UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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TYPOGRAPHICAL ERRORS IN JUNE 9, 1988 TRANSCRIPT

PAGE	LINE	CHANGES	
		Transcript	Correction
6	8	SALP	self-
7	2	SALP	self-
10	6	SALP	self-
10	12	SALP	self-
10	19	SALP	self-
11	21	Wagner	Wegner
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38	6	is that their	is that they're
38	14	moving alone	moving along
51	18	findings weren't consistent	findings were consistent
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DISCLAIMER

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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BRIEFING ON STATUS OF PILGRIM

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PUBLIC MEETING

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Nuclear Regulatory Commission

One White Flint North

Rockville, Maryland

Thursday, June 9, 1988

The Commission met in opensession, pursuant to notice, at 10:00 o'clock, a.m., the Honorable LANDO W. ZECH, Chairman of the Commission, presiding.

COMMISSIONERS PRESENT:

LANDO W. ZECH, Chairman of the Commission

THOMAS M. ROBERTS, Member of the Commission

KENNETH CARR, Member of the Commission

KENNETH ROGERS, Member of the Commission

STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

S. CHILK

W. PARLER

S. SWEENEY

R. BIRD

K. HIGHFILL

R. ANDERSON

R. VARLEY

G. TAYLOR

T. MURLEY

B. RUSSELL

S. COLLINS

B. BOGER

AUDIENCE SPEAKERS

E. HOWARD

P R O C E E D I N G S

[10:00 a.m.]

CHAIRMAN ZECH: Good morning, ladies and gentlemen. This morning, the Pilgrim Nuclear Power Station officials will discuss the situation at the Pilgrim power plant. The plant was shut down by the Boston Edison Company on April 12, 1986 due to a series of hardware problems. The Nuclear Regulatory Commission Region I subsequently issued a confirmatory action letter confirming Boston Edison Company's intent to keep the plant shut down until certain management deficiencies had been corrected.

Since that time the plant has remained shut down as corrective actions have been and are being undertaken. The purpose of today's meeting is for Boston Edison Company and the NRC staff to brief the Commission concerning the status of the Pilgrim Nuclear Power Station and the actions being taken to determine the state of readiness for restart of operation at the Pilgrim plant.

Today's meeting is for information only. There will be no votes scheduled today. The Commission will meet again at a later date with the Pilgrim officials to consider a restart decision for the Pilgrim plant. That date has not been set at this time.

I understand that copies of slides are available as you enter the room today. Do any of my fellow Commissioners

have any opening comments to make?

COMMISSIONER ROGERS: Yes, Mr. Chairman, I would. I think it's very important to remind ourselves and the public that there are steps and matters which the Commission as an agency must take and carefully examine before rendering a decision which is ultimately made and formalized by a vote by individual Commissioners.

The presentation today by the licensee and by NRC Staff to the Commission is a progress report. It's one very important element in a careful process that establishes the record which the Commissioners will examine before coming to a decision. Firsthand visits by individual Commissioners to the licensee site are also of value but by themselves are not definitive.

I've recently visited the Pilgrim site and have seen for my first time the condition of the plant and the persons who are in positions of responsibility there. While I was favorably impressed by what I saw and heard in that visit, my own judgment on the issue of restart has not yet been made and will be based on all pertinent information relating to the safety of the plant including the results of full briefing by the licensee and NRC staff experts.

I will have to be satisfied that public health and safety will be protected before I will vote to approve restart of the Pilgrim nuclear plant. I'm confident that my fellow

Commissioners will approach their decision-making from a similar point of view.

CHAIRMAN ZECH: Thank you very much. Any other comments? If not, Mr. Sweeney, welcome, and you may proceed.

MR. SWEENEY: Thank you, sir, and good morning. My name is Stephen J. Sweeney. I have been CEO of Boston Edison since 1984 and Chairman of the Board since 1986. I joined Boston Edison Company thirty-four and a half years ago beginning as a test man in our laboratory in 1953.

COMMISSIONER ROBERTS: You sound like a native son.

MR. SWEENEY: I am. I welcome this opportunity to express my continuing commitment and that of our Board of Directors to provide the support and resources to ensure that Pilgrim Nuclear Power Station is run safely and reliably.

I am here today because the Board and I do believe that Pilgrim Station is well along the path to restart and successful operation. I visit the plant on an average of once a week, attending scheduled staff meetings, touring parts of the facility and meeting with senior managers. I have gone through the general employee training program for unescorted access and as a result, I have witnessed firsthand many of the physical and management changes that have taken place.

I've also observed the operator training on the simulator and have been thoroughly briefed on all aspects of the safety enhancement program. My professional and corporate

background allows me to participate at Pilgrim in more than a cursory manner. I am a Registered Professional Engineer in Massachusetts and approximately 22 years of my career at Boston Edison, my assignments were in the generating and engineering disciplines including a 4-year assignment as Vice President of Steam Electric Operations.

I took part in the meetings of the management oversight and assessment team during the SALP assessment and I was so impressed by the results that I intend to implement that program in our fossil generation and T&D areas of the company. In addition to hearing from Ralph Bird at the monthly board meetings, the Board's nuclear operations review committee and members of our executive committee toured the plant on April 12, 1988.

They observed operator training on the simulator and met with key plant managers. Their observations were reported to the full Board at our April meeting. Now before Ralph begins his formal presentation, I want to reaffirm that we are committed to achieving continually rising standards of excellence in all aspects of Pilgrim's operation. Thank you sir.

CHAIRMAN ZECH: Thank you very much. You may proceed.

MR. BIRD: Good morning. We are here to give you a status report on our progress towards restart for the Pilgrim

Nuclear Power Station which has been shutdown since April, 1986. The SALP assessment report on readiness for restart which was recently submitted contains more detailed information that is the basis for our conclusions.

I'm Ralph Bird, the Senior Vice President, Nuclear. I joined Boston Edison on January 1, 1987. I spent two months in an intensive training program on the Pilgrim Plant before assuming my responsibilities at the end of February, 1987.

Since then I have spent most of my time at the plant in order to be closer to the people and their problems. Some of my background may be of interest to you. I'm a U.S. Naval Academy graduate. I retired in 1984 as a rear admiral after spending most of my career in nuclear submarines. All of my assignments in the Navy included responsibility for leadership and management which helped to prepare me for my present job. My experience also includes training, safety evaluations and personnel and material support.

Some related assignments included commanding officer of a nuclear submarine, senior member of the Pacific Fleet Nuclear Propulsion Examining Board, and chief of staff of the Pacific Submarine Force. After leaving the Navy and before joining Boston Edison I was a consultant at several nuclear power plants and I worked for Westinghouse as a consultant and also as an employee.

When I joined Boston Edison, Mr. Sweeney and the

Board of Directors made it very clear to me that I had their complete support. That support continues and they closely follow our progress. My experience in the Navy, my observations of commercial nuclear power --

CHAIRMAN ZECH: Excuse me, do you report directly to the Board?

MR. BIRD: I report directly to the Chairman and CEO, to Steve Sweeney personally.

CHAIRMAN ZECH: To the Chairman and CEO which means that not only as Chairman but as the Board itself, you're the Chairman of the Board?

MR. SWEENEY: That's right. And I'm also CEO.

CHAIRMAN ZECH: So essentially you report to the Chairman of the Board and the Board members then, of course, are part of your senior management group, if you will.

MR. BIRD: Yes, as you mentioned --

CHAIRMAN ZECH: But you have direct access to the Chairman and to the Board?

MR. BIRD: Not only direct access, but he visits the plant at least once a week, and I talk to him on the phone.

CHAIRMAN ZECH: No, I understand that, but I want to make sure that your line of communication is directly to the Chairman and to the Board, is that correct?

MR. SWEENEY: The only senior officer in the company that reports directly to my office is Ralph.

CHAIRMAN ZECH: Thank you. That's what I wanted to know.

MR. BIRD: To continue, my experience in the Navy and my observations of commercial nuclear power and related industry convinced me that there are three keys to success in managing a large complex organization. First, high standards. That's understood throughout the organization. Second, realistic plans for achieving those standards. And finally, third, a system of controls for measuring performance against the standards.

I believe that Boston Edison's nuclear organization now meets those criteria. Although we made substantial progress, we are not completely satisfied with our current status and I really hope we never will be. I believe there is no such thing as steady-state operation. An operation that is not getting better is getting worse, and we are determined to keep on getting better.

However, we are satisfied that we are on the path to success and that we will soon be ready to request approval to restart. The two major areas requiring further work are maintenance staffing and procedures and post-work and surveillance testing which we expect to complete this summer in parallel with the ongoing NRC assessment of our readiness to restart.

When I arrived at Boston Edison my immediate task was

to assess the strengths of the organization and determine the areas that needed improvement. The next step was to assign priorities and direct our attention and resources accordingly. We have continually reassessed our situation, adjusting resources and refining the process which resulted in filing of the SALP assessment of the readiness for restart report which we recently submitted.

We evaluated management practices at Pilgrim, and we presented our conclusions to the NRC at a public meeting in September 1987. We determined plans and actions necessary for restart and in July 1987 issued our restart plan which was the basis for what has gone on since including our SALP assessment.

We conducted in-depth assessments of maintenance and radiological controls and implemented improvement actions plans covering both restart-related and longer-term actions. We conducted investigations and critiques of specific events at Pilgrim and identified actions to prevent recurrence.

All of these assessments are the building blocks which support our recent SALP assessment report. It is Boston Edison's intention and resolve to continue the self-assessment progress at Pilgrim and to drive this initiative down and across the entire nuclear organization and to make it part of our continuing everyday operation.

This morning some of the key line managers and I will describe the corrective actions taken since the plant was

shutdown and the status of our efforts to achieve continually rising standards of excellence.

The long-term management organization has been defined and almost all key positions have been filled. All of the key managers, section head and above, are Boston Edison employees. The senior management team includes about a dozen new people who brought with them over 250 man-years of successful nuclear power experience as well as some outstanding Pilgrim veterans.

They are all strong individuals who have high standards. They work well together, and they have quickly become an effective team. We've taken action to strengthen management by adding people who are among the very best in their field. There are new managers in emergency preparedness, in security, in radiological protection, operations, plant support, special projects, and quality assurance.

Shortly you will meet the new station director, Ken Highfill, and the new plant manager, Roy Anderson, and the new manager of emergency preparedness, Ron Varley. We have also upgraded the nuclear safety review and audit committee, which is the senior safety committee and brought in Bill Wagner to be the chairman. Other new outside members of this important group are Murray Miles, Henry Stone, and Jack Gregg who are widely recognized experts in their fields.

In addition to the new members of the Pilgrim team,

we have maintained continuity of work force in management through retention of most of the long-term Boston Edison employees.

[Slide.]

The condition of the plant has improved dramatically since the beginning of the outage in 1986 and the rate of improvement has accelerated through 1987 and 1988.

The plant has refueled, we have successfully completed the hydrostatic and the integrated leak rate tests. The major modification work has been completed and we are now doing testing, surveillances and continuing maintenance. Any work that is required as a result of testing is being scheduled and is being performed by our resources on site.

The details of the very extensive work being done during this period are in our SALP assessment report but some of the major projects of the outage include items such as completion of the appendix R, power protection modifications, security system upgrades, installation of a plant-specific simulator for training the operators, overhaul of the turbine generator, refurbishment of plant systems including the main steam isolation valves and the residual heat removal pumps and refurbishment of the core spray pumps and decontamination of the process buildings so that virtually all of the accessible areas can now be entered without protective clothing or breathing apparatus.

[Slide.]

We set an objective to have 90 percent of the plant decontaminated, radiologically clean, which is virtually all of the accessible area, and we met that goal.

Certainly one of the most significant projects has been the safety enhancement program which includes both equipment modifications and procedure improvements. We have dedicated significant resources to this program which exceeds the current NRC requirements and therefore is not a prerequisite for restart.

[Slide.]

Our program, which emphasizes prevention of core damage, was a Boston Edison initiative in response to the draft severe accident containment policy for boiling water reactors which the NRC staff presented to the industry in June of 1986. We have kept the NRC staff informed of our plans and the bases for our decisions in this area.

[Slide.]

The safety enhancement program modifications are now virtually complete with the exception of the direct torus vent, which is on hold pending final resolution of the NRC staff position on containment venting and the second diesel-driven fire pump which is installed but which will be -- installation will be complete after restart.

We proceeded to implement new emergency operating

procedures based on revision four of the boiling water reactor guidelines because they are technically superior to the earlier versions. This major initiative has been a well-coordinated effort by our nuclear engineering operations and training departments, who used our new plant simulator extensively in their work.

[Slide.]

We are very proud of our achievements in this program because we have significantly improved our capability to respond effectively to off-normal events in a safe and reliable manner. We also focused our attention on aggressively upgrading those areas that had been rated category three in the early 1987 systematic assessment of licensee performance, the SALP report. We don't believe that any of these areas should continue to be rated category three.

I'll briefly summarize our actions in each of these areas and I do have the appropriate managers here today to respond to any specific questions that you may have.

The new security manager has a 28-year record of success in law enforcement and in the nuclear industry. In security we have increased Boston Edison's supervision of the contract personnel. We have upgraded physical security systems. We revised procedures, and we've expanded training to deal with previously recurring problems.

The improvements are obvious and there have been no

security violations issued during Don Long's tenure as security manager. Like security, fire protection is now a separate organization with an experienced manager, Fred Wozniak. Staffing has been increased. Fire brigade training has been significantly improved. The improvements are very clear and have been documented in recent NRC inspections.

The new manager of the radiological section, Jeff Jens, has made the changes to produce a very quick turnaround in that important area. Staffing has been increased for health physics technicians. Edison employees are replacing the contractors and new positions of a chief radiological scientist and an independent radiological assessor have been created and both of those report to me.

Revised training, plant decontamination, new work practices and new attitudes at the station led to the unconditional lifting of the Commission's 1984 radiological order modifying the Pilgrim license. In the area of surveillances, we are upgrading our surveillance tracking system, we are reviewing it to be sure it's accurate and we're revising procedures to make them easier to follow.

Jim Seery, who is the Technical Section Manager, is being assisted by a new systems engineering division and improvements have been made to ensure that surveillances will be performed on schedule. Assurance of quality is an issue that goes beyond the quality assurance department.

It requires and has received strong management attention. There is now close, frequent attention to quality issues at many levels of the organization including my weekly meetings with senior managers and with Frank Famulari, who is the new Quality Assurance Manager and who now reports directly to me. This ensures proper attention and prompt action on quality-related concerns.

I would now like to ask the Station Director, Ken Highfill, to continue with this status report.

MR. HIGHFILL: Thank you, Ralph. Good morning, gentlemen. I'm Ken Highfill. I joined Boston Edison in late 1987 as the Pilgrim Station Director. I'm a 1955 graduate of the U.S. Naval Academy. I retired from the Navy in 1977 as a captain after 22 years of service which included three new construction billets. One of those was as officer in charge of construction testing and acceptance of S-5G natural circulation reactor.

I spent four years as commanding officer of a nuclear submarine, and by that time I had qualified to operate six different types of nuclear power plants. I subsequently spent two years as senior instructor for perspective commanding officers. The core PCO school subjects were tactics, material condition and leadership. On leaving the Navy, I joined San Diego Gas and Electric Company as supervisor of nuclear operations and later, as the first general manager of Gas Cool

Reactor Associates.

In 1980, I founded a successful management consulting firm which provides assistance in nuclear power plant training, maintenance and operations to the utility industry. In the past eight years, I have visited about 35 nuclear plants nationwide and thus have an understanding of industry, INPO and NRC standards. I noted some items common to the better plants including quality, timeliness, ownership and pride.

Knowing this, Ralph asked me to apply that experience at Pilgrim Station. When I arrived, most of the plant modification work had been completed. It was clear that we not only needed to get the remaining work done, but that it should be done as much as possible by Boston Edison people. That is what we are doing.

The result is work that the individual can be proud of. Collectively, employees at Pilgrim can be proud of where they work and at what they do and one can see the improvements in morale. We are meeting our goals to complete work, improve housekeeping and preservation, reduce contractors, increase Boston Edison staffing and to do quality work. We are generally meeting our schedule and visitors are commenting very favorably upon plant condition, worker attitudes and our sense of pride.

A few graphics will help illustrate this progress.

[Slide.]

In July, 1987, there were a total of 1,820 contract personnel working for the nuclear organization. Today there are 435 including the guard force, which will continue to be contracted under Boston Edison's supervision at a year-end level of about 160 people. We intend to be below 250 total contractors by that time.

We have achieved this reduction in manpower while removing most of the temporary plant modifications and while driving the Bechtel contracted work packages to zero. We have instituted new management practices in security and completed physical improvements to the security system, such that we can eliminate guard posts as compensatory measures.

[Slide.]

We are doing the bulk of our own programmatic and administrative work. At the same time, we ar moving aggressively to do better on planning work and improving productivity so we can reduce overtime. Pilgrim should be a pleasant place to work and that means that people should be working a 40-50 hour week most of the time. This enhances the productivity, alertness and moral.

[Slide.]

This graph shows that we have reduced overtime and are controlling its use while overall manpower is ramping down. We are meeting our goal of filling approved vacancies in the nuclear organization ahead of schedule. We have not

compromised our standards.

Although our work planning capability is not yet where we want it and this is still restricting productivity somewhat, we are nonetheless seeing improving quality in many of the indicators we use.

CHAIRMAN ZECH: Excuse me, before you go on. I had a question on the operator overtime.

MR. HIGHFIELD: Yes, sir.

CHAIRMAN ZECH: Is operator overtime presently being maintained within the technical specification limits?

MR. HIGHFIELD: Yes, sir, well under it.

CHAIRMAN ZECH: All right, good. As you move along and as you well know and as the business of the operators becomes more intense, I would caution you to watch very closely, the overtime of your operators so that you're not over committing them and asking them to do too much as you approach the operational phase.

MR. BIRD: We are very sensitive to that and we have a system to track it very carefully to make sure that we don't place excessive demands. Also, we have, as we may mention here later today, we have two classes of operators go through the license training and take the exam.

They have conditional licenses now -- they need 20 hours of power, but we had 100 percent pass rate on those exams and we have 16 operators that we didn't have before.

CHAIRMAN ZECH: All right. How many total operators do you have?

MR. BIRD: The total number --

MR. ANDERSON: 22 reactor operators and we have 12 watch standing senior reactor operators. We also have many management people who are qualified.

CHAIRMAN ZECH: How about reactor operators? SROs, NROs, can you break those down?

MR. HIGHFIELD: 22 and 12.

CHAIRMAN ZECH: 22 senior operators?

MR. ANDERSON: We have 22 watch standing. We have 22 ROs and we have 12 watch standing SROs. We have management --

CHAIRMAN ZECH: On shift?

MR. ANDERSON: Yes, sir, that are available. We have management personnel that can fill SRO billets and maintain current qualifications.

CHAIRMAN ZECH: How many shifts do you have?

MR. ANDERSON: We are going to run a four-shift operation and as we get to the 20 percent point where we can release the licenses, we'll go to a five-shift operation. That will be post-restart test program. We made that decision consciously to have extra SROs on watch during the initial startup and test program.

MR. BIRD: Actually, we could have manned a six-shift rotation by using some of the SRO licenses as ROs, but it

seemed to me to make more sense to go to a four-shift rotation.

Then I'll have extra operators assigned as assistants to the watch engineer assistant to the supervisor and will have in the senior most knowledgeable position will actually have double coverage during the power ascension test program. We thought it was a good investment.

CHAIRMAN ZECH: You eventually plan to go to five shifts, you say?

MR. BIRD: We'll go to six.

CHAIRMAN ZECH: Eventually six.

MR. BIRD: We expect that to be fairly soon after we complete the power ascension test program.

COMMISSIONER CARR: But you still have only the eight unrestricted ROs and you're waiting for the hot ops for the rest of them?

