

VI. OTHER INFORMATION:

Operator Name: David Meints
Operator License Number: 009055 License Class: III
Consultant Contact Name: David Meints
Consultant Email Address: david@meincowastewater.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

WE (Initial) "I certify that, if this facility is a corporation, it is registered with the Secretary of the State of Arkansas."
WE (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."
WE (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: William El-Amri Title: Owner
Responsible Official Signature: [Signature] Date: 4-7-23
Responsible Official Email: welamir1978@gmail.com
Cognizant Official Printed Name: David Meints Title: Class III Operator
Cognizant Official Signature: [Signature] Telephone: 501-804-0837
Cognizant Official Email: david@meincowastewater.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?
Submittal of Required Permit Fee? Check Number: _____
Submittal of AHD Form EHP-19?
Submittal of Site Map?
DISCLOSURE STATEMENT

Handwritten text, possibly a signature or name, located in the lower center of the page.



Arkansas Department of Health
Environmental Health Protection

Receipt Number
25445023

Individual Onsite Wastewater System Permit Application

Permit Type New Installation
 Alteration / Repair

DR Environmental ID #

7 6 0 2 1 3 2 0 9 0

| 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 checked="" type="checkbox"/> |
| Structures more than 3000 sq ft and up to 4000 sq ft | \$120.00 | <input 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: **William El-Amin**
 2. Phone Number: **501-620-9544**
 3. Mailing Address: **2400 Riverfront Dr. Apt 2225 Little Rock AR 72202**
 4. County: **Lonoke**
 5. Address of Proposed System (if a 911 address is not available, attach detailed directions or map):
Lot 18/19 Sherman Hills Rd Jacksonville AR 72076
 6. Subdivision Name: **Sherman Hills Subd**
 7. Approval Date: **10-20-22**
 8. Date Recorded: **18/19**
 9. Lot Number: **450**
 10. Lot Dimensions: **See Plat**
 11. Total Area (Acres): **4**
 12. # Bedrooms # People: **4**
 13. Daily Flow (GPD): **450**
 14. Brief Legal Description of Property (Attach a separate sheet of paper, if necessary):
S-24 T-3 N R-10 W
 15. Water Supply (Specify supplier, if Public Water): **MAU**
 16. GPS Coordinates: **34.8591711 -92.0541020**

| 17. Loading Rates (gpd/ft ²) | 18. System Specifications |
|--|--|
| Primary Area: N/A | a. Size of Septic Tank: Treatment Plant gal |
| Secondary Area: N/A | b. Size of Dose Tank: 500 gal |
| Percolation Test (min/in): | c. Absorption Area: \ ft ² |
| Primary Area Avg: N/A | d. Number of Field Lines: \ |
| Secondary Area: N/A | e. Length of Field Lines: \ ft |
| | f. Trench Depth: none inches |
| | g. Trench Spacing: \ feet |
| | h. Trench Media (List Below) |
| | i. Trench Width: \ 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: **[Signature]** Date: **9-18-22**

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.
 Designated Representative Signature: **[Signature]** Title: **D.R.** Soil Certified Yes No
 Print Name: **KEVIN CASTLEBERRY** Date: **9/30/22** Phone Number: **870-692-5742**

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: **[Signature]** EHS Number: **804** Date: **10-7-22**

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) |
| \ | 0 | 0 | 34 | N/A | N/A | mod 34 | N/A |
| 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) |
| \ | 0 | 0 | 34 | N/A | N/A | mod 34 | N/A |
| 24. Seasonal Water Table (SWT) Classes Detail | | | | | | | |
| Primary Area | | | | List Redoximorphic Features and/or Clay Content Restrictions | | | |
| Brief | 0 | In | 2.5 YR 5/8 | | | | |
| Moderate | 0 | In | 10 YR 6/2 | | | | |
| Long | 34 | In | > 50% 10YR 6/2 | | | | |
| Secondary Area | | | | List Redoximorphic Features and/or Clay Content Restrictions | | | |
| Brief | 0 | In | 2.5 YR 5/8 | | | | |
| Moderate | 0 | In | 10 YR 6/2 | | | | |
| Long | 34 | In | > 50% 10YR 6/2 | | | | |
| Comments | | | | | | | |

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 | |

* Optional System Utilization Verification Form



Arkansas Department of Health
Environmental Health Protection

Receipt Number

Individual Onsite Wastewater System Permit Application

Permit Type New Installation
 Alteration / Repair

DR Environmental ID #

7602132090

Homeowner

Builder/Developer

| 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 \$ 46.00 | <input checked="" type="checkbox"/> |
| Structures more than 2000 sq ft and up to 3000 sq ft \$ 90.00 | <input checked="" type="checkbox"/> |
| Structures more than 3000 sq ft and up to 4000 sq ft \$120.00 | <input type="checkbox"/> |
| Structures more than 4000 sq ft \$150.00 | <input type="checkbox"/> |
| Alteration and Repair \$ 30.00 | <input type="checkbox"/> |

TO THE PROPERTY OWNER

Onsite Wastewater System Utilization Verification

Property location: Lot 18/19 Sherman Hills Rd Jacksonville AR
(Address of Proposed System, City, State, Zip)

I hereby attest there are 4 bedrooms (___ number of persons for commercial) and the square footage of the structure that will utilize the designed 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.

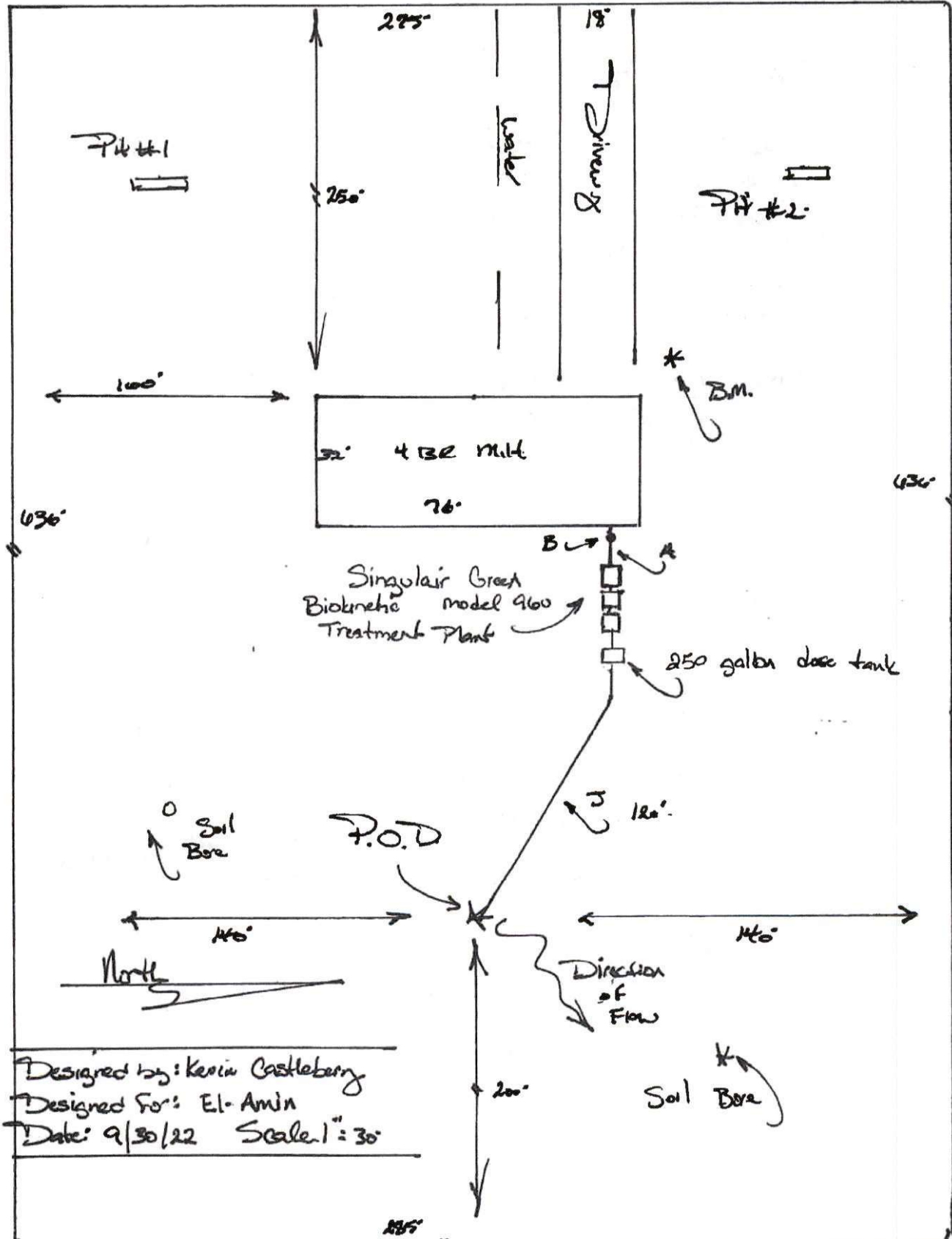
As Developer/Builder, I hereby attest that the above information is correct and prior to the sale of the property, I will convey, to the buyer, all information associated with this system.

