FOGLES WELL DRILLING, LLC P.O. Box 202 6003 Woodbine Road Woodbine, Maryland 21797 (443)609-4195 (443)609-4196(Fax)

Date: 4-30-09
TO: H.C. H.D
Attn: Brian Fax# 410-313-2648
From: Allen
Re: 200 Watersville Rd.
Pages (including cover sheet)
Message: aboud onment report for 270
Message: <u>aboudonment report for 270</u> <u>Wateroville Rd. Original courte mail</u>
taile_
1

NEW WELLS REPLACEMENT WELLS DEEPEN ORIGINAL WELL WELL PUMP INSTALLATIONS WATER CONDITIONING WATER TESTING

"FULL SERVICE FOR ALL WELL AND PUMP NEEDS"

pr. 30. 2009 5:12PM FOGLES WELL DRILLING No. 2790 P. 2/2						
****	1800 Washington Blvd., Baltimore, M	aryland 2	1230 (410)) 537-3784	*****	*****
*****	WATER WELL ABANDONMENT-S	EALING I	REPORT	FORM		*****
SUBMIT COPIES OF COMPLETED FORM TO: COUNTY ENVIRONMENT AGENCY (contact MDE, WMA if address needed) WELL OWNER MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM						
DATE	WELL ABANDONED: 4-29-09 (month/day/)	ycar)				
٠	PERMIT NUMBER OF ABANDONED WELL (if any)					
*	PERMIT NUMBER OF REPLACEMENT WELL					-
*	PERSON ABANDONING WELL: Allen Compten	WEL	.L D RILI	ERS LICENSE NUMBE		9 (MSD)MGD
•	OWNER'S NAME: Educia Harrisuno Athur Lambert			SITE LOCATION MAP		
٠	WELL LOCATION: COUNTY: How we de NEAREST TOWN: MOLANT AN'MY TAX MAP BLOCK PARCEL		2	4	. (-1
	SUBDIVISION:LOT: _	A	1) ne	+ waters	ulle	voc
	·		AND	T -		
•	TYPE OF WELL BEING ABANDONED:			LOG OF SEALI	NG MATERI	AL.
	DRILLEDJETTED BORED/AUGEREDHAND DUG OTHER (specify)			MATERIAL	FE	
•	USE CODE:			Cement	0	70
	DOMESTIC MUNICIPAL/PUBLIC IRRIGATION INDUSTRIAL TEST/OBSERVATION GEOTHERMAL					
•	TYPE OF CASING:					
	STEELPLASTIC CONCRETEOTHER (specify)	ર				
R	SIZE OF CASING: INCHES IN DIAMETER			VOLUME OF N	IATERIAL Ù	SED
٠	DEPTH OF WELL: 70 FEET DEEP			_	Read	
*	WAS ANY CASING REMOVED? YES NO if yes, length removed, in feet:	-		20	Bags	
*	WAS CASING RIPPED OR PERFORATED? YES NO	. [*	>09	MWD MSD/MG	D (1-	30-09
SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN LICENSE # CIRCLE ONE DATE						
DENV 828 JULY 1997						

NOTE. This saw r Markers Not suarant od by this survey. 11/ S. FRODERTY C WATERSVILLE ROAD, POPLAR SPRINGS, 0300 LOCATION OF HOUSE R.S. ED.L. TAYLOR PROPERTY LIBER 519- FOLIO 651 HOWARD COUNTY, MO. 0 0 100 0 0 3 N53 0 N 110-00 11-00 1 Existing Metal Septic Tank STEP I ANS C 3 à Ø. ÷ 23.0 STORY 26 FRAME 10 100' Well Radius r/w 2 U 15.00 1523.30 FRAME 8106 Existing Well FRAME SHED \$2.00.4 LIBER: 519-FOLIO:65, IAC, ± 570°W FENCE 243.00 Not To Scale NOTE: LOT DOES NOT CLOSE MATHEMAN REFERENCES SURVEYOR'S CERTIFICATE ELDON E. SNIDER & ASSOCIATES I HEREBY CERTIFY THAT THE POSITION OF ALL THE LAND SURVEYORS PLAT BK. EXISTING IMPROVEMENTS ON THE ABOVE DESCRIBED PROPERTY HAS BEEN CAREFULLY ESTABLISHED BY A D PLANNING CONSULTANTS PROPERSIONAL DRIVE, SUITE 214 TRANSIT-TAPE SURVEY AND THAT UNLESS OTHER-WISE SHOWN. THERE ARE NO ENCROACHMENTS. GAITHERSBURG, MD. 948 \$100 PLAT NO. DATE OF SURVEYS SCALE: 1'= 90' LIBER 519 Hanny X WALL CHECK: DRAWN BY: A.W. 9-9 HSE. LOC .: -78 FOLIO 651 108 NO .: 78 - 1498 EGISTERED LAND SURVEYOR MD. 17180 BOUNDARY

09:08 3012743292

SUPERIOR

Superior Tank, Inc.

