



APPLICATION

Title V Operating Permit Renewal

Twin Landfill Corporation - Milner Landfill

Submitted to:

Colorado Department of Public Health & Environment

4300 Cherry Creek Drive South
Denver, CO 80246-1530

Submitted by:

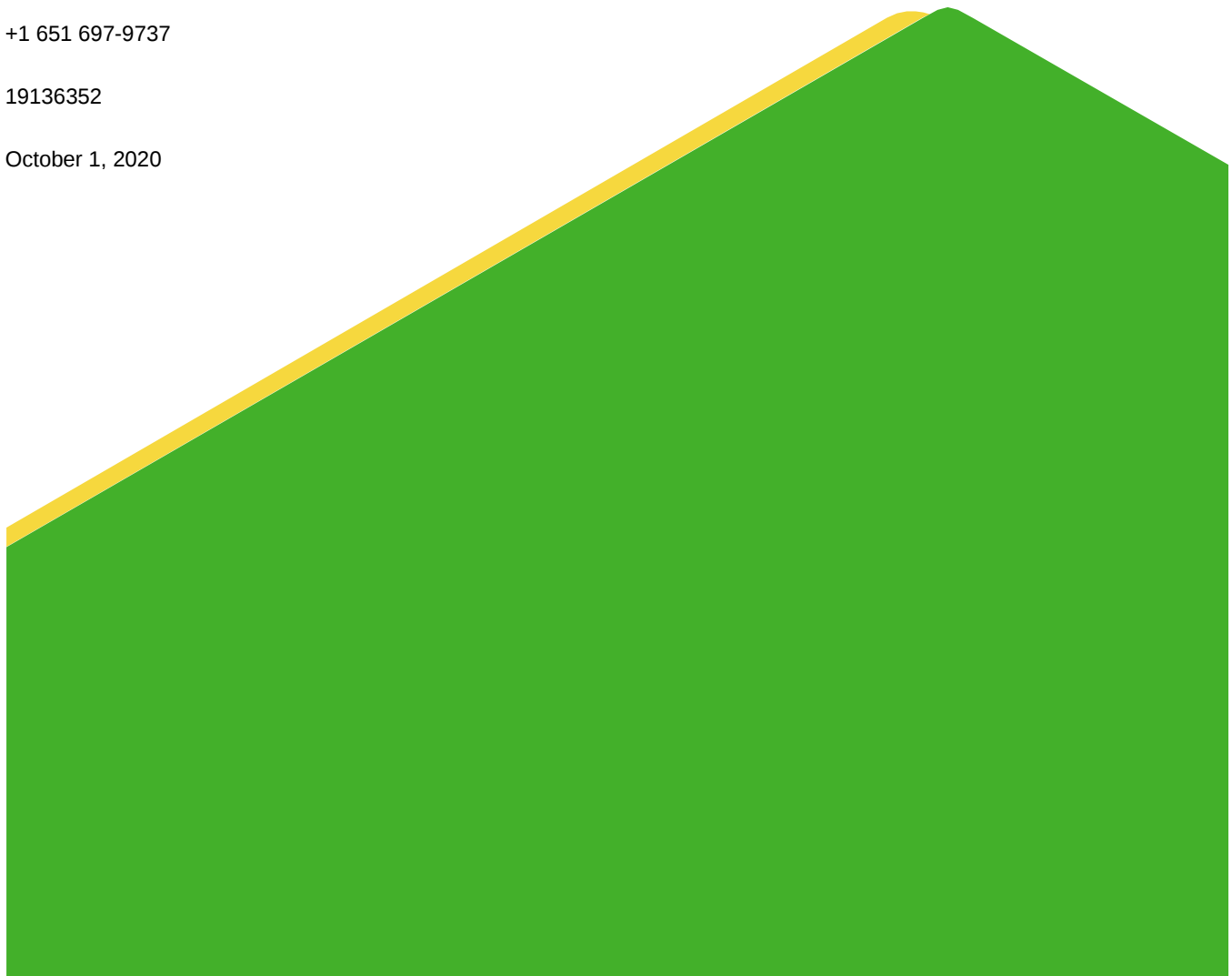
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Distribution List

Luke Schneider, Milner Landfill (electronic copy)

Table of Contents

1.0 INTRODUCTION	4
2.0 PROCESS DESCRIPTION AND REQUESTED CHANGES.....	4
2.1 E001 – Landfill (fugitive PM)	4
2.2 E002 – Landfill (landfill gas)	5
2.3 E003 – Solidification Basin.....	6
2.4 Gasoline Storage Tank (500-gal)	6
2.5 Composting	6
2.6 Insignificant Activities	6
3.0 RULE REVIEW AND NEWLY APPLICABLE REQUIREMENTS	7
4.0 APPLICATION AND PERMIT SHEILD	8
5.0 APPLICATION FORMS	9
6.0 ENVIRONMETNAL PLANS.....	9
7.0 CLOSING	9

TABLES

Table 1: Storage Tank Emission Calculation

FIGURES

Figure 1: Site Location

Figure 2: Site Layout

Figure 3: Process Flow Diagram

APPENDICES

APPENDIX A

LandGEM Model Results

APPENDIX B

Operating Permit Application Forms

APPENDIX C

Existing APENs

ABBREVIATIONS

CO = carbon monoxide

HAP = hazardous air pollutant

NANSR = nonattainment new source review

NOx = nitrogen oxides

NESHAP = National Emission Standard for Hazardous Air Pollutants (promulgated under 40 CFR Part 63)

NMOC = non-methane organic compound

NSPS = New Source Performance Standard (promulgated under 40 CFR Part 60)

NSR = new source review

Part 70 = 40 CFR Part 70 (the terms Title V and Part 70 permit refer to a federal air operating permit)

PM = particulate matter

PM10 = PM less than 10 microns

PM2.5 = PM less than 2.5 microns

PSD = prevention of significant deterioration (promulgated under 40 CFR Part 52.21)

SO2 = sulfur dioxide

Title V = Title V of the Clean Air Act (the terms Title V and Part 70 permit refer to a federal air operating permit)

USEPA = United States Environmental Protection Agency

VOC = volatile organic compound

1.0 INTRODUCTION

Twin Landfill Corporation owns and operates the Milner Landfill (the “Landfill”) in Routt County, located at 20650 RCR 205, approximately 1.2 miles southwest of Milner, Colorado. The Landfill operates air emission units under Air Operating Permit 09OPRO329 (Permit) issued by the Colorado Department of Public Health & Environment (CDPHE) Air Pollution Control Division (APCD). The Permit was issued on August 1, 2016 and expires August 1, 2021. The purpose of this document is to submit the Permit renewal application.

2.0 PROCESS DESCRIPTION AND REQUESTED CHANGES

The Permit currently authorizes air emissions from:

- E001 – Landfill (haul roads)
- E002 – Landfill (landfill gas)
- E003 – Solidification Basin
- Gasoline Storage Tank (500-gal)
- Several insignificant activities
- Composting (exempt)

A site location map is included in Figure 1. A site layout map is included in Figure 2. A process flow diagram is included in Figure 3. Sections 2.1 through 2.6 describe each emission activity and identify any changes requested in this application.

The Landfill is a major source under 40 CFR Part 70 because NMOC/VOC permitted emissions exceed 100 tpy; New Source Performance Standard Subpart WWW also requires the Landfill to hold a Title V operating permit. The Landfill is a minor source under Part 70 for Hazardous Air Pollutants. The Landfill is not subject to Prevention of Significant Deterioration because permitted emissions do not exceed the major source thresholds. The Landfill is not located in a geographical area that is classified as a nonattainment area so nonattainment new source review is not applicable. Dispersion modeling has not previously been conducted for this facility and is not required by this permitting action.

2.1 E001 – Landfill (fugitive PM)

Fugitive dust is defined as particulate matter emissions which may become entrained in the atmosphere due to mechanical or wind forces such as; transfer of material; disturbed surface areas; or similar commercial or industrial activities, and which are not ducted through exhaust systems. Fugitive emissions of particulate matter (PM), PM less than 10 microns (PM10), and PM less than 2.5 microns (PM2.5) are emitted from soil/material handling (excavation, cover material) and truck traffic on unpaved roads.

Because landfills are not one of the 28-named source categories, fugitive emissions are not included in the emission totals to determine if a source is a major source under Part 70 but they have been quantified in the current APEN (submitted December 14, 2015). Fugitive emissions from the movement of haul trucks on unpaved roads and heavy equipment on unpaved surfaces were estimated based on the methodology in United States Environmental Protection Agency (USEPA) document Compilation of Air Emissions Factors (AP-42) Section 13.2.2 Unpaved Roads in the current APEN.

The Permit requires control of fugitive dust using the following methods:

- Watering haul roads as needed
- Sweeping/scraping of paved roads, scales, and parking areas
- Watering during land clearing/construction activities

No changes are being requested to the fugitive PM emissions or control techniques in this renewal application.

2.2 E002 – Landfill (landfill gas)

The Landfill accepts municipal solid waste (MSW), construction and demolition (C&D) waste, and petroleum contaminated soil (PCS). Decomposition of biodegradable waste in landfills generates landfill gas (LFG). The Landfill does not have a landfill gas collection system or flare. Non-methane organic compounds (NMOC), volatile organic compounds (VOCs), hazardous air pollutants (HAPs), and carbon monoxide (CO) are emitted as fugitive emissions. Landfill gas generation is estimated using the U.S. EPA's LandGEM model (version 3.02). PCS does not significantly degrade into LFG; however, CDPHE air permitting guidance memo 12-01 establishes that PCS can emit NMOC. The emission calculations for the purposes of permit limits uses the inputs established in guidance memo 12-01 for "considerable quantities of PCS" and are listed below and the LANDGEM model report is presented in Appendix A.

- Historic waste acceptance data is provided by Landfill and includes PCS and future waste acceptance equal to Permit limit of 175,000 short tons per year
- Methane generation rate constant "k" of 0.02 is used which is appropriate for an "arid" geographic area and consistent with guidance memo 12-01 and with the Permit
- Potential methane generation capacity "Lo" of 100 m³/Mg is used which is consistent with guidance memo 12-01 and with the Permit
- Default methane content of 50% by volume
- Tier 1 NMOC concentration of 2,420 ppmv as hexane is used as a user-specific value and is consistent with co-disposal situations described in memo 12-01 and is consistent with the Permit

The LandGEM model inputs described above are not necessarily acceptable to show compliance with NSPS.

Based on a CDPHE-approved VOC emission factor equal to 85% of NMOC and the output of the LandGEM model, the following maximum emissions are estimated in the year 2033:

- NMOC = 119.2 short tons/yr
- VOC = 101.3 short tons/yr
- CO = 2.2 short tons/yr

No operational changes are being requested to the landfill. We suggest that the existing Permit limits of 107.2 tpy VOC, 8.0 tpy of any single HAP, 20 tpy of total HAP, and 2.4 tpy of CO be retained. No changes are being requested to the voluntary waste acceptance limit of 175,000 short tons per year. This activity is associated with an APEN submitted December 14, 2015.

2.3 E003 – Solidification Basin

The Milner Landfill previously operated a solidification basin which was discontinued in October 2019. The APEN associated with the solidification basin was cancelled in November 2019. We request that the solidification basin (E003) be removed from the Permit.

2.4 Gasoline Storage Tank (500-gal)

The 500-gal gasoline tank is used to fuel mobile sources at the Landfill; no changes are requested to the gasoline storage tank. This source would ordinarily be considered an insignificant activity but because it is subject to certain federal rules, it is included in the Permit. This source does not require an APEN.

2.5 Composting

The Landfill accepts wood and other organic material, grinds/screens the material, and places the ground material on a compost pile. The compost pile emits VOC but qualifies for a construction and operation permit exemption (see Exemption Number 18RO0850.XP issued March 20, 2019). Because it is exempt, it is not included in the Permit but does require an APEN (latest APEN is dated November 30, 2017). No changes are requested to the compost pile.

2.6 Insignificant Activities

Some of the previously listed insignificant activities in the Permit have been removed and/or replaced with other insignificant activities in addition to new insignificant activities added. The following previously listed insignificant activities have been removed:

- One of the 110-gallon AST's designated to store antifreeze was removed.
- The 305 hp diesel portable engine was replaced with a 603 hp engine.
- 400,000 BTU/hr waste oil burner was removed.

Insignificant activities added as new or replacement units include:

- 1,000 gallon used oil AST (new source, Colorado Regulation No. 3, Part C, Section II.E.3.aaa)
- 1,000 gallon methanol AST (new source, Colorado Regulation No. 3, Part C, Section II.E.3.a and Section II.E.3.b); because this unit is exempt on an emissions basis, emission calculations have been provided in Table 1 to show that emissions are less than the 250 lb/yr insignificance threshold for methanol.
- 2,000 gallon on-road diesel AST (Colorado Regulation No. 3, Part C, Section II.E.3.fff)
- 630 HP (new) and 54 HP (existing) diesel engines used during composting. These engines are considered non-road engines that do not fall under Regulation No. 3 Stationary Source requirements. Non-road engines are not regulated under the stationary source permitting program and, therefore, owners or operators of non-road engines are not required to submit an APEN or obtain an air permit from the Division at this time. (modified source)
- One 0.299 MMBtu/hr propane boiler located in the New Shop used for comfort heat (Colorado Regulation No. 3, Part C, Section II.E.3.ggg)

- One 0.324 MMBtu/hr propane boiler located in the Old Shop used for comfort heat (Colorado Regulation No. 3, Part C, Section II.E.3.ggg)
- Two propane storage tanks with a capacity of 500 gallons each located at the Old Shop and New Shop (Colorado Regulation No. 3, Part C, Section II.E.3.zz)

The following insignificant emission units were listed in the Permit and remain at the Landfill unchanged:

- Three 110 gallon ASTs – transmission oil, hydraulic oil, motor oil (Colorado Regulation No. 3, Part C, Section II.E.3.aaa)
- 2,000 gallon off-road diesel AST (Colorado Regulation No. 3, Part C, Section II.E.3.fff)
- Composting piles, however, all odor requirements of Colorado Regulation No. 2 must be met. (Colorado Regulation No. 3, Part C, Section II.E.3.rrr)
- Leachate holding pond activities, surface water storage impoundment of non-potable water, and storm water evaporation ponds. (Colorado Regulation No. 3, Part C, Section II.E.3.yyy)
- Asbestos containing materials are accepted at the landfill. (Colorado Regulation No. 3, Part C, Section II.E.2)

3.0 RULE REVIEW AND NEWLY APPLICABLE REQUIREMENTS

The following New Source Performance Standard (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) rules were reviewed for applicability.

NSPS Subpart WWW [40 CFR Part 60 Subpart WWW]

The Landfill is subject to NSPS Subpart WWW because construction on newly permitted airspace commenced on or after May 30, 1991 and no newly permitted airspace has been constructed after July 17, 2014. A design capacity report has previously been submitted documenting that design capacity exceeds 2.5 million megagrams and 2.5 million cubic meters. The permitted design capacity of the Landfill is 4,875,104 short tons which is unchanged from previous applications. Historically, Tier 2 NMOC tests have been conducted to demonstrate that a gas collection and control system is not required.

Emission Guideline Subpart Cf [40 CFR Part 60 Subpart Cf]

EPA promulgated Emission Guideline Subpart Cf concurrently with NSPS Subpart XXX. Subpart Cf requirements do not become effective upon promulgation, they become effective after EPA approves a state control plan implementing the rules or, in cases where the state does not submit a plan, approval of a federal control plan. NSPS Subpart WWW will cease to apply after Subpart Cf becomes applicable. CDPHE submitted a state control plan to EPA for approval but the plan has not yet been approved. The state control plan is not available for review but it is our understanding that it adopts the requirements stated in subpart Cf as written. If this is the case, then upon approval of the state control plan, this rule will require the following actions:

- A design capacity report is due 90 days after control plan approval
- A NMOC generation report is due 90 days after control plan approval
- Annual NMOC generation reports will be required. These are the same reports required under NSPS Subpart WWW but will compare to a 34 Mg/yr threshold rather than the existing 50 Mg/yr threshold. The

Landfill anticipates NMOC emissions with Tier 2 testing to be less than 34 Mg/yr so a gas collection and control system should not be required under Subpart Cf and additional monitoring and record keeping requirements will not be required.

NSPS Subpart XXX [40 CFR Part 60 Subpart XXX]

The Landfill is not subject to NSPS XXX because there have been no newly permitted airspace expansions where construction commenced after July 17, 2014. If such construction occurs in the future, Subpart Cf will cease to apply and Subpart XXX will apply.

NSPS Subpart IIII [40 CFR Part 60 Subpart IIII]

NSPS Subpart IIII does not apply to the two reciprocating engines associated with the compost operation because they are considered non-road engines and are periodically moved.

NESHAP Subpart AAAA [40 CFR Part 63 Subpart AAAA]

The Landfill is not subject to NESHAP AAAA because NMOC emissions do not exceed 50 Mg/yr based on Tier 2 NMOC testing.

NESHAP Subpart ZZZZ [40 CFR Part 63 Subpart ZZZZ]

NESHAP Subpart ZZZZ does not apply to the two reciprocating engines associated with the compost operation because they are considered non-road engines and are periodically moved.

NESHAP Subpart CCCCCC [40 CFR Part 63 Subpart CCCCCC]

The 250-gal gasoline tank is subject to NESHAP CCCCCC. Applicability remains the same as currently permitted.

4.0 APPLICATION AND PERMIT SHIELD

There are two types of shields, an application shield, and a permit shield. An application shield means that if a permittee submits a timely and administratively complete application prior to the due date, the permittee can continue operating under the expired permit if the renewal is not issued by the expiration date. A permit shield both protects a permittee when an applicable requirement is incorrectly addressed in the operating permit and when an applicable requirement is deemed to be not applicable in the operating permit.

