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TORREY PINES TECHNOLOGY  
A DIVISION OF GENERAL ATOMIC COMPANY

INDEPENDENT QUALITY ASSURANCE EVALUATION  
OF PVNGS UNITS 1, 2, AND 3

PRESENTATION TO NRC

BY

TORREY PINES TECHNOLOGY

JUNE 29, 1982

8502070169 840823  
PDR FOIA  
BERNABEB4-524 PDR



## QUALIFICATIONS OF GENERAL ATOMIC COMPANY

- O BUSINESS EXPERIENCE
  - ACTIVE IN NUCLEAR POWER INDUSTRY SINCE 1958
  - FULL RANGE OF NSSS AND SUPPLIER CAPABILITIES TO THE NUCLEAR INDUSTRY
- O BREADTH OF TECHNICAL CAPABILITIES
  - ALL MAJOR ENGINEERING DISCIPLINES
  - VERIFIED AND STATE-OF-THE-ART COMPUTER CODES
  - ASME CERTIFICATIONS
  - APPLIED EXPERIENCE
- O DEPTH OF CAPABILITIES
  - TOTAL STAFF OF 1920
  - 916 DEGREEED PROFESSIONALS, INCLUDING 485 WITH ADVANCED DEGREES
- O REQUIRED INFRASTRUCTURE
  - FIRST NRC ACCEPTED QUALITY ASSURANCE PROGRAM (1974)
  - DOCUMENT CONTROL CAPABILITY (SINCE 1970)
- O PREVIOUS EXPERIENCE ON VERIFICATION PROGRAMS



## INDEPENDENCE OF GENERAL ATOMIC COMPANY

### 0 FINANCIAL

- LESS THAN 1% REVENUE FROM ARIZONA PUBLIC SERVICE COMPANY RELATED CONTRACTS
- LESS THAN 5% REVENUE FROM ALL PARTICIPANTS, BECHTEL POWER COMPANY, AND COMBUSTION ENGINEERING

### 0 CORPORATE INTEGRITY

- COMPANY COMPLETELY INDEPENDENT OF ANY OF THE PROJECT PARTICIPANTS IN THE PVNGS PROJECT
- MAINTAIN CORPORATE IMAGE OF PARENT COMPANIES

### 0 NO SUBSTANTIVE CONFLICT OF INTEREST OF PERSONNEL

- NO PAST WORK EXPERIENCE FOR KEY PERSONNEL IN DESIGN, CONSTRUCTION OR QUALITY ASSURANCE AT PVNGS UNITS 1, 2, AND 3
- NO IMMEDIATE FAMILY EMPLOYED BY ANY OF THE PROJECT PARTICIPANTS IN THE PVNGS PROJECT
- NO SIGNIFICANT OWNERSHIP OR CREDITOR INTEREST IN ANY OF THE PROJECT PARTICIPANTS IN THE PVNGS PROJECT
- COMPLIANCE ASSURED THROUGH SECURITY QUESTIONNAIRE



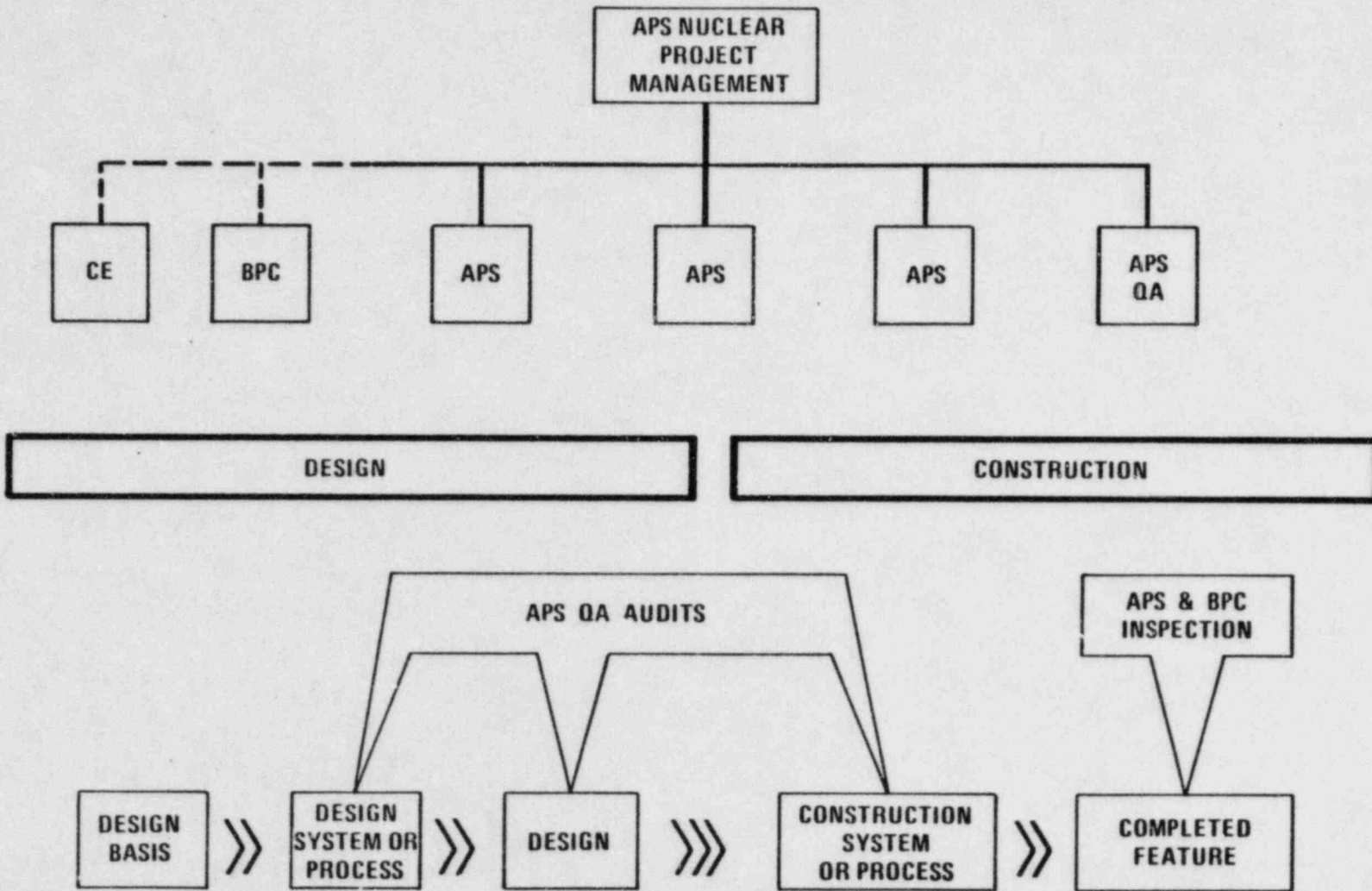
INDEPENDENT QUALITY ASSURANCE EVALUATION  
OF PVNGS UNITS 1, 2, AND 3

SUMMARY OF TASKS

TASK	TITLE
A	EVALUATION OF PROJECT MANAGEMENT ORGANIZATION
B	EVALUATION OF MANAGEMENT'S POLICIES TOWARD QUALITY ASSURANCE
C	EVALUATION OF QUALITY ASSURANCE ACTIVITIES
D	DESIGN VERIFICATION
E	CONSTRUCTION VERIFICATION
F	PROCESSING OF FINDINGS
G	REPORTS



