

**SOLID WASTE MANAGEMENT FACILITY
FACT SHEET
May 2016**

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OPERATOR/APPLICANT: Andrew Tibbitts, Barre Septic Service

AUTHORIZED REPRESENTATIVE: Andrew Tibbitts, Owner

SOLID WASTE I.D. NUMBER: 346

FACILITY DESIGNATION: Domestic Septage Management Facility

PROJECT NUMBER: BR95-0064

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I. GENERAL

This fact sheet is required by Section 6-305(a)(6) of the Vermont Solid Waste Management Rules, effective March 15, 2012 (Rules). Section II of this fact sheet sets forth the basis of the draft certification by detailing how the application by Barre Septic Service (Applicant) conforms to Rule requirements. For clarity, actual Rule language is highlighted, followed by the Applicant's response to show conformance. Sections of the Rules which are not germane to this application have been omitted and are not referenced herein. The application is for the recertification of an existing facility.

II. BASIS OF THE DRAFT CERTIFICATION

A. General

This basis of the draft certification relies upon the data, judgment, and other information supplied by the operator, the hired professional consultants and other experts who have participated in the preparation of the application.

1. Certification for the Applicant's solid waste management facility (facility) is required by 10 V.S.A. §6605 and Section 6-303 of the Rules.
2. On March 30, 2016, Andrew Tibbitts, Owner, Barre Septic Service, submitted an application to the Agency of Natural Resources, Department of Environmental Conservation (Department) consisting of an untitled document (Plan) containing information supplementing the application for recertification of an existing land application facility located in Brookfield, VT used for the management of stabilized septage.
3. The Facility is comprised of one agricultural field totaling 7.9 usable acres, located on a farm owned by Gaylen Brown on Town Highway #65 in Brookfield, VT.

4. The application was prepared and certified to conform with the Rules by Andrew Tibbitts, Barre, Vermont. Upon request by the Applicant, the Secretary waived the requirement that the application be completed under the direction of a professional engineer licensed in the State of Vermont.
5. In accordance with 10 V.S.A. § 6605(f), the Applicant provided notice of the application and submitted a Personal History and Business Disclosure Statement. No issues providing cause to deny the permit application under this statute were found.
6. The application was found to be administratively complete on April 18, 2016.
7. The applicant provided public notice of an administratively complete application and solicited public comment on the application materials as stipulated by § 6-304(h), of the Rules.
8. The application was found to be technically complete on May 10, 2016 and a draft certification and fact sheet were prepared by the Department in May 2016 in accordance with Subchapter 3 of the Rules.
9. Per § 6-305 of the Rules, the Secretary actively solicited comment on the draft certification and fact sheet via direct mailings and publication in two newspapers.

B. Conformance with the statutes

10 V.S.A. §6605 (c) - Planning

(c) The secretary shall not issue a certification for a new facility, *except for a sludge or septage land application project*, unless it is included in an implementation plan adopted pursuant to 24 V.S.A. § 2202a, for the area in which the facility is located.

Response: Barre Septic operates a septage land application facility and is therefore exempt from this requirement..

10 V.S.A. §6605(f) - Notification

(f) On or before the date of filing any certification or permit application for a facility, the applicant shall send notice and a copy of the application to the municipality where the facility is proposed to be or is located, and any adjacent Vermont municipality if the land is located on a boundary. The applicant shall furnish to the certifying or permitting authority the names of those furnished notice of application. Notwithstanding the provisions of

subsection (c) of this section, the secretary shall not issue a certification for a new facility or a recertification for an existing facility unless the town, city, or village in which the facility is located has been notified.

Response: The applicant demonstrated that notification was provided to the Town of Brookfield in accordance with this statute.

10 V.S.A. §6605(f) - Disclosure statements

(a) Disqualifying criteria. Any nongovernmental entity or person applying for a certification under sections 6605, 6605a or 6606 of this title, for interim certification under section 6605b of this title, or for a waste transportation permit under section 6607a of this title, shall be denied certification or other authorization if the secretary finds:

(1) that the applicant or any person required to be listed on the disclosure statement pursuant to subdivision (b)(1) of this section has been convicted of any of the following disqualifying offenses in this or any other jurisdiction within the 10 years preceding the date of the application: [see statute for list of offenses]

(2) that the applicant or any person required to be listed on the disclosure statement pursuant to subdivision (b)(1) of this section, alone or taken together, have committed more than one violation of environmental: statutes; rules; orders; certifications; or permits, issued by any jurisdiction, which have the potential to significantly harm the public health, public safety or the environment, giving due consideration to the size and scope of the applicant's business operations.