Application Shield

The Permit expires August 1, 2021. CDPHE regulations require that an operating permit renewal be submitted 12 months prior to expiration which was August 1, 2020. The U.S. EPA considers a timely application to be submitted *“at least 6 months prior to the date of expiration or such longer time as may be approved by the Administrator”*. From discussions with CDPHE, submission of this application past the 12-month deadline means that an application shield cannot be offered even though EPA allows a shorter due date. For this reason, we request that CDPHE prioritize this application as much as practical with a goal to issue the renewal prior to the expiration date.

Permit Shield

No specific non-applicable rules are being discussed as part of the permit shield.

5.0 APPLICATION FORMS

Golder reviewed CDPHE guidance to determine which application forms are required. The operating permit forms are listed below with a description of if they are being included with this application.

- Form OP-50 (application) is required for all renewal applications and is included. Also, this form requires that existing APENs be submitted; existing APENs are included in Appendix C.
- Form OP-100 (facility identification) is required for all renewal applications and is included.
- Form OP-101 (site description) is being submitted because updated drawings are being provided.
- Form OP-102 (criteria pollutants) is not submitted because the instructions specify that the form is only required if a change in the facility-wide limits is requested. No changes to facility-wide limits are being requested.
- Form OP-103 (HAP) is not submitted because the instructions specify that the form is only required if a change in the facility-wide limits is requested. No changes to facility-wide limits are being requested.
- Form OP-104 (permit shield) is not included because a permit shield is not being requested
- Form OP-105 (insignificant activities) is included as there are changes requested to insignificant activities
- Forms OP-201 through 204 are not submitted because no modifications are being requested, this is not an oil and gas facility, compliance assurance monitoring does not apply and dispersion modeling does not apply.
- Forms OP301 through 314 are not submitted because no new emission units are being permitted with this renewal
- Form OP-400 is not submitted because it is only required if an OP Series 300 form is required.

6.0 ENVIRONMENTAL PLANS

Sometimes a Title V permit renewal triggers a requirement to update environmental plans such as a compliance assurance monitoring (CAM) plan. No updated plans are submitted because the Permit does not require any such plans.

7.0 CLOSING

Twin Landfill Corporation respectfully submits this air permit renewal application to CDPHE. If there are any questions, please contact Mr. Luke Schneider at lschneider@twinenviro.com.

Signature Page

Golder Associates Inc.



Eryn Hall
Engineer



Ryan Birkenholz
Associate and Senior Consultant

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TABLES

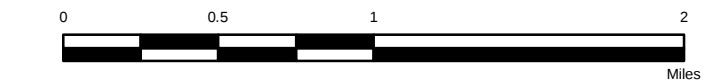
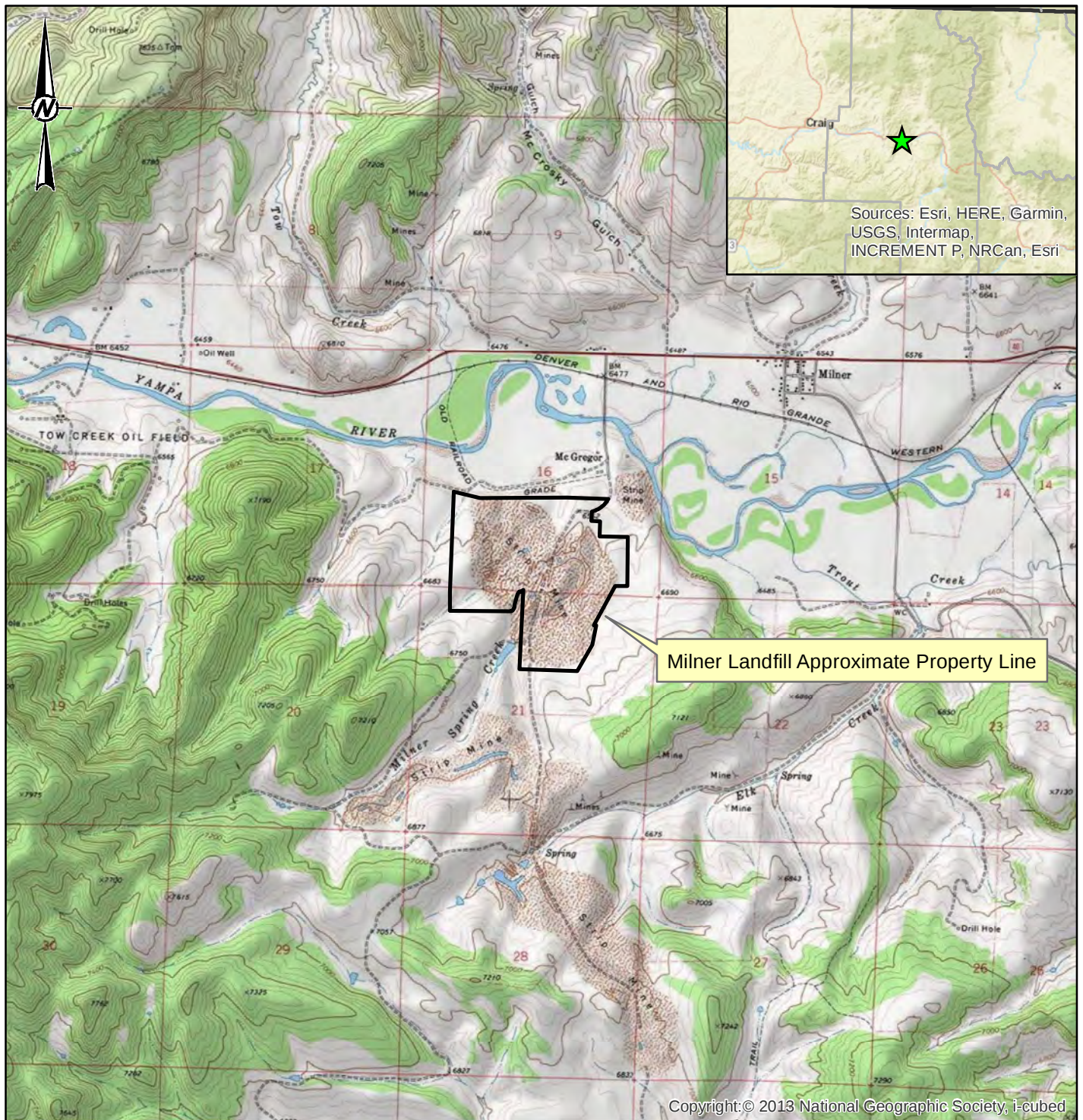
TABLE 1
Potential Emissions from Fixed Roof Tank
Milner Landfill

Parameters	Symbol	Units	Formula/Notes	Reference Equations ¹	Value
Tank Contents					Methanol
Tank Type					VFR
Throughput	Q	gal/yr			48,000
Tank Height	H _S	ft			11
Average Liquid Height	H _L	ft	H _S / 2	Section 7.1.3.1.Eqn 1-16	5.5
Diameter	D	ft			4
Tank Shell Radius	R _S	ft	1/2*D		2
Tank Liquid Volume	V _{LX}	ft ³	(D/2) ² * pi * H _S	Section 7.1.3.1.2 Eqn 1-31	138
Tank Nominal Capacity	T _{CG}	gal	V _{LX} * 7.481		1,034
Turnovers	N		5.614*Q / V _{LX}	Section 7.1.6.2 Equation 60-3	12.00
Maximum Filling Rate	FR _m	gal/hr			1,000
Roof Slope	S _R	ft/ft			0.0625
Tank roof Height	H _R	ft	S _R *R _S	Section 7.1.3.1.1 Equation 1-18	0.13
Tank Color/Shade					Beige/Cream
Paint Condition					Average
Paint Solar Absorptance	α	-		Table 7.1-6	0.42
Daily Total Solar Insolation Factor	I	Btu/ft ² ·d	AP-42 Chapter 7, Organic Liquid Storage Tanks	Table 7.1-7	1491
Daily Maximum Ambient Temperature	T _{AX}	°F	AP-42 Chapter 7, Organic Liquid Storage Tanks	Table 7.1-7	63.5
Daily Minimum Ambient Temperature	T _{AN}	°F	AP-42 Chapter 7, Organic Liquid Storage Tanks	Table 7.1-7	37.9
Daily Ambient Temp. Change	ΔT _A	°F	T _{AX} - T _{AN}	Section 7.1.3.1.1 Eqn 1-12	25.60
Daily Avg. Ambient Temperature	T _{AA}	°R	((T _{AX} +459.67)+(T _{AN} +459.67))/2	Section 7.1.3.1.1 Eqn 1-27	510.4
Liquid Bulk Temperature	T _b	°R	T _{AA} +(0.003*α _s *I)	Section 7.1.3.1.1 Eqn 1-31	512.2
Daily Avg. Liquid Surface Temp.	T _{LA}	°R	(0.4 T _{AA})+0.6 T _b)+(0.005*α*I)	Section 7.1.3.1.1 Eqn 1-28	514.6
Daily Max. Avg. Liq. Surf. Temp.	T _{LX}	°R	T _{LA} +0.25*ΔT _V	Figure 7.1-17	522.2
Daily Min. Avg. Liq. Surf. Temp.	T _{LN}	°R	T _{LA} -0.25*ΔT _V	Figure 7.1-17	507.0
Daily Vapor Temperature Range	ΔT _V	°F	(0.7*ΔT _A)+ (0.02 *α*I)	Section 7.1.3.1.1 Eqn 1-7	30.4
Liquid Molecular Wt.	M _L	lb/lb-mole	AP-42 Chapter 7, Organic Liquid Storage Tanks	Table 7.1-2	32.04
Vapor Molecular Wt.	M _V	lb/lb-mole	AP-42 Chapter 7, Organic Liquid Storage Tanks	Table 7.1-2	32.04
Reid Vapor Pressure	RVP	psi			NA
C-C Vapor Pressure Equation Constant A	A	dimensionless	12.82-0.9672ln(RVP)	Table 7.1-2	8.079
C-C Vapor Pressure Equation Constant B	B	°R	7261-1216ln(RVP)	Table 7.1-2	3338.01
True Vapor Pressure @ TLA	P _{VA}	psia @ T _{LA}	exp(A-(B/T _{LA}))	Section 7.1.3.1.1 Eqn 1-25	4.917
True Vapor Pressure @ TLX	P _{VX}	psia @ T _{LX}	exp(A-(B/T _{LX}))	Section 7.1.3.1.1 Eqn 1-25	5.405
True Vapor Pressure @ TLN	P _{VN}	psia @ T _{LN}	exp(A-(B/T _{LN}))	Section 7.1.3.1.1 Eqn 1-25	4.461
Vapor Pressure Function	P*	dimensionless	P _{VA} /P _A /(1+(1-(P _{VA} /P _A)) ^{0.5}) ²		0.10146
Daily Vapor Pressure Range	ΔP _V	psia	P _{VX} - P _{VN}	Section 7.1.3.1.1 Eqn 1-9	0.94372
Atmospheric Pressure (ΔP _B)		psia	P _{BP} -P _{BV}	Section 7.1.3.1.1 Eqn 1-10	0.06
Breather Vent Pressure Setting (P _{BP})		psig		Section 7.1.3.1.1 Eqn 1-10	0.03
Breather Vent Vacuum Setting (P _{BV})		psig		Section 7.1.3.1.1 Eqn 1-10	-0.03
True Vapor Pressure @ 95F	P	psia	exp(A-(B/T _{LA}))	Section 7.1.3.1.1 Eqn 1-24	7.854
Roof Outage	H _{RO}	ft	1/3 * H _R	Section 7.1.3.1.1 Eqn 1-16	0.04
Vapor Space Outage	H _{VO}	ft	(H _S -H _L) +H _{RO}	Section 7.1.3.1.1 Eqn 1-15	5.54
Vapor Space Expansion Factor	K _E		(ΔT _V /T _{LA}) + ((ΔP _V -ΔP _B)/(P _A -P _{VA})))	Section 7.1.3.1.1 Eqn 1-5	0.149
Vented Vapor Saturation Factor	K _S		1/(1 + 0.053 * P _{VA} * H _{VO})	Table 7.1-22 Eqn 1-21	0.06
Turnover Factor	K _N		turnovers < 36 = 1, turnovers > 36 = (180 + N)/6N	Section 7.1.3.1.2 Eqn 1-29	1
Working Loss Product Factor	K _P		0.75 for crude oils, 1.0 all other organic liquids		1
Daily Vapor Pressure Range	ΔP _V	psia	P _{VX} -P _{VN}	Section 7.1.3.1.1 Eqn 1-9	0.944
Vapor Space Volume	V _V	ft ³	pi * (D/2) ² * H _{VO}	Section 7.1.3.1.1 Eqn 1-15	70
Vapor Density	W _V	lb/ft ³	(M _V * P _{VA}) / (10.731*T _{LA})	Section 7.1.3.1.1 Eqn 1-21	0.02853
Standing Losses	L _S	lb/yr	365 * V _V * W _V * K _E * K _S	Section 7.1.3.1.1 Eqn 1-2	7.0
Working Losses	L _W	lb/yr	0.0010 * M _V * P _{VA} * Q/42 * K _N * K _P	Section 7.1.3.1.2 Eqn 1-29	180.1
Total Losses	L _T	lb/yr	L _S + L _W	Section 7.1.3.1 Eqn 1-1	187.1
Annual VOC Emission Rate		tpy	L _T / 2000		0.094
Max. VOC Emission Rate	L _{MAX}	lb/hr	(M _V *P _{VA}) / (R*T)*FR _m		5.652

Notes:

1. Emissions calculated based on Emission Factor Documentation for AP-42 Section 7.1 Organic Liquid Storage Tanks

FIGURES



NOTE(S)
APPROXIMATE PROPERTY BOUNDARY OBTAINED FROM ROUTT COUNTY, COLORADO ASSESSOR OFFICE ONLINE MAPPING SYSTEM.

REFERENCE(S)

PROJECT
MILNER LANDFILL
AIR OPERATING PERMIT RENEWAL
TITLE
SITE LOCATION MAP

PROJECT NO. 19136352 CONTROL 00 REV. 00 FIGURE 1

CLIENT
TWIN ENVIRO SERVICES

CONSULTANT



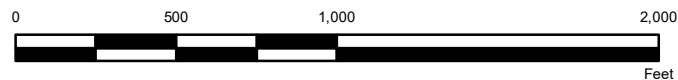
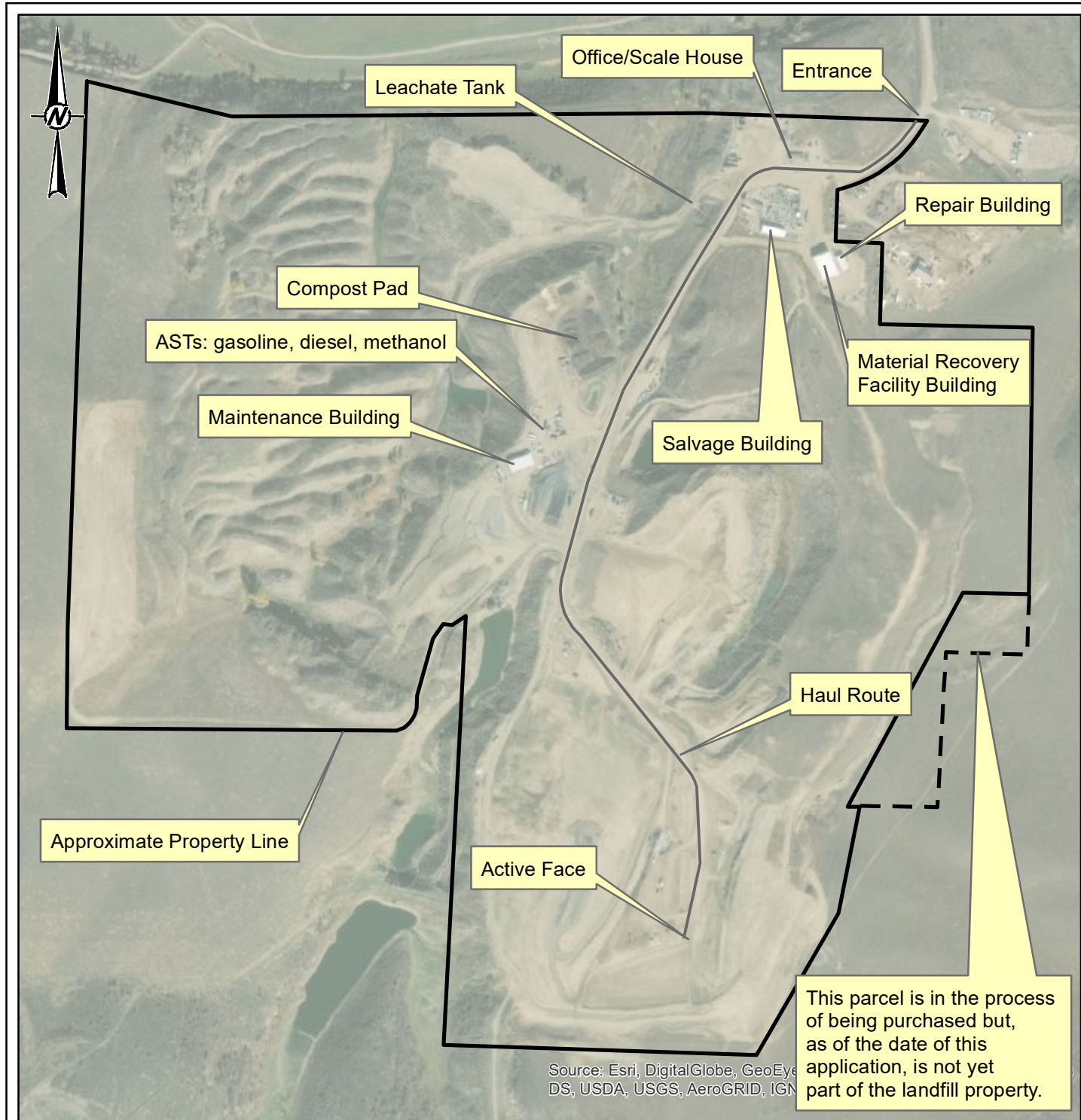
YYYY-MM-DD 2020-09-11

DESIGNED RCB

PREPARED RCB

REVIEWED EH

APPROVED RCB



NOTE(S)
APPROXIMATE PROPERTY BOUNDARY OBTAINED FROM ROUTT COUNTY, COLORADO ASSESSOR OFFICE ONLINE MAPPING SYSTEM.

