DEARTS A, B, C, 4D DRAFI PRELIMINARY VALUE/IMPACI STATEMENT FOR

REVISION IO 10 CIR 50

H. 1. Group: cls

QUALIEICATION OF MECHANICAL ECTIPMENT IMPORTANT TO SAFETY

PROPOSED ACIION

1.1 Description

Issue an Advance Notice of Rulemaking (ANR) as the first step in developing a regulation to require applicants and licensees of nuclear power plants to gualify mechanical equipment important to safety.

1.2 Need

A memorandum from H. R. Denton, Director of NRR, to R. B. Minogue, Director of OSD, dated September 2, 1980, defined the need and requested a single rulemaking to include environmental qualification of electrical equipment, independent equipment qualification testing and laboratory accreditation, and qualification of both electrical and mechanical equipment. The response memorandum from R. B. Minogue, Director of OSD, dated October 3, 1980, recommended separate rulemakings and an attempt to consolidate them at a later date. Subsequent discussions were held with Z. R. Rosztoczy, Chief of Equipment Qualification Branch, and verbal agreement was reached to proceed with a separate rulemaking for qualification of mechanical equipment.

Additional background which defines a need for this rulemaking is, there are mechanical equipment problems in nuclear power plants. The large number of continuing monthly Licensee Event Reports (LERs) of valve and pump problems is evidence of mechanical equipment problems, and substantiates the need for the proposed regulation.

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Recent directives and undertakings are aimed at electrical equipment qualification. NRR is preparing an NRC Equipment Qualification Program Plan which will soon be issued. This program plan includes mechanical equipment qualification. and and also will method the program of the program

Current A requirements for equipment qualification aren't clearly defined and are located under topic headings other than qualification. The proposed regulation will clearly identify the equipment qualification requirement and provide for incorporation of detailed requirement as they are developed.

2. VALUE/IMPACT

2.1 NRC

Equipment qualification should reduce the number of equipment problems and provide additional ensurance of safety in new and operating plants.

The regulation will provide a consistent basis for staff review of construction and operating permits. Cost savings will be obtained in terms of reduced manhours and the licensing process will be accelerated.

2.2 Other Government Agencies

Other government agencies, such as the Department of Energy, could be impacted if they have test facilities which could be used, are requested to develop facilities, or are requested to perform subcontracting work related to equipment qualification. There will also be impact on a government agency such as TVA, since this agency is also an applicant or licensee.

2.3 Industry

2.3.1 Applicants and Licensees

Equipment qualification should reduce the number of equipment problems and unscheduled shutdowns.

A clearly identified requirement for equipment qualification will eliminate misunderstanding and licensing delays.

There could be significant impact since facilities capable of testing the largest size equipment are not available. If test facilities have to be constructed the cost impact will be magnified.

Backfitting costs could be significant if tests of equipment of the same design as existing installed equipment fails qualification.

2.3.2 Manufa, arers

Equipment manufacturers would depend on the licensee's or private test facilities and consultants to perform and evaluate qualification requirements. The manufacturers could be severely impacted due to the unknown expense. They may choose not to bid or they may furnish equipment at the licensee's risk.

2.4 Public

Public safety would be improved due to equipment qualification. There would be an increased level of confidence in the industry.

3. TECHNICAL APPROACH

3.1 Alternatives

There are many ways to qualify equipment. Some alternatives are -

- qualification testing of actual equipment;
- (2) qualification testing by (1), in combination with analysis;
- (3) qualification testing by (1), in combination with similar usage experience; or
- (4) qualification testing of smaller size of similar design equipment, in combination with tests of actual size equipment or tests of subparts of actual size equipment.

Additional alternatives and suggestions will be requested of industry and the public in the ANR. A discussion and decision on the technical approach will be made after all comments are reviewed and evaluated.

