



## Nebraska Public Power District

GENERAL OFFICE  
P. O. BOX 499, COLUMBUS, NEBRASKA 68601  
TELEPHONE (402) 564-8561

July 30, 1979

Dr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Dear Dr. Denton:

Your letter of June 29, 1979 requested information regarding Nebraska Public Power District's corporate management and technical capabilities to cope with events such as the Three Mile Island incident. Enclosed please find this information.

In accordance with the July 24, 1979 letter from the Quality Assurance Branch, 40 copies are submitted for your use.

If you have any questions, or require additional information, please contact me.

Sincerely,

Jay M. Pilant  
Director of Licensing  
and Quality Assurance

JDW/cmk

Enclosure

653 275

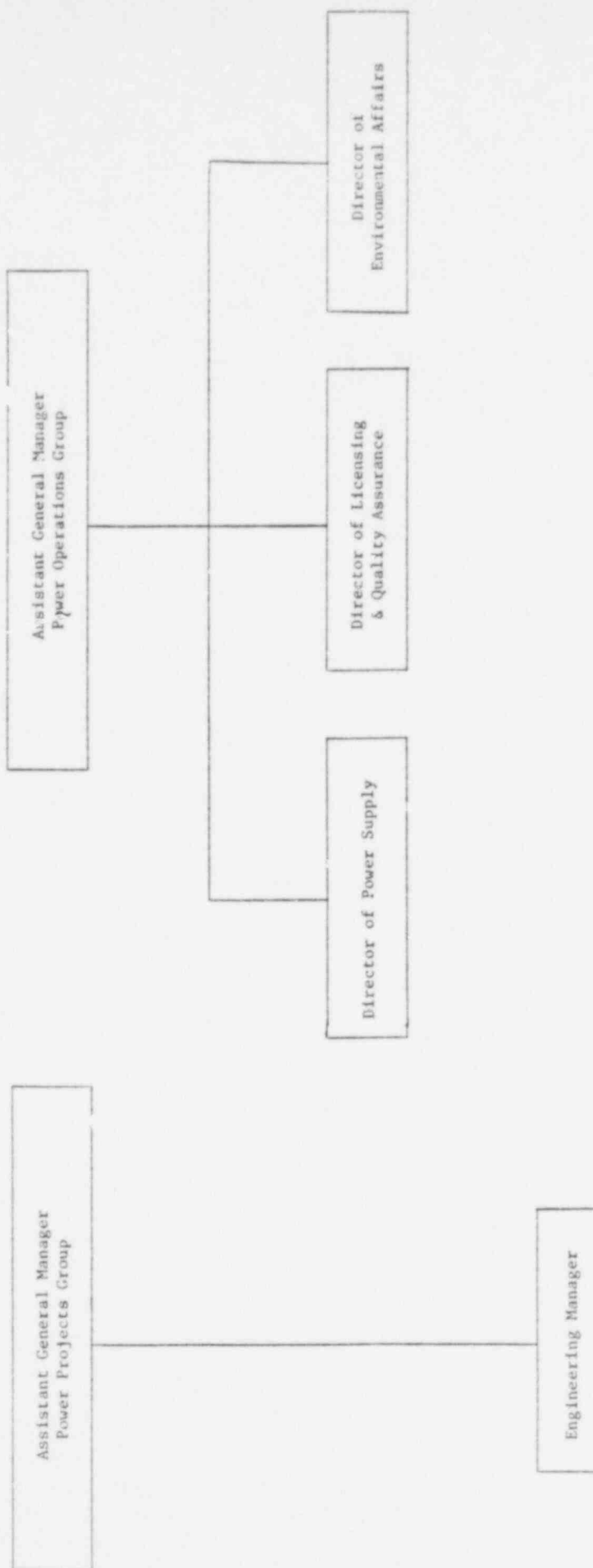
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MANAGEMENT RESOURCES

(Offsite)

MANAGEMENT ORGANIZATION CHART



## MANAGEMENT (Offsite)

### 1. Assistant General Manager - Power Operations Group

Responsible to the General Manager for all facets of operation of the District's power plants. Responsible for direction and management of Divisions: Power Supply, Licensing and Quality Assurance, and Environmental Affairs (as noted below).

### 2. Assistant General Manager - Power Projects Group

Responsible to the General Manager for all facets of engineering and construction associated with the District's power plants and various projects. Provides engineering support to operating plants as requested.

### 3. Director of Power Supply

To manage and direct the operation and maintenance of the major District power plants and the operation of the Dispatch Office. To manage and direct the District's nuclear and fossil fuel functions.

### 4. Director of Licensing and Quality Assurance

Responsible for direction of licensing and quality assurance activities, both technical and administrative, that are required to support the construction and operation of the District's generating facilities.

### 5. Director of Environmental Affairs

Full responsibility for management and direction of all environmental matters for all NPPD operations and activities. NPPD's representative to all State and Federal agencies dealing with environment. Keep public adequately informed on environmental matters affecting NPPD.

