

15A NCAC 18A .1969 APPROVAL AND PERMITTING OF ON-SITE SUBSURFACE WASTEWATER SYSTEMS, TECHNOLOGIES, COMPONENTS, OR DEVICES

(a) Experimental, controlled demonstration, and innovative wastewater systems (hereinafter referred to as E & I systems) are any wastewater systems, system components, or devices that are not specifically described in Rules .1955, .1956, .1957, or .1958 of this Section, including any system for which reductions are proposed in the minimum horizontal or vertical separation requirements or increases are proposed to the maximum long-term acceptance rates of this Section; or any E & I systems as defined by G.S. 130A-343(a) and approved pursuant to applicable laws and this Rule. Accepted systems are as defined by G.S. 130A-343(a). This Rule shall provide for the approval and permitting of E & I and accepted systems.

(b) APPLICATION: An application shall be submitted in writing to the State for an E & I system. The application shall include the information required by G.S. 130A-343(d),(e),(f), and (g), and the following, as applicable:

- (1) specification of the type of approval requested as either innovative, controlled demonstration, experimental, or a combination;
- (2) description of the system, including materials used in construction, and its proposed use;
- (3) summary of pertinent literature, published research, and previous experience and performance with the system;
- (4) results of any available testing, research or monitoring of pilot systems or full-scale operational systems and shall identify whether the testing, research or monitoring provided was conducted by a third party research or testing organization;
- (5) specification of system evaluation protocol as either an approved and listed protocol by the State or the applicant shall submit an alternative protocol for the evaluation of the performance of the manufacturer's system. National Sanitation Foundation (NSF) Standard 40 has been approved as an evaluation protocol pursuant to G.S. 130A-343(d);
- (6) verification that a system being submitted for approval has been tested and certified in accordance with an approved evaluation protocol, if applicable. For systems with no prior approval pursuant to this Rule, the manufacturer shall provide an affidavit certifying that the product submitted for approval is the same as the certified or listed product or identify any modifications made to the submitted product.
- (7) identity and qualifications of any proposed research or testing organization and the principal investigators, and an affidavit certifying that the organization and principal investigators have no conflict of interest and do not stand to gain financially from the sale of the E & I system;
- (8) objectives, methodology, and duration of any proposed research or testing;
- (9) specification of the number of systems proposed to be installed, the criteria for site selection, and system monitoring and reporting procedures;
- (10) operation and maintenance procedures, system classification, proposed management entity and system operator;
- (11) procedure to address system malfunction and replacement or premature termination of any proposed research or testing;
- (12) notification of any proprietary or trade secret information, system, component, or device;
- (13) in the case of a request for innovative system approval intended by the applicant to be subsequently reclassified from an innovative to an accepted system, monitoring, reporting and evaluation protocols to be followed by the manufacturer, the results of which shall be submitted in its future petition for accepted status; and
- (14) fee payment as required by G.S. 130A-343(k), by corporate check, money order or cashier's check made payable to: North Carolina On-Site Wastewater System Account or NC OSWW System Account, and mailed to the On-Site Wastewater Section, 1642 Mail Service Center, Raleigh, NC 27699-1642 or hand delivered to Rm. 1A-245, Parker Lincoln Building, 2728 Capital Blvd., Raleigh, NC.

(c) REVIEW: The State shall review all applications submitted as follows:

- (1) the completeness of the application shall be determined, and a determination shall be made whether additional information is needed to continue the review. The State shall inform the applicant of the acceptance or rejection of the application, or of any additional information needed to continue the review, within 30 days. When an application is rejected, the State shall inform the applicant in writing of the reasons for rejection and whether additional information is required for the application to be reconsidered. Acceptance of the application does not constitute a qualitative review of the information provided, nor the approval or denial of the proposed system designation. Additional requested

information for the application to be considered complete shall be received within 180 days, or the application file shall be closed. Notwithstanding a prior rejection or denial, an applicant may reapply pursuant to Paragraph (b) of this Rule;

- (2) the determination shall be made for a complete application whether the system meets the standards of an experimental system under G.S. 130A-343(a)(4), G.S. 130A-343(e) and Paragraph (d) of this Rule; a controlled demonstration system under G.S. 130A-343(a)(2), G.S. 130A-343(f) and Paragraph (e) of this Rule; or whether the system meets the standards of an innovative system under G.S. 130A-343(a)(5), G.S. 130A-343(g), and Paragraph (g) of this Rule, as applicable. This review shall be completed in accordance with the following time frame:

