

BRUNSWICK NUCLEAR PLANT
THREE-YEAR PLAN

Revision 0

December 15, 1992

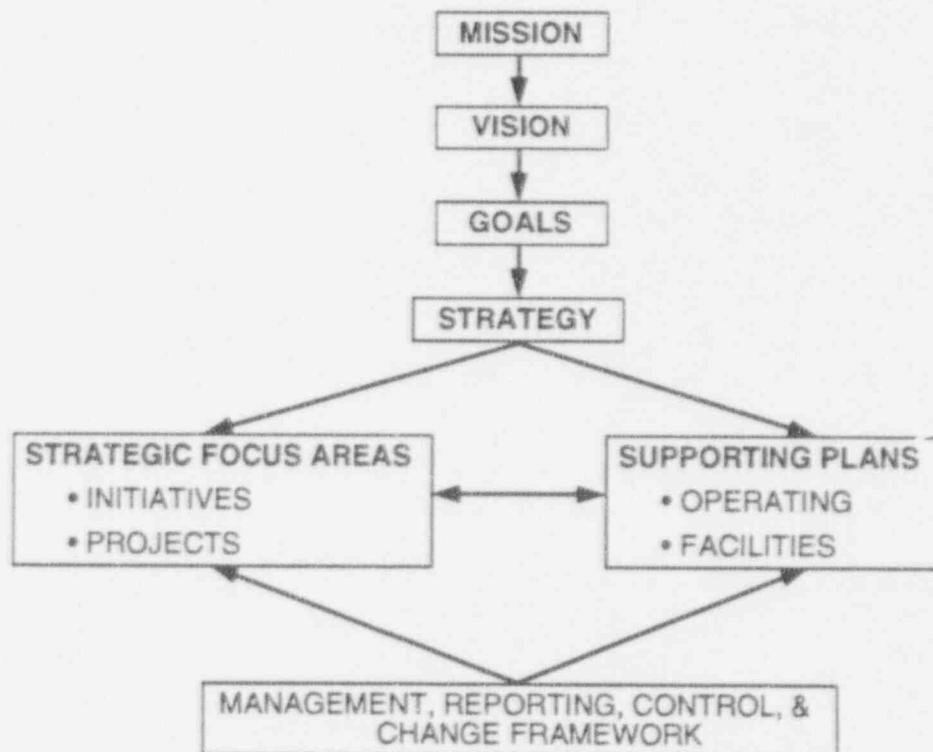
**BRUNSWICK NUCLEAR PLANT
THREE-YEAR PLAN
1993-1995**

1 - INTRODUCTION

EXECUTIVE SUMMARY

Carolina Power & Light Company (CP&L) has developed a Three-Year Plan of improvement to achieve "world-class" (top-quartile) results in safety, operation, and cost. In developing the plan, the Brunswick Nuclear Plant (BNP) managers considered their mission, the overall objective of achieving "world-class" performance, and the expectations of various "clients." Based on those considerations, goals were established for the three-year period. Achievement of those results will require certain organizational capabilities and attributes. A vision of the organization with those capabilities and attributes was developed. The strategy for developing or enhancing the necessary capabilities consists of initiatives (related to people, programs, processes, procedures, facilities, or software) and projects (related to plant systems and equipment) organized in five strategic focus areas. The plan also includes supporting elements such as an operating plan and a facilities plan. A framework for management, progress reporting, control, and changing of the plan has also been established. This document presents the mission, goals, vision, strategy, and associated BNP initiatives and projects that make up the BNP Three-Year Plan (1993-1995).

BUSINESS PLANNING PROCESSES



PLAN OUTLINE

This document is organized as follows:

CHAPTER 1	INTRODUCTION
CHAPTER 2	MISSION, VISION, AND GOALS
CHAPTER 3	ORGANIZATIONAL CAPABILITIES
CHAPTER 4	STRATEGY
CHAPTER 5	OPERATING PLAN
CHAPTER 6	FACILITIES PLAN
CHAPTER 7	MANAGEMENT, REPORTING, AND CONTROL
CHAPTER 8	BNP INITIATIVE AND PROJECT PLANS
APPENDIX A	DISCUSSION OF PROCESSES FOR SETTING PRIORITIES
APPENDIX B	SOURCES FOR COMPARISON OF NRC, INPO, AND NAD FINDINGS TO BUSINESS PLAN INITIATIVES

2 - MISSION, VISION, AND GOALS

MISSION

The CP&L mission is to provide the best electric service to present and future customers at the lowest rates consistent with fair compensation to employees, a fair return to those who have invested in the company, safety for employees and the public, protection of the environment, and the development of technology to provide future service. The BNP mission is to provide safe, reliable, economic, and environmentally sound electricity from nuclear energy.

VISION

CP&L and BNP are entering an era of excellence characterized by high standards of performance, individual and site accountability, effective planning, continuous improvement, and people empowerment. For the period of 1993-1995, the overall vision is to establish the capability for BNP to achieve "world-class" results, that is to perform in the top quartile of U.S. nuclear plants in 1996, and beyond.

GOALS

The key areas of performance are

- NUCLEAR SAFETY,
- PRODUCTION, and
- COST.

Two additional performance areas in which continuous improvement is important are:

- EMPLOYEE SATISFACTION and
- SCHEDULE and COMMITMENT ACHIEVEMENT.

For nuclear safety, production, and cost, measures of performance and ultimate goals are:

PERFORMANCE AREA	MEASURE	ULTIMATE GOALS
Nuclear Safety	SALP Rating	Top Quartile
Production	Capability Factor	81%
Cost	Mills/Kilowatt-Hour	21

Achievement of an INPO rating of "Excellent" is also an ultimate goal. Of course, standards of performance in the industry change and the actual goals for "world-class" performance may also change.

In addition to these top level goals, the INPO/Industry performance indicators will be used to track improvement. Aggressive annual goals for continuous improvement will be established. Other goals such as those associated with temporary modifications, outage duration, etc., will also be measured and tracked to help show progress.

3 - ORGANIZATIONAL CAPABILITIES

The management team has determined the capabilities and attributes of the BNP organization they will create over the next three years, an organization that will be capable of achieving world-class results in 1996 and beyond.

CAPABILITIES

The management team determined which capabilities were essential to the organization's performance; they are described in the table below. The identification of these key capabilities was based on analysis of the root causes of previous performance difficulties, the results of numerous self-assessments and independent assessments, and the combined experience of the management team.

1) PLANNING, SCHEDULING, AND COMMITMENT ACHIEVEMENT
Anticipating needs and forecasting results, setting priorities, and committing resources, planning and following through to ensure schedules and commitments are met.
2) HUMAN PERFORMANCE
Effective performance management, training and development, organizational development, self-assessment, productivity and quality improvement, work force utilization, and facility management.
3) WORK PROCESSES
Designing and optimizing processes, teamwork, defining and communicating responsibilities, measuring results, managing information, and monitoring and correcting performance problems the right way the first time.
4) COMMUNICATION
Open communications between managers and employees, understanding that effective communications is a valid part of expectations for managers and employees, understanding customer and supplier needs, constructive conflict resolution, and confidence among employees that any question asked in a professional manner will be answered.
5) SYSTEM RELIABILITY AND MATERIAL CONDITION
Upgrading and maintaining material condition, improving and maintaining system and equipment reliability, improving plant capability, identifying and correcting root causes of equipment problems, and housekeeping.

PLANNING

Integrated business planning will be an effective continuous process. BNP clients such as senior management, the CP&L system load dispatcher, and regulators will be confident of BNP's dependability in meeting business plans, operating plans, and commitments. The organization will include dedicated integrated planning and scheduling that will support line management.

Through continuous improvement, the quality and duration of outages will become as good as the best in the industry. The target nominal refueling outage length will be less than 60 days; outage scope will be effectively managed with established advance milestones for plant modification identification, design completion, parts availability, and work package completion. The backlog of plant modifications and corrective maintenance will be optimized to the number that is cost-effective, that is not an undue burden on plant operation, and that can be completed through a balance of work performed during operating and scheduled outage periods.

PEOPLE

Employees will be prepared, empowered, and accountable to make decisions. They will feel confident accepting responsibility for results and in accepting appropriate risks in order to innovate and effect positive changes. They will be flexible enough to work in various roles and on various teams with significant autonomy. Effective horizontal cooperation and communication will promote this. Employees will be able to understand and be confident of their ability to meet needs and expectations of internal and external clients. Employees will be substantially better trained, will have the benefit of increased levels of development, and will have more diverse skills. Managers and supervisors will spend a substantial part of their time setting clear expectations, observing, and coaching. Employees will feel that they are a part of the business, that they are growing professionally, and that their voice counts. Compensation will include significant components based on individual and team performance. Employees and other people will want to come to work at Brunswick.

The permanent BNP complement will be comparable to the current number; however, contractor staff size will be substantially smaller. Contractor and consultant support will be, with the exceptions of specific out-sourced functions such as security and janitorial services, exclusively applied to projects with specific products or services, well-defined budgets, and schedules with clear end points.

PROCESSES

Major plant processes will have been re-engineered to achieve major improvements in productivity over current performance. Productivity and process measures will be established, understood, and reported periodically. Major processes will have been re-engineered with information technology (such as the electronic document processing and nuclear information management initiatives) in mind. These processes will be supported by a site-wide local area network that will provide a major part of the information needed to support work activities and decisions. The result will be simplified processes, elimination of unnecessary or ineffective activities, and focus on the right tasks to support achievement of BNP goals. The organization will operate cooperatively as a team dedicated to effectiveness and efficiency for the site and to continuous improvement. Support services such as procedure and document control will be provided in an effective and consistent manner that will contribute to process efficiency gains and enhance communication and work flow across the site.

COMMUNICATION

All employees will be well informed of key site activities, performance against goals, areas where additional site focus is needed, and how they can and are expected to contribute to site goal achievement. Simple and visible reports and periodic peer and project reviews will contribute to a shared understanding of progress and alignment of employees with the common goals of the organization. Technology, such as voice-mail and electronic mail, will be utilized for more effective communication between management and employees and among employees.

PLANT RELIABILITY AND CONDITION

The plant appearance, material condition, and reliability will be enhanced. The fraction of maintenance that is planned and preventive will be much higher. System engineers will play a central role in guiding and optimizing maintenance and modification work on their systems. There will be fewer and smaller modification projects and corrective maintenance tasks. Issues potentially affecting the operators' ability to operate the plant effectively and reliably will be significantly reduced.

FACILITIES

Facilities will be upgraded to a standard that will promote professionalism among all employees. All CP&L permanent employees will be located in permanent facilities; trailers will only be used for temporary needs. Site industrial security measures will be implemented outside the protected area.

IMAGE

The industry will view BNP as a top performer. The local community will view BNP as an important resource and will understand that the plant's viability depends on its ability to produce power reliably and competitively. They will have confidence in the ability of the BNP organization to operate the plant safely and to safeguard the public.

MILEPOSTS OF PROGRESS

Achievement of this vision will require several years. In order to help the organization to visualize progress and to focus their efforts, each of the three years of this business plan have been characterized by a theme and key "mileposts."

1993 - A Year of Renewal

In 1993, the BNP team will dedicate itself to improving the material condition of the plant, enhancing the capabilities of its people, and developing a "can-do" spirit. Major events and planned accomplishments for 1993 are listed below.

- Both units will be returned to operation. A celebration will be held after synchronizing each unit to the grid.
- Significant opportunities for process improvements will be identified; many will be realized. Initial focus will be on the following:
 - Integrated planning and scheduling,
 - Improving the ability to identify and to correct problems,
 - Improving the modification process, and
 - Improving procedure control and content.

- Measurable goals and standards (for example, standards for the number of temporary conditions and housekeeping model rooms) will be established in areas of performance. Schedules and milestones for achievement will be set for 1994 and 1995.
- A program and goals for annual self-assessment including performance with respect to SALP functional areas will be established. The first annual self-assessment will be conducted.
- Targets to measure effectiveness in reducing event precursors such as NAD issues, LERs, and ACRs and for resolution of issues will be established.
- A program and goals to correct BNP-related issues cited in INPO evaluations will be implemented.
- A record of successful commitment, schedule, and results achievement will be established.
- The Fall Unit 1 Outage will be completed successfully on schedule.
- The 1994-1996 business plan will be completed in an organized and timely manner and include a high level of quality, detail, and certainty.
- Enhanced performance expectations will be established for employees top-down with appropriate linkage of goals.
- INPO Training programs will be re-accredited.
- Specific training goals and programs will be developed for:
 - Qualification of new employees
 - Total quality training for employees
 - Achieving 100% pass rates on licensed operator examinations
 - Qualifying or certifying more managers as SROs
 - Shortening the length of time for SRO certification.
 - Increasing involvement and ownership of line management in training
- First- and second-level supervisors will complete the Supervisory Development Program. Approximately half of the unit managers and above will complete the Management Development Program.
- A program for recognizing and rewarding performance will be established.
- A site master facilities plan will be established.

1994 - A Year of Achievement

In 1994, the BNP team will demonstrate that it has "turned the corner." The team will continue to make measurable progress in its journey to excellence. Performance in 1994 will be better than that achieved in 1993. In addition, the entire team will conclude that the quality of life at BNP has permanently improved. Major events and planned accomplishments for 1994 are listed below.

- The year will begin with a meeting of all site employees to celebrate the accomplishments of 1993. Organization performance and achievement of the 1993 performance goals will be recognized and rewarded. Goals and plans for 1994 will be communicated.
- Additional process and productivity improvements will be realized.
- The Unit 2 Outage will be completed successfully on schedule.
- A job rotation program will be initiated.
- The site work tracking systems will be implemented.
- The milestones, goals, and standards established for 1994 will be met.
- Target levels of training will be achieved.
- A self-assessment effectiveness review will be conducted.
- BNP-related INPO evaluation issues will be successfully addressed.

1995 - The Year of Aiming for Excellence

By the end of 1995, the BNP team will be recognized by industry experts as approaching a world-class level of performance. INPO and the NRC will acknowledge that the Three-Year Plan was successful and that the Brunswick Plant is well prepared to continue its evolution toward world-class performance.

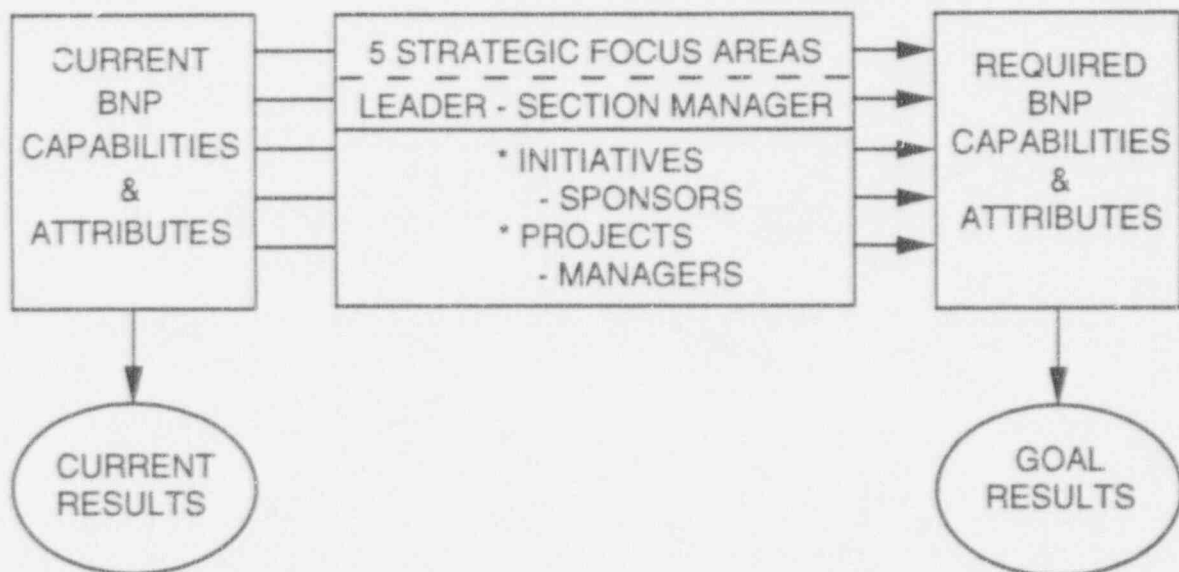
- The year will begin with a meeting to celebrate the accomplishments of 1994. Organization performance and achievement of the 1994 performance goals will be recognized and rewarded. Goals and plans for 1995 will be communicated.
- Both refueling outages will be completed successfully and on schedule.
- The goals, milestones, standards, and commitments established for 1995 will be met.
- Target levels of training will be achieved.
- A self-assessment effectiveness review will be conducted.
- BNP-related INPO evaluation issues will be successfully addressed.

4 - STRATEGY

The central strategy of the BNP management team for 1993-1995 is to focus management attention and resources on the activities necessary to develop or to strengthen the five essential sets of capabilities and attributes described in the previous section:

- Planning, scheduling, and commitment achievement
- Human performance
- Work processes
- Communication
- Plant reliability and material condition.

The development of each set of capabilities is an area of strategic focus for 1993-1995. In each strategic focus area, BNP initiatives (related to people, programs, processes, procedures, facilities, or software) or projects (related to plant systems and equipment) have been identified, developed, and planned in order to develop or to strengthen the essential capabilities. A section manager, who directly reports to the Vice President-BNP, has assumed responsibility and accountability for leadership in each of these five areas. Each initiative has a sponsor; each project has a manager. The figure below illustrates the relationships of results, capabilities, strategic focus areas, initiatives, and projects.



The importance of setting a manageable agenda for the BNP organization is recognized, particularly in early 1993 with the startup of both units. An agenda that is too large or that calls for moving too rapidly will not result in success. Establishment and maintenance of a steady and deliberate pace of change that can be effectively assimilated will be the key to sustained success. The initial, manageable change agenda must include a mix of initiatives to address both short-term improvement needs and more fundamental enhancements to organizational capability and infrastructure (people and their skills, processes, tools, structure, and management systems). In this way, early successes will result in several benefits to the organization - greater motivation, productivity improvements, increased management ability, and more confidence - that can prepare the way for subsequent successes and provide an ability to manage a larger agenda. This is particularly true if the early focus is on activities that can improve process efficiency, increase productivity, reduce the workload, and improve the ability to identify root causes and to establish priorities.

For these reasons, not all of the initiatives and projects have been scheduled to start immediately. The senior site management has identified key initiatives that will start in early 1993. They should result in significant improvement in the day-to-day performance of BNP. In addition, a series of steps aimed at focusing the BNP organization on essential "base" activities and improving the productivity of the organization in performing these "base" activities will start in early 1993. These initiatives and steps will enable the BNP organization to handle additional activities effectively. The BNP senior managers will meet at least monthly to review progress; they will schedule the start of additional initiatives and projects when they judge that the organization is ready based on considerations such as completion of substantial portions of the outages, realization of efficiency improvements, and consistency in meeting scheduled business plan milestones.

In the Three-Year Plan, details of activities and schedules in 1994 and 1995 are not as complete and well-defined as for 1993 due to the difficulty in predicting the rate of improvement in the organization's capabilities. In September 1993, after progress on the key initiatives and BNP capabilities has been made, BNP management will submit a revised Three-Year Plan with additional detail and updated schedules for 1994 and 1995.

The table on the next page lists the BNP initiatives. While initiatives are listed under their primary strategic focus area, many initiatives and projects support development or strengthening of capabilities in more than one strategic focus area. The key initiatives scheduled to start immediately are printed in bold type and marked with asterisks. Descriptions and schedules for all initiatives and projects are provided in Chapter 8. An explanation of the processes used to prioritize initiatives and projects is provided in Appendix A.

INITIATIVES

FOCUS AREA 1: PLANNING, SCHEDULING, AND COMMITMENT ACHIEVEMENT Leader - E.E. Willett	
INITIATIVE	SPONSOR
101 - Integrated Planning and Scheduling**	E. Willett
102 - BNP Integrated Scheduling and Three-Year Plan Administration**	M. Foerster
103 - Corrective Maintenance Backlog	D. Moore
104 - Business Planning Improvements	D. Ingram
105 - Inventory Control	J. Ferguson
106 - Outage Length Reduction	G. Peeler
FOCUS AREA 2: HUMAN PERFORMANCE Leader - G.H. Warriner	
INITIATIVE	SPONSOR
201 - Effective Performance Management/Total Quality**	J. Ferguson
202 - Training Initiatives**	M. Jones
203 - Utilization/Inter-Unit Support**	K. Ahern
204 - Management Effectiveness**	M. Donilon
205 - Supervisory Development Program**	M. Donilon
206 - BNP Facility Improvements**	R. Johnson
207 - Nuclear Revision Control System (NRCS)	D. Reid
208 - Integrated Computer Support	D. Reid
FOCUS AREA 3: WORK PROCESSES Leader - J.P. Cowan	
INITIATIVE	SPONSOR
301 - Improve Procedure Control Process and Procedure Content**	C. Lewis
302 - Improving the Modification Process**	R. Helme
303 - Improve Ability to Identify and Correct Problems**	S. Floyd
304 - Backlog Reduction**	J. Cowan
305 - Clearances	K. Ahern
306 - Health Physics Program Improvements	C. Robertson
307 - Implement/Augment BNP Local Area Network (LAN)	D. Reid
308 - Develop Centralized Document Control Program	C. Lewis
309 - Site Work Tracking System (SWTS)	D. Reid
310 - Assess Implementation of SAT Items	J. Cowan

** Identified as an initiative for which work is scheduled to begin immediately

FOCUS AREA 4: COMMUNICATION Leader - J.A. Dobbs	
INITIATIVE	SPONSOR
401 - Site Communication Plan**	K. Hampton
FOCUS AREA 5: SYSTEM RELIABILITY & MATERIAL CONDITION Leader - J.M. Brown	
INITIATIVE	SPONSOR
501 - Preventive/Predictive Maintenance Program Improvements**	R. Helme
502 - Corrosion Control**	E. Bishop
503 - Design Basis Reconstitution Program**	E. Bishop
504 - Equipment Data Base System (EDBS)**	A. Richards
505 - Cooling Water Reliability Program**	R. Helme
506 - Plant Engineering Program Upgrade**	R. Helme
507 - I&I/IST Improvement Testing Program**	R. Helme
508 - AC Source Improvement Project**	J. O'Connor
509 - Management of Temporary and Substandard Conditions	R. Helme
510 - Painting to Upgrade Material Condition	J. Kelly
511 - Dose Reduction/ALARA Initiatives	C. Robertson
512 - Environmental & Chemistry Program Improvements	C. Robertson
513 - Megawatt Improvement Projects	R. Helme
514 - Improve Plant HVAC Systems	R. Helme
515 - Fire Protection Upgrade Project	R. Helme

** Identified as an initiative for which work is scheduled to begin immediately

REGULATORY COMMITMENTS

Many of the projects identified and described in Chapter 8 are responsive to regulatory issues and requirements. In most cases, schedules for completing these projects and initiatives were previously established in CP&L commitments to the NRC. To the maximum extent practical, these committed completion dates remain intact. In some cases, applying the prioritization process outlined in Appendix A against a manageable resource level has identified the need to reschedule certain NRC commitments within and beyond the next three years. Other commitments have been rescheduled to coincide with outage periods. The Three-Year Plan constitutes CP&L's notification to the NRC of the rescheduling of such commitments, as listed in the following table:

Items In Three-Year Plan Scheduled To Be Completed Beyond Commitment Date	
PID NUMBER	SUMMARY
00917I	Emergency Response Facility Isolation Signals - Group 10 Current NRC Commitment - B109R1 (93), B211R1 (94) Scheduled Completion - B110R1 (95), B211R1 (94) Comments: Rescheduled for Unit 1, only, based on low Schedule Index.
01821A	Improve Lighting to Security Areas Current NRC Commitment - to be completed during next (1991) perimeter upgrade. Scheduled Completion - 9/23/93 Comments: The perimeter upgrade conducted in 1991 did not include this project. It is now scheduled for completion in the first year of the Three-Year Plan. The Schedule Index for this project is low.
05644A	AC Voltage Drop Analysis Current NRC Commitment - 10/3/88 for MCC system selectivity; 12/31/92 for response to IER 91-09. Scheduled Completion - 12/30/95 Comments: Scheduled to be completed as part of the initiative for Design Basis Reconstitution. Rescheduled based on low Schedule Index.
06156A	HPCI/RCIC High Steam Flow Current NRC Commitment - 6/30/93 Scheduled Completion - B211R1 (94) Comments: Scheduled for next Unit 2 refueling outage.
B0019A	Design Basis Reconstitution Current NRC Commitment - Complete DBR by 12/31/93. Scheduled Completion - The design basis documents will be developed by 12/93; validation will complete by 12/94.
G0017A	DC Voltage Profile Study Current NRC Commitment - 12/30/90 Scheduled Completion - 12/31/94 Comments: Rescheduled based on low Schedule Index; to be completed as part of the initiative for Design Basis Reconstitution.
G0051A	Secondary Containment Atmospheric Monitor (SCAM) Modules and Steam Leak Detection System Upgrade Current NRC Commitment - 12/31/90 Scheduled Completion - B109R1 (93), B211R1 (94) Comments: Project is scheduled for completion in the next refueling outage.
G0096A	Fuel Pool Girder Tendon Inservice Inspection Current NRC Commitment - 12/31/86 Scheduled Completion - 12/31/93 Comments: Scheduled for completion in first year of the Three-Year Plan.

Items In Three-Year Plan Scheduled To Be Completed Beyond Commitment Date	
PID NUMBER	SUMMARY
G0110A	Electrical Distribution System Adequacy/GDC-17 Current NRC Commitment - 12/31/94 Scheduled Completion - Being Evaluated. Comments: An initiative and project in the Three-Year Plan will evaluate the optimal way to comply with GDC-17. The evaluation will be completed by August 31, 1994, at which time a schedule will be established.
G0140A	Upgrade Security Computer and Card Reader Current NRC Commitment - 12/31/93 Scheduled Completion - 6/30/94 Comments: Rescheduled based on low Schedule Index.
G0156A	Provide CAD Subsystem Divisional Separation Current NRC Commitment - 12/6/91 Scheduled Completion - B211R1 (94) Comments: U2 rescheduled based on low Schedule Index.
I0031A	IRM Upgrade Current NRC Commitment - 12/31/91 Scheduled Completion - 12/31/96 Comments: Upgrades require several refueling outages due to limits on vendor refurbishment capabilities.
Item Committed To Be Completed But Not Included in Three-Year Plan	
84809A	Battery Initiation Logic Upgrade Current NRC Commitment - 12/31/91 Scheduled Completion - B112R1 (98); B214R1 (98) Comments: Rescheduled based on low Schedule Index.

In addition to the major commitments discussed above, CP&L has made other commitments of a routine nature and commitments directly related to startup of the units that are not identified in the Three-Year Plan. Commitments associated with startup of Unit 2 are included in the BNP Unit 2 Integrated Startup Plan and Schedule submitted November 30, 1992. Commitments relative to Unit 1 will be included in the December 30, 1992 submittal of the BNP Unit 1 Integrated Startup Schedule. CP&L is conducting a review of non-startup related commitments to identify any which may not be completed by the current commitment date. This review will be completed in January 1993 with the results, including any necessary revised dates, communicated to the NRC by the end of February 1993.

BACKLOG

One area of required short-term improvement is the backlog of items such as:

- Maintenance,
- Design basis documents,
- Engineering drawings,
- Procedure revisions,
- Vendor manual updates,
- PRA model updates,
- Equipment database system updates,
- Temporary conditions (including operator "work-arounds"), and
- Corrective Actions.

The outage that began in April 1992 has been a period of considerable activity in both identifying and closing backlog items. For example, the outage has resulted in completion of approximately 10,200 (62%) of a total of 16,500 (4400 of which were open in April plus approximately 12,100 of which have been identified since then) work requests/job orders.

The strategy to continue to close these items involves four elements. The first three are scheduled for the first half of 1993:

- 1) Completion of the work activities in the Integrated Startup Schedule for Units 1 and 2;
- 2) Accomplishment of initial tasks in the backlog initiatives (103 and 304) that will
 - Define and categorize the backlog,
 - Establish targets for backlog reduction,
 - Set priorities,
 - Develop a detailed work plan, as well as
 - Implement a minor maintenance procedure to improve efficiency; and
- 3) Implementation of some of the key initiatives and other steps taken to improve work processes.

The fourth element, implementation of additional tasks associated with the Backlog Reduction initiative (304), will be scheduled to start after completion of appropriate portions of the first three elements. With this strategy, work on the backlog will be continuous, consistent with the startup plan, and scheduled such that a significant portion of the work will benefit from expected efficiency improvements.

COMPARISON WITH PREVIOUS ASSESSMENTS AND IDENTIFICATION OF ROOT CAUSES

The BNP Three-Year Plan has been developed taking into account what CP&L has learned from external assessments (NRC, INPO) and CP&L's internal assessments. The findings and issues identified through external assessments are consistent with the conclusions of CP&L's internal assessments and reviews. The key findings and issues were thoroughly evaluated by BNP management and grouped into 10 major sets of issues. These sets of issues were analyzed to determine the predominant root cause of each issue set. The root causes were identified as follows:

- Self-assessment, corrective actions, and root cause analyses have not been sufficiently effective in identifying, correcting, and preventing problems.
- Management has not effectively communicated expectations and set standards for the plant and staff.
- Management has not provided the level of leadership, oversight, resources, and support to achieve sustained performance improvements. Management has not provided adequate supervision and direction of plant activities.
- Teamwork and communication among site organizational units have not been effective.
- Human performance weaknesses have been a significant contributor to less-than-acceptable BNP performance. Numerous operator and staff training programs need improvement.
- Process deficiencies have been identified in numerous work control processes (including work planning, scheduling, and maintenance).
- Aging equipment and insufficient maintenance have caused a high rate of equipment failure. Management had not set high enough standards for the material condition of the plant. Maintenance and engineering program improvements are needed.
- A lack of emphasis has been placed on reducing the backlog (e.g., "operator work-arounds," temporary conditions, and disabled annunciators).
- Weaknesses in procedures and Work Request/Job Order instructions and failure to follow procedures have contributed to plant events. Procedures and the procedure revision process need to be upgraded. Control over documents critical to efficient plant performance has been less than adequate.
- Health physics improvements are needed for contamination control and radiation monitoring. Housekeeping has not been maintained to high enough standards. Chemical control improvements have not been fully implemented.

The table on the following pages compares initiatives and projects in this plan to the root causes of those findings in previous assessments. The source documents for those findings are listed in Appendix B.

**RESOLUTION OF MAJOR ISSUES IDENTIFIED BY THE NRC, INPO, AND NAD
THROUGH IMPLEMENTATION OF THE THREE-YEAR PLAN INITIATIVES**

Appendix B lists the source correspondence documents identifying these ten issue areas. The table below provides a cross-reference of the BNP initiatives to the issues identified in the various assessments.

INITIATIVES		MAJOR ISSUES									
No.	Title	Self-assessment, corrective actions, and root cause analyses	Management expectations and standards	Management leadership, oversight, resources, and support	Teamwork and communications	Human performance	Work control processes	Aging equipment and insufficient maintenance	Backlog	Procedures, WR/JO instructions, and control of documents	Health physics and housekeeping
FOCUS AREA 1: Planning, Scheduling, and Commitment Achievement											
101	Integrated Planning and Scheduling			△	△	△	△				
102	BNP Integrated Scheduling and Three-Year Plan Administration		△	△	△		△				
103	Corrective Maintenance Backlog			●	●		●	●	●	●	
104	Business Planning Improvements		●	●			●				
105	Inventory Control						●	●			
106	Outage Length Reduction	●		●	●		●				
FOCUS AREA 2: Human Performance											
201	Effective Performance Management/Total Quality	△	△	△	△	△					
202	Training Initiatives			△		△					
203	Unitization/Inter-Unit Support			△	△	△					
204	Management Effectiveness		△	△	△	△					
205	Supervisory Development Program			△	△	△					
206	BNP Facility Improvements				△	△	△	△			△
207	Nuclear Revision Control System (NRCS)		●		●	●				●	
208	Integrated Computer Support			●	●	●					

△ - Key initiatives (scheduled in the Three-Year Plan)

● - Remaining initiatives (included in the Three-Year Plan, but not yet scheduled)

INITIATIVES		MAJOR ISSUES									
No.	Title	Self-assessment, corrective actions, and root cause analyses	Management expectations and standards	Management leadership, oversight, resources, and support	Teamwork	Human performance	Work control processes	Aging equipment and insufficient maintenance	Backlog	Procedures, WR/JO instructions, and control of documents	Health physics and housekeeping
FOCUS AREA 3: Work Processes											
301	Improve Procedure Control Process and Procedure Content					△				△	
302	Improving the Modification Process					△	△				
303	Improve Ability to Identify and Correct Problems	△	△	△		△					
304	Backlog Reduction						△		△		
305	Clearances					●	●			●	
306	Health Physics Program Improvements										●
307	Implement/Augment BNP Local Area Network (LAN)				●		●				
308	Develop Centralized Document Control Program					●	●			●	
309	Site Work Tracking System (SWTS)		●	●	●		●				
310	Assess Implementation of SAT Items	●		●		●	●			●	
FOCUS AREA 4: Communication											
401	Site Communication Plan		△	△	△	△					
FOCUS AREA 5: System Reliability and Material Condition											
501	Preventive/Predictive Maintenance Program Improvements						△	△			
502	Corrosion Control							△			
503	Design Basis Reconstitution Program						△			△	
504	Equipment Data Base System (EDBS)						△			△	
505	Cooling Water Reliability Program							△			
506	Plant Engineering Program Upgrade					△		△	△		
507	ISI/IST Improvement Testing Program				△	△	△	△		△	
508	AC Source Improvement Program							△			

△ - Key initiatives (scheduled in the Three-Year Plan)

● - Remaining initiatives (included in the Three-Year Plan, but not yet scheduled)

INITIATIVES		MAJOR ISSUES									
No.	Title	Self-assessment, corrective actions, and root cause analyses	Management expectations and standards	Management leadership, oversight, resources, and support	Teamwork	Human performance	Work control processes	Aging equipment and insufficient maintenance	Backlog	Procedures, WR/JO instructions, and control of documents	Health physics and housekeeping
FOCUS AREA 5: System Reliability and Material Condition (continued)											
509	Management of Temporary and Substandard Conditions			●		●		●	●		
510	Painting to Upgrade Material Condition							●			●
511	Dose Reduction/ALARA Initiatives							●			●
512	Environmental and Chemistry Program Improvements							●		●	●
513	Megawatt Improvement Program							●			
514	Improve Plant HVAC Systems							●			
515	Fire Protection Upgrade Project						●	●		●	

5 - OPERATING PLAN

This chapter provides an overview of the BNP operating plan for 1993-1997 and a list of major outage projects for 1993-1995. Outage schedules are continually refined to reflect the projected work and plant operational requirements. The refinements include updates resulting from reviews of the required coordination between units, the detailed project work plans, human and financial resource allocations, and the need to maintain a high level of nuclear safety and plant reliability.

Outage schedules and the major projects in the next two refueling outages are summarized in the table on the following page and reflect current plans. See the BNP Integrated Startup Plan issued on November 30, 1992, for startup activities scheduled in 1993.

OUTAGE OVERVIEW

Outage Description	Dates	Representative Major Projects
UNIT ONE		
Refuel No. 8	Fall 1993	<ul style="list-style-type: none"> • Main Generator Inspection • Reactor Pressure Vessel Hydro • High Pressure Turbine Inspection • Emergent Structural Issues (B0014A) • Diesel Generator Five-Year Inspection • Process Computer Replacement (01757A) • Main Steam Isolation Valve Upgrade (G0054A) • Seismic Qualification of Equipment (04042A) • Replace E11-F003A & 24A with Globe Valves (G0010A) • Provide CAD Subsystem Divisional Separation (G0156A) • Modules & Steam Leak Detection System Upgrade (G0051A) • Upgrade Replacement Equipment to NUREG-0588 CAT 1 Requirements (00912A) • Diesel Generator Service Water Supply and Discharge Piping Replacement (G0050J)
Refuel No. 9	Spring 1995	<ul style="list-style-type: none"> • Turbine Inspection • Service Water System 10-Year Hydros • Low Pressure B Turbine Rotor Replacement • Feedwater Sparger Cracking Issue (G0029A) • Main Steam Isolation Valve Upgrade (G0054A) • Reactor Recirculation Pump Motor 10-Year Inspection (07197A) • Thermal Overload Protection for AC Motor Operated Valves (M0121E) • Upgrade Replacement Equipment to NUREG-0588 CAT 1 Requirements (00912A) • Diesel Generator Service Water Supply and Discharge Piping Replacement (G0050J)
UNIT TWO		
Refuel No. 10	Spring 1994	<ul style="list-style-type: none"> • Main Generator Inspection • Seismic Qualification of Equipment • Service Water System 10-Year Hydros • Emergent Structural Issues (B0014A) • Process Computer Replacement (01757A) • Rosemount Transmitter Replacement (00912D) • Main Steam Isolation Valve Upgrade (G0054A) • Feedwater Control System Replacement (04688A) • Replace E11-F003A/B & 24A/B with Globe Valves (G0010A) • Thermal Overload Protection for AC Motor Operated Valves (M0121E) • Diesel Generator Service Water Supply and Discharge Piping Replacement (G0050J)
Refuel No. 11	Fall 1995	<ul style="list-style-type: none"> • Turbine Inspection • Service Water System 10-Year Hydros • Low Pressure A Turbine Rotor Replacement • Feedwater Sparger Cracking Issue (G0029A) • Main Steam Isolation Valve Upgrade (G0054A) • Service Water Flow Test Instrumentation (G0050M) • Reactor Recirculation Pump Motor 10-Year Inspection (07197A) • Thermal Overload Protection for AC Motor Operated Valves (M0121E) • Diesel Generator Service Water Supply and Discharge Piping Replacement (G0050J)

NOTE: The numbers in parenthesis are project identification (PID) numbers

6 - FACILITIES PLAN

The condition of site facilities has been a significant concern at BNP. Many facilities are old and are being used for purposes for which they were not originally intended. To improve these working conditions, projects are in progress, or being planned, for building new facilities, upgrading existing facilities, and removing temporary facilities. The facility improvements are planned for both inside and outside the protected area and are directed at: (1) increasing worker efficiency, (2) optimizing locations for specific work functions, (3) improving communications, (4) upgrading plant support facilities and equipment, (5) providing significant improvements in working conditions, (6) providing adequate office space for permanent BNP staff, and (7) increasing storage space.

The facility improvements have been grouped into two categories. The first category includes high priority improvements that have been sufficiently studied to ensure intended benefits will be realized. This category also includes lower priority facility improvements that must be completed in order to fulfill a prerequisite for the higher priority improvements. The second category includes high priority improvements that need further study and medium and low priority improvements. The facility improvements in the first category will be further evaluated for inclusion in the Master Facilities Plan. The Master Facilities Plan will be developed by August 31, 1993 and will include detailed descriptions and schedules for all facility improvements planned for late 1993, 1994, and 1995.

A brief description of the facility improvements for each category are provided below. Detailed schedules and action plans of the facility improvements are included in Chapter 8 as Initiative 206, BNP Facility Improvements. Also the locations of the proposed new facilities and facilities to be upgraded are indicated in the figures at the end of this chapter.

CATEGORY ONE FACILITY IMPROVEMENTS (AUTHORIZED FOR COMPLETION DURING 1993 AND 1994)

Technical and Administrative Center: Complete construction of the exterior areas adjacent to this facility, including associated roads, sidewalks, landscaping, lights, and parking. This includes constructing a covered walkway between the Technical and Administrative Center and the Secondary Access Facility.

Snubber Repair and Hot Calibration/Test Equipment Shop: Construct a 2,100 square-foot facility at the east end of the tool room and warehouse for snubber repair and issuing hot calibrated tools and clean tools. Construction of this facility is a prerequisite to creating a Radiologically Controlled Area (RCA) with single-point access. The proposed location of this facility will allow the Snubber Repair Shop to remain in the RCA and eliminate the need to move the snubbers being refurbished in and out of the RCA. This facility will also provide adequate "Q" list storage for the refurbished snubbers.

E&RC Laundry and Chemical Storage Facility: Construct a 9,000 square-foot, one-story storage and laundry facility at the north side of the E&RC warehouse to replace the existing laundry. This facility will be used for laundry sorting and storage, health physics materials storage, storage of HEPA filters, and storage of QA controlled items. This facility will be located outside of the proposed single-point access RCA.

Single-Point Access RCA: After completion of the Snubber Repair and Hot Calibration/Test Equipment Shop and the E&RC Laundry and Chemical Storage Facility, construct an RCA with single-point access by modifying the existing single-point access plus previous snubber shop and radwaste mechanical crew areas, moving the IPM-8 contamination friskers, and installing a chain-link fence with appropriate vehicle and personnel gates. The RCA will allow free access both inside and outside the "power block" and outside areas. The modification of the single-point access area will allow two-way traffic for access to and egress from the plant.

Sewage Treatment Facility: Construct two individual sewage treatment plants with a combined capacity of 40,000 gallons per day. This facility will lower the load on the existing sewage treatment facilities below required limits and allow flexibility to perform maintenance on these facilities. If the existing sewage treatment system fails at its present sewage intake, the entire site would be impacted for the period of its failure.

Tool Decontamination Facility: Upgrade the existing decontamination room in the "hot shop" with new decontamination equipment. This upgrade will significantly enhance worker efficiency, improve contamination/hot particle control, and eliminate the need for an outage-related decontamination trailer.

Material Storage Facilities: Upgrade these facilities to include HVAC systems and to accommodate material which is presently stored outside. This upgrade will minimize material degradation due to material being stored in a hostile environment.

Administrative Annex Building: Renovate this building to accommodate Computer Support Unit, Nuclear Craft Resources, and Emergency Preparedness Group staff. This renovation will allow personnel to be moved out of trailers.

Trailers and Temporary Buildings: Remove trailers and temporary buildings as personnel are transferred from these temporary facilities to new or renovated facilities.

CATEGORY TWO FACILITY IMPROVEMENTS (TO BE EVALUATED AND CONSIDERED FOR INCLUSION IN THE MASTER FACILITIES PLAN)

Service Building: A) Renovate this building to increase chemistry lab space and optimize office space for E&RC functions. This renovation will improve efficiency of required laboratory analysis activities and reduce congestion in the building's hallways. B) Relocate the armory and Security Lieutenant's office inside the protected area in the Service Building. This upgrade will allow the security force to better respond to security events.

Administrative Building: Renovate the first floor of this building to accommodate the Security staff and the second floor to accommodate NAD and Radwaste/Fire Protection staff.

Clean Maintenance Shop: Renovate the first and second floor of this building to optimize work space and worker efficiency.

Low-Level Waste Storage Facility: Add exterior crane and loading ramp to expedite loading and unloading of trucks and to relieve crane crews of work outside the protected area.

Hands-On Training Facility: Assess the pros and cons of extending the lease for the off-site leased facility that is currently being used for hands-on training. If warranted, construct a Hands-On Training Facility east of the Technical and Administrative Center. This facility would provide practical training of plant personnel using actual equipment and mock-ups and also provide office space for training personnel. This facility will replace a temporary, off-site leased facility that is currently being used for hands-on training.

Control Room Briefing Area: Construct a briefing area adjacent to the control room to enhance operations and personnel communications. This area will allow pre-shift and pre-evolution briefings to be conducted without distracting on-shift control room operators.

Work Control Center Facility: Construct a two-story, 23,000 square-foot building inside the protected area, south of the Clean Maintenance Shop. This facility will house personnel and support facilities for the Clearance Center, Site Work Force Control Group, Inservice Inspection/Post-Maintenance Test Requirements Test Group, a Field Library, maintenance planners, OM&M planners/schedulers, an Outage Control Center, and Maintenance Electrical Shops. This center will facilitate a more efficient work control process that would provide an improved product in the form of work packages, work schedules, and status reports.

Maintenance Storage Building: Construct a one-story, 3,200 square-foot building where the Plant Services trailers are currently located. This facility will be used for storage of maintenance consumables, infrequently used equipment, and in-process materials currently stored in the maintenance work areas or outside storage areas.

Technical Support Center/Emergency Operations Facility (TSC/EOF): Upgrade TSC/EOF existing rooms with monitors, electronic displays, decision line, individual computer workstations, and professional work areas to enhance communications during emergency situations. This upgrade will also improve human factors and reduce the potential for errors when transmitting important emergency information.

OM&M Support Offices: Construct a two-story, 14,000 square-foot building to house all OM&M craft and contractors, ISI testing equipment, NDE darkrooms, craft lunch room, and a one-story, sheet metal fabrication shop. This facility will increase communication between OM&M support personnel and eliminate the need for OM&M trailers on site. The fabrication shop included in this building will be needed if a fifth diesel generator (GDC-17 project) is built in the location of the existing fabrication shop.

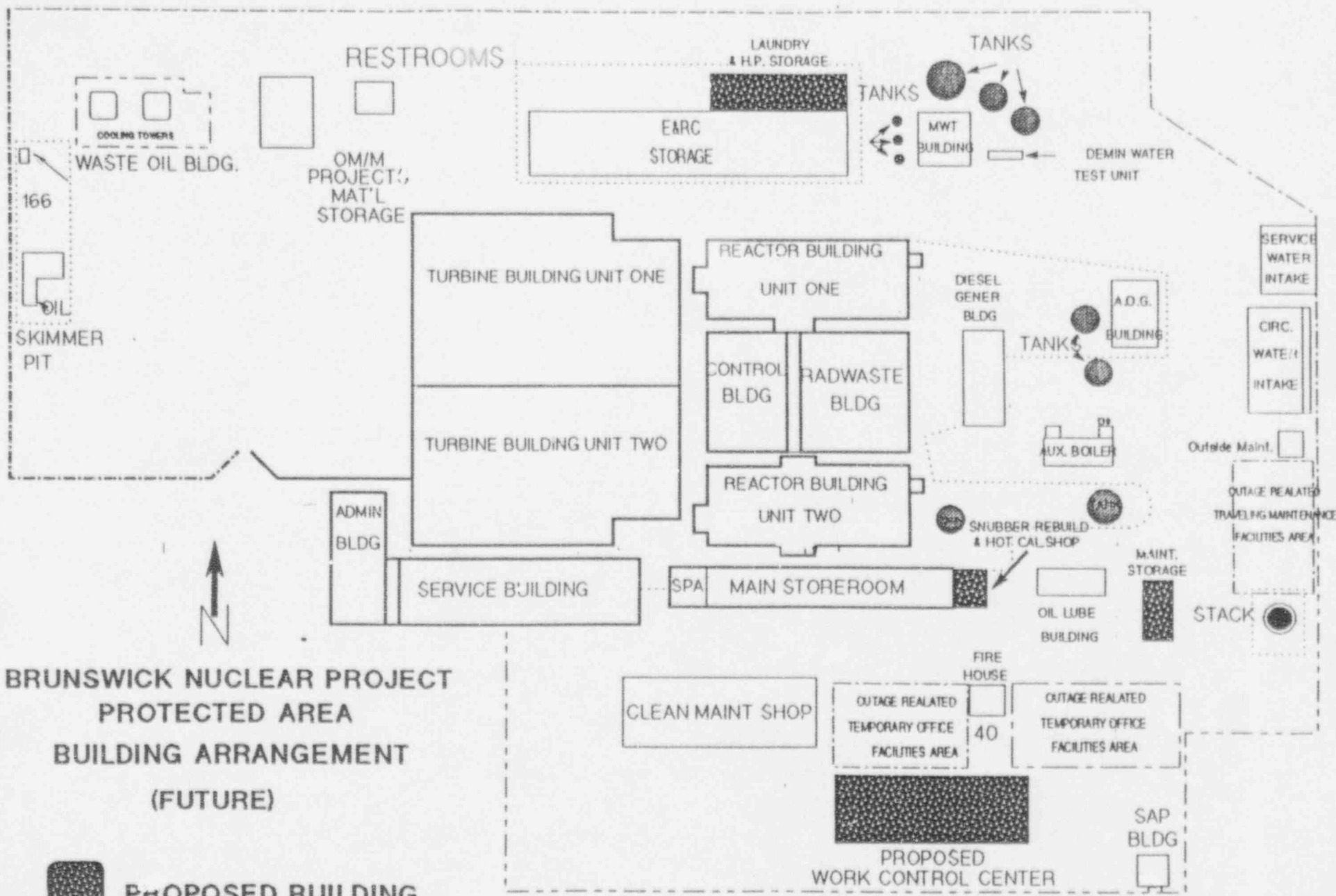
Central Alarm Station (CAS) and Secondary Alarm Station (SAS): Renovate the CAS and SAS to accommodate the security computer and card reader upgrade. This renovation will mainly consist of rearranging electronic equipment and performing associated electrical upgrades.

Maintenance Machine Shop: Improve hot and clean equipment in the Maintenance Machine Shop by repairing existing equipment and purchasing new equipment. This improvement will restore existing machine shop equipment to its original capabilities and increase the maintenance unit's capability to meet plant needs.

CRD Rebuild Room: Upgrade the Control Rod Drive (CRD) Rebuild Room on the 80-foot level of the Reactor Building by installing a wet table and adding partitions and electrical upgrades. This upgrade will improve the quality of rebuilds and increase hot particle protection.

Tech Support Laboratory and Storage Facility: Construct a one-story, 1,000 square-foot building inside the protected area. This facility will accommodate testing equipment, calibration blocks, and additional testing equipment used by Tech Support personnel. This equipment is currently located in various trailers throughout the site.

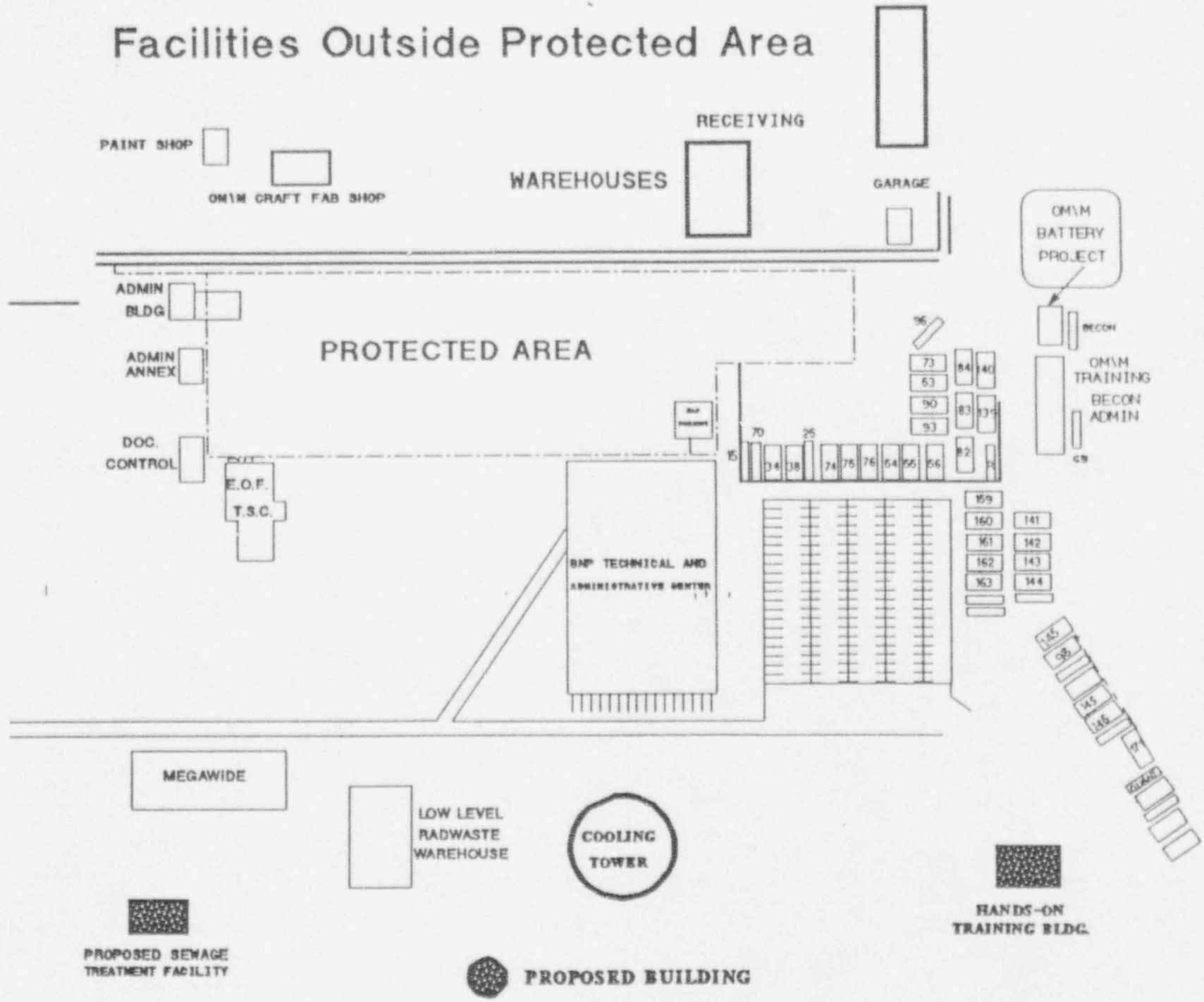
Mobile Solidification Facility: Construct a mobile enclosure that can be lifted and placed over resin storage to allow resin to be transferred for disposal.



**BRUNSWICK NUCLEAR PROJECT
PROTECTED AREA
BUILDING ARRANGEMENT
(FUTURE)**

PROPOSED BUILDING
PROPOSED RCA

Facilities Outside Protected Area



This chapter describes the framework for managing, reporting, and controlling the implementation of the BNP Three-Year Plan initiatives and projects.

IMPLEMENTATION MANAGEMENT

The Three-Year Plan will be implemented and controlled on-site. Several measures are being taken to facilitate effective implementation of the initiatives and projects in this plan. These measures include:

- A section manager has assumed accountability and responsibility for results in each strategic focus area.
- A management sponsor has been named for each initiative, and a project manager has been named for each project. The management sponsors and project managers are responsible for:
 - aggressively managing the scope of work;
 - providing accurate monthly status reports; and
 - ensuring that specified results are achieved.
- The BNP management team will monitor the overall implementation of this plan, ensuring that actions taken are effective and timely. Managers will continually assess progress toward correcting root causes and will ensure that expectations are met.
- Performance status, accomplishments, and exceptions to this plan will be provided each month to senior management through summary reports which are briefly described below. Additionally, review meetings will be held with senior management to facilitate discussions of accomplishments and progress made toward achieving the objectives of this plan.
- The Vice President-BNP is assigned as the senior manager with overall, direct responsibility for plan coordination, tracking, and successful implementation.
- Administrative aspects of this plan have been assigned to the Manager-Control and Administration, with responsibility to coordinate and support all participants.
- Contents of this plan are being communicated to BNP employees at all levels, and updates on progress will be regularly distributed. Continual focus of employee work efforts and building a common understanding of the purpose of new daily activities and performance standards is key to successful implementation of this plan.

STATUS REPORTING

The management sponsors and project managers of the initiatives and projects are responsible for providing status updates and actual accomplishments. All regulatory commitments associated with a particular initiative or project will be established as reporting milestones, and each will be monitored individually.

Each initiative and project contains milestones that will be monitored on an individual basis. The initiative milestones are defined as the scheduled completion dates of each initiative action step. The project milestones are defined as the scheduled completion dates for the study, design, and implementation phases. Every month the management sponsors and project managers will report on the status of completing these milestones by indicating the following:

- milestones completed, along with the actual completion date;
- milestones on target and those not on target;
- each milestone's percent complete; and
- regulatory commitments' status versus original commitment date.

Additionally, the management sponsors and project managers will provide initiative and project cost reports that will indicate the following:

- if the cost is on or off target; and
- the number of cumulative dollars spent on the initiative or project milestone.

For cost reporting, initiative costs will be reported on an overall initiative level by unit. Project costs will be reported at the study, design, and implementation levels.

If an action step is noted as not on-target, the management sponsor will provide a recovery plan that is intended to result in the action step being completed on schedule or within budget. If a revision to an action step completion date or cost estimate is necessary, the management sponsor must process the revision in accordance with the change management procedure described later in this section.

Status Report Frequency

A monthly status report on the initiatives and projects contained in the Three-Year Plan will be provided to CP&L Senior Management and BNP Site Management. A summary of this report will be provided to all employees to communicate overall Three-Year Plan progress and areas of increased emphasis.

Content of the Three-Year Plan Monthly Status Report

The monthly progress report for the Three-Year Plan will consist of the following major parts:

- Milestone Completions
- Milestone Exceptions
- Initiative/Project Accomplishment.

The first part of the report will note each milestone that was completed as scheduled during the most recent reporting period.

The second part of the report will describe missed milestones and milestones whose cost or schedule are identified as "not on-target." For these missed milestones, an explanation of the cause and the steps being taken to minimize the impact of this schedule slippage or cost overrun will be included. For future milestones that are reported as "not on-target," recovery plans that attempt to eliminate potential delays in milestone completion or reduce cost concerns will be fully defined in support of the approved scheduled date. Revisions to scheduled milestone dates or cost estimates will be accomplished only through the change procedure described below.

The third part of the report will describe all projects and initiatives completed during the reporting period. For each completed project or initiative, a description will be included that notes its completion, benefits realized to date and expected in the future, and acknowledgement that intended objectives were achieved. In most cases, there will be a time lapse after completion of an initiative or project before the benefits can be fully assessed. Therefore, this portion of the report also will include a list of benefits realized from previously completed initiatives and projects.

The Vice President-BNP is responsible for developing this report.

CHANGE MANAGEMENT

The Three-Year Plan covers the period from 1993 to 1995. The Three-Year Plan is a "living" plan and additional initiatives and projects may be added. As stated in Chapter 4, Strategy, once the key initiatives that focus on process improvements show results, the remaining initiatives will be reviewed, scheduled, and incorporated into the plan.

Changes in key milestones, scope, and cost estimates of the initiatives and projects in this plan will be reviewed and approved as a function of its assigned priority (high, medium, or low) or other site needs. Other changes, such as intermediate milestone changes, are important and will be reviewed if they might affect the key milestones and action steps that are being tracked for management reporting.

Current Initiatives And Projects

Proposed schedule or scope changes to existing initiatives or projects shall be approved as follows:

- Delaying milestones or changing initiative or project scopes shall be approved by the appropriate management level specified below. This required management approval is based exclusively on the priority of the initiative or project, as described below:
 - High Priority Initiatives or Projects must be approved by the Senior Vice President-NGG, or higher.
 - Medium Priority Initiatives or Projects must be approved by the Vice President-BNP, or higher.
 - Low Priority Initiatives or Projects must be approved by the responsible BNP Section Manager, or higher.
- Rescheduling initiatives for earlier completion shall be approved by the Vice President-BNP and the responsible Section Manager Team.

All changes in project costs shall be reviewed per standard company policy as reflected in BSP-14, Project Identification and Project Change Process.

Changes must be approved prior to adjusting the Three-Year Plan control database and tracking system.

New Initiative and Project Proposals for the Three-Year Plan

New initiatives must be proposed and ranked by priority through the same ranking process as were the original initiatives making up the Three-Year Plan. Proposals for new initiatives shall include a full description of impact on or relationship to existing initiatives or projects. All proposed initiatives (not currently included in the Three-Year Plan) must be approved by the Senior Vice President-NGG.

New projects must be proposed and processed in accordance with BSP-14, Project Identification and Project Change Process.

8 - BNP INITIATIVE AND PROJECT PLANS

Chapter 8 contains descriptions and schedules of the initiatives and projects in the Three-Year Plan. The initiatives are comprised of scheduled (key) and unscheduled initiatives, while the projects are divided into three categories: Major Projects, Small Projects, and Procurement and Other Miscellaneous Projects.

The initiatives are listed by focus areas with key initiatives denoted on the index with two asterisks (**). The key initiatives contain scheduled start/finish dates by each action step. The unscheduled initiatives contain the durations of each action step, but no start/finish dates.

The projects listed in this section are those which have a significant impact on improving plant conditions. These projects do not include start-up, carryover, routine or any small closeout projects.

The projects included in the Major and Small projects section contain schedule details by the Study, Design, and Implementation phases for 1992 thru 1997.

The Major projects have a project description with detailed schedule attached. The Small projects are all listed on one schedule plot. Finally, the Procurement and Other Miscellaneous Projects section is a listing of all procurement, maintenance, consolidated plant modification closeout, or other miscellaneous projects considered to be significant to the Three-Year Plan.

INITIATIVES

INDEX OF INITIATIVES

FOCUS AREA 1: PLANNING, SCHEDULING, AND COMMITMENT ACHIEVEMENT Leader - E.E. Willett	
INITIATIVE	SPONSOR
101 - Integrated Planning and Scheduling**	E. Willett
102 - BNP Integrated Scheduling and Three-Year Plan Administration**	M. Foerster
103 - Corrective Maintenance Backlog	D. Moore
104 - Business Planning Improvements	D. Ingram
105 - Inventory Control	J. Ferguson
106 - Outage Length Reduction	G. Peeler
FOCUS AREA 2: HUMAN PERFORMANCE Leader - G.H. Warriner	
INITIATIVE	SPONSOR
201 - Effective Performance Management/Total Quality**	J. Ferguson
202 - Training Initiatives**	M. Jones
203 - Utilization/Inter-Unit Support**	K. Ahern
204 - Management Effectiveness**	M. Donilon
205 - Supervisory Development Program**	M. Donilon
206 - BNP Facility Improvements**	R. Johnson
207 - Nuclear Revision Control System (NRCS)	D. Reid
208 - Integrated Computer Support	D. Reid
FOCUS AREA 3: WORK PROCESSES Leader - J.P. Cowan	
INITIATIVE	SPONSOR
301 - Improve Procedure Control Process and Procedure Content**	C. Lewis
302 - Improving the Modification Process**	R. Helme
303 - Improve Ability to Identify and Correct Problems**	S. Floyd
304 - Backlog Reduction**	J. Cowan
305 - Clearances	K. Ahern
306 - Health Physics Program Improvements	C. Robertson
307 - Implement/Augment BNP Local Area Network (LAN)	D. Reid
308 - Develop Centralized Document Control Program	C. Lewis
309 - Site Work Tracking System (SWTS)	D. Reid
310 - Assess Implementation of SAT Items	J. Cowan

** Identified as an initiative for which work is scheduled to begin immediately

INDEX OF INITIATIVES

FOCUS AREA 4: COMMUNICATION Leader - J.A. Dobbs	
INITIATIVE	SPONSOR
401 - Site Communication Plan**	K. Hampton
FOCUS AREA 5: SYSTEM RELIABILITY & MATERIAL CONDITION Leader - J.M. Brown	
INITIATIVE	SPONSOR
501 - Preventive/Predictive Maintenance Program Improvements**	R. Helme
502 - Corrosion Control**	E. Bishop
503 - Design Basis Reconstitution Program**	E. Bishop
504 - Equipment Data Base System (EDBS)**	A. Richards
505 - Cooling Water Reliability Program**	R. Helme
506 - Plant Engineering Program Upgrade**	R. Helme
507 - ISI/IST Improvement Testing Program**	R. Helme
508 - AC Source Improvement Project**	J. O'Connor
509 - Management of Temporary and Substandard Conditions	R. Helme
510 - Painting to Upgrade Material Condition	J. Kelly
511 - Dose Reduction/ALARA Initiatives	C. Robertson
512 - Environmental & Chemistry Program Improvements	C. Robertson
513 - Megawatt Improvement Projects	R. Helme
514 - Improve Plant HVAC Systems	R. Helme
515 - Fire Protection Upgrade Project	R. Helme

** Identified as an initiative for which work is scheduled to begin immediately

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: INTEGRATED PLANNING & SCHEDULING

NUMBER: TY101

PRIORITY: HIGH

FOCUS AREA: PLANNING, SCHEDULING, AND COMMITMENT ACHIEVEMENT

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP; FORECAST/SCHEDULE
ACHIEVEMENT

REFERENCE FOR NEED: NRC; INPO; IAP; SAT OM2A,2B,2C,2D,2E, OM4; CII-10

INITIATIVE DESCRIPTION

ESTABLISH AN INTEGRATED PLANNING AND SCHEDULING ORGANIZATION THAT WILL FACILITATE A UNIFORMLY UNDERSTOOD INTEGRATED WORK PLANNING AND SCHEDULING PROCESS FOR THE SITE. EFFICIENCIES WILL BE REALIZED IN RESOURCE UTILIZATION, LOWER OPERATING COSTS, AND ENHANCED PLANT MATERIAL CONDITION AND RELIABILITY. ESTABLISH AN ADMINISTRATIVE PROCESS BY WHICH TESTING, MODIFICATION, AND MAINTENANCE ACTIVITIES ARE INITIATED, SCHEDULED, PLANNED, APPROVED, COORDINATED, PERFORMED, AND REVIEWED FOR ADEQUACY.

OBJECTIVES

- A) PROVIDE ACCURATE STATUS OF WORK AND BACKLOGS OF WORK.
- B) ADDRESS THE EFFICIENT PLANNING, SCHEDULING, AND CONDUCT OF WORK.
- C) MAINTAIN CONFIGURATION CONTROL OF THE PLANT.
- D) ENHANCE EQUIPMENT AND PLANT SAFETY, RELIABILITY AND AVAILABILITY THROUGH EFFICIENT SCHEDULING WHICH WOULD MINIMIZE EQUIPMENT DOWNTIME.
- E) REDUCE MATERIAL EXPEDITING COSTS BY PROVIDING INCREASED NOTICE OF MATERIAL NEEDS.
- F) REDUCE RADIATION DOSE BY PROVIDING ADEQUATE TIME FOR ALARA PLANNING AND IMPLEMENTATION.
- G) ENHANCE INDUSTRIAL SAFETY.

MGMT. SPONSOR: E. WILLETT

RESP. ORGANIZATION: OM&M

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992			1993			1994			1995			
			J	A	J	J	O	J	A	J	O	J	A	J	O
TY101 01A	SITE MANAGEMENT APPROVAL OF PROPOSED IPS PLAN - INCLUDING FUNCTIONS, ORGANIZATION, AND IMPLEMENTATION SCHEDULE.	R. ANDERSON													
TY101 02A	API PACKAGE SUBMITTED TO POSITION EVALUATION COMMITTEE (PEC).	E. WILLETT													
TY101 03A	ASSESS CURRENT PLANT PROCEDURE WRITING STAFF CAPABILITIES AND THEIR EXISTING ORGANIZATIONAL ASSIGNMENTS AGAINST NEW PROCEDURES REQUIRED TO FACILITATE IPS FUNCTIONAL AND ORGANIZATIONAL CHANGES.	E. WILLETT													
TY101 04A	NAME IPS MANAGER AND ASSESS STAFFING AND ORGANIZATIONAL ASSIGNMENTS REQUIRED TO MEET THE OBJECTIVES OF IPS.	E. WILLETT													
TY101 05A	IDENTIFY/ASSIGN EXISTING RESOURCES.	R. ANDERSON													
TY101 06A	DEVELOP A PHYSICAL RELOCATION PLAN.	IPS MANAGER													
TY101 07A	FINALIZE WORK PROCESSES AND FLOW.	IPS MANAGER													
TY101 08A	DETERMINE TRAINING NEEDS AND CONDUCT TRAINING.	IPS MANAGER													
TY101 09A	ESTABLISH TRANSITION PLAN.	IPS MANAGER													
TY101 10A	IMPLEMENT PLAN.	IPS MANAGER													
TY101 11A	MONITOR EFFECTIVENESS AND REPORT ON A QUARTERLY BASIS.	IPS MANAGER													

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: BNP INTEGRATED SCHEDULING AND THREE-YEAR PLAN ADMINISTRATION
NUMBER: TY102 PRIORITY: HIGH
FOCUS AREA: PLANNING, SCHEDULING, AND COMMITMENT ACHIEVEMENT
RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP; EMPLOYEE
SATISFACTION; FORECAST/SCHEDULE ACHIEVEMENT
REFERENCE FOR NEED: NLS-92-272; NRC WATCH LIST GUIDELINES; NRC 92-12

INITIATIVE DESCRIPTION

ESTABLISH AN INTERIM, BRIDGE ORGANIZATION AND PROCESSES TO FACILITATE MANAGEMENT AND IMPLEMENTATION OF THE BNP THREE-YEAR PLAN UNTIL IT IS CONSOLIDATED WITH THE BUSINESS PLANNING FUNCTION. ACCOMPLISH THIS BY PROVIDING METHODS TO: TRACK AND REPORT ON PROGRESS, EVALUATE TRENDS, ASSIST IN RECOVERY PLANNING TO MEET MILESTONES, MANAGE AND RECORD RECORD CHANGES, ESTABLISH CLOSEOUT INCLUDING SELF-ASSESSMENT FOR BENEFITS DERIVED, AND FACILITATE OWNERSHIP AT THE DETAIL LEVEL FOR ACCOUNTABILITY IN MEETING COMMITMENTS/GOALS.

OBJECTIVES

- A) ENSURE THAT THE INTENDED BENEFITS OF THE THREE-YEAR PLAN ARE REALIZED.
- B) FACILITATE ANNUAL BUSINESS PLANNING.
- C) KEEP BNP MANAGEMENT AND WORKFORCE UPDATED ON THREE-YEAR PLAN PROGRESS.
- D) ENSURE THE SUCCESS OF INITIATIVE SPONSORS/PROJECT MANAGERS THROUGH THE USE OF: MEANINGFUL MILESTONES; TIMELY REPORTING; & RECOVERY PLANNING.
- E) IDENTIFY AND FACILITATE IMPLEMENTATION OF THREE-YEAR PLAN SCOPE, SCHEDULE & COST CHANGES.
- F) SATISFY THE INFORMATION NEEDS OF THE FOLLOWING PRIMARY AUDIENCES: CP&L SENIOR MANAGEMENT, BNP SITE MANAGEMENT, BNP USERS & NRC.

MGMT. SPONSOR: M. FOERSTER

RESP. ORGANIZATION: CONTROL & ADMIN

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992		1993		1994		1995	
			J	A	J	J	J	J	J	J
TY102 01A	ESTABLISH THE OVERALL PROCESSES, INTERFACES, AND COMMUNICATIONS PLAN TO MANAGE AND ADMINISTER THE THREE-YEAR PLAN.	M. FOERSTER			15-DEC-92	■	15-JAN-93			
TY102 02A	FACILITATE DEVELOPMENT OF NEXT LEVEL OF DETAIL (LEVEL II, III) SCHEDULES FOR INITIATIVES AND PROJECTS.	M. FOERSTER			15-DEC-92	■	15-APR-93			
TY102 03A	FACILITATE DEVELOPMENT OF DETAILED SUCCESS CRITERIA FOR EACH INITIATIVE/PROJECT.	M. FOERSTER			1-JAN-93	■	1-MAY-93			
TY102 04A	ESTABLISH AN INTERIM THREE-YEAR PLAN INFORMATION SYSTEM FOR STORING, TRACKING, AND REPORTING ON INITIATIVE/PROJECT DATA.	M. FOERSTER			1-NOV-92	■	28-FEB-93			
TY102 05A	DEVELOP A PROCESS FOR TRACKING, TRENDING, AND REPORTING THREE-YEAR PLAN IMPLEMENTATION.	M. FOERSTER			15-DEC-92	■	15-JAN-93			
TY102 06A	DEVELOP A THREE-YEAR PLAN CHANGE MANAGEMENT PROCESS THAT DESCRIBES METHODS FOR ADDING OR REVISING INITIATIVES AND PROJECTS. REVISE BSP-14, PROJECT IDENTIFICATION AND PROJECT CHANGE PROCESS.	M. FOERSTER			15-JAN-93	■	1-APR-93			
TY102 07A	DEVELOP A PROCESS FOR INITIATIVE/PROJECT CLOSEOUT WITH SELF-ASSESSMENT AND INDEPENDENT ASSESSMENT OF SUCCESS CRITERIA AND BENEFITS.	M. FOERSTER			1-MAR-93	■	15-MAY-93			
TY102 08A	DETERMINE THE IMPACT OF THE MISSIONS AND FUNCTIONS OF THE INTEGRATED PLANNING AND SCHEDULING ORGANIZATION ON THE INTERIM THREE-YEAR PLAN MANAGEMENT PROCESSES AND SYSTEMS. REVISE PROCESSES AND SYSTEMS, AS NECESSARY.	M. FOERSTER			1-APR-93	■	30-MAY-93			
TY102 09A	PROVIDE CONTINUOUS DATA COLLECTION, EVALUATION, TRENDING, AND REPORTING. FACILITATE INITIATIVE/PROJECT INITIATION AND CLOSEOUT.	M. FOERSTER			15-DEC-92	■	31-DEC-93			
TY102 10A	REVISE THE INTERIM THREE-YEAR PLAN MANAGEMENT PROCESSES TO BE CONSISTENT WITH THE PROCEDURES ESTABLISHED BY THE INTEGRATED PLANNING AND SCHEDULING ORGANIZATION.	M. FOERSTER			1-JUN-93	■	31-JUL-93			
TY102 11A	ASSESS THE OVERALL IMPACT OF THE THREE-YEAR PLAN ON MANAGEMENT & BNP PROCESSES; DETERMINE NEEDED PEOPLE, PROCESS, & PLANT IMPROVEMENTS; & REVISE THE PLAN ACCORDINGLY. SUBMIT THE REVISED THREE-YEAR PLAN FOR SENIOR MGMT COMM. REVIEW.	M. FOERSTER			1-JUL-93	■	30-SEP-93			

BNP THREE-YEAR PLAN

INT.# TASK	DESCRIPTION	ACTION SPONSOR	1992			1993			1994			1995		
			J	A	J	J	A	J	J	A	J	J	A	J
TY102 12A	CONSOLIDATE INTERIM THREE-YEAR PLAN INFORMATION SYSTEM WITH LONG RANGE PLANNING & BUSINESS PLANNING INFORMATION SYSTEMS.	M. FOERSTER												
TY102 13A	CONSOLIDATE THIS INITIATIVE PROCESS WITH THE LONG RANGE PLANNING & BUSINESS PLANNING PROCESSES.	M. FOERSTER				1-OCT-93						31-DEC-93		
						1-NOV-93						31-DEC-93		

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: CORRECTIVE MAINTENANCE BACKLOG

NUMBER: TY103 PRIORITY: MEDIUM

FOCUS AREA: PLANNING, SCHEDULING, AND COMMITMENT ACHIEVEMENT

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP; FORECAST/SCHEDULE
ACHIEVEMENT

REFERENCE FOR NEED: NRC 92-09, 92-12; INPO; SAT ITEMS M5,7,8,11,15,
OM2,4; CII-10,11; INIT. 001, 017, 069

INITIATIVE DESCRIPTION

DEVELOP AND IMPLEMENT A PROCESS TO ELIMINATE THE CURRENT CORRECTIVE MAINTENANCE BACKLOG AND ENSURE THAT PROPER STAFFING LEVELS, PROCESS IMPROVEMENTS, CRAFT AND SUPERVISORY TRAINING ENHANCEMENTS, AND MONITORING TOOLS ARE IN PLACE TO MAINTAIN A CONTINUING MANAGEABLE LEVEL OF BACKLOG.

OBJECTIVES

- A) MAINTAIN CORRECTIVE MAINTENANCE BACKLOG AT LESS THAN OR EQUAL TO TWELVE WEEKS.
- B) ELIMINATE THE CURRENT BACKLOG OF CORRECTIVE MAINTENANCE ITEMS WITHIN THREE YEARS.
- C) PROVIDE OPTIMUM STAFFING LEVELS IN MAINTENANCE TO MAINTAIN MANAGEABLE LEVELS OF CORRECTIVE MAINTENANCE BACKLOG.
- D) FACILITATE PROCESS IMPROVEMENTS REQUIRED TO MAINTAIN MANAGEABLE LEVELS OF BACKLOG.
- E) ASSURE TIMELY EQUIPMENT REPAIRS AND PREVENTIVE MAINTENANCE TO ASSURE PLANT SAFETY AND RELIABILITY.
- F) ENSURE THAT ASSESSMENT METHODS EXIST TO MONITOR PROGRESS AND FACILITATE EARLY PROBLEM DETECTION.

MGMT. SPONSOR: D. MOORE

RESP. ORGANIZATION: MAINTENANCE

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

1992	1993	1994	1995
J A J J	J A J J	J A J J	J A J J

ACTION SPONSOR














DESCRIPTION

1-DEC-92 ■■■■■ 31-DEC-93

D. MOORE

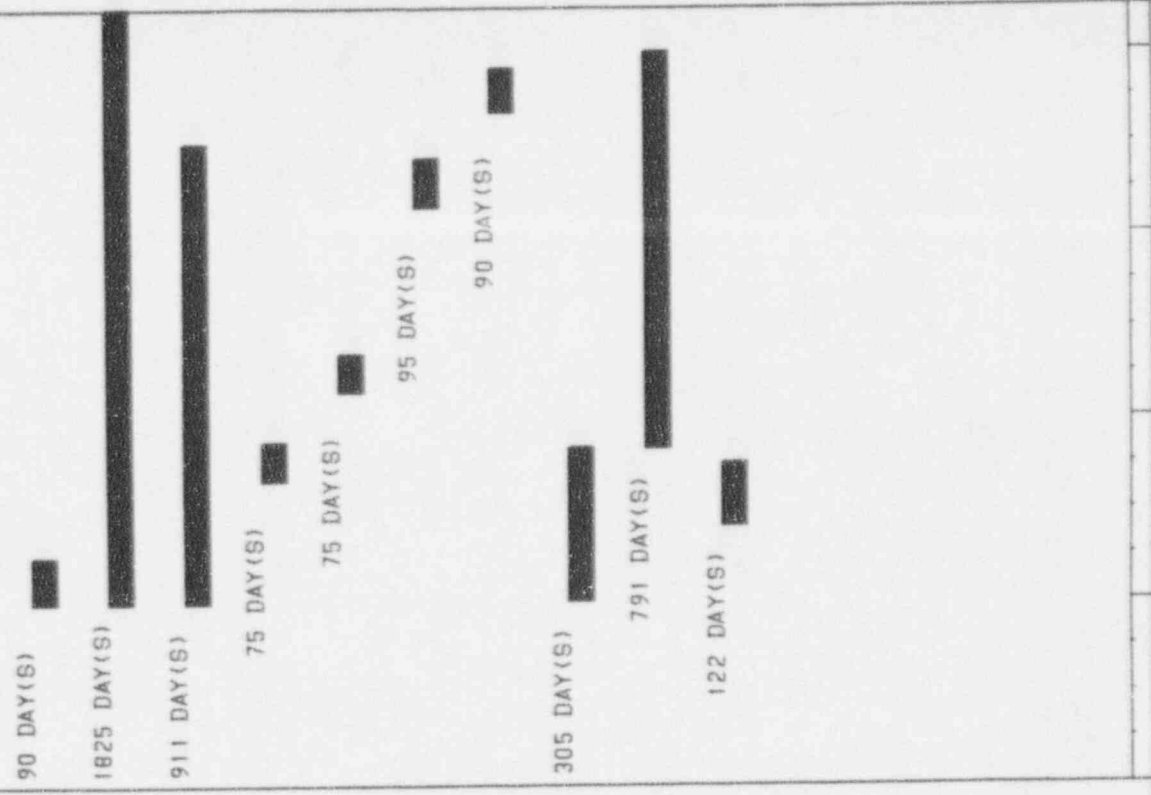
TY103 DEVELOP AND IMPLEMENT THE IMPROVED TROUBLE
04A TAG/MINOR MAINTENANCE PROCESS.

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	
TY103 01A	IDENTIFY THE CURRENT BACKLOG IN EACH OF THE THREE CATEGORIES: 1) OUTAGE 2) NON-OUTAGE 3) PROCEDURE REVISIONS.	IPS MANAGER	31 DAY(S) 
TY103 01B	ASSIGN RESPONSIBLE PROJECT MANAGERS FOR EACH OF THE MAINTENANCE BACKLOG CATEGORIES.	IPS MANAGER	59 DAY(S) 
TY103 01C	PRIORITIZE THE MAINTENANCE BACKLOG LISTS.	IPS MANAGER	61 DAY(S) 
TY103 01D	DEVELOP WORK PLAN AND SCHEDULE FOR MAINTENANCE BACKLOG REDUCTION.	IPS MANAGER	150 DAY(S) 
TY103 01E	REVIEW PRIORITIZED MAINTENANCE BACKLOG WORK PLAN WITH SITE MANAGEMENT.	IPS MANAGER	14 DAY(S) 
TY103 01F	REVIEW MAINTENANCE BACKLOG WORK PLAN WITH THE SENIOR VICE PRESIDENT.	IPS MANAGER	16 DAY(S) 
TY103 01G	PREPARE FINAL MAINTENANCE BACKLOG WORK PLAN.	IPS MANAGER	31 DAY(S) 
TY103 01H	RECEIVE FINAL APPROVAL OF MAINTENANCE BACKLOG WORK PLAN.	IPS MANAGER	31 DAY(S) 
TY103 01I	VALIDATE RESOURCE REQUIREMENTS TO MEET THE MAINTENANCE BACKLOG PROGRAM OBJECTIVES AND DEVELOP MGMT. REPORTING MECHANISM.	D. MOORE	92 DAY(S) 
TY103 01J	COMMENCE WORK ACTIVITIES AND MONITOR PROGRESS OF MAINTENANCE BACKLOG.	D. MOORE	1127 DAY(S) 
TY103 02A	DEFINE CRITERIA FOR ITEMS THAT WILL BE INCLUDED IN THE CORRECTIVE MAINTENANCE BACKLOG AND VALIDATE THE NEW CRITERIA WITH INTEGRATED PLANNING AND SCHEDULING MGMT. AND ADJUST AS REQUIRED.	D. MOORE	59 DAY(S) 
TY103 02B	DETERMINE THE POPULATION AND CATEGORIZE WR/JOS THAT CURRENTLY EXIST (EXCLUSIVE OF THE LONG TERM BACKLOG PROJECT).	IPS MANAGER	91 DAY(S) 
TY103 02C	DEVELOP MANAGEMENT REPORTING MECHANISMS TO MONITOR PROGRESS AND PROVIDE TIMELY TRENDING INFORMATION OF THE MAINTENANCE BACKLOG.	D. MOORE	120 DAY(S) 

BRP THREE-YEAR PLAN

INT. # TASK	DESCRIPTION	ACTION SPONSOR
TY103 03A	ASSESS MAINTENANCE STAFFING AND ORGANIZATION REQUIRED TO MEET NEW GOALS AND STANDARDS.	D. MOORE
TY103 03B	WORK OFF AND MAINTAIN MAINTENANCE BACKLOG.	D. MOORE
TY103 03C	SUPPLEMENT MAINTENANCE TO REDUCE EXISTING BACKLOG TO MANAGEABLE LEVELS.	D. MOORE
TY103 03D	SUPPLEMENT MAINTENANCE DURING OUTAGES TO SUPPORT DECREASED OUTAGE LENGTHS (U-1 REFUEL 8).	D. MOORE
TY103 03E	SUPPLEMENT MAINTENANCE DURING OUTAGES TO SUPPORT DECREASED OUTAGE LENGTHS (U-2 REFUEL 10).	D. MOORE
TY103 03F	SUPPLEMENT MAINTENANCE DURING OUTAGES TO SUPPORT DECREASED OUTAGE LENGTHS (U-1 REFUEL 9).	D. MOORE
TY103 03G	SUPPLEMENT MAINTENANCE DURING OUTAGES TO SUPPORT DECREASED OUTAGE LENGTHS (U-2 REFUEL 11).	D. MOORE
TY103 04B	IMPLEMENT INTEGRATED PLANNING & SCHEDULING PROCESS (REF: CIP-10).	E. WILLETT
TY103 04C	IMPROVE THE TECHNICAL CONTENT OF MAINTENANCE PROCEDURES.	D. MOORE
TY103 04D	EVALUATE THE EFFECTIVENESS OF THE MINOR MAINTENANCE PROGRAM.	D. MOORE



BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: BUSINESS PLANNING IMPROVEMENTS

NUMBER: TY104

PRIORITY: MEDIUM

FOCUS AREA: PLANNING, SCHEDULING, AND COMMITMENT ACHIEVEMENT

RELATED GOALS: MILS/KWH

REFERENCE FOR NEED: NRC 92-10, 92-12; NAD 11/91; CII-10

INITIATIVE DESCRIPTION

IN ORDER TO IMPROVE OUR ABILITY TO EFFECTIVELY APPLY RESOURCES TO THE PROJECTS THAT PROVIDE THE GREATEST RETURNS RELATIVE TO SITE GOALS AND OBJECTIVES, AN IMPROVED BUSINESS PLANNING PROCESS IS NEEDED. THE NEW PROCESS WILL CLEARLY IDENTIFY THE GOALS AND OBJECTIVES OF THE ORGANIZATION. IT WILL FACILITATE THE SCHEDULING OF PROJECTS WHICH SUPPORTS THE DESIRED DIRECTION AND WILL SUPPORT MANAGEMENT IN MAKING OBJECTIVE DECISIONS ON THE PLANNED APPLICATION OF RESOURCES.

OBJECTIVES

- A) DEVELOP A BASIS FOR BUDGETING ROUTINE EXPENDITURES FOR REFUELING OUTAGES AND NON-OUTAGE PERIODS.
- B) IDENTIFY THE LINKAGE BETWEEN GOALS, PERFORMANCE INDICES, PLANS, & RESOURCES.
- C) DEVELOP CLEAR DOCUMENTATION FOR MAJOR INITIATIVES AND PROJECTS.
- D) IMPLEMENT CORPORATE IMPROVEMENT PLAN INITIATIVES FOR INCORPORATING MANAGEMENT STANDARDS INTO BUSINESS PLANNING.
- E) IMPLEMENT FAIM PROCESSES AND TOOLS.
- F) IMPLEMENT ZERO BASED WORKLOAD PLANNING AND BUDGETING.

MGMT. SPONSOR: D. INGRAM

RESP. ORGANIZATION: FP&C

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR				
TY104 01A	DEVELOP AND DOCUMENT THE BASE RESOURCE REQUIREMENTS FOR NON OUTAGE PERIODS.	D. INGRAM	46 DAY(S)	■		
TY104 02A	DEVELOP AND DOCUMENT THE BASE RESOURCE REQUIREMENTS FOR REFUELING OUTAGES.	D. INGRAM	46 DAY(S)	■		
TY104 03A	UTILIZE THE LINKAGE BETWEEN GOALS & STRATEGIC FOCUS AREAS FOR BUSINESS PLAN DEVELOPMENT.	D. INGRAM	61 DAY(S)	■		
TY104 04A	DOCUMENT MAJOR PROJECTS WITHIN THE BUSINESS PLAN.	D. INGRAM	47 DAY(S)	■		
TY104 04B	DEVELOP A SUMMARY LEVEL SCHEDULE FOR BUSINESS PLAN DEVELOPMENT.	D. INGRAM	44 DAY(S)	■		
TY104 04C	DEVELOP THE UNIT SCHEDULES AND PROCESSES FOR DEVELOPMENT OF THE 1994-98 BUSINESS PLAN.	D. INGRAM	92 DAY(S)	■		
TY104 04D	DEVELOP A PLAN FOR INITIATING ZERO BASED WORKLOAD PLANNING AND BUDGETING.	D. INGRAM	29 DAY(S)	■		
TY104 05A	IMPLEMENT FAIM BUDGETING TOOL AND PROCESSES.	D. INGRAM	194 DAY(S)	■		
TY104 06A	DEVELOP BUSINESS PLAN FOR 1994-98 THAT INCLUDES ALL PROJECTS, MODS, BASE LEVEL ACTIVITIES AND ASSOCIATED RESOURCES.	D. INGRAM	257 DAY(S)	■		

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: INVENTORY CONTROL

NUMBER: TY105

PRIORITY: MEDIUM

FOCUS AREA: PLANNING, SCHEDULING, AND COMMITMENT ACHIEVEMENT

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP; HUMAN FACTORS

REFERENCE FOR NEED:

INITIATIVE DESCRIPTION

EFFECTIVELY CONTROL THE BNP MATERIAL INVENTORY WHILE SUPPORTING PLANT NEEDS FOR REPLACEMENT PARTS AND OTHER MATERIAL. THIS WILL BE ACCOMPLISHED BY ASSESSING QUANTITIES OF MATERIAL WITHIN EACH LINE ITEM, EVALUATING THE NEED FOR THE MATERIAL THROUGH VERIFICATION WITH OTHER WORK UNITS CPEG, NED, TECH SUPPORT, MAINTENANCE AND OM&M, INVENTORY TURNOVER, OBSOLETE PARTS, AND COMPUTER SYSTEM AND WORK PROCESS IMPROVEMENTS.

