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AT THE COMPANY

John V. Moran
Chief Executive Officer

FOR IMMEDIATE RELEASE

First of a Kind Cook Nuclear Plant Simulator Delivered in Record Time

GSE Graduates First Nuclear Operator Candidates for Southern Nuclear

Sykesville, Maryland, December 21, 2009--GSE Systems, Inc. (GSE) (NYSE Amex:GVP), a leading global provider of real-time simulation and training solutions to the power, process, manufacturing and Government sectors, announced that it recently delivered the Cook full scope Nuclear Power Plant simulator to American Electric Power. The Company announced this award in its August 15, 2008 Press Release.

At a “ribbon cutting” ceremony on November 9, 2009, Joseph Jenson, American Electric Power’s (AEP) Chief Nuclear Officer, declared the simulator “ready for training.” The project was unique for a number of reasons. First, it is the first simulator of its kind to fully integrate both control rooms of a dual site plant, and therefore sets a new standard for nuclear facilities with more than one unit occupying the same site. Secondly, it was delivered in less than 14 months, a record for the nuclear industry. The simulator is comprised of more than 100 miles of wire, and 4467 instruments.

Tim Vriezema, the AEP Project Manager, said “This was a real team effort from the beginning. Only through the full commitment of all vendors were we able to meet our compressed schedule. From the onset of the project, GSE committed to our schedule and fidelity demands, and was successful in meeting every milestone.”

In other Company news, GSE graduated the first class of new nuclear plant instructor and operator candidates from its training program being conducted for Southern Nuclear at Augusta Technical College in Georgia. GSE announced this contract in its Oct. 21, 2008 press release.

The 20-week course included generic fundamentals, human performance, nuclear systems and integrated plant operations. The last two segments required a significant

amount of time on GSE's soft panel Vogtle nuclear plant simulator. The graduates are being deployed to the Southern nuclear fleet for orientation, and then on to AP1000 plant operations training.

Based on the results of this initial course, Southern Nuclear has asked the Company to modify the 20-week course slightly, and to overlap classes in 2010 to create more operator candidates.

Both Southern Nuclear and GSE agreed that the major objectives of the program were met. First, it created a pool of instructor and operator candidates with high confidence that they can be certified in the short run and pass Nuclear Regulatory Commission (NRC) operator exams in the long run. Second, it provided a cost effective means of culling candidates who lack the ability to obtain an NRC Reactor Operator license, much earlier than the typical 18-month licensed operator training program. Third, it was accomplished with minimal participation by the Vogtle 3 and 4 training staff.

Chuck Kelly, GSE Vice President of Training Services said, "This first of a kind training program is helping to create the next new pool of skilled nuclear power plant operators that will be required to operate both existing nuclear units as well as those under construction and planned for the future. The program has generated a great deal of interest in both the U.S. and global nuclear community."

Charlie Nesbitt, Southern Nuclear's AP1000 Training Deployment Manager, stated "GSE's soft panel simulator provided a great introduction to control room operations for candidates without previous commercial reactor experience."

GSE Systems, Inc. provides training simulators and educational solutions. The Company has over three decades of experience, over 349 installations, and 100 customers in more than 40 countries. Our software, hardware and integrated training solutions leverage proven technologies to deliver real-world business advantages to the energy, process, manufacturing and government sectors worldwide. GSE Systems is headquartered in Sykesville, Maryland located in the western suburbs of Baltimore, Maryland. Our global locations include offices in St. Marys and Augusta, Georgia; Tarrytown, New York; Nyköping, Sweden and Beijing, China. Information about GSE Systems is available via the Internet at <http://www.gses.com>.

We make statements in this press release that are considered forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934. These statements reflect our current expectations concerning future events and results. We use words such as "expect," "intend," "believe," "may," "will," "should," "could," "anticipates," and similar expressions to identify forward-looking statements, but their absence does not mean a statement is not forward-looking. These statements are not guarantees of our future performance and are subject to risks, uncertainties, and other important factors that could cause our actual performance or achievements to be materially different from those we project. For a full discussion of these risks,

uncertainties, and factors, we encourage you to read our documents on file with the Securities and Exchange Commission, including those set forth in our periodic reports under the forward-looking statements and risk factors sections. We do not intend to update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise.

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