KMC

September 6, 1985

Mr. Samuel J. Chilk
Secretary
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Re: Proposed Rule 10 C.F.R. Part 140, Criteria for an Extraordinary Nuclear Occurrence

Dear Mr. Chilk:

This letter, providing comments on the subject rule, is submitted by KMC, Inc. on behalf of utility members of the Radiation Standards Industry Group. Those utilities are listed in Enclosure 1. To summarize our comments briefly, we recommend that the Commission defer any action on the proposed rule until after Congress has acted on the possible extension and modification of the Price-Anderson Act. Absent Congressional action revising the statutory provisions governing the extraordinary nuclear occurrence ("ENO") concept, we recommend that the Commission retain its present rule unaltered. We do not believe that any of the proposed options will correct the problems the Commission perceives exist with the present rule nor do we believe that the proposed rule adequately substantiates these perceived problems. Our comments below and in Enclosure 2 elaborate upon these conclusions and address each of the three options described in the proposed rule. If you have questions about any of our comments, please do not hesitate to contact us.

First, the NRC should delay any revision of its ENO rule until after Congress has completed its consideration of the possible extension and modification of the Price-Anderson Act. Absent such deference by the NRC, any Congressional action involving the ENO concept could be incorrectly based on the current rule. Additionally, if

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Congress amends the statutory provision governing the ENO rule, the NRC could be required to revise its rule again.1/ Deference will avoid unnecessary revisions by the NRC and will permit Congress to conduct its debate without the NRC's rule changing in midstream.

Second, the present rule correctly implements the statutory definition of an ENO. The proposed rule is inconsistent with Congressional intent as it would lower the dose level for a substantial offsite release of radioactivity to five rem, the annual occupational exposure limit. Thus, contrary to the legislative history, the proposed rule would permit the Commission to define as an ENO an event near the range of anticipated occurrences and involving doses within or near permissible regulatory limits.

It is clear that Congress intended that any event which would trigger the waiver of defenses would be substantial and not near the range of anticipated occurrences. This is apparent from the definition of an ENO:

> . . . any event causing a discharge or dispersal of source, special nuclear, or byproduct material from its intended place of confinement in amounts offsite, or causing radiation levels offsite, which the Commission determines to be substantial, and which the Commission determines has resulted or will probably result in substantial damage to persons offsite or property offsite. Atomic Energy Act, as amended, Section 11(j), 42 U.S.C. Section 2014(j).

Additionally, in the Joint Committee on Atomic Energy Report Accompanying Bills to Amend Price-Anderson Act to Provide Immediate Financial Assistance to Claimants and to Require Waiver of Defenses (September 16, 1966), the authors said that "there is no pressing need to invoke the mechanisms and procedures in situations which are not exceptional and which can well be taken care of by the traditional system of tort law." Selected Materials on Atomic Energy Indemnity and Insurance Legislation, 93rd Congress, Second Session, page

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1/ We are aware of at least one Congressional proposal to eliminate the ENO concept.

309 (1974). Congress did not intend that the ENO concept would trigger a waiver of defenses for frivolous or nuisance suits. Hearings Before the Joint Committee on Atomic Energy on Proposed Amendments to Price-Anderson Act Relating to Waiver of Defenses, 84th Congress, Second Session, pages 23, 50, 57-58, 81, 122, and 123 (1966).

The proposed rule would also replace a determination of actual or probable offsite property damage with determinations of property valuation, employment loss, and evacuation costs. Thus, instead of adhering closely to Congressional intent, the NRC proposes to consider criteria which may or may not, depending upon the circumstances of a particular event, be related to substantial offsite property damages. While such criteria may be easier for the NRC to measure, they are not necessarily appropriate measures for an ENO determination. Rather, the offsite property damages which should be determined are those which result from the release of radioactive material, such as the total cost necessary to put affected property back into use.