(301) 870-3904

2089

Rt. 488 - P.O. Box 10 Bryantown, Maryland 20617

Fax (301) 274-3292

\$9,711.40

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Proposal

NORWECO - Singulair Bio-Kinetic Wastewater Treatment System Model TNT 500 - 1000 Gallons Per Day Systems "BAY RESTORATION FUND PROPOSAL"

Project - Property Owner: LARRY LAMBERT

Property Address: 270 WATERVILLE ROAD HOWARD COUNTY

installer - Excavation Contractor: HARRISON CONTRACTING

Qty. #	DESCRIPTION		PRICE
1	NORWECO - SINGULAIR 500/600 GPD TNT Set of approved MDE Norweco tank unit with pre-installed of 1-aerator w/ punel (120 Volt) & 18" concrete mount casting 1-Sto-kinetic futer system w/ 18" of poly risers - 18" of poly risers for pre-treatment chamber.	6,240.00	
1	S year service contract includes service & report of unit to th (2 inspections/ year) - by a certified service tech.	is homeowner	2,450.00
	EXCAVATION OF HOLE, PLACEMENT, ELECTRICAL HOU REMOVAL OF EXISTING SEPTIC TANK IF NECESSARY, OUTSIDE OF TANK UNIT & COST TO REPLACE/REPAIR ANY ADDITIONAL WORK OTHER THAN NITROGEN UNIT	HOOK-UPS DRAINFIELDS	EXCAVATION CONTRACTOR
	(Delivery may vary due to job location) .	SUBTOTAL MD SALES TAX DELIVERY	and and and a state of the stat

** MODEL TNT APPROVED FOR MDE - BAY RESTORATION FUNDING

WWW. norveco.com - contact 2 Superior Tank - Jeff Earnshaw (301)274 - 3772

GRAND TOTAL



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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

Martin O'Malley Governor

Anthony G. Brown Lieutenant Governor Shari T. Wilson Secretary

Robert M. Summers, Ph.D. Deputy Secretary

February 9, 2009

Arthur L. Lambert (301) 829-5110 3838 Mt. Airy Dr. Mt. Airy, MD 21771

RE: 270 Watersville Rd, Mt Airy, Maryland 21771 Tax Map 2, Grid 9, Parcel 14

Dear Arthur L. Lambert:

Thank you for completing an application for the Bay Restoration Fund (BRF) Onsite Sewage Disposal System (OSDS) Program. The pre-application submitted is for your property located at 270 Watersville Rd, Mt Airy, Maryland 21771 and shown on Map 2, Parcel 14. A review of the application indicates a high priority for funding. This letter is to notify you of preliminary approval for funding from the BRF for the installation of best available technology (BAT) for removing nitrogen as part of your on-site sewage disposal system.

This notification letter is intended to assist you through the process of obtaining proper BAT installation bids and invoicing procedures to obtain funding from the BRF. The following sections outline the requirements necessary for proceeding with the project.

Submission of Bids

The applicant must acquire bids from at least three separate manufacturers and at least 2 different installers for a minimum total of 3 bids to MDE for review. The installer can act as agent on behalf of the applicant but still must also supply a separate installer bid. A list of manufacturers is included in this letter. If you need additional participating installer information please contact your designated Project Manager or go to <u>http://www.mde.state.md.us/Water/CBWRF/osds/bat_installers.asp</u> for a list of installers. Bids must include the following:

- The installer, whether they are a manufacturer representative or one chosen by the property owner, must submit a separate installation quote with each manufacturer bid on a separate piece of paper from the manufacturer quote or the bid will be considered incomplete.
- Bids must be itemized. The manufacturer bid is to include the purchase cost of the unit and all other MDE requirements while the installation cost of the unit is to include the unit installation, components, and labor (including electrical connections) directly related to upgrading an onsite sewage disposal system to the best available technology for removing nitrogen are eligible for funding.

4

Conditions of Financial Assistance

By reading and signing this form, you agree to the limitations and conditions set forth in this document. This form must be returned with your submission of bids. Your bid submission will be not be processed if this form does not accompany the bids when you submit them.

Award of Grant

- MDE will review the bids. The grant award will be obligated based on the lowest acceptable bid, however the applicant may pay the cost difference of a more expensive bid.
- The applicant will be notified by MDE as to the amount of the grant obligation and with further instructions as to how to pursue reimbursement of obligated funds.
- For awards greater than \$25,000 MDE must present a proposal to the Board Public Works for • approval.
- No change orders will be accepted by MDE.
- The award amount is available for reimbursement within 6 months of Department signature on the ٠ Agreement and Easement document. Upon request of the applicant, the original 6-month period may be extended at the discretion of the Department.

