DRAFT FACT SHEET: SOLID WASTE MANAGEMENT FACILITY CERTIFICATION
10 V.S.A. §6605

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APPLICANT:	Lawrence Young Working Dog Septic Service Inc. 504 Fletcher Road Cambridge, VT 05444
AUTHORIZED REPRESENTATIVE:	Owner, Working Dog Septic Service Inc.
SOLID WASTE I.D. NUMBER:	SW-380
CERTIFICATION NUMBER:	F2001
FACILITY DESCRIPTION:	The land application facility (Facility) includes one (1), 49.3-acre, agricultural field and three (3) groundwater monitoring wells located at River Road in the Town of Cambridge, Vermont (44°38'42.5"N, 72°55'14.4"W).
FACILITY OPERATION:	The Facility will be used for the land application of stabilized domestic septage. Domestic septage will be applied to the site at agronomic rates via surface application after treatment for pathogen and vector attraction reduction processes.

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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) and prepared by the Agency of Natural Resources (Agency), Department of Environmental Conservation (Department) Waste Management & Prevention Division, Residual Management & Emerging Contaminants Program. Section II of this fact sheet briefly sets forth the basis of the draft certification by detailing the Working Dog Septic Service's (Permittee) conformance to Rule requirements. Where necessary for clarity, actual Rule language is highlighted, followed by the response to show conformance.

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. Certification for the Permittee's solid waste management facility is required by 10 V.S.A. §6605 and Section 6-303 of the Rules and was reviewed by the Department in accordance with §6-305.

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 12, 2020, Lawrence Young, owner, Working Dog Septic Service, Inc., submitted an application to the Agency of Natural Resources, Department of Environmental Conservation for certification.

3. The application consisted of a plan in electronic format titled "Residual Waste Management Plan" (Plan) for the management of domestic septage, via land application, dated May 21, 2020. The application was prepared by Christopher Leister of Hogg Hill Design, LLC.

4. The proposed facility consists one (1) 49.3 usable acre agricultural field and three (3) groundwater monitoring wells located on River Road in the Town of Cambridge, Vermont, which is owned by Mark & Lauri Boyden.

5. The application for certification was found to be administratively complete on April 3, 2020 and was found to be technically complete on July 2, 2020.

6. The requirement that the application is certified by a professional engineer to be in conformance with the Rules was waived by the Secretary.

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. The implementation plan must be consistent with the state plan and in conformance with any municipal or regional plan adopted in accordance with 24 V.S.A. chapter 117. After July 1, 1990, the secretary shall not recertify a 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. The implementation plan must be consistent with the state plan, unless the secretary determines that recertification promotes the public interest, considering the policies and priorities established in this chapter. After July 1, 1990, the secretary shall not recertify a facility, unless it is in conformance with any municipal or regional plan adopted in accordance with 24 V.S.A. chapter 117.

Response: The Department has determined that the project conforms with the Lamoille Regional Solid Management District’s regional plan, and with the municipal plans of the Town of Cambridge.

10 V.S.A. §6605(f) - Notification

(f) On or before the date of filing any certification or permit application for a facility, the

permittee 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 permittee 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 Cambridge 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 permittee 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 permittee 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 permittee'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: An initial application form and applicable fee was submitted to the Department on March 12, 2020 and the revised application meeting technical standards was submitted on May 21, 2020.

(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 Lawrence Young, Owner, Working Dog Septic Service, Inc. Town of Fairfax, VT.

(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 permittee is required to certify that the application is in compliance with such standards.

Response: The application was prepared by Christopher Leister, Hogg Hill Design LLC. The requirement that the application is certified to be in conformance with the Rules was waived by the Secretary.

(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 section 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.

(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 field (FWJ0101) are given in the application as: 44°38’42.5”N, 72°55’14.4”W

(12) evidence of fee simple title in 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 therefore exempt.

(f) When a solid waste management facility includes more that 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 Facility is a single operation unit with the Field Designation (FCA0101).

(h) requirements for public notification

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

Rule 6-311 Environmental Impairment

Response: The requirements of 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) Discrete disposal facilities or activities 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 not a discrete disposal facility.

(2) Class I and Class II Groundwater Areas;

Response: No Class I groundwater areas have been designated in the State of Vermont. The Facility is not located within a Class II groundwater area. The only designated Class II groundwater area is 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: The Department has determined that no Class I wetlands are sited at the Facility. ANR Atlas has identified a Class II wetland on the western portion of the field. Per Section 6 of the Vermont Wetland Rules an agricultural exemption applies to the Facility.

