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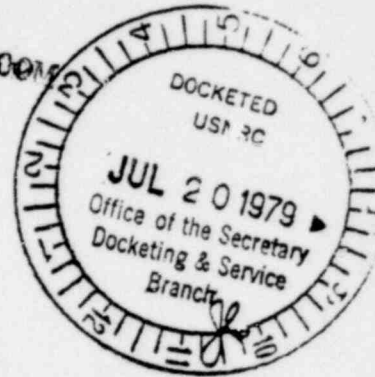
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TITLE 10 - ENERGY

Chapter 1 - Nuclear Regulatory Commission

**PART 140 - FINANCIAL PROTECTION REQUIREMENTS
AND INDEMNITY AGREEMENTS**

Section 82 - Procedures



Pursuant to its authority under Section 11(j) of the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2014(j), and according to Subsection 140.82 of its regulations, 10 CFR 140.82, the Commission hereby initiates the making of a determination as to whether or not the recent accident at Three Mile Island, Unit 2, constitutes an extraordinary nuclear occurrence ("ENO"). Although no petitions requesting such a determination have as yet been received, the Commission is aware of several factors which indicate that proceeding with the determination at this time is in the public interest. First, it is clear that the events which have taken place at Three Mile Island, Unit 2, constitute the most serious nuclear accident to date at a licensed U.S. facility, and thus should be rigorously scrutinized from the standpoint of their effect on the public. Second, various lawsuits have been brought concerning this accident, and the determination of whether or not an extraordinary nuclear occurrence has taken place is pertinent to issues which may arise in those cases. The court has informally asked the Commission for its view on the ENO question, and the Commission would like to assist the court in this regard.

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The Commission invites interested persons to submit to the Commission, within thirty days of this announcement, any information in their possession relevant to this determination. Submittals should, if possible, focus on the application of the Commission's regulations, 10 CFR 140.84 and 140.85, to the consequences of the Three Mile Island, Unit 2, accident. This information, along with other information assembled by the Commission from its own and other sources, will be considered by a panel composed of Commission principal staff as required by 10 CFR 140.82(b). The composition of this panel, and the detailed procedures which the Commission proposes to follow, including further provision for public participation, will be announced at a later date. Submittals should be sent to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, 1717 H Street, N.W., Washington, D.C., 20555.

CONTACT: Ira P. Dinitz, 301-492-8336.

For the Commission


SAMUEL J. CHALK
Secretary of the Commission

Dated at Washington, DC,
this 8th day of July, 1979.

Enclosure: Background Information

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BACKGROUND INFORMATION

INTRODUCTION

If a nuclear incident occurs, one of the principal obstacles to a claimant's recovery for injuries or damages could be the necessity of proving negligence on the part of the utility or other defendants. In 1966 Congress attempted to remove this obstacle for certain nuclear incidents ("extraordinary nuclear occurrences" - ENO) through contractual provisions termed "waivers of defenses," resulting in an essentially no-fault scheme. These waivers were intended to expedite recovery for claims under the Price-Anderson Act in the event of an ENO. The following is intended to explain the waiver of defenses in greater detail and to describe the criteria used by the NRC in making a finding as to whether or not an ENO has occurred. In order to better understand the waiver provision and the concept of an ENO, an overview of the Price-Anderson Act is included.

I. OVERVIEW OF THE PRICE-ANDERSON ACT

Under the Price-Anderson Act (which is a part of the Atomic Energy Act of 1954) there is a system of private funds and government indemnity totalling \$560 million to pay public liability claims for personal injury and property damage resulting from a "nuclear incident." The Price-Anderson Act, which expires August 1, 1987, requires licensees of large commercial nuclear power plants to provide proof to the NRC that they have financial protection in the form of private nuclear liability insurance, or in some other form approved by the Commission, in an amount equal to the maximum amount of liability insurance available from private sources. That financial protection, \$475 million at the time of the Three Mile Island (TMI) accident on March 28, 1979, consists of primary private nuclear liability insurance of \$140 million provided by two insurance pools, American Nuclear Insurers (ANI) and Mutual Atomic Energy Liability Underwriters (MAELU) (which was increased to \$160 million on May 1, 1979 -- except for TMI) and a secondary layer. In the event of a nuclear incident causing damages exceeding \$140 million, each commercial nuclear power plant licensee would be charged by the insurance pools providing the insurance a prorated share of damages in excess of the primary insurance layer up to \$5 million per reactor per incident. With 67 large commercial reactors now operating under this system, the secondary insurance layer totals \$335 million. Thus, the two layers of insurance at the time of the TMI accident totaled \$475 million. The difference of \$85 million between the financial protection layers of \$475 million and the \$560 million liability limit established by the Price-Anderson Act is provided by government indemnity. Government indemnity will gradually be phased out as more commercial reactors are licensed and licensees participate in the second layer of insurance. When the primary and secondary layers by themselves provide liability

