ROLLANS *SOIL & ENVIRONMENTAL SERVICES*

2120 Graham Road, Mount Ulla, NC 28125 *Phone/Fax (704) 278 – 0989*

Ashley Rollans, NC Licensed Soil Scientist
Mobile: (704) 746-5046
E-mail: Rollansfortcj@aol.com

Brady Freeman, Registered Sanitarian
Mobile: (704) 746-6497
E-mail: bfree209@yahoo.com

Attached is a proposed design for a PPBPS Septic System with low pressure distribution for a 5 bedroom single family residence on Lot 74 in Anniston Subdivision Iredell County, North Carolina.

Contents: **Page**

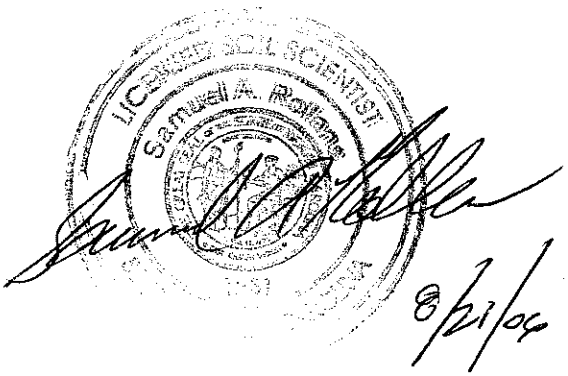
Information for the Installer---------- 1

Design Information
- Design Specifications---------- 2-3
- Layout Specifications---------- 4
- System Tapsheet---------- 5

Site Plan/System Plan---------- 6

Calculations---------- 7

Profile Descriptions---------- 8



August 17, 2006
Project No.01-1005
Design By: Rollans Soil & Environmental Services

LP PPBPS SYSTEM
FOR WASTEWATER TREATMENT

Owner/Applicant: Anniston LLC

Address: 17824 Statesville Rd STE 112
Conover, NC 28031
Phone:
County: Iredell
Location: Anniston Subdivision Lot 74

Source of Wastewater Flow: 5 Bedroom Single Family Residence
Estimated Daily Wastewater Production: 600 gpd
System Flow: 38.95

Design Specifications

Drainfield Size: 414
Loading Rate: 0.25 gpd/ft.^{2}
Depth of Gravel in Trench: NA (PPBPS)
Gravel Size: NA (PPBPS)
Trench Depth: 36 in.
Trench Width: 36 in.
Septic Tank Size: 1500 gal.
Pump Tank Size: 1500 gal.

Estimated Supply Line Length: 12
Supply Line Diameter: 2 in. SCH 40 PVC
Supply Line Volume: 2.09
Dosing Volume: 229.14
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: 0.28
Elevation Head: 4.00
Total Dynamic Head: 7.23

Threaded Union: In Tank
Gate Valves: 1 in Tank
1 per lateral
Check Valves: In Tank
Anti-Siphon Hole: NA
Additional Comments: Soil suitability was performed by Rollans Soil & Environmental Services

Anniston Subdivision Lot 74
LP PPBPS

DESIGN FLOW:	600
SOIL APPLICATION RATE:	0.25 gpd/ft.2
TOTAL AREA TRENCH BOTTOM:	1242
TOTAL LATERAL LENGTH:	414
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	400
SUPPLY LINE LENGTH:	12
TOTAL DYNAMIC HEAD:	7.23
MANIFOLD SIZE:	N/A
DOSING VOLUME:	229.14
PUMP TANK DRAW DOWN*:	7.9
SEPTIC TANK SIZE:	1500 gal.
PUMP TANK SIZE:	1500 gal.

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

Anniston Lot 74

Project #:01-1005

LAYOUT FOR 5 BEDROOM HOME

August 17, 2006

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		3.3			100.00		
INSTR. 1			103.30				
HOUSE CNR				0.40	102.90		
P. TANK				1.00	106.00		
1	*ORANGE*			*2.00*	*101.30*	*60*	*60*
2	*BLUE*			*2.90*	*100.40*	*63*	*63*
3	*PINK*			*4.00*	*99.30*	*62*	*62*
4	*RED*			*5.00*	*98.30*	*57*	*57*
5	*ORANGE*			*6.00*	*97.30*	*54*	*54*
6	*BLUE*			*6.90*	*96.40*	*60*	*60*
7	*PINK*			*7.70*	*95.60*	*58*	*58*
8	RED			8.70	94.60	*56*	*56*
9	ORANGE			10.10	93.20	*51*	*51*
10	BLUE			11.20	92.10	*47*	*47*
11	PINK			12.30	91.00	*66*	*66*
12	RED			13.20	90.10	*65*	*65*
13	ORANGE			14.30	89.00	*61*	*61*
14	BLUE			15.40	87.90	*58*	*58*
15	PINK			16.40	86.90	*57*	*57*
16	RED			17.70	85.60	*51*	*51*
					Total	926	926

	LINE LENGTH	LTAR GPD/FT2	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DISTRIBUTION
** System*	*414*	*0.25*	*MOD.*	*0.25*	*PPBPS*	*LOW PRESSURE*
Repair	512	0.25	MOD.	0.25	PPBPS	LOW PRESSURE

Notes:
** TBM located top of ground (see site plan)
**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

LP PPBPS TAPSHEET - Anniston Lot 74

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
1	*ORANGE*	101.3	*60*	0.156	**0.41**	180	14
2	*BLUE*	100.4	*63*	0.156	**0.41**	189	15
3	*PINK*	99.3	*62*	0.156	**0.41**	186	14
4	*RED*	98.3	*57*	0.156	**0.41**	171	13
5	*ORANGE*	97.3	*54*	0.156	**0.41**	162	12
6	*BLUE*	96.4	*60*	0.156	**0.41**	180	14
7	*PINK*	95.6	*58*	0.156	**0.41**	174	13
	total	**feet =**	**414**	**gal/min =**	**38.95**		95

Des. Flow	**600**
Pump Run=	**5.88**
soil LTAR	**0.25**
LTAR +5%	**0.2625**
LTAR with mod.	**0.5**
LTAR with mod.. + 5%	**0.525**

.156 equals 5/32 inch hole