Agreement and Easement

An Agreement and Easement must be completed, signed by all parties and recorded in the Land Records of Howard County Maryland. A draft copy of the Agreement and Easement is provided to you in this letter for your review. A completed Agreement will be provided to you after bids are submitted to MDE when you are notified of the grant approval amount. The purpose of this Agreement is to accomplish the following:

- To establish your voluntary participation in this program. ٠
- To ensure that a minimum of five years operation and maintenance is performed by an approved ٠ provider (included in the upfront cost of the system).
- Allows access for State, County and the Manufacturer designee's to inspect and collect samples from the system.
- Establishes the amount of the grant award.

Local Permitting Requirements

- All required local permits must be obtained.
- Permit fees are not eligible for BRF funding.
- Contact Howard County Health Department for more information.

The following BAT Technologies have undergone MDE review and are eligible for BRF grants:

Model Name

AdvanTex AX Manufacturer: Distributor:

Amphidrome Manufacturer: Distributor:

Bioclere Manufacturer:

Ecoflex Manufacturer:

Hoot H-Series, BNR & ANR Manufacturer: Distributor:

MicroFAST & RetroFAST Manufacturer: Distributor:

Nitrex Manufacturer:

ReCip RTS Manufacturer:

SeptiTech Manufacturer: Distributor:

Singulair Model TNT Manufacturer: Distributor:

Waterloo Biofilter Manufacturer: Distributor: Orenco Systems, Inc. Robert Johnson

F.R. Mahony & Associates, Inc. David Kershner

Aquapoint, Inc. Robbie Tippet Sam Seymour

Premier Tech Environment Allison Blodig

Hoot Aerobic Systems, Inc. Nancy Mayer

Bio-Microbics, Inc. Freemire & Associates

Lombardo Associates, Inc Pio Lombardo

Bio-Concepts, Inc. Al Privette

SeptiTech, Inc. Bruce Melton Western MD, Scott Everhart

Norweco, Inc. Eastern Shore - Randy Clark Western Shore - Jeff Earnshaw

Waterloo BioFilter Systems, Inc. Jones Pump Service www.orenco.com 1-877-214-92837

www.frmahony.com (610) 351-0963

www.aquapoint.com (240) 298-7572 (585) 473-3300

(785) 250-3215

www.hootsystems.com (410) 796-1434

www.biomicrobics.com (410) 768-8500

www.lombardoassociates.com (617) 964-2924

www.bioconceptsinc.com (252) 249-7040

www.septitech.com (410) 878-2952 (304) 676-3823

www.norweco.com (800) 773-9128 (301) 274-3772

www.waterloo-biofilter.com (410) 836-9206

bjohnson@septicsystems.net

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d.kershner@ketllc.com

rtipp4@aol.com sseymour@aquapoint.com

bloa@premiertech.com

mayerbro@connext.net

www.freemire.com rsf@freemire.com

pio@lombardoassociates.com

alprivette@coastal.net

rbmelton@progressiveseptic.com www.cseenterprises.net

ranjodan@yahoo.com superiortank@olg.com

manager@jonespumpservice.com

Recycled Paper

www.mde.state.md.us

TTY Users 1-800-735-2258 Via Maryland Relay Service Page Four

Issuance of Funds from the BRF

After review of the submitted invoice and associated documents, the Office of the Comptroller of the State of Maryland will issue a check to the property owner.

Once again the Department thanks you for participating in this important program. If you have any questions, please feel free to contact me at 410-537-3678 or by email at <u>jboris@mde.state.md.us</u>.

Sincerely,

John Boris Bay Restoration Fund Project Manager

Enclosure

cc: Jay Prager, Deputy Program Manager Steven Krieg, Regional Consultant Howard County Health Department

Recycled Paper

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		Receipt #P			
SEPTIC SYSTEM REPAIR / UPGRADE / EVALUATION REQUEST					
Please fill out this form completely and check off the reason for the request:					
Date requested: 3/2409					
	Reason for Request				
Failing System (includes surface discha	arge or inadequate treatment zone)				
Has the contractor verified through	excavation/pumping evaluation, that there are n	o pipe blockages?			
In support of a building permit. Type of	of building addition:				
*System relocation for proposed addition	on for setback compliance				
*Verification of adequate system capac	ity per COMAR 26.04.02.02D (4)				
To replace collapsed septic tank or upgrade tank capacity Σ					
To replace collapsed drywell	*****	****			
Septic Contractor:	Harrison Contincting	· · · ·			
Contractor's Address:	2858 Flag Marss Rd.				
	M+Airy MD 21771				
Contractor's Phone #:	410-795-8691				
Property Address:	270 Watersville Rd, MtA	.7			
Property (Subdivision) & Lot #					
Owner's Name:	Arthur & Lambert				
Is public sewer available/nearby:	No				
Names of Any Previous Owners:					
Year House Built:					
# of Existing Bedrooms:	2				
# of Bedrooms after completion of addition:					
Has this request been discussed previous	ly with a Sanitarian, who?				

