Approved Minutes of the Technical Advisory Committee Meeting
April 13, 2010

Attendees:	Roger Thompson	Steve Revell
	Gail Center	Gerry Kittle
	Gary Adams	Scott Stewart
	Craig Heindel	Rodney Pingree
	Jeff Fehrs	Claude Chevalier
	John Beauchamp	Kim Greenwood

Scheduled meetings:

May 4, 2010	1-4 PM	Room 107 Stanley Hall

Minutes:

Gail asked that the term grease interceptor be used instead of grease trap. Grease interceptor is the term used in the Wastewater System and Potable Water Supply Rules (Rules).

Colchester Training Session

Gerry said that the training program related to the use of advanced treatment systems had been productive and well attended. It was noted that one of the systems had been operated by the owner without running the blower needed for the aeration function.

H.779 (previously listed as H.593)

Roger gave an update. The bill passed the house and was sent to Senate Natural Resources. The bill was amended on the house floor to add an exemption for the addition of up to 4 outdoor picnic tables. The exemption is a blanket exemption from all state and local permitting requirements. The Senate NR Committee has not done much with the bill though there is talk about combining several bills currently in the committee into one bill which may cause so much opposition that the combined bill will fail. Kim said it is likely that VNRC would oppose the portion of H.779 related to picnic tables.

Water Treatment

Roger said that the last word he had was that the language that Anne had prepared, which is based on work with TAC, was going to be included in the capital bill. The language was not revised in response to comments from ACEC. Gary said this is the same information that he had received.

Gail asked for confirmation that as currently drafted, systems installed for treatment related to compliance with primary standards, other than those specifically exempted, would still require a permit from the Department of Environmental Conservation. Roger confirmed this and added that it is possible the more elements might be added as part of a rule making process.

Innovative/Alternative Systems

Roger noted that there are several systems under review including Cultec leaching chambers, Geomat, a mechanical ventilation system, and the White Knight System. Also, Eljen is suggesting that only 6"of sand should be required under their system even though it was tested with 12" and Presby is asking for an extension of their approval. Craig said that some systems are now widely used and really are no longer "innovative." Roger replied that the term is used because of how the process is written into the Rules but a fix could be made when the Rules are revised.

John noted that there are some new systems available for water treatment as well including some for radionuclides. Once there is agreement that there are "plug and play" type systems the exemptions for water treatment might be expanded.

John also asked about Ultraviolet Light Treatment systems (UV) for lake water systems as he has been contacted about that approach. Roger noted that surface water is not acceptable for new sources, though in a real hardship case it might qualify as the best fix option. Roger reviewed the previous attempt by a TAC subcommittee to draft language for surface water systems. This was pursued until it appeared that a treatment system sufficient to deal with the widely variable quality of surface water would be too complex and expensive.

The issues of disposing of filter backwash from systems treating radionuclides were discussed. Roger noted that this would be subject to the Underground Injection Control Rules and might not be acceptable. John said that some treatment systems depend on resin or other absorption materials and there is no discharge of radioactive material. John also noted that in many cases systems with radium are using a water softening system which removes the radium as well. Gail asked how the Department is dealing with public water systems some of which have high radionuclides. Rodney said that in some cases the problem is solved by blending two or more sources of water so that by dilution the water falls below the drinking water standard. Some systems are also using the Marilyn Davis memo related to abatement of existing water systems which allows for a combined discharge with the sanitary wastewater.

Innovative/Alternative

Roger gave a short review of some products under review. The Cultec application is for leaching chambers which should be approvable once the sizing calculations are made. The applications for mechanical ventilation and for the White Knight system are primarily aimed at renovation of existing systems. One project for Roger and Jeff is to

write a procedure for use of these systems that would include a basic analysis of the failed system with respect to important isolation distances such as to water supplies and separation from seasonal high water table and/or ledge. Systems with major non-compliance with the basic standards would not likely be approved for renovation if there are options to bring the project into better compliance with the Rules.

