VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

Accomack County Health Department
P. O. Box / 23191 Front Street
Accomac, VA 23301
(757) 787-5886 Voice
787-5841 Fax

Sewage Disposal System Operation Permit

Property Owner

Gary & Sherri Stewart
13 East 6th Street
NEW CASTLE, DE 19720

Health Dept. ID: **13-100-0414**
Tax Map: **31B1((3))268**
Locality: **Accomack**

Property Location

Property Address: S2 L268 Oyster Bay
Chincoteague, VA 23336
Oyster Bay Subdivision

Directions:

==========

Gary & Sherri Stewart is hereby granted permission to operate a **Residential Alternative Onsite Sewage System** at the above referenced location, under the following parameters:

Daily Flow: 600 gallons
Number of Bedrooms: 4

This permit is issued in accordance with the provisions of Title 32.1, Chapter 6 of the Code of Virginia as Amended, and Section 12VAC 5-610-340 of the Sewage Handling and Disposal Regulations of the Virginia Department of Health. The issuance of an operation permit does not denote or imply any guarantee by the department that the sewage disposal system will function for any specified period of time. It shall be the responsibility of the owner or any subsequent owner to maintain, repair, or replace any sewage disposal system that ceases to operate in accordance with the regulations.

The continued validity of this permit is contingent upon compliance with the operation and maintenance requirements contained in the Owner's Operation and Maintenance Manual and Regulations for Alternative Onsite Sewage Systems of the Virginia Department of Health (12VAC5-613-100 et seq.). Owners are advised to be aware of the operation and maintenance instructions for their alternative onsite sewage system and to follow them. Copies of the operation and maintenance instructions can be found by contacting the local health department for the locality where the onsite sewage disposal system is located.

March 05, 2015	Cathy Plant	Cathy Plant
Effective Date	Environmental Health Technical Specialist	Signature

Completion Statement

Commonwealth of Virginia
State Department of Health

Health Department Identification Number: 13-100-0414

Accomack County Health Department

Name of Company/Corporation/Individual: Boggs Water + Sewage, Inc.

Address: P. O. Box 333 Melfa, VA 23410 Telephone: 757-787-4000

Owner's Name: Gary + Sherri Stewart

Owner's Address: 13 East 6th Street New Castle, DE 19720-5087

Location of Installation: Lot: 268 Block:

Section: II Subdivision: Oyster Bay

Other:

I hereby certify that the onsite sewage disposal system has been installed and completed in accordance with the construction permit issued (Date) 10/29/13 and is in compliance with Part D of the Sewage Handling and Disposal Regulations and when appropriate the plans and specifications for the project.

10/21/14
Date

President
Signature and Title

C.H.S. 200 Rev. 4/93

AOSE/PE Inspection Report and Completion Statement

Commonwealth of Virginia
State Department of Health

Health Department Identification Number: 13-100-0414 Tax Map: 31B1((3))268

_____ Health Department

Name of OSE/PE: ARTHUR T. NIELSEN License Number: 12744 PE

Address: PO Box 347 ONANCOCK VA 23417 Telephone: 757-787-2654

Contractors Name: BOGGS WATER & SEWER

Owner's Name: GARY & SHERI L. STEWART

Owner's Address: 13 EAST 6TH ST. NEW CASTLE DE 19720

Location of Installation: Subdivision: OYSTER BAY Section: II Block: C Lot: 268

Other: _____

Component	Inspection Results Comments, Materials, Etc. Deficiencies Observed, Date Deficiencies Observed Corrective Action Required	Date Approved
Water Supply Location and Construction		N/A.
Building Sewer		10/24
Septic Tank		10/24
Inlet-Outlet Structure		10/24
Pump and Pump Station		10/24
Conveyance Method		10/24
Distribution Box or Pressure Manifold		10/24
Header, Conveyance, Return, etc. Lines		10/24
Percolation Lines, Drip, Chambers, etc.		—
Absorption Trenches and Dispersal Field		10/24
(Other Components: treatment unit, etc.)	UV Light	10/24

Attach observed deficiencies and corrective actions taken on a separate completion statement as necessary.

OSE/PE Completion Statement: As-built Drawing

Commonwealth of Virginia
State Department of Health

Health Department Identification Number: 13-100-0414 Tax Map: 31B1 ((3)) 268

Triangulate critical system components to fixed reference points.

installed per permit drawings.

☐ Check here if as-built drawing is on a separate page attached to this form
(Attachment must display Health Dept. Identification Number, tax map number, and must be signed and dated by AOSE/PE).

I hereby certify that on 10/22/14 (date), I, or an employee under my direct supervision, inspected this sewage system's construction. The onsite sewage system has been installed and completed in accordance with the construction permit issued on 10/29/13 (date) and is in compliance with the *Sewage Handling and Disposal Regulations* (12 VAC 5-610 et seq). *Private Well Regulations* (12 VAC 5-630 et seq), when applicable, and the plans and specifications for the project.

OSE/PE Signature: Arthur T. Nielsen PE Date: 10/24/14

Print Name: ARTHUR T. NIELSEN

OSE Form BB: Revised 7/2/2009

AS BUILT

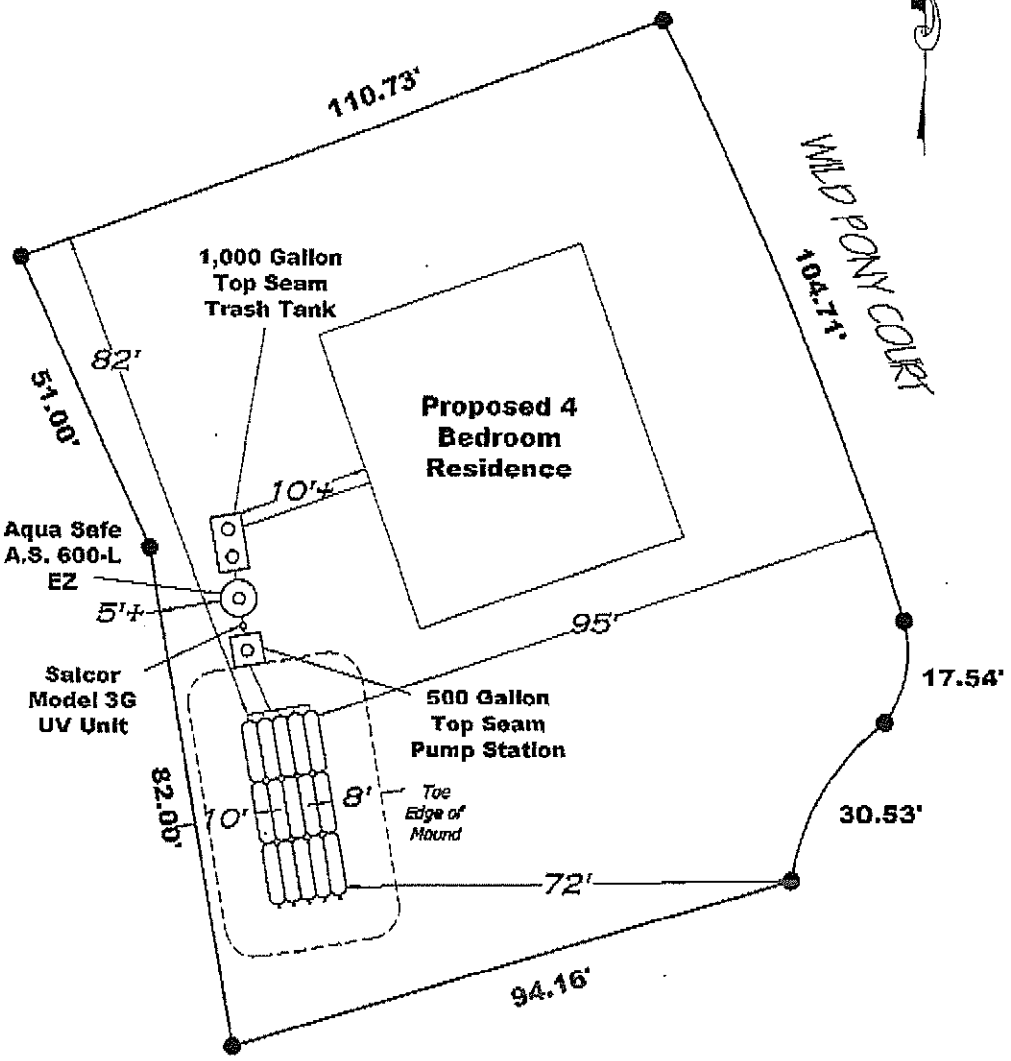
H.D.I. # _____

Tax Map #: 31B1((3))268
Lot 268
Size: 12,454 sq. ft.

Install:

- **150- L.F. of Flowtech Model FTSG103H-1 at grade on a 12" layer of ASTM C33 Sand in a 12.5'x30' Pad Configuration (5 Row, 30' in length, with 1.25" LPP Laterals)**
- **1- 1,000 Gallon Top Seam Trash Tank**
- **1- Aqua Safe AS 600-L EZ**
- **1- Salcor Model 3G UV Disinfection Unit**
- **1- 500 Gallon Top Seam Pump Station**
- **1- Zoeller N53 Effluent Pump**
- **1- Polylok High Pressure Filter (Model # 3014-SS)**
- **1- SJE Rhombus Model 115 Audible/Visual Control Panel**
- **375- S.F. of Geo-Textile Cover Fabric to be placed over Flowtech bundles**

Note:
Property is located in Oyster Bay II. Army Corps of Engineers has ruled that Oyster Bay is a grandfathered subdivision and therefore will not fall under their wetlands jurisdiction & enforcement.



NES Nielsen Engineering Services

Arthur T. (Tom) Nielsen
PE, BCE, MBA, MACFE

21222 Wise's Point Lane
PO Box 347
Onancock, VA 23417-0347

Telephone (757) 787-2654
Fax (757) 787-7444

SCALE: 1"=30'

0 30' 60'

DRAFTER: CMP

Accomack County Health Department
P. O. Box 177 / 23191 Front Street
Accomac, VA 23301
Tel: (757) 787-5880 / Fax: (757) 787-5841

December 1, 2014

Notice for Recordation: AOSS Operation and Maintenance Required

TO: Gary Stewart & Sherri Stewart

FROM: Cathy L. Plant
Environmental Health Technical Specialist

Property: Tax Map# 031B10300026800
HDID #:13-100-0414
Address: Oyster Bay Section II Lot 268
Locality: Accomack

TO WHOM IT MAY CONCERN:

The Accomack County Health Department has approved an alternative onsite sewage system (AOSS) for use for the property identified above as long as the system is properly operated and maintained and performs in accordance with the *Sewage Handling and Disposal Regulations*(12 VAC 5-610-10 *et seq.*) and the *Regulations for Alternative On-Site Sewage Systems* (12 VAC 5-613-10 *et seq.*)

This permit is issued in accordance with the provisions of Title 32.1, Chapter 6 of the *Code of Virginia* as Amended, and §12VAC5-610-340 of the *Sewage Handling and Disposal Regulations* of the Virginia Department of Health. The continued validity of this permit is contingent upon compliance with the operation and maintenance requirements contained in the Owner's Operation and Maintenance Manual and the *Regulations for Alternative Onsite Sewage Systems* of the Virginia Department of Health (12VAC5-613-100 et seq.). Owners are advised to be aware of the operation and maintenance instructions for their alternative onsite sewage system and to follow them. Copies of the operation and maintenance instructions should have been given to the original owner by the system designer and should be passed on from owner to owner; they can also be found by contacting the local health department for the locality where the onsite sewage disposal system is located.

This Notice must be recorded in the owner's name in the grantor's index of the land records of the Clerk of the Circuit Court of the county having jurisdiction over the property. You must furnish the Accomack County Health Department with certification from the Clerk of the Circuit Court showing the deed book and page number or the instrument number upon which the notice was recorded before you can receive your permit to operate the on-site sewage treatment and disposal system.

As owners of the property, we acknowledge that the sewage disposal system designed to serve the dwelling requires adherence to the Owner's Operation and Maintenance Manual and to Part III, Operation and Maintenance, found in the *Regulations for Alternative Onsite Sewage Systems* of the Virginia Department of Health (12VAC5-613-100 et seq.).

Gary Stewart

1/17/2015
Date

STATE OF Delaware,
COUNTY/CITY OF NewCastle, to wit:
Subscribed and acknowledged before me this 17th day of January, ~~2014~~ 2015 by Gary Stewart.

Meghan Ilene Clouser
NOTARY PUBLIC for the
STATE OF _____ at large

(SEAL)

My Commission Expires: MEGHAN ILENE CLOUSER NOTARY PUBLIC, STATE OF DELAWARE MY COMMISSION EXPIRES JUNE 16, 2016

Registration Number: _____

Sherri L. Stewart
Sherri Stewart

1/17/15
Date

STATE OF DE
COUNTY/CITY OF New Castle, to wit:

Subscribed and acknowledged before me this 17th day of January, ~~2014~~ 2015 by Sherri Stewart.

Meghan Ilene Clouser
NOTARY PUBLIC for the
STATE OF DE AT LARGE

(SEAL)

My Commission Expires: MEGHAN ILENE CLOUSER NOTARY PUBLIC, STATE OF DELAWARE MY COMMISSION EXPIRES JUNE 16, 2016

Registration Number:

~~Page 4 of 4~~

COMMONWEALTH OF VIRGINIA
COUNTY OF ACCOMACK, to-wit,

I certify the information provided herein is true and accurate to the best of my knowledge and belief:

Cathy L. Plant
Cathy L. Plant

The foregoing instrument was acknowledged before me this 2nd day of December 2014, by, Cathy L. Plant Environmental Health Specialist, for the Accomack County Health Department, on behalf of the health department.

MINNIE D. PARKER
Notary Public
Commonwealth of Virginia
Reg. #100539
My Commission Exps. 11/30/2016

Minnie D. Parker
NOTARY PUBLIC for the
COMMONWEALTH OF VIRGINIA AT LARGE

(SEAL)

My Commission Expires: November 30, 2016

Registration Number: #100539

INSTRUMENT #150000649
RECORDED IN THE CLERK'S OFFICE OF
ACCOMACK COUNTY ON
FEBRUARY 25, 2015 AT 10:33AM
SAMUEL H. COOPER, CLERK
RECORDED BY: NJR

OFFICIAL RECEIPT
ACCOMACK COUNTY CIRCUIT COURT
DEED RECEIPT

DATE: 02/25/15 TIME: 10:33:15 ACCOUNT: 001CLR150000649 RECEIPT: 15000001737
CASHIER: NJR REG: CQ10 TYPE: OTHER PAYMENT: FULL PAYMENT
INSTRUMENT : 150000649 BOOK: PAGE: RECORDED: 02/25/15 AT 10:33
GRANTOR: STEWART, GARY EX: N LOC: CO
GRANTEE: ACCOMACK COUNTY HEALTH DEPARTMENT EX: N PCT: 100%
AND ADDRESS : , .
RECEIVED OF : BOGGS DATE OF DEED: 12/01/14
CASH: $21.00
DESCRIPTION 1: CHINCOTEAGUE PAGES: 0 OP: 0
2: NAMES: 0
CONSIDERATION: .00 A/VAL: .00 MAP: 031B10300026800
PIN:

301	DEEDS	14.50	145	VSLF	1.50
106	TECHNOLOGY TRST FND	5.00			

TENDERED : 21.00
AMOUNT PAID: 21.00
CHANGE AMT : .00

CLERK OF COURT: SAMUEL H. COOPER

PAYOR'S COPY
RECEIPT COPY 1 OF 2

VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

Accomack County Health Department
P. O. Box 177 / 23191 Front Street
Accomac, VA
23301
(757) 787-5886 Voice
787-5841 Fax

Sewage System Construction Inspection Report

Health Department ID Number: **13-100-0414**

Tax Map: 31B1((3))268

System Location

Owner: Gary & Sherri Stewart
Property Address: S2 L268 Oyster Bay
County: Accomack
Subdivision: Oyster Bay
Section II Block C Lot 268

Sewer Line

Diameter: 4 "
Material: Sch 40 Plastic
Satisfactory: Yes
Date Inspected: 10/22/2014
Comments:

Septic Tank

Volume: 1000 gallons
Material: Concrete (pre-cast)
Grade on Tees:
Satisfactory: Yes
Date Inspected: 10/22/2014
Comments:

Treatment Device

Make and Model: Ecological Tanks, Inc.
Capacity: 600 gallons/day
Satisfactory: Yes
Date Inspected: 10/22/2014
Comments:

Pump System

Make and Model: Zoeller N53
Chamber Size: 500 gallons
Drawdown: 75 gal 6.5 inches
1/4 Day Storage: 150
High Water Alarm: Yes
# of Pumps: Simplex
Timed Dosing: No
Satisfactory: Yes
Date Inspected: 10/22/2014
Comments:

Conveyance Line

Method: Pump
Pipe Size: 2"
Material: Sch 40 Plastic
Satisfactory: Yes
Date Inspected: 10/22/2014
Comments:

Distribution System and Header Lines

Method: Manifold
Box Material:
Number of Ports:
Satisfactory: Yes
Date Inspected: 10/22/2014
Comments:

Bed/Pad Dispersal Area

Bed/Pad Dimensions: 20' x 12.5'
Install Depth: 12 " Above Grade
Satisfactory: Yes
Date Inspected: 10/22/2014
Comments:

Overall Construction

Overall Construction: Yes
Construction Comments: Lacking Notice for Recordation; received on March 3, 2015
Completion Statement Received Date: October 27, 2014
Inspected by: Nielsen, Arthur T. PE

OPERATION AND MAINTENANCE MANUAL

Lot 268 Sect II. Sub Sect "C"
Oyster Bay
Chincoteague, VA
HEALTH DEPT. ID # 13-100-0414

PREPARED BY:

NIELSEN ENGINEERING SERVICES
P.O. BOX 347
ONANCOCK, VA 23417

Maintenance Schedule:

State Health Department regulations require that alternative systems be serviced a minimum of every twelve months. However this maintenance manual requires that the system be checked by an operator every six (6) months per the manufacturer's recommendations. Also the UV system shall be checked and the UV light and filter cleaned at each inspection.

