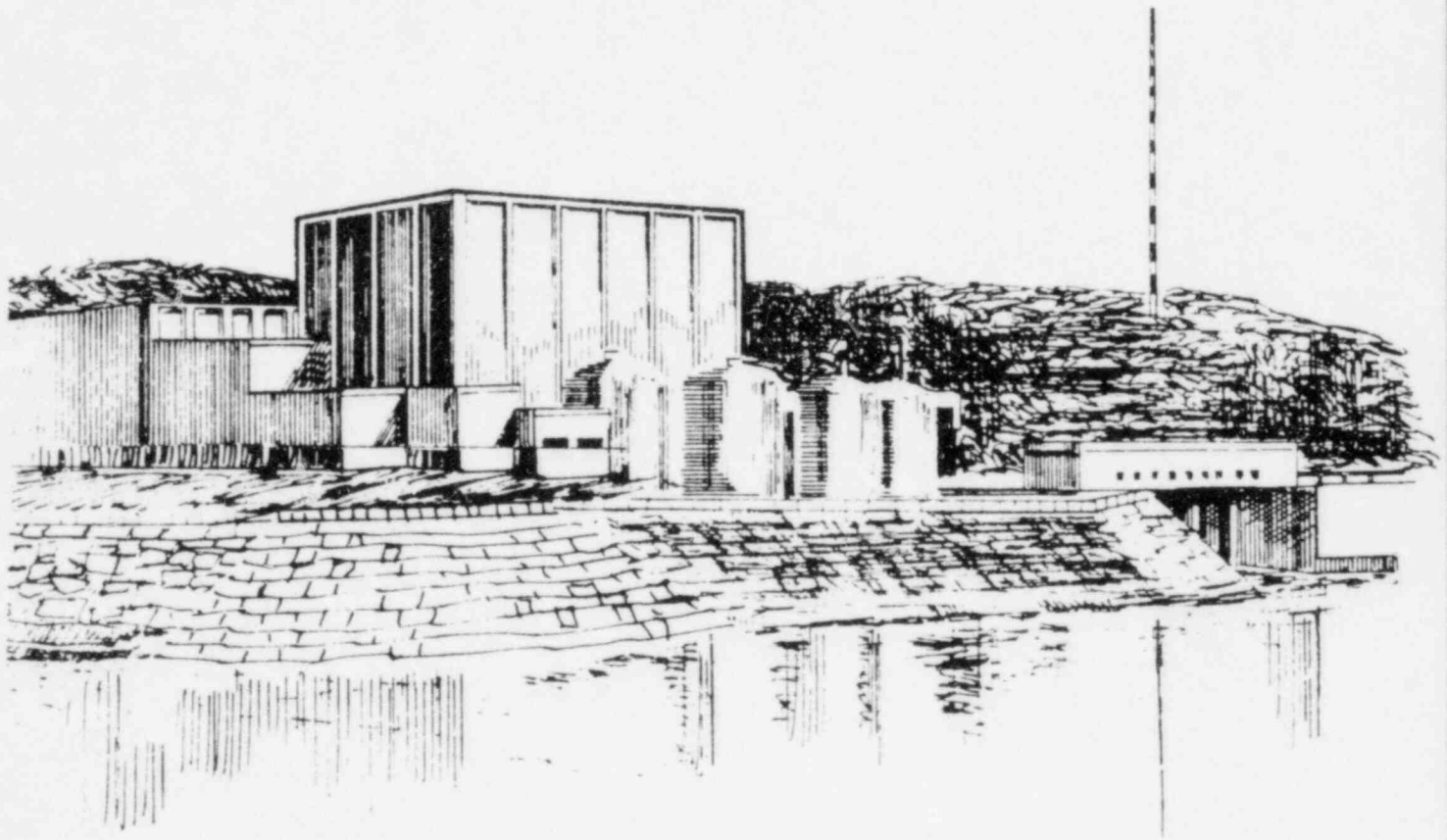


# PILGRIM NUCLEAR POWER STATION'S

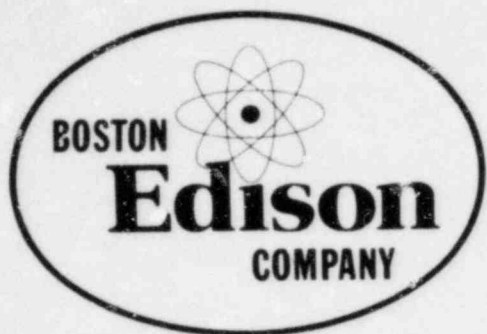
APRIL 8, 1983



## LONG TERM PROGRAM



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**PILGRIM NUCLEAR  
POWER  
STATION'S**

**LONG TERM PROGRAM**

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## 1. SUMMARY

The enclosed program and resultant implementation schedule is a logical extension of Boston Edison Company's commitment to the safe reliable and economic operation of Pilgrim Nuclear Power Station.

It is this commitment that provides the primary objective for the Long-Term Program:

Provide an approved plan and schedule for work at the station that

- Meets Regulatory Requirements
- Meets plant improvement needs
- Controls the impact of modifications on operations personnel
- Effectively manages resources

The secondary objective is also an extension of this same commitment:

Maintain the approved plan and schedule as a working tool against which to judge performance and measure future commitments.

Realizing that this program could become cumbersome if not focused properly, it was decided to direct the emphasis on those issues impacting the next full cycle of operation while planning for those issues extending beyond that point with decreasing detail. Satisfying the secondary objective will provide the forward looking focus needed to detail and update the schedule as work is accomplished.



There are three major components of the overall program.

- 1 Management Improvement Program
- 2 Maintenance of the Baseload Activities
- 3 Control of the Physical Modification Process  
at the Station.

The emphasis of this report is primarily on the third component because of its immediate impact on the plant. It is the program's intention to integrate the remaining two, which are in varying degrees of development and implementation, upon acceptance of the submitted plan and schedule, and the subsequent allocation of the dedicated resources to accomplish the scheduled work.

The final schedule (Figure 1) and the scope of work to be accomplished through Refuel 7 (Table 1) meets the primary objectives of this program. It enhances the safe operation of the plant by balancing the improvements required by both the Regulators and the Management while allowing the appropriate level of controls to be exercised regarding the physical condition of, affect on safe operations at, and rate of modification to, the plant. The key strategy decisions to allow the above to occur are as follows:

1. Committing to a mid-cycle modification outage (between Refuel 6 and Refuel 7).
2. Maintaining area densities (particularly elevation 23 in the Reactor Building) at a controllable level.
3. Focusing and directing the organization's efforts at a specific set of goals and schedules.

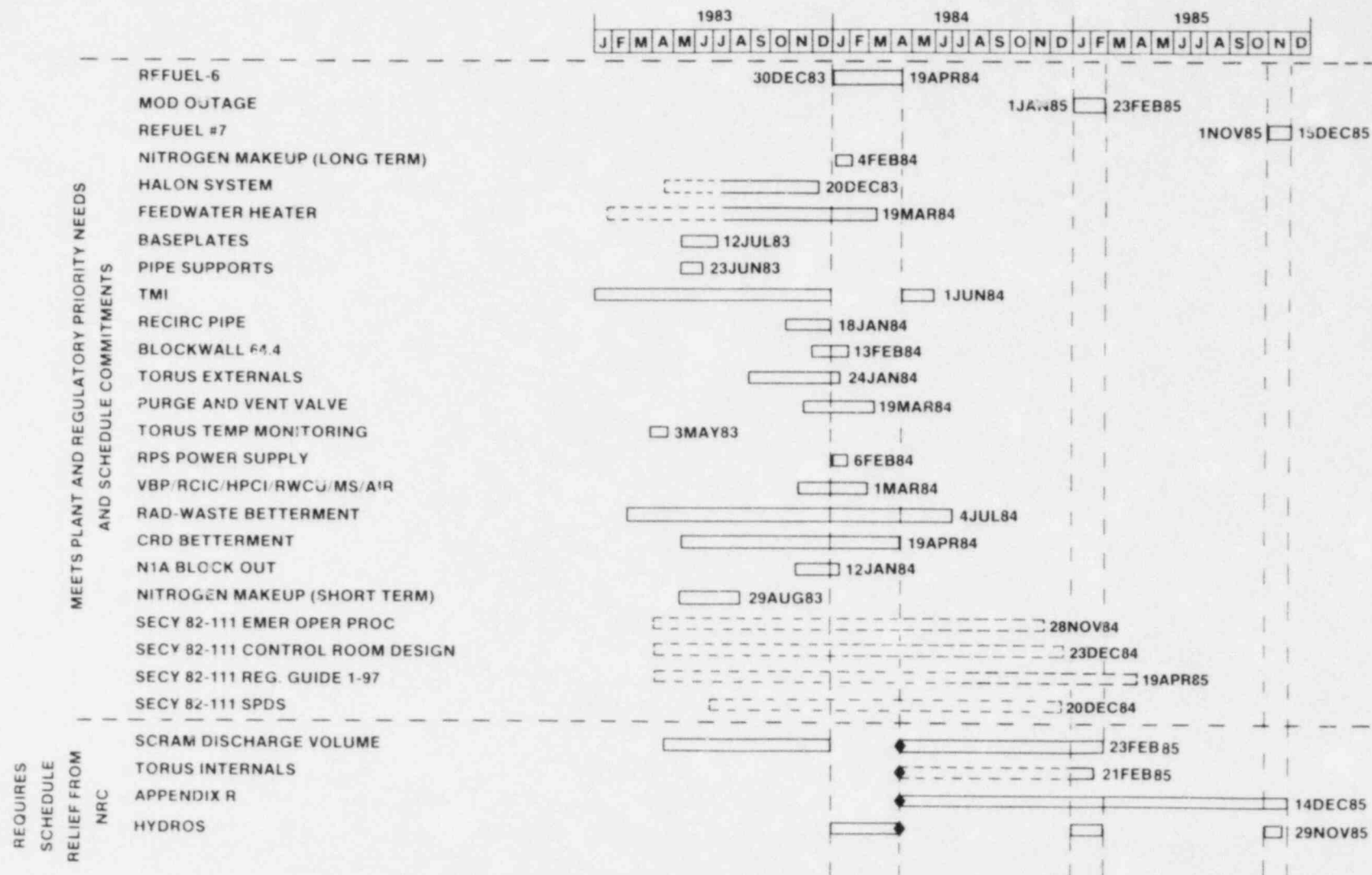


Figure 1. Long-Term Program Schedule

TABLE 1  
List of Major Projects for 83-85

PRE RFO #6				
PROJECT	SCOPE	WORKING SCHEDULE TIME AVAILABLE	TARGET COMPLETION	COMMENTS
Torus Temp. Monitoring System	Complete installation of 24 instruments, and readouts	April-December	Prior to RFO # 6	
Halon System	Replace failed CO <sub>2</sub> System in Cable Spreading Room	April-December	Prior to RFO # 6	
Pipe Supports	Per 79-14 complete four modifications	April-December	Prior to RFO # 6	
Base Plates	Per 79-02 complete four modifications	April-December	Prior to RFO # 6	
Torus External	Attached piping, column tie-down and saddle painting	April-December	Prior to RFO # 6	
N <sub>2</sub> Short Term	Complete modifications to allow N <sub>2</sub> supply to drywell	April-December	Prior to RFO # 6	
Appendix R	Start cable bank installation outside proc- ess buildings to meet NRC separation criteria.	April-December	Prior to RFO # 6	Project work will stop during Refuel Outage No. 6
TMI (PASS H <sub>2</sub> O <sub>2</sub> )	Continue installation of PASS H <sub>2</sub> O <sub>2</sub> system per NRC	April-December	Prior to RFO # 6	Project work will stop during Refuel Outage No. 6, with the exceptions of provisions made for on-line tie-ins.
Scram Discharge Volume (SDV)	Install two separate instrument volumes per NRC	April-December	Prior to RFO # 6	Project work will stop during Refuel Outage No. 6

TABLE 1  
List of Major Projects for 83-85 (Continued)

RFO #6				
PROJECT	SCOPE	WORKING SCHEDULE TIME AVAILABLE	TARGET COMPLETION	COMMENTS
Feedwater Heater	Replace feedwater heater E-102B	RFO # 6	End of RFO # 6	
Valve Betterment	Upgrade, replace valves that are high maintenance and/or not reliable HPCI/ RCIC, stop check, con- tainment purge and vent valves, miscellaneous steam valves, compressed air system isolation valves and condensate demin vent valves	RFO # 6	End of RFO # 6	
Hydro's	1/3 of Class II and III piping system hydro's integrated with valve betterment program and local leak rate testing	RFO # 6	End of RFO # 6	
Recirc Nozzle Blockout (NIA)	Rebuild blockout in biological shield wall	RFO # 6	End of RFO # 6	
Blockwall Modifica- tion (64.4)	Install three blowout panels in blockwall 64.4 per IE Bulletin 80-11	RFO # 6	End of RFO # 6	
Recirc System Inspection	Inspect recirc system in compliance with IE Bulletin 83-01	RFO # 6	End of RFO # 6	

TABLE 1  
List of Major Projects for 83-85 (Continued)

RFO #6

PROJECT	SCOPE	WORKING SCHEDULE TIME AVAILABLE	TARGET COMPLETION	COMMENTS
Insulation Replacement /Upgrade	Replace/upgrade insulation in drywell for drywell high temp issue and to facilitate easier removal and installation.	RFO # 6	End of RFO # 6	
Reactor Protection System	Upgrade the electrical RPS system by installation of 2 electrical protection assemblies.	RFO # 6	End of RFO # 6	This modification will be performed during any outage of sufficient duration.
Standard Refuel Outage Scope	Refuel, turbine overhaul, CRD's replacement, MSIV refurbishment	RFO # 6	End of RFO # 6	
N <sub>2</sub> Long Term	Reduction of combustible gases in the containment as a result of NRC Rule 10CFR50.54	RFO # 6	End of RFO # 6	

TABLE 1  
List of Major Projects for 83-85 (Continued)

PRE MOD OUT #1

PROJECT	SCOPE	WORKING SCHEDULE TIME AVAILABLE	TARGET COMPLETION	COMMENTS
Appendix R	Install conduit and supports in turbine building to meet NRC separation criteria.	April-December 84	Prior to Mod Outage # 1	Project work will stop during Mod Outage # 1
Scram Discharge Volume (SDV)	Install two separate instrument volumes per NRC	April-December 84	Prior to Mod Outage # 1	Completion (tie-ins) of scram volume discharge system will occur during Mod Outage # 1
TMI (PASS H <sub>2</sub> O <sub>2</sub> )	Continue installation of PASS H <sub>2</sub> O <sub>2</sub> system per NRC	April-June 84	Prior to Mod Outage # 1	Completion (tie-ins) of TMI PASS H <sub>2</sub> O <sub>2</sub> system.

TABLE 1  
List of Major Projects for 83-85 (Continued)

MOD OUT #1				
PROJECT	SCOPE	WORKING SCHEDULE TIME AVAILABLE	TARGET COMPLETION	COMMENTS
Scram Discharge Volume (SDV)	Complete tie-ins of instrument volumes to scram discharge header per NRC.	Mod Outage # 1	End of Mod Outage #1	
Hydro's	1/3 of Class II and III piping system hydros	Mod Outage # 1	End of Mod Outage #1	
Torus	Modify torus as a result of NUREG-0661 and 0783.	Mod Outage # 1	End of Mod Outage #1	
IH SI	Heating process to mini- mize cracking in recirc piping	Mod Outage # 1	End of Mod Outage #1	Potential plan activity

TABLE 1  
List of Major Projects for 83-85 (Continued)

PRE RFO #7				
PROJECT	SCOPE	WORKING SCHEDULE TIME AVAILABLE	TARGET COMPLETION	COMMENTS
Appendix R	Continue conduit/support installation and pull cables to meet NRC separation criteria	March-September	Prior to RFO # 7	Completion of tie-ins will occur during RFO # 7



TABLE 1  
List of Major Projects for 83-85 (Continued)

RFO #7				
PROJECT	SCOPE	WORKING SCHEDULE TIME AVAILABLE	TARGET COMPLETION	COMMENTS
Standard Refuel Outage	Refuel, turbine overhaul, CRD's replacement, MSIV refurbishment	RFO # 7	End of RFO # 7	
Hydro's	1/3 of Class II and III piping systems integrated with local leak rate testing	RFO # 7	End of RFO # 7	
Appendix R	Complete project tie-in of all cables to meet NRC separation criteria	RFO # 7	End of RFO # 7	
79-01B	Verify compliance with environmental qualifica- tions of electrical equipment	April 83-RFO # 7	End of RFO # 7	

To accomplish the above will require rescheduling the completion dates of the following major projects:

- Scram Discharge Volume
- Long-Term Program Torus Internal Mods

from the end of cycle 6 to the middle of cycle 7, and accepting the proposed completion dates of TMI (PASS H<sub>2</sub>O<sub>2</sub>) and Appendix R.

