

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
NOTICE OF INTENT
INDIVIDUAL TREATMENT FACILITIES
NPDES GENERAL PERMIT ARG550000

Application Type: New ☒ Renewal ☐ (Permit # ARG55)

I. PERMITTEE/OPERATOR INFORMATION

Permittee (Legal Name): AF Partners, LLC Operator Type:
Permittee Mailing Address: 1511 North Reynolds Road ☐ State ☐ Partnership
Permittee City: Bryant ☐ Federal ☒ Corporation*
Permittee State: AR Zip: 72022 ☐ Sole Proprietorship/Private
Permittee Telephone Number: 501-847-7964 *State of Incorporation: _____
Permittee Fax Number: _____ The legal name of the Permittee must be
Permittee E-mail Address: _____ identical to the name listed with the
Arkansas Secretary of State.

II. INVOICE MAILING INFORMATION (Home owners are exempt.)

Invoice Contact Person: Doug Hendrix City: Bryant
Invoice Mailing Company: AF Partners, LLC State: AR Zip: 72022
Invoice Mailing Address: 1511 North Reynolds Road Telephone: 501-847-7964

III. FACILITY INFORMATION

Facility Name: Big Red #154 Facility Contact Person: Doug Hendrix
Facility Address: 3265 Hwy 167 N Telephone Number: 501-847-7964
Facility County: Saline Facility City, State & Zip: Sheridan, AR 72150
Facility Latitude: 34 Deg 20 Min 35.10 Sec Facility Longitude: 92 Deg 23 Min 38.23 Sec
Datum
Accuracy: _____ Method: _____ : _____ Scale: _____ Description: _____

IV. DISCHARGE INFORMATION

Outfall Number: 001 Flow: 900 gpd (Gallons per Day)
Stream Segment: 2C Hydrologic Basin Code: 8040204
Outfall Latitude: 34 Deg 20 Min 38.06 Sec Outfall Longitude: 92 Deg 23 Min 39.17 Sec
Datum
Accuracy: _____ Method: _____ : _____ Scale: _____ Description: _____
Type of Treatment: Bio Microbics Fast Unit, 4 Orenco AX20RT with UV Disinfection
Receiving Stream: Ouachita River

V. FACILITY PERMIT INFORMATION

NPDES Individual Permit Number (If Applicable): AR00
NPDES General Permit Number (If Applicable): ARG
State Construction Permit Number: _____
NPDES General Construction Stormwater Permit Number (If Applicable): ARR15

WATER DIVISION
5301 NORTHSHORE DRIVE / NORTH LITTLE ROCK, ARKANSAS 72118
PHONE 501-682-0623 / FAX 501-682-0880
www.adeq.state.ar.us

VI. OTHER INFORMATION:

Operator Name: David Meints
Operator License Number: 009055 License Class: III

Consultant Contact Name: David Meints
Consultant Email Address: david@meincoastewater.com
Consultant Address: PO Box 1001 City: Bryant State: AR Zip: 72089
Consultant Phone Number: 501-804-0837 Consultant Fax Number: 501-821-4048

Has this treatment system been approved by AHD? Yes ☒ No ☐

Disclosure Statements:

Arkansas Code Annotated Section 8-1-106 requires that all applicants for the issuance or transfer of any permit, license, certification or operational authority issued by the Arkansas Department of Environmental Quality (ADEQ) file a disclosure statement with their applications. The filing of a disclosure statement is mandatory. No application can be considered complete without one. You must submit a new disclosure statement even if you have one on file with the Department. The form may be obtained from ADEQ web site at: http://www.adeq.state.ar.us/disclosure_stmt.pdf.

VII. CERTIFICATION OF OPERATOR

DA (Initial) "I certify that, if this facility is a corporation, it is registered with the Secretary of the State of Arkansas."
DA (Initial) "I certify that the cognizant official designated in this Application is qualified to act as a duly authorized representative under the provisions of 40 CFR 122.22(b). If no cognizant official has been designated, I understand that the Department will accept reports signed only by the Applicant."
DA (Initial) "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Responsible Official Printed Name: Doug Hendrix Title: Secretary
Responsible Official Signature: Doug Hendrix Date: 12-2-20
Responsible Official Email: _____
Cognizant Official Printed Name: David Meints Title: Operator
Cognizant Official Signature: _____ Telephone: 501-804-0837
Cognizant Official Email: david@meincoastewater.com

X. PERMIT REQUIREMENT VERIFICATION

Please check the following to verify completion of permit requirements.

	Yes	No	* If No is answered for any of the questions, then a permit can not be issued!
Submittal of Complete NOI?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Submittal of Required Permit Fee?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Check Number: _____
Submittal of AHD Form EHP-19?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Submittal of Site Map?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Submittal of Disclosure Statement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

WATER DIVISION
5301 NORTHSORE DRIVE / NORTH LITTLE ROCK, ARKANSAS 72118
PHONE 501-682-0623 / FAX 501-682-0880
www.adeq.state.ar.us

NOV 19 2019



Arkansas Department of Health
Environmental Health Protection

Receipt Number

23220066

Individual Onsite Wastewater System Permit Application

Permit Type

- ☒ New Installation
☐ Alteration / Repair

DR Environmental ID #

7 6 0 1 0 5 5 4 7

Fee Schedule for Structures

Structures 1500 sq ft or less	\$ 30.00	<input type="checkbox"/>
Structures more than 1500 sq ft and up to 2000 sq ft	\$ 45.00	<input type="checkbox"/>
Structures more than 2000 sq ft and up to 3000 sq ft	\$ 90.00	<input type="checkbox"/>
Structures more than 3000 sq ft and up to 4000 sq ft	\$120.00	<input checked="" type="checkbox"/>
Structures more than 4000 sq ft	\$150.00	<input type="checkbox"/>
Alteration and Repair	\$ 30.00	<input type="checkbox"/>

Part 1 Application

Treatment Type (check one)

Disposal Method (check one)

- ☐ STD = Standard Septic Tank ☐ ATU = Aerobic Treatment Plant ☐ STD = Standard Absorption Field ☐ LPD = Low Pressure Distribution
☐ ISF = Intermittent Sand Filter ☐ RSF = Re-circulating Sand Filter ☒ SUR = Surface Discharge ☐ HLD = Holding Tank
☒ PMF = Proprietary Media Filter ☐ RGF = Re-circulating Gravel Filter ☐ CPF = Capping Fill ☐ SRL = Serial Distribution
☐ OTH = Other (Describe) ☐ HLD = Holding Tank ☐ OTH = Other ☐ DRP = Drip Irrigation

1. Owner's/Applicant's Name
AF Partners, LLC (Big Red, Store 154) c/o David Hendrix

2. Phone Number
(501) 847-7964

3. Mailing Address
1511 N Reynolds Road, Bryant, AR 72022

4. County
Grant

5. Address of Proposed System (If a 911 address is not available, attach detailed directions or map)
Corner of Clark Trail and HWY 167, Sheridan, AR 72150

6. Subdivision Name
n/a

7. Approval Date
n/a

8. Date Recorded
n/a

9. Lot Number
n/a

10. Lot Dimensions
345' x 580' x 123' x 560'

11. Total Area (Acres)
3.0

12. # Bedrooms # People
Commercial

13. Daily Flow (GPD)
900

14. Brief Legal Description of Property (Attach a separate sheet of paper, if necessary)
Section 27, Township 4 South, Range 13 West, Grant County

15. Water Supply (Specify supplier, if Public Water)
Sheridan Public Water

16. GPS Coordinates
BLG 34.34362, -92.39447 P.O.D. 34.34396, -92.39420

17. Loading Rates (gpd/ft²)

18. System Specifications

Primary Area	n/a	a. Size of Septic Tank	2000	gal	f. Trench Depth	n/a	inches
Secondary Area	n/a	b. Size of Dose Tank	1000/500	gal	g. Trench Spacing	n/a	feet
Percolation Test	(min/in)	c. Absorption Area	n/a	ft ²	h. Trench Media (List Below)		i. Trench Width
Primary Area Avg	n/a	d. Number of Field Lines	n/a		n/a	n/a	in
Secondary Area	n/a	e. Length of Field Lines	n/a	ft	n/a	n/a	in

TO THE OWNER

The permit for construction may be deemed invalid by the local Environmental Health Specialist before the start of construction, if the site and/or soil conditions have changed after approval of this permit, or if the information within this permit is inaccurate or has been found to be misrepresented. Approval for operation does not constitute a guarantee that the system will function properly. The approval states that the system was designed and installed according to the Arkansas Department of Health, Rules and Regulations Pertaining to Onsite Wastewater Systems, unless there are exceptions or deviations noted in the comments. A Permit for Construction is valid for one (1) year from the date of approval. The authorized agent must revalidate a permit more than one (1) year old prior to the start of any construction.

19. Utilization Verification

I hereby attest that item 12, the number of bedrooms (number of persons for commercial) and square footage of the structure that will utilize the designed individual onsite wastewater system in this permit application, is accurate. I have reviewed the permit application and understand the layout, installation, maintenance, operation and expense(s) that may be associated with this system.

Owner/Applicant Signature

Date 11-14-19

20. I certify that I have conducted the above tests and that the above listed information is in accordance with the latest requirements of the Arkansas Department of Health Rules and Regulations Pertaining to Onsite Wastewater Systems.

David A. Meints

Designated Representative

Soil Certified ☒ Yes ☐ No

Designated Representative Signature

Title

David A. Meints

11/12/2019

501-821-3837/501-804-0837

Print Name

Date

Phone Number

21. Approval of Health Authority

The information and specifications in the application has been reviewed and found to meet the requirements of the Arkansas Department of Health Rules and Regulations Pertaining To Onsite Wastewater Systems. A PERMIT FOR CONSTRUCTION is hereby issued.

