

5107 APPLE MINT CT

19521129

1/9/2008

duponbj

Groundwater and Wastewater Services File Imaging Project
May 2007
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FEE: _____
DATE: _____

AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION

ACS

PERMIT NUMBER: 5772B
PARCEL NUMBER: 195-211-29

JOB LOCATION ADDRESS: 5107 APPLEMINT COURT LOT ~~25~~ 21
PROPERTY OWNER: AL AND MARGIE FORREST
BUILDING CONTRACTOR: NA
SUBDIVISION NAME: MAYHEW COUNTRY ESTATES
AUTHORIZATION ISSUED BY: PHILO WALKER DATE: 05/17/05

Philo S. Walker Jr

DENR/DEH AUTHORIZED AGENT

AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NUMBER 5772B, AND THE ATTACHED SITE PLAN WITH SYSTEM DETAILS. CONSTRUCTION AND INSTALLATION MUST ALSO MEET ALL REQUIREMENTS SET FORTH IN THE RULES GOVERNING SANITARY SEWAGE COLLECTION, TREATMENT, AND DISPOSAL AND ANY OTHER APPLICABLE RULES AND LAWS.

2. AN *INSTALLATION, CONSTRUCTION, ALTERATION AND/OR REPAIR APPROVAL* MUST BE SECURED PRIOR TO INSTALLATION OF THE SEPTIC TANK SYSTEM. THE INSTALLER OF THE SYSTEM SHALL BE A REGISTERED SEPTIC TANK CONTRACTOR WITH THE MECKLENBURG COUNTY HEALTH DEPARTMENT.

3. ANY ALTERATION IN SITE OR SOIL CONDITIONS (INCLUDING LOCATION OF STRUCTURES AND APPURTENANCES) OR MODIFICATION IN USE, DESIGN WASTEWATER FLOW, OR WASTEWATER CHARACTERISTICS AS SPECIFIED IN THE ASSOCIATED IMPROVEMENT PERMIT AND APPLICATION, MAY SUBJECT THIS CONSTRUCTION AUTHORIZATION AND ASSOCIATED PERMIT(S) TO REVOCATION.

4. THIS CONSTRUCTION AUTHORIZATION AS PROVIDED IN G.S. 130A-335(f) AND G.S. 130A-336(b) SHALL BE VALID FOR A P ERIOD E QUAL TO THE VALIDITY OF THE IMPROVEMENT PERMIT, NOT TO EXCEED 60 MONTHS.

5. OTHER CONDITIONS:
   AGREEMENT FORMS REQUIRED
   SEE PLAN ON FILE

Hold for:
1) Agreement Forms
2) Signatures & dates

CONDITIONS OF IMPROVEMENT PERMIT / CONSTRUCTION AUTHORIZATON

Permit Number: **5772B** Tax Number: **195-211-29**

- The IMPROVEMENT PERMIT is subject to revocation if site plans or the intended use change. There is to be **NO** grading, filling, or disturbance of the soil in the area of the septic tank system or repair area.
- CONSTRUCTION AUTHORIZATION must be obtained prior to receiving a Building Permit. The Construction Authorization is **NOT** transferable. Do not clear, grade, fill or disturb soil prior to obtaining a Construction Authorization.
- Domestic-type wastewater only. No industrial process wastewater may be discharged into the system.

Basement: ☐ Yes ☒ No ☐ Partial Basement

Primary Wastewater System

Type: ☐ I ☐ II ☐ III ☒ IV ☐ V ☐ VI

☐ Conventional
☒ Prefabricated, permeable block panel system
☐ Shallow Placed Conventional
☐ Low Pressure Pipe
☐ Large Diameter Pipe
☐ Fill
☐ Other
☐ Innovative or Experimental:

.3 Long-term acceptance rate (GPD/ft^2)	360 Max gallons/day wastewater flow	723 Absorption Area (ft^2)	8 Trench spacing (min. on centers) (ft)
Serviced by private well: ☐ Yes ☒ No	1500 Gallon septic tank	241 Total trench length (ft)	30 Maximum trench depth (in) (At least 12" of provisionally suitable soil must remain between trench bottom and unsuitable soil conditions.)
3 Bedrooms in residence	1500 Gallon pump tank	NA Depth of stone (in)	

Any surface water present: **NO** Type: Minimum separation distance (ft):

Additional conditions: **SEE PLAN ON FILE, PPBPS DESIGN AGREEMENT FORMS SHALL BE RECORDED AND ON FILE PRIOR TO CONSTRUCTION RELEASE**

Repair Area System

Type: ☐ I ☐ II ☐ III ☒ IV ☐ V ☐ VI

☐ Conventional
☐ Prefabricated, permeable, block panel system
☒ Shallow Placed Conventional
☐ Low Pressure Pipe
☐ Large Diameter Pipe
☐ Fill
☒ Other
☐ Innovative or Experimental:

600 Absorption Area (ft^2) 300 Total trench length (ft)	NA Depth of stone (in)	9 Trench spacing (min. on centers) (ft)	30 Maximum trench depth (in)

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department has approved the Request for the Job Location contained in this document. The approval is granted in accordance with the provisions of Laws and Rules For Sewage Treatment, and Disposal Systems in effect at the time of issuance of the permit and is subject to the following provisions:

*** No work shall be conducted on the septic tank system until an Installation, Construction, Alteration and/or Repair Approval is granted by this Department.

*** This Improvement permit is transferable.

Phil S. Walker RS 5/17/05

DENR Authorized Agent Date Owner/Agent Signature Date

MECKLENBURG COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 N. TRYON ST., SUITE 211
CHARLOTTE, NC 28202
PHONE: (704) 336-5103
FAX: (704) 336-6894

NC DENR
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

S&EC

Soil & Environmental Consultants, PA

236 LePhillips Court, Suite C • Concord, North Carolina 28025 • Phone: (704) 720-9405 • Fax: (704) 720-9406
www.SandEC.com

Attached is a proposed design for a 3-bedroom Prefabricated Permeable Block Panel System using LPP distribution for Alfred Forrest at Lot 21 on Apple Mint Court in Mint Hill, NC.

Contents: **Page**

Information for the Installer ----------1

Design Information
- Design Specifications----------2-4
- Layout Specifications---------- 5
- Drainline/Panel Specifications---------- 6
- Repair Lines Specifications----------7

Site Plans ----------8

Pressure Panel Drawing----------9

Septic Tank Diagram---------- 10

Pump Tank Diagram----------11

Control Panel & Float Specifications----------12-15

Pump Specifications----------16-17

Electric Box Installation ---------- 18

Maintenance of Septic Systems ---------- 19-21

Project #:5-1531s1
Design by: Wendell Overby
May 9, 2005

Approved 5/17/05
Philo S. Walker RS

Greensboro Office:
3817-E Lawndale Drive
Greensboro, NC 27455
Phone: (336) 540-8234
Fax: (336) 540-8235

Raleigh Office:
11010 Raven Ridge Road
Raleigh, NC 27614
Phone: (919) 846-5900
Fax: (919) 846-9467

INFORMATION FOR THE INSTALLER:

- The permit should be read very carefully prior to bidding. The following are details that must be considered along with all other considerations.
- Tanks shall be approved by DEHNR, and certification supplied by the manufacturer.
- Tanks shall be water tested prior to installation.
- The installer shall be responsible to the owner for placement of the tanks and to insure that final grades are returned to the original natural grade, with exception of added structural features.
- The supply trench shall be compacted to eliminate cavities left during initial fill placement.
- Installation of the system shall be during dry conditions in order to protect the soil structure.
- All fittings shall be pressure rated fittings.
- All joints shall be cleaned with PVC pipe cleaner and a heavy bodied glue applied to weld all joints.
- Where required by the county health department, post installation inspections by the designer must be scheduled 5 week days in advance.
- Trenches shall be carefully excavated so the bottom is within 2" from the highest to . the lowest points of elevation within the trench. If the bottom elevation needs adjusting after it has been trenched, it will be done by removing high points rather than filling low points. It is extremely important to insure that trenches are not over excavated during initial trenching. All fine grading within the trench will be hand done with a shovel. No loose material will be left in the trench
- All pipe openings in the tanks shall be properly grouted. This also applies to the joints around the riser.
- All tanks shall be properly back filled and compacted to prevent slump at a later date.
- Earth dams, constructed of relatively impervious material, shall be installed at the beginning and end of each lateral.
- No heavy equipment shall be used on the field during or after installation. The use of a small loader (i.e. Bobcat), trencher (i.e. Ditch Witch 2300/2310) or backhoe may be used for installation.
- Elevations at pinflag locations should be checked by the installer prior to beginning trenches.
- Pumptank riser should be 6" above grade, control panel should be 12" above grade.
- Septic tank riser shall be a minimum of 6" above finished grade.
- System is specified as LPP panel block.
- Repair is specified as an atgrade innovative system
- Sidewalls for panel system should be limed and raked
- System trenches shall be 3' wide
- 1-5/32" hole drilled for each panel

PPBPS SYSTEM FOR WASTEWATER TREATMENT

Owner's name: Alfred Forrest **Phone:** 704 545-5016
Mailing address: 5600 Mint Forest Drive
Charlotte, NC 28227
System location: Lot 21 Apple Mint
Tax ID #: **Deed Book:**
Township: Mint Hill **County:** Mecklenburg
Source of Wastewater Flow: 3-bedroom home
Estimated Daily Wastewater Production: 360 gpd
System Flow: 23 gpm

DESIGN PARAMETERS

Drainfield size: 241 linear ft.
Number of Panels 55
Trench depth: 30" below natural soil surface
Trench width: 36"
Septic tank size: 1500 gal
Supply line volume: 20.88 gal

Supply line length: ~120'
Supply line diameter: 2"
Supply line pressure rating: SCH 40

Loading rate: 0.3 gpd/ft²

Hole size 5/32"
Hole spacing: 1 per panel
Pump tank size: 1500 gal
Pump tank dimensions: 12'x6' (or other NCDENR approved 1500 gal pump tank

Combined lateral line volume: 19 gal
Dosing volume: 198 gal

Recommended float controls: SJE Pumpmaster
Threaded union: in tank
Gate valves: 1 per lateral, 1 in tank
Check valves: 1 in tank
Anti-siphon hole: No

Elevation head: ~16'
Pressure head: 2.0'
Friction head: 1.86'
Total dynamic head: 23'(w/15% for fittings)

Recommended high water alarm: SJE Rhombus panel and floats or equal
Recommended Pump: Myers ME50 or approved equal ½ hp pump
Additional Comments: Soil suitability performed by Soil and Environmental Consultants, PA & Mecklenburg County Health Department

3 BEDROOM PANEL SYSTEM
FOR WASTEWATER TREATMENT

Owner: Alfred Forrest

Address: 5600 Minte Forest Drive
Charlotte, NC 28227
Phone: (704) 545-5016
County: Mecklenburg
Location: Lot #21
Source of Wastewater Flow: 3 Bedroom Single Family Residence
Estimated Daily Wastewater Production: 360
System Flow: 5/32"

Design Specifications

Drainfield Size: 241
Loading Rate: 0.3gpd/ft2
Depth of Gravel in Trench: n/a
Gravel Size: n/a
Trench Depth: 30
Trench Width: 36 in.
Septic Tank Size: 1500
Pump Tank Size: 1500
Estimated Supply Line Length: 120
Supply Line Diameter: 2 in. SCH 40 PVC
Supply Line Volume: 20.88
Dosing Volume: 200.00
Supply Manifold: n/a
Supply Manifold Length: n/a
Supply Manifold Volume: N/A

Recommended Float Controls: SJE Sensor Float Control Switches as Required for Control Panel or County Approved Equivalents
Recommended Control Panel: SJE-Rhombus Model 112 (NEMA 4x) Control Panel or County Approved Control Panel.
Pressure Head: 2 ft.
Friction Head: 1.86
Elevation Head: 16.00
Total Dynamic Head: 22.84
Threaded Union: In Tank
Gate Valves: 1 in Tank
1 at Pressure Manifold
Check Valves: In Tank
Anti-Siphon Hole: NA
Recommended Pump: Myers Model ME50 or County Approved Effluent Rated Pump Capable of Delivering ~23 ft.of Head at ~23 gpm Total Flow

Additional Comments: Soil suitability was performed by S&EC & Mecklenburg County Health Department.