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4. PROCEDURAL APPROACH

4.1 Alternatives

The need for a regulation for mechanical equipment qualification has been recognized, and consideration was given to the procedural alternatives of -

- (1) issuing a proposed rule;
- (2) issuing an advance notice of rulemaking before issuing a proposed rule; or
- (3) holding a public meeting to obtain information before issuing a proposed rule.

4.2 Discussion

This regulation has significant impact potential, many technical alternatives, and possibility for controversies. There is a shortage of published mechanical equipment qualification national standards, Regulatory Guides, and test facilities for large size equipment. Many issues are undecided and the need exists to obtain industry and public input.

4.3 Decision

An advance notice of rulemaking is considered a necessary prerequisite before developing the proposed rule, and is selected as the means to notify industry and the public of the proposed rule and obtain their early participation in its development.

5. STATUIORY CONSIDERATIONS

5.1 NRC Authority

The requirements for equipment qualification are presently embodied in many different sections of 10 CFR Part 50, and in one case in 10 CFR Part 100, under topic headings other than qualification. This rulemaking will expand and clarify existing requirements and make them visible.

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5.2 Need for NEPA Assessment

The proposed action is not a major action, as defined by paragraph 10 CFR 51.5(a)(10), and does not require an environmental impact statement. This will be reconsidered after the ANR comments are received.

6. RELATIONSHIP TO OTHER EXISTING OR PROPOSED REGULATIONS OR POLICIES

This proposed rule is closely related to the rulemakings currently going forward on (1) electrical equipment qualification and (2) accreditation of laboratories that perform qualification testing.

This proposed rule relates to the TMI-2 Lessons Learned and Action Plan requirements of, qualification and testing of BWR and PWR safety and relief valves, and PWR block valves.

7. CONCLUSION

An advance notice of rulemaking will be prepared as the first step in the development of a regulation on qualification of mechanical equipment important to safety in nuclear power plants.

DRAEI PRELIMINARY VALUE/IMPACI SJAJEMENI FOR

- 1-A

REVISION IO 10 CHR 50

QUALIEICATION OF MECHANICAL EQUIPMENI IMPORIANI IO SAFEIY

1. - PROPOSED ACIION

3

1.1 Description

Issue an Advance Notice of Rulemaking (ANR) as the first step in developing a regulation to require applicants and licensees of nuclear power plants to qualify mechanical equipment important to safety.

1.2 Need

A memorandum from H. R. Denton, Director of NRR, to R. B. Minogue, Director of OSD, dated September 2, 1980, defined the need and requested a single rulemaking to include environmental qualification of electrical equipment, independent equipment qualification testing and laboratory accreditation, and qualification of both electrical and mechanical equipment. The response memorandum from R. B. Minogue, Director of OSD, dated October 3, 1980, recommended separate rulemakings and an attempt to consolidate them at a later date. Subsequent discussions were held with Z. R. Rosztoczy, Chief of Equipment Qualification Branch, and verbal agreement was reached to proceed with a separate rulemaking for qualification of mechanical equipment.

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VALUE/IMPACT

2.1 NRC

Equipment qualification should reduce the number of equipment problems and provide additional ensurance of safety in new and operating plants.

The regulation will provide a consistent basis for staff review of construction and operating permits. Cost savings will be obtained in terms of reduced manhours and the licensing process will be accelerated.

2.2 Other Government Agencies

Other government agencies, such as the Department of Energy, could be impacted if they have test facilities which could be used, are requested to develop facilities, or are requested to perform subcontracting work related to equipment qualification. There will also be impact on a government agency such as TVA, since this agency is also an applicant or licensee.

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2.3.2 Manufacturers

Equipment manufacturers would depend on the licensee's or private test facilities and consultants to perform and evaluate qualification requirements. The manufacturers could be severely impacted due to the unknown expense. They may choose not to bid or they may furnish equipment at the licensee's risk.

2.4 Public

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3. TECHNICAL APPROACH

3.1 Alternatives

There are many ways to qualify equipment. Some alternatives are -

- qualification testing of actual equipment;
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Additional alternatives and suggestions will be requisted of industry and the public in the ANR. A discussion and decision on the technical approach will be made after all comments are reviewed and evaluated.