1. Assistant General Manager - Power Operations Group

A. Education and Training:

1. BS Electrical Engineering, Iowa State
2. ES Mechanical Engineering, Iowa State

B. Experience:

1. Nuclear

March 1973	Assistant General Manager - NPPD
Present	Power Operations Group
January 1963	Director/Manager of Power Supply - NPPD
March 1973	
August 1959	Plant Superintendent/Engr. Supervisor - NPPD
January 1963	Sheldon Station/Hallam Nuclear Power Facility

2. Other

November 1958	Power Engineer - NPPD
August 1959	
1955	Engineer
1958	Stearns-Roger Mfg. Co.
1951	Engineer
1955	Babcock & Wilcox Co.

2. Assistant General Manager - Power Projects Group

A. Education and Training:

1. MBA, University of Chicago 1968
2. BS Mechanical Engineering, University of Nebraska 1961
3. GE courses in BWR Technology and Station Nuclear Engineering

B. Experience:

1. Nuclear

August 1978	Assistant General Manager - NPPD
Present	Power Projects Group

November 1973	Director of Power Projects - NPPD
August 1978	

November 1971	Engineering Manager
November 1973	Generation Engineering Dept. - NPPD

November 1969	Engineering Supervisor
November 1971	Cooper Nuclear Station

1962	Reactor Facility Supervisor & Engineer
April 1968	Argonne National Laboratory

1961	Reactor Engineer
1962	Phillips Petroleum Company

2. Other

April 1968	Assistant to Chief Mechanical Engineer
November 1969	Constructor of National Accelerator Laboratory

C. Licenses Held:

Reactor Operator at MTR, Arco, Idaho  
Registered Professional Nuclear Engineer

3. Director of Power Supply

A. Education and Training:

1. BS Chemical Engineering, Purdue University 1943
2. BS General Engineering, U.S. Naval Academy 1946
3. Graduate study in Modern Physics and Atomic Physics,  
University of Washington

B. Experience:

1. Nuclear

March 1973	Director of Power Supply
Present	NPPD
July 1972	Power Production Manager
February 1973	NPPD
August 1968	Station Superintendent
June 1972	Cooper Nuclear Station
May 1964	Sheldon Station/Hallam Nuclear Power Facility
July 1966	Operations Supervisor
June 1963	USAEC Reactor Engineer
April 1964	Reactor Engineering Division
June 1960	USAEC Site Representative
June 1963	Hallam Nuclear Power Facility
August 1955	Reactor Processing Supervisor
June 1960	GE Hanford Atomic Products Operation

2. Other

August 1966	Sheldon Station Plant Superintendent
July 1968	NPPD
June 1946	United States Navy
August 1955	

C. Licenses Held:

Reactor Operator

4. Director of Licensing and Quality Assurance

A. Education and Training:

1. B.A. Chemistry, University of Nebraska 1958
2. Study in Marine Engineering, U.S. Maritime Academy
3. Babcock and Wilcox Resident Course in PWR Technology

B. Experience:

1. Nuclear

1972	Director of Licensing & Quality Assurance
Present	and Licensing Manager - NPPD
1971	Project Manager
1972	B&W PWR Reactor Systems
1969	Executive Assistant to Vice President of Test Operations
1971	Aerojet Nuclear Systems Company
1966	Manager, Engine Test Operations Program Controls
1969	Aerojet - General Corporation
1959	Senior Nuclear Engineer, Reactor Operations Supervisor,
1966	Deputy General Supervisor, Manager
	Aerojet - General Nucleonics, Power Test Facility

2. Other

1958	Analytical Chemist
1959	U.S. Food and Drug Administration
1949	Propulsion Plant Operator
1954	U.S. Merchant Marine

C. Licenses Held:

Certified Power Plant Supervisor - Mobile Low Power Reactor (ML-1)  
NRTS, Idaho  
Registered Professional Nuclear Engineer



5. Director of Environmental Affairs

A. Education and Training:

1. Ph.D Physical Chemistry, Illinois Institute of Technology 1969
2. MS Chemistry, University of Illinois 1950
3. BS Chemistry, University of Illinois 1949

