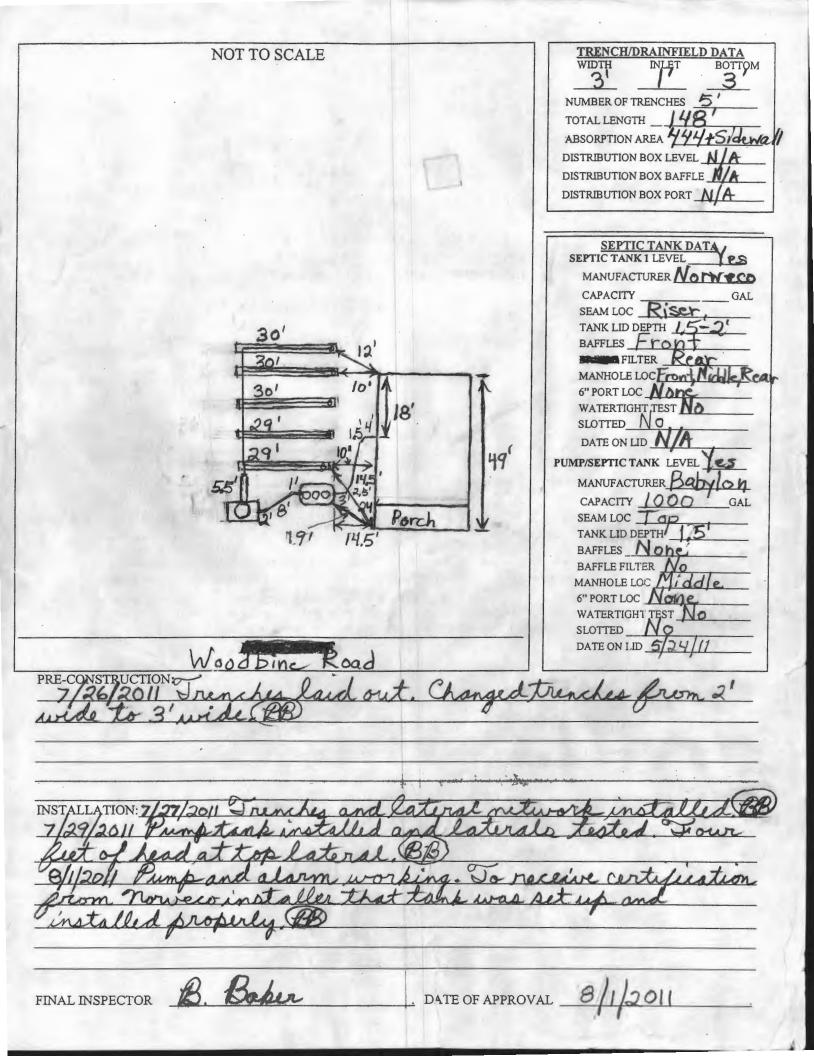
LAYOUT 7/26/2	Oll INSP 4
INSP 2 7/27/2	2011 INSP 5
INSP 3 7/29/	2011 INSP 6
ISSUE DATE:	SEPTIC PERMIT P 535235
APPROVAL DATE:	8/1/2011 LPD SYSTEM WITH PRETREATMENT A
	ON-SITE SEWAGE DISPOSAL SYSTEM HOWARD COUNTY HEALTH DEPARTMENT BUREAU OF ENVIRONMENTAL HEALTH
J&M Contracting	IS PERMITTED TO INSTALL ⊠ ALTER □
ADDRESS: 425 Ob	recht Road Sykesville,MD 21784 PHONE NUMBER: 443-277-7526
SUBDIVISION	LOT
ADDRESS: 421 Wo	podbine Road PROPERTY OWNER: Bernadette Braun
Norweco Singulair TNI pretreatment unit)	T model 750gpd (nitrogen 1600 Top Seamed
PUMP CHAMBER CAI	PACITY (GALLONS): 1000 Top Seamed
LPD Distribution Syste	em – see detailed design plans by HCHD, signed 6/20/2011
LOCATION:	Trench locations to be staked at the site. Five trenches to be located on left side of house 1' from base of slope, 10' from house, 2' wide, 30' length, 6' separation between trenches. Trenches to have 1' inlet depth, 3' bottom depth with 2' of approved stone beneath piping.
NOTES:	Call for layout inspection prior to beginning construction. System will require a start-up demonstration for proper evaluation. Pre-treatment unit must have final approval from manufacturer. Install system as per approved plans dated 6/20/2011.
PLANS APPROVED:	Jeff Williams DATE: 6/20/2011
NOTE: WATERTIGHT SEPT NOTE: ALL PARTS OF SEP NOTE: MANHOLE RISERS	PONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION INSPECTION FOR ALL INSTALLATIONS

NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT CALL 410-313-1771 FOR INSPECTIONS



PUB. SEWER STATUS VERIFIED BY	
ISSUE DATE: PER	
APPROVAL DATE:	A REPAIR
Septic F ON-SITE SEWAGE D HOWARD COUNTY HE BUREAU OF ENVIRON	ISPOSAL SYSTEM ALTH DEPARTMENT
J.M Contracting LLC.	S PERMITTED TO INSTALL ALTER
ADDRESS: 425 Obrecht Road Sykesville, MD 21784	PHONE NUMBER: 443-277-7526
SUBDIVISION:	LOT NUMBER:
ADDRESS: 421 Woodbine Road	PROPERTY OWNER: Bernadette Braun
SEPTIC TANK CAPACITY (GALLONS): N/A	
PUMP CHAMBER CAPACITY (GALLONS):	
NUMBER OF BEDROOMS:	
SQUARE FEET OF HOUSE:	
LINEAR FEET OF TRENCH REQUIRED:	
TRENCHES:	
LOCATION:	
PURPOSE:	
PLANS APPROVED:	DATE:
NOTE: PERMIT VOID AFTER 2 YEARS	

NOTE: CONTRACTOR RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION INSPECTION FOR ALL INSTALLATIONS

NOTE: WATERTIGHT SEPTIC TANKS REQUIRED
NOTE: ALL PARTS OF SEPTIC SYSTMEM SHALL BE 100 FEET FROM ANY WATER WELL NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS

NEITHER THE HOWARD COUNTY COUNCIL OR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT **CALL 410-313-1771 FOR INSPECTION OF SEPTIC SYSTEM**

NOT TO SCALE	TRENCH/DRAINFIELD DATA WIDTH INLET BOTTOM
	NUMBER OF TRENCHES
	TOTAL LENGTH
	ABSORPTION AREA
	DISTRIBUTION BOX LEVEL
·	DISTRIBUTION BOX BAFFLE
	DISTRIBUTION BOX PORT
	CERTIC TANK DATA
	SEPTIC TANK DATA SEPTIC TANK 1 LEVEL
	MANUFACTURER
	CAPACITYGAL
	SEAM LOC
	TANK LID DEPTH
	BAFFLES
	BAFFLES BAFFLE FILTER
	MANHOLE LOC
	6" PORT LOC
	WATERTIGHT TEST
	SLOTTED
	DATE ON LID
	PUMP/SEPTIC TANK LEVEL
	MANUFACTURER
	CAPACITYGAL
	SEAM LOC
	TANK LID DEPTH
	BAFFLES
	BAFFLE FILTER
	MANHOLE LOC
	6" PORT LOC
	SLOTTED
ROAD NAME	DATE ON LID
ROAD NAME	
PRE-CONSTRUCTION:- 2/13 DOID Repair cancelled. The	problem was a blacked
INSTALLATION:	
FINAL INSPECTOR	. DATE OF APPROVAL
IN I	. DATE OF AFFROVAL

Back River Pre-Cast, LLC

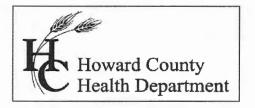
PO BOX 329 Glyndon, MD 21071 Phone # 410-833-3394 Fax # 410-833-4116

Letter of Certification

This is to certify that the Norweco Singulair Green Septic Tank installed at 421 Woodbine Rd. Woodbine, MD was installed according to the manufacture's specifications.

