

04-20

Contact NEI's media relations staff at 202/739-8000 during business hours or 703/644-8805 after hours and weekends.

## **South Texas Project Employees Recognized As Nuclear Industry's 'Best of the Best'**

### ***Other Companies Also Win Top Industry Practice Awards***

*NEW ORLEANS, May 14, 2004*—Employees at the South Texas Project nuclear power plant have won the nuclear industry's B. Ralph Sylvia Best of the Best Award for their comprehensive and innovative approach in managing a first-of-a-kind repair to instrumentation on one of the plant's reactor vessels. The Top Industry Practice (TIP) award was presented at the Nuclear Energy Institute's (NEI) annual conference in New Orleans.

The Top Industry Practice (TIP) awards recognize industry employees in 13 categories for innovation to improve safety, efficiency and plant performance. The Best of the Best Award honors the late B. Ralph Sylvia, an industry leader who was instrumental in starting the TIP awards 11 years ago.

Other companies receiving awards were: Dominion Nuclear Connecticut, Exelon, Entergy Nuclear, Nuclear Management Co., Exelon Generation Co., South Texas Project, Southern Nuclear Operating Co., FirstEnergy, Energy Northwest and a multi-company group that formed the Nuclear Supply Chain Strategic Leaders' AP-908 team.

The South Texas Project entry was selected from among a record 112 nominees for the meticulous planning, effective partnerships and innovative techniques used in managing the repair of instrumentation on the bottom of the Unit 1 reactor vessel. In March 2003, while Unit 1 was shut down for routine refueling, a small amount of powdery boric acid residue about the size of one-half of an aspirin tablet was found on the bottom of the reactor vessel during inspection.

“STP transformed an extraordinary event into an extraordinary achievement. Using a set of wide-ranging inspections—some specifically devised for this project—this dedicated staff made a difficult, first-time repair within four months. They also set new standards for the industry by informing federal and state regulators and the public regularly as repairs progressed,” said Joe Colvin, NEI's president and chief executive officer.

- more -



SUITE 400  
1776 I STREET, NW  
WASHINGTON, DC  
20006-3708  
202.739.8000  
[www.nei.org](http://www.nei.org)

## **STP Heads List of Companies Winning Top Practice Awards**

*Page 2 of 5*

“STP’s multi-disciplined approach in addressing this never-before-seen problem is an exemplary case study in technical project management under stress that illustrates the importance of corporate responsibility and superb communication,” Colvin said.

The thousands of professionals who make up the nuclear industry each play a role in shaping its future. The TIP award winners exemplify the best of those practitioners.

“Their drive, creativity, innovation and spirit help us to find faster, smarter, safer and bolder ways of doing business,” Colvin said.

AREVA, GE Nuclear Energy, Westinghouse Electric Co. and Westinghouse CE Nuclear Energy presented TIP awards recognizing top practices and improvements at plants that are associated with these nuclear design-engineers.

**Dominion Nuclear Connecticut** employees received the AREVA Vendor Award for their control element drive inspection and repair enhancements at Millstone Unit 2. In response to a Nuclear Regulatory Commission order to all nuclear power plants, Dominion employees performed volumetric ultrasonic examination of all 78 reactor vessel nozzles during a February 2002 refueling outage. The inspections and nozzle repairs extended the refueling schedule by 17 days. To improve performance in the next outage, employees worked closely for the next year and a half with AREVA to enhance inspection and repair techniques. The enhancements improved inspection accuracy and quality; saved more than \$12 million by shortening the maintenance period critical path by 21 days; and reduced worker radiation exposure. This represents the industry’s best performance to date.

Employees of **Exelon** received the GE Nuclear Energy Vendor Award for development of a reactor inspection robot called the INVADER. This self-contained, 360-degree rotational device uses up to six cameras to remotely inspect the inside of the reactor vessel during refueling and maintenance outages.

The INVADER performs even the most complex inspections that normally would be done by technicians using hand-held cameras while working on specialized platforms above the reactor cavity. The INVADER can reduce the radiation exposure of up to 30 reactor service technicians. It has been used at the Quad Cities station in Illinois, where it permitted lower radiation exposures and saved \$2.9 million by shortening critical path work by 48 hours. It can be used in any boiling water reactor.

**Exelon** also won the Westinghouse Nuclear Energy Vendor Award for its primary water stress corrosion cracking susceptibility assessment and decision risk analysis used at the Braidwood and Byron nuclear power plants in Illinois. This physics-based model ranks

- more -

## **STP Heads List of Companies Winning Top Practice Awards**

*Page 3 of 5*

the susceptibility of Alloy 600 materials and components in Westinghouse-designed pressurized water reactors. By incorporating data from recent laboratory findings and experience in plants worldwide, the model helped Exelon prioritize inspection, mitigation and repair strategies for components susceptible to cracking due to Alloy 600.

With Exelon's model, in conjunction with industry and Westinghouse fleet information, PWR plants are able to project where and when cracks might appear, and determine the optimum timetable for preventive or mitigative actions. The team's achievements will minimize service interruptions due to Alloy 600 cracking, increasing plant safety and efficiency.

The Westinghouse CE Vendor Award was awarded to **Entergy Nuclear** for its reactor vessel head low frequency eddy current technology developed for Arkansas Nuclear One nuclear power plant. With ANO's refueling and maintenance outage scheduled to begin less than seven months after the NRC ordered power plants to visually inspect all bare metal components, the team developed a unique inspection technique that allowed the material around Alloy 600 penetrations in the vessel head to be inspected during the outage without taking apart the structure above the head. Their innovation helped prevent more than 10 person-rem of cumulative worker radiation exposure, and avoided up to 10 days of down time and an estimated \$3.6 million in added outage costs.

