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COMMENTS OF OHIO CITIZENS FOR RESPONSIBLE ENERGY, INC. ("OCRE")  
ON REVIEW OF EXISTING LWR REGULATORY REQUIREMENTS. REG.  
39394 (OCTOBER 28, 1986)

October 28, 1986

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#### A. GENERAL COMMENTS

OCRE must express its strong disapproval of this program, which must be the AIF's dream come true. Never before has the NRC so blatantly pandered to the industry it is supposed to objectively regulate. OCRE believes that this program is illogical, illegal, and inconsistent with the NRC's statutory mandate, which is to protect the public from the hazards of nuclear technology. OCRE hopes that this policy is abandoned before the NRC's regulatory program is dismantled to suit the whims of the nuclear industry.

It might be asked whether any evaluation of the cost effectiveness of this program has been performed. It is ironic that the NRC has spent thousands of dollars on this program, geared primarily to benefit the industry, while at the same time vital research programs are suffering budget cuts or are being dropped altogether. The irony is compounded when one realizes that some of these research programs would reduce the vast uncertainties in our knowledge of risk and severe accident progression, uncertainties which have been conspicuously ignored or downplayed in this program.

A major deficiency of this (and any) program to evaluate the risk-effectiveness of regulations is the assumption that we know with precision exactly what the risks of nuclear power are. About the only definite conclusion which can be reached from severe accident analyses, PRAs, and source term work is that substantial uncertainties exist in our understanding of accident risk. Nevertheless, Vol. 2 of NUREG/CR-4330 uses the "bottom-line" numbers from WASH-1400 in its evaluation of containment leakage and fuel design issues, without any consideration of the uncertainties associated with these numbers or of the shortcomings in WASH-1400 (which the NRC itself admitted in NUREG/CR-0400 (1978)).

NUREG/CR-0400 makes it quite clear that WASH-1400 should not be used in this manner. "WASH-1400 was directed to make a 'realistic' estimate of risk. In the regulatory process, the usual conservatism must be incorporated." (P. ix) "WASH-1400 is defective in many important ways. . . . Therefore, the absolute values of the risks presented by the Report should not be used uncritically either in the regulatory process or for public policy purposes." (P. 3) This program is using the

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absolute values in WASH-1400 for the purpose of eroding the usual conservatism in the regulatory process.

The program also lacks logic and consistency. The industry and its sympathizers in the NRC have argued vociferously that nuclear power facilities should not be required to withstand severe accident conditions because severe accidents are very unlikely to occur. But now the argument is advanced that design-basis regulations should be relaxed because the more probable design basis accidents do not dominate risk, which is dominated by the severe accidents. There does not appear to be a concurrent program to impose regulatory requirements to reduce public risk from severe accidents, as logic would dictate. In fact, the 1980 proposed rulemaking on this issue was discarded in favor of a flawed Severe Accident Policy Statement which declared nuclear reactors to be safe enough, due to the industry's lobbying efforts.

This program signals a sharp departure from the statutory mission of the NRC, i.e., protection of the public health and safety. The NRC seems to have forgotten the circumstances surrounding its creation. Congress passed the Energy Reorganization Act of 1974, abolishing the AEC and creating the NRC, due to the obvious conflict of interest of having the AEC responsible for both the promotion and regulation of nuclear power. The NRC is now blatantly doing what the AEC did not overtly do - chipping away its own safety regulations to promote the interests of the nuclear industry.

Neither the Atomic Energy Act nor the Energy Reorganization Act allow the NRC to consider costs to the industry in its regulatory program. The Commission has repeatedly told the Courts that safety is its first, last, and permanent consideration and that it is not empowered to consider a utility's investment in a nuclear facility in its licensing decision. Power Reactor Development Co. v. International Unions, 367 U.S. 396, 402, 415 (1961); Pacific Gas and Electric Co. v. State Energy Resources Conservation and Development Commission, 51 LW 4449, 4456 (1983) ("the NRC's regulations are aimed at insuring that plants are safe, not necessarily that they are economical"); Rockford League of Women Voters v. NRC, 679 F.2d 1218, 1223 (7th Cir. 1982) (the NRC gave "assurance, founded on statute and regulation, that it will not grant an operating license for an unsafe plant no matter how much money has been irrevocably sunk in its construction"); Seacoast Anti-Pollution League of New Hampshire v. NRC, 690 F.2d 1025, 1033 (1982) ("the Commission does not and cannot consider the utility's investment in a particular facility in determining whether 'reasonable assurance' exists which justifies the grant of an operating license"). Yet now

the NRC is intent on identifying and eliminating regulations that are the licensing basis of existing power plants specifically "to reduce regulatory burdens." NUREG/CR-4330, Vol. 1, P. 1.1. This is plainly illegal. The only legitimate review of regulatory requirements is to identify any which might cause a decrease in safety. Complaints of this nature which were noted in NUREG/CR-4330, Vol. 1 should be investigated further to determine their merit. OCRE suspects many are merely a ruse to cover financial motives.

