



STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

Circular Letter No. 98-13

MEMORANDUM

TO: Directors of Health
Chief Sanitarians
Licensed Engineers
Connecticut Sewage Disposal Association

FROM: Frank A. Schaub *FAS*
Supervising Sanitary Engineer
Environmental Engineering Section

DATE: June 18, 1998

RE: SEPTIC UPDATES

Enclosed please find a compilation of 11 items our section staff has generated over the past several months concerning new products, fill specifications and other general information. Please circulate this information to all of your staff and installers in your area. The items covered include:

1. Approval of Ecoltube DR35 distribution pipe.
2. Approval of AEF480 filter fabric.
3. Approval of Zoeller septic tank outlet filters.
4. Approval of Equalizer flow control units for non level systems.
5. List of actions taken against licensed installers in 1997.
6. Approval of the Floating Outlet (FLOUT) distribution chamber.
7. Memo to building officials reminding them to comply with Section 19-13-B100 and other health regulations.



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8. Memo concerning protection of private wells.
9. Letter concerning select fill as revised in our soon to be reprinted "Design Manual".
10. Approval of ADS-N12 pipe with Series 35 fittings and couplings as a watertight equal to ASTM D3034 SDR35.
11. In addition, our first submission of revisions to Section 19-13-B100 (Building Additions, Conversions, Changes in Use, etc.) resulted in a denial without prejudice at the May 26 meeting of the Legislative Regulations Review Committee. We reviewed their comments and made minor changes to address their concerns. We are on the schedule for reconsideration during the July meeting. We are hopeful it will pass. Enclosed is the latest draft submission to the Legislative Regulation Review Committee.

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STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

December 4, 1997

Marc Cote
Product Engineer
Duchesne Pipe LTD
1245, boul Lavolser, CP 760
St. Joseph DeBeauce (Quebec)
Canada 605 2V0

RE: Coextruded PVC Non-pressure Pipe: Ecolotube DR35 Meeting ASTM F 1760

Dear Mr. Cote:

This office has reviewed the specifications and related information you submitted concerning the Ecolotube DR35 pipe your company manufactures. You requested that this office consider the pipe for use in distribution pipe applications in subsurface sewage disposal system installations. Distribution pipe is the gravity pipe that follows the septic tank.

This office has established PVC SDR-35 ASTM D 3034 pipe as the benchmark for distribution pipe applications that do not require bedding in stone. The pipe stiffness of the Ecolotube DR35 pipe made by your company equals that of the ASTM D 3034 SDR 35 pipe. The documentation you submitted indicated the only difference between the pipes is that the SDR 35/ASTM D 3034 is made out of virgin PVC where as the DR35/ASTM F1760 has inner and outer virgin PVC layers and a reprocessed-recycled PVC center layer. Based upon our review of the specifications the Ecolotube DR35 is acceptable for use for gravity distribution pipe used after the septic tank. This office will add the ASTM F 1760 DR35 specification to the list of approved distribution pipe (Table No. 5) in the next printing of our Technical Standards for Subsurface Sewage Disposal Systems. The next anticipated revision date to the Technical Standards is January 1, 1999. The pipe must be appropriately stamped with the ASTM F 1760 DR35 designation.

Please feel free to reproduce this letter as a means for notifying engineers, health officials, installers, and distributors, of our approval of the pipe. This letter may be reproduced in its entirety and is not to be considered an endorsement of the product.

If you have any questions or would like to further discuss this matter, please contact our office.

Sincerely,

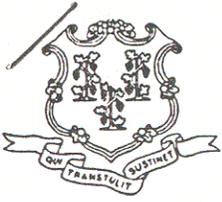
Frank A. Schaub
Supervising Sanitary Engineer
Environmental Engineering Section

FAS:lms

cc: Arthur Castellazzo
Robert Scully



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STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

December 12, 1997

Mr. Reuben Weinstein
American Engineering Fabrics, Inc.
1 Coffin Avenue
New Bedford, MA 02746

RE: Approval of AEF 480 Filter Fabric Used In Septic Systems Construction

Dear Mr. Weinstein:

This office has reviewed the specifications of your AEF 480 Non-Woven Filter Fabric. The fabric is labeled with the AEF 480 designation.

