



west virginia department of environmental protection

Division of Water and Waste Management
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Charleston, WV 25304
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Austin Caperton, Cabinet Secretary
dep.wv.gov

Revised April 5, 2018

**INSTRUCTIONS TO PERSON(S) APPLYING
FOR A SOLID WASTE LANDFILL
FACILITY PERMIT**

Part II - Class A, B, and C Solid Waste Landfill Facility Applications

Applicants for solid waste landfill permits should provide the following information.
Submit two (2) copies of the information to:

**West Virginia Department of Environmental Protection
Division of Water and Waste Management
Solid Waste Management
601 57TH Street SE
Charleston, WV 25304**

Drawings, plans, maps and specifications must be signed and sealed by a professional engineer. All construction, design plans, and operating plans should be suitable for construction and must show all details of the facility and its operation.

A. GENERAL INFORMATION

1. Name, company name, address and telephone number of the applicant
2. Name, title, company name, address and telephone number of any authorized agents of the applicant

Instructions
Solid Waste Landfill Facility Permit
page 2

3. Site information
 - a. Facility name, address and telephone number
 - b. Written description of the location of the site
 - c. Latitude and longitude of the center of site
 - d. Solid Waste Shed
 - e. Nearest town
 - f. County
 - g. A copy of the deed or lease to the site property
 - h. Owners of record both surface and subsurface
 - i. Number of site acres and number of acres in disposal area
 - j. USGS location map, including the name of the quadrangle map and date of last revision
 - k. Planned or remaining life of facility in years
 - l. Local zoning ordinances
4. Name, firm, address, telephone number and West Virginia professional engineering license number of the engineer responsible for the design
5. Solid waste types and sources
 - a. List all types and quantities of solid waste to be disposed at the facility. Give the quantity in tons and cubic yards per year for the first and fifth year. Indicate whether the quantity is listed in tons/year or cy/year.
 - b. If industrial solid waste or sludge is to be received, provide a complete list of all waste generators and provide each source of industrial solid waste, sludge or other solid waste.
 - c. Provide average monthly solid waste quantities in tons.
6. Methods for handling and disposing of the following materials, if any, to be received:
 - a. Bulky solid wastes (appliances, auto hulks, furniture, etc.)
 - b. Large dead animals
 - c. Sludge (twenty (20) percent solids content)
 - d. Industrial solid waste
 - e. Other (specify)
7. Population basis
 - a. The estimated population served
 - b. The per capita solid waste quantity (lbs/capita/day)
8. Service area
 - a. A detailed list of all counties, towns, cities and areas to be served by the facility
 - b. A detailed list of all municipal, private or other collectors to be served by the facility

B. SITE PLANS

1. General site maps

Provide the following information on large scale maps with a minimum scale of 1 inch = 200 feet and a maximum contour interval of ten (10) feet, or on the 7.5 minute USGS topographic map, or both. Show the following information, existing and planned, that occur either within the site boundaries or within fifteen hundred (1,500) feet of the site boundary, or within the distances specified in 33CSR1 Subsections 3.1. and 3.2..

- a. Property lines of the facility
- b. Identity and location of adjacent land owners
- c. Owners of record both surface and subsurface
- d. Uses of adjacent properties
- e. Water supply wells
- f. Springs
- g. Wetlands
- h. Streams
- i. Diversion ditches
- j. Ponds
- k. Other bodies of water
- l. 100-year flood plain boundary
- m. Public water supplies
- n. Sinkholes
- o. Groundwater discharge points
- p. Underground and surface mines
- q. Mine pools discharges
- r. Mine spoil piles and points of discharge
- s. Mine refuse spoil piles and impoundment capabilities
- t. Quarries or sand and gravel pits
- u. Gas and oil wells
- v. Surface and groundwater quality monitoring points
- w. Leachate or other wastewater discharge points
- x. Roads
- y. Powerlines (indicate ownership)
- z. Pipelines (indicate ownership)
- aa. All utilities (indicate ownership)
- bb. All easements or right-of-ways (indicate ownership)
- cc. Occupied dwellings
- dd. Public buildings
- ee. Weighing facilities
- ff. Sinkholes
- gg. Fences
- hh. Identity and location of any airports within fifteen hundred (1,500) feet of the site (insert may be used)

2. Site maps, 24" x 36", must contain a survey grid with a maximum dimension of two hundred (200) feet square based on monuments established in the field that is referenced to state plane coordinates.
3. Provide a location map or maps showing the permitted site boundaries, proposed cell area, fifteen hundred (1,500) feet surrounding the site, and the latitude and longitude lines crossing at the center of the site. USGS quadrangle maps must include the name of the quadrangle map and the last revision date.
4. Detailed plans and maps of landfill