MR. BIRD: Correct.

CHAIRMAN ZECH: Do you have a technical advisor, a shift technical advisor on each shift too?

MR. BIRD: Yes, sir.

CHAIRMAN ZECH: All right. Thank you.

MR. HIGHFIELD: I was about to address the quality improvements that we've made.

[Slide.]

Despite the fact that we have on three occasions lowered the threshold for issuing radiological occurrence

reports, the method by which we document and effect corrective actions for minor radiological problems, the number of those events has dropped and so has the severity of the RORs.

[Slide.]

In addition, we have eliminated our backlog and we deal with such events in a timely manner -- usually under one week. This has driven the active file to single digits. QA non-conformance reports are also being kept to single digits and only two are presently outstanding on plant installed equipment. These should be cleared this month.

Additionally, we have had only one overdue quality assurance deficiency report in the past three and a half months, and that was cleared up in four days.

We are also aggressively addressing quality assurance

[The prepared statement of recommendations with timeliness and thoroughness of response being the keynotes.

[Slide.]

Our recent self assessment clearly identifies the issues remaining before restart. The major one in my judgment, is the need to upgrade our work control process. That effort is now underway.

In summary, quality, timeliness, ownership and pride are evident in the way we're doing business. I'm proud to be part of the Pilgrim Station team and so are my people. With

our present team and the recent track record, I'm confident that we will be ready for restart when we next address the Commission.

Roy Anderson, the Plant Manager, will now discuss our efforts to upgrade various aspects of the organization and to improve the material condition and work control processes. Thank you.

COMMISSIONER CARR: Before we go on, how about running over that quality assurance recommendation for me again. I don't understand what those are.

MR. HIGHFIELD: Our Quality Assurance Department, besides issuing NCRs or Non-Conformance Reports and efficiency reports, when they do an audit and they do them frequently in a variety of areas, they will make recommendations for upgrades. Albeit the thing that they observed was not a deficient condition.

We have a very highly trained QA department. They're all engineers. We get recommendations from them for improvements and as you can see from the graph, there was a considerable backlog of those. We are addressing those in much more timely manner now. We are required to respond to them as to whether or not we will institute the recommendation and if so, when and what will be the institution of it.

If we say we will not institute it, then we need a very good reason.

COMMISSIONER CARR: Now, are those 17 approved for implementation or are they under review or how many of those --

MR. HIGHFIELD: Those are all under review. Those are 5 from 1987 audits and 12 from 1988 audits that have not been answered.

MR. CARR: That means you haven't decided yet whether to implement them or not?

MR. HIGHFIELD: Correct, sir. I believe that as we sit here today, the 5 from '87, in fact, have been done -- I mean, have been addressed. I'm not quite sure that they were supposed to be addressed this last week. We would have now, about 12 of these outstanding.

COMMISSIONER CARR: I'm trying to get some feel for what kind of man hours we're talking about if you decide to do those kinds of things. Are they major jobs, or relocate the gauge glass or what? I want a feel for that kind of thing.

MR. HIGHFIELD: All right, sir, they can have a whole broad spectrum. They may be something such as the program that you have for well, maintenance of say, one of your maintenance instructions may be difficult to understand and you need to modify the instruction. On the other hand, they may be some very small kind of a thing. They are generally programmatic in nature, as opposed to physical in nature.

COMMISSIONER CARR: All right, thank you.

MR. ANDERSON: I'm Roy Anderson. I came to Pilgrim in May of last year as a Vice President of Quadrex Energy Services Corporation, joining Edison as the planning and outage manager in December of 1987, to complete the major outage projects.

When the major outage projects were completed in early 1988, I became the Plant Manager. I have a Bachelor of Science Degree in Marine Nuclear Engineering, as well as a Masters of Business Adminstration Degree. I have over 17 years of nuclear experience in power plant operations, including plant startup, upgrade programs and reactor site overhauls and construction projects.

I am qualified to operate three different reactors and have done two tours as plant manager for the General Electric Company.

CHAIRMAN ZECH: You came to the Pilgrim, when?

MR. ANDERSON: I came to Pilgrim as a consultant in May of last year and joined Boston Edison Company in December of 1987.

CHAIRMAN ZECH: Thank you.

MR. ANDERSON: As Ralph Bird described earlier in the presentation, a key component of successful management is a system for measuring progress. We have decided to track certain key indicators which are important because one, the indicators contribute to safe and reliable operation of the

power plant; two, the indicators are good overall guides to operation and; three, in some cases, they have been areas of concern for Pilgrim in past years.

I will discuss four of those areas which are important in achieving safe, reliable continued operations -- maintenance, the plant decontamination, radiation exposure control and operations preparedness.

[Slide.]

MR. ANDERSON: We have worked off a mountain of maintenance requests. We intend to stay ahead of the workload. Today, we prioritize maintenance requests of plan and control work more effectively. Using INPO guidelines we focused on power block MR's. When we met the INPO goal of 500, which is the industry average, we raised our sights and toughened our Pilgrim goal. As you can see, we are hovering near our new goal of 400. Despite many recent improvements in maintenance practices, our self-assessment disclosed that our work control process is a hindrance to continuing our plant material condition improvement.

We have resolved to correct that prior to requesting the NRC inspection. That effort is well underway. When this outage began, only about 45 percent of the spaces in the process buildings were accessible without protective clothing. The entrance to some areas required self-contained breathing apparatus. We made a commitment that before restart, 90

percent of virtually accessible areas would be decontaminated.

We are there, 90 percent clean, and we intend to keep it that way. We think that a cleaner plant promotes safety and quality. Inspections are more frequent and more thorough when operators do not have to dress out in protective clothing to enter the area. Beyond these benefits however, we are always vitally interested in reducing total worker exposure.

[Slide.]"

ALARA is our policy. As low as reasonably achievable. We are pursuing it aggressively. We are communicating its importance through training and making sure that every employee knows that individual exposure is an individual responsibility. We originally set our exposure budget for the INPO guideline and as the graph shows, we have been living well within our budget. The industry average has decreased, but we are, in fact, in well below that mark.

We are in the process of establishing a new and much tougher goal based on our performance thus far in 1988. Finally I would like to discuss the readiness of our Operations Department for restart.

Since last summer, two successive classes of reactors operators and senior reactor operators have taken their NRC exams with a 100 percent pass rate. The new licenses are currently limited but once we have power, they will be able to meet those conditions and then we'll be able to take staff a

six-shift rotation to permit scheduling for future operator classes that will ensure we will always have enough operators in training to compensate for attrition. During restart, we have planned for a four-shift rotation. This permits an extra senior reactor operator to be assigned to each shift and allows the most efficient use of experienced operators.

The operators look better. They are now in uniform and certainly sound better. Training in formal communications has been effective and is showing clearly beneficial results in improved control and a higher level of professionalism. All four crews have completed training on the revised emergency operating procedures. Our operators have been observed as part of our self-assessment, by INPO and by the NRC's EOP inspection. Every assessing team has concluded that they are well-trained and prepared to operate the plant safely and reliably.

CHAIRMAN ZECH: Do you have a college degree program?

MR. BIRD: We have a limited college degree program which is in place for one group of people, and we are in the process of expanding that for operators. We think we can have it in place sometime before the middle of 1989. We have made the contact with the university and have arranged credit for various on-the-job performance.

CHAIRMAN ZECH: Good. I know you've got -- it's a very busy period for you now but I appreciate the fact that you

have intentions of putting a program like that in place.

MR. BIRD: I think it's a very good program. It's the right thing to do.

CHAIRMAN ZECH: I agree, and I encourage you to continue that initiative.

MR. BIRD: Thank you.

CHAIRMAN ZECH: All right. Thank you.

MR. ANDERSON: To continue, last December, the NRC evaluated an exercise of the onsite emergency plan and issued a finding of "adequate to protect the public health and safety," but some public attention has been focused on the offsite emergency plans which are the responsibility of the Commonwealth of Massachusetts.

Federal standards for offsite radiological response plans do place a financial burden on the surrounding communities. We have therefore made a major commitment to assist and support the Commonwealth and the towns in upgrading their plans. The new draft plans are now clearly better than the offsite plans have ever been.

I'd like to now ask Ron Varley to discuss briefly the offsite emergency plan.

MR. VARLEY: Good morning.

CHAIRMAN ZECH: Good morning.

MR. VARLEY: I came to Pilgrim Station from Toledo Edison in June of 1987 with 17 years combined Navy nuclear

experience and industry experience, ten of them in emergency preparedness. My priority since arriving at Pilgrim has been the development of improved relationships with the authorities that are responsible for offsite planning and to work with them to provide them with the necessary types of support to assist them in their efforts to upgrade their programs.

As Ralph stated, we recognize that the effort required to maintain an emergency preparedness program for Pilgrim Station requires greater resources than the local communities could muster. Accordingly, we've made commitments to provide the necessary resources to the five towns within our emergency planning zone and the two reception center communities that support the EPZ.

[Slide.]

We currently have signed letters of agreement with all of the involved communities accepting our support. Those resources include a large staff of professional planners that work on a daily basis with Commonwealth and the communities to ensure that the upgraded offsite emergency preparedness program will meet or exceed all applicable regulatory requirements and address the legitimate issues of local concern.

We are also providing funding for a full-time civil defense staff position in each of the communities for the operating life of the plant. We're providing funding to upgrade emergency operation centers in each of the seven

communities, including renovation of their existing buildings and supplying them with all the necessary emergency response equipment.

Finally, we're providing compensation to all of the offsite emergency workers for the time that they spend in emergency response training. My staff continues to work closely with the offsite officials and those agencies who have a responsibility for emergency preparedness so that we can continue to build on substantial progress that we've made to date.

MR. BIRD: Thank you, Ron. Based on our completed self-assessment of readiness for restart, which includes independent reviews that have been performed, we have concluded that upon completion of the actions identified in the self-assessment report and in the restart plan, that Pilgrim will be ready for safe and reliable restart and continued operation.

This conclusion is the result of a rigorous process which was supervised by a management oversight and assessment team which I chaired. Also on the team are the vice president of nuclear engineering, the station director, the special projects director, the managers of the nuclear engineering and quality assurance departments and my two very experienced staff assistants.

The team used many sources of information to conduct the reviews. We personally spent many hours in plant and

system walkdowns. We interviewed extensively the line managers who have the direct responsibility for performing work. We evaluated reports and documentation. We observed operators on the simulator and we reviewed independent performance evaluations to reach our conclusions.

Our conclusions included the following. The self-assessment confirmed the validity of the restart plan which we submitted last July. We identified some limited areas which do show significant improvement, but which require completion of specific well-defined actions for restart. There is improved performance in all areas that were rated as category three in the early 1987 SALP. The peer evaluation process which we put in place and the quality assurance surveillance monitoring program are valuable tools in improving our performance.

The essential elements of the long-term organization have been implemented. Substantial nuclear management experience and expertise have been added to the organization in key positions and the bases for self-assessment which we described in our restart plan last July have been substantially met.

To summarize, we have come a long way. We have an effective management team with talent and experience, that can match any in the industry. We have done a thorough review. We have identified a few things left to do this summer. We will be back when they are done and when Steve Sweeney and the

Boston Edison Board of Directors have authorized me to seek your approval to restart the Pilgrim Nuclear Power Station. Thank you.

CHAIRMAN ZECH: Thank you very much. Does that conclude, Mr. Sweeney, your presentation?

MR. SWEENEY: Yes it does, sir.

CHAIRMAN ZECH: All right. Thank you very much. Questions my fellow commissioners? Mr. Roberts?

COMMISSIONER ROBERTS: No.

COMMISSIONER CARR: I've got one comment that I was - - I last visited up there I was a little concerned by your test program for restart. Could you expand on that a little bit on what you're going to do to test and make sure all of those systems, the one's both you've worked and the ones you haven't worked are in place?

MR. BIRD: Testing was done for the repairs. We are going back through the nuclear engineering department and reviewing all of the maintenance, all of the modifications that were done, looking at the specific tests that were done to see if there is anything else that should be done.

More importantly in the power ascension and test program, we have tests that are designed to check the hardware problems that originally caused the shutdown to be sure that the repairs were effective as well as to check out dynamically all of the systems and especially those that were modified or

repaired.

We -- to summarize, we did have a test program, we're going back and reviewing it one more time to see if there's anything additional that we should do and we have a dynamic test program during the power ascension phase.

COMMISSIONER CARR: But it is a systems test program? You will test systems that were worked as well as ones that weren't worked?

MR. BIRD: Yes. Of course, we're redoing a lot of surveillance tests too to reset the clock on those. So between the surveillance tests, the logic system function tests, the individual equipment tests and then -- of course many of the systems have already been run. Anything that we can run we have run. For example, we brought in -- we rented a temporary boiler similar to the shore steam that the Navy uses in shipyards and we checked out the major steam-driven pumps a long time ago and we did find some minor repairs and we saved some time in the critical path during the restart and power ascension process by doing this.

But we've run condensate, RHR, HPCI, RCIC, everything that can possibly be run has been and is continuing to be run. Anything that can be in an operational mode is operating.

COMMISSIONER CARR: I understand.

CHAIRMAN ZECH: Thank you. Commissioner Rogers?

COMMISSIONER ROGERS: Yes. What's is the status of

your own study, ESF actuation status?

MR. BIRD: We have done a thorough review and we're -- because we identified that we had more of those than we would like. Roy, would you tell us where we stand on th corrective actions as a result of that review?

MR. ANDERSON: Well, the preliminary review has been completed and its on my desk to review right now. What I'm looking for are those things that I can positively do different. Not counseling or instruction, but why. What made it difficult for the maintenance operator to do his job. Why was his procedure not easy to use. We are doing that right now. Part of that is also rewriting our maintenance request processes. Many of these things came in as a result of maintenance, either how it was planned, how it was reviewed or how it was performed and so I believe that --

MR. BIRD: This was really one of the elements in our self-assessment that caused us to decide to accelerate the correction or the improvement I should say of the work control process. We had evaluated some time ago that that's something that should be improved and we had originally thought we would do it after restart, after looking at the ESF actuations and some other indicators, we decided that the time is now.

And that's what we're doing. Work control process will help and of course, if you go back and reanalyze each particular case of ESP actuations, we will find ways to modify

the procedure, to modify the way the operators goes about taking the readings to reduce the probability of a mistake.

It really is -- has to be a detailed case-by-case evaluation as well as looking for the broader work control processes. We're doing both.

COMMISSIONER ROGERS: Thank you. Could you just clarify a little bit more on what the delay is on this direct torus venting decision? I'm not quite clear on where the hold point is on that. I see that you've cited that the NRC has approved the -- I think that's what you said -- the revision four of the BWR owner's guidelines. I thought that was possibly a delay but where is the hold-up and --

MR. BIRD: I'd like to ask Ed Howard who is our vice president of engineering to respond.

COMMISSIONER ROGERS: I realize it's not a condition for restart but it is an issue that's out there of considerable public interest.

MR. BIRD: It's also a question that the NRC staff is reviewing according to our understanding, but Ed can you elaborate?

COMMISSIONER ROGERS: Would you come to the microphone over here at the podium and identify yourself to the reporter?

MR. HOWARD: Good morning. I'm Edward Howard, vice president of nuclear engineering. The emergency operating

procedures have been implemented to the revision for emergency procedure guidelines. Those guidelines have been approved through the owner's group activities and independently reviewed by General Electric and approved by them.

They are currently -- the guidelines themselves are currently under review by the staff. It's my understanding that's -- the safety evaluation on that is well along. I'm sure the staff could --

COMMISSIONER CARR: We will ask the staff to comment when they come up too but, thank you.

MR. HOWARD: The staff has reviewed our EOP implementation but has conditioned that on the -- in the event -- they're reviewing -- the generic review of the guidelines identified some change in the guidelines then we would have to go back and update our emergency operating procedures to reflect those.

COMMISSIONER CARR: That is the -- that's the reason you're holding on this now? Is that it?

MR. HOWARD: Yes. We are taking a very conservative approach towards that item and are planning on implementing direct torus vent system after the staff has completed that generic review and we can see their -- results of their safety evaluation.

COMMISSIONER ROGERS: Just one further question. Are there any further developments on the state of the Commonwealth

of Massachusetts' position with respect to acceptance of emergency plans? Any further changes in that since I visited the plant a month and a half ago, whatever it was?

MR. BIRD: We see progress being made. Would you like to comment on that Ralph?

MR. VARLEY: Well, the state's position is that their working with us to develop the best possible emergency plan and we're continuing to support the Commonwealth and the towns in that effort. Progress continues to be made in the development of very detailed implementing procedures that removes a lot of the reliance on ad hoc capabilities that existed in the past. Defining more specifically the resources such as where transportation providers are going to provide transportation and things like that. The process is moving alone. We've started training some of the emergency workers. Draft town plans have been forwarded on to FEMA for their review and comment and their comments are being incorporated into the community's plans so the process is moving along fairly well.

COMMISSIONER ROGERS: Thank you.

CHAIRMAN ZECH: When I visited the plant about a year ago now I believe, I know one thing we discussed was management involvement and I have now modified that term -- call it leadership involvement because I think it has more a connotation of people rather than just resources.

I think we talked about discipline and attention to

detail and formality and the things that looked like should be emphasized at the Pilgrim Plant. Follow-up procedures. I'll say Mr. Sweeney, it's obvious that you brought in a number of new senior managers. I know Mr. Bird was there when I visited your plant. He had just been there a short time. You brought in others since then.

I think that the initiatives in that regard have been certainly proper ones but I do think it's important that an effort continue as regards involvement of leadership in order to permeate down through your whole organization that cultural commitment if you will to excellence, reliability and to competent performance across the board. That's the leadership challenge to get that through your organization. You've told us some things this morning that you've done specifically that certainly would appear to be commendable and in the right direction. But the challenge is a leadership challenge and it's yours, Mr. Sweeney and the rest of your team here to make sure that those changes that you want to put in that you're telling us about, actually get executed.

Of course, the proof is in the results of how things go, and so we'll be watching that very closely, but I just emphasize the importance of attention to detail, formality, following the procedures and a commitment to a very serious attitude towards safety and toward following the technical specifications, teamwork, and a strong commitment to training.

Many of the things you told us would lead us to believe that your training program is a good one.

On the other hand, training is extremely important. It's a leadership challenge there to continue that. So I think that's important that leadership remain involved, and you accept the challenge to get those policies permeated through the whole organization.

The plant's been shutdown for over two years, and as I mentioned earlier, as you approach now moving into the more operational stage, I think it's awfully important to recognize that in many ways, it's kind of like a new construction plant. You're shifting from construction or repairs in your case, significant modifications, significant work, but you're shifting towards an operational phase that is very different from the -- than the shutdown phase.

You do have experienced people, obviously, in the senior management positions, and I would challenge them to call on their experience to make sure that the supervisors as well as the reactor operators, the maintenance people, the testing people, the surveillance people and all really do shift to the operational mode and recognize that as they accept the systems for their responsibility that they will be thinking operational rather than thinking in a shutdown condition.

It's a very important mentality to get into, and my experience has been that it doesn't come necessarily naturally.

You don't just turn a switch and go from shutdown to operational phase. It's a -- it's an attitude, it's a mentality shift that you've got to believe that that plant is about to come alive. It becomes something that is living, and you just can't walk away from it, and so all of your people should, I would hope, be thinking about the -- that shift from a shutdown phase to an operational phase, and it's something that challenges leadership. I hope you'll be mindful of that. I guess the only thing that I would like to say finally before we call the Staff up is that you still have a ways to go, as you well know.

It's going to take our staff time to review your -- the work that you've done and to assess and evaluate the progress that's been made, and so I want -- and I'm going to tell the staff when they get here, but what I want to tell you while you're still here is that my charge to them is going to be to take the time they need to make sure it's done right, just like you're doing.