The specifics and evaluation of the scope of relief requested for the Torus Internal Modifications and the Scram Discharge Volume are as follows:

Evaluation of Catwalk Extension Support  
Legs and Ring Girder/Shell Weld

An evaluation of the safety margin of the above item was done prior to the start of Fuel Cycle No. 6. Both the catwalk extension support legs and the ring girder to torus shell welds were shown to meet the acceptance criteria of the MKI containment Short Term Program, i.e., meet a safety factor of 2 based on ultimate strength. The grating on the catwalk extension platforms was removed to reduce pool fallback loads.

The bounding load case for both the support legs and ring girder to shell weld is a LOCA plus SRV actuation. Analysis has shown that the catwalk extension support legs would bend due to submerged loads which would result in strain in excess of yield. However, the legs would not break and would remain in the deformed position. The catwalk extension platform would also bend when the legs bent. There would be no subsequent loads that would cause further damage or distortion of the support legs and the suppression chamber pressure boundary would remain intact.

The ring girder to torus shell weld at the T-quencher supports has calculated stresses about 30 percent over MKI Containment Long-Term Program acceptance criteria. Although the stresses are over code allowables, they are below yield and the suppression chamber pressure boundary would remain intact and functional.

Evaluation of Scram Discharge Volume  
Modification Extension

The present configuration of Scram Discharge Volume does not meet the regulatory requirements of IEB 80-17. The existing commitment date for compliance is the end of cycle 6.

The ability to SCRAM has historically been highly reliable and operational problems identified in IEB 80-17 have not occurred at PNPS as evidenced by the following:

- a) High reliability of the Water Sleuth System (CMS)
- b) At no time has water build-up been detected in the headers
- c) Independent drain systems precluding hydraulic interaction within the system following a scram
- d) Installation of the air dump system to ensure a full scram upon detection of decreasing air header pressure.

Boston Edison Company believes that the reduced risk to the health and safety of the public afforded by the modification is outweighed by the increased risk associated with attempting to accomplish the modification in the presently planned manner to meet the existing commitment. The present plan calls for high craft density (approximately 50 men at peak) on elevation 23 in an area that can cause inadvertant scrams during plant operations. When added to the normal refuel densities on the same level, manpower density will place operations in a posture where desired control of activities will be threatened.

In addition, it presently appears that the 79-01B project would be implemented by the end of cycle 7 due to the integration of all projects in progress.

The major milestones involved as a result of SECY 82-111 have been represented and as scope and implementation schedules evolve, the details will be integrated as part of the updated progress.

Boston Edison Company will be progressing and updating this program quarterly and reporting on an exception basis while adding detail as further scope becomes available.

## 2. EXECUTIVE STATEMENT

I have had my present assignment for just over one year and I can assure you that Boston Edison's method of doing business in the Nuclear Organization is changing. At present we are endeavoring to meet our commitments and our mission today is another example of our continuing efforts. I would be less than honest if I did not share with you my concern over the rate at which we have been doing our work — and that rate must slow down.

Our program today will illustrate for you the many improvements we plan to make at Pilgrim Station which are not Regulator mandated, but which will make the plant safer. We have completed a major reorganization, created entirely new sections, one of which is outage management, and have established entirely new policies. Those are the software. The hardware are the physical changes we will make and will discuss later in the program.

As responsible utility executives, our goals continue to be the safe, reliable, and economic operation of Pilgrim Station consistent with cost effective implementation and modifications be they self-imposed or Regulator mandated.

The past few years of experience with refueling outages have been grueling ones from the regulatory sense, in that, within these time frames we have not been able to effectively manage our own resources nor set priorities to achieve our goals as previously stated.

I observed us working inefficiently and at an accelerated pace which was unacceptable. We had been doing that in an attempt to meet commitments which were made with inadequate investigation and planning. We had dedicated resources but we continued to place ever greater demands upon those same resources. The result was the hectic outage we experienced from September 1981 to April 1982, eight months' duration. Gentlemen, we must reduce our outage time in the future.

How had we arrived at this situation?

Let me briefly discuss that question.

In the mid 70's commitments were first made and scheduled afterwards. Although this cannot be viewed as a sound practice by today's standards, it was acceptable when modifications were not numerous. Shortcomings were easily addressed because nuclear organizational staffs were small and relatively stable, which allowed individuals to close out commitments and exchange information on a personal level by utilizing simple systems.

In addition, modifications were made with the utility's own staff, which enhanced operational knowledge of the change and maintained the ability to control them.

The transition from the 70's to the 80's saw a steep increase in regulatory actions in the form of bulletins, orders, NUREGs and changes in the "law". We accept and understand the reasons for this increase.

Also, the intensity (establishment of the on-site inspector program) and complexity of inspections changed drastically. Performance appraisal teams, radiological assessment teams, emergency response teams and the yearly systematic assessment of licensee performance program are all examples of this change and all in a relatively short time period.

The utility industry responded in kind by stepping up their quality assurance programs with the same intensity and complexity, and established the Institute of Nuclear Power Operations (INPO) to address and make recommendations on the same issues.

Unfortunately, Boston Edison company responded to the output of these various programs in the same conditioned manner of the mid 70's. This caused us to begin to have difficulty meeting other commitments so we elected to supplement the permanent work force with an increasing number of contractors in an attempt to respond to the new requirements and meet the increasing number of commitments.

The results experienced during this period were as follows:

- Increased number of missed commitments
- Physical and administrative changes to the Plant at a rate that could have caused confusion to the operator
- Site manpower densities to implement change straining the control of management and support services
- Outage durations often approaching 6 months
- Knowledge transfer to permanent employees minimized



- Inability to maintain documentation consistent with physical plant
- Plant improvement needs sacrificed in an attempt to meet regulatory needs
- Reduced plant maintenance
- Reduced training
- Boston Edison did not know the number and scope of post-TMI modifications

Correctly, this period saw a greatly increased regulatory involvement which was not quickly matched by an increased commitment of Boston Edison resources. The result was our inability to do more than short problem solving and place large demands on the available personnel.

This taught us that our situation required an integration of work, based on resource manageability, with schedules reflecting well thought out strategies so as not to create a negative impact. It was during this period that I joined the Boston Edison Nuclear Organization.

As I observed our performance I began to formulate some policies which would address the issues. Paramount was Boston Edison's continuing policy to keep the plant safe. We had to readjust how we did our work and — in some cases — when. I never again will permit the status to be that which we had during the 1981-1982 refueling and modification outage. As a result, we approached these problems by developing a long term program which was formulated using the following elements:



- Keep the plant safe by performing our improvements at a rate our operating force can understand.
- Perform base load work without major amounts of overtime, to keep our resources alert and involved.
- Control the work force to reduce the possibilities for error and operational transients by limiting site and area density.
- Minimize outage times but increase the frequency.
- Allow plant improvements to be prioritized according to their significance relative to all other tasks.
- Provide operations with greater time for personnel to become familiar with changes, and allow time for updating procedures and prints and training.

Because of the continually increasing level of sophistication associated with nuclear design, operation and modification, we believe our goal of supplying safe, reliable and affordable energy can be successfully fulfilled only by 1) a coherent long-range program which prioritizes without undue rigidity; 2) which allows the scheduling of future requirements in a realistic manner relative to the existing baseload; and 3) which allows a deployment of resources — particularly human resources — in a manageable way.

Only by developing a program that addresses these criteria — which we believe this program does — can we hope to achieve excellence in the future, and escape the errors of the past.

This attitude was expressed in the actions we took during the end of our last outage. Those actions included the immediate cessation

of all work, removal of all contractor personnel from the site, removal of all staging, cleaning and decontaminating the entire plant, identification of all remaining work that had to be done, and a rescheduling of this work accordingly. This was done with advance notice to all interested personnel and discussed in meetings at regional headquarters.

As a result, a Confirmatory Action letter was issued by Region I which confirmed all the agreements we had reached in those meetings and allowed us to reschedule our resources accordingly.

This program allowed us to regain control of the station and was applauded by both BECo. and NRC management. These actions became the initial building blocks for our Long Term Program and developed into the philosophy for operating Pilgrim Station in the future so that we would never again find ourselves in the situation we had during that outage.

This philosophy is expressed in the policies I have issued, as follows:

1. Pilgrim Station shall be operated and maintained in a safe condition at all times. This extends to operational and outage periods alike.
2. Established site densities will be upheld. The station manager must always be able to maintain his systems' operability and tech. spec. compliance.
3. Adequate time will be scheduled around each modification such that all affected procedures and drawings are updated and operator training is completed.

4. Work packages will not be allowed to commence until individuals involved are trained for the job at hand and sufficient materials and space for storage of those materials are available.
5. The amount of modifications being implemented at any one time will not exceed the operator's ability to fully understand "the big picture" including the "hows" and "whys" for each modification.
6. In the future we will have independent refueling and modification outages.
7. Personnel will not forego vacations or be required to work excessive amounts of overtime, nor will the number of modifications create reduced time allocated for operator training.
8. Implementation schedules for BECo. desired modifications shall not be sacrificed if other scheduled tasks cannot be accomplished as originally planned.

I realized that these policies wouldn't work unless they were applied to a program so we implemented them into the Boston Edison Long Term Program, and I believe our presentation will assist each of you in understanding that its acceptance is critical to our future.

### 3. PROGRAM INITIATION

This program is not another attempt to predict the future, but rather an attempt to create the future and adjust dynamically to changing situations. The enclosed plan and schedules are the result of five distinct phases.

1. Assemble the Data Base  
"What do we think we are presently trying to accomplish?"
2. Situation Analysis  
"Where are we and why are we attempting to accomplish these activities?"
3. Direction  
"What do we want to accomplish and what constraints exist?"
4. Plan  
"How do we want to accomplish these activities, are they interrelated, in what sequence and who will perform them?"
5. Schedule  
"When will the work be accomplished?"

The last phase which will be initiated after approval is the Update and Recycle for Each New Commitment Phase which will cause the program to be dynamic.

Figure 2 depicts the plan utilized to produce the implementation schedules. It took four months to complete the first two phases of the program and produce the initial implementation schedule, with the full data base upon which to develop strategies and make decisions.

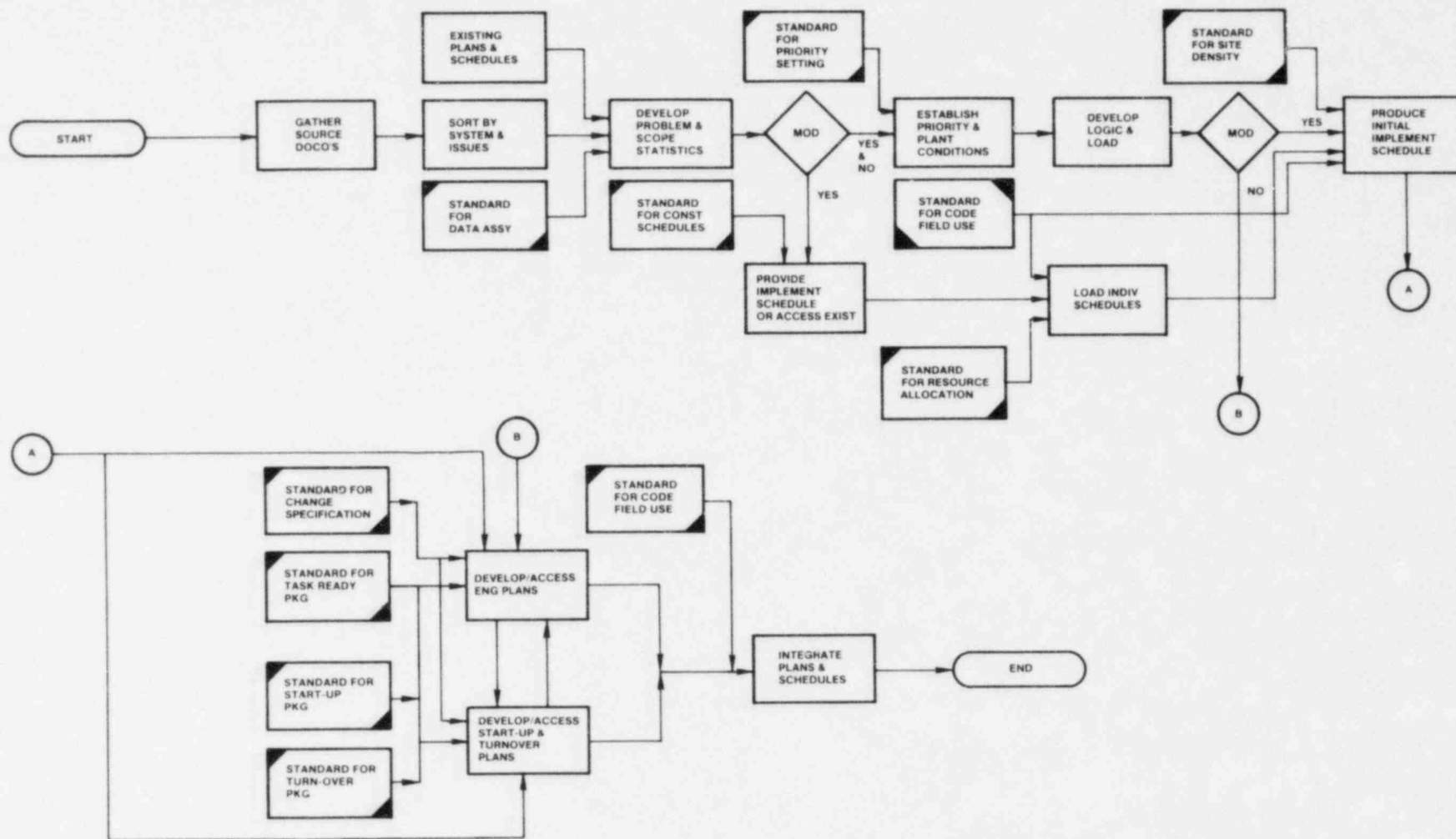


Figure 2. Program Development Plan

At this point in the process, there existed approximately 500 pieces of work, and 280 individual construction/maintenance schedules. The initial integrated schedule (Figure 3) reflected 13 of these activities and only those required by the Regulator. The ability to confidently analyze and manipulate the data and schedules was enhanced by the standards that were developed during the process. Attachment A provides a summary of these standards.

The total listing of the network is available; however, inclusion in this report would only serve to increase its weight and not its value. To provide a sense of the detail and effort involved in assembling the data base, the following attachment has been included:

Attachment B - WORK ELEMENTS BY SYSTEM AND ISSUE REQUIRED BY  
THE REGULATORS.

With the data base fully assembled, the analysis and manipulation began with the initial schedule and logic.

