west virginia department of environmental protection

Division of Water and Waste Management
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Harold D. Ward, Cabinet Secretary
dep.wv.gov

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APPLICATION REQUIREMENTS FOR A CLASS F INDUSTRIAL SOLID WASTE FACILITY

A "Class F Solid Waste Facility", as defined by 33CSR1 Subsection 2.28., means any industrial solid waste disposal facility.

All applicants for a new or a reissued Class F Industrial Solid Waste Facility shall complete a Class F Industrial Solid Waste Facility Application by providing, at a minimum, all of the information required in this document. Submit the completed application electronically to the West Virginia Department of Environmental Protection's website at www.dep.wv.gov under the permitting section, electronic submission system.

Unless otherwise approved by the Secretary in writing, all applicants for Class F Industrial Solid Waste Facility shall comply with the requirements of West Virginia Code Chapter 22, all applicable rules promulgated thereunder, and 33CSR1 "Solid Waste Management Rule".

If there are any questions regarding the proper procedure to complete the information required by this application, contact the Solid Waste Management Unit at (304) 926-0499.

I. PERMIT APPLICATION REQUIREMENTS

A. Attach a copy of the approval letter from the Division of Culture and History

B. Attach a copy of the Lands Inquiry Response for endangered species habitat for the area of the landfill site from the Wildlife Resources Section of the Division of Natural Resources.

II. GENERAL INFORMATION

A. Name, title, company name, address and telephone number of the applicant

B. Name, title, company name, address and telephone number of the authorized agents of the applicant

C. Name, company name, address, telephone number, and the West Virginia registration number of the professional engineer responsible for the design of the proposed facility

D. In accordance with 33CSR1 Subdivision 3.7.c. "Certification" all application documents related to engineering and design plans and specifications must be compiled, signed, and sealed by a professional engineer who is registered to practice in West Virginia.

E. Type of permit required: new permit, renewal of an existing permit, modification of an existing permit, or a closure permit

F. Type of disposal at the facility, e.g., landfill impoundment, etc..

G. Site location

1. Facility name, address, and telephone number
2. Description of the location
3. County
4. Nearest town
5. Latitude and longitude of the center of the proposed site
6. The number of site acres and number of acres in the disposal area
7. Local zoning ordinances

H. Names of all streams or other surface waters which receive or may receive leachate, runoff, or other discharge generated by the operation of the landfill disposal system. If the receiving water has no published name, specify the stream as an "unnamed tributary of" the specific subsequent receiving stream.

I. Provide a copy of the deed or lease for the facility and the owners of record both surface and subsurface.

J. Provide the planned life of facility in years supported by calculations.

K. Discuss the present and former land uses at the site and the area extending one mile in all directions which may have an impact on the suitability of the property for waste disposal.

L. Indicate any of the following location standards that apply to this solid waste facility:

1. Within one thousand (1,000) feet of any navigable lake, pond, or wetland (not including facility drainage or sedimentation control structures)
2. Within three hundred (300) feet of any navigable river or stream
3. Within a perennial stream
4. Within a 100-year floodplain
5. Within one thousand (1,000) feet of the nearest edge of the right-of-way of any state highway, interstate or federal aid primary highway, or public park

6. Within two hundred (200) feet of any faults
7. Within ten thousand (10,000) feet of any airport
8. Within five hundred (500) feet of an occupied dwelling
9. Within one thousand two hundred (1,200) feet of any public or private water well supply
10. Within one thousand (1,000) feet of any area that may be considered unmonitorable (e.g., karst terrain, solution cavities, etc.)
11. Above deep mine workings
12. Within a surface mine area

M. Provide the names, addresses and telephone numbers of all laboratories and technicians performing any tests, drilling, drawing preparations, analyses, etc., required by this application. Also provide:

1. Date, time and place of each sampling
2. Brief description of sampling procedure, including type of collection apparatus or equipment used
3. Sample fixatives (preservatives) used, if any
4. Dates analyses were performed
5. Description of analytical methods used

N. Provide the following information about the plant generating wastes that are being disposed or will be disposed in the landfill:

1. Name, location and type of plant generating wastes
2. Principal raw materials
3. Principal products

O. Include a detailed description of the alternatives to the facility, as well as a descriptt-ion of any waste reduction incentives and recycling services to be used or provided.