MATTHEW GECKLE

Vice-President



Bureau of Environmental Health

7178 Gateway Drive (410) 313-2640 TDD (410) 313-2323 Columbia, MD 21046 Fax (410) 313-2648 Toll Free 1-866-313-6300

website: www.hchealth.org

Peter L. Beilenson, M.D., M.P.H., Health Officer

July 25, 2011

Bernadette Braun 421 Woodbine Road Woodbine, MD 21797

Re:

Variance request 421 Woodbine Road

Woodbine, MD 21797

Dear Ms. Braun:

The Health Department has received your variance request dated July 20, 2011 for the above referenced property. Maryland Department of the Environment has accepted our recommendation to approve a variance allowing the on-site sewage disposal system (OSDS) to be located less than the setback distance of 100 feet to a water body required under the Code of Maryland Regulations 26.04.02.04(J)(9). This approval is subject to the following conditions:

- The OSDS will include an advanced pretreatment unit utilizing Best Available Technology to remove nitrogen. The Health Department requires you to continuously maintain an Operation and maintenance contract with a qualified service provider for as long as you own the property. If the property should be sold, this information along with any recorded agreements must be disclosed to the new owner.
- The OSDS will include a pump tank that will demand dose the effluent to a conventional low pressure dosing system.
- The pretreatment unit and the pump tank will be tested to verify water tightness before or during the installation process.

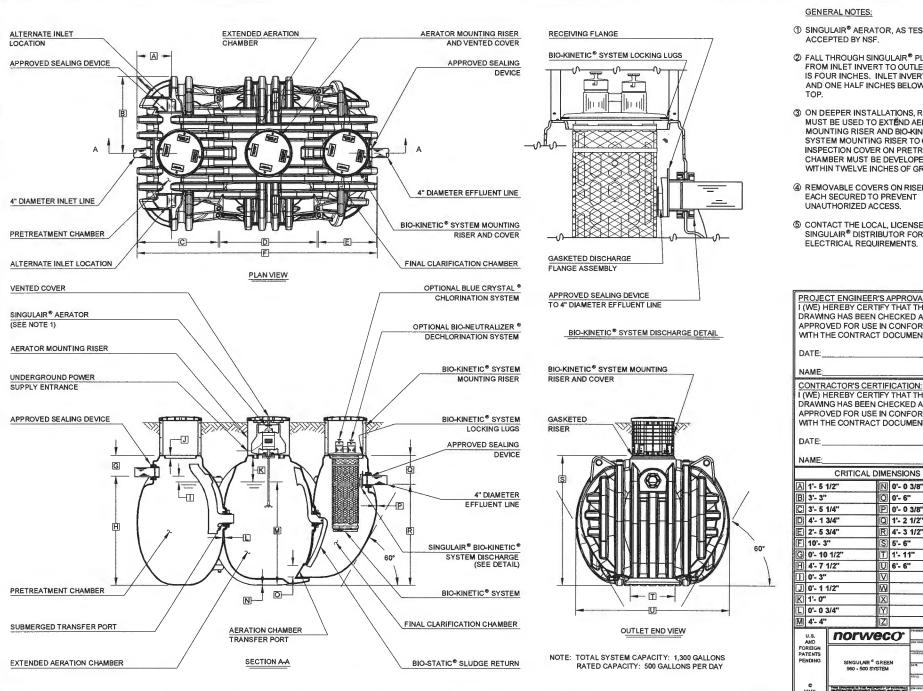
If you have any questions regarding this variance approval, you may contact me at the above address or by calling 410-313-4261.

Jeff Williams, R.S.

Howard County Health Department

Steven Krieg, R.S.

Maryland Department of the Environment



- ◆ SINGULAIR® AERATOR, AS TESTED AND
- 2 FALL THROUGH SINGULAIR® PLANT FROM INLET INVERT TO OUTLET INVERT IS FOUR INCHES. INLET INVERT IS TEN AND ONE HALF INCHES BELOWTANK
- 3 ON DEEPER INSTALLATIONS, RISERS MUST BE USED TO EXTEND AERATOR MOUNTING RISER AND BIO-KINETIC® SYSTEM MOUNTING RISER TO GRADE. INSPECTION COVER ON PRETREATMENT CHAMBER MUST BE DEVELOPED TO WITHIN TWELVE INCHES OF GRADE.
- REMOVABLE COVERS ON RISERS ARE EACH SECURED TO PREVENT UNAUTHORIZED ACCESS.
- **5** CONTACT THE LOCAL, LICENSED SINGULAIR® DISTRIBUTOR FOR ELECTRICAL REQUIREMENTS.

PROJECT ENGINEER'S APPROVAL: I (WE) HEREBY CERTIFY THAT THIS DRAWING HAS BEEN CHECKED AND IS APPROVED FOR USE IN CONFORMITY WITH THE CONTRACT DOCUMENTS.

I (WE) HEREBY CERTIFY THAT THIS DRAWING HAS BEEN CHECKED AND IS APPROVED FOR USE IN CONFORMITY WITH THE CONTRACT DOCUMENTS.

CRITICAL DIMENSIONS

N 0'- 0 3/8" Q 0'- 6" P 0'- 0 3/8" Q 1'- 2 1/2" R 4'- 3 1/2" S 5'- 6" 1'- 11" U 6'- 6" W Y

V.S.	norweco	PRATION DATE	REVINON	
AND	1101 11000	DRIVNEY	220	•
PATENTS PENDING	SINGULAIR © GREEN	LIPROVEDBY	JMM	
	960 - 500 SYSTEM	CATE	8-4-10	Ī
		4011	NTS	
ммх	THE DESCRIPTION OF THE PROPERTY OF THE PROPERT	DREWING NO.	E 7122	1



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230 410-537-3000 • 1-800-633-6101

Martin O'Malley Governor Shari T. Wilson Secretary

Anthony G. Brown Lieutenant Governor

Robert M. Summers, Ph.D. Deputy Secretary

Tuesday, March 15, 2011

Donald Bach
Director of Sales
Norweco Inc.
220 Republic St.
Norwalk, OH 44857-1156

SUBJECT: Approval of Norweco Singulair Green Bio-Kinetic model for grant eligibility under the Bay Restoration Fund.

Dear Mr. Bach:

On behalf of the Best Available Technology (BAT) Review Team, I would like to inform you that the Norweco Singulair Green Bio-Kinetic system has received approval for grant eligibility under the Bay Restoration Fund (BRF). The following documents were used in the approval process:

- 1. NSF 245 Norweco Singulair TNT (November 2007)
- 2. North American Testing LLC Evaluation Certification Report, (November 2010)
- 3. North American Testing LLC Evaluation Certification Report, (March 2010)

The data received from the reports were analyzed to obtain the 75th percentile of the TN effluent concentration and the percent reduction. For grant eligibility the system has to either have a TN percent reduction of at least 50% or an effluent concentration of 20 mg/l or less with influent concentrations greater than 40 mg/l. The analysis showed that the system met one or both of the criteria. Additional climatological information was used to analyze performance of systems during cold conditions.

The approval of the system is for residential units with flows up to 1000 gpd. For flows greater than 1000 gpd and/or for non-residential discharges, funding eligibility for BATs will be determined based upon a review of an engineering design submitted by a licensed engineer.



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230 410-537-3000 • 1-800-633-6101

Martin O'Malley Governor Shari T. Wilson Secretary

Anthony G. Brown Lieutenant Governor Robert M. Summers, Ph.D. Deputy Secretary

Memorandum

TO:

Manufacturers and Vendors of Best Available Technologies (BAT) Approved for use

under the Bay Restoration Fund (BRF)

FROM:

Jay Prager, Deputy Program Manager

Wastewater Permits Program

DATE:

July 13th, 2010

SUBJECT:

Changes to site selection and BAT field verification process

Upon approval to the Bay Restoration Fund (BRF) program, all Best Available Technologies (BAT) have to undergo the field verification component, which includes sampling of 12 sites over a one year period. In the past, the Department has allowed the sampling at the initial 12 BAT's funded through the program, with the option of using non-BRF funded BAT's as sampling sites upon approval through MDE. Effective immediately this policy will be changed so that the first 12 BAT's installed and operational after approval (both BRF and non-BRF funded) will be monitored. The BAT sampling protocol will not change. Non BRF systems installed prior to the date of this memorandum are not required to be sampled as part of the field verification.