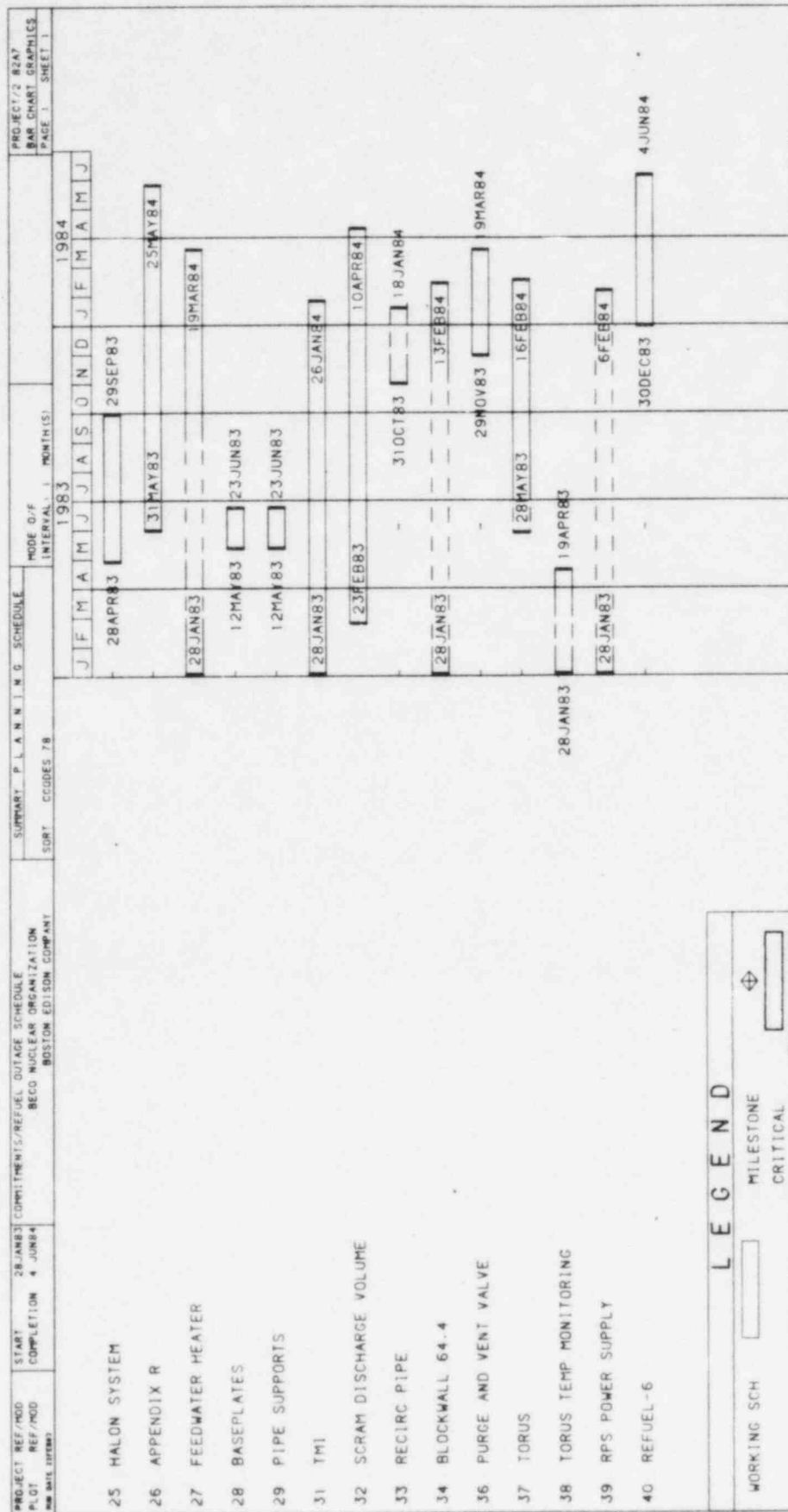


Figure 3. Initial Implementation Schedule

#### 4. PLAN AND SCHEDULE ANALYSIS

##### ANALYSIS NO. 1

The initial schedule based primarily on Regulatory Requirements, Figure 3, produced the following results:

- A. An unacceptably high number of contractors which will cause the following management control problems:
  - Housekeeping
  - Fire Protection
  - Exposure
  - Waste Generation
  - Quality
  - Impact on Operations
- B. The work being accomplished with the exception of the feedwater heater and purge and vent valves was because of Regulatory Requirements without consideration for plant improvement needs.
- C. Area loadings, because of the scope-of-work planned in excess of 150 contractors on Elevation 23 during outage conditions, in the Reactor Building alone.
- D. A water management problem if the Torus Internal Modifications and Feedwater Heater replacement were to be accomplished together that would require the temporary storage or discharge of approximately 200,000 gallons of water from the Torus.



- E. The requirement to provide an extensive temporary contaminated exhaust system to allow the containment purge and vent valves to be upgraded simultaneously with the Torus Internal Modifications.

A sensitivity study utilizing manpower loading as the variable to minimize A and C for pre-outage work to support the schedule produced the following:

- 100 working contractors would complete the work by March of 1984.
- 50 working contractors would complete the work by October of 1984.
- The term working contractor does not include the increased burden of Administrative, Health Physics, Quality Control, Waste Management, etc., personnel that are required to support each contractor in the field.

The existing reload requirements and present plant performance indicate the end of cycle will occur late in December - early in January; therefore, neither of the above results are satisfactory. Figures 4 and 5 depict the analysis. Recognizing that a broader base would be required if a viable strategy was going to be developed, the following programs were added to the plan:

- Valve Betterment
- Radwaste Betterment
- Cooling Water Betterment
- GEMAC Replacement
- Condensate Pump Upgrade
- Facilities Upgrade

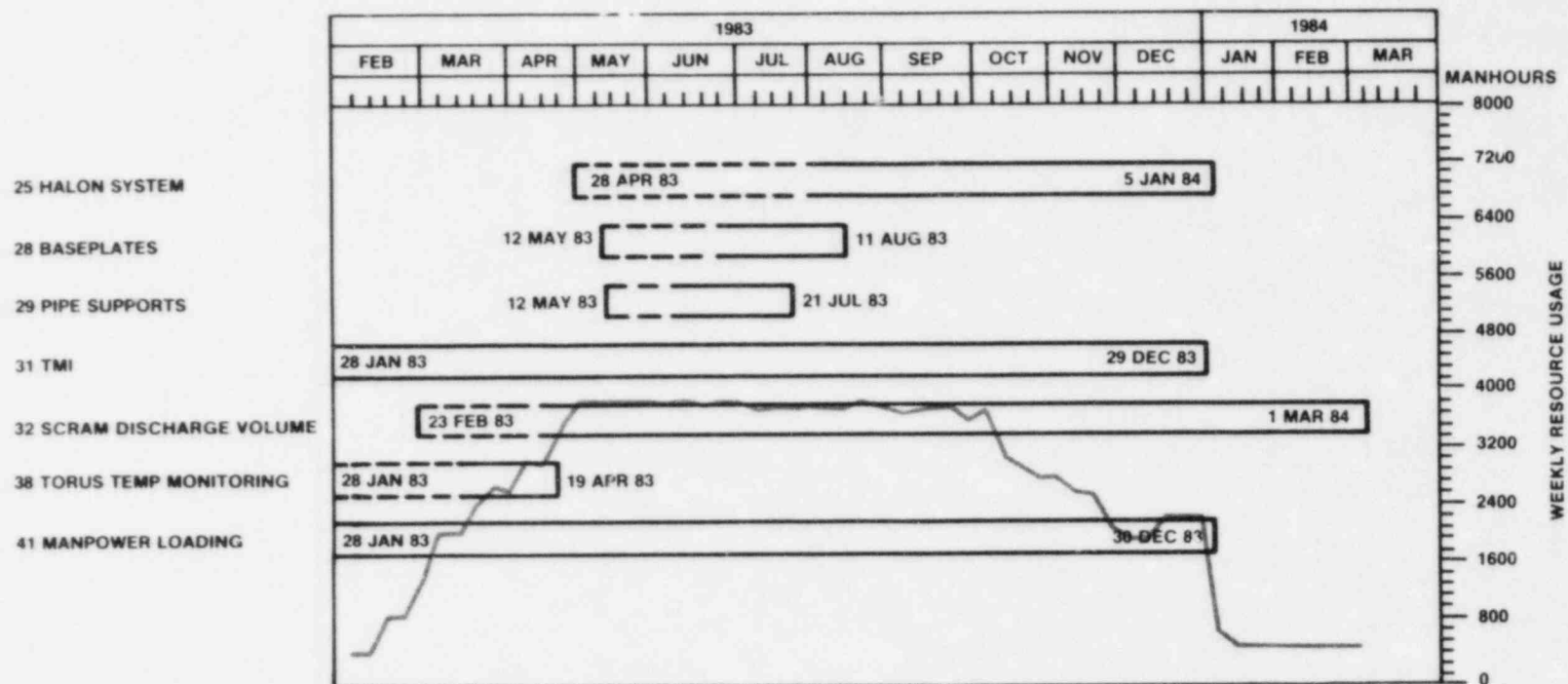


Figure 4. (100) Resource Constrained Pre-Outage Schedule

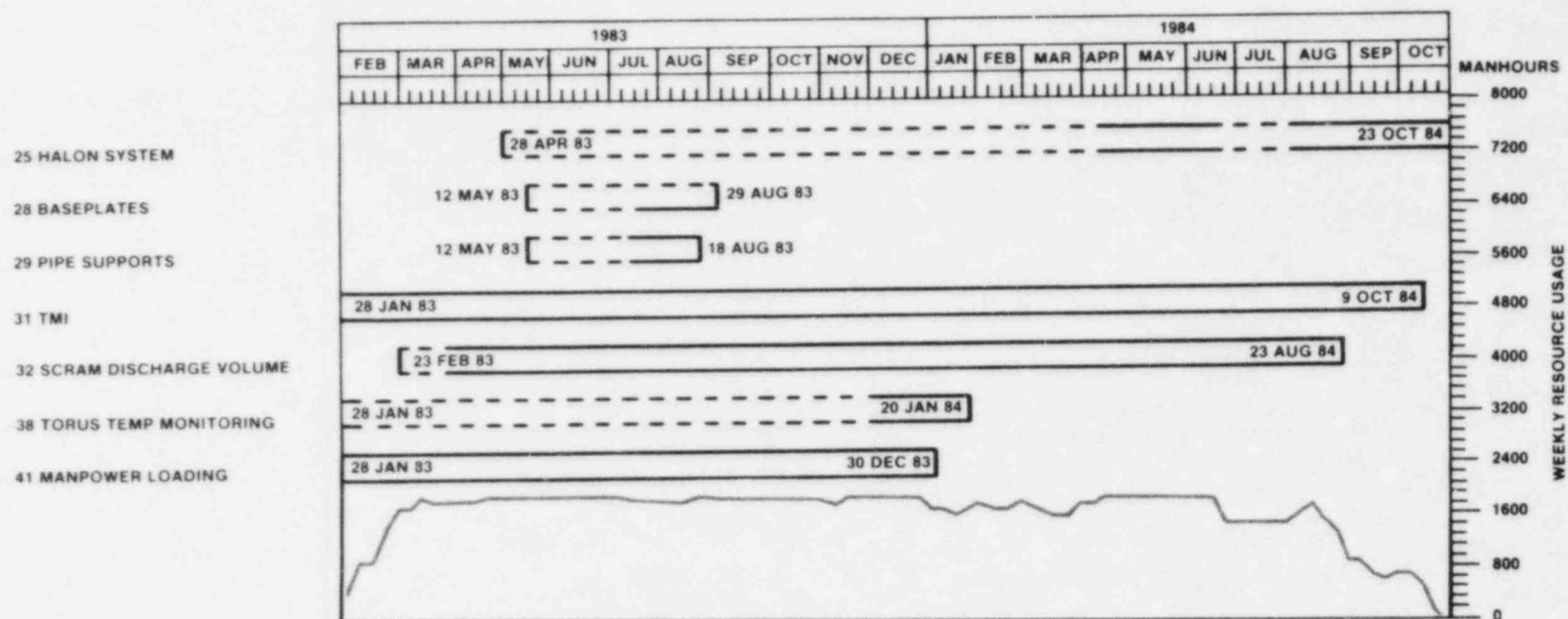


Figure 5. (50) Resource Constrained Pre-Outage Schedule

## ANALYSIS NO. 2

With the inclusion of the various maintenance programs, the project list grew from 13 to 55 and the individual pieces of logic were now in excess of 1500. Figure 6 represents an unconstrained summary schedule of these projects. The results of Analysis No. 1 (A,C,D and E) were either still valid or magnified many times; however, the schedule impact manpower loadings could now be accessed as constraint (area loadings and site density) and balance (Regulator Improvements versus Plant Betterment Programs) strategies were developed.

The four major issues to be addressed were:

1. All of the desired work could not be accomplished with the present level of site resources.
2. The area density on El. 23 and in the cable spreading room peaked at levels that would jeopardize the safe operation of the plant while on line and cause outage levels to reach in excess of 150 people on a watch.
3. Appendix R Modifications, if all other projects could be accomplished, caused the 84 outage to extend until June without any constraints.
4. Accomplishing the feedwater heater replacement in parallel with the Torus Internal Modification caused a loss of water storage capability of approximately 200,000 gallons.

As a result of the initial analysis, the total manhours to accomplish the scoped Regulator work was known. This indicated that with 50 working contractors, it would take approximately 18 nonoutage months to

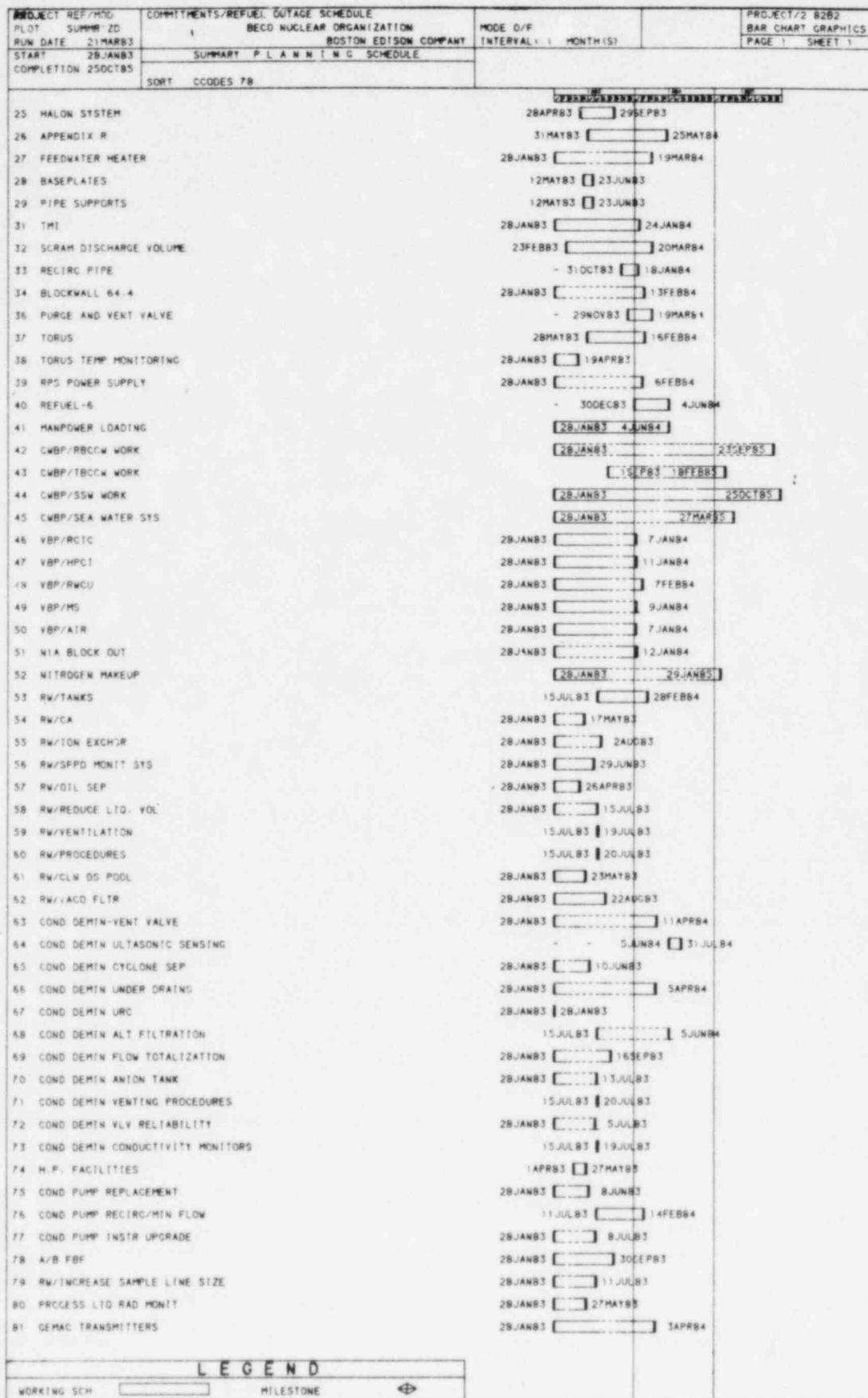


Figure 6. Unconstrained Three-year Schedule

accomplish the same scope of work. Fifty working contractors corresponds to approximately 100 total contractors on site (including Administrative, HP, QC, and general support). Inclusion of the betterment programs would require approximately 20 more contractors over the same period of time. It became obvious that the evolving strategy would focus to achieve the following results.

- Control the area density on elevation 23.
- Minimize the impact on Water Management.
- Balance Plant Maintenance needs with Regulators Improvement needs.

The key decision made during this phase was to test a mid-cycle modification outage to include Torus Internals, Scram Discharge Volume Tie-in and TMI Tie-ins, if not completed on line.

It was also decided to limit Regulator Contractors to 50 maximum so that the various betterment programs could be included and margin existed for new requirements during the same time frame.

## 5. FINAL PLAN AND SCHEDULE DEVELOPMENT

Figure 1 represents the final schedule produced as a result of the application of the key decisions from Analysis No. 2. The initial analysis produced the following results:

1. The following outage durations.
  - RFO # 6 - Approximately 10-12 weeks
  - Mod Out # 1 - Approximately 5-6 weeks
  - RFO # 7 - Approximately 6-7 weeks
2. Alleviation of the Water Management Issue
3. Alleviation of the manpower loading issues.

Figure 7 demonstrates the effect of controlling the resources in accordance with the proposed schedule for all modifications required to meet regulatory requirements while Figure 8 shows the alleviation of working contractor density on elevation 23 in the Reactor Building from the original schedule to the proposed.

