



WASTEWATER ALTERNATIVES, INC. THE CLEAN SOLUTION™



VERMONT 2009 MANUAL AN AEROBIC ALTERNATIVE SEPTIC SYSTEM DESIGNED SPECIFICALLY FOR ON SITE WASTEWATER TREATMENT

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VERMONT MANUAL THE CLEAN SOLUTION™

an

Alternative Wastewater Treatment System

Date: January 2008

Wastewater Alternatives Inc., (WAI) would like to Thank You for your interest in THE CLEAN SOLUTION™ alternative wastewater treatment system.

WAI was founded in 1992 by Harold Davis who saw the need to have a subsurface disposal system that could treat household sewer waste in an environmentally friendly manner and be cost effective. THE CLEAN SOLUTION System was first tested in 1992 with the first system installed in New Hampshire in 1995. From 1992 to when the first CLEAN SOLUTION was installed, it evolved into an environmentally friendly, cost effective, low maintenance alternative subsurface disposal system. When WAI began in 1992, WAI had one basic principle it would follow, “**customer satisfaction**”. WAI continues to follow that principle and has added new members to its team over the years to maintain the same level of service to its clients that has been WAI’s hallmark since 1992. WAI installs over 100 systems each year in New Hampshire. THE CLEAN SOLUTION system is also approved for use in Maine and Massachusetts.

The following pages provide each of you information pertaining to THE CLEAN SOLUTION system. This information is provided to give each of you a better understanding of the system as well as your respective responsibilities as a Home Owner, Designer, and Installer. The following information will be updated as necessary to address technology advances or regulatory updates pertaining to the system approval process. To ensure that you have the most current information please contact WAI at 1-866-900-2415.

There are four critical steps that need to be followed when using THE CLEAN SOLUTION system.

1. The owner must hire a Designer Licensed in the State of Vermont (site evaluator) and THE CLEAN SOLUTION system must be designed, installed and operated as described in the Innovative/Alternative System approval granted by the State of Vermont.
2. The owner of a property where THE CLEAN SOLUTION system has been installed shall have a valid maintenance contract in force at all times. The minimum length of any contract shall be for a period of two years.
3. Prior to making an application for state or local approval a copy of the design plan(s) and supporting documentation must be submitted to WAI for review and approval. This is required to ensure the Homeowner(s) has been provided with the required documentation.
4. In conjunction with a Licensed Designer, WAI requires that a WAI technician inspect the system installation and system start-up.

Please contact WAI with any questions or to setup a meeting to discuss the system in more detail. Thank you for your interest in THE CLEAN SOLUTION system.



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NOTES

Innovative/Alternative System Approval
General Use per §1-1001 of the
Wastewater System and Potable Water Supply Rules, effective September 29, 2007

#2008-01

Vendor Information

Wastewater Alternatives, Inc.
11 Hethlon Road
Canterbury, NH 03224

Technology Name

The Clean Solution™

Wastewater Treatment System

Contact

Gary R. Spaulding
Wastewater Alternatives, Inc.
11 Hethlon Road
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Technology Type

Aerobic Wastewater Treatment
System

Expiration Date

February 1, 2010

Harold Davis
37 Champney Street
Groton, MA 01450
Phone: (978) 448-2415
Fax: (978) 448-2911
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Approval

The Clean Solution™ Wastewater Treatment System may be used as part of a subsurface wastewater disposal system, with design flows of less than 6500 gallons per day, approved under the Wastewater System and Potable Water Supply Rules, effective September 29, 2007 (Rules), under the following conditions:

1. The treatment units must be installed and operated as described in the Innovative/Alternative System application package filed with the Agency of Natural Resources (Agency) on June 16, 2006, and with the site-specific installation and operating instructions submitted.



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2. Unit sizing must be in accord with the technical information submitted with the Innovative/Alternative System application package on June 16, 2006. The sizing shall be based on the calculated design flow per §1-808 of the Rules.
3. This approval is based on treatment only of domestic wastewater of low and moderate strength as specified in §1-915(a)(1)(C) & (D) of the Rules. Systems to treat higher strength wastewater may be approved on a case by case basis.
4. The system may be used for both new and replacement systems.
5. All effluent from a Clean Solution™ Wastewater Treatment System shall be discharged to a filtrate disposal system that conforms to the requirements of §1-916 of the Rules. If the rules are revised during the term of this approval, this approval shall be revised as needed to conform to the revisions.
6. Detailed operating instructions shall be provided in writing to the owner/operator.
7. The Vendor shall have an inventory of replacement parts available locally or available for delivery within 24 hours.
8. The Vendor shall provide a copy of this approval letter to any landowner who is a prospective purchaser of a Clean Solution™ Wastewater Treatment System prior to the sale of the unit and prior to the filing of any application for a site-specific approval by the Agency for the purchaser's property. The application filed with the Agency shall include the landowner's written acknowledgement of this approval letter. Prior to any sale of the property or completion of a sales agreement to sell the property, a copy of the site-specific permit shall be provided to the prospective purchaser. The owner of record shall notify the Vendor of the sale, and provide contact information for the new owner.
9. The owner of a property where a Clean Solution™ Wastewater Treatment System has been installed shall have a valid maintenance contract in force at all times. The minimum length of any contract shall be for a period of two years. A copy of the initial and each succeeding contract shall be submitted to the appropriate Regional Environmental Office of the Agency and to the Vendor. Maintenance shall be performed by, or shall be supervised by, a Licensed Class 1 Designer or a Licensed Class B Designer, approved by the Vendor or their representative, who shall provide written inspection reports detailing the maintenance performed on the specific system including measurements of sludge and scum levels and any pumping required, any problems that have occurred since the previous inspection, any modifications made to the system, the date of the inspection, and any work required to ensure the system operates in compliance with this approval.

The inspection shall be performed in accord with the manufacturer's Operation and Maintenance requirements submitted as part of the Innovative/Alternative System application package and shall include a visual check of the system, including the aeration chamber, clarifier and effluent. The compressor shall be

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#2008-01

checked and the air filter cleaned or replaced. A 30 minute settleable solids test shall be performed on a sample of the aeration chamber solids to determine the need for pumping the system. If at any inspection the effluent is cloudy or pungent smelling, a sample shall be collected and tested for BOD and TSS. The results of any testing shall be submitted with the annual inspection report.

10. The first inspection shall be completed no later than 6 months after placing the unit in service. The second inspection shall be completed no later than 12 months after placing the unit in service. In accordance with the Manufacturer's requirements, subsequent inspections shall be completed at twelve month intervals based on the date when the unit was first placed in service. More frequent inspections or additional testing, required by the manufacturer to ensure proper functioning of the system, shall be conducted in accordance with the manufacturer's specifications. All reports shall be filed with the appropriate Regional Environmental Office of the Agency, the Vendor and the landowner with the annual inspection report
11. The Vendor shall submit an annual report to the Agency by April 1 of each year containing the following information for the 12 month period ending December 31 of the previous year:
 - A. The number of permitted units installed in Vermont.
 - B. The address of each installation.
 - C. The name of the owner at the time of installation and any known change in ownership.
 - D. All known problems or failures, with a brief summary of the cause and remedial measures taken.
 - E. Copies of reports from an approved laboratory of all effluent quality testing conducted.
12. This approval is based on information submitted by the Vendor indicating that the specified models will routinely provide effluent with no more than 30 mg/l of BOD₅ and no more than 30 mg/l of TSS.
13. When a project is subject to the Rules, site-specific permission for the use of this product is required in the form of a Wastewater System and Potable Water Supply Permit.
14. A site-specific permit for the use of this product may be revoked if the unit fails to function properly or if the property owner fails to have a valid contract for the required maintenance and inspection of the unit. In the case of the unit failing to function properly, revocation of the permit will require that the use of the building

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be discontinued unless another wastewater disposal system is installed based on prior written approval by the Agency.

15. This approval is not a representation or guarantee of the effectiveness, efficiency or operation of a Clean Solution™ Wastewater Treatment System.

Design and Review Conditions

The following conditions will be used by the Department in reviewing permit applications that include a Clean Solution™ Wastewater Treatment System:

Equipment

- The Clean Solution™ Wastewater Treatment System

Design and Application

- The treatment unit shall be designed by a Licensed Class 1 Designer or a Licensed Class B Designer in accordance with the manufacturer's recommendations. The designer shall assure that the system will properly function in all seasons.
- The designer must assess the structural needs of the unit for the specific application site and place the requirements on the design plans.
- The designer must determine the type of backfill required and any necessary placement specifications.
- The designer must assess the ventilation path for the particular application and make any necessary provisions to assure proper flow and control of odor emissions.
- The designer shall consult with the Vendor for proper sizing.
- The designer must assure routine access to each compartment of the unit (access to grade) as well as the control panel, any pumps, distribution boxes (for sampling), and effluent filters.
- The designer must address flotation issues if the SHWT will be above the bottom of any of the tanks.