Table VI: Time Frame For State Review of Completed E & I System Applications

Type of Approval Requested	Normal Review	Fast Track Review	Rule Reference
Experimental	90 days	45 days	.1969(d)(2) of this Section
Controlled Demonstration	120 days	60 days	.1969(e)(4) of this Section
Innovative	180 days	120 days	.1969(g)(2) of this Section

and:

- (3) The State shall notify the applicant and local health department of the approval or denial of an E & I system. Such notice shall include conditions for permitting, siting, installation, use, monitoring, operation and maintenance, and number of systems which can be installed, as applicable.

(d) APPROVAL OF EXPERIMENTAL SYSTEMS: A system may be approved for use as an experimental system as follows:

- (1) the system shall be part of a research or testing program which has been approved by the State. The research or testing program shall be conducted by a third party research or testing organization which has knowledge and experience relevant to the proposed research or testing and has no conflict of interest and does not stand to gain financially from the sale of the proposed system. To be approved by the State, the proposed research or testing program shall:
- (A) Be designed such that, if the objectives were met, the system would satisfy the standards for approval as a controlled demonstration or an innovative system under Paragraph (e) or Paragraph (g) of this Rule, respectively; and
 - (B) Be designed and include research and testing methodology that shall have a reasonable likelihood of meeting the objectives, and
 - (C) Include in the proposal for evaluation all information required pursuant to G.S. 130A-343(e).
- (2) Applications for an experimental system shall be "Fast Track" approved or denied within 45 days from the acceptance of a complete application when the proposed research or testing program is a prior approved evaluation protocol.

(e) APPROVAL OF CONTROLLED DEMONSTRATION SYSTEMS: A system may be approved for use as a controlled demonstration system as follows:

- (1) Acceptable research is provided from prior evaluation of the system in North Carolina as an experimental system or from any comparable evaluations of the system in other states, including any prior evaluation pursuant to an approved evaluation protocol, which supports the proposed use of the system; and
- (2) Documentation is provided of at least 50 installations operational for at least 12-months, unless:
- (A) data have been collected that show all other requirements for controlled demonstration approval have been met from a lesser number of North Carolina installations in conjunction with an approved experimental research or testing program; or
 - (B) documentation is provided of the system's design and functional similarity to another approved system and that substantiates performance in a manner equal or superior to the comparable approved system in terms of structural integrity, chemical durability, hydraulic performance and wastewater treatment; or
 - (C) the provisions for "Fast-Track" approval of Subparagraph (4) of this Paragraph are met; and

- (3) The system shall be part of a research or testing program which has been approved by the State. To be approved by the State, the proposed research or testing program shall:
 - (A) Be designed such that, if the objectives were met, the system would satisfy the standards for approval as an innovative system under Paragraph (g) of this Rule, and
 - (B) Be designed and include testing methodology that shall have a reasonable likelihood of meeting the objectives, and
 - (C) Include in the proposal for evaluation all information required pursuant to G.S. 130A-343(f).
- (4) Applications for a controlled demonstration shall be "Fast Track" approved or denied within 60 days from the acceptance of a complete application when the application includes TS-I or TS-II compliant certification data collected under NSF Standard 40 or another prior-approved evaluation protocol, and all other available field verification data provided under Subparagraph (b)(4) of this Rule are consistent with TS-I or TS-II performance standards.

(f) PERMITTING OF EXPERIMENTAL AND CONTROLLED DEMONSTRATION SYSTEM: A local health department shall issue an Improvement Permit and Construction Authorization and an Operation Permit for an experimental or controlled demonstration system when the following conditions are met:

- (1) There is an application for an Improvement Permit and Construction Authorization in accordance with 15A NCAC 18A .1937(c), with the proposed use of an experimental or controlled demonstration system specified;
- (2) The proposed site is included as part of an approved research or testing program and any conditions specified for use of the system have been met;
- (3) When an experimental or controlled demonstration system is proposed to serve a residence, place of business or place of public assembly, there shall be a designated area for a repair system in accordance with the provisions of 15A NCAC 18A .1945(b) or an innovative or accepted system of this Rule, except:
 - (A) When an existing and properly functioning wastewater system is available for immediate use, including connection to a public or community wastewater system; or
 - (B) When the experimental or controlled demonstration system is used as a repair to an existing malfunctioning system when there are no other approved or accepted repair options; or
 - (C) As provided in G.S. 130A-343(f) for Controlled Demonstration Systems;
- (4) When an experimental or controlled demonstration system is proposed which shall not serve a residence, place of business, or place of public assembly, a repair area or backup system shall not be required.
- (5) The application for an experimental system shall include statements that the property owner is aware of its experimental nature, that the local health department and State do not guarantee or warrant that these systems will function in a satisfactory manner for any period of time, that use of the system may need to be discontinued if the system research or testing program is prematurely terminated, and that the site and system are to be accessible during reasonable hours for monitoring and evaluation by the research or testing organization. Such statements shall be signed by the owner;
- (6) Provisions shall be made for operation and maintenance of the system;
- (7) Any special conditions required for the installation of the experimental or controlled demonstration system shall be specified in the Improvement Permit and the Construction Authorization. Use of an experimental or controlled demonstration system and any conditions shall be described on the Improvement Permit, Construction Authorization and any subsequent operation permits, with provisions for a repair area and backup system specified;
- (8) The State shall be notified of a proposed Improvement Permit, Construction Authorization and any subsequent operation permits for experimental or controlled demonstration systems prior to issuance by the local health department. The State shall notify the manufacturer and local health department if the proposed use is found to be inconsistent with the approved research or testing program.
- (9) Upon completion of the installation and prior to use, an Experimental or Controlled Demonstration System Operation Permit (ESOP or CDSOP) shall be issued by the local health department. The ESOP or CDSOP shall be valid for a specified period of time based upon the projected duration of the research and testing program, not to exceed five years. Maintenance, monitoring and testing requirements shall be specified as permit conditions, in accordance with the approved research or testing program. Failure to carry out these conditions shall be grounds for permit suspension or revocation.

- (10) Prior to expiration of the ESOP (CDSOP) and based upon satisfactory system performance as determined during the research or testing program, the local health department shall issue an Operation Permit. Premature termination of the research or testing program shall be grounds for ESOP (CDSOP) suspension or revocation.
 - (11) Upon completion of monitoring, research and testing, the research or testing organization shall prepare a final report to the State including recommendations on future use of the system. If the State determines that the results indicate that the standards of Paragraph (e) or (g) of this Rule are met, the State shall approve the use as a controlled demonstration or an innovative system, respectively.
- (g) INNOVATIVE SYSTEMS: Innovative systems, technologies, components, or devices shall be reviewed and approved by the State, and the local health department shall permit innovative systems in accordance with the following:
- (1) The State shall approve the system as an innovative system when there has been successful completion of a prior evaluation of the system in North Carolina as an experimental or controlled demonstration system or when sufficient documentation is provided from any comparable evaluations of the system in other states which support the proposed use of the system, and when the performance requirements for an innovative system of G.S. 130A-343(a) and G.S. 130A-343(g) and the following conditions have been met:
 - (A) The system, shall have been demonstrated to perform equal or superior to a system, which is described in Rules .1955, .1956, .1957, or .1958, of this Section, based upon controlled pilot-scale research studies or statistically-valid monitoring of full-scale operational systems;
 - (B) Materials used in construction shall be equal or superior in physical properties and chemical durability, compared to materials used for similar proposed systems, specifically described in Rules .1955, .1956, .1957, or .1958 of this Section; and
 - (C) Documentation is provided of at least 100 installations operational for at least 12-months unless data have been collected that show all other requirements for innovative approval have been met from a lesser number of North Carolina installations in conjunction with an approved experimental or controlled demonstration research or testing program.
 - (2) In lieu of the requirements specified in Subparagraph (1) of this Paragraph, applications for innovative approval shall be "Fast Track" approved or denied within 120 days from the acceptance of a complete application when the application includes TS-I or TS-II compliant evaluation data collected under NSF Standard 40 or another prior approved evaluation protocol; and the following:
 - (A) The system, shall have been demonstrated to perform equal or superior to a system, which is described in Rules .1955, .1956, .1957, or .1958, of this Section, and to comply with TS-I or TS-II standards, based upon statistically valid third-party field verification data which include at least 50 data points from a minimum of 15 sites, with a minimum of two data points per site, collected over at least a 12-month period, and with no data excluded from the field sampling sites; and
 - (B) Materials used in construction shall be equal or superior in physical properties and chemical durability, compared to materials used for similar proposed systems, specifically described in Rules .1955, .1956, .1957, or .1958 of this Section.
 - (3) Approved innovative systems shall be assigned a unique code for tracking purposes. Prior to making a request for reclassification of a system from innovative to accepted, the manufacturer shall have a system in place to keep track of the number and location of new system installations, and of any system installations it becomes aware of which were required to be repaired, and to provide this information to the State upon request and in any subsequent petition for accepted status.
 - (4) A local health department shall issue an Improvement Permit and a Construction Authorization for any innovative system approved by the State upon a finding that the provisions of this Section including any conditions of the approval are met. Use of an innovative system and any conditions shall be described on the Improvement Permit, Construction Authorization, or Operation Permit.
 - (5) Manufacturers of proprietary innovative systems which include an advanced pretreatment component may choose to comply with the performance audit requirements as stipulated in Subparagraph (h)(8) of this Rule, in lieu of routine effluent sampling for each system on an annual basis as may otherwise be required, and shall comply with those performance audit requirements prior to being granted accepted system status. The approved audit procedure shall be carried out annually until receipt of Accepted System approval by the Commission.

