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Cable BURNS ROE ORA

July 26, 1983

Main Office 550 Kinderkamack Road Oradell, New Jersey 07649 (201) 265-2000

U. S. Nuclear Regulatory Commission Washington, D. C. 20555

Attention: W. P. Haass, Chief Quality Assurance Branch Division of Engineering

Dear Mr. Haass:

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As required by the Burns and Roe, Inc. Topical Report (B&Roe-COM4-1-NP-2A) the attached, marked-up copy of Chapter I, Organization, depicting recent changes within the company, is submitted for your information.

Briefly, the changes have been:

- The consolidation of the Power Technology and Engineering and Design Divisions into a single entity entitled, Engineering Technology Division.
- 2. The consolidation of the Procurement and Support Services and Quality Assurance Divisions into a single division entitled, Support Services. Mr. W. P. Rausch who was the Director of both of these divisions remains the Director of Support Services. Mr. Rausch is responsible for providing personnel systems, and facilities, he is devoid of responsibility for cost and schedules control which is vested in the individual Project Manager.
- 3. Mr. J. DeLooper has been appointed as the Manager, Corporate Quality Assurance, reporting to Mr. W. P. Rausch, Director, Support Services.

These organizational changes were implemented on 6/24/83 and have been instituted to give stronger support and coordination to our production related divisions and to assure that the requirements of our Topical Report are effectively implemented.

Revision 3 to the Burns and Roe Topical Report was submitted on 6/9/83 to

Achievements in Engineering and Construction Since 1932

B308050496 B30726 PDR TOPRP EECBURG PDR the NRC and is currently in the review cycle. Burns and Roe will formally revise the attached Chapter I and submit it to amend Revision 3 shortly.

If you should have any questions, please feel free to call Mr. W. P. Rausch at 201-265-2000, Extension 2655.

Very truly yours,

e

K. Keith Roe Executive Vice President

mm Attachment

- cc: P. Sears, Region IV (with attachment)
  - D. Fox, Region IV (with attachment)
  - P. Costello, Region IV (with attachment)

BURNS AND ROE, INC. ENGINEERS AND CONSTRUCTORS 700 KINDERKAMACK RCAO ORADELL NEW JERSEY 01. 9	NUCLEAR QUALI MANU		No. B&ROE-COM4-1-NP Revision 3 Page of 7
Subject	Effective Date	Quality Assu	rance Division
ORCAHIZATION	Supersedes Chapter I dated 10/5/80	Approved By Uffice of th	e President



## 1. SCOPE

This chapter describes the organizational structure, functional responsibilities, and levels of authority for the direction and execution of the Burns and Roe, Inc. nuclear quality assurance program. It also outlines the organizational relationships within the corporate scructure for the assurance of quality in the design and construction of nuclear power plants.

## 2. GENERAL DESCRIPTION

- 2.1 To support the effort required for the design and construction of a nuclear power project, Burns and Roe, Inc. establishes a project organization within the Project Operations Division. In assuming certain discrete tasks which involve analysis or studies, the project organization may be within another Burns and Roe, Inc. division (e.g. Power Technology). This organization is designated with the necessary personnel from the various functional divisions and departments including Engineering and Design, Construction, Purchasing, and Quality Assurance to support project activities.
  - 2.2 The Corporate Organization Chart, Exhibit I-1, shows that the corporate organization is composed of various divisions and departments reporting to the Executive Vice President or to the President. The President is responsible for establishing quality assurance policies, goals and objectives, and maintaining a continuing involvement in quality assurance matters. The Executive Vice President is responsible to assure that requirements of the established policies, goals, and objectives are carried out.
  - 2.3 The activities of Burns and Roe, Inc. organizational elements are governed by a set of formal corporate documents in the Burns and Roe, Inc. CORPORATE OPERATIONS MANUAL. Responsibilities assigned to individuals or organizational elements in this Nuclear Quality Assurance Manual are derived from the CORPORATE OPERATIONS MANUAL.