Response: A review of the information disclosed by the applicant did not find any matters that require denial of the application based upon the criteria established in this statute.

C. Conformance with the Solid Waste Management Rules

SUBCHAPTER 3 - APPLICABILITY AND ADMINISTRATION

Rule 6-304 - Application for Certification

- (a) **Any person required to obtain certification under §6-303 shall fully complete, sign, and submit an application along with the appropriate fee to the Secretary.**

Response: A complete application form and the applicable fee were submitted.

- (b) **An application submitted by a corporation shall be signed by a principal executive officer of at least the level of vice-president or a duly authorized representative who is responsible for the operation of the facility. An application submitted by a partnership or a sole proprietorship shall be signed by a general partner or proprietor. An application submitted by a municipality, state, or other public entity shall be signed by a principal executive officer, ranking elected official, or other duly appointed employee.**

Response: The application was signed by Andrew Tibbitts, Owner, Barre Septic Service.

- (d) **The completion of the application shall be accomplished under the direction of a professional engineer licensed in the State of Vermont, unless this requirement is specifically waived by the Secretary for that application. The engineer shall make appropriate use of other disciplines to assure compliance with all applicable standards contained or referenced in these rules. The engineer shall certify that to the best of his or her information, knowledge, of belief the application is in compliance with such standards. If the Secretary waives the requirement that the application is accomplished under the direction of an engineer, then the applicant is required to certify that the application is in compliance with such standards.**

Response: The application was prepared and certified to be in conformance with the Rules by the Applicant, Andrew Tibbitts. Upon request by the Applicant, the Secretary waived the requirement that the application be completed under the direction of a professional engineer licensed in the State of Vermont.

- (e) **Each application for certification shall be made on a form provided for this purpose by the Secretary and shall include, at a minimum, the following information: *[subsections (1) - (5), (7) - (11), and (13) -***

(16) contain various requirements of the application and are discussed at various points throughout this document]

Response: The application contained all information required by these sections of the Rules. See the responses to specific sections of the Rules herein for detailed information describing each requirement. The information required by subsections (6) and (12) are presented below, as they are not addressed elsewhere in the Rules or in this document.

As provided by §6-308 (b) of the Rules, information pertaining to the facility which has not changed since the facility was last certified (such as the site characterizations), was incorporated into the present application by reference to the information that was submitted in support of the previous application for certification.

(6) the location of the facility, using the Vermont plane coordination system on the appropriate Vermont orthophoto tax map or through use of a ground position system.

Response: The latitude and longitude of the approximate center point of the Brown Site was reported as being:

44°03'25" N latitude
72°36'25" W longitude

(12) evidence of fee simple title or an unencumbered right to possession of the property to be used for the facility, except that this is not required for diffuse disposal facilities;

Response: The facility is a diffuse disposal facility and is exempt from this rule's requirement. The application contained a written agreement with the landowner of the site, Gaylen Brown of Brookfield, VT, granting the applicant use of his land for the facility for the proposed duration of the certification.

(f) When a solid waste management facility includes more than one operational unit, such as multiple sites for the land application of septage or sludge, the information required for the certification application shall be provided for all involved units.

Response: The information required was provided for each operational unit. As provided by §6-308 (b) of the Rules, information pertaining to the facility which has not changed since the facility was last certified (such as the site characterizations), was incorporated into the present application by reference to the information that was submitted in support of the previous application for certification.

(h) requirements for public notification

Response: The application contained a plan for public notification that meets the requirements of this Rule.

Rule 6-308 Recertification

Response: As provided by §6-308 (b) of the Rules, information pertaining to the facility which has not changed since the facility was last certified (such as the site characterization), was incorporated into the present application by reference to the information that was submitted in support of the previous application for certification.

Rule 6-311 Environmental Impairment

Response: The requirements and actions authorized by this rule are specifically incorporated as conditions of the certification.

