

## Operator Jump Start Training Program

Traditionally nuclear workers receive most of their training after becoming employees of a nuclear utility. Until recently the nuclear industry in the US was stagnant and was not viewed as a promising career opportunity for high school and technical school graduates.

This, coupled with the limited training and education options available has begun to severely hamper licensed operator recruiting efforts. The nature of nuclear power and the associated knowledge and training requirements have made it difficult to attract new workers into the industry.

### The Solution

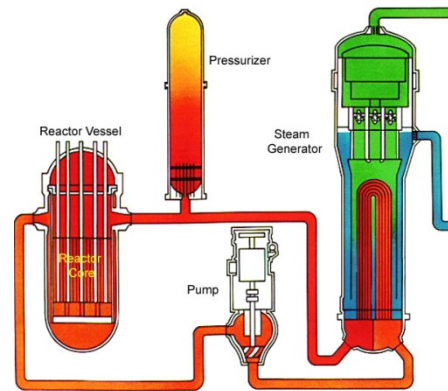
The *Operator Jump Start training program* is a rigorous screening program which includes instruction on:

- Fundamental sciences (including GFES)
- Plant systems
- Plant operations

By combining simulation with the intensive *Operator Jump Start Training Program*, new operator candidates are now being trained and screened for US utilities.

The goal of the program is two-fold:

1. Provide essential knowledge and skill to potential operators
2. Determine if candidates have the ability to successfully complete the utility's Control Room Operator Training Program



**GFES** 80%  
**Systems** 80%  
**Operations** 80%

### The Benefits

With the *Operator Jump Start Training Program*, operator candidates can be screened for their ability to complete the Utilities Licensed Operator Program before they enter it. With the national average throughput at 60%, this screening ability, can SAVE MILLIONS in training expenses and guarantee that the necessary number of new operators needed to cover attrition or to staff new builds will be trained and ready when needed.

### The Implementation

The first large scale implementation of this new training approach is at Augusta Technical College, a two-year college, in conjunction with the local nuclear power utility. GSE has worked with Augusta Tech to develop a two-year degree program in Nuclear Technology utilizing the *Operator Jump Start Training Program* as an integral part of the curriculum. The course materials and curriculum have been approved through the Technical College of Georgia Review Board.

GSE can assist other utilities with local community college partnerships to implement the same program.

## The Program

The *Operator Jump Start Training Program* is comprised of three sections:

### Fundamentals section

- Includes classes on: mechanical science, electrical science, I & C, fluid dynamics, heat transfer, material science, classical physics, nuclear physics (reactor theory), human performance (conduct of operations), and print reading
- Materials include the US NRC GFES requirements but also include additional sections deemed necessary for new workers

### Systems section

- Includes classes on: the systems that make up the nuclear island as well as the major systems of the secondary side of the plant including: feed water, feed water heating, main / aux steam, condensate, main turbine (and auxiliaries), main generator, and electrical distribution

### Operations section

- Includes classes on: unit start up, unit shut down, normal operations, abnormal operations, and emergency operations
- Accomplished on the GSE VPanel™ simulator and includes both individual and team training activities

The course materials are taught and evaluated at an initial license operator level. The system and simulator materials are taken directly from the nuclear utility's Initial License Program.



## Summary

An aging workforce combined with an increase in need for qualified personnel is not unique to the nuclear industry. The oil and gas, petrochemical, and non-nuclear power industries, as well as many other high tech industries, are facing the same problems of finding qualified personnel to support their operations.

GSE Systems' unique *Operator Jump Start Training Program* provides the nuclear, fossil and process industries with the training and screening capabilities they require to successfully meet the workforce demands of an ever-changing market.



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