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		anization				
	CORPOR identi ments that a qualit projec prepar by the Division and up	ATE OPERATIONS MAN fies those organi described or cont are applicable to y assurance plan t. The content of ed by the Manager on Directors, and odating of this stration Departmen	UAL. The Nuclear zational elements ained in the COR , and must be a which is developed of this Manual, ir of Corporate Qua dality Assurance approved by the Manual is contr	Quality and pro PORATE 0 ddressed for ea cluding lity Ass and ot Presiden	Assurant cedural PERATION in, a ch nucle all cha urance, ther ap t. Dist	ce Manual require- NS MANUAL project ear power anges, is reviewed propriate tribution
2.5 inport	delega to ver confirm	and Roe, Inc. pol in Project Work tes to the Director ify that appropri- n that actions pre applicable require s.	Policy PW-006, Ex or of Quality Assu- iate quality meas escribed are being	hibit I- rance th ures are perform	2. This response prescri red in co	is Policy nsibility ibed, to ompliance
3. QUALI	TY ASS	URANCE ORGANIZATIO	N			
3.1	Direct	or of Quality Assu	rance }			
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			ore years of which a minimum			
			liarity with U. tions and regulati		lear R	egulatory
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CHAPTER I - Or	ganization	Effective Date	Page 3 of 7	B&ROE-COM4-1-NP
	. Experience in ma	inagement and pers	sonnel supervis	ion
	. Extensive skill	in technical repo	ort writing	
	Manager of Corpora	te Quality Assura	ance	
	. Bachelor of Scie	nce in an enginee	ering discipline	e
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	. Detailed famil Commission funct	iarity with U. ions and regulati		Regulatory
	. Experience in ma	inagement and pers	sonnel supervis	ion
	. Extensive skill	in technical repo	ort writing	
	Manager of Quality and Nondestruction Assurance Managers	ve Examination,		
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	. Seven or more ye of which a minim	ears of responsibl num of three are i		
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	. Skill in technic	al report writing	1	
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3.1.3	The Manager of Co for assuring that lished and all qu in accordance with Corporate Quality quality assurance.	a quality assu ality affecting h the program. I Assurance are lim	rance program activities are Duties of the N	is estab- performed Manager of
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APTER I - Organization       4 er 7 [B&ROE-COM4-1-1]         responsible for the performance of activities affecting quality.         3.1.4 To assure proper direction of the quality assurace program and prompt resolution of quality related problems, the Manager of Corporate Quality Assurace has the authority to establish direct lines of communication, as may be necessary, with external organizations such as contractors and clients.         3.1.5 As described in Project Work Policy PW-006, authority to stop unsatisfactory work or control further processing, delivery, or installation. of nonconforming material is delegated to the Offector of Gality Assurance, who has further delegated this authority to the Manager of Corporate Quality Assurance.         3.2 Organization and Functions         3.2.1 The organizational structure and primary functions of the Quality Assurance of the Section of a special projects staff and three Quality assurance of Corporate Quality Assurance         . Quality Audits         . Quality Audits         . Vendor Surveillance and Nondestructive Examination         . Project Quality Assurance         Martin is responsible to the Oirector of Caulity Assurance who reports to the Manager of Corporate Quality Assurance         . Quality Audits         . Vendor Surveillance and Nondestructive Examination         . Project Quality Assurance         . A description of the Quality Assurance Manager who reports to the Manager of Corporate Quality Assurance functions under the direction of a anager who reports to the Manager of Corporate Quality Assurance functions under the direction of a manager who r			Effective Date	Page	No.
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			Effective Date	Page		No.
CHAPTER	I - 0r	ganization		5	of 7	B&ROE-COM4-1-N
		possess sufficient a identify quality pro- vide solutions throu channels, and to Verification of co Requirements (except in the Quality Assum of the work being trained and qualifi practices and are in	blems, to initi ogh appropriately verify impleme conformance to design) is acco rance Organizati verified, or b ed in Quality	ate, re y desig ntation estab mplishe on who oy indi Assuran	commend nated m of s olished d by ir are ir viduals ce con	l, or pro- management solutions. Quality ndividuals dependent who are cepts and
	3.2.5	When Burns and Roe, directing and mana program, an approp Engineer is assigne This individual fun carrying out the authority as is re quality assurance p Manager is involved important to the saf Quality Assurance Ma quality assurance an gated by the Manager	ging the on-s riately qualif d as Site Qual ctions in an o responsibility equired for pro program. The in day-to-day fety of the plar anager are limit d include stop	ite qu ied Qu ity Ass organiza and oper co Site Qu activ it. Du ed to work au	ality ality surance ational exerciontrol uality ities of those r thority	assurance Assurance Manager. position sing the over the Assurance which are the Site related to as dele-
4. PROU	JECT ORG	ANIZATION				
4.1	Genera	1				
	4.1.1	A project is establi accordance with Proj of the various Burns personnel for proj President, as shown Exhibit I-1.	ect Work Policy s and Roe, Inc. ects report t	PW-001 Division o the	. The ons whi Execut	Directors ch supply tive Vice
	4.1.2	A typical project, elements, is shown Chart, Exhibit I-3.	including sup in the Nuclea	porting r Proje	organ ect Org	nizational ganization
	4.1.3	Overall responsibili the exception of function, is assigned	the independent	quali	ty ver	rification

