

## U.S. NUCLEAR INDUSTRY ANNUAL AVERAGE PERFORMANCE INDICATORS

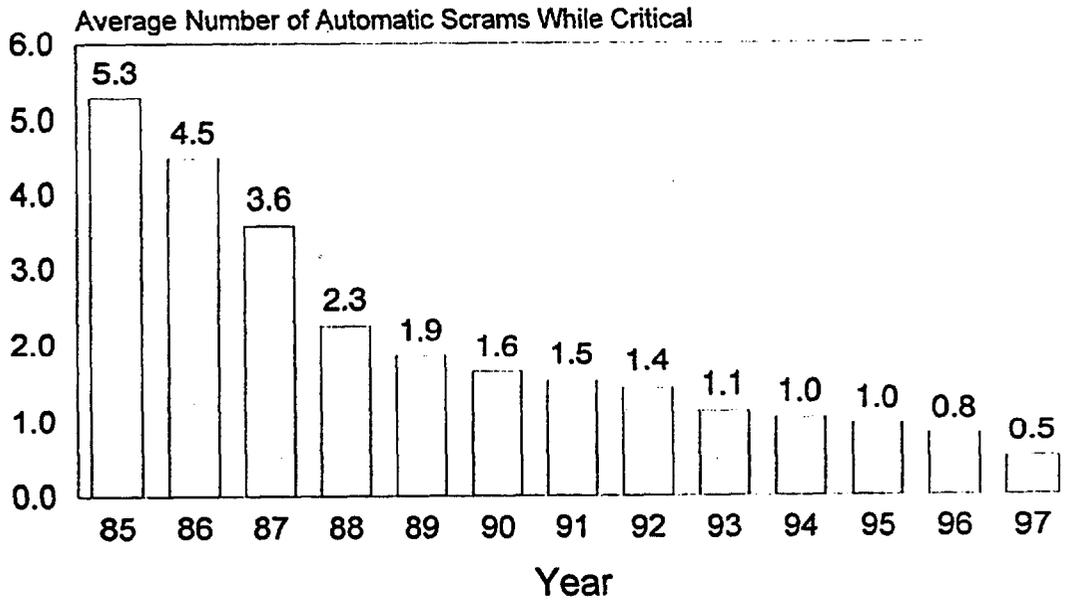
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- Since 1985, NRC has evaluated the nuclear industry's safety performance and reliability through monitoring the following set of performance indicators (Charts I-1 thru I-7):
  - Automatic Scrams
  - Safety System Actuations
  - Significant Events
  - Safety System Failures
  - Forced Outage Rate
  - Equipment Forced Outage Per 1000 Critical Hours
  - Collective Radiation Exposure
- The safety performance, as indicated by the trend of the majority of indicators, has improved steadily, and the number of safety-significant operational events and number of the initiating events resulting in scrams have declined significantly. Safety System Failures and Forced Outage Rate (%) are trend-neutral.

**The number of initiating events resulting in scrams have steadily declined—resulting in fewer and less complicated plant transients.**

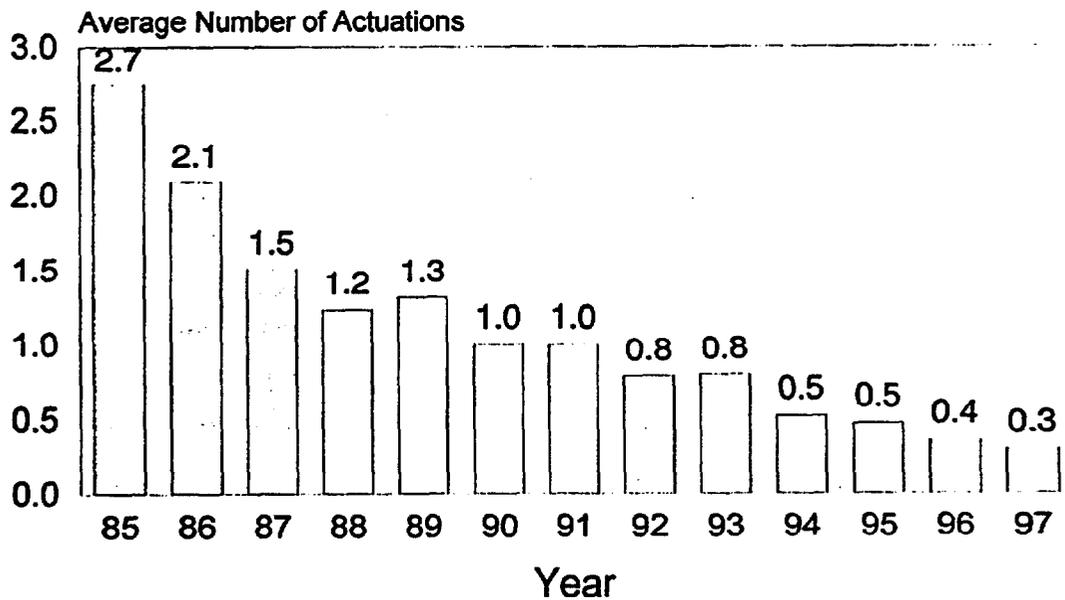
- Since the early 1990s, about 70% of scrams have been caused by equipment failures. Safety system failures, forced outage rate (%), and equipment forced outage rate have remained relatively constant since the early 1990s. (Chart I-8)
- Unit availability improved from 1986 to 1995—primarily due to reduced scheduled outage hours as a consequence of longer fuel cycles and shorter refueling outages.
- The availability declined in 1996 and 1997 because there were a number of plants (e.g. Millstone 1, 2, and 3) in extended shutdown.