In order to facilitate tracking of BAT's being sampled, as well as operation and maintenance, MDE requests that the manufacturer report on a monthly basis all BAT units installed in the state of Maryland, both BRF funded or not. Also effective immediately, any BAT technology accepted into the program will have unlimited access to the market until field verification is completed.

Please contact me if you have any questions on this matter.

Williams, Jeffrey

From:

Sent:

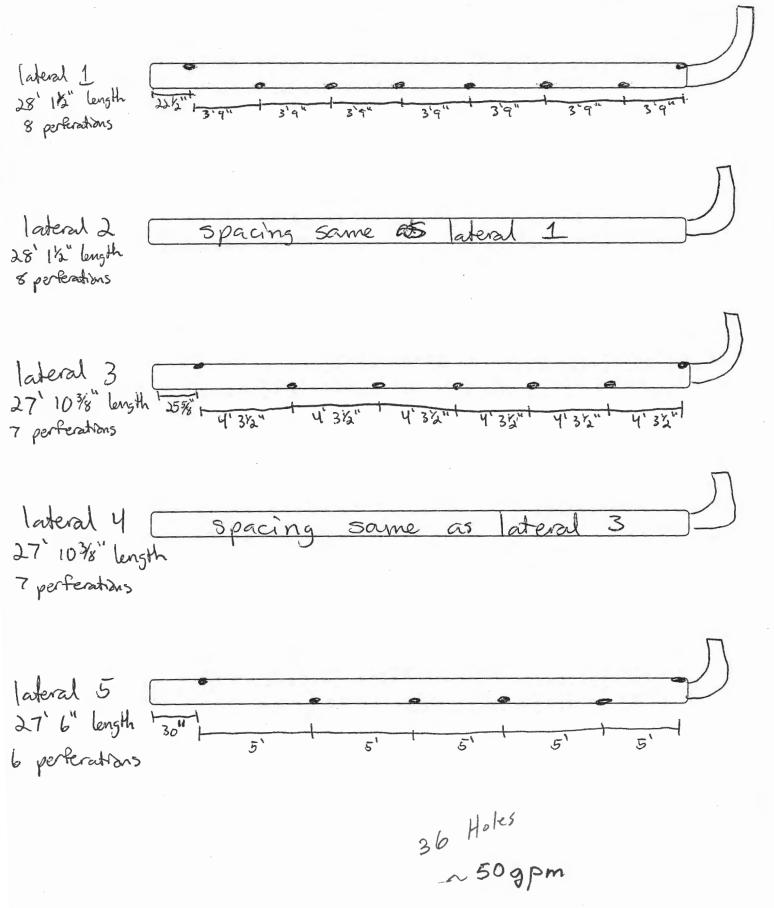
124hratm@comcast.net Thursday, July 28, 2011 2:37 PM Williams, Jeffrey NORWECO TANK

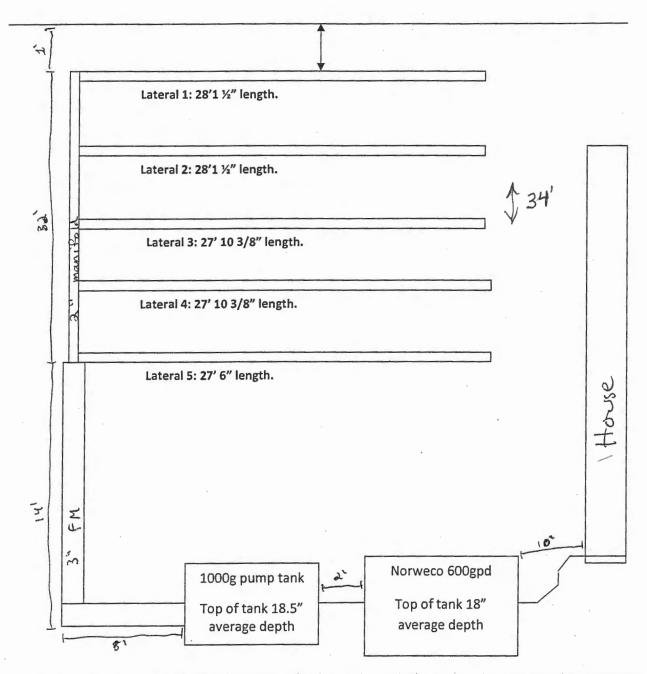
To: Subject:

Jeff, my sand supplier says C-33 sand is 103 lbs. density, so we are good.

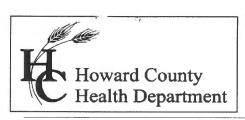
MATT GECKLE BACK RIVER PRE-CAST,LLC

COURAGE IS BEING SCARED TO DEATH-**BUT SADDLING UP ANYWAY**





- Install 5 laterals of 1 ½" PVC sch40 pipe in 2' wide trenches with 6' separation between trenches. Uppermost trench shall be 1' from base of steep slope. Trenches should extend 2' beyond distal end of laterals.
- Forcemain shall be 3" PVC sch40 pipe and manifold shall be 2" PVC sch40 pipe.
- Trench inlets shall be at 1' depth with trench bottom at 3' depth and 2' of stone beneath laterals.
- Laterals shall have ¼" perforations at spacing shown on second sheet detail. The first and last perforation of each lateral shall point up and all others shall point down.
- Turn-ups shall be installed on the distal ends of each lateral to grade and protected by a turf box.
- A ball valve shall be installed downstream of the pump disconnect and a ¼" weephole shall be drilled downstream of the ball valve before the pipe leaves the pump chamber.
- Norweco tank shall be installed with center of lid 18" below existing grade. Pump chamber shall be installed with center of lid 18.5" below existing grade.
- Pump-off float shall be installed 12" from bottom of tank. Pump-on float shall be installed 3" from pump-off
 float, and alarm float shall be installed 6" from pump-on float. Pump shall be installed on 6" block in bottom of
 pump tank.
- The pump shall be sized to provide a minimum of 73.5 gallon dose at 50.16 gallons per minute.



Bureau of Environmental Health
7178 Gateway Drive Columbia, MD
(410) 313-2640 Fax (410) 313-26
TDD (410) 313-2323 Toll Free 1-866-

nmental Healtn
Columbia, MD 210
Fax (410) 313-2648
Toll Free 1-866-313-6300

website: www.hchealth.org

Peter L. Beilenson, M.D., M.P.H., Health Officer

OPERATION AND MAINTENANCE AGREEMENT FOR AN ON-SITE SEWAGE DISPOSAL SYSTEM HAVING AN ADVANCED PRE-TREATMENT SYSTEM

THIS AGREEMENT is made this day of July, among Bernadette Braun, hereinafter collectively referred to as "Owner", and the Howard County Health Department hereinafter referred to as the "County".

WHEREAS, Owner is the owner or contract owner of a parcel of land located at 421Woodbine Road, Woodbine, MD 21797, in the 4th Election District of Howard County, Maryland, and the deed to same is recorded or shall be recorded among the Land Records of Howard County, Maryland in Liber 02885 Folio 478.

WHEREAS, The Lot is suitable for the installation of a conventional on-site sewage disposal system, but an advanced pre-treatment system, utilizing best available technology to perform nitrogen reduction, must be installed as part of the sewage disposal system for a 4 bedroom home with 1600 square feet of finished living space and 64 square feet of unfinished living space. Advanced pre-treatment has been required (pick one):

To minimize the potential impact of the on-site sewage disposal system on down grade wells.