Environmental Specialist Signature

EHS Number

Date

Individual Onsite Wastewater System Permit Application

Receipt Number

Continue Part 1

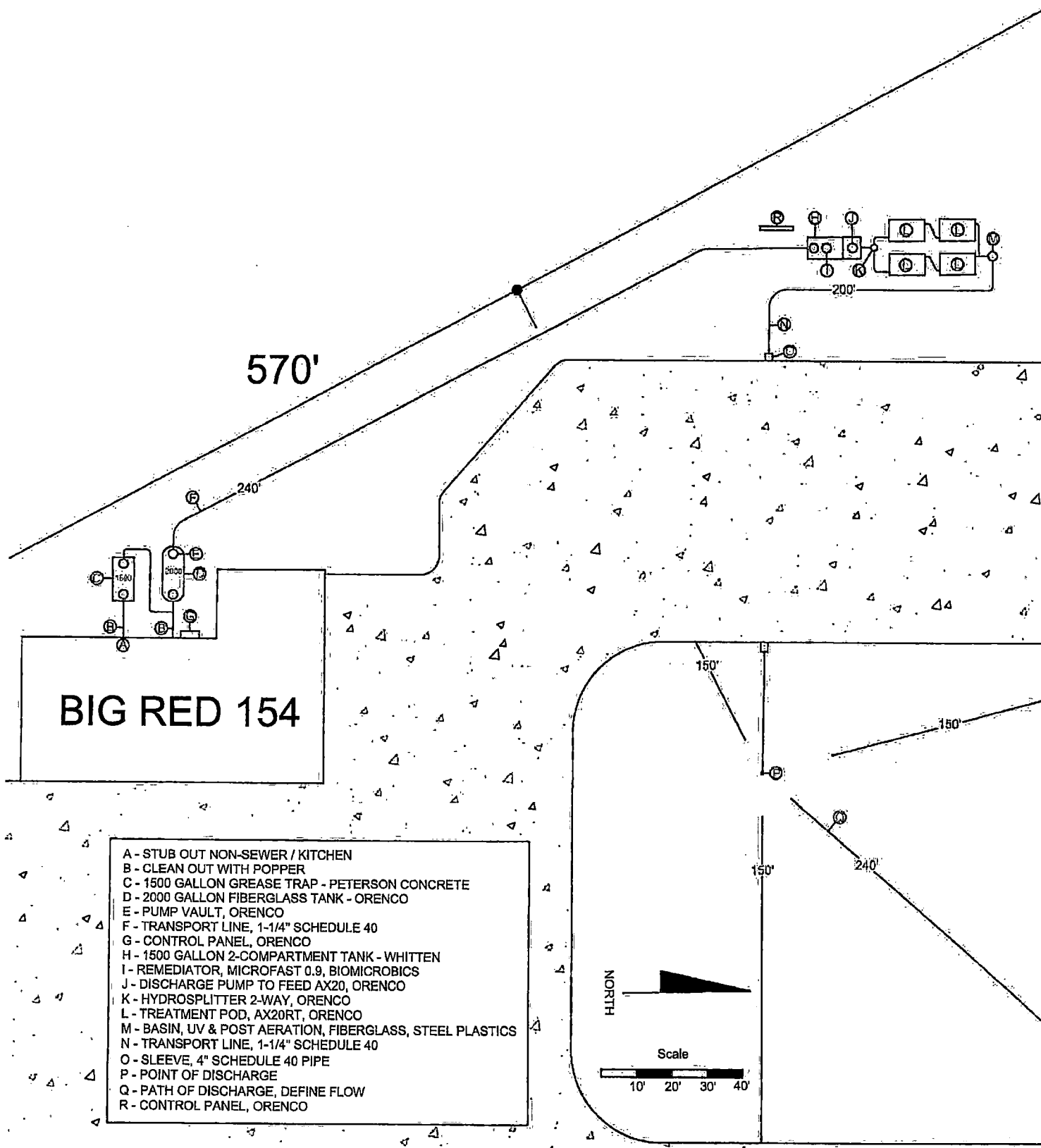
22. Soil Criteria (Primary Area)								Indicate the depth to items a-f, if observed in the soil (designate in inches)
a. Bedrock	b. BSWT	c. MSWT	d. LSWT	e. Adj. MSWT	f. Adj. LSWT	g. H.C./Depth	h. Loading Rate (gpd/ft ²)	
>48"	n/a	Surface	n/a	n/a	n/a	n/a	Unsuitable	
23. Soil Criteria (Secondary Area)								Indicate the depth to items a-f, if observed in the soil (designate in inches)
a. Bedrock	b. BSWT	c. MSWT	d. LSWT	e. Adj. MSWT	f. Adj. LSWT	g. H.C./Depth	h. Loading Rate (gpd/ft ²)	
>48"	n/a	Surface	n/a	n/a	n/a	n/a	Unsuitable	
24. Seasonal Water Table (SWT) Classes Detail								
Primary Area		List Redoximorphic Features and/or Clay Content Restrictions						
Brief	in	n/a						
Moderate	in	Depletions noted on less than 50% of ped surface or interior. Depletion <= chroma 2.						
Long	in	n/a						
Secondary Area		List Redoximorphic Features and/or Clay Content Restrictions						
Brief	in	n/a						
Moderate	in	Depletions noted on less than 50% of ped surface or interior. Depletion <= chroma 2.						
Long	in	n/a						
Comments Permit Requires: 1500 gal. grease trap, 2000 septic tank, 1000/500 combo tank (w/ Biomicrobics 0.9 Fast Unit), (4) Orenco AX20RT Units, and sample basin with UV Disinfection. NPDES Permit required. If system is not installed within a year of the date approved, a revalidation fee may be required.								

Part 2 Installation Inspection

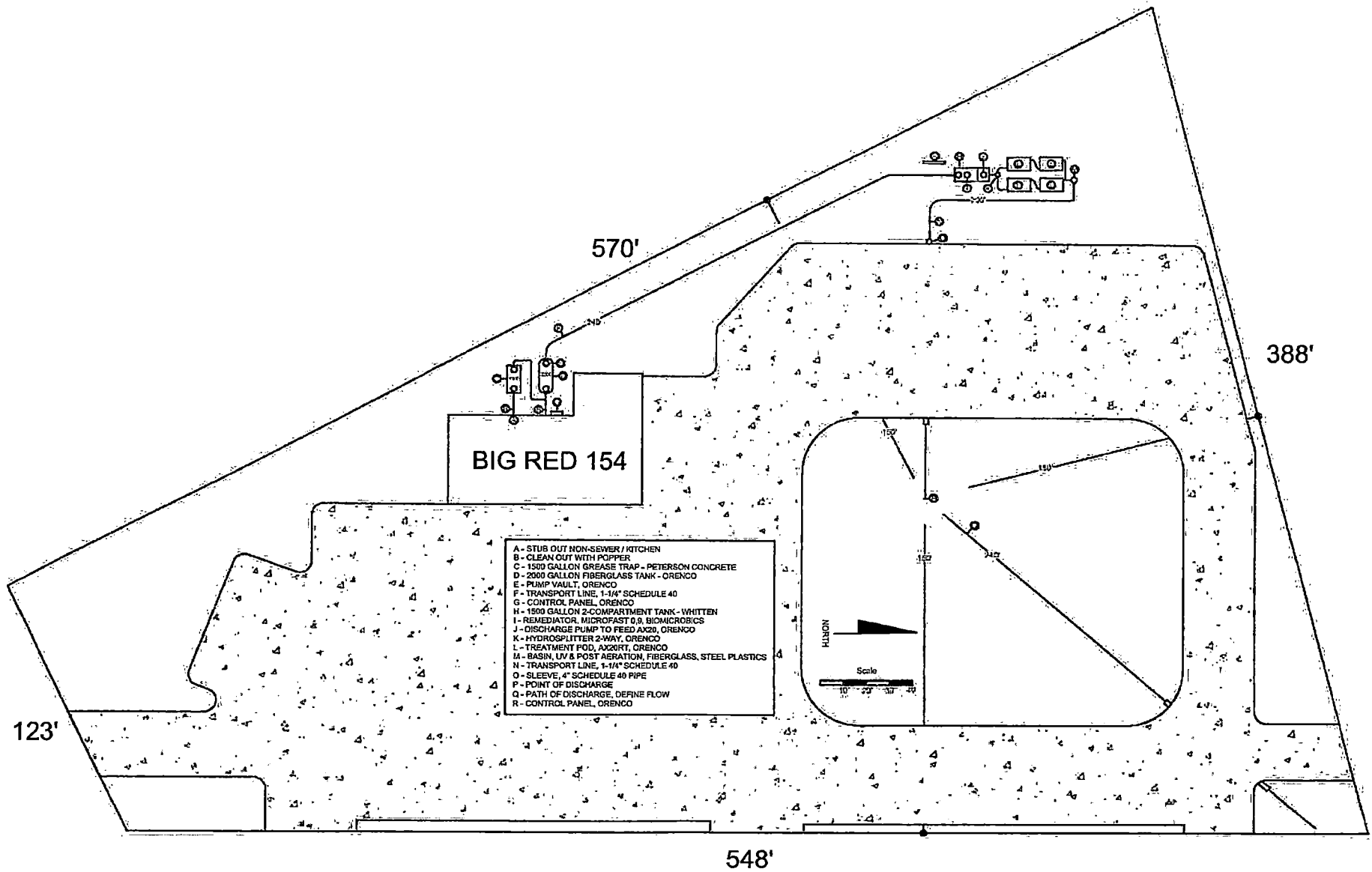
Septic tank manufacturer	Pump information
Septic tank material	Trench media and width
Dose tank manufacturer	Depth of interceptor drain
Dose tank material	Depth of settled fill
Name of Installer	License Number
Installation Inspected by <input type="checkbox"/> Environmental Health Specialist <input type="checkbox"/> Designated Representative (check one or Installer signs System Installation Verification below)	
Signature	EHS / License Number Date
System Installation Verification I have installed this system as designed and in compliance with all Rules and Regulations Pertaining to Onsite Wastewater Systems.	
Installer Signature	License Number Date

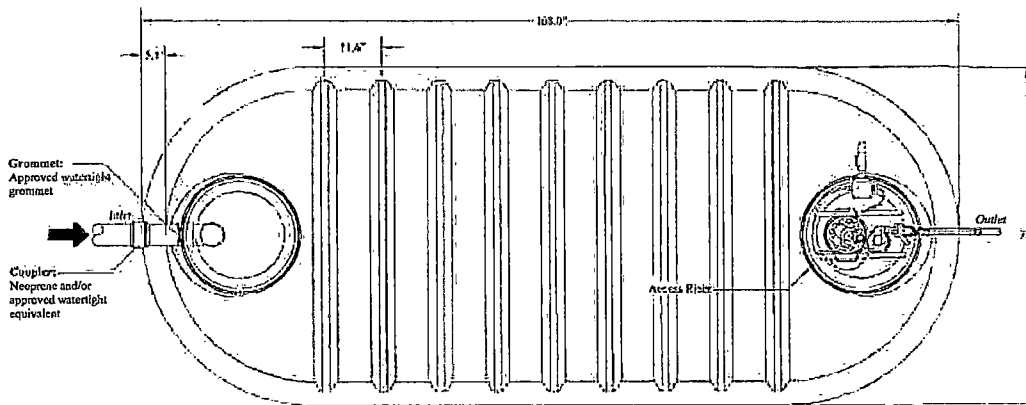
Part 3 Permit for Operation

The information contained in Part 1 and 2 of this form has been reviewed and found to meet the requirements of the Arkansas Department of Health. THE PERMIT FOR OPERATION of this system is hereby issued.		
Environmental Health Specialist	Signature	EHS Number Date
Comments		
Site Revalidation conducted by <input type="checkbox"/> Environmental Health Specialist <input type="checkbox"/> Designated Representative (check one)		
Signature	EHS / License Number	Date



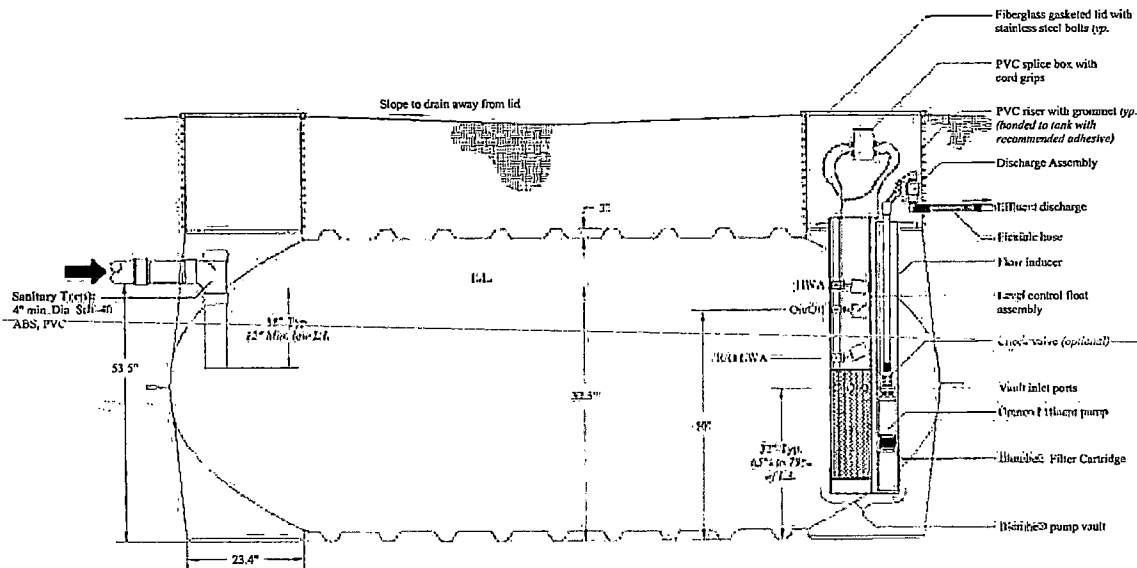
A - STUB OUT NON-SEWER / KITCHEN
B - CLEAN OUT WITH POPPER
C - 1500 GALLON GREASE TRAP - PETERSON CONCRETE
D - 2000 GALLON FIBERGLASS TANK - ORENCO
E - PUMP VAULT, ORENCO
F - TRANSPORT LINE, 1-1/4" SCHEDULE 40
G - CONTROL PANEL, ORENCO
H - 1500 GALLON 2-COMPARTMENT TANK - WHITTEN
I - REMEDIATOR, MICROFAST 0.9, BIOMICROBICS
J - DISCHARGE PUMP TO FEED AX20, ORENCO
K - HYDROSPLITTER 2-WAY, ORENCO
L - TREATMENT POD, AX20RT, ORENCO
M - BASIN, UV & POST AERATION, FIBERGLASS, STEEL PLASTICS
N - TRANSPORT LINE, 1-1/4" SCHEDULE 40
O - SLEEVE, 4" SCHEDULE 40 PIPE
P - POINT OF DISCHARGE
Q - PATH OF DISCHARGE, DEFINE FLOW
R - CONTROL PANEL, ORENCO