391

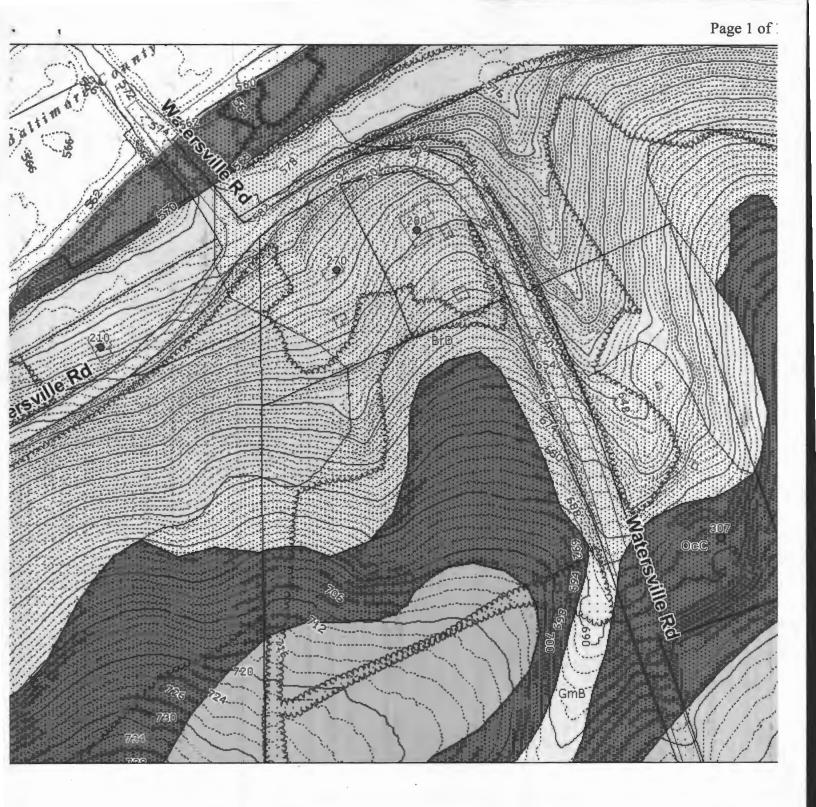
Fee Paid S

If public sewer is close, further research will be performed to verify availability and possible hook up to public sewer.

A Sanitarian will be in contact within three business days depending upon the urgency of the situation to coordinate the scheduling of the repair /upgrade/evaluation. No inspection will be performed without fee collection at the office.

Environmental Sanitarian tentatively assigned

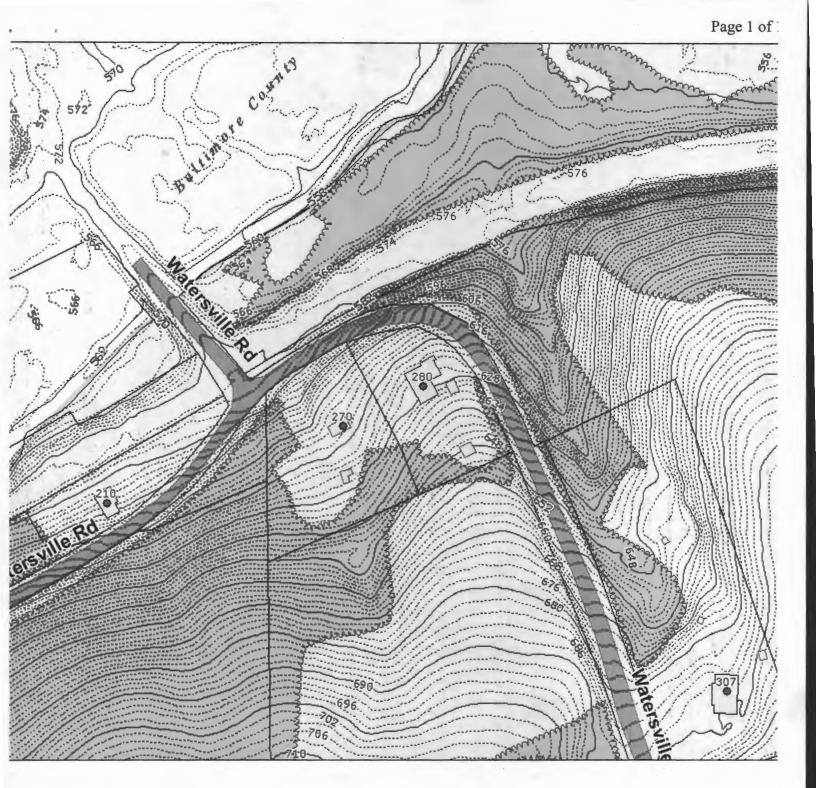
FAX TO 410-313-2648



280 - 1099110 P515300

nttp://hwdgis01iis/GISOnline4_3pool/GetMapXtremeImage.aspx?StreamID=7e9b6c5b-9091-4b7f-bd3b-a1... 2/19/2009