Owner/Applicant Signature [Signature]

Date 9/30/22

This document must be submitted with the permit application, if the Owner/Applicant Signature Section (number 19 on the EHP-19) is not signed.

Sherman Hills Rd.



Designed by: Kevin Castleberry
Designed For: El. Amin
Date: 9/30/22 Scale: 1" = 30'

- Install Nonoco Singular Model 9600 Treatment plant
- Install separate 850 gallon pump tank.
- Install a Zeller BU 53 pump and Zeller 10-0023 Alarm
- Pump treated effluent to P.O.D.

Notes:

| | | |
|----------------|------|-------|
| 4.7" | B.M. | 4.7" |
| Stub Out: | 5.0" | G.E. |
| Clean Out: | 5.0" | F.L. |
| Wash Tank IA | 5.0" | 6.9" |
| Wash Tank Out: | 5.0" | 6.11" |
| Treatment IA: | 5.0" | 6.11" |
| Treatment Out: | 5.0" | 6.11" |
| Chlorinator: | 5.0" | 6.11" |
| Pump IA: | 5.0" | 6.11" |
| Pump Intake: | 5.0" | 6.11" |
| P.O.D. | 5.4" | 6.4" |

Notes:



ENVIRONMENTAL

Zoeller Family of Water Solutions



PUMP COMPANY

Zoeller Family of Water Solutions

Zoeller Company

System Head Curve and Pump Selection Tool

Static Head Information

Static Head - elevation difference from low water to outfall

System high point above outfall?

| |
|----------|
| 5.0 feet |
| no |

Friction Head Information

Pipe

How many different pipes in the system (not counting laterals)?

| |
|---|
| 1 |
|---|

Pipe 1 Length

Pipe 1 Size

Pipe 1 Class

| | | | |
|----------|---|------------|--------|
| 120 feet | 1 | 1/2 inches | SCH 40 |
|----------|---|------------|--------|

Pressurized Laterals?

No

Fittings & Discharge Assemblies

| Type | Size | Quantity | Flow |
|------------------------|--------------|----------|-------|
| 90 Elbow | 1 1/2 inches | 5 | 100 % |
| Check Valve | 1 1/2 inches | 1 | 100 % |
| Gate Valve (full open) | 1 1/2 inches | 1 | 100 % |

Special Friction Considerations

Wet-pipe Hole

15 % of Pipe Loss

Automatic-Maintenance Valve?

Pressure Filter?

Yes

No

1/8"

Operating Head Information

System Type

Non-Pressurized

Specify Flow Requirement?

No

Factors and Coefficients

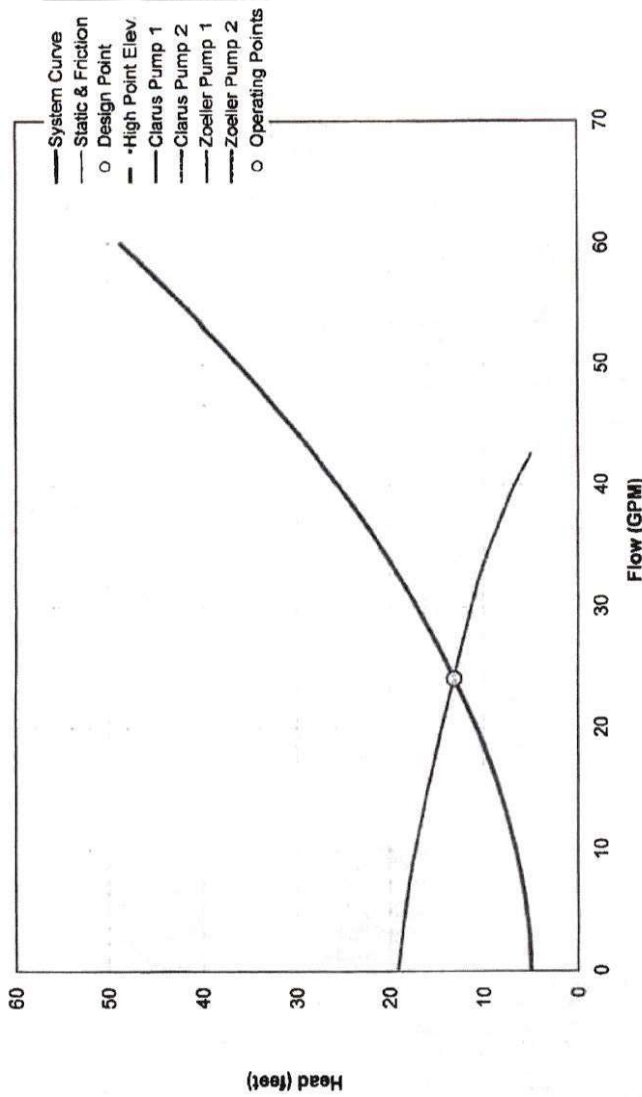
Hezen-Williams C Factor

Discharge Coefficient (Cd)

Lateral Design Mode

| |
|------|
| 130 |
| 0.81 |
| Off |

System / Pump Interaction Curves



NOTE: THE DISPLAYED PUMP CURVES HAVE BEEN ADJUSTED TO ACCOUNT FOR THE EFFECT OF THE WEEP HOLE

Curve Zoom Range 60 GPM

| Pump Selection | 60 Hz | Frequency | Operating Points |
|----------------------------|------------|-------------|------------------|
| Clarus Environmental Pumps | | | |
| Clarus Pump 1 | | | |
| Clarus Pump 2 | | | |
| Zoeller Pump Company Pumps | | | |
| Zoeller Pump 1 | 50.5657659 | 0.3hp, 60Hz | 24.2 GPM @ 13.1' |
| Zoeller Pump 2 | | | |

Project Data

Project Name: [blank]

Project Address: [blank]

Contact Info: [blank]

Notes: [blank]

norweco[®]

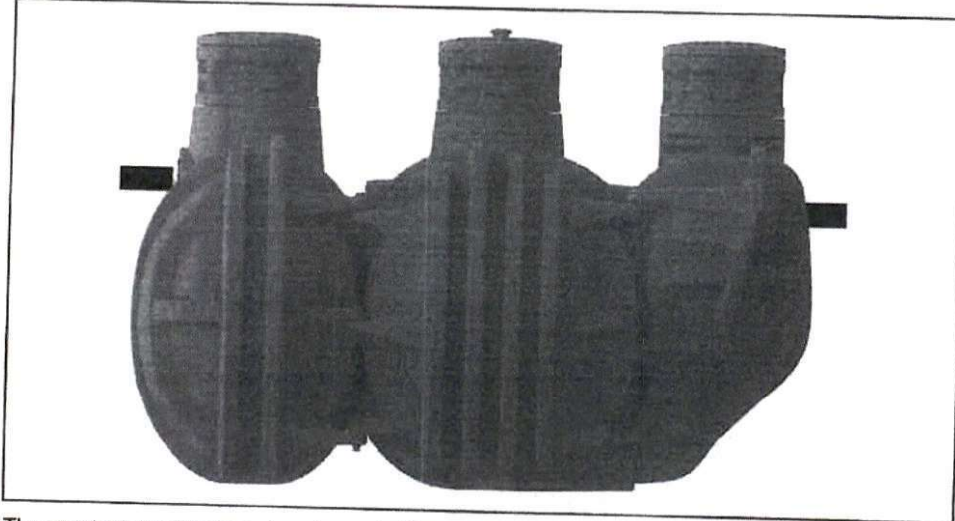
SINGULAIR GREEN[®] BIO-KINETIC[®] WASTEWATER TREATMENT SYSTEM

MODELS 960 AND TNT WITH SERVICE PRO[®] CONTROL CENTER

SPECIFICATIONS

GENERAL SPECIFICATIONS

The contractor shall furnish and install one complete Singulair Green Bio-Kinetic wastewater treatment system with all necessary parts and equipment as described in the following specifications. Treatment of the domestic wastewater shall be accomplished by the extended aeration process with non-mechanical flow equalization, pretreatment of the influent and filtration of the final effluent. The treatment system shall provide primary, secondary and tertiary treatment of the wastewater flow, and if required, chlorination and dechlorination of the effluent prior to discharge. All treatment processes shall be contained within a single tank which shall be manufactured using high density polyethylene resin. The wastewater treatment system shall be a Singulair Green as manufactured by Norweco, Inc., Norwalk, Ohio, USA. Systems not including integral pretreatment or non-mechanical flow equalization shall not be considered for this application.