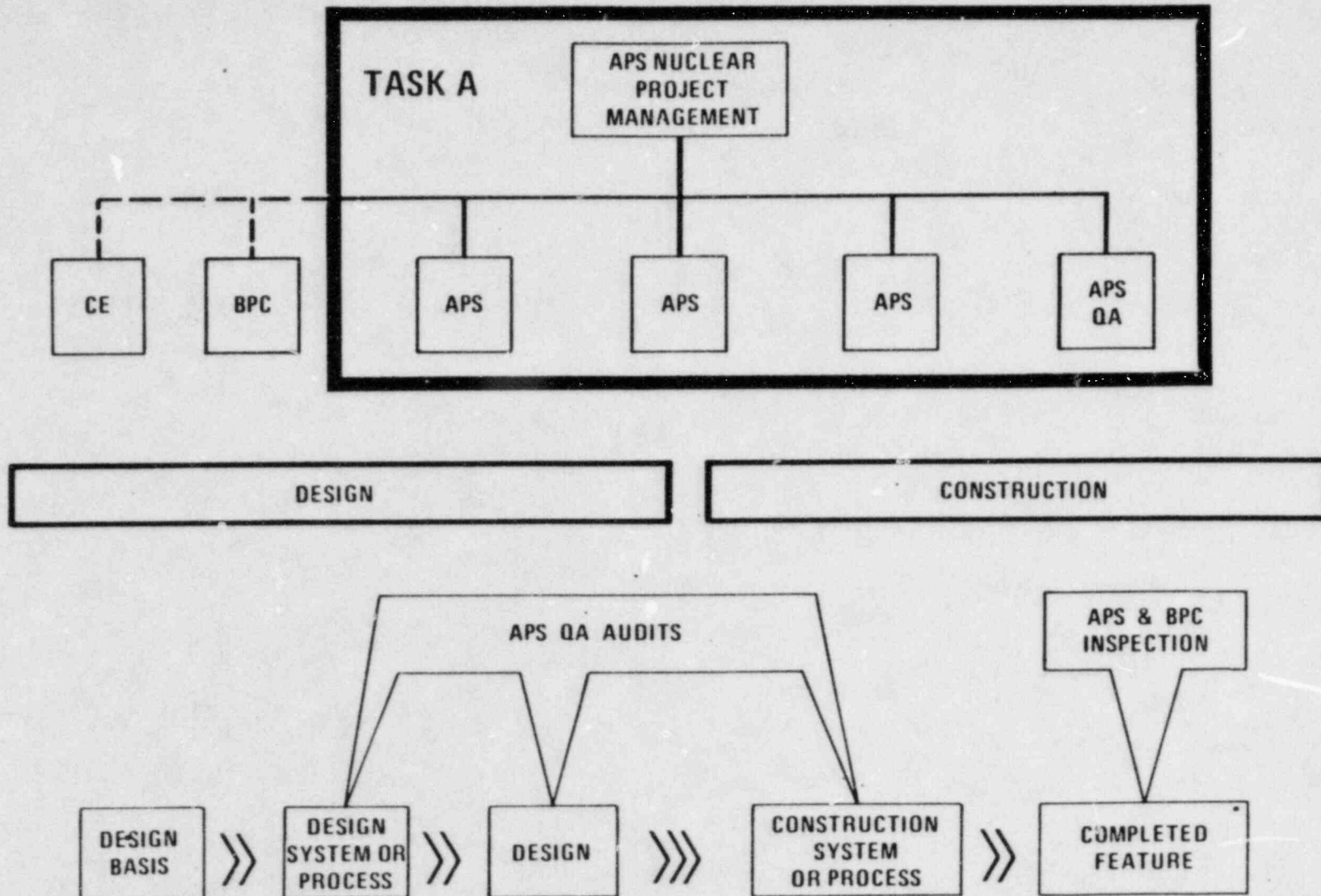
# BASIC PROGRAM STRUCTURE





TORREY PINES TECHNOLOGY  
A DIVISION OF GENERAL ATOMIC COMPANY

## BASIC PROGRAM STRUCTURE

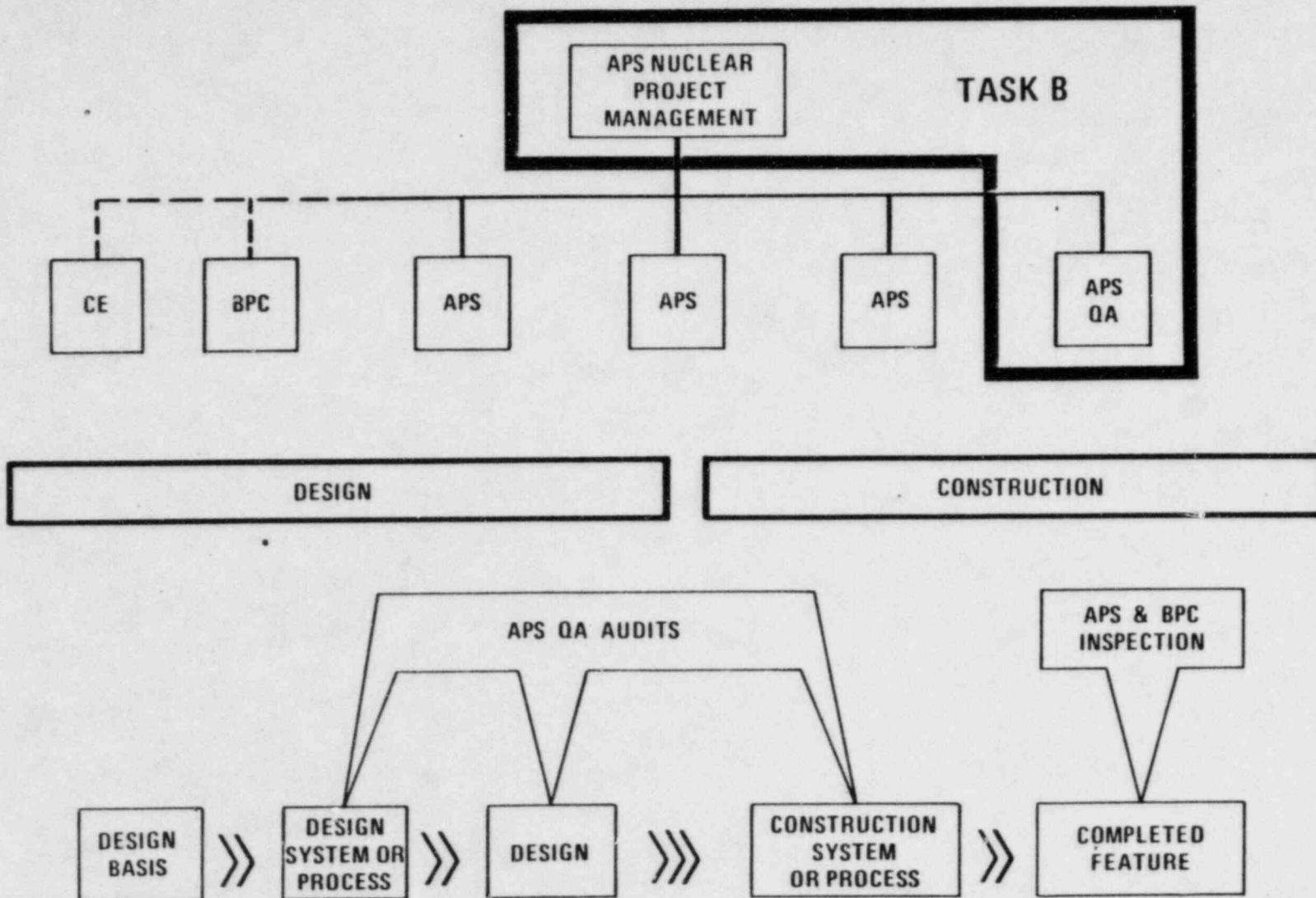


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JUNE 29, 1982



TORREY PINES TECHNOLOGY  
A DIVISION OF GENERAL ATOMIC COMPANY

## BASIC PROGRAM STRUCTURE

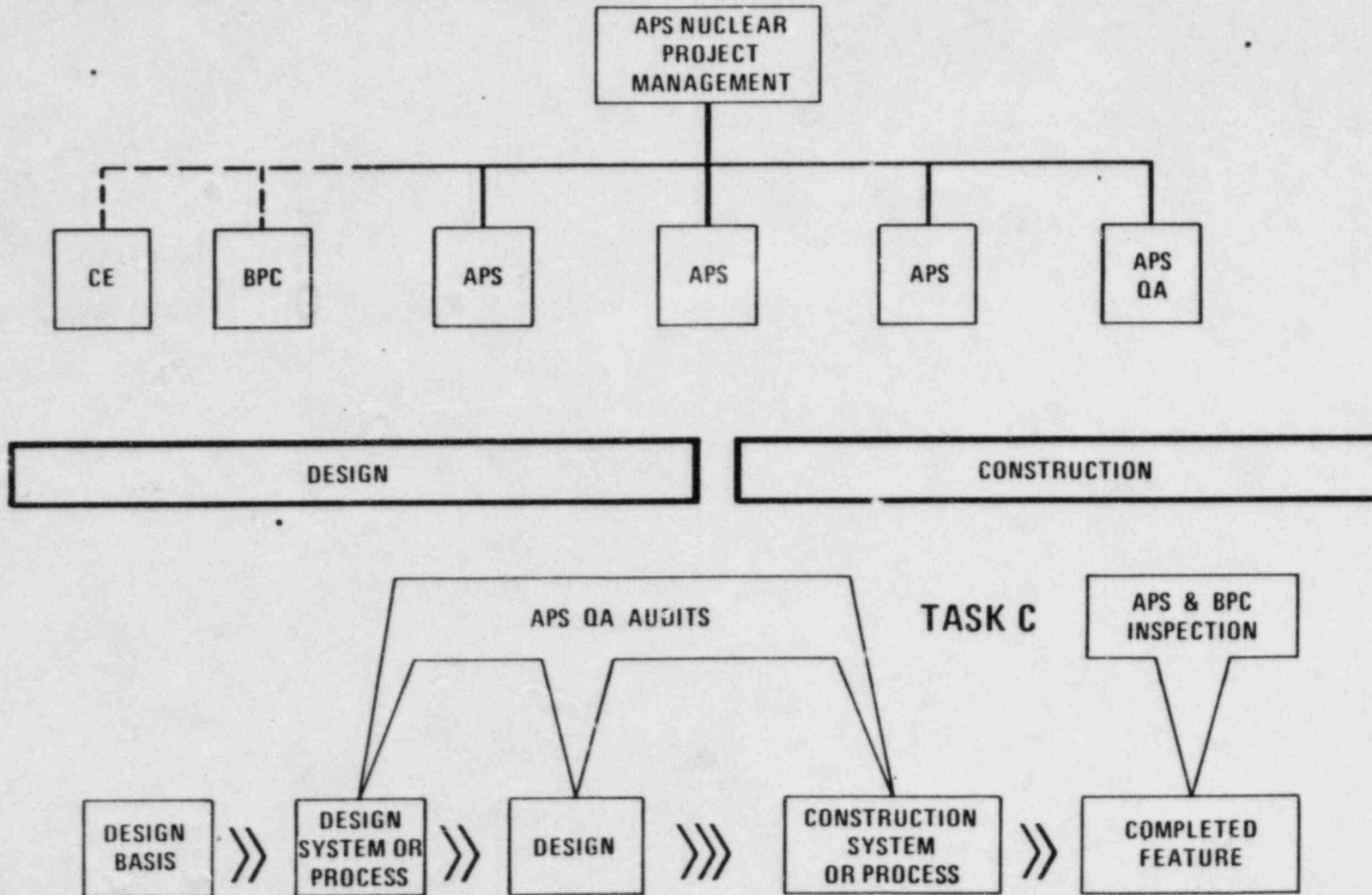


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A DIVISION OF GENERAL ATOMIC COMPANY

## BASIC PROGRAM STRUCTURE



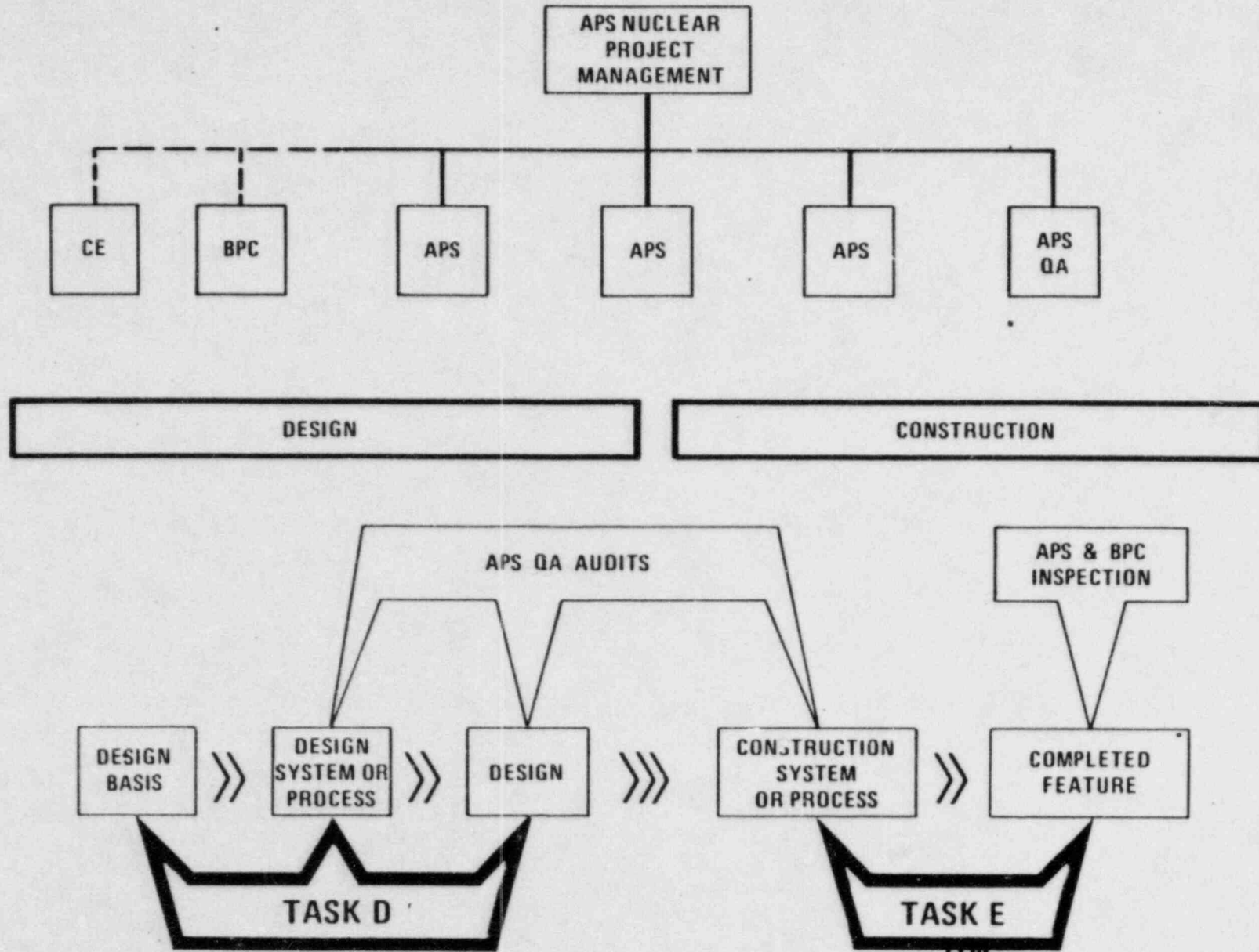
GLW

JUNE 29, 1982





# BASIC PROGRAM STRUCTURE





TASK A

EVALUATION OF PROJECT MANAGEMENT  
ORGANIZATION

OBJECTIVE

EVALUATE APS NUCLEAR PROJECT  
MANAGEMENT ORGANIZATION STRUCTURE,  
OPERATION, AND CONTRACTOR  
INTERFACING

ACTIVITY

REVIEW PSAR SECT. 17, AND APS QA  
MANUAL

INTERVIEW KEY INDIVIDUALS

REVIEW MANUALS AND PROCEDURES

EVALUATE LINES OF COMMUNICATION,  
RESPONSIBILITY, AND AUTHORITY

EVALUATE PROJECT POLICIES FOR  
ALL PROJECT ACTIVITIES

EVALUATE INSIDE AND OUTSIDE  