OBJECTIVES

- A) ENSURE ACCURACY IN THE STORAGE OF MATERIAL.
- B) IMPROVE THE CYCLE INVENTORY PROCESS FOR ACCURACY IN NUMBERS OF ITEMS STORED.
- C) REDUCE THE NUMBER OF OBSOLETE PARTS WHILE ENSURING THAT MATERIAL NEEDED FOR THE PLANT DESIGN IS APPROPRIATELY STOCKED.
- D) IMPROVE THE AUTOMATION TECHNIQUES FOR INVENTORY CONTROL.
- E) REDUCE THE NUMBER OF LINE ITEMS IN THE BNP INVENTORY.















MGMT. SPONSOR: J. FERGUSON

RESP. ORGANIZATION: M&CS

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	
TY105 01A	MODIFY THE TIMING FOR COMPLETION OF CYCLE INVENTORIES AND CHANGE FROM A ONE YEAR CYCLE TO A TWO YEAR CYCLE PER FERC.	J. FERGUSON	120 DAY(S) 
TY105 02A	IDENTIFY THE SPECIFIC LOCATIONS FOR BARCODING IMPLEMENTATION AND PRIORITIZE FOR IMPLEMENTATION.	J. FERGUSON	120 DAY(S) 
TY105 03A	OBTAIN SUPPORT FROM THE COMPUTER SUPPORT UNIT AND ISD TO IMPLEMENT BARCODING SUCH THAT CORPORATE INITIATIVES IN THIS AREA ARE INCORPORATED INTO OUR PLAN.	J. FERGUSON	59 DAY(S) 
TY105 04A	IMPLEMENT BARCODING FOR THE FIRST LOCATION IDENTIFIED.	J. FERGUSON	245 DAY(S) 
TY105 05A	IMPLEMENT THE SECOND BARCODING SEGMENT.	J. FERGUSON	181 DAY(S) 
TY105 06A	COMPLETE THE IMPLEMENTATION OF THE BARCODING PROJECT.	J. FERGUSON	365 DAY(S) 
TY105 07A	IDENTIFY AREAS WHERE SHELF-LIFE PROGRAM CAN BE IMPROVED.	J. FERGUSON	214 DAY(S) 
TY105 08A	PRIORITIZE AREAS FOR COMPLETING A 100% INVENTORY TO VERIFY STOCK LEVELS, TYPES, AND CONSOLIDATIONS.	J. FERGUSON	90 DAY(S) 
TY105 09A	INITIATE THE 100% INVENTORY.	J. FERGUSON	275 DAY(S) 
TY105 10A	COMPLETE THE SECOND SEGMENT OF THE 100% INVENTORY.	J. FERGUSON	274 DAY(S) 
TY105 11A	COMPLETE THE THIRD SEGMENT OF THE 100% INVENTORY.	J. FERGUSON	242 DAY(S) 
TY105 12A	COMPLETE THE FINAL SEGMENT OF THE 100% INVENTORY.	J. FERGUSON	245 DAY(S) 
TY105 13A	MODIFY PROCEDURES FOR INVENTORY CONTROL IMPROVEMENTS.	J. FERGUSON	365 DAY(S) 
TY105 14A	COORDINATE WITH SITE WORK GROUPS TO DETERMINE PROPER STOCK LEVELS OF MATERIAL TO SUPPORT THEIR MODIFICATION AND MAINTENANCE ACTIVITIES.	J. FERGUSON	426 DAY(S) 

BNP THREE-YEAR PLAN

INT. # TASK	DESCRIPTION	ACTION SPONSOR			
TY105 15A	RECEIVE CORPORATE EVALUATION OF INVENTORY CONTROL PROCESS.	J. FERGUSON	120 DAY(S)	[REDACTED]	[REDACTED]
TY105 16A	INCORPORATE SUGGESTIONS FROM THE CORPORATE INVENTORY EVALUATION INTO THE INVENTORY CONTROL PROCESSES OF THE UNIT.	J. FERGUSON	975 DAY(S)	[REDACTED]	[REDACTED]
TY105 17A	IDENTIFY GOOD INDUSTRY INVENTORY WORK PRACTICES THROUGH CONTACT AND VISITS WITH OTHER UTILITIES.	J. FERGUSON	59 DAY(S)	[REDACTED]	[REDACTED]

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: OUTAGE LENGTH REDUCTION

NUMBER: TY106

PRIORITY: MEDIUM

FOCUS AREA: PLANNING, SCHEDULING, AND COMMITMENT ACHIEVEMENT

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP; FORECAST/SCHEDULE
ACHIEVEMENT

REFERENCE FOR NEED: INPO OUTAGE 9/91; NAD 4/92; SAT OM2,3; CII-10; NGG
STANDARDS

INITIATIVE DESCRIPTION

DEVELOP AND IMPLEMENT AN OUTAGE PREPARATION AND IMPLEMENTATION
PROGRAM DESIGNED TO CONTINUALLY REDUCE BNP OUTAGE LENGTHS THROUGH
THE APPLICATION OF INDUSTRY EXPERIENCE AND IMPROVED PERFORMANCE.

OBJECTIVES

IMPROVE THE QUALITY AND DURATION OF OUTAGES WITH THE GOAL OF BECOMING
THE BEST IN THE INDUSTRY. REDUCE ROUTINE REFUELING CRITICAL PATH
OUTAGE LENGTHS TO A DURATION LESS THAN OR EQUAL TO SIXTY DAYS. THIS
SHALL BE ACCOMPLISHED BY THE END OF THREE REFUELING OUTAGES ON EACH
UNIT.














MGMT. SPONSOR: G. PEELER

RESP. ORGANIZATION: OM&M PLN SCH














REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	
TY106 01A	UTILIZING TOP-QUARTILE & OTHER SIMILAR PLANT DATA, DEVELOP A GENERIC REFUEL OUTAGE PLAN THAT WILL IMPROVE QUALITY AND DURATION OF OUTAGES. THE GOAL IS TO BE AS GOOD AS THE BEST IN THE INDUSTRY BY REFUEL OUTAGE 10 (U1) & 12 (U2).	G. PEELER	304 DAY(S) 
TY106 02A	DEVELOP PLAN TO SOLICIT INPUT AND OBTAIN SITE SUPPORT AND OWNERSHIP FOR THE GENERIC PLAN.	G. PEELER	124 DAY(S) 
TY106 03A	DEVELOP AND IMPLEMENT A PROCESS TO IDENTIFY THE SCOPE OF AN OUTAGE IN SUFFICIENT TIME TO ALLOW THOROUGH PREPARATION. (REF. INITIATIVE #076)	G. PEELER	396 DAY(S) 
TY106 04A	DEFINE PROJECT AND PROGRAM SIZE TO BE INCORPORATED IN THE LONG RANGE PLAN.	G. PEELER	212 DAY(S) 
TY106 05A	INCORPORATE INITIAL PROJECT AND PROGRAM DATA INTO THE LONG RANGE PLAN.	G. PEELER	214 DAY(S) 
TY106 06A	DEFINE AND ISSUE REPORTS AND PRODUCTS RELATIVE TO THE SCHEDULE TO MEET CUSTOMER NEEDS.	G. PEELER	243 DAY(S) 
TY106 07A	IMPLEMENT AN OUTAGE PREPARATION PROCESS WHICH SYSTEMATICALLY DEVELOPS AN OUTAGE PLAN THROUGH PARTICIPATING WORKGROUPS OWNERSHIP AND COMMITMENT.	G. PEELER	183 DAY(S) 
TY106 08A	IMPLEMENT AN OUTAGE EXECUTION PROCESS WHICH IS BASED UPON INDIVIDUAL OWNERSHIP AND TEAMWORK.	G. PEELER	1582 DAY(S) 
TY106 08B	UNIT 1 REFUEL 8 IMPLEMENT AN OUTAGE PREPARATION PROCESS WHICH DEVELOPS AN OUTAGE PLAN THROUGH COMMITMENT AND OWNERSHIP.	G. PEELER	71 DAY(S) 
TY106 08C	UNIT 2 REFUEL 10 IMPLEMENT AN OUTAGE PREPARATION PROCESS WHICH DEVELOPS AN OUTAGE PLAN THROUGH COMMITMENT AND OWNERSHIP.	G. PEELER	78 DAY(S) 
TY106 08D	UNIT 1 REFUEL 9 IMPLEMENT AN OUTAGE PREPARATION PROCESS WHICH DEVELOPS AN OUTAGE PLAN THROUGH COMMITMENT AND OWNERSHIP.	G. PEELER	99 DAY(S) 
TY106 08E	UNIT 2 REFUEL 11 IMPLEMENT AN OUTAGE PREPARATION PROCESS WHICH DEVELOPS AN OUTAGE PLAN THROUGH COMMITMENT AND OWNERSHIP.	G. PEELER	92 DAY(S) 
TY106 09A	DEVELOP AND IMPLEMENT AN OUTAGE SELF-ASSESSMENT PROCESS WHICH ENCOURAGES PARTICIPATION AT ALL ORGANIZATIONAL LEVELS.	G. PEELER	1582 DAY(S) 

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR				
TY106 09B	UNIT 1 REFUEL 8 IMPLEMENT AN OUTAGE SELF-ASSESSMENT PROCESS WHICH ENCOURAGES PARTICIPATION AT ALL ORGANIZATIONAL LEVELS.	G. PEELER	71 DAY(S)			
TY106 09C	UNIT 2 REFUEL 10 IMPLEMENT AN OUTAGE SELF-ASSESSMENT PROCESS WHICH ENCOURAGES PARTICIPATION AT ALL ORGANIZATIONAL LEVELS.	G. PEELER	78 DAY(S)			
TY106 09D	UNIT 1 REFUEL 9 IMPLEMENT AN OUTAGE SELF-ASSESSMENT PROCESS WHICH ENCOURAGES PARTICIPATION AT ALL ORGANIZATIONAL LEVELS.	G. PEELER	99 DAY(S)			
TY106 09E	UNIT 2 REFUEL 11 IMPLEMENT AN OUTAGE SELF-ASSESSMENT PROCESS WHICH ENCOURAGES PARTICIPATION AT ALL ORGANIZATIONAL LEVELS.	G. PEELER	92 DAY(S)			
TY106 10A	DEVELOP A COMPREHENSIVE OUTAGE CRITIQUE PROCESS THAT UTILIZES INPUT FROM ALL ORGANIZATIONS INVOLVED IN THE OUTAGE PROCESS.	G. PEELER	1491 DAY(S)			
TY106 10B	UNIT 1 REFUEL 8 WRITE A COMPREHENSIVE OUTAGE CRITIQUE THAT UTILIZES INPUT FROM ALL ORGANIZATIONS INVOLVED IN THE OUTAGE PROCESS.	G. PEELER	71 DAY(S)			
TY106 10C	UNIT 2 REFUEL 10 WRITE A COMPREHENSIVE OUTAGE CRITIQUE THAT UTILIZES INPUT FROM ALL ORGANIZATIONS INVOLVED IN THE OUTAGE PROCESS.	G. PEELER	78 DAY(S)			
TY106 10D	UNIT 1 REFUEL 9 WRITE A COMPREHENSIVE OUTAGE CRITIQUE THAT UTILIZES INPUT FROM ALL ORGANIZATIONS INVOLVED IN THE OUTAGE PROCESS.	G. PEELER	99 DAY(S)			
TY106 10E	UNIT 2 REFUEL 11 WRITE A COMPREHENSIVE OUTAGE CRITIQUE THAT UTILIZES INPUT FROM ALL ORGANIZATIONS INVOLVED IN THE OUTAGE PROCESS.	G. PEELER	92 DAY(S)			
TY106 11A	PLAN FOR INTEGRATED REACTOR BUILDING AND DRYWELL COOLING MODIFICATION (REF: PID #06094A).	J. LEININGER	265 DAY(S)			
TY106 11B	DESIGN INTEGRATED REACTOR BUILDING AND DRYWELL COOLING MODIFICATION. (REF: PID #06094A)	J. LEININGER	315 DAY(S)			
TY106 11C	INSTALLATION OF INTEGRATED REACTOR BUILDING AND DRYWELL COOLING MODIFICATION (REF: PID #06094A).	R. JOHNSON	1078 DAY(S)			
TY106 11D	DESIGN SUPPORT INSTALLATION OF INTEGRATED REACTOR BUILDING AND DRYWELL COOLING MODIFICATION (REF: PID #06094A).	J. LEININGER	1078 DAY(S)			

BNP THREE-YEAR PLAN

INIT. #
TASK

DESCRIPTION

ACTION SPONSOR

TY106 IMPLEMENT INTEGRATED PLANNING AND SCHEDULING
12A PROCESS (REF: INIT. #101).

G. PEELER

397 DAY(



BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: EFFECTIVE PERFORMANCE MANAGEMENT/TOTAL QUALITY

NUMBER: TY201

PRIORITY: HIGH

FOCUS AREA: HUMAN PERFORMANCE

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP; EMPLOYEE
SATISFACTION

REFERENCE FOR NEED: NRC 92-12; NAD 11/91, 5/92

INITIATIVE DESCRIPTION

HUMAN PERFORMANCE IS THE BASIS FOR IMPROVED PLANT CAPABILITY, COST, AND REGULATORY PERCEPTIONS. THE CORPORATE PROGRAM TO IMPROVE THIS PERFORMANCE RESTS IN THE IMPLEMENTATION OF THE EFFECTIVE PERFORMANCE MANAGEMENT PROGRAM AND THE TOTAL QUALITY EFFORT. THIS INITIATIVE FOCUSES ON ACTIONS DIRECTLY RELATED TO THE EFFECTIVE IMPLEMENTATION AND INTEGRATION OF EFFECTIVE PERFORMANCE MANAGEMENT, TOTAL QUALITY, EMPLOYEE DEVELOPMENT PLANNING, AND REWARD SYSTEMS.

OBJECTIVES

- A) ASSURE MUTUAL EXPECTATIONS ARE SET FOR EACH EMPLOYEE.
- B) ASSURE PROPER COACHING TECHNIQUES ARE A STANDARD PRACTICE FOR EACH SUPERVISOR.
- C) EFFECTIVELY MANAGE CHANGE TO THE NEEDED HIGHER STANDARDS FOR THE SITE AND COMPANY.
- D) IMPLEMENT REWARDS AND RECOGNITION TO PROVIDE AN INCENTIVE FOR THE RIGHT CHANGES.
- E) ASSURE CONTINUAL IMPROVEMENT OF WORK ACTIVITIES.
- F) ASSURE THE HIGHEST LEVEL OF PROFESSIONALISM AT BNP.

MGMT. SPONSOR: J. FERGUSON

RESP. ORGANIZATION: M&CS

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992			1993			1994			1995		
			J	A	J	J	A	J	J	A	J	J	A	J
TY201 01A	IMPLEMENT SUPERVISORY AND EMPLOYEE TRAINING PROGRAM TO ENSURE ALL EMPLOYEES RECEIVE TRAINING IN EPM PROCESS (CURRENTLY 77% OF SUPERVISORS & 97% OF EMPLOYEES TRAINED).	M. DONILON				1-JAN-93	■	30-APR-93						
TY201 02A	INCORPORATE A JOB DESCRIPTION UPDATE CONSIDERING CHANGES TO WORK RESPONSIBILITIES AS A RESULT OF THE APPROVED INITIATIVES.	K. HEWETT				1-JAN-93	■	31-DEC-93						
TY201 03A	FINALIZE THE INITIAL PERFORMANCE EXPECTATIONS FOR THOSE WHO HAVE NOT RECEIVED EXPECTATIONS TO DATE.	K. HEWETT				1-DEC-92	■	31-JAN-93						
TY201 03B	VERIFY, THROUGH QUARTERLY REPORTING, THE IMPLEMENTATION OF ANNUAL AND MID-YEAR PERFORMANCE EVALUATIONS USING PERFORMANCE EXPECTATIONS.	K. HEWETT				1-APR-93	■	31-DEC-97						
TY201 04A	IDENTIFY INITIATIVES IN THE THREE YEAR PLAN WHERE GENERIC EXPECTATIONS ARE TO BE DEVELOPED, AND IMPLEMENT APPROVED ITEMS INTO EACH SUPERVISORS FORMAL EXPECTATIONS (I.E. COMMUNICATIONS, CAP, COACHING, TG TNG, ETC.).	K. CORE				1-JAN-93	■	30-APR-93						
TY201 04B	ADOPT CORPORATE METHODS, AND IDENTIFY ADDITIONAL BNP METHODS AND INCLUDE THEM INTO EXPECTATIONS OF ALL EMPLOYEES.	M. DONILON				1-JAN-93	■	30-APR-93						
TY201 04C	COMPLETE EXPECTATIONS FOR SECTION MANAGERS.	J. FERGUSON				1-MAY-93	■	31-MAY-93						
TY201 04D	COMPLETE EXPECTATIONS FOR UNIT MANAGERS.	J. FERGUSON				1-JUN-93	■	30-JUN-93						
TY201 04E	COMPLETE EXPECTATIONS FOR SUB-UNIT MANAGERS.	J. FERGUSON				1-JUL-93	■	31-JUL-93						
TY201 04F	COMPLETE EXPECTATIONS FOR ALL EMPLOYEES.	J. FERGUSON				1-AUG-93	■	30-SEP-93						
TY201 05A	DEVELOP A TRACKING AND REPORTING SYSTEM TO DETERMINE THE PROGRESS TOWARD MEETING THE IDENTIFIED MILESTONES FOR EPM.	K. HEWETT				1-DEC-92	■	28-FEB-93						
TY201 06A	DESIGN AN INDIVIDUAL DEVELOPMENT PLAN METHODOLOGY, TO INCLUDE DEVELOPMENT NEEDS FOR CURRENT POSITION, POTENTIAL POSITIONS, AND NEW EXPECTATIONS.	M. DONILON				1-NOV-93	■	30-JUN-94						
TY201 07A	TRAIN SUPERVISORS AND MANAGERS TO IMPLEMENT THE DEVELOPMENT PLAN METHODOLOGY.	M. DONILON				1-NOV-93	■	30-JUN-94						

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992		1993		1994		1995	
			J	A	J	A	J	A	J	A
TY20: 08A	DEVELOP A PLAN TO INTEGRATE TOTAL QUALITY (TQ) TRAINING. (I.E. MANAGEMENT RELATIONSHIPS AT WORK (MRW), (CURRENTLY 46% TRAINED), MANAGING MEETINGS (MM), (CURRENTLY 12% TRAINED), MAKING THINGS BETTER (MTB), (CURRENTLY 26% TRAINED).	K. CORE								
			1-JAN-93				30-JUN-93			
TY201 09A	CONDUCT TOTAL QUALITY FUNDAMENTALS TRAINING.	K. CORE								
			1-MAR-93				30-JUN-93			
TY201 10A	IMPLEMENT THE CORPORATE REWARD SYSTEM SCHEDULED FOR 1993.	M. DONILON								
			1-JAN-93				30-JUN-93			

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: TRAINING INITIATIVES

NUMBER: TY202

PRIORITY: HIGH

FOCUS AREA: HUMAN PERFORMANCE

RELATED GOALS: MILS/KWH; SALP; UNIT CAPABILITY FACTOR; EMPLOYEE
SATISFACTION

REFERENCE FOR NEED: NRC 92-06,92-12,92-300; INPO OUTAGE EVALUATION
9/91, ACCREDITATION TEAM 1992; SALP 91-37; SOER
92-1; NAD 11/91,1/92,4/92; CII-8

INITIATIVE DESCRIPTION

IMPLEMENT A PLAN FOR TRAINING UPGRADES THAT PROVIDES THE TRAINING
NECESSARY TO DEVELOP AND SUSTAIN A HIGHLY QUALIFIED PLANT STAFF.
THIS INITIATIVE UPGRADES AREAS OF IDENTIFIED TRAINING WEAKNESS,
AND UPGRADES THE TRAINING PROCESS, FACILITIES, AND STAFFING TO HIGHER
STANDARDS. ADDITIONAL TRAINING IS PROVIDED TO KEY PERSONNEL. THE
TRAINING PROCESS IS MADE MORE EFFICIENT AND EFFECTIVE BY IMPROVED USE
OF THE SYSTEMATIC APPROACH TO TRAINING. COMPLIANCE AND INDUSTRY
STANDARDS DEFICIENCIES ARE CORRECTED. SOME SPECIFIC UPGRADES INCLUDE
IMPLEMENTATION OF THE ENGINEERING SUPPORT TRAINING PROGRAM, ADDITIONAL
TRAINING FOR NON-LICENSED OPERATORS, AND ADDITIONAL HANDS-ON TRAINING
FOR MAINTENANCE AND CRAFT PERSONNEL.

OBJECTIVES

- A) ASSURE A HIGHLY QUALIFIED WORK FORCE.
- B) EMPLOYEES RECEIVE NEEDED TECHNICAL TRAINING FOR THEIR DEVELOPMENT.
- C) SUPERVISORS AND MANAGERS MAINTAIN A HIGH LEVEL OF TECHNICAL
QUALIFICATION.
- D) ASSURE AN EFFECTIVE AND EFFICIENT TRAINING PROCESS.
- E) MAINTAIN ACCREDITATION OF TRAINING PROGRAMS.
- F) ASSURE 100% PASS RATES ON NRC LICENSED OPERATOR EXAMINATIONS.
- G) ACHIEVE SIGNIFICANT IMPROVEMENT IN LINE OWNERSHIP, INVOLVEMENT,
AND OVERSIGHT OF TRAINING.
- H) MAKE SIGNIFICANT GAINS IN THE NUMBER OF SUPERVISORS AND MANAGERS
WITH SRO LEVEL SYSTEMS KNOWLEDGE.

MGMT. SPONSOR: M. JONES

RESP. ORGANIZATION: TRAINING

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992			1993			1994			1995					
			J	A	J	J	O	J	A	J	J	O	J	A	J	J	O
TY202 100	CORRECT PLANT SPECIFIC TRAINING PROGRAM DEFICIENCIES TO SUPPORT IMPROVED PLANT PERFORMANCE, INPO REACCREDITATION ISSUES AND NRC TRAINING ISSUES.	M. JONES															31-DEC-95
TY202 11A	DEVELOP ENGINEERING SUPPORT TRAINING PROGRAM PER INPO GUIDELINES.	M. JONES															31-DEC-93
TY202 11F	PROVIDE SYS AND POSITION-SPECIFIC TRAINING FOR ENGR SUPPT PERSONNEL REQUESTED BY THE MANAGER OF TECH SUPPT. INCLUDES TRAINING FOR TECH SUPPT PERSONNEL WHO ARE NOT UNDER ACCREDITED TRAINING PROGRAMS, NEW ENGRS, AND CERT OF ADDITIONAL SYS ENGRS.	M. JONES															31-JAN-95
TY202 12A	UPGRADE NON-LICENSED OPERATOR PROGRAMS IN ACCORDANCE WITH INPO CRITERIA. THIS ITEM CONSISTS OF JOB AND TASK ANALYSIS OF THE AUXILIARY OPERATOR AND RADWASTE OPERATOR POSITIONS, DEVELOPMENT OF QUALIFICATION CARDS AND LESSON MATERIAL.	M. JONES															30-JUN-94
TY202 12H	TRAIN NON-LICENSED OPERATORS ON PLANT-SPECIFIC SYSTEMS DUE TO INPO ACCREDITATION FINDING. TRAINING FOR APPROXIMATELY 25-30 AUXILIARY OPERATORS AND NEW HIRES IN SYSTEMS AND OTHER AUXILIARY OPERATOR TOPICS.	M. JONES															31-MAY-93
TY202 12M	CORRECT CONDUCT OF ON-THE-JOB TRAINING (OJT) ISSUES PER INPO ACCREDITATION RENEWAL REPORT BY RETRAINING NON-LICENSED PERSONNEL IN HOW TO CONDUCT OJT AND TRAINING PLANT SUPERVISORS ON HOW TO EVALUATE OJT.	M. JONES															30-JUN-93
TY202 13A	UPGRADE ACCREDITED MAINTENANCE AND E&RC PROGRAMS IN ACCORDANCE WITH INPO STANDARDS.	M. JONES															31-DEC-95
TY202 13I	PROVIDE ADDITIONAL TRAINING FOR MAINT CRAFT PERSONNEL IN THE AREAS OF REGULATORY CONCERN AND PERFORMANCE IMPROVEMENT (E.G., DG, PUMP ALIGNMENT, ETC.). THIS CONSISTS OF DEVELOPING HANDS-ON TRAINING LESSON PLANS AND PROVIDING HANDS-ON TRAINING.	M. JONES															31-DEC-95
TY202 13R	CORRECT DISCREPANCIES IN MAINTENANCE SUPERVISOR ACCREDITED PROGRAM.	M. JONES															31-MAR-93

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992		1993		1994		1995				
			J	A	J	O	J	A	J	O	J	A	J
TY202 14A	IMPROVE OPERATOR PERFORMANCE IN THE AREAS OF COMMUNICATION, COMMAND, AND CONTROL (NRC 92-12 AND 92-300) BY CONDUCTING ADDITIONAL DIRECTED SIMULATOR EXERCISES DURING 1993 AND BY CONDUCTING THE INPO CONTROL ROOM TEAM DEVELOPMENT COURSE.	M. JONES	1-OCT-9	██████████	██████████	██████████	██████████	██████████	██████████	30-JUN-94			
TY202 14F	COMPLETE LICENSED OPERATOR MATERIAL UPGRADE FROM A 1990 LICENSED OPERATOR REQUALIFICATION (LOR) FAILURE/PLANT SHUTDOWN.	M. JONES	1-OCT-9	██████████	██████████	██████████	██████████	██████████	██████████	30-JUN-93			
TY202 14I	REVISE SENIOR REACTOR OPERATOR (SRO) TASK LIST AND QUALIFICATION CARD BASED ON INPO RECOMMENDATION.	M. JONES	1-OCT-9	██████████	██████████	██████████	██████████	██████████	██████████	30-JUN-93			
TY202 14N	REVISE SHIFT SUPERVISOR TRAINING PROGRAM BASED ON INPO RECOMMENDATION. REVISE SHIFT SUPERVISOR QUALIFICATION CARD.	M. JONES	1-OCT-9	██████████	██████████	██████████	██████████	██████████	██████████	30-JUN-93			
TY202 14P	IMPROVE STATIC SIMULATOR EXAMS (NRC 92-300) BY UPGRADING STATIC SIMULATOR EXERCISES. DEVELOP AND UPDATE STATIC SIMULATOR EXAMS.	M. JONES	1-OCT-9	██████████	██████████	██████████	██████████	██████████	██████████	31-DEC-93			
TY202 14T	LICENSED OPERATOR REQUALIFICATION (LOR) EXAM BANK UPGRADE FOR NRC DEFICIENCY.	M. JONES	1-OCT-9	██████████	██████████	██████████	██████████	██████████	██████████	31-M -93			
TY202 14U	DEVELOP, REVISE, VALIDATE SIMULATOR GUIDES.	M. JONES	1-JAN-93	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	31-DEC-94
TY202 15A	PROVIDE PERFORMANCE-BASED EMERGENCY RESPONSE ORGANIZATION TRAINING (SALP 91-37; AND NRC 92-06).	M. JONES	1-OCT-9	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	30-JUN-94
TY202 15G	DEVELOP AND PROVIDE TRAINING PROGRAM FOR MAINTENANCE PLANNERS.	M. JONES	1-JAN-93	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	31-DEC-93
TY202 15Q	PROVIDE MANAGEMENT ADVANCED SYSTEMS TRAINING (MAST) COURSE.	M. JONES	1-JAN-93	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	31-DEC-95
TY202 16A	PROVIDE AI-58/ACMS/AMMS TRAINING TO MEET PLANT NEEDS.	M. JONES	1-JAN-93	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	31-DEC-93
TY202 16F	PROVIDE HAZARDOUS MATERIAL TRAINING FOR EMPLOYEES WHO REQUIRE IT.	M. JONES	1-JAN-93	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	31-DEC-93
TY202 16K	UPGRADE VENDOR/VISITOR ACCESS TRAINING TO MEET 10CFR19.	M. JONES	1-OCT-9	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	30-JUN-93
TY202 16N	UPGRADE FIRE PROTECTION OPERATOR, FIRE BRIGADE MEMBER, FIRE WATCH, AND FIRE INSPECTOR TRAINING PROGRAMS IN RESPONSE TO THE COMPREHENSIVE PROGRAM EFFECTIVENESS EVALUATION.	M. JONES	1-JAN-93	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	31-DEC-93

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992		1993		1994		1995	
			J	A	J	A	J	A	J	A
TY202 169	EVALUATE AND IMPLEMENT TRAINING RELATED RECOMMENDATIONS OF 6OER 92-1.	M. JONES	1	-	JAN-93				31	-
TY202 17A	IMPROVE LINE OWNERSHIP OF TRAINING TO MEET INPO ACCREDITATION OBJECTIVES. REVISE PROCEDURES TO SPECIFY LINE ROLE IN TRAINING. APPROVE AND IMPLEMENT TI-100 REVISION.	M. JONES	1	-	OCT-93				28	-
TY202 17D	TRAIN LINE MANAGEMENT ON THEIR ROLE IN THE TRAINING PROCESS.	M. JONES	1	-	OCT-93				31	-
TY202 17J	SET UP PROCESS TO MONITOR LINE INVOLVEMENT IN TRAINING. IMPLEMENT MONITORING AND REPORTING PROCESS.	M. JONES	1	-	JAN-93				31	-
TY202 17M	IMPROVE LINE EFFECTIVENESS IN MONITORING AND EVALUATING ON-THE-JOB TRAINING BY PROVIDING ADDITIONAL TRAINING TO LINE SUPERVISORS ON EVALUATING OJT.	M. JONES	1	-	JAN-93				31	-
TY202 18A	IMPROVE IMPLEMENTATION OF SYSTEMATIC APPROACH TO TRAINING TO MEET INPO CRITERIA AND IMPROVE TRAINING EFFECTIVENESS IN ACCREDITED PROGRAMS BY UPGRADING JOB/TASK ANALYSIS AND TASK-TO-TRAINING MATRICES FOR ACCREDITED PROGRAMS.	M. JONES	1	-	JAN-93					31
TY202 21J	PROVIDE SUPPORT FOR IMPLEMENTING CORPORATE IMPROVEMENT PLAN ITEM #8; UPGRADE THE TECHNICAL TRAINING PROGRAM.	M. JONES	1	-	JAN-93					31
TY202 300	UPGRADE TRAINING ORGANIZATION AND FACILITIES.	M. JONES	1	-	JAN-93					31
TY202 33A	ASSESS STAFFING AND TRAINING OF INSTRUCTORS CONSISTENT WITH CORPORATE IMPROVEMENT INITIATIVE CII-1 AND CII-8 STEPS 2 AND 5.	M. JONES	1	-	JAN-93					31
TY202 34A	REFURBISH EXISTING OPERATOR TRAINING BUILDING FACILITIES (CLASS ROOMS, EQUIPMENT, OFFICES).	M. JONES	1	-	JAN-93					30
TY202 34F	PROVIDE MOCK-UPS AND MODELS FOR THE HANDS-ON TRAINING (A PRIORITIZED LIST OF EQUIPMENT HAS BEEN DEVELOPED FOR EACH YEAR).	M. JONES	1	-	JAN-93					31
TY202 35A	CENTRALIZE AND PROVIDE ONE YEAR ADVANCED TRAINING SCHEDULING.	M. JONES	1	-	JAN-93					30

BNP THREE-YEAR PLAN

INI. # TASK	DESCRIPTION	ACTION SPONSOR	1992	1993	1994	1995
TY202 38A	PLANT SIMULATOR UPGRADES AND MODIFICATIONS.	M. JONES	J A J J O J A J J O J A J J O J A J J O J	J A J J O J A J J O J A J J O J A J J O J	J A J J O J A J J O J A J J O J A J J O J	J A J J O J A J J O J A J J O J A J J O J
			1 - JAN - 93	[REDACTED]		31 - DEC - 95

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: UNITIZATION/INTER-UNIT SUPPORT

NUMBER: TY203

PRIORITY: HIGH

FOCUS AREA: HUMAN PERFORMANCE

RELATED GOALS: SALP; EMPLOYEE SATISFACTION

REFERENCE FOR NEED: NRC 92-09, 92-12; NAD REPORT B-OP-92-01, ISSUE
OP.1-1

INITIATIVE DESCRIPTION

PROVIDE APPROPRIATE RESOURCES WITHIN THE OPERATIONS UNIT TO SUPPORT
THE LONG-TERM NEEDS OF THE PLANT.

OBJECTIVES

- A) PROVIDE AN ADDITIONAL MANAGER AND PERSONNEL TO SUPPORT SEPARATE
OPERATIONS UNITS. ADDITIONAL PERSONNEL ARE NEEDED TO PROVIDE
SEPARATE RELIEF CAPABILITY FOR EACH UNIT.
- B) PROVIDE ADEQUATE ORGANIZATION FOR STAFF SUPPORT GROUP.
- C) MINIMIZE SHIFT IMPACT WHEN OPERATORS ARE SENT TO LICENSE CLASS.
- D) PROVIDE OPTIMAL RESOURCES TO SUPPORT WORK CONTROL FUNCTIONS.
- E) PROVIDE EXPERIENCED SRO PERSONNEL TO OTHER UNITS ON A ROTATIONAL
BASIS.

MGMT. SPONSOR: K. AHERN

RESP. ORGANIZATION: OPERATIONS

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992		1993		1994		1995	
			J	A	J	O	J	A	J	O
TY203 01A	DEVELOP DRAFT API SUBMITTAL FOR ADDITIONAL OPERATIONS EMPLOYEES TO SUPPORT PLANT UNITIZATION.	K. AHERN			1-OCT-9	15-DEC-92				
TY203 02A	PRESENT OPERATIONS UNITIZATION STAFFING REQUIREMENTS TO UNIT MANAGER FOR REVIEW.	K. AHERN			16-DEC-92	4-JAN-93				
TY203 03A	FINALIZE OPERATIONS UNITIZATION STAFFING REQUIREMENTS API SUBMITTAL AND INCORPORATE COMMENTS.	K. AHERN			5-JAN-93	6-JAN-93				
TY203 04A	SUBMIT/PRESENT OPERATIONS UNITIZATION API SUBMITTAL TO MGMT ON-SITE/CORPORATE FOR APPROVAL.	K. AHERN			7-JAN-93	15-JAN-93				
TY203 05A	OPERATIONS UNITIZATION STAFFING PLAN/API SUBMITTAL APPROVED.	K. AHERN			16--JAN-93	28-FEB-93				
TY203 06A	HIRE ADDITIONAL PERSONNEL TO FILL OPERATIONS UNITIZATION STAFFING PLAN.	K. AHERN			1-MAR-93					30-NOV-97
TY203 07A	SEND MAXIMUM NUMBER OF PERSONNEL TO LICENSE TRAINING CLASSES TO OBTAIN REACTOR OPERATOR (RO) AND SENIOR REACTOR OPERATOR (SRO) LICENSE (REF: INIT. #202) (OPS P ERSONNEL WOULD BE SENT TO RO/SRO CLASS AT A RATE OF 10 TO 12 PER YEAR).	K. AHERN			1-MAR-93					31-DEC-95

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: MANAGEMENT EFFECTIVENESS

NUMBER: TY204

PRIORITY: HIGH

FOCUS AREA: HUMAN PERFORMANCE

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP; EMPLOYEE
SATISFACTION

REFERENCE FOR NEED: CII-3

INITIATIVE DESCRIPTION

ESTABLISH A CULTURE WHERE NUCLEAR SAFETY IS OF HIGHEST PRIORITY AND
WHERE CONTINUOUS IMPROVEMENT IS A WAY OF LIFE.

- ENHANCE EFFECTIVE PERFORMANCE MANAGEMENT.
- OBTAIN FEEDBACK FROM EMPLOYEES.
- MAKE ORGANIZATIONAL CHANGES BASED ON IMPROVED EFFECTIVENESS AND
EFFICIENCIES.

OBJECTIVES

- A) IMPLEMENT PROGRAMS THAT CHANGE THE CULTURE IN ORDER TO ACHIEVE
EXPECTED RESULTS.
- B) USE EMPLOYEE FEEDBACK TO FOCUS ON FURTHER ORGANIZATIONAL
INITIATIVES.
- C) MAKE ORGANIZATION/PERSONNEL CHANGES TO ACHIEVE IMPROVED
EFFECTIVENESS AND EFFICIENCY.

MGMT. SPONSOR: M. DONILON

RESP. ORGANIZATION: EMP. RELATIONS

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI. # TASK	DESCRIPTION	ACTION SPONSOR	1992		1993		1994		1995										
			J	A	J	O	J	A	J	O	J	A	J	O	J				
TY204 01A	COMMUNICATE VISION MISSION VALUES AND BEHAVIORS AND HOW THEY FIT INTO THE PERFORMANCE MANAGEMENT PROCESS.	M. DONILON					1-JUN-93											31-OCT-93	
TY204 02A	IMPLEMENT ENHANCED EFFECTIVE PERFORMANCE MANAGEMENT (EPM) PROCESS WHICH INCORPORATES METHODS (REF: INITIATIVE #201).	M. DONILON					1-SEP-93											31-MAR-94	
TY204 03A	MONITOR EMPLOYEE ATTITUDES AND OPINIONS.	M. DONILON					1-SEP-93											31-OCT-93	
TY204 04A	FEEDBACK RESULTS OF MONITORING EMPLOYEE ATTITUDES.	M. DONILON					1-NOV-93											31-DEC-93	
TY204 05A	IMPLEMENT HUMAN RESOURCES/ORGANIZATIONAL DEVELOPMENT PLANNING WITH SECTION MANAGER TRAINING.	M. DONILON					1-JUN-93											30-JUN-94	
TY204 05B	PROVIDE TIME MANAGEMENT TRAINING FOR SUPERVISORS (INPO 1/91).	M. DONILON					1-APR-93											30-APR-94	
TY204 06A	INTEGRATE HUMAN RESOURCES/ORGANIZATIONAL DEVELOPMENT PLANNING WITH 1995 BUSINESS PLAN.	M. DONILON																1-JUN-94	30-NOV-94
TY204 07A	DEVELOP AND RECOMMEND A PRIORITIZATION PROCESS FOR ORGANIZATION STUDIES.	M. DONILON					1-JAN-93											28-FEB-93	
TY204 08A	IDENTIFY/PRIORITIZE ORGANIZATIONS/JOB FAMILIES NEEDING REVISIONS.	M. DONILON					1-JAN-93											28-FEB-93	
TY204 09A	DEVELOP API REVISIONS/REVIEW/GAIN APPROVAL. A) OPERATIONS B) OTHERS PER PRIORITIZATION PROCESS.	M. DONILON					1-JAN-93											31-JAN-95	
TY204 10A	DEFINE AND COMMUNICATE CONTRACTOR UTILIZATION PHILOSOPHY.	M. DONILON					1-DEC-92											28-FEB-93	

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: SUPERVISORY DEVELOPMENT PROGRAM

NUMBER: TY205

PRIORITY: HIGH

FOCUS AREA: HUMAN PERFORMANCE

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP; EMPLOYEE
SATISFACTION

REFERENCE FOR NEED: CII-5, 6, 7

INITIATIVE DESCRIPTION

THIS PROJECT WILL IMPLEMENT AT BNP THE CORPORATE INITIATIVES THAT:
IMPLEMENT THE SUPERVISORY ASSESSMENT CENTER (CII-5); COMPLETE TRAINING
IN THE SUPERVISORY DEVELOPMENT PROGRAM (SDP) (CII-6); AND IMPLEMENT
THE MANAGEMENT DEVELOPMENT AND SUCCESSION PLANNING PROGRAM (CII-7).

OBJECTIVES

- A) TO OBTAIN A HIGHER SUCCESS RATE IN SELECTING SUPERVISORS AND
ENCOURAGE STRONGER PERFORMANCE OF PRE-SUPERVISORY PERSONNEL.
- B) TO ENSURE ALL SUPERVISORS SUCCESSFULLY COMPLETE THE SDP AND ENSURE
THAT POST-COURSE FOLLOW-UP AND FEEDBACK ACTIVITIES SUPPORT
TRAINING.
- C) IMPROVE THE ABILITY TO FILL PLANNED AND UNPLANNED VACANCIES IN
MANAGEMENT WITH WELL-PREPARED LEADERS/MANAGERS.

MGMT. SPONSOR: M. DONILON

RESP. ORGANIZATION: EMP. RELATIONS

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992			1993			1994			1995			
			J	A	J	J	O	J	A	J	O	J	A	J	O
TY205 01A	IDENTIFY CANDIDATES FOR TRAINING IN NEW ASSESSMENT PROCESS.	M. DONILON													
TY205 02A	DETERMINE BNP ASSESSMENT NEEDS VIA EFFECTIVE PERFORMANCE MANAGEMENT (EPM), SUCCESSION PLANNING, ETC.	M. DONILON													
TY205 03A	SCHEDULE SUPERVISORY ASSESSMENT CENTERS TO MEET NEEDS.	M. DONILON													
TY205 04A	IDENTIFY AND SCHEDULE FIRST QUARTER 1993 SUPERVISORY DEVELOPMENT PROGRAM (SDP) PARTICIPANTS.	M. DONILON													
TY205 05A	IDENTIFY AND SCHEDULE REMAINDER OF 1993 SUPERVISORY DEVELOPMENT PROGRAM (SDP) PARTICIPANTS.	M. DONILON													
TY205 06A	IDENTIFY AND SCHEDULE SUPERVISORY DEVELOPMENT PROGRAM (SDP) PARTICIPANTS IN 1994.	M. DONILON													
TY205 06B	IDENTIFY AND SCHEDULE SUPERVISORY DEVELOPMENT PROGRAM (SDP) PARTICIPANTS IN 1995.	M. DONILON													
TY205 07A	IDENTIFY AND SCHEDULE 1993 MANAGEMENT DEVELOPMENT PROGRAM (MDP) PARTICIPANTS.	M. DONILON													
TY205 08A	IDENTIFY AND SCHEDULE 1994 MANAGEMENT DEVELOPMENT PROGRAM (MDP) PARTICIPANTS.	M. DONILON													
TY205 09A	IDENTIFY POSITIONS TO BE FILLED THROUGH MANAGEMENT DEVELOPMENT AND SUCCESSION PLANNING PROGRAM.	M. DONILON													
TY205 10A	IDENTIFY HIGH POTENTIAL MANAGERS AND NON-MANAGERS.	M. DONILON													
TY205 11A	DEVELOP BNP INPUT TO NUCLEAR GENERATION GROUP (NGG) SUCCESSION PLAN.	M. DONILON													
TY205 12A	INTEGRATE MANAGEMENT DEVELOPMENT PLANS WITH EFFECTIVE PERFORMANCE MANAGEMENT (EPM).	M. DONILON													

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: BNP FACILITY IMPROVEMENTS

NUMBER: TY206

PRIORITY: HIGH

FOCUS AREA: HUMAN PERFORMANCE

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP; FORECAST/SCHEDULE
ACHIEVEMENT; EMPLOYEE SATISFACTION

REFERENCE FOR NEED: NRC; INPO; OSHA; EPA; SAT ERC6

INITIATIVE DESCRIPTION

IMPROVE THE CONDITION OF OVERALL BNP FACILITY SPACES BY:

- A) DESIGNING AND CONSTRUCTING THE FOLLOWING NEW BNP FACILITIES:
 - TECHNICAL AND ADMINISTRATION CENTER, SNUBBER REPAIR AND HOT CALIBRATION/TEST EQUIPMENT SHOP, E&RC LAUNDRY AND CHEMICAL STORAGE FACILITY, AND SEWAG. TREATMENT FACILITY.
- B) CONSTRUCTING AN RCA WITH SINGLE POINT ACCESS.
- C) UPGRADING THE FOLLOWING BNP FACILITIES:
 - TOOL DECONTAMINATION FACILITY, MATERIAL STORAGE FACILITIES, AND ADMINISTRATIVE ANNEX BUILDING.
- D) DISPOSING OF TRAILERS, TEMPORARY BUILDINGS, AND THE OLD LAUNDRY METAL BUILDING.
- E) PERFORMING AN EVALUATION OF PROPOSED FACILITIES OR FACILITY UPGRADES, AND DEVELOPING A MASTER FACILITIES PLAN.

OBJECTIVES

- A) CENTRALIZE PLANT ORGANIZATIONS AND EQUIPMENT TO IMPROVE COMMUNICATIONS, OPERATIONAL EFFECTIVENESS, AND WORKER EFFICIENCY.
- B) IMPROVE RADIOACTIVE MATERIAL CONTROL AND STREAMLINE ACCESS/EGRESS FROM THE PLANT.
- C) IMPROVE THE QUALITY OF LIFE OF WORKERS.
- D) ENSURE COMPLIANCE WITH APPROPRIATE REGULATIONS, CORPORATE STANDARDS, AND EMPLOYEE SAFETY STANDARDS.
- E) CREATE A PROFESSIONAL/INDUSTRIAL SITE APPEARANCE.
- F) UPGRADE THE SITE'S TRAINING CAPABILITIES.
- G) INCREASE SEWAGE TREATMENT CAPACITY.
- H) PROVIDE ADEQUATE MATERIAL STORAGE SPACE.
- I) PROVIDE OFFICE SPACE IN PERMANENT FACILITIES FOR ALL CP&L EMPLOYEES.

MGMT. SPONSOR: R. JOHNSON

RESP. ORGANIZATION: OM&M

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992			1993			1994			1995		
			J	A	J	O	J	A	J	O	J	A	J	O
TY206 01A	COMPLETE CONSTRUCTION OF NEW TECHNICAL AND ADMINISTRATIVE CENTER, INCLUDING ASSOCIATED ROADS, SIDEWALKS, LANDSCAPING, LIGHTS, AND PARKING. (REF: PID #G0088C)	R. JOHNSON			1-JAN-93			30-APR-93						
TY206 02A	REMOVE TRAILERS AND TEMPORARY BUILDINGS, AND RENOVATE THE ADMIN ANNEX BUILDING (REF: PID #G0088B).	R. JOHNSON			1-JAN-93						31-DEC-93			
TY206 03A	DESIGN AND BUILD THE SHUBBER REPAIR AND HOT CALIBRATION/TEST EQUIPMENT SHOP. (REF: PID #M0186A)	R. JOHNSON			1-JUN-93						31-OCT-93			
TY206 04A	DESIGN AND CONSTRUCT THE E6RC LAUNDRY AND CHEMICAL STORAGE FACILITY. (REF: PID #R0138A)	R. JOHNSON			1-JUL-93						15-DEC-93			
TY206 05A	CONSTRUCT SINGLE POINT ACCESS RCA. (REF: PID #R0137A)	R. JOHNSON			1-AUG-93						15-FEB-94			
TY206 06A	CONSTRUCT SEWAGE TREATMENT FACILITY (REF: PID #R0144A).	R. JOHNSON			1-JUL-93						28-FEB-94			
TY206 07A	UPGRADE THE TOOL DECONTAMINATION FACILITY. (REF: #R0127A)	R. JOHNSON						1-NOV-93			28-FEB-94			
TY206 08A	UPGRADE MATERIAL STORAGE FACILITIES, INCLUDING INSTALLATION OF HVAC SYSTEMS. (REF: PID #A0124A)	R. JOHNSON						1-JAN-94						31-DEC-94
TY206 10A	EVALUATE THE BASES AND CURRENT DESIGNS OF PROPOSED FACILITIES AND FACILITY UPGRADES.	R. JOHNSON			1-JAN-93						31-AUG-93			
TY206 10B	DETERMINE THE NUMBER OF PERSONNEL REQUIRING PERMANENT OFFICE SPACE BOTH INSIDE AND OUTSIDE THE PROTECTED AREA. EVALUATE THE NEED TO INCLUDE ADDITIONAL NED OR CORPORATE PERSONNEL AT THE BNP SITE.	R. JOHNSON			1-JAN-93						31-MAR-93			
TY206 10C	EVALUATE THE ABILITY OF EXISTING AND PROPOSED FACILITIES TO ACCOMMODATE PERMANENT SITE EMPLOYEES.	R. JOHNSON			1-FEB-93						28-FEB-93			
TY206 10D	PERFORM A STUDY TO DETERMINE THE TYPES OF FACILITIES OR FACILITY UPGRADES REQUIRED, POTENTIAL FACILITY LOCATIONS, TYPE OF PERSONNEL THAT SHOULD BE ASSIGNED TO EACH FACILITY, AND INTERFACES WITH OTHER EXISTING FACILITIES.	R. JOHNSON			1-MAR-93						1-JUL-93			

BNP THREE-YEAR PLAN

1992	1993	1994	1995
J A J J	J A J J	J A J J	J A J J

DESCRIPTION

ACTION SPONSOR

INT. #
TASK

TY206 DEVELOP A MASTER FACILITIES PLAN BASED ON THE
106 RESULTS OF THE STUDY.

R. JOHNSON

1-JUL-93 ■ 31-AUG-93

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: NUCLEAR REVISION CONTROL SYSTEM (NRCS)

NUMBER: TY207

PRIORITY: MEDIUM

FOCUS AREA: HUMAN PERFORMANCE

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP; EMPLOYEE
SATISFACTION

REFERENCE FOR NEED: NAD 11/91, 8/92; CII-11

INITIATIVE DESCRIPTION

NRCS (A MAINFRAME BASED COMPUTER SYSTEM) COULD BE USED IN A REAL-TIME MODE TO MAINTAIN THE CURRENT STATUS OF ALL DOCUMENTS AND ELECTRONIC MEDIA THAT REFLECT THE DESIGN AND/OR CONFIGURATION OF THE UNITS AND THEIR SIMULATOR. AS IMPLEMENTED AT BNP, NRCS IS UNDER-UTILIZED. THIS INITIATIVE WILL ADDRESS RE-IMPLEMENTING NRCS AT BNP. WORK GROUPS IMPACTED BY THIS INITIATIVE ARE PROJECT SERVICES - DOCUMENT CONTROL AND RECORDS MANAGEMENT, NED, TECHNICAL SUPPORT, AND PROCEDURE WRITERS IN OPERATIONS, MAINTENANCE, ER&C, AND OM&M. THE INITIATIVE WILL FOCUS ON ENHANCING COOPERATION BETWEEN THESE WORK GROUPS, APPLICATION SYSTEM TRAINING, CONVERSION FRC., DEPARTMENTAL RECORD KEEPING SYSTEMS, AND INSTITUTIONALIZING A MORE RIGOROUS MAINTENANCE OF THE DATA RECORDED IN NRCS.

OBJECTIVES

- A) ENHANCE CONFIGURATION CONTROL OF DESIGN DOCUMENTATION FOR UNITS AND THEIR SIMULATOR.
- B) PROVIDE RELIABLE INDEX TO MOST CURRENT REVISION AND ALL OUTSTANDING CHANGES TO DOCUMENTS OR ELECTRONIC MEDIA RELATED TO THE DESIGN AND/OR CONFIGURATION OF THE UNITS AND THEIR SIMULATOR.
- C) PROVIDE RELIABLE DOCUMENT DISTRIBUTION OF MOST CURRENT REVISION AND ALL OUTSTANDING CHANGES TO DOCUMENTS RELATED TO THE DESIGN AND/OR CONFIGURATION OF THE UNITS AND THEIR SIMULATOR.

MGMT. SPONSOR: D. REID

RESP. ORGANIZATION: CSU

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	90 DAY(S)	120 DAY(S)	120 DAY(S)	214 DAY(S)	214 DAY(S)	1675 DAY(S)
TY207 01A	DEVELOP AUDIT STATEMENT OF BNP NRCS IMPLEMENTATION.	D. REID	■					
TY207 02A	NEGOTIATE SYSTEM IMPLEMENTATION GOALS/OBJECTIVES WITH AFFECTED WORK GROUPS.	D. REID		■				
TY207 03A	DEFINE NEEDED UPGRADES TO NRCS APPLICATION SOFTWARE.	D. REID		■				
TY207 04A	DEVELOP/IMPLENENT NRCS APPLICATION SOFTWARE UPGRADES.	D. REID				■		
TY207 05A	DEVELOP/IMPLEMENT SITE TRAINING, PROCEDURES AND STANDARDS GROUPS.	D. REID				■		
TY207 06A	ESTABLISH SITE NRCS USERS GROUP. MEET MONTHLY TO RESOLVE CONCERNS AND ISSUES.	D. REID					■	

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: INTEGRATED COMPUTER SUPPORT
NUMBER: TY208 PRIORITY: MEDIUM
FOCUS AREA: HUMAN PERFORMANCE
RELATED GOALS: SALP; EMPLOYEE SATISFACTION
REFERENCE FOR NEED: NCG STANDARD 7.6

INITIATIVE DESCRIPTION

DEFINE AND IMPLEMENT AN ORGANIZATION STRUCTURE THAT WILL PROVIDE INTEGRATED COMPUTER SUPPORT AND ADDRESS ALL HARDWARE, SOFTWARE, TECHNICAL TRAINING AND TELECOMMUNICATIONS REQUIREMENTS FOR BNP. THIS WILL INCLUDE PCS, MAINFRAME PROCESSING AND COULD INCLUDE THE SPECIAL USE COMPUTERS FOR SECURITY, CHEMISTRY, ERFIS AND PROCESS.
-- NOTE: INCORPORATING THE ERFIS AND PROCESS COMPUTING CAPABILITIES IN THIS UNIT IS STILL UNDER DISCUSSION.

THIS GROUP WILL ADDRESS THE SITE TELECOMMUNICATIONS NEEDS INCLUDING TELEPHONES, DATA TRANSFER, AND VIDEO CONFERENCING. THE INTEGRATED COMPUTER SUPPORT ORGANIZATION WILL DELIVER NOT ONLY HARDWARE BUT ALSO COORDINATE THE DELIVERY OF SOFTWARE FROM A VARIETY OF INTERNAL AND EXTERNAL VENDORS AND COORDINATE THE DELIVERY OF TECHNICAL AND FUNCTIONAL EDUCATION IN COMPUTER SYSTEM USE.

OBJECTIVES

- A) PROVIDE SINGLE ORGANIZATIONAL CONTACT FOR ALL COMPUTER AND TELECOMMUNICATIONS SERVICES, ISSUES, CONCERNS AND SUPPORT TO BETTER LEVERAGE THE SITE USE OF TECHNOLOGY.
- B) REALIZE PERSONNEL PRODUCTIVITY GAINS BY COMBINING PROJECTS, SERVICE DELIVERY, HELP DESK TRACKING, TRAINING INITIATIVES THAT ARE CURRENTLY DONE INDEPENDENTLY BY SEPARATE ORGS-I.E., CSU, SECURITY, CHEMISTRY, ERFIS & PROCESS.
- C) ENHANCE SYSTEM SUPPORT RELIABILITY BY HAVING PEOPLE WITH SIMILAR TECHNICAL KNOWLEDGE, SKILLS AND ASSIGNMENTS IN THE SAME ORGANIZATION TO ENSURE THAT APPLICATION KNOWLEDGE IS VESTED IN MORE THAN ONE INDIVIDUAL.
- D) GAIN SYNERGY IN TECHNOLOGY APPLICATION THAT NOW REQUIRES COORDINATION BETWEEN MULTIPLE ON-SITE ORGANIZATIONS - E.G., SITE-WIDE CABLING TO PROVIDE INTERCONNECTIVITY OF VARIOUS COMPUTERS.
- E) LEVERAGE BUDGET MANAGEMENT AND VENDOR NEGOTIATIONS.
- F) ENHANCE SYSTEM SUPPORT RELIABILITY BY HAVING CROSS TRAINED SUPPORT PERSONNEL.

MGMT. SPONSOR: D. REID RESP. ORGANIZATION: CSU
REVISION NO: 00 AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	
TY208 01A	DEVELOP COMPUTER SUPPORT NEEDS STATEMENT (FUTURE & PRESENT) FOR SECURITY, CHEMISTRY ERFIS AND PROCESS COMPUTERS. ACCESS IN-PROGRESS CAPITAL PROJECTS.	D. REID	150 DAY(S) [REDACTED]
TY208 02A	DEFINE JOB DESCRIPTIONS/LEVELS. DEVELOPMENT NEEDS OF CONSOLIDATED ORGANIZATION.	D. REID	153 DAY(S) [REDACTED]
TY208 03A	NEGOTIATE CUSTOMER/SUPPLIER AGREEMENTS WITH AFFECTED ORGANIZATIONS.	D. REID	122 DAY(S) [REDACTED]
TY208 04A	IMPLEMENT CONSOLIDATION OF FUNCTIONS, PERSONNEL AND BUDGETS.	D. REID	122 DAY(S) [REDACTED]

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: IMPROVE PROCEDURE CONTROL PROCESS & PROCEDURE CONTENT

NUMBER: TY301

PRIORITY: HIGH

FOCUS AREA: WORK PROCESSES

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP; EMPLOYEE SATISFACTION

REFERENCE FOR NEED: NRC 92-12 ITEMS 2.4&5; INPO TRIP 2/10/92-2/14/92, ITEMS A.5 & B; INPO CAP 3/2/92 ITEM B.2; NAD ITEMS B92-691 D,G,H; SAT ITEMS A4,5,7,8, M7,8,17, TS6,7, ERC2&3; IAP ITEMS D13&31; 10CFR50 APP.B; ANSI-N18.7-1976; REG. GUIDE 1.33

INITIATIVE DESCRIPTION

DEVELOP A COMPREHENSIVE PROCEDURE DEVELOPMENT AND CONTROL PROCESS AT BRUNSWICK TO MORE EFFICIENTLY MANAGE POM PROCEDURES. KEY ELEMENTS OF THIS INITIATIVE ARE:

- A) REVIEW AND EVALUATE EXISTING PROCESSES AGAINST REGULATORY REQUIREMENTS, CP&L COMMITMENTS, AND ACTUAL PLANT NEEDS.
- B) DEFINE THE REQUIRED HEIRARCHY OF PROCEDURES AND PROVIDE A PROCEDURE CHANGE PROCESS THAT QUICKLY CORRECTS OR IMPROVES THE TECHNICAL CONTENT OF INADEQUATE PROCEDURES.
- C) REVISE AND UPGRADE PROCEDURES AS APPROPRIATE TO CORRECT TECHNICAL INADEQUACIES OF EXISTING PROCEDURES, ELIMINATE UNNECESSARY PROCEDURES, AND PROVIDE NEW PROCEDURES WHERE NEW, IMPROVED WORK PROCESSES MANDATE.

OBJECTIVES

- A) SATISFY REGULATORY REQUIREMENTS (10CFR50, APPENDIX B; ANSI-N18.7-1976; REG GUIDE 1.33).
- B) PROVIDE A UNIFORM SYSTEM FOR DEVELOPING AND REVISING POM PROCEDURES THROUGHOUT ALL ORGANIZATIONS AT BNP TO MAXIMIZE EFFICIENCY IN THE PROCEDURE CONTROL PROGRAM.
- C) SIMPLIFY THE PROCEDURE REVISION PROCESS TO ENABLE QUICK CORRECTIONS TO INADEQUATE OR INCORRECT PROCEDURES; THIS WILL STIMULATE IDENTIFICATION OF PROCEDURAL PROBLEMS AND ENCOURAGE ADHERENCE TO PROCEDURES.
- D) PROVIDE OPERATING/MAINTENANCE CREWS WITH PROCEDURES THAT ARE CLEAR, CONCISE, EASY TO USE, AND ADEQUATE TO SUPPORT PLANT OPERATIONS.
- E) REDUCE THE OCCURRENCE OF ADVERSE PLANT EVENTS DUE TO INADEQUATE PROCEDURES.
- F) REDUCE THE NEED FOR OPERATOR WORKAROUNDS.
- G) ELIMINATE OVERLAPPING INSTRUCTIONS AND UNNECESSARY PROCEDURES.
- H) ENSURE PROCEDURES ARE UP TO DATE AND APPROVED PRIOR TO USAGE.

MGMT. SPONSOR: C. LEWIS

RESP. ORGANIZATION: PROJECT SERV

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992		1993		1994		1995					
			J	A	J	O	J	A	J	O	J	A	J	O
TY301 01A	REVIEW EXISTING BNP PROCEDURES ADDRESSING PLANT PROCEDURES PROGRAM AND THE EXISTING PROCEDURE CHANGE PROCESS.	C. LEWIS												
TY301 02A	ESTABLISH A PROCEDURE COORDINATORS GROUP/TASK FORCE REPRESENTING ALL SITE ORGANIZATIONS TO ASSIST IN DEVELOPMENT OF THE PROJECT ACTION PLAN AND IMPLEMENTATION OF THE NEW PROCEDURE CONTROL PROCESS.	C. LEWIS												
TY301 03A	RESEARCH INDUSTRY STANDARDS AND OTHER RECOMMENDED PROGRAMS, (I.E., SOER 92-1 AND OTHER HUMAN FACTORS STUDIES, INPO GOOD PRACTICES, IEEE GUIDELINES, EPRI GUIDELINES, OTHER NUCLEAR PLANT PROCEDURES AND PROGRAMS, ETC.)	C. LEWIS												
TY301 04A	RESEARCH PROBLEMS IDENTIFIED AT BNP (THROUGH OPERATIONAL EXPERIENCE FEEDBACK, LERS, NRC CONCERNS, NAD ASSESSMENTS, ACRS, PROCEDURE COOR. INPUT, ETC.), RESULTING FROM AN INADEQUATE PROCEDURE CONTROL PROCESS OR TECHNICALLY INCORRECT PROCEDURES.	C. LEWIS												
TY301 05A	DEVELOP PROJECT ACTION PLAN FOR IMPROVING THE PROCEDURE CONTROL PROCESS.	C. LEWIS												
TY301 06A	DEVELOP PROGRAMMATIC PROCEDURES TO IMPLEMENT THE NEW PROCEDURE CONTROL PROCESS.	C. LEWIS												
TY301 07A	DEVELOP TECHNICAL IMPLEMENTATION PROCEDURES BASED ON PROGRAMMATIC PROCEDURES DEVELOPED IN ACTION STEP 6.	C. LEWIS												
TY301 08A	DEVELOP TRAINING PROGRAM FOR THE NEW PROCEDURE CONTROL PROCESS.	C. LEWIS												
TY301 09A	TRAIN PROCEDURE WRITERS AND PROCEDURE COORDINATORS.	C. LEWIS												
TY301 10A	FULL IMPLEMENTATION OF NEW PROCEDURE CONTROL PROCESS.	C. LEWIS												
TY301 11A	EVALUATE EXISTING PROCEDURES AGAINST IDENTIFIED REGULATORY REQUIREMENTS, PREVIOUSLY IDENTIFIED COMMITMENTS, SOER 92-1 STANDARDS, AND RESULTS OBTAINED FROM VARIOUS PROCESS IMPROVEMENT INITIATIVES IDENTIFIED IN THE THREE YEAR PLAN.	C. LEWIS												

BNP THREE-YEAR PLAN

		1992	1993	1994	1995
		J A J J J A J J J	J A J J J A J J J	J A J J J A J J J	J A J J J A J J J
INI. # TASK	DESCRIPTION	ACTION SPONSOR			
TY301 12A	DETERMINE RESOURCES NECESSARY TO REVISE PROCEDURES/DEVELOP NEW PROCEDURES/ELIMINATE UNNECESSARY PROCEDURES RESULTING FROM THE EVALUATION IN ACTION STEP 11 ABOVE AND EVALUATE ALTERNATIVES.	C. LEWIS			
		1-JAN-94			31-DEC-97
TY301 12B	NOTE: THIS INITIATIVE MAY RESULT IN IDENTIFYING A PROCEDURAL REVIEW PROCESS THAT WOULD REQUIRE SUBSTANTIAL FUNDING IN 1994 AND BEYOND.	C. LEWIS			
		1-JAN-94		1-JAN-94	

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: IMPROVING THE MODIFICATION PROCESS

NUMBER: TY302

PRIORITY: HIGH

FOCUS AREA: WORK PROCESSES

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP; EMPLOYEE
SATISFACTION

REFERENCE FOR NEED: SAT OM3

INITIATIVE DESCRIPTION

IMPLEMENT INTERIM GUIDANCE TO PERMIT SHORT TERM GAINS IN FIXING
PROBLEMS NEEDING DESIGN WORK, WHILE SIMULTANEOUSLY INVESTIGATING AND
IMPLEMENTING LONG TERM IMPROVEMENTS TO THE MODIFICATION PROCESS WHICH
WILL SUBSTANTIALLY REDUCE MODIFICATION COSTS AND TIME FROM CONCEPT TO
OPERABILITY.

OBJECTIVES

INCREASE THE PRODUCTIVITY & EFFICIENCY FOR IMPLEMENTING PROJECTS &
MODIFICATIONS.

TIME TO DESIGN	END OF 1993	END OF 1994	END OF 1995
- LARGE MODIFICATIONS:	N/A	N/A	
- SETPOINT CHANGES:	4 WEEKS	3 WEEKS	
- SMALL (<50K) DESIGN: BOP MODS (NON SEISMIC)	6 WEEKS	4 WEEKS	
- SMALL (<50K) DESIGN: NSSS MODS OR BOP SEISMIC	8 WEEKS	6 WEEKS	
DESIGN COST REDUCTION ONCE BASE IS ESTABLISHED.	5%	15%	25%

MGMT. SPONSOR: R. HELME

RESP. ORGANIZATION: TECH SUPPORT

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992		1993		1994		1995	
			J	A	J	A	J	A	J	A
TY302 01A	REVIEW 1991 AND 1992 TECH SUPT REQUESTS TO NUCLEAR ENGINEERING/ENGR WORK REQUESTS WHICH AFFECTED MAINTENANCE ACTIVITIES. DETERMINE CATEGORIES OF WORK ACTIVITIES. EVALUATE CATEGORY RESULTS FOR PRIORITY ASSIGNMENTS TO TASK 02A BELOW.	R. HELME								
			1-JAN-93					31-MAR-93		
TY302 02A	DEVELOP ENGINEERING EVALUATION REPORT OR PROCEDURES WHICH PROVIDE ENVELOPING GUIDANCE FOR THOSE MAINTENANCE ACTIVITIES CATEGORIZED ABOVE, SO THAT ENGINEERING WORK REQUESTS NEED ONLY BE GENERATED IF OUTSIDE THE ENVELOPE.	J. LEININGER								
			1-APR-93					31-MAY-93		
TY302 03A	IMPLEMENT AN INTERIM BOP MODIFICATION PROCESS, SUCH AS PERMANENT REVISION ENGINEERING EVALUATION REPORT, TO EXPEDITE FIXES & REDUCE COSTS ASSOCIATED WITH BOP FIXES. (I.E., SMALL MODS <50K ENGR)	J. LEININGER								
			1-JAN-93					31-JUL-93		
TY302 04A	UNDERTAKE AN INVESTIGATION, WHICH INCLUDES VISITS TO WORLD CLASS PLANTS, TO DEVELOP ENHANCEMENTS TO THE CURRENT MODIFICATION PROCESS.	J. LEININGER								
			1-JAN-93					31-MAY-93		
TY302 05A	DEVELOP A HIERARCHY AS TO MODIFICATIONS REQUIRED TO SUPPORT CONFIGURATION CONTROL, BALANCE OF PLANT DESIGN CHANGES & NUCLEAR SYSTEMS MODIFICATIONS. THEN CLEARLY DEFINE WHEN TO USE WHICH MODIFICATION PROCESS.	J. LEININGER								
			1-JUN-93					30-JUN-93		
TY302 06A	DEVELOP & IMPLEMENT A PLAN TO IMPROVE THE TRAINING OF ENGINEERS INVOLVED IN THE DESIGN PROCESSES. THIS WOULD INCLUDE INPO & ISI TRAINING.	J. LEININGER								
			1-JAN-93					31-JUL-93		
TY302 06B	COMPLETE INPO IMPROVED TRAINING FOR ENGINEERS INVOLVED IN THE DESIGN PROCESS.	J. LEININGER								
			31-MAR-93					31-MAR-93		
TY302 06C	COMPLETE ISI IMPROVED TRAINING FOR ENGINEERS INVOLVED IN THE DESIGN PROCESS.	J. LEININGER								
			31-JUL-93					31-JUL-93		
TY302 07A	IMPROVE ACCOUNTABILITY OF THE MODIFICATION PROCESS BY REDUCING THE NUMBER OF SIGNATURES TO MAINTAIN CLEAR RESPONSIBILITY.	J. LEININGER								
			1-APR-93					30-APR-93		
TY302 08A	REMOVE ACCEPTANCE TESTING FROM PLANT MODIFICATION PACKAGES & DEVELOP ALTERNATIVE APPROACH USING THE SYSTEM ENGINEERS.	R. HELME								
			1-JAN-93					31-AUG-93		

BNP THREE-YEAR PLAN

INT. # TASK	DESCRIPTION	ACTION SPONSOR	1992			1993			1994			1995		
			J	A	J	J	A	J	J	A	J	J	A	J
TY302 09A	DETERMINE BY INVESTIGATION, THE APPROXIMATE COSTS OF EACH STEP IN THE MODIFICATION PROCESS. PRIORITIZE THE REVIEW FOR PROCESS IMPROVEMENTS BASED ON HIGHEST COSTS.	J. LEININGER												
TY302 10A	GENERATE AN ACTION PLAN TO REDUCE COSTS ASSOCIATED WITH THE MODIFICATION PROCESS.	J. LEININGER												

1 - JAN - 93 [] 31 - MAY - 93
 1 - JUN - 93 [] 31 - JUL - 93

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: IMPROVE ABILITY TO IDENTIFY AND CORRECT PROBLEMS

NUMBER: TY303

PRIORITY: HIGH

FOCUS AREA: WORK PROCESSES

RELATED GOALS: MILS/KWH, UNIT CAPABILITY FACTOR, SALP, EMPLOYEE
SATISFACTION

REFERENCE FOR NEED: NRC WATCH LIST GUIDELINES; NRC 92-09, NRC 92-10,
92-12; NAD 11/91, 3/92, 5/92; INPO CAP 3/92; SALP
91-37; SAT M9, RC4

INITIATIVE DESCRIPTION

- 1) DEVELOPMENT AND IMPLEMENTATION OF A SELF-ASSESSMENT PROGRAM THAT CAUSES BNP MANAGERS AND STAFF TO CRITICALLY EVALUATE THE ADEQUACY OF BNP PROCESSES AND PRODUCTS.
- 2) DEVELOP AND IMPLEMENT A ROOT CAUSE ANALYSIS PROCESS STRENGTHENED BY IMPROVED TRAINING, LINE ORGANIZATION INVOLVEMENT, INCREASED MANAGEMENT OVERSIGHT AND INTEGRATION OF INFORMATION FROM THE OPS EXPERIENCE FEEDBACK PROGRAM.
- 3) A CORRECTIVE ACTION PROGRAM ENHANCED BY IMPROVED TRAINING, DEVELOPMENT AND IMPLEMENTATION OF EFFECTIVE SUBPROGRAMS, AND EFFECTIVE TRENDING AND TRACKING.

OBJECTIVES

- A) PROMOTE A CULTURE OF CONTINUOUS IMPROVEMENT AT BNP.
- B) IDENTIFY STRENGTHS AND WEAKNESSES OF BNP PLANS, PROCESSES AND PRODUCTS.
- C) FOCUS MANAGEMENT ATTENTION ON PROBLEM AREAS.
- D) IDENTIFY ROOT CAUSES OF MAJOR WEAKNESSES.
- E) PROVIDE CLEAR, CONSISTENT DIRECTION TO BNP LINE AND SUPPORT ORGANIZATIONS AND INDIVIDUALS IN ACHIEVING EFFECTIVE SELF-ASSESSMENT.
- F) IDENTIFY PRECURSORS TO POTENTIAL PROBLEMS AND POTENTIAL BARRIERS TO IMPROVEMENT.
- G) FACILITATE THE EARLY RESOLUTION OF PROBLEMS.
- H) DECREASE THE NUMBER AND SIGNIFICANCE OF PLANT EVENTS AND LERS.
- I) APPLY LESSONS LEARNED FROM EVENTS AT OTHER PLANTS WORLDWIDE.
- J) IMPROVE LINE MANAGEMENT ACCOUNTABILITY AND INVOLVEMENT IN SELF-ASSESSMENT AND CORRECTIVE ACTIONS.

MGMT. SPONSOR: S. FLOYD

RESP. ORGANIZATION: REG. COMPLIANCE

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI. # TASK	DESCRIPTION	ACTION SPONSOR	1992		1993		1994		1995	
			J	A	J	A	J	A	J	A
TY303 01A	PREPARE A SITE-WIDE BNP SELF-ASSESSMENT GUIDELINE INCLUDING RESPONSIBILITIES FOR INDIVIDUALS, SUPERVISORS, & MANAGERS. FOCUS IS ON LINE MANAGEMENT ACCOUNTABILITY.	S. FLOYD			1-JAN-93	30-APR-93				
TY303 01B	PREPARE/APPROVE UNIT-SPECIFIC SELF-ASSESSMENT GUIDELINES BASED ON GENERIC PROGRAM.	UNIT MANAGERS			1-APR-93	31-JUL-93				
TY303 01C	DEVELOP GENERIC PERFORMANCE EXPECTATION FOR SELF-ASSESSMENT.	S. FLOYD			1-JAN-93	30-APR-93				
TY303 01D	INCORPORATE SELF-ASSESSMENT PERFORMANCE EXPECTATION INTO ALL UNIT PERSONNEL EXPECTATION (REF: INIT. #201).	UNIT MANAGERS					1-SEP-93	31-OCT-93		
TY303 01E	DEVELOP A SELF-ASSESSMENT TRAINING PROGRAM TO INCLUDE OBSERVATION TRAINING.	M. JONES			1-APR-93	30-SEP-93				
TY303 01F	PROVIDE INITIAL TRAINING ON SELF-ASSESSMENT TO ALL MANAGEMENT AND STAFF.	UNIT MANAGERS					1-SEP-93	30-SEP-94		
TY303 01G	PROVIDE CONTINUING TRAINING ON SELF-ASSESSMENT TO ALL MANAGEMENT AND STAFF.	UNIT MANAGERS							1-SEP-94	31-DEC-97
TY303 01H	IMPLEMENT SELF-ASSESSMENT PROGRAM EFFECTIVENESS REVIEWS ON A QUARTERLY FREQUENCY BASED ON CAP TRACKING AND TRENDING.	S. FLOYD					1-SEP-93			31-DEC-97
TY303 01I	REQUEST PERIODIC NAD SELF-ASSESSMENT REVIEWS.	S. FLOYD					1-JAN-94			31-DEC-97
TY303 01J	PERFORM A SELF-ASSESSMENT BASED ON THE RESULTS OF THE 1993 SALP.	S. FLOYD					1-JAN-94	1-FEB-94		
TY303 01K	PERFORM A SELF-ASSESSMENT BASED ON THE RESULTS OF THE 1993 INPO EVALUATION.	S. FLOYD			1-FEB-93	1-MAR-93				
TY303 02A	DETERMINE THE CORRECTIVE ACTION PROGRAM STAFF NEEDED TO PERFORM ROOT CAUSE ANALYSIS (RCA) FOR SUPPORT GROUPS AND ASSIST THE LINE ORGANIZATION.	S. FLOYD			1-JAN-93					31-DEC-97
TY303 02B	INCORPORATE ROOT CAUSE EXPECTATIONS INTO LINE MANAGEMENT ACCOUNTABILITIES (REF: INIT. #201).	S. FLOYD					1-SEP-93	31-OCT-93		
TY303 02C	DESIGNATE INDIVIDUALS IN LINE ORGANIZATIONS WITH PRIMARY RESPONSIBILITY FOR ROOT CAUSE ANALYSIS (RCA).	SECTION MGRS.			1-JAN-93	31-MAR-93				

BNP THREE-YEAR PLAN

INI. # TASK	DESCRIPTION	ACTION SPONSOR	1992			1993			1994			1995		
			J	A	J	J	O	J	A	J	O	J	A	J
TY303 02D	CONDUCT EXISTING 3 DAY ROOT CAUSE ANALYSIS COURSE TO NEWLY ASSIGNED ANALYSTS.	M. JONES												
TY303 02E	CONDUCT ROOT CAUSE ANALYSIS (RCA) OVERVIEW TRAINING FOR SUPERVISORS.	M. JONES												
TY303 02F	DEVELOP A PROCESS FOR INCLUDING OPERATING EXPERIENCE FEEDBACK (OEF) INFORMATION IN ROOT CAUSE ANALYSIS, INCLUDING CORRECTIVE ACTIONS.	S. FLOYD												
TY303 02G	DEVELOP LESSON PLANS AND TRAIN ROOT CAUSE ANALYSTS IN USE OF OPERATING EXPERIENCE FEEDBACK (OEF) INFORMATION.	M. JONES												
TY303 02H	REVISE PLP-04 TO STRENGTHEN MANAGEMENT INVOLVEMENT IN REVIEWS OF ROOT CAUSES AND CORRECTIVE ACTIONS FOR SIGNIFICANT ACRS.	S. FLOYD												
TY303 02I	APPROVE PLP-04 CHANGE AND IMPLEMENT MANAGEMENT REVIEW PROCESS FOR ROOT CAUSE ANALYSIS.	S. FLOYD												
TY303 03A	DEVELOP A CONSISTENT SUBPROGRAM FORMAT AND DATABASE SYSTEM FOR CORRECTIVE ACTION PROGRAM.	S. FLOYD												
TY303 03B	REVISE SUBPROGRAMS TO CONFORM TO NEW STANDARDS AND ISSUE DRAFT FOR CORRECTIVE ACTION PROGRAM.	S. FLOYD												
TY303 03C	APPROVE FINAL SUBPROGRAM FOR CORRECTIVE ACTION PROGRAM.	UNIT MANAGERS												
TY303 03D	DEVELOP TRAINING MODULES TO TRAIN SITE PERSONNEL ON ENHANCED CORRECTIVE ACTION PROGRAM (CAP) PROCESS.	M. JONES												
TY303 03E	CONDUCT SITE TRAINING FOR CORRECTIVE ACTION PROGRAM.	M. JONES												
TY303 03F	TRAIN CORRECTIVE ACTION PROGRAM (CAP) STAFF AND SUBPROGRAM COORDINATORS IN STATISTICAL ANALYSIS.	S. FLOYD												
TY303 03G	ESTABLISH A STANDARDIZED SUBPROGRAM AND CORRECTIVE ACTION PROGRAM (CAP) REPORT FORMAT. (INCLUDES TRENDING AND TRACKING.)	S. FLOYD												
TY303 03H	COMMENCE PERIODIC REPORTS FOR CORRECTIVE ACTION PROGRAM (CAP).	S. FLOYD												

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: BACKLOG REDUCTION

NUMBER: TY304

PRIORITY: HIGH

FOCUS AREA: WORK PROCESSES

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP

REFERENCE FOR NEED: CORPORATE INITIATIVE CII-11

INITIATIVE DESCRIPTION

DEVELOP CLEAR DEFINITIONS, STANDARDS, TARGETS, AND PLANS FOR REDUCTION AND MANAGEMENT OF THE BACKLOG AT BNP. CORPORATE INITIATIVES WILL BE CONSIDERED DURING THE DEVELOPMENT. THE TYPES OF BACKLOG ACTIVITIES TO BE CONSIDERED ARE:

- MAINTENANCE BACKLOG (REF INITIATIVES 101, 102, 103).
- DESIGN BASIS DOCUMENTS (REF INITIATIVE 504).
- ENGINEERING DRAWINGS.
- PROCEDURE REVISIONS.
- VENDOR MANUAL UPDATES.
- PRA MODEL UPDATE.
- EQUIPMENT DATABASE SYSTEM UPDATES (REF INITIATIVE 503).
- TEMPORARY CONDITIONS (REF INITIATIVE 509).
- CORRECTIVE ACTIONS (REF INITIATIVE 303).

THE TARGETS AND PLANS WILL BE CONSISTANT WITH THE THREE-YEAR PLAN AND THE INTEGRATED STARTUP PLAN.

A REVIEW OF THE BACKLOG FOR SOME CATEGORIES OF ITEMS (TEMP CONDITIONS AND MAINT FOR EXAMPLE) WILL BE ADDRESSED IN ADVANCE OF OTHERS IN ORDER TO MEET THE SCHEDULE OF THE INTEGRATED STARTUP PLAN, AND OBJECTIVE OF RAPID REDUCTION OF SIGNIFICANT ITEMS.

OBJECTIVES

- A) REDUCTION IN BACKLOGS RESULTING IN IMPROVED OVERALL PERFORMANCE AND RELIABILITY.
- B) IMPROVED PROBLEM RESOLUTION.
- C) REDUCED STAFFING.

MGMT. SPONSOR: J. COWAN

RESP. ORGANIZATION: REG. COMPLIANCE

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992		1993		1994		1995		
			J	A	J	O	J	A	J	O	J
TY304 01A	DEFINE AND IDENTIFY THE CURRENT BACKLOG IN EACH OF THE CATEGORIES.	UNIT MANAGERS			1-JAN-93	■	31-JAN-93				
TY304 02A	ESTABLISH BACKLOG TARGETS CONSISTENT WITH THE CORPORATE INITIATIVES.	UNIT MANAGERS			1-FEB-93	■	28-FEB-93				
TY304 03A	DEFINE PRIORITIES FOR EACH BACKLOG CATEGORY.	UNIT MANAGERS			1-MAR-93	■	31-MAY-93				
TY304 04A	DEVELOP A WORK PLAN FOR REDUCING THE BACKLOG.	UNIT MANAGERS			1-MAR-93	■	15-JUN-93				
TY304 05A	SCHEDULE AND BEGIN IMPLEMENTATION OF THE BACKLOG WORK PLAN IN ACCORDANCE WITH THE THREE-YEAR PLAN.	UNIT MANAGERS			16-JUN-93	■	31-AUG-93				

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: CLEARANCES

NUMBER: TY305

PRIORITY: HIGH

FOCUS AREA: WORK PROCESSES

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP; EMPLOYEE
SATISFACTION

REFERENCE FOR NEED: NRC 92-09, 92-12; SAT M16, OP5

INITIATIVE DESCRIPTION

CLEARANCES SHALL ONLY BE USED FOR PERSONNEL AND EQUIPMENT SAFETY. IMPROPER IMPLEMENTATION OF THE CLEARANCE SYSTEM THREATENS PERSONNEL AND EQUIPMENT SAFETY. THE CURRENT CLEARANCE PROCESS IS COMPLEX AND BULKY, TEMPTING PERSONNEL TO NOT COMPLY WITH ALL REQUIREMENTS AND INTRODUCES INEFFICIENCIES IN THE WORK PROCESS. THIS INITIATIVE UPGRADES PERSONNEL TRAINING AND REVISES THE CLEARANCE PROCESS TO STREAMLINE THE HANGING AND REMOVING OF CLEARANCES.

OBJECTIVES

- A) IMPROVE PERSONNEL AND EQUIPMENT SAFETY THROUGH COMPLIANCE WITH RULES REGARDING CLEARANCES THROUGH SIMPLIFICATION OF THE PROCESS.
- B) GAIN EFFICIENCY BY STREAMLINING THE CLEARANCE PROCESS WITHOUT LOSING SAFETY ASSUREDNESS.
- C) LIMIT COMPONENT MANIPULATIONS TO OPERATIONS PERSONNEL.
- D) GAIN EFFICIENCY THROUGH THE USE OF MASTER/BLOCK CLEARANCES.








MGMT. SPONSOR: K. AHERN

RESP. ORGANIZATION: OPERATIONS

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	
TY305 01A	DEVELOP INTEGRATED PLAN (INCLUDING MILESTONES AND SITE POLICY).	K. AHERN	60 DAY(S) 
TY305 02A	REVISE CLEARANCE PROCESS AND DEVELOP CONFIGURATION CONTROL METHODOLOGY.	K. AHERN	120 DAY(S) 
TY305 03A	IMPLEMENT A METHOD TO REMOVE CLEARANCE REFERENCES FROM ALL MAINTENANCE PROCEDURES.	D. MOORE	29 DAY(S) 
TY305 04A	OPERATIONS TO ADDRESS STAFFING NEEDS FOR COMPONENT MANIPULATION (TO INCLUDE A STAFFING PLAN IF REQUIRED).	K. AHERN	60 DAY(S) 
TY305 05A	REVISE IST PROCEDURES FOR LLRT, ILRT, AND HYDRO.	R. HELME	211 DAY(S) 
TY305 06A	DEVELOP METHODOLOGY FOR MASTER/BLOCK CLEARANCE USEAGE AND BOUNDARY VALVES.	G. PEELER	120 DAY(S) 
TY305 07A	PROVIDE TRAINING ON CLEARANCE METHODOLOGY CHANGES.	M. JONES	93 DAY(S) 

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: HEALTH PHYSICS PROGRAM IMPROVEMENTS

NUMBER: TY306

PRIORITY: MEDIUM

FOCUS AREA: WORK PROCESSES

RELATED GOALS: UNIT CAPABILITY FACTOR; SALP; EMPLOYEE SATISFACTION

REFERENCE FOR NEED: SAT ERC-6; 10CFR20; EMERGENCY PLAN; PERMIT
REGULATIONS; NRC 92-12; INPO ALARA 2/92

INITIATIVE DESCRIPTION

REVIEW THE HEALTH PHYSICS PROGRAMS AND PROCESSES TO IDENTIFY ENHANCEMENTS IN CONTAMINATION CONTROL, AND PROVIDE APPROPRIATE INSTRUMENTATION, FACILITIES, AND STAFF. CONSOLIDATE RCAS TO A SINGLE RCA.

OBJECTIVES

- A) ENSURE COMPLIANCE WITH APPLICABLE REGULATIONS.
- B) OBTAIN PREMIER PERFORMANCE IN THE AREA OF CONTAMINATION CONTROL.
- C) REDUCE CONTAMINATED AREAS IN THE PLANT.
- D) CONSTRUCT A FENCED RCA FOR IMPROVED CONTROL OF RADIOACTIVE MATERIALS.

MGMT. SPONSOR: C. ROBERTSON

RESP. ORGANIZATION: E&RC

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992			1993			1994			1995			
			J	A	J	J	O	J	A	J	O	J	A	J	O
TY306 03A	CONSTRUCT FENCED RCA AREA (CONSOLIDATE SEVERAL RCAS INTO A SINGLE RCA). (REF: INIT. #206; PID #R0137A).	C. ROBERTSON													
TY306 04A	UPGRADE TOOL DECON FACILITY (REF: INIT #206; PID #R0127A).	C. ROBERTSON													
TY306 05A	REMOVE CONTAMINATED SOIL FROM INSIDE PROTECTED AREA (REF: INIT. #502).	C. ROBERTSON													

1-AUG-93 ██████████ 15-FEB-94

1-NOV-93 ████████ 28-FEB-94

1-JAN-93 ██████████ 31-OCT-93

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	
TY306 01A	UPGRADE HEALTH PHYSICS INSTRUMENTATION/EQUIPMENT	C. ROBERTSON	334 DAY(S) ██████████
TY306 01B	IDENTIFY SOURCE FOR EQUIPMENT AND SUBMIT PURCHASE ORDERS.	C. ROBERTSON	274 DAY(S) ██████████
TY306 01C	RECEIVE EQUIPMENT ON SITE.	C. ROBERTSON	245 DAY(S) ██████████
TY306 01D	CONVERT CURRENT PLANT DOSIMETRY TO ELECTRONIC DOSIMETRY.	S. BROWN	365 DAY(S) ██████████
TY306 02A	DEVELOP AND IMPLEMENT PROGRAM TO REDUCE CONT. AREAS. PURCHASE DECON EQUIPMENT.	C. ROBERTSON	1095 DAY(S) ██
TY306 02B	PUT IN PLACE NEW CONTRACT FOR DECON SUPPORT.	C. ROBERTSON	59 DAY(S) ██
TY306 02C	PURCHASE AND/OR LEASE EQUIPMENT FOR DECON SUPPORT.	C. ROBERTSON	212 DAY(S) ██████████

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: IMPLEMENT/AUGMENT BNP LOCAL AREA NETWORK (LAN)

NUMBER: TY307

PRIORITY: LOW

FOCUS AREA: WORK PROCESSES

RELATED GOALS: UNIT CAPABILITY FACTOR, EMPLOYEE SATISFACTION

REFERENCE FOR NEED: NRC 92-04; INPO 1/91; SALP; SAT RC7 & RC8

INITIATIVE DESCRIPTION

THE MAJORITY OF BNP PC WORKSTATIONS ARE CURRENTLY OPERATING IN A STAND ALONE MODE. AT THE SAME TIME THE NUMBER OF PCS ON-SITE ARE INCREASING TO THE POINT WHERE THE PRESENT RATIO IS ROUGHLY ONE PC FOR EVERY TWO EMPLOYEES. INDICATIONS ARE THAT THIS RATIO WILL DROP TO THE POINT WHERE THERE IS ONE PC FOR EVERY 1.4 EMPLOYEES. HAVING THESE PCS OPERATING AS STAND ALONE UNITS CAUSES PERSONNEL INEFFICIENCIES AND UNNECESSARY COSTS. THIS LAN PROJECT INCLUDES THE ACQUISITION/IMPLEMENTATION OF NETWORK SERVERS, GATEWAYS FOR MAINFRAME ACCESS, NETWORK SOFTWARE, OFFICE AUTOMATION SOFTWARE (LAN LICENSES FOR WORDPERFECT, LOTUS, FREELANCE, HARVARD GRAPHICS, ETC.), UPGRADES TO INDIVIDUAL PCS SO THAT THEY CAN ACCESS LAN, AND THE PROCEDURES AND DISCIPLINES NEEDED TO ENSURE RELIABLE OPERATION OF THE LAN'S CAPABILITIES. THIS INITIATIVE SHOULD BE MANAGED IN CONJUNCTION WITH: TY309, SITE WORK TRACKING SYSTEM (SWTS), AND TY209, INTEGRATED COMPUTER SUPPORT.