SUBCHAPTER 5 SITING

Rule 6-502 Prohibited Areas

(a) Facilities are prohibited from being sited in the following designated areas:

- (1) In the case of discrete disposal facilities, in the Green Mountain National Forest except for a one half (0.5) mile corridor drawn from the centerline of the right-of-way of each Federal and secondary highway or as approved by the National Forest Service. This prohibition does not apply to diffuse disposal facilities;**

Response: The facility is a diffuse disposal facility and is not subject to this rule.

(2) Class I and Class II Groundwater Areas;

Response: The only Class I or Class II Groundwater areas designated in the State of Vermont are located in Brandon, VT.

(3) Class I and Class II wetlands and their associated buffer zones, as defined in the Vermont Wetlands Rules, unless a Conditional Use Determination has been issued by the Agency;

Response: A review of the facility's location documented that the facility is not sited in a Class I and Class II wetland.

(4) Class III wetlands, as defined by the Vermont Wetlands Rules, unless a Water Quality Certification has been issued pursuant to 40 CFR Part 401, or has been waived by the Agency;

Response: A review of the facility's location documented that the facility is not sited in a Class III wetland.

(5) A National Wildlife Refuge as designated by the United States Fish and Wildlife Service;

Response: There are only two National Wildlife Refuges in the State of Vermont. The Missisquoi N.W.R. is located in Swanton, and the Silvio O. Conte N.W.R. is located on numerous non-contiguous parcels of land in the upper Connecticut River valley. The facility is not located in either of these areas.

(6) A wildlife management area as designated by the Agency;

Response: A review of the facility's location documented that the Facility is not sited in a wildlife management area as designated by the Agency.

(7) A threatened or endangered species habitat area as designated by the Agency, except for diffuse disposal facilities;

Response: A review of the facility's location has documented that no threatened or endangered species habitat area is designated at the site by the Agency.

(8) A watershed for a Class A Waters; as designated by the Vermont Water Resources Board;

Response: A review of the facility's location by the documented that the facility is not sited within the watershed for a Class A stream or stream segment.

(9) Discrete disposal within the floodway portion of a one hundred (100) year flood plain or below the one hundred (100) year flood stage elevation;

Response: The facility is a diffuse disposal facility and is not subject to this rule.

(10) In the case of diffuse disposal facilities, within the floodway;

Response: A review of the facility's location documented that the Federal Emergency Management Agency (FEMA) has not designated a floodway where the facility is sited.

(11) Within five hundred (500) feet of an Outstanding Natural Resource Waters as provided for in Water Quality Standards and as designated by the Vermont Water Resources Board.

Response: A review of the facility's location documented that the facility is not sited within five hundred (500) feet of an Outstanding Natural Resource Waters.

(12) In the case of discrete or diffuse disposal facilities, within an approved Public Water Supply Source Protection Area, except that the Secretary may, on a case by case basis, make a determination that a diffuse disposal facility may be sited in a Public Water Supply Source Protection Area that is delineated by an arbitrary fixed radius method.

Response: A review of the Facility location determined that the site is not located in a Public Water Supply Source Protection Area.

Rule 6-503 Siting Standards

(a) General Performance Standard: Facilities shall be located such that an emission or discharge from the facility will not unduly harm the public health and will have the least possible reasonable impact on the environment, regardless of the technology used to minimize and emission or discharge.

(b) In order to meet the general performance standards of subsection (a) of section 6-503, the operator must satisfactorily demonstrate the following:

(1) that the isolation distances to high seasonal groundwater, bedrock and surface waters are sufficient to assure that an emission or discharge from the facility will meet all applicable environmental quality and public health standards and rules.

Response: The applicant has demonstrated that all applicable isolation distances to surface water, groundwater and bedrock are met. Any discharges and emissions to the environment will not exceed any applicable environmental quality and public health standards and rules if the facility is properly operated.

(2) that the Isolation distance to drinking water supplies is sufficient to assure that no emission or discharge from the facility will not adversely affect drinking water;

Response: No emissions or discharges from the facility should affect drinking water sources if the facility is properly operated.

(3) that the isolation distances to property lines, will be no less than fifty (50) feet or as determined by the Secretary, and that isolation distances to homes, public buildings (including schools, hospitals, and nursing homes), or places of public assembly are sufficient to assure that the facility will not:

(A) result in objectionable odors off site of the facility;

Response: The isolated location, odor control measures and normal operation of the facility should be sufficient to assure control of objectionable odors off site of the Facility.

- (B) result in an unreasonable visual impact for anyone off site of the facility;**

Response: The area of the facility is generally not visible from off site.