Detailed plans and maps of the landfill must be submitted with this application. Plans and maps must include all topographic features, cross sections, and details of construction proposed over the landfill. All details of site improvements and operation must be provided. At a minimum, provide the following information:

- a. Grading plans (referenced to grid control system)
 - (1) Initial contours and cross sections
 - (2) Intermediate contours and cross sections
 - (3) Final contours and cross sections
 - (4) Location and details of cover soil borrow excavation
 - (5) Grades required for proper drainage of lifts
 - (6) Location and limits of fill area, previously filled areas, and construction
 - (7) Location, cross sections, and details of solid waste fill sequencing
- b. Surface water management/erosion control
 - (1) Location, profiles and details of diversion channels, by reach
 - (2) Intermediate and final revegetation
 - (3) Location and details of sediment pond(s)
 - (4) Location and details of other surface water and erosion control measures
- c. Road and access control
 - (1) Location, profiles and cross section of main access road(s)
 - (2) Location, profiles and cross sections of all permanent and temporary on-site roads
 - (3) Traffic flow patterns and control measures
 - (4) Designated dumping area(s)
 - (5) Access gate details and location
 - (6) Fencing locations and details

- d. Solid waste disposal details
 - (1) Lift limits, cross sections, details, sequencing and phasing
 - (2) Solid waste placement and compaction methods
 - (3) Trench locations, details and profiles, if applicable
 - (4) Typical geological and soils profiles
 - (5) Sequence of solid waste filling, referenced to grid controls, for the entire life of the landfill
 - (6) Daily cell dimensions
 - (7) Daily, intermediate and final cover soil placement and compaction details, locations and sequences
 - (8) Location, filling sequence, and filling details for inclement weather operating area(s)
 - (9) Location and details of special waste disposal areas
 - (10) Locations and details of soil borrow areas
- e. Wastewater Control Structures
- f. Leachate Control Structures
- g. Leachate and gas controls
 - (1) Location, cross sections, extent, construction materials, and details of the construction of all aspects of the liner system
 - (2) Location, cross sections, and details of leachate holding or treatment facilities
 - (3) Details of construction of decomposition gas venting
 - (4) Location and construction details of groundwater monitoring structures
- h. On-site structures
 - (1) Location and details of employee and office structures
 - (2) Location and details of equipment maintenance building(s)
 - (3) Location and construction details of solid waste weighing facilities
 - (4) Construction details of sanitary facilities
- i. Utilities: Location and details of utility installation from point of connection to point of use (power, water, communications, etc.)
- j. Direction of prevailing winds
- k. Bridges, railroad, historic sites, schools, churches, other existing and proposed man-made or natural features

4. Design computations

At a minimum, attach design computations, or summaries thereof, for the following:

- a. Facility volume and life
 - (1) Total volume of solid waste fill space
 - (2) Estimated life of landfill
 - (3) Volume of cover soil available on-site or off-site
 - (4) Landfill volume utilization rate (acre-feet/year)
- b. Surface water drainage structures
 - (1) Hydrologic design basis
 - (2) Diversion channel capacities and design velocities, by reach
 - (3) Appurtenant structures
 - (4) Pipe culvert capacities and spacings
- c. Leachate volume (water balance)
 - (1) Average daily leachate flow
 - (2) Average annual leachate volume
 - (3) Volume of leachate holding facility
 - (4) Estimated design flow rate for the leachate treatment system
- d. Liner system
 - (1) Subbase
 - (2) Leachate detection zone
 - (3) Composite liner
 - (4) Leachate collection and protective cover zone
 - (5) Other
- e. Leachate treatment system

C. OPERATION PLAN

A detailed description of landfill operations must be attached. The Operation Plan should include narrative descriptions, maps, and detailed drawings, as necessary. Provide means of quality control and quality assurance where applicable. At a minimum, describe the following items:

1. General information
 - a. Days and hours of operations
 - b. Method of measurement of solid waste quantity received
 - c. Method of controlling access to the site by unauthorized personnel
 - d. Method of controlling access to the site during non-operating hours
 - e. Traffic control methods and traffic flow pattern
 - f. Availability of utilities

2. Disposal area preparations
 - a. Extent and details of clearing and grubbing
 - b. Liner placement and installation
 - c. Cover soil borrow areas, excavation of cover soil and cover soil stockpiles
 - d. Methods and details of trench excavation, if applicable
 - e. Locations and details of litter control fencing/litter control procedures
 - f. Sequencing, coordination and details of temporary access road, and surface water/erosion control operations
 - g. Starting location of filling operations
 - h. Site preparation details for inclement weather and special waste filling areas