INTERFACES

CRITERIA

SECTION 17.1 OF NUREG 800  
10CFR50, APPENDIX B  
ANSI N45.2



<u>TASK B:</u>	MANAGEMENT POLICIES TOWARD QA
<u>OBJECTIVE</u>	EVALUATE APS MANAGEMENT POLICIES WHICH AFFECT QA
<u>ACTIVITY</u>	REVIEW PSAR, SECT. 17 AND APS QA MANUAL  INTERVIEW KEY PERSONNEL  REVIEW MANUALS AND PROCEDURES  EVALUATE QA DEPARTMENT STATUS AND ACCESS TO UPPER MANAGEMENT  EVALUATE QA INVOLVEMENT IN PROJECT ACTIVITIES  EVALUATE UPPER MANAGEMENT INVOLVEMENT IN QA ACTIVITIES AND LICENSING
<u>CRITERIA</u>	SECTION 17.1 OF NUREG 800 ANSI N45.2 10CFR50, APPENDIX B



TASK C

QUALITY ASSURANCE ACTIVITIES

OBJECTIVE

EVALUATE ELEMENTS OF APS QA PROGRAM,  
THEIR DEFINITION AND IMPLEMENTATION

ACTIVITY

REVIEW MANUALS AND PROCEDURES

EVALUATE APS AUDIT PROGRAM

EVALUATE APS/BPC PROGRAM FOR VENDOR  
EVALUATION

EVALUATE APS/BPC PROGRAM FOR  
CONSTRUCTION INSPECTION

EVALUATE APS PROGRAM FOR REPORTING  
DEFICIENCIES AND CORRECTIVE ACTIONS

CRITERIA:

PSAR, SECTION 17  
10CFR50, APPENDIX B  
10CFR21  
10CFR50.55  
N45.2 (DAUGHTER SERIES)