III. WASTE DESCRIPTION

A. Solid Waste Types

1. 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.
2. Provide maximum, minimum and average daily solid waste quantities in pounds or tons, as well as the methods for handling and disposing sludge (minimum twenty (20) percent solids), industrial solid wastes or other solid waste.

B. Waste Characterization

Provide the following information about the waste disposed or be disposed in the landfill:

1. Chemical analyses that includes all potential contaminants known to the applicant to be characteristic of the waste

2. Solubility and leachability of the waste, including the results of a leachate test that represents the composition of the leachate that is being or could be generated at the site
3. The proportion of the total waste load that is putrescible matter, if any

IV. SITE PLANS

A. General Site Maps

1. Provide a United States Geological Survey (USGS) 7.5 minute quadrangle topographic map or portion thereof. The USGS map needs to show the site and the area extending at least one (1) mile in all directions of the site boundaries.
2. Provide a large scale drawing or map showing the facility site and the area extending fifteen hundred (1,500) feet in all directions of the site boundaries. The map must have a minimum scale of 1" = 200' and a maximum contour interval of ten (10) feet.
3. Show the following information on the site and area within fifteen hundred (1,500) feet of the site boundaries on the USGS and/or large scale site maps:

    a. Property lines of the site
    b. Uses of adjacent properties
    c. Power lines and pipelines (indicate ownership)
    d. Right-of-ways and easements (indicate ownership)
    e. Access roads
    f. Fences
    g. Weighing facilities
    h. Existing and proposed facilities
    i. Water wells
    j. Springs, swamps, streams, ponds, and other bodies of water
    k. Public water supplies
    l. Sinkholes
    m. Underground and/or surface mines
    n. Mine dumps and mine spoil piles
    o. Mine pool discharge points
    p. Quarries, sand and gravel pits
    q. Gas and oil wells
    r. Diversion ditches (existing and proposed)
    s. Water quality monitoring locations, including groundwater monitoring wells
    t. Occupied dwellings
    u. Roads
    v. Public buildings
    w. 100-year floodplain
    x. Airports within fifteen hundred (1,500) feet of the site (insert may be used)
    y. Leachate or other wastewater discharge points
    z. Injection/disposal wells

B. Detailed Plans and Maps of the Facility

Detailed plans and maps of the landfill must be submitted with this application. Plans and maps must include all topographic features, all existing conditions, and the proposed construction at the facility. On the plans include at least two (2) cross sections across the disposal area and all details of site improvements and site operation. Provide the following details:

1. Construction Plans that are referenced to a 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

    a. Initial contours and cross sections
    b. Intermediate contours and cross sections
    c. Final contours and cross sections
    d. Location and details of cover soil borrow excavations
    e. Grades required for proper drainage
    f. Location and limits of fill area, previously filled areas, and construction
    g. Location, cross sections, and details of solid waste filling sequence

2. Surface water management and erosion control

    a. Location and details of any surface water discharge structures
    b. Location and details of sediment ponds, if applicable
    c. Location, profiles, and details of diversion channels
    d. Location and details of other surface water and erosion control measures
    e. Intermediate and final revegetation

3. Road and access control

    a. Location, profiles, and cross sections of main access roads
    b. Location, profiles, and cross sections of all permanent on-site roads
    c. Access gate details and location
    d. Fencing locations and details

4. Solid waste disposal cells

    a. Lift limits, cross sections, details, sequencing and phasing
    b. Solid waste placement and compaction details
    c. Trench locations, details, and profiles, if applicable
    d. Sequence of solid waste filling, referenced to grid controls, for the entire life of the landfill
    e. Daily cell dimensions
    f. Location, filling sequence, and filling details for inclement weather operating areas
    g. Location and details of special waste disposal areas
    h. Locations and details of soil borrow areas

5. Leachate and gas controls

    a. Location, cross sections, extent of construction, construction materials, details of construction, and details of all aspects of the liner system
    b. Location, cross sections, and details of leachate holding or treatment facilities

6. On-site structures

    a. Location and details of equipment maintenance buildings
    b. Location and details of employee and office structures
    c. Construction details of sanitary facilities
    d. Location and construction details of solid waste weighing facilities

7. Utilities. Show the location of utility installation from point of connection to point of use (power, water, communications, etc.)

