AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation
1 National Life Drive, Main 2
Montpelier, VT 05620-3521

INDIRECT DISCHARGE PERMIT AMENDMENT

Permit No.: ID-9-0283-1
PIN: RU99-0047

SECTION A "ADMINISTRATION"

In compliance with provisions of 10 V.S.A. §1263, and in accordance with the following conditions, the permittee:

Bromley Manor, LLC
23 Almond Road
Tunbridge, VT 05077

is authorized to indirectly discharge treated domestic sewage from a wastewater system serving the Bromley Brook School facility in Manchester, Vermont to groundwater and indirectly into the Batten Kill River. **This is a permit amendment for the transfer of ownership of the Bromley Brook School from Spirit Master Funding II, LLC to Bromley Manor, LLC. The facility will be converted to a Level III senior care facility.**

A1. Permit Summary:

Expiration Date	September 30, 2019
Type of Waste	Treated Domestic Sewage
Treatment System	Septic Tanks/Recirculating Textile Filters
Disposal System	Leachfield Trenches
Town	Manchester
Drainage Basin	Batten Kill River
Receiving Stream	Batten Kill River
Drainage Area	Approximately 17.8 square miles
Low Median Monthly Flow (LMMF)	
Summer Stream Flow	Est. 12.07 cfs (7,799,469 gpd)
Disposal Capacity	14,970 gallons per day
Design Flow	8,125 gallons per day
Dilution Ratio	
(LMMF to Disposal Capacity)	521 to 1

A2. Compliance Schedule:

The following schedule summarizes the actions and requirements necessary for compliance with the conditions of this permit. The permittee shall complete the requirements in accordance with the dates indicated. See the designated section for specific details.

	Condition # & Description	Schedule Date
A3.	Apply for renewal of Indirect Discharge Permit	June 30, 2019
D1.	Notify Secretary of operation of senior care facility	Prior to Operation of Facility
D2A.	Have a Vermont Registered Professional Engineer complete an inspection of the sewage treatment and disposal system	Annually in April[1]
D2B.	Submit Annual Inspection Report	Annually by July 1st[1]
D2C.	Submit schedule for implementing engineer's recommendations	Annually by August 1st[1]
E2.	Record effluent flow volumes	Daily[1]
E2.	Submit effluent flow volumes	By the 15th of the month following the date of readings[1]
E3.	Collect and analyze septic tank and textile filter effluent samples	Biannually, February and October[1]
E4.	Collect and analyze groundwater samples	Biannually, February and October[1]
E3, E4.	Submit results of monitoring	By the 15th of the second month following the date of sampling[1]

Note 1: Not required until Bromley Manor is in operation.

A3. Expiration Date:

This permit, unless revoked, or amended shall be valid until September 30, 2019 despite any intervening change in Water Quality Standards or the classification of receiving waters. Renewal of this Indirect Discharge permit will be subject to all rules applicable at the time of renewal, including biological standards to determine significant alteration of aquatic biota.

The permittee shall apply for an Indirect Discharge Permit renewal by June 30, 2019 for continued authorization to discharge treated sewage. For the purposes of Title 3, an application for renewal of this indirect discharge permit will be considered timely if a complete application is received by the expiration date.

A4. Effective Date:

This permit amendment becomes effective on the date of signing.

A5. Revocation:

The Secretary may revoke this permit in accordance with 10 V.S.A. §1267.

A6. Transfer of Permit:

This permit is not transferable without prior written approval of the Secretary. The permittee shall notify the Secretary immediately, in writing, before any sale, lease or other transfer of ownership of the property from which the discharge originates. The proposed transferee shall make application for a permit to be reissued in their name. Failure to apply shall be considered a violation of this permit. Responsibility for compliance with the conditions of this permit shall be the burden of the permittee until such time as transfer of the permit to the transferee is complete. All application and operating fees must be paid in full prior to transfer of this permit. This permit shall be transferred only upon showing by the permittee or proposed transferee of compliance with the following conditions:

a. The transferee shall be a legal entity, financially and technically competent to operate, inspect, maintain and replace the systems.

b. If the transferee is a corporation or an association of unit owners or other legal entity, it shall be demonstrated that such legal entity has legal authority to raise revenues for the proper operation, inspection, and maintenance of the system.

c. The transferee shall provide a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee to the Secretary.

