Received
August 17, 2021
WV DEP/Div of Air Quality

Division of Air Quality Permit Application Submittal

Please find attached a permit application for : Short Creek Landfill; Ohio County, Short Creek, WV
[Company Name; Facility Location]

- DAQ Facility ID (for existing facilities only): 03-54-069-00071
- Current 45CSR13 and 45CSR30 (Title V) permits associated with this process (for existing facilities only): R30-06900071-2017

- Type of NSR Application (check all that apply):
  - ☐ Construction
  - ☐ Modification
  - ☐ Class I Administrative Update
  - ☐ Class II Administrative Update
  - ☐ Relocation
  - ☐ Temporary
  - ☐ Permit Determination

- Type of 45CSR30 (TITLE V) Application:
  - ☐ Title V Initial
  - ☑ Title V Renewal
  - ☐ Administrative Amendment**
  - ☐ Minor Modification**
  - ☐ Significant Modification**
  - ☐ Off Permit Change

****If the box above is checked, include the Title V revision information as ATTACHMENT S to the combined NSR/Title V application.**

- Payment Type:
  - ☐ Credit Card (Instructions to pay by credit card will be sent in the Application Status email.)
  - ☑ Check (Make checks payable to: WVDEP – Division of Air Quality)
    Mail checks to:
    WVDEP – DAQ – Permitting
    Attn: NSR Permitting Secretary
    601 57th Street, SE
    Charleston, WV 25304

Please wait until DAQ emails you the Facility ID Number and Permit Application Number. Please add these identifiers to your check or cover letter with your check.

- If the permit writer has any questions, please contact (all that apply):
  - ☐ Responsible Official/Authorized Representative
    - Name:
    - Email:
    - Phone Number:
  - ☐ Company Contact
    - Name:
    - Email:
    - Phone Number:
  - ☑ Consultant
    - Name: Mike Contestabile
    - Email: mcontestabile@wcgrp.com
    - Phone Number: (412) 287-0549

August 12, 2021

0120-700-76-01

TITLE V RENEWAL APPLICATION

AMERICAN DISPOSAL SERVICES OF WEST VIRGINIA, INC. (SHORT CREEK LANDFILL)

258 NORTH FORK

SHORT CREEK, WV 26003

PREPARED BY

Weaver Consultants Group

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1 FACILITY INFORMATION

The Short Creek Landfill (Short Creek) is an existing solid waste disposal facility located in Short Creek, West Virginia. Short Creek accepts municipal and other wastes in accordance with its operating permit (No. SWF-1034/WV0109517) issued by the West Virginia Department of Environmental Protection (WV DEP). Short Creek Landfill is owned and operated by American Disposal Services of West Virginia, Inc. is located in Short Creek, Ohio County, West Virginia.

Per current operating license, the Short Creek Landfill contains three existing separate fill areas, as follows:

- 01-C1: The area filled to final grade, closed and capped, Older Construction and Demolition Debris Waste Area, is approximately 11 acres without an active gas collection and control system (GCCS). This landfill was previously known as the North Fork Landfill.

- 01-C2: The area filled to final grade, closed and capped, Existing Landfill, is approximately 34 acres with an active GCCS.

- 01-A1: The active waste filling area, New Landfill, currently includes approximately 56.7 constructed acres of landfill footprint.

The Title V Permit to Operate was issued to the facility with Permit Number R30-06900071-2017 effective March 16, 2017 and currently regulates air emissions from Short Creek. The Title V Permit will expire on March 2, 2022. Therefore, an administratively complete Title V renewal application must be submitted to the WV DEP must be submitted no later than September 2, 2021. The application submitted herewith requests the renewal of Title V Permit for the Short Creek Landfill.

1.1 Site Details

Short Creek (NAICS 562212, SIC 4953) is a non-hazardous municipal solid waste (MSW) landfill that began operation in approximately 1986. The site consists of 280 acres of permitted area, including 113 acres of permitted disposal area. Of the 113 acres, 34 acres make up the closed landfill and 79 acres make up the active landfill. Currently 56.7 acres of the 79 acres of active area have been developed.

The landfill has a total design capacity of approximately 12.57 million Mg of MSW and consists of two segregated fill areas designated Landfill A and Landfill B. Waste placement in Landfill A began in approximately 1986 and continued through 2000. The total MSW placement in this area (Landfill A) is approximately 2.71 million Mg.

Landfill A encompasses approximately 34 acres and is a certified closed and capped pre-Subtitle D disposal area, underlain by a natural clay liner, with a compacted clay soil cover. Landfill A has two separate areas; one consists of 11 acres of construction/ demolition/debris (CDD) waste area, which has no GCCS components. The second portion of Landfill A is MSW disposal area, approximately 23 acres; an active GCCS is installed and operating in this area. Waste placement in Landfill B began in 2001 and is expected to continue through 2046, given the current rate of waste acceptance.

Landfill B has a MSW capacity of approximately 9.85 million Mg. The total permitted area for waste disposal in Landfill B is approximately 79 acres. Currently, 56.7acres have been developed, underlain by a double composite base liner system. The final cover system for Landfill B will consist of a composite geosynthetic/low permeability soil barrier.

Short Creek receives approximately 250,000 tons of waste per year. The landfill currently accepts municipal solid waste and, in the past, also accepted CDD waste. Site operations include disposal of solid waste, compaction of same, and daily cover with native soil. Site waste decomposes and generates methane and non-methane VOCs.

1.2 Process Description

The main process at Short Creek is landfilling of non-hazardous MSW. This process is identified as emission units 01-C1 (closed CDD waste area), 01-C2 (closed existing landfill area), and 01-A1 (active disposal area) in the Title V Permit. A landfill consists of an area of land that has been permitted and constructed according to solid waste regulations for the acceptance and disposal of solid waste materials.

Waste is hauled to the landfill by a waste carrying truck or other vehicles. Waste acceptance typically occurs by waste hauling trucks carrying waste material to the landfill "active face". The active face is an approximate 0.25-acre area on any given day. The location varies throughout the landfill as operations progress. As the waste is unloaded from the waste carrying vehicles, it is moved to its final location by bulldozers and densified in place by compactor units.

Landfilling involves covering the refuse at the end of the day with soil or approved alternate daily cover (tarps or other inert materials as approved by the WV DEP) thereby creating anaerobic conditions for refuse decomposition. As the waste decomposes within the landfill, a composite gas consisting primarily of methane and carbon dioxide is produced. Methane is not a regulated air pollutant; however, the landfill gas also contains small amounts of non-methane organic compounds (NMOC), volatile organic compounds (VOC) and hazardous air pollutants (HAPs), which are regulated air pollutants. In essence, the degradation process is analogous to that occurring in a sewage sludge digestor; the major difference is that optimum conditions for methane production are rarely encountered in a landfill. Gas generation volumes vary over the landfill life but generally increase year to year until a peak volume is reached shortly after landfill closure. Landfill gas emissions are minimized by placing daily, intermediate, and final soil cover on the waste to help prevent the gases from migrating out of the landfill.

Emissions of particulate matter (PM), particulate matter with an aerometric diameter less than 10 micrometers (PM_{10}), and particulate matter with an aerometric diameter less than 2.5 micrometers ($PM_{2.5}$), are generated by vehicles traveling on paved and unpaved roads located throughout the landfill. These emissions are generated by trucks bringing refuse and construction materials to the landfill face on paved and unpaved roads. Emissions associated with the truck traffic are identified as emission unit 01-P1 (paved roadways) and 01-UP1 (unpaved roadways) in the Title V Permit.

1.3 Applicable Regulations

Short Creek is required by the New Source Performance Standards (NSPS), being 40 CFR 60 Subpart XXX, and the National Emission Standard for Hazardous Air Pollutants (NESHAPs), being 40 CFR 63 Subpart AAAA, to install a GCCS because NMOC emissions exceed 34 Mg/yr and 50 Mg/year (respectively). Currently, the GCCS at Short Creek includes one (1) open flare, approximately 63 gas extraction wells, three (3) horizontal collectors, connections to seven (7) leachate cleanout risers, and two (2) leachate manholes. The open flare is designed to process a maximum of 2,500 standard cubic feet per minute (scfm) of landfill gas.

1.4 Changes Since Last Renewal

Since the pervious Title V Permit was issued, Short Creek wishes to remove the Rock Crusher from the Title V Permit. The facility no longer owns a rock crusher. If a facility rock crusher is to be used in the future, Short Creek will complete the necessary

permitting as a new emission unit for the facility. A markup of the current Title V Permit is included with this application.

2 GENERAL APPLICATION FORMS

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street SE
Charleston, WV 25304
Phone: (304) 926-0475
www.dep.wv.gov/daq

Received
August 17, 2021
WV DEP/Div of Air Quality

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

1. **Name of Applicant (As registered with the WV Secretary of State's Office):**
American Disposal Services of West Virginia, Inc.

2. Facility Name or Location:
Short Creek Landfill

3. DAQ Plant ID No.:
069 -- 00071

4. Federal Employer ID No. (FEIN):
540691997

5. **Permit Application Type:**

☐ Initial Permit — When did operations commence? 10/01/1986
☑ Permit Renewal — What is the expiration date of the existing permit? 3/2/2022
☐ Update to Initial/Renewal Permit Application

6. Type of Business Entity:

☑ Corporation ☐ Governmental Agency ☐ LLC
☐ Partnership ☐ Limited Partnership

7. Is the Applicant the:

☐ Owner ☐ Operator ☑ Both

If the Applicant is not both the owner and operator, please provide the name and address of the other party.

8. Number of onsite employees: 9

9. Governmental Code:

☑ Privately owned and operated; 0
☐ Federally owned and operated; 1
☐ State government owned and operated; 2
☐ County government owned and operated; 3
☐ Municipality government owned and operated; 4
☐ District government owned and operated; 5

10. Business Confidentiality Claims

Does this application include confidential information (per 45CSR31)? ☐ Yes ☑ No

If yes, identify each segment of information on each page that is submitted as confidential, and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's *"PRECAUTIONARY NOTICE-CLAIMS OF CONFIDENTIALITY"* guidance.