## AUTOMATIC SCRAMS PER UNIT



I-1

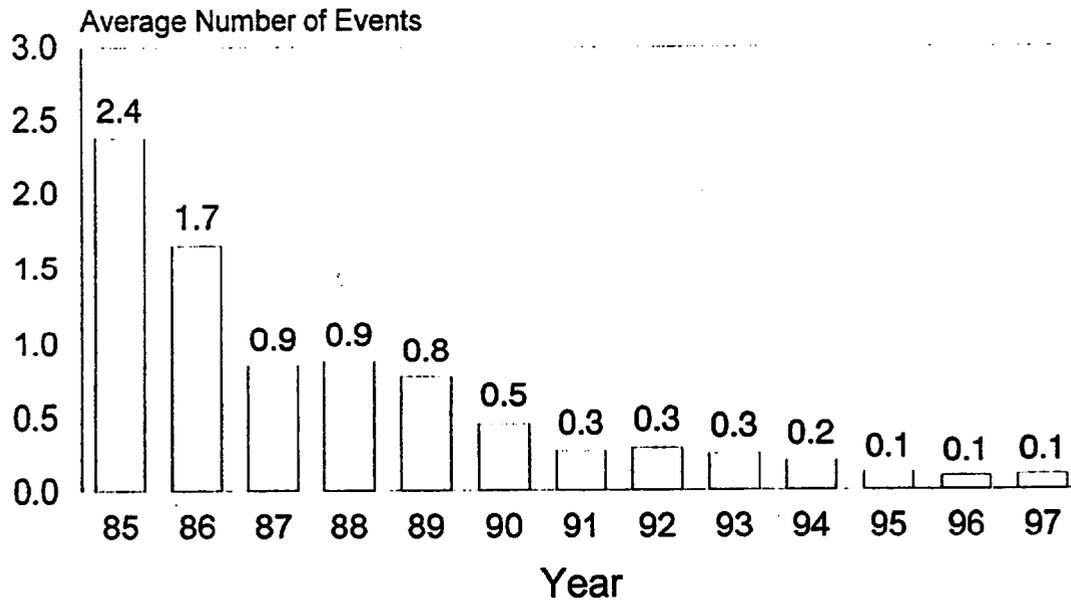
## SAFETY SYSTEM ACTUATIONS



1997 projected from first three quarters

I-2

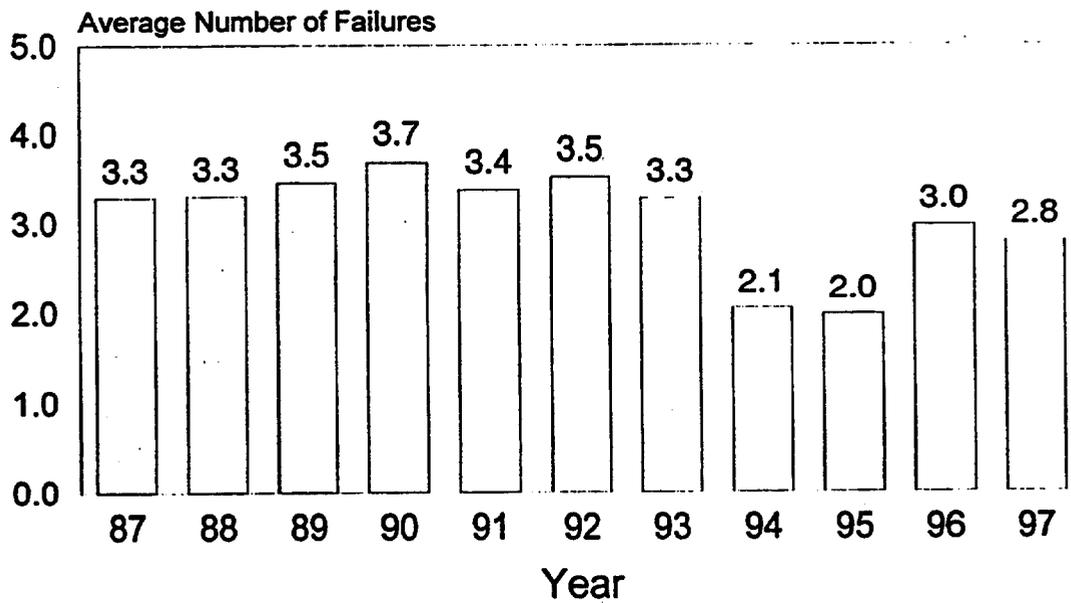
## SIGNIFICANT EVENTS



1997 projected from first three quarters

I-3

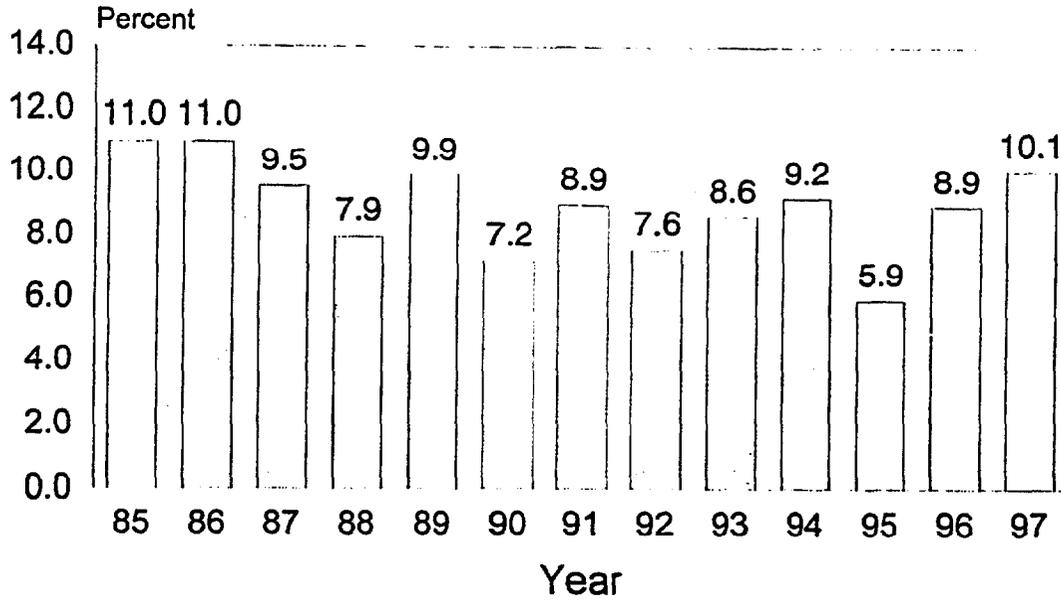
## SAFETY SYSTEM FAILURES



1997 projected from first three quarters

I-4

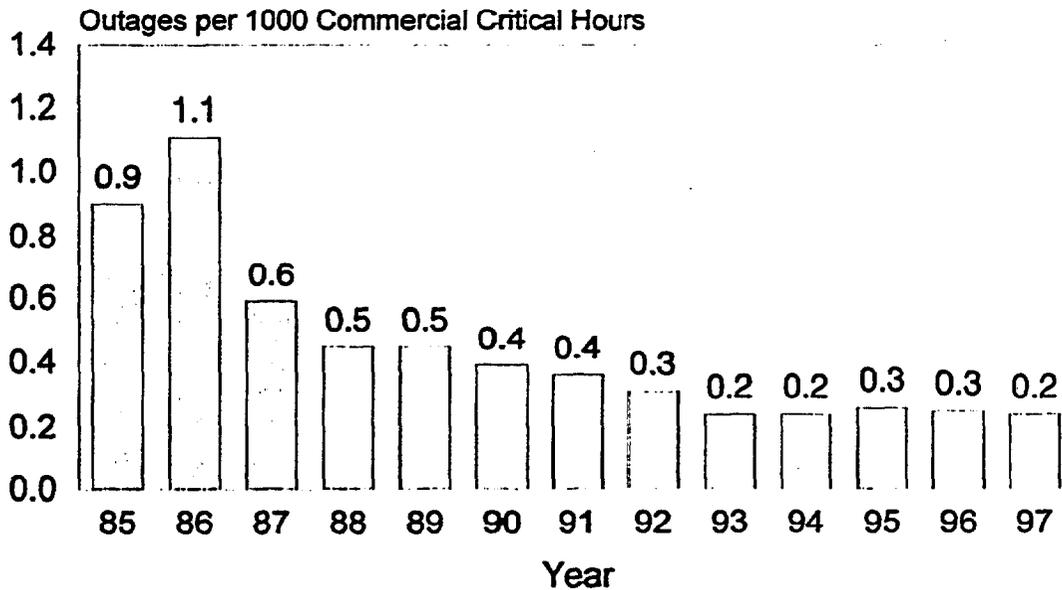
## FORCED OUTAGE RATE (%)



1997 projected from first three quarters

I-5

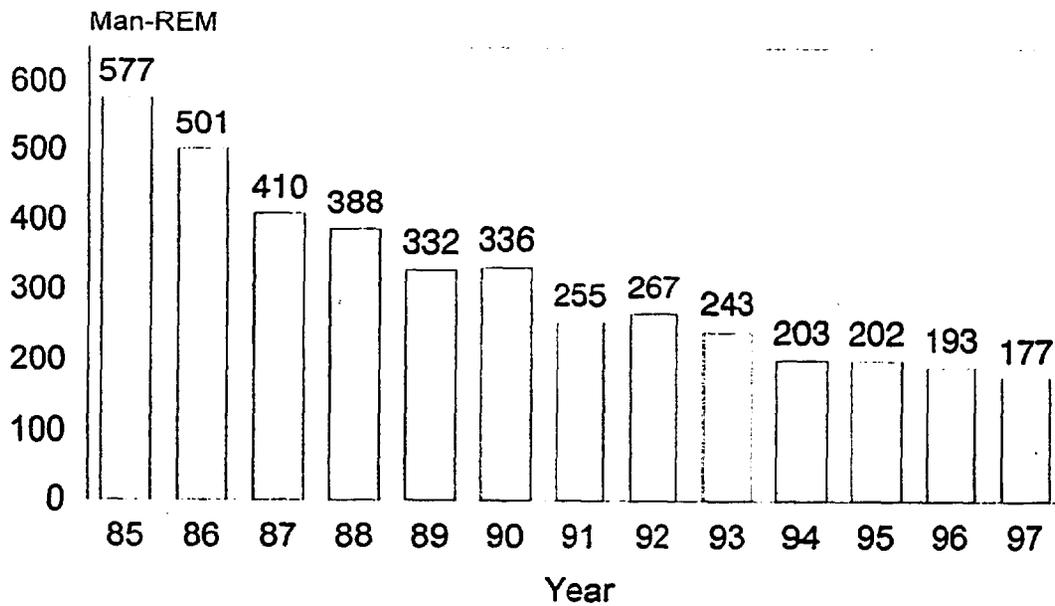
## EQUIPMENT FORCED OUTAGE RATE



1997 projected from first three quarters

I-6

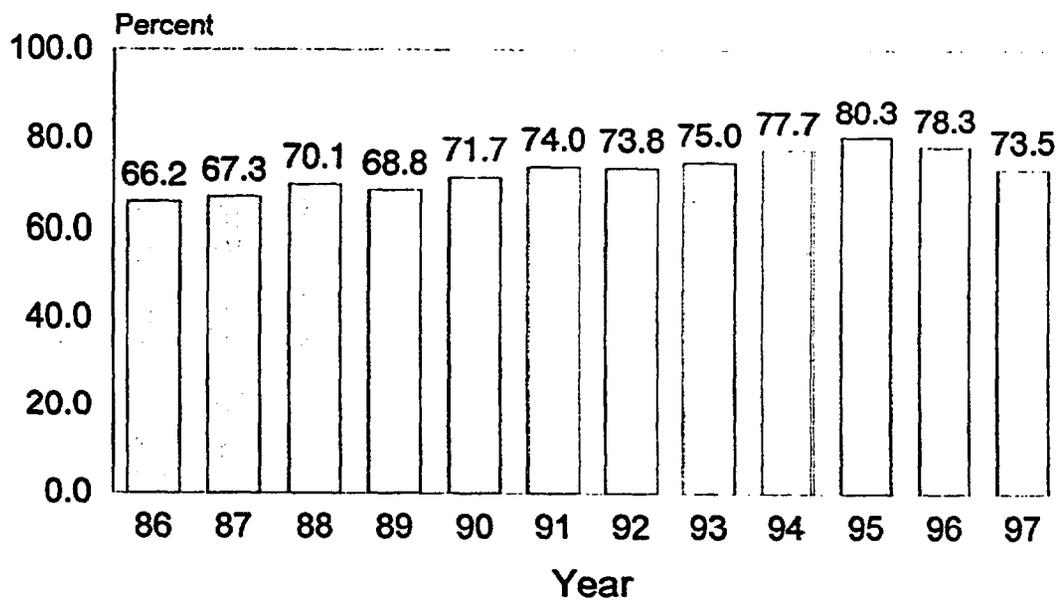
## COLLECTIVE RADIATION EXPOSURE



1997 projected from first three quarters

I-7

## AVAILABILITY (% TIME) by YEAR



I-8

## ACCIDENT SEQUENCE PRECURSOR (ASP) PROGRAM

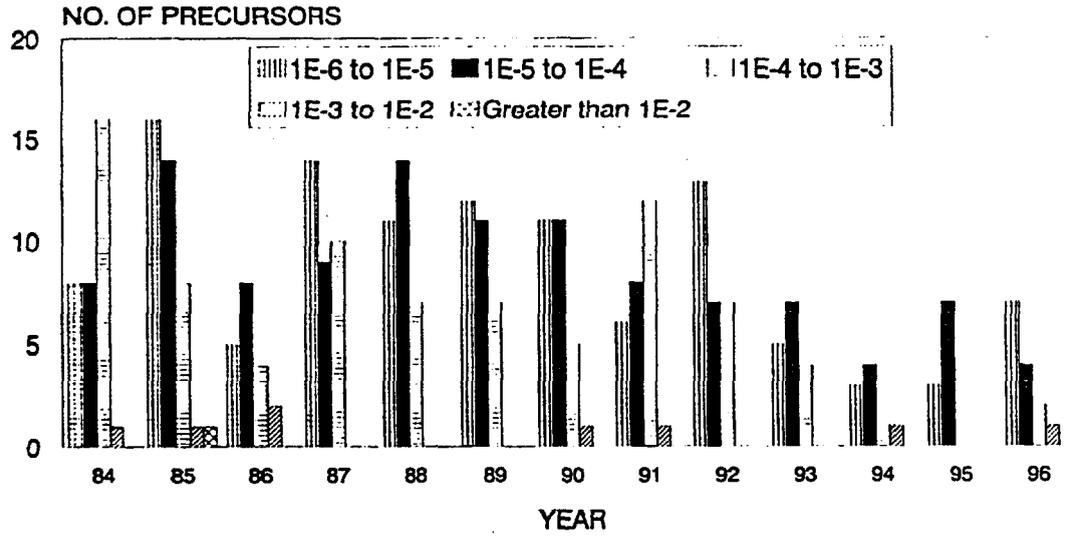
- The ASP program systematically evaluates the U.S. nuclear plant operating experience to identify those operating events that are significant in terms of their potential for inadequate core cooling and subsequent core damage.
- The ASP program quantifies the risk significance of operational events, using PRA methodology to model accident sequences initiated by operational events that involve challenge to or compromise of plant functions which provide protection against potential core damage.
- The figure of merit used in the ASP Program is the conditional core damage probability (CCDP) which represents the probability of subsequent severe core damage given the failure(s) observed during an operational event (Chart II-1).
- Most operational events (and therefore precursors) are directly or indirectly associated with four initiators of core damage sequences: reactor trip (including loss of main feedwater), loss of offsite power, small break LOCA, and steam generator tube rupture (SGTR). Occasionally, operational events that impact other initiators, such as medium or large break LOCA, are identified as precursors. Operational events considered for ASPs historically include support system failures, specific multiple failures, and unexpected core damage initiators.
- Potentially significant events are sometimes impractical to analyze due to inadequate data or inability to model within PRA framework and available resources—although such events are considered capable of impacting core damage sequences, they are excluded from the ASP analyses for practical considerations.