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coverage of \$560 million, government indemnity will be eliminated. The liability limit -- now \$560 million -- would thereafter increase in increments of \$5 million for each new commercial reactor licensed to operate.

II. EXTRAORDINARY NUCLEAR OCCURRENCE -- GENERAL

A. Definition

Webster defines the term "extraordinary" as "going beyond what is usual, regular, or customary." Viewed in this light, the recent events at Three Mile Island may be termed extraordinary, since they would not occur during normal operations at a nuclear power plant. However, the term "extraordinary nuclear occurrence" (ENO) is precisely defined by the Price-Anderson Act as follows:

The term "extraordinary nuclear occurrence" means 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 probably will result in substantial damages to persons offsite or property offsite. (Atomic Energy Act (as amended), subsection 11j, 42 U.S.C. 2014j)

The definition thus provides a two-pronged test: (1) substantial offsite release of radioactive material or substantial offsite radiation, and (2) substantial offsite damages. This same section requires that the Commission "establish criteria in writing" for purposes of applying these tests to specific events.

The significance of the ENO concept is that a positive determination that an ENO has taken place must be made by the Commission before the "waiver of defenses" provisions of the Act, described below, can apply to the accident. In the event of a "nuclear incident" that is declared not to be an ENO, Price-Anderson funds are still available and normal defenses permitted under State law are not waived. The insurance pools may dispense funds under their policies, whether or not there is a determination by the Commission of an ENO, and in certain situations at TMI have already done so.

B. Legislative History

Congressional reports and statements by members of Congress in 1966, during the passage of the ENO and related provisions, give a clear impression of Congressional intent. On one hand, it was felt that if recovery of Price-Anderson funds were left entirely to the statutes and

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principles of State tort law in the event of a major nuclear accident, many valid claims might be tied up in the courts for years. Congress gave particular attention to problems of varying State statutes of limitations (some States, for example, had not adopted the "discovery" rule for concealed injuries -- which would run the statute of limitations from the time the injured party knew of or reasonably should have discovered his injury). Congress was also concerned with the possibility that some States might not apply "strict liability" to a nuclear accident so that injured parties might have to prove negligence. On the other hand, there was considerable resistance to the total substitution of State law by creation of a "Federal tort" for nuclear accidents.

The result of this balance of competing factors was the "waiver" system. Under this system the NRC could require that its licensees agree to waive certain State law defenses (contributory negligence, assumption of risk, etc.) as part of the indemnity and insurance agreements, and thus create "strict liability" through the insurance policies and indemnity agreements. A statute of limitations would also be incorporated into these agreements, which would come into play if state statute of limitations were more restrictive. Finally, a consolidated Federal court proceeding would be used to handle all claims in the new system.

Insurers feared, however, that under such a waiver system they would be subjected to "nuisance suits." The insurance industry felt that it should not be required to waive the usual defenses available to it under State tort law for those "nuclear incidents" which had resulted in, at most, minor offsite releases and property damage. The insurance pools urged that such cases could be, and should be, dealt with within the usual State tort law system, particularly since minor accidents would not give rise to the need for quick, massive recoveries.

To meet this concern, Congress developed the "ENO" concept. The waiver provisions would be activated only if an "extraordinary nuclear occurrence" took place. The ENO was intended to be an event causing both substantial offsite releases of radiation and substantial offsite damages to persons or property. The Commission was given broad discretion (free of judicial review) to determine what constitutes an ENO, but was required by the 1966 amendments to publish written criteria which would be adopted after a public rulemaking process.

Congressional statements indicate that application of the criteria would be relatively flexible, even though precise numbers (such as a \$5 million damage figure) would be selected in the rulemaking. There is no indication that Congress intended the Commission to apply its criteria in a rigid fashion. Still, it is equally clear that Congress did desire a reasonably specific index of what the Commission considered "substantial" for purposes of an ENO determination.

