ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket Nos.:	50-528 50-529 50-530
License Nos.:	NPF-41 NPF-51 NPF-74
Report No.:	50-528/97-04 50-529/97-04 50-530/97-04
Licensee:	Arizona Public Service Company
Facility:	Palo Verde Nuclear Generating Station, Units 1, 2, and 3
Location:	5951 S. Wintersburg Road Tonopah, Arizona
Dates:	February 9 through March 22, 1997
Inspectors:	K. Johnston, Senior Resident Inspector D. Garcia, Resident Inspector D. Carter, Resident Inspector
Approved By:	Dennis F. Kirsch, Chief, Reactor Projects Branch F

ATTACHMENTS:
Attachment 1 Supplemental Information
Attachment 2 February 24, 1997, Management Meeting Slides
Attachment 3 Palo Verde Monthly Trend Report for December 1997
Attachment 4 Palo Verde 1997 Business Plan

EXECUTIVE SUMMARY

Palo Verde Nuclear Generating Station, Units 1, 2, and 3
NRC Inspection Report 50-528/97-04; 50-529/97-04; 50-530/97-04

Operations

- Operators did not effectively implement a procedure for containment power access purge and inadvertently lowered containment pressure below minimum Technical Specification requirements. Contributing to the error were weaknesses in the procedure and the lack of a thorough prejob briefing (Section O1.1).

- Operators responded in an excellent manner to the loss of cooling to a main transformer. Excellent communications were demonstrated in the control room, as well as very good team work was exhibited in the field (Section O1.2).

- The Unit 3 reactor shutdown evolution was well controlled and the control room staff displayed excellent operational performance (Section O1.3).

- Communications between the control room and other departments were not always thorough as evidenced by the unexpected alarms received by the control room due to planned refueling outage work activities (Section O4.1).

- An auxiliary operator demonstrated very good communication, annunciator response, and self-verification techniques during the prestart checks and subsequent start of an emergency diesel generator. The shift supervisor took action to address a recurring leak in a starting air receiver isolation valve that had the potential for impacting the ability to perform a routine surveillance test (Section O1.4).

Maintenance

- Good radiological protection awareness was demonstrated during the conduct of observed maintenance activities. The material condition of the work areas was excellent. The measuring and test equipment had proper calibration. System engineers and Nuclear Assurance were present for most observed work activities (Section M1.1).

- The valve services team demonstrated excellent performance in addressing changes to work instructions for a modification to a safety injection valve motor operator. The Nuclear Assurance inspector observing the work did an excellent job of independent oversight, assuring that the actions of the valve services team were acceptably performed without prompting (Section M1.2).

Nuclear Assurance personnel of maintenance and modification activities was thorough and affective (Section M1.3).

- Maintenance personnel did not exercise the requisite level of attention to details in their preparations to use scaffolding, which was constructed in accordance with a calculation specific to a lighter charging pump gear reducer to support the rigging of a charging pump block (Section M3.1).

Engineering

- Engineering performed incomplete technical work in allowing scaffolding, supported by a calculation specific to a lighter charging pump gear reducer, to be constructed for the removal of a charging pump block (Section M3.1).

- The auxiliary feedwater system and associated procedures, reviewed by the inspectors, adequately reflected the design and licensing bases. Training material adequately covered system design, operation, and off-normal operator actions (Section E3.1).

Report Details

Summary of Plant Status

Unit 1 and Unit 2 remained at essentially 100 percent power throughout this inspection period.

Unit 3 began the inspection period at approximately 88 percent power and continued coasting down for Refueling Outage 3R6. On February 22, the unit entered Refueling Outage 3R6. The unit was defueled from March 2-March 12. At the end of the inspection period the unit was in Mode 6.

On March 6, Unit 3 spent fuel pool level dropped to the Technical Specification (TS) limit after the transfer canal gate inflatable seal lost air pressure and began to leak. A special inspection was initiated on this event and the results of this inspection will be discussed in NRC Inspection Report 50-530/97-09.

On March 7, the NRC Chairman, members of her staff, and the Region IV Acting Regional Administrator toured Palo Verde with licensee senior management. Following the tour, the Chairman met with licensee senior management and the Arizona Corporation Commission Chairman.

I. Operations

O1 Conduct of Operations

O1.1 Containment Pressure Reduced Below TS Minimum - Unit 3

a. Inspection Scope - (92901)

On February 19, 1997, Unit 3 operators inadvertently reduced containment pressure below the TS minimum pressure (-0.3 psig) as a result of a lineup error in the containment purge and vent system. The inspectors discussed the event with the shift supervisor and with the unit department leader.

b. Observations and Findings

On February 19, at 10:30 a.m., Unit 3 operators attempted to place the containment purge system in the power access purge mode to improve containment atmosphere prior to the refueling outage. In this mode, both an 8 inch supply line and an 8 inch exhaust line should be placed in service and an exhaust fan energized. Both the supply and exhaust lines have automatic containment isolation valves inside and outside containment. These four valves are controlled by two control room hand switches. Each hand switch operates both a supply and exhaust valve, but has only one set of green and red position lights. If the two valves controlled by one hand switch are in different positions, both the green and red light are lit. This is the configuration for a normal containment vent operation when the supply valves are closed and the exhaust valves are opened.

The power access purge mode was provided with an interlock which assures that the supply valves will not open and the supply fan will not energize with containment pressure above 1 inch water gage (w.g.). Containment purge system operating Procedure 40OP-9CP01 provided a caution statement that containment pressure be reduced below 1 inch w.g. (0.03 psig) using the containment vent mode (opening only the exhaust valves) before initiating a power access purge.

The operator performing the power access purge procedure confused the 1 inch w.g. interlock described in the procedure for 1 psig. Based on this mistake, the operator concluded that containment pressure was below 1 psig, the interlock had been satisfied, and initiated power access purge. As a result, only the exhaust valves opened and the exhaust fan started. Operators noted that both control board switches provided dual indication, indicating that the exhaust valves were open and the supply valves were closed. The operator did not recognize that this indicated that the proper lineup had not been established, instead recognizing that the indication was consistent with the normal system venting operations.

The lineup was established at 10:30 a.m. and containment pressure proceeded to decrease from an initial pressure of 0.25 psig to approximately -0.45 psig on three of four containment pressure monitors. At about 11:48 a.m., operators received a containment purge exhaust fan air filter unit low differential pressure alarm; a result of the reduced containment pressure. At 12:24 p.m., operators discovered that containment pressure had dropped to -0.45 psig and realized power access purge had been misaligned. They took action to establish the proper lineup and, by 1:52 p.m., restored pressure to greater than -0.3 psig on each containment pressure channel.

TS 3.6.1.4 requires that pressure be restored to greater than -0.3 psig within 1 hour or be in hot standby within the next 6 hours. Data indicated that containment pressure was below -0.3 for approximately 2 hours. Operators did not take action to shutdown, which is consistent with plant procedures. Plant procedures allow operators approximately 3 hours to effect a controlled shutdown. Engineers performed a walkdown of the system and could not identify any deficiencies caused by the negative pressure. The licensee initiated Condition Report/Disposition Request (CRDR) 1-7-0061 to address this problem and conducted a human performance evaluation. They identified that a significant contributing factor included the difference in units used in the procedure (inches water gage) and the units used on indication available to the operators (psig). Additionally, a key procedure step had more than one action and the operators failed to recognize the second action. The licensee subsequently revised the procedure to resolve these weaknesses.

The inspectors noted that, although the procedure had weaknesses it was accurate and, if followed, would have established a proper power access purge lineup. The shift supervisor noted that there had not been a significant amount of preparation for the task and the Unit 3 department leader agreed that a prejob briefing to

discuss the procedure and expected control board response would have been appropriate. These contributions were factored into the licensee's corrective actions.

The failure to follow the power access purge procedure was a licensee-identified and corrected violation, which is being treated as a noncited violation consistent with Section VII of the NRC Enforcement Policy (NCV 50-530/9704-01).

c. Conclusions

Operators did not effectively implement a procedure for containment power access purge and inadvertently lowered containment pressure below minimum TS requirements. Contributing to the error were weaknesses in the procedure and the lack of a thorough prejob brief.

O1.2 Loss of Main Transformer Cooling - Unit 3

a. Inspection Scope (71707)

On February 20, 1997, power was lost to the cooling system for the Unit 3 main transformer phase C. The inspectors observed operations personnel respond in the control room and operations, maintenance, and engineering personnel respond in the field. Power to portions of the cooling system were subsequently restored.

b. Observations and Findings

Each main transformer cooling system has six separate groups which include four cooling fans and one oil circulation pump. These six groups are powered from either a normal or alternate power supply breaker. Control logic has one group running at all times and, with increasing transformer temperatures, energizes two more groups and then the remaining three. On February 20, phase C of the main transformer had three cooling groups operating and was powered by an alternate supply breaker. The normal breaker was out of service to support the installation of a temporary power supply in preparation for the refueling outage.

At 11:56 a.m., operators received an annunciator indicating that the alternate power supply breaker for the phase C main transformer cooling groups had tripped. Transformer trouble alarm response Procedure 40AL-9MA01 required that with less than two cooling groups operating, operators were to remove all transformer load within 30 minutes. The control room dispatched an auxiliary operator (AO) to investigate the annunciator.

The inspectors were informed of the event approximately 20 minutes after the breaker tripped and proceeded to both the control room and the main transformer. The inspectors at the main transformer observed that, in addition to the AO, the shift supervisor and the electrical maintenance team were present. They had

already made one attempt to close the alternate supply breaker, but it had tripped. By process of elimination they determined that the normally running cooling group had a ground fault. At approximately 30 minutes after the initial breaker trip, operators were able to start one cooling group. At approximately 32 minutes, they started a second group. Prior to exceeding the 30 minute procedural time limit, the shift supervisor had discussed the situation with electrical maintenance engineering. Together, they determined that they were very close to restoring more than one cooling group. They noted that Unit 3 was already at a reduced power of 80 percent and, consequently, a reduced transformer load. Additionally, the weather was cool in comparison for peak summer conditions. They determined that the transformer heatup rate would be mitigated by these factors sufficiently to provide time to reestablish cooling and avoid a plant transient.

The inspectors observed that these individuals were in communications with the control room and operations management. The inspectors in the field observed very good communications and team work. The inspectors in the control room observed excellent communications. The use of closed communications techniques and the briefing held by the control room supervisor (CRS) on the status of the event were excellent.

The shift supervisor initiated a CRDR to review the event. Electrical maintenance subsequently identified a ground fault in a cooling group power supply connector. They also found that the alternate supply breaker had an overload relay that was out of calibration. As a result, the supply breaker tripped before the breaker for the individual cooling group. At the end of the inspection period, the licensee had not completed their evaluation of the CRDR to determine corrective actions.

c. Conclusions

Operators responded in an excellent manner to the loss of cooling to a main transformer phase. Excellent communications were demonstrated in the control room, and very good team work was exhibited in the field.

O1.3 Plant Shutdown - Unit 3

a. Inspection Scope (71707)

On February 21, the inspectors observed the control room staff commence a planned reactor shutdown in preparation for the sixth refueling outage.

b. Observations and Findings

The control room staff was performing a plant shutdown in accordance with operating Procedure 40OP-9ZZ07, "Plant Shutdown Mode 1 to Mode 3." The reactor operator (RO) opened the reactor trip switchgear breakers from

approximately 20 percent power as directed by procedures. The operators entered the standard post-trip procedure immediately following the manual reactor trip.

The CRS displayed excellent command and control during the evolution. The reactor engineer and the shift technical advisor kept the CRS appraised of all expected reactivity changes and TS core operating limits.

The ROs exhibited excellent attentiveness and responsiveness to plant conditions. Of note, was the outstanding communications between reactor engineering and the control room staff. The inspectors noted that the shift supervisor provided excellent supervisory oversight of control room staff and both the site shift manager and Nuclear Assurance were present.

c. Conclusions

The planned reactor shutdown evolution was well controlled and the control room staff displayed excellent operational performance.

O1.4 Emergency Diesel Generator Surveillance Test - Unit 3

a. Inspection Scope (61726)

On March 9, 1997, the licensee was in the process of returning the Unit 3 Train B emergency diesel generator to service following outage maintenance and was preparing to start the engine in accordance with surveillance test Procedure 43ST-3DG02. The inspectors observed an AO perform prestart checks prior to starting the engine and subsequently monitor the engine start.

b. Observations and Findings

The AO consistently used self-verification techniques during the prestart checks and in monitoring the start. The AO communicated clearly with the control room and responded appropriately to both expected and unexpected annunciators.

Prior to the engine start, the surveillance test procedure directed the AO to isolate one of two starting air receivers and to vent its associated air header. The procedure required that pressure in the header be below 20 psig to assure that starting energy was not provided by the line. The purpose of isolating one of two starting air receivers was to assure that the engine could be started by one air receiver.

The isolated header remained at approximately 18 to 19 psig and was continuously venting, indicating that the isolation valve was leaking. A work request, dated March 4, 1997, identified that the valve had a seat leak. The shift supervisor reviewed the maintenance history for this isolation valve, and determined that it had a history of leaking. The shift supervisor contacted the system and maintenance

engineers and found that while they had known of the problem, had previously attempted modifications, and had developed a potential resolution, the repair had not been considered a high priority. The shift supervisor was concerned that if the leak rate increased, it could impact their ability to perform the surveillance test and initiated action to provide a greater level of management attention to the repair.

c. Conclusions

An AO demonstrated very good communication, annunciator response, and self-verification techniques during the prestart checks and subsequent start of an emergency diesel generator. The shift supervisor took action to address a recurring leak in a starting air receiver isolation valve that had the potential for impacting their ability to perform the routine surveillance test.

O4 Operator Knowledge and Performance

O4.1 Control Room Observations - Unit 3

a. Inspection Scope (71707)

On February 24, the inspectors observed Unit 3 control room activities, including operator performance and supervisory oversight. The unit was in Mode 6 and several outage activities were ongoing.

b. Observations and Findings

The inspectors observed the alarm of a control room annunciator and saw that the RO announced and acknowledged the alarm. The CRS acknowledged the RO and stated that the alarm had come in due to integrated safeguards (ISG) testing. The inspectors had reviewed the unit logs earlier that morning and recalled that the unit log contained an entry that stated that ISG testing had been complete late by the shift.

The inspectors discussed this observation with the CRS. The CRS directed the RO to determine whether or not the ISG testing was complete, and the reason for the alarm. The CRS subsequently determined that a maintenance engineer was in the process of restoring plant configuration from the ISG test and that the alarm was associated with this activity.

A few minutes later a second annunciator alarmed, the RO announced the alarm, and the CRS acknowledged and directed the RO to enter the alarm response procedure since this alarm was unexpected. A maintenance engineer responding to the control room stated that this alarm was also due to the restoration of the ISG test.

A third annunciator alarmed and the RO investigating this unexpected alarm determined that a work activity in the cabinets behind the control room was the cause. The CRS had not been adequately informed of the expected alarms.

The inspectors noted that the first alarm had been treated as an expected alarm, even though the operations crew had not clearly established why the alarm should be anticipated. The other two alarms were clearly not expected by the control room staff, even though they were related to ongoing work activities for which the alarms would be anticipated. This indicated that the control room staff had not been clearly appraised of ongoing work activities which might impact control room operations.

The inspectors discussed these observations with the unit department leader who stated that the control room's understanding of ongoing work and its impact on operations had not met operations management's expectations and planned to reemphasize the importance of clear communication between organizations.

c. Conclusions

Communications between the control room and other departments were not thorough as evidenced by the unexpected alarms received by the control room due to planned refueling outage work activities.

II. Maintenance

M1 Conduct of Maintenance

M1.1 General Comments on Maintenance Activities

a. Inspection Scope (62707)

The inspectors observed all or portions of the following work activities:

- WO 762510: diffuser removal/inspection for the low pressure Safety Injection Pump B (Unit 3)
- WO 760932: repairs to gasket joint surfaces for essential cooling water Heat Exchanger B (Unit 3)
- WO 761033: inspect and adjust emergency diesel generator chain drive tension (Unit 3)

b. Observations and Findings

Good radiological protection awareness was demonstrated during the conduct of observed maintenance activities. The material condition of work areas was excellent. The measuring and test equipment had proper calibration. System engineers and Nuclear Assurance representatives were present for most observed work activities.

M1.2 Safety Injection Valve Modification (Unit 3)

a. Inspection Scope (62707)

On February 28, 1997, the inspectors observed portions of a modification to Unit 3 high pressure safety injection Valve SIB-UV-626. The licensee was replacing the valve operator with a larger motor operator and converting it from a rotating-rising stem to a rising stem.

Observations and Findings

The inspectors observed the workers as they were in the process of verifying that the valve motor operator was properly positioned on the yoke. The work order required that the stem mounted anti-rotation device have 1/16 inch clearance to the yoke with the valve "lightly seated." This assured that the anti-rotation device would not impede travel prior to the valve seating. The inspectors observed the licensee implement three changes to the original work order instructions.

- The valve services technicians determined that they would not be able to establish the required 1/16 inch clearance. A valve services engineer revised a design drawing which specified these clearances to allow maintenance to modify the work order to allow the smaller clearances.

- Valve services technicians determined that as the valve was "lightly seated," the stem rotated, closing the gap of the anti-rotation device to the yoke. The design drawings did not specify that the valve should be seated before verifying the anti-rotation device to yoke clearances. The valve services team leader made a pen and ink change to the work instructions to reflect this.

- The valve services technicians found that the anti-rotation device had not been properly centered on the stem and determined that the installation of the anti-rotation device was addressed in a separate work order. With the valve services team leader's concurrence, the mechanic obtained the work order, reperformed the step, and appropriately documented the work.

The inspectors observed excellent team work at the job site. The mechanic, a helper, the valve services team leader, the responsible engineer, and a Nuclear

Assurance inspector were all present for the majority of the inspectors' observation. Changes to the work orders were discussed and properly documented. Since the entire team was present, the changes were made in a timely and correct manner.

The Nuclear Assurance inspector was present to witness hold points in the work order. He did not actively coach the workers, but did a thorough job of assuring that actions were acceptably performed. The inspectors found this to be an excellent practice.

c. Conclusions

The valve services team demonstrated excellent performance in addressing changes to work instructions for a modification to a safety injection valve motor operator. The Nuclear Assurance inspector observing the work did an excellent job of independent oversight, assuring that the actions of the valve services team were acceptably performed, without prompting.

M1.3 Auxiliary Feedwater (AFW) System Maintenance

a. Inspection Scope (62707)

The inspectors observed major portions of Procedure 31MT-9AF02, "AFW Pump Turbine Disassembly and Assembly." Work orders observed included:

WO 760931: terry turbine internal inspections
WO 760929: disassemble/inspect turbine governor valve
WO 760919: inspect turbine overspeed trip tappet

In addition, the inspectors reviewed a modification package to add an antihydraulic locking device to the AFW motor driven pump discharge valve bonnet area. This modification was in response to NRC Generic Letter 95-07. The inspectors observed major portions of the disassembly, inspection, and modification to the AFW discharge valves.

b. Observations and Findings

The turbine work was performed using approved procedures and in accordance with work instructions. Mechanics demonstrated detailed and comprehensive knowledge of the turbine and auxiliary components. Nuclear Assurance performed oversight of sensitive evolutions and provided feedback to the mechanics. A maintenance team leader provided direct oversight of the total turbine overhaul. Foreign material exclusion controls were effectively implemented to maintain system cleanliness.

The AFW discharge valve modification was performed in accordance with approved procedures and was supervised by the maintenance team leader and with Nuclear

Assurance oversight. Foreign material exclusion control was effective to maintain system cleanliness.

c. Conclusions

Mechanics demonstrated detailed and comprehensive knowledge of AFW turbine construction and repair procedures and demonstrated good use of both procedures and work orders. Oversight by both maintenance team leaders and Nuclear Assurance personnel of maintenance and modification activities was thorough and effective.

M3 Maintenance Procedures and Documentation

M3.1 Scaffolding Not Properly Evaluated for Rigging Application - Unit 2

a. Inspection Scope (62707)

On March 10, 1997, an AO observed a puddle on the floor of the Unit 2 Train A charging pump room. Operators subsequently determined this apparent leak was the result of a crack in the charging pump block. Operators determined this to be a loss of structural integrity to an ASME Class 2 component and entered TS 3.0.3 until the pump could be isolated. The inspectors observed preparations made for the removal and installation of the block.

b. Observations and Findings

On March 12, the inspectors observed carpenters as they completed the construction of scaffolding designed to support an I-beam, which was to be used to rig the charging pump block. The work order for the scaffold referred to a drawing of the scaffold with an associated calculation. The calculation, however, stated that it was developed to analyze a scaffold to rig a charging pump gear reducer. The inspectors discussed this with maintenance engineering and was informed that the charging pump block weighs approximately 1200 lbs and the gear reducers weigh approximately 800 lbs. The original calculation stated that a margin a 50 percent had been applied and that the scaffold had been analyzed for 1200 lbs.

Design engineering developed a new calculation for the same scaffolding construction which established that it could support 1800 lbs without modification. Additionally, the licensee initiated a CRDR to determine and assess the circumstances under which the scaffolding work order was released to the field with a calculation that was not specific to the rigging of the charging pump block.

c. Conclusions

Scaffolding, constructed to support the rigging of a charging pump block, was constructed in accordance with a calculation specific to a lighter charging pump gear reducer. This represents inattention to detail by the maintenance workers and an instance of incomplete technical work by engineering.

III. Engineering

E3 Engineering Procedures and Documentation

E3.1 AFW System Design and Licensing Basis Review

a. Inspection Scope (37551, 71707)

The inspectors conducted a review of licensee documentation associated with the AFW system and performed walkdowns of the system. This review included portions of the following design basis documents:

- Updated FSAR
- System description manual
- Individual Plant Examination (IPE) for Severe Accident Vulnerabilities (Response to Generic Letter 88-20)
- Operations training lesson plans
- NUREG-1275, Volume 10, "Operating Experience Feedback Report - Reliability of Safety-Related Steam Turbine-Driven Standby Pumps"
- NUREG/CR-5836, "AFW System Risk-Based Inspection Guide for the Palo Verde Nuclear Power Plant"
- AFW System Annual Report 1995-1996 (produced by the maintenance, system, and design engineers)
- System drawings

b. Observations and Findings

The inspectors conducted a walkdown of the AFW system as described in the Palo Verde updated FSAR. All observed components and piping configurations were as described in the drawings. All risk-important valves, as described in the IPE and in NUREG/CR-5836, were in their proper positions.

The inspectors confirmed, by a review of training department lesson plans associated with AFW, that operator emergency response actions were addressed and reinforced with job performance measures. These actions covered control room and local operator actions (i.e., resetting the turbine-driven AFW pump.) Additionally, industry-related and Palo Verde specific events were covered in operator requalification training.

c. Conclusions

The AFW system and procedures, reviewed by the inspectors, adequately reflected the design and licensing bases. Training material adequately covered system design, operation, and off-normal operator actions.

IV. Plant Support

R8 Miscellaneous RP&C Issues

R8.1 (Closed) Violation 50-530/91004-01: routine assignment of overtime to radiation protection personnel greater than TS limits. This violation concerned the routine scheduling of radiation protection technicians for work in excess of 72 hours in a 7-day period during a period from March 11 to April 13, 1991. During an administrative review of the NRC's inspection followup item tracking system, it was identified that this item had not been documented as closed.

NRC Inspection Report 50-528; 50-529; 50-530/91026 included a review of this item which identified that the remaining open issue involved the licensee's commitments to revise their overtime limitation procedure to specify the requirements for review and approval of overtime in excess of TS limits. The inspectors reviewed Procedure 01DP-9EM01, Revision 0, "Overtime Limitations," dated September 13, 1996, and determined that it had adequate requirements for the review and approval of overtime in excess of TS limits.

NRC Inspection Report 50-528; 50-529; 50-530/93040 included a Notice of Violation for failure to meet TS overtime limits and discussed several examples of NRC and licensee identified overtime limit violations. The licensee's response to this violation was reviewed and found acceptable, in NRC Inspection Report 50-528; 50-529; 50-530/95003.

F8 Miscellaneous Fire Protection Issues

F8.1 (Open) Unresolved Item 50-528/96016-03: degraded reactor coolant pump (RCP) oil collection system. During the last Unit 1 outage, the inspectors identified that the flexible covers over the RCP hydraulic lift pumps, designed to contain high pressure oil leakage and direct it to the oil collection system, were degraded.

During their evaluation of the Unit 1 cover condition, the licensee developed a reasonable expectation that the Unit 2 and 3 covers would perform their intended function. Although the licensee did not perform inspections of the covers at that time, their conclusion was based on the condition of the Unit 1 covers and discussions with personnel who had last observed the Unit 2 and 3 covers.

On February 22, at the start of the Unit 3 refueling outage, the licensee conducted an inspection of the Unit 3 covers and found minor degradation. They initiated a CRDR detailing their observations and performed an engineering evaluation and concluded that the as-found covers would have performed their design basis function of collecting pressurized oil leaks.

Shortly following the licensee's observations, the inspectors toured containment and examined all four RCP covers. The inspectors found all four covers to be mostly intact with minor cuts in some areas. Most of these cuts appeared to have been made to facilitate installation of the covers. The cover fasteners were mostly secured, however, there were no fasteners on the back side of the covers facing the RCP motor support stands. The inspectors found the condition of the covers to be consistent with conditions described in the licensee's evaluation.

This item remains open pending an assessment of licensee opportunities to identify the degraded condition of the Unit 1 flexible covers and a review of the licensee's evaluation of their condition.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on March 19, 1997. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any material examined during the inspection should be considered proprietary. No proprietary information was identified.

X3 Management Meeting Summary

On February 24, 1997, licensee senior managers met, in Region IV, with Region IV managers and staff, as well as the NRR Projects Director and Project Manager. The Vice President, Nuclear Production, discussed plant operations and the status of the Unit 3 outage. The Director of Nuclear Assurance discussed the status of the corrective actions program and the Nuclear Assurance "Top Ten" issues list. The Director of Radiation Protection discussed strategic areas for improvement in radiation protection. The Director of Emergency Services, which has responsibility for the security program, discussed access authorization, self-assessments, and the status of the vehicle barrier system

modifications. The Senior Vice President, Nuclear, concluded the meeting with a brief overview of ongoing licensee initiatives. Meeting slides, the December 1996, Palo Verde Monthly Trend Report, and the 1997 Palo Verde Business Plan, presented at the meeting, are included as attachments to this report.

ATTACHMENT 1

PARTIAL LIST OF PERSONS CONTACTED

Licensee

R. Flood, Department Leader, System Engineering
R. Fullmer, Director, Nuclear Assurance
J. Gaffney, Department Leader, Radiation Protection
J. Hesser, Director, Nuclear Engineering
W. Ide, Vice President, Nuclear Engineering
K. Jones, Section Leader, Design Engineering
D. Kanitz, Engineer, Nuclear Regulatory Affairs
A. Krainik, Department Leader, Nuclear Regulatory Affairs
J. Levine, Senior Vice President, Nuclear
D. Mauldin, Director, Maintenance
G. Overbeck, Vice President, Nuclear Production
T. Radke, Director, Outages
C. Seaman, Director, Emergency Services
M. Shea, Director, Radiation Protection
D. Smith, Director, Operations
J. Taylor, Unit 3 Operations Department Leader
M. Windsor, Section Leader, Mechanical Maintenance Engineering

INSPECTION PROCEDURES USED

71707	Plant Operations
92901	Plant Operations Followup
62707	Maintenance Observations
61726	Surveillance Observations
37551	Onsite Engineering
92904	Plant Support Followup

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-530/97004-01	NCV	failure to follow power access purge procedures

Closed

50-530/97004-01	NCV	failure to follow power access purge procedures
50-530/91004-01	NOV	routine assignment of overtime to radiation protection personnel in excess of TS limits

Discussed

50-528/96016-03	URI	degraded reactor coolant pump oil collection system

LIST OF ACRONYMS USED

AFW	auxiliary feedwater
AO	auxiliary operator
CRDR	condition report/disposition request
CRS	control room supervisor
ISG	integrated safeguards
RCP	reactor coolant pump
RO	reactor operator
TS	Technical Specification
w.g.	water gage

PVNGS - NRC Region IV Management Meeting

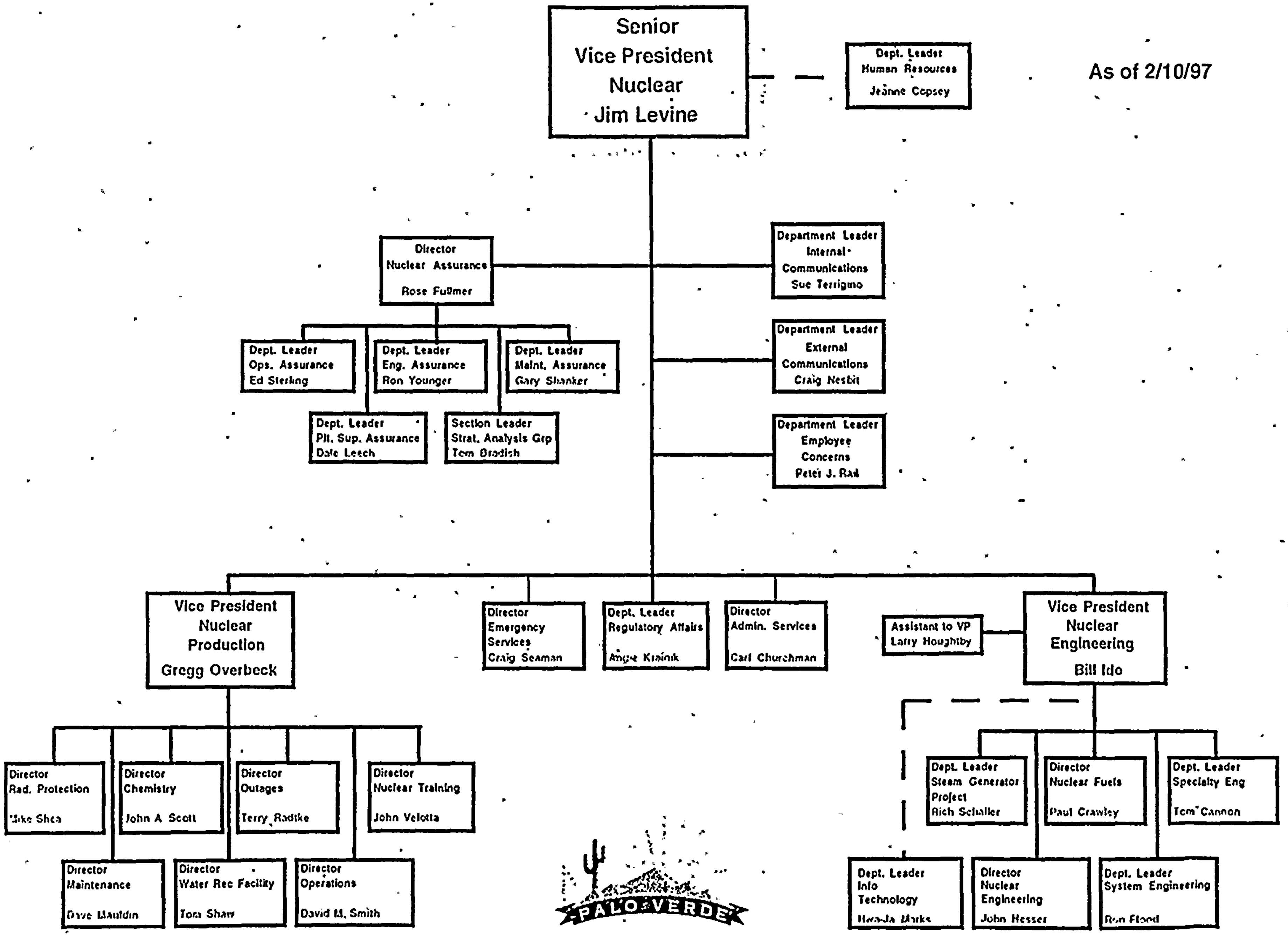
February 24, 1997

PVNGS - NRC Region IV Management Meeting Agenda

♦ J. M. Levine	Introduction
♦ G. R. Overbeck	Production Report Outage Status
♦ R. C. Fullmer	Corrective Action Program Status Nuclear Assurance Top Ten
♦ M. D. Shea	Radiation Protection
♦ C. K. Seaman	Security
♦ J. M. Levine	Closing

PALO VERDE

As of 2/10/97



Senior Vice President Nuclear Jim Levine
Dept. Leader Human Resources Jeanne Copsey
Director Nuclear Assurance Rose Fullmer
Dept. Leader Ops. Assurance Ed Sterling
Dept. Leader Eng. Assurance Ron Younger
Dept. Leader Maint. Assurance Gary Shanker
Dept. Leader Plt. Sup. Assurance Dale Leech
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Assistant to VP Larry Houghtby
Vice President Nuclear Engineering Bill Ide
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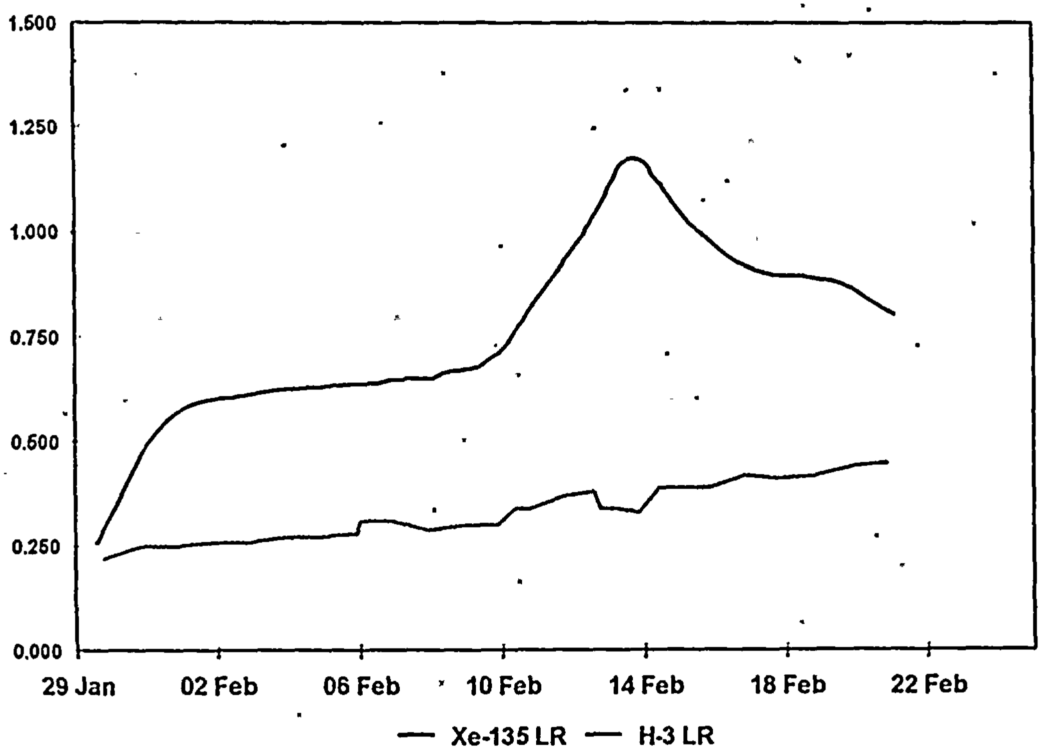
Director Outages Terry Radtke
Director Nuclear Training John Velotta
Director Maintenance Dave Mauldin
Director Water Rec Facility Tom Shaw
Director Operations David M. Smith
PALO VERDE
Dept. Leader Steam Generator Project Rich Schaller
Director Nuclear Fuels Paul Crawley
Dept. Leader Specialty Eng Tom Cannon
Dept. Leader Info Technology Hwa-Ja Marks
Director Nuclear Engineering John Hesser
Dept. Leader System Engineering Ron Flood

$PSLR_{Xe\text{-}135}$ & $PSLR_{H\text{-}3}$



- Both indicate LR <1 gpd
- Both verify a leak condition
- Both indicate a low LR

Palo Verde Nuclear Generating Station Monthly Trend Report

Nuclear Safety	B Reactor Trips	2a B Significant Systems	2b B Low Risk Significant Systems	3 B Collective Radiation Exposure	4 Contaminated Area	Personnel Contamination Events		
Industrial Safety	6a $B Preventable Recordable Injuries	6b B ISAR Industry Ranking	7 Contractor Industrial Safety	8 B Tagging & Clearance Events				
Oversight & Industry Performance	9 Licensee Event Reports	10 Notice of Violations	11 Corrective Action Program	12 B SALP Closeout	13 B INPO Closeout	14 $B Performance Trend	15 $ Business Plan Trend	
Economic Performance	16 B Production Cost	17a $B Operation & Maintenance Cost	17b B Capital Cost	17c B Fuel Cost	18 B Inventory Value	19 Staffing Level	20 Overtime	21 New Revenue
Plant Performance & Reliability	22 $B Capacity Factor	23 B Net Generation (MDC)	24 B Outage Duration	25 $B Forced Outage Rate	26 Thermal Performance	27 Fuel Reliability	28 B Secondary System Chemistry	29 B Corrective Maintenance
	30 Drip Catches	31 Temporary Modifications	32 Control Room Discrepancies	33 B Schedule Adherence				
Environmental Performance	34 B Low-Level Solid Radwaste	35 B Radioactive Effluents - Gaseous	36 B Mixed Waste	37 B Hazardous Waste	38 B Solid Waste			
Professionalism	39 B Human Performance	40 B Scheduled Training Participation	41 B Issues Resolution	42 B Minority Women Vendors				

Previous Month

Current Month

Significant Strength

Satisfactory

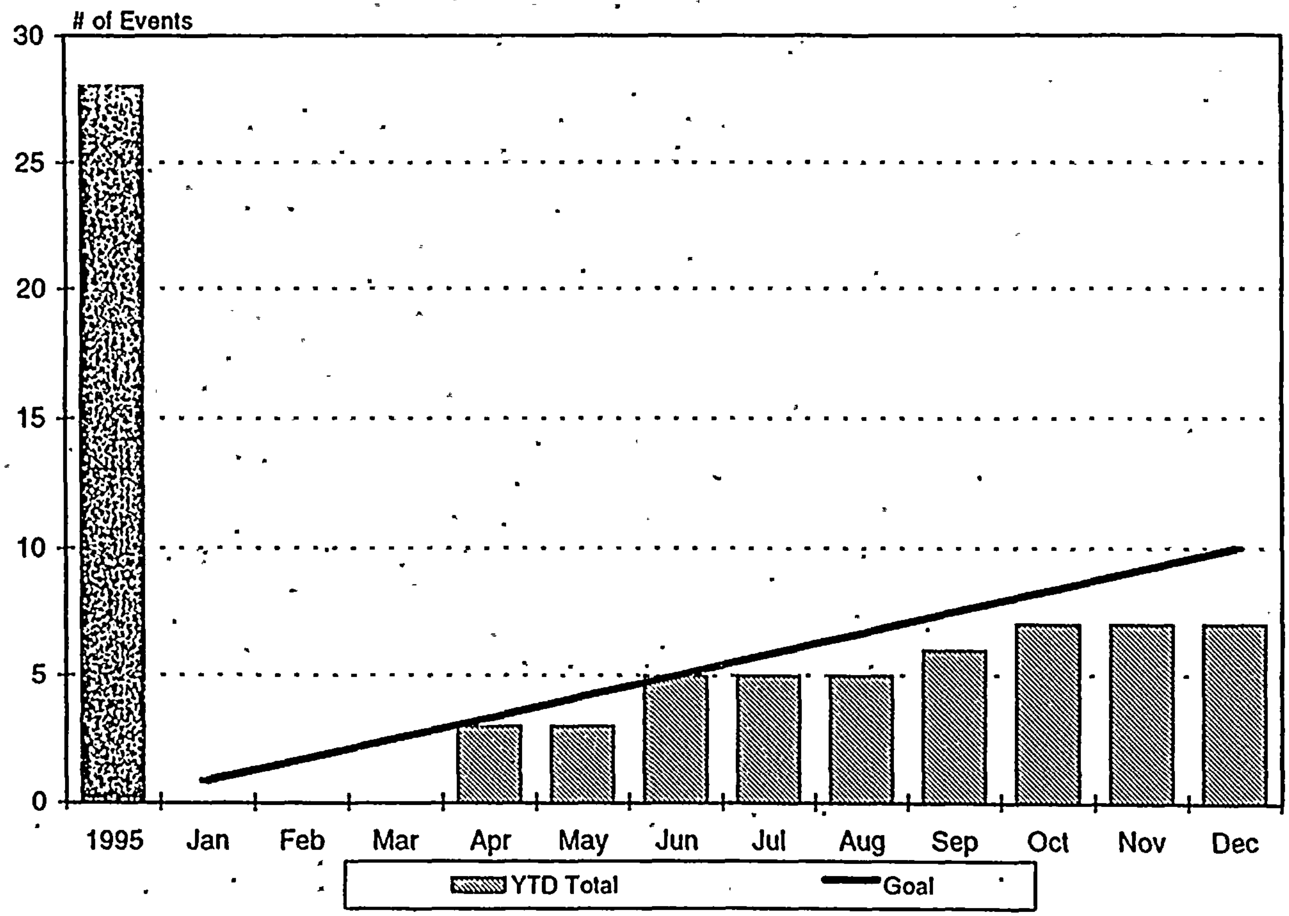
Improvement Needed

Significant Weakness

Code		Year-to-Date	Target
*	Total Accomplishment	77%	80%
B	Business Plan Accomplishment	80%	80%
$	Employee Incentive Payout (as a percent of base pay)	5%	5%

December 1996

8. 1996 Tagging & Clearance Events



Description

9-6-0374: U-2 personnel were still performing work under Clearance 96-00411 when team leader signed off from clearance.

9-6-0432: U-2--electrical arc occurred during installation of last inter-cell connector for PK 'B' battery under a clearance. Battery not completely isolated as required by clearance.

2-6-0086: U-2--during tagging restoration/ removal activities, a RED tag was removed from a 120V AC breaker that was not authorized to be removed.

9-6-Q357: Air compressor dissassembled for maintenance without a clearance. Local breaker had a hand written DO NOT OPERATE tag hanging.

9-6-0652: Electrical disconnect switch installed in Bldg E by subcontractor without a clearance.

Description

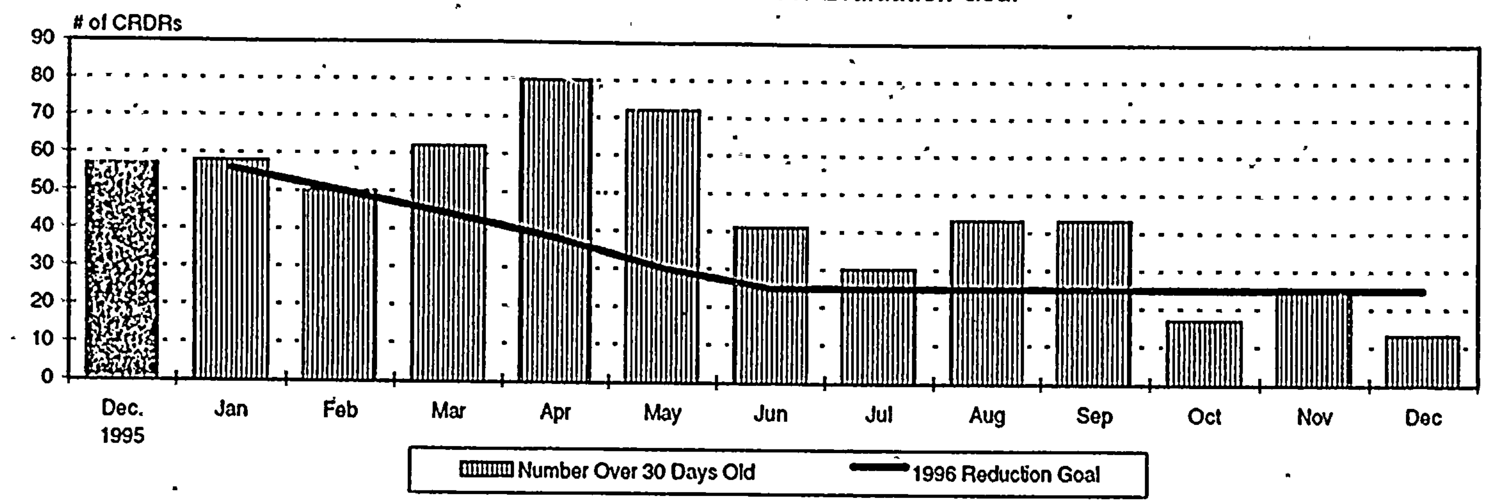
1-6-0217: On 9/27/96 local disconnect for SIC-HV653 was found ON with 2 RED tags hung requiring OPEN. Both tags had been independently verified. Clearances had been authorized, accepted and work accomplished without adequate boundaries established.

1-6-0237: Deals with SIAHV 686 being slightly open when tagged as a boundary valve.

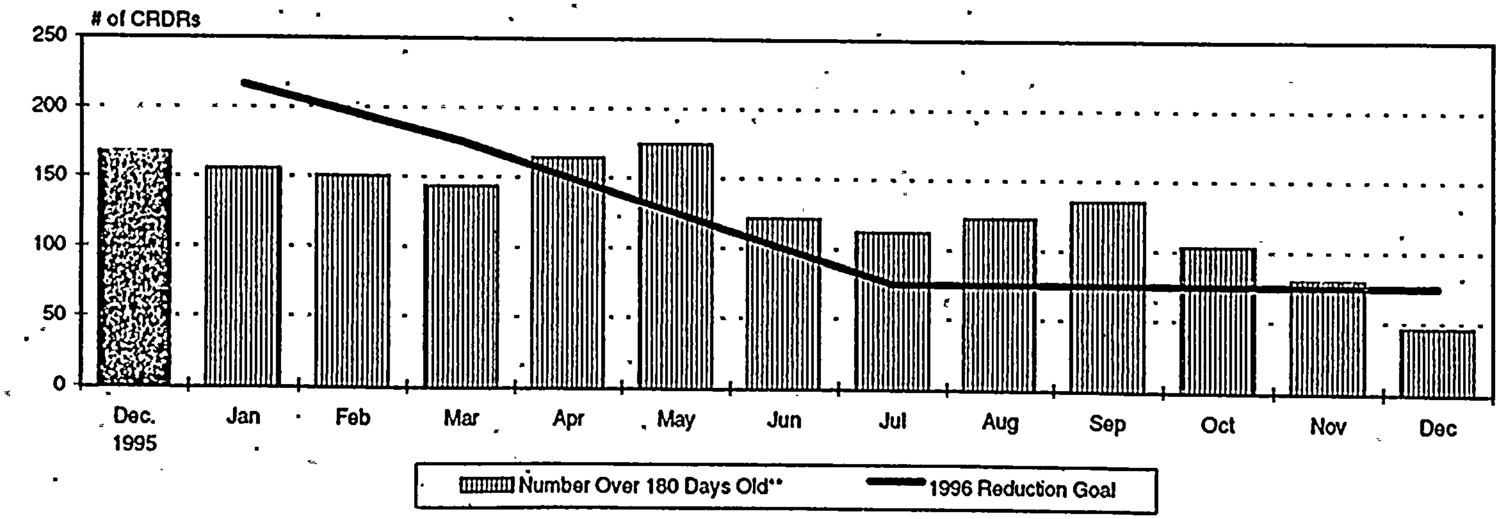
11. 1996 Timeliness of Corrective Actions

Adverse and Significant CRDRS

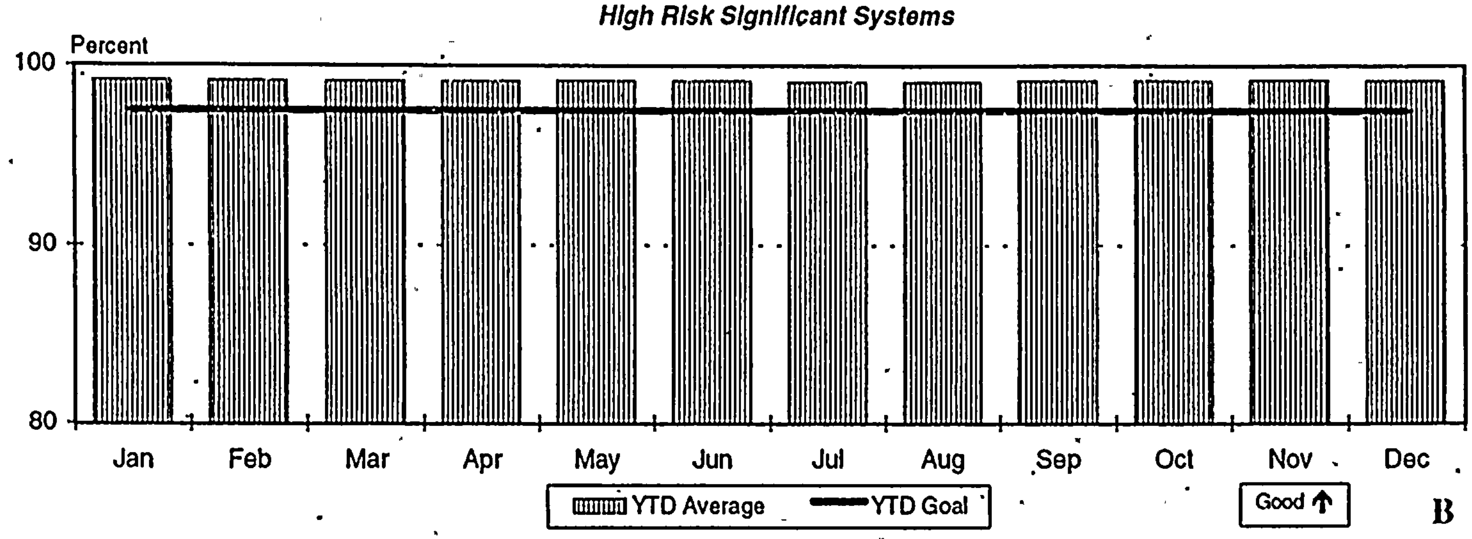
Number of CRDRs Over Evaluation Goal

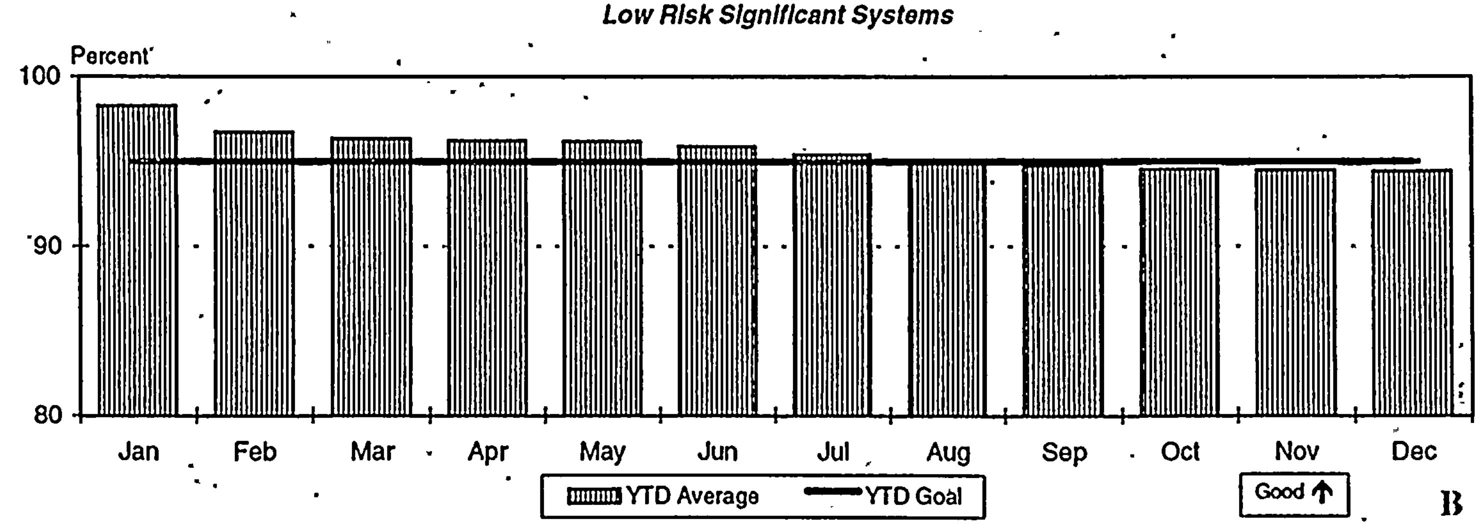


Number of CRDRs Over Closure Goal

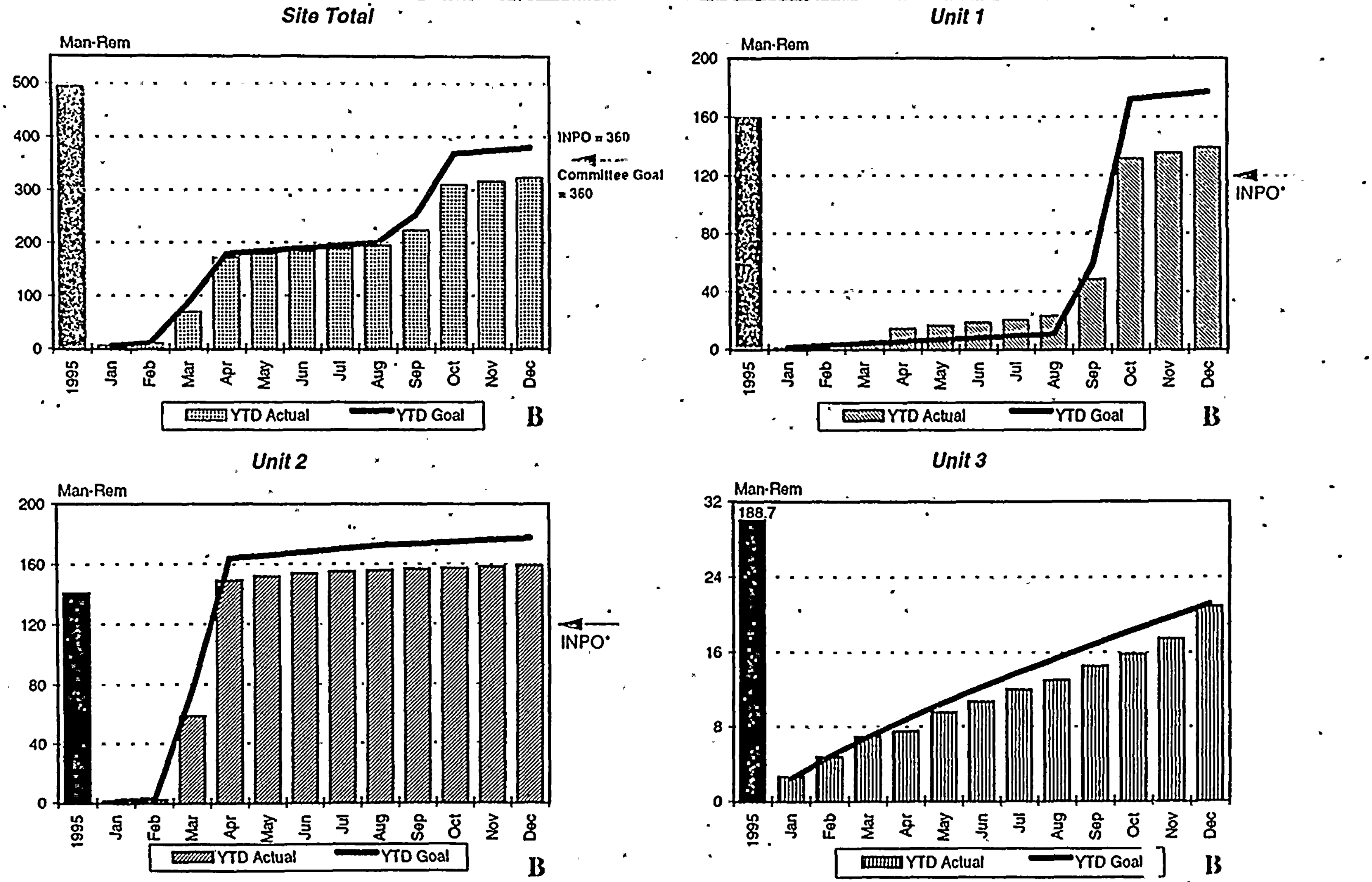


2. 1996 Maintenance Rule Performance



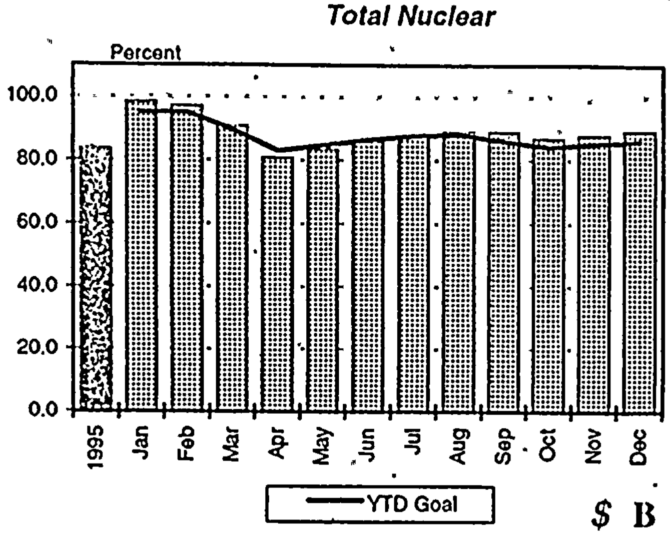


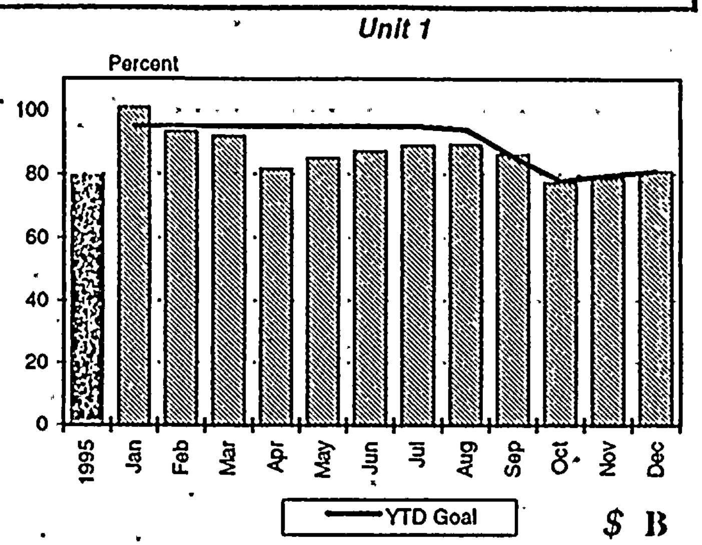
3. 1996 Collective Radiation Exposure

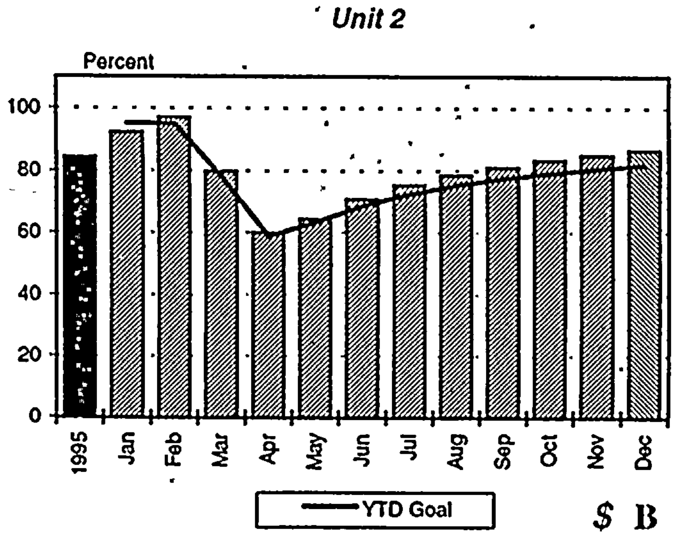


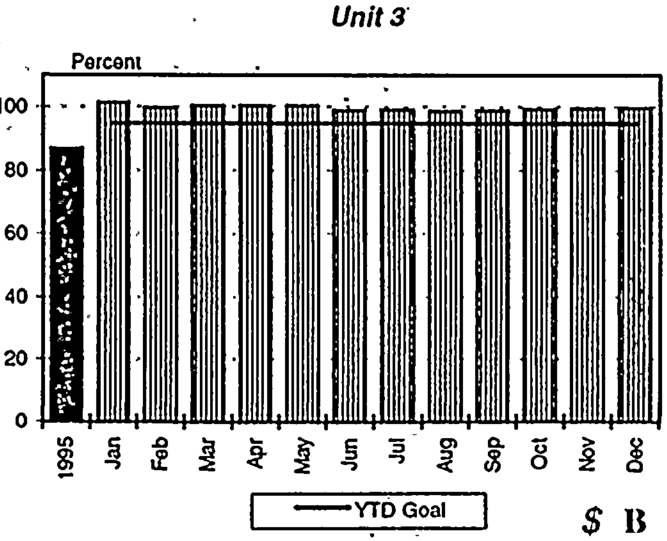
* INPO Best Quartile (man-rem per unit per year, 3-year average = 120).