A7. Minor Modifications of Permit:

The Secretary may modify this permit without requiring a permit application, a public notice, or a public hearing to correct typographical errors, or to increase monitoring frequency, in accordance with Section F of this permit.

A8. Compliance Demonstration Method:

This indirect discharge was initially reviewed and qualified for an Indirect Discharge Permit in accordance with Section 14-402 “Permit and Capacity Applications for New Indirect Discharge of Sewage” of the Indirect Discharge Rules, effective April 30, 2003 (IDRs). Compliance with the Aquatic Permitting Criteria was demonstrated by using the Dilution Method in Section 14-902 of the IDRs. The recirculating textile filter treatment system was approved in accordance with Section 14-1010 of the IDRs.

A Wastewater System and Potable Water Supply Permit is required for all buildings to be connected to the system.

A9. Right of the Agency to Inspect:

The permittee shall allow the Secretary or the Secretary's authorized representative upon the presentation of their credentials and at reasonable times:

a. To enter upon permittee's premises in which any effluent source, treatment or disposal system is located or in which any records are required to be kept under the conditions of this permit;

b. To have access to and copy any records required to be kept under conditions of this permit;

c. To inspect any monitoring equipment or method required in this permit;

d. To sample any discharge of waste, groundwater or surface water; and

e. To inspect any collection, treatment, pollution management and disposal facilities required by this permit.

A10. Permit Availability:

A copy of the approved plans and this permit shall remain at the office of the permittee and, upon request, shall be made available for inspection by the Secretary.

A11. Minor Modifications to System:

Minor modifications of the engineering design that do not reduce the treatment effectiveness or increase the capacity of the system may be approved in writing by the Secretary without a permit amendment.

Before making modifications to the treatment and/or disposal system, the permittee shall submit plans to the Secretary for review and approval. Plans for modification must be approved before any of the modifications or additions are made.

A12. Correction of Failed Systems:

The Secretary may, upon discretion, issue an Administrative Amendment to the Indirect Discharge Permit for the design and reconstruction of a failed wastewater disposal system where the replacement system design was not previously approved.

Before reconstruction of the failed system the permittee shall submit plans to the Department of Environmental Conservation for review and approval. These plans must be approved before any reconstruction occurs. Due to the urgency of the need to correct failed disposal systems, the Department will process these Amendments as soon as possible.

A13. Operating Fees:

This indirect discharge is subject to operating fees. The permittee shall submit the operating fees in accordance with procedures provided by the Secretary.

SECTION B "INDIRECT DISCHARGE"

B1. Location of Indirect Discharge:

The wastewater treatment and disposal system is located at 2595 Depot Street in the Town of Manchester, Vermont. The discharge is to groundwater and indirectly to the Batten Kill River.

The location of the subsurface disposal system and indirect discharge can be found on the USGS Manchester, Vermont 7.5' quadrangle map at approximately Latitude N 43° 10’ 35" and Longitude W 73° 01' 15".

B2. Nature of Indirect Discharge:

The indirect discharge is 14,970 gallons per day from a sewage treatment system consisting of septic tankage, a recirculating textile filter treatment system, pump station, and two leachfield disposal areas. Effluent from the septic tanks flows by gravity to the recirculating pump station which discharges to five (5) AdvanTex™ textile filter units. Following treatment in the recirculating textile filter system, the effluent is pumped to one of the two leachfields.

Each leachfield utilizes an absorption trench system with a maximum application rate of 1.50 gpd/ft^2. When the senior care facility is in operation, the leachfields are alternated on an annual basis. The effluent infiltrates through the soil to groundwater beneath the leachfield disposal area. Groundwater flows to the Batten Kill River.