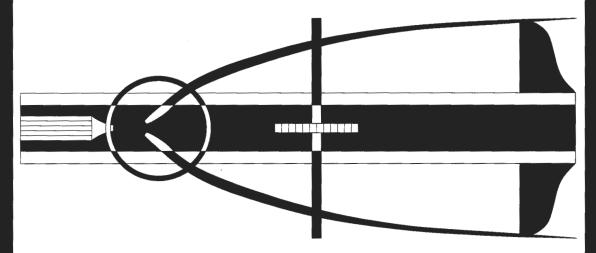




NORVECO® SINGULAIR® BIO-KINETIC® WASTEWATER TREATMENT SYSTEM MODEL TNT

GENERAL SPECIFICATIONS

The contractor shall furnish and install one complete Singulair Bio-Kinetic Model TNT system for Total Nitrogen Treatment with all necessary parts and equipment as described in the following specifications. Treatment of the domestic wastewater shall be accomplished by the extended aeration process with non-mechanical flow equalization, pretreatment of the influent, and filtration of the final effluent. In addition to primary, secondary, and tertiary treatment of the wastewater flow, the treatment system shall provide nitrification, denitrification, and if required, chlorination and dechlorination of the effluent prior to discharge. All treatment processes shall be contained within reinforced precast concrete tankage meeting the requirements of ACI Standard 318. The wastewater treatment system shall be a Singulair Model TNT as manufactured by Norweco, Inc., Norwalk, Ohio, USA. Systems utilizing fiberglass, steel, or plastic tankage are subject to floatation when dewatered and shall not be considered for this application.



The wastewater treatment system shall be capable of reducing Total Nitrogen without the addition of chemicals, specialized add-on processes or additional components. Nitrification and denitrification shall be accomplished within the chambers of the treatment system prior to effluent disposal. Biological reduction of nitrogen shall occur naturally by autotrophic bacteria, capable of converting ammonium nitrogen to nitrate, and heterotrophic bacteria, capable of transforming nitrate to harmless gas. The treatment system shall include precast concrete tankage providing separate pretreatment, aeration and clarification chambers. Principal items of electro-mechanical equipment shall be a 1725 RPM mechanical aerator, UL listed Service Pro control center with MCD technology, Bio-Static sludge return and Bio-Kinetic tertiary treatment device for flow equalization and final filtration of system effluent.

SINGULAIR®

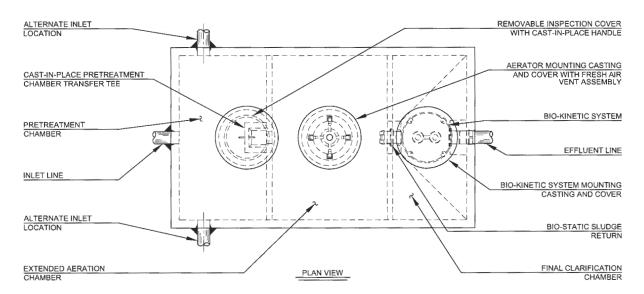
OPERATING CONDITIONS

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Total holding capacity of the system shall provide a minimum of 48 hour retention of the daily flow. The pretreatment chamber shall provide at least 18 hour retention, the extended aeration chamber shall provide at least 24 hour retention, and the clarification chamber shall provide at least 18 hour retention. The non-mechanical flow equalization device shall increase each individual chamber and total system retention time in direct proportion to loading. Design of the system shall include a compartmented tank and non-mechanical flow equalization device to insure successful treatment performance without upset even when the significant runoff period is six hours. Hydraulic design considerations of the system and flow equalization device shall be such that intermittent peak flow factors as high as four shall not upset hydraulic reliability within the system. System performance in compliance with the requirements of NSF Standard 245 shall be recognized by an ANSI accredited third-party laboratory and be approved for use by the local governing regulatory agency.

PRETREATMENT CHAMBER

The pretreatment chamber shall be an integral part of the wastewater treatment system. All domestic wastewater shall be preconditioned and flow equalized while passing through the pretreatment chamber prior to being introduced to the extended aeration chamber. The outlet of the pretreatment chamber shall be equipped with a discharge tee that extends vertically into the liquid so that only the preconditioned equalized flow from the center area of the chamber is displaced to the extended aeration chamber. The discharge tee and transfer port shall be of adequate size to handle a peak flow factor of four without restricting the outlet and disturbing hydraulic displacement to the extended aeration chamber. A removable inspection cover shall be cast into the top of the pretreatment chamber to allow tank and transfer tee inspection. As a safety measure, the uncovered opening shall be small enough to insure that the tank cannot be entered for inspection or service.