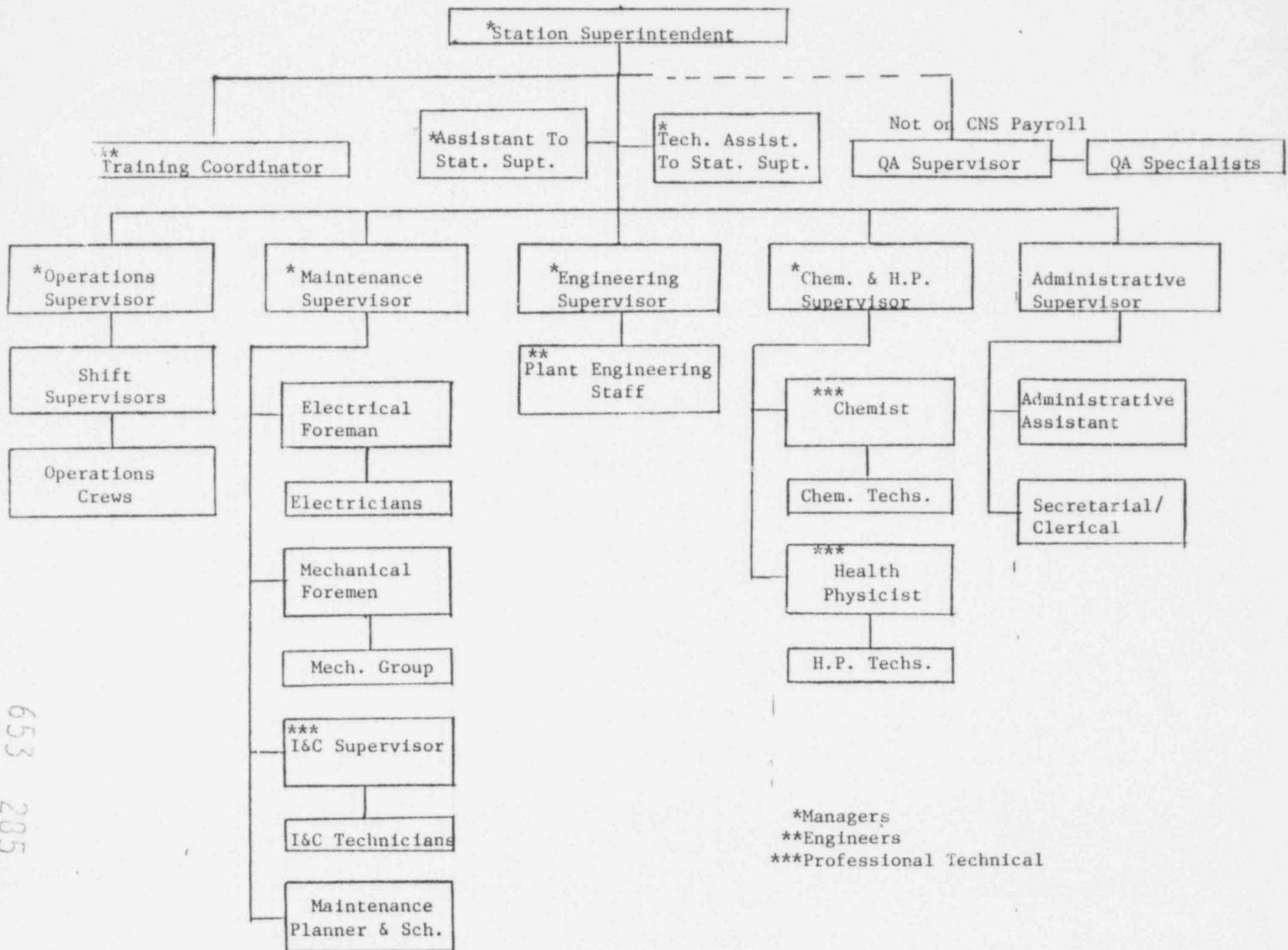
B. Experience:

1970	Director of Environmental Affairs
Present	NPPD
1953	Associate Chemist (Nuclear Chemistry etc.)
1970	Argonne National Laboratory

TECHNICAL RESOURCES

PLANT STAFF

# COOPER NUCLEAR STATION



\*Managers  
 \*\*Engineers  
 \*\*\*Professional Technical

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## MANAGERS

### 1. Station Superintendent

Manage the operation of Cooper Nuclear Station so that electricity is generated to meet the needs of the District and so that the plant and personnel perform in a safe, reliable and efficient manner within the requirements of our Operating License. Act as Chairman of the Station Operations Review Committee.

### 2. Assistant to the Station Superintendent

Alternate Chairman of the Station Operations Review Committee. Plans and coordinates major outages and special projects. Maintains SRO qualification.

### 3. Technical Assistant to the Station Superintendent

To assist the Station Superintendent as necessary, generally to:

- (1) review reports submitted to the Station Superintendent by other department heads
- (2) manage special projects
- (3) coordinate licensing activities at CNS
- (4) draft correspondence for the Station Superintendent
- (5) perform other staff work as required.

Maintains a Senior Reactor Operator License

### 4. Engineering Supervisor

Direct supervision of the Engineers, Engineering Assistants and Document Control Technicians assigned to the Engineering Department and to assure that responsibilities assigned to the Engineering Department at Cooper Nuclear Station are fulfilled.

### 5. Operations Supervisor

Directly responsible for fuel loading and the startup, operation, and shutdown of all station equipment. Responsible for the implementation of surveillance testing in accordance with requirements of regulatory agencies, technical specifications, and the station operating procedures. Responsible for supervising and maintaining a group of personnel which requires extensive on-the-job training; approximately 20 personnel in this department require NRC operator licenses. Member of the Station Operations Review Committee.

6. Maintenance Supervisor

Responsible for the supervision of the maintenance department. This includes the Instrument and Control, Mechanical, Electrical, and Stores divisions. Member of the Station Operations Review Committee.

7. Chemistry and Health Physics Supervisor

Establish and maintain radiation protection personnel monitoring, radiation and contamination surveillance, chemistry, and radio-chemistry surveillance programs. Radiation protection manager and member of the Station Operations Review Committee.

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## ENGINEERING

### 8,9, Mechanical Engineer & 10

Provides technical support to assure safe and reliable plant operation. Evaluates and prepares minor changes in plant design which are needed to improve reliability or correct deficiencies in the mechanical area. Provides troubleshooting expertise to the Maintenance Department as required.