____For an existing lot of record that does not have enough area available for an initial and two replacement onsite sewage disposal systems.

For the purpose of repairing a failing onsite sewage disposal system on an existing lot of record.

NOW, THEREFORE, the parties hereto agree as follows:

- A. Owner hereby grants to the County the right to enter upon the Lot at any reasonable time for access to the system to make periodic inspections and the Owner agrees to provide any information and data in Owner's possession reasonably requested and needed by the County to develop accurate and thorough test results.
- B. Owner acknowledges and agrees that neither the County nor any of its agents or employees, either officially or individually, underwrites the operation of any system approved by them.
- C. The Owner will devote reasonable care and effort to the operation and maintenance of the system in perpetuity or until a public sewer connection is made so that a system malfunction is not the result of poor maintenance, faulty operation, or neglect.
- D. The Owner agrees to enter into a contract reasonably acceptable to the Owner and the County with a private entity to operate and maintain on a regularly scheduled basis an approved

40 20

1.00,C

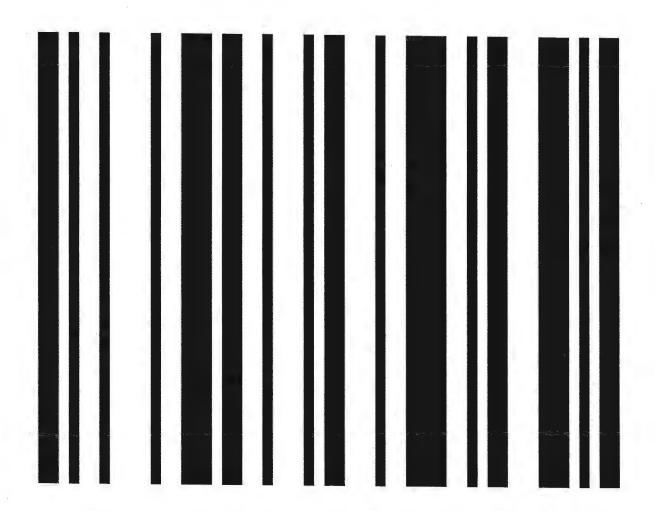
advanced pre-treatment system. The owner shall supply a copy of the contract to the County when it is renewed or altered.

- E. This agreement shall run with the land and upon Owner's taking title to the Lot shall bind the Owner, their heirs, successors, and assigns to the provisions of the agreement as long as the property is in existence and after installation of the system. Owner further agrees that they shall inform in writing any subsequent purchaser or lessee of the Lot that the system shall require maintenance or other attention. Upon taking title to the Lot, the Owner agrees to cause this agreement to be recorded in the Land Records of Howard County and assure that it becomes part of the Deed for the subject property in order that prospective buyers may be aware of the special conditions affecting this property.
- F. This agreement shall not be construed to limit any authority of the County to protect the public health, safety or comfort or to issue any other orders to take any other action which is now or may hereafter be within its authority.
- G. This agreement may be voided at any time at the discretion of the County.
- H. This agreement contains the entire agreement and understanding between the County and the Owner. There are no additional terms other than as contained in this agreement. This agreement may not be modified, except in writing signed by each of the parties or by their authorized representatives.
- I. The laws of the State of Maryland govern the provisions of all transactions pursuant to this agreement.
- J. Owner acknowledges and agrees that interior renovations to increase the number of bedrooms or an increase in living space shall not be permitted without approval from the County.

IN WITNESS WHEREOF, the parties have signed and sealed this agreement on the date indicated above.

Date

Document Separator



Document Separator

STATE OF MARYLAND, HOWARD COUNTY, TO WIT:
I HEREBY CERTIFY that the foregoing is a true copy of the original
Operation a Mainten ance Agreement Sewage Dispose recorded in
Liber MDR No. 13344 Folio 362 etc., one of the Land Records
of Howard County, Maryland.
IN TESTIMONY WHEREOF I hereto set my hand

Clerk of the Circuit Court of Howard County, Maryland

AGREEMENT AND EASEMENT FOR INSTALLATION OF BEST AVAILABLE TECHNOLOGY SYSTEMS WITH BAY RESTORATION FUNDS.

THIS AGREEMENT is made this 20 day of gray, among RANDENE BRAND referred to as "Owner," the Howard County Health Department hereinafter collectively referred to as the "County," and the Department of the Environment, hereinafter referred to as the "Department."

WHEREAS, Owner owns a tract of land located on 42 | woodb, we red in the 4 Election

District of Howard County, Maryland, and the deed to same is recorded among the Land Records of Howard County, Maryland, in and in Liber 0 2885 Folio 478.

WHEREAS, the Bay Restoration Fund (BRF) may provide a grant for the cost attributable to upgrading an onsite sewage disposal system to the Best Available Technology (BAT) for the removal of nitrogen.

WHEREAS, the BRF may also provide a grant for the cost difference between a traditional onsite sewage disposal system and a system that utilizes the BAT for the removal of nitrogen.

WHEREAS, Owner understands that participation in the Bay Restoration Fund is voluntary.

NOW, THEREFORE, the parties hereto agree as follows:

- A. Owner hereby grants to the Department and the County the right to enter upon the property at any reasonable time for access to the system to make periodic inspections and the Owner agrees to provide any information and data requested and needed by the Department to develop accurate and thorough test results.
- Owner acknowledges and agrees that a manufacturer-approved installer will install the BAT system.
- C. Owner acknowledges and agrees the manufacturer will provide for Operation and Maintenance of the BAT for a period of 5 years as a condition of sale of the BAT. After the 5 year

period the Operation and Maintenance contract can be further extended at the behest of the property owner. The Department and County encourage the property owner to continuously maintain an Operation and Maintenance contract during the lifetime of the system.

- D. Owner acknowledges and agrees that the manufacturer appointed Operation and Maintenance provider will have access to the BAT system at all times.
- E. Owner acknowledges and agrees that the manufacturer or manufacturers designee will have access to sample the effluent of the BAT system. Owner acknowledges and agrees that the proposed installation of a BAT system funded by the BRF is voluntary. Owner agrees that there shall be no liability on the part of the County or Department to Owner if this BAT system fails, and that the County and the Department do not warrant or guarantee that the BAT system will adequately or properly function.
- F. Owner acknowledges and agrees that neither the County nor the Department nor any of its agents or employees, either officially or individually, underwrites the operation of any system approved by them.
- G. The Owner will devote such care and effort to the maintenance of the BAT system so that any malfunction is not the result of poor maintenance, faulty operation, or neglect.
- H. The Canaan Valley Institute agrees to grant up to \$12,307 toward the cost of installation of the BAT system, and financial responsibility is limited to this amount. Operating cost will be at the Owners expense.
- I. The Owner acknowledges that the BRF grant can only be used for that portion of the OSDS attributable to (BAT) for the removal of nitrogen.
- J. Owner acknowledges in the event the total project cost is greater than \$25,000 the proposal will have to be approved by the Maryland State Board of Public Works.

- K. The Owner agrees to contact both the Water Management Administration, On-Site Systems

 Division of the Wastewater Permits Program and the County at least forty-eight (48)

 hours prior to system installation, so that the Department has the opportunity to be

 present at the time of installation or thereafter for inspection.
- L. The Owner must install BAT system according to the manufacturer recommended plans and specifications approved by the Department.
- M. The Owner agrees and acknowledges that if installation deviates substantially from the approved plans or changes such that performance of the system is compromised or reduced, BRF funding will not be provided.
- N. This agreement shall run with the land and binds the Owner, his heirs, successors, assigns except that the provisions of paragraph A, C, D and E shall be binding for a period of 5 years only after installation of the system and occupation of the home. Owner further agrees that he shall inform in writing any purchaser or lessee of the property that the system may require maintenance or other attention. The Owner agrees to record this agreement in the land records of Howard County.
- O. This agreement shall not be construed to limit any authority of the Department to protect the public health, safety or comfort or to issue any other orders to take any other action that is now or may hereafter be within its authority.
- P. This agreement may be voided at the discretion of the Department if the system construction is not completed within six (6) months of the effective date of this agreement.
- Q. This agreement contains the entire agreement and understanding between the County and the Owner and the Department. There are no additional terms other than as contained in this agreement. This agreement may not be modified except in writing signed by each of the parties or by their authorized representatives.