Lot 21 Apple Mint
PANEL SYSTEM

DESIGN FLOW:	360
SOIL APPLICATION RATE:	0.3gpd/ft2
TOTAL AREA TRENCH BOTTOM:	723
TOTAL LATERAL LENGTH:	241
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	200
SUPPLY LINE LENGTH:	120
TOTAL DYNAMIC HEAD:	22.84
MANIFOLD SIZE:	***N/A***
DOSING VOLUME:	200.00
PUMP TANK DRAW DOWN*:	9.5
SEPTIC TANK SIZE:	1500
PUMP TANK SIZE:	1500
RECOMMENDED PUMP:	Myers Model ME50 or County Approved Effluent Rated Pump Capable of Delivering ~23 ft.of Head at ~23 gpm Total Flow

**Pump tank draw down based on a volume basis of 21 gallons per inch. Draw down may vary among pump tank manufacturers.*

Apple Mint

Project No. 5-1531s1

LAYOUT FOR 3 BEDROOM HOME

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM					100.00		
INSTR. 1			100.00				
			SYSTEM				
1	**Red**			1.00	99.0	**52**	52
2	**Orange**			2.50	97.5	**58**	58
3	**Yellow**			4.00	96.0	**61**	61
4	**Red**			4.90	95.1	**70**	70
			REPAIR				
5	Orange			5.50	94.5	77	75
6	Yellow			6.20	93.8	77	75
7	Blue			7.20	92.8	84	75
8	Yellow			8.20	91.8	85	75

	LINE LENGTH	LTAR GPD/FT	SYSTEM TYPE	TRENCH BOTTOM	INNOVATIVE TYPE	DISTRIBUTN
* System	241	0.30	PPBPS	30	N/A	LPP
Repair	300	0.30	ATGRADE	12	EZ FLO	MANIFOLD

**System trenches shall be 3' wide
**TBM is assumed to be 100'
**All measures in feet
**Nitrification lines are demonstrated on contour via colored pin flags
**BS, HI, and FS indicate rod readings

Apple Mint

LPP PANEL SYSTEM

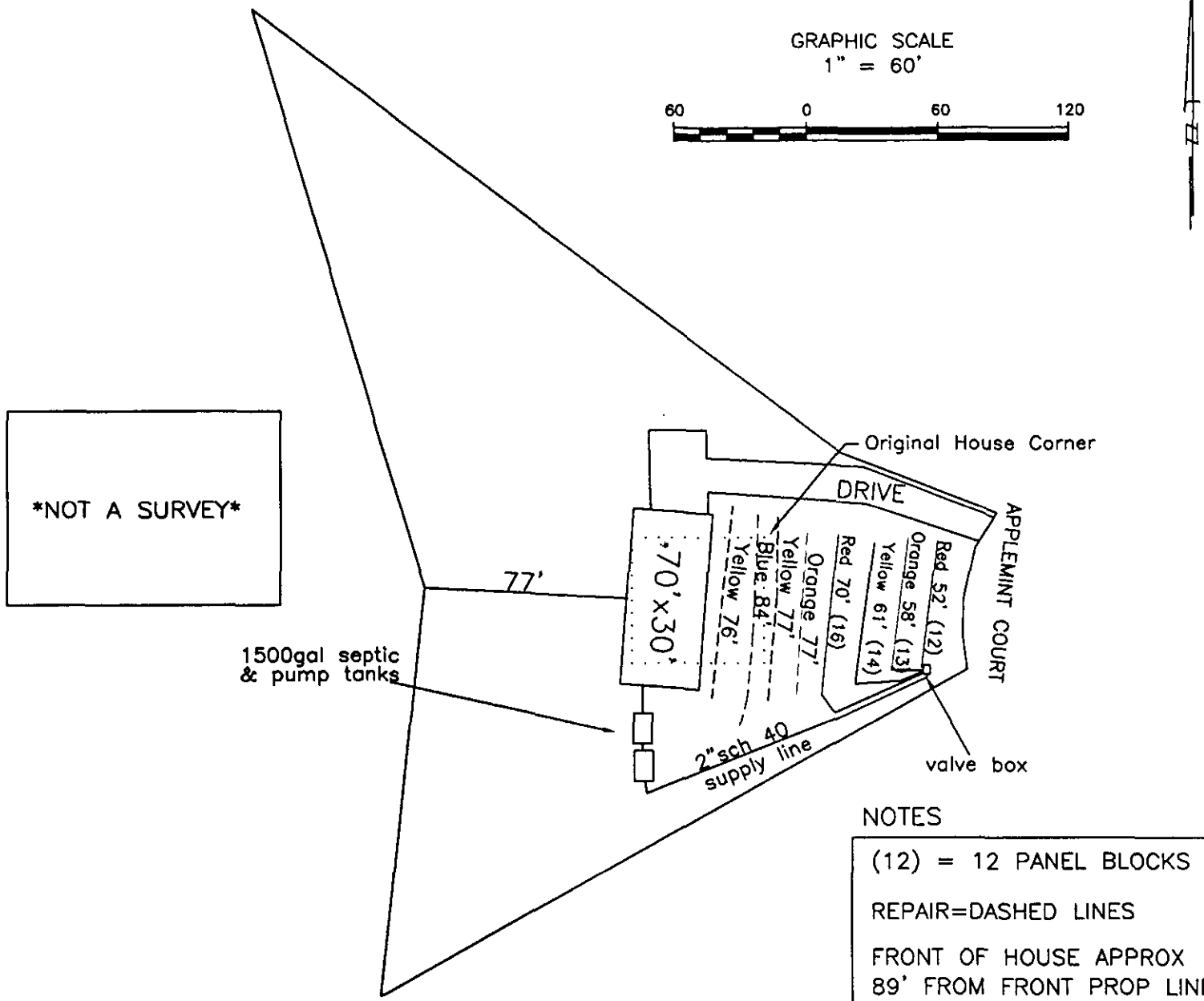
DESIGN SPECIFICATIONS

Line #	Line Color	#Panels	#Holes Panel	Line Length	Hole Size	Line Head	Line Flow
1	RED	12	1	52	5/32"	2.0	4.92
2	ORANGE	13	1	58	5/32"	2	5.33
3	YELLOW	14	1	61	5/32"	2	5.74
4	RED	16	1	70	5/32"	2	6.56
	Total	55					22.55

Apple Mint

PRESSURE MANIFOLD REPAIR

Line #	Color	Elev	Length	Hole Size	Flow/Tap	gpd	Trench Area	Line Ltar
5	ORANGE	94.5	75	SCH 40 1/2	**7.11**	90.00	225	**0.40**
6	YELO	93.8	75	SCH 40 1/2	**7.11**	90.00	225	**0.40**
7	BLUE	92.8	75	SCH 40 1/2	**7.11**	90.00	225	**0.40**
8	YELO	91.8	75	SCH 40 1/2	**7.11**	90.00	225	**0.40**
	total	**feet =**	**300**	**gal/min =**	**28.44**			
			Des. Flow	**360**				
			Pump Run=	**12.66**				
			LTAR	**0.3**				
			Ezflo Ltar	**0.4**				



NOTES

(12) = 12 PANEL BLOCKS

REPAIR=DASHED LINES

FRONT OF HOUSE APPROX
89' FROM FRONT PROP LINE

HOUSE CORNERS MARKED WITH
BLUE/PINK PIN FLAGS

PROJECT NO
S-1531
PROJECT MGR.
WO
DRAWN BY
BF
FIELD WORK
WO,BF
SCALE
1" = 60'
FILE
C:\JOBS\S-1531

Soil & Environmental Consultants, PA

S&EC

PROJECT NAME APPLEMINT COURT
ALFRED FORREST
- APPLEMINT COURT -
MECKLENBURG COUNTY, NORTH CAROLINA
APRIL 2005

SHEET TITLE
SEPTIC LAYOUT
SKETCH MAP

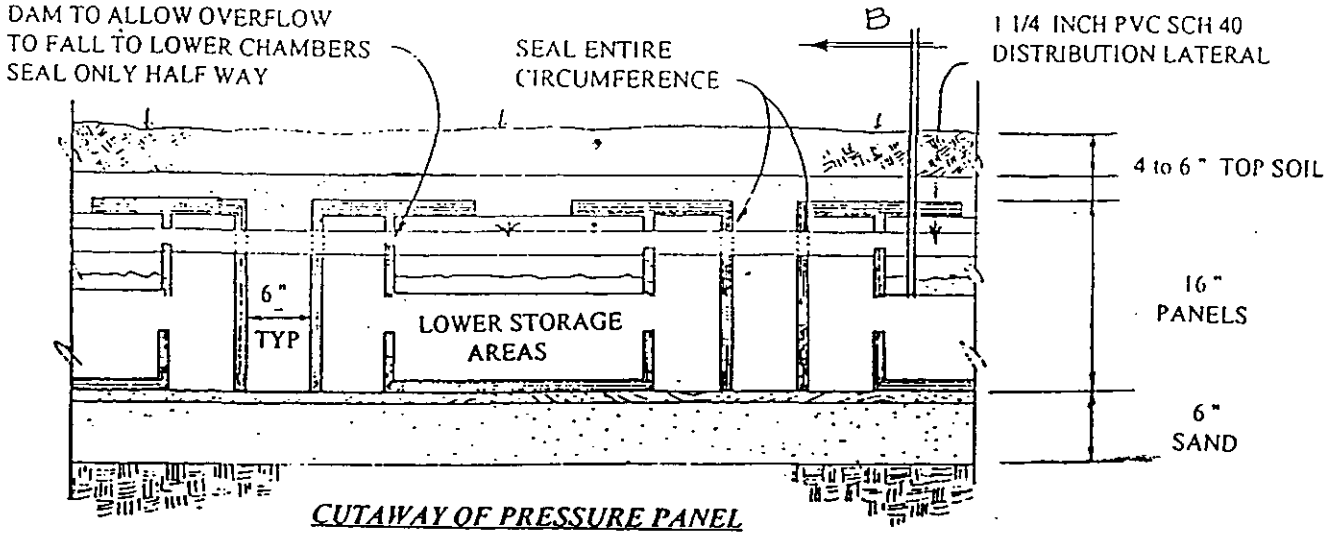
SHEET
1 of 1

Panels With Pressure Distribution

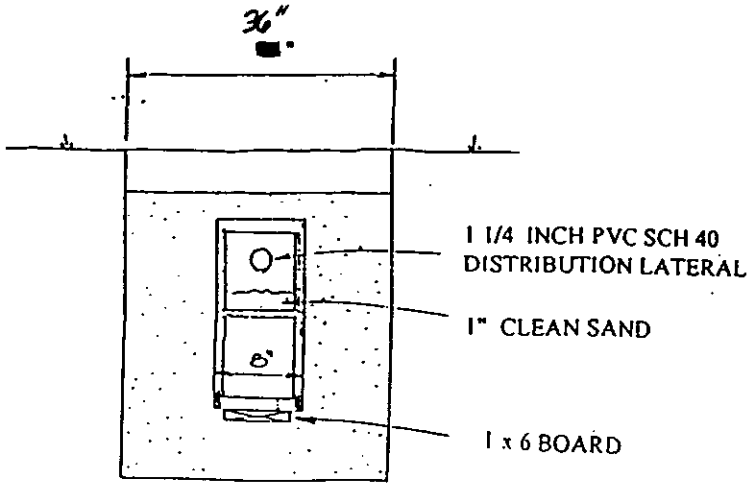
The LP Panel uses Technology similar to that of Low Pressure Pipe (LPP) System. The tables and distribution design described in the LPP manual is applicable to the pressure Panel System. The system should be used with two to four feet of head. In many respects a LP Panel is similar to a LPP with the holes discharging into the panels.

