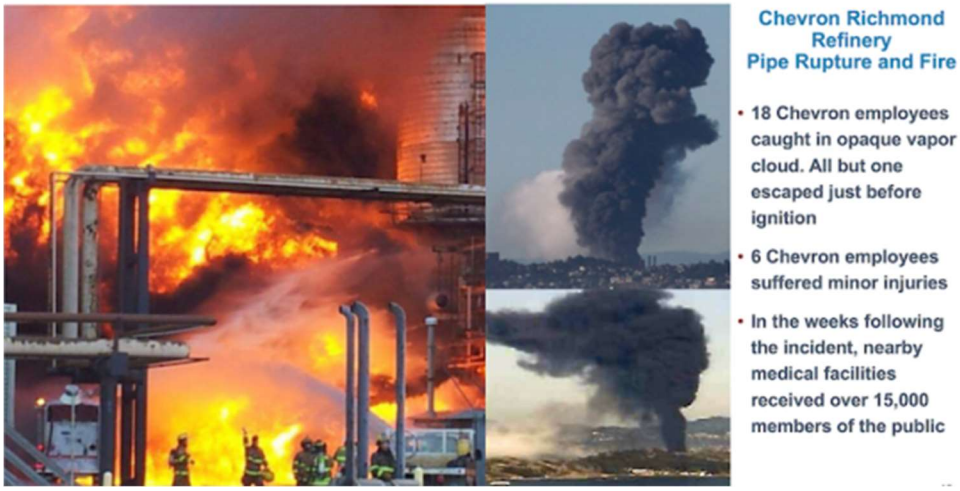
MONTHLY NEWSLETTER OF THE VIRTUAL LOCAL SECTION OF AICHE
MAR-APR 2022 - VOLUME 12, ISSUE 3-4

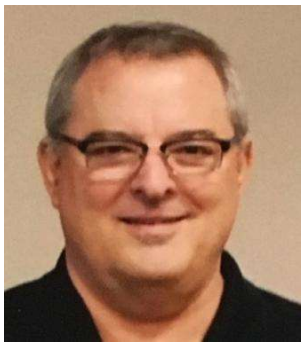
This month's meeting:
Primary (with live discussion/live chat) Wednesday, Apr 27 at 9 pm ET (US) / 1 am GMT
Alternate 1 (with live discussion/live chat) Thursday, Apr 28 at 7 am ET (US) / 11 am GMT
Alternate 2 (with live discussion/live chat) Thursday, Apr 28 at 1 pm ET (US) / 5 pm GMT

How Does The Chemical Safety Board Operate?

By Steven Cutchen

The U.S. Chemical Safety Board (CSB) is an independent, nonregulatory federal agency that investigates the root causes of major chemical incidents with the mission to "drive chemical safety change through independent investigations to protect people and the environment." This presentation describes the CSB investigation process, providing technique details that can be applied in internal company investigations. The investigation of the August 6, 2012 Chevron Refinery Fire in Richmond, California serves as an example for how these techniques can result in addressing true fundamental causes rather than the typical investigative result of buying new gear and retraining personnel.





Steven Cutchen joined the US Chemical Safety Board in 2011 and worked as an investigator for the agency for eight years. Prior to that, he had over thirty-three years of experience in the chemical industry in process, process safety and process control engineering. Over the last ten years, he specialized in incident investigation, risk analysis and safety instrumented systems, serving as one of two instructors for globally implementing advanced incident investigation techniques specializing in the causes for human error. In addition to technical roles, he held various management positions ranging from technical supervision to world-wide technology management. Mr. Cutchen received a Bachelor of Science in Chemical Engineering from the University of Texas at Austin. He completed graduate work in statistics at The University of Houston-Clear Lake. He is a Certified Human Factors Analysis and Classification System Professional.

Note that registration for VLS meetings is required.
Our meetings are still free to attend and open to all.

April Meeting Registration Information

Primary	**Alternate 1**	**Alternate 2**
(Live Presentation/Live Chat)	(Recorded Presentation/Live Chat)	(Recorded Presentation/Live Chat)
Apr 27 at 9 PM EST / 1 AM GMT	Apr 28 at 7 AM EST / 10 AM GMT	Apr 28 at 1 PM EST / 5 PM GMT
Register in advance for the	Register in advance for the	Register in advance for the
Primary Meeting	**Alternate 1 Meeting**	**Alternate 2 Meeting**

After registering, you will receive a confirmation email containing instructions for joining the meeting, along with add-to-calendar links.

Four Winners Announced at Annual Student Competition

The annual Student Internship/Co-op Presentation Competition was featured at the VLS February meeting, as four finalists from three continents selected from a global pool of submissions presented an overview of their industrial internship or co-op work. **Kenna Valentine**, a student at Georgia Institute of Technology and intern at Valero, was named as the winner. After graduation, she plans to join Texas Instruments in Dallas as a Manufacturing Process Engineer.