The wastewater treatment system shall include high density polyethylene tankage providing separate pretreatment, aeration and final clarification chambers. The tankage shall be furnished with a Schedule 40 PVC inlet hub, removable sealed pretreatment cover, submerged transfer ports, aerator mounting riser with removable vented cover, molded outlet coupling, Bio-Kinetic system mounting riser with removable sealed cover and Schedule 40 PVC outlet hub. Principal items of electro-mechanical equipment supplied with the Singulair Green wastewater treatment system shall be a UL Listed 1725 RPM mechanical aerator, UL Listed Service Pro electrical control center, Bio-Static sludge return and a Bio-Kinetic tertiary treatment device for flow equalization and final filtration of system effluent.

SPECIFICATIONS

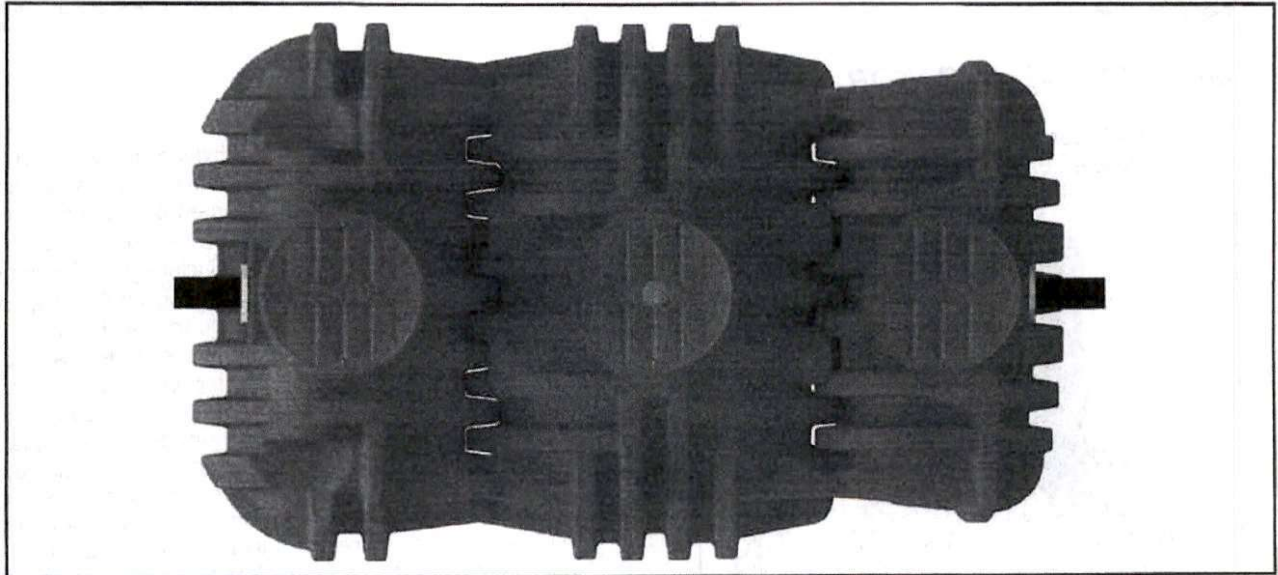
SINGULAIR GREEN[®]

OPERATING CONDITIONS

The Singulair Green system shall be certified to treat up to 600 GPD (gallons per day) of domestic wastewater. Total holding capacity of the system shall provide a minimum of 48 hour retention of the daily flow. The pretreatment chamber shall provide at least 18 hour retention, the extended aeration chamber shall provide at least 24 hour retention and the clarification chamber shall provide at least 6 hour retention. The non-mechanical flow equalization device shall increase each individual chamber and total system retention time in direct proportion to loading. Design of the system shall include a compartmented tank and a non-mechanical flow equalization device to insure successful treatment performance without upset even when the significant runoff period is six hours. Hydraulic design considerations of the system and flow equalization device shall be such that intermittent peak flow factors as high as four shall not upset hydraulic reliability within the system. Capability of the system to perform as outlined shall be certified by an independent testing laboratory and approved for use by the local governing regulatory agency.

PRETREATMENT CHAMBER

The pretreatment chamber shall be an integral part of the wastewater treatment system. All domestic wastewater shall be preconditioned and flow equalized while passing through the pretreatment chamber prior to being introduced to the extended aeration chamber. The outlet of the pretreatment chamber shall be equipped with a discharge tee that extends vertically into the liquid so that only the preconditioned equalized flow from the center area of the chamber is displaced to the extended aeration chamber. The discharge tee and transfer port shall be of adequate size to handle a peak flow factor of four without restricting the outlet and disturbing hydraulic displacement to the extended aeration chamber. A removable inspection cover shall be incorporated into the top of the pretreatment chamber to allow tank and transfer tee inspection.



AERATION CHAMBER

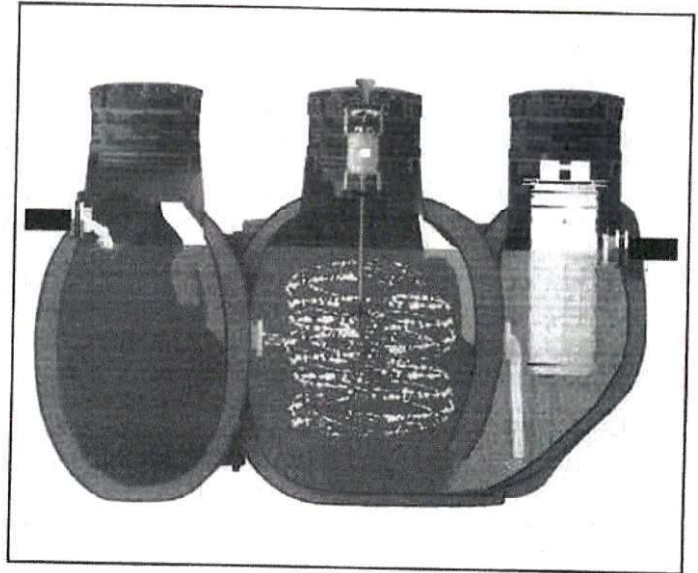
The extended aeration chamber shall provide in excess of 24 hour retention of the equalized daily flow. The chamber shall be of sufficient size to provide a minimum of 80 cubic feet of tank capacity per pound of applied BOD. The aeration chamber shall be an integral part of the system flow path and configured to insure effective mixing of microorganisms, wastewater and fresh air. No area of the chamber shall be isolated from process mixing, thereby eliminating dead or quiescent areas of the treatment chamber which are detrimental to the treatment process. Influent into the aeration chamber shall be preconditioned, equalized flow from the pretreatment chamber and settled solids via the Bio-Static sludge return.

FINAL CLARIFICATION CHAMBER

The final clarification chamber shall consist of 5 functionally independent zones operating together to provide satisfactory settling and clarification of the equalized flow. An inlet zone shall be provided and shall dissipate transfer turbulence at the flow inlet of the clarification chamber. Its performance shall also eliminate turbulence in other zones of the clarifier. Liquid shall be hydraulically displaced from the inlet zone to the sludge return zone. Hydraulic currents shall sweep settled sludge from the hopped walls and return these solids via the inlet zone to the aeration chamber. As solids are removed, liquid is displaced to the hopper zone of the clarifier. In this zone, settling by gravity takes place. Three of the four sidewalls are slanted to form a hopper which directs all settled material back to the sludge return zone. Clarified liquid from the hopper zone shall be displaced into the final settling zone to provide additional clarification of the liquid. The liquid is displaced to the outlet zone for final filtration and discharge from the system. Non-mechanical equalization of the flow, through all 5 zones, shall provide optimal settling and clarification.

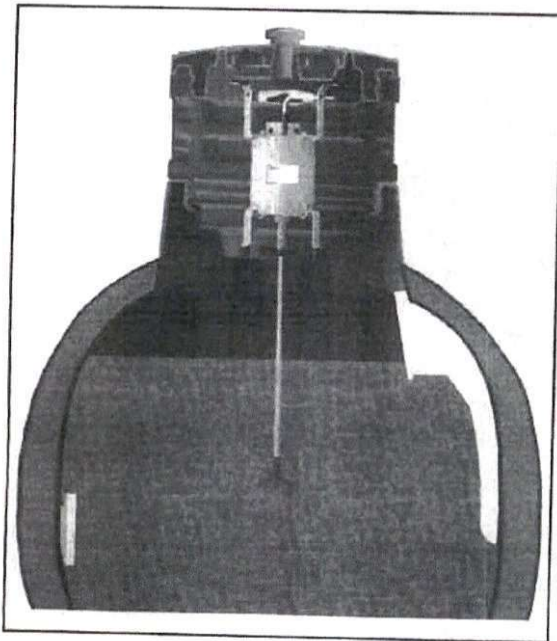
BIO-STATIC® SLUDGE RETURN

A Bio-Static sludge return shall be mounted into the opening in the aeration/clarification chamber wall to provide positive return of settled solids. Aeration chamber hydraulic currents shall enter the sludge return and be directed through the Bio-Static device into the second zone of the clarification chamber. The Bio-Static sludge return shall accomplish resuspension and return of settled solids without disturbing the clarified liquid in the final settling zone and outlet zone.



