Commonwealth of Virginia
Application for a Sewage Disposal and/or Water Supply Permit

Health Department ID# _____.(VDH Use)

Owner: Murphy's Mill Associates	Address: P. O. Box 340 Warsaw, Va. 22572-0340	Office Phone: 804 333 1261 Home Phone:
Agent: Mathews Soil Consultants Inc.	Address: Post Office Box 34099 Richmond, Virginia 23234	Office Phone: 804-271-0136

Directions to Property: East from Warsaw to Rt. 604 to right on Rt. 607 to left on Arlington Farm Road to right on Jackson Lane into Subdivision.

Subdivision Murphy's Mill Point Section __ Block _ Lot 8

Other Property Identification _____ Map Reference Tm 56 prrcels 53 & 53C

Dimension/size of Lot/Property 2.08 ± Acres

Residential Use:	(X) Yes	( ) No
Termite Treatment	(X) Yes	( ) No
Single family	(X) Yes	( ) No
Number of bedrooms	4	
Multi-family	( ) Yes	(X) No
Number of units	_____	
Basement	( ) Yes	(X) No
Fixtures in basement	( ) Yes	( ) No

Proposed Sewage Disposal Method:

Onsite Sewage Disposal System: ( )Septic Tank Drainfield ( ) LPD ( ) Mound (X) Other
Pre treatment using MicroFAST 0.75 treatment unit

Water Supply: ( ) Public (X) New ( ) Existing
IIIB recommended

The property lines, building location and sewage disposal system sites 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 as necessary until the sewage disposal system has been constructed and approved.

Signature of Owner/Agent: _____ Date: _____

MSCI JN: 6119

VIRGINIA DEPARTMENT OF HEALTH
HAROLD L. MATHEWS
16
AUTHORIZED ONSITE SOIL EVALUATOR

SOIL EVALUATION REPORT

Virginia Department of Health
Authorized Onsite Soil Evaluator
Harold L. Mathews, AOSE #16

MATHEWS SOIL CONSULTANTS INC.

LOT #8; MURPHY'S MILL POINT; WESTMORELAND COUNTY, VIRGINIA

SUMMARY OF SOIL OBSERVATIONS & DESIGN SUGGESTIONS

Depth to Redoximorphic colors: 17-23 in.; Depth to Chroma 2 Mottles: 17-23 in.
Soil Texture at the proposed installation depth: IIB Estimated Rate 45 mpi
Average soil texture one foot below the proposed installation depth: III
Average percolation rate for subdivision using a Precision Permeameter: 70-90 mpi
Separation Distance Required: 12 in. Recommended Trench Bottom: 5 in.

Recommended Design Rate: 90 mpi
System Type: Pretreatment System Required

Number of bedrooms 4 ; design flow: 600 gpd

(284 x 6 x 3 = 5112 ft.^{2} surface area required)
Surface area required for a drip irrigation system 5112 ft.^{2}.

Approximately 140' x 130' area available = 18,200 ft^2 (includes reserve area)

REQUIRES A DRAINFIELD DESIGN BY AN AOSE OR P.E.

Reserve Drainfield: Required Yes (X) No ( ) % Available 100+
[(Documented Drainfield Area - Drip System ft.^{2}) ÷ Drip System ft.^{2} x 100]
[(20, 475 - 5112) ÷ 5112 x 100] = 300 ± %

Water Supply: Public ( ); Class IIIA ( ); Class IIIB (X); Class IIIC ( )

Depth to Rock: Max __ Min. > 200' None X
Depth to Impervious (clay) Strata: Max. ___ Min. > 5' None X
Free Water Present: No X Yes ___ Range (in inches) ___
Slope 0-1 % Position in Landscape Satisfactory: Yes X No __

REMARKS RE: Rock, Free Water & Landscape Position: The soils of this site have developed from sandy and loamy sediments of the Coastal Plain Physiographic Province. Some profiles have "silty" wind blown sediments in their upper 24 to 30 inches. The proposed drainfield site occupies an upland topo position and has fair surface drainage.

