

# VIRGINIA POLLUTION ABATEMENT APPLICATION

## FORM D

### MUNICIPAL EFFLUENT AND BIOSOLIDS

## PART D-II LAND APPLICATION OF BIOSOLIDS

All of the information provided in this application will become part of the Biosolids Management Plan associated with a VPA individual permit issued for the proposed activity.

### General Information

1. Owner Legal name. (Provide the same name given on Form A, Item 2).
2. Provide a general description of the proposed operation.
  - a. **Source List:** Provide a list of the facilities that generate the biosolids that you currently land apply or propose to land apply. If the facility has multiple wastestreams that receive different treatment types; identify the biosolids produced by each treatment process as a separate source from the generating facility. Include all sources that you wish to be included in this permit. Include only sources that are identified as approved on the DEQ Sources list. (A source of biosolids at the generating facility is the product of a specific series of treatment unit processes, and a single facility may have multiple sources. For example, a generator that splits its waste activated sludge, half to a digester and a belt press and the other half to lime stabilization has 2 sources of biosolids). Include the following information using the Form D VPA Permit Application Workbook Tab **D II.2.a. Source List**
    - 1) Generating Facility's name (as it is identified on the DEQ Sources List)
    - 2) Generating Facility's discharge permit number VPDES, NPDES or other state permit;
    - 3) Biosolids Treatment Type
    - 4) Biosolids Quality (EQ Cake biosolids; Class A CPLR biosolids; Class B PC biosolids; Class B CPLR biosolids)
    - 5) Generating Facility's Owner
    - 6) Generating Facility's location – Address, city and state
    - 7) Annual Amount of Sludge/Biosolids Produced
    - 8) Annual Amount Biosolids Land Applied
    - 9) Approval Date
  - b. Provide each generating facility's odor control plan for the sources identified above, if a current odor control plan has not been submitted to DEQ. The odor control plan shall contain at minimum:
    - 1) Methods used to minimize odor in producing biosolids;
    - 2) Methods used to identify malodorous biosolids before delivery to the land applier (at the generating facility);
    - 3) Methods used to identify and abate malodorous biosolids if delivered to the field, prior to land application; and
    - 4) Methods used to abate malodor from biosolids if land applied;
  - c. Provide an updated Non-Hazardous Declaration Statement - Part D-V for each biosolids source from the approved source list.
  - d. General location: Describe the general location of the sites proposed for application, and
  - e. Methods of biosolids application proposed.
3. Identify the methods for notification of DEQ and local government prior to proposed land application activities.
4. Provide to the DEQ and to each locality in which the biosolids are to be applied, written evidence of financial responsibility. Evidence of financial responsibility shall be provided in accordance with the requirements specified under 9VAC25-32-770 et seq.

## Design Information

### Biosolids Characterization

5. For each new source of biosolids proposed for land application provide:
- a. Part D-IV, a Biosolids Characteristics Form for each source of biosolids that is not identified on the VA DEQ Approved Biosolids Source List. The following biosolids sources will always require a characterization form:
    - 1) biosolids from a new generating facility;
    - 2) biosolids from an existing generator that has never been approved for land application in Virginia;
    - 3) biosolids previously approved for which the generator has not submitted biosolids monitoring data in the past 5 years; or
    - 4) biosolids produced by a new treatment process within an existing facility.
  - b. Part D-V - Non-Hazardous Declaration Statement.