This labeled fabric meets the requirements stipulated in Section VIII Leaching Systems, subsection A. of our Technical Standards. The labeled fabric is acceptable for covering stone utilized in leaching system construction. It will be included on our list of approved filter fabrics. Please feel free to reproduce this letter as a means of notifying your local distributors of our approval. This approval is not to be construed as an endorsement of this or any other filter fabric.

If you have any questions or would like to discuss this matter please contact our office.

Sincerely,

Frank A. Schaub
Supervising Sanitary Engineer
Environmental Engineering Section

c: Arthur Castellazzo
Robert Scully

c/sewage/Weinstein



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STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

December 16, 1997

Kenneth Zoeller, Vice President/Manager of Engineering
Solar Pump Company
P.O. Box 16347
Louisville, KY 40256-0347

RE: Approval of Zoeller Septic Tank Outlet Filters

Dear Mr. Zoeller:

The purpose of this correspondence is to clarify our current and proposed regulations concerning installation and use of septic tank outlet filters serving residential and small commercial systems with discharges of 5000 gallons per day or less. These installations are currently regulated under the Connecticut Public Health Code, Section 19-13-B103.

The current regulation does not specifically include approval of any septic tank outlet filter but does require an outlet solids retention device (gas deflector). Upon request, we have written to other manufacturers of similar outlets filters advising them as to the acceptability of replacing a gas deflector with an outlet filter. In our opinion, the outlet filter represents a significantly improved device to prevent solids from discharging into the leaching system.

After reviewing the product which your company manufactures, we would have no objection to installations or use of outlet filters manufactured by your company with the following parts numbers: 170-0003 (residential), 170-0023 (residential), 170-0016 (deluxe), 170-0017 (commercial).

As with any filter unit, the installer is responsible for specifying the proper size unit for the proposed installation and is responsible for informing the property owners as to occasional necessary cleaning and inspection of the filter unit. Filters should be cleaned in such a manner to prevent public nuisance and prohibited the discharge of solids washed from the unit into the outlet piping.

Although there is no specific reference to outlet filters in our code, we anticipate inclusion in the 1999 proposed revisions.

Please feel free to reproduce this letter as a means of notifying engineers, health officials, installers and distributors, of our approval of your filters. This letter may be reproduced in its entirety it is not to be considered an endorsement of the products. If you have any questions or would like to further discuss this matter, please contact our office.

Very truly yours,

Frank A. Schaub
Supervising Sanitarian Engineer
Environmental Engineering Section

FAS/jm

c: Arthur Castellazzo

Robert Scully

Jim Lynch

c:/sewage/letters/Zoeller



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STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

June 8, 1998

Thomas W. Groves, Senior Environmental Engineer
New England Interstate Water Pollution Control Commission
255 Ballardvale Street 2nd Floor
Wilmington, MA 01887-1013

RE: EVALUATION OF EQUALIZER FLOW CONTROL DEVICE.

Dear Tom:

Enclosed please find a copy of a brief memorandum prepared by Robert W. Scully, staff engineer, who performed a home evaluation of the Equalizer on a relatively new sewage disposal system serving his residence. I believe the memorandum is complete and self explanatory.

While this evaluation was in no way meant to be a scientific study, I believe it adds further confidence in demonstrating that the Equalizer does indeed have the ability to adjust for discrepancies which frequently occur in distribution boxes when either the initial construction, back filling operation or occasional movement by frost causes a shifting of the outlet pipe evaluations.

If you have any questions or would like to further discuss these units please contact Robert or myself.

Very Truly Yours,

Frank A. Schaub
Supervising Sanitary Engineer
Environmental Engineering Section

FAS/jm

Enclosure

c:/sewage/letters/neiwpcc



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...ing the first trench. With the system still relatively new, effluent had not overflowed to the second trench at the time Equalizers were installed in the outlet pipes. When the three Equalizer units were installed, those placed on the



STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

DEPARTMENT OF PUBLIC HEALTH ENVIRONMENTAL ENGINEERING SECTION

MEMORANDUM

TO: Frank A. Schaub, Supervising Sanitary Engineer
FROM: ^{RWS} Robert W. Scully, PE, Sanitary Engineer III
RE: Site Evaluation Of New Equalizer, Distribution Box Flow Device.
DATE: May 14, 1998

In October of 1995, I installed three Equalizer flow control units in a distribution box serving my home located in Haddam, CT. My house was constructed in 1994 and is served by a conventional septic system consisting of a twelve hundred and fifty gallon septic tank followed by three 4 foot wide leaching trenches arranged for serial distribution. The system serves two adults, and three children under seven years of age.