COMMENTS: **It is important that clearing and construction work in the vicinity of the drainfield be carefully planned to protect the drainfield site. The drainfield should be treated as a sensitive environmental area. It should be protected from vehicular, construction and foot traffic. The drainfield should not be used for storage of construction materials. WE RECOMMEND THAT THE DRAINFIELD ADJACENT TO THE CONSTRUCTION AREA BE ROPED OFF TO PREVENT COMPACTION. FAILURE TO DO SO MAY RESULT IN THE DRAINFIELD PERMIT BEING VOIDED!!!**

SOIL EVALUATION REPORT
SOIL PROFILE DESCRIPTION
LOT #8
MURPHY'S MILL POINT SUBDIVISION
WESTMORELAND COUNTY, VIRGINIA

3/8
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The drainfield should be cleared by hand or by the use of a track mounted excavator during "DRY SOIL" conditions. It is very important that compaction is avoided and that topsoil is not removed during clearing. Wooded sites should have the leaf litter remaining after the trees are removed. Trees larger than 12 inches in diameter 3.0 feet above the soil surface are to be cut as near the soil surface as possible and the stump left in place. Stumps are not to be removed by excavation with a backhoe! Stump removal should be done with a stump grinder. The maximum depth of stump grinding is 18 inches below the natural soil surface. The site is not to be "root raked."

The location of the house is important. The house, driveway and drainfield should be located as shown on the site sketch. Careful consideration should be given to the location of the house and other structures in order to be sure that a drainfield and reserve drainfield site is available.

It is important that this drainfield system is installed on grade with the maximum ditch bottom being at the recommended depth or within the specified range in depth. The drainfield should be installed in a manner where it will not "buck grade".

This drainfield and reserve drainfield have been located to meet the limits of the Chesapeake Bay Ordinance. The documented drainfield area is of sufficient size to accommodate a minimum of two drainfields for the use indicated in this report.

The driveway should be located as shown on the homesite sketch. It is especially important that driveways be constructed within 12 to 15 feet of property lines when the location is shown parallel to side property lines! This will conserve available soils for drainfield and reserve drainfield use.

We recommend that the well be installed and flow tested before the start of construction of the structure to be placed on this site. We also recommend that someone skilled in the location of water supply wells be consulted regarding the type and depth of the well to be constructed. The location of the well can be changed with the approval of the local health department or the design AOSE. Care must be taken to be sure that separation distances between all drainfields and other sources of contamination are maintained. Changes in well locations should be done by a professional. No warranties are given or implied regarding yield of water at the well site shown on the site sketch. The location and drilling of the well must be approved by the local health department.

The use of low flush (1.6 gallons or less) toilets and restricted flow shower heads is recommended. This will allow for a 10 to 20% reduction in water use for single family structures and a 20 to 70% reduction for commercial uses. This practice will prolong drainfield life and reduce water consumption.

NOTE: See the homesite planning map or site sketch for the location of the homesite, drainfield, well and drive (when applicable).

SOIL PROFILE DESCRIPTIONS*

*The location of soil evaluation profile holes is shown on the schematic drawing or site plan which accompanies this report. The site sketch includes the estimated or measured location of all known wells, sewage disposal systems, springs, and structural features within 100 feet of the proposed drainfield and/or reserve drainfield site.

HORIZON	DEPTH INCHES	DESCRIPTION OF COLOR, TEXTURE, ETC	TEXTURE GROUP
HOLE #44	HLM		
AE	0-7	pale brown to light yellowish-brown; very friable; fine sandy loam	IIA
Bt1	7-23	yellowish-brown; friable; clay loam with moderate fine and very fine subangular blocky structure; has pale yellow crotovina influence from above	III
Bt2	23-36+	yellowish-brown mottled with gray and strong brown which grades to gray mottled with strong brown and yellowish-brown; friable; clay loam to clay; chroma 2 and redox start at about 23" and increase in intensity with depth	III/IV