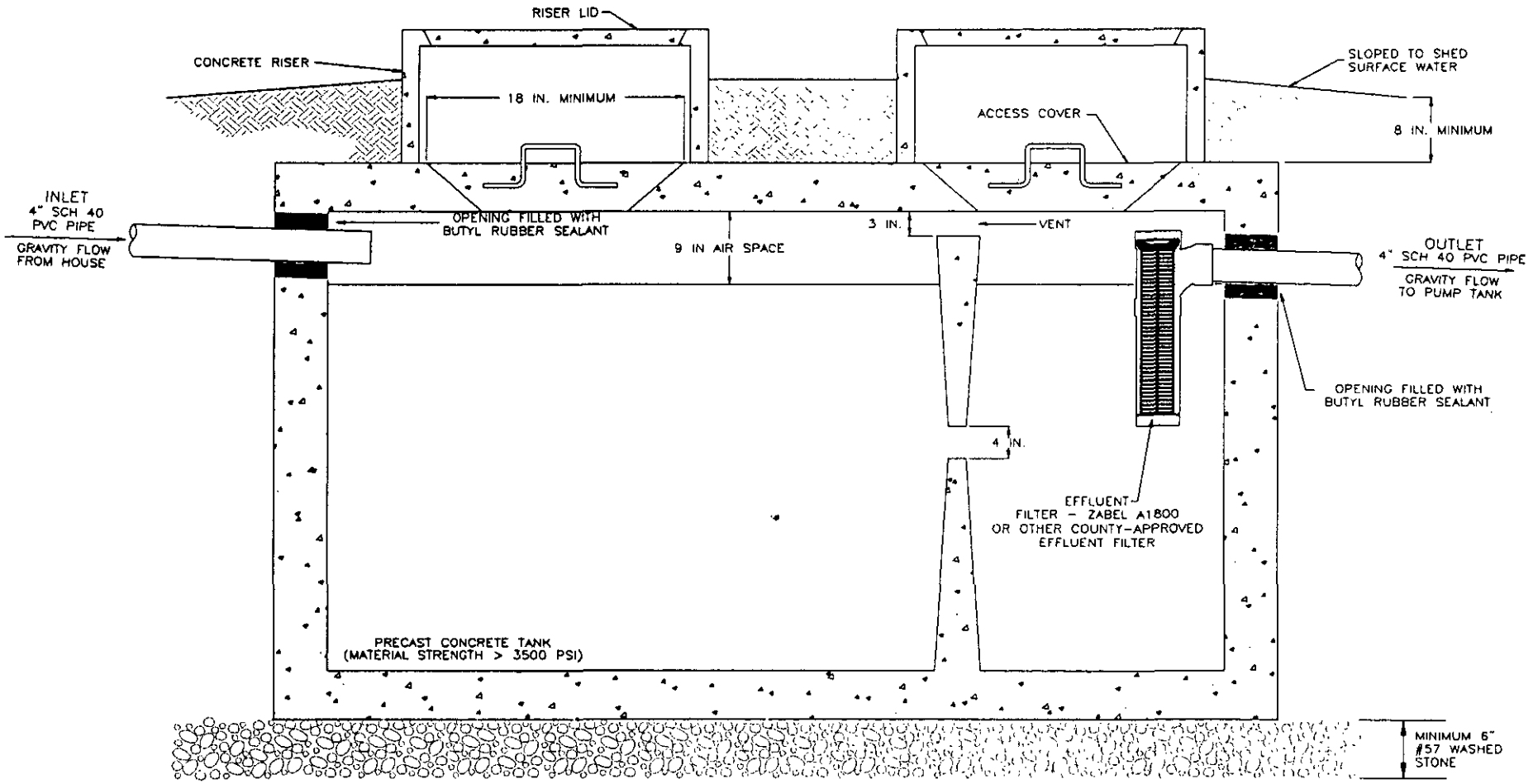
The dosing cycle for the Panel System is designed to pump enough effluent to fill the top chambers of all the panels in the system. The top chamber of a 16 inch panel hold 3.6 gallons. When the system has 34 panels and all holes are the same size, then you would multiply 34 x 3.6 to get 122 gallon per dose cycle. The holes are drilled in the distribution pipe at the 10 and the 2 o'clock position. These are then placed so that the effluent is pumped into the top chamber of the panel. If the hole sizing changes in the system the pump cycle is set by the hole that is discharging the fastest.

All valves and turnups should be neatly capped, covered and labeled for future service. Pump tanks should be constructed as shown in the drawing as to allow for service and repairs.



CUTAWAY OF PRESSURE PANEL





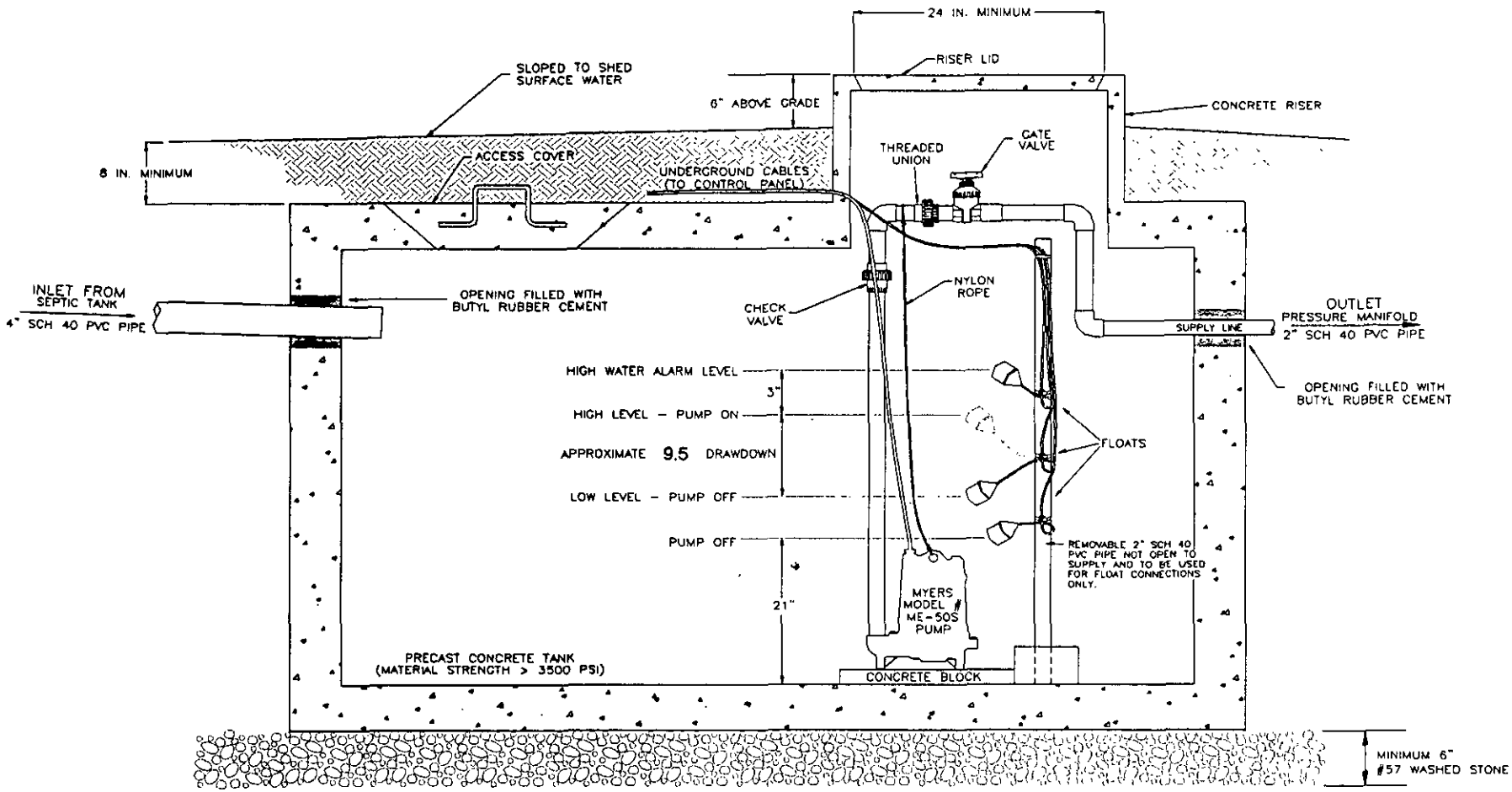
NOTES

1. TANK DIMENSIONS VARY BY MANUFACTURER.

1500 GALLON SEPTIC TANK

PROJECT NO: 4591	PROJECT NAME: **Apple Mint**	S&EC Soil & Environmental Consultants, Inc.
PROJECT MGR:		11010 Raven Ridge Road Raleigh, North Carolina 27614 Phone: (919) 846-5900 Fax: (919) 846-9467
SCALE: NTS	SHEET TITLE: SEPTIC TANK DIAGRAM	Web Page: www.SandEC.com

c1



NOTES

1. TANK DIMENSIONS VARY BY MANUFACTURER.
2. DRAWDOWN WILL VARY WITH TANK DIMENSIONS. DRAWDOWN SHOWN BASED ON 21 GALLONS PER INCH.

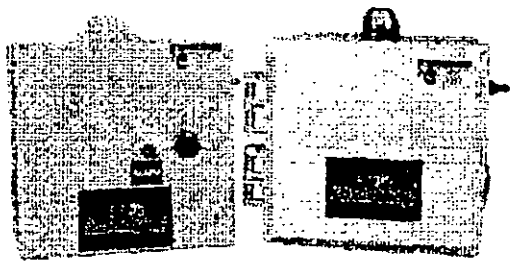
1500 GALLON PUMP TANK

PROJECT NO. 5	PROJECT NAME: Apple Mint	S&EC Soil & Environmental Consultants, Inc.
PROJECT MGR.	SHEET TITLE: PUMP TANK DIAGRAM	11010 Raven Ridge Road Raleigh, North Carolina 27614 Phone: (919) 846-5900 Fax: (919) 846-9467 Web Page: www.SandEC.com
SCALE NTS		

MODEL 112 Control Panel

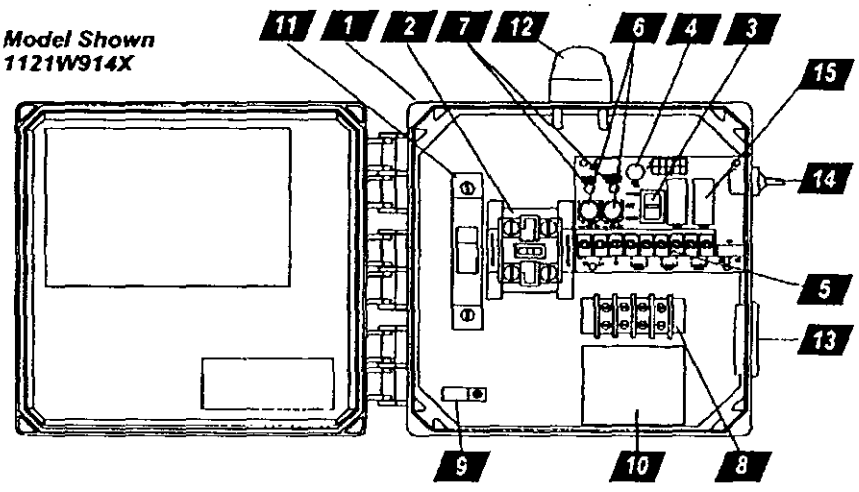
Single phase, simplex motor contactor control.