4. PROCEDURAL APPROACH

4.1 Alternatives

The need for a regulation for mechanical equipment qualification has been recognized, and consideration was given to the procedural alternatives of -

- issuing a proposed rule;
- (2) issuing an advance notice of rulemaking before issuing a proposed rule; or
- (3) holding a public meeting to obtain information before issuing a proposed rule.

4.2 Discussion

This regulation has significant impact potential, many technical alternatives, and possibility for controversies. There is a shortage of published mechanical equipment qualification national standards, Regulatory Guides, and test facilities for large size equipment. Many issues are undecided and the need exists to obtain industry and public input.

4.3 Decision

An advance notice of rulemaking is considered a necessary prerequisite before developing the proposed rule, and is selected as the means to notify industry and the public of the proposed rule and obtain their early participation in its development.

H. 1. 2 2/23/81 - 1-A

5. STATUTORY CONSIDERATIONS

5.1 NRC Authority

The requirements for equipment qualification are presently embodied in many different sections of 10 CFR Part 0, and in one case in 10 CFR Part 100, under topic headings other than qualification. This rulemaking will expand and clarify existing requirements and make them visible.

5.2 Need for NEPA Assessment

The proposed action is not a major action, as defined by paragraph 10 CFR 51.5(a)(10), and does not require an environmental impact statement. This will be reconsidered after the ANR comments are received.

RELATIONSHIP TO OTHER EXISTING OR PROPOSED REGULATIONS OR POLICIES

This proposed rule is closely related to the rulemakings currently going forward on (1' electrical equipment qualification and (2) accreditation of laboratories that perform qualification testing.

This proposed rule relates to the TMI-2 Lessons Learned and Action Plan requirements of, qualification and testing of BWR and PWR safety and relief valves, and PWR block valves.

7. CONCLUSION

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TASK CON	THOL I THE STORES

REQUESTOR Z. R. Rosztoczy EXT. 28	035 ORGANIZATION NRR
TASK LEADER H. I. Gregg INIT	BR. CHIEF W. F.Anderson INIT 20 - F.W-A
TASK NUMBER SC 138-1 DU/PA NUMBER 1	111
TASK DESCRIPTION (100 CHARACTERS) Develop R	eg. on Qualif. of Mech. Equip. via
Adv. Notice of Rulemaking Proc	ess
TASK PRIORITY A	TASK TYPE
START DATE Jan 14, 1981_	ESTIMATED COMP DATE Aug. 15 , 1981 to issue ANR
TASK ACTION ADD X DELETE CHANGE	TRANSFER
INTO HOLD OUT OF HOLD	NEW TASK NO. SC 138-1
EFFECTIVE DATE OF ACTION Feb. 20, 1981	WORKING DAYS SLIPPAGE
COGNIZANT INDIVIDUALS DIVIS	ION APPROVAL DATE
NRR C. Hofmayer DE	in the second
IMSS	
IE W. R. Rutherford DRRRI	
OTHER RES (SPECIFY) J. Burns/M. Stolzenberg DRSR	
	- / 0
SD APPROVAL: TL H.I. Gregg PSB DATE 2/12/81 PATE	BC SS IN USA AD
DATE 2/12/81 DATE	DATE 2/13/81 DATE
APPROVED ASST. DIV. DIR. (SD)	DATE
COMMENTS This is the task initiation for de mechanical equipment via an advance notice	veloping a regulation on qualification of of rulemaking.
The draft preliminary Value/Impact Statemen	t is attached.
CC: SD OFFICE DIRECTOR COGNIZANT DIV. D SD DEPUTY DIRECTOR COGNIZANT INDIVI SD DIVISION DIRECTOR MPA ANALYST	