### 11 & Reactor Engineer 12

To assure safe and economical usage of the uranium fuel by monitoring core performance parameters and to maneuver reactor power (via control rods and flow) in such a way as to maintain core parameters within limits. To communicate with the Nuclear Regulatory Commission and the nuclear fuel supplier in accordance with Federal regulations and fuel warranty requirements. Provides troubleshooting expertise to the Maintenance Department as required.

### 13. Nuclear Engineer

To assure safe and economical usage of the uranium fuel by monitoring core performance parameters and to maneuver reactor power (via control rods and flow) in such a way as to maintain core parameters within limits. To communicate with the Nuclear Regulatory Commission and the nuclear fuel supplier in accordance with Federal regulations and fuel warranty requirements. Provides troubleshooting expertise to the Maintenance Department as required.

### 14. Instrument and Control Engineer

Provides technical support to assure safe and reliable plant operation. Evaluates and prepares minor changes in plant design which are needed to improve reliability or correct deficiencies in the instrumentation area. Provides troubleshooting expertise to the Maintenance Department.

### 15. Electrical Engineer

Provides technical support to assure safe and reliable plant operation. Evaluates and prepares minor changes in plant design which are needed to improve reliability or correct deficiencies in the electrical area. Provides troubleshooting expertise to the Maintenance Department as required.

### 16. Electronics Engineer

Provides technical support to assure safe and reliable plant operation. Evaluates and prepares minor changes in plant design which are needed to improve reliability or correct deficiencies in the electronic area. Provides troubleshooting expertise to the Maintenance Department.

PROFESSIONAL-TECHNICAL

17. Training Coordinator

Coordinate and document all training activities at Cooper Nuclear Station. Provide advice and support to all departments in establishing and implementing training programs. Provide training and licensing support for the licensing of reactor operators. Teach mathematics, atomic and nuclear physics, reactor physics, core thermal hydraulics, radiation protection and various plant systems.

18. Health Physicist

Maintain personnel exposure records, provide plant radiation and contamination surveillance, and monitor radioactive waste shipments. Provide radiation protection training, keep the radiation protection equipment inventory, and monitor work activities in keeping exposures as low as reasonably achievable.

19. Plant Chemist

Maintain chemistry and radiochemistry surveillance programs including isotopic inventories, corrosion protection, and water quality. Monitor plant discharges, reactor water quality and associated process instrumentation.

20. Instrument and Control Supervisor

Supervises the Instrument and Control Department.

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1. Station Superintendent

A. Education & Training

1. BS Chemical Engineering, Kansas State University 1956
2. Completed GE Training Program for Operator Certification at Hanford

B. Experience

1. Nuclear

July 1972	Station Superintendent
Present	Cooper Nuclear Station (BWR)
July 1970	Assistant Station Superintendent
July 1972	Cooper Nuclear Station (BWR)
March 1969	Engineering Supervisor
June 1970	Hanford K Plant
June 1965	Reactor Analyst
March 1969	Hanford K East Plant
September 1963	Shift Supervisor I
June 1965	Hanford B Reactor
August 1960	Process Engineer
September 1963	Hanford F & K East Reactors
January 1957	Special Nuclear Weapons (Nuclear) Officer
March 1960	US Air Force

C. Licenses Held

Certified Nuclear Operator - Hanford

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2. Assistant to the Station Superintendent

A. Education & Training

1. High School Graduate
2. Three month Piqua NPF Training Program
3. Cooper Nuclear Station Cold Licensing Program (BWR)

B. Experience

1. Nuclear

July 1975 - Present	Assistant to the Station Superintendent Cooper Nuclear Station (BWR)
November 1972 - June 1975	Operations Supervisor Cooper Nuclear Station (BWR)
March 1969 - October 1972	Shift Supervisor Cooper Nuclear Station (BWR)
January 1963 - February 1969	Shift Supervisor Piqua NPF, (organic) Piqua, Ohio
September 1960 - January 1963	Reactor Operator Piqua NPF
August 1957 - August 1960	Reactor Operator (OMRE, Idaho Falls, Idaho)
December 1963 - August 1957	Reactor Operator Hanford Works Hanford, Washington

C. Licenses Held

Reactor Operator - Piqua NPF

Senior Reactor Operator - Piqua NPF

Senior Reactor Operator - Cooper Nuclear Station

3. Technical Assistant to the Station Superintendent

A. Education & Training

1. BS in Aerospace Engineering  
U.S. Naval Academy - 1970
2. Master in Business Administration  
University of Delaware - 1976
3. U.S. Naval Nuclear Power School  
Bainbridge, Maryland - 1971
4. U.S. Naval Prototype Training  
Idaho Falls, Idaho - 1970
5. Hot License Program  
Cooper Nuclear Station - 1978
6. G.E. Simulator Training - 1978

