

Energy Northwest Nuclear Power Plant Installs Blast Resistant Guard Booth at Columbia Generating Station

by Dave King, Vice President



Faced with a number of pressing issues including operating costs, reliability, sustainability, regulation and safety; security was determined to be the most critical need confronting administrators of nuclear power plants. One such energy provider responded by installing stepped up security measures at the Columbia Generating Station-Washington State's only commercial nuclear power plant serving 4.5 million people in eight states.

As a public power entity, Energy Northwest says it is committed to producing electricity at or as close as possible to the cost of power production. With an overall budget severely impacted by increased security measures mandated by the Nuclear Regulatory Commission (NRC) since the September 11th attacks, security and facility management staff needed a reliable and cost effective solution to protect the surrounding area.

The NRC advised nuclear facilities to go to the highest level of security in accordance with the system in place at the time. A series of Advisories, Orders, and Regulatory Issue Summaries have been issued to further strengthen security at NRC-licensed facilities.

The NRC developed a number of mandates regarding enhanced security at nuclear power plants, power reactors, decommissioning reactors, independent spent fuel storage installations, research and test reactors, uranium conversion facilities, gaseous diffusion plants, fuel fabrication facilities, certain users of radioactive materials, and transporters of spent fuel and radioactive materials. The primary concern, common among them all, focused upon changes and enhancements to the security perimeter and the screening of employees, vendors, and visitors as they accessed the site.

Faced with a rapidly approaching deadline, Chuck Forrester, Supervisor of the plant's Security Force installed a quick fix, stopgap measure with a temporary structure.

"It was terrible to work in; but it physically met the deadline from the Feds," Forrester said, "There was no heat or A/C, the windows weren't tinted and the glare from the sun was blinding and increased the temperature on hot days as a result."

"Practically speaking," he continued, "It was too small and didn't provide adequate protection for my officers. I knew we needed to find a permanent solution to our problem and now we had the time to research our needs properly."

Energy Northwest contacted manufacturers of high security, pre-fabricated guard booths. These manufacturers would be able to meet stringent custom specs that would have to be incorporated into the permanent 8' x 10' x 8' guard booth design such as bullet-proof glass with anti-glare coating, comprehensive defensive armor, protective sheathing and machine-gun ports.

Because blast resistance in guard booth construction is one of the new post 9/11 security requirements in specific industries-it brings with it special manufacturing needs. Unlike bullet resistance, blast resistance must deal with the two distinct phases of positive and negative pressure waves that are created radiating outward and then inward. The negative waves last three times as long as the positive waves.

Ron Butler, Senior Contract Officer at Energy Northwest, gave a run down of the timeline: "Competitive bids were released. Contractors that responded to the request for cost proposals were evaluated to insure they could meet the technical and commercial requirements of the specification. 10 months later, the contract was awarded to the lowest cost, technically responsive bidder which also happened to be the market leader," he said. "The booth was delivered in April, ahead of the 90-day schedule."

(Continued on next page.)



Security checkpoint at Columbia Generating Station.

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Forrester said he would make a few small improvements if he had it to do over again; such as even darker tinting of the windows would increase surveillance and privacy capability.

Forrester explained, “The booth has provided a quality work environment for the security officers that is well lit and provides ample work space. The booth has provided a quality approach as a part of an overall new checkpoint strategy. It was relatively easy to install and is significantly sounder; it's the capstone of a \$5.8 million overall security enhancement.”

Author Dave King, has 21 years of experience in the pre-fab booth industry as V.P. of B.I.G. Enterprises, Inc™ (www.bigbooth.com). He is a recognized authority on parking, toll, info kiosk, and perimeter control/security/surveillance.



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