

11235 WILDLIFE RD

19960127

1/8/2008

duponbj

Groundwater and Wastewater Services File Imaging Project
May 2007
Barcode Font = IDAutomationHC39M

on acct B#4050

FEE: 30⁰⁰ **AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION** A S U
DATE: 8/6/03 **VOID SIXTY (60) MONTHS FROM DATE OF ISSUANCE**

DATE: 7/22/03

PERMIT NO: 5232B
PARCEL NO: 199-60-101

JOB LOCATION ADDRESS: 11235 Wildlife Rd
PROPERTY OWNER: Crescent Resource
BUILDING CONTRACTOR:
SUBDIVISION NAME: The Sanctuary at Lake Wylie
AUTHORIZATION ISSUED BY: Brenda Sorrey DATE: 7/22/03
DEHNR AUTHORIZED AGENT

AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NO. 5232B, 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 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 AUTHORIZATION AND ASSOCIATED PERMIT(S) TO REVOCATION.

4. OTHER CONDITIONS: Stay >50' from any well.

OWNER CERTIFICATION

I CERTIFY THAT THERE HAVE BEEN NO ALTERATIONS IN SITE OR SOIL CONDITIONS OR MODIFICATIONS TO FACILITY, WASTEWATER FLOW, OR WASTEWATER CHARACTERISTICS FROM THOSE SPECIFIED IN THE ORIGINAL APPLICATION OR ASSOCIATED IMPROVEMENT PERMIT UNLESS AUTHORIZED IN WRITING BY THE MECKLENBURG COUNTY HEALTH DEPARTMENT. I ALSO UNDERSTAND THAT ANY SUCH ALTERATIONS, MODIFICATIONS, OR FALSE INFORMATION ARE GROUNDS FOR REVOCATION OF PERMITS AND AUTHORIZATION TO CONSTRUCT.

Tony C Crowder 7/21/03
SIGNATURE OF OWNER/OWNER'S REPRESENTATIVE DATE

P# 44174

Permit Number: 52328

Tax Number: 199-60-101
161-11

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 X No ___ Partial Basement

Type Primary Wastewater System
Type (circle one): 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:
___ IWWS-93-1
___ IWWS-93-2
___ IWWS-94-1

.3 Long-term acceptance rate	840 Max gallons/day wastewater flow	2800 Absorption Area (sq ft)	9' Trench spacing (min. on centers)
No Serviced by private well	1500 Gallon septic tank	700 Total trench length (ft)	30" Maximum trench depth (At least 12" of provisionally suitable soil must remain between trench bottom and unsuitable soil conditions)
7 Bedrooms in residence	1000 Gallon pump tank	N/A Depth of stone	

Any surface waters present: No Type: Minimum separation distance:

Site modifications required:

Additional Conditions: Install according to plans prepared by Tracy C. Jacobs for 11235 Wildlife Rd, dated July 18, 2003.

Repair Area System Type
Type (circle one): 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:
___ IWWS-93-1
___ IWWS-93-2
___ IWWS-94-1

2100 Absorption Area (Sq ft) 700 Total Trench Length (Ft)	N/A Depth of Stone Trench	9' Trench spacing (min. on centers)	36" Maximum Trench Depth

For existing system, enter the year originally installed:

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department has approved the Request for t
Job Location contained in this document. This approval is granted in accordance with the provisions of Laws and Rules For Sewage, Treatment and Disposal in effe
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 Departme
- This Improvement permit is transferable.

DEHNR Authorized Agent Date 7/22/03

Owner/Agent Signature Date 7/21/03

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

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

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date:	08/06/03	**Amount:**	300.00
Receipt #:	17768	**Tendered:**	0.00
Check / Auth #:	CHARGE	**Returned:**	0.00
Received By:	CRAIGGY		

Account Information

Account #: B84050
Contractor: ARCADIA HOMES INC
Attn:
Address: PO BOX 471941
Address:
City/State/Zip: CHARLOTTE, NC 28247-1941

Item	Description	Permit#	Quantity	Unit Price	Total Price
0734	Auth for Waste Wtr Sys Constr 11235 Wildlife/File 5232B		1	150.00	150.00
0703	Installation/Final Approval 11235 Wildlife Rd./File 5232B		1	150.00	150.00

