

Approved Minutes of the Technical Advisory Committee Meeting  
May 22, 2012

**Attendees:** Roger Thompson                      Kim Greenwood  
                  Gail Center                                Denise Johnson-Terk  
                  Dan Wilcox                                    Bill Zabiloski  
                  Ernest Christianson                      Spencer Harris  
                  Stephen Revell                                Craig Heindel  
                  Peter Boemig                                 Mary Clark  
                  Cindy Parks                                 Mark Bannon  
                  John Beauchamp

**Scheduled meetings:**

|               |        |   |
|---------------|--------|---|
| June 19, 2012 | 1-4 PM | Liquor Control Conference Room-<br>Montpelier |
| July 17, 2012 | 1-4 PM | Liquor Control Conference Room-<br>Montpelier |

**Agenda:**

The agenda was reviewed and accepted.

**Minutes:**

The draft minutes of the April 17, 2012 meeting were reviewed. Gail asked for clarifications to the portion on Radionuclide Issues. Roger will redraft and e-mail to Gail to make sure the wording is correct.

**Legislative Update:**

Ernie said that corrections to the overshadowing bill were included as an amendment related to the Proctor Community Water System (Act. 117, H.577). These reduce the amount of material that must be sent to neighboring landowners so they get what they need to understand the proposed development without all of the unrelated data that makes up a full application package. It was uncertain whether the bill related to the testing requirements for new potable sources passed (it did pass as Act 163, S.183). A loan program for the replacement of potable water supplies and/or wastewater disposal systems was also created (Act 161, H.769) which provides for loan to lower income landowners and is funded in part from application fees for permits issued under the Wastewater System and Potable Water Supply Rules. Kim said that some changes to the process for rule adoption process under the Administrative Procedures Act were also made that will affect the rule update that Ernie is working on (Act 138, S.202).

Ernie said that the fee bill was passed with new fees for the Regional Office permits. The changes are intended to make it very simple to calculate the fees and to raise additional money to fund the revolving loan program for replacement water and wastewater systems. Spencer asked about the fee for correcting permit mistakes and Ernie replied it would likely be \$100 which is reasonable considering the amount of administrative work required by the Regional Office staff to make the correction. The fees have also been revised for licensed designers with small increases in renewal fees and new fees for late renewals and for the potable water designer test. These fees are also in Act 161, H.769.

### **Wastewater Strength Subcommittee:**

The Wastewater Strength Subcommittee is continuing to work on a list of issues and the kinds of treatment available for difficult wastewaters. Originally a thought was to create a list of wastewater types with ranges of concentrations of various constituents but the committee realized that the ranges are so case specific that the information would not be useful for a particular project. One plan is to create a worksheet that would list problematic constituents that might or might not be present for a particular project but which could be used as a quick review tool. The committee is considering meeting with several technology vendors to hear how they work and what types of wastewater they can effectively treat. Steve said to be careful about endorsing any particular product to treat a specific type of wastewater. Roger agreed and said the committee did not intend to make any recommendations. Craig suggested it might be good policy to contact all of the vendors currently approved for use in Vermont.

### **Role for the TAC in Innovative/Alternative System Review:**

Cindy said that at a recent training session in Rhode Island she learned that Rhode Island has an interdisciplinary group of regulators, designers, and other that review Innovative/Alternative systems and is considering how the TAC could support the Department review process. Steve noted that there is a history of this and that Frank O'Brien used to provide brief updates of his review work for the Department to the TAC and ask for feedback. Craig suggested a subcommittee might be useful rather than bringing the discussion to the full TAC. Kim asked if there are requirements for an approval. Cindy and Ernie said there are requirements in the Wastewater System and Potable Water Supply Rules. On a related note, Steve said that in his experience many of the advanced treatment systems with approvals that require operational inspections on a regular basis are not in fact being inspected. Ernie said that he is considering creating a compliance and enforcement position which could be assigned to work on this issue. Ernie, Mary, and Cindy will bring information on various systems to the TAC. John noted that we would join a subcommittee if one is created to look into the effect of water treatment system filter backwash on advanced treatment systems.