- (C) unreasonably increase the level of noise detectable by persons off site of the facility; or**

Response: The noise generated by the operation of the facility will be indistinguishable from the common agricultural activities taking place on the farms.

- (D) otherwise adversely affect public health.**

Response: Because of the factors inherent in the design and the site location, efforts have been made to assure that the Facility should not otherwise adversely affect public health.

- (4) that any facilities or activities meet the minimum criteria in the following table;**

CATEGORY	FACILITY TYPE			
	Diffuse Disposal Injection	Other	Discrete Disposal	Subchapter 12 Facilities
Minimum vertical separation from high seasonal groundwater ¹	3'	3'	6'	n/a
Minimum vertical separation to bedrock	3'	3'	10'	n/a
Minimum distance to waters of the State, including intermittent streams and all larger water bodies	50'	100'	300'	100'
Distance to drinking water source from the waste management boundary	300'	300'	1000'	100'
Distance to property line	25'	50'	50'	50'

Response: The isolation distances established in the shaded column on the table above apply to this facility. The Plan demonstrates that the following isolation distances were used in the determination of usable acreage:

<u>Depth/Distance to:</u>	<u>Required Minimum Distance</u>	<u>Actual Distance</u>
bedrock	3'	> 6'
surface water	100'	>100'
drinking water supply	300'	>500'
property line	50'	>50'
occupied dwelling	100'	~250'
seasonal high groundwater ¹	3'	> 3'

¹: This rule, as it applies to separation to seasonal high groundwater for the land application sites, is applicable only at the times that septage is applied thereon. Groundwater monitoring wells installed at the site have historically been dry, demonstrating sufficient isolation distance.

- (5) that the facility is not located in areas that have serious development limitations, such as highly erodible soils, steep slopes, or do not have the physical capability to support the facility;**

Response: The Plan, via the site characterization, documents that the sites are well suited for the proposed activities and that there are no conditions present at the sites that will adversely affect the operation of the Facility.

- (6) that the facility is accessible from a state or federal highway or a Class III or better town highway.**

Response: The Brown Site is accessed from Brookfield Town Highway #65, a Class II town highway.

SUBCHAPTER 6 DESIGN STANDARDS

Rule 6-601 General

Design of all solid waste management facilities shall be addressed in a facility management plan that contains a basis of design and a facility operating plan for all facility components. The plan shall contain sufficient information to permit the Secretary to determine whether the facility

conforms to the provisions of these rules. Sections 6-604 through 6-606 provide the criteria which must be specifically addressed for each component of a solid waste management facility.

Response: The plan presents information concerning the operation of the facility in sufficient detail to determine conformance with the Rules. The plan describes the management of lime stabilized domestic septage via application to the agricultural site described therein, and management alternatives for wastes managed by the applicant that are ineligible for application to the land. The various aspects of the project and how they conform to the Rules are presented in the applicable responses throughout this fact sheet.

Rule 6-602 Submittals

- (a) The management plan documentation shall be prepared under the direction of an engineer, licensed in the State of Vermont, unless waived by the Secretary.**

Response: Upon request by the Applicant, the Secretary waived the requirement that the application be completed under the direction of a professional engineer licensed in the State of Vermont.

- (b) The engineer shall make appropriate use of available expertise for evaluating geology and hydrogeology, soil science, air pollution control and impacts, and other areas of specialized knowledge which may be required to assemble a management plan.**

Response: Appropriate use of expertise was used in the preparation of the application and Plan.

Rule 6-603 Site Characterization

A facility management plan must be developed by the Applicant. This document shall include information necessary to fully characterize the site... At a minimum, the site characterization must address, unless deemed non-applicable by the Secretary:

- (a) soils and surficial geology,**

Response: Information submitted in previous applications regarding site soil characteristics indicates that the site is suitable for the land

application of stabilized septage. This information consists of test pit logs, and National Resource Conservation Service (NRCS) mapping and soil descriptions. The soil was characterized as follows:

The Brown Site is underlain by Buckland Series soils, which are characterized as deep, stony to very stony, moderately to well drained loams formed in glacial till. The soils may be underlain by a fragipan. Permeability ranges from 0.06 inches/hr at the fragipan layer to 2.0 inches/hr in the upper horizons. Available water capacity ranges from 0.06 inches/inch at the fragipan layer to 0.21 inches/inch in the upper horizons.