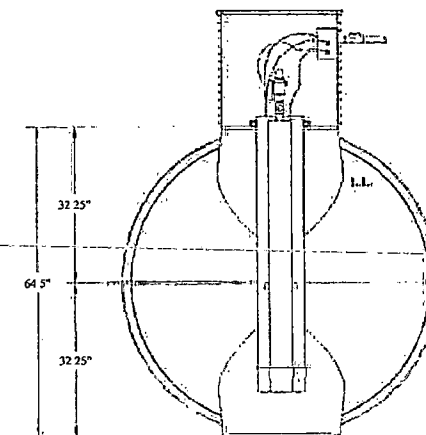
Top View

REFERENCE FOR NOTE D
2000 GALLON TANK HAS INSERT TO
MAKE THIS TANK DEEPER




Side View 1500 gal. Orenco Fiberglass Tank

Tank Volumes: Total Volume: 1785 gal.
Operating Volume: 1570 gal. @ 51-1/2"
Unit volume at typical operating depth: 27.5 gal./in.±



End View

<div>U.S. Patents 5,445,476 and 5,492,635 © 2003 Orenco Systems®, Inc</div>	<div>Title: Orenco Single Compartment 1,500 Gallon Fiberglass Tank</div>				<div> Orenco Systems® Incorporated</div>	
	<div>Drawing: 1 OF 1</div>		<div>Drawing No. NDW-TNK-FRPT-002</div>			<div>Drawing By: CHRIS JORDAN</div>
	<div>Revision: 2.0</div>		<div>Date: 6/17/03</div>			<div>Scale: 1" = 2'-0"</div>

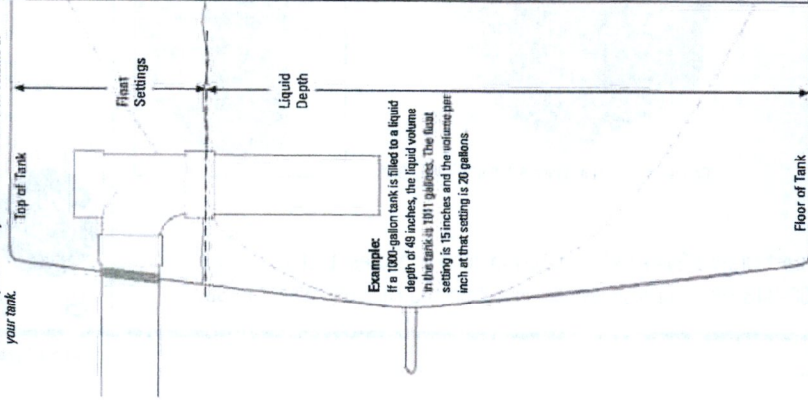
Fiberglass Tanks

Fiberglass Tank Volume per Unit of Liquid Depth: 1000-, 1500- and 2000-Gallon Tanks

These tables show the relationship between tank volume, the float setting elevation, and the liquid depth of the tank. The float setting is measured from the top of the tank to the liquid surface; liquid depth is measured from the liquid surface to the floor of the tank.

Liquid Depth: 1000- and 1500-Gallon Tanks			
Liquid Depth, inches	Float Setting, inches	Volume Per Inch of Liquid Depth, Gallons	Volume Per Inch of Liquid Depth, Gallons
64	Top	26	1210
62	—	—	—
60	—	—	—
58	—	—	—
56	—	—	—
54	—	—	—
52	—	—	—
50	—	—	—
48	—	—	—
46	—	—	—
44	—	—	—
42	—	—	—
40	—	—	—
38	—	—	—
36	—	—	—
34	—	—	—
32	—	—	—
30	—	—	—
28	—	—	—
26	—	—	—
24	—	—	—
22	—	—	—
20	—	—	—
18	—	—	—
16	—	—	—
14	—	—	—
12	—	—	—
10	—	—	—
8	—	—	—
6	—	—	—
4	—	—	—
2	—	—	—
0	—	—	—

NOTE: Data used in the tank volume tables are rounded; totals may not exactly match the actual total volume of your tank.



Example:
If a 1000-gallon tank is filled to a liquid depth of 48 inches, the liquid volume in the tank is 1011 gallons. The float setting is 15 inches and the volume per inch at that setting is 20 gallons.

* The invert of the tank is typically set 1/2 inch down from the top of the tank, or in accordance with prevailing state or local regulations.
** For gravity discharge applications, the invert of the outlet is typically set 15 inches down from the top of the tank.

Fiberglass Tanks

Liquid Depth: 2000-Gallon Tanks

Liquid Depth, inches	Float Setting, inches	Volume Per Inch of Liquid Depth, Gallons	Volume Per Inch of Liquid Depth, Gallons
78	Top	2300	2300
76	—	—	—
74	—	—	—
72	—	—	—
70	—	—	—
68	—	—	—
66	—	—	—
64	—	—	—
62	—	—	—
60	—	—	—
58	—	—	—
56	—	—	—
54	—	—	—
52	—	—	—
50	—	—	—
48	—	—	—
46	—	—	—
44	—	—	—
42	—	—	—
40	—	—	—
38	—	—	—
36	—	—	—
34	—	—	—
32	—	—	—
30	—	—	—
28	—	—	—
26	—	—	—
24	—	—	—
22	—	—	—
20	—	—	—
18	—	—	—
16	—	—	—
14	—	—	—
12	—	—	—
10	—	—	—
8	—	—	—
6	—	—	—
4	—	—	—
2	—	—	—
0	—	—	—

Biotube® Universal Pump Vaults

Applications

Orenco's patented* Biotube® Universal Pump Vaults filter effluent and pump from septic tanks or dosing tanks to drainfields, advanced treatment, or effluent collection systems. The filter prevents large solids from leaving the tank, dramatically improving wastewater quality and extending the life of downstream treatment systems.

Each Universal Pump Vault comes with a Biotube filter cartridge, a float stem bracket, and support pipes. It can accommodate either one (simplex) or two (duplex) High Head Effluent Pumps, their discharge assemblies, and a float switch assembly, all of which are ordered separately.

The unique Biotube filter cartridge provides a large filter surface area (see specs on back) in a small space, to resist clogging while providing maximum long-term protection.



Vaults with no support pipe brackets are available. They rest on the bottom of the tank and increase the space available in the riser for equipment.

*Covered by patent numbers 5,492,635 and 4,439,323

To Order

Call your nearest Orenco Systems®, Inc. Distributor. For nearest Distributor, call Orenco at 800-348-9843, or visit www.orenco.com and click on "Where to Buy."

Standard Features & Benefits

- Installs quickly in new or existing tanks
- Easy access design allows filter cartridge removal without pulling the pump or vault; simplifies filter inspection and maintenance
- Patented Biotube filter has several times the filtering capacity of other pump vaults
- Removes approximately two-thirds of suspended solids, on average
- Accommodates simplex or duplex configuration, for use with one or two pumps
- Float stem bracket allows easy removal and adjustment of float assembly
- Sturdy, molded polyethylene and corrosion-proof construction ensure long life

Biotube Filtering Process

Effluent from the relatively clear zone of the septic tank, between the scum and sludge layers, enters the Biotube Universal Pump Vault through inlet holes in the housing. Effluent

then flows between the Biotubes, utilizing the Biotubes' entire surface for filtering. Particles larger than the Biotube's mesh are prevented from leaving the tank.

Model Code for Ordering

Biotube® Universal Pump Vault

NOTE E

PVU □□ - □□□□ - □□

Support pipe length:
Blank = standard support pipes for 24" riser
L = long support pipes for 30" riser
NB = no bracket (for support pipe)

Inlet hole height: 13", 19", 25", custom (specify)

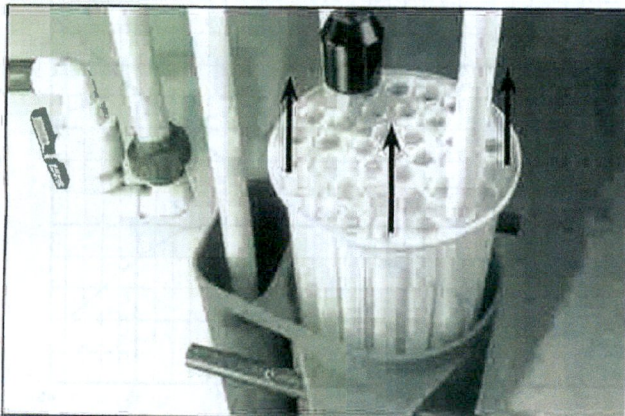
Cartridge height: 18", 24", 36"

Vault height: 48", 57", 68", 72", 78", 84", 95", custom (specify)

Universal pump vault (for simplex and duplex applications)

PVU 68 24 13 - VERIFY WITH DISTRIBUTOR

Orenco's Biotube Pump Vault is available in standard and customized configurations. Contact Orenco or your nearest distributor for sizing recommendations.

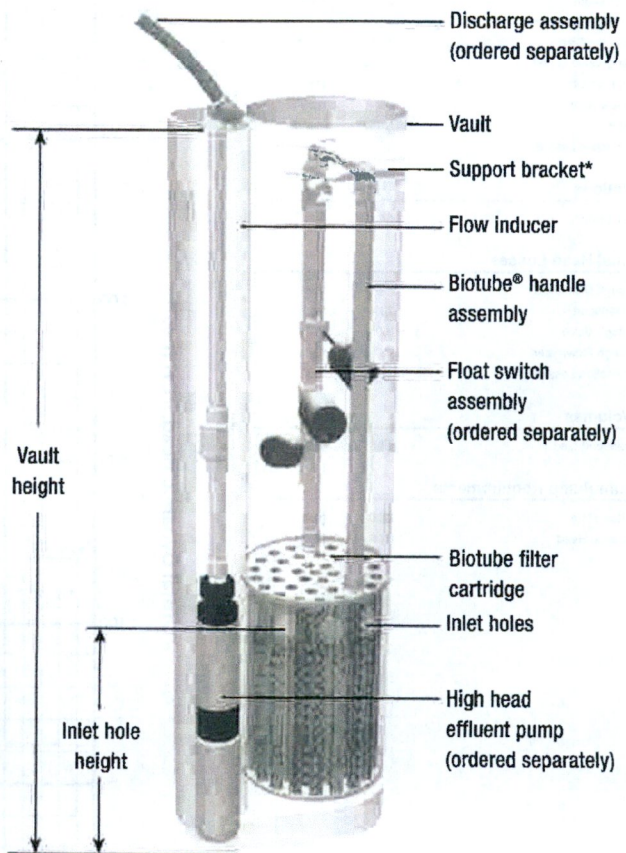


Easy access design allows filter cartridge removal without pulling the pump or vault; simplifies filter inspection and maintenance.