The Model 112 control panel provides a reliable means of controlling one 120, 208, or 240 VAC single-phase pump in pump chambers, sump pump basins, irrigation systems and lift stations. Two control switches activate a magnetic motor contactor to turn the pump on and off. If an alarm condition occurs, an additional alarm switch activates the audio/visual alarm system.



Indoor *Indoor/outdoor*

Model Shown
1121W914X



1. **Enclosure** measures 8 x 8 x 4 inches (20.32 X 20.32 X 10.16 cm). Choice of NEMA 1 (steel for indoor use), or NEMA 4X (ultraviolet stabilized thermoplastic with removable flanges for outdoor or indoor use).

   * Options selected may increase enclosure size and change component layout.

2. **Magnetic Motor Contactor** controls pump by switching hot electrical lines.
3. **HOA Switch** for manual pump control (mounted on circuit board).
4. **Green Pump Run Indicator Light** (mounted on circuit board).
5. **Float Switch Terminal Block** (mounted on circuit board).
6. **Alarm and Control Fuses** (mounted on circuit board).
7. **Alarm and Control Power Indicators** (mounted on circuit board).
8. **Pump Input Power and Pump Connection Terminal Block**
9. **Ground Lug**
10. **Terminal Block Installation Label**
11. **Circuit Breaker** (optional) provides pump disconnect and branch circuit protection.

STANDARD ALARM PACKAGE (other options available)

12. **Red Alarm Beacon** provides 360° visual check of alarm condition. **Note:** NEMA 1 style utilizes a door mounted indicator in lieu of a beacon.
13. **Alarm Horn** provides audio warning of alarm condition (83 to 85 decibel rating). **Note:** NEMA 1 style utilizes an internally mounted buzzer (83 to 85 decibel) in lieu of horn.
14. **Exterior Horn Test/Normal/Silence Switch** allows alarm horn to be silenced and testing of horn and light to ensure proper operation of alarm system.
15. **Horn Silence Relay** automatically resets alarm after alarm condition has been resolved (mounted on circuit board).

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 three 20' Sensor Float® control switches
- Complete with step-by-step installation instructions
- Three-year limited warranty

c UL us
LISTED

SJE Rhombus CONTROLS
SJ ELECTRO SYSTEMS, INC.
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

112							

MODEL 112

ALARM PACKAGE
0 = select options or no alarm package
1 = alarm package (includes test/normal/silence switch, fuse, red light, horn & float)

ENCLOSURE RATING
I = Indoor, NEMA 1 (metal)
W = Weatherproof, NEMA 4X (engineered thermoplastic)

STARTING DEVICE
1 = magnetic motor contactor 120/208/240V
9 = magnetic motor contactor 120V only

PUMP FULL LOAD AMPS
0 = 0-7 FLA
1 = 8-15 FLA
2 = 16-20 FLA
3 = 21-30 FLA

PUMP DISCONNECTS
0 = no pump disconnect
1 = pull-out with safety deadfront in a 10"x8" enclosure
4 = circuit breaker

FLOAT SWITCH APPLICATION
H or L = pump down or pump up
X = no floats

OPTIONS *Listed below*

★ Options selected may increase enclosure size and change component layout.

If additional features are required, call the factory for a quote on either a Pro-Line or Engineered Custom control panel system.

CODE	DESCRIPTION
1A	Red beacon only / no audio *must select 1E if floats included*
1C	Horn only / no visual *must select 1E if floats included*
1E	Alarm float
3A	Alarm flasher
★ 4A	Low level cutout *select option 4D if floats included*
★ 4B	Red low-level indicator & alarm *must select 4A also*
4D	Low-level float
6A	Auxiliary alarm contact, form C type
★ 8A	Elapsed time meter
★ 8C	Event (cycle) counter
10E	Lockable latch - NEMA 4X
10E	Lockable latch - NEMA 1
★ 10F	Lightning arrester
★ 10K	Anti-condensation heater

CODE	DESCRIPTION
11C	NEMA 1 alarm panel *must select option 6A*
11D	NEMA 4X alarm panel *must select option 6A*
15A	Control / alarm circuit breaker *Does not include the circuit board as in standard.*
16A	10' cord in lieu of 20'
16B	15' cord in lieu of 20'
16C	30' cord in lieu of 20'
16D	40' cord in lieu of 20'
17A	SJE SignalMaster® / mounting strap ●
17B	SJE SignalMaster® / externally weighted ●
17C	Sensor Float® / internally weighted ▲
17D	Sensor Float® / externally weighted ▲
17E	Sensor Float® Mini / pipe clamp ▲
17F	Sensor Float® Mini / externally weighted ▲
19X	Door mounted pump run indicator
21A	Pumpmaster® in lieu of on/off switches ●
21B	PumpMaster® Plus in lieu of on/off switches ●
21C	Super Single® in lieu of on/off switches ▲
21D	Double Float™ in lieu of on/off switches ▲

● Mechanically-activated ▲ Mercury-activated

SAMPLE

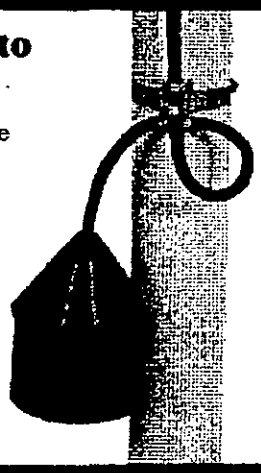
MODEL	112	1	W	9	1	4	H	3A 8A

Alarm Package
Enclosure Rating
Starting Device
Pump Full Load Amps
Pump Disconnect
Float Switch Application
Options: Alarm Flasher, Elapsed Time Meter

© SJE-Rhombus Printed in USA 01/00

SENSOR FLOAT® control switch

Mercury-activated, narrow-angle float switch designed to activate pump control panels and alarms.



This narrow-angle sensing device is used to accurately monitor liquid levels in sewage and non-potable water applications. The Sensor Float® control switch is not sensitive to rotation and is suitable for use with intrinsically safe circuits. Contact SJE-Rhombus regarding specific intrinsically safe applications.

Normally Open Model (high level)
The control switch turns on (closes) when the float tips slightly **above** horizontal signaling a high level, and turns off (opens) when the float drops slightly below horizontal.

Normally Closed Model (low level)
The control switch turns on (closes) when the float drops slightly **below** horizontal signaling a low level, and turns off (opens) when the float tips slightly above horizontal.

FEATURES

- Suitable for use with intrinsically safe circuits.
- Not sensitive to rotation.
- Control differential of .5 inches (1 cm) above or below horizontal.
- UL Listed for use in non-potable water and sewage.
- CSA Certified.
- Three-year limited warranty.

LR54245 LISTED 83N2

Hydraulic

OPTIONS

This switch is available:

- for normally open (high level) applications or normally closed (low level) applications.
- in standard cable lengths of 10, 15, 20, or 30 feet and 3, 5, 6, or 10 meters.
- with three mounting options that allow for flexibility in installation:

  Mounting Clamp: for applications where the switch can be attached to a discharge pipe or similar mounting device.

  Internally Weighted: for applications where the switch can be suspended from above.

  Externally Weighted: for applications where the switch can be suspended from above.

SPECIFICATIONS

CABLE: flexible 18 gauge, 2 conductor (UL,CSA) SJOW, water-resistant (CPE) jacket

FLOAT: 3.38 inch diameter x 4.55 inch long (8.58 cm x 11.56 cm), high-impact, corrosion resistant, PVC housing for use in sewage and non-potable water up to 140°F (60°C)

MAXIMUM WATER DEPTH: 30 feet (9 meters), 13 psi

MERCURY TILT SWITCH: single pole, single throw, mercury-to-mercury contacts, hermetically sealed in a steel capsule and epoxy sealed in the float housing

ELECTRICAL: 5 amp, 120/230 VAC, 50/60 Hz

CONTROLS SJE Rhombus SJ ELECTRO SYSTEMS, INC.
PO Box 1708, Detroit Lakes, MN 56502
1-888-DIAL-SJE Li1-218-847-1317
1-218-847-4617 Fax
email: sje@sjerhombus.com
www.sjerhombus.com

Sensor Float® control switch installation instructions

⚠WARNING **ELECTRICAL SHOCK HAZARD**
Disconnect power before installing or servicing this product. A qualified service person must install and service this product according to applicable electrical and plumbing codes.

⚠WARNING **EXPLOSION OR FIRE HAZARD**
Do not use this product with flammable liquids. Do not install in hazardous locations as defined by National Electrical Code, ANSI/NFPA 70.

Failure to follow these precautions could result in serious injury or death. Replace product immediately if switch cable becomes damaged or severed. Keep these instructions with warranty after installation. This product must be installed in accordance with National Electric Code, ANSI/NFPA 70 so as to prevent moisture from entering or accumulating within boxes, conduit bodies, fittings, float housing, or cable.

MOUNTING THE SWITCH

1. Place the cord into the clamp as shown in Figure B.
2. Locate clamp at desired activation level and secure the clamp to the discharge pipe as shown in Figures A and B. **Note:** Do not install cord under hose clamp.
3. Tighten the hose clamp using a screwdriver. Over tightening may result in damage to the plastic clamp. Make sure the float cable is not allowed to touch the excess hose clamp band during operation.
4. Bring cable leads back to control device and wire according to Figure C.
5. Check installation. Allow system to cycle to insure proper operation.

Note: All hose clamp components are made of 18-8 stainless steel material. See your SJE-Rhombus supplier for replacements.

Figure A

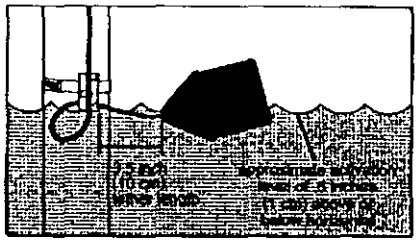
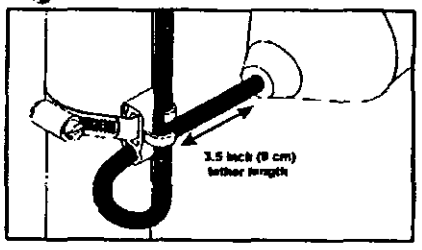


Figure B



INTERNAL WEIGHT

1. Determine desired activation level.
2. Suspend switch 7 inches (18 cm) below desired activation level as shown in Figure D. Switch remains partially submerged during the "on" tipping action. Switch can be totally submerged and still continue to operate properly.
3. Wire cable leads directly into control device as shown in Figure C.
4. Check installation. Allow system to cycle to insure proper operation.