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HORIZON	DEPTH INCHES	DESCRIPTION OF COLOR, TEXTURE, ETC	TEXTURE GROUP
HOLE #46	JDH		
AE	0-8	light yellowish-brown; very friable; fine sandy loam; contains a few yellowish-brown crotovina; friable; fine sandy loam	IIA
Bt1	8-18	yellowish-brown mottled with a few light yellowish-brown crotovina; friable; clay loam to heavy clay loam	III
Bt2	18-24+	yellowish-brown mottled with strong brown and pale yellow; friable; heavy clay loam; percolation rate = ~ 80 mpi at 18 inches using a Precision Permeameter	III
HOLE #48	HLM		
AE	0-6	pale brown to light yellowish-brown; very friable; fine sandy loam	IIA
Bt1	6-17	yellowish-brown; friable; clay loam with moderate fine and very fine subangular blocky structure; has pale yellow crotovina influence from above	III
Bt2	17-30	yellowish-brown mottled with gray and strong brown which grades to gray mottled with strong brown and yellowish-brown; friable; clay loam to clay	III/IV
Bt3	30-36+	gray mottled with strong brown and yellowish-brown; friable; sandy clay loam to heavy sandy clay loam; chroma 2 and redox start at about 17" and increase in intensity with depth	IIB/III
HOLE #49	JDH		
AE	0-12	light yellowish-brown; very friable; fine sandy loam; contains a few yellowish-brown crotovina; friable; fine sandy loam	IIA
Bt1	12-22	yellowish-brown mottled with a few light yellowish-brown crotovina; friable; clay loam to heavy clay loam	III
Bt2	22-30+	yellowish-brown mottled with strong brown and pale yellow; friable; heavy clay loam; percolation rate = ~ 60 mpi at 18 inches using a Precision Permeameter	III

Note; All soil work without hue/value/chroma pre-dates GMP #126.

SITE EVALUATED: May - June 2003 HLM, JDH, RDM, AMD

DATE OF REPORT: November 20, 2003; July 17, 2006

JOB NUMBER 6797 xr 6119

MATHEWS SOIL CONSULTANTS, INC.

