NORTH CAROLINA DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH SECTION
ON-SITE WATER PROTECTION BRANCH

PROVISIONAL WASTEWATER SYSTEM APPROVAL

PROVISIONAL APPROVAL NO: PWWS-2023-01

Issued To: Ecological Tanks, Inc.
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For: Aqua Safe Models AS500 to AS1500

Approval Date: January 17, 2023

In accordance with G.S. 130A-343, 15A NCAC 18A .1969 and .1970, a proposal by Ecological Tanks, Inc. for approval of their wastewater system has been reviewed and found to meet the standards of a Provisional System when all of the following conditions are met:

I. General

A. Scope of this Provisional Approval includes the following:
   1. Design, installation, and operation and maintenance guidelines for the specified models of Aqua Safe systems to meet TS-I effluent standards in accordance with Rule 15A NCAC 18A .1970(a) Table VII.
   2. Obtain field performance data from specified models of Aqua Safe systems intended to meet TS-II effluent quality standards in accordance with Rule .1970(a) Table VII.
   3. Operation, maintenance, and monitoring activities for these Aqua Safe systems to ensure the effluent standards are met.
   4. Proposal for evaluation of this Provisional System.

B. This Provisional Approval is only applicable to systems receiving domestic strength influent, not exceeding the influent quality standards in Rule.1970(b) Table VIII, utilizing specified models of Aqua Safe systems with a design daily flow less than or equal to 1,500 gallons per day.

C. Any site utilizing these systems shall have wastewater with sufficient alkalinity to facilitate biological treatment processes. The influent shall not have a pH level or toxins that significantly inhibit microbial growth.

E. This Provisional Approval is limited to 200 systems. The intent of this Provisional Approval is to gain field experience sufficient to qualify this system for Innovative Approval as a TS-I system, pursuant to Rule .1969(g).

F. Data from Aqua Safe systems designed for TS-II effluent quality standards may also be used to support these systems for Provisional or Innovative Approval as a TS-II system if sampled for all TS-II parameters.

G. Use of Aqua Safe systems that have a design flow exceeding 1,500 gallons per day if designed by a Professional Engineer (PE) may be permitted after approval by the State on a case-by-case basis in accordance with the Large Systems State Review/Approval Process and Rule 15A NCAC 18A .1938.

II. System Description

All specified Aqua Safe models use a pretreatment chamber that is an integral part of the model or a septic tank prior to the unit. The pretreatment tank is equipped with a discharge baffle extending vertically down into the liquid that is set to draw between the floatable and settleable solids and prevent larger solids from passing through to the mixing zone due to peak hydraulic loading periods. The primary purpose of the pretreatment chamber is to prevent non-biodegradable soils, greases, and oils from entering the aerobic system. The models utilize an extended aeration activated sludge process designed to effectively treat the effluent by distributing free dissolved oxygen into the mixed liquor in the aeration zone. A compressor distributes air through a drop line distributed around the perimeter of the tank. Finally, as effluent exits through the clarifier, solids settle in the clarifier and are recirculated back into the aeration chamber. The effluent will flow from the clarifier through the UV system. After the UV system, the effluent will flow to either a pump tank, if a pump is required, or flow by gravity to a dispersal field.

III. Siting Criteria

A. A Provisional System may be installed at sites that meet the requirements of this Section and the soil and siting criteria for a conventional, modified, alternative, innovative, or accepted wastewater system. The site shall have sufficient area to install a replacement advanced pretreatment system and 100 percent dispersal field repair area. The manufacturer agrees to provide another approved system if the Provisional System fails to perform properly. Exceptions to the repair area requirement are as set forth in Rule .1969(f)(3) and (4).

B. Aqua Safe systems and associated dispersal fields shall be sited and sized in accordance with Rule .1970 for TS-I systems. Drip irrigation systems used with Aqua Safe systems shall be sited and sized in accordance with the manufacturer specific drip approval.

IV. Dispersal Field Sizing

The dispersal field sizing criteria shall be based upon the long-term acceptance rate (LTAR)

specified in the rules or the specific dispersal system approval.

V. Special Site Evaluation

A special site evaluation may be required based on the proposed dispersal field in accordance with Rule .1970(p) or a manufacturer specific drip approval.

VI. Design Criteria

A. The Aqua Safe systems shall be designed in accordance with the following criteria.
   1. The Table below provides the design flow and minimum pretreatment tank capacity for the Aqua Safe models.

