Virginia Administrative Code
Title 9. Environment
Agency 25. State Water Control Board
Chapter 32. Virginia Pollution Abatement (VPA) Permit Regulation

Part IX. Biosolids Program

Article 3. Biosolids Use Standards and Practices

9VAC25-32-550. Storage facilities.

A. No person shall apply to the department for a permit, a variance, or a permit modification authorizing storage of biosolids without first complying with all requirements adopted pursuant to § 62.1-44.19:3 R of the Code of Virginia.

B. ~~Two~~ Three types of storage may be integrated into a complete biosolids management plan:

1. On-site storage~~, or~~;

2. Routine storage. Only routine storage facilities shall be considered a facility under this regulation~~.~~ ; or

3. Alternative storage.

C. All on-site storage and routine storage facilities shall comply with the requirements of this section by 12 months from the effective date of this regulation.

D. On-site storage. On-site storage is the short-term storage of biosolids on a constructed surface within a site approved for land application at a location preapproved by the department. These stored biosolids shall be applied only to sites under the operational control of the same owner or operator of the site where the on-site storage is located. Requirements for on-site storage include the following:

1. The certified land applier shall notify the department within the same working day whenever it is necessary to implement on-site storage. Notification shall include the source or sources, location, and amounts;

2. A surface shall be constructed with sufficient strength to support operational equipment and with a maximum permeability of 10^{-7} cm/sec;

3. Storage shall be limited to the amount of biosolids specified in the nutrient management plan to be applied at sites under the operational control of the same owner or operator of the site where the on-site storage is located;

4. If malodors related to the stored biosolids are verified by the department at any occupied dwelling on surrounding property, the problem must be corrected within 48 hours. If the problem is not corrected within 48 hours, the biosolids must be removed from the storage site;

5. All biosolids stored on the on-site storage pad shall be land applied by the 45th day from the first day of on-site storage;
6. Biosolids storage shall be located to provide minimum visibility from adjacent properties;

7. Best management practices shall be utilized as appropriate to prevent contact with storm water run on or runoff;

8. Stored biosolids are to be inspected by the certified land applier at least every seven days and after precipitation events of 0.1 inches or greater to ensure that runoff controls are in good working order. Observed excessive slumping, erosion, or movement of biosolids is to be corrected within 24 hours. Any ponding or malodor at the storage site is to be corrected. The certified land applier shall maintain documentation of inspections of stored biosolids;

9. The department may prohibit or require additional restrictions for on-site storage in areas of karst topography and environmentally sensitive sites; and

0. Storage of biosolids shall be managed so as to prevent adverse impacts to water quality or public health.

E. Routine storage. Routine storage is the long-term storage of biosolids at a facility not located at the site of the wastewater treatment plant, preapproved by the department and constructed specifically for the storage of biosolids to be applied at any permitted site. Routine storage facilities shall be provided for all land application projects if no alternative means of management is available during nonapplication periods. No person shall apply to the department for a permit, a variance, or a permit modification authorizing storage of biosolids without first complying with all requirements adopted pursuant to § 62.1-44.19:3 A 5 of the Code of Virginia. Plans and specifications for any surface storage facilities (pits, ponds, lagoons) or aboveground facilities (tanks, pads) shall be submitted as part of the minimum information requirements. The minimum information requirements include:

1. Location.

a. The facility shall be located at an elevation that is not subject to, or is otherwise protected against, inundation produced by the 100-year flood/wave action as defined by U.S. Geological Survey or equivalent information.

b. Storage facilities should be located to provide minimum visibility.

c. All storage facilities located offsite of property owned by the generator shall be provided with a minimum 750-feet setback area. The length of the setback area considered will be the distance measured from the perimeter of the storage facility. Residential uses, high-density human activities and activities involving food preparation are prohibited within the setback area. The department may reduce the setback requirements based on site-specific factors, such as facility size, topography, prevailing wind direction, and the inclusion of an effective windbreak in the overall design.

2. Design capacity.

a. The design capacity for storage of liquid biosolids shall be sufficient to store a minimum volume equivalent to 60 days or more average production of biosolids and the incidental wastewater generated by operation of the treatment works plus sufficient capacity necessary for: (i) the 25 year-24 hour design storm (incident rainfall and any runoff as may be present); (ii) net precipitation excess during the storage period; and (iii) an additional one foot freeboard from the maximum water level (attributed to the sum of the above factors) to the top berm elevation. Storage capacity of less than that specified above will be considered on a case-by-case basis only if sufficient justification warrants such a reduction.

b. If alternative methods of management cannot be adequately verified, contractors shall provide for a minimum of 30 days of in-state routine storage capacity for the average quantity of biosolids transported into Virginia from out-of-state treatment works generating at least a Class B biosolids.