II

## ACCIDENT SEQUENCE PRECURSOR (ASP) PROGRAM INSIGHTS

- Electric power related events and conditions have contributed a significant fraction to the precursor events since 1986.
- Over the last 10 years of precursor data, there has been an average of about 4 LOOP events per year. There were no LOOP events in 1994 and 1995, and 4 in 1996.
- Degraded AFW events continue to be significant contributors to precursor events.
- In 1996 there were 64% precursor events at multi-unit sites compared to an average value of 78% over the 10-year period 1986-1996.
- The number of precursors occurring annually has decreased since 1984 but it is difficult to meaningfully assess the significance of this trend for two reasons: (1) there have been changes to the ASP models and analysis methods from year to year; and (2) since 1992, the precursors analyses have been sent to the affected licensees for review and comment resulting, in some cases, in reanalysis of the events due to the consideration of the use of alternate equipment and other recovery measures not previously included.

ACCIDENT SEQUENCE PRECURSORS FOR CCDP RANGES



1. POTENTIALLY SIGNIFICANT EVENTS THAT WERE IMPRACTICAL TO ANALYZE WERE EXCLUDED. HOWEVER, SINCE 1992 MODELING ENHANCEMENTS HAVE REDUCED THESE SIGNIFICANTLY AND THERE WERE NONE IN 1996.
2. THE 3/20/90 VOGTLE EVENT HAS BEEN ROUNDED UP FROM 9.7E-4 TO 1.0E-3.

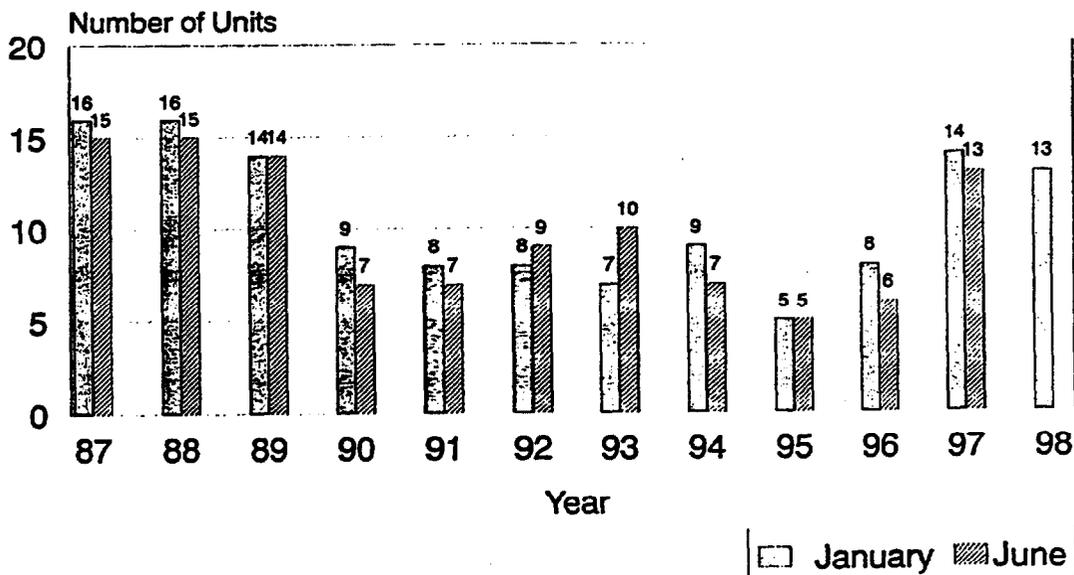
II-4

## WATCH LIST PLANTS

- NRC senior managers semi-annually discuss, among other things, plants with performance problems. The senior management meetings (SMM):
  - 1) Identify potential problem performance and adverse trends before they become actual safety events; and
  - 2) Effectively utilize agency resources in overseeing operating reactor safety.
- As a result of the twenty-fourth meeting held in January 1998, thirteen units associated with seven sites were identified as category 2 or 3 watch list plants. Changes to the watch list from the previous SMM were (Chart III-1):
  - 1) Clinton was added to the watch list as a category 2 plant
  - 2) Maine Yankee was administratively removed from the Watch List
- Other than the increase from June 1996 to January 1997, the number of plants on the Watch List has remained fairly steady. The January 1997 increase was generally attributed to declining operational safety performance. In addition, weaknesses in the design engineering area contributed directly to the decision to place two facilities on the Watch List.

III

## WATCH LIST PLANTS (CATEGORIES 2 AND 3)



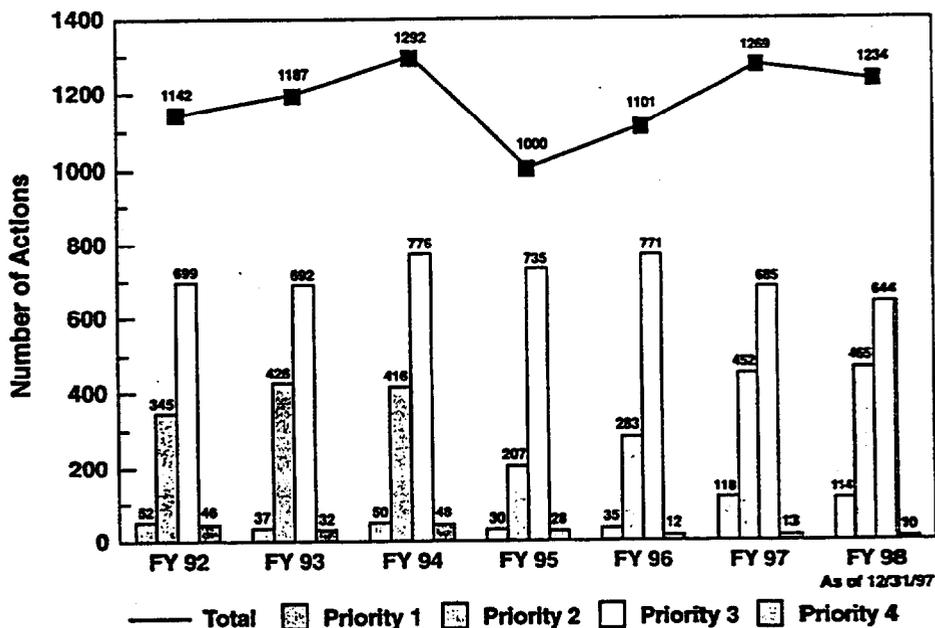
III-1

## NRR LICENSING TRENDS

- **Licensing Actions Inventory (Chart IV-1):**
  - Inventory increased due to increased focus of resources on plants such as three Millstone units, Maine Yankee, and Commonwealth Edison plants.
  - Although the inventory decreased slightly in FY 98, it is expected to increase through the year and possibly through FY99
  - Performance plan has a goal of licensing inventory of 1500 or less items
- **New procedures for notice of enforcement discretion (NOEDs) were issued in 1995.** NOEDs issued decreased markedly in FY 95 and FY 96. The decrease appears to be due to the staff's/licensee's interpretation of the revised Commission policy on NOEDs as reflected in the procedures revised in 1995 (IMC9900). FY 97 NOEDs were higher, and FY 98 NOEDs are expected to be comparable to 1997 (Chart IV-2 and IV-2a).
- **Exemptions decreased in FY 96 due to the licensee's/staff's interpretation of the Commission's policy on exemptions.** Unique emerging issues such as Charcoal Filters, Radiation Monitors for Spent Fuel Dry Storage tend to increase the number of exemptions issued. Exemption usage is monitored for trends to determine if rulemaking is warranted (Chart IV-3).