Biotube Cartridge Effective Filter and Flow Area

Cartridge Height	Filter Area	Flow Area
18 in. (457 mm)	14.5 ft ² (1.3 m ²)	4.4 ft ² (0.4 m ²)
24 in. (610 mm)	19.7 ft ² (1.8 m ²)	5.9 ft ² (0.5 m ²)
36 in. (914 mm)	30.0 ft ² (2.8 m ²)	9.0 ft ² (0.8 m ²)

Biotube Universal Pump Vault Components



* The distance between the top of the vault and the bottom of the support bracket is 3 inches (76 mm), so the vault extends that far above the opening on which the support pipes rest.

Tank Access and Riser Diameter

Biotube Application	Minimum Tank Access Diameter	Recommended Tank Access Diameter	Minimum Riser Diameter
PVU with Simplex Pump	19 in. (483 mm)	20 in. (508 mm)	24 in. (610 mm)
PVU with Duplex Pumps	19 in. (483 mm)	20 in. (508 mm)	30 in. (762 mm)
PVU with Recirculating Splitter Valve*	23 in. (584 mm)	23 in. (584 mm)	30 in. (762 mm)**

* RSV2Q or RSV3Q for AdvanTex® Treatment Systems.

**24-in. riser can be used with no-bracket (NB) PVU.

Pump Selection for a Non-Pressurized System - Commerical Project

Big Red 154 / E - Pump Vault

Parameters

Discharge Assembly Size	1.25	inches
Transport Length	240	feet
Transport Pipe Class	40	
Transport Line Size	1.25	inches
Distributing Valve Model	None	
Max Elevation Lift	8	feet
Design Flow Rate	28	gpm
Flow Meter	None	inches
'Add-on' Friction Losses	25	feet

Calculations

Transport Velocity	6.0	fps
--------------------	-----	-----

Frictional Head Losses

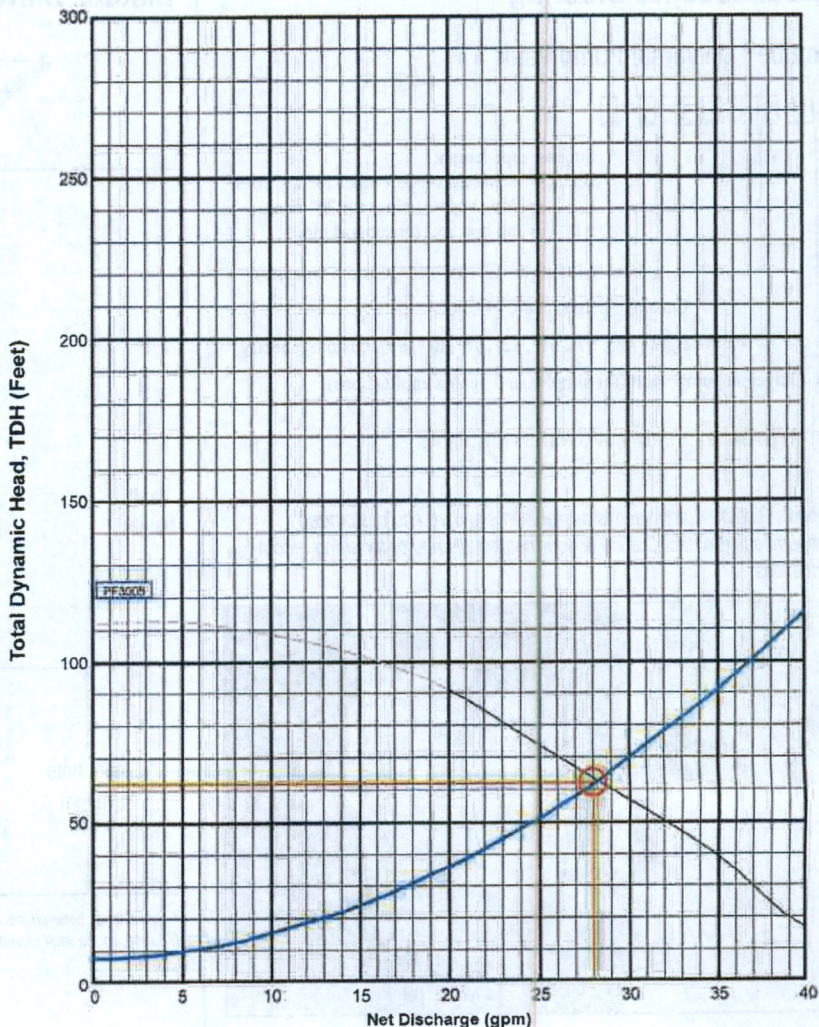
Loss through Discharge	5.5	feet
Loss in Transport	23.4	feet
Loss through Valve	0.0	feet
Loss through Flowmeter	0.0	feet
'Add-on' Friction Losses	25.0	feet

Pipe Volumes

Vol of Transport Line	18.6	gals
-----------------------	------	------

Minimum Pump Requirements

Design Flow Rate	28.0	gpm
Total Dynamic Head	61.9	feet



PumpData

PF3005 High Head Effluent Pump
30 GPM, 1/2HP
115/230V 1Ø 60Hz, 200V 3Ø 60Hz

Legend

System Curve:	
Pump Curve:	
Pump Optimal Range:	
Operating Point:	
Design Point:	



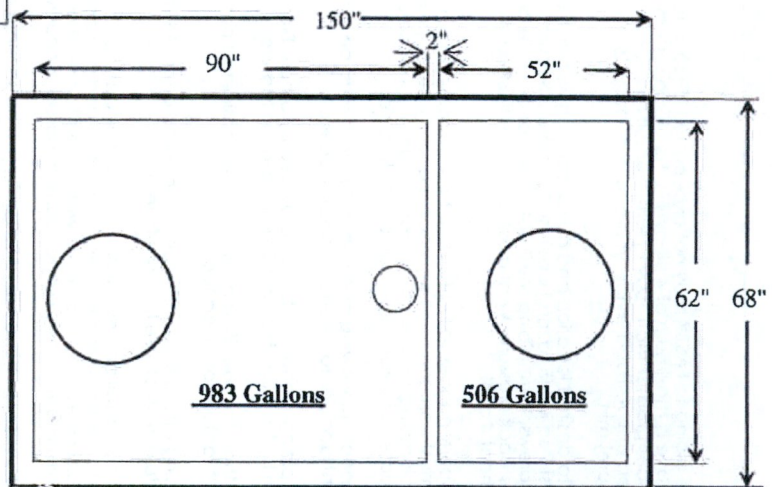
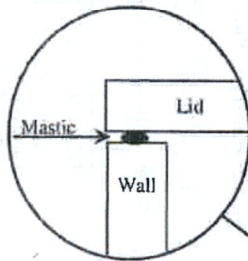
**1000 - Gallon Single
Compartment W/500 Pump Tank**

TOP VIEW

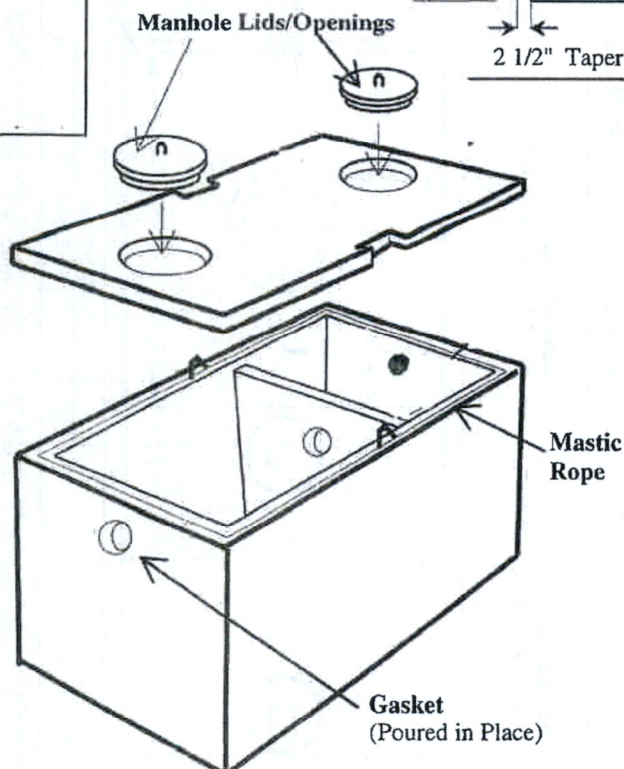
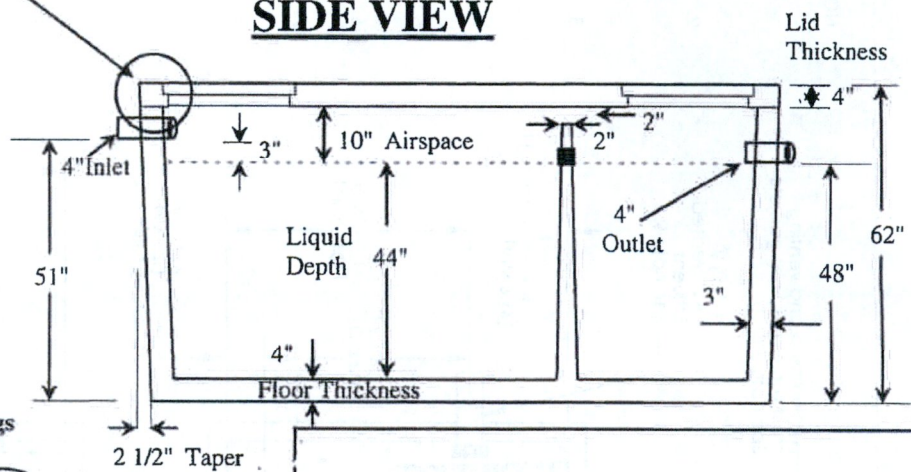
Drawings Not To Scale

NOTE H

Enlarged Detail



SIDE VIEW

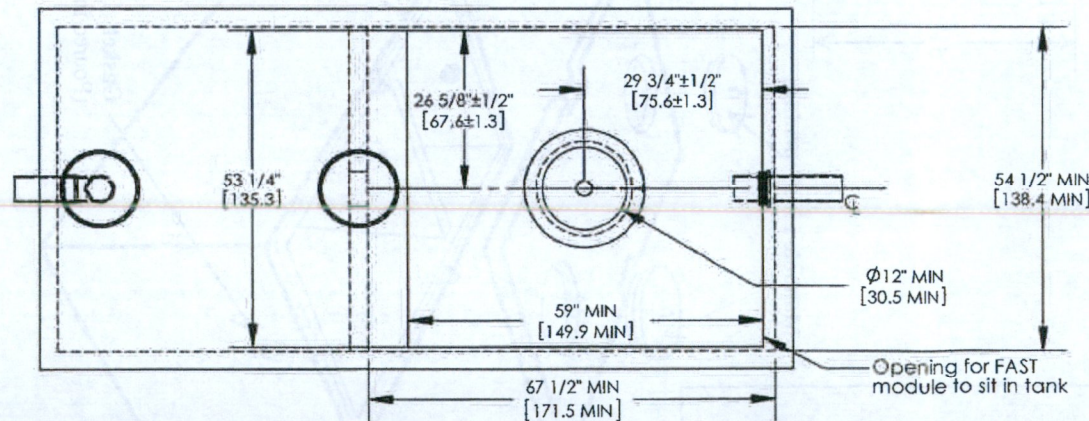
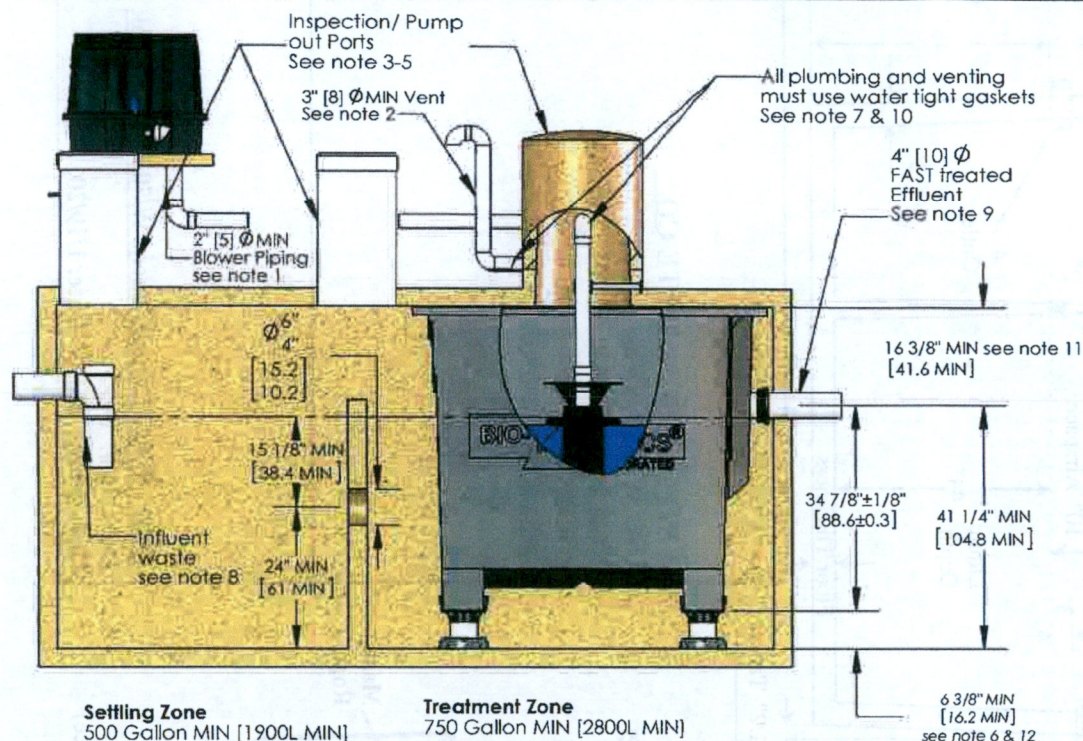