AERATION CHAMBER

The extended aeration chamber shall provide in excess of 24 hour retention of the equalized daily flow. The chamber shall be of sufficient size to provide a minimum of 80 cubic feet of tank capacity per pound of applied BOD. The aeration chamber length-width-depth ratio shall be designed to insure uniform tank mixing and provide optimum treatment. The aeration chamber(s) shall be an integral part of the system flow path and constructed of properly reinforced 5,000 PSI, 28 day compression strength precast concrete. All castings used to construct the precast concrete tankage shall be monolithic units with external and internal walls incorporated into each section.

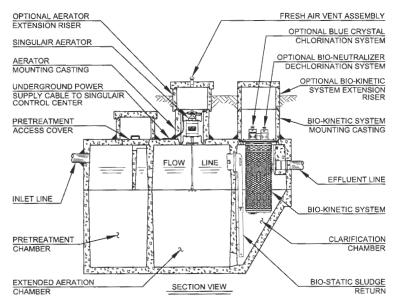
FINAL CLARIFICATION CHAMBER

The final clarification chamber shall consist of 5 functionally independent zones operating together to provide satisfactory settling and clarification of the equalized flow. An inlet zone shall be provided and shall dissipate transfer turbulence at the flow inlet of the clarification chamber. Its performance shall also eliminate turbulence in other zones of the clarifier. Liquid shall be hydraulically displaced from the inlet zone to the sludge return zone. Hydraulic currents shall sweep settled sludge from the hoppered walls and return these solids via the inlet zone to the aeration chamber. As solids are removed, liquid is displaced to the hopper zone of the clarifier. In this zone, settling by gravity takes place. Three of the four sidewalls are slanted to form a

hopper which directs all settled material back to the sludge return zone. Clarified liquid from the hopper zone shall be displaced into the final settling zone to provide additional clarification of the liquid. The liquid is finally displaced to the outlet zone for final filtration and discharge from the system. Non-mechanical equalization of the flow, through all 5 independent zones, shall provide optimal settling and clarification.

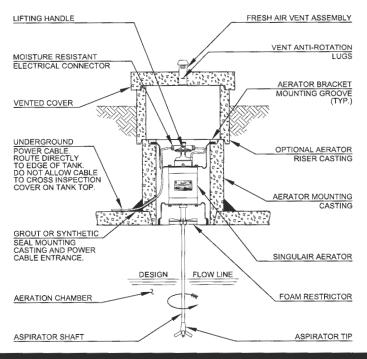
BIO-STATIC® SLUDGE RETURN

A Bio-Static sludge return shall be installed into the cast-in-place opening(s) in the aeration/clarification chamber wall to provide positive return of settled solids. Aeration chamber hydraulic currents shall enter the sludge return(s) and be directed into the sludge return zone of the clarification chamber. The Bio-Static sludge return shall accomplish resuspension and return of settled solids without disturbing the clarified liquid in the final settling zone and outlet zone.



MECHANICAL AERATOR

Each Singulair aerator shall be installed in a concrete aerator mounting casting above the aeration chamber. Fresh air shall be supplied through a molded plastic vent assembly cast into the concrete access cover above the aerator. The Singulair aerator shall include plated mounting brackets, NEMA 6 rated electrical connector, UL recognized fractional horsepower motor, molded

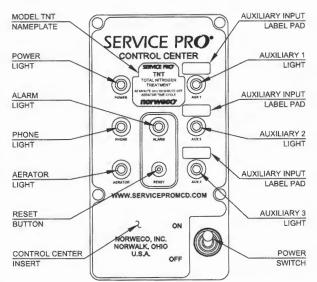


plastic lifting handle, molded plastic air intake screens, molded plastic foam restrictor, stainless steel aspirator shaft and molded glass-filled nylon aspirator tip. The motor shall contain precision manufactured o-ring type seals installed between the motor shell and the machined aluminum endbells to insure watertight integrity is maintained. Molded Viton elastomer shaft seals shall be utilized to protect the bearings from contamination. Only the stainless steel aspirator shaft and glass-filled nylon aspirator tip shall be installed in contact with the liquid. There shall be no submerged electrical motors, bearings, or fixed air piping in the aeration system. Singulair aerator motors shall be designed not to exceed the motor nameplate rating when installed and operated as recommended for the system. The fractional horsepower aerator motor shall be equipped with a foam restrictor to protect the motor against high water and foam. The motor shall be 4 pole, 1725 RPM, 115 volt, 60 Hertz, single phase, ball bearing constructed with a 1.0 service factor. It shall draw less than 4.0 amps when operating at the rated nameplate voltage. Aerator motors without UL recognition have not demonstrated compliance with international electrical standards for safety and reliability and shall not be considered for this application.