Installation Inspection

- The treatment unit shall be set up under the instruction and guidance of an installer/inspector trained by the Vendor.

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- The treatment unit shall be inspected by a Licensed Class 1 Designer or a Licensed Class B Designer, approved by the Vendor, after construction of the unit and installation of the tanks before backfilling, and after backfilling and grading is complete. The inspection shall include checking for an adequate structural foundation to support the unit, checking for levelness of the tanks, and inspecting for damage and proper assembly.
- Before backfilling, the unit and tankage shall be tested for watertightness by filling the unit or tank with water to a point that is above all below grade openings and holding it at a constant level for 24 hours; there shall be no measurable leakage. During the test the entire unit and tanks shall be inspected for visible leaks. Should the unit or tanks fail the test they may be repaired and retested. The testing and repairs shall be conducted under the direction and in the presence of the inspecting Licensed Designer.
- The Licensed Designer shall inspect all piping for proper installation and watertightness before backfilling.

Start-up

- Start-up of the system and initial operational checks shall be conducted by an installer/inspector trained by the Vendor, who shall submit a report to the owner, the Vendor, and to the inspecting Licensed Class 1 Designer or Licensed Class B Designer indicating any problems encountered, their resolution, and affirmation that the system is operating as intended.

Operational Maintenance and Inspection

- The owner shall have a valid maintenance contract in force at all times. The minimum length of any contract shall be for a period of two years. A copy of the initial and each succeeding contract shall be submitted to the appropriate Regional Environmental Office of the Agency and to the Vendor. Maintenance shall be performed by, or shall be supervised by, a Licensed Class 1 Designer or a Licensed Class B Designer, approved by the Vendor, who shall provide written inspection reports detailing the maintenance performed on the specific system including measurements of sludge and scum levels and any pumping required, any problems that have occurred since the previous inspection, any modifications made to the system, the date of the inspection, the results of all testing, and any work required to ensure the system operates in compliance with this approval.

The inspection shall be performed in accord with the manufacturers Operation and Maintenance Manual submitted as part of the Innovative/Alternative System application package, and shall include a visual check of the system,

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#2008-01

including the aeration chamber, clarifier and effluent. The compressor shall be checked and the air filter cleaned or replaced. A 30 minute settleable solids test shall be performed on a sample of the aeration chamber solids to determine the need for pumping the system. If at any inspection the effluent is cloudy or pungent smelling a sample shall be collected and tested for BOD and TSS. The results of all testing shall be submitted to the Agency and to the Vendor, with the annual inspection report.

- The first inspection shall be completed no later than 6 months after placing the system in service.
- The second inspection shall be completed no later than 12 months after placing the system in service.
- In accordance with the Manufacturer's requirements, subsequent inspections shall be completed at twelve month intervals based on the date when the unit was first placed in service. More frequent inspections or additional testing, required by the manufacturer to ensure proper functioning of the system, shall be conducted in accordance with the manufacturer's specifications.
- All reports shall be filed with the appropriate Regional Environmental Office of the Agency, the Vendor, and the landowner with the annual inspection report.

Permitting

- The permit shall run with the land.
- A copy of the site-specific permit shall be provided to any prospective purchaser prior to the sale.
- Each new owner of the property shall inform the appropriate Regional Environmental Office of the Agency, and the Vendor, within 30 days of the transfer of the property and include the name and mailing address of the new owner.

Effective: February 7, 2008

by: Roger Thompson Jr.
Roger Thompson, Jr.
Regional Office Program Manager

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There is now an affordable, ecologically sound alternative wastewater treatment system available to replace the conventional leach field currently required with septic systems. Developed in Jaffrey, N.H. by WASTEWATER ALTERNATIVES INC. *THE CLEAN SOLUTION* accomplishes the biological functions of a leach field in a subterranean tank the size of a septic tank. The discharge is a treated, odorless liquid, which is cleaner than typical treated municipal sewage. *THE CLEAN SOLUTION* system is widely used in New Hampshire, Maine and Massachusetts. Systems range in capacity from single family houses to large community systems and commercial applications.

In the typical *CLEAN SOLUTION* application, the effluent from the septic tank flows into the *BioCon*™ tank. This tank contains plastic media that provide an extended surface contact area for the bacteria to collect and a continuously operating air pump that provides oxygen to treat the effluent. The output from the *BioCon* flows by gravity into a settling tank where any remaining sludge is settled. The clear liquid either flows by gravity or is pumped to a leach field via a pressured distribution system.

The attached drawings and specifications provide details on a few *CLEAN SOLUTION* models. Because *THE CLEAN SOLUTION* system can be adapted to many standard precast concrete tanks, WAI will work with your designer and installer to ensure that the homeowner is provided a cost effective solution.

WHEN TO USE THE CLEAN SOLUTION

THE CLEAN SOLUTION system designed specifically for use in any septic system application where the installation of a standard leach field would be expensive or difficult – whether it's a single family house, multi unit development or a commercial development. Examples include homes on bodies of water, high water tables, ledge, small lots, housing developments and condo units. *The CLEAN SOLUTION* unit is an affordable, completely in-ground system that is ideal for new installations or failed systems.

ADVANTAGES OF THE CLEAN SOLUTION

Environment Friendly

- *THE CLEAN SOLUTION*, a tank that is installed in line after the septic tank, provides the same aerobic treatment that a leach field is supposed to. This means a smaller field is required to disperse the clean, odorless water into the ground.

User Friendly

- Simple - the only moving part is the air pump
- Garbage disposer and dish washer compatible
- Accommodates vacations, low flows and peak loads
- Landscape friendly - tanks in ground, no unsightly candy canes, vents or large raised covers above ground

Low Maintenance

- In most applications, simple maintenance is required only approximately every 2 to 3 years depending upon system loading rates. Maintenance consists mainly of pumping the septic and settling tanks.

Technical and Installation Support

- WAI provides one on one support throughout the design, installation and startup process.



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THEORY of THE CLEAN SOLUTION

Conventional small to mid- size sewage systems normally use a septic tank followed by a leach field to first provide anaerobic (without air) and then aerobic (with air) treatment of the effluent. Septic tanks work well for capturing and digesting the solids, which are anaerobically fermented over a long period of time, dissolving the solids into the liquid waste. However, a septic tank is not designed to treat the contaminants that dissolve in the liquids. These are treated aerobically in the leach field. Municipal systems, which handle very large volumes of waste use much different equipment to accomplish the same biological functions: primary sedimentation tanks remove solids, and a subsequent aerobic system treats the contaminants dissolved in the liquids. Settled solids are removed from municipal primary and secondary facilities for further treatment.

All aerobic treatment systems, whether a conventional leach field, a municipal treatment plant, or THE CLEAN SOLUTION, depend on bacteria to purify the effluent from a solids settling system. In order for bacteria to reproduce they require energy (food) and air. By using the contaminants in the effluent as food and atmospheric air the bacteria metabolize the dissolved solids to carbon dioxide, water and sludge (colonies of bacteria). The aerobic bacteria also convert ammonia compounds to nitrates.

A large number of bacteria need to come in contact with the food sources in order to purify an effluent. Treatment systems utilize different methods to provide the large necessary population. A municipal system mechanically stirs up the bacteria in the secondary treatment process so that they will contact their food and not settle out of the effluent. In a leach field, the sludge (biomat) that forms at the ground interface is a large colony of bacteria through which the dissolved solid stream flows. In THE CLEAN SOLUTION the bacteria collect in a thin film on the plastic media in WAI'S proprietary BioCon™ biological contactor, and the effluent is recirculated over them several times.

THE CLEAN SOLUTION uses the same biological process as a municipal secondary treatment plant using the activated sludge process. Solids are settled out and air is added for bacteria respiration in the BioCon. This allows the bacteria to convert the carbonaceous dissolved solids to carbon dioxide, water and sludge. In addition the urea and ammonia converts to nitrates and sludge. The sludge created is settled for periodic removal from the system, and a clean, odorless effluent is discharged to the dispersal field.

The major difference between a conventional septic system and THE CLEAN SOLUTION is where the bacteria (sludge) collect. In a conventional system, the sludge forms in the bottom of the leach field and restricts the effluent flow enough so that the bacteria has time to act. This flow rate through the sludge determines the required field size. In THE CLEAN SOLUTION system the sludge is formed in the BioCon and a clean effluent is discharged to the dispersal field. This field can be very small because there is no for further treatment.