Continued use of the sites will require that a liming program be continued to maintain the soil pH in the required range of 6.5 to 8.0 S.U.(aqueous).

Soil analysis revealed that the site has metal concentrations typically found in Vermont soils.

(b) bedrock geology,

Response: Bedrock beneath the site is the typical phyllite/schist of the Green Mountains.

(c) integrated groundwater geology and geochemistry,

Response: Groundwater monitoring wells installed at the site have always been dry at all times of the year and groundwater has not been characterized. This isolation depth provides substantial and adequate protection to groundwater from site activities.

(d) topography,

Response: The application area is generally sloped less than 5%.

(e) surface water,

Response: There are no surface waters proximate to the site.

(f) groundwater location and flow direction,

Response: Groundwater beneath the site is predicted to follow the general surface contours of the area, draining to the east.

(g) air quality, and

Response: Air quality at the Facility was characterized as generally good. There are no major sources of air pollution near the facility.

(h) airshed characteristics.

Response: The site is located near the high point of the surrounding area. As such, airshed characteristics are controlled by general weather patterns rather than by local topography. Prevailing winds tend to be from the northwest in the winter and from the southwest in the summer.

Rule 6-606 Disposal Facilities

(a) General Performance Standards

- (1) Facilities shall be designed to minimize, to the greatest extent feasible, the possibility of an emission or discharge of contaminants from the facility and, should an emission or discharge occur, the threats from the emission or discharge to public health and the environment.**

Response: The Facility location minimizes any such potential impacts. The standard of care established in daily operations and the ongoing sampling and analyses required by the certification are sufficient to meet these criteria.

- (2) Facilities shall be designed to provide for a positive means to control odor, vectors, and dust so as to preclude hazards to public health and safety or the creation of nuisance conditions.**

Response: Septage must be lime stabilized in order to reduce pathogen content and the attraction of vectors prior to land application. Properly stabilized septage should not cause an odor problem and should not attract vectors. The Plan demonstrates an adequate standard of care to assure compliance with this requirement. The certification will require the Applicant to perform stabilization in a manner which fully complies with a defined Process to Significantly Reduce Pathogens. All septage applied to

the site shall be raised to a minimum pH of 12.0 Standard Units (SU), and shall be maintained at that pH for a minimum of two hours, prior to it's application to the land.

- (3) Facilities shall be designed to protect surface water and groundwater and the air, and to detect, through monitoring where appropriate, the emission or discharge of contaminants from the facility to the surface water, groundwater, or the air.**

Response: The monitoring plan as set forth in the certification is adequate to detect any such emissions. Facility location and operating conditions are adequate to minimize the risk of such a release. There are two (2) groundwater monitoring wells installed at the facility. Septage, groundwater (if present), and the site's soils are all monitored annually or biannually for any evidence of adverse effects derived from operation of the facility.

- (4) Facility management plans shall include provisions for contingencies for the proper management of waste during both planned and unplanned events when the facility is not in operation.**

Response: In the event that the facility can not be operated, the applicant has the capability to dispose of septage at a certified, in-state solid waste facility, typically the Montpelier WWTP.

- (5) Facility management plans shall include operator training plans that assure that all facility personnel involved in the handling of waste receive organized instruction that teaches them to perform their duties in a way that ensures the facility's compliance with these rules and conditions of certification.**

Response: An adequate Operator Training Plan was included in the application.

(b) Standards for Specific Facilities

- (1) Diffuse Disposal Facilities**

- (A) Facilities shall be designed to provide for an aggregate storage volume for five (5) months of the waste generated to account for storage during winter months, inclement weather, and normal agricultural and silvicultural activities. Alternatives which provide the equivalent of storage are acceptable if adequately documented.**

Response: The Applicant will dispose of septage only at certified solid waste facilities, such as a municipal wastewater treatment facility, at times when site conditions preclude land application. Therefore, no storage facility is required by the Rules or proposed in the application.

