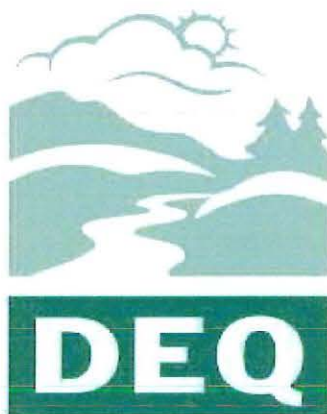


**OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS 08/22/2000**



**State of Oregon
Department of
Environmental
Quality**

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A G E N D A

ENVIRONMENTAL QUALITY COMMISSION MEETING

Special Phone Meeting

August 22, 2000

DEQ Conference Room 4

811 S. W. Sixth Avenue

Portland, Oregon

Notes: Because of the uncertain length of time needed for each agenda item, the Commission may deal with any item at any time in the meeting. If a specific time is indicated for an agenda item, an effort will be made to consider that item as close to that time as possible. However, scheduled times may be modified if agreeable with participants. Anyone wishing to listen to the discussion on any item should arrive at the beginning of the meeting to avoid missing the item of interest.

Beginning at 2:00 p.m.

A. †Rule Adoption: Revisions to On-Site Innovative Technology Rules

†Hearings have already been held on the Rule Adoption items and the public comment period has closed. In accordance with ORS 183.335(13), no comments can be presented by any party to either the Commission or the Department on these items at any time during this meeting.

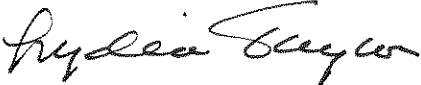
The Commission has set aside September 28-29, 2000, for their next meeting. It will be held in Roseburg, Oregon.

Copies of staff reports for individual agenda items are available by contacting the Director's Office of the Department of Environmental Quality, 811 S. W. Sixth Avenue, Portland, Oregon 97204, telephone 503-229-5301, or toll-free 1-800-452-4011. Please specify the agenda item letter when requesting.

If special physical, language or other accommodations are needed for this meeting, please advise the Director's Office, 503-229-5301 (voice)/503-229-6993 (TTY) as soon as possible but at least 48 hours in advance of the meeting.

December 15, 2000

State of Oregon
Department of Environmental Quality Memorandum

Date: August 10, 2000
To: Environmental Quality Commission
From: Langdon Marsh 
Subject: Agenda Item A. Proposed Amendments to the Rule Establishing Review and Acceptance Criteria for New or Innovative Technologies and Materials for Application in the On-Site Program as Requested by the EQC on July 14, 2000.

Background

On July 14, 2000, the Environmental Quality Commission (EQC, Commission) met to discuss Proposed Changes to the Rule Establishing Review and Acceptance Criteria for New or Innovative Technologies and Materials for Application in the On-Site Program. During the meeting, members of the EQC raised questions about reported problems with the rule-making process and the proposed rule amendments that required a response by the Department prior to issuing a ruling on the proposed rule amendments.

Members of the EQC expressed concerns that some stakeholders, including manufacturers of new and innovative technologies and materials, were not properly notified of the proposed rule amendments. Therefore, the EQC voted to extend the comment period for the proposed rule amendments until July 31, 2000 and asked the Department to ensure all stakeholders, including manufacturers of new or innovative technologies and materials, be notified of the proposed rule amendments. In response, the Department extended the comment period until July 31, 2000, and notified all known new and innovative technology or material manufacturers of the proposed rule amendments.

Members of the EQC also expressed concern that the proposed rule amendments did not include a deadline for the two manufacturers with prior approvals to meet the new standards for approval. Without a deadline in the new rule amendments, the two manufacturers would have what would amount to an indefinite approval of their products. In response, the Department changed the proposed rule amendments to include a deadline the two manufacturers must meet in order to meet the new standards for approval.

Department staff have evaluated the comments received (Attachment B). Based upon that evaluation, the attached proposed rule amendments (Attachment A) are being recommended by the Department. The proposed rule amendments are summarized below and detailed in Attachment D.

Memo To: Environmental Quality Commission

Agenda Item A. Proposed Amendments to the Rule Establishing Review and Acceptance Criteria for New or Innovative Technologies and Materials for Application in the On-Site Program as Requested by the EQC on July 14, 2000. August 10, 2000.

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The following sections summarize the issue that this proposed rulemaking action is intended to address, a summary of the rulemaking proposal, a summary of the significant public comments and the changes proposed in response to those comments, a summary of how the rule will work and how it is proposed to be implemented, and a recommendation for Commission action.

Issue this Proposed Rulemaking Action is Intended to Address

The Department is requesting the Commission proposed rule amendments establishing criteria for evaluation and approval of alternative on-site technologies and materials. The proposed amendments will clarify the flexibility in the written performance-based criteria to be used when reviewing and authorizing the use of innovative technologies and materials within on-site sewage treatment and disposal systems. The Department believes the proposed amendments continue to comply with the Court order requiring the Department to determine the standards to be used in evaluating alternative products and addressing the Commission's concerns about allowing an open-ended deadline for the two manufacturers with prior approvals to continue distributing their products in Oregon.

Summary of Rulemaking Proposal Presented for Public Hearing and Discussion of Significant Issues Involved.

The Department proposes modifications to OAR 340-071-0116 by adding new language to section (2) and (3) of the rule. With section (2), staff determined it was prudent to allow manufacturers of drain media substitutes to apply for approval by demonstrating functional equivalency of their product to a product that has been approved following the provisions in OAR 340-071-0130(2)(a). With section (3), staff determined it was necessary to give manufacturers the option to apply for approvals utilizing a protocol that would allow for a performance study to be conducted in locations other than Oregon. Any alternative protocol accepted must demonstrate compliance with any applicable DEQ established performance criteria and include a schedule indicating onset and completion dates of the study.