TASK D

DESIGN VERIFICATION

OBJECTIVE

REVIEW COMPLIANCE OF DESIGN RELATED QA PROCEDURES, THEIR IMPLEMENTATION AND CONTROL, WITH REQUIREMENTS

REVIEW DESIGN OF SELECTED SAFETY RELATED STRUCTURES, SYSTEMS AND COMPONENTS

ACTIVITY

- D1: REVIEW APS, BPC AND CE DESIGN CONTROL SYSTEM.
- D2: REVIEW IMPLEMENTATION OF DESIGN CONTROL SYSTEM
- D3: PERFORM DETAILED DESIGN REVIEW OF SELECTED PORTION OF SAFETY SYSTEMS AND STRUCTURE

CRITERIA

PSAR, QA PROGRAM  
10CFR50, APPENDI...  
ANSI N45.2  
ANSI N45.2.11



DOCUMENT REVIEW  
FOR COMPLIANCE WITH DESIGN PROCEDURES

- 0 ALL DOCUMENTS FROM SUBTASK D3
  
- 0 ADDITIONAL DOCUMENTS FOR AT LEAST 30 SAFETY RELATED ITEMS FROM EQUIPMENT CLASSIFICATION LIST IN PSAR
  
- 0 DOCUMENTS BY BPC, CE, AND APS (IF ANY)
  
- 0 CALCULATIONS, DRAWINGS, SPECIFICATIONS, MEMOS, CHANGE NOTICES, AND CODE VERIFICATION REPORTS
  
- 0 COVER CALENDAR PERIOD OF DESIGN EFFORT AND ALL PHASES OF DESIGN PROCESS



CRITERIA FOR REQUIRING  
INDEPENDENT ANALYSIS

- 0 JUDGEMENT - USING ANSI N45.2.11, SECTION 6.3.1 IS NOT ADEQUATE
  
- 0 ORIGINAL ANALYSIS METHOD APPEARS UNREASONABLE
  
- 0 POTENTIAL FINDING IMPACT CANNOT BE JUDGED



## CRITERIA FOR REVIEW FEATURE SELECTION

- O INCLUDE MECHANICAL COMPONENTS, CONTROLS, AND PIPING IN SYSTEM PORTION
- O INCLUDE DESIGN INTERFACES BETWEEN BPC AND CE
- O INCLUDE FEATURES REPRESENTATIVE OF SAFETY RELATED PLANT PORTIONS
- O INCLUDE FEATURES THAT COVER IDENTIFIED NRC CONCERNS
- O INCLUDE AT LEAST ONE MAJOR NSSS COMPONENT
- O INCLUDE RANGE OF DESIGN METHODS





## TENTATIVE FEATURE SELECTION

### PORTIONS OF STRUCTURES

- 0 AUX BUILDING EQUIPMENT SUPPORTS
- 0 CONTAINMENT BUILDING PRESSURIZER SUPPORT AND ONE PIPE PENETRATION

### PORTIONS OF SAFETY INJECTION, SHUTDOWN COOLING AND CONTAINMENT SPRAY SYSTEM

- 0 SPRAY CHEMICAL STORAGE TANK
- 0 CONTAINMENT SPRAY PUMP
- 0 SHUTDOWN COOLING HEAT EXCHANGER
- 0 PIPING
- 0 VALVES
- 0 MOTOR AND POWER SUPPLY
- 0 INSTRUMENTS AND RELATED PANEL
- 0 PIPE SUPPORTS AND SNUBBERS
- 0 CABLE RACEWAYS

### PORTIONS OF OTHER SYSTEMS

- 0 PRESSURIZER
- 0 REFUELING WATER TANK



## TYPICAL ELEMENTS OF TECHNICAL REVIEW

- 0 DESIGN BASES
- 0 ADEQUACY OF DESIGN SPECIFICATION
- 0 APPLIED LOADS
- 0 MATHEMATICAL MODEL USED FOR ANALYSIS
- 0 INPUT TO ANALYSIS
- 0 VALIDATION OF COMPUTER CODES USED
- 0 OUTPUT OF ANALYSIS
- 0 COMPLIANCE WITH APPROVED STANDARDS



TASK E

CONSTRUCTION VERIFICATION

OBJECTIVE

REVIEW COMPLIANCE OF CONSTRUCTION RELATED QA PROCEDURES, THEIR IMPLEMENTATION AND CONTROL, WITH REQUIREMENTS

DETERMINE THAT CONSTRUCTION OF SELECTED SAFETY SYSTEM PORTIONS IS IN ACCORDANCE WITH DESIGN DOCUMENTATION

ACTIVITY

- E1: EVALUATE APS AND BPC FIELD DESIGN CHANGE CONTROL
- E2: EVALUATE APS AND BPC AS-BUILT DRAWING CONTROL
- E3: PHYSICAL VERIFICATION (WALKDOWN)

CRITERIA

PSAR, QA PROGRAM  
10CFR50, APPENDIX B  
ANSI N45.2  
ANSI N45-2.11



## TYPICAL ELEMENTS OF CONSTRUCTION VERIFICATION

- O INSTALLATION OF COMPONENTS IN ACCORDANCE WITH DESIGN DOCUMENTS
- O INSTALLATION OF SYSTEM IN ACCORDANCE WITH P&I DIAGRAMS
- O INSTALLATION OF PIPING IN ACCORDANCE WITH DRAWINGS & ISOMETRICS
- O COMPLIANCE OF FUNCTIONAL RATING WITH DESIGN REQUIREMENTS AND SPECIFICATIONS
- O COMPLIANCE WITH DESIGN DETAIL