So we need time, too. Our people need time, and so I hope that you will be reasonable in your expectations. We're not going to authorize you to start up -- if we authorize you to start up -- without being confident that the staff has had the time they need to -- the regional people, the headquarters people, whoever on the staff who is particularly responsible for that and especially the regional administrator, Mr. Bill

Russell -- we want to make sure that they have the time they need to do the job that has to be done.

So I just want to emphasize that to you. That's going to be our role. When you're done, that doesn't necessarily mean that we're done. We need the time to properly, fully, thoroughly, carefully, and with confidence evaluate and assess the work that's been done.

Are there any other comments before we close?

COMMISSIONER CARR: I need to make one.

CHAIRMAN ZECH: Commissioner Carr.

COMMISSIONER CARR: When I was up there, I mentioned to you that you had a bunch of all-stars gathered together, and the challenge was to make them into a team. It looks like you're working in that direction. Now my concern has shifted to: are you just going for the big game or are you going to be there for the next season?

Are you going to be able to hold those people and keep them around awhile? And you're going to have a challenge there, Mr. Sweeney.

MR. SWEENEY: That was a concern of mine and the Board; however, we have -- at the last Board meeting and at the upcoming Board meeting -- we are setting in place a program that will cause us to be comforted by the retention of the team that is there. That's all I can say at this point, but that is something that we do recognize and that we will take care of.

With regard to your last comment, as we have quite appropriately taken our time then to do what we have done and do it right, we would expect no less from you, because I do believe that my interest and your interest are the same.

We want a safe and reliable power plant, and when we're ready, we will feel that -- and then, of course, you must do yours, and we would expect no less from you than we've done ourselves.

CHAIRMAN ZECH: That's exactly right, and I appreciate that. I appreciate your -- I appreciate that comment because that's exactly what we intend to do.

Anything else before we call the staff up?

[No response.]

Thank you very much. We appreciate it.

CHAIRMAN ZECH: Mr. Taylor, you may proceed.

MR. TAYLOR: Good morning, sir. The staff presentation today will be given by Tom Murley and Bill Russell in two parts, and at the close I would like to add a few words to the staff's presentation.

Tom, I'll turn to you first.

CHAIRMAN ZECH: Fine. You may begin. Thank you.

MR. MURLEY: Thank you, Mr. Chairman. We have discussed Pilgrim with the Commission on several occasions over the past few years.

Today is, as you mentioned, a status briefing only.

We have a lot of work ahead of us this summer before we're ready to conclude that the plant and the plant staff are ready to resume operations.

The plant was shut down 26 months ago. The immediate reason for the shut-down was equipment failures, but there was a background of more widespread problems that were long standing and they ran deep in the organization.

It took about a year after the shut-down for Boston Edison to analyze their situation and take positive steps to begin turning things around.

We believe that Ralph Bird has made some major improvements. You've heard some of those today. Brought in a lot of new staff, fresh ideas.

In addition, which is particularly impressive, is the physical improvements to the plant. There were times, I think it's been only within the last year or so, that we've been able to go down into some of the corner rooms without getting any special-dressed equipment and so forth.

They're continuing on that guideline and that can only improve operations and management. Those people can walk around in their street clothes and look at various parts of the plant.

They have a solid management organization in place and a comprehensive restart plan. I think what deserves particular mention is the safety enhancement program that

Boston Edison has voluntarily undertook.

It is not required for restart, but nonetheless, they have implemented a number of safety improvements and I think in many regards they are industry leaders.

For example, they have moved ahead with improved emergency operating procedures. We are close to approving, if we haven't already, the provision four, and we're doing generic reviews which I understand should be done in perhaps a month or two.

They've added a third diesel generator in the plant. They've added fire water crosstie to the RHR system so that, in fact, one can use city water with some slight modifications, and with well documented procedures and training, they can use the fire water system for --

CHAIRMAN ZECH: Was the diesel engine completely additional to what may be required?

MR. MURLEY: Yes. They saw the station blackout to rule coming and they also knew there were other good sensible reasons for doing it.

They could operate the plant with two. But they've decided to add three and --

CHAIRMAN ZECH: Is it safety -- is it safety -- conditioned for safety?

MR. MURLEY: It's not completely safety grade, but it can be used in an emergency and they've got procedures for it.

CHAIRMAN ZECH: Well, I certainly think that's a commendable initiative.

MR. MURLEY: Yes.

CHAIRMAN ZECH: Extra power is something that I think we all think about, ever have any kind of a serious incident. That's one of the things I think about first and I think that's a very commendable initiative to take. Certainly if I were a utility executive, I'd feel more comfortable doing it and I'm sure that utility feels the same way.

MR. MURLEY: Yes. Another initiative in this safety enhancement program that Commissioner Rogers asked about, was a direct torus vent.

They, on their own initiative last summer, made some design modifications. We, at the time, asked them a number of questions about how the vent would be designed, how it would be used, and it also got caught up in the generic review that we're doing of venting in general for Mark I's, but also just the general topic of venting.

So we have asked Boston Edison and the BWR owners group a number of questions that pertain to the downside of venting as well as the benefits.

These questions are not easy to answer. We're now getting answers to them from the owners group and from Boston Edison.

The direct torus vent is not required for restart,

but I believe that they, if I understood their answer to your question, they were waiting to see how we come down in our generic requirements which are scheduled to come to you this fall.

We'll give you a status briefing on the Mark I's probably in a month or two. But if that's the case, then we'll review them when they come in for our approval.

If they were to ask now for our approval, we would review them now. But I understand why they might want to wait to see how we come down in generic recommendations.

Last year, I switch now to emergency preparedness, last year, FEMA conducted a review of the off-site emergency preparedness plans of Pilgrim and they notified us of a number of significant deficiencies in those plans.

And even before that, even before the FEMA report, the Commonwealth of Massachusetts itself had written to NRC expressing concerns about deficiencies in the state plans.

We have told Boston Edison that these deficiencies must be addressed. We will give particular attention to improvements in the plans for schools and day care centers for transportation dependent populations, and the plans for special needs population.

Boston Edison is working with the state and local authorities to upgrade these plans. We are following their progress.

They seem to be making steady progress along these lines and we will work with FEMA to evaluate the plans. As you know, public interest is very high in the communities around the Pilgrim plant.

The NRC staff has held many public meetings in the Plymouth area. Probably more than any other plant, at least in the last few years, that I'm aware of.

We do have a number of 2206 petitions which are still under review by the staff. Moving to our restart criteria, we have discussed with the company that there are three major categories where we expect improvements to be made.

You've heard discussions of each of those today. The organization and management. We expect there are stable and effective management and staff at Pilgrim.

And I think, Commissioner Carr, we would echo your concern about the stability that this team, which is good, appears to be there and it appears to -- we want to make sure, satisfy ourselves, that they're going to make lasting changes at the site.

The condition of the plant is the second major area and here we have a number of technical issues in the plant design that we have to review.

We want to see demonstrated improvement in the SALP areas, fire protection, radiological controls, security, surveillance, and we also want to see improvements in the

maintenance program.

I think Bill Russell will talk a little bit more about that. Finally, we want to satisfy ourselves that improvements have been made in the emergency preparedness area.

With that, I'll turn to Bill Russell and he'll continue.

CHAIRMAN ZECH: Thank you. You may proceed.

MR. RUSSELL: I'd like to start by first identifying a part of the process that the staff is using for the review of Pilgrim which is unique.

We have formed a restart assessment panel which is a joint panel made up of senior members from both the region and NRR.

Sam Collins is the Deputy Director for projects in Region 1. He is the panel Chairman and he is with me today. In addition, Bruce Boger from NRR is the Assistant Director for Region 1 projects and he is the panel Vice-Chairman.

We have a number of other staff members in specialty areas that participate on this panel, the purpose of which is to effectively integrate both the inspection and licensing activities and to make sure that issues are identified early and brought to senior management's attention.

The panel frequently briefs me and Tom Murley and there are occasions when senior managers get together and review the status of the plant.

This has occurred four times. In the senior management meetings, which are headed by Mr. Stello, the Executive Director, where we meet with all the regional administrators and office directors and discuss the status of plants, principally for the purpose of making a determination as to whether a particular plant deserves agency-wide attention or region-based attention.

In each case, the conclusion has been that Pilgrim deserves agency-wide attention and, of course, Commission attention.

We have on-site senior management meetings with myself, Dr. Murley, and also Mr. Taylor and the Deputy Executive Director, to review the status and ensure that the activities are managed effectively and that issues that are important are being brought forward.

There is a second aspect of the review process for Pilgrim which I think is somewhat unique. And that is that we have made efforts to open the staff review process while the process is going on.

We have solicited comments from the state, local officials, and the public regarding the restart plans themselves.

Once we received those comments, we went back and held meetings and addressed the comments both orally and in writing such that we could, in fact, open that process up.

That dialogue is continuing and I will identify some of those major steps as they relate to the technical and management issues that we will be addressing.

As far as future staff activities, I'd like to start first and follow-up on the comments on the maintenance inspection that we conducted at the site.

This was an approach where we looked at how maintenance was being performed on selected systems. We took an in-depth vertical cut through on two systems, and while there were a number of areas that were quite positive, there were some areas that gave us concern.

The area of control of work and control of testing following maintenance work and a number of issues which relate the ability of first line supervisors to effectively implement the programs.

These issues are now being addressed by the company. In fact, they were not yet complete with their own self-assessment and the findings weren't consistent with some of their own findings.

We believe that those issues associated with control of work must be addressed effectively prior to restart. The ESF actuations that were questioned by Mr. Rogers, we believe are in part due to work control issues and really understanding what is to be done prior to starting it.

Those issues clearly need to be addressed prior to

operation. We currently have in hand and under review with the staff the submittal of the Boston Edison Company self-assessment report, and we are also reviewing their power ascension program.

We believe that the self-assessment, when it is complete and the supplemental information is presented to the staff, that that review should be able to be completed within about two to three weeks of having all of the information in hand.

Once we have completed that and the company has indicated that they are -- our review, and the company has indicated that they are ready to restart, we will commence an in-depth integrated assessment team inspection.

This will involve approximately one week of preparations on-site, including interaction between staff members and the company on the details of the self-assessment.

Followed by two weeks of inspection that will run continuous, the first several days of which will be around the clock inspection.

And we will maintain that team together until we have completed a draft integrated assessment team inspection report. The planning for that inspection has been completed.

We've identified the areas to be inspected and we feel it's quite a good plan. We intend to take the results of that inspection and compare those results to the company's

self-assessment to use that as a basis for judging the effectiveness of the management team in determining what needs to be done at the facility.

We are also in the process of developing a self-report. The period closed for this evaluation on the 15th of May and we expect to complete that report in July, and we'll issue that report, such that we will be able to use the SALP report which will characterize the performance over the last 15 months, plus the team inspection report, the review of the self-assessment and the power ascension program, as well as the other inspections that have been conducted over the last 15 months, to develop a report from me to NRR which indicates the readiness of management and hardware at the facility or which indicates potentially those areas which may not be ready and which require further work.

To date, we have, and during this self-assessment period, expended over 7,000 hours of direct inspection effort at the plant.

We have a substantial additional effort that's planned. In addition, we are expecting the ACRS Subcommittee to hold a meeting on-site to review the status to the plant, along with a Full ACRS Committee meeting and the discussions we've had with the staff of the ACRS are such that they expect the ACRS review to be completed in time to provide their views to the Commission before a Commission decision.

We are developing plans for power ascension monitoring should the approval be given to restart the facility, which will necessarily include the monitoring at each step through power escalation.

We have built in a number of hold points at which time NRC approval would be required prior to going to the next plateau.

And finally, we feel that it's appropriate to shorten the period for the next SALP assessment following a startup period.

We can't be as specific on what that schedule is because it's going to be a function of how long it takes to get to a restart decision and then how long it takes to complete power ascension.

But we do feel it's very important to assess early in a formal way and an integrative manner, the quality of operations of the facility should a restart decision be made.

That concludes my comments on subsequent staff activities, with the exception, I want to assure you, Mr. Chairman and Commissioners, that before I make a recommendation on this facility, I will satisfy myself and use the inputs from the staff in the process I've just described to ensure that this facility is indeed ready, from a management and a technical standpoint, as far as hardware availability at the plant.

CHAIRMAN ZECH: All right. Thank you very much.

MR. TAYLOR: Mr. Chairman, I was at the Pilgrim station last week and did meet with the senior managers.

I would like to stress the emphasis I placed then upon the improvements in maintenance control, because some of what Commissioner Rogers asked about is the epitome of these lack of controls in some of the safety system actuation issues.

And before startup and rerunning that plant, I think it's absolutely imperative that the company do what they've indicated they will do in that area, so they don't get the challenges when they restart the plant.

I must say I saw a changed Pilgrim from what I've seen a couple of years ago. It's an improved station. You've heard many of the things today that they've done to improve it.

I saw the things that were outlined to you. I saw professional conduct by the operators in both the simulator and the control room.

I found that they had done a very extensive overhaul in tests of some of the major safety systems and much to my pleasure completed some long standing G.E. recommended improvements in the safety systems, some of them which go back a number of years.

They did a good test by bringing in steam and running some of the safety systems, and in addition to the hardware improvements, I noted a marked differences in the housekeeping

and general state of the plant from what I had seen at Pilgrim in the past years.

Although there's yet work to be done in areas such as maintenance control and some other areas mentioned by the staff, I do see an improved station.

That concludes the staff's presentation.

CHAIRMAN ZECH: Thank you very much. Questions? Commissioner Roberts?

COMMISSIONER ROBERTS: Bill, did I understand you said you've expended 7,000 man hours on the present SALP?

MR. RUSSELL: That's correct.

COMMISSIONER ROBERTS: What would an average SALP be if there is any such thing?

MR. RUSSELL: About 2,300 for a 12-month period. About 2,300 hours for a 12-month SALP.

MR. TAYLOR: That reflects the additional manpower.

MR. RUSSELL: We have staffed the Pilgrim station with an additional residence, such that we have three residents in a single unit site.

We have extensive support on inspections from NRR and others in headquarters and we've used a number of team inspections. It is a significant resource issue which is one of the reasons why I have deferred starting the final team inspection until such time as the company says they're ready.

I, just from a resource standpoint, can't afford to

do that inspection twice.

MR. MURLEY: I'm sure the NRR resources are running two to three to four times as high for this plant as average too.

CHAIRMAN ZECH: Mr. Carr?

COMMISSIONER CARR: I only have one question for the staff. In reading over the maintenance inspection, one thing that caught my attention in there was the comment about maintenance procedures being modified on the scene. I couldn't figure out whether it was by the workers or by the system engineer or who was there to say, yeah, that's an approved way to do it, or was nobody there?

MR. RUSSELL: I think it's some of both. There were examples. The one that immediately comes to mind is the machining work that was done on the throttle valve poppets for the HPCI turban, which appeared to be done in the shop without prior review and approval.

But that is exactly one of the concerns that we have that there were modifications being made. There was corrective maintenance work that was being done and troubleshooting work requests.

So that the issue is not only what work is being done, but how well is it being controlled, and we believe that some of the ESF actuations that occurred, occurred principally as a result of not carefully reviewing what the consequence of

the action was, what circuits would be de-energized, for example, when pulling fuses.

But that is the principal issue associated with work control that we have concerns about.

CHAIRMAN ZECH: When you come back next time I'd like you to make a point of giving us your evaluation at that time of this issue.

MR. RUSSELL: Yes, sir.

CHAIRMAN ZECH: Commissioner Rogers?

COMMISSIONER ROGERS: I have nothing to add.

CHAIRMAN ZECH: Well, let me just say you heard me talk to the Pilgrim people about the time you need to do the job right, and you've indicated that you have a schedule which certainly sounds reasonable to me.

But I would just like to emphasize to you and to Tom Murley, too, that the headquarters and the region people and we, the Commission, certainly expect you to take the time you need to review this plan carefully.

It's been down for more than two years, and there were a number of concerns we had. We understand there's been significant management changes. It's encouraging to hear about some of the programs in place and some of the results that you can see from what we've been told this morning.

But, still, I think it's important that you take the time you need to assure yourself, and the Commission will want

to be assured of your confidence, before we go ahead with any restart decision, if we do. So, I think that's very important.

And, also, of course, we will want to hear from you again before we authorize restart, at a meeting here before the Commission. And we want the Pilgrim Boston-Edison people here, too, before we would make that decision.

I think the briefing this morning has been very valuable. There's obviously a ways to go. It's encouraging to see that progress has been made.

But we expect the staff, the region, and the headquarters people to continue monitoring the Pilgrim plant and to bring to our attention, prior to the next meeting, if you think it's necessary, any concerns that you think the Commission should be aware of and involved in.

We just want to keep in close touch with the Pilgrim plant as it moves ahead. So, we would ask you to do that as you see fit as time goes on.

Are there any other questions from my fellow Commissioners? If not, thank you very much. We stand adjourned.

[Whereupon, the briefing was concluded at 11:35 a.m.]

CERTIFICATE OF TRANSCRIBER

This is to certify that the attached events of a meeting of the U.S. Nuclear Regulatory Commission entitled:

TITLE OF MEETING: COMMISSION BRIEFING ON THE STATUS OF PILGRIM NUCLEAR POWER STATION

PLACE OF MEETING: Washington, D.C.

DATE OF MEETING: THURSDAY, JUNE 9, 1988

were transcribed by me. I further certify that said transcription is accurate and complete, to the best of my ability, and that the transcript is a true and accurate record of the foregoing events.

Suzanne Young

Ann Riley & Associates, Ltd.

