

FINAL Minutes of December 8, 2022 Ethylene Producers' Environmental Sub-Committee Meeting

(December 8, Rev. 1)

Following are the minutes of the December 8, 2022 Ethylene Producers' Environmental Sub-Committee Meeting, held face-to-face (Rick Beleutz host at LyondellBasell Houston Engineering Center) and via MS Teams. Thank you, Rick, for hosting!

Present: Rick Beleutz, LyondellBasell [LB HEC]
Troy Boley, Spectrum Environmental Solutions, LLC [Teams]
Shelby Browning, Eastman Chemical [Teams]
Jacob Hilbrich, Chevron Phillips
James Kendall, ExxonMobil Chemicals [LB HEC]
Dan Lutz, Ineos [LB HEC]
Andrés Muñoz Gandarillas, Neste [Teams]
Arijit Pakrasi, Edge Engineering and Science [Teams]
Walter Postula, Shell Global Solutions (US) Inc. [Teams]
Mark Schmidt, Dow [LB HEC]
Mark Ulrich, Linde Engineering Americas [LB HEC]

Absent: Benjamin Burns, LyondellBasell
Ahmad Hamad, Siemens-Energy
Ted Heron, The Catalyst Group
Allyson Ledet, NOVA Chemicals
Patti Long, Eastman
Gerardo Ruiz-Mercado, US EPA (AIChE Environmental Division)
Jeffrey Seay, University of Kentucky (AIChE Environmental Division)
Dick Siegel, R&B Consulting Services (AIChE Environmental Division)
Edward Soliz Jr., LyondellBasell?
Jason Trembly, Ohio University (AIChE Environmental Division)
Gary Wojnowski, BASF

The meeting began at 10:46 am with Walter Postula reading the Ethylene Producers' Committee (EPC) anti-trust statement:

No activity of the committee shall involve the exchange, collection, or dissemination of information among competitors for the purpose of bringing about or attempting to bring about an understanding or agreement, written or oral, formal or informal, express or implied, among competitors, with regard to costs, prices, pricing methods, terms or conditions of sale, distribution, production quotas or other limitations on either the timing or volume of production or sales, or allocation of territories or customers.

The meeting agenda was published in advance and is included below:

- 1) Reading of Anti-Trust Statement [10:32 AM]
- 2) Welcome of new member [10:34 AM]
- 3) Discussion on abstracts to include/accept in session (see attached PDF for full abstracts) [10:40 AM]
 - a. (1) in PDF: The US Approach to Regulating GHG Emissions – A Practical Summary
 - b. (2) in PDF: Ethylene Risk and Technology Review Reconsideration, What NOW?

- c. (3) in PDF: Olefin and Olefin Derivative Carbon Footprint of Product Perspective
 - d. (4) in PDF: Review of Recent Ethylene Producers' Consent Decree Fenceline Monitoring
 - e. (5) in PDF: Carbon Dioxide Mitigation Using Renewable Power: Life Is All about Priorities!
 - f. (6) in PDF: How Is the U.S. EPA's Pollution Accountability Team (PAT) Using "Next Gen Enhanced Monitoring" in Its Investigations?
 - g. (7) in PDF: Mitigating the Growing Risks of Fenceline Monitoring Chemical Plants
 - h. (8) in PDF: Decarbonization Roadmap Methodology and Case Study for Petrochemical Facilities
- NOTE: (1)-(5) are those abstracts "solicited" by subcommittee during planning, (6)-(7) submitted after Mark Ulrich interaction with potential presenters at AFPM Environmental Conference, and (8) was unsolicited submission.**

- 4) Order of presentations in session [11:20 AM]
- 5) Subcommittee Name Change [11:40 AM]
- 6) Review of Action Items [12:00 PM]
- 7) Important Date Reminders
 - June 20, 2022 – Call for abstracts opens
 - October 25, 2022 – Call for abstracts closes (postponed to November 11, 2022)
 - December 9, 2022 – Papers accepted or rejected
 - January 6, 2023 – Draft schedule ready
 - January 13, 2023 – Program goes live
 - March ??, 2022 – Paper submission closes
 - March 12-16, 2022 – Spring Meeting – Houston, TX
- 8) Adjourn [12:15 PM]

Welcome of new member: Shelby Browning (Eastman Chemical in Longview) joined the subcommittee. The existing members present briefly introduced themselves, Shelby did same. Welcome Shelby!