TORREY PINES TECHNOLOGY  
A DIVISION OF GENERAL ATOMIC COMPANY

## CONSTRUCTION VERIFICATION

UNIT 1	WALKDOWN 100% OF ITEMS SELECTED
UNIT 2	WALKDOWN OF 25% OF ITEMS SELECTED
UNIT 3	WALKDOWN OF 10% OF ITEMS SELECTED



TASK E

PROCESSING OF FINDINGS

OBJECTIVE

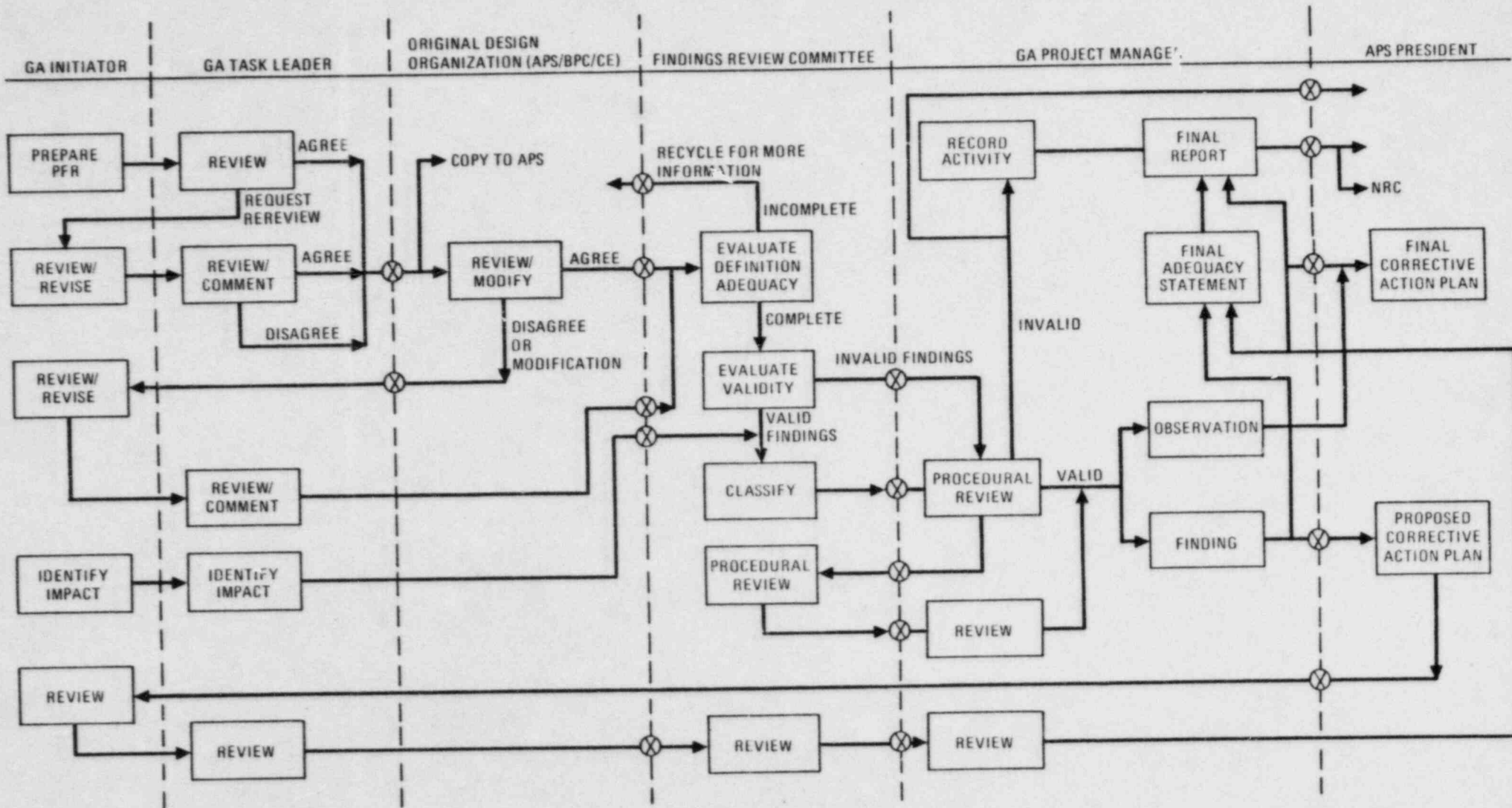
REVIEW AND DOCUMENT DISPOSITION  
OF ALL POTENTIAL FINDINGS

ACTIVITY

COMMITTEE REVIEW AND POTENTIAL FINDING  
DISPOSITION



PROCEDURE FOR PROCESSING FINDINGS





TASK G

REPORTS

OBJECTIVE

PREPARE PERIODIC STATUS REPORTS  
AND A FINAL EVALUATION REPORT

ACTIVITY

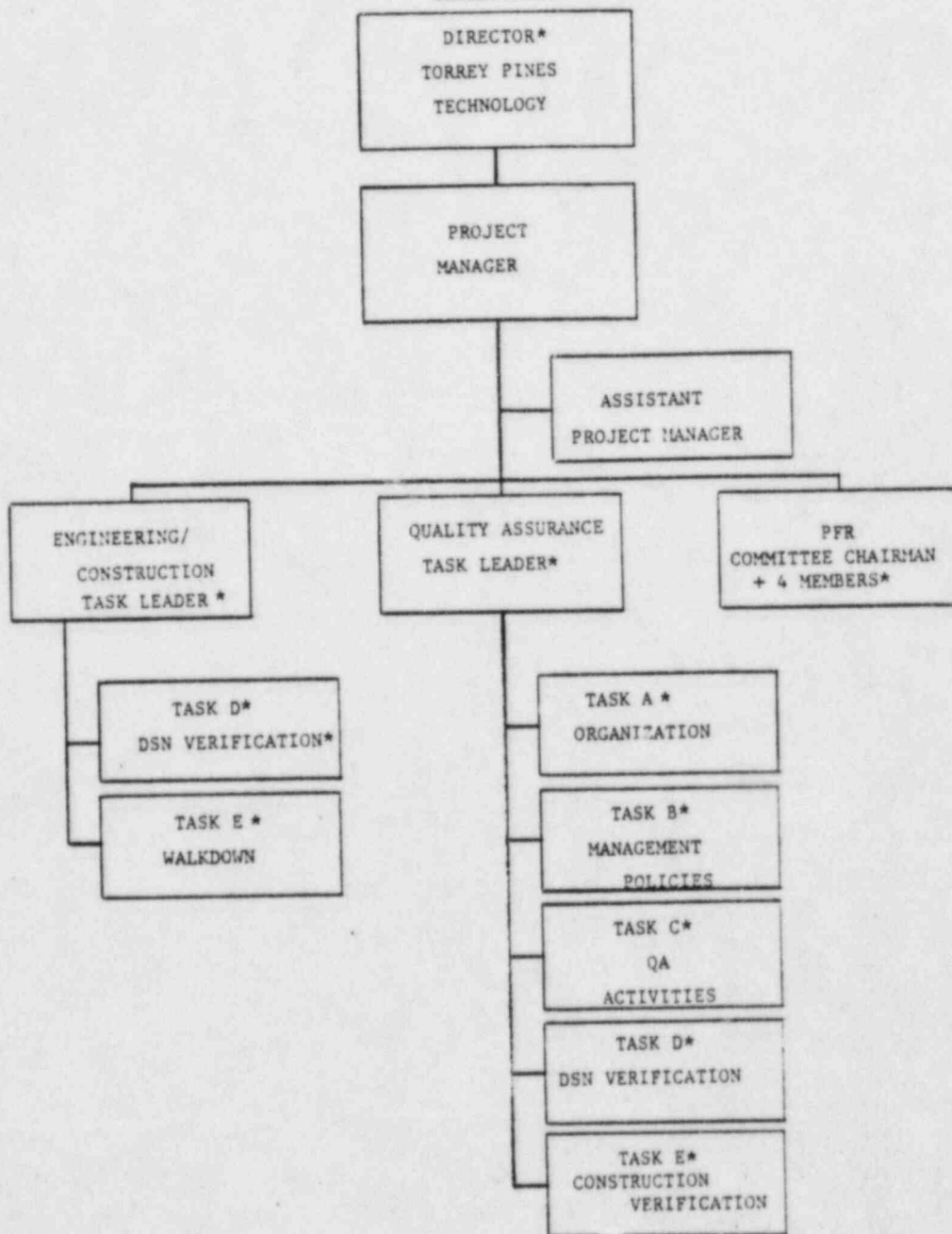
ISSUE BIWEEKLY REPORT

PREPARE FINAL REPORT





INDEPENDENT QUALITY ASSURANCE EVALUATION OF  
PALO VERDE NUCLEAR GENERATING STATION UNITS 1, 2, and 3  
ORGANIZATION



\* Participated in SCE Review



INDEPENDENT QUALITY ASSURANCE  
EVALUATION OF PALO VERDE NUCLEAR  
GENERATING STATION UNITS 1, 2, AND 3

SCHEDULE

ISSUE PROGRAM PLAN	JUNE 8, 1982
NRC REVIEW OF PLAN	JUNE 29, 1982
COMPLETE PROCEDURES	JULY 2, 1982
COMPLETE MANAGEMENT EVALUATION TASKS A & B	AUGUST 7, 1982
COMPLETE QA EVALUATION TASK C	SEPT. 10, 1982
COMPLETE DESIGN VERIFICATION TASK D	SEPT. 4, 1982
COMPLETE CONSTRUCTION VERIFICATION TASK E	OCT. 1, 1982
FINAL REPORT	OCT. 15, 1982

*Proposed*

**NRC STAFF REDUCES CIVIL PENALTY AGAINST ARIZONA PUBLIC SERVICE FOR PREVIOUSLY CITED QUALITY ASSURANCE VIOLATION AT PALO VERDE**

*Proposed*

*APS*

The Nuclear Regulatory Commission staff has reduced by 50 percent a civil penalty against the Arizona Public Service Company for violations at the Palo Verde Nuclear Generating Station that were identified during a special NRC construction assessment inspection at the plant last fall.

In a *April* March xx letter to APS, the NRC staff said it is imposing a \$20,000 fine for the violation, instead of the \$40,000 proposed in December, because of the company's "prompt and extensive corrective action."

Based on the results of a special team inspection conducted at Palo Verde Unit 1 between September 6 and November 1, 1983, the NRC Region V office proposed a \$40,000 civil penalty against the company on December 12 for a breakdown in its quality assurance program. Under NRC procedures, APS was given 30 days to either pay the fine or formally submit a protest. The utility filed its response on January 31, having been given an extension of time, substantially denying the alleged violations.

*[Handwritten signature]*

Richard C. DeYoung, Director of the NRC's Office of Inspection and Enforcement in Bethesda, MD, today notified the company of his finding that the violations did occur as cited by the staff, but that the fine ~~should be~~ reduced by 50 percent because of the prompt and extensive corrective actions identified in the company's January 31 response. As examples of the corrective actions, DeYoung cited the company's independent assessment following the NRC findings, suspension of startup work at the company's initiative, a management reorganization and the "unusually prompt and extensive" direct involvement by senior corporate management. The company now has 30 days to either pay the \$20,000 fine or request a hearing before an NRC administrative judge.

*Proposed*

*law*

The violation resulted from four examples of a breakdown in the quality assurance program: (1) caps had been installed on pressure sensing lines in the containment building with no procedure to assure that they would have been removed prior to operation of the reactor; (2) no record of a disconnected manual operator on a valve in the High Pressure Safety Injection System; (3) no record of a mispositioned valve indicator on a similar HPSI valve; and (4) bolts missing from the frames of six motor control centers.

In its December 12 letter, the NRC staff also proposed another \$40,000 fine against APS for improperly signed electrical installation records at the plant. The company requested and was granted an extension of time for response to that civil penalty until the NRC Office of Investigations report on the matter is released. It is not known when that report will be released. Therefore, today's action does not address that proposed fine.