Figure C - Wiring Diagram

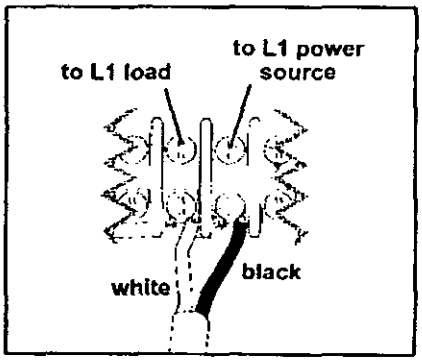
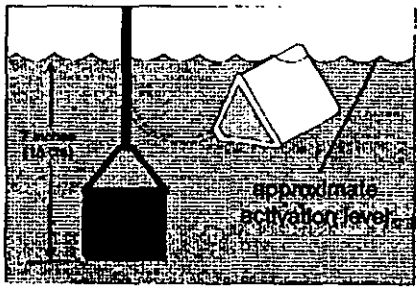


Figure D



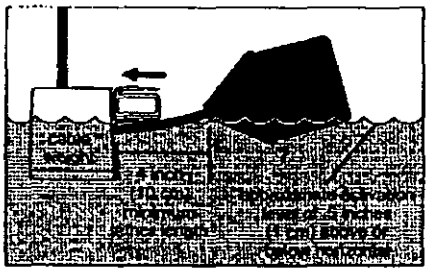
CABLE WEIGHT

1. Determine desired activation level.
2. Suspend switch and cable weight at desired activation level as shown in Figure E.
3. Wire cable leads directly into control device as shown in Figure C.
4. Check installation. Allow system to cycle to insure proper operation.

Cable weight is attached to switch cable at the factory. To adjust:

1. Release clip.
2. Adjust cable weight to desired position.
3. Lay switch cable in weight channel.
4. Align clip with weight channel and slide towards switch cable as shown in Figure E.
5. Snap clip snugly up to cable, moving clip to tightest possible position.

Figure E



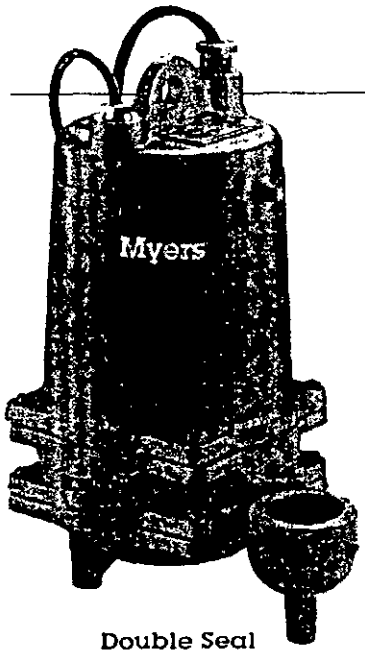
CONTROLS
SJE Rhombus
SJ ELECTRO SYSTEMS, INC.
22650 County Highway 6 ■ P.O. Box 1708 ■ Detroit Lakes, Minnesota 56502 USA
1-888-DIAL-SJE (1-888-342-5753) ■ Phone: 218-847-1317 ■ Fax: 218-847-4617
E-mail: sje@sjerhombus.com

Instl. Instr. PN 1009646A
Cat. Page PN 1009509A

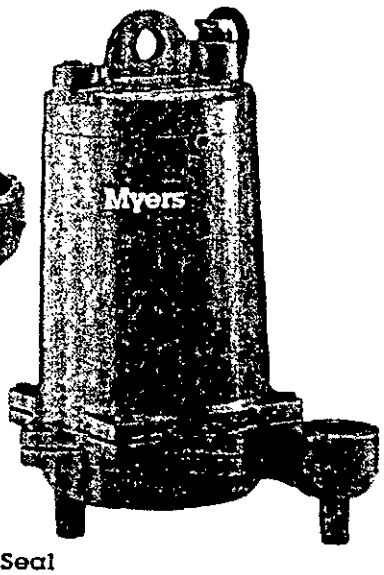
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ME SERIES

1/2 through 1-1/2 HP
Effluent Pumps



Double Seal



Single Seal

THE MYERS ME SERIES EFFLUENT PUMPS ARE DESIGNED SPECIFICALLY FOR TODAY'S EFFLUENT PRESSURE DISTRIBUTION MOUNDS, TRENCHES AND HIGH FLOW DRAINAGE APPLICATIONS. The ME Series effluent pumps with their efficient two vane, enclosed impellers, provide the ideal performance for optimum dosing. ME Series pumps are constructed of only corrosion resistant materials like cast iron, stainless steel and thermoplastics to assure that they will perform for years to come in the harsh effluent environment and drainage applications. For more information, call your Myers distributor today or the Myers Ashland, Ohio sales office at 419/289-1144.

ADVANTAGES BY DESIGN

IDEAL FOR USE IN MOUND AND TRENCH PRESSURE DISTRIBUTION SYSTEMS

- High efficiency, two vane, enclosed impeller provides ideal performance for most efficient dosing.
- Impeller passes full ¾ inch solids.
- Enclosed impeller design eliminates possibility of jamming or corrosion between impeller and volute.

DURABLE MOTOR WILL DELIVER MANY YEARS OF RELIABLE SERVICE

- Oil-filled motor for maximum heat dissipation and constant bearing lubrication.
- High torque, permanent split capacitor (PSC), single phase motors. No starting switches or relays to wear out.
- Optional seal leak probe warns of seal leak condition. (Dual seal motors only.) Helps prevent costly motor damage.
- Motors have on winding current and temperature sensitive overload. (Single phase only.)

THE ME SERIES EFFLUENT PUMPS ARE DESIGNED FOR YEARS OF MAINTENANCE FREE OPERATION

- Volute seal ring is replaceable. Restores pump to original performance if wear should occur.
- Motor is held in place by 4 screws. Easily removed if service is ever needed.

PRODUCT CAPAILITIES

Capacities To	120 GPM	454 LPM
Heads To	95 ft.	28.9 m
Max. Spherical Solids	¾ in.	19 mm
Liquids Handling	domestic effluent & drain water	
Intermittent Liquid Temp.	up to 140° F	up to 60° C
Motor Electrical Data	1/2 HP 115 volts, 1 ph 1/2 to 1-1/2 HP 230 volts, 1 ph 208, 230, 460, 575 volts, 3 ph oil-filled, permanent split capacitor type, 1 ph, 3450 rpm, 60 Hz	
Motor Insulation	Class B (130° C)	
Third Party Approvals	UL, CSA	
Acceptable pH Range	6-9	
Specific Gravity	.9-1.1	
Viscosity	28-35 SSU	
Discharge, NPT	2 in.	50.8 mm
Min. Sump Dia. Simplex	24 in.	61 cm
Duplex	36 in.	91.4 cm

Construction Materials	
Motor Housing, Volute	cast iron, Class 30, ASTM A48-76
Enclosed Two Vane Impeller Standard	engineered thermoplastic
Optional	bronze
Impeller Wear Ring	304 SST
Volute Sealing Ring	Buna-N
Shaft	416 SST
Power Cord	
1/2 HP 1 Ph	20 ft. 16/3 SJOW/SJOW-A
3/4 - 1-1/2 HP 1 Ph	20 ft. 14/3 SJOW/SJOW-A
All 3 Ph	20 ft. 14/4 SOW/SOW-A
Shaft Seals Standard	single carbon & ceramic
Optional	tandem carbon & ceramic
Opt. Lower	tungsten carbide
Fasteners	300 Series SST

WHERE INNOVATION MEETS TRADITION

ISO 9001 Certified Company

Myers
PENTAIR PUMP GROUP

ME SERIES

1/2 through 1-1/2 HP
Effluent Pumps

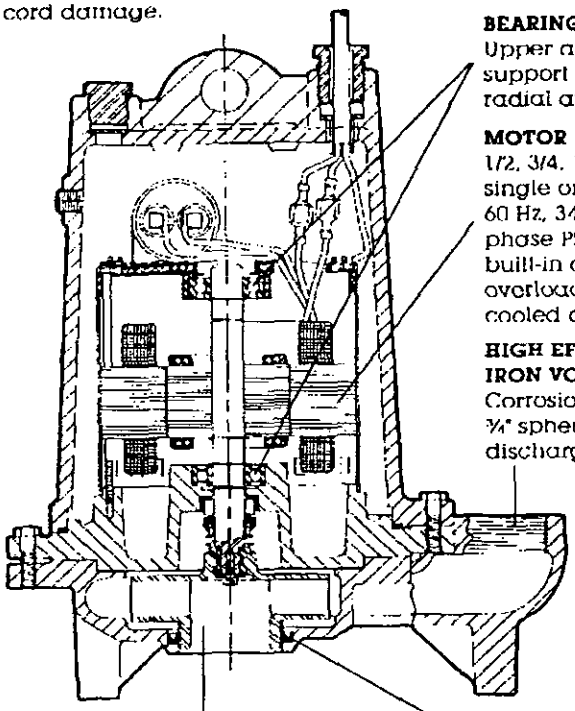
POWER CORD
Jacket sealed with compression fittings. Individual wires potted with epoxy to prevent wicking in case of cord damage.

MOTOR HOUSING
Cast iron for efficient heat transfer and corrosion resistance.

BEARINGS
Upper and lower ball support rotor. Take radial and thrust loads.

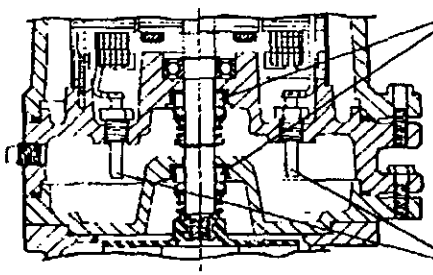
MOTOR
1/2, 3/4, 1 and 1-1/2 HP single or three phase. 60 Hz, 3450 RPM. Single phase PSC motors have built-in on winding overload protection, oil-cooled and lubricated.

HIGH EFFICIENCY CAST IRON VOLUTE
Corrosion resistant. Passes ¾" spherical solids. 2" NPT discharge.



ENCLOSED TWO VANE IMPELLER
high efficiency. Passes ¾" spherical solids with stainless steel wear ring. Optional bronze construction available.

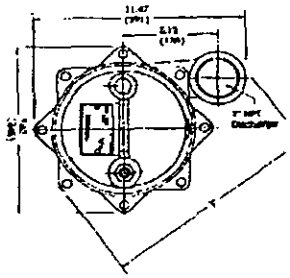
VOLUTE/IMPELLER SEAL RING
Maintains high efficiency and reduces recirculation. Replaceable.

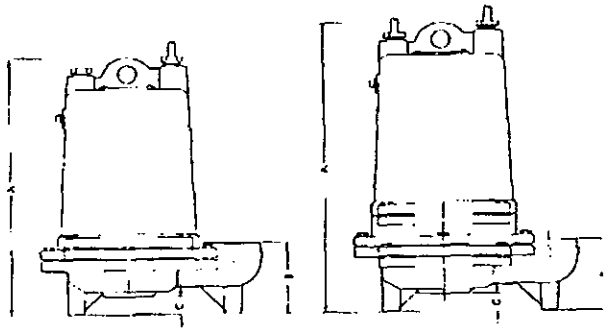


SHAFT SEAL(S)
Carbon and ceramic faces. Optional dual tandem seals. Extends motor life.

SEAL LEAK PROBES
Optional probes (dual seal only) detect water leakage in seal housing. Activates warning light.