WHITTEN CONCRETE CO.
 2703 W. 2nd AVE.
 PINE BLUFF, AR. 71601
 PHONE: 870-534-6901
 FAX: 870-534-6902

1000 - Single Compartment W/500 Pump Tank

Drawing #: DZ-2

Drawing by: SMR Date: 1/19/2011



NOTES

1. Airline piping to FAST® may not exceed 100 FT [30m] total length and have a maximum of 4 elbows in the piping system. For distances greater than 100 FT [30m] consult factory. Blower must be located above flood levels on a concrete base 26" X 20" X 2" [65 X 50 X 5cm] min.
2. Vent to desired location and cover opening with a vent grate with at least 7 sq in. [45 sq. cm] open surface area. Secure with stainless steel screws. Vent piping must not allow condensate build up or create back pressure. Vent must be above finished grade or higher (see sheet 4 of 4).
3. All appurtenances to FAST® (e.g. tanks, access ports, electrical, etc.) must conform to all applicable country, state, province, and local plumbing and electrical codes. Pump out access shall be adequate to thoroughly clean out both zones.
4. All inspection, viewing and pump out ports must be secured to prevent accidental or unauthorized access.
5. Tank, piping, conduit, etc. are provided by others. Blower control system by Bio-Microbics, Inc. See Installation Manual.
6. If less than the specified minimums are considered necessary, consult factory for guidance.
7. All piping and ancillary equipment installed after FAST must not impede or restrict free flow of effluent.
8. The tank(s) shall be designed to prevent air passage between the settling zone/tank and the treatment zone and preventing an air lock. Examples include a baffle wall sealed to the lid or treatment zone inlet line with a pipe cap. Consult factory for guidance.
9. The air supply line into the FAST® unit must be secured to prevent vibration induced damage. The air supply line should be secured with a non-corrosive clamp every 2' min [60 cm]. See alternate air supply option on sheet 4 of 4.
10. Specialized treatment levels may require specific features to be incorporated into the tank design. Consult factory for guidance.
11. Min. height may be reduced, consult factor and reference "Low Profile Module Procedure.pdf"
12. Refer to sheet 4 of 4 for leg extensions requirements.

DO NOT SCALE

UNLESS NOTED
DIMENSIONS
ARE IN INCHES
[CENTIMETERS]
TOLERANCES
± 0.02 IN/IN
[± 0.05 CM/CM]



MicroFAST 0.90 FAST Unit

WEIGHT	lb	SIZE	DRAWING NUMBER	SHEET
		A	MicroFAST® 0.90 with feet	2 OF 4
DRAWN	CTC	DATE	12/18/2006	
CHECKED	PF	10/11/2013	REVISED 10/11/2013	REV. INI-03-U

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BIO-MICROBICS INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BIO-MICROBICS INC. IS PROHIBITED. DESIGN AND INVENTION RIGHTS ARE RESERVED. IN THE INTEREST OF TECHNOLOGICAL ADVANCEMENT, ALL PRODUCTS ARE SUBJECT TO DESIGN AND OR MATERIAL CHANGE WITHOUT NOTICE.

BIO-MICROBICS © 2014

Specifications for MicroFAST 0.90 Wastewater Treatment System

1. GENERAL

The contractor shall furnish and install (1) MicroFAST® 0.90 treatment system as manufactured by Bio-Microbics, Inc. The treatment system shall be complete with all needed equipment as shown on the drawings and specified herein.

The principal items of equipment shall include FAST® system insert, leg extensions, or lid, blower assembly, blower controls and alarms. All other items will be provided by others. The MicroFAST 0.90 unit shall be situated within a 750 Gallon [2800L] minimum compartment as shown on the drawings. Suggested maximum settling zone is (1X) the daily flow. Tank must provide adequate pump out access and conform to local, state, and all other applicable codes. The contractor shall coordinate the proper fabrication of the tank between the tank and FAST system suppliers as well as the installation of the FAST unit, and delivery to the job site.

2. OPERATING CONDITIONS

The MicroFAST 0.90 treatment system shall be capable of treating the wastewater produced by typical family activities (bath, laundry, kitchen, etc.) ranging from (1) one to (11) eleven persons and not to exceed 900 US Gallons per day (3400LPD) provided the waste contains nothing that will interfere with biological treatment. The FAST system is a biological treatment system not meant for non-biodegradable or industrial wastewater.

3. MEDIA

The FAST media shall be manufactured of rigid PVC, polyethylene, or polypropylene and it shall be supported by the polyethylene insert. The media shall be fixed in position and contain no moving or wearing parts and shall not corrode. The media shall be designed and installed to ensure that sloughed solids descend through the media to the bottom of the septic tank.

4. BLOWER

The MicroFAST 0.90 unit shall come equipped with a regenerative type blower capable of delivering 17-25 CFM [31-46m3/hr]. The blower assembly shall include an inlet filter with metal filter element. The blower shall be mounted outside the tank on a contractor supplied concrete base. Blower piping to the tank shall use non-corrosive material (PVC, Galvanized, or Stainless Steel). Do not run galvanized pipe inside the treatment tank. Refer to Installation Manual for further details.

5. REMOTE MOUNTED BLOWER

The blower must not set in standing water and its elevation must be higher than the normal flood level. A two-piece, rectangular housing shall be provided. The discharge air line from the blower to the MicroFAST System, shall be provided and installed by the contractor.

6. ELECTRICAL

The electrical source should be within 150 feet [45 meters] of the blower, consult local codes for longer wiring distances. All wiring must conform to all applicable codes (IEC, NEC, etc.). Wiring distances must prevent significant voltage loss. Input power on 60Hz electrical systems 110/220VAC, 1Ø, 3.5/1.7 FLA, on 50 Hz electrical systems 220VAC, 1Ø, 1.9 FLA. Other voltages and phase are also available. Actual power consumption varies with site conditions. All conduit and wiring shall be supplied by contractor.

7. CONTROLS

The control panel provides power to the blower with an alarm system consisting of a visual and audible alarm capable of signaling blower circuit failure and high water conditions. The control panel is equipped with SFR® (Sequencing Fixed Reactor) timed control feature. A manual silence button is included.

8. INSTALLATION AND OPERATING INSTRUCTIONS

All work must be done in accordance with local codes and regulations. Installation of the FAST 0.90 shall be done in accordance with the written instructions provided by the manufacturer. Manuals shall be furnished, which will include a description of system installation, operation, and maintenance procedures.

9. FLOW AND DOSING

FAST systems have been successfully designed, tested and certified receiving gravity, demand-based influent flow. When influent flow is controlled by pump or other means to help with highly variable flow conditions, then multiple dosing events should be used to maximize performance. The flow rate shall not exceed 5 gpm (19 Lpm) with a maximum hourly flow not to exceed 10% of the design daily flow (90 gph (340 LPH)).

10. WARRANTY

Bio-Microbics, Inc. warrants all new residential FAST® models (MicroFAST® 0.50, 0.625, 0.75, 0.90, and 1.5) against defects in materials and workmanship for a period of two years after installation or three years from date of shipment whichever occurs first. All other FAST® system models are warranted for a period of one year after installation or eighteen months from date of shipment, whichever occurs first. All are subject to the following terms and conditions below: During the warranty period, if any part is defective or fails to perform as specified when operating at design conditions, and if the equipment has been installed and is being operated and maintained in accordance with the written instructions provided by Bio-Microbics, Inc., Bio-Microbics, Inc. will repair or replace at its discretion such defective parts free of charge. Defective parts must be returned by owner to Bio-Microbics, Inc.'s factory postage paid, if so requested. The cost of labor and all other expenses resulting from replacement of the defective parts and from installation of parts furnished under this warranty and regular maintenance items such as filters or bulbs shall be borne by the owner. This warranty does not cover general system misuse, aerator components which have been damaged by flooding or any components that have been disassembled by unauthorized persons, improperly installed or damaged due to altered or improper wiring or overload protection. This warranty applies only to the treatment plant and does not include any of the structure wiring, plumbing, drainage, septic tank or disposal system. Bio-Microbics, Inc. reserves the right to revise, change or modify the construction and/or design of the FAST system, or any component part or parts thereof, without incurring any obligation to make such changes or modifications in present equipment. Bio-Microbics, Inc. is not responsible for consequential or incidental damages of any nature resulting from such things as, but not limited to, defect in design, material, or workmanship, or delays in delivery, replacements or repairs.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED. BIO-MICROBICS SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

NO REPRESENTATIVE OR PERSON IS AUTHORIZED TO GIVE ANY OTHER WARRANTY OR TO ASSUME FOR BIO-MICROBICS, INC., ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF ITS PRODUCTS. Contact your local distributor for parts and service.

