



**American Institute of Chemical Engineers,
Cleveland Section**

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Thursday, February 24, 2022

Remote Zoom meeting format due to COVID-19 variant cases, hospitalizations, and deaths in Ohio

Where will the Intel Ohio Chip Plant get their Pure Si?

There is a high probability that the Hemlock Semiconductor Corporation (HSC) plant located in Hemlock, MI will provide a fair portion if not all of the 99.999% pure polycrystalline silicon or polysilicon needed for the electronics chip manufacturing process at the Intel Corporation facility to be built in New Albany, Ohio. The HSC plant currently is the largest producer of polysilicon in the United States and produces 36,000 tons of polycrystalline silicon annually, ranking it among the top five producers worldwide. The pure form of Si is used in the manufacture of electronic chips as well as solar photovoltaic panels. HSC (founded in 1961) was owned by the Dow Corning Corporation. In June 2016 Dow Chemical Company took full ownership of Dow Corning Corporation and Corning Inc. took 80% of HSC sharing it with 20% ownership by Shin-Etsu Chemical. This ending a 73 year joint venture between Dow Chemical and Corning Inc.

This presentation will step through the polycrystalline silicon five production process areas as it was designed on the Hemlock Semiconductor Corporation (HSC) Pharo III and Pharo IV projects engineered by the Morrison Knudsen Corporation Cleveland offices in 1997 and 1998. The HSC Pharo III and Pharo IV project teams received the Morrison Knudsen Corp. & HSC Award for Engineering Excellence for their work in 1998.

Speaker: Joe Yurko was with Morrison Knudsen Corporation (MK became URS then AECOM) as a senior process engineer for 22 years. During his time at MK, Mr Yurko was the CVD Recovery Process lead engineer on the Hemlock Semiconductor Corp. Pharo III and Pharo IV projects that doubled the facility production capacity of high purity grade polycrystalline silicon in Hemlock, Michigan. Mr Yurko is presently the Cleveland AIChE Section Newsletter Editor and Webmaster. Mr Yurko is a professional engineer licensed in the state of Texas. He is also an Emeritus member and Fellow of AIChE, and an active member of NSPE, ISPE, and ACS. Recently, Joe was a Project Lead at Xellia Pharmaceuticals (Novo Nordisk a/s) manufacturing facility in Bedford, Ohio, and retired in 2020. He was with Xellia for four years overseeing the process design, construction, and commissioning of Sterile Injectable Parenteral systems in two factories for the production of Vancomycin. This facility is cGMP compliant as well as licensed and regulated by the Food and Drug Administration (FDA) and the European Medicines Agency (EMA). Mr Yurko's previous work as a senior project engineer was with Ben Venue Laboratories (Boehringer Ingelheim GmbH) overseeing four cGMP factories and a pilot plant for 12 years manufacturing chemotherapy parenterals regulated by the FDA, EMA, ANVISA, PMDA, and TGA.

Please email Joseph Yurko if you plan to attend the presentation so AIChE will Email you a Zoom link. An AIChE Continuing Professional Development certificate will be issued to you after the meeting. Thank you!

Meeting Location: Please RSVP with Joseph Yurko prior to the meeting so you will be Emailed a Zoom Link to attend the presentations

6:00 – 7:30 pm: Zoom Presentation

Cost: No Cost for Zoom Presentation

Menu: No menu for Zoom Presentation

RSVP by February 22nd with Joseph Yurko and AIChE: j.yurko@sbcglobal.net

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