4. Allowance for Plant Maintenance Programs
  - Radwaste
  - Valve Betterment
  - Cooling Water Betterment
  - Instrument Upgrade
5. A defined and controllable scope of modifications for Operations.

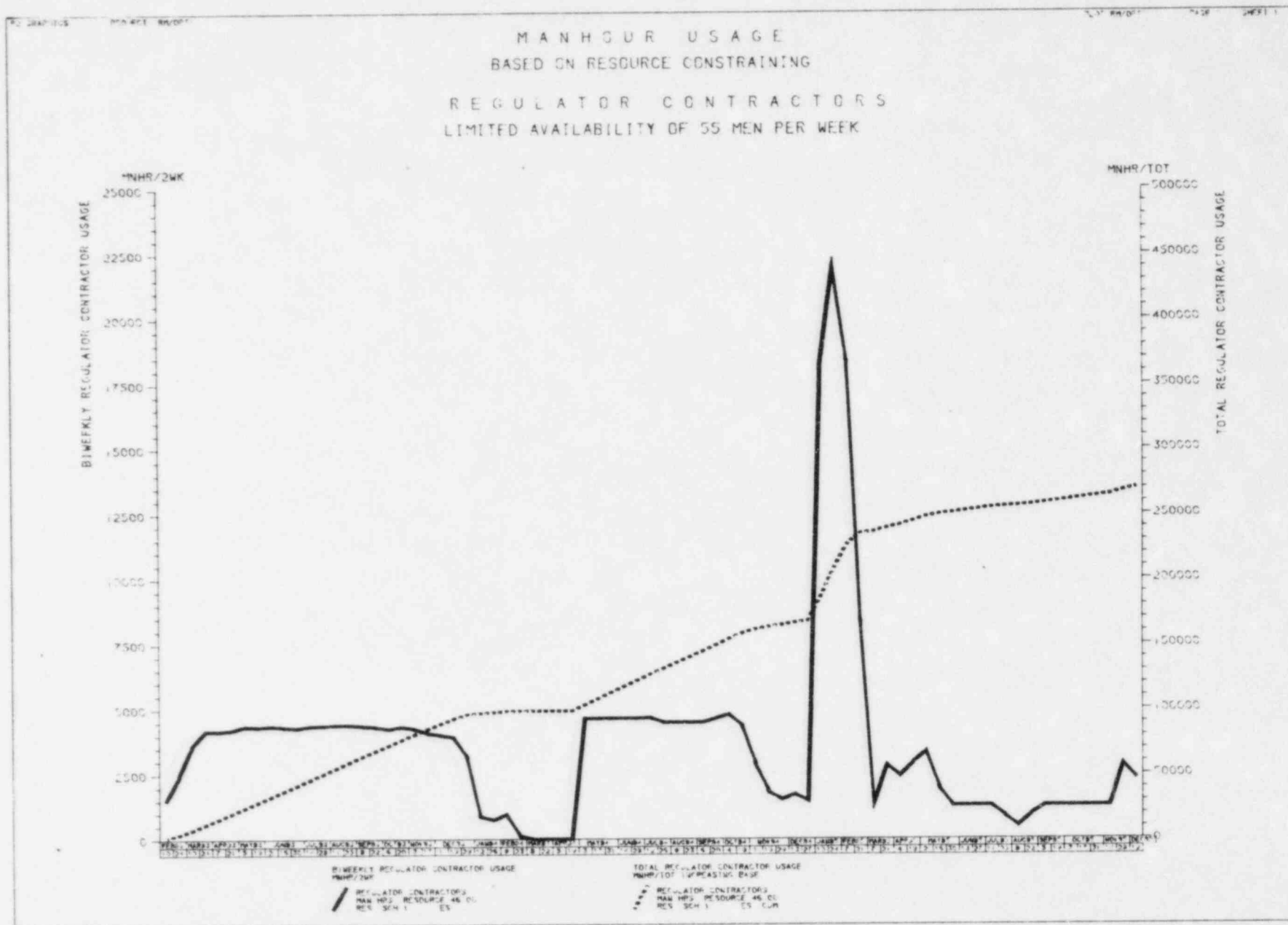


Figure 7. Working Contractor Usage for Proposed Plan



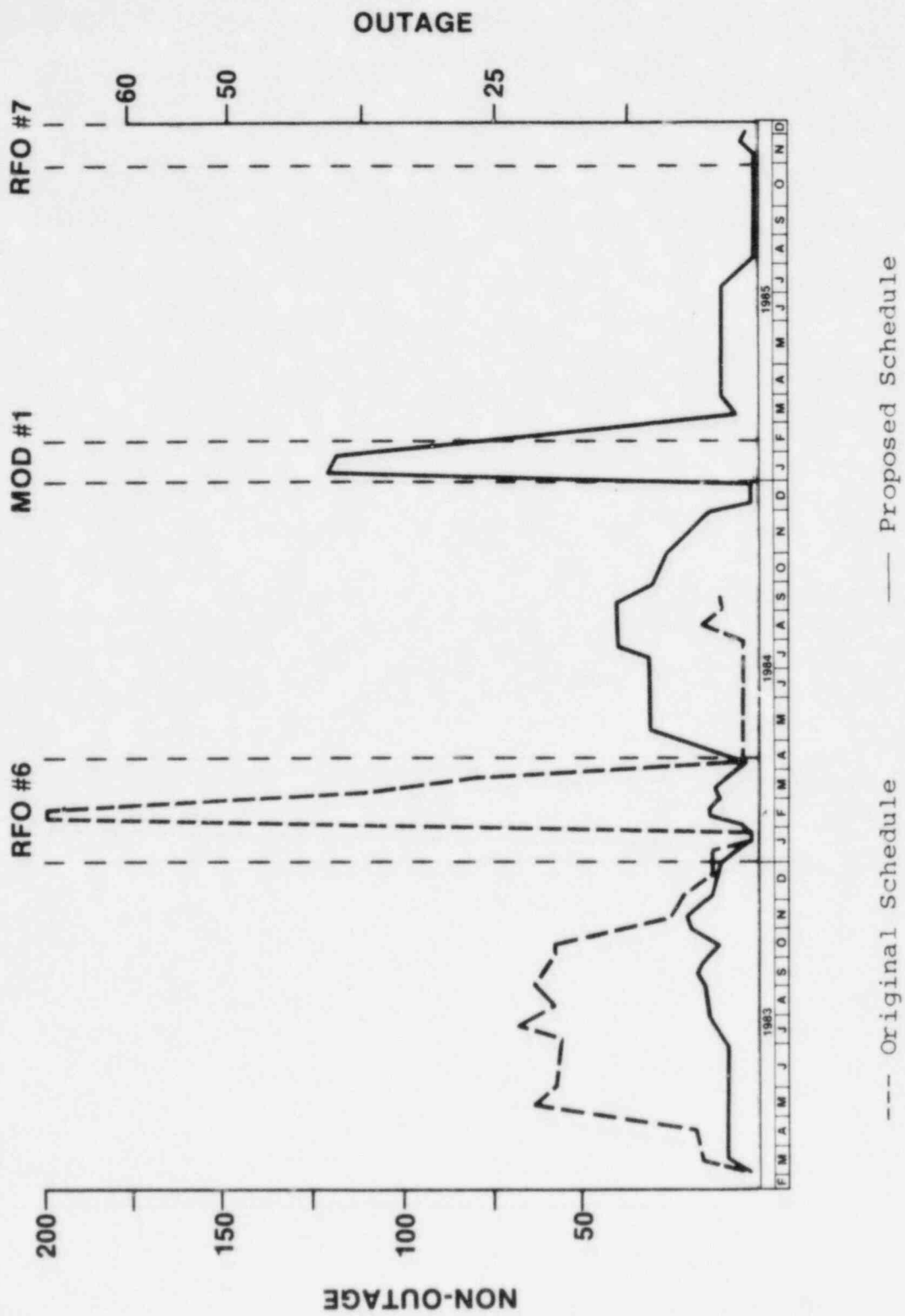


Figure 8. Contrator Usage on Elevation 23 Analysis

6. Margin for analysis and commitment to new requirements which may arise.

The major milestones for SECY 82-111 have been included as well as the developing analysis of the CRD operability betterment program.

Remaining to be included are the details of the Radwaste and Cooling Water Betterment which are in the process of being levelized in accordance with available resources to accomplish the scoped work.

The first update will include this information.

## 6. CLOSING

In summary, we have drawn into one planned and integrated program the individual plans and schedules that comprise our workload. Without this integrated program, there would occur a collision of schedules which would drive us into making decisions in a fire-drill environment. We are experienced in these collisions and the unpleasant consequences, such as excessive downtime, violations, and public notoriety. We must avoid this.

We believe we have comprehensively identified those tasks which must be accomplished in the next few years. Rather than allow the future to control the destiny of those tasks, we have placed them in a program that will complete them expeditiously with fewer resources, will ensure their completeness, and will maintain acceptable levels of safety.

We have a manageable and managed program that has been carefully constructed, has received, and will continue to receive, top management support and involvement.

Cycle dependency is a key to successful implementation of the program. Directing emphasis on those issues which occur during the next cycle of operation creates an intense plan within a program. Implementing a segment of the long-term program a cycle at a time, rather than on calendar dates, improves real-life implementation and allows us to commit to firm schedules rather than wishful schedules.

None of this will work if the program does not allow for the constantly improving knowledge and the changing priorities which are so much a part of this industry.

Each day brings information notices, circulars, bulletins, equipment breakdowns, etc., all of which place demands against other tasks which must be weighed against those items already scheduled. There is a necessity to periodically update, monitor, and take appropriate corrective actions throughout the implementation of the program. We propose a quarterly status meeting with you to identify problems in a timely fashion, assess and integrate any new regulatory requirements and new improvement needs, and adjust the schedule as required. These meetings, in addition to keeping you aware of what has been done, and will be done, will allow your input. We are convinced that such inputs are crucial to addressing the changing needs of the industry, as well as avoiding the misunderstandings which occasionally appear concerning priorities.

Boston Edison Company wishes to have our plan formally submitted on our docket. We believe docketing will ensure the dynamic character, which is essential, and avoid the counter-productive aspects of rigidity. It must flex with new issues, not snap.

We hope we can receive your acceptance of the program very soon since our activities are dependent on the program. The next few months are very critical as we complete the planning for our next outage. In fact, as you can see, we have a very tight schedule to fine tune the program before the next planned outage.

Obviously, the effort behind putting this program together was a strain on our resources. We are certain our effort will be worthwhile to the NRC and the Boston Edison Company if we can agree on this program. As such, we are eager to implement the program and get on with the work. We therefore request your feedback prior to the close of this meeting so that we can submit the program and obtain approval in the most expeditious manner.

ATTACHMENT

A

PROGRAM PLANNING AND  
SCHEDULING STANDARD

PROGRAM PLANNING  
AND  
SCHEDULING STANDARD

SUMMARY

This attachment is a synopsis of the technique utilized to assemble the data base, perform the situation analysis, develop the logic and produce the various reports and schedules.

DEFINITIONS

Prior to commencing this effort, it was determined that a uniform planning vocabulary needed to be established to break-down the communication barriers and ensure uniform processes. The major definitions are as follows:

Commitment - an agreement to perform an assignment in a fixed period. A commitment can be initiated by the Regulator, by station need and/or Management directive.

Program - the sum of all projects within the organization with the benefit of corporate direction and constraint. This integration may impact individual project schedules as their interaction and impact on the entire organization is viewed as one entity.

Project - a set of related activities by elements or components which lead toward the completion of a commitment. A project has definite starting and ending points and requires time to undertake and complete. It will typically involve multi-department interaction, and has resource demands - people, machinery, materials, work space, all of which result in costs incurred. Projects have intermediate and final goals (milestones) by which progress can be measured. All items that comprise a project have

a common goal; completion on time, within budget, at a prescribed quality level.

Component - a systematic reduction of a project to an item for which a series of scope statements apply to resolve related issues. The component level need not exist for each project or may be added as more knowledge is gained regarding a specific issue.

Element - an element specifies an individual scope statement to resolve a specific issue.

Activity - the activities that make up a project can be thought of as departmental projects. Each activity represents a measurable work product and has a definite starting and end point. A few will require no material resources, but do require time to accomplish, and must be included in the planning due to the time constraints it imposes on other activities. Most activities have associated costs, whether the actual costs of materials or machinery, people costs or incidental incurred expenses such as general supplies. The collection of all activities at the element level, together with their resource requirements, cost requirements data and precedence relationship form a plan to resolve a specific issue.

Tasks - work assignments to specific engineers or individuals. A task is usually the lowest level of work assignment and monitoring, typically at the group or individual level.

Plan - a scheme or method developed typically during the scope definition phase. It indicates a logical

set of activities and their relationships as they relate to the accomplishment of goals. A plan represents the best estimate on the way we will proceed in accomplishing our goals (meeting a commitment).

Schedule - a program of forthcoming events. The schedule represents in detail a logical set of activities and their relationships as they relate to the accomplishment of goals. A schedule, depending on the phase the project is in, will represent the responsible persons' actual estimate of resources, people, machinery and materials required to meet goals. A schedule is fixed in time.

NOTE: The main differences between plans and schedules are that a plan is a process to represent an overall strategy while a schedule represents a fixed set of events in time and leading towards the accomplishment of a commitment. The elements of both plans and schedules must be prepared and supported by the individual(s) responsible for delivery of that element.



### WORK BREAKDOWN STRUCTURE

A work breakdown structure (Figure 1) was utilized to develop the relationships that existed between the various pieces of work within the existing standalone tracking and planning systems of the Organization.

Figure 2 depicts a typical Project - Component - Element Relationship while Figure 3 shows the key to the detail that was gathered regarding each element.

### WORK LIFE CYCLE

To aid in the situation analysis the Five Phases of the work life cycle were utilized (Figure 4) and a scheduling confidence level was developed as shown on the same figure.

### PRIORITY

Priorities were established in accordance with the system shown on Figure 5.

### DATA COLLECTION AND REPORTS

This program utilized Project 2 as the scheduling and reporting tool which requires structuring and adhering to uniform code fields which allows reporting formats to be developed which meet the users needs. Figure 6 shows the code field use while Figure 7 demonstrates the output for one of the Projects.

### CONSTRUCTION/MAINTENANCE SCHEDULES

For the initial planning and scheduling efforts to be valid required the uniform transmittal, estimating and receipt of construction/maintenance data. Figure 8 represents the data transmittal form for each element. The estimating was done in accordance with a developed standard considering

previous industry experience, station experience, construction standards, productivity factors (local craft, environmental, radiological) and a contingency factor recognizing the adequacy of scope definition. The element implementation schedules were completed on a form represented by Figure 9 and summarized as shown on Figure 10.

#### PLANNING AND INTEGRATION

For each construction/maintenance schedule that could impact the next full cycle of operation, a detailed logic was developed (Figure 11 represents one minor element). These logics considered plant conditions, material availability, priority, design efforts interrelationships with other elements, manpower requirements and plant locations. There exists in excess of 1500 logic elements within the network. To aid in assessment four types of implementing personnel were designated:

- O&M - Work to be accomplished by Station personnel
- MC - Modification craft to accomplish work for plant betterment programs
- RC - Regulator craft to accomplish work required by the regulator
- UC - Utility contractor to supplement the maintenance force for routine peak workload, turbine overhaul, CRD change out, etc.

### SCHEDULING

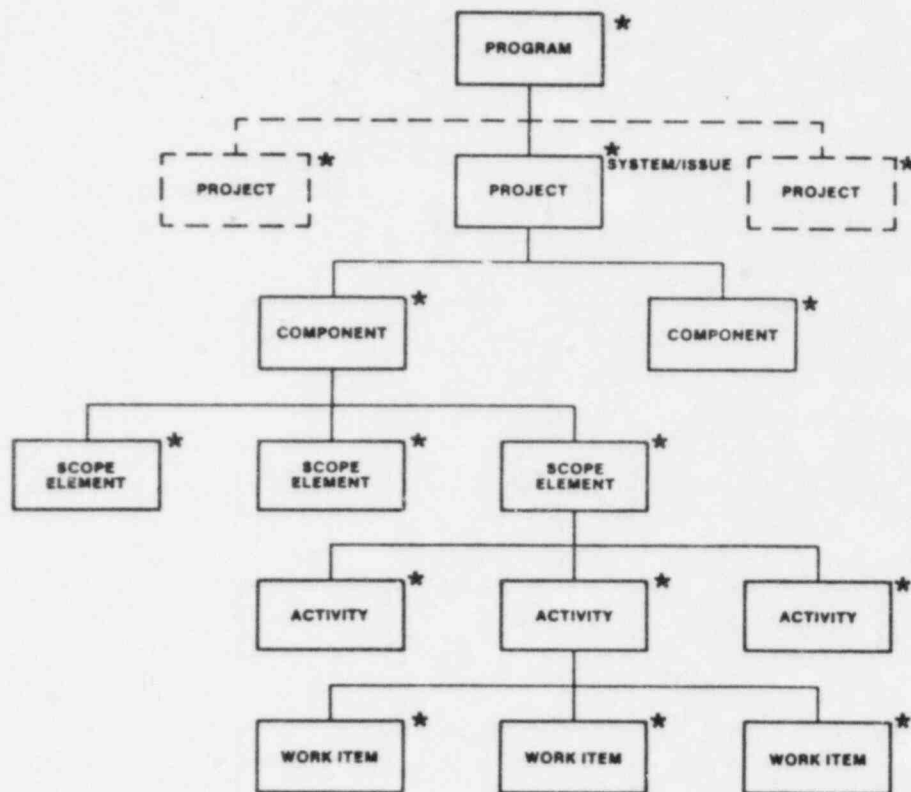
With the requirement to logic and integrate each element, the scheduling activity is straight forward. The Project 2 software program manipulates the data, assigns the resources, constrains by the logic, defines critical path, defines float (time available for one piece of work prior to it impacting the next piece of work), summarizes related logic to a project level report and produces manpower usage reports. Figures 12 and 13 are representative of the systems output.