R. The laws of the State of Maryland govern the provisions of all transactions pursuant to this agreement.

IN WITNESS WHEREOF, the parties have signed and sealed this agreement on the date indicated

above.

DATE: 20 July 3011

Owner

DATE: 7/20/2011

Howard County Health Department

Mr. Jeff Williams Program Supervisor, Well and Septic Program Bureau of Environmental Health Howard County Health Dept.

Mr. Steve Krieg Regional Onsite Systems Consultant Maryland Dept. of the Environment

Gentlemen,

Please accept this letter requesting a variance from the standard one hundred (100) foot setback from a septic system to a stream.

The proposed and approved BRF tank being installed will be forty (40) feet from the stream.

Thank you for your attention to this matter,

Bernadette Braun

421 Woodbine Rd. Woodbine, MD 21797 421 Woodbine Road
FILE INQUIRY NOTES

DATE	RESULTS OF REVIEW FOR FILE
4/2/11	Observed direct discharge to creek
100	from septic system.
	Issued Verbal (oral) N-O-V. Directed
	Bernadette Braun to Immediately have
	ceptic system pumped and to maintain
	it as a holding tank by periodically
	pumping it. I advised that next step
	would be to arrange for perctests.
1	S. Brown is cooperative - applying for
	S. Braun is cooperative; applying for denitrification system.
Variana	Several set backs will be required.
VSI /SIGN	40 ft to Stream; 75 ft on less to well;
	less than 25 Ct to slopes > 25%. Dricken
	The state of the s

FILE INQUIRY NOTES

DATE	RESULTS OF REVIEW FOR FILE
	fretreatment & L.P.D.
	Flexible Load Rate
	Someze or much as passible in one
	Squeeze as much as possible in area
	rext to house
	30 w/2 Sidewall
	3
	- 1.03 grd/sq.fr.
7	3 Jilsquit.
3	3.
	9
	Health Dept design
	Health Dept design
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	· · · · · · · · · · · · · · · · · · ·
	·

Williams, Jeffrey

From:

Bernadette Braun [skydiva4eva@verizon.net] Sunday, April 10, 2011 6:39 AM

Sent:

To: Subject: Williams, Jeffrey septic permit

Dear Mr. Williams,

Regarding our conversation concerning the application for my septic system, please consider this my official request to cross off Mr. Heaps name as applicant and leave it blank at this time.

Thank you for your time and consideration in this matter.
Bernadette Braun

421 Woodbine Rd. Woodbine, MD 21797 443.418.8897 -mobile

norweco[®]

SINGULAIR GREEN® BIO-KINETIC® WASTEWATER TREATMENT SYSTEM

TANK DELIVERY AND SETTING

To insure that all work proceeds safely and efficiently, check these items prior to delivery of the Singulair Green tank.

- ✓ Does the driver have complete and accurate directions to the installation?
- ✓ Does the driver have the Singulair installer's tool kit?
- ✓ Are the appropriate aerator mounting riser, vented access cover, Bio-Kinetic system mounting riser, pretreatment riser, sealed access covers and extension risers included?
- ✓ Are additional anti-flotation measures required for this installation?
- ✓ Is a sufficient amount of water and gravel available for the installation?
- ✓ Is an adequate supply of sealing material available for all plumbing connections?
- ✓ Does the delivery vehicle have the proper pick-up bar, cable, straps and/or chain?
- ✓ Is the proper Service Pro control center available for delivery with the tank?
- ✓ Is there sufficient underground electrical cable to reach from the control center to the tank?

PLEASE NOTE: The Singulair Green tank is constructed of high density polyethylene. All joints have been factory sealed for your convenience. This will minimize tank loading, unloading and setting time at the site. The Singulair Green tank has been designed for underground use only. Do not install the tank in a location that is subject to vehicular traffic.

CHECKING THE EXCAVATION

Before tank setting begins, verify that the excavation is level and free of sharp stones and construction debris.

Clear out any objects that could come in contact with the tank.

The length, width and depth of the excavation should be checked. The excavation should have sufficient overdig to allow between 18" to 24" of clearance on both sides and 6" to 12" of clearance on the inlet and outlet ends of the Singulair Green system. In addition, the excavation should allow for a minimum of 6" and a maximum of 161/2" of cover over the top of the tank. For deeper installations, consult the Deeper Burial Requirements section of this guide. Failure

to follow the excavation and backfilling guidelines may result in tank damage and will void the system warranty.

Check the influent and effluent sewer line trenches. The trench depth should correspond with the Singulair Green system inlet and outlet connections and the trenches should be smooth to prevent damage to the sewer lines.

A tank leveling pad should be installed in the bottom of the excavation. The leveling pad should be a minimum of 4" thick and leveled to within 1/4" from side to side and end to end. The elevation of the top of the leveling pad should

correspond to the outside bottom of the Singulair Green tank when installed. In areas with unstable soil conditions, a reinforced concrete pad may be required under the Singulair Green tank.

Safe working conditions must be established and maintained during the entire installation procedure. Unstable soil conditions require constant monitoring of the site to insure safety. Installation procedures, equipment and personnel should always comply with applicable safety regulations as well as all federal, state and local codes.



Do not install the Singulair Green tank in saturated clay, areas with a high water table, bogs, swampy areas, landfills where the soil is soft or wet, areas containing expansive soils or soils with an ultimate bearing capacity of less than 1,500 psf. Failure to follow these directions may result in damage to the tank and will void the system warranty.

Underground electrical cable for electrical service to the Singulair aerator should be installed in the influent sewer line trench before backfilling the Singulair Green tank. Refer to the "ELECTRICAL WIRING AND CONTROL CENTER INSTALLATION" instructions for complete details.

CAUTION: Do not attempt to adjust the position of the tank or sewer lines with the backhoe bucket. Excessive force may damage the inlet and/or outlet couplings.

GROUND WATER RELIEF POINT

The effluent sewer line should be installed with a ground water relief point to prevent back-up into the system if the effluent discharge point is blocked or flooded. This device can be constructed by installing a pipe tee in the effluent sewer line and extending it to grade. The relief point must be at a lower elevation than the outlet invert of the Singulair Green tank. The extension to grade should be installed with a suitable screen to prevent access to the sewer line.

BACKFILLING THE GREEN SYSTEM

Prior to backfilling, add a minimum of 12" (250 gallons) of ballast water to the Singulair Green tank to prevent shifting in the excavation. Fill each chamber to an equal level. Do not add water through the clarifier access opening. The clarification chamber will be filled through the transfer opening between the aeration and clarification chambers as the aeration chamber is filled. The Singulair Green tank must be backfilled immediately after the sewer lines, underground electrical cable and ballast water are in place.

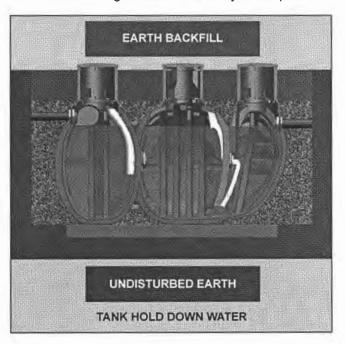


Cover all openings, then begin backfilling with gravel under and around the sloped clarifier. Continue to add gravel until the discharge line from the Singulair Green tank is covered. Proceed to the inlet end of the pretreatment chamber and add gravel until the inlet line is covered. Fine, loose earth may be used to backfill the remainder of the excavation.