3. Landfill procedures
 - a. Details of initial slope construction
 - b. Working face details and practices (solid waste placement and compaction)
 - c. Designated tipping area(s)
 - d. Daily cell dimensions
 - e. Lift construction details
 - f. Sequencing of cells, lifts and phases, referenced to grid controls, over the life of the landfill
 - g. All landfilling methods to be utilized and each area in which each landfilling method will be used
 - h. Daily, intermediate and final cover soil sources, excavation, placement and compaction details

- i. Procedures for coordinating solid waste landfilling with access road, drainage, leachate, gas control, and other construction sequencing
 - j. Special solid waste, bulky solid waste, and inclement weather disposal procedures
 - k. Intermediate and final revegetation specifications and procedures
4. Equipment
 - a. Specifications and descriptions of primary operating equipment (i.e., equipment used for earthmoving, solid waste placement and compaction)
 - b. Vehicular equipment list, with descriptions, for all equipment
 - c. Description of special landfill options, or other options, to be included on primary operating equipment
 - d. Description of special equipment to be employed for maintenance, construction or other uses
 - e. Method for providing stand-by or replacement equipment for primary operating equipment within twenty-four (24) hours of breakdown (include copies of contracts or other arrangements if services are provided by others)
5. Maintenance - Provide all details of the following:
 - a. Normal periodic equipment maintenance (fluid changes, inspections, tune-ups, cleaning, etc.)
 - b. Arrangements for major repairs of primary operating equipment
 - c. Any on-site maintenance facilities
 - d. Equipment available for maintenance
 - e. Provisions for inspecting and maintaining the following:
 - (1) Access roads
 - (2) Leachate collection and treatment system
 - (3) Gas control system
 - (4) Slopes and vegetation
 - (5) Surface water and erosion control systems
 - (6) Ponds (sediment, leachate and any other lagoons or ponds)
 - (7) Weighing facilities
 - (8) Buildings and grounds
6. Personnel
 - a. Number of employees to be on-site
 - b. Job descriptions
 - c. Training

7. Environmental controls (describe the following in detail)
 - a. Contingency plan for prevention of spills and leaks at leachate treatment system
 - b. Dust control methods
 - c. Blowing litter control methods (including fencing or structures to be employed)
 - d. Firefighting provisions (local fire company, soil stockpiles, water supplies, etc.)
 - e. Provisions for portable water supply and employee/user sanitary facilities
 - f. Provisions for intermediate, temporary and permanent revegetation
 - g. Provision for controlling decomposition gas accumulation at the site
 - h. Provision for minimizing leachate quantity
8. Safety
 - a. Provisions for controlling unauthorized access to the facility
 - b. Provisions to protect users from an accident at the working face
 - c. Employee safety equipment
 - d. Safety equipment provisions for primary operating equipment
 - e. Employee safety training
9. Monitoring - Describe all equipment, facilities, and methods for monitoring the following:
 - a. Landfill space utilization
 - b. Quantity of solid waste received
 - c. Leachate flow rate and composition
 - d. Leachate discharge characteristics, prior to and after treatment
 - e. Surface water quality in receiving stream, if applicable
 - f. Groundwater quality
 - g. Explosive gas concentrations at the site boundary and in landfill buildings
10. Recordkeeping and reporting
 - a. Give details of operating records to be maintained at the site, including sample forms to be used. At a minimum, operating records should be kept for the following:
 - (1) Current landfill area in use
 - (2) Landfill space utilization
 - (3) Normal equipment maintenance
 - (4) Type, amount, and origin of solid waste received
 - (5) Surface water, groundwater, and leachate composition
 - (6) Special operating problems or modifications

- b. Provide an outline of the annual report of operations to be submitted to the Division of Water and Waste Management. At a minimum, the following items should be included:
 - (1) Summary of daily and monthly quantities of solid waste received
 - (2) Landfill utilization rate and current area in use
 - (3) Operational problems encountered and their resolution
 - (4) Summary of all monitoring activities from Item C.9.
 - (5) Condition of all on-site facilities

D. SOLID WASTE FACILITY WASTEWATER MANAGEMENT

1. Mapping

- a. Provide a 7.5 minute USGS topographic map showing the location of the site.
- b. Provide a plan map of the facility, at a minimum scale of 1 inch = 200 feet. Locate the following on the plan map:
 - (1) Collection systems
 - (2) Treatment systems
 - (3) Discharge points
 - (4) Proposed groundwater monitoring points

NOTE: General landfill mapping may be used to provide the necessary information.

