Realistic training solution for pipeline operators
DNV GL's Synergi Pipeline Simulator (SPS) Trainer provides a realistic training solution that helps pipeline operating companies train and maintain staff to optimal levels, and to comply with operator qualification requirements. Operator training systems based on Synergi Pipeline Simulator leverage the high-fidelity transient simulation software, integrated with control-room style graphics for the real life SCADA console interface.

A training simulator assists in the education process of both new and experienced operators by providing the most realistic training experience possible. Simulators, unlike other forms of training, expose operations staff to realistic, normal and abnormal pipeline conditions without any effect on the actual pipeline.

SCADA console displays
Operator training systems can be configured in two formats: SCADA-interfaced or graphical-interfaced. A SCADA-interfaced training system uses the existing SCADA platform to provide the display interface. A graphical-interfaced trainer system replicates the SCADA graphics accurately using the operational interface of DNV GL’s Synergi Pipeline Simulator.
Operator testing and qualification

Having the correct information for all pipeline control room operators and their qualification status is critical for both control room management and reporting. The Synergi Pipeline Simulator software has Operator Qualification functionality that facilitates training, testing, qualifications and reporting.

- **Tasks:** Regulatory compliance requires that pipeline operators are qualified in “covered tasks.”

- **Task groups:** Control room staff perform specific job functions, such as operating a pipeline or pipeline segment. Operator Qualification uses the concept of task groups to combine tasks into collections that are meaningful to your operation.

- **Users:** Users are paramount to the entire concept of qualification and testing. Operator Qualification has up to four types of users:
  - Operator - undergoes testing and qualification
  - Evaluator - reviews the results of an operator’s qualification test
  - Administrator - configures and sets up the qualification plan using Operator Qualification
  - Auditor - permitted to access to the qualification program, but can make no changes

- **Simulations:** Simulations are designed to exercise a particular set of tasks. Using simple check boxes, tasks are associated with each simulation.

- **Sessions:** A session is the test. It is one instance of a user running a simulation of a specific event that needs to be learned, reinforced, or qualified.

- **Reporting:** A comprehensive suite of reports is available to extract information on the current qualification status of control room staff.

Synergi Pipeline Simulator’s training evaluator’s interface

The control room operator will use the SCADA console display to interact with the training system. In addition, “Interactive Training Sessions” can be conducted using the Viewport graphical user interface (GUI). Using the Viewport GUI, the training coordinator can create an interactive training session that recreates pipeline operational events without the need for a predefined scripted scenario.

Full pipeline operation and control is available through Viewport to start/stop pumps/compressors, open/close valves, change pressure/flow settings, etc. Interactive training sessions are a dynamic way to provide pipeline operational experience and new operator training, as defined by the training coordinator.