(h) ACCEPTED SYSTEMS: A petition to the Commission for reclassification of a proprietary innovative system to an accepted system, as defined in G.S. 130A-343(a)(1), shall be submitted by the manufacturer for review to the State, accompanied by the fee payment as required by G.S. 130A-343(k) and as stipulated in Paragraph (b) of this Rule. The State shall review all petitions submitted and evaluate the following: the completeness of the petition, and whether additional information is needed to continue the review; and whether the system meets the standards of an accepted system under G.S. 130A-343(a)(1), G.S. 130A-343(h), and this Section. The State shall inform the petitioner if the petition is determined to be complete or of any additional information needed to continue the review, within 30 days. When a petition is determined to be incomplete, the petitioner shall be informed in writing why and whether additional information is required for the petition to be reconsidered. This review of the petition for completeness does not constitute a qualitative review of the information provided, nor the approval or denial of the proposed system designation. Additional requested information for the petition to be considered complete shall be received within 180 days, or the petition file shall be closed. Upon request of the petitioner, the Commission may modify this 180 day time frame if the Commission determines that more time is necessary to obtain the additional information requested by the State and it can be provided within the requested modified time frame. The petitioner may also request Commission review of the State's determination that a petition is incomplete or a request by the State for additional information. The State may also initiate a review of a nonproprietary innovative system pursuant to G.S. 130A-343(i)(2). The State shall submit to the Commission findings and recommendations based upon its review for final Commission action on system designation. The State's findings and recommendations for a proprietary innovative system shall be presented to the Commission within 120 days of receipt of a complete petition. The Commission shall designate a wastewater system technology, component or device as an accepted system when it finds that the standards set forth by G.S. 130A-343(a)(1) and G.S. 130A-343(h) have been met. The following factors shall be considered prior to granting accepted system status:

- (1) documentation provided that there have been at least 300 systems installed statewide and the system has been in use as an approved innovative system for more than five years;
- (2) data and findings of all prior evaluations of the system performance as provided by the manufacturer;
- (3) results of prior performance surveys of innovative systems in use in North Carolina for at least the five year period immediately preceding the petition, including any information available to the manufacturer pertinent to the accuracy and validity of performance surveys not completed under their control;
- (4) review(s) of records on system use and performance reported by local health departments and other information documenting the experiences with performance of the system in North Carolina, including information collected and reported pursuant to Subparagraph (g)(1) and Paragraph (p) of this Rule. Upon request of the manufacturer, the State and manufacturer shall meet to discuss the accuracy and validity of performance data and surveys to be considered for inclusion in the review. Local health departments shall be invited to participate in the discussion;
- (5) for proprietary nitrification trench systems, a statistically valid survey of system performance shall be performed, as follows:
 - (A) The manufacturer shall provide a proposed survey plan for State concurrence prior to carrying out the survey. This plan shall specify the number of systems to be evaluated, period of evaluation, method to randomly select systems to be evaluated, methods of field and data evaluation, and proposed survey team members, including proposed cooperative arrangements to be made with State and local health department on-site wastewater program staff. The State shall facilitate local health department participation with any performance review or survey. The State shall utilize the Division of Public Health's State Center for Health Statistics for assistance in evaluating the statistical validity of proposed evaluation protocols.
 - (B) The survey shall include the field evaluation of at least 250 randomly selected innovative systems compared with 250 comparably-aged randomly selected conventional systems, with at least 100 of each type of surveyed system currently in use and in operation for at least five years. Systems surveyed shall be distributed throughout the three physiographic regions of the state (Mountain, Piedmont and Coastal Plain) in approximate proportion to the relative usage in the three regions. The survey shall determine comparative system failure rates, with field evaluations completed during a typical wet-weather season (February through early April), with matched innovative and conventional systems sampled during similar time periods in each region. The petitioner shall provide a statistical analysis of the survey results showing a "one-sided" test where, if the failure rate in the sample of 250 innovative systems