BIO-KINETIC®

SERVICE PRO® CONTROL CENTER

The Service Pro electrical control center with MCD technology shall provide Monitoring, Compliance and Diagnostic functions for the Singulair treatment plant using a microprocessor based platform. The Service Pro control center shall contain nonvolatile memory to prevent loss of programming in the event of a power failure. The pre-wired controls shall be mounted in a lockable NEMA rated enclosure designed specifically for outdoor use. Each Service Pro control center shall be a UL listed assembly and shall include a factory-programmed timer, alarm light, reset button, power switch, power light, phone light, aerator alarm light and three auxiliary alarm lights. The control center shall monitor all treatment system operating conditions including aerator over current, aerator under current and open motor circuit. In the event the control center detects one of these conditions, power to the aerator shall be interrupted, a diagnostic sequence shall begin and the visual alarm shall activate. After a programmed recovery interval, an automatic restart attempt shall be initiated. If normal aerator operation does not resume during 24 programmed recovery and restart cycles, the audible alarm shall activate and the



telemetry system shall report the specific condition to the Service Pro monitoring center. In the event that any of the auxiliary inputs detect abnormal operation of the treatment system auxiliary equipment, the audible and visual alarms shall immediately activate and the telemetry system shall report the alarm condition to the monitoring center. The service provider shall automatically be notified by the Service Pro monitoring center of the specific alarm condition using phone, fax or email.

AERATOR TIME CYCLE

A factory-programmed timer built into the Service Pro control center shall provide a total of twelve hours of aerator operation per day. The non-adjustable timer shall create a 60 minute aeration cycle followed by a 60 minute anoxic cycle during which the aerator shall be off. Use of an aerator timer can seriously affect system performance and operating cost. Systems that have not



www.servicepromcd.com

been performance certified, at a timed aeration cycle, by an independent ANSI accredited testing laboratory shall not be considered for this application.

SERVICE PRO® MONITORING CENTER

The Service Pro monitoring center shall include a 128 bit encrypted password protected website for interface with the monitoring center database. Access to the secure website shall be obtained through a unique user name and password that provides tiered access to data from monitored treatment systems. Access level tiers shall include distributors, service providers, regulatory agencies and individual system owners. Distributors and service providers shall be able to create accounts, maintain service records and grant regulatory agencies access to the information. Individual system owners shall be able to view information regarding their own wastewater treatment systems, as well as download and print instructional information. Integrity of stored data shall be maintained through the use of multiple servers operating in geographically isolated locations.

11662-485-A

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:

DATE:

3 23 GY DATE:_

Owner ARTHOR

Jay Prager, Deputy Program Manager Wastewater Permits Program Maryland Department of the Environment

Howard County Health Department

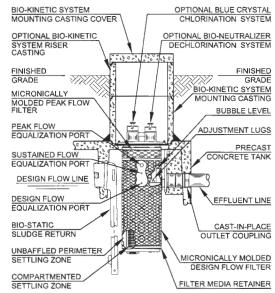
INP FO SIRE \$ RECORDING FEE		29.99 25.00
RECORDEND FEE		
TOTAL		46.88
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SPECIFICATIONS

BIO-KINETIC® SYSTEM

A Bio-Kinetic system shall be installed in the mounting casting(s) above the clarification chamber. Each Bio-Kinetic system shall provide non-mechanical flow equalization through all plant processes including pretreatment, aeration, clarification, tertiary filtration, chlorination and dechlorination. The assembly shall be supplied with locking lugs and removable moisture/vapor shield and shall consist of a design flow and peak flow micronically molded filter.

and shall consist of a design flow and peak flow micronically molded filter, baffled perimeter settling zone, flow distribution deck, lifting handles, level indicator, adjustment lugs, optional chlorination feed tube, unbaffled perimeter settling zone, solids contact zone, vertical inlet zone, compartmented settling zone consisting of 42 baffled chamber plates, effluent stilling well, final discharge zone, adjustable outlet weir, optional dechlorination feed tube, outlet zone and gasketed discharge flange. All components shall be manufactured from inert synthetic materials or rubber, assembled in circular fashion and connected to a plastic outlet coupling. The outlet coupling shall accept a 4" diameter, Schedule 40, PVC pipe. Each Bio-Kinetic system shall be installed with the inverts of the design flow equalization ports located at the normal liquid level of the clarifier. If intermittent flow rates exceed the capacity of the design flow ports, flow shall be held upstream until the intermittent flow dissipates. If the intermittent flow continues to increase, the liquid level may reach a pair of sustained flow equalization ports. With four ports in use, flow through the system increases while continuing to provide flow equalization to all upstream and downstream processes. Peak flow equalization ports are supplied but should not be required in a properly sized system. Optional Blue Crystal and Bio-Neutralizer tablet feed tubes shall be positioned such that the flow-activated chemical cannot make contact with the liquid upstream of the feed tubes.