Aqua Safe Model #	Maximum Design Flow	Minimum Pretreatment Tank Capacity
AS500	500 gpd	350 gallons
AS500-C*	500 gpd	350 gallons
AS500+5 Duo** Pre^	500 gpd	500 gallons
AS500+5 Duo Concrete*	500 gpd	500 gallons
AS500+75 Duo Pump^^	500 gpd	350 gallons
AS500 5+75 Trio#	500 gpd	500 gallons
AS500 4+75 Concrete	500 gpd	400 gallons
AS500L	500 gpd	350 gallons
AS500L-C	500 gpd	350 gallons
AS500L+5 Duo Pre	500 gpd	500 gallons
AS500L+75 Duo Pump	500 gpd	350 gallons
AS500L 5+75 Trio	500 gpd	500 gallons
AS500LC+5 Pre	500 gpd	350 gallons
AS500L 4+75 Concrete	500 gpd	400 gallons
AS600	600 gpd	350 gallons
AS600-C	600 gpd	350 gallons
AS600+5 Duo Pre	600 gpd	500 gallons
AS600+75 Duo Pump	600 gpd	350 gallons
AS600 5+75 Trio	600 gpd	500 gallons
AS600 4 +75 Concrete	600 gpd	400 gallons
AS600+4NR	600 gpd	400 gallons
AS600+4NR-C	600 gpd	400 gallons
AS600+5NR	600 gpd	500 gallons
AS600+5NR-C	600 gpd	500 gallons
AS600L	600 gpd	325 gallons
AS600L-C	600 gpd	325 gallons
AS750	750 gpd	1,000 gallons
AS750-C	750 gpd	1,000 gallons
AS800L	800 gpd	1,000 gallons
AS800L-C	800 gpd	1,000 gallons

AS1000	1,000 gpd	1,000 gallons
AS1000-C	1,000 gpd	1,000 gallons
AS1100L	1,100 gpd	1,000 gallons
AS1100-C	1,100 gpd	1,000 gallons
AS1500	1,500 gpd	1,000 gallons

Notes:

* C or concrete designates the model as being manufactured in concrete

** Duo means two tanks are manufactured in a single unit

Trio means two tanks are manufactured in a single unit

^ Pre means the second tank is a pre-treatment tank/chamber

^^ Pump means the second tank is a pump tank/chamber

2. The following models are approved in both fiberglass and concrete units: AS500, AS500L, AS600, AS600L, AS600+4NR, AS600+5NR, AS750, AS800L, AS1000, and AS1100L.
3. The following models are approved in fiberglass units only: AS500+5 Duo Pre, AS500+75 Duo Pump, AS500 5+75 Trio, AS500L+5 Duo Pre, AS500L+75 Duo Pump, AS500L 5+75 Trio, AS600+5 Duo Pre, AS600+75 Duo Pump, AS600 5+75 Trio, and AS1500.
4. The following models are approved in concrete units only: AS500-5 Pre Concrete, AS500 4+75 Concrete, AS500L-C+5 Pre, AS500L 4+75 Concrete, and AS600 4+75 Concrete.
5. Shoaf Precast Septic Tank, Inc, and High Point Precast Products, Inc, have been approved to manufacture the concrete models.
6. For all AS500, AS500L, AS600, AS600L, AS600+4NR, and AS600+5NR models the approved settling tank may be an integral part of the tank or a separate settling tank. A separate State approved 1,000 gallon septic tank may be used as the settling tank.
7. For all AS750, AS800L, AS1000, AS1100L, and AS1500 models a separate State approved 1,000 gallon septic tank shall be used as the settling tank.
8. An Aqua Safe system designed for flows less than or equal to 1,500 gpd shall utilize models of Residential Wastewater Treatment Systems (RWTS's) that have been preapproved by the State in addition to meeting the requirements listed below.
9. Buoyancy calculations shall be completed by a PE on sites where a soil wetness condition is present within five feet of the top of the ground surface. The PE shall make appropriate design modifications as needed.
10. A vent for the Aqua Safe system must be provided. The house vent may not be the only vent.
11. A UV system, such as "The Disinfector" or other UV system proposed by the company and approved by the State, shall be used for all systems. The UV system shall be rated for the discharge rate from the Aqua Safe unit. Audible and visible alarms for bulb failure will be provided.
12. Aqua Safe systems will utilize the Ecological Tanks, Inc. control panel. The control panel is in a NEMA 4X enclosure and located within 50 feet and in line of sight of the Aqua Safe system. Separate control and alarm circuits shall be provided. The operator in responsible charge (ORC) of the system shall be authorized in writing by Ecological Tanks, Inc. and must be able to access the panel directly on site and shall be available to LHD with 24-hour notice in the event that the LHD needs to access the control panel.
13. Effluent samples shall be collected after the disinfection unit. For gravity systems, a sampling port may be from a container constructed from watertight material with watertight joints. A distribution box may be used for this purpose if it meets the following