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C. Waivers of Defenses

When the Commission determines that an ENO has occurred, then any defendant must waive:

- (1) any issue or defense as to the conduct of the claimant or fault of persons indemnified,
- (ii) any issue or defense, as to charitable or governmental immunity, and
- (iii) any issue or defense based on any statute of limitations if suit is instituted within three years from the date on which the claimant first knew, or reasonably could have known, of his injury or damage and the cause thereof, but in no event more than twenty years after the date of the nuclear incident.

The waivers in subsection (i) relating to the fault of all persons indemnified relieve the claimant of having to prove negligence by any defendant and of having to disprove defenses such as contributory negligence. To recover for damages resulting from an ENO, a claimant needs to prove that he was injured or damaged, the monetary amount of the damages, and the causal link between his damages and the radioactive, toxic, explosive or other hazardous properties of the radioactive material released. Thus, through this "no-fault" type of provision the principal obstacle to a claimant's recovery is no longer proving negligence on the part of the defendant but rather showing that his injury or damage was caused by the ENO.

The statute of limitations provision in subsection (iii) of the waivers is not intended to be more restrictive than applicable State law. Thus, if a State had a statute of limitations which provided that suits for personal injury or property damage resulting from a nuclear incident could be brought any time within 30 years after the occurrence of the incident, the 30-year statute would take precedence over the 20-year period specified in the Price-Anderson Act.

The criteria to be used by the Commission will be fully discussed later, but at this point it should be reiterated that, unless an ENO is declared by the Commission, the waivers of defenses provisions do not apply. In such a situation a claimant would have exactly the same rights that he now has under existing tort law.

The other major concept in the 1966 amendments is that the Commission's authority to determine whether or not an ENO has occurred is not reviewable by the courts.

The 1966 amendments also benefited injured persons in several other respects. The Commission was authorized to make financial assistance payments to claimants immediately following a nuclear incident, regardless

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of whether an ENO determination has been made and without requiring them to sign a release or otherwise compromise their claims. In the event of an ENO, the 1966 amendments authorized all claimants to sue in the same Federal district court, generally under the same rules of procedure. Any action dealing with the same incident but pending in any State court or other Federal district court could, upon motion of the NRC or defendant, be removed to the single specified district court. Consolidation of all claims resulting from an ENO in a single Federal district court would permit all claimants to be treated equally. Finally, the 1966 amendments modified the Act to assure that available funds would be distributed in accordance with a court-approved plan making appropriate allowance for latent injury claims if it appeared that the total amount of all claims might exceed the limit on liability.

III. CRITERIA FOR DETERMINING AN ENO

A. Language and Structure of the Criteria

For the Commission to make the determination that there has been an ENO both Criterion I and Criterion II as set out in the Commission's published regulations (Chapter 10, Code of Federal Regulations, sections 140.84 and 140.85) must be met. The language of the criteria (especially Criterion I) is rather technical and precise and is expressed in terms of measurements that laymen would not be expected to make themselves. For example, to satisfy Criterion I the Commission must determine that there has been a substantial discharge or dispersal of radioactive material off the site of the reactor, or that there has been a substantial level of radiation offsite. The Commission would determine that Criterion I had been met when, as a result of an event comprised of one or more related happenings, radioactive material is released from its intended place of confinement or radiation levels occur offsite and either of the following findings are also made.

- a. The Commission finds that one or more persons offsite were, could have been, or might be exposed to radiation or to radioactive material, resulting in a dose or in a projected dose in excess of one of the levels in the following table:

TOTAL PROJECTED RADIATION DOSES

<u>Critical organ</u>	<u>Dose (rems)</u>
Thyroid	30
Whole body	20
Bone Marrow	20
Skin	60
Other organs or tissues	30

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In measuring or projecting doses, exposures from the following types of radiation shall be included:

- (1) Radiation from sources external to the body;
- (2) Radioactive material that may be taken into the body from air or water; and
- (3) Radioactive material that may be taken into the body from food or from land surfaces.