8. Wastewater Management

    a. Location and details of collection systems
    b. Location and details of treatment systems
    c. Location and details of all discharge points

C. Design Computations

Attach design computations, or summaries thereof, for the following:

1. Facility volume and design life

    a. Total volume of solid waste fill space
    b. Estimated life of the landfill
    c. Volume of cover soil available on site or off site
    d. Landfill volume utilization rate (acre-feet/year)

2. Surface water drainage structures

    a. Hydrologic design basis
    b. Diversion channel capacities and design velocities, by reach
    c. Appurtenant structures
    d. Pipe culvert capacities

3. Leachate volume (Water Balance)

    a. Average daily leachate flow
    b. Average annual leachate volume
    c. Volume of leachate holding facility
    d. Estimated design flow rate for leachate treatment system

4. Liner system

    a. Subbase
    b. Leachate detection zone
    c. Composite liner
    d. Leachate collection and protective cover zone
    e. Other

V. SOILS, GEOLOGICAL AND HYDROLOGICAL BACKGROUND INFORMATION

A. Soils Information

Background soil conditions must be determined and submitted with this application. Backhoe test pits or drilled test borings are to be used to determine soil types, characteristics and conditions. Four (4) test pits or borings for the first ten (10) acres (or less) and one (1) test pit or boring for each additional ten (10) acres (or less) must be excavated or drilled on a uniform grid pattern across the site and the proposed borrow sources. Provide the following:

1. A list of each soil series and phases and borrow sources present on the site
2. An original USDA Soil Conservation Service Map (with a USDA soil legend) for the area which indicates the site boundaries
3. The locations of all test pits or borings made to describe soils and to determine their depth (the locations of the test pits shall be indicated on a large scale map (minimum scale of 1" = 200'))
4. A description of soil horizons containing seventy-five (75) percent or more coarse fragments including:

    a. Minimum thickness of soil to horizons with seventy-five (75) percent or more coarse fragments as defined by the United Soil Classification System
    b. Soil thickness determination process
    c. Degree of weathering of coarse fragments

5. Test pits and/or borings descriptions including depth to all horizons, soil type (Unified Soil Classification System designation), and texture, structure, consistence, and depth to and color of any mottles
6. Results of laboratory analyses of soil samples taken from test pits or borings including analyses for grain size, pH, permeability, and Atterberg limits for predominant soil types
7. A description of the following general soil characteristics:

    a. Drainage characteristics of soil
    b. Maximum slopes at the proposed site
    c. Shallowest depth from surface to mottling

8. A minimum of five (5) representative samples for the first ten (10) acres (or less) and one (1) additional sample for each additional five (5) acres (or less) must be tested for the relationship of water content to dry density using either the modified Proctor method or standard Proctor method. Each Proctor curve must be developed with a minimum of five (5) points.
9. A minimum of twenty (20) percent of the samples used to develop the Proctor curves must be used to evaluate the relationship between compaction and hydraulic conductivity. This evaluation must be accomplished by testing the sample corresponding to each point established on the chosen Proctor curves for hydraulic conductivity.

