NEWS RELEASE

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Employees at Entergy's River Bend Station Earn Top Industry Practice 'Best of the Best' Award

Other Companies Also Win Top Industry Practice Awards

WASHINGTON, D.C., May 18, 2005—Employees at **Entergy Corp.'s River Bend Station** in Louisiana have been awarded the nuclear energy industry's B. Ralph Sylvia Best of the Best Award.

The team won for its first-of-a-kind approach for examining nuclear fuel to determine the cause of deposits that form on the fuel and interfere with heat transfer and the efficient production of electricity. The Top Industry Practice (TIP) award was presented at the Nuclear Energy Institute's (NEI) annual conference here.

The NEI 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 in 1993.

Other companies receiving awards were: **American Electric Power, Dominion Nuclear Connecticut, Dominion Generation, Dominion Resources Services, Exelon Generation, FirstEnergy Nuclear Operating Co., Florida Power and Light, Nuclear Management Co., PPL Susquehanna LLC, Southern Nuclear Operating Co., STP Nuclear Operating Co.,** and **Tennessee Valley Authority.**

The River Bend Station entry was selected from 94 nominations for the team's innovative technique to obtain pieces, or "flakes," of residue from fuel rods while submerged in coolant water. This examination was necessary because workers had identified significant residue buildup as the primary cause for fuel failures.

"Such examinations were previously only possible through use of shielded enclosures known as hot cells, an expensive and time-consuming technique that requires two to three years from start to finish and an investment of $2 million to $3 million. Entergy's innovative method can be completed in six months, at a substantial cost saving. More importantly, worker radiation exposure is reduced three rem to 300 millirem," said Skip Bowman, NEI's president and chief executive officer.

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"All U.S. power reactors can use this technique. Indeed, River Bend's efforts are now serving as a basis for additional incentives that will further the entire industry's knowledge of residue formation and behavior," Bowman said.

The TIP awards recognize industry professionals who have taken the initiative to develop better practices that have positioned the nuclear energy industry as one of the safest, most efficient and most productive in the world, Bowman 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.

Florida Power and Light Co. employees received the AREVA Vendor Award for their design, fabrication and installation of an integrated reactor head assembly at Turkey Point 3 in Florida. While planning to replace the plant's reactor vessel head, the team took an aggressive approach to maximize safety, inspection accessibility and long-term exposure/maintenance. The product, an Alloy 690 vessel head, is likely the most comprehensive design in the nation. It has lighter materials, more efficient connectors for cables, and features a permanent, hinged bridge walkway for access to maintenance areas. The new design will substantially limit radiation exposure to workers while saving $1.3 million per outage and a projected $36 million over the life of the plant.

Employees of **Exelon Generation** received the GE Nuclear Energy Vendor Award for its enforcer outage support bridge developed at the Clinton plant in Illinois. The winning team overcame limited refueling space and designed a standard boiling water reactor (BWR) auxiliary bridge that changes into a full modification/inspection deck. This structure can be centered over the core to allow access to all reactor areas. The platform's low profile allows the refueling bridge to pass over it. During its first use, the bridge saved 213 critical path man-hours and provided a savings of $13.6 million. The design is transferable to all GE BWR-6 reactors.

The Westinghouse Electric Co. Vendor Award was presented to **FirstEnergy Nuclear Operating Co.** for its chemistry instrument upgrade using the design exclusion evaluation request process at the Beaver Valley Power Station in Pennsylvania. Accurate and reliable instrumentation is essential to ensure that plants maintain the proper chemical balance in water systems. The team used in-house expertise to choose equipment and develop a plan for replacing instrument panels in sequences that minimally affected plant operation. This saved the company money, avoided the need for outside engineering help, and shortened the time required to upgrade equipment.

Nuclear Management Co. was recognized with the Westinghouse CE Design Vendor Award for its use of controllers to improve material handling during last fall's outage at the Palisades plant in Michigan. Taking guidance from air traffic controllers, the winning team assigned controllers to the plant's crane and rigging team to direct load movements, optimize crane usage and minimize handling delays. They coordinated more than 900 equipment and box moves and 250 hours of dedicated equipment assembly and disassembly without incident, using a detailed load move plan and task schedule. The controllers also handled unplanned loads and schedule changes, including reactor vessel head repairs. This controller approach contributed to the plant's best outage ever. This year's nine TIP Process Award winners are:

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Dominion Energy, *Operate Plant Process Award*, for a project that injects air to reduce iron transport in plant piping, developed at the Millstone power station in Connecticut. The winning team devised a solution to limit corrosion in high-energy piping systems – one that essentially reversed conventional wisdom. They found that introducing, not minimizing, dissolved oxygen reduced the total oxidant transport to the steam generators by lowering the corrosion rate in the final feedwater. The result was a 49 percent reduction in the transport of corrosion to the steam generators, which has reduced piping replacements and scaled back sludge removal to every second or third outage, decreasing worker dose by at least half.