REFERENCE(S)

CLIENT
TWIN ENVIRO SERVICES

CONSULTANT



YYYY-MM-DD 2020-10-02

DESIGNED RCB

PREPARED RCB

REVIEWED EH

APPROVED RCB

PROJECT
**MILNER LANDFILL
AIR OPERATING PERMIT RENEWAL**

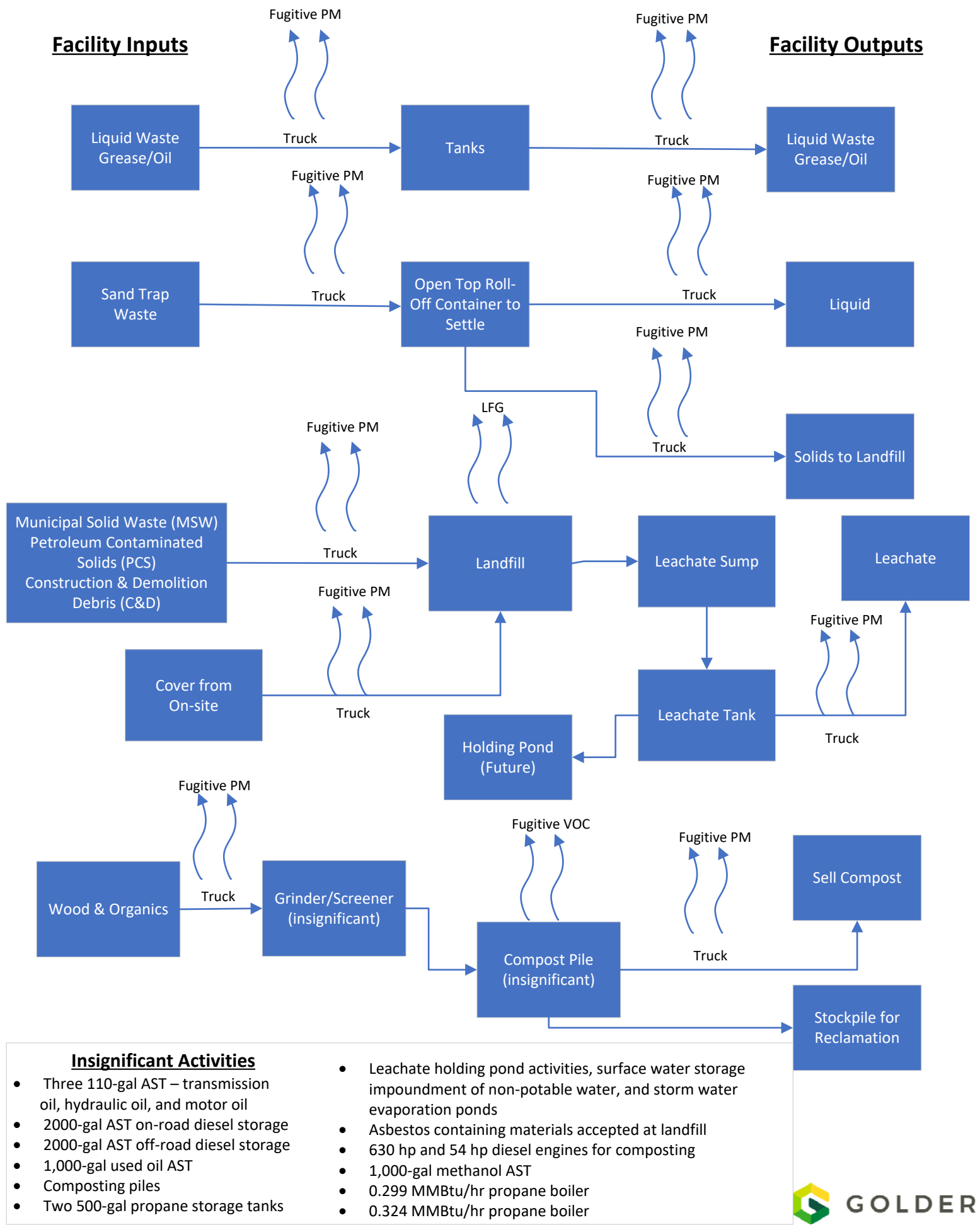
TITLE
SITE LAYOUT

PROJECT NO.
19136352

CONTROL
00

REV.
00

FIGURE
2



APPENDIX A

LANDGEM Model Results

INVENTORY

Landfill Name or Identifier: Milner Landfill

Enter year of emissions inventory:

2033

Gas / Pollutant	Emission Rate				
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(ft ³ /year)	(short tons/year)
Total landfill gas	1.560E+04	1.249E+07	8.394E+02	4.412E+08	1.716E+04
Methane	4.167E+03	6.246E+06	4.197E+02	2.206E+08	4.584E+03
Carbon dioxide	1.143E+04	6.246E+06	4.197E+02	2.206E+08	1.258E+04
NMOC	1.084E+02	3.023E+04	2.031E+00	1.068E+06	1.192E+02
1,1,1-Trichloroethane (methyl chloroform) - HAP	3.327E-02	5.997E+00	4.029E-04	2.118E+02	3.660E-02
1,1,2,2-Tetrachloroethane - HAP/VOC	9.594E-02	1.374E+01	9.233E-04	4.853E+02	1.055E-01
1,1-Dichloroethane (ethylidene dichloride) - HAP/VOC	1.234E-01	2.998E+01	2.015E-03	1.059E+03	1.358E-01
1,1-Dichloroethene (vinylidene chloride) - HAP/VOC	1.007E-02	2.499E+00	1.679E-04	8.824E+01	1.108E-02
1,2-Dichloroethane (ethylene dichloride) - HAP/VOC	2.108E-02	5.122E+00	3.441E-04	1.809E+02	2.319E-02
1,2-Dichloropropane (propylene dichloride) - HAP/VOC	1.057E-02	2.249E+00	1.511E-04	7.941E+01	1.162E-02
2-Propanol (isopropyl alcohol) - VOC	1.562E+00	6.246E+02	4.197E-02	2.206E+04	1.718E+00
Acetone	2.113E-01	8.745E+01	5.876E-03	3.088E+03	2.324E-01
Acrylonitrile - HAP/VOC	1.737E-01	7.870E+01	5.288E-03	2.779E+03	1.911E-01
Benzene - No or Unknown Co-disposal - HAP/VOC	7.711E-02	2.374E+01	1.595E-03	8.382E+02	8.483E-02
Benzene - Co-disposal - HAP/VOC	4.505E-01	1.387E+02	9.317E-03	4.897E+03	4.956E-01
Bromodichloromethane - VOC	2.639E-01	3.873E+01	2.602E-03	1.368E+03	2.903E-01
Butane - VOC	1.510E-01	6.246E+01	4.197E-03	2.206E+03	1.661E-01
Carbon disulfide - HAP/VOC	2.294E-02	7.246E+00	4.868E-04	2.559E+02	2.524E-02
Carbon monoxide	2.038E+00	1.749E+03	1.175E-01	6.177E+04	2.241E+00
Carbon tetrachloride - HAP/VOC	3.197E-04	4.997E-02	3.358E-06	1.765E+00	3.517E-04
Carbonyl sulfide - HAP/VOC	1.529E-02	6.121E+00	4.113E-04	2.162E+02	1.682E-02
Chlorobenzene - HAP/VOC	1.462E-02	3.123E+00	2.098E-04	1.103E+02	1.608E-02
Chlorodifluoromethane	5.841E-02	1.624E+01	1.091E-03	5.735E+02	6.425E-02
Chloroethane (ethyl chloride) - HAP/VOC	4.358E-02	1.624E+01	1.091E-03	5.735E+02	4.794E-02
Chloroform - HAP/VOC	1.861E-03	3.748E-01	2.518E-05	1.324E+01	2.047E-03
Chloromethane - VOC	3.148E-02	1.499E+01	1.007E-03	5.294E+02	3.463E-02
Dichlorobenzene - (HAP for para isomer/VOC)	1.604E-02	2.623E+00	1.763E-04	9.265E+01	1.764E-02
Dichlorodifluoromethane	1.005E+00	1.999E+02	1.343E-02	7.059E+03	1.106E+00
Dichlorofluoromethane - VOC	1.390E-01	3.248E+01	2.182E-03	1.147E+03	1.529E-01
Dichloromethane (methylene chloride) - HAP	6.179E-01	1.749E+02	1.175E-02	6.177E+03	6.797E-01
Dimethyl sulfide (methyl sulfide) - VOC	2.518E-01	9.744E+01	6.547E-03	3.441E+03	2.770E-01
Ethane	1.391E+01	1.112E+04	7.471E-01	3.927E+05	1.530E+01
Ethanol - VOC	6.465E-01	3.373E+02	2.266E-02	1.191E+04	7.111E-01
Ethyl mercaptan (ethanethiol) - VOC	7.425E-02	2.873E+01	1.931E-03	1.015E+03	8.168E-02
Ethylbenzene - HAP/VOC	2.537E-01	5.747E+01	3.861E-03	2.029E+03	2.791E-01
Ethylene dibromide - HAP/VOC	9.762E-05	1.249E-02	8.394E-07	4.412E-01	1.074E-04
Fluorotrichloromethane - VOC	5.425E-02	9.495E+00	6.379E-04	3.353E+02	5.968E-02
Hexane - HAP/VOC	2.955E-01	8.245E+01	5.540E-03	2.912E+03	3.251E-01
Hydrogen sulfide	6.375E-01	4.497E+02	3.022E-02	1.588E+04	7.012E-01
Mercury (total) - HAP	3.023E-05	3.623E-03	2.434E-07	1.279E-01	3.325E-05
Methyl ethyl ketone - HAP/VOC	2.660E-01	8.870E+01	5.960E-03	3.132E+03	2.926E-01
Methyl isobutyl ketone - HAP/VOC	9.888E-02	2.374E+01	1.595E-03	8.382E+02	1.088E-01
Methyl mercaptan - VOC	6.250E-02	3.123E+01	2.098E-03	1.103E+03	6.875E-02
Pentane - VOC	1.237E-01	4.123E+01	2.770E-03	1.456E+03	1.361E-01
Perchloroethylene (tetrachloroethylene) - HAP	3.188E-01	4.622E+01	3.106E-03	1.632E+03	3.507E-01



Summary Report

Landfill Name or Identifier: Milner Landfill

Date: Tuesday, September 15, 2020

Description/Comments:

Arid methane generation rate chosen based on data from that indicates average precepitation is less than 25 inches of rainfall per year. Inventory methane capacity chosen to represent PTE as per guidance from CDPHE. NMOC concentration of 2420 ppmv as hexane based on maximum allowable in existing permit. Future waste acceptance assumed to be at permit limit. Petroleum Contaminated Soil (PCS) included in waste totals.

About LandGEM:

First-Order Decomposition Rate Equation:

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

Where,

Q_{CH_4} = 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	1983	
Landfill Closure Year (with 80-year limit)	2033	
Actual Closure Year (without limit)	2033	
Have Model Calculate Closure Year?	Yes	
Waste Design Capacity	4,431,915	<i>megagrams</i>

MODEL PARAMETERS

Methane Generation Rate, k	0.020	<i>year⁻¹</i>
Potential Methane Generation Capacity, L ₀	100	<i>m³/Mg</i>
NMOC Concentration	2,420	<i>ppmv as hexane</i>
Methane Content	50	<i>% by volume</i>

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)
1983	266,715	293,387	0	0
1984	34,380	37,818	266,715	293,387
1985	32,420	35,662	301,095	331,205
1986	26,893	29,582	333,515	366,867
1987	25,588	28,147	360,408	396,449
1988	32,352	35,587	385,996	424,596
1989	34,024	37,426	418,348	460,183
1990	34,137	37,551	452,372	497,609
1991	32,095	35,304	486,509	535,160
1992	35,123	38,635	518,604	570,464
1993	43,107	47,418	553,726	609,099
1994	49,054	53,959	596,834	656,517
1995	55,279	60,807	645,887	710,476
1996	52,692	57,961	701,166	771,283
1997	57,681	63,449	753,858	829,244
1998	64,294	70,723	811,539	892,693
1999	68,484	75,332	875,833	963,416
2000	67,591	74,350	944,316	1,038,748
2001	81,224	89,346	1,011,907	1,113,098
2002	74,315	81,747	1,093,131	1,202,444
2003	67,406	74,147	1,167,446	1,284,191
2004	75,948	83,543	1,234,853	1,358,338
2005	80,247	88,272	1,310,801	1,441,881
2006	117,714	129,485	1,391,048	1,530,153
2007	118,276	130,104	1,508,762	1,659,638
2008	99,932	109,925	1,627,038	1,789,742
2009	85,121	93,633	1,726,970	1,899,667
2010	72,960	80,256	1,812,091	1,993,300
2011	69,375	76,313	1,885,051	2,073,556
2012	38,087	41,896	1,954,426	2,149,869
2013	49,334	54,267	1,992,514	2,191,765
2014	40,622	44,684	2,041,847	2,246,032
2015	47,636	52,400	2,082,469	2,290,716
2016	51,198	56,318	2,130,105	2,343,116
2017	54,407	59,848	2,181,304	2,399,434
2018	69,082	75,990	2,235,711	2,459,282
2019	67,432	74,176	2,304,793	2,535,272
2020	159,091	175,000	2,372,225	2,609,448
2021	159,091	175,000	2,531,316	2,784,448
2022	159,091	175,000	2,690,407	2,959,448

WASTE ACCEPTANCE RATES (Continued)

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	(short tons/year)	(Mg)	(short tons)
2023	159,091	175,000	2,849,498	3,134,448
2024	159,091	175,000	3,008,589	3,309,448
2025	159,091	175,000	3,167,680	3,484,448
2026	159,091	175,000	3,326,771	3,659,448
2027	159,091	175,000	3,485,861	3,834,448
2028	159,091	175,000	3,644,952	4,009,448
2029	159,091	175,000	3,804,043	4,184,448
2030	159,091	175,000	3,963,134	4,359,448
2031	159,091	175,000	4,122,225	4,534,448
2032	159,091	175,000	4,281,316	4,709,448
2033			4,440,407	4,884,448
2034	0	0	4,431,915	4,875,107
2035	0	0	4,431,915	4,875,107
2036	0	0	4,431,915	4,875,107
2037	0	0	4,431,915	4,875,107
2038	0	0	4,431,915	4,875,107
2039	0	0	4,431,915	4,875,107
2040	0	0	4,431,915	4,875,107
2041	0	0	4,431,915	4,875,107
2042	0	0	4,431,915	4,875,107
2043	0	0	4,431,915	4,875,107
2044	0	0	4,431,915	4,875,107
2045	0	0	4,431,915	4,875,107
2046	0	0	4,431,915	4,875,107
2047	0	0	4,431,915	4,875,107
2048	0	0	4,431,915	4,875,107
2049	0	0	4,431,915	4,875,107
2050	0	0	4,431,915	4,875,107
2051	0	0	4,431,915	4,875,107
2052	0	0	4,431,915	4,875,107
2053	0	0	4,431,915	4,875,107
2054	0	0	4,431,915	4,875,107
2055	0	0	4,431,915	4,875,107
2056	0	0	4,431,915	4,875,107
2057	0	0	4,431,915	4,875,107
2058	0	0	4,431,915	4,875,107
2059	0	0	4,431,915	4,875,107
2060	0	0	4,431,915	4,875,107
2061	0	0	4,431,915	4,875,107
2062	0	0	4,431,915	4,875,107