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DESIGN CRITERIA

THE CLEAN SOLUTION™ System is to be sized by WAI staff based on design flow provided by designer. Site design and leach field design to be completed by a Designer who is licensed by the State of Vermont Wastewater Management Division. Design must be completed using the State of Vermont Wastewater Management Division – Environmental Protection Rules – Wastewater System and Potable Water Supply Rules – Effective September 29, 2007

RESPONSIBILITIES

The responsibilities for a *CLEAN SOLUTION* installation rest in the partnership between the owner, designer, installer, and WAI. Below is an outline of responsibilities:

The Owner:

- 1) Retains a Licensed Designer in the State of Vermont to prepare a plan.
- 2) Reviews plans prepared by Licensed Designer.
- 3) Reads the conditions outlined in the WAI's *Innovative/Alternative System Approval* granted by the State of Vermont.
- 4) Obtains all necessary permits and approvals required at both the State and Local level.
- 5) Executes a sales agreement with WAI at least 3 weeks prior to installation.
- 6) Executes an Inspection / Maintenance Agreement with WAI as outlined in the *Innovative/Alternative System Approval* granted by the State of Vermont.
- 7) Hires a contractor to install the septic tank(s), pump chamber and complete all earthwork.
- 8) Owner and WAI Technician determine location of compressor.
- 9) Hires a licensed electrician to provide an electrical outlet near the compressor capable of 1 amp, 115 volts. If a sump pump is specified, provides an electrical service panel with a 20 amp, 115volt circuit. Circuit must be capable of running pump and high water alarm.
- 10) Retain Licensed Designer to complete construction inspection as required by the State of Vermont.

The Licensed Designer:

- 1) Provide owner with a copy of WAI's *Innovative/Alternative System Approval* granted by the State of Vermont.
- 2) Explain to the owner the difference between THE CLEAN SOLUTION system and a conventional wastewater disposal system.
- 3) Complete all fieldwork required by the State of Vermont.
- 4) Prepare design plans.
- 5) Contact WAI to discuss system.
- 6) Review final design plan with owner for owner sign-off.
- 7) Provide WAI with a copy of the design plan and supporting documentation for review.
- 8) Provide WAI with pump operating parameters.
- 9) Submit final design plan for State and Local approval.
- 10) Provide necessary construction inspection of installation as required by the State of Vermont.



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Wastewater Alternatives, Inc.:

- 1) Review system design parameters with Designer.
- 2) Review system components, operation and maintenance schedule with Owner.
- 3) Prepare standard Sales and Maintenance agreement for Owner.
- 4) Provide Contractor and Owner with Purchase Order.
- 5) Coordinate project schedule with Contractor.
- 6) WAI Technician to install the following components onsite;
 - a) BioCon Media
 - b) Air transfer system
 - c) Internal BioCon plumbing
 - d) Setup effluent pump (if required)
 - e) Setup effluent controls and alarms (if required)
 - f) Setup Air Compressor
- 7) System Inspection and report;
 - a) Copy of report to Owner
 - b) Copy of report to Designer
- 8) System check and startup.
- 9) Annual system inspection and reporting as required by WAI's *Innovative/Alternative System Approval* granted by the State of Vermont

The INSTALLER:

- 1) Contracts with owner for all work outside of WAI's responsibilities.
- 2) Contacts WAI at least 3 weeks prior to installation to discuss schedules.
- 3) Provides all tanks and materials outside of WAI's responsibilities.
- 4) Excavates for the septic tank and all WAI tanks to design elevations.
- 5) Calls tank supplier to arrange delivery and setting of the WAI tank[s].
- 6) Constructs the leach field in accordance with the approved design.
- 7) Installs all piping to and from all tanks.
- 8) Installs the piping from *THE CLEAN SOLUTION* or pump chamber to leach field.
- 9) Seals all pipe penetrations and knockouts with a watertight non-shrink mortar.
- 10) Digs a trench for the electrical conduit and airline.
- 11) Brings risers to grade. Contractor ensures that all sections of risers are watertight.
- 12) Completes all leakage tests required by designer.
- 13) Obtains inspection(s).
- 14) Backfill system components, loam, seed and mulch disturbed areas
- 15) Obtains final inspection.

The above list of responsibilities is a general outline. Additional responsibilities may be required based on specific site conditions or use.



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MAINTENANCE and OPERATION

The following maintenance is required. It is the owner's responsibility to see that this maintenance is performed. The owner must maintain a Service Agreement with Wastewater Alternatives, Inc.

Full Time Residential Use (Single Family Home)

1. Inspection by WAI Technician, Licensed Designer or by a company or individual that has been certified by WAI or the State of Vermont Wastewater Management Division to perform inspections. System inspection to be done annually.
2. Use a local pumper to pump out the septic tank and settling/pump every 2 years. Frequency of pumping is dependent upon system use and the number of occupants. Homeowner must retain records of pumping.
3. Compressor must run continuously.
4. BioCon chamber may require pumping every 6 to 8 years. WAI Technician will determine if pumping is necessary during annual inspection.
5. Compressor Air Filter to be clean or replaced yearly.

Seasonal Residential Use (Single Family Home use less than 6 months per year)

1. Inspection by WAI Technician, Licensed Designer or by a company or individual that has been certified by WAI or the State of Vermont Wastewater Management Division to perform inspections. System inspection to be done annually
2. Use a local pumper to pump out the septic and settling/pump tanks every 2 years. Frequency of pumping is dependent on system use and number of occupants. WAI or the pumper may determine the required frequency. Homeowner must retain records of pumping.
3. Compressor may be disconnected during the off-season.
4. BioCon chamber may require pumping every 8 to 10 years. WAI Technician will determine if pumping is necessary during annual inspection.
5. Compressor Air Filter to be clean or replaced yearly.

Following the above schedule will fulfill your obligations to maintain your warranty.

The first two annual inspections are included in the sale price. Maintenance Contracts are available from WAI. The service will include a detailed inspection of the system and replacement of any failed items within the BioCon Chamber. Tank pumping must be arranged and paid for by the homeowner.



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WARRANTY

For a period of five years, WAI will warranty THE CLEAN SOLUTION system and repair any malfunction, including parts and labor, at no cost to you. Your responsibility during this period is to perform the required maintenance and to notify WAI of any problems. Failure to perform either of these items will void this warranty and result in you being billed for repair costs. This warranty also does not cover damage caused by improper use, poor construction practice, high groundwater or acts of God.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES. ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY OR OTHERWISE, APPLICABLE TO THE SEWAGE TREATMENT SYSTEM SHALL BE LIMITED IN DURATION TO ONE YEAR.

WASTEWATER ALTERNATIVES INC. SHALL NOT BE LIABLE FOR ANY DIRECT OR INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES. NOR, SHALL WASTEWATER ALTERNATIVES INC. LIABILITY UNDER THIS WARRANTY EXCEED THE ORIGINAL PRICE PAID BY THE BUYER.

RIGHTS TO DATA AND ACCESS TO THE SYSTEM

WAI reserves the right of reasonable access to collect data, modify, maintain and repair THE CLEAN SOLUTION and its subsystems. WAI will retain all data collected and the rights to it.

TRADE SECRETS

THE CLEAN SOLUTION is the result of the expenditure of a great deal of effort and money. The design of the components and operational cycle are the intellectual property of WAI and may not be revealed without written permission.

DIGITAL FILES

WAI can provide digital files for all system components and required system notes. Call WAI with your system questions and a CD of standards.





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APPENDIX A

VERMONT STANDARD DESIGN NOTES JANUARY 1, 2008



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VERMONT STANDARD DESIGN NOTES JANUARY 1, 2008

The General Notes listed below are to be shown on design plans when using THE CLEAN SOLUTION™ system. Additional notes may be required to cover specific uses, site conditions or to meet State and Local regulations. These notes are not meant to replace Standard Design Notes and information that is provided by the designer.

The follow notes can be provided either in a Vector Works, ACAD, Word or PDF format. Please call Wastewater Alternatives, Inc. for a CD.