The Department is also requesting that the newly proposed rule amendment to OAR 340-071-0130(2)(b) be modified to address the EQC's concerns about "grandfathering" the two manufacturers with prior approvals by establishing December 31, 2002 as the date previous approvals granted by the Director will expire. If the two manufacturers do not meet the requirements set forth in this section by the December 31, 2002 deadline, their products will not be allowed for use in Oregon.

Memo To: Environmental Quality Commission

Agenda Item A. Proposed Amendments to the Rule Establishing Review and Acceptance Criteria for New or Innovative Technologies and Materials for Application in the On-Site Program as Requested by the EQC on July 14, 2000. August 10, 2000.

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Summary of Significant Public Comment and Changes Proposed in Response

Several comments were expressed that the proposed rule amendments are proper and should be adopted by the Commission without modification. The Department agrees that the proposed amendments are fair and reasonable for the manufacturers of new and innovative technologies and materials. The Department modified the proposed rule amendments to include a deadline for the two manufacturers of currently approved products to meet in order to meet the new standard as requested by the Commission.

One commenter wrote that manufacturers of new and innovative technology or materials that are similar in function and design to the products previously granted approval should be exempted from the process outlined in the proposed rule amendments for gaining approval for use in Oregon. The commenter suggested that the proposed rule amendments would require unnecessary and duplicative testing of the products, which could possibly increase costs of producing the products, and those costs will ultimately be borne on the consumer.

In the proposed rule amendments, the Department is establishing equitable and objective criteria for all manufacturers of new and or innovative technology and materials by requiring the manufacturers to demonstrate, to the Department's satisfaction, that their product will perform adequately in Oregon. The Department also believes that manufacturers of new and innovative technology or materials must demonstrate performance of a product on it's own merits, tested under a methodology approved by the Department. To ensure that the new rule amendments are equitable and objective, the Department included in the modifications to the proposed rule amendments a deadline for the two manufacturers with prior approvals that must be met to meet the new standard, otherwise these products will not be allowed for use in Oregon. The current language in 340-071-0130(2)(b) gave the two manufacturers with prior approvals nearly five years to meet the requirements for obtaining an approval under the new standard. Now all manufacturers of new and innovative technology and materials will follow the same process for approval for their products in Oregon.

The same commenter also found fault with the "grandfathering" of the two manufacturers with prior approvals that allow continuance of their approvals indefinitely without meeting the new standards for approval. The Commission also noted this and requested that the Department set a deadline for prior approval expiration. In acknowledging this concern, the Department modified the language of the proposed rule amendments in OAR 340-071-0130(2)(c) and included a deadline of December 31, 2002 that the two manufacturers must meet in order to meet the new standards for approval.

Other significant comments and the Department's responses are noted in Attachment C.

Memo To: Environmental Quality Commission

Agenda Item A. Proposed Amendments to the Rule Establishing Review and Acceptance Criteria for New or Innovative Technologies and Materials for Application in the On-Site Program as Requested by the EQC on July 14, 2000. August 10, 2000.

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Summary of How the Proposed Rule Will Work and How it Will be Implemented

The proposed rule amendments provide manufacturers of new or innovative technology or materials with three options in gaining approval for their products: a prescriptive approach, a performance evaluation approach, or a comparison approach to a yet to be determined performance criteria for the standard trench. The proposed amendments clarify the expectations of these three options for manufacturers of new and innovative technology and materials.

The two manufacturers holding approval letters issued by the Director on July 1, 1999 may continue to rely upon their approvals until December 31, 2002. By that time, in order to meet the new standard for approval for their products, the two manufacturers must: 1) meet the requirements in 340-071-0116 (4) and (5), the prescriptive approach, or; 2) meet the requirements in 340-071-0116(2), the performance evaluation approach, or; 3) meet the requirements in 340-071-0116 (3), the comparison approach. In addition, if the Department develops, and the Commission adopts by rule, performance criteria for the standard disposal trench, then manufacturers of substitute drain media will have a benchmark to compare the performance of their product for the purpose of applying for approval.

The amended rules would also apply to manufacturers without prior approvals of new or innovative technology or material wanting to market their products in Oregon. These amendments will establish the flexibility to consider alternate means of demonstrating the effectiveness of a new technology or material.

Recommendation for Commission Action

It is recommended that the Commission adopt the modified proposed rule amendments as presented in Attachment A of the Department Staff Report.

Attachments

- A. Rule (Amendments) Proposed for Adoption
- B. List of Persons Providing Comment During the Extended Public Comment Period
- C. Department's Evaluation of Public Comment
- D. Detailed Changes to Original Rulemaking Proposal made in Response to Public Comment
- E. Rule Implementation Plan

Memo To: Environmental Quality Commission

Agenda Item A. Proposed Amendments to the Rule Establishing Review and Acceptance Criteria for New or Innovative Technologies and Materials for Application in the On-Site Program as Requested by the EQC on July 14, 2000. August 10, 2000.

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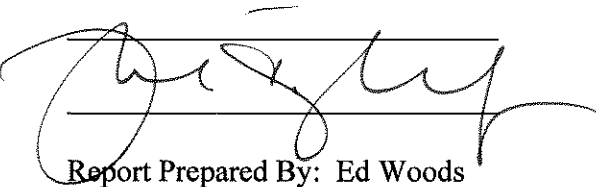
Reference Documents (available upon request)

Written Comments Received (listed in Attachment B).

Approved:

Section:

Division:

A handwritten signature in black ink, appearing to read 'Ed Woods', is written over two horizontal lines. The signature is cursive and extends to the right of the second line.

Report Prepared By: Ed Woods

Phone: (503) 229-5415

Date Prepared: August 10, 2000

Proposed Amendments to OAR Chapter 340, Division 71

Note: The underlined portion of text represent proposed modifications and additions to the rule. The ~~bracketed~~ portion of text represents proposed deletions to the rule.

Amend OAR 340-071-0116 as follows:

OAR 340-071-0116 Review Criteria for New or Innovative Technology or Materials.