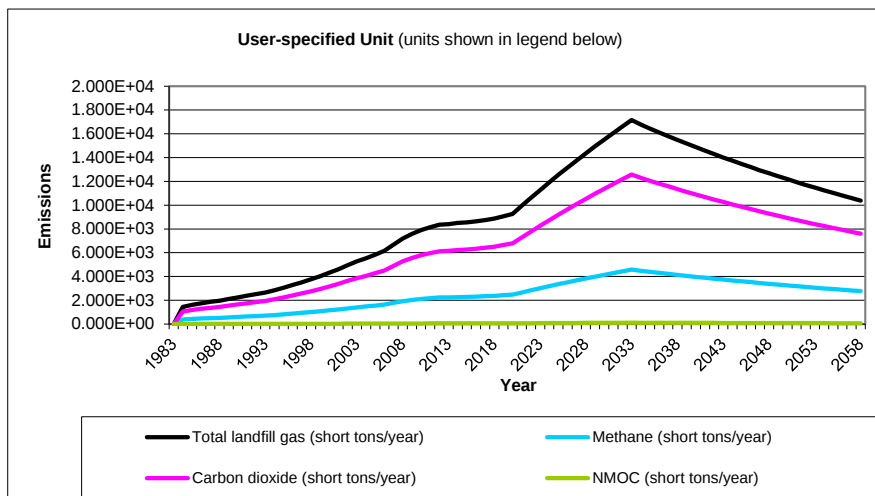
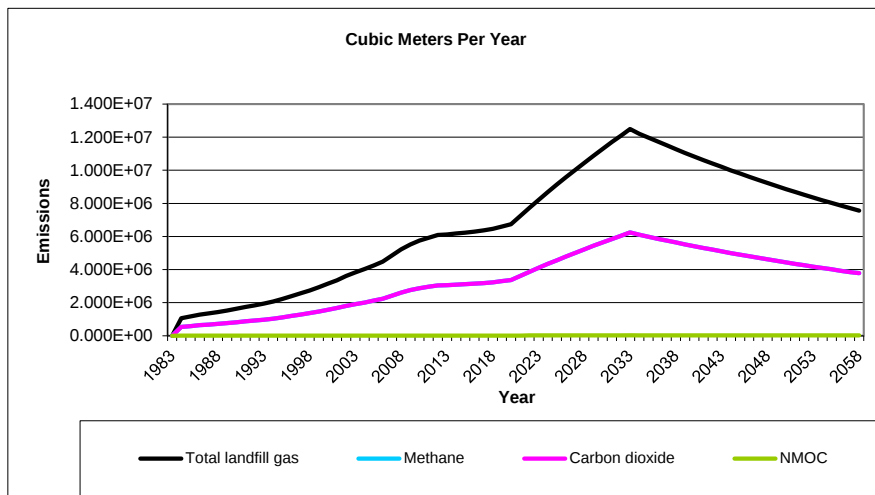
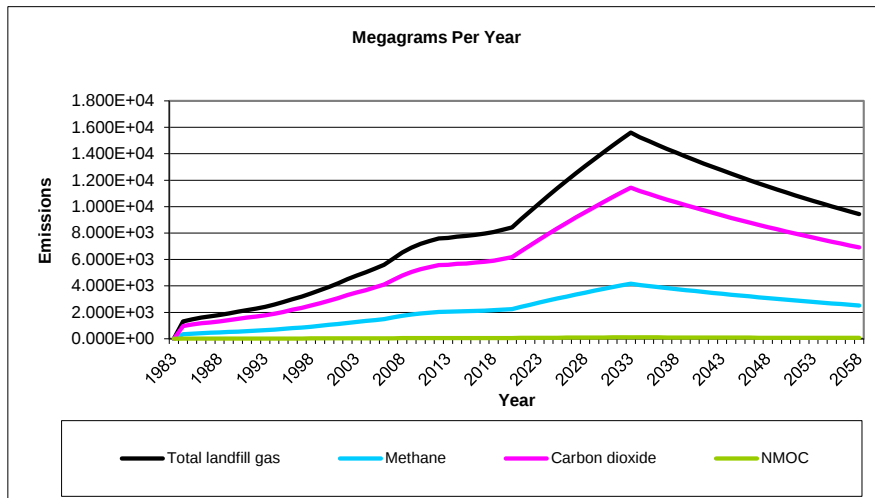
Pollutant Parameters

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		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	11.10	
	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		
	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



Results

Year	Total landfill gas			Methane		
	(Mg/year)	(m ³ /year)	(short tons/year)	(Mg/year)	(m ³ /year)	(short tons/year)
1983	0	0	0	0	0	0
1984	1.320E+03	1.057E+06	1.452E+03	3.527E+02	5.287E+05	3.880E+02
1985	1.464E+03	1.173E+06	1.611E+03	3.912E+02	5.863E+05	4.303E+02
1986	1.596E+03	1.278E+06	1.756E+03	4.263E+02	6.390E+05	4.689E+02
1987	1.697E+03	1.359E+06	1.867E+03	4.534E+02	6.796E+05	4.988E+02
1988	1.791E+03	1.434E+06	1.970E+03	4.783E+02	7.169E+05	5.261E+02
1989	1.915E+03	1.534E+06	2.107E+03	5.116E+02	7.668E+05	5.627E+02
1990	2.046E+03	1.638E+06	2.250E+03	5.465E+02	8.191E+05	6.011E+02
1991	2.174E+03	1.741E+06	2.392E+03	5.808E+02	8.705E+05	6.388E+02
1992	2.290E+03	1.834E+06	2.519E+03	6.117E+02	9.169E+05	6.729E+02
1993	2.419E+03	1.937E+06	2.661E+03	6.460E+02	9.684E+05	7.106E+02
1994	2.584E+03	2.069E+06	2.843E+03	6.903E+02	1.035E+06	7.593E+02
1995	2.776E+03	2.223E+06	3.053E+03	7.415E+02	1.111E+06	8.156E+02
1996	2.995E+03	2.398E+06	3.294E+03	7.999E+02	1.199E+06	8.799E+02
1997	3.196E+03	2.559E+06	3.516E+03	8.537E+02	1.280E+06	9.391E+02
1998	3.418E+03	2.737E+06	3.760E+03	9.131E+02	1.369E+06	1.004E+03
1999	3.669E+03	2.938E+06	4.036E+03	9.800E+02	1.469E+06	1.078E+03
2000	3.935E+03	3.151E+06	4.329E+03	1.051E+03	1.576E+06	1.156E+03
2001	4.192E+03	3.357E+06	4.611E+03	1.120E+03	1.678E+06	1.232E+03
2002	4.511E+03	3.612E+06	4.962E+03	1.205E+03	1.806E+06	1.325E+03
2003	4.790E+03	3.835E+06	5.269E+03	1.279E+03	1.918E+06	1.407E+03
2004	5.029E+03	4.027E+06	5.531E+03	1.343E+03	2.013E+06	1.478E+03
2005	5.305E+03	4.248E+06	5.836E+03	1.417E+03	2.124E+06	1.559E+03
2006	5.597E+03	4.482E+06	6.157E+03	1.495E+03	2.241E+06	1.645E+03
2007	6.069E+03	4.860E+06	6.676E+03	1.621E+03	2.430E+06	1.783E+03
2008	6.535E+03	5.233E+06	7.188E+03	1.745E+03	2.616E+06	1.920E+03
2009	6.900E+03	5.525E+06	7.590E+03	1.843E+03	2.763E+06	2.027E+03
2010	7.185E+03	5.753E+06	7.903E+03	1.919E+03	2.877E+06	2.111E+03
2011	7.404E+03	5.928E+06	8.144E+03	1.978E+03	2.964E+06	2.175E+03
2012	7.600E+03	6.086E+06	8.360E+03	2.030E+03	3.043E+06	2.233E+03
2013	7.638E+03	6.117E+06	8.402E+03	2.040E+03	3.058E+06	2.244E+03
2014	7.731E+03	6.191E+06	8.505E+03	2.065E+03	3.095E+06	2.272E+03
2015	7.779E+03	6.229E+06	8.557E+03	2.078E+03	3.115E+06	2.286E+03
2016	7.861E+03	6.295E+06	8.647E+03	2.100E+03	3.147E+06	2.310E+03
2017	7.959E+03	6.373E+06	8.755E+03	2.126E+03	3.187E+06	2.339E+03
2018	8.071E+03	6.463E+06	8.878E+03	2.156E+03	3.231E+06	2.371E+03
2019	8.253E+03	6.609E+06	9.078E+03	2.204E+03	3.304E+06	2.425E+03
2020	8.423E+03	6.745E+06	9.266E+03	2.250E+03	3.373E+06	2.475E+03
2021	9.044E+03	7.242E+06	9.949E+03	2.416E+03	3.621E+06	2.657E+03
2022	9.653E+03	7.729E+06	1.062E+04	2.578E+03	3.865E+06	2.836E+03
2023	1.025E+04	8.207E+06	1.127E+04	2.738E+03	4.104E+06	3.011E+03
2024	1.083E+04	8.675E+06	1.192E+04	2.894E+03	4.338E+06	3.183E+03
2025	1.141E+04	9.134E+06	1.255E+04	3.047E+03	4.567E+06	3.352E+03
2026	1.197E+04	9.584E+06	1.317E+04	3.197E+03	4.792E+06	3.517E+03
2027	1.252E+04	1.002E+07	1.377E+04	3.344E+03	5.012E+06	3.678E+03
2028	1.306E+04	1.046E+07	1.436E+04	3.488E+03	5.228E+06	3.837E+03
2029	1.359E+04	1.088E+07	1.495E+04	3.629E+03	5.440E+06	3.992E+03
2030	1.411E+04	1.130E+07	1.552E+04	3.768E+03	5.648E+06	4.145E+03
2031	1.461E+04	1.170E+07	1.608E+04	3.904E+03	5.851E+06	4.294E+03
2032	1.511E+04	1.210E+07	1.662E+04	4.037E+03	6.051E+06	4.441E+03

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	(m ³ /year)	(short tons/year)	(Mg/year)	(m ³ /year)	(short tons/year)
2033	1.560E+04	1.249E+07	1.716E+04	4.167E+03	6.246E+06	4.584E+03
2034	1.525E+04	1.221E+07	1.678E+04	4.074E+03	6.106E+06	4.481E+03
2035	1.495E+04	1.197E+07	1.644E+04	3.993E+03	5.985E+06	4.392E+03
2036	1.465E+04	1.173E+07	1.612E+04	3.914E+03	5.866E+06	4.305E+03
2037	1.436E+04	1.150E+07	1.580E+04	3.836E+03	5.750E+06	4.220E+03
2038	1.408E+04	1.127E+07	1.549E+04	3.760E+03	5.636E+06	4.136E+03
2039	1.380E+04	1.105E+07	1.518E+04	3.686E+03	5.525E+06	4.054E+03
2040	1.353E+04	1.083E+07	1.488E+04	3.613E+03	5.415E+06	3.974E+03
2041	1.326E+04	1.062E+07	1.458E+04	3.541E+03	5.308E+06	3.895E+03
2042	1.300E+04	1.041E+07	1.430E+04	3.471E+03	5.203E+06	3.818E+03
2043	1.274E+04	1.020E+07	1.401E+04	3.402E+03	5.100E+06	3.743E+03
2044	1.249E+04	9.998E+06	1.373E+04	3.335E+03	4.999E+06	3.669E+03
2045	1.224E+04	9.800E+06	1.346E+04	3.269E+03	4.900E+06	3.596E+03
2046	1.200E+04	9.606E+06	1.320E+04	3.204E+03	4.803E+06	3.525E+03
2047	1.176E+04	9.416E+06	1.293E+04	3.141E+03	4.708E+06	3.455E+03
2048	1.153E+04	9.229E+06	1.268E+04	3.079E+03	4.615E+06	3.387E+03
2049	1.130E+04	9.047E+06	1.243E+04	3.018E+03	4.523E+06	3.320E+03
2050	1.107E+04	8.868E+06	1.218E+04	2.958E+03	4.434E+06	3.254E+03
2051	1.085E+04	8.692E+06	1.194E+04	2.899E+03	4.346E+06	3.189E+03
2052	1.064E+04	8.520E+06	1.170E+04	2.842E+03	4.260E+06	3.126E+03
2053	1.043E+04	8.351E+06	1.147E+04	2.786E+03	4.176E+06	3.064E+03
2054	1.022E+04	8.186E+06	1.124E+04	2.731E+03	4.093E+06	3.004E+03
2055	1.002E+04	8.024E+06	1.102E+04	2.676E+03	4.012E+06	2.944E+03
2056	9.822E+03	7.865E+06	1.080E+04	2.624E+03	3.932E+06	2.886E+03
2057	9.627E+03	7.709E+06	1.059E+04	2.572E+03	3.855E+06	2.829E+03
2058	9.437E+03	7.556E+06	1.038E+04	2.521E+03	3.778E+06	2.773E+03
2059	9.250E+03	7.407E+06	1.017E+04	2.471E+03	3.703E+06	2.718E+03
2060	9.067E+03	7.260E+06	9.973E+03	2.422E+03	3.630E+06	2.664E+03
2061	8.887E+03	7.116E+06	9.776E+03	2.374E+03	3.558E+06	2.611E+03
2062	8.711E+03	6.975E+06	9.582E+03	2.327E+03	3.488E+06	2.560E+03
2063	8.539E+03	6.837E+06	9.393E+03	2.281E+03	3.419E+06	2.509E+03
2064	8.370E+03	6.702E+06	9.207E+03	2.236E+03	3.351E+06	2.459E+03
2065	8.204E+03	6.569E+06	9.024E+03	2.191E+03	3.285E+06	2.410E+03
2066	8.041E+03	6.439E+06	8.846E+03	2.148E+03	3.220E+06	2.363E+03
2067	7.882E+03	6.312E+06	8.670E+03	2.105E+03	3.156E+06	2.316E+03
2068	7.726E+03	6.187E+06	8.499E+03	2.064E+03	3.093E+06	2.270E+03
2069	7.573E+03	6.064E+06	8.330E+03	2.023E+03	3.032E+06	2.225E+03
2070	7.423E+03	5.944E+06	8.165E+03	1.983E+03	2.972E+06	2.181E+03
2071	7.276E+03	5.826E+06	8.004E+03	1.944E+03	2.913E+06	2.138E+03
2072	7.132E+03	5.711E+06	7.845E+03	1.905E+03	2.856E+06	2.096E+03
2073	6.991E+03	5.598E+06	7.690E+03	1.867E+03	2.799E+06	2.054E+03
2074	6.852E+03	5.487E+06	7.538E+03	1.830E+03	2.744E+06	2.013E+03
2075	6.717E+03	5.378E+06	7.388E+03	1.794E+03	2.689E+06	1.974E+03
2076	6.584E+03	5.272E+06	7.242E+03	1.759E+03	2.636E+06	1.934E+03
2077	6.453E+03	5.168E+06	7.099E+03	1.724E+03	2.584E+06	1.896E+03
2078	6.326E+03	5.065E+06	6.958E+03	1.690E+03	2.533E+06	1.859E+03
2079	6.200E+03	4.965E+06	6.820E+03	1.656E+03	2.482E+06	1.822E+03
2080	6.078E+03	4.867E+06	6.685E+03	1.623E+03	2.433E+06	1.786E+03
2081	5.957E+03	4.770E+06	6.553E+03	1.591E+03	2.385E+06	1.750E+03
2082	5.839E+03	4.676E+06	6.423E+03	1.560E+03	2.338E+06	1.716E+03
2083	5.724E+03	4.583E+06	6.296E+03	1.529E+03	2.292E+06	1.682E+03

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	(m ³ /year)	(short tons/year)	(Mg/year)	(m ³ /year)	(short tons/year)
2084	5.610E+03	4.492E+06	6.171E+03	1.499E+03	2.246E+06	1.648E+03
2085	5.499E+03	4.403E+06	6.049E+03	1.469E+03	2.202E+06	1.616E+03
2086	5.390E+03	4.316E+06	5.929E+03	1.440E+03	2.158E+06	1.584E+03
2087	5.284E+03	4.231E+06	5.812E+03	1.411E+03	2.115E+06	1.552E+03
2088	5.179E+03	4.147E+06	5.697E+03	1.383E+03	2.074E+06	1.522E+03
2089	5.076E+03	4.065E+06	5.584E+03	1.356E+03	2.032E+06	1.492E+03
2090	4.976E+03	3.984E+06	5.473E+03	1.329E+03	1.992E+06	1.462E+03
2091	4.877E+03	3.906E+06	5.365E+03	1.303E+03	1.953E+06	1.433E+03
2092	4.781E+03	3.828E+06	5.259E+03	1.277E+03	1.914E+06	1.405E+03
2093	4.686E+03	3.752E+06	5.155E+03	1.252E+03	1.876E+06	1.377E+03
2094	4.593E+03	3.678E+06	5.053E+03	1.227E+03	1.839E+06	1.350E+03
2095	4.502E+03	3.605E+06	4.953E+03	1.203E+03	1.803E+06	1.323E+03
2096	4.413E+03	3.534E+06	4.855E+03	1.179E+03	1.767E+06	1.297E+03
2097	4.326E+03	3.464E+06	4.758E+03	1.155E+03	1.732E+06	1.271E+03
2098	4.240E+03	3.395E+06	4.664E+03	1.133E+03	1.698E+06	1.246E+03
2099	4.156E+03	3.328E+06	4.572E+03	1.110E+03	1.664E+06	1.221E+03
2100	4.074E+03	3.262E+06	4.481E+03	1.088E+03	1.631E+06	1.197E+03
2101	3.993E+03	3.198E+06	4.393E+03	1.067E+03	1.599E+06	1.173E+03
2102	3.914E+03	3.134E+06	4.306E+03	1.046E+03	1.567E+06	1.150E+03
2103	3.837E+03	3.072E+06	4.220E+03	1.025E+03	1.536E+06	1.127E+03
2104	3.761E+03	3.011E+06	4.137E+03	1.005E+03	1.506E+06	1.105E+03
2105	3.686E+03	2.952E+06	4.055E+03	9.846E+02	1.476E+06	1.083E+03
2106	3.613E+03	2.893E+06	3.975E+03	9.651E+02	1.447E+06	1.062E+03
2107	3.542E+03	2.836E+06	3.896E+03	9.460E+02	1.418E+06	1.041E+03
2108	3.472E+03	2.780E+06	3.819E+03	9.273E+02	1.390E+06	1.020E+03
2109	3.403E+03	2.725E+06	3.743E+03	9.089E+02	1.362E+06	9.998E+02
2110	3.335E+03	2.671E+06	3.669E+03	8.909E+02	1.335E+06	9.800E+02
2111	3.269E+03	2.618E+06	3.596E+03	8.733E+02	1.309E+06	9.606E+02
2112	3.205E+03	2.566E+06	3.525E+03	8.560E+02	1.283E+06	9.416E+02
2113	3.141E+03	2.515E+06	3.455E+03	8.390E+02	1.258E+06	9.229E+02
2114	3.079E+03	2.466E+06	3.387E+03	8.224E+02	1.233E+06	9.047E+02
2115	3.018E+03	2.417E+06	3.320E+03	8.061E+02	1.208E+06	8.868E+02
2116	2.958E+03	2.369E+06	3.254E+03	7.902E+02	1.184E+06	8.692E+02
2117	2.900E+03	2.322E+06	3.190E+03	7.745E+02	1.161E+06	8.520E+02
2118	2.842E+03	2.276E+06	3.126E+03	7.592E+02	1.138E+06	8.351E+02
2119	2.786E+03	2.231E+06	3.065E+03	7.442E+02	1.115E+06	8.186E+02
2120	2.731E+03	2.187E+06	3.004E+03	7.294E+02	1.093E+06	8.024E+02
2121	2.677E+03	2.143E+06	2.944E+03	7.150E+02	1.072E+06	7.865E+02
2122	2.624E+03	2.101E+06	2.886E+03	7.008E+02	1.050E+06	7.709E+02
2123	2.572E+03	2.059E+06	2.829E+03	6.870E+02	1.030E+06	7.556E+02