ADVANCE NOTICE OF PROPOSED RULEMAKING; MECHANICAL EQUIPMENT QUALIFICATION

Prepare Prelim. Value/Impact Statement & TIF	2-20-81
TIF Approved	2-30-81
Initial ANR Draft Complete	3-30-81
Prelim. Interoffice Review Complete	4-25-81
Resolution of Comments Complete	5-15-81
Final ANR Complete	5-25-81
FINAL ANK Concurrence Complete	6-20-81
Submit to EDO/Commission	6-30-81
ANR Published in Federal Register	8-15-81

H. 1. Gregg:rp 2/20/81 - 1-A

DRAFT PRELIMINARY VALUE/IMPACT STATEMENT FOR

REVISION TO 10 CFR 50

QUALIFICATION OF MECHANICAL EQUIPMENT IMPORTANT TO SAFETY

1. PROPOSED ACTION

1.1 Description

Issue an Advance Notice of Rulemaking (ANR) as the first step in developing a regulation to require applicants and licensees of nuclear power plants to qualify mechanical equipment important to safety.

1.2 Need

A memorandum from H. R. Denton, Director of NRR, to R. B. Minogue, Director of OSD, dated September 2, 1980, defined the need and requested a single rulemaking to include environmental qualification of electrical equipment, independent equipment qualification testing and laboratory accreditation, and qualification of both electrical and mechanical equipment. The response memorandum from R. B. Minogue, Director of OSD, recommended separate rulemakings and an attempt to consolidate them at a later date. Subsequent discussions were held with Z. R. Rosztoczy, Chief of Equipment Qualification Branch, and verbal agreement was reached to proceed with a separate rulemaking for qualification of mechanical equipment.

Additional background which defines a need for this rulemaking is, there are mechanical equipment problems in nuclear power plants. The large number of continuing monthly Licensee Event Reports (LERs) of valve and pump problems is evidence of mechanical equipment problems, and substantiates the need for the proposed regulation.

Recent directives and undertakings are aimed at electrical equipment qualification. NRR is preparing an NRC Equipment Qualification Program Plan

which will soon be issued. This program plan includes mechanical equipment qualification.

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Current legal requirements for equipment qualification aren't clearly defined and are located under topic headings other than qualification. The proposed regulation will clearly identify the equipment qualification requirement and provide for incorporation of detailed requirement as they are developed.

VALUE/IMPACT

2.1 NRC

Equipment qualification should reduce the number of equipment problems and provide additional ensurance of safety in new and operating plants.

The regulation will provide a consistent basis for staff review of construction and operating permits. Cost savings will be obtained in terms of reduced manhours and the licensing process will be accelerated.

2.2 Other Government Agencies

Other government agencies, such as the Department of Energy, could be impacted if they have test facilities which could be used, are requested to develop facilities, or are requested to perform subcontracting work related to equipment qualification. There will also be impact on a government agency such as TVA, since this agency is also an applicant or licensee.

2.3 Industry

2.3.1 Applicants and Licensees

Equipment qualification should reduce the number of equipment problems and unscheduled shutdowns.

A clearly identified requirement for equipment qualification will eliminate misunderstanding and licensing delays.

There could be significant impact since facilities capable of testing the largest size equipment are not available. If test facilities have to be constructed the cost impact will be magnified.

Backfitting costs could be significant if tests of equipment of the same design as existing installed equipment fails qualification.

2.3.2 Manufacturers

Equipment manufacturers would depend on the licensee's or private test facilities and consultants to perform and evaluate qualification requirements. The manufacturers could be severely impacted due to the unknown expense. They may choose not to bid or they may furnish equipment at the licensee's risk.

2.4 Public

Public safety would be improved due to equipment qualification. There would be an increased level of confidence in the industry.

3. ECHNICAL APPROACH

3.1 Alternatives

There are many ways to qualify equipment. Some alternatives are -

- qualification testing of actual equipment;
- (2) qualification testing by (1), in combination with analysis;
- (3) qualification testing by (1), in combination with similar usage experience; or
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Additional alternatives and suggestions will be requested of industry and the public in the ANR. A discussion and decision on the technical approach will be made after all comments are reviewed and evaluated.