B. Experience

1. Nuclear

March 1978 - Present	Technical Assistant to the Station Superintendent Cooper Nuclear Station (BWR)
September 1976 - March 1978	Chemistry & Health Physics Supervisor Cooper Nuclear Station (BWR)
September 1976 - March 1978	Director of Reactor Plant Technology Division, U.S. Naval Nuclear Power School (U.S. Naval Submarine PWR Plant)
February 1972 - August 1973	Division Officer, USS Grant (SSBN631)
July 1970 - January 1972	U.S. Naval Nuclear Training Program for Engineering Officers of the Watch (6 months formal schooling, 6 months prototype operation, 6 weeks submarine school)

C. Licenses Held and Other Qualifications

May 1978 - Present	Senior Reactor Operator Cooper Nuclear Station
March 1972 - March 1976	Engineering Officer of the Watch, U.S. Naval Nuclear Propulsion Program

#### 4. Engineering Supervisor

##### A. Education & Training

1. BS - Mechanical Engineering  
University of Nebraska - 1970
2. MS - Nuclear Engineering  
University of Missouri - 1970
3. U.S. Navy Machinery Repairman "A" School  
San Diego, California - 1957
4. U.S. Naval Nuclear Power School  
Vallejo, California - 1961
5. U.S. Naval Prototype  
Idaho Falls, Idaho - 1961
6. BWR Fundamentals Course at GE Simulator  
Morris, Illinois

##### B. Experience

###### 1. Nuclear

August 1976 - Present	Engineering Supervisor Cooper Nuclear Station (BWR)
July 1972 - July 1976	Maintenance Supervisor Cooper Nuclear Station (BWR)
June 1971 - June 1972	Performance Engineer Cooper Nuclear Station (BWR)
January 1961 - August 1966	U.S. Naval Nuclear Propulsion Program (U.S. Navy Surface Propulsion Plants - PWR)

###### 2. Other

September 1957 - December 1960	Machinery Repairman U.S. Navy
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##### C. Other Qualifications

Professional Engineer (Mechanical) State of Nebraska

Professional Engineer (Nuclear) State of California

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## 5. Operations Supervisor

### A. Education & Training

1. High School Graduate
2. U.S. Navy Machinist's Mate "A" School
3. U.S. Nuclear Power School
4. U.S. Navy DIG Prototype Training
5. KAPL DLGN PWR Design Course
6. LaCrosse Boiling Water Reactor Hot Licensing Program
7. Cooper Nuclear Station Cold Licensing Program

### B. Experience

#### 1. Nuclear

March 1978 - Present	Operations Supervisor Cooper Nuclear Station (BWR)
March 1972 - March 1978	Shift Supervisor Cooper Nuclear Station (BWR)
September 1969 - March 1972	Unit Operator Cooper Nuclear Station (BWR)
October 1967 - August 1969	Reactor Operator LaCrosse BWR LaCrosse, Wisconsin
December 1964 - September 1967	Machinist Mate U.S. Navy USS Truxton (DLGN-35)

#### 2. Other

April 1961 - September 1963	Machinist Mate U.S. Navy USS Kitty Hawk (CVA-63)
August 1959 - April 1961	U.S. Navy

### C. Licenses Held

Reactor Operator - LaCrosse Boiling Water Reactor  
Senior Reactor Operator - Cooper Nuclear Station

6. Maintenance Supervisor

A. Education & Training

1. High School Graduate
2. Diesel Maintenance Training Program
3. Three Month Hallam Nuclear Power Facility Training Program
4. Cooper Nuclear Station Licensing Program (BWR)

B. Experience

1. Nuclear

July 1976 - Present	Maintenance Supervisor Cooper Nuclear Station (BWR)
September 1974 - July 1976	Maintenance Planner & Scheduler Cooper Nuclear Station (BWR)
October 1973 - September 1974	Engineer A Burns & Roe, Inc. Cooper Nuclear Station (BWR)
September 1971 - November 1972	Operations Supervisor Cooper Nuclear Station (BWR)
September 1969 - September 1971	Shift Supervisor Cooper Nuclear Station (BWR)
September 1964 - September 1969	Shift Supervisor Sheldon Station (Sodium-Graphite)
July 1961 - September 1964	Unit Operator Sheldon Station (Sodium-Graphite)
June 1960 - July 1961	Equipment Operator Sheldon Station (Sodium-Graphite)

C. Licenses Held

Reactor Operator - Hallam Nuclear Power Facility

Senior Reactor Operator - Hallam Nuclear Power Facility

7. Chemistry and Health Physics Supervisor

A. Education & Training

1. BS Physical and General Science  
Peru State College - 1966
2. Graduate Courses - Earth Science  
University of South Dakota - 1969
3. U.S. Public Health - Radiological Health Course - 1970
4. Gamma Spectrometer - 3 Short Courses - 1974, 1975, 1977

B. Experience

1. Nuclear

March 1978 - Present	Chemistry and Health Physics Supervisor Cooper Nuclear Station (BWR)
January 1977 - March 1978	Lead Health Physics Technician Cooper Nuclear Station (BWR)
December 1975 - March 1976	Plant Chemist Cooper Nuclear Station (BWR)
December 1972 - December 1975	Lead Chemistry Technician Cooper Nuclear Station (BWR)
July 1970 - December 1972	Chemistry Technician Cooper Nuclear Station (BWR)