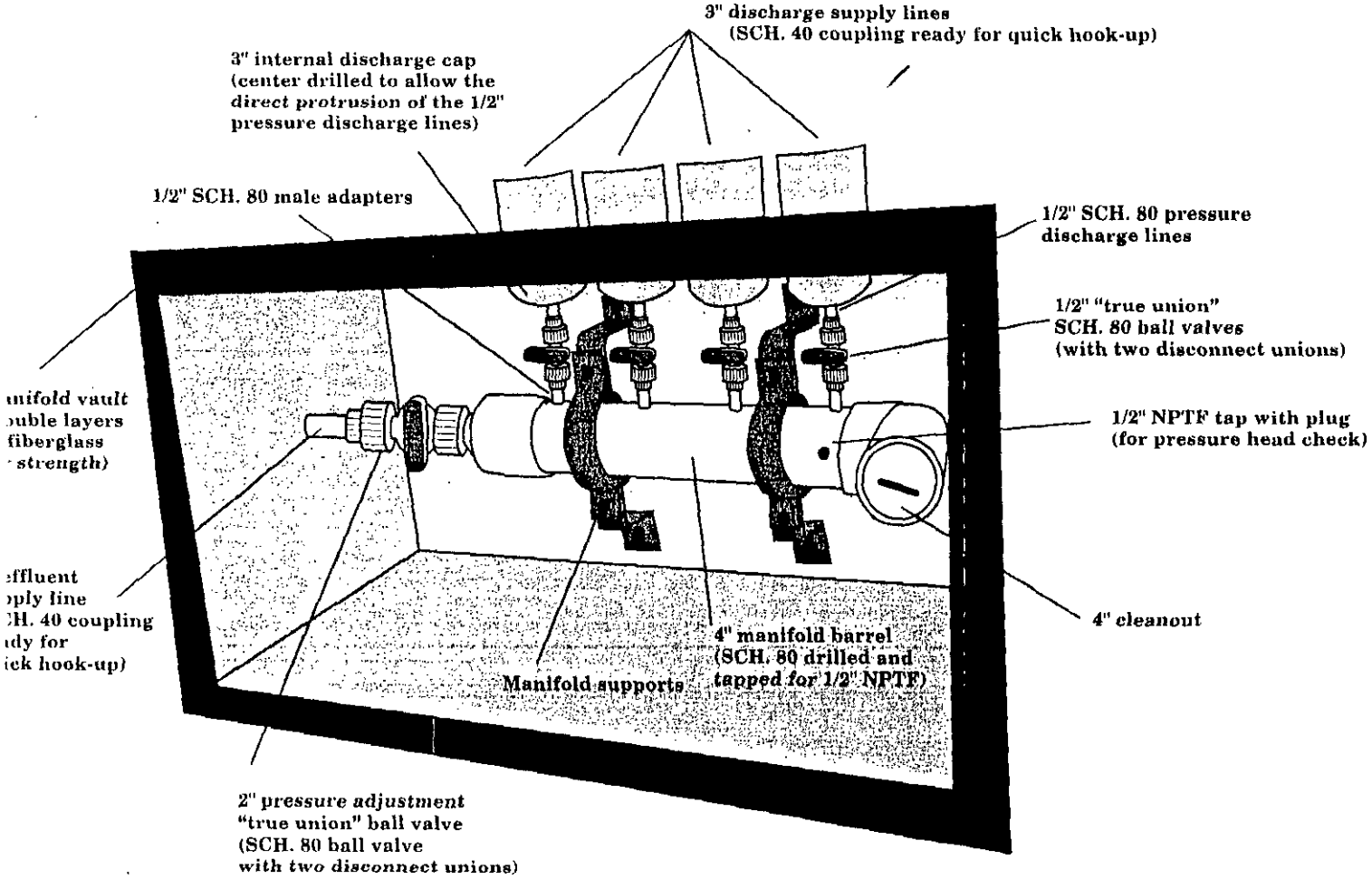
Outstanding Balances

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance
300.00	120.53				

pressbox
Pressure Manifold

Be in the winner's circle!

- Compact and lightweight fiberglass unit - 22" x 24" x 46" Weight____
- Built to commercial standards for long-term life and quality performance
- Uniquely designed Floating Barrel eliminates stress points leading to cracked fittings, leaks and pressure losses
- Adjustable 1/2" SCH. 80 pressure discharges
- Install 1-8 drainlines with total flow control (Up to 16 drainlines may be installed using splitter tees)
- No assembly required
- Custom units available upon special order



PressBox QUATRO UNIT

- 4 Taps with SCH. 80 fittings, valves and 1/2" pressure discharges
- 4 Expansion ports drilled, tapped and plugged (expansion kits complete with fittings, valves and discharge hook-ups sold separately)
- 4" Cleanout
- 4" SCH. 80 barrel
- 2" SCH. 80 pressure adjustment valve
- 3" Discharge hook-ups

PressBox QUATRO X2 UNIT

- QUATRO UNIT features plus an added 8 taps with fittings, valves and discharge hook-ups

TRI-COUNTY WASTEWATER

Telephone: 1.800.448.1298

Be in the winner's circle!

ME SERIES

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

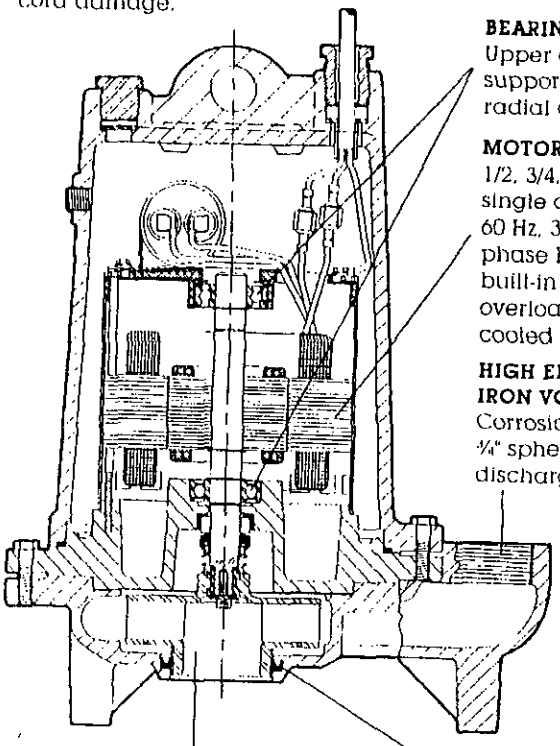
POWER CORD
Jacket sealed with compression fittings. Individual wires potted with epoxy to prevent wicking in case of cord damage.

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

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

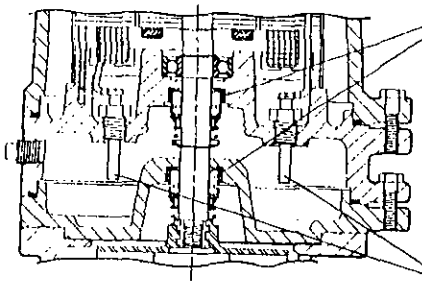
MOTOR
1/2, 3/4, 1 and 1-1/2 HP single or three phase, 60 Hz, 3450 RPM. Single phase PSC motors have built-in on winding overload protection, oil-cooled and lubricated.

HIGH EFFICIENCY CAST IRON VOLUTE
Corrosion resistant. Passes ¼" spherical solids. 2" NPT discharge.



ENCLOSED TWO VANE IMPELLER
high efficiency. Passes ¼" spherical solids with stainless steel wear ring. Optional bronze construction available.

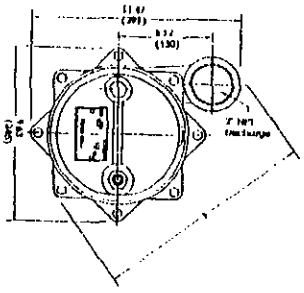
VOLUTE/IMPELLER SEAL RING
Maintains high efficiency and reduces recirculation. Replaceable.