Third, while a primary reason given for the proposed revision is to "avoid the problems encountered by the Commission in applying the existing criteria to the accident at the Three Mile Island ("TMI") nuclear plant," these problems are not set forth in detail. Thus, it is difficult to provide comments which are fully and particularly responsive to these perceived problems. For example, the NRC states that it was difficult, if not impossible, to evaluate accurately and in a timely manner monetary damages pursuant to Criterion II. While not stated, apparently this difficulty flowed, at least in part, from the fact that the TMI accident did not result in a substantial offsite release of radioactivity nor substantial offsite property damages. We do not believe that the difficulty of estimating damages when there is no substantial offsite release of radioactivity should cause the Commission to change its rule. Presumably another reason why the NRC had difficulty ascertaining the damages resulting from the TMI accident was the NRC's lack of personnel trained in making such damage estimates. If in the future there is an event resulting in offsite property damage and the Commission does not have the requisite in-house ability to ascertain monetary damages, the Commission could hire experts who could estimate such damages for it.

With regard to these perceived problems, it should be noted that the NRC has never declared an event to be an ENO. The TMI accident is the only event that has even warranted

such consideration. Any regulation which is implemented so infrequently will not be automatic in its implementation. Moreover, NRC's application of the rule took place in a climate of intense scrutiny from Congress, the media, and the public. It is to be expected that, in such circumstances, the NRC would have difficulty applying the criteria for the first time. We believe that there will continue to be similar problems in the future when an event does not release substantial quantities of radiation or cause substantial offsite damages. Thus, it is unlikely that the goal underlying the revision, to make the ENO rule easily applied when such an event occurs, can be achieved. Moreover, we do not believe that such an event provides a justifiable basis for revising the rule.

Finally, we are concerned that defining a five rem dose as "substantial," even if only for the purposes of the ENO rule, will have an adverse impact on the NRC and the commercial nuclear power industry. Adoption of this definition will likely lead the public to assume that the NRC has concluded that a five rem dose is substantial in terms of its human health effects. When this assumption is compared to the present occupational dose limit, it is likely that the public will further assume that the NRC is inadequately protecting health and safety.

In addition to this adverse effect on the public's perception of the NRC, we believe that this downward revision could adversely affect industry's defense of radiation injury claims brought before workers compensation boards and courts by industry employees. It is likely that the revised ENO Criterion I will be introduced as evidence that personal injury results from receipt of a five rem dose. If courts and workers compensation boards accept this argument that Criterion I reflects the NRC's judgment that personal injury results from receipt of a five rem dose, then there could be an adverse impact on the availability to industry of insurance and on industry insurance rates.2/

2/ We note that insurance industry statements noted in the proposed rule that there would be no adverse impacts on the availability of insurance and on insurance rates are about 20 years old and cannot be relied upon to represent that industry's opinion today.

In sum, we recommend that the Commission defer its action on a revised ENO rule until after Congress has acted on the possible extension and modification of the Price-Anderson Act. Absent Congressional action modifying the ENO concept, we recommend that the present rule not be changed.

Sincerely,

Peter F. Riehm

Peter F. Riehm
Associate

ENCLOSURE 1

UTILITIES COMMENTING ON PROPOSED RULE 10 CFR PART 140,
CRITERIA FOR AN EXTRAORDINARY NUCLEAR OCCURRENCE

Detroit Edison Company

Omaha Public Power District

Pacific Gas & Electric Company

Toledo Edison Company

Yankee Atomic Electric Company

ENCLOSURE 2

Detailed Comment on Proposed ENO Options

Comment 1.1: The discussion of "substantial releases or substantial offsite doses" is confusing. The Supplementary Information states clearly:

> The proposed dose levels for Criterion I .... are in the range of the occupational dose limits and hence could be regarded as too low to be viewed as being "substantial". (Emphasis added)

We agree with this.

However, the text then continues and tries to justify why such low levels are, nevertheless, "substantial." We are not convinced by this argument. A dose of this magnitude either is or is not "substantial." As these doses are in the range of occupational dose limits, and as the NRC has concluded that its occupational dose limits are sufficiently low, then the only proper conclusion is that the proposed limits are well below "substantial" and are improper for consideration in the ENO criteria. Given the Congressional intent underlying the ENO concept, to conclude otherwise is to introduce confusion.

The proposed dose criteria are too low.

Comment 1.2: The Supplementary Information states:

> The proposed modification has been selected to be numerically consistent with Protective Action Guides proposed by the Environmental Protection Agency .... This ensures that any nuclear accident which would have warranted protective actions will be found to involve a substantial release of radioactive materials which would satisfy the first condition for an ENO determination.

Yet existing 10 CFR 140.81 states that "The criteria ..... are not intended to indicate .... a level at which some protective action is indicated."