ARIZONA PUBLIC SERVICE COMPANY  
INDEPENDENT DESIGN VERIFICATION

A G E N D A

- INTRODUCTION
- PURPOSE OF MEETING  
E. E. VAN BRUNT, JR.  
VICE PRESIDENT, NUCLEAR  
PROJECTS MANAGEMENT
- SENIOR MANAGEMENT INVOLVEMENT  
IN PALO VERDE  
T. G. WOODS, JR.  
EXECUTIVE VICE PRESIDENT,  
OPERATIONS  
CHIEF OPERATING OFFICER
- PROJECT ORGANIZATION AND  
EXECUTION  
E. E. VAN BRUNT, JR.
- QUALITY ASSURANCE PROGRAM  
AND IMPLEMENTATION  
J. A. ROEDEL  
CORPORATE QUALITY  
ASSURANCE MANAGER
- INDEPENDENT QUALITY ASSURANCE  
EVALUATION  
G. L. WESSMAN, DIRECTOR  
TORREY PINES TECHNOLOGY  
W. A. SIMON  
PROJECT MANAGER
- SUMMARY  
T. G. WOODS, JR.
- DISCUSSION

602-271-7900  
271-2121

ARIZONA PUBLIC SERVICE COMPANY  
PURPOSE OF MEETING

- EVOLUTION OF PALO VERDE
- ORGANIZATION PHILOSOPHY
- MANAGEMENT PHILOSOPHY
- PROJECT IMPLEMENTATION
- QUALITY ASSURANCE PROGRAM AND RESULTS
- INDEPENDENT VERIFICATION PROGRAM

ARIZONA PUBLIC SERVICE COMPANY  
SENIOR MANAGEMENT INVOLVEMENT IN  
PALO VERDE

T. G. WOODS, JR.  
EXECUTIVE VICE PRESIDENT  
CHIEF OPERATING OFFICER

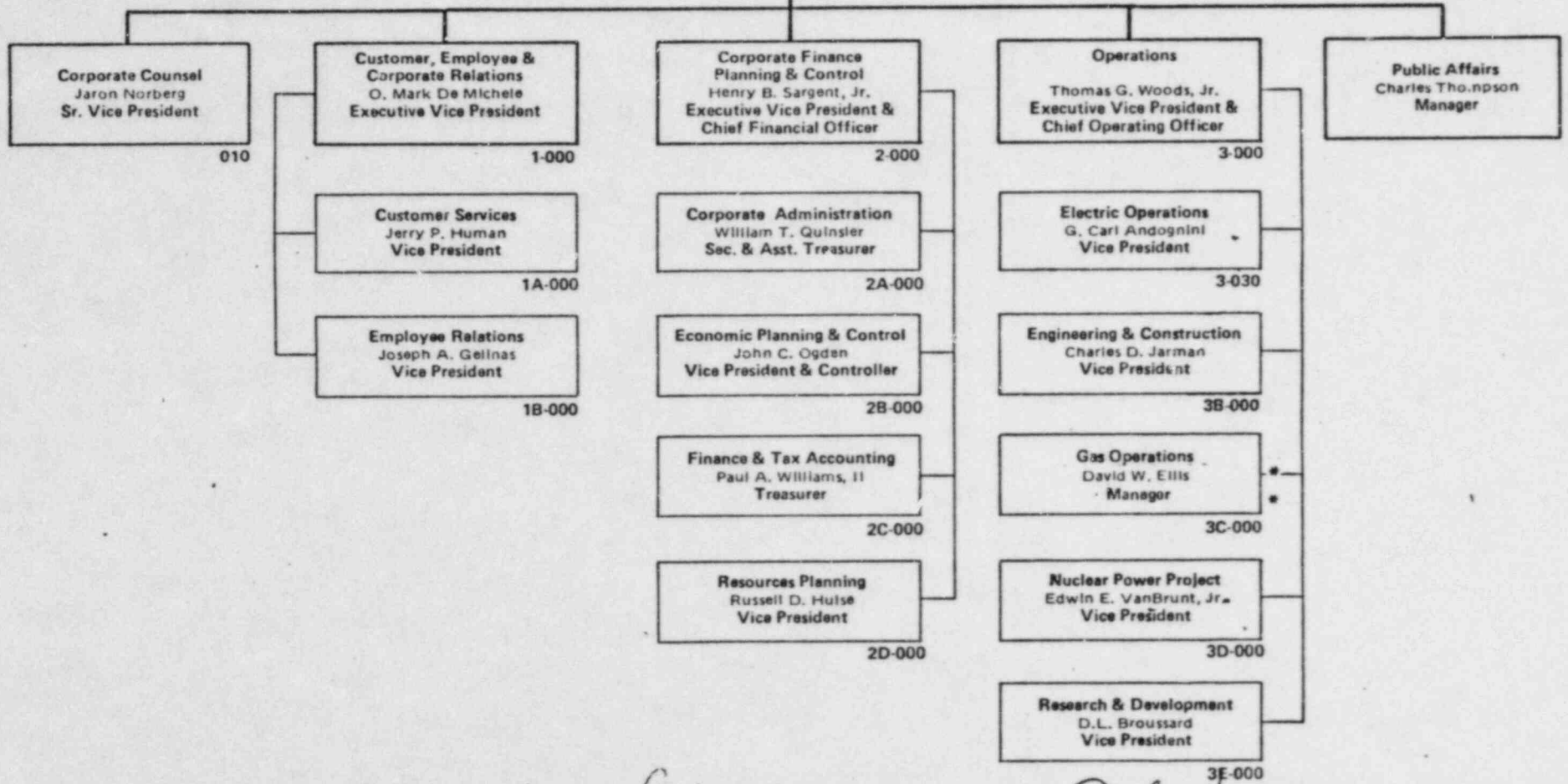
- HISTORY
- PARTICIPANT PROJECT
  - ARIZONA PUBLIC SERVICE COMPANY 29.1%  
(PROJECT MANAGER AND OPERATING AGENT)
  - SALT RIVER PROJECT 29.1%
    - SCPPA
    - LADWP
  - SOUTHERN CALIFORNIA EDISON COMPANY 15.8%
  - EL PASO ELECTRIC COMPANY 15.8%
  - PUBLIC SERVICE COMPANY OF NEW MEXICO 10.2%
- ORGANIZATION - COMPANY
- ORGANIZATION - NUCLEAR
  - SAFETY
  - QUALITY
  - COST AND SCHEDULE
  - STAFFING PHILOSOPHY
  - INNOVATION



OFFICE OF THE PRESIDENT

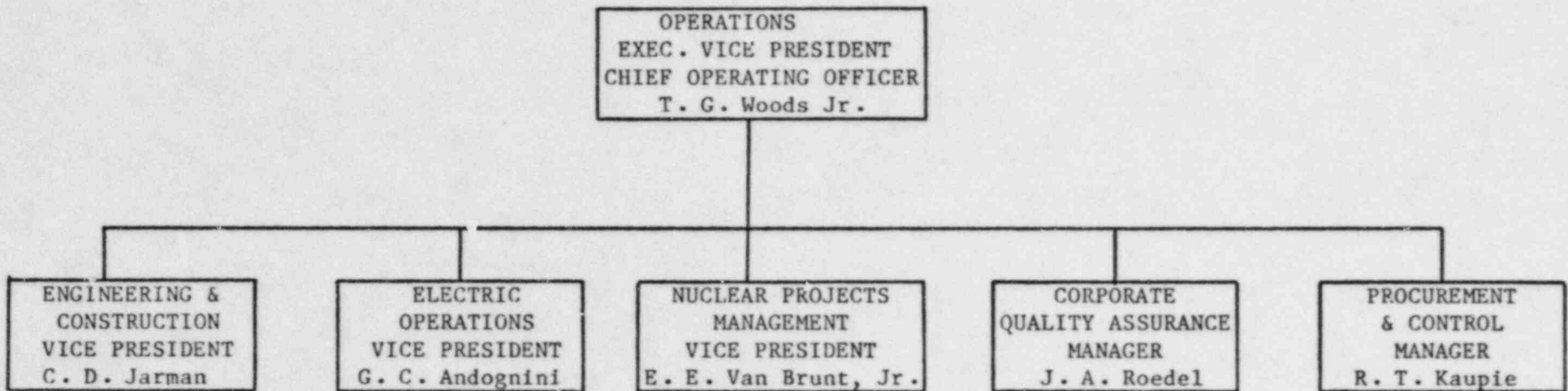
Keith L. Turley  
O. Mark De Michele  
Henry B. Sargent, Jr.  
Thomas G. Woods, Jr.