requirements: it has a minimum diameter of eight inches at the point of sample collection, the inlet is at least eight inches above the bottom of the sample port, and there is at least two inches of fall between the inlet and outlet of the sample port. For pump systems, a valve or tap shall be installed on the force main.

14. Influent samples shall be taken from the outlet end of the settling tank. The sample shall be taken from the clear zone beneath any scum layer using a sludge judge or similar device.
15. The SJE Rhombus EZ Series In-Site control panel shall be used for determining the 7-day and 30-day flow for the corresponding time period preceding each ORC inspection/sample collection. Where effluent flows by gravity to the receiving environment, a flow meter shall be installed on the inlet water line or the inlet line from the well depending on the water source. For installations where effluent is under pressure, flows shall be determined by using an elapsed time meter in the effluent pumping station control panel. When a drip distribution system is proposed, the drip manufacturer shall provide the necessary flow monitoring capability with their separate drip system control panel.
16. The dispersal field dosing tank shall be a state-approved tank sized in accordance with Rule .1952(c).
17. Effluent from Aqua Safe systems may be discharged to a gravity dispersal field, or to a dispersal field pump tank.
18. The Aqua Safe system shall not be placed in driveways, parking areas, or other areas subject to vehicular traffic.

B. All Aqua Safe systems shall be designed by an Aqua Safe authorized designer (designer) or a PE. Aqua Safe systems designed for flows greater than 1,000 gpd shall be designed by a PE.

VII. Installation and Testing

A. Prior to beginning construction of an Aqua Safe system, a preconstruction conference shall be required to be attended by the designer, PE (if required), Aqua Safe authorized installer (installer), and LHD.

B. The Aqua Safe system shall be located in compliance with the horizontal setback requirements of Rule .1950(a) and Rule .1970 and shall be located to prevent surface/subsurface water inflow/infiltration.

C. All Aqua Safe systems shall be installed according to directions provided by Ecological Tanks, Inc. Additionally, all Aqua Safe systems and components used with, but not manufactured by Ecological Tanks, Inc. shall be installed in accordance with all applicable regulations and manufacturer instructions.

D. All individuals/companies installing Aqua Safe systems shall be in possession of all necessary permits and licenses before attempting any portion of a new or repair installation. The company/individual must be a Level IV installer and Ecological Tanks, Inc. authorized.

E. Watertightness of the tanks shall be tested by either of the following protocols: 24-hour hydrostatic test or a vacuum test.

1. Hydrostatic Test[1, 2]
   a. Temporarily seal the inlet and outlet pipes.
   b. Fill tank with clean water to a point at least two inches above the pipe connections or the seam between the tank and the riser, whichever is highest.
   c. Measure the water level.
   d. Allow the tank to sit for 24 hours.
   e. Re-measure the water level.
   f. If the water level change is ½-inch or less or one percent of the liquid tank capacity, the tank passes the leak test.
   g. If the water level change is greater than ½-inch, any visible leaks can be repaired and the tank may be topped off with water and allowed to sit for a minimum of one hour.
   h. The tank passes the leak test if there are no visible leaks (flowing water or dripping in a steady stream) and no measurable drop in water level after one hour. Otherwise, the tank fails the leak test.
2. Vacuum Test[3]
   a. Temporarily seal the inlet and outlet pipes.
   b. A vacuum of four inches of mercury should be pulled on the tank and held for five minutes.
   c. During the testing, the tank manufacturer or their representative can seal the tank if it is found to be leaking.
   d. If the tank is repaired, the vacuum must be brought back up to four inches and held for five minutes.

F. Prior to Operation Permit (OP) issuance, the installer and designer or PE of record shall conduct an inspection/start-up of the Aqua Safe system and all associated system components. The LHD personnel and the ORC will attend and observe the inspection/start-up. An acceptance letter from the installer and designer or PE shall be provided to the LHD prior to issuance of the OP.