6/9/88

SCHEDULING NOTES

TITLE: BRIEFING ON STATUS OF PILGRIM

SCHEDULED: 10:00 A.M., THURSDAY, JUNE 9, 1988 (OPEN)

DURATION: APPROX 1-1/2 HRS

PARTICIPANTS: BOSTON EDISON COMPANY (LICENSEE)

- STEPHEN J. SWEENEY, CHIEF EXECUTIVE OFFICER AND CHAIRMAN OF THE BOARD OF DIRECTORS	5 MINS
- RALPH G. BIRD, SENIOR VICE PRESIDENT NUCLEAR	20 MINS
- KENNETH L. HIGHFILL, STATION DIRECTOR	5 MINS
- ROY A. ANDERSON, PLANT MANAGER	5 MINS
- RONALD B. VARLEY MANAGER EMERGENCY PREPAREDNESS	5 MINS

NRC

- VICTOR STELLO, EDO	5 MINS
- THOMAS MURLEY, NRR	10 MINS
- WILLIAM RUSSELL, REGION I	10 MINS

JUNE 9, 1988

BOSTON EDISON COMPANY

PILGRIM NUCLEAR POWER STATION

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CHAIRMAN AND CEO

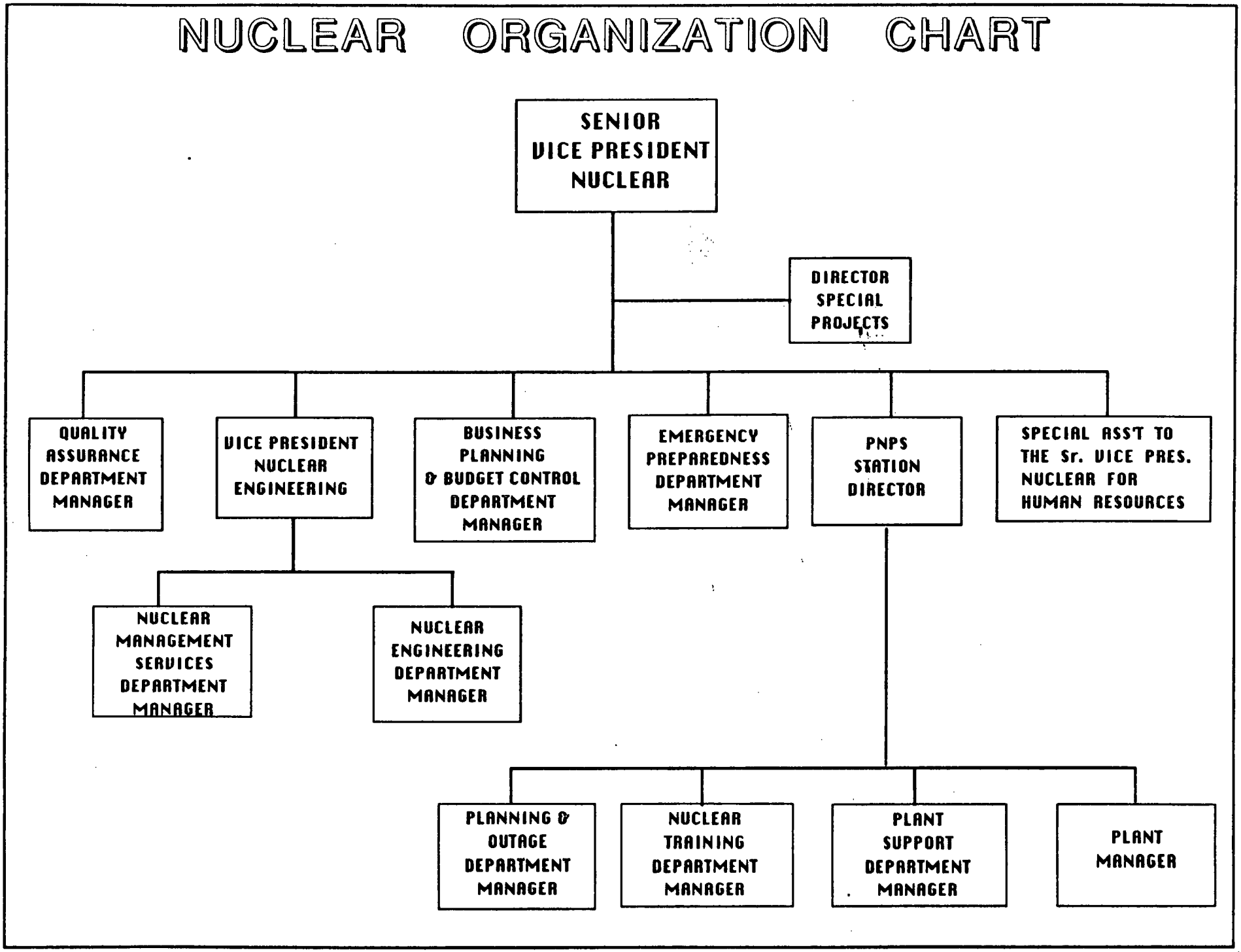
RALPH G. BIRD
SENIOR VP, NUCLEAR

KENNETH L. HIGHFILL
STATION DIRECTOR

ROY A. ANDERSON
PLANT MANAGER

RONALD A. VARLEY
MANAGER, EMERGENCY PREPAREDNESS

NUCLEAR ORGANIZATION CHART



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- ILRT COMPLETE
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- PLANT CLEAN AND DECONTAMINATED

SALP "3" AREAS ADDRESSED

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- FIRE PROTECTION
- RADIOLOGICAL CONTROLS
- SURVEILLANCE
- ASSURANCE OF QUALITY

SAFETY ENHANCEMENT PROGRAM

EQUIPMENT MODIFICATIONS
AND
PROCEDURE IMPROVEMENTS

EMPHASIZE PREVENTION OF CORE DAMAGE

REVISE EOPS
REV.4 BWR GUIDELINES

MAJOR OUTAGE PROJECTS

- APPENDIX R
- SECURITY SYSTEM UPGRADES
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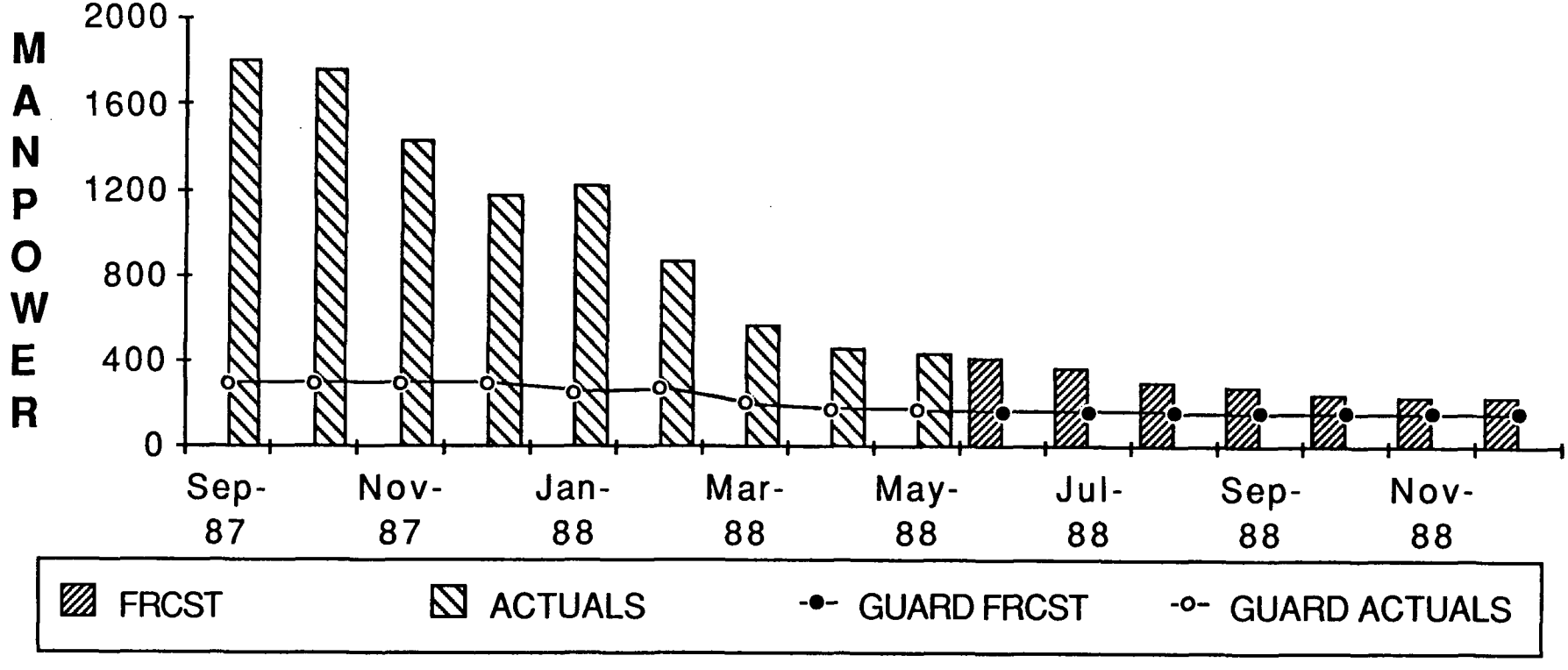
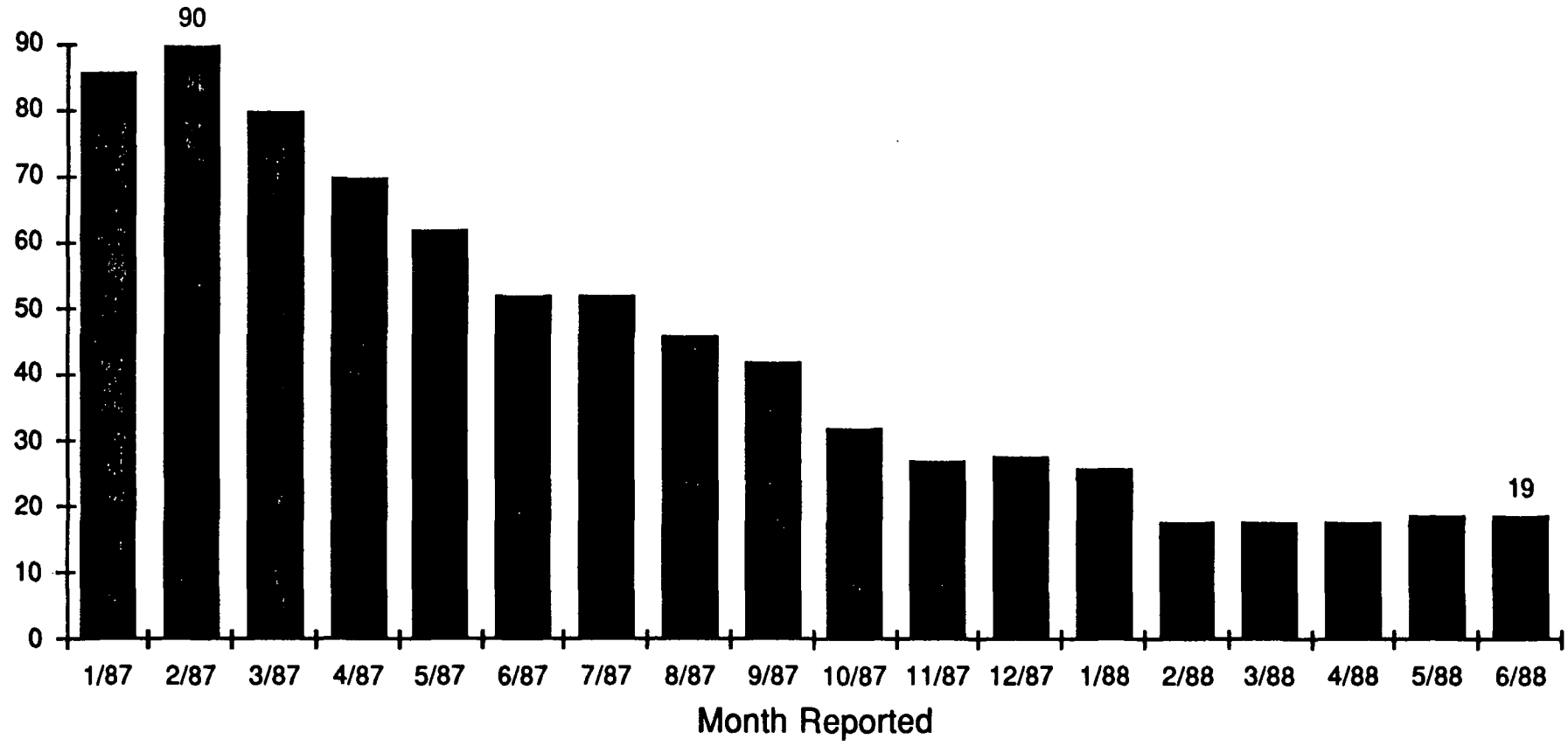
- TURBINE GENERATOR OVERHAUL
- REFURBISHMENT OF PLANT SYSTEMS
- DECONTAMINATION