4. PROCEDURAL APPROACH

4.1 Alternatives

The need for a regulation for mechanical equipment qualification has been recognized, and consideration was given to the procedural alternatives of -

- (1) issuing a proposed rule;
- (2) issuing an advance notice of rulemaking before issuing a proposed rule; or
- (3) holding a public meeting to obtain information before issuing a proposed rule.

4.2 Discussion

This regulation has significant impact potential, many technical alternatives, and possibility for controversies. There is a shortage of published mechanical equipment qualification national standards, Regulatory Guides, and test facilities for large size equipment. Many issues are undecided and the need exists to obtain industry and public input.

4.3 Decision

An advance notice of rulemaking is considered a necessary prerequisite before developing the proposed rule, and is selected as the means to notify industry and the public of the proposed rule and obtain their early participation in its development.

5. STATUTORY CONSIDERATIONS

5.1 NRC Authority

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The requirements for equipment qualification are presently embodied in many different sections of 10 CFR Part 50, and in one case in 10 CFR Part 100, under topic headings other than qualification. This rulemaking will expand and clarify existing requirements and make them visible.

5.2 Need for NEPA Assessment

The proposed action is not a major action, as defined by paragraph 10 CFR 51.5(a)(10), and does not require an environmental impact statement.

6. RELATIONSHIP TO OTHER EXISTING OR PROPOSED REGULATIONS OR POLICIES

This proposed rule is closely related to the rulemakings currently going forward on (1) electrical equipment qualification and (2) accreditation of laboratories that perform qualification testing.

This proposed rule relates to the TMI-2 Lessons Learned and Action Plan requirements of, qualification and testing of BWR and PWR safety and relief valves, and PWR block valves.

7. CONCLUSION

An advance notice of rulemaking will be prepared as the first step in the development of a regulation on qualification of mechanical equipment important to safety in nuclear power plants.

TASK CONTROL FORM
REQUESTOR Z. R. Rosztoczy EXT. 28035 ORGANIZATION NRR TASK LEADER H. I. Gregg INIT HIG BR. CHIEF W. F.Anderson INIT ZACAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
TASK PRIORITY A TASK TYPE START DATE Jan 14, 1981 ESTIMATED COMP DATE Aug. 15, 1981 to issue AN TASK ACTION ADD × DELETE CHANGE TRANSFER INTO HOLD `OUT OF HOLD NEW TASK NO. SC 138-1
EFFECTIVE DATE OF ACTION Feb. 10, 1981 WORKING DAYS SLIPPAGE COGNIZANT INDIVIDUALS DIVISION APPROVAL NRR C. Hofmayer DE NMSS
SD APPROVAL: TL H.I. Gregg PSE BC S.S. FAUSA AD DATE 2/12/91 PATE DATE DATE APPROVED ASST. DIV. DIR. (SD) DATE COMMENTS
CC: SD OFFICE DIRECTOR COGNIZANT DIV. DIRECTOR SD DEPUTY DIRECTOR COGNIZANT INDIVIDUALS SD DIVISION DIRECTOR MPA ANALYST

ADVANCE NOTICE OF PROPOSED RULEMAKING; MECHANICAL EQUIPMENT QUALIFICATION

1.

