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AUTHANAME	AUTHOR AFFILTATION	
BASKIN, K.P.	Southern California Edison Co.	
RECIP.NAME	RECIPIENT AFFILIATION	
ZIEMANN, D.L.	Operating Reactors Branch 2	-

SUBJECT: Forwards info re mgt & technical capabilities to cope w/events similar to TMI.

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## Southern California Edison Company

P. O. BOX 800 2244 WALNUT GROVE AVENUE ROSEMEAD, CALIFORNIA 91770

K. P. BASKIN

August 20, 1979

TELEPHONE 213-572-1401

Director of Nuclear Reactor Regulation Attention: D. L. Ziemann, Chief Operating Reactors Branch #2 Division of Operating Reactors U. S. Nuclear Regulatory Commission Washington, D. C. 20555

Gentlemen:

Subject: Management and Technical Capabilities San Onofre Nuclear Generating Station Unit 1

Mr. H. R. Denton's letter of June 29, 1979 to Mr. J. H. Drake requested information regarding the management and technical capabilities of our company to cope with events like the accident at Three Mile Island Unit 2. Forty copies of the requested information are provided as an enclosure to this letter.

If you have any questions on the enclosed information, please let us know.

Very truly yours,

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Enclosure

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INFORMATION PERTAINING TO SCE'S MANAGEMENT AND TECHNICAL RESOURCES

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RETURN TO REACTOR DOCKET

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#### I. Management Resources (Offsite)

In the event of an accident involving San Onofre Nuclear Generating Station, Unit 1, the persons filling the following positions would be available to provide management functions, in the areas of engineering management, logistics support, coordination of activities with local, state, and federal agencies, communications networks, and overall accident coordination:

Vice President, Power Supply Vice President, Engineering and Construction (E&C) Manager of Steam Generation Manager, Nuclear Generation Manager of Engineering Design Manager, Generation Engineering Services Chief of Nuclear Engineering Manager of Corporate Communications

A corporate organization chart is provided as Figure 1. An organization chart for the Engineering and Construction, and Power Supply Departments is provided as Figure 2. The above positions are shown in Figure 1 and/or Figure 2. A description of the corporate functions and responsibilities of these positions, as well as a description of the educational and experience background for the incumbent for each of the positions is provided in Table 1.

The current Emergency Plan for San Onofre Unit 1 provides for the establishment of two teams in the event of an offsite radiological emergency.

The Team 1 activities would be conducted in San Clemente. The primary responsibilities of the Team would be to establish communication with, interface with, and provide assistance to the various local agencies which may be responding to such an emergency. The Chief of Nuclear Engineering would direct the activities of Team 1, serve as management's representative at the scene, and be the official company spokesman for news media communications in the immediate San Onofre area. Support personnel who would also be assigned to Team 1 consist of two Customer Service personnel, a Corporate Communications representative, two engineers from the Nuclear Generation Engineering Staff, and an engineer from the Nuclear Engineering Section.

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Team 2 would be established in the SCE General Offices in Rosemead. The responsibilities of the team would be to provide Company management direction to the onsite Emergency Coordinator (the Station Superintendent or designated alternate), provide liaison among the Emergency Coordinator, Team 1, and Company management, provide necessary technical backup and support, and to prepare news releases and status reports.

Team 2 members, and their respective functions, would be as follows:

- a. The Manager of Steam Generation, who would direct the activities of Team 2 and be responsible to Company management to assure that the appropriate measures are taken to protect the health and safety of onsite personnel and the public and to prevent property damage. He would also request and coordinate assistance, as necessary, from the corporate office organizations which are not represented on the team, such as Medical, Law, and Fuel.
- b. The Manager, Nuclear Generation, who would provide management control and assistance to the onsite Emergency Coordinator once onsite conditions permit major decisions and policy directions to be made by Company management. He would also provide operational support and technical support from the Power Supply Department and assure proper communication with the Nuclear Regulatory Commission, Office of Inspection and Enforcement.
- c. The Manager, Generation Engineering Services, who would provide and coordinate technical support from the Company's engineering organization. He would also provide for appropriate communication with the Nuclear Regulatory Commission, Nuclear Reactor Regulation.
- d. The Manager of Corporate Communications, who would provide information to the news and communications media for public release.
- e. One Supervising Engineer from both the Nuclear Generation Engineering Staff and the Nuclear Engineering Section, who would provide staff support as needed.

#### II. Technical Resources

The technical support for San Onofre Nuclear Generating Station is directly provided by the Company, rather than by contractual arrangement with any Company subsidiary, wholly or partly owned service company, or holding company.

The services of outside consultants and engineering firms are retained, as needed, to supplement the Company's plant staff and offsite technical resources. "Master Agreements" are maintained with Westinghouse Electric Corporation and Bechtel Corporation, which provide for technical support to San Onofre Unit 1. Their services may be made available upon the verbal (with subsequent written confirmation) authorization of the San Onofre Station Plant Manager, or the Power Supply management personnel discussed in paragraph I above.

# TABLE 1

# INFORMATION PERTAINING TO

# MANAGEMENT RESOURCES (OFFSITE)

Table 1 Sheet 1 of 8

Name, Title, Responsibility, Authority

Educational Background

J. T. Head, Jr. Vice President, Power Supply

Responsible for the operation and maintenance of the electric generating plants, transmission systems, energy service systems, and telecommunications.

Has the authority to reallocate resources from throughout the Power Supply Department to provide operational, maintenance, and communications support. Can request support from the other Company departments, or retain the services of outside companies as required. Stanford Executive Program (1973)

Management:

AMA Management Workshops (1969-1970)

EEI Graduate Management Course (1968)

M&M Management Conference (1967)

Cal Tech - Human Resources Management (1964)

Technology:

SCE & GE Electric Utility Systems & Practices (1969-1970)

B&W Nuclear Operations for Utility Manager (1970)

Professional Level Experience

SOUTHERN CALIFORNIA EDISON COMPANY

-Superintendent, Hydro Generation. Responsible for continuity and efficiency of operation and maintenance of hydro generating facilities. (1965-1968)

-General Superintendent. Responsible for operation and maintenance of generation, communication, shop and test facilities. Assignment included transmission and substation facilities for a period of time. (1968-1971)

-Manager of Power Supply. Departmental responsibility for operation and maintenance of system resources, control of policies, programs and plans, determine and plan for future requirements, etc. (1971-1974)

-Vice President, System Development. Corporate responsibility for electric system planning, environmental planning, power contracts, urban/regional planning and electric system services. (1974-1976)

-Vice President, Power Supply. (1976 to present)

# Table 1 Sheet 2 of 8

	Educational Background	Profossional Loval Exportionco
Responsibility, Autionity		Processional Level Experience
J. H. Drake Vice President Engineering and	California Institute of	SOUTHERN CALIFORNIA EDISON COMPANY
Construction	MSEE (1947)	-Chief System Engineer (1954-1955)
Responsible for engineering, design, and construction of all generation	P.E. License, Electrical California	-Chief System Operating Engineer (1955-1957)
and generation related improvement		-Computer Research Engineer (1957-1958)
projects, and nonerectric facilities.	Processional Arrillations:	-Superintendent of System Operations (1958-1959
Has the authority to reallocate resources from throughout the F&C	-EEI Executive Advisory Committee on Nuclear	-Superintendent of Steam Ceneration (1959-1963)
Department to provide engineering and	Power	
support from other Company departments	-EEI Construction Committee	-Chief Electrical Engineer (1963-1964)
or retain the services of outside	-Association of Edison	-Manager of System Development (1964-1967)
	Illuminating Companies (AEIC), Committee on Power Generation	-Executive Engineer (1967-1970)
	-AIF, Company representative	-Vice President. Directed the corporate, system and environmental activities of
	-Pacific Coast Flectrical	the Company. (1970-1971)
	Association (PCEA)	-Vice President, Corporate Systems and Planning. (1971-1974)
<i>,</i>	-Institute of Electrical and Electronics Engineers (IEEE)	-Vice President, Engineering and
	Past teaching positions at	construction (1974 to present)

Table 1 Sheet 3 of 8

Name, Title, Responsibility, Authority	Educational Background	Professional Level Experience
R. S. Currie Manager of Steam Generation	University of Southern California —BSME (1955)	SOUTHERN CALIFORNIA EDISON COMPANY (1955 to present)
Responsible for the operation and maintenance of all thermal generating facilities and energy service systems, including chemical problems and radiation protection.	Management and Business Courses at USC, UCLA and Cal Tech P.E. License, Mechanical California	-Plant Engineer. Responsible for plant engineering, plant performance monitoring, instrumentation, and water chemistry control at a fossil power plant.
Has the authority to reallocate resources among generating facilities to provide operating, maintenance, and chemical and radiation protection support. Can request support from the other Company departments or retain the services of outside companies as required.	Professional Affiliations: -EEI Prime Movers Committee -ASME Power Division Utility Operations Committee	<ul> <li>-Generating Station Superintendent. Responsible for the operation, maintenance and plant engineering of a 1000 megawatt fossil generating station. (1963-1967)</li> <li>-Chief Steam Generation Engineer. Responsible for the engineering and technical aspects of operating and maintaining the Company's thermal- electric generating facilities. (1967-1970)</li> </ul>
		-Chief Mechanical Engineer (Engineering Department). Responsible for Mechanical Engineering Division comprised of approxi- mately 70 engineers. (1970-1972)
	· · ·	-Project Manager (Engineering and Construc-