- (1) The Environmental Quality Commission has established standards within OAR Chapter 340, Divisions 071 and 073, for on-site sewage disposal systems, including the materials used to construct them. Any new or innovative technology or materials to be used in systems within the State of Oregon that differ from the standards described in OAR Chapter 340, Divisions 071 and 073, may be reviewed by the Technical Review Committee, consistent with the provisions in sections 2 through 5 of this rule. After consideration of the TRC's advice, the Department may recommend that the Director grant approval, consistent with OAR 340-071-0130(2). The Department shall require convincing documentation of performance as provided in sections (2) and (3) of this rule, or compliance with the prescriptive standard option as provided in sections (4) and (5) of this rule, before recommending a new or innovative technology or material for general use.
- (2) Performance evaluation of new or innovative technology or materials. Performance is the preferred standard by which new or innovative technologies and materials are evaluated in the State of Oregon. Performance is established when the Department determines the criteria described in subsections (a) through (e) of this section are met~~ed~~. With respect to new or innovative technology or material proposed for use as a substitute for drain media, performance may also be established by a demonstration of functional equivalency to a material that is approved pursuant to provisions in OAR 340-071-0130(2)(a) on or after September 1, 2000.
 - (a) Peer-reviewed, third party documentation, usually obtained by field studies, that have produced data that is scientifically defensible and have sufficient replications to be representative. The data must clearly document the manufacturer's claim as to the performance of the product.
 - (b) The field studies shall have relevancy to the field conditions encountered within the State of Oregon, such as soil-type and climate, before the Department may recommend the technology or material for statewide use. If the studies are only partly relevant to Oregon field conditions, the Department may limit its recommendation of the technology or material to locations with similar field conditions.
 - (c) The field studies shall include a control that represents the applicable prescriptive standards within OAR Chapter 340, Divisions 071 and 073, against which the new technology or material is evaluated.

- (d) The studies shall clearly define objectives and variables being considered. Objectives shall include performance standards sought. Variables shall include climate, soil, waste characteristics such as flow and strength, and topography.
 - (e) The field studies shall be sufficient to address system operations at maturity and any temporal variabilities.
- (3) Supplemental to the requirements described in section (2) of this rule, field studies conducted to demonstrate equivalent or better performance of material used as a substitute for drain media shall have been conducted substantially in conformance with the testing protocol described in OAR 340-071-0117, **or an alternative protocol that includes a schedule indicating onset and completion date of the study, has scientific merit and has a reasonable expectation to provide conclusions necessary for Department determination of approval or denial.**
- (4) Prescriptive standard option. The applicable standards within OAR Chapter 340, Divisions 071 and 073, shall be the prescriptive standards new or innovative technology or materials are evaluated against. Supplemental criteria may be developed by the Department if it determines the applicable standards within OAR Chapter 340, Divisions 071 and 073 are insufficient. A prescriptive standard option for material used as a substitute for drain media is prescribed in section (5) of this rule.
- (5) Prescriptive standard option for material used as a substitute for drain media. The Department may recommend for approval proposed new or innovative materials intended to be used within disposal trenches (including seepage trenches), seepage beds or other similar absorption facilities by evaluating the following criteria:
- (a) The new or innovative materials shall be structurally sound, durable and inert within the environment they are placed. The substitute material shall be capable of passing wastewater towards the infiltrative surfaces at a rate equal to or greater than drain media.
 - (b) Disposal trench:
 - (A) The trench shall be excavated in conformance with the trench standards described in OAR Chapter 340, Division 071. However, due to the design configuration of the substitute material for drain media, the trench width may be less than 24 inches wide provided the trench length is increased to compensate for the loss of the bottom surface area using the following formula:

$$\text{Adjusted Trench Length} = (24 \text{ inches} \div W) \times L$$

Where:

W = the reduced trench width in inches;

L = the original trench length as specified in paragraph (5)(b)(F) of this rule.

- (B) The substitute material for the drain media shall be placed within the trench, and be in uniform contact with the trench bottom and both sidewalls. If voids larger than typically found with the use of drain

media are present along the trench bottom after placement of the substitute material, methods to prevent the entry of burrowing rodents shall be required. If the substitute material for drain media is not in uniform contact with both sidewalls, drain media shall be placed within the trench so as to provide that contact;

- (C) The substitute material for drain media shall be placed so as to provide a uniform sidewall infiltrative surface depth as measured along the trench sidewall from the bottom to the top of the drain media substitute in contact with the sidewall. In seepage trenches, the depth of the substitute material for drain media shall be greater than 12 inches. If the substitute material for drain media provides less than 12 inches of sidewall contact depth, either drain media must be placed to accomplish the minimum sidewall contact depth, or the length of the disposal trench shall be increased to compensate for the reduced sidewall seepage area depth using the following formula:

$$\text{Adjusted Trench Length} = (12 \text{ inches} \div D) \times L$$

Where:

D = the reduced sidewall seepage area depth in inches;

L = the original trench length as specified in paragraph (5)(b)(F) of this rule.

- (D) If a substitute material is used in the trench that is both narrower than 24 inches and has a sidewall contact depth that is less than 12 inches, then the adjusted trench length shall be the longer of the adjusted trench lengths calculated using the formulae within paragraphs (A) and (C) of this subsection.
- (E) The top surface of the substitute material for the drain media shall be level across the trench and be in contact with each side of the trench. The substitute material for drain media shall have porosity at the top surface that is not appreciably different from the porosity of drain media. Drain media may be placed across the top of the substitute material to provide the level surface extending from sidewall to sidewall.
- (F) The sizing criteria for standard disposal trenches using a substitute material for drain media shall conform to OAR 340-071-0220(2), 340-071-0290(4), or 340-071-0360(2)(a). Seepage trenches using a substitute material for drain media shall be sized in conformance with OAR 340-071-0280(2), 340-071-0290(4), 340-071-0310(2) or 340-071-0360(2)(b).