22. 1996 Capacity Factor (MDC Net)



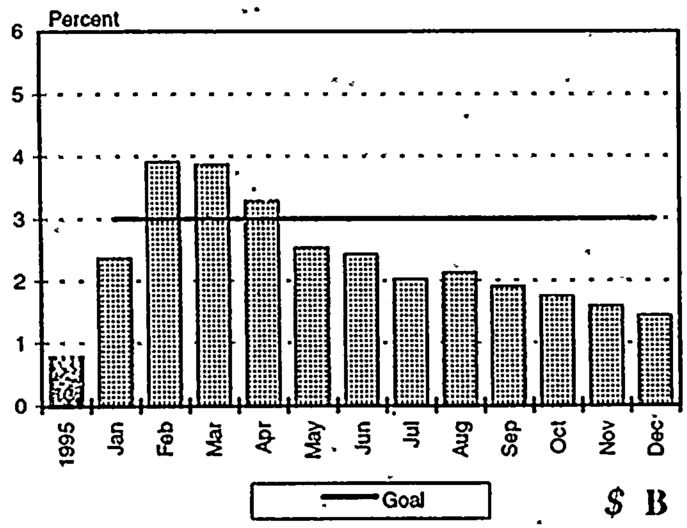




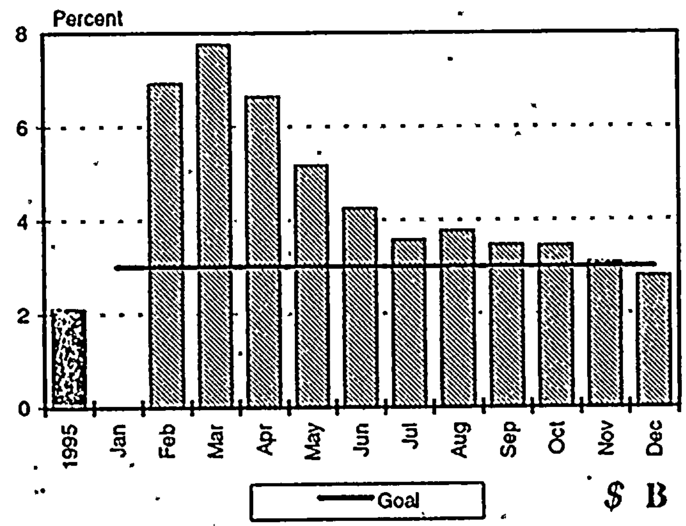


25. 1996 Forced Outage Rate

Total Nuclear



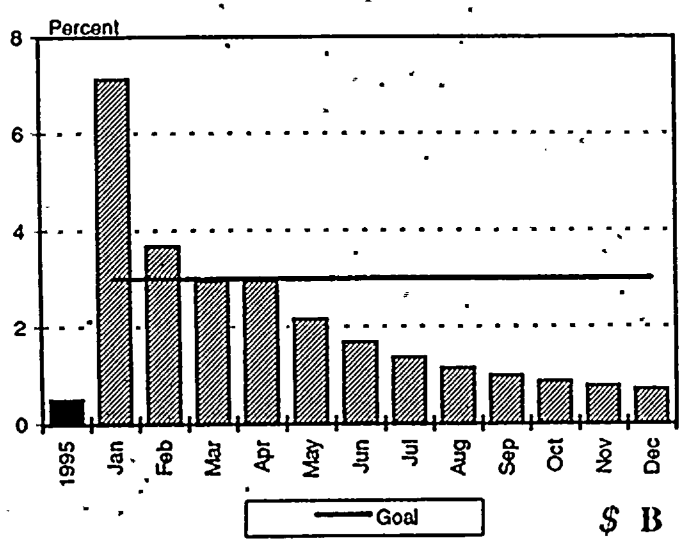
Unit 1



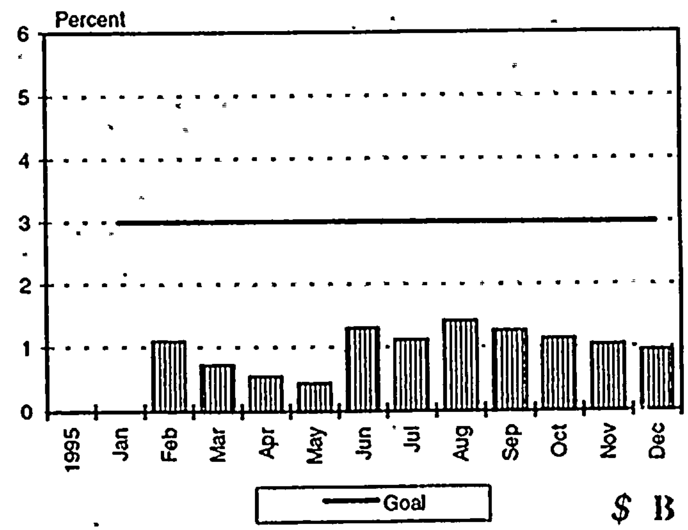
2/25/96 - RX manually tripped to perform repairs caused by lightning.
8/10/96 - RX tripped due to grid disturbance.

Unit 2

1/22/96 - RX automatically tripped on low steam generator level.

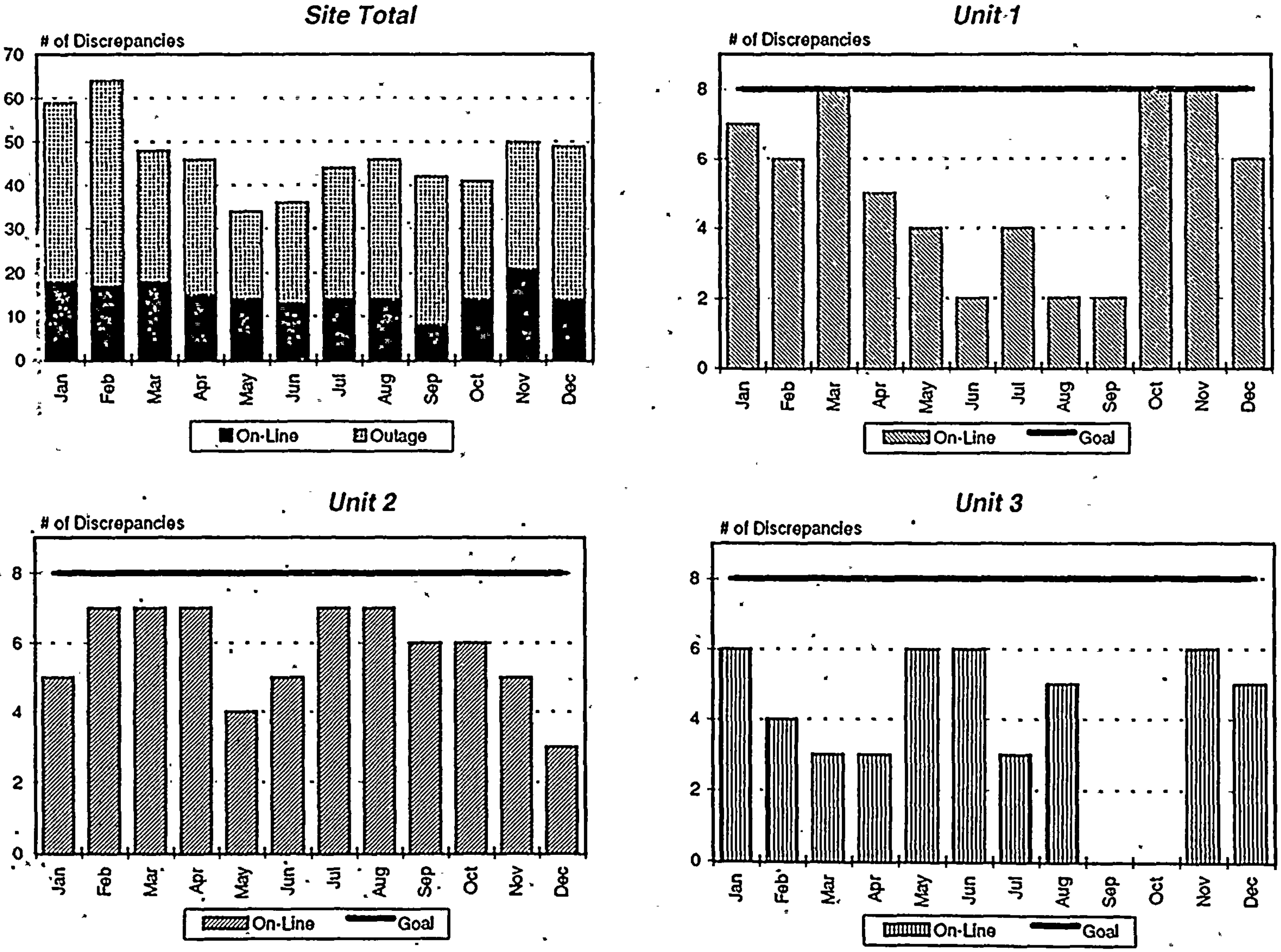


Unit 3

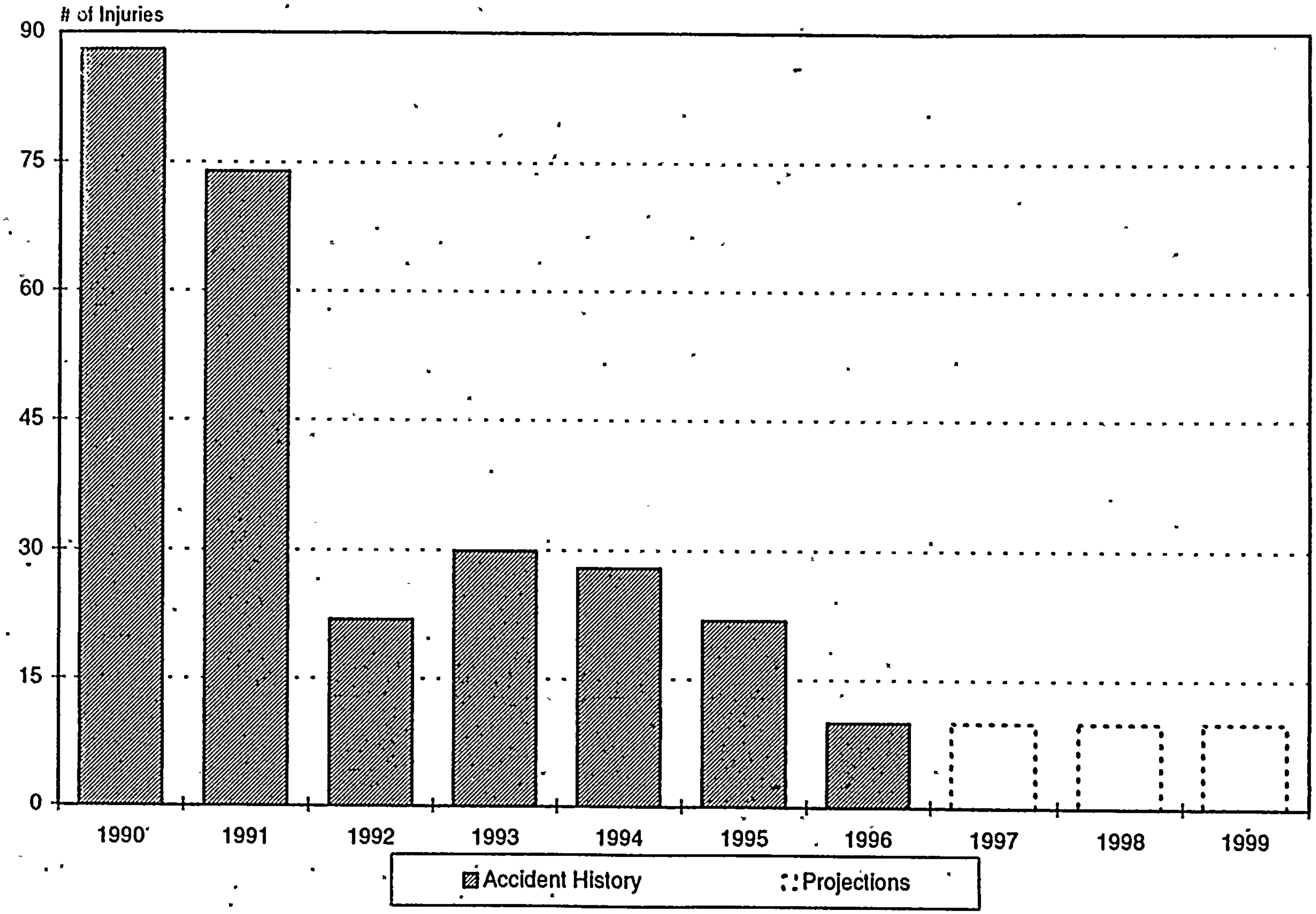


2/25/96 - Turbine trip and RX power cutback to 60% after lightning struck U-1 "C" main transformer.
6/10&25/96 - Manually tripped turbine and reduced RX power to 15% due to EHC problem
8/10/96 - RX tripped due to grid disturbance

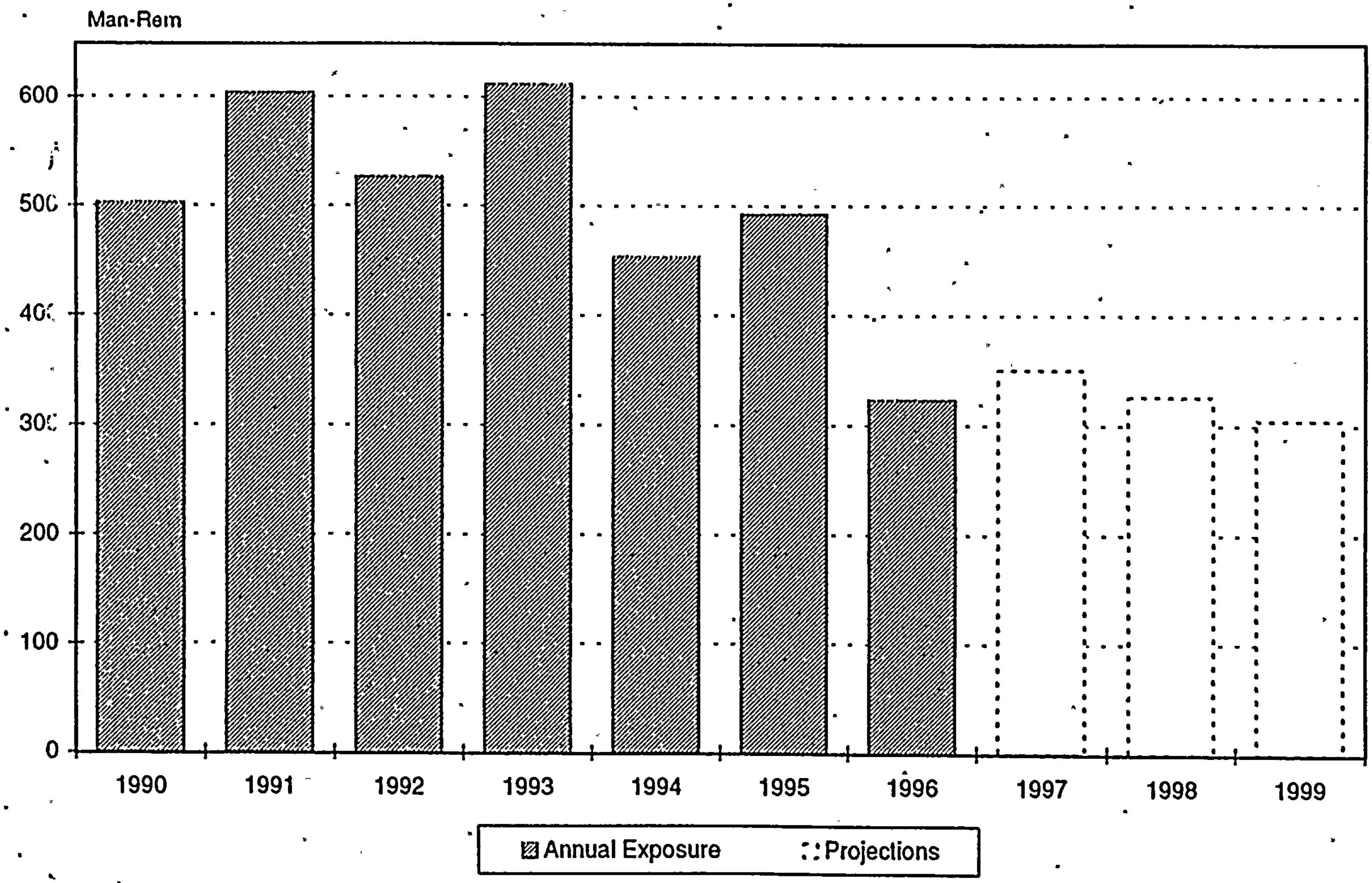
32. 1996 Control Room Discrepancies



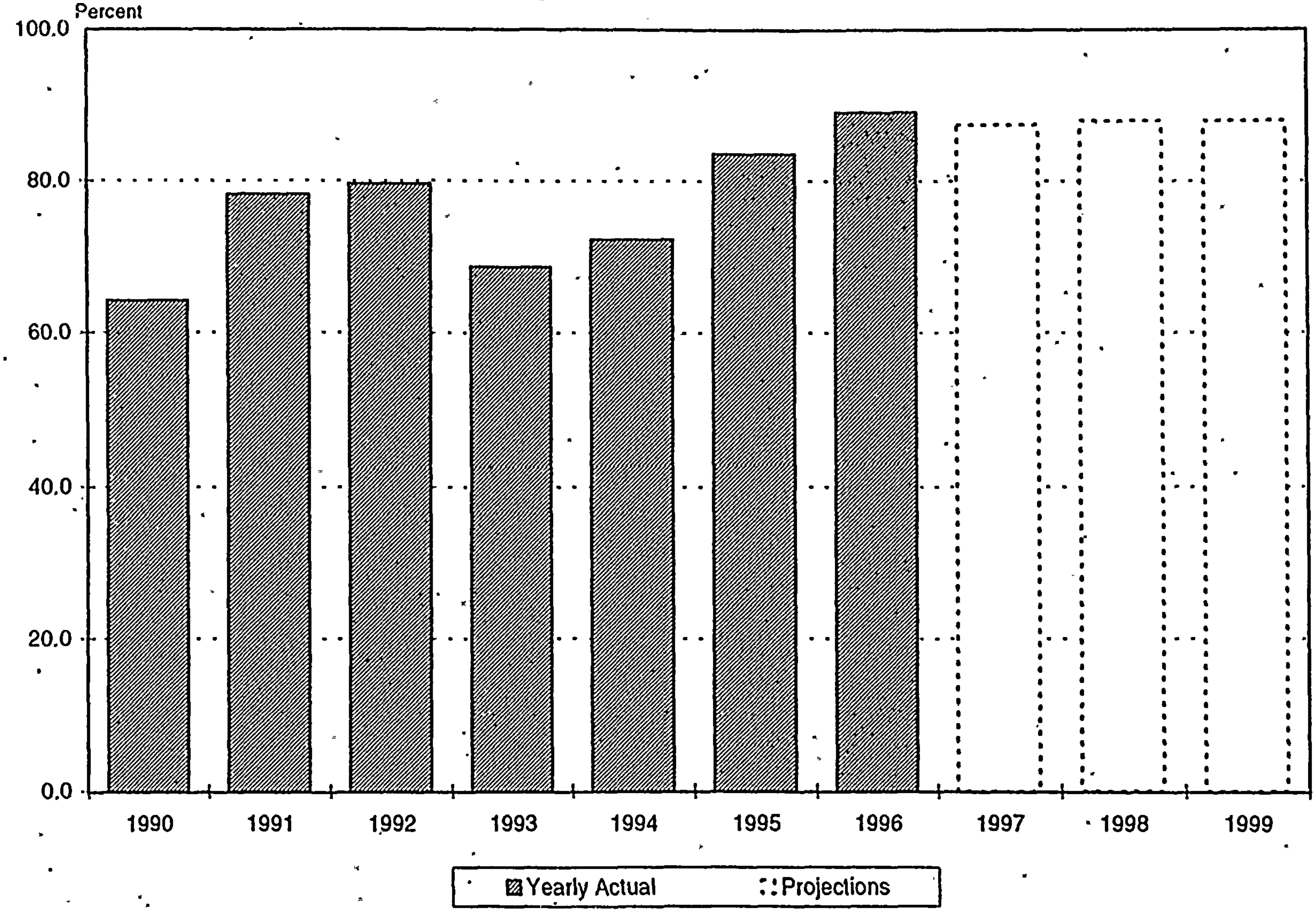
Preventable Recordable Injuries



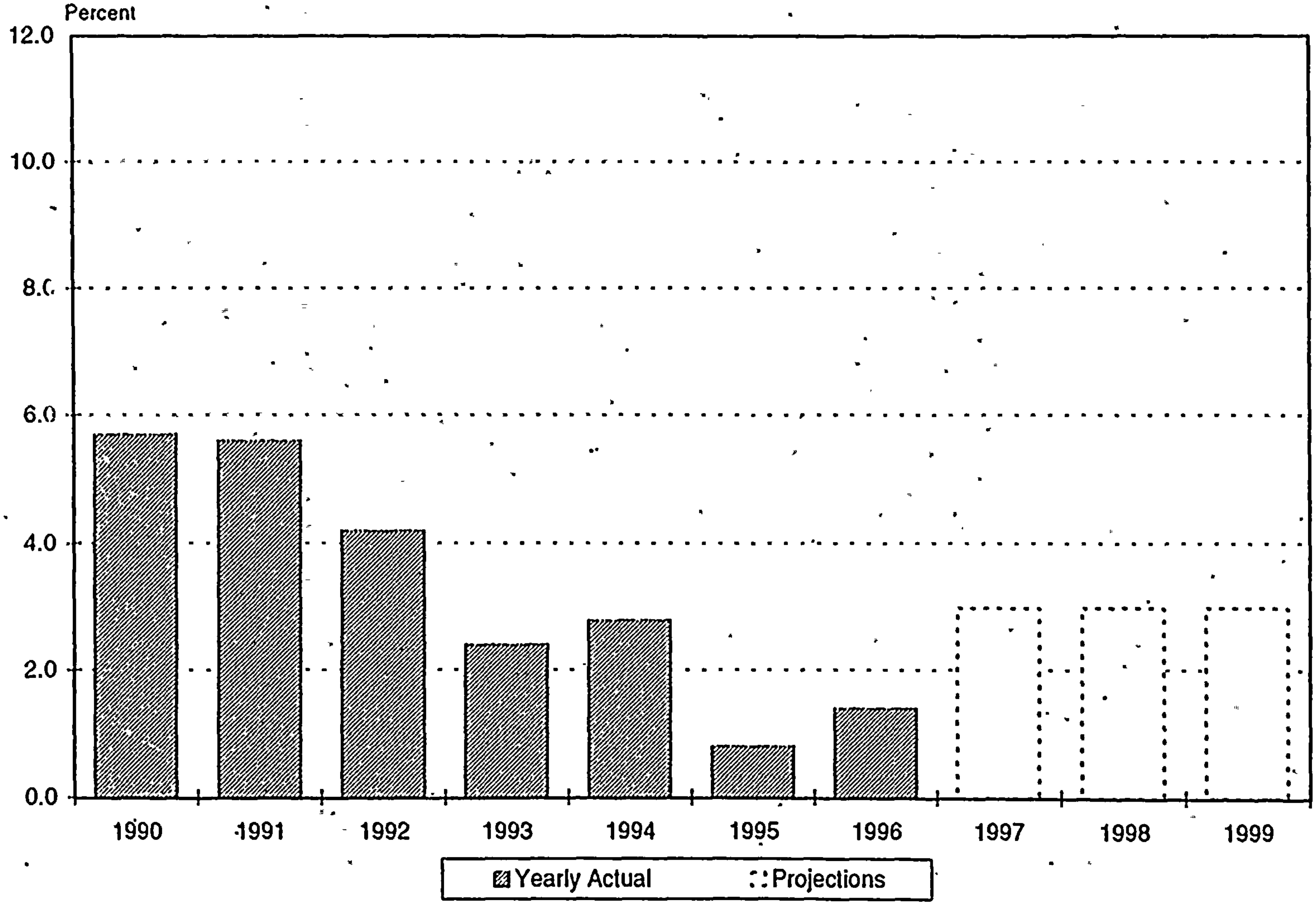
Radiation Exposure

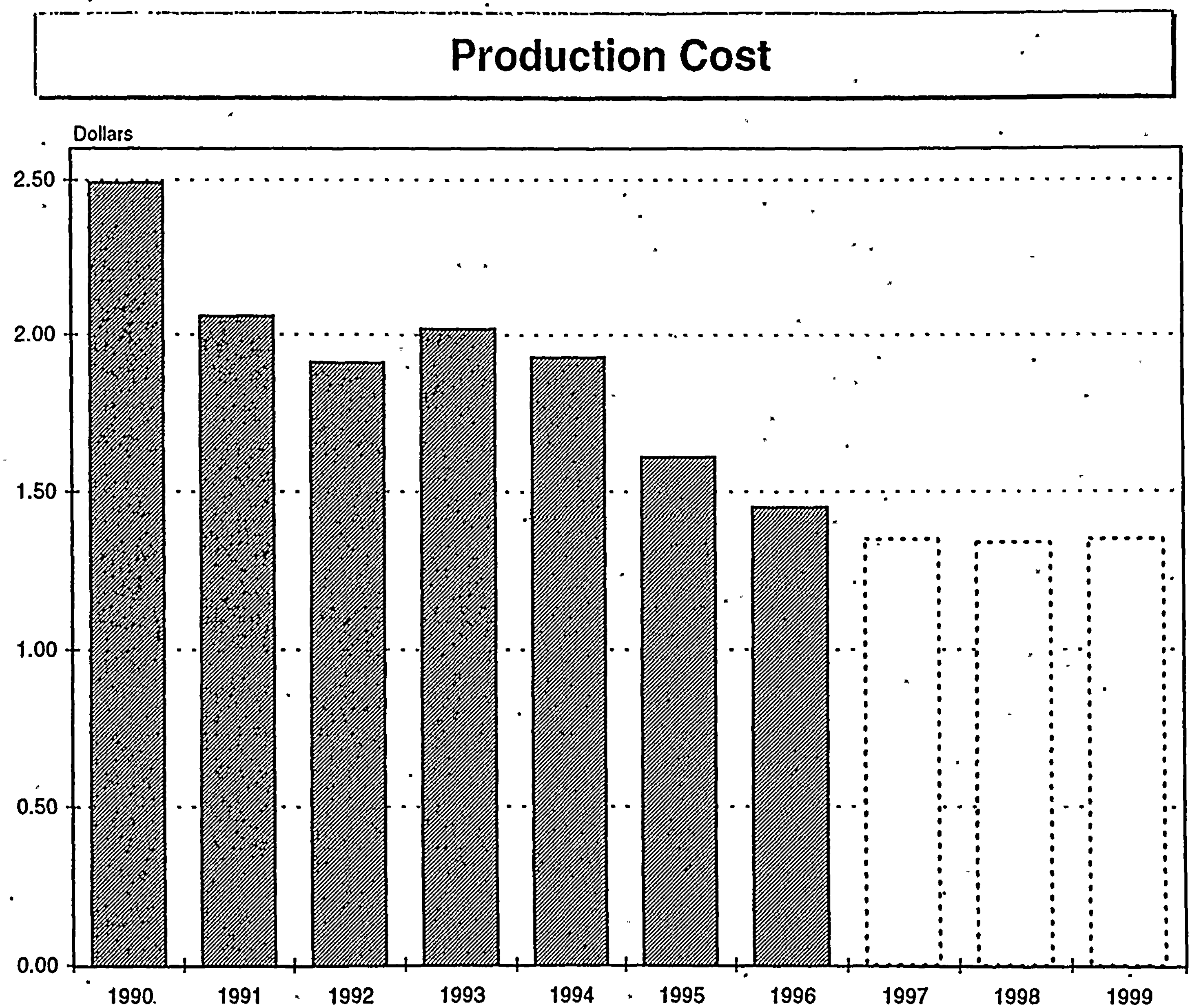


Site Capacity Factor - MDC

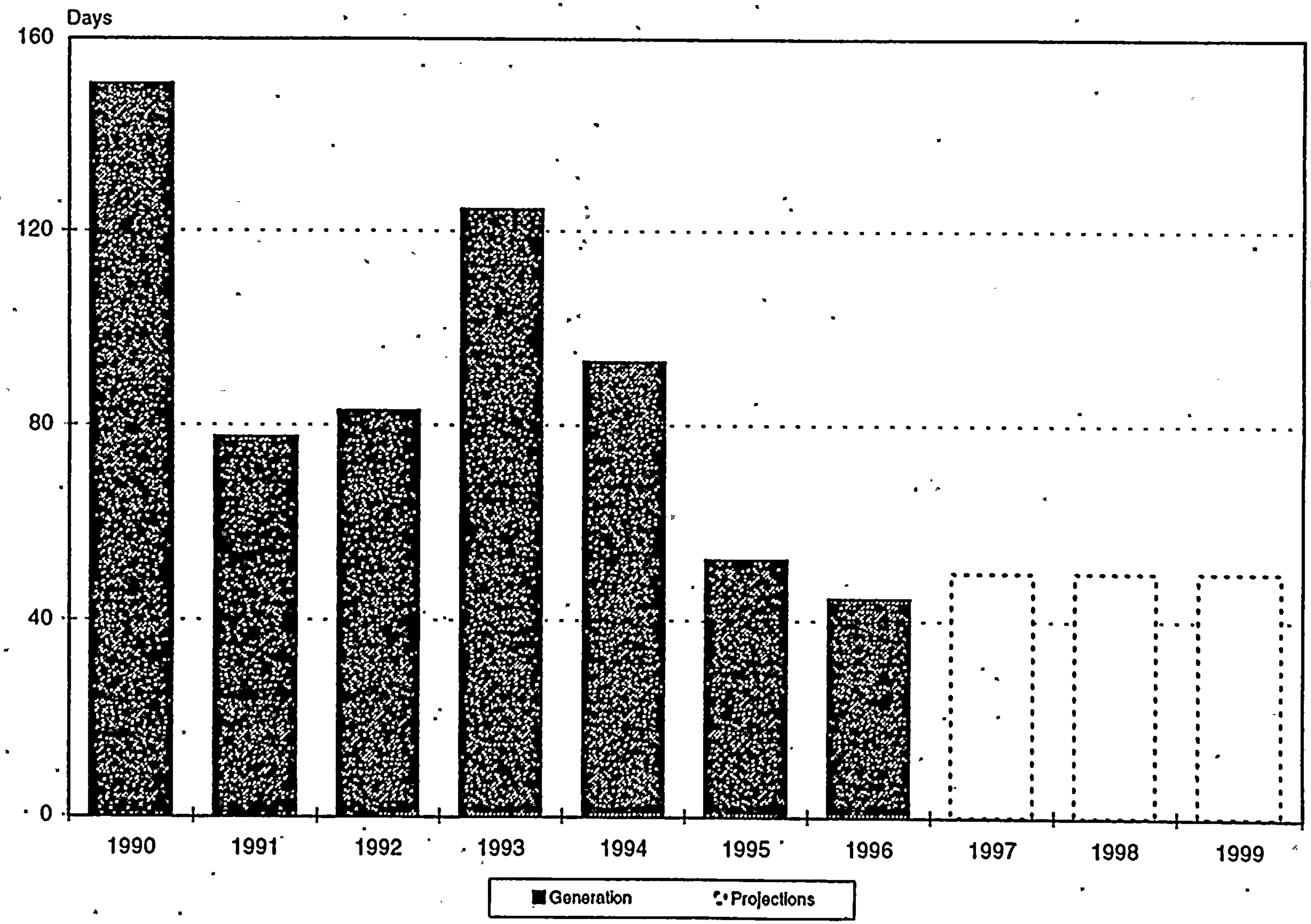


Forced Outage Rate

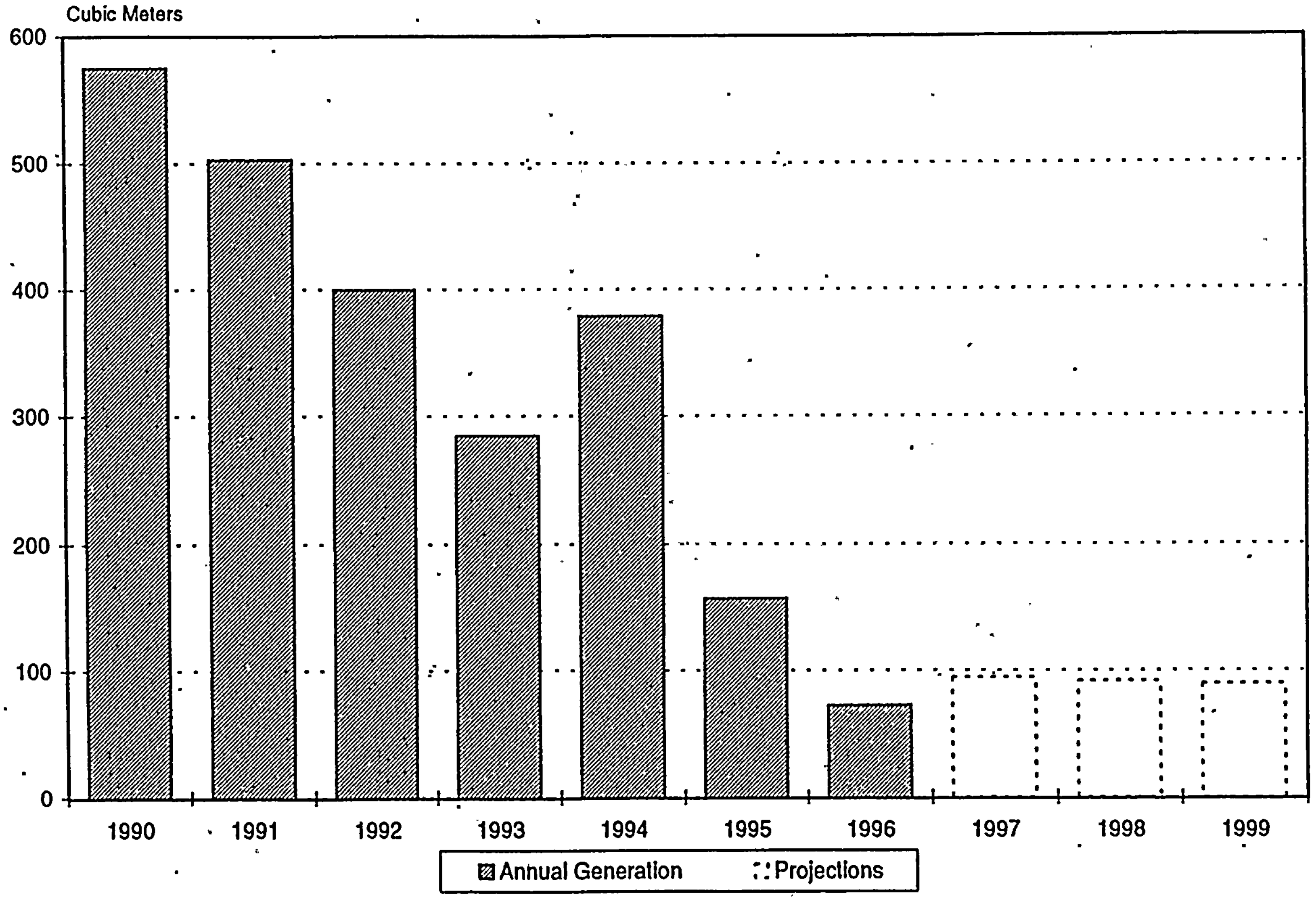



Production Cost
Dollars
2.50
2.00
1.50
1.00
0.50
0.00
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999

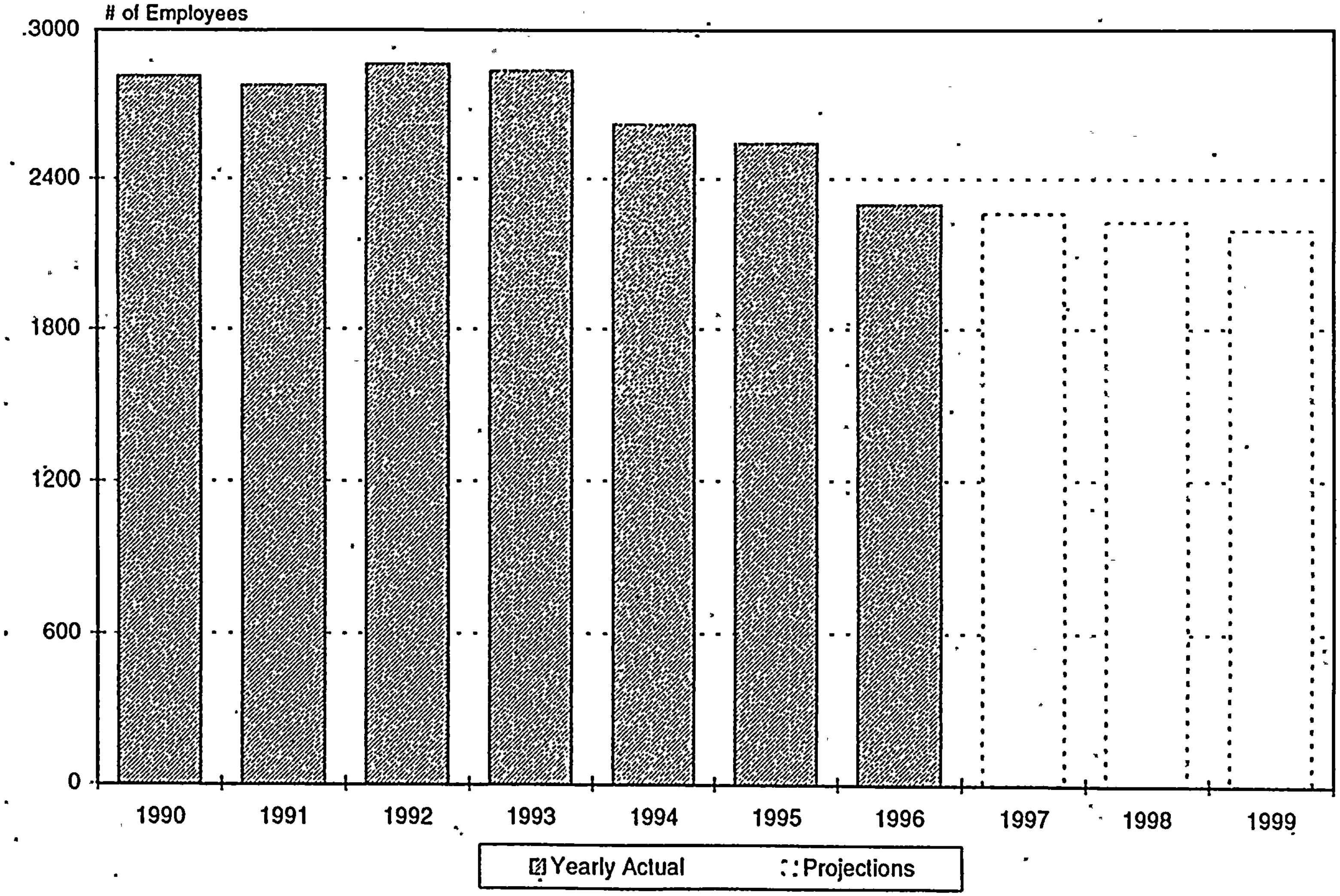
Average Annual Refueling Time



Low Level Solid Radioactive Waste

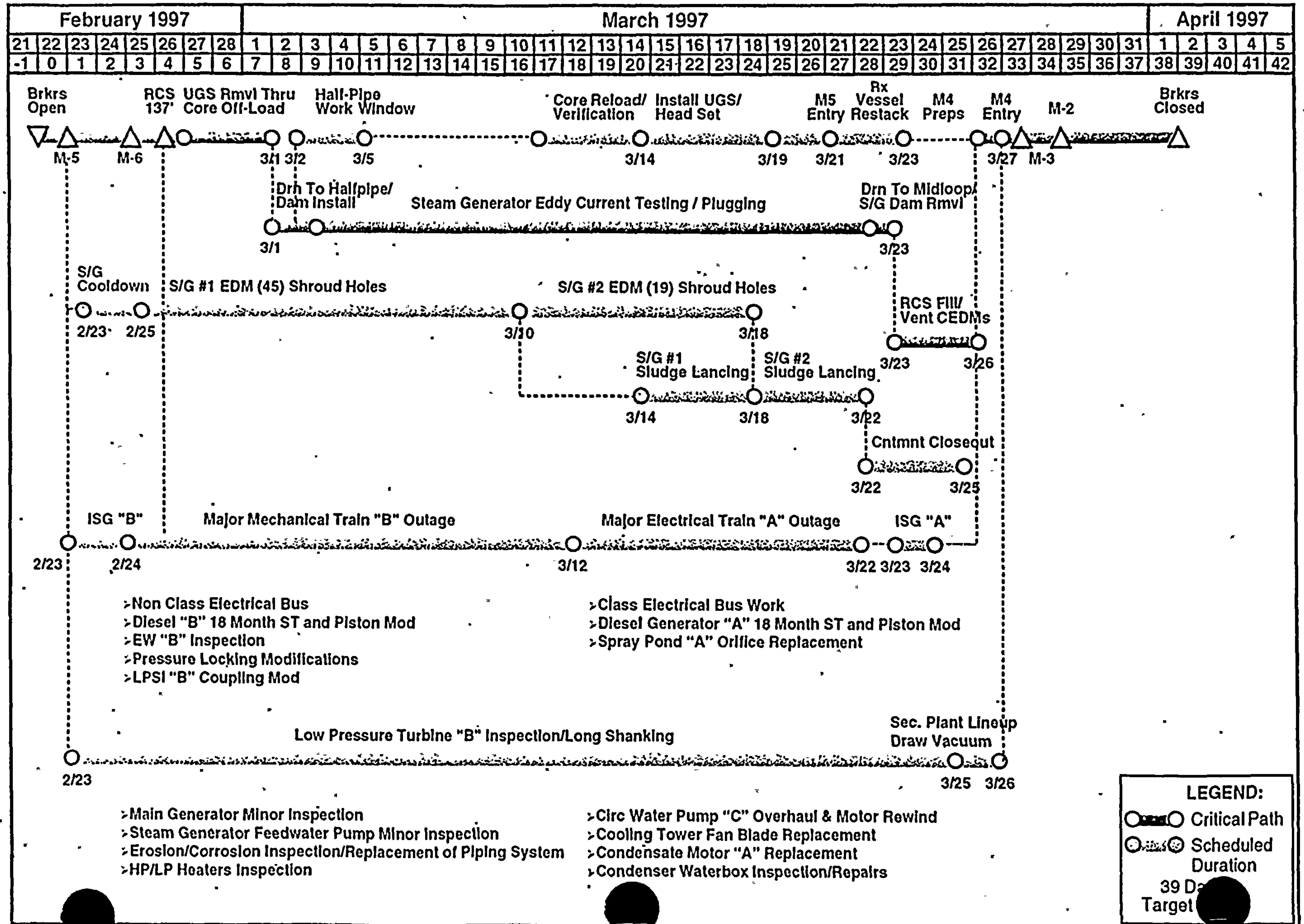


Staffing

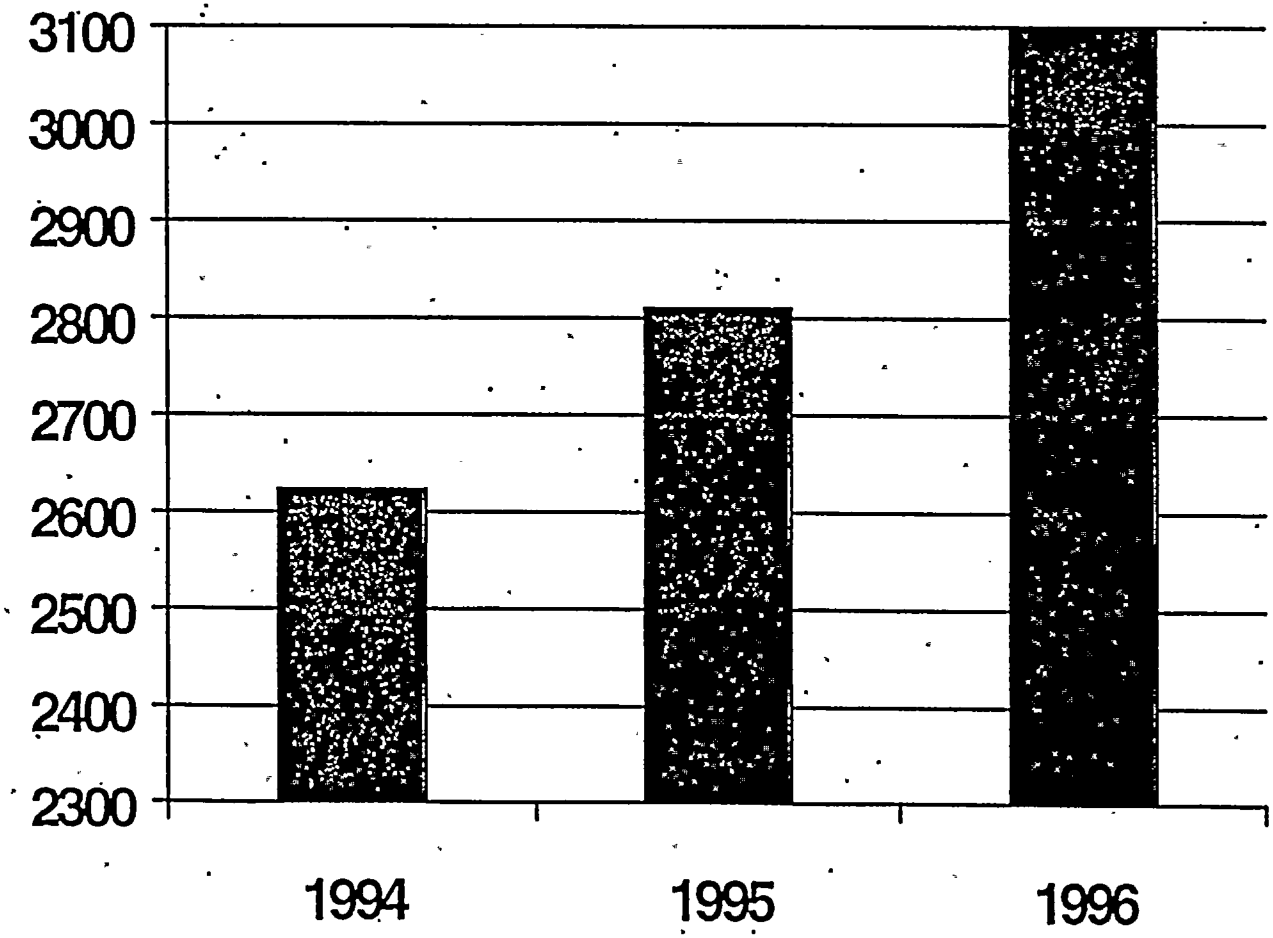


# of Employees
3000
2400
1800
1200
600
0
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
Yearly Actual
Projections

U3R06 Refueling Outage Projection
39 Days

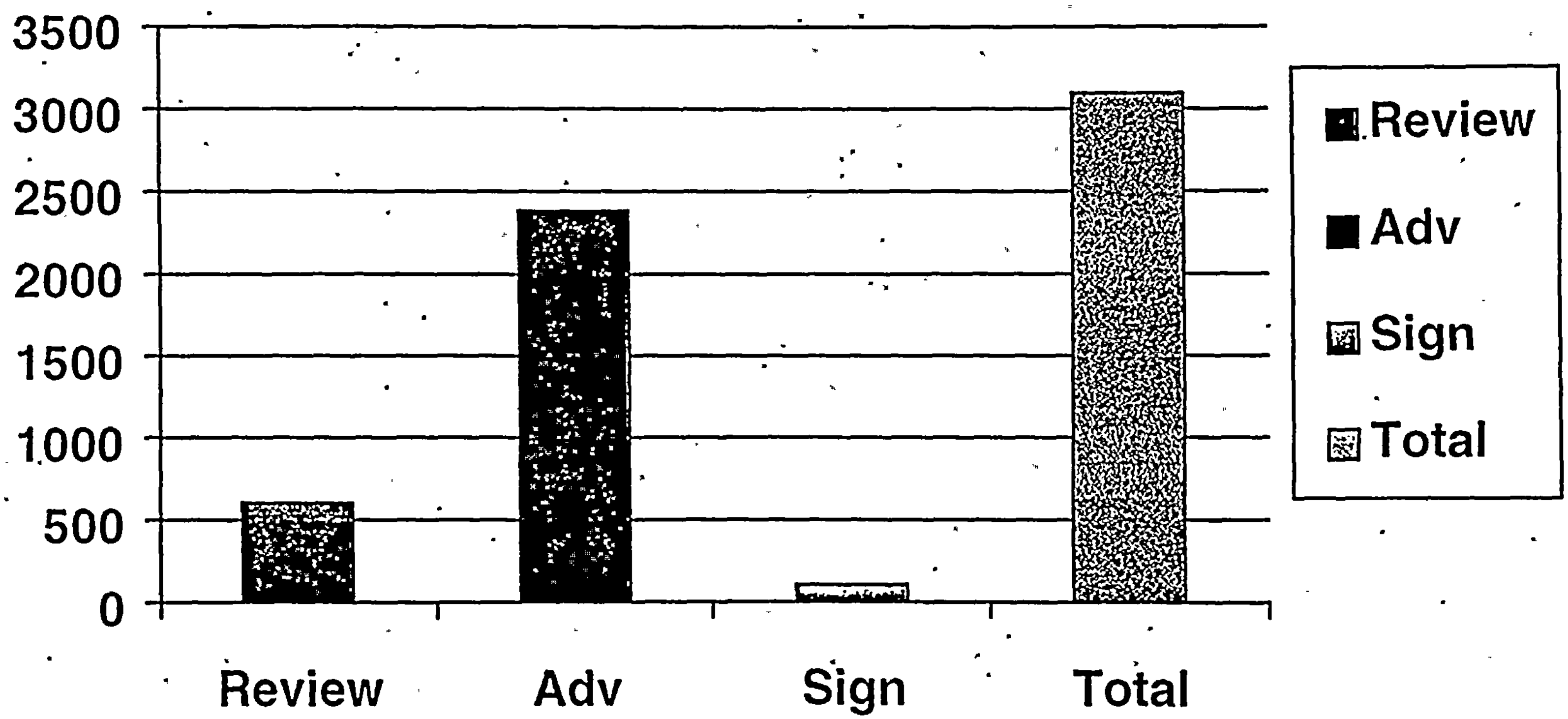


CRDR Totals, 1994 thru 1996



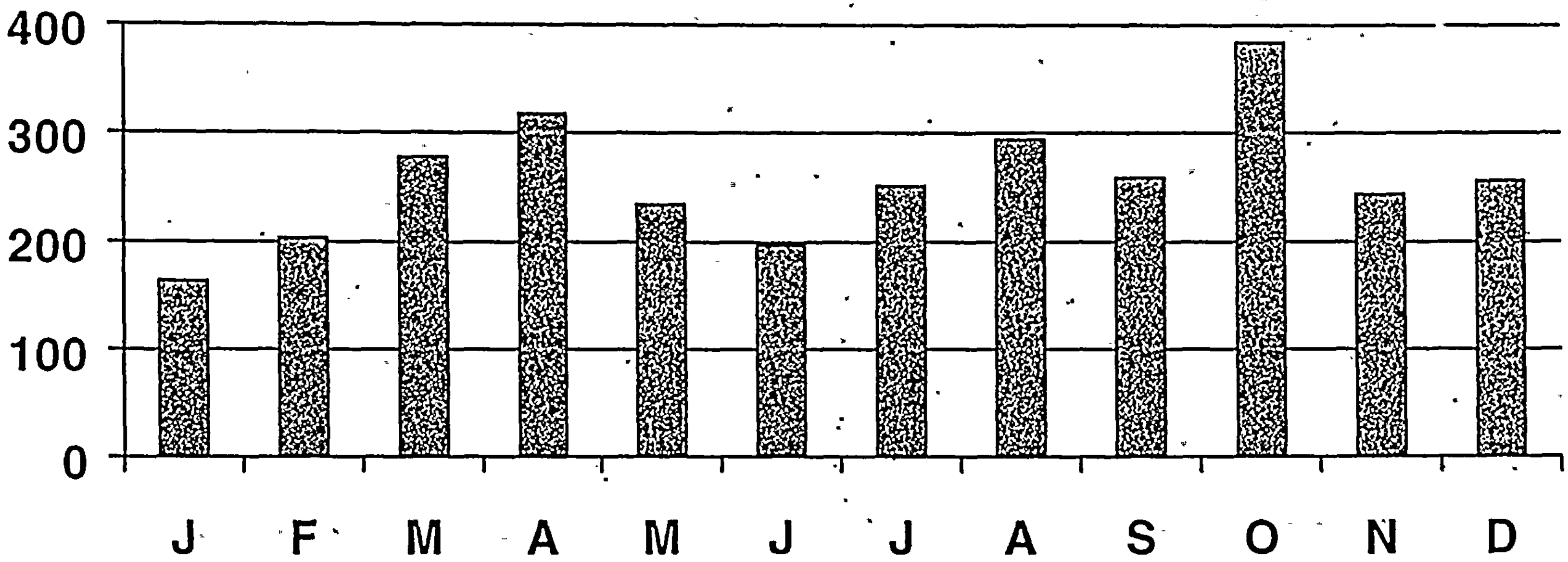
PALO VERDE

1996 CRDRs by Type



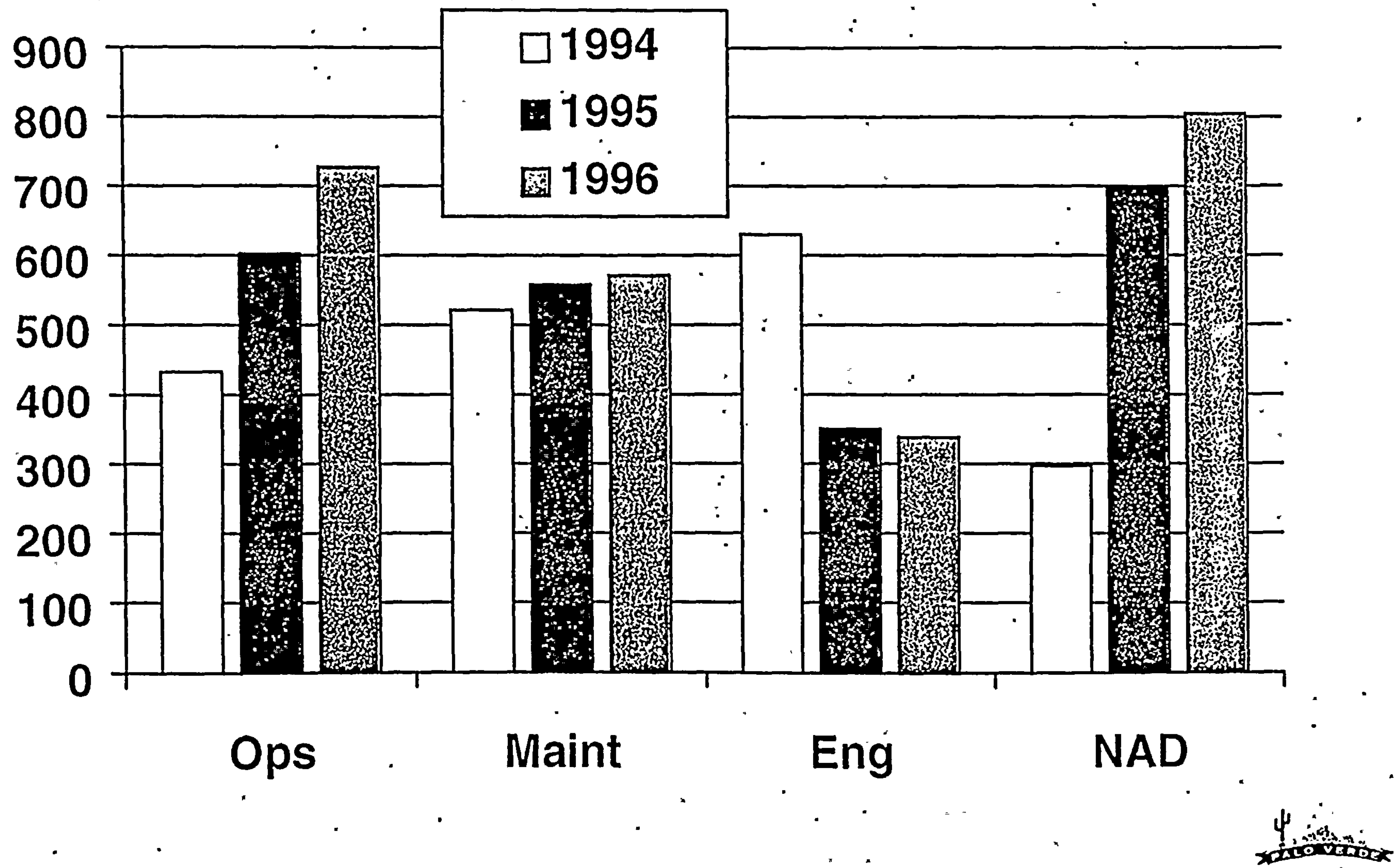
(19.5%) (77%) (3.5%)