MECHANICAL AERATOR

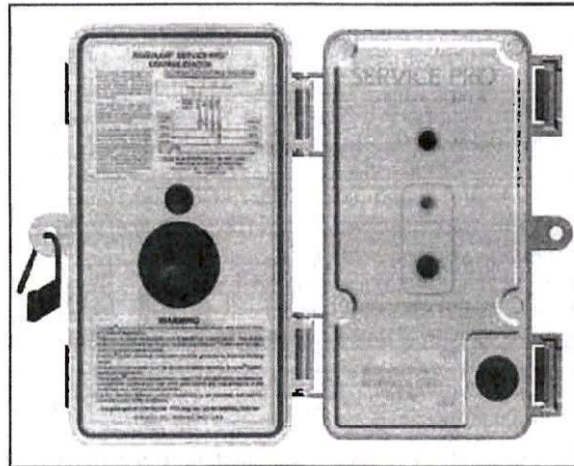
The Singulair aerator shall be installed in a rotationally molded, heavy duty, high density polyethylene aerator mounting riser above the aeration chamber. Fresh air shall be supplied through a rotationally molded, heavy duty, polyethylene access cover above the aerator. The vented access cover shall be threaded and secured to the mounting riser with two security screws. The aerator shall be UL Listed and include plated mounting brackets, NEMA 6 rated electrical connector, fractional horsepower motor, molded plastic lifting handle, molded plastic air intake screens, molded plastic foam restrictor, stainless steel aspirator shaft and molded glass-filled nylon aspirator tip. The motor shall contain precision manufactured o-ring type seals installed between the motor shell and the machined aluminum endbells to insure watertight integrity. Molded Viton elastomer shaft seals shall protect the bearings from contamination. Only the stainless steel aspirator shaft and glass-filled nylon aspirator tip shall be in contact with the liquid. There shall be no submerged electrical motors, bearings or fixed air piping in the aeration system. The Singulair aerator motor shall not exceed the motor nameplate rating when installed and operated as recommended. The fractional horsepower aerator motor shall be equipped with a foam restrictor to protect the motor against high water and foam. The motor shall be 4 pole, 1725 RPM, 115 volt, 60 hertz, single phase, ball bearing constructed with a 1.0 service factor. It shall draw 4.0 amps when operating at the rated nameplate voltage. Aerators without UL listing have not demonstrated compliance with international electrical standards for safety and reliability and shall not be considered for this application.



BIO-KINETIC®

SERVICE PRO® CONTROL CENTER

The Service Pro electrical control center shall control all aspects of treatment plant operation using a microprocessor based platform. The prewired control center shall contain nonvolatile memory to prevent the loss of programming in the event of a power failure. For protection of wiring and components, the electrical controls shall be mounted in an injection molded, lockable, corrosion proof, NEMA rated enclosure designed specifically for outdoor use. The enclosure shall be equipped with a tamper evident seal to discourage unauthorized access. The Service Pro control center shall be a UL Listed assembly and shall include a time clock, alarm light, audible alarm, reset button and power switch. The control center shall monitor all treatment system operating conditions including aerator over current, aerator under current and open motor circuit. In the event the control center detects one of these conditions, power to the aerator shall be interrupted, a diagnostic sequence shall begin and the visual alarm shall activate. After a programmed recovery interval, an automatic restart attempt shall be initiated. If normal aerator operation does not resume during 24 programmed recovery and restart cycles, the audible alarm shall activate.



TIME CLOCK

The aerator run cycle shall be controlled by an adjustable, prewired time clock. The minimum setting shall not permit the aerator to be "off" for more than 30 minutes per hour. It shall be adjustable in 5 minute increments and designed such that any adjustment results in additional run time up to "continuous" operation (60 minutes per hour). The Service Pro TNT controls shall include a non-adjustable time clock. Use of a time clock can seriously affect system performance and operating cost. Systems that have not been performance certified at the minimum time clock setting by an independent testing laboratory shall not be considered for this application.

SERVICE PRO® ADVANCED CONTROLS (Optional)

Advanced system control options shall be available for all Singlair Green Bio-Kinetic wastewater treatment systems. Service Pro control center options include the Service Pro control center with Monitoring, Compliance and Diagnostic (MCD) technology and the Service Pro control center with Total Nitrogen Treatment (TNT) technology.

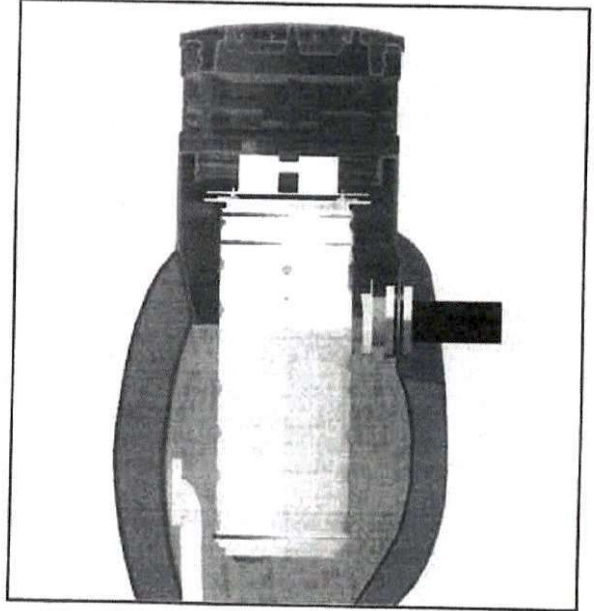
The Service Pro control center with MCD technology shall be a UL Listed assembly and shall include a time clock, integral telemetry system, main alarm light, power light, phone light, aerator alarm light, three auxiliary alarm lights, reset button and power switch. The control center shall monitor all treatment system operating conditions including aerator over current, aerator under current and open motor circuit. In the event the control center detects one of these conditions, power to the aerator shall be interrupted, a diagnostic sequence shall begin and the visual alarm shall activate. After a programmed recovery interval, an automatic restart attempt shall be initiated. If normal aerator operation does not resume during 24 programmed recovery and restart cycles, the audible alarm shall activate and the telemetry system shall report the specific condition to the Service Pro monitoring center. In the event that any of the auxiliary inputs detect abnormal operation of the treatment system auxiliary equipment, the audible and visual alarms shall immediately activate and the telemetry system shall report the alarm condition to the monitoring center.

The Service Pro TNT control center shall provide the same Monitoring, Compliance and Diagnostic functions as the Service Pro control center with MCD technology. However, the Service Pro TNT control center shall include a non-adjustable time clock. The non-adjustable time clock shall create a 60 minute aeration cycle followed by a 60 minute anoxic cycle during which the aerator shall be off. This aeration cycle shall insure Total Nitrogen Treatment of the wastewater.

SPECIFICATIONS

BIO-KINETIC® SYSTEM

A Bio-Kinetic system shall be installed in the mounting riser above the clarification chamber. The Bio-Kinetic system shall provide non-mechanical flow equalization through all plant processes including pretreatment, aeration, clarification, tertiary filtration, chlorination and dechlorination. The assembly shall be supplied with locking lugs and removable moisture/vapor shield and shall consist of a design flow and peak flow micronically molded filter, baffled perimeter settling zone, flow distribution deck, lifting handles, level indicator, adjustment lugs, optional chlorination feed tube, unbaffled perimeter settling zone, solids contact zone, vertical inlet zone, compartmented settling zone consisting of 42 baffled chamber plates, effluent stilling well, final discharge zone, adjustable outlet weir, optional dechlorination feed tube, outlet zone and gasketed discharge flange. All components shall be manufactured from inert synthetic materials or rubber, assembled in circular fashion and connected to a plastic outlet coupling. The outlet coupling shall accept a 4" diameter, Schedule 40 PVC pipe. The Bio-Kinetic system shall be installed with the inverts of the design flow equalization ports located at the normal liquid level of the clarifier. If intermittent flow rates exceed the capacity of the design flow ports, flow shall be held upstream until the intermittent flow dissipates. If the intermittent flow continues to increase, the liquid level may reach a pair of sustained flow equalization ports. With four ports in use, flow through the system increases while continuing to provide flow equalization to all upstream and downstream processes. Peak flow equalization ports are supplied but should not be required. Optional Blue Crystal and Bio-Max tablet feed tubes shall be positioned such that the flow-activated chemical cannot contact the liquid upstream of the feed tubes.