Be sure that the backfill is free of rocks, sharp objects, large clumps of earth and construction debris. Never use clay for backfill material. The backfill must flow freely and care should be taken to insure that all recesses formed between the ribs and beneath the area between the pretreatment and aeration chambers are completely filled. Add backfill evenly around the entire perimeter of the Singulair Green tank in 12" increments. Hand tamp each layer of fill to compact soil. When backfilling over the tank, add fill to the area between the risers first. Final grading should be 3" to 6" below the top of each access cover and should slope away from the tank so surface runoff will drain away from the Singulair Green system. Use extreme care when backfilling the excavation. Do not allow dirt or mud to enter any part of the Singulair Green system or sewer lines.

TANK HOLD DOWN WATER

The Singulair Green tank must be filled with clean water to the outlet invert immediately following backfilling. The water must be free of leaves, mud, grit or other materials that might interfere with system operation.



When pumping or dewatering the Singulair Green tank, only pump the pretreatment chamber. Then, promptly refill the tank to capacity with clean water. Dewatering and leaving the Singulair Green tank empty will effect tank integrity and void the Singulair Green warranty.

DEEPER BURIAL REQUIREMENTS

Special consideration should be taken if the Singulair Green tank is buried deeper than 16 $^{1}/_{2}$ " below grade. However, the tank should never be buried deeper than 34 $^{1}/_{2}$ " below grade. If deep burial is required, first fill the tank with 12" of clean ballast water. Next, backfill the entire tank with gravel up to the base of the risers. Once gravel is in place, fill the tank with clean water to the design flow line. Finally, backfill to grade with native soil.

TEMPORARY UNIT STORAGE

If a Singulair Green tank is delivered before installation can occur, store the tank on smooth ground with no rocks or sharp objects against the tank. Chock the tank with sandbags to prevent tank movement. If high winds are anticipated, tie the tank down to prevent any damage.

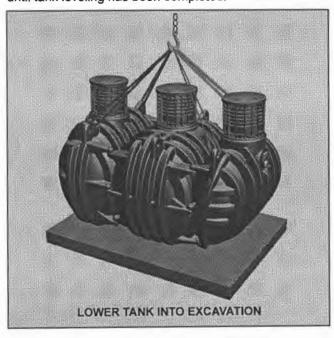
PREPARING THE SINGULAIR GREEN® TANK

Before installing the Singulair Green tank, inspect for signs of damage that may have occurred during transportation or handling. Damaged tanks could leak and should not be installed. Check the inlet and outlet couplings for any signs of damage that would prevent solvent welding to the plumbing. Inspect all risers and access covers to insure no damage has occurred. Verify that all riser and access cover fasteners are securely attached.

CAUTION: Extreme care should be used in the vicinity of any excavation. A delivery vehicle can place excessive loading on excavation sidewalls and care must be taken in its positioning. Once installed, no vehicle should operate over the tank or any other part of the treatment system.

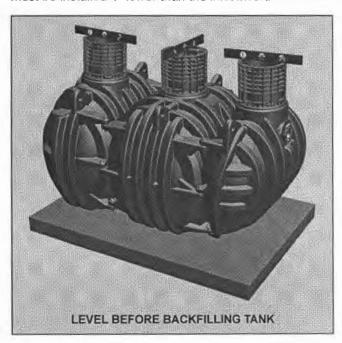
TANK SETTING AND SAFETY

Make sure the delivery vehicle outriggers are firmly placed on stable soil at the excavation site. All personnel must be out of the excavation area and at a safe distance from the tank. Before lifting the tank, check all lifting chains, straps or cables to be sure they are properly secured. Lift the tank using at least four of the molded lifting lugs located on the Singulair Green tank. Carefully lower the tank into the excavation. Stop the tank several inches above the excavation floor and position it in the desired location. Lower the tank carefully until all tension is off the lifting device. Do not remove the lifting chains, straps or cables until tank leveling has been completed.



LEVELING THE TANK

Remove the access covers and place a level on the risers to verify that the tank is level within 1/4" from side to side and end to end. If the tank needs to be raised more than 6" to apply leveling material, all personnel should move to a safe location so the tank can be fully removed from the excavation. Fall through the system from inlet invert to outlet invert is 4". Therefore, the outlet invert of the system must be installed 4" lower than the inlet invert.



MOUNTING RISER AND OPTIONAL EXTENSION RISER INSTALLATION

If extension risers are required, install them as needed above each mounting riser. To insure a watertight seal, install an o-ring gasket in all joints between the risers.

Access to the pretreatment chamber can be developed to grade or below grade as required by local regulation or owner preference. The access cover on the pretreatment chamber must be developed to within 12" of finished grade. Place a sealed access cover on the pretreatment chamber access opening. Place a vented access cover on the aerator mounting riser and a sealed access cover on the Bio-Kinetic system mounting riser before backfilling.

SEWER LINE INSTALLATION

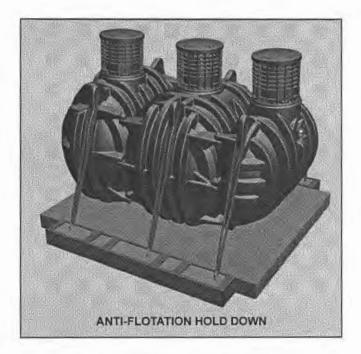
Sewer lines may be installed as soon as the Singulair Green tank has been leveled. Sewer line trenches must be smoothly excavated and free of debris or sharp objects. The trenches must allow sewer lines to be laid with 1/6" of fall per lineal foot. Influent and effluent sewer lines must be at least 4" in diameter. The influent and effluent lines should be PVC pipe and solvent welded into the Singulair Green tank inlet and outlet couplings. Influent and effluent lines must be laid continuously and unspliced from the tank to the undisturbed earth beyond the tank excavation site.

SPECIAL ANTI-FLOTATION SYSTEM

In areas where high water is a concern, it may be necessary to provide additional anti-flotation measures to secure the Singulair Green tank. Anti-flotation is not required when the tank is installed with at least 16" of fill over the tank and the soil density of the backfill is at least 100 pounds per cubic foot. Failure to follow the anti-flotation recommendations provided in this document may result in damage to the Singulair Green tank or shifting in the excavation and may void all or part of the limited warranty.

If anti-flotation is required, consult a soil scientist to measure soil density. Once soil density is defined, refer to the SHALLOW BURIAL AND REDUCED SOIL DENSITY HOLD DOWN REQUIREMENTS chart below. After the amount of additional hold down weight is determined, it is recommended that a pair of concrete beams of appropriate size be placed at the base of the excavation. Alternately, plastic anti-flotation beams are available from Norweco. Plastic anti-flotation beams must be filled with concrete prior to installation. Beams must not be placed directly under the perimeter of the Singulair Green tank. The weight of the soil over the beams significantly contributes to the tank hold down forces. Placing beams under the tank will limit the amount of soil anchoring the beams into the excavation and should never be done.

Secure the anti-flotation beams to the Singulair Green tank with properly rated hold down straps that attach to the lifting lugs located at the top of each of the three chambers. The weight of the beams plus the weight of the soil over the beams must be greater than the required hold down weight shown in the table below.



COMPLETING THE INSTALLATION

Once backfilling has been completed and the tank has been filled with clean water, the access openings must be secured. Install a sealed access cover on the pretreatment and clarification chamber risers. Install a vented cover on the aeration chamber riser. Secure all access risers with the fasteners that have been provided. Installation of the control center and underground electrical cable are normally completed before leaving the site. Refer to "ELECTRICAL WIRING AND CONTROL CENTER INSTALLATION" instructions for details.