The purpose of this demonstration was to see first hand if the Equalizer units would achieve the desired goal of providing equal distribution, even when installed in the same distribution box at different elevations. The manufacturer had claimed that organic slime would build up in the "V" notch weir and become self leveling after some period of use. In order to gain access to the distribution box, I extended a riser with a concrete cover to grade.

The distribution box had originally been set to accomplish serial high level overflow. The inlet pipe entering the box was set the highest. Two outlet pipes running perpendicular to the inlet pipe fed the first trench in two directions and, only when a total of eight inches of liquid effluent was ponded in the trenches, would the effluent overflow to the second trench in series. The overflow pipe invert was set two inches higher than the two pipes feeding the first trench. With the system still relatively new, effluent had not overflowed to the second trench at the time Equalizers were installed in the outlet pipes. When the three Equalizer units were installed, those placed on the lowest pipes feeding the first trench were raised to the highest position. The Equalizer placed on the overflow outlet pipe was set to the lowest position. At these setting, the unit set in the overflow pipe was approximately one quarter inch higher than those feeding the first trench.

Approximately two years later, I uncovered the distribution box to evaluate function of the units. Each of the three Equalizers did have an organic slime growth in the weirs and the growth appeared to be at the same elevation throughout the box. Sewage had obviously been flowing down to the second trench as the slime growth in the lower two units was elevated thereby raising the liquid level in the box until flow began to the overflow trench outlet. From that point on, it appears flow was equally distributed between the three outlets.

Based on the observations of this non technical home experiment, I would agree that the Equalizer does function as described by the manufacturer. The narrow "V" notch weir provides a stable base for the slime to collect and, once established, the slime itself becomes the flow control mechanism. Installation of these products in standard distribution boxes used throughout Connecticut should not present any problems. All equal flow boxes have a high inlet and at least three to six outlets all at the same elevation. With a two inch difference between inlet and outlets, it is not probable that effluent could back up into the inlet pipe, even if the biological slime dams were established at the very high point of the notch.

c/sewage/memos/may1398



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STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

December 29, 1997

Mr. Harry S. Plander
Polylok, Inc.
173 Church Street
Yalesville, CT 06992

RE: Approval of the Equalizer Self - Adjusting Flow Device.

Dear Mr. Plander:

Recently, you received an advisory opinion from the Technical Review Committee for the New England Interstate Regulatory Cooperation Project which has been meeting over the past year to review new technology products such as the Equalizer. The CT State Dept. Of Public Health was an active participant on the committee along with other New England State Sewage Program Regulators.

Based upon review of the data submitted by your company, Technical Review Committee members acknowledged the relationship between the modified "V" -notch weir, the bacterial slime which typically forms in all distribution boxes and the self adjusting flexibility of the Equalizer design to compensate for box movement cause by frost or construction activity. Enclosed please find a copy of the committee's final advisory opinion.

The Equalizer had been previously approved by our office for all installations of leaching components constructed at the same elevation. This new approval extends product use to leaching systems constructed at different elevations yet fed from a single distribution box provided Equalizers are placed on each of the outlet pipes. Equalizers may also be installed on central distribution boxes which are dosed from pumps, siphons or other mechanical devices.

By copy of this letter, we will advise all our Local Health Regulators and Professional Engineers as to the approval of this product in this expanded capacity. We will remind them that other distribution pipe flow adjustment devices which utilize large diameter holes can not be used for leaching systems with components constructed at different elevations. We thank your company for participating with the New England Interstate Regulatory Cooperation Project and support your companies' effort in promoting uniform application of effluent to leaching systems components.