IV

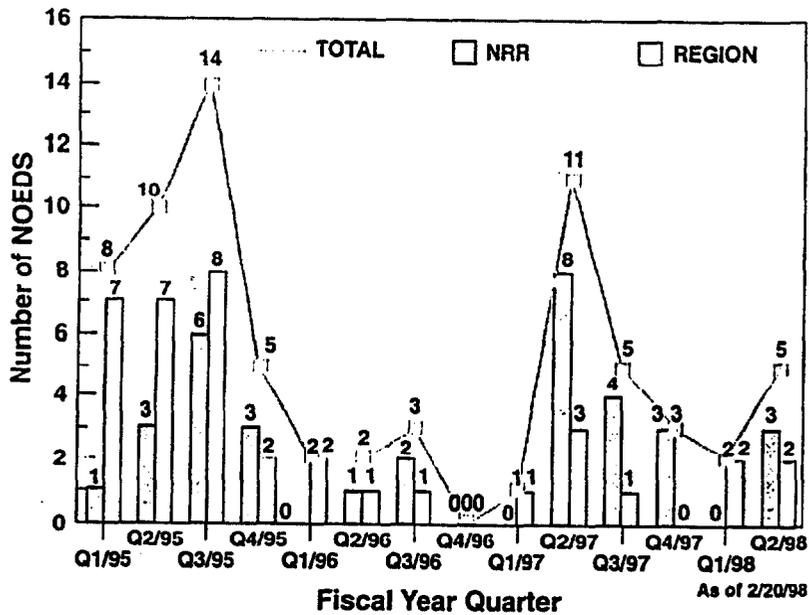
### LICENSING ACTION INVENTORY BY PRIORITY – FY 92 TO FY 98



SOURCE: WISP AS OF 1/21/98

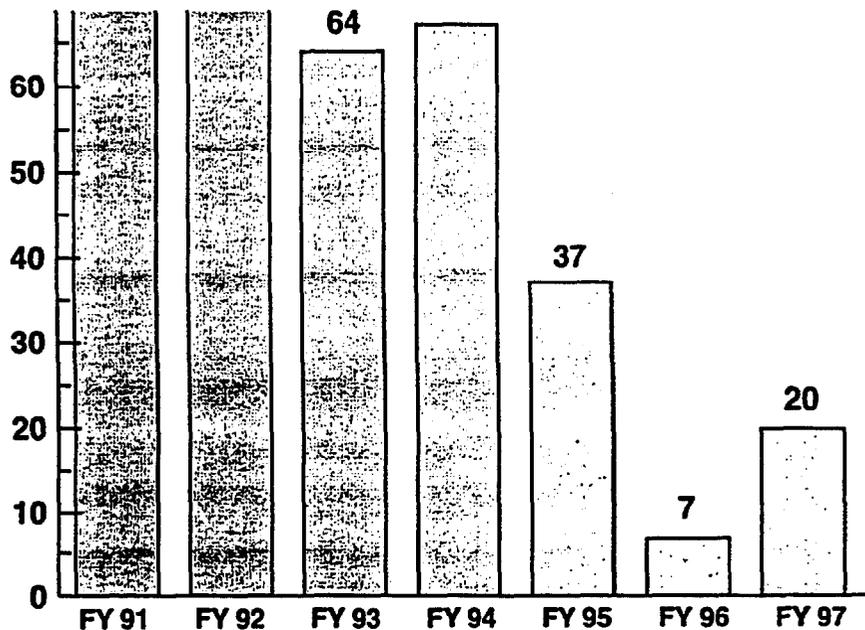
IV-1

## NOTICE OF ENFORCEMENT DISCRETION NOEDS ISSUED BY FY QUARTER



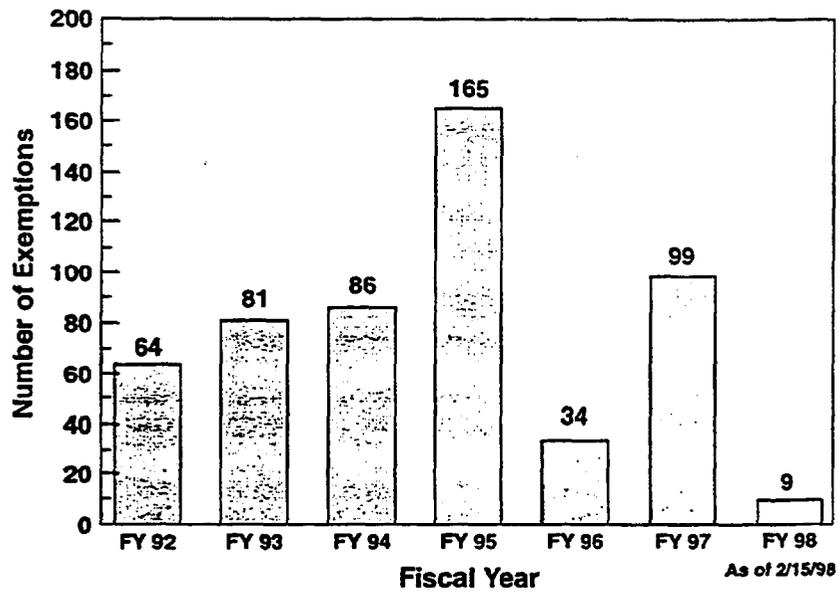
IV-2

## NOTICE OF ENFORCEMENT DISCRETION NOEDS ISSUED BY FY



IV-2a

## EXEMPTIONS ISSUED BY FISCAL YEAR



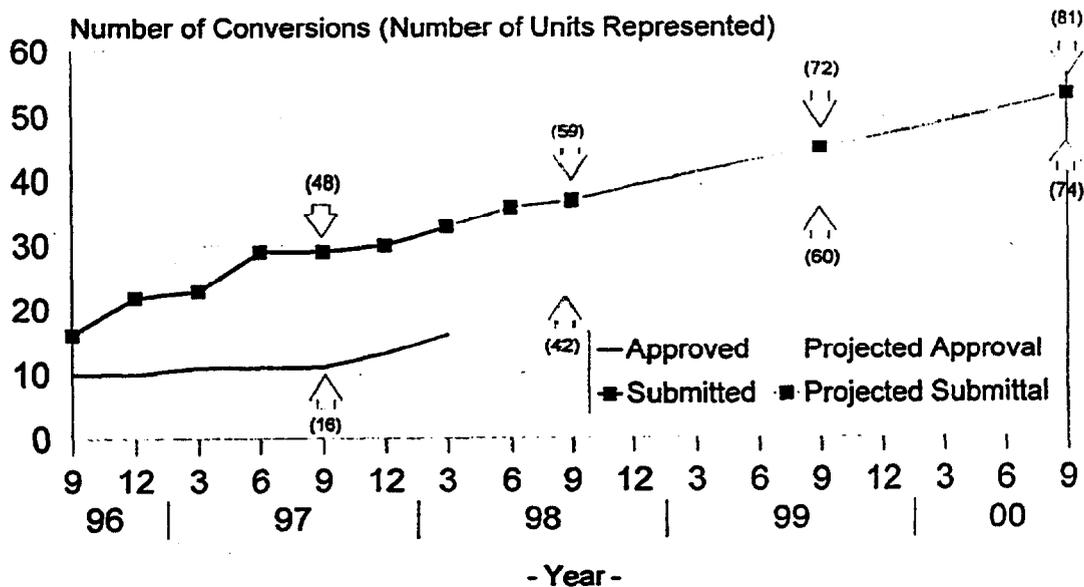
IV-3

## IMPROVING THE TECHNICAL SPECIFICATIONS

- **IMPROVED STANDARD TECHNICAL SPECIFICATIONS** - Chart V-1 shows the actual and projected number of applications to convert to the iSTS submitted by licensees, as well as the actual and projected number of approved applications. The number of units represented by the applications are also shown since, in the case of multi-unit sites, an application may represent more than one unit.
- High rates of submittals during FY 1996 and FY 1997 has resulted in a significant inventory of applications being reviewed and an average review time of over 18 months. Starting in FY 1998, the staff hopes to increase the approval rate, which combined with a reduced rate of submittals, should reduce the inventory of applications under review and shorten the average review time.

v

## IMPROVED STANDARD TECHNICAL SPECIFICATIONS



FEBRUARY 98 (RIC)

v-1

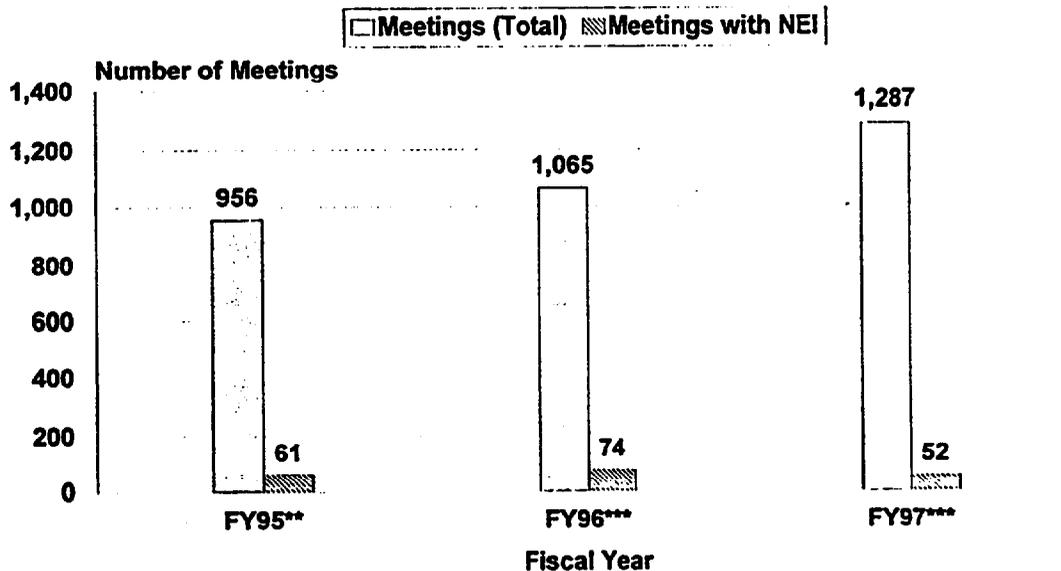
## MEETINGS OPEN TO PUBLIC OBSERVATION

- The NRC's public meeting notice system provides daily update on an electronic bulletin board system of the upcoming NRC meetings open to public observation.
- Records since 1995 indicate that the number of NRC meetings open to public observation has been steadily increasing (Chart VI-1).
- Meetings with NEI have been in the 7% range, except that in 1997 there were about 4.5% meetings between the NRC and NEI.

VI

## MEETINGS OPEN TO PUBLIC OBSERVATION

CHART VI-1 (NRC'S PUBLIC MEETING NOTICE SYSTEM) PMNS\*



\*NRC's Electronic Bulletin Board System for Information on Upcoming Meetings  
 \*\*Staff Meetings Only      \*\*\*Includes Commission and ASLB Meetings

VI-1

## NRC TOTAL OVERSIGHT EFFORT

- **TOTAL EFFORT FOR SINGLE UNIT SITES** - For total effort at single unit sites (Chart VII-1), the total number of hours has decreased by 6.5% from FY 1996 to FY 1997. The largest decrease comes from Millstone 1, which decreased by 53% (22,795 to 10,723) and accounts for nearly half of the drop-in hours. The remaining half is split between Haddam Neck and Ginna, with the greater decrease of 59% (16,105 to 6,596) going to Haddam Neck. As a result of completion of resource intensive activities on steam generator replacement and improved technical specifications in FY 1996, effort on Ginna dropped from 13,698 hours in FY 1996 to 8,245 hours in FY 1997. Significant increase occurred at Indian Point 2 where the total hours increased by 107% (from 4,977 hours in FY 1996 to 10,319 in FY 1997). There were other increases and decreases in hours that are not as significant as those mentioned above.
- **TOTAL EFFORT FOR DUAL UNIT SITES** - For hours at Dual Unit sites (Chart VII-2), however, the total effort increased by 5% (19,575) from FY 1996 to FY 1997. The bulk of the increase was due to Salem and Dresden. Salem increased from 15,719 hours in FY 96 to 26,608 hours in FY 97; representing an increase of 69%. Dresden increased from 18,003 total hours in FY 96 to 19,558 in FY 97. Together, these two plants account for 4.5% of the increase in total effort.
- **TOTAL EFFORT FOR TRIPLE UNIT SITES** - Triple unit sites (Chart VII-3) increased only slightly from FY 1996. Oconee 1,2,3 increased by 1,300 hours, which represents an increase of 3.5%, while Palo Verde decreased by 200 hours.

25<sup>th</sup> DOE/NRC NUCLEAR AIR CLEANING AND TREATMENT CONFERENCE

TOTAL EFFORT FOR SINGLE UNIT SITES  
FY 1997 (9/18/96 - 9/30/97)

<u>PLANT</u>	<u>TOTAL HOURS</u>	
BIG ROCK POINT	4,971.9	
HADDAM NECK	6,596.0	
GRAND GULF 1	7,001.3	
OYSTER CREEK	7,253.8	
SUMMER	7,527.9	MEDIAN = 7,527.9
SEABROOK 1	7,568.5	MEAN = 7,128.1
DAVIS-BESSE	7,729.1	
WOLF CREEK 1	7,751.7	
HOPE CREEK 1	7,752.9	
RIVER BEND	8,090.7	
DUANE ARNOLD	8,162.2	
FITZPATRICK	8,193.8	
GINNA	8,244.7	
KEWAUNEE	8,454.1	MEDIAN = 8,454.1
MONTICELLO	8,504.4	MEAN = 8,462.7
FORT CALHOUN 1	8,665.3	
HARRIS 1	8,668.0	
CALLAWAY	8,781.1	
THREE MILE ISLAND 1	8,847.3	
MILLSTONE 2	8,862.8	
PERRY 1	9,056.3	
WATTS BAR 1	9,582.0	
ROBINSON 2	9,629.1	MEDIAN = 9,629.1
PALISADES	9,940.9	MEAN = 9,607.7
FERMI 2	10,180.5	
PILGRIM 1	10,232.2	
INDIAN POINT 2	10,318.6	
VERMONT YANKEE	10,327.1	
MILLSTONE 1	10,722.6	
WATERFORD 3	10,831.7	
INDIAN POINT 3	11,013.4	
COOPER	11,137.0	MEDIAN = 11,137.0
MAINE YANKEE	12,133.4	MEAN = 11,219.4
WASHINGTON NUCLEAR 2	12,390.1	
CRYSTAL RIVER 3	14,685.2	
MILLSTONE 3	15,573.4	
CLINTON	17,380.3	