WASTEWATER ALTERNATIVES INC. DESIGN NOTES

1. SUBSURFACE DISPOSAL SYSTEM IS BASED ON THE CLEAN SOLUTION™ MANUFACTURED BY WASTEWATER ALTERNATIVES, INC. PETERBOROUGH NH.
2. THE CLEAN SOLUTION SYSTEM™ TO BE SUPPLIED BY WASTEWATER ALTERNATIVES, INC (WAI), 1-866-900-2415.
3. THE CLEAN SOLUTION™ PROVIDED BY WAI TO INCLUDE:
 - A. BIOCON™ AND SETTLING TANKS STANDARD DUTY (COVER LESS THAN 3- FEET). IF COVER OVER THE TOP OF TANK EXCEEDS 3- FEET NOTIFY WAI.
 - B. AIR COMPRESSORS
 - C. MEDIA
 - D. PLASTIC RISERS AND COVERS. MAXIMUM HEIGHT PROVIDED BY WAI IS 24". FOR DEPTHS GREATER THAN 24" OF COVER INSTALLER TO SUPPLY ADDITIONAL RISERS.
 - E. WAI AND THEIR REPRESENTATIVES SHALL PERFORM ALL INTERNAL PIPING IN THE BIOCON™ TANK AND SYSTEM STARTUP.
4. INSTALLER SHALL FOLLOW MANUFACTURER'S GUIDELINES TO PREPARE SITE FOR INSTALLATION OF THE CLEAN SOLUTION™ SYSTEM AND PROVIDE THE FOLLOWING:
 - A. CONTRACTOR SHALL FOLLOW APPROVED DESIGN PLANS AND VERMONT'S WASTEWATER SYSTEM – ENVIRONMENTAL PROTECTION RULES EFFECTIVE SEPTEMBER 29, 2007
 - B. CONTRACTOR TO SUPPLY NECESSARY SEPTIC TANKS AND GREASE TRAPS AS REQUIRED BY DESIGNER.
 - C. EXCAVATION OF ALL TANKS INCLUDING TANKS SUPPLIED BY WAI TO GRADES ESTABLISHED BY DESIGNER.
 - D. SETTING AND LEVELING OF ALL TANKS, INCLUDING TANKS SUPPLIED BY WAI
 - E. SERVICE CONNECTIONS FROM BUILDING TO SEPTIC TANK, SEPTIC TANK TO BIOCON™ TANK, BIOCON™ TANK TO SETTLING TANK, SETTLING TANK TO DISPERSAL FIELD.
 - F. CONTRACTOR SHALL EXCAVATE FOR ALL AIR CONDUIT LINES FROM COMPRESSOR HOUSING TO BIOCON™ TANK.
 - G. CONTRACTOR TO WATER PLUG ALL TANK PENETRATIONS TO PREVENT GROUNDWATER LEAKS.
 - H. CONTRACTOR TO WATER PLUG ALL INLET(S) AND OUTLET(S) NOT USED.



WASTEWATER ALTERNATIVES, INC

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www.theleansolution.com

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email: gary@theleansolution.com

- I. CONTRACTOR SHALL SET ALL RISERS TO GRADES ESTABLISHED BY DESIGNER. CONTRACTOR TO ENSURE THAT RUBBER GASKET O-RING IS IN PLACE PRIOR TO SECURING SECTIONS. ALL SCREW HOLES TO BE USED TO SECURE SECTIONS TO EACH OTHER. CONTRACTOR TO ENSURE THAT ALL RISERS ARE WATERTIGHT TO PREVENT INFILTRATION FROM GROUNDWATER AND SURFACE RUNOFF.
 - J. CONTRACTOR TO BUILD / MODIFY DISPERSAL FIELD AS REQUIRED BY DESIGNER.
 - K. CONTRACTOR TO PROVIDE OWNER WITH SWING TIES FROM TWO PERMANENT FIXED POINTS TO ACCESS COVERS.
 - L. CONTRACTOR SHALL CALL SYSTEM DESIGNER FOR SYSTEM INSPECTION.
 - M. CONTRACTOR SHALL ENSURE THAT TANK(S) INVERTS ARE SET ACCORDING TO ELEVATIONS SHOWN ON PLANS. FAILURE TO INSTALL SYSTEMS AT CORRECT ELEVATIONS OR PREVENTING EQUAL FLOW TO BIOCON™ TANK(S) WILL VOID SYSTEM WARRANTY AND PERFORMANCE SPECIFICATIONS. CONTRACTOR TO ENSURE THAT ALL SYSTEM COMPONENTS, BOTH UPSTREAM AND DOWNSTREAM OF THE CLEAN SOLUTION™ SYSTEM ARE WATERTIGHT.
5. THE OWNER/CONTRACTOR SHALL PROVIDE THE FOLLOWING:
- A. OWNER/CONTRACTOR SHALL SUPPLY NECESSARY ELECTRICAL OUTLETS CAPABLE OF 1 AMP – 115 VOLTS FOR EACH COMPRESSOR. THERE SHALL BE TWO SEPARATE CIRCUITS PROVIDED. CIRCUITS **SHALL NOT** BE GFI PROTECTED.
 - B. COMPRESSOR HOUSING TO BE SUPPLIED BY OWNER / CONTRACTOR.
 - C. COMPRESSOR(S) LOCATION TO BE MUTUALLY DETERMINED BY OWNER / REPRESENTATIVE AND WAI.
 - D. MAXIMUM DISTANCE FROM COMPRESSOR(S) TO BIOCON™ TANK IS 50'. FOR DISTANCES GREATER THAN 50' CONTACT WAI.
6. REQUIRED MAINTENANCE BY OWNER:
- A. SIGNED SYSTEM MAINTENANCE AGREEMENT FOR THE CLEAN SOLUTION™ SYSTEM. MAINTENANCE AGREEMENT IS PROVIDED BY WAI.
 - B. SEPTIC TANK(S) AND SETTLING TANK TO BE PUMPED OUT EVERY TWO YEARS OR SOONER IF DEEMED NECESSARY AT ANNUAL SYSTEM INSPECTION.
 - C. BIOCON™ TANK TO BE INSPECTED ANNUALLY BY AN APPROVED WAI TECHNICIAN.
 - D. OWNER SHALL KEEP ALL PUMPING RECORDS.
 - E. FAILURE TO COMPLY WITH "A" – "D" ABOVE WILL VOID WARRANTY OF THE CLEAN SOLUTION™ SYSTEM AND WAI.



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APPENDIX B

VERMONT SYSTEM DESIGN SCHEMATICS FOR SINGLE FAMILY RESIDENTIAL APPLICATIONS

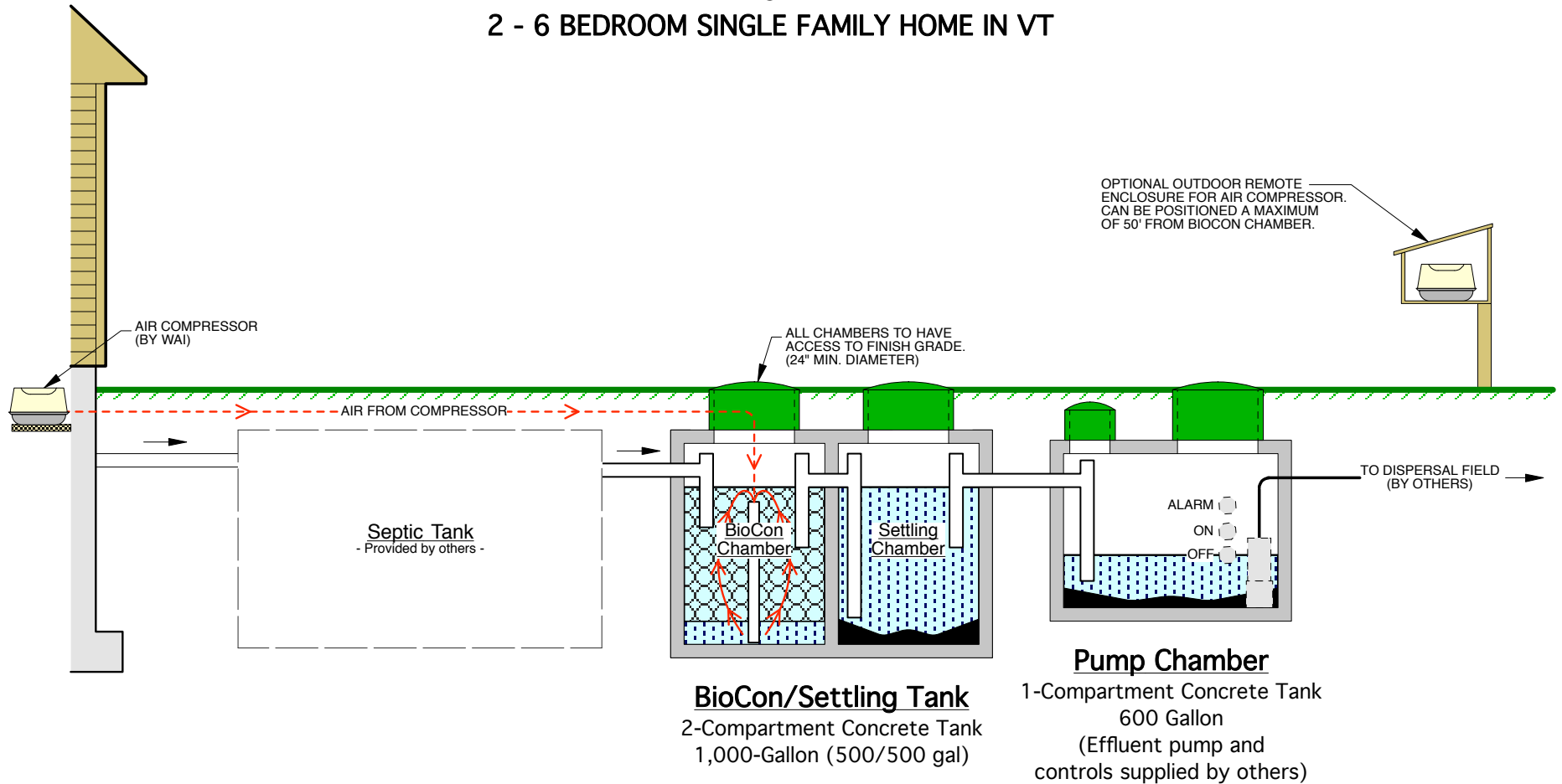
THE CLEAN SOLUTION™ MODEL 250-Rx
2-compartment concrete tank with separate septic tank.