Very truly yours,

Frank A. Schaub
Supervising Sanitary Engineer
Environmental Engineering Section

FAS/jm

c: Arthur Castellazzo
Robert Scully

c/sewage/plander



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ENVIRONMENTAL HEALTH ENFORCEMENT

JAN 1 - DEC 31, 1997

SUBSURFACE SEWAGE INSTALLERS

Cheshire, Dee, SSI/Lic. #001346/Mystic

-Consent Order - September 22, 1997

-\$1,500.00 civil penalty; suspended until he passes state exam relative to

-CGS§20-314(e) followed by two year probation; monitor; coursework pursuant to

-Connecticut Public Health Regulation §19-13-103e (b)(2)(A)

-Type of case: incompetence/negligence

Gervais, Peter, SSI/Lic. #003563/Windham

-Consent Order - September 23, 1997

-Reprimand; \$250.00 civil penalty;

-Type of case: incompetence/negligence

Kudlach, Mark, SSI/Lic. #unlicensed/Versailles

-Cease & Desist Consent Order - September 15, 1997

-Type of case: unlicensed practice of subsurface sewage installer

Erickson, Keith, S.S.I./ Lic. #003317/Cheshire

-Consent Order - July 24, 1997

-Reprimand; \$250.00 civil penalty

-Type of case: incompetence/negligence

Bodyko, Gregory/Unlicensed/North Branford

-Cease and Desist Consent Order - August 1, 1997

-Type of case: unlicensed practice of subsurface sewage disposal system installation

Geer, Mark, S.S.I./Lic. #000283/Waterford

-Voluntary Agreement Not To Renew or Reinstate - April 8, 1997

Kelley, Raymond, S.S.I./Lic. #003592/Mansfield Center

-Consent Order - April 30, 1997

-Reprimand; \$750.00 civil penalty

-Type of case: illegal conduct

Calderwood, John, S.S.I./Lic. #002369/Seymour

-Consent Order - May 7, 1997

-\$2000.00 civil penalty; one year probation: provide local directors with copies of

Consent Order; provide the Department with copies of work permits and written approval notices

-Type of case: incompetence/negligence/illegal conduct

Scheetz, Frank, S.S.I./Lic. #003003/Noank

-Consent Order - May 29, 1997

-\$1,000.00 civil penalty; one year probation: monitor

-Type of case: incompetence/negligence

Mackey, R. Douglas, SSI/Lic. #01059/Woodbury

-Voluntary Agreement Not To Renew/Reinstate - November 24, 1997

Dotsie, Shawn, SSI/Lic. #004056/Woodbury

-Voluntary Agreement Not To Renew/Reinstate - November 24, 1997

Hubbell, James, SSI/Lic. #003984/Naugatuck

-Consent Order - December 17, 1997

-\$200.00 civil penalty; one month stayed suspension; one year probation: dispose of

sewage in manner presented in regulations

-Type of case: incompetence/negligence

Bruce, Richard, S.S.I./ Lic. #002531/Wilton

-Memorandum of Decision - December 29, 1997

-\$300.00 civil penalty; two year probation: other provide notice to Department for

-(1) any work he performs on the installation, improvement or modification of a

subsurface sewage system: (2) change in business address; and, (3) change in the

ownership of his business A1 Dexter Septic and Drainage

-Type of case: incompetence/negligence



STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC SAFETY
DIVISION OF FIRE, EMERGENCY AND BUILDING SERVICES

DATE: January 29, 1998
TO: Municipal Building Officials
FROM: Office of the State Building Inspector
SUBJECT: Connecticut State Building Code, Article 1, Sections 101.5 "Other regulations"
and 2807.1 "Private Sewage Disposal Systems"

The State Department of Public Health, Environmental Engineering Section, has asked this Office to provide a clarification to the above-referenced code sections.

It has been brought to their attention that occasionally a building permit is issued for alteration, change of use or addition to an existing building that is utilizing a private sewage disposal system without first checking with the local health department.

Enforcement of the Public Health Code by the local health department allows new construction, additions/alterations and change of uses to buildings only on lots that can support adequate sewage disposal facilities and assures that if a septic system failed, it could be satisfactorily repaired.

Sections 101.5, "Other regulations", and 2807.1, "Private sewage disposal systems", opens the door and requires communication between the building department and the local health department. Most building departments, before issuing a building permit, have implemented a sign-off process involving other local agencies (health department, zoning, etc...).