Source: RITS DATA - End of FY 1997

VII-1

25th DOE/NRC NUCLEAR AIR CLEANING AND TREATMENT CONFERENCE

TOTAL EFFORT FOR DUAL UNIT SITES  
FY 1997

<u>PLANT</u>	<u>TOTAL HOURS</u>	
• TURKEY POINT 3,4	7,273.3	
• NORTH ANNA 1,2	7,410.0	
• LIMERICK 1,2	7,596.1	
BROWNS FERRY 2,3	7,682.0	
SURRY 1,2	8,400.8	MEDIAN = 8,041.4
PEACH BOTTOM 2,3	8,630.2	MEAN = 8,121.1
• COMANCHE PEAK 1,2	8,732.1	
VOGTLE 1,2	9,271.2	
QUAD CITIES 1,2	9,439.5	
LASALLE 1,2	9,759.1	
DIABLO CANYON 1,2	9,818.1	
PRAIRIE ISLAND 1,2	10,181.2	
BEAVER VALLEY 1,2	10,251.4	MEDIAN = 10,216.3
ARKANSAS 1,2	10,257.5	MEAN = 10,079.2
SAN ONOFRE 2,3	10,361.6	
BYRON 1,2	10,565.4	
CALVERT CLIFFS 1,2	10,677.6	
CATAWBA 1,2	10,980.5	
HATCH 1,2	11,184.2	
ST LUCIE 1,2	11,232.1	
SOUTH TEXAS 1,2	11,462.7	MEDIAN = 11,462.7
FARLEY 1,2	12,187.3	MEAN = 11,693.2
McGUIRE 1,2	12,282.4	
SEQUOYAH 1,2	12,509.1	
NINE MILE POINT 1,2	12,722.5	
BRAIDWOOD 1,2	12,959.1	
COOK 1,2	13,017.2	
SUSQUEHANNA 1,2	13,339.2	
BRUNSWICK 1,2	13,461.1	
ZION 1,2	13,953.1	MEDIAN = 13,707.1
POINT BEACH 1,2	16,150.4	MEAN = 16,130.8
DRESDEN 2,3	19,558.4	
SALEM 1,2	26,608.1	

\* Site with N + 1 exemption  
Source: RITS Data - End of FY 1997

VII-2

TOTAL EFFORT FOR TRIPLE UNIT SITES  
FY 1997 (9/18/96 - 9/30/97)

<u>PLANT</u>	<u>TOTAL HOURS</u>	
PALO VERDE 1,2,3	13,365.4	MEDIAN = 15,303.1
OCONEE 1,2,3	17,240.8	MEAN = 15,303.1

Source: RITS - End of FY 1997

VII-3

## MEAN INSPECTION EFFORT PER UNIT

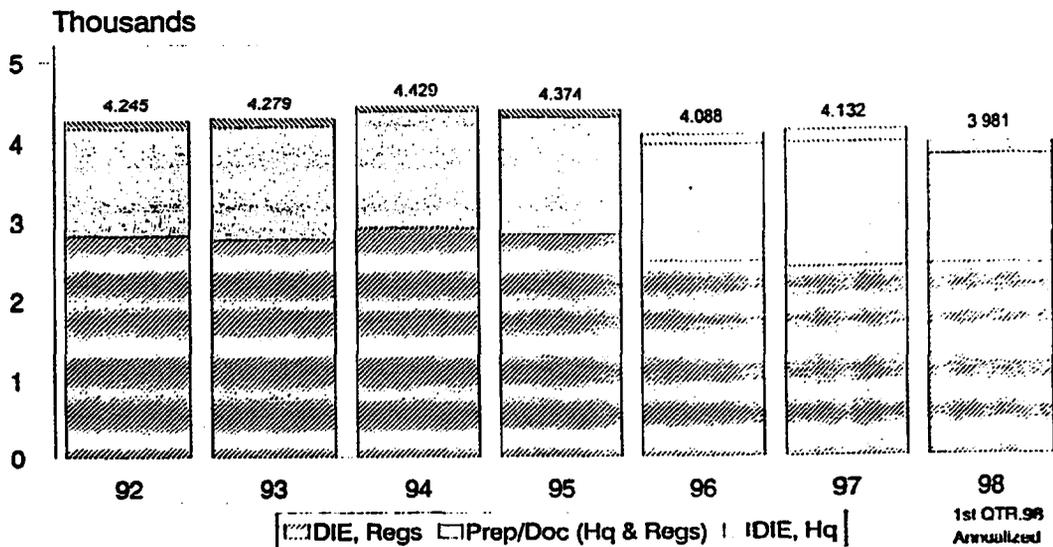
Direct Inspection Effort (DIE) and Preparation/Documentation (Prep/Doc) Hours

Mean inspection effort has decreased gradually since 1995 (Chart VIII-1). Several changes during the FY 1996 - 97 had an effect *in the aggregate* to reduce the mean inspection effort. The items discussed reflect the trend from FY 1995 through FY 1997; FY 1998 values annualized from one quarter data were excluded due to tentative nature of the projection.

- The Regional Section Chiefs were eliminated in FY 1996, reducing the Total Hours.
- Starting in FY 1996 Senior Residents took over some administrative functions previously done by Section Chiefs resulting in decreased DIE.
- In FY 1996 DIE dropped as a result of staff being in training under the Senior Resident Inspector and Resident Inspector Development programs and, therefore, not available to conduct inspections to the same extent.
- Also, DIE for FY 1996 dropped due to a lag in the hiring of the regional inspectors (hiring did not make up the attrition rate).
- Prep & Doc rose slightly in FY 1996 and more substantially in FY 1997 as the increased reporting requirements of Manual Chapter 610 went into effect in February 1996 (second quarter of FY 96).

VIII

## MEAN INSPECTION EFFORT PER UNIT\* DIE and Total Hours, FY 92 - 98



VIII-1

## TOTAL INSPECTION EFFORT

- **CLINTON (Charts IX-1, IX-2, and IX-3)**  
Significant inspection activity occurred in FY 1997 to address a significant event (excess recirculation pump seal leakage when going to single loop operation) which occurred in September 1996.
- **CALLAWAY**  
More inspections were scheduled close to the end of the two year SALP cycle which occurred in FY 1997. Examples include an engineering inspection (214 hours), and a corrective actions inspection (136 hours). Other contributing inspections not performed in FY 1996 were a regional Steam Generator inspection (126 hours), a Maintenance Rule inspection (314 hours), and an Operational Safeguards Response Evaluation (OSRE) (402 hours).
- **KEWAUNEE**  
During FY 1997, the plant was in a 9 month extended outage due to steam generator problems. As a result a Region III engineering inspector made several site inspections of the repair efforts. In addition during FY 1997 and E&TS inspection and a maintenance rule inspection were performed.
- **WATTS BAR**  
Significant licensing activities were completed and the Full Power Operating License was issued in February 1996 and the plant reached Commercial Operation in May 1996. Thereafter, Watts Bar was in its first fuel cycle of operation, a cycle which proceeded relatively trouble-free and required a normal inspection effort for an operating reactor.
- **POINT BEACH**  
Inspection hours at Pt. Beach increased during 1997 as a result of Confirmatory Order issued January 3, 1997, in response to licensee's December 12, 1996 letter stating that 81 items needed to be completed prior to Unit 2 restart. A trending letter was issued January 27, 1997. Unit 2 has been in an extended outage for steam generator replacement (shutdown started October 5, 1996, and unit returned to service on September 22, 1997). Unit 1 was shutdown on February 19, 1997 to allow resources to be devoted to Unit 2 restart. A restart and site performance improvement oversight panel was chartered in January 1997. Inspection resources increased to verify 81 items were accomplished and followup actions taken (including 2 additional team inspections); verify that an adverse trend had been arrested; and closely monitor restart activities for both units.
- **INDIAN POINT 2**  
During FY 1997, Indian Point 2's SALP scores were downgraded in engineering from 1 to 3, Maintenance from 1 to 2 and Plant Support from 1 to 2. This decline, coupled with inspection findings, resulted in a increased inspection effort to address the concerns regarding the licensee's overall performance.
- **SALEM**  
The inspection hours increased for the Salem Nuclear Generating Station because of the following:
  - a. The inspection verification activities for those actions detailed in the Salem Restart Action Plan (under NRC Manual Chapter 0350) were conducted to support the restart of Salem Unit 2 in July 1997.
  - b. There were a number of team inspections to support Salem Unit 2 restart; most notably the Unit 2 Restart Assessment Team Inspection (RATI).
  - c. The Region provided near continuous coverage of the Unit 2 restart and power ascension.
  - d. The inspection effort has continued as the licensee has focused its activities on the readiness for restart of Unit 1.

25<sup>th</sup> DOE/NRC NUCLEAR AIR CLEANING AND TREATMENT CONFERENCE

TOTAL INSPECTION EFFORT FOR SINGLE UNIT SITES  
FY 1997

<u>PLANT</u>	<u>TOTAL HOURS</u>	
BIG ROCK POINT	3,475.6	
WOLF CREEK 1	3,964.9	
OYSTER CREEK	4,131.2	
HADDAM NECK	4,388.8	
SUMMER	4,436.7	MEDIAN HOURS = 4,436.7
DUANE ARNOLD	4,471.0	MEAN HOURS = 4,275.2
MONTICELLO	4,483.5	
MILLSTONE 1	4,553.0	
MILLSTONE 2	4,571.7	
FITZPATRICK	4,594.7	
KEWAUNEE	4,673.5	
PALISADES	4,705.0	
GRAND GULF 1	4,743.4	
RIVER BEND	4,757.1	MEDIAN HOURS = 4,757.1
HOPE CREEK 1	4,766.4	MEAN HOURS = 4,780.3
GINNA	4,797.9	
DAVIS-BESSE	4,822.6	
SEABROOK 1	5,162.4	
THREE MILE ISLAND 1	5,200.1	
ROBINSON 2	5,202.4	
MAINE YANKEE	5,213.6	
CALLAWAY	5,399.1	
HARRIS 1	5,472.5	MEDIAN HOURS = 5,472.5
PILGRIM 1	5,605.0	MEAN HOURS = 5,489.7
WATTS BAR 1	5,667.2	
FORT CALHOUN 1	5,712.0	
PERRY 1	5,935.5	
VERMONT YANKEE	6,227.3	
COOPER	6,707.3	
WATERFORD 3	6,967.7	
INDIAN POINT 2	7,181.1	
INDIAN POINT 3	7,293.5	MEDIAN HOURS = 7,300.1
MILLSTONE 3	7,306.6	MEAN HOURS = 7,717.9
FERMI 2	7,475.0	
WNP 2	7,529.8	
CRYSTAL RIVER 3	8,853.3	
CLINTON	11,637.0	

