

ACRS-2650

PDR 2/21/90

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SUMMARY/MINUTES  
ACRS HUMAN FACTORS SUBCOMMITTEE MEETING  
JUNE 7, 1989  
7920 NORFOLK AVENUE, BETHESDA, MARYLAND

The meeting convened at 1:00 p.m. Dr. Forrest J. Remick is the chairman of this subcommittee. The other subcommittee members in attendance were Mr. James Carroll, Dr. William Kerr, Mr. David A. Ward, and Mr. Charles J. Wylie. The ACRS cognizant staff member was Herman Alderman.

Dr. Remick noted that the purpose of the meeting was to review the Commission's policy statement for senior operators and shift supervisors at nuclear power plants. Dr. Remick presented a brief history on this topic. He noted that there was an advanced notice of proposed rulemaking in May 1986 in which the Commission indicated that it was considering rulemaking which would require all senior operators after a specified number of years to have a baccalaureate degree. He noted that about 98 percent of the public comments were opposed to rule. The ACRS considered the issue at several meetings and wrote a letter to the Commission on August 12th, 1987 that indicated opposition to the rule.

This past December the Commission issued a proposed rule. The proposed rule had two alternatives. Alternative 1 was that all senior operators must have baccalaureate degrees. Alternative 2 would require that all shift supervisors have baccalaureate degrees. He stated that he believed about 95 percent of the public comments were in opposition to the proposed rule.

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The Commission then asked the staff to go back and prepare a policy statement. Dr. Remick noted that the subcommittee had been requested to review this policy statement.

Mr. Zoltan Rosztoczy made the first presentation. Mr. Rosztoczy discussed the provisions in the advanced notice of proposed rulemaking of 1980. He said that senior operators would be required to have a Bachelors degree after January 1, 1991. The degree requirement was limited to engineering and physical sciences with a provision that individuals with degrees in other areas could be considered on a case-by-case basis. Degree equivalency was not acceptable. The advance notice required that one year out of the two years required for nuclear plant experience would have to be at the plant operating at greater than 20 percent power.

All senior operators who had received certification prior to the 1991 deadline would be grandfathered, so they could stay senior operators for the rest of their lives without a degree. There was a concurrent policy statement along with the proposed rule.

He stated that the ACRS letter indicated that the Committee did not find any rationale for a requirement for senior operators to have a degree, and recommended against issuing a rule on degree requirements.

The Commission decided to issue two options of the rule for public comment.

The first alternative of the rule was oriented toward the senior operators. It required a Bachelors degree in Engineering, Engineering technology, or physical sciences. Other Bachelors degrees could be considered on a case-by-case basis. The experience requirements were raised from two years to three years. One of the three years of

experience would have to be at a reactor at greater than 20 percent power.

Six months of the experience would have to be at the plant where the license was being attained. The grandfathering provision was allowed up to 4 years after the effective date of the rule.

The second alternative did not require a degree for the senior operators. It required a degree for the shift supervisors. The shift supervisor was defined in such a way that each control room would have a shift supervisor.

Mr. Rosztoczy pointed out that the shift supervisor would have to have a degree from an institution accredited by the Accreditation Board for Engineering and Technology. An alternative would be a professional engineering license issued in the state. Another alternative would be a Bachelors degree with an Engineering in Training certificate.

Mr. Rosztoczy discussed the public comments. 250 comments were received. 95 percent of the comments were against the rule. All of the utility comments were against the rule. 90 percent of the operator comments were against the rule. He noted that most of the people who had degrees were against the rule.

Mr. Rosztoczy listed some of the comments: one of the major comments was the proposed rule is not necessary. A major comment was that experience is more important than education. A major comment was that if more knowledge is needed, then NRC should identify what knowledge is needed and the NRC should set up its operator examination program to assure that the knowledge physically exists there. The

commenters recommended retention of the shift technical advisor position.

Mr. Rosztoczy noted that the Commission has a policy that recommends combining the shift technical advisor position with a senior operator position.

One major comment was that labor agreements usually specify educational requirements but they don't specify degree requirements. Several of the subcommittee members objected to the statements regarding career paths for degreed operators. They noted that the NRC is telling the utilities how they should manage their operations rather than regulating them.

Mr. Rosztoczy discussed the policy statement. The policy statement notes that progress has already been made. INPO has developed its principles of enhancing professionals in nuclear personnel. They have a program on the way to provide training and education requirements for shift supervisors. NRC is monitoring the technical knowledge of operating personnel. The Commission doesn't feel that the present level of training is not sufficient. However, the Commission is looking forward to measures that would improve the operating staff's capability.

He noted the policy statement states that engineering and technical knowledge on shift has a direct bearing on safety.

Dr. Kerr asked if the expertise is greater will safety be greater? Or the greater the level of engineering and technical knowledge, will safety be greater?

Mr. Rosztoczy replied regarding the operators as a team, that if the team has a greater engineering knowledge, then in general, the

Commission believes that would lead to a safer handling of the plant especially in unusual or abnormal situations.

Several of the subcommittee members indicated that there wasn't any evidence that having a degree will enhance safety. Several subcommittee members noted that if the Commission believed degrees would enhance safety, they should encourage a rule.

Mr. Ward noted that if there isn't sufficient technical justification for a rule, then he didn't think the Commission should be encouraging utilities to pursue these objectives with a policy statement.

Dr. Remick noted that he couldn't see why the Commission shouldn't state what it thinks is good advice but not require it. Mr. Rosztoczy noted that the policy statement could not be enforceable in any way. There would be nothing in it that would be enforceable and subject to inspection.

Mr. Carroll said he believed the regional administrator would use the policy statement and do a lot of gentle persuasion on utilities that don't seem to follow the letter and spirit of it. He wondered why the Commission is doing this if INPO is already doing this. Mr. Rosztoczy continued his discussion of the policy statement. He noted the Commission would encourage that the operating staff should combine technical and academic knowledge. They would encourage people with degrees to obtain SO licenses. Shift personnel would be encouraged to obtain learning experience including learning engineering fundamentals. The Commission endorses the INPO practices for enhancing professionalism of nuclear personnel. The Commission

encourages utilities to have programs for their employees that would make it easier to obtain degrees.

They encourage the utilities to hire college graduates into their operator programs.

Mr. Carroll noted that the policy statement states that the Commission encourages plant licensees to hire for entry level positions in the operating staff. He interpreted that as hiring as an auxiliary operator. He noted that in the utility that he came from, the auxiliary operator earned about two-thirds the salary of the entry level for a graduate engineer. He wondered how you would get a graduate engineer to accept a job at the pay level of an auxiliary operator.

Several of the subcommittee members asked if the operating experience could ever be obtained as an operator or could it be obtained at other positions?

Mr. Rosztoczy noted that it was one way of obtaining experience.

Mr. Rosztoczy noted that the intent was to have a mix of senior operators, some with degrees and some without.

The subcommittee discussed Commissioner Robert's question regarding whether or not the degrees should be from accredited institutions and should they be accredited programs.

Dr. Kerr notes that a college or university can be accredited by an organization that accredits institutions. He noted that ABET accredits programs.

Mr. Fleishman noted that ABET is not mentioned in the policy statement. The policy statement noted accredited programs.

Dr. Remick noted that his personal preference would be for a degree from an accredited institution.

The meeting was adjourned at this point.

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NOTE: A transcript of the meeting is available at the NRC Public Document Room, Gelman Bldg. 2120 "L" Street, NW., Washington, D.C., Telephone (202) 634-3383 or can be purchased from Heritage Reporting Corporation, 1220 L Street, NW., Washington, D.C. 20005, Telephone (202) 628-4888.