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Oct. 5, 1987

Secretary,
U.S. Nuclear Regulatory Commission
Washington, D.C., 20553
ATTN: Docketing and Service Branch.

Subject: Comment on Proposed Rule " Revision of Backfitting Process for Power Reactors," 10 CFR 50.109 Backfitting.

Dear Secretary,

After reading the original backfitting rule found in the 1987 edition of 10 CFR 50, the proposed revisions found in Federal Register, Vol. 52, No. 175, Sept. 10, 1987, and the court opinion in Union of Concerned Scientists v. U.S. NRC, (824 F.2d 108 (D.C. Cir. 1987)), I would like to make the following comments for your consideration.

1. The Court correctly points out that Sec. 182(a) of the Atomic Energy Act requires the NRC to ensure that public health and safety are adequately protected from operating nuclear power plants, without taking into account the economic costs needed to reach this level of adequate protection.

And the Court states that under Sec. 161 of the Act, the NRC is empowered to establish safety requirements, that are not necessary for adequate protection, that are additional, and that may take economic factors into account.

The Court found the backfitting rule did not maintain this exclusion of cost analysis from Sec. 182(a) as was required by statute. It therefore vacated the rule stating that "the backfitting rule is an exemplar of ambiguity and vagueness; indeed, we suspect that the Commission designed the rule to achieve this very result". (824 F.2d 108 (at 119)).

It appears that the Commission has cured this defect in its proposed rule by allowing for cost analysis to arise only in connection with backfitting based upon Sec. 161. Thus there is now no possibility of this type of cost analysis being carried out under Sec. 182(a), except in footnote 3.

In footnote 3 of the proposed rule, a cost analysis between alternatives is permitted even though the footnote seems to apply to an action based upon Sec. 182(a). Since

this is contrary to the Court's opinion, I recommend that the reference to cost within the last sentence of the footnote be deleted. Possibly the ending of the previous sentence in footnote 3 could be modified to ".... which best suits its purposes, provided that the objective of compliance or adequate protection is met.

2. The NRC was attempting with the vacated rule and is attempting with this proposed rule to correct an arbitrary and highly criticized process. Indeed the Court made note of "the staff's prior backfitting practices which have cost consumers billions of dollars, have made nuclear plants more difficult to operate and maintain, have injected uncertainty and paralyzing delay into the administrative process and in some instances may have reduced rather than enhanced public health and safety". (Report on Backfitting and Licensing Practices at the U. S. Nuclear Regulatory Commission (Mar.11,1985), (824 F.2d 108 (at 110)).

Unchanged in the vacated rule and in the proposed rule is the wording of Sec. 50.109(a)(3); " the Commission shall require the backfitting of a facility only when it determines, ... , that there is a substantial increase in the overall protection of the public health and safety or the common defense and security to be derived from the backfit and that the direct and indirect costs of implemention for that facility are justified in view of this increased protection".

Trying to reconcile these last two quotes with Secs. 182(a) and 161 is difficult for me. The picture I have is that NRC wants to require a backfit when a substantial increase in protection is possible at a reasonable cost. And this on the surface makes good sense.

But in granting the original/current operating license, the NRC has already said that the plant can operate without any undue risk to the public health and safety, that the public is adequately protected. Clearly this level of adequacy is by no means equal to zero risk. Rather it means that there is no remaining significant risk of harm to the public.

So the Commission first reviews the safety characteristics of a plant and decides that its operation presents no undue risk to the public, that the public is adequately protected. This must mean that whatever risk is residual at that plant must be insignificant, that it cannot be substantial.

Then the proposed backfit rule comes into play where it is stated that when a substantial increase in public protection is possible through a modification at reasonable cost it will be required. Doesn't this put the Commission in

a quandary? The plant is operating safely with no undue risk to the public, and yet the plant is operating such that a substantial increase in overall protection of the public health and safety is possible. Both of these conditions are permitted under Sec. 182(a).

Now there could be new knowledge developed that would lead the Commission to realize that some plants had an accident potential heretofore unseen or that the public required an even more exacting safety requirement for plant operation - a higher level of adequacy - and this, as I understand the backfit rule, is included in Sec. 50.109(4). But this is a mandated backfit, one required by Sec. 182(a).

It may be that my observations are personally unsettling because I am misinterpreting the terms "adequate", "substantial", "undue risk", and some others. Or it may be that they are not defined with enough precision by the NRC so that a reasonable technical person can see what the license based upon Sec.182(a) means.

Perhaps a way through the process of licensing and backfitting can be made more meaningful if it is viewed as follows. During the initial Sec.182(a) licensing the burden is on the applicant to show to the satisfaction of the NRC that the plant can be operated without undue risk to the health and safety of the public. Once the license is granted, and barring a requirement of emergency action by the NRC, the burden then shifts to the NRC to show that a plant modification is required to substantially reduce public risk, even though such risk is necessarily residual.

I hope you will consider these comments from one who has thought about these issues for some time. NRC has a difficult job to do and perhaps now is not the time to visit the issues mentioned above. But then again is there ever a right time?

Sincerely yours,

Robert C. Erdmann