### ANALYSIS

Once the base logic and schedule have been established, ties can be added or deleted, manpower constrained, proposed plant conditions altered, float removed, etc., to allow impact studies regarding existing or new commitments.



# LONG TERM PROGRAM

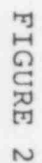


REQUIREMENTS ANALYSIS		SCOPE DEFINITION JUSTIFICATION AND APPROVAL			PRODUCT SPECIFICATION PROCUREMENT AND DELIVERY		IMPLEMENTATION START-UP AND TURN-OVER			CLOSE OUT
DEV. I.D.	EVAL.	SCOPE	JUSTIF.	APPVL.	SPECIFY PROCURE	DELV.	IMPL.	START UP	TURN OVER	CLOSE OUT
<div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div>										
<div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div>										

\*  
 MILESTONE DATES  
 ACTUAL DATE  
 ACTUAL PROGRESS

A-7

FIGURE 1





# 5 YEAR PROGRAM

# COMMENTS

REV

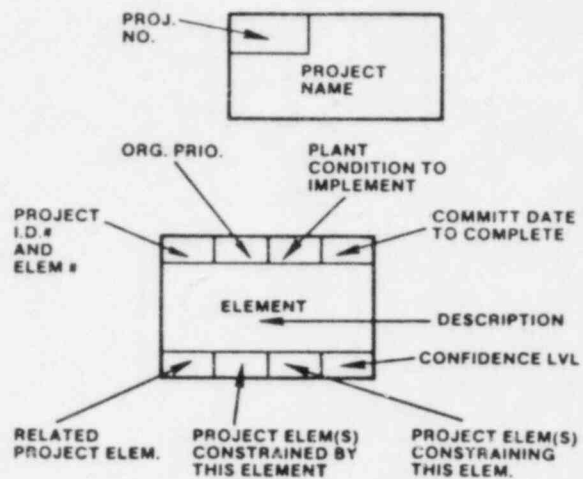
PROJECT \_\_\_\_\_

PREP BY \_\_\_\_\_ REV BY \_\_\_\_\_

APP. BY \_\_\_\_\_ DATE \_\_\_\_\_

KEY: PLANT COND.  
R = RUNNING  
S.O. = SYSTEM OTG  
P.O. = PLANT OTG  
R.O. = REFUEL OTG  
P.R. = POWER REDUCTION

SHT \_\_\_\_\_  
OF \_\_\_\_\_

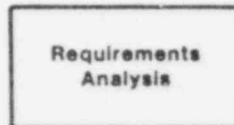


REQUIREMENTS ANALYSIS		SCOPE DEFINITION JUSTIFICATION AND APPROVAL			PRODUCT SPECIFICATION PROCUREMENT AND DELIVERY		IMPLEMENTATION START-UP AND TURN-OVER			CLOSE OUT
DEV. I.D.	EVAL.	SCOPE	JUSTIF.	APPVL.	SPECIFY PROCURE	DELV.	IMPL.	START UP	TURN OVER	CLOSE OUT
<div style="position: relative;"> <div style="position: absolute; bottom: 20px; left: 20px; width: 100%; height: 20px; background: linear-gradient(to right, black 40%, white 40%);"></div> <div style="position: absolute; bottom: 20px; left: 40%; transform: translateX(-50%);"> <p>ACTUAL DATE</p> <p>ACTUAL PROGRESS</p> </div> <div style="position: absolute; bottom: 20px; right: 20px;"> <p>MILESTONE DATES</p> </div> </div>										

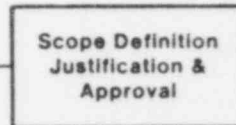
A-9

# TYPICAL WORK LIFE CYCLE

Confidence Level	None	LIST				CLOSEOUT PACKAGE COMPLETE
	C	COMPLETED	LEVEL I PLAN			
	B	COMPLETED		LEVEL II PLAN	LEVEL I PLAN	
	A	COMPLETED		LEVEL II PLAN		
	Task Ready	COMPLETED			Material to Implement Activity Available	



Requirements Statement  
Operating Data/Analysis  
Problem Analysis  
Schedule Requirements  
Required Results  
Initial Approval



Scope Defined  
Alternatives Considered  
Long Lead Procurement Identified  
Make/Buy Decision  
Level I Plan Approved  
Justification Complete  
Conceptual Pkg. Developed  
Integrated with Existing Work  
Approval to Proceed



Products Specified  
Procurement Initiated  
Task Ready Package Developed  
Startup Package Developed  
Close-out Package Developed  
Implement, Turnover & Startup  
Level II Plans Approved  
Integrated with Existing Work  
Approval to Proceed



Task Ready Pkg Complete  
Integrated with On-going Work  
Implement  
Turnover  
Startup  
Startup Pkg Complete  
Accept

# PRIORITY SYSTEM RELAYS RELATIVE IMPORTANCE OF AN ISSUE

## 1. THREE DIMENSIONS INDICATE IMPORTANCE OF ISSUE — LOGICAL JUDGEMENT REQUIRED

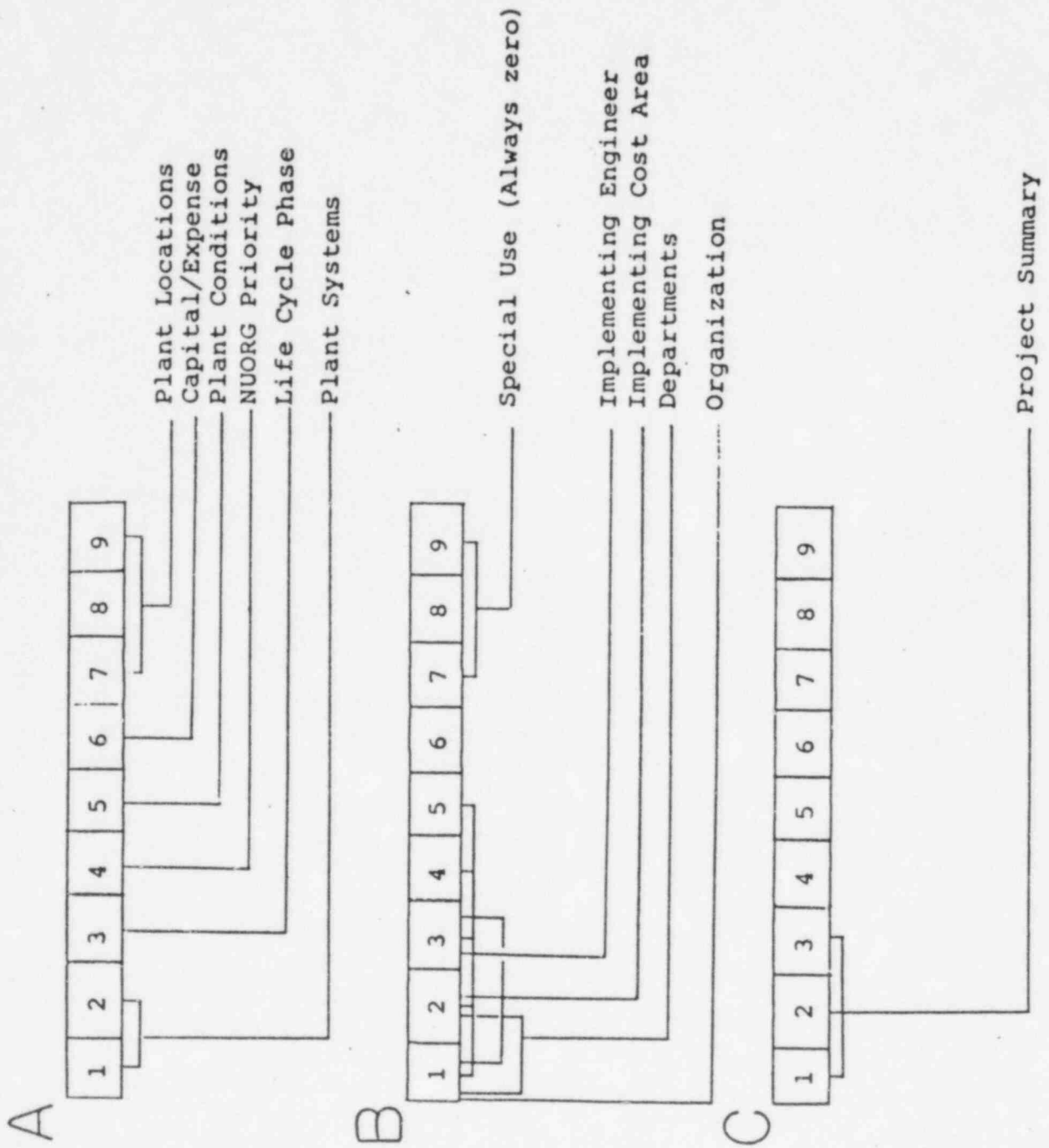
- A. SERIOUSNESS — RAISES QUESTION OF IMPACT ON PEOPLE, RESOURCES, OTHER DEPARTMENTS, SAFETY, FUTURE PROBLEMS, CONSEQUENCES OF NOT GIVING THIS PROBLEM HIGH PRIORITY
- B. URGENCY — RAISES TIMELINESS ISSUE. CRITICALITY OF TIME PRESSURE, ARE INTERIM OR STOPGAP ACTIONS TO GAIN TIME INDICATED
- C. GROWTH — RAISES QUESTION OF TREND OF THE PROBLEM SUCH AS: WILL PROBLEM GET PROGRESSIVELY WORSE OR BURN OUT AND DISAPPEAR. WHAT IS PROBABLE TREND PREDICTED FOR IT

## 2. COMMITMENTS MADE TO OR MANDATED BY REGULATOR MUST ALSO BE PRIORITIZED

- A. REGULATORY — MUST BE TAGGED BY SYSTEM TO INDICATE REGULATORY IMPORTANCE
- B. CLASSIFICATION — INDICATES FIRMNESS OF DATES
- C. SERIOUSNESS — SAME AS 1.A. ABOVE



# STANDARD CODE DESCRIPTION



# FIVE YEAR PLAN SORT AND SELECT ANALYSIS

## (32 AUGMENTED OFF-GAS)

ELEMENT NUMBER		DESCRIPTION	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
32010101	R/A	EVALUATE AND IDENTIFY SOURCES OF WATER IN AOG SYSTEM PROBLEM STATEMENT: SYSTEM ROUTINELY BECOMES WATER BOUND AND LACKS DRAINING CAPABILITY WHICH INTERRUPTS OFF-GAS FLOWS, BLOWS LOOP SEALS AND RELEASES RADIOACTIVE GAS	N/A	B4 PRIORITY	HIGH	STEADY (R)	PLANT RUNNING	TECH
32020101	R/A	ID 7 CORRECT VALVE PROBLEMS (LS ETC) PROBLEM STATEMENT: VALVE POSITION SWITCHES AND DRAIN VLVS WERE MISAPPLIED IN ORIGINAL DESIGN. OTHER MISC VALVE PROBLEMS EXIST (PCV's TO PREHEATER, ELEVATION OF LCV's AT LOOP SEAL)	N/A	B4 PRIORITY	HIGH	DECREASING (PR)	POWER REDUCTION	TECH
32030201	R/A	UPGRADE AOG INSTRUMENTATION ORIGINAL AOG SYSTEM INSTRUMENTATION IS DEGRADED AND/OR INADEQUATE	N/A	B4 PRIORITY	LOW	STEADY (SO)	SYSTEM OUTAGE	TECH
32040101	R/A	DEVELOP MEANS FOR CHANGEOUT OF AOG CHARCOAL PROBLEM STATEMENT: AOG SYSTEM CHARCOAL CHANGEOUT IS NOT FACILITATED BY PRESENT DESIGN	N/A	B4 PRIORITY	LOW	INCREASING (SO)	SYSTEM OUTAGE	TECH
32010202	SDJA	INSTALL (ADD) REMOTE OPERATORS ON DRAIN VALVES AND LEAK-OFFS PROBLEM STATEMENT: AOG SYSTEM ROUTINELY BECOMES WATER BOUND AND LACKS DRAINING CAPABILITY WHICH INTERRUPTS OFF-GAS FLOW, BLOWS LOOP SEALS AND RELEASES RADIOACTIVE GAS	N/A	A2 PRIORITY	LOW	STEADY (SO)	SYSTEM OUTAGE	TECH
32030103	PSPD	CLOSEOUT EXISTING AOG PDCR PROBLEM STATEMENT: EXISTING AOG PDCR IS PARTIALLY OBSOLETE	N/A	B4 PRIORITY	LOW	STEADY (SO)	SYSTEM OUTAGE	TECH
32050104	IT&S	RESTORE "A" CATALYTIC CONVERTOR PROBLEM STATEMENT: "A" CATALYTIC CONVERTOR APPEARS TO BE INOPERABLE AND HAS NOT BEEN IN SERVICE FOR SEVERAL YEARS	N/A	B2 PRIORITY	HIGH	INCREASING (PR)	POWER REDUCTION	O&M

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FIGURE 7

Revision \_\_\_\_\_  
Date \_\_\_\_\_

FIVE YEAR LEVEL I PLANNING

1. System/Issue:	No. _____	Description _____
		_____
		_____
		_____
2. Problem Statement:		_____
		_____
		_____
		_____
		_____
		_____
3. Scope Statement:		_____
		_____
		_____
		_____
		_____
		_____
		_____
		_____
4. Priority:		_____
5. Funding:	Capital _____	Expense _____
	Authorization No. _____	
	Work Order _____	Account _____ CA _____
6. Products Required: (Analysis, Report, PDCR, Spec, etc.)		_____
		_____
		_____
		_____
		_____

G. Special Construction:  
(Tools/Methods)

---

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---

H. Constraints:

I. Work Areas

---

II. Manloading

---

III. Procedures

---

IV. Plant Environment  
(ALARA)

---

---

V. Other

---

---

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---

9. Turnover/Startup Requirements:  
(Training, Spare Parts,  
Procedures, etc.)

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10. Closeout Requirements:  
(Documents, etc.)