the exception of the independent quality verification function, is assigned to the Project Manager who reports directly to the Project Operations Division Director. Included in the duties of the Project Manager is the responsibility for assuring that all quality affecting functions are executed in accordance with project procedures. The Project Manager has the organizational freedom and authority to detect problem areas in any facet of the project and to initiate appropriate corrective action. Engineering and design personnel are furnished to the project from the Engineering and Design Division. 

 CHAPTER I - Organization
 Effective Date
 Page
 No.

 4.1.4
 Disagreements among project participants involving quality are resolved in accordance with Project Work Policy PW-004, Exhibit I-4.
 No.

 4.2
 Engineering and Design Division
 Technology

- 4.2.1 Burns and Roe, Inc. engineering (and design effort is assigned to the Engineering and Design) Division. The departments under the overall direction of the Engineering Technology and Design) Division Director are: Engineering, Design and Drafting, (and Engineering Support, Power Technology and Computer Aided
  - 4.2.2 The Engineering and Destan Division is responsible for the development of design criteria, issuance of a project criteria document, the translation of project requirements into working documents, such as specifications and drawings, and the verification of the technical adequacy of their work.

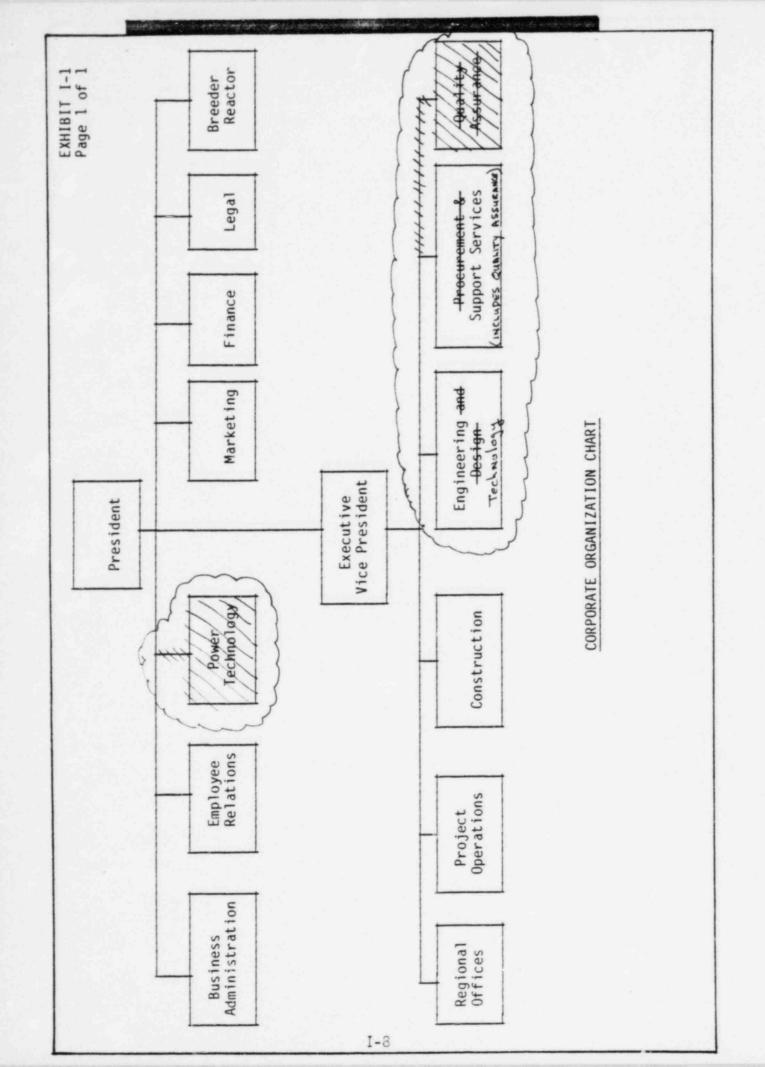
## 4.3 Construction Division

The Resident Construction Manager is responsible to the Project Manager for the proper execution of the construction of the plant and for the project direction of all Burns and Roe, Inc. site personnel. Under the construction management method of construction, the Resident Construction Manager coordinates and oversees the contractors performing the work, anticipates and takes action to correct interference and interface problems between contractors, and as a complement to the formal quality assurance effort, takes appropriate action to assure that the construction work is performed in accordance with the contract documents. Duties of the Resident