

DRAFT December 8, 2009

TITLE 20 ENVIRONMENTAL PROTECTION  
CHAPTER 7 WASTEWATER AND WATER SUPPLY FACILITIES  
PART 12 ON-SITE LIQUID WASTE SYSTEM SUBMITTAL PROCEDURES

20.7.12.1 ISSUING AGENCY: New Mexico Environment Department. [20.10.1 NMAC - N, xx/xx/xx]

20.7.12.2 STATUTORY AUTHORITY: This part is adopted pursuant to Section 9-7A-6(D) NMSA 1978 and Section 74-1-7(A)(3).

20.7.12.3 SCOPE: Liquid Waste Disposal and Treatment Regulations 20.7.3.501.A, 809.F, 502.D, 502.H and 808.K NMAC require department approval of septic tanks, holding tanks, risers, effluent filters, and proprietary effluent drip irrigation systems, respectively. Liquid Waste Disposal and Treatment Regulations 20.7.3.501.A, and 601.B NMAC require wastewater technical advisory committee review of advanced wastewater treatment systems, prior to department approval. Liquid Waste Disposal and Treatment Regulation 20.7.3.701.C NMAC requires wastewater technical advisory committee review of proprietary drainfield systems. This part governs the procedures for submittal of information and data to the department to be followed by a manufacturer requesting a listing by the Department as an approved on-site liquid waste system component which may be permitted by the department. These submittal requirements apply to all septic tanks, holding tanks, risers, effluent filters, advanced treatment systems, chemical or biological liquid waste system additives for which a claim of advanced treatment is made, proprietary drainfield products, and proprietary drip systems that are utilized as components of liquid waste systems that are designed to receive and do receive 2,000 gallons or less of liquid waste per day. Septic tanks, holding tanks, risers, effluent filters are not reviewed by the wastewater technical advisory committee.

20.7.12.4 DURATION: Permanent.

20.7.12.5 EFFECTIVE DATE: XX unless a later date is cited at the end of a section.

20.7.12.6 OBJECTIVE: The purpose of this part is to standardize the procedures for manufacturers requesting a listing by the Department as an approved component of an on-site liquid waste system which may be permitted by the Department.

20.7.12.7 DEFINITIONS:

- A. "advanced treatment system" means a device or combination of devices that affect a process whereby a greater amount of contaminants is removed than is accomplished through primary treatment of wastewater;
- B. "department" means the New Mexico environment department;
- C. "department secretary" means the cabinet secretary of the environment department or his delegee;
- D. "program" means the liquid waste program of the New Mexico environment department;
- E. "proprietary drainfield system" means a wastewater dispersal product that is patented, trademarked, or otherwise is the intellectual property of manufacturers not in the public domain.
- F. "wastewater technical advisory committee" means the wastewater technical advisory committee created by Section 9-7A-15, NMSA 1978 (2003).

20.7.12.8 APPLICATION AND SUBMITTAL ADDRESS: Applications and submissions made pursuant to this rule shall be addressed to:

New Mexico Environment Department  
Liquid Waste Program Engineer  
525 Camino de Los Marquez, Suite 1  
Santa Fe, NM 87505

20.7.12.9 SUBMITTAL PROCEDURES FOR SEPTIC TANKS, HOLDING TANKS, AND EFFLUENT FILTERS

- A. Any product manufacturers wishing to obtain approval for a septic tank, holding tank, riser or effluent filter shall submit a written application to the program, containing the following minimum information.

- (1) Name of person or company seeking approval to sell product in New Mexico, and form of entity (corporation, limited liability company, partnership, sole proprietor, etc.). If the entity seeking approval is a corporation or LLC, documentation of registration with the New Mexico Public Regulation Commission must be provided along with documentation of registration with the state of original registration if not New Mexico.
  - (2) contact person, telephone number, email address (if available), mailing address, and street address.
  - (3) Description of approval being requested (listing the specific products for which the approval is sought, the intended purpose of the products, whether the approval sought is experimental or unconditional)
  - (4) Proof of International Association of Plumbing and Mechanical Officials (IAPMO) certification, or certification by a registered professional engineer that the product meets minimum standards specified in the Liquid Waste Disposal and Treatment Regulations, Sections 20.7.3.501 and 20.7.3.502 NMAC, or other appropriate standard as required by the Department.
  - (5) Drawings of the product, properly sealed by a registered professional engineer, showing all pertinent dimensions, details and reinforcement.
  - (6) Structural calculations, certified by a registered professional engineer, if applicable.
- B. Specific claims for proprietary trade secret confidentiality must be identified at the time of submission.