Please contact the local health department prior to issuance of a building permit to assure that the applicant has complied with the applicable state health regulation.

cc: Robert Scully, Dept. of Public Health

1111 Country Club Road
P.O. Box 2794
Middletown, CT 06457-9294
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STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

MEMORANDUM

TO: Directors of Health, Chief Sanitarians, Licensed Engineers, Installers, and Well Drillers

FROM: Frank A. Schaub, Supervising Sanitary Engineer *FAS*

DATE: May 7, 1998

SUBJECT: Required Separation Distance From Private Wells To Sewage Disposal Systems And Other Sources Of Pollution.

Section 19-13-B51d(a) sets forth the requirements for all private wells with withdrawal rates less 10 gallons per minute. We are all familiar with the required separation distance of 75 feet to sewage disposal systems or other sources of pollution. Location of private wells as far as reasonably possible from potential sources of pollution is a primary goal of this section.

Over the past several years, our section staff have been involved with complaints from concerned property owners who's wells are located close to a property line with much of their protective well radius on the adjacent lot. Activities on the adjacent property such as gardening, storage of manure, construction of garages or other typical residential lot activities have brought forth cries for protection of their valuable private water supply. Unfortunately, they have no direct control of their portion of the protective well radius beyond the property line.

Similarly, we are faced with both new development and repair of sewage disposal systems adversely effected by the location of a well close to a property line with a protective well radius that consumes valuable space on the adjoining lot necessary for septic system installation. Annually, our section engineers routinely review hundreds of septic systems repairs proposed less than 75 feet from existing private wells, many of which were located unnecessarily close to a property line.

Section 19-13-B51d(a) requires "each such well shall be located at a relatively high point on the premises consistent with the general layout and surroundings; be protected against surface wash; be as far removed from any known or probable source of pollution as the general layout of the premises and the surroundings will permit;..." After reviewing intent of requirements in this section with staff engineers in our Water Supply Section, we are requesting your cooperation with respect to review and approval of all new private well locations in assuring reasonable protection of private wells can be provided where feasible. The only way a property owner can be assured that no unwanted activity occurs adjacent to their well is to have all or substantially most of their protective well radius within their property bounds. There may be circumstances where standard well drilling equipment cannot get to sites which would afford this protection and common sense must prevail in approving alternate sites. There may also be circumstances where several wells on adjacent lots are all clustered in the same general location thereby creating a larger singular protective well radius. We are aware of some towns and health districts who, by regulation, ordinances or policy, routinely require all or most of the well protective radius to be located within the property bounds of the lot served. We encourage the rest of you to consider the importance of providing long term protection for private wells with the minimal adverse impact to adjacent property owners. This clarification is consistence with the Water Supply Section's approval of all new public wells which require a water company to either own or have legal easement to assure long term protection from "any known or probably source of pollution adjacent" to their wells site.

If you have any questions concerning this matter, please contact our office.

c: Len McCain, Local Health Administration
c/sewage/memo/memo22



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STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

May 7, 1998

Janet McAllister, RS
Robert DeVito, RS
Tolland Health Department
21 Tolland Green
Tolland, CT 06084

RE: Septic System Select Fill

Dear Ms. McAllister and Mr. DeVito:

This letter is to provide guidance on select fill specifications. The monitoring your health department has been conducting has clearly identified several problems related to select fill (a.k.a., septic fill). Your department has been checking the suitability of select fill by conducting sieve analyses of the fill after placement on-site. The monitoring documented a high percentage of instances that the amount of fines in the fill exceeded the 5 percent limit which is typically specified on engineered plans. In many cases the fill material tested on-site differed dramatically from the sieve analyses that the fill supplier produced as evidence that the source was acceptable. The monitoring also documented that performing percolation tests on the in-place fill does not necessarily mean unacceptable fill will be detected.

The percentage of fines in select fill is a primary factor in determining whether the material is suitable for use in septic system construction. Excessive fines can cause septic system failures. The infiltrative surface at the leaching system-soil interface can become so restrictive that the leaching system is unable to disperse effluent into the surrounding soils. The bio-mat that forms at the interface has a lower long term acceptance rate (LTAR). The degree to which the LTAR is reduced is dependent on several factors including the nature and strength of the waste, and the particle size distribution of the fill material. Recent observations suggest the percentage of fine sands is also a concern in fill selection. Excessive amounts of fine sands can also lead to septic system failures. Septic systems constructed in fill with excessive fines or fine sands may not fail until such time that a mature bio-mat at the soil interface develops. Bio-mats can take from several months to several years to mature.