Construction Manager include obtaining interpretation of Burns and Roe, Inc. construction specifications and drawings from the Site Project Engineer; liaison between contractor, Burns and Roe. Inc. engineering, and quality assurance; and the disposition of nonconforming material within the limits established in appli-The Resident Construction Manager cable project procedures. receives functional and administrative direction from the Director of the Construction Division through a home office Construction Division Manager.

## 4.4 Purchasing Department

- 4.4.1 The Director of the Purchasing Department reports to the Director of Procurement and Support Services.
- 4.4.2 The Director of Purchasing is responsible for the procurement activities of the project. These duties include the expediting of hardware items and engineering and quality documents required from contractors.

<ul> <li>4.5 <u>Other Departments/Divisions</u>         Other supporting functions, such as planning, scheduling, and estimating, are supplied to the project by the appropriate divisions or departments, in accordance with the Burns and Roe, Inc. scope of services and as required to support the Project.     </li> <li><u>EXHIBITS:</u>         Exhibit I-1 Burns and Roe, Inc. CORPORATE ORGANIZATION CHART Exhibit I-2 Burns and Roe, Inc. PROJECT WORK POLICY PW-006     </li> </ul>	CHAPTER	I - Organiz	ation	Ef	fective Date	Page 7	of 7	No. B&ROE-COM4-1-N
Other supporting functions, such as planning, scheduling, and estimating, are supplied to the project by the appropriate divisions or departments, in accordance with the Burns and Roe, Inc. scope of services and as required to support the Project.         EXHIBITS:         Exhibit I-1       Burns and Roe, Inc. CORPORATE ORGANIZATION CHART         Exhibit I-2       Burns and Roe, Inc. PROJECT WORK POLICY								
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Exhibit I-3 Burns and Roe, Inc. NUCLEAR PROJECT ORGANIZATION CHART		I-1 Burns	and Roe.	TIP . 20111 01		CHILON UN		
	Exhibit	I-2 Burns	and Roe.	Inc. PROJEC	T WORK POL	ICY PW-C	06	15 N 1
	Exhibit Exhibit	I-2 Burns I-3 Burns	and Roe, and Roe,	Inc. PROJEC	T WORK POL R PROJECT	ICY PW-0 ORGANIZAT	006 ION CHA	ART