Filter shall be cleaned annually.

Based on manufacturer's recommendations it is suggested that owner consider having septic checked and UV lamp cleaned on a semi-annual basis.

For any systems that are not functioning call Boggs Water & Sewerage, Inc. @ 1-757-787-4000. Parts for the system will be available through them. If for some reason they are not available, the following are the suppliers of the equipment:

Ecological Tanks (Aqua Safe)	1-318-644-0397
Sallor	1-760-731-0745

Within 60 days of receipt of operation permit, owner shall provide to the Health Department the name and address of their service contractor. Service contractor shall be trained and certified by Aqua-Safe.

AS BUILT

H.D.I. # _____

Tax Map #: 31B1((3))268
Lot 268
Size: 12,454 sq. ft.

Install:

150- L.F. of Flowtech Model FTSG103H-1 at grade on a 12" layer of ASTM C33 Sand in a 12.5'x30' Pad Configuration (5 Row, 30' in length, with 1.25" LPP Laterals)

1- 1,000 Gallon Top Seam Trash Tank

1- Aqua Safe AS 600-L EZ

1- Salcor Model 3G UV Disinfection Unit

1- 500 Gallon Top Seam Pump Station

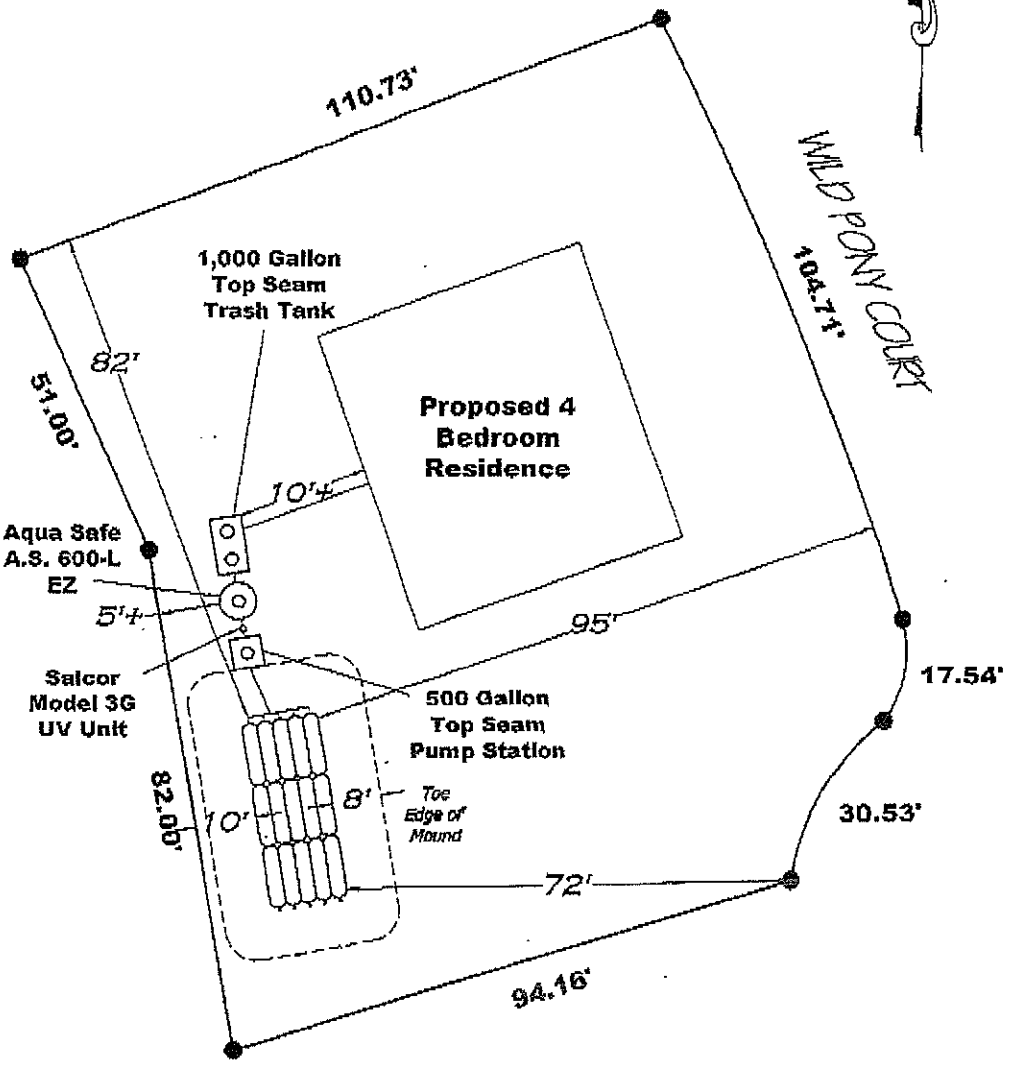
1- Zoeller N53 Effluent Pump

1- Polylok High Pressure Filter (Model # 3014-SS)

1- SJE Rhombus Model 115 Audible/Visual Control Panel

375- S.F. of Geo-Textile Cover Fabric to be placed over Flowtech bundles

Note:
Property is located in Oyster Bay II. Army Corps of Engineers has ruled that Oyster Bay is a grandfathered subdivision and therefore will not fall under their wetlands jurisdiction & enforcement.



NES Nielsen Engineering Services

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Telephone (757) 787-2654
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SCALE: 1"=30'

0 30' 60'

DRAFTER: CMP

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

Accomack County Health Department
P. O. Box 177 / 23191 Front Street
Accomac, VA
23301
(757) 787-5880 Voice
(757) 787-5841 Fax

October 29, 2013

Gary & Sherri Stewart
13 East 6th Street
NEW CASTLE, DE 19720

Subject: **Alternative Onsite Sewage Disposal System, Owner Responsibilities**
Health Department ID Number: **13-100-0414**
Tax Map Number/GPIN: **31B1((3))268**
Physical Address: S2 L268 Oyster Bay Accomack

Dear Mr. & Mrs. Stewart:

Records on file at the Accomack County Health Department indicate that you are the owner of an Alternative Onsite Sewage System (AOSS) located at S2 L268 Oyster Bay, CHINCOTEAGUE, VA. This letter is to provide you with important information regarding owner responsibilities for the operation and maintenance of your AOSS.
The *Regulations for Alternative Onsite Sewage Systems* (the "*AOSS Regulations,*" 12 VAC 5-613) became effective on December 7, 2011. These regulations can be found online at http://www.vdh.virginia.gov/EnvironmentalHealth/Onsite/regulations/index.htm.
The Commonwealth of Virginia State Board of Health *Emergency Regulations for Alternative Onsite Sewage Systems* (12 VAC 5-613-120) outlines the owner's responsibilities for alternative onsite sewage systems. Owners are now required to:

1. Have the **AOSS operated and maintained by a licensed operator.** A list of licensed operators can be obtained by visiting the Department of Professional and Occupational Regulation at www.dpor.virginia.gov. Select "License Lookup" from the menu, type an asterisk (*) in the name field, check the "Operators" box under "Onsite Sewage Systems Professionals" and click "search."

2. Have a **licensed operator visit** the AOSS at the frequency required by the regulations.

3. Have a licensed operator collect any **samples** required by the regulations (specific laboratory sampling requirements depend on the date your application was filed, the size of the treatment system, the approval status of the treatment unit, whether or not disinfection was required, and whether or not there is direct dispersal to groundwater. Laboratory sampling is not required for any small AOSS with an installed soil treatment area that is sized for septic tank effluent and complies with the requirements of 12VAC5-610 for septic tank effluent. Please consult your Operation and Maintenance Manual, the system designer, an Operator, or the Health Department if you have questions.).

4. Keep a copy of the **maintenance log** provided by the operator on the property where the AOSS is located, make the log available to the health department upon request, and transfer the log to any future owner of the property.

5. Keep a copy of the **Operation and Maintenance (O&M) Manual** for the AOSS on the property where the system is located, make the manual available to the health department upon request, and transfer the O&M Manual to any future owner.

6. Comply with the onsite sewage disposal requirements contained in any local ordinance adopted pursuant to the Chesapeake Bay Preservation Act (§10.1-2100 of the *Code of Virginia)* and the Chesapeake Bay Preservation Area Designation and Management Regulations (9 VAC 10-20) if the AOSS is located within a designated Chesapeake Bay preservation area.

Proper operation and maintenance of an AOSS is required by law and is necessary to ensure continued functioning of the system and may prevent premature failure of the system. Operation and maintenance information for your system may be found by contacting the system designer, the local health department, or by visiting the VDH website at http://www.vdh.virginia.gov/EnvironmentalHealth/Onsite/newsofinterest/index.htm.
If you have any questions regarding this letter or believe that you received this letter in error, please contact me at (757) 787-5880. Your cooperation and timely response will be appreciated.

Sincerely,

Cathy Plant

Virginia Department of Health

COMMONWEALTH of VIRGINIA

EASTERN SHORE HEALTH DISTRICT

ACCOMACK COUNTY HEALTH DEPARTMENT
23191 FRONT STREET
PO BOX 177
ACCOMAC, VIRGINIA 23301-0177

PHONE (757) 787-5880 OR 824-5616

NORTHAMPTON COUNTY HEALTH DEPARTMENT
7114 LANKFORD HIGHWAY
PO BOX 248
NASSAWADOX, VIRGINIA 23413-0248

PHONE (757) 442-6228

December 1, 2014

Gary & Sherri Stewart
13 East 6th Street
New Castle, Delaware 19720-5087

Re: Location:Oyster Bay II Lot 268 Chincoteague
Tax Map# 31B1((3))268
HDID#13-100-0414

Dear Mr. & Mrs. Stewart:

This letter is in regards to your Alternative Onsite Sewage System Construction Permit which was installed on October 24, 2014. Please find enclosed a Notice for Recordation document regarding your alternative onsite sewage system. This document needs to be signed, recorded and returned to the health department.

Section 15.2-2157 E of the Code of Virginia states that the State Health Commissioner shall require, as a precondition to the issuance of an alternative onsite sewage system operation permit, the property owner record a document identifying the maintenance regulation for the sewage system in the land records of the clerk of the circuit court.

We have provided you with a "Notice for Recordation" with this letter. Please take this "Notice for Recordation" and have it recorded at the Accomack County Clerk of Court in Accomac, Virginia. The Clerk of Court's office is located at 23316 Courthouse Avenue. The Clerk of Court can be contacted at (757)787-5776. This recordation can be done via the U.S. mail, as well. There is a recordation fee.

Once recorded, please bring/mail the recorded paperwork to the Accomack County Health Department, located at 23191 Front Street/ POB 177, Accomac, Virginia 23301. The Operation Permit will then be issued to you.

If we do not receive this document the health department will be unable to issue you a Sewage System Operation Permit. Additionally, we will be unable to approve any future building permits for the property. If you plan to sell your property in the future, not having an Operation Permit may affect the sale of your property.

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

Please feel free to call me at (757) 414-6251 if you have any questions.

Sincerely,

Cathy L. Plant

Cathy L. Plant
Env. Health Tech. Spec.

Accomack County Health Department
P. O. Box 177 / 23191 Front Street
Accomac, VA 23301
Tel: (757) 787-5880 / Fax: (757) 787-5841

December 1, 2014

Notice for Recordation: AOSS Operation and Maintenance Required

TO: Gary Stewart & Sherri Stewart

FROM: Cathy L. Plant
Environmental Health Technical Specialist

Property: Tax Map# 031B10300026800
HDID #:13-100-0414
Address: Oyster Bay Section II Lot 268
Locality: Accomack

TO WHOM IT MAY CONCERN:

The Accomack County Health Department has approved an alternative onsite sewage system (AOSS) for use for the property identified above as long as the system is properly operated and maintained and performs in accordance with the *Sewage Handling and Disposal Regulations*(12 VAC 5-610-10 *et seq.*) and the *Regulations for Alternative On-Site Sewage Systems* (12 VAC 5-613-10 *et seq.*)

This permit is issued in accordance with the provisions of Title 32.1, Chapter 6 of the *Code of Virginia* as Amended, and §12VAC5-610-340 of the *Sewage Handling and Disposal Regulations* of the Virginia Department of Health. The continued validity of this permit is contingent upon compliance with the operation and maintenance requirements contained in the Owner's Operation and Maintenance Manual and the *Regulations for Alternative Onsite Sewage Systems* of the Virginia Department of Health (12VAC5-613-100 et seq.). Owners are advised to be aware of the operation and maintenance instructions for their alternative onsite sewage system and to follow them. Copies of the operation and maintenance instructions should have been given to the original owner by the system designer and should be passed on from owner to owner; they can also be found by contacting the local health department for the locality where the onsite sewage disposal system is located.

This Notice must be recorded in the owner's name in the grantor's index of the land records of the Clerk of the Circuit Court of the county having jurisdiction over the property. You must furnish the Accomack County Health Department with certification from the Clerk of the Circuit Court showing the deed book and page number or the instrument number upon which the notice was recorded before you can receive your permit to operate the on-site sewage treatment and disposal system.

As owners of the property, we acknowledge that the sewage disposal system designed to serve the dwelling requires adherence to the Owner's Operation and Maintenance Manual and to Part III, Operation and Maintenance, found in the *Regulations for Alternative Onsite Sewage Systems* of the Virginia Department of Health (12VAC5-613-100 et seq.).

_____ _____

Gary Stewart Date

STATE OF _____,

COUNTY/CITY OF _____, to wit:

Subscribed and acknowledged before me this ____ day of _____, 2014 by Gary Stewart.

_____ _____

NOTARY PUBLIC for the (SEAL)

STATE OF _____at large

My Commission Expires:_____

Registration Number:_____

_____ _____

Sherri Stewart Date

STATE OF _____

COUNTY/CITY OF _____, to wit:

Subscribed and acknowledged before me this ____ day of _____, 2014 by Sherri Stewart.

_____ _____

NOTARY PUBLIC for the (SEAL)
STATE OF _____ AT LARGE

My Commission Expires:_____

Registration Number:_____

COMMONWEALTH OF VIRGINIA
COUNTY OF ACCOMACK, to-wit,

I certify the information provided herein is true and accurate to the best of my knowledge and belief:

Cathy L. Plant

Cathy L. Plant

The foregoing instrument was acknowledged before me this 2nd day of December 2014, by, Cathy L. Plant Environmental Health Specialist, for the Accomack County Health Department, on behalf of the health department.