B. Site Geological Information

A minimum of four (4) test borings shall be performed at any landfill site with a permitted surface area of ten (10) acres (or less) and one (1) additional test boring performed for each additional five (5) acres up to one hundred fifty (150) acres. Such test borings required herein should be distributed over the entire site area to give an accurate description of subsurface conditions for the area of the site which is intended for use as a landfill. Each boring shall consist of sampling of unconsolidated sediment and coring of all consolidated sediments. Upon completion of drilling all completed logs of all boreholes shall be submitted. The depth at which the borings shall terminate shall be determined as follows. The first boring shall be placed in the lowest point of the proposed disturbed area and drilled down to and including the uppermost significant aquifer. All borings shall have a sufficient overlap of elevation to provide complete correlated stratigraphic cross sections to adequately illustrate the geology of the site. Geophysical methods shall be required in those areas underlain by formations subject to solution actions (i.e., Karst limestone, etc.) and other formations which area highly fractured.

Provide the following:

1. Unconsolidated Sediments

    a. A description of any unconsolidated sedimentary deposits under the proposed site including, but not limited to, colluvial, alluvial or lacustrine
    b. A description of the type and texture of unconsolidated materials
    c. The thickness of the maximum and minimum thickness of unconsolidated materials and the procedural methods used to determine the thickness
    d. Permeability of individual units
    e. Effects of these sediments on the potential discharges from the facility

2. Bedrock

    a. The formations and names (i.e., Greenbrier Limestone)
    b. The lithologies in the area, including major lithologic names, plotted on a large scale map

c. Indicate on a large scale map all areas where bedrock outcrops occur within the site and within fifteen hundred (1,500) feet of the site boundaries
d. Characterization of the degree of bedrock weathering
e. The shallowest depth from surface to bedrock
f. For carbonate rock, indicate any undrained depressions or sinkholes that exist on site or within fifteen hundred (1,500) feet of the site on the large scale map or on a 7.5 minute USGS topographic map
g. Permeability of individual units

3. Structure

a. Indicate all of the following types of fracture zones on site and within fifteen hundred (1,500) feet of the site on a large scale and a 7.5 minute topographic map:

(1) Traces
(2) Lineaments
(3) Joints
(4) Faults
(5) Folds

b. Briefly describe the influence that these fracture zones have on the movements of infiltrated water and groundwater.
c. Describe the regional bedrock structures in the area of the site.
d. Describe the folding as it applies to the site including strike and dip of the fold axis and location of the site in relation to the local structure.
e. Provide a detailed description of the local bedrock structure. Construct a structural geological map with a scale of 1 inch = 200 feet using the following structural contour intervals:

(1) For 0 – 5 degrees bedrock dip angles, use 5 foot intervals
(2) For 5 – 30 degrees bedrock dip angles, use 10 foot intervals
(3) For 30 degrees or greater bedrock dip angles, use 25 foot intervals

f. Describe the strike and dip of bedding planes.
g. Describe any or all joints and fractures, including strike and dip of joints. Describe the spacing of joints. Give a description of open joints.
h. Describe all faults located on or within fifteen hundred (1,500) feet of the site, including strike and dip of faults. Indicate all faults in the area of the site on the map.
i. Construct a minimum of two (2) correlated stratigraphic cross sections using bedrock outcrops, potentiometric surface elevations, and borehole information, including a vertical exaggeration to adequately illustrate the geology and hydrology of the site.

4. Mining

    a. Identify the presence of any abandoned, reclaimed, active or inactive surface mines on the site
    b. List any extractable coal seams beneath the site.
    c. Identify any active or inactive deep mines located under the site or within fifteen hundred (1,500) feet of the site including the minimum depth to mined areas, aerial extent of mined areas, and the type of the mineral mined (if coal, give names of seams).

C. Hydrologic Information

1. Provide the maximum and the minimum depth to the groundwater table.

    a. Describe the seasonal water table fluctuations and seeps and springs affected by seasonal changes.
    b. Describe perched or special water table conditions and provide the minimum depth to a perched water table.
    c. Determine groundwater drainage to deep mines. If this occurs, mine discharges must be identified on the large scale and/or USGS quadrangle map.