OBJECTIVES

- A) IMPROVE PERSONNEL PRODUCTIVITY THROUGH REDUCED EFFORT AND ENHANCED COMMUNICATION.
- B) REDUCE SOFTWARE LICENSING FEES ASSOCIATED WITH PURCHASING SOFTWARE FOR INDIVIDUAL PC'S.
- C) PROVIDE AN INFRASTRUCTURE TO FACILITATE ON-SITE INTERPERSONAL COMMUNICATION, INCREASED ACCESS TO OFFICE AUTOMATION TOOLS, AND PROVIDE MAINFRAME ACCESS.
- D) PROVIDE THE FOUNDATION FOR LAN BASED PRODUCTIVITY ENHANCING APPLICATIONS SUCH AS: ISYS-TEXT RETRIEVAL SYSTEM, SWTS-SITE WORK TRACKING SYSTEM, ERPIS TREND DATA, TASKMASTER-TRAINING ASSIST PKG., ANSI/IEE STDS, ETC., ON CD ROM.

NOTE: AS NEW STRUCTURES (TRAILERS AND PERMANENT BUILDINGS) ARE ADDED TO THE SITE, THIS INITIATIVE MAY NEED TO BE EXPANDED TO ADD LAN CAPABILITIES TO THESE STRUCTURES.














MGMT. SPONSOR: D. REID

RESP. ORGANIZATION: CSU

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	
TY307 01A	CONTINUE BNP LOCAL AREA NETWORK (LAN) IMPLEMENTATION INCLUDING; LEASE/MAINT. HARDWARE/SOFTWARE PROCUREMENT AND ISD SUPPORT (REF: PID #X0032A,32B).	D. REID	365 DAY(S) 
TY307 01B	CONTINUE BNP LOCAL AREA NETWORK (LAN) IMPLEMENTATION INCLUDING; LEASE/MAINT. HARDWARE/SOFTWARE PROCUREMENT AND ISD SUPPORT (REF: PID #X0032A,32B).	D. REID	365 DAY(S) 
TY307 01C	CONTINUE BNP LOCAL AREA NETWORK (LAN) IMPLEMENTATION INCLUDING; HARDWARE/SOFTWARE PROCUREMENT (REF: PID #X0032A,32B).	D. REID	365 DAY(S) 
TY307 01D	CONTINUE BNP LOCAL AREA NETWORK (LAN) IMPLEMENTATION INCLUDING; HARDWARE/SOFTWARE PROCUREMENT (REF: PID #X0032A,32B).	D. REID	731 DAY(S) 
TY307 03A	ASSESS CURRENT PLANT CSU STAFF CAPABILITIES & EXISTING ORGANIZATIONAL ASSIGNMENTS AGAINST NEW PROGRAM GOALS & OBJECTIVES.	D. REID	1826 DAY(S) 
TY307 04A	TEST AND IMPLEMENT TECHNOLOGY (MHSR & COST IN TASK #01A, B, C, D & #03A),(REF: PID #X0032A,32B).	D. REID	1918 DAY 
TY307 04B	INSTALL AND TEST TAC BUILDING LAN MIGRATION.	D. REID	182 DAY(S) 
TY307 04C	INSTALL AND TEST LAN IN STORES BUILDING.	D. REID	90 DAY(S) 
TY307 04D	INSTALL AND TEST LAN IN DOCUMENT CONTROL BUILDING.	D. REID	90 DAY(S) 
TY307 04E	INSTALL AND TEST LAN IN EOF/TRAINING BUILDING.	D. REID	59 DAY(S) 
TY307 04F	INSTALL AND TEST LAN SERVERS 10, 11, & 12.	D. REID	122 DAY(S) 
TY307 04G	INSTALL AND TEST LAN IN SERVICE BUILDING.	D. REID	122 DAY(S) 
TY307 04H	INSTALL AND TEST LAN IN CLEAN SIDE MAINTENANCE BUILDING.	D. REID	122 DAY(S) 

BNP THREE-YEAR PLAN

INT.# TASK	DESCRIPTION	ACTION SPONSOR
TY307 04I	INSTALL AND TEST LAN IN ADMIN ANNEX (AFTER RENOVATION).	D. REID
TY307 04J	INSTALL AND TEST LAN IN ADMIN BUILDING.	D. REID
TY307 04K	INSTALL AND TEST LAN IN CONTROL BUILDING.	D. REID
TY307 04L	INSTALL AND TEST LAN IN NORTH END OF SITE FACILITIES.	D. REID

92 DAY(S)

92 DAY(S)

90 DAY(S)

122 DAY(S)

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: DEVELOP CENTRALIZED DOCUMENT CONTROL PROGRAM

NUMBER: TY308

PRIORITY: MEDIUM

FOCUS AREA: WORK PROCESSES

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP; EMPLOYEE
SATISFACTION

REFERENCE FOR NEED: NRC 91-12, 92-06,10; NRC WATCH LIST #3; INPO TRIP
2/10-14/92; INPO OUTAGE 9/16-27/91; SALP 91-37
#4,7; NAD 91-668, 92-01,249,251,522,691,692,694,
OA.3,OA.4, ISSUES 1,3,5; IAP D4,9,31; SAT A7,9

INITIATIVE DESCRIPTION

DEVELOP A COMPREHENSIVE SITE-WIDE DOCUMENT CONTROL PROGRAM TO SATISFY
ALL REGULATORY REQUIREMENTS AND SUPPORT IMPROVED WORK PROCESSES
IDENTIFIED IN THE BNP 3-YEAR PLAN. KEY ELEMENTS OF THIS INITIATIVE
ARE:

- A) ANALYZE EXISTING DOCUMENT CONTROL PROCESSES FOR COMPLIANCE WITH
REGULATORY REQUIREMENTS, CP&L COMMITMENTS, AND ACTUAL PLANT NEEDS.
- B) IDENTIFY AREAS WHERE IMPROVEMENTS OR ADDITIONS TO THE DOCUMENT
CONTROL PROCESSES ARE REQUIRED.
- C) DEVELOP PROGRAMMATIC AND IMPLEMENTING PROCEDURES TO DEFINE THE
NEW SITEWIDE DOCUMENT CONTROL PROGRAM.

OBJECTIVES

- A) SATISFY REGULATORY REQUIREMENTS (10CFR50, APPENDIX B, CRITERION
6; ANSI-N18.7-1976) AND CP&L WORK MANAGEMENT POLICIES AND
STANDARDS.
- B) IMPROVE PLANT EFFICIENCY BY SIMPLIFYING THE PROCESS FOR OBTAINING
WORKING COPIES OF DOCUMENTS REQUIRED TO SUPPORT WORK PROCESSES AND
ACTIVITIES THROUGHOUT THE PLANT.
- C) ENHANCE VENDOR MANUAL CONTROL AND DRAWING CONTROL PROGRAMS.
- D) IMPROVE OVERALL DOCUMENT DISTRIBUTION AND CONTROL PROGRAM.
- E) ESTABLISH CONTROL OF HISTORICAL DESIGN DRAWING REVISIONS.
- F) SUPPLEMENT THE NEW PROCEDURE CONTROL PROCESS TO ENHANCE
DISTRIBUTION CONTROL FOR PARTIAL REVISIONS AND TEMPORARY REVISIONS
TO PROCEDURES.
- G) IMPROVE ACCOUNTABILITY FOR CONTROLLED COPY SETS OF DOCUMENTS
THROUGH AN INTERNAL AUDIT PROGRAM.
- H) COMPLETE TRANSFER OF BNP DRAWING ORIGINALS TO NED.
- I) ENSURE THAT PLANT PERSONNEL HAVE THE CORRECT REVISION OF THE
REQUIRED DOCUMENTS NECESSARY TO SUPPORT WORK ACTIVITIES THROUGHOUT
THE PLANT.









MGMT. SPONSOR: C. LEWIS

RESP. ORGANIZATION: PROJECT SERV

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	
TY308 01A	ANALYZE EXISTING PROGRAM, IDENTIFY CHANGES NEEDED IN WORK PROCESSES, PROCEDURES, FIELD ACTIVITIES, TRAINING AND COMMUNICATION.	C. LEWIS	120 DAY(S) 
TY308 01B	REVIEW ON AN ONGOING BASIS THE NEED TO REVISE THE PROGRAM IN TASK 01A ABOVE IN THE FOLLOWING MAJOR AREAS: 1) DRAWING CONTROL 2) PROCEDURE CONTROL 3) VENDOR MANUAL CONTROL 4) MOD PACKAGE CONTROL.	C. LEWIS	1005 DAY(S) 
TY308 02A	DEVELOP SITE PROGRAM PROCEDURE FOR COMPLIANCE WITH 10CFR50 APPENDIX B, CRITERION 6.	C. LEWIS	92 DAY(S) 
TY308 03A	DEVELOP IMPLEMENTING PROCEDURES FOR DOCUMENT CONTROL PROGRAM.	C. LEWIS	92 DAY(S) 
TY308 04A	DEVELOP TRAINING PROGRAM FOR DOCUMENT CONTROL PERSONNEL AND SITE PERSONNEL ON ENHANCED DOCUMENT CONTROL PROGRAM.	C. LEWIS	92 DAY(S) 
TY308 05A	TRAIN DOCUMENT CONTROL PERSONNEL ON ENHANCED DOCUMENT CONTROL PROGRAM.	C. LEWIS	92 DAY(S) 
TY308 06A	TRAIN SITE PERSONNEL ON ENHANCED DOCUMENT CONTROL PROGRAM.	C. LEWIS	396 DAY(S) 
TY308 07A	IMPLEMENT ENHANCED DOCUMENT CONTROL PROGRAM IF DETERMINED TO BE COST EFFECTIVE AS PART OF 1994 BUDGETING.	C. LEWIS	1645 DAY(S) 

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: SITE WORK TRACKING SYSTEM (SWTS)

NUMBER: TY309

PRIORITY: LOW

FOCUS AREA: WORK PROCESSES

RELATED GOALS: UNIT CAPABILITY FACTOR; SALP; EMPLOYEE SATISFACTION;
FORECAST/SCHEDULE ACHIEVEMENT

REFERENCE FOR NEED: NRC 92-04, 92-12; INPO 1/91; OUTAGE 9/91; TRIP
2/92; NAD 11/91; SAT OM4; RCT, RCB

INITIATIVE DESCRIPTION

PROVIDE AN INTEGRATED SITE WORK TRACKING SYSTEM THAT CAN BE USED CONCURRENTLY BY ALL SITE WORK GROUPS. THE SYSTEM WILL USE A VERSION OF THE SITE-WIDE TRACKING SYSTEM SOFTWARE CURRENTLY OPERATING ON THE ROBINSON LAN. ITEMS TO BE TRACKED ARE TYPICALLY EXTERNALLY GENERATED, DUE DATE DRIVEN, AND REQUIRE FORMAL ANALYSIS WITH RESPONSE TO THE ORIGINATOR, SUCH AS, REGULATORY COMMITMENTS, ADVERSE CONDITION REPORTS, AND CAP ITEMS.

MANAGE IN CONJUNCTION WITH TY303, IMPROVE ABILITY TO IDENTIFY AND CORRECT PROBLEMS AND TY307, LAN EXPANSION.

OBJECTIVES

- A) PROVIDE AN EASILY ACCESSED CONSOLIDATED LIST OF PROJECTS AND INITIATIVES SO THAT SITE MANAGEMENT IS AWARE OF COMMITMENTS AND STATUS.
- B) SUPPORT BETTER COMMUNICATION AND PROJECT MANAGEMENT BETWEEN INTERDEPENDENT WORK GROUPS SO THAT THERE ARE EFFICIENCIES IN WORK SCHEDULING.
- C) REDUCE THE NUMBER OF REGULATORY COMMITMENTS THAT ARE MISSED.
- D) REDUCE THE NUMBER OF WORK TRACKING SYSTEMS ON-SITE AND ENHANCE ACCOUNTABILITY.
- E) REDUCE NUMBER AND SIGNIFICANCE OF PLANT EVENTS THROUGH IMPROVED TRACKING AND COMMITMENT MANAGEMENT.

MGMT. SPONSOR: D. REID

RESP. ORGANIZATION: CSU

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR				
TY309 01A	PROJECT ORGANIZATION/INITIATION. CONFIRM SCOPE, REQUIREMENTS, PLAN.	D. REID	30 DAY(S)	■		
TY309 02A	FINALIZE SOFTWARE. REVISE, TEST PROGRAMS AND REPORTS.	D. REID	61 DAY(S)	■		
TY309 03A	DEVELOP SITEWIDE COMMITMENT MANAGEMENT PROCEDURE.	S. FLOYD	122 DAY(S)	■		
TY309 04A	CLIENT TRAINING. TRAIN THE TRAINER.	D. REID	31 DAY(S)	■		
TY309 05A	MANAGEMENT REVIEW COMMIT MGMT PROCEDURE.	S. FLOYD	31 DAY(S)	■		
TY309 06A	IMPLEMENT COMMIT MGMT PROCEDURE.	S. FLOYD	30 DAY(S)	■		
TY309 07A	DATA CONVERSION/ IMPLEMENTATION - WRITE/TEST CONVERSION PROGRAMS.	D. REID	215 DAY(S)	■		

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: ASSESS IMPLEMENTATION OF SAT ITEMS

NUMBER: TY310

PRIORITY: MEDIUM

FOCUS AREA: WORK PROCESSES

RELATED GOALS: MILS/KWH; SALP

REFERENCE FOR NEED: NRC 92-12

INITIATIVE DESCRIPTION

THE STAFF ASSISTANCE TEAM (SAT) HAS PARTICIPATED ON-SITE IDENTIFYING PROCESS IMPROVEMENTS TO FACILITATE ENHANCED PERFORMANCE AT BRUNSWICK. MANY OF THESE ITEMS HAVE BEEN COMPLETED WHILE THE SAT HAS COMPLETED ITS WORK, MANY OTHERS ARE IN PROGRESS. THIS INITIATIVE IDENTIFIES THOSE ITEMS THAT HAVE BEEN COMPLETED AND ESTABLISHES A METHOD FOR EVALUATION AND ASSESSMENT OF THE EFFECTIVENESS OF THESE ITEMS. IN ADDITION, IT ESTABLISHES A PROCESS FOR EVALUATION AND IF DEEMED APPROPRIATE, IMPLEMENTATION OF THE REMAINING PROJECTS. SEVERAL OF THE LATTER ARE ALSO INCLUDED, IN WHOLE OR PART, IN OTHER ALREADY IDENTIFIED INITIATIVES WITHIN THE THREE-YEAR PLAN.

OBJECTIVES

- A) FOLLOW-UP ON CLOSURE AND EFFECTIVENESS OF SAT ITEMS TO ENSURE IDENTIFIED PROCESS IMPROVEMENTS ARE IMPLEMENTED.
- B) INCREASE EMPLOYEE SATISFACTION BY REDUCING FRUSTRATION AND IMPROVE SITE PROCESSES.

MGMT. SPONSOR: J. COWAN

RESP. ORGANIZATION: REG. COMPLIANCE

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR				
TY310 01A	COMPLETED SAT PROJECTS.	J. COWAN	245 DAY(S)	█		
TY310 01B	VERIFY THAT IMPLEMENTED SAT PROJECTS ARE EFFECTIVE. (FIELD OBSERVATION/SURVEY)	J. COWAN	123 DAY(S)	█		
TY310 01C	ESTABLISH ON-GOING SELF-ASSESSMENT INDICATORS TO MONITOR CONTINUED EFFECTIVENESS OF IMPLEMENTED SAT PROJECTS.	J. COWAN	122 DAY(S)	█		
TY310 01D	INCORPORATE IN UNIT SELF-ASSESSMENT PROGRAMS.	J. COWAN	91 DAY(S)	█		
TY310 01E	REVISE PROCESS IF SELF-ASSESSMENT REVEALS NEED.	J. COWAN	92 DAY(S)	█		
TY310 02A	SAT PROJECTS CONTINUED WITHIN THREE-YEAR PLAN.	J. COWAN	396 DAY(S)	██████████		
TY310 02B	COMPARE EXISTING PROCESS TO DESIRED STATE.	J. COWAN	122 DAY(S)	█		
TY310 02C	REVISE PROCESS FOR SITE WIDE USE TO ELIMINATE ROOT CAUSE FOR INEFFICIENCY.	J. COWAN	122 DAY(S)	█		
TY310 02D	REVISE SITE PROCEDURES TO REFLECT PROCESS IMPROVEMENTS.	J. COWAN	122 DAY(S)	█		
TY310 02E	CONDUCT TRAINING FOR AFFECTED UNITS.	J. COWAN	121 DAY(S)	█		
TY310 02F	ESTABLISH INDICATORS TO MEASURE EFFECTIVENESS.	J. COWAN	90 DAY(S)	█		
TY310 02G	MONITOR PROCESS IMPROVEMENTS FOR EFFECTIVENESS. (SURVEY/OBSERVATION).	J. COWAN	153 DAY(S)	█		
TY310 02H	EVALUATE EFFECTIVENESS OF SAT ITEMS.	J. COWAN	730 DAY(S)	██████████████████		

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: SITE COMMUNICATION PLAN

NUMBER: TY401

PRIORITY: HIGH

FOCUS AREA: COMMUNICATION

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP; EMPLOYEE
SATISFACTION

REFERENCE FOR NEED: NRC REPORT 92-09, 92-12; NAD REPORT 11/91; INPO
REPORT 1/91

INITIATIVE DESCRIPTION

THE INITIATIVE IS FOUNDED ON THE PREMISE THAT SUCCESSFUL COMMUNICATIONS REFLECT AN ONGOING DIALOGUE AMONG MANAGERS AND EMPLOYEES. THIS RECOGNIZES THAT THE PRIMARY RESPONSIBILITY FOR COMMUNICATIONS RESTS WITH MANAGERS, SINCE THEY SET THE TONE FOR THEIR ORGANIZATIONS AND SERVE AS MODELS FOR THEIR EMPLOYEES. SUCCESS DEPENDS ON THE MANAGER'S ABILITY TO SHARE INFORMATION FREELY AND IN A TIMELY MANNER WITH EMPLOYEES; TO DEMONSTRATE GOOD LISTENING SKILLS; AND TO RESPECT EMPLOYEE INPUT AND FEEDBACK. WHILE VEHICLES SUCH AS PUBLICATIONS, VIDEO NEWS SYS. OR ELECTRONIC MEDIA EXIST TO INFORM EMPLOYEES, THEIR GREATER VALUE IS TO STIMULATE DIALOGUE AMONG EMPLOYEES AND MANAGERS. NO VIDEO OR PUBLICATION CAN SUBSTITUTE FOR FACE-TO-FACE DISCUSSION. ESTABLISHMENT OF AN EXPECTATION FOR EFFECTIVE AND OPEN COMMUNICATION WITHIN THE EPM PROCESS WILL IMPROVE INTRA-UNIT COMMUNICATION AND FOSTER TEAMWORK.

OBJECTIVES

- A) IMPROVE MANAGERS RECOGNITION OF THE IMPORTANCE OF DAY-TO-DAY COMMUNICATIONS WITH EMPLOYEES AND FELLOW BRUNSWICK MANAGERS AND PROVIDE THEM WITH TRAINING AND COACHING IN COMMUNICATIONS SKILLS.
- B) SUPPORT MANAGERS COMMUNICATIONS EFFORTS THROUGH CLEAR PROCEDURES FOR DISSEMINATING IMPORTANT NEWS IN A TIMELY MANNER, AND ENHANCED COMMUNICATION VEHICLES DESIGNED TO PROVIDE EMPLOYEES WITH READY ACCESS TO CURRENT NEWS.
- C) IMPROVE TEAMWORK BETWEEN ORGANIZATIONS BY SUCCESSFUL IMPLEMENTATION OF DESIRED COMMUNICATION SKILLS, AS PROMOTED IN THE FUNDAMENTALS OF "MANAGING RELATIONSHIPS AT WORK" (MRW).
- D) PROVIDE A MEANS OF MEASURING PROGRESS TOWARD IMPROVED COMMUNICATIONS AT THE BRUNSWICK PLANT.

MGMT. SPONSOR: K. HAMPTON

RESP. ORGANIZATION: COMMUNICATIONS

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992		1993		1994		1995	
			J	A	J	J	J	J	J	J
TY401 01A	INCLUDE EFFECTIVE COMMUNICATIONS IN THE EXPECTATIONS OF BNP SITE MANAGEMENT DOWN TO AND INCLUDING UNIT MANAGER LEVEL (REF: INIT. #201).	R. ANDERSON	1	-	JAN-93	■	30	-	JUN-93	
TY401 01B	INCLUDE EFFECTIVE COMMUNICATIONS IN THE EXPECTATIONS OF ALL PERSONNEL AS EFFECTIVE PERFORMANCE MANAGEMENT (EPM) IS FULLY IMPLEMENTED IN ACCORDANCE WITH INITIATIVE #201.	M. DONILON	1	-	JAN-93	■	30	-	SEP-93	
TY401 02A	AUGMENT SCHEDULED SAFETY MEETINGS TO INCLUDE A MANAGEMENT INFORMATION PERIOD, WHERE SITE SENIOR MANAGEMENT REGULARLY PROVIDES CURRENT INFORMATION TO ALL EMPLOYEES.	R. ANDERSON	15	-	FEB-93	■				31-DEC-97
TY401 02B	EXPLAIN EXPECTATIONS RELATIVE TO THE BNP SITE COMMUNICATION PLAN.	R. ANDERSON	1	-	FEB-93	■	28	-	FEB-93	
TY401 02C	REINFORCE EXPECTATIONS RELATIVE TO THE BNP SITE COMMUNICATION PLAN.	R. ANDERSON					1	-	FEB-94	■ 28-FEB-94
TY401 02D	REINFORCE EXPECTATIONS RELATIVE TO THE BNP SITE COMMUNICATION PLAN.	R. ANDERSON							1-FEB-95	■ 28-FEB-95
TY401 03A	HOLD MONTHLY MEETINGS WITH BRUNSWICK PLANT EMPLOYEES, CALLED 4CS MEETINGS, IN WHICH EMPLOYEES DISCUSS ISSUES, ASK QUESTIONS, AND EXCHANGE IDEAS WITH BRUNSWICK MANAGERS AND SUPERVISORS AND CP&L NUCLEAR SENIOR MANAGEMENT.	R. ANDERSON	1	-	JAN-93	■				31-DEC-97
TY401 04A	HOLD MONTHLY MEETINGS OF BRUNSWICK MANAGERS AND SUPERVISORS TO PROVIDE BRIEFINGS ON PLANT STATUS AND PLANT ISSUES, MATTERS IMPORTANT TO THE COMPANY, AND TRAINING AS NEEDED TO ENHANCE THE EFFECTIVENESS OF MANAGERS AND SUPERVISORS.	R. ANDERSON	1	-	JAN-93	■				31-DEC-97
TY401 05A	PROVIDE EFFECTIVE COMMUNICATIONS TRAINING/RETRAINING FOR MANAGERS/EMPLOYEES THAT EMPHASIZES LISTENING SKILLS, CONFLICT RESOLUTION, AND GIVING/RECEIVING FEEDBACK AS OUTLINED IN THE MANAGING RELATIONSHIPS AT WORK (MRW) TRAINING COURSE (REF: INIT. #2	R. ANDERSON	1	-	JAN-93	■				31-DEC-97
TY401 06A	PLACE CORPORATE COMMUNICATIONS EMPLOYEE AT BNP TO SUPPORT MANAGERS COMMUNICATIONS EFFORTS AND TO COORDINATE EMPLOYEE COMMUNICATIONS.	K. HAMPTON			1-APR-93	■				31-DEC-97
TY401 07A	ESTABLISH BNP SITE COMMUNICATIONS PLAN.	K. HAMPTON	23	-	NOV-92	■	15	-	JAN-93	

BNP THREE-YEAR PLAN

INT. # TASK	DESCRIPTION	ACTION SPONSOR	1992 1993 1994 1995											
			J	A	J	J	J	J	J	J	J	J	J	J
TY401 08A	IMPLEMENT VOICEMAIL FOR BNP EMPLOYEES.	D. REID								■	■	■	■	
TY401 08B	TRAIN EMPLOYEES ON THE EFFECTIVE USE OF VOICEMAIL AS A COMMUNICATION TOOL (2000 PEOPLE FOR 1-1/2 HOUR CLASS).	D. REID								■	■	■	■	
TY401 08C	MAINTAIN THE VOICEMAIL SOFTWARE AND MAINTENANCE AGREEMENT ON THE HARDWARE.	D. REID								■	■	■	■	
TY401 09A	ESTABLISH ELECTRONIC BULLETIN BOARD AT BNP ON LAN/PROFS.	D. REID							■	■	■	■	■	
TY401 10A	EVALUATE COMMUNICATIONS IMPROVEMENT ACTIVITIES AT PEER UTILITIES.	K. HAMPTON								■	■	■	■	
TY401 11A	CONDUCT ANNUAL EMPLOYEE COMMUNICATIONS SURVEY AT BNP TO DETERMINE EFFECTIVENESS OF COMMUNICATIONS EFFORTS.	K. HAMPTON												
TY401 11B	BNP LINE MANAGEMENT REVIEW RESULTS OF 1993 ANNUAL EFFECTIVENESS EVALUATION FOR THIS INITIATIVE AND IMPLEMENT MEASURES TO IMPROVE THIS INITIATIVE.	K. HAMPTON												
TY401 11C	BNP LINE MANAGEMENT REVIEW RESULTS OF 1993 EMPLOYEE COMMUNICATIONS SURVEY AT BNP AND IMPLEMENT MEASURES TO IMPROVE EMPLOYEE COMMUNICATIONS.	K. HAMPTON												
TY401 11D	BNP LINE MANAGEMENT REVIEW RESULTS OF 1994 ANNUAL EFFECTIVENESS EVALUATION FOR THIS INITIATIVE AND IMPLEMENT MEASURES TO IMPROVE THIS INITIATIVE.	K. HAMPTON												
TY401 11E	BNP LINE MANAGEMENT REVIEW RESULTS OF 1994 EMPLOYEE COMMUNICATIONS SURVEY AT BNP AND IMPLEMENT MEASURES TO IMPROVE EMPLOYEE COMMUNICATIONS.	K. HAMPTON												
TY401 11F	BNP LINE MANAGEMENT REVIEW RESULTS OF 1995 ANNUAL EFFECTIVENESS EVALUATION FOR THIS INITIATIVE AND IMPLEMENT MEASURES TO IMPROVE THIS INITIATIVE.	K. HAMPTON												
TY401 11G	BNP LINE MANAGEMENT REVIEW RESULTS OF 1995 EMPLOYEE COMMUNICATIONS SURVEY AT BNP AND IMPLEMENT MEASURES TO IMPROVE EMPLOYEE COMMUNICATIONS.	K. HAMPTON												

BNP THREE-YEAR PLAN

INT. # TASK	DESCRIPTION	ACTION SPONSOR	1992			1993			1994			1995		
			J	A	J	J	A	J	J	A	J	J	A	J
TY401 12A	ESTABLISH INFORMATION CENTERS AROUND THE PLANT SITE TO ALLOW EMPLOYEES ACCESS TO REPORTS, COMPANY PUBLICATIONS AND TECHNICAL DOCUMENTS.	K. HAMPTON				■			■					
TY401 12B	EVALUATE QUARTERLY THE INFORMATION CENTERS FOR EFFECTIVENESS.	K. HAMPTON					■			■				
TY401 13A	REVIEW LOCATION OF BNP VIDEO SCREENS AND REPOSITION SCREENS AS NECESSARY.	K. HAMPTON						■			■			

1-JAN-93 ■ 31-MAR-93
 1-APR-93 ■ 31-DEC-97
 1-JAN-93 ■ 31-MAR-93

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: PREVENTIVE/PREDICTIVE MAINTENANCE PROGRAM IMPROVEMENTS
NUMBER: TY501 PRIORITY: HIGH
FOCUS AREA: SYSTEM RELIABILITY & MATERIAL CONDITION
RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP
REFERENCE FOR NEED: NAD REPORT B-SA-92-05 AND NRC NOTICE OF VIOLATION
92-21 (50-324/92-21 AND 50-325/92-21), 10CFR50.65
(MAINTENANCE RULE), SAT M12.

INITIATIVE DESCRIPTION

ENHANCE THE PREVENTIVE MAINTENANCE PROGRAM BY RECONSTRUCTING THE PM BASIS FOR TASKS AND FREQUENCIES, EVALUATING THE PM BASIS FOR APPLICABILITY AND EFFECTIVENESS, AND PERFORMING ENGINEERING ASSESSMENTS ON PM EXCEPTION AND REVISION REQUESTS. CREATE A STRUCTURE TO SUPPORT THE CORPORATE INITIATIVE FOR THE MAINTENANCE RULE (10CFR50.65). AS A FURTHER INITIATIVE, DEVELOP A PREDICTIVE MAINTENANCE PROGRAM TO EVALUATE EQUIPMENT AND COMPONENT CONDITIONS THROUGH THE USE OF VIBRATION, LUBE OIL ANALYSIS, AND INFRARED THERMOGRAPHY.

OBJECTIVES

- A) INCREASE THE ACCURACY OF THE PRESENT PM PROGRAM.
- B) OPTIMIZE OVERALL PREVENTIVE MAINTENANCE.
- C) INCREASE THE RELIABILITY OF PLANT EQUIPMENT.
- D) IMPROVE THE OVERALL MATERIAL CONDITION OF THE PLANT AND REDUCE THE COST OF MAINTENANCE.
- E) INCREASE THE RELIABILITY OF SAFETY SYSTEMS AND SYSTEMS IMPORTANT TO SAFETY AND PLANT RELIABILITY.
- F) PROVIDE AN OVERALL REDUCTION IN PREVENTIVE MAINTENANCE TASKS.
- G) REDUCE CORRECTIVE MAINTENANCE AND PLANT TRANSIENTS.
- H) PRIORITIZE CORRECTIVE MAINTENANCE ACTIVITIES FOR PLANNED MAINTENANCE VS. EMERGENT MAINTENANCE.
- I) PROVIDE FOR CONSISTENT & RELIABLE TREND DATA WHICH CAN BE USED TO HELP MEET THE REQUIREMENTS OF THE MAINTENANCE RULE ALONG WITH THE IMPROVEMENTS IN THE PREVENTIVE MAINTENANCE PROGRAM.

MGMT. SPONSOR: R. HELME RESP. ORGANIZATION: TECH SUPPORT

REVISION NO: 00 AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

		1992	1993	1994	1995
		J A S O	J A S O	J A S O	J A S O
	
INT.# TASK	DESCRIPTION	ACTION SPONSOR			
TY501 01A	RECONSTRUCT PM BASIS FOR TASKS AND FREQUENCIES.	1-JAN-93	31-DEC-93		
TY501 01B	DUAL UNIT OUTAGE PM BASES COMPLETE.	31-JAN-93	31-JAN-93		
TY501 01C	REFUEL OUTAGE PM BASES COMPLETE.	30-APR-93	30-APR-93		
TY501 01D	PRIORITY SYSTEM PM BASES COMPLETE.	31-JUL-93	31-JUL-93		
TY501 01E	REMAINING NEEDED PM BASES COMPLETE.		31-DEC-93	31-DEC-93	
TY501 02A	CONTRACT TO ASSESS ONGOING PM EXCEPTIONS AND REVISIONS.	1-JAN-93	30-SEP-93		
TY501 02B	ASSESS ONGOING PM EXCEPTIONS AND REVISIONS.		1-OCT-93		31-DEC-97
TY501 03A	PRIORITIZE SYSTEMS FOR PREVENTIVE MAINTENANCE EVALUATIONS.	1-JUN-93	31-DEC-93		
TY501 04A	OPTIMIZE PM TASKS & FREQUENCIES, CONSOLIDATE TASKS.	1-JUN-93			30-JUN-95
TY501 04B	COMPLETE PM OPTIMIZATION OF 6 SYSTEMS.		31-DEC-93	31-DEC-93	
TY501 04C	COMPLETE PM OPTIMIZATION OF 6 MORE SYSTEMS (12 TO DATE).		30-JUN-94	30-JUN-94	
TY501 04D	COMPLETE PM OPTIMIZATION OF 6 MORE SYSTEMS (18 TO DATE).			31-DEC-94	31-DEC-94
TY501 04E	COMPLETE PM OPTIMIZATION OF ADDITIONAL SYSTEMS AS NEEDED.			30-JUN-95	30-JUN-95
TY501 05A	INCORPORATE OPTIMIZED PM TASKS INTO EXISTING PM PROGRAM (E.G. PROCEDURES).				31-AUG-95
TY501 05B	INCORPORATE OPTIMIZED PM TASKS INTO EXISTING PROGRAM FOR 6 SYSTEMS.		31-JAN-94	31-JAN-94	
TY501 05C	INCORPORATE OPTIMIZED PM TASKS INTO EXISTING PROGRAM FOR 6 SYSTEMS (12 TO DATE).		31-JUL-94	31-JUL-94	

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: CORROSION CONTROL

NUMBER: TY502

PRIORITY: HIGH

FOCUS AREA: SYSTEM RELIABILITY & MATERIAL CONDITION

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP

REFERENCE FOR NEED: NRC 92-09, 92-12; NAD 5/92

INITIATIVE DESCRIPTION

DEVELOP A COMPREHENSIVE PROGRAM TO ADDRESS ROOT CAUSES OF EXISTING CORROSION, IMPLEMENT PREVENTIVE MAINTENANCE MEASURES, PROVIDE REPAIRS FOR EXISTING CORRODED EQUIPMENT AND STRUCTURES, AND UPGRADE MATERIALS AND COATINGS WHERE APPROPRIATE.

OBJECTIVES

PROVIDE PREVENTIVE MEASURES TO CONTROL THE EFFECTS OF CORROSION AT THE COSMETIC STAGE AND WELL BEFORE STRUCTURAL INTEGRITY IS CHALLENGED. PROVIDE CORRECTIVE MEASURES TO RESTORE EXISTING EQUIPMENT AND STRUCTURES AFFECTED BY CORROSION.

MGMT. SPONSOR: E. BISHOP

RESP. ORGANIZATION: NED

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992			1993			1994			1995						
			J	A	J	O	J	A	J	O	J	A	J	O	J	A	J	O
TY502 01A	DEVELOP EXTERNAL CORROSION PREV MAINT PROGRAM.	J. LEININGER	1	-	JAN	-	31	-	DEC	-	93							
TY502 01B	PERFORM EXTERNAL CORROSION PREVENTIVE MAINTENANCE PROGRAM INSPECTIONS.	J. KELLY			1	-	JUL	-										31-DEC-95
TY502 02A	COMPLETE ENGINEERING STUDY TO DETERMINE EXTENT OF REPAIRS NEEDED TO CATHODIC PROTECTION SYSTEM AND PROVIDE ENGINEERING SUPPORT FOR FIXES; THIS INCLUDES CATHODIC PROTECTION SYS MATERIALS IN ENGR COST (REF: PID #01536A).	J. LEININGER			1	-	APR	-	30	-	APR	-	94					
TY502 02B	INSTALL CATHODIC PROTECTION SYSTEM FIXES (REF: PID #01536A).	R. JOHNSON											12	-	JUN	-	95	
TY502 02C	PROVIDE COORDINATORS AND SUPPORT CRAFT FOR INSTALLATION OF CATHODIC PROTECTION SYSTEM FIXES (REF: PID #01536A).	J. KELLY											12	-	JUN	-	95	
TY502 03A	CORROSION BETTERMENT PROGRAM, DESIGN AND FIELD-FOLLOW FIXES DETERMINED NECESSARY IN 1992 WALKDOWNS (CW & SW AREAS), (REF: PID #P0057B).	J. LEININGER	1	-	JAN	-	30	-	JUN	-	93							
TY502 03B	INSTALL CORROSION BETTERMENT FIXES DESIGNED IN 1992 AND IN TASK 03A (CW & SW AREAS), (REF: PID #P0057B).	J. KELLY	1	-	JAN	-	31	-	DEC	-	93							
TY502 03C	CORROSION BETTERMENT PROGRAM DESIGN AND FIELD - FOLLOW CORROSION BETTERMENT FIXES FOR PREVIOUSLY IDENTIFIED CW AND SW AREAS AND OTHER AREAS IDENTIFIED IN TASK 07A (REF: PID #P0057B).	J. LEININGER			1	-	JUL	-	31	-	DEC	-	94					
TY502 03D	INSTALL CORROSION BETTERMENT FIXES DESIGNED IN TASK 03C AND PRIOR (REF: PID #P0057B).	J. KELLY					1	-	JAN	-	94							31-DEC-94
TY502 03E	CORROSION BETTERMENT PROGRAM/COMPLETE DESIGN & FIELD - FOLLOW PREVIOUSLY DESIGNED FIXES; CLOSE-OUT MODS, EVALUATIONS, AND CALCULATIONS (REF: PID #P0057B).	J. LEININGER											1	-	JAN	-	95	
TY502 03F	INSTALL CORROSION BETTERMENT FIXES DESIGNED IN TASK 03E AND PRIOR; COMPLETE MOD CLOSE-OUT (REF: PID #P0057B).	J. KELLY											1	-	JAN	-	95	
TY502 04A	MINIMIZE LINK SEAL LEAKAGE BY UPGRADING EXISTING SEALS.	D. MOORE			1	-	JUL	-	30	-	JUN	-	94					

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992		1993		1994		1995	
			J	A	J	A	J	A	J	A
TY502 04B	COMPLETE ENGINEERING FOR LINK SEAL UPGRADE AND PROVIDE ENGINEERING SUPPORT.	J. LEININGER	1	-	JAN-93	████████████████████	30	-	JUN-94	
TY502 04C	PROVIDE COORDINATORS AND SUPPORT CRAFT FOR LINK SEAL UPGRADES.	J. KELLY	1	-	JAN-93	████████████████████	30	-	JUN-94	
TY502 05A	COMPLETE ENGINEERING STUDY TO DETERMINE BEST WAY TO MINIMIZE RATTLESPACE IN-LEAKAGE. DEVELOP MOD OR EVALUATION, AND PROVIDE FIELD SUPPORT.	J. LEININGER			1	-	JUL-93	████████████████████	30	JUN-95
TY502 05B	PROVIDE COORDINATORS AND CRAFT TO INSTALL RATTLESPACE IN-LEAKAGE FIXES.	J. KELLY			1	-	JUL-93	████████████████████	30	JUN-95
TY502 06A	REMOVE SEDIMENT FROM STORM DRAINS AND SETTLING BASIN. (INCLUDES DIRECT CRAFT, EQUIPMENT & CONTRACTS)	R. JOHNSON			1	-	MAY-93	████████	30	OCT-93
TY502 06B	PROVIDE ENGINEERING SUPPORT FOR TASK 06A	J. LEININGER	1	-	JAN-93	████████████████████	30	-	OCT-93	
TY502 06C	PROVIDE E&RC SUPPORT FOR REMOVAL OF CONTAMINATED SOIL FROM INSIDE PROTECTED AREA	C. ROBERTSON			1	-	MAY-93	████████	30	OCT-93
TY502 06D	PROVIDE COORDINATORS AND SUPPORT CRAFT FOR TASK 06A.	J. KELLY	1	-	JAN-93	████████████████████	30	-	OCT-93	
TY502 07A	COMPLETE INSPECTIONS OF CORROSION AREAS OUTSIDE OF CW AND SW INTAKE AREAS; DEVELOP NEEDED FIXES UNDER TASK 03C & E.	J. LEININGER	1	-	JAN-93	████████	30	-	JUN-93	
TY502 07B	PROVIDE COORDINATORS AND CRAFT SUPPORT FOR TASK 07A.	J. KELLY	1	-	JAN-93	████████	30	-	JUN-93	

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: DESIGN BASIS RECONSTITUTION PROGRAM

NUMBER: TY503 PRIORITY: HIGH

FOCUS AREA: SYSTEM RELIABILITY & MATERIAL CONDITION

RELATED GOALS: SALP

REFERENCE FOR NEED: NRC COMMITMENTS; FACTS 89B9920, 91B0812; IAP D.7

INITIATIVE DESCRIPTION

IMPLEMENT EXISTING DESIGN BASIS RECONSTITUTION PROGRAM FOR SAFETY RELATED SYSTEMS AND DEVELOP DESIGN BASIS DOCUMENTS FOR KEY BALANCE OF PLANT SYSTEMS.

OBJECTIVES

- A) OBTAIN POSSESSION AND MAINTAIN CONTROL OF DESIGN BASIS INFORMATION FOR SAFETY RELATED SYSTEMS.
- B) MAINTAIN DESIGN BASIS DOCUMENTATION UP-TO-DATE AND RESOLVE DESIGN ISSUES IN A SYSTEMATIC, TIMELY MANNER.
- C) ENHANCE EFFICIENCY OF FUTURE MODIFICATION DEVELOPMENT.

MGMT. SPONSOR: E. BISHOP

RESP. ORGANIZATION: NED

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992		1993		1994		1995	
			J	A	J	A	J	A	J	A
TY503 01A	IMPLEMENT PID #B0018A; PIPING DESIGN TURNOVER PROGRAM.	E. BISHOP	1	-						
TY503 01B	PID #B0018A; UNIT 1 SUPPORT FIXES INSTALLED IN REFUEL 8 (B109R1) (REF: PID #B0014A).	E. BISHOP								
TY503 01C	PID #B0018A; UNIT 2 SUPPORT FIXES INSTALLED IN REFUEL 10 (B211R1) (REF: PID #B0014A).	E. BISHOP								
TY503 02A	IMPLEMENT PID #B0019A; DESIGN BASIS RECONSTITUTION.	E. BISHOP	1	-						
TY503 02B	PID #B0019A; ISSUE SAFETY RELATED SYSTEM DESIGN BASIS DOCUMENTS.	E. BISHOP								
TY503 02C	PID #B0019A; COMPLETE SAFETY RELATED SYSTEM VALIDATIONS.	E. BISHOP								
TY503 02D	COMPLETE PID #B0019A; DESIGN BASIS RECONSTITUTION, CLOSEOUT DISCREPANCIES.	E. BISHOP								
TY503 03A	IMPLEMENT PID #BNT622; NED PORTION ONLY, BNP PLANT BLDG STEEL VERIFICATION. (REPAIRS OF IRREGULARITIES COVERED UNDER PCN #B0060B, #B0060C)	E. BISHOP	1	-						
TY503 03B	PID #BNT622; BASED ON RESULTS & FINDINGS TO DATE, DETERMINE REMAINING PROGRAM SCOPE TO DETERMINE ADEQUACY OF STRUCTURAL STEEL.	E. BISHOP								
TY503 03C	COMPLETE ENGINEERING FOR PID #BNT622; BNP PLANT BLDG STEEL VERIFICATION.	E. BISHOP								
TY503 04A	IMPLEMENT PID #G0017A; DC VOLTAGE PROFILE STUDY.	J. O'CONNOR	1	-						
TY503 04B	PID #G0017A; UNIT 2 24/48 VDC BATTERY LOAD STUDY.	J. O'CONNOR								
TY503 04C	PID #G0017A; UNIT 2 24/48 VDC VOLTAGE STUDY.	J. O'CONNOR								
TY503 04D	PID #G0017A; UNIT 2 125/250 VDC VOLTAGE STUDY.	J. O'CONNOR								
TY503 04E	PID #G0017A; UNIT 2 24/48 AND 125/250 VDC COORDINATION STUDY.	J. O'CONNOR								

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992		1993		1994		1995	
			J	A	J	O	J	A	J	O
TY503 05A	IMPLEMENT PID #05644A; AC VOLTAGE ANALYSIS.	J. O'CONNOR	1	-	JAN-93					30-DEC-95
TY503 05B	PID #05644A; UNIT 2 CONTROL LOOP STUDY.	J. O'CONNOR	1	-	OCT-93					31-MAR-93
TY503 05C	PID #05644A; EMERGENCY DIESEL GENERATOR STUDY.	J. O'CONNOR			1-APR-93					31-DEC-93
TY503 05D	PID #05644A; AC VOLTAGE DROP STUDY.	J. O'CONNOR			1-AUG-93					30-SEP-94
TY503 05E	PID #05644A; AC COORDINATION STUDY.	J. O'CONNOR								1-JUL-94 31-DEC-94
TY503 06A	DEVELOP DESIGN BASIS DOCUMENTS FOR 7 KEY BALANCE OF PLANT SYSTEMS.	E. BISHOP			1-JAN-94					31-DEC-94

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: EQUIPMENT DATA BASE SYSTEM (EDBS)
NUMBER: TY504 PRIORITY: HIGH
FOCUS AREA: SYSTEM RELIABILITY & MATERIAL CONDITION
RELATED GOALS: MILS/KWH; SALP
REFERENCE FOR NEED: NRC; INPO; NAD

INITIATIVE DESCRIPTION

COMPLETE THE DATA COLLECTION AND PARTS LISTING FOR COMPONENTS NOT YET IN THE EQUIPMENT DATA BASE SYSTEM (EDBS).

OBJECTIVES

COMPLETION OF THE EDBS WILL INCREASE EFFICIENCY AND PRODUCTIVITY IN RESEARCHING AND DEVELOPING DESIGN CHANGE PACKAGES, WR/JOS, AND LCOS; CONTROLLING THE PLANT CONFIGURATION; AND OPTIMIZING INVENTORY.

MGMT. SPONSOR: A. RICHARDS

RESP. ORGANIZATION: PROC ENGR

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

		1992	1993	1994	1995
		J A J J O	J A J J O	J A J J O	J A J J O
INT. #	DESCRIPTION	ACTION SPONSOR			
TY504 01A	COMPLETE DATA COLLECTION EFFORTS & PARTS LISTINGS (PID #F0025C)	1-JAN-93			31-DEC-95
TY504 01B	ACHIEVE 56 PERCENT COMPLETION (BASED ON TAG NUMBERS).	31-MAR-93	31-MAR-93		
TY504 01C	ACHIEVE 60 PERCENT COMPLETION (BASED ON TAG NUMBERS).		30-JUN-93	30-JUN-93	
TY504 01D	ACHIEVE 64 PERCENT COMPLETION (BASED ON TAG NUMBERS).		30-SEP-93	30-SEP-93	
TY504 01E	ACHIEVE 68 PERCENT COMPLETION (BASED ON TAG NUMBERS).		31-DEC-93	31-DEC-93	
TY504 01F	ACHIEVE 72 PERCENT COMPLETION (BASED ON TAG NUMBERS).		31-MAR-94	31-MAR-94	
TY504 01G	ACHIEVE 76 PERCENT COMPLETION (BASED ON TAG NUMBERS).			30-JUN-94	30-JUN-94
TY504 01H	ACHIEVE 80 PERCENT COMPLETION (BASED ON TAG NUMBERS).			30-SEP-94	30-SEP-94
TY504 01I	ACHIEVE 84 PERCENT COMPLETION (BASED ON TAG NUMBERS).			31-DEC-94	31-DEC-94
TY504 01J	ACHIEVE 88 PERCENT COMPLETION (BASED ON TAG NUMBERS).			31-MAR-95	31-MAR-95
TY504 01K	ACHIEVE 92 PERCENT COMPLETION (BASED ON TAG NUMBERS).			30-JUN-95	30-JUN-95
TY504 01L	ACHIEVE 96 PERCENT COMPLETION (BASED ON TAG NUMBERS).			30-SEP-95	30-SEP-95
TY504 01M	ACHIEVE EQUIPMENT DATA BASE SYSTEM PROJECT COMPLETION.			31-DEC-95	31-DEC-95

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: COOLING WATER RELIABILITY PROGRAM

NUMBER: TY505

PRIORITY: HIGH

FOCUS AREA: SYSTEM RELIABILITY & MATERIAL CONDITION

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP

REFERENCE FOR NEED: NRC 92-12

INITIATIVE DESCRIPTION

DEVELOP & IMPLEMENT A PROGRAM TO PREDICT, IDENTIFY, REPAIR & PROTECT THE CIRCULATING WATER, RBCCW, TBCCW, AND SERVICE WATER SYSTEMS FROM DEGRADATION CAUSED BY EROSION AND OR CORROSION. ALSO, IDENTIFY MATERIAL SUBSTITUTION THAT WOULD IMPROVE RESISTANCE IN THESE SYSTEMS TO CORROSION.

OBJECTIVES

- A) REDUCE THE POTENTIAL FOR THRU-WALL FAILURES IN IMPORTANT COOLING SYSTEMS.
- B) IMPROVE THE MATERIAL CONDITION OF SYSTEMS.
- C) MAINTAIN UNIT CAPACITY.
- D) MAINTAIN THE DESIGN BASES OF THE COOLING SYSTEMS.
- E) MINIMIZE THE EFFECTS OF EROSION-CORROSION TO SYSTEMS EXPOSED TO COOLING WATER.

MGMT. SPONSOR: R. HELME

RESP. ORGANIZATION: TECH SUPPORT

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992			1993			1994			1995			
			J	A	J	J	O	J	A	J	O	J	A	J	O
TY505 01A	REVIEW THE PROGRAMS AT OTHER SITES TO DETERMINE THE ATTRIBUTES OF A SUCCESSFUL PROGRAM.	R. HELME	1	-	JAN	-	-	30	-	-	JUN	-	-	-	-
TY505 02A	DETERMINE THE IMPROVEMENTS WHICH WILL DEFINE THE POTENTIAL SCOPE OF THE PROGRAM AT BNP.	R. HELME													
TY505 03A	UNIT 1 RBCCW, TBCCW, CW, SW: SYSTEM WALKDOWN, UT INSPECT, PHYSICAL INTERNAL INSPECT, DEFINE SYSTEM IMPROVEMENTS, REPAIR IMMEDIATE NEED AREAS, DEVELOP INITIAL PROGRAM PROCEDURE.	R. HELME	1	-	JAN	-	-	31	-	-	DEC	-	-	-	-
TY505 03B	OMGM SUPPORT UNIT 1 RBCCW, TBCCW, CW, SW WORK.	R. JOHNSON													
TY505 03C	NED SUPPORT UNIT 1 RBCCW, TBCCW, CW, SW WORK.	J. LEININGER	1	-	FEB	-	-	31	-	-	DEC	-	-	-	-
TY505 03D	ADMIN ORGANIZATION SUPPORT UNIT 1 RBCCW, TBCCW, CW, SW WORK.	C. LEWIS	1	-	JAN	-	-	31	-	-	DEC	-	-	-	-
TY505 04A	UNIT 2 RBCCW, TBCCW, CW, SW: SYSTEM WALKDOWN, UT INSPECT, PHYSICAL INTERNAL INSPECT, DEFINE SYSTEM IMPROVEMENTS, REPAIR IMMEDIATE NEED AREAS, DEVELOP INITIAL PROGRAM PROCEDURE.	R. HELME	1	-	JAN	-	-							31	-
TY505 04B	OMGM SUPPORT UNIT 2 RBCCW, TBCCW, CW, SW WORK.	R. JOHNSON													
TY505 04C	NED SUPPORT UNIT 2 RBCCW, TBCCW, CW, SW WORK.	J. LEININGER	1	-	FEB	-	-	31	-	-	MAY	-	-	-	-
TY505 04D	ADMIN ORGANIZATION SUPPORT UNIT 2 RBCCW, TBCCW, CW, SW WORK.	C. LEWIS	1	-	JAN	-	-	31	-	-	MAY	-	-	-	-
TY505 05A	UNIT 1 RBCCW, TBCCW, CW, SW: REINSPECT & EVAL CONDITIONS VS PREVIOUS EVAL, DESIGN CHANGES FOR MATRL CONFIGURATION, PM ROUTE FOR UT, INSTALL DESIGN FOR IMMEDIATE NEEDS, FINALIZE PROGRAM PROCEDURES.	R. HELME													
TY505 05B	OMGM SUPPORT UNIT 1 RBCCW, TBCCW, CW, SW REINSPECT WORK.	R. JOHNSON													
TY505 05C	NED SUPPORT UNIT 1 RBCCW, TBCCW, CW, SW REINSPECT WORK.	J. LEININGER													
TY505 05D	MAINT SUPPORT UNIT 1 RBCCW, TBCCW, CW, SW REINSPECT WORK.	D. MOORE													

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992				1993				1994				1995											
			J	A	J	O	J	A	J	O	J	A	J	O	J	A	J	O								
TY505 05E	ADMIN ORGANIZATION SUPPORT UNIT 1 RBCCW, TBCCW, CW, SW REINSPECT WORK.	C. LEWIS									1								3							
TY505 06A	UNIT 2 RBCCW, TBCCW, CW, SW: REINSPECT & EVAL CONDITIONS VS PREVIOUS EVAL, DESIGN CHANGES FOR MATRL/CONFIGURATION, PM ROUTE FOR UT, INSTALL DESIGN FOR IMMED NEEDS, FINALIZE PROGRAM PROCEDURES.	R. HELME																								
TY505 06B	OM6M SUPPORT UNIT 2 RBCCW, TBCCW, CW, SW REINSPECT WORK.	R. JOHNSON																								
TY505 06C	NED SUPPORT UNIT 2 RBCCW, TBCCW, CW, SW REINSPECT WORK.	J. LEININGER																								
TY505 06D	MAINT SUPPORT UNIT 2 RBCCW, TBCCW, CW, SW REINSPECT WORK.	D. MOORE																								
TY505 06E	ADMIN ORGANIZATION SUPPORT UNIT 2 RBCCW, TBCCW, CW, SW REINSPECT WORK.	C. LEWIS																								

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: PLANT ENGINEERING PROGRAM UPGRADE

NUMBER: TY506 PRIORITY: HIGH

FOCUS AREA: SYSTEM RELIABILITY & MATERIAL CONDITION

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP; EMPLOYEE
SATISFACTION

REFERENCE FOR NEED: NRC 92-12; INPO 1/91; SALP 91-37; NAD 5/92; CII-11

INITIATIVE DESCRIPTION

IMPROVE PLANT ENGINEERING CAPABILITIES TO MEET THE INTENT OF INPO GOOD PRACTICE TS-413, USE OF SYSTEM ENGINEERS. PROVIDE TECHNICAL RESOURCES, EQUIPMENT ANALYSIS METHODOLOGY, AND TOOLS TO UPGRADE THE PLANT ENGINEERING PROGRAM. ESTABLISH AND MAINTAIN QUALITY COMPONENT ENGINEERING PROGRAMS. THESE IMPROVEMENTS INCORPORATE KEY ELEMENTS OF SUCCESSFUL PLANT ENGINEERING PROGRAMS AT OTHER NUCLEAR FACILITIES.

OBJECTIVES

- A) IMPROVE THE OVERALL PERFORMANCE AND RELIABILITY OF BNP SAFETY-RELATED AND POWER GENERATION-RELATED EQUIPMENT.
- B) IMPROVE PLANT ENGINEERING PROGRAMS TO ACHIEVE WORLD CLASS PERFORMANCE IN THE AREAS OF MATERIAL CONDITION, OUTAGE MANAGEMENT, AND CONTROL OF ENGINEERING BACKLOGS TO AN AVERAGE AGE LESS THAN 90 DAYS.
- C) IMPROVE THE SYSTEM ENGINEERING PROGRAM TO MEET THE INTENT OF INPO GOOD PRACTICE TS-413 (E.G., SYSTEM WALKDOWNS, DETAILED SYSTEM TRENDING, SYSTEM ASSESSMENTS).
- D) IMPROVE THE COMPONENT ENGINEERING PROGRAM SUPPORT TO MAINTENANCE IN EQUIPMENT EXPERTISE, AND ACCELERATE ACTIVITIES THAT PREVENT COMPONENT FAILURES.
- E) EVALUATE AND APPLY LESSONS LEARNED FROM SUCCESSFUL UTILITY ENGINEERING PROGRAMS AT OTHER WORLD CLASS NUCLEAR FACILITIES.
- F) ENHANCE STAFF QUALITY OF LIFE AND JOB SATISFACTION THROUGH INCREASED RESPONSIBILITY, ACCOUNTABILITY AND PLANT KNOWLEDGE.
- G) PROVIDE ADEQUATE ENGINEERING DEPTH BY CERTIFICATION OF BACKUP SYSTEM AND COMPONENT ENGINEERS ON CRITICAL SYSTEMS/COMPONENTS THAT AFFECT RELIABILITY AND/OR SAFETY.
- H) IMPLEMENT REVISED NUCLEAR PLANT MODIFICATION PROCEDURE WITH NEW RESPONSIBILITIES FOR SYSTEM ENGINEERS REGARDING POST-MODIFICATION TESTING.
- I) TRANSITION SYSTEM AND COMPONENT ENGINEERING PERSONNEL ACTIVITIES TO SUPPORT SYSTEM SPONSORS DURING OUTAGES.

MGMT. SPONSOR: R. HELME

RESP. ORGANIZATION: TECH SUPPORT

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992			1993			1994			1995								
			J	A	J	J	O	J	A	J	O	J	A	J	O	J				
TY506 01A	DETERMINE FROM OPERATIONS & MAINTENANCE BNP-SPECIFIC PLANT ENGINEERING NEEDS AND IDENTIFY CURRENT DEFICIENCIES.	R. HELME																		
TY506 02A	EVALUATE PLANT ENGINEERING PROGRAMS AT OTHER WORLD CLASS NUCLEAR FACILITIES.	R. HELME																		
TY506 03A	ESTABLISH SPECIFIC PLANT ENGINEERING PROGRAM OBJECTIVES & GOALS FOR COMPONENT & SYSTEM ENGINEERS.	R. HELME																		
TY506 04A	ASSESS CURRENT PLANT ENGINEERING STAFF CAPABILITIES & EXISTING ORGANIZATIONAL ASSIGNMENTS AGAINST NEW PROGRAM OBJECTIVES & GOALS.	R. HELME																		
TY506 05A	DEVELOP TRANSITION PLAN FOR THE OPTIMUM ORG. STRUCTURE & STAFF ASSIGNMENTS THAT MEETS THE NEW ENGR PERFORMANCE OBJECTIVES & GOALS.	R. HELME																		
TY506 07A	DEVELOP REVISED PERFORMANCE EXPECTATIONS FOR ENGINEERING STAFF TO ADDRESS INCREASED FLEXIBILITY REQUIREMENTS & OTHER IDENTIFIED PERFORMANCE ISSUES.	R. HELME																		
TY506 08A	DEVELOP REVISED TRAINING & CERTIFICATION PROCESSES & ASSOCIATED TARGET MILESTONES FOR THE ORGANIZATIONAL STRUCTURE.	R. HELME																		
TY506 09A	SUSTAIN SPECIFIC INTERIM CONTRACTOR ASSIGNMENTS IN DEFICIENT ENGINEERING PROGRAM AREAS WHILE MINIMIZING THE NEED FOR CONTINUING CONTRACTOR SUPPORT.	R. HELME																		
TY506 13A	ESTABLISH MILESTONE TARGETS FOR THE TRAINING & CERTIFICATION OF CP&L STAFF AND CONTRACTORS.	R. HELME																		
TY506 14A	ASSESS PROGRESS OF ACHIEVING TARGET MILESTONES ON A QUARTERLY BASIS.	R. HELME																		
TY506 15A	PERFORM ASSESSMENT OF ORGANIZATIONAL CHANGE EFFECTIVENESS AND MAKE ADJUSTMENTS.	R. HELME																		
TY506 16A	BASED ON ASSESSMENT RE-EVALUATE AND PERFORM CORRECTIVE ACTIONS AS NECESSARY.	R. HELME																		

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: INSERVICE INSPECTION/INSERVICE TESTING IMPROVEMENT PROGRAM

NUMBER: TY507 PRIORITY: HIGH

FOCUS AREA: SYSTEM RELIABILITY & MATERIAL CONDITION

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP

REFERENCE FOR NEED: NRC 92-12; NAD 7/92

INITIATIVE DESCRIPTION

IMPROVE THE ISI/IST PROGRAMS TO CORRECT DEFICIENCIES AND CONCERNS IDENTIFIED BY BNP'S ISI/IST GROUP, NAD AUDIT TEAM, AND NRC INSPECTION TEAM. PERFORM AN ASSESSMENT OF THE ISI/IST PROGRAM TO ENSURE COMPLIANCE WITH REGULATORY COMMITMENTS. DEVELOP A DEFINITIVE BASIS DOCUMENT, UPGRADE TEST EQUIPMENT, AND IDENTIFY NEEDED TEST CONNECTIONS TO INCREASE EFFICIENCY AND REDUCE PERSONNEL EXPOSURE.

OBJECTIVES

- A) IMPROVE THE ISI/IST PROGRAMS AND IMPLEMENTING PROCEDURES (INCLUDING THE DEVELOPMENT OF A BASIS DOCUMENT) TO ENSURE COMPLIANCE TO ASME SECTION XI AND 10CFR50.
- B) ENHANCE TRAINING AND PARTICIPATION OF ISI/IST PERSONNEL IN CODE SEMINARS, MEETING, ETC. ON A CONTINUAL BASIS TO PROVIDE THE ISI/IST STAFF WITH HIGHER CAPABILITY TO MAINTAIN PROGRAMS.
- C) UPGRADE THE ISI/IST PROGRAMS FOR THE THIRD TEN YEAR INTERVAL TO ENSURE COMPLIANCE TO 10CFR50.55.
- D) UPGRADE TEST EQUIPMENT AND IDENTIFY NEEDED TEST CONNECTIONS TO INCREASE EFFICIENCY OF TESTING AND REDUCE PERSONNEL EXPOSURE.
- E) DEVELOP ADMINISTRATIVE CONTROLS FOR ISI/IST PROCESSES TO ENSURE PROGRAMS ARE PROPERLY MAINTAINED AND TO ENSURE REGULATORY COMPLIANCE.

MGMT. SPONSOR: R. HELME

RESP. ORGANIZATION: TECH SUPPORT

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI. # TASK	DESCRIPTION	ACTION SPONSOR	1992			1993			1994			1995		
			J	A	J	J	O	J	A	J	O	J	A	J
TY507 01A	PERFORM A DETAILED ASSESSMENT/ENHANCEMENT OF THE ISI/IST PROGRAMS.	R. HELME			1-JAN-93									31-DEC-93
TY507 02A	DEVELOP A BASIS DOCUMENT FOR THE ISI/IST PROGRAMS.	R. HELME						1-NOV-93						31-DEC-93
TY507 03A	REVIEW/REVISE ISI/IST PROGRAM IMPLEMENTING TEST PROCEDURES.	R. HELME			1-JAN-93									31-DEC-93
TY507 03B	MAINTAIN ISI/IST PROGRAM IMPLEMENTING PROCEDURES.	R. HELME						1-JAN-94						31-DEC-95
TY507 04A	DEVELOP ADMINISTRATIVE CONTROLS FOR ISI/IST PROCESSES & PROCEDURES.	R. HELME			1-OCT-93									31-DEC-93
TY507 05A	DEVELOP A TRAINING ACTION PLAN FOR PERMANENT ISI/IST PERSONNEL.	R. HELME			1-JUL-93									31-AUG-93
TY507 05B	IMPLEMENT TRAINING ACTION PLAN TO TRAIN PERSONNEL TO CURRENT INDUSTRY AND REGULATORY STANDARDS ON A CONTINUAL BASIS.	R. HELME			1-SEP-93									31-DEC-97
TY507 06A	ISI/IST PERSONNEL TO PARTICIPATE IN INDUSTRY CODE ACTIVITIES.	R. HELME			1-JUL-93									31-DEC-97
TY507 06B	DEVELOP AN ACTION PLAN TO HAVE PERMANENT ISI/IST PERSONNEL PARTICIPATE IN MORE INDUSTRY ACTIVITIES. (E.G., PLANT VISITS, SEMINARS, CHUG MGTS., ETC.)	R. HELME			1-JUL-93									31-AUG-93
TY507 06C	ACHIEVE PARTICIPATION IN AT LEAST THREE INDUSTRY ACTIVITIES BY THE END OF 1994.	R. HELME			1-SEP-93									31-DEC-94
TY507 06D	ACHIEVE PARTICIPATION IN AT LEAST THREE INDUSTRY ACTIVITIES BY THE END OF 1995.	R. HELME											1-JAN-95	31-DEC-95
TY507 07A	UPDATE THE AUGMENTED PROGRAM TO INCLUDE THE RPV WELD EXAMINATIONS.	R. HELME			1-FEB-93									31-DEC-93
TY507 08A	PURCHASE UPGRADED TEST EQUIPMENT REQUIRED FOR REGULATORY COMPLIANCE.	R. HELME			1-JAN-93									1-DEC-93
TY507 09A	IDENTIFY NEEDED TEST CONNECTIONS TO SUPPORT ISI/IST TESTING TO INCREASE EFFICIENCY AND REDUCE PERSONNEL EXPOSURE.	R. HELME			1-JAN-93									30-NOV-93
TY507 09B	INITIATE A PID TO HAVE THE TEST CONNECTIONS INSTALLED.	R. HELME			1-NOV-93									31-DEC-93

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992		1993		1994		1995	
			J	A	J	A	J	A	J	A
TY507 10A	PERFORM A REVIEW OF EDBS PROGRAM TO ENSURE ISI/IST COMPONENTS HAVE PROPER ISI/IST CLASSIFICATION AND IDENTIFY CHANGES TO THE EDBS GROUP. REVISION TO EDBS WILL BE COMPLETED UNDER INITIATIVE #504.	R. HELME	1	-	-	-	3	-	-	-
TY507 11A	DEVELOP AN ACTION PLAN TO PRODUCE A DETAILED SET OF ISI/IST COLOR CODED CLASS BOUNDARY DRAWINGS.	R. HELME	-	-	1	-	-	-	3	-
TY507 11B	INITIATE A PID TO HAVE THE COLOR CODED BOUNDARY CLASSIFICATION DRAWING PRODUCED.	R. HELME	-	-	-	-	1	-	3	-
TY507 12A	UPDATE THE ISI/IST PROGRAMS FOR THE THIRD INTERVAL USING THE LATEST EDITION OF THE CODE.	R. HELME	-	-	-	-	1	-	-	3
TY507 13A	INVESTIGATE THE USE OF PERMANENTLY INSTALLED TAGS FOR LLRT TEST CONNECTIONS AND LABEL CONTAINMENT PENETRATIONS.	R. HELME	-	-	1	-	-	-	-	3
TY507 13B	IF COST EFFECTIVE, INITIATE A PID TO HAVE TAGS/LABEL MADE AND INSTALLED.	R. HELME	-	-	-	-	1	-	-	3
TY507 14A	INVESTIGATE THE TRANSFER OF TESTING ACTIVITIES TO OTHER GROUPS.	R. HELME	1	-	-	-	3	-	-	-

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: AC SOURCE IMPROVEMENT PROJECT
NUMBER: TY508 PRIORITY: HIGH
FOCUS AREA: SYSTEM RELIABILITY & MATERIAL CONDITION
RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP
REFERENCE FOR NEED: NLS-91-341; 10CFR50 APPENDIX A GDC-17

INITIATIVE DESCRIPTION

DEVELOP IPBS PROJECT PROPOSAL AND PLAN TO IMPROVE THE FLEXIBILITY AND RELIABILITY OF THE BRUNSWICK UNIT 1 AND UNIT 2 OFF-SITE AND EMERGENCY ON-SITE AC POWER SYSTEMS.

OBJECTIVES

THE PRIMARY OBJECTIVE OF THE PROJECT IS TO ENSURE COMPLIANCE WITH CURRENT INTERPRETATIONS OF 10CFR50 APPENDIX A GENERAL DESIGN CRITERIA 17 (GDC-17). THIS DESIGN CRITERIA ADDRESSES THE REDUNDANCY, CAPACITY, & AVAILABILITY OF THE OFF-SITE POWER SOURCES.

SECONDARY OBJECTIVES:

- A) PROVIDING RELIEF (SUBJECT TO NRC CONCURRENCE) FOR THE TECHNICAL SPECIFICATION REQUIREMENTS TO SHUT DOWN BOTH UNITS WITHIN SEVEN DAYS OF DECLARING ANY DIESEL GENERATOR INOPERABLE.
- B) PROVIDING FOR ADEQUATE OFF-SITE POWER CAPACITY AND VOLTAGE TO SAFETY RELATED BUSES/LOADS (PARTICULARLY DURING SYSTEM PEAK PERIODS).

MGMT. SPONSOR: J. O'CONNOR RESP. ORGANIZATION: NED

REVISION NO: 00 AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	1992		1993		1994		1995	
			J	A	J	O	J	A	J	O
TY508 02E	DEVELOP IPBS PLAN FOR SELECTED ALTERNATIVE FOR GDC-17 & VOLTAGE REG. RESOLUTION. (PREPARE MORE DETAILED ENGINEERING, COST & SCHEDULING ESTIMATES.) (COST FOR 1994 NOT YET DETERMINED)	J. O'CONNOR					1-JAN-94	██████████	30-JUN-94	
TY508 02F	CRITICAL DATE AT WHICH TIME RESOLUTION OF VOLTAGE REGULATION PROLEM MUST BE IMPLEMENTED (ESTIMATED DATE).	J. O'CONNOR							1-MAY-95	1-MAY-95
TY508 03A	COMPLETE DESIGN OF NON-SEGREGATED CABLE BUS MODIFICATION.	J. O'CONNOR			1-JAN-93	██████████			1-JUL-93	
TY508 03B	COMPLETE UNIT 1 DESIGN OF NON-SEGREGATED CABLE BUS MODIFICATION.	J. O'CONNOR			1-MAR-93				1-MAR-93	
TY508 03C	COMPLETE UNIT 2 DESIGN OF NON-SEGREGATED CABLE BUS MODIFICATION.	J. O'CONNOR					1-JUL-93		1-JUL-93	
TY508 03D	INSTALL NON-SEGREGATED CABLE BUS MODIFICATION.	R. JOHNSON			1-JUL-93	██████████			18-MAY-94	
TY508 03E	NED SUPPORT INSTALLATION OF NON-SEGREGATED CABLE BUS MODIFICATION.	J. O'CONNOR			1-JUL-93	██████████			31-DEC-93	
TY508 03F	PURCHASE MATERIAL FOR NON-SEGREGATED CABLE BUS MODIFICATION.	J. O'CONNOR			1-JAN-93	██████████			31-DEC-93	
TY508 04A	PURCHASE MATERIAL ALREADY COMMITTED; VOLTAGE REGULATORS AND BYPASS SWITCHES.	J. O'CONNOR			1-JAN-93	██████████			31-DEC-93	
TY508 05A	PROVIDE AC ELECTRICAL DISTRIBUTION SYSTEM DESIGN BASIS DOCUMENT.	J. O'CONNOR			1-JAN-93	██████████			31-DEC-93	

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: MANAGEMENT OF TEMPORARY CONDITIONS AND SUBSTANDARD CONDITIONS

NUMBER: TY509 PRIORITY: MEDIUM

FOCUS AREA: SYSTEM RELIABILITY & MATERIAL CONDITION

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP

REFERENCE FOR NEED: NRC REPORT 92-04, 92-09, 92-12; NAD REPORT 11/91;
SAT TS6,7

INITIATIVE DESCRIPTION

BNP HAS PROGRAMS IN PLACE FOR CONTROL OF TEMPORARY CONDITIONS, REPEAT FAILURES, OBSOLETE EQUIPMENT AND SHORT TERM STRUCTURAL INTEGRITY ITEMS. HOWEVER, THE EXISTING PROCESSES FOR CONTROL AND MANAGEMENT OF THESE REQUIRES IMPROVEMENT TO ENHANCE EFFICIENCY AND EFFECTIVENESS. DEFINE TEMPORARY AND SUBSTANDARD CONDITIONS, IMPLEMENT CONTROLS, AND ESTABLISH TARGETS FOR RESOLUTION OF EACH ITEM CONTROLLED BY THIS PROGRAM.

OBJECTIVES

IMPLEMENT IMPROVED MANAGEMENT PROGRAM TO MAINTAIN TEMPORARY AND SUBSTANDARD CONDITIONS AT REDUCED LEVELS AND CONTROL THE AGE OF THE CONDITION.

MGMT. SPONSOR: R. HELME

RESP. ORGANIZATION: TECH SUPPORT

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INT. # TASK	DESCRIPTION	ACTION SPONSOR
TY509 01A	CLARIFY THE DEFINITION OF WHAT CONSTITUTES A TEMPORARY CONDITION AND SUBSTANDARD CONDITIONS. CONSIDER OPERATOR WORKAROUNDS, REPEAT FAILURES, OBSOLETE EQUIPMENT, TEMP. MODIFICATIONS, AND SHORT-TERM STRUCTURAL INTEGRITY ITEMS.	R. HELME 90 DAY(S)
TY509 02A	OBTAIN SITE-WIDE CONCURRENCE TO THE DEFINITION OF TEMPORARY CONDITION.	R. HELME 92 DAY(S)
TY509 03A	DEVELOP AN IMPROVED COMPREHENSIVE MANAGEMENT PROGRAM AND PROCEDURES FOR CONTROLLING SUBSTANDARD CONDITIONS, EACH CATEGORY UNDER SUBSTANDARD CONDITIONS, AND CONTROL OF MAINT. & OM&M ACTIVITIES WHICH CAN CREATE SUBSTANDARD CONDITIONS.	R. HELME 92 DAY(S)
TY509 04A	DEVELOP STAFFING ESTIMATE TO IMPLEMENT AND MANAGE.	R. HELME 61 DAY(S)
TY509 05A	BENCHMARK BY VISITING CP6L SITES AND OTHER WORLD CLASS PLANTS TO ENSURE COMPLETENESS.	R. HELME 212 DAY(S)
TY509 06A	PREPARE IMPLEMENTATION PLAN REPORT & OBTAIN APPROVAL.	R. HELME 62 DAY(S)
TY509 07A	PREPARE TRAINING FOR APPROPRIATE PERSONNEL CONCERNING DEFINITION, CONTROL, AND PROCEDURES.	R. HELME 62 DAY(S)
TY509 08A	FULLY IMPLEMENT IMPROVED PROGRAM	R. HELME 1582 DAY(S)

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: PAINTING TO UPGRADE MATERIAL CONDITION

NUMBER: TY510

PRIORITY: MEDIUM

FOCUS AREA: SYSTEM RELIABILITY & MATERIAL CONDITION

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP; EMPLOYEE
SATISFACTION

REFERENCE FOR NEED: NRC 92-12; NAD 11/91 & 7/92; CII-12

INITIATIVE DESCRIPTION

PAINT INTERIOR WALLS, CEILINGS, FLOORS, ASSOCIATED EQUIPMENT, PIPING,
VALVES, AND CONDUITS IN THE PLANT TO MEET EXPECTATIONS. THIS PROJECT
INCLUDES: DEVELOPING A HOUSEKEEPING AND MATERIAL CONDITION PROCEDURE,
ESTABLISHING A MODEL MATERIAL CONDITION ROOM, AND UTILIZING A SYSTEM
COLOR CODING SCHEME AND UNIT SEPARATION SCHEME.

OBJECTIVES

- A) MEET THE NRG STANDARDS FOR PLANT MATERIAL CONDITION.
- B) PROVIDE A MECHANISM FOR DEMONSTRATING THE REQUIRED HOUSEKEEPING AND
APPEARANCE STANDARDS.

MGMT. SPONSOR: J. KELLY

RESP. ORGANIZATION: OM&M

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI. # TASK	DESCRIPTION	ACTION SPONSOR				
TY510 01A	REVIEW AND APPROVE SITE PAINTING STANDARD.	J. KELLY	31 DAY(S)	■		
TY510 01B	DEVELOP COMPREHENSIVE SITE HOUSEKEEPING & MATERIAL CONDITION PROCEDURE.	J. KELLY	181 DAY(S)	■		
TY510 02A	ESTABLISH CLEAR EXPECTATIONS FOR THE DESIRED LEVELS OF HOUSEKEEPING DURING PLANT OPERATIONS BY ESTABLISHING THE FIRST MODEL ROOM; THE SW BLDG.	J. KELLY	365 DAY(S)	■		
TY510 02B	ESTABLISH SECOND MODEL ROOM; DIESEL GENERATOR #1 AREA.	J. KELLY	365 DAY(S)	■		
TY510 03A	IMPLEMENT SITE PAINTING PLAN.	J. KELLY	1095 DAY(S)	■		
TY510 03B	COMPLT RESTORE & PAINT DIESEL GENERATOR #3 AND FUEL OIL STORAGE AREAS.	J. KELLY	1 DAY(S)			
TY510 03C	COMPLT RESTORE & PAINT 3FT. RADWASTE BLDG AND 4FT. NUCLEAR SERVICE WATER BLDG.	J. KELLY	1 DAY(S)			
TY510 03D	COMPLT RESTORE & PAINT 17FT. U-1 RX BLDG AND U-2 20FT., 45FT & 70FT. TURB BLDG HOTSIDE.	J. KELLY	1 DAY(S)			
TY510 03E	COMPLT RESTORE & PAINT 23FT. RADWASTE BLDG AND 20FT. NUCLEAR SERVICE WATER BLDG.	J. KELLY	1 DAY(S)			
TY510 03F	COMPLT RESTORE & PAINT DIESEL GENERATOR #2 AND #4 AREAS.	J. KELLY	1 DAY(S)			
TY510 03G	COMPLT RESTORE & PAINT 20FT. U-1 RX BLDG; 20FT. U-2 RX BLDG; 20FT. & 45FT. U-1 TURB BLDG HOTSIDE.	J. KELLY	1 DAY(S)			
TY510 03H	COMPLT RESTORE & PAINT DIESEL GENERATOR BASEMENT.	J. KELLY	1 DAY(S)			
TY510 03I	COMPLT RESTORE & PAINT RADWASTE BLDG AND 17FT. U-2 RX BLDG.	J. KELLY	1 DAY(S)			
TY510 03J	COMPLT RESTORE & PAINT 50FT. U-1 RX BLDG.	J. KELLY	1 DAY(S)			

BNP THREE-YEAR PLAN

INT. # TASK	DESCRIPTION	ACTION SPONSOR			1 DAY(S)
TY510 03K	COMPLT RESTORE 6 PAINT DIESEL GENERATOR BLDG.	J. KELLY			1
TY510 03Z	CONTINUE 5 YEAR SITE PAINTING PLAN.	J. KELLY			730

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: DOSE REDUCTION/ALARA INITIATIVES

NUMBER: TY511

PRIORITY: MEDIUM

FOCUS AREA: SYSTEM RELIABILITY & MATERIAL CONDITION

RELATED GOALS: MILS/KWH; SALP; EMPLOYEE SATISFACTION; MILS/KWH

REFERENCE FOR NEED: NAD 3/92, 7/92; NRC 92-12; INPO ALARA 2/92

INITIATIVE DESCRIPTION

DEVELOP PLANS FOR AND IMPLEMENT ALARA INITIATIVES AND ITEMS ADDRESSED IN THE CORPORATE DOSE REDUCTION PLAN.

OBJECTIVES

- A) REACH PREMIER STATUS IN ANNUAL SITE EXPOSURE BY 1995 (500 PERSON-REM).
- B) IMPLEMENT THE CORPORATE DOSE REDUCTION PLAN.
- C) PERFORM DECONS TO REDUCE HOT SPOTS IN THE PLANT.
- D) INCREASE USE OF ROBOTICS TO MINIMIZE PERSONNEL EXPOSURE.















MGMT. SPONSOR: C. ROBERTSON

RESP. ORGANIZATION: EGRC

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR				
TY511 01E	DEVELOP AND IMPLEMENT AN AGGRESSIVE CHEMICAL DECONTAMINATION PLAN FOR UNIT 2 FUEL POOL HEAT EXCHANGER DECON	R. JOHNSON	92 DAY(S)			
TY511 01F	DEVELOP AND IMPLEMENT AN AGGRESSIVE CHEMICAL DECONTAMINATION PLAN FOR UNIT 2 RX RECIRC DECON	R. JOHNSON	92 DAY(S)			
TY511 01G	DEVELOP AND IMPLEMENT AN AGGRESSIVE CHEMICAL DECONTAMINATION PLAN FOR UNIT 1 FUEL POOL HEAT EXCHANGER DECON	R. JOHNSON	91 DAY(S)			
TY511 01H	DEVELOP AND IMPLEMENT AN AGGRESSIVE CHEMICAL DECONTAMINATION PLAN FOR UNIT 1 RX RECIRC DECON	R. JOHNSON	91 DAY(S)			
TY511 01I	DEVELOP AND IMPLEMENT AN AGGRESSIVE CHEMICAL DECONTAMINATION PLAN FOR UNIT 1 RX RECIRC DECON	R. JOHNSON		92 DAY(S)		
TY511 01J	DEVELOP AND IMPLEMENT AN AGGRESSIVE CHEMICAL DECONTAMINATION PLAN FOR UNIT 2 RX RECIRC DECON	R. JOHNSON			91 DAY(S)	
TY511 02A	IDENTIFY LOCATIONS WHERE DECON PORTS ARE NEEDED.	C. ROBERTSON	242 DAY(S)			
TY511 02B	PRIORITIZE THE NEEDED DECON PORTS.	C. ROBERTSON	123 DAY(S)			
TY511 02C	SUBMIT PRIORITIZED LISTS OF LOCATIONS TO NED FOR DESIGN.	C. ROBERTSON	120 DAY(S)			
TY511 03A	PERFORM DECON ON DRAINS THAT DO NOT NEED PORTS INSTALLED (AVG 10/GTR UNTIL COMPLETE).	C. ROBERTSON	1005 DAY(S)			
TY511 03B	DEVELOP ESTIMATE FOR INCREASE IN BASE BUDGET TO PERFORM DRAIN DECONS ROUTINELY.	C. ROBERTSON		153 DAY(S)		
TY511 04A	INVESTIGATE WHICH ROBOTICS ARE APPROPRIATE FOR BNP USE.	C. ROBERTSON	303 DAY(S)			
TY511 04B	PURCHASE ROBOTICS.	C. ROBERTSON	306 DAY(S)			
TY511 04C	PURCHASE EQUIPMENT FOR SURROGATE TOUR.	C. ROBERTSON	214 DAY(S)			

BNP THREE-YEAR PLAN

INI. # TASK	DESCRIPTION	ACTION SPONSOR				
TY511 04D	INSTALL EQUIPMENT FOR SURROGATE TOUR CAPABILITY.	C. ROBERTSON	184 DAY(S)	█		
TY511 05A	DEVELOP PLAN FOR RWCU PHASE SEPARATOR ROOM.	K. AHERN	120 DAY(S)	█		
TY511 05B	DEVELOP CONTRACT FOR SUPPORT AS NECESSARY TO CLEAN UP RWCU PHASE SEPARATOR ROOM.	K. AHERN	123 DAY(S)	█		
TY511 05C	CLEAN RWCU PHASE SEPARATOR ROOM.	K. AHERN	122 DAY(S)	█		
TY511 05D	E&RC SUPPORT FOR RWCU PHASE SEPARATOR ROOM.	C. ROBERTSON	122 DAY(S)	█		
TY511 06A	UPGRADE CRD REBUILD ROOM (REF: INIT. #206).	J. LEININGER			212 DAY(S)	█

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: ENVIRONMENTAL & CHEMISTRY PROGRAM IMPROVEMENTS

NUMBER: TY512

PRIORITY: MEDIUM

FOCUS AREA: SYSTEM RELIABILITY & MATERIAL CONDITION

RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP; EMPLOYEE
SATISFACTION

REFERENCE FOR NEED: EPA, OSHA, NRC, INPO, TECH. SPECS., PSAR, FUEL
WARRANTY, SAT ERC-4

INITIATIVE DESCRIPTION

REVIEW AND ENHANCE THE ENVIRONMENTAL AND CHEMISTRY PROGRAMS, AS
NECESSARY, TO ENSURE COMPLIANCE WITH APPLICABLE EPA, OSHA, NRC, AND
STATE REGULATIONS AND WITH INPO GUIDELINES. ENHANCEMENTS SHOULD
INCLUDE ADEQUATE PROGRAMS, PROCESSES, PROCEDURES, FACILITIES, AND
INSTRUMENTATION.

OBJECTIVES

- A) ENSURE ADEQUATE SYSTEM CHEMISTRY CONTROL.
- B) ACHIEVE PREMIER PERFORMANCE PER INPO & NRC GUIDELINES AND
REGULATIONS.
- C) COMPLY WITH EPA & OSHA REGULATIONS.
- D) DEVELOP ADEQUATE CAPABILITIES FOR SAMPLING & ANALYSIS.