(or)

b. The Commission finds that --

- (1) As the result of a release of radioactive material from a reactor there is at least a total of any 100 square meters of offsite property that has surface contamination. This contamination must show levels of radiation in excess of one of the values listed in column 1 or column 2 of the following table, or
- (2) As the result of a release of radioactive material in the course of transportation surface contamination of any offsite property has occurred. This contamination must show levels of radiation in excess of one of the values listed in column 2 of the following table.

TOTAL SURFACE CONTAMINATION LEVELS^{*}

Type of emitter	Column 1 Utility's property beyond the fence surrounding the reactor station.	Column 2 Other offsite property
Alpha emission from transuranic isotopes	3.5 microcuries per square meter	0.35 microcuries per square meter
Alpha emission from isotopes other than transuranic isotopes	35 microcuries per square meter	3.5 microcuries per square meter
Beta or gamma emission	40 millirads/hour at 1 cm. (measured through not more than 7 milligrams per square centimeter of total absorber)	4 millirads/hour at 1 cm. (measured through not more than 7 milligrams per square centimeter of total absorber)

^{*}/ The maximum levels (above background), observed or projected, 8 or more hours after initial deposition.

Based on the information available to the NRC staff at this time, it appears that neither part of Criterion I is satisfied. Both personal exposures and property contamination are presently considered to be far below the levels specified in the tables set out above. In the period March 28-April 7, the approximate upper limit on whole body dose to a person in a populated area offsite has been calculated to be 100 millirems. For the most part, property contamination levels measured approximated "minimum detectable activity" levels.

If the Commission determines that an event satisfied Criterion I, Criterion II must then be applied. If Criterion I cannot reasonably be met, the Commission would conclude that there has not been an ENO. Criterion II is satisfied if the Commission makes any of the following findings:

- (1) The event has resulted in the death or hospitalization, within 30 days of the event, of five or more people located offsite showing objective clinical evidence of physical injury from exposure to the radioactive, toxic, explosive or other hazardous properties the reactor's nuclear material; or
- (2) \$2,500,000 or more of damage offsite has been or will probably be sustained by any one person, or \$5 million or more of such damage in total has been or will probably be sustained, as the result of such event; or
- (3) The Commission finds that \$5,000 or more of damage offsite has been or will probably be sustained by each of 50 or more persons, provided that \$1 million or more of such damage in total has been or will probably be sustained, as the result of such event.

The term "damage" refers to damage arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of the reactor's nuclear material, and shall be based upon estimates of one or more of the following:

- (1) Total cost necessary to put affected property back into use,
- (2) Loss of use of affected property,
- (3) Value of affected property where not practical to restore to use,
- (4) Financial loss resulting from protective actions such as evacuation, appropriate to reduce or avoid exposure to radiation or to radioactive materials.

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Based on the information available to the NRC staff at this time, the only category of Criterion II damages possibly satisfied by the Three Mile Island accident is defined by (4), namely financial loss resulting from protective actions such as evacuation, appropriate to reduce or avoid exposure to radiation or radioactive material. A limited number of persons (pregnant women and small children) were advised by the Governor of Pennsylvania to leave the 5 mile radius of Three Mile Island, and in so doing incurred expenses. The insurance pools have been compensating the expenses of these families. Many others evacuated the area although they were not advised to do so.

A detailed assessment of all losses of this type might reach the \$5 million figure of Criterion II, though much would depend on how broadly the various damage categories of this criterion were interpreted. It appears unlikely that voluntary payments by the insurance pools will reach this figure. The amount recoverable in the various court actions is virtually impossible to estimate at this time.

The 1966 amendments to the Act required the Commission to prepare and publish for public comment the criteria it proposed to apply in deciding whether a nuclear incident was an ENO. On May 9, 1968, the proposed rule and accompanying explanation appeared in the Federal Register (33 Fed. Reg. 6978). Following a period of public comment, the final rule was published on September 1, 1968 with an effective date of December 1, 1968 (33 Fed. Reg. 15998).

The dual criteria contained in the final rule were designed to follow the language of the 1966 amendments to the Act in defining an ENO: there must be a substantial offsite release and substantial offsite damages. The specific values incorporated into the criteria intentionally place a large gap between an ENO and the Commission's regulations governing offsite release during normal operations. Those values were intended to represent the Atomic Energy Commission's best judgment in deciding when the Act's definition of an ENO had been satisfied. The criteria have remained unchanged since their adoption in 1968.

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