Chairman, Board of Directors  
President  
Chief Executive Officer  
Keith L. Turley



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06/24/82

ARIZONA PUBLIC SERVICE COMPANY





ARIZONA PUBLIC SERVICE COMPANY

SENIOR MANAGEMENT INVOLVEMENT IN PALO VERDE (CONTINUED)

- INVOLVEMENT
  - APS BOARD OF DIRECTORS
  - EXECUTIVE REVIEW MEETINGS
    - PARTICIPANTS
    - BECHTEL
    - COMBUSTION ENGINEERING
  - QUALITY ASSURANCE
  - SITE MEETINGS
- TMI SAFETY EVALUATION TASK FORCE
- INDEPENDENT DESIGN AND CONSTRUCTION VERIFICATION
- APS NUCLEAR POWER ADVISORY COMMITTEE
- INDUSTRY INVOLVEMENT OF APS SENIOR MANAGEMENT
  - EEI
  - INPO
  - EPRI
  - AIF

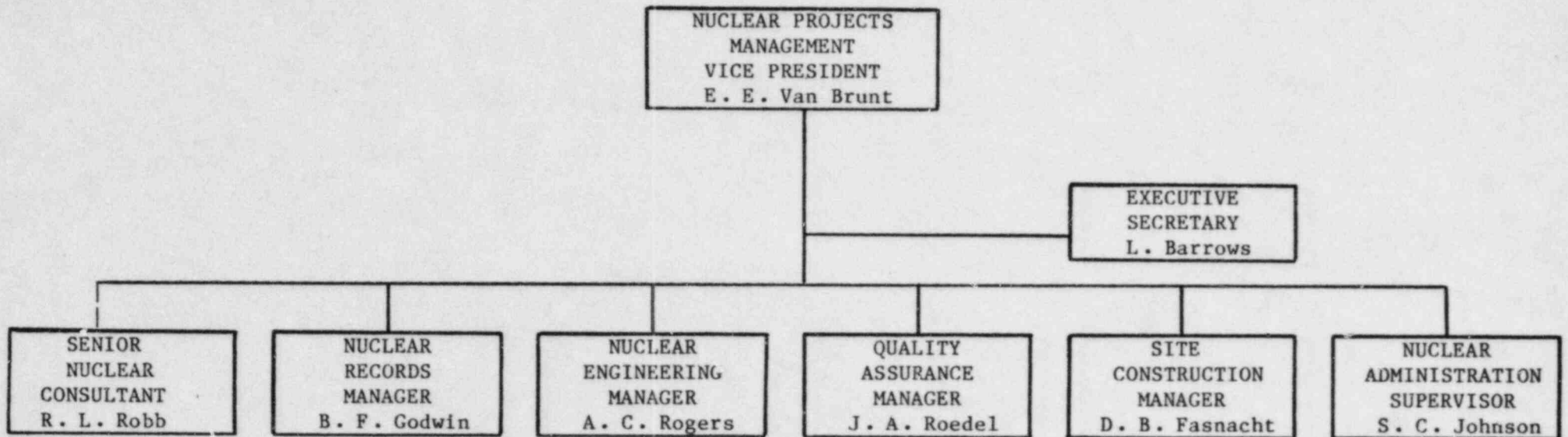
ARIZONA PUBLIC SERVICE COMPANY  
PROJECT ORGANIZATION AND EXECUTION

E. E. VAN BRUNT, JR.  
VICE PRESIDENT - NUCLEAR PROJECTS

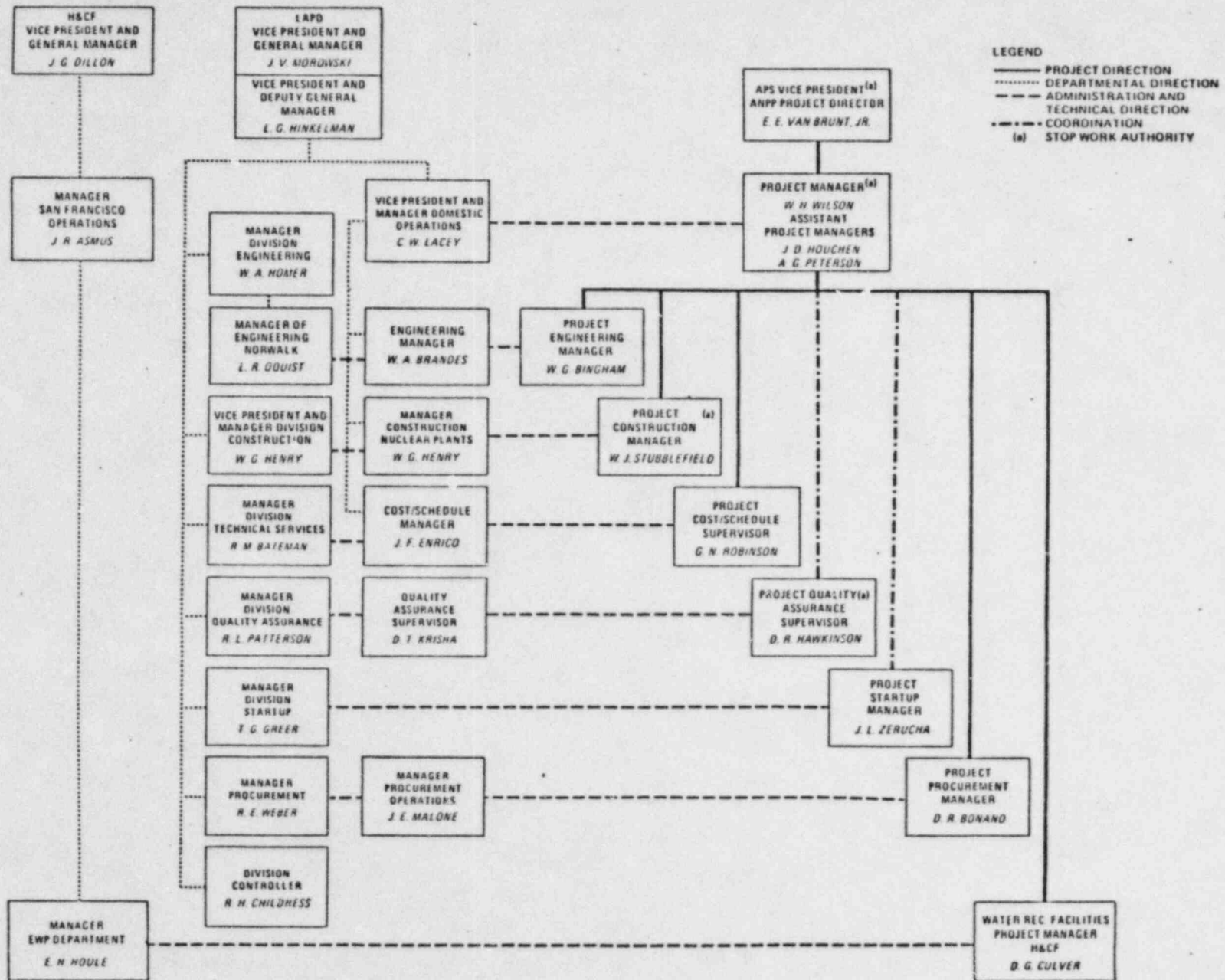
- PROJECT ORGANIZATION - OVERALL INTEGRATION
  - ARIZONA PUBLIC SERVICE COMPANY
    - SINGLE RESPONSIBILITY
    - DEDICATED PROJECT STAFF
    - SINGLE LOCATION
  - BECHTEL
    - DEDICATED STAFF
    - SINGLE LOCATION
    - NUCLEAR EXPERIENCE
  - COMBUSTION ENGINEERING, INC.
- STAFFING
  - QUALITY
  - COMMITMENT
- IMPLEMENTATION - COMMUNICATION AND MANAGEMENT OF INTERFACES
  - CONTRACTING - CRITERIA
  - LEGAL COUNSEL
  - DESIGN CRITERIA MANUAL
  - DESIGN REVIEW MEETINGS
  - PROJECT REVIEW MEETINGS
  - MAINTENANCE MEETINGS

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06/24/82

ARIZONA PUBLIC SERVICE COMPANY  
NUCLEAR PROJECTS MANAGEMENT



# PVNGS PROJECT MANAGEMENT ORGANIZATION



ARIZONA PUBLIC SERVICE COMPANY  
PROJECT ORGANIZATION AND EXECUTION (CONTINUED)

- LICENSING
  - MANAGEMENT INVOLVEMENT
  - INDEPENDENT DESIGN REVIEWS
- RECORDS MANAGEMENT
- STANDARDIZATION
- DESIGN MODEL
- ROLE OF QUALITY ASSURANCE
  - INTEGRATED PROJECT ACTIVITY
  - MANAGEMENT TOOL
  - DIRECT INVOLVEMENT
  - PHILOSOPHY OF MANAGEMENT PARTICIPATION
- CONSTRUCTION
- CONCLUSION