B	TOO KINDERKAMACK ROAD	PROJECT WORK	POLICY	No. <u>P11-006</u> Revision <u>4</u> Page <u>1 of 2</u>
oject		Effective Date	Initiated By	
Accu	rance of Quality	6/8/83	President	
ASSU	rance of quality	Supersedes	Approved By	11 1
		PW-006, Rev. 3 dated 10/1/82	Seumith	Ale
1.	The company is committed is services to clients which duce reliability. Withous sideration will be given to	will assure public out compromising the	safety and his commitme	optimize pro- nt, due con-
2.	As a minimum, the company design, and cause to be adequate to comply with neering standards, and co tion, for nuclear faciliti appropriate portions of the Guides, and other national nuclear installations.	built into its de statutory codes, Bi ntractually imposed es, Burns and Roe, e Code of Federal Re	signs a leve urns and Roe i requirement Inc. will co egulations, t	el of quality e, Inc. engi- ts. In addi- omply with the the Regulatory
3.	The primary responsibility the individuals doing the However, separate people audit, inspect, or otherwis performed.	work and with the are assigned the re	ir immediate sponsibility	supervisors. to confirms,
4.	Procedures and organization vide that the individual of firm, audit, inspect, or and has organizational for responsible for performing persons assigned to confir problems, to recommend solic corrective action.	or group assigned t otherwise verify qui reedom from, the the specific work m or review will be	the responsib uality is in person or go activity. I activity. I free to ide	ility to con- dependent of, roup directly in this regard entify quality
5.	Responsibilities for assur	ance of quality are	as follows:	
	a. The responsibility for design work is describ Engineering."			
	b. The Director, Breeder assurance compliance <u>Reactor Division</u> . For Assurance Division	on those projects r all other power p	assigned to lant projects	the Breeder , the Quality

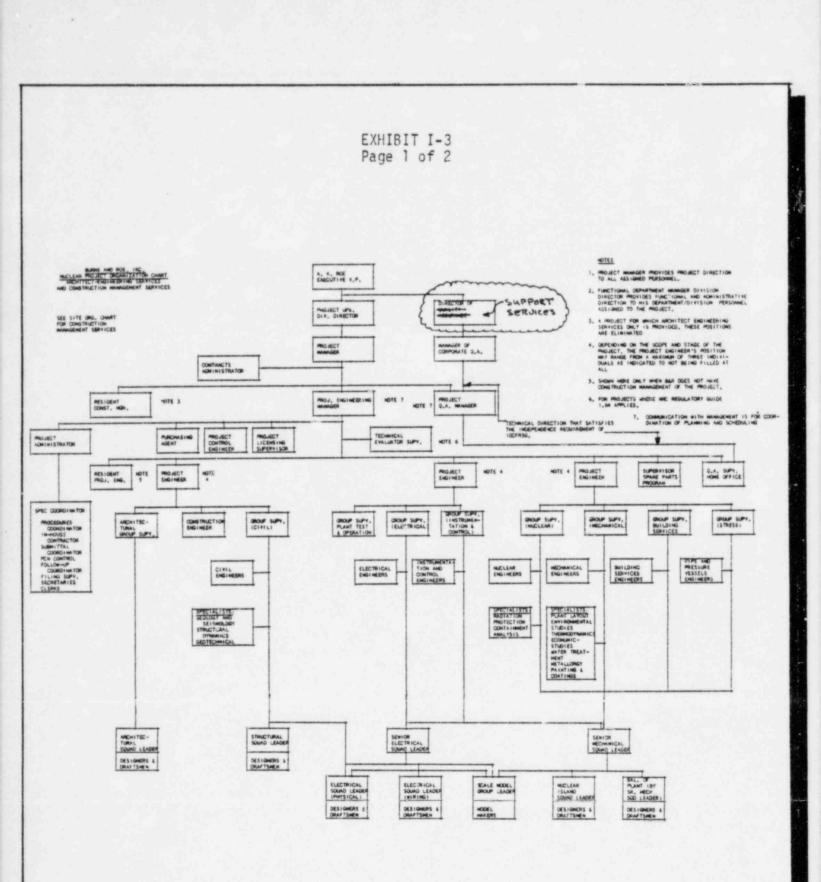
appropriate quality measures are prescribed, to confirm that actions prescribed are being performed in compliance with applicable requirements, and to develop applicable quality manuals.