The other presenters at the February meeting were:

Runner-up: Tomás Barboni, a student at the Instituto Tecnológico de Buenos Aires, Argentina, and intern at Raízen.

Finalist: Hannah Liu, a student at The Ohio State University and intern at Post Consumer Brands.

Finalist: Rifat Abdullah, a student at Shahjalal University Of Science And Technology, Bangladesh, and intern at Carew and Co, Ltd.

The student competition always fosters lively discussion as the students get to present to the live, global membership and field questions from the many experienced engineers, even as they get to hear from other students. Tomás noted how important this was to him, "Being able to know what has been done recently in terms of chemical engineering all around the world has always been quite interesting to me. What makes it even more special is that those projects have been developed by students just like me."

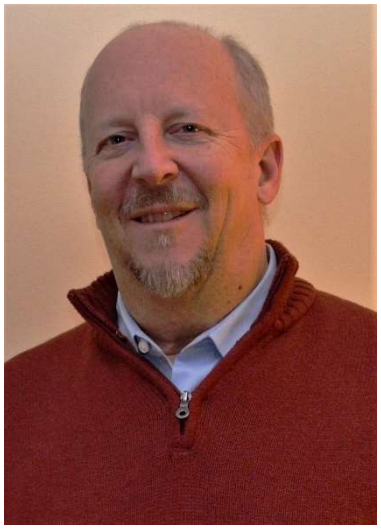
This installment was special, as it was the first after the competition was shelved and then delayed during the Covid pandemic, due to inconsistencies in internship offerings during 2020. The four great presenters and numerous high-quality abstracts indicated that the incredible development opportunities have returned. Rifat noted that his internship had shown the impact of research, "I realized that by research a person can change the economic growth of his community, country and also the world."

Kenna remarked on the value of her internship - "It confirmed that I wanted to work full-time in a plant environment. I am a high energy person, and I loved how every day was different in a plant." After discovering that chemical engineering opportunities in manufacturing aren't limited to refineries, she said, "I am never one to pass up a new experience, so I took a job in an environment other than refining -- microelectronic fabrication!"

From L-R: Hannah Liu, Kenna Valentine, Rifat Abdullah, and Tomás Barboni

Introducing Our February Meeting Raffle Winner!

Every month, a dues-paying member who signed in for the duration of the monthly webinar is selected at random to win a free year of VLS membership (Executive Committee members and previous winners during the current year are ineligible). We are pleased to introduce our February winner – Dan Miller.



- **What made you want to be a chemical engineer?** *My interest in engineering began early with the home chemistry kits - and not being limited to the boundaries of those "safe" experiments. Coupled with an affinity to math and the sciences, engineering became the draw. Chemical Engineering was my chosen major when I graduated from high school and I never regretted zeroing in on that choice for the doors that were later opened.*
- **What school(s) did you go to?** *I graduated from the University of Toledo with a BS Chemical Engineering in 1977. Go Rockets!!*
- **What kinds of jobs have you had?** *1977 was a lucrative time to graduate with a chemical engineering degree. Of the several offers received, I joined BASF, due in large part to their Technical Personnel Development Program, which allowed new entry engineers an opportunity to work 2-4 assignments, each about 6 months - learn the company as they learned about you. My early career was spent in manufacturing, predominantly on the Gulf Coast. It was during this time that I became responsible for technology transfer, new plant design, and commissioning of new plants. In all, I was involved in 8 such projects over a 16-year period. I was then invited to join BASF's global process safety group - an opportunity to leverage all of the start-up / operations experiences and sit on the other side of the design table, as well as a chance to work overseas. The last 21 years of my career was spent in process safety, including leading BASF's North America Process Safety Center of Expertise and a member of the BASF Global Process Safety Steering Team. Yes - I was a 39-year lifer with BASF! Since retiring from BASF, I have been one of the CCPS Process Safety Boot Camp instructors in the AIChE Academy.*
- **Where do you live?** *My wife moved from northern NJ to Bluffton, SC in 2018 as our retirement base.*
- **Why did you join the Virtual Local Section?** *My route to the VLS was interesting. I was recruited by Amanda Scalza to join the VLS Board - I honestly did not know about the VLS prior to that. I served on the Board for 4 years, an experience that reinforced to me the importance of the VLS platform to further reach the AIChE membership, especially those without access to a physical local section.*
- **Any hobbies that are connected to chemical engineering?** *If anything, being a SCUBA diver has given me a chance to apply principles of buoyancy, pressure equalization and view the natural world from underwater - being a steward of the earth is important to me.*

AIChE News

The AIChE hosts technical conferences around the world. Check www.aiche.org/conferences for registration and presentation information for this year's events.