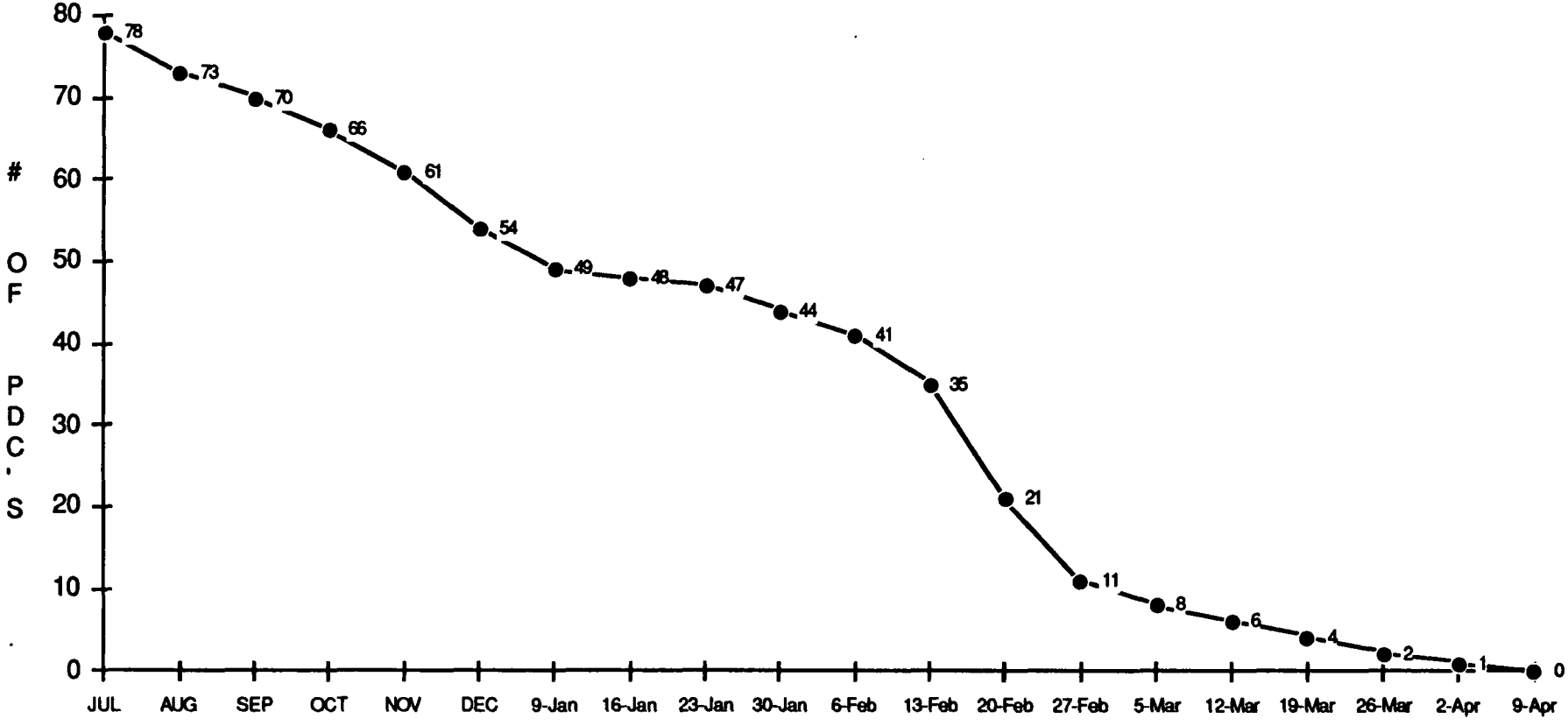
PILGRIM STATION
NON - BOSTON EDISON RAMP DOWN



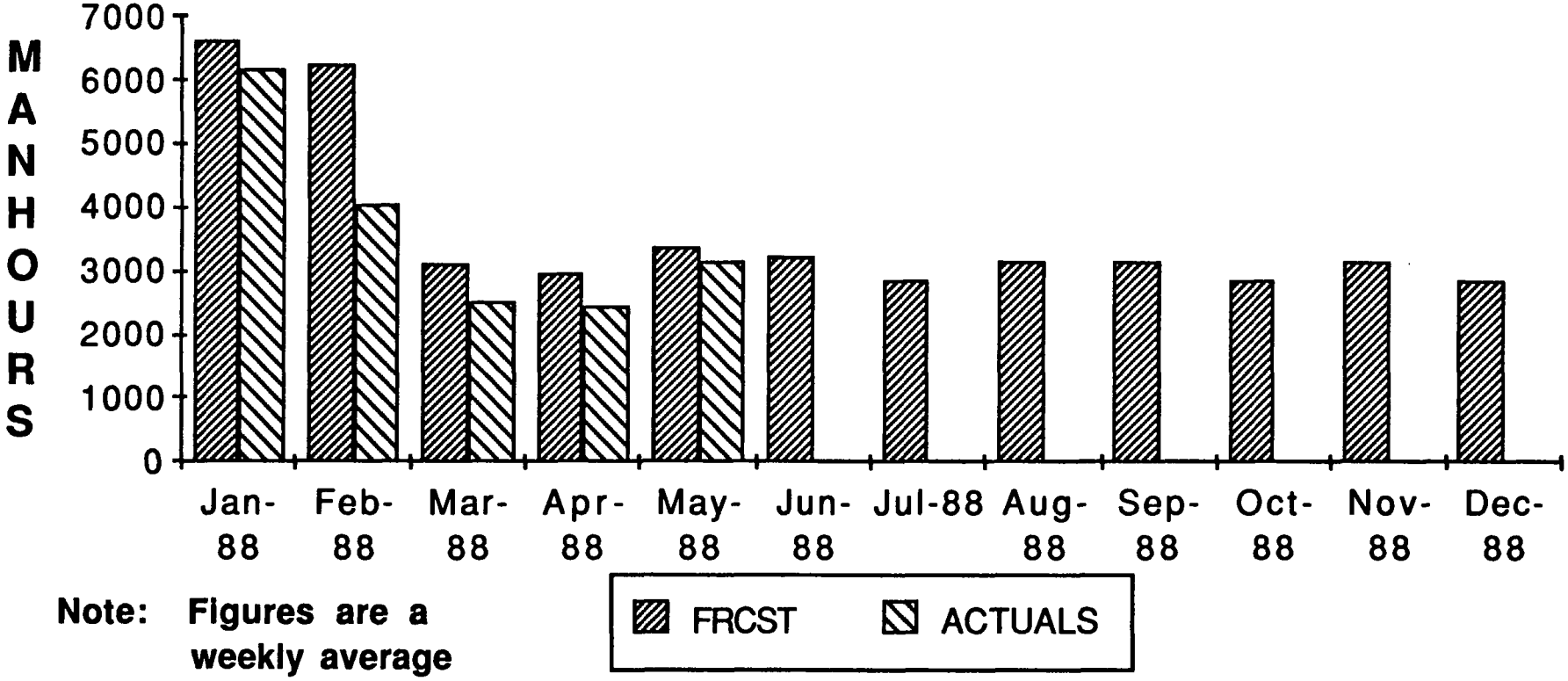
Open Temp Mods



BECHTEL WORK PACKAGE CLOSE-OUTS
July 1987 - April 1988

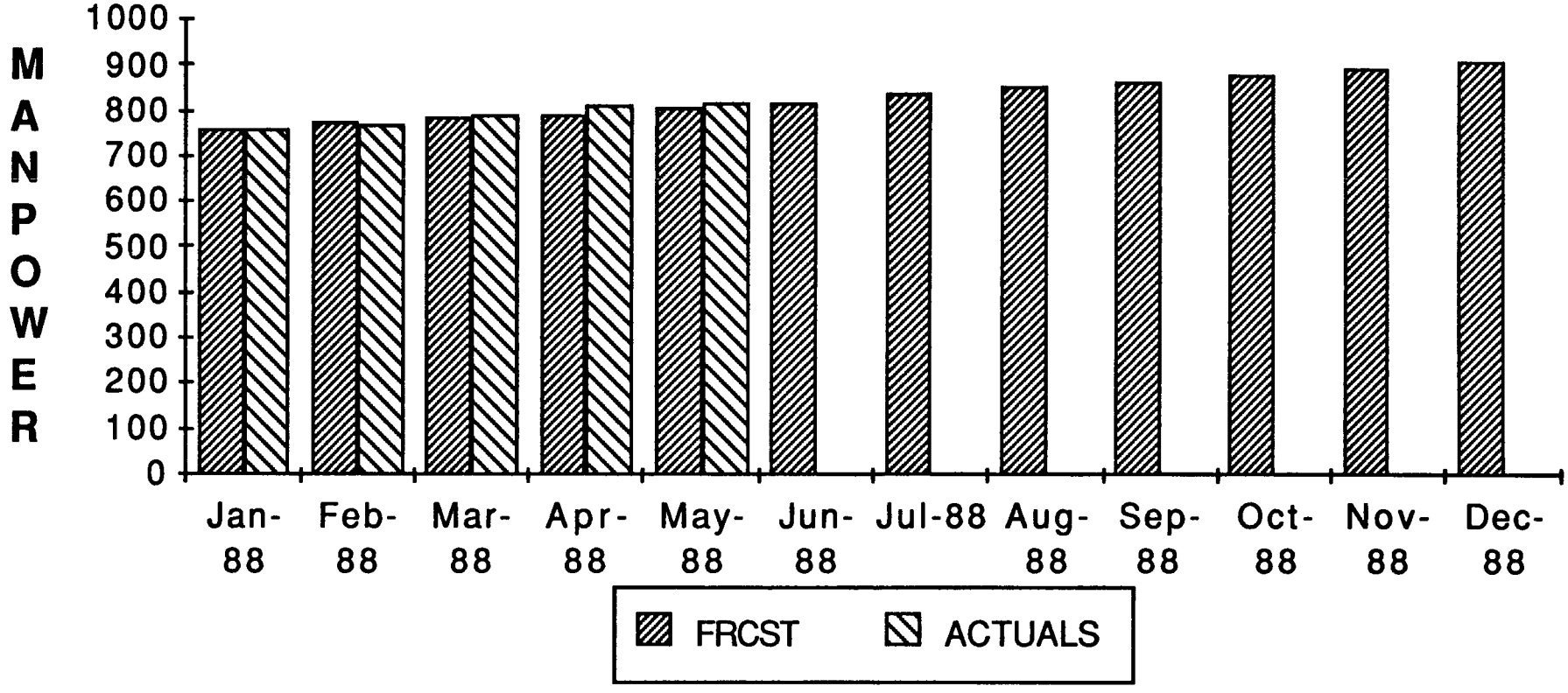


PILGRIM STATION
NUORG OVERTIME

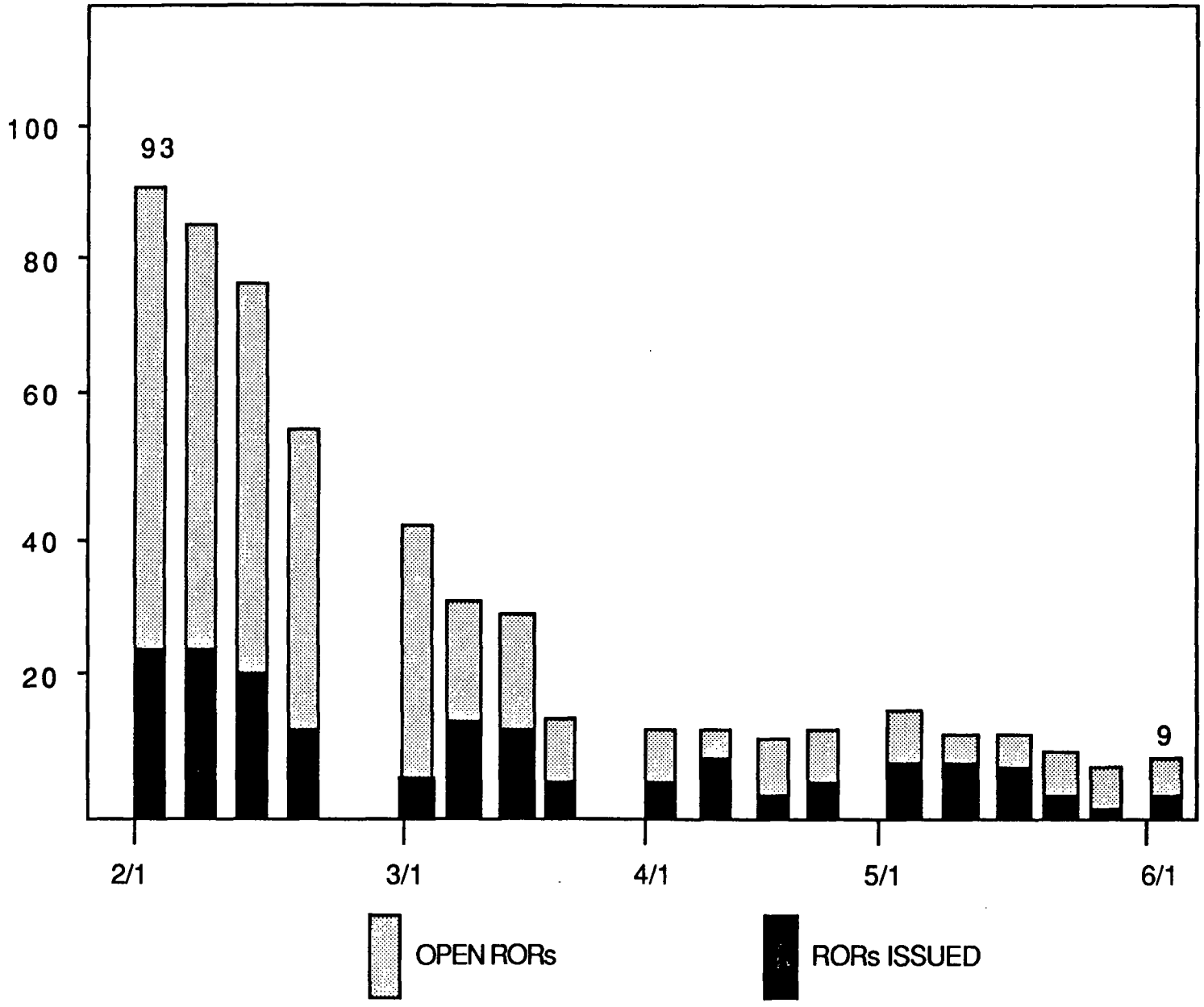


Note: Figures are a weekly average

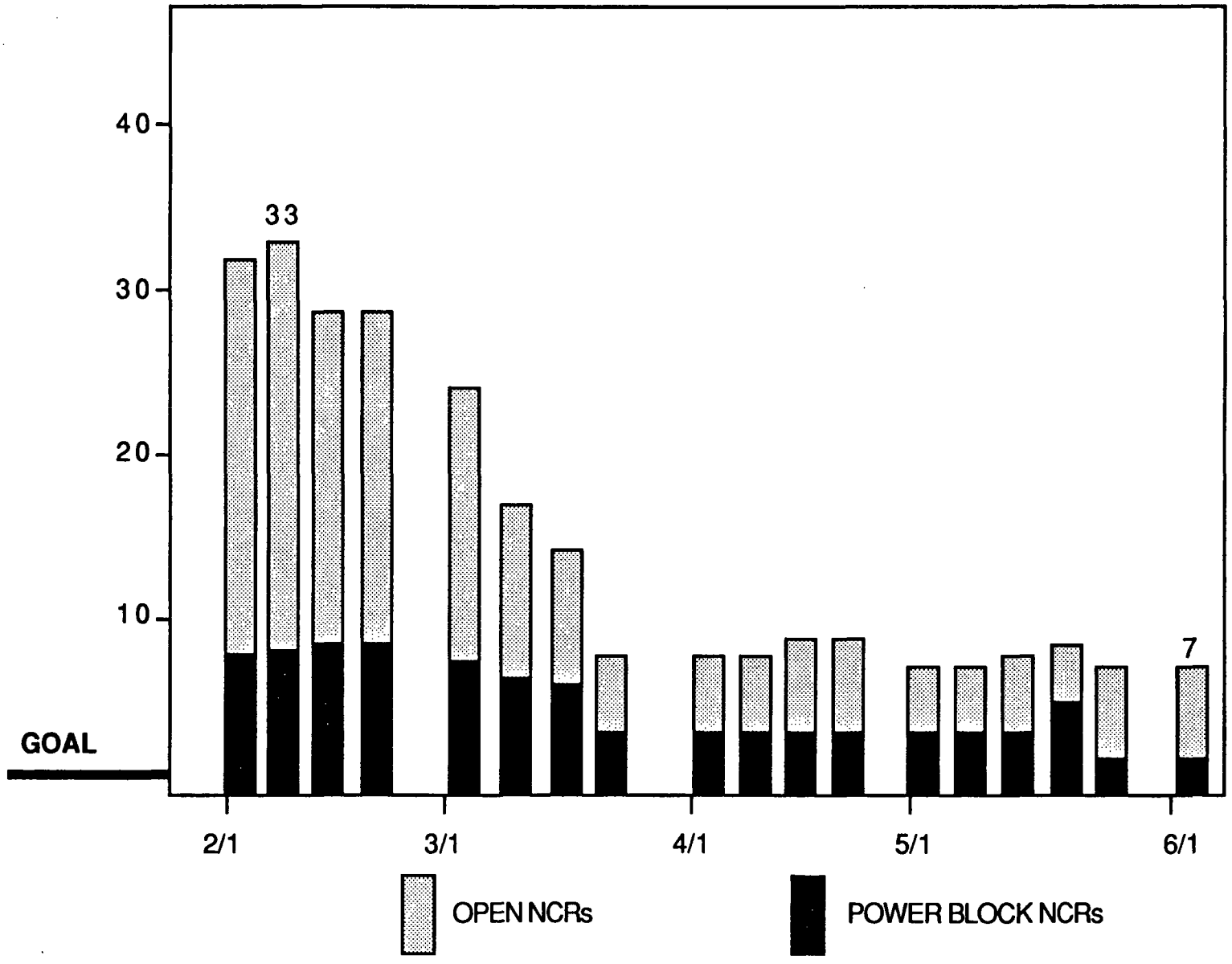
PILGRIM STATION
NUORG STAFFING



RADIOLOGICAL OCCURRENCE REPORTS (ROR'S)

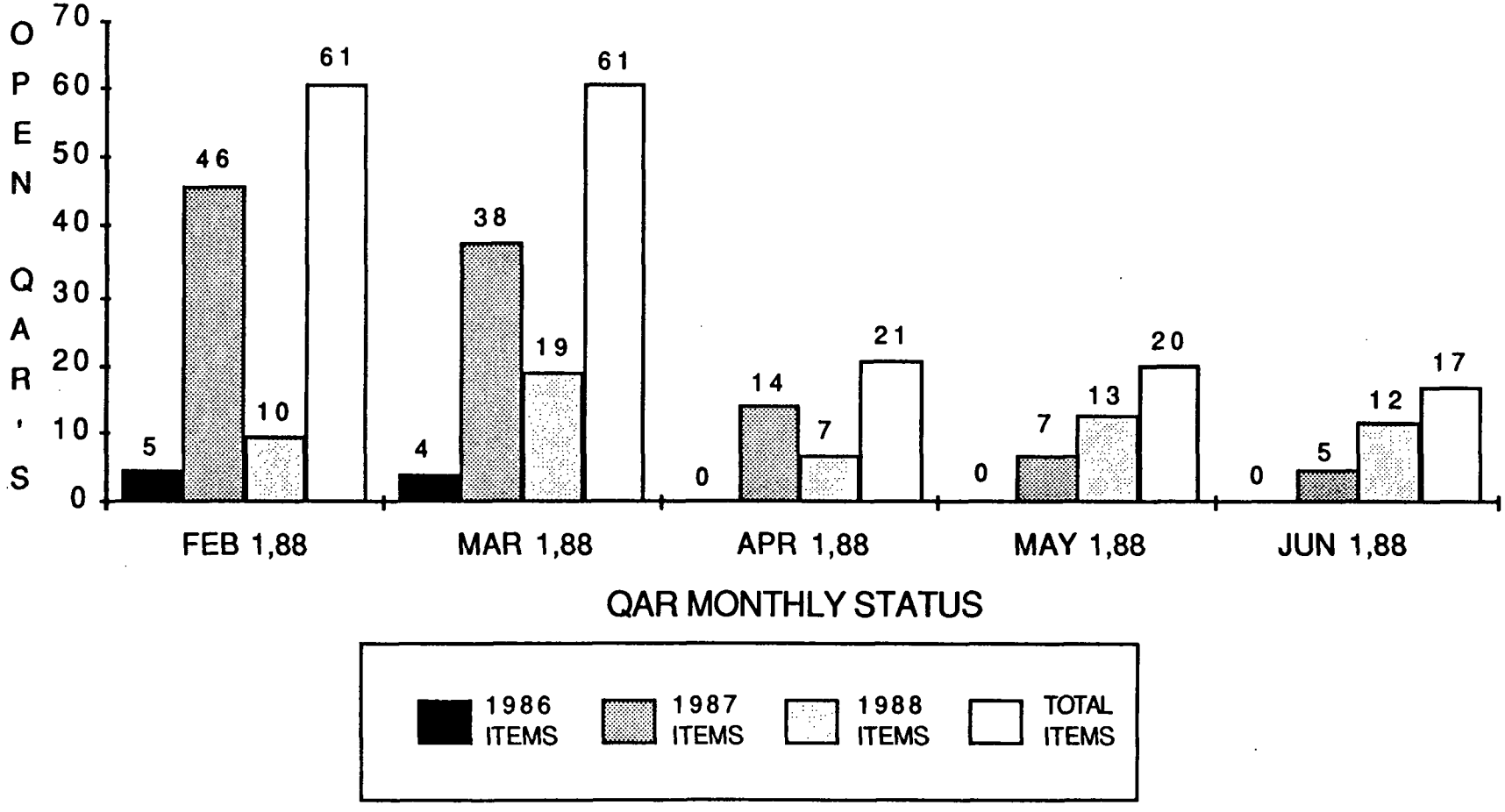


NON-CONFORMANCE REPORTS (NCR'S)



QUALITY ASSURANCE RECOMMENDATION TRENDS

(FOR PNPS ORGANIZATION)



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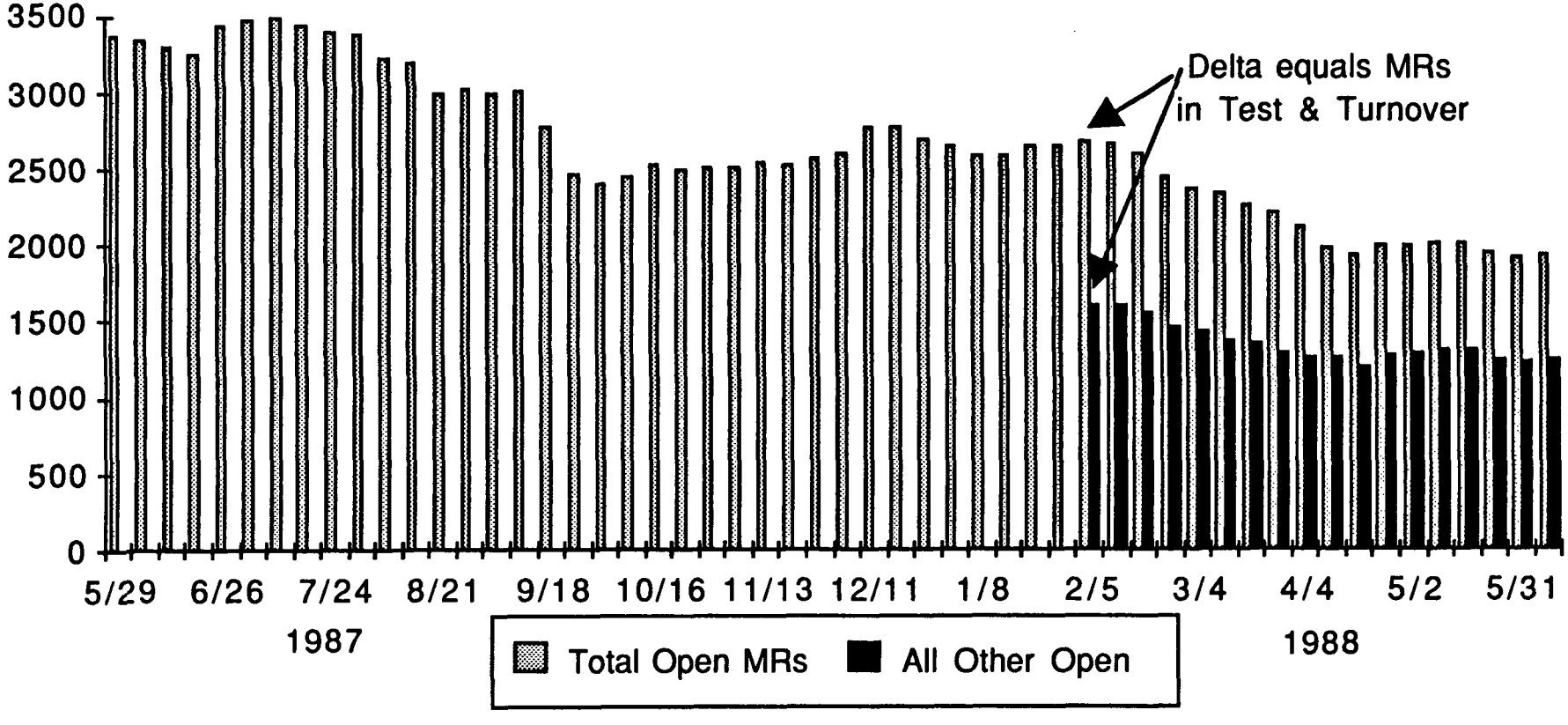
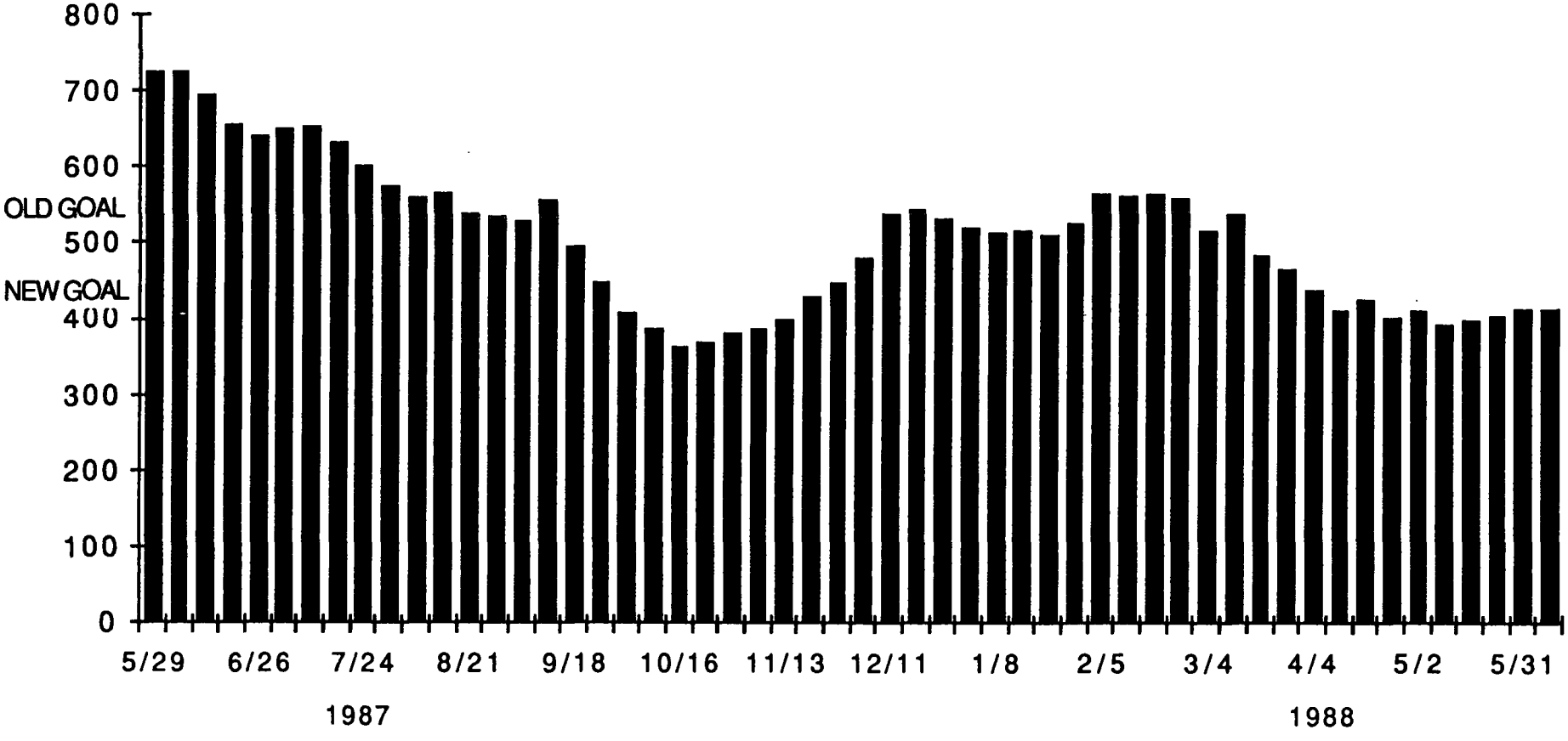