DO NOT SCALE

UNLESS NOTED
DIMENSIONS
ARE IN INCHES
[CENTIMETERS]
TOLERANCES
± 0.02 IN/IN
[± 0.05 CM/CM]

BIO-MICROBICS
BETTER WATER. BETTER WORLD.®

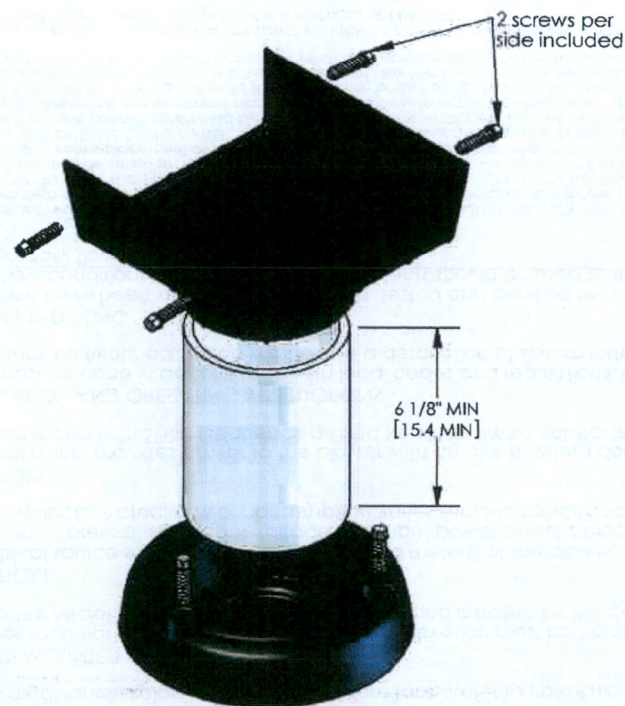
MicroFAST 0.90 FAST Unit

WEIGHT		SIZE	DRAWING NUMBER	SHEET 3 OF 4
NAME	DATE			
DRAWN CTC	12/18/2006	A	MicroFAST® 0.90 Specifications	
CHECKED PF	10/11/2013		REVISED 10/11/2013	
			REV. INI-07-T	

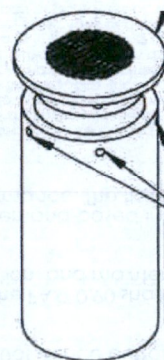
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BIO-MICROBICS INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BIO-MICROBICS INC. IS PROHIBITED. DESIGN AND INVENTION RIGHTS ARE RESERVED. IN THE INTEREST OF TECHNOLOGICAL ADVANCEMENT, ALL PRODUCTS ARE SUBJECT TO DESIGN AND OR MATERIAL CHANGE WITHOUT NOTICE.

BIO-MICROBICS © 2014

Minimum leg extension assembly
see note 4



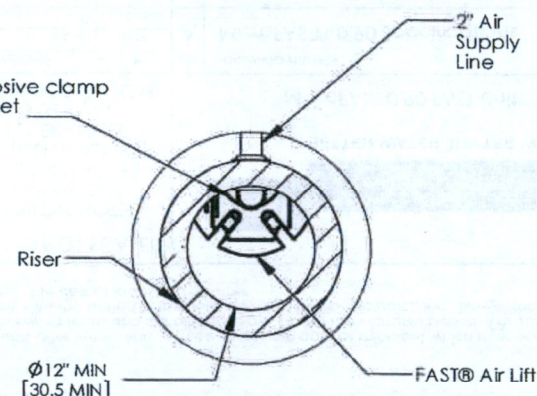
NDS 6" Grate MIN 7.1 SQ
in open surface area



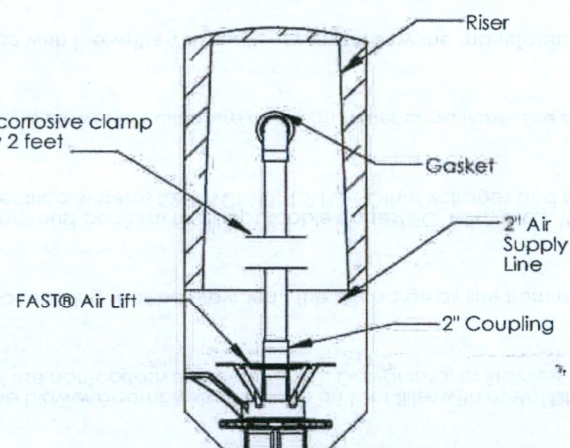
FAST® Lid
Vent Option

Fasten with non-
corrosive screws

Non-corrosive clamp
every 2 feet



Non-corrosive clamp
every 2 feet



Alternate Air Supply Option

Notes

1. Secure leg extension to the FAST® unit by placing two screws on each side of the leg extension (4 screws per foot are included).
2. Cut 4" schd. 40 PVC pipe (not included) to obtain the desired height. Minimum pipe length of 6 1/8" [15.56cm] will provide minimum clearance of 6 3/8 inches [16.2 cm]. For heights greater than 18" [45.7cm] use schd. 80 PVC pipe (not included). Consult factory for extending leg beyond 36" [90cm].
3. Anchor the leg extensions to the tank with non-corrosive hardware (not included) at the provided mounting points.
4. If less than the specified minimums are considered necessary, consult factory for guidance.
5. The air supply line into the FAST® unit must be secured to prevent vibration induced damage. The air supply line should be secured with a non-corrosive clamp every 2ft [0.6m] minimum.
6. Tank, anchors, piping conduit, blower, housing pad and vents are provided by others.

DO NOT SCALE

UNLESS NOTED
DIMENSIONS
ARE IN INCHES
[CENTIMETERS]
TOLERANCES
± 0.02 IN/IN
[± 0.05 CM/CM]

BIO MICROBICS
BETTER WATER. BETTER WORLD®

MicroFAST 0.90 FAST Unit

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BIO-MICROBICS INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BIO-MICROBICS INC. IS PROHIBITED. DESIGN AND INVENTION RIGHTS ARE RESERVED. IN THE INTEREST OF TECHNOLOGICAL ADVANCEMENT, ALL PRODUCTS ARE SUBJECT TO DESIGN AND OR MATERIAL CHANGE WITHOUT NOTICE.

BIO-MICROBICS © 2014

WEIGHT	lb	SIZE	DRAWING NUMBER	SHEET 4 OF 4
NAME	DATE	A	MicroFAST® 0.90 Details	
DRAWN CTC	12/18/2006			
CHECKED PF	10/11/2013			
		REVISED 10/11/2013	REV. INI-07-T	

Pump Selection for a Non-Pressurized System - Commerical Project

Big Red 154 / J - Discharge Pump

Parameters

Discharge Assembly Size	1.25	inches
Transport Length	20	feet
Transport Pipe Class	40	
Transport Line Size	1.00	inches
Distributing Valve Model	None	
Max Elevation Lift	8	feet
Design Flow Rate	30	gpm
Flow Meter	None	inches
'Add-on' Friction Losses	10	feet

Calculations

Transport Velocity	11.2	fps
--------------------	------	-----

Frictional Head Losses

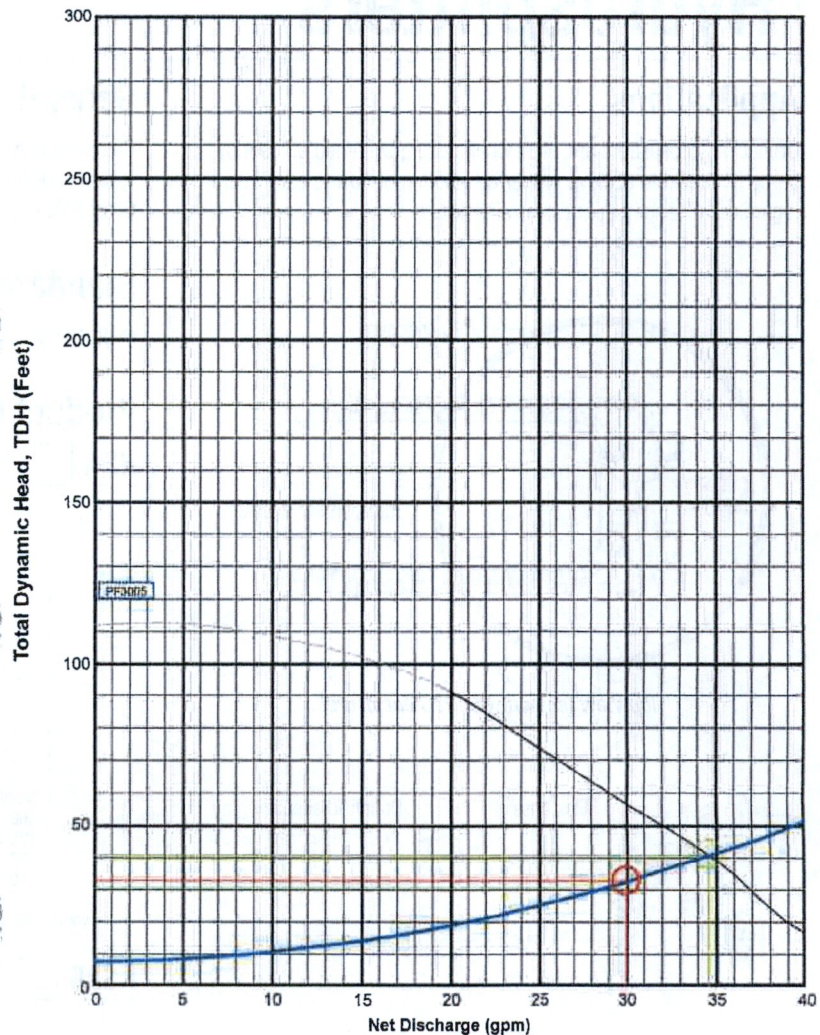
Loss through Discharge	6.3	feet
Loss in Transport	8.4	feet
Loss through Valve	0.0	feet
Loss through Flowmeter	0.0	feet
'Add-on' Friction Losses	10.0	feet

Pipe Volumes

Vol of Transport Line	0.9	gals
-----------------------	-----	------

Minimum Pump Requirements

Design Flow Rate	30.0	gpm
Total Dynamic Head	32.7	feet



PumpData

PF3005 High Head Effluent Pump
30 GPM, 1/2HP
115/230V 1Ø 60Hz, 200V 3Ø 50Hz

Legend

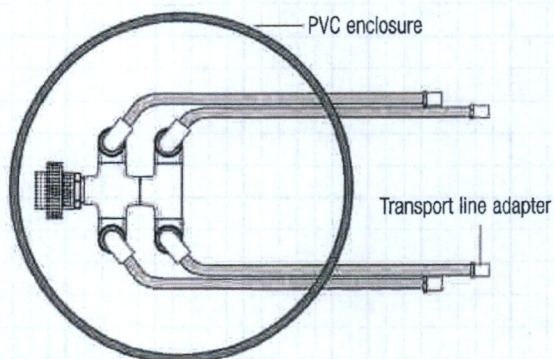
System Curve:	
Pump Curve:	
Pump Optimal Range:	
Operating Point:	
Design Point:	



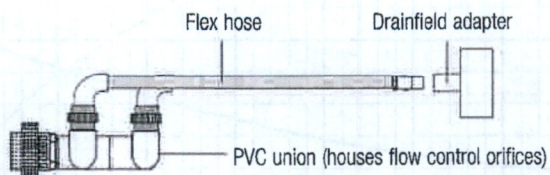
Hydrosplitters

Applications

Orenco® Hydrosplitters are used when dosing screened effluent by pump or siphon to achieve proper distribution of flow to each lateral, regardless of length, in gravity drainfields.



Top View (shown with PVC enclosure)



Side View

General

Orenco Hydrosplitters are fabricated with PVC components. Each hydrosplitter is designed to meet specific needs of a particular drainfield. Order PVC enclosure and fiberglass lid separately.

Standard Models

NOTE K - HSA 100 02 05

Hydrosplitters are built to specification.