11. Mailing Address		
Street or P.O. Box: 258 North Fork Road		
City: Short Creek	**State:** WV	**Zip:** 26003 -
Telephone Number: (304) 336 - 7800	**Fax Number:** (304) 336 - 7815	

12. Facility Location		
Street: 258 North Fork Road	**City:** Short Creek	**County:** Ohio
UTM Easting: 530.57 km	**UTM Northing:** 4444.10 km	☐ ☑
Directions: From the city of Wheeling, take Route 2 North, turn right onto County Route 2 (Girty's Run and Short Creek Road), and proceed for approximately 2.6 miles, bear left onto County Route 1 (Short Creek Road) and proceed approximately 1.6 miles, then turn left onto County Route 9 (North Fork Road) and proceed approximately 0.1 miles to the landfill entrance		
☐ ☑		
☑	**If yes, for what air pollutants?** 8-hour ozone	
☑	**If yes, name the affected state(s).** Pennsylvania, Ohio	
☐ ☑	**If yes, name the area(s).**	
☐ ☑		

[1] *Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.*

13. Contact Information		
Responsible Official: Shawn Meenihan		**Title:** Environmental Manager
Street or P.O. Box: 258 North Fork Road		
City: Short Creek	**State:** WV	**Zip:** 26003 -
Telephone Number: (724) 601 - 3444	**Fax Number:** ( ) -	
E-mail address: smeenihan@republicservices.com		
Environmental Contact: Shawn Meenihan		**Title:** Environmental Manager
Street or P.O. Box: 258 North Fork Road		
City: Short Creek	**State:** WV	**Zip:** 26003 -
Telephone Number: (724) 601 - 3444	**Fax Number:** ( ) -	
E-mail address: smeenihan@republicservices.com		
Application Preparer: Mike Contestabile		**Title:** Senior Project Manager
Company: Weaver Consultants Group		
Street or P.O. Box: 6185 Shamrock Court, Suite B		
City: Dublin	**State:** OH	**Zip:** 43016 -
Telephone Number: (412) 287 - 0549	**Fax Number:** ( ) -	
E-mail address: mcontestabile@wcgrp.com		

14. Facility Description

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Municipal Solid Waste Landfill	Disposal of Solid Waste	562212	4953

Provide a general description of operations.

The main process at Short Creek is landfilling of non-hazardous MSW. This process is identified as emission units 01-C1 (closed CDD waste area), 01-C2 (closed existing landfill area), and 01-A1 (active disposal area) in the Title V Permit. A landfill consists of an area of land that has been permitted and constructed according to solid waste regulations for the acceptance and disposal of solid waste materials.

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In essence, the degradation process is analogous to that occurring in a sewage sludge digestor; the major difference is that optimum conditions for methane production are rarely encountered in a landfill. Gas generation volumes vary over the landfill life but generally increase year to year until a peak volume is reached shortly after landfill closure. Landfill gas emissions are minimized by placing daily, intermediate, and final soil cover on the waste to help prevent the gases from migrating out of the landfill.

15. Provide an **Area Map** showing plant location as **ATTACHMENT A**.

16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**.

    For instructions, refer to "Plot Plan - Guidelines."

17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
☐ SIP	☐ FIP
☑ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☑ NESHAP (45CSR34)	☐ Nonattainment NSR (45CSR19)
☑ Section 111 NSPS	☐ Section 112(d) MACT standards
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☑ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☐ **C**ompliance **A**ssurance **M**onitoring (40CFR64)
☐ CAIR NO_x Annual Trading Program (45CSR39)	☐ CAIR NO_x Ozone Season Trading Program (45CSR40)
☐ CAIR SO_2 Trading Program (45CSR41)	

19. Non Applicability Determinations
List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.
none
☐ Permit Shield

19. Non Applicability Determinations *(Continued)* *- Attach additional pages as necessary.*

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

☐ Permit Shield

20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*).

See current Title V Permit and attached markup.
Applicable Requirement: C.S.R. 45-6-3.1., Permit Condition Number: III.B.1.a.i.
Applicable Requirement: C.S.R. 45-6-3.2., Permit Condition Number: III.B.1.a.ii.
Applicable Requirements: 40 C.F.R. 61.145, 61.148, and 61.150; Permit Condition Number: III.B.1.a.iii.
Applicable Requirement: C.S.R. 45-30-4.3.h.1.B., Permit Condition Number: III.B.1.a.iv.
Applicable Requirement: WV Code 22-5-4(a)(15), Permit Condition Number: III.B.1.a.v.
Applicable Requirement: C.S.R. 45-4-3.1. Permit Condition Number: III.B.1.b.
Applicable Requirement: C.S.R. 45-11-5.2. Permit Condition Number: III.B.2.a.i.
Applicable Requirement: C.S.R. 45-17 Permit Condition Number: III.B.2.b.i.
Applicable Requirements: C.F.R. 40-60-752, C.F.R 40-60-753, C.F.R 40-60-755, C.F.R 40-60-756; Permit Condition
Numbers: III.B.2.a.iii., III.B.2.a.iv.(a)-(h)
Applicable Requirement: WV Code 22-5-4(a)(14); Permit Condition Number: III.B.2.a.v

☐ Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See current Title V Permit and attached markup;
Applicable Requirement: C.S.R. 45-6-3.1., Permit Condition: III.B.1.a.i. - open burning is prohibited;
Applicable Requirement: C.S.R. 45-6-3.2., Permit Condition: III.B.1.a.ii. - open burning is prohibited;
Applicable Requirements: 40 C.F.R. 61.145, 61.148, and 61.150; Permit Condition: III.B.1.a.iii. - no friable asbestos waste is currently accepted;
Applicable Requirement: C.S.R. 45-30-4.3.h.1.B., Permit Condition: III.B.1.a.iv. - site will notify and submit compliance schedule as necessary;
Applicable Requirement: WV Code 22-5-4(a)(15), Permit Condition: III.B.1.a.v. - testing conducted under III.B.1.a.v;
Applicable Requirement: C.S.R. 45-4-3.1. Permit Condition : III.B.1.b. - reporting under III.C.18;
Applicable Requirement: C.S.R. 45-11-5.2. Permit Condition: III.B.2.a.i. - site will submit standby plan if requested;
Applicable Requirement: C.S.R.45-17 Permit Condition: III.B.2.b.i. - submission of control program under condition III.C.1;
Applicable Requirements: C.F.R. 40-60-752, C.F.R 40-60-753, C.F.R 40-60-755, C.F.R 40-60-756; Permit Conditions: III.B.2.a.iii., III.B.2.a.iv.(a)-(h) - recordkeeping and reporting under III.C.3, III.C.4, III.C.6, III.C.7, III.C.8, III.C.11, III.C.13, III.C.14;
Applicable Requirement: WV Code 22-5-4(a)(14); Permit Condition: III.B.2.a.v - reporting under III.B.2.a.v.

[illegible] ☑ ☐

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

20. Facility-Wide Applicable Requirements *(Continued)* - *Attach additional pages as necessary.*

List all facility-wide applicable requirements. For each applicable requirement, include the rule citation and/or permit with the condition number.

☐ Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing/recordkeeping/ reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Are you in compliance with all facility-wide applicable requirements? ☐ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

21. Active Permits/Consent Orders		
Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit *(if any)*
R30-06900071	March 2, 2017	

22. Inactive Permits/Obsolete Permit Conditions		
Permit Number	Date of Issuance	Permit Condition Number

Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	111.16
Nitrogen Oxides (NO_X)	20.43
Lead (Pb)	
Particulate Matter ($PM_{2.5}$)[1]	2.14
Particulate Matter (PM_{10})[1]	21.0
Total Particulate Matter (TSP)	59.31
Sulfur Dioxide (SO_2)	4.83
Volatile Organic Compounds (VOC)	10.75
Hazardous Air Pollutants[2]	Potential Emissions
Total HAP	7.74
Regulated Pollutants other than Criteria and HAP	Potential Emissions
NMOC	27.56

[1]$PM_{2.5}$ and PM_{10} are components of TSP.
[2]For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

Section 4: Insignificant Activities

24. Insignificant Activities (Check all that apply)		
☑	1.	Air compressors and pneumatically operated equipment, including hand tools.
☑	2.	Air contaminant detectors or recorders, combustion controllers or shutoffs.
☑	3.	Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
☑	4.	Bathroom/toilet vent emissions.
☑	5.	Batteries and battery charging stations, except at battery manufacturing plants.
☐	6.	Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
☐	7.	Blacksmith forges.
☐	8.	Boiler water treatment operations, not including cooling towers.
☑	9.	Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
☐	10.	CO_2 lasers, used only on metals and other materials which do not emit HAP in the process.
☑	11.	Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
☑	12.	Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
☑	13.	Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
☐	14.	Demineralized water tanks and demineralizer vents.
☐	15.	Drop hammers or hydraulic presses for forging or metalworking.
☐	16.	Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
☐	17.	Emergency (backup) electrical generators at residential locations.
☐	18.	Emergency road flares.
☐	19.	Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO_x, SO_2, VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis:

24. Insignificant Activities (Check all that apply)		
☐	20.	Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27. Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis:
☐	21.	Environmental chambers not using hazardous air pollutant (HAP) gases.
☑	22.	Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
☐	23.	Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
☑	24.	Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
☑	25.	Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
☑	26.	Fire suppression systems.
☑	27.	Firefighting equipment and the equipment used to train firefighters.
☐	28.	Flares used solely to indicate danger to the public.
☑	29.	Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
☐	30.	Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
☑	31.	Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
☐	32.	Humidity chambers.
☐	33.	Hydraulic and hydrostatic testing equipment.
☐	34.	Indoor or outdoor kerosene heaters.
☑	35.	Internal combustion engines used for landscaping purposes.
☐	36.	Laser trimmers using dust collection to prevent fugitive emissions.
☐	37.	Laundry activities, except for dry-cleaning and steam boilers.
☐	38.	Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
☐	39.	Oxygen scavenging (de-aeration) of water.
☐	40.	Ozone generators.

24. Insignificant Activities (Check all that apply)		
☑	41.	Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise requested.)
☑	42.	Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
☐	43.	Process water filtration systems and demineralizers.
☑	44.	Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
☐	45.	Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
☐	46.	Routing calibration and maintenance of laboratory equipment or other analytical instruments.
☐	47.	Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
☐	48.	Shock chambers.
☐	49.	Solar simulators.
☑	50.	Space heaters operating by direct heat transfer.
☑	51.	Steam cleaning operations.
☐	52.	Steam leaks.
☐	53.	Steam sterilizers.
☐	54.	Steam vents and safety relief valves.
☑	55.	Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
☑	56.	Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
☐	57.	Such other sources or activities as the Director may determine.
☐	58.	Tobacco smoking rooms and areas.
☐	59.	Vents from continuous emissions monitors and other analyzers.

Section 5: Emission Units, Control Devices, and Emission Points

25. Equipment Table
Fill out the **Title V Equipment Table** and provide it as **ATTACHMENT D**.
26. Emission Units
For each emission unit listed in the **Title V Equipment Table**, fill out and provide an **Emission Unit Form** as **ATTACHMENT E**.
For each emission unit not in compliance with an applicable requirement, fill out a **Schedule of Compliance Form** as **ATTACHMENT F**.
27. Control Devices
For each control device listed in the **Title V Equipment Table**, fill out and provide an **Air Pollution Control Device Form** as **ATTACHMENT G**.
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the **Compliance Assurance Monitoring (CAM) Form(s)** for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as **ATTACHMENT H**.