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	(m ³ /year)	(short tons/year)	(Mg/year)	(m ³ /year)	(short tons/year)
1983	0	0	0	0	0	0
1984	9.677E+02	5.287E+05	1.064E+03	9.172E+00	2.559E+03	1.009E+01
1985	1.073E+03	5.863E+05	1.181E+03	1.017E+01	2.838E+03	1.119E+01
1986	1.170E+03	6.390E+05	1.287E+03	1.109E+01	3.093E+03	1.219E+01
1987	1.244E+03	6.796E+05	1.368E+03	1.179E+01	3.289E+03	1.297E+01
1988	1.312E+03	7.169E+05	1.444E+03	1.244E+01	3.470E+03	1.368E+01
1989	1.404E+03	7.668E+05	1.544E+03	1.330E+01	3.711E+03	1.463E+01
1990	1.499E+03	8.191E+05	1.649E+03	1.421E+01	3.964E+03	1.563E+01
1991	1.594E+03	8.705E+05	1.753E+03	1.510E+01	4.213E+03	1.661E+01
1992	1.678E+03	9.169E+05	1.846E+03	1.591E+01	4.438E+03	1.750E+01
1993	1.773E+03	9.684E+05	1.950E+03	1.680E+01	4.687E+03	1.848E+01
1994	1.894E+03	1.035E+06	2.083E+03	1.795E+01	5.008E+03	1.974E+01
1995	2.034E+03	1.111E+06	2.238E+03	1.928E+01	5.379E+03	2.121E+01
1996	2.195E+03	1.199E+06	2.414E+03	2.080E+01	5.803E+03	2.288E+01
1997	2.342E+03	1.280E+06	2.577E+03	2.220E+01	6.193E+03	2.442E+01
1998	2.505E+03	1.369E+06	2.756E+03	2.374E+01	6.624E+03	2.612E+01
1999	2.689E+03	1.469E+06	2.958E+03	2.548E+01	7.110E+03	2.803E+01
2000	2.884E+03	1.576E+06	3.173E+03	2.734E+01	7.626E+03	3.007E+01
2001	3.072E+03	1.678E+06	3.380E+03	2.912E+01	8.123E+03	3.203E+01
2002	3.306E+03	1.806E+06	3.637E+03	3.133E+01	8.742E+03	3.447E+01
2003	3.510E+03	1.918E+06	3.861E+03	3.327E+01	9.282E+03	3.660E+01
2004	3.685E+03	2.013E+06	4.054E+03	3.493E+01	9.745E+03	3.842E+01
2005	3.888E+03	2.124E+06	4.277E+03	3.685E+01	1.028E+04	4.053E+01
2006	4.102E+03	2.241E+06	4.512E+03	3.888E+01	1.085E+04	4.277E+01
2007	4.448E+03	2.430E+06	4.893E+03	4.216E+01	1.176E+04	4.637E+01
2008	4.789E+03	2.616E+06	5.268E+03	4.539E+01	1.266E+04	4.993E+01
2009	5.057E+03	2.763E+06	5.563E+03	4.793E+01	1.337E+04	5.272E+01
2010	5.266E+03	2.877E+06	5.792E+03	4.990E+01	1.392E+04	5.490E+01
2011	5.426E+03	2.964E+06	5.969E+03	5.143E+01	1.435E+04	5.657E+01
2012	5.570E+03	3.043E+06	6.127E+03	5.279E+01	1.473E+04	5.807E+01
2013	5.598E+03	3.058E+06	6.158E+03	5.306E+01	1.480E+04	5.836E+01
2014	5.666E+03	3.095E+06	6.233E+03	5.370E+01	1.498E+04	5.907E+01
2015	5.701E+03	3.115E+06	6.272E+03	5.404E+01	1.508E+04	5.944E+01
2016	5.761E+03	3.147E+06	6.338E+03	5.460E+01	1.523E+04	6.007E+01
2017	5.833E+03	3.187E+06	6.416E+03	5.528E+01	1.542E+04	6.081E+01
2018	5.915E+03	3.231E+06	6.506E+03	5.606E+01	1.564E+04	6.167E+01
2019	6.049E+03	3.304E+06	6.653E+03	5.733E+01	1.599E+04	6.306E+01
2020	6.173E+03	3.373E+06	6.791E+03	5.851E+01	1.632E+04	6.436E+01
2021	6.628E+03	3.621E+06	7.291E+03	6.282E+01	1.753E+04	6.910E+01
2022	7.074E+03	3.865E+06	7.782E+03	6.705E+01	1.871E+04	7.375E+01
2023	7.512E+03	4.104E+06	8.263E+03	7.119E+01	1.986E+04	7.831E+01
2024	7.940E+03	4.338E+06	8.734E+03	7.525E+01	2.099E+04	8.278E+01
2025	8.360E+03	4.567E+06	9.196E+03	7.923E+01	2.210E+04	8.716E+01
2026	8.772E+03	4.792E+06	9.649E+03	8.313E+01	2.319E+04	9.145E+01
2027	9.175E+03	5.012E+06	1.009E+04	8.696E+01	2.426E+04	9.566E+01
2028	9.571E+03	5.228E+06	1.053E+04	9.071E+01	2.531E+04	9.978E+01
2029	9.958E+03	5.440E+06	1.095E+04	9.438E+01	2.633E+04	1.038E+02
2030	1.034E+04	5.648E+06	1.137E+04	9.798E+01	2.734E+04	1.078E+02
2031	1.071E+04	5.851E+06	1.178E+04	1.015E+02	2.832E+04	1.117E+02
2032	1.108E+04	6.051E+06	1.218E+04	1.050E+02	2.929E+04	1.155E+02

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	(m ³ /year)	(short tons/year)	(Mg/year)	(m ³ /year)	(short tons/year)
2033	1.143E+04	6.246E+06	1.258E+04	1.084E+02	3.023E+04	1.192E+02
2034	1.118E+04	6.106E+06	1.229E+04	1.059E+02	2.955E+04	1.165E+02
2035	1.096E+04	5.985E+06	1.205E+04	1.038E+02	2.897E+04	1.142E+02
2036	1.074E+04	5.866E+06	1.181E+04	1.018E+02	2.839E+04	1.120E+02
2037	1.053E+04	5.750E+06	1.158E+04	9.976E+01	2.783E+04	1.097E+02
2038	1.032E+04	5.636E+06	1.135E+04	9.779E+01	2.728E+04	1.076E+02
2039	1.011E+04	5.525E+06	1.112E+04	9.585E+01	2.674E+04	1.054E+02
2040	9.913E+03	5.415E+06	1.090E+04	9.395E+01	2.621E+04	1.033E+02
2041	9.717E+03	5.308E+06	1.069E+04	9.209E+01	2.569E+04	1.013E+02
2042	9.524E+03	5.203E+06	1.048E+04	9.027E+01	2.518E+04	9.929E+01
2043	9.336E+03	5.100E+06	1.027E+04	8.848E+01	2.468E+04	9.733E+01
2044	9.151E+03	4.999E+06	1.007E+04	8.673E+01	2.420E+04	9.540E+01
2045	8.970E+03	4.900E+06	9.867E+03	8.501E+01	2.372E+04	9.351E+01
2046	8.792E+03	4.803E+06	9.671E+03	8.333E+01	2.325E+04	9.166E+01
2047	8.618E+03	4.708E+06	9.480E+03	8.168E+01	2.279E+04	8.985E+01
2048	8.447E+03	4.615E+06	9.292E+03	8.006E+01	2.234E+04	8.807E+01
2049	8.280E+03	4.523E+06	9.108E+03	7.847E+01	2.189E+04	8.632E+01
2050	8.116E+03	4.434E+06	8.928E+03	7.692E+01	2.146E+04	8.461E+01
2051	7.955E+03	4.346E+06	8.751E+03	7.540E+01	2.103E+04	8.294E+01
2052	7.798E+03	4.260E+06	8.578E+03	7.390E+01	2.062E+04	8.130E+01
2053	7.643E+03	4.176E+06	8.408E+03	7.244E+01	2.021E+04	7.969E+01
2054	7.492E+03	4.093E+06	8.241E+03	7.101E+01	1.981E+04	7.811E+01
2055	7.344E+03	4.012E+06	8.078E+03	6.960E+01	1.942E+04	7.656E+01
2056	7.198E+03	3.932E+06	7.918E+03	6.822E+01	1.903E+04	7.504E+01
2057	7.056E+03	3.855E+06	7.761E+03	6.687E+01	1.866E+04	7.356E+01
2058	6.916E+03	3.778E+06	7.608E+03	6.555E+01	1.829E+04	7.210E+01
2059	6.779E+03	3.703E+06	7.457E+03	6.425E+01	1.792E+04	7.067E+01
2060	6.645E+03	3.630E+06	7.309E+03	6.298E+01	1.757E+04	6.928E+01
2061	6.513E+03	3.558E+06	7.165E+03	6.173E+01	1.722E+04	6.790E+01
2062	6.384E+03	3.488E+06	7.023E+03	6.051E+01	1.688E+04	6.656E+01
2063	6.258E+03	3.419E+06	6.884E+03	5.931E+01	1.655E+04	6.524E+01
2064	6.134E+03	3.351E+06	6.747E+03	5.814E+01	1.622E+04	6.395E+01
2065	6.013E+03	3.285E+06	6.614E+03	5.698E+01	1.590E+04	6.268E+01
2066	5.893E+03	3.220E+06	6.483E+03	5.586E+01	1.558E+04	6.144E+01
2067	5.777E+03	3.156E+06	6.354E+03	5.475E+01	1.527E+04	6.022E+01
2068	5.662E+03	3.093E+06	6.229E+03	5.367E+01	1.497E+04	5.903E+01
2069	5.550E+03	3.032E+06	6.105E+03	5.260E+01	1.468E+04	5.786E+01
2070	5.440E+03	2.972E+06	5.984E+03	5.156E+01	1.438E+04	5.672E+01
2071	5.333E+03	2.913E+06	5.866E+03	5.054E+01	1.410E+04	5.559E+01
2072	5.227E+03	2.856E+06	5.750E+03	4.954E+01	1.382E+04	5.449E+01
2073	5.124E+03	2.799E+06	5.636E+03	4.856E+01	1.355E+04	5.341E+01
2074	5.022E+03	2.744E+06	5.524E+03	4.760E+01	1.328E+04	5.236E+01
2075	4.923E+03	2.689E+06	5.415E+03	4.665E+01	1.302E+04	5.132E+01
2076	4.825E+03	2.636E+06	5.308E+03	4.573E+01	1.276E+04	5.030E+01
2077	4.730E+03	2.584E+06	5.203E+03	4.483E+01	1.251E+04	4.931E+01
2078	4.636E+03	2.533E+06	5.100E+03	4.394E+01	1.226E+04	4.833E+01
2079	4.544E+03	2.482E+06	4.999E+03	4.307E+01	1.202E+04	4.737E+01
2080	4.454E+03	2.433E+06	4.900E+03	4.222E+01	1.178E+04	4.644E+01
2081	4.366E+03	2.385E+06	4.803E+03	4.138E+01	1.154E+04	4.552E+01
2082	4.280E+03	2.338E+06	4.707E+03	4.056E+01	1.132E+04	4.462E+01
2083	4.195E+03	2.292E+06	4.614E+03	3.976E+01	1.109E+04	4.373E+01

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	(m ³ /year)	(short tons/year)	(Mg/year)	(m ³ /year)	(short tons/year)
2084	4.112E+03	2.246E+06	4.523E+03	3.897E+01	1.087E+04	4.287E+01
2085	4.030E+03	2.202E+06	4.433E+03	3.820E+01	1.066E+04	4.202E+01
2086	3.950E+03	2.158E+06	4.346E+03	3.744E+01	1.045E+04	4.119E+01
2087	3.872E+03	2.115E+06	4.259E+03	3.670E+01	1.024E+04	4.037E+01
2088	3.796E+03	2.074E+06	4.175E+03	3.597E+01	1.004E+04	3.957E+01
2089	3.720E+03	2.032E+06	4.092E+03	3.526E+01	9.837E+03	3.879E+01
2090	3.647E+03	1.992E+06	4.011E+03	3.456E+01	9.642E+03	3.802E+01
2091	3.575E+03	1.953E+06	3.932E+03	3.388E+01	9.451E+03	3.727E+01
2092	3.504E+03	1.914E+06	3.854E+03	3.321E+01	9.264E+03	3.653E+01
2093	3.434E+03	1.876E+06	3.778E+03	3.255E+01	9.081E+03	3.580E+01
2094	3.366E+03	1.839E+06	3.703E+03	3.191E+01	8.901E+03	3.510E+01
2095	3.300E+03	1.803E+06	3.630E+03	3.127E+01	8.725E+03	3.440E+01
2096	3.234E+03	1.767E+06	3.558E+03	3.065E+01	8.552E+03	3.372E+01
2097	3.170E+03	1.732E+06	3.487E+03	3.005E+01	8.383E+03	3.305E+01
2098	3.108E+03	1.698E+06	3.418E+03	2.945E+01	8.217E+03	3.240E+01
2099	3.046E+03	1.664E+06	3.351E+03	2.887E+01	8.054E+03	3.176E+01
2100	2.986E+03	1.631E+06	3.284E+03	2.830E+01	7.895E+03	3.113E+01
2101	2.927E+03	1.599E+06	3.219E+03	2.774E+01	7.738E+03	3.051E+01
2102	2.869E+03	1.567E+06	3.156E+03	2.719E+01	7.585E+03	2.991E+01
2103	2.812E+03	1.536E+06	3.093E+03	2.665E+01	7.435E+03	2.931E+01
2104	2.756E+03	1.506E+06	3.032E+03	2.612E+01	7.288E+03	2.873E+01
2105	2.702E+03	1.476E+06	2.972E+03	2.560E+01	7.143E+03	2.817E+01
2106	2.648E+03	1.447E+06	2.913E+03	2.510E+01	7.002E+03	2.761E+01
2107	2.596E+03	1.418E+06	2.855E+03	2.460E+01	6.863E+03	2.706E+01
2108	2.544E+03	1.390E+06	2.799E+03	2.411E+01	6.727E+03	2.652E+01
2109	2.494E+03	1.362E+06	2.743E+03	2.364E+01	6.594E+03	2.600E+01
2110	2.445E+03	1.335E+06	2.689E+03	2.317E+01	6.463E+03	2.548E+01
2111	2.396E+03	1.309E+06	2.636E+03	2.271E+01	6.335E+03	2.498E+01
2112	2.349E+03	1.283E+06	2.584E+03	2.226E+01	6.210E+03	2.449E+01
2113	2.302E+03	1.258E+06	2.532E+03	2.182E+01	6.087E+03	2.400E+01
2114	2.257E+03	1.233E+06	2.482E+03	2.139E+01	5.967E+03	2.353E+01
2115	2.212E+03	1.208E+06	2.433E+03	2.096E+01	5.848E+03	2.306E+01
2116	2.168E+03	1.184E+06	2.385E+03	2.055E+01	5.733E+03	2.260E+01
2117	2.125E+03	1.161E+06	2.338E+03	2.014E+01	5.619E+03	2.216E+01
2118	2.083E+03	1.138E+06	2.291E+03	1.974E+01	5.508E+03	2.172E+01
2119	2.042E+03	1.115E+06	2.246E+03	1.935E+01	5.399E+03	2.129E+01
2120	2.001E+03	1.093E+06	2.202E+03	1.897E+01	5.292E+03	2.087E+01
2121	1.962E+03	1.072E+06	2.158E+03	1.859E+01	5.187E+03	2.045E+01
2122	1.923E+03	1.050E+06	2.115E+03	1.822E+01	5.084E+03	2.005E+01
2123	1.885E+03	1.030E+06	2.073E+03	1.786E+01	4.984E+03	1.965E+01

APPENDIX B

Operating Permit Application Forms

Title V Operating Permit Application Form

This form must be included with any application submittal to the Title V Operating Permit Unit

Title V Operating
Permit Number:

090PRO329

Plant AIRS ID
Number:

107 - 0057

1. Instructions

Included on the Colorado Air Pollution Control Division Website is an instruction sheet (Form OP-50A) for this application form. Refer to the instruction sheet or contact the Division with questions. Attach a cover letter describing the purpose of the application package if more room is needed. Any form with missing information may be determined administratively incomplete and may result in inability to grant the application shield of Regulation No. 3, Part C, Section II.B. **Note that if using copy and paste; the applicant must paste as plain text. See "General Instructions" document for more details.**

2. Permit Application Type (check all that apply)

☐	Initial	☒	Renewal - Identify any requested changes below or in a cover letter.
☐	Significant Modification	☐	Administrative Modification (e.g. transfer of ownership, correct typographical error, etc.)
☐	Minor Modification - The Minor Modification worksheet (Form OP-201) must also be completed if a source wishes to use the procedures under Colorado Regulation No. 3, Part C, Section X.		
☐	Notification of Construction Permit Exempt Unit (APCD PS Memo 09-01, Scenario #7)	☐	Title V Billing Contact Update
☐	Responsible Official Update	☐	Supplemental Information (describe): Click here to enter text.
☐	Other (describe): Click here to enter text.		

3. General Description - Include brief description describing the purpose of the application package. If more detail is needed, provide in cover letter.

General Description of package	The purpose of this application package is to renew the existing Title V Permit. In general, emission sources are being renewed as-is with no changes. The solidification basin is being removed. See additional detail in the application narrative.
--------------------------------	---

4. Additional Information

A. Initial and Renewal Applications

☒ Check this box if you are submitting an initial or renewal application. For all other application types, proceed to Section 4.B.

If you are submitting an initial or renewal application, provide the application due date. See Colorado PS-Memo 09-01 for help with Title V Operating Permit application due dates.