-Project Manager (Engineering and Construction Department). Responsible for the management of a 3000 MW coal-fired electric generating station project. (1972-1976)

-Manager of Steam Generation (1976 to present)

# Table 1 Sheet 4 of 8

Name, Title, Responsibility, Authority	Educational Background	Professional Level Experience
H. L. Ottoson	HTL (Technical College)	SOUTHERN CALIFORNIA EDISON COMPANY
Manager, Nuclear Generation	Stockholm, Sweden BSME (1947)	
Responsible for the operation and maintenance of San Onofre Unit 1, and the functional design review and preoperational activities of	Westinghouse - 14 months training in nuclear engin- eering and operation (1964)	-Plant Engineer. Responsible for plant engi- neering, instrumentation and water chemistry control at a large fossil power plant (1954-1958)
San Onofre Units 2 and 3	MTT Peactor Safety Course	Superintendent for Etiwanda Steam Concrat-
buil choire onies z and 5.	(1969)	ing Station (a 4-unit 900 MWE fossil facility). Responsible for all plant operat-
Has the responsibility to determine		ing maintenance and engineering activities,
when support for San Onofre Unit 1	NUS Nuclear Fuel Management	including participation in the initial
is required from other Steam Genera- tion divisions, other Company	(1966)	startup of two 320 MWE units with computerized control systems (1958-1964)
departments, or outside companies.	NUS Core Analysis Workshop	
	(1971)	-Superintendent for San Onofre Unit 1. Responsible for all plant operating,
	Senior Reactor Operator	maintenance and engineering activities,
	License, San Onofre Unit 1	including planning and directing efforts for safe, reliable and economical opera-
	P.E. License, Nuclear	tion of the nuclear facility (1965-
	California	1977)
		-Manager, Nuclear Generation. (1977 to present)

Table 1 Sheet 5 of 8

Name, Title,	
Responsibility, Authority	

O. J. Ortega Manager of Engineering Design

Responsible for providing conceptual, preliminary, and final engineering and design and engineering services for generation and generation related improvement projects and non-electric facilities.

Has the authority to reallocate resources within the engineering disciplines to provide technical support. Can request support from other Company departments, or retain the services of outside companies as required. University of Southern California - BSME and MSME

Educational Background

Oak Ridge School of Reactor Technology - Nuclear Engineering Certificate

P.E. License, Mechanical California & Utah

Professional Affiliatons:

-American Nuclear Society (ANS)

-American Society of Mechanical Engineers (ASME)

-Pacific Coast Electrical Association (PCEA)

-Project Management Institute (PMI)

-Society of Hispanic Professional Engineers SOUTHERN CALIFORNIA EDISON COMPANY

-Junior Engineer (1959-1961)

-Assistant Mechanical Engineer (1961-1963)

Professional Level Experience

-Mechanical Engineer (1963-1967)

-Associate Chief Mechanical Engineer (1967-1970)

-Chief Nuclear Engineer (1970-1972)

-Manager of Generation Engineering and Construction (1972-1975)

-Manager of Projects (1975-1978)

-Manager of Engineering Design (1978 to present)



TABLE 1 Sheet 6 of 8

#### NAME, TITLE AND RESPONSIBILITY

K. P. Baskin Manager, Generation Engineering Services

Responsible for providing engineering and technical assistance pertaining to regulatory activities for new or modified generation, energy services, and related facilities. Provides specialized support in areas of apparatus, site selection, geotechnical services, and nuclear engineering.

Has the authority to reallocate engineering resources within the Generation Engineering Services Division. Can request assistance from other Company departments or retain limited services from outside companies as required.

#### USC - BSME (1960)

Purdue - MSNE (1968)

P.E. License, Mechanical California

EDUCATIONAL BACKGROUND

P.E. License, Nuclear California

#### PROFESSIONAL LEVEL EXPERIENCE

SOUTHERN CALIFORNIA EDISON COMPANY

-Nuclear Engineer. Performed engineering duties associated with licensing submittals, development of nuclear analysis capability, design and design review, cost evaluation. (1968-1969, 1964-1967)

-Supervising Nuclear Engineer. Provided supervision for nuclear engineers in performance of duties as listed above. (1969-1971)

-Project Manager. Responsible for overall management of project to design, construct and start up two 1100 MW pressurized water reactors. (1971-1973)

-Chief of Nuclear Engineering. Responsible for nuclear engineering, radiological health and safety, and licensing activities for Company's new and existing nuclear generating facilities. (1973)

-Manager, Generation Engineering. (1973 to present)

# Table 1 Sheet 7 of 8

Responsibility, Authority	Educational Background	Professional Level Experience
J. G. Haynes Chief of Nuclear Engineering	USC - BSME (1959)	SOUTHERN CALIFORNIA EDISON COMPANY
Responsible for providing nuclear engineering, radiological health, and nuclear licensing activities for new and existing nuclear generating	Westinghouse - 14-month training in nuclear engineering and operation (1964)	-Plant Engineer. Responsible for plant engineering, instrumentation, and water chemistry control at a large fossil power plant (1959-1964)
facilities.	MIT - Reactor Safety Course	-Plant Engineer and Assistant Superin- tendent for San Onofre Unit 1.
engineering support in the areas of licensing, nuclear systems and equip- ment, nuclear analysis, and emergency	GA HIGR Engineering Design Course	testing, station engineering, radia- tion protection, instrumentation, and water chemistry control (1964-1971)
planning as required. Can request assistance from other company	NUS Fuel Management Course	-Chief Steam Generation Engineer.
rom outside companies as required.	NUS Core Analysis Course	Responsible for engineering, modifications and special tests associated with SCE's fossil and
	Senior Reactor Operator License, San Onofre l	nuclear generating stations (1971-1973)
	P. E. License, Mechanical California	-Chief of Nuclear Engineering (1973 to present)
	P. E. License, Nuclear California	

Table 1 Sheet 8 of 8

Name, Title, Responsibility, Authority	Educational Background	Professional Level Experience
J. S. Bull Manager of Corporate Communications	B.S Washington University, St. Louis, Missouri (1952)	AMERICAN BROADCASTING COMPANY - News Editor (1953-1961)
Responsible for the preparation of	(English and Economics)	LOCKHEED AIRCRAFT SERVICE COMPANY - Director

news releases, publications, newsletters and corporate response statements for dissemination to news media, employees, and the general public. Maintains and enhances media relations.

M.S. - UCLA (1953) (Journalism) LOCKHEED AIRCRAFT SERVICE COMPANY - Director of Public Relations (1961-1972)

### SOUTHERN CALIFORNIA EDISON COMPANY

-Manager of Public Information (1972-1973)

-Manager of Corporate Communications (1973 to present)

# TABLE 2

# STATION PERSONNEL

# RESUMES

TABLE 2 Sheet 1 of 41

NAME, TITLE AND RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
J. M. Curran Plant Manager, San Onofre	Loyola - BSME (1961)	SOUTHERN CALIFORNIA EDISON COMPANY
Units 1, 2 and 3	USC - 48 semester units of graduate work	-Assistant Plant Engineer, fossil generating stations (1961-1965)
Manage the operation, maintenance and technical service activities at San Onofre Nuclear Generating Station.	Westinghouse - 7 week design lecture series	-Steam Generation Engineer. Nuclear project design coordination of San Onofre Unit 1 (1965-1970)
	NUS - 2 week Core Analysis Course MIT - 2 week Reactor Safety Course NUS - 1 week Fuel Management Course	-Senior Steam Ceneration Engineer. Super- vised the Steam Generation engineering staff for operating nuclear power plants and design review of new nuclear plants (1970-1971)
	Senior Reactor Operator License - San Onofre Unit 1 (1968 to present)	-Plant Engineer and Assistant Superintendent, San Onofre Unit 1. Responsible for station engineering, radiation protection, instru- mentation, and water chemistry control
	P. E. License, Mechanical California	(1971–1977)
	P.E. License, Nuclear California	-Plant Manager, San Onofre. (1977 to * present)
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NAME, TITLE AND RESPONSIBILITY		
	BOCATIONAL BACKGROOND	PROFESSIONAL LEVEL EXPERIENCE
R. R. Brunet Superintendent, Unit l	West Coast University BSME (1976)	SOUTHERN CALIFORNIA EDISON COMPANY
Responsible for the operation and maintenance of San Onofre, Unit 1.	Westinghouse - Nuclear Reactor Design and Operations Course (1964-1965) Saxton Nuclear Reactor Training Program (1965-1966)	-Various fossil fuel power plant positions. Fourteen years experience, including parti- cipation in the initial startup and testing of seven new units. Additional three years maintenance experience on boilers and turbine-generators.
	San Onofre On-Site Training Program (1965-1966)	-Operating Foreman, Etiwanda Generating Station (1962-1964)
	Combustion Engineering - Reactor Simulator Training (1974)	-Watch Engineer, San Onofre Unit 1. Supervised shift operation. (1964-1973)
	Senior Reactor Operator License, San Onofre Unit l	-Supervisor of Plant Operations, San Onofre Unit 1. Responsible for station operating activities, operator training, and site security. (1973-1977)
	Reactor Operators Certificate, Saxton, Pa.	-Superintendent, San Onofre Unit 1 (1977 to present)

