米国原子力学会 Nuclear PE 試験委員会委員長への手紙

～　応援と今後の連携提案　～

2006.9.5

(社)日本技術士会

原子力・放射線部会

米国原子力学会（ANS）会誌 2006 年 8 月号 P22 に ANS の Nuclear PE 試験委員会委員長（Prof. Sjoden）の ” Backing needed for Nuclear PE"**が掲載されました。Nuclear PE の志願者数が減り、「削減に対する執行猶予期間に入った」として、産業界に支援を呼びかける Open Letter です。米国においては、建設準備のラッシュとなっている今こそ、Nuclear PE を活用してもらいたいと言う趣旨です。（2-3 頁目に全文を添付します）**

9/1 **の部会役員会で Prof. Sjoden に部会からの応援の手紙を送ることを決定し部会長名で** 9/4 **に手紙を出しました。内容は PE 発祥の地の Nuclear PE 制度への応援および日本の原子力・放射線部門の設置経緯と部会の紹介、さらに相互交流と協力の提案です。（4 頁目に全文を添付します）**

早速 9/5 **に御礼とともに委員会で配布されるとの返事が来ました。**

今後は部会として ANS の Nuclear PE 試験委員会とも連携をすすめていく予定です。

以上

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reactors now operating at the site. Because Dominion had applied for an early site permit (ESP) for the plant two years earlier, the Nuclear Regulatory Commission said that the addition of cooling towers forced the agency's staff to amend the relevant portion of the environmental impact statement (EIS) for the application (*NN*, Jan. 2006, p. 24). On July 6, the NRC announced the completion of a draft supplemental EIS for the North Anna ESP, with a preliminary conclusion that there are no environmental reasons not to issue the ESP.

The addition of cooling towers was the second significant change in Dominion's plans for the new reactors—which are referred to as North Anna-3 and -4, even though the company has made no commitment to build them and might not pursue a construction/operating license (COL) for even one reactor, let alone two. In January 2005, Dominion switched its reactor choice from AECL Technologies' ACR-700, an advanced pressurized heavy-water reactor, to General Electric's ESBWR, a boiling water reactor.

Under the NRC's revised schedule for ESP-related reviews, a final supplemental safety evaluation report would be issued on August 15, the final supplemental EIS would follow on December 29, the initial decision on the ESP would be reached by the Atomic Safety and Licensing Board in August 2007, and a decision to issue the ESP could be rendered by the commission in December 2007.

Dominion has stated that it would have its COL application ready for submission by the end of September 2007 and would decide at that time whether to submit the application. The COL process for a project with an ESP would be shorter than for a

Open letter to the nuclear industry: Backing needed for Nuclear PE

If you don't care about making a profit over the next 10 years, then don't read this letter! Is this a "trick" question? Not really. As the nuclear industry faces new challenges, and our nuclear future looks very bright, promoting professional competency and mastery of critical skills in the nuclear engineering profession is essential—now more than ever.

Some estimates show that the nuclear engineering workforce will turn over by more than 50 percent over the next 10 years. This means that many new folks will be needed to keep up with the new demand for clean, safe nuclear energy. The truth is that any industry, including our nuclear industry, is only as good as the people carrying out the mission. A high-quality nuclear engineering workforce translates directly to the highest degree of public safety, economical energy production, peace of mind, and profit for the nuclear industry at large—all achievable goals.

A high-quality workforce also translates directly into profit, and I don't know anyone who isn't concerned about making a profit if they have mouths to feed. Let's face it—good people also mean good profits. I am writing this letter as the chair of the ANS Professional Engineering Exam Committee to canvass industry support (commitment) to encourage nuclear engineers to embark on the process of obtaining professional licensure in nuclear engineering.

In a recent article on the worldwide resurgence of nuclear power and the nuclear industry's manpower needs, the *Wall Street Journal* echoed concerns raised by the scientific community and the public as to whether the industry and the universities will succeed in training and educating enough qualified nuclear engineers to operate the new plants safely.