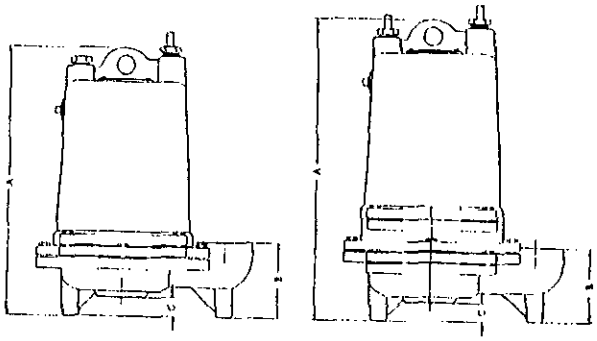


SHAFT SEAL(S)
Carbon and ceramic faces. Optional dual tandem seals. Extends motor life.

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

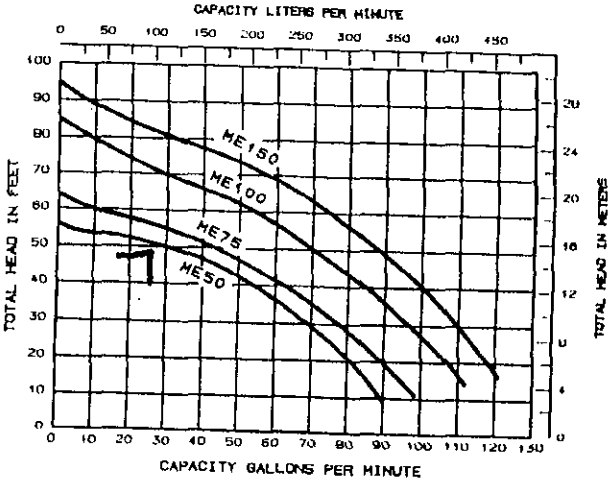
DIMENSIONS





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 2/96
Printed in U.S.A.

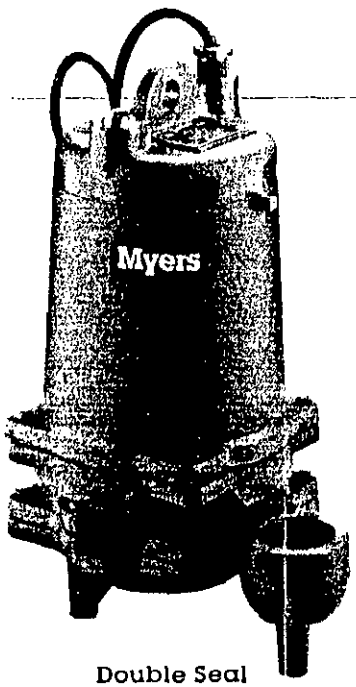
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Myers

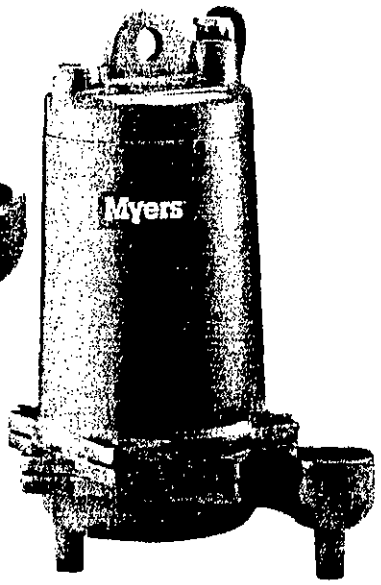
F. E. Myers, 1101 Myers Parkway, Ashland, Ohio 44805-1969
419/289-1144, FAX: 419/289-6658, TLX: 98-7443
Myers (Canada), 269 Trillium Drive, Kitchener, Ontario N2G 4W5
519/748-5470, FAX: 519/748-2553

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

Myers

CERTIFICATE OF COMPLETION/OPERATION PERMIT

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON ST., SUITE 211
CHARLOTTE, NC 28202
PHONE (704) 336-5102

FILE: 52328 DATE: 10/11/04

TC: 199-161-11 ☐ L ☐ CRT

SERIAL 19462

Name of Owner CRESCENT RESOURCES Juris.: _____

Address of Property 11235 WILDLIFE RD.

Inspection Data:

Tank Material PCC

Total Length of Drainfield 700'

Number of Lines 5 @ 140'

Cover Depth 12"

Water Supply Source W

Distance to Water Source 750

Excavation Inspected 7/16/04

Tank(s) Inspected 7/16/04

Wash Line Inspected N/A

High Water Alarm Inspected 10/11/04

INSTALLED ACCORDING TO PLANS SUBMITTED BY TONEY JACOBS & ASSOCIATES 7/18/03

PLOT

Design 1500ST, 1500DT, PI, INV., E-Z Flow, 2100SF, T CTR# W.T. Norwood

The undersigned has inspected the Septic Tank System described above, and certifies it has been

☒ installed or constructed ☐ altered or repaired

☒ in accordance with the permit issued ☐ as detailed in the plot above

and meets the provisions of 15A NCAC 18A. 1900, "Laws And Rules For Sewage Treatment and Disposal Systems" in effect on the date of issuance of the permit. This issuance of this

☐ Certificate of Completion ☒ Operation Permit

does not in any way guarantee that the system will operate properly or relieve any person now or hereafter owning, controlling, or using such system from any liability resulting from the failure of the system to operate properly. This document is issued subject to those restrictions and conditions shown on the permit(s) and the provisions of 15A NCAC 18A. 1990 in addition to those listed below under "COMMENTS." This document shall be null and void if any information contained in the application is untrue or if any additions are made to the property which would increase the requirements for said system.

Notice: Disturbance of the designated repair area may result in the suspension/revocation of this permit.