Application Due Date: August 1, 2020

Basis for Application Due Date (Initial Permits Only): [Click here to enter text.](#)

B. APEN Attachments

Enclose a copy of the most current complete Air Pollution Emission Notice(s) (APENs) on file with the Division. New/revised APENs are required if the facility is requesting a modification that requires a new APEN or changes information on a previously submitted APEN.

☐ New or Revised APENs have been included with this submittal (filing fees must be included)

☒ **Required** – Copies of all applicable APENs have been included (no filing fees are needed for these APEN copies).

C. Confidential/Trade Secret Information

Check the following box if any confidential/trade secret information has been submitted with this application. **The pages including confidential information must clearly be labeled as confidential.**

See PS Memo 98-01 for acceptable confidential information submittals.

☐ This application includes confidential information on the following pages: [Click here to enter text.](#)

D. Submittal

The Division is requiring one hardcopy submittal mailed to the APCD (with any wet signatures required; see instruction documents for details) and one electronic copy submittal emailed to APCD. The electronic submittal **MUST** be submitted in word format (either .doc or .docx) to cdphe_apcd_title_V@state.co.us. **For legal purposes, the date the signed hardcopy is received by the Division is considered the date received, not when the electronic copy is emailed.**

E. Oil and Gas Sources

If this facility is associated with Oil & Gas activities, Form OP-202 must be completed if the facility is submitting an initial application or the facility is requesting changes to oil and gas equipment and must be submitted for the application to be considered complete. Oil and Gas SIC codes include, but are not limited to, 1311, 1321, and 4922.

☐ Form OP-202 has been included with this application.

☒ This facility is not an oil and gas facility, and/or the facility is not requesting any changes to the oil and gas equipment.

F. Modeling

If an emission unit will have to go through modeling as part of a permit action, OP-204 must be completed and attached to the corresponding OP-300 series form. If the applicant has already filled out the optional air quality modeling form as part of the modeling process, the applicant may attach that form in lieu of OP-204. For information about the modeling process, see the page titled "Air Quality Modeling Guidance for Permits" on the Division webpage.

☐ Form OP-204 has been completed and attached.

☐ A copy of the optional air quality modeling form has been attached.

☒ This facility did not trigger modeling requirements.



5. Signature of Responsible Official

A. Statement of Completeness

☒ I have reviewed this application in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this application are true, accurate and complete.

B. Certification of Facility Compliance Status With Federal and State Enforceable Conditions

☒ I certify that the facility described in this air pollution permit application is fully in compliance with all applicable requirements, including compliance certification requirements and any applicable compliance assurance monitoring.

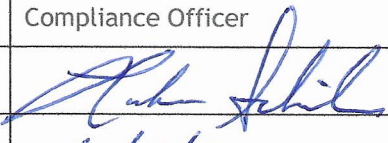
☐ I certify that the facility described in this air pollution permit application is fully in compliance with all applicable requirements, except for the following emissions unit(s) identified below:
Click here to enter text.

C. Certification of Facility Compliance Status With State-Only Enforceable Conditions

☐ I certify that the facility described in this air pollution permit application is fully in compliance with all applicable requirements.

☒ I certify that the facility described in this air pollution permit application is fully in compliance with all applicable requirements, except for the following emissions unit(s) identified below:
Permit Section IV, Item 19 requires that operating permit renewal applications must be submitted at least 12 months prior to expiration. This application was not submitted prior to the deadline. The resolution to this deviation is submission of this application. This deviation has not yet been reported because the deviation did not occur until August 1, 2020 for which a compliance report has not yet come due. (Regulation No. 3,5 CCR 1001-5, Part C, §§ III.B.6., IV.C., V.C.2.)

WARNING: Any person who knowingly, as defined in § 18-1-501(6), C.R.S., makes any false material statement, representation, or certification in, or omits material information from this application is guilty of a misdemeanor and may be punished in accordance with the provisions of § 25-7 122.1, C.R.S.

Responsible Official Name or Other ¹	Luke Schneider
Title	Compliance Officer
Signature ²	
Date	10/5/20

¹For the following applications, a signature of a Legally Authorized Person (not a vendor or consultant) is acceptable: Notification of Construction Permit Exempt Unit, Billing contact update, Responsible Official update, and Supplemental Information submittal. **For these application types, a Legally Authorized Person must only certify with Section 5.A (5.B and 5.C certifications are not needed).**

²This document requires a "wet signature," electronic signatures will not be accepted.

SEND MATERIALS TO:

Colorado Dept. of Public Health & Environment
APCD-SS-B1
ATTN: Title V Unit Supervisor



General Facility & Contact Information Form

Title V Operating
Permit Number: 090PRO329

Plant AIRS ID
Number: 107 - 0057

1. Instructions

Included on the Colorado Air Pollution Control Website is an instruction sheet (Form OP-100A) for this application form. Refer to the instruction sheet or contact the Division with questions. Any form with missing information may be determined administratively incomplete and may result in inability to grant the application shield of Regulation No. 3, Part C, Section II.B. **Note that if using copy and paste; the applicant must paste as plain text. See "General Instructions" document for more details.**

2. Facility Name and Physical Address

Company Name	Twin Landfill Corporation
Facility Name	Milner Landfill
Address 1	20650 RCR 205
Address 2	Enter the facility physical address (No PO Boxes).
City	Milner
County	Routt
State and Zip Code	CO 80487

3. Parent Company Name and Mailing Address

Name	Twin Landfill Corporation
Address 1	P.O. Box 774362
Address 2	Enter Parent Facility Address line 2, if applicable.
City	Steamboat Springs
State and Zip Code	CO 80477

4. Billing/Accounts Payable for Title V Operating Permit Fees

Invoices are issued quarterly to recover costs associated with processing Title V Operating Permit applications. The Division may send invoices via email and/or US Mail. Update the contact information immediately upon any change to avoid additional penalties due to nonpayment. Billing contact information for other Division fees can be updated via an Air Pollution Emission Notice (for hourly fees associated with construction permit processing) or by following the instructions on the annual emission fee invoice for fees associated with annual pollutant emissions.

Contact Name	Luke Schneider
Title	Compliance Officer
Email	lschneider @twinenviro.com
Telephone	(970) 879-6985
Address	P.O. Box 774362 Steamboat Springs, CO 80477

5. Responsible Official - See instruction sheet for information on Responsible Official requirements.

Name	Luke Schneider
Title	Compliance Officer
Email	lschneider@twinenviro.com
Telephone	(970) 879-6985
Address	P.O. Box 774362 Steamboat Springs, CO 80477

6. Permit Contact Person

Name	Luke Schneider
Title	Compliance Officer
Email	lschneider@twinenviro.com
Telephone	(970) 879-6985
Address	P.O. Box 774362 Steamboat Springs, CO 80477

7. Correspondence Options - Select the correspondence option associated with the processing of the Title V Operating Permit for the facility.

- ☒ Permit Contact Person Only
- ☐ Copy Responsible Official (formal letters only)
- ☐ Copy Responsible Official (include all files, draft permits, etc.)
- ☐ Provide additional copies to others (attach contact information, including email addresses)

8. Facility Information

A. Business Activity of facility:	Solid Waste Landfill		
B. SIC Code:	4953	C. NAICS Code:	562212
D. Is the facility located in a nonattainment area?	☐ Yes ☒ No	E. If yes on D, check the designated nonattainment pollutant(s)	☐ CO ☐ Ozone ☐ PM ₁₀ ☐ Other (specify): Click here to enter text.
F. Is this facility subject to the provisions governing prevention of accidental release of hazardous air pollutants contained in section 112(r)(7) of the Clean Air Act?:			☐ Yes ☒ No If yes, has a RMP been registered? ☐ Yes ☐ No
G. Is the facility subject to the Acid Rain Provisions of Title IV?	☐ Yes ☒ No	H. If yes on G, is a complete new or renewal Acid Rain permit application included?	☐ Yes ☐ No

[illegible]

10. Prevention of Significant Deterioration (PSD) and Non-Attainment New Source Review (NANSR)

A. Is this facility a listed source for the purposes of Prevention of Significant Deterioration (PSD) for which the source would be considered major at 100 tons per year? (See Colorado Regulation 3 Part A Section II.A.25.a.(i))	☐ Yes ☒ No If yes, describe: Click here to enter text.
B. Is this facility a major stationary source for the purposes of the Prevention of Significant Deterioration (PSD) program? (Potential to Emit $\geq$ 250 Tons/Year or 100 Tons/Year if listed source)	☐ Yes ☒ No If yes, enter pollutants: Click here to enter text.
C. Is this facility a major stationary source for the purposes of the Non-Attainment New Source Review (NANSR) program? (Potential to Emit above thresholds listed in Colorado Regulation 3, Part D, Section II.A.25.b)	☐ Yes ☒ No If yes, enter pollutants: Click here to enter text.

11. Reporting

Facilities are required to submit semiannual Monitoring and Deviation reports and annual Compliance Certifications (these reports are included as appendices in the operating permit). For the calendar year reporting period (see below), reports are required by the end of the month following the end of the semiannual or annual periods respectively; e.g., Monitoring and Deviation reports would be due on July 31 and January 31, and the Compliance Certification would be due on January 31. The applicant may elect to alter the reporting date ranges below. Note that the requested reporting periods must be every 6 months for the Monitoring and Deviation report, and every 12 months for the compliance certification.

☐ *Calendar year periods as follows:

Monitoring and Deviation report: January 1 - June 30, July 1 - December 31

Compliance Certifications: January 1 - December 31

☒ Reporting periods will align with issued permit

i.e. if the operating permit is issued in May, annual compliance period will be May 1 - April 30

☐ *Alternate reporting period (specify): [Click here to enter text.](#)

*Note that if the applicant selects one of these options and the permit is issued on any month other than January or July, there will be shortened reporting periods to "catch up" to the default period. The applicant will be informed of any shortened periods with the issuance letter.

Source and Site Description

Title V Operating
Permit Number: **090PRO329**

Plant AIRS ID
Number: **107 - 0057**

1. Instructions

Included on the Colorado Air Pollution Control Website is an instruction sheet (Form OP-101A) for this source and site description form. Refer to the instruction sheet or contact the Division with questions. Any form with missing information may be determined administratively incomplete and may result in inability to grant the application shield of Regulation No. 3, Part C, Section II.B. Renewal and modification applications for equipment already included in the Title V permit are allowed to only complete portions of the form affected by the modification. **Note that if using copy and paste; the applicant must paste as plain text. See "General Instructions" document for more details.**

2. Site Description

Describe the units to be permitted and the activities at the facility. If additional space is needed, attach an additional description.

The Milner Landfill is an MSW landfill, SIC 4953, located in Routt County, Colorado. The Landfill emits landfill gas and fugitive particulate emissions generated from activities at the landfill. The facility includes a compost operation with engines used for screening and grinding composting material. A liquid waste solidification basin was historically operated, but ceased operation October 2019 and should be removed from the Operating Permit.

3. Site Information

Site Location Description
(Include instructions needed to drive to remote sites not identified by street addresses)

The facility is located at 20650 RCR 205 in Routt County, approximately 1.2 miles southwest of Milner, Colorado.

Neighboring state(s) and Tribal programs within a 50 mile radius of the facility (check all that apply)

- | | |
|---|-----------------------------------|
| ☐ Arizona | ☐ Nebraska |
| ☐ Utah | ☐ Kansas |
| ☒ Wyoming | ☐ Oklahoma |
| ☐ New Mexico | ☐ Texas |
| ☐ Southern Utes | |

Class I and II Federal areas within a 100 kilometer radius of the facility (check all that apply)

To find this information, use the link to the data viewer provided in the instruction sheet.

- | | |
|---|--|
| ☒ Mount Zirkel Wilderness | ☐ Rawah Wilderness |
| ☒ Flat Tops Wilderness | ☐ Rocky Mountain National Park |
| ☐ West Elk Wilderness | ☐ Eagles Nest Wilderness |
| ☐ La Garita Wilderness | ☐ Maroon Bells Snowmass Wilderness |
| ☐ Mesa Verde National Park | ☐ Black Canyon of the Gunnison Wilderness |
| ☐ Great Sand Dunes National Park | ☐ Weminuche Wilderness |
| ☐ Florissant Fossil Beds National Monument | ☐ Great Sand Dunes National Preserve |
| ☐ Dinosaur National Monument | ☐ Colorado National Monument |

	☐ Uncompahgre Mountain	☐ Wilson Mountain
Required Safety Equipment (check all that apply)	☒ Hard Hat ☒ Safety Shoes ☒ Gloves ☒ Eye Protection	☒ Hearing Protection ☐ Flame Retardant Clothing ☐ H ₂ S Monitor ☐ Other (describe): Click here to enter text.
Collocation Information	Is this facility collocated with another facility? ☐ Yes ☒ No If yes, list other facility operating permit number(s) (if applicable) and AIRS ID(s): Click here to enter text.	

4. Required Attachments – The following must be attached in order for the application to be considered administratively complete:

- ☒ Facility Plot Plan (plan view) – The Division will not accept blueprint sized drawings
 - Include all buildings occupied by or located on the site of the facility and any outdoor process layout
 - Identify location of emission units
- ☒ Process Flow Diagram (PFD) (if applicable)
 - Identify emission units

Insignificant Activities

Title V Operating
Permit Number:

09OPRO329

Plant AIRS ID
Number: 107 - 0057

1. Instructions

Included on the Colorado Air Pollution Control Website is an instruction sheet (Form OP-105A) for this insignificant activities form. Refer to the instruction sheet or contact the Division with questions.

Review the exemptions listed and determine if any of the insignificant activities described operate at the facility. In the "additional information" column, using the checkboxes, indicate "Yes" or "No" if this insignificant activity operates at the facility. If "Yes", complete any additional questions that and/or fill out any associated tables. If more space is needed in the table(s), attach additional information.

Note that the Operating Permit exemptions listed below do not apply if the emission unit is subject to any specific federal or state applicable requirements such as a New Source Performance Standard (NSPS), National Emission Standard for Hazardous Air Pollutants (e.g. MACT), and/or Colorado Regulation No. 7. Units subject to specific federal or state applicable requirements must submit the proper application forms and have the applicable requirements reflected in the Operating Permit. See Colorado Regulation No. 3, Part C, Section II.E for more details.

Potential to Emit (PTE) for insignificant activities is typically estimated using the maximum design/emission rate of the emission unit operating at 8760 hours per year, or 500 hours/year for emergency engines. **Note that if using copy and paste; the applicant must paste as plain text. See "General Instructions" document for more details.**

2. Exemptions

2.A. Starred Insignificant Activities

Sources are required to include a list of insignificant activities in their permit applications if the insignificant activities are marked with an asterisk in Colorado Regulation No. 3, Part C, Section II.E. The asterisk denotes an insignificant activity source category based on the size of the activity, emissions levels from the activity or the production rate of the activity. The owner or operator of individual these emission points must maintain sufficient record keeping verifying that the exemption applies.

Insignificant Activity	Regulatory Citation	Additional Information		
*Units with emissions less than APEN de minimis - criteria pollutants.	Regulation 3 Part C.II.E.3.a	☒ Yes ☐ No		
		Name of Unit	PTE (indicate highest pollutant only)	Location
		1,000-gal methanol AST	VOC/Methyl alcohol: 187 lb/yr	See Figure 2
		Unit	Example- VOC: 50 lbs/yr	Location
		Unit	PTE	Location
		Unit	PTE	Location
		Unit	PTE	Location
		Unit	PTE	Location
		Unit	PTE	Location



*Research laboratories.	Regulation 3 Part C.II.E.3.i	☐ Yes ☒ No		
		*If yes, is it of a small pilot scale and that process less than ten thousand pounds of test material per year? ☐ Yes ☐ No		
		*If yes, is it less than six months in duration with controlled actual emissions less than five hundred pounds of any criteria pollutant or ten pounds of any non-criteria reportable pollutant? ☐ Yes ☐ No		
*Disturbance of surface areas for purposes of land development, that do not exceed twenty-five contiguous acres and that do not exceed six months in duration.	Regulation 3 Part C.II.E.3.j	☐ Yes ☒ No		
		Describe: Click here to enter text.		
*Each individual piece of fuel burning equipment, other than smokehouse generators and internal combustion engines, that uses gaseous fuel, and that has a design rate less than or equal to five million British thermal units per hour.	Regulation 3 Part C.II.E.3.k	☐ Yes ☒ No		
		Name of Unit	Design Rate (MMBtu/hr)	Location
		Unit	Capacity	Location
		Unit	Capacity	Location
		Unit	Capacity	Location
		Unit	Capacity	Location
		Unit	Capacity	Location
		Unit	Capacity	Location
*Petroleum industry flares, not associated with refineries, combusting natural gas containing no hydrogen sulfide except in trace amounts, approved by the COGCC and having uncontrolled emissions of any pollutant of less than five tons per year.	Regulation 3 Part C.II.E.3.m	☐ Yes ☒ No		
		Describe: Click here to enter text.		
*Chemical storage tanks or containers that hold less than five hundred gallons, that have an annual average throughput less than twenty-five gallons per day, and are not associated with either oil and gas production wastewater or commercial facilities that accept oil production wastewater for processing.	Regulation 3 Part C.II.E.3.n	☐ Yes ☒ No		
		Chemical Storage Tanks	Capacity (gal)	Location
		Unit	Capacity	Location
		Unit	Capacity	Location
		Unit	Capacity	Location
		Unit	Capacity	Location
		Unit	Capacity	Location