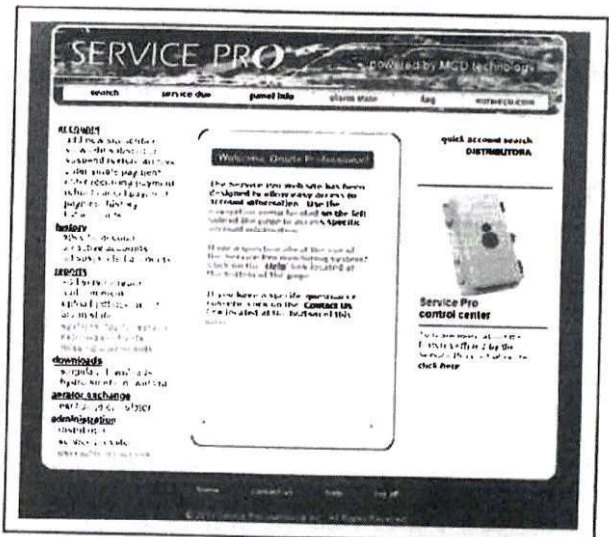


FLOW EQUALIZATION

The wastewater treatment system shall include a demand use, non-mechanical, flow equalization device. The device shall control normal residential flow rates and reduce typical residential flow surges. The flow equalization rate shall be dependent upon the specific loading pattern and the duration of flow surges. At the 600 GPD (gallons per day) NSF Standard 40 design loading schedule, minimum performance of the device shall equalize daily flow an average of 50%.

SERVICE PRO® MONITORING CENTER

The Service Pro monitoring center shall include a 256 bit encrypted password protected website for interface with the monitoring center database. Access to the secure website shall be obtained through a unique user name and password that provides tiered access to data from monitored treatment systems. Access level tiers shall include dealers, service providers, regulatory agencies and individual system owners. Dealers and service providers shall be able to create accounts, maintain service records and grant regulatory agencies access to the information. Individual system owners shall be able to view information regarding their own systems, as well as download instructional information. Integrity of stored data shall be maintained through the use of multiple servers operating in geographically isolated locations.



BLUE CRYSTAL® CHLORINATION SYSTEM (Optional)

The Singulair Green system shall be furnished complete with a tablet feed tube and a six month supply of Blue Crystal disinfecting tablets. Blue Crystal tablets shall be specifically formulated for consistent chlorine dosage and effluent disinfection to the sustained, variable and intermittent flows that are typical of domestic wastewater treatment systems. The tablets shall be manufactured from pure calcium hypochlorite and contain a minimum of 70% available chlorine. Each tablet shall be 2⁵/₈" diameter, compressed to a 1" thickness, weigh approximately 5 ounces and be white in color with blue crystals for easy identification. The tablets shall dissolve in direct proportion to the flow rate, releasing controlled amounts of chlorine.

BIO-MAX® DECHLORINATION SYSTEM (Optional)

The Singulair Green system shall be furnished complete with a tablet feed tube and a six month supply of Bio-Max dechlorination tablets. The dechlorination tablets shall contain 92% sodium sulfite as the active ingredient and shall be specially formulated to chemically neutralize both free and combined chlorine. Each tablet shall be 2⁵/₈" diameter, compressed to a 1³/₁₆" thickness, weigh approximately 5 ounces and be green in color for easy identification. The tablets shall dissolve slowly, releasing controlled amounts of chemical for the instantaneous removal of residual chlorine from the system effluent.

WARRANTY AND EXCHANGE PROGRAM

The manufacturer shall provide a three year limited warranty for each Singulair aerator, control center, Bio-Kinetic system and any other electro-mechanical components purchased from the manufacturer. The comprehensive aerator exchange program offers a lifetime of equipment protection. The dealer shall provide warranty and exchange information to the regulatory agency, contractor and customer as required.



EQUIPMENT MANUFACTURER

The equipment specified herein shall be the product of a manufacturer having a minimum of seven years experience in the construction of prefabricated wastewater treatment equipment and systems. Bids shall be prepared on the basis of the equipment and material specified herein for purposes of determining the low bid. This is not done, however, to eliminate other products or equipment of equal quality and efficiency. If equipment is to be substituted, approval of such substitution must be made prior to execution of any order. It is assumed that substitution will result in a reduction of cost to the contractor and that if accepted, these savings will be passed along by a reduction in the base bid.

PROGRESS THROUGH SERVICE SINCE 1906

norweco®

*Engineering the future of water
and wastewater treatment*

220 REPUBLIC STREET
NORWALK, OHIO, U.S.A. 44857
TELEPHONE (419) 668-4471
FAX (419) 663-5440
www.norweco.com

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SERVICE AND MAINTENANCE CONTRACT

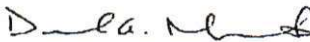
1. **Parties.** This contract ("Agreement" or "Contract") is between Meinco Septic Systems, Inc., ("Meinco") and William I. El-Amin, ("Client"), referred to individually as a "Party" and collectively as the "Parties."
2. **Service Location.** This is a Contract for septic system service and maintenance services provided by Meinco for Client located at 911 Address of Site hereinafter referred to as the "Service Site."
3. **Service Fees.** Client agrees to pay Meinco One Hundred Dollars (\$ 100.00) for septic system service and maintenance specifically work performed every Three Months (Quarterly) and described more specifically below (hereinafter referred to as "Service Work"). Meinco and Client agree that the invoiced amount is good consideration for this Contract and the services set forth below and reflects the bargained for terms of this agreement.
4. **Materials Charges.** During regular maintenance Meinco will replace materials necessary to keep the septic system operating efficiently (chlorine tablets, UV light bulbs, floats, filters, etc.). Meinco and Client agree that Meinco shall submit to client the costs of maintenance parts and materials and Client will promptly pay the same.
5. **Laboratory Fees.**
 - A) This paragraph is inapplicable.
 - B) Client agrees that Meinco will use a third party laboratory, Environmental Services, Inc., for any sampling that is required under this Contract. In such event, Meinco shall submit to Client a laboratory fee of \$ 125.00 and Client will promptly pay the same.
6. **Services Provided.** Meinco agrees to provide the following Service Work to the Client and the Service Site:
 - A) Maintenance requirements, including review of system components and their working condition, monitoring of solid levels to determine system efficiency, and periodic cleaning of system filters or media.
 - B)
 - I. This paragraph is inapplicable.
 - II. Necessary sampling and submission of paperwork every month(s) or as required to comply with the Arkansas Department of Health Onsite Maintenance Program.
 - C) Necessary paperwork every 6 month(s) as required to comply with the Arkansas Department of Health and/or the Arkansas Department of Environmental Quality.
 - D)
 - I. This paragraph is inapplicable.
 - II. Sampling of discharge every 6 month(s) in coordination with a 3rd party laboratory for required laboratory tests.
7. **Contract Duration.** This contract shall be for a period of 24 month(s) from the date this Contract is executed by the parties on page 2
8. **Flow Requirements.** This contract shall be null and void if septic system flow exceeds 500 gallons per day.
9. **Modification to System.** If the septic system is modified, abused, mis-used, or altered, then Meinco's responsibility to service or maintain the septic system is terminated. Meinco may remedy such conditions by replacing parts or correcting defects. If Meinco makes such changes to the septic system, then it may charge to client the costs of repairs, modifications, parts, and labor. Meinco may, at its discretion, seek payment in advance of making any repairs or modifications to the septic system. In such event, Meinco shall not be responsible for any damage or adverse effects for its delay in making repairs or modifications to the septic system.
10. **Access to System.** Client agrees to provide Meinco access to the septic system as well as its parts and components.
11. **Termination by Client.** Client may terminate this contract by providing thirty (30) days written notice to Meinco.
12. **Termination by Meinco.** Notwithstanding, and in addition to, any other provision or term in this Contract, **MEINCO MAY TERMINATE THIS CONTRACT AT ANY TIME AND WITHOUT PREVIOUS NOTICE TO CLIENT.**
13. **Solid Removal.** Solid removal is not a covered service and shall incur an additional fee. If Meinco removes solids from the septic system, then it may charge to client the costs of solid removal. In any event, Meinco shall not be responsible for any damage or adverse effects for any delay in removing solids.
14. **Indemnity.** To the fullest extent permitted by law, Client shall indemnify, hold harmless, and defend Meinco and any agent or employees of Meinco from and against all injuries, claims, damages, losses, and expenses, including, but not limited to, attorneys' fees, arising directly or indirectly out of the obligations herein undertaken or resulting out of operations related to the Service Work or Service Site conducted by Meinco, Meinco's agents, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such injury, claim damage, losses, or expenses is caused in part by a party indemnified. Such obligation shall not negate, abridge, or otherwise reduce the rights or obligations of indemnity which would otherwise exist to a party or person described in this paragraph.