MINNIE D. PARKER
Notary Public
Commonwealth of Virginia
Reg. #100539
My Commission Exps. 11/30/2016

Minnie D. Parker

NOTARY PUBLIC for the
COMMONWEALTH OF VIRGINIA AT LARGE

(SEAL)

My Commission Expires: November 30, 2016

Registration Number: # 100539

Accomack County Health Department
P. O. Box 177 / 23191 Front Street
Accomac, VA 23301
Tel: (757) 787-5880 / Fax: (757) 787-5841

October 29, 2013

Notice for Recordation: AOSS Operation and Maintenance Required

TO: Gary Stewart & Sherri Stewart

FROM: Cathy L. Plant
Environmental Health Technical Specialist

Property: Tax Map# 031B10300026800
HDID #: 13-100-0414
Address: Oyster Bay Section II Lot 268
Locality: Accomack

TO WHOM IT MAY CONCERN:

The Accomack County Health Department has approved an alternative onsite sewage system (AOSS) for use for the property identified above as long as the system is properly operated and maintained and performs in accordance with the *Sewage Handling and Disposal Regulations*(12 VAC 5-610-10 *et seq.*) and the *Regulations for Alternative On-Site Sewage Systems* (12 VAC 5-613-10 *et seq.*)

This permit is issued in accordance with the provisions of Title 32.1, Chapter 6 of the *Code of Virginia* as Amended, and §12VAC5-610-340 of the *Sewage Handling and Disposal Regulations* of the Virginia Department of Health. The continued validity of this permit is contingent upon compliance with the operation and maintenance requirements contained in the Owner's Operation and Maintenance Manual and the *Regulations for Alternative Onsite Sewage Systems* of the Virginia Department of Health (12VAC5-613-100 et seq.). Owners are advised to be aware of the operation and maintenance instructions for their alternative onsite sewage system and to follow them. Copies of the operation and maintenance instructions should have been given to the original owner by the system designer and should be passed on from owner to owner; they can also be found by contacting the local health department for the locality where the onsite sewage disposal system is located.

This Notice must be recorded in the owner's name in the grantor's index of the land records of the Clerk of the Circuit Court of the county having jurisdiction over the property. You must furnish the Accomack County Health Department with certification from the Clerk of the Circuit Court showing the deed book and page number or the instrument number upon which the notice was recorded before you can receive your permit to operate the on-site sewage treatment and disposal system.

As owner of the property, I acknowledge that the sewage disposal system designed to serve the dwelling requires adherence to the Owner's Operation and Maintenance Manual and to Part III, Operation and Maintenance, found in the *Regulations for Alternative Onsite Sewage Systems* of the Virginia Department of Health (12VAC5-613-100 et seq.).

_____ _____

Gary Stewart Date

COMMONWEALTH OF VIRGINIA,

COUNTY/CITY OF _____, to wit:

Subscribed and acknowledged before me this ____ day of _____,2013 by

Gary Stewart.

_____ _____

NOTARY PUBLIC for the (SEAL)
COMMONWEALTH OF VIRGINIA AT LARGE

My Commission Expires:_____

Registration Number:_____

As owner of the property, I acknowledge that the sewage disposal system designed to serve the dwelling requires adherence to the Owner's Operation and Maintenance Manual and to Part III, Operation and Maintenance, found in the *Regulations for Alternative Onsite Sewage Systems* of the Virginia Department of Health (12VAC5-613-100 et seq.).

_____ _____

Sherri Stewart Date

COMMONWEALTH OF VIRGINIA,

COUNTY/CITY OF _____, to wit:

Subscribed and acknowledged before me this ____ day of _____,2013 by Sherri Stewart.

_____ _____

NOTARY PUBLIC for the (SEAL)
COMMONWEALTH OF VIRGINIA AT LARGE

My Commission Expires:_____

Registration Number:_____

COMMONWEALTH OF VIRGINIA
COUNTY OF NORTHAMPTON, to-wit,

I certify the information provided herein is true and accurate to the best of my knowledge and belief:

Cathy L. Plant
Cathy L. Plant

The foregoing instrument was acknowledged before me this 29th day of October 2013, by, Cathy L. Plant Environmental Health Technical Specialist, for the Accomack County Health Department, on behalf of the health department.

NANCY D. DECKER
Notary Public
Commonwealth of Virginia
Reg. #362430
My Commission Exps. 12/31/13

Nancy D Decker
NOTARY PUBLIC for the
COMMONWEALTH OF VIRGINIA AT LARGE

(SEAL)

My Commission Expires: December 31, 2013

Registration Number: 362430

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

Accomack County Health Department
P. O. Box 177 / 23191 Front Street
Accomac, VA 23301
(757) 787-5880
(757) 787-5841 Fax

PE Sewage Disposal System Construction Permit Letter (COV 32.1-163.6)

October 29, 2013

Gary & Sherri Stewart
13 East 6th Street
NEW CASTLE, DE 19720

RE: Tax Map: 31B1((3))268
HDID: 13-100-0414

Dear Mr. & Mrs. Stewart:

This letter and the attached drawings, specifications and calculations dated September 16, 2013 and October 10, 2013 constitute your **permit** to install a sewage disposal system on the property referenced above. Your application for a permit was submitted pursuant to §32.1-163.6 of the *Code of Virginia,* which requires the Virginia Department of Health (VDH) to accept designs for onsite sewage systems from individuals licensed as Professional Engineers (PEs). This law allows PEs to design onsite sewage systems that do not fully comply with the *Sewage Handling and Disposal Regulations* (12 VAC 5-610-10 *et seq.)* and requires VDH to accept such designs provided they comply with standard engineering practices, performance requirements set by the Board of Health, and certain horizontal setback requirements necessary to protect public health and the environment. VDH hereby recognizes that the design submitted by **Nielsen, Arthur T., P.E.** complies with the requirements of the *Code of Virginia* and the *Regulations for Alternative Onsite Sewage Systems* and grants permission to install the system as designed in the area shown on the attached plans and specifications.

If modifications or revisions are necessary between now and when the system is constructed, please contact the PE who designed the system upon which this permit is based. Should revisions be necessary during construction, your contractor should consult with the PE. The PE is authorized to make minor adjustments in the location or design of the system provided that adequate documentation is provided to the Accomack County Health Department.

The PE that submitted the design for this permit is required by the *Sewage Handling and Disposal Regulations* to conduct a final inspection of this sewage system when it is installed and to submit an inspection report and completion statement to the Accomack County Health Department. The health department is not required to inspect the installation, but may do so at its sole discretion. The sewage system may not be placed into operation until you have obtained an Operation Permit from the Accomack County Health Department. If your PE did not submit an Operation and Maintenance Manual for review and approval with the plan package, then (s)he will be required to do so prior to issuance of an Operation Permit.

This Construction Permit is null and void if site and soil conditions are changed from those shown on your application or if conditions are changed from those shown on the attached plans and specifications. VDH may revoke or modify any permit if, at a later date, it finds that the system would threaten public health or the environment.

This permit approval has been issued in accordance with applicable regulations based on the information and materials provided at the time of application. There may be other local, state, or federal laws or regulations that apply to the proposed construction of this onsite sewage system. The owner is responsible at all times for complying with all applicable local, state, and federal laws and regulations. If you have any questions, please contact me.

This permit **expires April 26, 2015**. This permit is **not transferable** to another owner or location.

Sincerely,

Cathy Plant

Cathy Plant
Environmental Health Technical Specialist

C: Nielsen, Arthur T., P.E.

WHAT YOU WILL NEED TO GET YOUR SEPTIC SYSTEM OPERATION PERMIT

- Your system must have a **satisfactory inspection** at the time of installation. This will be done by the designer of your permitted system, a private OSE or PE. Your OSE or PE must submit a copy of the inspection results, complete with an as-built diagram, to the Health Department.
- Please ensure that your contractor turns in a **Completion Statement** to the local Health Department after installation.
- Should you choose to reduce the size of your installed system using an approved substituted system product, a signed **Notice of Substitution** must be received by the local Health Department.
- If your permit is for an alternative system, you must sign, have notarized, and record the attached **Notice of Recordation** in your locality's land records. Please bring proof of this recordation to the local Health Department

IF YOUR PERMIT IS FOR BOTH A SEPTIC SYSTEM AND WELL YOU WILL ALSO NEED

- Your well must have **satisfactory inspection** results after installation. Please give the Health Department several days notice to schedule this inspection before your Operation Permit will be requested.
- The Health Department must receive a copy of your **water sample test result** being negative/satisfactory for coliform bacteria. You are responsible for performing this test and ensuring the results are received at the Health Department
- Please ensure that your Well Driller submits a Uniform **Water Well Completion Statement or GW-2** to the Health Department, including documentation of a proper well abandonment if required by permit

Allow 5 business days after the last piece of documentation is received for the Operation Permit to be issued. To avoid delays, clearly label each piece of documentation with the property Tax Map number and HDID number shown above and on your construction permit. *Please note that due to the individual circumstances of your permit there may be additional required items not covered by this checklist.*

If you have any questions about any of the items on this list, please do not hesitate to contact the Accomack County Health Department at (757) 787-5880.

Site and Project Information:

Project Name: Lot 268 Section II Oyster Bay HDI 13-100-0414
Owners: Gary & Sherri Stewart
Location: Oyster Bay Section II Lot 268 Tax Map #31B1((3))268

Design Engineer: Arthur T. Nielsen, P.E. – Nielsen Engineering Services
AOSE: Robert Savage, AOSE, Affordable Septic Solutions
EHS: Cathy Plant, REHS, AOSE – Accomack County HD
VDH Environmental Engineer Consultant: Stephen Elgin, P.E.
Received Date: October 1, 2013, Revisions received October 10, 2013
(Original and revisions received by SRE, October 10, 2013)
Processing Deadline: October 22, 2013 (per Code of Virginia §32.1-163.6)

Project Description: Onsite sewage treatment/dispersal system to serve wastewater generated by a new 4 bedroom residence
Design Flow: 600 gpd
Design Flow Justification: SHDR (150 gpd/bedroom)
Design Effluent Treatment: TL-3 + disinfection (UV)
Dispersal Area Description: New dispersal system installed in broad flat area; 0 inch to seasonal water table; free water at 36 inches; estimated mpi 25.

Design Summary: New 1000 gallon septic tank ► 600 gpd capacity Aqua Safe AS600L EZ ATU ► Salcor 3G UV ► 500 gallon pump chamber ► LPP within chambers ►sand mound with minimum 12 inches of sand below chamber bottom and minimum of 6 inch cover over top of chambers

Sand pad surface is 12.5 feet by 30 feet (375 sf): 600 gpd/375 sf = 1.6 gpd/sf OK

18.5 feet by 36 feet at base of mound (including toe) (666 sf): 600 gpd/(666) = 0.9 gpd/sf OK

5 rows of 3 chambers each with LPP suspended in chambers

75 gallon dose (fills piping about 8 times) = 0.2 gal/sf per dose based on area directly under chambers

Polylok High Pressure Filter Model 3014-SS proposed on the outlet side of the pump.

Emergency Storage OK 150 gallons

Discussion:

The project is new construction with a zero inch water table site.

Review Comments and Resolution:

1. There is an apparent typographical error on page 10 of 21, where it is indicated that the LPP orifices are 5' on center. As indicated on page 11 of 21, the correct orifice spacing is apparently 3' on center. The design engineer should be requested to provide a corrected page 10, since that is the detailed drawing of the pad configuration, (page 11 is a calculation page).

Outstanding Issues: None.

Recommendation:

_X_ **Approve**
___ **Deny**
___ **Return**

Date: October 21, 2013

Plant, Cathy (VDH)

From: nielsenat@verizon.net
Sent: Thursday, October 24, 2013 12:27 PM
To: Plant, Cathy (VDH)
Subject: Re: Gary & Sherri

Cathy: You have my permission to make the change.--Thanks!!! Tom N.

On 10/24/13, Plant, Cathy (VDH)<Cathy.Plant@vdh.virginia.gov> wrote:

Tom:

Do you want to come in and fix this typo, or do you want me to fix it with your permission?

Your choice.

Cathy

CATHY L. PLANT, REHS, AOSE

ENVIRONMENTAL HEALTH TECHNICAL SPECIALIST

EASTERN SHORE HEALTH DISTRICT

POB 177

ACCOMAC, VA 23301

PHONE: (757)302-4272

Commonwealth of Virginia

Application for a Sewage Disposal System & Well Construction Permit

Type of sewage system: X New ___Repair ___Expanded ___Conditional (VDH Use)

Accomack County Health Department Health Dept. ID # 13-100-0414

Date: Tax Map # 31B1((3))268

To Be Completed By The Applicant

Owner Gary & Sherri L. Stewart Address 13 East 6th Street Phone 302-322-3579
New Castle, DE 19720-5087

Agent Nielsen Engineering Services Address P.O. Box 347 Phone 757-787-2654
Onancock, VA 23417-0347

Directions to Property: Chincoteague; Wild Pony Court, Lot on right before Cul-de-Sac.

Subdivision Oyster Bay Section II Block C Lot 268

Other Property Identification Tax Map No. 31B1((3))268

Dimension/Size of Lot/Property 12,454 sq. ft.

Building/facility	X New		Existing	
Intermittent Use	___ Yes	X	No	If yes, describe
Residential Use	X Yes		No	
Termite Treatment	X Yes		No	
	X Single Family		Multi-family	**Request Review Under**
	4 Number of bedrooms	1	Number of Units	**§32.1-163.6 of the**
Basement	___ Yes	X	No	*CODE OF VIRGINIA*
Fixtures in Basement	___ Yes	X	No	
Commercial Use	___ Yes	X	No	Describe:
Commercial Wastewater	___ Yes	X	No	Number of Patrons
				Number of Employees

If yes, give volumes and describe

Proposed Sewage Disposal Method:

Onsite Sewage Disposal System: ___ Septic Tank & Drainfield ___ LPD ___ Mound X Other*

* Aqua Safe A.S. 600-L EZ ATU (600 gpd) with UV Disinfection

Water Supply:

X Public	___ New	X	Existing
___ Private	___ New	___	Existing

Describe: Town of Chincoteague Public Water Supply

The property lines, building location, and sewage disposal system site are clearly marked and the property is sufficiently visible to see the topography. I give permission to the Department to enter onto the property described for the purpose of processing this application and to perform quality assurance checks of evaluations and designs certified by an AOSE or PE as necessary until the sewage disposal system has been constructed and approved.

COMMONWEALTH OF VIRGINIA ARTHUR T NIELSEN No. 12744 PROFESSIONAL ENGINEER

Signature of Owner/Agent

10/10/13
Date

OSE/PE Report for:

Construction Permit ☑ Certification Letter ☐ Subdivision Approval ☐

Property Location:

911 Address: N/A - Not Yet Assigned City: Chincoteague

Lot 268 Section II, Subsection "C" Subdivision Oyster Bay

GPIN or Tax Map # 31B1((3))268 Health Dept ID # 13-100-0414

Latitude _____ Longitude _____

Applicant or Client Mailing Address:

Name: Gary & Sherri L. Stewart

Street: 13 East 6th Street

City: New Castle State DE Zip Code 19720-5087

Prepared by:

OSE Name _____ License # _____

Address _____

City _____ State _____ Zip Code _____

PE Name: Arthur T. Nielsen License # 12744

Address P.O. Box 347

City Onancock State VA Zip Code 23417-0347

Date of Report _____ Date of Revision #1 _____

OSE/PE Job # _____ Date of Revision #2 _____

Contents/Index of this report (e.g., Site Evaluation Summary, Soil Profile Descriptions, Site Sketch, Abbreviated Design, etc.)

VDH Application	Construction Specs
Site Plan	Schematic Drawing & Pad Configuration
AOSE Soil Evaluation Report	Pump & LPP Calcs and Tech Data Sheets
Design Calcs	Survey Plat

Certification Statement

I hereby certify that the evaluations and/or designs contained herein were conducted in accordance with the Sewage Handling and Disposal Regulations (12 VAC5-610), the Private Well Regulations (12 VAC5-630) and all other applicable laws, regulations and policies implemented by the Virginia Department of Health. I further certify that I currently possess any professional license required by the laws and regulations of the Commonwealth that have been duly issued by the applicable agency charged with licensure to perform the work contained herein.

☐ The work attached to this cover page has been conducted under an exemption to the practice of engineering, specifically the exemption in Code of Virginia Section 54.1-402.A.11

I recommend that a (select one) construction permit ☑ certification letter ☐ subdivision approval ☐ be (select one) issued ☑ denied ☐.