The Bromley Brook School facility will be converted to a Level III senior care facility with a design flow of 8,125 gallons per day.

SECTION C "SYSTEM CONSTRUCTION"

C1. Approved Plans:

The following plans for the sewage collection, treatment and disposal system for the Bromley Brook School, prepared and stamped by Ellis Speath, P.E. of Speath Engineering, Inc., were approved by the Secretary:

Sheet	Title	Date	Latest Revision
1 of 4	Septic Design for Bromley Brook School	4/06/04	5/27/04
2 of 4	Septic Design for Bromley Brook School	4/06/04	9/13/04
3 of 4	Septic Design for Bromley Brook School	4/06/04	None
4 of 4	Septic Design for Bromley Brook School	4/06/04	6/15/04

The construction of the sewage collection, treatment and disposal system for the Bromley Brook School was completed in accordance with the following as-built plan prepared by Ellis Speath, P.E. of Speath Engineering, Inc.:

Sheet	Title	Date	Latest Revision
1 of 4	Septic Design for Bromley Brook School	6/27/05	7/28/05

SECTION D "SYSTEM OPERATION"

D1. System Operation:

The permittee shall notify the Secretary in writing prior to the operation of the Bromley Manor senior care facility.

The wastewater disposal system shall be operated at all times in a manner that will (1) not permit the discharge of sewage onto the surface of the ground; (2) not result in the direct discharge of sewage into waters of the State; (3) not result in a violation of Water Quality Standards; and (4) not result in a significant alternation of the aquatic biota.

Every year that the senior care facility is in operation, the disposal fields shall be alternated on an annual basis.

In accordance with accepted design practices, the effluent disposal rate to the disposal fields shall not exceed 14,970 gallons per day except as may occur on an occasional basis during normal operation.

D2. Annual Inspection, Report and Implementation Schedule:

A. Annual Inspection:

Once the senior care facility is in operation, the permittee shall engage a professional engineer registered in the State of Vermont to make a thorough inspection, evaluation, and report of the complete sewage collection, treatment and disposal system during the month of April each year. The engineer's inspection shall include, but not be limited to the following:

a. evaluating the accumulation of solids and scum in the grease trap and septic tank, determining if the tanks need to be pumped that year;

b. verifying the proper operation of all pumps, alarms and controls in the recirculation tank and pump station;

c. inspecting the surface of each cell of the recirculating textile filter;

d. verifying the proper operation of all distribution valves that distribute flow to the AdvanTex™ units;

e. verifying the proper operation of the forced air ventilation system that serves the AdvanTex™ units;

f. performing a drawdown test on the leachfield pump station pumps to verify meter calibration;

D2. Annual Inspection, Report and Implementation Schedule (continued):

g. walking along the route of the force mains to check for any leakage evidenced by surfacing effluent;

h. walking the disposal fields, noting any signs of ponding effluent and the general condition of the surface of the disposal fields;

i. verifying the use of alternate disposal fields and noting all valve settings;

j. checking all the observation wells and noting the depth of liquid level in each well; and

k. noting any necessary repairs or maintenance that needs to be performed.

B. Engineering Report:

By July 1st each year once the facility is in operation, the permittee shall have a professional engineer submit an annual report including the following items:

a. a complete list of the items inspected and the results of the inspection;

b. the measured depths of sludge and scum in the grease trap and septic tank; and

c. a discussion of the recommended repairs and maintenance required.

C. Implementation Schedule:

By August 1st each year once the facility is in operation, the permittee shall notify the Secretary in writing stating how the engineer's recommendations are to be implemented and including a schedule for recommended repairs and maintenance.