15. **Assignment.** Client agrees that even though this is a contract for services, Meinco may assign this Contract to any third party without written notice to Client.
16. **Bilateral Contract.** Meinco and client specifically agree that Client is seeking Meinco's promise to perform and not its performance.
17. **Claims Against Meinco.** Client shall give Meinco written notice of all claims within five (5) days of Client's knowledge of facts giving rise to the event for which claim is made. Otherwise, such claims shall be deemed waived by Client. All unresolved claims, disputes, and other matters in question between Meinco and Client shall be resolved in the manner provided for in this Agreement.
18. **Rights Upon Breach.** If Client breaches this Agreement with Meinco, Meinco may stop all work, including all Service Work. Additionally, Client will be liable to Meinco for consequential, incidental, and reliance damages as well as attorneys' fees and court costs. Such liability upon Client shall extend to petitions for and orders of contempt as well as any attempts by Meinco to collect upon any debt or damages owed to it by Client, including those entered by court of law or other dispute resolution proceeding.
19. **Direct Discussion.** If a dispute arises out of or relates to this Agreement, the Parties shall endeavor to settle the dispute through direct discussion before advancing to any dispute resolution proceeding.
20. **Joint Drafting.** The Parties expressly agree that this Agreement was jointly drafted and that this Agreement shall be construed neither against nor in favor of either Party. Instead, this Agreement shall be construed in a neutral manner.
21. **Choice of Law.** The Parties expressly agree that any dispute or claim filed or heard in any jurisdiction concerning or relating to this Agreement or worked performed as a result of this Agreement shall be governed by the laws of the State of Arkansas.
22. **Forum Selection and Choice of Venue.** The Parties expressly agree that any dispute or claim arising from, filed, or heard concerning or relating to this Agreement or work performed as a result of this Agreement shall be heard in Saline County, Arkansas, and no other forum. If this clause is penetrated and the hearing

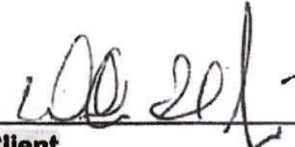
concerning the dispute removed to the United States federal court system, then the Parties expressly agree that the dispute shall be heard in the United States District Court for the Eastern District of Arkansas, Western Division, at the Richard Sheppard Arnold United States Courthouse in Little Rock, Arkansas.

23. **Waiver of Agreement Terms.** Meinco, at its sole discretion and leisure, may waive any term in this Agreement. Such waiver shall not, under any conditions or circumstances, constitute a modification of this Agreement. Additionally, such waiver shall not, under any conditions or circumstances, constitute a course of performance, course of dealings, or trade usage between Meinco and Client. Any waiver by Meinco shall be limited to a single incident or event. No waiver of any term of this Agreement is valid unless it is in writing, signed by Meinco, and attached to this Agreement as an addendum. It is the responsibility and duty of Client to draft any written waiver and to present it to Meinco for Meinco's approval and signature.
24. **Force Majeure.** Neither Party shall be in breach of its obligations under this Agreement (other than payment obligations) or incur any liability to the other Party for any losses or damages of any nature whatsoever incurred or suffered if and to the extent that the other party it is prevented from carrying out its obligations by, or such losses or damages are caused by, a *force majeure* event. For purposes of this paragraph, the failure of the state of Arkansas or the United States of America to act according to current practices, procedure, or law at the time of the making of this Contract shall be considered a *force majeure* event. Such event by the government shall be in addition to any current or commonly accepted definition of *force majeure* event.
25. **Merger and Integration.** Meinco and Client agree that this Agreement represents a full, final, and complete memorial of their Agreement for the Service Work and that this Agreement does not rely upon any term or promise not otherwise specified within the four corners of this Agreement.
26. **No Oral Modification.** Meinco and Client agree that this Agreement shall not be subject to oral modification. The Parties agree that any modification made or agreed to by the Parties shall be in writing, signed by both Parties, and attached to this Agreement as an Addendum.

By signing this Agreement below, I indicate that I have read this Agreement and its terms, consisting of two (2) pages, excluding any Addendum or Addenda, and that these express terms are both acceptable and agreeable to me. I further declare that these terms do not represent an undue hardship, are not illusory, and are not unconscionable as I have expressly bargained for these terms in consideration of entering into this Contract for the value specified in paragraph three (3).


 Meinco Septic Systems, Inc.

09/30/2022
 Date


 Client

09/30/2022
 Date



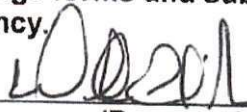
Arkansas Department of Health
 4815 West Markham, Slot 46
 Little Rock, Arkansas 72205-3867

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:  SIGNED: _____
 (Property Owner) (Health Department)

DATE: 9/30/22 DATE: _____

QUALITY PUMPS SINCE 1939



SECTION: 4.10.110
FM0732
0706
Supersedes
0705

Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.

MAIL TO: P.O. BOX 16347 • Louisville, KY 40256-0347
SHIP TO: 3649 Cane Run Road • Louisville, KY 40211-1961
(502) 778-2731 • 1 (800) 928-PUMP • FAX (502) 774-3624

visit our web site:
www.zoeller.com

A-PAK - ALARM SYSTEMS

INDOOR/OUTDOOR ALARM SYSTEM FEATURES

- Indoor & Outdoor use per UL 864.
- UL Listed and CSA Certified.
- Alarm system (horn & light) operates to warn of a high water condition.
- Horn is rated 82 decibels at 10'.
- Alarm Test and Horn Silence Switch with auto reset.
- Terminal connections for a pump & float switch.

Standard Model (P/N 10-0623) Includes:

- 15 ft. float switch.

Deluxe Model (P/N 10-0682) Includes:

- 20 ft. float switch.
- 6 ft. power cord plugs into 115V outlet.
- Watertight cord connectors.

"A-PAK" ALARM SYSTEM FEATURES

10-1454 (115V/1Ph/9V DC)

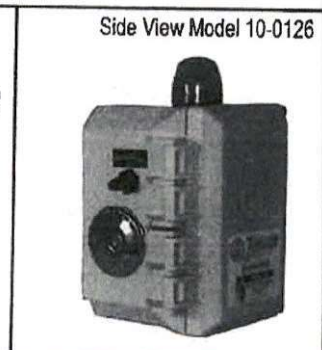
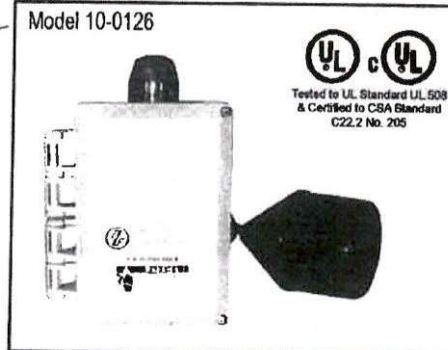
- Auto reset solid state alarm.
- 9 Volt battery back-up (battery not included).
- NEMA 1 non-corrosive enclosure for indoor use.
- Manual shut off.
- Float operates on 12 VAC.
- Float switch with 15' cable included.
- 6 ft. power cord plugs into 115V outlet.
- Horn is rated at 86 decibels at 10'.



"A-PAK II" ALARM SYSTEM FEATURES

10-0126 (115V/1Ph)

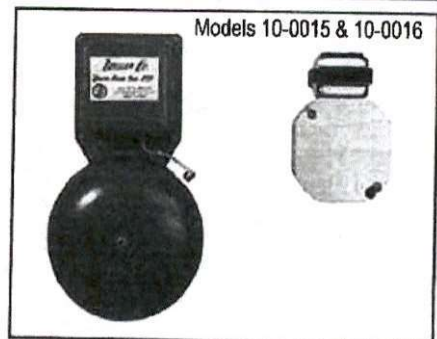
- NEMA 4X thermoplastic alarm panel.
- Horn & light warn of high liquid levels
- Test and silence switch.
- Auxiliary dry high level alarm contacts - 5 amps.
- Operates on separate circuit from pump 115 VAC.
- UL Listed for US & Canada.
- Float switch with 15 ft. cable included.
- Can be used with liquids to 140°F (60°C).
- Horn is rated at 88 decibels at 10'.



10-0015 (115V) / 10-0016 (230V)

- Non-enclosed model.
- 6" magnetic bell with transformer.
- Mount on standard utility box (not included).
- Operates with 10-0743 float switch or mechanical alternator (not included).

Note: All variable level float switches in this section are mechanically activated and do not contain mercury.