TABLE 2 Sheet 3 of 41

NAME, TITLE AND RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
H. E. Morgan Superintendent, Units 283	U.S.N.A BS (1959)	U.S. NAVY
Responsible for the operation and	University of Colorado - 20 hours graduate courses	-Division Officer, destroyer (1959-1962)
maintenance of San Onofre Units 2&3	Navy Nuclear Power School (1965)	-NROTC Instructor at University of Colorado (1964-1966)
	Senior Reactor Operator License, San Opofre Unit 1	-Nuclear Power Training (1964-1966)
	San Olorie Onic 1	-Department Head, nuclear submarines (1966-1970)
		SOUTHERN CALIFORNIA EDISON COMPANY
		-Assistant Plant Engineer, San Onofre Nuclear Generation Station (1970-1972)
		-Steam Generation Engineer (1972-1974)
· · ·		-Senior Engineer (1974-1977)
		-Superintendent (1977 to present)

TABLE 2 Sheet 4 of 41

NAME, TITLE AND		
RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
Blaine L. Curtis	Purdue University - BS (1968)	BECHTEL POWER CORPORATION
Supervising Engineer	Engineering Sciences	(1968–1969)
San Onofre Units 1, 2&3		
	University of Florida - MS	-Nuclear/Mechanical Engineer on boiling water
Supervises the plant technical services	(1972) Nuclear Engineering	reactor project
staff and is responsible for supervision		
of nuclear and balance of plant perform-	University of Southern	PRATT AND WHITNEY AIRCRAFT, Florida R&D
ance monitoring and evaluations, plant	California – 21 hours graduate	Center $(1970-1971)$
test programs, reactor safety, plant	courses in engineering	
modifications, and the coordination of	courses in engineering	-Inalytical Engineer on advanced gag
tochnical support provided by the	D.F. Licongo Machanical	-Analycical Engineer on auvanced gas
Companying officiate (her investment)	P.E. License, Mechanical	curbine engine projects
company's offsite (neadquarters)	California	
technical staffs.		SOUTHERN CALIFORNIA EDISON COMPANY
		-Associate Engineer, Nuclear Licensing and
		Safety (1972-1973)
		<b>-</b> · · ·

- -Associate Engineer, Nuclear Systems and Equipment (1973-1974)
- -Engineer, Nuclear Systems and Equipment (1975-1977)
- -Supervising Engineer, San Onofre Generating Station (1977 to present)

TABLE 2 Sheet 5 of 41

NAME, TITLE AND RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
K. N. Hadley Security Supervisor	B.A. Chapman College	SOUTHERN CALIFORNIA EDISON COMPANY
San Onofre Units 1, 2&3	B.S. Pepperdine University	-Special Agent, Corporate Security, respon- sible for the protection of Company property.
Responsible for station security. Plans, develops, implements, and directs programs	California Peace Officers Academy	personnel and interests, Southeastern Division (1960-1977)
and procedures to insure physical and personnel security, and to insure that the facility complies with NRC regulations.	Civil Disorder Management Course, California Specialized Training Institute	-Supervisor of Plant Security (1977 to present)
	Terrorism Course, National Consulting Service	
	Business Protection Seminar	
	Industry and Business Security Course	
	Business Frauds and Theft Course	
	Police Officer Survival and SWAT Course - FBI	
	Demolition and Sabotage Methods Course	
	Lifetime teaching credential, Police Science	

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TABLE 2 Sheet 6 of 41

-Supervisor of Plant Operations, San Onofre Unit 1. (1977 to present)

NAME, TITLE AND		
RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
J. R. Tate	High school graduate	SOUTHERN CALIFORNIA EDISON COMPANY
Supervisor of Plant Operations		
San Onofre Unit 1	Westinghouse - Nuclear Opera- tions Course (1965)	-Station operator positions, San Bernardino Generating Station (8 years)
Responsible for the Unit 1 operating		
activities and operator training.	San Onofre On-Site Training Program (1965-1966)	-Control Operator, San Onofre Unit 1. Participated in initial unit startup (1965-1969)
	Atomics International - Reactor	· · · · · · · · · · · · · · · · · · ·
·	operators and practical health physics courses	-Operating Foreman, San Onofre Unit 1. Primary responsibility of operator training. (1969-1971)
	Senior Reactor Operator	
	License, San Onofre Unit l	-Watch Engineer, San Onofre Unit 1. Supervised shift operations. Directed the initial and requalification operator train- ing programs for two years. (1971-1977)

TABLE 2 Sheet 7 of 41

NAME, TITLE AND RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
RESPONSIBILITY W. D. McKibben Supervisor of Plant Operations San Onofre Units 2&3 Responsible for the operation of Units 2&3. Reports to the Superintendent, Units 2&3, and stays in close communica- tion with other station supervisors with regard to all Unit 2&3 activities.	EDUCATIONAL BACKGROUND High school graduate, 1939 -ICS Steam Engineering Course (1940-1942) -Michigan State University, 16 units (1944 - 8 months) -University of California Extension (Math) (1964-1965)	PROFESSIONAL LEVEL EXPERIENCE SOUTHERN CALIFORNIA EDISON COMPANY -Fossil Fuel Power Plants (1952-1965) -Nuclear Control Operator, San Onofre Unit 1 (1965-1967) -Operating Foreman, San Onofre Unit 1 (1967-1968)
	<ul> <li>-Westinghouse Reactor Operator Training Program (1965 - 6 months)</li> <li>-University of California Extension (Tech. Writing) (1968)</li> <li>-Licensed Reactor Operator, San Onofre Unit 1 (1967-1968)</li> <li>-Licensed Senior Reactor Operator, San Onofre Unit 1 (1968 to present)</li> </ul>	-Watch Engineer, San Onofre Unit 1 (1968-1979) -Supervisor of Plant Operation, San Onofre Units 2&3 (February, 1979 to present)

TABLE 2 Sheet 8 of 41

RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
J. F. Bankovich Supervisor of Plant Maintenance San Onofre Units 1, 2&3	Correspondence courses, ICS Mechanical Engineering, Chemistry and Electrical	Forty-one years responsible industrial maintenance experience.
Responsible to Plant Superintendent for all mechanical, electrical maintenance and general services. Cooperates closely with the Supervisors of Plant Operations and other staff supervisors in scheduling his work, particularly during refueling periods.	-UCLA Extension Courses Engineering Fundamentals, Introduction to Nuclear Engineering, Nuclear Reactor Technology and Control (1963-1964)	-Wheeling Steel Corp., Continental Roll & Foundry, Blaw Knox Union Steel, Baash Ross Tool Co. Heavy manufacturing installation and maintenance (1938-1953) SOUTHERN CALIFORNIA EDISON COMPANY -Maintenance Machinist (1953-1963)
Directly supervises Field Engineers, Maintenance Planners, and Foremen.	-Westinghouse Reactor Operator and Maintenance Training Program (1965) -General Dynamics, Non- Destructive Testing Course which fulfills the requirement for Level II NDT (1972) -P.E. License, Mechanical California	-Machine Shop Foreman (1963-1965) -Supervisor of Plant Maintenance (1965 to present)

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#### TABLE 2 Sheet 9 of 41

#### NAME, TITLE AND RESPONSIBILITY

R. N. Santosuosso Supervisor of Nuclear Plant Instrumentation San Onofre Units 1, 2&3

Responsible for all control, instrumentation, and protective relaying at the plant.

#### EDUCATIONAL BACKGROUND

ISC-Instrumentation and Controls Engineering (1948-1950)

University of Wisconsin - Power Plant Engineering (1954)

Rockford College, Chemistry (1955)

Pasadena City College - Basic Computer Technology (1962)

Long Beach State - Power Plant Control System Design (1963)

Westinghouse Electric Corp.:

-Basic Nuclear Physics, Health Physics (1964)

-Control System Instrumentation for Nuclear Power Plants

-Nuclear Power Plant Systems Design (1964)

#### PROFESSIONAL LEVEL EXPERIENCE

CENTRAL ILLINOIS ELECTRIC AND GAS CO.