2. Provide the following information on existing groundwater monitoring wells:

    a. Monitoring well identification number
    b. Well location – latitude and longitude
    c. Drilling method used
    d. Complete drilling logs
    e. Total depth
    f. Surface elevation
    g. Type of casing
    h. Casing diameter
    i. Borehole diameter
    j. Depth of zones cased
    k. Zones open to aquifer
    l. Zones grouted and/or sealed and type used
    m. Lithology of zone monitored
    n. Depth to groundwater
    o. Method used for well development
    p. Description of method used to backfill
    q. Interval open to aquifer
    r. Type and size of openings to aquifer (i.e., perforations, slots, screens, open hole, etc.)
    s. Date of well construction completion
    t. Names, addresses, phone numbers of individuals, and firms used to drill, test, and complete monitoring wells

3. Groundwater Movement

   a. Construct a large scale map (1 inch = 200 feet) showing all groundwater flow directions. Contour the water table potentiometric surface using an appropriate contour interval.
   b. Give the approximate rate of groundwater flow and method of determination.
   c. Describe how groundwater flow directions were determined.
   d. Show the location of all groundwater discharge points related to the site on a large scale map.
   e. Discuss the rate of groundwater flow at the site and its effects on the operation of the proposed facility.

4. Groundwater Quality

   Provide results of analyses of samples of each groundwater monitoring well from the site. All samples are to be collected using proper sampling procedures. All analyses must include the following parameters: alkalinity, hardness, TOC, conductivity, bicarbonate, TDS, TSS, chlorides, sulfate, calcium, magnesium, manganese, iron, copper, lead, potassium, sodium, zinc, ammonia nitrogen, phosphate, arsenic, barium, cadmium, chromium, silver, mercury, pH, nickel, total phenolics, boron, COD, BOD-5, and other parameters otherwise believed to be present.

5. Surface Water

   a. Provide the name of the nearest stream and its 7Q10 low flow.
   b. Provide the watershed area of the tributary on which the site is located.
   c. Provide an estimated peak surface water drainage flow of the tributary to the site for a 25-year, 24-hour rainfall event.
   d. Provide results of analyses of water from one grab sample from the nearest stream. Include the same parameters as listed in the Groundwater Quality section of this application.

6. Water Budget

   A water budget shall be prepared for the periods during active operations when the maximum amount of area has been filled but not capped following facility closure at any landfill site. At a minimum, the following factors must be considered in the preparation of each water budget:

   a. Average monthly temperature
   b. Average monthly precipitation
   c. Evaporation
   d. Evapotranspiration
   e. Surface slope and topsoil texture
   f. Soil moisture holding capacity and root zone depth
   g. Runoff coefficients
   h. Moisture contribution from the waste
   i. Any groundwater contribution

VI. OPERATION PLAN

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

A. General Information

1. Days and hours of operations
2. Method of measurement of solid waste quantity received
3. Method of controlling access to the site by unauthorized personnel during non-operating hours
4. Availability of utilities

B. Disposal Area Preparations

1. Extent and details of clearing and grubbing
2. Liner system. Provide the following:

    a. A cross section of the liner system as installed
    b. Thickness and characteristics of the subbase
    c. Thickness and characteristics of the leachate collection zone
    d. The design for the leachate monitoring system in the leachate detection zone
    e. The nature and thickness of the liner material
    f. The thickness and characteristics of the leachate collection zone and the design of the leachate collection system in the collection zone

3. Liner placement and installation. Provide the following:

    a. The testing procedures and construction methods proposed to be implemented during construction of the liner system
    b. The manner in which the protective cover and liner disposal area will be protected in unfilled portions of the disposal area prior to and during placement of the initial lift of solid waste
    c. The manner in which the protective cover and liner system will be protected from weather prior to and during placement of the initial lift of solid waste
    d. Methods and details of anchor trench excavation
    e. Demonstrate that leachate will not adversely affect the physical or chemical characteristics of the proposed liner system, or inhibit the liner's ability to restrict the flow of solid waste constituent or leachate, based on the most recent edition of EPA Method 9090, "Compatibility Test for Waste and Membrane Liners", or other documented data.