The use of the outlet filter was briefly discussed. They seem to be working well in Vermont and do protect the leachfield. Some people are still concerned about the maintenance requirements and may just remove them, though they may pay in the long run when the leachfield itself fails. One item of concern to designers is fibrous material including both cotton fibers and inorganic fibers. They tend to have neutral buoyancy and therefore either coat the filter or pass to the leachfield. One vendor said that coffee was a major issue for leachfields because of the high BOD and low pH. Another said cream was a major problem at coffee shops and convenience stores.

Groundwater Withdrawal Rule

Rodney gave an update on the progress of developing a rule for groundwater withdrawals as required in statute. Anything that is not exempt which draws more than 57,600 gallons per day requires a permit. Regulated users of 20,000 gallons per day but less than 57,600 gallons per day must register their withdrawals. The process is just beginning with a meeting scheduled for April 15th with the Groundwater Coordinating Committee. The regulatory program starts on July 1, 2010 and the rules may not be ready by then. The rules cover industrial, commercial, and bottling uses. There are exemptions for agriculture and residential use. Standing column geothermal wells are exempt but systems using a withdrawal well and a separate discharge point are not exempt. The rules will not deal with quality or source protection issues. The permitted withdrawal is evaluated to ensure there will not be an undue impact on neighbors.

Challenges for Change

Kim asked about the affect of language proposed for statutory changes that allows for conditional exemptions. Jeff noted that we are planning to propose several conditional exemptions but are not proposing to exempt large capacity geothermal wells at this time.

Water Supply Rules

Scott asked about work on the design flow chart and Roger responded that he had not finished his task but would try to bring a proposal to the next meeting.

Scott led a discussion about the proposed changes to the isolation distance table. Scott said that he could add a column to the table that would list distances from shallow wells that would reflect the different requirements for bedrock and shallow wells.

Claude said he was still concerned about the requirement that wells be drilled into bedrock when the well driller sometimes finds an adequate quantity of water above the

bedrock. Claude noted that there are many wells not drilled into bedrock and that he has never had a problem with this situation. The issue of people being affected by contaminated water was discussed. Gail noted that one common problem was consumption of water contaminated by Giardia. John said that there are also systems that test fine for a period of time and then show contamination such as a small public system he worked on. The system had been compliant for years and then repeatedly failed the quality testing. Ultimately a disinfection system will be used.

Scott reviewed the variance process. The Water Supply Division and the Wastewater Management Division both use the term variance but what is allowed varies. The revised Water Supply Rules will be worded to deal with abatement of failed supplies as well as include a provision to allow for equivalent designs of the water system equipment. The table is designed to provide a ranking system when making the choice on which isolation distances to reduce first or to a larger degree. Craig said that when the rules suggest extra casing as an increased protective measure it should indicate this is when the casing is sealed into bedrock not just extended in an unconsolidated aquifer.

Claude, Craig, and Roger also discussed the use of concentric drilling methods and whether this method provided the same level of protection as drilling an oversized hole and then grouting the well into the bedrock. This issue needs more consideration before considering the two methods to be equivalent.

Items prioritized for discussion with high, low, and medium ranking

1. Soil identification vs. perc test **medium**
2. Curtain drain with presumption of effectiveness **high**
3. Revisions to desktop hydro chart **medium**
4. Minimum amount of sand under a mound **high**
5. Grandfathered design flow and conversion of use policy **high**
6. Updating of design flow chart **high**

Executive Committee

Steve Revell, Lance Phelps, and Roger Thompson
Alternates – Chris Thompson, Spencer Harris, Jeff Williams

Subcommittees

Hydrogeology - Craig Heindel, Dave Cotton and Steve Revell.

Training subcommittee - Roger Thompson, Dave Cotton, and Barbara Willis.

Drip Disposal – Roger Thompson, Dave Cotton, Steve Revell, Alan Huizenga

Water treatment systems – Gail Center, Jeff Williams, Rodney Pingree, Dave Cotton, Lance Phelps, and Roger Thompson.