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SECRETARY
OFFICE OF
DOCKETING & SERVICE

Re: 10 CFR 50 proposed rule on departure from tech specs in emergencies
by Wells Eddleman

COMMENTS:

NRC states that "special circumstances can arise during emergencies involving multiple equipment failures or coincident accidents where plant emergency procedures could be in conflict, or not applicable to the circumstances" 47 FR 35996.

This seems to be recognition of the fact that accidents involving more than a single failure or single cause, can happen in nuclear plants. Yet "the proposed rule does not provide significant guidance to part 50 (nuclear power plant) licensees for identifying those situations in which deviations from technical specifications or license conditions are allowable" nor does it contain standards for NRC Staff to use in deciding whether to take enforcement action (47 FR 35997). It only says "enforcement action for a violation of the rule would not be taken unless a licensee's action was unreasonable considering all the relevant circumstances having to do with the emergency." (35997)

Yet, such action would be allowed when virtually anyone among licensee's personnel decided to do it, and only the reactor operators would have to obtain concurrence by anyone before acting. You can't be serious. This rule is so open-ended that some very junior worker could decide not to do a required valve test because it was cold and with the nuclear plant shut down, there would be a chance of power failures which might adversely affect the health and safety of the public (in that worker's view).

The fundamental weakness of this rule is that it has no standard for who is allowed to order or take action outside the tech specs, and no standards for when that action is permissible. It could be used to approve almost any conceivable violation, even though the Commission says they expect the rule to be used infrequently.

This rule is inexcusably sloppy. The NRC has defined emergency conditions, on 4 levels up through general emergency. Yet the rule as proposed does not require that any of the conditions for any of same be met, or that any of these be declared, prior to departing from the rules. Only the general emergency condition contemplates harm to the health and safety of the public. Thus, at minimum, a general emergency should exist before any action that violates the rules is taken. Moreover, whoever takes such action should be reasonably assured that the equipment and controls for such action are functional, and that the action can be terminated if it causes more trouble, PRIOR to taking it.

Finally, there must be qualifications of folks who decide to violate rules and tech specs. They have to know what they are doing, at a minimum, in terms of controls and interactions in the plant, in terms of thermodynamics and reactor dynamics, in terms of radiation releases and in terms of probable health effects. It would certainly be nice to have someone so qualified on duty at each reactor all the time, but the NRC doesn't require such. While NRC may require that the operators or Senior Reactor Operators (SROs) have been exposed

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to this information, that is not the same as having the experience and judgment to depart from the rules and specifications. That requires a much higher level of training and experience.

For example, as an energy manager, someone who can quickly calculate peak and steady demands of heating and other equipment and decide what to phase in when, after a power failure, who has experience with such equipment and its transient demands in starting from a very cold state, might be allowed to step outside the normal demand-limiting system for a brief time. But only if they have sufficient knowledge to avoid placing excessive demands on the serving utility. I was in such a situation in early 1981 and it took all my energy knowledge plus a lot of tact and work to keep far less knowledgeable people from overriding my judgment and that of the manager of the local electrical system in such a way that we could have crashed the system again after most folks had been without power for up to 2 days already. If every one of the less knowledgeable folks had had authority to override the rules, we might not have come through this restart OK.

Now, while knocking out power to several thousand people, or prolonging an outage in bitter cold weather, is quite a serious matter (which I nonetheless had to do lots of educating to get some folks to take seriously), it is far less serious than a nuclear emergency that threatens the health and safety of the public. NRC is surely aware of the consequences: thousands of deaths, billions of dollars in damages, health effects for many many generations, all of these can occur from multiple failures in nuclear systems. Yet what you propose, in effect gives any utility employee the authority to override NRC rules and tech specs, with a small chance ex post facto of a fine.