### Biosolids Storage

6. List in a tabular format, using Form D VPA Permit Application Workbook **Tab D II.6. Storage**, all existing and proposed **routine** biosolids storage facilities and **on-site** storage under the control of the permit applicant. Provide the permit name and number associated with the storage facility or site. Include for each, the storage facility or site name, the location, total storage capacity, current available capacity and the biosolids contracts currently permitted or assigned to these facilities or sites.
7. Provide plans and specifications for proposed **routine** and **on-site** storage facilities that depict the following information:
- a. Site layout on a recent 7.5 minute topographic quadrangle or other appropriate scaled map with the following information:
    - 1) Location of any required soil, geologic and hydrologic test holes or borings
    - 2) Location of the following field features within 0.25 miles of the site boundary (indicated on the map) with the approximate distances from the site boundary.
      - (a) Water wells (operating or abandoned).
      - (b) Surface waters.
      - (c) Springs.
      - (d) Public water supplies.
      - (e) Sinkholes.
      - (f) Underground and/or surface mines.
      - (g) Mine pool (or other) surface water discharge points.
      - (h) Mining spoil piles and mine dumps.
      - (i) Quarries.
      - (j) Sand and gravel pits.
      - (k) Gas and oil wells.
      - (l) Diversion ditches.
      - (m) Occupied dwellings, including industrial and commercial establishments.
      - (n) Landfills - dumps.
      - (o) Other unlined impoundments.
      - (p) Septic tanks and drainfields.
      - (q) Injection wells.
  - b. Topographic map (10-foot contour preferred) of sufficient detail to clearly show the following information:
    - (1) Maximum and minimum percent slopes.
    - (2) Depressions on the site that may collect water.
    - (3) Drainage ways that may attribute to rainfall run-on to or runoff from this site.
    - (4) Portions of the site (if any) which are located within the 100-year floodplain.
  - c. Data and specifications for the liner proposed for seepage control.

- d. Scaled plan view and cross-sectional view of the storage facilities or sites showing inside and outside slopes of all embankments and details of all appurtenances.
  - e. Calculations justifying impoundment capacity, including freeboard where applicable.
  - f. A description of supernatant handling and disposal.
  - g. Groundwater monitoring plans for the facilities or sites including pertinent hydrogeological data to justify upgradient and downgradient well location and depth.
8. For the routine storage of biosolids, provide evidence of certification by the local government of the locality in which the biosolids are to be stored that the storage site is consistent with all applicable ordinances. Evidence of certification shall consist of the following:
- a. A copy of the certification from the local government confirming that the storage site is consistent with all applicable ordinances, or where the local government fails to respond within 30 days of receiving the request for certification, a copy of the letter from the applicant to the local government requesting certification of the storage facility; **or**
  - b. A copy of the special exception or special use permit from the local government that has adopted an ordinance in accordance with § 62.1-44.19:3.R of the Code of Virginia.

## **Biosolids Transport**

9. Provide a detailed description for each of the following:
- a. Vehicles that will be used to transport biosolids from generators or storage to land application sites;
  - b. Routes to be used to transport biosolids from the generator(s) to storage unit(s);
  - c. Procedures for biosolids off-loading at the biosolids facilities and the land application site together with spill prevention, cleanup (including vehicle cleaning) and emergency spill notification and cleanup measures; and
  - d. Voucher system to be used to document transport and delivery of biosolids from their source to the land application site or a facility to further process the biosolids for marketing. Also describe record retention for vouchers.

## **Field Operations**

10. For field operations involving storage, provide a detailed description for each of the following:
- a. Routine storage—procedures for biosolids loading of transport vehicles, equipment cleaning, freeboard maintenance for storage of liquid biosolids, and inspections for structural integrity of the storage unit;
  - b. On-site storage—procedures for DEQ approval and implementation; designated site locations if provided in the "Design Information"; the specific site criteria including the best management practices that will be utilized to prevent contact with storm water run on or runoff and the procedures to be followed to ensure the 45 day time limit will be met;
  - c. Staging - procedures for DEQ notification; procedures to be followed including either designated site locations provided in the "Design Information" or the specific site criteria for such locations including the liner or cover requirements and the time limit assigned for such use;
  - d. Procedures for reestablishment of off-loading and staging areas.
11. Provide a detailed description for each of the following:
- a. The biosolids spreader vehicles and the specifications of each vehicle.

- b. Procedures for calibrating each spreader based on the solids content of various biosolids to ensure uniform distribution and appropriate loading rates on a day-to-day basis.
  - c. Procedures used to ensure that operations address the following constraints:
    - (1) Application of biosolids to frozen ground, pasture or hay fields, crops for direct human consumption and saturated or ice/snow covered ground; and
    - (2) Establishment of setback distances, slopes, prohibited access for beef and dairy animals, soil pH requirements, and proper site specific biosolids loading rates on a field-by-field basis.
12. Provide a Land Applier Odor Control Plan that includes at a minimum:
- a. Methods used to identify and abate malodorous biosolids in the field prior to land application, and
  - b. Methods used to abate malodorous biosolids if land applied.