### **Training:**

Cindy said that she wanted to know what type of training the TAC would like to see. She said that the New England training folks are willing to come to Vermont and could

provide several sessions over a 3 day period or do more than one visit to Vermont. Craig asked about the training at the Vermont Technical College. VTC is ready to start offering a whole series of courses that would cover most of what a prospective septic designer needs to know. Steve said that courses dealing with identification of redoximorphic features and the use of the Munsell Color charts would be useful. Information about bottomless sand filters and drip dispersal would also be helpful. Ernie, Mary, and Cindy noted that the use of advanced treatment systems seems to be growing and would be useful training. Mark said that there is interest in training but not many people seem to travel out-of-state to get training.

### **Bottomless Sand Filters:**

There was a general discussion about bottomless sand filters including how they are currently used in Vermont as best-fix replacements and in other states both as replacement and new systems. Roger provided some handouts with background information. Rhode Island allows the use of bottomless sand filters for new projects but requires that the effluent receive advanced treatment prior to discharge to the bottomless sand filter. Ernie expressed concerns that a significant safety factor might be reduced if the toe slopes for mound systems were eliminated with the bottomless sand filter approach. There is agreement that careful evaluation of the hydraulic capacity of the site to move effluent away from the sand filter location is required. As the discussion moved towards specific details that would need to be considered in any rule revision it was decided that subcommittee should work on the details rather than starting with a full committee discussion.

Steve, Peter, Mary, Mark will participate on the subcommittee and Denise will be involved by e-mail. Ernie will find a regional office staff person to participate. Ernie will get comments from his staff. Craig said it would be good to update the list of currently approved technologies.

### **Agenda for Next Meeting:**

Hydro-subcommittee  
Advanced treatment systems, plastic septic tanks, Geoflow  
UIC update  
Loan program  
Water Supply Rules

### **Other Discussion:**

Craig said that he had been talking about geothermal wells with Jeff Williams of Spafford Well Drilling and there are emerging questions about effects on water quality from the temperature changes in standing column wells. Apparently, even in wells without any air break, metals are being mobilized by changes in temperature of 10 degrees or more.

Steve commented that the replacement well exemption is being abused with wells for multifamily and commercial buildings and the addition of wells to an existing system being constructed without the required permits.

John said he was working on a situation where arsenic had been found in the well. The well is about 100' from the existing leachfield. When the cost of an arsenic treatment system determined the question of a replacement well was also raised. Other wells in the neighborhood do not test high for arsenic. This is a site specific question as drilling another well a short distance away is likely to be in the same geologic formation unless there is information that a shallower or deeper well might penetrate a different rock type.

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. Water Supply Rule update **high**
6. Seasonal High Water Table determination for performance based systems **high**
7. Wastewater Strength

### **Executive Committee**

Steve Revell, Ernest Christianson, Roger Thompson  
Alternates – Chris Thompson, Spencer Harris, Claude Chevalier, Craig Heindel

### **Subcommittees**

Hydrogeology –

Craig Heindel, Bill Zabiloski, Mark Bannon, Scott Stewart, and Steve Revell.

Overshadowing of Isolation Distance Issues –

Anne Whiteley, Ernie Christianson, Roger Thompson, John Beauchamp,  
Gail Center, Chris Thompson

UIC Rules and Geothermal Wells -

Craig Heindel, Steve Revell, Roger Thompson, Ernie Christianson, Scott Stewart,  
Rodney Pingree, Kim Greenwood, Cindy Parks

SHWT Monitoring –

Craig Heindel, Steve Revell, Roger Thompson, Ernie Christianson, Bill Zabiloski,  
Dan Wilcox

UIC Rules and Disposal of Wastewater from Water Treatment Systems –

John Beauchamp, Gary Adams, Roger Thompson, Ernie Christianson,  
Gail Center, Cindy Parks

Wastewater Strength -

Mary Clark, Cindy Parks, Peter Boemig, Bill Zabiloski, Roger Thompson,  
John Akielaszek,

Bottomless Sand Filters-

Peter Boemig, Mark Bannon, Cindy Parks, Mary Clark, Denise Johnson-Terk