Dates	Event
Apr 20-21	eChemExpo
May 2-5	2022 Synthetic Biology: Engineering, Evolution & Design
May 2-5	2022 Offshore Technology Conference
May 4	Micro Reaction Calorimetry: Applications for the Chemical & Pharmaceutical Industry
May 4	IDEAL Star Panel
May 5	Improve Productivity of Catalytic Processes
May 9-10	5th Commercializing Industrial Biotechnology
May 10	CCPS Pharma, Food, and Fine Chemicals Meeting
May 11	2022 CCPS China Regional Virtual TSC Meeting
May 11-13	2022 DIERS Spring Virtual Meeting
May 18-19	4th Solar Energy Systems Conference

Upcoming VLS Meetings

The VLS has monthly meetings. The following meetings have firm dates and speakers.

Dates	Topic
Apr 2022	How Does the Chemical Safety Board Operate?
May 2022	Evaluating our assumptions: the need for diverse perspectives
Jun 2022	Cybersecurity
Jul 2022	Python Demo: Pulling Data Using an Application Programming Interface
Aug 2022	Using Artificial Intelligence to Improve Toxicity Predictions When Developing Products or Processes
Sep 2022	Waste Biomass Digestion to Make Biofuels

Past VLS Meetings

The VLS records its monthly meetings and archives them on the AIChE Academy website in case you missed a meeting or are looking for a particular topic. See below for current recordings.

Date	Event
Feb 2022	2022 Student Co-Op and Internship Competition hosted by Noah Meeks
Aug 2021	How can nuclear energy help fight climate change?
Jul 2021	Automation of Process Simulation and Data Analytics with MATLAB
Jun 2021	Chemical Fuels in Carbon Neutral Energy system
Apr 2021	Impactful Online Meetings
Feb 2021	Overcoming the Challenge of Applying Chemical Engineering Principles to the Art of Winemaking

Date	Event
Jan 2021	DIERS Technology Fundamentals II: VLS January 2021 Webinar
Nov 2020	Protecting Lives and Livelihood: Hazardous Materials Classification and its Impact to the Supply Chain
Oct 2020	Chemical Safety Board (CSB) Accidental Release Reporting Rule
Sep 2020	Internships and Undergraduate Education
Aug 2020	Physical Property Models to Design Better Chemical Products
Jul 2020	Julia - A Fresh Approach to Technical Computing
Jun 2020	The Next Digital Leap to AI (An Interactive Webinar)
May 2020	Challenges and Benefits of Remote Operator Training using Cloud-Deployed High-Fidelity, First-Principles Based Standard Operator Training Simulators (SOTS)
Apr 2020	NASEM Chemical Engineering in the 21st Century Study: Give your input!
Mar 2020	Is Your Focus Your Magic!
Feb 2020	DIERS data/standards in HAZOPS of two phase flow
Jan 2020	A Brief History of Measurement
Nov 2019	Using Thermal Imaging to Guard Industrial Facilities
Oct 2019	Python for chemical engineers: Getting started
Aug 2019	Reactive Chemical Hazards
Jul 2019	Should I Py or Should I Fortran?
Jun 2019	Design Considerations for Organic Electronic Materials and Devices
May 2019	Why Can't You Compete Without Virtual/Augmented Reality in Your Plant
Apr 2019	The Chemistry of Bourbon: The "spirit" of molecules
Mar 2019	Demystifying Professional Engineering Licensure and How to Put it to Work for you
Feb 2019	Municipal Wastewater and Sludge Are a Resource, Not a Waste: Coping with Tightening Water Supplies and Limited Landfill Availability

We're in this Together

The ongoing COVID-19 situation has provided us with a reminder that even in uncertain times, AIChE is a diverse community of people who lead, create, inspire and learn—together. AIChE is here to help. Knowing that many of our members are working virtually, AIChE has created this page to act as a hub for online content, access to communities, and communication updates. Learn more.

The Virtual Local Section's Executive Committee

Officers

Chair:	Steve Treese
Senior Vice Chair:	Mario Arredondo
Vice Chair:	Hashim Al Hajji
Immediate Past Chair:	Paul Adamson
Secretary:	Laura Gimpelson
Treasurer:	-

Directors

Director 1	Fred Fischl
Director 2	Kirsten Rosselot
Director 3	Shannon Brown
Director 4	Andrew Riederer
Director 5	Paul Wissmann
Director 6	Marc Clithero

Did You Know?

You can visit the VLS website for more information on the Virtual Local Section's mission, activities, and membership. Also at this website, AIChE student members and VLS members can watch previous webinars for free.

Subscription Information

Current fully paid members of the Virtual Local Section receive this newsletter. If you wish to update your email address, contact the AIChE's New York Office for Permanent Address Corrections at xpress@aiche.org or 1-800-242-4363.

Continuing Education Credits

Members of AIChE can receive 1 hour of continuing education/professional development credit for attending Virtual Local Section webinars. Send your name, the certificate number on your professional engineer's license, and the licensing entity (state or country) in which you are licensed to our Secretary, lg_environmental@bellsouth.net, to receive one hour of continuing education credit for attending this meeting.