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TIF Approved	2-20-81	2-30-81
Initial ANR Draft Complete	3-20-81	3-30-81
Prelim. Interoffice Concurrence Complete	4-15-81	4-25-81
Resolution of Comments Complete	5-5-81	5-15-81
Final ANR Complete	5-15-81	5-25-81
Final ANR Concurrence Complete	6-10-81	6-20-81
Submit to EDO/Commission	6-20-81	6-20-81
ANR Published in Federal Register	7-30-81	8-15-81

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H.I. Gregg:clb 2/12/81 - 1-A

DRAFT PRELIMINARY VALUE/IMPACT STATEMENT FOR

QUALIFICATION OF MECHANICAL EQUIPMENT IMPORTANT TO SAFETY

1. PROPOSED ACTION

1.1 Description

Issue an Advance Notice of Rulemaking (ANR) as the first step in developing a regulation to require applicants and licensees of nuclear power plants to qualify mechanical equipagent important to safety by test

1.2 Need

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Justice Rows trigge as als requester, How did the request it? aren't also documents you can reference giving the interest for this need. We didn't quiet draw this up based on review of LER's.

VALUE/IMPACT 2.

NRC 2.1

Equipment qualification should reduce the number of equipment problems and provide additional ensurance of safety in new and operating plants.

The regulation will provide a consistent basis for staff review of construction and operating permits. Cost savings will be obtained in terms of reduced manhours and the licensing process will be accelerated.

2.2 Other Government Agencies

Other government agencies, such as the Department of Energy, could be impacted if they have test facilities which could be used, are requested to develop facilities, or are requested to perform subcontracting work related to equipment qualification. There will also be impact on a government agency such as TVA, since this agency is also an applicant or licensee.

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2.3.1 Applicants and Licensees

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There could be significant impact since facilities capable of testing the largest size equipment are not available. If test facilities have to be constructed the cost impact will be magnified.

Backfitting costs could be significant if existing equipment fails quali-

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3. TECHNICAL APPROACH

3.1 Alternatives

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PROCEDURAL APPROACH 4.

4.1 Alternatives

The need for a regulation for mechanical equipment qualification has been how and the decision was made to proceed. Consideration was given to the procedural alternatives of -

- issuing a proposed rule;
- before exercise a propositional (2) issuing an advance notice of rulemaking;
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This regulation has significant impact potential, many technical alternatives, and possibility for controversies. There is a shortage of published mechanical equipment qualification National Standards, Regulatory Guides, and test facilities for large size equipment. Many issues are undecided and the the propried sale need exists to obtain industry and public input.

4.3 Decision

The advance notice of rulemaking was considered necessary and was selected as the means to notify industry and the public of the proposed rule and to obtain their early participation in its development.

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5. STATUTORY CONSIDERATIONS

5.1 NRC Authority

The requirements for equipment qualification, are presently embodied in many different sections of 10 CFR 50, and in one case in 10 CFR, 100 under topic headings other than qualification, This rulemaking will expand and clarify existing requirements and make them visible.

5.2 Need for NEPA Assessment

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This proposed rule relates to the TMI-2 Lessons Learned and Action Plan requirements of, qualification and testing of BWR and PWR safety and relief valves, and PWR block valves.

7. CONCLUSION

An advance notice of rulemaking will be prepared as the first step in the development of a regulation on qualification of mechanical equipment important to safety in nuclear power plants.

E. 1. Gregg:clb 2/12/81 - 1-A

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DRAFT PRELIMINARY VALUE/IMPACT STATEMENT FOR

REVISION TO 10 CFR 50

QUALIFICATION OF MECHANICAL EQUIPMENT IMPORTANT TO SAFETY

1. PROPOSED ACTION

1.1 Description

Issue an Advance Notice of Rulemaking (ANR) as the first step in developing a regulation to require applicants and licensees of nuclear power plants to gualify mechanical equipment important to safety.

1.2 Need

There are mechanical equipment problems in nuclear power plants. The large number of continuing monthly Licensee Event Reports (LERs) of valve and pump problems is evidence of mechanical equipment problems, and substantiates the need for the proposed regulation.

Recent directives and undertakings are aimed at electrical equipment qualification. There is an NRC Equipment Qualification Program Plan in final stage of preparation. This program plan includes mechanical equipment qualification.

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2. VALUE/IMPACT

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4. PROCEDURAL APPROACH

4.1 Alternatives

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7. CONCLUSION

An advance notice of rulemaking will be prepared as the first step in the development of a regulation on qualification of mechanical equipment important to safety in nuclear power plants.