8. Mechanical Engineer

A. Education

1. BS in Mechanical Engineering  
Michigan State University - 1974

B. Experience

1. Nuclear

October 1976 -	Mechanical Engineer
Present	Cooper Nuclear Station (BWR)

June 1974 -	Mechanical Test Engineer
September 1976	New Port News Shipbuilding and Drydock Company (Naval PWR's)

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9. Mechanical Engineer

A. Education

1. BS in Mechanical Engineering  
University of Kansas - 1977

B. Experience

1. Nuclear

June 1977 -  
Present

Mechanical Engineer  
Cooper Nuclear Station (BWR)

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10. Mechanical Engineer

A. Education

1. B.S. in Nuclear Engineering  
Kansas State University - 1979

B. Experience

1. Nuclear

June 1979 -  
Present

Mechanical Engineer  
Cooper Nuclear Station (3WR)

11. Reactor Engineer

A. Education

1. BS in Applied Math/Physics  
Kansas State College - 1966
2. GE Station Nuclear Engineer's Course  
San Jose, California - 1976
3. GE Simulator  
Morris, Illinois - 1978

B Experience

1. Nuclear

October 1974 - Present	Reactor Engineer Cooper Nuclear Station (BWR)
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January 1970 - August 1974	Computer Specialist General Electric Company San Jose, California
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May 1968 - January 1970	Computer Analyst General Electric Company San Jose, California
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2. Other

April 1966 - April 1968	Computer Programmer U.S. Army
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12. Reactor Engineer

A. Education

1. B.S. in Nuclear Engineering  
Kansas State University - 1973
2. G.E. BWR Simulator Course  
Morris, Illinois - 1977
3. G.E. Station Nuclear Engineer's Course  
San Jose, California - 1978

B. Experience

1. Nuclear

October 1976 -	Reactor Engineer
Present	Cooper Nuclear Station (BWR)

June 1974 -	Nuclear Engineer
October 1976	Mare Island Naval Shipyard
	Vallejo, California

2. Other

June 1973 -	Environmental Engineer
June 1974	Kansas State Department of Health

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13. Nuclear Engineer

A. Education

1. BS in Nuclear Engineering  
Kansas State University - 1977
2. GE Station Nuclear Engineer's Course  
San Jose, California - 1978

B. Experience

1. Nuclear

June 1977 -  
Present

Nuclear Engineer  
Cooper Nuclear Station (BWR)

14. Instrument and Control Engineer

A. Education & Training

1. Three years in Engineering Major  
Central Missouri University - 1961 - 1964
2. 1 year in Mechanical Engineering  
Missouri University - 1964
3. U.S. Navy Electronics Technician "A" School - 1966
4. U.S. Naval Nuclear Power School - 1967
5. U.S. Naval Nuclear Prototype Training - 1967
6. U.S. Navy Electronics Technician "B" School - 1970

B. Experience

1. Nuclear

March 1978 - Present	I&C Engineer Cooper Nuclear Station (BWR)
July 1974 - March 1978	Leading Petty Officer U.S. Naval Prototype West Milton, New York (U.S. Naval PWR)
December 1970 - May 1974	Electronics Technician USS Thomas Jefferson (USSBN618)
October 1967 - July 1969	Instructor U.S. Naval Nuclear Prototype West Milton, New York
April 1967 - October 1967	Student U.S. Naval Nuclear Prototype West Milton, New York
September 1966 - March 1967	U.S. Naval Nuclear Power School

2. Other

September 1967 - July 1970	U.S. Navy Electronics Technician "B" School
June 1965 - March 1966	U.S. Navy Electronics Technical "A" School

C. Other Qualifications

Engineering Watch Supervisor Qualification  
U.S. Navy - 1972 - 1978

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15. Electrical Engineer

A. Education

1. BS in Electrical Engineering  
University of Nebraska - 1960

B. Experience

1. Nuclear

August 1969 -	Electrical Engineer
Present	Cooper Nuclear Station (BWR)

2. Other

August 1960 -	Electrical Engineer
August 1969	Tennessee Valley Authority

C. Other Qualifications

Professional Engineer (Electrical) - Nebraska

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16. Electronics Engineer

A. Education

1. U.S. Navy Electrician "A" School - 1968
2. BS in Electronic Engineering Technology  
University of Nebraska at Omaha - 1975

B. Experience

1. Nuclear

March 1978 -	Electronics Engineer
Present	Cooper Nuclear Station (BWR)

2. Other

December 1974 -	Electronics Engineer
March 1978	Valmont Industries, Inc. & Lindsay Manufacturing Company

August 1971 -	Construction Electrician
December 1974	

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17. Training Coordinator

A. Education & Training

1. High School Graduate
2. One year post-graduate high school
3. BS in Electrical Engineering  
Michigan Technological University - 1945
4. MS in Electrical Engineering  
Michigan Technological University - 1950
5. Twelve-week Basic Nuclear Engineering Summer Institute  
Brookhaven National Laboratory  
Upton, New York - 1956
6. Ten-week Argonaut Reactor Summary Institute  
Argonne National Laboratory  
Argonne, Illinois - 1957
7. Eight-week Reactor Instrumentation and Control Summer Institute  
Argonne National Laboratory  
Argonne, Illinois - 1958
8. Eight-week Specialized Nuclear Studies Summer Institute  
Argonne National Laboratory  
Argonne, Illinois - 1959
9. Seven-day BWR Fundamentals Course  
GE BWR Simulator  
Morris, Illinois - 1973