Harold L. Mathews, Ph.D., CPSS, AOSE

COMMONWEALTH OF VIRGINIA
HAROLD L. MATHEWS
NO. 000039
PROFESSIONAL SOIL SCIENTIST
7/17/06

SITE SKETCH
LOT #8
MURPHY'S MILL POINT SUBDIVISION
WESTMORLAND COUNTY, VIRGINIA

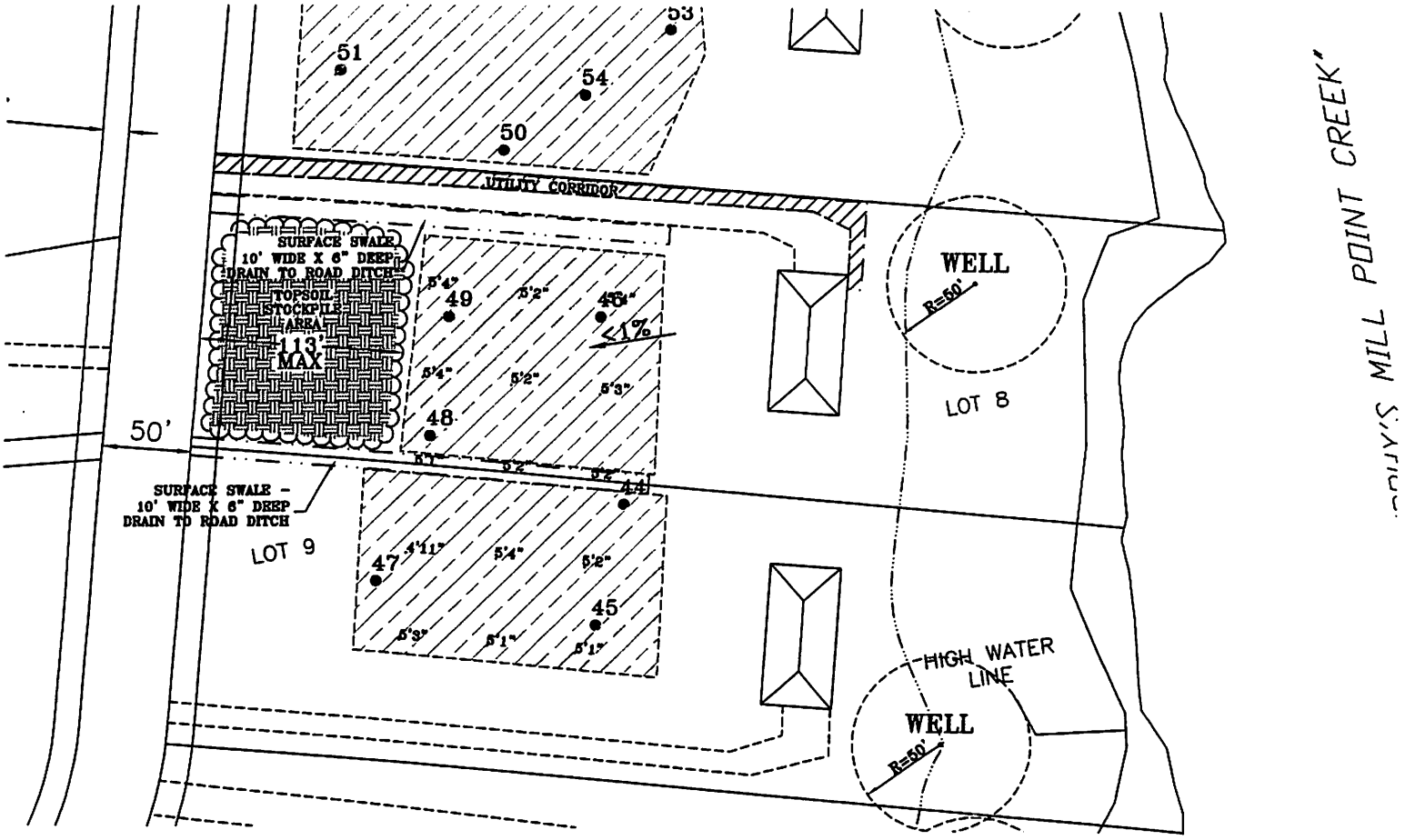
Page ___ of ___

SITE SKETCH DRAWN TO SCALE FROM THE HOMESITE PLANNING MAP.

DRAINFIELD MUST BE INSTALLED ON GRADE.

NO WELLS OR SEPTIC FIELDS OTHER THAN THOSE SHOWN ON THE HOMESITE PLANNING MAP WERE OBSERVED WITHIN 200' OF THE PROPOSED DRAINFIELD.

NOTE: THE BACK-FLUSH FLUIDS FROM WATER TREATMENT UNITS SHALL NOT BE DISCHARGED INTO HOUSEHOLD PLUMBING. ALL WARRANTIES EITHER WRITTEN OR IMPLIED ARE NULL AND VOID IF WATER TREATMENT FLUIDS ARE DISCHARGED INTO SEWERS LEADING TO THE DRAINFIELD OR SEWAGE TREATMENT COMPONENTS.



LEGEND

- •4 SOIL BORE # & LOCATION
- DOCUMENTED SOIL AREA
- TOPO
- GULLY
- NATURAL DRAINAGE SWALE
- PROPOSED HOUSESITE
- PROPOSED DRIVEWAY
- PROPOSED WELL SITE
- TOPSOIL STOCKPILE

0' 100 200 300

VIRGINIA DEPARTMENT OF HEALTH
HAROLD L. MATHEWS # 10
AUTHORIZED ONSITE SOIL EVALUATOR

MARCH 28, 2005
JOB NUMBER:
FILE: MURPHYS MILL FINAL

MATHEWS SOIL CONSULTANTS INC.
5700-C HOPKINS ROAD
POST OFFICE BOX 34099
RICHMOND, VIRGINIA 23234
EMAIL: MSCINC@CAVTEL.NET
PHONE: 804-271-0136
FAX: 804-271-7148

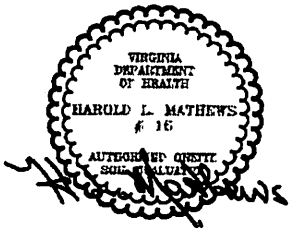
PRINCIPLES OF GOOD DRAINFIELD MAINTENANCE

Harold L. Mathews, Ph.D., CPSS

1. DO use water saving fixtures - use sensible water conservation practices.
2. DO use the washing machine sparingly on a daily basis. Wash one (1) or two (2) loads daily rather than saving for a wash day.
3. DO maintain faucets and other fixtures on a regular basis, so that leaking does not occur when not in use.
4. DO have septic tanks, boxes, and the drainfield system evaluated regularly; pump and clean all tanks and distribution boxes once every three (3) to (4) four years.
5. DO pump grease traps for garbage disposer every one (1) to two (2) years.
6. DO add additional tanks if you install a garbage disposer or hot tub.
7. DO keep a record of the septic tank(s), distribution box(es), and drainfield design layout and of the pumping schedule.
8. DO consult your local health department or consultant before installing structures, home additions, swimming pools, decks, patios, parking, or other soil disturbing practices.
9. DO consider preventative design practices. The installation of multiple tanks in series is a good practice which will insure longer drainfield life. This practice is very cost effective when the expense and inconvenience of repairs is considered.