	TASK CONTROL	FCC	DA	TE:
REQUESTOR Z. R. Rosztoczy	FXT. 28035	ORGANIZATI	DN NRR	
TASK LEADER H. I. Gregg TASK NUMBER SC 138-1 DU/PA TASK DESCRIPTION (100 CHARACTERS)	INIT HIG BR. NUMBER 1111	CHIEF W. F.And	erson I	
Adv. Notice of Ruler				
TASK PRIORITY A START DATE Jan 14, 1981. TASK ACTION ADD X DELETE INTO HOLD OUT O EFFECTIVE DATE OF ACTION Feb. 10, COGNIZANT INDIVIDUALS NRR C. Hofmayer NMSS	CHANGE TR F HOLD NEW 1981 NOR DIVISION DE DRRRI	ANSFER TASK NO. <u>SC 138</u> KING DAYS SLIPPAC APPROVAL	DATE July 30	0, 1981 to issue \NF
SD APPROVAL: H.I. Gregg PSE DATE 2/12/81 DAT			AD Date	
APPROVED ASST. DIV. DIR. (SD)		DA	TE	
COMMENTS				
SD DEPUTY DIRECTOR COGM	NIZANT DIV. DIRE NIZANT INDIVIDUA ANALYST			· · · · · · · · · · · · · · · · · · ·

ADVANCE NOTICE OF PROPOSED RULEMAKING; MECHANICAL EQUIOMENT QUALIFICATION

Prepare Prelim. Value/Impact Statement & TIF	2-10-81
TIF Approved	2-20-81
Initial ANR Draft Complete	3-20-81
Prelim. Interoffice Concurrence Complete	4-15-81
Resolution of Comments Complete	5-5-81
Final ANR Complete	5-15-81 ,
Final ANR Concurrence Complete	6-10-81-
Submit to EDO/Commission	6-20-81
ANR Published in Federal Register	7-30-81

DEALT PRELIMINARY VALUE/IMPACT STATEMENT FOR

REVISION TO 10 CFR 50

QUALIFICATION OF MECHANICAL EQUIPMENT IMPORTANT TO SAFETY

1. PROPOSED ACTION

1.1 Description

(ANR) Issue an Advance Notice of Rulemaking as the first step in developing a regulation to require applicants and licensees of nuclear power plants to qualify mechanical equipment important to safety.

1.2 Need

There are mechanical equipment problems in nuclear power plants. The large number of continuing monthly Licensee Event Reports (LERs) of valve and pump problems is evidence of mechanical equipment problems, and substantiates the need for the proposed regulatica.

Recent directives and undertakings are aimed at electrical equipment qualification. There is an NRC Equipment Qualification Program Plan in final stage of preparation. This program plan includes mechanical equipment qualification.

Current legal requirements for equipment qualification aren't clearly defined and are located under topic headings other than qualification. The proposed regulation will clearly identify the equipment qualification requirement and provide for incorporation of detailed requirement as they are developed.

VALUE/IMPACT 2.

2.1 NRC

Equipment qualification should reduce the number of equipment problems and provide additional ensurance of safety in new and operating plants.

The regulation will provide a consistent tasis for staff review of construction and operating permits. Cost savings will be obtained in terms of reduced manhours and the licensing process will be accelerated.

2.2 Other Government Agencies

Other government agencies, such as the Department of Energy could be impacted if they have test facilities which could be used, are requested to develop facilities, or are requested to perform subcontracting work related to equipment qualification. There will also be impact on a government agency such as TVA since this agency is also an applicant or licensee.

2.3 Industry

2.3.1 Applicants and Licensees

Equipment qualification should reduce the number of equipment problems and unscheduled shutdowns.

A clearly identified requirement for equipment qualification will eliminate misunderstanding and licensing delays.