Soli Density (ibs. per ou.ft.)	80	90	100	110	120	130
Fill Over Tank (inches)	Additional Weight Required (lbs.)	Additional Weigh Required (lbs.)				
6	6,915	5,935	4,956	3,976	2,996	2,017
8	6,091	5,008	3,926	2,843	1,761	678
10	5,267	4,081	2.896	1,710	625	*****
12	4,443	3,155	1,866	578	*	*
14	3,619	2,228	836	*	*	*
16	2,796	1,301	STANDARD INSTALLATION	*	*	*
18	1,972	374	* - 2	3 miles * 100 miles	******	*
20	1,148	*	*	*	*	*
22	324	* 7	*	* 1	*	*
24	*	*	*	*	*	*

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website: www.hchealth.org

Peter L. Beilenson, M.D., M.P.H., Health Officer

May 20, 2011

To:

Bernadette Braun, owner

421 Woodbine Road, Woodbine, MD 21797

RE: Perc Test Report, 421 Woodbine Road; A534418

Percolation testing was conducted on the referenced property on May 11, 2011. The purpose for conducting these percolation tests was to define area(s) suitable for a drainfield to replace the failing septic system now serving the residence. All percolation tests conducted were standard tests, measuring rate of fall for a pre-wet period followed by measurement and recordation of the time required for the water level to drop 1 inch. Field data collected are shown on the Percolation Test Worksheet enclosed with this letter. Recommended Inlet and Trench Bottom depths, and Usable Sidewall all are based on observed soil properties and characteristics at respective test locations as well as the particular soils materials tested.

Three locations were tested, 'A', 'B', and 'C'. In addition, location 'D' was observed and described for assurance that a layer restricting vertical flow was not present on the slope below location 'C'. Location 'A' represents the area immediately north of the residence; 'B' represents the area south of the garage; 'C' and 'D' represent the area at the northeast, above a section of very steep slopes.

The soil materials tested and observed at these locations have loamy textures with rock fragments (re: channers) ranging from 20 percent to 30 percent of the soil volume. Satisfactory soils conditions for wastewater treatment and disposal occurred at all four locations tested or observed. The percolation rates varied by location.

Septic system drainfields having a 4-foot soil buffer (to water table) may be designed at locations 'A' and 'C', while at location 'B' the soil buffer can be no more than 3.5 feet. The Health Department recommends that the owner choose between locations 'A' and 'C' for the site of the replacement drainfield. Effluent will have to be pumped to either site from the treatment tank which will probably be located slightly downhill of the existing 'cesspit'. For either location, the drainfield will be designed by the Health Department.

At 'A' a low-pressure-dosed (LPD) distribution system will be required. A 10-foot setback to the house foundation will be observed and the drainfield will be 30 feet wide from the base of the very steep slope to a 5-foot setback from the existing 'cesspit'.

The distribution pipe Inlet will be at 1 foot, and the Trench Bottoms can be no deeper than 3 feet.

At location 'C', the effluent will be pumped to a distribution box and drain to 2 50-foot long trenches. The Inlet on theses trenches should be no deeper than 2.5 feet and the Trench Bottom can be no deeper than 7 feet.

Variances from MDE will be required for either 'A' or 'C'. The variances required for 'A' are for reduction of the regulated setbacks to stream and to slopes greater than 25 percent. At 'C', a variance is needed for reduction of setback distance to slopes greater than 25 percent. The Health Department will express recommendation to MDE to grant the variance(s) respective of the location you select.

For the Health Department to complete design of a system at location 'A' (near the residence), precise measurements of the available area are needed. These data will be obtained by Health Department personnel when the following information is provided by a contractor: a) the location of treatment tank (and if necessary, the pump tank) in relation to the house foundation; b) the route of the sewer line from the house to the treatment tank, with distances referenced to the house foundation; c) the elevation of the pump inside the treatment tank or pump tank. The required information should be provided to the Health Department in the format of a plan, drawn by the contractor whom you select to install the treatment tank.

The Health Department will contact you should additional field review of well or septic system conditions be required at any time during this process. If you have any questions regarding this evaluation and requirements, please contact myself at the above address or by calling (410) 313-2691, or Jeff Williams (410)313-4261.

Respectfully.

Robert C. Bricker, CPSS, REHS/RS Environmental Sanitarian Supervisor

Well and Septic Program

Copy:

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HUB

Mr. Jeff Williams Program Supervisor, Well and Septic Program Bureau of Environmental Health Howard County Health Dept.

Mr. Steve Krieg Regional Onsite Systems Consultant Maryland Dept. of the Environment

Gentlemen,

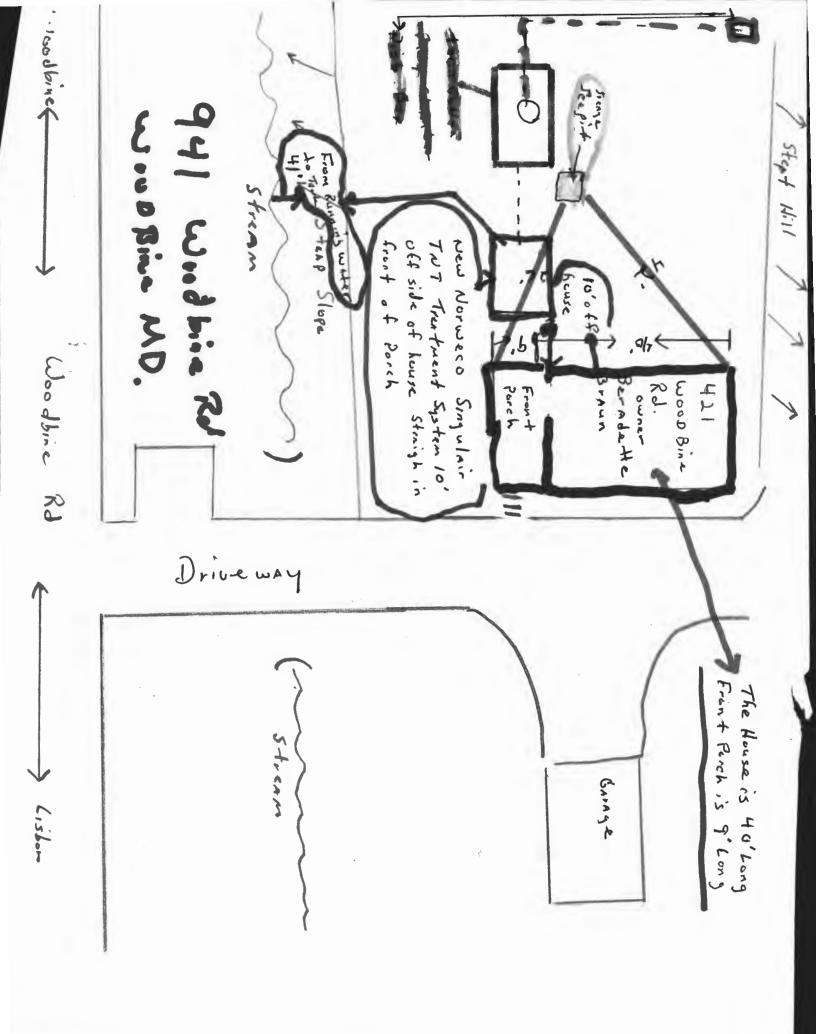
Please accept this letter requesting a variance from the standard one hundred (100) foot setback from a septic system to a stream.

The proposed and approved BRF tank being installed will be forty (40) feet from the stream.