Section 6: Certification of Information

28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

*Note: This Certification must be signed by a responsible official. The **original**, signed in **blue ink**, must be submitted with the application. Applications without an **original** signed certification will be considered as incomplete.*

a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

b. Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

Responsible official (type or print)

Name: Shawn Meenihan	Title: Environmental Manager

Responsible official's signature:

Signature: _____ Signature Date: 8-11-21

(Must be signed and dated in blue ink)

Note: Please check all applicable attachments included with this permit application:

☑	ATTACHMENT A: Area Map
☑	ATTACHMENT B: Plot Plan(s)
☑	ATTACHMENT C: Process Flow Diagram(s)
☑	ATTACHMENT D: Equipment Table
☑	ATTACHMENT E: Emission Unit Form(s)
☐	ATTACHMENT F: Schedule of Compliance Form(s)
☑	ATTACHMENT G: Air Pollution Control Device Form(s)
☐	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

All of the required forms and additional information can be found and downloaded from, the DEP website at www.dep.wv.gov/daq, requested by phone (304) 926-0475, and/or obtained through the mail.

TITLE V PERMIT APPLICATION CHECKLIST
FOR ADMINISTRATIVE COMPLETENESS

A complete application is demonstrated when all of the information required below is properly prepared, completed and attached. The items listed below are required information which must be submitted with a Title V permit application. Any submittal will be considered incomplete if the required information is not included.*

☑	A signed copy of the application ("Certification" page must be signed and dated by a Responsible Official as defined in 45CSR30)
☑	*Table of Contents (needs to be included but not for administrative completeness)
☑	Facility information
☑	Description of process and products, including NAICS and SIC codes, and including alternative operating scenarios
☑	Area map showing plant location
☑	Plot plan showing buildings and process areas
☑	Process flow diagram(s), showing all emission units, control equipment, emission points, and their relationships
☑	Identification of all applicable requirements with a description of the compliance status, the methods used for demonstrating compliance, and a Schedule of Compliance Form (ATTACHMENT F) for all requirements for which the source is not in compliance
☑	Listing of all active permits and consent orders (if applicable)
☑	Facility-wide emissions summary
☑	Identification of Insignificant Activities
☑	ATTACHMENT D – Title V Equipment Table completed for all emission units at the facility except those designated as insignificant activities
☑	ATTACHMENT E – Emission Unit Form completed for each emission unit listed in the Title V Equipment Table (ATTACHMENT D) and a Schedule of Compliance Form (ATTACHMENT F) for all requirements for which the emission unit is not in compliance
☑	ATTACHMENT G – Air Pollution Control Device Form completed for each control device listed in the Title V Equipment Table (ATTACHMENT D)
☐	ATTACHMENT H – Compliance Assurance Monitoring (CAM) Plan Form completed for each control device for which the "Is the device subject to CAM?" question is answered "Yes" on the Air Pollution Control Device Form (ATTACHMENT G)
☑	General Application Forms signed by a Responsible Official
☐	Confidential Information submitted in accordance with 45CSR31

3 EMISSIONS CALCULATIONS

Air emission calculations were performed to estimate potential emissions from Short Creek for regulated and hazardous air pollutants. There are no requested changes in any emissions limits as part of this renewal application. The facility-wide emissions summary is provided in Section 3 of the General Forms in Section 2 of this application. Detailed emissions calculations are included after the discussion in this section.

3.1 Roadway Emissions

Emissions of PM and particulate matter with an aerometric diameter less than 10 micrometers (PM_{10}) are generated by vehicles traveling on paved and unpaved roads located throughout the landfill and by moving soil to create and cover the landfill. Emissions from landfill construction are based on projected maximum material handling for the remaining life of the landfill.

Unpaved roadway distances were estimated from a site drawing showing projected landfill construction. Fugitive emissions of PM and PM_{10} are generated by trucks bringing refuse to the landfill face on paved and unpaved roads.

3.2 Fugitive Emissions from Landfill

Potential fugitive emissions for regulated and hazardous air pollutants from the MSW landfill (01C1, 01C2, and 01A1) were calculated using the USEPA's Landfill Gas Emissions Model, Version 3.02 (LANDGEM). Yearly waste acceptance rates beginning 1986 through 2020 were used with an estimated design capacity of approximately 12.57 million Mg.

Emissions of PM, PM_{10}, and $PM_{2.5}$ from landfill material handling (includes solid waste handling, daily and intermediate cover) were calculated using the equations in Section 13.2.4 of AP-42. Estimates of materials handled were obtained from the facility.

Fugitive HAP emissions from the landfill were calculated using 25% of the maximum landfill gas emission rate predicted by LANDGEM (25% of landfill gas in uncontrolled, the other 75% is collected), based on AP-42 emission factors and assuming that there are no controls.

3.3 Control Equipment Emissions

Using conservative assumptions, LANDGEM has predicted a maximum landfill gas emission rate of 2,915 scfm. Assuming a capture efficiency of 75%, at some point in the

future the landfill gas collection rate of 2,186 scfm is expected during the year 2046. The landfill is currently producing landfill gas at a rate of approximately 900-1,000 scfm. The primary method of controlling the landfill gas is the currently permitted 2,500 scfm open flare.

Calculation of Stack Emissions from Open Flare

Emissions Summary

	tons/yr	lbs/hr
CO	**111.2**	**25.4**
NOx	**20.4**	**4.66**
PM10	**4.64**	**1.06**
SO2	**4.83**	**1.10**
VOC	**0.61**	**0.14**
NMOC	**1.56**	**0.36**
HAP (T)	**2.63**	**0.60**
HAP (S)	**2.33**	**0.53**

Site Details		
Flare Inlet Flow - wet	2,186	scfm
Flare Inlet Flow - dry (calculated)	2,011	scfm
Heat Input	68.6	MMBtu/hr
Hours of Operation	8,760	hours/yr

Standards & Assumptions		
Standard Temperature	59	deg F
Absolute Temperature	519	R
Standard Pressure	1	atm
Universal Gas Constant	0.7302	atm-ft^3/lb-mol-R
Assumed VOC conc of NMOC	39%	
Methane Heating Value	1,013	btu/scf
Methane Inlet Flow - dry	1,038	scfm
LFG Moisture	8%	
LFG Methane Content	52%	
LFG Heating Value	523	btu/scf
LFG Temperature	77	deg F

Conversions	
deg F to Rankine	459.676
million	1.00E+06
min/hr	60
hrs/yr	8,760
lbs/ton	2,000
lbs/kg	2.205
ppm	1.00E-06

Flare Parameters		
Base Elevation	100	ft
Tip Height	30	ft
Tip Diameter	1.5	ft
Design Temperature	1400	deg F
Flare Exhaust Flow	2262	scfm
Flare Exhaust Velocity	21.33	ft/sec

Pollutant	**Emission Factor[1]**		**Stack Emissions**	
	(lb/MMBtu)	**(lb/MM dscf CH4)**	**(lb/hr)**	**(tons/yr)**
CO	0.37		25.38	111.16
NOx	0.068		4.66	20.43
PM10		17	1.06	4.64

1 - Emission factors from AP-42 5th Ed., "Compilation of Air Pollutant Emissions Factors, Vol. 1 - : Stationary Point and Area Sources," Section 13.5 Industrial Flares, Tables 13.5-1 (NOx) and 13.5-2 (CO) dated Feb. 2018. PM emission factor from Section 2.4 Municipal Solid Waste Landfills, Table 2.4-5 dated Nov. 1998. It can be assumed PM2.5 = PM10.

Pollutant	HAPs	Mol Wt (lb/lbmol)	Default Conc[2] (ppmv)	Control Eff[3] (%)	Stack Emissions (lb/hr)	(tons/yr)
1,1,1-Trichloroethane (methyl chloroform)	Y	133.41	0.48	98%	4.44E-04	1.94E-03
1,1,2,2-Tetrachloroethane	Y	167.85	1.11	98%	1.29E-03	5.65E-03
1,1-Dichloroethane (ethylidene dichloride)	Y	98.97	2.35	98%	1.61E-03	7.06E-03
1,1-Dichloroethene (vinylidene chloride)	Y	96.94	0.2	98%	1.34E-04	5.88E-04
1,2-Dichloroethane (ethylene dichloride)	Y	98.96	0.41	98%	2.81E-04	1.23E-03
1,2-Dichloropropane (propylene dichloride)	Y	112.99	0.18	98%	1.41E-04	6.17E-04
2-Propanol (isopropyl alcohol)		60.11	50.1	91%	9.39E-02	4.11E-01
Acetone		58.08	7.01	91%	1.27E-02	5.56E-02
Acrylonitrile	Y	53.06	6.33	98%	2.33E-03	1.02E-02
Benzene	Y	78.11	1.91	98%	1.03E-03	4.53E-03
Bromodichloromethane		163.83	3.13	91%	1.60E-02	7.00E-02
Butane		58.12	5.03	91%	9.11E-03	3.99E-02
Carbon disulfide	Y	76.13	0.58	100%	0.00	0.00
Carbon tetrachloride	Y	153.84	0.004	98%	4.26E-06	1.87E-05
Carbonyl sulfide	Y	60.07	0.49	100%	0.00	0.00
Chlorobenzene	Y	112.56	0.25	98%	1.95E-04	8.54E-04
Chlorodifluoromethane		86.47	1.3	91%	3.50E-03	1.53E-02
Chloroethane (ethyl chloride)	Y	64.52	1.25	98%	5.59E-04	2.45E-03
Chloroform	Y	119.39	0.03	98%	2.48E-05	1.09E-04
Chloromethane		50.49	1.21	91%	1.90E-03	8.34E-03
Dichlorobenzene	Y	147	0.21	98%	2.14E-04	9.37E-04
Dichlorodifluoromethane		120.91	15.7	91%	5.92E-02	2.59E-01
Dichlorofluoromethane		102.92	2.62	91%	8.41E-03	3.68E-02
Dichloromethane (methylene chloride)	Y	84.94	14.3	98%	8.41E-03	3.69E-02
Dimethyl sulfide (methyl sulfide)		62.13	7.82	100%	0.00	0.00
Ethane		30.07	889	91%	8.33E-01	3.65E+00
Ethanol		46.08	27.2	91%	3.91E-02	1.71E-01
Ethyl mercaptan (ethanethiol)		62.13	2.28	100%	0.00	0.00
Ethylbenzene	Y	106.16	4.61	98%	3.39E-03	1.48E-02
Ethylene dibromide		187.88	0.001	91%	5.86E-06	2.57E-05
Fluorotrichloromethane		137.38	0.76	91%	3.25E-03	1.43E-02
Hexane	Y	86.18	6.57	98%	3.92E-03	1.72E-02
Hydrogen sulfide		34.08	35.5	100%	0.00	0.00
Mercury (total)	Y	200.61	2.92E-04	98%	4.06E-07	1.78E-06
Methyl ethyl ketone		72.11	7.09	91%	1.59E-02	6.98E-02
Methyl isobutyl ketone	Y	100.16	1.87	98%	1.30E-03	5.68E-03
Methyl mercaptan		48.11	2.49	100%	0.00	0.00
Pentane		72.15	3.29	91%	7.40E-03	3.24E-02
Perchloroethylene (tetrachloroethylene)	Y	165.83	3.73	98%	4.28E-03	1.88E-02
Propane		44.09	11.1	91%	1.53E-02	6.68E-02
t-1,2-dichloroethene		96.94	2.84	91%	8.58E-03	3.76E-02
Toluene	Y	92.13	39.3	98%	2.51E-02	1.10E-01
Trichloroethylene (trichloroethene)	Y	131.4	2.82	98%	2.57E-03	1.12E-02
Vinyl chloride	Y	62.5	7.34	98%	3.18E-03	1.39E-02
Xylenes	Y	106.16	12.1	98%	8.90E-03	3.90E-02
Hydrogen chloride	Y	36.5	42	0%	5.31E-01	2.33E+00
NMOC (as hexane)		86.18	595	98%	0.36	1.56
VOC			232.05	98%	0.14	0.61
SO2 (assume 100% conversion to SO2)		64.066	49.65	0%	1.10	4.83

2 - Concentrations of LFG constituents from AP-42 5th Ed., "Compilation of Air Pollutant Emissions Factors, Vol. 1 - : Stationary Point and Area Sources," Section 2.4 Municipal Solid Waste Landfills, Table 2.4-1 dated Nov. 1998. HCl is a product of combustion, emissions estimated based on Section 2.4.4 discussion. Use site-specific concentrations if known.