POWER BLOCK MRs



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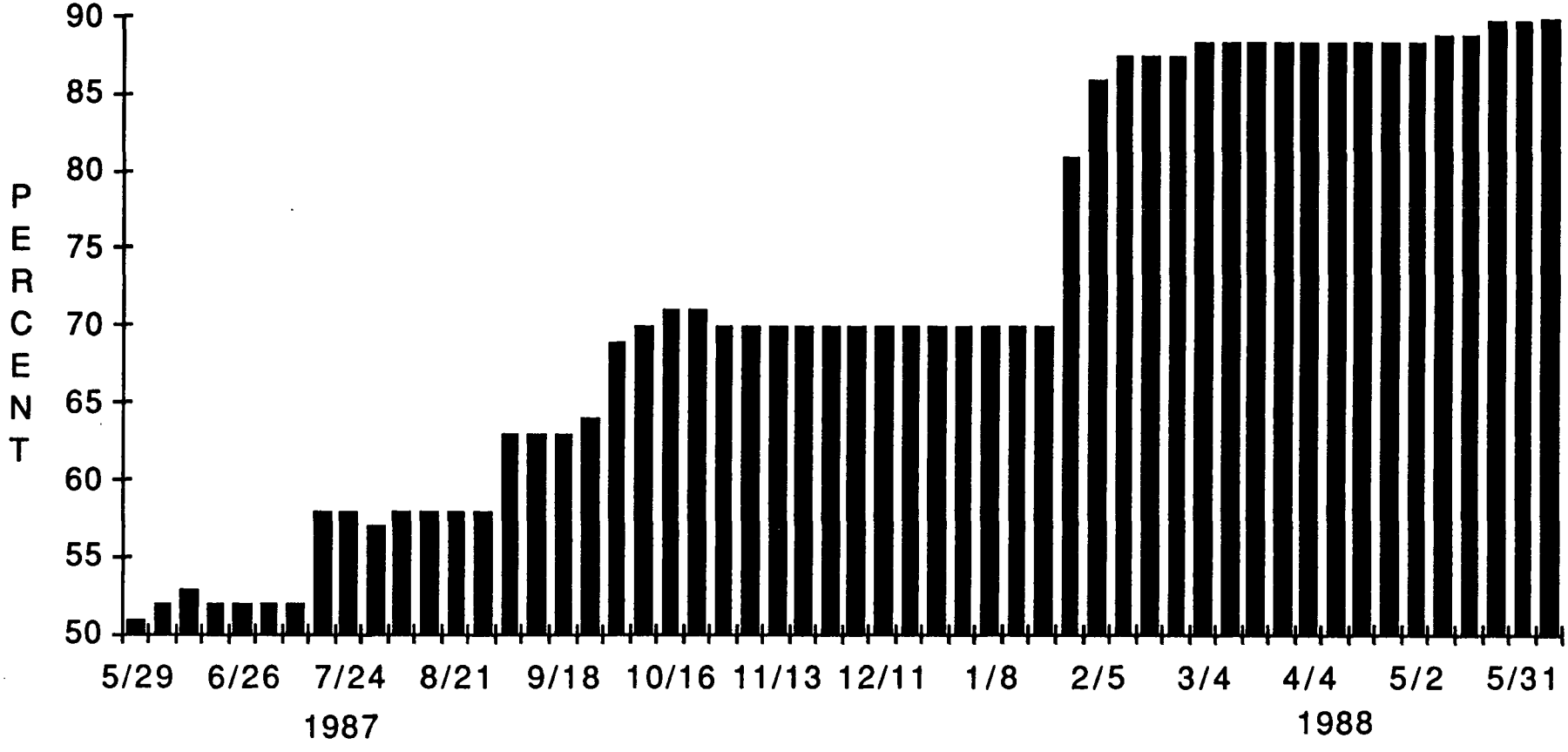
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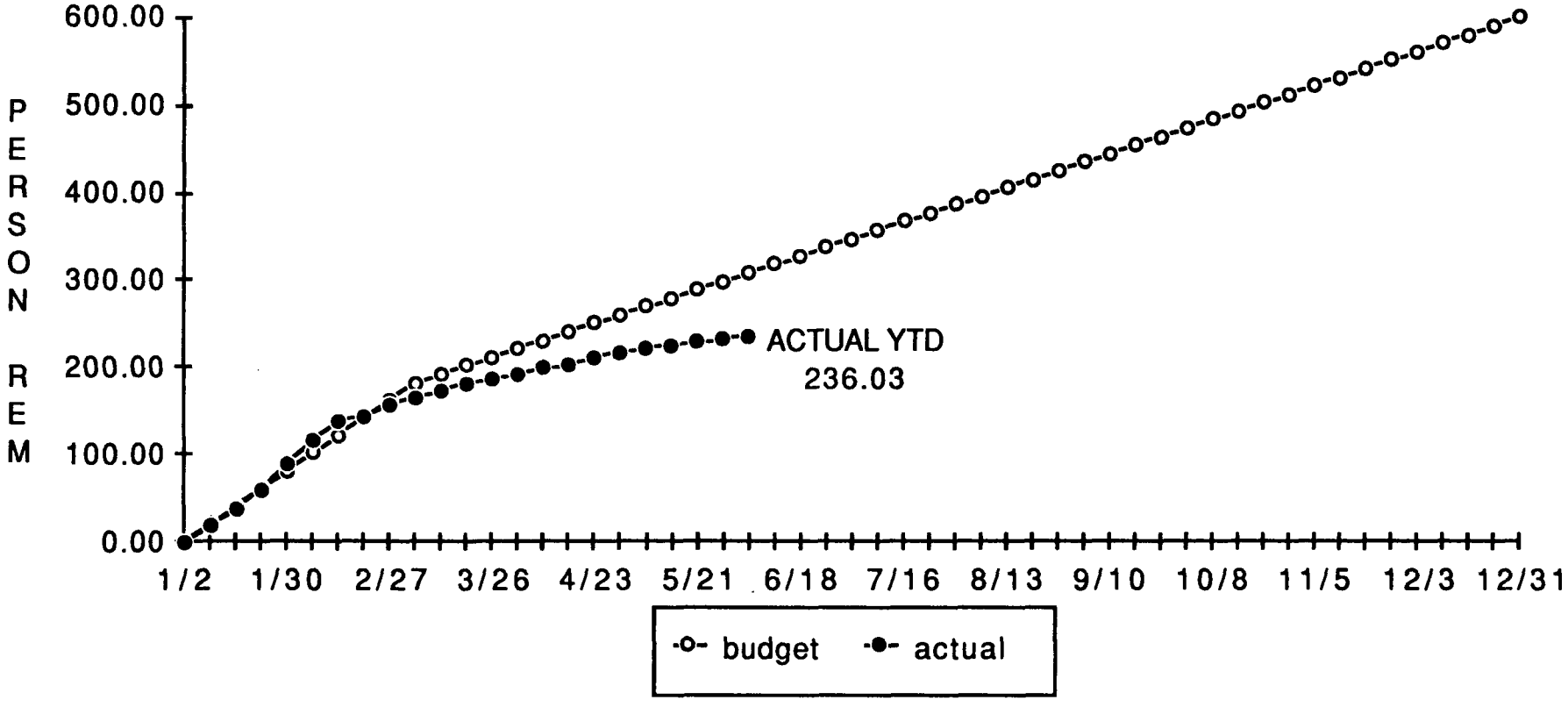
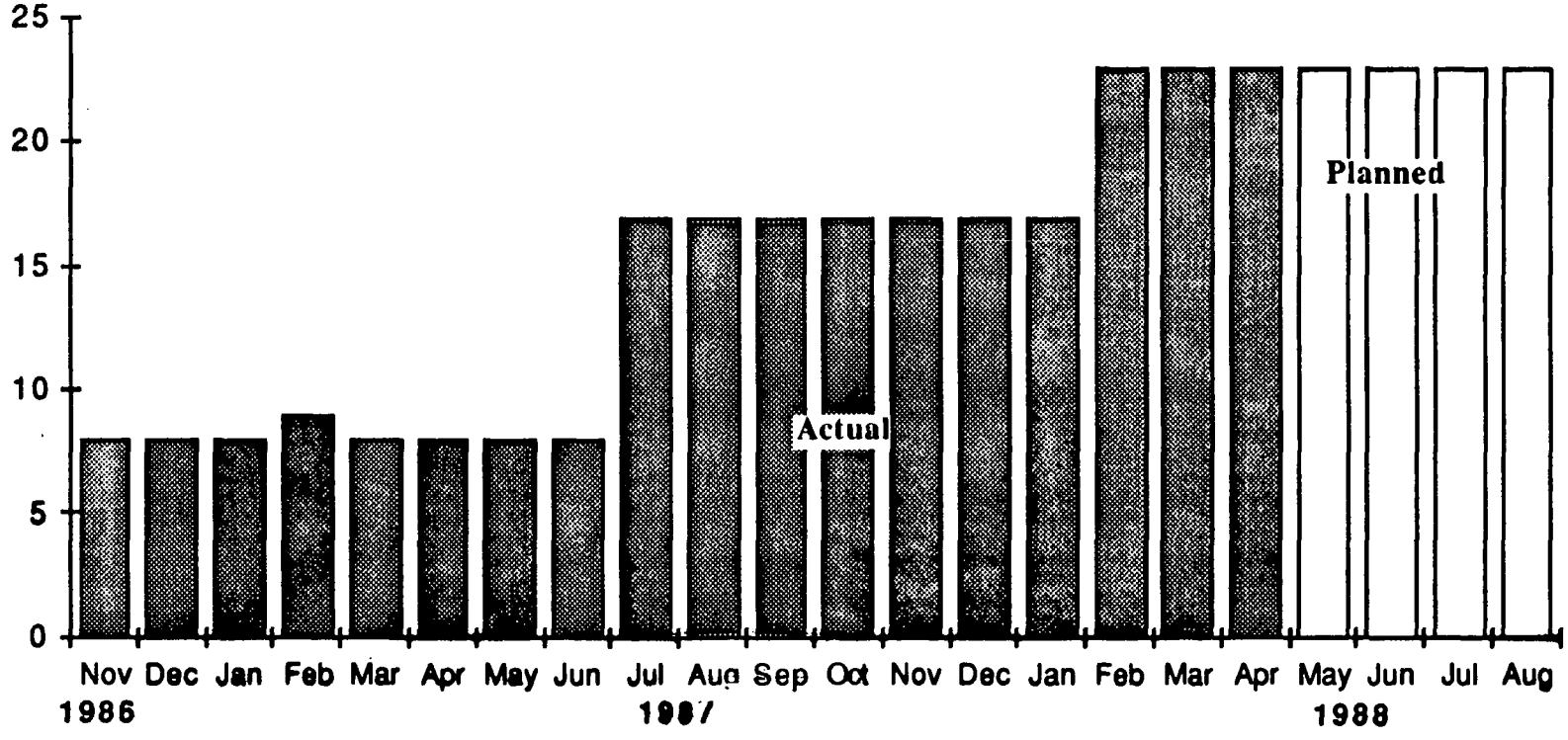
ALARA TRACKING



Licensed Operator Staffing Status



RESOURCES PROVIDED BY BECo

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COMMISSION BRIEFING

ON THE STATUS

OF

PILGRIM NUCLEAR STATION

JUNE 9, 1988

PRESENTATION OUTLINE

BACKGROUND

RESTART CRITERIA

STAFF RESTART ACTIVITIES

FUTURE STAFF ACTIVITIES

SLIDE 1

BACKGROUND

SHUTDOWN APRIL 12, 1986

CONFIRMATORY ACTION LETTER 86-10

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2.206 PETITIONS/PUBLIC CONCERNS

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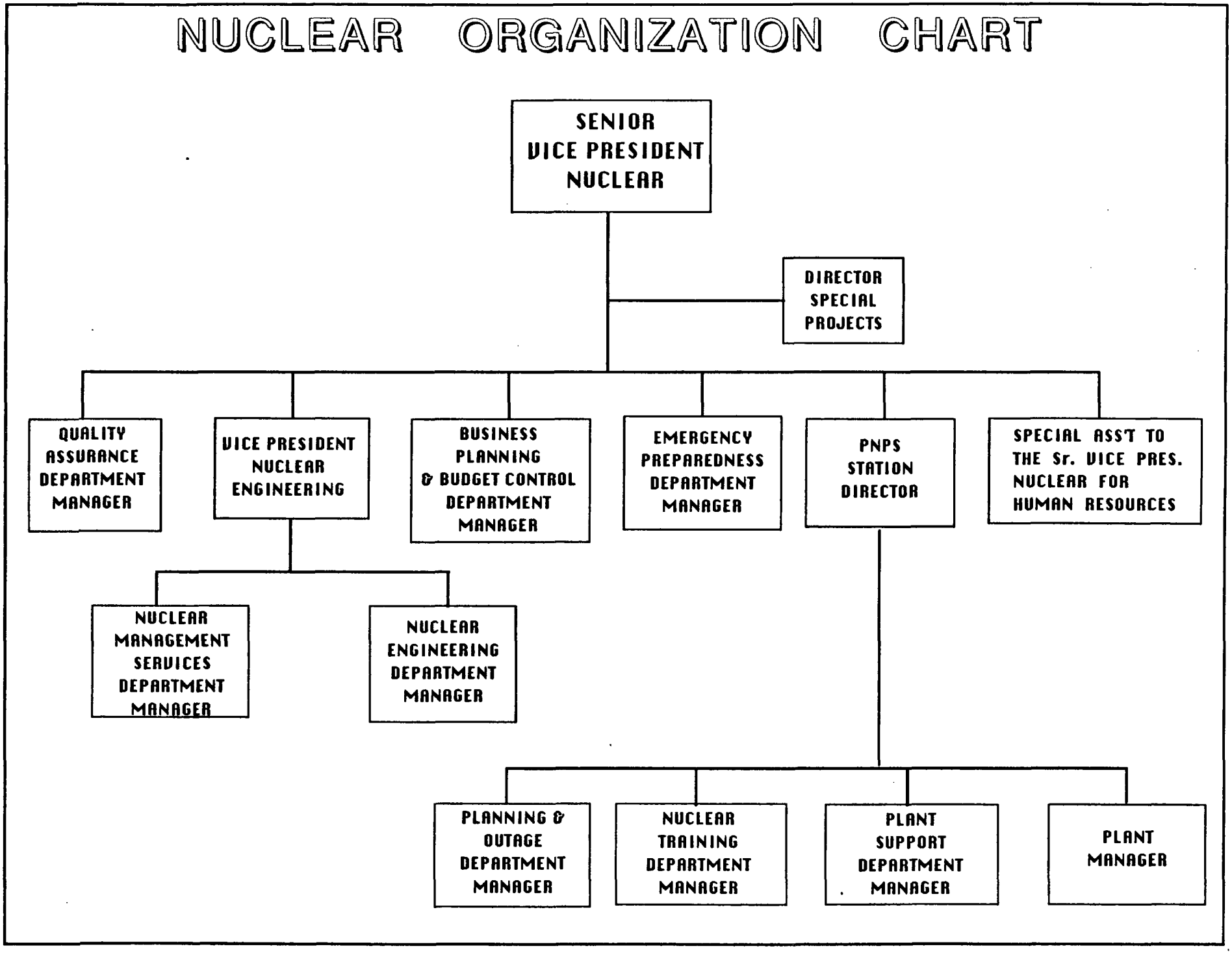

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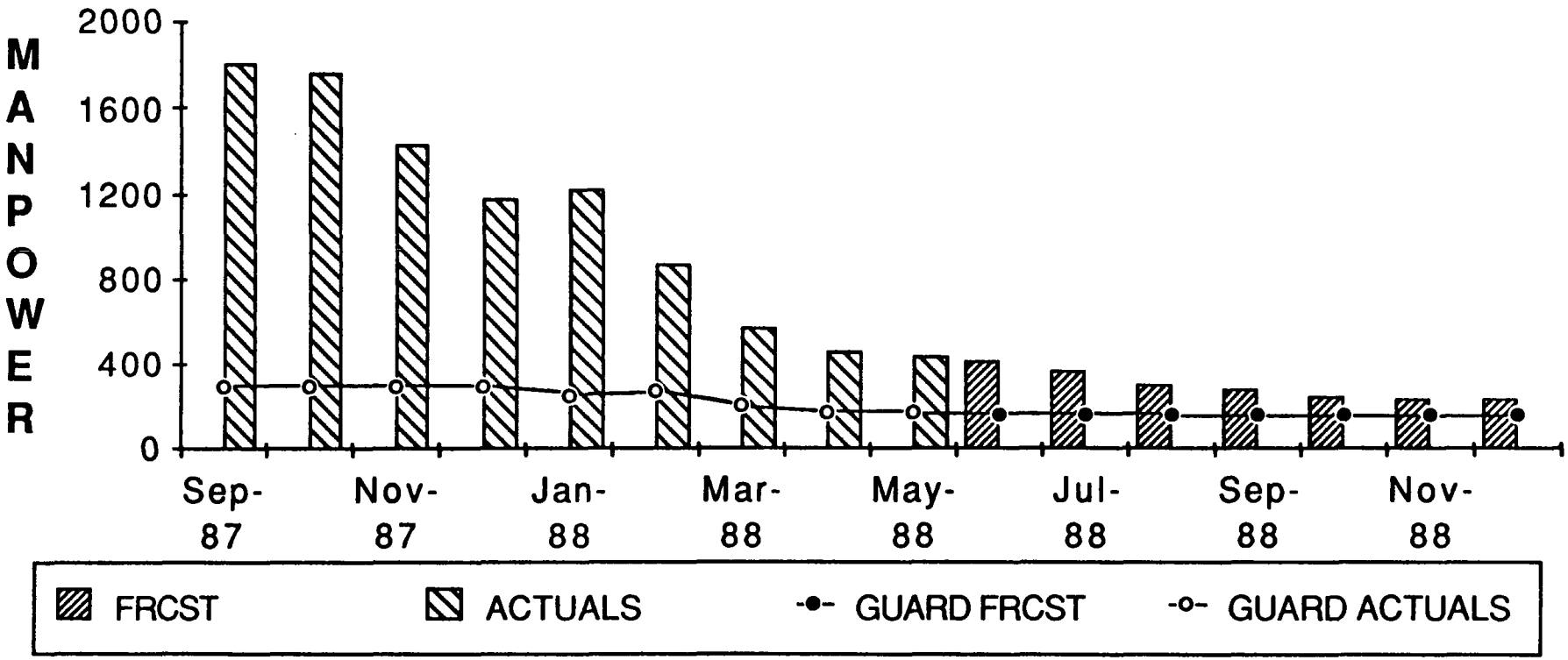
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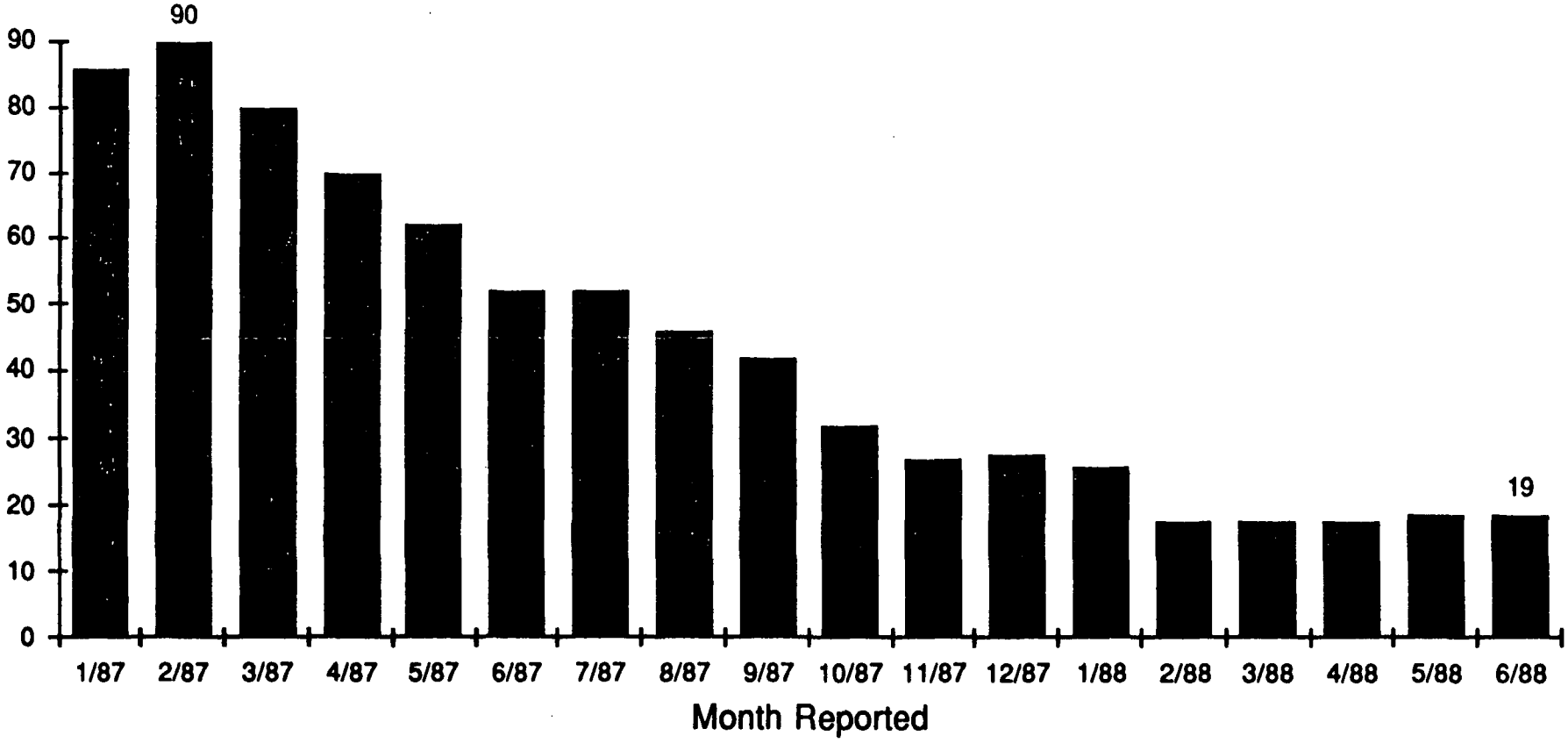