*Landscaping and site housekeeping devices equal to or less than ten horsepower in size (lawnmowers, trimmers, snow blowers, etc.).	Regulation 3 Part C.II.E.3.bb	☐ Yes ☒ No			
*Crude oil loading truck equipment at exploration and production sites where the loading rate does not exceed 10,000 gallons of crude oil per day averaged on an annual basis. Condensate truck loading equipment at exploration and production sites that splash fill less than 6750 barrels of condensate per year or that submerge fill less than 16308 barrels of condensate per year.	Regulation 3 Part C.II.E.3.ee	☐ Yes ☒ No			
		Describe: Click here to enter text.			
*Chemical storage areas where chemicals are stored in closed containers, and where total storage capacity does not exceed five thousand gallons.	Regulation 3 Part C.II.E.3.mm	☐ Yes ☒ No			
		Chemical Storage Areas	Capacity (gal)	Location	
		Unit	Capacity	Location	
		Unit	Capacity	Location	
		Unit	Capacity	Location	
		Unit	Capacity	Location	
		Unit	Capacity	Location	
		Unit	Capacity	Location	
*Venting of compressed natural gas, butane or propane gas cylinders, with a capacity of one gallon or less.	Regulation 3 Part C.II.E.3.bbb	☐ Yes ☒ No			
*Fuel storage and dispensing equipment in ozone attainment areas operated solely for company-owned vehicles where the daily fuel throughput is no more than four hundred gallons per day, averaged annually. Sources in an ozone attainment/maintenance area must utilize Stage 1 vapor recovery on all tanks greater than five hundred and fifty gallons capacity, as required by Regulation Number 7, in order to take this exemption.	Regulation 3 Part C.II.E.3.ccc	☐ Yes ☒ No			
		Equipment	Daily Fuel Throughput (gal/day)	Fuel Type	Location
		Unit	Throughput	Type	Location
		Unit	Throughput	Type	Location
		Unit	Throughput	Type	Location
		Unit	Throughput	Type	Location
		Unit	Throughput	Type	Location
		Unit	Throughput	Type	Location
Is the equipment subject to NESHAP CCCCCC? ☐ Yes ☐ No					
*Storage tanks meeting all of	Regulation	☒ Yes ☐ No			



the following criteria: (1) Annual throughput is less than four hundred thousand gallons; and (2) The liquid stored is one of the following: (i) Diesel fuels 1-D, 2-D, or 4-6; (ii) Fuel oils #1 - #6; (iii) As turbine fuels 1 - GT through 4 - GT; (iv) An oil/water mixture with a vapor pressure less than or equal to that of diesel fuel (Reid vapor pressure of .025 psia).	3 Part C.II.E.3.fff	<table border="1"> <thead> <tr> <th>Tank</th> <th>Capacity (gal)</th> <th>Throughput (gal/yr)</th> <th>Type of Liquid Stored</th> <th>Location</th> </tr> </thead> <tbody> <tr> <td>Off-road diesel AST</td> <td>2000</td> <td>24,000</td> <td>diesel</td> <td>See Figure 2</td> </tr> <tr> <td>On-road diesel AST</td> <td>2000</td> <td>24,000</td> <td>diesel</td> <td>See Figure 2</td> </tr> <tr> <td>Unit</td> <td>Capacity</td> <td>Throughput</td> <td>Type</td> <td>Location</td> </tr> <tr> <td>Unit</td> <td>Capacity</td> <td>Throughput</td> <td>Type</td> <td>Location</td> </tr> <tr> <td>Unit</td> <td>Capacity</td> <td>Throughput</td> <td>Type</td> <td>Location</td> </tr> <tr> <td>Unit</td> <td>Capacity</td> <td>Throughput</td> <td>Type</td> <td>Location</td> </tr> <tr> <td>Unit</td> <td>Capacity</td> <td>Throughput</td> <td>Type</td> <td>Location</td> </tr> <tr> <td>Unit</td> <td>Capacity</td> <td>Throughput</td> <td>Type</td> <td>Location</td> </tr> </tbody> </table>			Tank	Capacity (gal)	Throughput (gal/yr)	Type of Liquid Stored	Location	Off-road diesel AST	2000	24,000	diesel	See Figure 2	On-road diesel AST	2000	24,000	diesel	See Figure 2	Unit	Capacity	Throughput	Type	Location	Unit	Capacity	Throughput	Type	Location	Unit	Capacity	Throughput	Type	Location	Unit	Capacity	Throughput	Type	Location	Unit	Capacity	Throughput	Type	Location	Unit	Capacity	Throughput	Type	Location
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Unit	Capacity	Throughput	Type	Location																																													
Unit	Capacity	Throughput	Type	Location																																													
*Surface mining activities that mine seventy thousand tons or fewer of product material per year. A fugitive dust control plan is required for such sources. Crushers, screens and other processing equipment activities are not included in this exemption.	Regulation 3 Part C.II.E.3.qqq	☐ Yes ☒ No Describe: Click here to enter text.																																															
*Stationary internal combustion engines.	Regulation 3 Part C.II.E.3.xxx	Note that if you have filled out the engine exemption in Regulation 3 Part C.II.E.3.nnn below do not duplicate in this list Do you have engines that are less than or equal to 175 horsepower which operate less than 1,450 hours per year? ☐ Yes ☒ No Do you have engines that are greater than 175 horsepower and less than or equal to 300 horsepower which operate less than 850 hours per year? ☐ Yes ☒ No Do you have engines that are greater than 300 horsepower and less than or equal to 750 horsepower which operate less than 340 hours per year? ☐ Yes ☒ No <table border="1"> <thead> <tr> <th>Name of Unit</th> <th>PTE (indicate highest pollutant only)</th> <th>Horsepower</th> </tr> </thead> <tbody> </tbody> </table>			Name of Unit	PTE (indicate highest pollutant only)	Horsepower																																										
Name of Unit	PTE (indicate highest pollutant only)	Horsepower																																															





		Unit	Example- NOx: 100 lbs/yr	Horsepower	
		Unit	Example- NOx: 100 lbs/yr	Horsepower	
		Unit	PTE	Horsepower	
		Unit	PTE	Horsepower	
		Unit	PTE	Horsepower	
		Are any of these engines subject to NESHAP ZZZZ, NSPS IIII, or NSPS JJJJ? ☐ Yes ☐ No			
*Chemical storage tanks.	Regulation 3 Part C.II.E.3. eeee	Does your facility have sulfuric acid storage tanks not to exceed ten thousand five hundred gallons capacity? ☐ Yes ☒ No			
		Does your facility have sodium hydroxide storage tanks? ☐ Yes ☒ No			
		Tanks	Capacity (gallons)	Type of Liquid Stored	Location
		Unit	Capacity	Type	Location
		Unit	Capacity	Type	Location
		Unit	Capacity	Type	Location
		Unit	Capacity	Type	Location
		Unit	Capacity	Type	Location
		Unit	Capacity	Type	Location
*Any condensate storage tank with a production rate of 730 barrels per year or less or condensate storage tanks that are manifold together with a production rate of 730 barrels per year or less that are owned and operated by the same person, and are located at exploration and production sites.	Regulation 3 Part C.II.E.3. gggg	☐ Yes ☒ No			
		Tanks	Throughput (bbl/yr)	Location	
		Unit	Throughput	Location	
		Unit	Throughput	Location	
		Unit	Throughput	Location	
		Unit	Throughput	Location	
		Unit	Throughput	Location	
		Unit	Throughput	Location	
Are any of these tanks subject to NSPS K, Ka, or Kb? ☐ Yes ☐ No					
2.B. Common Insignificant Activities					
The Division strongly suggests reporting the following common insignificant activities. However, it is not required to complete this section. Using the checkboxes, indicate "Yes" if this insignificant activity operates at the facility. If "Yes", complete any additional questions that and/or fill out any associated tables.					
Units with emissions less than APEN de minimis – non-criteria pollutants.	Regulation 3 Part C.II.E.3.b	☒ Yes			
		Name of Unit	PTE (indicate highest pollutant only)	Location	





		1,000-gal methanol AST	Methanol: 187 lb/yr	See Figure 2
		Unit	Example- Acrolein: 50 lbs/yr	Location
		Unit	PTE	Location
		Unit	PTE	Location
		Unit	PTE	Location
Fireplaces used for recreational purposes, inside or outside.	Regulation 3 Part C.II.E.3.d	☐ Yes		
Emissions from, or construction, or alteration of residential structures, including all buildings or other structures used primarily as a place of residence, and including home heating devices.	Regulation 3 Part C.II.E.3.h	☐ Yes		
Internal combustion engines powering portable drilling rigs.	Regulation 3 Part C.II.E.3.i	☐ Yes		
Open burning activities.	Regulation 3 Part C.II.E.3.q	☐ Yes		
Aerosol can usage.	Regulation 3 Part C.II.E.3.u	☐ Yes		
Storage of butane, propane, or liquefied petroleum gas in a vessel with a capacity of less than sixty thousand gallons, provided the requirements of Regulation Number 7, Section IV (<i>now Part B, Section II</i>) are met, where applicable.	Regulation 3 Part C.II.E.3.zz	☒ Yes		
Storage tanks of capacity less than forty thousand gallons of lubricating oils or waste lubricating oils.	Regulation 3 Part C.II.E.3.aaa	☒ Yes		
Each individual piece of fuel burning equipment that uses gaseous fuel, and that has a design rate less than or equal to ten million British thermal units per hour, and that is used solely for heating buildings for personal comfort.	Regulation 3 Part C.II.E.3.ggg	☒ Yes		
		Describe: One 0.299 MMBtu/hr propane boiler located in the New Shop & One 0.324 MMBtu/hr propane boiler located in the Old Shop		





Stationary internal combustion engines.	Regulation 3 Part C.II.E.3.nnn	Note that if you have filled out the engine exemption in Regulation 3 Part C.II.E.3.xxx above do not duplicate in this list		
		Do you have power portable drilling rigs? ☐ Yes		
		Do you have emergency power generators that operate no more than two hundred fifty hours per year? ☐ Yes		
		Do you have engines that have uncontrolled actual emissions less than five tons per year or manufacturer's site-rated horsepower of less than fifty? ☐ Yes		
		Name of Unit	PTE (indicate highest pollutant only)	Horsepower
		Unit	Example- NOx: 100 lbs/yr	Horsepower
		Unit	Example- Acrolein: 50 lbs/yr	Horsepower
		Unit	PTE	Horsepower
		Unit	PTE	Horsepower
		Are any of these engines subject to NESHAP ZZZZ, NSPS IIII, or NSPS JJJJ? ☐ Yes ☐ No		
Gasoline stations located in ozone attainment areas.	Regulation 3 Part C.II.E.3.ppp	☐ Yes		
Surface water storage impoundment of non-potable water and storm water evaporation ponds, with the exceptions of impoundment of oil and gas production wastewater (including produced water tanks) and commercial facilities that accept oil and gas production wastewater for processing.	Regulation 3 Part C.II.E.3.yyy	☒ Yes		
Wet screening operations notwithstanding the applicability of the New Source Performance Standards included in the Code of Federal Regulations, Title 40, Part 60, Subpart 000.	Regulation 3 Part C.II.E.3.ffff	☐ Yes		
		Are these screening operations subject to NSPS 000? ☐ Yes ☐ No		

2.C. Other Insignificant Activities





Use the space below to report any other noteworthy insignificant activities that the facility would like listed in the permit. Include the name of the exemption, regulation citation (from Regulation 3 Part C Section II.E), name of unit, and any other information the facility would like to add. Attach additional pages as needed to report other insignificant activities.

Compost Piles	C.II.E.3.rrr	Compost Piles	Click here to enter additional information.
Asbestos acceptance in landfill	C.II.E.2	Asbestos	



APPENDIX C

Existing APENs

341926



MUNICIPAL SOLID WASTE LANDFILLS

Air Pollutant Emission Notice (APEN) - and- Application for Construction Permit

All sections of this APEN and application must be completed for both new and existing facilities, including APEN updates. An application with missing information may be determined incomplete and may be returned to you or result in longer engineer processing times. You will be charged an additional APEN fee if APEN is filled out incorrectly or missing information and requires re-submittal.

Requested Action:

- ☐ New Landfill, Apply for Construction Permit ☐ Transfer of Ownership¹ ☐ Change Company Name ☒ Change in Waste Acceptance
- ☐ Change in Design Capacity ☐ APEN Update ☒ Request Other Permit Modification

¹Note: For transfer of ownership or company name change, you must submit proof of ownership transfer (e.g., Transfer of Ownership Form signed by the previous owner or a copy of a Bill of Sale with this form).

PERMIT NUMBER: 02RO0124 FACILITY AIRS ID: 107 | 0057 | 001

~~02RO~~

0909RO329

SECTION 01 – ADMINISTRATIVE INFORMATION

Landfill Name: Twin Landfill Corporation - Milner Landfill County: Routt

Landfill Address: 20650 County Rd. 205

Steamboat Springs, CO Zip Code: 80487

Billing Address: PO Box 774362

Steamboat Springs, CO Zip Code: 80477

Person to Contact: Luke Schneider Phone Number: 970-879-6985

Contact Email Address: lschneider@twinenviro.com Fax Number: 815-377-2495

Landfill Owner: Les Liman Phone Number: _____

Address of Owner: 20650 County Rd. 205

Steamboat Springs, CO Zip Code: 80487

Landfill Operator (if different): same Phone Number: _____

Landfill Operator Address: _____ Zip Code: _____

SECTION 02 – GENERAL INFORMATION

Landfill:	Approximate Date	Comments
☒ Commenced construction on (Existing):	1983	
☐ Will commence construction on (New):		
☐ Was closed on:		
☐ Projected closure date:		



MUNICIPAL SOLID WASTE LANDFILLS

SECTION 03 – DESIGN CAPACITY INFORMATION

Select the appropriate scenario below:

- ☐ New or Previously unreported landfill.
 ☐ Complete the "Design Capacity Report Form" and submit it with this APEN.
 ☐ Date the Certificate of Designation was approved: _____
- ☐ Change to a previously reported design capacity.
 ☐ Complete the "Design Capacity Report Form" and submit it with this APEN.
 ☐ Date the Certificate of Designation was approved: _____
- ☒ No change to design capacity.
 ☐ Date the most recent Design Capacity Report Form was submitted: Feb. 2009

List the Landfill Design Capacity in both volume and mass²:

7,623,062 m³ 4,430,967 Megagrams (Mg)

If you are reporting a change in design capacity, list the new capacity here²:

_____ m³ _____ Megagrams (Mg)

²Calculate m³ by multiplying yd³ by 0.7646. Calculate Mg by multiplying tons by 0.907.

Landfill is subject to (check all that apply):

- ☐ NSPS Subpart Cc ☒ NSPS WWW
- ☒ Title V ☐ NESHAP Subpart AAAAA ☐ Other _____

SECTION 04 – WASTE ACCEPTANCE INFORMATION

This landfill measures solid waste acceptance in:

- ☒ Tons
- ☐ Cubic yards (Specify Gate Volume or In Place Volume): _____
- ☐ Other (please explain): _____

Specify the types of materials that are or would be accepted at the landfill. For each type, list the actual waste acceptance rate and the requested permit limit. (e.g., fly ash, petroleum contaminated soils, non-degradable material...)

Type of Materials Accepted (List)	Actual Annual Waste Acceptance Rate (include units) Reporting Year: 2014	Requested Annual Permit Acceptance Limit (include units)
Municipal Solid Waste	44,685 tons	175,000 tons/year



MUNICIPAL SOLID WASTE LANDFILLS

Beginning with the year the landfill opened, list the total waste acceptance amount for each year or submit the LandGEM waste acceptance data with this APEN. Specify units.

If any acceptance rates are estimated, attach documentation that demonstrates how acceptance rates were calculated.

Year	Waste Accepted	Year	Waste Accepted	Year	Waste Accepted
☒ LandGEM data has been submitted with this APEN.					

Note: The APCD is currently using AP-42 Section 2.4 to estimate landfill gas emissions. The Landfill Gas Emissions Model (LandGEM) is based on this AP-42 section and can be used to provide this information. .

SECTION 05 – OTHER LANDFILL ACTIVITIES

Check appropriate box(es) below to indicate other activities and/or equipment at the landfill that may require submission of a separate APEN form.

☒	Composting (describe activity): Most recent APEN submittal was December 2012.
☐	Engine(s)/Generator(s) (specify type):
☐	Leachate (on-site use):
☐	Parts Washer (describe activity):
☐	Sand & Gravel Operations (describe activity):
☒	Solidification Basin (describe activity): Most recent APEN submittal was February 2014.
☐	Other (specify activity/equipment):

SECTION 06 – FLARE INFORMATION (if not applicable mark N/A)

Type of Equipment ³	Equipment ID	Manufacturer	Make	Model Number	Serial No.

³ Submit additional sheets if necessary.

Fuel Type	Design Input Rate (10 ⁶ Btu/hr)	Actual Fuel Usage Level (for data year)	Fuel Heating Value (indicate units)
Landfill Gas			



MUNICIPAL SOLID WASTE LANDFILLS

SECTION 06- continued:

Flare Stack ID No.	Base Elevation (feet)	Discharge Height Above Ground Level (feet)	Temp. (°F)	Flow Rate (ACFM)	Velocity (ft/sec)	Moisture (%)

Horizontal Datum (NAD27, NAD83, WGS84)	UTM Zone (12 or 13)	UTM Easting or Longitude (meters or degrees)	UTM Northing or Latitude (meters or degrees)

Direction of outlet (check one):

- ☐ Vertical
- ☐ Vertical with obstruction rain cap
- ☐ Horizontal
- ☐ Down
- ☐ Other

Exhaust Opening Shape & Size (check one):

- ☐ Circular: Inner Diameter (inches) = _____
- ☐ Other: Length (inches) = _____ Width (inches) = _____

MUNICIPAL SOLID WASTE LANDFILLS

SECTION 07 – EMISSIONS INVENTORY INFORMATION

Note: Attach a copy of LandGEM with this APEN form. Sources may have approved site-specific values based on performance testing; attach this information with the APEN form, if applicable.