-Instrument Technician (1953-1958)

-Results Engineer (1958-1961)

SOUTHERN CALIFORNIA EDISON COMPANY

-Instrument Technician (1961-1963)

-Instrument Supervisor (1963-1964)

-Instrument Engineer (1964-1977)

-Supervisor of Nuclear Plant Instrumentation (1978 to present)

TABLE 2 Sheet 10 of 41

NAME, TITLE AND RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
M. K. Sullivan Supervisor of Plant Chemical Radiation Protection San Onofre Unit 1 Responsible for the proper processing of plant liquid, solid and gaseous wastes. Directs the plant personnel radiation safety program.	University of Colorado - B.A. Chemistry (1957) U.S. Public Health Service - Courses in Basic Radiological Health, Occupational Radiation Protection, and Radionuclide Analysis by Gamma Ray Spectroscopy Westinghouse Reactor Operator Training School - Reactor Physics Theory	<ul> <li>SOUTHERN CALIFORNIA EDISON COMPANY</li> <li>-Assistant and Junior Chemist, Division Chemical Section</li> <li>-Division Chemist, Division Chemical Section. Supervision of Division Chemical Laboratory, training of chemical personnel including Chemical Technicians and Assistant and Junior Chemists. Other duties included acid cleaning of boilers and coordination of station chemical control programs. (1961- 1965)</li> </ul>
	Saxton Nuclear Experimental Center - On-site Radiation Protection Training Yankee Atomic Power Co On-site Radiation Protec- tion Training Atomics International - Reactor Operator Training Course	-Chemical Radiation Protection Engineer, San Onofre Unit 1. Supervision and develop- ment of chemistry, radiochemistry and radiation protection programs for station. (1965 to present)

#### TABLE 2 Sheet 11 of 41

NAME, TITLE AND RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
R. V. Warnock Supervisor of Plant Chemistry and	San Diego State University - BS (1963)	SOLAR DIVISION OF INTERNATIONAL HARVESTER
Radiation Protection Units 2&3		-Research Engineer I, II, contract research in
Supervises Chemical and Radiation	San Diego State University - MS (1965)	materials development. (1965-1972)
Protection Engineers, Foremen,		SOUTHERN CALIFORNIA EDISON COMPANY
Engineering Aides and Technicians	San Diego State University -	
	Additonal courses in Electron- ics, Metallurgy (1970-1971)	-Assistant Chemical and Radiation Protection Engineer, San Onofre Unit 1 (1972-1976)
	Atomics International - Basic Reactor Theory and Operation (1973)	-Supervisor of Plant Chemistry and Radiation Protection, San Onofre Units 2&3 (1976 to present)

P.E. License, Corrosion Engineer, California (1977)

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#### TABLE 2 Sheet 12 of 41

NAME, TITLE AND RESPONSIBILITY

M. A. Wharton Supervising Engineer San Onofre Unit 1

Supervises the Unit 1 engineering staff. Responsibilities include plant test programs, performance monitoring of plant equipment, reactor safety, and minor plant modifications.

#### EDUCATIONAL BACKGROUND

University of Redlands - B.S. Engineering

California State Polytechnic University - Graduate courses in Mechanical Engineering

Liquid Metal Fast Breeder Reactor Project - Training assignment (1972-1973)

P.E. License, Mechanical California PROFESSIONAL LEVEL EXPERIENCE

WESTINGHOUSE ELECTRIC CORPORATION

-Design Engineer in Nuclear Energy Systems Division (1970)

SOUTHERN CALIFORNIA EDISON COMPANY

-Assistant Mechanical Engineer (1970-1971)

-Assistant Plant Engineer. Cross training at Mohave Generating Station (1971)

-Assistant Mechanical Engineer. Performed fossil plant design functions (1971-1972)

-Mechanical Engineer. Directed the mechanical engineering design functions associated with San Onofre Unit 1 modification projects (1973-1979)

-Supervising Engineer, San Onofre Unit 1 (1979 to present)

NAME, TITLE AND		· · · · · · · · · · · · · · · · · · ·
RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
D. L. Bertram Supervising Engineer	Miami University (Ohio) - B.S. in Applied Science (1969)	CROWN ZELLERBACH PULP AND PAPER MILL
San Onofre Units 2&3		-Chemical Engineer (1969-1971)
Supervises the Units 2&3 engineering staff. Responsibilities will include	U.S. Navy Nuclear Power School - one year (1973)	U.S. NAVY
plant test programs, performance monitoring of plant equipment, reactor safety, and minor plant modifications.	U.S. Navy Prospective Engineer- ing Officer School (Nuclear) - 3 months (1975)	-Nuclear Engineer. Responsible for the opera- tion and maintenance (including refueling overhaul) of various systems on a nuclear missile submarine (1973-1977)
	Atomics International - Reactor Engineering and Operation Course (1977)	SOUTHERN CALIFORNIA EDISON COMPANY
	Combustion Engineering — San Onofre Units 2&3 Lecture Series	-Assistant Engineer, San Onofre. Provided station assistance to the Units 2&3 startup organization (1977-1979)
		-Supervising Engineer, San Onofre Units 2&3. (1979 to present)

TABLE 2 Sheet 13 of 41

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NAME, TITLE AND RESPONSIBILITY	EDUCATTONAL BACKGROUND	DROFFSSIONAL LEVEL EXDEDIENCE
W. G. Frick Engineer	Ursinus College - BS Chemistry	U.S. NAVY
Provides engineering support and tech- nical assistance to the Supervising	Princeton University - one year graduate work with a major of organic chemistry.	-Served as Reactor Controls and Instrumentation Officer and Radiological Controls and Water Chemistry Management Officer on the USS Truxto
	U.S. Navy Nuclear Power School (6 months)	(CGN-35). Qualified for operation, supervision and maintenance of the nuclear propulsion plan (1972-1975)
· ·	U.S. Navy Nuclear Prototype Training, S3G	SOUTHERN CALIFORNIA EDISON COMPANY
	Atomics International -	-Assistant Engineer, San Onofre (1975-1976)
	Reactor Operator Training	-Engineer, San Onofre (1977 to present)
	NUS - Nuclear Fuel Manage- ment Course	
	MIT — Reactor Safety Courses	

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## TABLE 2 Sheet 15 of 41

NAME, TITLE AND RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
G. R. Mills Engineer	University of Wisconsin - B.S. Nuclear Engineering (1967)	NATIONAL CENTER FOR RADIOLOGICAL HEALTH.
Provides engineering support and tech- nical assistance to the Supervising	M.S. Nuclear Engineering (1970)	-Health physics and nuclear ship refueling experience (1967-1969)
Engineer, Unit 1.	Combustion Engineering - Training Course in Nuclear	COMBUSTION ENGINEERING
	Power Plant Operation (Simulator)	-Startup Test Engineer and Safety and Licensing Engineer (1970-1973)
	National Center for Radio- logical Health - Reactor	ILLINOIS POWER COMPANY
	Safety and Hazards Evaluation	-Staff Nuclear Engineer. Participated in nuclear power plant design reviews, and inservice inspection functions
	MIT - Reactor Safety Course	(1973–1974)
	Atomics International -	SOUTHERN CALIFORNIA EDISON COMPANY
	Reactor Engineering and Operations	-Engineer, San Onofre (1974 to present)
	University of Wisconsin - Reactor Operations Training for the TRIGA MARK III Reactor	
	General Dynamics Convair - School for Nondestructive Testing	- -
	P.E. License, Nuclear California	
	Reactor Operators License, Palisades Nuclear Power Plant	

#### TABLE 2 Sheet 16 of 41

NAME, TITLE AND RESPONSIBILITY EDUCATIONAL BACKGROUND . F. Briggs III University of Arizona - B.S. Assistant Engineer Nuclear Engineering (1975) -Research Assistant (1966-1967) Provides engineering support and tech-MIT - Nuclear Reactor Safety nical assistance to the Supervising Course (1977)

Engineer, Unit 1.

