

Commission for Health Services
Peat Committee Recommendations
(approved by Full Commission May 11, 2005)
(implementation subject to future CHS rulemaking)

Recommendations That Apply to Petition by Premier Tech Environment of 10/28/04

- I. Controlled Demonstration and Innovative System Approval Requirements:** The NSF 40 Certification or other State approved protocols shall be adopted as evaluation protocol pursuant to G.S. 130A-343(d) as a basis for approval of a controlled demonstration and an innovative pretreatment wastewater system. The staff shall prepare draft rule amendments that will allow for fast tracking of controlled demonstration and innovative approvals of systems with NSF 40 Certification or certification under another prior-approved protocol; fast track approval shall be completed in a 60-day process for a controlled demonstration and 120-day process for an innovative system from the time a complete application is received that includes all information requested by Rule and in any pre-approved application form prepared pursuant to the adopted Rules. Rules shall require an application for innovative approval to include third-party verification of system field performance, in addition to the product's NSF 40 Certification. NSF 40 data, supplemental data collected and reported during the NSF 40 bench test, and any additional third-party data on field performance will be used as the basis to determine compliance with TS-I or TS-II standards. The aforementioned criteria do not apply to systems already holding innovative approvals in North Carolina.
- II. Accepted System Approval Requirements:** NSF 40 Certification or other State approved protocols will be required for a proprietary innovative pretreatment wastewater system to become an approved Accepted Wastewater System. Other approved innovative systems that have been in general use in the State for more than five years when these Rules become effective may be granted accepted status conditioned upon the manufacturer successfully completing NSF 40 Certification or certification under another State approved protocol within no more than 24 months of being granted accepted status. The section .1969(5)(g) of the Rules will be amended to change the requirement of 20% exceedance and other aspects to include the following:
- a. Random sampling of NC sites in compliance with influent and flow standards by an approved third party monitoring entity as per the BNQ or equivalent annual audit protocol with influent and 24-hour composite effluent sample collected from the randomly selected sites. Details of this annual audit protocol shall be a part of the innovative approval for the system.
 - b. The mean values of all sites together shall meet applicable effluent quality standards for each parameter.
 - c. No more than 20 percent of these randomly sampled sites during the annual audit shall exceed the designated effluent quality standards.
 - d. Prior to Accepted System approval by the Commission, the BNQ or equivalent protocol shall be run for a minimum of 3 consecutive years or until data have

been collected from at least 30 separate operational systems. The sampled systems for the purposes of evaluation for Accepted System status shall be operational for at least three years, with at least 40 percent in operation for at least five years, and at least 70 percent of the sampled systems over five years old shall meet effluent quality standards; furthermore, no such data shall be considered that is collected before these Rule amendments are adopted by the Commission.

- e. Operation and maintenance activities that have taken place at the audited sites shall be reported to the Local Health Department (LHD) and the State.
- f. The NSF 40 Class I, TS-I and TS-II standards will be added to the Rules.

III. Amend Innovative Approval Requirements: The annual audit shall consist of the above testing protocol requirements for Accepted Systems. Annual audit continues until receipt of Accepted System approval by Commission. The innovative approval of peat systems should be modified in the following manners:

- a. For systems installed after December 31, 2005, the manufacturer shall be required to provide operation and maintenance for their systems as prescribed in Rules to be adopted by the Commission. The manufacturer shall be required to function under an operation and maintenance contract with the owner from installation through the life of the system. Contracts shall be renewable on an annual basis and the contract shall run for no less than five years. The manufacturer shall inform the LHD when an expired contract with the owner has not been renewed. The manufacturer shall include in the contract required services that are beyond the control of the manufacturer as additional fee services not prescribed in the Rules to be adopted by the Commission. The manufacturer shall be the responsible party in interacting with the LHD for operation, maintenance, and assurance of system compliance with performance standards, except when the system has been confirmed to be improperly sited or when hydraulic inflows or influent strength entering the wastewater system or other instances of owner abuse cause non-compliance with the system performance standards.
- b. For systems installed prior to December 31, 2005, the manufacturer shall be required to provide an optional yearly operation and maintenance contract with the owner. When such a contract is entered into between the manufacturer and owner, the manufacturer shall be the responsible party in interacting with the LHD for assurance of system compliance with performance standards, except when the system has been confirmed to be improperly sited or when hydraulic inflows or influent strength entering the wastewater system or other instances of owner abuse cause non-compliance with the system performance standards. The manufacturer shall inform the LHD when an expired contract with the owner has not been renewed.
- c. For systems installed after December 31, 2005, the manufacturer shall be required to provide a means to measure and record daily wastewater flows. The recording device shall provide for determining at least the last 30 days of wastewater flow to the system prior to the required field inspection.
- d. The compliance standards of each individual wastewater system shall be determined by the following hydraulic inflow and performance evaluation standards:

- i. Hydraulic Evaluation Standards:
 1. Inflow Monitoring: Estimate by time clock or other approved means the 7-day or 30 day inflow prior to a monitoring/maintenance visit. The 7-day inflow shall not exceed 1.3 times the design daily flow and the 30-day inflow shall not exceed the design daily flow. For systems installed after December 31, 2005, the peak 7-day and the 30-day flow for the 30-day period prior to the monitoring/maintenance visit shall be determined. The monitoring/maintenance visit shall be scheduled during the time period when usage is expected to be greatest for systems subject to peak seasonal use, and
 2. Peat System Hydraulic Performance Assessment: Measure on an annual basis the height of any saturated zone beneath or in the peat filter:
 - a. Saturated zone shall be no more than 6-inches above the bottom of the peat filter that may be determined by measuring the depth to a ponded surface in the filter sampling chamber, and
 - b. Surface ponding on the peat filter bed that persists after raking shall not exceed $\frac{1}{2}$ of the surface area with a surface depth of greater than $\frac{1}{2}$ -inch, and
- ii. Peat Qualitative Evaluation Standard:
 1. Observe the quality and level of degradation of the peat filtering media annually.
 2. Annual ranking of peat media condition shall be performed in accordance with manufacturer's protocol, with findings and follow-up recommendations made to the owner and reported to the health department.
- iii. BOD and NH₄-N Monitoring Standards (required annually until the annual audit program described in Section II of these Recommendations is operational, or as part of an enforcement action):
 1. BOD and NH₄-N grab sample of each system peat filter effluent annually; standard for single-site grab samples shall be =30 mg/l for BOD and =20 mg/l for NH₄-N. Septic tank effluent (influent to peat system) grab sample of each system shall be analyzed for BOD and total Kjeldahl Nitrogen (TKN); standard shall be <350 and <100 mg/l, respectively,
 2. If BOD or NH₄-N peat filter effluent sample exceeds 30 mg/l or 20 mg/l, respectively, then resample the system for that parameter within the next month; if either parameter continues to exceed these single-sample standards, then a diagnostic analysis shall be done by the system operator, manufacturer, and health department. Remedial steps, including modification of the system, shall be required as determined to be needed.

- iv. The LHD shall discontinue issuing construction authorizations for new systems of a particular manufacturer that has installed and has in operation at least ten systems in the county if:
 - 1. More than 10% of the manufacturer's systems installed in the county exceed hydraulic standard No. 2 or exceed the BOD or NH₄-N compliance standard (for sites meeting flow and influent quality standards) in any single year, or
 - 2. More than 5% of the manufacturer's systems installed in the county that are being maintained by the manufacturer have operation and maintenance activity requirements that have not been completed for the last reported year.
 - 3. All individual system compliance data and all operations and maintenance records shall be submitted to the LHD. The LHD shall convey information on individual system compliance to the State on at least an annual basis. Action by a LHD on approval of a system in a county does not preclude action by the State on the system's approval status, pursuant to applicable Laws and Rules.
- v. Standard language should be written to be included in permits of LHD for peat systems in the following manner:
 - 1. Operation and maintenance activities and reporting requirements – to be prepared.
 - 2. Compliance monitoring data reporting requirements – as above.
 - 3. Standards for replacement of peat in system.
 - 4. Standards for flow monitoring consisting of: violations of hydraulic flows by Owner based on the 7-day peak and the 30-day average flow rate during any 30 consecutive 30-day monitoring period; establish fine to be issued by LHD when Owner fails to bring influent flows into compliance.