B. Other

1. Nuclear

August 1972 - Present	Training Coordinator Cooper Nuclear Station (BWR)
July 1968 - June 1972	Manager Educational Nuclear Reactor Laboratories Argonne, Illinois
February 1960 - July 1968	Associate Electrical Engineer, Educational Nuclear Reactor Laboratories Argonne National Laboratory Argonne, Illinois

2. Other

September 1945 - February 1960	Instructor to Associate Professor Department of Physics Michigan Technological University Houghton, Michigan
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18. Health Physicist

A. Education & Training

1. BS Math  
Kearney State College - 1971
2. U.S. Public Health - Radiological Health Course - 1971
3. Atomic Absorption Analysis Course - 1975

B. Experience

1. Nuclear

June 1979 - Present	Health Physicist Cooper Nuclear Station (BWR)
May 1976 - June 1979	Plant Chemist Cooper Nuclear Station (BWR)
December 1975 - May 1976	Lead Chemistry Technician Cooper Nuclear Station (BWR)
August 1971 - December 1975	Chemistry Technician Cooper Nuclear Station (BWR)

19. Plant Chemist

A. Education & Training

1. BS in Physical Science  
Kearney State College - 1968
2. U.S. Public Health - Radiological Health Course - 1971
3. Atomic Absorption Analysis Course - 1975

B. Experience

1. Nuclear

June 1979 - Present	Plant Chemist Cooper Nuclear Station (BWR)
June 1976 - June 1979	Lead Chemistry Technician Cooper Nuclear Station (BWR)
October 1972 - June 1976	Chemistry Technician Cooper Nuclear Station (BWR)
July 1970 - October 1972	Health Physics Technician Cooper Nuclear Station (BWR)

20. Instrument & Control Supervisor

A. Education & Training

1. High School Graduate
2. Forty-two week Army Electronics Course - 1957
3. Several Instrument Short Courses by General Electric  
Richland, Washington - 1960 - 1961
4. Eleven Week G.E. Nuclear Instrumentation Course - 1968
5. BWR Fundamentals Course at G.E. Simulator  
Morris, Illinois - 1971

B. Experience

1. Nuclear

February 1972 - Present	Instrument & Control Supervisor Cooper Nuclear Station (BWR)
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March 1971 - February 1972	Assistant Shift Engineer G.E. Startup Crew at Dresden 3
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March 1968 - March 1971	Field Engineer Dresden 2 & 3 Project
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July 1960 - March 1968	Instrument Technician Hanford Reactor 5
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2. Other

September 1956 - March 1960	Radar Technician U.S. Army
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TECHNICAL RESOURCES

OFFSITE (Nonplant Staff)