1073 ON THE DISTRICT OF THE CITY

GENERAL BILL DESCRIPTION

ALBEX
LARRY HUNT, JR.
1073 ON THE DISTRICT OF THE CITY, 1073

| LINE NO. | DESCRIPTION | QUANTITY | UNIT PRICE | TOTAL |
|----------|-------------|----------|------------|-------|
| 130 | W/1000 | 10 | 1.00 | 10.00 |
| 131 | W/1000 | 10 | 1.00 | 10.00 |
| 132 | W/1000 | 10 | 1.00 | 10.00 |
| 133 | W/1000 | 10 | 1.00 | 10.00 |
| 134 | W/1000 | 10 | 1.00 | 10.00 |
| 135 | W/1000 | 10 | 1.00 | 10.00 |
| 136 | W/1000 | 10 | 1.00 | 10.00 |
| 137 | W/1000 | 10 | 1.00 | 10.00 |
| 138 | W/1000 | 10 | 1.00 | 10.00 |
| 139 | W/1000 | 10 | 1.00 | 10.00 |
| 140 | W/1000 | 10 | 1.00 | 10.00 |
| 141 | W/1000 | 10 | 1.00 | 10.00 |
| 142 | W/1000 | 10 | 1.00 | 10.00 |
| 143 | W/1000 | 10 | 1.00 | 10.00 |
| 144 | W/1000 | 10 | 1.00 | 10.00 |
| 145 | W/1000 | 10 | 1.00 | 10.00 |
| 146 | W/1000 | 10 | 1.00 | 10.00 |
| 147 | W/1000 | 10 | 1.00 | 10.00 |
| 148 | W/1000 | 10 | 1.00 | 10.00 |
| 149 | W/1000 | 10 | 1.00 | 10.00 |
| 150 | W/1000 | 10 | 1.00 | 10.00 |

STATEMENT OF WORK
ON THE DISTRICT OF THE CITY...
LARRY HUNT, JR.
1073 ON THE DISTRICT OF THE CITY

STATEMENT OF WORK
ON THE DISTRICT OF THE CITY...
LARRY HUNT, JR.
1073 ON THE DISTRICT OF THE CITY

WEST SURVEYING CO.
1420 W. 10th St. S.W.
MINNAPOLIS, MN 55410
PHONE: 612-338-3530

1073 ON THE DISTRICT OF THE CITY

1073 ON THE DISTRICT OF THE CITY

| LINE NO. | DESCRIPTION | QUANTITY | UNIT PRICE | TOTAL |
|----------|-------------|----------|------------|-------|
| 130 | W/1000 | 10 | 1.00 | 10.00 |
| 131 | W/1000 | 10 | 1.00 | 10.00 |
| 132 | W/1000 | 10 | 1.00 | 10.00 |
| 133 | W/1000 | 10 | 1.00 | 10.00 |
| 134 | W/1000 | 10 | 1.00 | 10.00 |
| 135 | W/1000 | 10 | 1.00 | 10.00 |
| 136 | W/1000 | 10 | 1.00 | 10.00 |
| 137 | W/1000 | 10 | 1.00 | 10.00 |
| 138 | W/1000 | 10 | 1.00 | 10.00 |
| 139 | W/1000 | 10 | 1.00 | 10.00 |
| 140 | W/1000 | 10 | 1.00 | 10.00 |
| 141 | W/1000 | 10 | 1.00 | 10.00 |
| 142 | W/1000 | 10 | 1.00 | 10.00 |
| 143 | W/1000 | 10 | 1.00 | 10.00 |
| 144 | W/1000 | 10 | 1.00 | 10.00 |
| 145 | W/1000 | 10 | 1.00 | 10.00 |
| 146 | W/1000 | 10 | 1.00 | 10.00 |
| 147 | W/1000 | 10 | 1.00 | 10.00 |
| 148 | W/1000 | 10 | 1.00 | 10.00 |
| 149 | W/1000 | 10 | 1.00 | 10.00 |
| 150 | W/1000 | 10 | 1.00 | 10.00 |

STATEMENT OF WORK
ON THE DISTRICT OF THE CITY...
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PHONE: 612-338-3530



ARKANSAS DEPARTMENT OF

Health

Keeping Your Hometown Healthy

Wire Gauge Calculation Chart

- Indicates wire is insufficient to carry load

*Information provided by
Whelen Engineering, Inc.

Maximum Current Draw

| | 5 Amps | 10 Amps | 15 Amps | 20 Amps | 25 Amps | 30 Amps | 35 Amps | 40 Amps | 45 Amps | 50 Amps |
|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 22 AWG | 6 | 3 | | | | | | | | |
| 20 AWG | 9.5 | 5 | 3 | | | | | | | |
| 18 AWG | 15 | 7.5 | 5 | 4 | 3 | | | | | |
| 16 AWG | 24.5 | 12 | 8 | 6 | 5 | 4 | 3.5 | 3 | | |
| 14 AWG | 39 | 19.5 | 13 | 9.5 | 8 | 6.5 | 5.5 | 5 | 4.5 | 4 |
| 12 AWG | 62 | 31 | 20.5 | 15.5 | 12.5 | 10.5 | 9 | 7.5 | 7 | 6 |
| 10 AWG | 98 | 49 | 32.5 | 24.5 | 19.5 | 16.5 | 14 | 12.5 | 11 | 10 |
| 8 AWG | 158 | 78 | 52 | 39 | 31 | 28 | 22.5 | 19.5 | 17.5 | 15.5 |
| 6 AWG | 248.5 | 124 | 82.5 | 62 | 48.5 | 41.5 | 35.5 | 31 | 27.5 | 25 |
| 4 AWG | 395 | 197.5 | 131 | 98.5 | 79 | 66 | 56.5 | 49.5 | 44 | 39.5 |
| 2 AWG | 628 | 314 | 208 | 157 | 125.5 | 104.5 | 88.5 | 78.5 | 68.5 | 63 |

Maximum wire length - measured in feet.

| | 55 Amps | 60 Amps | 65 Amps | 70 Amps | 75 Amps | 80 Amps | 85 Amps | 90 Amps | 95 Amps | 100 Amps |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| 22 AWG | | | | | | | | | | |
| 20 AWG | | | | | | | | | | |
| 18 AWG | | | | | | | | | | |
| 16 AWG | | | | | | | | | | |
| 14 AWG | 3.5 | 3 | 3 | 3 | | | | | | |
| 12 AWG | 5.5 | 5 | 5 | 4.5 | 4 | 4 | 3.5 | 3.5 | 3.5 | 3 |
| 10 AWG | 9 | 8 | 7.5 | 7 | 6.5 | 6 | 6 | 5.5 | 5 | 5 |
| 8 AWG | 14 | 13 | 12 | 11 | 10.5 | 10 | 9 | 8.5 | 8 | 8 |
| 6 AWG | 22.5 | 20.5 | 19 | 17.5 | 16.5 | 15.5 | 14.5 | 14 | 13 | 12.5 |
| 4 AWG | 36 | 33 | 30.5 | 28 | 26.5 | 24.5 | 23 | 22 | 21 | 19.5 |
| 2 AWG | 57 | 52.5 | 48.5 | 45 | 42 | 39 | 37 | 35 | 33 | 31.5 |

American Wire Gauge (AWG) - diameter in inches

| Gauge | Diameter |
|--------|----------|
| 000000 | 0.5800 |
| 00000 | 0.5185 |
| 0000 | 0.4600 |
| 000 | 0.4096 |
| 00 | 0.3648 |
| 0 | 0.3249 |
| 1 | 0.2893 |

| Gauge | Diameter |
|-------|----------|
| 7 | 0.1443 |
| 8 | 0.1285 |
| 9 | 0.1144 |
| 10 | 0.1019 |
| 11 | 0.0907 |
| 12 | 0.0808 |
| 13 | 0.0719 |

| Gauge | Diameter |
|-------|----------|
| 19 | 0.0359 |
| 20 | 0.0319 |
| 21 | 0.0285 |
| 22 | 0.0253 |
| 23 | 0.0226 |
| 24 | 0.0201 |
| 25 | 0.0179 |

| Gauge | Diameter |
|-------|----------|
| 31 | 0.0089 |
| 32 | 0.0079 |
| 33 | 0.0071 |
| 34 | 0.0063 |
| 35 | 0.0056 |
| 36 | 0.0050 |
| 37 | 0.0045 |



ARKANSAS DEPARTMENT OF

Health

Keeping Your Hometown Healthy

Basic Electrical Information for Septic Systems Using Pumps, Floats, and Warning Alarms or Control Panels

***ALL Aspects of the wiring and electrical system must meet the current National Electrical Code*.**

- **All components of a pumped septic system including: pump vaults, pump chambers, tank draw-downs, pumps, floats and alarms, controls, wiring, conduit, all electrical connections and breakers must be specified with examples included in the design by Designated Representative.**
- **All septic system electrical work must be performed by an Arkansas licensed Septic System Installer, or an Arkansas licensed Master Electrician.**
- **Any electrical work inside a building must be performed by the property owner, or an Arkansas licensed Master Electrician.**
- **All enclosures, panels, breaker boxes or other housings must be NEMA-4X rated with gas-proof and waterproof gaskets and seal offs.**
- **No exposed plug-in electrical cords are allowed, they must be entirely sealed in a NEMA-4X enclosure to be both gas resistant and water resistant.**
- **All wire splices and connections must be made with heat shrink-butt connectors, or silicone encapsulated wire nuts.**
- **All conduit opening s into control boxes, splice boxes, or alarm and breaker boxes must have gel-filled seal off kits or plugs.**
- **All power cable or wire must be UF (underground rated) and of correct gauge for the total amperage and total length of run.**
- **Any power cable or wire buried 12-inches or less deep must be entirely inside UF (underground rated) conduit of correct size to allow for heat dispersal of the wire.**
- **The pump must have an individual breaker of correct amperage in line of site to its location.**
- **The float/alarm set up must have an individual breaker of correct amperage in line of site to its location.**
- **The main breaker for the entire septic system set up must have amperage at least equal to pump, alarm, or control breakers coming to the main breaker. This main breaker must be labeled and its location noted on the septic system permit/design.**
- **No deviations from the approved design may be made without prior approval of Designated Representative and Environmental Health Specialist.**



- | | | | | | |
|---|-------------------------------------|----------------------------------|-----------------------------------|-----------------------------------|----------------------------------|
| Zoeller Corp. Home Page | Company Profile | Service Stations | Comments | What's New | Products |
| | Related Links | Contact Info | Extended Warranty | Order Info | Technical Briefs |
| | Pump Sizing Program | | Literature Index | Technical Support | |

Technical Briefs by Zoeller Professionals



The Do's and Don'ts of Submersible Pump Applications . . .