1. DON'T use excessive amounts of water in short periods of time.
2. DON'T dump grease or coffee grounds down the drain or dispose of household and automotive chemicals, insecticides, herbicides or petroleum products in a drainfield system. Septic tank systems are not designed to decompose these materials.
3. DON'T dispose of sanitary napkins, disposable diapers, plastics or synthetic rubber products.
4. DON'T use excessive amounts of drain cleaner, plumber's helper, yeast, bacteria, enzymes, etc. These materials <u>are not good</u> for the septic tank system and are normally a waste of money.
5. DON'T place bark, sawdust, or plastic mulch over drainfield systems.
6. DON'T place lawn irrigation systems on or contiguous to septic tank drainfields.
7. DON'T plant maple, weeping willow, sycamore, cottonwood, locust or bamboo in or near a drainfield.
8. DON'T use the drainfield area for growing a vegetable garden.
9. DON'T park, place structures, cut and fill, or otherwise abuse the drainfield or the reserve drainfield or any area within 25' of the drainfield.
10. DON'T destroy old drainfields after a repair. They will become serviceable after five (5) to eight (8) years.
11. DON'T discharge waste water from water treatment equipment or swimming pools into a septic system. Sodium from this process causes soils to lose structure which is essential to good percolation. Failure of the system will result from improper discharge from these systems.

(HLM - 08/01/96)



(Revised 10/25/99)

MATHEWS SOIL CONSULTANTS, INC. P. O. BOX 34099 RICHMOND, VIRGINIA 23234
Phone (804) 271-0136 - (800) 287-9604 - Fax (804) 271-7148

IMPORTANT FACTORS TO CONSIDER WHEN INSTALLING AND MAINTAINING SEPTIC TANK DRAINFIELD SYSTEMS

Harold L. Mathews, Ph.D., CPSS

SURFACE DRAINAGE AND USE OF THE DRAINFIELD AREA: Surface and roof water should be directed away from the drainfield, and the finished grade should promote good surface drainage without ponding of water near the drainfield. Cut and fill of the drainfield or the natural soil within 25' of the drainfield should be avoided. Drainfields should not be used for parking automobiles or other secondary uses which would cause compaction. Trucks, tractors, and other heavy equipment should not be driven across drainfields or septic tanks. Drainfields should be graded and seeded to an appropriate lawn grass and maintained as a lawn area. Consult your local Extension Service office for seed and fertilizer recommendations.

WATER TREATMENT EQUIPMENT: The back flush from home water treatment systems and swimming pools should not be discharged into a sewer system leading to a septic tank drainfield. The drainfield design does not include allowances for this type of discharge. Most treatment units use salt. Sodium causes clays to disperse and soil structure to break down. Soil structure is essential for good percolation in clayey soils and failure of drainfield systems will result from sodium rich back flush waters being place in drainfield systems. The back flush water from the home water treatment systems and swimming pool filters should be discharged on the surface at a point well away from the house and any part of the septic tank drainfield system. It is important that water from these treatment units does not flow over any part of a drainfield system including the septic tanks, distribution lines or drainfield trenches.

JACUZZI (jetted tubs): MSCI recommends that those homes which utilize indoor hot tubs or Jacuzzi tubs (large jetted bathtubs) provide a separate absorption system or dedicated septic tank for the disposal of this effluent. The sudden release of 40 to 100 gallons of water into the primary septic tank will cause suspension of sediments within the tank. Solids suspended in the effluent will subsequently flow into the drainfield system and can lead to premature failure of the system. A separate plumbing outlet is required.

