

# Joseph Ellin's Commentary on "Dissent About Nuclear Safety"

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Dissent About Nuclear Safety

## I

Alison is the junior member of the PNSCR, which has the responsibility of making a recommendation concerning continuing operation of a heat exchanger which is not functioning to standards. Nuclear Safety and Licensing has submitted an analysis justifying continued operation (JCO), but Alison has reservations about an assumption made by NSL; if the assumption is wrong, problems could occur, and NSL has not discussed that contingency. Should Alison express her reservations? The other members of PNSCR want to approve the JCO, and there is pressure that the recommendation be unanimous.

Alison should keep firmly in mind that as a professional engineer, her job is to provide her best professional judgment when called on to do so; she is not on the payroll in order to endorse decisions made by others. She finds herself in a tense political situation, where management looks for the 'correct' recommendation. But if she feels she has valid reservations about the JCO, which she can't express for political reasons, she would be subverting her function on the PNSRC. In effect, it is being suggested to Alison that her professional judgment isn't needed in this situation, which ought to raise the question in everybody's mind, why is she there? If she's not free to speak as her judgment dictates, she has no role on the PNSCR and ought to ask to be replaced on it.

Chair Robinson's comments about the cost to the company of not approving the JCO are entirely inappropriate and put the PNSCR under pressure. Perhaps the parameters of the PNSCR's mandate are not clear; are they supposed to make engineering judgments, or management judgments? It is up to management, it

would seem, to consider the costs of delay in deciding whether to accept or reject PNSRC recommendations. Evidently the PNSRC in this company functions in part to cover management's decisions; by providing input management wants to hear, they relieve management of the necessity of making business decisions balancing cost versus safety. This attitude is reflected in the comment of Chair Robinson.



Alison expresses her reservations, and there is discussion. However her recommendation for further study is steamrolled by the committee. Should she vote against the approval, since the calculations she requested haven't been made? It is unclear what the hurry is here; if a committee member has reservations which could be clarified by a three hour study, why not make the study? Evidently most of the other committee members think Alison's reservations simply aren't important enough to bother with, which is certainly their prerogative. On the other hand, she has a different opinion, and as a competent professional she is entitled to hear some reason why the study is a waste of time. Evidently Mark Reynolds sees the point of Alison's concern, but his support is brushed aside, leaving the impression that the committee does not really like to hear disagreement among its members. The case does not present any serious discussion on the PNSCR about the contingency which worries Alison; her concern is brushed off with vague invocations of the company's excellent safety record (which this discussion on the PNSRC may be putting in jeopardy!).

Of course Alison could be wrong; perhaps she is inexperienced, and just doesn't realize that what she's worried about is the remote possibility of the failure of a redundant system ("lots of plants don't even have containment spray systems"), which shouldn't be taken seriously. Maybe she's a bit over her head on this committee! If so, she might be wise to listen and learn until she gets more experience. On the other hand, it is also possible that she lends a critical point of view which the committee evidently lacks. Her attitude of refusal to go along with the rest could save the committee from embarrassment some day. There is an air of self-confidence about the other members which could prove dangerous. Given that her recommendation has been rejected without serious discussion, she ought to vote No. Perhaps she's not entitled that the study be done, but she is entitled to a reasoned discussion and plausible arguments why the study shouldn't be made.

It is not stated why it is important that PNSRC decisions be unanimous. Perhaps the vaunted unanimity of past decisions is a consequence of political pressure and not engineering consensus? If previous unanimous recommendations have been the legitimate result of engineering judgments, then no precedent is created, because such unanimity does not exist in the current situation. On the other hand, if previous unanimity has been produced by pressure such as is being exerted on Alison, then the tradition of unanimity is hollow and ought not to be taken as a precedent. What is being decided by the PNSRC is how far one has to go in the interests of safety. This is a matter of judgment. In general, reasonable people can disagree about this question. In this case, the system is optional, failure is evidently considered remote (only a "possibility," a word which in context implies, "very unlikely") and there are said to be no "extraordinary" risks involved even if the exchanger does fail. Nonetheless it is surprising that all PNSRC decisions have been unanimous. If I were management, I would suspect a unanimous PNSRC as too good to be true; such unanimity would strike me as more than a little bit 'concocted'. However management isn't interested in such suspicions because unanimity makes management's job easier.



Therefore, I conclude that no matter what the ultimate outcome, Alison would be more at fault for taking the easy way out and going along with the majority, than for voting No. In any case, however, she ought to have a chat with other members of the committee and express disappointment that her judgment was not respectfully considered, and point out that the tendency of the chair to pressure engineering judgments is not in anybody's best interest. Unless she exerts herself and defends her professional competence and prerogatives, she is going to find herself more and more ignored and will come to be regarded as a fifth wheel on the wagon.