**20.7.12.10 SUBMITTAL PROCEDURES FOR ADVANCED WASTEWATER TREATMENT SYSTEMS, CHEMICAL OR BIOLOGICAL LIQUID WASTE SYSTEM ADDITIVES, PROPRIETARY DRAINFIELD PRODUCTS AND PROPRIETARY EFFLUENT DRIP IRRIGATION SYSTEMS**

A. Any product manufacturer wishing to obtain approval for an advanced wastewater treatment system, a chemical or biological liquid waste system additive, proprietary drainfield product or proprietary drip irrigation system, shall submit a written application to the program, containing the following minimum information.

(1) Name of person or company seeking approval to sell product in New Mexico, and form of entity (corporation, limited liability company, partnership, sole proprietor, etc.). If the entity seeking approval is a corporation or LLC, documentation of registration with the Public Regulation Commission must be provided along with documentation of registration with the state of original registration if not New Mexico.

(2) Contact person.

(3) Description of approval being requested (listing the specific products for which the approval is sought, the intended purpose of the products, whether the approval sought is experimental or unconditional).

(4) Performance claims being made.

(5) Summary of any treatment process.

(6) Process discussion to substantiate performance claims (written at about the level of a patent application.)

(7) Required product information, as specified in Sections 20.7.12.11, 20.7.12.12, 20.7.12.13 and 20.7.12.14.

(8) Installation, Operation, and Maintenance (O&M) manuals for the system.

(9) Description of training program for installers and maintenance service providers, including training manuals, and plan for assuring compliance with 20.7.3.903 NMAC.

(10) Engineer certified drawings of the product.

(11) Materials and components list.

(12) National standard certifications of performance, materials, electrical equipment, structural integrity, labeling and any other certifications for the equipment, materials, assemblies or components of the product for which approval is sought. Any component that has not been certified to a national standard must be certified by a professional engineer based on manufacturer testing.

(13) Disclosure of product limitations, if any, in terms of appropriate applications (include limitations due to siting/installation conditions, influent water quality, altitude, climate, temperature, and periodic flow).

(14) Product performance or evaluation reports, if any, prepared by entities other than the manufacturer or generally recognized standards covered under Item 12 above.

(15) Articles in peer-reviewed professional publications, if any, that address the specific product.

(16) All handouts and slide presentations to be used during the wastewater technical advisory committee meeting.

(17) Other information as required in writing by the department or by the wastewater technical advisory committee.

- B. The product manufacturer shall submit the required information in electronic portable document format (PDF).
- C. Specific proprietary issues and claims for trade secret proprietary confidentiality must be identified at the time of submission.
- D. Within 30 days of receipt of materials submitted by a product manufacturer, the program shall make a determination of administrative completeness. Applications for experimental approval of advanced wastewater treatment technologies shall not be considered administratively incomplete if the effluent sampling data required by Section 20.7.12.12 does not exist.
- E. If the materials are deemed to be administratively incomplete, the program shall provide written notification to the manufacturer and to the wastewater technical advisory committee that includes a list of deficiencies.
- F. If the materials are deemed to be administratively complete, the program shall provide written notification to the manufacturer and to the wastewater technical advisory committee, and shall post the submitted information on the program website along with an announcement of a 30 day public comment period.
- G. Public comments shall be submitted to the program in writing including email.
- H. Within 30 days after completion of the 30 day comment period, the program shall forward to the wastewater technical advisory committee:
  - (1) the materials submitted by the product manufacturer;
  - (2) the public comments that were received; and
  - (3) a written analysis of the product prepared by the program.

At the same time that these materials are forwarded to the wastewater technical advisory committee, the program shall add the public comments and the program's analysis of the product to the website location that contains the product material submitted by the manufacturer. The department also shall provide the manufacturer with a copy of the public comments received and of the department's written analysis of the product.

I. After completion of the public comment period, and all materials have been forwarded to the wastewater technical advisory committee, products shall be scheduled to be reviewed at a wastewater technical advisory committee meeting on a first-come, first-serve basis. Product manufacturers will be invited to make a presentation during the wastewater technical advisory committee meeting, the duration of which will be at the committee's discretion.