MGMT. SPONSOR: C. ROBERTSON

RESP. ORGANIZATION: E&RC

REVISION NO: 00

AS OF: 15-DEC-92















BNP THREE-YEAR PLAN

INI. # TASK	DESCRIPTION	ACTION SPONSOR	1992			1993			1994			1995		
			J	A	J	J	A	J	J	A	J	J	A	J
TY512 06B	UPGRADE CAC 1260,1261,1262,1264 MONITORS (PID #G0215A).	J. LEININGER												
TY512 06C	INSTALL UPGRADED CAC 1260,1261,1262,1264 MONITORS (PID #G0215A).	R. JOHNSON												














1-MAR-93 [REDACTED] 29-AUG-94

4-JUN-94 [REDACTED] 20-NOV-94

BNP THREE-YEAR PLAN

INIT. # TASK	DESCRIPTION	ACTION SPONSOR				
TY512 01A	DESIGN AND MODIFY CHEMISTRY LAB (REF: INIT. #206).	C. ROBERTSON	137 DAY(S)			
TY512 02A	ASSESS CURRENT AND ONGOING PLANT E6RC STAFF CAPABILITIES AND ORGANIZATIONAL ASSIGNMENTS REQUIRED TO COMPLY WITH EXISTING AND NEW EPA AND OSHA REGULATIONS.	C. ROBERTSON	1826 DAY(S)			
TY512 02B	RESEARCH CURRENT EPA REQUIREMENTS.	C. ROBERTSON	150 DAY(S)			
TY512 02C	DETERMINE WHICH REQUIREMENTS APPLY TO BNP.	C. ROBERTSON	61 DAY(S)			
TY512 02D	DEVELOP ACTION PLAN TO ACHIEVE COMPLIANCE WITH THE REQUIREMENTS.	C. ROBERTSON	183 DAY(S)			
TY512 02E	RESEARCH CURRENT OSHA REGULATIONS.	C. ROBERTSON	212 DAY(S)			
TY512 02F	DETERMINE WHICH REQUIREMENTS APPLY TO BNP.	C. ROBERTSON	92 DAY(S)			
TY512 02G	DEVELOP ACTION PLAN TO ACHIEVE COMPLIANCE WITH THE PROPOSED REQUIREMENTS.	C. ROBERTSON	335 DAY(S)			
TY512 02I	REVIEW AND STRENGTHEN THE MANAGEMENT AND CONTROL OF CHEMICALS IN THE WORKPLACE.	C. ROBERTSON	365 DAY(S)			
TY512 03A	COMPLETE THE SERVICE AND INST. AIR SAMPLING PROGRAM PER GENERIC LETTER 88-14.	C. ROBERTSON	730 DAY(S)			
TY512 03B	IDENTIFY THE ENHANCEMENTS NEEDED TO SAMPLE THE INSTRUMENT AND SERVICE AIR LINES PER GENERIC LETTER 88-14.	R. HELME	120 DAY(S)			
TY512 03C	PRELIMINARY DESIGN ON SERVICE AND INSTR. AIR SAMPLE LINES.	E. BISHOP	123 DAY(S)			
TY512 03D	DESIGN SERVICE AND INSTR. AIR SAMPLE LINES.	E. BISHOP	184 DAY(S)			
TY512 03E	DEVELOP PID TO DESIGN SAMPLE LINES FOR SERVICE WATER SYSTEM.	C. ROBERTSON	214 DAY(S)			

BNP THREE-YEAR PLAN

INT. # TASK	DESCRIPTION	ACTION SPONSOR	
TY512 04A	DEVELOP PROGRAM TO REDUCE LIQUID WASTES.	C. ROBERTSON	290 DAY(S) 
TY512 04B	ASSEMBLE APPROPRIATE PERSONNEL FOR A TASK FORCE/WORKING GROUP.	C. ROBERTSON	61 DAY(S) 
TY512 04C	DEVELOP PLAN/OPTIONS. OBTAIN MANAGEMENT APPROVAL (BUY-IN).	C. ROBERTSON	245 DAY(S) 
TY512 05A	INSTALL IN-LINE ION CHROMATOGRAPH AND TOTAL ORGANIC CARBON ANALYZERS ON FEEDWATER AND RADWASTE PROCESSING.	C. ROBERTSON	515 DAY(S) 
TY512 05B	DETERMINE LOCATION(S) FOR IN-LINE MONITOR(S).	C. ROBERTSON	59 DAY(S) 
TY512 05C	PURCHASE APPROPRIATE MONITOR(S).	C. ROBERTSON	214 DAY(S) 
TY512 05D	INSTALL MONITOR(S).	C. ROBERTSON	273 DAY(S) 
TY512 06A	INCORPORATE HOT SHOP VENT MONITOR INTO PLANT DRAWINGS.	E. BISHOP	426 DAY(S) 
TY512 07A	UPGRADE RB SAMPLE STATION.	C. ROBERTSON	546 DAY(S) 
TY512 07B	DETERMINE ITEMS/EQUIPMENT THAT NEED TO BE UPGRADED.	C. ROBERTSON	120 DAY(S) 
TY512 07C	PURCHASE ITEMS/EQUIPMENT AS APPROPRIATE.	C. ROBERTSON	245 DAY(S) 
TY512 07D	INSTALL ITEMS/EQUIPMENT IN RB SAMPLE STATIONS.	C. ROBERTSON	334 DAY(S) 
TY512 08A	IMPROVE LAYUP PROGRAM.	R. HELME	310 DAY(S) 

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: MEGAWATT IMPROVEMENT PROJECTS
NUMBER: TY513 PRIORITY: MEDIUM
FOCUS AREA: SYSTEM RELIABILITY & MATERIAL CONDITION
RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR
REFERENCE FOR NEED: INPO GOOD PRACTICES QA-104 AND TS-414; NAD 11/91

INITIATIVE DESCRIPTION

IDENTIFY & IMPLEMENT MEGAWATT IMPROVEMENT PROJECTS. MEGAWATT IMPROVEMENTS WILL COME IN MANY AREAS. THE FOLLOWING IS AN INCOMPLETE LIST OF ITEMS THAT NEED TO BE ADDRESSED:

- 1) VALVE LEAKAGE MONITORING EQUIPMENT,
- 2) COMPUTER PLANT MODEL (THERMAC/PMAX),
- 3) REACTOR FEED PUMP TURBINE CONTROLS,
- 4) DIGITAL FEEDWATER HEATER LEVEL CONTROL,
- 5) CIRCULATING WATER INSPECTION & REPAIR MODIFICATION,
- 6) ANTI-FOULING COATING IN THE CW SYSTEM,
- 7) INSTALL PERMANENT BIO-MONITORING BOXES ON THE CW SYSTEM, AND
- 8) PROGRAM TO IDENTIFY, REPAIR, AND REDUCE THE NUMBER OF STEAM LEAKS.

OBJECTIVES

- A) ENSURE THAT THE EQUIPMENT THAT COULD AFFECT PLANT POWER OUTPUT IS FUNCTIONING EFFICIENTLY & WILL CONTINUE TO PERFORM RELIABLY.
- B) DETERMINE THE POTENTIAL CAUSES FOR UNIDENTIFIED DECREASES IN PLANT PERFORMANCE.

MGMT. SPONSOR: R. HELME

RESP. ORGANIZATION: TECH SUPPORT

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

DESCRIPTION

INT. # TASK

ACTION SPONSOR

TY513 IDENTIFY OTHER POSSIBLE CAPACITY IMPROVEMENT PROJECTS OR EQUIPMENT RELIABILITY PROGRAMS
 01A
 TY513 EVALUATE CURRENTLY INSTALLED VALVE LEAKAGE MONITORING EQUIPMENT
 02A
 TY513 EVALUATE INSTRUMENTS INSTALLED BY GE DURING POWER UPRATE
 02B
 TY513 EVALUATE ANY OTHER PARAMETERS WHICH SHOULD BE MONITORED
 02C
 TY513 CONTINUE WITH THERMAC TRAINING AND DEVELOPMENT SO MODEL CAN BE USED ON THE PC
 03A
 TY513 EVALUATE PERMANENT FIX TO THERMAC
 03B
 TY513 TRACK PID COMPLETION AND UPDATE INITIATIVE EVERY QUARTER TO ENSURE COMPLETION/IMPLEMENTATION BY END OF THREE YEAR PERIOD.
 04A

R. HELME
 R. HELME
 R. HELME
 R. HELME
 R. HELME
 R. HELME
 R. HELME

123 DAY([REDACTED]
 31 DAY(S) [REDACTED]
 31 DAY(S) [REDACTED]
 32 DAY(S) [REDACTED]
 457 DAY([REDACTED]
 92 DAY(S) [REDACTED]
 915 DAY(S) [REDACTED]

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: IMPROVE PLANT HVAC SYSTEMS

NUMBER: TY514

PRIORITY: MEDIUM

FOCUS AREA: SYSTEM RELIABILITY & MATERIAL CONDITION

RELATED GOALS: SALP

REFERENCE FOR NEED: NRC 92-12, 92-15; NAD 5/92

INITIATIVE DESCRIPTION

THE UPGRADING OF PLANT HVAC SYSTEMS IS NEEDED TO RESTORE DESIGN AND IMPROVE SYSTEM PERFORMANCE. HVAC SYSTEMS FOR THE CONTROL BUILDING, REACTOR BUILDING, TURBINE BUILDING, DG BUILDING, TSC/EOF, AND THE RADWASTE BUILDING ARE INCLUDED WITHIN THE SCOPE OF THIS INITIATIVE.

OBJECTIVES

- A) RESTORE SYSTEMS TO DESIGN CONDITIONS IN ORDER TO ENSURE PROPER COOLING OF EQUIPMENT AND PERSONNEL, CONTROL OF RADIOACTIVE CONTAMINATION AND MAINTENANCE OF PROPER BUILDING PRESSURES.
- B) ESTABLISH IMPROVED METHODS TO TEST AND MAINTAIN HVAC SYSTEMS.










MGMT. SPONSOR: R. HELME

RESP. ORGANIZATION: TECH SUPPORT

REVISION NO: 00

AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INI.# TASK	DESCRIPTION	ACTION SPONSOR	
TY514 01A	PERFORM WALKDOWNS TO IDENTIFY NEEDED IMPROVEMENTS IN SYSTEM COMPONENT LABELING, EDBS DATA ENTRY, AND PLANT DRAWING CHANGES.	R. HELME	181 DAY(S) 
TY514 G2A	CONDUCT FLOW TESTING, ADJUSTING, AND BALANCING OF EACH SYSTEM.	D. MOORE	547 DAY(S) 
TY514 02B	TECH SUPPORT ASSIST IN CONDUCTING FLOW TESTING, ADJUSTING, AND BALANCING OF EACH SYSTEM.	R. HELME	547 DAY(S) 
TY514 02C	NED EVALUATE HVAC REQUIREMENTS AS A RESULT OF FLOW TESTING, ADJUSTING, BALANCING OF EACH SYSTEM.	J. LEININGER	730 DAY(S) 
TY514 03A	UPGRADE MATERIAL CONDITION AND DESIGN DEFICIENCIES OF SPECIFIC COMPONENTS THROUGH CORRECTIVE MAINTENANCE AND DESIGN CHANGES.	R. HELME	912 DAY(S) 
TY514 03B	NED SUPPORT RESOLUTION OF UPGRADE MATERIAL AND DESIGN DEFICIENCIES.	J. LEININGER	912 DAY(S) 
TY514 03C	UPGRADE MATERIAL AND DESIGN DEFICIENCIES.	D. MOORE	912 DAY(S) 
TY514 04A	IDENTIFY APPROPRIATE PREVENTATIVE MAINTENANCE TASKS, PERIODIC TESTS, AND MAINTENANCE SURVEILLANCE TESTS NEEDED TO VERIFY PROPER MAINTENANCE AND TESTING OF SYSTEMS AND COMPONENTS.	R. HELME	365 DAY(S) 
TY514 05A	ESTABLISH AND IMPLEMENT THE PROCEDURES FOR THE PM, PT, AND MST IDENTIFIED.	R. HELME	365 DAY(S) 

BNP THREE-YEAR PLAN
INITIATIVE IDENTIFICATION WORKSHEET

TITLE: FIRE PROTECTION UPGRADE PROJECT
NUMBER: TY515 PRIORITY: MEDIUM
FOCUS AREA: SYSTEM RELIABILITY & MATERIAL CONDITION
RELATED GOALS: MILS/KWH; UNIT CAPABILITY FACTOR; SALP
REFERENCE FOR NEED:

INITIATIVE DESCRIPTION














ASSURE ALL FIRE PROTECTION COMMITMENTS ARE IDENTIFIED AND ASSESS
LEVEL OF CODE COMPLIANCE.

OBJECTIVES

TO ASSURE THAT FIRE PROTECTION IS DESIGNED AND INSTALLED PER CODES
AND BNP COMMITMENTS. ALSO APPLICABLE EXCEPTIONS AND DEVIATIONS WILL
BE IDENTIFIED, EVALUATED AND PROPERLY DOCUMENTED.

MGMT. SPONSOR: R. HELME RESP. ORGANIZATION: TECH SUPPORT
REVISION NO: 00 AS OF: 15-DEC-92

BNP THREE-YEAR PLAN

INT.# TASK	DESCRIPTION	ACTION SPONSOR	
TY515 01A	REVIEW/RESEARCH AVAILABLE DATA BASES AND DOCUMENTS FOR APPLICABLE COMMITMENTS.	R. HELME	91 DAY(S) 
TY515 02A	PLANT TRIPS/COMMUNICATIONS WITH OTHER UTILITIES.	R. HELME	60 DAY(S) 
TY515 03A	EVALUATE/RESOLVE COMMITMENT DISCREPANCIES.	R. HELME	91 DAY(S) 
TY515 04A	UPDATE/REVISE/ISSUE PLP 1.1, FIRE PROTECTION COMMITMENT DOCUMENT.	R. HELME	63 DAY(S) 
TY515 05A	REVISE/ISSUE BNP FIRE PROTECTION DOCUMENTS PROCEDURES AS REQUIRED.	R. HELME	334 DAY(S) 
TY515 06A	NED SUPPORT FIRE PROTECTION UPGRADE PROJECT.	J. LEININGER	1095 DAY(S) 
TY515 06B	OPS SUPPORT FIRE PROTECTION UPGRADE PROJECT.	K. AHERN	1095 DAY(S) 
TY515 06C	REGULATORY COMPLIANCE SUPPORT FIRE PROTECTION UPGRADE PROJECT.	S. FLOYD	1095 DAY(S) 
TY515 06D	SECURITY SUPPORT FIRE PROTECTION UPGRADE PROJECT.	C. LEWIS	366 DAY(S) 
TY515 07A	DEVELOP WALKDOWN PROCEDURES.	R. HELME	62 DAY(S) 
TY515 08A	VERIFY PHYSICAL CONFIGURATION VS CODE.	R. HELME	366 DAY(S) 
TY515 09A	IDENTIFY/EVALUATE DISCREPANCIES.	R. HELME	118 DAY(S) 
TY515 10A	INITIATE CORRECTIVE ACTIONS (E.G. EER, ACR, PID, ETC).	R. HELME	61 DAY(S) 

MAJOR PROJECTS

THREE YEAR PLAN PROJECT LISTING

MAJOR PROJECTS

PID NUMBER	PROJECT TITLE	RESPONSIBLE MANAGER
00912A	UPGRADE REPLACEMENT EQUIPMENT TO NUREG 0588, CAT I REQUIREMENTS	RICH DELONG
00912D	ROSEMOUNT TRANSMITTER REPLACEMENT	ED CATHEY
01536A	RESTORE CATHODIC PROTECTION SYSTEM FOR THE CIRCULATING WATER SYSTEM AND INTAKE STRUCTURE	RICH DELONG
01538A	SERVICE WATER SYSTEM PIPING PHASE III	CHRIS HUGHES
01757A	PROCESS COMPUTER REPLACEMENT	BEN WHITE
02164A	CORE THERMAL UPRATE	ED CATHEY
02317A	REPLACE SHAFT DRIVEN OIL PUMP FOR REACTOR FEEDPUMP TURBINE WITH MOTOR DRIVEN PUMP(S)	DENNIS COOPER
02535A	CONTROL ROD BLADE REPLACEMENT/DISPOSAL (INCLUDES G0146A FOR DISPOSAL OF OLD)	TONY PRIEST
03088A	CONTAINMENT ATMOSPHERIC CONTROL-DILUTION SYSTEM UPGRADE	DENNIS COOPER
04031A	RESIDUAL HEAT REMOVAL HEAD SPRAY REMOVAL	CRAIG MARCH
04042A	SEISMIC QUALIFICATION OF EQUIPMENT-NUREG 1030	ROY JOHNSON
04270A	STANDBY LIQUID CONTROL RELIEF VALVES	DENNIS COOPER
04688A	FEEDWATER CONTROL SYSTEM REPLACEMENT	ED CATHEY
04828A	FLOOR DRAIN FILTER RETROFIT	CRAIG MARCH
04830A	MAINTAIN THE BSEP ENVIRONMENTAL QUALIFICATION PROGRAM	SHEALY SMITH
05092A	REACTOR BUILDING INSTRUMENT RACK REPAIR/UPGRADE	ED CATHEY
05503A	HP 5A FEEDWATER HEATER REPLACEMENT	DENNIS COOPER
05644A	AC VOLTAGE DROP ANALYSIS	JIM DIETRICK
05806A	RADWASTE EFFLUENT RELEASE LINE REPLACEMENT	ROY JOHNSON
06094A	COOLING UPGRADE FOR DRYWELL, REACTOR BLDG AND FUEL POOL	CHRIS HUGHES
06202A	OFF-GAS DRAIN TANKS RESERVOIR	CRAIG MARCH
06407A	IMPROVE REFUEL FLOOR FIRE DETECTION ACCESSIBILITY	CRAIG MARCH
07148A	REPLACE HPCI, RCIC AND RPS TOPAZ INVERTERS	RICH DELONG
07197A	TEN YEAR INSPECTION OF RECIRCULATING PUMP MOTORS	DENNIS COOPER

THREE YEAR PLAN PROJECT LISTING

07250A	ELIMINATE SOURCE AND INTERMEDIATE RANGE MONITOR NOISE SPIKES	ED CATHEY
07539A	OFF GAS VALVE TORQUE INVESTIGATION	CRAIG MARCH
07647A	RESOLVE THERMAL BINDING OF RHR F004 VALVES	DENNIS COOPER
07700A	REPLACE OBSOLETE REACTOR BUILDING AND DRYWELL SUMP LEVEL SWITCHES	RICH DELONG
07774A	REPLACEMENT OF OBSOLETE DIESEL GENERATOR JACKET WATER HEATER CIRCULATING PUMPS	CRAIG MARCH
07818A	CONTROL CIRCUIT FOR REACTOR FEEDPUMP SEAL WATER	ED CATHEY
07862A	REPLACE LIGHTING AND COMMUNICATIONS UNINTERRUPTABLE POWER SUPPLY	RICH DELONG
08048A	INSTRUMENTATION SETPOINT AND CONTROL PROGRAM	JIM MCPADDEN
08341A	RPV SHELL TEMPERATURE MONITORING THERMOCOUPLE CABLE REPLACEMENT	ED CATHEY
31377B	SPENT FUEL POOL LEAK REPAIR	RON WILKINS
84070A	SERVICE WATER SYSTEM REPAIRS PHASE II	CHRIS HUGHES
84489B	480-AC MOTOR PROTECTION MODIFICATION	RICH DELONG
84587A	RADWASTE SAMPLING SYSTEM UPGRADE	CRAIG MARCH
B0014A	EMERGENT STRUCTURAL ISSUES	ROY JOHNSON
B0018A	PIPING DESIGN TURNOVER PROGRAM	BILL MONROE
B0019A	DESIGN BASIS RECONSTITUTION	ERIC NORTHEIM
B0075A	STARTUP LEVEL CONTROL VALVE FLOW METER ADDITION	ED CATHEY
BNT622	BNP PLANT BUILDING STEEL	SUSAN VANN
F0025C	EQUIPMENT DATA BASE SYSTEM	ALLWYNE RICHARDS
G0010A	REPLACE E11-F003A-B & F0024A-B WITH GLOBE VALVES	DENNIS COOPER
G0014A	OFF-GAS SYSTEM UPGRADE	CRAIG MARCH
G0017A	DC VOLTAGE PROFILE STUDY	JIM DEITRICK
G0029A	FEEDWATER SPARGER CRACKING ISSUE	ROY JOHNSON
G0050J	DIESEL GENERATOR SERVICE WATER SUPPLY AND DISCHARGE PIPING REPLACEMENT	CHRIS HUGHES
G0050M	SERVICE WATER FLOW TEST INSTRUMENTATION	CHRIS HUGHES
G0051A	SECONDARY CONTAINMENT ATMOSPHERIC MONITOR (SCAM) MODULES AND STEAM LEAK DETECTION SYSTEM UPGRADE	ED CATHEY
G0054A	MAIN STEAM ISOLATION VALVE UPGRADE	DAN MOORE

THREE YEAR PLAN PROJECT LISTING

G0058A	TURBINE UPRATE	ED CATHEY
G0060A	IMPROVE REACTOR BUILDING DIFFERENTIAL PRESSURE INSTRUMENTATION	CRAIG MARCH
G0075A	LOCAL POWER RANGE MONITOR CABLE REPLACEMENT IN DRYWELL	ED CATHEY
G0076A	LOCAL POWER RANGE MONITOR CABLE REPLACEMENT OUTSIDE DRYWELL	ED CATHEY
G0094A	PROVIDE CORROSION MONITORING OF TBCCW	CHRIS HUGHES
G0096A	FUEL POOL GIRDER TENDON INSERVICE INSPECTION	RON WILKINS
G0105A	BWR THERMAL HYDRAULIC STABILITY ISSUE	ED CATHEY
G0110A	ELECTRICAL DISTRIBUTION ADEQUACY/GDC-17	MARTIN DALLA-POZZA
G0119A	REACTOR RECIRCULATION VALVE UPGRADE	DENNIS COOPER
G0140A	UPGRADE SECURITY COMPUTER AND CARD READER	RICH DELONG
G0156A	PROVIDE CONTAINMENT ATMOSPHERE DILUTION SUBSYSTEM DIVISIONAL SEPARATION	RICH DELONG
G0159A	EVALUATE AND TRACK RADIATION INDUCED CHANGES TO THE REACTOR VESSEL SHELL	PHILLIP GORE
G0180A	125/250 VDC BATTERY GROUND DETECTION IMPROVEMENTS	RICH DELONG
G0202A	RECONFIGURATION OF LPRMS FROM GROUPS TO APRMS	ED CATHEY
G0207A	TURBINE BUILDING SMOKE REMOVAL	CRAIG MARCH
G0212A	RHR SERVICE WATER BOOSTER PUMP IMPROVEMENT	CHRIS HUGHES
G0215A	MODIFY DESIGN OF DRYWELL RADIATION MONITORS	ROY JOHNSON
G0218A	MAKE TEMPORARY POWER FEEDS PERMANENT	RICH DELONG
M0066A	REFUEL BRIDGE UPGRADE	TONY PRIEST
M0121E	PROVIDE THERMAL OVERLOAD PROTECTION FOR AC MOTOR OPERATED VALVES	RICH DELONG
P0057A	RESOLVE MISCELLANEOUS HVAC ISSUES	CRAIG MARCH
P0057B	SERVICE AND CIRCULATING WATER INTAKE AREA ENHANCEMENT	CHRIS HUGHES
P0057D	RHR REFURBISHMENT AND PAINTING	WAYNE HAYES
P0074A	INSTALL ANTI-FOULANT COATINGS IN U2 CW SYS	ROY JOHNSON
R0123M	SPENT FUEL POOL COOLING ASSIST-PIPING & PENETRATIONS	ROY JOHNSON
R0123N	RHR CHEMICAL DECONTAMINATION	ROY JOHNSON
S0033B	CCNTROL ROOM UPGRADE	ED CATHEY

Local Power Range Monitor Cable Replacement Outside Drywell

I. PURPOSE AND SCOPE

The purpose of this project is to replace local power range monitor (LPRM) cabling between the drywell penetration and the Control Room power range neutron monitoring cabinet (H12-P608) in order to upgrade the material condition of the LPRMs. Currently, the original LPRM cables that are installed are approximately 18 years old and may affect the operation of the LPRM detectors because of high capacitive losses from age-related degradation.

The scope of this project is to replace all 124 existing LPRM shielded twisted cable pairs outside the drywell between the drywell penetration and the Control Room cabinet with coaxial cable. This installation is in accordance with original vendor design specifications.

The success criteria for this project are to eliminate half-scrams attributed to LPRM spiking caused by degraded LPRM cabling and to eliminate LCOs on the average power range monitors (APRM) due to LPRMs that are inoperable due to degraded cabling.

II. EVALUATION

Schedule Index: 13 - This project will upgrade the material condition and the reliability of the LPRMs. As a result, less LPRM spiking will occur, and the plant will likely experience fewer reactor half-scrams. This, in turn, could reduce challenges to the reactor protection system (RPS). Additionally, LPRMs are the inputs to the APRMs, which are used during emergency operations. Therefore, this initiative affects nuclear safety (0.2 x 32). The half-scrams produced from the LPRM spiking during full power operation have occasionally caused a loss of unit generation. Also, the potential exists for entry into an LCO on APRM operability and subsequent plant shutdown. Therefore, this project corrects deficiencies which could cause a loss of unit availability (0.2 x 12). This project is considered a moderate plant enhancement in that there is improvement in the LPRM maintenance program as a result of an upgraded material condition (0.5 x 8).

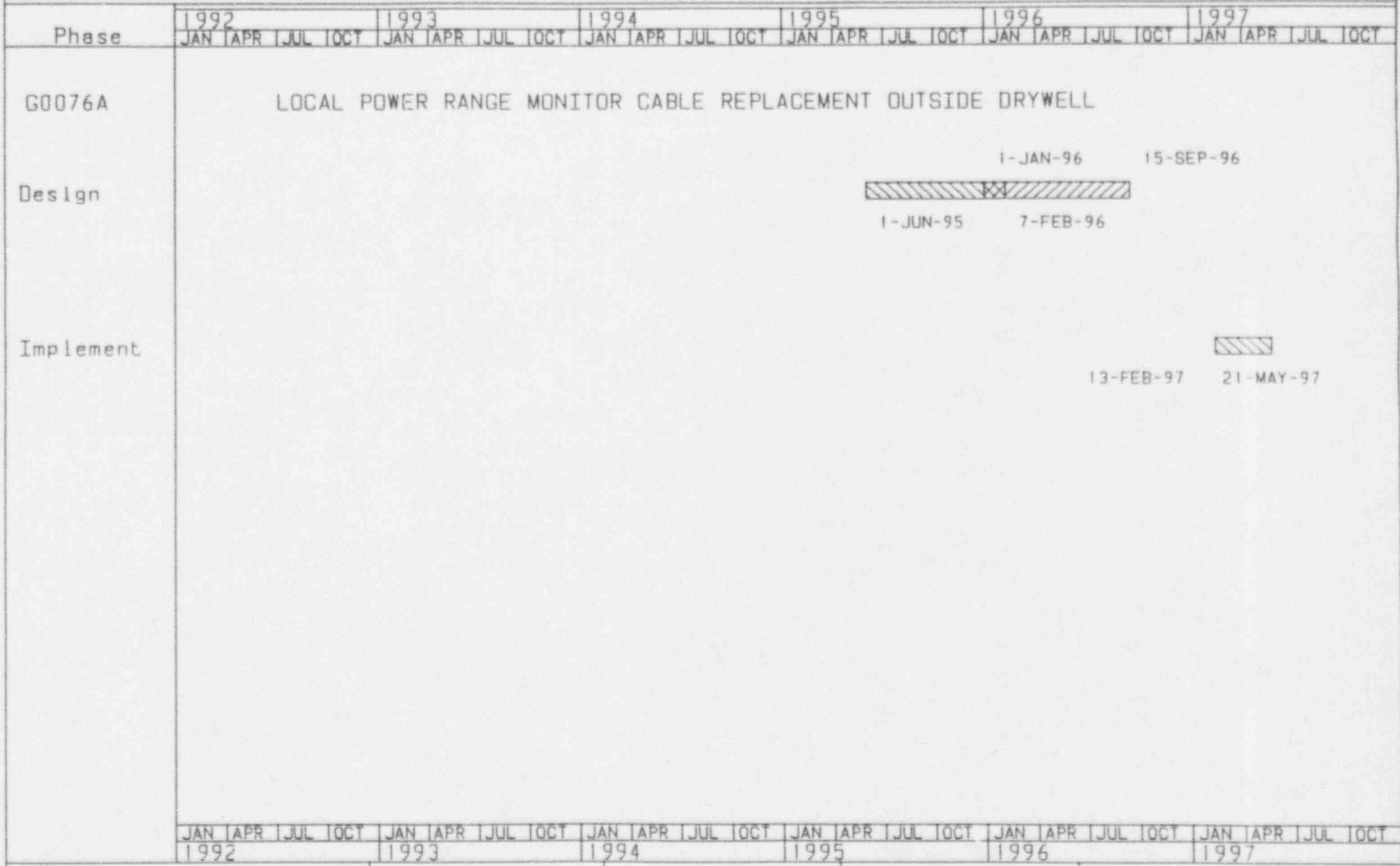
Economic Aspects: This project is expected to avoid unnecessary half-scrams and the associated loss of power generation. Also, it is expected that the long term periodic maintenance costs of the LPRMs will be reduced over the next twenty years.

Other Considerations: This project is related to PID G0075A, Local Power Range Monitor Cable Replacement in Drywell. If there is substantial improvement in the LPRM reliability after implementation of project G0075A, implementation of this project should be re-evaluated.

III. CONCLUSION

This project is scheduled but may not be implemented if project G0075A alleviates the reliability problems associated with the LPRMs. At least one operating cycle is allowed for the evaluation of the effectiveness of project G0075A, which installs new LPRM cabling inside the drywell. This schedule will allow sufficient time to make a careful evaluation as to whether this project actually needs to be completed.

BNP Three Year Plan Project Schedule



★ Commitment Date	Start Finish Common	Start Finish Unit 1	Start Finish Unit 2

Provide Corrosion Monitoring of the TBCCW System

I. PURPOSE AND SCOPE

The purpose of this project is to add corrosion monitoring capabilities to the turbine building closed cooling water (TBCCW) system. This corrosion monitoring will provide a means of quantifying corrosion rates on different materials in the system, particularly those used in the associated heat exchangers. It will also provide an additional input to evaluate the effectiveness of the system water chemistry corrosion control techniques. Currently BNP lacks the ability to monitor corrosion rates in this system.

This project will allow BNP to obtain information on corrosion to anticipate heat exchanger replacements, select best replacement materials, evaluate chemistry control practices, optimize chemical feed rates, and evaluate the impact of off-normal chemistry excursions. The scope of the project also includes the addition of side-stream particulate filtration for the TBCCW system. The temporary filtration units on 38' elevation will become permanent plant equipment.

The TBCCW system corrosion monitoring will also be used as a benchmark for the service water and reactor building closed cooling water systems. The success criterion of this project is that no plant shutdown or reduction in plant cooling capabilities will be caused by a corrosion-related degradation in the TBCCW system.

II. EVALUATION

Schedule Index: 6 - Providing corrosion monitoring for the TBCCW system is a moderate plant enhancement (0.5 x 8). For example, corrosion monitoring will allow trending of the TBCCW system, potentially resulting in a reduction in system corrective maintenance requirements. Also, the addition of permanent side-stream filtration to the TBCCW system will reduce the buildup of suspended solids within the system. Furthermore, this project corrects a condition which potentially could affect unit availability (0.2 x 12). For example, heat exchanger replacement requirements will be anticipated and planned, avoiding significant system functional problems (heat exchanger leaks), and more corrosion resistant materials and internal designs might be selected to minimize the problem in the future. This project has no impact on the nuclear safety attribute because TBCCW is not considered important to safety in the PRA model.

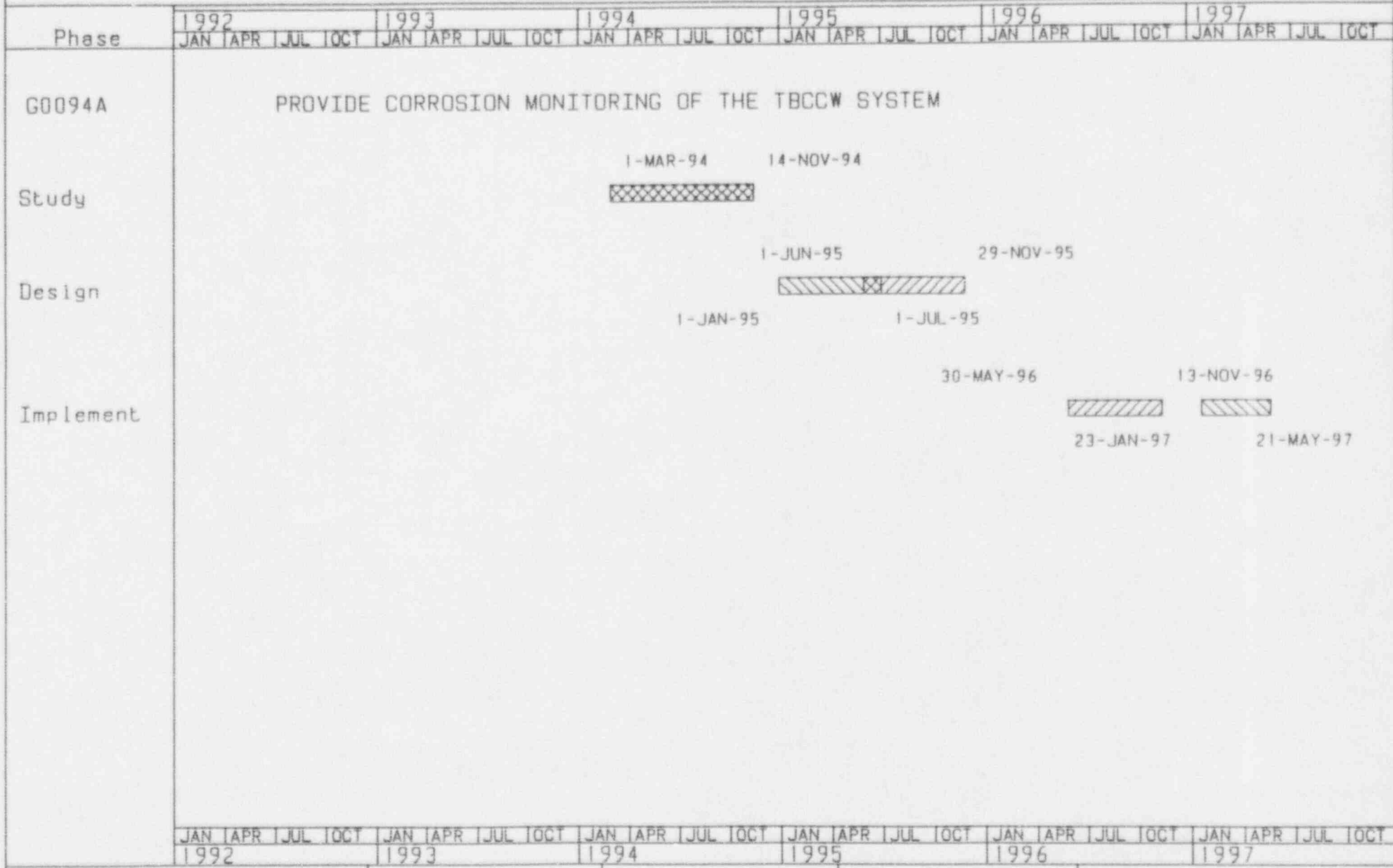
Economic Aspects: To maintain the expected benefits of this project in the future, more chemistry technician time will be needed, assuming increased chemistry treatment and monitoring requirements. However, these costs are expected to be offset over plant life by reduced maintenance and by a potential reduction in forced outages.

Other Considerations: This project is a commitment to the Institute for Nuclear Power Operations (INPO) as a result of INPO finding CY.1-1. Implementation of this project has to be accomplished during an outage.


III. CONCLUSION

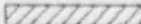
This project will be completed as scheduled to improve the material condition of the TBCCW system. A corrosion monitoring program for the TBCCW system will be established such that corrosion can be monitored and minimized, the need for component replacement can be anticipated, and component life can be optimized through better material selection.


BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Fuel Pool Girder Tendon Inservice Inspection

I. PURPOSE AND SCOPE

Each of the four spent fuel pool girders contains twelve pairs of post-tensioned tendons that serve as primary tension reinforcement for the girders. This project resulted from an NRC inspection report item that has been closed, but further work was initiated to address long term BNP inspection requirements for the fuel pool girders. Potential problem areas to be addressed include:

- loss of prestress force of the fuel pool girder tendons,
- loss of grease from the tendon anchorage grease caps, and
- corrosion of girder tendons.

More specifically, this project is to evaluate the long-term capacity of the girders as a result of the installation of high density fuel racks in the fuel pool, the effects of fuel pool water temperature on the material properties of the tendon wires, the potential for corrosion, and the effects of cyclical loading. The information previously available (i.e., design calculations, specifications, and industry literature) did not indicate that design margins were reduced or compromised; however, there are unknowns that could not be addressed by analysis. Nevertheless, it is felt that the important unknowns will not impact the design margin to current standards. At present, there is no inspection program for fuel pool girders.

The scope of this project involves writing and implementing a specification and procedure to inspect 25 percent of the tendon sample wires, samples of tendon lubricant, and visible areas of girder concrete. Tendon sample wires will be sent to the Harris Energy & Environmental Center for testing and analysis. Upon completion of inspection and testing, data analysis will be done. It is anticipated that a routine inspection and testing program with a periodicity of three to five years will be put in place following the analysis.

This project will initially be considered successful when the fuel pool girder tendon inspection requirements have been identified in the short term and the immediate inspections and adjustments have been implemented. The long term success of this project will be dependent on the ability of the inspection program to control the tendon material condition and to anticipate problems.

II. EVALUATION

Schedule Index: 16 - This inspection and testing project is not expected to affect nuclear safety (0 x 32). Without the inspection and testing to verify the design basis assumptions for the pool with high density storage racks, there may be personnel safety implications from the potential degradation of the fuel pool support girder strength (0.5 x 29). Also, since the original design assumptions could potentially be no longer appropriate and in need of correction, this project represents a plant enhancement (0.2 x 8).

Economic Aspects: This is no direct economic gain from this inspection and testing program. The project expenditure is a charge for economic-loss risk reduction. If a degraded condition is found upon inspection and testing, correcting the problem early could save many times the inspection and testing cost by avoiding expensive repairs.

Other Considerations: The original NRC commitment date for completion of this project, December 31, 1986, was not met. The effort is now scheduled for completion by December 31, 1993.

III. CONCLUSION

Because this project yields a significant benefit in economic-loss risk reduction, it will be accomplished as scheduled.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
G0096A	FUEL POOL GIRDER TENDON INSERVICE INSPECTION																							
Commitment Milestones	<div style="display: flex; justify-content: space-between;"> 31-DEC-86 1-JAN-91 2-APR-92 </div>																							
Study	<div style="display: flex; justify-content: space-between;"> 15-JAN-93 31-DEC-93 </div>																							
Implement	<div style="display: flex; justify-content: space-between;"> 15-JAN-93 31-DEC-93 </div>																							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
	1992				1993				1994				1995				1996				1997			

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

BWR Thermal Hydraulic Stability Issue

I. PURPOSE AND SCOPE

Thermal hydraulic instability oscillations have been detected at some BWRs, potentially causing core local thermal limits to be exceeded for short durations. This indicates that actual thermal margins are not as large as intended in the thermal hydraulic design. As a result, there is some potential of localized fuel damage under some conditions if this phenomenon is not adequately controlled.

The purpose of this project is to increase safety margins relative to BWR thermal hydraulic instability by selecting and implementing one of the BWR Owner's Group (BWROG) Stability Committee's solutions. Selection of a solution for BNP will be made after NRC approval of the BWROG solutions (NRC IE Bulletin 88-07, Supplement 1). This project includes developing BNP system modification alternatives based on the approved solutions, assessing their relative suitability, and implementing the best alternative.

Generic-modification technical development and the associated licensing of the modification alternatives are accomplished through the BWROG. Development and licensing specific to BNP will be completed under this project, which will eventually involve detailed engineering, material procurement, and installation. Currently, there are three modification options for a long term solution: 1) Option IA, Regional Exclusion, which prevents intentional operation in power/flow regions where an instability may occur by initiating either a full reactor scram or a selected rod insert; 2) GE Option III, local power range monitor (LPRM) based oscillation power range monitor, which is a microprocessor-based monitoring and protection system capable of detecting a thermal hydraulic instability, providing an alarm even for small oscillations, and initiating an automatic suppression function (ASF) to suppress an oscillation prior to exceeding safety limits; and 3) ABB Option III, which functions the same as GE Option III (differences between the GE and ABB options relate to hardware and installation methods).

The project implementation may also involve revision and verification of the emergency procedure guidelines (EPG) and improvements to safety related systems such as the reactor protection system (RPS). The success criterion for this project is that the chosen modification and overall implementation adequately address the concerns regarding thermal hydraulic instability margins such that the risk of fuel damage during future operations is minimized.

II. EVALUATION

Schedule Index: 13 - A nuclear safety scaling factor of 0.2 has been selected based on the design alternatives under consideration (0.2×32). However, if the selected alternative involves a design option that increases the potential of plant trips (e.g., additional reactor trip signals), then further PRA evaluation would be required to assess the potential impact on theoretical core damage frequency. This project is also a plant enhancement in that it is expected to help operators manage plant conditions more effectively when the plant is operating in some configurations. This improved control will help operators avoid inadvertent entry into the unstable thermal hydraulic region, thus avoiding unknown localized core conditions and minimizing the potential for unit shutdowns to investigate (0.2×12).



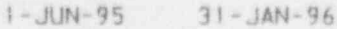
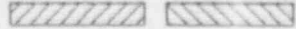

Economic Aspects: Following project completion, routine maintenance costs will likely increase. However, the project and continuing increased maintenance costs will be somewhat offset by the reduced potential for shutdowns due to thermal hydraulic instability.

Other Considerations: It is anticipated that a regulatory requirement will emerge out of the discussions between the NRC and the BWROG about the BWR thermal hydraulic stability issue

III. CONCLUSION

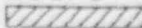
The BWROG has issued bid specifications to vendors and vendor selection is scheduled to occur in 1993. This project will proceed as planned assuming vendor selection remains on schedule.


BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
G0105A	BWR THERMAL HYDRAULIC STABILITY ISSUE																							
Study	<div style="text-align: center;"> 1-MAY-93 21-OCT-93 </div> 																							
Design	<div style="text-align: center;"> 1-JAN-95 2-SEP-95 </div>  <div style="text-align: center; margin-top: 10px;"> 1-JUN-95 31-JAN-96 </div> 																							
Implement	<div style="text-align: center;"> 11-JUL-96 25-DEC-96 </div>  <div style="text-align: center; margin-top: 10px;"> 23-JAN-97 25-JUN-97 </div> 																							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
	1992				1993				1994				1995				1996				1997			

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Electrical Distribution System Adequacy/GDC-17

I. PURPOSE AND SCOPE

As part of the Integrated Action Plan (IAP) that responded to the NRC Diagnostic Evaluation Team (DET) report of September 1989, Item D1 provided for a re-evaluation of the Brunswick electrical distribution system for compliance with 10 CFR 50, Appendix A, General Design Criterion 17 (GDC-17). This criterion requires that the plant emergency systems be able to respond to a loss of coolant accident and a coincident loss of all onsite sources of AC power by having one source of offsite electrical power immediately available. Also required is a second source of offsite power that would be available in time to preclude exceeding fuel thermal limits. For Brunswick, this first source of offsite power to each unit is provided through the respective startup auxiliary transformer (SAT). The second source of offsite power is provided by backfeeding through the unit auxiliary transformer (UAT), which takes several hours to accomplish. In order to meet the current interpretation of GDC-17, a faster way of providing the second offsite source is needed.

In addition to GDC-17 compliance, additional concerns being addressed for the AC electrical distribution system include long term adequacy of switchyard voltage to meet emergency bus voltage requirements, and investigation into improving emergency diesel generator (EDG) Technical Specification (Tech Spec) restrictions through enhancements, which may include an additional onsite emergency power source. Also the non-segregated bus ducts for each unit's existing SAT Y-windings will be upgraded to meet current system ampacity requirements. Related activities for the AC electrical distribution system include reconstitution of the AC electrical analysis and the development of a system design basis document; these related activities are covered under Three-Year Plan initiative TY503 and project 05644A.

A design study is in progress to address the most effective way to meet the current interpretation of GDC-17 and long term voltage adequacy. Changes to be investigated include installation of an additional SAT for each unit and installation of regulators to improve the quality of voltage to safety related busses and loads, particularly during system peak periods. Also, a design study is in progress to address EDG Tech Spec improvement. This design study involves alternative solutions to provide relief (subject to NRC concurrence) for the Tech Spec requirements to shut down both units within seven days of declaring any EDG inoperable. An alternative to be investigated is the addition of a non-safety related diesel generator capable of being manually aligned to one of the four emergency busses.

Successful completion of G0110A, and associated initiative TY508, will result in electrical distribution system design alternatives that meet the current interpretation of GDC-17.

II. EVALUATION

Schedule Index: 40 - This initiative and project contribute significantly to the electrical distribution system defense-in-depth needed to respond to loss of power incidents, resulting in a significant improvement in nuclear safety (1.0 x 32). When completed, the upgrades will assure that the plant electrical system meets the current interpretation of GDC-17 and the associated industry standards. Under certain conditions involving repairs or maintenance to one of the EDGs, plant availability will also be improved by allowing plant operation beyond current LCO limits (0.5 x 12). This increase in maintenance availability plus the somewhat reduced reliance on operation of the EDGs constitute a plant enhancement (0.2 x 8).

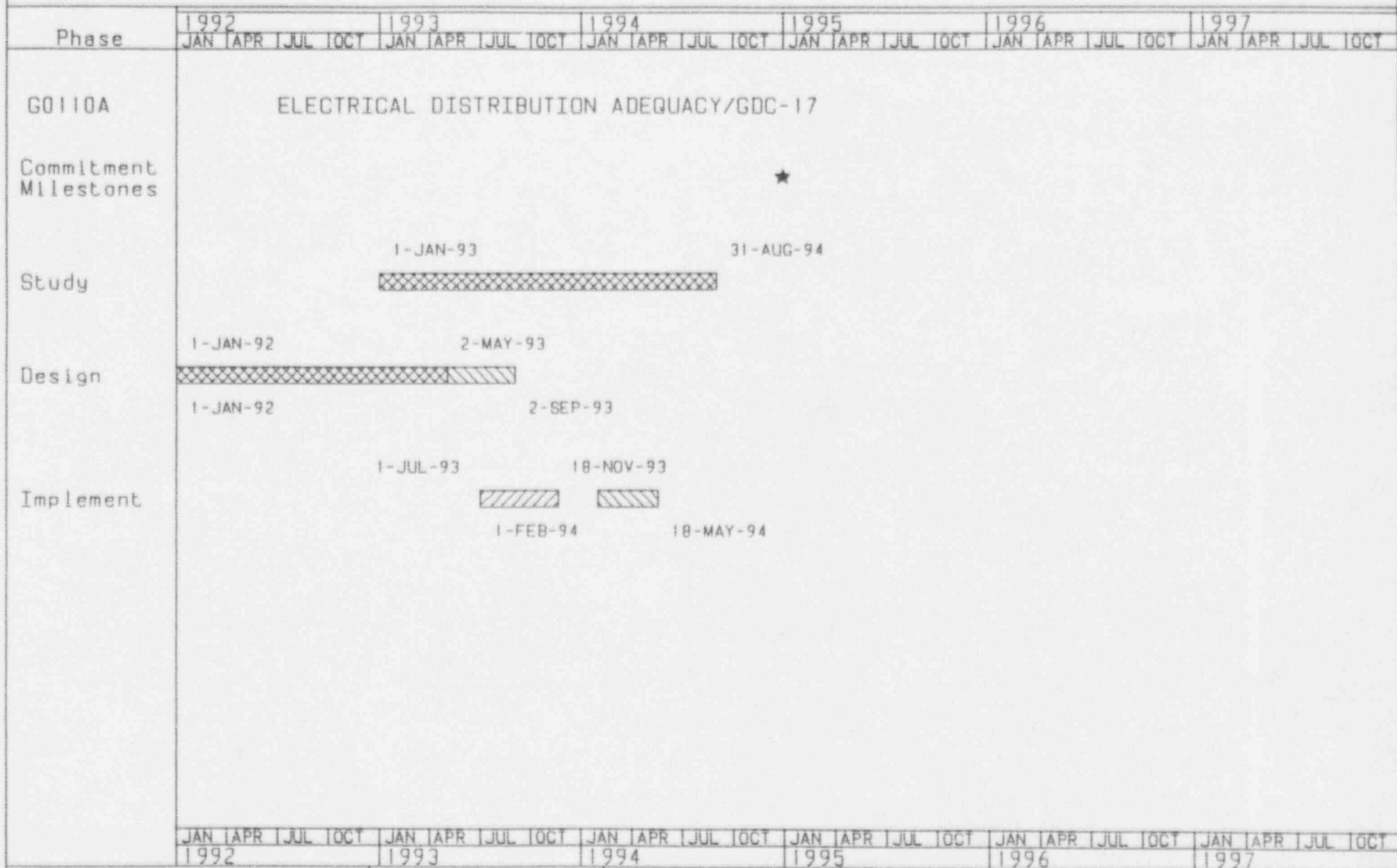
Economic Aspects: This initiative and project will identify design alternatives that will provide increased reliability of safety systems during postulated accidents. In the event of a major accident (however remote), these enhancements could prove to be vital. In addition, availability of units for operation during extended EDG repairs or maintenance over the life of the plant and the increased flexibility in responding to system electrical distribution system problems can be expected to provide continuing financial benefits to offset the cost of future modifications, if any.

Other Considerations: Modifications to the existing SATs and design studies related to GDC-17, Tech Spec relief, and offsite power will be completed prior to CP&L's NRC commitment date of December 31, 1994. Other hardware modifications listed in CP&L's letter NLS-91-341 are being reevaluated. It is likely that modifications, if any, resulting from the design studies will not be complete until after the December 31, 1994 commitment date. It is also likely that some technical specification relief for availability of offsite electrical power sources will be needed for final project implementation.

III. CONCLUSION

Based on the need to comply with the current interpretation of GDC-17, these initiatives and projects will be funded and completed as scheduled. The design studies are currently in the initial stages, so adjustments to the completion date may be needed in order to accommodate outages and other schedule constraints.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Reactor Recirculation Valve Upgrade

I. PURPOSE AND SCOPE

General Electric issued a Service Information Letter that recommended modifications to prevent the recirculation system suction, discharge, and bypass valves from locking up from fluid being trapped in the bonnets. Gate valves have the potential to be rendered inoperable due to valve bonnet pressure creating a high differential pressure across the valve discs, primarily when the valves are closed for some period of time. This can be caused by thermal changes or system depressurization. The modifications involve drilling holes in the upstream side of the valve discs. Procedural guidelines exist that are intended to prevent this hydraulic lock; however, these procedural guidelines are not effective. In the past, the Unit 1 valves have still locked up, and the associated actuator motors have been damaged as a result.

This modification was previously performed on Unit 2 after valve packing leakage from the valves on that unit caused unit shutdown or delayed unit startup. The situation resulted in the redesign of the stuffing box on the Unit 2 valves from a three-stage design to a single stage design. The concern for loose parts stems from the identification of cracks on the valve seats and discs on the Unit 2 valves when the modifications recommended by General Electric were implemented on those valves. The cracks could lead to sections of the discs or seats being sheared off and becoming loose parts circulating through the system.

Thus, the Unit 1 project scope consists of modifying the design of the valve packing, drilling holes to prevent hydraulic locking of the valve discs, and replacing those valve parts identified as being subject to cracking and fracture.

Successful completion of this project will result in the reduction in valve packing leaks, no further hydraulic locking problems, and elimination of cracks in the valve discs and seats.

II. EVALUATION

Schedule Index: 23 - The modifications impact plant availability by removing conditions that could lead to a unit shutdown. The conditions include excessive valve packing leakage or pieces of degraded valve seats circulating through the reactor (1.0 x 12). Upgrading these valves will require personnel radiation exposures of about 60 person-rem. This will be offset by reduced valve maintenance over the remaining life of the plant, resulting in an overall positive ALARA impact (0.5 x 9). Reducing the potential for pieces of valve components to circulate through the reactor and possibly causing significant core blockage could impact nuclear safety (0.2 x 32).

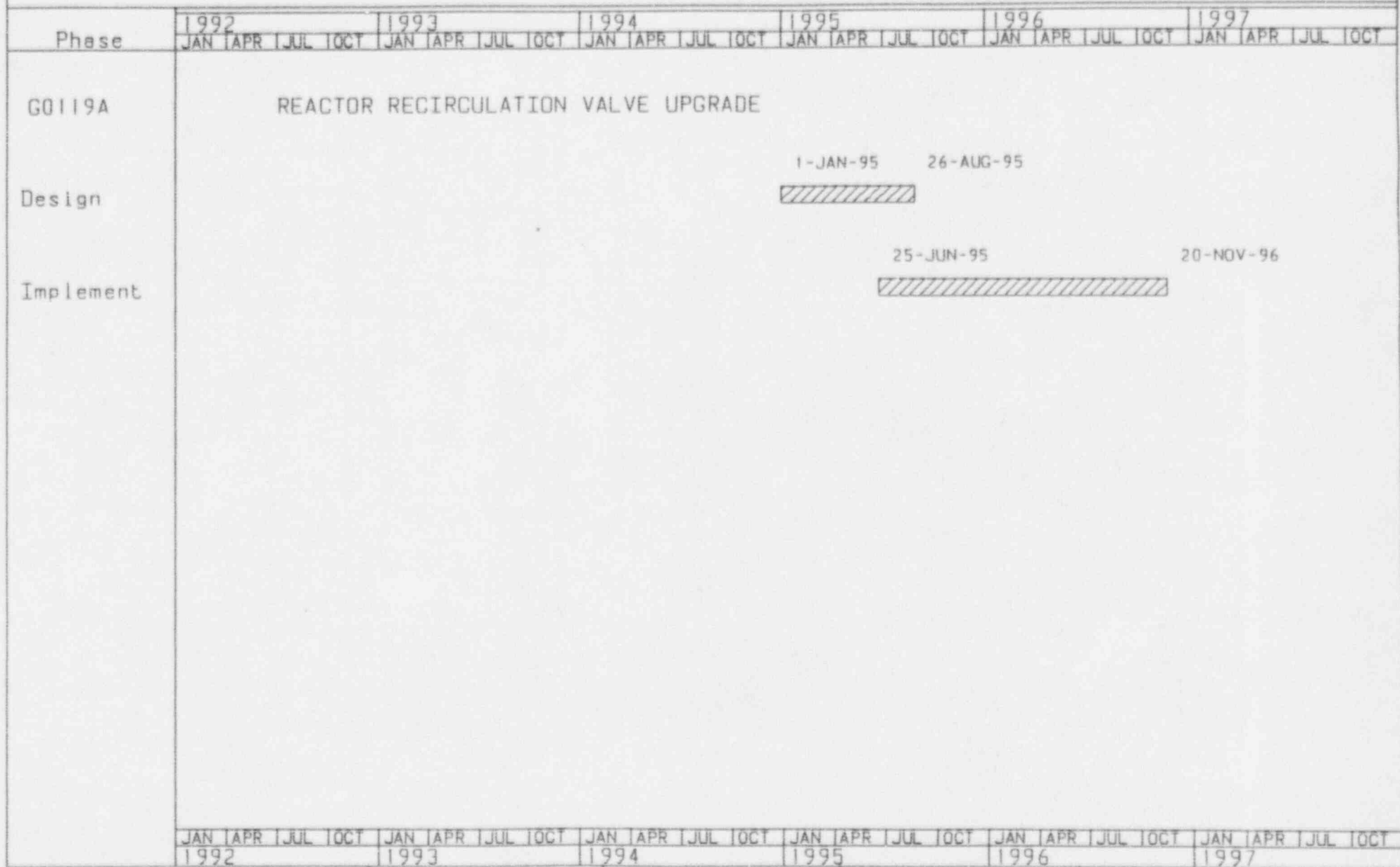
Economic Aspects: The Unit 1 packing leaks are not as severe as those experienced on the comparable Unit 2 valves, and they require less frequent repair. Therefore the potential maintenance related cost savings are less than for Unit 2. However, the modifications will also prevent future incidents of valve hydraulic locking and the resultant actuator motor damage.

Other Considerations: None.

III. CONCLUSION

This project addresses deficiencies in the material condition of valves for the reactor recirculation pumps in Unit 1 that were previously corrected in Unit 2. This project will improve the material condition and operational reliability of the valves, thereby reducing the probability of an unplanned shutdown. The project will be accomplished as scheduled.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Upgrade Security Computer and Card Reader

I. PURPOSE AND SCOPE

Most of the equipment that makes up the Brunswick security system has been in place since original plant construction. Developments in the design and use of such equipment have evolved such that new equipment and systems are available which provide higher reliability and would substantially reduce the types of failures currently experienced. These failures result in potential security problems and require large amounts of resources to compensate and correct. Additionally, the unique design of the Brunswick system is no longer fully supported by the original vendor. Because failures can affect large portions of the security system and because troubleshooting must currently be done at the component level, failures can have a large effect on plant access. This represents an economic risk should failures occur during busy outage periods. Failures could require additional manning of access points.

Specific changes of the system equipment are under evaluation. Potentially, the card reader and access control equipment would be upgraded with replacement of the security host computers, consoles, multiplexors, and card readers (all of which are original plant equipment, with minor modifications made to the computers in 1986). The upgrades will consist of industry standard fault tolerant computers communicating to distributed intelligence multiplexors via high speed fiber optic communication links. A majority of the fiber optic cables, planned for and pulled during previous security modifications, will be used for the multiplexor communication link. During installation of the multiplexors and the monitored devices, security compensatory guard personnel will be required. New access cards will be required for all badged personnel. Additionally, training of computer, maintenance, and security personnel will be required.

System performance, maintenance, spare parts availability, and the reduced reliance on contractor software support will greatly improve the security system. Following installation and an initial trial period, reportable events due to failures of the card reader access control subsystem should decrease to less than one third of that of the three previous years.

II. EVALUATION

Schedule Index: 8 - This project should have no appreciable effect on nuclear safety, personnel safety, unit availability, unit capacity, or ALARA. A high plant enhancement scaling factor is assigned because the expected reduction in security events and reduced nuisance to all badged personnel will result in higher system reliability (1.0 x 8).



Economic Aspects: Increased security system reliability and reduced maintenance and procurement effort for individual repair and routine activities should result. Reliance on contractors for software support will be eliminated. Security, technical, and computer software staff time, along with management attention following failure events, should be significantly reduced. The nuisance impact of access control failures and security events on all badged personnel should decrease.


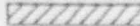

Other Considerations: On the most recent NRC Systematic Assessment of Licensee Performance (SALP), Brunswick was downgraded from a "1" to a "2" in the security area. A verbal commitment has been made to the NRC to implement upgrades to the card readers by December 1993. However, project completion has been extended to June 1994 based on the project's relatively low schedule index.

III. CONCLUSION

Although the schedule index is relatively low, this project is important. Failure of the card reader control subsystem could have a major impact on plant access and require expensive and labor intensive compensatory action.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
G0140A	UPGRADE SECURITY COMPUTER AND CARD READER																							
Commitment Milestones	★																							
Design	1-OCT-92								31-DEC-93															
																								
Implement	1-OCT-92								31-DEC-93															
					1-APR-93								30-JUN-94											
																								
					1-APR-93								30-JUN-94											

★ Commitment Date	Start Finish  Common	Start Finish  Unit 1	 Unit 2 Start Finish
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Provide Containment Atmosphere Dilution Subsystem Divisional Separation

I. PURPOSE AND SCOPE

Wiring and cables for containment isolation valves for the containment atmosphere control/containment atmosphere dilution (CAC/CAD) subsystem are not divisionally separated as required by the FSAR and design requirements, including GDC-41. The present condition affects nuclear safety because certain CAC/CAD containment isolation valves cannot be operated to vent the containment if one division of electrical power is lost. This project studied alternatives and options to resolve the deficiencies with divisional separation, yet retain the ability to vent the containment under post-accident conditions. Resolution was complicated by Generic Letter 89-016, which required plants to have improved venting capabilities.

The recommended solution is to resolve the divisional separation problems with new cabling and physical barriers and to maintain alternate venting capabilities by installing a suppression pool vent path that will allow venting in the event either division of electrical power is lost. This suppression pool vent path will use piping installed as part of the hardened wetwell vent project (G0106A).

Successful completion of this project would be indicated by complete divisional separation of electrical power to the containment isolation valves for the containment atmosphere dilution subsystem of the CAC, along with retention of the ability to vent the containment by means of installing a separate vent path that also meets the requirements for electrical and physical separation.

II. EVALUATION

Schedule Index: 9 - Improving the redundancy and separation of the electrical power for certain valves associated with venting containment provides additional assurance of system operation during post-accident conditions and provides some degree of nuclear safety benefit. (0.2 x 32). The proposed modifications provide plant enhancement benefits by assuring compliance with specified criteria and by improving reliability and assurance of performance (0.5 x 8). A minor negative impact on ALARA results from the exposure incurred in installation (-0.7 x 9).

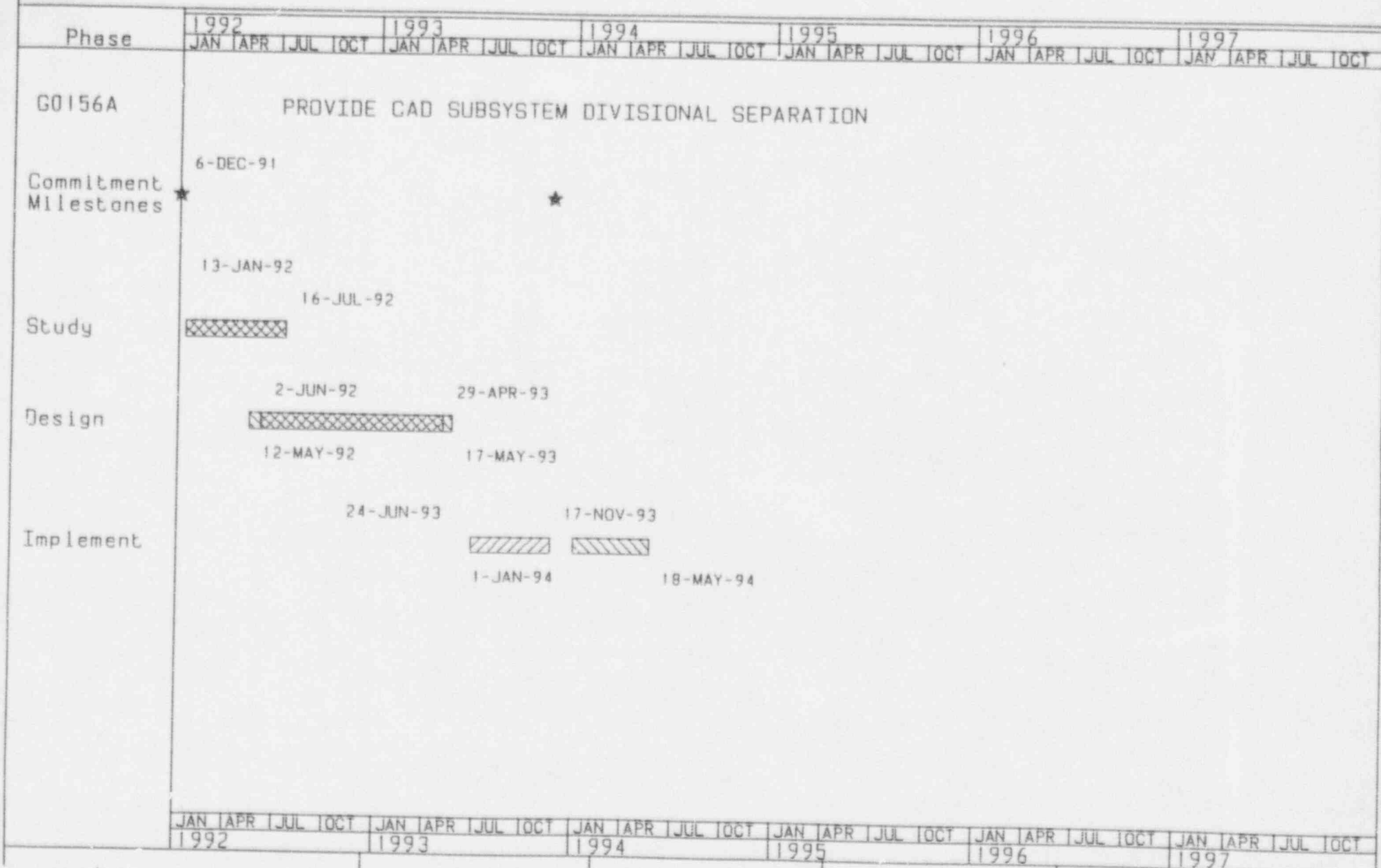
Economic Aspects: This project has no long term economic impacts after the modifications are implemented.

Other Considerations: The proposed modifications will be integrated and coordinated with the hardened wetwell vent project (G0106A), since that project installs a new valve integral to providing the alternate vent path. The deficiencies were originally reported to the NRC in August, 1990 in Licensee Event Report 90-013. CP&L committed to complete corrective actions in outages B109R1 for Unit 1 and in B210R1 for Unit 2. However, the Unit 2 commitment date was not met, and a supplement to LER 90-013 has been prepared. Implementation of the separation modifications is currently scheduled for outages B109R1 and B211R1.

III. CONCLUSION

Maintaining electrical and physical separation is important to assuring that safety-related equipment is reliably powered and is capable of performing its functions when required. Assuring that these requirements are met for containment isolation valves is important from a system safety and reliability standpoint. Therefore, this project will be continued on its current schedule for implementation.

BNP Three Year Plan Project Schedule



★ Commitment Date	Start Finish Common	Start Finish Unit 1	Unit 2 Start Finish
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Evaluate Radiation Induced Changes to the Reactor Vessel Shell

I. PURPOSE AND SCOPE

The purpose of this project is to monitor radiation-induced changes to the reactor vessel shell. This work will include the removal and analysis of the reactor pressure vessel (RPV) in vessel irradiated specimens to determine changes in the material properties and to update the RPV pressure-temperature curves. Table 4.4.6.1.3-1 of the BSEP Technical Specifications requires that the first surveillance specimens be removed from Unit 1 during the refueling outage immediately preceding or immediately following the accumulation of 8 effective full power years (EFPY), and that the first specimens be removed from Unit 2 during the refueling outage immediately preceding or immediately following the accumulation of 10 EFPY.

The project scope will include: 1) removal and analysis of the irradiated specimens; 2) revision, if required, of the Technical Specifications RPV pressure/temperature curves using the data from the irradiated specimen analysis; 3) preparation and submittal of a Technical Specification Change Package for the revised pressure/temperature curves (if required); and 4) tracking of the industry's RPV integrity issues arising from GL 92-01.

The success criterion of this project is NRC approval of the revised Technical Specifications RPV pressure/temperature curves and permitted continued operation of the plant.

II. EVALUATION

Schedule Index: 5 - The purpose of this project is to allow determination of changes in the material properties of the RPV and to update the RPV pressure/temperature curves. Therefore, this project is intended to provide a means to ensure the integrity of the RPV. The BSEP PRA assigns a frequency of $1.0E-8$ per year for an RPV rupture that would render ECCS ineffective. This value is based on NUREG/CR-4550 assessments of current Pressurized Thermal Shock studies of the H. B. Robinson plant. WASH-1400 assigns a value of $3.0E-7$ per year with an upper bound of $1.0E-6$ per year for vessels designed to ASME Sections III and XI. Assuming that failure to remove specimens could result in an increase of the RPV rupture frequency up to $1.0E-6$ per year, the calculated increase in core damage using the BSEP PRA model is about 4%. Therefore, a nuclear safety scaling factor of 0.2 is considered appropriate based on the low impact to core damage frequency (0.2×32). The removal of the in vessel irradiation specimens will result in a net dose expenditure with no expected savings in person-rem (-0.2×9).

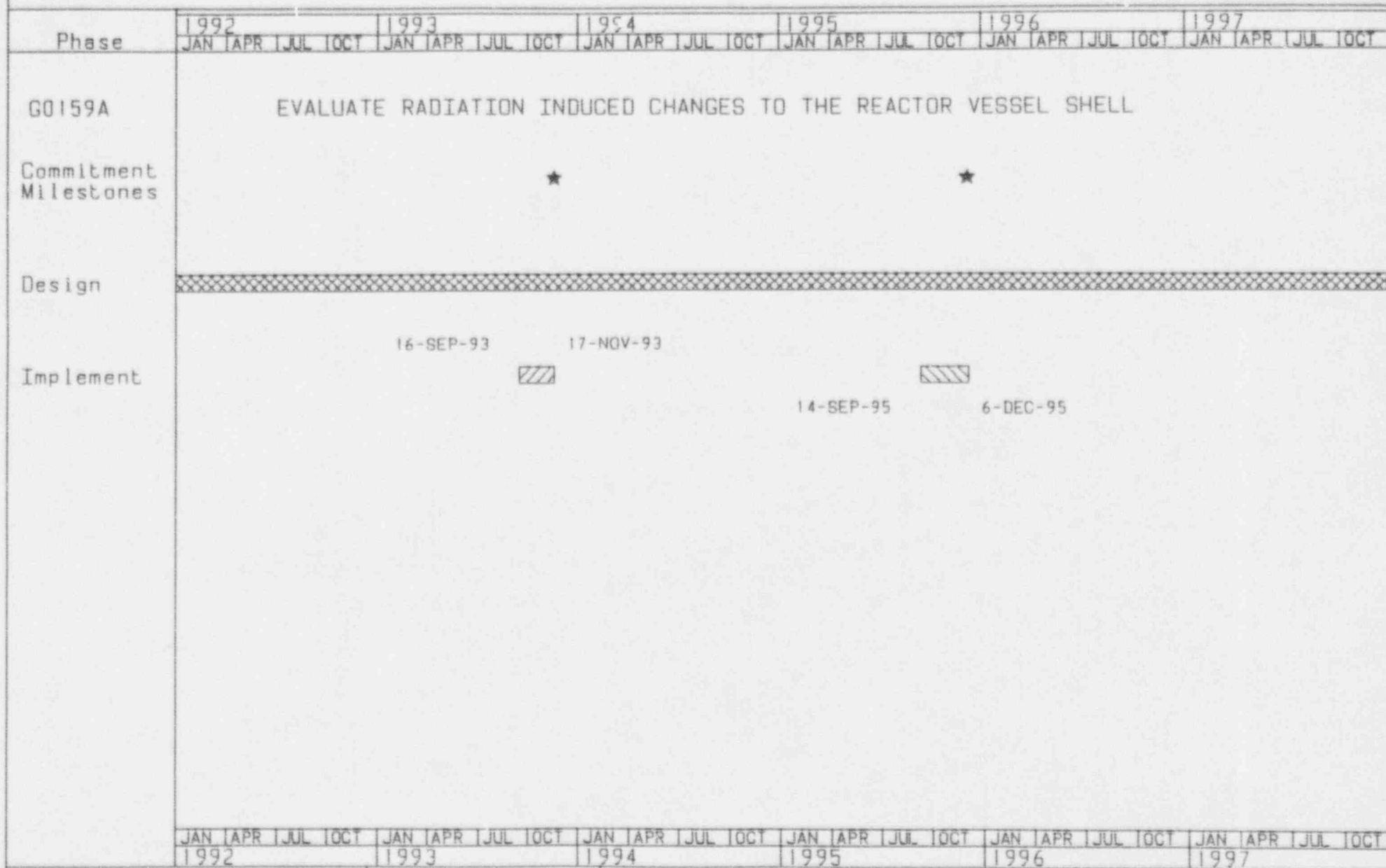
Economic Aspects: There are no long term changes in baseload costs as a result of this project. The net expected benefit of this project is that a more precise RPV pressure/temperature curve will maintain a safe margin of reactor vessel operation and allow continued plant operation.

Other Considerations: To meet its Technical Specification requirement, CP&L has scheduled this project for refueling outages B109R1 for Unit 1 and B212R1 for Unit 2. Training for licensed operators will have to be performed for the revised Technical Specification RPV pressure/temperature limits.

III. CONCLUSION

The project will be performed as scheduled for Unit 1. The Unit 2 schedule date is dependent upon the EFPY attained by B212R1. It is a required license condition to periodically remove the RPV in vessel irradiated specimens, and it is also a necessary means of tracking the material condition of the RPV.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

125/250 VDC Battery Ground Detection Improvements

I. PURPOSE AND SCOPE

Electrical ground detection problems on the 125/250 VDC electrical system have delayed startup and have consumed hundreds of man-hours in repairs and alternative measures to detect and isolate (locate) grounds. The primary cause of these problems is that the 125/250 VDC electrical system ground detectors are inaccurate, unreliable, and obsolete. Repairs to the detectors are costly and difficult to perform since the repairs are performed at the component level and replacement parts are difficult to obtain. Frequent maintenance on ground detectors also increases the potential for creating circuit problems and increases general degradation of the detectors' circuit boards. Deficient and inaccurate control room annunciations have resulted in the need for ground readings to be taken manually on each shift. In addition to these hardware problems, the lack of a firm design basis for the setpoints of the detectors results in numerous man-hour expenditures to trace and isolate grounds that may be of little importance.

This project will provide a technical basis for the ground detection system requirements and will establish reasonable and maintainable annunciation setpoints. The scope of this project also includes researching industry ground detection systems to identify and select the most suitable system. Selection criteria will include maintenance, annunciation, and ground isolation considerations.

Successful completion of this project includes developing a valid setpoint design basis, which is to be accomplished by evaluating the electrical operating values for various DC components and by reviewing industry standards, BSEP system configuration, and the associated PRA implications. The success of the system upgrade will ultimately be measured in terms of man-hours saved on isolating grounds and repairing failed detectors, by a decrease in false control room annunciations, and by a significant increase in the probability of the detectors remaining calibrated.

II. EVALUATION

Schedule Index: 20 - Although AC electrical power is used for most safety-related equipment, DC power is used for certain safety-related equipment and instrumentation in the event of a loss of all onsite and offsite AC electrical power (station blackout). Improved ground detection techniques providing real-time detection and more rapid location of system faults provides more assurance that the DC system will supply power to vital equipment when required, resulting in some positive impact on nuclear safety (0.2 x 32). A major reason for identifying and removing electrical grounds is to provide safe working conditions for personnel and to ensure proper and safe operation of plant electrical equipment. Therefore, improving the reliability of ground detection assists operators in assuring that no unnecessary conditions exist to endanger personnel or plant equipment (0.2 x 29). Improved ground detection and isolation techniques will reduce the effort needed to identify and correct sources of electrical grounds, resulting in a moderate plant enhancement (0.5 x 8). Finally, the capability to more efficiently establish the source of a ground will reduce plant radiological area entries needed to perform ground detection, reducing the personnel radiation exposure currently expended in performing this activity (0.2 x 9).




Economic Aspects: Upgraded ground detection has substantial potential economic benefits. Upgrading of the ground detection system should alleviate the potential for delayed startup due to problems with detecting and isolating DC grounds. The costs that can be saved are evidenced by the approximately 1000 man-hours spent on such activities during a delayed startup of Units 1 and 2 in 1991. In addition, the need to perform manual ground detection could be removed, resulting in additional cost savings and improved productivity.

Other Considerations: None

III. CONCLUSION


Because of the significant benefits this project is expected to yield, it will be accomplished as scheduled.


BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
G0180A	125/250 VDC BATTERY GROUND DETECTION IMPROVEMENTS																							
Study	<div style="text-align: center;">15-OCT-92</div> 																							
Design	<div style="display: flex; justify-content: space-between; width: 80%; margin: 0 auto;"> 4 JAN-93 15-JUL-93 </div> 																							
Implement	<div style="display: flex; justify-content: space-between; width: 80%; margin: 0 auto;"> 9-JUN-93 9-SEP-93 </div> 																							

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Reconfiguration of LPRMs from Groups to APRMs

I. PURPOSE AND SCOPE

The scope of this project is to move the local power range monitors (LPRM) from LPRM Group B to the average power range monitors (APRM) B, D and F. The LPRMs from LPRM Group A could also be added to APRMs A, C, and E. The purpose of moving the LPRMs to the APRM channels is to increase significantly the technical specification operability margin, thus increasing APRM reliability. Another benefit of this modification is for some of the detectors to be left in the core for an additional cycle(s), which would save on the purchase and installation costs of new detector strings. Disposal costs for these detectors would also be decreased since the number of detectors requiring disposal would decrease with increased service life. The overall impact should be a cost savings for the Brunswick Nuclear Plant.

Successful implementation of this project will result in an increase in the reliability of the APRMs and a cost savings for the BNP in the procurement and disposal detector strings. Also, this project would be a significant radiation dose reduction due to fewer LPRM string replacements.

ii EVALUATION

Schedule Index: 8 - Unit availability is increased with the modification of the LPRMs because of the increased reliability that will be achieved for the APRMs to meet Technical Specification requirements (0.5 x 12). The plant is enhanced with the increased operability and reliability of the APRMs (0.2 x 8). Adding LPRMs to the APRMs will increase the reliability of the reactor protection system to monitor reactor power, but will not have an impact on nuclear safety since less than the required number of APRMs invokes restrictive LCOs which can place the reactor in a shutdown condition.

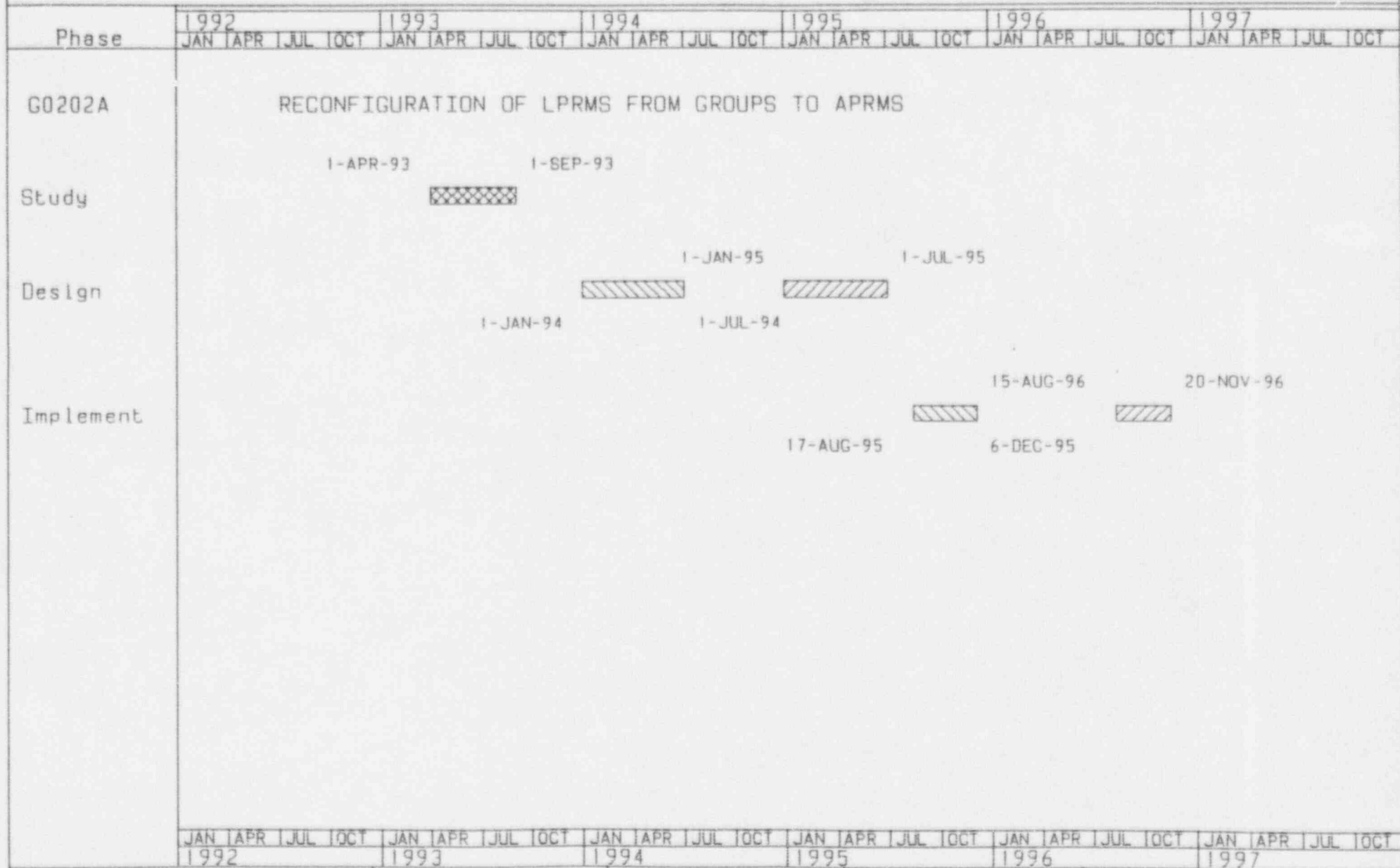
Economic Aspects: This project to reconfigure the LPRMs for APRM channels will extend the life of the detector strings and thus reduce purchase/installation costs for new detectors while also reducing personnel radiation exposure. Additionally, there will be a savings from the reduced number of detectors that have to be shipped to a disposal site.

Other Considerations: Because of the function of these detectors, it is necessary for this project to be performed during an outage.

III. CONCLUSION

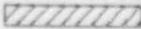
This project improves the reliability of the APRMs and, thus, improves plant availability. Relocation of the LPRMs to APRM channels will also extend the life of the detector strings and reduce the amount of personnel radiation exposure needed for the installation of new detectors. Extending the useful life of these detectors will also reduce the cost for their disposal because fewer new strings will be required. This project will be accomplished as scheduled.


BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Turbine Building Smoke Removal

I. PURPOSE AND SCOPE

A temporary condition was established when the dampers for the power roof ventilators (PRV) were blanked off due to leakage past the dampers. Prior to being blanked off, the gaps in the dampers created a path for the release of unmonitored radioactive effluent from the Turbine Building since there was no capability to monitor radiological releases via the PRVs. In addition to creating a leakage path for air, the degraded dampers allowed rainwater to leak into the Turbine Building, causing operational problems such as generator grounding or electrical shorts, which created safety and unit availability concerns. Blanking off the PRVs and the dampers, while temporarily disabling the PRVs, helps prevent the unmonitored release of radioactivity and helps eliminate the possibility of electrical shock resulting from rainwater leaking onto electrical equipment. However, the corrective action of blanking the PRVs resulted in non-compliance with Section 9.4.5.2 of the Final Safety Analysis Report (FSAR), which takes credit for the PRVs for smoke removal as part of the response to fires in the Turbine Building.

Disabling the PRVs is not a significant ventilation concern since the PRVs are not an integral part of the normal ventilation system. They were initially intended to support a summer ventilation mode when the Turbine Building ventilation was a once-through system instead of a recirculating system as it is now. The PRVs remained in place after the change in ventilation modes, and they were subsequently designated to assist in removing smoke and heat in the event of a fire, per Section 9.4.5.2 of the FSAR. With the temporary condition in place, they are not able to perform that function. However, the PRVs had been under clearance tags for approximately 10 years and have not been relied upon to perform smoke removal functions, primarily because of the possibility of unmonitored releases. The Pre-Fire Plan guidance is to remove smoke from the Turbine Building using portable smoke ejectors.

The purpose of this project is to identify, prepare, and install design solutions to establish a permanent condition that complies with building codes, the FSAR, and the Technical Specifications. The project will prepare develop a resolution that ensures sufficient smoke removal capabilities, allows monitoring of post-fire ventilation releases, seals the ventilation system and Turbine Building during normal operation, and continues to prevent rainwater from entering the Turbine Building.

Successful completion of this project will result in a permanent condition for the PRVs such that the Turbine Building can be maintained at a negative pressure, with no pathways for the release of unmonitored air to the atmosphere and with adequate capabilities for smoke removal via monitored pathways.

II. EVALUATION

Schedule Index: 13 - The schedule index was calculated by evaluating the desired state of the system relative to the current conditions. The level of the schedule index reflects the compensatory actions taken to eliminate the threats to unit availability from grounds caused by leaking water, which would result in a higher scheduling index if this factor was included. The plant enhancement benefits that may be achieved by modifications include removing a temporary condition and updating the FSAR to reflect actual capabilities to respond to fires in the Turbine Building (1.0 x 8). Currently, the requirements for radiological monitoring of effluents produced by smoke removal activities are met by approved plant fire procedures. If this proves insufficient to satisfy Technical Specifications, engineering modifications may be required (0.5 x 9).

Economic Aspects: Following modification, design engineering, material, and installation costs for this project, future maintenance costs associated with the Turbine Building ventilation system would likely increase.

Other Considerations: None

III. CONCLUSION

Despite the relatively low Schedule Index, the project is an important one because it will correct a temporary condition and, therefore, will proceed as scheduled.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
G0207A	TURBINE BUILDING SMOKE REMOVAL																							
Study	<div style="display: flex; justify-content: space-around; align-items: center;"> 1-JAN-94 24-JUN-94 </div> <div style="display: flex; justify-content: center; margin-top: 10px;"> <div style="width: 100px; height: 15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); border: 1px solid black;"></div> </div>																							
Design	<div style="display: flex; justify-content: space-around; align-items: center;"> 1-JAN-95 16-SEP-95 </div> <div style="display: flex; justify-content: center; margin-top: 10px;"> <div style="width: 100px; height: 15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); border: 1px solid black;"></div> </div>																							
Implement	<div style="display: flex; justify-content: space-around; align-items: center;"> 25-FEB-96 18-MAY-96 </div> <div style="display: flex; justify-content: center; margin-top: 10px;"> <div style="width: 30px; height: 15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); border: 1px solid black;"></div> </div>																							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
	1992				1993				1994				1995				1996				1997			

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

RHR Service Water Booster Pump Improvement

I. PURPOSE AND SCOPE

This project replaces the residual heat removal service water (RHR SW) booster pumps with new, standard pumps and, also, repairs or replaces the pump/motor baseplates and skids. Replacement of the pumps will provide new impellers, larger shafts, and improved bearings and pump/motor couplings. The existing pumps were "custom" made for CP&L and are a source of high maintenance. Rebuilds have been performed on the average of every three years for these pumps. Replacement of the original pumps with standard ones will permit easier parts procurement during future repairs. The pump supports also need to be refurbished or replaced to correct anchoring and corrosion problems. These corroded baseplates and skids are contributing to vibration problems. The current condition of the baseplates and skids could impair the ability to support the pump/motor assemblies during a seismic event.

Successful completion of this project will assure reliable operation, reduce vibration problems, and allow easier maintenance of the RHR SW booster pumps/motors in the future.

II. EVALUATION

Schedule Index: 17 - Reduced maintenance and improved operator confidence in the performance of these new pumps are a plant enhancement (1.0 x 8). Replacement of the RHR SW booster pumps and upgrading the baseplates will improve the availability of the RHR SW system to assist in suppression pool cooling/shutdown cooling and prevent liquid radioactive releases to the environment. Additionally, the RHR SW booster pumps can be useful in accident scenarios where alternate injection sources are required (0.2 x 32). Because the existing pumps are custom made and spare parts are not easily obtained, there is the potential for unit availability to be impacted if these new standard pumps are not installed (0.2 x 12).

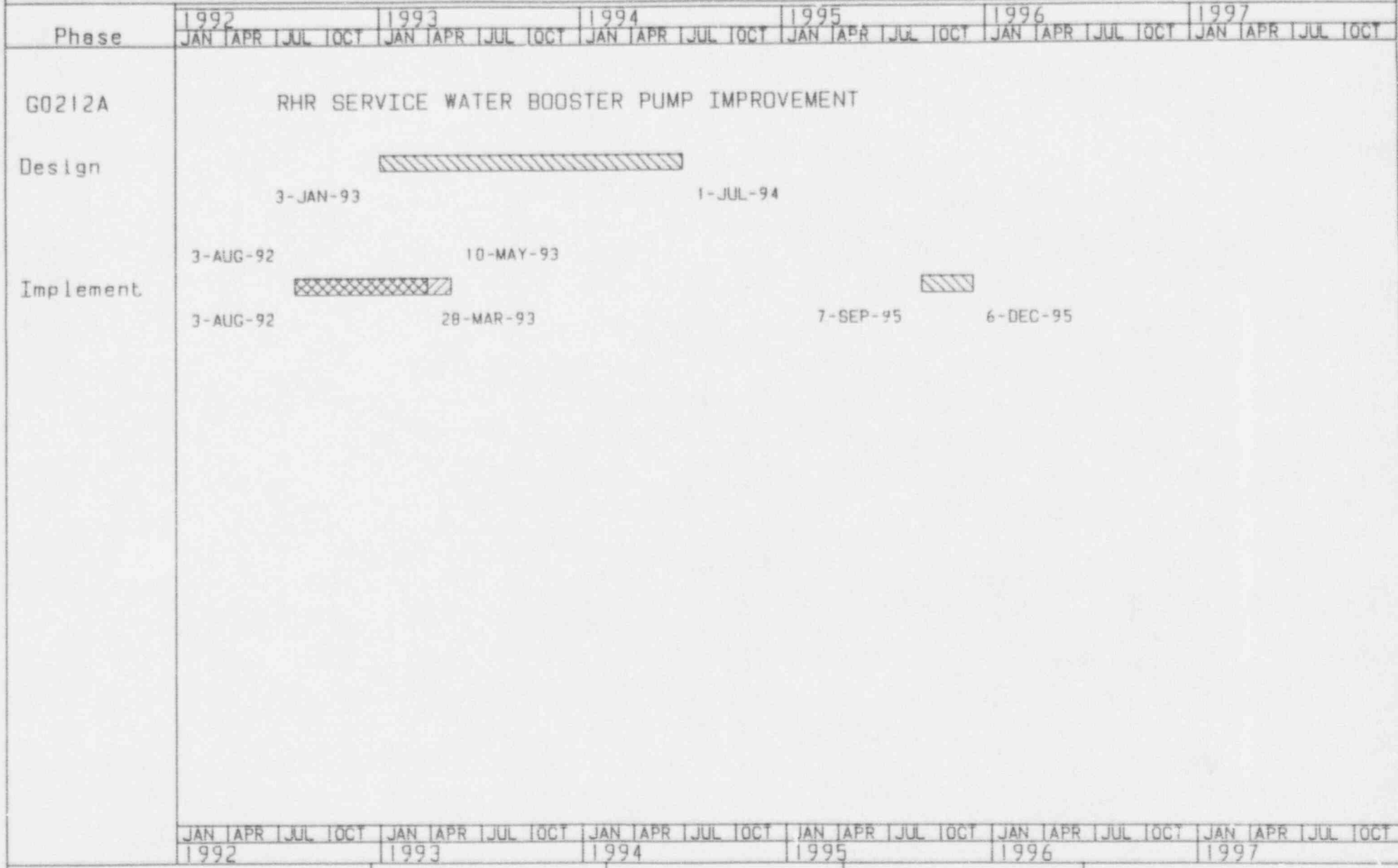
Economic Aspects: After the initial expenditure for pump replacement and baseplate/skid refurbishment, the long term maintenance costs will be reduced, and parts availability will be improved.