3 - AP-42 gives ranges for control efficiencies . Control efficiency ranges from AP-42 - for halogenated compounds 91-99.7% and for non-halogenated compounds 38-91%. Conservative values assumed. Assume 100% of sulfur compounds converted to SO2.

Calculation of Fugitive LFG Emissions from Landfill

Emissions Summary

	tons/yr	lbs/hr
VOC	**10.14**	**2.31**
NMOC	**26.00**	**5.92**
HAP (T)	**5.11**	**1.16**
HAP (S)	**1.84**	**0.42**

Site Details		
LFG Generation (from LandGEM)	2,915	scfm
GCCS Collection Efficiency	75%	
Fugitive LFG Flow (calculated)	729	scfm

Standards & Assumptions		
Standard Temperature	59	deg F
Absolute Temperature	519	R
Standard Pressure	1	atm
Universal Gas Constant	0.7302	atm-ft^3/lb-mol-R
Assumed VOC conc of NMOC	39%	
Methane Heating Value	1,013	btu/scf
LFG Moisture	8%	
LFG Methane Content	2%	
LFG Heating Value	23	btu/scf
LFG Temperature	77	deg F

Conversions	
deg F to Rankine	459.676
million	1.00E+06
min/hr	60
hrs/yr	8,784
lbs/ton	2,000
lbs/kg	2.205
ppm	1.00E-06

Pollutant	HAPs	Mol Wt (lb/lbmol)	Default Conc[1] (ppmv)	Fugitive LFG Emissions (lb/hr)	(tons/yr)
1,1,1-Trichloroethane (methyl chloroform)	Y	133.41	0.48	7.39E-03	3.25E-02
1,1,2,2-Tetrachloroethane	Y	167.85	1.11	2.15E-02	9.45E-02
1,1-Dichloroethane (ethylidene dichloride)	Y	98.97	2.35	2.69E-02	1.18E-01
1,1-Dichloroethene (vinylidene chloride)	Y	96.94	0.2	2.24E-03	9.83E-03
1,2-Dichloroethane (ethylene dichloride)	Y	98.96	0.41	4.68E-03	2.06E-02
1,2-Dichloropropane (propylene dichloride)	Y	112.99	0.18	2.35E-03	1.03E-02
2-Propanol (isopropyl alcohol)		60.11	50.1	3.48E-01	1.53E+00
Acetone		58.08	7.01	4.70E-02	2.06E-01
Acrylonitrile	Y	53.06	6.33	3.88E-02	1.70E-01
Benzene	Y	78.11	1.91	1.72E-02	7.56E-02
Bromodichloromethane		163.83	3.13	5.92E-02	2.60E-01
Butane		58.12	5.03	3.38E-02	1.48E-01
Carbon disulfide	Y	76.13	0.58	5.10E-03	2.24E-02
Carbon tetrachloride	Y	153.84	0.004	7.10E-05	3.12E-04
Carbonyl sulfide	Y	60.07	0.49	3.40E-03	1.49E-02
Chlorobenzene	Y	112.56	0.25	3.25E-03	1.43E-02
Chlorodifluoromethane		86.47	1.3	1.30E-02	5.70E-02
Chloroethane (ethyl chloride)	Y	64.52	1.25	9.31E-03	4.09E-02
Chloroform	Y	119.39	0.03	4.14E-04	1.82E-03
Chloromethane		50.49	1.21	7.05E-03	3.10E-02
Dichlorobenzene	Y	147	0.21	3.56E-03	1.57E-02
Dichlorodifluoromethane		120.91	15.7	2.19E-01	9.63E-01
Dichlorofluoromethane		102.92	2.62	3.11E-02	1.37E-01
Dichloromethane (methylene chloride)	Y	84.94	14.3	1.40E-01	6.16E-01
Dimethyl sulfide (methyl sulfide)		62.13	7.82	5.61E-02	2.46E-01
Ethane		30.07	889	3.09E+00	1.36E+01
Ethanol		46.08	27.2	1.45E-01	6.36E-01
Ethyl mercaptan (ethanethiol)		62.13	2.28	1.64E-02	7.18E-02
Ethylbenzene	Y	106.16	4.61	5.65E-02	2.48E-01
Ethylene dibromide		187.88	0.001	2.17E-05	9.53E-05
Fluorotrichloromethane		137.38	0.76	1.21E-02	5.29E-02
Hexane	Y	86.18	6.57	6.54E-02	2.87E-01
Hydrogen sulfide		34.08	35.5	1.40E-01	6.13E-01
Mercury (total)	Y	200.61	2.92E-04	6.76E-06	2.97E-05
Methyl ethyl ketone		72.11	7.09	5.90E-02	2.59E-01
Methyl isobutyl ketone	Y	100.16	1.87	2.16E-02	9.50E-02
Methyl mercaptan		48.11	2.49	1.38E-02	6.07E-02
Pentane		72.15	3.29	2.74E-02	1.20E-01
Perchloroethylene (tetrachloroethylene)	Y	165.83	3.73	7.14E-02	3.14E-01
Propane		44.09	11.1	5.65E-02	2.48E-01
t-1,2-dichloroethene		96.94	2.84	3.18E-02	1.40E-01
Toluene	Y	92.13	39.3	4.18E-01	1.84E+00
Trichloroethylene (trichloroethene)	Y	131.4	2.82	4.28E-02	1.88E-01
Vinyl chloride	Y	62.5	7.34	5.30E-02	2.33E-01
Xylenes	Y	106.16	12.1	1.48E-01	6.51E-01
NMOC (as hexane)		86.18	595	5.92	26.00
VOC			232.05	2.31	10.14

1 - Concentrations of LFG constituents from AP-42 5th Ed., "Compilation of Air Pollutant Emissions Factors, Vol. 1 - : Stationary Point and Area Sources," Section 2.4 Municipal Solid Waste Landfills, Table 2.4-1 dated Nov. 1998. Use site-specific concentrations if known.

Calculation of Fugitive PM Emissions from Waste Operations

Summary of Fugitive PM Emissions from Soil/Construction Activities

Emissions Summary (tons/yr)

	$PM_{2.5}$	PM_{10}	PM_{30}
Paved Roads	0.84	3.42	17.08
Unpaved Roads	0.84	8.37	27.34
Material Handling	0.00	0.03	0.06

Site Information - Waste Operations		
Daily Waste Hauled	1282	tons/day
Paved Road Length - 1-way	1	mi
Unpaved Road Length - 1-way	0.8	mi
Days of Operation	365	days/yr
Days with > 0.009 in precip	153	days/yr
Mean Wind Speed (U)	7.8	mph

Waste Truck Information

	Vehicle Weight					
	Unloaded (tons)	**Loaded (tons)**	**Payload (tons)**	**Avg Wt (tons)**	**Vehicle Count truck/day**	
Transfer Trailer	15	39	24	27	7	13%
Front Loader	20	28	8	24	10	6%
Rear Loader	17	24	7	20.5	33	18%
Roll Off	16	21	5	18.5	72	28%
Dump Truck	14	25	11	19.5	23	20%
Pick Ups	4	5	1	4.5	192	15%

Trucks/Year	122978	trucks/year
Waste Trucks per day	337	trucks/day
Mean Vehicle Weight (W)	10	tons/truck
Hauling capacity (calculated)	1282	tons/day

Paved Roadway Emission Calculations

Paved Roadway Emissions based on AP-42 Section 13.2.1 (dated 1/2011).

Predictive Emission Factor Equation:

$$E = \{[k*(sL)^{0.91}*(W)^{1.02}]*(1-P/4N)\}*CE$$

Inputs	
sL	7.4
W	9.75748953
p	153 days/yr
CE	80%

Particle Size Multiplier - k

$PM_{2.5}$	0.00054
PM_{10}	0.0022
PM_{30}	0.011

Emission Factor - E

$PM_{2.5}$	0.03	lb/VMT
PM_{10}	0.14	lb/VMT
PM_{30}	0.69	lb/VMT

PTE - Vehicle Miles Traveled 245,956 VMT/yr

Emissions	**Uncontrolled**	**Controlled**	
$PM_{2.5}$	4.19	0.84	tons/yr
PM_{10}	17.08	3.42	tons/yr
PM_{30}	85.38	17.08	tons/yr

Unpaved Roadway Emission Calculations

Unpaved Roadway Emissions based on AP-42 Section 13.2.2 (dated 11/2006).

Predictive Emission Factor Equation:

$$[k*(s/12)^{a}*(W/3)^{b}]*[(365-P)/365)$$

Inputs		
A	0.9	
b	0.45	
s	3	%
W	9.75748953	
p	153	days/yr
CE	80%	

Particle Size Multiplier - k

$PM_{2.5}$	0.15
PM_{10}	1.50
PM_{30}	4.90

Emission Factor - E

$PM_{2.5}$	0.04	lb/VMT
PM_{10}	0.43	lb/VMT
PM_{30}	1.39	lb/VMT

PTE - Vehicle Miles Traveled 196,765 VMT/yr

Emissions	**Uncontrolled**	**Controlled**	
$PM_{2.5}$	4.18	0.84	tons/yr
PM_{10}	41.85	8.37	tons/yr
PM_{30}	136.71	27.34	tons/yr

Material Handling Emission Calculations

Material Handling Predictive Emission Factor Equation
Material Handling Emissions based on AP-42 Section 13.2.4 (dated 11/2006).