Atomics International - Nuclear Reactor Operations Training (1977)

Nondestructive Testing Training Course (1978)

PROFESSIONAL LEVEL EXPERIENCE

UNION CARBIDE NUCLEAR RESEARCH LABORATORIES

U.S. ARMY

-Instructor at Nuclear Weapons Training Center, Europe (1967-1970)

SOUTHERN CALIFORNIA EDISON COMPANY

-Assistant Engineer, Nuclear Licensing and Safety Group (1975-1977)

-Assistant Engineer, San Onofre Unit 1 (1977 to present)

TABLE 2 Sheet 17 of 41

NAME, TITLE AND RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
D. R. Howard Assistant Engineer	University of Oklahoma - B.S. Nuclear Engineering (1977)	SOUTHERN CALIFORNIA EDISON COMPANY
Provides engineering support and tech- nical assistance to the Supervising Engineer, Unit 1.	Atomics International - Reactor Engineering and Operations Course (1977)	-Assistant Engineer, San Onofre Unit 1 (1977 to present)
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#### TABLE 2 Sheet 18 of 41

# RESPONSIBILITYEDUCATIONAL BACKGROUNDPROFESM. P. ShortUniversity of CaliforniaU.S. NAVYAssistant EngineerIrvine - B.S. in Engineering<br/>(1974)-Supervised<br/>training of<br/>plant opera<br/>Engineer, Unit 1.

NAME, TITLE AND

Atomics International -Reactor Operations Course

Nuclear Power School

Prototype training

(1 month)

(6 months), Engineering Officer of the Watch

(6 months), and Nuclear

Plant Engineer School

General Dynamics - School for Destructive Testing

#### PROFESSIONAL LEVEL EXPERIENCE

-Supervised shift plant operations, and the training of candidate naval and reactor plant operators at the Naval Reactors Facility S5G Naval Prototype Plant (1975-1976)

#### SOUTHERN CALIFORNIA EDISON COMPANY

-Assistant Engineer, San Onofre Unit 1 (1976 to present)

#### TABLE 2 Sheet 19 of 41

#### NAME, TITLE AND RESPONSIBILITY

J. P. Rodriguez Assistant Engineer

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Provides engineering support and technical assistance to the Supervising Engineer, Unit 1. EDUCATIONAL BACKGROUND

Cal Poly University -B.S. Mathematics (1970) B.S. Mechanical Engineering (1970)

Stanford University - M.S. Nuclear Engineering (1972)

Atomics International -Reactor Engineering and Operations Course (1977)

Nondestructive Examination Training (1978)

#### PROFESSIONAL LEVEL EXPERIENCE

PACIFIC CAS AND ELECTRIC COMPANY

-Field Engineer, Station Construction Department (1970-1971)

-Engineer, Mechanical and Nuclear Department (1972-1974)

-Nuclear Engineer, Diablo Canyon Nuclear Power Plant (1974-1976)

SOUTHERN CALIFORNIA EDISON COMPANY

-Assistant Engineer, San Onofre Unit 1 (1976 to present)

#### TABLE 2 Sheet 20 of 41

#### NAME, TITLE AND RESPONSIBILITY

S. W. McMahan Assistant Engineer

Provides engineering support and technical assistance to the Supervising Engineer, Units 2&3.

#### EDUCATIONAL BACKGROUND

California State University at Long Beach - B.S. Mechanical Engineering (1974)

Atomics International -Reactor Engineering and Operations Course (1977)

Combustion Engineering -San Onofre 2&3 NSSS Lecture Series (1978)

Nondestructive Examination Lecture Series

P.E. License, Mechanical California

#### PROFESSIONAL LEVEL EXPERIENCE

SOUTHERN CALIFORNIA EDISON COMPANY

-Assistant Plant Engineer, Fossil Generating Station (1972-1975)

-Associate Engineer, Steam Generation Fossil Engineering staff (1975-1976)

-Engineer, San Onofre (1976 to present)

TABLE 2 Sheet 21 of 41

NAME, TITLE AND RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
E. D. Chaney Engineer	U.S. Naval Academy - B.S. (1953)	U.S. NAVY
Provides engineering support and tech- nical assistance to the Supervising	Naval Post Graduate School, Monterey, California -	-Various aircraft maintenance assignments and responsibilities (21 years)
Engineer, Units 2&3	M.S. Aeronautical Engineering	SOUTHERN CALIFORNIA EDISON COMPANY
х.		-Assistant Plant Engineer, Fossil Generating Station (1974-1975)
		-Engineer, San Onofre (1975-1979)

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# TABLE 2 Sheet 22 of 41

NAME, TITLE AND		
RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
T. Herring, III Assistant Engineer	U.S. Naval Academy - B.S. Physics (1971)	U.S. NAVY
		-Naval Nuclear Power Program (5 years)
Provides engineering support and tech- nical assistance to the Supervising Engineer, Units 2&3	U.S. Navy Nuclear Power School	DRAGON VALVES, INC.
	U.S. Naval Nuclear Proto- type Training	-Project Engineer (1 year)
		SOUTHERN CALIFORNIA EDISON COMPANY
	Naval Nuclear Propulsion	
	Program Engineer's School	-Assistant Engineer, San Onofre (1977 to present)
	Combustion Engineering - San Onofre Units 2&3 Design Lecture Series	

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TABLE 2 Sheet 23 of 41

NAME, TITLE AND RESPONSIBILITY

G. D. Peckham Assistant Chemical Radiation Protection Engineer

Provides technical assistance to the Supervisor of Plant Chemical Radiation Protection, San Onofre Unit 1 EDUCATIONAL BACKGROUND

University of California, San Diego - B.A. Physics (1975)

San Diego State University -M.S. Radiological Physics (1977)

#### PROFESSIONAL LEVEL EXPERIENCE

SOUTHERN CALIFORNIA EDISON COMPANY

-Assistant Chemical Radiation Protection Engineer, San Onofre (1977 to present)

TABLE 2 Sheet 24 of 41

NAME, TITLE AND RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
J. P. Albers Assistant Chemical Radiation	San Diego State University - B.S. Zoology (1975)	PACIFIC GAS AND ELECTRIC COMPANY
Protection Engineer	M.S. Radiation Physics (1975)	-Engineering Aide (1977)
Provides technical assistance to the		SOUTHERN CALIFORNIA EDISON COMPANY
Supervisor of Plant Chemical Radia- tion Protection, San Onofre Units 2&3	Teaching Assistant, San Diego State University, Human Anatomy Laboratory (1975- 1977)	-Assistant Chemical Radiation Protection Engineer, San Onofre (1977 to present)

TABLE 2 Sheet 25 of 41

NAME, TITLE AND RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
A. J. Prosser Assistant Chemical Radiation	California State University, Long Beach - B.A.	SOUTHERN CALIFORNIA EDISON COMPANY
Protection Engineer	Anthropology (Chemistry and Math Minor) (1975)	-Plant Equipment Operator, Fossil Gener Station (1956-1957)
Provides technical assistance to the		beauton (1990-1997)
Supervisor of Plant Chemical Radia- tion Protection, San Onofre		-Division Chemical Section Laboratory Assistant (1960-1961)

Units 2&3

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Chemical Technician (1961-1970) Chemical Foreman (1972-1977) Chemist (1977-1978)

-Assistant Chemical Radiation Protection Engineer, San Onofre (1978 to present)

#### TABLE 2 Sheet 26 of 41

NAME,	$\mathbf{TITLE}$	AND
RESPON	<b>VSIBIL</b>	ITY

E. S. Medling Assistant Chemical Radiation Protection Engineer

Provides technical assistance to the Supervisor of Plant Chemical Radiation Protection, San Onofre Units 2&3 EDUCATIONAL BACKGROUND

California State University, B.S. Physics (1973)

San Diego State University M.S. Radiological Physics (1975)

Atomics International -Reactor Operator Training

Lecturer, Graduate Physics Department, San Diego State University (1976-1978) PROFESSIONAL LEVEL EXPERIENCE

U.S. ATOMIC ENERGY COMMISSION

-Radiologist Specialist, Nevada Operations Office (1974)

SOUTHERN CALIFORNIA EDISON COMPANY

-Assistant Chemical Radiation Protection Engineer, San Onofre (1975 to present)

TABLE 2 Sheet 27 of 41

NAME, TITLE AND	· · · · · · · · · · · · · · · · · · ·	
RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
S. C. Folsom Assistant Chemical Radiation	California State University, Fullerton - B.A.	SOUTHERN CALIFORNIA EDISON COMPANY
Protection Engineer	Biological Sciences (1979)	-Assistant Chemical Radiation Protection
Provides technical assistance to the Supervisor of Plant Chemical Radia- tion Protection, San Onofre Units 2&3		ingineer, bui choire (1979 to present)
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# TABLE 2Sheet 28 of 41

NAME, TITLE AND RESPONSIBILITY

Supervises the "On Shift" operating

personnel in accordance with appro-

nical specifications. In the event

priate station orders, station

operating instructions, and tech-

of unexpected contingencies of a

tion program and overall plant

temporary nature, responsible for implementing the radiation protec-

J. Reeder

operation.

Watch Engineer, Unit 1

#### EDUCATIONAL BACKGROUND

High School Graduate

Selected Junior College courses totaling 60 semester units.