1996 CRDRs
Issued Each Month



Total Number 1996 CRDRs = 3096

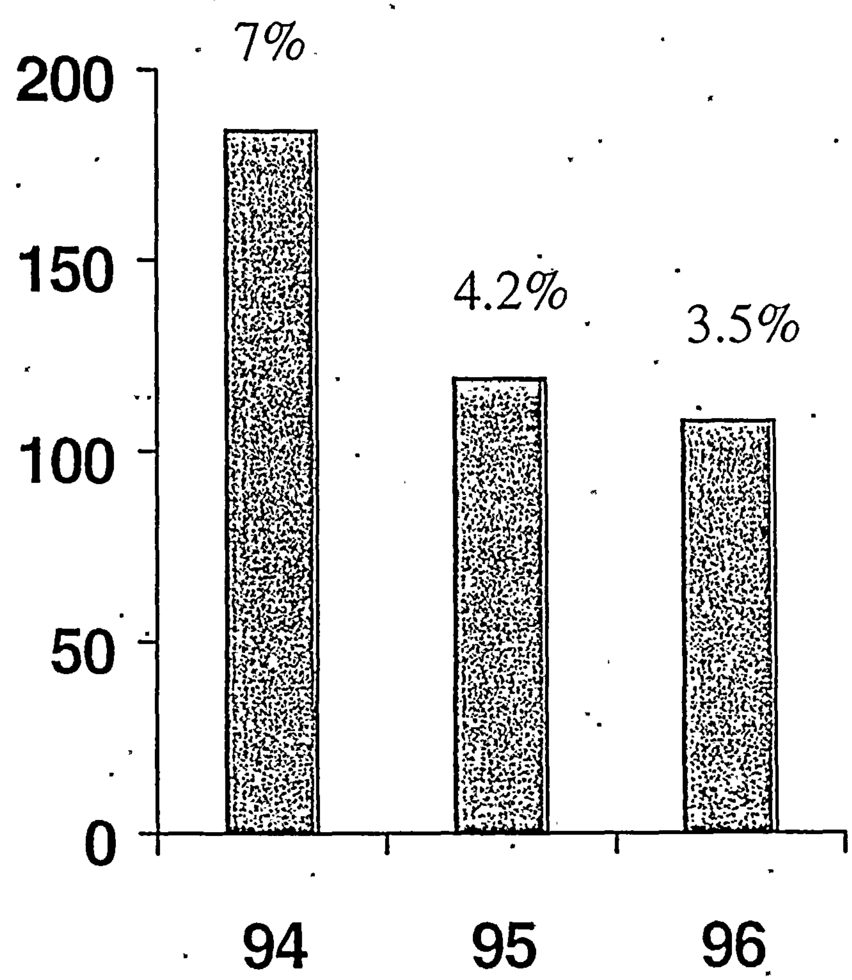
CRDRs Initiated, 1994 thru 1996
Ops/Maint/Eng/NAD



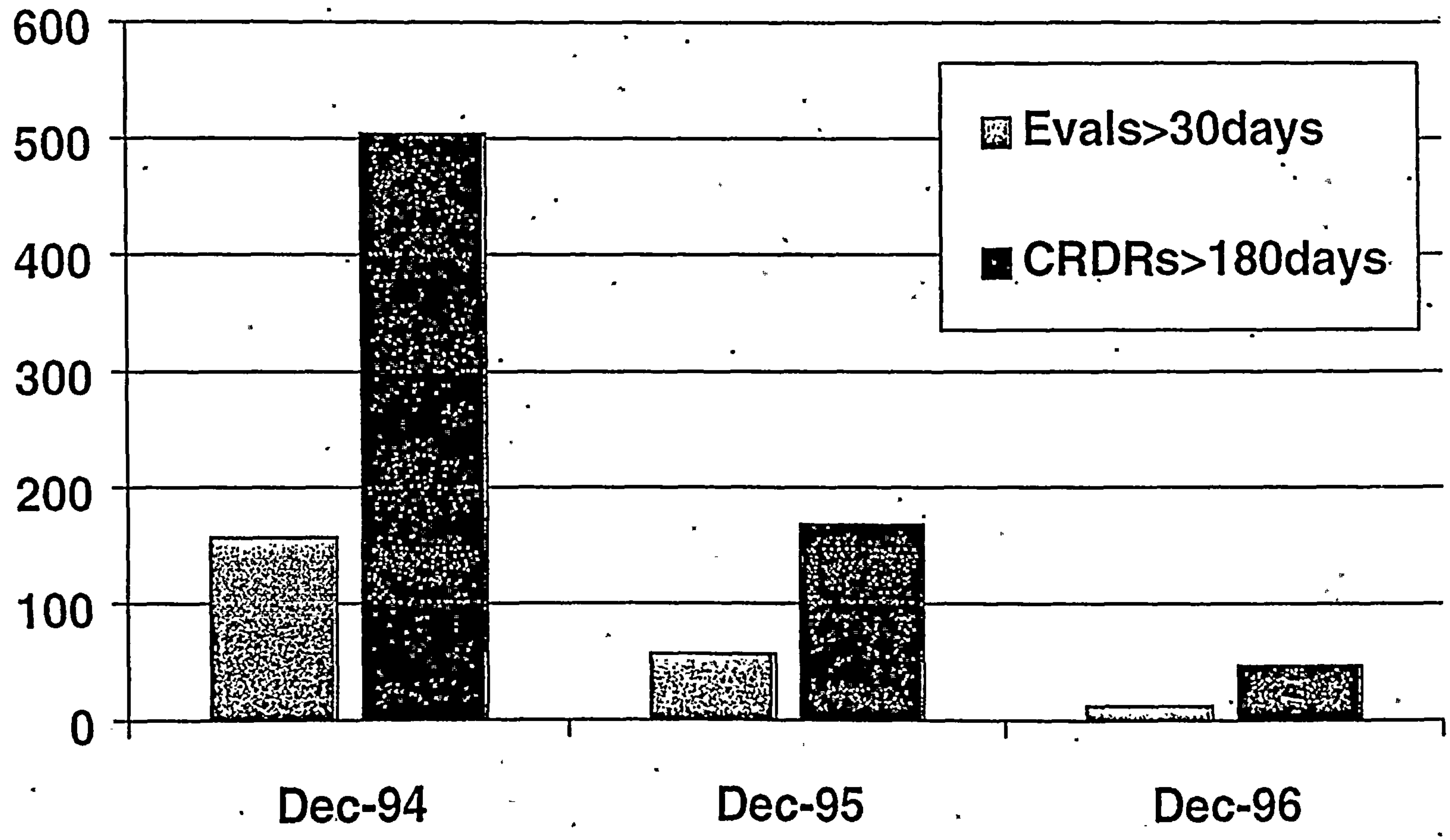
Significant CRDRs, 1994 thru 1996

Reduction due to:

- ♦ Detailed Classification Criteria
- ♦ CRDR Review Committee
- ♦ Use of Potentially Significant CRDRs
- ♦ Major Program Reviews Completed (DBM, Setpoint)
- ♦ Improved PVNGS Performance



Timeliness of CRDR Evaluations and Closure



PALO VERDE

TOP TEN NAD IDENTIFIED ISSUES

ITEMS REMOVED FROM THE LIST IN 1996

1	FIRE PROTECTION CA EFFECTIVENESS	Mar
2	MODIFICATION CONFIGURATION MANAGEMENT	Apr
3	RADIOLOGICAL WALKDOWNS	Apr
4	FLUOR DANIEL PERFORMANCE	May
5	MAINTENANCE VERIFICATIONS	May
6	SECURITY ACCESS AUTHORIZATION	Jun
7	OPERATIONS LAPSE IN ATTENTION TO DETAIL	Jul
8	ENGINEERING REVIEW PROCESS	Aug
9	NON SECTION XI PRESSURE SAFETY VALVES	Oct
10	MATERIALS ENGINEERING PERFORMANCE	Nov
11	TAGGING AND CLEARANCE PROGRAM	Dec
12	CHEMISTRY HUMAN PERFORMANCE	Dec

TOP TEN NAD IDENTIFIED ISSUES
FEBRUARY STATUS

ISSUE	ISSUE	CURRENT TREND
1	DFWO PROGRAM IMPLEMENTATION	→
2	COORDINATION OF GTG PERFORMANCE	→
3	SOV RELIABILITY	→
4	RECURRING TRAINING EVALUATION ISSUES	↓
5	50.59 PROCESS IMPLEMENTATION	→
6	UNPOSTED CONTAMINATED AREAS	→
7	ZONE III PERSONNEL PERFORMANCE	→
8	PERSONNEL PERFORMANCE - CLEARANCES	↓
9	M&TE PROGRAM CORRECTIVE ACTIONS	↓
10	LICENSING DOCUMENT MAINTENANCE PROCESS	↓

↑	IMPROVING	→	HOLDING STEADY	↓	DECLINING
▩	MEETING OR EXCEEDING GOAL	☐	NOT MEETING GOAL	▒	NEW ISSUE OR NO GOAL ESTABLISHED

Summary

- Condition Reporting
- Low CRDR Threshold
- Improved Timeliness
- Reduced Backlog
- Decreasing Number of Significant CRDRs
- Program Continues to be Effective
- Self Assessment Activities Focus on Effectiveness of Corrective Actions

1994 thru 1996
Timeliness of Corrective Actions

	Evaluation Time			Closure Time		
	#>30 Days	Backlog Goal	Ave Time (Days)	#>180 Days	Backlog Goal	Ave Time (Days)
Dec 94	157	122	72	504	472	285
Dec 95	57	61	47	168	236	181
Dec 96	13	25	25	47	75	103

PALO VERDE

Radiation Protection Strategic Areas

- Contamination Control
- Radworker Practices
- Dose Reduction/ALARA
- Radioactive Material Control

PALO VERDE

Radiation Protection Strategic Areas

- Self Assessment Programs
- Streamlined Training Implementation
- Technology Advancements
- Standardization and Formality for RP Activities

Access Authorization

- Process Improvements
- Analysts
- Independent Verification via Local Law Enforcement

Enhancements

Completed

- X-ray with Organic Stripping
- Motorola Smart Net / Radio System
- Metal Detectors

In Progress

- Camera Upgrades
- Door Voice Chips
- Video Capture Upgrades
- Perimeter Detection Upgrades

Security Self-Assessment

- Performance Indicators (Monthly Report)
- ESD Self-Assessment / Training Section
- Nuclear Assurance Division Oversight
- Corrective Action Effectiveness
  - HPES
  - Root Cause
  - Follow-Up Evaluations

VEHICLE BARRIER SYSTEM STATUS

- Modifications Made
- Response to Inspection Report 96-20

Palo Verde Initiatives

- Implement Improved Technical Specification
- Maintenance Rule Implementation
- Improve Self Assessment Capability
- Make Attrition Work
- Select and Implement a Site Work Management System
- Simplify and Reduce Procedures
- Steam Generator Management
- Air and Solenoid Operated Valve Programs
- Implement Minor Maintenance Program
- Develop Dry-Cask Spent Fuel Storage
- Timely Resolution of Employee Issues
- Train Palo Verde Employees as Multi-Skilled Workers

Palo Verde Nuclear Generating Station

Monthly Trend Report

December 1996

Palo Verde Nuclear Generating Station
Monthly Trend Report

December 1996

Compiled and Published By
Generation Research & Graphics

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Palo Verde Nuclear Generating Station
Monthly Trend Report

The Monthly Trend Report monitors current performance trends and progress towards goals established in the Palo Verde Business Plan.

Responsibility for completing the tasks described in the Business Plan is shared by all Palo Verde team members.

This report is made available to the entire Palo Verde team, so that all personnel are constantly aware of the team's objectives, and our current standing in achieving, and then exceeding, the established goals.

SIMPLICITY INTENSITY ACCOUNTABILITY TENACITY POSITIVE ATTITUDE TEAMWORK

Palo Verde Nuclear Generating Station Monthly Trend Report

Nuclear Safety	1 B Reactor Trips	2a B Significant Systems	2b B Low Risk Significant Systems	3 B Collective Radiation Exposure	4 Contaminated Area	5 Personnel Contamination Events		
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Satisfactory

Improvement Needed

Significant Weakness

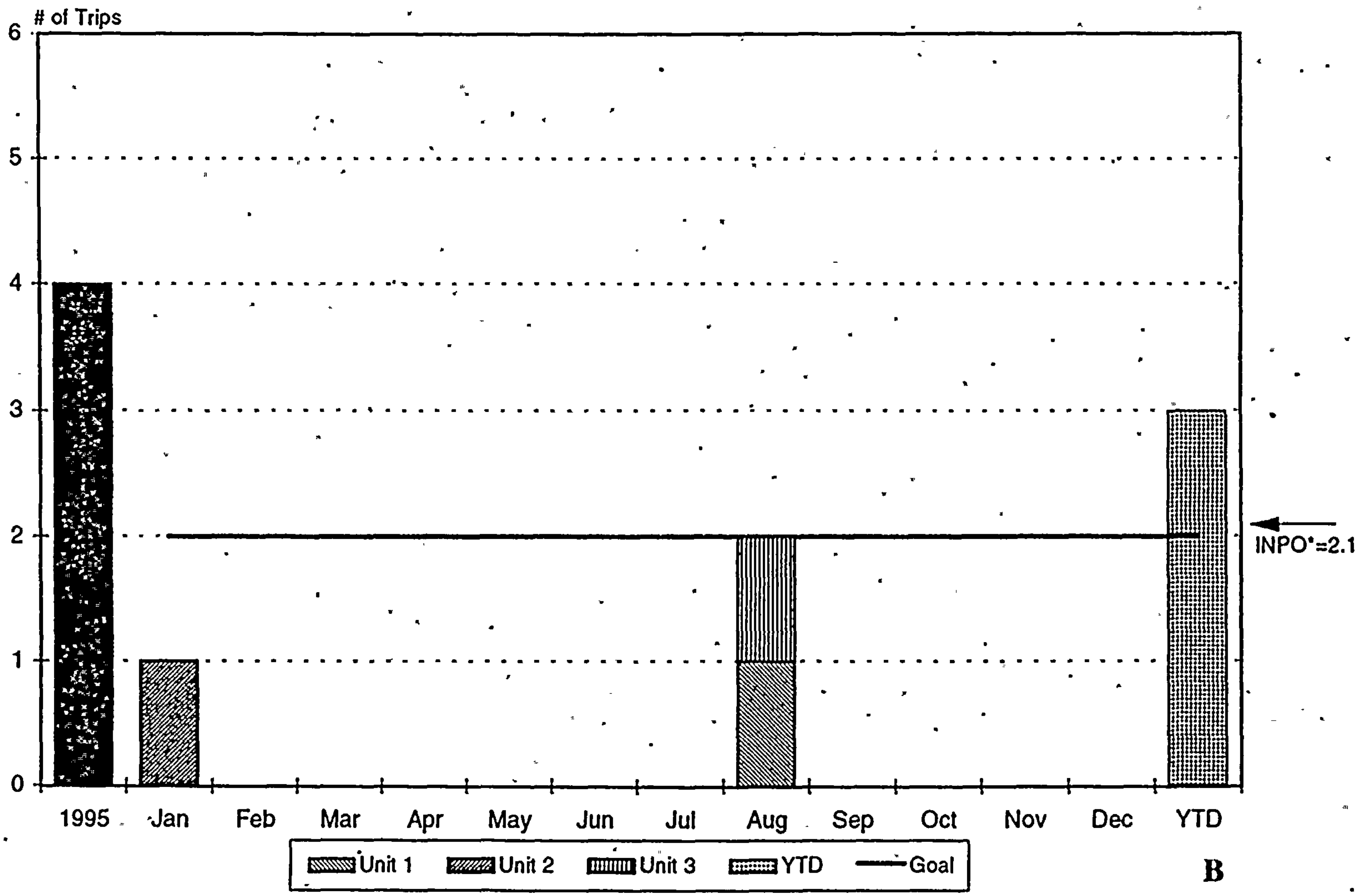
Code		Year-to-Date	Target
	Total Accomplishment	77%	80%
B	Business Plan Accomplishment	80%	80%
$	Employee Incentive Payout (as a percent of base pay)	5%	5%

December 1996

1. 1996 Automatic Reactor Trips

Description

Unit 2 - On 1/22/96 Unit 2 RX automatically tripped on a low SG level. Trip was due to improper start of Condensate pump.
Unit 1 & 3 - On 8/10/96 Units 1 & 3 automatically tripped due to grid distrubance.



B

* INPO Best Quartile (3 Year Average Unit Value = 0.7)

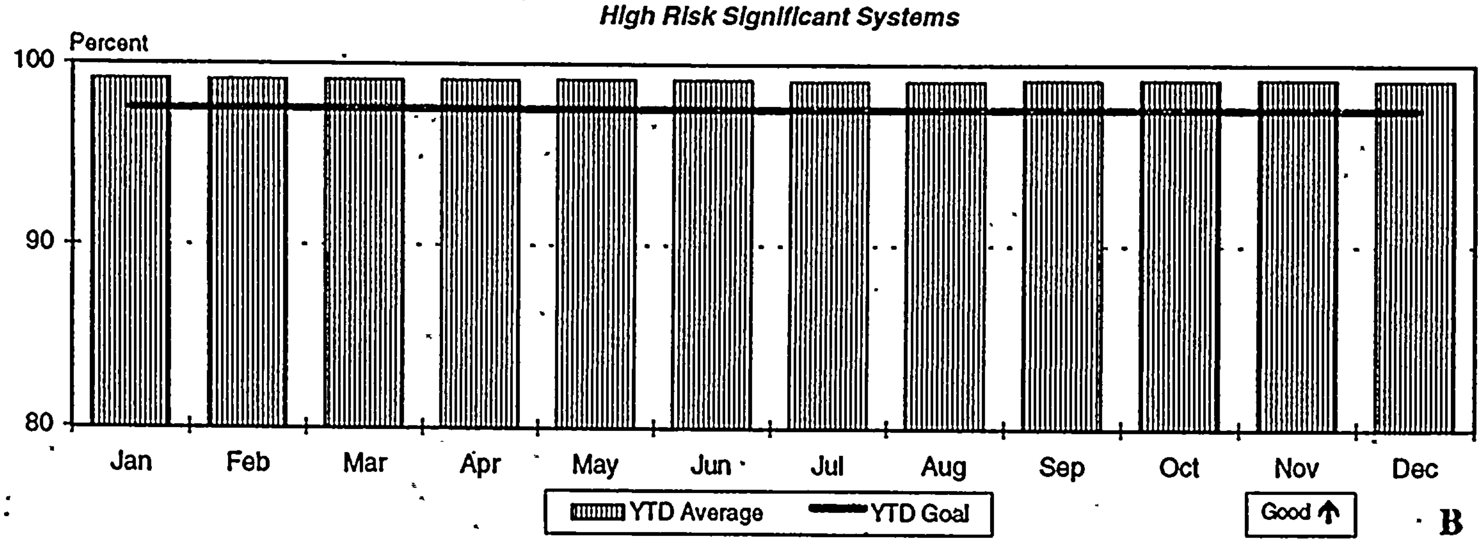
2. 1996 Maintenance Rule Performance

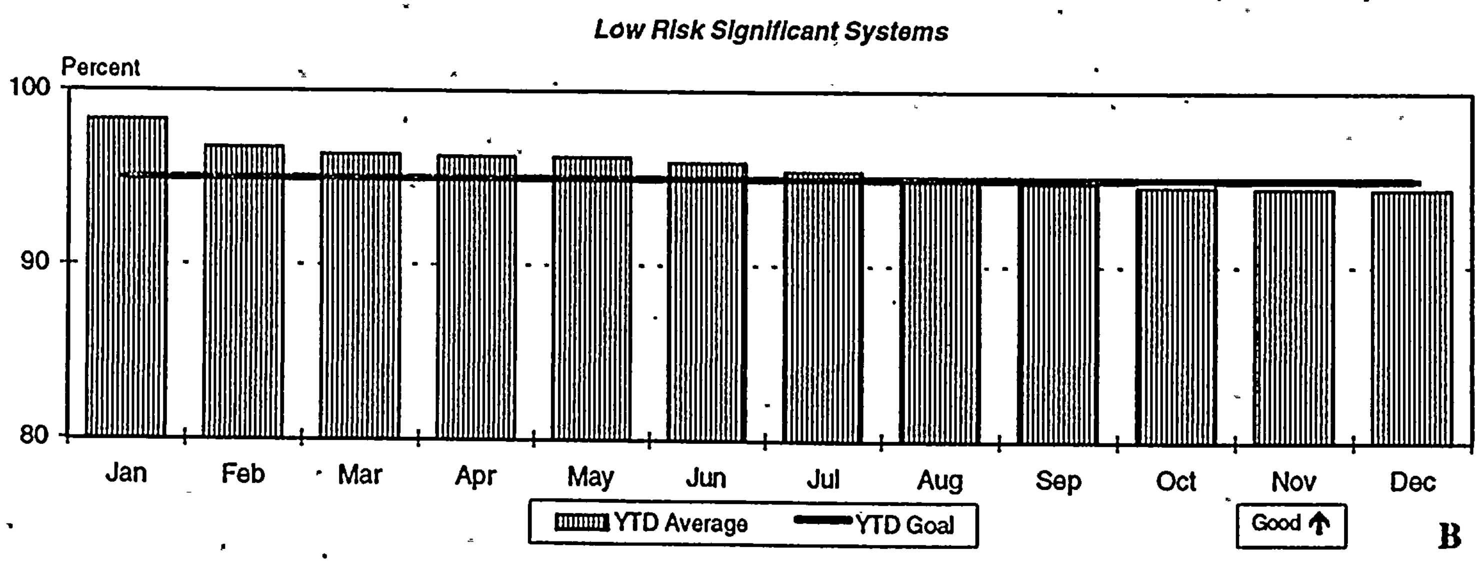
Definition: Percentage of Maintenance Rule systems meeting performance criteria.

	High Risk Significant Systems			Low Risk Significant Systems		
Month	Monthly Actual	YTD Average	YTD Goal	Monthly Actual	YTD Average	YTD Goal
Jan	99.2	99.2	97.5	98.3	98.3	95.0
Feb	99.1	99.1	97.5	95.2	96.7	95.0
Mar	99.2	99.1	97.5	95.6	96.3	95.0
Apr	99.2	99.2	97.5	96.0	96.2	95.0
May	99.2	99.2	97.5	96.0	96.2	95.0
Jun	99.3	99.2	97.5	94.6	95.9	95.0
Jul	98.7	99.1	97.5	92.5	95.4	95.0
Aug	99.3	99.1	97.5	91.3	94.9	95.0
Sep	99.5	99.2	97.5	93.8	94.8	95.0
Oct	99.3	99.2	97.5	93.1	94.6	95.0
Nov	99.5	99.2	97.5	93.8	94.5	95.0
Dec	98.9	99.2	97.5	93.8	94.5	95.0

Data Source: Brad Davis - 393-6515 Indicator Owner: Dave Mauldin - 393-2518

2. 1996 Maintenance Rule Performance





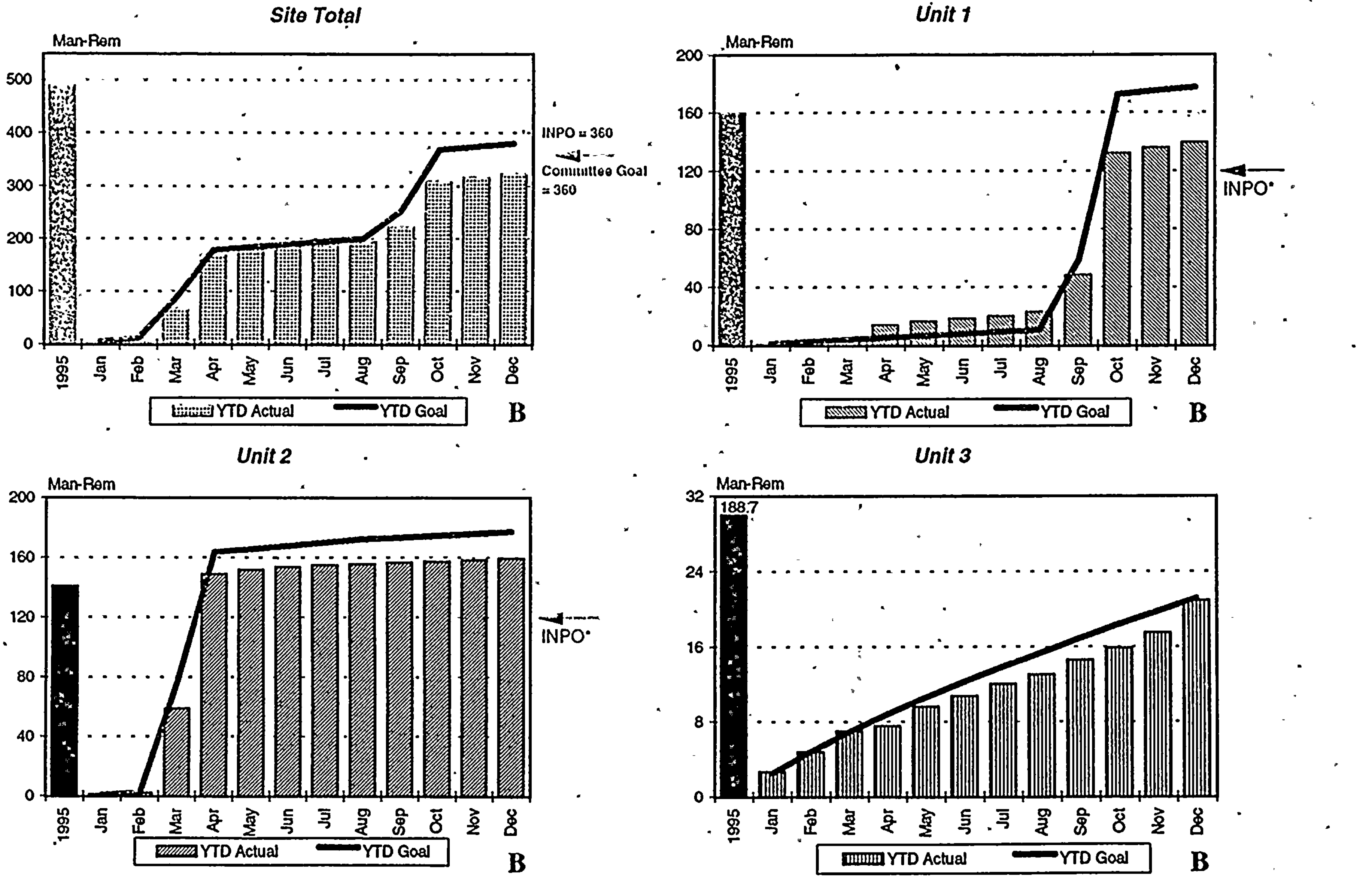
3. 1996 Collective Radiation Exposure

Definition: The total external whole-body dose received by all personnel, including contractors and visitors, as measured by incremental dosimetry, and thermoluminescent dosimetry (TLD).

	Site Total			Unit 1			Unit 2			Unit 3		
Month	Monthly Actual	YTD Actual	YTD Goal	Monthly Actual	YTD Actual	YTD Goal	Monthly Actual	YTD Actual	YTD Goal	Monthly Actual	YTD Actual	YTD Goal
1995		493.3	644.0		159.761	205.0		141.196	240.0		188.706	199.0
Jan	5.047	5.047	5.7	0.927	0.927	1.4	1.255	1.255	1.4	2.672	2.672	2.5
Feb	4.595	9.642	10.9	1.240	2.167	2.7	1.037	2.292	2.7	2.116	4.788	4.8
Mar	59.559	69.201	88.2	0.713	2.880	4.0	56.394	58.686	76.2	2.197	6.985	6.9
Apr	102.784	171.985	179.5	11.194	14.074	5.3	90.574	149.260	163.9	0.558	7.543	8.8
May	7.806	179.791	185.1	2.553	16.627	6.7	2.888	152.148	166.0	2.042	9.585	10.6
Jun	5.132	184.923	190.6	1.776	18.403	8.0	1.718	153.866	168.2	1.150	10.735	12.3
Jul	4.812	189.735	196.0	1.803	20.206	9.3	1.295	155.161	170.3	1.260	11.995	13.9
Aug	5.223	194.958	201.4	2.885	23.091	10.6	0.850	156.011	172.5	1.052	13.047	15.4
Sep	28.668	223.626	253.0	25.710	48.801	59.2	0.967	156.978	173.7	1.492	14.539	16.9
Oct	85.621	309.247	369.1	83.002	131.803	172.2	0.624	157.602	174.9	1.289	15.828	18.4
Nov	6.465	315.712	374.5	3.634	135.437	174.7	0.919	158.521	176.1	1.655	17.483	19.8
Dec	7.760	323.472	380.0	3.510	138.947	177.3	0.817	159.338	177.3	3.433	20.916	21.2

Data Source: Steve Peace - 393-5205 Indicator Owner: Mike Shea - 393-2860

3. 1996 Collective Radiation Exposure



* INPO Best Quartile (man-rem per unit per year, 3-year average = 120).

4. 1996 Contaminated Area

Definition: Percentage of the radiological controlled area that is designated contaminated at the end of each month, shown for each unit, based on floor square footage of the RCA.

% of RCA Contaminated = Contaminated Area (sq. ft.) / Total RCA (sq. ft.) x 100

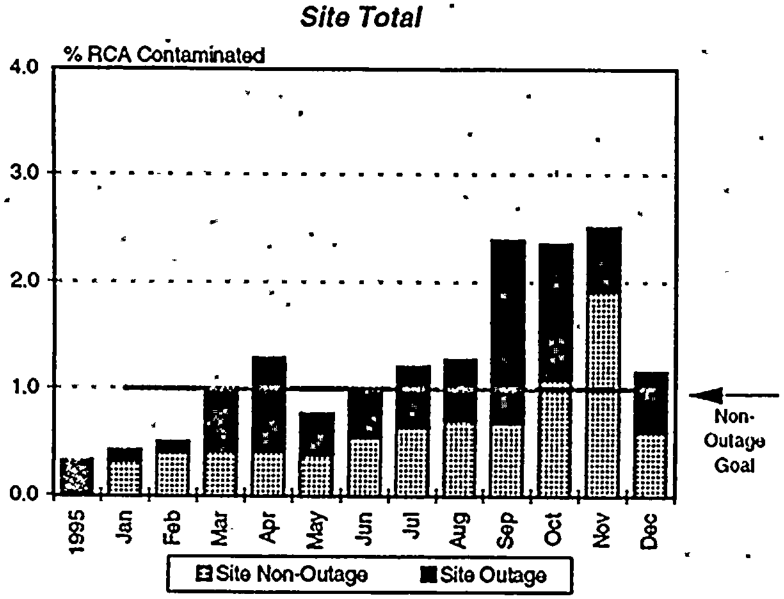
Unit RCA Total (sq. ft.) 131,702

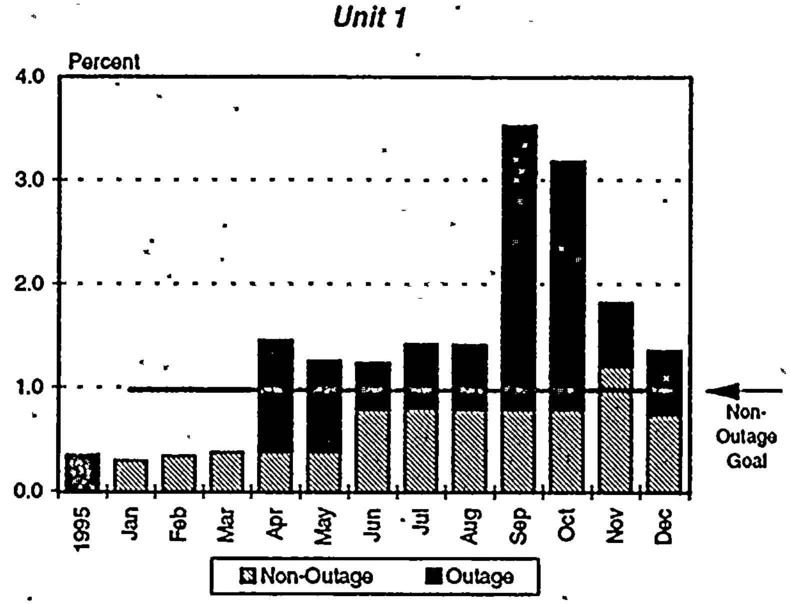
Site RCA Total (sq. ft.) 395,106

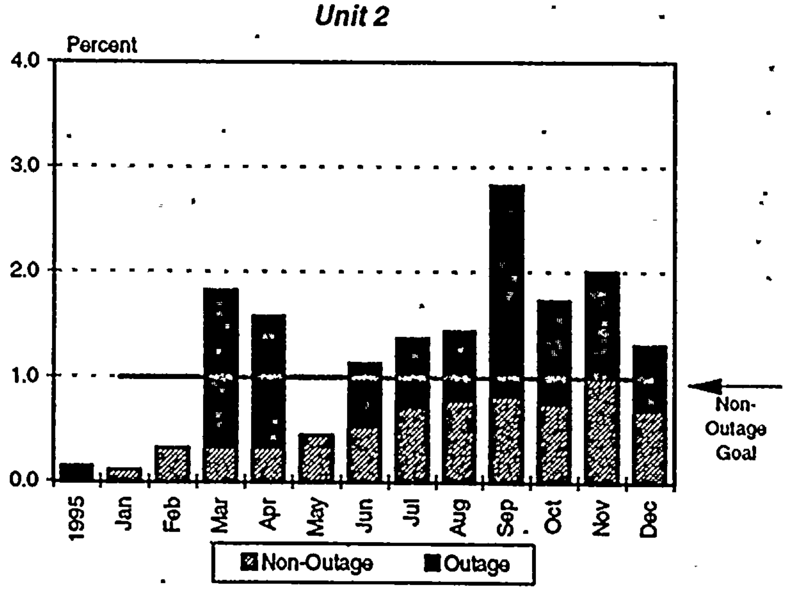
	Contaminated Area (sq. ft.)				% of RCA Contaminated				
Month	Site Total	Unit 1	Unit 2	Unit 3	Site Total	Unit 1	Unit 2	Unit 3	Goal
1995	1,297	463	198	636	0.33	0.35	0.15	0.48	1.0
Jan	1,662	384	149	1,129	0.42	0.29	0.11	0.86	1.0
Feb	1,963	449	425	1,089	0.50	0.34	0.32	0.83	1.0
Mar	3,986	494	2,403	1,089	1.01	0.38	1.82	0.83	1.0
Apr	5,088	1,921	2,078	1,089	1.29	1.46	1.58	0.83	1.0
May	3,025	1,660	587	778	0.77	1.26	0.45	0.59	1.0
Jun	3,927	1,636	1,493	798	0.99	1.24	1.13	0.61	1.0
Jul	4,791	1,878	1,814	1,099	1.21	1.43	1.38	0.83	1.0
Aug	5,059	1,865	1,902	1,292	1.28	1.42	1.44	0.98	1.0
Sep	9,486	4,635	3,722	1,129	2.40	3.52	2.83	0.86	1.0
Oct	9,322	4,178	2,280	2,864	2.36	3.17	1.73	2.17	1.0
Nov	9,953	2,403	2,644	4,906	2.52	1.82	2.01	3.73	1.0
Dec	4,593	1,789	1,726	1,078	1.16	1.36	1.31	0.82	1.0

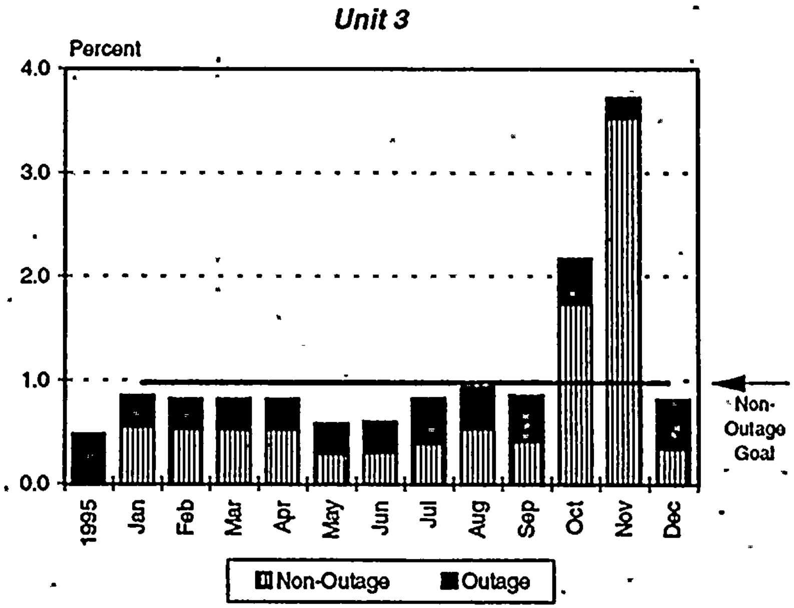
Data Source: Steve Peace - 393-5205 Indicator Owner: Mike Shea - 393-2860

4. 1996 Contaminated Area









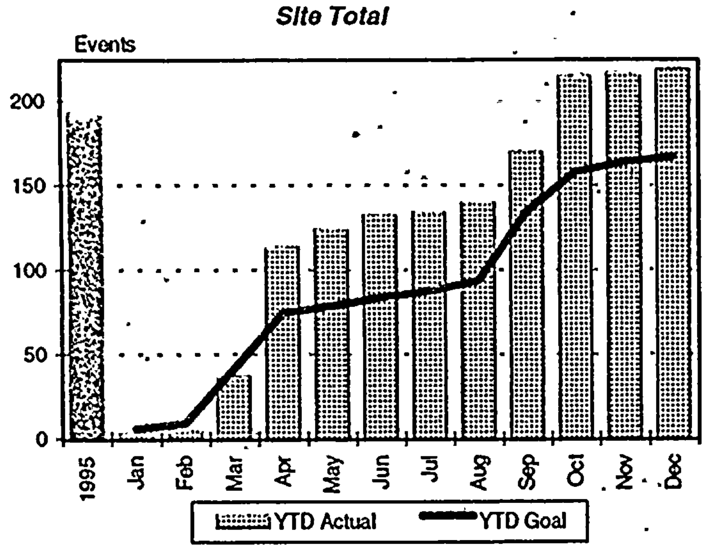
5. 1996 Personnel Contamination Events

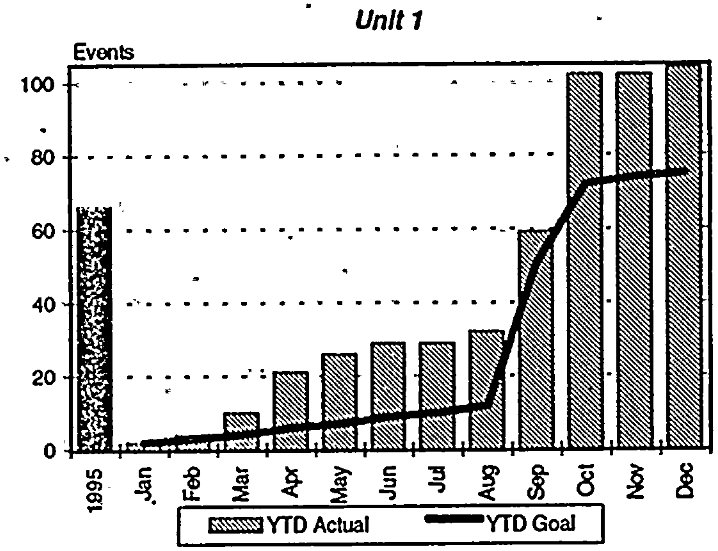
Definition: The total number of skin and clothing contaminations received per unit.

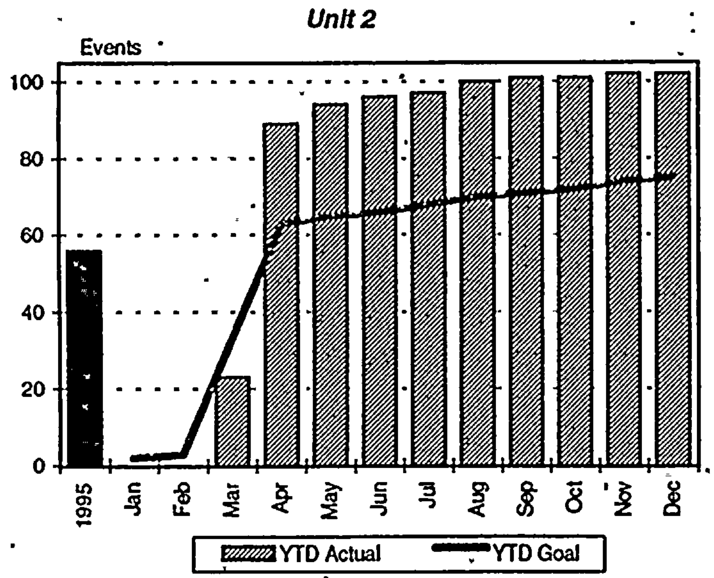
	Site Total			Unit 1			Unit 2			Unit 3		
Month	Monthly Actual	YTD Actual	YTD Goal	Monthly Actual	YTD Actual	YTD Goal	Monthly Actual	YTD Actual	YTD Goal	Monthly Actual	YTD Actual	YTD Goal
1995		193			66			56			71	
Jan	3	3	6	2	2	2	0	0	2	1	1	2
Feb	2	5	9	2	4	3	0	0	3	0	1	3
Mar	32	37	42	6	10	4	23	23	34	3	4	4
Apr	77	114	75	11	21	6	66	89	63	0	4	6
May	10	124	79	5	26	7	5	94	65	0	4	7
Jun	9	133	84	3	29	9	2	96	66	4	8	9
Jul	1	134	88	0	29	10	1	97	68	0	8	10
Aug	6	140	94	3	32	12	3	100	70	0	8	12
Sep	30	170	135	27	59	51	1	101	71	2	10	13
Oct	45	215	158	43	102	72	0	101	72	2	12	14
Nov	2	217	164	0	102	74	1	102	74	1	13	16
Dec	2	219	167	2	104	75	0	102	75	0	13	17

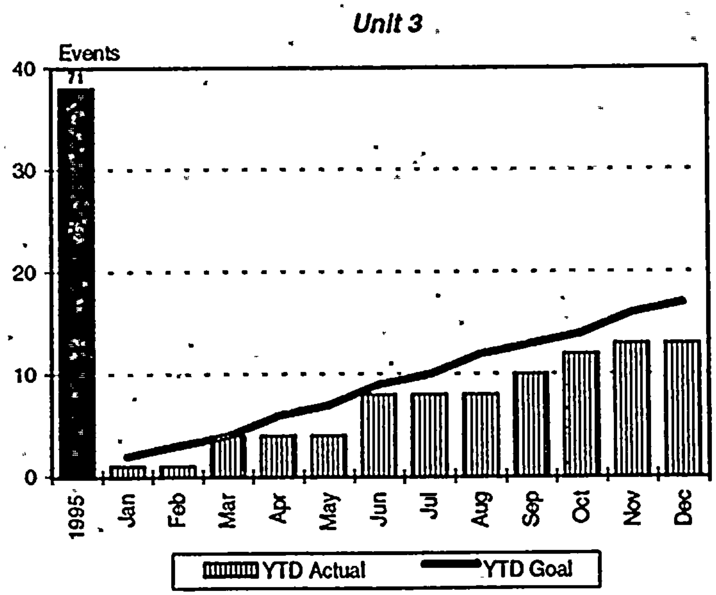
Data Source: Steve Peace - 393-5205   Indicator Owner: Mike Shea - 393-2860

5. 1996 Personnel Contamination Events









6. 1996 Preventable Recordable Injuries

All Injury Incident (AIIR) = The total of all preventable recordable (injury) cases, to personnel permanently assigned to Palo Verde. Rate = Total cases multiplied by 200,000 and divided by actual man-hours worked.

Industrial Safety Accident Rate (ISAR) = The total number of lost-time accidents plus restricted time accidents plus fatalities, for personnel permanently assigned to Palo Verde, multiplied by 200,000 and divided by actual man-hours

	Preventable/Recordable Injuries				ISAR			
Month	Monthly	Total Incidents	YTD Rate	YTD Goal	Lost Work Days/ Restricted	Fatalities	YTD Rate	YTD Goal
1995		22	0.84		0	0	0.08	0.12
Jan	0	0	0.00	12	0	0	0.00	0.0
Feb	0	0	0.00	12	0	0	0.00	0.0
Mar	1	1	0.16	12	0	0	0.00	0.0
Apr	0	1	0.12	12	0	0	0.00	0.0
May	1	2	0.19	12	0	0	0.00	0.0
Jun	0	2	0.16	12	0	0	0.00	0.0
Jul	1	3	0.21	12	2	0	0.14	0.0
Aug	2	5	0.30	12	0	0	0.12	0.0
Sep	2	7	0.37	12	0	0	0.11	0.0
Oct	2	9	0.43	12	0	0	0.09	0.0
Nov	0	9	0.39	12	0	0	0.09	0.0
Dec	1	10	0.40	12	0	0	0.08	0.0

Data Source: Pam Turner - 393-6363 Indicator Owner: Craig Seaman - 393-2099

6. 1996 Preventable Recordable Injuries

Recordable Injuries

03/19/96 -- Maintenance Team member (HVAC) sustained a back injury.

05/10/96 -- Fire Protection employee sustained injury to hand.

07/10/96 -- WRF Auxiliary Operator sustained ankle injury.

08/29/96 – RAMS Maintenance Team member sustained laceration to right index finger requiring 7 stitches.

08/30/96 – Maintenance Svcs. Team member sustained laceration to left index finger requiring 17 stitches.

09/04/96 -- A WRF Team Member sustained an OSHA Recordable muscle strain to neck.

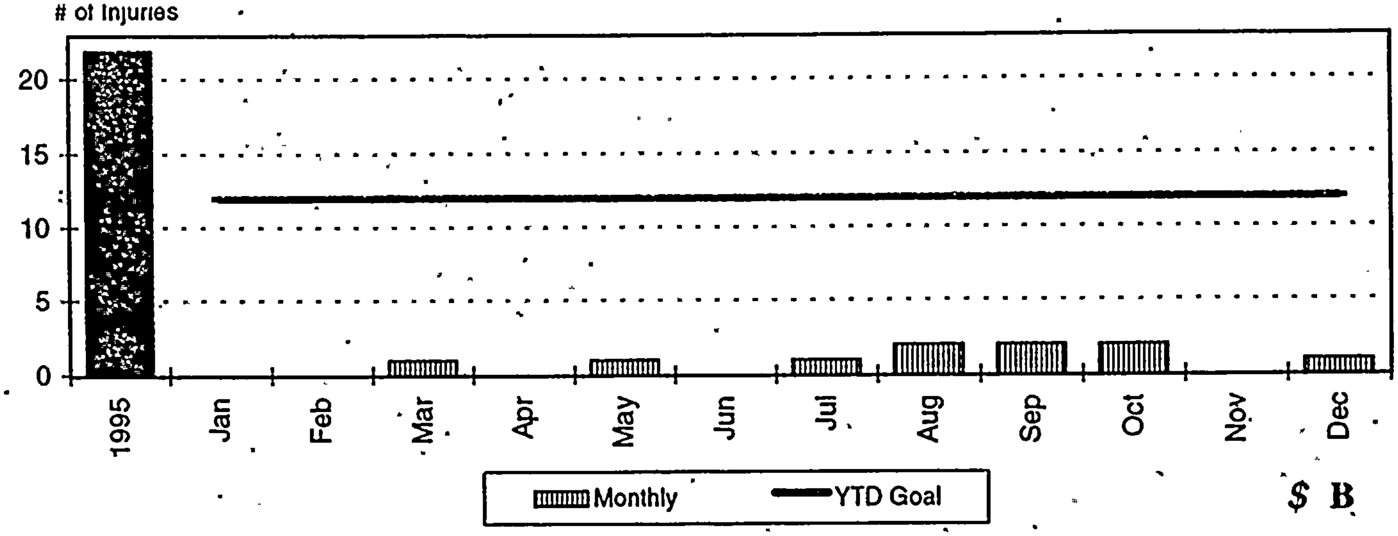
10/18/96 -- Maintenance Team member sustained an OSHA Recordable injury when he strained his wrist.

10/26/96 – NA Team member, on assignment to RP, sustained an OSHA Recordable injury when fall fractured bone in right foot.

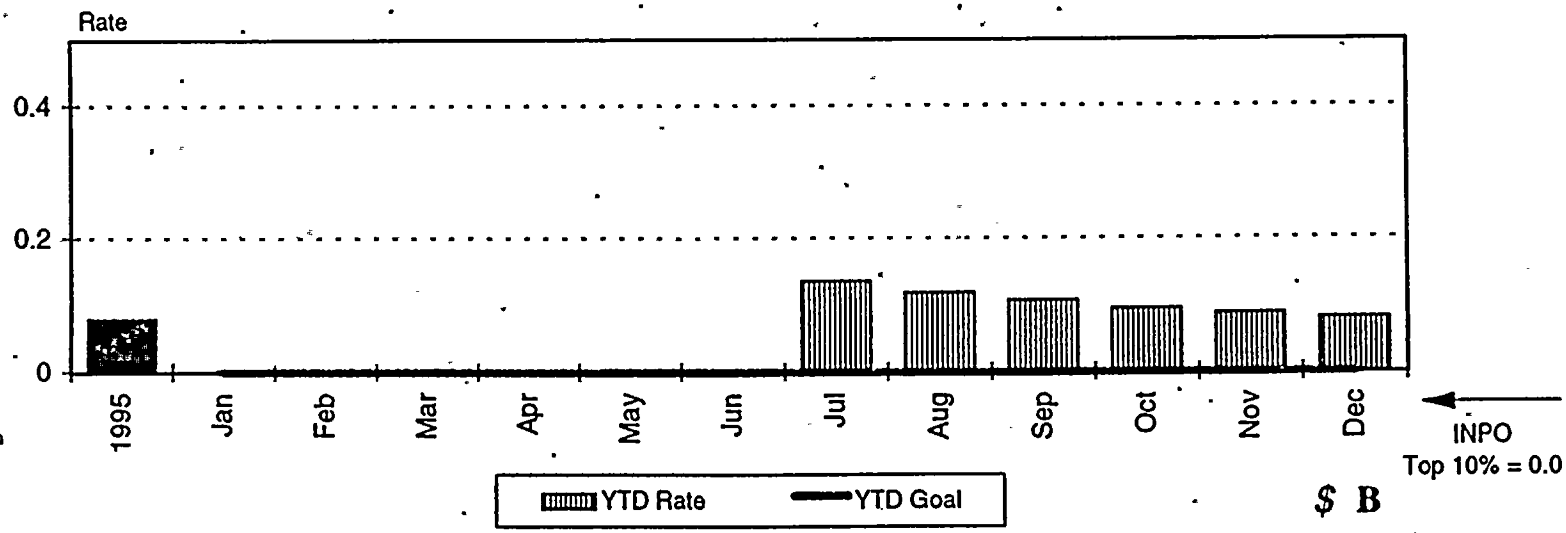
11/96 – Accident originally took place 9/23/95 and turned recordable 11/96 (after publication of MTR). Chemistry Tech sustained laceration to chin when he lost control of electric drill motor he was using to operate a valve.

