

## Rocky Mountain AIChE News

September 2013

Volume 23 Number 1

### September Section Meeting: Plant Tour of Merrick's MillerCoors Ethanol Plant

In 1995, Merrick contracted with MillerCoors Brewing Company to purchase a brewing residual waste stream from the brewery and upgrade it to fuel-grade ethanol under a long term contract for Colorado's Front Range Clean Air Program. As the lead entity, Merrick assumed the project development role, secured the financing, provided engineering and design services, procured new equipment and materials, and oversaw construction of the new facility. Merrick owns and manages the facility. As a partner in the project, MillerCoors supplies the feed streams and utilities for the project and supplies operators for the facility. Valero completes the project team and is responsible for transporting the product and providing the long-term purchase agreement for the ethanol.



Merrick was responsible for the new continuous production process design which includes a fractionation train, molecular sieve dehydration unit,

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### September Section Meeting

**Topic:** Plant Tour of Merrick's  
MillerCoors Ethanol Plant

**Tour Guides:** Pam Buzzetta, Ryan Caulfield,  
Crystal Smalley, Michael Washer  
and Chris Johnson

**Date:** Tuesday, September 24th

**Time:** 5:30 Meet at "The Copper Kettle"  
5:30 Safety Briefing/Walk to plant  
5:45-7:00 Tour (2 groups of 12)  
\*\* 7:00-7:30 Check-in/Networking  
7:30 Dinner/Q&A Table Mtn Inn  
\*\* *Can't make the tour at 5:30? Attend  
the dinner and Q&A session afterwards*

**Location:** 5:30 Meet at "The Copper Kettle"  
7:00 Table Mountain Inn  
1310 Washington Ave, Golden

**Cost:** Members: \$20  
(w/RSVP)\* Non-Members: \$25  
Students & Unemployed: \$10

**Please RSVP by FRIDAY, September 20<sup>th</sup>,**  
indicating your name, phone number, and number  
of attendees. *Indicate whether you'll attend both  
the tour and dinner, or just the dinner session.*  
Please RSVP at [rockyaiche@yahoo.com](mailto:rockyaiche@yahoo.com).

\*Add \$5 for attending meeting without RSVP

**IMPORTANT NOTE TO ATTENDEES:** Be sure to wear  
sturdy shoes and long pants for this outdoor tour.  
Merrick will provide safety glasses and hardhats. The  
plant is on multiple floors with no elevators, and  
therefore cannot accommodate wheelchairs or crutches.  
Only 24 spots available on the plant tour. Please RSVP.

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and product handling facilities. The existing equipment strips the ethanol from the feed stream. The vapor stream from the distillation tower feeds the molecular sieve unit which removes the remaining portion of the water. The finished product of 200-proof ethanol is then pumped to the storage and truck loading facilities. The original facility was expanded in 2005 to its current capacity of 3 million gallons per year of fuel-grade ethanol.

In 2011, the ethanol received a Renewable Identification Number (RIN) which validates the quality and provenance of the ethanol and increases its market value. (Text and photo from website: <http://www.merrick.com/Portfolio/MillerCoorsEthanolPlant>)

Awards: American Council of Engineering Companies, Colorado Chapter, Engineering Excellence Award

Pam Buzzetta, Ryan Caulfield, Crystal Smalley, and Michael Washer from the Merrick Process Group, plus Chris Johnson from the Merrick Mechanical Group will describe the plant design and operation and host a tour of the facility.

**Note: Maximum tour size is limited to 24 (two groups of 12) so RSVP early. Be sure to wear sturdy shoes and long pants for this outdoor tour. Merrick will provide safety glasses and hardhats. The plant is on multiple floors with no elevators, and therefore cannot accommodate wheelchairs or crutches. The meeting location is at the Copper Kettle on the MillerCoors campus at 5:30pm.**

***Dinner Only Option.*** *If you can't make it to the tour by 5:30, attend just the dinner and Q&A session afterwards, starting at 7:00 PM check-in. Indicate "dinner only" in your RSVP.*

## Engineers Needed to Mentor Middle School Kids in Future City Program

The Future City Competition is a national, project-based learning experience where students in 6th, 7th, and 8th grade imagine, design, and build cities of the future. Students work as a team with an educator and engineer mentor to plan cities using SimCity™ software; research and write solutions to an engineering problem; build tabletop scale models with recycled materials; and present their ideas before judges at Regional Competitions in January. Regional winners represent their region at the National Finals in Washington, DC in February.

There are lots of ways you can get involved in this worthy program. Check out this website link for more details <http://futurecity.org/getinvolved>.

## 2012-2013 AIChE Meeting Presentations

May 2013	Applying Process Safety Management (PSM) to Production Pilot Plants by Bruce D. Bullough
Apr 2013	Clean Coal Conversion Technology Breakthrough by Dr. E.G. Meyer
Mar 2013	Supercritical Carbon Dioxide Brayton Cycles: Next Generation Power by Dr. Craig Turchi
Feb 2013	Denver Water Recycling Plant Tour by Jenny Murray, Russell Plakke and Myron Neale
Jan 2013	Premier of FRACKNATION – A viewing Event
Nov 2012	Presentation and Tour of the Atmel Manufacturing Plant by David Helmer
Oct 2012	Challenges of Removing 1,4-Dioxane at Lowry Superfund Site by Timothy C. Shangraw, P.E.
Sept 2012	The Most Important Substance You've Never Heard Of by Mike Washer and Martin Biggs

## AIChE Meetings

### 2013

Sept 23-24	AIChE & A&WMA Joint Workshop on Municipal Water Reuse Hyatt Regency Long Beach, CA
Sept 25-26	AIChE Workshop on Smart Grid for the Chemical Process Industry Chicago, IL
Oct 3-4	5th AIChE Southwest Process Technology Conference Moody Gardens Hotel and Convention Center
Oct 21-23	Carbon Management Technology Conference Hilton Alexandria Old Town Alexandria, VA
Nov 3-8	2013 AIChE Annual Meeting Hilton Union Sq San Francisco, CA

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The objectives of AIChE are to advance chemical engineering in theory and practice, to maintain a high professional standard among its members, and to serve society, particularly where chemical, engineering can contribute to the public interest.

## Rocky Mountain AIChE News Publication Schedule

### October 2013 issue

Articles due Wednesday, October 2<sup>nd</sup>  
 Publish on Friday, October 4<sup>th</sup>  
 Meeting on Tuesday, October 15<sup>th</sup>

## MEETING SCHEDULE

*The Rocky Mountain District of AIChE generally meets the third Tuesday of every month, September through November and January through May.*



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*Send your E-MAIL address to  
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this newsletter electronically!*



**To Table Mountain Inn from parking lots of “The Copper Kettle,”** drive south on 12<sup>th</sup> Street. Turn left on Washington Ave. Drive about 2 blocks and look for Table Mountain Inn on the right.

**To Copper Kettle from I-70 westbound,** merge onto CO-58 W via exit 265 toward Golden. Take Washington Ave exit and turn left. Drive 0.4 miles and turn left onto 12<sup>th</sup> street. Look for the parking lots. Walk northeast to the “The Copper Kettle.”

**To Copper Kettle from 6<sup>th</sup> Avenue,** turn right onto 19<sup>th</sup> Street, drive 0.7 miles and turn left onto Ford Street. Drive 0.5 miles and turn right onto 12<sup>th</sup> street. Look for the parking lots. Walk northeast to the “The Copper Kettle.”