THE CLEAN SOLUTION™ SYSTEM MODEL 250ST-Rx
3-compartment concrete tank with septic chamber included.

THE CLEAN SOLUTION™ SYSTEM MODEL 250PT-Rx
Plastic tank model with separate septic tank.

**PLEASE CONTACT THE STAFF OF WAI FOR
COMMERCIAL SCHEMATICS**

THE CLEAN SOLUTION™ ALTERNATIVE SEPTIC SYSTEM
SCHEMATIC OF MODEL 250-Rx:
2-COMPARTMENT MODEL WITH SEPARATE PUMP CHAMBER
FOR
2 - 6 BEDROOM SINGLE FAMILY HOME IN VT



Dispersal Field Sizing for VT:

Dispersal field can be a minimum of 50% the size of a traditional leach field. Larger size may be required depending on site conditions. Please contact WAI for dispersal field sizing.

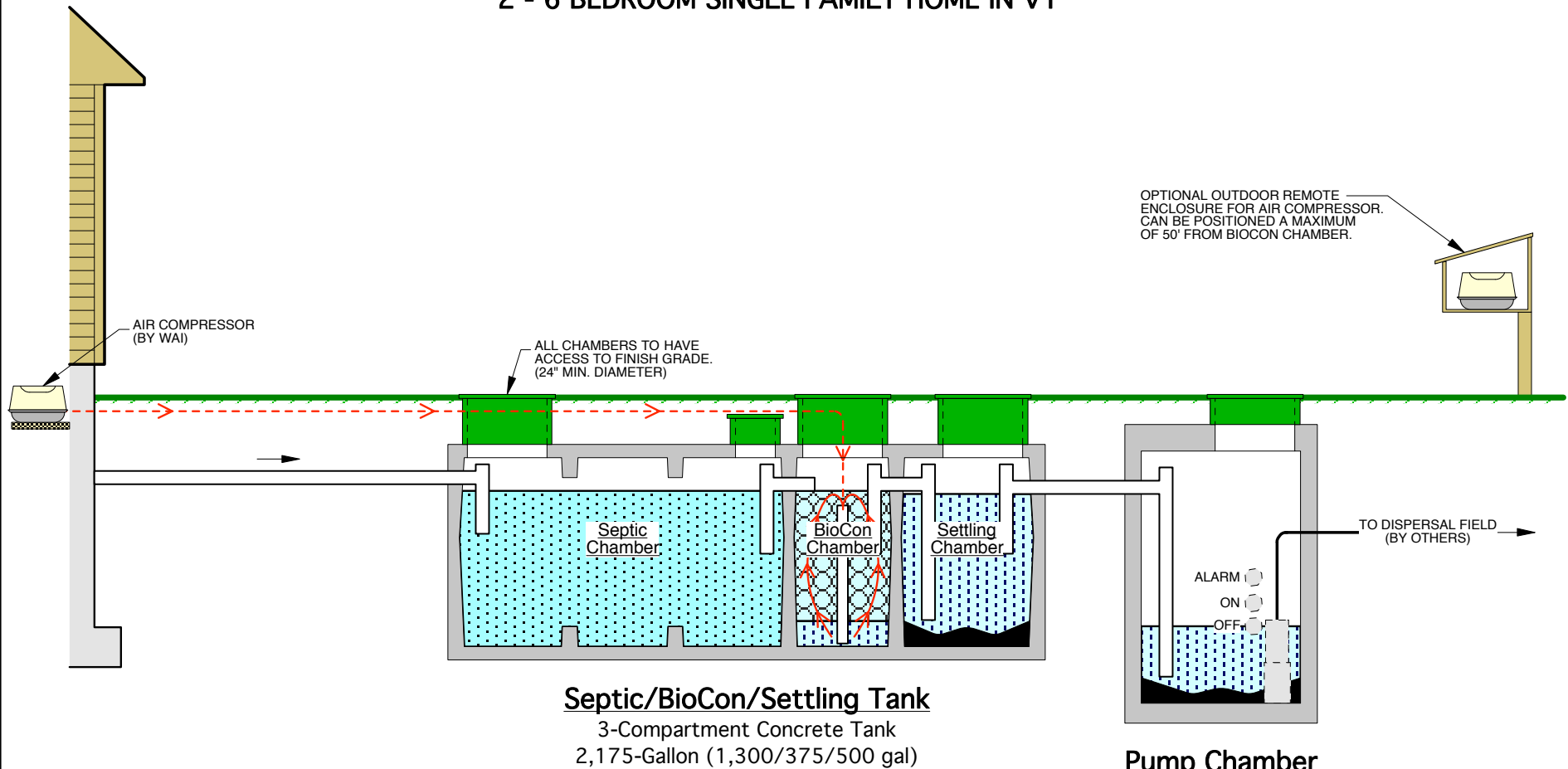
NOTES:

1. Septic Tank, Settling Compartment & Pump Chamber must be pumped every 2 to 3 years. More frequent pumping may be required depending on use.
2. Tank is not suitable for drive on use. Heavy Duty and H-20 models available.
3. Contact WAI for tank manufacturer and dimensions.



WASTEWATER ALTERNATIVES, INC.
THE CLEAN SOLUTION™
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THE CLEAN SOLUTION™ ALTERNATIVE SEPTIC SYSTEM
SCHEMATIC OF MODEL 250ST-Rx:
3-COMPARTMENT MODEL WITH SEPARATE PUMP CHAMBER
FOR
2 - 6 BEDROOM SINGLE FAMILY HOME IN VT



Dispersal Field Sizing for VT:

Dispersal field can be a minimum of 50% the size of a traditional leach field. Larger size may be required depending on site conditions. Please contact WAI for dispersal field sizing.