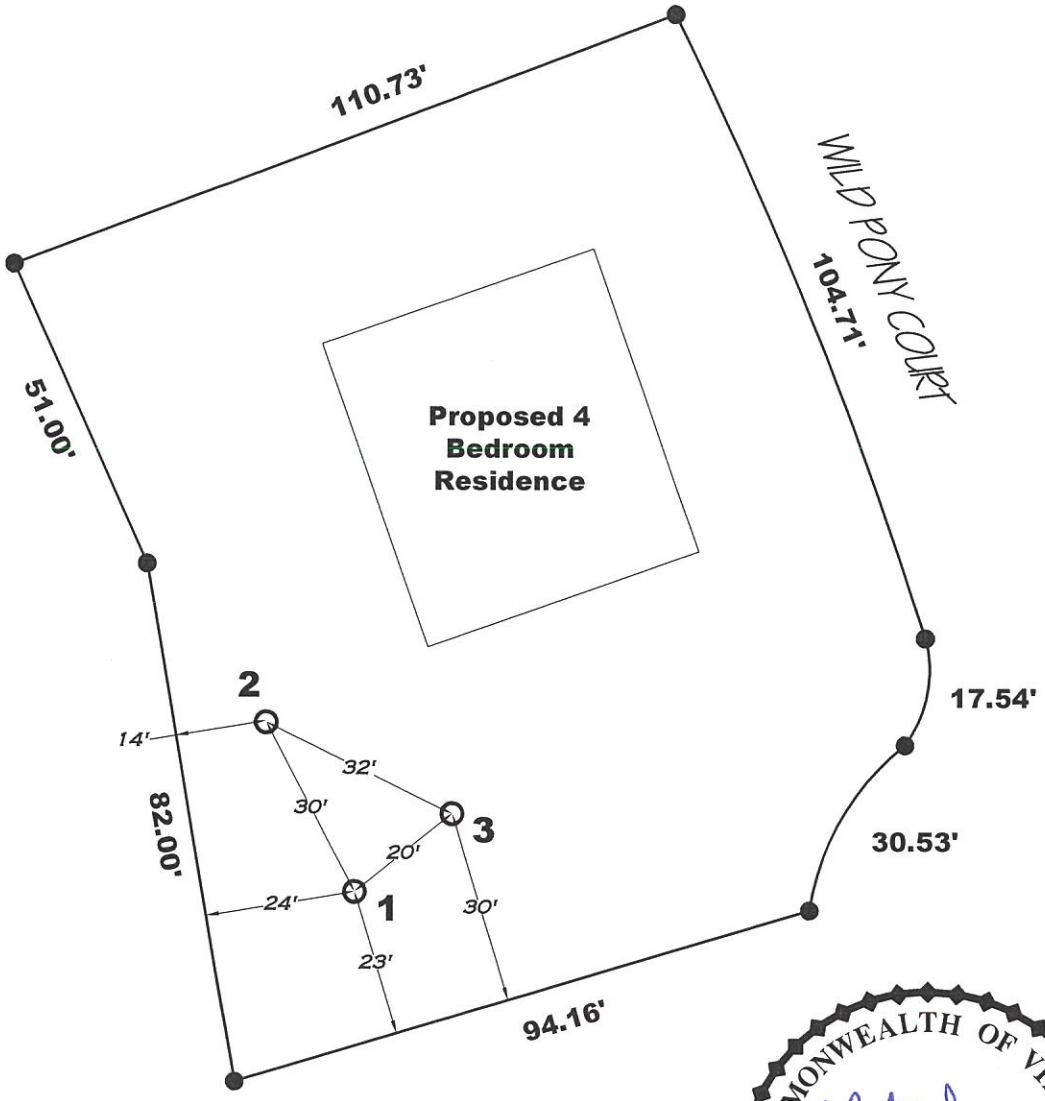
COMMONWEALTH OF VIRGINIA ARTHUR T. NIELSEN No. 12744 PROFESSIONAL ENGINEER

OSE/PE Signature Arthur T. Nielsen Date 9/16/13

SITE PLAN

H.D.I. # 13-100-0414

Tax Map #: 31B1((3))268
Lot 268
Size: 12,454 sq. ft.



COMMONWEALTH OF VIRGINIA
Robert C. Savage
ROBERT C. SAVAGE
Lic. No. 1940 001082
9/3/13
ALTERNATIVE ONSITE SOIL EVALUATOR

SCALE: 1"=30'

0 30' 60'

AFFORDABLE SEPTIC SOLUTIONS
Va. A.O.S.E. Licensed
PO Box 676 • Melfa, VA 23410
(757)787-1191 • Fax (757)787-7287

DRAFTER: CMP

Soil Evaluation Form

PAGE 4 OF 21

Commonwealth of Virginia
Department of Health

Health Department
Identification Number 13-100-0114
Tax Map Number 31B1((3))268

General Information

Date 8/27/2013 Accomack County Health Department

Applicant _____ Telephone No. _____

Address _____

Owner Gary & Sherri L. Stewart Address 13 East 6th Street, New Castle, DE 19720-5087

Location Chincoteague; Wild Pony Court, Lot on right before Cul-de-Sac.

Subdivision Oyster Bay Block/Section II / C Lot 268

Soil Information Summary

1. Position in landscape satisfactory Yes ☒ No ☐ Describe Broad Flar
2. Slope <1 %
3. Depth to rock/impervious strata Max. _____ Min. _____ None X
4. Depth to seasonal water table (gray mottling or gray color) No ☐ Yes ☒ 0 inches
5. Free water present No ☐ Yes ☒ 36 range in inches
6. Soil percolation rate estimated Yes ☒ Texture group ☐ I ☒ II ☐ III ☐ IV
   No ☐ Estimated rate 25 min/in
7. Percolation test performed Yes ☐ Number of percolation test holes _____
   No ☒ Depth of percolation test holes _____
   Average percolation rate _____

Name and title of evaluator Robert C. Savage, President, Affordable Septic Solutions, Inc.

Signature Robert C. Savage

Department Use

☐ Site Approved: Drainfield to be placed at _____" depth at site designated on permit

☐ Site Disapproved:

Note: Soils do not comply with the soil requirements of the VA Sewage Handling & Disposal Regulations. May be considered by a PE under GMP #146.

Reasons for rejection:

1. ☐ Position in landscape subject to flooding or periodic saturation.
2. ☐ Insufficient depth of suitable soil over hard rock
3. ☐ Insufficient depth of suitable soil to seasonal watertable.
4. ☐ Rates of absorption too slow.
5. ☐ Insufficient area of acceptable soil for required drainfield, and/or Reserve Area
6. ☐ Proposed system too close to well.
7. ☐ Other Specify _____

COMMONWEALTH OF VIRGINIA
Robert C. Savage
ROBERT C. SAVAGE
Lic. No. 1940001082
9/3/13
ALTERNATIVE ONSITE SOIL EVALUATOR

Profile Description

SOIL EVALUATION REPORT

Date of Evaluation 8/27/2013 Health Department Identification No. 13-100-0414

Where the local health department conducts the soil evaluation the location of the profile holes may be shown on the schematic drawing on the construction permit or the sketch submitted with the application. If soil evaluations are conducted by a private soil scientist, location of profile holes and sketch of the area investigated including all structural features i.e., sewage disposal systems, wells, etc., within 100 feet of site (See section 4) and reserve site shall be shown on the reverse side of this page or prepared on a separate page and attached to this form.

☒ See Application ☐ See Construction permit ☐ See sketch on the reverse side or page attached to this form

Hole #	Horizon	Depth (in.)	Description of, color, texture, etc.	Texture Group
1	Fill	0-20	10YR 5/2 Grayish Brown Sand with many 10YR 6/2 Light Brownish Gray, 10YR 4/4 Dark Yellowish Brown and 10YR 5/1 Gray Mottles	I
	Ab	20-28	10YR 3/1 Very Dark Gray Sandy Loam with organic root matter	IIa
	Cg	28-48	10YR 5/1 Gray Fine Sand	I
		48+	Sloughing; Free Water at 36"	
2	Fill	0-16	10YR 5/2 Grayish Brown Sand with many 10YR 6/2 Light Brownish Gray, 10YR 4/4 Dark Yellowish Brown and 10YR 5/1 Gray Mottles	I
	Ab	16-27	10YR 3/1 Very Dark Gray Sandy Loam with organic root matter	IIa
	Cg	27-30	10YR 5/1 Gray Fine Sand	I
3	Fill	0-22	10YR 5/2 Grayish Brown Sand with many 10YR 6/2 Light Brownish Gray, 10YR 4/4 Dark Yellowish Brown and 10YR 5/1 Gray Mottles	I
	Ab	22-33	10YR 3/1 Very Dark Gray Sandy Loam with organic root matter	IIa
	Cg	33-36	10YR 5/1 Gray Fine Sand	I

COMMONWEALTH OF VIRGINIA
Robert C. Savage
ROBERT C. SAVAGE
Lic. No. 1940001082
9/3/13
ALTERNATIVE ONSITE SOIL EVALUATOR

Remarks:

Commonwealth of Virginia
Design Calculations

Health Department ID# 13-100-0414 (VDH Use)

Name of property / site: **Gary & Sherri L. Stewart**

Subdivision **Oyster Bay** Section **II** Block **C** Lot **268**

Other Property Identification **12,454 sq. ft.** Tax Map No. **31B1((3))268**

DESIGN BASIS

A. Estimated percolation rate: **25 mpi**

B. Trench bottom square footage required: (based on ____ Gravity or **X** LPD)

GPD/SQ Ft: **2**

Per 100-gallons: ____

C. Number of bedrooms: **4** (at **150** gallons/bedroom) Total flow from bedrooms: **600** gpd

Other: ____ (at ____ gpd) Total flows from other sources: ____ gpd

____ (at ____ gpd) Total Sewage Flows = **600** gpd

____ (at ____ gpd)

AREA CALCULATIONS

D. Length of pad: **30** ft (length of available area **30** ft)

E. Width of pad: **12.5** ft

F. Number of trenches: **N/A**

G. Center-to-center spacing: **N/A** ft

H. Required length/width ratio: **</=6/1** (width of available area **12.5** ft)

I. Total area required: **320** sf (actual area required based upon 2 GPD/SQ. Ft. = 300 sf)

J. Square footage in design: **375** sf

K. Is a reserve area required? ____ Yes **X** No: ____

Size: ____ % Area provided: ____

L. Type: **Aqua Safe A.S. 600 EZ ATU (600 gpd) TL-3 Effluent with UV Disinfection**

Pump Station = 500 gals. 1/4 Day Storage = 150 gals. Working Volume = 75 gals.

Tank Volume = 1 cu. Inch = 11.7 gals. Drawdown = 75 gals/11.7 = 6.41" (say 6.5")

1/4 Day Storage = 150 gals./ 11.7 = 12.82"

COMMONWEALTH OF VIRGINIA
ARTHUR T. NIELSEN
No. 12744
PROFESSIONAL ENGINEER
9/16/13

COMMONWEALTH OF VIRGINIA
ARTHUR T. NIELSEN
No. 12744
PROFESSIONAL ENGINEER

Sewage Disposal System Construction Specifications

General Information

Accomack County Health Department

ID # 13-100-0414

Map reference 31B1((3))268

New [X] Repair [ ] Expanded [ ]

Owner Gary & Sherri L. Stewart Telephone 302-322-3579

Address 13 East 6th Street, New Castle, DE 19720-5087

For a Type II Sewage disposal system which is to be constructed on/at Chincoteague; Wild Pony Court, lot on right before cul-de-sac.

Subdivision Oyster Bay Section II Block C Lot 268

Actual or estimated water use: 600 gpd

DESIGN	NOTES
Water supply, existing: (describe) Chincoteague Town Public Water Supply **To be installed:** class _____ cased _____ grouted _____	
Building Sewer: 4" I.D. PVC Schedule 40, or equivalent Slope 1.25 " per 10' (minimum). [ ] Other: _____	
Septic tank: Capacity 1,000 gallons (minimum). [ ] Other: To be used as a "Trash Tank" for ATU	
Inlet-Outlet structures: PVC Schedule 40, 4" tees or equivalent [ ] Other: _____	
Pump and pump station: No [ ] Yes [X] describe and show design: If yes: See Attached	
Gravity mains: 3" or larger I.D., minimum 6" fall per 100', 1500 lb. Crush strength or eq. [X] Other: 2" SCH 40 PVC Force Main	
Distribution Box: Precast concrete with _____ ports. [X] Other: 2" SCH 40 PVC Pressure Manifold	
Header lines: Material: 4" I.D. 1500 lb. Crush strength plastic or equivalent from distribution box to 2' into trench. Slope 2" minimum [X] Other: 2" SCH 40 PVC Pressure Manifold	
Percolation lines: Gravity 4" plastic 1000 lb. Per foot bearing load or equivalent, slope 2"-4" (min. max) per 100'. [X] Other: 1.25" SCH 40 PVC LPP Laterals	LPP Laterals to be housed inside 10" Dia. Flowtech (FTSG103H-1) Bundles
Disposal Pad: Depth of aggregate: 0" Pad length: 30' Square feet required: 375 Pad width: 12.5' Depth from ground surface to bottom of pad: 0" Number of trenches: N/A	

COMMONWEALTH OF VIRGINIA
ARTHUR T. NIELSEN
No. 12744
PROFESSIONAL ENGINEER
9/16/13

Revised 6/99

Inspected by: _____ Date: _____

NITRATE CALCULATIONS

LOT SIZE = 0.288 A.

RAINFALL = 43"/YR.

INFILTRATION = 70% = 30.1 IN/YR.

NITRATE LOADING = 600 gal × 0.867 = 520 gal/da

RAINWATER DILUTION = (30.1)(0.288)(74) = 642 gal.

NITRATE CONCENTRATION:

$$\frac{520}{1162} \times 7.5 \text{ mg/l}^{*} = 3.36 \text{ mg/l.}$$

* performance data submitted by manufacturer demonstrated a 75% reduction of nitrogen when treated with aqua safe system per NSF testing results.

Water mounding:

Due to high infiltration rate no water mounding occurs.

COMMONWEALTH OF VIRGINIA
ARTHUR T. NIELSEN
No. 12744
9/16/13
PROFESSIONAL ENGINEER

SCHEMATIC DRAWING

H.D.I. # 13-100-0414

Tax Map #: 31B1((3))268
Lot 268
Size: 12,454 sq. ft.

Install:

150- L.F. of Flowtech Model FTSG103H-1 at grade on a 12" layer of ASTM C33 Sand in a 12.5'x30' Pad Configuration (5 Row, 30' in length, with 1.25" LPP Laterals)

1- 1,000 Gallon Top Seam Trash Tank

1- Aqua Safe AS 600-L EZ

1- Salcor Model 3G UV Disinfection Unit

1- 500 Gallon Top Seam Pump Station

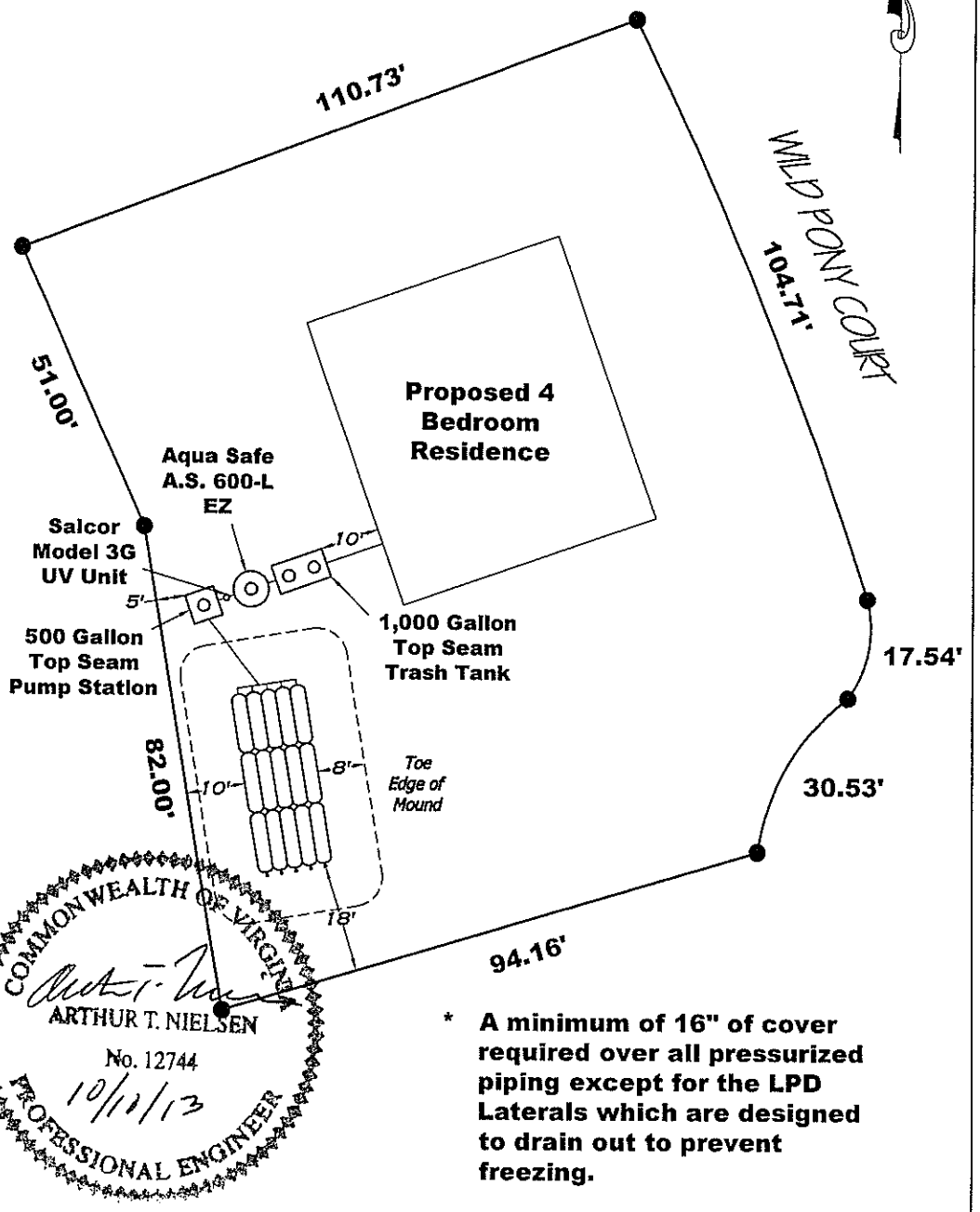
1- Zoeller N53 Effluent Pump

1- Polylok High Pressure Filter (Model # 3014-SS)

1- SJE Rhombus Model 115 Audible/Visual Control Panel

375- S.F. of Geo-Textile Cover Fabric to be placed over Flowtech bundles

Note:
Property is located in Oyster Bay II. Army Corps of Engineers has ruled that Oyster Bay is a grandfathered subdivision and therefore will not fall under their wetlands jurisdiction & enforcement.