#### 20.7.12.11 PROCEDURES FOR ADVANCED WASTEWATER TREATMENT SYSTEMS THAT HAVE NATIONAL SANITATION FOUNDATION CERTIFICATION

A. Applicants for approval of an advanced wastewater treatment system that has a national sanitation foundation certification shall, in addition to the information required in Section 10, above, submit all test results, test reports and approval documents related to national sanitation foundation certification. Applicants also shall submit documentation demonstrating that the advanced treatment system will perform properly in the altitudes, climates and temperatures found in residential areas of New Mexico.

- B. Treatment levels required for approval:
- (1) Advanced treatment systems that have been certified by the national sanitation foundation as providing Class 1 treatment pursuant to national sanitation foundation standard 40, and that have been shown to be capable of performing properly at the altitudes, climates and temperatures found in residential areas of New Mexico, shall be deemed as having met the performance requirements for secondary treatment.
  - (2) Advanced treatment systems that have been certified by the national sanitation foundation as providing both Class 1 treatment (as defined in 20.7.12.11.B.1) and a 50% reduction in Total Kjeldhal Nitrogen (TKN) pursuant to national sanitation foundation standard 245, and that have been shown to be capable of performing properly at the altitudes, climates and temperatures found in residential areas of New Mexico, shall be deemed as having met the performance requirements for tertiary treatment with the following condition: the approved total nitrogen effluent limit shall be the average total nitrogen concentration in effluent tests conducted during the national sanitation foundation testing plus an additional 5 mg/L; individual sites requiring permits with a lower total nitrogen effluent limit, as defined in Liquid Waste Regulation 20.7.3.603.B NMAC, will not be issued for advanced treatment systems approved with this condition. The Approved Advanced Treatment System List will list the total nitrogen limit for which the product is approved.

#### 20.7.12.12 PROCEDURES FOR ADVANCED WASTEWATER TREATMENT SYSTEMS THAT DO NOT HAVE NATIONAL SANITATION FOUNDATION CERTIFICATION

A. Applicants for approval of an advanced wastewater treatment system that do not have a national sanitation foundation certification shall, in addition to the information required in Section 20.7.12.10, above, submit a

minimum of twelve consecutive effluent sample results, with no more than 2 per month, over a 6 to 24 month period, from three private residences to demonstrate that the advanced wastewater treatment system is capable of reducing contaminants to required levels.

B. Field Test Parameters: Properly calibrated field instruments shall be used to measure pH, conductivity, temperature, and DO, as specified in Table 1, at the time of sample collection.

C. Laboratory Test Parameters. All tests other than those specified in Section 20.7.12.12.B shall be conducted by a professional laboratory using the most current version of one of the following methods:

(1) Standard Methods for the Examination of Water and Wastewater, a joint publication of the American Public Health Association, the American Water Works Association, and the Water Environment Federation, <http://www.standardmethods.org/>.

(2) Methods and Guidance for the Analysis of Water, U.S. Environmental Protection Agency, <http://www.ntis.gov/products/bestsellers/epa-water-methods.asp?loc=4-2-0>.

(3) Techniques of Water-Resources Investigations, U.S. Geological Survey, <http://infotrek.er.usgs.gov/pubs/>.

(4) Other appropriate methods as approved by the department.

Table 1. Required Analytical Parameters for Advanced Treatment.

| Influent  | Effluent                 |
|---|--------------------------|
|   |                          |
| <b><i>Field Test Parameters for Secondary or Tertiary Treatment</i></b> |                          |
| pH  | pH                       |
|   | Temperature              |
|   | DO                       |
|   |                          |
| <b><i>Laboratory Test Parameters for Secondary Treatment</i></b>        |                          |
| BOD <sub>5</sub> or CBOD  | BOD <sub>5</sub> or CBOD |
| TSS   | TSS                      |
|   |                          |
| <b><i>Laboratory Test Parameters for Tertiary Treatment</i></b>         |                          |
| BOD <sub>5</sub> or CBOD  | BOD <sub>5</sub> or CBOD |
| TSS   | TSS                      |
| Alkalinity  | Alkalinity               |
| Ammonia   | Ammonia                  |
| TKN   | TKN                      |
|   | Nitrate + Nitrite (as N) |
|   |                          |
| <b><i>Laboratory Test Parameters for Disinfection Treatment</i></b>     |                          |
|   | E. coli                  |

D. Treatment Levels Required for Approval:

(1) Secondary treatment – average 30/30 mg/L BOD/TSS, with no sample greater than 60 mg/L

- (2) Tertiary treatment – average 30/30 mg/L BOD/TSS, with no sample greater than 60 mg/L, and an average 20 mg/L total nitrogen (sum of TKN, nitrate, nitrite), with no sample greater than 40 mg/L
- (3) Disinfection treatment – average 30/30 mg/L BOD/TSS, with no sample greater than 60 mg/L, and 200 CFU E. coli.