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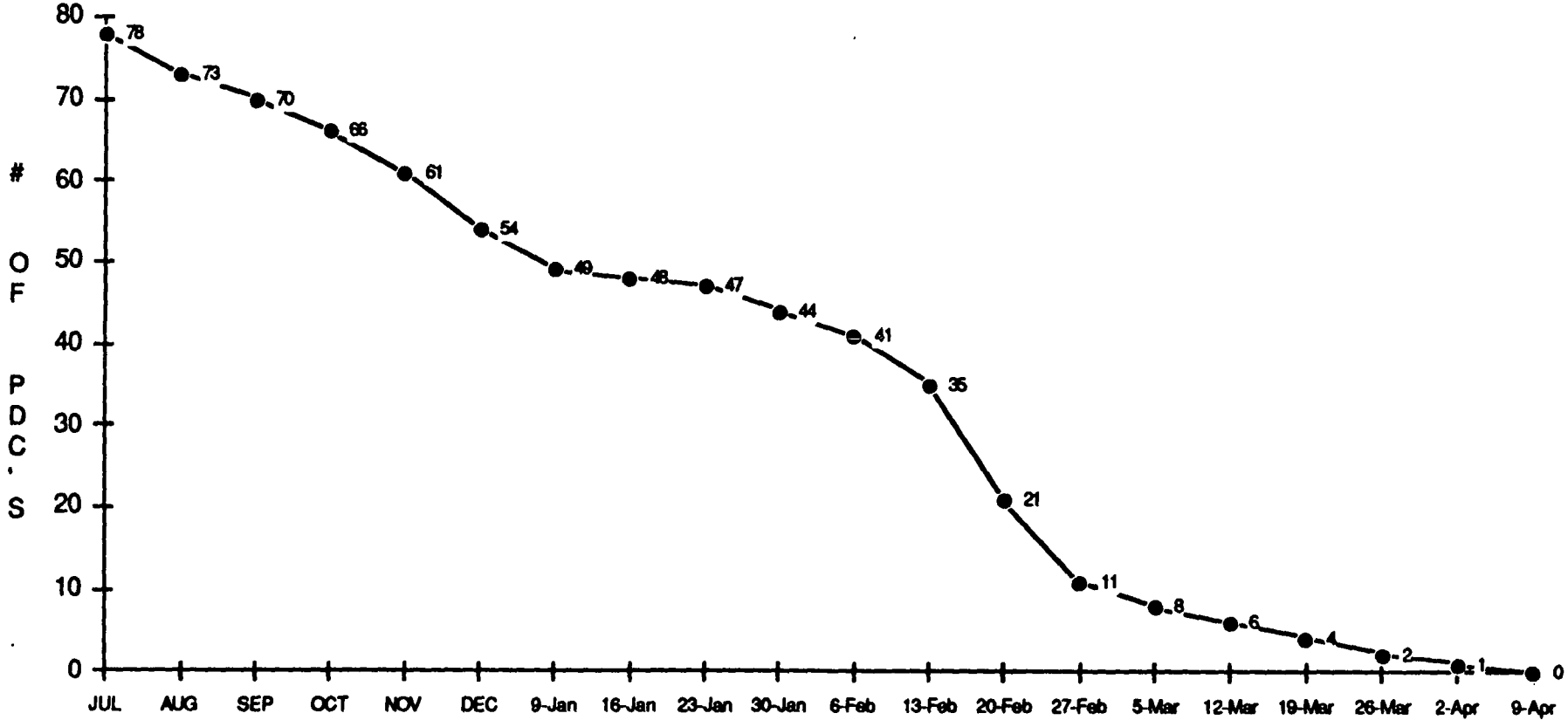

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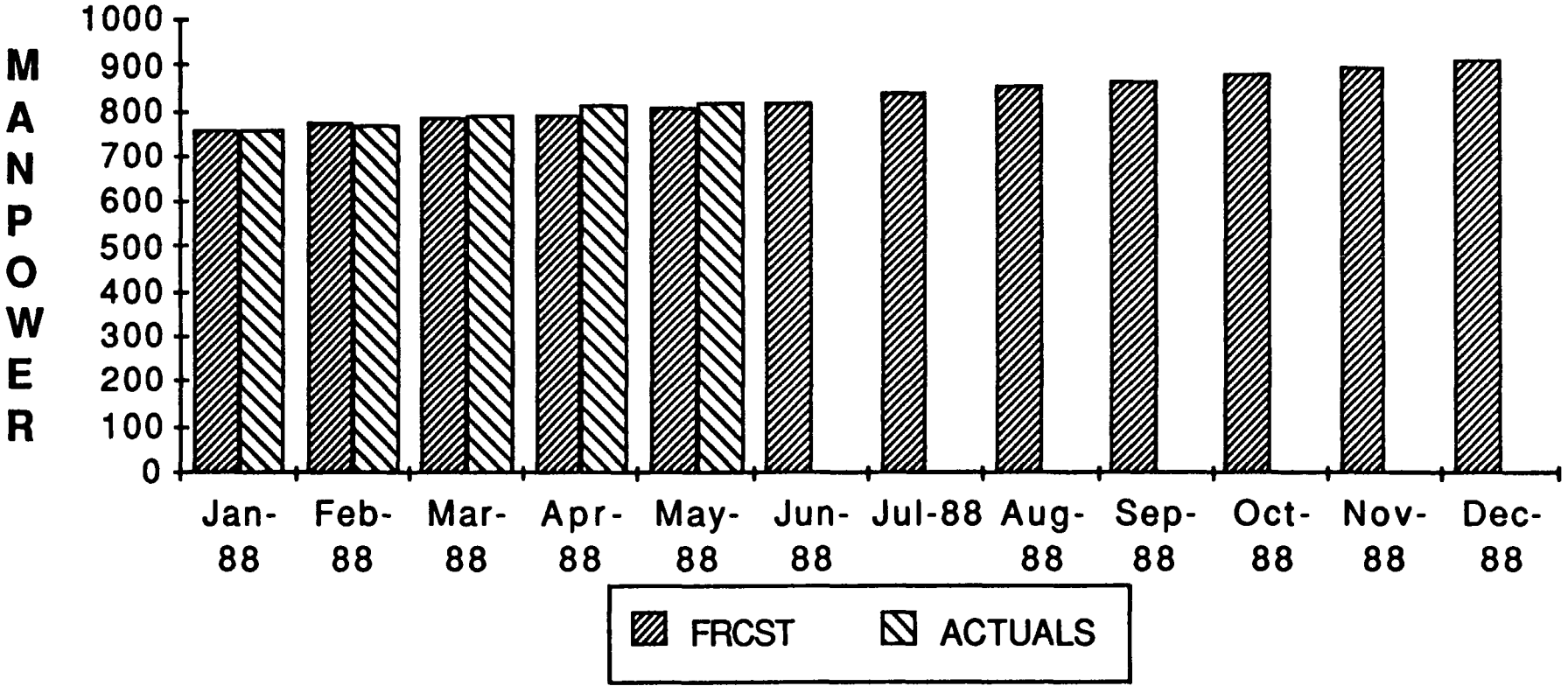

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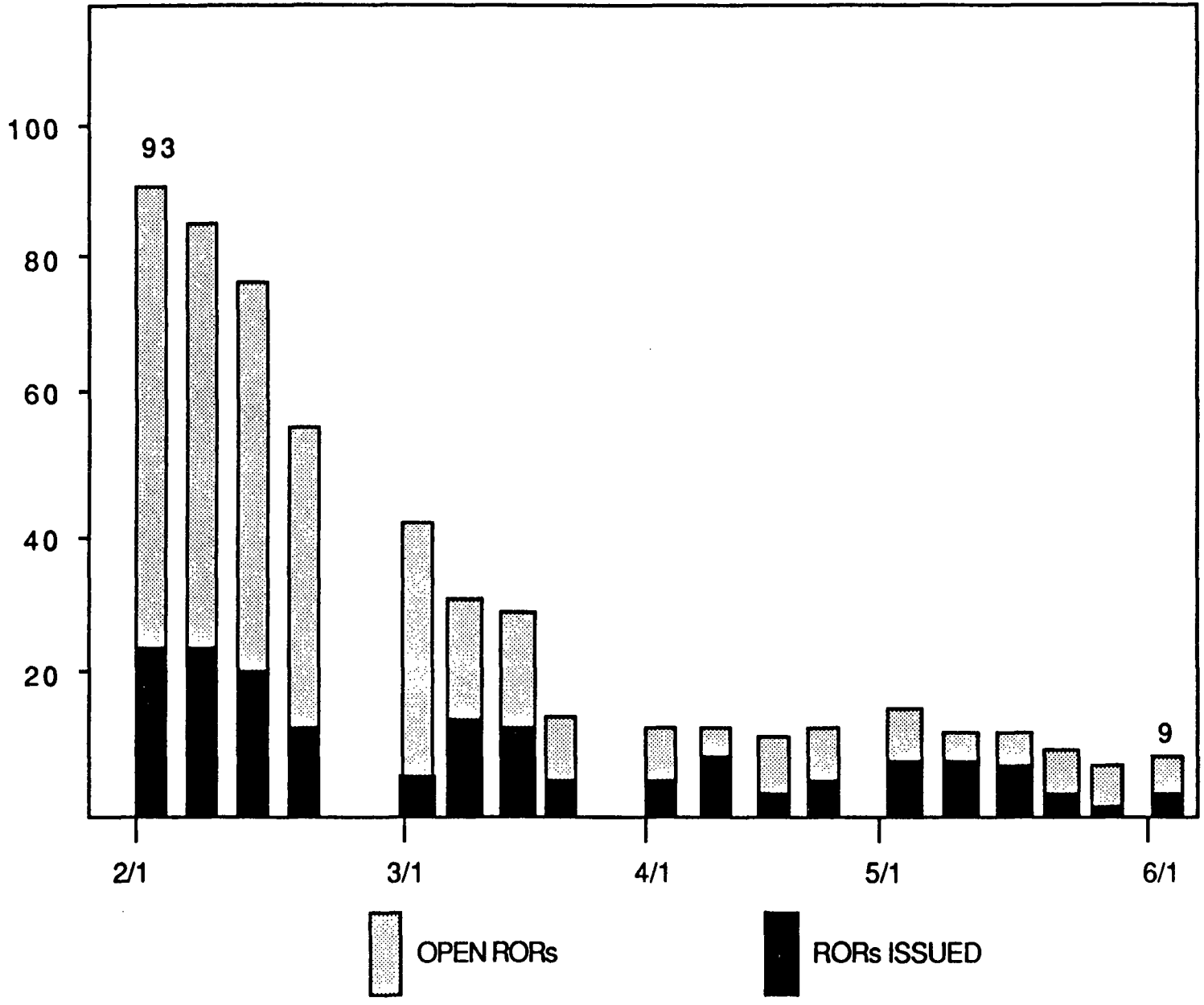

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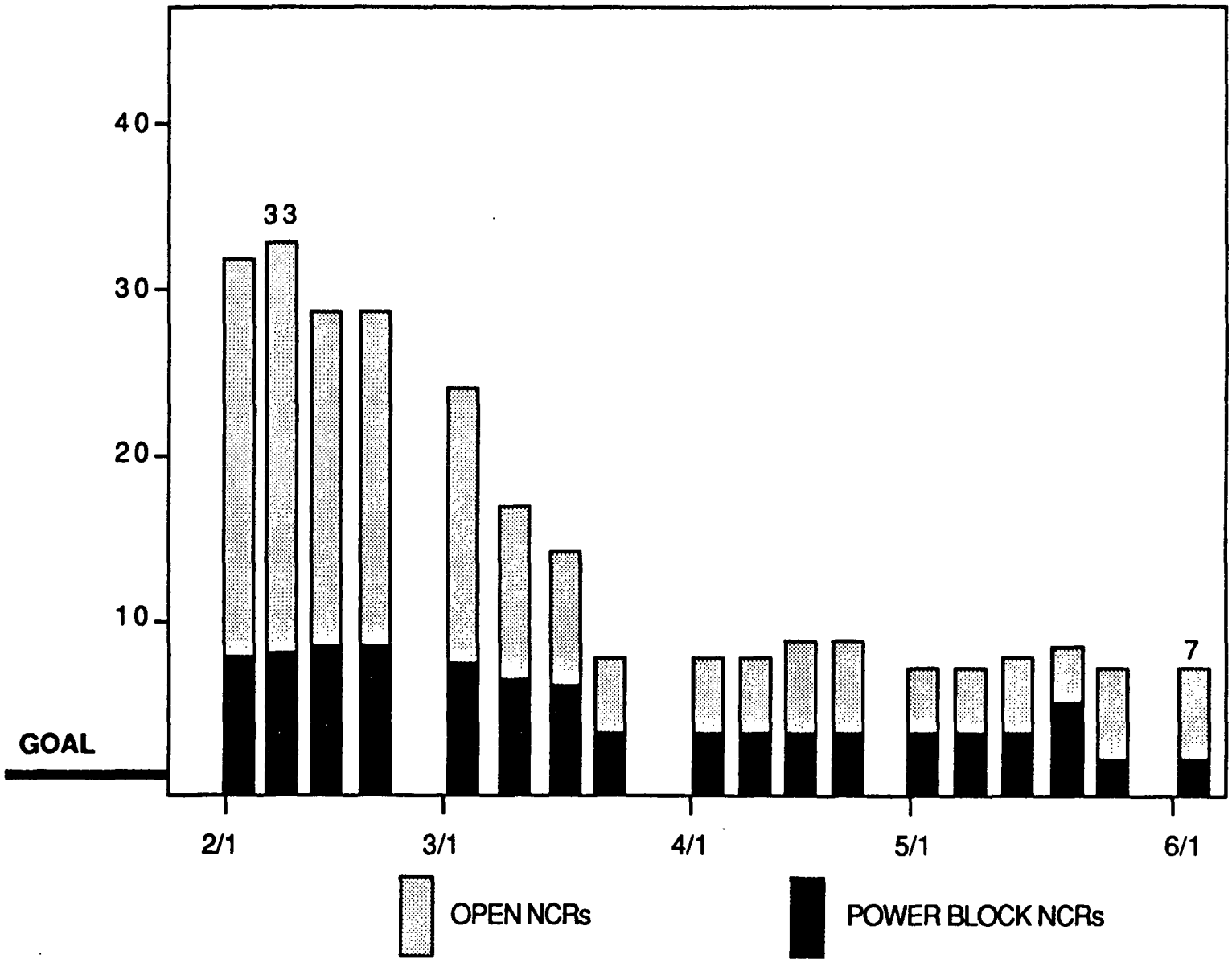

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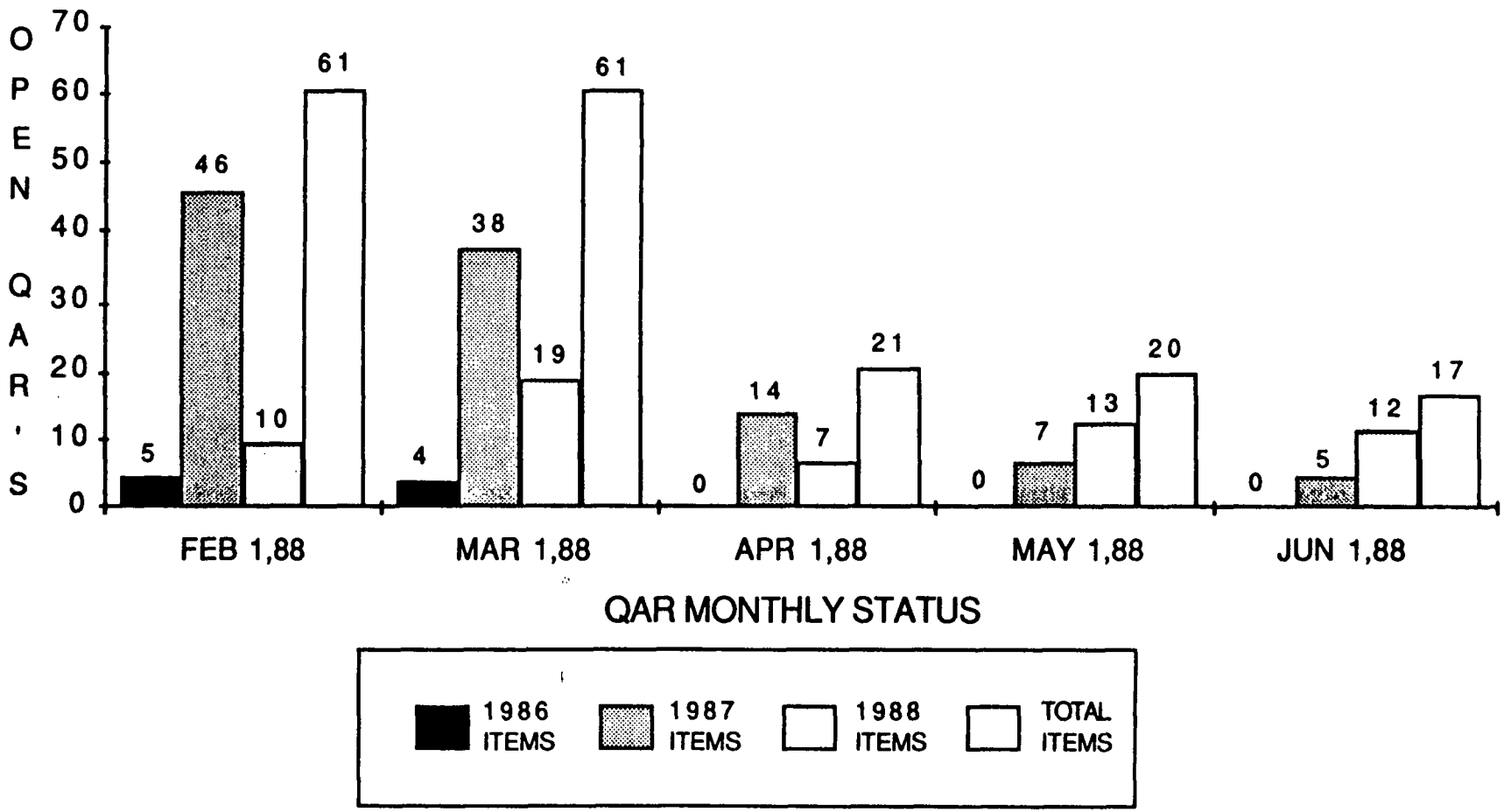