COMMENTS: 840gpd, 1500GST, 1500GPT, 2100SF, 5 LINES @ 140' E-Z FLOW, SETBACKS MET, 750' FROM WELL, 710' FROM PROP LINE, 75' FROM HOUSE. TYPE III cy

D. Smith, R.S.
Environmental Health Specialist

Mecklenburg County services are available without regard to ethnic origin, sex, or disability.

INSTALLATION, CONSTRUCTION, ALTERATION, AND/OR REPAIR APPROVAL

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON ST., SUITE 211
CHARLOTTE, NC 28202
PHONE (704) 336-5102

FILE: 52328 DATE: 7/16/04

TC: ~~199-601-01~~ 161-11 ☒ L

SERIAL 19406

Permission is hereby given to ___ Install or Construct, ___ Alter or Repair the individual septic tank wastewater treatment system with subsurface, soil absorption, effluent discharge as specified herein at the described location. This permit is granted based upon the information supplied in the application dated 5/7/03. All work shall be completed on or before 7/30/04, after which date this permit shall be null and void. The system shall meet all of the construction requirements of 15A NCAC 18A. 1900 which are in effect on the date of the granting of this permit. A Certificate of Completion or an Operation Permit must be obtained from the Mecklenburg County Health Department before any system can be covered up or placed into service. The issuance of this permit does not in any way guarantee that the system anticipated to be constructed will operate properly, or relieve any person now or hereafter owning, controlling or using such system from any liability resulting from the failure of the system to operate properly.

INSTALL ACCORDING TO PLANS SUBMITTED BY TONEY JACOBS 7/18/03

PLOT OF SYSTEM

Liquid Capacity of Septic Tank 1500 gallons

Liquid Capacity of Dosing Tank ~~1000~~ 1500 gallons

Tank Construction PCC

Trench Depth 30"

Absorption and/or Nitrification Lines:

Trench Width 3 feet

Trench Walls Scored and Porous Y

Total Line Length 700 feet

Number of Lines 5@140'

Depth of Stone N/A inches

Distance from House 75' feet

Distance from Property Line 710' feet

Distance from Well 750' feet

NOTICE: This system shall not be installed while soils are in a wet condition.

NAME OF OWNER CRESCENT RESOURCES

LOCATION OF PROPERTY 11235 WILDLIFE RD.