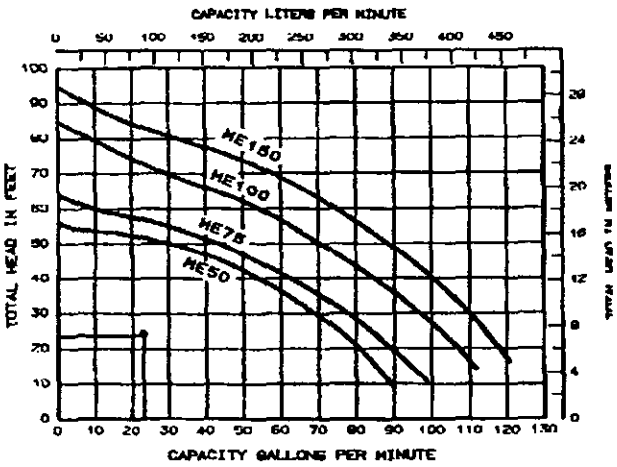
DIMENSIONS





Model Series	Inches (millimeters) A	B	C	F
ME50S	16.8 (427)	4.09 (104)	1.03 (26)	12.13 (308)
ME50D	18.6 (472)	4.09 (104)	1.03 (26)	12.13 (308)
ME75S, ME100S, ME150S	16.8 (427)	4.0 (102)	1.06 (27)	12.5 (318)
ME75D, ME100D, ME150D	18.6 (472)	4.0 (102)	1.06 (27)	12.5 (318)

PERFORMANCE CURVE

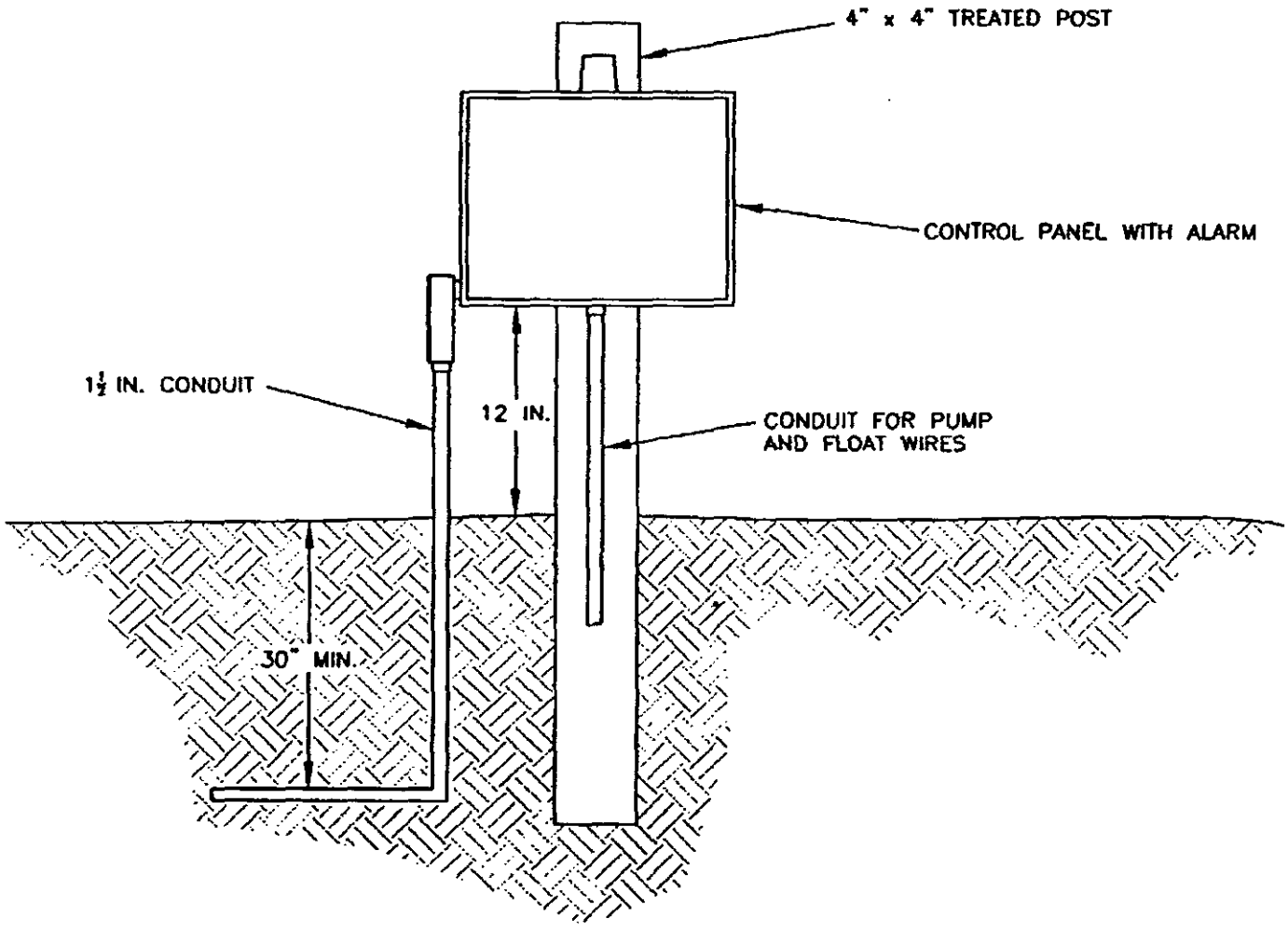


K3320 9/98
Printed in U.S.A.

Myers
PENTAIR PUMP GROUP

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419/289-1144, FAX: 419/289-6658, www.femyers.com
Myers (Canada), 269 Trillium Drive, Kitchener, Ontario N2G 4W5
519/748-5470, FAX: 519/748-2553

ELECTRIC BOX



NOTES: ELECTRICAL SYSTEM COMPONENTS SHALL BE INSTALLED TO MEET OR EXCEED MINIMUM REQUIREMENTS SPECIFIED IN THE ELECTRICAL CODE. ALL WIRING SHALL BE #12 MINIMUM, AND RATED FOR DIRECT BURY. PROVIDE GROUNDING AS REQUIRED, AND PROVIDE 30" MINIMUM BURY ON CABLES. PROVIDE ONE 20 AMP, DOUBLE POLE, 230 VOLT CIRCUIT BREAKER (FOR PUMP), AND ONE 20 AMP, SINGLE POLE, 115 VOLT CIRCUIT BREAKER (FOR ALARM) IN MAIN PANEL.

Maintenance of Sewage Systems

15A NCAC 18A .1961 (b) states:

(b) System management in accordance with Tables V(a) and V(b) of this Rule shall be required for all systems installed or repaired after July 1, 1992. After July 1, 1992 system management in accordance with Tables V(a) and V(b) shall be required for all existing Type V and Type VI systems.

(1) After July 1, 1992, no Improvement Permit shall be issued for Type IV, Type V, or Type VI systems, unless a management entity of the type specified in Table V(b) is specifically authorized, funded, and operational to carry out this management program in the service area where the proposed system is to be located.

(2) A local health department may be a public management entity for systems classified Type IV, V(a) and V(b) only when specifically authorized by resolution of the local board of health.

(3) A contract shall be executed between the system owner and a management entity. The contract shall include the specific requirements for maintenance and operation, responsibilities for the owner and system operator, provisions that the contract shall be in effect for as long as the system is in use, and other requirements for the continued proper performance of the system. It shall also be a condition of the Operation Permit that subsequent owners of the system execute such a contract.

(4) Inspection of the system shall be performed by a management entity at the frequency specified in Table V(b). The management entity shall report the results of their inspection to the local health department at the specified reporting frequency. However, where inspections indicate the need for system repairs, the management entity shall notify the local health department within 48 hours in order to obtain an Improvement Permit for the repairs.

(5) The management entity shall be responsible for assuring routine maintenance procedures in accordance with the condition of the Operation Permit and the contract.

(6) Sewage systems with multiple components shall be classified by their highest or most complex system type in accordance with Table V to determine local health department and management entity responsibilities.

(7) Sewage systems not identified in this Rule shall be classified by the Division of Environmental Health after consultation with the appropriate commission governing operators of pollution control facilities.

(8) The local health department shall routinely review the performance and operation reports submitted in accordance with Table V(b) of this Rule and shall perform an on-site inspection of the systems as required in Table V(a).

(9) Nothing in this Section shall preclude any requirements for system operators imposed in accordance with Article 3 of G.S. 90A.

Maintenance Responsibilities of Management Entity

System maintenance for Type IV and Type V a. (0-1500 GPD) systems as defined in 15A NCAC 18A .1961, Table V shall be performed in accordance with the following (Note: Results of inspections are to be reported to the Wake County Department of Health once per year and twice per year for Type IV and Type V a. systems, respectively):

System Component	Frequency	Maintenance
1. Septic Tank and Grease Trap (If So equipped)	6 months	Check riser condition (must be accessible from ground surface), excess in/exfiltration, entry of water at riser, and solids accumulation. Pump Grease trap as needed.
	1-3 years	Pump septage (septage is to be pumped when ¼ to 1/3 of liquid capacity is occupied by solids).
2. Pump or Dosing Tank	6 months	Check riser condition (must be accessible from ground surface), excess in/exfiltration , entry of water at riser, and solids accumulation. Pump sludge accumulation as required and when septic tank is pumped. Check pump(s), controls, floats, electrical connections, and alarm for proper operation. Measure delivery rate to disposal field. Wash (hose) sludge accumulation from pump housing. If so equipped, verify proper siphon function.
3. Sand Filter Pretreatment (If so equipped)	6 months	Any appropriate maintenance3 in item 2 above. Verify discharge and effluent quality from sand filter.
4. Supply lines (Manifold)	6 month	Check for settling, pipe exposure and leakage.
5. Distribution Devices	6 months	Check distribution boxes, valves, solenoids, etc. for proper function, leakage, and infiltration of surface or ground water into enclosures. Desludge and reset pressure head on pressure manifold. Remove sludge accumulation from all devices as required.
6. Ground Absorption	1-4 weeks	Maintain vegetative cover (mow grass and remove weeds and brush, most grasses should be maintained at a height of 2-4 inches).
	6 months	Check for settling, erosion and surfacing of effluent. Repair any broken lateral turnups and make certain they are accessible from ground surface and are fitted with screw-on type caps. Lateral turn-ups must be sleeved for systems permitted after 1/190. For pressure distribution systems, check and reset pressure head and flush sludge from lateral lines (any discharge of sludge and effluent is to be treated with lime or chlorine solution). Check site drainage, eliminate low or settled areas and divert surface or shallow groundwater movement around fields.

7. General	At all times	Prohibit vehicular or equipment traffic on ground absorption field. Prohibit tillage (gardening) or other soil disturbance over ground absorption field. Practice water conservation to reduce waste water load on system. Do not permit entry of grease and non-domestic waste to system. Use of a garbage disposal is prohibited unless specifically permitted. Addition of chemical or biological additives has not been demonstrated to be necessary to maintain proper system function. Prevention of root intervention on lateral lines and trenches may be necessary on certain sites. Surface and groundwater diversion structures must be maintained.