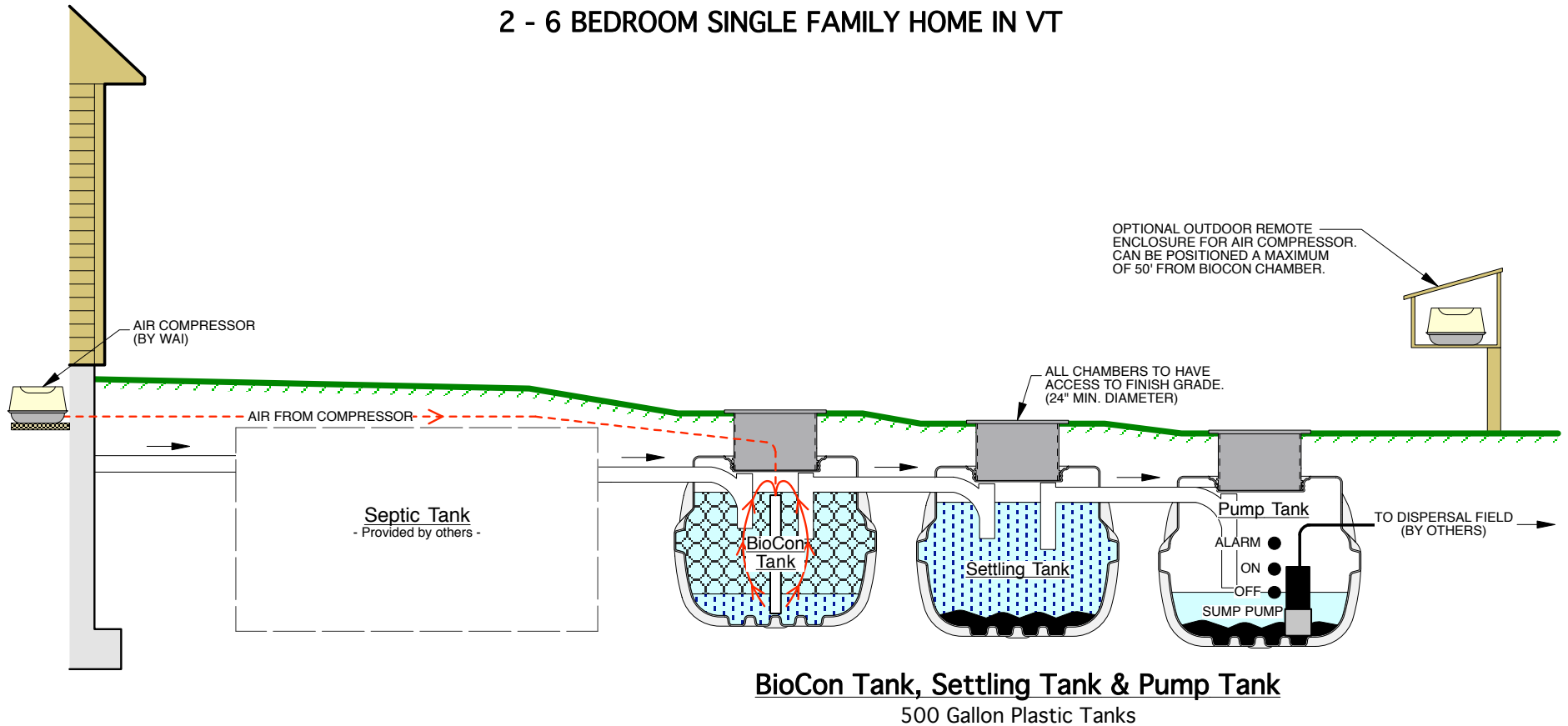
NOTES:

1. Septic Tank, Settling Compartment & Pump Chamber must be pumped every 2 to 3 years. More frequent pumping may be required depending on use.
2. Tank is not suitable for drive on use. Heavy Duty and H-20 models available.
3. Contact WAI for tank manufacturer and dimensions.



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**THE CLEAN SOLUTION™ ALTERNATIVE SEPTIC SYSTEM
SCHEMATIC OF MODEL 600PT-Rx:
PLASTIC TANK MODEL WITH SEPARATE PUMP CHAMBER
FOR
2 - 6 BEDROOM SINGLE FAMILY HOME IN VT**



Dispersal Field Sizing for VT:

Dispersal field can be a minimum of 50% the size of a traditional leach field. Larger size may be required depending on site conditions. Please contact WAI for dispersal field sizing.

NOTES:

1. Septic Tank, Settling Tank & Pump Tank must be pumped every 2 to 3 years. More frequent pumping may be required depending on use.
2. Tank is not suitable for drive on use. Heavy Duty and H-20 models available.
3. Contact WAI for tank manufacturer and dimensions.



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APPENDIX C

SAMPLE RESIDENTIAL SALES AND MAINTENANCE AGREEMENT



WASTEWATER ALTERNATIVES, INC

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RESIDENTIAL SALES AND MAINTENANCE AGREEMENT DATE

BUYER:

Name: xxxx
Address: xxxx
City, State Zip: xxxx
Phone: xxxx
Cell: xxxx
Email: xxxx

OWNER-IF DIFFERENT:

Name: xxxx
Address: xxxx
City, State Zip: xxxx
Phone: xxxx
Cell: xxxx
Email: xxxx

SITE:

Property ID: Tax Map xxx Lot No.
Address: xxxx
City, State, Zip: xxxx

Waterbody: (name)

Property Type:

Residential Single Family: (yes/no)
Residential Seasonal: (yes/no)

Wastewater Alternatives, Inc. (WAI) agrees to supply a Model (***model description-pump no pump***) **CLEAN SOLUTION™** Sewage Treatment System to the buyer installed at the above site in accordance with the attached specifications and the subsurface disposal plan submitted for a (*full time or seasonal, description of property i.e. # bedrooms etc*) by (*designers name*), as approved by the State of Vermont Agency of Natural Resources Department of Environmental Conservation. **THE CLEAN SOLUTION** system has been designed based on design parameters provided by the designer / owner. Change of use that results in the increase in daily flow or wastewater strength will require approval by WAI. Approval from State of Vermont Agency of Natural Resources Department of Environmental Conservation and Local Land Use Boards will be required, where applicable.

SHOULD THE ABOVE PROPERTY BE SOLD, THE ABOVE OWNER SHALL PROVIDE THE NEW OWNER WITH A COPY OF THIS AGREEMENT. THE TERMS AND CONDITIONS OF THIS AGREEMENT WILL TRANSFER AND BECOME BINDING ON THE NEW OWNER(S).

This Sales Agreement is subject to the following conditions:

1. The buyer has retained a designer licensed in the State of Vermont and has obtained all necessary approvals from the State of Vermont Agency of Natural Resources Department of Environmental Conservation and Local Land Use Boards.
2. The buyer will provide WAI with copies of the plans approved by the State of Vermont Agency of Natural Resources Department of Environmental Conservation.
3. The buyer has, or will have, retained a qualified installer to install the Subsurface Disposal System.
4. This agreement contains a required maintenance schedule. Failure to perform the required maintenance could result in premature failure of the dispersal field and will void the warranty of system and system components.



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I. SYSTEM COMPONENTS PROVIDED BY WAI

WAI will provide the following system components as shown on the attached design schematic and specifications. These components shall be installed as shown on the design plans by a qualified installer.

1. A (xxxxxxxxxxx) xxxxx tank to function as a septic tank, an aerobic treatment tank, settling tank and a pump chamber.
2. A (xxxxxx) tank to function as a settling tank / pump chamber.
3. Plastic (Cast Iron) access covers and plastic (concrete) risers to a maximum height of 24". If depth of cover over the top of the tank exceeds 24", the site contractor shall provide additional risers as necessary. Contractor shall ensure that all risers are watertight and that all screws and gaskets are in place and that the cover(s) have been secured. If concrete risers, covers or cast iron covers are used, contractor shall use water plug or an equivalent method to ensure water tightness.

WAI will provide the following system components and labor to install components as shown in the attached design schematic and specifications:

1. Plastic Media in BioCon™ Chamber
2. (x)- SLXX Compressor(s) - Owner and WAI will mutually determine placement of the compressor. Compressor needs to be within 50' of the BioCon tank.
3. Oxygen transfer system.
4. Baffles within BioCon™ Chamber and settling tank.
5. Air compressor(s) shelf.
6. Sump Pump: XX-hp pump with necessary pump controls and high-water alarm. Location of the pump controls, electrical disconnect switch and high-water alarm must be within 50 feet of, and visible from the pump chamber.

Electrical Requirements to be provided by Owner:

1. Owner shall be responsible for hiring a licensed electrician.
2. A 115-volt outlet capable of supplying 1-amp continuously for each compressor. Location of the outlet(s) shall be within 50-feet of the BioCon Chamber

Following not provided by WAI:

1. Additional septic tanks (to be supplied by owner).
2. Exterior housing unit for the compressor(s) (to be supplied by owner).
3. Exterior Venting may be required for older homes or systems where effluent is pumped to **THE CLEAN SOLUTION** (to be supplied by owner).
4. Provisions for placement of the compressor more than 50' from the BioCon.

All system components supplied by WAI are standard duty rated. Heavy Duty tanks and risers shall be required when the depth of fill exceeds 3 feet but is less than 5 feet. H-20 loaded tanks and risers will be required when the depth of fill is 5 feet or greater and/or is subject to vehicular traffic. Contact WAI for updated pricing for Heavy Duty or H-20 loaded components.



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II. SPECIAL CONDITIONS

1. Tanks not installed according to approved design plans or WAI's standards will be corrected by Owner's contractor. Owner's contractor shall correct all deficiencies prior to the system being placed into service. Contractor to ensure that all system components, both upstream and downstream of **THE CLEAN SOLUTION** system are watertight.
2. Owner's contractor to ensure that all risers are watertight to prevent infiltration from groundwater and surface runoff.
3. If existing septic tank is to be utilized contractor shall ensure that existing septic tank is in good condition, watertight with inlet and outlet baffles in place and in good condition.
4. **THE CLEAN SOLUTION** system has not been designed to handle backwash discharge from Water Softeners.