Comments: 840 GPD, 1500 GST, 1500 GPT, 2100 SF ABSORPTION AREA
5 LINES @ 140', E-Z FLOW, TYPE IIIg

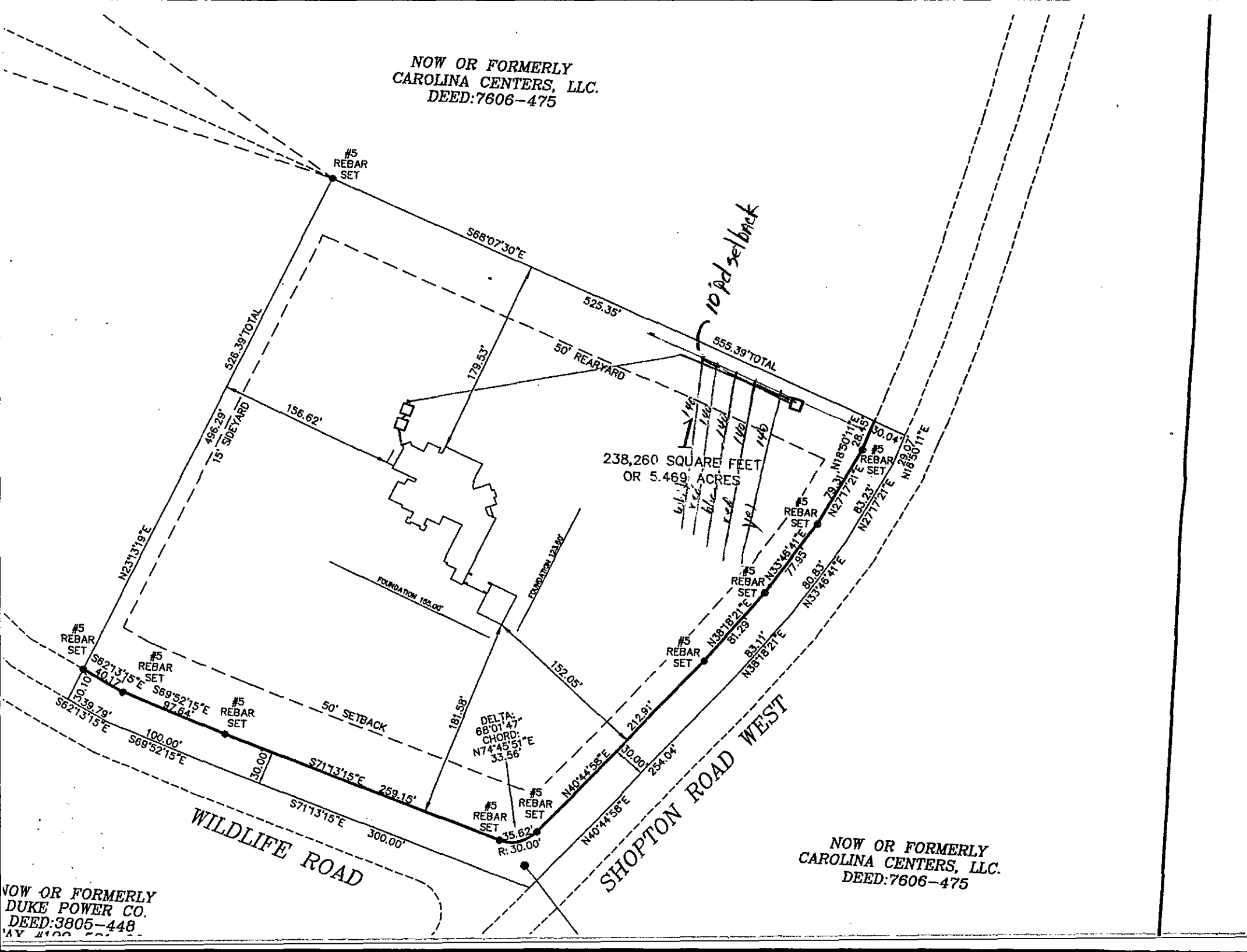
R.S.
Environmental Health Specialist

WHITE - HEALTH DEPARTMENT's COPY • CANARY - E.H.S. COPY • PINK - OWNER OR AGENT's COPY

DESIGN SPECIFICATIONS

11235 Wildlife Road

Daily design flow:	840 gpd.
Septic tank size:	1500 gal. (2 compartments) 1.17Q + 500=1483
Pumping tank size:	1500 gal.
Effluent loading rate:	0.3 gpd/ft^2
Total length and diameter of supply pipe:	app. 350 of 2" SCH 40 PVC
Number and length of laterals:	5 @ ~~140~~ 140' long 140' long
Number and length of repair laterals:	same
Pressure Manifold:	5 taps at ½" (SCH 40 PVC)
Flow rate through the system:	27.3 gpm capability
Elevation head:	Approx. 30.0' (verify after tanks are set)
Pressure head:	2.0'
Friction head:	6.0'
20% contingency	8.0'
Total head:	46' (to be verified at installation after tanks are set)
Pump requirements:	27.3 gpm at 46' of head; use Myers ME50 ½ hp pump or equivalent with compatible electrical
Dosing volume:	300 gal. – 2.8 doses/day at design flow
Depth of water pumped per dose:	calculated to specific tank by measure or dealer engineering specifications(1 cubic ft. of water equals 7.48 gal.)
Pump run per dose:	approx. 11 min
Check valve:	yes
Siphon break hole:	No
Water service:	CMUD-possible well interim


NOW OR FORMERLY
CAROLINA CENTERS, LLC.
DEED:7606-475
#5 REBAR SET
S68°07'30"E
525.35'
555.39'TOTAL
10' pd setback
50' REARYARD
526.39'TOTAL
179.53'
156.62'
496.29'
15' SIDEYARD
N23°13'19"E
238,260 SQUARE FEET
OR 5.469 ACRES
FOUNDATION 155.00'
FOUNDATION 123.89'
152.05'
181.58'
50' SETBACK
DELTA: 68°01'47"
CHORD: N74°45'51"E
33.56'
R: 30.00'
S62°13'15"E
40.17'
S69°52'15"E
97.64'
S62°13'15"E
339.79'
10.10
100.00'
S69°52'15"E
30.00'
S71°13'15"E 259.15'
S71°13'15"E 300.00'
N40°44'58"E
212.91'
30.00'
254.04'
N40°44'58"E
N38°18'21"E
81.29'
N33°48'41"E
77.95'
N27°17'21"E
79.31'
N18°50'11"E
28.45'
30.04'
N27°17'21"E
83.23'
N18°50'11"E
29.07'
N38°18'21"E
83.11'
N33°48'41"E
80.83'
WILDLIFE ROAD
SHOPTON ROAD WEST
NOW OR FORMERLY
DUKE POWER CO.
DEED:3805-448
NOW OR FORMERLY
CAROLINA CENTERS, LLC.
DEED:7606-475

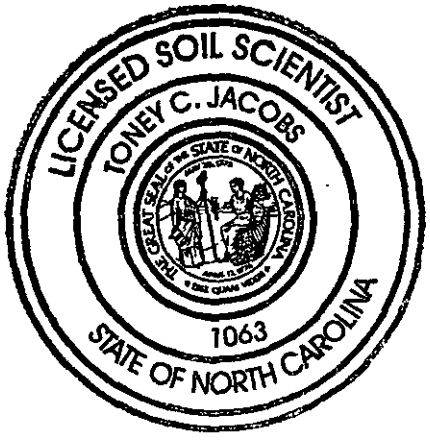
RESIDENTIAL INFILTRATOR CHAMBER SEPTIC SYSTEM WITH PRESSURE MANIFOLD DOSING FOR SUBSURFACE WASTEWATER DISPOSAL 11235 WILDLIFE ROAD THE SANCTUARY AT LAKE WYLIE LOT 1

MCHD FILE # 5232B

Prepared for:
Crescent Resources, Inc.
P. O. Box 1003
Charlotte, North Carolina 28201-1003

Prepared by:
Toney C. Jacobs & Associates, Inc.
168 Broadbill Drive
Mooresville, North Carolina 28117
office (704) 663-6905
fax (704) 662-9845
e-mail jacobs@i-america.net

July 18, 2003



Copy: Mr. Brandon Summey, R.S.
Mecklenburg County Health Dept.-IWWS
700 N. Tryon Street
Charlotte, N.C. 28202

Mr. Allen Harrington-project manager
10933 Ballantyne Crossing Ave.
Charlotte, N.C. 28277

Toney C. Jacobs, LSS

BACKGROUND

This will be a seven (7) bedroom design for sale as a residence after interim use as a sales center during project development. There should be approximately 6 staff and 6 intermittent customers during this office phase of use (6staff + 6customers = 12x25=300gpd). This is significantly less than the 840 gpd designed for initial use.

A 25% reduction system is used to preserve the mature trees on the lot. The system uses a wide 140' aerial window and should offer an excellent potential for service. The repair will be a 25% reduction Infiltrator also with pressure dose. All soil profiles by Mr. Bill Marlin (MCHD) and Toney Jacobs were ps soils to 48" and 0.3LTAR.

APPLICATION INFORMATION

1. Owner: Crescent Resources, Inc.
   P.O. Box 1003
   Charlotte, N. C. 28201-1003

   Soil Scientists
   and Designers: Toney C. Jacobs, LSS
   Toney C. Jacobs & Associates, Inc.
   168 Broadbill Drive
   Mooresville, NC 28117
   (704) 663-6905 (Office)
   (704) 662-9845 (fax)
   e-mail jacobs@i-america.net

2. Water supply is provided by CMUD. There may be an interim well, but this will be >100' from any part of the septic system..

LOCATION

The property is located at 11235 Wildlife Road (corner of Wildlife & Shopton Road West).