- (B) Design documentation shall detail each disposal site with respect to soil character, cropping practices, usable area, floodplain and seasonal restrictions, application area and rates, and site life, as these affect the management of the facility.**

Response:

- 1) Soil characteristics - see the response to 6-603 (a)
- 2) Cropping practices - see the response to 6-702 (a)(9)
- 3) Usable land application area at Brown site is 7.9 acres.
- 4) No portions of the site are located in a floodplain. The application of septage is prohibited on frozen or snow covered ground and/or at times when saturated soil is within three feet of the ground surface on the site.
- 5) Application rates - the maximum annual application rate and site capacity has been determined as follows:

<u>Crop</u>	<u>N Required</u>	<u>Acreage</u>	<u>App Rate</u>	<u>Capacity</u>
Hay	150 lbs/ac	7.9 ac	57,692 gal/ac	455,767 gal/yr

The application rates presented above were calculated using the following formula:

$$\text{App rate} = \frac{(\text{crop N requirement} - \text{N supplied from other sources})}{0.0026}$$

Therefore, application rates presented above are based upon the premise that nitrogen applied to the sites is derived solely from septage. In the event that nitrogen is applied from other sources, such as manure or chemical fertilizers, the application rates must be recalculated to ensure that the total mass of nitrogen applied does not exceed the nutrient requirements of the crops being grown.

Application rates will be adjusted annually, if necessary, to account for crop rotation and nitrogen applied from other sources than septage.

6) Site Life - The life time loading rate and estimated remaining site life, based on actual annual loading rates and on average metal concentrations in samples of septage collected throughout Vermont, is calculated and tracked by the Residuals Management Section. The average percentage of annual capacity used at this site, since 1989, is only twenty-seven (23) percent.

The estimated remaining site life of the Brown Site, calculated by assuming that the sites are annually loaded at the maximum allowable application rate (57,692 gal/ac-yr) is 65 years, based on the limiting metal, cadmium.

The estimated remaining site life of the Brown Site, calculated by assuming that the sites are annually loaded at the average application rate (15,681 gal/ac-yr) is 238 years, based on the limiting metal, cadmium

- (C) Land application rates shall be based on agronomic rates unless otherwise limited by the Secretary. Waste quality must be fully documented as required in §6-702(a)(10).**

Response: see §6-606 (b)(1)(B) for documentation of the calculated application rate. Waste quality for the calculations is based upon average contaminant and nutrient concentrations as determined in studies conducted by the USEPA.

- (D) **Design shall show obvious points of public access and provide for any appropriate measures to control public access.**

Response: Potential point points of access are posted with signs.

SUBCHAPTER 7 OPERATIONS STANDARDS

Rule 6-701 General Standards Applicable to All Facilities

- (a) **Adequate and qualified personnel must be retained to operate solid waste management facilities.**

Response: The Facility will be operated by individuals trained in the operations of the equipment and the process.

- (b) **Before a solid waste management facility may commence operations, the engineer for the facility must certify it was built in accordance with requirements of the certification and furnish a complete set of as-built drawings to the Secretary.**

Response: No new construction is proposed under this application.

- (c) **Owners and operators of a solid waste management facility shall adhere to all conditions of the facility certification and these rules.**

Response: The operator will be instructed and required to adhere to the requirements of the Facility's certification and the Vermont Solid Waste Management Rules.

- (d) **At least one contact person identified in the certification application shall be on site during all hours of operation, unless specifically waived by the Secretary, in which case a contact person must nevertheless be able to be contacted at all times.**

Response: Contact person is Andrew Tibbitts (802) 476-7980

- (e) **All sampling must be performed by properly trained and qualified personnel. Qualified personnel must have a minimum three (3) months training and (6) six months' experience in sampling or analysis.**

Response: The applicant will conduct sampling at the site and has adequate experience. Because the groundwater wells have historically been dry, groundwater sampling has not been conducted at the site. If sufficient groundwater volume is present in wells, water samples will be collected and delivered to a qualified, independent laboratory for analysis.

- (f) The owner and operator shall take all steps necessary to prevent and/or control spills, nuisance dust, vectors, wind blown debris, and odors.**

Response: The standards of care and facility design as previously described are sufficient to meet the requirements of this rule.

- (g) The operator shall take all practicable steps to prevent the inclusion of hazardous wastes, as defined and regulated by Vermont's Hazardous Waste Management Regulations, into the waste stream being managed by the facility.**

Response: The facility may only accept domestic septage for management via land application. No septage or sludge from industrial or commercial sources may be managed at the facility. The factor that differentiates commercial/industrial septage from domestic septage is not the type of establishment generating the waste, rather, it is the type of waste being produced. It is important to emphasize that any mixture of domestic and non-domestic septage causes the entire batch to be considered non-domestic septage. Vermont regulations further restrict the types of waste that may be applied to the land by prohibiting the land management of portable toilet waste, cesspool waste, and marine holding tank wastes.