Source: RITS DATA - End of FY 1997

IX-1

**TOTAL INSPECTION EFFORT FOR DUAL UNIT SITES  
FY 1997**

<u>PLANT</u>	<u>TOTAL HOURS</u>	
BROWNS FERRY 2,3	4,233.3	
• NORTH ANNA 1,2	4,234.8	
• LIMERICK 1,2	4,252.6	
CALVERT CLIFFS 1,2	4,622.8	
• TURKEY POINT 3,4	4,641.4	MEDIAN = 4,632.1
PEACH BOTTOM 2,3	4,655.1	MEAN = 4,652.9
BYRON 1,2	5,140.2	
• COMANCHE PEAK 1,2	5,442.7	
PRAIRIE ISLAND 1,2	5,475.5	
VOGTLE 1,2	5,546.7	
SUSQUEHANNA 1,2	5,663.5	
LA SALLE 1,2	5,702.2	MEDIAN = 5,705.2
BEAVER VALLEY 1,2	5,708.2	MEAN = 5,777.7
DIABLO CANYON 1,2	5,930.2	
SURRY 1,2	6,027.1	
SOUTH TEXAS 1,2	6,168.5	
QUAD CITIES 1,2	6,246.9	
FARLEY 1,2	6,313.5	
CATAWBA 1,2	6,674.7	
ARKANSAS 1,2	6,684.1	
HATCH 1,2	6,766.7	MEDIAN = 6,725.4
SAN ONOFRE 2,3	6,987.8	MEAN = 6,734.0
BRUNSWICK 1,2	7,004.6	
BRAIDWOOD 1,2	7,193.8	
McGUIRE 1,2	7,209.5	
ST. LUCIE 1,2	7,521.7	
SEQUOYAH 1,2	8,033.0	
COOK 1,2	8,095.0	
NINE MILE POINT 1,2	8,383.2	MEDIAN = 8,383.2
ZION 1,2	9,427.8	MEAN = 9,849.7
POINT BEACH 1,2	10,537.9	
DRESDEN 2,3	11,413.3	
SALEM 1,2	18,025.9	

• Site with N + 1 exemption  
Source: RITS Data - End of FY 1997

IX-2

**TOTAL INSPECTION EFFORT FOR TRIPLE UNIT SITES  
FY 1997**

<u>PLANT</u>	<u>TOTAL HOURS</u>	
PALO VERDE 1,2,3	6,426.4	MEDIAN = 8,170.7
OCONEE 1,2,3	9,914.9	MEAN = 8,170.7

Source: RITS Data - FY 1997

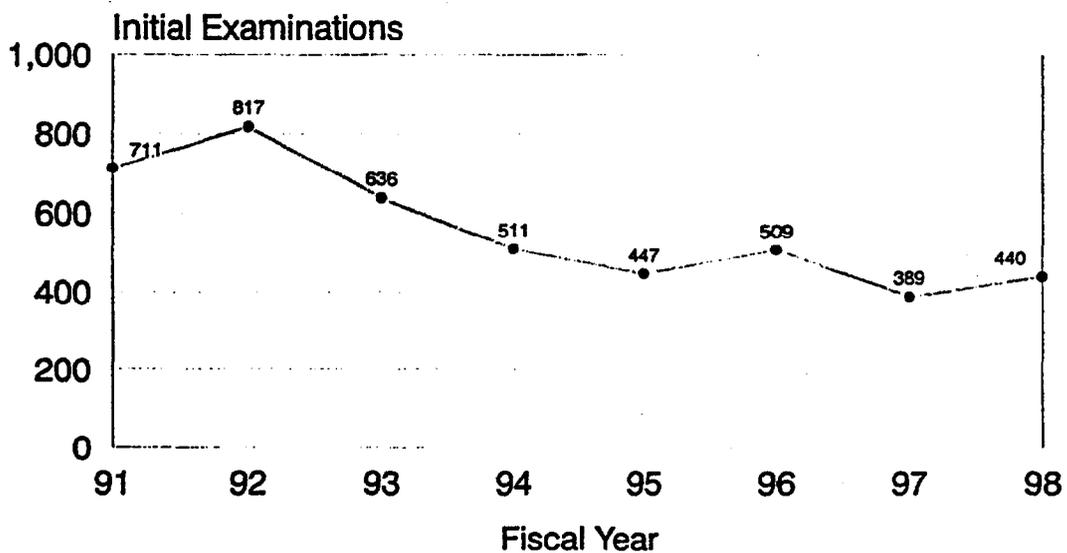
IX-3

## NRC EXAMINATIONS

- The trend in the number of the NRC initial operator examinations is downward (Chart X-1).
- In the near term, the NRC expects that the number of operator examinations will remain level at about 400 per year, consistent with the current number of operating reactors.

x

### NRC EXAMINATIONS BY FISCAL YEAR



Projected for 1998

x-1

## GENERIC COMMUNICATIONS

- **GENERIC LETTERS (Chart XI-1)**

- The number of Generic Letters has been decreasing since 1980s.
- In 1997 NRR issued 4 Generic Letters. As of 2/4/98 NRR has issued 2 Generic Letters. We project that NRR will issue 3 or less additional Generic Letters during the remainder of 1998.

- **BULLETINS (Chart XI-2)**

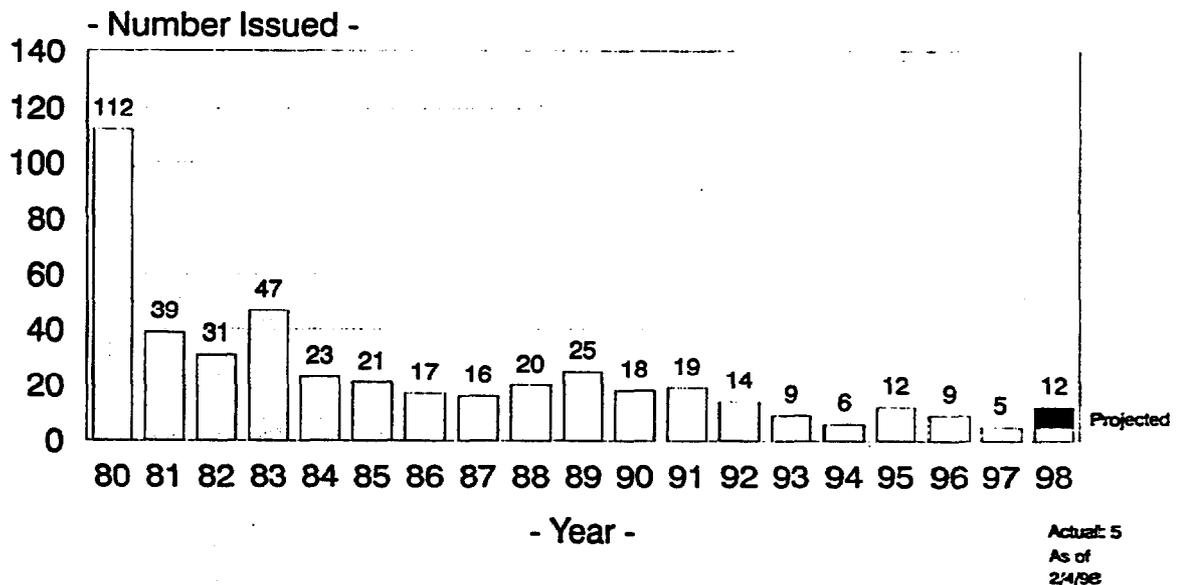
- The Number of Bulletins issued per year has been decreasing since 1980. As of 2/4/98 no Bulletins have been issued in 1998. In 1997, NRC issued 2 Bulletins. In 1998, NRC projects that 2 or less Bulletins will be issued.

- **INFORMATION NOTICES (Chart XI-3)**

- Information Notices Issued since 1980 do not show a historic trend. As of 2/4/98 NRC had issued 20 Information Notices. We project that in 1998 NRC will issue 80 Information Notices.

XI

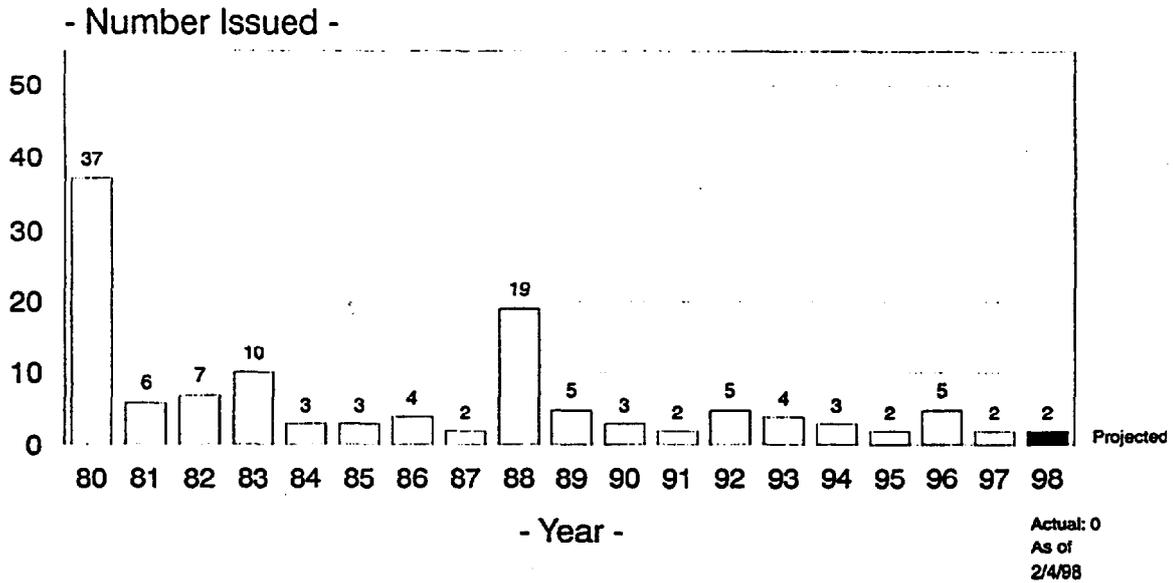
## GENERIC LETTERS ISSUED



NOTE -- Total issuances for the year include new issuance, revisions, and supplements.

XI-1

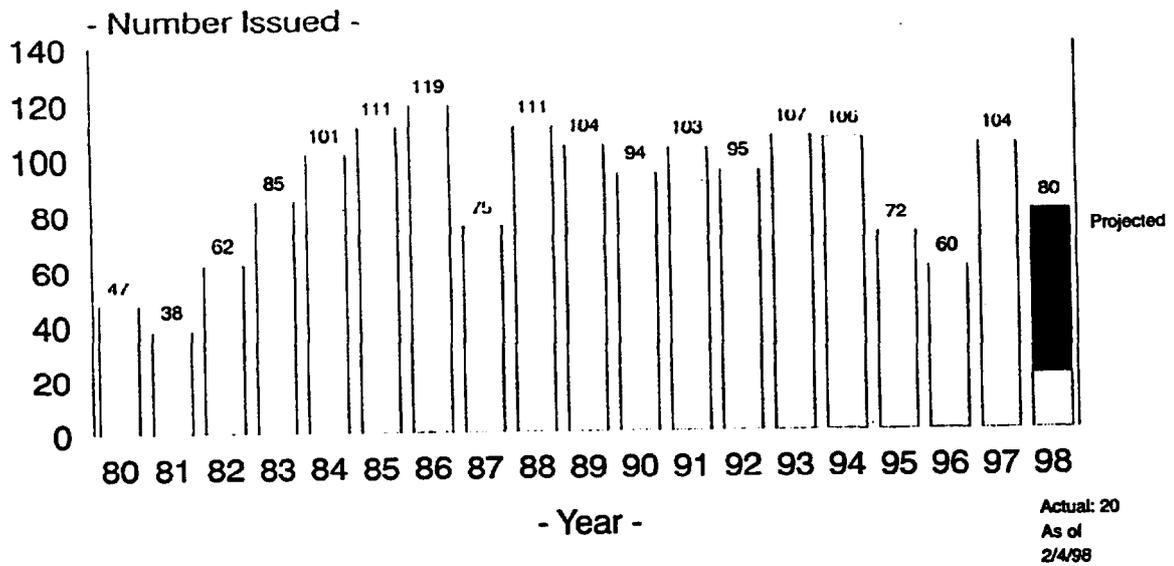
## BULLETINS ISSUED



NOTE -- Total issuances for the year include new issuance, revisions, and supplements.