(c) ETA beds, seepage beds:

- (A) Beds shall be excavated in conformance with the standards described in OAR 340-071-0270(2) or 340-071-0275(4)(d);
- (B) The substitute material for drain media shall be placed within the excavation, and be in contact with the bottom and sidewalls of the bed. If voids larger than typically found with the use of drain media are present along the bottom or

sidewalls after placement of the substitute material, methods to prevent the entry of burrowing rodents may be required;

- (C) The substitute material for drain media shall be placed so as to provide a substitute material depth of at least 12 inches, as measured from the bottom of the excavation to the top of the drain media substitute. If the depth of the media substitute is less than 12 inches, drain media may be placed within the excavation to provide this depth.
 - (D) The upper surface of the substitute material for drain media shall be level from sidewall to sidewall. The porosity of the top surface of the substitute material shall not appreciably differ from the porosity of drain media. Drain media may be placed across the top of the substitute material to provide the level surface extending from sidewall to sidewall.
 - (E) The sizing criteria for ETA beds that contain a substitute material for drain media shall be as specified in OAR 340-071-0270(2). Seepage beds using a substitute material for drain media shall be sized in conformance to OAR 340-071-0275(4)((d)(B).
- (d) Distribution piping that is present in absorption facilities using a substitute material for drain media shall comply with the appropriate pipe standards within OAR Chapter 340, Division 071 and OAR 340-073-0060.

Stat. Auth.: ORS 454.625 & 468.020

Stats. Implemented: ORS 454.615; 454.775; 468.035 & 468.045

Hist.: DEQ 15-1999, f. & cert. ef. 12-29-99

Amend OAR 340-071-0130 as follows:

340-071-0130 GENERAL STANDARDS, PROHIBITIONS AND REQUIREMENTS

- (1) **Public Waters or Public Health Hazards.** If, in the judgment of the Agent, proposed operation of a system would cause pollution of public waters or create a public health hazard, system installation or use shall not be authorized. If, in the judgment of the Agent, the minimum standards contained in these rules do not afford adequate protection of public waters or public health, the requirements shall be more stringent. This may include, but is not limited to, increasing setbacks, increasing drainfield sizing and/or utilizing an Alternative System. If the Agent imposes requirements more stringent than the minimum, the Agent shall provide the applicant with a written statement of the specific reasons why the requirements are necessary.
- (2) **Approved Disposal Required.**
 - (a) All sewage shall be treated and disposed of in a manner approved by the Department. After review by the Technical Review Committee and by the Department, the Director may approve the use of new or innovative technologies, materials, or designs that differ from those specified within this division and OAR Chapter 340, Division 073, if such technologies, materials, or designs provide equivalent or better protection of the public health and safety and waters of the State and meet the purposes of this division and OAR Chapter 340,

Division 073, including the purposes stated in OAR 340-071-0110. The Director may amend or repeal an approval granted pursuant to this section. The Department may determine that the appropriate method of approving Alternative Systems is by rule amendment.

- (b) On ~~[March 1, 2000]~~ **December 31, 2002** each approval for new or innovative technology or material that was granted by the Director prior to July 1, 1999, shall expire unless the new or innovative technology or material is:
- (A) found to be in conformance with the prescriptive standard option described in OAR 340-071-0116~~(4) and (5)~~; or
- (B) in the process of an evaluation in conformance with the **testing or performance protocol and schedule ~~criteria~~** described in OAR 340-71-0116~~(3) ~~(1)~~~~, **or the new and innovative technology or material meets the requirements set forth in 340-071-0116(1)**. At the conclusion of the evaluation, which shall not exceed three years, the Director may approve the new or innovative technology or material if it ~~meets the criteria~~ **has demonstrated equivalent or better performance to the standard disposal trench currently approved in Oregon**. While engaged in the ~~performance~~ evaluation, materials with a current approval from the Director for use as a drain media substitute may be allowed through a construction-installation permit. **During the evaluation of a product approved prior to July 1, 1999, the Department may allow the trench length to be reduced ~~and sized~~** according to **the** appropriate manufacturer's recommendation ~~with Department concurrence~~, provided the following conditions are met:
- (i) The manufacturer provides a written warranty acceptable to the Department that provides for repair or replacement if the material is found to be defective or contributes wholly or in part to a failure of the absorption facility;
- (ii) The manufacturer, installer or property owner provides a bond or other security acceptable to the Department, assuring the repair or replacement of the absorption facility that the Department finds to be defective or to be contributing to the failure of the facility. The amount of the bond or security shall be based on the projected number of systems installed during the evaluation period at \$2500 per system. The bond or security must be maintained for 5 years, or until the drain media substitute as installed has been approved as provided in subsection (2)(a) of this rule, or until the system is decommissioned, whichever is sooner;
- (iii) The property with a system proposed to be installed at the appropriate manufacturer's recommended sizing, must have sufficient area available to accommodate an initial and replacement system at a size that would otherwise be required by these rules~~;~~ **or,**

(C) meets such performance criteria for the standard disposal trench as may be established by rule.