> EXHIBIT I-2 Page 1 of 2

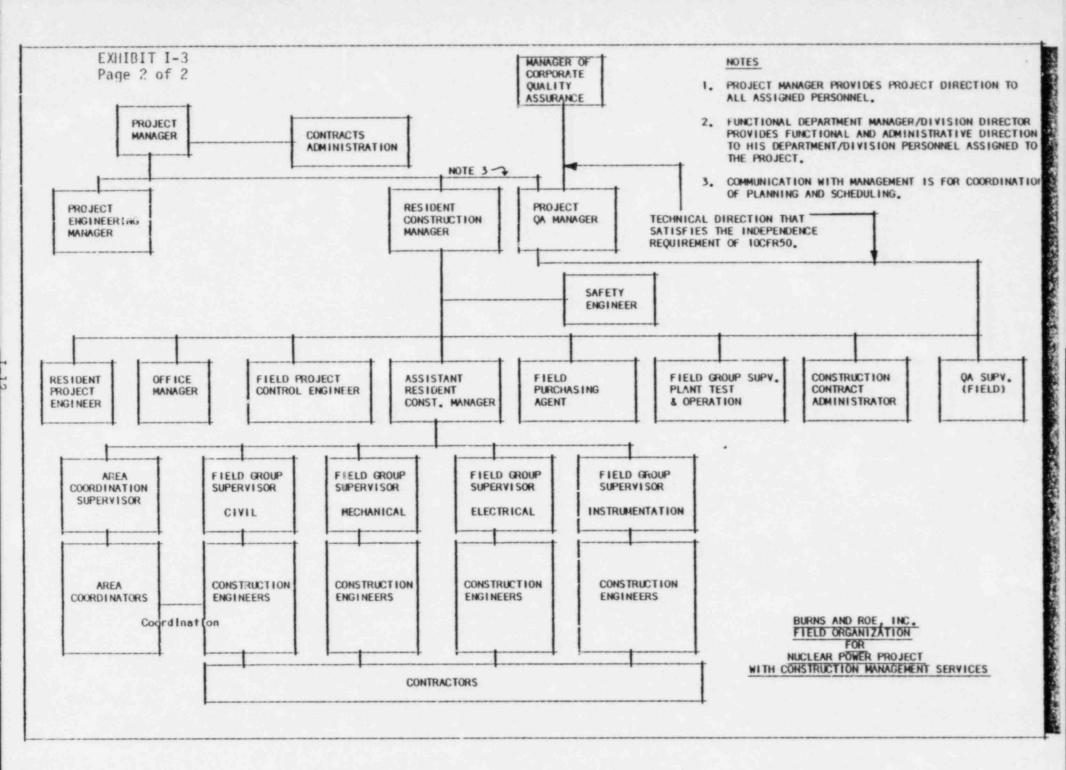
<text><text><text><text><text><text><text></text></text></text></text></text></text></text>			Effective Date	Page	No.
<ul> <li>manager on other than nuclear projects, surveillance of contractors inspection and nondestructive examination activities will normally be performed by Construction Division personnel will normally be performed by Construction Division personnel will normally be the construction work. In either case, personnel assigned to a perform these functions will be qualified formally by the performed by Quality Assurance Hutses. And their activities will be aution of many facturing and construction work will be performed by Quality Assurance Hutses. And their activities will be division personnel unless otherwise approved in writing by the Quality Assurance Hutses. The Manager of Corporate Quality Assurance and the Breeder Reactor Division Quality Assurance Ander Project Manager will be davised of the circumstances and will be requested to take appropriate Ation including stopping work when considered necessary. The Project Manager will proceed in an orderly manner with the action requested. If the responsible Division Director Considers the action taken in appropriate, the authority granted here to the Manager, Corporate Manager will proceed in an orderly manner with the action requested. If the responsible Division Director Considers the action taken and the assurance develor.</li> <li>Men appropriate, the authority granted here to the Manager, Corporate Manager may be delegated in writing to assigned project quality Assurance Arether Evence Reactor Division Quality Assurance and the Breeder Reactor Division Quality Assurance with applicate the above stated disciplines.</li> <li>Men appropriate, Sectified Level III in nondestructive examination methods and the above stated disciplines.</li> <li>Men appropriate, Sectified Level III personnel will formally certify those wind when a such assurance development will person will be above stated disciplines.</li> <li></li></ul>		Assurance of Quality	6/8/83	2 of 2	PW-006
<ul> <li>to perform these functions will be qualified formally by the definition of the second of th</li></ul>		manager on other than contractors' inspection and will normally be performed When force account work is Division personnel will nor Ree Inc. construction work	nuclear proje nondestructive by Construct undertaken at s mally perform	ects, surveil examination ion Division p such sites, Con inspection of ase personnel	lance of activities personnel. nstruction Burns and
<ul> <li>birector of the two for the sturmed and their activities will be paradited in the sturmed in the sturm</li></ul>		+ ] to perform these functions	s will be qua	lified formall	ly by the Veran