Fill specifications are tied to the size of the particles that make up the fill. There are several different classification systems of soils based on particle size. Classification of soils for engineering purposes is typically based on The Unified Soil Classification System. The following broad categories are included in this system:

Cobbles	Between 3" - 12" Sieves
Gravel	Between No. 4 - 3" Sieves
Sand	Between No. 200 - No. 4 Sieves
Fines	Pass No. 200 Sieve

Septic system select fill should predominately consist of sand. The fill can have up to 45% gravel and should not include any cobbles. Cobbles are rocks larger than the 3 inch sieve. The fill should not contain excessive fines. Material with few fines are said to be clean. Fines include silts and clays both of which pass the No. 200 sieve.

The classification system breaks the sand and gravel categories down into the following sub-categories:

	3" Sieve
Coarse Gravel	→
	3/4" Sieve
Fine Gravel	→
	No. 4 Sieve
Coarse Sand	→
	No. 10 Sieve
Medium Sand	→
	No. 40 Sieve
Fine Sand	→
	No. 200 Sieve



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The best way to gauge the suitability of select fill is to conduct a sieve analysis after larger material is removed from the sample. The No. 4 sieve should be used to remove the gravel from the sample. Gravel will be retained on the No. 4 sieve. The material that passes the No. 4 sieve will consist of sand and fines. The material passing the No. 4 sieve should then be analyzed with the sieves for particle size gradation. The material remaining after the gravel has been removed will be referred to as fill less the gravel.

This office recommends select fill used in septic system construction meet the following specifications:

1. The fill should not contain any material larger than 3 inches.
2. The fill should not contain more than 45 percent gravel (Gravel falls between the No. 4 - 3" Sieves). No more than 45 percent of the material can be retained on the No. 4 sieve.
3. The fill less the gravel should meet the following gradation criteria:

<u>Sieve</u>	<u>Percent Passing</u>
No. 4	100
No. 40	0-50
No. 100	0-20
No. 200	0-5

We have incorporated the above criteria into our new revision of our Design Guidelines. We will recommend these specifications be used for Select Fill. This office is finalizing the revisions and we look for distribution to local health departments and professional engineers in 1998 once printing is completed. This office has begun a discussion on select fill specifications with our Code Advisory Committee. Many of the committee members cited the same concerns you raised. We will be continuing our discussions on select fill with the committee including whether there is a need to incorporate fill specifications into the Technical Standards.

The monitoring you've conducted stresses the need for periodic sieve analyses of in-place fill in order to verify fill suitability. Visual verification of fill suitability is very difficult unless the material predominately consists of a uniform coarse sand or coarse sand with gravel. It is interesting to note that since your monitoring began the quality of fill being delivered to sites in your town has improved. The spot checks have proven useful in this regard.

Section 19-13-B103e(d) (6) clearly states the local director of health has the authority to require additional testing including sieve analyses to assure the sewage disposal system will function properly. This office suggests the sample analyzed be a composite of fill collected from several locations within the leaching system area. The sieve results should meet the specification on the engineer's plan, or the fill will have to be replaced with suitable fill, or the engineer will have to authorize use of the fill.

This office appreciates your input on this matter and we would welcome feedback from other local health departments. If you would like to discuss this matter further or have any questions on our recommendations please contact me.

Sincerely,



Robert W. Scully, P.E.
Sanitary Engineer III
Environmental Engineering Section

c: Robert Miller, MPH, Eastern Highlands Health District (Mansfield Office)
Jeffrey Polhemus, RS, Eastern Highlands Health District (Coventry Office)
n/sewage/letters/mcallis



STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

June 3, 1998

Don Regan
Don Regan Sales Corporation
P.O. Box 3277
Waterbury, CT 06705

RE: ADS N-12 Pipe with Series 35 Sanitary Fittings and Couplings.

Dear Mr. Regan:

This office has reviewed the technical information you submitted on the subject pipe. The ADS N-12 is a polyethylene, corrugated exterior/smooth interior drainage pipe that is currently listed in Technical Standard Table No. 5 as an approved Distribution Pipe. The N-12 pipe can be connected with various grades of couplers and fittings. The tightest of which are the Series 35 Sanitary Fittings and Couplings. You requested a determination whether the N-12 pipe with Series 35 connections are an accepted equal to cast iron pipe with rubber gasketed joints as listed in Technical Standard 2-C.