There are many ways of guaranteeing good quality in the nuclear workforce. One low-risk method is to hire a "critical mass" of nuclear engineers with the "PE" designation—licensed Professional Nuclear Engineers. Getting a PE license under a state licensing entity requires taking two exams to certify the engineer: the Fundamentals of Engineering (FE) Exam, and, after the requisite period of experience/advanced degree, the Principles and Practice Professional Engineering Licensure (PE) Exam, both administered for each state engineering board by the National Council of Examiners for Engineering and Surveying (Web site: <www.ncees.org>).

Passing the PE exam demonstrates that the engineer has competency in his or her field, and corporations that require PEs on their engineering staffs already know that this certification translates into dollars saved, problems minimized, and profits due to a "quality dividend" from having those nuclear PEs on their team. This sounds like a simple decision for any industry employer, right?

Well, let's be frank: Nuclear industry support for the PE has been, in general, lackluster. Industry support of the PE licensing process is important to the American Nuclear Society and the profession at large. ANS strongly endorses the Nuclear PE in its official society position statement #61, "Nuclear Engineering Licensure" (June 2003).

There are currently key deficiencies in support for the Nuclear Professional Engineering Examination and Nuclear PE licensure for nuclear engineers across the United States. In the past several offerings, the number of Nuclear PE exam first-time takers fell below the minimum threshold of 50 as required by NCEES. As a result, NCEES has placed the Nuclear PE exam process "on probation," meaning that it may be curtailed if the minimum number of first-time examinees is not satisfied.

It is clear that the nuclear profession is rapidly expanding, as evidenced by the surge in nuclear engineering enrollments, oil shortages, and a proposed nuclear foundation in the hydrogen economy, and it would be very unfortunate to have the Nuclear PE curtailed at a time when it is needed most.

What can be done? If each utility or corporation would commit to requiring its nuclear engineers to obtain their Professional Engineering license by taking the Nuclear PE exam in general and specifically commit to sponsoring at least one or two engineers to take the examination each year, then we would have sufficient numbers to continue the exam indefinitely.

In return for industry commitment, ANS (as it always has), will commit to providing a full-day PE Professional Development Workshop for nuclear engineering review training for those wishing to take the PE exam and online study materials. This becomes a win/win opportunity for both your facility and the nuclear industry. Licensure is inherently designed to protect public health and safety and can be directly linked to profitability as well—in short, a Nuclear PE "profit dividend."

Please join me in promoting the Nuclear PE licensing process by encouraging your engineers to take and pass the FE and PE exams. This will certainly benefit the professionalism and future of nuclear energy by maximizing the certification of professional competence. To contribute to the Nuclear PE Professional Development Workshops, please contact Mary Beth Gardner (<mgardner@ans.org>; phone 708/579-8216) at ANS headquarters, or me (<Sjoden@ufl.edu>).

Glenn Sjoden
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September 4, 2006

Dear Prof. Glenn Sjoden,

I have just read the open letter you posted on the latest issue of Nuclear News with deep despondency and alarm on the gloomy prospect of our own department. I am writing this letter as the founding chair of the Nuclear and Radiation Department of the Institution of Professional Engineers, Japan (IPEJ) to show our deep compassion and to send our heartiest cheers to the ailing forerunner in the cradle land of Professional Engineers.

In the year 2005, our department was established in line with the report dated June 2, 2003 issued from the governmental advisory body, the Council for Science and Technology. It was submitted after a recent series of troubles and misconducts in Japanese nuclear industry, such as a fatal criticality accident or falsifications of safety related inspection data.

The report alarmed each engineer on the danger of devoting him or herself too much into protecting organizational benefit and finally crossing the red line. And it advocated the necessity of the system to encourage the continuous heightening of the ethical consciousness of each engineer as well as continuous professional development.

Our government conducted the first Nuclear and Radiation PE exam in August 2004. Twenty-one engineers passed it to be the first Nuclear and Radiation P.E.Jps. Now our department has 58 members as the certificated P.E.Jps and 35 associate members. We have just begun to work on how we can deliver for the benefit of the society and also of ourselves and have renewed our awareness of the old saying; "Saying is one thing, doing another".

Please keep in mind that you have your young counterparts rooting for you from thousands of miles away over the ocean. We hope we can make good communication and cooperation for mutual benefit sometime in the future. And we would be the most pleased, if you could give us some advices to make PE activities more attractive to the engineers and appreciated by the society.

With best regards,

Katsumi Hayashi

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