3. Facility design.

a. All drawings and specifications shall be submitted in accordance with 9VAC25-790-160.

b. The biosolids shall be stored on an engineered surface with a maximum permeability of 10^{-7} cm/sec and of sufficient strength to support operational equipment.

c. Storage facilities designed to hold dewatered biosolids shall be constructed with a cover to prevent contact with precipitation.

d. Existing facilities permitted as routine storage facilities and designed to contain liquid biosolids may be used to store dewatered biosolids. The supernatant shall be managed as liquid biosolids in accordance with 9VAC25-32-550 E 5 d. Freeboard shall be maintained in accordance with 9VAC25-32-550 E 5 c. The department may require additional monitoring prior to land application.

e. Storage facilities shall be of uniform shape (round, square, rectangular) with no narrow or elongated portions.

f. The facilities shall also be designed to permit access of equipment necessary for loading and unloading biosolids, and shall be designed with receiving facilities to allow for even distribution of biosolids into the facility.

g. The design shall also provide for truck cleaning facilities.

4. Monitoring. All biosolids storage facilities shall be monitored in accordance with the requirements of this regulation. Plans and specifications shall be provided for such a monitoring program in accordance with the minimum information specified in 9VAC25-32-60 F and 9VAC25-32-410.

5. Operation.

a. Only biosolids suitable for land application (Class A or B biosolids) shall be placed into permitted routine storage facilities.

b. Storage of biosolids located offsite or remote from the wastewater treatment works during the summer months shall be avoided whenever possible so that the routine storage facility remains as empty as possible during the summer months.

c. Storage facilities shall be operated in a manner such that sufficient freeboard is provided to ensure that the maximum anticipated high water elevation due to any and all design storm inputs is not less than one foot below the top berm elevation.

d. Complete plans for supernatant disposal shall be provided in accordance with 9VAC25-32-60 F. Plans for supernatant disposal may include transport to the sewage treatment works, mixing with the biosolids for land application or land application separately. However, separate land application of supernatant will be regulated as liquid biosolids; additional testing, monitoring and treatment (disinfection) may be required.

e. The facility site shall be fenced to a minimum height of five feet; gates and locks shall be provided to control access. The fence shall be posted with signs identifying the facility. The fence shall not be constructed closer than 10 feet to the outside edge of the facility or appurtenances, to allow adequate accessibility.

f. If malodors related to the stored biosolids are verified by the department at any occupied dwelling on surrounding property, the malodor must be corrected within 48 hours.

6. Closure. An appropriate plan of closure or abandonment shall be developed by the permittee when the facility ceases to be utilized and approved by the department. Such plans may also be reviewed by the Department of Health.

7. Recordkeeping. A manifest system shall be developed, implemented and maintained and be available for inspection during operations as part of the overall daily recordkeeping for the project (9VAC25-32-60 F).

F. Alternative Storage. Alternative Storage is the short-term storage of biosolids at a location identified in an alternative management plan that has been approved by the department. Alternative storage sites may be added to an alternative management plan at any point during the permit term. Alternative storage sites may only be utilized after an alternative management plan has been initiated following the procedures in 9VAC25-32-410. Requirements for alternative storage include the following:

1. Not more than 24 hours prior to delivery of biosolids to an alternative storage site, the permittee shall notify in writing the department and the chief executive officer or designee or the local government where the site is located unless they request in writing not to receive the notice. This notification shall include the site location and the source or sources of biosolids stored;
2. A certified land applier shall be present at the alternative storage site when biosolids are delivered. The certified land applier shall record the amount of each source of biosolids delivered and removed daily.
3. A surface with sufficient strength to support operational equipment;
4. If malodors related to the stored biosolids are verified by the department at any occupied dwelling on surrounding property, the problem must be corrected within 48 hours. If the

problem is not corrected within 48 hours, the biosolids must be removed from the storage site;

5. All biosolids stored at the alternative storage site shall be prioritized for removal prior to biosolids stored at on-site or routine storage facilities;
6. Best management practices shall be utilized as appropriate to prevent contact with storm water run on or runoff;
7. Stored biosolids are to be inspected by the certified land applier at least every seven days and after precipitation events of 0.1 inches or greater to ensure that runoff controls are in good working order. Observed excessive slumping, erosion, or movement of biosolids is to be corrected within 24 hours. Any ponding or malodor at the storage site is to be corrected. The certified land applier shall maintain documentation of inspections of stored biosolids;
8. The department may prohibit or require additional restrictions for alternative storage in areas of karst topography and environmentally sensitive sites; and
9. Storage of biosolids shall be managed so as to prevent adverse impacts to water quality or public health.
10. The certified land applier shall record any conditions or activities at the alternative storage site that are not in accordance with the approved AMP.

Statutory Authority

§62.1-44.15 of the Code of Virginia.

Historical Notes

Derived from Virginia Register Volume 24, Issue 6, eff. January 1, 2008; amended, Virginia Register Volume 29, Issue 24, eff. September 1, 2013; Volume 39, Issue 5, eff. November 23, 2022.