Other Considerations: Because of the safety related nature of this system, it is necessary for this project to be performed during an outage and should be coordinated with any other work on this system during this time frame.

III. CONCLUSION

The replacement of the RHR SW booster pumps and the refurbishment of their baseplates will be completed as scheduled.

BNP Three Year Plan Project Schedule



★ Commitment Date	Start Finish Common	Start Finish Unit 1	Start Finish Unit 2
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Modify Design of Drywell Radiation Monitors

I. PURPOSE AND SCOPE

The drywell radiation monitors are required by Regulatory Guide 1.45. There are three monitors installed in each unit. Poor initial design and inadequate configuration control have resulted in several problems with the drywell radiation monitors. Problems include layout inconsistencies with design documentation, concerns regarding proper filter placement and geometry, inadequate air tightness such that oxygen leaks into the drywell, and interference between the filters and detectors.

This project replaces the blower with an alternate pump design to prevent oxygen leakage, redesigns the iodine cartridge filter holder so that the filters do not have to be held in place by duct tape, improves iodine channel detector seals, and installs isolation valves to allow independent maintenance of monitors in order to avoid entry into an LCO when only one monitor requires work. Additional work includes replacement of the strip heaters (used to prevent condensation) with cartridge heaters in order to avoid a personnel hazard, improved thermal insulation to enhance heater effectiveness, improvements in the operability of the check-source motors, removal of obsolete equipment from the monitor cabinets, improvements in equipment supports to reduce vibration, and seismic qualification of the monitor cabinets. If seismic qualification can not be achieved, it may be necessary to procure a new cabinet that is seismically qualified.

Successful completion of this project will result in the elimination of the drywell radiation monitors' associated functional problems.

II. EVALUATION

Schedule Index: 23 - The increased reliability of the three drywell radiation monitors represents a plant enhancement by reducing operations and maintenance personnel workload caused by design deficiencies (1.0 x 8). The drywell radiation monitors are important for the operator in diagnosing small breaches in the reactor coolant pressure boundary. These monitors provide an early indication of leakage. Even though LOCAs are small contributors to the overall core damage risk, the operators' ability to monitor the plant effectively during accident conditions can reduce the burden factor associated with potential subsequent actions (0.2 x 32). Personnel safety is enhanced by using cartridge heaters instead of strip heaters (0.2 x 29). Plant availability is impacted by entering LCOs, which will be avoided through increased reliability and by the installation of isolation valves to allow isolation of one monitor at a time (0.2 x 12).

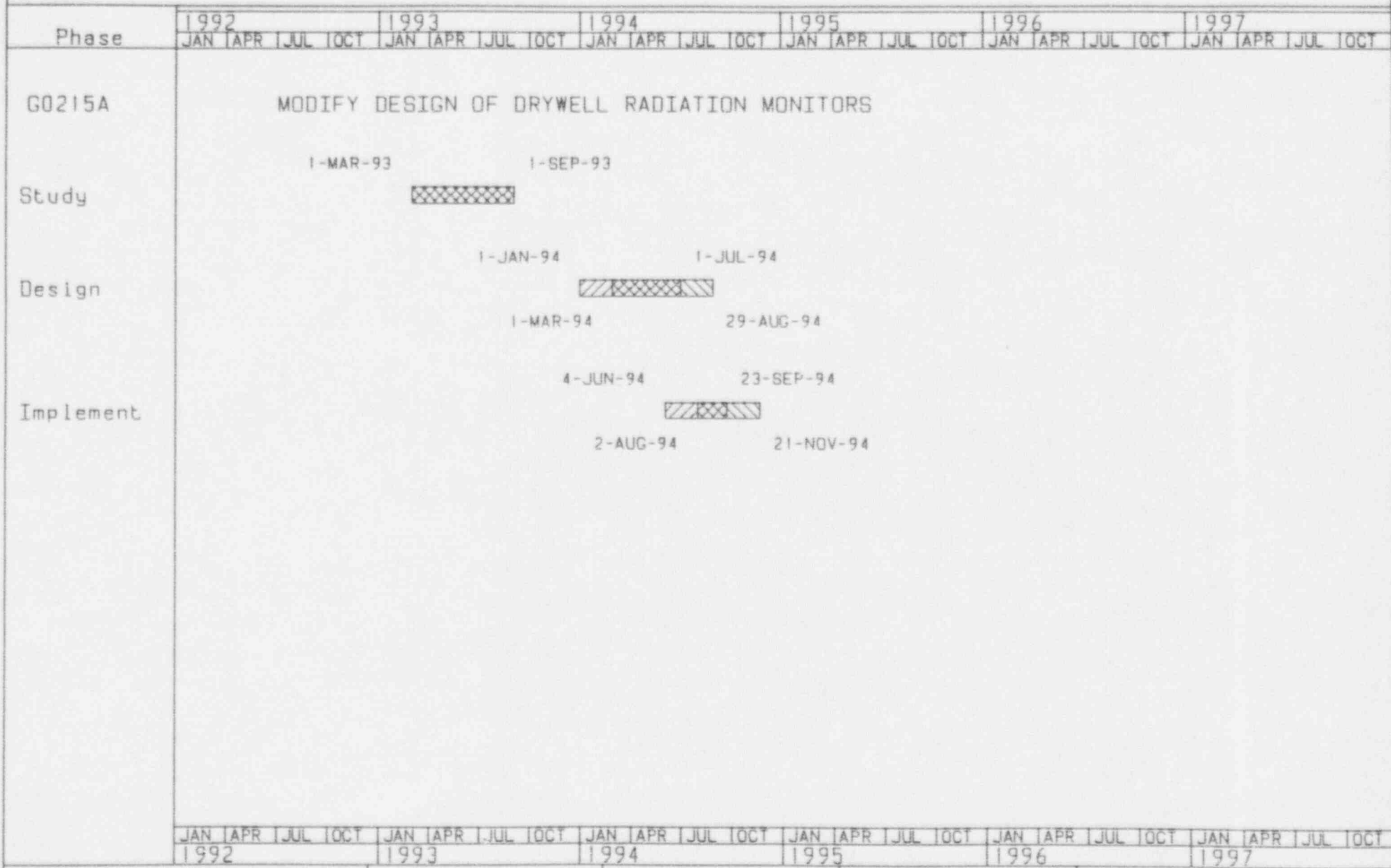
Economic Aspects: This project will reduce maintenance requirements for the three drywell radiation monitors and will reduce the chances of entering an LCO.

Other Considerations: Regulatory Guide 1.45 requires the use of the drywell radiation monitors and requires that they be seismically qualified.

III. CONCLUSION

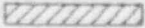
Completion of this project will increase the assurance of adequate, reliable drywell radiation monitoring capabilities and enhance personnel safety. Therefore, this project will proceed as scheduled.


BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Make Temporary Power Feeds Permanent

I. PURPOSE AND SCOPE

This project will make permanent the many temporary power feeds that have been installed under the temporary power procedure, ENP-14. The intent of ENP-14 is to provide temporary power (6 months at a time) where it is needed in the plant and not to provide long term power. At the present time there are a number of loads connected to temporary power feeds that have been connected for years, well beyond the intent of the temporary power feed procedure. In order to allow plant operations to continue in an uninterrupted manner, the loads identified in this project will be made permanent and removed from the temporary feeder supply and temporary power tracking system. Permanent power feeds will reduce the maintenance and tracking costs for the existing temporary feeds and reduce the dose to plant personnel in maintaining such temporary feeds. The risk of electrical shock to plant personnel from temporary cables would also be reduced with the installation of permanent power feeds.

Successful completion of this project will allow temporary power supplies to designated loads to be removed or converted to a permanent, safer, and more reliable system.

II. EVALUATION

Schedule Index: 25 - Temporary power feeds have a potential to cause fires in cable trays. Plant fires are outside the limitations of the current PRA model; however, plant fires represent a concern for nuclear safety since multiple safety-related systems needed to mitigate accidents can be affected by a fire (0.2 x 32). Converting such power feeds to a permanent state will eliminate load tracking and improve/enhance the site power supply (1.0 x 8). Personnel safety is somewhat enhanced with permanent power feeds since this would eliminate the potential for tripping and electrical shock hazards (0.2 x 29). ALARA is moderately improved because the removal of temporary lines would also eliminate the necessity for regular inspection, removal, and installation of those lines in radiation areas (0.5 x 9).





Economic Aspects: After initial installation of permanent power feeds, the long term cost of maintaining temporary power supplies will be eliminated.

Other Considerations: This project can be worked at any time.


III. CONCLUSION

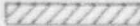
The scheduled installation of permanent power feeds to replace long standing temporary power feeds will improve both plant and personnel safety by reducing the potential for accidental fires and electrical shock hazards. Plant operations will also be enhanced with a more reliable on-site power supply and a reduced work load in tracking, inspecting and replacing temporary power supplies. Therefore, this project will be accomplished as scheduled.


BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
G0218A	MAKE TEMPARARY POWER FEEDS PERMANENT																							
Design	18-APR-92				31-DEC-92				3-JAN-94				25-OCT-94											
																								
Implement	29-NOV-92				31-DEC-92				3-JAN-94				31-DEC-94											
																								
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
	1992				1993				1994				1995				1996				1997			

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Refuel Bridge Upgrade

I. PURPOSE AND SCOPE

Refuel bridge upgrades are required in order to increase reliability and safety during outage critical path defueling and reloading. Malfunctions of various refuel bridge equipment have resulted in outage delays. This project upgrades or replaces the refuel bridge equipment having the most number of failures. For example, this project replaces the mast assembly, platform drive system, control systems, air compressor, and hose take up reels with more reliable equipment. Also, the main hoist motor is being refurbished, the load cells are being replaced with solid state strain gauge type load cells (having a continuous digital readout), and several other reliability enhancements are being made in the compressed air system. Obsolete equipment (X-Y transmitters) will be removed.

This project will be successful when outage delays due to refuel bridge equipment failures are eliminated.

II. EVALUATION

Schedule Index: 28 - Unit availability is affected due to refuel bridge failures extending outage critical paths (1.0 x 12). Refueling operations are outside the limitations of the PRA model since the current model does not consider plant shutdown conditions. Nevertheless, refueling accidents are analyzed in the FSAR and are important to nuclear safety. Since the refuel bridge is used in refueling operations with heavy loads over the core and fuel pool, nuclear safety is impacted directly (0.2 x 32). Personnel safety is also directly impacted due to hoist reliability concerns (0.2 x 29). A reduction in personnel exposure to radiation is expected due to reduced maintenance requirements in the associated radiation areas (0.2 x 9). This project is a plant enhancement since it replaces obsolete equipment and reduces maintenance requirements (0.2 x 8).

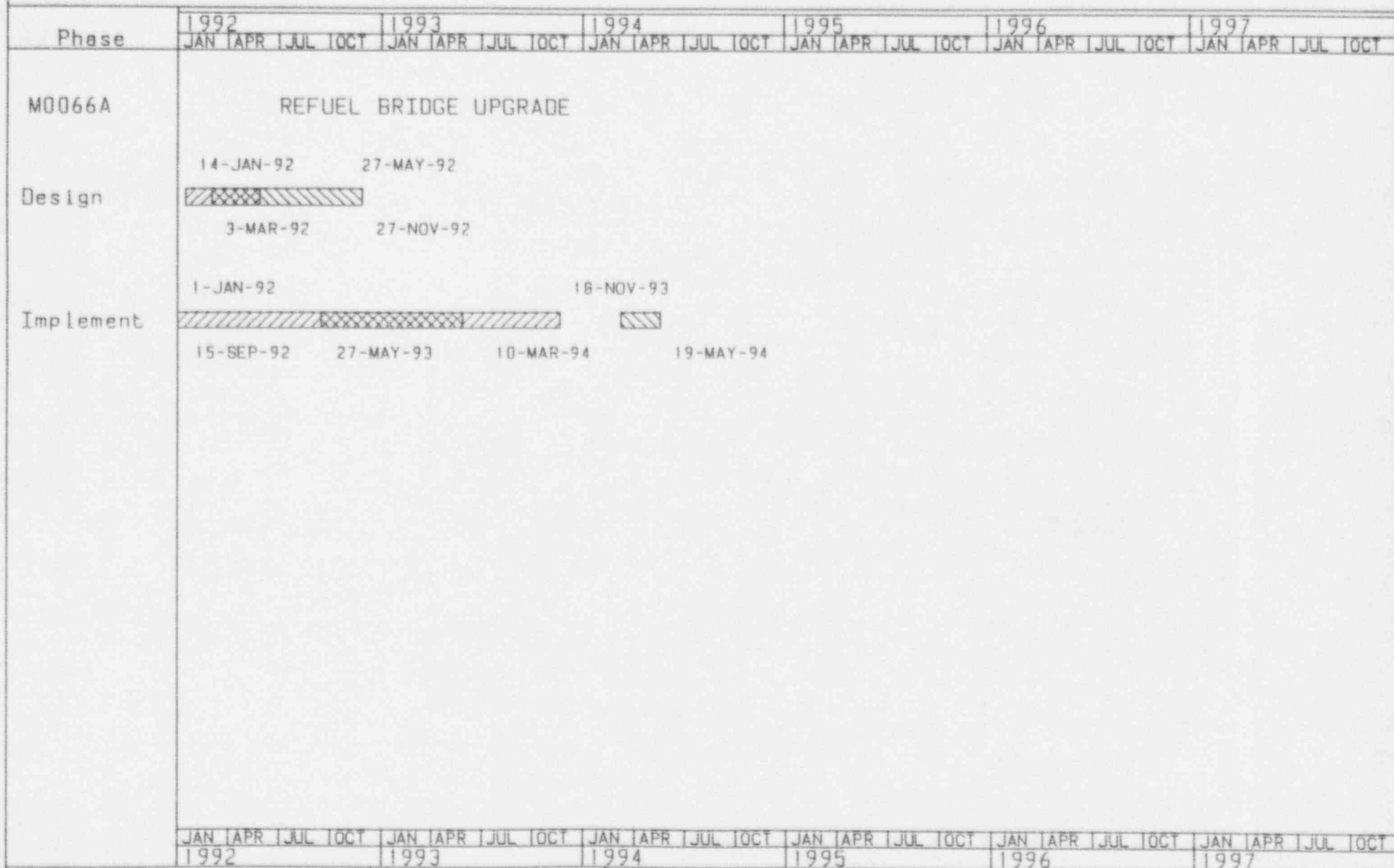
Economic Aspects: Costs due to outage delays and maintenance requirements will be significantly reduced by this project.

Other Considerations: This project does not require an outage to accomplish the physical modifications. This project addresses work on Unit 1 and, under PCN M0067B, work on Unit 2.


III. CONCLUSION


The overall benefits of this upgrade project are significant. This project will be accomplished as scheduled.


BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Provide Thermal Overload Protection for AC Motor Operated Valves

I. PURPOSE AND SCOPE

Thermal overload protection for valve actuator motors addresses one part of the overall program to upgrade the operational reliability of motor operated valves (MOV). Thermal overloads are used to protect the actuator motors from excessive electrical current, especially in the case where the MOV is stuck (either shut or open) and the motor does not have enough power to overcome the problem. Without thermal overload protection, when the valve is stuck, the motor starting currents remain high, severely damaging the motor windings and making manual operation of the valve the only option.

The basis for not using thermal overload protection was the assumption that the use of protective devices (such as thermal overloads) having the capability to interrupt power to safety-related valves would increase the risk that the valves would not operate during accident conditions, assuming the protective devices themselves might malfunction and prevent valve operation. It was considered better to let a motor destroy itself while attempting to operate the valve. The current industry approach and NRC guidance (NUREG 1296, "Thermal Overload Protection for Electric Motors on Safety-Related Motor-Operated Valves") is to assure that motor overload protection is set and maintained in a manner that assures motor-winding protection and, also, avoids spurious valve operation. This approach allows resetting of electrical breakers and, thus, allows another attempt by operating personnel to reposition the valve after the condition causing the stuck valve is corrected.

This project is primarily to install thermal overload protection for motor operated valve AC motors and to replace motor control cabinet breakers which have reached their environmental qualification end of life. To support this project, collateral engineering work is needed to assure setpoint consistency and breaker coordination among the approximately 125 MOVs per unit. Also, once the new setpoints are established, recalculation of the corresponding torque values is required for each valve actuator in order to assure that the valve can be operated under all design conditions without causing spurious thermal overload actuations. All of the affected safety related MOVs and the associated breakers were identified using the Equipment Data Base System, assuring coverage of all of the applicable safety equipment. Examples of systems affected by this project include core spray (CSS), high pressure coolant injection (HPCI), reactor core isolation cooling (RCIC), reactor water cleanup (RWC), reactor building closed cooling water (RBCCW), standby gas treatment (SGT), main steam (MS), and containment atmospheric control (CAC).

This project will be successful when the operational reliability of MOVs improves and valve actuator motors are no longer damaged under stuck-valve (stalled-motor) conditions.

II. EVALUATION

Schedule Index: 28 - This project is directly related to assuring the availability of several safety systems, including residual heat removal, service water, main steam, core spray, high pressure coolant injection, and reactor core isolation cooling (0.5 x 32). Since it has been determined that lack of overload protection has probably resulted in higher MOV motor failure rates at BSEP, this condition has most likely indirectly contributed to plant outages in the past. Consequently, unit availability is enhanced (0.5 x 12) through increased operational reliability of most of the safety-related MOVs. Likewise, this project provides potential plant enhancements (0.5 x 8) by reducing the level of corrective maintenance, post-maintenance testing, and MOV troubleshooting required for a large number of safety-related valves. This is particularly important due to the high impact such work has on outages. Finally, although the project itself will require some additional exposure to radiation during its implementation, reduced levels of MOV inspection, troubleshooting, and maintenance over the rest of the life of the plant are expected to compensate for this (0.2 x 9).

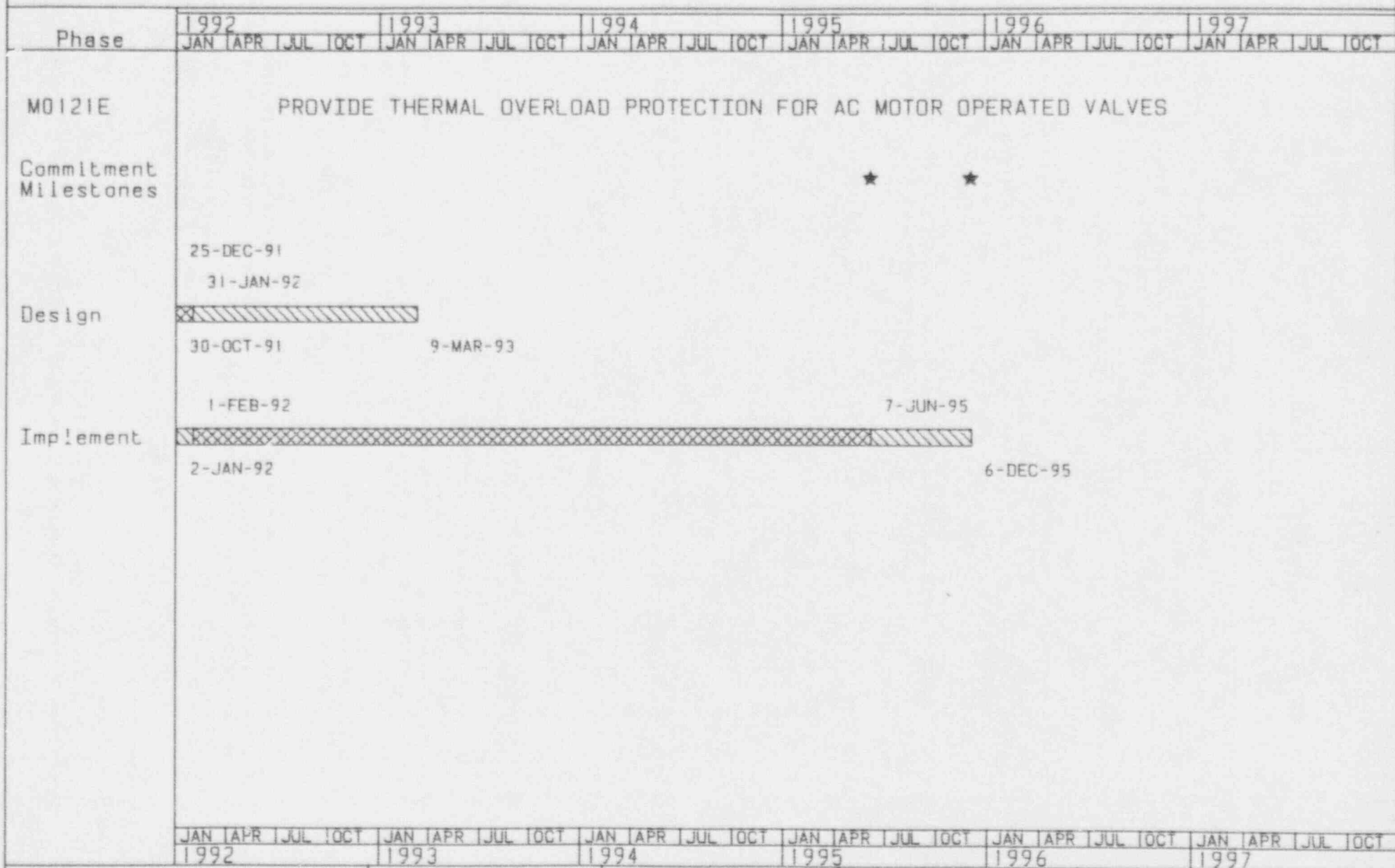
Economic Aspects: Improved plant availability and fewer actuator motor replacements are expected to compensate for the cost of this project. No long term additional costs are anticipated as a result of this project for maintenance except routine preventive maintenance.

Other Considerations: The remaining thermal overload work will be accomplished before the completion of outages B110R1 and B212R1 to fulfill CP&L's commitments to the NRC, and will be coordinated with the more comprehensive MOV work being accomplished under M0121M. Also, this project is related to M0121O, MOV Testing, which is a long term effort and does not directly impact the M0121E thermal overload work.

III. CONCLUSION

This project will be completed before the end of outages B110R1 and B212R1.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Resolve Miscellaneous HVAC Issues

I. PURPOSE AND SCOPE

There are currently numerous open work items for the heating, ventilation, and air conditioning (HVAC) systems at Brunswick. Of these items, the highest priority work pertains to HVAC material upgrades in the Reactor Building and in the Control Building. Noteworthy examples of material conditions requiring resolution under the scope of this project are listed below:

1. Approximately 200 feet of ductwork (100 feet in each Reactor Building) is corroded beyond repair. This corroded ductwork is located in the overhead area of the 20 feet elevation. This corrosion is caused by continual condensation. This duct requires replacement and insulation to preclude future condensation and corrosion. Also, many of the HVAC duct supports are either bent, missing, or loose.
2. The Control Building intake plenum base is corroded throughwall in several places.
3. The Control Building supply and return roll filters (sitewide) do not work properly and have to be manually advanced. Excessive leakage of unfiltered air occurs due to corroded media frames.
4. The Reactor Building supply fan vortex dampers are corroded and obsolete. This corrosion has caused damper binding and has tripped HVAC during the current forced outage. The supply fan discharge dampers have no rubber seals, therefore backflow through idle fan causes reverse rotation of fan blades and a possible fan breaker trip could result when the fan is started.

Successful completion of this project will result in increased HVAC system efficiency and reliability.

II. EVALUATION

Schedule Index: 15 - Upgrading the material condition of HVAC systems at Brunswick will be a significant plant enhancement (1.0 x 8). Correcting the material problems identified within the scope of this project will ensure long term reliability of the HVAC systems. Concerning nuclear safety, HVAC systems are heavily modeled in the PRA. Failure of individual HVAC systems have the potential to fail plant systems. Individual system failures are generally not significant with respect to mitigation of accidents; however, the cumulative effects of the degradation of HVAC systems could result in a negative effect on nuclear safety. It is, therefore, judged that this project will result in an overall low positive effect on nuclear safety (0.2 x 32). HVAC systems in general provide support functions for many plant systems. The inability to cool certain plant areas, particularly the Reactor Building, could result in a loss of unit generation. During the summer months when the temperatures in the Reactor Building are elevated and a loss of Reactor Building ventilation occurs, a potential threat exists for a PCIS Group 1 isolation on high temperature in the MSIV pit. Additionally, cooling components for safety-related equipment (i.e., RHR Room Coolers) have a potential to place the plant in restrictive LCOs. Therefore, this project has a low positive impact on unit availability (0.2 x 12). Performing the work to HVAC systems in the Reactor Building will expend dose since some of the duct which needs replacing is in radiation areas. It is estimated, however, that this dose would be minimal since most of the work would take place during outages. This project would therefore result in a low negative scaling factor for ALARA (-0.2 x 9).


Economic Aspects: The cost of this project will be offset by reduced long-term HVAC maintenance costs and longer, more reliable operation of systems cooled by these HVAC systems.

Other Considerations: There is an NRC commitment associated with a portion of this project - to complete the development of DR 90-0143 related to vortex dampers in the Reactor Building by December 31, 1992. The DR will be completed on the committed schedule.


III. CONCLUSION

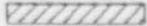
Because of the important effect this project will have on upgrading the material condition of plant HVAC systems and because of the widespread effect that HVAC systems have on other important plant systems, this project will proceed as scheduled.


BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT				
P0057A	RESOLVE MISCELLANEOUS HVAC ISSUES																											
Commitment Milestones	★																											
Implement																												
	1-JUL-92								30-DEC-93																			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
	1992				1993				1994				1995				1996				1997							

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Service and Circulating Water Intake Area Enhancement

I. PURPOSE AND SCOPE

This is a comprehensive project to restore the material condition of the service water system (SWS) and circulating water system (CWS) intake areas and structures. The purpose of the SWS is to provide water from the Cape Fear River for lubrication and cooling of equipment in the Turbine Building, Reactor Building, Diesel Generator Building, chlorination system, and the CWS. The SWS supplies a nuclear header and a conventional header. The purpose of the CWS is to provide water from the Cape Fear River for the main condenser. Due to the relatively humid and corrosive saltwater environment, the physical plant areas and equipment associated with these systems require continued upkeep and preservation. The project includes such work as upgrades to corroded steel structural components, platforms, conduit, cable trays, and handrails; piping repairs and replacement; general repairs to non-corrosive components; refurbishment of instrumentation and control systems; and general area improvements. The objectives of this project are to correct current material problems in the intake areas and to establish effective inspection and maintenance programs that prevent future, significant deficiencies.

The success criteria for this project are that the specified restoration work is completed as planned and that the associated equipment and general areas are returned to a corrosion-free condition.

II. EVALUATION

Schedule Index: 30 - This project is largely a plant enhancement, but it also affects other attributes. Enhancement of the SWS intake area will improve the system's availability in the event of an accident. If this project is not completed and the intake area not maintained on a continuing basis, the increased probability of a single SWS train being out of service would have a moderate impact on overall SWS availability. Since the SWS is designed to cool critical safety system components directly and can be cross-connected to the residual heat removal system in an emergency to provide additional reactor core flooding capability, this system is very important to nuclear safety. Consequently, this project provides moderate improvement in the availability of a highly important core-damage protection system (0.5 x 32). Corroded platforms and handrails are potential sources of personnel injury; therefore, this project will avoid current conditions from developing into a future concern in this area (0.2 x 29). Unit availability could be affected, but the gradual nature of the degradation and the general ability to make temporary repairs make this a low impact (0.2 x 12). Problems in the CWS can lead to loss of flow to the main turbine condenser, requiring turbine shutdown or loss of thermal efficiency (0.2 x 10). In addition, the SWS intake area facilities are frequently and readily identified as deteriorated, and these conditions are an indication of inadequate maintenance (0.5 x 8).

Economic Aspects: Long-term maintenance of these facilities will require additional annual expenditures above previous maintenance efforts. Thus, the base maintenance program will be expanded in parallel with these improvements in order to meet this obligation. Failure to maintain this equipment could lead to more extensive SWS and CWS problems, and potential damage of equipment cooled or served by these systems.

Other Considerations: Even though each unit has its own SWS and CWS, the intake facilities are common to both units and will require outage work to accomplish some of the electrical work, especially for controls. It is expected that a significant portion of the structural work can be done with the units in operation. Nevertheless, some of the structural work may also be more readily accomplished during outages.

III. CONCLUSION

Failure to maintain control of the material condition of the SWS and CWS facilities could lead to system failures requiring plant shutdown. Deterioration of the intake structure and associated equipment is usually gradual enough that any resultant system failures would be identified during normal operations and would primarily affect unit availability and capacity. Therefore, from a nuclear safety perspective, refurbishment and continued maintenance of these facilities is considered to be mandatory but not urgent. Nevertheless, since continued deterioration of these facilities could result in unit shutdowns, this project is being implemented as scheduled.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
P0057B	SERVICE WATER AND CIRCULATING WATER INTAKE AREA ENHANCEMENT																							
Commitment Milestones	★																							
Implement	15-MAY-92												31-DEC-95											
	15-MAY-92												31-DEC-95											

1992				1993				1994				1995				1996				1997			
JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

RHR Refurbishment and Painting

I. PURPOSE AND SCOPE

The current state of the residual heat removal (RHR) system is that some of this safety related equipment is rusting, and the surrounding areas frequently have water covering the floors due to inoperable floor drains. In addition, the walls and floors in the RHR areas have become discolored due to the water intrusion. The scope of this project is to complete cleaning and painting in the north and south RHR and high pressure coolant injection (HPCI) rooms. Because of the amount of work to be performed, the project will continue over several years and will evolve into a long-term maintenance program for upkeep of these plant systems and areas.

Successful completion of this project will protect safety-related equipment from corrosion, keep the floors in these areas dry and clean, and maintain the general area in a state of premier housekeeping condition.

II. EVALUATION

Schedule Index: 1 - Personnel radiation exposure for refurbishing the RHR system is estimated to be over 40 rem in 1992 alone (-1.0 x 9). Preventing corrosion of safety related systems has a small impact for systems of high importance to nuclear safety since this increases the availability of such systems to perform their intended functions (0.2 x 32). Unit availability has the potential to be impacted if safety related systems are not maintained in good condition (0.2 x 12). Refurbishing the RHR system and maintaining good housekeeping will enhance the plant and improve personnel effectiveness (0.2 x 8).

Economic Aspects: The costs of this project are high monetarily and in terms of personnel radiation exposure. However, refurbishment/painting of the RHR & HPCI systems as a part of this project will reduce corrective maintenance in the future.

Other Considerations: Portions of the work for this project can be accomplished during outage and non-outage time periods.

III. CONCLUSION

This project will continue on schedule to refurbish the RHR and HPCI systems and areas. Completion of this project and continued maintenance of these safety systems will prevent conditions that are adverse to plant safety and operations. In addition, the proper housekeeping and maintenance of these systems will improve the plant material condition and prevent plant availability from being adversely impacted.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
P0057D	RESIDUAL HEAT REMOVAL REFURBISHMENT AND PAINTING																							
Implement	<div style="display: flex; justify-content: space-between; padding: 5px;"> 31-MAR-92 31-DEC-94 </div> <div style="text-align: center; margin: 5px 0;"> </div> <div style="display: flex; justify-content: space-between; padding: 5px;"> 31-MAR-92 31-DEC-94 </div>																							

★ Commitment Date	Start Finish Common	Start Finish Unit 1	Start Finish Unit 2 Start Finish

Installation of Anti-Foulant Coatings in Circulating Water System

I. PURPOSE AND SCOPE

The Brunswick circulating water system (CWS), like similar systems at other sites that use once-through saltwater cooling, is subject to fouling due to marine growth (e.g., biofouling). The plant is designed to use chlorination for biofouling prevention. However, system inspection and cleaning each outage indicated that desired levels of biofouling prevention are not being achieved. Excessive biofouling growth on CWS piping and on debris filters of the condenser inlet water boxes impedes flow of circulating water to the condensers causing a reduction in cooling efficiency and a reduction in the generation capacity of the plant. Additionally, chlorine is a gas which represents a major personnel hazard and requires extensive precautions to prevent potential introduction into the control room atmosphere.

This project involves the employment of anti-foulant coatings to reduce biofouling of the CWS. Following favorable testing of coated coupons in the Brunswick intake canal during the primary fouling season in 1991, test sections of three coatings were installed in the Unit 1 CWS inlet piping in early 1992. Following completion of the next Unit 1 operating cycle, the test sections will be inspected and evaluated. Based on the evaluation, an anti-foulant coating system will be selected and applied to the Unit 2 CWS piping, backwash zones, and diversion zone, during a subsequent shutdown. Although not within the scope of this project, it is envisioned that operating experience with the applied Unit 2 anti-foulant will be monitored to assess the feasibility of applying the coating to Unit 1, at a later date. Also, effective results from the Unit 1 coating system will enhance the effectiveness of the use of alternative biocides (PID G0068A) to reduce or eliminate the need to use chlorine.

Successful completion of this project will result in reduced CWS fouling and clogging, reduced defouling activities during outages, and increased plant thermal efficiency.

II. EVALUATION

Schedule Index: 35 - In conjunction with project G0068A, reduction of chlorine gas hazard represents a substantial improvement in personnel safety (0.5 x 29). Reduced fouling and clogging of filters will reduce/eliminate the recurrence of power reductions due to low waterbox level or low condenser vacuum (0.5 x 12). Unit capacity improvements (5 MW/year rough estimate) should result due to reduced degradation of circulation water flow (1.0 x 10). Reduction in the amount of inspection and defouling costs each outage represents an important plant enhancement (0.5 x 8). No appreciable effect is anticipated related to nuclear safety (no impact on use of circulating water for decay heat removal) or to ALARA.


Economic Aspects: The cost of this project will be offset by reduced staff and contractor costs related to inspection and defouling activities, and by the increased revenue resulting from more efficient plant operation.




Other Considerations: Benefits derived from this project will enhance the benefits derived from project G0068A.

III. CONCLUSION

Because this project will have a significant effect on enhancing personnel safety, plant availability and capacity, and because of the favorable cost impact it will have, it will proceed as scheduled.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
P0074A Implement	INSTALLATION OF ANTI FOULANT COATINGS IN UNIT TWO CIRC WATER SYSTEM <div style="text-align: center; margin: 20px 0;">  </div> <div style="text-align: center; margin: 0 100px;"> 3-MAR-94 19-MAY-94 </div>																							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT

★ Commitment Date	Start Finish  Common	Start Finish  Unit 1	 Unit 2 Start Finish
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Spent Fuel Pool Cooling Assist - Piping & Penetrations

I. PURPOSE AND SCOPE

Chemical decontamination of the recirculating system requires a full core offload. Currently, the spent fuel cooling system is not capable of providing cooling for a full core offload until approximately 32 days after shutdown; therefore, the residual heat removal (RHR) system must remain in operation during significant portions of outages in order to provide such cooling. This requirement inhibits RHR system maintenance and prolongs outages. Temporary heat exchangers and cooling towers can be used to supplement the existing spent fuel cooling system and accomplish this cooling function, allowing increased flexibility for RHR maintenance. Since a core offload can be accomplished in about 10 days, the supplemental cooling capability can save about 22 days of outage time.

The scope of this project is to install permanent auxiliary fuel pool cooling system Reactor Building penetrations, piping (10-inch supply and return), and valves. When this project is completed, the permanent piping will reduce the amount of time needed to establish supplemental spent fuel cooling during refueling outages.

II. EVALUATION

Schedule Index: 18 - The use of permanent piping significantly improves the viability of using an alternate spent fuel pool cooling system, allowing RHR system maintenance flexibility during outages; this minimizes the length of refueling outages, increasing unit availability (1.0 x 12). Permanently installed piping minimizes the need to install and remove temporary system piping, reducing radiation exposure (0.5 x 9). The use of permanent piping and the increased availability of the RHR system without extensive temporary cooling system setup work constitute a plant enhancement (0.2 x 8).

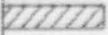

Economic Aspects: The use of permanent piping for supplemental spent fuel pool cooling is more cost effective than the use of temporary piping. Overall, the use of the alternative cooling system for spent fuel cooling allows increased RHR system maintenance and decontamination flexibility, significantly reducing the length of refueling outages.

Other Considerations: The scope of this project is limited to the installation of permanent piping and valves for the supplemental cooling system.


III. CONCLUSION

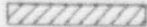
This project will significantly increase the viability of using supplemental cooling of spent fuel, allowing reductions in the length of refueling outages as a result of not having to operate the RHR system for this purpose. The savings are significant, so this project will be completed as scheduled.


BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
R0123M	SPENT FUEL POOL COOLING ASSIST-PIPING & PENETRATIONS																							
Design	<div style="display: flex; justify-content: space-between;"> 1-JAN-92 7-MAY-92 </div> 																							
Implement	<div style="display: flex; justify-content: space-between;"> 9-JUN-93 9-SEP-93 </div> 																							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
	1992				1993				1994				1995				1996				1997			

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

RHR Chemical Decontamination

I. PURPOSE AND SCOPE

Chemical decontamination of the residual heat removal (RHR) system piping is the subject of this project. During their 1991 evaluation of Brunswick, INPO was critical of the plant's high dose rates and encouraged efforts to reduce source terms. Chemical decontamination of the reactor coolant recirculation system (RCR) every refueling outage, and decontamination of other systems such as the RHR system and the reactor water clean up (RWCU) system has also been encouraged by the BNP ALARA Task Force (1990) and the Company's Dose Reduction Plan (September 1990). Inside the drywell, the RCR piping is the primary source of radiation exposure; plans are in place to perform chemical decontamination of the RCR piping during every refueling outage (PID R0123A).

Outside of the drywell, the most significant source term affecting personnel exposure stems from the RHR system. A three year average dose of 76.8 person-rem/year/unit has been attributed to contamination in the RHR system. This dose varies with the level of contamination and the amount of work in the area. Chemical decontamination of the RHR system is expected to be undertaken on an aperiodic schedule, approximately every five years. Currently, it is estimated that the average dose reduction for either unit due to a single RHR chemical decontamination would be as follows:

Year	Dose Reduction
1993	124.0
1994	60.8
1995	55.5
1996	44.8
1997	12.8
	297.9

The dose reduction in the first year is larger than the three year average dose history. This is because much more work in the dose affected area is scheduled to be performed in the period immediately following the chemical decontamination. Much of this work has been waiting for the opportunity to be performed when area doses would be low. Relative to the anticipated dose reduction, decontamination of the RHR system is expected to result in a negligible exposure of 5 person-rem/unit caused by this project.

Aggressive source term reduction is necessary to meet the established goals in the Dose Reduction Plan. This project will significantly contribute to meeting these goals.

II. EVALUATION

Schedule Index: 5 - Any project which is expected to yield in excess of 20 person-rem dose reduction over the life of the plant is given the maximum credit for ALARA impact. This project is expected to produce a dose reduction of almost fifteen times that amount (1.0 x 9). Bringing the Brunswick ALARA record in line with national averages enhances morale. Reducing area radiation levels reduces the time pressure on work completion in radiation areas and reduces the probability of human errors during maintenance and inspection. This is considered a significant plant enhancement item (1.0 x 8). The project is outside the scope of the PRA model (i.e., shutdown). However, the work will be done at an appropriate time and with appropriate alternatives in place such that the unavailability of the RHR system during the decontamination will not result in a significant reduction in nuclear safety (0 x 32). It is possible that an outage may be extended by this activity resulting in a loss of generation for more than 24 hours. This potential yields the maximum negative score for unit availability (-1.0 x 12). This project has no significant impact on personnel/public safety or unit capacity.

Economic Aspects: RHR decontamination will be periodically repeated. The cost/benefit and timing of each decontamination is considered on its own merit. There are no continuing costs from each iteration. The project provides no direct reduction in budgeted dollars but has an estimated value of \$2,980,000 over five years and \$1,240,000 in the first year in calculated dose reduction at \$10,000 per person-rem.

Other Considerations: In addition to accumulated dose reduction, lower dose rates have other positive effects as well. Costs for many other projects are often reduced because fewer trained individuals need to encounter exposure. The need for installation of temporary shielding can be reduced. Open system maintenance and modifications result in less area contamination, decontamination (i.e., wipedown) efforts and minimized potential for internal exposure. RHR system work during outages is often critical path.

This work must be performed during an outage.

III. CONCLUSION

This project will make a significant contribution to dose reduction at BNP (it has a dose reduction dollar value that is many times the anticipated cost). For this reason, it is an important project that will be accomplished as scheduled despite the Schedule Index value, which is low because of the potential risk that this project could extend an outage.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
R0123N	RESIDUAL HEAT REMOVAL DECONTAMINATION																							
Implement					21-APR-92 28-DEC-92								10-FEB-94 18-MAY-94											

Control Room Upgrade

I. PURPOSE AND SCOPE

The purpose of this project is to comply with the Control Room human factors requirements in NUREG-0737, Supplement 1 and resolve human engineering deficiencies (HED) identified by Control Room Design Reviews and in an HED commitment letter NLS-87-123. The modifications correct inconsistencies between control switches, indications, and labels; replace meter and gage scales used to monitor various systems with human-factored instruments; revise annunciator window descriptions to be more understandable; delete spare and unused devices from the control room benchboard; and rearrange indicators, recorders, and control switches more logically. These changes are intended to enhance the operator's ability to respond quickly and accurately to normal and emergency operating conditions.

The desired state at the completion of these modifications is a well-organized, logical Control Room design layout that would reduce the number of operator errors. Success criterion is a reduced number of licensee event reports due to incorrect switch operation or misreading indications in the Control Room.

II. EVALUATION

Schedule Index: 14 - The improvement in the control room design layout is a significant plant enhancement. A better designed layout of system controls and indications will minimize operator errors and improve operator response time to normal and emergency operating situations (1.0 x 8). Upgrading the control room could potentially enhance the operator's ability to respond in an accident condition. For example, control room enhancements that improve the ability to vent containment or to cross-tie emergency buses would have a significant impact on core damage frequency. In addition, certain systems important to safety are being arranged in a more logical fashion from an operating perspective, potentially improving operator effectiveness. However, this initiative does not have a major impact on important human actions in the PRA and thus has a low impact on reducing the probability of core damage (0.2 x 32).

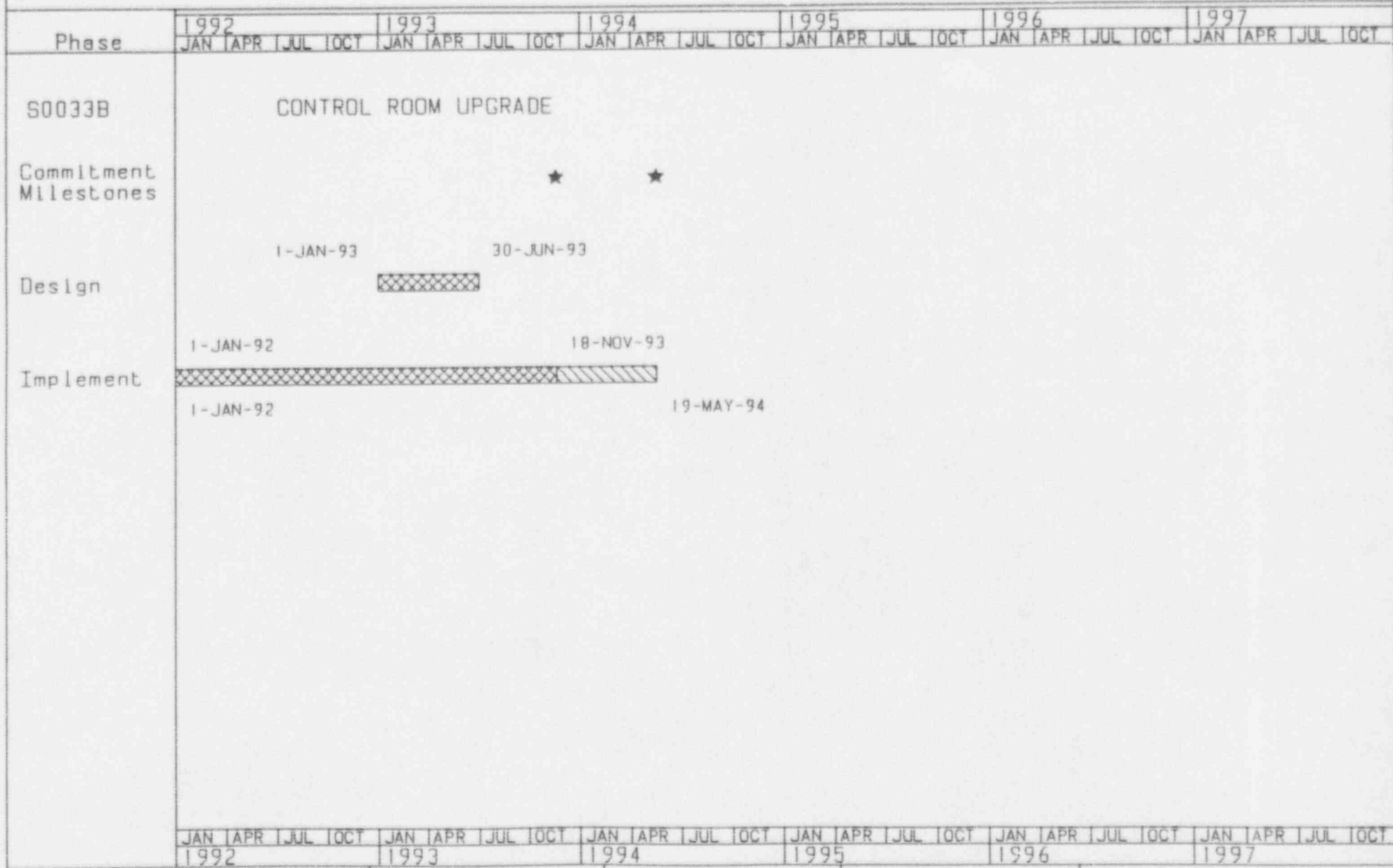
Economic Aspects: This project is a one-time cost. Baseload costs following the project will be the same as they were before the project (e.g., equipment maintenance, procedure maintenance, and operator training).

Other Considerations: This project is well underway and is scheduled to be completed prior to the end of outages B109R1 and B211R1. CP&L's commitment to the NRC will be met with this schedule.

III. CONCLUSION

This project is already well underway and will be continued as scheduled.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Replace Shaft Driven Oil Pump for Reactor Feedpump Turbine with Motor Driven Pump(s)

I. PURPOSE AND SCOPE

This project is to assess and implement the installation of redundant oil pumps for the reactor feedwater pump turbines (RFPT). The RFPT main shaft driven oil pumps have been unreliable, with limited operating range, and have had a difficult and expensive repair and maintenance history. Due to the unreliable operation of the RFPT main shaft driven oil pumps, a single RFPT motor driven auxiliary oil pump must be continuously operated to maintain RFPT oil system pressure requirements. The recent failure of a single RFPT auxiliary oil pump resulted in the loss of over \$100,000 in generating revenue (18 hours of reduced power). The recommendation to correct this problem involves two options. The first option would be to add one new motor driven pump with the current auxiliary pump. A second option would be to purchase two new motor driven pumps to replace the current configuration, as recommended by General Electric.

This project will be successful if a corrective action option is selected that will improve plant availability and plant capacity and will reduce maintenance requirements for the RFPTs.

II. EVALUATION

Schedule Index: 30 - The prevention of power reductions due to failures in the present RFPT system and lost generation time will increase the unit capacity (1.0 x 10). The plant will also be enhanced by the improved maintenance and lower repair costs for the proposed upgrade to the RFPT oil pumps (1.0 x 8). Nuclear safety is somewhat improved with a more reliable feedwater system which will reduce the potential for a loss of feedwater transient (0.2 x 32). The addition of the motor driven auxiliary oil pumps for the RFPTs could prevent previous unit power reductions associated with the present system thus increasing unit availability (0.5 x 12).

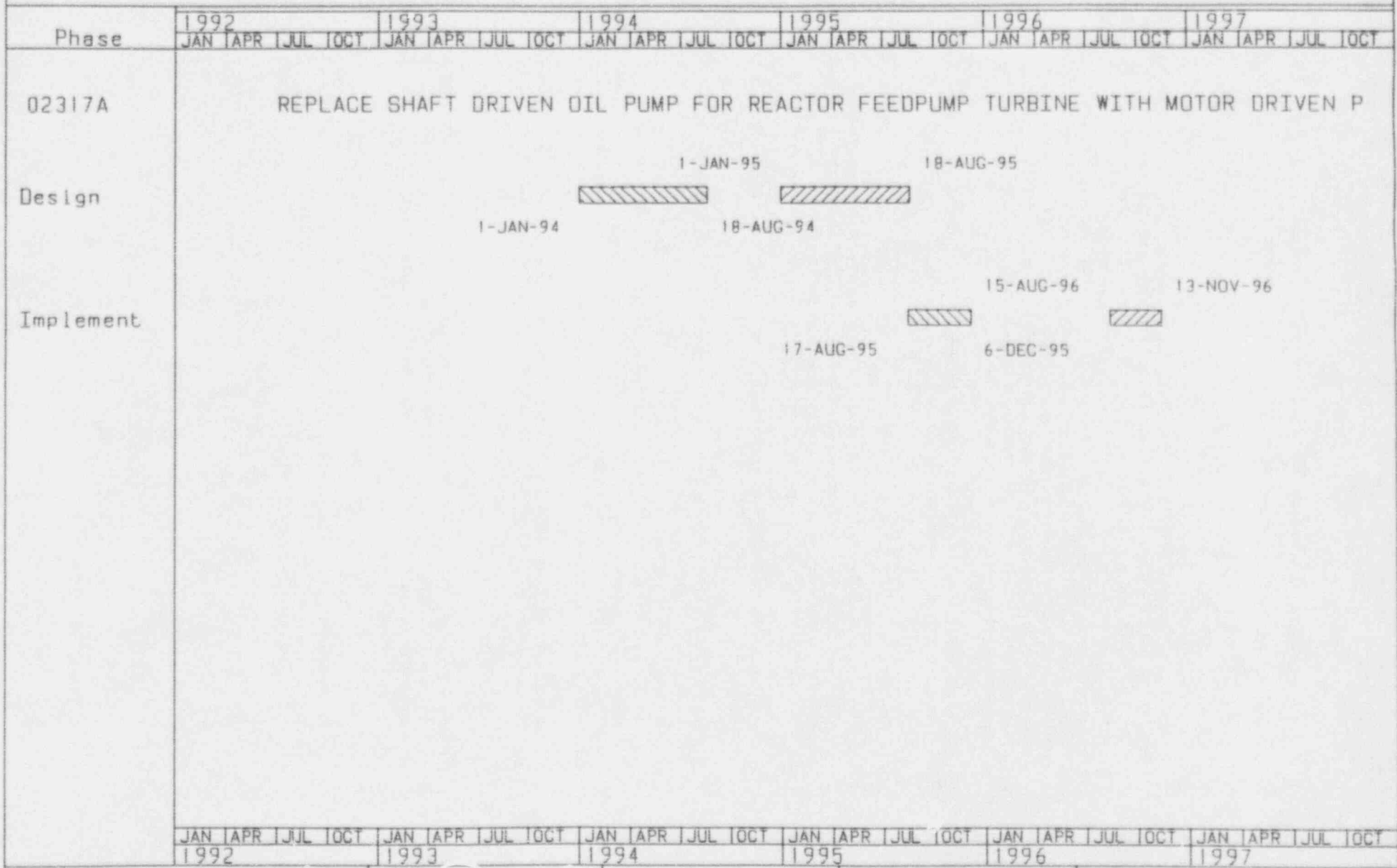
Economic Aspects: The economics of replacing a difficult and expensive to maintain RFPT main shaft driven oil system with a more reliable and easier to maintain system are positive. Besides the savings in maintenance, there is also a savings in generating capacity with increased reactor feedwater reliability. Just one failure of the RFPT auxiliary oil system cost 18 hours of reduced generating capacity or \$100,000 of lost revenue. The cost of upgrading both units could be economically justified with the prevention of potential lost generating revenue over the balance of plant life. Long term maintenance costs would be reduced relative to the present RFPT oil system.

Other Considerations: Because this project requires the reactor feedwater system to be inoperable for the replacement of the RFPT oil pumps the work would have to be performed during an outage.

III. CONCLUSION

The project is scheduled to allow adequate time for design and outage planning. The replacement of the RFPT shaft driven oil pumps with motor driven oil pumps would result in increased plant capacity, availability and reduce the maintenance cost of the reactor feedwater system. The added reliability of the reactor feedwater system will also enhance the safety of the Brunswick Nuclear Plant.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Control Rod Blade Procurement/Disposal

I. PURPOSE AND SCOPE

The reactivity of the core is controlled by movement of the 137 bottom entry control rods. A control rod blade consists of a sheath in a cruciform array containing neutron absorbing rods, which are filled with compacted boron-carbide powder. Control rod blades consist of three principle regions. These regions are the velocity limiter containing the coupling mechanism to the control rod drive mechanism, the neutron absorbing section containing a physical arrangement of neutron-absorbing materials, and the control rod blade handle.

Rollers with their associated pins in the top end casting guide the control blades between the surrounding fuel assemblies, and rollers in the bottom end casting position the lower part of the control rod in the control rod guide tube located below the core. These rollers are made of a stellite material that produces highly radioactive Cobalt-60 when exposed to an active reactor core. It has been estimated that sixty percent of the Cobalt-60 found in the reactor coolant system comes from the stellite rollers and pins of the control rod blades. This radioactive Cobalt-60 is a major contributor to worker dose at Brunswick.

Control rod blades are normally replaced over the life of the plant as the blades reach the end of their individual nuclear or mechanical life. However, CP&L has embarked on an accelerated replacement program to markedly reduce worker dose in future years. The accelerated control rod blade replacement program will remove in-core blades containing high levels of cobalt, as well as those reaching their individual nuclear or mechanical end of life, and replace them with blades that no longer use stellite rollers and pins. The schedule for replacing individual control rod blades has been established to meet nuclear and mechanical lifetime limits, Dose Reduction Task Force targets, management of spent fuel pool inventory, and outage schedules. As currently envisioned, the program will proceed at an average replacement rate of 25 blades per outage for each core. The control rod blades that are removed will be transported by Chem-Nuclear Systems, Inc. to the Barnwell Facility.

Successful completion of this project will result in a significant savings in dose to workers over the remaining life of the plant.

II. EVALUATION

Schedule Index: 15 - It has been estimated that an average annual differential dose savings of 306 person-rem will result if all control rod blades are replaced in accordance with the current project schedule. This project will therefore have a significant impact on ALARA (1.0 x 9). This project will have a moderate impact on plant enhancement (0.5 x 8) since disposal of replaced control rod blades will allow easier management of spent fuel pool inventory. Additionally, since lower cobalt levels in the reactor coolant system will reduce the amount of decontamination efforts during outages, less outage time should result. This reduction in outage time is judged to have a low positive impact on unit availability (0.2 x 12). The control rods control reactivity in the reactor core and ensure that adequate shutdown margin exists under all conditions even with the analytically determined strongest rod fully withdrawn. Concerning nuclear safety, the PRA model assumes that adequate shutdown margin exists when all control rods are fully inserted. This assumption is based on required technical specification testing for shutdown margin following refueling. Based on this assurance of required shutdown margin, this project has no appreciable impact on nuclear safety (0.0 x 32).


Economic Aspects: Project costs will be offset somewhat by future savings in reactor coolant system decontamination efforts, reduced personnel exposures, and decreases in outage time due to easier access for maintenance and modifications.

Other Considerations: 25 control rod blades that do not use stellite rollers or pins are currently on-site, and General Electric has been contracted to perform the replacement. Contracts for subsequent procurements and replacements will be issued later.


III. CONCLUSION

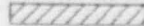
Accelerated control rod blade replacement has already begun and will be completed on schedule. As control blades are replaced, significant reductions in the site's collective radiation exposure will occur.


BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
02535A/G0146A	CONTROL ROD BLADE REPLACEMENT																							
Implement	<div style="display: flex; justify-content: space-between;"> 1-JUN-92 31-DEC-2000 </div> 																							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
	1992				1993				1994				1995				1996				1997			

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Containment Atmospheric Control-Dilution System Upgrade

I. PURPOSE AND SCOPE

The containment atmospheric control - dilution (CAC/CAD) systems are in need of upgrade due to a combination of reasons. Outdoor equipment is corroded, instruments do not work properly, annunciators are often in continuous alarm in the control room, and maintenance costs are high. The root cause of the repetitive CAC tank annunciator alarms in the Control Room and invocation of LCOs has been traced to faulty level indicating transmitting switches and system monitoring and control instruments. These devices are obsolete and marginally serviceable, with parts unavailable and have been classified as repetitive failure items. Besides instrumentation problems, there have been problems with nitrogen inventory loss because of an inability to maintain the CAC liquid nitrogen tank jacket vacuum. These losses have been stemmed by a temporary installation of a jacket vacuum system. This project will make the installation permanent. Some CAC subsystems are no longer used but must be maintained.

After upgrade, the CAC and CAD systems will only consist of necessary components (i.e., obsolete subsystems/equipment will be eliminated, including unnecessary Control Room annunciators), and the remaining equipment will be more maintainable with approved availability of spare parts. Also, fewer LCOs will be entered because of faulty sensors and avoidable conditions.

II. EVALUATION

Schedule Index: 19 - The CAC/CAD systems are safety systems of low to moderate significance and will receive a minor to moderate increase in reliability as a result of this upgrade. The distraction of false alarms from systems of low to moderate safety significance could possibly impede actions of control room operators. However, this project does not improve the ability to vent containment during scenarios involving the loss of decay heat removal; therefore this initiative has no significant impact on nuclear safety (0 x 32). The personnel safety aspects of corroded components, degraded, low voltage electrical equipment and increased maintenance have industrial safety significance (0.5 x 29). Since false alarms from these systems have caused LCOs, failure to act on this modification has the potential to negatively impact availability (0.2 x 12). Maintaining subsystems which no longer have a use and obsolete components for which spare parts are unavailable has negative effects on worker productivity and morale; thus, this project represents a plant enhancement (0.2 x 8).

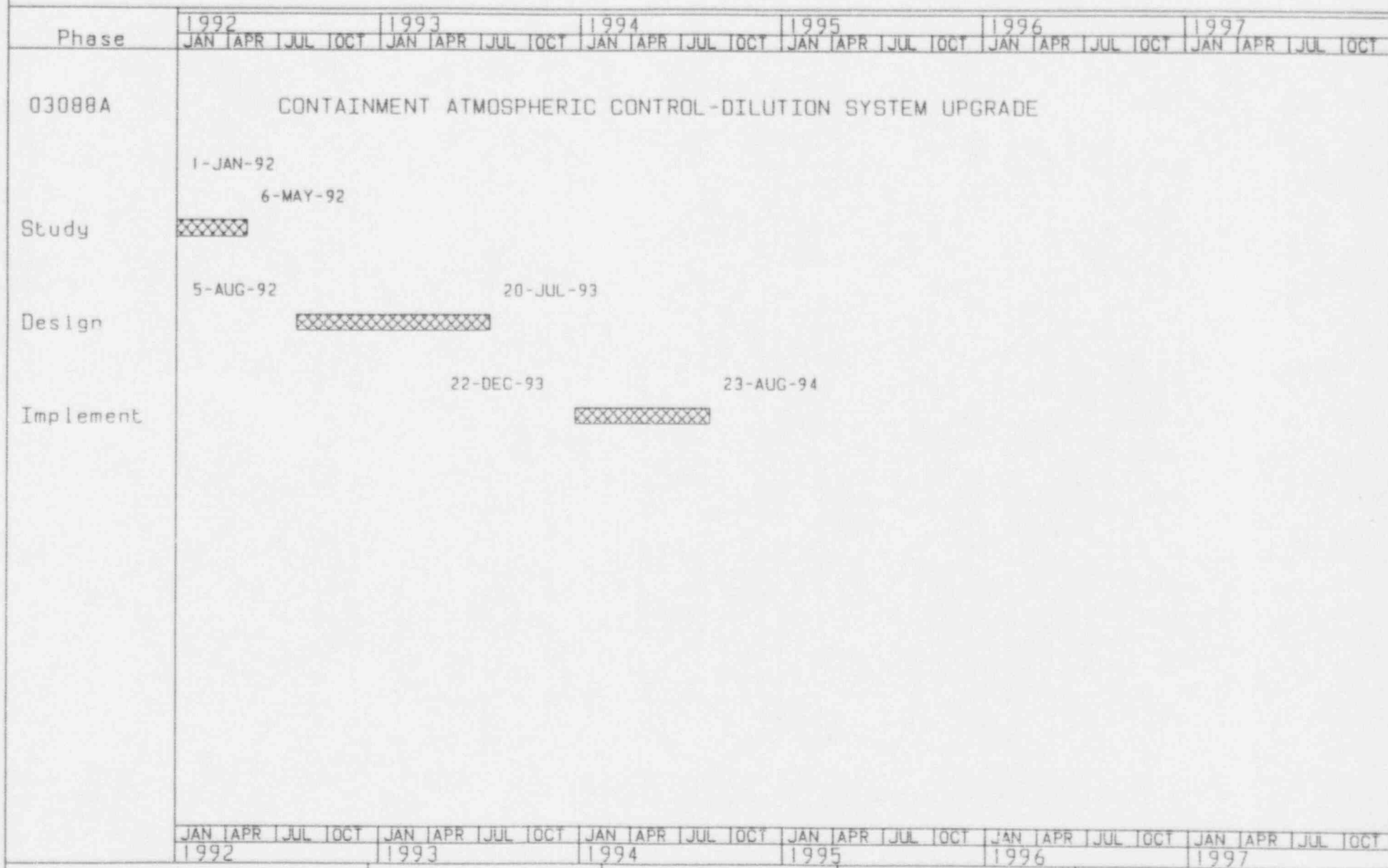
Economic Aspects: There should be a minor to moderate reduction in O&M costs when this project is completed. Cost benefit is hard to quantify because a large portion of potential avoided cost is unpredictable. Although the risk of LCOs caused by future system malfunctions actually resulting in reduction in net generation is low, the economic impact of such avoidable conditions are high and must be considered.

Other Considerations: Project completion will reduce the number of disabled annunciators in the Control Room. The work for this modification can be performed with one or both units operating. Either CAD loop being inoperative places the plant in a 31 day LCO. Minor simulator changes will be required as a result of completing this project.

III. CONCLUSION

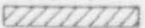
This project will be completed as scheduled in order to improve the material condition of the CAC/CAD systems. Corroded outdoor equipment is a significant problem. The condition of the system results in alarms in the Control Room which distract operators and necessitate entering into LCOs.


BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Residual Heat Removal Head Spray Removal

I. PURPOSE AND SCOPE

Residual heat removal (RHR) head spray was intended for use during shutdown cooling to maintain saturated conditions in the reactor pressure vessel (RPV) by condensing steam in the head volume and decreasing thermal stratification in the coolant. During original plant design it was envisioned that vessel cooldown and head removal would be critical path activities at the beginning of plant outages. Head spray was designed to allow more rapid cooldown. Plant operating experience has proven that head cooldown is not on the critical path, and RHR head spray is not needed during plant shutdown.

Although unused, a considerable number of RHR head spray components are still permanently installed plant equipment and are required to be disassembled/reassembled and tested during each refueling outage. This causes unnecessary radiation exposure to personnel performing maintenance and testing and represents unnecessary activity that can be eliminated.

This project will remove RHR head spray system components (e.g., piping, valves, expansion joint, and supports) inside Unit 1 containment. The work area inside the containment between elevations 94' and 105'-10" has exposure levels greater than 100 mR/hour. Related equipment outside containment will also be disposed of. A similar modification has previously been performed on Unit 2. When completed, no RHR head spray system related effort will be required during outages.

II. EVALUATION

Schedule Index: 19 - Elimination of unnecessary work in a radiation area outweighs the dose expected during equipment removal under this project and represents an ALARA improvement (1.0 x 9). Reduction of unnecessary work is a substantial plant enhancement (1.0 x 8). Because the current configuration requires unnecessary outage activity which could affect the critical path, this project potentially represents an improvement in availability (0.2 x 12). Removal of unused RHR head spray equipment has no impact on nuclear safety.

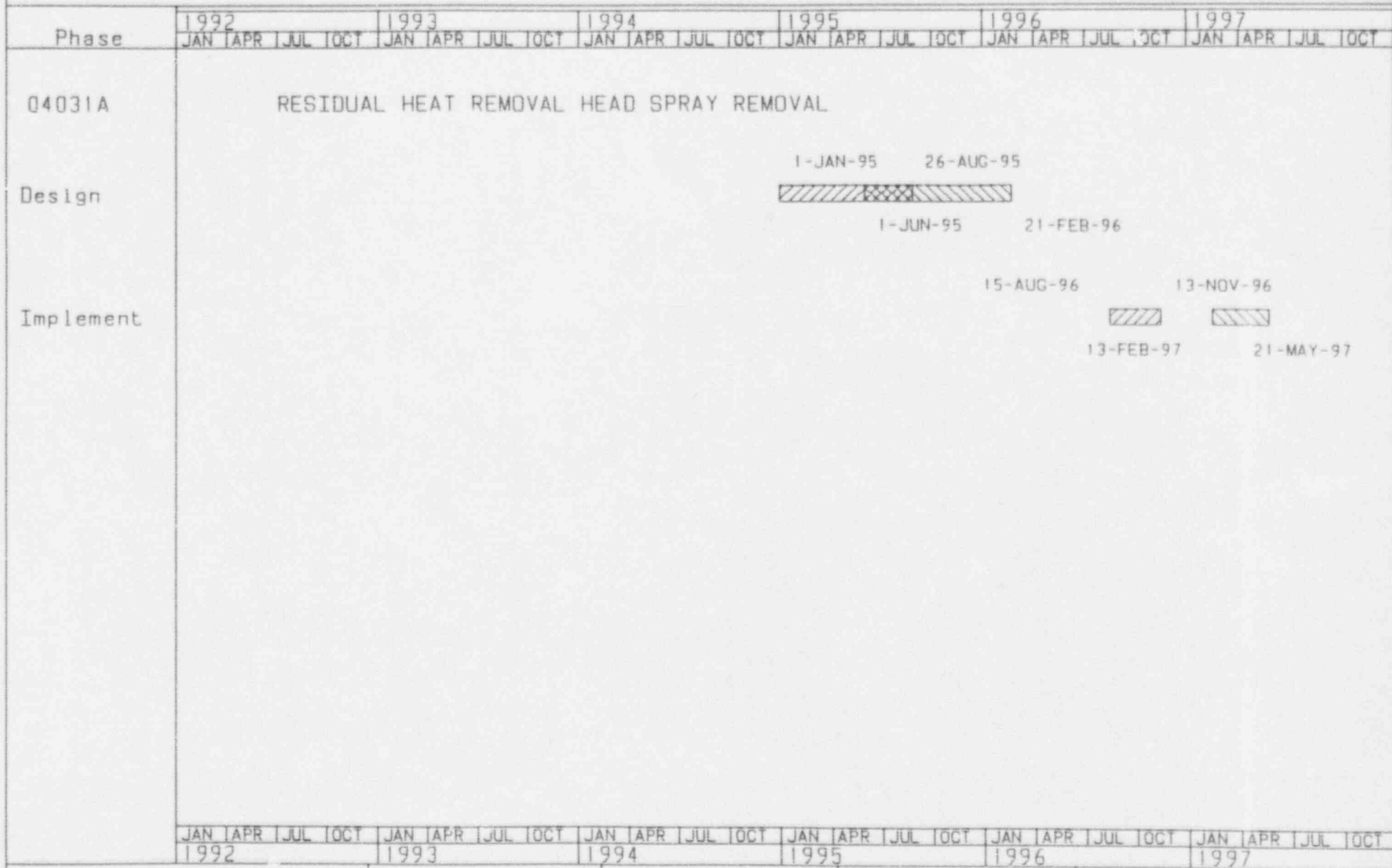
Economic Aspects: Following completion of the project, no additional work or funding will be necessary. A reduction in refueling outage effort and exposure will result over the life of the plant.

Other Considerations: Continued maintenance of an unused and obsolete system could be considered a work-around condition.

III. CONCLUSION

This project will eliminate unnecessary work during outages and will be implemented as scheduled.

BNP Three Year Plan Project Schedule




JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
1992				1993				1994				1995				1996				1997			

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Seismic Qualification of Equipment NUREG 1030

I. PURPOSE AND SCOPE

Methods to analyze the adequacy of equipment to withstand seismic events have changed in the years since the Brunswick plant was designed and constructed. Because of these changes in methodologies, the seismic margins of older equipment are unknown. NRC resolution of Unresolved Safety Issue (USI) A-46, "Seismic Qualification of Equipment in Operating Nuclear Power Plants," is promulgated in NRC Generic Letter 87-02 and requires all utilities whose plants are not qualified to current criteria to evaluate their electrical and mechanical equipment required for hot shutdown for adequate seismic qualification. The Seismic Qualification Utility Group (SQUG), of which CP&L is a member, developed general implementing guidance for performing the reviews. NRC approved the use of this guidance in a Safety Evaluation Report dated May 22, 1992.

In addition, on November 23, 1988, the NRC issued Generic Letter 88-20, "Individual Plant Examination for External Events (IPEEE) for Severe Accident Vulnerabilities." The generic letter requested each licensee to conduct an examination to establish the effects of seismic events, internal fires, high winds, floods, transportation, and nearby facility accidents. Licensees are also to confirm that there are no comparable plant-unique external events being excluded from examination.

The purpose of this project is to implement the resolution of USI A-46 by analyzing the seismic adequacy of Brunswick electrical and mechanical equipment required to accomplish and maintain the plant in a hot safe shutdown condition for 72 hours. Also included in the scope of this project are the evaluation of outliers and the scoping of modifications to address any deficient conditions found during the effort. The final product will be a report documenting the results of the review, including any deficiencies that will require correction.

The seismic portion of the IPEEE will be performed under this project using a seismic margins methodology that screens components according to safety importance and seismic capacity against a peak ground acceleration of 0.03g. This screening process will be performed concurrently with the USI A-46 program.

Assurance that all safety-related electrical and mechanical equipment can perform their intended functions during and following a seismic event or identification of corrective actions to resolve deficient conditions will constitute successful completion of this project. Further assurance of successful completion will be evidenced by NRC review and acceptance of Brunswick's implementation of USI A-46.

II. EVALUATION

Schedule Index: 30 - This initiative could have a significant impact on future analyses of external events. All systems would be affected by a seismic event and severe consequences could result if equipment is not assured of meeting the specified qualification criteria, resulting in a significant impact on the core damage frequency due to seismic events (1.0 x 32). Verifying seismic qualification will require inspection and system walkdowns in radiation areas and result in exposure to workers. This exposure will not be made up by any ALARA benefits afforded by the project over the lifetime of the plant, therefore resulting in a negative ALARA scaling factor (-0.2 x 9).


Economic Aspects: The project requires a short-term investment to conduct the system inspections and walkdowns, with no identified positive or negative economic benefits extending beyond the completion of the project.

Other Considerations: The project will be performed under the guidelines of the General Implementing Procedure developed by SQUG. NRC approval of the procedure has been obtained. After the study is completed, a report will be prepared and submitted to NRC by June 30, 1995 that documents the results and describes the schedule for correcting any deficiencies identified during the review. Margins for the plant with respect to seismic events as required for the IPEEE analysis will also be established under this project.

III. CONCLUSION

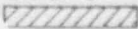
Because the methods used in seismically qualifying safety-related systems were not as capable as current methodologies, plant systems will be reviewed to assure the capability to perform their functions during and after a seismic event. The NRC has expressed its concerns on this issue and recommended actions to be taken by licensees in Generic Letter 87-02. SQUG, of which CP&L is a participant, submitted to, and received approval from, the NRC on generic implementing guidance for reviewing seismic qualification of equipment. CP&L plans to complete and document the SQUG and related IPEEE reviews by June 30, 1995.


BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
04042A	SEISMIC QUALIFICATION OF EQUIPMENT-NUREG 1030																							
Commitment Milestones	★																							
Study	<div style="display: flex; justify-content: space-between; width: 100%;"> 1-DEC-92 30-JUN-95 </div> <div style="text-align: center; margin-top: 10px;">  </div>																							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
	1992				1993				1994				1995				1996				1997			

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Standby Liquid Control Relief Valves

I. PURPOSE AND SCOPE

Each unit's standby liquid control (SLC) boron injection system has two relief valves. These relief valves have experienced disc and seat degradation and erratic setpoint drift. These problems are due primarily to chattering caused by inadequately dampened pressure pulses from the SLC system positive displacement pumps. These pressure pulses at the relief valves are greater than necessary due to the relief valves being located between the pump discharge and the system pulse-dampening accumulators. Additionally, corrosion of carbon steel accumulator shells has occurred due to inadvertent chipping of the protective accumulator lining during maintenance.

Relief valve failures have not caused plant downtime to date. However, corrective maintenance has been frequent and expensive, and the plant has entered 7-day LCOs due to relief valve failures. Continued degradation could eventually result in a forced or extended plant outage.

Under this project, SLC safety relief valves will be replaced with relief valves specifically designed to tolerate the SLC pump pressure surges better. In addition, the current accumulators will be replaced with stainless steel accumulators installed upstream of the relief valves, providing better pressure pulse dampening. The stainless steel accumulators will eliminate current accumulator liner problems. Additionally, relief valve exhaust piping will be re-routed to discharge into the SLC tank, a location preferable to the present pump suction location.

When this project is completed, system pressure surges at the relief valves due to pump discharge will be better dampened, resulting in improved SLC valve reliability. Also, this project results in an accumulator material condition enhancement that will result in an increased service life.

II. EVALUATION

Schedule Index: 6 - This project is primarily a plant enhancement due to the expected decrease in corrective maintenance and longer system life (0.5 x 8). Because SLC relief valve failures have caused the plants to enter LCOs and because repairs add to outage workload, the potential exists for loss of unit availability (0.2 x 12). While some improvement in system performance will occur, the relatively low contribution of SLC to reducing plant risk does not indicate a significant safety improvement. Thus, a zero nuclear safety scaling factor is assigned.

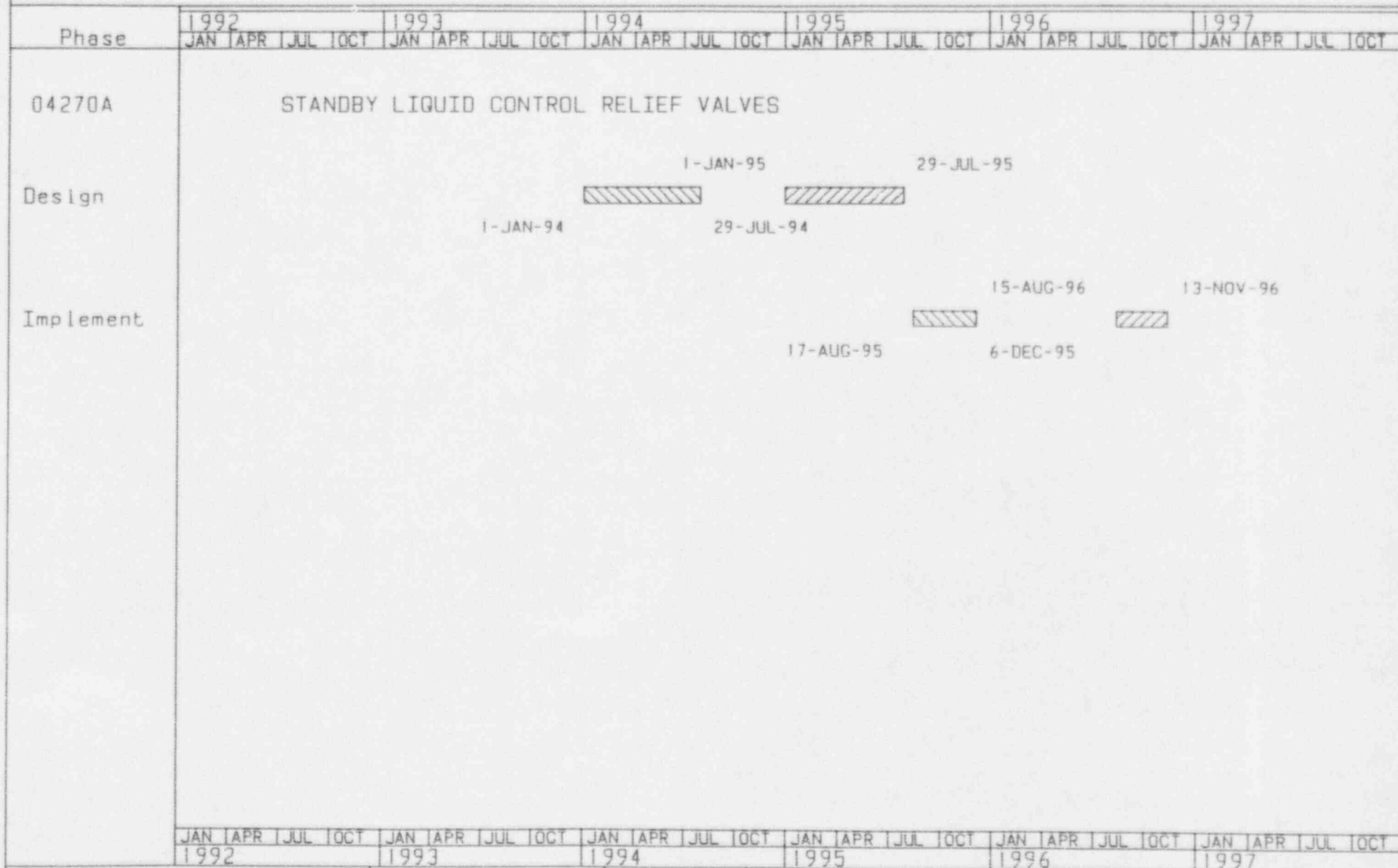
Economic Aspects: When this project is completed, significant ongoing savings should result from lower failure rate of SLC relief valves and longer SLC accumulator life, resulting in reduced maintenance requirements.

Other Considerations: This project is outage dependent and must be performed with the plant in Mode 4. A Technical Specification change is being requested which would allow this work to be performed in Mode 3, 4 or 5.

III. CONCLUSION

This plant betterment initiative has previously been deferred. Since further deferral will result in continued high levels of maintenance and could result in extended or unplanned outages, it will be accomplished as scheduled.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Feedwater Control System Replacement

I. PURPOSE AND SCOPE

The existing analog feedwater control system (FCS) is obsolete, many components are no longer manufactured, and replacement parts are difficult to obtain. Moreover, at least twelve scrams can be directly attributed to analog FCS failures. This modification will replace the analog FCS, including existing feedwater control relays, switches, control stations, and computation and conversion modules, with a more fault tolerant digital feedwater control system (DFCS). This would likely reduce the frequency and severity of scrams and plant transients resulting from feedwater control system failures. Additionally, replacement of obsolete feedwater system indicators and recorders, and the startup level control valve current to pneumatic positioner as well as the reactor level and feedwater flow transmitters, will be accomplished to enhance the compatibility of the process input and output devices with the new DFCS. Operational and maintenance procedures will be revised and operator and maintenance training will have to be conducted. The simulator will be upgraded to reflect the new design under a separate project control number.

The final desired state would be a fault tolerant, on-line tuning DFCS that would provide redundancy and therefore avoidance of plant scrams. The success criterion is that no scrams can be attributed to FW controller system failures.

II. EVALUATION

Schedule Index: 26 - Replacement parts for the current FCS are difficult to procure or are no longer available because the system is obsolete. The present design is based on single channel analog control. Consequently, the analog FCS has been responsible for a total of at least twelve reactor scrams for the two units. The DFCS is more fault tolerant, self-diagnostic, easier to tune, and redundant, making it more reliable than the analog FCS. Thus, installation of more reliable, state-of-the-art digital feedwater controls will reduce the number of scrams and plant transients that were attributed to the analog feedwater controls. A reduction in plant scrams and transients also reduces the challenges to and demands on plant safety systems (0.2 x 32). Furthermore, greater FCS reliability would improve unit availability due to the reduction in the frequency and severity of these trips (1.0 x 12). Finally, the DFCS provides tolerance to operator errors in that the system can either forbid certain actions or require multi-step operator action to perform a function. Also it provides the potential for more sophisticated control algorithms that make system operation easier, resulting in fewer operator errors. These features make the DFCS more user friendly and forgiving, thus reducing the potential for consequential operator errors (1.0 x 8).

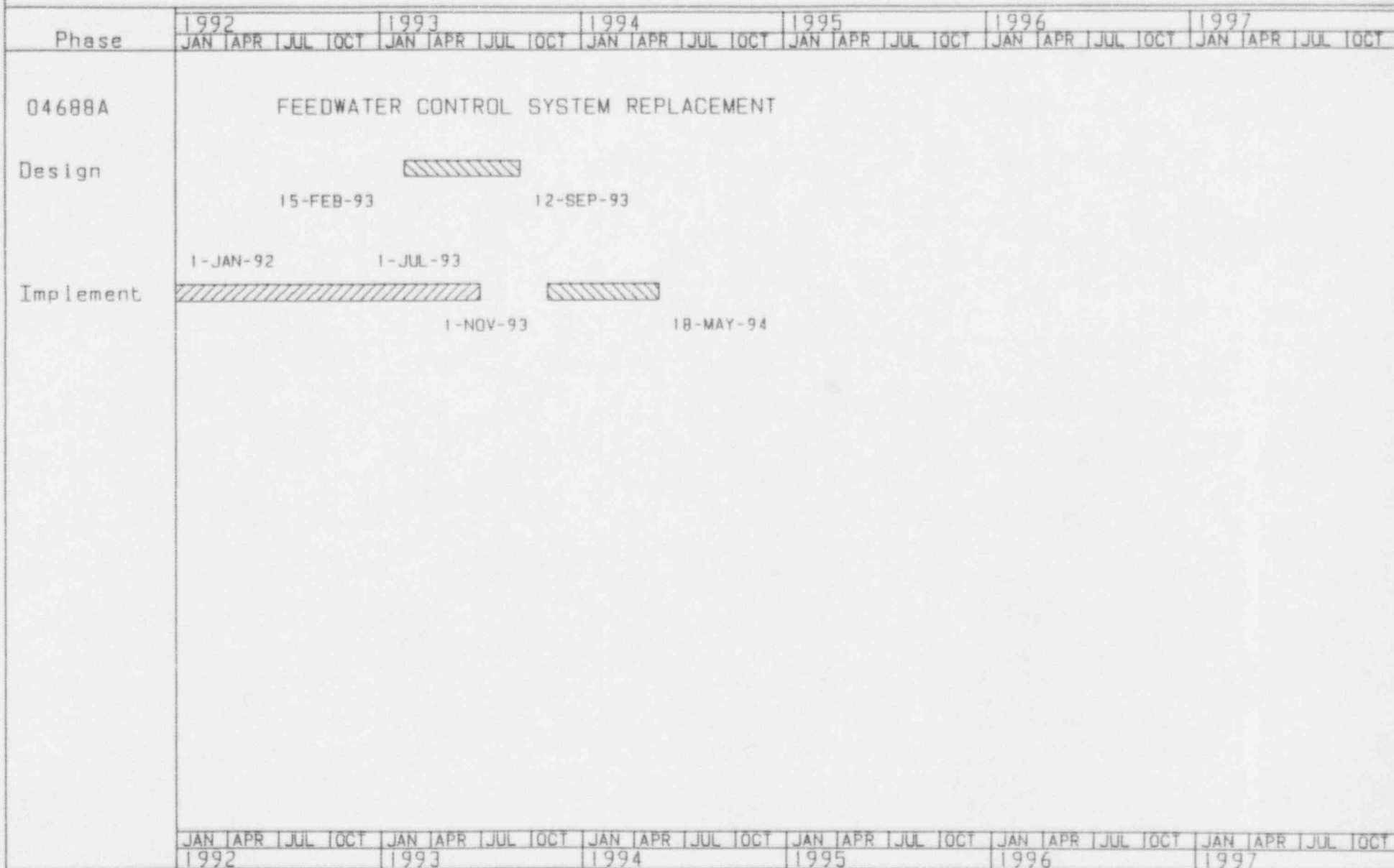
Economic Aspects: Expected benefits of this modification would be ease of maintenance and scram reduction. It has been estimated that in excess of \$4,000,000 in unit generation revenue has been lost as a result of the twelve scrams attributed to FCS failure. The controllers tuning capability with an on-line trend display and digital systems self-diagnostics result in easier maintenance. In the long term, routine plant maintenance and calibration is expected to be substantially less than they are now.

Other Considerations: The equipment for Unit 1 has been procured, tested and accepted on site. Unit 2 equipment has been procured and is awaiting software loading and acceptance testing. The simulator modification is currently being installed. A critical component of this modification is the operator and maintenance training required to ensure proper operation and maintenance of the new digital equipment in order to derive the full benefit of the digital system design. Similarly, operations and maintenance procedures must be revised.

III. CONCLUSION

This project shall be implemented as scheduled. The modification is a significant plant enhancement that will produce immediate tangible savings in unit availability.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Floor Drain Filter Retrofit

I. PURPOSE AND SCOPE

Liquid radwaste processing was originally designed to be accomplished by two process paths, a floor drain system for "dirty" liquid waste and a waste collector system for "clean" liquid waste. A previous modification on the original floor drain filter system did not achieve the desired performance objectives and resulted in an inoperable floor drain filter. The inoperable condition of the floor drain filter leaves the waste collector system as the only path for processing liquid radwastes. Since the waste collector filter is designed for processing "clean" waste water, the presence of radwaste intended for the floor drain system, such as oil-containing water, causes frequent changeouts of the waste collector filter elements that are costly and incur unnecessary expenditure of person-rem. The resin precoat is exhausted much more rapidly due to the current operating lineup, thereby generating extra costs and solid radwaste to ship off the site. Extended failures of the waste collector system could result in a dual unit shutdown because of an inability to process liquid radwaste.

The purpose of this project is to modify the floor drain filter to restore the filter to its original, functional design using current technology components. This will restore the floor drain system to service and provide separate paths for processing liquid radwastes, thereby improving the operation of the waste collector filters, reducing the frequency of filter changeouts, and providing an alternate path for processing all liquid radwastes in the event one of the systems becomes inoperable.

Successful completion of this project will be evidenced by demonstrated ability to process all liquid radwaste through either the floor drain system or the waste collector system and by a reduction in the frequency of element changeouts in the waste collector filter.

II. EVALUATION

Schedule Index: 12 - Returning the floor drain filter to its original design will return the waste processing systems to their normal configurations and intended uses, provide redundancy in waste processing paths, and restore the ability to maintain cleanliness in the waste collector system, resulting in a significant plant enhancement (1.0 x 8). Returning the floor drain system to service reduces the possibility of a dual unit shutdown due to an inability to store or process radwaste for extended periods (0.2 x 12). This project will reduce the filter maintenance related radiation exposures caused by mixed stream processing (0.2 x 9).

Economic Aspects: Retrofitting the floor drain filter will reduce the routine costs of cleaning the waste collector system to remove oil impurities that the system was not designed to handle on a regular basis. Several cost estimates performed since 1985 have shown that the project would pay for itself relatively soon after implementation due to a reduction in the frequency of filter element and resin precoat changeouts.

Other Considerations: The modifications do not require an outage to implement.

III. CONCLUSION

Inoperability of the floor drain filter causes all liquid radwaste to be processed through the waste collector system, which is designed to process only "clean" radwaste, and causes increased costs for maintenance and cleaning of the waste collector system. Additionally, the lack of redundant processing paths presents a potential for forcing unit shutdown if the waste collector system is inoperable for three or more days. Restoring the floor drain filter to its original design offers immediate economic and material benefits, so this project will be implemented as scheduled.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
04828A	FLOOR DRAIN FILTER RETROFIT																							
Study					6-OCT-92				29-MAR-93															
Design					30-MAR-93				15-NOV-93															
Implement									24-MAY-94				12-SEP-94											

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Maintain the BSEP Environmental Qualification Program

I. PURPOSE AND SCOPE

The Brunswick Environmental Qualification (EQ) Program ensures continued compliance with 10 CFR 50.49, the NRC environmental qualification rule. Since the establishment of the Brunswick EQ program, numerous and significant issues have arisen which have the potential to affect portions of the program. Some of these issues are ongoing. Review, evaluation, and revision of affected qualification documentation is necessary to ensure the quality of the EQ files and support continued qualification of equipment. Fourteen Engineering Work Requests (EWRs) have been specified at different times to address various EQ concerns. All 14 of these EWRs are consolidated in this project. Additionally, other EQ issues will be addressed under this project. For example, resolution of Limitorque Motor Operated Valve issues and the establishment of an environmental specification for plant harsh environment areas are two important initiatives.

At the completion of this project, Brunswick should have resolved each of the issues currently within the scope of this project and received final NRC acceptance of each resolution.