Licensed Senior Reactor Operator, San Onofre Unit 1 PROFESSIONAL LEVEL EXPERIENCE

SOUTHERN CALIFORNIA EDISON COMPANY

-Fossil Fuel Power Plants

-Nuclear Assistant Control Operator, San Onofre Unit 1

-Nuclear Control Operator, San Onofre Unit 1

-Operating Foreman, San Onofre Unit 1

-Watch Engineer, San Onofre Unit 1

A total of 13 1/2 years nuclear power plant experience

TABLE 2 Sheet 29 of 41

NAME, TITLE AND RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
J. E. Ryan Watch Engineer, Unit 1	High School Graduate	SOUTHERN CALIFORNIA EDISON COMPANY
Supervises the "On Shift" operating	Reactor Operator Training, Westinghouse	-Fossil Fuel Power Plants
personnel in accordance with appro- priate station orders, station	Reactor Operator Training,	-Nuclear Control Operator, San Onofre Unit 1
operating instructions, and tech- nical specifications. In the event	San Onofre Unit 1	-Operating Foreman, San Onofre Unit 1
of unexpected contingencies of a temporary nature, responsible for	Licensed Senior Reactor Operator, San Onofre	-Watch Engineer, San Onofre Unit 1
implementing the radiation protec- tion program and overall plant operation.	Unit 1	A total of 13 years nuclear power plant experience

TABLE 2 Sheet 30 of 41

NAME, TITLE AND		
RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
A. J. Schramm Watch Engineer, Unit 1	High School Graduate and one year Junior College	SOUTHERN CALIFORNIA EDISON COMPANY
		-Fossil Fuel Power Plant (1962-1965)
Supervises the "On Shift" operating	Reactor Operator Training,	
personnel in accordance with appro-	Westinghouse Reactor	-Nuclear Assistant Control Operator,
priate station orders, station operating instructions, and tech-	Evaluation Center (1965)	San Onofre Unit 1 (1965-1970)
nical specifications. In the event of unexpected contingencies of a temporary nature, responsible for	Saxton Nuclear Generating Station Operator Training Program (1965)	-Nuclear Control Operator, San Onofre Unit 1 (1970-1975)
implementing the radiation protec-		-Operating Foreman, San Onofre Unit 1
tion program and overall plant operation.	Reactor Operator Training, San Onofre Unit 1 (1967-	(1975–1977)
-	1969)	-Watch Engineer, San Onofre Unit l (1977 to present)
	Atomics International Reactor	
	Training Program (1972,1974)	A total of 14 years nuclear power plant experience.
	Licensed Reactor Operator,	· ·
	San Onofre Unit 1	
	(1967–1969)	
	Licensed Senior Reactor	
	Operator, San Onofre Unit 1 (1969 to present)	
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TABLE 2 Sheet 31 of 41

NAME, TITLE AND RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
M. Burns Watch Engineer, Unit l	High School Graduate	SOUTHERN CALIFORNIA EDISON COMPANY
Supervises the "On Shift" operating personnel in accordance with appro- priate station orders, station	U.S. Merchant Marine Academy - Equivalent of two year college curriculum	-Fossil Fuel Power Plant (10 years) -Watch Engineer, San Onofre Unit l
operating instructions, and tech- nical specifications. In the event of unexpected contingencies of a temporary nature, responsible for implementing the radiation protec- tion program and overall plant operation.	Licensed Senior Reactor Operator, San Onofre Unit l	A total of 13 1/2 years nuclear power plant experience

TABLE 2 Sheet 32 of 41

NAME,	TITLE	AND
RESPON	SIBIL	[TY

M. Bentz Watch Engineer, Units 2&3

Supervises the "On Shift" operating personnel in accordance with appropriate station orders, station operating instructions, and technical specifications. In the event of unexpected contingencies of a temporary nature, responsible for implementing the radiation protection program and overall plant operation. EDUCATIONAL BACKGROUND

High School Graduate, supplemented by selected college courses and technical training

Reactor Operator Training, Westinghouse Reactor Evaluation Center (1965)

Reactor Operator Training, San Onofre Unit 1 (1966)

Licensed Reactor Operator, San Onofre Unit 1 (1967-(1969)

Licensed Senior Reactor Operator, San Onofre Unit 1 (1969-present) PROFESSIONAL LEVEL EXPERIENCE

SOUTHERN CALIFORNIA EDISON COMPANY

-Fossil Fuel Power Plant (4 1/2 years) (1960-1965)

-Nuclear Assistant Control Operator, San Onofre Unit 1 (1965-1967)

-Nuclear Control Operator, San Onofre Unit 1 (1967-1971)

-Operating Foreman, San Onofre Unit 1 (1971-1976)

-Watch Engineer, San Onofre Units 2&3 (1976 to present)

A total of 14 years nuclear power plant experience

#### TABLE 2 Sheet 33 of 41

NAME, TITLE AND RESPONSIBILITY

V. B. Fisher Watch Engineer, Units 2&3

Supervises the "On Shift" operating personnel in accordance with appropriate station orders, station operating instructions, and technical specifications. In the event of unexpected contingencies of a temporary nature, responsible for implementing the radiation protection program and overall plant operation.

#### EDUCATIONAL BACKGROUND

High School Graduate, supplemented by technical training (1962)

Reactor Operator Training, San Onofre Unit 1 (1967-1969)

Atomics International -Basic Reactor Theory and Operation (1969)

Licensed Reactor Operator San Onofre Unit 1 (1969-1971)

Senior Operator Training San Onofre Unit 1 (1971)

Licensed Senior Operator San Onofre Unit 1 (1971 to present)

#### PROFESSIONAL LEVEL EXPERIENCE

SOUTHERN CALIFORNIA EDISON COMPANY

-Fossil Fuel Power Plant (20 months) (1964-1967)

-Nuclear Plant Equipment Operator, San Onofre Unit 1 (1967-1969)

-Nuclear Assistant Control Operator, San Onofre Unit 1 (1969-1973)

-Nuclear Control Operator San Onofre Unit 1 (1973-1976)

-Operating Foreman San Onofre Unit 1 (1977-1978)

-Watch Engineer San Onofre Units 2&3 (1978 to present)

A total of 12 years nuclear power plant experience

#### TABLE 2 Sheet 34 of 41

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NAME, TITLE AND		
RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
T. E. James Watch Engineer, Units 2&3	High School Graduate	PORTLAND GENERAL ELECTRIC
Supervises the "On Shift" operating personnel in accordance with appro-	Westinghouse Nuclear Training:	-Shift Supervisor - Trojan Nuclear Plant (1970-1977)
priate station orders, station operating instructions, and tech- nical specifications. In the event	-Phase I Fundamental Nuclear Training	-Operations/Maintenance Supervisor, Fossil Fuel Power Plant (1977-1978)
of unexpected contingencies of a temporary nature, responsible for	-Phase II FWR Operation Observation	SOUTHERN CALIFORNIA EDISON COMPANY
implementing the radiation protec- tion program and overall plant	-WNIC Reactor Training	-Fossil Fuel Power Plants (1960-1970)
operation.	-Similator Training	-Watch Engineer - San Onofre Units 2&3 (1978 to present)
	Licensed Senior Reactor Operator Trojan Nuclear Plant (1975-1977)	A total of 7 years nuclear power plant experience



NAME, TITLE AND RESPONSIBILITY

Don J. Lokker Watch Engineer, Units 2&3

Supervises the "On Shift" operating personnel in accordance with appropriate station orders, station operating instructions, and technical specifications. In the event of unexpected contingencies of a temporary nature, responsible for implementing the radiation protection program and overall plant operation.

#### EDUCATIONAL BACKGROUND

High School Graduate (1956)

Chaffee Junior College 30 units (1961)

Orange Coast Junior College 15 units (1963)

Westinghouse Reactor Operator Training Program (1965)

Licensed Reactor Operator, San Onofre Unit 1 (1967 -1968)

Licensed Senior Reactor Operator, San Onofre Unit 1 (1968 to present).