- (h) Access to the facility shall be controlled, as appropriate, in a manner approved by the Secretary.**

Response: The sites, which are located on private property, are properly posted with warning signs.

Rule 6-702 Standards for Disposal Facilities

- (a) Diffuse Disposal Facilities**

- (1) **Application of wastes to frozen ground or on top of snow covered ground is prohibited.**

Response: This prohibition is specifically stated in the certification.

- (2) **Application rate shall be determined on the basis of representative sampling and analysis of the waste applied, the crop nutrient requirements, other sources of nutrients used, and limited by other factors such as metals.**

Response: Application rates are calculated as specified by this Rule.

- (3) **Cadmium application shall be limited to 0.45 pounds per acre annually, and 4.5 pounds per acre cumulatively.**

Response: See the response to §6-606(b)(1)(B). As of December 31, 2015, cumulative cadmium (Cd) loading, at mean concentration of 5.39 mg Cd/kg, dw and 2.41 percent solids, to the Brown site had been 0.46 lbs Cd/acre, or 10.19% of the maximum allowable loading.

- (4) **The pH in the zone of incorporation for all sites used for application of solid wastes shall be maintained between 6.5 and 8.0 during the time of application.**

Response: The certification prohibits use of the sites when the soil pH is not within the specified range and requires maintenance of soil pH within that range.

- (5) **Application of waste is prohibited on the 100-year floodplain unless incorporated within 48 hours of application.**

Response: The site is not located within a 100-year floodplain.

- (6) **Application of waste is prohibited at times when groundwater is within three feet of the zone of incorporation.**

Response: The certification requires that depth to groundwater be verified prior to land applying the wastes by direct measurement of the groundwater monitoring wells which are installed at the site.

- (7) Application of waste is prohibited in Class I and Class II Groundwater Areas.**

Response: The only Class I or Class II Groundwater Area designated in the State of Vermont is located in Brandon, VT.

- (8) Application is prohibited in a watershed for a Class A stream or stream segment.**

Response: The site is not located in such an area.

- (9) Where solid waste is a domestic waste unless otherwise directed by the Secretary, the following restrictions shall apply:**

- (A) Provisions for controlling public access shall be established and maintained for the duration of disposal, and for twelve months beyond the last disposal episode.**
- (B) Domestic food source animals shall be prohibited from grazing on disposal facilities for the duration of the project and for six months beyond the last disposal episode.**
- (C) Sites amended by waste application shall not be used for production of crops for direct human consumption, for the duration of the project and for thirty-six months beyond the final disposal episode.**
- (D) Feed crops grown on waste amended disposal facilities shall not be harvested for a period of five weeks beyond the last disposal episode.**
- (E) Silage to be used as a feed crop, from waste amended sites shall not be fed to domestic food source animals for a period of four months after the last application of waste.**

Response: All site and crop use and site access restrictions are a requirement of the certification.

- (10) The following requirements for sampling, analysis, and standards shall be met:
- (A) All wastes intended for diffuse disposal shall be sampled and analyzed for the following parameters. The frequency will be established in each certification.
- (i) The waste must pass the Extraction Procedure (EP) Toxicity Test Method (or other EPA approved extraction procedure). This can be done one of two ways; through sampling and analysis or calculation.
 - (ii) The waste must be tested for total metals concentration for the following metals: arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, and zinc.
 - (iii) The waste must be tested for total polychlorinated biphenyls (PCB).
 - (iv) The waste shall be tested for the following nutrients, if land application is the chosen disposal method: percent solids, pH, total Kjeldahl nitrogen, ammonia nitrogen, nitrate nitrogen, total phosphorus, and total potassium.

Response: Waste testing and analysis is specifically designated in the certification, and meets or exceeds the minimum requirements of this Rule.

- (B) All wastes intended for diffuse disposal, or for processing at a composting or co-composting facility, must meet the following standards. At the Secretary's discretion, these standards may be made more or less stringent.
- (i) EP Toxicity Test Method limits (or other EPA approved extraction procedure), or demonstrate mathematically that based on the total metals

concentrations in the waste, it will not fail EP Toxicity Test Method limits.