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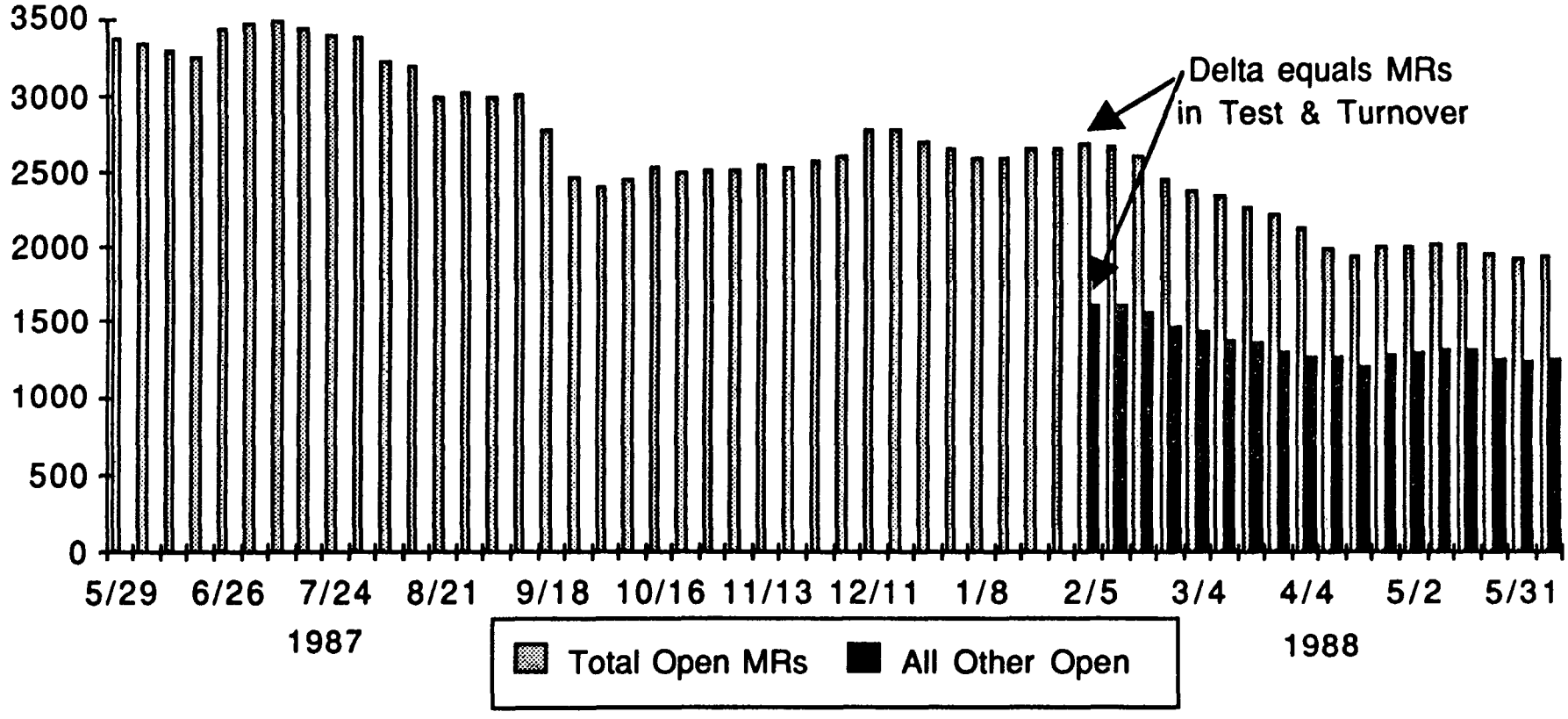

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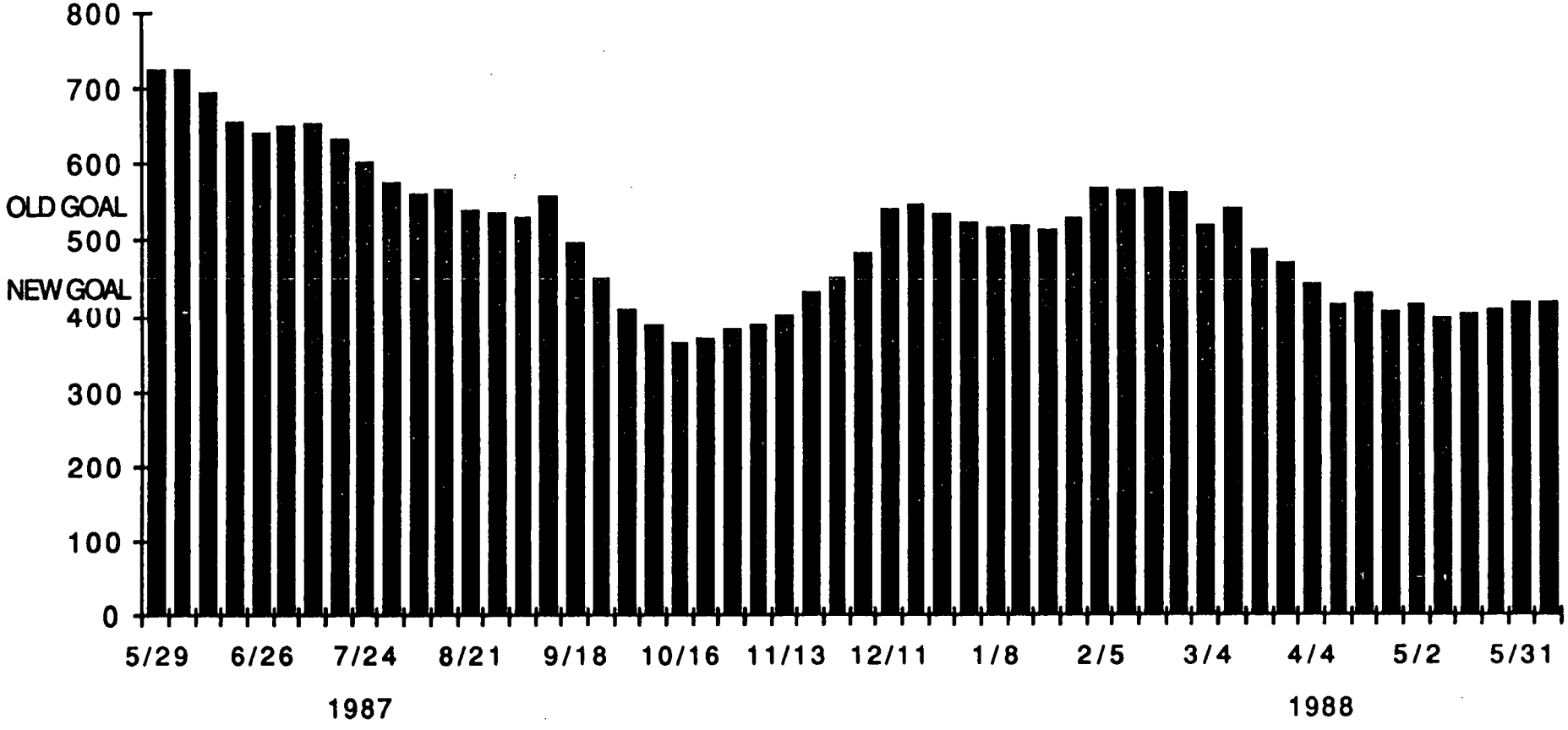

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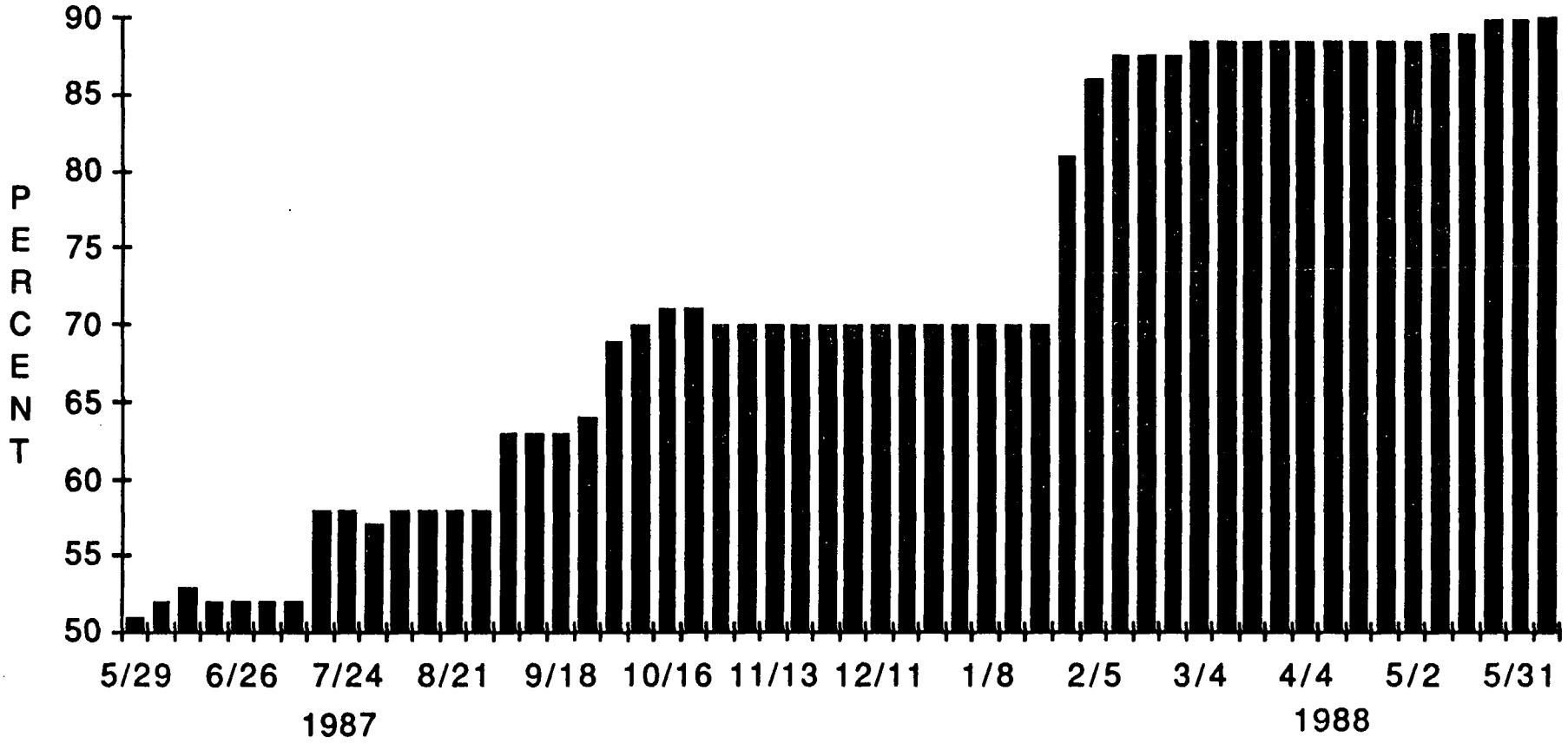
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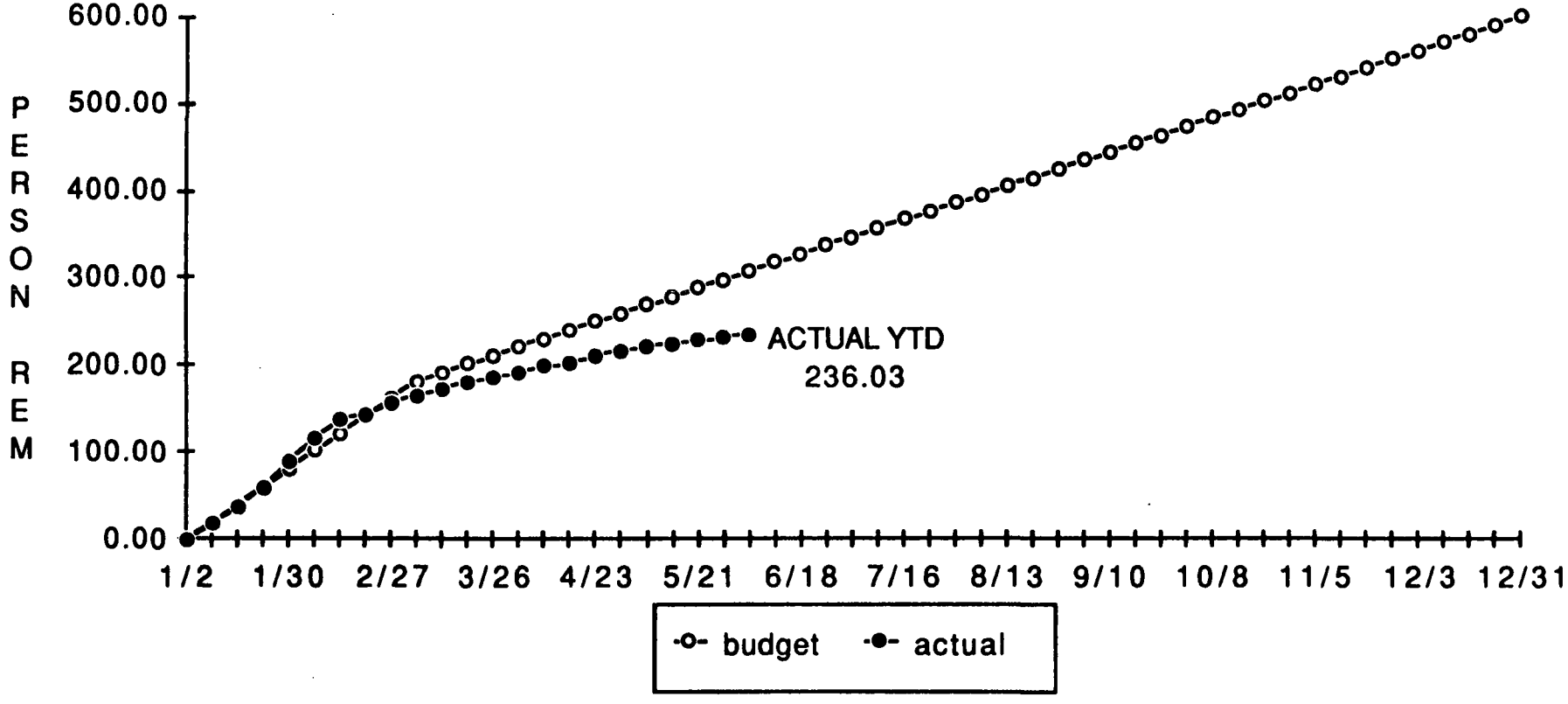

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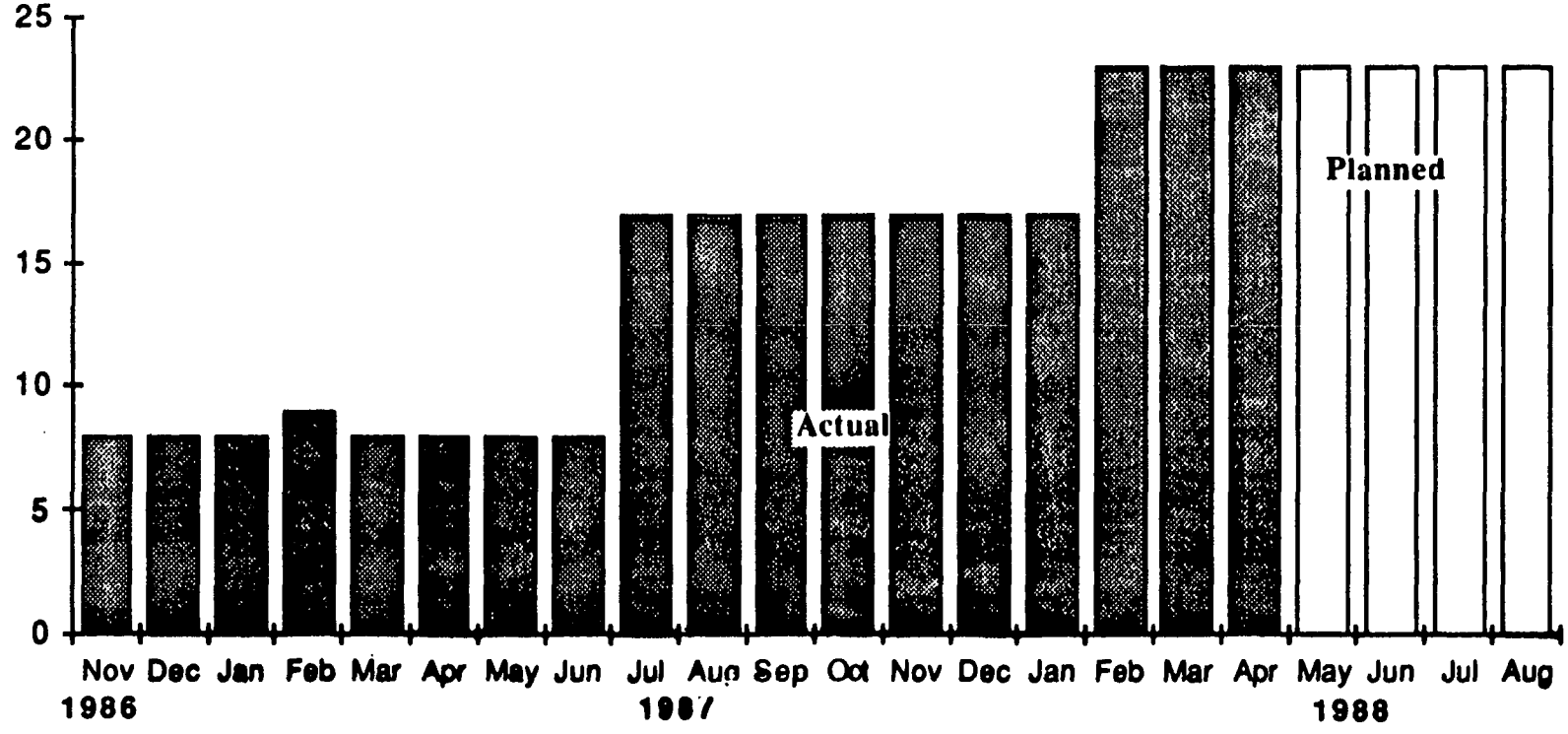

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