Reporting Year (e.g., 2010):							2014		
Pollutant	Type of Control Equipment	Overall Collection Efficiency	Control Efficiency	EF (Include Units)	EF Source	Actual Calendar Year Emissions		Requested Emissions ⁴ (Permit Limits)	
						Uncontrolled (tpy)	Controlled (tpy)	Uncontrolled (tpy)	Controlled (tpy)
PM	fugitive emissions control plan	NA	50%	refer to engineering report	AP-42 13.2	40.1	20.1	156	78
PM-10	fugitive emissions control plan	NA	50%	refer to engineering report	AP-42 13.2	10.9	5.4	42.2	21.1
PM-2.5	fugitive emissions control plan	NA	50%	refer to engineering report	AP-42 13.2	1.1	0.5	4.2	2.1
VOC	NA	NA	NA	NA	LandGEM	6.94	NA	15.21	NA
SO ₂ ⁵	NA	NA	NA	NA	NA	NA	NA	NA	NA
NOx ⁵	NA	NA	NA	NA	NA	NA	NA	NA	NA
CO ⁵	NA	NA	NA	NA	LandGem	1.2	NA	2.4	NA

⁴Permit limits for flare(s) will be based on the year with maximum emissions, even if after closure.
⁵Emissions Inventory information above includes emissions from combustion sources (e.g., flares).





MUNICIPAL SOLID WASTE LANDFILLS

SECTION 08 – FUGITIVE DUST CONTROL MEASURES

(Report fugitive emissions and controls at the landfill under normal operating conditions during the reporting year).

1. ONSITE HAULING, AND LOADING/UNLOADING

Vehicle Type	No. of Vehicles	Time Period (# vehicles per month)	Loaded Vehicle Weight (tons)	Empty Vehicle Weight (tons)	Length of Haul Road One Way (feet)
Commercial Trash Truck	7,476	623	43	28	3,960 feet
Private	NA	NA	NA	NA	NA
List maximum posted speed limit on haul roads (miles/hour):					15 mph

CONTROLS: (Check all that apply)

☒	Watering	☐	Graveled surfaces		
☐	Paved surfaces	☐	Chemical stabilizer		
☐	Other (Specify):				

2. SOIL HANDLING/REMOVAL

Maximum: **3,500** tons per year

CONTROLS: (Check all that apply)

☒	Moist materials		
☒	Water	☐	Others (specify)

3. DISTURBED AREA

Total Area of Site (Acres):	58.8	
Total Disturbed Area of Site (Acres):	20	

CONTROLS:

☒	Watering	☒	Compaction
☒	Revegetation	☐	Other (Specify):

SECTION 09 – APPLICANT CERTIFICATION

Signature of Legally Authorized Person (not a vendor or consultant)

12/4/2015

Date

Marlin Mullet, Chief Executive Officer

Name (please print)

Title

Check the appropriate box if you want:

- ☒ Copy of the Preliminary Analysis conducted by the Division
- ☒ To review a draft of the permit prior to issuance

(Checking any of these boxes may result in an increased fee and/or processing time)

Colorado Department of Public Health and Environment
Air Pollution Control Division



MUNICIPAL SOLID WASTE LANDFILLS

Send this form along with **\$152.90** to:
Telephone: (303) 692-3150

Colorado Department of Public Health and Environment
Air Pollution Control Division
APCD-SS-B1
4300 Cherry Creek Drive South
Denver, CO 80246-1530

The Small Business Assistance Program (SBAP) is available to help you complete this form. SBAP services are free and confidential. Please contact the SBAP if you need assistance at (303) 692-3175 or 3148.

NON-CRITERIA REPORTABLE AIR POLLUTANT EMISSION NOTICE ADDENDUM

(See reverse side for guidance on completing this form)

Permit Number: 02RO0124

AIRS ID Number: 1070057001

Company Name: Twin Landfill Corporation - Milner Landfill

Plant Location: 20650 County Rd 205

County: Routt

Zip Code: 80487

Person to Contact: Luke Schneider

Phone Number: 970-879-6985

E-mail Address: lschneider@twinenviro.com

Fax Number: 815-377-2495

Chemical Abstract Service (CAS) Number	Chemical Name	Control Equipment / Reduction (%)	Emission Factor (Include Units)	Emission Factor Source	Uncontrolled Actual Emissions (lbs/year)	Controlled Actual Emissions (lbs/year)
71432	Benzene	NA	NA	LandGEM	497	NA
75092	Dichloromethane (meth)	NA	NA	LandGEM	681	NA
100414	Ethylbenzene	NA	NA	LandGEM	280	NA
110543	Hexane	NA	NA	LandGEM	326	NA
127184	Perchloroethylene (tetra)	NA	NA	LandGEM	351	NA
108883	Toluene	NA	NA	LandGEM	8972	NA
75014	Vinyl Chloride	NA	NA	LandGEM	261	NA
1330207	Xylenes	NA	NA	LandGEM	730	NA

Calendar Year for which Actual Data Applies: 2014

Signature of Person Legally Authorized to Supply Data

Marlin Mullet

Name of Person Legally Authorized to Supply Data (Please print)



Date

Chief Executive Officer

Title of Person Legally Authorized to Supply Data

GUIDANCE FOR NON-CRITERIA REPORTABLE AIR POLLUTANT EMISSION NOTICE ADDENDUM

Non-Criteria Reportable Air Pollutant Emission Notice Addendum: This form must be filed for each emission point (individual or grouped) that has uncontrolled actual emissions equal to or greater than 250 pounds per year of any non-criteria reportable pollutant listed in Regulation 3, Appendix B.

Permit Number: For New Permit Applications leave this blank. For modifications to existing permits, please list the permit number previously issued by the APCD.

AIRS ID Number: For a new Air Pollutant Emission Notice (APEN) or new Permit Applications leave this blank. For modifications to existing APEN/permits, please list the emissions point AIRS ID number previously issued by the APCD.

Chemical Abstract Service (CAS) Number and Chemical Name: Please list the CAS number and common chemical name for each non-criteria reportable air pollutant that is emitted from this emission point. A list of CAS numbers and common chemical names may be found in Regulation 3, Appendix B. This can also be found on the chemical Safety Data Sheet (SDS)

Control Equipment / Reduction (%): Please list the type of control equipment used (i.e. SCR, NSCR, Flare, Thermal Oxidizer, etc.) and report the minimum percent reduction achieved by the control equipment.

Emission Factor: If applicable, please list the emission factor used to calculate the emission rates listed in the actual emission columns.

Emission Factor Source: Example emission factor sources include: AP-42, GRI HAP Calc., EPA TANKS, GRI GLY Calc., Manufacturer's Emission Factor, and Mass Balance.

Uncontrolled Actual Emissions: Enter the actual uncontrolled data year (projected first year emissions for new sources) emissions (lbs/year) from the reported emission point excluding any emission reduction achieved by control equipment.

Controlled Actual Emissions: If emissions are controlled, enter the actual controlled data year (projected first year emissions for new sources) emissions (lbs/year) from the reported emission point including the emission reduction listed in the "Control Equipment Reduction (%)" column. Enter "N/A" if the emissions are uncontrolled.

SUBMITTAL OF THIS ADDENDUM MUST BE ACCOMPANIED BY AN AIR POLLUTANT EMISSION NOTICE (APEN)

All sections of the APEN and Addendum must be completed for both new and existing facilities, including APEN updates. An application with missing information may be determined incomplete and may be returned to you or result in longer engineer processing times. Please note there is an APEN filing fee. You may be charged an additional APEN fee if the APEN or Addendum is filled out incorrectly or missing information and requires re-submittal.

Copies of this form may be obtained on the Internet under Construction Permit Forms and APENS: <http://www.colorado.gov/cdphe/apcd>



General APEN – Form APCD-200

Air Pollutant Emission Notice (APEN) and
Application for Construction Permit



All sections of this APEN and application must be completed for both new and existing facilities, including APEN updates. An application with missing information may be determined incomplete and may be returned or result in longer application processing times. *You may be charged an additional APEN fee if the APEN is filled out incorrectly or is missing information and requires re-submittal.*

There may be a more specific APEN for your source (e.g. paint booths, mining operations, engines, etc.). A list of specialty APENs is available on the Air Pollution Control Division (APCD) website at:
www.colorado.gov/cdphe/apcd.

This emission notice is valid for five (5) years. Submission of a revised APEN is required 30 days prior to expiration of the five-year term, or when a reportable change is made (significant emissions increase, increase production, new equipment, change in fuel type, etc). See Regulation No. 3, Part A, II.C. for revised APEN requirements.

Permit Number: 18R00850
~~090PRO329~~ AIRS ID Number: 107 / 0057 / ~~001~~ 005

[Leave blank unless APCD has already assigned a permit # and AIRS ID]

Section 1 - Administrative Information

Company Name¹: Twin Landfill Corporation

Site Name: Milner Landfill

Site Location: 1.2 mi SW of Milner and 12 mi W of
Steamboat Springs on US Hwy 40

Site Location
County: Routt

NAICS or SIC Code: 562212

Mailing Address:
(Include Zip Code) P.O. Box 774362
Steamboat Springs, CO 80477

Permit Contact: Luke Schneider

Phone Number: 970-879-6985

Portable Source
Home Base: _____

E-Mail Address²: Lschneider@twinenviro.com

¹ Use the full, legal company name registered with the Colorado Secretary of State. This is the company name that will appear on all documents issued by the APCD. Any changes will require additional paperwork.

² Permits, exemption letters, and any processing invoices will be issued by APCD via e-mail to the address provided.

372188

Permit Number: **09OPRO329**

AIRS ID Number: **107 / 0057 / 001**

[Leave blank unless APCD has already assigned a permit # and AIRS ID]

Section 2- Requested Action

☐ **NEW permit OR newly-reported emission source** (check one below)

☐ STATIONARY source

☐ PORTABLE source

- OR -

☐ **MODIFICATION to existing permit** (check each box below that applies)

☐ Change fuel or equipment

☐ Change company name

☐ Add point to existing permit

☒ Change permit limit

☐ Transfer of ownership³

☐ Other (describe below)

- OR -

☐ **APEN submittal for update only** (Blank APENs will not be accepted)

- ADDITIONAL PERMIT ACTIONS -

☐ **Limit Hazardous Air Pollutants (HAPs) with a federally-enforceable limit on Potential To Emit (PTE)**

☐ **APEN submittal for permit exempt/grandfathered source**

Additional Info & Notes:

³ For transfer of ownership, a completed Transfer of Ownership Certification Form (Form APCD-104) must be submitted.

Section 3 - General Information

General description of equipment and purpose: Compostable organic material (feedstock) is processed into a nutrient rich soil amendment through microbial decomposition.

Manufacturer: _____ Model No.: _____ Serial No.: _____

Company equipment Identification No. (optional): _____

For existing sources, operation began on: 11/1/2008

For new or reconstructed sources, the projected start-up date is: _____

☐ Check this box if operating hours are 8,760 hours per year; if fewer, fill out the fields below:

Normal Hours of Source Operation: 6 hours/day 6 days/week 52 weeks/year

Seasonal use percentage: Dec-Feb: _____ Mar-May: _____ Jun-Aug: _____ Sep-Nov: _____

Permit Number: 09OPRO329

AIRS ID Number: 107 /0057 / 001

[Leave blank unless APCD has already assigned a permit # and AIRS ID]

Section 4 - Processing/Manufacturing Information & Material Use☐ Check box if this information is not applicable to source or processFrom what year is the *actual annual amount*? 2016

	Description	Design Process Rate (Specify Units)	Actual Annual Amount (Specify Units)	Requested Annual Permit Limit ⁴ (Specify Units)
Material Consumption:	Feedstock	N/A	11,550 cubic yards	16,000 cubic yards
Finished Product(s):	Compost	N/A	2,890 cubic yards	4,000 cubic yards

⁴ Requested values will become permit limitations. Requested limit(s) should consider future process growth.**Section 5 - Stack Information**

Geographical Coordinates (Latitude/Longitude or UTM)
40.474359, -107.039901

☒ Check box if the following information is not applicable to the source because emissions will not be emitted from a stack. If this is the case, the rest of this section may remain blank.

Operator Stack ID No.	Discharge Height Above Ground Level (Feet)	Temp. (°F)	Flow Rate (ACFM)	Velocity (ft/sec)

Indicate the direction of the stack outlet: (check one)

- ☐ Upward ☐ Downward ☐ Upward with obstructing raincap
☐ Horizontal ☐ Other (describe): _____

Indicate the stack opening and size: (check one)

- ☐ Circular Interior stack diameter (inches): _____
☐ Square/rectangle Interior stack width (inches): _____ Interior stack depth (inches): _____
☐ Other (describe): _____

Permit Number: 09OPRO329

AIRS ID Number: 107 /0057/ 001

[Leave blank unless APCD has already assigned a permit # and AIRS ID]

Section 6 - Combustion Equipment & Fuel Consumption Information

☒ Check box if this information is not applicable to the source (e.g. there is no fuel-burning equipment associated with this emission source)

Design Input Rate (MMBTU/hr)	Actual Annual Fuel Use (Specify Units)	Requested Annual Permit Limit ⁴ (Specify Units)

From what year is the *actual annual fuel use* data? _____Indicate the type of fuel used⁵:☐ Pipeline Natural Gas (assumed fuel heating value of 1,020 BTU/SCF)☐ Field Natural Gas Heating value: _____ BTU/SCF☐ Ultra Low Sulfur Diesel (assumed fuel heating value of 138,000 BTU/gallon)☐ Propane (assumed fuel heating value of 2,300 BTU/SCF)☐ Coal Heating value: _____ BTU/lb Ash Content: _____ Sulfur Content: _____☐ Other (describe): _____ Heating value (give units): _____⁴ Requested values will become permit limitations. Requested limit(s) should consider future process growth.⁵ If fuel heating value is different than the listed assumed value, provide this information in the "Other" field.**Section 7 - Criteria Pollutant Emissions Information**

Attach all emission calculations and emission factor documentation to this APEN form.

Is any emission control equipment or practice used to reduce emissions? ☐ Yes ☒ No

If yes, describe the control equipment AND state the overall control efficiency (% reduction):

Pollutant	Control Equipment Description	Overall Collection Efficiency	Overall Control Efficiency (% reduction in emissions)
TSP (PM)			
PM ₁₀			
PM _{2.5}			
SO _x			
NO _x			
CO			
VOC			
Other:			

[Leave blank unless APCD has already assigned a permit # and AIRS ID]

Section 7 (continued)From what year is the following reported *actual annual emissions* data? 2016Use the following table to report the criteria pollutant emissions from source:
(Use the data reported in Sections 4 and 6 to calculate these emissions.)

Pollutant	Uncontrolled Emission Factor (Specify Units)	Emission Factor Source (AP-42, Mfg. etc)	Actual Annual Emissions		Requested Annual Permit Emission Limit(s) ⁴	
			Uncontrolled (Tons/year)	Controlled ⁶ (Tons/year)	Uncontrolled (Tons/year)	Controlled (Tons/year)
TSP (PM)	N/A	N/A	N/A	N/A	N/A	N/A
PM ₁₀	N/A	N/A	N/A	N/A	N/A	N/A
PM _{2.5}	N/A	N/A	N/A	N/A	N/A	N/A
SO _x	N/A	N/A	N/A	N/A	N/A	N/A
NO _x	N/A	N/A	N/A	N/A	N/A	N/A
CO	N/A	N/A	N/A	N/A	N/A	N/A
VOC	5.71 lbs/ton	APCD	16	0	23	6
Other:						

⁴ Requested values will become permit limitations. Requested limit(s) should consider future process growth.⁶ Annual emission fees will be based on actual controlled emissions reported. If source has not yet started operating, leave blank.**Section 8 - Non-Criteria Pollutant Emissions Information**Does the emissions source have any uncontrolled actual emissions of non-criteria pollutants (e.g. HAP- hazardous air pollutant) emissions equal to or greater than 250 lbs/year? ☐ Yes ☒ No

If yes, use the following table to report the non-criteria pollutant (HAP) emissions from source:

CAS Number ⁸	Chemical Name	Overall Control Efficiency	Uncontrolled Emission Factor (specify units)	Emission Factor Source (AP-42, Mfg. etc)	Uncontrolled Actual Emissions (lbs/year)	Controlled Actual Emissions ⁶ (lbs/year)

⁶ Annual emission fees will be based on actual controlled emissions reported. If source has not yet started operating, leave blank.

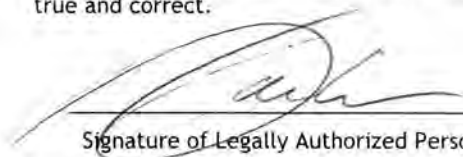
Permit Number: **09OPRO329**

AIRS ID Number: **107 / 0057 / 001**

[Leave blank unless APCD has already assigned a permit # and AIRS ID]

Section 9 - Applicant Certification

I hereby certify that all information contained herein and information submitted with this application is complete, true and correct.



Signature of Legally Authorized Person (not a vendor or consultant)

11/30/2017

Date

Marlin Mullet

Chief Executive Officer

Name (print)

Title

Check the appropriate box to request a copy of the:

- ☐ Draft permit prior to issuance
☐ Draft permit prior to public notice

(Checking any of these boxes may result in an increased fee and/or processing time)

This emission notice is valid for five (5) years. Submission of a revised APEN is required 30 days prior to expiration of the five-year term, or when a reportable change is made (significant emissions increase, increase production, new equipment, change in fuel type, etc). See Regulation No. 3, Part A, II.C. for revised APEN requirements.

Send this form along with \$152.90 to:

For more information or assistance call:

Colorado Department of Public Health and Environment
Air Pollution Control Division
APCD-SS-B1
4300 Cherry Creek Drive South
Denver, CO 80246-1530

Small Business Assistance Program
(303) 692-3175 or (303) 692-3148

Or visit the APCD website at:

Make check payable to:
Colorado Department of Public Health and Environment

<https://www.colorado.gov/cdphe/apcd>

Telephone: (303) 692-3150



golder.com



Tracking Details

A3768100457

Updated: 10/06/2020 12:58 P.M. EST

Delivered



Delivered On

Tuesday
10/06/2020

Delivery Time

at 10:38 A.M.

Send Updates

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DENVER, CO, US

Left At: Mail Room

Received By: DELGADO

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