There could be significant impact since facilities capable of testing the largest size equipment are not available. If test facilities have to be constructed the cost impact will be magnified.

Backfitting costs could be significant if existing equipment fails qualification.

2.3.2 Manufacturers

Equipment manufacturers would depend on the licensee's or private test facilities and consultants to perform and evaluate qualification requirements. The manufacturers could be severely impacted due to the unknown expense. They may choose not to bid or they may furnish equipment at the licensee's risk.

2.4 Public

Public safety would be improved due to equipment qualification. There would be an increased level of confidence in the industry.

3. TECHNICAL APPROACH

3.1 Alternatives

There are many ways to qualify equipment. Some alternatives are (-)

- qualification testing of actual equipment;
- (2) qualification testing by (1), in combination with analysis;
- (3) qualification testing by (1), in combination with similar usage experience; or
- (4) qualification testing of smaller size of similar design equipment, in combination with tests of actual size equipment or tests of subparts of actual size equipment.

Additional alternatives and suggestions will be requested of industry and the public in the ANR. A discussion and decision on the technical approach will be made after all comments are reviewed and evaluated.

4. PROCEDURAL APPROACH

4.1 Alternatives

The need for a regulation for mechanical equipment qualification has been shown, and the decision was made to proceed. Consideration was given to the procedural alternatives of \bigcirc

- issuing a proposed rule;
- (2) issuing an advance notice of rulemaking; or
- (3) holding a public meeting to obtain information.

4.2 Discussion

This regulation has significant impact potential, many technical alternatives, presublity for and possible controversies, and the need exists to obtain indust y and publicmechanical equipment qualification -input. There is a shortage of published National Standards, Regulatory Guides, and test facilities for large size equipment, and many issues are undecided. Many issues a condecided and the need exists to obtain industry and public input.

4.3 Decision

The advance notice of rulemaking was considered necessary and was selected as the means to notify industry and the public of the proposed rule and to obtain their early participation in its development.

STATUTORY CONSIDERATIONS

5.1 NRC Authority

The requirements for equipment qualification are presently embodied in many different sections of 10 CFR 50, and in one case in 10 CFR 100, under topic headings other than qualification. This rulemaking will expand and clarify existing requirements and make them visible.

5.2 Need for NEPA Assessment

The proposed action is not a major action, as defined by paragraph 10 CFR 51.5(a)(10), and does not require an environmental impact statement.

RELATIONSHIP TO OTHER EXISTING OR PROPOSED REGULATIONS OR POLICIES

This proposed rule is closely related to the rulemakings currently going forward on (1) electrical equipment qualification and (2) accreditation of laboratories that perform qualification testing.

This proposed rule relates to the TMI-2 Lessons Learned and Action Plan requirements of, qualification and testing of BWR and PWR safety and relief valves, and PWR block valves.

7. CONCLUSION

An advance notice of rulemaking (ANR) will be prepared as the first step in the development of a regulation on qualification of mechanical equipment important to safety in nuclear power plants.

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REQUESTOR	Z. R. Rosztoczy	EXT. 2803	0RGAN	IZATION NRR	
TASK LEADER	H. I. Gregg	INIT HIG B	R. CHIEF W.	F.Anderson	INIT
		DU/PA NUMBER 111		÷	
TASK DESCRIP	TION (100 CHARACTE	RS) Develop Reg	g. on Qualif.	of Mech. Equip.	via
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START DATE	Jan 14, 1981_		ESTIMATED	COMP DATE June	44, 1981 to issue
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Final ANR Concurrence Complete	(5-1-81-6-10-81)
Submit to EDO/Commission	5-15-81-6-20-81
ANR Published in Federal Register	6-20-81 7-30-81

DRAFT PRELIMINARY VALUE/IMPACT STATEMENT FOR

REVISION TO 10 CFR 50

QUALIFICATION OF MECHANICAL EQUIPMENT IMPORTANT TO SAFETY

1. PROPOSED ACTION

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VALUE/IMPACT

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