G. All specified site preparation steps and construction specifications for the dispersal field shall be strictly adhered to including, but not limited to, specified depth of trenches in relation to site limiting conditions, cover material specifications (if needed), and trench installation method.

H. Prior to Operation Permit (OP) issuance, the installer, PE or designer, and the ORC shall conduct a system start-up of the Aqua Safe system and all associated system components. The LHD will attend and observe the system start-up. An acceptance letter from the installer and designer or PE shall be provided to the LHD prior to the issuance of the OP.

I. The Ecological Tanks, Inc. control panel shall have a label as shown in Attachment B.

VIII. Operation, Maintenance, Monitoring, and Reporting

1 Victor D'Amato and Ishwar Devkota, *Development of Prefabricated Septic and Pump Tank Construction and Installation Standards for North Carolina.*
2 National Precast Concrete Association, *Best Practices Manual Precast Concrete On-Site Wastewater Tanks*, Second Edition, October 2005, 24.
3 National Precast Concrete Association, *Best Practices Manual Precast Concrete On-Site Wastewater Tanks*, Second Edition, October 2005, 24.

A. Aqua Safe systems shall be classified, at a minimum, as a Type Vc system in accordance with Table V(a) of Rule .1961(b). Management and inspection shall be in accordance with Rules .1961 and .1970.

B. All Aqua Safe systems require an operation and maintenance agreement between the system owner and an authorized subsurface system operator designated as the ORC to inspect and maintain the system. The ORC shall meet one of the following criteria: an Ecological Tanks, Inc. employee, an Ecological Tanks, Inc. authorized representative, or an authorized subsurface operator authorized in writing by Ecological Tanks, Inc. in accordance with Rule .1970. The operator must have proper equipment and training to access and program the control panels on site.

C. All Aqua Safe systems shall be operated and maintained according to the latest version of Ecological Tanks, Inc. O&M manual.

D. At each Aqua Safe system inspection, the ORC shall follow service procedure steps identified in the Ecological Tanks, Inc. O&M Manual and, at a minimum, observe, monitor, record, and/or collect the following:
   1. Clarity of system effluent;
   2. Wastewater, sludge, and scum levels in all tanks;
   3. Proper operation of system aerator, noting any unusual sounds or physical appearance;
   4. Air flowrate for the system aerator;
   5. Solids level in the aeration chamber;
   6. Watertightness of all tanks, risers, and pipe connections at the tanks;
   7. Operation of pumps, floats, valves, electrical controls, and alarms, including record of alarms since last visit and troubleshooting actions;
   8. Dispersal field pump delivery rate (drawdown test), determination of the average pump run time, and dispersal field dosing volume;
   9. Average and maximum 7-day and 30-day flowrates in gallons per day;
   10. Any structural damage, accessibility issues, adequate ventilation, excess odors, ponding of effluent, insect infestations, vegetative growth over the dispersal field, or surfacing of effluent on the dispersal field; and
   11. Samples and laboratory analyses of influent and effluent as required.

E. The ORC shall also conduct other or additional observations, measurements, monitoring, and maintenances activities as specified in the OP and as recommended by the manufacturer.

F. Sampling
   1. All sampling shall be done in accordance with Rule .1970(n)(3) and (5).
   2. All systems shall be tested for effluent $CBOD_5$, TSS, NH_4-N, and fecal coliforms. Influent shall be tested for BOD_5 and TKN. The manufacturer may choose for TS-I system effluent to be additionally tested for TN.
   3. Additional sampling of effluent or influent may be determined to be necessary by the ORC during a system inspection to assist with troubleshooting or to verify system performance.

4. Influent samples shall be taken from the outlet end of the settling tank. The sample shall be taken from the clear zone beneath any scum layer using a sludge judge or similar device.
5. Effluent samples shall be collected after the disinfection unit. For gravity systems, a sampling port may be constructed from a prefabricated container, such as a distribution box. The container shall be constructed from watertight material with watertight joints. A distribution box may be used for this purpose if it meets the following requirements: it has a minimum diameter of eight inches at the point of sample collection, the inlet is at least eight inches above the bottom of the sample port, and there is at least two inches of fall between the inlet and outlet of the sample port. For pump systems, a valve or tap shall be installed on the force main.
6. Adjustments in the monitoring schedule and number of parameters sampled may be proposed in writing by Ecological Tanks, Inc. pursuant to Rule .1970(n)(3)(B) or (C). Approval decision regarding adjustments of sampling/monitoring frequencies and parameters will be provided in writing by the State.
7. The SJE Rhombus EZ Series In-Site control panel shall be used to measure periodic and cumulative effluent pump run times for systems that incorporate a pressurized effluent dispersal system. Where effluent flows are by gravity, a flow meter shall be installed on the water line.