2. Outfall description

- a. Provide the names of streams or waters receiving treated wastewater directly or indirectly from facility operations.
- b. Specify the number of outlets, size of outlets, type of construction, outlet identifications by name or designation, and mile point of the discharge point. Indicate whether the outlet is submerged. Also, indicate whether the storm water to be discharged is contaminated or uncontaminated or a combination of the two.

3. Waste load description

- a. Influent/effluent characteristics - Complete "Form I, NPDES Industrial Application for NPDES Water Pollution Control Permit, Manufacturing and Commercial Operations".

- b. Describe all sampling. Include the following:
 - (1) Description of sampling and composting methods
 - (2) Date, time and place of sampling
 - (3) Dates analyses were performed
 - (4) Laboratory performing analyses

- 4. Wastewater collection system
 - a. Provide design plans and a narrative description of the system for the collection of all wastewaters emanating from the solid waste facility (leachate, sewage, and other wastewaters).
 - b. Provide a profile of all collection system components.
 - c. Provide complete details for the construction of the wastewater collection system. Use maps, plans, drawings, profile specifications and narrative, as necessary.
 - d. If basins or impoundments are being or will be used in the collection system, provide all details of construction, including:
 - (1) Pertinent liner characteristics
 - (2) Excavation and/or dikes for ponds
 - (3) Inlets, outlets, weirs, baffles, by-passes or overflow structures
 - (4) Surface water diversion structures and channels
 - (5) Cross sections, including dike and liner details
 - (6) Geologic and soils information for earthen impoundments
 - (7) Permeability for earthen impoundments
 - (8) Compaction for earthen impoundments
 - (9) Seepage control for earthen impoundments
 - e. Provide a plan for maintenance and method of operation for the wastewater collection system.

- 5. Treatment, control and disposal systems
 - a. Describe the methods of wastewater control, including: treatment and discharge to surface waters, land treatment, and recirculation to solid waste disposal areas.
 - b. Provide a narrative description of each existing and planned treatment, control, and disposal component included in the wastewater control system from the entrance point to the control system discharge point or completion of treatment, control, and disposal. Include the following:
 - (1) Detailed plans, drawings, and details of all treatment, control and disposal systems for the wastewater control system

- (2) Treatment, control and disposal system process flow block diagram clearly indicating the path of waste treatment
 - (3) Any reduction expected during normal operations for those pollutants requiring treatment
 - (4) The hydraulic capacity and retention time of all treatment unit processes
 - (5) A list of wastes which are not directed to treatment, control and disposal systems, and an explanation why these wastes are not being treated
- c. Sludge handling (if sludge disposal is being used or proposed)
- (1) Describe all sludge removal methods.
 - (2) Describe all sludge disposal methods.
 - (3) Describe all sludge transport methods.
- d. Operations and maintenance
- (1) The plan of maintenance and method of operation for each treatment, control, and disposal component
 - (2) Means for coping with spills
 - (3) A contingency plan to eliminate or minimize stream pollution from power failures, repairs, or other process interruptions

E. CERTIFICATIONS

It is hereby certified that the above information is true and accurate to the best of the applicant's knowledge and belief.

The applicant has in operation, or can reasonably be expected to place in operation, the treatment, control, disposal facilities, works and systems herein described within _____ days after receipt of any permit issued for such facilities, works, and systems pursuant to this part of the application.

It is understood that any permit issued pursuant to this application may be revoked or suspended and all enforcement provisions set forth in Article 15, Article 12, and Article 11 of Chapter 22 of the West Virginia Code will be invoked in the event that (1) future investigations disclose conditions other than those stated in this application, (2) the applicant fails to comply with any terms and conditions of any such permit, or (3) the applicant fails to comply with any terms and conditions in the plans and specifications, in the plan of maintenance, or in the method of operation submitted herewith.

By: _____
Print Name

Signature

Title

Date

STATE OF WEST VIRGINIA
COUNTY OF _____

Taken, subscribed and sworn to before me the undersigned authority
in my said county this _____ day of _____, 20 _____.

My commission expires: _____

Notary Public

STAMP OR SEAL

We will process your personal information (email address, mailing address and/or telephone number) in accordance with the State of West Virginia's Privacy Policy for appropriate and customary business purposes. Your personal information may be disclosed to other state agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. The Division of Water and Waste Management will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact the DEP's Chief Privacy officer at deprivacyofficer@wv.gov.