We find that setting the doses to be consistent with EPA's PAGs is counter to the long-standing philosophy of the ENO concept and the quoted text in 10 CFR 140.81. No justification has been offered for using PAGs and other health and safety technical documents as bases in support of the proposed criteria.

Comment 1.3: The proposed rule states in 10 CFR 140.85(a):

> Five or more people have received a radiation dose equivalent to the whole body or any organ in excess of 100 rads (1 gray) during the course of the accident. (Emphasis added)

As this criterion involves doses "during the course of the accident," doses resulting from the accident which are received after the accident (e.g., through the food chain) would not be considered. Is this intended?

Comment 1.4: The Supplementary Information states:

> .... the assessed value of property requiring decontamination is used as an index of damage.

This is an easy approach but would be appropriate only if that property is destroyed or rendered essentially useless. A more appropriate property damage measurement would be the cost of decontamination, if necessary, to return the property to its original condition.

Comment 1.5: We agree with the statement in the Supplementary Information that:

> In evaluating the doses for defining "substantial injury," the Commission intends that the methodology used for the evaluations be realistic rather than overly conservative.

Comment 1.6: It should be clarified that the sources of radiation listed in proposed 10 CFR 140.84(a) include only those sources resulting from the accident in question, particularly for sources internal to the body. Also, we do not understand what is gained by the addition of item (4): "Radiation from sources internal to the body."

Comments on Option 2

Comment 2.1: Same as Comment 1.1 above.

Comment 2.2: Same as Comment 1.2 above.

Comment 2.3: The proposed rule states in 10 CFR 140.84(a):

> The Commission finds that any of the following doses were or could have been received by a person or persons located on or near any site boundary throughout the duration of the accident.

Thus Comment 1.3 above applies here also.

Comment 2.4: Same as Comment 1.4 above.

Comment 2.5: The proposed rule in 10 CFR 140.85(a) refers to "a calculated collective dose ...." We note that in the Commission's recently approved proposed Part 20 rule, a "de minimis" concept is incorporated into the collective dose calculation. We believe it would be likewise appropriate and consistent to incorporate a similar concept here.

Comment 2.6: Same as Comment 1.6 above.

Comments on Option 3

Comment 3.1: Option 3 states regarding the present Criterion I:

> ... it is a measure of exposure and possible damage (cf. Criterion II), not a measure of discharge or radiation level. (Emphasis added)

We disagree. Nor do we agree with assertion regarding Criterion I that:

> ... one must be able to track two paths: the path of the persons at risk and the path of the plume of radionuclides.

To the contrary, the present Criterion I states clearly that the Commission must find that:

> ... one or more persons offsite were, could have been, or might be exposed .... (Emphasis added)

We believe that this allows for a standard "fencepost cow" calculation, which is done regardless of whether the cow is actually present. As such, it is truly a measure of discharge. Furthermore, by calling into question the ability to determine plume characteristics (i.e., size, speed, content, etc.), Option 3 challenges the ability to adequately calculate exposure in the required accident analyses found in Chapter 15 of every Safety Analysis Report. We doubt that the Commission intends to do this.

Thus we find that Option 3 is wrong in declaring the present Criterion I not to be what it purports to be. Hence, the proposal to reduce the two criteria to one has no basis.

Comment 3.2: As originally intended by Congress and as presently promulgated by the NRC, for an event to be declared an ENO, it must involve both a substantial discharge and substantial damages offsite. Thus, an event which involves a large discharge resulting in small damages would be precluded from classification as an ENO by virtue of this two part test. However, Option 3 eliminates the two part test and replaces it with a test whereby only offsite damages are considered regardless of release size. This is not

consistent with Congressional intent, but comports with the erroneous interpretation of Criterion I as discussed in Comment 3.1.

The rule should properly maintain its present two-criteria form.

Comment 3.3: As defined in the Atomic Energy Act, an ENO is an event which, among other things, "has resulted or probably will result, in substantial damage to persons offsite or property offsite." The present Criterion II divides offsite property into two categories: (1) contiguous offsite property which is owned (or leased) by the indemnified party, and (2) all other offsite property. We believe this is appropriate. We do not understand the basis for deleting the first category. Until a basis is supplied, the present "Column 1" should be retained in the Table.