Predictive Emission Factor Equation:

$$E = (k*0.0032)*[((U/5)^{1.3})/((M/2)^{1.4})$$

Inputs	
M	14.00

Particle Size Multiplier - k

$PM_{2.5}$	0.053
PM_{10}	0.35
PM_{30}	0.740

Emission Factor - E

$PM_{2.5}$	1.98E-05	lb/ton
PM_{10}	1.31E-04	lb/ton
PM_{30}	2.77E-04	lb/ton

Emissions	**Uncontrolled**	
$PM_{2.5}$	4.64E-03	tons/yr
PM_{10}	3.06E-02	tons/yr
PM_{30}	6.48E-02	tons/yr

Calculation of Fugitive PM Emissions from Soil Activities

Summary of Fugitive PM Emissions from Soil Activities

Emissions Summary (tons/yr)

	$PM_{2.5}$	PM_{10}	PM_{30}
Paved Roads	0.00	0.00	0.00
Unpaved Roads	0.45	4.52	14.76
Material Handling	0.00	0.03	0.06

Site Information- Soil Activities		
Daily Soil Hauled	1282	tons/day
Paved Road Length - 1-way	0	mi
Unpaved Road Length - 1-way	0.8	mi
Days of Operation	365	days/yr
Days with > 0.009 in precip	153	days/yr
Mean Wind Speed (U)	7.8	mph

Soil Vehicle Information

	Vehicle Weight				
	Unloaded (tons)	**Loaded (tons)**	**Payload (tons)**	**Avg Wt (tons)**	**Vehicle Count truck/day**
Transfer Trailer	15	39	24	0	
Front Loader	20	28	8	0	
Rear Loader	17	24	7	0	
Roll Off	16	21	5	0	
Dump Truck	32	60	28	46	46

Soil Trucks per day	46	trucks/day
Mean Soil Vehicle Weight (W)	46	tons/truck
Hauling capacity (calculated)	1282	tons/day

Unpaved Roadway Emission Calculations

Unpaved Roadway Emissions based on AP-42 Section 13.2.2 (dated 11/2006).

Predictive Emission Factor Equation:

$$[k*(s/12)^{a}*(W/3)^{b}]*[(365-P)/365]$$

Inputs		
A	0.9	
b	0.45	
s	6.4	%
W	46	
p	153	days/yr
CE	80%	

Particle Size Multiplier - k

$PM_{2.5}$	0.15
PM_{10}	1.50
PM_{30}	4.90

Emission Factor - E

$PM_{2.5}$	0.17	lb/VMT
PM_{10}	1.69	lb/VMT
PM_{30}	5.52	lb/VMT

PTE - Vehicle Miles Traveled 26,739 VMT/yr

Emissions	**Uncontrolled**	**Controlled**	
$PM_{2.5}$	2.26	0.45	tons/yr
PM_{10}	22.60	4.52	tons/yr
PM_{30}	73.82	14.76	tons/yr

Material Handling Emission Calculations

Material Handling Predictive Emission Factor Equation

Material Handling Emissions based on AP-42 Section 13.2.4 (dated 11/2006).

Predictive Emission Factor Equation:

$$E = (k*0.0032)*[((U/5)^{1.3})/((M/2)^{1.4})$$

Inputs	
M	14.00

Particle Size Multiplier - k

$PM_{2.5}$	0.053
PM_{10}	0.35
PM_{30}	0.740

Emission Factor - E

$PM_{2.5}$	1.98E-05	lb/ton
PM_{10}	1.31E-04	lb/ton
PM_{30}	2.77E-04	lb/ton

Emissions	**Uncontrolled**	
$PM_{2.5}$	4.64E-03	tons/yr
PM_{10}	3.06E-02	tons/yr
PM_{30}	6.48E-02	tons/yr

4 MARKUP OF TITLE V PERMIT

A markup of changes requested as part of the Title V Permit Renewal is attached.

West Virginia Department of Environmental Protection
Division of Air Quality

Jim Justice
Governor

Austin Caperton
Cabinet Secretary

Permit to Operate

Pursuant to
Title V
of the Clean Air Act

Issued to:
American Disposal Services of West Virginia, Inc. d.b.a.
Short Creek Landfill
R30-06900071-2017

William F. Durham
Director

Issued: March 2, 2017 • Effective: March 16, 2017
Expiration: March 2, 2022 • Renewal Application Due: September 2, 2021

Permit Number: **R30-06900071-2017**
Permittee: **American Disposal Services of West Virginia, Inc. dba Short Creek Landfill**
Facility Name: **Short Creek Landfill**
Permittee Mailing Address: **258 North Fork, Short Creek, WV 26003**

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 C Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Facility Location:	Short Creek, Ohio County, West Virginia
Telephone Number:	(304) 336-7038
Type of Business Entity:	Corporation
Facility Description:	The Short Creek Landfill is a municipal solid waste (MSW) landfill that began operation in 1986. The total permitted area of the waste disposal is approximately 113 acres. The landfill receives approximately 250,000 tons of waste per year on Short Creek.
SIC Codes:	4953 Primary; None Secondary; None Tertiary
UTM Coordinates:	530.57 km Easting $ 4444.10 km Northing $ Zone 17

Permit Writer: Natalya V. Chertkovsky-Veselova

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

Table of Contents

1.0 Emission Units and Active R13, R14, and R19 Permits

1.1. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
Landfill					
0 1-C1	01	Older CDD waste area – Closed and Capped	1986	794,129 Mg	None
0 1-C2	01	Existing Landfill – Closed and Capped	2001	1,919,825 Mg	None
0 1-A1	01	New Landfill – Active Disposal area	2001	9,854,217 Mg	None
Roadways					
01-P1	P1	Paved Roadway	1986	Approximately 2,995 ft	None
01-UP-1	UP-1	Unpaved Roadway	1986	Approximately 6,300 ft (Varies)	None
LFG Control Device(s)					
01-F1	01	Flare	2001	2,500 scfm max capacity	None
Miscellaneous					
LST001	LST1	Existing Landfill Leachate Open Top Tank	Post 1984	48,000 gallons	None
LST002	LST2	New Landfill Leachate Open Top Tank	Post 1984	675,000 gallons	None
~~**Portable Rock Crushing and Sizing Plant**~~					
~~HOP1~~	~~RC-E~~	~~Feed Hopper~~	~~2014~~	~~125 TPH~~	~~None~~
~~CR1~~	~~RC-E~~	~~Jaw Crusher~~	~~2014~~	~~125 TPH~~	~~None~~
~~SC1~~	~~RC-E~~	~~Double Deck Vibrating Screen~~	~~2014~~	~~125 TPH~~	~~None~~
~~BC1~~		~~Belt Conveyor from SC1 to SP1~~	~~2014~~	~~125 TPH~~	~~MDH~~
~~SP1~~		~~Open Stockpile 1,800 sq.ft. base, 20 ft. high~~	~~2010~~	~~1,095,000 TPY~~	~~WS~~
~~BC2~~		~~Belt Conveyor from SC1 to SP2~~	~~2014~~	~~125 TPH~~	~~MDH~~
~~SP2~~		~~Open Stockpile 1,800 sq.ft. base, 20 ft. high~~	~~2010~~	~~1,095,000 TPY~~	~~WS~~
~~DG~~	~~DG-E~~	~~Rock Crushing Diesel Engine Generator, 2010 Model Tier III Certification CPX-NRCI-10-22~~	~~2014~~	~~300 HP~~	~~None~~

WS - Water Spray, MDH – Minimize Drop Heigth

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit (s) is listed below.

Site requests removal of Rock Crusher and associated R13 permit

~~Permit Number~~	~~Date of Issuance~~
~~R13-2822A~~	~~January 6, 2015~~

4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.
[45CSR§30-5.1.c.3.B.]

3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.
[45CSR§30-4.3.h.1.B.]

3.6. Compliance Plan

3.6.1. None.

3.7. Permit Shield

3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.

3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.

40 C.F.R. § 60.767 (a)(3), Subpart XXX	The design capacity of this facility is greater than 2.5 million megagrams and 2.5 million cubic meters. Therefore, amended design capacity reports are not required.
40 C.F.R. Part 64	This is the third permit renewal for this facility. The facility was found not to be subject to CAM at the time of the first and second renewals. As a result of the installation of replacement rock crushing equipment (per minor modification MM01), there were no PSEU created. Therefore, CAM is not applicable.
~~**40 CFR Part 60, Subpart OOO**~~	~~The rock crushing and sizing plant processes a maximum of 125 tons of rock per hour. In accordance with 40 CFR § 60.670(c)(2), portable plants with capacities of 136 megagrams per hour (150 tons per hour) or less are exempt from this NSPS.~~

Site requests removal of Rock Crusher

4.1.8. If monitoring demonstrates that the operational requirements in paragraphs (b), (c), or (d) of 40 C.F.R. § 60.763 (requirements 4.1.3, 4.1.4 and 4.1.5) are not met, corrective action must be taken as specified in 40 C.F.R. §§60.765(a)(3) and (5) or (c) (requirements 4.2.1 or 4.2.3). If corrective actions are taken as specified in §60.765, the monitored exceedance is not a violation of the operational requirements in this section.
[45CSR16, 40 C.F.R. § 60.763 (g)]

4.1.9. For purposes of compliance with 40 C.F.R. § 60.763 (a) (requirement 4.1.3 (a)), each owner or operator of a controlled landfill must place each well or design component as specified in the approved design plan as provided in 40 C.F.R. § 60.767 (c) (requirement 4.5.3). Each well must be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of:

(1) 5 years or more if active; or

(2) 2 years or more if closed or at final grade.

[45CSR16, 40 C.F.R. § 60.765(b)]

This language is no longer in the revised NESHAP Subpart AAAA rules - please remove

4.1.10. This facility is subject to 40 C.F.R. 63 Subpart AAAA and must meet the follo

a. If your landfill is a new affected source, you must comply with this subp at the time you begin operating, whichever is last.
[40 C.F.R. §63.1945(a)]

b. If your landfill is an existing affected source, you must comply with this subpart by January 16, 2004.
[40 C.F.R. §63.1945(b)]

c. If your landfill is a new affected source and is an area source meeting the criteria in 40 C.F.R. §63.1935(a)(3), you must comply with the requirements of 40 C.F.R. §§63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by ~~40 CFR 60.752(b)(2) of subpart WWW~~.
[40 C.F.R. §63.1945(e)]

should reference 40 CFR 60 Subpart XXX

d. If your landfill is an existing affected source and is an area source meeting the criteria in 40 C.F.R. §63.1935(a)(3), you must comply with the requirements in 40 C.F.R. §§63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by ~~40 CFR §60.752(b)(2) of subpart WWW, the Federal plan, or EPA approved and effective State or tribal plan that applies to your landfill or by January 16, 2004, whichever occurs later~~.
[40 C.F.R. §63.1945(f)]

[45CSR34, 40 C.F.R. §63.1945]

4.1.11. ~~The permittee must comply with the requirements of 40 CFR part 60, subpart WWW.~~
~~**[45 CSR34, 40 C.F.R. §63.1955(a)(1)]**~~

4.1.12. If you are required by ~~40 CFR §60.752(b)(2) of subpart WWW, the Federal plan, or an EPA approved and effective State or tribal plan t~~o install a collection and control system, you must comply with the requirements in 40 C.F.R. §§63.1960 through 63.1985 and with the general provisions of 40 C.F.R. Part 63 specified in Table 1 of 40 C.F.R. 63 Subpart AAAA.
[45 CSR34, 40 C.F.R. §63.1955(b)]

6.0. Portable Rock Crushing and Sizing Plant [emission point ID(s): RC-E and DG-E]

6.1. Limitations and Standards

6.1.1. Maximum Raw Material Throughput Limitation. The maximum hourly throughput (tons per hour input) of raw material to be handled or processed shall not exceed 125 tons per hour (TPH) without effecting a modification.