American Electric Power, *Configuration Management Process Award*, for its multi-disc traveling water screen installation at the D.C. Cook plant in Michigan. Seeking to improve cooling water intake screens, the winning team partnered with Geiger International to adapt a concept that had been applied only once before in a single industrial wastewater pilot machine. With this system, screens that trap debris face the cooling water stream at all times, they travel around a central oval hub, and the debris stays in front for collection. The screens automatically collect and remove larger debris loads, keeping the material out of the plant equipment and allowing it to operate more reliably.

Southern Nuclear Operating Co., *Work Management Process Award*, for creating a vertical pump alignment tool that was a safer and more efficient way to perform alignments. The winning team created a device that surrounds the pump/motor coupling, keeping the shaft stationary for easier alignment. This innovation reduced the process from 14 hours to six, and the crew size from four to three. The largest cost savings has resulted from a five-fold increase in alignment accuracy. This has decreased loads on bearings to significantly extend the life of pumps and motors.

South Texas Project, *Equipment Reliability Process Award*, for its energize-to-actuate valve modification project. To improve component reliability, the team reviewed previous plant reactor trips. It determined that solenoids – electromagnetic coils used to open or close valves – were prone to failure. The team reconfigured the solenoids to be de-energized during plant operation. This represented the first conversion from one operational mode to another and also the first time risk-informed asset management was applied in the industry.

PPL Susquehanna LLC, *Materials and Services Process Award*, for its successful site-wide conversion to graphite pressure seals for valves. The winning team applied more than a decade's worth of experience with graphite seals to identify areas of concern. The team developed a process guide addressing all issues associated with the seals. It then developed a unique training module that includes mockups to demonstrate critical installation issues and detail problems that led to failures.

Tennessee Valley Authority, *Management Processes and Support Services*, for the creation of an equipment deficiency intolerance index that tracks deficiencies in 20 attributes that affect operations, maintenance, work control and engineering. The team assigned each of the 20 attributes to a specific manager, who was held accountable for that attribute. The maintenance

and engineering staff now has smaller backlogs, there are fewer equipment deficiencies, and the time taken to address problems is shorter. The result was fewer forced plant outages at the three plants where the equipment deficiency index was installed, saving $16.5 million.

Dominion Resources Services, *Loss Prevention Process Award*, for the flood risk reduction implemented at the Surry Nuclear Power Station in Virginia. The team found that flooding posed a risk challenge for the plant. The team first added a requirement for simultaneous verification before maintenance crews open the major water systems. It also recommended installing secondary barriers at multiple points where the circulation system was vulnerable to rupture. The team's risk reduction principles are applicable across the industry.

Entergy Corp., *Nuclear Fuel Process Award*, for its advanced technique for fuel sampling and analysis. The team established new tooling to obtain the flakes of residue on fuel rods and developed advanced methods to analyze affected fuel. In the process, it created an unprecedented knowledge base on the nature of fuel residue. Examinations at the used fuel storage vault produce quicker results and allow plants to adjust water chemistry practices to correct fuel problems as quickly as the next outage. The work is considered a model case study and won the B. Ralph Sylvia Best of the Best Award.

American Electric Power, *Training Process Award*, for its innovative and integrated approach to improve mechanical maintenance at the D.C. Cook plant in Michigan. The team encountered a situation where mechanics were getting the proper training but not performing to high standards set by the company. The team developed a "mental model" for successful mechanical maintenance performance. Behavioral and educational specialists observed plant mechanics at work, interviewed strong performers and reviewed task lists. A profile of a successful mechanic was developed, and workers were trained to meet that profile. Success has been demonstrated by improvements in the plant's safety, work quality and troubleshooting skills.

A special recognition award was presented to **Dominion Generation** for its exceptional vision and leadership demonstrated in its energy education initiative and science teacher workshops. After Sept. 11, 2001, nuclear information centers were closed for security reasons. Dominion refocused its activity and took its outreach efforts to the schools. To restore public confidence in plant safety and security, Dominion conducted teacher conferences, field trips, workshops and other outreach activities.

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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.