Product Code Diagrams

HSA [] - [] - []

Discharge connection diameter, in. (mm):

05 = ½ (15)
10 = 1 (25)

Discharge connections installed:

02 = 2 connections
03 = 3 connections
04 = 4 connections
05 = 5 connections
06 = 6 connections
07 = 7 connections
08 = 8 connections

Mainfold size, in. (mm):

100 = 1 (25)
125 = 1¼ (32)
150 = 1½ (40)
200 = 2 (50)

Hydrosplitter assembly

HSRR [] []

Enclosure height:

12 = 12-in. (305-mm)
18 = 18-in. (457-mm)
24 = 24-in. (610-mm)

Enclosure diameter:

24 = 24-in. (600-mm) for 1-in. and 1¼-in.
(25-mm and 32-mm) manifolds, 2-6 outlets
30 = 30-in. (750-mm) for 1½-in. and 2-in.
(40-mm and 50-mm) manifolds, 7-10 outlets

Hydrosplitter enclosure

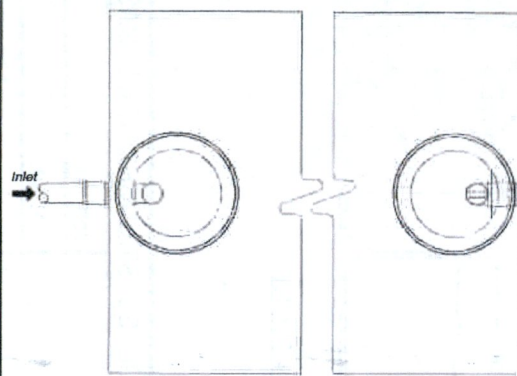
Specifications

Component	Sizes available, nominal in.							
PVC fittings	½	¾	1	1¼	1½	2	3	4
Unions	½	¾	1	1¼	1½	2	3	4
Flexible hose	½	¾	1	1¼	n/a	2	n/a	n/a
Flow controllers	½	¾	1	1¼	1½	2	3	4

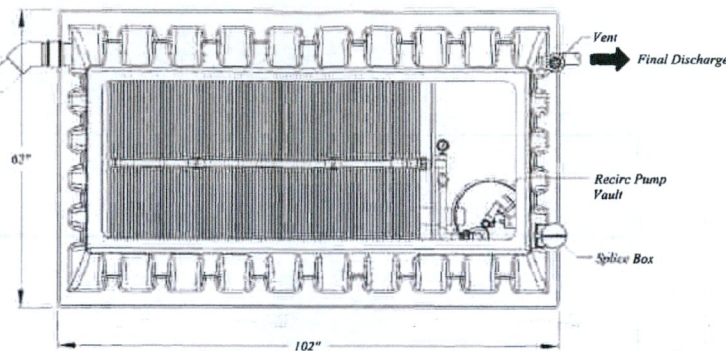
Materials of Construction

PVC fittings	PVC Sch. 40
Unions	PVC Sch. 80
Flexible hose	PVC
Flow controllers	PVC Sch. 80, 1/8-inch thick (3mm)

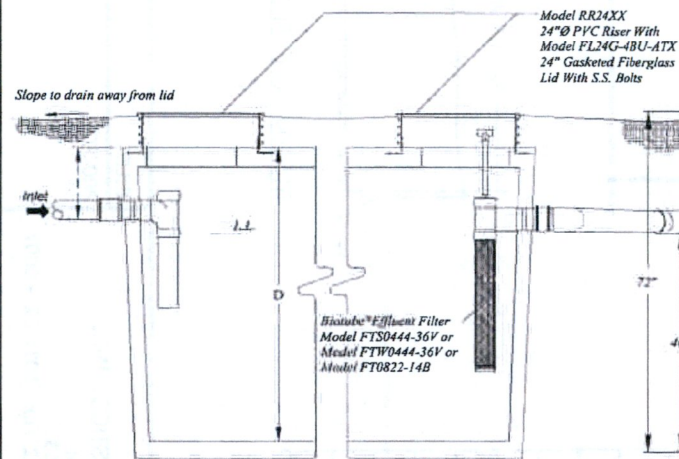
AX20RT Treatment System - Gravity Discharge (VA)



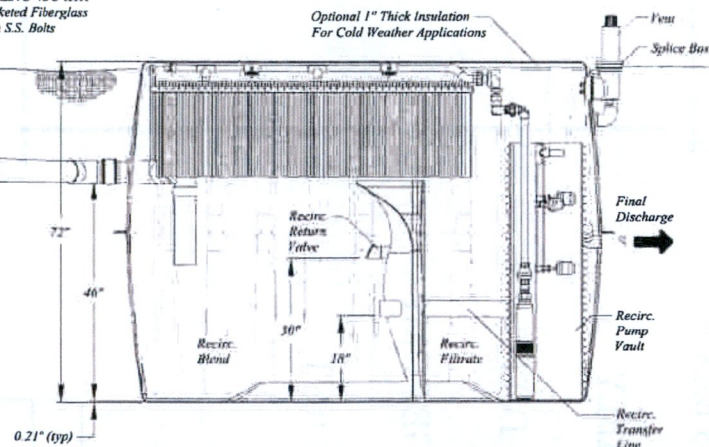
1000 gal. Primary Tank - Top View



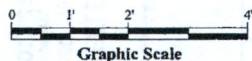
AX20 800 gal. Recirc. Tank - Top View



1000 gal. Primary Tank - Side View



AX20 800 gal. Recirc. Tank - Side View

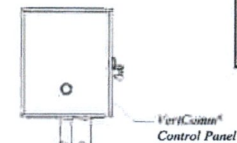


Graphic Scale

Filter Tank Dry Weight: 860 lbs

Design and Installation Notes

- For Expected Flows 4 Bedrooms or less
- Installation To Be Performed By An AdvanTex Trained Installer Only
- Start-up And Service To Be Performed By An AdvanTex Trained Service Provider

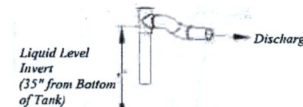


Control Panel Detail
Not To Scale

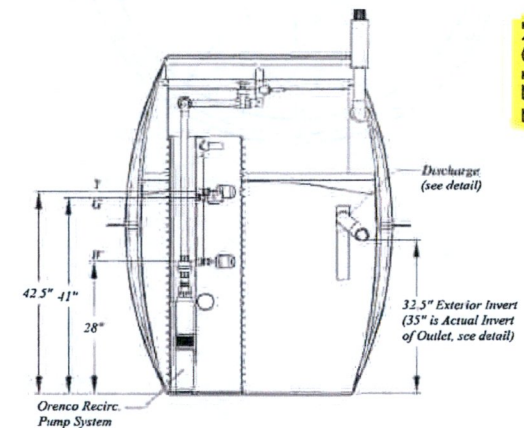
Note: Only tanks from the manufacturers listed below shall be used.

Tank Manufacturer	Septic Tank Size	I	D
Orencia Fiberglass Tank	1000 Gal.	11"	65"
C.T. Jamison	1000 Gal.	14"	65"
Hanover Precast	1000 Gal.	16"	66.5"
Rockingham Precast	1000 Gal.	16"	64"
Wrights Ready Mix	1000 Gal.	15"	65"
Heasley Concrete	1000 Gal.	16"	66"
Roth Global Plastics	1000 Gal.	11"	54"

Note: All tanks shall be tested for watertightness. All concrete tanks shall have PRTA34 cast into tank for acceptance of Model RR24XX Riser.



Discharge Detail
Not To Scale



Discharge Chamber - End View

NOTE 1

Float Functions
Y High Level Alarm
G Override Timer ON/OFF
W LL/UR

UNAUTHORIZED CHANGES & USES

Orencia has prepared these drawings for use by the design engineer. Orencia will not be responsible or liable for unauthorized changes to or uses of these drawings. All changes to these drawings must be made in writing and must be approved by the design engineer.

PRODUCT CONFIGURATION DRAWINGS



Drawn By: BEN SMITH

Drawn For:

Project:

AX20RT Mode 1A

Title:

NDW-ATX-RT-VA-01

Copyright © 2011
Orencia Systems®, Inc.

Scale: AS SHOWN

Sheet: 1 OF 1

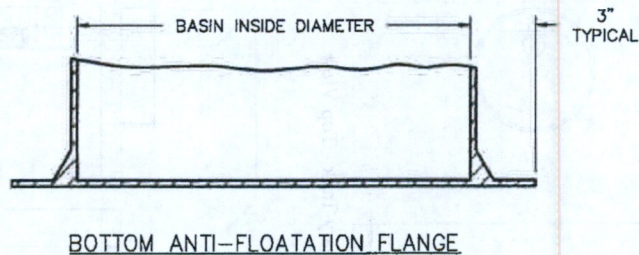
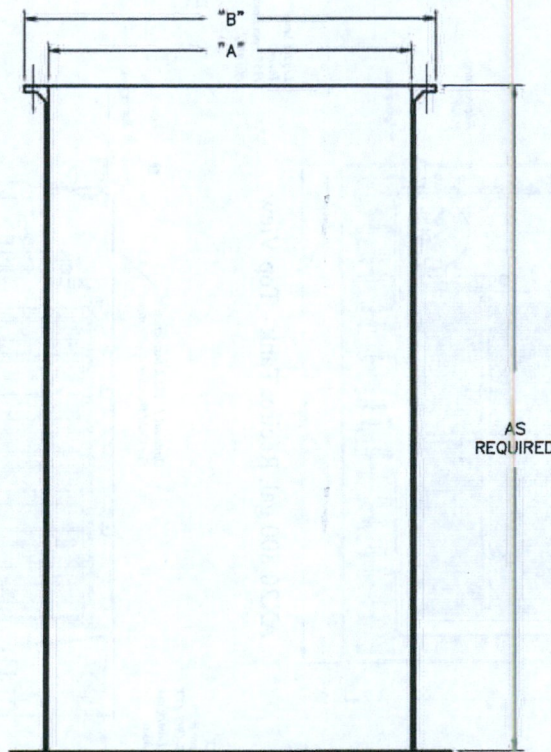
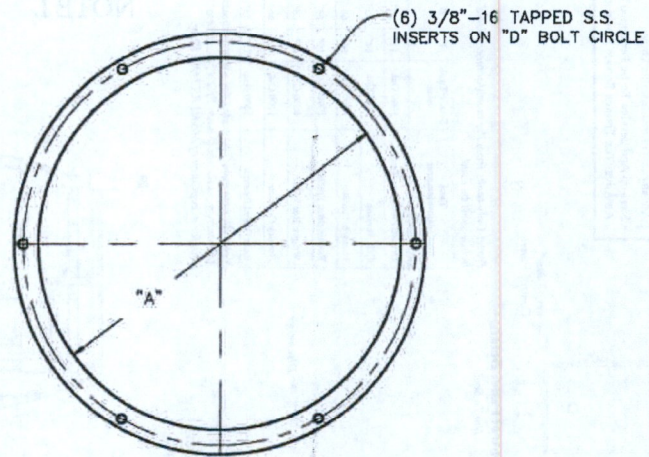
Rev: 4-05 Date: 8/17/2011

NOTE M

30" x 78"

INSIDE THIS BASIN

- * UV ASSEMBLY
- * AIR LINE / DIFFUSER
- * DISCHARGE PUMP
- * SAMPLE POINT



DIMENSIONAL DATA		
"A"	"B"	"D"
24"	28"	26 1/2"
30"	34"	32 1/2"
36"	40"	38 1/2"
42"	48"	44 1/2"
48"	54"	51"
54"	60"	57"
60"	66"	63"
72"	78"	75"



STEELE PLASTICS, INC.
1280 Sturgis Rd.
Conway, AR 72033
(501) 327-5122 Fax (501) 327-0807

TITLE		FIBERGLASS STRAIGHT WALL BASIN	
PROJECT	JOB NO.		
	P.O. NO.		
	DWG. NO. 404S		
CUSTOMER			

Pump Selection for a Non-Pressurized System - Commerical Project

Big Red 154 / M - Discharge Pump

Parameters

Discharge Assembly Size	1.25	inches
Transport Length	200	feet
Transport Pipe Class	40	
Transport Line Size	1.25	inches
Distributing Valve Model	None	
Max Elevation Lift	8	feet
Design Flow Rate	28	gpm
Flow Meter	None	inches
'Add-on' Friction Losses	25	feet