is at least five percentage points higher than the failure rate in the sample of 250 conventional systems, there is only a five percent chance that a difference this large would occur by chance (95% confidence level). If a statistically significant higher failure rate in the innovative system is not detected, the Commission shall find that the innovative system performs the same as or better than the conventional system.

- (6) The Commission shall grant accepted status to an innovative system based upon a showing by the manufacturer that there have been at least 10,000 operational systems installed in the state, in more than one county of the state, over at least an eight year period with a total reported failure rate statewide based on records provided by the manufacturer and local health departments of less than one percent. However, the granting of accepted status based upon this criteria shall be conditioned on the manufacturer successfully completing an approved field survey pursuant to Parts (h)(5)(A) or (h)(5)(B) of this Rule within no more than 24 months of being granted accepted status;
- (7) The manufacturer of a proprietary innovative system, which includes an advanced pretreatment component designed to achieve NSF-40, TS-I or TS-II effluent quality standards requesting accepted status shall document that the system has received certification under NSF Standard 40 or another prior approved evaluation protocol. A certified system which has been modified pursuant to Paragraph (i) of this Rule or as otherwise necessary to be approved for use in North Carolina shall still be considered in compliance with this certification requirement. For approved innovative systems in general use in North Carolina for more than five years prior to January 1, 2006, which only lack certification under NSF Standard 40 or another approved evaluation protocol but meet all other requirements for Accepted System status, the Commission shall grant conditional accepted status provided such certification is obtained within 24 months from the date this conditional status is granted;
- (8) Performance Audit: Prior to Accepted System approval by the Commission of a proprietary innovation system which includes an advanced pretreatment component, a performance audit shall be run for a minimum of three consecutive years or until data have been collected from at least 30 separate operational North Carolina systems. The performance audit shall consist of third-party random sampling of a minimum of 10 separate operational North Carolina sites by an approved field evaluation protocol. The manufacturer shall propose the third-party, and the third-party shall submit a plan for system evaluation to include their third-party credentials and the number of systems to be sampled, the method for randomly selecting the sites to be sampled, and details of the procedure for sample collection and analysis, which shall be prior-approved by the State. Samples shall be collected by 24-hour composite sampling (grab sampling for fecal coliform) and analyzed by a wastewater laboratory certified by the Division of Water Quality for all applicable performance parameters. All systems to be included in the performance audit shall be found by the third-party to be in compliance with the design requirements of the Innovative Approval. In order to be granted accepted status, the following conditions shall be met:
 - (A) the mean values of sample data from all sites statewide in each sampling year shall meet NSF-40, TS-I or TS-II effluent quality standards for each parameter, as applicable;
 - (B) no more than 20 percent of these randomly sampled sites during each sampling year shall exceed the designated NSF-40, TS-I or TS-II effluent quality standards for any parameter, as applicable;
 - (C) the sampled systems for the purposes of evaluation for Accepted System status shall be operational for at least three years, with at least 10 systems in operation for at least five years, and results from no more than 20 percent of these sampled systems over five years old shall exceed the designated NSF-40, TS-I or TS-II effluent quality standards for any parameter, as applicable;
 - (D) no data collected and analyzed pursuant to Parts (A) through (C) of this Subparagraph shall be considered as part of the audit that is collected before April 1, 2006;
 - (E) operation, maintenance or sampling activities that have taken place or are proposed by the third-party at the audited sites, including Operator reports, maintenance logs and projected sample collection days and laboratory reports for samples analyzed, shall be provided to the local health department and the State;
 - (F) if the performance criteria in Parts (A) and (B) of this Subparagraph are not met in any sampling year, the sites from which substandard samples are obtained shall be resampled for

any non-compliant parameter. If the performance criteria in Parts (A) and (B) of this Subparagraph are still not met using the results from the resampled data, at least 20 new sites or twice as many as were initially sampled, not to exceed 30, shall be sampled for all applicable performance parameters. If this second set of sample results does not meet performance criteria stipulated in Parts (A) and (B) of this Subparagraph, the accepted system status shall be denied.