II. EVALUATION

Schedule Index: 10 - If EQ activities identify necessary improvements to systems, structures or components, some contribution to nuclear safety may result. However, such improvements are unlikely and, should they occur, will have small overall impact on the reliability of systems important to plant risk (0.2 x 32). If any equipment upgrades result from EQ activities, a similar, small improvement may be seen in plant availability (0.2 x 12). Maintenance of the EQ program records should make future analysis of equipment easier (plant enhancement, 0.2 x 8). No appreciable effect is anticipated to personnel safety, unit capacity (EQ must support plant uprate, but does not determine it), or ALARA.


Economic Aspects: This project addresses a number of discreet, one-time issues which have arisen relative to EQ. While the level of effort associated with EQ should decrease as these issues are resolved, other issues are likely to be identified in the future. Maintenance of the Brunswick EQ Program is an ongoing effort which must continue until final plant shutdown and decommissioning (PCN 01657A accounts for this routine activity).

Other Considerations: This overall program is required by 10 CFR 50.49. Power uprate will require some high energy line break reanalysis due to expected primary system pressure and temperature changes. The generation of an environmental specification will assure that power uprate parameters are well documented in the BNP EQ design basis.

III. CONCLUSION

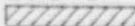
Continuation of this project is necessary for compliance with 10 CFR 50.49, and the current schedule will be maintained.


BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
04830A	MAINTAIN THE BSEP ENVIRONMENTAL QUALIFICATION PROGRAM																							
Design	1-JAN-92												30-DEC-94											
																								
	1992				1993				1994				1995				1996				1997			

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Reactor Building Instrument Rack Repair/Upgrade

I. PURPOSE AND SCOPE

The initial scope of this project was to address only the residual heat removal (RHR) instrument racks located on the -17 ft. level of the Reactor Building. These instrument racks were rusting and needed to be repaired or replaced with stainless steel material in order to prevent further degradation which could create a condition adverse to quality and safety. Work on these instrument racks is ongoing and is considered necessary in order for them to remain seismically qualified. However, the project scope has increased to include inspection of all instrument racks in both Unit 1 and Unit 2 Reactor Buildings to determine their present condition. Necessary repairs will be identified and completed once all the instrument racks have been inspected.

Success for this project would be the inspection and necessary repair of all Reactor Building instrument racks to restore them to their originally installed condition.

II. EVALUATION

Schedule Index: 14 - The SI is composed of the nuclear safety, unit availability and ALARA categories. For nuclear safety there is a moderate improvement in the availability of systems of high importance (0.5 x 32). Unit availability will be somewhat increased since some of the instrument racks must be fixed to maintain the plant in an operational condition conducive to quality and safety (0.2 x 12). There is a moderate negative impact on the ALARA category because work on these instrument racks is estimated at the 10 to 20 rem dose range (-0.5 x 9).



Economic Aspects: The project cost will depend on the final scope of identified work. It is possible for project cost estimates to increase according to the condition of other instrument racks that are yet to be inspected. Once necessary repairs are completed, long term maintenance costs will be decreased by this project because the stainless steel instrument racks will require less maintenance. The major benefit of this project will be the capability to maintain unit availability.

Other Considerations: The work required for this project will have to be accomplished during outages. It will be necessary to coordinate this project with other RHR projects such as RHR refurbishment and painting (P0057D) during these outages.

III. CONCLUSION

It is important for the material condition of the power plant not to degrade to the point where conditions could become adverse to both quality and safety. Therefore this project will be completed as scheduled to ensure the Reactor Building instrument racks are restored to their originally installed condition.


BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
05092A	REACTOR BUILDING INSTRUMENT RACK REPAIR/UPGRADE																							
Design	<div style="display: flex; justify-content: space-between; margin-bottom: 5px;"> 13-MAY-92 15-AUG-93 </div> 																							
Implement	<div style="display: flex; justify-content: space-between; margin-bottom: 5px;"> 6-MAY-92 15-JAN-94 </div> <div style="display: flex; justify-content: space-between; margin-bottom: 5px;"> 1-JUN-92 10-MAY-93 </div>  <div style="display: flex; justify-content: space-between; margin-top: 5px;"> 1-JUN-92 28-MAR-93 </div>																							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
	1992				1993				1994				1995				1996				1997			

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

HP 5A Feedwater Heater Replacement

I. PURPOSE AND SCOPE

At the present time the BSEP Unit 1 5A high pressure feedwater heater has 16.5% of its tubes plugged due to failure and leakage. The high number of plugged tubes prevents efficient preheating of the feedwater before it enters the reactor pressure vessel (RPV). A reduction in the number of available feedwater tubes results in reduced heat transfer surface and thus lower plant thermal cycle efficiency. Feedwater heaters are expected to have future tube failures, further degrading the performance of the power plant. Failure of the heat exchanger tubes is the result of corrosion, vibration and thermal effects from steam flashing. High tube rate failures led to the Unit 2 4A feedwater heater being replaced in 1988. A previous loss of one set of feedwater heaters resulted in a 30 megawatt generation loss for 17 days. In 1982 the Unit 1 5A feedwater heater had numerous tube failures which forced the unit to shutdown for repairs.

The scope of this project is to replace the Unit 1 5A high pressure feedwater heater to increase unit capacity and to increase unit availability by eliminating the possibility of forced outage for repairs. Additionally, the project scope includes the removal and decontamination and disposal of the 1-5A feedwater heater.

Successful completion of this project will increase unit capacity, increase unit availability, and result in an overall improvement in the performance of the plant. The replacement of this high pressure feedwater heater will also have a positive and measurable cost benefit for the BNP.

II. EVALUATION

Schedule Index: 19 - The replacement of the 5A feedwater heater will have a significant impact on preventing a loss of unit capacity by replacing the existing feedwater heater before more tube failures occur (1.0 x 10). A new feedwater heater would give a moderate positive ALARA category by reducing personnel dose with decreased maintenance requirements (0.5 x 9). Reduced maintenance on the new feedwater heater would also be a plant enhancement (0.2 x 8). A catastrophic tube failure of a high pressure feedwater heater would possibly result in a reactor scram due to decreased moderator temperature. Turbine trips and reactor scrams are plant initiators which are small contributors to the overall core damage frequency. Additionally, the condensate system is used for low pressure safety injection during anticipated transient without scram (ATWS) and non-ATWS events, but the high pressure feedwater heater is bypassed. Therefore, this project has no appreciable effect on nuclear safety (0.0 x 32).

Economic Aspects: Because the new feedwater heater will improve unit capacity and unit availability, there will be a measurable cost benefits for the BNP. Maintenance costs for the feedwater heater will also be reduced with the implementation of this project.

Other Considerations: This project will have to be accomplished during an outage. Coordination of this feedwater heater replacement with other feedwater and condensate system projects would be necessary for effective project implementation.

III. CONCLUSION

This project will be completed as scheduled to allow the BSEP to have increased unit capacity and availability with a measurable cost benefit for the BNP. In addition, the new feedwater heater will reduce personnel dose with reduced maintenance requirements.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
05503A	HP 5A FEEDWATER HEATER REPLACEMENT																							
Design	<div style="display: flex; justify-content: space-around; align-items: center;"> 1-JUL-95 31-DEC-95 </div> <div style="display: flex; justify-content: center; align-items: center; margin-top: 10px;"> <div style="width: 100px; height: 15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px);"></div> </div>																							
Implement	<div style="display: flex; justify-content: space-around; align-items: center;"> 11-JUL-96 1-JAN-97 </div> <div style="display: flex; justify-content: center; align-items: center; margin-top: 10px;"> <div style="width: 100px; height: 15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px);"></div> </div>																							

JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT				
1992				1993				1994				1995				1996				1997			

★ Commitment Date	Start Finish Common	Start Finish Unit 1	Unit 2 Start Finish
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AC Voltage Drop Analysis

I. PURPOSE AND SCOPE

Existing design basis calculations for the Brunswick AC electrical distribution system have been found, in some cases, to be unavailable or inadequate. The AC Voltage Drop Analysis project has been undertaken to establish current, readily accessible AC electrical distribution system design basis calculations. Calculations to be provided include load factor studies, control loop calculations, voltage/load flow/fault current calculations, cable ampacity (ampere capacity) calculations, emergency diesel generator loading calculations, grounding calculations, the fast bus transfer study, and a validation of the computer code used for voltage drop analysis (in accordance with NRC Branch Technical Position PSB-1). The 1991 electrical distribution system functional inspection reaffirmed the need to upgrade or develop certain calculations which are a part of this project.

Once complete, this project will document the capability of the present AC distribution system, and provide a basis to support future modifications and 10 CFR 50.59 safety evaluations. In the event of a proposed change to the AC distribution system, documentation will be easily accessible to allow identification of potential equipment overloading, over or under voltage situations, non-selective tripping of overcurrent protective devices, excessive fault currents, emergency diesel generator overloading, or other design issues. The ability to quickly and accurately respond to design basis issues which may arise during an audit will be greatly enhanced.

II. EVALUATION

Schedule Index: 10 - Upgrade or development of design basis calculations is not expected to have a substantial effect on AC distribution system design or operation. However, the project includes additional calculations to establish diesel generator loading profiles. A more detailed analysis of the diesel generator load profile could result in procedural or hardware changes that would enhance the reliability of the EDG system. Because of the low impact on this system of high risk significance, a 0.2 nuclear safety scaling factor is assigned (0.2 x 32). This project should have no appreciable effect on personnel safety, unit availability, unit capacity, or ALARA, but should reduce research time on modifications and engineering evaluations and analyses (plant enhancement, 0.5 x 8).

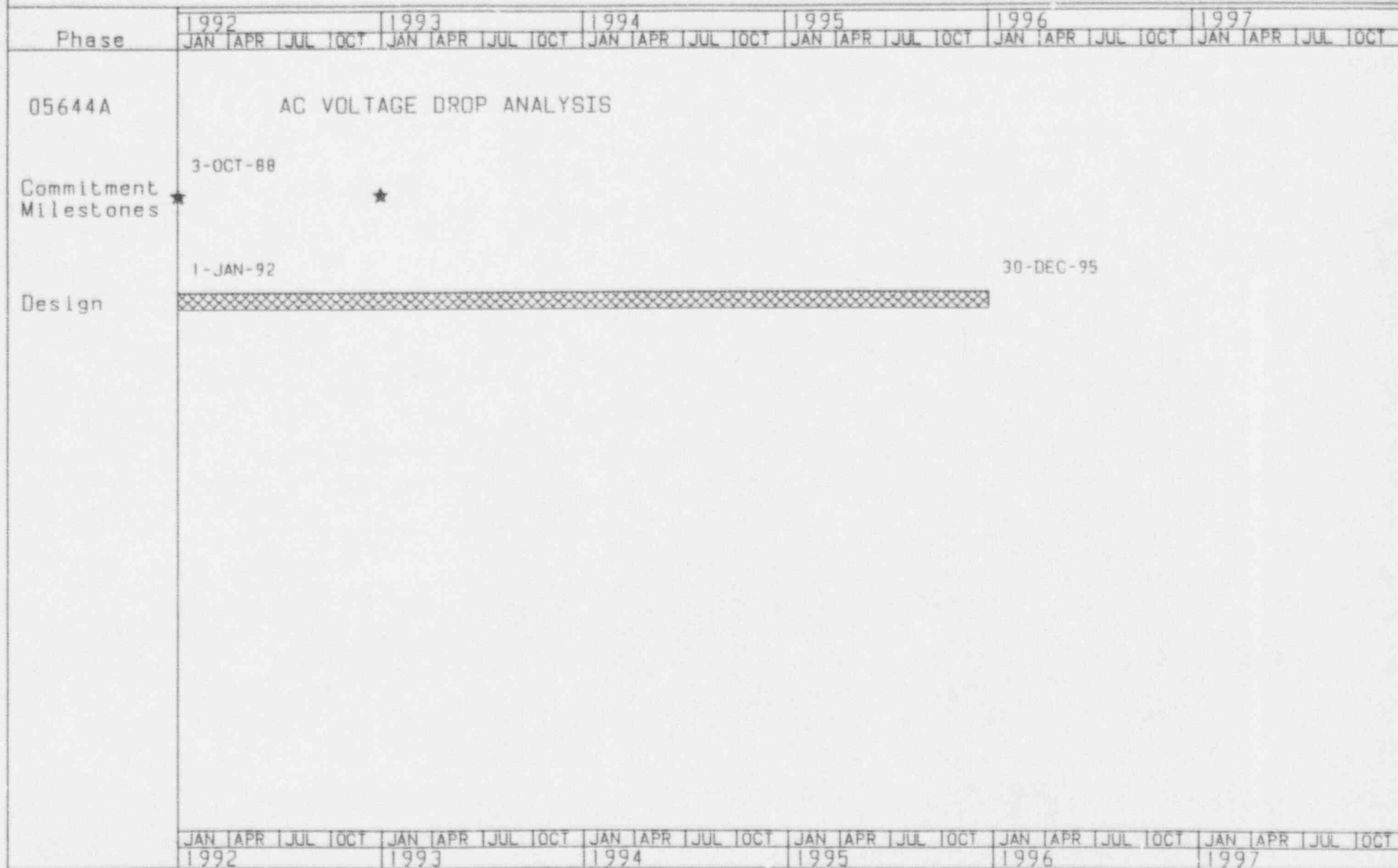
Economic Aspects: Once this project is completed, no continued costs are anticipated. Ongoing resource savings are expected in the future, due to reduction of time spent on modification preparation and engineering evaluation.

Other Considerations: This project is related to B0019A, Design Basis Reconstitution, and G0110A, Electrical Distribution System Adequacy/GDC-17. The original NRC commitment for this project was to complete analysis of MCC system selectivity by October 3, 1988. In 1991, an additional commitment was made to respond to NRC Inspection Report 91-09 by December 31, 1992. Based on the project's relatively low schedule index, the work has been rescheduled to be completed by December 1995 as part of the initiative for design basis reconstitution. The calculations being developed presently either do not exist or need improvement.

III. CONCLUSION

This project will be completed as part of the design basis reconstitution effort. This project will provide a basis for future modifications and safety evaluations of the AC electrical distribution system.

BNP Three Year Plan Project Schedule



★ Commitment Date	Start Finish Common	Start Finish Unit 1	Unit 2 Start Finish
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Radwaste Effluent Release Line Replacement

I. PURPOSE AND SCOPE

During 1987 a portion of the Unit 2 radwaste effluent release line developed a leak, caused by corrosion, which was detected when radioactive effluents surfaced at ground level. The leak was repaired with a wrap-around type patch and re-buried. The objectives of this project are to install a new pipe which will be routed through the electrical tunnel and along the Turbine Building wall to obtain a more reliable release path for both units. With the current arrangement, any potential leakage in the release line could allow radioactive effluents to be released in the ground water prior to reaching the required dilution factor in the circulating water system (CWS) effluent. Successful completion of this project will provide more reliable radwaste effluent releases and maintain them within regulatory dilution limits.

II. EVALUATION

Schedule Index: 10 - The plant is enhanced with new radwaste effluent release piping that will be routed above ground to allow detection and containment of any leakage (1.0 x 8). The potential for avoiding unplanned release represents a minor ALARA impact (0.2 x 9).

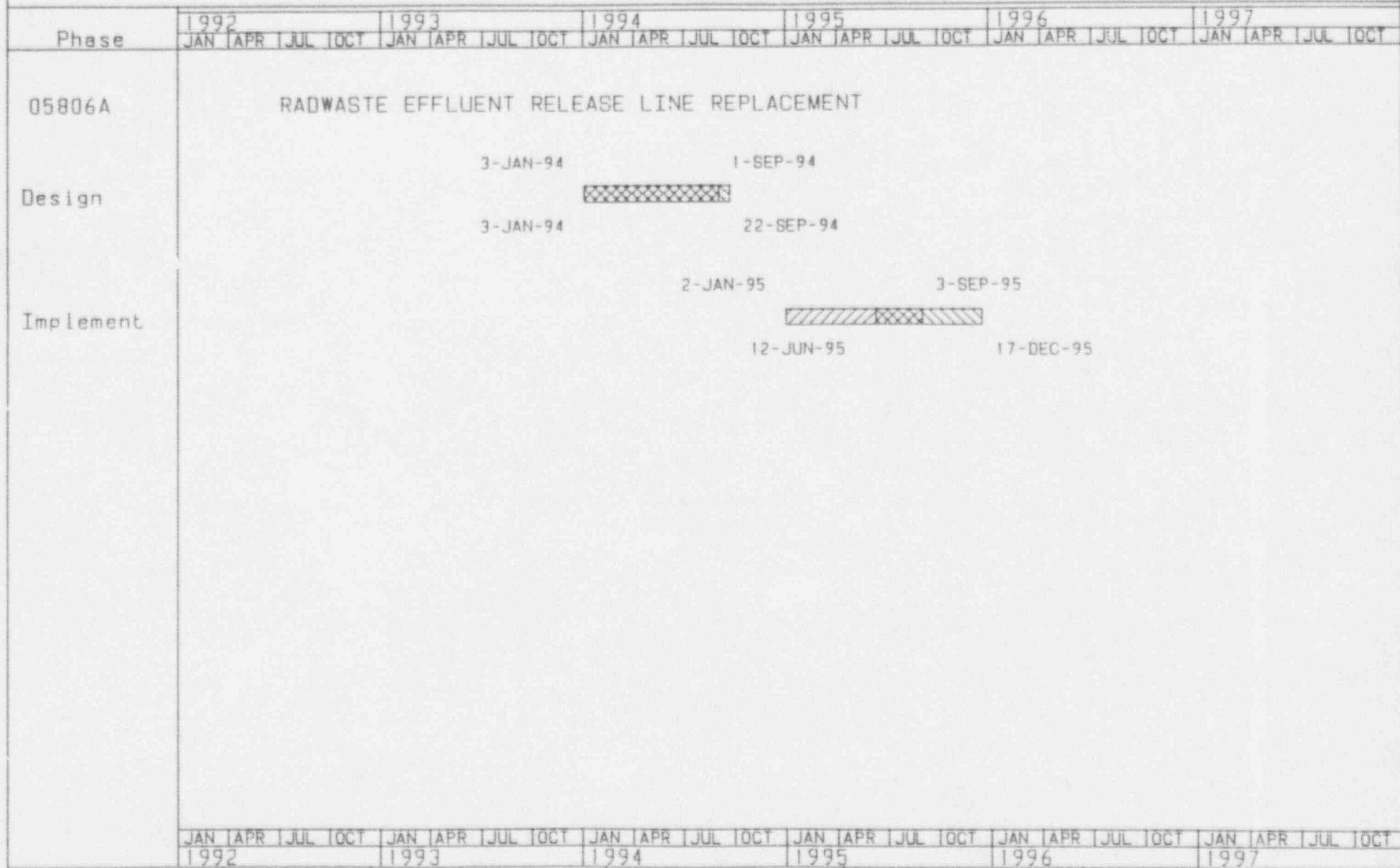
Economic Aspects: There is no expected change in routine costs associated with the system after installation. Replacing the old radwaste effluent release line could save the cleanup costs for any potential future leakage into the ground.

Other Considerations: Some of the work on installing the plant site radwaste piping could be done at any time, while integration with the CWS would have to be coordinated during an outage for each unit.

III. CONCLUSION

This project will be completed as scheduled to allow greater flexibility of radwaste operations and easier identification of any leakage.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Cooling Upgrade for Drywell, Reactor Building, and Fuel Pool

I. PURPOSE AND SCOPE

Permanent, reliable cooling systems are needed to replace the temporary chiller systems and temporary fuel pool cooling currently used to provide cooling for the drywells and fuel pools. The drywell chiller was installed in 1985 as a temporary measure to reduce operating temperatures in the Unit 2 drywell. The chiller is now in poor condition, which has resulted in two fire incidents and excessive maintenance. No similar system currently cools the Reactor Building. Excessive temperatures in that building affect the working environment.

This purpose of this project is to develop a permanent, integrated, cooling system to replace the temporary systems currently installed. The new system will be capable of simultaneously providing cooling to both Reactor Buildings, the outage unit drywell, and the outage unit fuel pool. The temporary cooling system for the spent fuel pool was installed in 1991, but installing a permanent system in its place would provide substantial annual savings by eliminating the costs of installing the pumps, heat exchangers, cooling towers and associated piping. Included in the scope of this project is replacement piping to remove the need for the RHR system to provide cooling to the spent fuel pool prior to full core offload. Also, a redundant seismic Class 1 makeup line is being added for the fuel pool.

Successful system design and implementation would result in improved working and operating environments which will result in improved worker productivity, reduced exposures and possibly shorter outages due to quicker core offloading to the fuel pool.

II. EVALUATION

Schedule Index: 26 - Replacing the temporary systems with permanently installed systems eliminates the time required for initial system setup and subsequent removal. Reduced temperatures in the drywell and Reactor Buildings will also improve worker efficiency and will lessen the chance for personnel errors due to heat and excessive perspiration. Combined, these effects have a significant impact on unit availability (1.0 x 12). Improved working conditions have a significant effect on worker morale. Moreover, removing the temporary cooling systems removes hazards, improves system reliability and material condition, and improves cooling capabilities, resulting in a significant plant enhancement (1.0 x 8). Personnel safety is enhanced by greater worker awareness and morale brought about by the lower drywell and Reactor Building temperatures, less heat stress, and fewer workplace hazards (0.2 x 29).




Economic Aspects: Installation costs and the long term costs related to system maintenance should be more than offset by the benefits of eliminating installation and removal costs for the temporary systems and improved worker and outage efficiencies.

Other Considerations: Outage related work is required during the installation of this cooling upgrade.


III. CONCLUSION


The temporary cooling systems installed to cool the drywell and the spent fuel pool are not reliable for the long term. They also present hazards due to poor material condition, require time to install and remove, and do not provide sufficient capacity for supplying other cooling loads. The importance of improving these conditions is reflected in a schedule index that is high relative to many other projects. Therefore this project will be completed as scheduled to develop a permanent cooling system to supply cooling requirements for the drywell, Reactor Building, and the spent fuel pool for each unit.


BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
06094A	COOLING UPGRADE FOR DRYWELL, REACTOR BLDG AND FUEL POOL																							
Study	<div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> 7-MAR-92 22-SEP-93 </div> 																							
Design	<div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> 6-JAN-94 16-NOV-94 </div> 																							
Implement	<div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> 19-JAN-95 31-DEC-97 </div> 																							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
	1992				1993				1994				1995				1996				1997			

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Off-Gas Drain Tanks Reservoir

I. PURPOSE AND SCOPE

The electrical level control and indication systems for the off-gas drain tank (OGDT) and its loop seal reservoir have had a history of problems that have initiated several incidents resulting in loss of main condenser vacuum. Some of these incidents have led to power reductions or reactor scrams. The control failures and other material deficiencies in the system are caused, in part, by the high humidity in the residual heat removal (RHR) room (-17 foot elevation) where the OGDT is located. For example, the humidity causes corrosion of exposed carbon steel solenoid valve linkages, interfering with loop seal reservoir drain and makeup valve operation. Failure of these valves to operate properly will cause condensate to backup into the system, eventually leading to loss air ejector condensing capability and, thus, loss of condenser vacuum. Operator response to loss of vacuum incidents is hindered by the current indication and control system since determining whether this system is the cause is unusually difficult. This is because of the lack of remote and accurate level indications for the OGDT and loop seal reservoir. Also, to determine the level in the OGDT, the operator must enter a contaminated area and check the high level alarm annunciator. Even if a high level is indicated, the operator must then try to start the OGDT pumps. Failure of the drain pump to start indicates a low level in the OGDT, leading to the conclusion that the loop seal reservoir level control system is causing a problem. Also, the high level alarm for the OGDT is also not reliable, since the alarm has failed to annunciate when the drain pump and level control malfunction. Other control and indication related deficiencies have been identified during investigations of loss of condenser vacuum incidents.

This project replaces electrically controlled components in the off-gas drain tank and loop seal reservoir with mechanical control components. The scope of the project includes installing two float-type liquid drainers with associated piping in place of the electrical level control valves for the OGDT, installing a manual drain from the OGDT loop seal reservoir, replacing reed switch level indicators with magnetic float type liquid level indicators (with remote annunciators), and modifying piping to eliminate hold-up points for condensate. These modifications will provide more reliable level control to prevent water from backing up in the off-gas 30-minute hold-up line and will provide remote mechanical indication of water level in the off-gas drain tank. Successful implementation of this project will be evidenced by a reduction in loss of condenser vacuum events caused by the off-gas system and consistent, reliable level indication for the off-gas drain tank and the loop seal line reservoir.

II. EVALUATION

Schedule Index: 27 - Removing the potential for loop seal line blockage increases plant availability by reducing the potential for loss of condenser vacuum events that have resulted in reactor scrams (1.0 x 12). The deficiencies being corrected have also caused power reductions at BNP in the past. Implementing this project has a positive impact on plant capacity by reducing the potential for such power reductions in the future (0.5 x 10). The reduced potential for the off-gas system to cause a loss of condenser vacuum event has a low positive impact on nuclear safety due to the improved availability of the condenser as a heat sink when decay heat removal is required (0.2 x 32). Correcting long-standing problems in the off-gas system for which special plant procedures were developed has a moderately positive impact on plant enhancement (0.5 x 8).

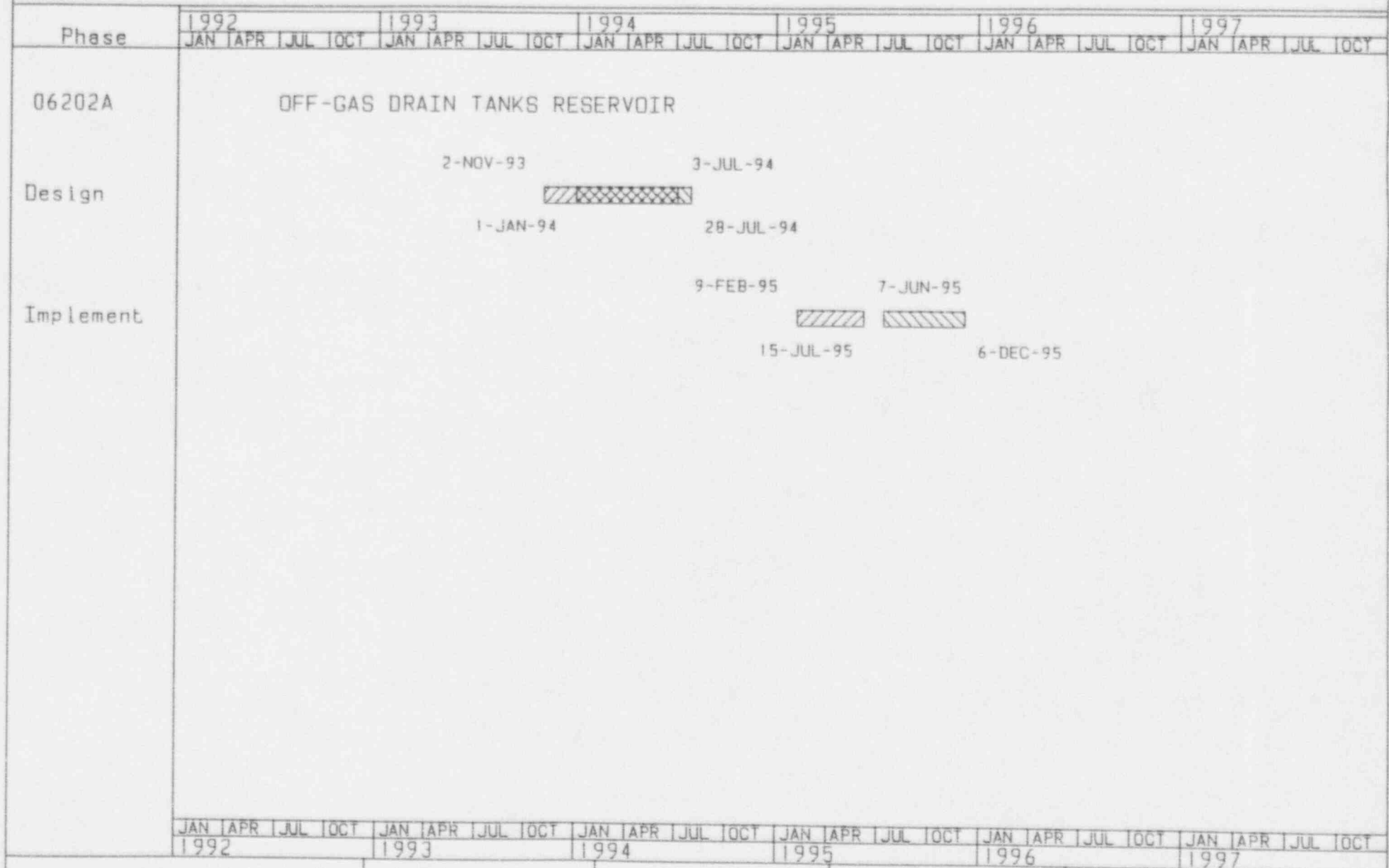
Economic Aspects: Reactor scrams and power reductions due to loss of condenser vacuum can result in one or two days of lost generating capacity each time the off-gas drain tank and loop seal reservoir malfunction. Implementation of this project will have no substantial impact on the long term costs of system maintenance of the off-gas system.

Other Considerations: This project includes modifications that must be implemented during an outage.

III. CONCLUSION

Problems with the off-gas system drain tank valves and associated piping has, on several occasions, caused reactor scrams and power reductions. Implementing this project will correct system reliability deficiencies and will enhance the ability of the operator to determine system conditions. This project will be completed as scheduled or earlier, if feasible.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Improve Refuel Floor Fire Detection Accessibility

I. PURPOSE AND SCOPE

Fire detectors located in the ceilings of the Reactor Buildings' refueling areas currently have to be reached for periodic testing, changeout, and indicator bulb replacement. This has to be done from the Reactor Building bridge crane trolley 50 feet above the floor using special tools. Because the distance from the trolley up to the detectors is approximately 20 feet, special tools are used which are large and cumbersome. Moreover, the clearance between the very congested crane trolley and the building trusses is only 14 inches, so personnel must crouch beneath the steel as the crane moves from detector to detector. The combination of these factors creates an unsafe and inefficient process for detector maintenance and testing.

In addition to these maintenance and testing difficulties with the current system, erroneous fire alarms are common, especially during outages when work creates abnormal amounts of dust. Troubleshooting these false alarms is complicated by the burned-out indicator lamps which are not also replaced due to lack of safe access. In addition, occasionally an LCO has been declared due to inoperability of the system, requiring the use of personnel for hourly fire-watch tours in the plant.

This project corrects these accessibility problems by installing a new fire detection air-sampling system that uses tubing to bring the air sample to a readily accessible detector panel. Fire detection annunciation will be provided locally and in the Control Room, using current circuits to the extent feasible. Also, the new system will be more sensitive and more reliable than the old system.

This project will be considered successful when Reactor Building refueling area fire detection component maintenance and testing is not deferred due to personnel safety concerns. Completion of the applicable maintenance and testing tasks will result in minimal false alarms and significantly less frequent circuit deactivations. Thus, the need for an LCO fire watch caused by such system problems should not occur after project completion.

II. EVALUATION

Schedule Index: 33 - This project primarily addresses concerns related to personnel safety caused by excessive maintenance requirements that must be accomplished in difficult to reach locations (1.0 x 29). Since the maintenance of the relatively inaccessible detectors used in the current system involves significant risk of severe personnel injury, maintenance has also been deferred in the past. Replacement of this fire detection system as proposed will increase system reliability, will significantly ease maintenance and testing requirements, and will reduce unnecessary fire detection circuit trouble indications in the Control Room, resulting in a plant enhancement (0.5 x 8). This project is outside the limits of the Level I PRA, but it could have some impact in a Fire PRA. Nevertheless, a fire in this area of the Reactor Building does not appear to impact any important systems in the PRA and does not have any appreciable impact on core damage frequency.

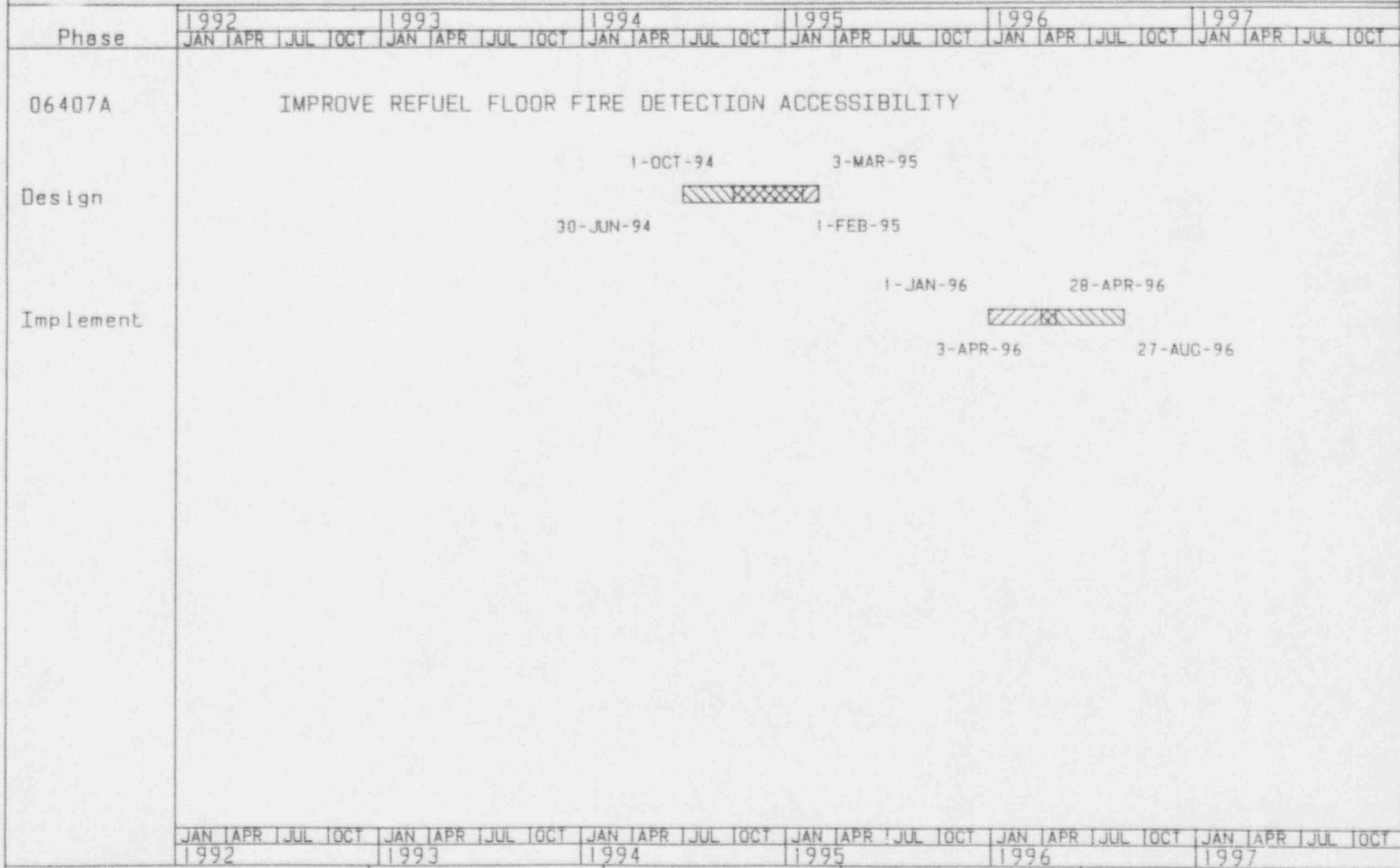
Economic Aspects: This project reduces the long term cost of maintenance and troubleshooting for the affected fire detection circuits. Concerns for safety of personnel during the accomplishment of the project itself are expected to result in abandoning certain components in place, which also results in some project savings. Additional savings are anticipated from using existing instrument circuitry. Also, some fire detection related LCOs are expected to be avoided in the future, reducing the potential future costs of providing fire watches.

Other Considerations: Since care must also be taken to avoid personnel injury during the accomplishment of this project, some components of the previous fire detection system will probably be abandoned in place. In addition, most of the work can be performed during non-outage periods, and only minor impacts are expected during outages.

III. CONCLUSION

This project will be accomplished as scheduled to minimize personnel safety concerns when Reactor Building refueling area fire detection component maintenance and testing is required.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Replace HPCI, RCIC, and RPS Topaz Inverters

I. PURPOSE AND SCOPE

The purpose of this project is to resolve the spare parts and reliability issues associated with Topaz inverters. Topaz inverters are presently used in a variety of systems for DC to AC conversion to allow control, logic and instrumentation functions to be performed with AC power. The installed models are no longer available and the original manufacturer will not refurbish the units. Additionally, replacement parts are unavailable. This has affected the availability of the high pressure coolant injection (HPCI) and reactor core isolation cooling (RCIC) systems.

Initially, all component loads supplied by the HPCI and RCIC Topaz inverters will be removed. Then, the Topaz inverters and components will be replaced with a simplified DC to DC power distribution system. The function of all the system components originally supplied by the inverters will be the same. New DC HPCI and RCIC flow controllers will be procured. New power supplies will be procured that will feed the remaining instruments after the inverter loads are removed.

The reactor protection system (RPS) analog Rosemount instrumentation Topaz inverters are also included in this project scope. The RPS Topaz inverters will be the subject of a study which will develop recommendations for modifications, as appropriate.

The desired state at the completion of this project is to have available, in place of the obsolete Topaz inverters, reliable power supplies that are qualified for the environment to which they are exposed. The success criterion of this project is the elimination of HPCI and RCIC systems unavailability due to the failure of the Topaz inverter.

II. EVALUATION

Schedule Index: 13 - This initiative moderately improves the availability of the HPCI and RCIC systems. Flow control improvements do not have a major impact on HPCI or RCIC reliability. Based on the PRA model, the HPCI system is a system of relatively low importance. However, when combined with the RCIC system, the HPCI system is weighted higher. Therefore, a nuclear safety scaling factor of 0.2 was assigned to this initiative (0.2 x 32).

Further, this initiative corrects the failure of Topaz inverters in the HPCI and RCIC systems which has a potential for a loss of unit availability. The potential loss of unit availability would be most likely caused by entering a HPCI and/or RCIC inoperable LCO (0.2 x 12). Finally, this modification is a medium positive impact on plant enhancement in that it contributes to improvement in the maintenance and operations of the HPCI and RCIC systems (0.5 x 8). Maintenance work-arounds such as replacing individual components within Topaz inverters would be avoided, and the elimination of Topaz inverter failures would enhance system operation.

Economic Aspects: The estimated cost of the project includes the RCIC and HPCI modifications and the RPS study. The expected benefits of this project are the improved material condition and reliability of the RCIC, HPCI, and RPS systems. The changes in the routine periodic maintenance costs as a result of this initiative are difficult to quantify. The maintenance cost will diminish but maintenance will clearly be required for the new equipment.

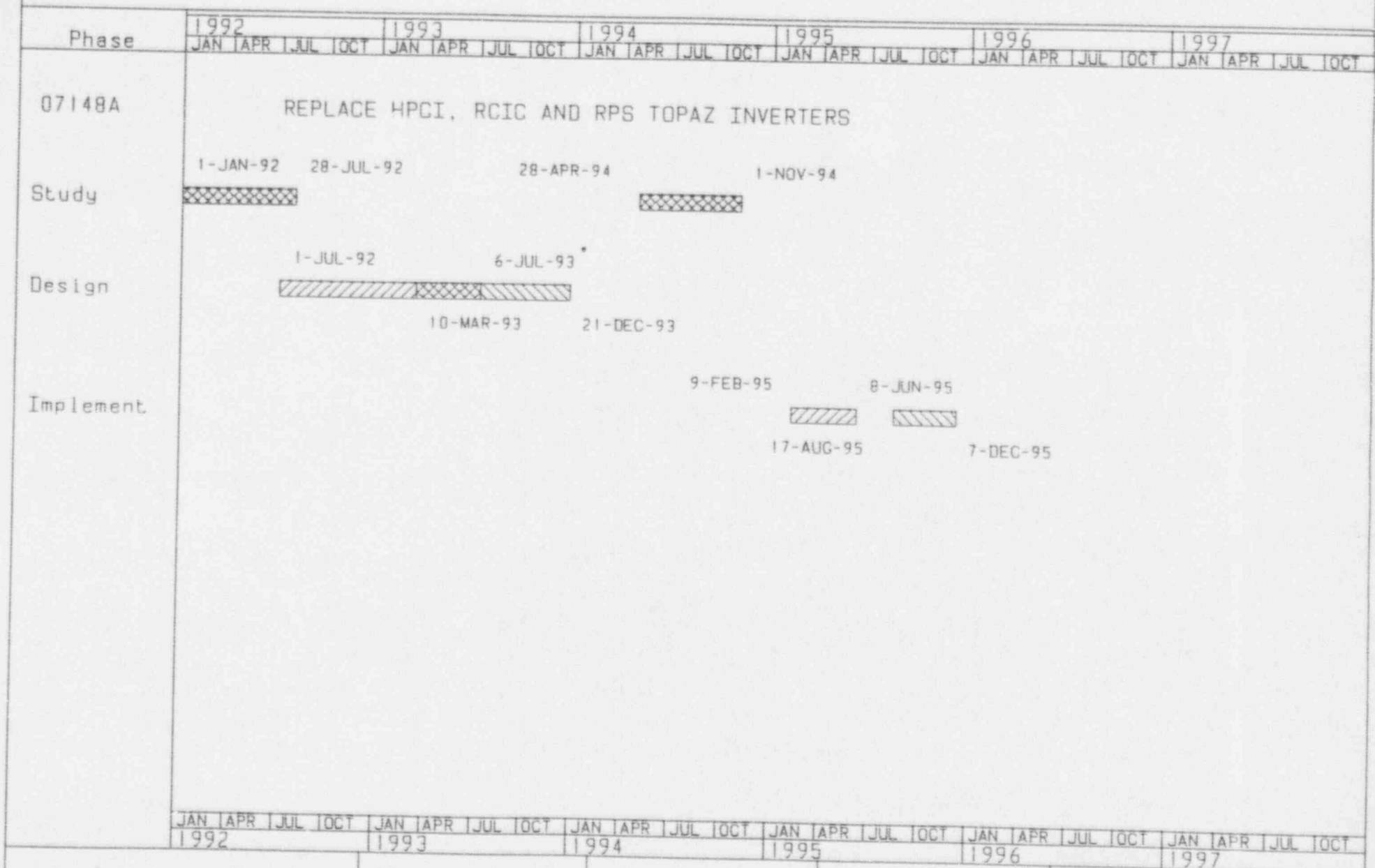
Other Considerations: The most critical short term work to be completed is the RCIC and HPCI Topaz inverter change out. The final resolution of the RPS Topaz inverters will depend on the results of the study to be conducted.

Other, related work is also in progress. The feedwater Topaz inverters are being removed under PID 04688A. The RCIC and HPCI steam leak detection system Topaz inverters are being replaced by a NUMAC digital system under PID G0051A.

III. CONCLUSION

The RCIC and HPCI modifications will be implemented as scheduled. This initiative improves the availability of the RCIC and HPCI systems and helps reach availability goals for those systems. It also will enhance the plant material condition by upgrading critical plant systems with components that are currently available. The study of the RPS Topaz inverters will also proceed as scheduled.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Ten Year Inspection of Reactor Recirculation Pump Motors

I. PURPOSE AND SCOPE

General Electric recommends removal and inspection/refurbishment of reactor recirculation pump motors every ten years to maximize motor life and preclude in-service failures. Proper functioning of the internal motor components is vital to reliable operation. In particular, motor winding damage can result from a number of conditions which are undetectable without disassembly. Other BWR owners have detected and corrected potential problems during such inspections; however, this maintenance is not an in-service inspection requirement.

These variable speed motors will be removed by plant personnel and shipped to the vendor for disassembly and inspection. They will be cleaned and refurbished as necessary and returned to the plant for reinstallation by plant personnel. Inspection and refurbishment of the recirculation pump motors will assure optimal motor reliability and will prevent unplanned downtime. Each unit has two recirculation pump motors.

Success of this project will result in improved reliability and availability of recirculation pump motors until the next maintenance period.

II. EVALUATION

Schedule Index: (-3) - Although no downtime has occurred at Brunswick as a result of recirculation pump motor failure, optimum maintenance of the pump motors potentially reduces or eliminates unplanned outages that might be caused by such failures (0.2 x 12). Dose estimates for removal, preventive maintenance, and reinstallation are estimated to be about 70 person-rem (-1.0 x 9). The potential to avoid unnecessary pump motor replacement represents a plant enhancement, but is offset somewhat by the substantial removal and reinstallation effort required (0.5 x 8). This project could have some small positive effect on nuclear safety in reducing recirculation pump motor failures, but such failures are not significant contributors to theoretical core damage frequency. Therefore, a zero nuclear safety scaling factor is assigned.

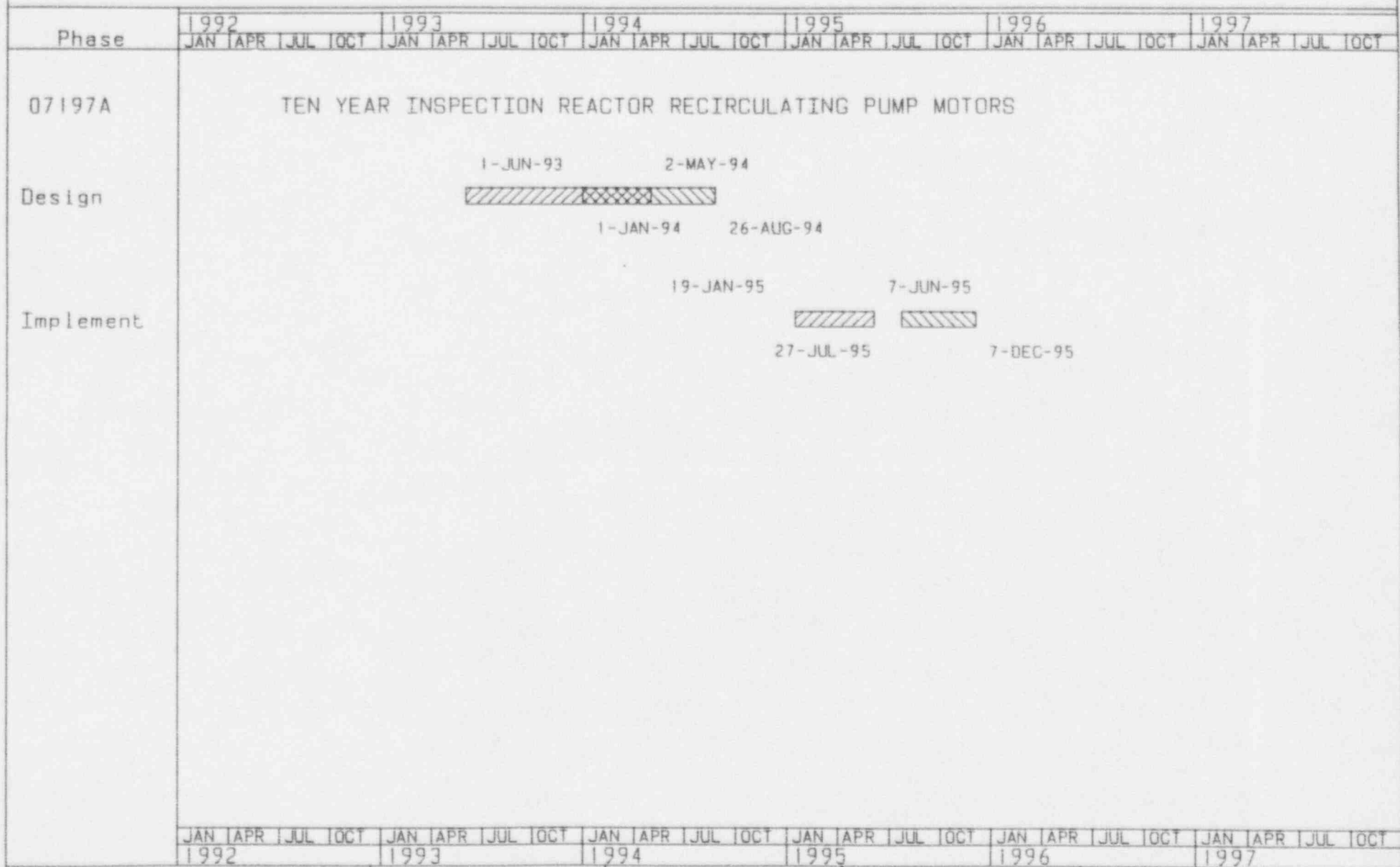
Economic Aspects: Inspection and refurbishment of recirculation pump motors should result in optimal reliability and extended motor life. Without this preventive maintenance, there is an increased probability of motor winding failure and the need for significant unplanned corrective maintenance.

Other Considerations: Removal of the recirculation pump motors can only be done during a refueling outage.

III. CONCLUSION

Due to the importance of the recirculation pump motors to plant operation, this preventive maintenance project will be performed as scheduled.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Eliminate Source and Intermediate Range Monitor Noise Spikes

I. PURPOSE AND SCOPE

This project addresses noise-induced spikes on SRM and IRM channels received from unknown sources during unit startup. IRM channels may respond with noise spikes during reactor startup whenever the rod select and drive control pushbuttons are operated. The noise spikes may produce an upscale trip which inputs a half scram signal to the Reactor Protection System (RPS) during reactor startup. The root cause of the spiking on SRM/IRM channels was determined to be low level noise-induced interference sensed on the SRM/IRM cabling between the preamp cabinets and the drywell penetrations. Rerouting SRM/IRM detector cables was recommended to separate them from other cables of unlike sensitivity (i.e., Local Power Range Monitor cables, detector drive cables) to eliminate the source of noise induced interference. As part of the study phase of this project, comprehensive diagnostic testing was performed to determine the cause and magnitude of current electrical interference levels of each individual SRM/IRM channel. Several SRMs and IRMs were found to have electrical interference at the preamp cable input. As a result of this portion of the study phase, modifications are planned to reduce the level of interference. For example, SRM/IRM cables will be rerouted through separate conduit that is used only for SRM/IRM detector cables, conforming with BSEP specification 048-004. Also, a bare copper ground cable to the outside of the conduit will be installed to provide a "tube shield" effect for noise elimination.

The desired state after this modification is completed would be a significant reduction of SRM/IRM noise spikes resulting in occasional rod blocks and half scrams during reactor startup when the rod drive and select control panel is operated.

II. EVALUATION

Schedule Index: 18 - Rerouting SRM/IRM detector cabling to eliminate or reduce signal spiking is a significant plant enhancement, particularly during reactor plant startup. This modification would eliminate delays in plant startup due to rod blocks and half scrams (occasionally full scrams) caused by IRM channel noise induced spikes (1.0 x 8). Reducing the number of half scram or full scram signals would reduce challenges to plant safety systems such as the reactor protection system (0.2 x 32). Furthermore, eliminating the root cause of the IRM half scram problem will streamline reactor startups and return the unit to full power more quickly, thus increasing unit availability (0.2 x 12). Finally, although rerouting and pulling SRM/IRM detector cabling would expend appreciable man-rem, it would also minimize future maintenance and technical support man-hours spent troubleshooting and repairing SRM/IRM problems and thus minimize radiation exposure. The result over the life cycle of the plant would be a significant dose savings to personnel (0.2 x 9).

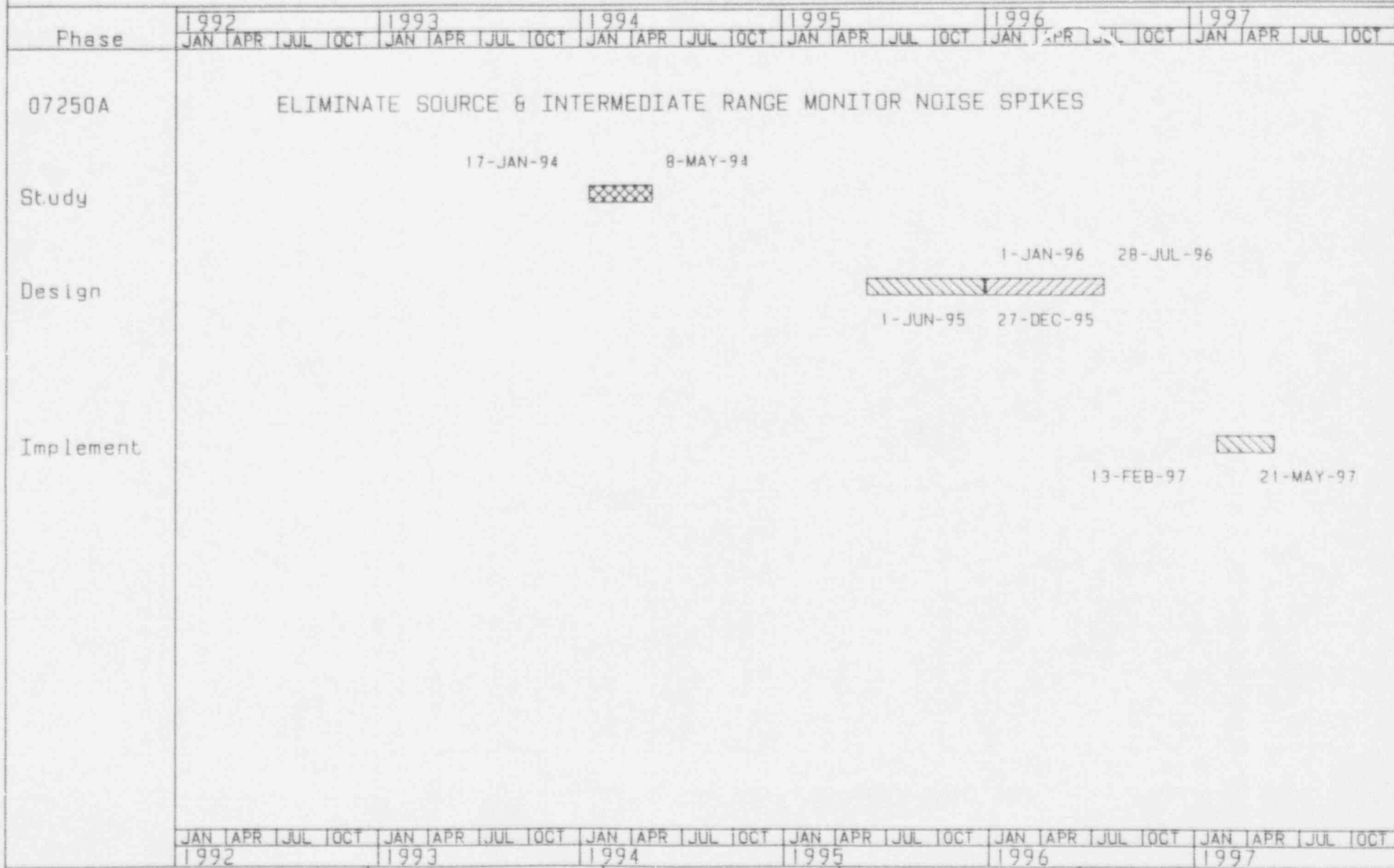
Economic Aspects: The expected benefit of this project would be the elimination of delays incurred during reactor startup from SRM/IRM spiking problems, which result in higher unit availability and net generation revenue. The excessive use of technician resources to troubleshoot, identify, and correct the SRM/IRM noise spiking would be eliminated. The cumulative radiation exposure of crews would be minimized with an error free SRM/IRM instrumentation system. The operations crew, as well, could better focus on the reactor startup with fewer interruptions from SRM/IRM problems.

Other Considerations: Implementation of this project is outage-associated work. This project will correct the deficiency that the cabling for the SRMs and IRMs is not in conformance with the FSAR in that it is not triple shielded type. The NRC may require an environmentally qualified, wide range neutron monitoring (WRNM) system capable of measuring neutron flux from source range level to full power. The WRNM system would be capable of determining post-accident neutron flux and be designed to the Category I criteria of Regulatory Guide 1.97 and 10 CFR 50.49. The cabling rerouting and segregation performed by this project should be compatible with the cabling requirements of a new WRNM system.

III. CONCLUSION

The modifications associated with this project are intended to eliminate nearly all SRM and IRM noise induced spikes and, consequently, all associated rod blocks, half scrams, and full scrams experienced during reactor startup. This project is a significant plant enhancement for the operators, particularly during reactor startups, and therefore will be completed as scheduled.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Off Gas Valve Torque Investigation

I. PURPOSE AND SCOPE

Off-gas system gate valves in vertical piping runs in both units do not always operate on command during critical evolutions, which can cause a loss of condenser vacuum and a reactor scram. To compensate for this deficiency, operating procedures were revised to require operators to be stationed locally in high radiation areas to operate the valves manually, if necessary. The valves should operate on demand to eliminate this operator work-around, to reduce the potential for a reactor scram, and to avoid unnecessary radiation exposures.

This project addresses investigating the cause of failure of off-gas system valves and modifying or replacing these valves installed in vertical runs so they can open properly under normal system operation. Modifying or replacing these valves eliminates the requirement for the auxiliary operator to observe valve operation while in a high radiation area to ensure the valves open properly. These valves are non-Q, non-seismic, piping class G-3. In addition to valve replacement, the scope includes control modifications and re-work of two hangars for each valve.

The success criterion after this modification or replacement is completed would be proper automatic operation of these valves, resulting in a reduction in the probability of loss of condenser vacuum accidents caused by the off-gas system.

II. EVALUATION

Schedule Index: 14 - This modification or replacement will reduce the potential for loss of the condenser as a heat sink when decay heat removal is required, thus resulting in a slight positive effect on nuclear safety (0.2 x 32). Problems with valve operation in the off-gas system may lead to losses of condenser vacuum and, in some cases, to reactor scram. Correction of these problems will reduce the probability of loss of condenser vacuum events, minimize the possibility of reactor scram due to these events, and increase plant availability (0.2 x 12). The amount of steam that can be condensed is dependent on condenser vacuum. If condenser vacuum cannot be maintained at normal levels, lower power levels will result. This project will reduce the probability of low condenser vacuum incidents and thus will improve plant capacity (0.2 x 10). Eliminating the need for the operator to operate the off-gas valves manually results in reduced exposures (0.2 x 9) and is a plant enhancement (0.2 x 8).

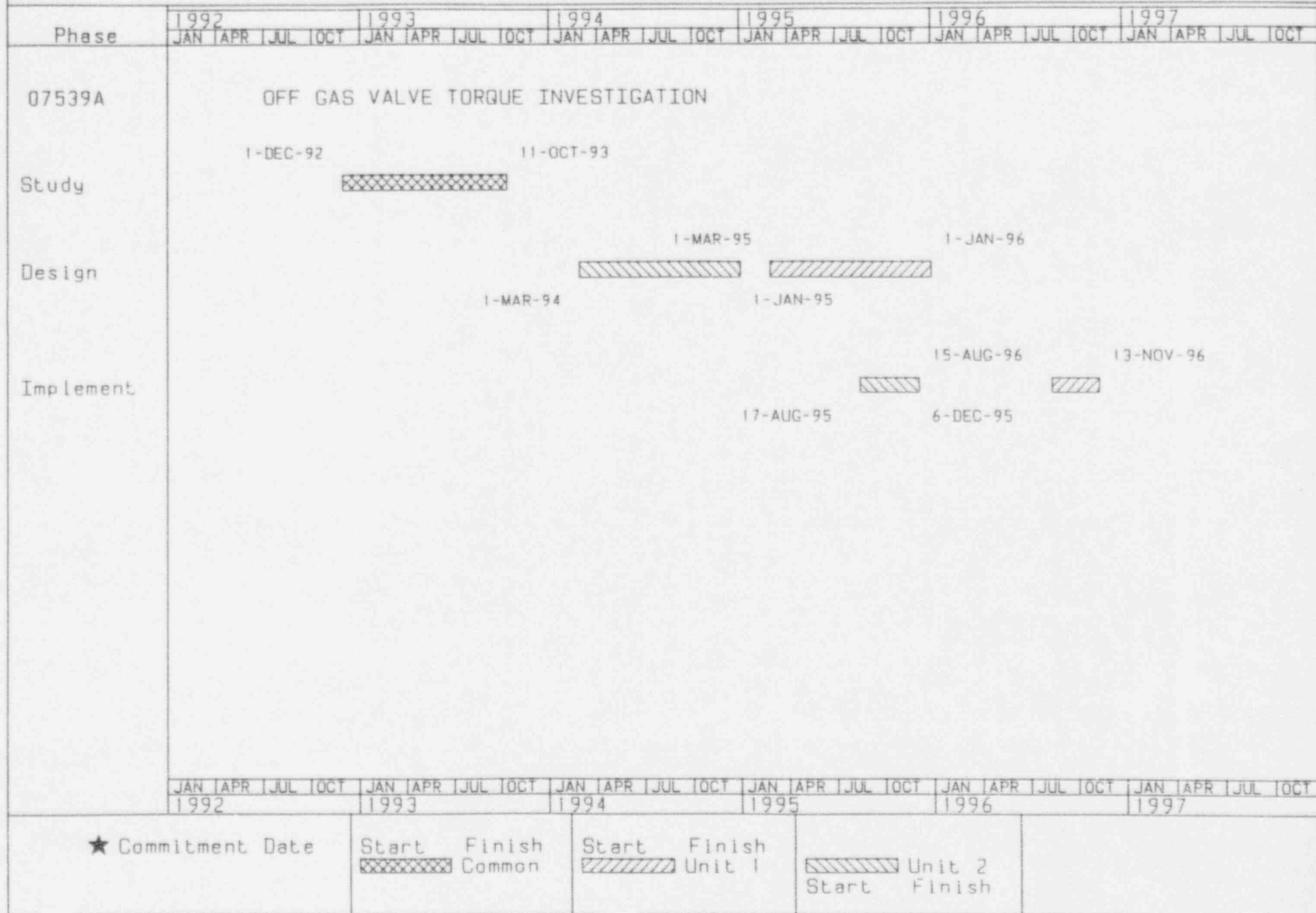
Economic Aspects: The study phase of this project will identify the specific valves that do not always operate on command and will determine the proper corrective actions. The cost of the project will depend on the number of problem valves identified and the corrective action recommended. Once the affected valves are modified or replaced, no additional costs are expected. The resultant increase expected in plant availability should offset the initial cost of the project.

Other Considerations: This project includes modifications that must be implemented during an outage.

III. CONCLUSION

In order to increase valve operational reliability and improve off-gas system operation, this project will be completed as scheduled.

BNP Three Year Plan Project Schedule



Resolve Thermal Binding of RHR F004 Valves

I. PURPOSE AND SCOPE

Currently, residual heat removal (RHR) torus suction valves E11-F004A, B, C, and D periodically fail to open on demand upon restoring the RHR system to a normal standby lineup after securing from the shutdown cooling mode of operation. Operators have to manually crack open the valves off their seats prior to motor operation when securing from shutdown cooling to avoid tripping the motor operator on thermal overload. This has been a repetitive problem as documented in EER 90-0192, EWR 07647RF, and FACTS 89-B0303. The Motor Operated Valve Task Group (MOVTG) has indicated that these valves are particularly susceptible to thermally induced binding. The purpose of this project is to correct the thermal binding problems with these valves.

The success criterion of this project is increased reliability of the remote motor-operated function of the E11-F004A/B/C/D valves as evidenced by no valve motor thermal overload trips.

II. EVALUATION

Schedule Index: 13 - This project is intended to improve the reliability of the RHR system F004 valves when opening them from the remote Control Room switch. During power operation, the F004 valves are normally open. This project primarily affects the reliability of the F004 valves particularly during plant shutdown when the F004 valve is closed. The BNP PRA model does not take into account risks associated with plant shutdown. Therefore, this project is outside the limitations of the PRA model. However, this project will result in a small positive nuclear safety impact on RHR availability in preventing core damage or containment release (0.2 x 32). Also, this project is expected to produce a net dose savings for the remaining life of the plant of greater than 10 person-rem (0.5 x 9). General area radiation levels near the F004 valves are 50 millirem per hour. Substantial person-rem savings will be realized because routine manual valve operation during shutdown will no longer be necessary. Finally, this project will provide a small positive plant enhancement (0.2 x 8). There will be an improvement in plant operations because the time spent and person-rem expended by the auxiliary operator during manual operation of the F004 valves would be eliminated.

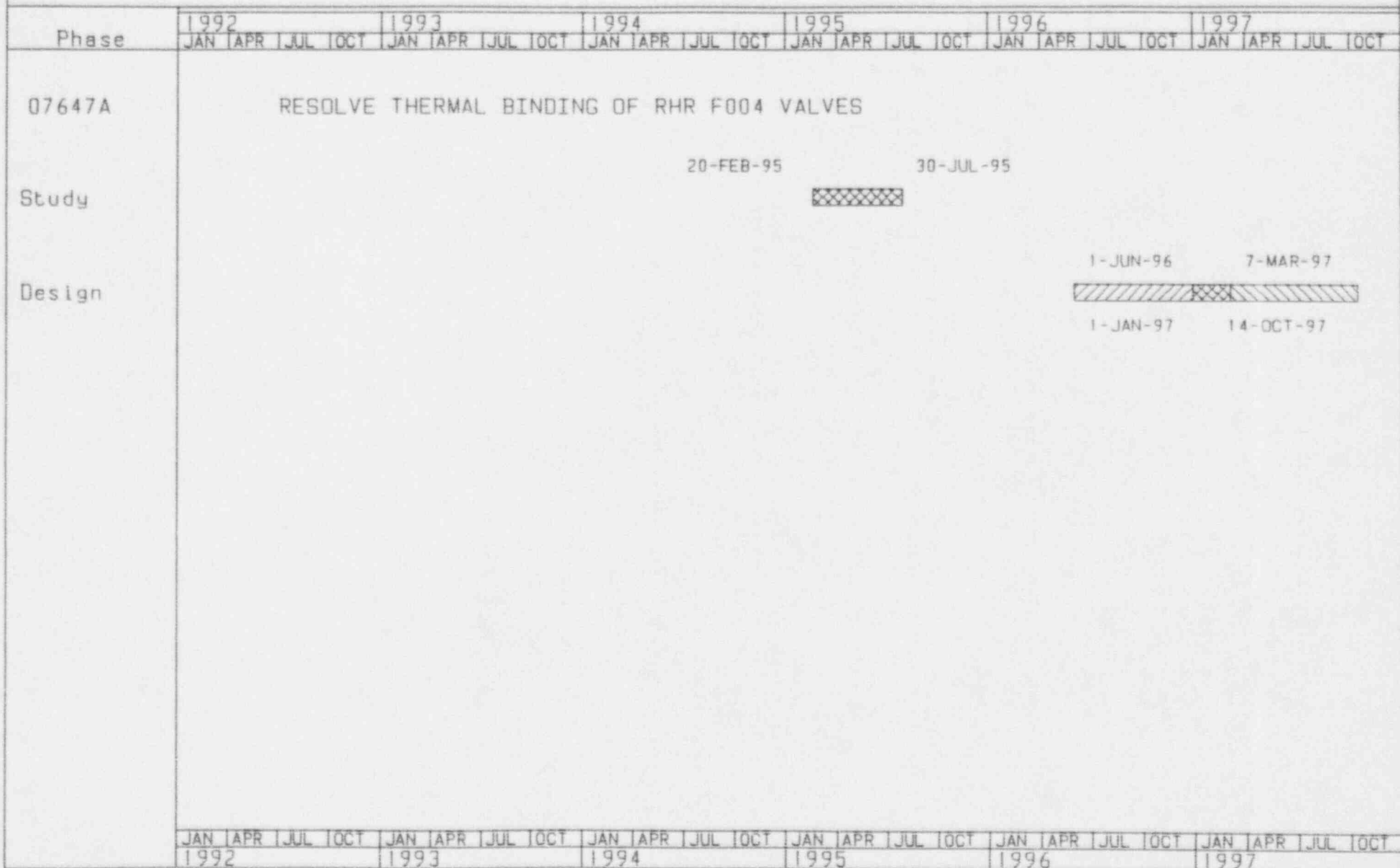
Economic Aspects: Improving the reliability of the E11-F004 valves will reduce the routine maintenance costs associated with these valves. The net expected benefits of this project are reduced person-rem, operating, and maintenance costs.

Other Considerations: Any changes to the F004 valves must be performed during an outage. Performing work on the F004 valves will render suppression pool cooling mode for that RHR loop inoperable.

III. CONCLUSION

This project will be completed as scheduled to improve the reliability of the RHR torus suction F004 valves.

BNP Three Year Plan Project Schedule



	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
★ Commitment Date					Start					Finish					Start					Finish				
						Common					Unit 1					Unit 2								

Replace Obsolete Reactor Building and Drywell Sump Level Switches

I. PURPOSE AND SCOPE

The company that manufactured the level control switches for the drywell equipment drain sump, the drywell floor drain sump, and the Reactor Building equipment drain tank (RBEDT) is no longer in existence. The switches, which control the operation of the sump pumps, require frequent maintenance and are in need of replacement parts, which are no longer readily obtainable. Additionally, the switches and electronics are located in the drywell and RBEDT room, limiting switch maintenance and calibration to outage periods or entries into high radiation areas (RBEDT room). As a result, the maintenance and calibration activities result in significant expenditures of person-rem.

This project will replace the level control switches for the drywell equipment drain sump, the drywell floor drain sump and the RBEDT with a solid state switch manufactured by Fluid Components, Inc. This type of switch will provide more reliable operation, thus reducing the maintenance associated with the switches. The solid state switches can also be repaired and calibrated remotely by locating the electronics for the switches outside the drywell and RBEDT room, reducing personnel radiation exposure and permitting maintenance and calibration while the unit is at power.

Successful completion of this project will be evidenced by installation of solid state switches that accurately indicate sump level under all operating conditions, allow maintenance and calibrations in areas remote from the switches, and are adequately supported with replacement parts.

II. EVALUATION

Schedule Index: 19 - The sump level switches are located in high radiation areas and must be removed for maintenance and calibration. Reducing the maintenance and calibration activities performed at the switches by improving reliability and removing the electronics to remote areas provides substantial ALARA benefits (1.0 x 9). Installing more reliable, supportable, and accessible switches maintains the plant material condition, assures the performance of the switch function, and improves the conduct of maintenance, providing a positive benefit to plant enhancement (1.0 x 8). A small positive impact on unit availability is provided because failure of the drywell switches could result in the drywell sump pumps becoming inoperable, which would require unit shutdown for repairs to retain compliance with Technical Specifications on leakage detection (0.2 x 12). Enhancement of the drywell floor drain sump level switches could result in a more reliable means for the operator to detect small break LOCA events. Nevertheless, since small break LOCA events have a very low probability, there is no appreciable impact on nuclear safety (0.0 x 32).

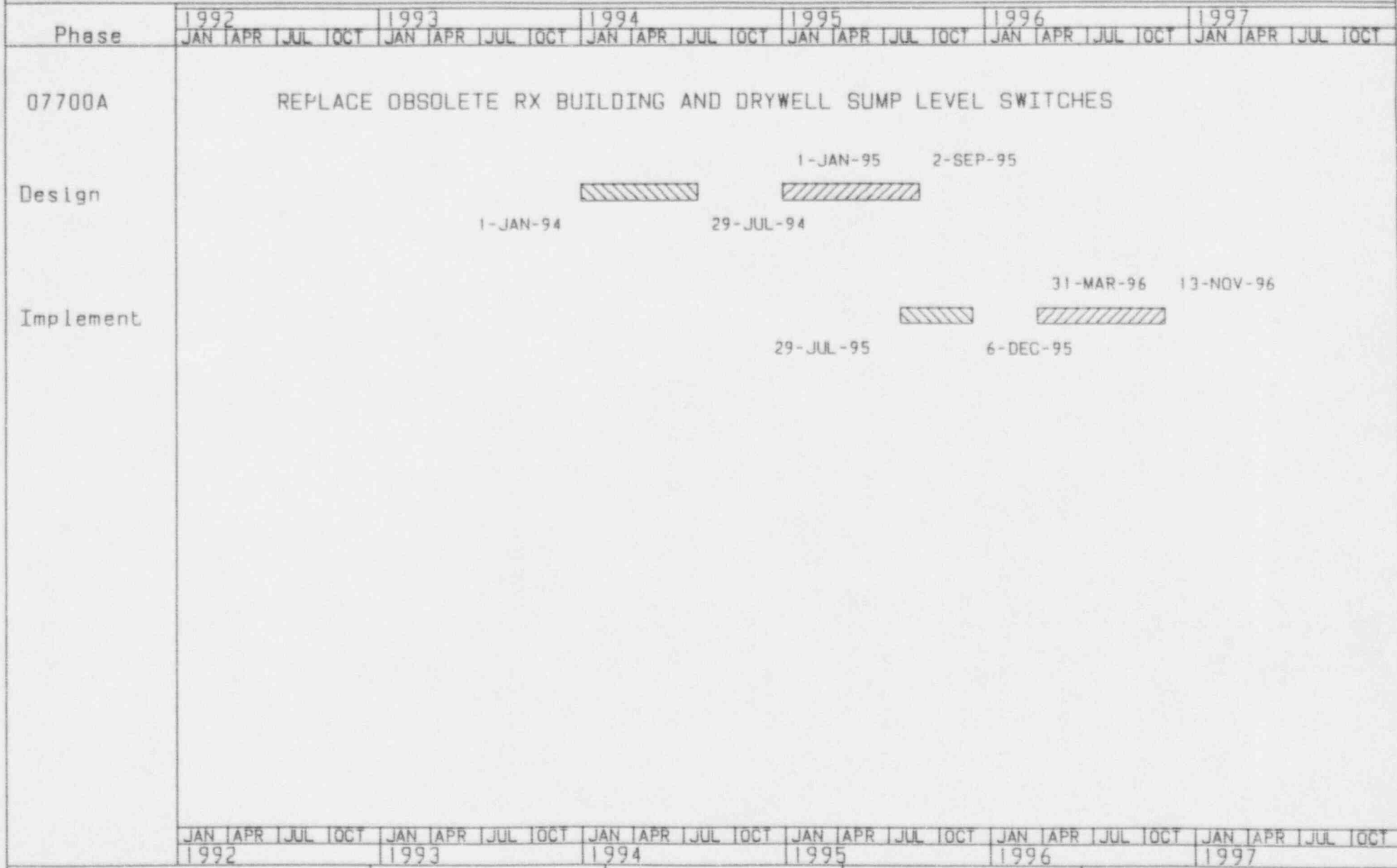
Economic Aspects: Installing switches with remote access to electronics simplifies maintenance and reduces the cost in terms of person-hours, parts, and radiation dose. Overall long term costs for maintaining these switches will be reduced after implementing this project.


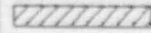
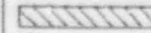
Other Considerations: Outage related modifications to install the new switches are included in this project.

III. CONCLUSION

New level control switches for floor drains in the drywell sump and Reactor Building must be procured because the current switches are not reliable and can no longer be supported with replacement parts. This project will be completed as scheduled to ensure Reactor Building and drywell sump levels are accurately indicated under all operating conditions. Installing solid state switches with remote maintenance and calibration capabilities will reduce costs and radiation exposure related to maintenance and calibration of the switches.

BNP Three Year Plan Project Schedule



★ Commitment Date	Start Finish	Start Finish	Start Finish
	 Common	 Unit 1	 Unit 2 Start Finish

Replacement of Obsolete Diesel Generator Jacket Water Heater Circulating Pumps

I. PURPOSE AND SCOPE

The purpose of this project is to find, procure, and install suitable replacement pumps for the four emergency diesel generator (EDG) jacket water heater circulating pumps. The current EDG jacket water circulating pumps are obsolete, and their replacement parts are difficult to procure. It is essential to find and purchase suitable replacements soon and install them before any of the existing pumps fail. The failure of an EDG jacket water heater circulating pump would result in the BSEP entering a limiting condition of operation (LCO) which could shutdown both Units 1 and Unit 2. Pump replacement would require changeout of the skid package (including both pump and motor) and rework of pipe and conduit supports at each pump skid.

The successful outcome of this project will be to find, procure, and replace the existing EDG jacket water heater circulating pumps with a suitable alternative. Replacement of these obsolete jacket water circulating pumps with a more current model will prevent the BSEP from entering an LCO and possible dual unit shutdown.

II. EVALUATION

Schedule Index: 28 - A scaling factor of 0.5 was assigned to the nuclear safety category because the EDGs are of high importance in preventing and mitigating core damage. The jacket water heater circulating pumps ensure the EDGs are ready for service by circulating warm water through the diesel engines while in standby. This project will enhance the EDGs' ability to respond to an accident by providing a more reliable system (0.5 x 32). There is the potential for plant availability to be impacted by the failure of the diesel generator jacket water heater circulating pumps. The EDGs would have to be declared inoperable and this would place the BSEP in an LCO condition which might require a dual unit shutdown (1.0 x 12).

Economic Aspects: Failure to replace the EDG jacket water heater circulating pumps could result in a dual unit shutdown and loss of generating revenue if these pumps fail without replacement parts in inventory. The long term maintenance costs will be reduced due to the increased availability of spare parts.

Other Considerations: Replacement of equipment on the EDGs will require that the implementation of this project be performed during an outage, when the EDGs can be taken out of service.

III. CONCLUSION

The current EDG jacket water heater circulating pumps are obsolete and replacement parts are becoming harder to locate. These pumps are required by technical specifications because they are used to keep the EDG water jackets warm so they can start and load emergency equipment quickly. Since the EDGs are required to have support systems available in order for them to be considered operational, the project will be completed as scheduled. If the existing pumps fail without suitable replacement parts in inventory, the BSEP would enter an LCO which could result in a dual unit shutdown.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
07774A	REPLACEMENT OF OBSOLETE DIESEL GENERATOR JACKET WATER HEATER CIRC PUMPS																							
Study					1-SEP-92 26-JUL-93																			
Design													1-JUN-95 29-NOV-95											
Implement																	13-FEB-97 21-MAY-97							

JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
1992				1993				1994				1995				1996				1997			

★ Commitment Date	Start Finish Common	Start Finish Unit 1	Start Finish Unit 2	
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Control Circuit for Reactor Feed Pump Seal Water

I. PURPOSE AND SCOPE

Reactor feed pump gland seal water flow is automatically controlled by temperature control valves to maintain outlet gland seal water at a constant 150 degrees Fahrenheit. The gland seal water system also has a low flow sensing switch that will open a solenoid valve to increase seal water flow if a low flow condition occurs. During unit shutdown and startup, the temperature control system throttles seal water flow since the seal water temperature is low. When the flow is below the low flow setpoint, the seal water makeup solenoid valve opens. This causes solenoid valve problems and excess gland seal water to be sprayed from the pump shaft seals onto nearby equipment. This has a significant impact on the material condition of the feed pump lubricating oil system since water gets into the bearing housing and causes corrosion.

This project modifies the gland seal water system to stop or reduce gland seal water flow when it is not needed. The success criterion for this project is the elimination of gland seal water spraying on equipment, thereby reducing corrosion problems and avoiding accumulations of water and the associated clean-ups currently needed in the reactor feed pump rooms.

II. EVALUATION

Schedule Index: 14 - Modification of the reactor feed pump gland seal water control will prevent seal water spraying and resultant unsightly flooding, and thus eliminate the need for extensive clean-up efforts. Additionally, this project will help prevent solenoid valve coil failures and therefore is a plant enhancement (1.0 x 8). Because this modification will reduce the probability of a reactor feed pump failure, a slight increase in the availability of the plant (0.2 x 12) will be obtained. A slight increase in plant capacity (0.2 x 10) will also be gained due to improved oil quality. This modification will also result in reduced personnel exposures (0.2 x 9) due to the elimination of the need to clean-up the seal water spray. This modification will have no appreciable effect on nuclear safety since the loss of the reactor feedwater pumps is a very small contributor to the theoretical core damage frequency (0.0 x 32).

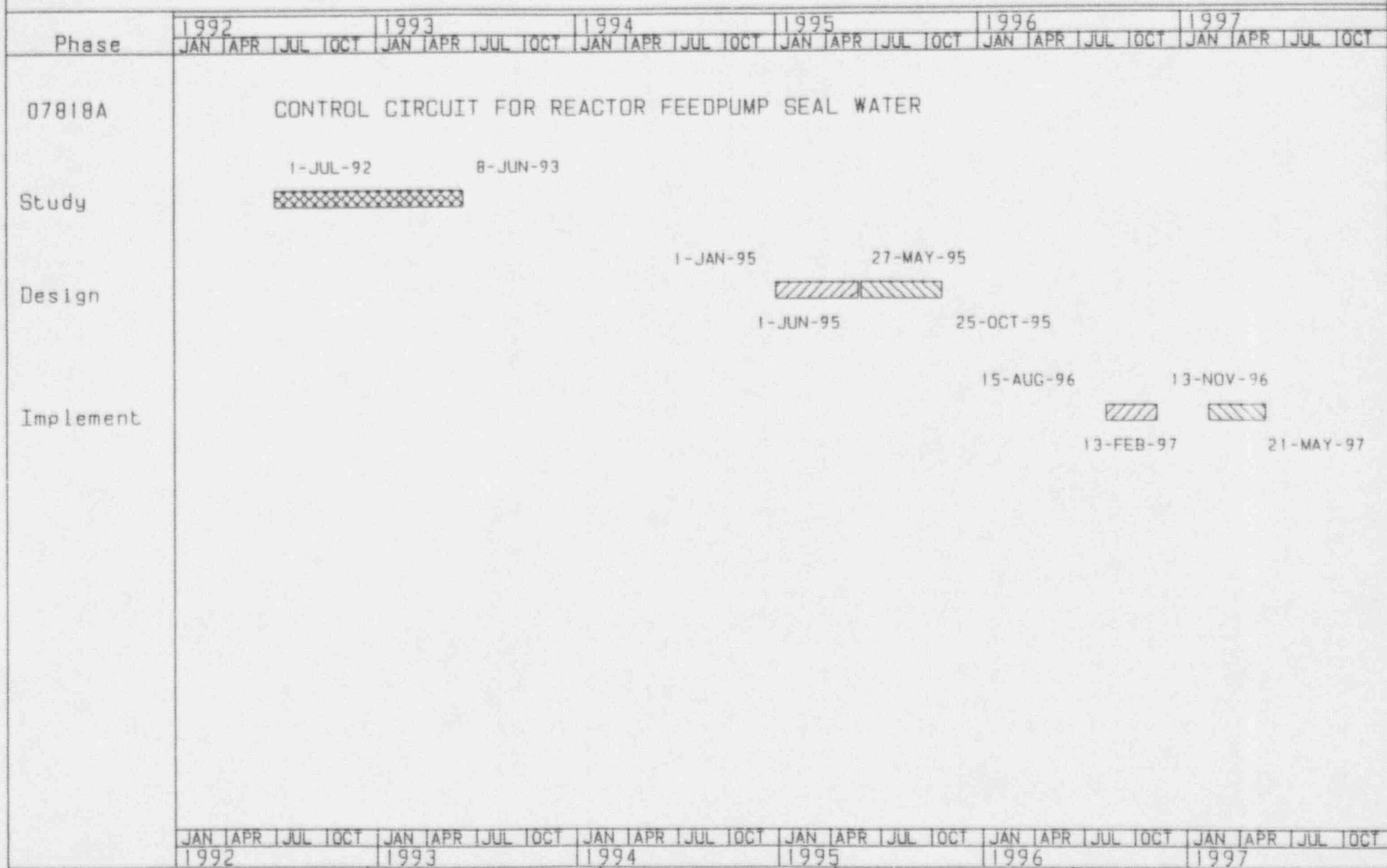
Economic Aspects: Once the gland seal water system is modified, no additional costs are expected. The resultant increase expected in plant availability and the reduced maintenance and clean-up costs should offset the initial cost of the project.

Other Considerations: This project includes modifications that must be implemented during an outage.

III. CONCLUSION

This project will be completed as scheduled to prevent reactor feed pump gland seal water from spraying on other equipment and causing corrosion.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Replace Lighting and Communications Uninterruptible Power Supply

I. PURPOSE AND SCOPE

This project will replace the existing obsolete lighting and communications uninterruptible power supply (UPS) system with a more modern and maintainable system. The lighting and communications UPS system supplies 120/208V AC power to the plant paging and intercom system, the plant evacuation and fire alarm system, lighting in the Control Room and other critical areas, and the plant card reader and security system (e.g., the explosive entrance detectors). The UPS system was originally installed in 1973 and has become a significant maintenance problem due to normal equipment aging. Support from the original manufacturer (Static Products Incorporated, now International Power Machines) has been declining and will continue to erode due to the unavailability of the spare parts for this obsolete equipment. In order to maintain the functions of the UPS system, it is crucial that the current hardware be replaced with a modern system for which part support is available.

The initial phase of the project is a study which includes identifying a new system and vendor to replace the existing lighting and communication UPS system. The project will be successful if the UPS system maintenance costs are reduced and the system reliability is improved. Also, the equipment modernization process itself should not unnecessarily impact plant operations or personnel safety.

II. EVALUATION

Schedule Index: 23 - Plant lighting and the plant paging system are very important to successful operator actions during recovery from any potential accident. Since operator actions are critical in preventing and mitigating core damage, the replacement of the lighting and communications UPS impacts nuclear safety scaling factor (0.2 x 32). Personnel safety is improved by this project due to the potential lost time accident that could occur if the evacuation and fire alarms were to be without power. Loss of plant communications could also have the potential for a lost time accident (0.5 x 29). There is also some potential for unnecessary radiation exposure if the plant intercoms and alarms are unavailable due to a loss of power (0.2 x 9).

Economic Aspects: The present system is obsolete and spare parts are becoming increasingly scarce. A new UPS will allow continued safe plant operation and would have reduced maintenance costs as compared with the present installed system.

Other Considerations: Because of the importance of the UPS system, it is critical that replacement of this equipment is done in a manner that will not have any adverse impacts on plant security or vital alarms. This project is not outage dependent.

III. CONCLUSION

Installation of a new lighting and communications UPS system is needed to support continued efficient plant operational control. System maintenance costs for the current obsolete equipment will also be reduced. This project will be completed as scheduled and will allow orderly modernization of the lighting and communications UPS system.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
07862A	REPLACE LIGHTING AND COMMUNICATIONS UNINTERUPTABLE POWER SUPPLY																							
Study					29-MAR-93																			
Design					30-MAR-93				30-NOV-93															
Implement													29-MAR-95				20-JUN-95							
													29-MAR-95				20-JUN-95							

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Instrumentation Setpoint Control Program

I. PURPOSE AND SCOPE

This project establishes a systematic method for specifying, documenting, reviewing, and controlling instrument setpoints. This effort will enhance the effectiveness of the plant's overall configuration management program by assuring design control of instrument setpoints and the associated test and calibration procedures, including better control and management of setpoint changes.

Current instrument maintenance practice is to use the instrument manufacturer's rated accuracy as the basis for the required accuracy for most individual instrument calibrations. The instrument data sheets provided in FP-50174 list instrument rated accuracy and the required accuracy, which is simply supposed to be less stringent than the rated accuracy of a given instrument. The basic design approach is to determine the needed accuracy for instruments, then purchase and install equipment capable of meeting the requirement. Then the plant personnel keep track of actual calibration data. Since the information in the instrument data sheets has not been kept up to date, it cannot be used as the basis for managing and, where needed, changing the accuracies contained in instrument calibration procedures. Additionally, adjustments to the calibration frequency are dependent on such records (set and drift).

Completion of this upgraded setpoint program would yield both labor and dose saving benefits that would provide immediate payback when applied to instrumentation loops in high dose areas. Instrument loops that are being calibrated too frequently due to the arbitrary use of an instrument's available set point drift data would also realize these labor and dose savings. Also, improvements in setpoint control would have a positive impact on several routine instrumentation tests.

II. EVALUATION

Schedule Index: 11 - The project could potentially reduce the chance of failing to actuate important systems automatically during accident scenarios due to common cause miscalibration errors. However, since the Emergency Operating Procedures (EOPs) direct operators to start equipment manually when automatic has failed, the impact of this failure is not as important from a PRA standpoint. A nuclear safety factor of 0.2 is assigned to this initiative since it has a low impact on safety systems of high importance (0.2 x 32). Unit availability is moderately increased with a potential reduction in plant trips (0.2 x 12). ALARA is somewhat enhanced with a 6 person-rem reduction for this project (0.2 x 9).



Economic Aspects: After initial project work is complete, there will be some continuing effort to maintain plant setpoint control. The estimated ALARA savings is \$60,000/year (6 person-rem x \$10,000) plus the potential savings resulting from increased availability.

Other Considerations: This project is not outage dependent.