4. Locations and details of litter control fencing and litter control procedures
5. Sequencing, coordination, and details of any temporary access roads and surface water and erosion control operations
6. Starting location of filling operations
7. Site preparation details for inclement weather and special waste filling areas

C. Landfill Procedures

1. Landfilling methods to be used. If more than one method will be used, designate the site areas in which each method is to be used.
2. Starting point of disposal operations
3. Details of initial slope construction
4. Working face details and practices regarding solid waste placement and compaction
5. Daily cell dimensions
6. Lift construction details
7. Sequencing of disposal cells, lifts, and phases of construction over the life of the landfill (referenced to grid controls)
8. Cover material, characteristics, and specifications. Provide the following:

    a. Earthen Materials

        (1) The permeability of representative samples of cover material remolded to field density
        (2) List any soil conditioners used, if necessary, to enhance cover material effectiveness
        (3) Cover soil borrow sources

    b. Synthetic Materials

        (1) Manufacturer specifications and thickness in mils
        (2) Design and installation procedures
        (3) Welding procedures

            (a) Approved manufacture's procedures
            (b) Welding procedures to be used during installation

        (4) Special construction details

9. Procedures for coordinating solid waste landfilling with access roads, drainage, leachate and gas controls, and other construction sequencing
10. Special solid waste and inclement weather disposal procedures
11. Intermediate and final revegetation specifications and procedures

D. Equipment

1. Specifications and descriptions of primary operating equipment (i.e., equipment used for earthmoving, solid waste placement, and compaction)

2. Vehicular equipment list, with descriptions, for all equipment
3. Description of special options or other options to be included on primary operating equipment needed to support operations at this site
4. Description of special equipment to be used for maintenance, construction, or other uses
5. Method for providing stand-by or replacement equipment

E. Maintenance. Provide all details of the following provisions for inspecting and maintaining the following:

1. Access roads
2. Leachate collection and treatment systems
3. Gas control systems
4. Slopes and revegetation
5. Surface water and erosion control systems
6. Ponds (sediment, leachate, and any other lagoons or ponds)
7. Weighing facilities
8. Buildings and grounds

F. Personnel

1. Number of employees to be on-site
2. Job descriptions
3. Training

G. Environmental controls. Describe the following in detail:

1. Contingency plan for prevention of spills and leaks within the leachate treatment system
2. Dust control methods
3. Methods to control blowing litter, including fencing or other structures
4. Fire fighting provisions (local fire company, soil stockpiles, water supplies, etc.)
5. Provisions for potable water supply and employee/user sanitary facilities
6. Provisions for temporary, intermediate, and permanent revegetation
7. Provisions for controlling decomposition gas accumulation at the site
8. Provisions for minimizing leachate quantity, if applicable

H. Safety

1. Provisions for controlling unauthorized access to the facility
2. Employee safety equipment
3. Safety equipment provisions for primary operating equipment
4. Employee safety training
5. Provisions for controlling decomposition gas accumulation at the site

I. Monitoring. Describe all equipment and methods for monitoring the following:

1. Landfill space utilization
2. Quantity of solid wastes received
3. Leachate flow rate and decomposition
4. Leachate discharge characteristics, prior to and after treatment
5. Surface water quality in the receiving stream, if applicable
6. Groundwater quality
7. Explosive gas concentrations at the site boundary and in landfill buildings

J. Record Keeping and Reporting

1. Give details of operating records to be maintained at the site including sample forms to be used. At a minimum, the following operating records should be kept:

    a. Current landfill area in use
    b. Landfill space utilization
    c. Normal equipment maintenance
    d. Solid waste quantities received
    e. Surface water, groundwater, and leachate composition
    f. Special operating problems or modifications

2. Provide an outline of an annual report of operations to be submitted to the Division of Water and Waste Management. At a minimum, the following items should be included:

    a. Summary of daily and monthly quantities of solid waste received
    b. Landfill utilization rate and current area in use
    c. Operational problems encountered and their resolution
    d. Summary of all monitoring activities (as a result of "Monitoring", above)
    e. Condition of all on-site facilities

VII. SOLID WASTE FACILITY WASTEWATER MANAGEMENT

The applicant must complete the West Virginia NPDES Water Pollution Control Permit Application.