- (9) Provisions shall be in place for the manufacturer of a proprietary accepted system which include an advanced pretreatment component to remain certified and listed under NSF Standard 40 or another prior State approved evaluation, certification and listing protocol that includes routine audits of the system manufacturing facilities and of the performance of operational systems that verifies ongoing conformity with the approved protocol.
- (10) Other criteria for determining whether the proposed system has been in general use, and other surveys, including evaluations of different numbers of innovative and conventional systems, designed to verify equal or superior performance of the innovative system compared to the conventional system under actual field conditions in North Carolina shall be approved by the state when they are demonstrated to have comparable statistical validity as described in Subparagraphs (5) or (8) of this Paragraph, as applicable. The State's review and approval of proposed alternate criteria for determining whether the system has been in general use, or of other proposed surveys are subject to review and concurrence by the Commission.

(i) **APPROVAL AND PERMITTING OF ACCEPTED SYSTEMS:** The following conditions apply to the approval and permitting of accepted systems:

- (1) When a petition or recommendation for an accepted wastewater system designation is approved by the Commission, the State shall notify local health departments and publish a listing of accepted systems. The Commission shall impose any use, design, installation, operation, maintenance, monitoring, and management conditions pursuant to G.S. 130A-343.
- (2) The local health department shall permit systems designated as accepted nitrification trench systems that meet the requirements of this Section, laws, and conditions of its accepted system approval in an equivalent manner as a conventional system. The Owner may choose to substitute an accepted system for a conventional system or another accepted system without prior approval of the health department as long as no changes are necessary in the location of each nitrification line, trench depth, or effluent distribution method.
- (3) The owner may choose to substitute an accepted advanced pretreatment system for another accepted advanced pretreatment system provided the owner applies to the local health department and receives a revised Construction Authorization prior to its installation.
- (4) The type of accepted system installed shall be indicated on the Operation Permit, including designation of the manufacturer and model or unique code.

(j) **MODIFICATION OF APPROVED SYSTEMS:** Where a manufacturer of an approved E & I or accepted system seeks to modify such system or its conditions of approval (including siting or sizing criteria) and retain its approved status, the manufacturer shall submit to the State a request for approval of the proposed modification. If the manufacturer demonstrates that the modified system will perform in a manner equal or superior to the approved system in terms of structural integrity, chemical durability, hydraulic performance and wastewater treatment, the state shall approve the modified system with the same status as the previously approved system. Approvals of proposed modifications to E & I systems pursuant to this Paragraph shall be made by the State. Approvals of proposed modifications to accepted systems pursuant to this Paragraph shall be made by the Commission when the manufacturer's demonstration provides clear, convincing and cogent supporting evidence. In order to confirm the satisfactory performance of an approved modified accepted system, the manufacturer shall conduct a survey or audit of installed modified systems in accordance with Subparagraphs (h)(5) or (h)(8) of this Rule, as applicable, within one year of the fifth anniversary of the approval of the modified system and shall submit the results of the survey to the State. The State may modify, suspend, or revoke its approval of the modified system based on the survey results or any other information that supports a finding that the modified system does not perform in a manner equal or superior to the previously approved E & I system. The Commission may similarly modify, suspend, or revoke its approval of a modified accepted system.

(k) The State may modify, suspend or revoke the approval of a system as provided for in G.S. 130A-343(c), and as follows:

- (1) The system approval shall be modified as necessary to comply with subsequent changes in laws or rules which affect their approval.

- (2) The approval of a system may be modified, suspended or revoked upon a finding that:
 - (A) subsequent experience with the system results in altered conclusions about system performance, reliability, or design;
 - (B) the system or component fails to perform in compliance with performance standards established for the system; or
 - (C) the system or component or the system applicant fails to comply with wastewater system laws, rules or conditions of the approval.
- (3) The State shall notify the Commission of any action required for Commission approval of any modifications to the status of an accepted system. The Commission may require the manufacturer or the State to complete a follow-up survey of a proprietary nitrification trench system or a performance audit of an advanced pretreatment system such as described in this Rule if the Commission determines further information is necessary prior to rendering a final decision on modification of the status of an accepted system.