XI-2

## INFORMATION NOTICES ISSUED



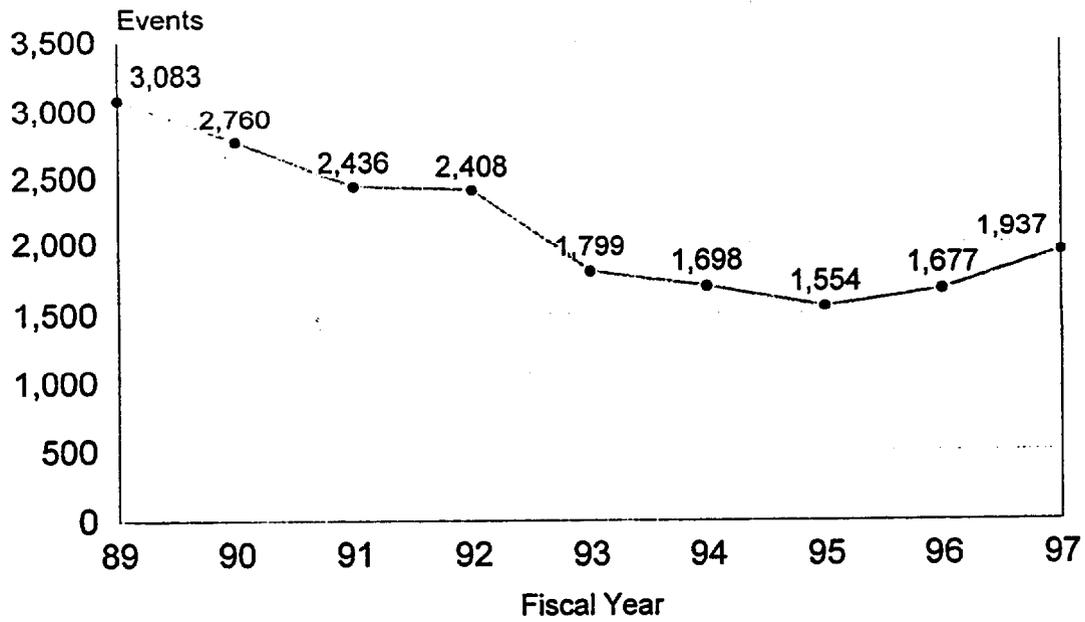
NOTE -- Total issuances for the year include new issuance, revisions, and supplements.

XI-3

## EVENTS ANALYSIS AND FOLLOW UP

- **Events reviewed by the NRC declined steadily from 1989 to 1995 (Chart XII-1)—as a result of the recent NRC emphasis on design issues there has been an upswing in the number reported in 1996 and 1997.**
- **Agency Operating Plan has a goal of following up on 400 events per year, consistent with 10 year history of event follow up (Chart XII-2).**
- **Significant events identified by the agency have been declining (Chart XII-3), consistent with the observations in Performance Indicators Program showing steady improvement in the industry performance—consequently the NRC's Augmented Inspection Team activity has been declining (Chart XII-4).**