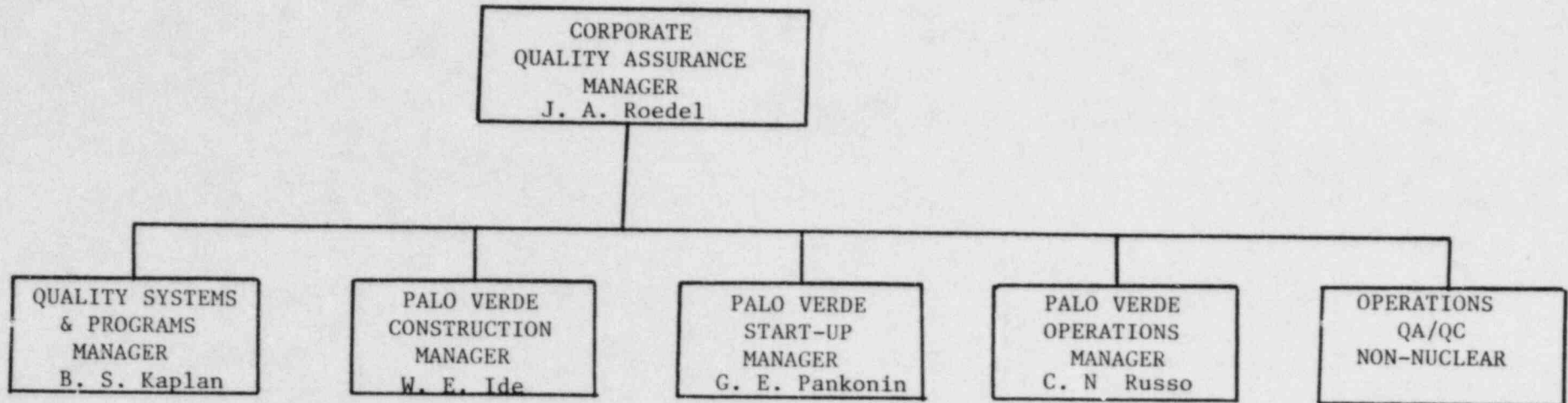
ARIZONA PUBLIC SERVICE COMPANY  
QUALITY ASSURANCE PROGRAMS AND IMPLEMENTATION

J. A. ROEDEL  
CORPORATE QUALITY ASSURANCE MANAGER

- MANAGEMENT SUPPORT
- QUALITY ASSURANCE PROGRAMS
- DIFFERENT THAN NORMAL
  - ONE QUALITY ORGANIZATION
  - PROGRAM UNIQUE TO PROJECT
  - WORK AS A TEAM
  - NON-NUCLEAR QUALITY ASSURANCE
- QUALITY PROGRAM COVERS MORE THAN SAFETY-RELATED
  - DESIGN REVIEWS
  - PROCUREMENT
  - VENDOR SURVEILLANCE
  - CONSTRUCTION ACTIVITIES
- MEASURE OF SUCCESS
  - AUDITS
  - SURVEILLANCES
  - NRC INSPECTIONS - SALP REVIEWS
  - ALLEGATIONS
- CONCLUSION

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6/24/82

ARIZONA PUBLIC SERVICE COMPANY  
CORPORATE QUALITY ASSURANCE



PALO VERDE NUCLEAR GENERATING STATION  
PROJECT QUALITY ASSURANCE AUDITS AND SURVEILLANCES

	<u>AUDITS</u>	<u>SURVEILLANCES</u>
CONSTRUCTION	792	3,971
DESIGN OFFICES	534	68
SUPPLIERS	655	CONTINUOUS

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PALO VERDE NUCLEAR GENERATING STATION  
PROJECT QUALITY ASSURANCE AUDITS

APS (1974-1982)

QUALITY SYSTEMS	-	126
SITE QA		160

BECHTEL (1978-1982)

DESIGN OFFICE QA	-	408
SITE QA	-	632
SUPPLIER QUALITY	-	<u>655</u>
TOTALS		1,981

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JUNE, 1982

PALO VERDE NUCLEAR GENERATING STATION  
PROJECT QUALITY ASSURANCE SURVEILLANCES

APS (1974-1982)

QUALITY SYSTEMS - 68

SITE QA 818

BECHTEL (1979-1982)

SITE QA - 3,153

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4,039

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PALO VERDE NUCLEAR GENERATING STATION  
PROJECT CONTROL OF NONCONFORMING MATERIALS, PARTS OR COMPONENTS  
AND ACTIVITIES

NONCONFORMANCE REPORTS (NCR's)

NCR's ISSUED: 13,954

DEFICIENCY EVALUATION REPORTS (DER's)

DER's ISSUED: 154

DER EVALUATION PER 10CFR50.55(E):

REPORTABLE: 36

NOT REPORTABLE: 86

EVALUATION IN PROCESS: 32

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JUNE, 1982

SUMMARY OF DEFICIENCY EVALUATION REPORTS 10CFR50.55(E)  
THROUGH JUNE 7, 1982

	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>TOTAL</u>	
DER'S ISSUED	33	57	47	13	4	154	ISSUED
REPORTABLE (NRC CONCURRENCE)	1 (-)	12 (6)	20 (10)	2 (1)	1 (-)	36 (17)	REPORTABLE (NRC - OK)
NOT REPORTABLE (NRC CONCURRENCE)	9 (-)	36 (16)	27 (14)	11 (4)	3 (-)	86 (34)	(NOT REPORTABLE (NRC - OK)
OPEN	23	9	0	0	0	32	OPEN

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PALO VERDE NUCLEAR GENERATING STATION  
SUMMARY OF NRC INSPECTION ACTIVITIES

	<u>INSPECTIONS</u>	<u>MANHOURS</u>	<u>INFRACTIONS (SEVERITY LEVEL V)</u>	<u>DEFICIENCIES (SEVERITY LEVEL VI)</u>
NRC REGION V 1974-1982 (MARCH)	45	3,186	24	11
RESIDENT INSPECTOR 1979-1982 (MARCH)	--	1,507	2	1
TOTAL PROJECT	45	4,693	26	12

TOTAL PROJECT                      124 MANHOURS PER NONCOMPLIANCE

NRC SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

<u>SALP PERIOD</u>	<u>NRC EVALUATION</u>	<u>INSPECTION HOURS PER ITEM OF NONCOMPLIANCE</u>
MAY 1979 - MAY 1980	SATISFACTORY	96.7
JUNE 1980 - JUNE 1981	ABOVE AVERAGE	324.5

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JUNE, 1982

SUMMARY OF NRC INSPECTIONS THROUGH MARCH, 1982

NRC REGION V

<u>PERIOD</u>	<u>NO. OF INSPECTIONS</u>	<u>MANHOURS</u>	<u>INFRACTIONS (SEVERITY LEVEL V)</u>	<u>DEFICIENCIES (SEVERITY LEVEL VI)</u>
1982	3	196	1	0
1981	7	732	1	3
1980	8	524	3	1
1979	8	524	7	1
1978	9	622	6	1
1977	4	248	3	4
1974-1976	6	340	3	1
TOTALS		<u>3,186</u>	<u>24</u>	<u>11</u>

RESIDENT INSPECTOR

	<u>MANHOURS</u>	<u>INFRACTIONS (SEVERITY LEVEL V)</u>	<u>DEFICIENCIES (SEVERITY LEVEL VI)</u>
1982	190	0	0
1981	611	0	1
1980	596	2	0
1979	110	0	0
TOTALS	<u>1,507</u>	<u>2</u>	<u>1</u>

TOTAL PROJECT

<u>NO. OF INSPECTIONS</u>	<u>MANHOURS</u>	<u>INFRACTIONS (SEVERITY LEVEL V)</u>	<u>DEFICIENCIES (SEVERITY LEVEL VI)</u>
45	4,693	26	12

386 MANHOURS PER NONCOMPLIANCE IN 1982 THROUGH MARCH

269 MANHOURS PER NONCOMPLIANCE IN 1981

187 MANHOURS PER NONCOMPLIANCE IN 1980

JAR  
6/24/82

EEVB  
6/24/82

TORREY PINES TECHNOLOGY  
DIVISION OF GENERAL ATOMICS

INDEPENDENT QUALITY ASSURANCE EVALUATION

G. L. WESSMAN  
DIRECTOR

## SCOPE OF TORREY PINES TECHNOLOGY REVIEW

PROGRAM IS STRUCTURED TO GIVE A DISCERNING BASIS ON WHICH  
TO MAKE A DEFINITIVE EVALUATION IN THE AREAS OF:

- ORGANIZATION
- MANAGEMENT
- QUALITY ASSURANCE
- DESIGN
- CONSTRUCTION



ARIZONA PUBLIC SERVICE COMPANY

SUMMARY

T. G. WOODS, JR.

- ORGANIZATION
- INVOLVEMENT
- QUALITY
- INDEPENDENT VERIFICATION