12/23/96 – APS employee working at keyboard all day shows symptoms of tendonitis in wrist. Given medication and splints.

1996 Preventable/Recordable Injuries
1996 Secondary Goal = 50% reduction from 1995 or <=12



Industrial Safety Accident Rate (ISAR)
1996 Goal = INPO Top 10% of Nuclear Plants



*INPO Best Quartile Station Rate = 0.14

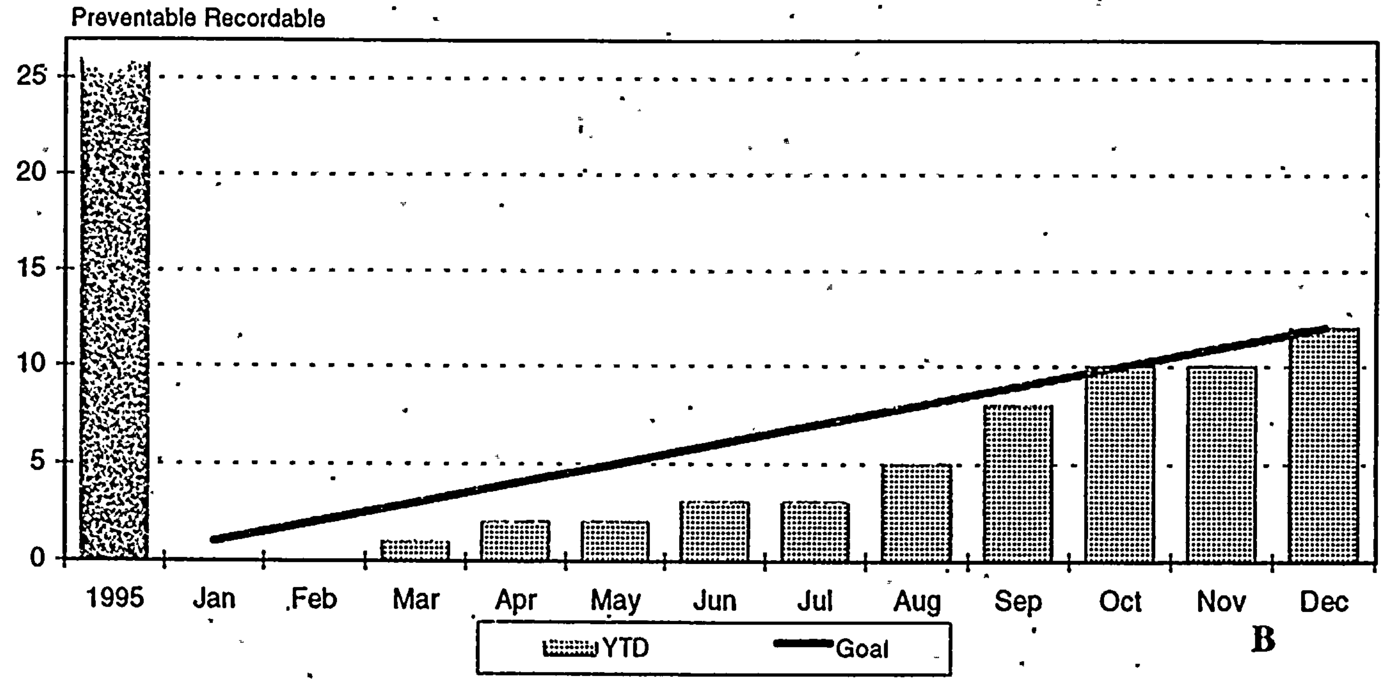
7. 1996 Contractor Industrial Safety

Definition: The number of preventable recordable injury cases involving contractor personnel assigned to Palo Verde.

Month	Total Accidents	YTD
1995		26
Jan	0	0
Feb	0	0
Mar	1	1
Apr	1	2
May	0	2
Jun	1	3
Jul	0	3
Aug	2	5
Sep	3	8
Oct	2	10
Nov	0	10
Dec	2	12

Data Source: Pam Turner - 393-6363   Indicator Owner: Craig Seaman - 393-2099

7. 1996 Contractor Industrial Safety



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Recordable Injuries

03/06/96 --
Fluor Daniels carpenter sustained two lacerations to forehead requiring sutures.
04/13/96 --
Fluor Daniels employee sustained injury to hand which required sutures.
06/25/96 --
Fluor Daniels employee sustained Injury to hand. Accident under investigation. (June recordable determined to be non-restricted.)

Recordable Injuries

08/06/96 --
Infincom employee injured back. Employee taken off work for 2 days -- allowed back to work restricted duty.
08/11/96 --
Contract Maint. Team member sustained significant injury to left leg. Accident will result in Lost Workdays.
09/25/96 -- Bunney employee sustained a fractured finger.
09/13/96 -- Bunney employee sustained a low back contusion.
09/13/96 -- Rockridge employee sustained laceration to left hand.

Recordable Injuries

10/18/96 --
Fluor Daniel employee sustained laceration to forehead which required stitches.
10/21/96 -- Bartlett employee sustained laceration to left leg which required stitches.
12/04/96 -- Grinnell Fire Protection employee sustained hand injury requiring 6 stitches.
12/18/96 -- Fluor Daniel employee sustained muscle neck strain when he struck head on an overhead obstruction while sitting on floor. Employee was wearing a hard hat. When he stood he struck his head, jamming his neck.

8. 1996 Tagging & Clearance Events

Definition: The number of events involving a safety concern for personnel.

Months	Monthly Actual	YTD Total
1995		28
Jan	0	0
Feb	0	0
Mar	0	0
Apr	3	3
May	0	3
Jun	2	5
Jul	0	5
Aug	0	5
Sep	1	6
Oct	1	7
Nov	0	7
Dec	0	7
YTD		7

Data Source: John Dennis - 393-6311 Indicator Owner: Dave Smith - 393-2656

8. 1996 Tagging & Clearance Events

Description

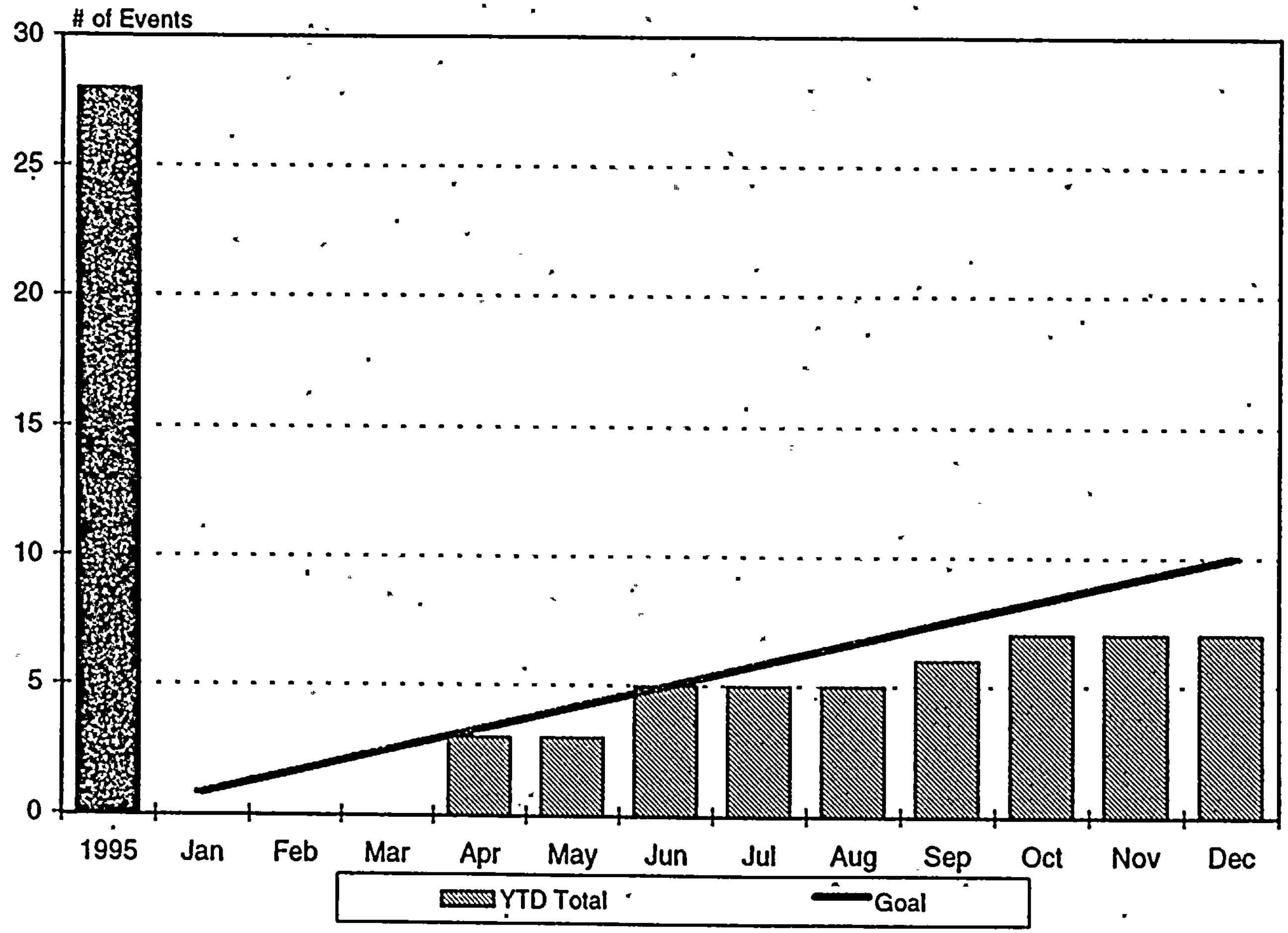
9-6-0374: U-2 personnel were still performing work under Clearance 96-00411 when team leader signed off from clearance.

9-6-0432: U-2--electrical arc occurred during installation of last inter-cell connector for PK 'B' battery under a clearance. Battery not completely isolated as required by clearance.

2-6-0086: U-2--during tagging restoration/ removal activities, a RED tag was removed from a 120V AC breaker that was not authorized to be removed.

9-6-Q357: Air compressor dissassembled for maintenance without a clearance. Local breaker had a hand written DO NOT OPERATE tag hanging.

9-6-0652: Electrical disconnect switch installed in Bldg E by subcontractor without a clearance.



Description

1-6-0217: On 9/27/96 local disconnect for SIC-HV653 was found ON with 2 RED tags hung requiring OPEN. Both tags had been independently verified. Clearances had been authorized, accepted and work accomplished without adequate boundaries established.

1-6-0237: Deals with SIAHV 686 being slightly open when tagged as a boundary.valve.

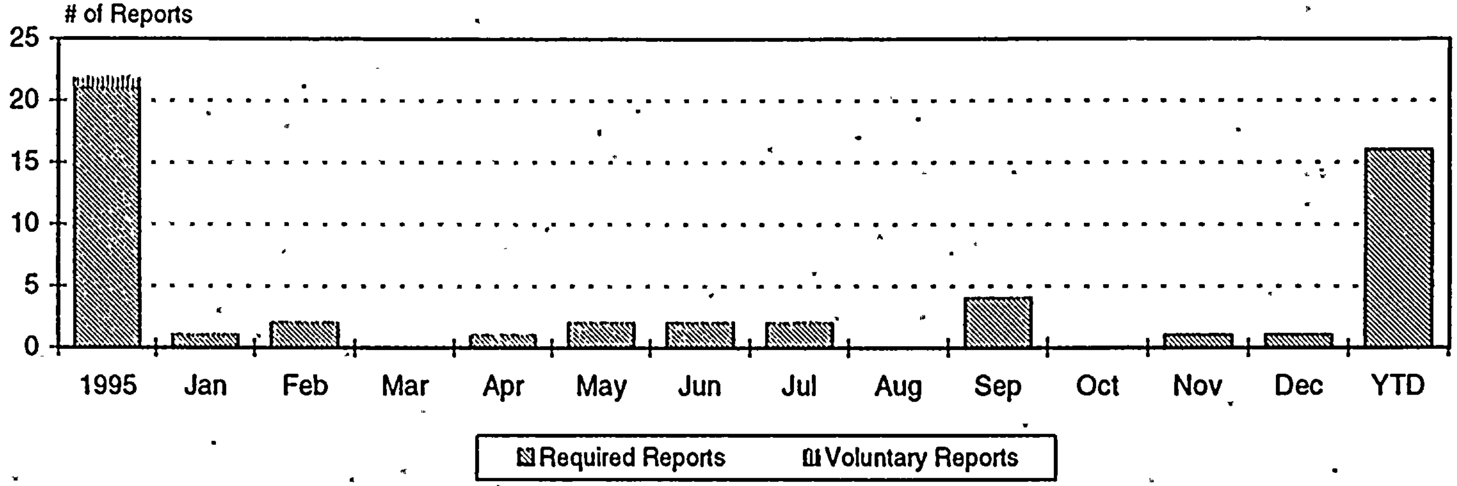
9. 1996 Licensee Event Reports

Definitions: Required Reports are generated because of a violation of a section in 10CFR50.
Voluntary Reports are generated to inform the industry of a condition or finding, but is not required by 10CFR50.

Month	Required Reports	Voluntary Reports	Monthly Total
1995	21	1	22
Jan	1	0	1
Feb	2	0	2
Mar	0	0	0
Apr	1	0	1
May	2	0	2
Jun	2	0	2
Jul	2	0	2
Aug	0	0	0
Sep	4	0	4
Oct	0	0	0
Nov	1	0	1
Dec	1	0	1
YTD	16	0	16

Data Source: Dan Marks - 393-6492 Indicator Owner: Angie Krainik - 393-5421

9. 1996 Licensee Event Reports



Report Date	Event Date	Number	Description
01/19/96	12/20/95	1-95-015-00	Main Steam Isolation Valve (MSIV)(SB) bypass valve SGE UV 169 failed to fully close during surveillance testing.
02/20/96	01/21/96	1-95-016-00	Containment spray pump mini recirculation isolation valve failed to stroke closed during ST.
02/22/96	12/19/95	2-96-001-00	Rx trip occurred when SG 1 water level reached reactor protection system trip setpoint for low SG water level following degradation of main feedwater flow.
04/25/96	04/01/96	2-96-002-00	Erroneous manipulation of alternate supply breaker to bus PBB-S04 by reactor operator resulted in loss of offsite power to Unit 2 Train B Class 1E 4.16 kV bus.
05/17/96	01/22/96	2-96-003-00	Deficient surveillance test procedure did not require bypass logic check & test was credited as a complete surveillance. Violated TS 4.3.1.2.
05/06/96	04/06/96	1-96-001-00	Failure of hot lead to ground at the 100' Control Bldg. transformer winding between terminals 1&2 of transformer caused a fire in Unit 2.
06/09/96	05/13/96	2-96-004-00	SG#1 normal blowdown isolation valve was isolated. The blowdown flow rate constants used in reactor power calculation were determined with normal blowdown valves unisolated. Resulted in indicated power being less than actual power.
06/09/96	05/14/96	2-96-002-00	Anhydrous trisodium phosphate in use as opposed to the TS required TSP dodecahydrate. TS surveillance requirement (SR) 4.5.2.d.2 had not been satisfied.
07/17/96	05/21/96	2-96-001-00	Defective Procedure -- dissolved hydrogen in RCS was miscalculated. It was indicated criteria for test acceptance had been met.
07/26/95	06/28/95	2-96-005-00	When personnel hatch (100') was opened EQ parameters of Train A&B AF BA pumps controls and indication for A& B ADVs and HPSI pumps could have been exceeded and would not likely be able to perform intended safety functions.
09/02/96	08/05/96	2-96-006-00	CR personnel momentarily entered then exited TS LCO 3.0.3 following determination that ACTION statements for TS LCO 3.5.2 & 3.6. hadn't been met with both trains of the SI System and CS System inoperable while in Mode 1.
09/04/96	08/10/96	1-96-0004-00	U-1&3 tripped on low departure from nucleate boiling ration following major grid perturbation.
09/04/96	09/09/96	1-96-003-00	Maint workers propped open a door on the 100' elevation of Aux Bldg creating a flow path which could not be compensated for by the Fuel Bldg Essential Filtration units.
09/19/96	04/18/93	95-006-01 Supplement	Supplement corrects Plant mode of operation for October 18, 93 condition.
11/16/96	10/29/93	1-96-006-00	U-1 Aux. Operator discovered a leak through a cracked weld in piping near the B HPSI pump minimum recirculation line drain valve.
12/17/96	11/19/96	1-96-007-00	T.S. LCO 303 entry due to missed ST. GL 96-01-review determined that ESF lockout relays should be tested.

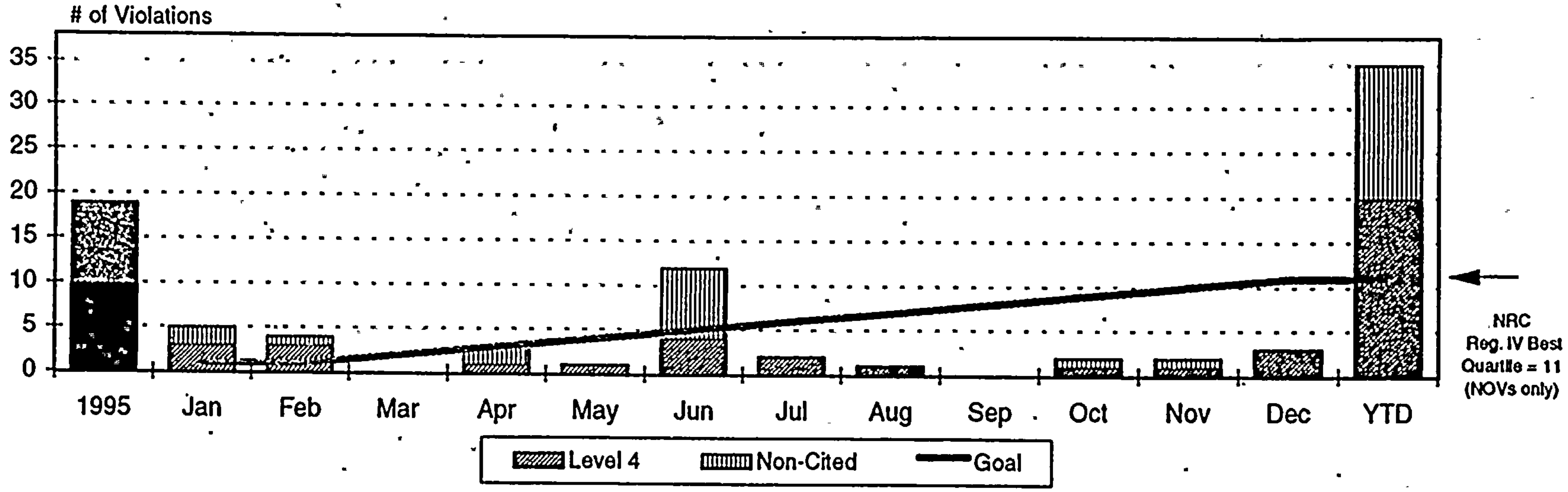
10. 1996 NRC Violations

Definition: The number of violations from the NRC during the month. Level 1 violations are the most significant and level 4 are the least significant. Non-cited violations are generally licensee identified and not counted against the goal. Level 1, 2 and 3 violations are not expected and therefore are not illustrated.

Month	Non-Cited	Level 4	Goal
1995	9	10	<11
Jan	2	3	<2
Feb	1	3	<3
Mar	0	0	<4
Apr	2	1	<5
May	0	1	<6
Jun	8	4	<7
Jul	0	2	<8
Aug	0	1	<9
Sep	0	0	<10
Oct	1	1	<11
Nov	1	1	<11
Dec	0	3	<11
YTD	15	20	<11

Data Source: Dan Marks - 393-6492   Indicator Owner: Angie Krainik - 393-5421

10. 1996 NRC Violations



Number(s)	Description
95-24 (IV)	NRC tests determined 3 zones would not detect a simulated intruder.
95-24 (IV)	Posted Security officer (comp measure) was removed before zone was properly repaired.
95-24 (IV)	Fixed metal detectors were unable to detect test weapons. Employee allowed into PA without search after alarm. Another employee allowed to enter PA without adequate identification after biometric handreader refused entry.
530/95-25-01 (IV)	U-3 Train B EC refrigerant level above max operability limit -- a CRDR was not issued.
530/95-25-02 (IV)	Licensee took credit for use of manual operation to maintain the U-3 Train A EC operable without documented evaluations.
528/95-25-03 (IV)	Required test not done to demonstrate essential chiller water system could perform in service.
96-04-1 (IV)	RAD Worker practices were poor. RP did not correct and adequately monitor.
96-05 (IV)	RO operated incorrect electrical breaker causing loss of power.
96-06-01(IV)	Measures specified in procedure to assure the maintenance of design basis of upper guide structure were inadequate. This resulted in damage to guide tubes during movement of the structure.
96-07-01 (IV)	2 failures to follow procedures: 1-Operators failed to declare both trains of LPSI inoperable; 2-didn't realign the blowdown system correctly, actual reactor power greater than indicated reactor power.
96-07-09 (IV)	3 examples of unposted contaminated areas.
96-08-01 (IV)	Granting back-to-back temporary unescorted access, issuing a badge/keycard w/out required approval signature, and failing to include developed references.
96-11-01 (IV)	I&C Maint Eng failed to recognize that a change to U2 QSPDS represented a change to facility and review it for unreviewed safety question.
96-11-02 (IV)	Individual failed to process himself and hand carried items through security search equipment prior to entering protected area.
96-10-02 (IV)	Failure to incorporate and correctly translate applicable regulatory requirements and the design bases into drawings, procedures, and instructions is a violation of 10CFR Part 50.
96-13-01 (IV)	Failure to follow procedures for ventilation boundary door control.
96-16-01 (IV)	U-1 reduced inventory valve line-up.
96-17-01 (IV)	T.S. 6.8.1: SEIS manual input, RCP spanner work instructions/clearance.
96-17-02 (IV)	10CFR50, App. B, Crit. IV: EC chiller mod issue.
96-17-03 (IV)	Loss of escort control.

11. 1996 Timeliness of Corrective Actions

Adverse and Significant CRDRs

Definitions: Adverse - Any item or activity which does not conform to requirements.
Significant - A condition which, if uncorrected, could have a serious effect on safety or operability.

CRDR Goals
Average Evaluation Time = ≤ 30 Days
Average Closure Time = ≤ 180 days

	CRDR Evaluation Time*			CRDR Closure Time*		
Months	Number Over 30 Days Old	1996 Reduction Goal	Average Time (Days)	Number Over 180 Days Old**	1996 Reduction Goal	Average Time (Days)**
Dec. 1995	57	61	47	168	236	181
Jan	58	56	50	156	216	166
Feb	50	50	44	151	196	155
Mar	62	44	40	144	176	141
Apr	80	38	36	165	150	126
May	72	30	44	175	125	142
Jun	41	25	54	122	100	146
Jul	30	25	29	113	75	124
Aug	43	25	22	123	75	115
Sep	43	25	26	136	75	121
Oct	17	25	19	104	75	106
Nov	25	25	20	80	75	109
Dec	13	25	25	47	75	103

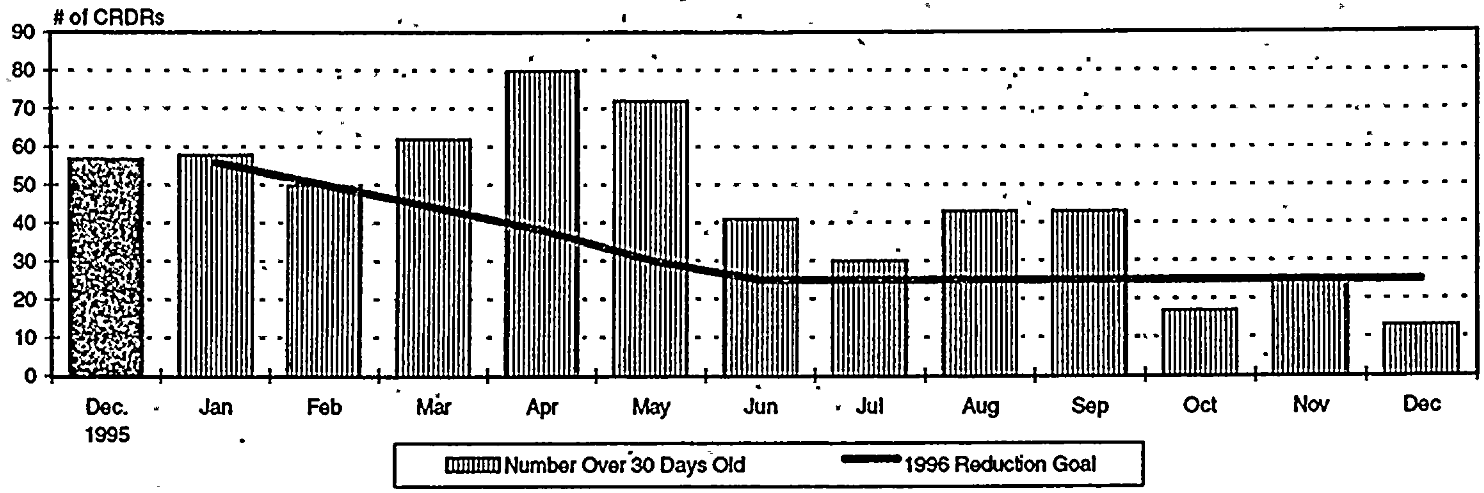
*Includes Open CRDRs and CRDRs closed during the month.
**Excludes CRDRs with open Priority 1,2,3 action(s) with milestone indicators.

Data Source: Theresa Smith - 393-5696 Indicator Owner: Rose Fullmer - 393-6338

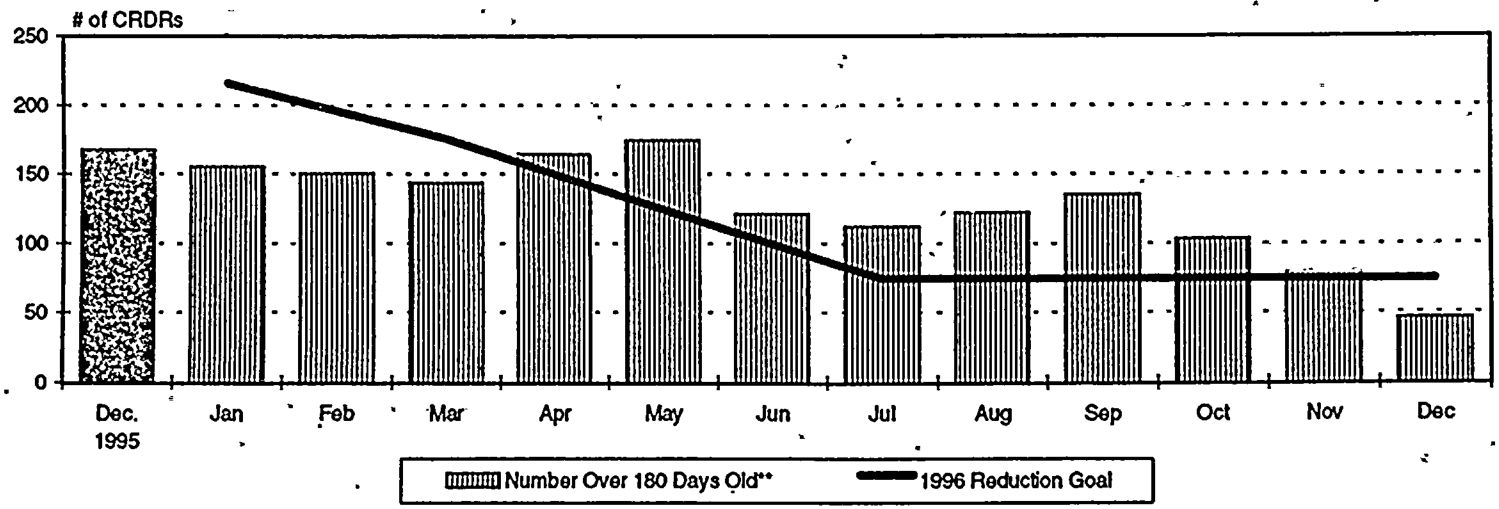
11. 1996 Timeliness of Corrective Actions

Adverse and Significant CRDRS

Number of CRDRs Over Evaluation Goal



Number of CRDRs Over Closure Goal



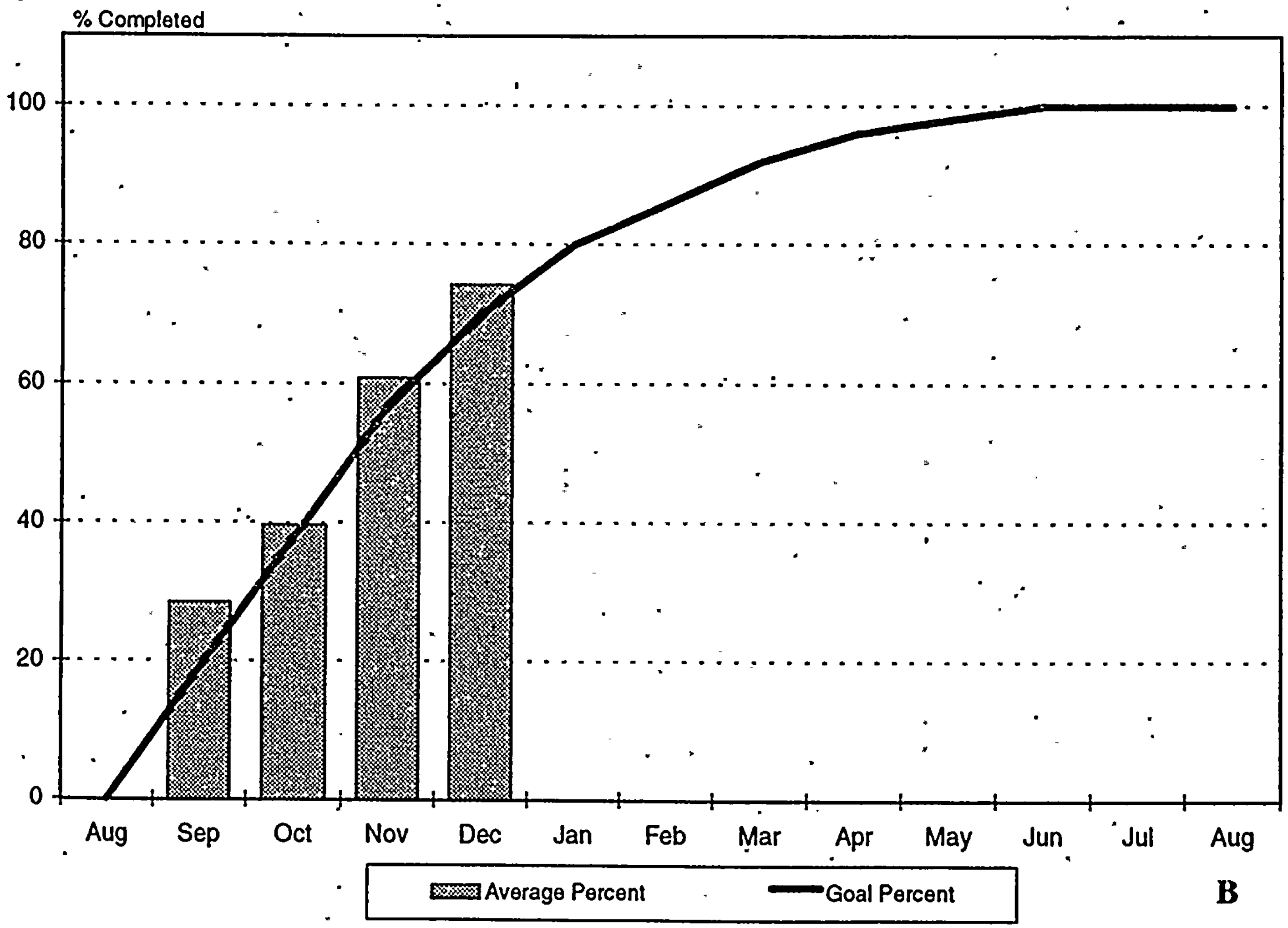
12. SALP Closeout

Definition: The number of Open Nuclear Projects per month and their rate of completion against specific deadlines.

Description	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
0523-S-96-01 -- Assess/improve individual performance consistency, self checking (peer checks) and procedure adherence/usage.	0	20	60	80	95								
0523-S-96-02 -- Review/change, as necessary, procedures or guidance for radiation surveys/postings.	0	10	40	70	99								
0523-S-96-03 -- Improve performance of access authorization program.	0	15	15	40	45								
0523-S-96-04 -- Examine interdepartmental communication network when emerging issues develop to assess our weak links and remedy the communication between Maintenance and Systems Engineering.	0	50	55	65	99								
0523-S-05 -- Evaluate work package guidance to ensure packages are of top quality and worker usable. Additionally, encourage worker identified problems to be addressed.	0	25	40	55	55								
0523-S-06 -- Focus appropriate resources/attention to BOP systems to raise awareness/readiness to enhance unit availability and appearance.	0	25	37	80	99								
0523-S-96-07 -- Assess, as appropriate, the OD process and audit its effectiveness as a follow-up to the enhancements recently put in place.	0	10	10	50	50								
0523-S-96-08 -- Set and assess management expectations with regard to improving Radworker and RP Technicians' performance to correct/enhance consistency and procedural and programmatic compliance/	0	20	30	30	50								
0523-S-96-09 -- Improve Security detection equipment performance and compliance with compensatory measures procedures.	0	100	100	100	100								
0523-S-96-10 -- Implement a program to improve housekeeping.	0	10	10	40	50								
Average Percent	0.00	28.5	39.7	61	74.2								
Goal Percent	0	19	38	57	70	80	86	92	96	98	100	100	100

Data Source: Dan Marks - 393-6492 **Indicator Owner: Angie Krainik - 393-5421**

12. SALP Closeout



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13. 1996 INPO Closeout

Definition: Initial Project Completion % – Percentage completion of initial commitments to INPO.
Effectiveness Assessment Complete – Self assessment of correction action effectiveness by the owner.
Additional Actions Complete – During initial action implementation or the effectiveness review additional actions may be developed. This column provides a completion percentage of those actions.

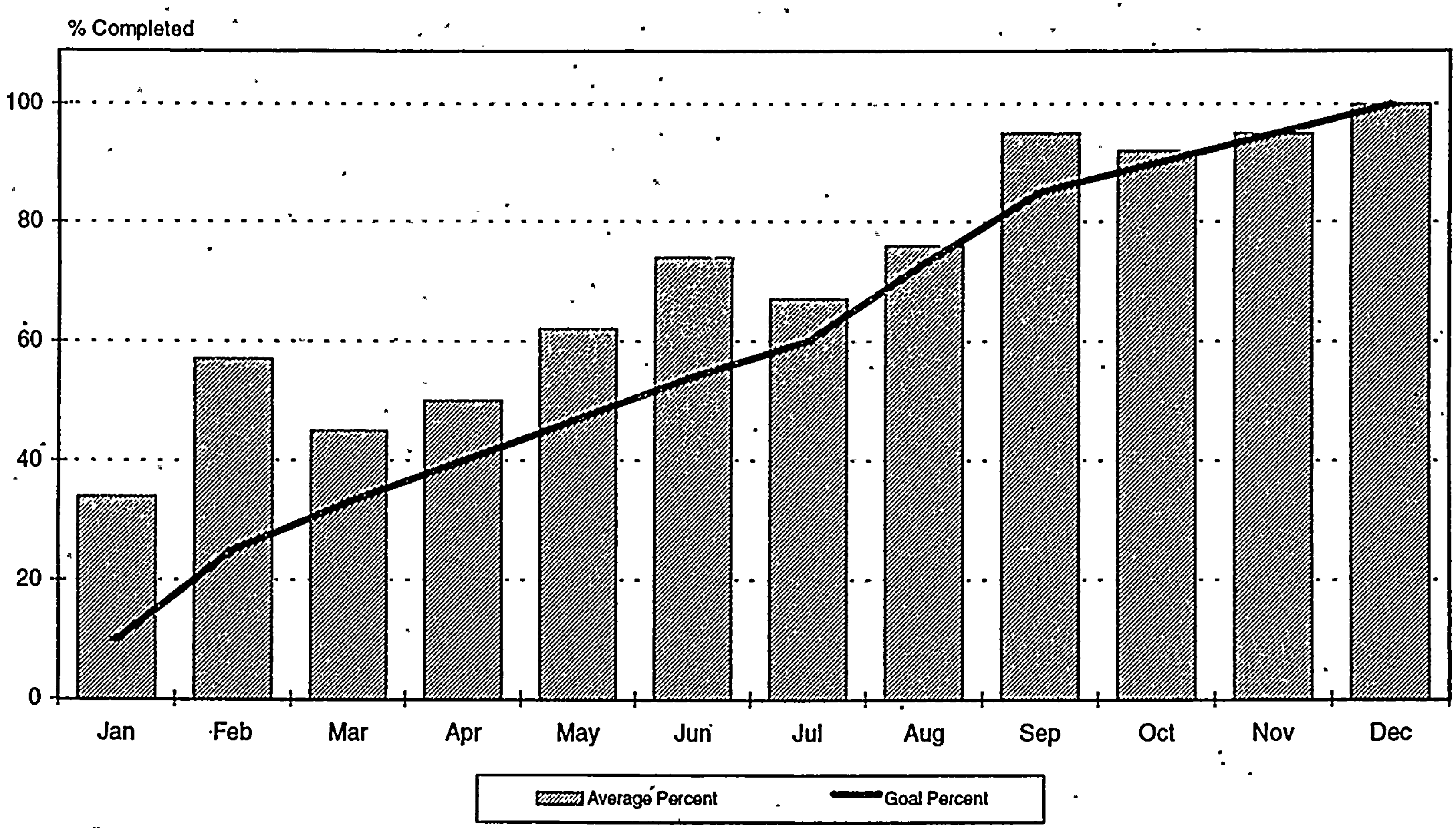
Description	Initial Project Completion (%)	Effectiveness Assessment Complete	Additional Actions % Complete
0123-I-1 - Reduce ingress of impurities into secondary systems, improve corrosion control practices in plant auxiliary systems and correct and improve laboratory work practices.	100	Y	
0123I95-01 - Improve Tagging and Clearance performance.	100	Y	N/A
0123I95-02 - Improve Operations' crew delegation and prioritization of tasks.	100	Y	
0123I95-03 - Improve work management and efficiency.	100	N	
0123I95-04 - Improve quality and adherence to work instructions.	100	N	
0123I95-05 - Improve effectiveness of Engineering in identifying emerging equipment-related issues.	100	N	
0123I95-06 - Eliminate use of clear plastic in the Fuel Building.	100	Y	N/A
0123I95-07 - Improve collective trend analysis of reactivity monitoring control issues.	100	N	
0123I95-08 - Improve simulator training preparation and evaluation.	100	Y	
0123I95-09 - Clarify distinction between training and evaluation.	100	Y	
0123I95-10 - Ensure pre-outage milestones are met.	100	Y	
0123I95-11 - Reduce DAW volume.	100	Y	

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average Percent	34	57	45	50	62	74	67	76	95	92	95	100
Goal Percent	10	25	33	40	47	54	60	73	85	90	95	100

*Additional action identified

Data Source: Rick Hazelwood - 393-5868 Indicator Owner: Angie Krainik - 393-5421

13. 1996 INPO Closeout



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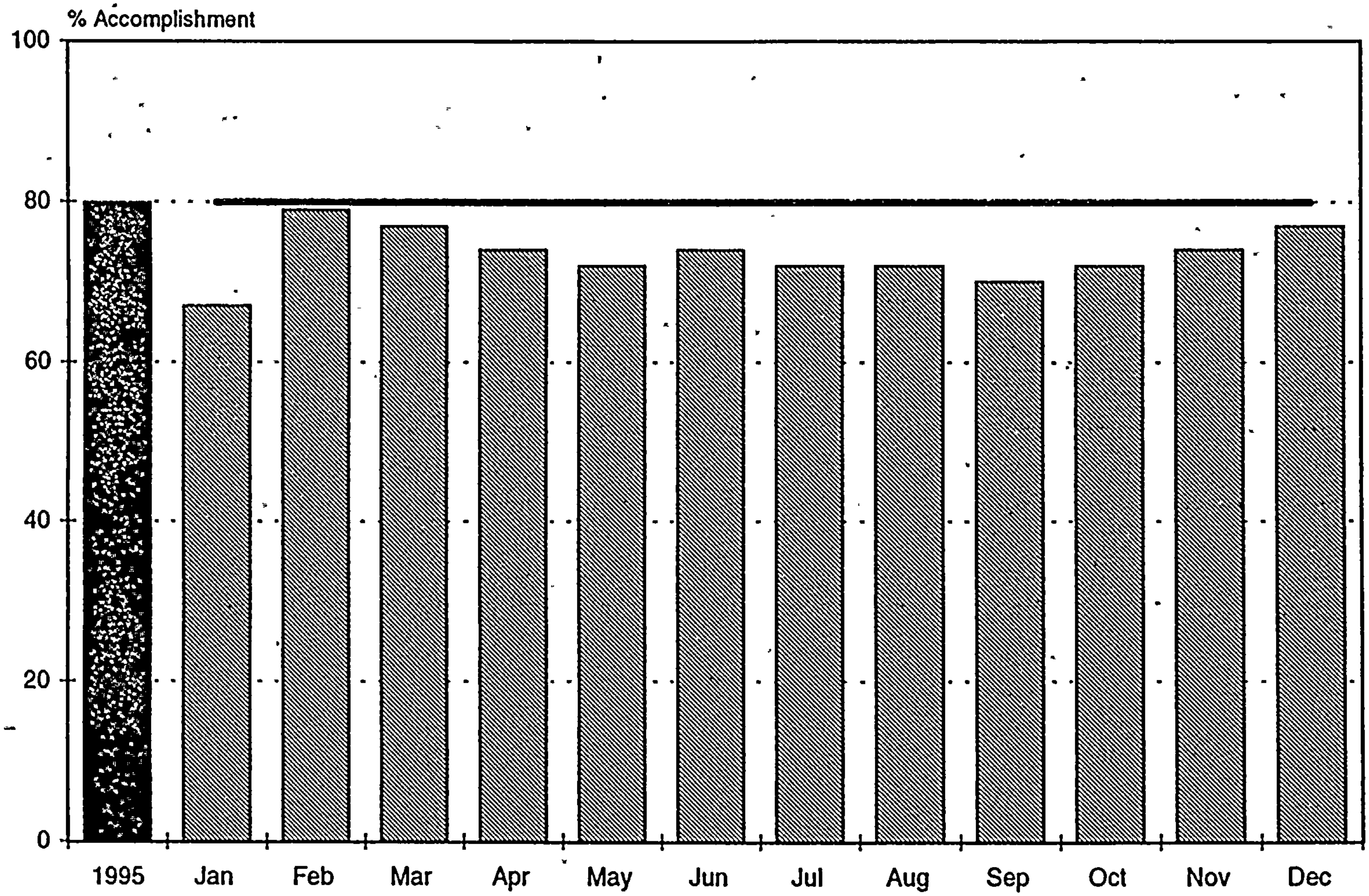
14. 1996 Palo Verde Performance Trend

Definition: The percentage of Palo Verde performance indicators showing satisfactory or better performance, compared to the total number of indicators.

Month	% Accomplishment	Goal
1995	80	75
Jan	67	80
Feb	79	80
Mar	77	80
Apr	74	80
May	72	80
Jun	74	80
Jul	72	80
Aug	72	80
Sep	70	80
Oct	72	80
Nov	74	80
Dec	77	80

Data Source: Fred Doyle - 250-3678 Indicator Owner: Jack A. Bailey - 393-5444

14. 1996 Palo Verde Performance Trend



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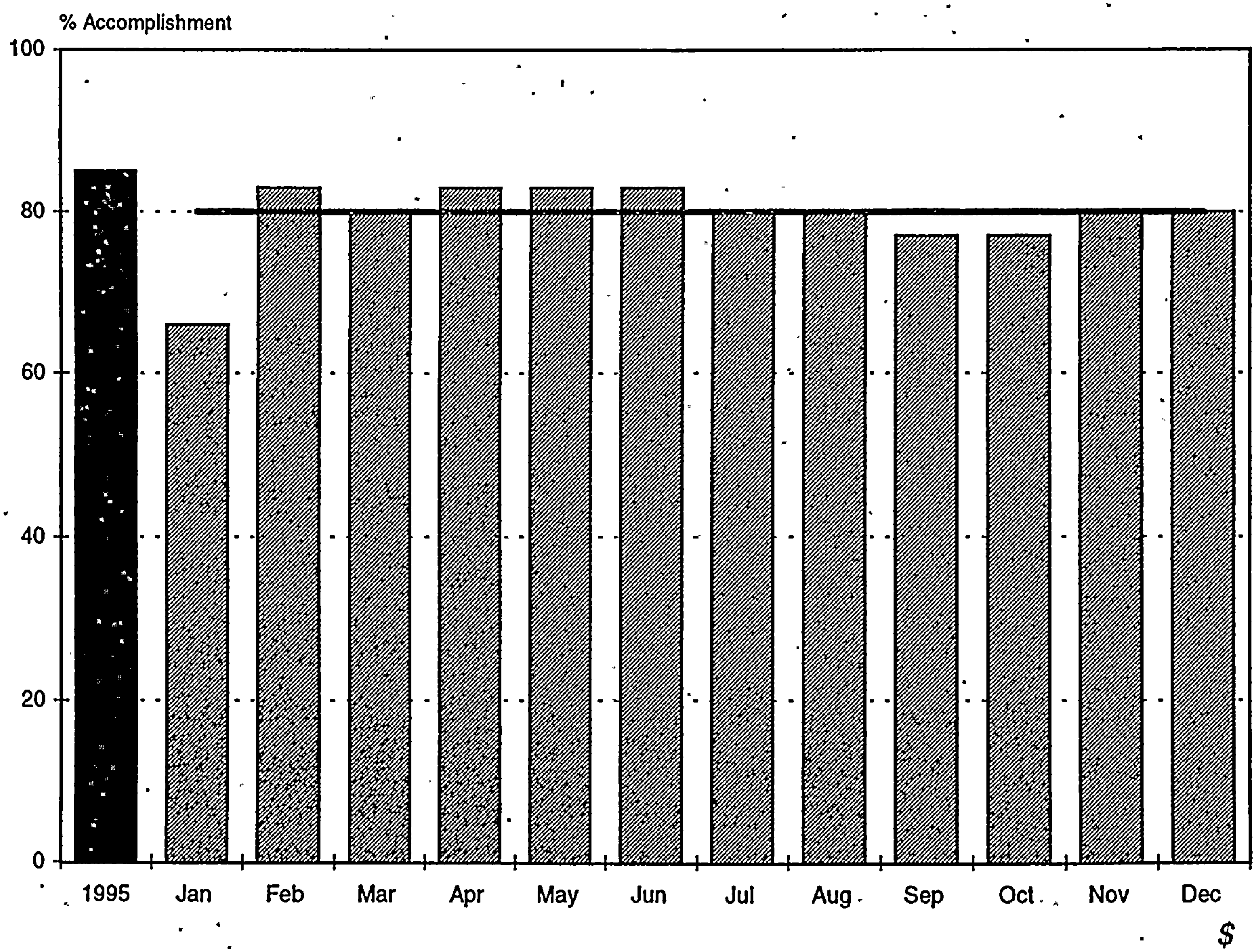
15. 1996 Palo Verde Business Plan Trend

Definition: The percentage of Palo Verde business plan performance indicators showing satisfactory or better performance, compared to the total number of business plan indicators.

Month	% Accomplishment	Goal
1995	85	75
Jan	66	80
Feb	83	80
Mar	80	80
Apr	83	80
May	83	80
Jun	83	80
Jul	80	80
Aug	80	80
Sep	77	80
Oct	77	80
Nov	80	80
Dec	80	80

Data Source: Fred Doyle - 250-3678 Indicator Owner: Jack A. Bailey - 393-5444

15. 1996 Palo Verde Business Plan Trend



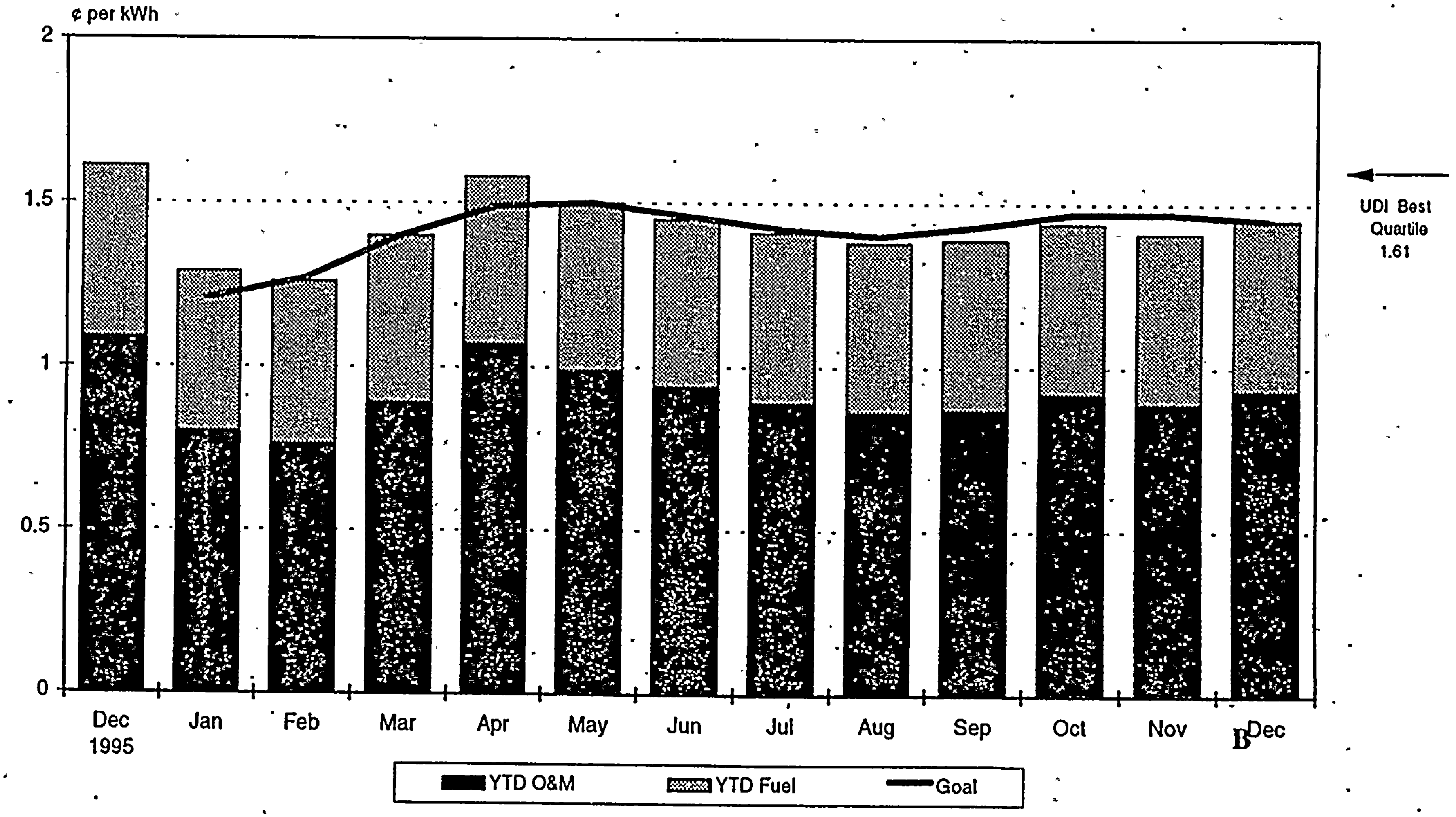
16. 1996 Production Cost

Definition: Production cost ratio = Total O&M + fuel cost for a time period, divided by net energy produced during the period. O&M includes NRC fees but excludes load dispatch and certain other overhead costs.

	O&M Cost Ratio		YTD Fuel Cost Ratio		YTD Production Cost Ratio	
Month	Actuals	Goal	Actuals	Goal	Actuals	Goal
Dec 1995	1.09	1.15	0.52	0.55	1.61	1.7
Jan	0.80	0.69	0.49	0.52	1.29	1.21
Feb	0.76	0.76	0.50	0.51	1.26	1.27
Mar	0.89	0.89	0.51	0.51	1.40	1.40
Apr	1.07	0.98	0.51	0.51	1.58	1.49
May	0.99	0.98	0.51	0.52	1.50	1.50
Jun	0.94	0.94	0.51	0.52	1.45	1.46
Jul	0.89	0.90	0.52	0.52	1.41	1.42
Aug	0.86	0.88	0.52	0.52	1.38	1.40
Sep	0.87	0.91	0.52	0.52	1.39	1.43
Oct	0.92	0.95	0.52	0.52	1.44	1.47
Nov	0.89	0.95	0.52	0.52	1.41	1.47
Dec	0.93	0.93	0.52	0.52	1.45	1.45

Data Source: John Funicello - 393-6998 Indicator Owner: Carl Churchman - 393-6006

16. 1996 Production Cost



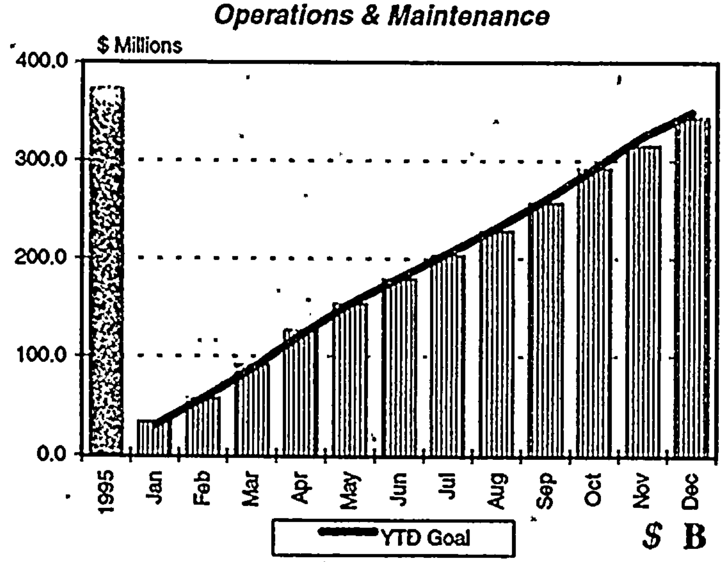
17. 1996 Costs and Budgets

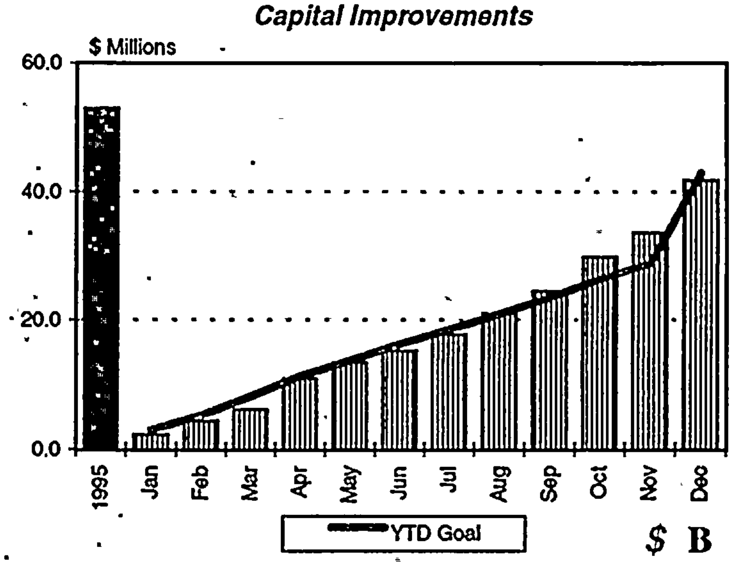
Definition: The year-to-date costs for Palo Verde, by budget in millions of dollars, excluding incentive plan payouts.