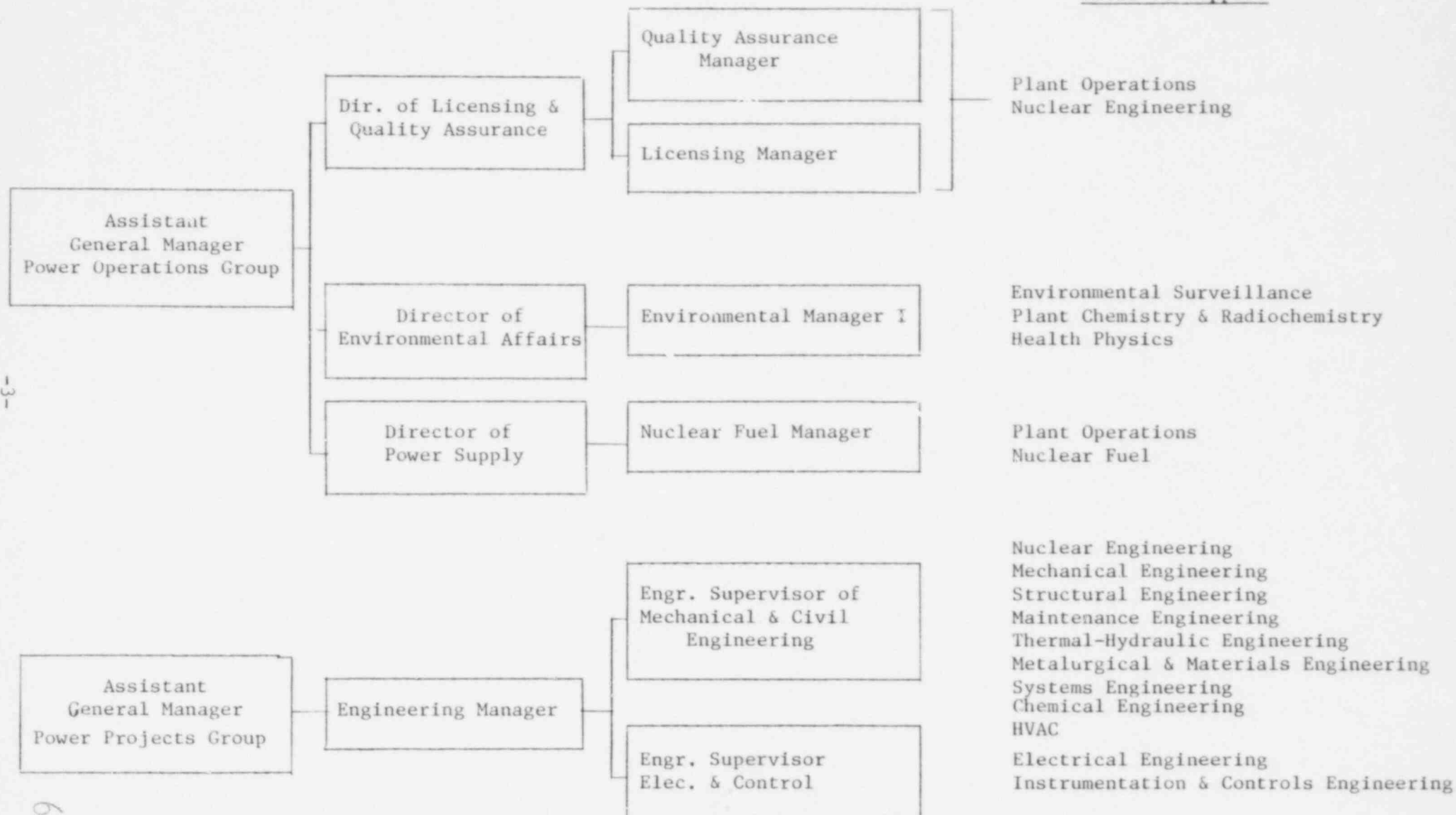
TECHNICAL SUPPORT AGREEMENTS FOR COOPER NUCLEAR STATION

Company	Type & Extent of Support	Availability (work order, phone call)	Authority to Allocate Resources	Contract Expiration
NUS Corporation	Technical and professional licensing and related services as required	Phone Call (<\$5K) Phone Call & Work Order (>\$5K)	Director of Licensing and QA or Licensing Manager	May 1982
Energy Incorporated	Safety and other analysis, general engineering, plant modifications, design review and evaluation, metallurgical assistance, and other services concerned with nuclear power plants to the extent specifically requested	Phone Call	NPPD Management	Indefinite
Stone & Webster Engineering Corp.	Design, engineering, and construction management services	Not Specified	Designated Project Manager (Station Superintendent)	When terminated by either party
EDS Nuclear	Design, engineering, and consultation services as requested	Phone Call	Engineering Manager	Indefinite
Burns & Roe	General Engineering	Phone Call	Engineering Manager	Indefinite
Nutech	Engineering, technical, and other services as requested	Phone Call	NPPD Management	Automatic Annual Extensions unless terminated
Kaiser Engineers, Inc.	Technical and professional consulting services such as design engineering, detail design, construction management or construction services	Phone Call	Engineering Manager	Indefinite
Chicago Bridge & Iron Company	Structural analysis, fabrication techniques, welding techniques, erection techniques for modifications at CNS	Phone Call (Work Order not Specified)	NPPD Management 653 311	Indefinite

Company	Type & Extent of Support	Availability (work order, phone call)	Authority to Allocate Resources	Contract Expiration
General Electric	Fuel fabrication and related services including technical core management consultation services	Phone Call (Work Order not Specified)	NPPD Management	approx. 1989
Marshall Maintenance	Nuclear power plant maintenance services	Phone Call	CNS Station Superintendent or his alternate	Indefinite
Teledyne Isotopes	Complete radiological environmental study program and sample analysis as requested	Phone Call	Environmental Manager	Indefinite
Hazelton Environmental Sciences	Complete meteorological monitoring program	Phone Call	Environmental Manager	Indefinite

OFFSITE CNS TECHNICAL SUPPORT STAFF  
ORGANIZATION CHART

Areas of Support



Technical Staff (Offsite)

	Quality Assurance	Licensing	Environmental	Nuclear Fuel Title of Subunit (Mgr. Maintenance)	Engineering Title of Subunit (Project Mgr.-Nuclear)
1. Total Number of Personnel	1 Manager 4 Engineers	1 Manager	1 Manager 3 Professional	1 Manager 1 Engineer	1 Manager 2 Supervisors 11 Engineers
2. Education Background	3 BS Electrical	1 BS Mechanical 1 MS Nuclear	1 BS Zoology/Chemistry 2 BS Biology 1 MS Zoology	1 BS Nuclear 1 MS Nuclear	1 BS Nuclear 4 BS Electrical 7 BS Mechanical 1 MS Chemical 1 MS Nuclear
3. Technical Experience (in man-years)					
a. Engineering					
1) Nuclear Power Field	43	13	29	25	41
2) Engineering Management	10			10	51
3) Total Utility Experience	41	5	41	10	47
b. Other	2 Electronics 13 Welding Techniques 20 NDE		20 Health Physics 41 Environmental 6 Chemistry/Radiochemistry		
4. Licenses Held	1 SRO 1 Reg. Nuclear Eng.	1 RO	1 SRO	1 RO	1 RO 1 Reg. Nuclear Eng. 3 Reg. Mechanical Eng.