- (3) Discharge of Sewage Prohibited. Discharge of untreated or partially treated sewage or septic tank effluent directly or indirectly onto the ground surface or into public waters constitutes a public health hazard and is prohibited.
- (4) Discharges Prohibited. No cooling water, air conditioning water, water softener brine, groundwater, oil, hazardous materials, roof drainage, or other aqueous or non-aqueous substances which are, in the judgment of the Department, detrimental to the performance of the system or to groundwater, shall be discharged into any system.
- (5) Increased Flows Prohibited. Except where specifically allowed within this division, no person shall connect a dwelling or commercial facility to a system if the total projected sewage flow would be greater than that allowed under the original system construction permit.
- (6) System Capacity. Each system shall have adequate capacity to properly treat and dispose of the maximum projected daily sewage flow. The quantity of sewage shall be determined from **Table 2** or other information the Agent determines to be valid that may show different flows.
- (7) Material Standards. All materials used in on-site systems shall comply with standards set forth in these rules.
- (8) Encumbrances. A permit to install a new system can be issued only if each site has received an approved site evaluation (OAR 340-071-0150) and is free of encumbrances (i.e., easements, deed restrictions, etc.) which could prevent the installation or operation of the system from being in conformance with the rules of this division.
- (9) Future Connection to Sewerage System. In areas where a district has been formed to provide sewerage facilities, placement of house plumbing to facilitate connection to the sewerage system shall be encouraged.
- (10) Plumbing Fixtures Shall be Connected. All plumbing fixtures in dwellings and commercial facilities from which sewage is or may be discharged, shall be connected to, and shall discharge into an approved area-wide sewerage system, or an approved on-site system which is not failing.
- (11) Property Line Crossed:
 - (a) A recorded utility easement and covenant against conflicting uses, on a form approved by the Department, is required whenever a system crosses a property line separating properties under different ownership. The easement must accommodate that part of the system, including setbacks, which lies beyond the property line, and must allow entry to install, maintain and repair the system;
 - (b) Whenever an on-site system is located on one lot or parcel and the facility it serves is on another lot or parcel under the same ownership, the owner shall execute and record in the county land title records, on a form approved by the Department, an easement and a covenant in favor of the State of Oregon:

ATTACHMENT A

- (A) Allowing its officers, agents, employees and representatives to enter and inspect, including by excavation, that portion of the system, including setbacks, on the other lot or parcel; and
 - (B) Agreeing not to put that portion of the other lot or parcel to a conflicting use; and
 - (C) Agreeing that upon severance of the lots or parcels, to grant or reserve and record a utility easement, in a form approved by the Department, in favor of the owner of the lot or parcel served by the system.
- (12) Disposal and Replacement Area. Except as provided in specific rules, the disposal area, including installed system and replacement area shall not be subject to activity that would, in the opinion of the Agent, adversely affect the soil or the functioning of the system. This may include, but is not limited to, vehicular traffic, covering the area with asphalt or concrete, filling, cutting, or other soil modification.
- (13) Operation and Maintenance. All systems shall be operated and maintained so as not to create a public health hazard or cause water pollution. Those facilities specified in sections (15) or (16) of this rule as requiring a WPCF permit shall have operation and maintenance requirements established in the permit.
- (14) Construction. The Department or Agent may limit the time period a system can be constructed due to soil conditions, weather, groundwater, or other conditions which could affect the reliability of the system.
- (15) Operating Permit Requirements. The following systems shall be constructed and operated under a renewable WPCF permit, issued pursuant to OAR 340-071-0162:
- (a) Any system or combination of systems located on the same property or serving the same facility with a total sewage flow design capacity greater than 2,500 gallons per day. Flows from single family residences or equivalent flows on separate systems need not be included;
 - (b) A system of any size, if the sewage produced is greater than residential strength wastewater;
 - (c) Holding tanks;
- EXCEPTIONS:** This requirement does not apply to septic tanks used as temporary holding tanks pursuant to OAR 340-071-0160(11), or to holding tanks described in OAR 340-071-0340(5).
- (d) A system which includes a conventional sand filter as part of the treatment process that serves a commercial facility;
 - (e) A system which includes an aerobic treatment facility as part of the treatment process if:
 - (A) The system serves a commercial facility; or
 - (B) The system does not meet the requirements of OAR 340-71-0220 and 340-071-0345.
 - (f) Recirculating Gravel Filters (RGFs);

- (g) Other systems that are not described in this division, that do not discharge to surface public waters.
- (16) WPCF Permits for Existing Facilities:
- (a) Owners of existing systems meeting the system descriptions in subsections (15)(a), (b), and (d) through (g) of this rule are not required to apply for a WPCF permit until such time as a system repair, or alteration is necessary;
 - (b) All owners of existing holding tanks installed under a construction-installation permit issued pursuant to these rules, except holding tanks described in OAR 340-071-0340(5) and septic tanks used as temporary holding tanks pursuant to OAR 340-071-0160(11), shall make application for a WPCF permit by September 30, 1998. The application filing fee and the annual compliance determination fee listed in OAR 340-071-0140(5) shall be submitted with the application. Applications submitted on or after October 1, 1998 shall include all applicable fees established in OAR 340-071-0140.
- (17) Perpetual Surety Bond Requirements. Pursuant to Oregon Revised Statutes (ORS) 454.425 and OAR Chapter 340, Division 015, a perpetual surety bond, or approved alternate security, in the amount of \$1.00 per gallon per day installed sewage disposal capacity, shall be filed with the Department by any person proposing to construct or operate facilities for the collection, treatment, or disposal of sewage with a design capacity of 5,000 gallons per day or more.
- (a) Exemptions From the Surety Bond Requirements:
 - (A) Systems serving only food handling establishments, travel trailer accommodations, tourist and travelers facilities, or other development operated by a public entity or under license issued by the State Health Division. (Systems which serve both licensed facilities and unlicensed facilities require a surety bond if the portion requiring a Health Division license has a design capacity of 5,000 gallons per day or more);
 - (B) Systems owned and operated by a state or federal agency, city, county service district, sanitary authority, sanitary district, or other public body;
 - (C) Systems serving the sewerage needs of industrial or commercial operations where there are no permanent residences.
 - (b) Alternate Security: The approved forms of alternate security are specified in OAR 340-015-0020.
- (18) Fees for WPCF Permits. The fees required to be filed with WPCF permit applications and to be paid annually for WPCF permit compliance determination are outlined in OAR 340-71-140(5).
- (19) Variances for WPCF Permits. The variance procedures established in this division do not apply to systems permitted by WPCF Permit.
- (20) Engineering Plan Review. Pursuant to ORS 468B.055, unless specifically exempted by rule, all plans and specifications for the construction, installation or modification of disposal systems, shall be submitted to the Department for its approval or denial pursuant to rules of the Commission. The design criteria and rules governing the plan review are as follows:
- (a) For on-site systems which do not require a WPCF permit, the rules and design criteria for construction are found in this division. Construction standards for certain manufactured items are found in OAR Chapter 340, Division 073;