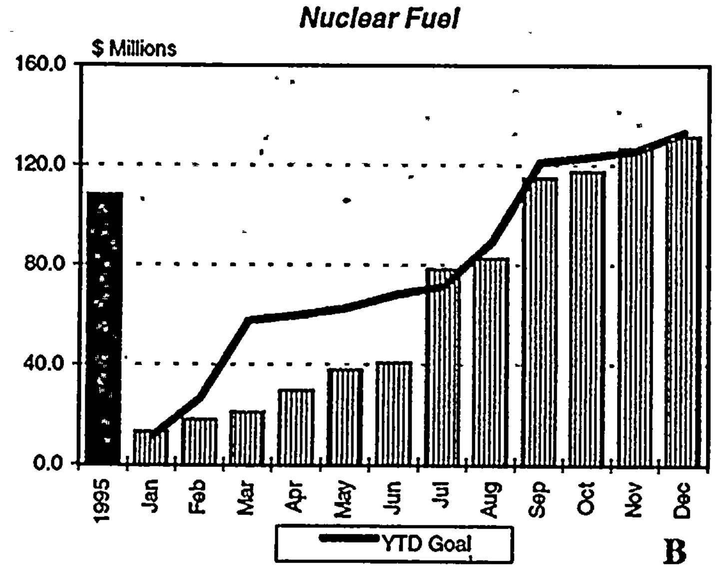
	Operations & Maintenance			Capital Improvement			Nuclear Fuel		
Month	Monthly Actual	YTD Actual	YTD Goal	Monthly Actual	YTD Actual	YTD Budget	Monthly Actual	YTD Actual	YTD Budget
1995		372.9	376.8		53	75.0		108.3	116.4
Jan	34.2	34.2	30.9	2.3	2.3	3.0	13.3	13.3	11.5
Feb	23.5	57.8	58.5	2.1	4.4	5.3	5.0	18.3	26.7
Mar	33.6	91.3	87.5	1.8	6.2	8.2	2.9	21.2	57.9
Apr	35.5	126.8	121.7	4.7	10.9	11.3	8.8	30.0	60.1
May	27.2	154.0	154.1	2.5	13.4	13.7	8.2	38.2	62.9
Jun	25.4	179.4	180.8	1.8	15.2	16.2	2.9	41.1	68.2
Jul	24.4	203.7	205.9	2.5	17.7	18.5	37.3	78.4	71.8
Aug	24.6	228.3	232.2	3.3	21.0	20.9	4.5	82.9	89.6
Sep	29.3	257.6	261.0	3.5	24.5	23.5	32.2	115.1	121.2
Oct	35.3	292.9	293.6	5.4	29.9	26.4	2.6	117.7	123.4
Nov	23.3	316.2	325.8	3.9	33.7	28.9	9.2	126.9	126.0
Dec	28.1	344.3	349.5	8.2	41.9	43.0	4.8	131.7	133.3

Data Source: John Funicello - 393-6998 Indicator Owner: Carl Churchman - 393-6006

17. 1996 Costs and Budgets







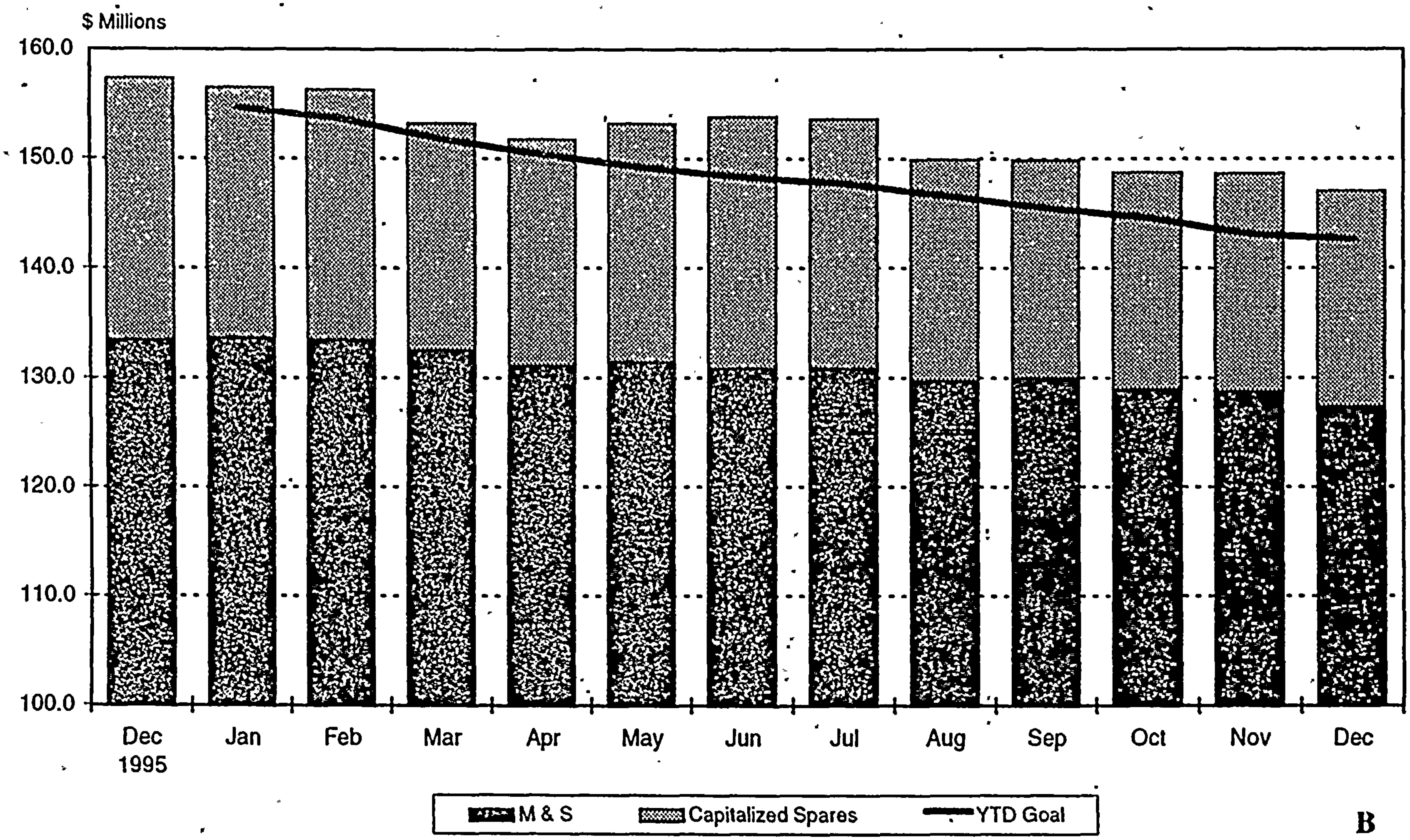
18. 1996 Inventory Value

Definition: Total dollar value of all materials, parts and supplies in stock at the end of each month, including capitalized spare parts valued at original cost less estimated depreciation starting 3/96. ($ Millions)

Month	M & S	Capitalized Spares	Total Value This Month	YTD Goal
Dec 1995	133.4	23.9	157.3	
Jan	133.6	22.9	156.5	154.6
Feb	133.4	22.9	156.3	153.6
Mar	132.5	20.7	153.2	151.8
Apr	131.1	20.7	151.8	150.4
May	131.4	21.8	153.2	149.2
Jun	130.8	23.0	153.8	148.3
Jul	130.8	22.8	153.6	147.7
Aug	129.7	20.2	149.9	146.6
Sep	130.0	19.9	149.9	145.5
Oct	128.9	19.9	148.7	144.6
Nov	128.7	19.9	148.7	143.1
Dec	127.3	19.8	147.0	142.6

Data Source: John Funicello - 393-6998 Indicator Owner: Carl Churchman - 393-6006

18. 1996 Inventory Value



B

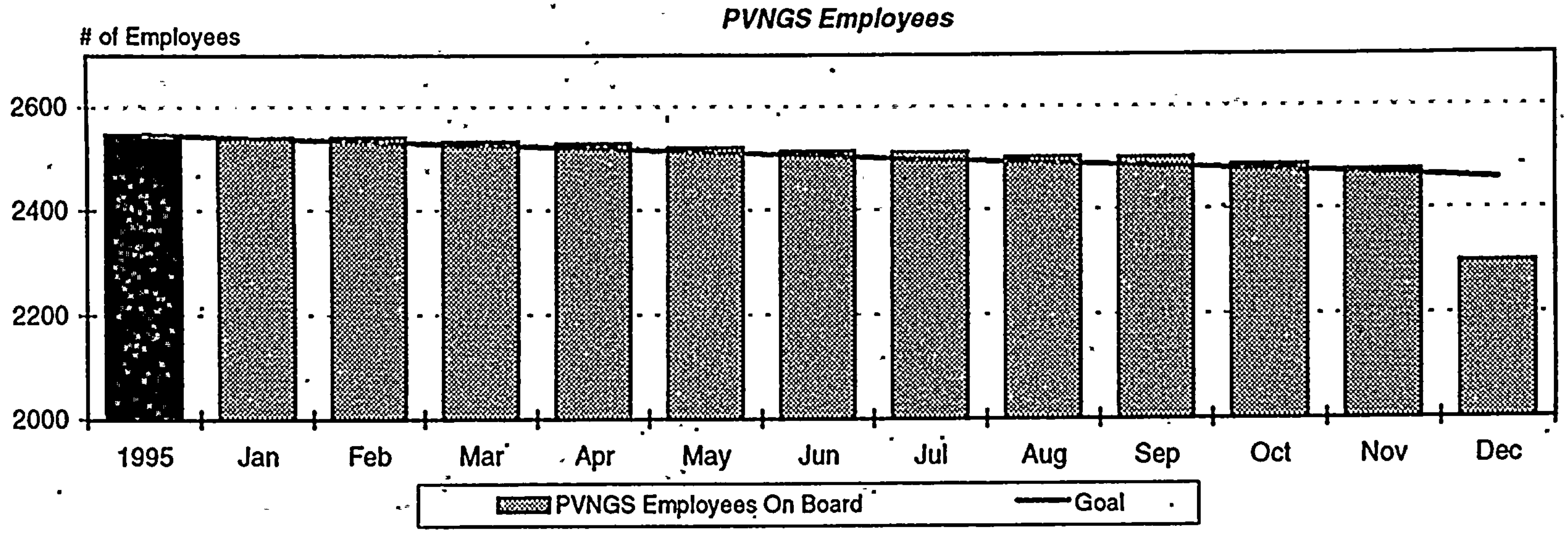
19. 1996 PVNGS Employee/Contractor Staffing

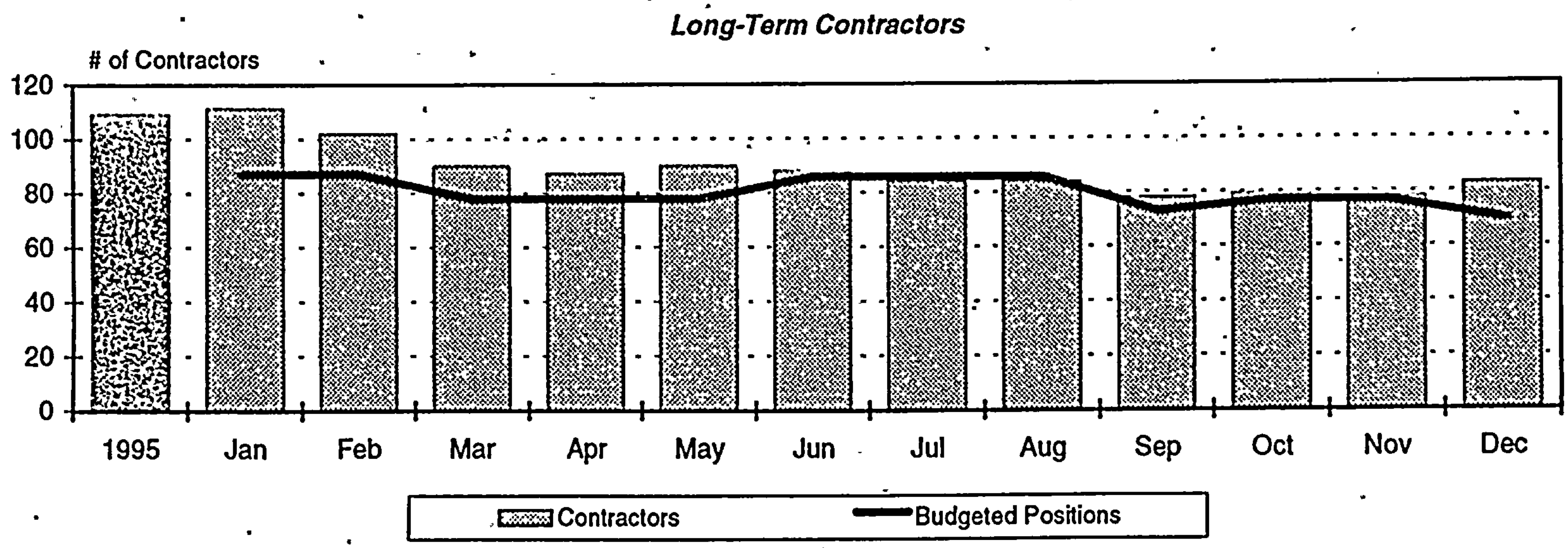
Definition: The number of PVNGS Employees on Board excludes temporary employees and summer-hires.

Month	PVNGS Employees On Board	Goal	PVNGS Budgeted Positions		Contractors	Monthly Total
			APS	Contractors		
1995	2546	2546	2705		109	2,655
Jan	2540	2538	2540	87	111	2,651
Feb	2540	2532	2534	87	102	2,642
Mar	2531	2524	2527	78	90	2,621
Apr	2528	2518	2521	78	87	2,615
May	2520	2510	2515	78	90	2,610
Jun	2513	2504	2508	86	88	2,601
Jul	2510	2496	2502	86	84	2,594
Aug	2501	2490	2496	86	84	2,585
Sep	2499	2482	2489	73	78	2,577
Oct	2485	2476	2483	77	79	2,564
Nov	2474	2468	2477	77	78	2,552
Dec	2299	2456	2470	70	83	2,382

Data Source: Charley Moore - 393-6539   Indicator Owner: Jeanne Copsey - 393-6318

19. 1996 PVNGS Employee/Contractor Staffing





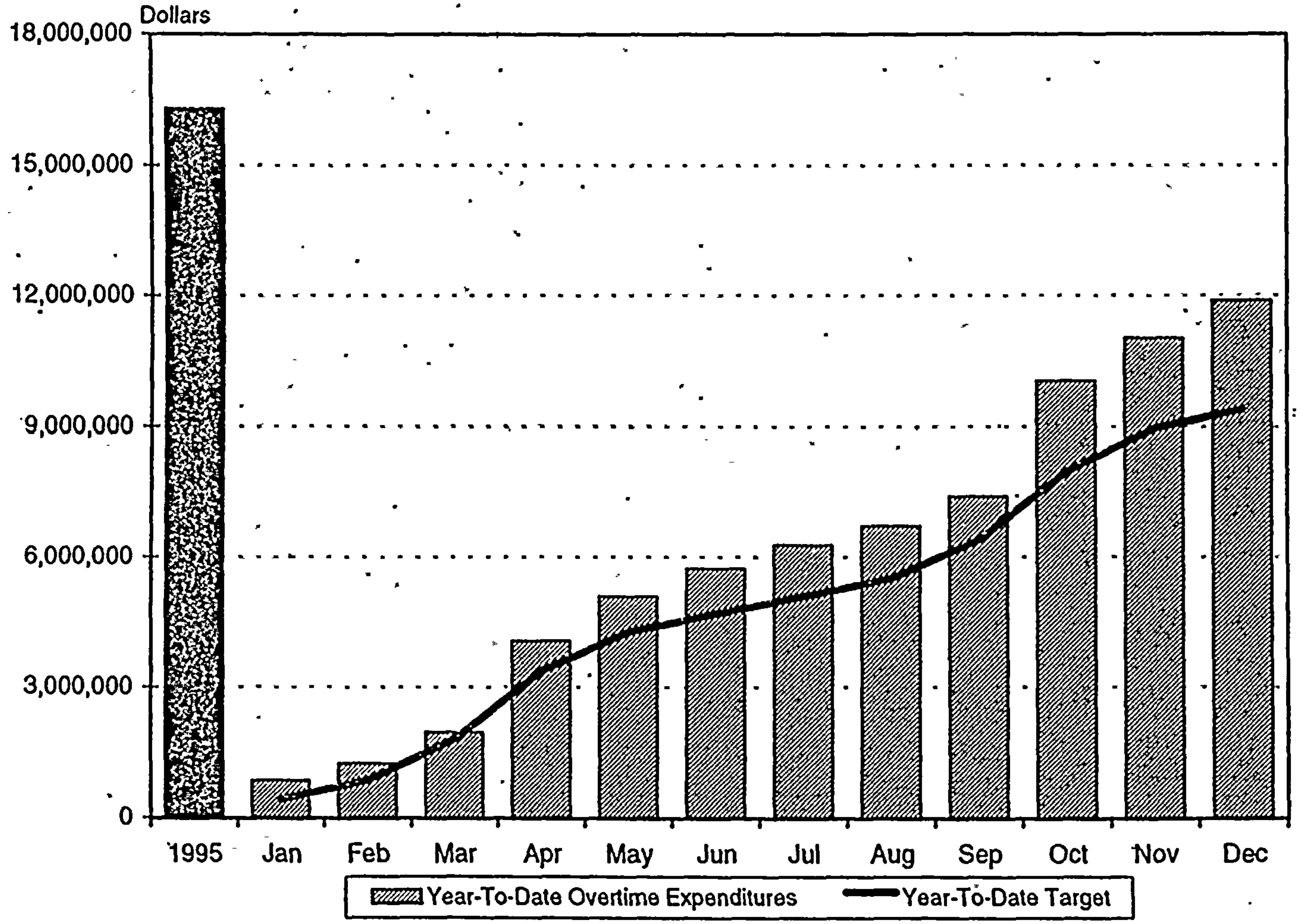
20. 1996 Overtime

Definition: Cumulative expenditures for overtime pay.

Month	Current Month Overtime Expenditure	Year-To-Date Overtime Expenditures	Year-To-Date Target
1995		16,300,000	
Jan	873,000	873,000	429,000
Feb	393,000	1,266,000	867,000
Mar	712,000	1,978,000	1,823,000
Apr	2,097,000	4,075,000	3,392,000
May	1,023,000	5,098,000	4,278,000
Jun	629,000	5,727,000	4,687,000
Jul	550,000	6,277,000	5,101,000
Aug	434,000	6,711,000	5,513,000
Sep	684,000	7,395,000	6,392,000
Oct	2,668,000	10,063,000	7,969,000
Nov	982,000	11,045,000	8,966,000
Dec	856,000	11,901,000	9,404,000

Data Source: John Funicello - 393-6998 Indicator Owner: Bill Ide - 393-2656

20. 1996 Overtime



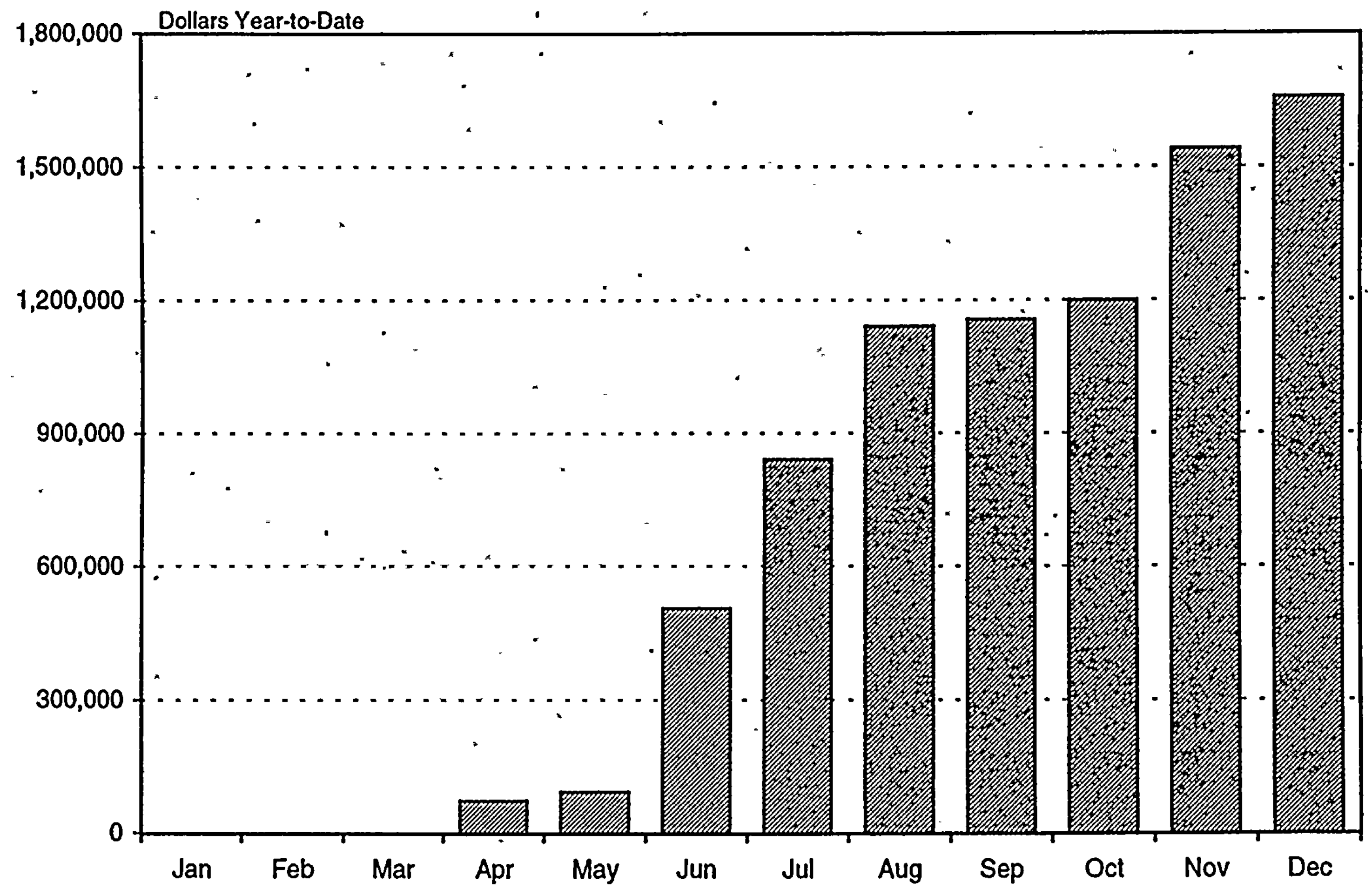
21. Revenue Generation

Definition: Gross revenue (before expenses) from sources other than electric power generation.

Month	Current Month Revenue	Year-To-Date Revenue
Jan	0	0
Feb	0	0
Mar	0	0
Apr	73,000	73,000
May	20,000	93,000
Jun	412,000	505,000
Jul	335,000	840,000
Aug	301,000	1,141,000
Sep	15,000	1,156,000
Oct	42,000	1,198,000
Nov	343,000	1,541,000
Dec	116,000	1,657,000

Data Source: Billy Carlton - 393-6561 Indicator Owner: Bill Simko - 393-5206

21. Revenue Generation



22. 1996 Capacity Factor (MDC Net)

Definition: Capacity (MDC Net) - The gross electrical output, less the normal station service loads, as measured at the output terminals of the turbine generator during the most restrictive seasonal conditions (usually summer).

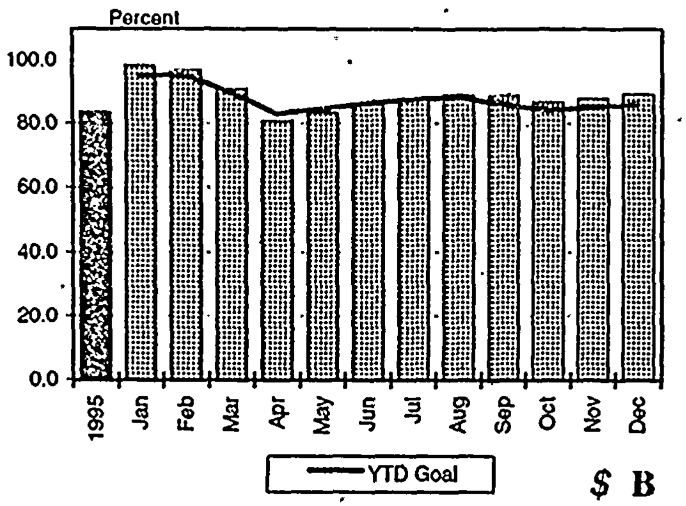
Capacity Factor (MDC Net) % = [Net Generation (mWh) / (Maximum Dependable Capacity x Period Hours)] x 100

	Total Nuclear			Unit 1			Unit 2			Unit 3		
Month	Monthly Actual	YTD Actual	YTD Goal	Monthly Actual	YTD Actual	YTD Goal	Monthly Actual	YTD Actual	YTD Goal	Monthly Actual	YTD Actual	YTD Goal
1995		83.6	77.0		79.3	76.1		84.4	78.7		87.1	76.1
Jan	98.27	98.3	95.1	101.0	101.0	95.09	92.3	92.3	95.09	101.6	101.6	95.09
Feb	95.3	96.8	95.1	85.6	93.5	95.09	102.1	97.0	95.09	98.1	99.9	95.09
Mar	79.0	90.7	89.5	88.7	91.9	95.09	46.9	80.0	78.4	101.3	100.4	95.09
Apr	50.3	80.7	83.0	50.3	81.6	95.09	0.0	60.1	58.9	100.6	100.4	95.09
May	93.5	83.3	84.6	98.0	84.9	95.09	81.7	64.5	63.5	100.7	100.5	95.09
Jun	97.8	85.7	86.3	99.0	87.2	95.09	102.8	70.8	68.7	91.7	99.0	95.09
Jul	100.6	87.9	87.6	99.1	89.0	95.09	101.6	75.3	72.6	101.1	99.3	95.09
Aug	96.3	88.9	88.2	91.7	89.3	94.08	101.4	78.6	75.4	95.9	98.9	95.09
Sep	88.1	88.9	86.0	60.9	86.2	85.38	102.2	81.2	77.6	101.2	99.2	95.09
Oct	68.2	86.8	84.2	0.0	77.4	78.11	102.8	83.4	79.4	101.8	99.4	95.09
Nov	99.5	87.9	85.2	93.3	78.9	79.63	103.1	85.2	80.8	102.1	99.7	95.09
Dec	102.6	89.1	86.0	102.3	80.8	80.94	103.5	86.7	82.0	102.0	99.9	95.09

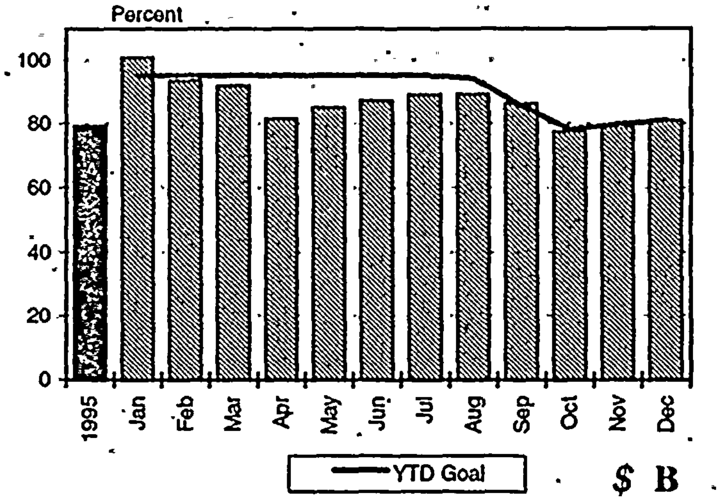
Data Source: Cathy Jury - 250-2445   Indicator Owner: Gregg Overbeck - 393-5148

22. 1996 Capacity Factor (MDC Net)

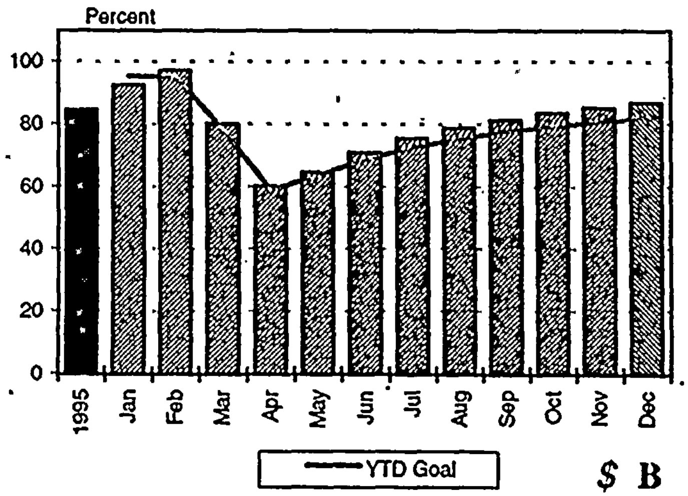
Total Nuclear



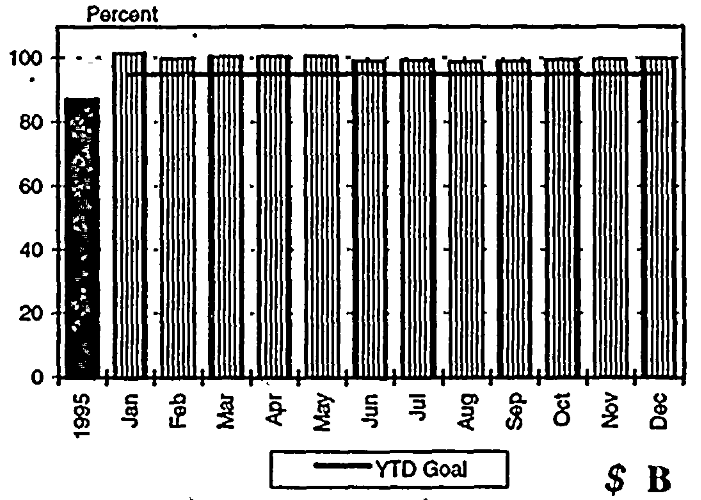
Unit 1



Unit 2



Unit 3



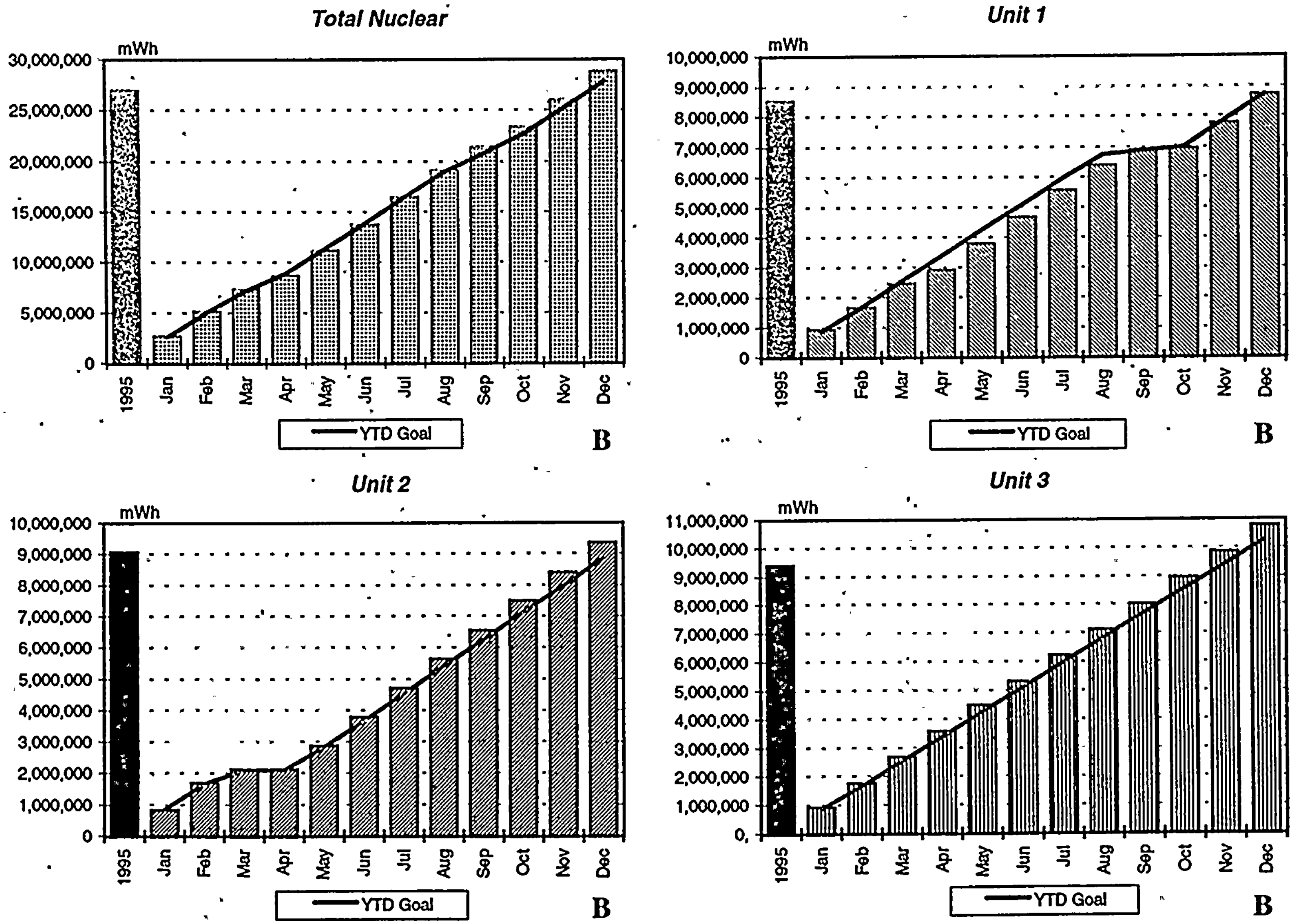
23. 1996 Net Generation

Definition: Net Generation (mWh) - Actual electrical output in megawatt hours generated during the reporting period, minus the normal station service or auxiliary electrical energy utilization.

	Total Nuclear			Unit 1			Unit 2			Unit 3		
Month	Monthly Actual	YTD Actual	YTD Goal	Monthly Actual	YTD Actual	YTD Goal	Monthly Actual	YTD Actual	YTD Goal	Monthly Actual	YTD Actual	YTD Goal
1995		26,984,507	24,707,787		8,526,815	8,143,598		9,070,857	8,420,591		9,386,836	8,143,598
Jan	2,693,494	2,693,494	2,606,318	921,764	921,764	868,065	842,244	842,244	868,065	929,486	929,486	870,188
Feb	2,442,971	5,136,465	5,044,486	730,602	1,652,366	1,680,126	872,231	1,714,475	1,680,126	840,138	1,769,624	1,684,234
Mar	2,164,991	7,301,456	7,202,771	809,547	2,461,913	2,548,191	428,480	2,142,955	2,100,158	926,964	2,696,588	2,554,422
Apr	1,335,256	8,636,712	8,884,951	444,198	2,906,111	3,388,254	0	2,142,955	2,100,158	891,058	3,587,646	3,396,539
May	2,561,409	11,198,121	11,365,259	894,528	3,800,639	4,256,320	745,431	2,888,386	2,842,213	921,450	4,509,096	4,266,726
Jun	2,594,207	13,792,328	13,887,503	874,623	4,675,262	5,096,383	907,823	3,796,209	3,682,277	811,761	5,320,857	5,108,843
Jul	2,757,056	16,549,384	16,493,817	904,252	5,579,514	5,964,444	927,410	4,723,619	4,550,342	925,394	6,246,251	5,979,031
Aug	2,640,523	19,189,907	19,027,335	837,148	6,416,662	6,759,709	925,897	5,649,516	5,418,407	877,478	7,123,729	6,849,219
Sep	2,337,014	21,526,921	20,839,219	537,904	6,954,566	6,889,413	902,550	6,552,066	6,258,470	896,560	8,020,289	7,691,336
Oct	1,869,660	23,396,581	22,703,481	0	6,954,566	7,015,423	938,519	7,490,585	7,126,535	931,141	8,951,430	8,561,523
Nov	2,639,644	26,036,225	25,225,724	824,135	7,778,701	7,855,486	911,137	8,401,722	7,966,598	904,372	9,855,802	9,403,640
Dec	2,812,517	28,848,742	27,832,043	934,296	8,712,997	8,723,551	944,419	9,346,141	8,834,664	933,802	10,789,604	10,273,828

Data Source: Cathy Jury - 250-2445 Indicator Owner: Dave Smith - 393-2656

23. 1996 Net Generation

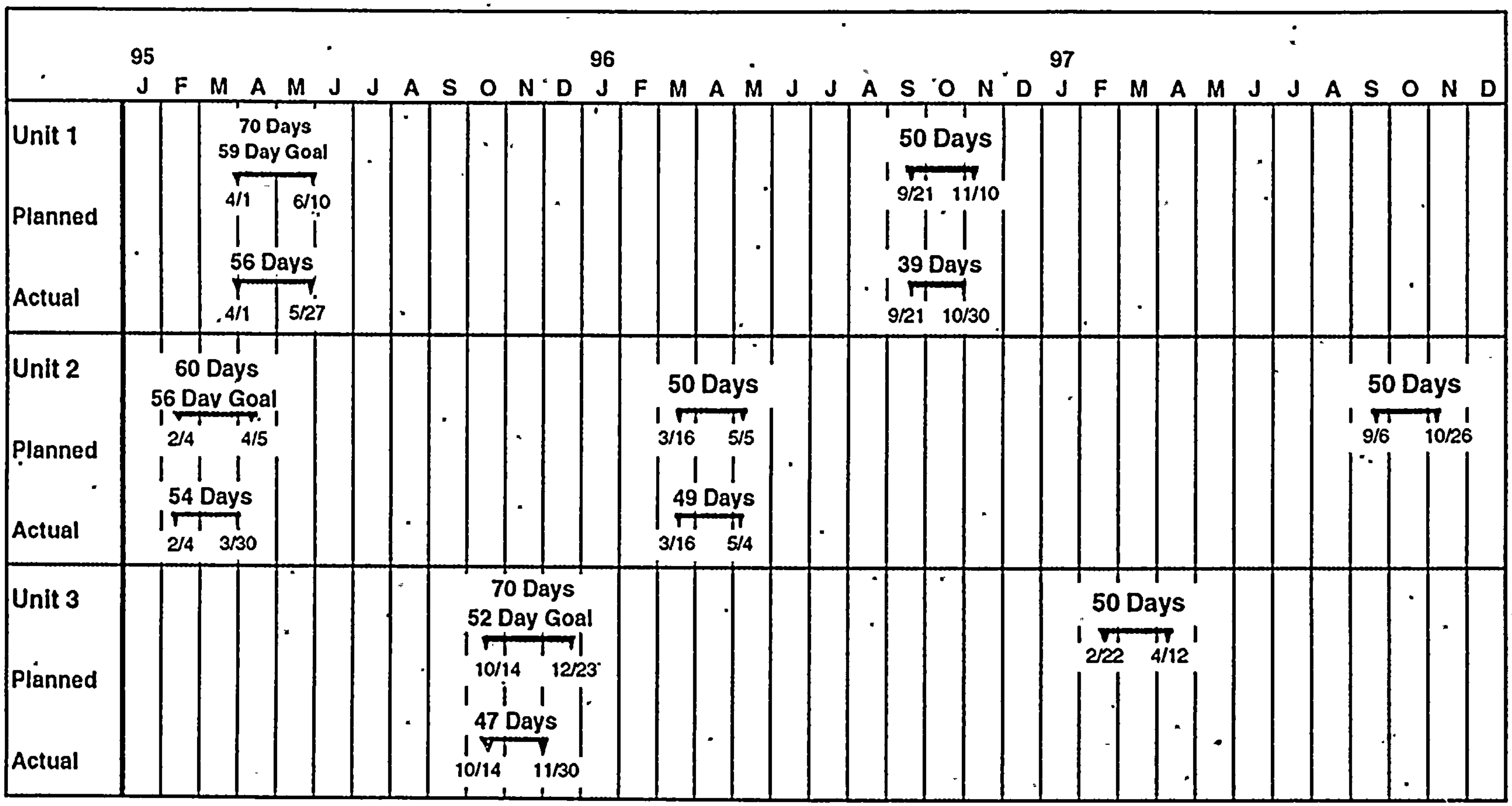


24. Refueling Outage Durations

Breaker to Breaker

Outage Designation	Start Date & Time		End Date & Time		Duration In Days	Goal
U1R1	03-Oct-87	01:55	10-Mar-88	06:43	159.2	90
U2R1	20-Feb-88	02:02	22-Jun-88	20:02	123.8	83
U3R1	08-Mar-89	06:00	30-Dec-89	15:29	297.4	75
U1R2	08-Apr-89	00:00	05-Jul-90	13:21	453.6	94
U2R2	23-Feb-90	23:01	19-Jul-90	00:36	145.1	96
U3R2	16-Mar-91	00:51	03-Jun-91	11:32	79.4	70
U2R3	17-Oct-91	01:03	08-Jan-92	22:18	83.9	70
U1R3	15-Feb-92	02:15	23-May-92	12:43	98.4	70
U3R3	19-Sep-92	00:56	25-Nov-92	12:00	67.5	70
U2R4	19-Mar-93	00:01	31-Aug-93	17:05	165.7	70
U1R4	04-Sep-93	00:01	26-Nov-93	06:40	83.3	70
U3R4	19-Mar-94	00:34	20-Jun-94	03:08	93.1	70
U2R5	04-Feb-95	00:03	30-Mar-95	02:33	54.1	56
U1R5	01-Apr-95	00:06	27-May-95	11:13	56.5	59
U3R5	14-Oct-95	00:51	30-Nov-95	03:24	47.1	52
U2R6	16-Mar-96	00:05	04-May-96	06:27	49.3	50
U1R6	21-Sep-96	00:17	30-Oct-96	23:42	39.9	50

24. Outage Duration



Data Source: Tom Trieckel - 393-1734 Indicator Owner: Terry Radtke - 393-3616

B

25. 1996 Forced Outage Rate

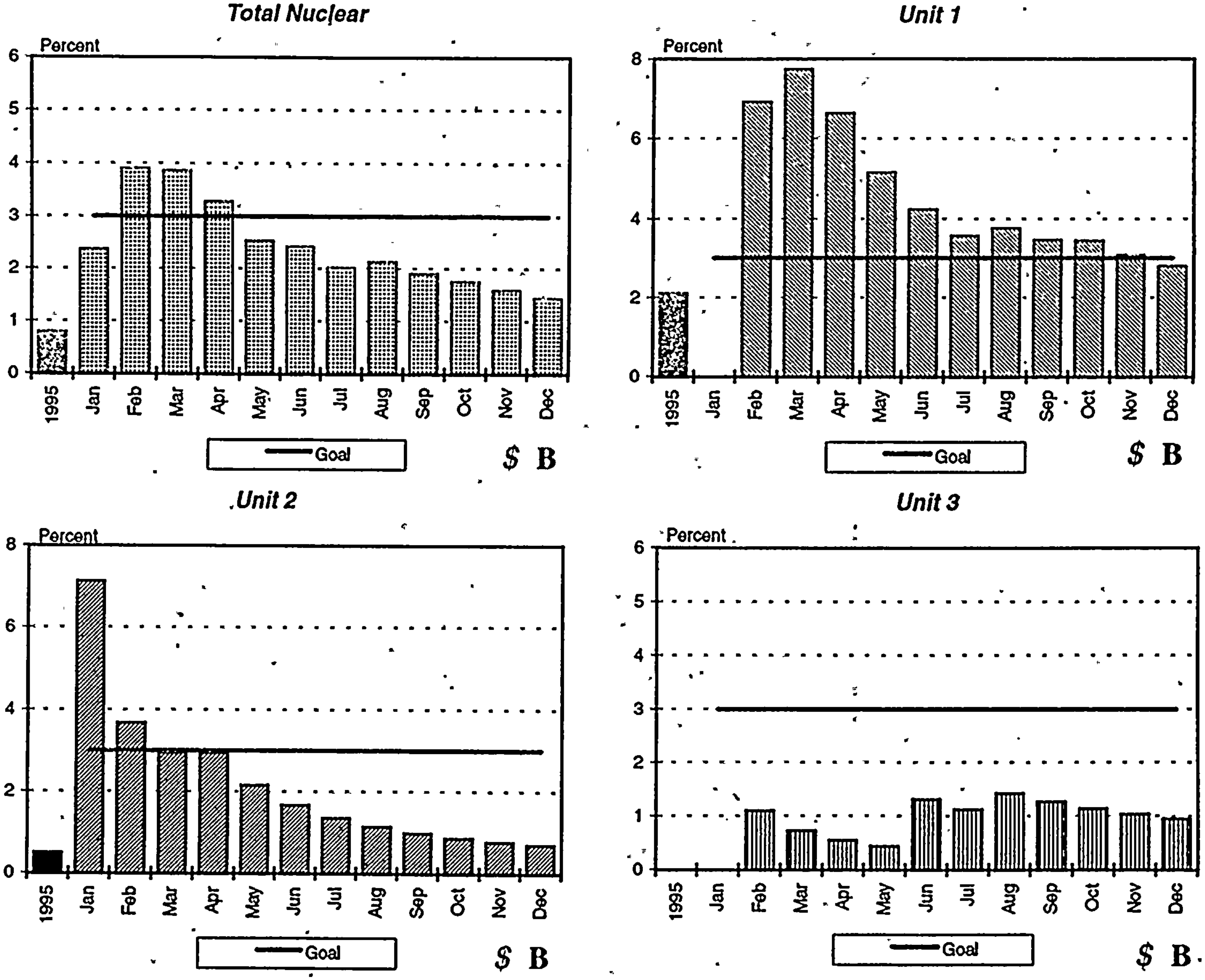
Definition: The average percentage of time each unit was unavailable due to forced events compared to the time planned for electrical generations.

Forced Outage Rate % = [Forced Outage Hours / (Forced Outage Hours + Hours On-Line)] x 100

	Total Nuclear			Unit 1			Unit 2			Unit 3		
Month	Monthly Actual	YTD Actual	Goal	Monthly Actual	YTD Actual	Goal	Monthly Actual	YTD Actual	Goal	Monthly Actual	YTD Actual	Goal
1995		0.8	3.5		2.1	3.5		0.5	3.5		0.0	3.5
Jan	2.4	2.4	3.0	0.0	0.0	3.0	7.1	7.1	3.0	0.0	0.0	3.0
Feb	5.5	3.9	3.0	14.3	6.9	3.0	0.0	3.7	3.0	2.3	1.1	3.0
Mar	3.8	3.9	3.0	9.4	7.8	3.0	0.0	2.9	3.0	0.0	0.7	3.0
Apr	0.0	3.3	3.0	0.0	6.6	3.0	0.0	2.9	3.0	0.0	0.5	3.0
May	0.0	2.5	3.0	0.0	5.2	3.0	0.0	2.1	3.0	0.0	0.4	3.0
Jun	1.9	2.4	3.0	0.0	4.2	3.0	0.0	1.7	3.0	5.8	1.3	3.0
Jul	0.0	2.0	3.0	0.0	3.6	3.0	0.0	1.3	3.0	0.0	1.1	3.0
Aug	2.8	2.1	3.0	5.0	3.8	3.0	0.0	1.1	3.0	3.5	1.4	3.0
Sep	0.0	1.9	3.0	0.0	3.5	3.0	0.0	1.0	3.0	0.0	1.3	3.0
Oct	0.0	1.8	3.0	0.0	3.4	3.0	0.0	0.9	3.0	0.0	1.1	3.0
Nov	0.1	1.6	3.0	0.3	3.1	3.0	0.0	0.8	3.0	0.0	1.0	3.0
Dec	0.0	1.4	3.0	0.0	2.8	3.0	0.0	0.7	3.0	0.0	1.0	3.0

Data Source: Frank Todd - 393-5888 Indicator Owner: Ron Flood - 393-5102

25. 1996 Forced Outage Rate



2/25/96 - RX manually tripped to perform repairs caused by lightning.
8/10/96 - RX tripped due to grid disturbance.

1/22/96 - RX automatically tripped on low steam generator level.

2/25/96 - Turbine trip and RX power cutback to 60% after lightning struck U-1 "C" main transformer.
6/10&25/96 - Manually tripped turbine and reduced RX power to 15% due to EHC problem.
8/10/96 - RX tripped due to grid disturbance.

26. 1996 Thermal Performance

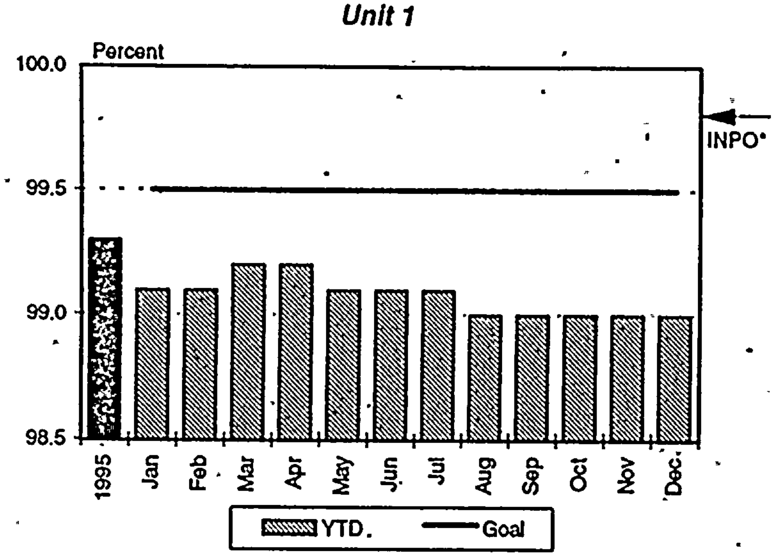
Definition: A measure of unit thermal performance based on the best 24 hour period during the month at a power level above 80%.

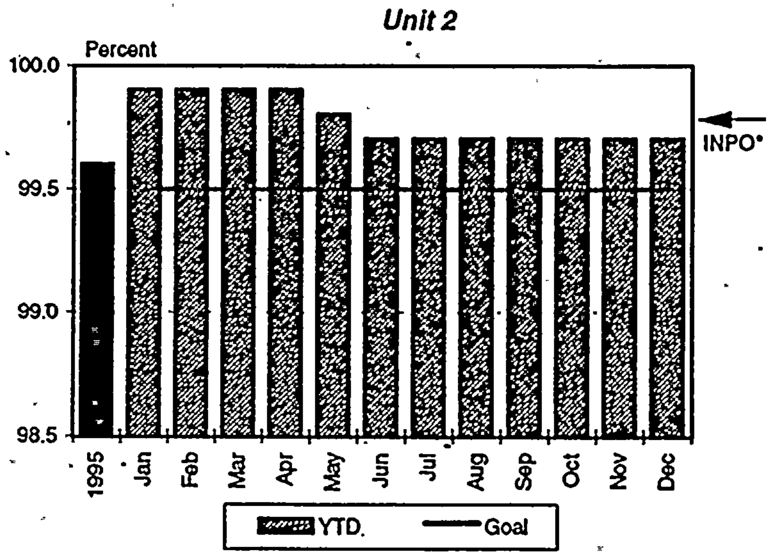
Thermal Performance (%) = (Design Gross Heat Rate / Actual Gross Heat Rate) x 100

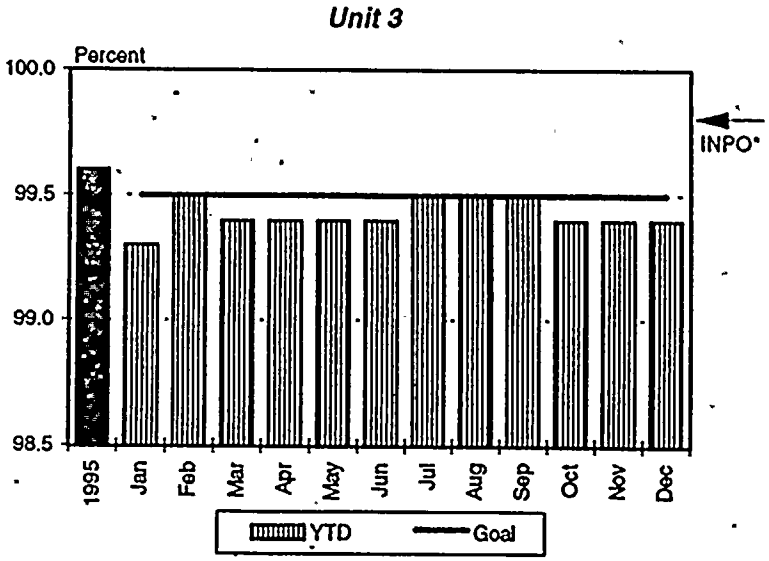
	Unit 1				Unit 2				Unit 3			
Month	Monthly Actual	YTD		Year End Goal	Monthly Actual	YTD		Year End Goal	Monthly Actual	YTD		Year End Goal
1995		99.3	>	99.5		99.6	>	99.5		99.6	>	99.5
Jan	99.1	99.1	>	99.5	99.9	99.9	>	99.5	99.3	99.3	>	99.5
Feb	99.1	99.1	>	99.5	99.9	99.9	>	99.5	99.6	99.5	>	99.5
Mar	99.3	99.2	>	99.5	99.9	99.9	>	99.5	99.4	99.4	>	99.5
Apr	99.2	99.2	>	99.5	0.0	99.9	>	99.5	99.2	99.4	>	99.5
May	99.1	99.1	>	99.5	99.3	99.8	>	99.5	99.4	99.4	>	99.5
Jun	99.0	99.1	>	99.5	99.7	99.7	>	99.5	99.6	99.4	>	99.5
Jul	98.9	99.1	>	99.5	99.8	99.7	>	99.5	99.7	99.5	>	99.5
Aug	98.7	99.0	>	99.5	99.7	99.7	>	99.5	99.5	99.5	>	99.5
Sep	0.0	99.0	>	99.5	99.7	99.7	>	99.5	99.5	99.5	>	99.5
Oct	0.0	99.0	>	99.5	99.7	99.7	>	99.5	99.1	99.4	>	99.5
Nov	99.0	99.0	>	99.5	99.7	99.7	>	99.5	99.0	99.4	>	99.5
Dec	99.2	99.0	>	99.5	99.7	99.7	>	99.5	99.0	99.4	>	99.5

Data Source: Frank Todd - 393-5888   Indicator Owner: Ron Flood - 393-5102

26. 1996 Thermal Performance







* INPO Best Quartile Average = 99.8% per Unit

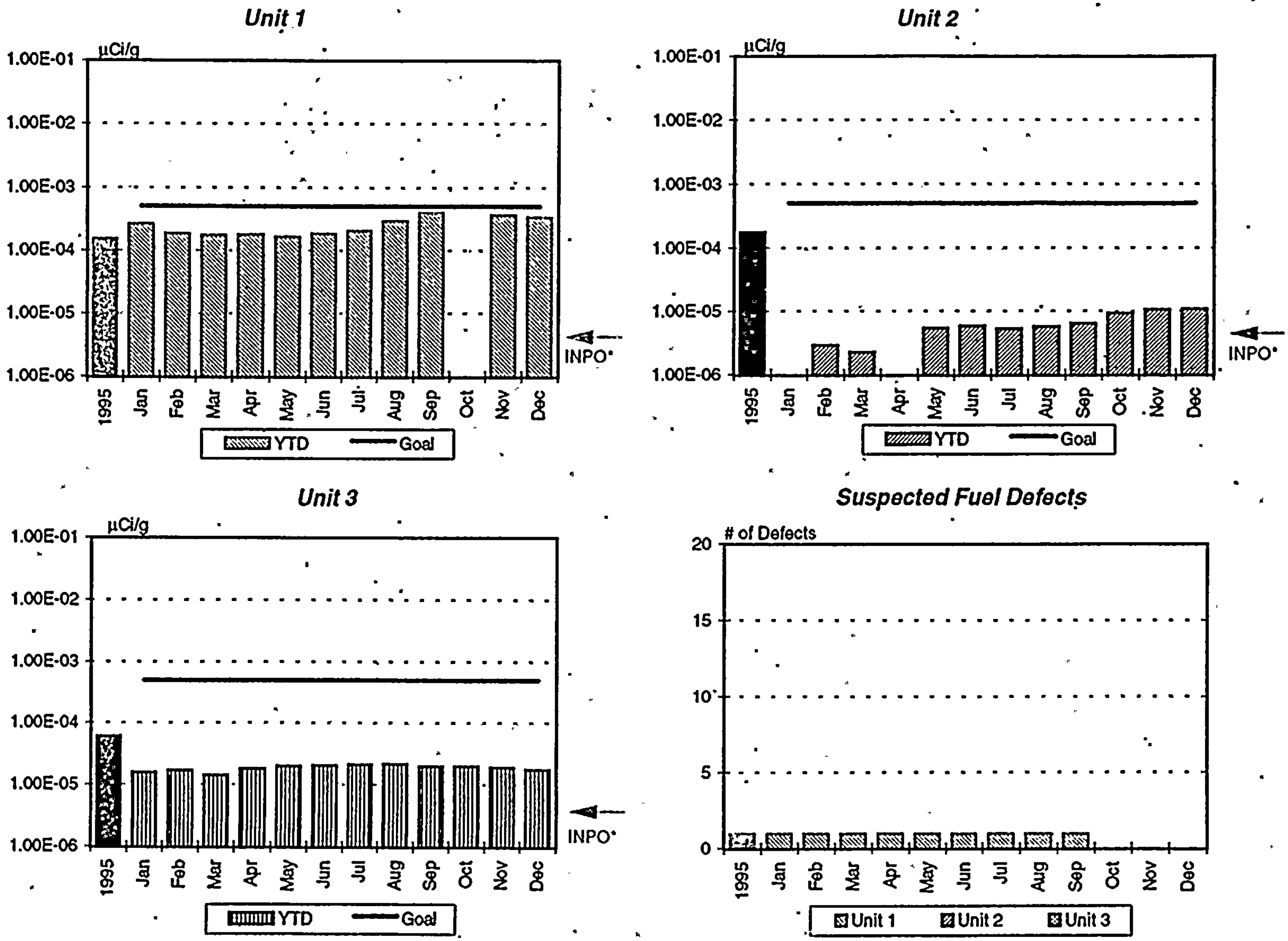
27. 1996 Fuel Reliability Index

Definition: The average monthly value of Iodine-131 activity in the reactor coolant corrected for tramp Iodine-131. Fuel reliability data is derived from radiochemistry data obtained at steady state conditions excluding any data obtained within an appropriate waiting period following significant reactor power transients.