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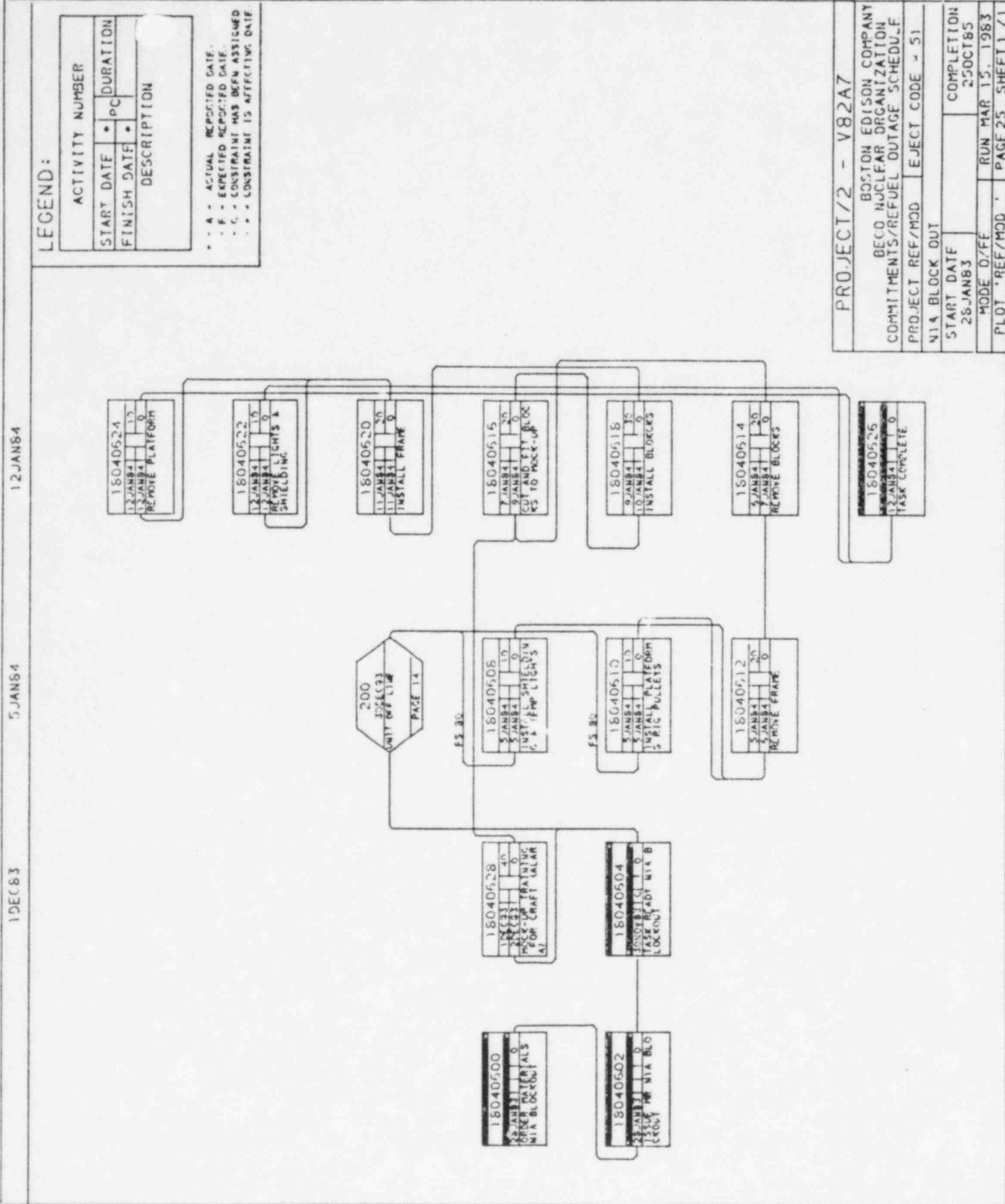
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7. Work Assignments:	BECO	Contractor
A. Analyze/Design	_____	_____
	(Group)	(Specify)
B. Procurement	_____	_____
	(Group)	(Bechtel/Other)
C. Installation	_____	_____
	(Maint/CMG)	(Bechtel/Other)
8. Implementation:		
A. Material/Equipment:	_____	
(pipe, valves, conduit, cable, etc.)	(Indicate size, type, quantity)	
	_____	
	_____	
	_____	
	_____	
B. Plant Status:	Running_____	
	System Outage_____	
	Plant Outage_____	
	Refuel Outage_____	
C. Plant Work Areas:	_____	
(Where? - elevation, quad, building, plant coordinates)	_____	
	_____	
	_____	
D. Pipe/Conduit Routing:	_____	
(From - through - to)	_____	
	_____	
	_____	
E. Interferences:	_____	
	_____	
	_____	
F. Mods to Associated:	_____	
(Systems/Structures)	_____	
	_____	
	_____	



## MHS SUMMARY

[illegible]

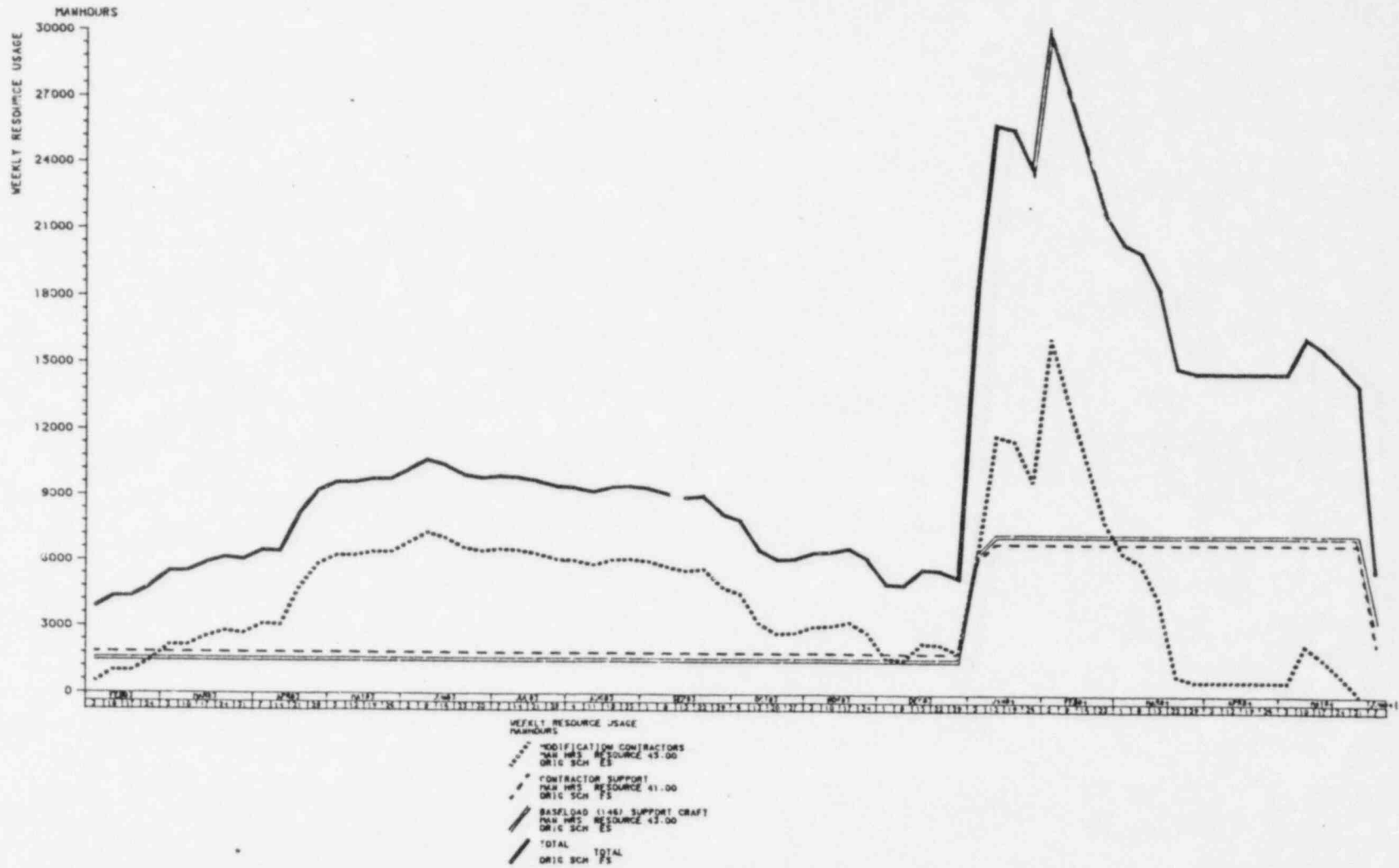






GRAPHIC REPORT WRITER  
MANPOWER AND DOLLAR DISTRIBUTION  
FOR NRC COMMITMENTS

PLOT FEB 1984 PAGE 1 SHEET 1



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FIGURE 13

ATTACHMENT

B

LISTING OF REGULATOR  
REQUIREMENTS BY SYSTEM/ISSUE

## FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 12APR83 1517HRS

\*\*\* SORT &amp; SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: 5YEAPA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE	6	STATION COMPUTER	EJECT	NODES	DATA DATE	3JAN83	PAGE	1	
ELEMENT NUMBER	DESCRIPTION			REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
6010201	R/A	CONTROL ROOM REVIEW PROBLEM STATEMENT: PLANT COMPUTER IS AGING & UNRELIABLE PARTS ARE UNAVAILABLE ADDITIONAL CAPACITY IS NEEDED & PROBLEMS HAVE TECH SPEC IMPACT. NUREG 0737 SUPP 1 REQUIRES ADDITION OF SPOS SYSTEM. NEW COMPUTER WILL REQUIRE CONVERSION & ADDITION OF SOFTWARE	R3	B4				(R)	TECH (NED)
6010301	R/A	IO INPUTS/OUTPUTS & PERIPHERAL CONFIG. (INCREASE SIGNAL CAPABILITY) PROBLEM STATEMENT: PLANT COMPUTER IS AGING & UNRELIABLE PARTS ARE UNAVAILABLE ADDITIONAL CAPACITY IS NEEDED & PROBLEMS HAVE TECH SPEC IMPACT. NUREG 0737 SUPP 1 REQUIRES ADDITION OF SPOS SYSTEM. NEW COMPUTER WILL REQUIRE CONVERSION & ADDITION OF SOFTWARE	R3	B4				(R)	TECH (NED)
6010401	R/A	INTEGRATE NEW COMPUTER SPOS PROBLEM STATEMENT: PLANT COMPUTER IS AGING & UNRELIABLE PARTS ARE UNAVAILABLE ADDITIONAL CAPACITY IS NEEDED & PROBLEMS HAVE TECH SPEC IMPACT. NUREG 0737 SUPP 1 REQUIRES ADDITION OF SPOS SYSTEM. NEW COMPUTER WILL REQUIRE CONVERSION & ADDITION OF SOFTWARE	R3	B4				(R)	TECH (NED)

## FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 12APR83 1517HRS

\*\*\* SORT &amp; SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: 5YEARA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE#	7	SECURITY	EJECT	NODES	DATA DATE	3JAN83	PAGE	2	
ELEMENT NUMBER	DESCRIPTION			REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
7010201	R/A	NED SUPPORT TO COMPLY WITH NRC SECURITY REQUIREMENTS PROBLEM STATEMENT: NONE PROVIDED			R3	B4		(R)	TECH (NED)
7000301	R/A	REVIEW & EVAL EFFECTIVE WAY TO INSTRUMENT SECURITY FENCE PROBLEM STATEMENT: NONE PROVIDED			R3	B4		(R)	TECH (NED)

## FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 17APR83 1517HRS

\*\*\* SORT &amp; SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: SYEARA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE	R	SITE IMPROVEMENTS	EJECT	NODES						DATA DATE	3JAN83	PAGE	3
ELEMENT NUMBER		DESCRIPTION	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE					
8020101	R/A	DESIGN AND CONSTRUCT HAZARDOUS MATERIAL BUILDING PROBLEM STATEMENT: PRESENT FACILITIES FOR HAZARDOUS MATERIAL STORAGE IS INADEQUATE	R3	R4			(?)	TECH (PT)					
8010104	ITRS	DESIGN AND CONSTRUCT GAS BOTTLE STORAGE FACILITY PROBLEM STATEMENT: EXISTING FACILITY DOES NOT CONFORM TO CODES/STANDARDS.	R3	P1			(R)	MC					

## FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 12APR83 1517HRS

\*\*\* SORT &amp; SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: 5YEARA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE	11 CRD SYSTEMS	EJECT	NODES	DATA DATE	3JAN83	PAGE	4
ELEMENT NUMBER	DESCRIPTION	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
11010201	R/A EVALUATE AND UPGRADE CRD HYD. SYSTEM DYNAMICS INCLUDING WATER HAMMER PROBLEM STATEMENT: NRC WILL SOON REQUIRE ADDING WATER HAMMER LOADS TO CRD PIPE ANALYSIS WHICH WILL REQUIRE REANALYSIS & POSSIBLE MODS	R3	B4			(P0)	TECH (NED)
11040103	PSPD DESIGN 2 REDUNDANT SCRAM DISCHARGE VOLUMES AND HEADER DRAIN LINES PROBLEM STATEMENT: SDV UPGRADE REQUIRED.	R3	B1			(P0)	TECH (NED)
11040104	IT&S INSTALL 2 REDUNDANT SCRAM DISCHARGE VOLUMES AND HEADER DRAIN LINES PROBLEM STATEMENT: SDV UPGRADE REQUIRED.	R3	B1			(P0)	RC
11040203	PSPD DESIGN SDV VENT VALVES AND PIPING PROBLEM STATEMENT: SDV UPGRADE REQUIRED.	R3	B1			(P0)	TECH (NED)
11040204	IT&S INSTALL SDV VENT VALVES AND PIPING PROBLEM STATEMENT: SDV UPGRADE REQUIRED.	R3	B1			(P0)	RC
11040303	PSPD DESIGN AND INSTALL SDV DRAIN VALVES AND PIPING PROBLEM STATEMENT: SDV UPGRADE REQUIRED.	R3	B1			(P0)	TECH (NED)
11040304	IT&S INSTALL SDV DRAIN VALVES AND PROBLEM STATEMENT: SDV UPGRADE REQUIRED.	R3	B1			(P0)	RC
11040403	PSPD DESIGN IMPROVED SDV INSTRUMEN- TATION SYSTEM AND CABINETS PROBLEM STATEMENT: NRC SDV UPGRADE TO SINGLE FAILURE PROOF/SEPARATED SYSTEMS.	R3	B1			(P0)	TECH (NED)
11040404	IT&S INSTALL IMPROVED SDV INSTRUMEN- TATION SYSTEM AND CABINETS PROBLEM STATEMENT: NRC SDV UPGRADE TO SINGLE FAILURE PROOF/SEPARATED SYSTEMS.	R3	B1			(P0)	RC
11050101	R/A INSTALL STABILIZING VALVES PROBLEM STATEMENT: NUREG-0619 REQUIREMENT TO MINIMIZE TEMP TRANSIENTS.	R3	B1			(P0)	TECH (NED)
11060201	R/A EVAL/REPLACE CARBON STEEL CRD RWCU EXHAUST LINE WITH STAINLESS STEEL	R3	B1			(P0)	TECH (NED)

CODE# 11 CRD SYSTEMS EJECT NODES DATA DATE 3JAN83 PAGE 5

ELEMENT NUMBER	D E S C R I P T I O N	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
-------------------	-----------------------	--------------	-------------------	---------	--------	---------------------	----------

PROBLEM STATEMENT: NUREG 0619: POTENTIAL FOR  
CRACKS IN FW NOZZLES & CRD RETURN LINE NOZZLES.



## FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 12APR83 1517HRS

\*\*\* SORT &amp; SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: 5YEARA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE	14	RECIRCULATION SYSTEM	EJECT	NODES						DATA DATE	3JAN83	PAGE	6
ELEMENT NUMBER		DESCRIPTION	REG CLASS	NDORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE					
14010104	IT&S	INS. RECIRC WELDS AND EVALUATE INSPECT RESULTS PROBLEM STATEMENT: RECIRC AUS SS PIPE EXHIBITING CRACKS MUST BE REPLACED AND/OR REPAIRED (IER 83-01).	R3	B1			(P0)	UC					
14050104	IT&S	INSPECT JET PUMP BEAMS PROBLEM STATEMENT: GENERIC JET PUMP BEAM INSPECTION REQUIRED FOR POTENTIAL CRACKS.	R3	B1			(R0)	UC					

F I V E   Y E A R   P L A N

BOSTON EDISON COMPANY

RUN DATE 12APR83 1517HRS

\*\*\* S O R T   &   S E L E C T   A N A L Y S I S   \*\*\*

PROJECT START 3JAN83

PROJECT: 5YEARA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE= 10 MISC ELECTRICAL EJECT NODES DATA DATE 3JAN83 PAGE 7

ELEMENT NUMBER	D E S C R I P T I O N	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
15030201	R/A MONITOR X01 AND X22 AND EVALUATE MOD FOR LOAD BALANCING PROBLEM STATEMENT: UNDER CERTAIN OPERATING CONDITIONS TRANSFORMERS X-21 & X-22 CAN EXPERI ENCE ACCELERATED AGING DUE TO LOADING	R3	B4			(P0)	TECH (NED)

## FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 12APR83 1517HRS

\*\*\* SORT &amp; SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: SYCARA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE	1R MISC STRUCTURAL	EJECT	NODES	DATA DATE	3JAN83	PAGE	8
ELEMENT NUMBER	DESCRIPTION	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
18030102	SDJA REVIEW OPERATOR TRAINING PROCEDURES WITH REGARDS TO LIFTING AND RIGGING PROBLEM STATEMENT: NUREG 0619 ISSUED WITH AN OBJECTIVE TO CONTROL MOVEMENT OF HEAVY LOADS TO MINIMIZE LOAD DROPS AFFECTING SAFE OPERATION/ SHUTDOWN OF PLANT.	R3	B1			(R)	TECH (PT)
18030104	ITLS REVIEW OPERATOR TRAINING PROCEDURES WITH REGARDS TO LIFTING AND RIGGING PROBLEM STATEMENT: NUREG 0619 ISSUED WITH AN OBJECTIVE TO CONTROL MOVEMENT OF HEAVY LOADS TO MINIMIZE LOAD DROPS AFFECTING SAFE OPERATION/ SHUTDOWN OF PLANT.	R3	B1			(R)	O & M
18030202	SDJA ESTABLISH "SAFE LOAD PATHS & INCORPORATE INTO PNPS PROCEDURE PROBLEM STATEMENT: NUREG 0619 ISSUED WITH AN OBJECTIVE TO CONTROL MOVEMENT OF HEAVY LOADS TO MINIMIZE LOAD DROPS AFFECTING SAFE OPERATION/ SHUTDOWN OF PLANT.	R3	B1			(R)	TECH (NED)
18030204	ITLS ESTABLISH "SAFE LOAD PATHS & INCORPORATE INTO PNPS PROCEDURE PROBLEM STATEMENT: NUREG 0619 ISSUED WITH AN OBJECTIVE TO CONTROL MOVEMENT OF HEAVY LOADS TO MINIMIZE LOAD DROPS AFFECTING SAFE OPERATION/ SHUTDOWN OF PLANT.	R3	B1			(R)	O & M
18030302	SDJA PERFORM A DESIGN REVIEW OF MECHANICAL LIFTING EQUIP PROBLEM STATEMENT: NUREG 0619 ISSUED WITH AN OBJECTIVE TO CONTROL MOVEMENT OF HEAVY LOADS TO MINIMIZE LOAD DROPS AFFECTING SAFE OPERATION/ SHUTDOWN OF PLANT.	R3	B1			(R)	TECH (NED)
18030402	SDJA ANALYZE "NON SINGLE FAILURE PROOF" CRANES TO EST. CONFORMANCE FOR HEAVY LOADS PROBLEM STATEMENT: NUREG 0619 ISSUED WITH AN OBJECTIVE TO CONTROL MOVEMENT OF HEAVY LOADS TO MINIMIZE LOAD DROPS AFFECTING SAFE OPERATION/ SHUTDOWN OF PLANT.	R3	B1			(R)	TECH (NED)
18030502	SDJA TAKE FOLLOW-UP ACTION (REVISE PROCEDURES PURCHASE HARDWARE PROBLEM STATEMENT: REQUIREMENTS ANALYSIS RESULTS	R3	B1			(R)	TECH (PT)

CODE# 18 MISC STRUCTURAL		EJECT	NODES			DATA DATE 3JAN83	PAGE 9
ELEMENT NUMBER	DESCRIPTION	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
18030504	ITKG 5) TAKE FOLLOW-UP ACTION (REVISE PROCEDURES PURCHASE HARDWARE PROBLEM STATEMENT: REQUIREMENTS ANALYSIS RESULTS OF HEAVY LOADS MUST BE TAKEN TO COMPLETION.	R3	B1			(R)	O & M
18030602	SDJA 6) FILE FINAL REPORT WITH NRC DOCUMENTING PROBLEM STATEMENT: HEAVY LOAD ACTION PLAN CLOSE- OUT.	R3	B1			(R)	TECH (NEO)
18070102	SDJA REVIEW LOADS TO EXISTING STEEL FROM STRUCTURAL MODS PROBLEM STATEMENT: VARIOUS PROJECT MODIFICATIONS (I.E., BLOCKWALLS, BASE PLATES & PIPE SUPPORTS) HAVE RESULTED IN NEW LOADS TRANSMITTED TO EXIST- ING STRUCTURAL STEEL.	R3	B4			(R)	TECH (NEO)

FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 12APR83 1017HRS

\*\*\* SORT & SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: 5YEARA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE	19 DIESEL/GENERATOR	EJECT	NODES					DATA DATE	3JAN83	PAGE	10
ELEMENT NUMBER	DESCRIPTION	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE				
19010101	R/A RESOLVE LOADING TIME FOR DIESEL GENERATOR AND SET TOLERANCE BAND PROBLEM STATEMENT: DESIGN DOCU'S DO NOT AGREE WITH ACTUAL DIESEL GENERATOR LOADING TIME.	R3	B1			(R)	TECH (PT)				

## FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 12APR83 1517HRS

\*\*\* SORT &amp; SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: SYCARA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE# 29 NUCLEAR INSTRUMENTATION EJECT NODES DATA DATE 3JAN83 PAGE 11

ELEMENT NUMBER	DESCRIPTION	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
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20010102	50JA REVISE TECH SPEC FOR BYPASS FUNCTION ON APRM'S PROBLEM STATEMENT: EXISTING CONFIGURATION ON APRM/IPRM BYPASS FUNCTION POTENTIAL FOR VIOLATION OF TECH SPECS.	R3	B4			(R)	TECH (NED)
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## FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 12APR83 1517HRS

\*\*\* SORT &amp; SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: GYARA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE# 26 STANDRY GAS TREATMENT EJECT NODES DATA DATE 3JAN83 PAGE 12

ELEMENT NUMBER	D E S C R I P T I O N	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
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26030101	PSPD SUBMIT A REPORT VERIFY SV'S REPLACED DOCUMENT DAMPER REPAIR & TEST DOCUMENT SURV. INS. DOCUMENT DRAWING VERIFY DOCUMENT PCN'S PROBLEM STATEMENT:10/2/81 FAILURE TO PASS SECONDARY CONTAINMENT LEAK RATE TEST HAS RESULTED IN LER 81-55	R3	B4			(R)	TECH (PT)
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## FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 12APR83 1517HRS

\*\*\* SORT &amp; SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: 5YEARA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE#	20 REACTOR PROTECTION SYSTEM	EJECT	NODES					DATA DATE 3JAN83	PAGE 13
ELEMENT NUMBER	DESCRIPTION	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE		
28010101	R/A INSTALL CLASS IE PROTECTION/ISOLATION FOR PPS POWER SUPPLIES TO MEET NRC'G PROBLEM STATEMENT: PPS POWER SUPPLIES NOT CLASS IE PROTECTED.	R3	B1			(P0)	TECH (NED)		



## FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 12APR83 1517HRS

\*\*\* SORT &amp; SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: 5YEARA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE	29 RHR/CORE SPRAY	EJECT	NODES	DATA DATE	3JAN83	PAGE	14
ELEMENT NUMBER	DESCRIPTION	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
39040404	IT&S INSPECT EACH OUTAGE PROBLEM STATEMENT: GENERIC INSPECTION REQUIREMENT.	R3	B1			(R0)	UC

## FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 12APR83 1517HRS

\*\*\* SORT &amp; SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: NYEARA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE#	30 FIRE PROTECTION	EJECT	NODES					DATA DATE 3JAN83	PAGE 15
ELEMENT NUMBER	DESCRIPTION	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE		
30010103	PSPD REROUTE APPROX. 70 CABLE TO MEET SEPARATION CRITERIA (APPENDIX "R") PROBLEM STATEMENT: 10CFR 50, APP R IS A LEGAL REQUIREMENT.	R3	B4			(R)	TECH (NED)		
30010104	PSPD REROUTE APPROX. 70 CABLE TO MEET CRITERIA (APPENDIX "R") PROBLEM STATEMENT: 10CFR 50, APP R IS A LEGAL REQUIREMENT.	R3	B4			(R)	RC		
30010203	PSPD POTENTIAL IMPACT ON CABLE REROUTE ALTERNATE SHUTDOWN/RELOCATE ONE PANEL MOD 2 PANELS (APPENDIX "R") PROBLEM STATEMENT: 10CFR 50, APP R IS A LEGAL REQUIREMENT.	R3	B4			(R)	TECH (NED)		
30010204	PSPD POTENTIAL IMPACT ON CABLE REROUTE SHUTDOWN-RELOCATE ONE PANEL MOD 2 PANELS (APPENDIX "R") PROBLEM STATEMENT: 10CFR 50, APP R IS A LEGAL REQUIREMENT.	R3	B4			(R)	RC		
30010307	PSPD ANALYZE BREAKER TO FUSE ISSUE (APPENDIX R) PROBLEM STATEMENT: 10CFR 50, APP R IS A LEGAL REQUIREMENT.	R3	B4			(R)	TECH (NED)		
30010403	PSPD SEEK EXEMPT ON FIRE ZONE ISSUES, PROCESS VARIABLES HI/LO PRESS INTERFACE (APPENDIX "R") AND SCHEDULE PROBLEM STATEMENT: 10CFR 50, APP R IS A LEGAL REQUIREMENT.	R3	B4			(R)	TECH (NED)		
30010601	PSPD REVAL/RESUBMIT IMPACT OF NRC REGT AND INTEGRATE W/ 5 YEAR PLAN PROBLEM STATEMENT: NRC IMPOSED COMPLETION SCHEDULE FOR APPENDIX R MODS.	R3	B1			(R)	TECH (NED)		
30040101	R/A RESOLVE CC, ANI, NRC CONCERNS PROBLEM STATEMENT: VARIOUS FIRE PROTECTION ISSUES.	R3	B4			(R)	TECH (NED)		

## FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 12APR83 1517HRS

\*\*\* SORT &amp; SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: SYEARA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE# 35 CONTAINMENT ATMOS CONT SYS (CACS) EJECT NODES DATA DATE 3JAN83 PAGE 16

ELEMENT NUMBER	D E S C R I P T I O N	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
15030101	R/A CONT. EVAL 59.44 MEMO TO LIC. STATING THAT IN CONJ. WITH THE BWORG REPORT WE MAY NOT NEED A RECOMBINER BECAUSE A - EVAL AIR IN LEAKAGE (RELATED TO N2 IN CONTAINMENT) R - GO ALONG WITH BWORG REPORT PROBLEM STATEMENT: THE NRC HAS ISSUED A REVISION TO 10CFR 59.44 ON CONTROL OF COMBUSTIBLE GAS IN THE CONTAINMENT.	R3	B4			(R)	TECH (NED)

## FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 12APR83 1517HRS

\*\*\* SORT &amp; SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: 5YEARA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODES	PROGRAMS	EJECT	NODES	DATA DATE	3JAN83	PAGE	17
ELEMENT NUMBER	DESCRIPTION	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
99070304	IT&S 34 NOZZLE TO VESSEL SHELL WELDS AND THE INNER RADII	R3	B1			(R0)	UC
99070404	IT&S 18 NOZZLE TO SAFE-END WELDS	R3	B1			(R0)	UC
99070504	IT&S 56 REACTOR PRESSURE VESSEL STUDS, NUTS, WASHERS, AND LIGAMENTS	R3	B1			(R0)	UC
99070604	IT&S 36 RECIRCULATION PUMP STUDS	R3	B1			(R0)	UC
99070704	IT&S VARIOUS PRESSURE RETAINING BOLTS (<2")	R3	B1			(R0)	UC
99070804	IT&S APPROXIMATELY 2 HUNDRED FEET OF SKIRT WELD	R3	B1			(R0)	UC
99070904	IT&S APPROXIMATELY 2 HUNDRED CIRCUMFERENTIAL PIPE WELDS IN CLASS 1 SYSTEMS	R3	B1			(R0)	UC
99071004	IT&S 20 INTEGRALLY WELD SUPPORTS IN PIPE, VALVES AND PUMPS	R3	B1			(R0)	UC
99071104	IT&S VISUALLY EXAMINE APPROXIMATELY 2 HUNDRED SUPPORTS IN THE CLASS 1, 2, AND 3 SYSTEMS	R3	B1			(R0)	UC
99071204	IT&S VISUALLY EXAMINE THE INTERNAL SURFACE OF TWENTY-FIVE VALVE CATEGORIES	R3	B1			(R0)	UC

## FIVE YEAR PLAN

ROSTON EDISON COMPANY

RUN DATE 12APR83 1517HRS

\*\*\* S O R T &amp; S E L E C T A N A L Y S I S \*\*\*

PROJECT START 3JAN83

PROJECT: EYSARA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE=	100	MAJOR LICENSING ISSUES	EJECT	NODES	DATA DATE	3JAN83	PAGE	18
ELEMENT NUMBER	D E S C R I P T I O N		REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
100020103	PSPD	DEVELOP MASTER LIST OF EQUIP. TO SUPPORT 79-01B PROBLEM STATEMENT: LIST OF ENVIRONMENTALLY AFFECTED EQUIPMENT DOES NOT EXIST.	R3	B1			(R)	TECH (NED)
100020203	PSPD	DEFINE ENVIRONMENT PER 79-01B	R3	B1			(R)	TECH (NED)
100020303	PSPD	DEVELOP QUAL. DATA PER 79-01B PROBLEM STATEMENT: STANDARDS TO DETERMINE ENVIRONMENTAL QUAL. DEVIATIONS DO NOT EXIST.	R3	B1			(R)	TECH (NED)
100020403	PSPD	ESTABLISH AND MAINTAIN EQUIPMENT QUALIFICATION FILE PER 79-01B PROBLEM STATEMENT: QUALIFICATION FILES REFLECTING 79-01-B HAVE NOT BEEN ESTABLISHED.	R3	B1			(R)	TECH (NED)
100020503	PSPD	COMPARE 79-01B QUAL DATA TO SERVICE DATA PROBLEM STATEMENT: EXISTING SERVICE DATA MAY NOT SUPPORT NEW ENVIRONMENTAL CRITERIA AND MUST BE DOCUMENTED.	R3	B1			(R)	TECH (NED)
100020604	IT&S	REPAIR/REPLACE OR RELOCATE 79-10B UNQUALIFIED EQUIPMENT AS REQUIRED PROBLEM STATEMENT: WHEN QUAL/SERVICE DATA DEVIATION EXISTS, IT MUST BE CORRECTED.	R3	B1			(R)	RC
100020704	IT&S	IMPLEMENT EQUIP QUAL. MAINT PROGRAM PROBLEM STATEMENT: ONE EQUIPMENT IS ENVIRONMENTALLY UPGRADED, ITS QUAL. LIFE CANNOT BE JEOPARDIZED.	R3	B1			(R)	O & M
100020800	C/O	RESPOND TO 79-01B TO NRC PROBLEM STATEMENT: 79-01B CLOSE-OUT DOCUMENTATION REQUIRED AFTER PROJECT COMPLETION.	R3	B1			(R)	TECH (NED)
100030203	PSPD	NUREG 0737 POST IMPLEMENTATION REVIEW ITEMS PROBLEM STATEMENT: COMPLETION OF POST IMPLEMENTATION REVIEW ITEMS REQUIRED UNDER 10CFR 50.44.	R3	B4			(R)	TECH (NED)
100030403	PSPD	REVIEW AND ESTABLISH THIFT STAFFING/NORMAL OPER. PER IMI-0737 PROBLEM STATEMENT: NUREG 0803 ESTABLISHES CRITERIA FOR SDV SYSTEM RUPTURE NOT REFLECTED IN PROCEDURES.	R3	B1			(R)	O & M

CODE#		100 MAJOR LICENSING ISSUES	EJECT	NODES			DATA DATE	3JAN83	PAGE	19
ELEMENT NUMBER		DESCRIPTION	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE		
1000R0301	R/A	REDUCTION OF IODINE CONCENTRATION LIMITS (REQ'S TECH SPEC CHANGE) PROBLEM STATEMENT: BECO/GE POSITION ON NUREG 0803 (SEE NEDO-22209) IS THAT PNPS IS PRESENTLY ADEQUATE. NRC EVALUATION MAY REQUIRE FURTHER MODS/ACTIONS.	R3	B4			(R)	TECH (PT)		
1000R0401	R/A	REVIEW PROCEDURES (MAINTENANCE AND EMER- GENCY) FOR SDV SYSTEM RUPTURE. PROBLEM STATEMENT: NUREG 0803 ESTABLISHED CRITERIA FOR SDV SYSTEM RUPTURE NOT REFLECTED IN PROCEDURES.	R3	B1			(R)	TECH (NED)		
1000R0501	R/A	ENVIRONMENT QUAL OF EQUIP REQUIREMENTS TO MITIGATE THE EFFECTS OF SDV. RUPTURE (ENORMOUS FINANCIAL IMPACT) PROBLEM STATEMENT: NRC FEELS SCRAM DISCHARGE VOLUME INTEGRITY IS IN QUESTION. BECO/GE EVALUA- TION CONCLUDING SDV INTEGRITY IS ADEQUATE IS UNDER NRC REVIEW.	R3	B4			(R)	TECH (NED)		
1000R0205	C/O	CLOSEOUT ATWS MODS COMPLETED TO DATE PROBLEM STATEMENT: ATWS MODS PERFORMED TO DATE (I.E., ARI, RPT) REQUIRE CLOSEOUT.	R3	B4			(R)	TECH (NED)		
1000R0301	R/A	DETERMINE NEEDS FOR ARI TECH SPEC PROBLEM STATEMENT: AN EVALUATION IS REQUIRED TO DETERMINE THE NEED FOR A TECHNICAL SPECIFICATION TO SUPPORT AUTOMATIC ROD INSPECTION MOD.	R3	B4			(R)	TECH (NED)		

## FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 10APR83 1517HRS

\*\*\* SORT &amp; SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: 6YEARS

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE= 101 ISI

EJECT NODES

DATA DATE 3JAN83 PAGE 20

ELEMENT NUMBER	DESCRIPTION	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
101010104	IT&S EST & IMPL UT/PT FW & CRD RETURN LINE NOZZLE INSPECT PROGRAM PROBLEM STATEMENT: THERE IS A HIGH INDUSTRY INCIDENCE OF FEED NOZZLE CRACKING. ROOT CAUSE DETERMINED TO BE THERMAL TRANSIENTS AT THE NOZZLES. CRD RETURN LINE NOZZLES HAVE SIMILAR PROBLEM.	R3	R4			(R0)	UC

## FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 12APR83 1517HRS

\*\*\* SORT &amp; SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: SYEAPA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE= 103 SECY-82-111

EJECT NODES

DATA DATE 3JAN83 PAGE 21

ELEMENT NUMBER	DESCRIPTION	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
103010101 R/A	EVAL AND SPECIFY SPDS PROBLEM STATEMENT: TRAINING, PROCEDURES, INDICATIONS (INTELLEGEENCE) MAY NOT BE PROVIDED TO OPERATIONS TO RECOGNIZE & MITIGATE THE CONSEQUENCES OF A DEGRADED CORE SITUATION	R3	B4			(R)	TECH (STA)
103010201 R/A	PERFORM CONTROL ROOM DESIGN & RECOMMEND PROBLEM STATEMENT: TRAINING, PROCEDURES, INDICA TIONS (INTELLEGEENCE) MAY NOT BE PROVIDED TO OPERATIONS TO RECOGNIZE AND MITIGATE THE CONSEQUENCES OF A DEGRADED CORE SITUATION.	R3	B4			(R)	TECH (NED)
103010301 R/A	EVAL IMPACT 1.97 & RECOM PROBLEM STATEMENT: TRAINING, PROCEDURES, INDICATIONS (INTELLEGEENCE) MAY NOT BE PROVIDED TO OPERATIONS TO RECOGNIZE & MITIGATE THE CONSEQUENCES OF A DEGRADED CORE SITUATION	R3	B4			(R)	TECH (NED)
103010403 PSPD	DECIDE FORMAT & CONTENT & DEVELOP EOP'S PROBLEM STATEMENT: TRAINING, PROCEDURES, INDICATIONS (INTELLEGEENCE) MAY NOT BE PROVIDED TO OPERATIONS TO RECOGNIZE & MITIGATE THE CONSEQUENCES OF A DEGRADED CORE SITUATION	R3	B4			(R)	TECH (STA)
103010501 R/A	REVIEW & UPDATE REQUIRED TRAINING PROBLEM STATEMENT: TRAINING, PROCEDURES, INDICATIONS (INTELLEGEENCE) MAY NOT BE PROVIDED TO OPERATIONS TO RECOGNIZE & MITIGATE THE CONSEQUENCES OF A DEGRADED CORE SITUATION	R3	B4			(R)	TECH (NED)
103020101 R/A	EVAL & UPGRADE TSC PROBLEM STATEMENT: EMERGENCY RESPONSE FAC DO NOT MEET NRC CRITERIA	R3	B4			(R)	TECH (NED)
103020201 R/A	EVAL & UPGRADE ECG PROBLEM STATEMENT: EMERGENCY RESPONSE FAC DO NOT MEET NRC CRITERIA	R3	B4			(R)	TECH (NED)
103020301 R/A	EVAL & UPGRADE OSC PROBLEM STATEMENT: EMERGENCY RESPONSE FAC DO NOT MEET NRC CRITERIA	R3	B4			(R)	TECH (PT)



## FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 12APR83 1517HRS

\*\*\* SORT &amp; SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: SYEARA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE= 109 TORUS MOS

EJECT NODES

DATA DATE 3JAN83 PAGE 22

ELEMENT NUMBER	DESCRIPTION	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
109010203	PSPD DESIGN COLUMN TIE DOWN INSTALLATION PROBLEM STATEMENT: NEW TORUS LOADS DISCOVERED BY GE ASSOC. WITH SRV LIFTING TRANSIENTS. ALL MK I TORUS DESIGNS WERE FOUND TO BE LESS THAN THE DESIGN SAFETY MARGIN AS A RESULT.	R3	B4			(R)	TECH (NED)
109010204	IT&S COLUMN TIE DOWN INSTALLATION PROBLEM STATEMENT: NEW TORUS LOADS DISCOVERED BY GE ASSOC. WITH SRV LIFTING TRANSIENTS. ALL MK I TORUS DESIGNS WERE FOUND TO BE LESS THAN THE DESIGN SAFETY MARGIN AS A RESULT.	R3	B4			(R)	RC
109010303	PSPD DESIGN REINFORCED RING GIRDER TO SHELL WELDS (T - QUENCHER BAYS) IN THE TORUS PROBLEM STATEMENT: GE HAS IDENTIFIED NEW STRUC TURAL LOADS TO THE TORUS ASSOCIATED WITH SRV TRANSIENTS. ALL MARK I TORUS DESIGNS REQUIRE MODIFICATION	R3	B4			(P0)	TECH (NED)
109010304	IT&S INSTALL REINFORCED RING GIRDER TO SHELL WELDS (T - QUENCHER BAYS) IN THE TORUS PROBLEM STATEMENT: GE HAS IDENTIFIED NEW STRUC TURAL LOADS TO THE TORUS ASSOCIATED WITH SRV TRANSIENTS. ALL MARK I TORUS DESIGNS REQUIRE MODIFICATION	R3	B4			(P0)	RC
109010603	PSPD DESIGN ADDITIONAL SUPPORTS ON SRV LINES PROBLEM STATEMENT: TORUS DESIGN DEFF. IDENTI- FIED IN MARK I PROGRAM (SHORT TERM).	R3	P1			(P0)	TECH (NED)
109010604	IT&S INSTALL ADDITIONAL SUPPORTS ON SRV LINES PROBLEM STATEMENT: TORUS DESIGN DEFF. IDENTI- FIED IN MARK I PROGRAM (SHORT TERM).	R3	P1			(P0)	RC
109010703	PSPD REDESIGN TORUS SHELL PENETRATIONS REINFORCEMENTS PROBLEM STATEMENT: NEW TORUS LOADS DISCOVERED BY GE ASSOC. WITH SRV LIFTING TRANSIENTS. ALL MK I TORUS DESIGNS WERE FOUND TO BE LESS THAN THE DESIGN SAFETY MARGIN AS A RESULT.	R3	B4			(R)	TECH (NED)
109010704	IT&S INSTALL TORUS SHELL PENETRATIONS REINFORCEMENTS PROBLEM STATEMENT: NEW TORUS LOADS DISCOVERED	R3	B4			(R)	RC

CODE# 109 TORUS MOS EJECT NODES DATA DATE 3JAN83 PAGE 23

ELEMENT NUMBER	DESCRIPTION	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
	BY GE ASSOC. WITH SRV LIFTING TRANSIENTS. ALL MK I TORUS DESIGNS WERE FOUND TO BE LESS THAN THE DESIGN SAFETY MARGIN AS A RESULT.						
109010803	PSPD REDESIGN EXTERNAL PIPING TO TORUS PROBLEM STATEMENT:GE HAS IDENTIFIED NEW STRUC- TURAL LOADS TO THE TORUS ASSOCIATED WITH SRV TRANSIENTS.ALL MARK I TORUS DESIGNS REQUIRE MODIFICATION	R3	B4			(P0)	TECH (NED)
109010804	IT&S INSTALL EXTERNAL PIPING TO TORUS PROBLEM STATEMENT:GE HAS IDENTIFIED NEW STRUC- TURAL LOADS TO THE TORUS ASSOCIATED WITH SRV TRANSIENTS.ALL MARK I TORUS DESIGNS REQUIRE MODIFICATION	R3	B4			(P0)	RC
109040104	IT&S INSTALL TORUS TEMP. MONITORING SYSTEM AND CHANGE TO TECH SPECS PROBLEM STATEMENT: EXISTING TEMP. MONITORING SYSTEM DOES NOT MEET REQUIREMENTS OF NUREG 0661-8 0783	R3	B1			(R)	RC
109040204	IT&S REPLACE/REMOVE BROKEN BEAMER IN THERMO WELLS IN TORUS PROBLEM STATEMENT: EXISTING TEMP. MONITORING SYSTEM DOES NOT MEET REQUIREMENTS OF NUREG 0661 - 8 0783.	R3	B1			(P0)	RC
109050103	PSPD DESIGN WETWELL VACUUM BREAKERS MATERIAL UPGRADE PROBLEM STATEMENT: TORUS DESIGN DEFF. IDENTI- FIED IN MARK I PROGRAM (SHORT TERM).	R3	B1			(P0)	TECH (NED)
109050104	IT&S WETWELL VACUUM BREAKERS MATERIAL UPGRADE PROBLEM STATEMENT: TORUS DESIGN DEFF. IDENTI- FIED IN MARK I PROGRAM (SHORT TERM).	R3	B1			(P0)	RC

## FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 124PR83 1517HRS

\*\*\* SORT &amp; SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: 5YEARA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE=	112 BLOCKWALLS	EJECT	NODES	DATA DATE	3JAN83	PAGE	24
ELEMENT NUMBER	DESCRIPTION	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
112010103	PSPE EVAL 13R BLOCKWALLS FOR ANCHORAGE PROBLEM STATEMENT: 13R BLOCKWALLS UNDERGOING ANCHORAGE EVALUATION. SEVERAL ANCHORAGE MODS ARE EXPECTED.	R3	B4			(R)	TECH (NED)
112010203	PSPD IMPLEMENT (15) BLOCKWALL ANCHORAGES MOD PROBLEM STATEMENT: 13R BLOCKWALLS UNDERGOING ANCHORAGE EVALUATION. SEVERAL ANCHORAGE MODS ARE EXPECTED.	R3	B4			(R)	TECH (NED)
112010204	IT&S IMPLEMENT (15) BLOCKWALL ANCHORAGES MOD PROBLEM STATEMENT: 13R BLOCKWALLS UNDERGOING ANCHORAGE EVALUATION. SEVERAL ANCHORAGE MODS ARE EXPECTED.	R3	B4			(R)	RC
112010303	PSPD COMPLETE OR REMOVE PARTIAL BLOCKWALL MODS PROBLEM STATEMENT: FIVE NON-OUTAGE SCOPE BLOCK- WALL ANCHORAGE MODIFICATIONS WERE LEFT PARTIALLY COMPLETED AT THE END OF RFO#5.	R3	B4			(R)	TECH (NED)
112010304	IT&S COMPLETE OR REMOVE PARTIAL BLOCKWALL MODS PROBLEM STATEMENT: FIVE NON-OUTAGE SCOPE BLOCK- WALL ANCHORAGE MODIFICATIONS WERE LEFT PARTIALLY COMPLETED AT THE END OF RFO#5.	R3	B4			(R)	RC
112010404	IT&S INSTALL VENT RECIRC MG WALL PROBLEM STATEMENT: DESIGN PROBLEM REQUIRING MODS (IER 80-11).	R3	B1			(PO)	RC
112010603	PSPD DEVELOP SR CONTROL DATA PAGE PROBLEM STATEMENT: IER 80-11, UNCOVERED DESIGN & CONSTRUCTION DEFICIENCIES	R3	B4			(R)	TECH (NED)

FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 12APR83 1517HRS

\*\*\* SORT & SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: EYSARA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE= 114 REACTOR WATER LEVEL EJECT NODES DATA DATE 3JAN83 PAGE 25

ELEMENT NUMBER	DESCRIPTION	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
114010201	R/A INVEST FURTHER ROOT CAUSE PROB WITH COMMON REF. LEGS RX WATER LEVEL PROBLEM STATEMENT: COMMON REFERENCE LEG APPEARS TO CAUSE INDICATION PROBLEMS DURING CHANGES IN POWER LEVELS. DRYWELL ENVIRONMENT CHANGES ALSO AFFECT RPV LEVEL IND.	R3	B4			(PR)	TECH (PT)

BOSTON EDISON COMPANY

PROJECT START 3JAN83

ORIGINAL COMPL. 3JAN83

## FIVE YEAR PLAN

BOSTON EDISON COMPANY

RUN DATE 12APR83 1517HRS

\*\*\* SORT &amp; SELECT ANALYSIS \*\*\*

PROJECT START 3JAN83

PROJECT: SYCARA

NUCLEAR ORGANIZATION

ORIGINAL COMPL. 3JAN83

CODE= 133 PASS H202

EJECT NODES

DATA DATE 3JAN83 PAGE 27

ELEMENT NUMBER	DESCRIPTION	REG CLASS	NLORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
133010103	PSPD FINALIZE PDCR 80-30 H202 PIPING PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).	R3	B1			(P0)	TECH (NED)
133010104	IT&S IMPLEMENT PDCR 80-30 H202 PIPING PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).	R3	B1			(P0)	RC
133010203	PSPD FINALIZE PDCR 80-31 PASS PIPING PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).	R3	B1			(P0)	TECH (NED)
133010204	IT&S IMPLEMENT PDCR 80-31 PASS PIPING PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).	R3	B1			(P0)	RC
133010303	PSPD FINALIZE PDCR 80-52 (PASS H202 REAGENT GAS PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).	R3	B1			(R)	TECH (NED)
133010304	IT&S IMPLEMENT PDCR 80-52 (PASS H202 REAGENT GAS PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).	R3	B1			(R)	RC
133010401	PSPD FINALIZE PDCR 80-53 C-19 MECH (PASS H202) PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).	R3	B1			(R)	TECH (NED)
133010404	IT&S IMPLEMENT PDCR 80-53 C-19 MECH (PASS H202)	R3	B1			(R)	RC

CODE#	133	PASS H202	EJECT	NODES	DATA DATE	3JAN83	PAGE	28	
ELEMENT NUMBER	D E C R I P T I O N			REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
	PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).								
133010503	PSPD	FINALIZE PDCR 80-57 PASS COOLING SYSTEM	R3	B1				(R)	TECH (NED)
	PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).								
133010504	IT&S	IMPLEMENT PDCR 80-57 PASS COOLING SYSTEM	R3	B1				(R)	RC
	PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).								
133010603	PSPD	FINALIZE PDCR 80-40 CONTROLS (PASS H202)	R3	B1				(R)	TECH (NED)
	PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).								
133010604	IT&S	IMPLEMENT PDCR 80-40 CONTROLS (PASS H202)	R3	B1				(R)	RC
	PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).								
133010703	PSPD	FINALIZE PDCR 80-42 HEAT TRACE AND INSULATE (PASS H202)	R3	B1				(SO)	TECH (NED)
	PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).								
133010704	IT&S	IMPLEMENT PDCR 80-42 HEAT TRACE AND INSULATE (PASS H202)	R3	B1				(SO)	RC
	PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).								
133010803	PSPD	FINALIZE PDCR 80-49 PWR DISTRIBUTION (PASS H202)	R3	B1				(SO)	TECH (NED)
	PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).								
133010804	IT&S	IMPLEMENT PDCR 80-49 PWR DISTRIBUTION (PASS H202)	R3	B1				(SO)	RC
	PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).								
133010903	PSPD	FINALIZE PDCR 80-53A C-19	R3	B1				(SO)	TECH (NED)

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ELEMENT NUMBER	D E S C R I P T I O N	REG CLASS	NUORG PRIORITY	URGENCY	GROWTH	PLANT CONDITIONS	RESOURCE
	PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).						
133010904	IT&S IMPLEMENT POCR 80-53A C-19 ELECT. (PASS H202) PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).	R3	B1			(SO)	RC
133011003	PSPD FINALIZE POCR 80-46 CIVIL/ PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).	R3	B1			(R)	TECH (NED)
133011004	IT&S IMPLEMENT POCR 80-46 CIVIL/ PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).	R3	B1			(R)	RC
133011103	PSPD FINALIZE POCR 80-37 HVAC (PASS H202) PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).	R3	B1			(SO)	TECH (NED)
133011104	IT&S IMPLEMENT POCR 80-37 HVAC (PASS H202) PROBLEM STATEMENT: POST ACCIDENT SAMPLING IS REQUIRED UNDER A LONG TERM LESSONS LEARNED PRO- GRAM FROM TMI-2 (NUREG 0737).	R3	B1			(SO)	RC
133011201	PSPD EVALUATE AND FINALIZE SAMPLE ANALYSIS AND HANDLING PROCEDURE AND HARDWARE (PASS H202) PROBLEM STATEMENT: IT HAS NOT BEEN DETERMINED HOW PASS4202 SAMPLES WILL BE HANDLED OR ANALYZED.	R3	B1			(R)	TECH (PT)