III. PERFORMANCE SPECIFICATIONS:

This system has been designed based on the following estimated residential wastewater influent strength from the primary treatment tank(s) of 180 mg/l BOD₅, 150 mg/l TSS and <5 mg/l FOG. The system is warranted to discharge clean, odor free water to the dispersal field, equivalent or better than 30mg/l BOD₅, 30mg/l TSS.

IV. MAINTENANCE

The following maintenance is required. It is the owner's responsibility to see that this maintenance is performed.

Full Time Residential Use (Single Family Home)

1. Inspection after the first 6 months of use and annually thereafter by a WAI Technician or by a company or individual that has been certified by WAI to perform inspections.
2. Use a local pumper to pump out the septic and settling/pump tanks every 2-years. Frequency of pumping is dependent on system use and number of occupants. WAI or the pumper can determine the required frequency. Homeowner must retain records of pumping.
3. Compressor must run continuously. It should be checked for operation at least once a month.
4. BioCon chamber may require pumping between 6 and 8 years. WAI Technician will determine if pumping is necessary during annual inspection.
5. Compressor Air Filter to be cleaned or replaced yearly.

Seasonal Residential Use (Single Family Home use less than 6 months per year)

1. Inspection after the first season of use and annually thereafter by a WAI Technician or by a company or individual that has been certified by WAI to perform inspections.
2. Use a local pumper to pump out the septic and settling/pump tanks every 2 years. Frequency of pumping is dependent on system use and number of occupants. WAI or the pumper can determine the required frequency. Homeowner must retain records of pumping.
3. Compressor may be disconnected during the off-season.
4. BioCon chamber may require pumping between 8 and 10 years. WAI Technician will determine if pumping is necessary during annual inspection.
5. Compressor Air Filter to be cleaned or replaced yearly.

Following the above schedule will fulfill your obligations to maintain your warranty.

The first two inspections are included in the sales price. Inspection Contracts are available from WAI. The service will include a detailed inspection of the system and replacement of any failed items within the BioCon Chamber. Tank pumping is not included in the price and must be arranged by the property owner.



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V. WARRANTY

*For a period of 5-years, WAI will warranty **THE CLEAN SOLUTION** system and repair any malfunction, including parts and labor, at no cost to you. Your responsibility during this period is to perform the required maintenance and to notify WAI of any problems. Failure to perform either of these items will void this warranty and result in you being billed for repair costs. This warranty does not cover damage caused by improper use, poor construction practice, high groundwater or acts of God.*

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES. ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY OR OTHERWISE, APPLICABLE TO THE SEWAGE TREATMENT SYSTEM SHALL BE LIMITED IN DURATION TO ONE YEAR.

WASTEWATER ALTERNATIVES, INC. SHALL NOT BE LIABLE FOR ANY DIRECT OR INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES. NOR, SHALL WASTEWATER ALTERNATIVES INC. LIABILITY UNDER THIS WARRANTY EXCEED THE ORIGINAL PRICE PAID BY THE BUYER.

VI. RIGHTS TO DATA AND ACCESS TO THE SYSTEM

WAI reserves the right of reasonable access to collect data, modify, maintain and repair **THE CLEAN SOLUTION** and its subsystems. WAI will retain all data collected and the rights to it.

VII. DELIVERY

WAI will be prepared to install the system approximately three weeks after you have chosen an installer and returned a signed copy of this agreement, along with the initial payment, to WAI. **It is important that WAI be able to coordinate with the installer. Owner to provided WAI with the installer's contact information.**

VIII. TRADE SECRETS

THE CLEAN SOLUTION is the result of the expenditure of a great deal of effort and money. The design of the components and operational cycle are the intellectual property of WAI and may not be revealed without written permission.



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IX. PAYMENT

The agreed upon price for the WAI equipment and services detailed in the Sales Agreement is **\$XXXXX.00. ELECTRICAL WORK NOT INCLUDED IN PRICE.**

Payment is requested as follows:

\$XXXX.00 upon signing this agreement

\$XXXX.00 immediately upon WAI installing system components.

Ownership will transfer to the buyer upon final payment. Failure to pay WAI will void all warranties.

The price does not include electrical wiring, excavation to install the components of this system, dispersal field, or connections from the house to **THE CLEAN SOLUTION** or to the dispersal field.

THIS PRICE IS VALID FOR 60 DAYS FROM THE DATE OF THIS DOCUMENT. ALL SYSTEM COMPONENTS MUST BE INSTALLED WITHIN 60 DAYS OF INTIAL DESPOSIT.

Please send payment to:

Wastewater Alternatives Inc.
P.O. Box 670
Groton MA 01450

If Paying by Credit Card please call

WAI Accounting Department at 1-978-448-2280

By signing below the owner or owner's representative has read the SALES AGREEMENT and attached INSPECTION CONTRACT requirements and agrees to the terms of the SALES AGREEMENT and to perform the necessary maintenance and inspections as outlined in the INSPECTION CONTRACT.

ACCEPTED:

BUYER:

SELLER:

(NAME)
(ADDRESS)
(PHONE)

Wastewater Alternatives, Inc.
Gary R. Spaulding
General Manager

DATE:

DATE:



WASTEWATER ALTERNATIVES, INC

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APPENDIX D

SAMPLE RESIDENTIAL INSPECTION CONTRACT



WASTEWATER ALTERNATIVES, INC

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email: gary@thecleansolution.com

Fax (603) 783-4499
email: gary@thecleansolution.com

RESIDENTIAL INSPECTION CONTRACT DATE

BUYER:

Name: xxxx
Address: xxxx
City, State Zip: xxxx
Phone: xxxx
Cell: xxxx
Email: xxxx

OWNER-IF DIFFERENT:

Name: xxxx
Address: xxxx
City, State Zip: xxxx
Phone: xxxx
Cell: xxxx
Email: xxxx

SITE:

Property ID: Tax Map xxx Lot No.
Address: xxxx
City, State, Zip: xxxx

Waterbody: (name)

Property Type:

Residential Single Family: (yes/no)
Residential Seasonal: (yes/no)

MAINTENANCE REQUIRED:

The following maintenance is required. It is the owner's responsibility to see that this maintenance is performed.

Full Time Residential Use (Single Family Home)

1. Inspection after the first 6 months of use and annually thereafter by a WAI Technician or by a company or individual that has been certified by WAI to perform inspections.
2. Use a local pumper to pump out the septic and settling/pump tanks every 2 years. More or less frequent pumping may be required depending on system use and number of occupants. WAI and the pumper can determine the required frequency. Owner must retain records of pumping.
3. Compressor must run continuously. It should be checked for operation at least once a month.
4. BioCon™ chamber may require pumping between 6 and 8 years. WAI Technician will determine if pumping is necessary during inspection.
5. Compressor Air Filter to be cleaned or replaced yearly.

Seasonal Residential Use (Single Family Home when used less than 6 months per year)

1. Inspection after the first season of use and annually thereafter by a WAI Technician or by a company or individual that has been certified by WAI to perform inspections.
2. Use a local pumper to pump out the septic and settling/pump tanks every 2 years. More or less frequent pumping may be required depending on system use and number of occupants. WAI or the pumper can determine the required frequency. Homeowner must retain records of pumping.
3. Compressor must run continuously. It should be checked for operation at least once a month.



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4. Compressor may be disconnected during the off-season.
5. BioCon™ chamber may require pumping between 8 and 10 years. WAI Technician will determine if pumping is necessary during inspection.
6. Compressor Air Filter to be cleaned or replaced yearly.

Following the above schedule will fulfill your obligations to maintain your warranty.

The first inspection is included in the sales price. Inspection Contracts are available from WAI. The service will include a detailed inspection of the system and replacement of any failed items within the BioCon Chamber. Tank pumping is not included in the price and must be arranged by the property owner. Failure to have an Inspection Contract with WAI or an approved vendor will void maintenance warranty outlined in the **Sales and Maintenance Agreement**.

INSPECTION FEE SCHEDULE

Single Family Residential Homes – fee is \$200.00 per inspection plus the cost of replacement parts not covered by warranty.

Inspection fees may be revised by WAI as needed to adjust cost of services.

Inspection fees will be billed at time of service. Failure to perform inspection or pay for inspection will void WAI warranty.

By signing below the owner or owner's representative has read the above Maintenance requirements and conditions outlined in the SALES AGREEMENT and agrees to perform the necessary maintenance and inspections as outlined.