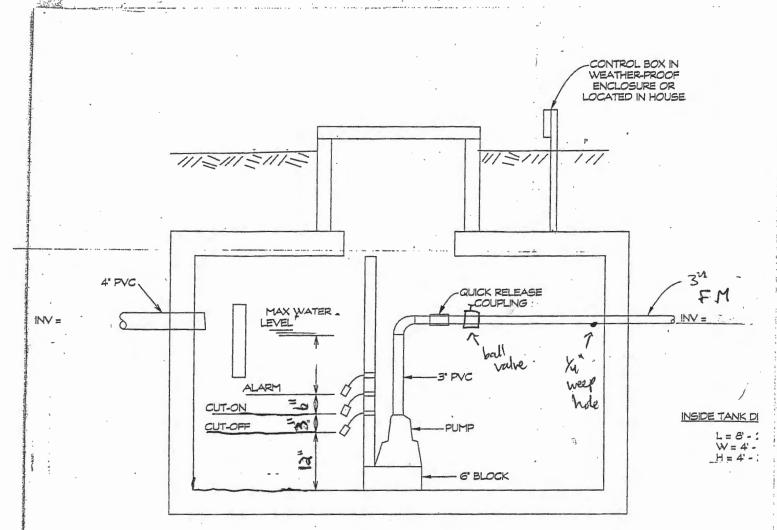
Thank you for your attention to this matter,

Bernadette Braun

421 Woodbine Rd. Woodbine, MD 21797



shaker we head on some dead rotted & Braun Woodbine Pl Wortloine 2011 JN -8 PM IN CON= 443-418-8897 10:22 am 44/11 site visit am to notify formadette :



TOP SEAM 1000 GAL. PUMP CHAMBER

(NOT TO SCALE)

Howard County Health Department

Bureau of Environmental Health, Ellicott City, Maryland 410-313-2640

PERMITTEE J. M. Contracting LLC. LOCATION 421 Woodbine Road Bernadette Brown	NT NO. A- P- 534418
Bennadette Brown	uc.
POST THIS CARD WHERE IT CAN BE SEEN FROM ROAD STOP ALL CONSTRUCTION ON SEWAGE	Department Approval Appears On This Card EIT CAN BE SEEN FROM ROAD AGE
DISPOSAL SYSTEM AND CONTACT HEALTH DEPARTMENT BEFORE CONTINUING WORK IS SATISFACTORY, Inspector Date	
CONTINUE	Inspector Date
FINAL INSPECTION MADE, COVER ALL WORK HD-230 (3/97) Inspector Da	Inenector

000145

AGREEMENT AND EASEMENT FOR INSTALLATION OF BEST AVAILABLE TECHNOLOGY SYSTEMS WITH BAY RESTORATION FUNDS.

THIS AGREEMENT is made this 20 day of July, among BOLNADETTE PRANK, hereinafter referred to as "Owner," the Howard County Health Department hereinafter collectively referred to as the
referred to as "Owner," the Howard County Health Department hereinafter collectively referred to as the
"County," and the Department of the Environment, hereinafter referred to as the "Department."
WHEREAS, Owner owns a tract of land located on $\frac{421 \omega_{000000E} \text{Pb}}{1000000000}$ in the $\frac{4 \text{Th}}{1000000000}$
District of Howard County, Maryland, and the deed to same is recorded among the Land Records of
Howard County, Maryland, in Columbia and in Liber 0 2885 Folio 478.
WHEREAS, the Bay Restoration Fund (BRF) may provide a grant for the cost attributable to
upgrading an onsite sewage disposal system to the Best Available Technology (BAT) for the removal of

WHEREAS, the BRF may also provide a grant for the cost difference between a traditional onsite sewage disposal system and a system that utilizes the BAT for the removal of nitrogen.

WHEREAS, Owner understands that participation in the Bay Restoration Fund is voluntary.

40 20 W

nitrogen.

NOW, THEREFORE, the parties hereto agree as follows:

- A. Owner hereby grants to the Department and the County the right to enter upon the property at any reasonable time for access to the system to make periodic inspections and the Owner agrees to provide any information and data requested and needed by the Department to develop accurate and thorough test results.
- B. Owner acknowledges and agrees that a manufacturer-approved installer will install the BAT system.
- C. Owner acknowledges and agrees the manufacturer will provide for Operation and Maintenance of the BAT for a period of 5 years as a condition of sale of the BAT. After the 5 year

period the Operation and Maintenance contract can be further extended at the behest of the property owner. The Department and County encourage the property owner to continuously maintain an Operation and Maintenance contract during the lifetime of the system.

- D. Owner acknowledges and agrees that the manufacturer appointed Operation and Maintenance provider will have access to the BAT system at all times.
- E. Owner acknowledges and agrees that the manufacturer or manufacturers designee will have access to sample the effluent of the BAT system. Owner acknowledges and agrees that the proposed installation of a BAT system funded by the BRF is voluntary. Owner agrees that there shall be no liability on the part of the County or Department to Owner if this BAT system fails, and that the County and the Department do not warrant or guarantee that the BAT system will adequately or properly function.
- F. Owner acknowledges and agrees that neither the County nor the Department nor any of its agents or employees, either officially or individually, underwrites the operation of any system approved by them.
- G. The Owner will devote such care and effort to the maintenance of the BAT system so that any malfunction is not the result of poor maintenance, faulty operation, or neglect.
- H. The Canaan Valley Institute agrees to grant up to \$12,307 toward the cost of installation of the BAT system, and financial responsibility is limited to this amount. Operating costs will be at the Owners expense.
- The Owner acknowledges that the BRF grant can only be used for that portion of the OSDS attributable to (BAT) for the removal of nitrogen.
- J. Owner acknowledges in the event the total project cost is greater than \$25,000 the proposal will have to be approved by the Maryland State Board of Public Works.

- K. The Owner agrees to contact both the Water Management Administration, On-Site Systems Division of the Wastewater Permits Program and the County at least forty-eight (48) hours prior to system installation, so that the Department has the opportunity to be present at the time of installation or thereafter for inspection.
- L. The Owner must install BAT system according to the manufacturer recommended plans and specifications approved by the Department.
- M. The Owner agrees and acknowledges that if installation deviates substantially from the approved plans or changes such that performance of the system is compromised or reduced, BRF funding will not be provided.
- N. This agreement shall run with the land and binds the Owner, his heirs, successors, assigns except that the provisions of paragraph A, C, D and E shall be binding for a period of 5 years only after installation of the system and occupation of the home. Owner further agrees that he shall inform in writing any purchaser or lessee of the property that the system may require maintenance or other attention. The Owner agrees to record this agreement in the land records of Howard County.
- O. This agreement shall not be construed to limit any authority of the Department to protect the public health, safety or comfort or to issue any other orders to take any other action that is now or may hereafter be within its authority.
- P. This agreement may be voided at the discretion of the Department if the system construction is not completed within six (6) months of the effective date of this agreement.
- Q. This agreement contains the entire agreement and understanding between the County and the Owner and the Department. There are no additional terms other than as contained in this agreement. This agreement may not be modified except in writing signed by each of the parties or by their authorized representatives.

LIBER | 3344 FOLTO 367

R. The laws of the State of Maryland govern the provisions of all transactions pursuant to this agreement.

IN WITNESS WHEREOF, the parties have signed and sealed this agreement on the date indicated

above.

DATE: 20 July 2011

DATE: 7/20/2011

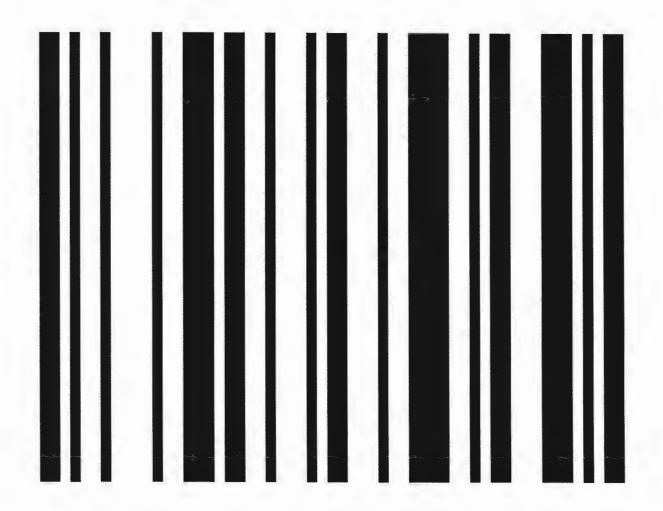
Owner/BERNADETTE BRALIA

Howard County Health Department

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TOTAL 7.88
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MDR KMC Blk # 649
Jul 20: 2011 83:38 FM

INP FD SURE \$ 40.08
RECORDING FEE 28.09
TOTAL 60.00
Res\$ 4003 Res\$ \$ 17828
NDR KMC 81k \$ 648
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Document Separator



Document Separator

S	STATE	OF MARYLA	ND, HOWAR	D COU	NTY, TO V	VIT:
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of Howard	d Count	y, Maryland.				
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