

Approved Minutes of the Technical Advisory Committee Meeting  
September 14, 2010

**Attendees:**

Roger Thompson	Don Woods
Steve Revell	Claude Chevalier
Jeff Fehrs	Gail Center
Scott Stewart	Rodney Pingree
Chris Thompson	Spencer Harris
Bruce Douglas	Gerry Kittle

**Scheduled meetings:**

October 12, 2010	1-4 PM	Lincoln Room, Osgood Building
November 16, 2010	1-4 PM	Room 100 Stanley Hall
December 14, 2010	1-4 PM	Room 100 Stanley Hall

**Minutes:**

Minutes were distributed. If any errors are found, the comments will be sent to Roger who will make corrections.

**Committee membership:**

Several of those who were nominated for membership have received their appointment letters. The appointments are until 1/31/2011, apparently as a courtesy so the next governor can appoint new members after taking office.

The Governor's office declined to reappoint Kim Greenwood as a representative of the Vermont Natural Resources Council. This leaves the committee without a person designated as a water quality specialist. It was suggested by the Water Quality Division that Bruce Douglas is well qualified for this role.

Steve said that he felt strongly that Kim should be a member of the committee. Steve noted that it is a benefit to know about VNRC's objection before the rules get to LCAR (Legislative Committee on Administrative Rules). Gail asked if the decision by the Governor's Office is final and if Kim could be an informal member of the committee. The decision by the Governor's Office is final and Roger will ask if there is any objection to Kim being an informal member. All those present voted in support of Kim being an "at large" member of the committee.

**General comments:**

Steve said that the committee should move forward on updating the Water Supply Rules and that the Wastewater System and Potable Water Supply Rules should be updated every year.

### **Water Supply Rules:**

A motion was made to approve the changes in the isolation distances between water supplies and other items as shown in the current draft prepared by Scott. Steve proposed to amend the section related to reductions in isolation distance which could be granted when adequately supported by a hydrogeologic analysis. He proposed that such reductions, for new projects be limited to a maximum reduction of 50% of the usual isolation distance. Steve also noted that because the prescriptive rules cannot anticipate every situation the numbers are conservative and therefore the process to make a site specific reduction needs to be simple, up-front, and quick. The Committee voted on the amended motion with 10 members in favor, none opposed, and one abstention.

Bruce provided an overview of the two year time of travel concept based on literature review of virus survival in groundwater. This concept was included in the 1982 wastewater rules.

### **Overshadowing from well and wastewater isolation distances:**

The draft work plan, dated September 9, 2010 was reviewed and discussed. Chris asked if the work plan is acceptable or if it needs to be revised. It was decided to move forward with the existing draft for now.

One question is how much does it cost to comply with the existing statutory requirement? Steve said that he now agrees with Spencer about the cost of the notification process. Spencer said that there is extra cost in preparing the plans, in some cases more survey work is needed, and then there is significant copying and mailing costs that depend on the number of neighbors who must be notified. This can run into several hundred dollars of new costs. Don agreed that the new requirement adds a significant amount of cost. Steve noted that some regional offices are asking for notification of neighbors even when there is both municipal water and wastewater systems serving the property. Steve is also very concerned about the implications of the current approach as it may lead to requiring a public process for all permits.

### **Discussion of current isolation distances:**

Bruce reviewed the history of isolation distance revisions made to the Water Supply Rules in 1992. Bruce noted that the 1982 Rules indicated that the 2 year time of travel concept applied to all wells because the prescriptive isolation distances were based on an assumption that flow from the leachfield was away from the well. When the flow was not away from the well, a hydrogeologic calculation showing a 2 year time of travel was specified in the rules. This applied to all wells, including bedrock wells, though the regional offices were not generally requiring a hydrogeologic study for bedrock wells. Bruce and David Cotton, using a public participation process involving designers, researched existing isolation distances for Vermont and several other states. There was no technical basis for the existing isolation distances. Bruce and David then looked at the 2 year time of travel concept that was in the 1982 Vermont Rules and determined that