<ul> <li>Assurance and the Breeder Reactor Division Quality Assurance Manager have the authority to stop unsatisfactory nuclear work or to control further processing, delivery, or installation of nonconforming items. In exercising this authority, the Project Manager will be advised of the circumstances and will be requested to take appropriate action, including stopping work when considered necessary. The Project Manager will proceed in an orderly manner with the action requested. If the responsible Division Director the considers the action taken inappropriate, the matter is to be resolved immediately in accordance with Corporate Policy PW-004, "Resolution of Conflicts."</li> <li>When appropriate, the authority granted here to the Manager, Corporate Quality Assurance persone.</li> <li>The Director of <u>Surfity Fervice</u> will formally certify those who qualify as Level III in nondestructive examination methods and Mechanical, Electrical and Civil disciplines in accordance with applicable standards. Certified Level III personnel will formally certify those with above stated disciplines.</li> <li>The company's plans for assurance of quality are described in (1) the Nuclear Quality Assurance Manual for nuclear projects; (3) the ASME Section III, Division I and 2 Quality Assurance Manual; (4) the Corporate Power Boiler Quality Control Manual; and (5) the Quality Assurance Program Plan for Breeder Reactor Division project compliance with 10CFR50, Appendix B and RDT Standard F2-2.</li> </ul>		periodically by the Quality surveillance, inspection, a facturing and construction Assurance Division personne by the President. Department	Assurance Divi nd nondestructi work will be unless otherw	sion., All off ve examination performed b vise approved	her audited her audit, n of manu- y Quality in writing
<ul> <li>Quality Assurance and the Breeder Reactor Division Quality Assurance Manager may be delegated in writing to assigned project quality assurance personnel.</li> <li>7. The Director of Superit Service will formally certify those who qualify as Level III in nondestructive examination methods and Mechanical, Electrical and Civil disciplines in accordance with applicable standards. Certified Level III personnel will formally certify those individuals who qualify as Level I and II in NDE methods and in the above stated disciplines.</li> <li>8. The company's plans for assurance of quality are described in (1) the Nuclear Quality Assurance Manual for nuclear project compliance with 10CFR50, Appendix B; (2) the Quality Compliance Manual for quality verification on other than nuclear power plant projects; (3) the ASME Section III, Division 1 and 2 Quality Assurance Manual; (4) the Corporate Power Boiler Quality Control Manual; and (5) the Quality Assurance Program Plan for Breeder Reactor Division project compliance with 10CFR50, Appendix B and RDT Standard F2-2.</li> </ul>	6.	Assurance and the Breeder React have the authority to stop unsa further processing, delivery, or In exercising this authority, the the circumstances and will be including stopping work when cons will proceed in an orderly mann responsible Division Director inappropriate, the matter is to	or Division Qu tisfactory nucl r installation he Project Mana requested to t sidered necessan er with the ac tor conside be resolved im	ality Assurance ear work or to of nonconforming ger will be a ake appropriate ry. The Project tion requested rs the action mediately in	te Manager to control ing items. advised of te action, ct Manager 1. If the on taken