1. Do thoroughly read all installation material provided with the pump.
2. Do inspect pump for any visible damage caused by shipping. Contact dealer if pump appears to be damaged.
3. Do clean all built up debris in sewage pit if debris can obstruct the pumps initial start up. Be sure that the pump will have a hard, flat surface beneath it.
4. Do be sure that the pit is large enough to allow proper clearance for the pumps float switch.
5. Do Always Disconnect Pump From Power Source Before Handling.
6. Do always connect to a separately protected and properly grounded circuit.
7. Don't ever cut, splice or damage the power cord.
8. Don't carry or lift the pump by its power cord.
9. Don't use an extension cord with a sewage pump.
10. Do install a check valve and a union in the discharge line.
11. Don't use a discharge pipe smaller than the pumps discharge size.
12. Do drill a 3/16" weep hole between the check valve and the pump housing.
13. Do review all applicable local and national codes and verify that the installation conforms to each of them.
14. Do consult manufacturer for clarifications or questions.
15. Do consider a Two Pump System with an alarm where an installation may become overloaded or primary pump failure would result in property damage.
16. Don't flush any items that are not biodegradable such as paper towels, feminine hygiene products, condoms, or other items that could jam the pump impeller. A moderate amount of tissue paper in a system is acceptable.
17. Don't pour chemicals into the pump system such as acid's, floor wax, paints, or any degreasing chemicals. Common household soaps and detergents are acceptable. Contact the manufacturer with any chemical questions.
18. Do keep all warranty information, installation instructions, and receipts for future use.
19. Do size the pump to the proper capacity of the home. In a two-pump system each pump should be sized to meet the homes pumping requirements.
20. Do verify that the sewage pit is gas tight and well vented to prevent odors.

"QUALITY PUMPS SINCE 1939"

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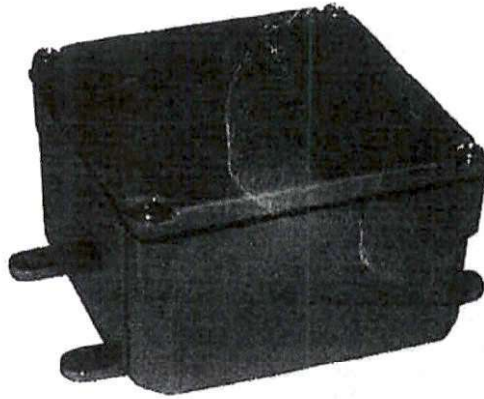
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Supersedes 0210

Junction Boxes



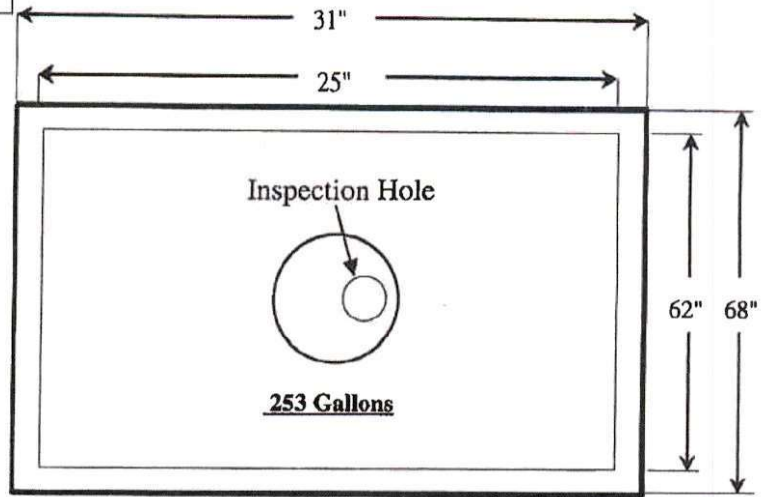
UL listed and CSA certified high impact, corrosion resistant, weatherproof thermoplastic enclosure with flexible PVC gasket and brass screws. Presassembled at the factory for convenience and ease of installation.



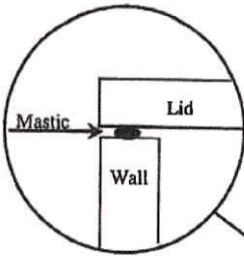
| Junction Boxes CL0625 | |
|-----------------------|---|
| Part Number | Description |
| 10-1398 | 4"x4"x4" J-Box w/ 0.75" hub, 4 small cord grips, 1 plug |
| 10-1399 | 4"x4"x4" J-Box w/ 1.5" hub, 4 small cord grips, 1 plug |
| 10-1402 | 6"x6"x4" J-Box w/ 1.5" hub, 4 small cord grips, 1 plug |
| 10-1403 | 6"x6"x4" J-Box w/ 2.0" hub, 5 small cord grips, 1 plug |
| 10-1710 | 6"x6"x4" J-Box w/ 2.0" hub, 6 small cord grips, 1 plug |

250 - Gallon Pump Tank

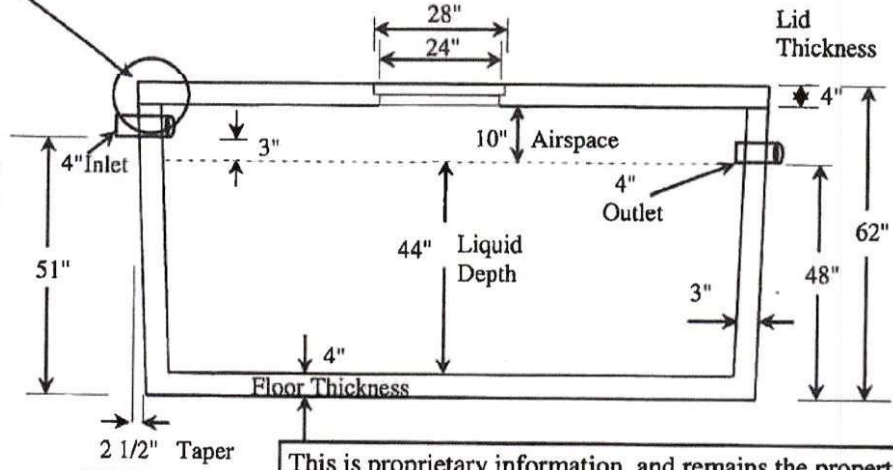
TOP VIEW Drawings Not To Scale



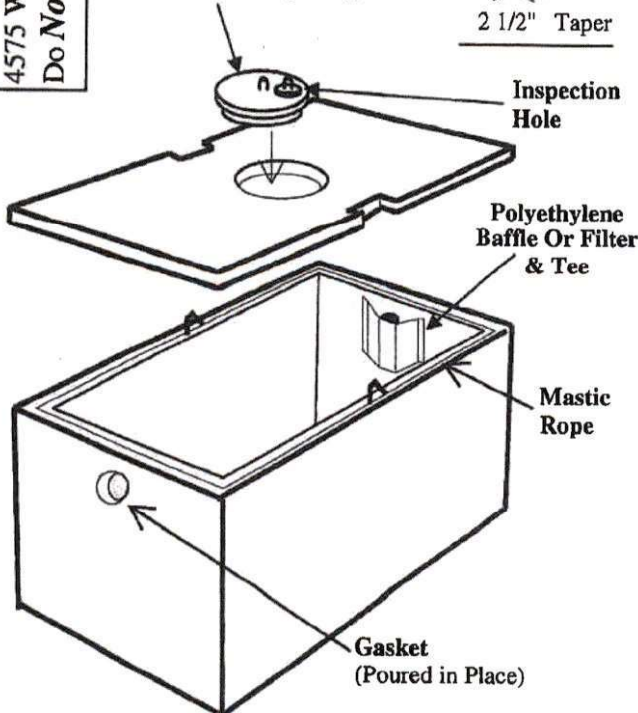
Enlarged Detail



SIDE VIEW



Manhole Lid Opening



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

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Date Approved: _____

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250 - Gallon Pump Tank

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Google Maps 34°51'33.1"N 92°03'16.8"W



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