	Unit 1				Unit 2				Unit 3			
Month	Fuel Defects	Monthly Actual	YTD Actual	Year End Goal	Fuel Defects	Monthly Actual	YTD Actual	Year End Goal	Fuel Defects	Monthly Actual	YTD Actual	Year End Goal
1995	1		1.55E-04	< 5.00E-04	0		1.75E-04	< 5.00E-03	0		6.17E-05	< 5.00E-04
Jan	1	2.64E-04	2.64E-04	< 5.00E-04	0	1.00E-06	1.00E-06	< 5.00E-04	0	1.58E-05	1.58E-05	< 5.00E-04
Feb	1	1.12E-04	1.88E-04	< 5.00E-04	0	4.90E-06	2.95E-06	< 5.00E-04	0	9.80E-06	1.72E-05	< 5.00E-04
Mar	1	1.55E-04	1.77E-04	< 5.00E-04	0	1.00E-06	2.30E-06	< 5.00E-04	0	8.90E-06	1.44E-05	< 5.00E-04
Apr	1	1.96E-04	1.82E-04	< 5.00E-04				< 5.00E-04	0	2.91E-05	1.81E-05	< 5.00E-04
May	1	1.14E-04	1.68E-04	< 5.00E-04	0	1.49E-05	5.40E-06	< 5.00E-04	0	2.76E-05	2.00E-05	< 5.00E-04
Jun	1	2.97E-04	1.89E-04	< 5.00E-04	0	8.00E-06	5.92E-06	< 5.00E-04	0	2.29E-05	2.05E-05	< 5.00E-04
Jul	1	3.00E-04	2.05E-04	< 5.00E-04	0	1.50E-06	5.29E-06	< 5.00E-04	0	2.57E-05	2.12E-05	< 5.00E-04
Aug	1	9.57E-04	2.99E-04	< 5.00E-04	0	6.00E-06	5.78E-06	< 5.00E-04	0	2.60E-05	2.20E-05	< 5.00E-04
Sep	1	1.28E-03	4.08E-04	< 5.00E-04	0	1.10E-05	6.43E-06	< 5.00E-04	0	1.54E-05	2.01E-05	< 5.00E-04
Oct				< 5.00E-04	0	3.20E-05	9.27E-06	< 5.00E-04	0	2.01E-05	2.01E-05	< 5.00E-04
Nov	0	7.02E-06	3.68E-04	< 5.00E-04	0	2.40E-05	1.07E-05	< 5.00E-04	0	1.15E-05	1.93E-05	< 5.00E-04
Dec	0	1.19E-04	3.45E-04	< 5.00E-04	0	1.17E-05	1.08E-05	< 5.00E-04	0	1.00E-06	1.78E-05	< 5.00E-04

Data Source: Kevin Whittaker - 393-5896 Indicator Owner: Paul Crawley - 393-6360

27. 1996 Fuel Reliability Index



*INPO Best Quartile = 5.00E-06

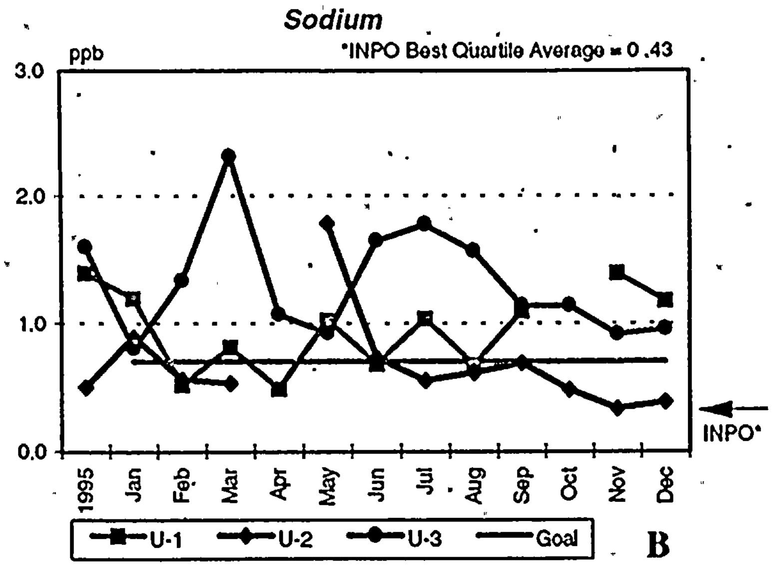
28. 1996 Secondary System Chemistry

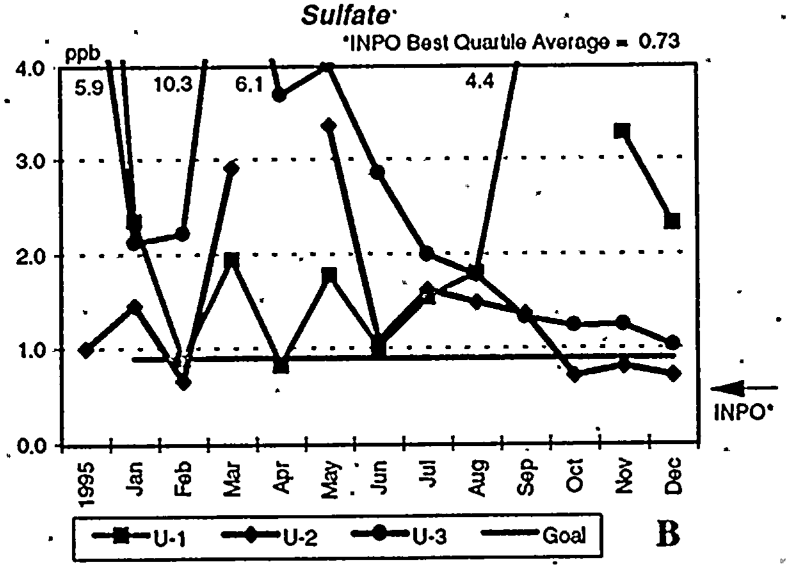
Definition: Sodium: Monthly average Sodium Concentration (ppb) from the downcomer.
Sulfate: Monthly average Sulfate Concentration (ppb) from the downcomer.
Iron : Monthly average Iron Concentration (ppb) in the feedwater.
Molar Ratio: Monthly Average Molar Ratio of Sodium/Chloride:

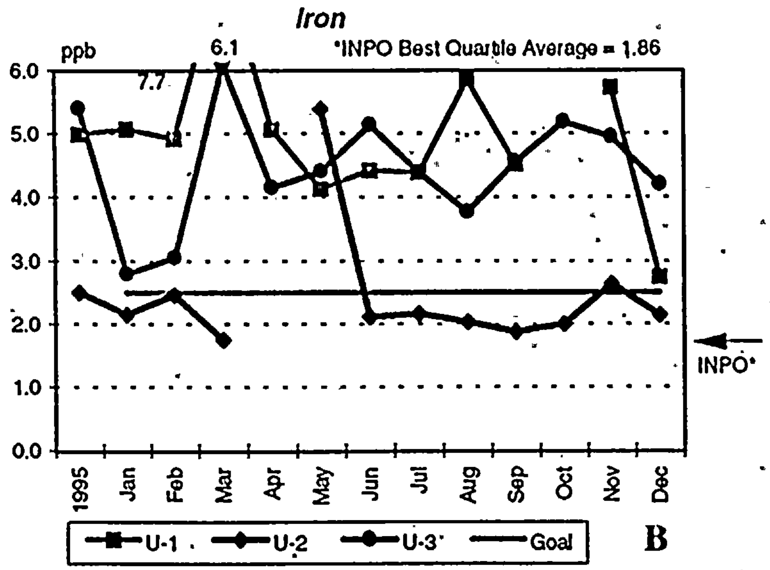
	Sodium				Sulfate				Iron				Molar Ratio			
Month	U-1	U-2	U-3	Goal	U-1	U-2	U-3	Goal	U-1	U-2	U-3	Goal	U-1	U-2	U-3	Target
1995	1.4	0.5	1.6	≤ 0.8	10.3	1	5.9	≤ 1	5.0	2.5	5.4	≤ 2	0.4	0.3	0.8	0.2 - 0.7
Jan	1.2	0.9	0.8	≤ 0.7	2.4	1.5	2.1	≤ 0.9	5.1	2.2	2.8	≤ 2.5	0.4	0.3	0.4	0.2 - 0.7
Feb	0.5	0.6	1.3	≤ 0.7	0.9	0.7	2.2	≤ 0.9	4.9	2.5	3.1	≤ 2.5	0.3	0.3	0.5	0.2 - 0.7
Mar	0.8	0.5	2.3	≤ 0.7	2.0	2.9	6.1	≤ 0.9	7.7	1.8	6.1	≤ 2.5	0.5	0.3	0.5	0.2 - 0.7
Apr	0.5		1.1	≤ 0.7	0.8		3.7	≤ 0.9	5.1		4.2	≤ 2.5	0.3		0.4	0.2 - 0.7
May	1.0	1.8	0.9	≤ 0.7	1.8	3.4	4.0	≤ 0.9	4.2	5.4	4.4	≤ 2.5	0.6	0.5	0.4	0.2 - 0.7
Jun	0.7	0.7	1.7	≤ 0.7	1.0	1.1	2.9	≤ 0.9	4.4	2.1	5.1	≤ 2.5	0.5	0.4	0.5	0.2 - 0.7
Jul	1.0	0.6	1.8	≤ 0.7	1.6	1.6	2.0	≤ 0.9	4.4	2.2	4.4	≤ 2.5	0.3	0.4	0.4	0.2 - 0.7
Aug	0.7	0.6	1.6	≤ 0.7	1.8	1.5	1.8	≤ 0.9	5.9	2.0	3.8	≤ 2.5	0.3	0.4	0.4	0.2 - 0.7
Sep	1.1	0.7	1.1	≤ 0.7	4.4	1.4	1.3	≤ 0.9	4.5	1.9	4.6	≤ 2.5	0.5	0.4	0.4	0.2 - 0.7
Oct		0.5	1.1	≤ 0.7		0.7	1.2	≤ 0.9		2.0	5.2	≤ 2.5		0.4	0.3	0.2 - 0.7
Nov	1.4	0.3	0.9	≤ 0.7	3.3	0.8	1.3	≤ 0.9	5.7	2.6	5.0	≤ 2.5	0.7	0.4	0.4	0.2 - 0.7
Dec	1.2	0.4	1.0	≤ 0.7	2.3	0.7	1.0	≤ 0.9	2.7	2.1	4.2	≤ 2.5	0.6	0.4	0.3	0.2 - 0.7

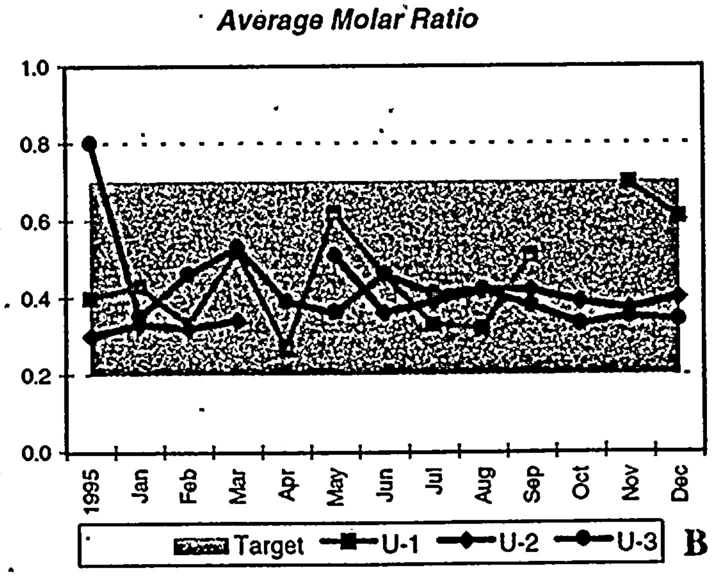
Data Source: Joe King - 393-1075 Indicator Owner: John Scott - 393-2780

28. 1996 Secondary System Chemistry









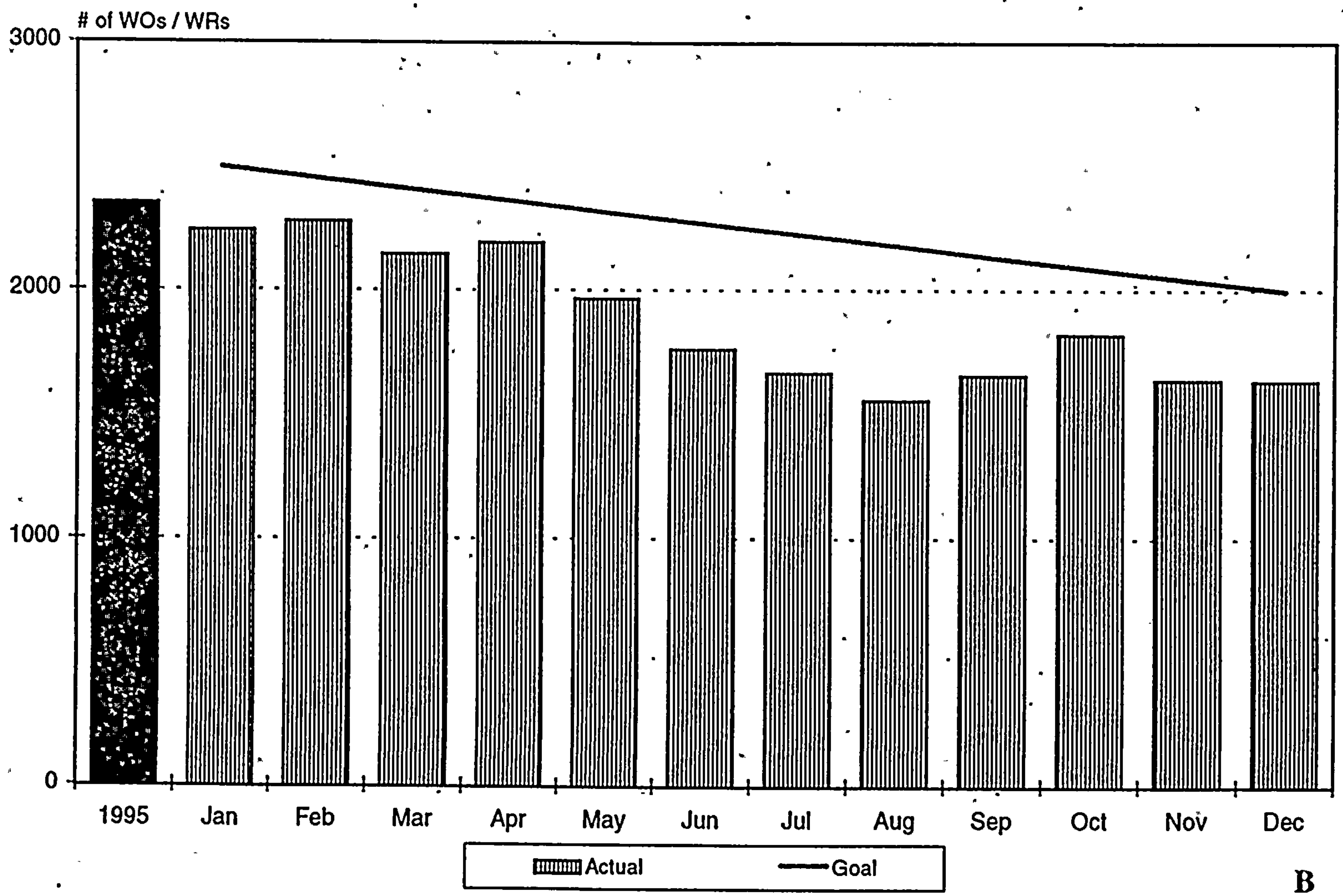
29. 1996 Corrective Maintenance To Work

Definition: Corrective Maintenance (work orders and work requests) excluding outage, plant modifications, and non-plant related work.

	Electrical		Mechanical		I & C		Valves		OCS		Services		Total	
Month	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal
1995	481	457	935	795	263	205	82	32	51	117	541	893	2353	2500
Jan	411	457	949	795	229	205	72	32	54	117	529	893	2244	2500
Feb	408	449	1019	781	224	201	82	31	78	115	468	877	2279	2455
Mar	388	441	941	766	216	198	60	31	66	113	476	861	2147	2409
Apr	367	432	978	752	212	194	77	30	64	111	495	844	2193	2364
May	310	424	829	737	181	190	79	30	56	108	513	828	1968	2318
Jun	303	416	654	723	156	186	85	29	56	106	509	812	1763	2273
Jul	279	407	538	708	172	183	101	29	58	104	518	796	1666	2227
Aug	303	399	509	694	170	179	71	28	68	102	436	779	1557	2182
Sep	353	391	556	679	177	175	72	27	78	100	422	763	1658	2136
Oct	389	382	610	665	214	171	60	27	88	98	462	747	1823	2091
Nov	372	374	485	650	182	168	72	26	62	96	467	731	1640	2045
Dec	379	366	479	636	173	164	53	26	58	94	492	714	1634	2000

Data Source: Steve Ryan - 393-6702 Indicator Owner: Dave Mauldin - 393-2518

29. 1996 Corrective Maintenance To Work



B

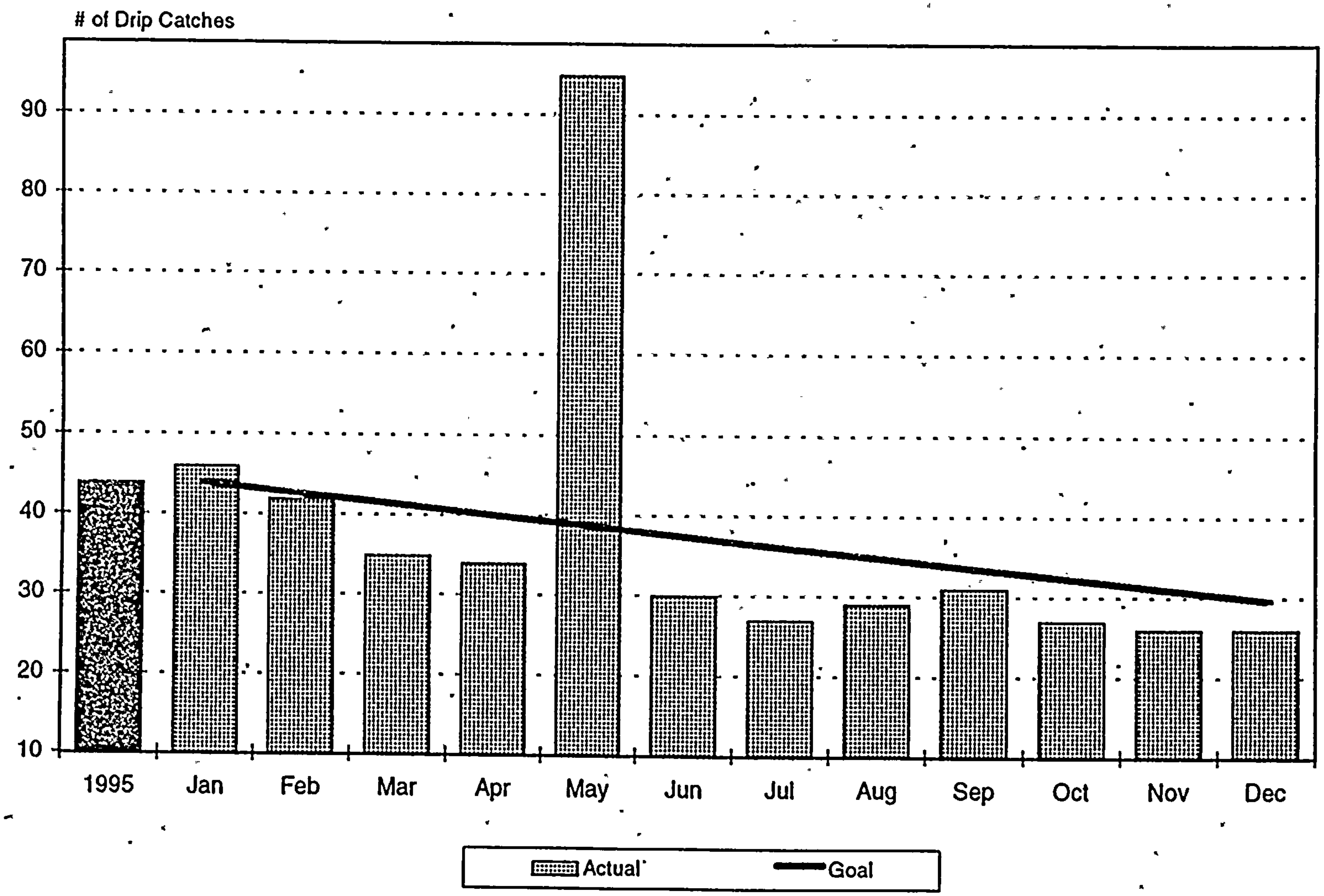
30. 1996 Drip Catches

Definition: The number of active leak drip catches and encapsulation devices installed in the RCA and Turbine Building that are non-outage repairable.

	Site Total		Unit 1		Unit 2		Unit 3	
Month	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal
1995	44	< 45	15	< 15	18	< 15	11	< 15
Jan	46	< 44	10	<	25	<	11	<
Feb	42	< 43	12	<	18	<	11	<
Mar	35	< 41	11	<	16	<	8	<
Apr	34	< 40	8	<	16	<	10	<
May	95	< 39	37	<	25	<	33	<
Jun	30	< 38	7	<	12	<	11	<
Jul	27	< 36	3	<	13	<	11	<
Aug	29	< 35	5	<	11	<	13	<
Sep	31	< 34	9	<	11	<	11	<
Oct	27	< 32	9	<	9	<	9	<
Nov	26	< 31	9	<	7	<	10	<
Dec	26	< 30	9	<	7	<	10	<

Data Source: John Sherman - 393-1359 Indicator Owner: Dave Mauldin - 393-2518

30. 1996 Drip Catches



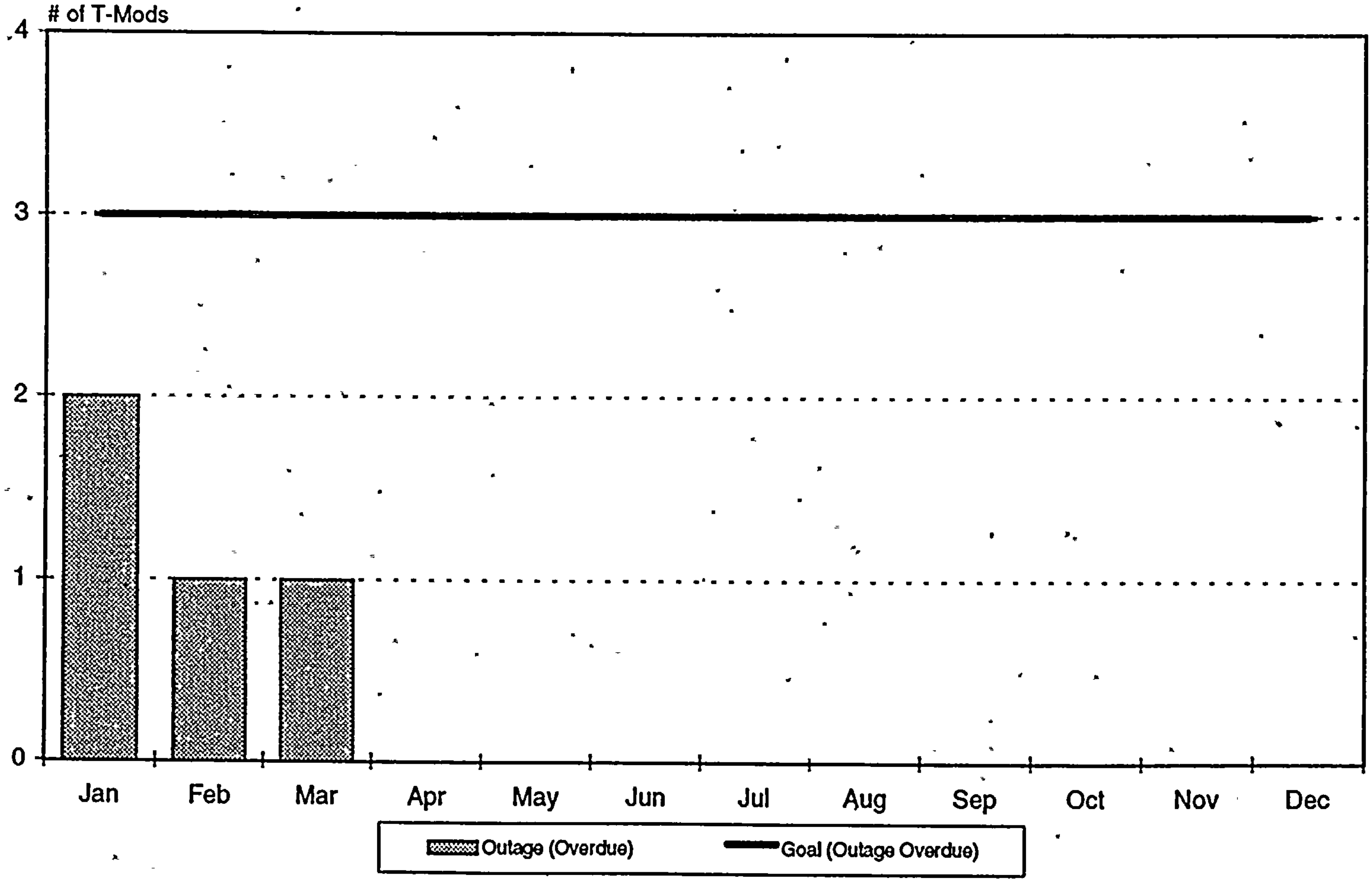
31. 1996 Temporary Modifications

Outage = Requires Unit Outage to work
Overdue = Goal was to remove during last outage
New = Initiated after the last outage

Month	Outage (New)	Outage (Overdue)	Goal (Outage Overdue)
Jan	8	2	3
Feb	11	1	3
Mar	10	1	3
Apr	4	0	3
May	8	0	3
Jun	10	0	3
Jul	10	0	3
Aug	10	0	3
Sep	10	0	3
Oct	6	0	3
Nov	5	0	3
Dec	5	0	3

Data Source: John Dennis - 393-6311 Indicator Owner: David M. Smith - 393-2884

31. 1996 Temporary Modifications



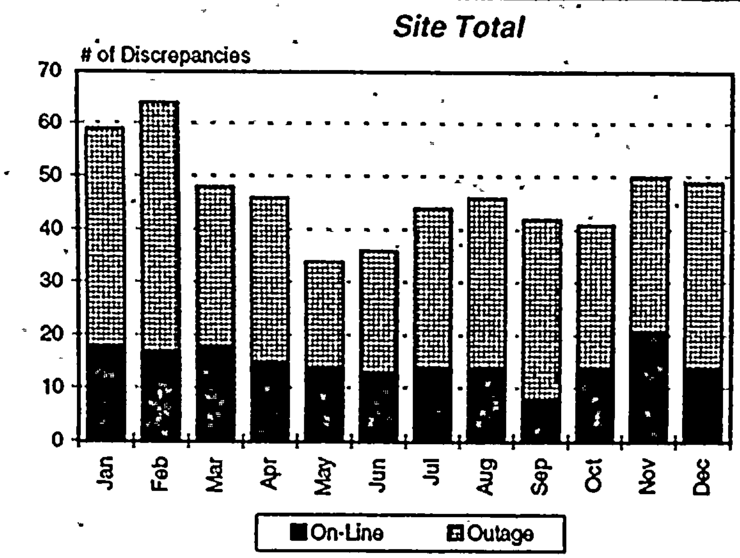
32. 1996 Control Room Discrepancies

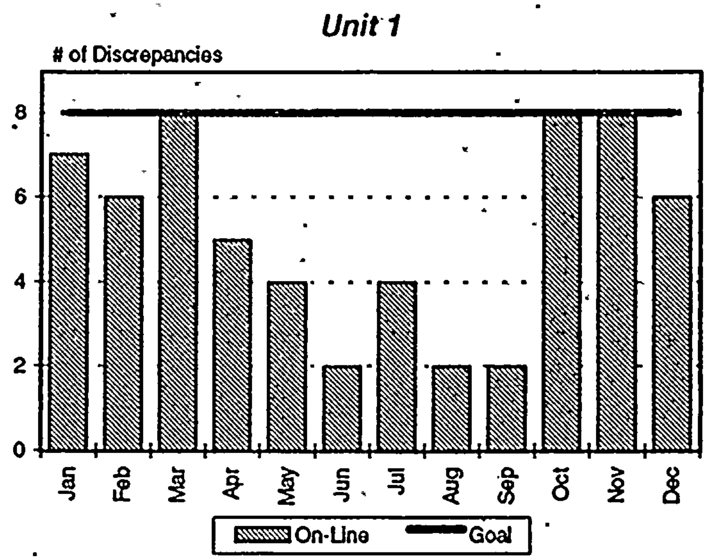
Definition: Control Board Equipment not functioning as designed.

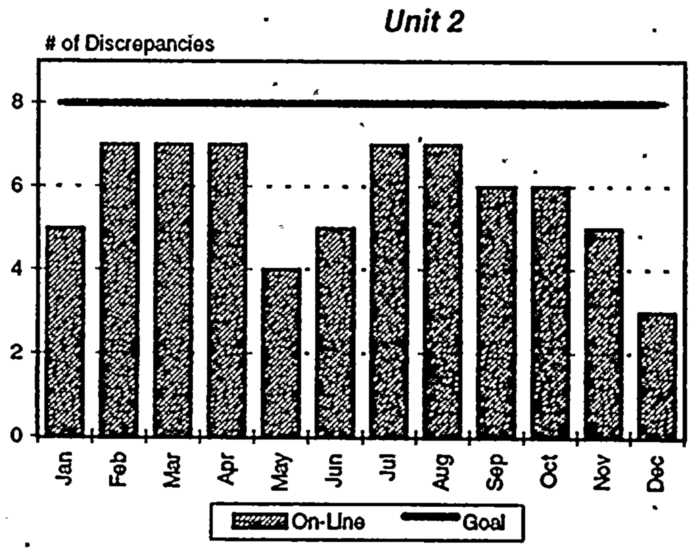
	Site Total		Unit 1		Unit 2		Unit 3	
Month	On-Line	Outage	On-Line	Goal	On-Line	Goal	On-Line	Goal
Jan	18	41	7	8	5	8	6	8
Feb	17	47	6	8	7	8	4	8
Mar	18	30	8	8	7	8	3	8
Apr	15	31	5	8	7	8	3	8
May	14	20	4	8	4	8	6	8
Jun	13	23	2	8	5	8	6	8
Jul	14	30	4	8	7	8	3	8
Aug	14	32	2	8	7	8	5	8
Sep	8	34	2	8	6	8	0	8
Oct	14	27	8	8	6	8	0	8
Nov	21	29	8	8	5	8	6	8
Dec	14	35	6	8	3	8	5	8

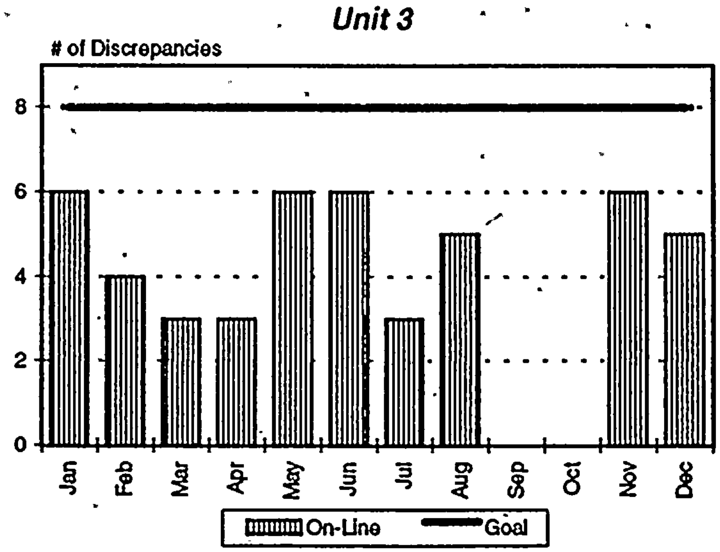
Data Source: John Dennis - 393-6311 Indicator Owner: Dave Smith - 393-2656

32. 1996 Control Room Discrepancies









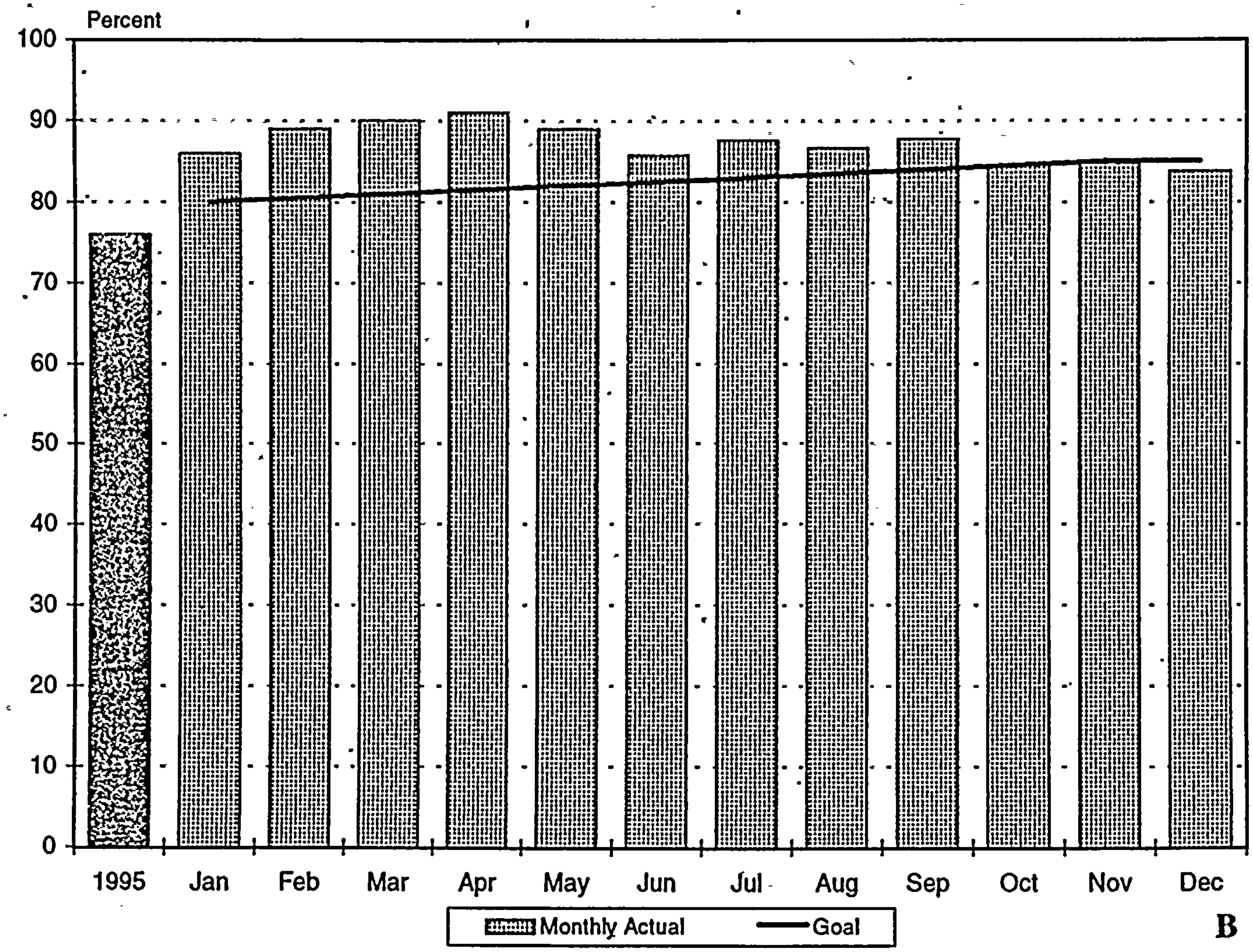
33. 1996 Schedule Adherence

Definition: The percentage of scheduled tasks that were completed within the target week for Units not in an outage.

	Site Average		
Month	Monthly Actual	YTD Average	Goal
1995		76	80
Jan	86	86	80
Feb	89	88	81
Mar	90	88	81
Apr	91	89	82
May	89	89	82
Jun	86	88	83
Jul	88	88	83
Aug	87	88	84
Sep	88	88	84
Oct	85	88	85
Nov	85	87	85
Dec	84	87	85

Data Source: John J. Scott - 393-2600 Indicator Owner: Terry L. Radtke - 393-3616

33. 1996 Schedule Adherence



34. 1996 Low-Level Solid Radwaste

Definition: The total volume of low-level solid radioactive waste that has been processed and is in final form ready for disposal during the month. In addition to solid waste volume in final form ready for disposal, it includes the estimated final volume of waste generated in the month but not in final form for shipment.

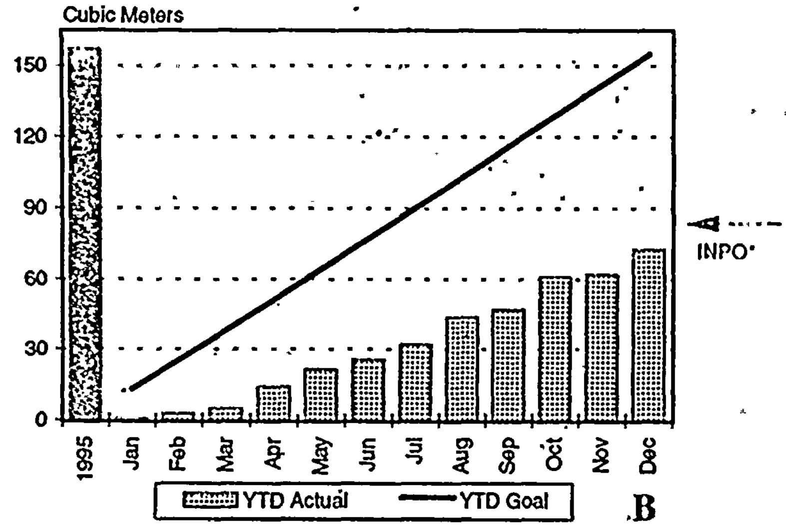
The INPO Best Quartile Average = 89 Cubic Meters per 3 Unit Station; 28 Cubic Meters per Unit (3 year rolling avg).

	Site Total			Unit 1			Unit 2			Unit 3		
Month	Monthly Actual	YTD Actual	YTD Goal	Monthly Actual	YTD Actual	YTD Goal	Monthly Actual	YTD Actual	YTD Goal	Monthly Actual	YTD Actual	YTD Goal
1995		157.2	266.0		52.9	85.0		71.4	115.0		32.9	66.0
Jan	1.2	1.2	13.3	0.3	0.3	5.0	0.3	0.3	5.0	0.6	0.6	3.3
Feb	1.7	2.9	25.8	0.4	0.7	9.3	0.1	0.4	9.8	1.2	1.8	6.7
Mar	2.1	5.0	38.8	0.2	1.0	14.0	1.3	2.0	14.8	0.6	2.4	10.0
Apr	9.0	14.0	51.7	0.8	1.8	18.7	8.1	10.1	19.7	0.1	2.5	13.3
May	7.6	21.6	64.7	7.1	8.9	23.4	0.3	10.4	24.6	0.2	2.7	16.7
Jun	4.2	25.8	77.5	0.3	9.2	28.0	3.8	14.2	29.5	0.1	2.8	20.0
Jul	6.3	32.1	90.4	1.5	10.7	32.7	4.8	19.0	34.4	0.0	2.8	23.3
Aug	11.6	43.7	103.4	7.7	18.4	37.4	3.8	22.8	39.4	0.1	2.9	26.6
Sep	3.3	47.0	116.3	0.8	19.2	42.0	2.3	25.1	44.3	0.2	3.1	30.0
Oct	14.0	61.0	129.2	10.0	29.2	46.7	0.2	25.3	49.2	3.8	6.9	33.3
Nov	1.1	62.1	142.1	0.8	30.0	51.4	0.1	25.4	54.1	0.2	7.1	36.6
Dec	10.8	72.9	155.0	0.8	30.8	56.0	0.2	25.6	59.0	9.8	16.9	40.0

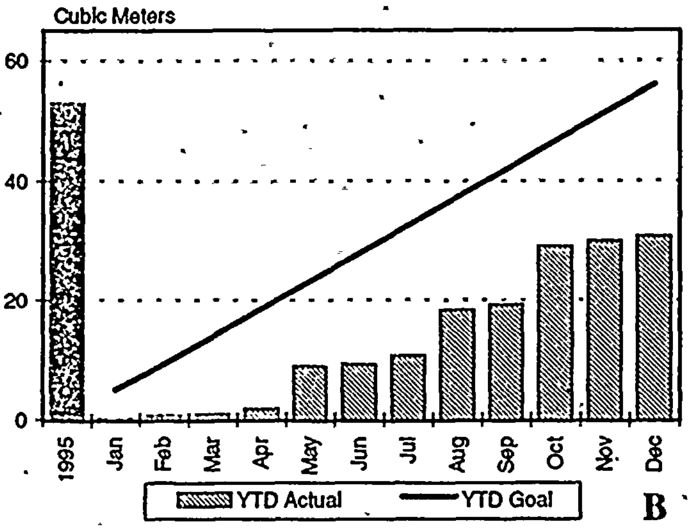
Data Source: Varcel Huntsman - 393-2670 Indicator Owner: Mike Shea - 393-2860

34. 1996 Low-Level Solid Radwaste

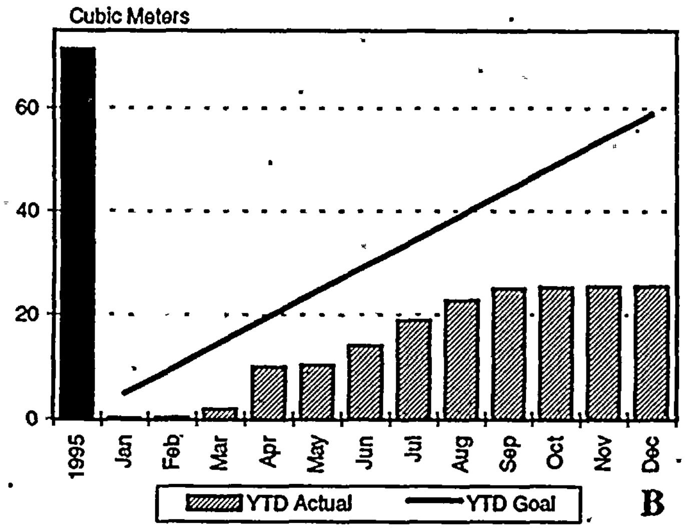
Site Total



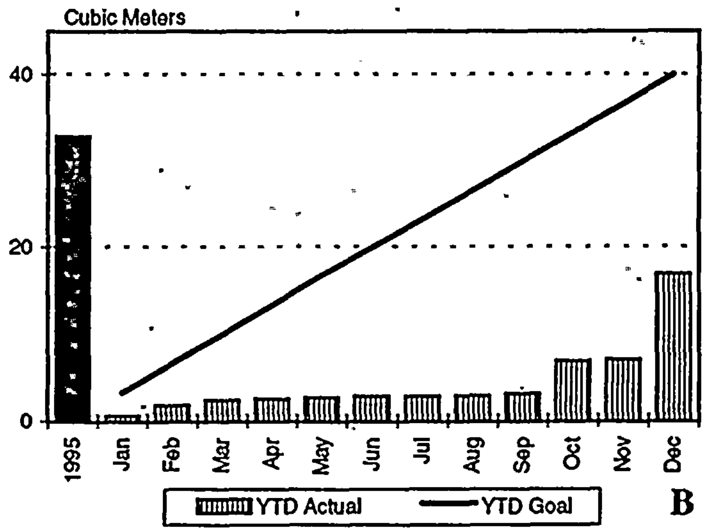
Unit 1



Unit 2



Unit 3



*The INPO Best Quartile Average = 84 Cubic Meters per 3 Unit Station; 28 Cubic Meters per Unit (3 year rolling avg).

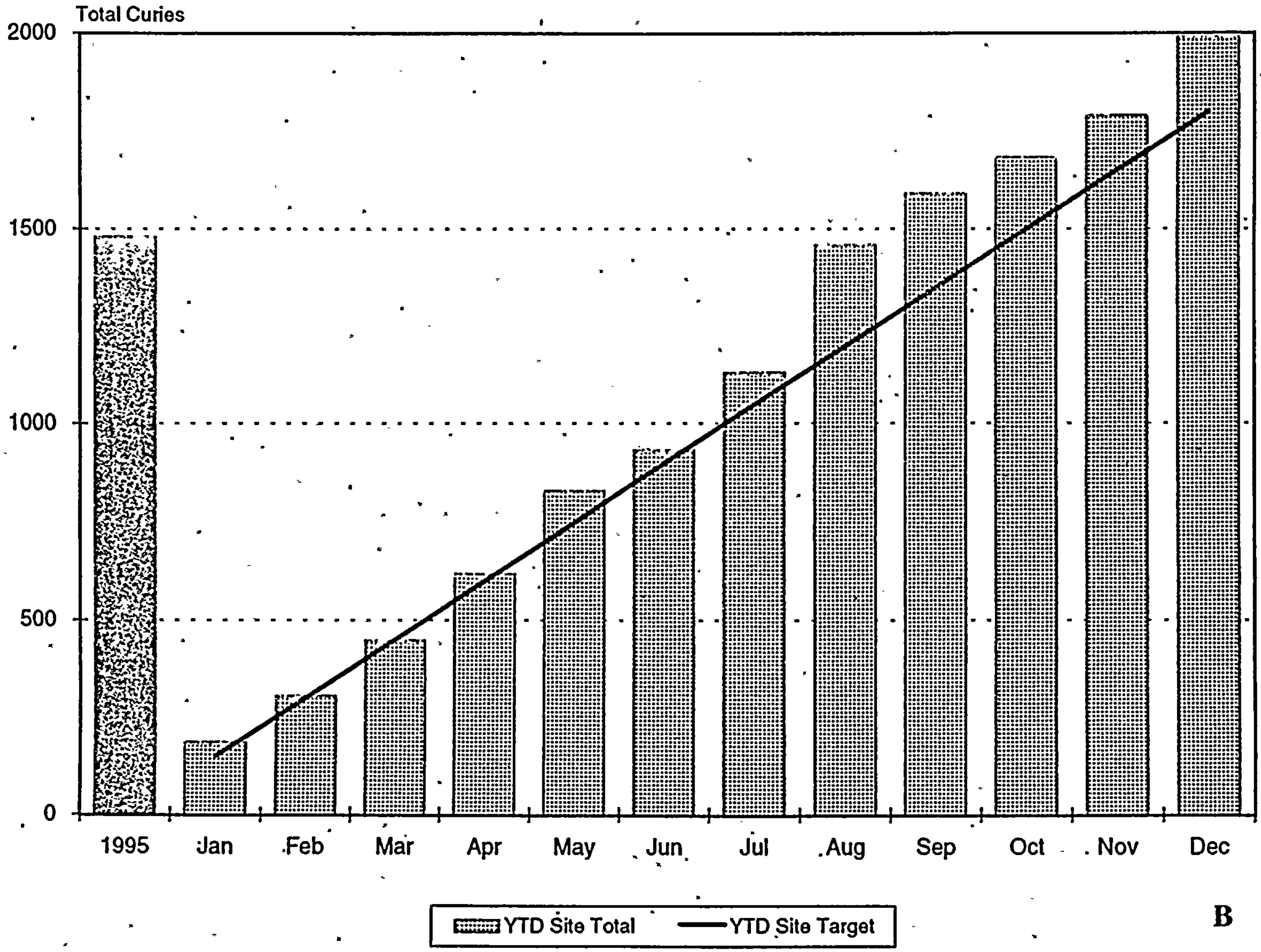
35. 1996 Radioactive Effluents - Gaseous

Definition: Includes Particulate, Iodine, Noble Gas and Tritium.

	Total Curies Released				
Month	YTD Site Total	YTD Site Target	U-1 YTD	U-2 YTD	U-3 YTD
1995	1479	2208.0			
Jan	185.1	150.0	57.3	96.9	30.9
Feb	305.4	300.0	140.0	133.0	32.4
Mar	448.5	450.0	232.0	184.0	32.5
Apr	617.0	600.0	350.7	232.0	34.3
May	828.8	750.0	486.0	265.0	77.8
Jun	933.0	900.0	487.0	299.0	147.0
Jul	1131.0	1050.0	514.0	329.0	288.0
Aug	1458.0	1200.0	665.0	334.0	459.0
Sep	1590.0	1350.0	790.0	334.0	466.0
Oct	1683.0	1500.0	817.0	398.0	468.0
Nov	1791.0	1650.0	840.0	403.0	548.0
Dec	1991.0	1800.0	844.0	404.0	743.0

Data Source: Randy Sorensen - 393-6398 Indicator Owner: John A. Scott - 393-2780

35. 1996 Radioactive Effluents - Gaseous



B

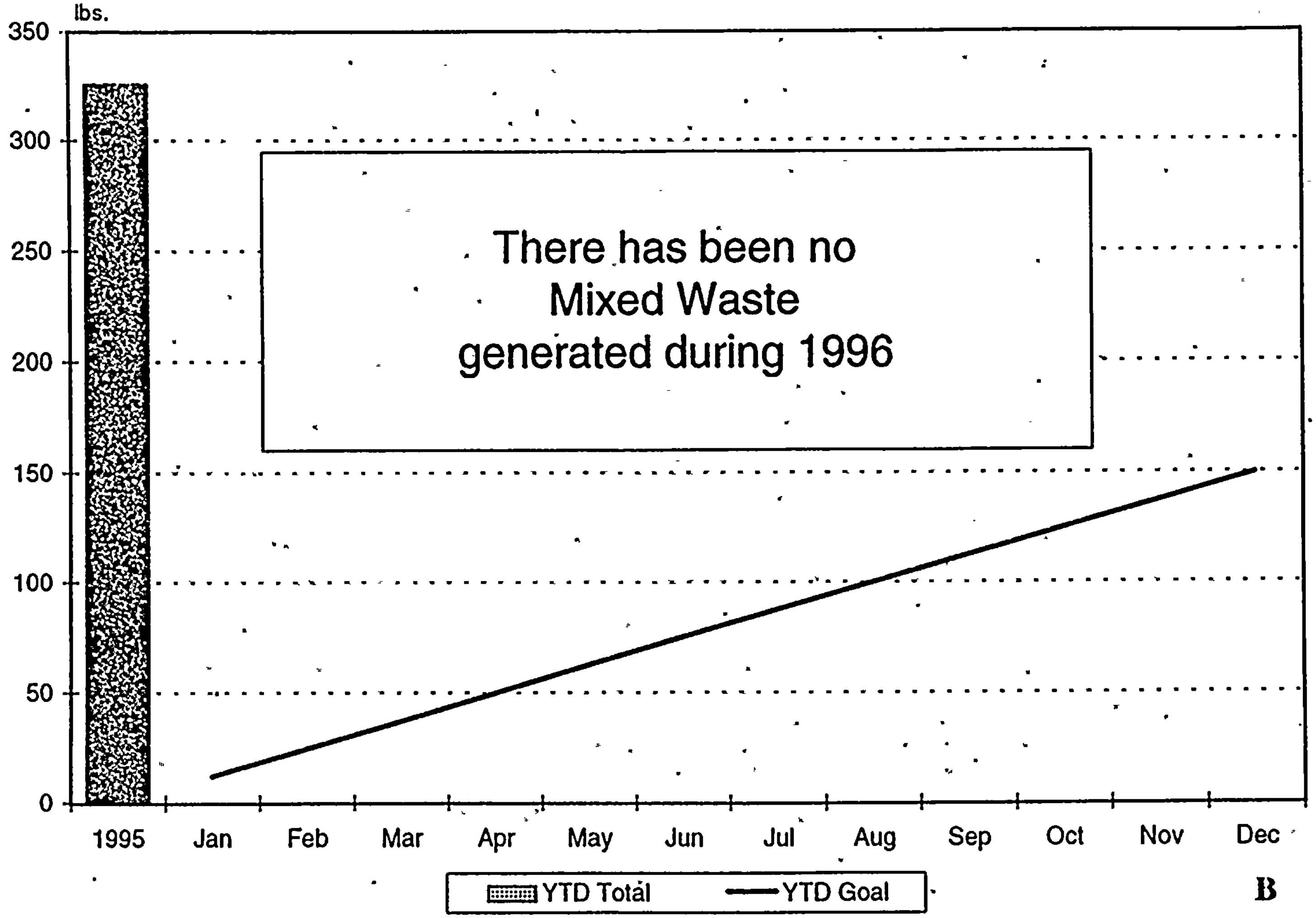
36. 1996 Mixed Waste

Definition: Waste generated in 1996 that is both radiologically and chemically hazardous.

