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BAT VERIFICATION PROGRAM FLOWCHART

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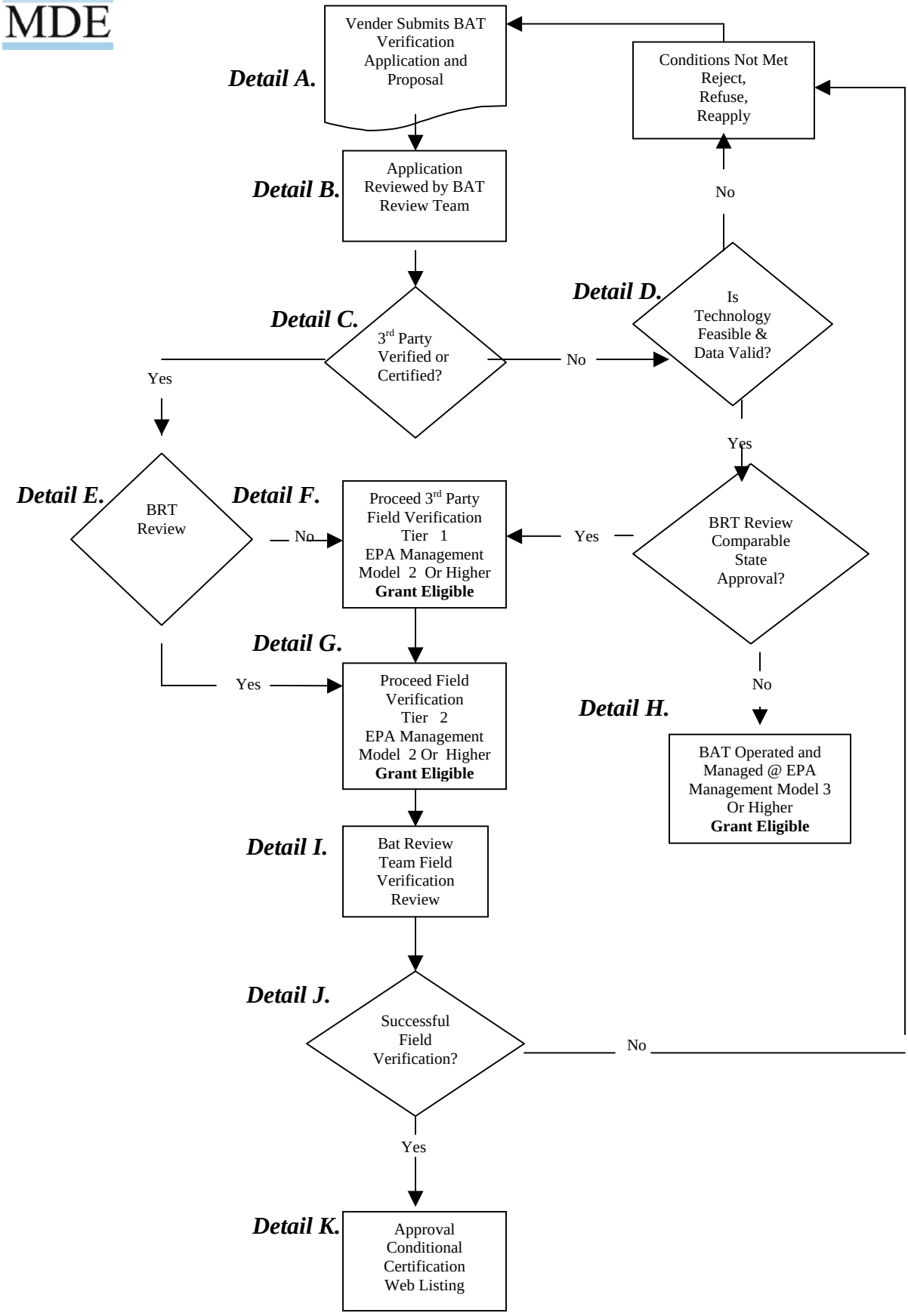

BAT VERIFICATION PROGRAM FLOWCHART DETAIL DRAFT

Detail A. Vendor submits formal application to the Department of the Environment. Vendor contact, general technology description, operating manuals, existing verification information to include test protocols, test plans, standards, etc., are some requested items to be included with the application.