Calculations

Transport Velocity	6.0	fps
--------------------	-----	-----

Frictional Head Losses

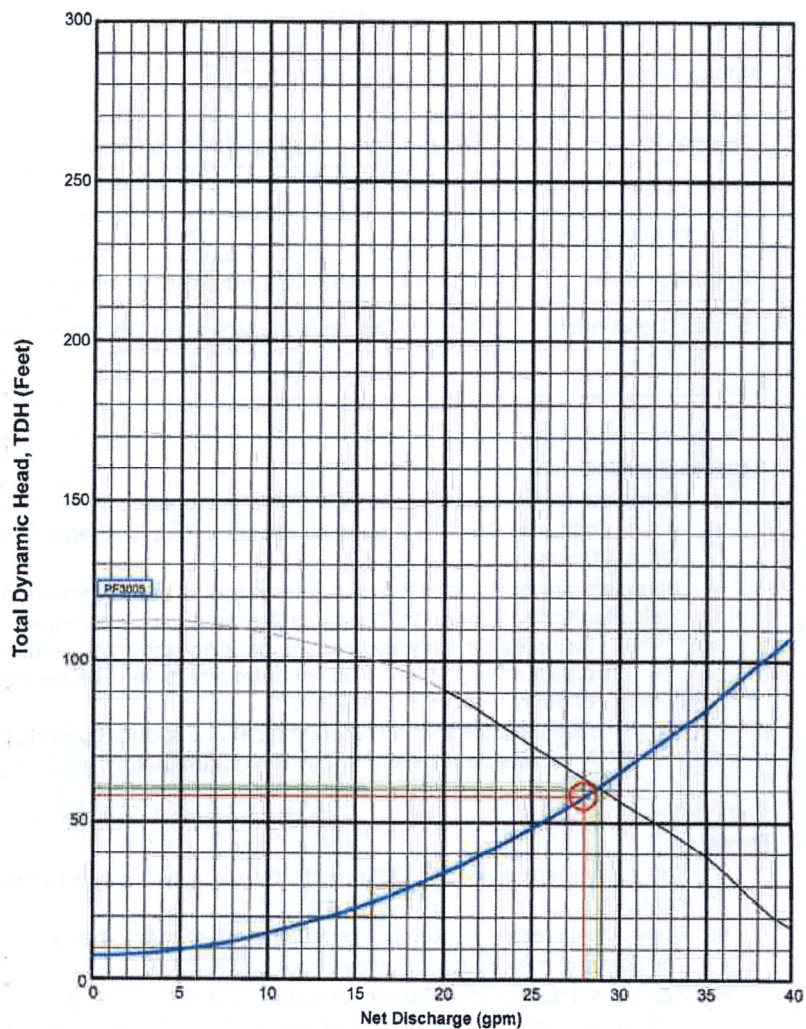
Loss through Discharge	5.5	feet
Loss in Transport	19.5	feet
Loss through Valve	0.0	feet
Loss through Flowmeter	0.0	feet
'Add-on' Friction Losses	25.0	feet

Pipe Volumes

Vol of Transport Line	15.5	gals
-----------------------	------	------

Minimum Pump Requirements

Design Flow Rate	28.0	gpm
Total Dynamic Head	58.0	feet



PumpData

PF3005 High Head Effluent Pump
30 GPM, 1/2HP
115/230V 1Ø 60Hz, 200V 3Ø 60Hz

Legend

System Curve:	
Pump Curve:	
Pump Optimal Range:	
Operating Point:	
Design Point:	



Maintenance Provider: New Water Systems, LLC

System Owner	AF Partners LLC (Big Red Store #154)
Owner Billing Address	
Owner Phone & Email	
System Address	Corner of Clark Trall and Hwy 167, Sheridan, AR 72150
System Description	Orenco Systems, Inc. AdvanTex Treatment Systems AX25RTs, AX20RTUV, FAST

Services Provided

- Complete sampling and testing of effluent as required by the NPDES permit.
- Act as Cognizant Official for purpose of completing Discharge Monitoring Reports and serving as Class 3 Operator.
- Complete preventative maintenance as required and recommended by the manufacturer. Provide Field Monitoring Reports to the owner & manufacturer as required.
 - Including monthly site visits to perform preventative maintenance such as cleaning effluent filters, adding chlorine and sodium bicarbonate as needed, verifying good physical condition of the plant and its operation.
 - Also includes monthly sampling, analysis, and reporting as required by the NPDES and Arkansas Department of Environmental Quality.

Terms

- This agreement is good for 12 months from the system startup date or the beginning date of this contract.
- Contract will renew remain active on a month-to-month basis.
- The contract may be canceled by either party with 30 days prior written notice.
- Service will be provided during normal workday hours and during weekdays excluding holidays according to routine schedule as determined by the service provider.

Fees

- Service Agreement Fee = XX per month.
- Invoices are issued on or about the 1st of each month and are due on the 15th of the same month.
- Additional fees may apply if the system is tampered with or modified by unauthorized personnel.

Owner Responsibilities

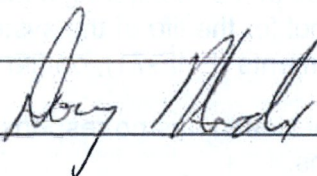
- Allow the maintenance provider or their representative access to all parts of the system.
- Keep area around system components clear and free of obstructions including landscaping and grass.
- Refrain from tampering with system components or making any modifications to the system.
- Read and follow guidelines as supplied by the manufacturer or operator.




7915 Hyw 300
Roland, AR 72135
Office: 501-888-0500
Fax: 501-888-0501

Exclusions

- Replacement parts and labor are not included.
- Solids removal will be required at some interval and are not included in this agreement.
- Cutting, spraying, removing weeds, and mowing around the treatment plant are not included in this agreement.
- This agreement does not constitute a warranty of system performance and effluent quality as there are numerous factors beyond the control of the operator which can affect the outcome and performance of any wastewater system.
- Emergency site visits performed in addition to regularly scheduled maintenance will be billed as time and expenses.

Owner Signature		Date	11-14-19
Startup or Beginning Date			

Service Provider Signature		Date	
----------------------------	---	------	--



Arkansas Department of Health

4815 West Markham, Slot 46
Little Rock, Arkansas 72205-3867

MEMORANDUM OF AGREEMENT

SUBJECT: ONSITE WASTEWATER SYSTEM APPLICATION

This is an agreement that the onsite wastewater system installed on this property has been permitted under authority of Act 402 of 1977 and by the Arkansas Department of Health with the understanding that the following provisions are met:

1. Onsite Wastewater Systems requiring a Monitoring Contract with a Certified Monitoring Personnel are Holding Tanks, Experimental Systems (i.e. Reduced Absorption Areas, *ABGs), and Drip Dispersal Systems. *Aerobic Biological Generators – Commercial applications only, residential applications must follow manufacturers' service contract requirements.
2. The property owner assumes all responsibility for the proper operation of the onsite wastewater system.
3. The property owner must maintain a monitoring contract with a licensed Certified Monitoring Personnel for the life of the system and retain Onsite Wastewater System Assessments (EHP-71), on file, for at least five (5) years.
4. The Arkansas Department of Health has no responsibility in the operation and maintenance of such systems.
5. That the Arkansas Department of Health may monitor the system as to its operation capabilities.
6. That the Arkansas Department of Health is granted permission to make such inspections as deemed necessary.
7. Subsurface systems with flows ≥ 3000 gpd and all surface discharging systems require the owner to file an additional permit application with the Arkansas Department of Environmental Quality (ADEQ).
8. That, on the sale of the property, the owner of the property must disclose to the perspective buyer notice of this agreement and any permit requirements. The buyer is to sign memoranda, contracts or permit name change forms and submit these documents to the appropriate regulatory agency.

SIGNED: [Signature]
(Property Owner)

DATE: 11/14/19

SIGNED: [Signature] RS
(Health Department)

DATE: 11-27-19



A Grant County, 700 E Center St, Sheridan, AR 72150

B 3279 US-167 N, Sheridan, AR 72150, US

5 min , 2.9 miles

Light traffic

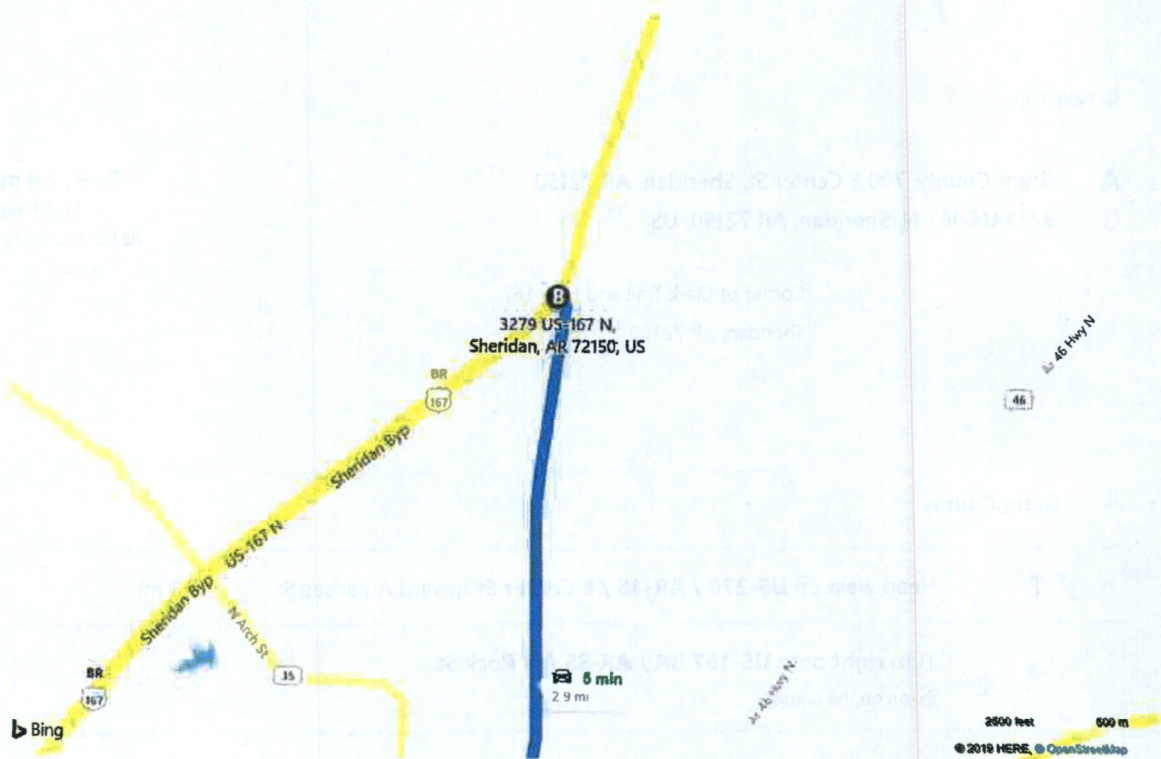
Via US-270, US-167 BR

Corner of Clark Trail and Hwy 167
Sheridan, AR 72150

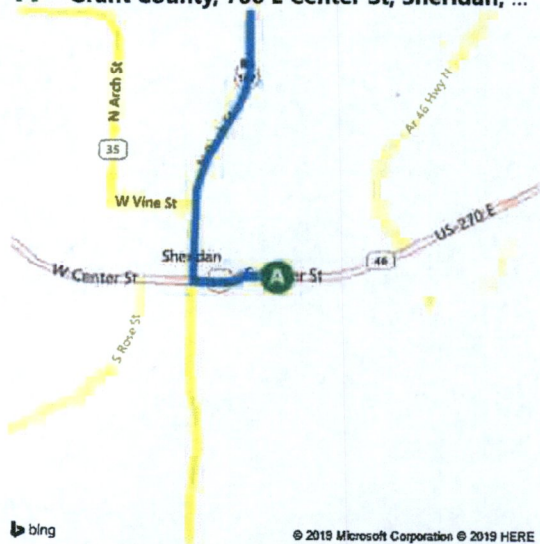
A Grant County

↑	1. Head west on US-270 / AR-46 / E Center St toward Arkansas St	0.3 mi
↗	2. Turn right onto US-167 BR / AR-35 / N Rock St Exxon on the corner	2.5 mi
	3. Arrive at US-167 BR / US-167 N	

B 3279 US-167 N, Sheridan, AR 72150, US



A Grant County, 700 E Center St, Sheridan, ...



B 3279 US-167 N, Sheridan, AR 72150, US



These directions are subject to the Microsoft® Service Agreement and are for informational purposes only. No guarantee is made regarding their completeness or accuracy. Construction projects, traffic, or other events may cause actual conditions to differ from these results. Map and traffic data © 2019 HERE™