(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: The Department has determined 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: The Silvio O. Conte National Wildlife Refuge is comprised of several non-contiguous parcels of land in the immediate Connecticut River Valley. No portions of the refuge are located near the facility.

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

Response: The Department has determined 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: The Facility is a diffuse disposal site and exempt from this prohibition.

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

Response: The Department has determined that the Facility is not sited in the watershed for a Class A Waters, as designated by the Agency.

(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 not a discrete disposal facility.

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

Response: The Facility is not a discrete disposal facility.

(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: The Department has determined that the Facility is not sited within five hundred (500) feet of an Outstanding Natural Resource Water.

(12) In the case of diffuse disposal facilities, within zone 1 or 2 of 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 zone 2 of an approved surface water Public Water Supply Source Protection Area.

Response: The Department has determined that the Facility is not located in a drinking water 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.

Response: The land application Facility is relatively isolated from public access and is surrounded by an isolation zone (setbacks to surface water, public and private drinking water source, and property lines) to assure compliance with this rule.

(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 seasonal high 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: This requirement uses isolation distances to assure that any emissions or discharges from the Facility will meet all applicable environmental quality, public health standards, and rules. Isolation distances to surface water, groundwater and bedrock do pertain to this facility. No discharges or emissions to the environment should exceed any applicable environmental quality and public health standards and rules if the Facility is properly operated per the Certification.

(2) that the isolation distance to public and private drinking water supplies is sufficient to assure that an emission or discharge from the facility will not adversely affect drinking water;

Response: The Rules require a 300’ set back to drinking water supplies such that any emissions or discharges from the facility should not affect drinking water sources if the facility is operated in accordance with conditions in the certification. A private drinking water supply is located near the southeastern corner of the Facility. The 300’ setback will be maintained during a land application.

(3) that the isolation distances to property lines, or any of the following not owned by the permittee: residences, schools, day care facilities, hospitals and nursing homes, are sufficient to assure that the facility will not:

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

Response: The relative isolation of the Facility used for land application should be sufficient to assure control of odors off site of the facility.

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

Response: The operation of the facility will not be visually distinguishable from conventional agricultural activities.

(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 site.

(D) otherwise adversely affect public health.

Response: Public access to the site is restricted during the application event and for the 12 months following therefore, the Facility should not otherwise adversely affect public health.

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

	Diffuse Disposal	
	Injection	Other
Minimum vertical separation from high seasonal groundwater (see note below)	3'	3'
Minimum vertical separation to bedrock	3'	3'
Minimum distance to waters of the State, including intermittent streams	50'	100'
Minimum distance from waste management boundary to drinking water source not owned by the permittee	300'	300'
Minimum distance to property line from the waste management boundary	25'	50'
Minimum distance from waste management boundary to residences, schools, day care facilities, hospitals, and nursing homes, not owned by the permittee	100’	100’

NOTE: For diffuse disposal the three-foot vertical separation shall be measured from the ground surface, or bottom of the zone of incorporation, to the saturated zone existing at the time of disposal.

Response: The following isolation distances were observed in the determination of usable acreage:

Criteria	Site Conditions
Depth to bedrock	> 3'
Distance to surface water	>100'
Distance to drinking water supply	300'
Distance to property line	> 50'
Distance to occupied dwelling	> 100'
Distance to seasonal high groundwater	***

Note: *** to be determined and confirmed at > 3' prior to stabilized septage land application.

(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 Department has determined that the Facility is not located in an area with serious development limitations.

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

Response: The site is accessed from a town highway designated as River Road in Cambridge, VT.

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: Depth to groundwater will be identified by the Facility by sampling monitoring wells MW1 (WCA0101), MW2 (WCA0102), and MW3 (WCA0103) prior to land application. At design year, the domestic septage will be delivered onsite utilizing a pump truck and transferred to the proposed storage frac tank. To meet reduction of vector attraction requirements, hydrated lime will be introduced by the Applicant. In order to meet the required pathogen reduction standards the pH value will be raised to 12 SU or higher for two hours without the addition of more alkali. Stabilized septage will be transferred to a liquid manure field spreading unit where land application will proceed at the permitted land application site (FCA0101) at approved agricultural rates. Land application will comply with all isolation distances including the 300-foot buffer to all drinking water supply wells, and 100 feet to surface waters. If site is in an annual

crop stabilized septage will be incorporated into the soil within forty-eight hours to meet one hundred-year floodplain requirements. Signs will be posted by the Facility at points of public access.