(l) Modification, suspension or revocation of a system approval shall not affect systems previously installed pursuant to the approval.

(m) Reductions in total nitrification trench length allowed for systems, as compared to the system sizing requirements delineated in Rule .1955 of this Section for conventional systems based upon excavated trench width, apply only to drainfields receiving septic tank effluent of domestic strength or better quality. The system may be used for facilities producing non-domestic strength wastewater with nitrification trench length and trench bottom area determined based upon excavated trench width equal to what is required by Rule .1955 of this Section for a conventional gravel trench system, with no reduction or application of an equivalency factor. However, reductions up to 25 percent when allowed for approved innovative or accepted system models may be applied for facilities producing higher strength wastewater following a specifically approved pretreatment system designed to assure effluent strength equal to or better than domestic septic tank effluent, with a five-day Biochemical Oxygen Demand (BOD) less than 150 milligrams per liter (mg/l), total suspended solids (TSS) less than 100 mg/l and fats, oil and grease (FOG) less than 30 mg/l.

(n) A Performance Warranty shall be provided by the manufacturer of any approved innovative or accepted wastewater system handling untreated septic tank effluent which allows for a reduction in the total nitrification trench length of more than 25 percent as compared to the total nitrification trench length required for a 36-inch wide conventional wastewater system, pursuant to G.S. 130A-343(j). The Department shall approve the warranty when found in compliance with the applicable laws and this Paragraph. When a wastewater system warranted according to G.S. 130A-343(j) (warranty system) is proposed to serve a residence, place of business, or place of public assembly, the site shall include a repair or replacement area in accordance with Rule .1945(b) of this Section or an innovative or accepted system approved under this Rule with no more than a 25 percent reduction in excavated trench bottom area. The following conditions are applicable for the performance warranty and a system approved pursuant to this Paragraph:

- (1) The Manufacturer shall provide the approved Performance Warranty in effect on the date of the Operation Permit issuance to the owner or purchaser of the system. The warranty shall be valid for a minimum of five-years from the date the warranty system is placed into operation.
- (2) The Manufacturer shall issue the Performance Warranty to the property owner through its authorized installer who shall sign the Performance Warranty indicating the system has been installed in accordance with the manufacturer's specifications, any conditions of the system approval granted by the Department, and all conditions of the Authorization to Construct a Wastewater System by the local health department. The installer or contractor shall return a copy of the signed Performance Warranty to the Manufacturer within 10 days indicating the physical address or location of the facility served by the warranty system, date the system was installed or placed into use, and type and model of system installed.
- (3) The Performance Warranty shall provide that the manufacturer shall furnish all materials and labor necessary to repair or replace a malfunctioning warranty system as defined in Rule .1961(a) of this Section or a warranty system that failed to meet any performance conditions of the approval. The system shall be repaired or replaced with a fully functional wastewater system at no cost to the Owner, in accordance with this Section and applicable laws.
- (4) Performance Warranty repairs such as full replacement of the nitrification system, extension of the nitrification system or other repairs shall be completed pursuant to a repair Authorization to Construct that is issued by the local health department in accordance with this Section.

- (5) The Performance Warranty shall be attached to the Operation Permit issued by the Health Department for the wastewater system. The Performance Warranty shall remain in effect, notwithstanding change in ownership, to the end of the five-year warranty period.
- (o) Manufacturers of proprietary systems approved under this Rule shall provide a list of manufacturer's authorized installers to the Department and applicable local health departments, and update this list whenever there are additions or deletions. No Operation Permit shall be issued for a proprietary system installed by a person not authorized by the Manufacturer, unless the Manufacturer of the proprietary system specifically approves the installation in writing.
- (p) The local health department shall include in its monthly activity report submitted to the State the number of new system Operation Permits issued for E & I and accepted systems. Additionally, the number of Operation Permits issued for repairs of E & I and accepted systems, and repair system type shall be reported to the State as part of the monthly activity report. The State shall accumulate and store this installation data for future reference and surveys, including site locations.
- (q) The State shall provide assistance and training to its authorized agents to assure approved E & I and accepted systems are permitted, installed, operated and evaluated in accordance with the system approval.

*History Note: Authority G.S. 130A-335(e),(f); 130A-343;
Eff. April 1, 1993;
Temporary Amendment Eff. June 24, 2003; February 1, 2003;
Amended Eff. June 1, 2006; February 1, 2005; May 1, 2004.*