COMMONWEALTH OF VIRGINIA
ARTHUR T. NIELSEN
No. 12744
10/11/13
PROFESSIONAL ENGINEER

* **A minimum of 16" of cover required over all pressurized piping except for the LPD Laterals which are designed to drain out to prevent freezing.**

** **All chambers must be anchored or weighted to prevent flotation.**

SCALE: 1"=30'

0 30' 60'

DRAFTER: CMP

NES *Nielsen Engineering Services*

Arthur T. (Tom) Nielsen
PE, BCE, MBA, MACFE

21222 Wise's Point Lane
PO Box 347
Onancock, VA 23417-0347

Telephone (757) 787-2654
Fax (757) 787-7444

PAD CONFIGURATION

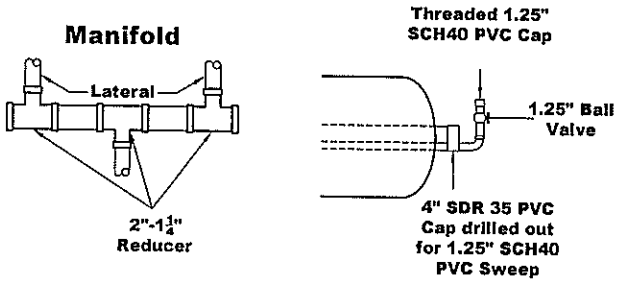
H.D.I. # 13-1000414

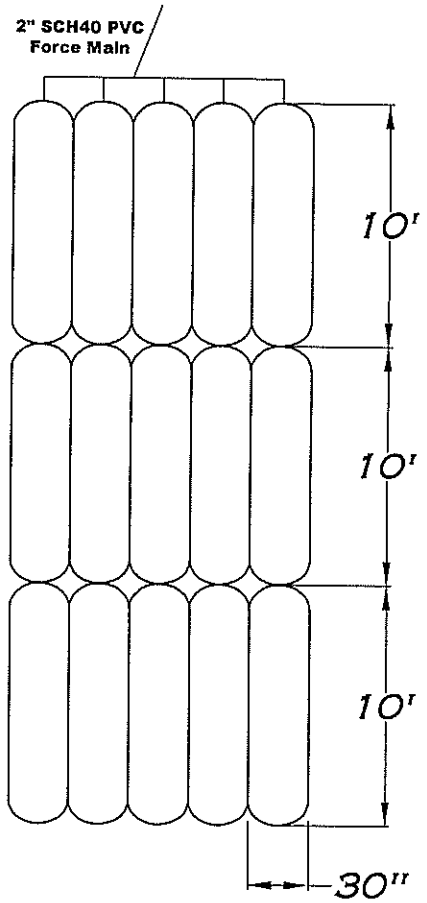
LPP Notes: 3'

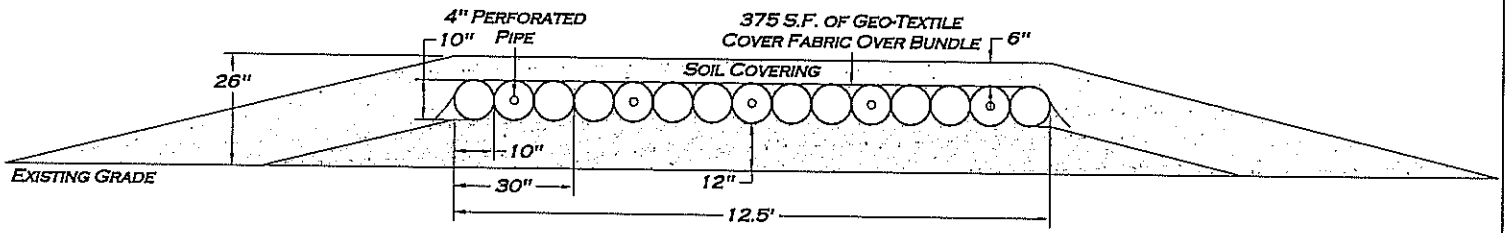
$\frac{3}{16}$" Orifices on ~~3'~~ centers with 8 orifices facing up at the 12 o'clock position, last points down at 6 o'clock position.

Dose = 75 Gallons per dosing cycle

First orifice to be placed 1.5' from beginning of lateral and last orifice to terminate 1.5' from end of lateral.







NOTE: Taper on a 3:1 Slope on all 4 sides of Pad. All distrurbed areas shall be seeded with tall fescue at a rate of 2lbs. per 1,000 sq. ft. Scarify Surface prior to Sand Placement.

COMMONWEALTH OF VIRGINIA
ARTHUR T. NIELSEN
No. 12744
10/10/12
PROFESSIONAL ENGINEER

NES
Nielsen Engineering Services

Arthur T. (Tom) Nielsen
PE, BCE, MBA, MACFE

21222 Wise's Point Lane
PO Box 347
Onancock, VA 23417-0347

Telephone (757) 787-2654
Fax (757) 787-7444

DRAFTER: CMP

LATERAL DESIGN SHEET

PROJECT:	Gary & Sherri L. Stewart
JOB NO.:	
DESIGN BY:	NES
DATE:	9/3/13

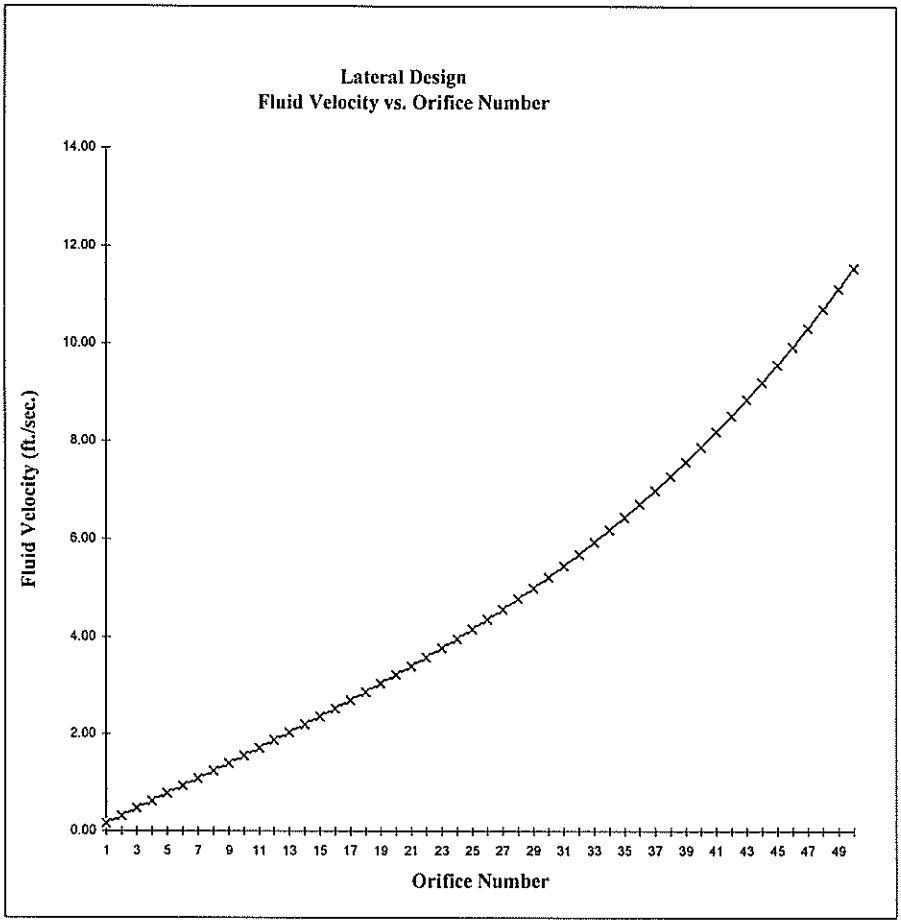
1.25 " Diameter Lateral, Schedule 40, PVC Pipe
0.188 " Orifices at 3.00 Feet O.C.

Nominal Pipe Diameter	1.25	inches		Actual Pipe I.D.	1.38	inches
Orifice Size	0.188	inches		Number of Orifices per Lateral	9	
Distance between Orifices	3.00	ft.		Lateral Discharge	6.5	GPM
Pressure at last Orifice	3.00	ft.		Required Head at Manifold	3.08	ft.

Note: Orifice #1 is the distal (last) orifice in the lateral.

Orifice #	Residual Pressure	GPM per orifice	Sum of flow (gpm)	Segment Velocity (ft./sec.)	Segment Headloss (ft.)	Sum of lateral length (ft.)	Sum of headloss (ft.)	Is orifice flow greater than 10% of distal orifice (#1)
1	3	0.721	0.721	0.15	0.001	3	0.001	-
2	3.001	0.721	1.442	0.31	0.002	6	0.003	no
3	3.003	0.721	2.164	0.46	0.004	9	0.007	no
4	3.007	0.722	2.886	0.62	0.007	12	0.014	no
5	3.014	0.723	3.609	0.77	0.011	15	0.024	no
6	3.024	0.724	4.333	0.93	0.015	18	0.039	no
7	3.039	0.726	5.059	1.09	0.020	21	0.059	no
8	3.059	0.728	5.787	1.24	0.026	24	0.085	no
9	3.085	0.731	6.518	1.40	0.032	27	0.117	no
10	3.117	0.735	7.253	1.56	0.039	30	0.156	no
11	3.156	0.740	7.993	1.72	0.047	33	0.202	no
12	3.202	0.745	8.738	1.88	0.055	36	0.257	no
13	3.257	0.751	9.489	2.04	0.064	39	0.321	no
14	3.321	0.759	10.248	2.20	0.074	42	0.395	no
15	3.395	0.767	11.015	2.36	0.084	45	0.479	no
16	3.479	0.777	11.792	2.53	0.096	48	0.574	no
17	3.574	0.787	12.579	2.70	0.108	51	0.682	no
18	3.682	0.799	13.378	2.87	0.121	54	0.803	yes
19	3.803	0.812	14.190	3.05	0.135	57	0.937	yes
20	3.937	0.826	15.016	3.22	0.149	60	1.087	yes
21	4.087	0.842	15.858	3.40	0.165	63	1.252	yes
22	4.252	0.859	16.716	3.59	0.182	66	1.434	yes
23	4.434	0.877	17.593	3.78	0.200	69	1.634	yes
24	4.634	0.896	18.489	3.97	0.220	72	1.854	yes
25	4.854	0.917	19.407	4.17	0.240	75	2.094	yes
26	5.094	0.940	20.346	4.37	0.262	78	2.356	yes
27	5.356	0.964	21.310	4.57	0.285	81	2.641	yes
28	5.641	0.989	22.299	4.79	0.310	84	2.952	yes
29	5.952	1.016	23.314	5.00	0.337	87	3.289	yes
30	6.289	1.044	24.359	5.23	0.366	90	3.654	yes
31	6.654	1.074	25.433	5.46	0.396	93	4.050	yes
32	7.050	1.106	26.538	5.70	0.428	96	4.479	yes
33	7.479	1.139	27.677	5.94	0.463	99	4.942	yes
34	7.942	1.173	28.850	6.19	0.500	102	5.442	yes
35	8.442	1.210	30.060	6.45	0.539	105	5.981	yes
36	8.981	1.248	31.308	6.72	0.582	108	6.562	yes
37	9.562	1.288	32.595	7.00	0.627	111	7.189	yes
38	10.189	1.329	33.924	7.28	0.675	114	7.864	yes
39	10.864	1.372	35.296	7.58	0.726	117	8.590	yes
40	11.590	1.417	36.714	7.88	0.781	120	9.371	yes
41	12.371	1.464	38.178	8.19	0.839	123	10.210	yes
42	13.210	1.513	39.692	8.52	0.902	126	11.112	yes
43	14.112	1.564	41.256	8.85	0.969	129	12.081	yes
44	15.081	1.617	42.873	9.20	1.040	132	13.121	yes
45	16.121	1.672	44.544	9.56	1.117	135	14.238	yes
46	17.238	1.729	46.273	9.93	1.198	138	15.436	yes
47	18.436	1.788	48.061	10.32	1.285	141	16.721	yes
48	19.721	1.849	49.910	10.71	1.378	144	18.100	yes
49	21.100	1.913	51.822	11.12	1.477	147	19.577	yes
50	22.577	1.978	53.801	11.55	1.583	150	21.160	yes

12/21


Lateral Design
Fluid Velocity vs. Orifice Number
Fluid Velocity (ft./sec.)
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49
Orifice Number

PUMP DESIGN SHEET PG. 1

PROJECT:	Gary & Sherri L. Stewart
JOB NO.:	0
DESIGN BY:	NES
DATE:	9/3/13

LATERALS

NUMBER OF LATERALS:	5	G.P.M. PER LATERAL:	6.52 G.P.M.
		TOTAL REQUIRED G.P.M.:	32.59 G.P.M.

DOSING TANK

SELECT PIPE TYPE AND DIAMETER: 1 1/2" — (●) SCHEDULE 40 OR POLYETHYLENE ( ) SCHEDULE 80 ( ) SDR 26 — ACTUAL PIPE I.D. 1.61 IN.

NOMINAL PIPE DIAMETER:	1.50 IN.	VEL.=	5.14 FT./SEC.			EQ. LENGTH
LENGTH OF PIPE:	4.0 FT.				=	4.0 FT.
NO. REDUCERS:	EA.	OUTPUT DIA.	2.00 IN.		=	0.0 FT.
NO. 90 DEG. ELBOWS:	1 EA.				=	4.5 FT.
NO. GATE VALVES:	1 EA.				=	1.0 FT.
NO. CHECK VALVES:	EA.				=	0.0 FT.
				TOTAL EQUIVALENT LENGTH:	=	9.5 FT.

-HEAD LOSS IN DOSING TANK = (E. LENGTH) X (FRICTION LOSS PER LENGTH)

-HEAD LOSS IN DOSING TANK = 9.50 FT. X 0.0609 FT/FT = **0.58 FT.**

FORCE MAIN

SELECT PIPE TYPE AND DIAMETER: 2" — (●) SCHEDULE 40 OR POLYETHYLENE ( ) SCHEDULE 80 ( ) SDR 26 — ACTUAL F.M. I.D. 2.07 IN.

NOMINAL FORCE MAIN DIAMETER:	2.00 IN.	VEL.=	3.12 FT./SEC.			EQ. LENGTH
LENGTH FORCE MAIN:	15.0 FT.				=	15.0 FT.
NO. REDUCERS:	EA.	OUTPUT DIA.	2.00 IN.		=	0.0 FT.
NO. 90 DEGREE ELBOWS:	1 EA.				=	5.5 FT.
NO. GATE VALVES:	EA.				=	0.0 FT.
NO. CHECK VALVES:	EA.				=	0.0 FT.
				TOTAL EQUIVALENT LENGTH:	=	20.5 FT.