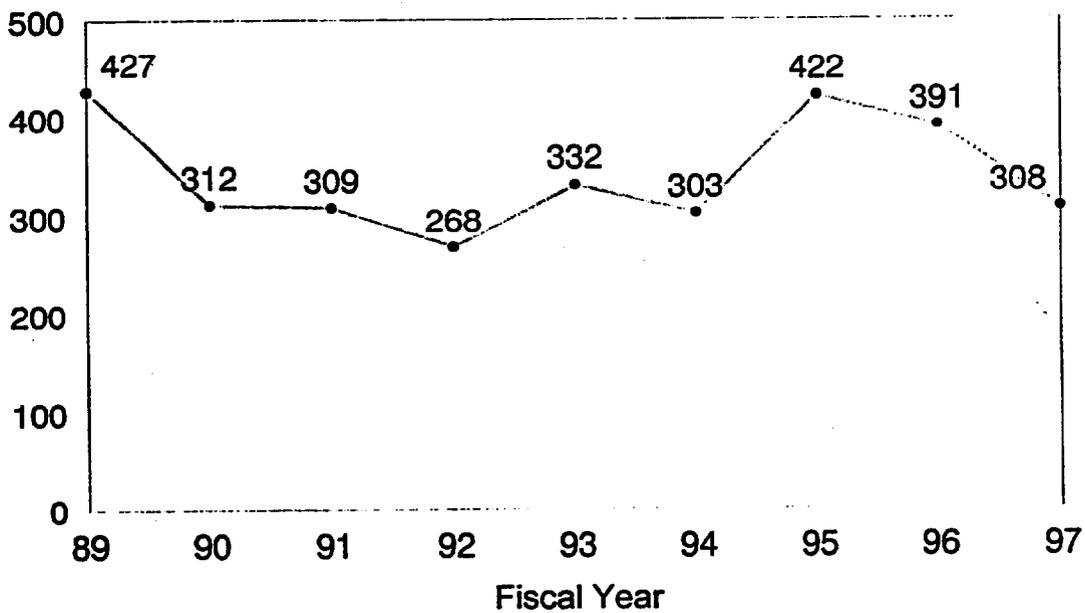
## EVENTS REVIEWED



Source: NRR 2/4/98

XII-1

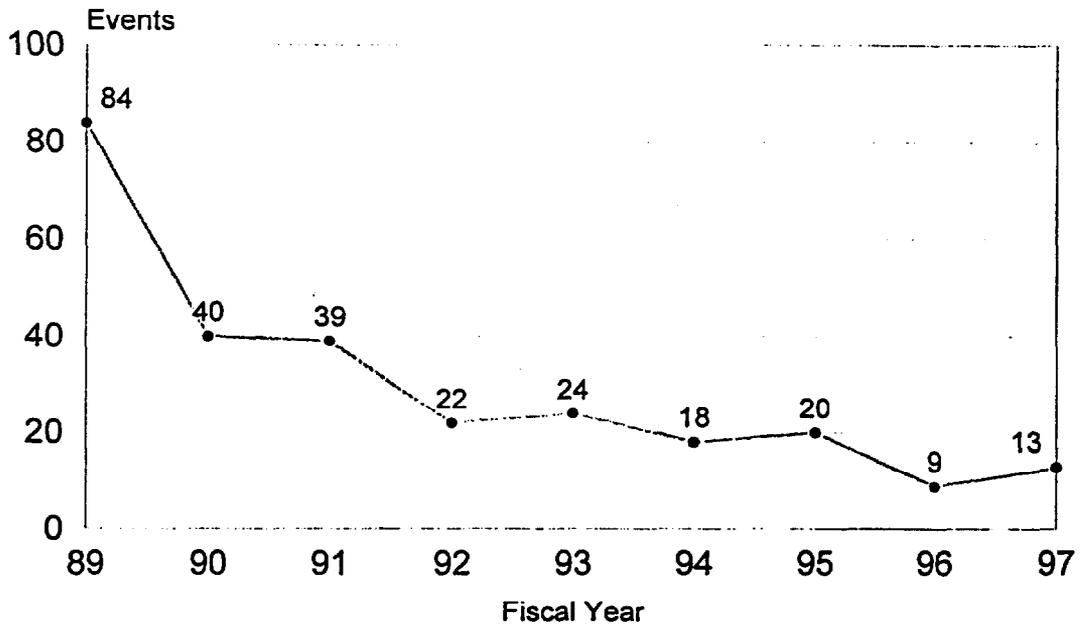
## EVENTS REQUIRING FOLLOW-UP



Source: NRR 2/4/98

XII-2

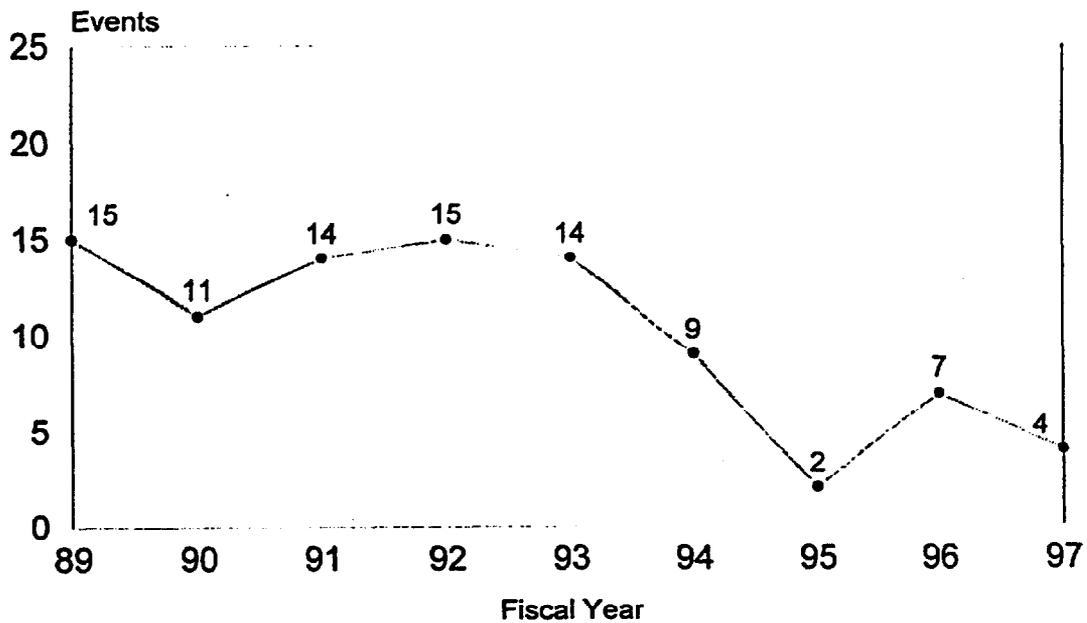
## SIGNIFICANT EVENTS



Source: NRR 2/4/98

XII-3

## AUGMENTED INSPECTION TEAMS



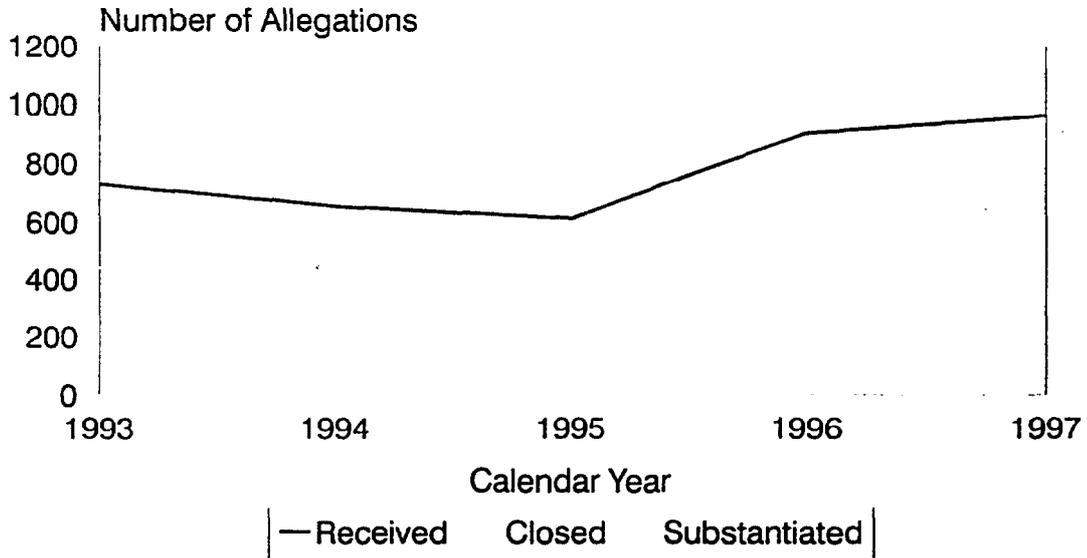
Source: NRR 2/4/98

XII-4

## ALLEGATIONS

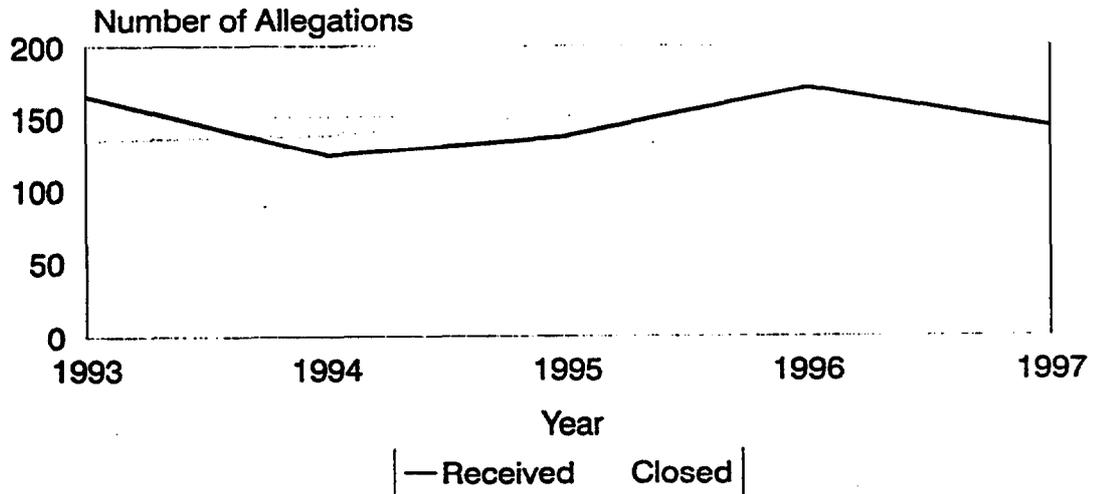
- **The number of allegations received is up for second year (Chart XIII-1).**
- **The NRC's timeliness in resolving allegations is improving.**
- **The number of allegations substantiated is down but still around 30%.**
- **Discrimination allegations are shown in Chart XIII-2. Substantiation of discrimination cases is about 12%**
- **Anecdotal information indicates that the general upward trend is attributable to changes in the workplace due to preparation for a competitive market, higher standards of accountability, and new work assignments resulting in labor/management friction.**

## ALLEGATIONS Reactor Licensees and Contractors



XIII-1

## DISCRIMINATION ALLEGATIONS Reactor Licensees and Contractors



NOVs, CPs, DFIs, and Orders

XIII-2

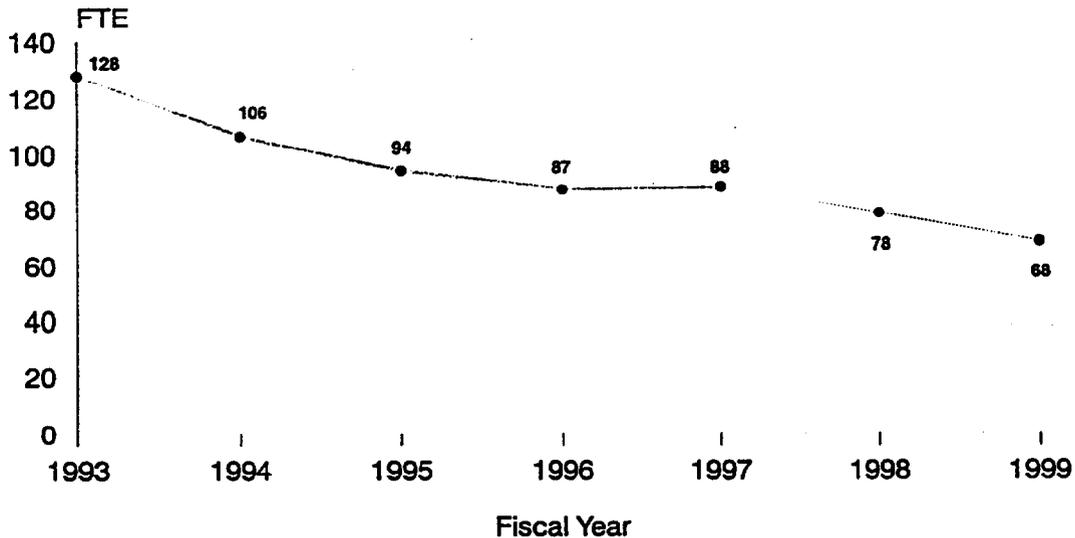
## ALLOCATION OF RESOURCES

- **TOTAL MANAGERS FTE (Chart XIV-1)** — Shows net changes due to the organizational structure resulting from the creation of the Special Projects Office (SPO) within NRR and the increase in positions from 87 to 88 in FY 1997. The decrease to 68 in FY 1999 is in accordance with NRR's attempt to reach the 8:1 employees:supervisor ratio.
- **TOTAL NRR OVERHEAD FTE (Chart XIV-2)** — Drop achieves the desired rate of overhead-to-total staff positions; the 28%-to-29% variance results from minimal changes affected by rounding.
- **NRR COMPARABILITY (Chart XIV-3) – HQ AND REGIONS** — This chart shows the Region FTE compared to NRR FTE track each other well for trend from 1988 to 1998.

XIV

### FTE

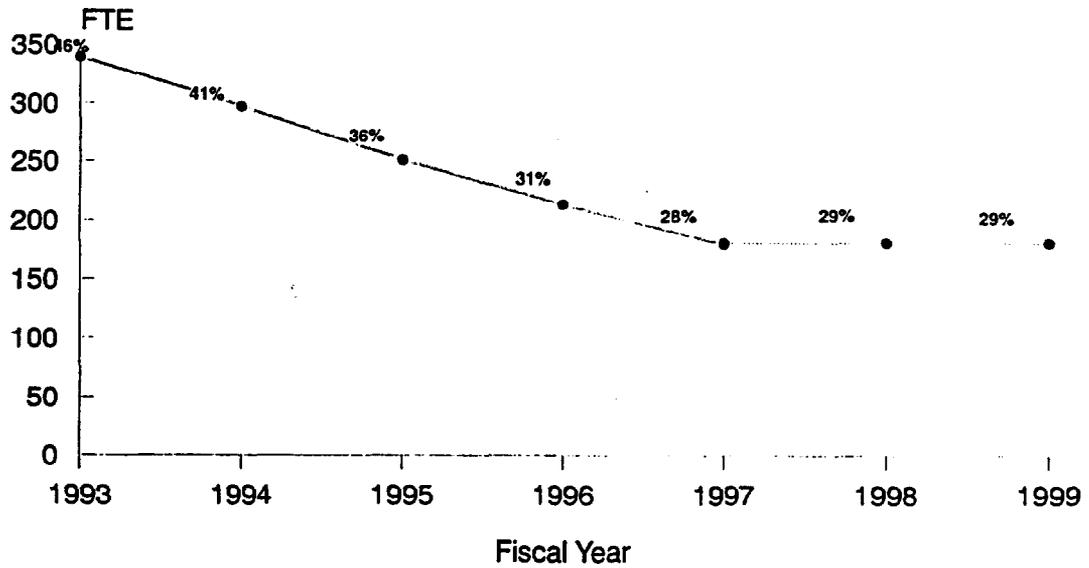
#### Total NRR Managerial Positions



February 98

XIV-1

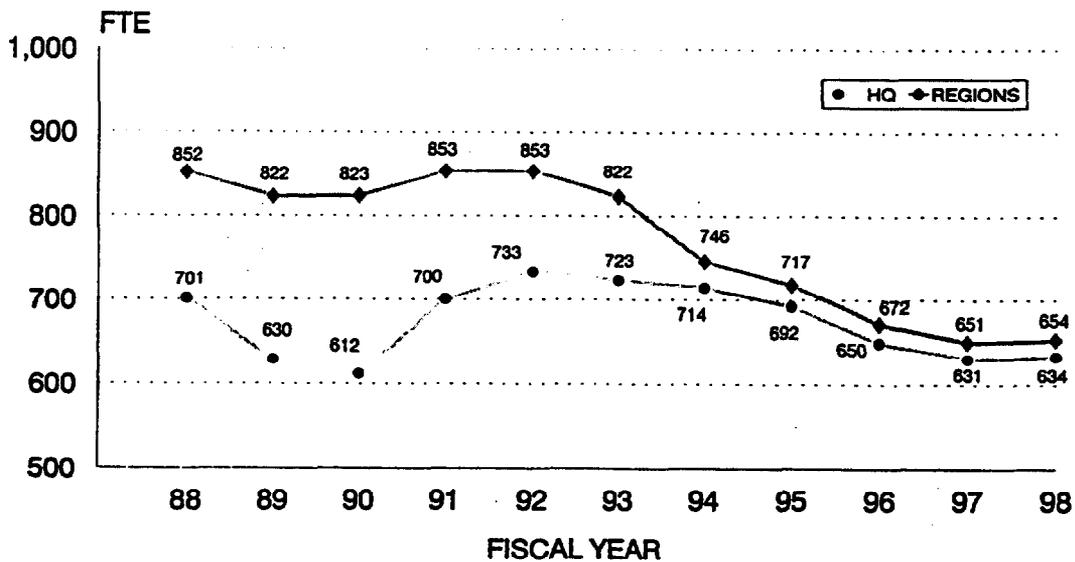
## FTE Total NRR Overhead



February 98 (RIC)

XIV-2

## NRR COMPARABILITY -- HQ and REGIONS FY 1988-1998



Note: Actual FTE FY88-97,  
Budgeted FTE FY98 (Data as of Feb 98)

XIV-3