

The Blue Ridge Chemist

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The Executive Committee hosts the May meeting

<http://www.acs-vbrs.org>

VIRGINIA BLUE RIDGE SECTION AMERICAN CHEMICAL SOCIETY

656th SECTION MEETING
Hosted by the Executive Committee

Tuesday, May 21, 2013

PROGRAM:

- 4:00-5:30** Tour of the Western Virginia Water
Pollution Control Plant
5:30- Dinner: The Roanoker

This month's meeting is a tour of the Western Virginia Water Pollution Control Plant at 1502 Brownlee Ave SE Roanoke, VA (formerly known as the Roanoke Regional Water Pollution Control Plant) followed by dinner at the Roanoker at 2522 Colonial Ave SW, Roanoke, VA.

Reservations for the tour must be made by TUESDAY, May 14, FIVE DAYS before the meeting, by phoning Gwen Sibert at 540-375-2048, or by email to sibert@roanoke.edu.

Western Virginia Water Pollution Control Plant

Note: pictures and information are from

<http://www.westernvawater.org> and links therein

Constructed in 1951, the Roanoke Regional Water Pollution Control Plant provides wastewater treatment service for all jurisdictions in the Roanoke Valley. The facility occupies a 24-acre tract of property in southeast Roanoke City. With an average receiving flow of 37-million gallons per day, a drop of water entering the plant takes approximately 19-hours to move through all levels of the treatment facility. Along the way, more than 3,000 lab tests are conducted every month to verify that the liquid treatment process is meeting or exceeding water quality standards. The Regional Water Pollution Control Plant has some of the most stringent requirements for treatment of any plant in Virginia. Fully treated water is discharged to the Roanoke River.

Biosolids remaining after the digestion process is finished stay in lagoons at the plant for an additional nine months while anaerobic and aerobic bacteria consume most of the remaining



organic matter. Once fully treated, the biosolid material is land- applied to farms as fertilizer at no cost to farmers. More information about beneficial biosolids land application is available from the [Virginia Biosolids Council](#).



The facility utilizes two 500-kW generators to convert waste methane gas produced in the digestion process into usable energy. The combined heat and power (CHP) system supplies thermal energy to heat the existing digesters and electrical power that is used by the plant to reduce the plant's electrical utility power usage. Excess heat not used by the digesters supplies thermal energy to absorption chillers to heat and cool the buildings located on the plant site, further reducing the plant's electric usage. The CHP generation system offsets approximately 7,577 MWH of purchased electrical power and reduces an estimated 4,600 metric tons of greenhouse gas emissions annually.

The Western Virginia Water Authority has been recognized with the 2012 Platinum Excellence in Management Award by the National Association of Clean Water Agencies (NACWA) and has received NACWA's Gold Peak Performance Award every year since 2009. This award is given to facilities that achieve 100 percent compliance with their NPDES permits for an entire calendar year.

Section Members Honored

At the April 10, 2013 meeting of the Blue Ridge Section of the American Chemical Society, those who have been ACS members for 50 and 60 years were recognized.

The fifty-year members:

John Dillard
Bill Hickam
Peter Lorenz
Vernon Miller
Timothy Pickering
Frank Settle
Robert Taylor

The sixty-year members:

Ray Dessy
Norma Wade-Jardetzky
James Webb

Coming Soon: National Chemistry Week (NCW)

This year its October 20-26. Note that Mole Day, October 23, is in the middle of this week!

Topic: Energy

Theme: "Energy: Now and Forever!"

Visit www.acs.org to learn more.

IUPAC Contest to share with chemistry students:

The Physical and Biophysical Chemistry Division of the International Union of Pure and Applied Chemistry (IUPAC) is pleased to announce the Student Physical Chemistry Cartoon Competition for 2013. This competition follows a chemistry cartoon competition run by the Division of Physical and Biophysical Chemistry during 2011. The goal of the competition is to *clearly illustrate an aspect of [physical chemistry](#) in a manner that can enrich the teaching of physical chemistry.*

Awards of \$100 will go to 5 students whose cartoons are chosen as winning entries.

Key dates

- Submission Period: January 1 to May 31, 2013
- Decision Notification: June 30, 2013

For Entry Guidelines see:

<http://www.iupac.org/news/news-detail/article/pchem-cartoon13.html>

For examples of a previous winning cartoons see http://www.iupac.org/publications/ci/2011/3306/6_ityc_cartoons.html

Directions to Western Va. Water Pollution Control Plant(WPCP)

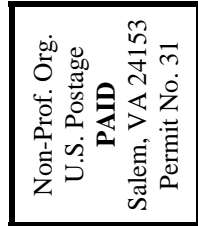
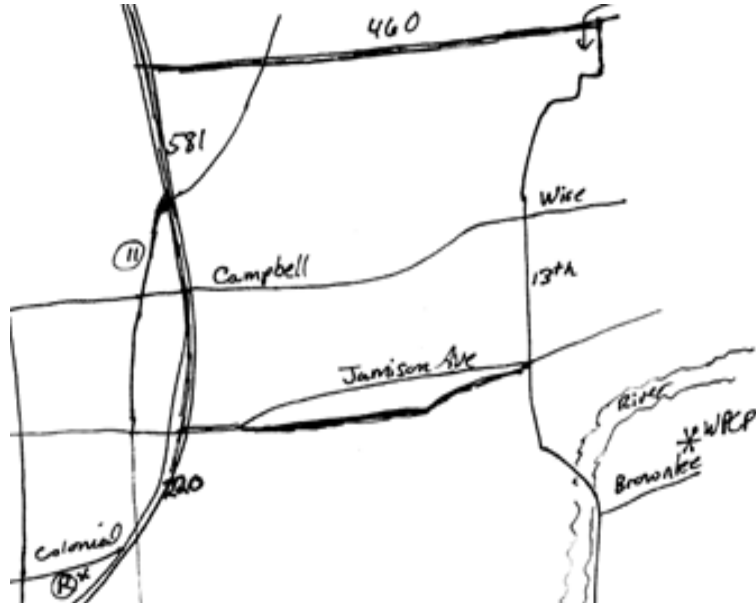
From I-81: Take Exit 143 onto 581 South; on 581S, take exit 5 and merge onto Williamson Road/11S; go left onto Campbell Ave.; go right onto 13th Street SE; go left onto Brownlee.

From Lynchburg: Take 460W to Roanoke; turn left onto Hollins Rd NE; turn right onto Norfolk Ave SE; turn immediately left onto 14th St SE; in one block turn right onto Wise Ave SE; in one more block turn left onto 13th Ave SE; after several miles take a left onto Brownlee.

Notes: some map programs/websites/GPS systems do not show Brownlee cut through to 13th St SE, but rather show a left from 13th St SE onto Carlisle, then left to Kindred and right on Brownlee which also works, but Brownlee is cut through to 13th St SE. Also note that near this area 13th St. SE changes name to Bennington as going south.

Directions from water plant to Roanoker (R)

From Brownlee Ave, turn right onto 13th St SE; turn left onto Jamison Ave SE, continue as it becomes Elm Ave W; turn left to take ramp and merge onto US 220S; take Colonial Ave exit; turn left at end of exit onto Colonial Ave. Restaurant is on the left in 0.3 miles.



Nancy Richardson and Vernon Miller, Co-editors
VA Blue Ridge Section, American Chemical Soc.
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Salem, VA 24153-3789

Return Service Requested

The next meeting will be hosted by Liberty University on September 17, 2013. Mike Goldin will be the speaker. Nancy Richardson is the contact person.