## Land Application Sites

13. Provide a comprehensive list that includes each field proposed for inclusion in the permit. For each field include the following information using Form D VPA Permit Application Workbook Tab **D II.13.a Permitted Fields** or Tab **D II.13.b New Fields**: *DEQ Control Number; Site Book Name; Field ID in the format as it will be used in monthly reports; gross acres of the field; landowner names, date on landowner agreement(s); Tax parcel ID; latitude and longitude of each land application site in decimal degrees to three decimal places and the method of determination; the type of site and crops to be grown.* For modifications to existing fields, include the change in acreage and a description of the modification to the field.

Submission of a completed Fields tab in the Form D VPA Permit Application Workbook supersedes the need to complete the Landowner Coordination Form in the Landowner Agreement, VPA Permit Application Form D-VI.

Site Type includes agricultural land, forest, a public contact site, or a reclamation site, as defined in 9VAC25-32-10.

Use the **Permitted Fields** tab for reissuance and modifications to existing fields. Use the **New Fields** tab for issuance of new permits and addition of new fields during reissuance and modifications.

When submitting a permit application for a permit modification, do not include existing permitted fields that are not being modified or removed.

14. Provide a properly completed Land Application Agreement form for each landowner, Part D-VI.
- *Each landowner must sign his or her own landowner agreement form.*
  - *Provide the name, mailing address, and telephone number of the site owner identified on that form.*
  - *See Part D-VI: Land Application Agreement – Biosolids and Industrial Residuals – Instructions for specific details on completing the form.*
15. Provide a legible topographic map and aerial photograph, including legend, of proposed application areas to scale as needed to depict the following features:
- a. Property boundaries;
  - b. Surface watercourses, including drainage ways;
  - c. Water supply wells and springs;
  - d. Roadways;
  - e. Rock outcrops;
  - f. Slopes;
  - g. Sinkholes
  - h. Frequently flooded areas (National Resources Conservation Service (NRCS) designation);
  - i. Occupied dwellings within 400 feet of the property boundaries and all existing dwelling and property line setback distances;
  - j. Publicly accessible properties and occupied buildings within 400 feet of the property boundaries and the associated extended setback distances; and
  - k. The gross acreage of the fields where biosolids will be applied;

16. Provide a county map or other map of sufficient detail to show general location of the site and proposed transport vehicle haul routes to be utilized from the treatment plant or storage facility.
17. Provide county tax maps labeled with Tax Parcel ID(s) ] for each farm to be included in the permit, which may include multiple fields to depict properties within 400 feet of the field boundaries.
18. Provide a USDA soil survey map, if available, of proposed sites for land application of biosolids.
19. Provide the name, mailing address, and telephone number of the person who applies biosolids to the site, if different from the applicant.
20. Provide the following information for each land application site that has been identified at the time of permit application, if the applicant intends to apply bulk biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 3 to the site:
  - a. Whether the applicant has contacted VA DEQ to ascertain whether bulk biosolids subject to 9VAC25-32-356 Table 3 has been applied to the site on or since July 20, 1993, and if so, the name of person contacted; and
  - b. Identification of facilities other than the applicant's facility that have sent, or are sending, biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 3 to the site since July 20, 1993, if, based on the inquiry in item (a) above, bulk biosolids subject to cumulative pollutant loading rates in 9VAC25-32-356 Table 3 has been applied to the site since July 20, 1993.
21. Provide a nutrient management plan approved by the Department of Conservation and Recreation and a copy of the DCR approval letter for application sites meeting the following conditions:
  - a. Sites operated by an owner or lessee of a confined animal feeding operation, as defined in subsection A of § 62.1-44.17:1 of the Code of Virginia, or confined poultry feeding operation, as defined in subsection A of § 62.1-44.17:1.1 of the Code of Virginia;
  - b. Sites where land application more frequently than once every three years at greater than 50% of the annual agronomic rate is proposed;
  - c. Mined or disturbed land sites where land application is proposed at greater than agronomic rates; or
  - d. Other sites based on site-specific conditions that increase the risk that land application may adversely impact state waters.
22. For mined or disturbed sites where land application is proposed at greater than agronomic rates, provide a reclamation plan that establishes the biosolids application rates and other site specific management practices.