This year's nine TIP Process Award winners are:

**Nuclear Management Co.**, *Operate Plant Process Award*, for its safety focused leadership and coordination during refueling outages at the Prairie Island nuclear power plant in Minnesota. Intricate inspections of a nuclear plant's steam generator require the plant systems to be placed in a sensitive configuration. Prairie Island employees developed a method to improve safety while conducting these demanding inspections, reducing the period of time to just over 12 hours while maintaining the quality of inspections. As a result, the employees maximized safety for one of the more safety-significant maintenance activities that plants conduct.

**Exelon Generation Co.**, *Configuration Management Process Award*, for the design of a clamp device installed at its LaSalle nuclear power plant to minimize the threat of vibration problems associated with jet pumps located inside the reactor. The clamp design holds essential components together while allowing movement of thermal expansion during operation. The clamp, which was installed on all 20 of the plant's jet pumps during its January 2004 outage, required less installation time, reduced levels of radioactive waste, retained the plant's operational flexibility, saved about 12 days on the outage's critical path, and lowered outage costs by more than \$7 million compared to other options. This award makes Exelon's team leader, Keith Moser, a five-time TIP award winner.

- more -

## **STP Heads List of Companies Winning Top Practice Awards**

*Page 4 of 5*

**South Texas Project**, *Work Management Process Award*, for techniques used in the management and replacement of two reactor instrument tube nozzles on its Unit 1 reactor vessel bottom head. After discovering boric acid residue during Unit 1's March 2003 refueling outage, the team used a battery of sophisticated tests and inspections to locate cracks in the suspect nozzles, made the necessary repairs, and enabled the plant to go back on line within four months of the residue discovery. The work is considered a model case study and won the B. Ralph Sylvia Best of the Best Award.

**Southern Nuclear Operating Co.**, *Equipment Reliability Process Award*, for its unique "half-tower" design technique used at the Joseph M. Farley nuclear power plant in Alabama to replace three old cooling towers with six "half-towers" without interrupting plant operations. The modification also led to an increase in peak summer capacity of each of the plant's two reactors by 21 megawatts.

**Nuclear Supply Chain Strategic Leader's AP-908 team** (a multi-company group of procurement specialists), *Materials and Services Process Award*, for its initiative in developing the first large-scale industrywide, updated process description and guideline to benchmark and develop ideas to improve industry materials and services processes. The team's effort enabled many participating companies to quickly begin systematic self-assessments and improvement projects. It has resulted in improvement in customer service focus and overall application of business knowledge, assuring that technical expertise is retained in an industry that will see substantial turnover in its work force over the coming decade.

**Nuclear Management Co.**, *Managing Processes and Support Services*, for its successful legislative campaign on behalf of the dual-unit Prairie Island nuclear power plant to ensure a bright nuclear future in Minnesota. NMC worked in cooperation and coordination with Xcel Energy and the International Brotherhood of Electrical Workers to get state leaders to change a 1994 law that would require the plant to shut down in 2007 because of state restrictions on used-fuel storage capacity. New state legislation passed in 2003 provides for enough storage to permit operations through the balance of the current reactors' two licenses, expiring in 2013 and 2014. Additional dry storage at Prairie Island is subject to utility commission approval, but no future legislative review of used nuclear fuel storage will be required.

**Entergy Nuclear**, *Loss Prevention Process Award*, for its creation of an electronic database to handle the engineering and environmental work required for submittal of license renewal applications. After seeking license renewal for the first of its plants, Entergy developed this "virtual team" to support fleet-wide license renewal needs that previously required the formation of a team based at the plant site for the four- to five-year license renewal period. Lessons learned from this dedicated virtual team enabled Entergy to capture years of experience and minimize the cost of personnel relocation

- more -

## **STP Heads List of Companies Winning Top Practice Awards**

*Page 5 of 5*

and/or travel. Using this approach, Entergy's license renewal costs for the second reactor were 25 percent less than for its first reactor and below their estimated \$15 million to \$20 million. The NRC review took 17 months instead of the projected 30 months. The virtual team approach also can be applied to other fleet-wide, and potentially industrywide, initiatives.

**FirstEnergy**, *Training Process Award*, for its creation of a multi-tasking training model that looks, sounds, feels and operates like an actual plant system. The model, which receives full plant-level power from an electrical switching gear and incorporates actual working components of the plant, provides the optimum in training while maintaining the highest level of safety throughout the training process. It features a central control station for operating pumps, communication and sound simulation, and video monitoring.

**Energy Northwest**, *Fuel Process Award*, for development of a new methodology to calculate the decay heat of used fuel in its Columbia nuclear power plant cooling pool. This improved, more precise methodology, which employs plant-specific models, allows more efficient loading of fuel assemblies and eliminates unnecessary conservatism inherent in the standard generic method. As a result of this innovative methodology, the plant is able to achieve more efficient cask loading and shorter in-pool cooling periods for used nuclear fuel prior to transfer to dry storage. The plant now can load 12 dry canisters at once, rather than four canisters every other year, saving an estimated \$1.4 million.

###

*The Nuclear Energy Institute is the nuclear energy industry's policy organization. This news release and additional information about nuclear energy are available at <http://www.nei.org>.*