FLOW EQUALIZATION

The wastewater treatment system shall include a non-mechanical, demand use, flow equalization device. The device shall control normal residential flow rates and reduce typical residential flow surges. The flow equalization rate shall be dependent upon the specific loading pattern and the duration of flow surges. At the 600 gallon per day design loading schedule of NSF Standard 40 and NSF Standard 245, minimum performance of the device shall equalize daily flow an average of 50%.

BLUE CRYSTAL® CHLORINATION SYSTEM (Optional)

The Singulair system shall be furnished complete with a tablet feeder and a six month supply of Blue Crystal disinfecting tablets. Blue Crystal tablets shall be specifically formulated for consistent chlorine dosage and effluent disinfection to the sustained, variable and intermittent flows that are typical of domestic wastewater treatment systems. The tablets shall be manufactured from pure calcium hypochlorite and contain a minimum of 70% available chlorine. Each tablet shall be 2⁵/₈" diameter, compressed to a 1" thickness, weigh approximately 5 ounces and be white in color with blue crystals for easy identification. The tablets shall dissolve in direct proportion to the flow rate, releasing controlled amounts of chlorine.

BIO-NEUTRALIZER® DECHLORINATION SYSTEM (Optional)

The Singulair system shall be furnished complete with a tablet feeder and a six month supply of Bio-Neutralizer dechlorination tablets. The dechlorination tablets shall contain active ingredients specially formulated to chemically neutralize both free and combined chlorine. Each tablet shall be $2^{5}/6$ " diameter, compressed to a $^{13}/_{16}$ " thickness, weigh approximately 5 ounces and be green in color for easy identification. The tablets shall dissolve slowly, releasing controlled amounts of chemical for the instantaneous removal of residual chlorine from the system effluent.

WARRANTY AND EXCHANGE PROGRAM

The manufacturer shall provide a two year limited warranty for each Singulair aerator, Service Pro control center, Bio-Kinetic system and any other Singulair components purchased from the manufacturer. A comprehensive exchange program offers Singulair owners an additional forty-eight years of equipment protection. The distributor shall provide warranty and exchange program details to the regulatory agency, contractor and customer as required.

EQUIPMENT MANUFACTURER



The equipment specified herein shall be the product of a manufacturer having a minimum of seven years experience in the construction of prefabricated wastewater treatment equipment and systems. Bids shall be prepared on the basis of the equipment and material specified herein for purposes of determining the low bid. This is not done, however, to eliminate other products or equipment of equal quality and efficiency. If equipment is to be substituted, approval of such substitution must be made prior to execution of any order. It is assumed that substitution will result in a reduction of cost to the contractor and that if accepted, these savings will be passed along by a reduction in the base bid.

Designation: Model TNT	500 GPD	750 GPD	1000 GPD	1250 GPD	1500 GPD
Daily Treatment Capacity (Gallons Per Day)	500/600	750/800	1000	1250	1500
Total System Capacity (Gallons)	1300	1600	2300	2850	3400
Number of Singulair Aerators	1	1	2	2	2
Number of Bio-Kinetic Systems	1	2	2	3	3
Number of Bio-Static Sludge Returns	1	1	1	2	2
Drawing Number (PC-5-)	7103	7065	7067	7068	7069

SINGULAIR® MODEL TNT DATA CHART

PROGRESS THROUGH SERVICE SINCE 1906



Engineering the future of water and wastewater treatment

DISTRIBUTED LOCALLY BY:

220 REPUBLIC STREET NORWALK, OHIO, USA 44857-1156 TELEPHONE (419) 668-4471 FAX (419) 663-5440 www.norweco.com

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

000207

THIS AGREEMENT is made this <u>9th</u> day of <u>March</u>, among <u>Arthur Lambert</u>, hereinafter referred to as "Owner," the <u>Howard</u> County Health Department hereinafter collectively referred to as the "County," and the Department of the Environment, hereinafter referred to as the "Department." 270 Watersville P&. WHEREAS, Owner owns a tract of land located on <u>3838 Mount Airy Drive</u> in the <u>4th</u> Election District of <u>Howard</u> County, Maryland, and the deed to same is recorded among the Land Records of <u>Howard</u> County, Maryland, in <u>Ellicott City</u> and in Liber **205** Folio <u>543</u>

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.
- 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

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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 Department agrees to grant \$<u>13,421.00</u> toward the cost of installation of the BAT
 System, and financial responsibility is limited to this amount. Owner will present to the
 Department at least <u>3</u> proposals from manufacturer and County certified system
 installers demonstrating the total cost of installation. Operating costs will be at the
 Owner's 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.

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- 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 <u>Howard</u> 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.

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

DATE: 4-2-09

DATE:__

DATE: 3 23 09

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Jay¹Prager, Deputy Program Manager Wastewater Permits Program Maryland Department of the Environment

Howard County Health Department

INP FD SIRE \$ RECORDING FEE		29.09 28.09
Total		46,68
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MIR SLC	Blk	\$ 1898
Apr 15: 2003		81:53 pa