Rule 6-602 Submittals

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

Response: Requirement was waived by the Secretary per the request dated November 18, 2019.

(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: The application provided evidence of the use of appropriate science and technology in the preparation of the application and plan.

Rule 6-603 Site Characterization

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

Response: The application contained detailed site characterization information detailed below.

(a) soils and surficial geology,

Response: A review of site soil characteristics by the Department indicates that the site is suitable for the land application of stabilized sludge. The soils are characterized as Ondawa, Teel, and Podunk Series. The National Resources Conservation Service (NRCS) describes Ondawa series as fine sandy loam, Teel series as a silty loam, and Podunk series as fine sandy loam. Ondawa series is the predominant soil type classified as a well-drained prime farmland with a root restrictive layer generally greater than 60 inches on zero to three percent slopes.

Soil pH (aqueous) was determined to be 6.0 S.U. in January 2020. Sites soil composition must have a pH in the range 6.5 S.U. (6.0 salt) to 8.0 S.U. (7.5 salt) before their use of stabilized septage management is permitted. The certification prohibits the use of the site when the soil pH is outside of the specified range and requires that the site will continue to be treated with lime as necessary to maintain the soil pH in the proper range.

Prior to the initial land application, site soils and septage shall be sampled to calculate application rates including metals, PCBs, and nutrients.

(b) bedrock geology,

Response: Bedrock beneath the site is the Pinnacle Formation comprised predominately of schist and metawacke typical of the Vermont Piedmont.

(c) integrated groundwater geology and geochemistry,

Response: Groundwater at the site is unconfined and its geochemistry is influenced by the flow of the Lamoille River and adjoining agricultural activities.

(d) topography,

Response: The site is relatively flat with a slope of generally less than 5%.

(e) surface water,

Response: The site is bordered on three sides by the Lamoille River and is within the 100-year floodplain. The southern boundary is a drainage created to runoff to the Lamoille River in the south western corner of the field. A 100-foot isolation distance to the river is maintained on all sides of the property with surface waters including the southern drainage.

(f) groundwater location and flow direction,

Response: Groundwater beneath the site is generally at shallow depth at approximately the same elevation as the level of the Lamoille River. Groundwater flow is generally from the centralized portion of the site with a significant north eastern vector with a secondary flow towards the southern drainage that leads into the Lamoille River at the south western corner of the field.

(g) air quality, and

Response: There should be no major sources of air pollution from proper operation of the facility.

(h) airshed characteristics.

Response: The most common prevailing winds at the site are in the northern direction.

Rule 6-605 Storage Facilities

(a) General Performance Standards

(1) Facilities shall be designed to provide adequate storage to assure, to the greatest extent feasible protection of public health and safety and the environment and to assure that the disposal of stored wastes occurs at proper times and under environmentally sound conditions.

Response: Septage is temporarily stored within the frac tank (storage facility) where it will be mixed for stabilization and will be screened for any non-biodegradable materials. The storage facility is a fully enclosed container sited properly to protect public health and safety.

(2) Facilities shall be designed to prevent, to the greatest extent feasible, the reduction of the quality of the waste, such as the rotting or contamination of stored wastes.

Response: Septage will be stored at the storage facility for the required retention time in the process to significantly reduce pathogens and vector attractiveness until prepared for land application.

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

Response: The storage facility specifically designed to prevent discharges to surface waters and groundwater. Because of the safety factors inherent in the facility's design, the Secretary has determined that groundwater will be monitored at two down gradient monitoring wells and one up gradient. Should the Department receive complaints regarding emissions or odors from the facility, the Secretary will determine if air monitoring of the facility will be required.

(4) Facility management plans shall provide positive means to control vectors, emissions, or discharges including odor and dust, so as to preclude undue threats to public health and safety, the environment or the creation of nuisance conditions.

Response: The storage facility design and operation procedures provide positive means to control vectors, emissions, emissions, and odors.

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

Response: The Certification F2001 allows contingency disposal at any suitable in-state or out-of-state solid waste management facility.

(6) 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: The Permittee has extensive training in the management of a solid waste facility and will train additional operators to assure that those employees

responsible for the operation of the facility are properly trained.

(7) Facility management plans must include estimates of amounts and types of solid wastes brought to storage and transfer facilities, and a schedule for transport and disposal of these materials.

Response: The Permittee has provided historical data in the application with volumes of septage managed by the Permittee.