III. CONCLUSION

This project will be completed as scheduled to provide both dose and labor savings for the BNP. Increased control of safety margins will result from better management and use of instrument set point calibration data. The improvements in setpoint control will enhance nuclear safety and in some cases, it may also reduce unit trips; but the principal objective of the project is to achieve reductions in exposure by reducing unnecessary calibration tests and instrument adjustments (6 person-rem/yr).

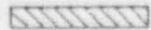
BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
08048A	INSTRUMENTATION SETPOINT AND CONTROL PROGRAM																							
Design	<div style="display: flex; justify-content: space-between;"> 1-JAN-93 31-DEC-96 </div> 																							
Implement	<div style="display: flex; justify-content: space-between;"> 1-JAN-93 31-DEC-96 </div> 																							
	<div style="display: flex; justify-content: space-between;"> 1-JAN-93 31-DEC-96 </div>																							

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

RPV Shell Temperature Monitoring Thermocouple Cable Replacement

I. PURPOSE AND SCOPE

The purpose of this project is to study and propose solutions to modify the Reactor Pressure Vessel (RPV) Shell temperature monitoring system. Seven of the sixteen thermocouples routed through thermocouple splice box 2-XM6 have failed, and the thermocouple splice box has been identified as non-maintainable.

The proposed modification is to replace the RPV Shell thermocouple splices with thermocouple terminal blocks, to replace cables from penetrations to the splice box with cables rated at a higher ambient temperature, and to relocate the splice box. Maintenance and Instrumentation and Control personnel experience excessive doses due to constant repairs to the RPV Temperature Monitoring System.

The desired state at the completion of this project is to have a reliable RPV Shell temperature monitoring system. The success criteria of this project are to develop and implement a modification that will enhance equipment reliability and reduce personnel exposure when troubleshooting and/or repairing equipment.

II. EVALUATION

Schedule Index: 21 - This project affects the reliability of the RPV Shell temperature monitoring system. This system is utilized to verify that Technical Specifications temperature limits are met for RPV temperature monitoring during hydrostatic testing, during cold shutdown or refueling, and prior to reactor recirculation pump start. Therefore, this system protects the integrity of the reactor pressure vessel. Failure to maintain the RPV integrity could potentially result in an increase of the RPV rupture frequency from 1.0E-8 per year to 1.0E-6 per year (based on the WASH-1400 study). The RPV rupture core damage frequency (CDF) could be as high as 4% of the total CDF. Consequently, this project was given a nuclear safety scaling factor of 0.2 because it improves the reliability of the reactor pressure vessel, which has a small positive affect on CDF (0.2 x 32).

Furthermore, this project eliminates a potential threat to personnel safety (0.2 x 29) because it would reduce the maintenance time spent in a high temperature, harsh environment next to the biological shield (the location of the thermocouple splice box). Additionally, this project is considered a medium positive impact on the ALARA scaling factor (0.5 x 9), in that personnel exposure when troubleshooting and/or repairing equipment would be reduced. Finally, this project is considered a medium positive impact on plant enhancement (0.5 x 8) in that it contributes to improvement in operations during cold shutdown and refueling plant conditions as well as during reactor vessel hydrostatic testing.

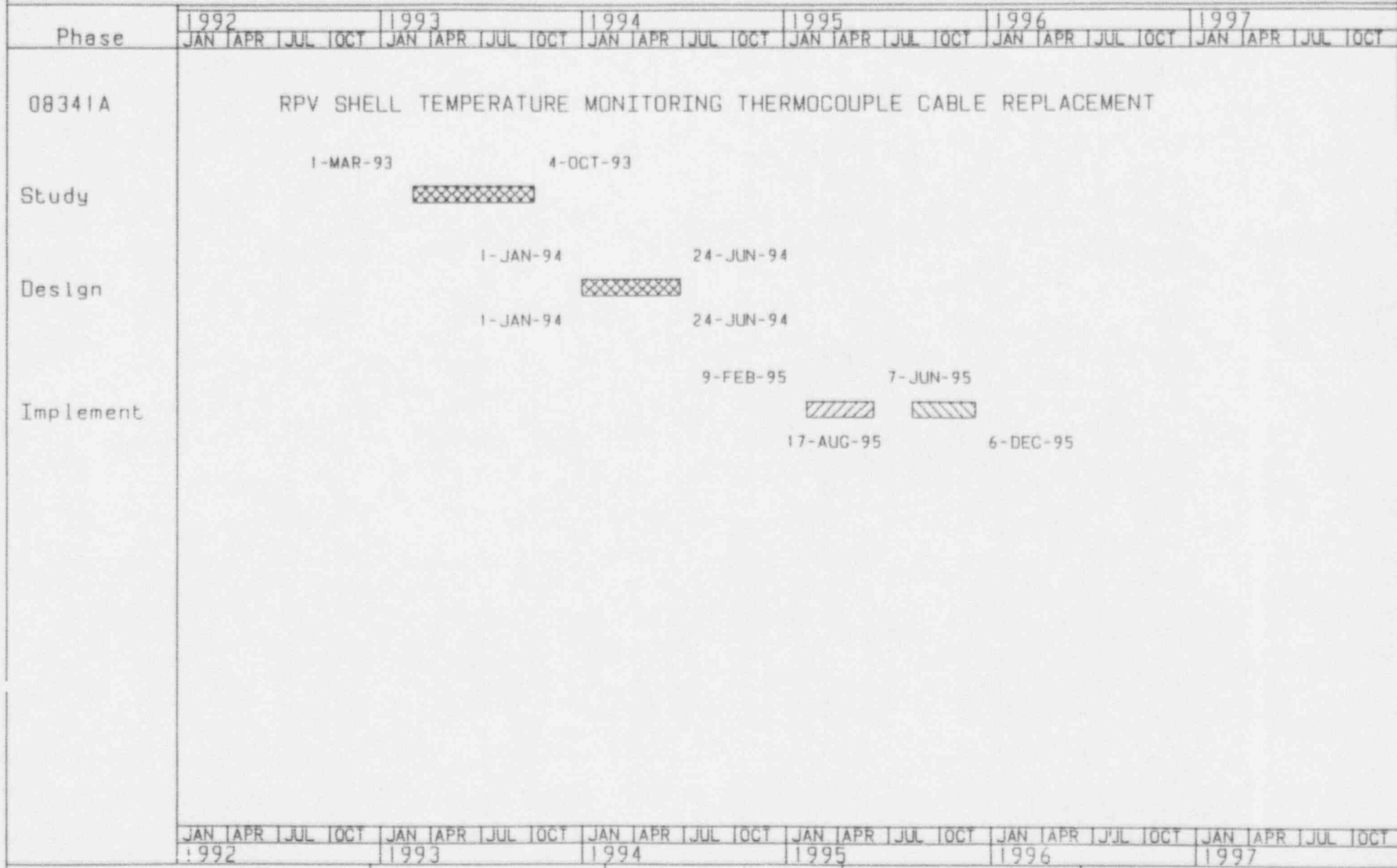
Economic Aspects: It is expected that long term maintenance and ALARA costs will be reduced as a result of this initiative.

Other Considerations: A detailed ALARA study should be performed to verify that the expected personnel savings would be reached. Alternate temperature indications for RPV metal temperatures may need to be provided while the work is in progress to comply with Technical Specifications.

III. CONCLUSION

This project will be completed as scheduled. The eventual implementation of this project is expected to contribute substantially to achieving the BNP ALARA goals.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Spent Fuel Pool Leak Repair

I. PURPOSE AND SCOPE

The Unit 2 spent fuel pool has leaked small amounts of water since as early as 1976. This leakage currently penetrates to the 50 foot elevation ceiling directly under the spent fuel pool in the Reactor Building where it is routed and collected using plastic tubing and buckets. Several engineering studies have been conducted since the leakage was first observed, and each has concluded that no structural concerns were present. However, the leakage represents personnel safety and ALARA concerns, and continued leakage could potentially cause equipment damage.

This project will conduct testing of potential leakage paths and repair identified leaks. All potential leakage paths will be systematically investigated and substantial fuel shuffling will likely be required. A three phase process will be used, with the first phase requiring no fuel movement. During this first phase potential leakage paths other than those created by loss of liner integrity will be examined and as-built drawings of the fuel pool liner will be made. Testing for fuel pool liner integrity will be performed in phases 2 and 3. Phase 2 differs from phase 3 in that minimal fuel shuffling is planned during this phase. Inspection of the fuel pool liner will include visual examination of the liner plate surfaces, pressure testing of all test channels, and vacuum box testing of the welds not covered by test channels. A crawler camera and submarine camera will be used for this fuel pool inspection. Diving in the fuel pool will be necessary during phases 2 and 3. Phase 3 involves extensive fuel shuffling and could take as long as four months or more to complete. Potentially, 1400 fuel bundle moves and 40 to 50 rack relocations could be required. Successful implementation of this project will terminate the fuel pool leak and the temporary conditions established to mitigate this condition.

II. EVALUATION

Schedule Index: 10 - Doses are expected for the divers involved; however, a potential plant and equipment contamination source will be eliminated, yielding a net positive ALARA scaling factor (0.2 x 9). Correction of this long-standing problem represents a substantial plant enhancement (1.0 x 8). This project should have no appreciable consequences for personnel safety, unit availability, or unit capacity. This project is outside the limitations of the PRA model because it impacts plant conditions at shutdown. The repair of spent fuel pool leaks will not improve the ability to mitigate core damage at power conditions. A nuclear safety scaling factor of zero is assigned because the project has no appreciable nuclear safety risk (0.0 x 32).


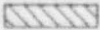
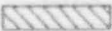
Economic Aspects: Once the leak is identified and corrected, no ongoing effort will be required.

Other Considerations: Shipment of spent fuel to the Harris plant will need to be coordinated with this project.

III. CONCLUSION

Though this project will be difficult and has a relatively low schedule index, the project will be completed as scheduled because the current situation represents a long-standing work-around.


BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
31377B	SPENT FUEL POOL LEAK REPAIR																							
Study	<div style="display: flex; justify-content: space-around; align-items: center;"> 15-APR-92 20-JUN-93 </div> 																							
Design	<div style="display: flex; justify-content: space-around; align-items: center;"> 7-SEP-92 31-DEC-92 </div> 																							
Implement	<div style="display: flex; justify-content: space-around; align-items: center;"> 6-JAN-93 23-MAY-93 </div> 																							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
	1992				1993				1994				1995				1996				1997			

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Service Water System Repairs, Phase II

I. PURPOSE AND SCOPE

GL 89-13 and Supplement 1 address service water (SW) system problems affecting safety-related equipment and conformance of the SW system to 10 CFR 50 Appendix A, GDC 44, 45, and 46 and Appendix B, Section XI. This project established a periodic inspection program for the entire SW system to identify deteriorated portions of the service water system. Subsequently, the work involved repair or replacement of deteriorated structures and components, and removal of marine growth and other debris from the SW piping such that the SW system material condition can be maintained to support continued plant operation. The type of modifications performed by this project are small in scope and do not in general affect system function logic or controls. Subsequent system modifications include additions of inspection access points (e.g., manways) in the SW system and installation of permanent rigging points for maintenance considerations.

In the past, portions of the SW system have degraded to the point of inoperability and have caused plant shutdowns. The SW system reliability has been and will be continually upgraded, and the SW system will be maintained such that it does not become inoperable and cause unit shutdown. Success criteria for this project are that no unit forced outages will occur as a result of SW system material condition and that future maintenance on the SW system will result in less personnel radiation exposure due to not having to perform maintenance in radiation areas served by this system.

II. EVALUATION

Schedule Index: 42 - The enhancement of nuclear safety as a result of this project is considerable. This project moderately improves the availability of a system of high importance by improving SW system reliability. The probability of a single SW system train being out of service is included in the PRA and has a moderate impact on the overall SW system availability for a postulated accident (0.5 x 32). The planned improvements to the system will increase maintainability of SW system components, reduce the potential for lost time accidents, and consequently improve worker safety (0.5 x 29). This project contributes to unit availability in that it continues to improve SW system reliability, which in the past has caused a loss of unit generation (0.5 x 12). Additionally, the improved material condition and historical records of the SW system are significant plant enhancements. The SW system configuration control and design basis is better maintained, with a reduced error potential while operating, maintaining, and repairing the system (0.5 x 8). Finally, net dose savings should be realized due to reduced maintenance requirements and easier maintenance staging within the SW system, which has components in areas near plant sources of radiation (0.2 x 9).

Economic Aspects: The initial project cost includes establishing periodic inspection and routine maintenance of the SW system. The routine maintenance cost of the SW system is considerably higher as a consequence of this project. This effort has resulted thus far in a significantly more reliable SW system with unspecified savings in unit availability, indirect maintenance-related person-rem from nearby systems, and lost worker time. It will ultimately result in reduced labor effort to maintain the system.

Other Considerations: This project maintains configuration control of the SW system. Work on projects 01538A and G0050M also tie in with the total SW system upgrade, inspection, and maintenance program. NLS-91-074, dated March 21, 1991 and NLS-92-001, dated January 10, 1992, informed the NRC that initial activities and testing and the establishment of the continuing programs for the SW system per GL 89-13 have been completed for Unit 1 and Unit 2, respectively.

III. CONCLUSION

This project will be completed as scheduled to increase the reliability, availability, and maintainability of the SW system. This project already has resulted in a considerably more reliable and better configuration-controlled SW system because of the periodic equipment inspection and material history tracking processes that have been established. NRC regulations require that the SW system design accommodate periodic inspection and periodic pressure and functional testing. Maintaining design basis and configuration control of the SW system is continuing through implementation of this project.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT				
84070A	SERVICE WATER SYSTEM REPAIRS PHASE II																											
Design	31-DEC-91																				1-JUL-97							
	<div style="border: 1px solid black; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); width: 100%; height: 15px;"></div>																											
					1-JAN-93																				1-JUL-97			
Implement	3-JAN-92																				17-JUN-98							
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	1-MAR-92																				16-DEC-98							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT				
	1992				1993				1994				1995				1996				1997							

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

480-AC Motor Protection Modification

I. PURPOSE AND SCOPE

The purpose of this project is to evaluate and modify (as needed) the vital 480-volt motor control centers (MCC) to ensure that loads (and associated feeder cables) are properly protected and that the associated electrical distribution equipment will operate when called upon to do so. Additionally, some components within the MCCs must be replaced to meet environmental qualification requirements. Those MCC compartment components (starters, breakers, overload relays/heaters) that require changeout and/or setting changes to improve the current level of protection have been or will be worked under plant modifications 86-001 and 86-002. Failure to implement these changes could result in damage to safety-related equipment because of inadequate trip current values or degraded components.

The project work scope includes analysis of the current loads and MCC compartments, preparation of modification packages, and equipment procurement. The remaining work scope includes completion of modifications and plant modification closeout for both plant modifications 86-001 and 86-002. Nearly all of the 617 MCC breakers have been evaluated and modified where needed. The next phase of this project is closeout and rework (if necessary) of the MCCs. Closeout will also include the revision of over 3000 design documents. The desired state at the completion of this modification is that 480-volt vital MCCs are properly designed and documented to ensure safety-related equipment functions correctly and is adequately protected.

II. EVALUATION

Schedule Index: 20 - This project potentially affects the reliability of safety-related equipment in that fewer challenges to safety-related equipment will likely originate from the modified 480-volt vital MCCs. Therefore, this project provides a moderate improvement in the availability of systems of significant importance in preventing core damage or containment releases (0.5 x 32). This initiative also corrects 480-volt MCC problems that have the potential of causing a plant trip and loss of unit availability (0.2 x 12). Finally, this project is a plant enhancement that improves the material condition and maintainability of the 480-volt MCCs (0.2 x 8).

Economic Aspects: The expected benefits of this project are reduced maintenance requirements of 480-volt vital MCCs and improved plant operations. The routine operating and maintenance costs of the 480-volt MCCs are expected to remain the same because increased costs of parts and material will likely offset the lower maintenance costs.

Other Considerations: The modification documentation being prepared under this project (i.e., safety-related MCC load protection study) will become a part of the "Electrical Design Basis Calculations." This is related to other AC distribution system design basis calculations being prepared under PID 05644A, AC Voltage Drop Analysis. The safety-related MCC load protection study is considered part of design basis documentation. The outage-related MCC work for this project has been completed. However, some emergent rework activities may have to be performed during an outage. This project will complete a commitment to respond to NCR R-83-157 (installation of non-qualified breakers into MCCs) and EER 83-0386.

III. CONCLUSION

This project will continue to be worked as scheduled to increase the reliability of safety-related equipment originating from the 480-volt vital MCCs.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
84489B	480-AC MOTOR PROTECTION MODIFICATION																							
Implement	<div style="display: flex; justify-content: space-between; align-items: center;"> 1-JUN-92 31-DEC-93 </div> <div style="display: flex; justify-content: center; align-items: center; margin: 5px 0;"> </div> <div style="display: flex; justify-content: space-between; align-items: center;"> 1-JUN-92 30-JUN-94 </div>																							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT

★ Commitment Date	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Start</td> <td style="width: 50%; text-align: center;">Finish</td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">Common</td> </tr> </table>	Start	Finish		Common	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Start</td> <td style="width: 50%; text-align: center;">Finish</td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">Unit 1</td> </tr> </table>	Start	Finish		Unit 1	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;"></td> <td style="width: 50%; text-align: center;">Unit 2</td> </tr> <tr> <td style="text-align: center;">Start</td> <td style="text-align: center;">Finish</td> </tr> </table>		Unit 2	Start	Finish
Start	Finish														
	Common														
Start	Finish														
	Unit 1														
	Unit 2														
Start	Finish														

Radwaste Sampling System Upgrade

I. PURPOSE AND SCOPE

The BSEP radwaste sample system monitors some of the major sources of potential reactor water impurities, including the condensate demineralizers and processed makeup water. The radwaste sampling system has experienced several long term and repetitive problems. Many sample points have been plugged for years. Conductivity recorders normally track as many as 7 variables, but they print data on only 8% of the chart paper range, making data analysis difficult. In addition, conductivity monitor failures cause the plant to enter LCOs frequently. In 1989, INPO issued finding CY.1-1, stating, in part:

"The conductivity monitors and recorders for the condensate filters and demineralizers located in the radwaste control room do not provide information useful for controlling the operation of the systems.... Also, the radwaste demineralizer conductivity monitor has been inoperable for several years. The operators do not have indication when the demineralizer resin is exhausted and when impurities are sent to the waste sample tank."

After the proposed modifications, a new radwaste sample station will be installed at a more suitable location in the plant. Plugged sample lines will be replaced and existing lines removed, or they will be retired in place after removal of hot spots. The new sample lines will be designed for backwash, continuous flow, or other methods that will prevent future plugging. Separate and fully functional sample chillers will be provided for each unit's process streams. Conductivity elements will have automatic temperature compensation, and new data recorders will provide data that is easy to read and analyze. Thus, this project will allow more accurate trending of filter and resin performance, better control of water system integrity, and better overall plant chemistry control.

This project will be successful when the new system is in place and fully operable; E&RC staff have accurate chemistry data to work with; and more proactive chemistry, filter, and resin management is demonstrated.

II. EVALUATION

Schedule Index: 15 - The plant is significantly enhanced by allowing plant personnel the ability to monitor critical chemistry parameters as well as prevent continual maintenance on obsolete equipment (1.0 x 8). Completion of this project is expected to result in a net savings of 16.3 person-rem (0.5 x 9). Of the four chloride intrusion monitors identified in technical specifications, two are made inoperative by failure of the sample chiller. If the other two are out of service, then the unit must be brought to hot shutdown within 12 hours. This potential causes a minor concern for loss of unit availability (0.2 x 12). Although this project will significantly improve the ability to monitor chemistry of important makeup water supply systems, there is insufficient evidence to indicate that improvements in water quality of important safety systems would result in significant reduction of corrosion or other beneficial effects that might improve nuclear safety (0.0 x 32).

Economic Aspects: Due to radwaste processing costs and current chemistry practices, this project is expected to result in a cost savings of \$2.8 million over the remaining life of the plant. General plant maintenance costs are expected to be somewhat lower following completion of this project.

Other Considerations: Sample temperature is a critical parameter for accurate analysis. The FSAR states that the temperature of samples undergoing in-line analysis is designed to be maintained automatically at $77 \pm 1^\circ\text{F}$. Technical specification limits are given at 25°C (77°F). The temperature is controlled at the sample station by the chiller system, which has been very unreliable. The INPO finding CY.1-1 is being tracked by FACTS Numbers 89B0905, 89B0906, and 90B1031. Closure of the INPO finding has been rescheduled several times. Most of the work can be done while the units are online. Addition or tie-in of some sample points, especially from the condensate system, may require an outage. A presently recommended option involves radwaste sample station replacement with a station prefabricated offsite by a vendor. If this option is accepted, offsite fabrication time must be scheduled between design approval and installation.

III. CONCLUSION

This project is important to proper monitoring of reactor water chemistry and will be completed as scheduled. The conditions warranting action have been present since 1985 and resulted in a 1989 INPO finding that is still open.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
84587A	RADWASTE SAMPLING SYSTEM UPGRADE																							
Study	<div style="display: flex; justify-content: space-around; align-items: center;"> 1-APR-93 10-NOV-93 </div> <div style="display: flex; justify-content: center; align-items: center; margin-top: 10px;"> <div style="width: 100px; height: 15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); border: 1px solid black;"></div> </div>																							
Design	<div style="display: flex; justify-content: space-around; align-items: center;"> 1-JAN-94 17-DEC-94 </div> <div style="display: flex; justify-content: center; align-items: center; margin-top: 10px;"> <div style="width: 150px; height: 15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); border: 1px solid black;"></div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> 1-JAN-94 17-DEC-94 </div>																							
Implement	<div style="display: flex; justify-content: space-around; align-items: center;"> 15-APR-95 7-JUL-95 </div> <div style="display: flex; justify-content: center; align-items: center; margin-top: 10px;"> <div style="width: 40px; height: 15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); border: 1px solid black;"></div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> 15-APR-95 7-JUL-95 </div>																							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
	1992				1993				1994				1995				1996				1997			

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Emergent Structural Issues

I. PURPOSE AND SCOPE

BNP initially responded to the pipe support issues of IEB 79-14 in 1979 and 1980. This project was initiated in 1986 to address other emergent structural repairs for supports and miscellaneous steel used in the plant. In 1988, the project incorporated additional response to IEB 79-14 to provide enhancements to pipe supports needed in order for them to meet original design requirements. Other work not related to IEB 79-14 has been added to this project, which now includes additional corrective actions needed. Examples of such emergent items are masonry wall upgrades, fire protection support upgrades, and HVAC support upgrades. These deficiencies require either verification of structural support seismic qualification or implementation of structural reinforcements or repairs that meet seismic requirements.

This project will be considered successful when all plant structures and supports with seismic qualifications or other safety related design criteria are found to conform consistently to those requirements over the remaining life of the plant. The level of emergent structural work should decline, and the requirement for rework of structural supports should be primarily the result of inspections and planning and should consistently be accomplished.

II. EVALUATION

Schedule Index: 51 - This project is intended to assure the seismic qualification or requalification of supports for Category I and Category II structures and safety systems. This project exceeds the scope of the current nuclear safety probabilistic risk assessment (PRA) model. Nevertheless, a special seismic review was performed by the CP&L PRA Group to assess the significance of identified structural support deficiencies. This assessment indicated that the structural support corrective actions included in this project have a high impact on reducing the risk of core damage (1.0 x 32). Unit availability is also impacted directly (1.0 x 12) since structural supports have been found in the plant that do not meet seismic requirements. Some potential also exists for personnel hazards due to failed supports, primarily during an earthquake (0.2 x 29). As a result of this project, continued upgrades in plant inspections, system walkdowns, and maintenance practices will provide some additional general enhancements to the plant (0.2 x 8).

Economic Aspects: This project has significant financial impacts due to the need to remain shutdown for repairs to structures and supports that must be seismically qualified. Continued maintenance of structural supports and foundations will require an increase in routine expenditures for inspections and maintenance.

Other Considerations: Repairs to masonry walls are in progress and are scheduled to be completed prior to plant operation. The current commitment to the NRC is to complete IEB 79-14 pipe support work by the end of outages B109R1 and B211R1; CP&L has scheduled such work to meet this commitment. In addition, work under this project not related to the NRC commitment will continue past the commitment date through the end of 1994.

III. CONCLUSION

This project is intended to provide resources needed to assure continued compliance with regulatory requirements, primarily seismic support requirements. The Diesel Generator Building walls will be completed as soon as possible and prior to plant operation. The impacts on safety and plant availability are significant and aggressive implementation is warranted.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
B0014A	EMERGENT STRUCTURAL ISSUES																							
Commitment Milestones	<div style="display: flex; justify-content: space-around; width: 100%;"> ★ ★ </div>																							
Design	<div style="display: flex; justify-content: space-between;"> 14-JUN-90 30-DEC-94 </div> <div style="border: 1px solid black; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); width: 100%; height: 20px; margin-top: 5px;"></div>																							
Implement	<div style="display: flex; justify-content: space-between;"> 9-APR-91 30-DEC-94 </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> 1-JAN-92 30-DEC-94 </div> <div style="border: 1px solid black; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); width: 100%; height: 20px; margin-top: 5px;"></div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> 1-JAN-92 30-DEC-94 </div>																							

1992				1993				1994				1995				1996				1997				
★ Commitment Date	Start	Finish		Start	Finish			Start	Finish			Start	Finish			Start	Finish			Start	Finish			
		Common			Unit 1				Unit 2				Start	Finish				Start	Finish				Start	Finish

Piping Design Turnover Program

I. PURPOSE AND SCOPE

Some BSEP design drawings and calculations have been found to differ from the as-built condition of piping and related equipment in the plant. One of the primary causes of this problem is incomplete turnover of detailed design information from the architect/engineer. The Piping Design Turnover Program is locating, packaging, and turning over to CP&L the UE&C pipe stress and pipe support calculations for Brunswick. CP&L is reviewing the calculations that are safety related and, where needed, upgrading them. Where safety related design calculations are missing, they are being recreated. Also, some plant walk-downs are being conducted where needed to verify drawing information.

The Piping Design Turnover Program will result in over 5000 revised piping-support drawings. In addition, over 400 piping isometric drawings and supporting calculation packages will be provided. The BNP Piping Design Control organization will integrate data into existing plant information systems (NRCS and EDDBS) and will establish procedures to assure continued integrity of design information.

Following project completion, an audit will be conducted to verify the consistency among related drawings, calculations, and the as-built plant configuration. Also the administrative procedures for plant modifications will be updated to ensure continued maintenance of design basis documents.

II. EVALUATION

Schedule Index: 11 - This project has resulted in the changeout or modification of over 400 piping supports for safety systems. Of the 400 piping supports affected, about 200 involve the RHR system, including RHR service water. In most cases, these piping supports were adequate for their basic function, but they were not fully qualified. Thus, the actual impact of this project on RHR and service water system performance is considered to be low. However, because the RHR and service water system are high contributors to theoretical core melt frequency, a nuclear safety scaling factor of 0.2 is assigned (0.2 x 32). If design basis issues are not resolved, unit availability concerns could arise (0.2 x 12). Some personnel radiation exposure is incurred during walkdowns (-0.2 x 9). The potential for increased efficiency in future design activities results in a significant plant enhancement (0.5 x 8).


Economic Aspects: The compiled design documents will improve efficiency in developing future modifications and in conducting operability evaluations. Long term maintenance of the affected piping design bases will be incorporated as a routine part of plant work that is already funded and staffed. The related data base management and design control activities are also already part of the routine plant work and staffing and are adequate to support long term requirements. Therefore, the net long term impact of this project is a reduction in BNP costs.

Other Considerations: This type of documentation problem resulted in NRC IEB 79-14. Final closeout of IEB 79-14 issues and resolution of NCR S-86-021 are dependent on this project. The service water lubricating water and service water diesel generator supply and return systems are not within the scope of the NRC commitment. These systems are currently being modified and/or replaced; consequently, the associated design packages, prepared by CP&L, contain current design documentation.


III. CONCLUSION

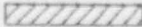
This project will proceed as scheduled due to the importance of having accurate design basis documentation readily available.


BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
B0018A	PIPING DESIGN TURNOVER PROGRAM																							
Design	1-JAN-92												2-JUN-94											
																								
	1-JAN-92												2-JUN-94											
	★ Commitment Date																							

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Design Basis Reconstitution

I. PURPOSE AND SCOPE

CP&L has undertaken the Brunswick Design Basis Reconstitution Project to structure the design bases and calculations/analyses applicable to the plant systems and generic issues. The project includes the collection and consolidation of design basis information from the Architect/Engineer (UE&C), the NSSS supplier (General Electric), and from CP&L licensing, regulatory compliance, and engineering files. This compilation includes the review and turnover of applicable historical correspondence and calculations related to system/component design and regulatory requirements or commitments. The scope of this effort includes capturing data for Brunswick systems and generic issues. All information will be sorted and stored in a computer database to enhance retrievability and control.

The NRC has shown a high level of interest in plant design basis reconstitution. This project meets the guidance of NUMARC 90-12, "Design Basis Program Guidelines." The 1992 NRC policy statement on design basis information indicates that a generic letter will be issued requesting a description of all licensee programs and that the SALP process will be modified to include assessment of licensee design basis programs. The current CP&L program is sufficient to meet all anticipated regulatory standards. Additionally, design basis control will be necessary to maintain the option of plant life extension beyond the current license expiration through the license renewal process.

The project is expected to uncover potential discrepancies which must be evaluated. A programmatic approach to identify, confirm, prioritize, track, and close out each discrepancy has been developed. Once completed, the design basis for safety related systems, structures and components at Brunswick will be clearly established, easily retrievable, and fully controlled.

II. EVALUATION

Schedule Index: 24 - This project will resolve any discrepancies that arise as a result of the design basis reconstitution effort. Since the PRA model directly depends on the quality of plant design documentation, such discrepancies could invalidate important PRA assumptions and could impact calculated core damage frequency. Plant modifications to resolve discrepancies are expected to represent a moderate improvement to safety (0.5 x 32). The project should significantly reduce research time on modifications and engineering evaluations and analyses. The identification and disposition of potential discrepancies also represents a plant enhancement (1.0 x 8).

Economic Aspects: Once the upgrades of this project are complete, maintenance of design bases will be part of routine and are not considered as a part of this project. Ongoing resource savings are expected in the future, due to reduction of time spent on modification and engineering evaluation preparation.

Other Considerations: Writing of design basis documents is scheduled to be completed by December 1993. Validation is expected to be completed by December 1994. Resolution of discrepancies is expected to continue through 1995 and 1996. The original NRC commitment date to complete the Brunswick Design Basis Reconstitution Project was December 1993; however, after further defining the work scope, the completion date was extended to December 1996. AC system and DC system calculation reconstitution efforts are covered in projects 05644A and G0017A, respectively.

III. CONCLUSION

Efforts on this project will continue due to the importance of accurate and useful design basis documentation.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
B0019A	DESIGN BASIS RECONSTITUTION																							
Commitment Milestones	★																							
Design	<div style="display: flex; justify-content: space-between;"> 1-JAN-92 31-DEC-96 </div> <div style="border: 1px solid black; width: 100%; height: 20px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); margin: 5px 0;"></div> <div style="display: flex; justify-content: space-between;"> 1-JAN-92 31-DEC-96 </div>																							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
	1992				1993				1994				1995				1996				1997			

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Start Up Level Control Valve Flow Meter Addition

I. PURPOSE AND SCOPE

The purpose of this project is to develop a modification that will provide operations with an immediate indication that the start up level control valve (SULCV) has responded to a demand signal from the operator. Currently, the SULCV does not have available flow indication at the low feedwater flows that it is normally used for. Consequently, Control Room Operators do not have reliable indication of when and how much feedwater the SULCV is actually passing into the reactor vessel. This lack of a reliable flow feedback indication has caused reactor scrams in the past. Plant incident reports dated 8/19/90 and 8/30/90 describe the scrams and associated SULCV problems.

The proposed modification would add a flow indicating loop to the SULCV piping line. The piping would be modified to add a one and one-half inch flange connection and a support coupling upstream of the manual isolation valve for the SULCV in order to mount a flow element. The local flow indicator and transmitter will be mounted on an instrument rack in the 20 foot elevation breezeway. An analog signal will be run to a panel indicator mounted on Control Room panel H12-P603 in the vicinity of the SULCV controller FW-LIC-3269. Each unit would require a separate modification. In the short term, a temporary start up level control valve flow indication will be installed in Unit 1. There is a potential that Unit 2 will also have a temporary SULCV flow indication.

The desired state at the completion of the modification would be an accurate flow indication used by the Control Room Operator while operating the SULCV. The success criterion is that no reactor scrams in the future would be attributed to the SULCV and associated operator's actions.

II. EVALUATION

Schedule Index: 22 - This project affects the condensate and feedwater system, which is considered a moderately important system with respect to nuclear safety. This project has a no appreciable effect on nuclear safety at full power. In the PRA model, the SULCV is used in conjunction with condensate for low pressure injection, but there is adequate redundancy with other low pressure injection systems. The major effect of this project will be to aid operators and reduce challenges to safety systems during shutdown. Shutdown is outside the current scope of the PRA model. A nuclear safety scaling factor of 0.2 is assigned due to the incremental reduction in safety system challenges (0.2 x 32). This project has a high positive effect on unit availability. The lack of a SULCV flow indication has in the past caused a reactor scram and more than one day of lost generation time (1 x 12). In another case, it has hindered operations from recovering from a reactor scram. If not implemented, the SULCV could cause future reactor scrams. Finally, this project is a plant enhancement in that operator control of reactor vessel level during plant startups and low power operations can be maintained more easily (0.5 x 8).

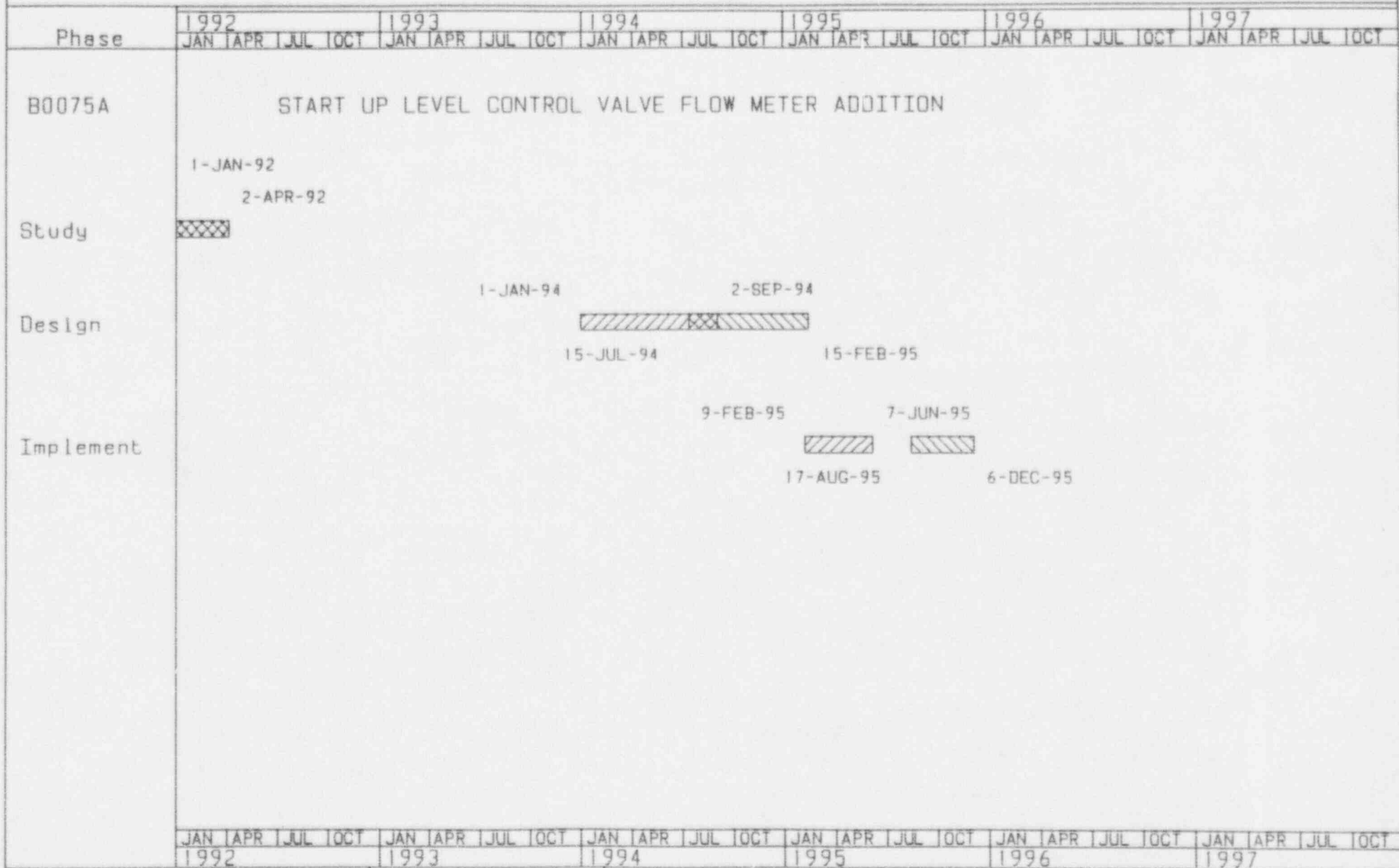
Economic Aspects: There will be small additional routine maintenance costs associated with the new SULCV flow indicating instrument loop after installation. However, the flow indication and loop will also help maintain close agreement between actual SULCV position and actual feedwater flow, given the start up level control valve flow characteristics. The expected benefits of this project are the reduction of reactor scrams which could result in a savings of at least \$250 thousand per day of lost generation time.

Other Considerations: Part of the project involves a simulator algorithm upgrade to ensure the SULCV flow characteristics in the simulator match both plants' SULCV actual flow characteristics.

III. CONCLUSION

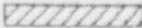
This project will be completed as scheduled to provide operations with an immediate indication that the SULCV has responded to a demand signal from the operator. The modification for temporary SULCV flow indication will aid the plant reactor operators during start-up and could prevent reactor scrams. The temporary SULCV flow indication to be installed in Unit 1 will validate the permanent modification and will also ensure that the permanent modification performs its intended function.


BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

BNP Plant Building Steel

I. PURPOSE AND SCOPE

The purpose of the BNP plant building steel verification program is to close out the Notice of Deviation in NRC Inspection Report (IR) 92-14. Licensee Event Report (LER) 1-88-35 and Unresolved Item (UI) 89-18-02 identified an overstress condition in one beam in each Reactor Building. In response, in 1990, CP&L began walkdowns of miscellaneous steel in the Reactor Building outside the drywell, under project B0060A, As-Built Verification of Miscellaneous Steel. In early 1992, in response to IR 92-14, CP&L expanded the program to include drywell platform steel (because of similarities with miscellaneous steel design and construction); this program is being accomplished in two phases. The Phase I Program consists of engineering walkdowns of miscellaneous steel outside the drywell to categorize each steel member and connection as adequate or requiring further action; the Phase I walkdowns will be completed during the current Unit 1 and 2 outages. The Phase II Program consists of analysis of representative platform sections in the drywell and in the Reactor Building outside the drywell, and of documentation and verification (through photographs, reviews, and measurements) of miscellaneous structural steel.

Walkdowns and analyses performed to date have shown that, despite occasional minor construction variances, construction of miscellaneous steel in the Reactor Building outside the drywell is generally of good quality and none of the variances adversely affect safe plant operation. In the event that repairs or modifications are required, such work will be completed under the scope of B0060A.

The success criteria for this program are that the structural steel affected by the program will satisfy the design requirements of the 1978 Edition of the AISC Specification for the Design, Fabrication, and Erection of Structural Steel Buildings, consistent with the Brunswick Plant Updated FSAR and that there will be greater assurance that plant drawings accurately reflect current as-built conditions.

II. EVALUATION

Schedule Index: (-13) - No nuclear safety problems have been found to date and none are expected; the purpose of this program is to verify that building steel meets design requirements in the updated FSAR. Nevertheless, even though the likelihood that a seismically-induced failure of a structural member could damage a safety-related system is very remote, such a failure could have an impact on a safety system function of high importance (0.2 x 32). The walkdowns necessary to implement the program will greatly increase the chance that a worker could be injured due to a fall or falling objects (-0.5 x 29) and will result in significant worker dose even though steps (such as the use of photographs) have been taken to minimize the accumulated dose for the project effort (-1 x 9). The added confidence in structural steel design margins and in the currency of design drawings and calculations, and the contribution these make to the efficiency of the modification process, represent a moderate plant enhancement (0.5 x 8).


Economic Aspects: This two-phase program has been undertaken to provide assurance that building steel meets design requirements in the updated FSAR. Once completed, this program will result in negligible continued financial costs. The updated drawings and calculations resulting from the program will make subsequent plant modifications, which relate to or interface with structural steel, easier and quicker to complete.

Other Considerations: Walkdowns and photographs in the drywell require a plant outage to accomplish and are being given priority attention during the current Unit 1 and 2 outages. To meet the NRC commitment associated with this effort, completion of the Phase II Program is scheduled for November 30, 1993; administrative close-out work unrelated to the NRC commitment will continue beyond this date.

III. CONCLUSION

The Phase I Program is currently in progress and is scheduled for completion during the current Unit 1 and 2 outages, as are the drywell and bounding analyses portions of the Phase II Program. Work on the Phase II program will continue after the current outages.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
BNT622	BNP PLANT BUILDING STEEL																							
Commitment Milestones	★																							
Design	<div style="display: flex; justify-content: space-between; width: 100%;"> 22-APR-92 31-DEC-93 </div>																							
																								
	<div style="display: flex; justify-content: space-between; width: 100%;"> 22-APR-92 31-DEC-93 </div>																							
	1992				1993				1994				1995				1996				1997			

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Equipment Data Base System

I. PURPOSE AND SCOPE

The Equipment Data Base System (EDBS) provides listings of components and materials for use in maintenance, design, inventory management, configuration control, and operations. The EDBS has proven to be a major contributor to productivity and efficiency improvements by reducing the time required to conduct research, develop design packages, obtain parts, and to perform the work. However, the EDBS project was suspended before all data and parts listings could be entered into the system. The Data Collection and the Parts Listing elements of the project are only 50 percent and 65 percent complete, respectively. The Data Collection task identifies plant documents and other information related to specific components. The Parts Listing task consists of reviewing plant and vendor documents to develop a complete component bill of material and identifying both stocked and non-stocked parts for the components.

The purpose of re-initiating this project is to complete collecting information on systems, components, and parts for the Data Collection and Parts Listing tasks and to load the information into the EDBS for use by the Maintenance, Operations, Technical Support and Engineering staffs. Successfully completing this project will result in the EDBS becoming a finished database with component data on all plant systems entered, and capable of supporting all plant maintenance activities. Completing the EDBS will reinforce and invigorate productivity and performance improvements related to researching and developing design change packages, controlling the plant configuration control, and optimizing the parts inventory.

II. EVALUATION

Schedule Index: 29 - Completing the EDBS project improves the availability and usefulness of a tool with a proven record for improving productivity, resulting in a significantly positive impact on plant enhancement (1 x 8). More efficient maintenance and improved productivity in identifying components, researching information, and developing design change packages improves unit availability by improving outage planning and scheduling, reducing rework, and assuring the correct components are identified and obtained to control items on the critical path to unit startup. Additional positive impacts on unit availability result from more capable and effective management of items that become the critical path to startup (1 x 12). A completed EDBS has a positive impact on ALARA by providing effective control of equipment configuration and component labelling, along with accurate information on component location, that facilitates work planning and efficient work performance that reduces personnel exposures associated with inspection, maintenance, and repair activities (1 x 9). Completing the EDBS improves the effectiveness of a management tool to increase the productivity and efficiency of technical support activities and, as such, does not directly impact the performance of systems with importance to safety. Therefore, this project has no appreciable effect on the nuclear safety scaling factor.


Economic Aspects: CP&L will recoup the costs associated with this project, and the additional maintenance and upkeep required to maintain the EDBS operational and accurate, through improved efficiency and productivity over the remaining life of the plant. Completing this project will result in efficiencies being realized both onsite and offsite. Estimates of the cost savings due to improvements in efficiency total over \$3 million from 1989 through 1991 for the current system; even larger savings are expected with the fully-completed system.

Other Considerations: The EDBS is a key information system for an effective configuration management program at BSEP. An EDBS model developed and recommended under the initiative of the Corporate Inventory Management Initiatives Steering Committee requires completion of the EDBS in order to be implemented. The EDBS interacts with other site systems to identify current and pending plant configuration changes. A complete EDBS is essential to fully utilizing these systems to achieve the process efficiencies possible.


III. CONCLUSION

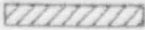
The EDBS will be completed as scheduled based on its proven value in improving productivity, efficiency, configuration control, maintenance and operations. The EDBS is the only system that contains component data and interfaces with other important information and management systems to provide this data.

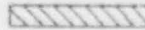
BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
F0025C	EQUIPMENT DATA BASE SYSTEM																							
Design	<div style="display: flex; justify-content: space-between; margin-bottom: 5px;"> 1-OCT-92 31-DEC-95 </div> 																							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
	1992				1993				1994				1995				1996				1997			

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Replace E11-F003A-B & F0024A-B with Globe Valves

I. PURPOSE AND SCOPE

This project replaces the RHR heat exchanger outlet valves E11-F003A/B, their actuators, and control switches with new flow control valves. The E11-F003s need to be replaced because of an NRC commitment to replace the valves (Generic Letter 89-10), their extensive surface rust, and the cascading effect on the E11-F017s of minimum valve wall thickness which could lead to through-wall leaks. The outboard low pressure coolant injection valves, E11-F0017A/B are currently being used to control reactor vessel cooldown rate while in the shutdown cooling mode. These valves are not designed for throttling and have experienced excessive erosion and cavitation resulting in premature valve body wear. Replacing the E11-F003A/B valves with a flow control valve will allow the F003 valves to assume the E11-F017 throttling function and allow the E11-F017s to be left full open, thus reducing their rate of erosion. The success criteria of this modification is to employ a more reliable valve (E11-F003A/B) designed to better control RHR flow in shutdown cooling mode with less E11-F017 valve wear such that valve life can be extended.

This project also replaces the E11-F024A/B valves with flow control valves. The E11-F024A/B valves are used to control RHR suppression pool cooling flow. The characteristics of the present valves are such that throttle control is difficult and causes cavitation and valve body erosion. The success criterion for these valves is to provide better control of suppression pool cooldown and significantly reduce valve wear.

II. EVALUATION

Schedule Index: 22 - In addition to replacing the E11-F003A/B valves, this initiative replaces the E11-F024A/B valves with flow control valves that will result in better control of the suppression pool cooldown rate and significantly less valve wear. The dominant failure mode for the E11-F024A/B valves in the PRA is "failure to open during suppression pool cooling." Although the E11-F024A/B valves are assigned a high impact classification on the component importance table for the RHR system, replacement of the valves does not necessarily significantly improve their ability to open. Therefore, this project is assessed to have a moderate impact on the RHR system (0.5 x 32). The impact of replacing the E11-F003A/B on nuclear safety is less than the F024A/B valves.

With respect to the F003A/B valves, simpler and more reliable control of the reactor vessel cooldown rate during RHR shutdown cooling operation will reduce the probability of exceeding Technical Specification cooldown limits and operational temperature limits. In the past, BNP has been cited for violating these limits as described in Inspection Evaluation Report (IER) 88-15B. This project is also a moderate plant enhancement in that it improves the reliability of different modes of the RHR system (particularly the shutdown cooling mode) and it reduces the maintenance requirements on primary containment isolation valves and other inaccessible valves in high dose areas within the RHR system (0.5 x 8). Replacing the RHR valves will appreciably improve the reliability and availability of the RHR system. The degradation and eventual through-wall failure of RHR valves from premature wear will be reduced. Consequently, it is more likely that RHR system operability will be maintained and immediate plant shutdown will be avoided (0.2 x 12).

Economic Aspects: The expected benefits of these new valves are greater ease of operation, less valve wear, fewer valve maintenance demands, and reduced risk of technical specifications violations. Additionally, a degraded system condition economic evaluation of the consequences of delaying valve replacement of one loop was performed in April 1992. An estimated \$3 million impact was evaluated due to a high risk of loss of plant availability.

Other Considerations: Modifications for this project are scheduled during B109R1 and B211R1 outages. RHR loops would be inoperable during these outages. Currently, plans are to consolidate both modifications (the E11-F003s and E11-F024s) and work on both RHR loops during the B109R1 outage. Similarly, plans are to consolidate both Unit 2 modifications and work on both RHR loops during the B211R1 outage. These plans meet the NRC commitment dates. Performing work on both loops may extend refueling outages from ten weeks up to fourteen weeks. Because of the extended shutdown that both units are currently in, it is anticipated that there will be more extensive damage to the E11-F017 valves. Finally, completion of this project will eliminate operator work-arounds that are currently in place (i. e., use RHR Loop A for RHR shutdown cooling).

III. CONCLUSION

The project will be accomplished as scheduled to meet the NRC commitment dates. This project will improve control of suppression pool cooldown and increase the reliability of different modes of the RHR system.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Off-Gas System Upgrade

I. PURPOSE AND SCOPE

Instrumentation problems in the off-gas system have caused scrams and loss of condenser vacuum events, provided erroneous system indications to operators, and resulted in unnecessary costs for inspection and repair of problems in these areas. Deficiencies in instrumentation alarm setpoints, piping installation, and reactor trip logic have been identified. Operator effectiveness in diagnosing and responding to loss of condenser vacuum events is hindered by these deficiencies, and unnecessary man-hours are spent repairing instrumentation problems in the off-gas system.

Preliminary engineering studies will be performed to identify modifications to improve system reliability including adjusting alarm setpoints, revising reactor trip logic, and repiping of instrument sensing lines. These modifications will result in fewer spurious alarms, believable indications, more reliable system operation, and improved control and monitoring of condenser vacuum. Operators will have additional time to diagnose causes for a loss of condenser vacuum and take appropriate action to prevent unit shutdown or scram. Improved reliability will reduce the time and cost of repairs to instrumentation.

Successful completion of this project would be indicated by adjustment of alarm setpoints away from operating limits such that the operator can respond to system changes to prevent loss of condenser vacuum before an automatic protective action occurs.

II. EVALUATION

Schedule Index: 32 - Problems with instrumentation in the off-gas system have led to losses of condenser vacuum and, in some cases, to reactor scram. Correction of these problems will reduce the frequency of loss of condenser vacuum events, minimize the possibility of reactor scram due to these events, and increase plant availability (1 x 12). The amount of steam that can be condensed is dependent on condenser vacuum. If condenser vacuum cannot be maintained at normal levels, lower power levels will result. The modifications being studied in this project will reduce the incidences of low condenser vacuum and improve plant capacity (1 x 10). Instrumentation problems in the off-gas system produces a low to moderate impact on two moderately important systems, the main steam system and the condensate system. The overall effect is a low positive impact on nuclear safety due to the reduced potential for loss of the condenser as a heat sink when decay heat removal is required (0.2 x 32). Reducing the operator burden in diagnosing loss of condenser vacuum events caused by the off-gas system and the reduction in maintenance and repair causes a positive effect on plant enhancement.(0.5 x 8).

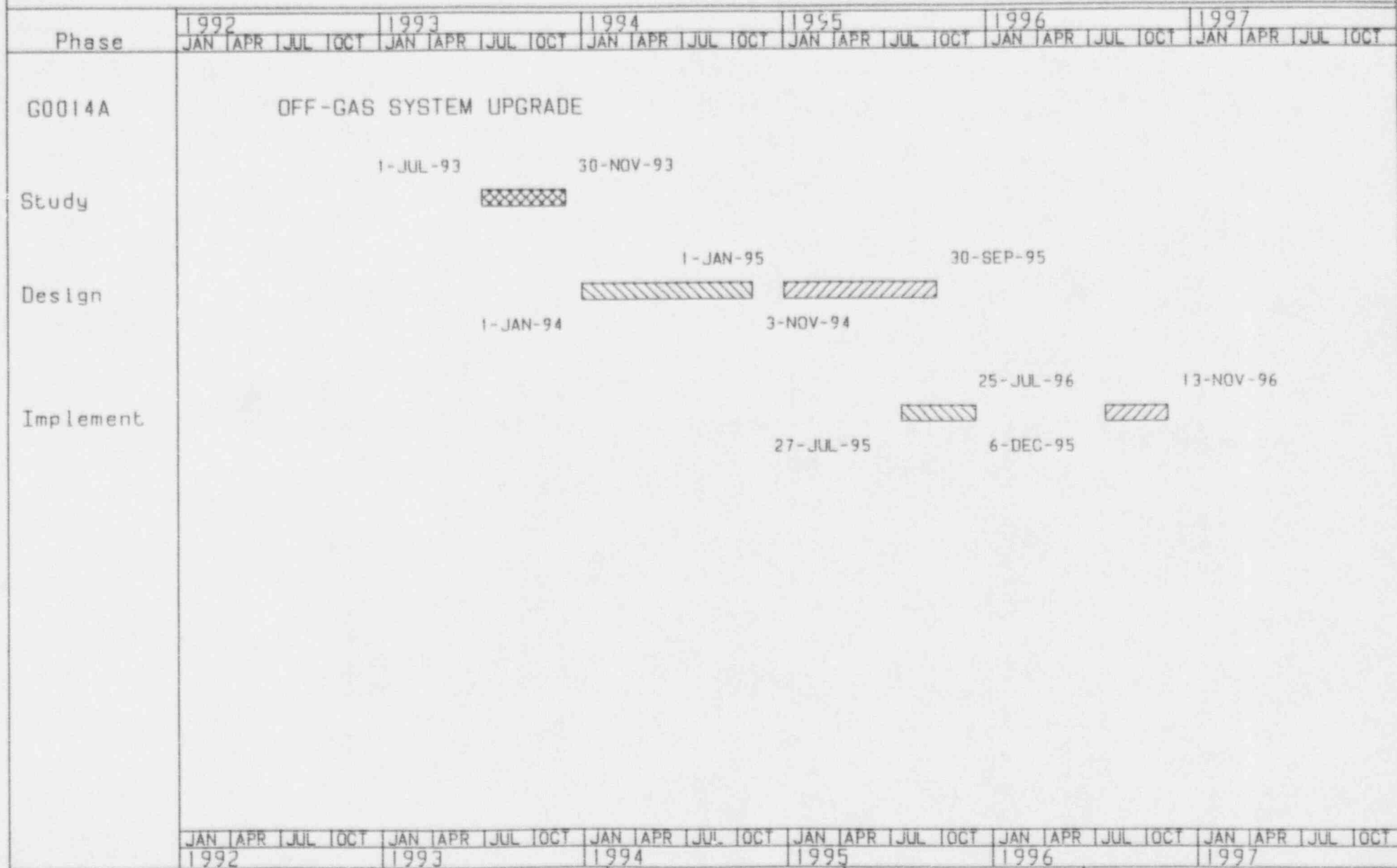
Economic Aspects: No firm cost estimates have been performed for these modifications. However, it is believed that the total costs will be small relative to the savings from averting plant shutdown due to loss of condenser vacuum or erroneous indications. Implementing the proposed modifications will result in reduced maintenance costs for continued operation.

Other Considerations: This project includes modifications that must be implemented during an outage. Simulator changes would be required as a result of completing this project.

III. CONCLUSION

This project will be completed as scheduled. Although a relatively low cost project, problems with the off-gas system hinder the normal operation of the plant. Significant benefits in plant availability, reliability, and operator effectiveness can be realized from this project.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

DC Voltage Profile Study

I. PURPOSE AND SCOPE

Existing design basis calculations for the Brunswick DC electrical distribution system have been found, in some cases, to be unavailable or inadequate. The DC Voltage Profile Study has been undertaken to establish current, readily accessible DC electrical distribution system design basis calculations. Calculations to be provided include those to establish battery loading, DC distribution system voltage, battery charger sizing, DC system fault current and coordination, and DC system cable amperage capacity. The 1991 electrical distribution system functional inspection reaffirmed the need to upgrade or develop certain calculations which are a part of this project.

Once complete, this project will document the capability of the present configuration and loading, and provide a basis to support future modifications and 10 CFR 50.59 safety evaluations. For a proposed change to the DC distribution system, documentation will be easily accessible to demonstrate whether a proposed change to the DC distribution system will cause overloading of components. The ability to quickly and accurately respond to design basis issues which may arise during an audit will be greatly enhanced.

II. EVALUATION

Schedule Index: 10 - Upgrade or development of design basis calculations is not expected to have a substantial effect on DC distribution system design or operation. However, the project includes additional calculations to analyze battery loading profiles. The results of these calculations could lead to procedural or hardware changes that would increase the plant's ability to withstand station blackout. A nuclear scaling factor of 0.2 is assigned because of this potential low impact on core damage frequency (0.2 x 32). This project should have no appreciable effect on personnel safety, unit availability, unit capacity, or ALARA, but should reduce research time on modifications and engineering evaluations and analyses (plant enhancement, 0.5 x 8).

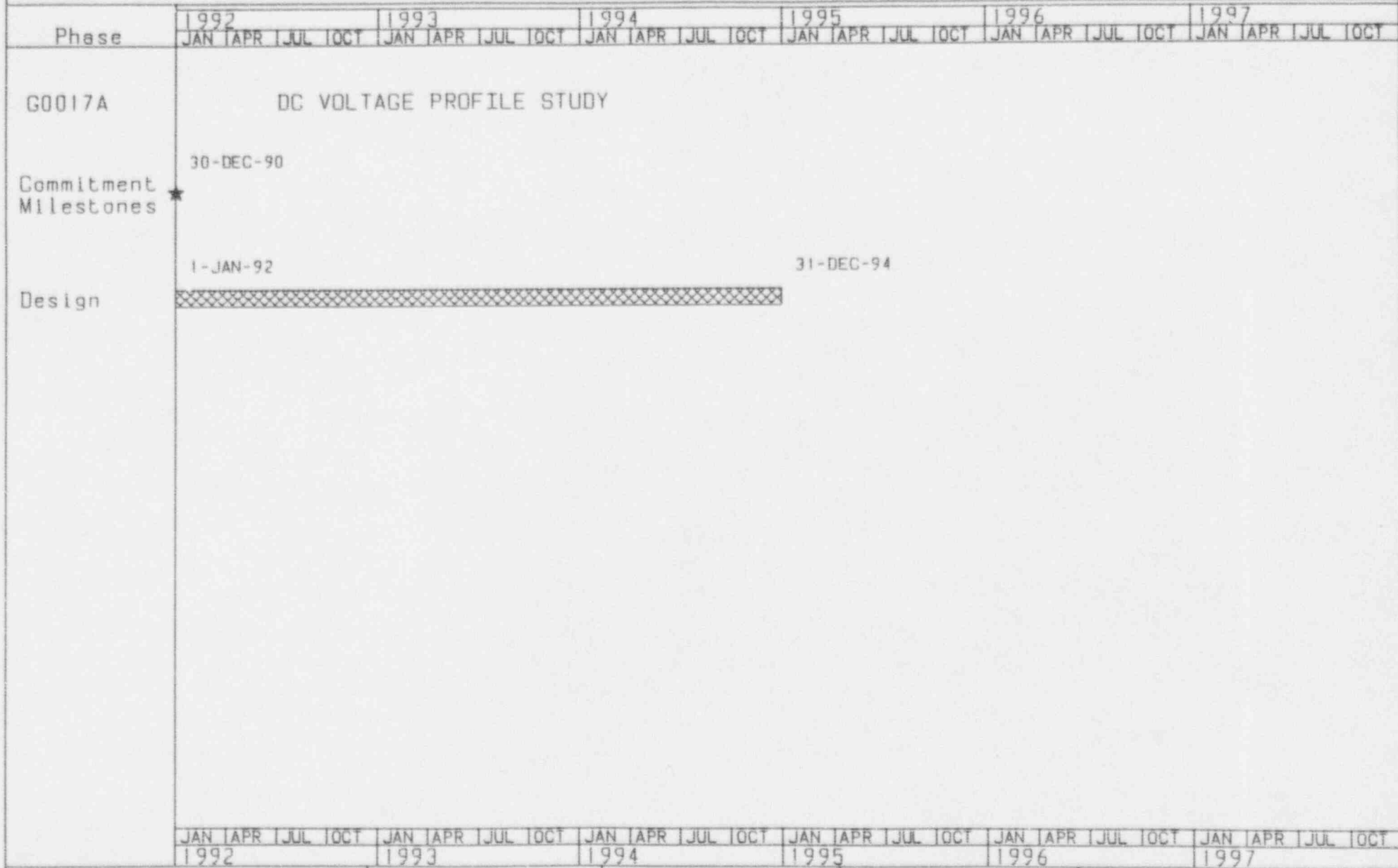
Economic Aspects: Once this project is completed, no continued costs are anticipated. Ongoing resource savings are expected in the future due to reduction of time spent on modification and engineering evaluation preparation.

Other Considerations: The calculations being developed are required by the NRC and presently either do not exist or are not in a usable form for the Brunswick units. The original NRC commitment date (12/30/90) for completing this project was missed. This project is now scheduled for completion at the end of December 1994 based on its relative priority to other projects. This project is related to B0019A, Design Basis Reconstitution.

III. CONCLUSION

The DC Voltage Profile Study will proceed as scheduled to provide a basis for future modifications and safety evaluations of the DC electrical distribution system.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Feedwater Sparger Cracking Issue

I. PURPOSE AND SCOPE

NUREG-0619 requires frequent non-destructive examination (NDE) of the feedwater (FW) nozzle blend radius regions and visual examination of the FW spargers to monitor potential crack growth in the vessel cladding. Both units are currently committed to examining the spargers every outage. As a result of such inspections, feedwater sparger cracking has been found. The purpose of these projects is the replacement of the feedwater spargers, thermal sleeves, and safe-ends on both units. The spargers are cracking around the flow holes and around the circumferential welds which attach the sparger arms to the tee. During outages that are prior to sparger replacement, interim repairs may be performed to capture potential loose pieces in place. Prior to the interim repairs, as applicable, the regularly scheduled NDE will first be performed on the FW spargers, nozzle weld areas, and IGSCC susceptible weld joints. The Unit 1 and Unit 2 sparger replacement scope includes removal and replacement of existing spargers, safe-ends, and portions of FW piping in the drywell. Both units will have the cladding removed from the FW nozzle blend radius regions. The success criteria for this project are the presence of no cracks (as determined by NDE/UT) and extended operation of both units without FW sparger problems. The safe-end replacement for Unit 2 will result in Unit 1 and Unit 2 having the same configuration. Also lessons learned during the Unit 1 replacement will enhance the Unit 2 replacement.

II. EVALUATION

Schedule Index: 22 - Replacing the FW spargers is expected to reduce the potential for a breach of the reactor coolant pressure boundary (RCPB) and a loss of coolant accident (LOCA). The likelihood of breaching the RCPB and causing a LOCA event is based on nuclear grade piping having no pre-existing flaws exceeding allowable limits. Therefore, this initiative is assessed to have a significant impact to a moderately important system, the RCPB (0.5 x 32).

Additionally, this project is a plant enhancement; it provides marginally improved unit availability and results in some ALARA benefits. This modification would constitute a plant enhancement in that it would considerably reduce the maintenance and inspection requirements of NUREG-0619 on the FW nozzle inner blend radius (0.2 x 8). There is an increased potential for a significantly longer unit down time from failed FW spargers if they are not replaced. Therefore, unit availability is expected to improve (0.2 x 12). Also, reducing the frequency of liquid penetrant inspections of the feedwater nozzle blend radius would reduce by sixteen hours the outage critical path time required to perform the examination. Reducing the inspection requirements would represent significant man-rem savings, although the actual FW sparger replacement work would expend approximately 190 man-rem for each unit. Radiation dose for each in-vessel inspection is approximately 7.9 man-rem and, given the estimated reduction in the inspection frequency, when a savings of approximately twenty inspections is realized, a net ALARA savings would result (0.2 x 9).

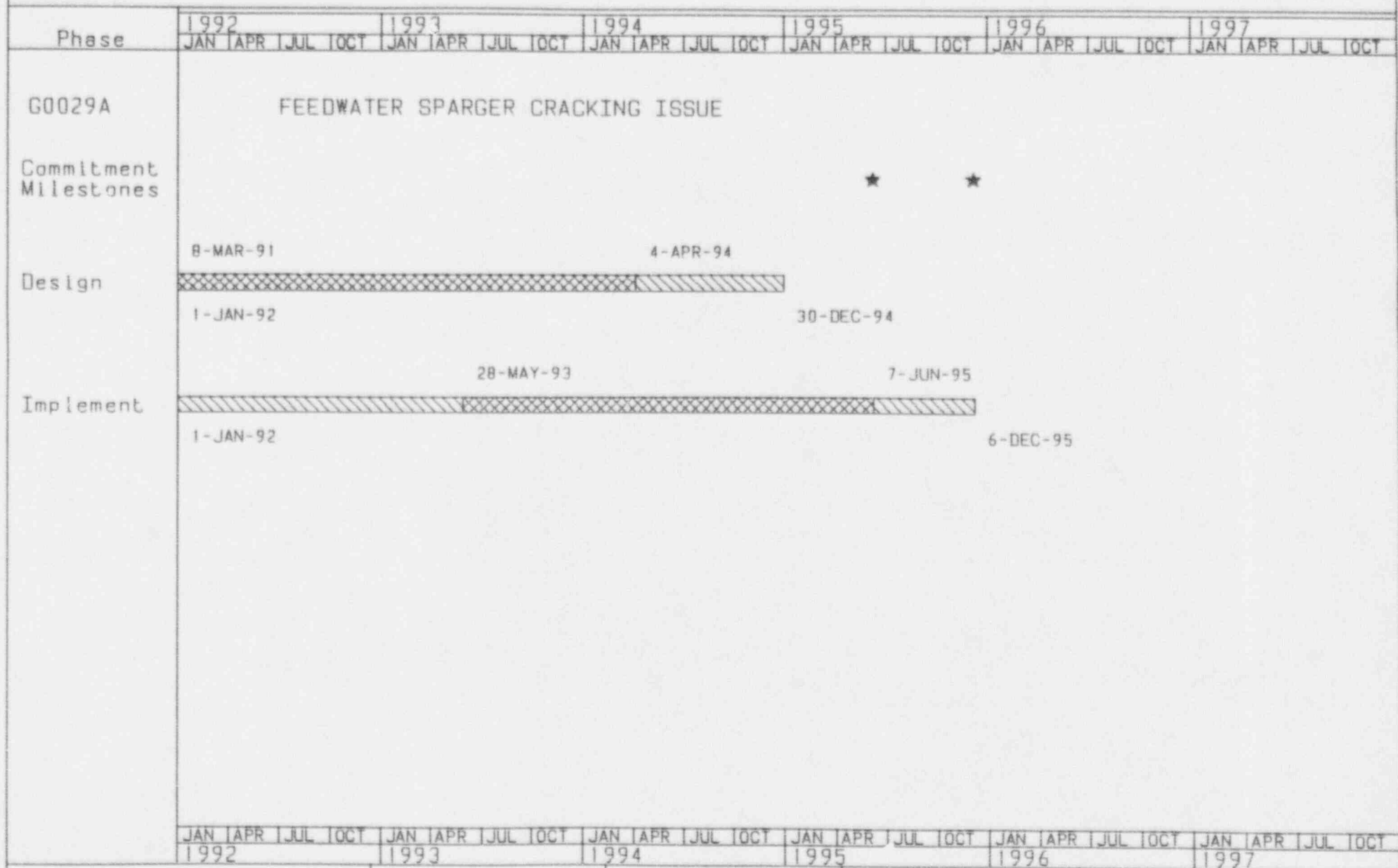
Economic Aspects: The expected benefits of this modification will be derived through personnel radiation exposure reductions, net unit availability increase, and savings due to reduced maintenance and inspections. It is expected that the baseload cost of FW sparger maintenance and inspections will be significantly reduced after replacement.

Other Considerations: This modification can only be performed during a refueling outage, with a complete core offload. FW sparger replacement is scheduled for outages B110R1 and B212R1. Interim FW sparger repairs are scheduled to be performed (as required) in B109R1 and B211R1 in order to allow continued operation until the FW spargers can be replaced. These plans meet the NRC commitment date. It is estimated that at least three weeks of outage critical-path time is required to replace FW spargers. Decontamination of FW piping and the vessel should be performed prior to work to reduce exposure during FW sparger replacement.

III. CONCLUSION

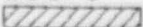
Implementation of this project will reduce the frequency of inspections required by NUREG-0619. Unit reliability will be improved because of the reduced likelihood of FW sparger failure. To meet established commitments, this project will be implemented as scheduled.


BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Secondary Containment Atmospheric Monitor (SCAM) Modules and Steam Leak Detection System Upgrade

I. PURPOSE AND SCOPE

The purpose of this project is to replace the Riley instrumentation for the high pressure coolant injection (HPCI), reactor core isolation cooling (RCIC), reactor water cleanup (RWCU), and residual heat removal (RHR) steam leak detection systems (LDS) with NUMAC instrumentation. Also the project will replace fifteen local Fenwal temperature switches with thermocouples that connect to NUMAC. In addition, GEMAC flow instrumentation in the RWCU system will be replaced with NUMAC instrumentation. Currently, the HPCI, RHR, RCIC, and RWCU systems are subject to spurious isolations caused by their associated Riley-based steam leak detection instrumentation (SCAM Modules). These spurious isolations have been a source of numerous licensee event reports (LERs) at BNP. With the replacement of the GEMAC and Riley-based instrumentation with NUMAC instrumentation, it is anticipated that spurious isolations of these systems will significantly decrease because of more reliable, accurate, and redundant instrumentation.

The success criterion of this modification will be a reduction in the LERs caused by spurious isolations during the subsequent operating cycles. Also the design will ensure that the installed configuration will meet operability requirements, trip setpoints and allowable values, and isolation response times in Technical Specification Tables 3.3.2-1 through 3.3.2-3 for RWCU, HPCI, and RCIC isolation instrumentation.

II. EVALUATION

Schedule Index: 29 - The principal impact of this project is with regard to industrial safety. Currently, technicians must conduct surveillance testing of LDS sensors at (in some cases) difficult to reach locations, risking injury from hot pipes as well as from potential falls. Implementing this project will eliminate these potential lost-time accidents by allowing complete surveillance testing at the instrumentation panels rather than requiring access to the sensors (0.5 x 29). Also, use of the more reliable NUMAC instrumentation will reduce spurious RWCU, HPCI, RHR, and RCIC isolations that have routinely occurred with the old instrumentation. The availability of these systems will moderately improve, and challenges to safety systems such as HPCI will be significantly reduced. Therefore, there will be a moderate improvement in nuclear safety (0.2 x 32). This project contributes to the improvement in operations of the power plant by eliminating spurious system isolations that distract operators from other duties. Also, the operator interface is much improved with added LDS indication capability and reliability, and surveillance requirements are simplified. Therefore, this project is a significant plant enhancement (0.5 x 8). The improvement in the reliability of the RWCU differential flow instrumentation will reduce the number of RWCU isolations which have previously delayed a unit's return to service and unit availability (0.2 x 12). Finally, net dose savings would be realized from reduced maintenance and surveillance testing (0.2 x 9).

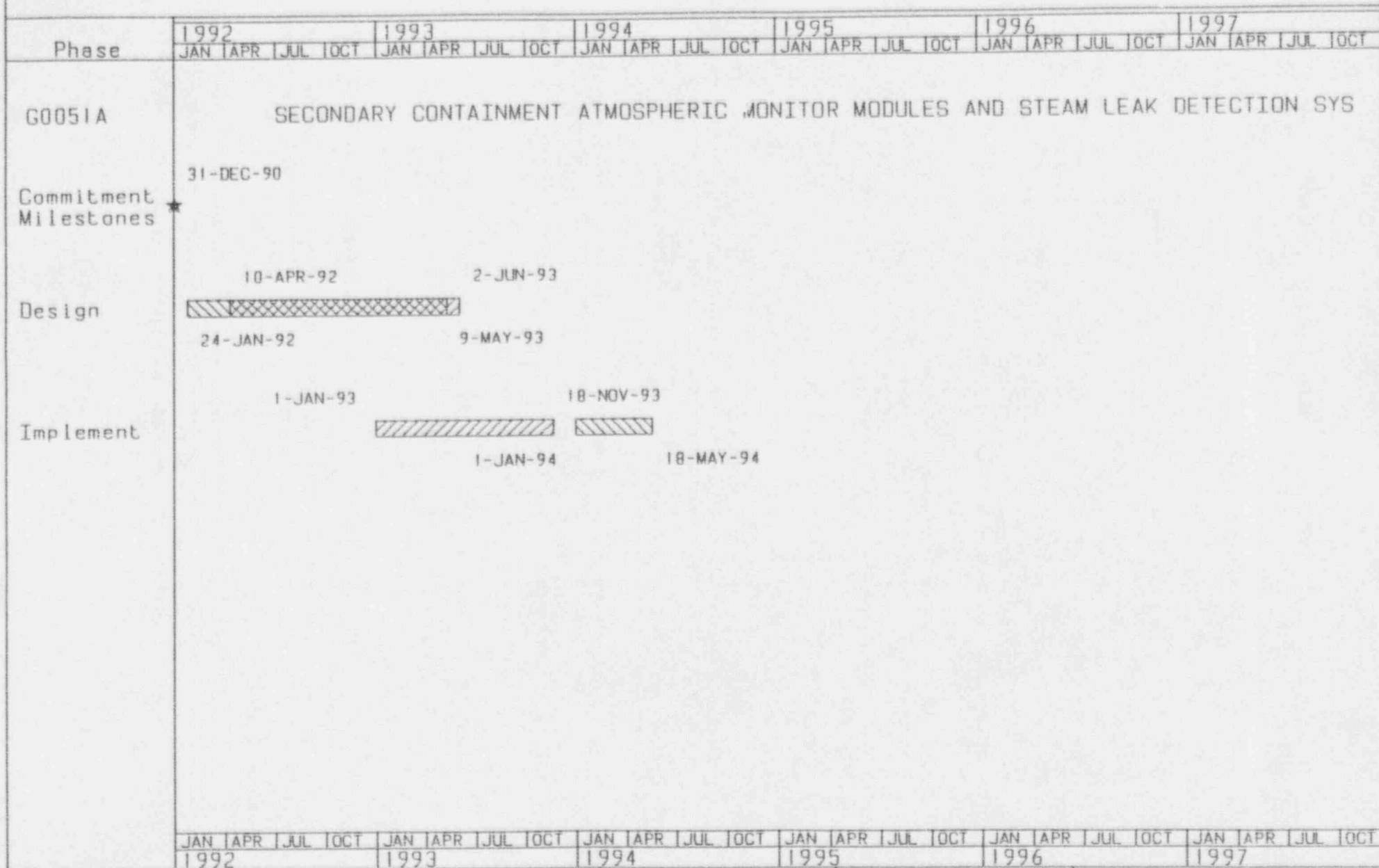
Economic Aspects: The economic benefits of this project include reduced system troubleshooting and maintenance and more efficient use of human resources because the LDS will be more reliable and will require less effort to perform surveillances. The increased reliability will result in fewer spurious isolations and, thus, fewer LERs that need to be processed. Routine costs associated with the LDS are expected to be lower.

Other Considerations: Implementation of this project must be performed during an outage. The NUMAC instrumentation design might allow for some surveillance relaxation due to its self-test features. The original NRC commitment date (12/31/90) for completing this project was missed. This project has been scheduled for completion at the end of the next refueling outages (B109R1 and B211R1).

III. CONCLUSION

This project will improve the LDS operability and reliability. It will also improve the availability of the RCIC, HPCI, RWCU, and RHR systems due to reduced spurious isolations originating from the LDS. The project has many positive attributes and shall be implemented during the next refueling outages based on its expected benefits to many of the site organizations, including operations, maintenance, and instrumentation and controls.

BNP Three Year Plan Project Schedule



★ Commitment Date	Start Finish Common	Start Finish Unit 1	Unit 2 Start Finish
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Diesel Generator Service Water Supply and Discharge Piping Replacement

I. PURPOSE AND SCOPE

In order to meet requirements resulting from NRC Generic Letter 89-13, CP&L has undertaken a number of initiatives regarding inspection and testing of service water piping and components. The service water lines for the diesel generator jacket water heat exchangers have a history of high maintenance due to piping through-wall leaks. These leaks result from cement lining failure at weak spots or from erosion and corrosion of the piping. Leaks, eroded welds, and missing cement lining indicate that the piping is in a degraded condition. The potential for this piping becoming inoperable is of significant concern because of the stringent operability requirements for the diesel generators, which require service water for cooling during operation. In order to eliminate high ongoing maintenance costs, CP&L has chosen to undertake a major program to replace large portions of the service water system piping with new piping to improve resistance to salt water corrosion and bio-fouling.

The purpose of this project is to replace the existing cement-lined carbon steel service water piping to and from the diesel generator jacket water heat exchangers with copper-nickel piping. Also this project will throttle service water flow to the diesels in order to balance flow to other equipment cooled by the service water system.

Successful completion of the proposed modifications would be evidenced by the absence of corrosion and through-wall leaks in system piping and improved cooling water flow to other system loads.

II. EVALUATION

Schedule Index: 30 - Replacing the service water piping reduces maintenance and improves system reliability, thereby moderately improving the availability of the emergency diesel generators. Throttling of the service water flow to the diesels moderately increases the flow to other safety-related coolers and components that are served by the service water system while maintaining a significant margin of cooling flow to the emergency diesel generators. The result is a moderately positive impact on nuclear safety (0.5 x 32). Improved piping materials would reduce the maintenance required to maintain service water system availability and would prevent or minimize the potential for forced outages due to failures of the service water system or inoperability of the emergency diesel generators, resulting in a moderate impact on plant availability (0.5 x 12). Replacement of service water system piping would result in less frequent repair activities, more reliable system operation, and improved maintenance, providing a significant plant enhancement (1.0 x 8).

Economic Aspects: Analyses show that no significant cost savings are achieved by performing the installation in a dual-unit outage. The project reduces the probability of a forced dual-unit outage that might result due to service water unavailability impacting diesel generator operability. Long term costs will be reduced because improved piping materials will eliminate the increasing cost of inspection and repair caused by the deteriorating piping.

Other Considerations: This project is an element of the Long Range Plan to significantly improve the reliability and performance of the service water system. It is also consistent with the Emergency Diesel Generator Enhancement Strategy goal to minimize out-of-service time and improve reliability. Installation must be performed during plant operation as well as over a series of outages.

In letter NLS-92-136, CP&L documented commitments from a meeting with NRC on May 12, 1992, and answered questions from an NRC letter dated April 27, 1992. Commitment number 15 from enclosure 4 of NLS-92-136 was given in response to NRC question III.A, regarding the backlog of items qualified under the short term structural integrity program. CP&L indicated that pipe supports for diesel generator service water supply and return lines would have to be qualified by the end of the Unit 2 Reload 11 outage (B212R1). Furthermore, LER 2-92-008 commits CP&L to complete installation of the new system by the end of the Unit 1 Reload 10 outage (B111R1). Ripout and sparring of the remaining portions of the now nonfunctional existing system will be completed thereafter.

III. CONCLUSION

To meet established commitments, this project will be completed as scheduled. This project is an element of the Long Range Plan for the service water system and is consistent with the Emergency Diesel Generator Enhancement Strategy goals.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
G0050J	DIESEL GENERATOR SERVICE WATER SUPPLY AND DISCHARGE PIPING REPLACEMENT																							
Commitment Milestones	<div style="display: flex; justify-content: space-around; width: 100%;"> ★ ★ </div>																							
Design	<div style="display: flex; justify-content: space-between; width: 100%;"> 22-MAR-92 1-OCT-93 </div> <div style="display: flex; justify-content: center; width: 100%; margin-top: 10px;"> </div> <div style="display: flex; justify-content: space-between; width: 100%; margin-top: 10px;"> 15-JAN-92 1-OCT-93 </div>																							
Implement	<div style="display: flex; justify-content: space-between; width: 100%;"> 7-MAR-93 29-DEC-96 </div> <div style="display: flex; justify-content: center; width: 100%; margin-top: 10px;"> </div> <div style="display: flex; justify-content: space-between; width: 100%; margin-top: 10px;"> 11-MAR-93 29-DEC-96 </div>																							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
	1992				1993				1994				1995				1996				1997			

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Service Water Flow Test Instrumentation

I. PURPOSE AND SCOPE

Permanent, installed instrumentation is inadequate to perform required tests to verify system flow and performance data on the service water system. These tests are performed in response to NRC Generic Letter 89-13. As a result, testing to verify the margin in flow to important components can be accomplished only during time windows that can accommodate installing temporary instruments. Installing temporary instruments requires approximately 10 days for testing that could be done in one day with permanently installed instruments. Extensive system realignments required to support testing with temporarily installed instruments create sub-optimal test conditions, such as measuring pump discharge pressure at an instrument that is not ideally situated for accurately recording the test data. Such test conditions occasionally result in test data being obtained that render important equipment inoperable until valid results can be obtained.

This project includes a study to identify the permanent flow and pressure instrumentation for conducting periodic tests on the service water system. The actual instruments installed will be determined by analysis to minimize the number of instruments necessary for the tests. The instruments, once installed, will facilitate more frequent testing, improve the reliability and accuracy of data, provide consistent trending data, and eliminate the cost of renting and installing temporary instruments.

II. EVALUATION

Schedule Index: 13 - Installing permanent instrumentation for periodic tests on the service water system has a significant positive impact on plant enhancement. Permanent instrumentation makes such tests easier to perform and manage and facilitates rapid decisions regarding flow adjustments (1.0 x 8). Permanently installed instruments remove the need to enter radiation areas each outage for installing and removing test instruments, thereby producing a medium positive impact on ALARA (0.5 x 9). Although service water is an important system with regard to nuclear safety, this project improves the efficiency and cost of system testing and does not affect the capability of the system to perform its functions in response to an accident. Therefore, there is no appreciable effect on the service water system, resulting in no impact on nuclear safety (0 x 3?).

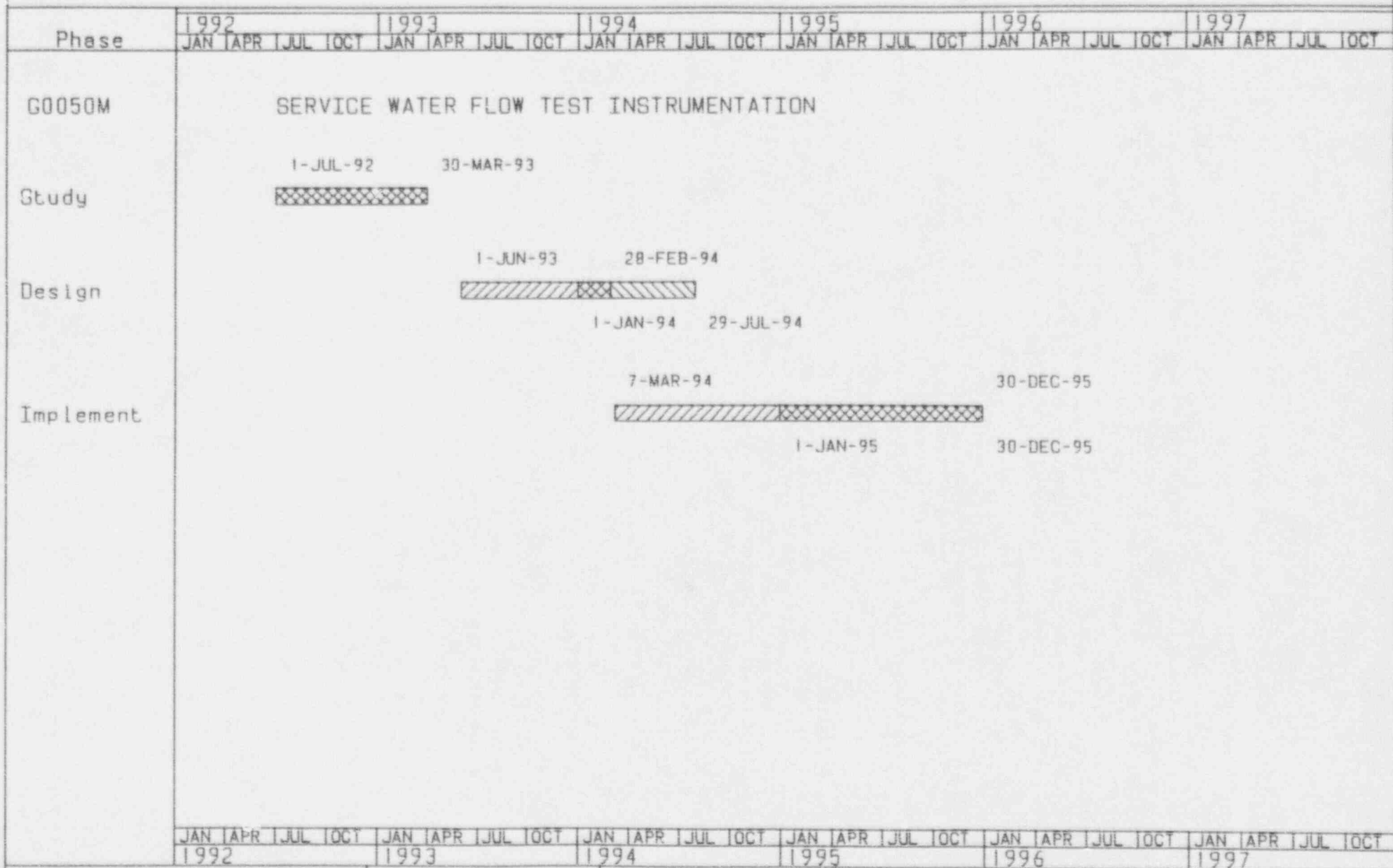
Economic Aspects: Installing permanent flow and pressure instrumentation eliminates rental costs for temporary instruments and reduces time and personnel costs associated with setting up and performing flow testing. Some of the reduced costs will be offset due to costs for maintenance and calibration of the permanent instrumentation.

Other Considerations: Upgrades to the service water system, under other projects, are scheduled over the next few years to replace degraded piping and throttle service water flow to the diesel generator coolers to increase flow to other components of the service water system. Changes resulting from this project will be integrated with those efforts to minimize engineering and installation costs.

III. CONCLUSION


This project will be completed as scheduled to provide an enhancement to the service water system that improves the efficiency, effectiveness, and flexibility of the periodic tests.


BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Main Steam Isolation Valve Upgrade

I. PURPOSE AND SCOPE

The purpose of this project is to evaluate the vendor recommendations for upgrading the main steam isolation valves (MSIV) and provide direct replacement engineering documentation for replacement of the MSIV internal components. An MSIV upgrade is necessary due to past MSIV LLRT failures and due to the current design of the MSIV internals having been discontinued by the vendor (Edward Valve Company, formally Rockwell). Edward Valve Company is supplying a new design as a replacement for the discontinued parts (stem/stem-disk and disk-piston) which are described as an enhancement to the MSIVs. The new and improved stem/stem-disk and disk-piston will be used to replace the existing valve internals whenever an MSIV is required to be rebuilt. The new design has been installed in five of the sixteen MSIVs as a result of LLRT failures. Other MSIV enhancements presented in the proposal submitted by the vendor have been evaluated and found to be beneficial. An analysis by NED to compare the cost of the other upgrades with the cost of past repairs was requested by the Site Review Group. NED performed the analysis and determined from the failure history of the MSIVs that the cost of the other MSIV enhancements did not justify their purchase at that time (1989). NED proposed that, if the failures increased, the enhancements should be evaluated for implementation again. This action should be pursued.

This project will be considered successful if the MSIV LLRT performance history improves for those MSIVs which have had the new stem and disk piston installed. This project also ensures that replacement with performance enhancing components in the future will have engineering overview and that appropriate engineering documents are supplied to support the replacements.

II. EVALUATION

Schedule Index: 12 - This upgrade reduces the possibility of an inadvertent MSIV closure transient and the resultant loss of the condenser for decay heat removal; therefore, it has a low positive impact on nuclear safety (0.2 x 32). Unit availability is somewhat enhanced with a reduction in the potential for unit loss on an inadvertent MSIV closure (0.2 x 12). The MSIV upgrade will result in reduced maintenance and, therefore, a dose savings for plant personnel. In particular, less seat lapping will be required to pass LLRTs, and a reduction of activated cobalt will result (0.2 x 9). Reduced maintenance will also enhance personnel productivity and plant performance (0.2 x 8).