Department of Environment, Health, and Natural Resources
Division of Environmental Health
On-site Wastewater Section

Sheet: 1 of 2
Property ID: 195-211-29
Lot #: 29
File #: 5772B
Code: 2

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Owner: Margie Forrest
Applicant: Alex Charnofiskiy
Address: 5600 Mint Forest Drive, Charlotte, N. C. 28227
Date Evaluated: 11/5/2004
Proposed Facility: Residence
Design Flow (.1949): 480gpd
Property Size: 1.06a
Location of Site: 5107 Apple Mint Court
Property Recorded:
Water Supply: [ ] Public [x] Individual [x] Well [ ] Spring [ ] Other
Evaluation Method: [x] Auger Boring [ ] Pit [ ] Cut
Type of Wastewater: [x] Sewage [ ] Industrial Process [ ] Mixed

PROFILE #	.1940 Landscape Position/ Slope%	Horizon Depth (IN.)	SOIL MORPHOLOGY .1941 Structure/ Texture	SOIL MORPHOLOGY .1941 Consistence Mineralogy	OTHER PROFILE FACTORS .1942 Soil Wetness/ Color	.1943 Soil Depth (IN.)	.1956 Sapro Class	.1944 Restr Horiz	Profile Class & LTAR
1	LS, 8	0-8	GR/SCL	FR/SEXP/SS/SP	>30" TO SOIL WETNESS	30	N/A	NONE	US, IV
		8-30	SBK/SC	FI/SEXP/S/P					.2GPD/FT^2
2	"	0-3	GR/SCL	FR/SEXP/SS/SP	>28" TO SOIL WETNESS	28	"	"	US
		3-24	SBKC	FI/SEXP/S/P					
		24-28	SBK/C	VFI/EXP/VS/VP					
3	"	0-2	GR/CL	FR/SEXP/SS/SP	2.5Y7/1@17"	19	"	"	"
		2-19	SBK/C	VFI/EXP/VS/VP					
4	LS, 10	0-5	DISTURBED		2.5Y7/1@26"	28+	"	"	US, IV
		5-24	SBK/C	FI/SEXP/S/P					
		24-28	M/C	"					
5	"	0-4	GR/CL	FR/SEXP/SS/SP	>43" TO SOIL WETNESS	43	"	"	PS, IV
		4-43	SBK/C	FI/SEXP/S/P					.225GPD/FT^2

Description	Initial System	Repair System
Available Space (.1945)	US	US
System Type(s)		
Site LTAR	.225GPD/FT^2	.2GPD/FT^2

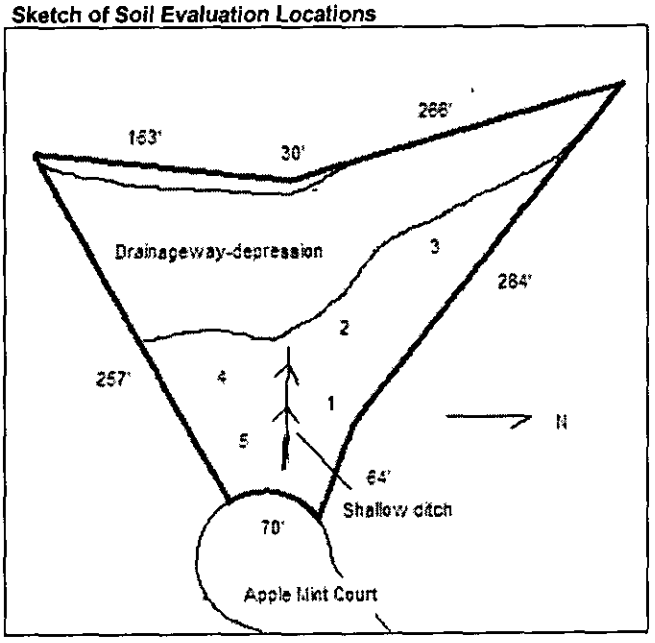
Other Factors (.1946):
Site Classification (.1948): UNSUITABLE
Evaluated By: W. R. Marlin, LSS, 11/5/2004, W. R. Marlin
Others Present:

COMMENTS:
100% repair

Landscape Position	Group	Texture	.1955 LTAR	Structure
R-Ridge	I	S-Sand	1.2 - 0.8	SG-Single Grain
SS-Shoulder Slope		LS-Loamy Sand		M-Massive
LS-Linear Slope				CR-Crumb
FS-Food Slope	II	SL-Sandy Loam	0.8 - 0.6	GR-Granular
NS-Nose Slope		L-Loam		SBK-Subangular Blocky
HS-Head Slope				ABK-Angular Blocky
CC-Concave Slope	III	SI-Silt	0.6 - 0.3	PL-Platy
CV-Convex Slope		SICL-Silty Clay Loam		PR-Prismatic
T-Terrace		CL-Clay Loam		
FP-Flood Plain		SCL-Sandy Clay Loam		
	IV	SC-Sandy Clay	0.4 - 0.1	
		SIC-Silty Clay		
		C-Clay		

Consistence Moist	Consistence Wet	Mineralogy
VFR-Very Friable	NS-Non-Sticky	SEXP-Slightly Expansive
FR-Friable	SS-Slightly Sticky	EXP-Expansive
FI-Firm	S-Sticky	
VFI-Very Firm	VS-Very Sticky	
EFI-Extremely Firm	NP-Non-Plastic	
	SP-Slightly Plastic	
	P-Plastic	
	VP-Very Plastic	

Sketch of Soil Evaluation Locations



9624A 195-031-23

FEE: 200.00
DATE: 11/3/04
Cash JKA

APPLICATION FOR IMPROVEMENT PERMIT FOR RESIDENTIAL SITE INDIVIDUAL WATER AND WASTEWATER SYSTEMS PROGRAM

[ ] CRT

TYPE APPLICATION: ___ NEW SYSTEM ___ EXPANSION/ ALTERATION OF EXISTING SYSTEM ___ REPAIR OF EXISTING SYSTEM

NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT,
HEALTH, AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

FILE #: 5712B

PROPERTY INFORMATION (FROM ENGINEERING FORM) FOR JOB LOCATION:

TAX/PARCEL NUMBER: 195-211-29

STREET ADDRESS: 5107 Appla Mint Ct.

SUBDIVISION OR MOBILE HOME PARK NAME: Mayhaw Country Estates

LOT NUMBER: 29

TYPE OF BUILDING (CHECK ONE):

___ SINGLE MOBILE HOME(S)
___ DOUBLE WIDE (D)
✓ HOUSE (H)
___ MODULAR HOME (M)
___ MULTIPLE FAMILY (U)
___ OTHER (O)

TOWNSHIP (CHECK ONE):

___ 0 MECKLENBURG
___ 1 CHARLOTTE
___ 2 DAVIDSON
___ 3 CORNELIUS
___ 4 PINEVILLE
___ 5 MATTHEWS
___ 6 HUNTERSVILLE
✓ 7 MINT HILL

HEATED SQUARE FOOTAGE:

NUMBER OF BEDROOMS: 4 NUMBER OF OCCUPANTS: 5

CLOSING DATE

Vladimer 704-608-5242

FOUNDATION FOR RESIDENCE:

___ WITHOUT BASEMENT
___ ON SLAB
___ CRAWL SPACE
✓ WITH BASEMENT /PLUMBING
___ WITH BASEMENT /NO PLUMBING

IF EXPANSION/ALTERATION OF EXISTING SYSTEM, DESCRIBE THE PROPOSED BUILDING ADDITION:

WILL THERE BE A HOME BUSINESS IN THE RESIDENCE: ___ YES ___ NO TYPE:

WATER SUPPLY (CHECK ONE):

___ COMMUNITY (C)
___ MUNICIPAL (M)
✓ PRIVATE WELL (P)
___ SHARED WELL (S)
___ OTHER 'SPRINGS' (O)

IF ANY OF THE FOLLOWING ARE LOCATED ON THE PROPERTY, PLEASE SHOW LOCATION ON PLAT:

BURIED CABLES, LANDFILLS, STUMPHOLES ___ YES ✓ NO
EXISTING WASTEWATER SYSTEMS ___ YES ✓ NO
EASTMENTS OR RIGHT-OF-WAYS ___ YES ___ NO
WELL, SPRINGS OR WATERLINES ___ YES ✓ NO
DESIGNATED WETLANDS ✓ YES ___ NO

Buyer

PROPERTY OWNER:

NAME: Forrest Margia H
(LAST) (FIRST) (MI)

ADDRESS: 5107 Appla Mint Ct.

CITY: Mint Hill STATE: NC ZIP: 28227

DAYTIME PHONE: ( ) -

LEGAL AGENT FOR PROPERTY ~~OWNER~~, IF APPLICABLE:

NAME: Charnapiskiy Alex D
(LAST) (FIRST) (MI)

DAYTIME PHONE: (704) 400-8317

3101 Laural Wood Dr.
Matthews NC, 28105

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED?

An Improvement Permit is subject to suspension or revocation if site plans or the intended use change or if information submitted in this application is falsified or changed. The undersigned, owner, or legal agent for the owner, of the property described above as the "Job Location" has read the foregoing application, acknowledges that the contents of same are true, and authorizes agents of the Mecklenburg County Health Department to enter onto the property for the purpose of processing this request.

SIGNED: Alex Charnapiskiy DATE: 11.03.04

MECKLENBURG COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
c/o HAL MARSHALL CTR., SUITE 211, 700 N. TRYON ST., CHARLOTTE, N.C. 28202., (704) 336-5102

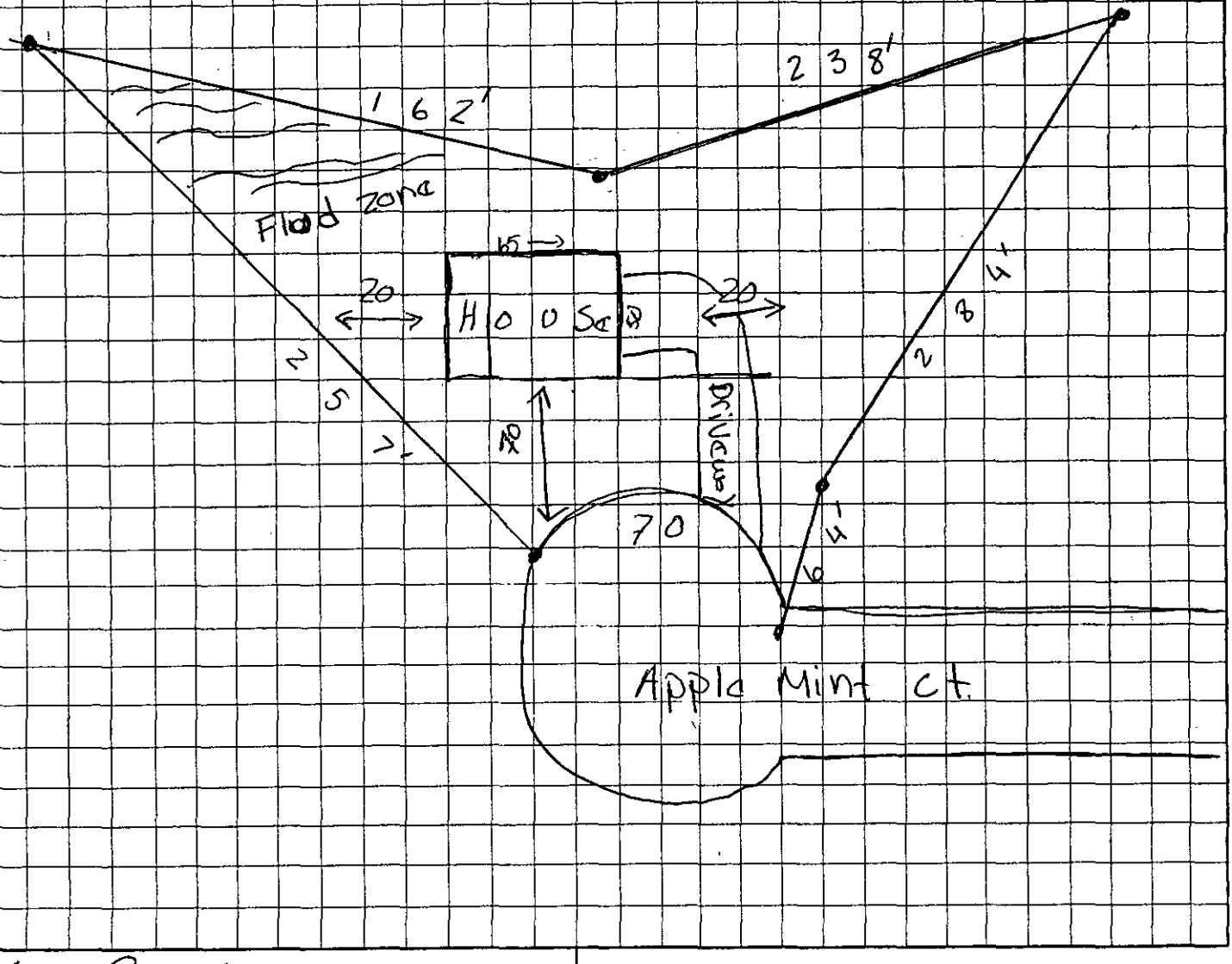
PROPOSED PLOT PLAN

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON STREET
CHARLOTTE, NC 28202
PHONE (704) 336-5102

FILE: 5772B

TC: 195-211-29

Draw in and name all roads adjoining the property. Draw in and accurately dimension the lot concerned. Accurately indicate property boundaries proposed and/or existing structures and driveways, underground utilities, and wells and springs within 100 feet of the proposed building or drainfield.



