

## PROCESS SAFETY FUNDAMENTALS Seminar Series, March 2024

Process Safety Fundamentals Chemical Process Safety is widely regarded as a vital and significant part of an overall Environment, Health and Safety Management System for chemical operations. We will briefly examine some recent process safety incidents which will help us understand the history and origins of chemical process safety. We will lay the groundwork for a comprehensive process safety management system for chemical operations.

**Session #1** – March 13, 2024, \$25/Person, at Cleveland Analytical, LLC; 15666 Snow Road, Brook Park, Ohio 44142  
In this session we will focus on what it means to understand our chemical processes. What information is critical, and how this information is the backbone of a robust process safety management system.

**Session #2** – March 20, 2024, \$25/Person, at Cleveland Analytical, LLC; 15666 Snow Road, Brook Park, Ohio 44142  
This session will build on what we learned in session #1. After understanding our processes, their hazards and their safe operating limits, we will focus on learning how to consistently operate and maintain our systems following documented procedures and standards. What are the essential elements of operation and maintenance.

**Session #3** – March 27, 2024, \$25/Person, at Cleveland Analytical, LLC; 15666 Snow Road, Brook Park, Ohio 44142  
In this session we will use what we learned in the previous two sessions combined and, using a practical perspective, study the core element of process safety: Management of Change. Time permitting, we will work on an example of how change is managed.

### Presenting:

Mr. Gurmukh Bhatia, CPSA, is President of RPSC, LLC a Risk & Process Safety Consulting services company. He retired as the Corporate Director for Process Safety and Chemical Security from The Sherwin-Williams Company, with over 45 years of work experience in the chemical industry. Mr. Bhatia is certified by the Board of Environmental, Health, and Safety (EHS) Auditor Certification (BEAC) as a Certified Process Safety Auditor (CPSA) with 15 years of auditing experience in Process Safety Management (PSM) regulated facilities. He is presently serving on the CLE AIChE Steering Committee as the Risk and Process Safety Director. Mr. Bhatia graduated from the Case Institute of Technology with a Bachelor's Degree in Chemical Engineering.



### Registration:

Please register with Joseph Yurko at [yurkojoe5@gmail.com](mailto:yurkojoe5@gmail.com) by March 5, 2024 for these events.

The registration fee is \$25 for each seminar session. You may take one, two, or all three sessions. The registration fee will be paid at the door the day of the event with cash or check payable to AIChE Cleveland Section #017. The fee will include dinner and a CLE AIChE Professional Development Hour certificate for completing the event. Certificates will be awarded for each event, and if all three events are taken, then a fourth certificate will be awarded.

### Cleveland Analytical, LLC:

Our host is presently renovating their 2<sup>nd</sup> floor facility to install a lead analysis process to sample paint, dust, and soil samples from counties across Ohio to determine the amount of lead content. Samples with lead content above the acceptable levels will have third party companies notify residential, industry or brown field sites to undergo a site remediation process to remove the lead contamination and reduce the area lead content to acceptable levels for human and animal exposure. The central instrument to this effort that is being installed in their lab is an Inductively Coupled Plasma Optical Emission System (ICP-OES). A small test cell in this unit operates at 10,000<sup>o</sup>K (the same temperature as the surface of the Sun) to create the plasma energy of the sample that will indicate the concentration and amount of lead in the sample. This information will determine the level of contamination and the extent of remediation required to provide a safe and healthy environment for families to live, work and play in Ohio.