#### B. COMMENTS ON NUREG/CR-4330, VOL. 1

This report documents the NRC's search for unnecessary regulations having marginal importance to risk. The methodology employed consisted of the regulator asking the regulated which regulations it would like eliminated. This is analogous to asking the fox how best to guard the henhouse. The response was predictable. The industry's list of "unnecessaries" covered the spectrum of defense in depth: technical specifications, fire protection, emergency planning, quality assurance, security, environmental qualification of electrical equipment, LERs, containment leak testing, combustible gas control, ECCS evaluation models, and a score of others. Most of the specific complaints against the requirements were utterly self-serving, based on illogical and circular reasoning, and devoid of concern for public health and safety. OCRE finds it appalling that the NRC apparently does not see the bias and conflict of interest inherent in its approach. Even more disturbing is the number of NRC personnel interviewed advocating industry viewpoints.

The following specific comments address some of the more glaring points in the report.

1. Why is 10 CFR 61 listed in Table 1.2 when it appears from the table that no one registered any complaint about it?

2. Much of the discussion ignores the fact that many of the maligned regulations arose out of operating events revealing deficiencies in previous requirements. For example, fire protection requirements were enacted due to the Browns Ferry fire. Emergency planning, post accident sampling systems, reactor vessel level indication, and new combustible gas control requirements resulted from the TMI-2 accident. The Sholly license amendment process came about because the NRC violated the hearing rights of citizens in venting radioactive noble gases from TMI-2 before giving them an opportunity to be heard. It is hardly rational to argue that these measures serve no purpose.



3. Fire protection. It is stated at p. 2.11 that, based on three PRAs, fires contribute from 25% to 40% of the total core melt frequency from all initiators. It should follow that Appendix R serves a useful and necessary role in protecting the public, and no further discussion of its elimination should be entertained. The suggestion that "the requirements for fire protection could be based on risk significance and the probability of a fire occurring in various areas of the plant" defies logic. NUREG/CR-0400 commented on this very point: "no one would suggest the treatment of a fire through a logic diagram which branches with the probability that a fire starts versus the probability that it does not." (P. 5) The suggested modifications, e.g., more realistic estimates of combustible loadings, using 1-hour fire barriers, are not warranted, as the NRC has admitted that it does not understand the risks of fires. "The staff often lacks specific technical data that supports either accepting or requesting a licensee request for exemption" to Appendix R. April 30, 1986 memorandum re Impacts of Budget Cuts on NRC's Ability to Assure Safety. Similarly, the complaint that it is unusual to wheel a 55-gallon drum of oil through every fire sensitive area (for transient combustible load considerations) misses the point. The drum of oil is assumed to bound real transient loads, which might be somewhere in the plant at some time, exact location unknown. So it is prudent to consider such a transient load to be in every fire area analyzed. Taking credit for operator actions is also unwise. At Browns Ferry the operators did not successfully extinguish the fire in a timely manner; in fact, they resisted the suggestions of the local fire department (which ultimately proved correct) for hours. The discussion on loss of offsite power focuses only on (a) independent occurrence of LOOP and a fire; and (b) LOOP initiated by a fire, with the conclusion that both probabilities are low. However, that the third option (LOOP causing a fire) might be a reasonable basis for the requirement is suggested by the admission that 20% of all fires occur in diesel generator rooms. Since fires there are more likely when the diesels are running (as in a LOOP), concurrent LOOP and a fire is not an unreasonable assumption. The discussion of emergency lighting as "an interesting conflict in requirements" ignores that this is merely a layer of defense in depth, the basis of nuclear reactor regulation.

4. Sholly License Amendment Process. The disingenuous complaint is made that the process is a disincentive to apply for amendments that enhance safety. Curiously, the process does not seem to inhibit licensees from seeking amendments which would decrease plant safety, which is the effect one would expect from the public scrutiny of the amendment process. That few hearings have been held on license amendments indicates that

the public is behaving in a reasonable and responsible manner and would probably not object to amendments enhancing safety. The feigned concern for safety is a ruse for the real motive, which is the fear that someday, somewhere a citizen will exercise his/her

hearing rights granted by Congress to successfully oppose a license amendment which is harmful to the public but profitable for the utility.

The claim is made that provisions are needed to distinguish between the great majority of amendments having little risk significance and the small fraction posing some risk. There already exists a process to accomplish this, the "no significant hazards considerations" review. It was also suggested that a means be provided to grant emergency license amendments prior to significant hazards consideration, with the notice published later. It was such an abuse that lead to the Sholly court decision and subsequent legislation.

5. Emergency planning. Here the most strident and self-serving arguments are made. Again a concern for public safety is feigned, with the claim that evacuation is dangerous due to the risk of injuries and of exposure to the plume during evacuation.