The Series 35 fittings and couplings are constructed of PVC meeting ASTM D 3034, and F 1336. They are fitted with an O-ring seal (Elastometric Gasket). The gasketed joint meets the requirements of ASTM D 3212. This specification is the standard specification for joints for plastic sewer and drain pipes using flexible elastometric seals. The 3212 specification includes tightness tests by vacuum and pressure.

Based on this office's review of the technical information submitted, the ADS N-12 pipe with Series 35 connections is an accepted equal to cast iron pipe with rubber gasketed joints. This office will add this pipe to the next revision of the Technical Standards. The next anticipated revision date is January 1, 2000. Please feel free to reproduce this letter as a means for notifying engineers, health officials, installers, and distributors of our approval of this pipe under conditions where Table 2-C pipe is needed.

Sincerely,

Robert W. Scully, P.E.
Sanitary Engineer III
Environmental Engineering
Division of Environmental Health

RWS/jm

c: Bill Chappa
Richard Beneath & Assoc.
31 Franklin Street
Westport, CT 06880
c/sewage/letters/donregan



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STATE OF CONNECTICUT
REGULATION
OF

Name of Agency

Department of Public Health

Concerning

Conversions, Changes in Use, Additions
SUBJECT MATTER OF REGULATION

**SECTION 1 - The Regulations of Connecticut Agencies are amended by adding
Section 19-13-B100a. as follows:**

(NEW) Section 19-13-B100a. Building conversions/changes in use, building additions,
garages/accessory structures, swimming pools, sewage
disposal area preservation.

(a) Definitions. As used in this section:

- (1) "Accessory structure" means a permanent non-habitable structure which is not served by a water supply and is used incidental to residential or non-residential buildings. Accessory structures include, but are not limited to, detached garages, open decks, tool and lawn equipment storage sheds, gazebos, and barns.
- (2) "Building conversion" means the act of winterizing a seasonal use building into year round use by providing one or more of the following: (A) a positive heating supply to the converted area; or, (B) a potable water supply which is protected from freezing; or, (C) energy conservation in the form of insulation to protect from heat loss.
- (3) "Change in use" means any structural, mechanical or physical change to a building which allows the occupancy to increase; or the activities within the building to expand or alter such that, when the building is fully utilized, the design flow or required effective leaching area will increase.
- (4) "Code-complying area" means an area on a property where a subsurface sewage disposal system can be installed which meets all requirements of Section 19-13-B103 of the Regulations of Connecticut State Agencies, and the Technical Standards except for the one hundred percent reserve leaching area referred to in Section VIII A of the Technical Standards.
- (5) "Design flow" means the anticipated daily discharge from a building as determined in accordance with Sections IV and VIII F of the Technical Standards.
- (6) "Potential repair area" means an area on a property which could be utilized to repair or replace an existing or failed septic system and includes areas on the property where exceptions to Section 19-13-B103 of the Regulations of Connecticut State Agencies could be granted by the local director of health or the Commissioner of Public Health but does not include areas beyond those necessary for a system repair and areas of exposed ledgerrock.
- (7) "Technical Standards" means those standards established by the Commissioner of Public Health in the most recent revision of the publication entitled "Technical Standards for Subsurface Sewage Disposal Systems" prepared pursuant to Section 19-13-B103d(d) of the Regulations of Connecticut State Agencies. These standards can be obtained from the Department of Public Health, 410 Capitol Avenue, MS #51SEW, P.O. Box 340308, Hartford, CT. 06134-0308, or by calling (860) 509-7296.

