Approved Minutes of the Technical Advisory Committee Meeting
July 19, 2011

Attendees:	Roger Thompson	Gail Center
	Larry Becker	John Beauchamp
	Steve Revell	Ernest Christianson
	Jon Kim	Rodney Pingree
	Bill Zabiloski	Chris Thompson
	Scott Stewart	Craig Heindel
	Anne Whiteley	

Scheduled meetings:

August 23, 2011	1-4 PM	Mad Tom Room, Osgood Building
September 20, 2011	1-4 PM	Lincoln Room, Osgood Building
October 25, 2011	1-4 PM	Mad Tom Room, Osgood Building

Agenda:

The agenda was reviewed and accepted.

Minutes:

The draft minutes of the June 21, 2011 meeting were reviewed and corrected to reflect that a system supervised by Steve Revell does not use disposable resin filters and that Mr. Lowry, a water treatment specialist from Maine, indicated that backwashing of carbon and BIRM filters does not remove the accumulated radioactive material.

Arsenic in Vermont Groundwater:

Jon Kim, a geologist with the Vermont Geological Survey, presented the results of a collaborative study with Middlebury College entitled **Deciphering Elevated Arsenic Levels in Groundwater Wells from Southwestern Vermont.** This talk built on previous work done by Middlebury Students in an Environmental Seminar (Arsenic Contamination in Vermont's Private Wells) that was led by Professor Peter Ryan and was supported by the Vermont Geological Survey, the Vermont Department of Health, and State Senator Ginny Lyons. The report and associated documents are posted on the Vermont Geological Survey website at:

http://www.anr.state.vt.us/dec/geo/HealthMain.htm

Jon said that while the study concentrated on the Taconic Mountain portion of Vermont, and found the largest number of wells with high arsenic concentrations in Rutland and

Bennington Counties, high levels of arsenic were also found in northern and eastern portions of Vermont. Some concentrations were much higher than the federal drinking water standard of 10 PPB. The maps developed with the study (see the website) are a start at developing a process that would give some guidance on where water quality testing for arsenic should be a priority.

This presentation led to a discussion of S.77, the bill that proposed to require water quality testing of all new private water sources. The bill was passed by the Legislature but was vetoed by the Governor. Larry Becker, Vermont State Geologist, said that DEC Commissioner David Mears appears to be supportive of water quality testing as described in S.77 which was passed by the Legislature but not signed by the Governor.

Steve noted that one problem with S.77 was that the TAC was not involved early in the process and as a result there was a rush at the end of the session to fix some problems that the TAC would have recognized and fixed at the beginning. This might have built more support for the bill. Anne said that she has heard that the bill will be back in the next session.

Ernie asked Jon if there is a correlation between arsenic and uranium.

Rodney asked if there is evidence of organic complexing. Jon said that this is occurring and it creates a reducing environment which can mobilize arsenic and uranium.

Scott asked Jon about well driller education. They agreed that it would make sense to make a presentation at the next well driller's meeting. Gail said that the province of Quebec is dealing with an arsenic rich formation north of Newport. She noted that Quebec had done some province wide education with poor results which was the same result that the Vermont Department of Health had with a statewide approach. She said that a town by town approach seems to be more effective at getting people's attention.

John asked if there are soil types that are better at retaining radioactive particles. It appears that uranium is mobile under most non-reducing environments.

There was discussion about collecting a data base of information that would include information not currently collected by the Vermont Department of Health or DEC. John said that water treatment specialists do a lot of water testing. Jon said this would be useful if the source locations can be accurately determined. Craig said that his personal well is high in sulfur and volunteered to provide samples.

TAC Appointments:

Roger asked if everyone had gotten their appointment letters from the Governor's Office. John has not received his letter. Ernie or Chris will check on this.

Design Flows:

The TAC is working on a full review of the design flows table to bring it up-to-date. Ernie said that he and Anne had reviewed a list of design flows based on Roger's last draft of TAC work and had along with his staff proposed some edits. Anne noted that the review document does cover all design flows for potable water systems based on the definition in the Wastewater System and Potable Water Supply Rules.

Craig asked if the term zero design flow should be used when there actually is a flow associated with the described activity, such as home catering. Craig asked about the science of not adding design flow for home catering. Ernie explained that it had been decided that while a home catering operation would involve some water usage it seemed that it was a small enough amount in most cases that it would be covered by the allowance for a single family residence. Anne said that a footnote could be added to make it clear that zero means the increase in design flow not that there is no flow for the activity. Craig asked about the difference between home and commercial catering. Roger said that the type of equipment was used to differentiate the two operations.

After discussion of design flows related to kennels it was decided the design flow should be per animal enclosure.

Next Meeting Dates:

It was decided that the next meetings would be August 23rd, September 20th, and October 25th.

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

Executive Committee

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

Subcommittees

Hydrogeology - Craig Heindel, Dave Cotton and Steve Revell.

S.77 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

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, Jeff Fehrs