#### PROFESSIONAL LEVEL EXPERIENCE

SOUTHERN CALIFORNIA EDISON COMPANY

-Operator, Fossil Fuel Plants (1960-1965)

-Nuclear Control Operator, San Onofre Unit 1 (1965-1969)

-Watch Engineer, Huntington Beach Gen. Station (Fossil) (1969-1973)

-Watch Engineer, San Onofre Nuclear Generating Station Units 2 and 3 (1978 to present)

A total of 5 years nuclear power plant experience

TABLE 2 Sheet 36 of 41

#### NAME, TITLE AND RESPONSIBILITY PROFESSIONAL LEVEL EXPERIENCE EDUCATIONAL BACKGROUND D. J. Riley High School Graduate and SOUTHERN CALIFORNIA EDISON COMPANY Operating Foreman, Unit 1 1-1/2 years of college. -Fossil Fuel Power Plants (1963-1966) Assists the Watch Engineer in Reactor Operator Training, supervising the "On-Shift" San Onofre Unit 1 -Nuclear Plant Equipment Operator, operating personnel in accordance San Onofre Unit 1 (1966-1968) with appropriate station orders, Licensed Senior Reactor station operating instructions, Operator, San Onofre Unit 1 -Nuclear Assistant Control Operator, and technical specifications. San Onofre Unit 1 (1968-1972) -Nuclear Control Operator, San Onofre Unit 1 (1972-1977) -Operating Foreman, San Onofre Unit 1 (1977 to present) -

A total of 13 years nuclear power plant experience

TABLE 2 Sheet 37 of 41

NAME, TITLE AND RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
D. C. Burgeson Operating Foreman, Units 2 and 3	High School Graduate (1961) supplemented by 65 college	SOUTHERN CALIFORNIA EDISON COMPANY
Assists the Watch Engineer in supervising the "On-Shift"	units and related technical training	-Fossil Fuel Power Plants - 28 months (1963-1966)
operating personnel in accordance with appropriate station orders, station operating instructions,	Reactor Operator Training, San Onofre Unit 1 (1966- 1968)	-Nuclear Plant Equipment Operator San Onofre Unit 1 (1966-1968),
and technical specifications.	Atomics International - Basic Reactor Theory and	-Nuclear Assistant Control Operator, San Onofre Unit 1 (1968-1971)
	Operation (1968)	-Nuclear Control Operator, San Onofre Unit l (1971-1977)
	Licensed Reactor Operator San Onofre Unit 1 (1968- 1971)	-Operating Foreman, San Onofre Units 2&3 (1977 to present)
· · · · · · · · · · · · · · · · · · ·	Senior Reactor Operator Training San Onofre Unit 1 (1971)	A total of 13 years nuclear power plant experience
	Licensed Senior Reactor Operator, San Onofre Unit 1 (1971 to present)	
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TABLE 2 Sheet 38 of 41

NAME, TITLE AND RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
K. Eckman Operating Foreman, Units 2 and 3	High School Graduate	SOUTHERN CALIFORNIA EDISON COMPANY
Assists the Watch Engineer in	Reactor Operator Training, San Onofre Unit 1 (1967-	-Fossil Fuel Power Plants - (1965-1967)
supervising the "On-Shift" operating personnel in accordance	1969)	-Nuclear Plant Equipment Operator, San Onofre Unit 1 (1967 to 1969)
with appropriate station orders,	Atomics International -	
and technical specifications.	Basic Reactor Theory and Operation (1969)	-Nuclear Assistant Control Operator, San Onofre Unit 1 (1969 to 1975)
	Licensed Reactor Operator, San Onofre Unit 1 (1969)	-Nuclear Control Operator, San Onofre Unit 1 (1975 to 1977)
	Licensed Senior Reactor	-Operating Foreman, San Onofre

Operator, San Onofre Unit 1

(1974 to present)

-Operating Foreman, San Onofre Units 2&3 (1977 to present)

A total of 12 years nuclear power plant experience.

TABLE 2 Sheet 39 of 41

LDUCATIONAL BACKERCOND	PROFESSIONAL LEVEL EXPERIENCE
High School Graduate, California (1962)	U.S. NAVY
U. S. Navy Nuclear Power Training NPTT - Mare Island,	-Nuclear Plant Mechanical Operator, USS Long Beach CG(N)9, (1967-1969) -Engineering Laboratory Technician,
California (1966) , NPTU - Idaho Falls, Idaho (1967)	USS Samuel Gompers AD-37 (1969- 1972)
· · · · · · · ·	SOUTHERN CALIFORNIA EDISON COMPANY
Reactor Operator Training, San Onofre Unit 1 (1972- 1974)	-Nuclear Plant Equipment Operator San Onofre Unit 1 (1972-1973)
Atomics International - Basic Reactor Theory and Operation (1973)	-Assistant Nuclear Control Operator, San Onofre Unit 1 (1975-1977)
Licensed Reactor Operator, San Onofre Unit 1 (1974-	Units 2&3 (1977 to present)
1976)	A total of 9 years nuclear experience
Licensed Senior Reactor Operator, San Onofre Unit 1 (1976 to present)	
· · · · · · · · · · · · · · · · · · ·	· · ·
	EDUCATIONAL BACKCROUND High School Graduate, California (1962) U. S. Navy Nuclear Power Training NPTT - Mare Island, California (1966) , NPTU - Idaho Falls, Idaho (1967) Reactor Operator Training, San Onofre Unit 1 (1972- 1974) Atomics International - Basic Reactor Theory and Operation (1973) Licensed Reactor Operator, San Onofre Unit 1 (1974- 1976) Licensed Senior Reactor Operator, San Onofre Unit 1 (1976 to present)



#### NAME, TITLE AND RESPONSIBILITY

C. M. Seward Operating Foreman, Units 2&3

Assists the Watch Engineer in supervising the "On-Shift" operating personnel in accordance with appropriate station orders, station operating instructions, and technical specifications.

#### EDUCATIONAL BACKGROUND

High School Graduate, supplemented by additional college education and technical training

Reactor Operator Training San Onofre Unit 1 (1966-1968)

Atomics International -Basic Reactor Theory and Operation (1969)

Licensed Reactor Operator, San Onofre Unit 1 (1968-1971)

Senior Operator Training, San Onofre Unit 1 (1971)

Licensed Senior Operator, San Onofre Unit 1 (1971 to present)

#### PROFESSIONAL LEVEL EXPERIENCE

SOUTHERN CALIFORNIA EDISON COMPANY

- -Fossil Fuel Power Plants 14 months (1964-1966)
- -Nuclear Plant Equipment Operator, San Onofre Unit 1 (1966-1968)
- -Nuclear Assistant Control Operator, San Onofre Unit 1 (1968-1977)
- -Operating Foreman, San Onofre Units 2&3 (1977 to present)
- A total of 13 years nuclear power plant experience

# TABLE 2 Sheet 41 of 41

NAME, TITLE AND		
RESPONSIBILITY	EDUCATIONAL BACKGROUND	PROFESSIONAL LEVEL EXPERIENCE
K. C. Vogts Operating Foreman, Units 263	High School Graduate, Kansas (1961)	U. S. NAVY
operating recanany onless 245		-Nuclear Plant Mechanical Operator,
Assists the Watch Engineer in supervising the "On-Shift"	U. S. Navy Nuclear Power Training	USS Long Beach CG(N)9, (1966-1970)
operating personnel in accordance with appropriate station orders,	NPTT - Mare Island, California (1965) ,	-Leading Petty Officer in Engine Room, USS Edwards DD950 (1970)
station operating instructions, and technical specifications.	NPTU — Idaho Falls, Idaho (1966)	SOUTHERN CALIFORNIA EDISON COMPANY
•	Control Data Institute - Customer Engineer Graduate, Inglewood, California (1970)	-Fossil Fuel Power Plants - 18 months (1971-1972)
· .	Reactor Operator Training, San Opofre Unit 1 (1972-	-Nuclear Plant Equipment Operator, San Onofre Unit 1 (1972-1973)
	1974)	-Nuclear Assistant Control Operator, San Onofre Unit 1 (1974-1977)
•	Atomics International - Basic Ractor Theory and Operation (1973)	-Operating Foreman, San Onofre Units 2&3 (1977 to present)
	Licensed Reactor Operator, San Onofre Unit 1 (1974- 1976)	A total of 11 years nuclear experience
	Senior Operator Training, San Onofre Unit 1 (1976)	
	Licensed Senior Reactor Operator San Onofre Unit 1 (1976 to present)	
	•	



#### INFORMATION PERTAINING TO OFFSITE TECHNICAL RESOURCE UNITS

	<u>Unit</u>	Corporate Department	Functions and Responsibilities	Unit Support Assignment
1.	Nuclear Generation Engineering Staff	Power Supply	Provides technical assistance to the Manager, Nuclear Generation, in support of the operations and maintenance of San Onofre Unit 1, and the functional design, review and preoperational activities of San Onofre Units 2 and 3. Coordi- nates any required supplemental support from other Company departments.	. F
2.	Division Maintenance	Power Supply	Provides supervision and manpower capability for major overhauls and equipment repair, such as refueling operations and turbine-generator inspections. Consists primarily of experienced Machinists, Boiler and Condenser Mechanics, Welders, Electricians, Test Technicians, Painters, and Helpers.	P
3.	Division Chemical Section	Power Supply	Assists generating stations with radiation protection, primary and secondary water chemistry control. Provides evaluations of radiation protection and chemical or metallurgical problems and failures.	Р
4.	. Fossil Engineering Staff	Power Supply	Provides technical assistance to the Chief, Steam Generation Engineer in support of the operations and maintenance of fossil generating stations. Available to provide support for San Onofre Unit 1, if necessary.	N

(F) - Full-Time Unit Support for San Onofre Units 1, 2, and 3.

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(P) - Part-Time Unit Support for San Onofre Units 1, 2, and 3.