- (b) For on-site systems which require a WPCF permit, the criteria in this division shall be used. However, the Department may allow variations of the criteria and/or technologies, when the applicant or Department has adequate documentation of successful operation of that technology or design. The burden of proof for demonstrating new processes, treatment systems, and technologies that the Department is unfamiliar with, lies with the system designer. The Department shall review all plans and specifications for WPCF permits pursuant to procedures and requirements outlined in OAR Chapter 340, Division 052.
- (21) **Manufacturer's Specifications.** All materials and equipment, including but not limited to tanks, pipe, fittings, solvents, pumps, controls, valves, etc. shall be installed, constructed, operated, and maintained in accordance with manufacturer's minimum specifications.
- (22) **Sewer and Water Lines.** Effluent sewer and water line piping which is constructed of materials which are approved for use within a building, as defined by the current Oregon State Plumbing Specialty Code, may be run in the same trench. Where the effluent sewer pipe is of material not approved for use in a building, it shall not be run or laid in the same trench as water pipe unless both of the following conditions are met:
 - (a) The bottom of the water pipe at all points shall be set at least 12 inches above the top of the sewer pipe;
 - (b) The water pipe shall be placed on a solid shelf excavated at one side of the common trench with a minimum clear horizontal distance of at least 12 inches from the sewer pipe.
- (23) **Septage Disposal.** No person shall dispose of sewage, septage (septic tank pumpings), or sewage contaminated materials in any location not authorized by the Department under applicable laws and rules for such disposal.
- (24) **Groundwater Levels.** All groundwater levels shall be predicted using "Conditions Associated With Saturation" as defined in OAR 340-071-0100. In areas where conditions associated with saturation do not occur or are inconclusive, such as in soil with rapid or very rapid permeability, predictions of the high level of the water table shall be based on past recorded observations of the Agent. If such observations have not been made, or are inconclusive, the application shall be denied until observations can be made. Groundwater level determinations shall be made during the period of the year in which high groundwater normally occurs in that area. A properly installed nest of piezometers or other methods acceptable to the Department shall be used for making water table observations.

Stat. Auth.: ORS 454.625 & 468.020

Stats. Implemented: ORS 454.615, 454.655, 454.695, 468B.050, 468B.055 & 468B.080

Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 9-1984, f. & ef. 5-29-84; DEQ 27-1994, f. & cert. ef. 11-15-94; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 8-1998, f. & cert. ef. 6-5-98; DEQ 15-1999, f. & cert. ef. 12-29-99

ATTACHMENT B

List of Persons Providing Comment During the Extended Public Comment Period

1. Keith Shumate, Squire, Sanders & Dempsey, L.L.P. Mr. Shumate submitted a letter containing written comment on the proposed rulemaking, dated and received July 13, 2000.
2. Alex Mauck, E-Z Drain Co. Mr. Mauck submitted a letter containing written comment on the proposed rulemaking, dated and received July 26, 2000.
3. Keith Shumate, Squire, Sanders & Dempsey, L.L.P. Mr. Shumate submitted a letter containing written comment on the proposed rulemaking, dated and received July 31, 2000.
4. William H. Chapman, Preston, Gates & Ellis, L.L.P. Mr. Chapman submitted a letter containing written comment on the proposed rulemaking, dated and received July 31, 2000, with the following attachment:
 - 1) 5/15/00 Letter from Michael R. Campbell, Stoel Rivers, L.L.P, to the Department, identified in the text as a courtesy copy of a previously submitted letter to the Department.

ATTACHMENT C

Department's Evaluation of Public Comment

COMMENT #1: One commenter (#1) expressed the opinion that PSA was not given proper notice of the proposed rule amendments that would have prevented the approvals for Infiltrator and E-Z Drain from expiring. This oversight has given these two companies a significant competitive advantage, and, in addition, PSA was not given an opportunity to comment on the proposed rule change.

RESPONSE #1: Members of the Commission also expressed concern about this possible error in the notification procedure and voted to re-open the comment period for two weeks, providing adequate time for PSA to review the proposed rule amendments and provide comment. In response, the Department did re-open the comment period, PSA was given proper notice, and PSA provided the Department with comments regarding the proposed rule amendments. To the extent there was any degree of deficiency in the notice procedure, the Department has rectified the problem and allowed PSA to both review and comment on the proposed rule amendments.

COMMENT #2: Two commenters (#1, #3) recommended that OAR 340-071-0130(2)(c) be deleted, and OAR 340-071-0116(4) be modified with the following language: **“Such supplemental criteria may include but not be limited to the dimensional similarity and functional equivalency of a new or innovative technology or material determined by the Department to be consistent with those of any previously approved new or innovative technology or material”**.

RESPONSE #2: Staff determined it was prudent to allow manufacturers of drain media substitutes to apply for approval by demonstrating functional equivalency of their product to a product that has been approved following the provisions in OAR 340-071-0130(2)(a).

COMMENT #3: Two commenters (#1, #3) recommended that OAR 340-071-0130(2)(c) be modified with the following language: **“... , or which issue based upon supplemental criteria as described in OAR 340-071-0116(4), ...”**.