ACCEPTED:

OWNER:

(NAME)
(ADDRESS)
(PHONE)

DATE:



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APPENDIX E

P.O. CONFIRMATION SLIP



WASTEWATER ALTERNATIVES, INC

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Toll Free: (866) 900-2415

Fax (603) 783-4499
email: gary@thecleansolution.com

P.O. Confirmation Slip

P.O. Number: xxxx xxxxxxxx

Date: xx-xx-xx

Installer:

xxxxxx
xxxxxx
xxxxxx
xxxxxx

Buyer:

xxxxxx
xxxxxx
xxxxxx
xxxxxx

Site:

xxxxxx
xxxxxx
xxxxxx

Owner:

xxxxxx
xxxxxx
xxxxxx
xxxxxx

Method Sent -

Faxed

Mailed

Emailed WAI – Tim Beckwith, Harold Davis

Instructions:

Attached is the purchase order for **THE CLEAN SOLUTION™** system tank(s) for the above site. **Please call the tank manufacturer when you are ready to confirm the delivery date and time to set the tank(s), see attached PO for phone number. Please give manufacturer directions to site for delivery. CONTRACTOR IS RESPONSIBLE TO CONFIRM TANK DIMENSIONS AND INVERT HEIGHTS AND SETTING ALL TANKS LEVEL AND ACCORDING TO DESIGNERS ELEVATIONS.**

Access risers and covers are required to bring access to grade for all components of THE CLEAN SOLUTION system. **Contractor is responsible to ensure that all risers are watertight and all fasteners are in place when back filling. If concrete risers are used butyl seal must be used. FAILURE OF CONTRACTOR TO ENSURE WATERTIGHT TIGHTNESS OF ACCESS RISERS AND COVERS WILL RESULT IN VOIDED WARRANTY.** Contactor will need to provide the tank manufacturer with the access height required. WAI provides access risers and covers (plastic only) to a depth of 24" **IF ORDERED AND DELIVERED WITH THE TANK.** For depths greater than 24" additional risers shall be paid for and provided by installer. Installer shall install all piping to and from WAI tanks and install all interior baffles. Contractor to install dispersal field(s) and all lines (gravity/forcemain) to dispersal fields. WAI is responsible only for interior plumbing of the BioCon™ Chamber. **Contractor to provide as-built swing ties to all access covers from fixed structures such as buildings or utility poles. Contractor to provide owner(s) with "as-built" swing tie information to access covers for their records.**

Please contact Wastewater Alternatives Inc., 3 to 4 days ahead of when the tanks are going to be set so we can schedule a day to install the system components. Please call to confirm that tanks have been set and ready for our crew to install the system components.

If you have any questions please feel free to contact us at 1-866-900-2415. Thank you.



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APPENDIX F

PURCHASE ORDER – TANK



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Telephone: 603-783-8042
www.theleansolution.com

Toll Free: (866) 900-2415

Fax (603) 783-4499
email: gary@theleansolution.com

PURCHASE ORDER

PO NUMBER: XXXX-XXXX

DATE: xx-xx-xx

COMPANY:

XXXXX
XXXXX
XXXXX

FAX# xxx-xxx-xxxx

TEL# xxx-xxx-xxxx

QUANTITY	DESCRIPTION	NOTES
x	Clean Solution Model No. xxxxx	STANDARD DUTY
x	24" Plastic covers	
x	24" dia x 6" plastic risers	

NOTES:

1. Plastic starter collar must be precast into top slab of tank.
2. Risers specified are for 24" of cover or less - the installer will need to order additional risers as needed. ADDITIONAL RISERS TO BE PAID FOR BY INSTALLER.

INSTALLER :
 Xxxxx
 Xxxxx
 Xxxxx
 Xxxxx

SITE:
 Xxxxx
 Xxxxx
 Xxxxx
 Xxxxx

DELIVERY NOTES: The installer will call to arrange delivery and provide directions to site.

BILL TO: WASTEWATER ALTERNATIVES, INC

Problems / Questions: Contact Gary Spaulding

Tel No. 1-866-900-2415 Fax No. 603-783-8042



WASTEWATER ALTERNATIVES, INC

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APPENDIX G

INSPECTION REPORT FOR *THE CLEAN SOLUTION™* SYSTEM



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Sample INSPECTION REPORT FOR THE CLEAN SOLUTION™ SYSTEM

<u>Date:</u>		WAI PO #		
<u>Owner:</u>		System installed on:	System last inspected on:	
<u>Site address:</u>		System Use:		
		Residential	<input type="checkbox"/> Full Time	<input type="checkbox"/> Seasonal
		Commercial	<input type="checkbox"/> Office	<input type="checkbox"/> Restaurant
<u>Phone Number(s):</u>			Type	
Water Treatment System <input type="checkbox"/> Yes <input type="checkbox"/> No		IF YES – DOES SYSTEM BACKWASH INTO SEPTIC SYSTEM <input type="checkbox"/> YES <input type="checkbox"/> NO		
PUMPING INFORMATION				
System last pump on:		System last pumped by		
Owner has records of pumping <input type="checkbox"/> Yes <input type="checkbox"/> No				
Pumper onsite during inspection <input type="checkbox"/> Yes <input type="checkbox"/> No		System pumped by		
Septic Tank Condition	<input type="checkbox"/> Good	Groundwater leaks	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Visible
	<input type="checkbox"/> Fair	Inlet Baffle in place	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Visible
	<input type="checkbox"/> Poor	Outlet Baffle in place	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Visible
INSPECTION OF CLEAN SOLUTION SYSTEM				
Access Stacks	Accessible <input type="checkbox"/> Yes <input type="checkbox"/> No	Gaskets in place <input type="checkbox"/> Yes <input type="checkbox"/> No	Replacement gaskets needed <input type="checkbox"/> Yes <input type="checkbox"/> No	Groundwater Leaks <input type="checkbox"/> Yes <input type="checkbox"/> No
Air Compressor	Model:	Air flow at unit:	Air flow at BioCon Tank:	Filter: Cleaned <input type="checkbox"/> Replaced <input type="checkbox"/>
Condition of air lines:				
Dissolved oxygen test	BioCon Tank		Settling Tank	
BioCon Chamber	Thickness of sludge	Center:	Corner;	Sludge Bulking <input type="checkbox"/> Yes <input type="checkbox"/> No
Media	Biofilm	Color	Sludge Buildup <input type="checkbox"/> Yes <input type="checkbox"/> No	Pumpinig Requierd <input type="checkbox"/> Yes <input type="checkbox"/> No
Settling Tank	Thickness of sludge	Center:	Corner:	Sludge Bulking <input type="checkbox"/> Yes <input type="checkbox"/> No
	Water Clarity to Depth:	Settling Test: Time:	Odor <input type="checkbox"/> Yes <input type="checkbox"/> No	Effluent Cloudy <input type="checkbox"/> Yes <input type="checkbox"/> No
Interior Pipe BioCon Chamber	Outlet Baffle in place <input type="checkbox"/> Yes <input type="checkbox"/> No	Inlet Baffle in place <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments	
Interior Pipe Settling Chamber	Outlet Baffle in place <input type="checkbox"/> Yes <input type="checkbox"/> No	Inlet Baffle in place <input type="checkbox"/> Yes <input type="checkbox"/> No	Comments	



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PUMP STATION INSPECTION				
PUMP STATION				
Separate Pump Station from Settling Tank: <input type="checkbox"/> Yes <input type="checkbox"/> No	Pump on/off Float Test On <input type="checkbox"/> Test Off <input type="checkbox"/>	Pump Alarm: Test On <input type="checkbox"/> Test Off <input type="checkbox"/>	Visible Groundwater Leaks <input type="checkbox"/> Yes <input type="checkbox"/> No	
Electrical Disconnect	Pump Disconnect Test <input type="checkbox"/>	Alarm Disconnect Test <input type="checkbox"/>		
INSPECTOR OBSERVATIONS				
BioCon Chamber:				
Settling Chamber:				
Pump Chamber:				
REPAIRS MADE DURING INSPECTION				
BioCon Chamber:				
Settling Chamber:				
Pump Chamber:				
RECOMMENDATIONS				
Have Septic Tank Pumped <input type="checkbox"/> Yes <input type="checkbox"/> No	Have BioCon Chamber Pumped <input type="checkbox"/> Yes <input type="checkbox"/> No	Have Settling Tank Pumped <input type="checkbox"/> Yes <input type="checkbox"/> No	Have Pump Chamber Pumped <input type="checkbox"/> Yes <input type="checkbox"/> No	Replace Air Compressor <input type="checkbox"/> Yes <input type="checkbox"/> No
OTHER				
MATERIALS LIST				
INSPECTION COMPLETED BY				
Company Name				
Address				
Town	State	Zip Code		
Phone Number	Fax Number			
Print Inspector Name				
Inspector Signature				
Copy of Inspection left with owner <input type="checkbox"/> Yes <input type="checkbox"/> No				