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 is designed specifically to minimize any such potential impacts by the very nature of its being a land-based management system. The standard established in daily operations and monitoring required by the certification are sufficient to meet these criteria.

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

Response: The Facility is a land based management system. 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 sites 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 design and operating conditions are adequate to minimize the risk of such a release.

Depth to groundwater will be identified by the Facility by sampling monitoring wells MW1 (WCA0101), MW2 (WCA0102), and MW3 (WCA0103) prior to land application.

(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 either dispose of all wastes managed at a certified suitable in-state or out-of-state waste management facility or to cease operations.

(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: The application provided acceptable means of training for facility personnel.

(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 fully documented.

Response: The Applicant will either cease managing septage or dispose of septage only at municipal wastewater treatment facilities at times when site conditions preclude land application. Therefore, no storage facility is required by this section of the Rules.

(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: Applicant has submitted documentation of all these aspects. Department review shows that the diffuse disposal facility consists of one (1) site comprising a total of 49.3 usable acres as follows:

(a) Soil character: See the response to §6-603(a) for soil descriptions.

(b) Cropping/fertilization practices: See the response to §6-702(a)(9) and section (f) of this subsection.

(c) Usable acreage: See response to §6-606(b)(1)(b)

(d) Floodplain and seasonal restrictions: The site lies within the 100-year floodplain of the Lamoille River. A minimum 100-foot isolation buffer between the authorized application areas and the banks of the river are established in the certification. Incorporation of stabilized septage within 48 hours of application to the land is required for all areas that lie within the 100-year floodplain in an annual cropping practice.

(e) Application rates: Rates are determined based upon crop nitrogen and phosphorus demand as determined by the current University of Vermont Cooperative Extension System's "Nutrient Recommendations for Field Crops in Vermont" handbook, nitrogen and water extractable phosphorus content in the stabilized septage and/or other nutrient sources, available phosphorus and reactive aluminum in sites soils, as well as previous applications of nutrients (including septage, manures or chemical fertilizers). The Permittee shall not apply stabilized septage to the site in excess of the nutrient requirements of the crop(s) grown on the site. If a nitrogen-based septage application rate is determined appropriate, the following formula is to be utilized. The application rate is in units of gallons/acre and the crop N requirement and N supplied from other sources are in units of lbs N/acre:

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

(f) Site Life: The lifetime loading rate, based on soil type and total metal concentrations in the septage, shall be calculated prior to the first land application. Remaining site life shall be calculated under several scenarios. The first variable is application rate, where the estimate shall be calculated using the maximum allowable application rate for the crops being grown on the sites.

The second variable in the estimate calculation is the concentration of the regulated metals in septage. Three sets of concentration data shall be used: 1) the 95th percentile wet concentrations (in mg/l) as determined by a maximum likelihood estimation based on the samples that USEPA used in developing the federal biosolids regulations, 2) the average of the metal concentrations in the USEPA samples following conversion of the individual data to dry weight concentrations (in mg/kg, dry weight), and 3) the average concentration of contaminants as reported in a significantly larger database of septage analysis results provided by various states and USEPA regions, which is maintained by the Department.

The maximum cumulative loading of the regulated metals to land application site is not established in the Rules except for cadmium, where §6-702 (a)(3) sets a maximum of 4.5 lbs Cd/acre. Under the federal standards, established at 40 CFR 503.13 – Table 2, maximum cumulative loadings are established for all the regulated metals (including cadmium, at a higher level than in the Rules).

(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)(f) for documentation of the calculated application rates. 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 control.

Response: Site plans document public access points which are required to be noticed/posted to control and prohibit access.

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 during the life of the certification.

(c) 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 always be available during the operating hours of a facility.

Response: The following contact information was provided:

Primary contact: Lawrence W. Young
Working Dog Septic Service, Inc.
504 Fletcher Road
Cambridge, VT 05444
(802) 343-1657

(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: Septage sampling will be completed by the Applicant, who has extensive experience in this area which meets the requirements of this Rule.

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

Response: Steps necessary to prevent or control spills have been incorporated into the Facility design and operations.

(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.