#### 20.7.12.13 PROCEDURES FOR CHEMICAL OR BIOLOGICAL LIQUID WASTE SYSTEM ADDITIVES FOR WHICH A CLAIM OF ADVANCED TREATMENT IS MADE

A. In addition to the influent and effluent testing data required in Section 20.7.12.12 above, the following information is required for liquid waste system additives for which a claim of advanced treatment is made:

- (1) A description of the chemical, physical or biological treatment mechanism.
- (2) Empirical data from tests conducted with valid controls that demonstrate the magnitude and effectiveness of treatment.
- (3) Material safety data sheet (MSDS) for the product.
- (4) The protocol for product application.
- (5) Laboratory test results for volatile organic compounds (VOCs) by gas chromatography/mass spectrometry (GCMS) for a sample of the product.

#### 20.7.12.14 REQUIRED INFORMATION FOR PROPRIETARY DRAINFIELD PRODUCTS

In addition to the information required in Section 20.7.12.10 above, the Applicant must submit:

- A. Copies of sales brochures, catalogs and other promotional materials.
- B. Written detailed description of the function of the product.
- C. The sizes, colors, locations, information shown and methods for labeling the product. (Actual labels are acceptable.)
- D. Complete installation instructions, including detailed installation drawings indicating all connections between the product and plumbing system.
- E. A list of all standards to which the product conforms.
- F. Specifications for construction materials.
- G. H-10 or other structural testing results or calculations.
- H. Request for sizing allowance relative to conventional pipe and gravel drainfields, if any. (A maximum 30 percent reduction is allowed by the Liquid Waste Disposal and Treatment Regulations (20.7.3.701.C) as compared to conventional drainfield sizing.)
- I. Data or a theoretical justification that demonstrates satisfactory functionality of the product when installed at the requested reduced drainfield size. If a theoretical justification is used, the manufacturer must submit a testing protocol to demonstrate reduction.
- J. Complete list of models, or configurations of product, for which approval is sought, with associated sizing reduction requests.
- K. Product limitations for conditions such as unsuitable soil types, difficult terrains, high structural loading, high strength waste, or seasonal flows.

#### 20.7.12.15 REVIEW AND APPROVAL PROCEDURES

A. Within 45 days of receipt of the application for a septic tank, holding tank or effluent filter, the program shall notify the product manufacturer in writing of either approval of the product for use in the State of New Mexico, of deficiencies that must be remedied in order for approval to be granted, or denial of the application.

B. After review of the information submitted by the manufacturer of an advanced wastewater treatment system, chemical or biological additive, proprietary drainfield product, or proprietary drip irrigation system, and after deliberation in open meeting, the wastewater technical advisory committee may submit its findings and recommendations to the department secretary for approval, approval with conditions, or denial. The wastewater technical advisory committee may recommend approval subject to conditions that would limit the use of the product with regard to altitude, climate, temperature, influent water quality and periodic or seasonal flow. The wastewater technical advisory committee also may recommend experimental approval subject to the conditions in this section. Within 45 days of receipt of a written recommendation from the wastewater technical advisory committee chairman, the department secretary shall take action on such recommendation

C. The secretary may grant experimental approvals allowing the installation of a specific number of systems over a period not to exceed thirty months. The Department may impose one or more of the following conditions when approving liquid waste permits for systems that contain a component subject to experimental approval:

(1) Advanced treatment systems granted experimental approval shall be installed so the effluent discharges into a centralized sewer system, into a non-discharging on-site system, or into a permitted onsite disposal system at a site not requiring advanced treatment.

(2) During the thirty month experimental period, the Applicant shall submit data as described in Section 20.7.12.12, above that details product performance and identifies any problems that may have occurred during the manufacturing, installation and operation of the systems.

