

## Contaminants & Impurities in Ethylene Plants Subcommittee – August 25<sup>t</sup>, 2023 Meeting Minutes

### Team Members

Mark Davis	X	Yong Wang		Robert Alvers	X
David Smith	X	Joe Lally	X	David Hood	X
Sherri Elder		Andre Bernard	X	Ross Perchuk	
Mark Whitney	X	Scott Hailey	X	Lisheng Xu	
Dwight Hines		Jennifer Nill	X	Debby Rossana	
Omar Hamid	X				

### 1. Anti-trust statement

*“No activity of the Committee shall involve the exchange, collection or dissemination among competitors of information or be used for the purpose of bringing about or attempting to bring about any understanding or agreement written or oral, formal or informal, express or implied, among competitors, with regard to costs, prices, or 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.”*

### 2. Key Dates

- Call for abstract is currently open
- Call for abstract closes Oct 25<sup>th</sup>, 2022
- Paper acceptance/rejection -> December 9<sup>th</sup>, 2022
- EPC Draft Schedule January 6<sup>th</sup>, 2023
- Program to go live January 13<sup>th</sup>, 2023
- Paper submission -> March
- Virtual Dry Run -> 2 to 3 weeks prior to the conference
- Conference -> March 12<sup>th</sup> to 16<sup>th</sup> in Houston

### 3. Updates from Main EPC Committee

Access to AIChE confex has been provided to Chair (Andre) and Co-Chair (Sherri). Currently no abstracts have been uploaded.

#### **4. Review Paper Ideas**

##### **Potential Contaminant from On Purpose Propylene Catalytic De-Hydrogenation.**

- Dow still not ready to share in the public domain but shows some potential openness for 2024. The idea will be move to the standby list.

##### **Popcorn Polymer – TCP Incident.**

- Potential paper on popcorn polymer by NOVA will be move to the standby list as a potential for 2024. There is still interest in doing a paper, but the timing was reported too tight for meeting the 2023 timelines.

##### **Feedstock CO2 Capture – Amine Technology/ Sensitivity to impurities.**

- Unsuccessful in reaching out to Amine Technology suppliers last year. Omar is still pursuing potential contacts. However, there is a low probability in meeting timelines for 2023. Will move the idea to the standby list.

##### **Oxydative Coupling of Methane to Ethylene**

- Dave S. met with contacts and was referred to other contacts that he expects to meet within the next few weeks. (Dave S. to follow up).

##### **Pipeline Contaminants**

- Unsuccessful in reaching out to gas company or other potential authors. Will move the idea back to the standby list.

##### **Feedstock Contaminant Database & Specific Contaminant**

- Subcommittee Abstract submitted last year as contingency.
- Will reconsider the idea for this year. (No action required at this time, will keep it as contingency)

##### **Radon – NOVA Experience**

- Paper accepted in 2022 but transfer to the safety session
- Authors pulled out of 2022 EPC due to issues with travel approvals.
- Authors still interested in presenting. Will keep the idea but may transfer later to the Safety session. (Same status - Andre to follow up with authors)

### **Contaminants from Plastic Waste Base Feedstocks**

- Yong indicated that University of Ghent was also contacted by Jack Buehler who chair the Technology Session. University of Ghent will provide abstract to both session and a decision can then be made as which session is a better fit. (Yong to monitor progress)
- Hydro processing for cleaning up the feed. UOP showed interest, planning on sending 2 abstracts. 1 on circular economy and 1 on decarbonization strategy. The circular economy will be a fit to our session, but the abstract on decarbonization is to be submitted to another session. (Omar & Scott to monitor progress)
- Omar had contacted Rahul khandelwal (Sulzer) without success relative to Hydro Processing for cleaning up the feed from Pye Oil originating from waste plastic.
- Baker Hughes indicated interest in presenting a paper on plastic pyrolysis oil and its chemical treatment. (Lisheng to follow up)

### **Contaminants associated with unusual feedstock (ex. Ethanol, Waste & others)**

- Survey – Literature (could potentially be done within the subcommittee). Andre has some ideas for a subcommittee paper. Needs to further develop the idea. To be discuss at next meeting

### **Impacts from Higher Volume of Ethan Cracking in Mix Feed Cracker**

- Many papers between 2010 to 2020 on Impact of Ethane cracking in Mix Feed Cracker. Papers were mostly theoretical. Plant data is now available and could make an interesting topic
- Contaminants such as Pytar, PNA's, Indene, Styrene
- Success & War stories with flux oil
- Focus on Primary Fractionator given the number of papers presented previously. Idea is to compare theory to practice.
- Discussed the approach to the paper, survey vs producer experience (war/ success stories). D. Smith to follow up with Nalco experience.
- Mark D. will follow with Dow relative to plant experience.

### **Paper on N2O & NO – Linde**

- Success story at Linde.
- Interesting topic as it discussed contaminants for which we have little data if any (new contaminant for the database).
- Mark W. to produce an abstract.

### **DMS substitute vs process impacts**

- DMS availability tight. Producers are switching to DMDS and others. Gaylord Chemical (make DMSO & DMDS) Showed interest in doing a paper. (Joe to follow up)
- Dave S. indicated that Lummus is not interested in doing a paper on DMS.
- Jennifer will follow up within CPChem

### **MEA & NH3 issues**

- Quench system pH control with MEA vs NH3 contamination or NH3 contamination from upstream MEA units. Deb started looking at the EPC history. Ran into some difficulties in accessing EPC web site. (Andre to follow up & provide some help)
- Dwight presented a good paper on that topic at a previous EPC. Dave H. contacted Dwight, who is considering the idea. (Dave H. to follow up)

### **5. Technical Discussion**

- None currently

### **6. Other Business**

- The EPC/ EEPC partnership may allow an EEPC Butadiene Safety Video to be made available on the EPC web site. (Mark W. to follow up)

### **7. Schedule Next Meeting**

Next Meeting Sept 22<sup>nd</sup>, 15h00 CST