Economic Aspects: Upgrading the MSIVs to enhance their reliability will reduce costs by not having to expend manhours or dose to rebuild MSIVs that have failed the LLRT. By taking this proactive approach, the goal of shorter outages is attainable.

Other Considerations: This project requires outage work, and it may be accomplished in two-valve increments over several outages.

III. CONCLUSION

This project will be completed as scheduled to enhance the performance of the MSIVs. The MSIV Upgrade Project will have a positive impact on plant nuclear safety and availability. If replacement of the MSIV internals of any valve is required, the new design should be installed.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Turbine Uprate

I. PURPOSE AND SCOPE

This project improves BSEP efficiency by reducing main turbine throttling losses. The BSEP turbines have four inlet valves to the first stage. When operated in full admission, each of the four valves throttles equally to control steam flow to the turbine. In partial arc admission, two or three of the valves operate wide open at full power and control is obtained by throttling the remaining valve(s). Partial arc admission is more efficient at full power (for the same steam flow and reactor power) because throttling losses are less. However, operation in partial arc admission results in more uneven stresses than operation in full arc admission. Conversion from full to partial arc admission is a major project involving changes to turbine control and strengthening first stage blades to withstand the increased stresses of partial arc admission.

Unit 2 was converted to partial arc admission during the fall of 1991. During subsequent operation, turbine oscillations due to control problems at high power necessitated a 75% power operation limit. Remaining control issues are being addressed during the current outage. Turbine output is affected by a number of factors, including circulating water temperature, but preliminary estimates are that conversion to partial arc admission has resulted in about 1.5% increase in turbine output. Conversion of the Unit 1 turbine to partial arc admission is contingent on successful and demonstrated resolution of the Unit 2 control problems at high power. Efforts have been undertaken to avoid similar problems on Unit 1.

The project scope also includes other non-reactor power uprate work, including inspection and repairs to the electrohydraulic control system, installation of a new feedwater flow differential pressure transmitter, and development of special test procedures. This project does not include efforts associated with the core thermal uprate, which are handled under project 02164A.

Upon successful completion of this project, both units will generate higher full power electrical output with high turbine reliability.

II. EVALUATION

Schedule Index: 10 - A substantial increase in turbine capacity is expected (1.0 x 10). No appreciable effect is expected related to nuclear safety (no increase in turbine trips expected), personnel safety, unit availability, ALARA, or plant enhancement.

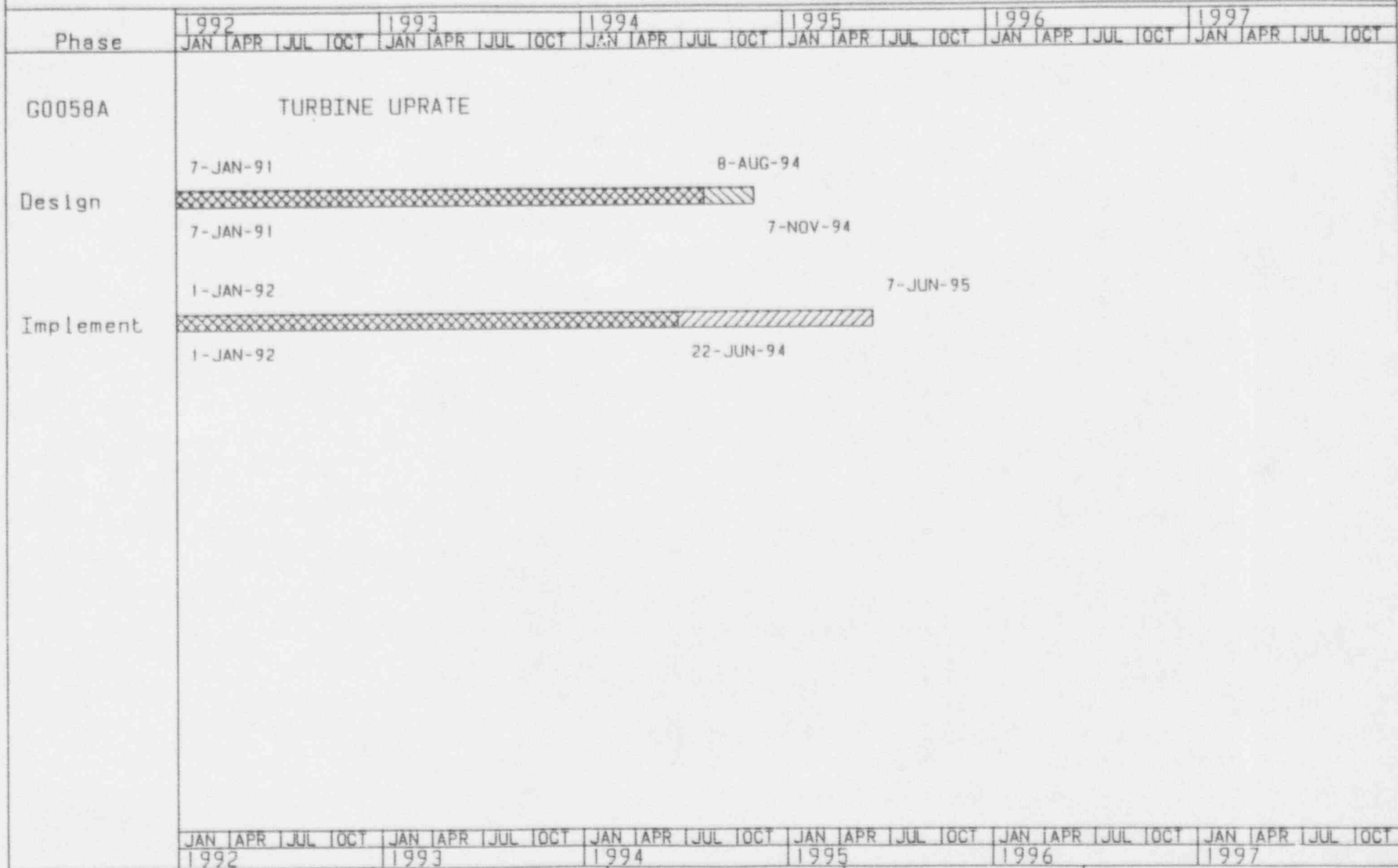
Economic Aspects: An economic evaluation done in June 1991 showed that the project is very beneficial. This conclusion is likely to remain valid, even though the evaluation used assumptions which are no longer valid and did not have the benefit of the experience resulting from actual project implementation on Unit 2. Once turbine conversion is complete and any remaining control problems are resolved, no continuing effort should be necessary related to this project.

Other Considerations: This project to uprate the turbines is related to the core thermal uprate, PID 02164A. The nuclear safety and licensing considerations are more significant for core thermal uprate. These two projects are considered separately because of their different natures.

III. CONCLUSION

This project will be completed as scheduled to substantially increase turbine capacity. Actions to resolve the control problems on Unit 2 will continue. Conversion of the Unit 1 turbine to partial arc admission will occur once the Unit 2 control problems at high power have been resolved.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Improve Reactor Building Differential Pressure Instrumentation

I. PURPOSE AND SCOPE

This project will improve the accuracy of the differential pressure instrumentation used for the Reactor Building. The present instrumentation is affected by high wind speeds, resulting in a loss of instrument accuracy. In addition, this condition makes testing difficult to perform and, in many instances, requires extra personnel for testing. To alleviate this situation, it is necessary to upgrade the instrument design and/or install wind shields to protect the instrumentation. Instrument accuracy is required in order to comply with technical specifications for containment integrity.

The successful design and installation of improved reactor building differential pressure instrumentation will permit more accurate instrument readings even in high wind situations. The radiation dose encountered when performing testing of the improved instrumentation will be reduced because less personnel will be required.

II. EVALUATION

Schedule Index: 19 - The plant will be enhanced with improved performance and accuracy of Reactor Building pressure differential instrumentation (1.0 x 8). Adverse weather during the summer months could isolate the Reactor Building HVAC, which could lead to main steam isolation valve (MSIV) closure. The ability to maintain MSIVs open during accident scenarios is important since loss of decay heat is a significant part of the core damage frequency for the Brunswick plant (0.2 x 32). Unit availability may also be somewhat improved since the unreliability of this instrumentation has caused critical path delays during outages (0.2 x 12). Additionally, the more efficient testing of this improved instrumentation will reduce the personnel radiation dose during this periodic testing (0.2 x 9).

Economic Aspects: After initial installation, there will be savings in plant availability and in personnel radiation exposure.

Other Considerations: The improvement of this instrumentation must be performed at the appropriate power plant operational mode when the instrumentation is not required by technical specification for containment integrity (during core alterations).

III. CONCLUSION

The Reactor Building differential pressure instrumentation improvements will facilitate compliance with the intent of the technical specification for reactor containment integrity. This project will be completed as scheduled.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
G0060A	IMPROVE REACTOR BUILDING DIFFERENTIAL PRESSURE INSTRUMENTATION																							
Study	<div style="display: flex; justify-content: space-around; align-items: center;"> 1-JAN-94 28-JUL-94 </div>																							
Design	<div style="display: flex; justify-content: space-around; align-items: center;"> 1-JAN-95 5-AUG-95 </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> 1-JAN-95 15-JUL-95 </div>																							
Implement	<div style="display: flex; justify-content: space-around; align-items: center;"> 10-MAR-96 8-JUN-96 </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> 18-FEB-96 27-APR-96 </div>																							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
	1992				1993				1994				1995				1996				1997			

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Local Power Range Monitor Cable Replacement In Drywell

I. PURPOSE AND SCOPE

The purpose of this project is to replace deteriorating local power range monitor (LPRM) coaxial cables in the drywell in order to upgrade the material condition of the LPRMs. Currently, the LPRM cabling between the drywell electrical penetration and the vessel pedestal pull box is degraded principally due to age.

The scope of this project is to replace all 124 existing LPRM coaxial cables inside the Drywell between the Drywell penetrations X-100 (A through H) and pull boxes YY9, YZ3, YZ0, YZ4, YZ1, YZ2, and YZ5. In addition, the existing hard line LPRM cables from the pull boxes to the individual LPRMs will be replaced with quick-disconnect connectors to eliminate connector splices at the pull boxes. The 7 pull boxes will be replaced with patch panels to facilitate access to the connectors. Also the quick-disconnect connectors and patch panels will be installed at the inboard penetrations to aid in cabling and connector maintenance.

The success criteria for this project are to significantly reduce person-rem exposure that results from LPRM cable and connector maintenance and to eliminate reactor scrams or half-scrams attributed to LPRM spiking because of degraded LPRM cabling.

II. EVALUATION

Schedule Index: 21 - This project will upgrade the material condition and the reliability of the LPRMs. As a result, less LPRM spiking will occur, and therefore the plant will experience fewer reactor half-scrams. This, in turn, reduces the challenges to the reactor protection system (RPS), and contributes to maintaining or improving the health and safety of the general public. Therefore, this initiative has a small positive nuclear safety impact (0.2 x 32).

Furthermore, the numerous half-scrams produced from the LPRM spiking during full power operation have occasionally caused a loss of unit generation. Therefore, unit availability is also affected (0.5 x 12). Additionally, this project has a medium positive impact on ALARA (0.5 x 9). The person-rem estimate during cable replacement is high, but there are higher expected person-rem savings as a result of significant reductions in LPRM cabling and connector maintenance.

Finally, this project is considered a moderate plant enhancement in that there is improvement in the LPRM maintenance program (0.5 x 8).

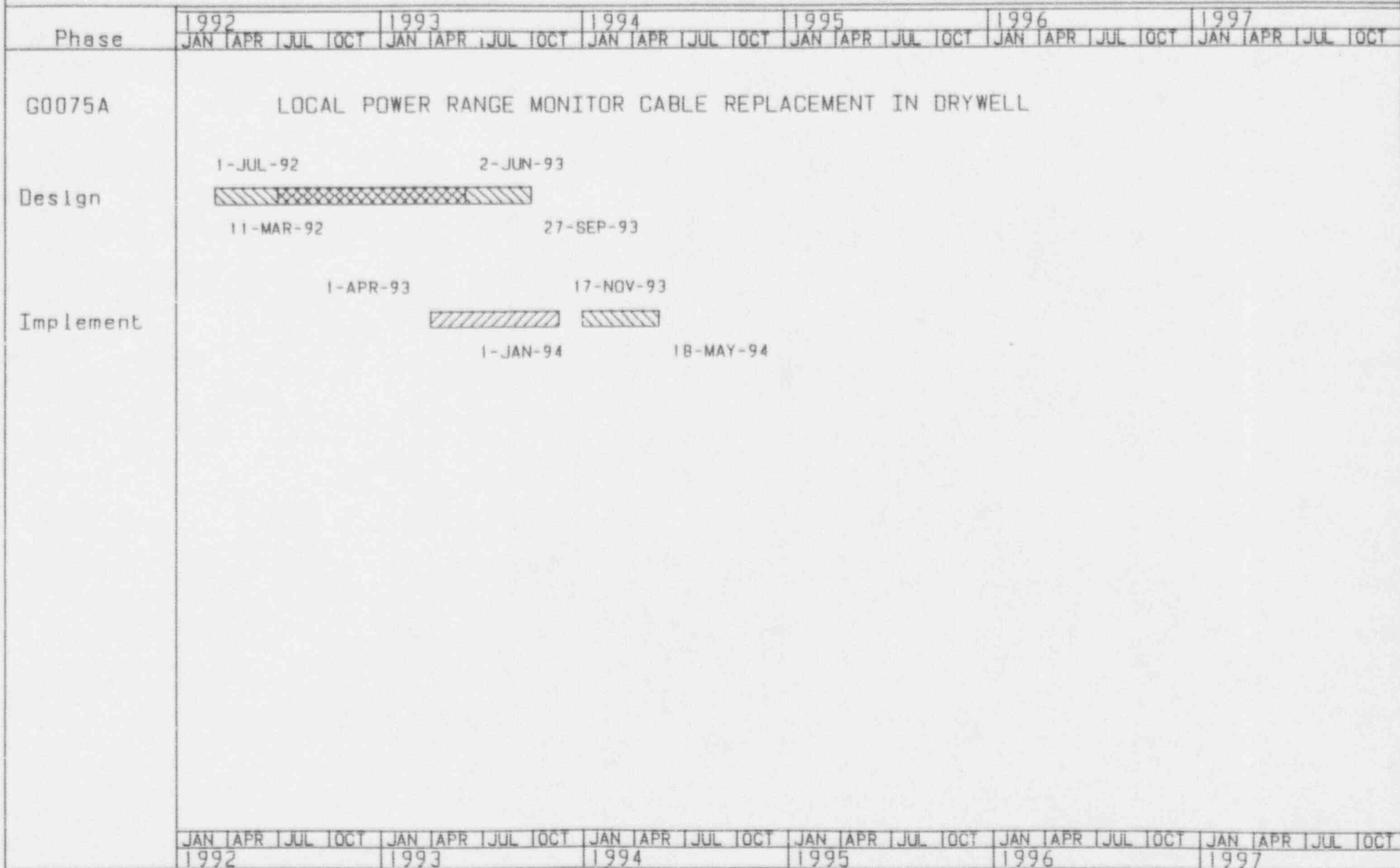
Economic Aspects: It is expected that the routine periodic maintenance costs of the LPRMs will substantially be reduced over the next twenty years. Additionally, an expected benefit of this project will be reduced person-rem from significantly reduced maintenance on the LPRMs.

Other Considerations: This project is related to PID G0076A, Local Power Range Monitor Cable Replacement Outside Drywell. There is a concern that the cable degradation will reduce the number of operable LPRMs to less than the Technical Specification required number for average power range neutron monitoring operability.

III. CONCLUSION

This project shall be completed as scheduled. This project will reduce LPRM cable and connector maintenance and eliminate problems associated with LPRM spiking.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Upgrade Replacement Equipment to NUREG 0588 Category I Requirements

I. PURPOSE AND SCOPE

The environmental qualification (EQ) rule (10 CFR 50.49) imposes replacement equipment requirements in paragraph L of the rule. In that paragraph, the EQ rule requires use of upgraded components when it becomes necessary to replace electrical equipment important to safety. To address this upgrade provision, BNP committed to a programmatic replacement with Category I electrical equipment qualified per NUREG 0588, unless sound reasons to the contrary exist which would preclude its replacement. This program will evaluate approximately 50 percent of the plant EQ-related electrical equipment.

This project includes gradual but coordinated replacement of multiple similar components (where feasible) rather than replacement of individual components during isolated corrective maintenance activities or at the end of the individual component's qualified life. Where replacement of groups of components is not feasible or efficient, each affected component is upgraded based on the most efficient approach relative to the entire project and relative to the individual application. This approach results in significant flexibility and efficiencies in the actual replacement work, in updating plant design configuration documentation, and in maintenance and test programs. Future audits and inspections should conclude that management of environmentally qualified equipment is adequate. Unqualified or expired electrical components should not be found in the plant.

II. EVALUATION

Schedule Index: 22 - With the exception of HVAC cooling of important components, the nuclear safety probabilistic risk assessment (PRA) does not explicitly address the survivability of equipment during accident conditions. It is assumed that the equipment is designed to perform its function under accident conditions. Electrical equipment is required to be operational and capable of performing design safety functions over the life of the plant, including during the adverse plant environmental conditions (e.g., temperature, pressure, and humidity) that are anticipated to occur in the event of an accident. Therefore, since nuclear safety is the basis for the EQ program, this project is judged to have a moderate impact on important systems in the PRA (0.5 x 32). The replacement equipment is expected to be inherently more reliable during normal operations, thus potentially increasing plant operational availability (0.2 x 12). In addition, new components with increased reliability will reduce overall maintenance requirements. Similarly, since the approach being taken is to replace the equipment in an efficient, comprehensive manner rather than piecemeal, worker productivity and error avoidance will be enhanced, thus resulting in general operational and maintenance enhancements (0.5 x 8).

Economic Aspects: The upgraded equipment is generally more expensive, but this is somewhat offset by increased reliability and availability of current vendors. Replacement of some multiple components can be optimized in a manner that minimizes project cost. This has been recognized and is part of the planning process for this project. Although this replacement program has a regulatory-driven purpose, it will also relieve equipment obsolescence problems and will support BNP plant life extension and maintenance programs.

Other Considerations: Component and inventory replacements will be accomplished as needed to avoid expiration of design life of installed equipment. The work will be accomplished first for equipment with less than a 40 year design plant life, then for equipment having a 40 year design plant life. In some cases where advanced change-out is not prudent, the needed quantities of upgraded replacement equipment will be purchased and retained in stock. Thereafter, the affected components will be replaced with the stocked replacement components when it is actually required for corrective or preventive maintenance. This approach will also remove older stock replacement components and thus minimize the possibility of using non-upgraded components from stock. Due to the range of equipment and systems affected by this project, much of this work will have to be accomplished during unit outages. A separate but closely related project (PID 00912D) addresses Rosemount transmitters.

III. CONCLUSION

This project implements the plant response to important equipment environmental qualification requirements contained in 10 CFR 50.49. The project will continue in a systematic, coordinated manner until all plant electrical equipment conforms to 10 CFR 50.49. This will allow a controlled, cost effective resolution of this issue.

BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
00912A	UPGRADE REPLACEMENT EQUIPMENT TO NUREG 0588, CAT I REQUIREMENTS																							
Design	<div style="display: flex; justify-content: space-between;"> 15-FEB-92 17-JUN-03 </div> <div style="border: 1px solid black; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); width: 100%; height: 15px; margin-top: 5px;"></div> <div style="display: flex; justify-content: space-between;"> 15-FEB-92 1-JUL-99 </div>																							
Implement	<div style="display: flex; justify-content: space-between;"> 1-JAN-93 16-NOV-05 </div> <div style="border: 1px solid black; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); width: 100%; height: 15px; margin-top: 5px;"></div> <div style="display: flex; justify-content: space-between;"> 1-JUN-93 14-NOV-01 </div>																							

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Rosemount Transmitter Replacement

I. PURPOSE AND SCOPE

The environmental qualification (EQ) rule (10 CFR 50.49) was originally addressed under project 00912A, Upgrade Replacement Equipment to NUREG 0588 Category I Requirements. In addition to general EQ requirements for installed electrical equipment, the rule includes replacement-equipment requirements in paragraph L. These additional requirements impact Rosemount transmitters. Rosemount model 1152 transmitters (reactor plant pressure, flow, and level instrumentation) are being replaced before the end of their ten year qualified life. The upgrades are being done at this time due to the commitment to meet the requirements of the rule, the approaching end of qualified life, and the availability of a qualified replacement, Rosemount model 1153B transmitters. Rosemount model 1153B instruments are qualified to Category I (NUREG 0588) criteria, as required by 10 CFR 50.49(L). Upon initiation of this project, approximately 70 of the older Rosemount model 1152 transmitters were in use in Unit 1 and 65 in Unit 2. Unit 1 replacements have been completed; there are 22 model 1152 transmitters scheduled to be replaced in Unit 2. This project will be successful if all Rosemount transmitters are replaced before their design end of life.

II. EVALUATION

Schedule Index: 22 - The installed Rosemount transmitters are critical pressure, level, and flow instrumentation components in safety-related systems. Replacing the Rosemount transmitters with a more reliable model will reduce the probability that automatic functions would fail to actuate during an accident scenario, especially in the harsh environments possible during a postulated accident. Since emergency operating procedures direct the operators to start equipment manually when the automatic signal has failed and since critical automatic function signals are redundant by design, the impact of this type of equipment reliability upgrade is not critically important from a PRA standpoint. However, the Control Room operators must also have confidence in the reliability of their instruments in order to make timely decisions on such emergency-manual operation of equipment. Since such safety-related indication instrumentation circuits are also dependent on these transmitters, a moderate impact relative to nuclear safety is assigned to this project (0.5 x 32). In addition, the replacement equipment is expected to be inherently more reliable during normal operations, thus potentially increasing plant operational availability (0.2 x 12). Also, new components with increased reliability will reduce overall maintenance requirements. Moreover, since the approach being taken is to replace the equipment in an efficient, comprehensive manner rather than piecemeal, worker productivity and error avoidance will be enhanced, thus resulting in general operational and maintenance enhancements (0.5 x 8).

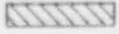
Economic Aspects: This project contributes significantly to equipment reliability and operator confidence in Control Room indications important to safety. The upgraded equipment is also expected to require less maintenance in the future.

Other Considerations: The Rosemount transmitters in Unit 1 have been upgraded. The Rosemount transmitters in Unit 2 must be upgraded during an outage.

III. CONCLUSION


Rosemount transmitters are critical to level and flow instrumentation and will be upgraded to environmental qualification requirements in an expeditious manner.


BNP Three Year Plan Project Schedule

Phase	1992				1993				1994				1995				1996				1997			
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
00912D Implement	<p>ROSEMOUNT TRANSMITTER REPLACEMENT</p> <div style="text-align: center; margin: 20px 0;">  </div> <p style="text-align: center;">1-JAN-94 18-MAY-94</p>																							
	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
	1992				1993				1994				1995				1996				1997			

★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

 Unit 2
 Start Finish

Restore Cathodic Protection for the Circulating Water System and Intake Structure

I. PURPOSE AND SCOPE

No substantial maintenance has been performed on the cathodic protection system since 1984. Although this system is not required for plant operation, its proper operation is important in reducing long term corrosion of the metallic components of the circulating water system and other plant metallic equipment. In addition to the circulating water system, the cathodic protection system is intended to protect stack and off-gas piping, service water piping, the service water intake structure, and sewage treatment plant equipment.

This project will begin by performing a cathodic protection system survey via a special procedure. The results of the survey will provide an indication of the degradation of the system and reveal which anodes and anode cables require repair or replacement. This project will replace the obsolete cathodic protection rectifiers and the corroded cathodic protection anode boxes located on the circulating water and service water intake structure. The replacement of the anode boxes will require the circulating water and service water decks to be broken up to expose and replace damaged conduits. Divers may be required for the replacement of anodes or sacrificial zincs located in the circulating water and service water intake pump bays.

A restored and well maintained cathodic protection system will inhibit further degradation of the service water and circulating water system intake equipment exposed to the plant salt water environment. Reliable cathodic protection system operation will minimize the possibility of catastrophic failures of metallic supports, structures, and other equipment and will extend equipment operating lives.

II. EVALUATION

Schedule Index: 10 - Anticipated failures from excess corrosion would not prevent basic system function or present significant safety challenges. However, extension of circulating water system life represents a substantial plant enhancement (1.0 x 8). Without the restoration of the cathodic protection system, avoidable equipment replacements could extend an outage and reduce unit availability (0.2 x 12).

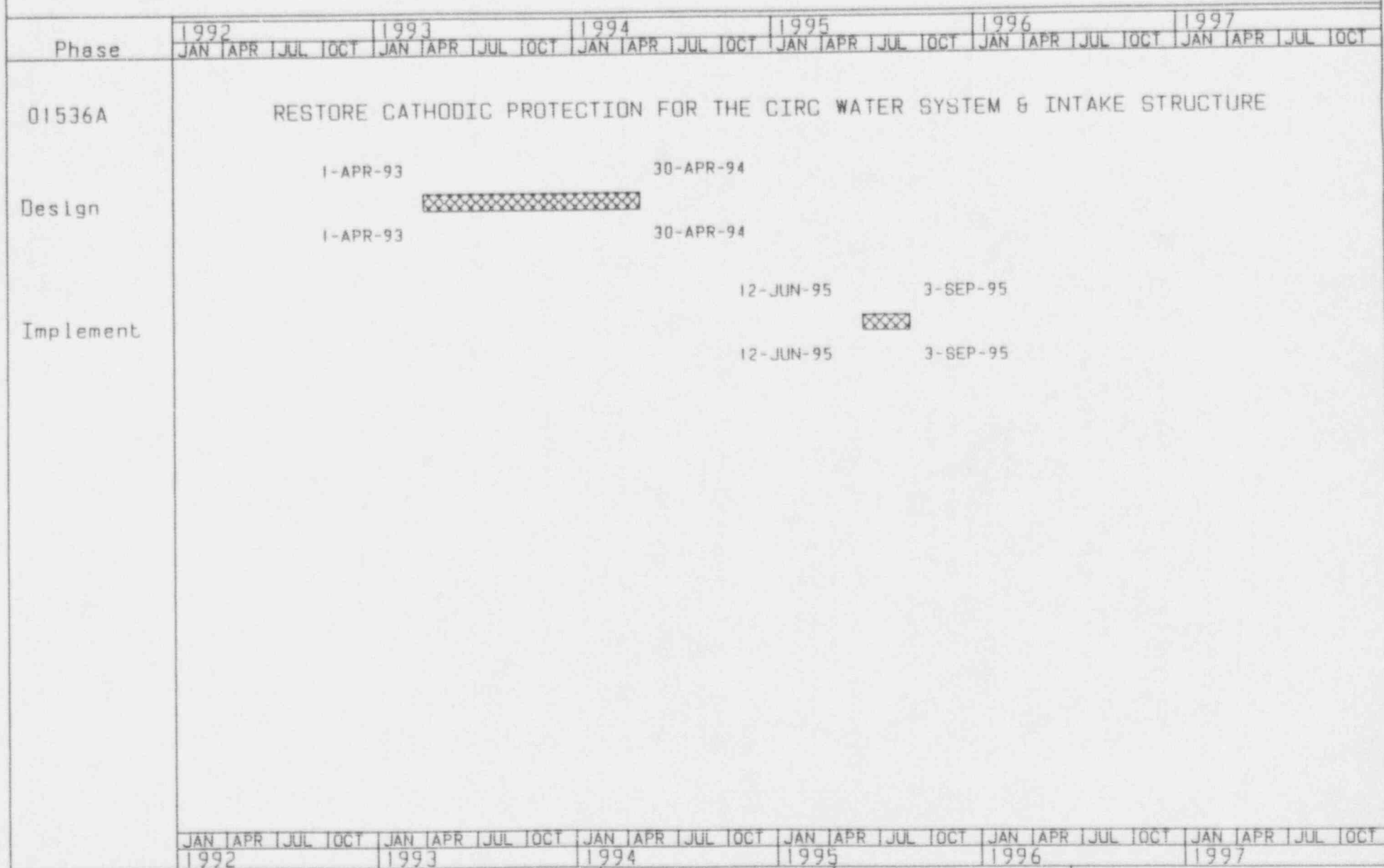
Economic Aspects: Once the system is restored to operability, some increase in routine effort will be required to perform system inspections and maintenance. Long-term savings are expected due to corrosion reduction for protected components.

Other Considerations: No outage related work is required to complete this project.

III. CONCLUSION

This project is important to prevent unnecessary degradation of the circulating water system and will be accomplished as scheduled.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Service Water System Piping Phase III

I. PURPOSE AND SCOPE

Salt water corrosion and erosion reduces service water (SW) system reliability and increases maintenance costs. The corrosion and erosion could cause potential through-wall failures of portions of the SW system because the carbon steel cement-lined piping and rubber-lined carbon steel valves used in the original SW system are susceptible to through-wall failures.

This project replaces and upgrades portions of the SW system large bore piping and valves. The Reactor Building closed cooling water (RBCCW) heat exchangers and associated inlet SW piping are being replaced due to plugged tubing and degraded heat exchanger performance. The SW pumps will also be upgraded for long term seismic qualification, designed for self-lubrication, and backfitted with improved thrust bearings. This SW pump modification eliminates the need for the SW lube water pumps, which will eventually be removed. The success criterion of this project is that no unit forced outages or plant deratings will be attributable to the SW system.

II. EVALUATION

Schedule Index: 32 - This project moderately improves the availability of the SW system and therefore reduces the probability of core damage or containment release (0.5 x 32). The probability of a SW system train being out of service is included in the PRA and the project is judged to have a moderate positive impact on SW system availability. It eliminates the need for ASME Section XI Relief Request PR-05, which requests relaxation of required performance testing of the SW lube water pumps. Replacement of the RBCCW heat exchangers and supply piping to the heat exchangers will improve unit availability (0.5 x 12). Replacement of the piping with more corrosion resistant copper nickel material greatly reduces the potential for SW system through-wall failures and subsequent unit shutdown due to loss of cooling water to components served by the SW system. Seismic upgrade and self-lubrication changes to the SW pumps will reduce the potential personnel safety hazards resulting from high SW pump maintenance (0.2 x 29). Finally, this project contributes to improvement in the operations and maintenance of the SW system and reduces the maintenance and testing requirements for the SW system; therefore, this project is considered an important plant enhancement (0.5 x 8).

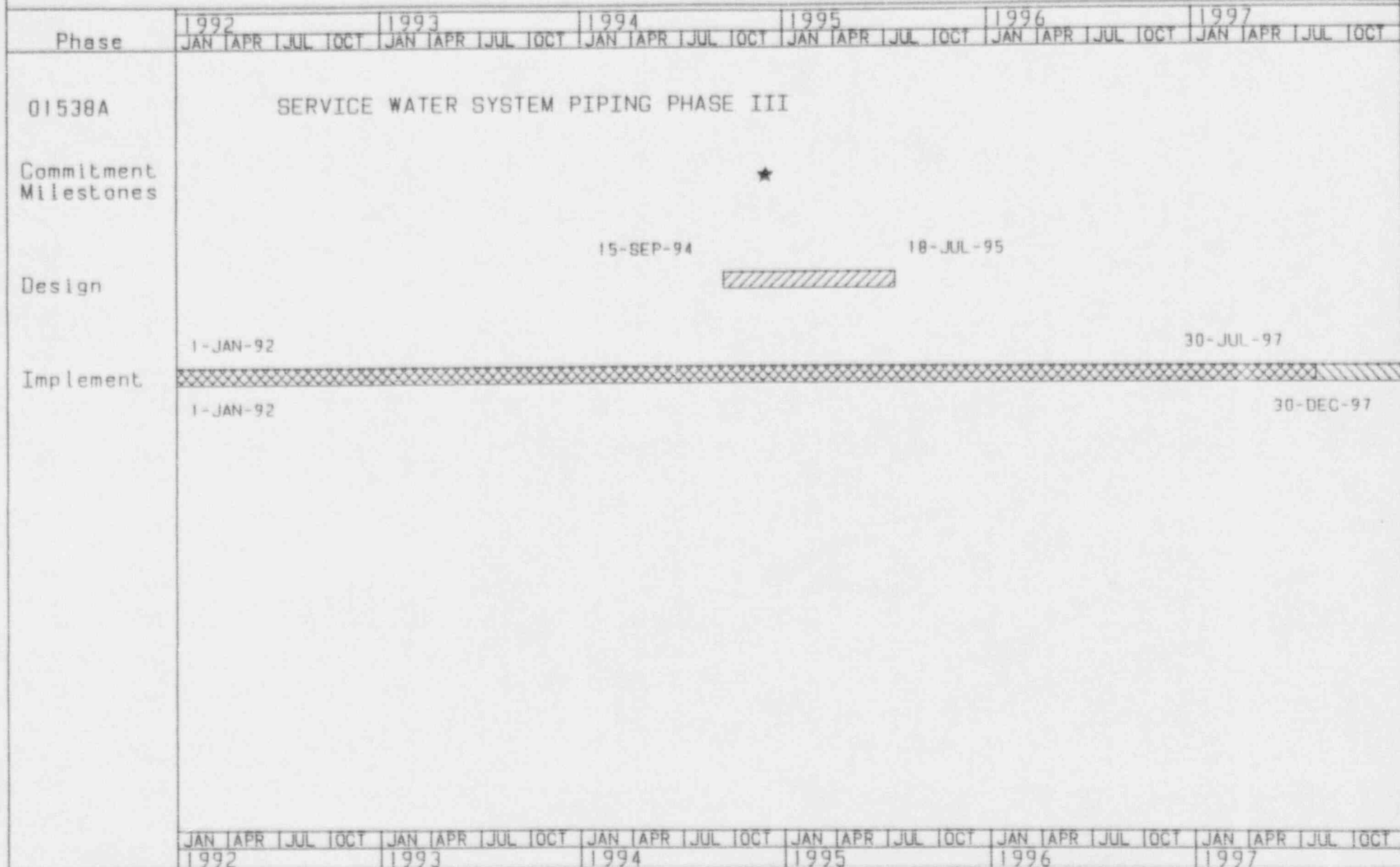
Economic Aspects: There are no expected continuing or baseload costs for this project since all of the modifications are one-time component and pipe replacements. The expected benefits of this project are future savings due to reduced maintenance requirements and, therefore, increased unit availability.

Other Considerations: This project is related to other SW system projects such as PID 84070A, Service Water System Repairs, Phase II. The RBCCW heat exchanger inlet piping changeout has been identified as outage-related work. Upgrading SW pumps (and removing the SW lube water system) can be accomplished without an outage because of the redundancy of the SW system. All work under this project that is critical to meeting the NRC commitment date is scheduled to be completed before November 1994.

III. CONCLUSION

This project has established a considerably more reliable and better configuration-controlled SW system. This project received a moderate nuclear safety impact, a moderate unit availability impact and a moderate plant enhancement rating. Eliminating the SW lube water system reduces ISI testing requirements and some Technical Specification considerations. Also, upgrading the SW piping and valves with more corrosion resistant material upgrades SW system reliability and reduces the probability that the SW system will cause unit shutdowns. This project shall continue in order to sustain the benefits of a reliable SW system.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Process Computer Replacement

I. PURPOSE AND SCOPE

Brunswick's Honeywell 4010 process computers are the oldest installed and functioning reactor core monitoring computers in the United States. They were designed with technology which has become outdated and cannot be readily supported by the manufacturer. Also, technician training services and spare parts are no longer provided by Honeywell. Spare parts can be obtained at this time from third party sources; however, supplies are subject to depletion without notice. Although the many computer outages have not yet impacted the associated unit generation, their frequency has been rising, increasing the probability of startup delays or shutdowns.

The process computer's primary function, core monitoring, is currently dependent on software limited by the existing software provided only by General Electric Corporation (GE). This software is less versatile and accurate than the variety of software now being written for DEC VAX (versus Honeywell) computers. In addition, limitations in fuel vendor selection are caused by the core monitoring software being GE-specific and less efficient than other available software. These fuel vendor limitations are considered to be a major disadvantage of the present system. In addition, as more complex fuel is used in the reactor core, it becomes increasingly difficult to predict the effects of core power adjustments, resulting in slower reactor startups and power adjustments than would be possible with a more capable system. The existing process computer system does not have sufficient capacity to accommodate the upgraded software needed.

The basic scope of the plant process computer replacement (PPCR) project is to transfer the functions currently being performed by the existing process computer to a system that has greater hardware/software capability, expansion capability, reliability, and maintainability. The existing process computer functions will be upgraded to perform more advanced computing and monitoring using the latest computer graphic capabilities. The new hardware includes front-end data acquisition equipment, data links, high speed DEC network interfaces to existing VAX computers, additional VAX systems, special purpose interfaces for the existing plant data system, and new operator consoles. Only the existing Honeywell input/output (I/O) cabinets will remain, serving as the interface between the plant sensors and the new data acquisition system. The new software includes the CPU's operating system licenses, data acquisition and data validation software, new core monitoring software, applications specific software, and system integration software that coordinates and monitors the entire system. Engineering services to support this project include providing documentation, testing, installation, training, conversion planning, and project management.

The testing and evaluation phase for the new system is extensive. After the new system's operation has been adequately verified, the existing Honeywell 4010 computer will be disconnected and removed using a phased approach. A long list of goals and success criteria have been established to confirm the adequacy of the new system. Abandonment and/or removal of the Honeywell process components will be a major milestone to indicate that important goals are being satisfied.

II. EVALUATION

Schedule Index: 13 - The process computer replacement is considered a non-safety related modification. Although it can be argued that the equipment is not safety related, the dependence of operators on the system output may have safety implications during operation. It is reasonable to predict that the graphic display benefits and predictive capability of the new system (especially as related to secondary plant process parameters) will reduce the frequency of secondary plant event sequence initiators (such as low condenser vacuum) relative to the frequency values considered in the PRA (0.2 x 32). The reliability, availability, and maintainability of the new system is expected to be much better than the previous system. As time goes on, the probability of unit downtime or startup delays increases with the old system (0.2 x 12). The computer replacement is viewed as a significant enhancement for the few personnel who need to use it, resulting in a plant enhancement (0.5 x 8).

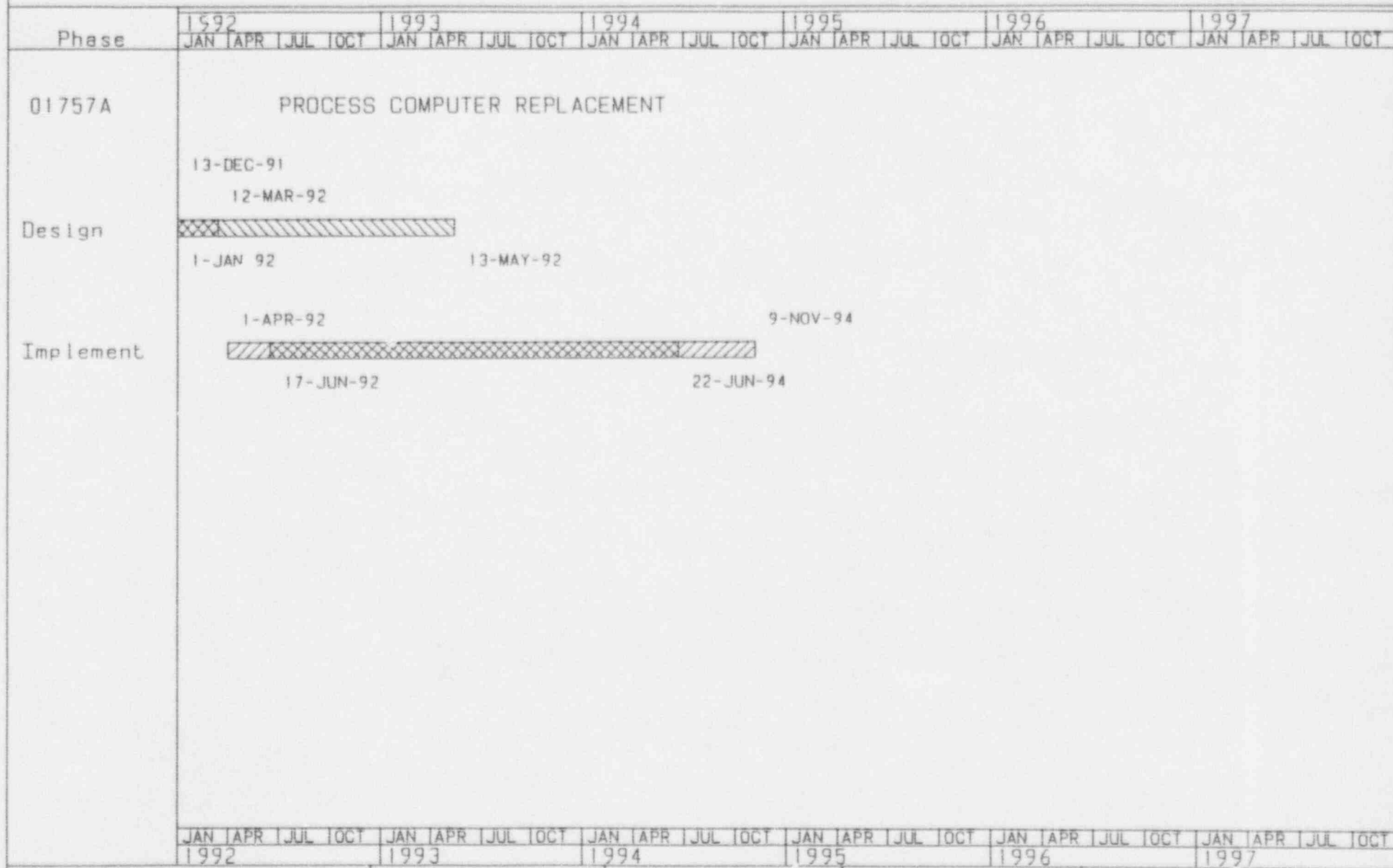
Economic Aspects: The current 20 year old computer system can not last much longer without support from the vendor, so investment in a replacement is inevitable. The largest probable economic benefit is that the new system is much less likely to delay return to service after a refueling outage because of process computer system failures. It has been estimated that such a failure would result in a one to seven day increase in startup time. Also important is that the new core monitoring software, which will not run on the old computer, will permit CP&L to purchase fuel from more than one nuclear fuel supplier, enhancing competitive pricing. Finally, upon project completion, long-term system maintenance costs are expected to be reduced somewhat due to the increased availability of spare parts.

Other Considerations: Other improvements in the ability of operators to monitor and tune the operation of the plant require the installation of the new process computer system before they become possible. It is anticipated that there will be measurable improvement in plant availability and net generation as a result of these other enhancements.

III. CONCLUSION

Almost all equipment has been purchased and is onsite, and the project will proceed on schedule. The process computer replacement will result in improved plant availability and allow better operational control.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

Core Thermal Uprate

I. PURPOSE AND SCOPE

This project will gain a 3.9 percent thermal power uprate (from 2436 MWt to 2531 MWt) by reducing unnecessary conservatism in the core thermal-hydraulic analysis. Actual core design will not change, but higher power operation will be authorized. Higher full power operation will be achieved by using modified rod patterns. An increase in steam and feedwater flow through the corresponding systems and components will be achieved; however, no increase in core recirculation flow will be necessary.

Sufficient margins exist for turbine operation at greater steam flow. The BSEP generators are rated at 849 MWe. Currently, maximum power output for rated core thermal power is about 800 MWe. The increase in core thermal power should not cause the generators to exceed rated output power. However, two modifications to the generators are also being evaluated. New hydrogen coolers will be installed to increase generator winding cooling. Additionally, new stator cooling pump impellers and drive motors will be installed to increase stator cooling water flow. Other systems will be affected by thermal uprate as well, and analysis is necessary in the general areas of LOCA loads, increased decay heat, NPDES compliance, corrosion rate changes, setpoint changes, valve closure capability, blowdown pipe support loadings, and system performance at higher pressures.

General Electric is preparing the safety analysis to demonstrate continued reactor safety. A license amendment request will be submitted to NRC in order to enable operation at higher power. CP&L is allowing for an 18 month review of the amendment request by NRC. Successful completion of this project will result in licensed operation at higher capacity with no significant decrease in safety or reliability.

II. EVALUATION

Schedule Index: 10 - The goal of this project is a substantial increase in plant electrical capacity (1.0×10). Core thermal-hydraulic analysis will demonstrate continued nuclear safety at higher power, or no licensing submittal will be made. However, higher power level could impact nuclear safety due to an increase in the decay heat removal after plant trip. This increase in decay heat removal requirements would be small and therefore will result in no appreciable effect relative to nuclear safety (0.0×32).

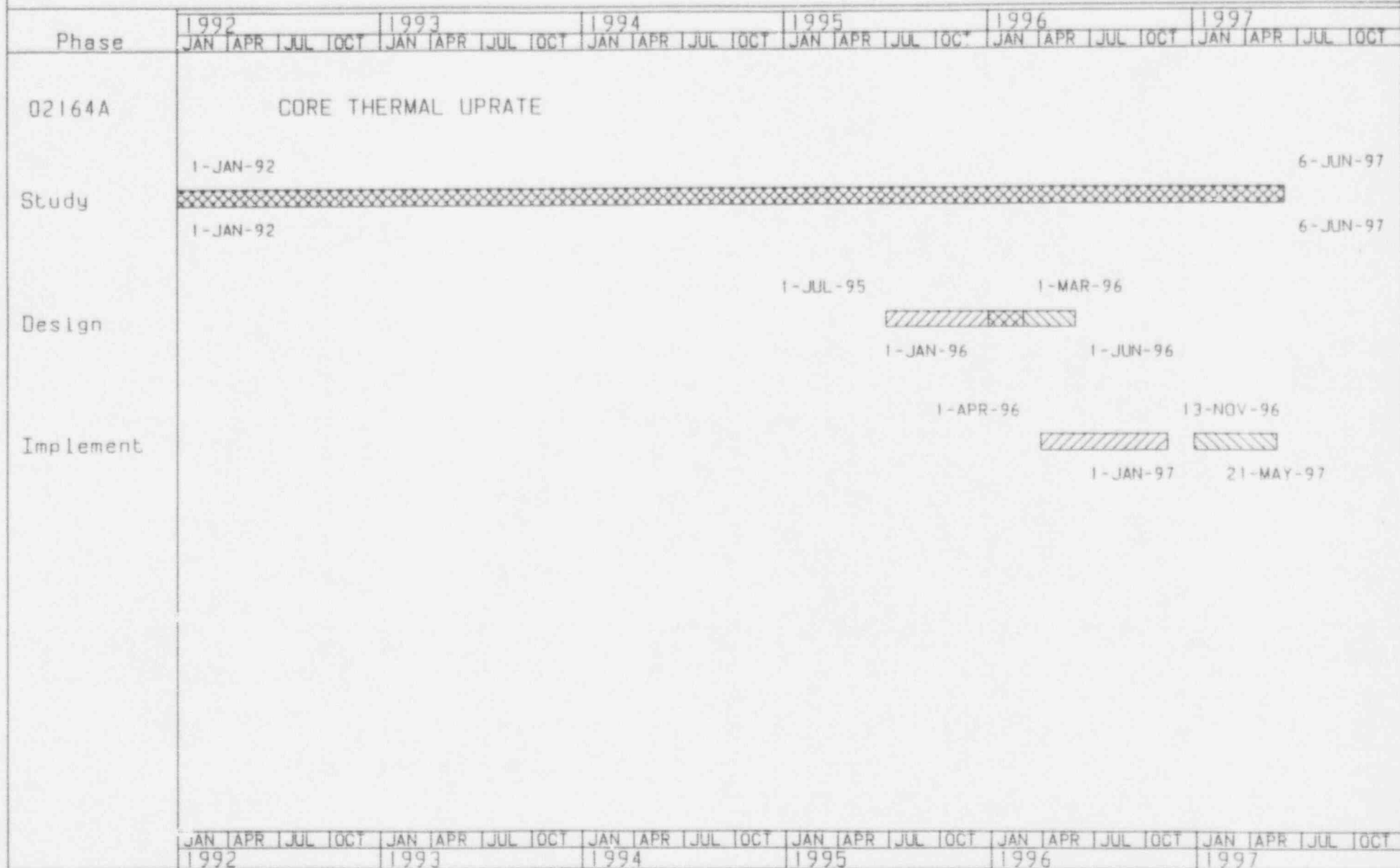
Economic Aspects: Costs of this project are partially offset by General Electric under the settlement agreement. Once complete, no appreciable additional funding will be necessary under this project, though additional revenue should be gained throughout plant life due to increased plant output.

Other Considerations: Project G0058A addresses turbine power uprate (increased steam throttling efficiency) and is thus related to core thermal uprate. However, the nuclear safety and licensing considerations are more significant for core thermal uprate. These two projects are considered separately because the project interdependence is limited.

III. CONCLUSION

In order to provide a thermal power uprate, this project will be completed as scheduled. This project will increase unit capacity but is dependent on successful completion of a number of smaller projects and analyses. An unfavorable outcome of one or more of these subtasks could negate the benefits of the project. Because implementation of this project also requires a favorable licensing action from NRC, coordination with other licensing issues and initiatives is necessary.

BNP Three Year Plan Project Schedule



★ Commitment Date

Start Finish
 Common

Start Finish
 Unit 1

Unit 2
 Start Finish

SMALL PROJECTS

THREE YEAR PLAN PROJECT LISTING

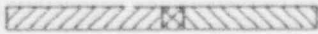
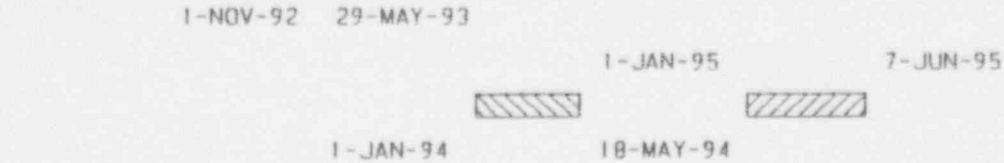



SMALL PROJECTS

00917I	EMERGENCY RESPONSE FACILITY ISOLATION SIGNALS-GROUP 10	ED CATHEY
00918A	REACTOR VESSEL WATER LEVEL INSTRUMENT UPGRADE	CRAIG MARCH
00918C	POST ACCIDENT NEUTRON FLUX MONITORING SYSTEM	RICH DELONG
00925A	REMOTE SHUTDOWN PANEL LEVEL INDICATION	RICH DELONG
01821A	IMPROVE LIGHTING TO SECURITY AREAS	RICH DELONG
03484A	HPCI ROOM CO2 SYSTEM ALARM	CRAIG MARCH
03807A	PROVIDE FM REMOTE STARTING SYSTEM & POWER FEED FOR WELL WATER PUMPS 4 & 5	RICH DELONG
04421A	REACTOR RECIRCULATING PUMP SEAL LEAKAGE MONITORING	DENNIS COOPER
04699A	REPLACE SALT WATER TRANSFER PUMPS WITH ELECTRIC, REMOTELY OPERATED PUMPS	ROY JOHNSON
05892A	EFFECT OF ELECTRICAL SYSTEM VARIATIONS ON TURBINE GENERATOR TORSIONAL RESPONSE	JOHN O'CONNOR
06156A	HIGH PRESSURE COOLANT INJECTION-REACTOR CORE ISOLATION COOLING HI STEAM FLOW	CRAIG MARCH
06249A	DIESEL GENERATOR START & CONTROL AIR MOISTURE REMOVAL	DENNIS COOPER
06650A	REACTOR PRESSURE VESSEL THERMAL CYCLING EVALUATION	STEVE BERTZ
06817A	HEATER BAY GANTRY CRANE IMPROVEMENT	CRAIG MARCH
07768A	INSTALL SHIELDING ENCLOSURE FOR THE CRACK ARREST VERIFICATION SYSTEM	CRAIG MARCH
07880A	FEED WATER HEATER AND DEAERATOR LEVEL INSTRUMENTATION UPGRADE	CRAIG MARCH
07970A	VENTILATION FAN AIR FLOW SWITCH DELETION	CRAIG MARCH
08041A	INSTALLATION OF BANANA TEST JACK ON APRM RECIRC FLOW UNITS	CRAIG MARCH
08083A	INSTALLATION OF SIGHT GLASS IN RFPT LUBE OIL FILTER VENT LINES	CRAIG MARCH
08233A	INSTALL A DIESEL GENERATOR CONTINUOUS ON-LINE MONITORING SYSTEM	RICH DELONG
08262A	DRYWELL COOLERS LOSS OF COOLING ACCIDENT LOCKOUT OVERRIDE	CRAIG MARCH
08324A	REDUNDANT AIR SUPPLY TO EMERGENCY DIESEL GENERATOR GOVERNOR BOOST CYLINDER	DENNIS COOPER


THREE YEAR PLAN PROJECT LISTING

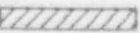
08377A	HPCI/RCIC LOGIC ENHANCEMENT	ED CATHEY
08383A	DIESEL JACKET WATER EXPANSION TANK IMPROVEMENT	DENNIS COOPER
08437A	TURBINE BUILDING MISC TEMPERATURE SWITCH IMPROVEMENTS	CRAIG MARCH
08467A	INSTALL LIGHTING IN LUBE OIL ROOM	CRAIG MARCH
77443A	SPENT RESIN TRANSFER SYSTEM	CRAIG MARCH
84849A	REPLACE THE ELECTRIC FIRE PUMP CONTROLLER	RICH DELONG
G0024A	INVESSEL CORE SPRAY PIPING REPAIR	ROY JOHNSON
G0026A	CONTROL OF RWCU ION EXCHANGE RESIN	DENNIS COOPER
G0027A	AUTOMATIC SWITCH COMPANY APPLICATIONS	RICH DELONG
G0041A	INSTALL AN OPERATIONS RADIO COMMUNICATIONS SYSTEM	RICH DELONG
G0068A	INSTALL ALTERNATE BIOCIDES SYSTEM	ROY JOHNSON
G0125A	125 VOLT BATTERY CHARGER AMPLIFIER BOARD REDESIGN	RICH DELONG
G0181A	INSTALL A TURBINE CONTROL/STOP VALVE TIGHTNESS TEST CIRCUIT BOARD	CRAIG MARCH
G0193A	BNP REFRIGERANT REPLACEMENT	DENNIS COOPER
G0205A	REDESIGN INSTRUMENT AIR ISOLATION LOGIC TO PREVENT UNNECESSARY SCRAM	ED CATHEY
G0209A	ENHANCEMENT OF CHLORINATION ALARM SYSTEM AND REMOTE ISOLATION CHLORINE TANK	CHRIS HUGHES
G0216A	REMOVAL OF 20' & 50' CALIBRATION HEAD TANKS	ED CATHEY
G0217A	PERMANENT AUXILIARY STEAM PIPING FOR HPCI AND RCIC TESTING	DENNIS COOPER
G0223A	REACTOR INSTRUMENT MAINTENANCE/TEST PROVISIONS VS RESIDUAL HEAT REMOVAL	BEN WHITE
G0225A	PROVIDE COOLED AIR FOR VITAL UPS UNITS	AL BISHOP
P0057C	CASWELL BEACH PUMPING STATION STRUCTURAL ISSUES	ROY JOHNSON
P0075A	FISH DIVERSION SCREEN UPGRADE	ROY JOHNSON
R0142A	AUXILIARY SURGE TANK DECONTAMINATION	ROY JOHNSON

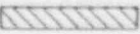
BNP Three Year Plan Project Schedule

Phase	SI	1992				1993				1994				1995				1996				1997			
		JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
00917I		EMERGENCY RESPONSE FACILITY ISOLATION SIGNALS-GROUP 10																							
Commitment 8 Milestones		<div style="display: flex; justify-content: space-around; width: 100%;"> ★ ★ </div>																							
Design		<div style="display: flex; justify-content: space-around; width: 100%;"> 7-APR-92 30-NOV-92 </div> 																							
Implement		<div style="display: flex; justify-content: space-around; width: 100%;"> 1-NOV-92 29-MAY-93 </div> 																							
Total																									
00918A		REACTOR VESSEL WATER LEVEL INSTRUMENTATION UPGRADE																							
Implement 20 Total		<div style="display: flex; justify-content: space-around; width: 100%;"> 19-AUG-93 18-NOV-93 </div> 																							
00918C		POST ACCIDENT NEUTRON FLUX MONITORING SYSTEM																							
Study 2 Total		<div style="display: flex; justify-content: space-around; width: 100%;"> 1-JAN-93 31-DEC-93 </div> 																							
00925A		REMOTE SHUTDOWN PANEL LEVEL INDICATION																							
Design 16		<div style="display: flex; justify-content: space-around; width: 100%;"> 9-FEB-92 17-NOV-92 </div> 																							

★ Commitment Date

 Common

 Unit 1

 Unit 2

BNP Three Year Plan Project Schedule

Phase	SI	1992				1993				1994				1995				1996				1997			
		JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
00925A		REMOTE SHUTDOWN PANEL LEVEL INDICATION																							
Implement		<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">19-AUG-93</div> <div style="text-align: center;">17-NOV-93</div> </div> <div style="display: flex; justify-content: center; margin-top: 10px;"> <div style="width: 20px; height: 10px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); border: 1px solid black; margin-right: 10px;"></div> <div style="width: 20px; height: 10px; background: repeating-linear-gradient(-45deg, transparent, transparent 2px, black 2px, black 4px); border: 1px solid black; margin-right: 10px;"></div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">10-FEB-94</div> <div style="text-align: center;">18-MAY-94</div> </div>																							
Total																									
01821A		IMPROVE LIGHTING TO SECURITY AREAS																							
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Total																									
03484A		HPCI ROOM CO2 SYSTEM ALARM																							
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Implement		<div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">8-JUN-95</div> <div style="text-align: center;">7-SEP-95</div> </div> <div style="display: flex; justify-content: center; margin-top: 10px;"> <div style="width: 15px; height: 10px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); border: 1px solid black;"></div> </div>																							
Total																									
03807A		PROVIDE FM REMOTE STARTING SYSTEM & POWER FEED FOR WELL WATER PUMPS 4 & 5																							
Study	25	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">3-MAY-93</div> <div style="text-align: center;">28-NOV-93</div> </div> <div style="display: flex; justify-content: center; margin-top: 10px;"> <div style="width: 40px; height: 10px; background: repeating-linear-gradient(-45deg, transparent, transparent 2px, black 2px, black 4px); border: 1px solid black;"></div> </div>																							
Design		<div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">1-JAN-94</div> <div style="text-align: center;">24-APR-94</div> </div> <div style="display: flex; justify-content: center; margin-top: 10px;"> <div style="width: 20px; height: 10px; background: repeating-linear-gradient(-45deg, transparent, transparent 2px, black 2px, black 4px); border: 1px solid black;"></div> </div>																							
		JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
		1992				1993				1994				1995				1996				1997			





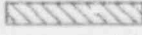

★ Commitment Date

Common

Unit 1


Unit 2

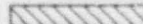
BNP Three Year Plan Project Schedule

Phase	SI	1992				1993				1994				1995				1996				1997			
		JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
03807A		PROVIDE FM REMOTE STARTING SYSTEM & POWER FEED FOR WELL WATER PUMPS 4 & 5																							
Implement		<div style="display: flex; justify-content: space-around;"> 1-JAN-95 28-FEB-95 </div> <div style="text-align: center; margin-top: 10px;">  </div>																							
Total																									
04421A		REACTOR RECIRCULATING PUMP SEAL LEAKAGE MONITORING																							
Design	22	<div style="display: flex; justify-content: space-around;"> 1-JAN-95 1-JUL-95 </div> <div style="text-align: center; margin-top: 10px;">  </div>																							
Implement		<div style="display: flex; justify-content: space-around;"> 8-AUG-96 13-NOV-96 </div> <div style="text-align: center; margin-top: 10px;">  </div>																							
Total																									
04699A		REPLACE SALT WATER TRANSFER PUMPS WITH ELECTRIC, REMOTELY OPERATED PUMPS																							
Study	11	<div style="display: flex; justify-content: space-around;"> 10-APR-95 2-OCT-95 </div> <div style="text-align: center; margin-top: 10px;">  </div>																							
Design		<div style="display: flex; justify-content: space-around;"> 1-MAY-96 29-OCT-96 </div> <div style="text-align: center; margin-top: 10px;">  </div>																							
Total																									
05892A		EFFECT OF ELECTRICAL SYSTEM VARIATIONS ON TURBINE GENERATOR TORSIONAL RESPONSE																							
Study	15	<div style="display: flex; justify-content: space-around;"> 1-JAN-95 31-DEC-95 </div> <div style="text-align: center; margin-top: 10px;">  </div>																							
Total																									

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BNP Three Year Plan Project Schedule

Phase	SI	1992				1993				1994				1995				1996				1997			
		JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
06156A		HIGH PRESSURE COOLANT INJECTION-REACTOR CORE ISOLATION COOLING HI STEAM FLOW																							
Commitment	18	★																							
Milestones																									
Implement		<div style="display: flex; justify-content: space-around; width: 100%;"> <div style="border: 1px solid black; width: 100px; height: 15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px);"></div> <div style="border: 1px solid black; width: 100px; height: 15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px);"></div> </div>																							
Total		<div style="display: flex; justify-content: space-around; width: 100%;"> 10-FEB-94 18-MAY-94 </div>																							
06249A		DIESEL GENERATOR START & CONTROL AIR MOISTURE REMOVAL																							
Commitment	26	★																							
Milestones																									
Study		<div style="display: flex; justify-content: space-around; width: 100%;"> 20-MAR-91 14-MAY-92 </div>																							
Design		<div style="display: flex; justify-content: space-around; width: 100%;"> <div style="border: 1px solid black; width: 100px; height: 15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px);"></div> <div style="border: 1px solid black; width: 100px; height: 15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px);"></div> </div>																							
Implement		<div style="display: flex; justify-content: space-around; width: 100%;"> <div style="border: 1px solid black; width: 100px; height: 15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px);"></div> <div style="border: 1px solid black; width: 100px; height: 15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px);"></div> </div>																							
Total		<div style="display: flex; justify-content: space-around; width: 100%;"> 1-OCT-92 9-SEP-93 19-AUG-93 18-MAY-94 </div>																							
06650A		REACTOR PRESSURE VESSEL THERMAL CYCLING EVALUATION																							
Study	10	<div style="display: flex; justify-content: space-around; width: 100%;"> 5-OCT-90 31-DEC-93 </div>																							
Total		<div style="border: 1px solid black; width: 100%; height: 15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px);"></div>																							

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BNP Three Year Plan Project Schedule

Phase	SI	1992				1993				1994				1995				1996				1997							
		JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT				
06817A		HEATER BAY GANTRY CRANE IMPROVEMENT																											
Design	23																												
Implement		<div style="display: flex; justify-content: space-between; width: 100%;"> 1-JAN-94 12-AUG-94 </div>																											
Total		<div style="display: flex; justify-content: space-between; width: 100%;"> 18-MAR-95 12-MAY-95 </div>																											
07768A		INSTALL SHIELDING ENCLOSURE FOR THE CRACK ARREST VERIFICATION SYSTEM																											
Design	23	<div style="display: flex; justify-content: space-between; width: 100%;"> 3-MAY-93 28-NOV-93 </div>																											
Implement		<div style="display: flex; justify-content: space-between; width: 100%;"> 31-MAY-93 19-DEC-93 </div> <div style="display: flex; justify-content: space-between; width: 100%;"> 6-JUN-94 28-AUG-94 </div>																											
Total		<div style="display: flex; justify-content: space-between; width: 100%;"> 14-AUG-94 5-NOV-94 </div>																											
07880A		FEED WATER HEATER AND DEAERATOR LEVEL INSTRUMENTATION UPGRADE																											
Study	11	<div style="display: flex; justify-content: space-between; width: 100%;"> 3-MAY-93 28-NOV-93 </div>																											
Design		<div style="display: flex; justify-content: space-between; width: 100%;"> 1-JAN-94 1-JUL-94 </div> <div style="display: flex; justify-content: space-between; width: 100%;"> 1-JAN-95 1-JUL-95 </div>																											
Implement		<div style="display: flex; justify-content: space-between; width: 100%;"> 15-AUG-96 13-NOV-96 </div> <div style="display: flex; justify-content: space-between; width: 100%;"> 17-AUG-95 6-DEC-95 </div>																											

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BNP Three Year Plan Project Schedule

Phase	SI	1992				1993				1994				1995				1996				1997			
		JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
07880A		FEED WATER HEATER AND DEAERATOR LEVEL INSTRUMENTATION UPGRADE																							
Total																									
07970A		VENTILATION FAN AIR FLOW SWITCH DELETION																							
Study	13	<div style="display: flex; justify-content: space-around; width: 100%;"> 1-JAN-95 3-JUN-95 </div> <div style="display: flex; justify-content: center; width: 100%;"> </div>																							
Design		<div style="display: flex; justify-content: space-around; width: 100%;"> 1-JAN-97 1-JUL-97 </div> <div style="display: flex; justify-content: center; width: 100%;"> </div>																							
Implement		<div style="display: flex; justify-content: space-around; width: 100%;"> 1-JAN-96 30-JUN-96 </div> <div style="display: flex; justify-content: center; width: 100%;"> </div>																							
Total		<div style="display: flex; justify-content: space-around; width: 100%;"> 13-FEB-97 21-MAY-97 </div> <div style="display: flex; justify-content: center; width: 100%;"> </div>																							
08041A		INSTALLATION OF BANANA TEST JACK ON APRM RECIRC FLOW UNITS																							
Design	10	<div style="display: flex; justify-content: space-around; width: 100%;"> 1-JAN-94 20-APR-94 </div> <div style="display: flex; justify-content: center; width: 100%;"> </div>																							
Implement		<div style="display: flex; justify-content: space-around; width: 100%;"> 20-APR-93 11-OCT-93 </div> <div style="display: flex; justify-content: center; width: 100%;"> </div>																							
Total		<div style="display: flex; justify-content: space-around; width: 100%;"> 10-FEB-94 18-MAY-94 </div> <div style="display: flex; justify-content: center; width: 100%;"> </div>																							

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BNP Three Year Plan Project Schedule

Phase	SI	1992				1993				1994				1995				1996				1997					
		JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT		
08083A		INSTALLATION OF SIGHT GLASS IN RFPT LUBE OIL FILTER VENT LINES																									
Design	14	<div style="display: flex; justify-content: space-around;"> 1-FEB-93 11-JUL-93 </div> <div style="display: flex; justify-content: center; margin-top: 10px;"> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> 1-AUG-93 30-OCT-93 </div> <div style="display: flex; justify-content: center; margin-top: 10px;"> 31-JAN-94 6-MAR-94 </div> <div style="display: flex; justify-content: center; margin-top: 10px;"> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> 5-JUN-94 9-JUL-94 </div>																									
Implement																											
Total																											
08233A		INSTALL A DIESEL GENERATOR CONTINUOUS ON-LINE MONITORING SYSTEM																									
Study	30	<div style="display: flex; justify-content: space-around;"> 2-FEB-93 28-OCT-93 </div> <div style="display: flex; justify-content: center; margin-top: 10px;"> </div>																									
Total																											
08262A		DRYWELL COOLERS LOSS OF COOLING ACCIDENT LOCKOUT OVERRIDE																									
Design	14	<div style="display: flex; justify-content: space-around;"> 5-NOV-92 24-FEB-93 </div> <div style="display: flex; justify-content: center; margin-top: 10px;"> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> 25-AUG-92 24-FEB-93 </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> 19-AUG-93 17-NOV-93 </div> <div style="display: flex; justify-content: center; margin-top: 10px;"> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> 10-FEB-94 18-MAY-94 </div>																									
Implement																											
Total																											
		JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT		
		1992					1993					1994					1995					1996					1997

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BNP Three Year Plan Project Schedule

Phase	SI	1992				1993				1994				1995				1996				1997							
		JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT				
08324A		REDUNDANT AIR SUPPLY TO EMERGENCY DIESEL GENERATOR GOVERNOR BOOST CYLINDER																											
Design	9																												
Implement																													
Total																													
08377A		HPCI/RCIC LOGIC ENHANCEMENT																											
Study	20																												
Design																													
Implement																													
Total																													
08383A		DIESEL JACKET WATER EXPANSION TANK IMPROVEMENT																											
Study	16																												
		JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
		1992				1993				1994				1995				1996				1997							

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Phase	SI	1992				1993				1994				1995				1996				1997			
		JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
08383A		DIESEL JACKET WATER EXPANSION TANK IMPROVEMENT																							
Design		<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">1-JUN-95</div> <div style="text-align: center;">1-JUN-96</div> <div style="text-align: center;">29-NOV-96</div> </div>																							
Implement																									
Total																									
08437A		TURBINE BUILDING MISC TEMPERATURE SWITCH IMPROVEMENTS																							
Study	17	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">7-FEB-94</div> <div style="text-align: center;">1-AUG-94</div> </div>																							
Design		<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">1-JAN-95</div> <div style="text-align: center;">1-JUL-95</div> </div>																							
Implement		<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">15-AUG-96</div> <div style="text-align: center;">13-NOV-96</div> </div>																							
Total																									
08467A		INSTALL LIGHTING IN LUBE OIL ROOM																							
Design	25	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">31-JAN-94</div> <div style="text-align: center;">5-JUN-94</div> </div>																							
		<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">31-JAN-94</div> <div style="text-align: center;">5-JUN-94</div> </div>																							

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BNP Three Year Plan Project Schedule

Phase	SI	1992				1993				1994				1995				1996				1997			
		JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
08467A		INSTALL LIGHTING IN LUBE OIL ROOM																							
Implement										4-OCT-94				28-NOV-94											
Total										4-OCT-94				28-NOV-94											
77443A		SPENT RESIN TRANSFER SYSTEM																							
Study	9	13-FEB-93				10-DEC-93																			
Design						1-JAN-94				23-SEP-94															
Implement										27-MAY-95				22-DEC-95											
Total										27-MAY-95				22-DEC-95											
84849A		REPLACE THE ELECTRIC FIRE PUMP CONTROLLER																							
Study	4	30-JUL-92				16-DEC-93																			
Design						13-JAN-95				13-JUL-95															
Implement										13-JAN-95				13-JUL-95				16-FEB-96				9-MAY-96			
Total										13-JAN-95				13-JUL-95				16-FEB-96				9-MAY-96			

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BNP Three Year Plan Project Schedule

Phase	SI	1992				1993				1994				1995				1996				1997			
		JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
G0024A		INVESSEL CORE SPRAY PIPING REPAIR																							
Commitment	29	★																							
Milestones																									
Implement		<div style="display: flex; justify-content: space-around; width: 100%;"> <div style="text-align: center;"> <p>17-FEB-94</p> </div> <div style="text-align: center;"> <p>18-MAY-94</p> </div> </div>																							
Total																									
G0026A		CONTROL OF RWCU ION EXCHANGE RESIN																							
Study	10	<div style="display: flex; justify-content: space-between; width: 100%;"> 1-AUG-91 2-APR-92 </div>																							
Design		<div style="display: flex; justify-content: space-around; width: 100%;"> <div style="text-align: center;"> <p>1-JAN-94</p> </div> <div style="text-align: center;"> <p>22-JUL-94</p> </div> </div>																							
Implement		<div style="display: flex; justify-content: space-around; width: 100%;"> <div style="text-align: center;"> <p>1-JAN-94</p> </div> <div style="text-align: center;"> <p>29-JUL-94</p> </div> <div style="text-align: center;"> <p>9-FEB-95</p> </div> <div style="text-align: center;"> <p>14-JUN-95</p> </div> <div style="text-align: center;"> <p>17-AUG-95</p> </div> <div style="text-align: center;"> <p>6-DEC-95</p> </div> </div>																							
Total																									
G0027A		AUTOMATIC SWITCH COMPANY APPLICATIONS																							
Study	15	<div style="display: flex; justify-content: space-around; width: 100%;"> 1-JAN-95 22-APR-95 </div>																							
Design		<div style="display: flex; justify-content: space-around; width: 100%;"> <div style="text-align: center;"> <p>1-JAN-96 </p></div> <div style="text-align: center;"> <p>6-OCT-96 </p></div> <div style="text-align: center;"> <p>1-JAN-97 </p></div> <div style="text-align: center;"> <p>29-JUL-97 </p></div> </div>																							
Total																									







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BNP Three Year Plan Project Schedule

Phase	SI	1992				1993				1994				1995				1996				1997							
		JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT				
G0041A		INSTALL AN OPERATIONS RADIO COMMUNICATIONS SYSTEM																											
Design	27	<div style="display: flex; justify-content: space-between;"> 15-FEB-92 27-AUG-92 </div> 																											
Implement		<div style="display: flex; justify-content: space-between;"> 15-FEB-92 27-AUG-92 </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> 15-DEC-92 31-AUG-93 </div> 																											
Total		<div style="display: flex; justify-content: space-between;"> 15-DEC-92 31-AUG-93 </div>																											
G0068A		INSTALL ALTERNATE BIOCIDES SYSTEM																											
Design	47	<div style="display: flex; justify-content: space-between;"> 27-AUG-92 9-DEC-92 </div> 																											
Implement		<div style="display: flex; justify-content: space-between; margin-top: 10px;"> 19-AUG-93 17-NOV-93 </div> 																											
Total																													
G0125A		125 VOLT BATTERY CHARGER AMPLIFIER BOARD REDESIGN																											
Design	14	<div style="display: flex; justify-content: space-between; margin-top: 10px;"> 1-MAY-95 4-DEC-95 </div> 																											
Implement		<div style="display: flex; justify-content: space-between; margin-top: 10px;"> 2-JAN-95 6-AUG-95 </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> 1-JUN-96 27-JUL-96 </div> 																											
Total		<div style="display: flex; justify-content: space-between; margin-top: 10px;"> 1-APR-96 3-JUN-96 </div>																											
		JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT				
		1992					1993					1994					1995					1996					1997		

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BNP Three Year Plan Project Schedule

Phase	SI	1992				1993				1994				1995				1996				1997			
		JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
G0181A		INSTALL A TURBINE CONTROL/STOP VALVE TIGHTNESS TEST CIRCUIT BOARD																							
Design		<div style="display: flex; justify-content: space-between;"> 1-JUN-95 1-JUN-96 26-DEC-96 </div>																							
Implement		<div style="display: flex; justify-content: space-between;"> 16-JAN-96 13-FEB-97 21-MAY-97 </div>																							
Total																									
G0193A		BNP REFRIGERENT REPLACEMENT																							
Study	12	<div style="display: flex; justify-content: space-between;"> 1-APR-93 30-SEP-93 </div>																							
Total																									
G0205A		REDESIGN INSTRUMENT AIR ISOLATION LOGIC TO PREVENT UNNECESSARY SCRAM																							
Study	6	<div style="display: flex; justify-content: space-between;"> 28-JUL-92 30-APR-93 </div>																							
Design		<div style="display: flex; justify-content: space-between;"> 1-JAN-94 1-SEP-94 </div>																							
Implement		<div style="display: flex; justify-content: space-between;"> 1-JAN-94 1-SEP-94 4-FEB-95 8-JUN-95 </div>																							
Total		<div style="display: flex; justify-content: space-between;"> 4-AUG-95 7-DEC-95 </div>																							







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Phase	SI	1992				1993				1994				1995				1996				1997			
		JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
G0209A		ENHANCEMENT OF CHLORINATION ALARM SYSTEM AND REMOTE ISOLATION CHLORINE TANK																							
Design	100	19-JUN-92				10-MAR-93																			
Implement						15-MAR-93				29-AUG-93															
Total																									
G0216A		REMOVAL OF 20' 650' CALIBRATION HEAD TANKS																							
Design	29					1-MAY-93				31-DEC-93															
Implement						1-MAY-93				31-DEC-93				30-MAY-94				25-SEP-94							
Total																									
G0217A		PERMANENT AUXILARY STEAM PIPING FOR HPCI AND RCIC TESTING																							
Study	26													10-APR-95				2-OCT-95							
Total																									
G0223A		REACTOR INSTRUMENT MAINTENANCE/TEST PROVISIONS vs RESIDUAL HEAT REMOVAL AND CO																							
Study	21									1-MAR-94				28-JUN-94											
Total																									
		JAN APR JUL OCT				JAN APR JUL OCT				JAN APR JUL OCT				JAN APR JUL OCT				JAN APR JUL OCT				JAN APR JUL OCT			
		1992				1993				1994				1995				1996				1997			

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Phase	SI	1992				1993				1994				1995				1996				1997			
		JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT
G0225A		PROVIDE COOLED AIR FOR VITAL UPS UNITS																							
Study	16	<div style="display: flex; justify-content: space-around;"> 1-JUL-94 15-DEC-94 </div> <div style="text-align: center; margin-top: 10px;"> </div>																							
Total																									
P0057C		CASWELL BEACH PUMPING STATION STRUCTURAL ISSUES																							
Implement	12	<div style="display: flex; justify-content: space-around;"> 1-JAN-93 15-APR-93 </div> <div style="text-align: center; margin-top: 10px;"> </div>																							
Total																									
P0075A		FISH DIVERSION SCREEN UPGRADE																							
Implement	4	<div style="display: flex; justify-content: space-around;"> 1-DEC-92 17-NOV-93 </div> <div style="text-align: center; margin-top: 10px;"> </div>																							
Total																									
R0142A		AUXILARY SURGE TANK DECONTAMINATION																							
Implement	17	<div style="display: flex; justify-content: space-around;"> 27-JAN-94 7-SEP-94 </div> <div style="text-align: center; margin-top: 10px;"> </div>																							
Total																									

★ Commitment Date

Common

Unit 1

Unit 2

**PROCUREMENT & OTHER
MISCELLANEOUS PROJECTS**

PROCUREMENT & OTHER MISCELLANEOUS PROJECTS

PID	TITLE
02780A	PROCURE SAFETY RELIEF VALVE
02791A	FEEDWATER HEATER EDDY CURRENT TESTING
B0015A	PLANT MOD CLEANUP
C0010A	BNP EARLY WARNING SYSTEM
G0015A	SMALL PLANT MODIFICATIONS
G0074A	CORE SPRAY - RESIDUAL HEAT REMOVAL
G0101A	SERVICE WATER MOTOR PUMP REWIND
I0016A	TURBINE/RX BLDG. ELEVATOR REFURBISHMENT
I0031A	IRM UPGRADE
M0045A	REBUILD RHR PUMP
M0701A	PUMP UPGRADE
P0047A	PLANT MOD CLOSEOUT
	LOW PRESSURE TURBINE ROTOR REPLACEMENTS
	REPLACEMENT OF DG GOVENOR
	INDIVIDUAL PLANT EXAMINATION FOR EXTERNAL EVENTS - STUDY

APPENDIX B

**SOURCES FOR COMPARISON OF NRC, INPO, AND NAD
FINDINGS TO BUSINESS PLAN INITIATIVES**

BNP MAJOR ISSUES AS COMMUNICATED BY NRC, INPO, AND NAD
SOURCE CORRESPONDENCE

The following sources were used to develop the table in Chapter 4.

Self-assessment, corrective actions, and root cause analyses have not been sufficiently effective in identifying, correcting, and preventing problems.

NRC 92-12 (2.6, 3.6, 4.5, 7.4, 7.5, 8.3)
NRC Letter Dated 6/23/92
NAD Assessment Report dated 6/19/92
NAD 2/92 (92-01, 92-02)
NAD 3/92 (92-184, 92-248, 92-249, 92-251)
NAD 11/91 (1)SALP 91-37 (9)
NRC Watch List Guidelines (1,2)
NRC 92-09 (1,6)
NRC 92-06 (1)
NRC 92-10 (2)
INPO CAP 3/92 (A.1, B.1)

Management has not effectively communicated expectations and set standards for the plant and staff.

NRC Letter Dated 6/23/92
NAD Corporate Assessment Report dated 6/19/92
NAD 11/91 (OA.3, 5)
NRC 92-12 (2.6)
NRC 92-10 (1)
INPO 1/91 (MA 1-2)
INPO OUTAGE 9/91 (A, C)

Management has not provided the level of leadership, oversight, resources, and support to achieve and sustain performance improvements. Management has not provided adequate supervision and direction of plant activities.

NRC 92-12 (2.3, 8.2)
NRC Letter Dated 6/23/92
NAD Corporate Assessment Report dated 6/19/92
NAD 6/92 (91-1)
NAD 7/92 (92-521)
NAD 11/91 (OA.1, OA.4)
SALP 91-37 (8, 10)
NRC Watch List Guidelines (3)
NRC 92-10 (3)
INPO 1/91 (OA 2-1)

Teamwork and communication among site organizational units have not been effective.

NRC 92-12 (3.5)
NRC 92-09 (3,4)
SALP 91-37 (3)

A lack of emphasis has been placed on reducing the backlog (e.g., operator work-arounds, temporary conditions, disabled annunciators).

NAD 11/91 (6)
NRC 92-12 (3.4, 6.5)
NRC 92-09 (2,3)

Weaknesses in procedures and Work Request/Job Order instructions and not following procedures have contributed to plant events. Procedures and the procedure revision process need to be upgraded. Control over documents critical to efficient plant performance has been less than adequate.

NRC 92-12 (2.4, 2.5)
NRC 92-15 (C, D)
NRC 92-19
NRC 92-21 (B)
INPO TRIP 2/92 (A.5)
INPO CAP 3/92 (B.2)
NAD 11/91 (91-668, 92-694)
NAD 8/92 (92-691, 92-692)
INPO TRIP 2/92 (C)
NRC 92-20
NRC 92-22

Health physics improvements are needed for contamination control and radiation monitoring. Housekeeping has not been maintained to high enough standards. Chemical control improvements have not been fully implemented.

NRC 92-12 (4.2, 4.3, 4.4)
INPO ALARA (A, B)
NAD 11/91 (91-560)
NAD 3/92 (92-186)
NAD 7/92 (92-522)
NAD 11/91 (91-667, 3)

Based on the above-mentioned considerations, the BNP Management Team ranked the initiatives as High, Medium, or Low.

In general, initiatives were scheduled to be worked based on their relative priority ranking. Other factors considered in addition to the priority ranking were: impacts on regulatory commitments, coordination with other initiatives and projects, ability to affect major process improvements, funding requirements, and management judgement.

Relationship of Project and Initiative Rankings

In order to compare priorities of projects and initiatives, the conversion table below can be used. In making this comparison, however, the results can be highly subjective due to the fact that most projects are plant hardware-oriented while most initiatives are people- or process-oriented.

INITIATIVE PRIORITY	PROJECT SCHEDULE INDEX RANGE
High (H)	> 36
Medium (M)	21 - 35
Low (L)	< 0 - 20

APPENDIX A

DISCUSSION OF PROCESSES FOR SETTING PRIORITIES

DISCUSSION OF PROCESSES FOR SETTING PRIORITIES

All initiatives and projects that are included in the BNP Three-Year Plan have been ranked and scheduled by relative importance. Projects were ranked and scheduled based on such considerations as regulatory importance, safety, plant operations, and financial impact. Initiatives are ranked and scheduled based on their impact on enhancing key organizational capabilities and their effect on improving plant performance.

Project Ranking

A. Schedule Index

All projects were first evaluated using criteria outlined in the Nuclear Generation Group Guideline on Prioritization Process (NGGM 305-05). This process includes the Schedule Index (SI), which provides a "raw" ranking of major projects based on a weighted sum of the following component attributes:

- Nuclear Safety - This attribute is a measure of the extent to which a project contributes to maintaining or improving the health and safety of the general public and plant employees. This includes reductions to core melt frequency, challenges to safety systems, release of radiation off-site, or increases in safety-system availability.
- Personnel/Public Safety - This attribute is a measure of the extent to which a project contributes to the reduction or elimination of an actual or potential situation that could cause injury to employees or the public.
- Unit Availability - This attribute is a measure of the extent to which a project contributes to increasing unit availability, including reliability.
- Unit Capacity - This attribute is a measure of the contribution of a project to increasing unit capacity, in megawatt hours, including efficiency.
- ALARA - This attribute is a measure of the extent to which a project contributes to the cumulative radiation exposure to personnel.
- Plant Enhancement - This attribute is a measure of the contribution of a project to improving operations and/or maintenance of the power plant, including considerations of improvements to programs, procedures, and surveillance requirements.

For each project, the component attributes are assigned a scaling factor ranging from - 1.0 to + 1.0. The nuclear safety scaling factor is determined using criteria developed from the actual results of the BNP Probabilistic Risk Assessment (PRA). PRA guidance for assigning the nuclear safety scaling factor is discussed in the prioritization guideline noted above.

The importance of each component attribute is weighted relative to a total Schedule Index weight of 100. The individual weights are provided below:

Attribute	Weight
Nuclear Safety	32
Personnel/Public Safety	29
Unit Availability	12
Unit Capacity	10
ALARA	9
Plant Enhancement	8
TOTAL	100

The SI value is used to determine relative importance of projects. The SI value is used to determine relative importance of projects. As outlined in the prioritization guideline, any project that is assigned a work activity priority of 1, 2, or 3 (e.g., imminent nuclear safety, personnel safety, or radiological exposure concerns; violations of regulatory requirements for which compensatory actions cannot be provided; items that severely hinder appropriate responses to accidents or operational transients; significant reductions in unit capacity; items that delay startup or return to service) is automatically assigned an si of 100. All projects that receive an SI of 100 are scheduled for the next available window based on the additional factors discussed in Paragraph C., Project Scheduling.

3. Other Considerations

In addition to the schedule index, projects were further evaluated based upon the following considerations that are predominantly qualitative in nature:

- urgency in terms of potential impacts on plant reliability or operability
- effective utilization of personnel resources
- potential for reducing core damage frequency to below 1×10^{-6}
- regulatory requirements and commitments
- management's perspectives and priorities.

C. Project Scheduling

The projects were scheduled by taking into account their priority rankings (based on SI values and other considerations described in paragraphs A and B above) and the following additional factors:

- Commitments
- Outage requirements
- Engineering and procurement lead times
- Coordination with other project schedules
- Impacts on other scheduled projects
- Manageability limits
- Funding requirements
- Non-NRC regulatory requirements
- Management judgement.

Initiative Ranking

All initiatives were ranked by importance as either high, medium, or low. The criteria used to define how an initiative is ranked are described below.

All initiatives were evaluated based on a qualitative review. This review considered (1) the relative importance of the capability enhancement that the initiative is designed to achieve or support, and (2) the extent to which the initiative is expected to enhance the desired or needed capability.

Judgements on the relative importance of capability enhancements were made based upon the following considerations:

- the nature, extent, and severity of deficiencies in the current capabilities of BNP's human resources, work processes, and plant equipment
- the extent to which an improvement in the capability would directly correlate with an improvement in performance as measured by top-level goals
- the extent to which the capability improvement is a necessary precursor or companion to other capability enhancements.

Accordingly, initiatives meeting the following criteria were viewed as more important than others:

- solves a problem that is pivotal to solving other issues
- results in a gain in efficiency or productivity for an essential work process
- provides a capability that positively affects the performance of multiple activities
- removes roadblocks to getting work accomplished
- improves the quality of work life of employees.

Human performance weaknesses have been a significant contributor to less-than-acceptable BNP performance. Numerous operator and staff training programs need improvement.

NAD Corporate Assessment Report dated 6/19/92
NAD 11/91 (91-2)
INPO 1/91 (OP 2-1)
NRC 92-10 (4)
NAD 6/92 (91-1)
NAD 1/92 (92-3)
NAD 11/91 (O^m.6)
SALP 91-37 (7)
NRC 92-12 (3.3)
NRC 92-06 (1)
NRC 92-300 (1,2)
INPO 1/91 (TQ 1-1)
INPO OUTAGE 9/91 (B)

Process deficiencies have been identified in numerous work control processes (including work planning, scheduling, and maintenance).

NRC Letter Dated 6/23/92
NAD 4/92 (92-275, 92-276)
SALP 91-37 (1, 2, 4)
NRC 92-04 (1)
NRC 92-09 (3)
INPO 1/91 (OP 3-2, OA 3-1)
INPO TRIP 2/92 (A.1, A.4, C)
INPO OUTAGE 9/91 (D)

Aging equipment and insufficient maintenance have caused a high rate of equipment failure. Management has not set high enough standards for the material condition of the plant. Maintenance and engineering program improvements are needed.

NRC 92-12 (2.1, 2.2, 2.8, 3.1, 5.2, 6.1, 6.2, 6.3, 6.4, 8.1)
NRC Letter Dated 6/23/92
NRC 92-14
NRC 92-15 (A,B)
NRC 92-18
NRC 92-19
NRC 92-21 (A)
NAD 6/92 (92-0421, 92-505)
NAD 5/92 (92-0321, 92-0330)
SALP 91-37 (5,6)
NRC 92-04 (2)
NRC 92-09 (5)
NAD 7/92 (92-581)