VIII. CLOSURE

Unless otherwise required by the Secretary, submit the following information if the facility will be closed within five (5) years.

A. A closure plan must be submitted and include:

1. Cover information. Provide the following:

   a. Details of gas management layer, if applicable
   b. Details of the clay cap layer, including permeability, thickness, and compaction method
   c. Details of the drainage layer, including permeability and thickness
   d. Details of the final cover, including permeability, thickness, and placement method

2. Surface water diversion. Provide the following:

   a. Location, profiles, and details of diversion channels
   b. If proposed drainage channels will route surface water over previous waste disposal areas, provide cross sectional details of the final cap with drainage channel
   c. Location and details of sediment ponds, if any
   d. Location and details of other surface water and erosion control measures

3. Grading plans. Provide the following:

   a. Final contours and cross sections
   b. Describe grades required for proper drainage to prevent ponding and/or reduce infiltration

4. Backfilling. Should it be necessary to backfill impoundments or depressions on site to establish proper site drainage, provide plans and descriptions of backfill procedures and information on the source and the type of materials used.

5. Establishment of vegetation. Provide the following:

   a. Type of grasses or crops to be seeded
   b. Soil Amendments

      (1) Type of fertilizer used and its application rate
      (2) Lime application rate
      (3) Type of mulch used and the application rate

B. Post-Closure Care. Provide details of post-closure care for the following items:

1. Repair of any settlement of waste which may occur up to thirty (30) years from the date of closure
2. Repair of cover material
3. Site monitoring for unauthorized disposal
4. Describe design criteria to be utilized to prevent erosion or scouring of the disposal site by river flooding, surface water runoff, or other erosive agents
5. Post-Closure site monitoring plan

    a. Indicate the frequency of inspections
    b. Describe action to be taken in the event of vandalism or unauthorized disposal
    c. Describe remedial actions to correct post-closure erosion problems (i.e., fissure cracks, slumps, slides, etc.)
    d. Monitoring of both groundwater and surface water

C. Provide plans that show the final use of the facility post-closure (33CSR1 Subdivision 6.1.f.)

IX. 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, a Notary Public in and for the County and State aforesaid this _____ day of _____ 20_____.

My commission expires: _____

_____
Notary Public

STAMP OR SEAL

X. MAP LOCATION CHART

For all application items which are required to be located on a map, please indicate on which map it was marked. If more than one topographic or large scale map has been used, indicate the map and/or drawing number.

Check the appropriate column.		7.5 Minute Topo Map	Large Scale Map	Not Applicable
1.	Property lines of the site			
2.	Uses of adjacent properties			
3.	Power lines and pipelines			
4.	Right-of-ways and easements			
5.	Access roads			
6.	Fences			
7.	Weighing facilities			
8.	Existing and proposed facilities			
9.	Water wells			
10.	Springs, swamps, and streams			
11.	Ponds			
12.	Other bodies of water			
13.	Groundwater discharge points			
14.	Directions of groundwater flow			
15.	Public water supplies			
16.	Sinkholes			
17.	Undergrnd and/or surface mines			
18.	Mine dumps and mine spoil piles			
19.	Mine pool discharge points			
20.	Quarries, sand and gravel pits			
21.	Gas and oil wells			
22.	Diversion ditches			
23.	Water quality monitoring points			
24.	Occupied dwellings			
25.	Roads			
26.	Public buildings			
27.	100-year floodplain			
28.	Airports w/in 1,500 ft of the site			
29.	Leachate discharge points			
30.	Other wastewater discharge pts			
31.	Injection/disposal wells			
32.	Test pit or boring locations			
33.	Lithologies			
34.	Bedrock outcrops			
35.	Traces			
36.	Lineaments			
37.	Joints			
38.	Faults			
39.	Folds			

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 depprivacyofficer@wv.gov.