- (ii) Total metals concentrations of the wastes must be less than or equal to:

<u>Metal</u>	<u>mg/kg, dry wt.</u>
Arsenic (As)	15
Cadmium (Cd)	21
Chromium (Cr)	1200
Copper (Cu)	1500
Lead (Pb)	300
Mercury (Hg)	10
Molybdenum (Mo)	75
Nickel (Ni)	420
Selenium (Se)	100
Zinc (Zn)	2800

- (iii) Total PCB = 10 mg/kg or less

The Department maintains and annually updates data on septage quality. As of December 31 2015, average concentrations of metals and PCBs (mg/kg, dw) and percent solids of septage are as follows:

<u>METAL</u>	<u>CONCENTRATION</u>
As	7.58
Cd	5.39
Cr	37.3
Cu	729.
Pb	76.7
Hg	31.0
Ni	30.8
Se	7.30
Zn	1123.
PCB	not detected
% solids	2.41

- (iv) Pathogen reduction standards, as applicable in subsection (a) or (b) below.

(aa) **Compost or Co-Compost. To be considered compost or co-compost, and eligible for disposal by general distribution, the waste must undergo a process to further reduce pathogens as defined in Appendix B.**

(bb) **Diffuse disposal by land application. Prior to land application of solid waste derived from domestic waste, the waste must undergo a process to significantly reduce pathogens or a process to further reduce pathogens, as defined in Appendix B.**

Response: The Applicant has demonstrated compliance with these requirements via use of lime stabilization, a process listed as a process to significantly reduce pathogens in Appendix B of the Rules.

(11) **Testing frequency of solid waste, soil, groundwater, and surface water and plant tissue shall be performed as specified in the solid waste management facility certification.**

Response: Testing of these media is established in the certification. Parameters to be tested, and the frequency of testing, meets or exceeds federal and state requirements.

Rule 6-703 Reporting

(a) **The operator shall make quarterly reports to the Secretary... Such reports shall include but are not limited to, information on: (1), (2), (3)**

Response: Rule 6-703 Reporting, requires that the operator submit quarterly reports to the Secretary. The forms for the quarterly reports will be provided by the Secretary.

(b) **The operator shall report to the Secretary within five working days of the receipt of any information indicating non-compliance with any term or condition of certification or other operating authority.**

Response: Should the operator become aware of any information indicating non-compliance with any term or condition of the Facility certification or other operation authority, the operator shall submit a report to the Secretary within five (5) working days.

- (c) Any discharge or emission from a site which poses a threat to public health and safety, a danger to the environment, or the creation of a public nuisance must be reported within 24 hours to the State of Vermont Department of Environmental Conservation, the local health officer, and the selectpersons of the affected municipality. A written report shall be submitted to the parties to whom the event was reported within seven days of the discharge or emission.**

Response: As previously indicated, should any spill, discharge or emission occur that is either a threat to public health and safety, a danger to the environment, or which results in the creation of a nuisance, it will be reported within 24 hours to the Department.

Rule 6-704 - Record Keeping

- (a) The following records must be kept in a dry and secure location by the owner and/or operator of the facility: (1), (2), and (3)**

Response: The certification requires compliance with this rule.

- (b) All records must be kept for the time period specified below:**
- (2) For diffuse disposal facilities, from the date on which the application for initial certification is signed through the date of closure of the facility;**
- (3) For sludge and septage storage and treatment facilities located at wastewater treatment facilities, for five years.**

Response: The certification requires compliance with this rule.

SUBCHAPTER 9 - FINANCIAL RESPONSIBILITY AND CAPABILITY

Rule 6-901 Private Facilities

- (b) This section establishes requirements and procedures for applicants for solid waste management facility certifications to show evidence of financial responsibility for closure and, as appropriate, post-closure care.**

Response: Because land application sites are not subject to the closure requirements of Subchapter 10, the Facility is exempt from the requirements of this Subchapter as well.

SUBCHAPTER 10 -CLOSURE AND POST-CLOSURE

Rule 6-1002 Closure Plan

- (a) A closure plan is required for all facilities operating on the effective date of these rules and all new facilities required to obtain certification under these rules, except the following:**
- (2) land used for diffuse land application of septage, sludge, or other appropriate wastes; and**
 - (3) Septage and sludge storage facilities located at domestic wastewater treatment plants.**

Response: A closure plan is not required for this facility.