Detail B. The application is reviewed by the BAT Review Team (BRT), which consists of 5 individuals with expertise and knowledge in nutrient reduction technologies. The BRT makes recommendations to the department, reviews vendor submitted field test plans, determines level of field verification and coordinates as needed with the 3rd party verification organization.

Detail C. The NSF/EPA's Environmental Technology Verification Program (ETV) has tested several nutrient reduction residential wastewater treatment systems. The program utilizes standard test methods, independent performance evaluations and test result preparation to ultimately verify the vendor's claim.

Detail D. The vendor must provide detailed description of the technology process, which illustrates sound scientific fundamentals and engineering practice. Technologies, which have not been through 3rd party, test center verification or certification may however, have undergone or are currently undergoing independent field verification through national demonstration projects, university research studies and other formal state verification programs.

Detail E. Technologies that have or have not been through 3rd party test center verification or certification may have been through a field verification program where a BAT has been installed at numerous sites in a state with a comparable climate. Based on the information submitted the BRT will determine the appropriate field verification Tier.

Detail F. Tier 1 represents the field verification, which provides a greater level of oversight, both from a management and verification standpoint. Fewer BAT systems will be allowed in Tier 1 to allow greater expertise to be developed by operators and to provide a full and independent evaluation of these systems. An approved 3rd party verification organization will be required to perform verification services. A minimum of 12 with a maximum of 25 BAT units installed per vendor will be allowed initially. A minimum of 4 data points per BAT unit is required. After a minimum of 50 valid data points are obtained and after a minimum period of 12 months with a maximum of 18 months following start-up, a report consistent with the Tier 1 QAPP may be generated by the verification organization for BRT review. The QAPP will outline requirements for representative sampling and a method for statistical evaluation of data points in order to provide accurate performance conclusions. EPA Management Model 2 or higher required.

Detail G. Tier 2 allows a greater number of field installations for technologies, which have been successfully field-tested in other comparable states. Together with Tier 1, a 2-3 year period of field verification is provided which should allow an adequate time to develop the appropriate level of operation and management. This time period should allow sufficient time to collect the minimum 100 data points for the BRT to determine overall field verification. A Maryland licensed operator and an approved 3rd party testing organization will be responsible for certifying that all samples were collected, transported, and analyzed consistent with the Tier 2 QAPP. In order to get a minimum number of data points for proper statistical evaluation, 25 BAT units are required to be installed per vendor. A "carryover" of the units installed during Tier 1 may be allowed to provide the minimum number of installed units. A minimum of 4 data points per BAT unit during Tier 2 is required. EPA Management Model 2 or higher required.

Detail H. BAT is operated and managed according to EPA Model Management #3. General operating permits provides greater assurance of control over performance compliance.

Detail I. A minimum of 100 valid data points are obtained and after a minimum period of 2 years with a maximum of 3 years elapses, the BRT may begin the decision making process. The BRT will be make recommendations to the department which may include, certify BAT for general conditional use, require additional field evaluation or disapprove the use of the BAT.

Detail J Successful field verification is determined by the following:
When 100 TN effluent data points or greater per unit being evaluated are graphed, whereas the x- axis represents Percent Rank and the y- axis represents TN Effluent in mg/l, at the 75 percentile the TN shall be less than or equal to 20 mg/l. And BRT determines the BAT is capable of maintaining the desired nutrient reduction, long term, given consideration to proper level of operation and maintenance.

Detail K A written certification will be sent to the applicant with terms and conditions specified. The certification shall expire after a period of five years from the date of issuance. If the applicant wishes to continue the certification, application for renewal must be forwarded to the department at least 180 days prior to the expiration date of the certification. If the Department has determined that 20-mg/l total nitrogen is no longer BAT, the standard may be revised.