

## **New training strategy improves operator performance by over 25%**

### *Use of military training technique is a success*

**Dayton Ohio, August 13, 2015** – In a project funded by the Center for Operator Performance (COP), Joseph Borders and Dr. Gary Klein tested the Shadowbox Training technique, developed in conjunction with the Defense Advanced Research Projects Administration (DARPA), on a high fidelity ethylene plant simulator. The technique has the trainee at key decision points prioritize actions, objectives, or information requirements. Their responses are compared to those of experts recorded earlier. A counter-balanced experimental design showed that exposure to the Shadowbox approach resulted in the operators completing the scenarios in less time and produced a 26% improvement in identification of the root cause of the problem.

The next phase of the study is to develop and administer the Shadowbox scenario on one unit and then administer the test to operators on a similar unit. The goal is to understand the relative benefits for scenarios that are unit specific versus generic. These results will be available at the November 17-18 COP Member Meeting in Houston, Texas. We invite organizations with an interest in this research to attend. The Center for Operator Performance ([www.operatorperformance.org](http://www.operatorperformance.org)) is a collaboration of operating companies and DCS suppliers that conducts research focused on ways to improve operator performance. The operating companies include Chevron, Koch Industries (Flint Hills Resources, Invista Chemical, Georgia Pacific), SUNCOR Energy (PetroCanada), and NOVA Chemicals. DCS suppliers include Emerson and Yokogawa. The Center is based at Wright State University in Dayton, Ohio.

Contact: Tom Kindervater

Center for Operator Performance  
7087 Corporate Way  
Dayton, Ohio  
513-713-3847  
Email: [tkindervater@operatorperformance.org](mailto:tkindervater@operatorperformance.org)  
[www.operatorperformance.org](http://www.operatorperformance.org)

###

---

---