Maximum Raw Material Yearly Throughput Limitation. The maximum yearly throughput of raw material handled or processed shall not exceed 1,095,000 tons per year (TPY) without effecting a modification. Compliance with the Maximum Raw Material Yearly Throughput shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the raw material throughput at any given time during the previous twelve consecutive calendar months.

Site requests removal of Rock Crusher

[45CSR13, R13-2822, 4.1.1 and 4.1.2]

6.1.2. a. The engine shall be equipped with a non-resettable hour meter prior to the start-up of the engine;

b. After October 1, 2010, the engine shall only consume diesel fuel meeting the following requirements:

A. Maximum sulfur content of 15 ppm;

B. Cetane index or aromatic content as follows:

1. A minimum cetane index of 40; or

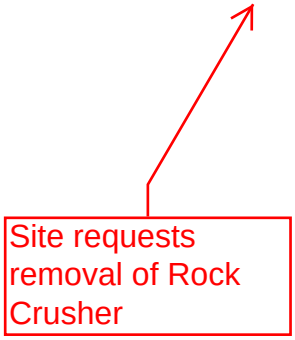
2. A minimum aromatic content of 35 % by volume.

[40 C.F.R. § 80.510 (b), 45CSR16, 40 C.F.R. § 60.4207 (b), 45CSR13, R13-2822, 4.1.7, 4.1.8]

6.1.3. (1) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 C.F.R. § 89.112, 40 C.F.R. § 89.113, 40 C.F.R. § 1039.101, 40 C.F.R. § 1039.102, 40 C.F.R. § 1039.104, 40 C.F.R. § 1039.105, 40 C.F.R. § 1039.107, and 40 C.F.R. § 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.
[45CSR16, 40 C.F.R. § 60.4201 (a)]

(2) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in 40 C.F.R. § 60.4201 for their 2007 model year and later stationary CI ICE, as applicable.
[45CSR16, 40 C.F.R. § 60.4204 (b)]

6.1.4. The permitted facility shall comply with all applicable requirements of 45CSR7 -"To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations," provided that the facility shall comply with any more stringent requirements as may be set forth under section 4.1. of this permit. The pertinent sections of 45CSR7 applicable to this facility include, but are not limited to, the following:



No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7.

The provisions of subsection 3.1 shall not apply to smoke and/or particulate matter emitted from any process source operation which is less than forty (40) percent opacity for any period or periods aggregating no more than five (5) minutes in any sixty (60) minute period.

No person shall cause, suffer, allow or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in Table 45-7A found at the end of this rule.

No person shall cause, suffer, allow, or permit any manufacturing process generating fugitive particulate matter to operate that is not equipped with a system to minimize the emissions of fugitive particulate matter. To minimize means that a particulate capture or suppression system shall be installed to ensure the lowest fugitive particulate emissions reasonably achievable. The permitted facility shall comply with all applicable requirements of 45CSR7, with the exception of any more stringent limitations set forth in Section 4.1. of this permit.

The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment.

[45CSR§§7-3.1, 3.2, 4.1, 5.1, 5.2, 45CSR13, R13-2822, 4.1.3]

6.1.5. Minimization of Fugitive Emissions, Methods and Required Systems

a. The registrant shall not cause, allow or permit a nonmetallic mineral processing plant to operate that is not equipped with a fugitive dust control system(s). Such system(s) shall be operated and maintained in such a manner as to effectively minimize the emission of particulate matter into the open air;

b. The registrant shall maintain fugitive dust control of the premises and owned, leased or controlled haulroads and access roads by paving, utilization of a water truck and/or other suitable measures. Good operating methods, practices and general maintenance shall be observed in relation to stockpiling, truck, railcar or barge loading, grinding, breaking and screening to effectively minimize the emission of particulate matter;

c. To maintain effective fugitive dust control of the premises and minimize the emission of particulate matter, fugitive dust generation and atmospheric entrainment of particulate matter, the registrant shall properly install, operate and maintain a fugitive dust control system(s) designed in accordance with good engineering practices and observe and employ good operating methods, practices and general maintenance.

[45CSR13, R13-2822, 4.1.4]

6.1.6. Compliance Requirements for Owners and Operators of Compression Ignition Internal Combustion Engines shall:

1. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;
2. Change only those emission-related settings that are permitted by the manufacturer; and
3. Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

[40 CFR § 60.4211(a), 45CSR16, 45CSR13, R13-2822, 4.1.5]

6.1.7. Regulated Pollutant Limitation. The registrant shall not cause, suffer, allow or permit emissions of PM, PM_{10}, VOC, SO_2, NO_x, and CO from any registered reciprocating internal combustion engine to exceed the potential to emit (pounds per hour and tons per year) listed.

Site requests removal of Rock Crusher

Engine (DG-E)		
Engine	Caterpilar C-9 (Diesel)	
Power Rating (hp)	2010 Model, 300 hp (224 kw) @ 2200 RPM	
Pollutant	Lb/hr	TPY
$PM/PM_{2.5}/PM_{10}$	0.24	1.04
Sulfur Dioxide	0.22	0.97
Nitrogen Oxide	3.37	14.75
Carbon Monoxide	0.73	3.18
Hydrocarbons (VOCs)	0.27	1.20

[45CSR13, R13-2822, 4.1.6]

6.2. Monitoring Requirements

6.2.1. For the purposes of demonstrating compliance with Sections 6.1.1. and 6.1.2.b., the permittee shall monitor the amount of rock processed, and hours the engine operated on a daily basis. Records of such monitoring and a 12-month rolling total of stone processed shall be maintained in accordance with Section 3.4.2.
[45CSR13, R13-2822, 4.2.2]

6.2.2. For the purpose of determining compliance with the opacity limits of Section 6.1.4., the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 C.F.R. Part 60 Appendix A, Method 22 or from the lecture portion of the 40 C.F.R. Part 60 Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at each source (stack, transfer point, fugitive emission source, etc.) for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of facility operation and appropriate weather conditions.

If visible emissions are present at a source(s) for three (3) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of Method 9 as soon as practicable, but within seventy-two (72) hours of the final visual emission check. A Method 9 observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.
[45CSR13, R13-2822, 4.2.1]

6.3. Testing Requirements

6.3.1. Reserved.

6.4. Recordkeeping Requirements

6.4.1. The permittee shall keep on site all information or documents noting the internal combustion engine for the portable crushing and screening unit is certified in accordance with 40 C.F.R. Part 89 for the same model year and engine power or records of performance test results showing compliance with emission limits of Section 6.1.7. Such records shall be maintained on site for the life of the engine at the facility. **[45CSR13, R13-2822, 4.4.2]**

Site requests removal of Rock Crusher

6.4.2. The permittee shall maintain records of all monitoring data required by Section 6.2.2. documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80º F, 6 - 10 mph NE wind) during the visual emission check(s). An example form is supplied as Appendix B. Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9. For an emission unit out of service during the normal monthly evaluation, the record of observation may note "out of service" (O/S) or equivalent. **[45CSR13, R13-2822, 4.4.4]**

6.4.3. To demonstrate compliance with section 6.1.1 and 6.1.2.b, the registrant shall maintain records of the amount and type of raw material and the hours of operation. Said records shall be maintained on site for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official. **[45CSR13, R13-2822, 4.4.1]**

6.5. Reporting Requirements

6.5.1. None.

6.6. Compliance Plan

6.6.1. Reserved

APPENDIX B

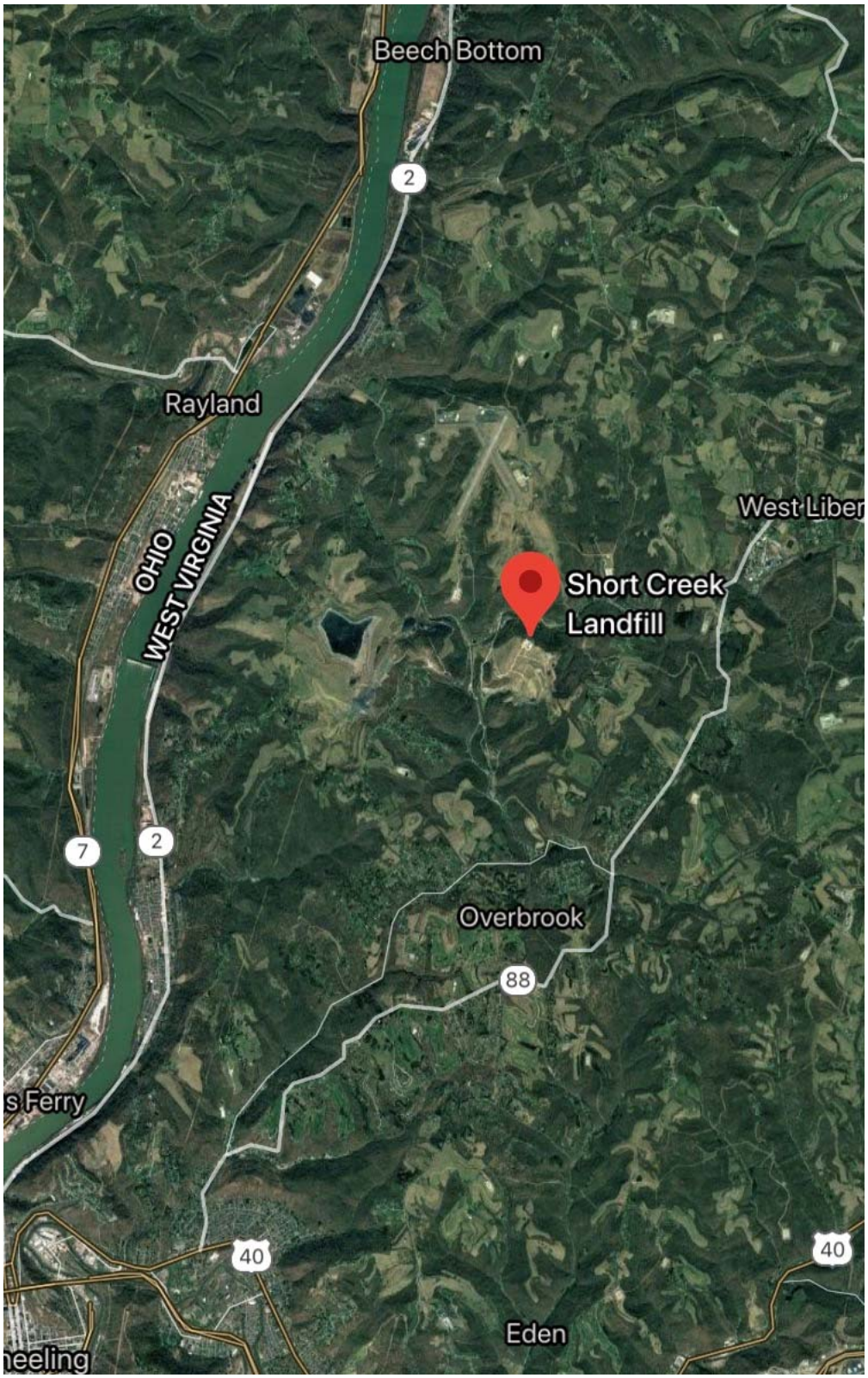
Site requests removal of Rock Crusher

MONTHLY/QUARTERLY OPACITY REPORT
Portable Rock Crushing and Sizing Plant
Permit: R13-2822