there is a scientific basis for that number. They then considered revisions to the rules that would incorporate the concept but make it more practical than doing a hydrogeologic analysis for every project. They looked at several existing studies and concluded that for bedrock wells, a distance of about 200' seemed to be sufficient to ensure a low risk of pathogens reaching the well. Bruce and David also consulted with Bill Bress at the Vermont Department of Health who supported a prescriptive isolation distance of 200' to drilled wells and 500' to shallow wells when the leachfield was upslope of the well. Based on this work, the 1992 Water Supply Rules incorporated the changes which resulted in increase separation distances from upslope leachfield. The new areas have an elongated shape now described as being a well shield.

Bruce said that a couple of years ago he reviewed some of the more recent literature and found studies showing that viruses have been detected in groundwater at significant distances from leachfields though the literature indicates the 200' distance to bedrock wells appears to provide good protection.

There are some other issues related to well isolation distances that may be emerging. Roger said that Rep. David Deen had e-mailed him asking for information about pharmaceuticals in groundwater. Gail noted that the material using in chemo-therapy are also of concern. Don said that the committee should not get too focused on this issue beyond supporting education about the proper disposal of unused drugs.

Steve noted that we don't currently even track existing water quality for projects involving single family residences. Steve said that there should be a requirement for all new wells to be tested.

Scott suggested that the committee consider just sticking with the existing Vermont numbers as those from other states generally do not have any technical justification.

Gail asked that Steve clarify his comments about doing the notification process. Steve reviewed two recent projects and explained the specific steps required to complete the work.

Spencer said that one concern he has is that people are redesigning their projects to eliminate or reduce the impact on the neighbors. While this is good in one way, he is now designing systems on poor soils in order to reduce the impact. It is a good thing that the replacement area is not required when designing mounds or the situation would be even more difficult. Spencer thinks it adds 3 to 6 hours extra work for each project. Steve said that he does a lot of large properties that end up with few impacts on neighbors which reduces his effort. He thinks doing a multi-lot subdivision of small lots would be a lot of work for notification. Steve said he had a conversation with an attorney about what impact receiving a notification of overshadowing would have on a future sale. The attorney said that he and other attorneys are starting to worry about that.

Don said that so far he has not had a project where notification is required so he can only estimate the cost. It would be significant because of the time to get addresses and do the copying and mailing process.

Don asked what TAC is charged with doing on the overshadowing topic. Roger reviewed the statutory language.

Steve listed three options:

1. Repeal Act 145
2. Go to a public review process
3. Require the isolation distances be kept on the applicant's property to the extent possible.

Steve noted that option three will require a lot of detail including a decision on how much does cost affect the requirement.

Bruce suggested contacting other states to see if they feel there is a scientific basis for their isolation distances. He thinks that Massachusetts and New Hampshire has looked at this.

A motion was made to recommend keeping the existing Vermont isolation distances. There were 10 votes in favor and one against.

Roger suggested there should be a subcommittee to write language related to granting reductions in isolation distance when certain conditions exist, particularly when there are thick and extensive clay layers that can protect the groundwater.

Steve said the process needs to be improved for the use of hydrogeologic information to make decisions on reductions in isolation distance and there needs to be better trained people to implement the process. Maybe people working in other Divisions could be shared to improve the process.

Claude said that there is a lot of anecdotal evidence that much smaller isolation distances are safe. He said that when the site conditions are limited he has drilled many wells in sand at isolation distances as small as 25' from leachfields discharging into the same sand and they are fine. Scott noted that these wells have not been tested for viruses so there cannot be much assurance that the situation is as safe as you would want for a new project.

The committee recommended keeping the isolation distances the same but beef up the language related to granting reductions based on a hydrogeologic analysis.

**Meeting dates:**

It was decided to meet on October 12<sup>th</sup>, November 16<sup>th</sup>, and December 14<sup>th</sup>.

### **Housekeeping issues:**

Steve suggested that the committee lists below need to be updated and repeated his comment that the goal should be to do annual updates for the Rules.

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.