Health moment: Rick discussed his recent (and lingering) experience with Shingles. A vaccine is available.

Discussion on abstracts to include/accept in session: Proposal was made to combine the three fenceline monitoring papers [4, 6, and 7] into a single, extended length presentation. Troy Boley indicated that he and the two authors from Tricord Consulting would be able to abide. Since the GHG emissions presentation is double length, the suggestion was made to shorten the RTR presentation (Steve Smith) to accommodate the longer fenceline monitoring presentation. Rick will discuss with Steve but thought it would be workable because of the limited amount of new material for RTR. The Decarbonization [8] abstract was submitted to the Environmental Session because the author(s) noted the Technology and Fundamentals session on Decarbonization was overfull. The Environmental subcommittee agreed that the paper belonged in that session. Walter had communication with the author(s) before the subcommittee meeting and they indicated desire to be released into the general paper pool if they did not make the Environmental Session.

Order of presentations in session: The following was agreed (abstract number from PDF is in brackets).

- (5 min) Intro remarks
- (50 min) US Approach to Regulating GHG [1]
- (25 min) Carbon Footprint [3]
- (20 min) Break
- (15 min) Ethylene RTR [2]
- (35 min) Fenceline Monitoring [4, 6, & 7]
- (25 min) Ghent [5]
- (5 min) Closing remarks

Total time of 3 hours. Presentation time includes time for Q&A.

Subcommittee Name Change: Revisited discussion from past couple of meetings. “Environmental and Sustainability” again was settled upon as best representing. Short paragraph will be developed and shared to help define the subcommittee’s purview. The name change will be communicated at the Main Committee meeting.

Timing of Next Subcommittee meeting: Those present agreed that another meeting on January 26, 2023 (next Main Committee meeting) was not necessary. Makes more sense to have something scheduled in mid/late February in “dry run” format. We should have presentations in hand by that point.

Review of Action Items: Below are the action items (responsible in **bold**)

- **Walter:** Communicate acceptance/rejection of abstracts to authors. **DONE**
- **Troy:** Coordinate with Laura and Joe from Tricord Consulting to develop combined abstract and presentation/paper on fenceline monitoring subject. Send abstract to Walter for replacement in AIChE Confex system.
- **Rick:** Follow-up with Steve on acceptance of shorter slot for RTR. **DONE**
- **Rick:** Communicate Environmental Subcommittee name change to Main Committee. **DONE**
- **Andrés:** Develop and share paragraph to communicate the desired scope of potential content for the Environmental and Sustainability session. **DONE**

Post meeting note: Andrés proposed the below as a first draft description for the scope of the “new” Environmental and Sustainability subcommittee.

“The Environmental and Sustainability Subcommittee focuses on issues dealing with environmental regulations, compliance and reporting impacts for the ethylene producing companies. Additionally, and with sustainability playing an increasingly important role in the ethylene and petrochemical industry, the subcommittee acts as a forum for discussion as well as sharing of non-confidential information related to the development and deployment of corporate strategy aimed at sustainability target setting and achievement, besides best practices on sustainability, calculations and standards.”

Mark Ulrich proposed the following updates (in **bold**).

“The **AICHE Ethylene Producers Committee’s** Environmental and Sustainability Subcommittee focuses on issues dealing with environmental regulations, compliance and reporting impacts for the ethylene production industry. Additionally, with sustainability playing an increasingly important role in **broader society, the petrochemical industry and amongst ethylene producers**, the subcommittee acts as a forum for discussion **and** sharing of non-confidential information. **Envisioned sustainability focus areas include** the development and deployment of corporate strategies aimed at target-setting and achievement, **applicable technologies**, best practices, calculations, and standards.”

Safety moment: Mark U. mentioned the increased danger of being followed (by car) after going to the bank or shopping this time of year. Advised that taking three right turns is a good method to confirm if you believe you are being followed. Do not go home. Go to well lit, public place, where people are present (gas station). Honk horn to draw attention to yourself if necessary.

Important Date Reminders: The dates listed in item 7 of the agenda were reviewed. The conference will be here before we know it after the holidays.

Adjourn: The meeting/call was closed at 12:06 pm.