Nuclear Quality Assurance Manual for nuclear project compliance with 10CFR50, Appendix B; (2) the Quality Compliance Manual for quality verification on other than nuclear power plant projects; (3) the ASME Section III, Division 1 and 2 Quality Assurance Manual; (4) the Corporate Power Boiler Quality Control Manual; and (5) the Quality Assurance Program Plan for Breeder Reactor Division project compliance with 10CFR50, Appendix B and RDT Standard F2-2. EXHIBIT I-2 Page 2 of 2	7.	Quality Assurance and the Breed Manager may be delegated in assurance personnel. The Director of Quality Assured qualify as Level III in nor Mechanical, Electrical and Civil cable standards. Certified Leve those individuals who qualify as	ance will form destructive ex disciplines in el III personne	ision Quality signed projec ally certify camination me accordance w 1 will formal	Assurance t quality those who thods and ith appli- ly certify
Page 2 of 2	8.	Nuclear Quality Assurance Manua 10CFR50, Appendix B; (2) the verification on other than nucle Section III, Division 1 and Corporate Power Boiler Quality Assurance Program Plan for Breed	l for nuclear Quality Complia ear power plant 2 Quality Assu Control Manua der Reactor Div	project compl nce Manual fo projects; (3) nrance Manual; l; and (5) th	iance with or quality ) the ASME (4) the ne Quality
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BURNS AND ROE, INC. ENGINEERS AND CONSTRUCTORS 700 KINDERKAMACK ROAD ORADELL NEW JERSEY 07649	PROJECT WORK	K POLICY	No. <u>PW-004</u> Revision <u>0</u> Page <u>1 of 1</u>
Subject Resolution of Conflicts	Effective Date 8/1/76	Initiated By President	142
	Supersedes	Approved By	

- 1. Conflicts resulting from differences of opinion on personnel, technical and other matters between projects and functional Divisions or Departments should be resolved promptly at the lowest supervisory level where sufficient information exists to make an effective resolution.
- 2. In any case where conflicts cannot be resolved promptly at the lowest supervisory level, such conflicts are to be referred to the next higher level of supervision in both the project and functional Division or Department and, if necessary, ultimately to the Directors of the Divisions concerned for resolution.
- 3. When referred to the Division Director level, concerned Division Directors are mutually responsible for expeditious settlement of unresolved conflicts, for promptly advising the Office of the President of such conflicts, and for obtaining assistance or requesting decisions from the President or his representative in the Office of the President when necessary to insure timely resolution of conflicts in a manner that serves the best interests of the company.

EXHIBIT I-4 Page 1 of 1

I-13