Month	Site			Refuel/Mech Maintenance		Maintenance Services		Other Organizations	
	Monthly Actual	YTD Total	YTD Goal	Monthly Actual	YTD	Monthly Actual	YTD	Monthly Actual	YTD
1995		326	1300		307		19		0
Jan	0	0	13	0	0	0	0	0	0
Feb	0	0	25	0	0	0	0	0	0
Mar	0	0	38	0	0	0	0	0	0
Apr	0	0	50	0	0	0	0	0	0
May	0	0	63	0	0	0	0	0	0
Jun	0	0	75	0	0	0	0	0	0
Jul	0	0	88	0	0	0	0	0	0
Aug	0	0	100	0	0	0	0	0	0
Sep	0	0	113	0	0	0	0	0	0
Oct	0	0	125	0	0	0	0	0	0
Nov	0	0	138	0	0	0	0	0	0
Dec	0	0	150	0	0	0	0	0	0

Data Source: Varcel Huntsman - 393-2670 Indicator Owner: Angie Krainik - 393-5421

36. 1996 Mixed Waste



B

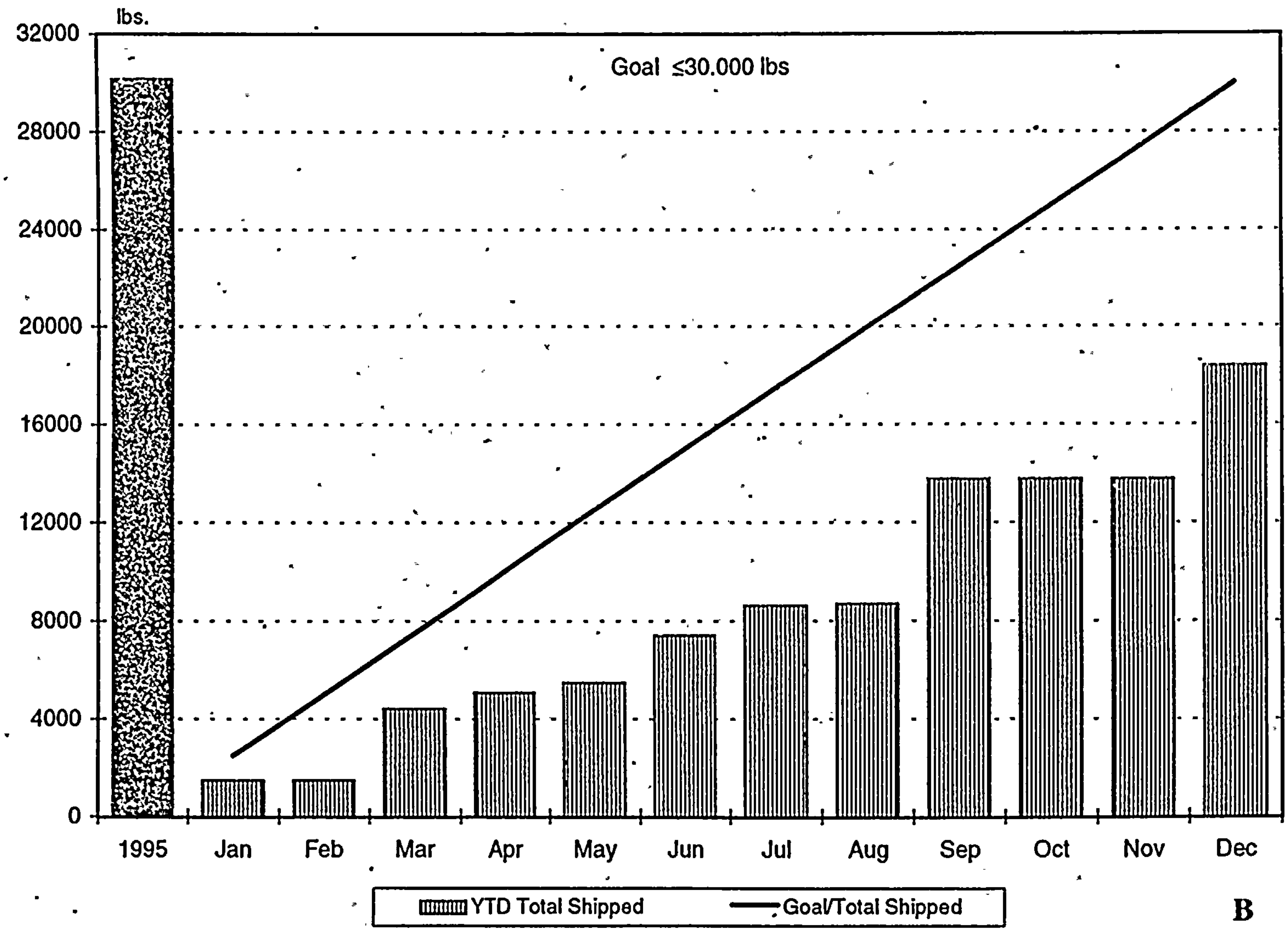
37. 1996 Hazardous Waste

Definition: Solid waste generated in 1996 that is a listed hazardous waste or exhibits one or more hazardous characteristics.

	Total Site			Maintenance Services		Electrical Maintenance		Other Maintenance		Nuclear Materials		All Other	
Month	Monthly Actual	YTD Total Generated	YTD Total Shipped	Monthly Actual	YTD	Monthly Actual	YTD	Monthly Actual	YTD	Monthly Actual	YTD	Monthly Actual	YTD
1995		28654	30137		11,261		3,166		2,387		4,228		7,612
Jan	2,046	2,046	1,504	1,446	1,446	387	387	57	57	0	0	156	156
Feb	21	2,067	1,504	21	1,467	0	387	0	57	0	0	0	156
Mar	1,910	3,977	4,439	1,367	2,834	520	907	1	58	0	0	22	178
Apr	401	4,378	5,109	398	3,232	0	907	0	58	0	0	3	181
May	1,152	5,530	5,503	500	3,732	46	953	562	620	0	0	44	225
Jun	651	6,181	7,435	0	3,732	617	1,570	0	620	0	0	34	259
Jul	745	6,926	8,647	355	4,087	0	1,570	379	999	11	11	0	259
Aug	25	6,951	8,711	0	4,087	0	1,570	25	1,024	0	11	0	259
Sep	4,663	11,614	13,759	545	4,632	0	1,570	10	1,034	0	11	4,108	4,367
Oct	519	12,133	13,759	200	4,832	116	1,686	23	1,057	0	11	180	4,547
Nov	1,385	13,518	13,759	800	5,632	285	1,971	0	1,057	0	11	300	4,847
Dec	2,856	16,374	18,414	0	5,632	62	2,033	196	1,253	2,523	2,534	75	4,922
Goal			≤30000										

Data Source: Don Paul - 393-1987 Indicator Owner: Angie Krainik - 393-5421

37. 1996 Hazardous Waste



B

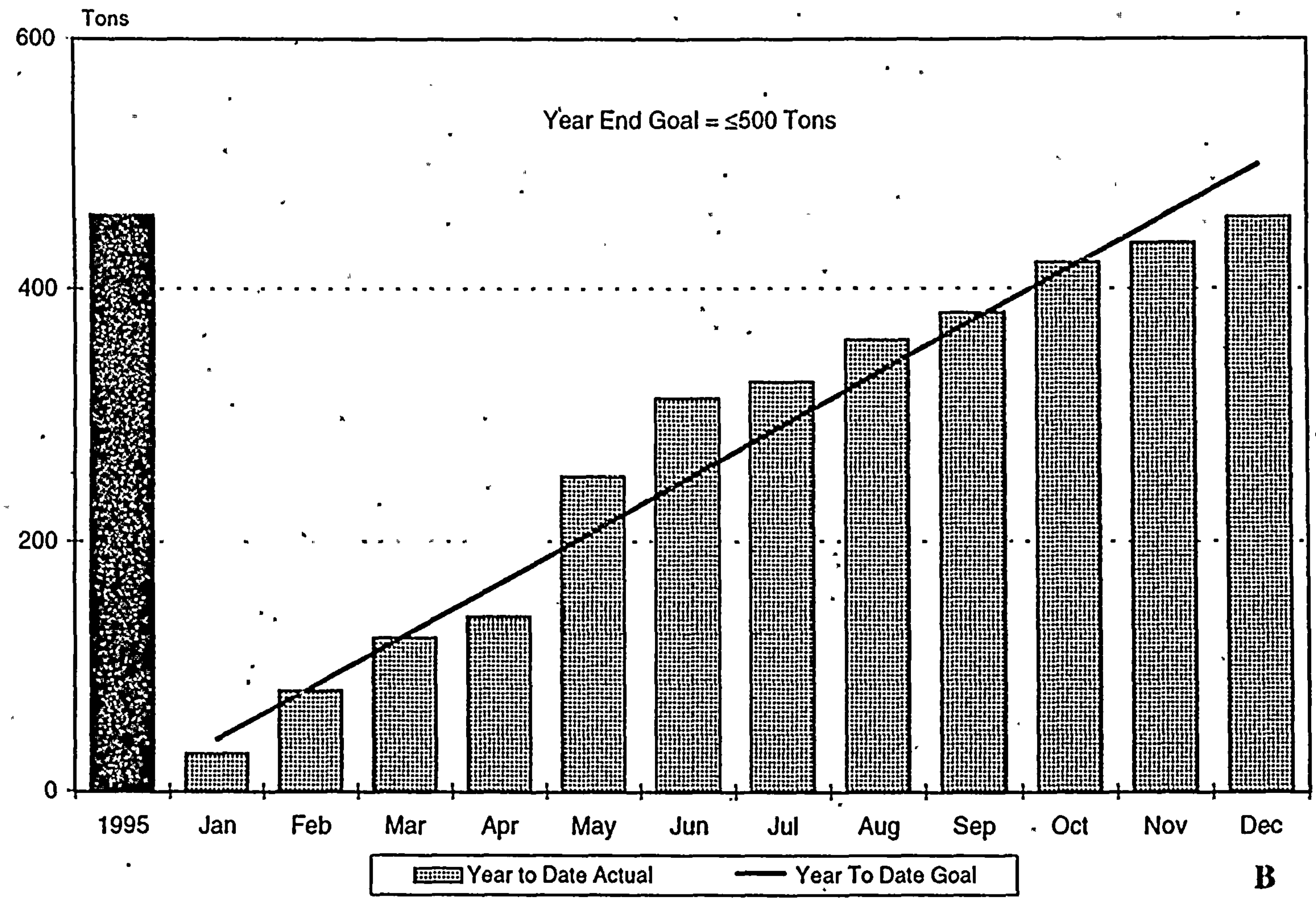
38. 1996 Solid Waste

Definition: Waste generated in 1996 and disposed of in the on-site solid waste landfill.
Does not include Water Rec. sludge or concrete tailings.
* = Normalized to 1995 density factor of 0.0984 tons per cubic yard.

Month	Monthly Actual	Year to Date Actual	Year To Date Goal
1995		* 460	* 541
Jan	30	30	42
Feb	51	81	83
Mar	43	124	125
Apr	17	140	167
May	111	252	208
Jun	62	314	250
Jul	13	326	292
Aug	33	360	333
Sep	22	381	375
Oct	40	422	417
Nov	16	438	458
Dec	20	458	500

Data Source: Howard Doyle - 393-3519 Indicator Owner: Tom Shaw - 393-3000

38. 1996 Solid Waste



39. 1996 Human Performance

Definition: Inappropriate behavior(s) resulting in, or contributing to, adverse conditions. Significant events adversely impact the accomplishment of Palo Verde's mission, i.e. Safety, Cost Management, Energy Production.

Month	Significant Events	Other Events	Total YTD	Rolling 12 Month Average	Significant Events Goal
1995	14	120	134	11.17	
Jan	1	4	5	12.81	1
Feb	0	9	14	11.35	2
Mar	0	10	24	10.98	2
Apr	1	19	44	12.65	3
May	0	14	58	13.81	4
Jun	0	13	71	14.90	5
Jul	0	20	91	16.56	5
Aug	2	15	108	17.98	6
Sep	0	13	121	19.06	7
Oct	0	27	148	21.31	8
Nov	0	16	164	22.65	8
Dec	0	16	180	23.98	9

Data Source: Rich Rouse - 393-5403 Indicator Owner: Rose Fullmer - 393-6338

39. 1996 Human Performance

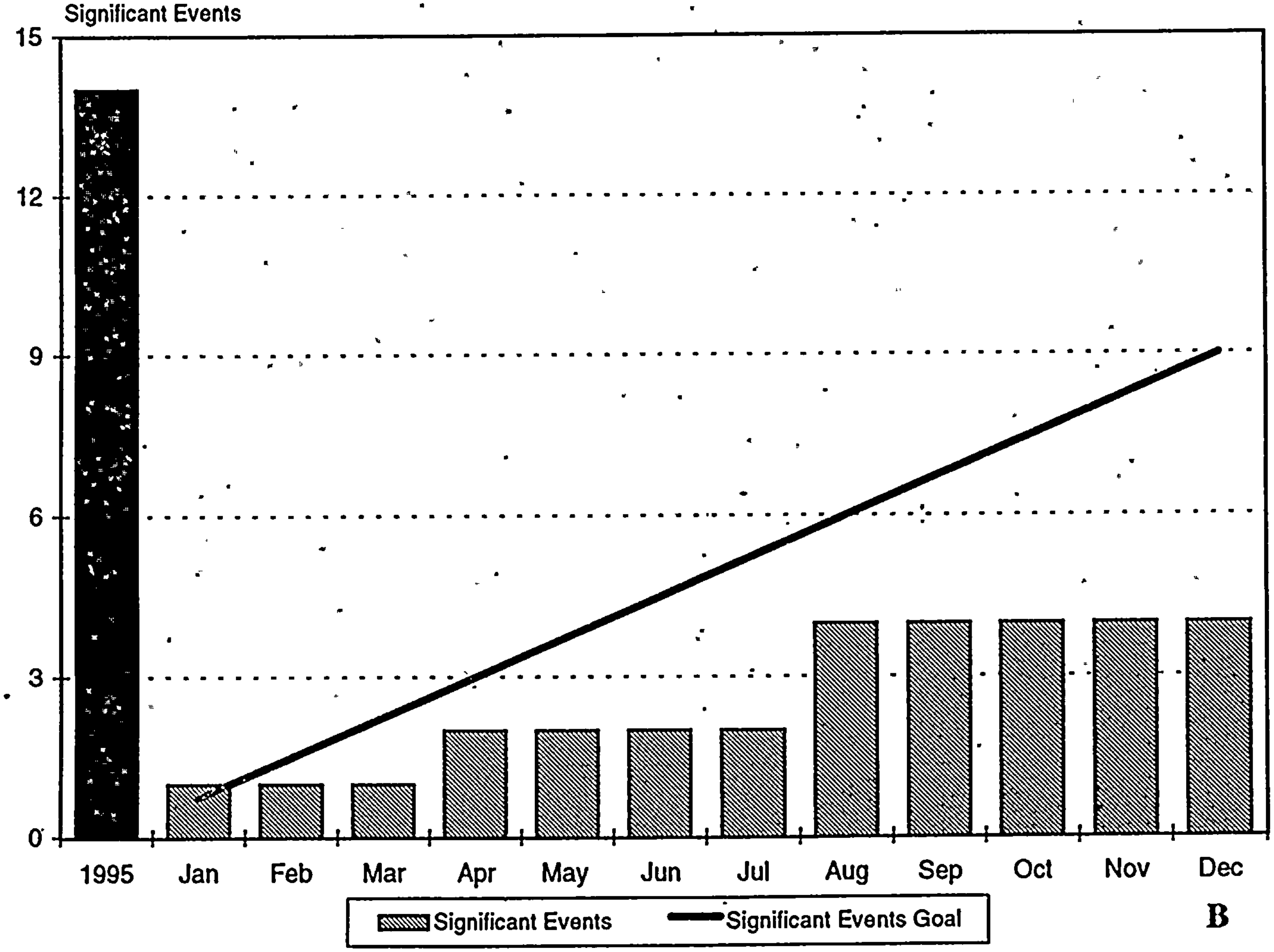
Description

1/96 - Rx trip resulted from efforts to restore condensate pump to service under operating conditions.

4/96 - During electrical switching, wrong breaker was shut and reopened resulting in loss of power to one class train and loss of shutdown cooling.

8/2/96 - U-2 entered LCO 3.0.3 when both ECCS trains were rendered inoperable at the same time for approx. 20-30 seconds.

8/5/96 - Door #A123 was propped open without a permit or compensatory measures. Open door could adversely impact Aux. Bldg. essential ventilation in event of SIAS.



B

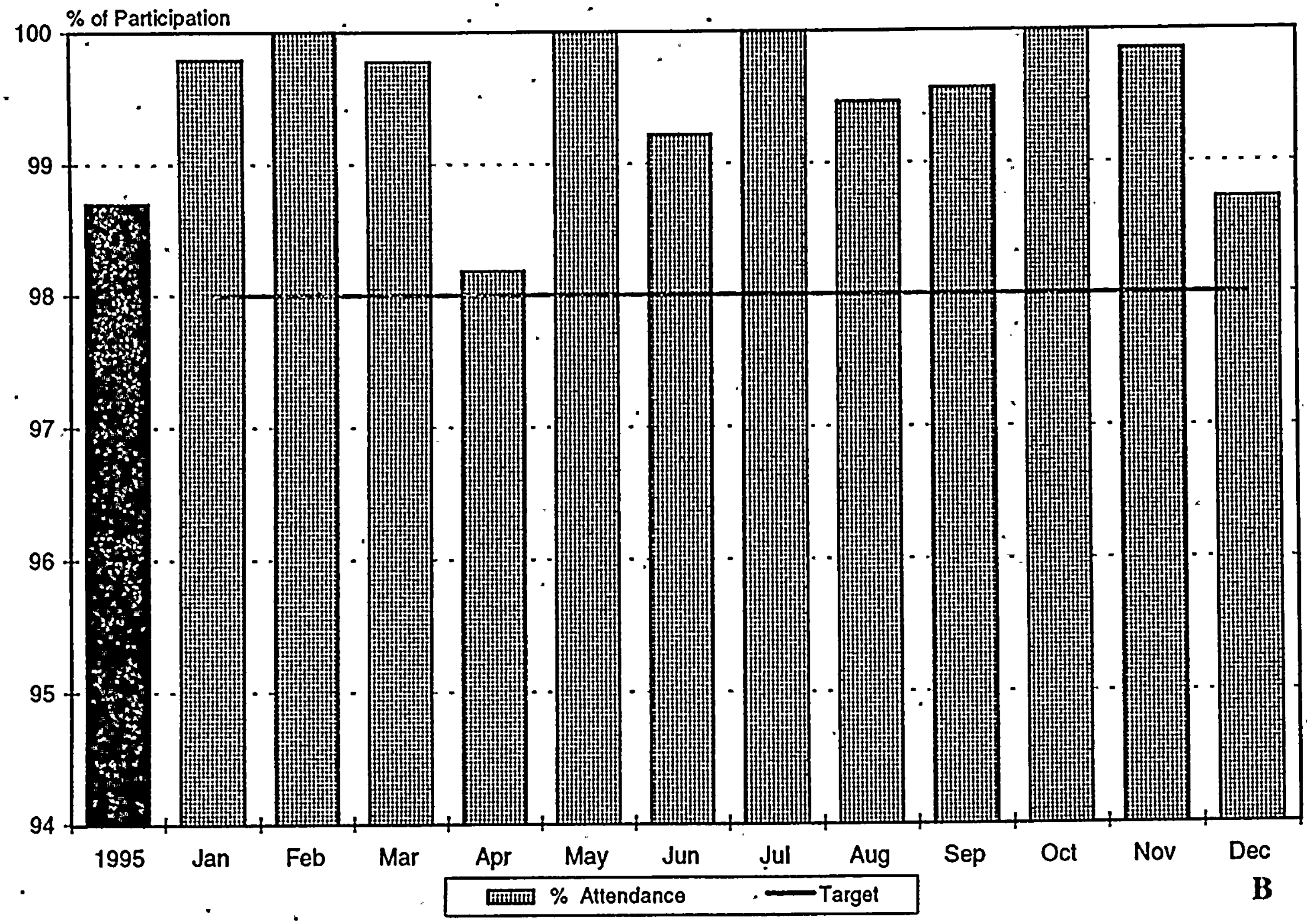
40. 1996 Scheduled Training Participation

Definition: The percent of personnel completing scheduled accredited training sessions.
Target = 98%

	Site Total		
Month	# Scheduled	# Attended	% Attendance
1995			98.7
Jan	475	474	99.8
Feb	1057	1057	100.0
Mar	883	881	99.8
Apr	55	54	98.2
May	355	355	100.0
Jun	639	634	99.2
Jul	643	643	100.0
Aug	928	923	99.5
Sep	911	907	99.6
Oct	108	121	100.0
Nov	671	670	99.9
Dec	471	465	98.7

Data Source: Bob Nunez - 393-6580 Indicator Owner: John Velotta - 393-1785

40. 1996 Scheduled Training Participation



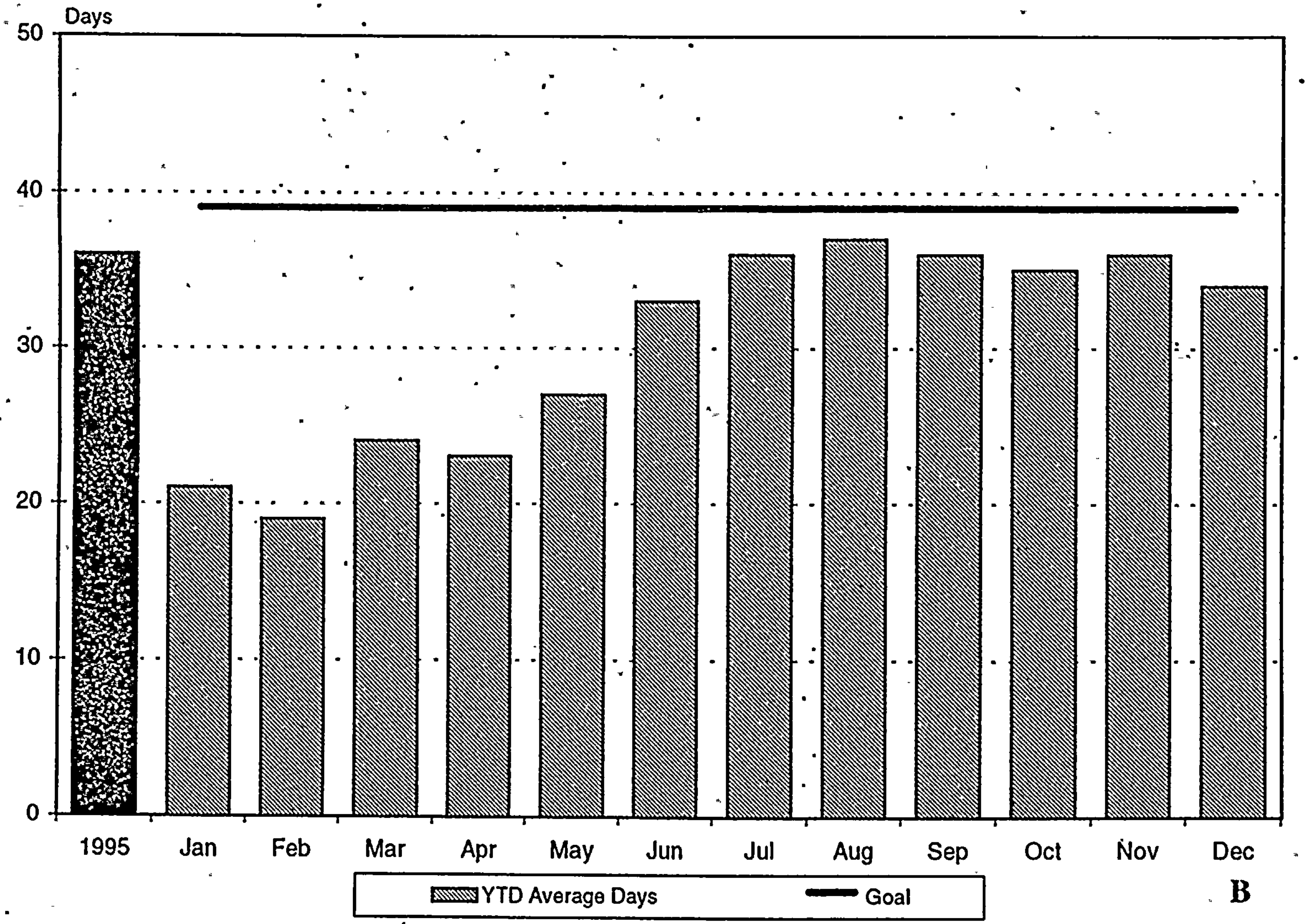
41. 1996 Issues Resolution

Definition: The time required to resolve employee issues through the MITR process, or through the employee concerns program.

Month	Current Month Average Days	YTD Average Days	Goal
1995	36	36	
Jan	21	21	39
Feb	18	19	39
Mar	48	24	39
Apr	20	23	39
May	33	27	39
Jun	76	33	39
Jul	49	36	39
Aug	40	37	39
Sep	32	36	39
Oct	15	35	39
Nov	38	36	39
Dec	18	34	39

Data Source: Deborah Leuthold - 393-6352 Indicator Owner: Jeanne Copsey - 393-6318

41. 1996 Issues Resolution



B

42. 1996 Minority And Women-Owned Business Enterprises

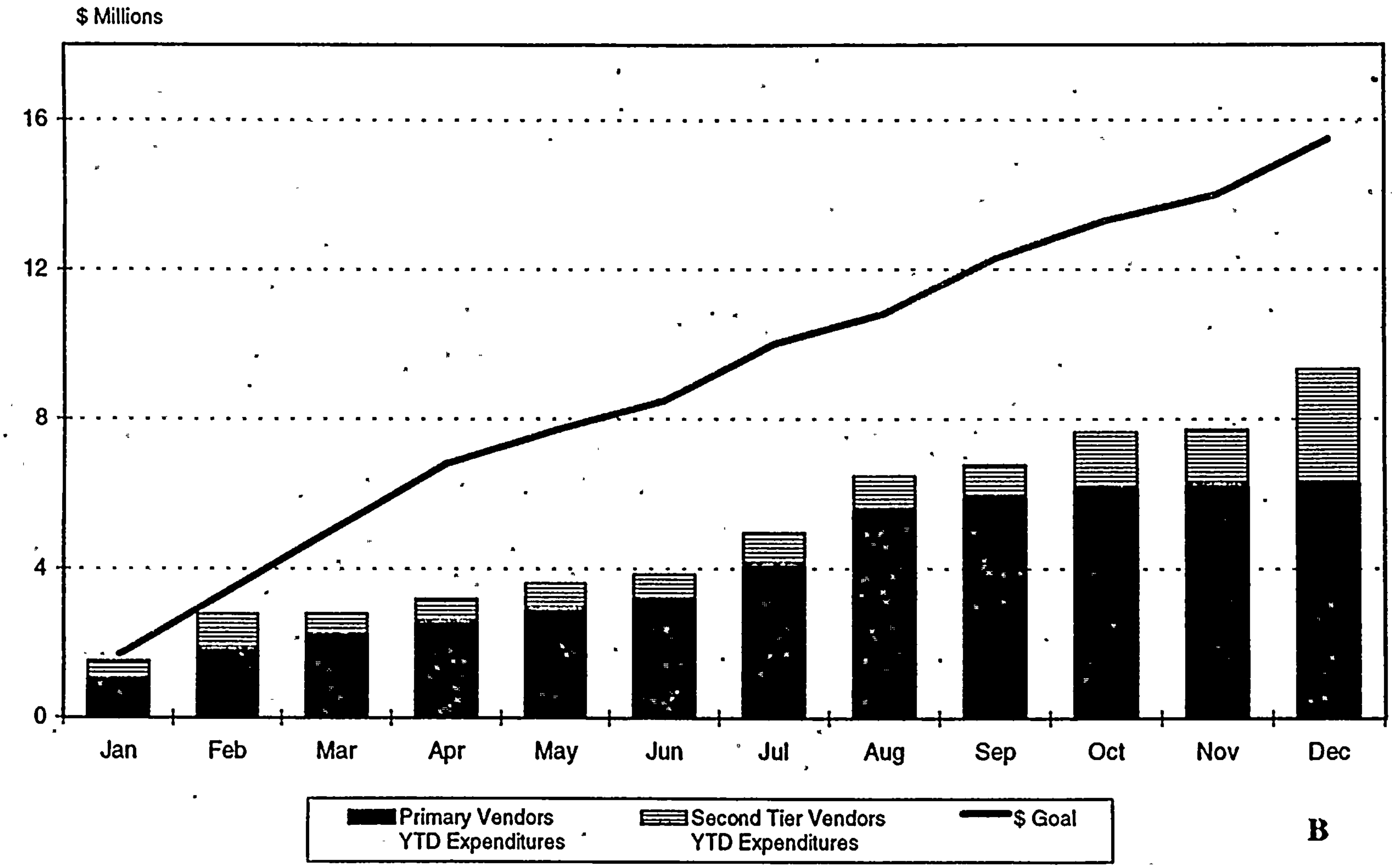
Definition: Total spending for goods and services from both primary and second tier MWBEs, in millions of dollars. The 1996 target is 9.5% of total expenditures. The goal line on the chart is revised periodically to reflect updated year-end expenditure forecasts.

Month	Primary Vendors YTD Expenditures	Second Tier Vendors YTD Expenditures	Total MWBE YTD Expenditures	$ Goal
Jan	1.072	0.450	1.52	1.7
Feb	1.867	0.900	2.77	3.4
Mar	2.266	0.526	2.79	5.1
Apr	2.580	0.591*	3.17	6.8
May	2.902	0.691	3.59	7.7
Jun	3.239	0.591	3.83	8.5
Jul	4.112	0.831	4.94	10.0
Aug	5.615	0.831	6.45	10.8
Sep	5.924	0.832	6.76	12.3
Oct	6.165	1.458	7.62	13.3
Nov	6.241	1.458	7.70	14.0
Dec	6.327	2.986	9.31	15.5

*Actual

Data Source: Carl Unger - 393-5255 Indicator Owner: Frank Nagy - 250-2091

42. 1996 Minority And Women-Owned Business Enterprises



B

Palo Verde
Nuclear Generating Station

Annual Performance Trends

1996

EMPLOYEE INCENTIVE SCORE CARD

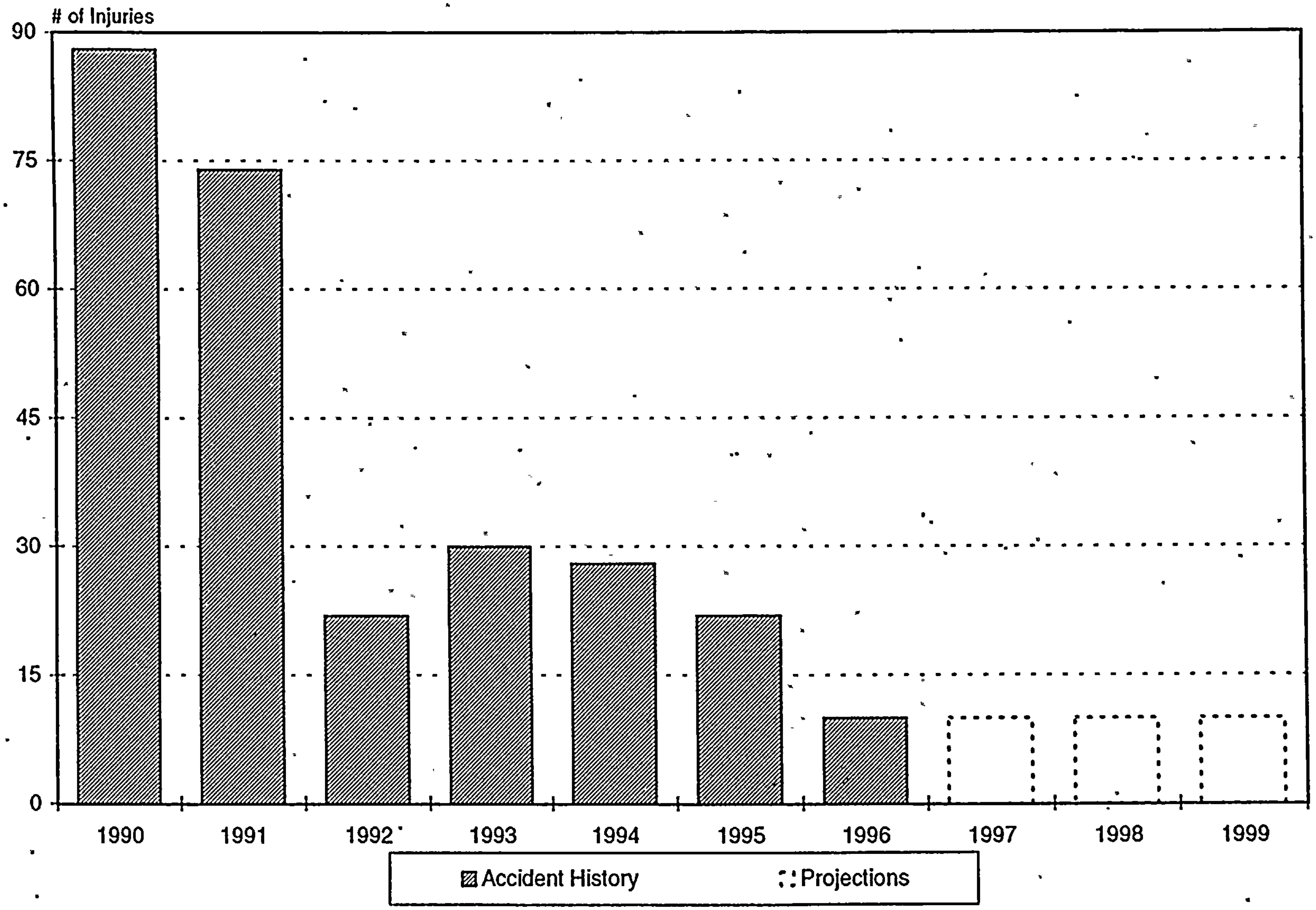
December 1996

Indicator	Threshold	Threshold Incentive	Maximum	Maximum Incentive	Year to Date Actual	Incentive % Actual
Recordable Injuries Months without a Preventable Recordable Injury	NA	NA	0%	.02% / Month	5	0.10
Industrial Safety Industry Ranking (ISAR)	Top 15%	0.13%	Top 5%	0.26%	Top 25%	0.00
Site Capacity Factor	84.00%	1.25%	89.00%	3.00%	89.14%	3.00
O & M Budget (Millions)	$349.485	0.5 %	$339.5	3.00%	343.737	1.94
Forced Outage Rate	3.00%	0.50%	1.00%	1.50%	1.4%	1.30
Business Plan Trends	75.00%	0.25%	90.00%	0.70%	80%	0.40
Monthly Trends	75.00%	0.25%	85.00%	0.70%	77%	
			Incentive Total (Maximum funding = 5 %)			7.08

Preventable Recordable Injuries

Year	Accident History	Projections
1990	88	
1991	74	
1992	22	
1993	30	
1994	28	
1995	22	
1996	10	
1997		10
1998		10
1999		10

Preventable Recordable Injuries

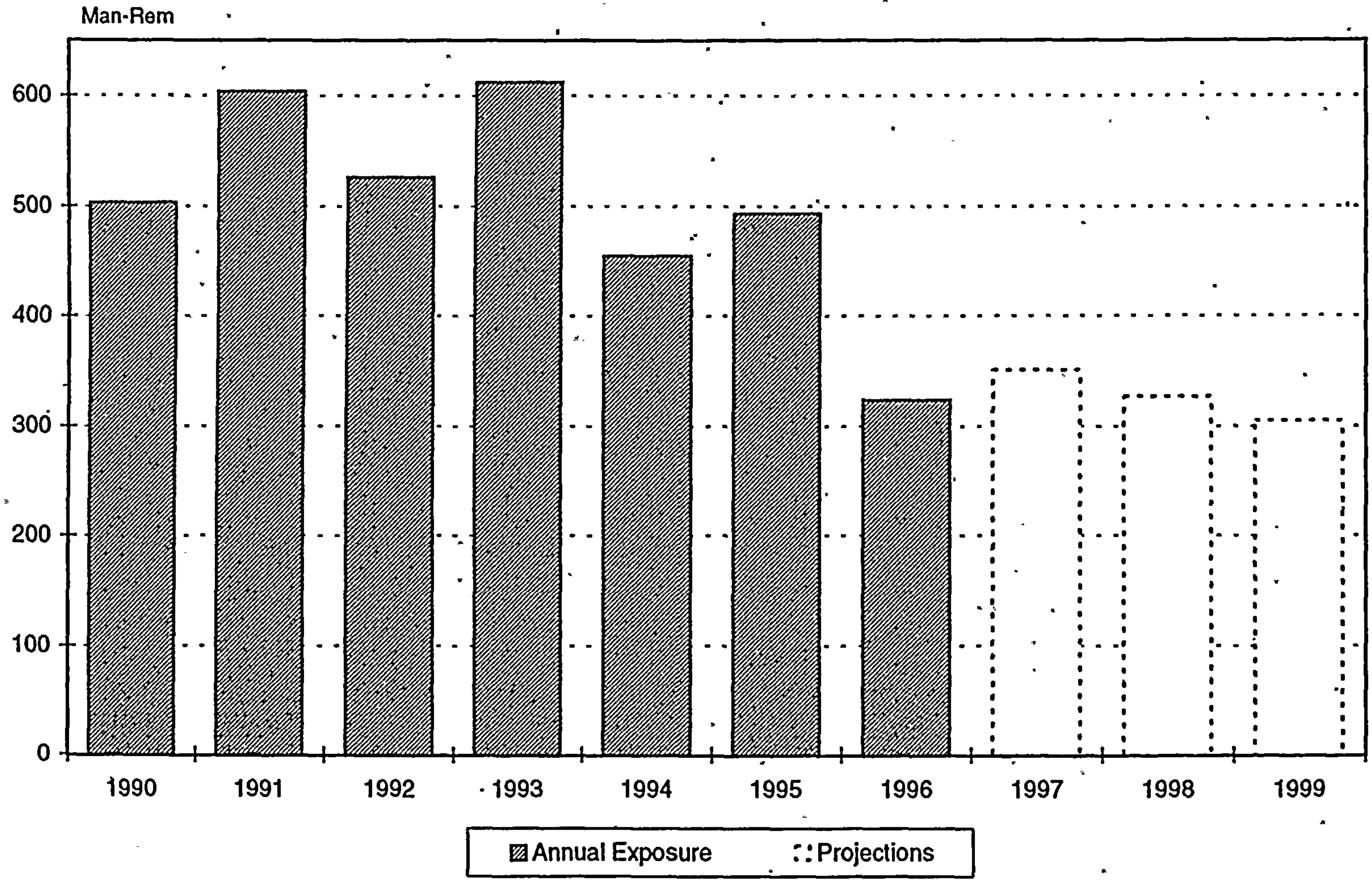


Radiation Exposure

(Site Totals)

Year	Annual Exposure	Projections
1990	502.9	
1991	604.3	
1992	526.4	
1993	612.8	
1994	454.8	
1995	493.3	
1996	323.5	
1997		351
1998		327
1999		305

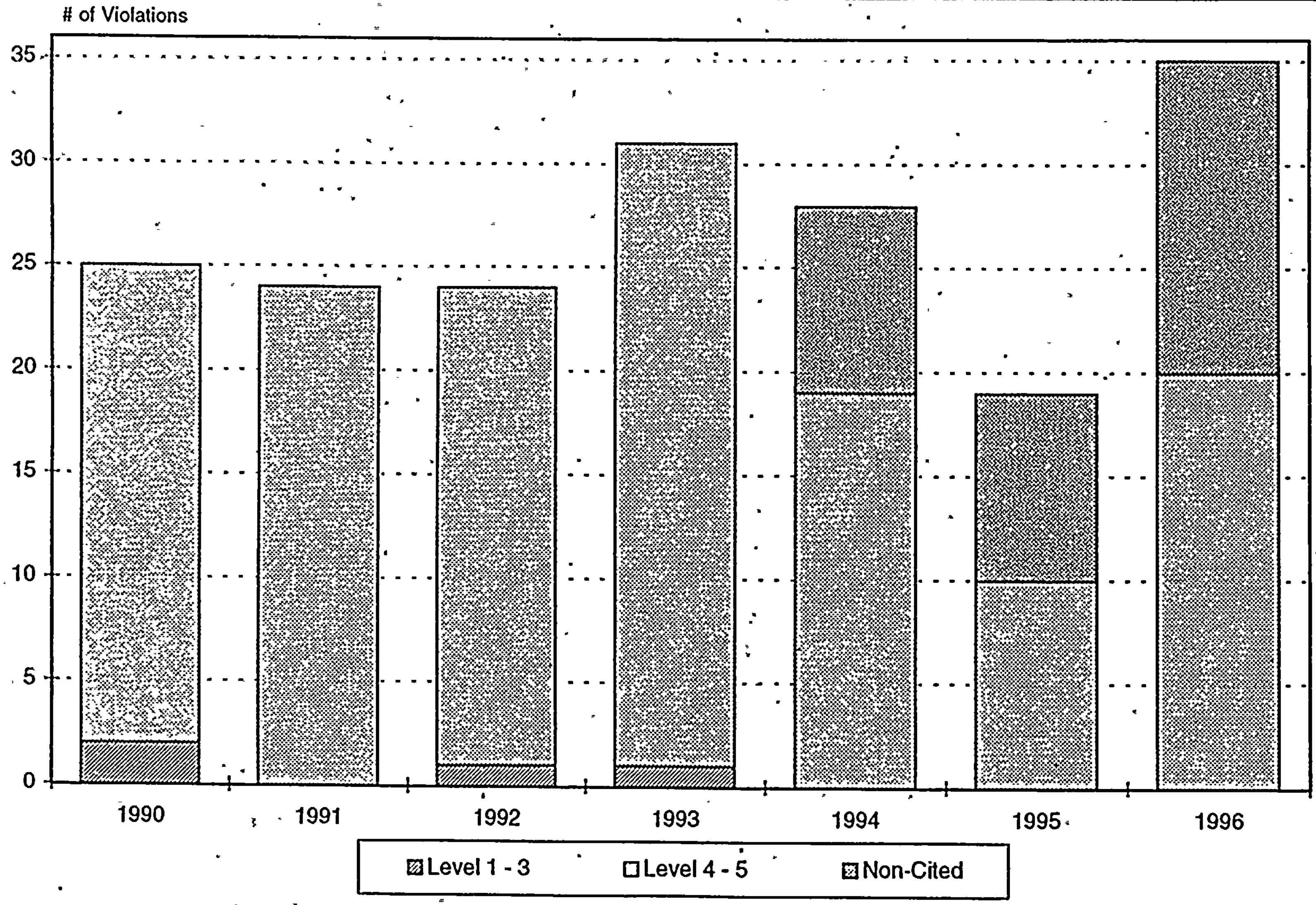
Radiation Exposure



NRC Violations

Year	Level 1 - 3	Level 4 - 5	Non-Cited
1990	2	23	
1991	0	24	
1992	1	23	
1993	1	30	
1994	0	19	9
1995	0	10	9
1996	0	20	15

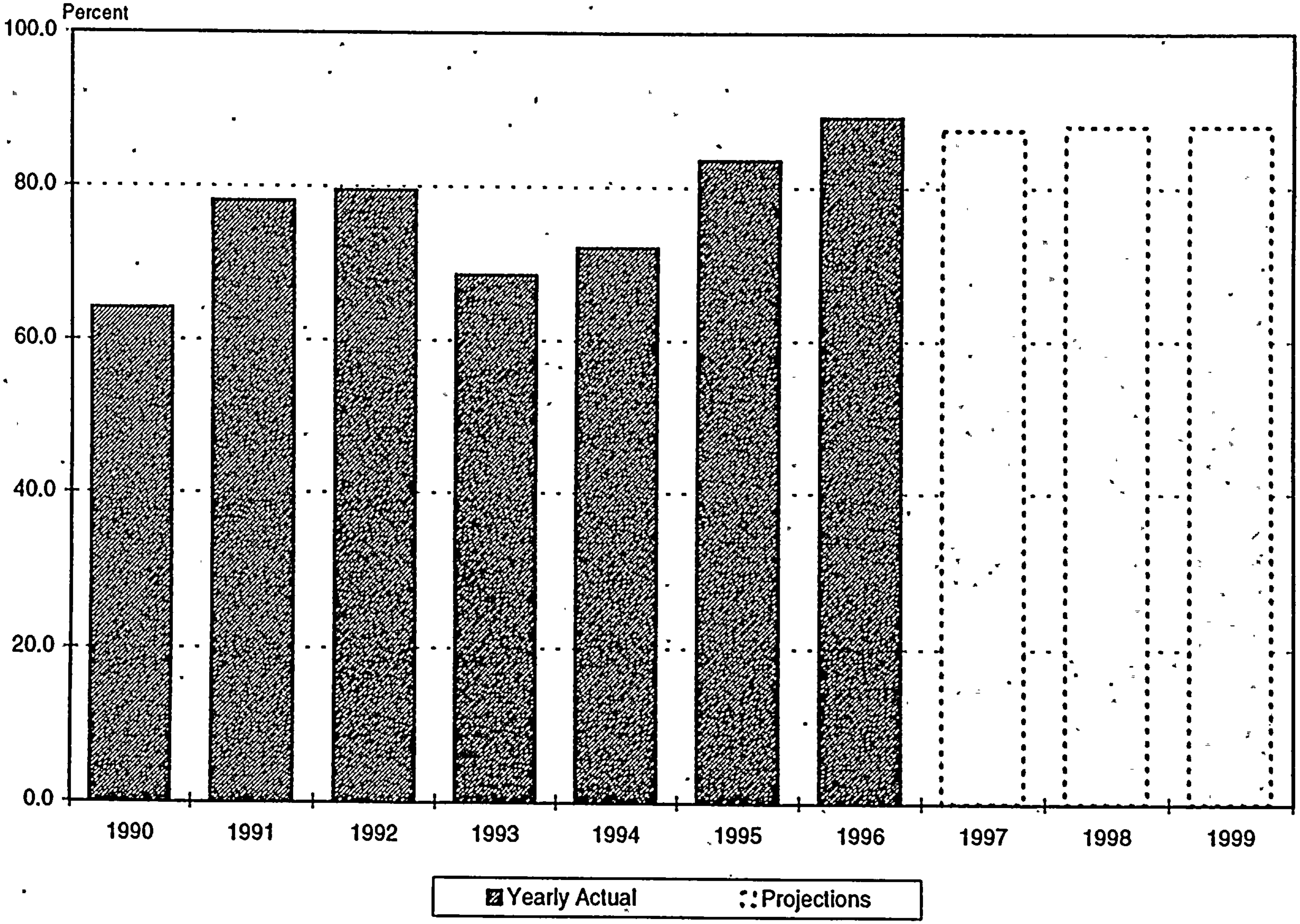
NRC Violations



Site Capacity Factor - MDC

	Site Total		
Year	Yearly Actual	Projections	Palo Verde Three Year Average
1990	64.2		54.0
1991	78.2		55.6
1992	79.6		74.0
1993	68.7		75.5
1994	72.2		73.5
1995	83.6		74.8
1996	89.1		81.7
1997		87.5	
1998		88	
1999		88	

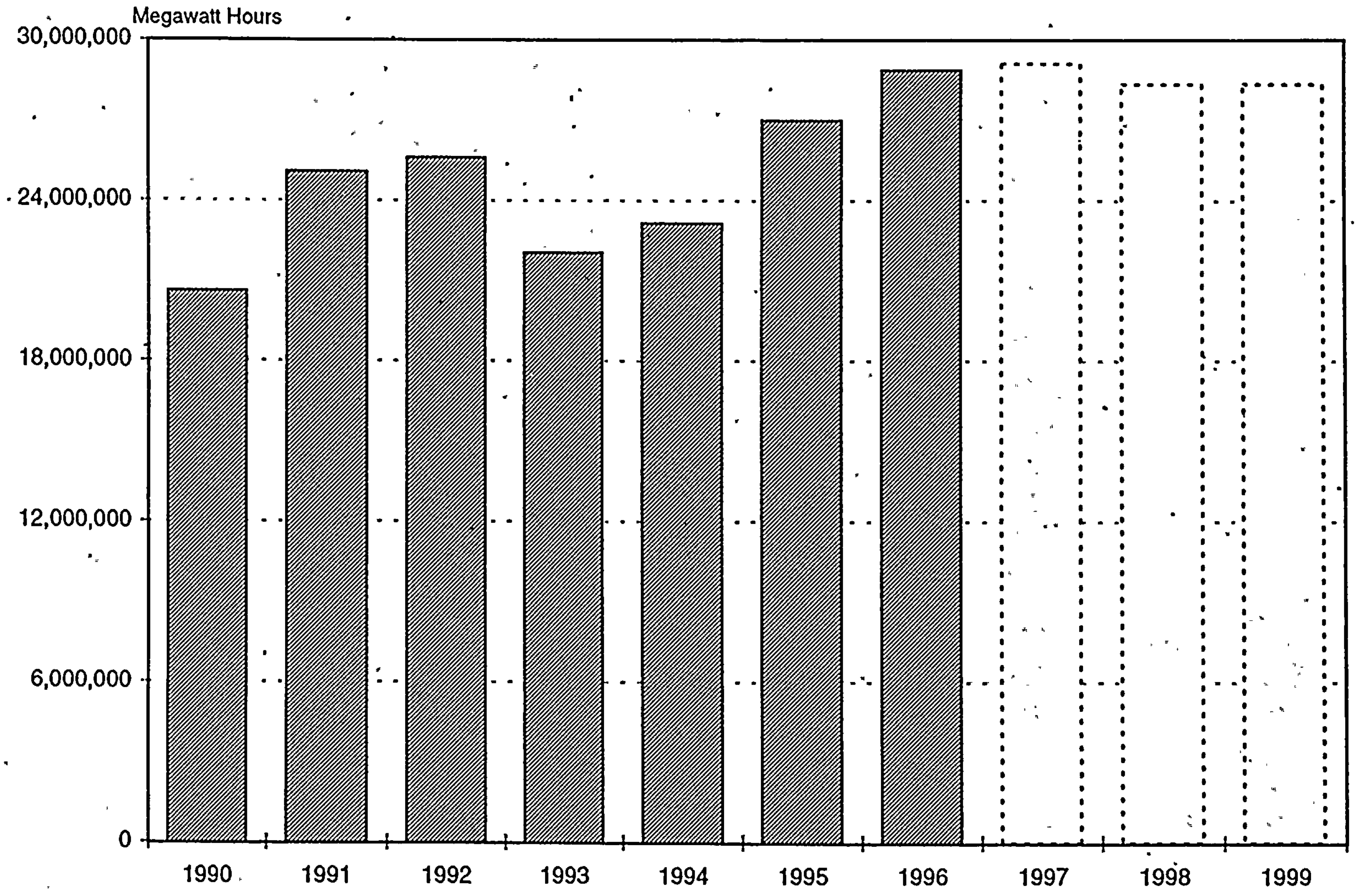
Site Capacity Factor - MDC



Net Generation (MWh)

Year	Generation	Projections
1990	20,597,689	
1991	25,095,776	
1992	25,608,703	
1993	22,034,981	
1994	23,170,892	
1995	26,984,507	
1996	28,848,742	
1997		29,107,043
1998		28,329,000
1999		28,329,000

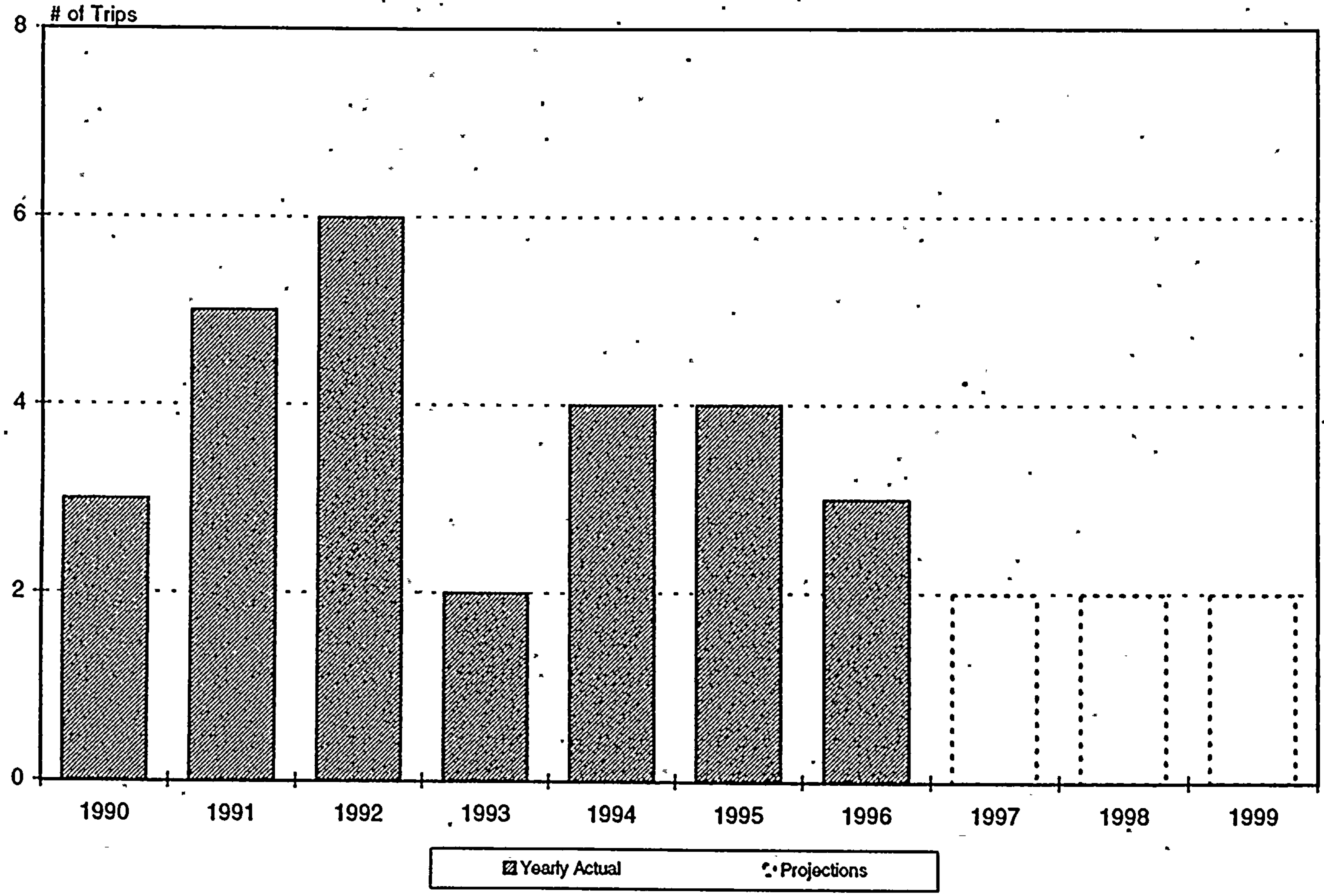
Net Generation (MWh)



Automatic Reactor Trips

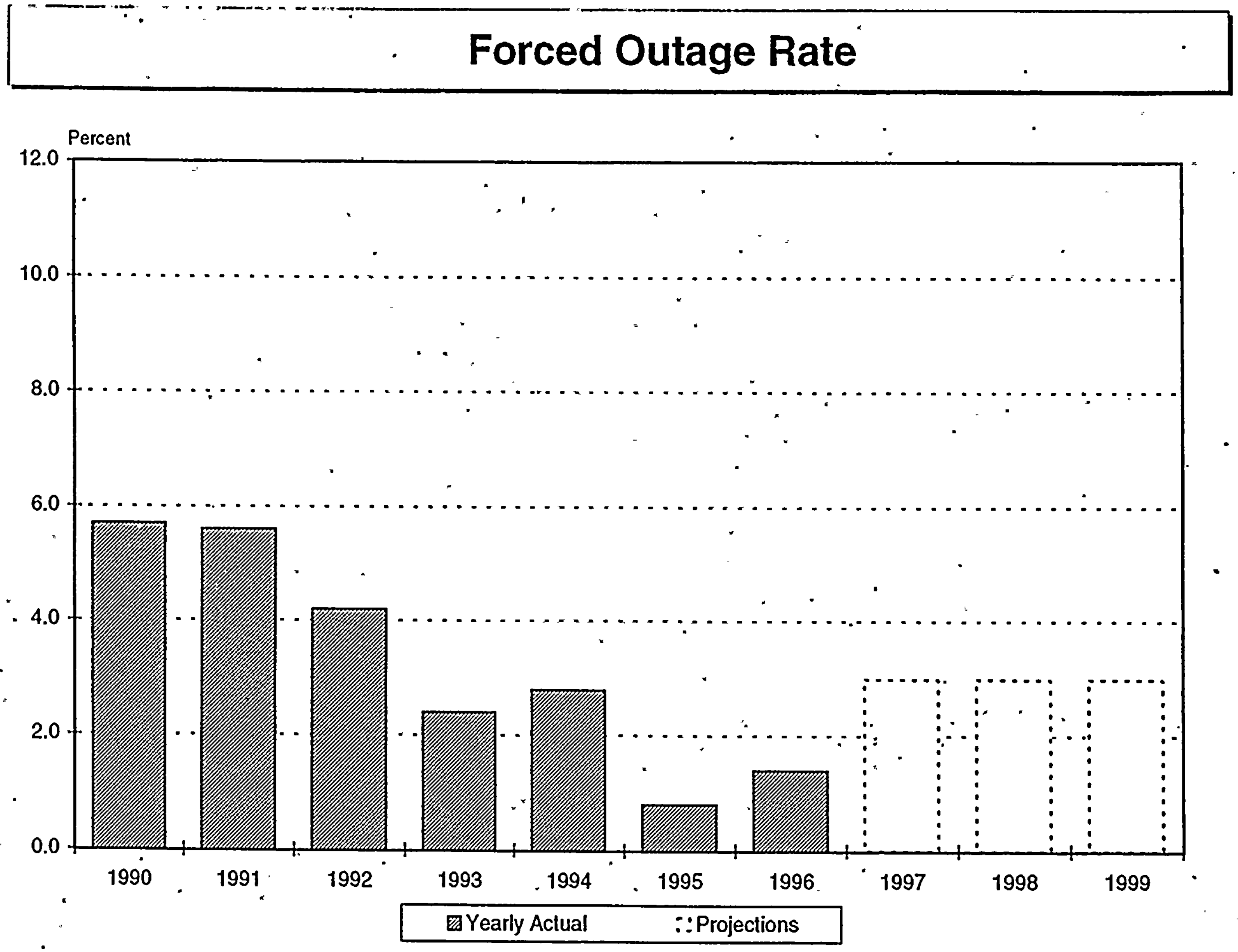
Year	Unit 1	Unit 2	Unit 3	Yearly Actual	Projections
1990	1	0	2	3	
1991	2	1	2	5	
1992	2	3	1	6	
1993	0	1	1	2	
1994	0	2	2	4	
1995	3	1	0	4	
1996	1	1	1	3	
1997					2
1998					2
1999					2