REFERENCES

Law and Rules for Sewage Treatment and Disposal Systems, 15A NCAC 18A, Section .1900, Department of Environment and Natural Resources-DEH, April 17, 2002.

PLANS AND SPECIFICATIONS FOR SPECIFIC SYSTEM COMPONENTS

Septic Tank

1. The septic tank receives wastewater directly from the house.
2. A septic tank shall be watertight, structurally sound, and not subject to excessive corrosion or decay.

3. The septic tank must be of two-compartment design for maximum solids and retention. The inlet compartment of two-compartment tank shall hold between two-thirds and three-fourths of the total tank capacity.
4. Effluent from the two-compartment septic tank flows by gravity through a State approved effluent filter and a four-inch solid PVC pipe to the pumping tank.
5. Both the septic tank and pumping tank must be provided with above ground approved manhole risers to provide easy access for clean-out and pump service.
6. When prefabricated concrete tanks or tanks of other material are used, they shall be constructed in accordance with the plans which have been approved by the State and shall comply with all requirements of Section .1953 of 15A NCAC 18A.
7. On the outlet tee of the septic tank an effluent filter must be installed. This filter should be equivalent to a Zabel Model A1800 or other State approved unit supplied by the tank manufacturer.

Pumping Tank

1. The pumping tank shall have an access manhole extending at least 6 inches above finished grade.
2. A septic tank effluent pump that will not be corroded by sewage shall be used in the pumping tank.
3. The pump must be placed on two concrete blocks set next to each other on the bottom of the tank. This prevents the pumping of any solid particles that can clog the system.
4. A piece of nylon rope or other non-corrodible material should be attached to the pump and to the outlet pipe for lifting the pump in and out of the chamber.
5. The lower level control or "pump-off" must be positioned above the pump, so that the pump remains submerged at all time.
6. The pump outlet pipe should be connected to the supply manifold with a threaded PVC union to allow quick removal
7. Pump and Simplex control circuits shall be provided with manual circuit disconnects within a watertight, corrosion-resistant, outside enclosure (NEMA 4X or equivalent) adjacent to the pump tank, securely mounted at least 12 inches above finished grade. Pump control (Simplex) may be mounted on side of house if long cord pump is used. The pump shall be manually operable without requiring the use of special tools or entrance into the tank for testing purposes. Conductors shall be conveyed to the disconnect enclosure through water proof, gas proof, and corrosion-resistant conduits, with no splices or junction boxes provided inside the tank. Wire grips, duct seal or other suitable material shall be used to seal around wire and wire conduit openings inside the pump tank and disconnect enclosure. There shall be two electric circuits for controls: one for pump power, one for the alarm. These will require 2 circuit breakers.
8. The pump tank shall have a properly functioning high-water alarm. The alarm circuit shall be supplied ahead of any pump overload and short circuit protective devices. It should be on a separate electrical circuit from the pump power line. The alarm shall be audible and visible by system users and included in the pump and control enclosure (Simplex Panel). The alarm is activated if the water level in the pump tank rises above the "pump-on" float control. The tank provides at least one day or more of

excess storage capacity (depending on water use in the home) during which time the system must be repaired.

9. Float switch for the high water alarm shall be set no more than 3 inches above the high water level of pump cycle.
10. Float switch tie downs to be made of corrosion resistant material, no tape or metal hose clamps. For maintenance flexibility, tree must be used to set floats.
11. Watertight testing per .1900 rules shall be required on two piece pump tanks.
12. Wiring between the pumping tank and the house should meet State and local code requirements.

Pipe and Fittings

1. All pipes and fitting should be made of SCH 40 PVC.
2. All joints must be sealed with appropriate PVC-solvent cement.
3. There should be a threaded PVC union above the pump to allow easy removal or replacement.
4. A gate valve for final pressure adjustment is installed in the supply line inside the pumping tank.
5. Manifold and valve as shown in specifications.

CONSTRUCTION INSTALLATION

Site Preparation

1. One of the most important concerns for an on-site system is to protect the site from soil disturbance by heavy equipment.
2. Now that the absorption area has been designed and flagged, it should be fenced off and protected from construction traffic. No site preparation or construction work should occur if the soil is wet.
3. Only when the soil is dry enough, the site should be cleared of brush and trees.
4. After the area has been cleared and shaped, the location of the lateral lines and supply manifold should be accurately re-flagged according to design specifications. Each lateral line must be laid out along a level contour using a transit. This step can be completely avoided if flags are protected during clearing.

Tank Installation

1. The two-compartment septic tank is installed.
2. The pumping tank is installed next to the septic tank.
3. The tanks are connected with an appropriate length of solid, four-inch PVC pipe.

Supply Manifold

1. The supply manifold conveys effluent from the pump to the distribution laterals.
2. Design of the pressure manifold is shown on attached diagram.

3. After the supply manifold has been placed in its trench and lateral lines connected, it should be backfilled with tightly tamped soil. The supply manifold trench must not be backfilled with gravel, or the trench may become a conduit for downslope flow effluent from the laterals.

Lateral Lines

1. Infiltrator chambers shall be used.
2. Sand backfill shall be placed over the vents on the side of the chambers.
3. A minimum of 12" of cover shall be placed over the chambers.
4. Follow manufacturer's guides.

PROPER OPERATION CHECK AND PRESSURE HEAD ADJUSTMENT

1. After all connections have been installed and connected, the system should be checked for proper operation. With electrical power turned off, fill the pump tank with a garden hose until the liquid rises to the level of the high-water alarm float.
2. Turn on the electrical power. The alarm light should go off when the liquid level falls below the high-water float. The pump should turn off when the liquid reaches the lowest float control. Be sure the pump is still completely submerged.
3. The pressure head is measured as the height liquid will rise above the pressure manifold when the pump is running. To set or check the pressure head:

    - Attach a three-foot length of pipe (preferable clear) to a threaded adapter that will screw into the pressure manifold.
    - Turn the power on to allow liquid to rise in the pipe.
    - Adjust the gate valve until the effluent reaches the desired height in the pipe.