(3) During the experimental period, the Applicant shall provide a money back guarantee to all consumers who purchase the experimentally approved models for installation on an experimental basis, such that, if final unconditional approval is not given to the model by the Department, or the experimental approval terminates, the Applicant will reimburse the customer's purchase money, plus the cost of installation and removal, within ninety days of the termination or denial of Final Approval. Guarantees shall be enforceable by the consumer.

D. Consumers who purchase the advanced treatment systems during the experimental period shall be informed that the system is subject to experimental approval, and that the permit is conditional until an unconditional approval of the system is granted by the Department. A copy of the order granting experimental approval shall be provided to each consumer who purchases the product for installation on their property during the experimental period.

E. If, at any time during the experimental period, the product receives national sanitation foundation certification or if the monitoring and treatment requirements of Section 20.7.12.12 above are achieved, the manufacturer may request non-experimental approval following the procedures and submittal requirements specified in 20.7.12.10 NMAC.

#### 20.7.12.16 SUSPENSION AND REVOCATION PROCEDURES

A. The department may suspend or revoke the approval of any product for good cause including, but not limited to, the following circumstances:

(1) Willful violation of any provision of the Liquid Waste Disposal and Treatment Regulations 20.7.3 NMAC by the product manufacturer or any manufacturer approved installer or maintenance service provider.

(2) Failure of the product manufacturer to implement and maintain the training plan for installers and/or maintenance service providers.

(3) Failure of the product manufacturer to adhere to the materials, design and construction specifications approved by the department.

(4) Repeated failure of multiple advanced treatment systems to achieve the effluent limitations specified in Liquid Waste Permits approved by the department.

(5) Structural failure of any tank or proprietary drainfield system.

(6) Falsification of effluent monitoring data.

#### 20.7.12.17 WASTEWATER TECHNICAL ADVISORY COMMITTEE REVIEW AND THE DEPARTMENT RE-APPROVAL OF ADVANCED TREATMENT SYSTEMS AND PROPRIETARY DRAINFIELD PRODUCTS APPROVED BY THE DEPARTMENT PRIOR TO JUNE 20, 2003

A. Manufacturers of advanced treatment systems and proprietary drainfield products that were approved by the department prior to the June 20, 2003, the effective date of 9-7A-15 NMSA, shall submit the product information specified in Sections 20.7.12.10, 20.7.12.11, 20.7.12.12, 20.7.12.13 and 20.7.12.14, above, as appropriate, no later than by July 1, 2010, for review by the wastewater technical advisory committee and re-approval by the department.

B. Failure to submit the required information by July 1, 2010, or failure of an advanced treatment systems to achieve the appropriate treatment levels specified in Sections 20.7.12.11 and 20.7.12.12 above shall be grounds for removal from the appropriate list of products approved for use in the State of New Mexico.

#### 20.7.12.18 PERIODIC ADVANCED TREATMENT SYSTEM REVIEW AND RE-APPROVAL

A. The department approvals of non-experimental advanced treatment systems shall be valid for seven years.

B. Product manufacturers wishing to renew approval of any advanced treatment systems for another seven years shall submit a system performance report to the department at least six months prior to the expiration of approval.

C. The advanced treatment system performance report shall be in pdf format and shall include, at a minimum:

(1) tabulated effluent monitoring data for the specific advanced treatment system being considered for re-approval from all such systems operated within the State of New Mexico during the past two years;

- (2) graphs of effluent data from each system as a function of time;
- (3) a generic analysis the effluent monitoring data with regard to overall performance of the advanced treatment system and its ability to provide treatment to effluent limitations required in the liquid waste permits approved by the department;
- (4) a description of system upsets or performance failures.
- (5) a list of applicant-certified installers and maintenance service providers who do business in New Mexico.

D. The department shall post the performance report on its internet website and shall forward the performance report to the wastewater technical advisory committee for its review and recommendations to the department for re-approval, approval with additional conditions or removal from the list of products approved for use in the State of New Mexico.

20.7.12.19 APPEALS: Any person who is adversely affected by a decision by the department regarding product approval or disapproval, or the suspension or revocation of approval, may appeal that decision in accordance with law.

20.7.12.20 COMPLIANCE WITH LIQUID WASTE DISPOSAL AND TREATMENT REGULATIONS: Nothing in these submittal requirement relieves any person from any responsibility to fully comply with the Liquid Waste Disposal and Treatment Regulations 20.7.3 NMAC.

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