

American Institute of Chemical Engineers, Cleveland Section

Visit our Web Page at: <u>https://www.aiche.org/community/sites/local-sections/cleveland</u> Join our LinkedIn Group called: AIChE Cleveland Section and let colleagues know it is available

Thursday, January 30, 2020

Nuclear Power, Past, Present and Future



At the center of the debate about climate change is how to produce electricity without releasing CO2 to the atmosphere. The most contentious and largest form of carbon free electrical production is nuclear power. This Presentation will go over the history of nuclear power plants from early designs, to the modern large electrical generation stations and look at potential future plant designs. Discussion will be provided on how newer designs will be more accident tolerant, will produce less long-term radioactive waste and will be more cost efficient. Additional discussion will go over current state of nuclear power in Ohio and Ohio legislative efforts to support nuclear power. Time will be available for a question and answer session at the end.

Andrew R. Ohrablo is the Maintenance Electrical Engineer at Perry Nuclear Power Plant with over 30 years of study and experience in the nuclear power field. Mr. Ohrablo started his nuclear career with the United States Navy in 1987. After training as a nuclear electrician, he was stationed on the USS Enterprise and served till 1993. Following his time in the Navy, Mr. Ohrablo returned to school at the Ohio State University. He transferred to the University of Wisconsin at Madison and received his Bachelor of Science Degree in Nuclear Engineering in 1998. Mr. Ohrablo's thesis was on the design of a Liquid Sodium Cooled Fast Breeder Reactor. He then began a career in the civilian nuclear power field as a Shift Technical Engineer at Cooper Nuclear Station in Brownville, Nebraska. In 2008 he completed Senior Reactor Operator License Class and received his Nuclear Regulatory License effective March 27th, 2008. Senior Reactor Operator License Class is a 15 to 18-month instruction course that goes over the design, operation and accident response for a specific nuclear power plant. In 2014 he returned home to Ohio to work at Perry Nuclear Power Plant as a Work Week Manager and is now the Maintenance Electrical Engineer at Perry.

Kristine Gehring-Ohrablo is currently the Primary Chemist at Perry Nuclear Power Plant with over 20 years of experience in the nuclear power field. Kristine holds a Bachelor of Science Degree in Microbiology from The Ohio State University (1994) and a Master of Science Degree in Bacteriology from the University of Wisconsin at Madison (1999). She started her career in Nuclear Power at Cooper Nuclear Station in Brownville, Nebraska as a Chemistry Technician. She received a Master of Science Degree in Radiation Health Physics from the Oregon State University in 2011. Her studies included radiochemistry and radiation detection instrumentation. Kristine transitioned from her position as a Senior Chemistry Technician to a Plant Chemist position at Cooper Nuclear Station to be the Radioactive Effluents Specialist. As the current Primary Chemist at the Perry Nuclear Power Plant, Mrs. Gehring-Ohrablo is responsible for predictive trending and process chemistry management to maintain the ultra-pure chemistry of the reactor and steam cycle water.

Mr. Ohrablo and Mrs. Gehring-Ohrablo look forward to an evening of discussion with AIChE.