FINAL LANDSCAPING

1. After the system is installed, the following should be checked to ensure that the system will not be overloaded with excess rainwater and runoff:
    - The distribution field is shaped to shed rainwater and is free of low areas.
2. Finally, the entire area should be planted with grass in order to prevent erosion. The soil should be properly tilled, limed (if necessary) and fertilized before planting. After applying an appropriate grass seed, the area should be heavily mulched with straw or other suitable material.

QUALITY ASSURANCE REQUIREMENTS

The system must be installed by a qualified, contractor that is on the Mecklenburg County list of competent contractors. Critical stages of the installation, which should be checked, are:

1. System layout

2. Septic and pump tank installation prior to backfilling.
3. Manifold and lateral installation prior to backfilling.
4. Final landscaping, operation and pressure head check.

The system design is based on a maximum waste flow of 840 gallons per day. Homeowners should pay particular attention to the section titled Homeowner Suggestions for ways to minimize the burden on the system.

OPERATION AND MAINTENANCE PROCEDURE

The system is classified as Type III and does not require a maintenance contract with a certified operator; however, the developer through the homeowner's association will have a required pre-operational inspection and semi-annual inspection to be reported to MCHD. The following are operating, maintenance and inspection procedures the homeowner should follow.

- Septic system shall be pumped as needed or when solids accumulate to 1/3 the volume of the tank.
- At 6 month intervals inspect the effluent filter. When washing the filter, debris must be sprayed directly back into the septic tank and not onto the lawn.
- Pressure head at manifold should be checked and adjusted one month after installation and annually thereafter.
- All piping and fittings shall be checked annually for damage and/or proper operation and corrections made immediately.
- The property should be inspected to insure all surface water is diverted away from the fields and tank. Any ponding of surface water should be corrected.
- Grasses shall be mowed and maintained and any erosion shall be corrected promptly.
- The nitrification field area shall be checked for leakages, blowouts or malfunction, indications of damp or mushy areas compared to surrounding area or evidence of noticeable odor of sewage. Repairs shall be made immediately.
- The pump electrical should be checked to insure tight, clean connections with no corrosion and proper operation.
- Pump switches shall be checked for free operation and proper level set.
- Pump draw down depth and delivery rate shall be checked each year.
- Check septic tank and pump tank for evidence of damage or leakage. Check the quality of effluent including grease and sludge accumulation.

HOMEOWNER SUGGESTION

Most systems do not require much effort to operate and maintain. Even though the effort is small, the system must be maintained properly so that it operates reliably and at a minimum cost. Following are suggestions for the homeowner to minimize the burden on the septic system.

1. Garbage disposals should not be used in on-site systems. The ground garbage adds large amounts of solids to a septic tank, causing sludge to build up at a quicker rate than without. If disposal is installed, use should be limited.
2. Grease, cooking oils and coffee grounds should never be put into a septic tank.
3. Items such as disposable diapers, cigarettes, facial tissues and other solid or paper wastes should not be flushed into the on-site system.
4. Used motor oil and other such oily liquids should not be put into a septic tank.
5. Using less water can reduce the amount of water flowing to the treatment and disposal field.
6. Water-saving fixtures and devices can be installed on sinks, toilets and showers to reduce the rate at which the water flows from the fixture.
7. Dishwashers and washing machines should only be run with full loads.
8. Leaky faucets and toilets can add large volumes of water to the daily flow of water into the on-site system. Repair the leaks to save water and give the treatment and disposal field a rest.
9. Roof drains, basement sump pumps, foundation drains, and other such drains should not empty into or onto the surface above the on-site system. These drains should be directed to another part of the lot away from the treatment and disposal field.

DESIGN SPECIFICATIONS

11235 Wildlife Road

Daily design flow:	840 gpd.
Septic tank size:	1500 gal. (2 compartments) 1.17Q + 500=1483
Pumping tank size:	1500 gal.
Effluent loading rate:	0.3 gpd/ft^2
Total length and diameter of supply pipe:	app. 350 of 2" SCH 40 PVC
Number and length of laterals:	5 @ 140' long 140' long
Number and length of repair laterals:	same
Pressure Manifold:	5 taps at ½" (SCH 40 PVC)
Flow rate through the system:	27.3 gpm capability
Elevation head:	Approx. 30.0' (verify after tanks are set)
Pressure head:	2.0'
Friction head:	6.0'
20% contingency	8.0'
Total head:	46' (to be verified at installation after tanks are set)
Pump requirements:	27.3 gpm at 46' of head; use Myers ME50 ½ hp pump or equivalent with compatible electrical
Dosing volume:	300 gal. – 2.8 doses/day at design flow
Depth of water pumped per dose:	calculated to specific tank by measure or dealer engineering specifications(1 cubic ft. of water equals 7.48 gal.)
Pump run per dose:	approx. 11 min
Check valve:	yes
Siphon break hole:	No
Water service:	CMUD-possible well interim

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

Sheet: 1
Property ID: PO 199-601-01
Lot #:
File #: 5232B
Code: 1

ACS

SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

Owner: Crescent Resources, Inc.
Applicant:
Address: PO Box 1003, Charlotte, N. C. 28201
Date Evaluated: 06/09/2003
Proposed Facility: Residence
Design Flow (.1949): 840gpd
Property Size: 1.5a.+/-inv.
Location of Site: 11235 Wildlife Road
Property Recorded:
Water Supply: [x] Public [ ] Individual [ ] Well [ ] Spring [ ] Other
Evaluation Method: [x] Auger Boring [x] Pit [ ] Cut
Type of Wastewater: [x] Sewage [ ] Industrial Process [ ] Mixed