Alex Chernobisky
OWNER/AGENT SIGNATURE

DATE 11.03.04

APPROVAL DATE _____

White - Health Department's Copy Canary - E.H.S. Copy Pink - Owner's Copy

Department of Environment, Health, and Natural Resources
Division of Environmental Health
On-site Wastewater Section

Sheet: 1 of 2
Property ID: 195-211-29
Lot #: 29
File #: 5772B
Code: 2

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Applicant: Alex Charnofiskiy
Owner: Margie Forrest
Date Evaluated: 11-5-04
Address: 5600 Mint Forest Drive, Charlotte, N. C. 28227
Property Size: 1.06
Proposed Facility: Residence Design Flow (.1949): 480gpd
Property Recorded:
Location of Site: 5107 Apple Mint Court
Water Supply: [ ] Public [x] Individual [x] Well [ ] Spring [ ] Other
Evaluation Method: [x] Auger Boring [ ] Pit [ ] Cut
Type of Wastewater: [x] Sewage [ ] Industrial Process [ ] Mixed

PROFILE #	.1940 Landscape Position/ Slope%	Horizon Depth (IN.)	SOIL MORPHOLOGY .1941		OTHER PROFILE FACTORS				Profile Class & LTAR
			.1941 Structure/ Texture	.1941 Consistence Mineralogy	.1942 Soil Wetness/ Color	.1943 Soil Depth (IN.)	.1956 Sapro Class	.1944 Restr Horiz	
1	LS, 8	0-8	GR/SCL	FR/SEXP/SS/SP	>30" TO SOIL WETNESS	30	N/A	NONE	US, IV .2GPD/FT^2
		8-30	SBK/SC	FI/SEXP/S/P					
2	"	0-3	GR/SCL	FR/SEXP/SS/SP	>28" TO SOIL WETNESS	28	"	"	US
		3-24	SBKC	FI/SEXP/S/P					
		24-28	SBK/C	VFI/EXP/VS/VP					
3	"	0-2	GR/CL	FR/SEXP/SS/SP	2.5Y7/1@17"	19	"	"	"
		2-19	SBK/C	VFI/EXP/VS/VP					
4	LS, 10	0-5	DISTURBED		2.5Y7/1@26"	28+	"	"	US, IV
		5-24	SBK/C	FI/SEXP/S/P					
		24-28	M/C	"					
5	"	0-4	GR/CL	FR/SEXP/SS/SP	>43" TO SOIL WETNESS	43	"	"	PS, IV .225GPD/FT^2
		4-43	SBK/C	FI/SEXP/S/P					

Description	Initial System	Repair System
Available Space (.1945)	US	US
System Type(s)		
Site LTAR	.225GPD/FT^2	.2GPD/FT^2

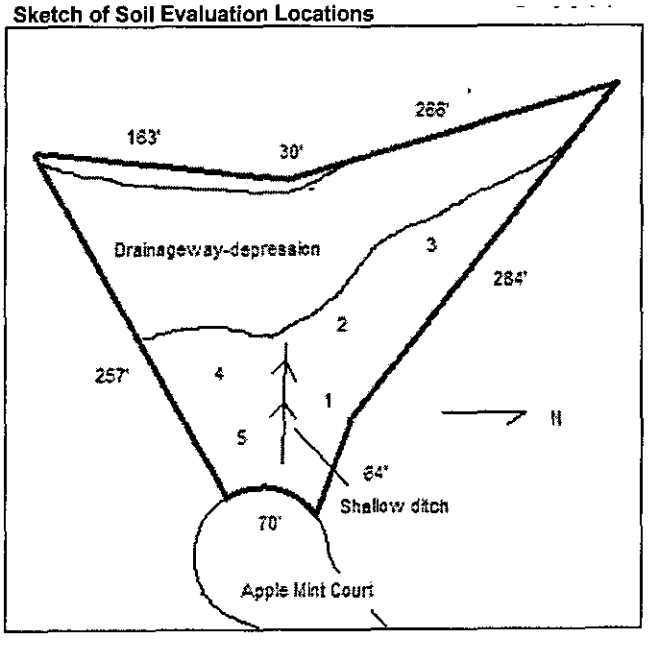
Other Factors (.1946):
Site Classification (.1948): UNSUITABLE
Evaluated By: W. R. Marlin, LSS, 11/5/2004 W. R. Marlin
Others Present:

COMMENTS:
100% repair

Landscape Position	Group	Texture	.1955 LTAR	Structure
R-Ridge	I	S-Sand	1.2 - 0.8	SG-Single Grain
SS-Shoulder Slope		LS-Loamy Sand		M-Massive
LS-Linear Slope				CR-Crumb
FS-Food Slope	II	SL-Sandy Loam	0.8 - 0.6	GR-Granular
NS-Nose Slope		L-Loam		SBK-Subangular Blocky
HS-Head Slope				ABK-Angular Blocky
CC-Concave Slope	III	SI-Silt	0.6 - 0.3	PL-Platy
CV-Convex Slope		SICL-Silty Clay Loam		PR-Prismatic
T-Terrace		CL-Clay Loam		
FP-Flood Plain		SCL-Sandy Clay Loam		
	IV	SC-Sandy Clay	0.4 - 0.1	
		SIC-Silty Clay		
		C-Clay		

Consistence Moist	Consistence Wet	Mineralogy
VFR-Very Friable	NS-Non-Sticky	SEXP-Slightly Expansive
FR-Friable	SS-Slightly Sticky	EXP-Expansive
FI-Firm	S-Sticky	
VFI-Very Firm	VS-Very Sticky	
EFI-Extremely Firm	NP-Non-Plastic	
	SP-Slightly Plastic	
	P-Plastic	
	VP-Very Plastic	

Sketch of Soil Evaluation Locations



MECKLENBURG COUNTY
Health Department

November 08, 2004

Margie H. Forrest
5600 Mint Forest Drive
Charlotte, NC 28227

Re: Application for improvement permit for
Property Site: 5107 Apple Mint Court
Health Department file number: **5772B**

Dear Property Owner or Owner's Agent:

The Mecklenburg County Health Department, Environmental Health Division on **November 08, 2004** evaluated the above-referenced property at the site designated on the site plan that accompanied your improvement permit application. According to your application the site is to serve a four-bedroom residence, with a design wastewater flow of 480 gallons per day. The evaluation was done in accordance with the laws and rules governing wastewater systems in North Carolina General Statute 130A-333 and related statutes and Title 15A, Subchapter 18A, of the North Carolina Administrative Code, Rule .1900 and related rules.

Based on the criteria set out in Title 15A, Subchapter 18A, of the North Carolina Administrative Code, Rules .1940 through .1948, the evaluation indicated that the site is **UNSUITABLE for** a ground absorption sewage system. Therefore, your request for an improvement permit is **DENIED.** A copy of the site evaluation is enclosed. The site is unsuitable based on the following:

- ☐ Unsuitable soil topography and/or landscape position (Rule .1940)
- ☐ Unsuitable soil characteristics (structure or clay mineralogy) (Rule .1941)
- ☒ Unsuitable soil wetness condition (Rule .1942)
- ☒ Unsuitable soil depth (Rule .1943)
- ☐ Presence of restrictive horizon (Rule .1944)
- ☒ Insufficient space for septic system and repair area (Rule .1945)
- ☐ Unsuitable for meeting required setbacks (Rule .1950)
- ☐ Other (Rule .1946)

These severe soil or site limitations could cause premature system failure, leading to the discharge of untreated sewage on the ground surface, into surface waters, directly to ground water or inside your structure.

The site evaluation included consideration of possible site modifications, and modified, innovative or alternative systems. However, the Health Department has determined that none of the above options will overcome the severe conditions on this site. A possible option might be a system designed to dispose of sewage to another area of suitable soil or off-site to additional property.

For the reasons set out above, the property is currently classified **UNSUITABLE,** and an improvement permit shall not be issued for this site in accordance with Rule .1948 (c).

However, the site classified as **UNSUITABLE** may be classified as **PROVISIONALLY SUITABLE** if written documentation is provided that meets the requirements of Rule .1948(d). A copy of this rule is enclosed. You may hire a consultant to assist you if you wish to try to develop a plan under which your site could be reclassified as **PROVISIONALLY SUITABLE.**

You have a right to an informal review of this decision. You may request an informal review by the soil scientist or environmental health supervisor at the local health department. You may also request an informal review by the
N. C. Department of Environment and Natural Resources regional soil specialist. A request for informal review must be made in writing to the local health department.

You also have a right to a formal appeal of this decision. To pursue a formal appeal, you must file a petition for a contested case hearing with the Office of Administrative Hearings, 6714 Mail Center, Raleigh, NC 27699-6714. To get a copy of a petition form, you may write the Office of Administrative Hearings or call the office at (919) 733-0926 or from the OAH web site at www.oah.state.nc.us/form.htm. The petition for a contested case hearing must be filed in accordance with the provision of North Carolina General Statutes 130A-24 and 150B-23 and all other applicable provisions of Chapter 150B. N. C. General Statue 130A-335(g) provides that your hearing would be held in the county where your property is located.

Please note: If you wish to pursue a formal appeal, you must file the petition form with the Office of Administrative Hearings **WITHIN 30 DAYS OF THE DATE OF THIS LETTER.** The date of this letter is **November 11, 2004.** Meeting the 30-day deadline is critical to your right to a formal appeal. Beginning a formal appeal within 30 days will not interfere with any informal review that you might request. Do not wait for the outcome of any informal review if you wish to file a formal appeal.

If you file a petition for a contested case hearing with the Office of Administrative Hearings, you are required by law (N.C. General Statute 150B-23) to send a copy of your petition to the North Carolina Department of Environment and Natural Resources. Send the copy to: Office of General Counsel, N. C. Department of Environment and Natural Resources, 1601 Mail Service Center, Raleigh, NC. 27699-1601. Do **NOT** send the copy of the petition to your local health department. Sending a copy of your petition to the local health department will **NOT** satisfy the legal requirement in N.C. General Statute 150B-23 that you send a copy to the Office of General Counsel, NCDENR.

You may call or write the local health department if you need any additional information or assistance.

Sincerely,

Philo Walker, R.S.
Authorized Agent - DENR

Encl: (2)
Cc: Alex Chernopiskiy