

# MODERNIZING YOUR PHA EXPERIENCE

## TECH TIP



**Why is a Quality Process Hazard Analysis (PHA) Important?** PHA studies analyze the types of undesired events that may be rare and involve a complex set of initiating events, including failure of safety/mitigation systems. These events can have impacts well-beyond the individuals directly involved; and a complex process requires a systematic evaluation of the risks and consequences to properly determine the safety of an individual system. The goal of industry is to avoid tragedies and mitigate process failures before they occur. PHAs do just that. Over time, new technologies and effective

methodologies have optimized PHA teams' ability to identify potential failures before they occur and acknowledge where process weaknesses may be lurking.

### Preferred PHA Techniques

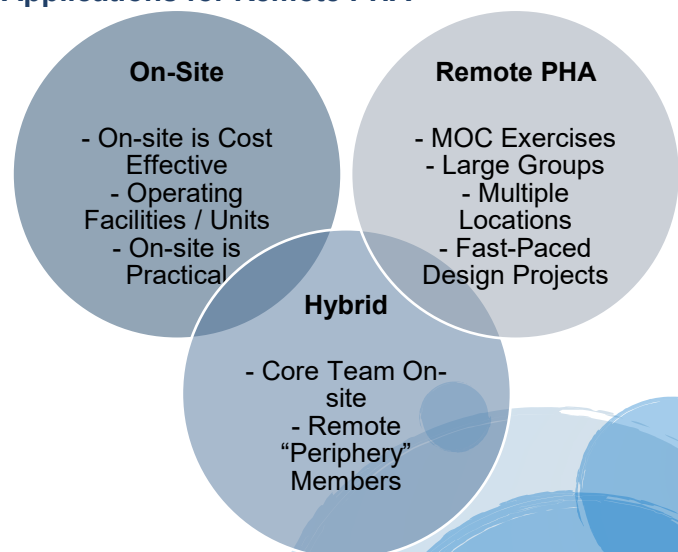
Despite the considerable number of methodologies in the PHA toolkit, the team-oriented, patterned-brainstorming sessions associated with Hazard and Operability (HAZOP) studies have quickly become the workhorse across various industries for modern PHA facilitation. HAZOP is arguably ideal for most PHAs and can be combined with another methodology to enhance results or to provide a list of general items to review during a study. For a fundamental hazard analysis technique such as HAZOP to remain relevant over such a long period of time is a testament to its effectiveness.

### Remote PHAs Effectiveness


Performing a PHA remotely using a web conferencing platform has never been easier. However, recognizing what represents an effective application of a remote PHA study is critical. Telecollaboration and remote PHAs can be beneficial when:

- the involvement of a large group of individuals would prohibit an in-person or on-site meeting;
- assembling pertinent individuals in the same room can be cost-prohibitive;
- scheduling a meeting for the correct people to be in attendance may delay the PHA;

### Applications for Remote PHA



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- subject matter experts may not be present when needed ; and
- remote capabilities enable casual observers to listen to a meeting without injecting in the study.

## Remote PHA Preparation and Planning

Planning and preparation efforts are even more important for a successful remote PHA due to multiple locations and technical problems that could materialize. Preparations should begin well in-advance of deadlines/regulatory requests to promote a smooth study. Things to consider are

- interactive P&ID displays,
- scribe support,
- on-site remote meeting management, and
- language barrers.

While general preparation is key, certain preparation efforts are more important for a successful remote PHA session. Just as a PHA is used to identify what can go wrong with a chemical process, potential problems should be evaluated and anticipated with the remote PHA sessions and how the problems might be addressed. The evaluation should include the following.

- Are adequate computers and/or displays are available for the team (on-site and remote)?
- Are the cameras, communications access, and IT support are adequate?
- Is there time to test communciations and power at the location of broadcast?
- Is it possible to pre-define causes and questions to expedite the discussion in the PHA?

## Summary

The evolution of how PHA sessions are performed will continue to be difficult to predict, but process safety professionals must continue to look for and embrace new ways to improve the effectiveness of their efforts. Remote PHA session applications have been implemented by some practitioners for over a decade, but telecollaboration is still new to many professionals and a focus of skepticism by many more. HAZOP might be a new methodology for many teams, but making the switch may greatly improve understanding of vulnerability. We owe it to our staff and our communities to continue to strive for a higher standard of safety and to embrace innovative ways of accomplishing process safety. For more infomration on report PHAs, please see my paper titled [Optimizing Your Remote PHA Experience](#).

### About the Author

Ms. Smith is a Principal Engineer and has been with Risk Management Professionals for over 10 years. She is involved in a variety of activities associated with CalARP, NDEP CAPP, EPA RMP, and OSHA PSM compliance programs. She specializes in ammonia refrigeration, power generation, agriculture, water / wastewater treatment, and manufacturing industries. Connect with Stephanie on [LinkedIn](#)



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