G. Notification and Performance of Maintenance and Repairs
1. The ORC shall alert Ecological Tanks, Inc. the LHD, and the system owner within 48 hours of needed maintenance or repair activities including but not limited to landscaping, tank sealing, tank pumping, pipe or control system repairs, aerator replacement, and/or adjustments to any other system component.
2. The ORC shall notify the system owner, Ecological Tanks, Inc. and the LHD whenever the pump delivery rate efficiency and/or average pump run times are not within 25% of initial measurements conducted prior to system start-up.
3. System troubleshooting and needed maintenance shall be provided to maintain the pump delivery rate and average pump run time within 25% of initial measurements conducted during system start-up.
4. Tank compartments will be pumped as needed upon recommendation of the ORC and in accordance with the Ecological Tanks, Inc. Operation and Maintenance instructions. However, at a minimum, the septic tank will be pumped whenever the solids level exceeds 25% of the tank's total liquid working capacity or the scum layer is more than four inches thick.
5. The tanks shall be pumped by a properly permitted septage management firm, and the septage handled in accordance with 15A NCAC 13B .0800.
6. All maintenance activities shall be logged and recorded in the ORC reports provided to the LHD.

H. Reporting
1. The ORC shall provide a completed written report to the system owner, Ecological Tanks, Inc. and the LHD within 30 days of each inspection. At a minimum, this report shall specify:
   a. The date and time of inspection;
   b. System operating conditions measured and observed according to VIII.D and VIII.E;

c. Results from any laboratory analyses of any influent and effluent samples;
d. Maintenance activities performed since the last inspection report;
e. An assessment of overall system performance;
f. A list of any improvements or maintenance needed;
g. A determination of whether the system is malfunctioning, and the specific nature of the malfunction; and
h. Any changes made in system settings based on recommendations of the manufacturer.

2. Proposal for Evaluation and Reporting
   a. The manufacturer shall maintain a contract for evaluation of the performance of the Provisional wastewater system with an independent third-party laboratory, consultant, or other entity that has expertise in the evaluation of wastewater system and that is approved by the State.
   b. Semi-Annual Reports are due to the State by January 31 and July 31 of each year from the third party. The report shall include the following information at a minimum:
      (1) list of all systems currently installed (including names and addresses) under Provisional Approval;
      (2) results of all effluent quality samples collected, including a table summarizing all the effluent quality results;
      (3) flow monitoring information;
      (4) copies of all ORC inspection reports;
      (5) assessment of system performance in relation to effluent quality standards and showing compliance with Rule .1970(o);
      (6) assessment of system performance in relation to flow monitoring and showing compliance with Rule .1970(o);
      (7) assessment of physical and chemical properties of the materials used to construct the system in terms of strength, durability, and chemical resistance to loads and conditions experienced and showing compliance with Rule .1969(g)(2)(B);
      (8) recommended areas of applicability for the system; and
      (9) conditions and limitations related to the use of the system.
   c. Upon completion of the research and testing protocol, the third party shall submit a final report to the Department. This report shall be submitted in conjunction with Ecological Tanks, Inc. completing an application for Innovative Approval and within five years of the effective date of the first OP issued pursuant to this approval.
   d. The final report shall contain the following information at a minimum:
      (1) list of all systems currently installed (including names and addresses) during the Provisional Approval period;
      (2) results of all effluent quality samples collected, including a table summarizing all the effluent quality results;
      (3) flow monitoring information;
      (4) copies of all ORC reports;
      (5) assessment of system performance in relation to effluent quality standards and showing compliance with Rule .1970(o);
      (6) assessment of system performance in relation to flow monitoring and showing compliance with Rule .1970(o);
      (7) assessment of physical and chemical properties of the materials used to construct

the system in terms of strength, durability, and chemical resistance to loads and conditions experienced and showing compliance with Rule .1969(g)(2)(B);
(8) recommended areas of applicability for the system; and
(9) conditions and limitations related to the use of the system.

e. The final report shall be in electronic format and may be published on the On-Site Water Protection Branch's website without confidentiality. The contents of the semi-annual and final reports shall not be altered from the original document without approval from Ecological Tanks, Inc.