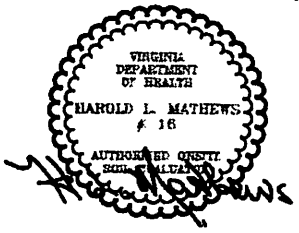
GARBAGE DISPOSER: If the homeowner desires the installation of a garbage disposer, the kitchen plumbing should be plumbed to a separate outlet and a 1250 or 1500 gallon septic tank/grease trap installed to receive only kitchen effluent. Effluent from this tank can flow to the primary drainfield or to a separate drainfield. This grease trap should be pumped to remove grease and solids once every two years. We do not recommend that kitchen garbage disposer units be installed with conventional septic tank drainfield systems which do not have dedicated septic tanks (grease traps).

TREES, SHRUBS, GARDENS AND THE DRAINFIELD: Trees and plants such as weeping willow, maple, locust, sycamore, cottonwood, tree of heaven and bamboo should be removed if within 50 feet of drainfield lines, septic tanks, or distribution boxes. The roots of these trees have an affinity for water and will enter distribution lines, distribution boxes and drainfield trenches. These roots frequently cause clogging of distribution lines and failure of the drainfield system. We do not recommend that these species be utilized as landscape vegetation in the vicinity of the drainfield system because of this problem. They should not be planted within 50' of any part of the drainfield and should not be used as landscape materials near adjacent drainfield systems. We do not recommend that any vegetable garden practices be conducted in the vicinity of a drainfield. Common sense dictates that the production of home gardens and sewage disposal are not compatible practices.

BURIED UTILITIES AND DRAINFIELD PROBLEMS: It is the responsibility of the builder, developer, utility contractor, sub-contractor, realtor, and the homeowner to be sure that cable routes for buried utilities (e.g., electric, natural gas, water, telephone, cable tv) do not cross the drainfield/reserve drainfield. Trenches for buried cables and other utilities frequently cause drainfield failure by providing an avenue for lateral movement of effluent. Contractors and sub-contractors must be made aware of the problems and held responsible for staying clear of designated drainfield zones. Detailed site plans are recommended for their use.

MULCH: We do not recommend the use of bark, sawdust or plastic sheeting mulch on drainfield sites. Septic tank drainfield systems are designed to percolate water into the soil system and evapotranspiration is a principal part of the removal of water from that system. Mulches are designed to prevent evaporation and hold water in the soil system. The use of mulch over drainfields often contributes to premature failure of the system.

SPRAY IRRIGATION SYSTEMS: Spray irrigation systems should not be installed over or near the drainfield and reserve drainfield site. Septic tank drainfield systems are designed for percolation of water into the soil system. Those designs take into consideration annual rainfall but do not allow for irrigation. Spray irrigation systems may lead to failure of the drainfield system because of additional water being placed in the drainfield area and the improper design and installation of piping systems.



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Phone (804) 271-0136 - (800) 287-9604 - Fax (804) 271-7148

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Certification Statement

County: Westmoreland

Property Identification: Lot #8; Murphy's Mill Point

Submitted by: Mathews Soil Consultants, Inc.

This is to certify according to §32.1-163.5 of the Code of Virginia that work submitted for the referred property is in accordance to and complies with the Sewage Handling and Disposal Regulations of the Virginia Department of Health. I recommend a certification letter and/or subdivision approval.

AOSE _____ AOSE #16 Date: 11/17/09

Services rendered by MSCI are specifically limited to twenty four (24) months (services are hereinafter referred to "services") and are provided without warranty or representation other than the warranty that such services were rendered in accordance with §32.1-163.5 of the Code of Virginia. MSCI makes no warranties or representations of any kind, express or implied, including, without limitation, any warranty of or representation that the property can be used for any purpose other than a drainfield and reserve drainfield for single family home construction or that the property can be utilized for any particular use twenty four (24) months subsequent to the date of the rendition of the services. MSCI shall have no liability or responsibility to any person or entity in the event the topographical features of either the property inspected or adjoining properties are altered and MSCI shall have no liability for any indirect, incidental or consequential damages, resulting from the rendition of any services by MSCI. Any claim for any damages, whatsoever, shall be waived unless asserted within twenty four (24) months of the date the services were rendered.

MSCI request that the local health department notify the AOSE if a Level 2 field review is to be conducted for this submission. Please give 48 hours notice at (804) 271-0136, (800) 287-9604 or by fax (804) 271-7148.