Automatic Reactor Trips



Forced Outage Rate

	Site Total		
Year	Yearly Actual	Projections	Three Year Average
1990	5.7		16.7
1991	5.6		14.0
1992	4.2		5.2
1993	2.4		4.1
1994	2.8		3.1
1995	0.8		2.0
1996	1.4		1.7
1997		3	
1998		3	
1999		3	

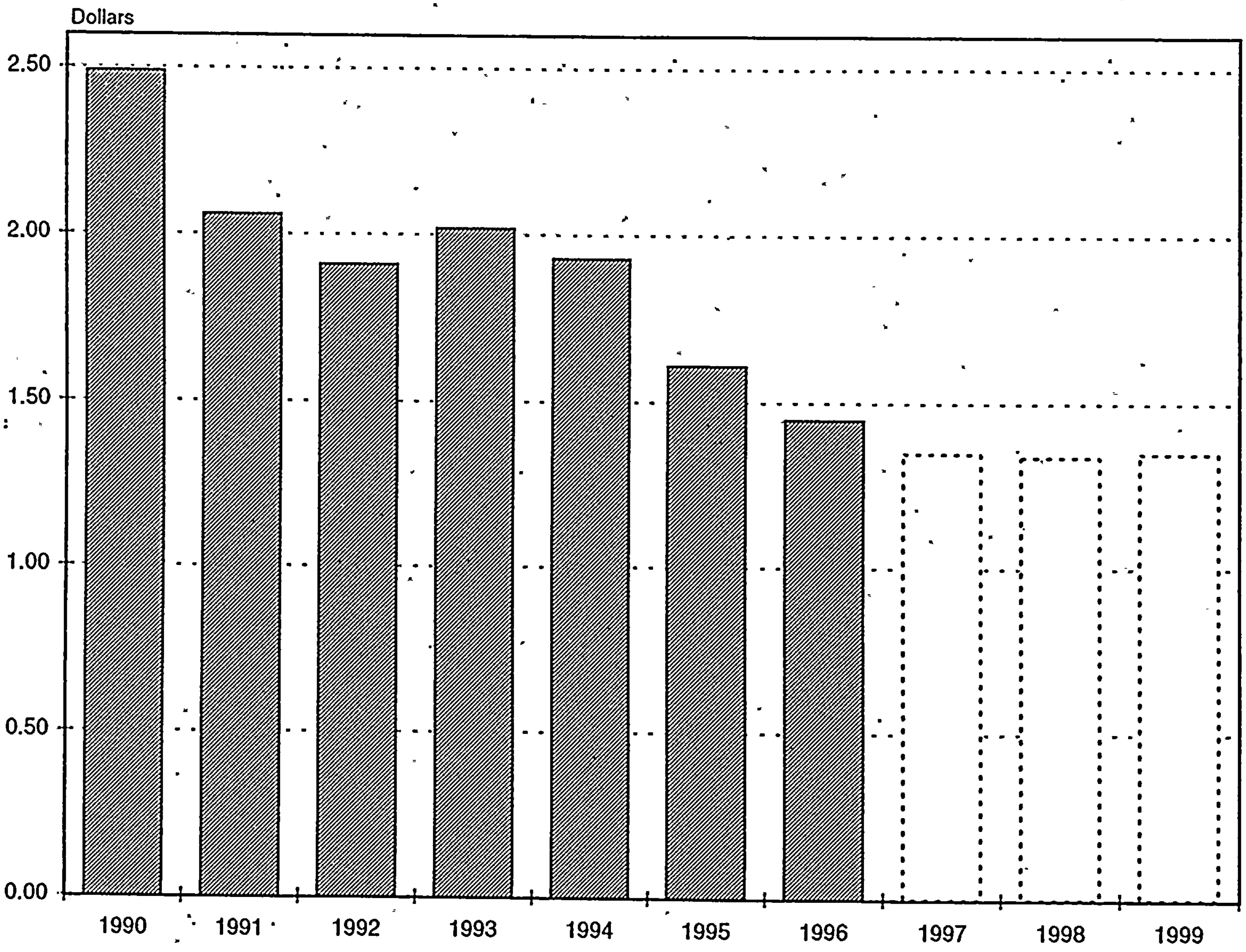

Forced Outage Rate
Percent
12.0
10.0
8.0
6.0
4.0
2.0
0.0
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
Yearly Actual
Projections

Production Cost

(Cents per kWh)

Year	Annual Cost	Projections	Palo Verde Three Year Average Costs
1990	2.49		3.01
1991	2.06		3.07
1992	1.91		2.15
1993	2.02		2.00
1994	1.93		1.95
1995	1.61		1.85
1996	1.45		1.66
1997		1.35	
1998		1.34	
1999		1.35	

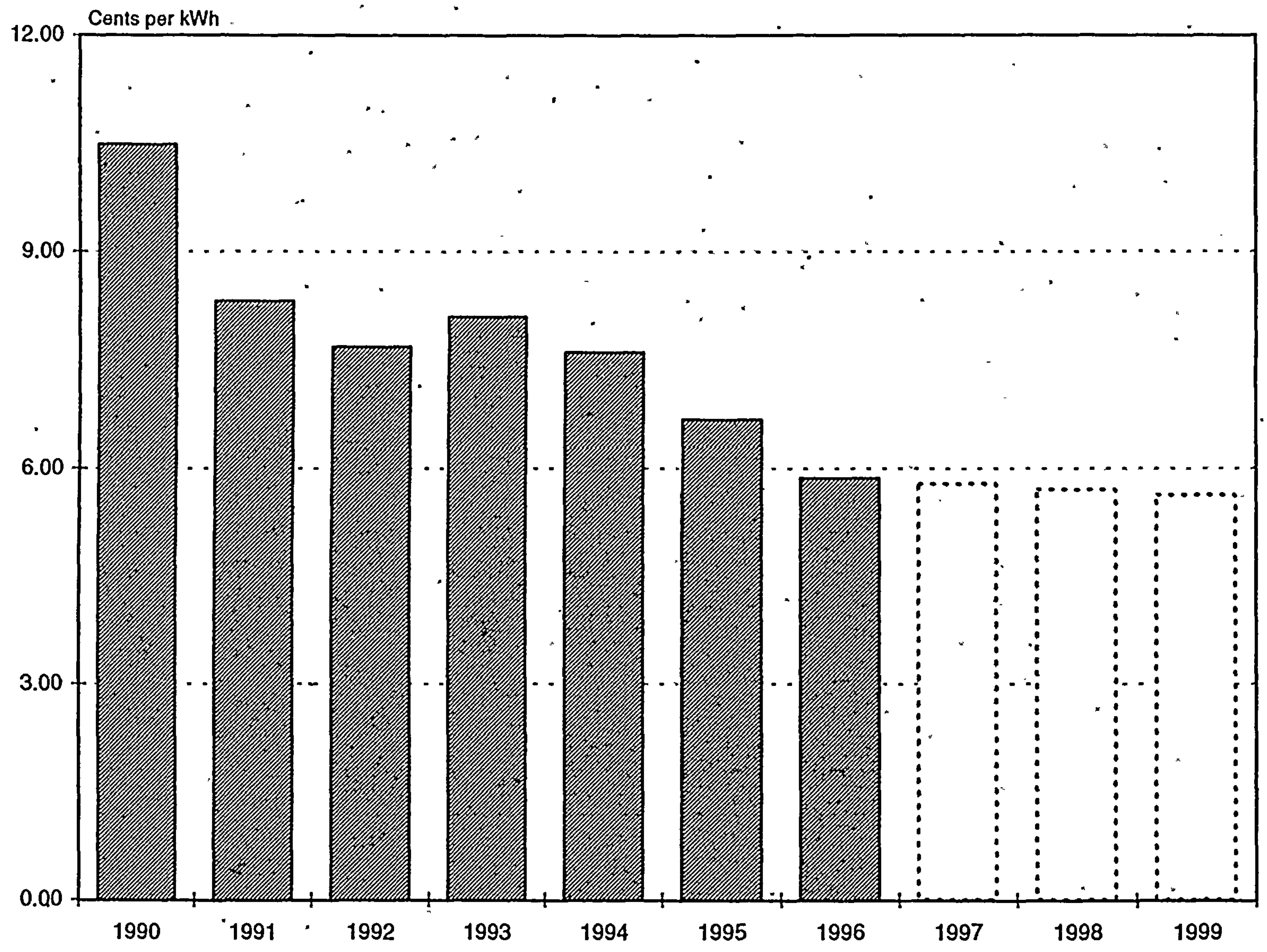
Production Cost



Busbar Cost

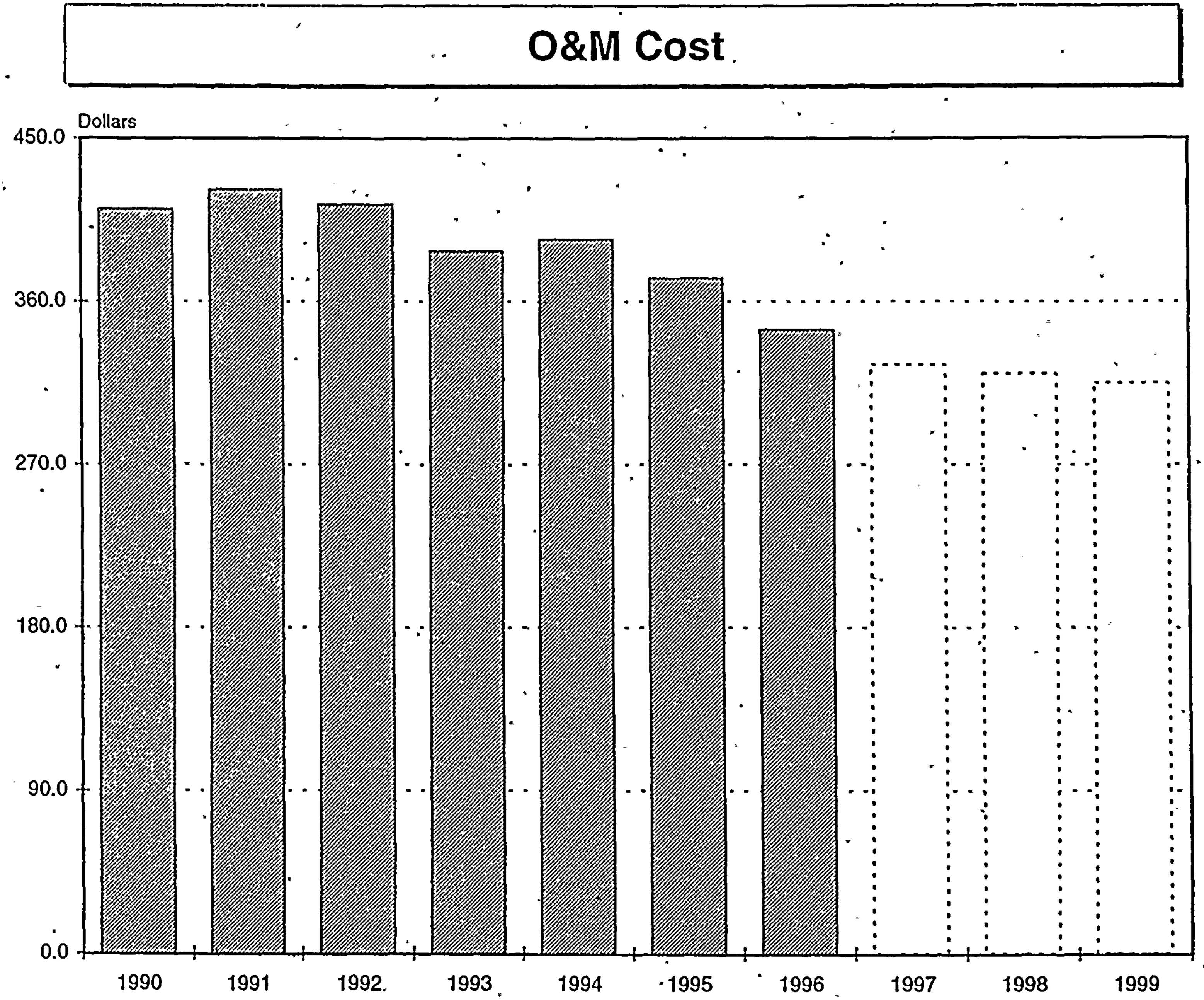
Year	Annual Cost	Projections	Three Year Average Cost
1990	10.49		15.30
1991	8.31		15.00
1992	7.67		8.82
1993	8.09		8.02
1994	7.60		7.79
1995	6.67		7.45
1996	5.87		6.71
1997		5.79	
1998		5.71	
1999		5.64	

Busbar Cost


Cents per kWh
12.00
9.00
6.00
3.00
0.00
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999

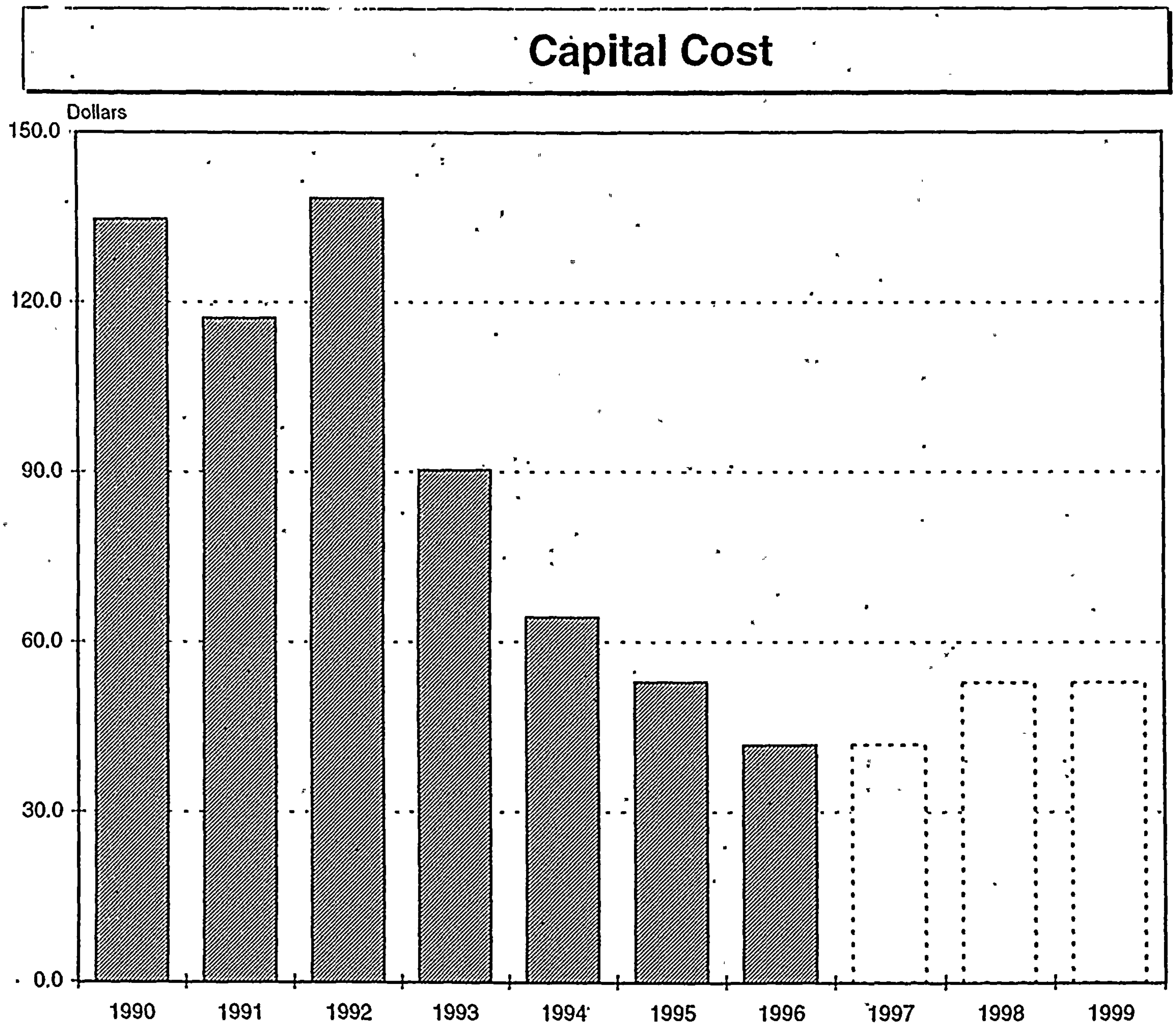
O&M Cost

Year	O & M Cost	Projections
1990	410.9	
1991	421.6	
1992	413.3	
1993	387.8	
1994	394.3	
1995	372.9	
1996	344.3	
1997		325.1
1998		320.0
1999		315.0


O&M Cost
Dollars
450.0
360.0
270.0
180.0
90.0
0.0
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999

Capital Cost

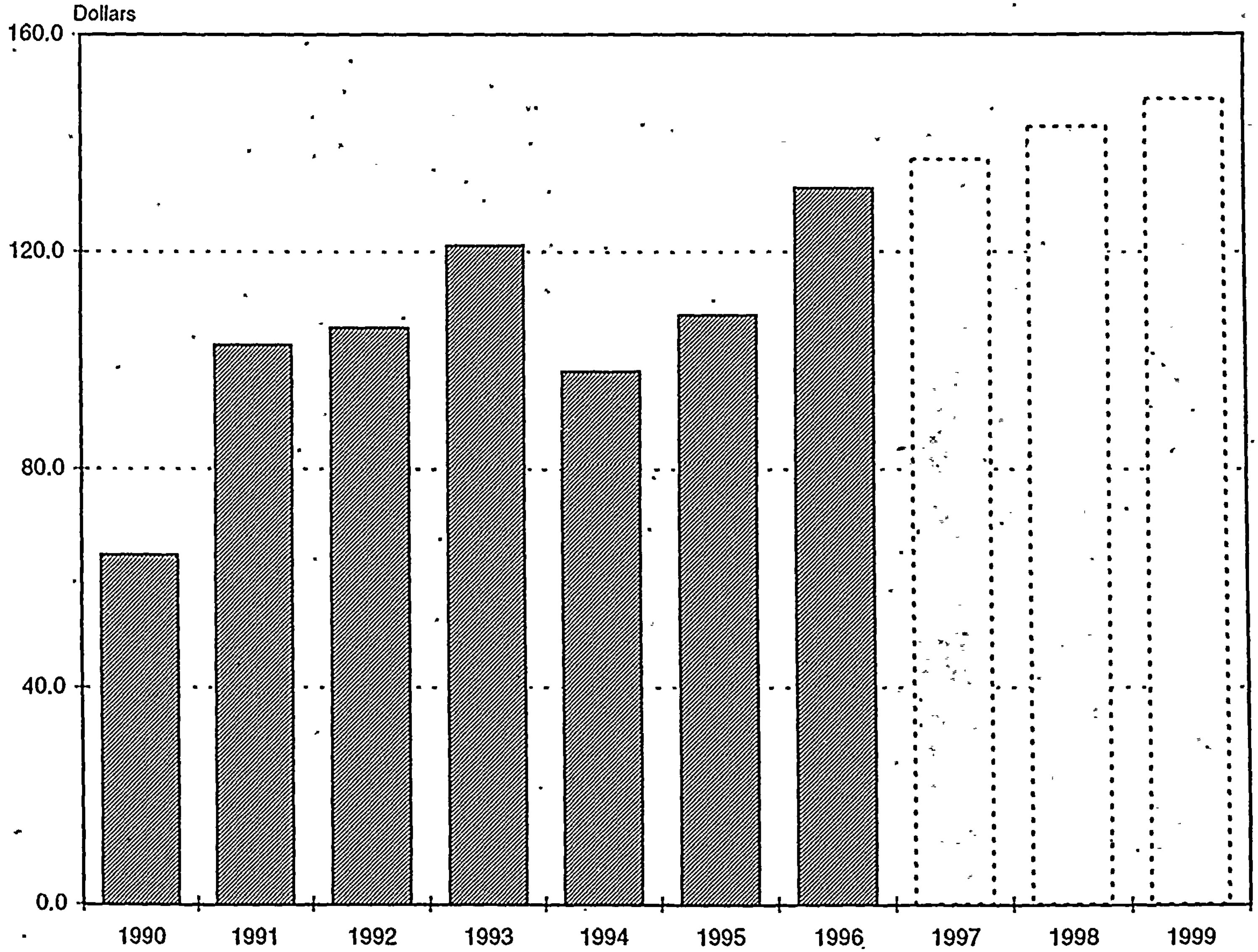
Year	Capital Cost	Projections
1990	134.6	
1991	117.2	
1992	138.3	
1993	90.4	
1994	64.4	
1995	53.0	
1996	41.9	
1997		42.0
1998		53.0
1999		53.0


Capital Cost
Dollars
150.0
120.0
90.0
60.0
30.0
0.0
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999

Fuel Cost

Year	Fuel Cost	Projections
1990	64.3	
1991	102.8	
1992	105.9	
1993	121.1	
1994	97.9	
1995	108.3	
1996	131.7	
1997		137.0
1998		143.0
1999		148.0

Fuel Cost

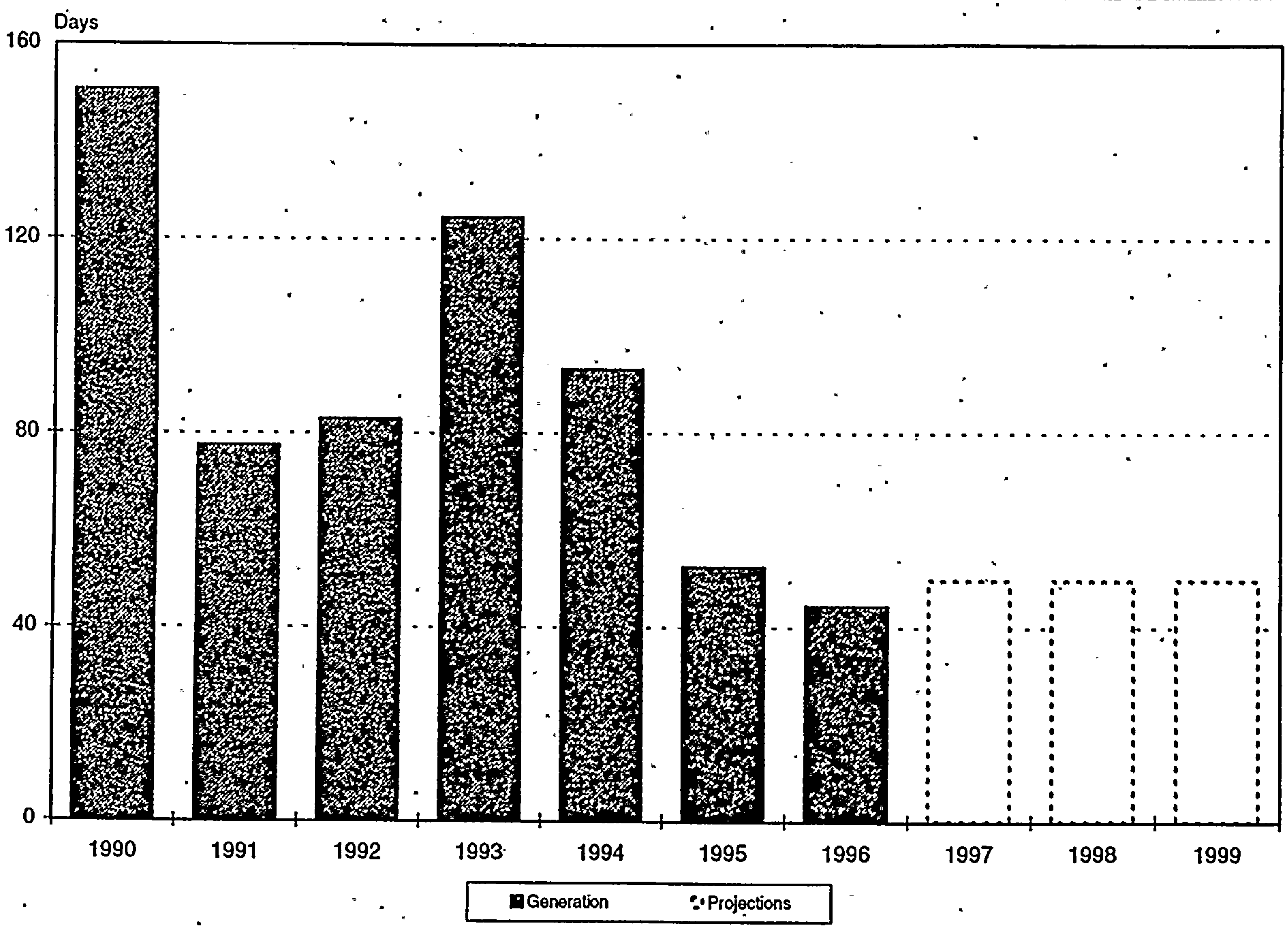


Dollars
160.0
120.0
80.0
40.0
0.0
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999

Average Annual Refueling Time

Year	Generation	Projections
1990	151	
1991	78	
1992	83	
1993	125	
1994	93	
1995	53	
1996	45	
1997		50
1998		50
1999		50

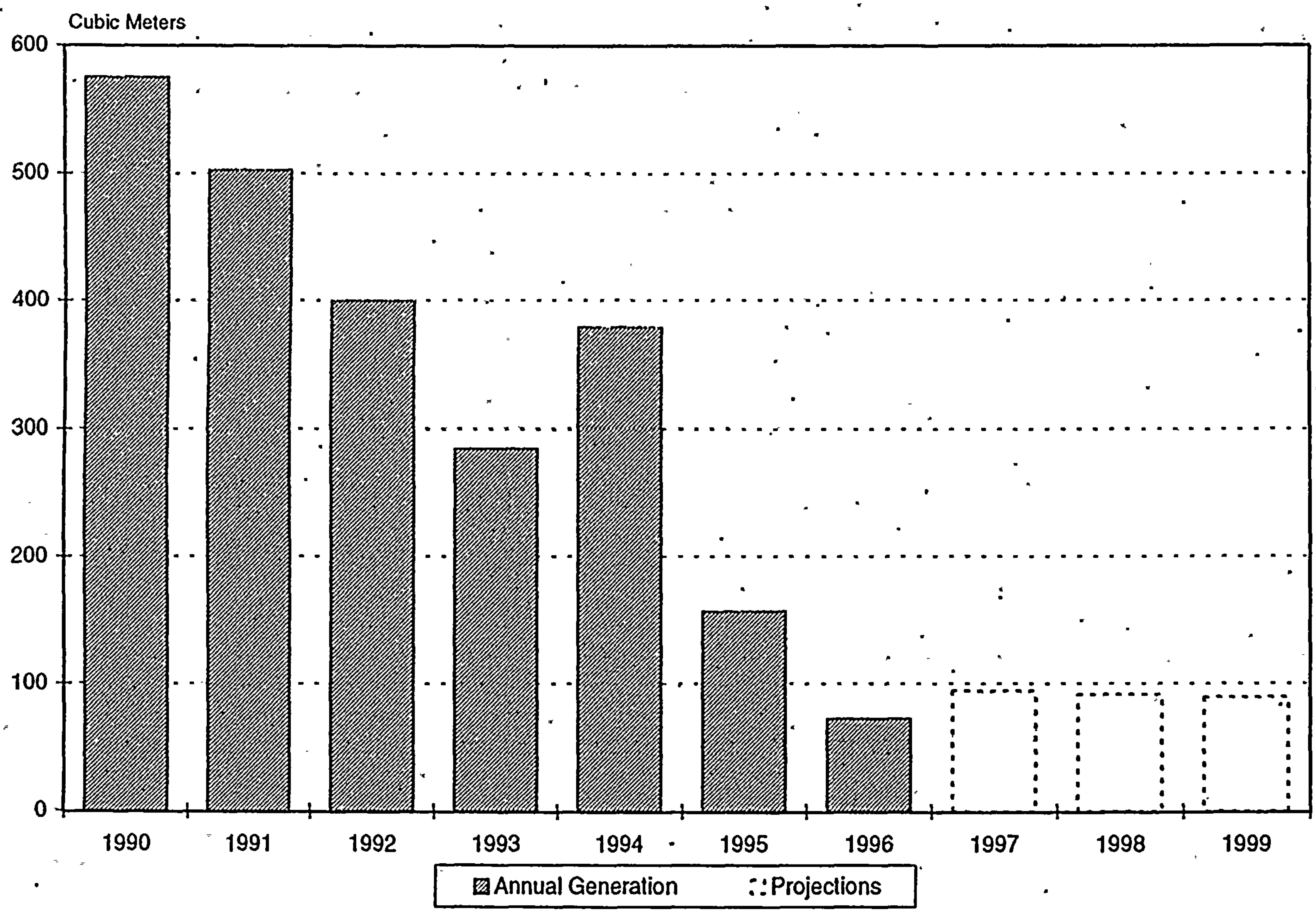
Average Annual Refueling Time



Low Level Solid Radioactive Waste

Year	Annual Generation	Projections
1990	575	
1991	503	
1992	400	
1993	285	
1994	380	
1995	157	
1996	73	
1997		95.0
1998		92.0
1999		90.0

Low Level Solid Radioactive Waste

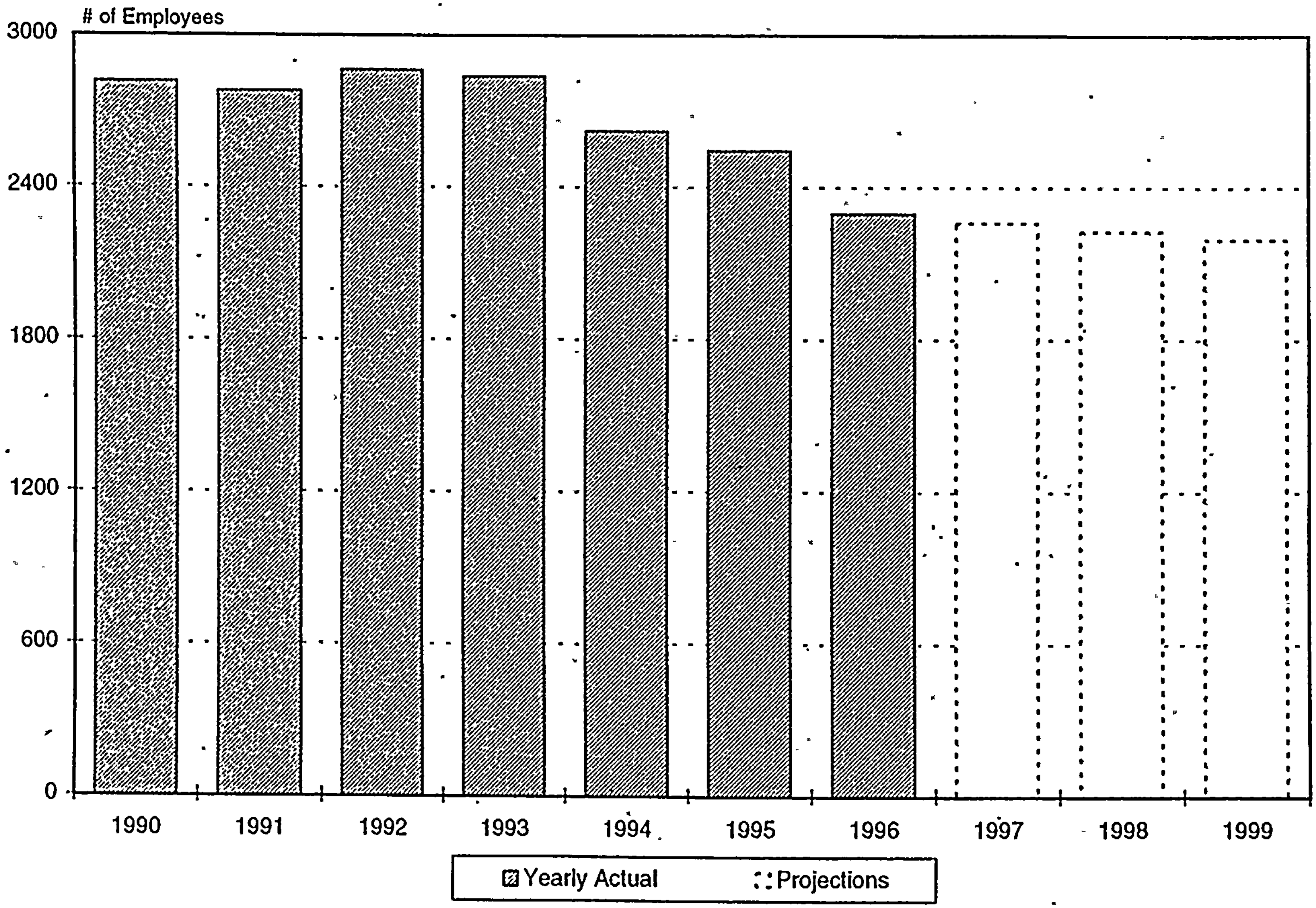


Staffing

(Direct Personnel)

Year	Yearly Actual	Projections
1990	2816	
1991	2778	
1992	2863	
1993	2837	
1994	2623	
1995	2546	
1996	2299	
1997		2264
1998		2230
1999		2196

Staffing



# of Employees
3000
2400
1800
1200
600
0
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
Yearly Actual
Projections

PALO VERDE
BUSINESS PLAN
97

PALO VERDE NUCLEAR GENERATING STATION

THE PALO VERDE TEAM:

Our many accomplishments in 1996 have paved the road for an even more successful 1997. We've passed significant milestones in our march toward efficiency and competition: record capacity factors, unprecedented production of electricity, record outages and substantial improvements in employee safety, to name a few. Extending those successes into the coming year and beyond will help assure our future.

The ultimate goal we have set for Palo Verde is to be the safest, most environmentally sound and lowest cost nuclear power station in the nation. Achieving these goals will continue to be challenging, and we have many more milestones to pass. While the five Palo Verde Principles have been and will continue to be an indispensable component of each success, we have reached a point where one more attribute, a Sixth Principle, is necessary to carry us the rest of the way.

The principle is Teamwork. It is an essential characteristic common to all great organizations.

This fall we will have the first opportunity in Palo Verde history to achieve back-to-back INPO 1 ratings. Teamwork will get us there. Our two refueling outage schedules will set new records for the third straight year. Teamwork will bring those schedules to fruition. We will begin 1997 with significantly fewer employees than a year earlier. Teamwork not only will smooth the transition, it will carry our work to a level of excellence unheard of just a few short years ago. Teamwork will improve our knowledge, the quality of our jobs and lives, and it will be a potent force to propel Palo Verde into the next, very different century for an electric utility.

The strategies and goals in this plan represent our next steps toward our promising future. They are ambitious for us as individuals; they are attainable by us as a team. By applying the six Palo Verde Principles — Simplicity, Intensity, Accountability, Tenacity, Positive Attitude and Teamwork — we will manage our own future.

We have been and will continue to be "The Energy Cornerstone of the Southwest."

Jim Levine

PALO VERDE NUCLEAR GENERATING STATION

The Palo Verde Business Plan outlines the vision and mission of the Palo Verde team.

The success of this business plan will be measured by carefully defined performance indicators. The following pages outline the vision and mission, strategies for advancing them and methods for measuring our progress.

The Palo Verde Nuclear Generating Station will be valued as a safe, reliable and low-cost producer of electricity in the competitive energy market.

Through the efforts of all employees, the Palo Verde Nuclear Generating Station will be recognized as:

- A leading producer of reliable electric energy in a manner that is safe and in compliance with regulatory requirements;
- The lowest cost nuclear producer of electric energy as measured by unit cost ratio;
- The industry leader in employee pride, teamwork and performance.

We will achieve this mission for our owners, employees and customers through our commitment to the six Palo Verde principles:

SIMPLICITY
INTENSITY
ACCOUNTABILITY AND FOLLOW UP
TENACITY
POSITIVE ATTITUDE
TEAMWORK

To meet the challenges of competition, we must focus our attention and resources on those areas that will most quickly and effectively move us toward our vision. We have targeted the following areas:

- NUCLEAR AND INDUSTRIAL SAFETY
- OVERSIGHT AND INDUSTRY PERFORMANCE
- ECONOMIC PERFORMANCE
- PLANT PERFORMANCE AND RELIABILITY
- ENVIRONMENTAL PERFORMANCE
- PROFESSIONALISM AND OUTREACH

Both strategic issues and performance indicators are reflected in our individual performance plans. Additionally, in keeping with the goal to tie pay to performance, selected performance indicators are used to determine the level of award under the overall employee incentive program

NUCLEAR AND INDUSTRIAL SAFETY

Our aggressive nuclear and industrial safety goals are among the competitive characteristics that set Palo Verde apart. To demonstrate safety as a personal value while lowering our operating costs, we must strengthen safe work practices, simplify our processes and reduce costs associated with regulation. The following strategies will drive our safety success.

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IMPROVE INDUSTRIAL SAFETY PERFORMANCE — Continued emphasis on reporting close calls, improving safety communications and training, improving root cause investigations and correcting those incidents, and recognizing our employees for practicing safe work behaviors will increase our awareness of safety as a personal value. Our goal is to be the leader in industrial safety.

REDUCE RADIOLOGICAL EXPOSURE — Palo Verde is committed to keeping our exposure as low as reasonably achievable. Continued emphasis on employee awareness is critical. Close cooperation between line organizations has resulted in significant dose reductions and this must remain a high priority in our work planning process.

REDUCE SIGNIFICANT EVENTS — Significant Events, whether human or equipment related, can have a major impact on our performance. Regardless of how they are identified, we must evaluate and resolve them as quickly as conservative decision-making will allow. We must then actively pursue the identification of other issues which could lead to significant events.

MAINTENANCE RULE MANAGEMENT — We must support the (a)(1) system goals and associated corrective actions to meet system performance expectations. Further refining system performance standards by analyzing appropriateness and effectiveness of Maintenance Rule activities will continue to be a critical process to maintain the material condition of our plants.

VERIFY FSAR / DESIGN BASIS CONFIGURATION — Operation of Palo Verde consistent with regulatory commitments and requirements relied upon by the NRC in licensing the facility and maintaining the license is paramount. This review will verify the effectiveness of processes for ensuring plant operation is consistent with the licensing and design basis.

IMPLEMENT IMPROVED TECHNICAL SPECIFICATIONS — In parallel with NRC review and approval of the Improved Technical Specifications (ITS), a detailed plan will be implemented sitewide for converting to the ITS.

NUCLEAR SAFETY PERFORMANCE INDICATORS

AUTOMATIC REACTOR TRIPS: The total number of unplanned automatic reactor trips for the three Palo Verde Units during the year.

	1997	1998	1999	2000	2001
AUTOMATIC TRIPS	2	2	2	2	2

RADIOLOGICAL CONTROL: Palo Verde is committed to maintaining radiological exposure as low as reasonably achievable. Aggressive RP monitoring, enhanced worker awareness and performance are essential to success, and will be measured by monitoring our collective radiation exposure. This is the sum of internal and external dose, known as the Total Effective Dose Equivalent (TEDE), that is received by all personnel including contractors and visitors.

	1997	1998	1999	2000	2001
EXPOSURE (REM)	351	327	305	307	302

NUCLEAR SAFETY PERFORMANCE INDICATORS

SIGNIFICANT EVENTS CAUSED BY HUMAN ERROR: Significant events caused by human error are those events which, if not corrected, can adversely affect the accomplishment of Palo Verde's mission, i.e., the safe, reliable and economic production of electricity. We measure our performance by the number of inappropriate behaviors resulting in or contributing to significant adverse conditions.

GOALS	1997	1998	1999	2000	2001
SIGNIFICANT EVENTS	8	7	6	6	6

MAINTENANCE RULE PERFORMANCE: Two indicators have been established to summarize the average performance results for maintenance rule systems with specific performance criteria. The measurement is the percent of systems meeting availability and reliability standards.

GOALS	1997	1998	1999	2000	2001
HIGH RISK %	97.5	97.5	97.5	97.5	97.5
LOW RISK %	92	92	92	92	92

INDUSTRIAL SAFETY PERFORMANCE INDICATORS

PREVENTABLE RECORDABLE INJURIES: The number of recordable injuries or illnesses. An injury or illness is considered recordable if it results from an event or exposure in the work environment that requires medical treatment, causes loss of consciousness, causes restriction of work or motion or results in a transfer to another job and is preventable.

GOALS	1997	1998	1999	2000	2001
NUMBER	10	10	10	10	10

The Palo Verde Vision and Mission Statements emphasize industry leadership as a key ingredient to our success. Leadership can be measured several ways. Direct ratings by regulatory or peer groups and ranking among other nuclear, utility or industry business units provide specific data on our relative standing.

STRATEGIC ISSUES

IMPROVE SELF-ASSESSMENT CAPABILITY — We must each be willing and able to do self-critical assessments of our programs and their implementation. This will lead to the continuous improvement necessary to support this business plan and assure that we are finding and fixing our own problems. As part of expanding our self-assessment program, organizations must promote the use of shared resources. The opportunity to participate in assessments and audits provides employees with new perspectives of the organization, its processes and its effectiveness.

EXPAND REGULATORY ACCEPTANCE OF SELF-ASSESSMENT PROGRAM — Palo Verde has earned the reputation as an organization which is self-critical and takes the actions necessary to resolve issues. As we continue to imbed these traits in our culture, we must work with our regulators, enhancing their confidence in Palo Verde, in order to gain their acceptance of our internal assessment programs.

ENHANCE INDUSTRY INFLUENCE — As the leading generator of electric power, Palo Verde shall expand its position of leadership in the industry. We will increase our participation in such activities as INPO evaluations and accreditation visits. Palo Verde must use its influence to ensure nuclear generation continues to be a safe, reliable and competitively positioned provider of electric energy.

OVERSIGHT AND INDUSTRY PERFORMANCE INDICATORS

PALO VERDE

SALP RATING: The Nuclear Regulatory Commission periodically gives Systematic Assessment of Licensee Performance (SALP) ratings in four functional areas: plant operation, maintenance, engineering and plant support. Each area is rated 1, 2 or 3 with 1 the highest rating. A composite rating is derived from the average of the four ratings.

GOALS	1997	1998	1999	2000	2001
SALP RATING	N/A	1.0	N/A	1.0	N/A

INPO RATING: The overall rating determined by INPO during its periodic plant evaluations. An INPO 1 is the highest attainable rating.

GOALS	1997	1998	1999	2000	2001
INPO RATING	1	N/A	1	N/A	1

MONTHLY PERFORMANCE TRENDS: The number of Palo Verde monthly performance trends accomplished satisfactorily, divided by the total number of performance trends and expressed as a percentage.

GOALS	1997	1998	1999	2000	2001
MTR % ACCOMPLISHED	83	85	85	85	85

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ECONOMIC PERFORMANCE

Palo Verde must continue to manage cost in order to be competitive. Our goal is to be the least cost nuclear producer of electricity in the United States by 2001 as measured by unit cost ratio. The responsible control of O&M and fuel costs will be managed at the lowest level possible in the organization. Cross organizational review and tracking of the cost factors is essential.

STRATEGIC ISSUES

CONTINUED EMPHASIS ON STRATEGIC BUSINESS INITIATIVES — Continuing the 1996 efforts to reduce contract labor, contract services and overtime will put Palo Verde in a position of greater control of our resources.

REDUCE WAREHOUSE INVENTORY — We must continue to reduce the considerable carrying costs associated with a large inventory of spare materials by stocking only material immediately needed to support unit operations. Consumables can be managed to provide just-in-time inventory at a lower cost.

MAKE ATTRITION WORK — Palo Verde is committed to achieving staff reductions through attrition. Broadening our skill base and simplifying our processes will allow attrition to work. As positions become vacant, we must critically challenge the need to refill them.

REVENUE GENERATION — PVNGS will pursue sound business and economic opportunities to generate new revenue. Any new business opportunities pursued will be consistent with PVNGS' business strategy and will not reduce or compromise the safe and reliable operation of the plant.

IMPLEMENTATION OF THE INTEGRATED RISK MANAGEMENT PROGRAM — Integration of risk insights into PVNGS processes will allow us to increase plant safety by focusing resources on the systems and components contributing most to plant safety. We will reduce costs through the reduction of inspections and testing on systems and components not contributing significantly to plant safety.

SELECT AND IMPLEMENT A SITE WORK MANAGEMENT SYSTEM —Implementating an integrated work management system is key to simplifying our processes. A single work management system will integrate such areas as maintenance, engineering, operations, records, training and radiation protection through a central data repository.

SIMPLIFY AND REDUCE PROCEDURES — In 1996, program documents were prepared for 18 areas. Continued development of departmental procedures will significantly streamline work and reduce procedure maintenance without sacrificing safety.

ECONOMIC PERFORMANCE INDICATORS

OPERATIONS AND MAINTENANCE COSTS: The recurring cost of conducting day-to-day operation of the nuclear plants and keeping them in standard operating condition.

GOALS	1997	1998	1999	2000	2001
O&M COST (MILLION $)	325.1	320.0	315.0	310.0	305.0

FUEL COST: Dollars spent to procure nuclear fuel and related services.

GOALS	1997	1998	1999	2000	2001
FUEL COST (MILLION $)	137.0	143.0	148.0	152.0	145.6

CAPITAL COST: Dollars spent on capital replacement and new capital equipment, including capital modifications.

GOALS	1997	1998	1999	2000	2001
CAPITAL COST (MILLION $)	42.0	53.0	53.0	53.0	53.0

PRODUCTION COST RATIO: Total O&M dollars and fuel cost for a period of time, divided by the net energy produced during the period. Also includes NRC fees and DOE charges, but excludes certain overhead costs.

GOALS	1997	1998	1999	2000	2001
PRODUCTION COST RATIO (CENTS/KWHR)					
O & M	.84	.83	.82	.81	.79
FUEL	.51	.51	.53	.54	.55
TOTAL	1.35	1.34	1.35	1.35	1.34

INVENTORY VALUE: Total dollar value of all materials, parts and supplies in stock at end of each month. Excludes capital spares.

[illegible]	1997	1998	1999	2000	2001
INVENTORY VALUE (MILLIONS)	117.1	92.0	84.9	80.0	80.0

PLANT PERFORMANCE AND RELIABILITY

PALO VERDE

Palo Verde is a leading producer of electrical energy in the United States. We will continue our efforts to increase production and to set new records for generation. Increased generation is a result of several measurable factors. Additionally, improvements to our systems and processes will continue to drive generation up. Generation is the major contributor to unit cost ratios.

STRATEGIC ISSUES

REDUCE OUTAGE DURATIONS — Reducing the average length of refueling outages increases production and lowers costs. Although we will plan replacement power for 50 day outages, Palo Verde's goal is to complete the scheduled outage scope in a safe and efficient manner consistent with the outage work plans of under 50 days.

IMPROVE THERMAL PERFORMANCE — By extracting more heat energy from the same amount of steam, we can generate more megawatts. This translates into a lower heat rate or BTUs per kilowatt-hour. We will look for new ways to improve the efficiency of the units and react faster to megawatt losses.

DEVELOP A PLAN FOR REPLACEMENT OF UNIT 2 STEAM GENERATORS— Palo Verde will be prepared to replace Unit 2 steam generators when it becomes appropriate based upon economic and operational considerations.

STEAM GENERATOR MANAGEMENT PROGRAM— PVNGS continues to be involved with industry developments in corrosion monitoring, prevention, prediction and repair to achieve the maximum useful life from the PVNGS steam generators. Additionally, these initiatives will allow Palo Verde to continue to operate without mid-cycle outages and reduce the outage scope associated with generator issues.

IMPLEMENT AIR OPERATED VALVE AND SOLENOID OPERATED VALVE PROGRAMS — These valves often require higher than normal maintenance and have jeopardized the reliability of all three units. A comprehensive program will improve valve reliability.

IMPLEMENT THE MINOR MAINTENANCE PROGRAM— As we implement the fix-it-now (FIN) teams in early 1997, it is essential that we continually re-evaluate the process to ensure that all maintenance work practices are consistent with regulatory requirements and demonstrate a conservative approach to work. At the same time, we must look for additional areas where the concept can be implemented.

ENHANCE SECONDARY PLANT PERFORMANCE— The performance and reliability of the secondary plant has a direct impact on safety and plant availability. New monitoring and evaluation programs will be developed for large components, i.e., turbine, condensers and main generator to further improve the efficiency and reliability of our secondary plant.

PALO VERDE

PLANT PERFORMANCE AND RELIABILITY INDICATORS

OUTAGE DURATION: Number of days for scheduled outages (2 units per year).

GOALS	1997	1998	1999	2000	2001
OUTAGE DURATION (TOTAL DAYS)	100	100	100	100	100

FORCED OUTAGE RATE: The average percentage of time each unit is unavailable because of forced events, compared to the time planned for electrical generation.

GOALS	1997	1998	1999	2000	2001
FORCED OUTAGE RATE (%)	3.0	3.0	3.0	3.0	3.0

CAPACITY FACTOR: Capacity Factor (MDC Net) % - [Net Generation (MWH) / Maximum Dependable Capacity x Period Hrs)] x 100.

GOALS	1997	1998	1999	2000	2001
CAPACITY FACTOR (% MDC NET)	88	88	88	88	88

MAINTENANCE TO WORK: The monthly average of corrective maintenance (work orders and work requests) excluding outage, plant modifications and work not related to the plant.

GOALS	1997	1998	1999	2000	2001
MAINTENANCE TO WORK	1500	1300	1100	1000	1000

PALO VERDE CHEMISTRY INDEX (PVCI): The PVCI indicator developed by Site Chemistry combines several key chemistry parameters into a single indicator that can be used as an overview of the relative effectiveness of Plant Operational Chemistry Control. An indicator of 1.0 is considered optimum.

GOALS	1997	1998	1999	2000	2001
PVCI	1.0	1.0	1.0	1.0	1.0

Palo Verde shall be a recognized leader on environmental issues and performance. Effective environmental management is essential, both as a social obligation and as a business strategy. We are publicly committed to not only comply with environmental laws and regulations, but also to actively seek opportunities to improve beyond regulatory requirements.

STRATEGIC ISSUES

RAISE ENVIRONMENTAL AWARENESS — Palo Verde will foster a culture that encourages environmentally responsible behavior by integrating environmental requirements into work practices, reducing waste streams and implementing pollution prevention activities. We will continue to demonstrate that Palo Verde is ideally suited to the desert environment in which we are located.

REDUCE WASTE STREAM — Palo Verde is committed to demonstrating that we will be a leader both in the safe and reliable production of electrical energy and in environmental issues. We must continue to emphasize our commitment through increased recycling, reductions in the use of hazardous materials and the responsible disposal of waste generated.

DEVELOP DRY-CASK SPENT FUEL STORAGE — Delays in opening of a federal repository will require Palo Verde to develop and implement a plan to store a portion of the spent fuel on site in dry-cask storage until the federal government is prepared to take possession of the fuel.

ENVIRONMENTAL PERFORMANCE INDICATORS

PALO VERDE

LOW-LEVEL RADIOACTIVE WASTE: The total volume of low-level solid radioactive waste generated, in cubic meters. This includes the volume of low-level waste ready for shipment or actually shipped.

GOALS	1997	1998	1999	2000	2001
LOW-LEVEL RADWASTE (CUBIC METERS)	95	92	90	85	83

1.

MIXED WASTE: Waste generated in the course of normal operation of Palo Verde that is both radiological and chemically hazardous.

GOALS	1997	1998	1999	2000	2001
MIXED WASTE POUNDS/YR.	50	50	50	50	50

HAZARDOUS WASTE: Waste generated in the course of normal operation of Palo Verde that is chemically hazardous.

GOALS	1997	1998	1999	2000	2001
HAZARDOUS WASTE TONS/YR.	<13.2	<12	<11	≤10	≤10

SOLID WASTE: Waste disposed of in the solid waste landfill on site. Does not include Water Reclamation sludge or concrete tailings.

GOALS	1997	1998	1999	2000	2001
SOLID WASTE CUBIC YARDS.	5000	4800	4600	4500	4500

PROFESSIONALISM

People are Palo Verde's most important resource. As we prepare to move into the competitive environment, we will be challenged to achieve performance levels above those of the past. Our people will need to expand their skills to support routine, emergent and outage work. We must provide a safety-conscious environment in which employees feel free to raise concerns, learn from mistakes and continually strive for exceptional performance. Establishing Palo Verde as open, accessible and responsive to the public and press will increase public appreciation of nuclear energy and build strong public support for Palo Verde as an important community resource.

STRATEGIC ISSUES

TRAIN PALO VERDE EMPLOYEES AS MULTI-SKILLED WORKERS — Multi-skilling will create a cadre of employees experienced in several jobs. This will allow the attrition strategy to work while putting Palo Verde in a better position to handle routine, emergent, and outage work without additional contractor support.

TIMELY RESOLUTION OF EMPLOYEE ISSUES — At Palo Verde, we strive to maintain an environment in which employees feel free to address all types of concerns with their leader. Timely, mutually agreed upon resolutions will help ensure Palo Verde remains a safe, reliable and cost effective plant.

IMPROVE DIVERSITY AWARENESS AT PALO VERDE — Increased awareness of the positive effects of a diverse work force will allow employees to capitalize on the strengths and contributions of all employees and improve efficiency and employee morale.

PROMOTE COMPETITIVE OPPORTUNITIES FOR MINORITY AND WOMEN-OWNED BUSINESSES — Recognizing that Palo Verde has both a business need and a social responsibility to support all segments of the community, we will accelerate the use of enterprises owned by women and minorities in purchasing goods and services.

ENHANCE PALO VERDE'S TOUR AND OUTREACH PROGRAMS — A standardized system of tours will simplify access for visitors and increase understanding of nuclear energy. Using Palo Verde's World Wide Web site for public outreach activities will reach new audiences.

ESTABLISH A COMPREHENSIVE LOCAL AND NATIONAL MEDIA RELATIONS PROGRAM — This program will familiarize reporters and editors with Palo Verde, build trust with Palo Verde information sources and create a positive impression of Palo Verde and nuclear power that can be transmitted to the public.

EXPAND RELATIONS WITH ELECTED OFFICIALS — By building strong relationships with local, state and national elected officials, Palo Verde can increase the understanding of important nuclear issues among lawmakers and build trust among government policy makers.

PROFESSIONALISM PERFORMANCE INDICATORS

PALO VERDE

ISSUES RESOLUTION: The time required to resolve employee issues reported through the MITR process, or through the employee concerns program, measured in number of days.

GOALS	1997	1998	1999	2000	2001
ISSUES RESOLUTION # OF DAYS	35	30	30	30	30

MINORITY AND WOMEN OWNED BUSINESS ENTERPRISES (MWBE): The percentage of total spending for goods and services from both primary and secondary MWBEs. This percent does not include nuclear fuel expenditures.

GOALS	1997	1998	1999	2000	2001
MWBE % SPENT	11	15	20	25	25

EMPLOYEES WORKING IN SECONDARY JOBS: In order to meet our staffing and attrition goals, we must have a cadre of employees trained in secondary jobs. For 1997, this will reflect the number of individuals working in secondary jobs per outage.

GOALS	1997	1998	1999	2000	2001
OUTAGE SUPPORT PERSONNEL	350	350	350	350	350