Of course, if government officials and the public were notified early enough, evacuation could precede exposure to the plume. But, they find early notification of accidents a burdensome dispensable too. And the Soviet Union found the risks of evacuation from Chernobyl (actually permanent relocation) to be outweighed by the risks of continued radiation exposure. The incredible statement is made that reduction of the source term and the EPZ sizes

would have little impact on public risk. If an accident occurs and the highly uncertain new source term estimates turn out to be wrong on the nonconservative side, then there is a drastic deleterious effect on public health and safety. The Chernobyl disaster has reinforced the need for prompt notification of accidents and for workable evacuation plans for areas at least 20 miles from a nuclear plant.

6. Environmental qualification of electrical equipment. It is hardly unreasonable to require equipment relied upon to function during an accident to in fact be able to do so, with proof. Assurance of this is all the environmental qualification rule seeks. The industry, rather than striving to comply with this entirely reasonable and appropriate requirement, instead seeks to eliminate it because compliance is expensive. Such complaints should be rejected as utterly lacking in merit.

7. Commercial grade procurement. Recent disclosures of counterfeit bolts (recently publicized in Jack Anderson's column) indicate continued caution is warranted.

8. Turbine missiles. The comment was voiced that better materials and new designs for turbine discs and rotors have been developed. The fact is that IGSCC has been observed in new turbines of both Westinghouse and General Electric. Relaxation of this requirement is not warranted, and the more stringent 1E-7 goal in Reg. Guide 1.115 is a better protection of the public than the safety goal, which allows an unacceptable risk of core melt (equivalent to about a 40% chance of core melt over the remaining lives of licensed plants).

#### C. COMMENTS ON NUREG/CR-4330, VOL. 2

1. Containment leak rate testing. It is exceedingly ironic that the same U.S. nuclear industry which tried to distance itself from Chernobyl with the argument that U.S. reactor containments are massive and leak tight is now trying to relax containment leak rate testing requirements. The analysis in the NUREG uses the numbers from WASH-1400 as if they had precise, absolute validity to show that containment leakage contributes little to risk. This is a conclusion apparently not shared by the Containment Performance Working Group, which found "the potential influence of significant leakage before reaching the structural capability pressure of the containment" to be important. NUREG-1037, p. xix.

Such leakage is of course the sum of pre-existing leakage and that resulting from severe accident loads. Clearly, if pre-existing leakage is substantial, as might well be the case if containment leak rate testing or leakage allowables were relaxed, the containment does not perform its function early in the accident, and offsite consequences would be significant. OCRE also finds the use of the NUREG/CR-3539 analysis on the impact of containment leakage on risk to be flawed and inconsistent with the concept of defense in depth. The purpose of the containment is to be the last barrier to fission product release in the event of an accident. NUREG/CR-3539 included accident probabilities in the risk computation, clearly an inappropriate methodology. Indeed, looking at the "bottom-line" numbers of industry-sponsored PRAs, one could conclude that containments are not needed at all, but this is inconsistent with defense in depth, and additionally runs the risk of a disaster of the magnitude of Chernobyl if the PRAs are simply wrong or the "one-in-a-million-chance" event occurs, which the laws of probability allow. Other reasons for retaining the present containment leakage and testing requirements are given in OCRE's comments on the proposed revisions to Appendix J, attached.

2. MSIV Leakage Control Systems. MSIV leakage is a serious problem in BWRs. Indeed, MSIV leakage is a major cause of containment unavailability. NUREG/CP-0033, Vol. 1, p. 330; NUREG/CP-0056, Vol. 1, p. 36. And, MSIV leakage control systems



have been credited with improving containment availability (NUREG/CP-0033, Vol. 1, p. 331; MSIVLCS prevents "leaking valves from causing containment integrity failures.") However, NUREG/CR-4330 considers effectiveness of the MSIVLCS for core melt scenarios and determines that they contribute little to safety. The report failed to consider less severe accidents, for which the system would likely contribute greatly to safety. There is the

legitimate concern that MSIV leakage has exceeded the capacity of the LCS. The rational solution is to upgrade the LCS to handle the high leakages reported, not to abandon the system altogether.

Nor would it appear that reliance on retention in the steam lines and condensor is appropriate for severe accidents. Too little is known about the potential for revaporization of fission products from these surfaces and their subsequent flow paths to consider this a viable solution.

3. Fuel design reviews. It is conceded in the report that the industry would not experience cost savings if these reviews were relaxed. On the other hand, the report also states that such relaxation would require the utilities and fuel vendors to police themselves, "of particular concern at the present time because the utilities are urging the vendors to provide more fuel performance for their dollars. . . All of the fuel damage/failure mechanisms identified in the SRP have some safety significance. . . the NRC's diligence in these areas has contributed to the lack of safety problems and to the low fuel failure rates experienced at the present time." The obvious conclusion is that relaxation of fuel design reviews is certainly not warranted. Thus, the requirement is doing its job in protecting the public, and even if the NRC were allowed to consider costs to licensees in its regulatory program (which it is not), no incentive exists to relax the standards.

Respectfully submitted,



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