- RESPONSE #3:** See response #2 above.
- COMMENT #4:** One commenter (#2) expressed the opinion that the proposed rules simply freeze the status quo.
- RESPONSE #4:** Both existing approvals will remain in place during the testing phase of these products. However, based on the results of the test, the approvals may be modified.
- COMMENT #5:** One commenter (#2) expressed the opinion that there was no reason for the Department not to implement the proposed rules.
- RESPONSE #5:** Based on comments received by the Department, modifications were made to the proposed rule amendments that improved clarity and established deadlines for current approvals.
- COMMENT #6:** One commenter (#3) expressed the opinion that OAR 340-071-0116 requires duplicative and unnecessary procedures for gaining approval, since there is no section in the proposed amendments for approving new products or technologies that are based on products and/or technologies that are already approved.
- RESPONSE #6:** See Response #2 above.
- COMMENT #7:** One commenter (#3) expressed the opinion that OAR 340-071-0130(2)(c) was unfair because it allows the E-Z Drain and Infiltrator to continue their approvals indefinitely without meeting the new standards for approval.
- RESPONSE #7:** Members of the Commission expressed concern about the lack of deadline amounting to an “indefinite approval” for the two manufacturers with prior approvals. In response, the Department has modified the proposed rule amendments to set a deadline for the two manufacturers with prior approvals to meet the new standard for approval as December 31, 2002. Otherwise the products will not be allowed for use in Oregon.
- COMMENT #8:** One commenter (#3) recommends that the “grandfather” clause in OAR 340-071-0130(2)(c) be deleted from the proposed rule amendments.
- RESPONSE #8:** See Response #7 above.
- COMMENT #9:** One commenter (#4) recommended that the Commission adopt the proposed rule amendments to OAR 340-071-0116(3) and 340-071-0130(2)(c).
- RESPONSE #9:** See Response #5 above.

COMMENT #10: One commenter (#4) suggests changing, for clarification purposes only, OAR 340-071-0130(2)(b)(B) by adding “**identified in OAR 340-071-0116(3)**” to the end of the sentence.

RESPONSE #10: At the end of the paragraph of OAR 340-071-0130(2)(b)(B), the following language, “**has demonstrated equivalent or better performance to the standard disposal trench currently approved in Oregon**” was added to clarify the criteria that must be met to satisfy the new approval standard.

COMMENT #11: One commenter (#4) found the proposed rule amendments to be valid, in contrast to PSA assertions that the Department did not provide adequate notice for comments on the proposed rule amendments.

RESPONSE #11: Members of the Commission also expressed concern that PSA might not have been given proper notice and opportunity to comment on the proposed rule amendments and voted to re-open the comment period. Therefore, the Department re-opened the comment period for 15 days to allow PSA the opportunity to comment on the proposed rule amendments.

ATTACHMENT D

Detailed Changes to Proposed Rule Amendments made in Response to Commission Requests and Public Comment

Proposed Rule (Attachment A)

OAR 340-071-0116 Review Criteria for New or Innovative Technology or Materials

- (2) Performance evaluation of new or innovative technology or materials. Performance is the preferred standard by which new or innovative technologies and materials are evaluated in the State of Oregon. Performance is established when the Department determines the criteria described in subsections (a) through (e) of this section are met~~ed~~. **With respect to new or innovative technology or material proposed for use as a substitute for drain media, performance may also be established by a demonstration of functional equivalency to a material that is approved pursuant to provisions in OAR 340-071-0130(2)(a) on or after September 1, 2000.**

Reason: Staff determined it was prudent to allow manufacturers of drain media substitutes to apply for approval by demonstrating functional equivalency of their product to a product that has been approved following the provisions in OAR 340-071-0130(2)(a).

- (3) Supplemental to the requirements described in section (2) of this rule, field studies conducted to demonstrate equivalent or better performance of material used as a substitute for drain media shall have been conducted substantially in conformance with the testing protocol described in OAR 340-071-0117, **or an alternative protocol that includes a schedule indicating onset and completion date of the study, has scientific merit and has a reasonable expectation to provide conclusions necessary for Department determination of approval or denial.**

Reason: After further review, staff determined that a schedule for onset and completion of the performance evaluation/study was a necessary addition to any protocol submitted to the Department for review. Staff also determined that the standard trench, as currently approved in the State of Oregon, provides the de facto performance criterion that will assist the Department in determining equivalency.

Proposed Rule (Attachment A)

OAR 340-071-0130 General Standards, Prohibitions and Requirements

2(b) On ~~March 1, 2000~~ **December 31, 2002**, each approval for new or innovative technology or material that was granted by the Director prior to July 1, 1999, shall expire unless the new or innovative technology or material is:

(A) found to be in conformance with the prescriptive standard option described in OAR 340-071-0116(4) and (5); or

(B) in the process of an evaluation in conformance with the **testing or performance protocol and schedule ~~criteria~~** described in OAR 340-71-0116(3) ~~10117~~, or the **new and innovative technology or material meets the requirements set forth in 340-071-0116(1)**. At the conclusion of the evaluation, which shall not exceed three years, the Director may approve the new or innovative technology or material if it ~~meets the criteria~~ **has demonstrated equivalent or better performance to the standard disposal trench currently approved in Oregon**. While engaged in the ~~performance~~ evaluation, materials with a current approval from the Director for use as a drain media substitute may be allowed through a construction-installation permit. **During the evaluation of a product approved prior to July 1, 1999, the Department may allow the trench length to be reduced ~~and sized~~** according to the appropriate manufacturer's recommendation ~~with Department concurrence~~, provided the following conditions are met:

...

(C) meets such performance criteria for the standard disposal trench as may be established by rule.

Reason: In section 2(b), the Department responded to the Commission's concern's by setting the December 31, 2002 deadline for the two manufacturers with prior approvals to meet in order to prevent a "grandfathering" of the approvals for those two manufacturers. In section 2(b)(A), this language was added to this section to be consistent with OAR 340-071-0116. In section 2(b)(B), this language was added to be consistent with 340-071-0116, 340-071-0117 and 340-071-0130. Also, the language, "**has demonstrated equivalent or better performance to the standard disposal trench currently approved in Oregon**" at the end of the paragraph was added per to clarify the criteria that must be met in order to satisfy the new approval standard. A new section 2(b)(C) was added to establish, if developed by the Department and adopted by the EQC, the performance criteria for the standard disposal trench. If developed and subsequently adopted by rule,

this performance criteria would set a benchmark for manufacturers of substitute drain media to meet instead of following the provisions found in the rules for the prescriptive, performance or comparison approach for meeting the new standard of approval.