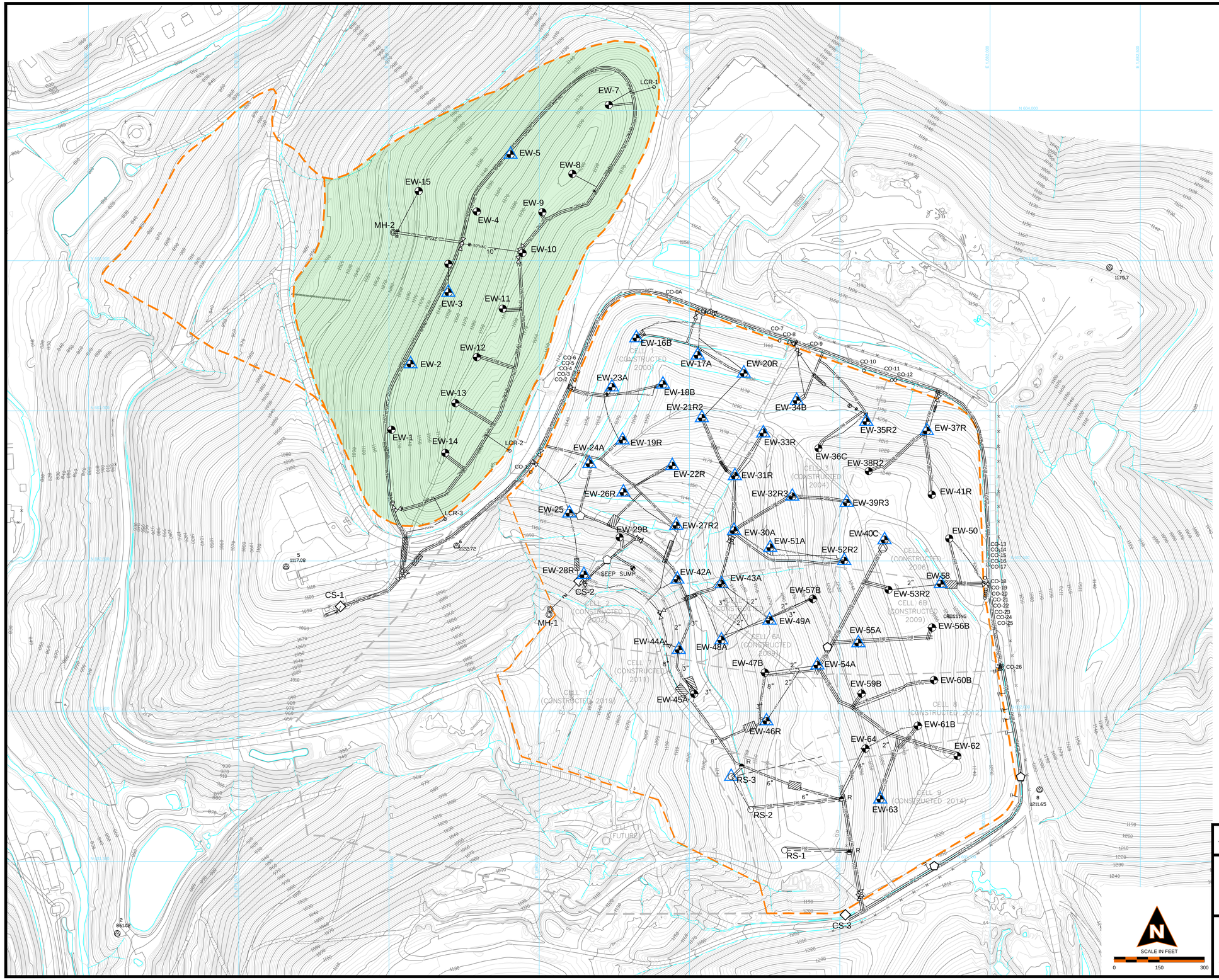
Date of Observation:
Date Entered by:
Reviewed by:
Date Reviewed:
General Weather Conditions:

Emission Point ID	Description of Emission Point	Time of Observation	Visible Emissions (Yes/No)	Consecutive Months of Visible Emission	Comments

ATTACHMENT A AREA MAP



ATTACHMENT B PLOT PLAN



LEGEND

- PERMITTED SOLID WASTE BOUNDARY
- EXISTING CELL BOUNDARY
- LIMITS OF 2020 FILL OPERATIONS
- AREAS OF FINAL COVER
- 1180 — EXISTING GRADE 10' CONTOUR
- EXISTING GRADE 2' CONTOUR
- 12"VAC — 12"VAC — EXISTING LANDFILL GAS HEADER/LATERAL
- 3"FM — 3"FM — EXISTING FORCEMAIN
- 2"AIR — 2"AIR — EXISTING AIRLINE
- EXISTING HORIZONTAL COLLECTOR
- EW- — EXISTING LFG EXTRACTION WELL
- EW- — EXISTING LFG EXTRACTION WELL WITH PUMP
- EW- — EXISTING LFG EXTRACTION WELL – CAISSON
- R — EXISTING WELLHEAD
- EXISTING HEADER ACCESS RISER
- CO– — EXISTING LEACHATE CLEAN OUT RISER
- RS– — EXISTING ROCK SUMP
- EXISTING ISOLATION VALVE
- EXISTING FORCEMAIN ISOLATION VALVE
- EXISTING AIR ISOLATION VALVE
- EXISTING BLIND FLANGE
- EXISTING FLANGE CONNECTION
- EXISTING FORCEMAIN CLEANOUT
- EXISTING AIR RELEASE VALVE
- MH- — EXISTING LEACHATE MANHOLE
- CS- — EXISTING CONDENSATE PUMP STATION
- EXISTING ROAD CROSSING
- EW- — OPERATIONAL PUMP

SCALE IN FEET
0 150 300

AMERICAN DISPOSAL SERVICES OF WEST VIRGINIA, INC.

2020 LFG SYSTEM CONSTRUCTION AS-BUILT PLAN VIEW

BEL ENVIRONMENTAL ENGINEERING

PROJECT NUMBER: 2020.216			
ENG:	PAB	AERIAL S_R	11/24/20
CAD:	MAR	SUBMITTAL DATE:	-
		PLOT DATE:	1/21/21

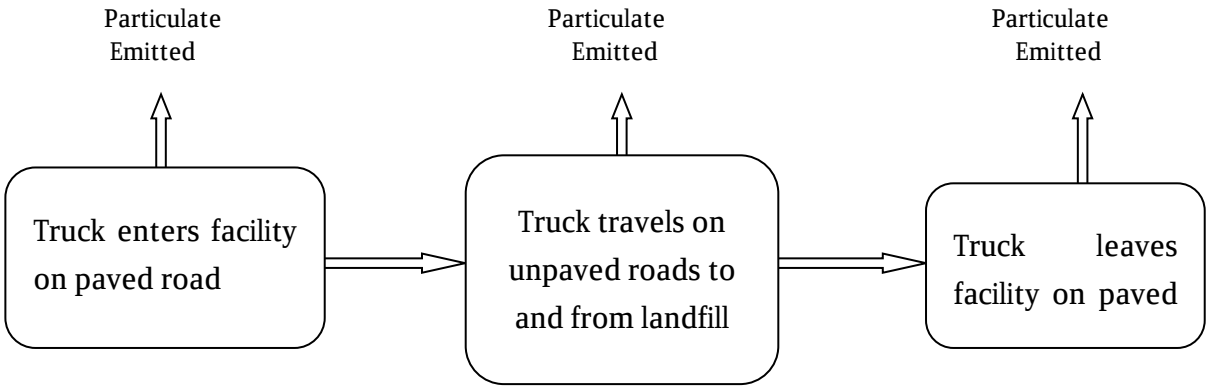
REV.	DATE	DESCRIPTION
-	-	

DRAWING: 1 OF 1

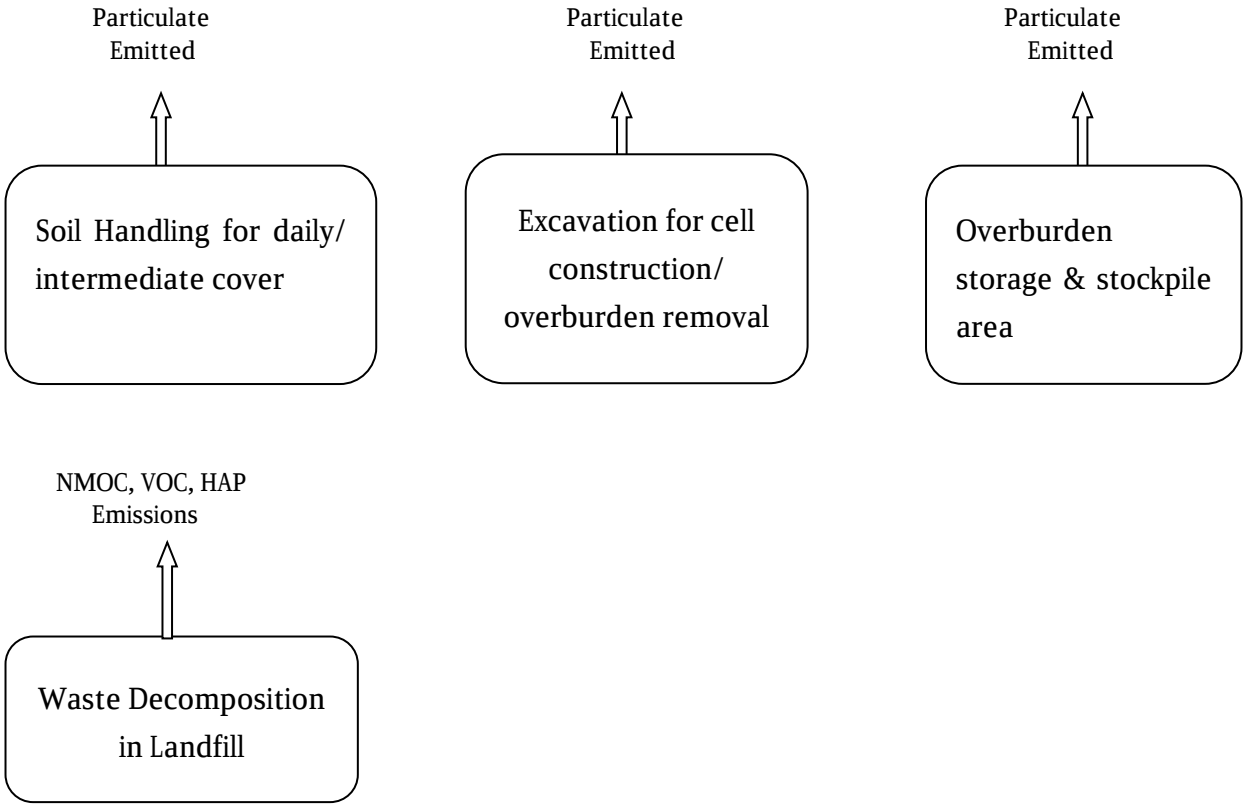
Z:\Shared\Bel-Eng\Short Creek LF\2021\As-Built\2021 Short Creek - As Built - 1.20.21.dwg