D3. Experimental System - Criteria for Success/Failure:

This treatment system is considered an experimental system as per Section 14-1802 of the IDR. A loading rate > 5.0 gpd/ft^2 in the recirculating filters requires that the effluent quality meet the effluent limitations listed in Condition D(4) below. If the system fails to meet these effluent limitations, the Secretary may require additional monitoring. If the additional monitoring indicates that the treatment system is not meeting the effluent limitations listed in Condition D(4) below, the Secretary may require that an alternative treatment system be constructed.

The treatment system will be considered to have failed to meet its performance objectives when two consecutive samples of treated effluent exceed any of the effluent limitations listed in Condition D(4).

D4. Effluent Limitations:

The effluent discharged to the disposal area shall meet the following effluent quality limitations:

Parameter	Monthly Average Limit
Biochemical Oxygen Demand (5-day)	15 mg/l
Total Suspended Solids	15 mg/l

D5. Septage Disposal:

During the system's annual inspection, the depth of sludge and scum shall be measured in the grease trap and septic tank. The tanks shall be pumped if: 1) the sludge is closer than twelve (12) inches to the outlet baffle or; 2) the scum layer is closer than three (3) inches to the septic tank outlet baffle or; 3) if otherwise recommended by the inspecting engineer. Before pumping the tanks, the permittee shall notify the Secretary in writing of the name and address of the pumper and the municipal sewage treatment facility where the septage is to be disposed or other facility approved by the Secretary.

D6. Operation and Maintenance Manual:

The previous permittee submitted an Operation and Maintenance Manual for the sewage collection, treatment and disposal system on March 16, 2007.

D7. System Operator:

Once the senior care facility is in operation, the permittee is required at all times to employ a wastewater treatment plant operator with a minimum Grade I operator certificate from the Secretary of State's office to operate the treatment and disposal system.

The permittee shall notify the Secretary in writing within 30 days of any change in the operator employed to operate the treatment facility.

D8. System Operation and Maintenance:

The wastewater collection, treatment, and disposal system shall be operated and maintained at all times in a manner satisfactory to the Secretary and not to cause health hazards, contamination of drinking water supplies, groundwater and/or surface water.

D9. Inspection of Distribution Valves:

When the senior care facility is in operation, the system operator shall observe the operation of the distribution valves on a monthly basis. The operator shall verify that the valves are distributing effluent sequentially and equally to all five (5) filter modules. The operator shall keep a journal of the inspections, noting the date, observations and any repairs performed. The journal shall be kept at the facility for inspection by Division personnel upon request.

D10. Reporting of Failures:

The permittee shall immediately report any failure of the wastewater collection, treatment, or disposal system to the Secretary, first by telephone within 24 hours of the failure and then in writing within 5 days of the failure. The written notice shall include a discussion of the actions taken or to be taken to correct the failure.

D11. Discharge Restrictions:

The permittee shall not allow any person to discharge or cause to be discharged anything other than sanitary wastewater to this collection, treatment and disposal facility.

SECTION E "MONITORING"

E1. Quality Assurance/Quality Control Plan:

The previous permittee submitted a Quality Assurance/Quality Control Plan (QA/QC Plan) to the Secretary on March 15, 2007.

The laboratory utilized for analyzing the samples shall demonstrate successful participation in third party proficiency testing recognized by ISO or NELAP for all parameters and shall analyze any check sample provided by the Secretary. Failure to obtain an acceptable result for either the Secretary's check sample or successful third party proficiency testing may be a basis for requiring an alternate analytical laboratory.

E2. Effluent Flow Volume:

When the senior care facility is in operation, the permittee shall record the volume of recirculated effluent discharged to the disposal fields based on readings from the pump station flow meters each day at approximately the same time. The daily total, total for the month and daily average for the month shall be submitted to the Secretary by the 15th of the month following the date of the readings.