PROFILE #	.1940 Landscape Position/ Slope%	Horizon Depth (IN.)	SOIL MORPHOLOGY .1941 .1941 Structure/ Texture	.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, 6	0-5	GR/CL	FR/SEXP/SS/SP	>50" TO SOIL WETNESS	50	N/A	NONE	PS, IV .3GPD/FT^2
		5-19	SBK/CL	"					
		19-50	SBK/C	FI/SEXP/S/P					
2	"	0-4	GR/CL	FR/SEXP/SS/SP	>48" TO SOIL WETNESS	48	"	"	"
		4-14	SBK/CL	"					
		14-48	SBK/C	FI/SEXP/S/P					
3	"	0-8	GR/CL	FR/SEXP/SS/SP	"	"	"	"	"
		8-30	SBK/C	FI/SEXP/S/P					
		30-48	SBK/CL	FR/SEXP/SS/SP					
4	"	0-14	GR/CL	"	"	"	"	"	"
		14-38	SBK/C	FI/SEXP/S/P					
		38-48	SBK/CL	FR/SEXP/SS/SP					
5	"	0-9	GR/CL	"	"	"	"	"	"
		9-38	SBK/C	FI/SEXP/S/P					
		38-48	SBK/CL	FR/SEXP/SS/SP					

Description	Initial System	Repair System
Available Space (.1945)	PS	PS
System Type(s)		
Site LTAR	.3GPD/FT^2	.3GPD/FT^2

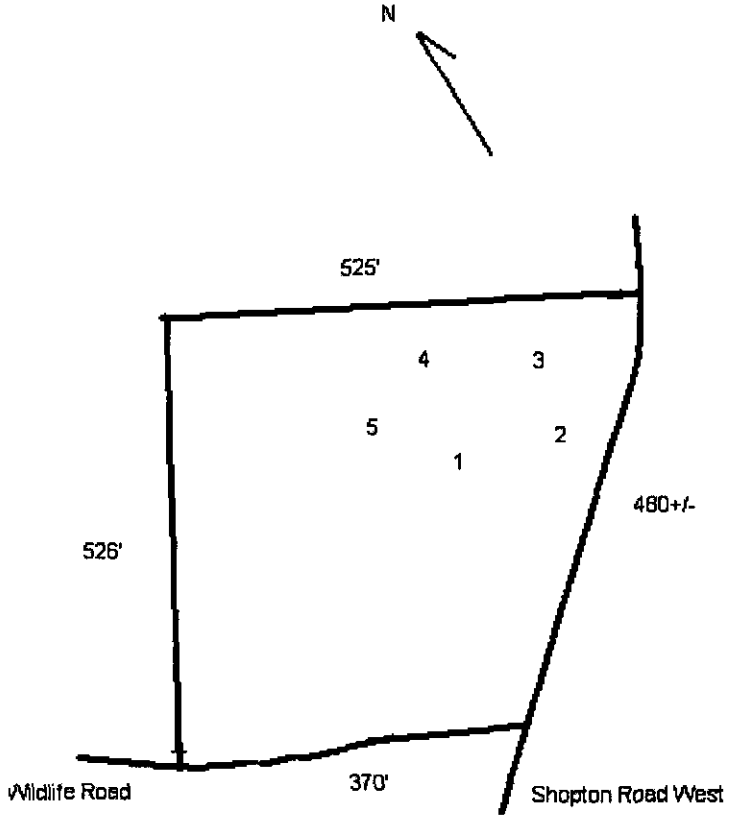
Other Factors (.1946): _____
Site Classification (.1948): PROVISIONALLY SUITABLE
Evaluated By: W. R. Marlin, LSS, 6/10/2003, W. R. Marlin
Others Present: Toney Jacobs

FILE # 5232B

COMMENTS: 100% repair

LANDSCAPE POSITIONS	GROUP	TEXTURES	.1955 LTAR	CONSISTENCE MOIST	WET
R-RIDGE	I	S-SAND	1.2 - 0.8		
S-SHOULDER SLOPE		LS-LOAMY SAND		VFR-VERY FRIABLE	NS-NON-STICKY
L-LINEAR SLOPE				FR-FRIABLE	SS-SLIGHTLY STICKY
FS-FOOT SLOPE	II	SL-SANDY LOAM	0.8 – 0.6	FI-FIRM	S-STICKY
N-NOSE SLOPE		L-LOAM		VFI-VERY FIRM	VS-VERY STICKY
H-HEAD SLOPE				EFI-EXTREMELY FIRM	NP-NON-PLASTIC
CC-CONCLAVE SLOPE	III	SI-SILT-	0.6 – 0.3		SP-SLIGHTLY STICKY
CV-CONVEX SLOPE		SIL-SILT LOAM			P-PLASTIC
T-TERRACE		CL-CLAY LOAM			VP-VERY PLASTIC
FP-FLOOD PLAN		SCL-SANDY CLAY LOAM			
		SICL-SILTY CLAY LOAM			
	IV	SIC-SILTY CLAY	0.4 – 0.1		
		C-CLAY			
		SC-SANDY CLAY			

STRUCTURE	MINERALOGY
SG-SINGLE GRAIN	SLIGHTLY EXPANSIVE
M-MASSIVE	
CR-CRUMB	EXPANSIVE
GR-GRANULAR	
SBK-SUBANGULAR BLOCKY	
ABK-ANGULAR BLOCKY	
PL-PLATY	
PR-PRISMATIC	



FEE: 200.00 CK # 1356
DATE: 5/9/03 JC

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 #: 52328

PROPERTY INFORMATION (FROM ENGINEERING FORM) FOR JOB LOCATION:

TAX/PARCEL NUMBER: 199-60F-01

STREET ADDRESS: 11235 Wildlife Rd.

SUBDIVISION OR MOBILE HOME PARK NAME: The Sanctuary

LOT NUMBER:

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: 10000²

NUMBER OF BEDROOMS: 9 NUMBER OF OCCUPANTS: 18

CLOSING DATE _____

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

PROPERTY OWNER:

NAME: (LAST) Crescent (FIRST) Resources (MI) INC

ADDRESS: PO Box 1003

CITY: Charlotte STATE: NC ZIP: 28201

DAYTIME PHONE: (704 663--6905

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME: (LAST) (FIRST) (MI)

DAYTIME PHONE: ( ) –

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: Tracy C Martin, CPM Agent DATE: 5/7/03

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