-HEAD LOSS IN FORCE MAIN = (E. LENGTH) X (FRICTION LOSS PER LENGTH)

-HEAD LOSS IN FORCE MAIN = 20.50 FT. X 0.0181 FT/FT = **0.37 FT.**

ELEVATION HEAD

INVERT ELEV. OF LATERALS:	5.00 FT.			
LOW WATER ELEV. DOSING TANK:	FT.			EQ. LENGTH
		ELEVATION HEAD DIFFERENCE:	=	5.00 FT.
		HEAD REQUIRED AT LATERAL AND MANIFOLD INTERSECT:	=	3.08 FT.
-ELEVATION HEAD REQUIRED =				**8.08 FT.**

14/21

PUMP DESIGN SHEET PG. 2

PROJECT:	Gary & Sherri L. Stewart		
JOB NO.:	0		
DESIGN BY:	NES	DATE:	9/3/13

OTHER HEAD LOSSES

K-RAIN VALVE # (0 FOR NONE)		K-RAIN HEAD LOSS	0.00 FT.
DESCRIBE (IE ADDITIONAL REDUCERS)			FT.
-TOTAL OTHER LOSSES =			**0.00 FT.**

TOTAL DYNAMIC HEAD

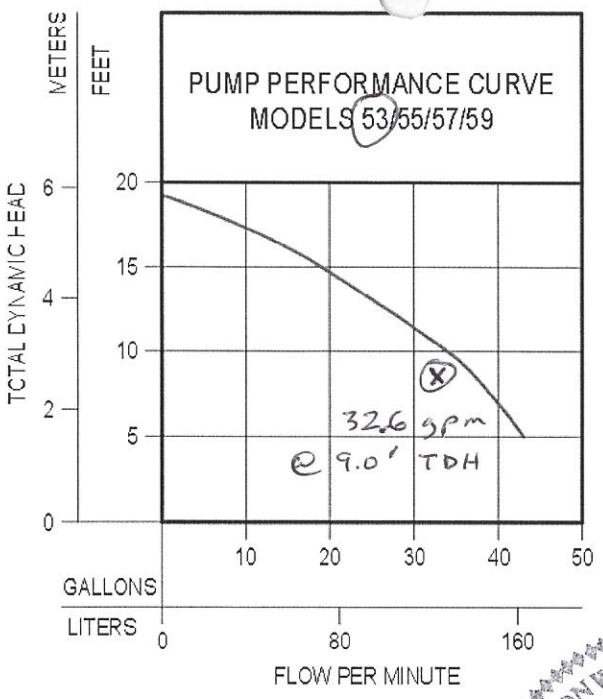
DOSING TANK LOSSES:	0.58 FT.
FORCE MAIN LOSSES:	0.37 FT.
ELEVATION **(STATIC)** HEAD:	8.08 FT.
OTHER LOSSES:	0.00 FT.
TOTAL HEAD LOSS	**9.03 FT.**

PUMP MUST BE CAPABLE OF PUMPING 32.6 G.P.M.

AT A T.D.H. OF 9.0 FT.

COMMONWEALTH OF VIRGINIA
ARTHUR T. NIELSEN
No. 12744
9/16/13
PROFESSIONAL ENGINEER

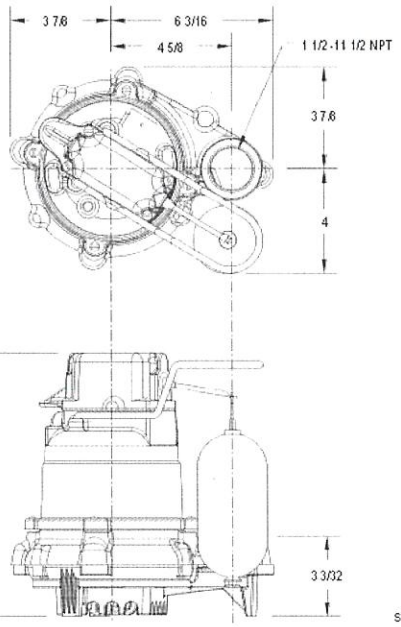
15/21



TOTAL DYNAMIC HEAD/FLOW PER MINUTE EFFLUENT AND DEWATERING

MODEL		53/55/57/59	
Feet	Meters	Gal.	Liters
5	1.5	43	163
10	3.0	34	129
15	4.6	19	72
Shut-off Head:		19.25 ft.(5.9m)	

009897



SK8858

CONSULT FACTORY FOR SPECIAL APPLICATIONS

- Variable level float switches available
- Variable level long cycle systems available
- Available with special cord lengths of 15', 25', 35', (50' 230V only)
- Alarm systems available
- Duplex systems available

COMMONWEALTH OF VIRGINIA
ARTHUR T. NIELSEN
No. 12744
PROFESSIONAL ENGINEER
9/16/13

SELECTION GUIDE

1. Integral float operated mechanical switch, no external control required.
2. Single piggyback variable level float switch or double piggyback variable level float switch. Refer to FM0477.
3. Mechanical alternator "M-Pak" 10-0072 or 10-0075.
4. See FM0712 for correct model of Electrical Alternator.
5. Variable level control switch 10-0225 used as a control activator, with Electrical Alternator (3) or (4) float system.

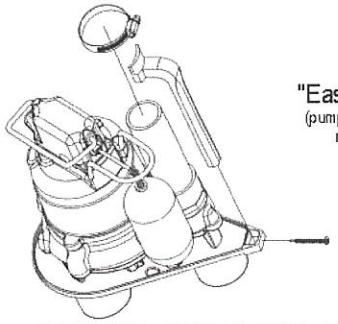
Single Seal	Control Selection						Listings	
Model	Volts	Phase	Mode	Amps	Simplex	Duplex	CSA	UL
M53/55 & M57/59	115	1	Auto	9.7	1	—	Y	Y
N53/55 & N57/59	115	1	Non	9.7	2	3 or 4 & 5	Y	Y
* BN53	115	1	Auto	9.7	*	—	Y	Y
* BN57	115	1	Auto	9.7	*	—	N	Y
* BE53/57	230	1	Auto	4.8	*	—	Y	Y
D53/55 & D57/59	230	1	Auto	4.8	1	—	Y	Y
E53/55 & E57/59	230	1	Non	4.8	2	3 or 4 & 5	Y	Y

* Single piggyback switch included.

⚠ CAUTION

All installation of controls, protection devices and wiring should be done by a qualified licensed electrician. All electrical and safety codes should be followed including the most recent National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).

For information on additional Zoeller products refer to catalog on Piggyback Variable Level Float Switches, FM0477, Electrical Alternator, FM0486, Mechanical Alternator, FM0495, Sump/Sewage Basins, FM0487, and Single Phase Simplex Pump Control/Alarm Systems, FM0732.



"Easy assembly"
(pump & discharge pipe not included.)

OPTIONAL PUMP STAND P/N 10-2421

- Reduces potential clogging by debris
- Replaces rocks or bricks under the pump
- Made of durable, noncorrosive ABS
- Raises pump 2" off bottom of basin
- Provides the ability to raise intake by adding sections of 1½" or 2" PVC piping
- Attaches securely to pump
- Accommodates sump, dewatering and effluent applications

NOTE: Make sure float is free from obstruction.

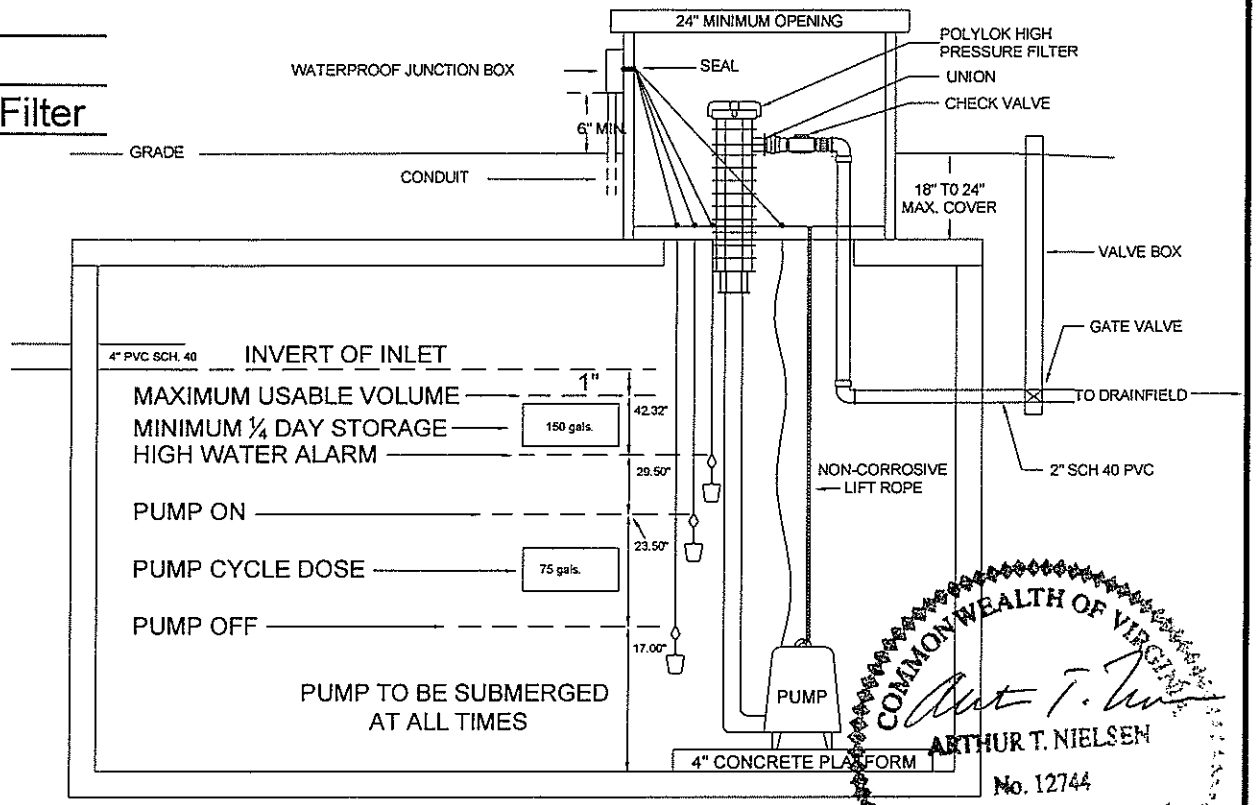
RESERVE POWERED DESIGN

For unusual conditions a reserve safety factor is engineered into the design of every Zoeller pump.

Applicant : Gary Stewart
Tax Map # 31B1((3))268
Brand Name of Pump : Zoeller
Sewage Pump Model # : N53
Effluent Filter: Polylok High Pressure Filter

CONSTRUCTION NOTES

- Pump Chamber to be sealed Watertight.
- Pump to be separate electrical circuit from alarm.
- Alarm to be audio/visual
- Pump and alarm to be hardwired into electric system.
- Pump chamber must be anchored or weighted to prevent flotation.
- Center and top seam tanks must be sealed with bituminous mastic - top seam tanks recommended.



COMMONWEALTH OF VIRGINIA
ARTHUR T. NIELSEN
No. 12744
10/10/13
PROFESSIONAL ENGINEER

500 Gal. Pump Chamber
Tank Volume (1 cu. inch) =11.7 Gallons

NES Nielsen Engineering Services

Arthur T. (Tom) Nielsen
PE, BCE, MBA, MACFE

21222 Wise's Point Lane
PO Box 347
Onancock, VA 23417-0347

Telephone (757) 787-2654
Fax (757) 787-7444

COMPUTED BY: ATN
DRAWN BY: CMP
CHECKED BY: ATN
APPROVED BY: ATN
DATE APPROVED: 8/30/2013

17/21

AQUA SAFE PRODUCT SPECIFICATIONS

INDIVIDUAL HOME WASTEWATER TREATMENT PLANT

MODELS A.S. 500, A.S. 600, A.S.750, A.S. 800, A.S. 1000, A.S. 1200, & A.S. 1500
Includes EZ Models

	A.S. 500	A.S. 600	A.S. 750	A.S. 800	A.S. 1000	A.S. 1200	A.S. 1500
Treatment Capacity	500 GPD	600 GPD	750 GPD	800 GPD	1000 GPD	1200 GPD	1500 GPD
Volumetric Capacity	1000 GAL.	1190 GAL.	1516 GAL.	1619 GAL.	2008 GAL.	2464 GAL.	2918 GAL.
Aeration Zone Capacity	848 GAL.	1000 GAL.	1288 GAL.	1336 GAL.	1706 GAL.	2010 GAL.	2349 GAL.
Clarifier Capacity	152 GAL.	190 GAL.	228 GAL.	283 GAL.	302 GAL.	454 GAL.	569 GAL.
BOD_5 Loading	1.25 #/DAY	1.50 #/DAY	1.85 #/DAY	2.0 #/DAY	2.50 #/DAY	3.0 #/DAY	3.75 #/DAY
Aerator-Aqua Safe Compressor	ASC2532	ASC3342	ASC3352	ASC3350	ASC5082	ASC7510	ASC7510

DESIGN COMPONENTS AND MATERTIALS

Aeration Tank & Cover..... fiberglass or concrete
Clarifier..... polyethylene or fiberglass
Compressor Housing..... polyethylene, fiberglass, or concrete

PARTS LIST

Aeration Tank..... item #1
Clarifier..... 2
Air Distribution System..... 3
Access Cover, 6" Diameter PVC, 16" Fiberglass or 20" Polyethylene..... 4
Discharge Piping Assembly..... 5
Compressor Housing..... 6

	DIMENSIONS	
MODEL	A (I.D.)	B (HEIGHT)
A.S. 500	5'6"	6'4"
A.S. 600	6'0"	6'4"
A.S. 750	6'9"	6'4"
A.S. 800	7'0"	6'4"
A.S. 1000	6'9"	8'2"
A.S. 1200	7'6"	8'2"
A.S. 1500	8'2"	8'2"

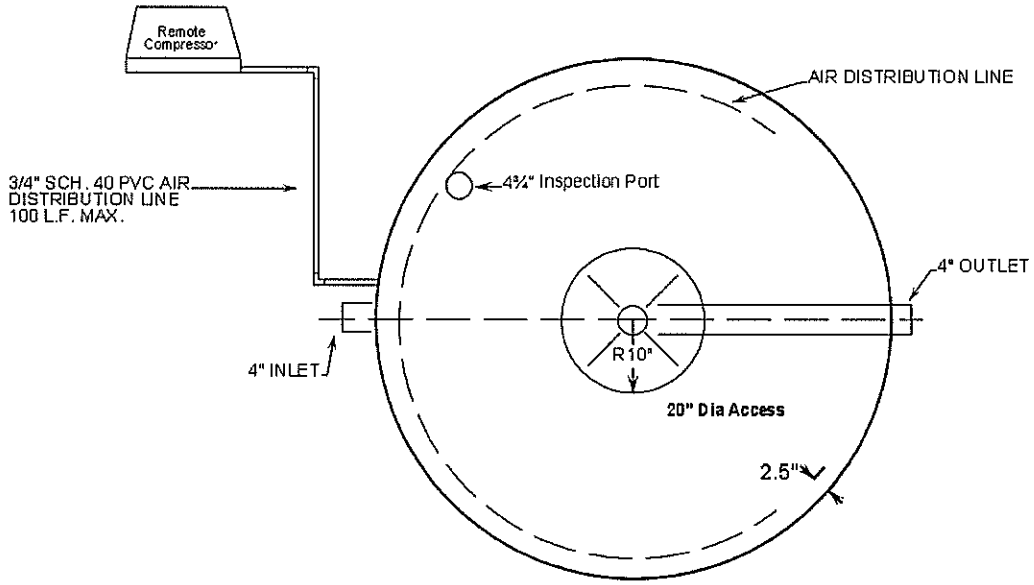
FIGURE 1

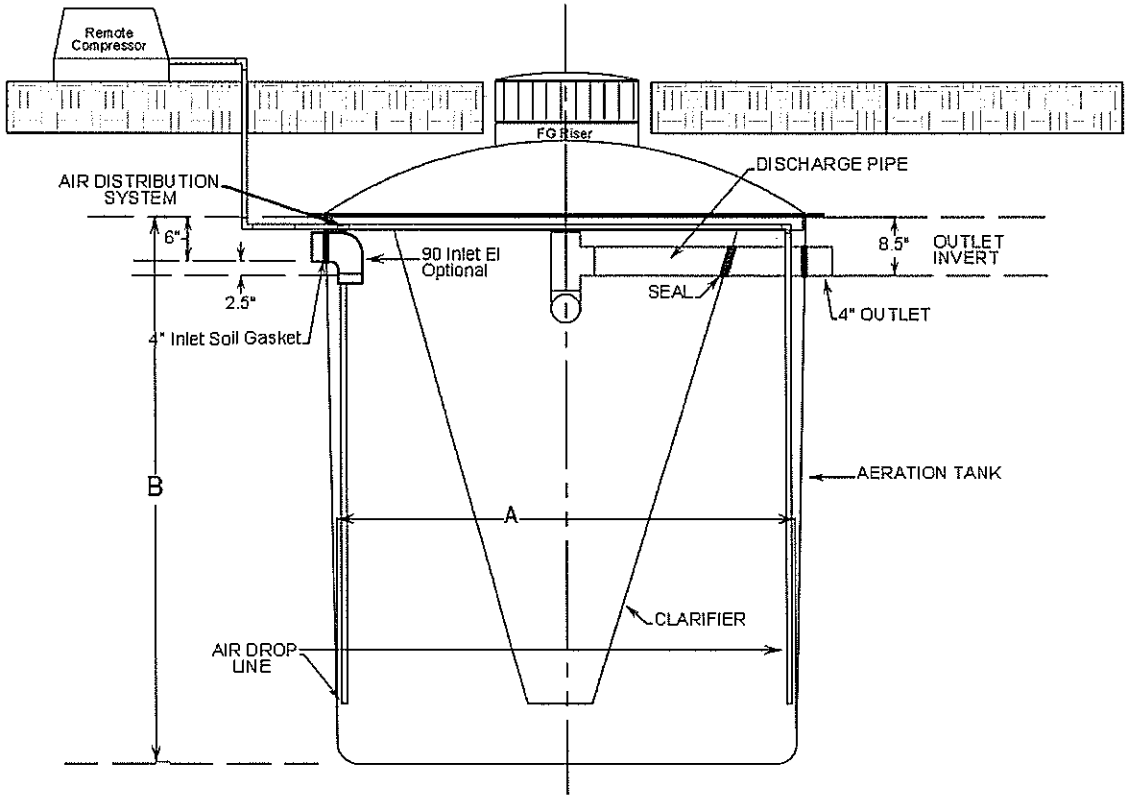
AS500, AS600, AS750, AS800, AS1000, AS1200 & AS1500 with Tuf Tite Riser

ECOLOGICAL TANKS, INC

Individual Home Wastewater Treatment Plant

EZ Top Optional





Ecological Tanks, Inc. Patented 02/2004

19/21

MODEL 115 Control Panel

Single phase, simplex pump switch control.