(N) - Unit Is Not Assigned to the support of San Onofre Units 1, 2, and 3 but could be made available.

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	Unit	Corporate Department	Functions and Responsibilities	Unit Support Assignment*
5.	Nuclear Engineering Section	E&C	Responsible for interfacing with the NRC regarding licensing matters associated with San Onofre Units 1, 2, and 3. Performs nuclear engineering services in support of the operations of, and modifications to, San Onofre Unit 1, as well the design and construction of new nuclear generating facilities.	F
6.	Mechanical Engineering Design Section	E&C	Provides engineering and technical assistance in support of projects for new generation facilities, and modifications to existing generation facilities. Provides technical support for the operation of generation facilities as requested by the Power Supply Department.	P
7.	Controls and Electrical Engineering Design Section	E&C	U .	Р
8.	Civil/Structural Design Section	E&C		Р
9.	Apparatus Engineering Section	E&C	. u	Р
10.	Nuclear Fuel Supply	Fuel	Responsible for the development of specifications for and procurement of nuclear fuel supply components and services (for both fresh fuel and spent fuel) including the negotiation and administration of contracts. Directs off-site spent fuel handling and reprocessing activities and maintains the nuclear material inventory records and controls.	F

Table 3 (Cor



Unit Support Assignment\*

F

#### Unit

11. Nuclear Fuel Cycle Programs Fuel

Corporate

Department

# Functions and Responsibilities

Maintains coordination and liaison for joint nuclear fuel projects between the Company and Electric Power Research Institute (EPRI). Represents the Company on committees, technical society meetings, and utility groups on matters pertaining to the nuclear fuel cycle. Monitors developments and trends in the nuclear fuel cycle, including uranium mining and milling, conversion, enrichment, fabrication, reprocessing, waste management, and related transportation and safeguards areas.

Sheet 1 of 3

#### Table 4

#### Summary Information For The Professional and Technical Personnel Within Offsite Technical Resource Units

Next a tax

1. Te	btal number (Managers, Engineers,	Nuclear Generation Engineering Staff 4a	Maintenance Section 4b	Division Chemical Section 10	Fossil Engineering Staff 12
ar	nd Professional Personnel)	•			
2. By	y education background,		•		
в.	.S. Electrical Engineering	1	-	-	-
B.	.S. Mechanical Engineering	2	1	-	· 8
В.	.S. Chemical Engineering	<b>-</b> .	1	-	-
ы. Б	.S. Civil Engineering	<del>~</del>	-	-	1
. Д.	S Electrical Engineering	-	1	6	-
м.	S. Mechanical Engineering	-	-	-	1
м.	.S. Chemistry	-		-	1
М.	.S. Education	-	-	3 1	-
М.	.B.A.	-	-	-	1
3. Te	echnical Experience (in man-years) • Engineering Application				
	<ol> <li>Nuclear Fower Field</li> <li>Non Nuclear Power Field</li> <li>Engineering Management</li> <li>Plant Operational Supervision</li> <li>Total Utility Experience</li> </ol>	43 10 25 25 57	6 63 10 79	3 42 8 - 53	169 31 200
b.	. Engineering Field <sup>C</sup>	FN	FN	FN	FN
	<ol> <li>Reactor Physics</li> <li>Ikalth Physics</li> <li>Ikalth Physics</li> <li>Electrical Engineering</li> <li>Mechanical Engineering</li> <li>Chemical Engineering</li> <li>Chuil Engineering</li> <li>Civil Engineering</li> <li>Plant Supervision (Eng./Ops)</li> <li>Plant Operations/Maintenance</li> <li>Chemistry/Physics</li> <li>Maintenance Engineering</li> </ol>	4 - 2 - 2 - 4 - - 15 12 16 23 -	 - 18 2 5   1 21 3 29	  3 50   	- 15 - 173 - 12 

a. NRC licenses held by staff include three Senior Reactor Operator Licenses.

b. The section's non-professional supervisory personnel (45 persons with a combined 813 man-years of utility experience), and maintenance force, is not shown above.

c. Experience is shown as (F) - full time nuclear experience; (N) - nonnuclear experience.

d. Approximately 10% of this Apparatus section experience has consisted of part-time support for nuclear power plant operations and projects.

Sheet 2 of 3

#### Table 4 (Cont'd)

#### Summary Information For The Professional and Technical Personnel Within Offsite Technical Resource Units

. ".		N Eng S	uclear ineering ection	Mec Engi Desig	hanic neeri n Sec	cal ing ction	Contr Elec Design	ol and trical Section	Civil Desi	/Structural gn Section
1.	Total number (Managers, Engineers,		32		33			41		33
	and Professional Personnel)					•				
2.	By education background,		_			·				
	B.S. Nuclear Engineering		6		-			-		-
	B.S. Electrical Engineering		3		_			26		-
	B.S. Mechanical Engineering/Eng. Science		12		21			4		-
	B.S. Industrial Engineering		-		-			1		-
	B.S. Civil Engineering		1		-			-		31
	B.S. Chemistry		2		-			Ţ		-
	R.S. Physics		6		-		-	T		-
	B.S. Industrial Science		1		-			-		. –
	M.S. Nuclear Engineering		15		-			-		-
	M.S. Electrical Engineering		-					7		· ••
	M.S. Mechanical Engineering		5		11			-		
	M.S. Systems Engineering		-		-			1		-
	M.S. Civil Engineering		-		-			-		14
	M.S. Physics		1		-			-		-
	M.S. Engineering Mechanics		1					-		-
	PhD. Nuclear Engineering		3		-			-		-
	PhD. Mechanical Engineering		-		1			-		-
	B.S. Engineering Science		1		-			-		-
3.	Technical Experience (in man-years)			-	4					
	a. Engineering Application									
	(1) Nuclear Power Field		286		90		1	.33		57
	(2) Non Nuclear Power Field		46		210		2	72		278
	(3) Engineering Management		27		35			20		28
	(4) Total Utility Experience		212		300		4	05		275
	b. Engineering Field <sup>C</sup>	F	N		F	N	F	N	F	N
	(1) Nuclear Engineering	290			-	-	-	-	-	-
	(2) Electrical Engineering	_	3		-	-	96	201	-	-
	(3) Control Systems	-	-		-	-	37	71	-	
	(4) Mechanical Enginering	-	21		90	210	-	—	· •	-
	(5) Civil/Structural Engineering		-		-	-	-	-	57	278

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#### Table 4 (Cont'd)

#### Summary Information For The Professional and Technical Personnel Within Offsite Technical Resource Units

		Apparatus Engineering Section	Nuclear Fuel Supply	Nuclear Fuel Cycle Programs
1.	Total number (Managers, Engineers, and Professional Personnel)	44	6	· · 1
2.	By education background,			
	B.S. Nuclear Engineering	-	· 1	-
	B.S. Electrical Engineering	20	1	-
	B.S. Mechanical Engineering	4	2	-
	B.S. Industrial Engineering	1	. –	-
	B.S. Civil Engineering	· 1	-	· –
	B.S. Chemistry	1	1	-
	B.S. Physics	1	-	1
	B.S. Engineering	1	1	-
	M.S. Electrical Engineering	. 4	<del>-</del> .	-
	M.S. Mechanical Engineering	3	-	<b>—</b> .
	M.S. Metallurgical Engineering	1	-	. –
	M.S. Industrial Engineering	1	-	. <b>-</b>
	M.S. Environmental Engineering	1	<b>.</b>	-
_	M.S. Environmental Science	1	. 🛥	-
	M.S. Management Science	-	1 .	-
Ţ	MBA	-	2	-
	MBA Management and Computer Application	1	-	-
	MBE Control of Business Operation	1	-	-
	PhD. Acoustics/Vibration	1	` <b>-</b>	-
3.	Technical Experience (in man-years)	•		
	a. Engineering Application		· · · ·	
	(1) Nuclear Power Field	-	66	19
	(2) Non Nuclear Power Field	703 <sup>d</sup>	28	6
	(3) Engineering Management	134	8	_
	(4) Total Utility Experience	703	59	12
	b. Engineering Field <sup>C</sup>	F N <sup>d</sup>	FN	FN
	(1) Nuclear Engineering		10 -	
	(2) Electrical Engineering	- 566	- 8	
	(3) Mechanical Engineering	- 114	- 13	- 6
	(4) Civil/Structural Engineering	- 23		
	(5) Fuels Management		56 5	12 -
	(6) Computer Engineering		- 2	
	(7) Reactor Physics	<b>–</b> – <sup>1</sup>		7 -

Sheet 3 of 3



#### CORPORATE ORGANIZATION SOUTHERN CALIFORNIA EDISON COMPANY

FIGURE 1





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SAN ONOFRE
NUCLEAR GENERATING STATION
• ORGANIZATION UNITS 1, 2, AND 3
Figure 3

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