I think the rules should stand, and leave it to informed judgment to violate same (risking a fine) when the harm of staying within the rules is clearly less than the harm of straying from them. For example, in certain traffic accident situations, an "unsafe" and illegal move, such as driving left of center, might be justified even though it is against the law and against the safety rule to always try to move right to avoid accidents. Should we put an exception into the law? Surely not, for few drivers have the skill, judgment and quick thinking ability to safely avoid accidents in such a way. If drivers not skilled enough to do this successfully were allowed to ~~try~~ try it, the result would be more and worse accidents, not less accidents.

If NRC thinks the likelihood of accidents is high enough to require highly skilled, very cool-headed, extremely knowledgeable folks (surely of a competency that would enable them to write the rules based on their own technical knowledge, at a minimum) in nuclear plants at all times, so as to be able to override the rules when necessary, fine, do it. But that is not what you proposed. The proposal is a Keystone Kops plan that does not define emergency, does not define authority, and will be used by utility lawyers (based on my experience with them) as an excuse post facto for anything and everything. Adoption of the proposed rule will bring a flood of operators and others who "remember" intending to protect the public health and safety from harm just before they violated each and every rule and tech spec they have been caught violating.

Instead of new loopholes, you need to take Admiral Pickover's advice: inspect, inspect, inspect -- don't just check paperwork most of the time. And give NRC inspectors the authority to shut down any nuclear plant at any time they judge it is not safely

operable. That's how the Navy dealt with Shippingport.

The proposed rule requires almost superhuman judgment of almost anybody in a nuclear plant. How are you going to find, develop, or demonstrate such judgment? Look at airline pilot training and testing, and compare it with the much lower standards for personnel, training and testing of nuclear plant operators. Yet, an airline pilot error might kill a few thousand people (quickly) at the outside. Nuclear plant operator error can kill far more people, both now and in the future, and contaminate huge areas of land. NRC can't possibly upgrade the "C in high school algebra" operators we now have to this level of capability, though some of them could probably make the grade. You'd have to train and bring in a whole new generation of operators, each with the stability and sense of operators combined with the skills of a fine physicist, biologist and nuclear engineer. You know very well how hard it would be to do that, so you don't propose it.

It's like saying, under emergency conditions, we'll let the high school biology teacher operate on you because we don't have a surgeon. If you think you'll need a surgeon, you need one on hand. Actually, the proposed rule is worse, for at least a surgeon can diagnose a disease. The NRC rule requires no such diagnosis, no level of emergency at all.

The basic foolishness of this proposal is so great that it further reduces my (already small) belief that NRC might be competent to oversee nuclear safety. It does not define emergency, it does not require that whoever overrides rules in an emergency be qualified to do so, it does not require such a qualified person to be present (a typical SRO certainly doesn't have the background or experience that would be needed -- they could be good at taking tests and be an SRO with modest routine operating experience and no emergency experience or theoretical or practical knowledge of such emergencies), and finally it absolves the persons so acting of responsibility in advance, except under very vague circumstances with no procedure for establishing responsibility.

How, in the name of common sense, can you even propose such a travesty? I don't believe NRC rules do or could cover every important accident (it'd help if you'd take accidents more seriously instead of grinding out licenses and proposing loopholes for the industry, whose laxity will get them next, since NRC is equally lax). But better leave it a serious matter, costing up to \$1 million, to override the rules, relying on the ability to show that it was done to save public health and safety, than to move overriding the rules down to an option less important than a tech spec which would cost a day's power output (\$200,000- \$400,000) to comply with.

Commissioner Gilinsky at least remains to add some sanity: He points out that reactor operators are not trained or tested on both the basis and the importance of the Technical Specifications. Are the SROs? Comprehensively, for each such spec, and their interactions. You need a Leonardo Da Vinci or Marie Curie to make this sort of decision, not Mickey and Minnie Mouse with the concurrence of Gyro Gearloose as NRC proposes. Leave well enough alone, scrap this rule, and if you need an out, propose that emergency actions which are intended in a general emergency to protect the health and safety of the public, may be approved by NRC under established criteria of reasonableness and effectiveness, and any violations or fines therefor waived. Then get comments on that proposal. Or save your energy and do nothing, and let this rule die a well-deserved death.

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