ATTACHMENT E

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
For
Revisions to On-Site Innovative Technology Rules
Rule Implementation Plan

Summary of Proposed Rule

The Department is proposing amendments to existing rules that establish performance-based and prescriptive standards to be used when reviewing and authorizing new or innovative technologies and materials for use within on-site sewage treatment and disposal systems. These amendments will establish in rule the flexibility to consider alternate methods of demonstrating the effectiveness of the new technology.

Proposed Effective Date of the Rule

August 27, 2000

Proposal for Notification of Affected Persons

Copies will be sent to the two immediately affected businesses, and businesses that sent in comments during the extended comment period. The rule changes will be included in copies of the rules, including the on-line version.

Proposed Implementing Actions

None Required

Proposed Training/Assistance Actions

None Required

Minutes are not final until approved by the EQC

Environmental Quality Commission Minutes of the Two Hundred and Eighty-Seventh Meeting

**September 6, 2000
Special Phone Meeting**

On September 6, 2000, the Environmental Quality Commission (EQC) held a special phone meeting at the Department of Environmental Quality (DEQ) headquarters, 811 SW Sixth Ave, Portland, OR. The following Environmental Quality Commission members were present:

Melinda Eden, Chair
Tony Van Vliet, Member
Mark Reeve, Member
Deirdre Malarkey, Member

Also present were Larry Knudsen, Assistant Attorney General, Oregon Department of Justice (DOJ); Lydia Taylor, Deputy Director, Department of Environmental Quality; and other staff from DEQ.

Note: The Staff reports from 1994 referred to at this meeting, are on file in the Office of the Director, 811 SW Sixth Avenue, Portland, Oregon 97204. Written material submitted at this meeting is made a part of the record and is on file at the above address. These written materials are incorporated in the minutes of the meeting by reference.

Chair Eden called the meeting to order at 8:00 a.m. on Wednesday, September 6.

A. Informational Item: Standards, Criteria, Policy Directives and Hiring Procedures to be Used in Hiring the Director of the Department of Environmental Quality

The Commission discussed the Standards, Criteria, Policy Directives and Hiring Procedures in Hiring the Director of the Department of Environmental Quality that were used by the Commission in 1994. The changes they made were as follows:

- The Human Resources Services Division of the Department of Administrative Services would be asked to coordinate the application process.
- Recruitment would be held open until October 6, 2000. The Commission may choose to extend the deadline if not enough applications are received.

Written public comment on the standards, criteria, policy directives and hiring procedures will be taken until September 25, 2000. Oral comment will be heard at the September EQC meeting, and the Commission will vote on this action item after consideration of all comments.

A motion was made by Commissioner Van Vliet to propose for public comment the standards, criteria, policy directives and hiring procedures in hiring of the Director of the Department of Environmental Quality set forth in 1994 with the above amendments. Commissioner Reeve seconded the motion and it passed with four "yes" votes.

There being no further business, the meeting was adjourned at 8:35 a.m.

Minutes are not final until approved by the EQC

Environmental Quality Commission Minutes of the Two Hundred and Eighty-Sixth Meeting

**August 22, 2000
Special Phone Meeting**

On August 22, 2000, the Environmental Quality Commission (EQC) held a special phone meeting at the Department of Environmental Quality (DEQ) headquarters, 811 SW Sixth Ave, Portland, OR. The following Environmental Quality Commission members were present:

Melinda Eden, Chair
Harvey Bennett, Member
Tony Van Vliet, Member
Mark Reeve, Member
Deirdre Malarkey, Member

Also present were Larry Knudsen, Assistant Attorney General, Oregon Department of Justice (DOJ); Lydia Taylor, Deputy Director, Department of Environmental Quality; and other staff from DEQ.

Note: The Staff report presented at this meeting, which contain the Department's recommendations, is on file in the Office of the Director, 811 SW Sixth Avenue, Portland, Oregon 97204. Written material submitted at this meeting is made a part of the record and is on file at the above address. These written materials are incorporated in the minutes of the meeting by reference.

Chair Eden called the meeting to order at 2:00 p.m. on Tuesday, August 22.

A. Rule Adoption: Revisions to On-Site Innovative Technology Rules

Mike Llewelyn, Water Quality Administrator, and Ed Woods, On-Site Manager, presented this item to the Commission.

The EQC reviewed the proposed rule revisions and made the following changes:

1. In 340-071-0116(2) The second sentence beginning "Performance is established..." was moved to be the third sentence. This was to make it easier to read.
2. In 340-071-0130(2)(b) the following changes were made. These changes were made to make the rule easier to understand.
 - The last word of the first sentence "is" was removed and added to the beginning of (A) and (B).
 - In (B) the phrase "the new and innovative technology or material" was removed.
 - (B) was divided into 2 sections called (C) and (C)(i). (i) starts with the sentence "During the evaluation of a product approved prior to July 1, 1999..." and includes subitems (i), (ii), and (iii). The remainder of (B) was renamed section (C).
 - Section (C) was renamed (B).

The EQC discussed the merits of allowing until December 31, 2002 for current approvals to expire. Mr. Llewelyn indicated the current approvals would have continued indefinitely were it not for the litigation. He also indicated DEQ intended to try to define the performance of the standard trench through a contract. If criteria were established as indicated in the proposed 130(2)(b)(C) they would be incorporated by rule. If for any reason DEQ were notable to establish criteria, current approvals could not use (C) would be able to get approval by any of the other options.

The "piggybacking" of approvals was discussed. The Commission asked what would DEQ expect from a company that wanted "functional equivalency" approval? DEQ responded that it would be up to the applicant to demonstrate "functional equivalency" to DEQ's satisfaction.

Commissioner Van Vliet made a motion to adopt the rules with the above corrections. Commissioner Malarkey seconded the motion and it carried with five "yes" votes.

Deputy Director Taylor gave an update on the spill at 15 Mile Creek.

There being no further business, the meeting was adjourned at 2:55 p.m.