E3. Effluent Monitoring:

When the senior care facility is in operation, the septic tank and textile filter effluent shall be sampled biannually and analyzed in accordance with the QA/QC Plan, as follows:

Parameter	Units	Sample Type	Sample Frequency
pH	S.U.	grab	February & October
Biochemical Oxygen Demand (BOD_5)	mg/l	grab	February & October
Total Suspended Solids (TSS)	mg/l	grab	February & October
Chloride (Cl-)	mg/l	grab	February & October
Total Phosphorus (TP)	mg/l	grab	February & October
Total Kjeldahl Nitrogen (TKN)	mg/l	grab	February & October
Ammonia Nitrogen (NH3)	mg/l	grab	February & October
Nitrate Nitrogen (NO3 as N)	mg/l	grab	February & October

The septic tank effluent samples shall be collected at the inlet end of the 15,000 gallon recirculation tank.

The textile filter effluent samples shall be taken at a sampling valve on the recirculation tank discharge line.

The results of the analyses shall be submitted to the Secretary by the 15th of the second month following the date of sampling.

E4. Groundwater Monitoring:

When the senior care facility is in operation, groundwater in each of the monitoring wells shall be sampled biannually as per the QA/QC Plan and analyzed as follows:

Parameter	Units	Sample Type	Sample Frequency
Escherichia coli	col/100 ml	grab	February & October
pH	S.U.	grab	February & October
Chloride (Cl-)	mg/l	grab	February & October
Total Dissolved Phosphorus (TDP)	mg/l	grab	February & October
Nitrate Nitrogen (NO3 as N)	mg/l	grab	February & October
Depth to groundwater (below ground surface)	feet/inches		At time of sampling

E4. Groundwater Monitoring (continued):

Because of changing water table conditions, samples from the groundwater monitoring wells may not be able to be collected on the same day or in the same week. If a monitoring well has water at any time during the months of February and October, then a sample is required to be collected and analyzed.

The results of these analyses and measurements shall be submitted to the Secretary by the 15th of the second month following the date of sampling.

E5. Sampling and Testing Procedures:

All wastewater, groundwater sampling, preservation, handling and test procedures used to comply with the monitoring requirements herein shall conform to procedures specified in the most current edition of Standard Methods for the Examination of Water and Wastewater APHA - AWWA - WPCF, and the Vermont Water Quality Standards unless written approval of an alternate method is received from the Agency.

The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at regular intervals to ensure accuracy of measurements or shall ensure that both activities will be conducted. Samples shall be representative of the volume and quality over the sampling and reporting period.

E6. Miscellaneous Monitoring:

If the permittee monitors any required parameter set forth in this permit for this treatment and disposal system more frequently or at additional locations outside the treatment facility than required by this permit, the results of such monitoring shall be included in the monthly report.

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Secretary. Records shall include laboratory bench sheets as well as analytical procedures used, interim results obtained and all calculations supporting the reported test results.

SECTION F "COMPLIANCE REVIEW"

If the results of monitoring and analysis of the effluent, groundwater or surface water indicates that a violation of the effluent disposal limits, a violation of the Vermont Water Quality Standards, or a Significant Alteration of the Aquatic Biota has occurred, is occurring, or is likely to occur, the Secretary may increase the frequency of or change the location and/or type of monitoring, and/or require the permittee to take appropriate corrective actions to eliminate or reduce the possibility of a violation.

The issuance of this permit amendment, ID-9-0283-1 to Bromley Manor, LLC by the Secretary relies upon the data, designs, judgment, and other information supplied by the applicant, consultants and other experts who have participated in the preparation of the application. The Department makes no assurance that this system will meet the performance objectives of the applicant and no warranties or guarantees are given or implied.

SECTION G "EFFECTIVE DATE"

This Indirect Discharge Permit Amendment, ID-9-0283-1, issued to Bromley Manor, LLC for the discharge of treated wastewater from the Bromley Manor senior care facility in Manchester, Vermont, is effective this 15th day of August, 2017.

Emily Boedecker, Commissioner
Department of Environmental Conservation

By Bryan J. Redmond
Bryan Redmond, Director
Drinking Water and Groundwater Protection Division