ATTACHMENT C PROCESS FLOW DIAGRAM

Fugitive Emissions: Roadway Traffic (01-P1 and 01-UP1)

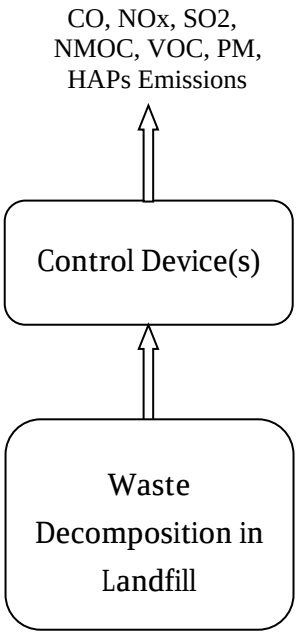


Fugitive Emissions: Landfill Operations (01-C1 and 01-C2, and 01-A1)



Stack Emissions: Open Flare System (01-F1)

Emissions from Control Equipment



ATTACHMENT D TITLE V EQUIPMENT TABLE

The table below lists all emission units at the facility except those designated as insignificant activities.

ATTACHMENT D - Title V Equipment Table

(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Point ID[1]	Control Device[1]	Emission Unit ID[1]	Emission Unit Description	Design Capacity	Year Installed/ Modified
01-C1	01-F1	01	Older CDD waste area - closed and capped	794,129 Mg	1986
01-C2	01-F1	01	Existing Landfill - closed and capped	1,919,825 Mg	2001
01-A1	01-F1	01	New Landfill - active disposal area	9,854,217 Mg	2001
01-P1	None	P1	Paved Roadway	~2,995 ft	1986
01-UP1	None	UP-1	Unpaved Roadway	~6,300 ft	1986
01-F1	N/A	01	Flare (Control Device)	2,500 scfm	2001
LST001	None	LST1	Existing Landfill Leachate Open Top Tank	48,000 gallons	after 1984
LST002	None	LST2	New Landill Leachate Open Top Tank	675,000 gallons	after 1984

[1]For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT E EMISSION UNIT FORM

Completed for each emission unit listed in the Title V equipment table.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
01-C1, 01-C2, 01-A1	Sanitary Landfill	Open Flare - 01-F1

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Disposal of solid waste, compaction of same, and daily cover with native soils. This waste decomposes and generates CH4 and NMOCs. 01-C1 is the older CDD waste area which is closed and capped. 01-C2 is the existing landfill which is closed and capped. 01-A1 is the new landfill which is an active disposal area. One combined emission estimate has been calculated covering emissions from all three emission points.

Manufacturer:	**Model number:**	**Serial number:**
N/A	N/A	N/A
Construction date: **(MM/DD/YYYY)**	**Installation date:** **(MM/DD/YYYY)**	**Modification date(s):** **(MM/DD/YYYY)**
10 / 01 / 1986	10 / 01 / 1986	/ / ; / / / / ; / /

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

12.57 million Mg of waste disposal capacity

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
N/A	~250,000 tons	8,760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel?	**If yes, is it?**
__Yes ✔ No	___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**
N/A	N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		10.14
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NMOC		26.00

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential fugitive emissions for regulated and hazardous air pollutants from the MSW landfill (01-C1, 01-C2, and 01-A1) were calculated using the USEPA's Landfill Gas Emissions Model, Version 3.02 (LANDGEM). Yearly waste acceptance rates beginning 1986 through 2020 were used with an estimated waste acceptance of approximately 12.57 million Mg.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

C.S.R. 45-23, C.F.R. 40-60.757(a); III.B.2.a.ii.; Design Capacity; Volume Calculation – III.C.2 and III.C.3.

___ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

C.S.R. 45-23, C.F.R. 40-60.757(a); III.B.2.a.ii.; Design Capacity; Volume Calculation – III.C.2 and III.C.3.

Are you in compliance with all applicable requirements for this emission unit? ✔_Yes __No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
01-P1	Paved Roadways	N/A**

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Emissions of PM and particulate matter with an aerometric diameter less than 10 micrometers (PM_{10}) are generated by vehicles traveling on paved roads located throughout the landfill and by moving soil to create and cover the landfill.

**Note: Emissions from this emission unit are controlled by use of a water truck.

Manufacturer:	**Model number:**	**Serial number:**
N/A	N/A	N/A
Construction date: **(MM/DD/YYYY)**	**Installation date:** **(MM/DD/YYYY)**	**Modification date(s):** **(MM/DD/YYYY)**
10 / 01 / 1986	10 / 01 / 1986	/ / ; / / / / ; / /

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

N/A

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
N/A	N/A	3,744 hr/yr, max 6 day/wk, 12 hr/day

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? __Yes ✔ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		0.84
Particulate Matter (PM_{10})		3.42
Total Particulate Matter (TSP)		17.08
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Emissions of PM and particulate matter with an aerometric diameter less than 10 micrometers (PM10) are generated by vehicles traveling on paved roads located throughout the landfill and by moving soil to create and cover the landfill. Fugitive emissions of PM and PM10 are generated by trucks bringing refuse to the landfill face on paved roads.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

N/A

___ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

N/A

Are you in compliance with all applicable requirements for this emission unit? ✔_Yes __No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
01-UP1	Unpaved Roadways	N/A**

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Emissions of PM and particulate matter with an aerometric diameter less than 10 micrometers (PM10) are generated by vehicles traveling on unpaved roads located throughout the landfill and by moving soil to create and cover the landfill.

**Note: Emissions from this emission unit are controlled by use of a water truck.

Manufacturer:	**Model number:**	**Serial number:**
N/A	N/A	N/A
Construction date: **(MM/DD/YYYY)**	**Installation date:** **(MM/DD/YYYY)**	**Modification date(s):** **(MM/DD/YYYY)**
10 / 01 / 1986	10 / 01 / 1986	/ / ; / / / / ; / /

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

N/A

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
N/A	N/A	3,744 hr/yr, max 6 day/wk, 12 hr/day

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? __Yes ✔ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		1.29
Particulate Matter (PM_{10})		12.89
Total Particulate Matter (TSP)		42.11
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Emissions of PM and particulate matter with an aerometric diameter less than 10 micrometers (PM10) are generated by vehicles traveling on unpaved roads located throughout the landfill and by moving soil to create and cover the landfill. Fugitive emissions of PM and PM10 are generated by trucks bringing refuse to the landfill face on unpaved roads.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

N/A

___ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

N/A

Are you in compliance with all applicable requirements for this emission unit? ✔_Yes __No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
LST001 and LST 002	Leachate Storage Tanks	N/A

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Open top aboveground leachate storage tanks - 48,000 gallon in NW corner and 675,000 gallon in SW corner of landfill.

Manufacturer:	**Model number:**	**Serial number:**
N/A	N/A	N/A
Construction date: **(MM/DD/YYYY)**	**Installation date:** **(MM/DD/YYYY)**	**Modification date(s):** **(MM/DD/YYYY)**
/ / 1984	/ / 1984	/ / ; / / / / ; / /

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
48,000 gallons and 675,000 gallons

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
		8,760 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? __Yes ✔ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	**Type and Btu/hr rating of burners:** N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

N/A

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

C.F.R. 40-60.116b(b); III.B.2.a.vi; Recordkeeping – III.B.2.a.vi. C.F.R. 40-60.116b(d); III.B.2.a.vii; Maximum true vapor pressure 5.2 KPa; Notification – III.B.2.a.vii.

___ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

C.F.R. 40-60.116b(b); III.B.2.a.vi; Recordkeeping – III.B.2.a.vi. C.F.R. 40-60.116b(d); III.B.2.a.vii; Maximum true vapor pressure 5.2 KPa; Notification – III.B.2.a.vii.

Are you in compliance with all applicable requirements for this emission unit? ✔ Yes ___ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT G AIR POLLUTION CONTROL DEVICE FORM

Completed for each control device listed in the Title V Equipment Table

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number:	**List all emission units associated with this control device.**	
01	01-F1	
Manufacturer:	**Model number:**	**Installation date:** MM/DD/YYYY
John Zink	BF-9095295	01/01/2001

Type of Air Pollution Control Device:

__ Baghouse/Fabric Filter	__ Venturi Scrubber	__ Multiclone
__ Carbon Bed Absorber	__ Packed Tower Scrubber	__ Single Cyclone
__ Carbon Drum(s)	__ Other Wet Scrubber	__ Cyclone Bank
__ Catalytic Incinerator	__ Condenser	__ Settling Chamber
__ Thermal Incinerator	_✔_ Flare	__ Other (describe) _____
__ Wet Plate Electrostatic Precipitator		__ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
NMOC	100%	98%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

The flare is a John Zink Model BF-9095295 open flare rated to handle a gas flow between 250 and 2,500 standard cubic feet per minute (scfm). There are two (2) 40-horsepower Gardner Denver direct-drive centrifugal blowers (Model# 73202A) rated at 1,250 scfm installed as the gas-moving equipment on the blower/flare skid. Current LFG inlet flow to flare is approximately 900-1,000 scfm.

Is this device subject to the CAM requirements of 40 C.F.R. 64? __ Yes _✔_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.** Flare is not subject to CAM

Describe the parameters monitored and/or methods used to indicate performance of this control device.

The flare is equipped with a continuous flow monitor amd digital chart recorder that stores a temperature and flow reading at least every 15 minutes. The blower/flare skid is equipped with both manual and automatic isolation valves. If the flare shuts down or a flame is not detected, an automatic valve on the main gas header that feeds the blower closes immediately. This automation helps prevent the free-venting of raw LFG to the atmosphere.