f. The research and testing protocol shall be managed by Michael Lash, PE, Lash Engineering, or other approved third-party evaluator and includes the following minimum activities outlined in a detailed protocol provided in the submittal:
(1) A minimum of 50 complete data sets shall be collected from a minimum of 15 sites.
(2) A complete data set includes the following information: influent BOD and TKN, and effluent CBOD, TSS, NH4-N, and fecal coliforms. If the manufacturer chooses for TS-I system effluent to be additionally tested for TN, that information will be included in the complete data set.
(3) There must be at least 30 days between samples collected form any one site.
(4) Samples shall be collected from all sites. A site may be excluded if justification is provided that it is unsuitable as a test site. The samples from that site must be provided but will not be used as part of the data evaluation.
(5) Each site shall produce a minimum of two sample sets collected over at least a 12-month period.
(6) For coastal resort communities, two samples shall be collected between June 1 and September 8 of each year. The samples must be taken at least six weeks apart.
(7) Other seasonal homes shall be sampled during the projected times of greatest use.
(8) The samples will be collected during a scheduled visit by the ORC.
(9) A copy of the sample results will be provided to the On-Site Water Protection branch after the analyses.

3. Compliance of each site and the system shall be in accordance with requirements set forth in Rule .1970. Consideration shall be given for the system to be reclassified as an approved Innovative System when the requirements of Rule .1969(g)(2) for Fast Track approval and system compliance requirements of Rule .1970(o)(2) have been met.

IX. Responsibilities and Permitting Procedures

A. Prior to the installation of an Aqua Safe system at a site, the owner or owner's agent shall fill out an application at the LHD for the proposed use of this system. The LHD shall issue an Improvement Permit (IP) or Construction Authorization (CA) or amend a previously issued CA allowing for the use of a Aqua Safe system.

B. The IP and CA shall contain all conditions the site approval is based upon, including the proposed used of the Provisional System. The OP will include all conditions specified in the IP and CA. Notification of the issuance of all OPs by the LHD, pursuant to this Provisional

Approval, shall be submitted to the On-Site Water Protection Branch.

C. When a special site evaluation is required pursuant to Rule .1970(p)(1) or a drip approval, an evaluation and written, sealed report from a Licensed Soil Scientist (LSS) regarding the site shall be provided to the LHD. The report shall contain the information as specified in Rule .1970(p)(2) and "Requirements for Submittals of Soil Reports and Pretreatment and/or Dispersal System Designs". The LHD may request the assistance of their Regional Soil Scientist in evaluating this report prior to permit issuance.

D. Aqua Safe systems shall be designed by either an authorized designer or a PE (if required). Systems over 1,000 gpd or as otherwise required for drip dispersal systems shall be designed by a PE.

E. Prior to issuance of a CA for Aqua Safe systems, a design submittal prepared by a authorized designer or a PE shall be submitted for review and approval by the LHD. The design submittal shall include the information required in "Requirements for Submittals of Soil Reports and Pretreatment and/or Dispersal System Designs".

F. It is recommended that local authorized environmental health practitioners attend a design training session offered by the manufacturer/authorized representative prior to permitting the system. Also, at the request of the LHD, an OSWP Engineer will review designs otherwise not required to be reviewed by the State.

G. An Ecological Tanks, Inc. authorized installer and authorized designer or PE, as applicable, or shall certify in writing that the Aqua Safe system was installed in accordance with the approved plans and specifications prior to OP issuance.

H. For sites required to be evaluated by an LSS or Licensed Geologist (LG) (see Section V and IX.C), the LHD may specify as a condition on the IP and CA that a LSS or LG oversee critical phases of the dispersal field installation and certify in writing that the installation was in accordance with their specified site/installation requirements prior to the OP issuance.

I. The ORC shall be present during the final inspection of the system prior to the issuance of the OP. The ORC shall be certified both as a subsurface operator and an authorized Ecological Tanks, Inc. system operator.

J. The LHD issues the OP after the following:
   1. Field verification of installation is completed;
   2. Receipt of written documentation from the design or PE, as applicable, that the system has been designed, installed, and is operating in accordance with the approved plans; and
   3. All necessary legal documents have been completed, including the contract between the system operator and the ORC.

X. Repair of Systems

The provisions of 15A NCAC 18A .1961(l) shall govern the use of the Aqua Safe systems for

repairs to existing malfunctioning wastewater systems.

Approved By: _____ Date: _____