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- (b) Building conversion, change in use. If public sewers are not available, no building or part thereof shall be altered so as to enable its continuous occupancy by performing any building conversion, nor shall there be a change in use unless the local director of health has determined that after the conversion or change in use, a code-complying area exists on the lot for installation of a subsurface sewage disposal system. The determination by the local director of health of whether a code-complying area exists on the property shall be based upon analysis of existing soil data. If soil data is not available, the property owner shall perform soil testing. The property owner or the owner's authorized agent shall submit design plans or a sketch to demonstrate how the property contains a code-complying area that can accommodate a sewage disposal system. The local director of health may require expansion of the existing sewage disposal system or installation of a new sewage disposal system at the time of the change in use for those properties whenever the proposed change in use results in a more than 50% increase in the design flow.
- (c) Building additions. If public sewers are not available, no addition to any building shall be permitted unless the local director of health has determined that after the building addition a code-complying area exists on the lot for the installation of a subsurface sewage disposal system. Once a code-complying area is identified, portions of the property outside this designated area may be utilized for further development of the property. This determination by the local director of health shall be based upon analysis of existing soil data to determine if a code-complying area exists. If soil data is not available, the property owner shall perform soil testing. The property owner or the owner's authorized agent shall submit design plans or a sketch to demonstrate how the property contains a code-complying area that can accommodate a sewage disposal system. If the applicant submits soil test data, design plans or a sketch and is unable to demonstrate a code-complying area, the building addition shall be permitted, provided:
- (1) The size of the replacement system shown on design plans or sketch provides a minimum of 50% of the required effective leaching area per the Technical Standards,
 - (2) The replacement system shown on the plans or sketch provides a minimum of 50% of the required Minimum Leaching System Spread (MLSS) per the Technical Standards,
 - (3) The proposed design does not require an exception to Section 19-13-B103d(a)(3) of the Regulations of Connecticut State Agencies, regarding separation distances to wells,
 - (4) The addition does not reduce the potential repair area, and
 - (5) The building addition does not increase the design flow of the building.

The local director of health may require expansion of the existing sewage disposal system or installation of a new sewage disposal system at the time of building addition whenever the proposed addition results in a more than 50% increase in the design flow. The separation distance from an addition to any part of the existing sewage disposal system shall comply with Table 1 in Section II of the Technical Standards.

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- (d) Attached or detached garages, accessory structures, below or above ground pools. If public sewers are not available, no attached garage, detached garage, accessory structure, below or above ground pool shall be permitted unless the local director of health has determined that after construction of the attached garage, detached garage, accessory structure, below or above ground pool, a code-complying area exists on the lot for installation of a subsurface sewage disposal system. This determination by the local director of health shall be based upon analysis of existing soil data. If soil data is not available, the property owner shall perform soil testing. The property owner or the owner's authorized agent shall submit design plans or a sketch to demonstrate how the property contains a code-complying area that can accommodate a sewage disposal system. If the applicant submits soil test data, design plans or a sketch and is unable to demonstrate a code-complying area, the attached or detached garage, below or above ground pool, or accessory structure shall be permitted, provided the structure does not reduce the potential repair area. The separation distance from the attached or detached garage, below or above ground pool, or accessory structure to any part of the existing sewage disposal system shall comply with Table 1 in Section II of the Technical Standards.
- (e) Sewage disposal area preservation. If public sewers are not available, no lot line shall be relocated or any other activity performed that affects soil characteristics or hydraulic conditions so as to reduce the potential repair area, unless the local director of health has determined that after the lot line relocation or disturbance of soils on the lot a code-complying area exists for the installation of a subsurface sewage disposal system. This determination by the local director of health shall be based upon analysis of existing soil data. If soil data is not available, the property owner shall perform soil testing. The property owner or the owner's authorized agent shall submit design plans or a sketch to demonstrate how the property contains a code-complying area that can accommodate a sewage disposal system. In no case shall a relocated lot line violate Subsection (d) of Section 19-13-B103(d) of the Regulations of Connecticut State Agencies that requires that each subsurface sewage disposal system shall be located on the same lot as the building served.
- (f) Decision by Director of Health. Any final decision of the local director of health made in regard to this section shall be made in writing and sent to the applicant. Any decision adverse to the applicant or which limits the application shall set forth the facts and conclusions upon which the decision is based. Such written decision shall be deemed equivalent to an order, and may be appealed pursuant to Section 19a-229 of the Connecticut General Statutes.

SECTION 2 - SECTION 19-13-B100 of The Regulations of Connecticut State Agencies is repealed

STATEMENT OF PURPOSE

The regulations up-date and clarify existing requirements for maintaining subsurface sewage disposal areas on lots which are served by on-site subsurface sewage disposal systems. The purpose is to regulate building conversions; activities which would potentially increase the water usage discharged to a subsurface sewage disposal system; construction activities or lot line changes which would reduce the area available for sewage disposal purposes.