EPA has further clarified this issue via a description of domestic septage. 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. For example, grease trap wastes from a restaurant are not domestic septage, but the sanitation waste residues and residues from food and normal dish cleaning are considered domestic septage. Likewise, only sanitation wastes from a gas station are domestic septage, while wastes containing petroleum are classified as commercial septage. Septage from a school, motel, nursing home, etc. is considered to be domestic septage provided it does not contain grease trap waste. Dry cleaning waste residues are commercial waste, while sanitation only waste from such an establishment is considered domestic septage. 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: Public access points to the diffuse disposal Facility are required to be noticed/posted to control/prohibit access

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: These prohibitions are specifically stated in the Certification Number F2001.

(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. The application rate is based upon analysis results of septage and soils, additions of any other nutrients, past applications, and must be calculated using the model approved by the Department.

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

Response: Analysis for Cadmium is included in the required metals parameters. The application rate will be based on the results and calculated as specified by this Rule using the model approved by the Department.

(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 site 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 lies within the 100-year floodplain. Incorporation of stabilized septage applied to the site within 48-hours of application unless no-till agricultural management practices are utilized for perennial crop.

(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: No Class I groundwater areas have been designated in the State of Vermont. The facility is not in a designated Class II groundwater area. The only Class II groundwater area is located in Brandon, VT.

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

Response: The Department has determined that 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 (12) 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 (6) 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 (36) months beyond the final disposal episode.

(D) Feed crops grown on waste amended disposal facilities shall not be harvested for a period of five (5) 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 (4) months after the last application of waste.

Response: All site use and access restrictions of these rules and the federal regulations (40 CFR 503.32) are identified in Certification Number F2001.

(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 limits (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.

Cadmium	**(Cd)**
Chromium	**(Cr)**
Copper	**(Cu)**
Lead	**(Pb)**
Mercury	**(Hg)**
Nickel	**(Ni)**
Zinc	**(Zn)**

(iii) The waste must be tested for 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 (TKN); Ammonia – Nitrogen (NH4-N); Nitrate – Nitrogen (NO3-N); Total Phosphorus (TP); and Total Potassium (TK).

Response: Testing for these parameters is established in the certification number F2001.

(B) All wastes intended for diffuse disposal, or for processing at composting of 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 concentration in the waste, it will not fail EP Toxicity Test Method limits

(ii) Total metals concentrations of the wastes must be no more than:

Response: The most recent analysis of the septage (August 2018) documented the following:

Parameter	Max Concentration (mg/kg, dry wt.)	Septage Sample (mg/kg, dry wt.)
Arsenic	15	7.5
Cadmium	21	1.4
Chromium	1200	11
Copper	1500	410
Lead	300	17
Mercury	10	<0.89
Molybdenum	75	9.3
Nickel	420	14
Selenium	100	7.3
Zinc	2500	940
PCBs	10	NA[1]

1 – Not Analyzed

(iii) Pathogen reduction standards, as applicable in subsection (aa) or (bb) below.

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

Response: The Applicant shall demonstrate compliance with the 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: The monitoring frequency and parameters in the media, site soils, groundwater, and plant tissue are established in the certification number F2001. No surface water testing is required.

Rule 6-703 Reporting

(a) The operator, including operators of wastewater treatment plants, shall make quarterly reports to the Secretary on forms developed for this purpose by the Secretary. Such reports shall include but are not limited to, information on:

(1) the quantity and quality of wastes, by type, managed by the facility at each

site;

(2) the sources of all solid wastes (by municipality) managed by the facility; and

(3) the destination of all solid wastes managed by the facility.

Response: The certification will require that the operator submit quarterly reports to the Secretary. The Vermont Residuals Management Quarterly Report forms will be submitted electronically to the Department.

(b) The operator shall report to the Secretary within five (5) 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 twenty-four (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 (7) days of the discharge or emission. The report shall identify the discharge or emission that occurred, the type, quantity, and quality of waste, and the actions taken to correct the problem.

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) All information that demonstrates compliance with Subchapters 5 through 11;

(2) Copies of the quarterly report forms that have been submitted to the Secretary as a requirement of certification; and

(3) Copies of any reports, records, data or other information required to be submitted by the Secretary as a requirement of certification.

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;

Response: The certification requires compliance with this rule.

SUBCHAPTER 9 - FINANCIAL RESPONSIBILITY AND CAPABILITY

Rule 6-901 Private Facilities

Response: Land application sites are not subject to the closure requirements of Subchapter 10, and is therefore exempt from the requirement of this subchapter.

Rule 6-902 Public Facilities

Response: The Facility is not a Public Facility.

SUBCHAPTER 10 -CLOSURE AND POST-CLOSURE

Rule 6-1002 Closure Plan

Response: The facility is exempt as this is diffuse land application facility.