The Model 115 control panel provides customers with a reliable means of controlling one 120, 208, or 240 VAC single phase pump in water and wastewater installations. A pump float switch turns the pump on and off. If an alarm condition occurs, an additional alarm switch activates the audio/visual alarm system. Common applications include pump chambers, sump pump basins, irrigation systems, and lift stations.

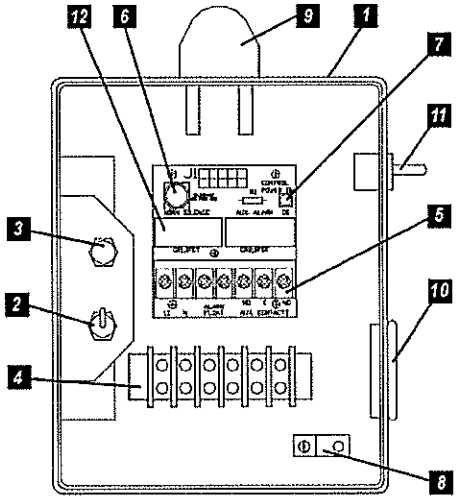
PANEL COMPONENTS

1. **Enclosure** measures 8 x 6 x 4 inches (20.32 X 15.24 X 10.16 cm). Choice of NEMA 1 (steel for indoor use), or NEMA 4X (ultraviolet stabilized thermoplastic with removable mounting feet for outdoor or indoor use).
2. **HOA Switch** for manual pump control.
3. **Green Pump Run Indicator Light**
4. **Pump Circuit Terminal Block**
5. **Alarm Circuit Terminal Block** (mounted on circuit board).
6. **Alarm Fuse** (mounted on circuit board).
7. **Alarm Power Indicator** (mounted on circuit board).
8. **Ground Lug**

STANDARD ALARM PACKAGE

9. **Red Alarm Beacon** provides 360° visual check of alarm condition **Note:** NEMA 1 style utilizes a door mounted indicator in lieu of a beacon.
10. **Alarm Horn** provides audio warning of alarm condition (83 to 85 decibel rating) **Note:** NEMA 1 style utilizes an internally mounted buzzer in lieu of a horn.
11. **Exterior Alarm Test/Normal/Silence Switch** allows horn and light to be tested and horn to be silenced in an alarm condition. Alarm automatically resets once alarm condition is cleared.
12. **Horn Silence Relay** (mounted on circuit board).

NOTE: other options available.



Model Shown 1151W600X

c UL us LISTED

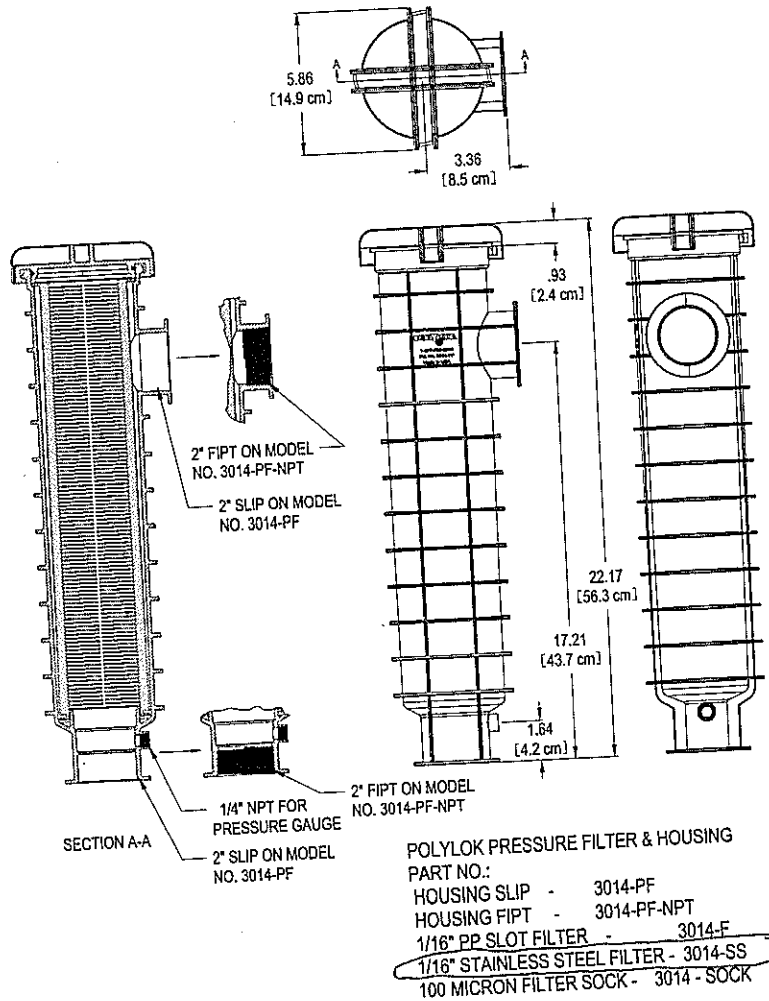
FEATURES

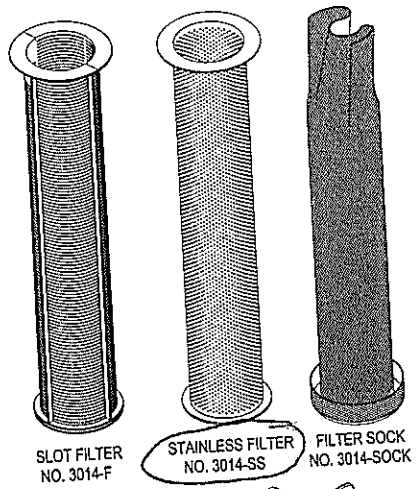
- Entire control system (panel and switches) is UL Listed to meet and/or exceed industry safety standards
- Dual safety certification for the United States and Canada
- Standard package includes float switches
- Complete, step-by-step installation instructions
- Three-year limited warranty

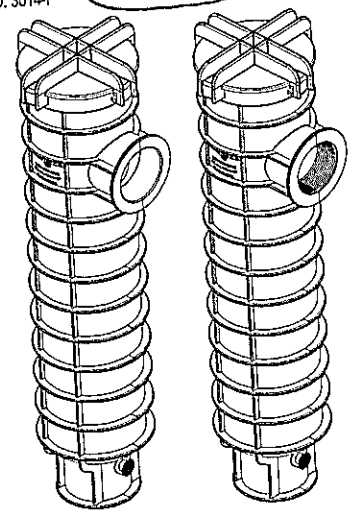
SEE BACKSIDE FOR COMPLETE LISTING OF AVAILABLE OPTIONS.
SEE PRICE BOOK FOR LIST PRICE.

SJE Rhombus®
PO Box 1708, Detroit Lakes, MN 56502
1-888-DIAL-SJE • 1-218-847-1317
1-218-847-4617 Fax
email: sje@sjerhombus.com
www.sjerhombus.com

High Pressure Effluent Filter







POLYLOK PRESSURE FILTER & HOUSING

PART NO.:

HOUSING SLIP - 3014-PF

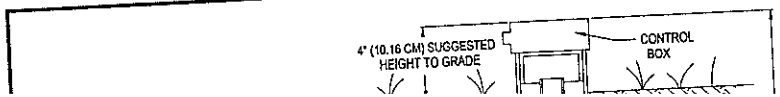
HOUSING FIPT - 3014-PF-NPT

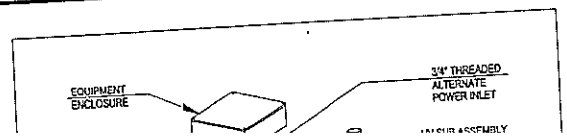
1/16" PP SLOT FILTER - 3014-F

1/16" STAINLESS STEEL FILTER - 3014-SS

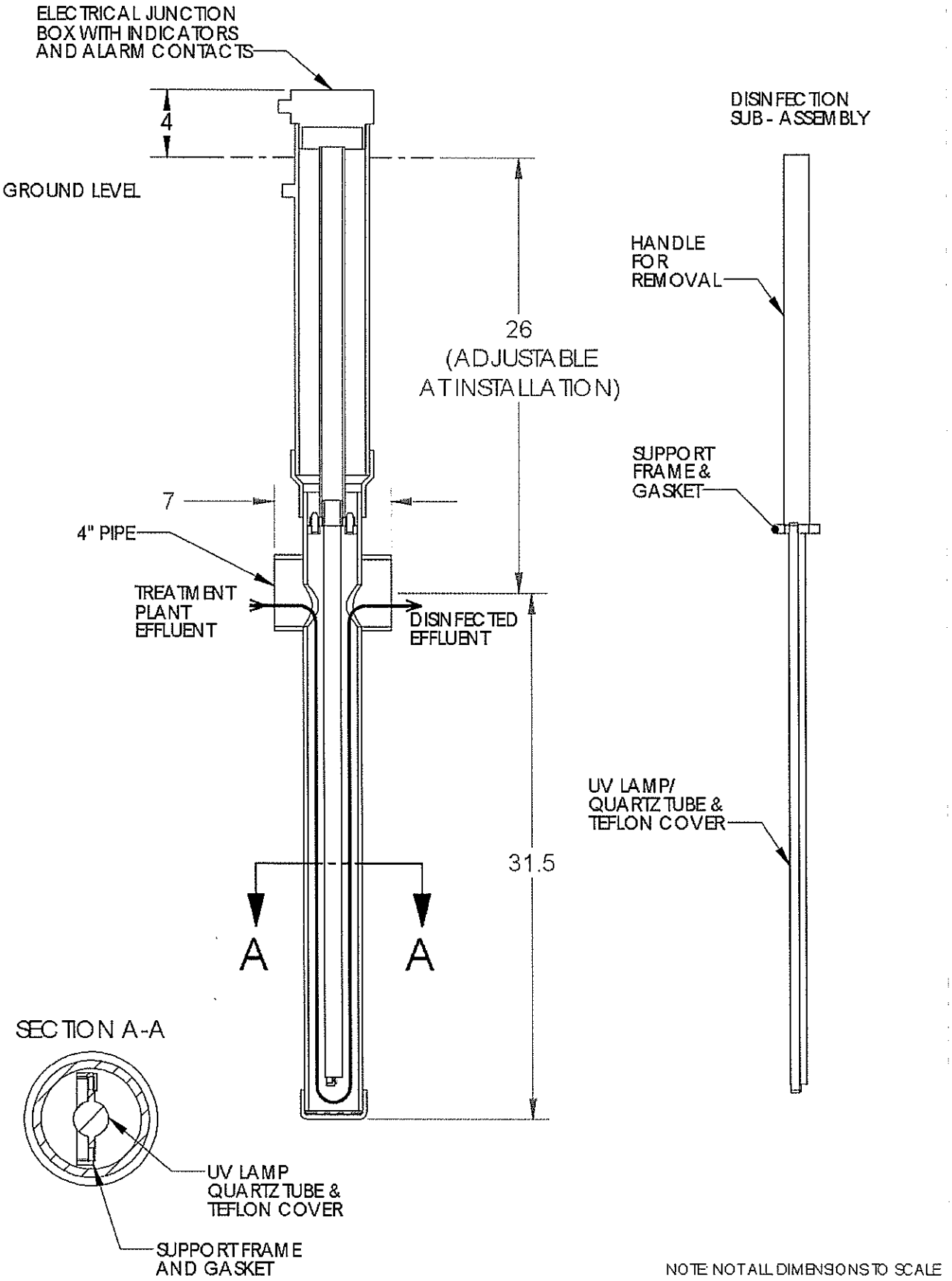
100 MICRON FILTER SOCK - 3014 - SOCK

PL-UV1 UV Disinfection Unit



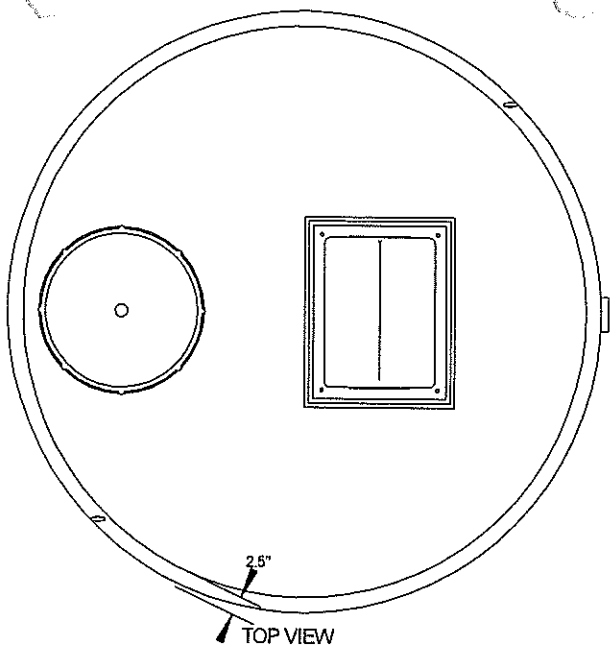


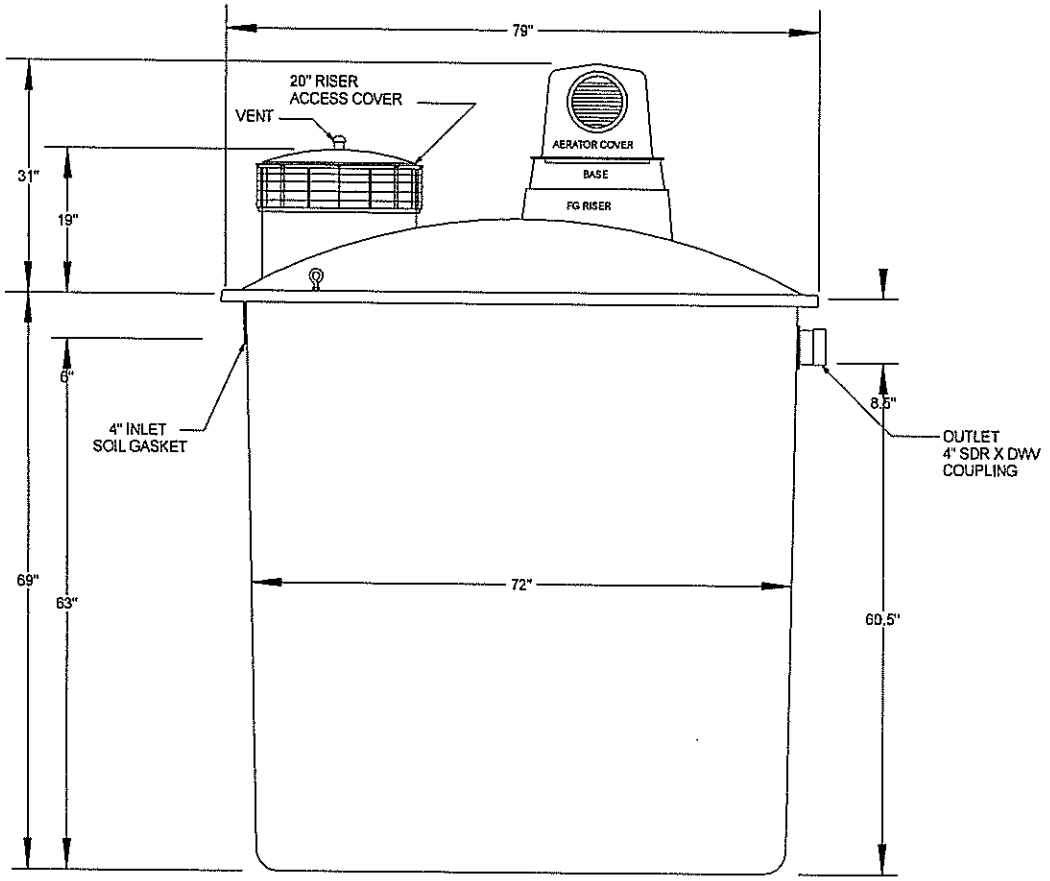
SALCOR UV DISINFECTION UNIT



NOTE: NOT ALL DIMENSIONS TO SCALE

21A/21





SIDE VIEW

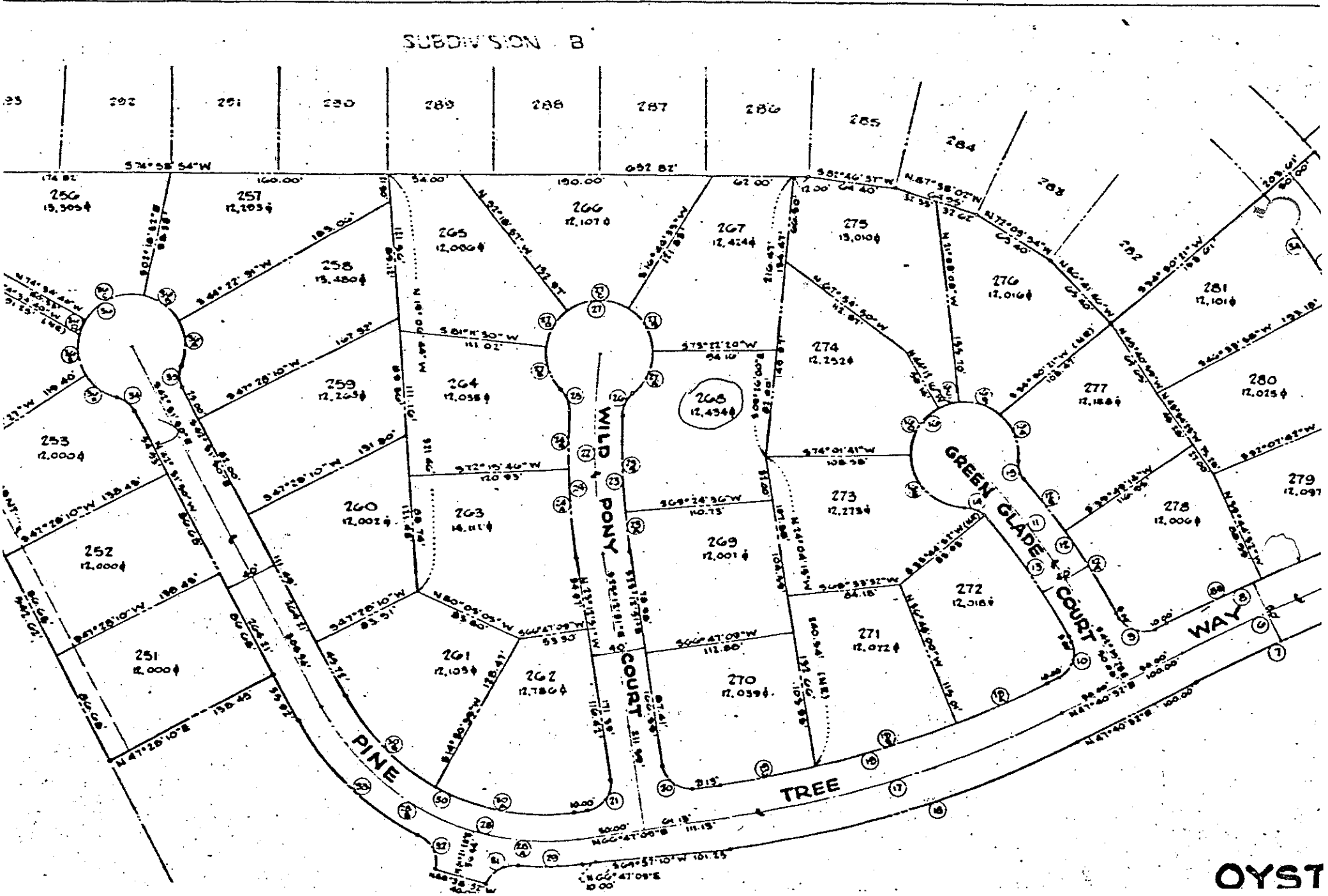
ALL DIMENSIONS IN INCHES

DESCRIPTION:
MODEL AS600L-EZ

Treatment Capacity: 600 GPD | Flow Line Volume: 1058 GAL

DWG REF: D-TA-600L-EZ	REV: 0	DATE: 06/24/2008	SCALE: FULL	ENG: JKC

ECOLOGICAL TANKS, INC
2247 HWY 151 NORTH
DOWNSVILLE, LA 71234
318-644-0397 OFFICE
318-644-7257 FAX


SUBDIVISION B
256
15,305 ϕ
257
12,203 ϕ
258
13,480 ϕ
259
12,269 ϕ
260
12,002 ϕ
261
12,105 ϕ
262
12,780 ϕ
263
14,111 ϕ
264
12,038 ϕ
265
12,006 ϕ
266
12,107 ϕ
267
12,434 ϕ
268
12,434 ϕ
269
12,001 ϕ
270
12,039 ϕ
271
12,072 ϕ
272
12,018 ϕ
273
12,273 ϕ
274
12,252 ϕ
275
13,010 ϕ
276
12,016 ϕ
277
12,158 ϕ
278
12,006 ϕ
279
12,097
280
12,025 ϕ
281
12,101 ϕ
252
12,000 ϕ
253
12,000 ϕ
251
12,000 ϕ
WILD PONY COURT
GREEN GLADE COURT
PINE TREE WAY

COMMONWEALTH of VIRGINIA

EASTERN SHORE HEALTH DISTRICT

ACCOMACK COUNTY HEALTH DEPARTMENT
23191 FRONT STREET
PO BOX 177
ACCOMAC, VIRGINIA 23301-0177

PHONE (757) 787-5880 OR 824-5616

NORTHAMPTON COUNTY HEALTH DEPARTMENT
7114 LANKFORD HIGHWAY
PO BOX 248
NASSAWADOX, VIRGINIA 23413-0248

PHONE (757) 442-6228

October 3, 2013

Stephen Elgin, PE
Lynchburg Health Department
1900 Thomson Drive
Lynchburg, VA 24501

Re: Tax Map #31B1((3))268
H.D.I. # 13-100-0414
Oyster Bay II Lot 268
Chincoteague Island, VA 23336

Through: Jonathan Richardson, Environmental Health Manager

Dear Mr. Elgin:

Please find enclosed a sewage system application submitted by Arthur T. Nielsen, PE under the provisions of 32.1-163.6 of the Code of Virginia for a four bedroom dwelling.

A Level II Review was conducted and the health department substantially agrees with the AOSE, Robert Savage, findings in his Site Evaluation Report.

I have reviewed the plans and cannot offer any further comments at this time.

We appreciate your review and guidance regarding this application.

Sincerely,

Cathy Plant

Cathy Plant, REHS, AOSE
Env. Health Technical Specialist

VDH VIRGINIA DEPARTMENT OF HEALTH

Protecting You and Your Environment

Accomack County Health Department
P. O. Box 177 / 23191 Front Street
Accomac, VA
23301
(757) 787-5880 Voice
(757) 787-5841 Fax

Site Evaluation Report

Health Department ID Number: 13-100-0414

Facility and Evaluation Information	
Tax Map/GPIN #:	31B1((3))268
HDID:	13-100-0414
Date of Evaluation	October 02, 2013
Site Evaluator:	Cathy Plant, EHTS

Site Evaluation	
Evaluation method:	Hand Auger
Landscape Position:	Broad Flat
Position Satisfactory?	Yes
Slope (range):	Min: 0% Max: 0%
Depth to rock/ impervious strata:	> 0 inches
Depth to seasonal water table:	> 0 inches
Free water present?	Yes, at 54 inches
Estimated soil permeability:	15 minutes per inch at: 0 inches
Evaluation comments:	

Soil Profile Descriptions

Health Department ID Number: 13-100-0414

Hole	Horizon	Depth	Color	Texture	Comments	Texture Group
A		0 - 22	Light Brownish Gray (10YR 6/2)	LS (Loamy Sand)	with 10YR5/8 redox features	I (1)
		22 - 32	Very Dark Gray (10YR 3/1)	L (Loam)	with 10YR5/8 redox features	II (2)
		32 - 60	Dark Gray (10YR 4/1)	S (Sand)	Free water at 54" depth	I (1)

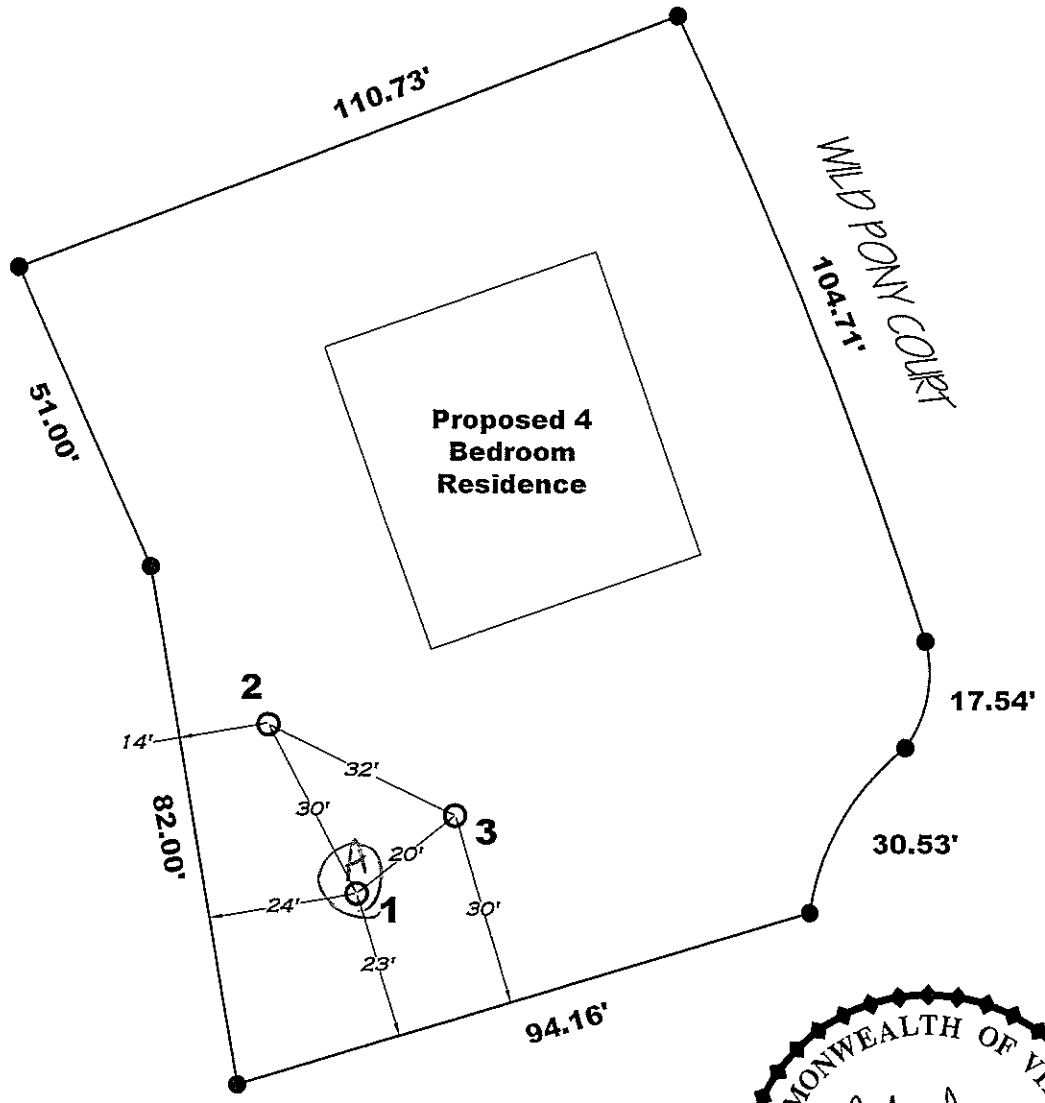
Site Sketch

Health Department ID Number: 13-100-0414

SITE PLAN

H.D.I. # 13-100-0414

Tax Map #: 31B1((3))268
Lot 268
Size: 12,454 sq. ft.



COMMONWEALTH OF VIRGINIA
Robert C. Savage
ROBERT C. SAVAGE
Lic. No. 1940 001082
9/3/13
ALTERNATIVE ONSITE SOIL EVALUATOR

SCALE: 1"=30'

0 30' 60'

AFFORDABLE SEPTIC SOLUTIONS
Va. A.O.S.E. Licensed
PO Box 676 • Melfa, VA 23410
(757)787-1191 • Fax (757)787-7287

DRAFTER: CMP

Appendix E

Scope And Detail Review List

County/City: Accomack

Date Received: 10/1/2013

Project Name: Gary + Sherri h. Stewart

Applicant: Nielsen Eng. Services

Design Engineer/Consultant: Tom Nielsen

LHD Reviewer: Cathy Plant

Items Required to Initiate Plan Review

If a "NO" response is given for any required item(s), return the plans and specifications to the consultant.

	YES	NO	N/A	
I. PRELIMINARIES				
A. Application for onsite system complete?	✓			required
B. General Discharge Permit issued?		✓		
C. Preliminary technical design conference held?		✓		
II. GENERAL				
A. Original PE seal/signature/date (type III systems) on first sheet of plans?	✓			required
B. Facsimile PE seal/signature/date (type III systems) on additional sheets?	✓			required
C. Original PE seal/signature/date (type III systems) on specifications?	✓			required
D. Four sets of plans and specifications provided?	✓			required
E. Plans and specifications legible and of an adequate size/scale?	✓			required
III. PLANS				
A. Location of project shown?	✓			
B. Site plan with topography provided?		✓		required
IV. DESIGN CRITERIA AND CALCULATIONS				
A. Acceptable design criteria provided?	✓			required
B. Acceptable design calculations provided?	✓			required
C. Soils reviewed and are adequate for treatment/dispersal?	✓			

V. Comments Submitted under 32.1-163.6 of the Code of Virginia

Level I & II Review Form

Tax Map/GPIN #: 31B1((3))268
HDID: 13-100-0414
Reviewer: Cathy Plant CP **Date:** October 04, 2013

Level I Review

Item	IN[1]	OUT[2]	N. O.[3]	N. A.[4]	Comments
Location					
Site features affecting well & septic system location identified	X				
Landscape position indicated	X				
Absorption Area	X				
House site located	X				
Other:					
Separation distance adequate	X				
Adequate triangulation / scale	X				
Depth					
Limiting factors (or lack of) noted	X				
Depth adequate for slope	X				
Depth adequate for limiting factors	X				
Timed-Dosing specified (if required)					
Capacity					
Absorption area adequately evaluated (number and location of borings / pits)	X				
Design flow adequate for intended use	X				
Adequate trench area, based on flow & estimate / measured perc rate	X				
Adequate footprint area (including reserve area, if required)	X				
Treatment					
Treatment level specified	X				
Treatment level adequate for specified absorption area depth	X				
Treatment capacity adequate for design flow	X				

Level II Review

Item	IN	OUT	N. O.	N. A.	Comments
Location					
Site features affecting location adequately identified	X				
Separation distances adequate	X				
Landscape position identified & adequate	X				
Slope adequately identified	X				
Depth					
Depth to limiting factors adequate (A)	X				
Capacity					

Estimated per rate adequate (A)	X				
Treatment					
Correct level of treatment indicated	X				

1 In substantial agreement; 2 Not in substantial agreement; 3 Not observed; 4 Not applicable
(A) If one boring indicates disagreement, reviewer should complete a second boring before concluding that there is overall disagreement.

Additional comments, if any: Submitted under 32.1-163.6 of the Code of Virginia