



ACRS-2874  
PDR 3/25/94

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
REGIONAL PROGRAMS SUBCOMMITTEE MEETING:  
REVIEW OF ACTIVITIES OF NRC REGION II OFFICE  
MARCH 23, 1993  
ATLANTA, GEORGIA

PURPOSE:

The purpose of the meeting was to review the activities of the NRC Region II Office.

ATTENDEES:

Principal meeting attendees included:

| <u>ACRS</u>          |             | <u>NRC</u>     |
|----------------------|-------------|----------------|
| P. Shewmon, Chairman | S. Ebnetter | A. Gibson      |
| P. Davis, Member     | L. Reyes    | P. Stohr       |
| T. Kress, Member     | R. Maley    | R. Trojanowski |
| C. Michelson, Member | G. Jenkins  | E. Merschhoff  |
| C. Wylie, Member     |             |                |
| P. Boehnert, DFO     |             |                |

Meeting Highlights, Agreements, and Requests

Opening Comments - S. Ebnetter, Regional Administrator

Mr. Ebnetter welcomed the Subcommittee to the Region II Offices. He noted the following items in his opening comments:

- The major "problem plants" in Region II include: Brunswick (shutdown for ~ one year due to operational problems), Browns Ferry Units 1&3 (Category 3 plants - restart schedule for Unit 3 has slipped by 6-12 months), and Sequoyah (recent enforcement problems and operating event (steam line rupture)). There are two fuel plants in the Region (B&W and NFS, Irwin). Both may face financial problems given reduction in military spending. In response to Mr. Michelson, Mr. Ebnetter said that the performance of the personnel at Browns Ferry Unit 2 has been outstanding.
- Basic issues that the Region is addressing consist of: concerns with MOV reliability, service water inspections, and erosion/corrosion (the cause of the Sequoyah event noted above). While the recent severe winter storm caused extended loss of offsite power events at numerous plants in the region, there were no safety-related incidents.
- The recently announced personnel reductions for the Agency should not cause the Region any problems. The reductions will be accommodated through attrition.

Region II Operations - L. Reyes

*EMB*

*RSO*  
*9/1*

Mr. Reyes reviewed the elements of the Region II Office organization and functions (Figures 1&2). He also noted the unique activities of the Office. These activities include overseeing the licensing of the only four remaining reactors under construction in the U.S. (Watts Barr and Bellefonte). In response to questions from Mr. Michelson, Mr. Ebnetter indicated that the Bellefonte plant is in excellent condition; TVA did an excellent job of equipment lay up. Ebnetter said that the delay associated with the licensing of Watts Barr can be attributed to TVA's loss of control over the engineering work.

Figure 3 lists the activities undertaken to maintain uniformity of regulatory actions among the five region offices.

#### Administration - R. Maley

The details of the administrative aspects of the Region's operations were discussed by Mr. R. Maley. He noted that the Office's FY-92 allocation was 257 FTEs. The attrition rate for the last three years has been averaging ~ 5% or so. Discussing recruitment efforts, Mr. Maley noted that the current labor market is very favorable to NRC, given the effects of the recession.

All employees are encouraged to construct Individual (career) Development Plans. (IDPs). IDPs are required for all new supervisors and SES managers. Figure 4 shows the training courses both required and available for supervisors/managers.

The impact of the fee collection program was noted. In response to questions from Messrs. Davis and Boehnert, the V.P. of the Brunswick plant licensee indicated that their yearly NRC license fee is on the order of \$3-m/unit, and that as a result of the Congressional mandate for 100% fee recovery, ~ 100 of the 1000 materials licensees in the Region have abandoned the business.

The status of the NRC fitness for duty drug testing program was noted. The NRC has recently reduced the testing rate from 100% to 50% due to the very low rate of positive test results. In response to Dr. Shewmon, Mr. Ebnetter indicated that the NRC has instituted provisions to allow the licensees to reduce their testing rate as well.

#### Enforcement Program - G. Jenkins

Mr. G. Jenkins discussed the status of the enforcement program for Region II. He noted that in 1990 (the latest year for which data is available) there were a total of 264 allegations submitted. The majority of these centered on the TVA units under construction (Watts Barr).

Figure 5 shows the status of the escalated enforcement actions taken against Region II licensees for 1991-92 and from 6/92 to date. In response to Mr. Davis, Mr. Jenkins said that the determination of the Severity Level to assign a given event is based partly on the provisions of the enforcement policy and partly on judgment.

Among the past experience/current issues associated with enforcement activities, the following was noted: use of enforcement conferences open to the public, application of the "wrongdoer rule" (which allows NRC to cite/fine an individual), and the fact that five licensed operators in the Region were cited for violation of fitness for duty rules. In response to questions, it was noted that there has been little public interest in the open enforcement conferences. Mr. Wylie asked if the NRC ever cited a design organization for an action(s) on the part of an individual that lead to a violation. Mr. Jenkins indicated that this was done once, but the "wrongdoer" rule was not applied to this case.

In the past, applicable enforcement cases were referred from the cognizant region office to Headquarters. Since the Office of Investigations possess saphena powers, OI now practices self referral and initiates their own investigations. In response to questions from Mr. Michelson, Mr. Jenkins said that the on-going investigation of the Thermo Lag fire barrier issue has been complicated by allegations of wrongdoing by members of the NRC staff.

#### Reactor Operations - E. Merschoff

Key issues related to reactor operations were discussed by Mr. E. Merschoff. He noted the following points:

- There are 33 operating power reactors located on 18 sites in the Region. The only two remaining (active) power reactor construction sites in the US (Watts Bar and Bellefonte) are also located in this region.
- Current outstanding issues related to the Region's operating plants include: recovery of Browns Ferry Units 1&3, pending restart of the Brunswick Units, restart of both Sequoyah units following a recent steam line rupture event, and the licensing for operation of the Watts Bar Units. Since Watts Bar has been under construction for ~ 20 years, issues related to equipment aging need to be dealt with.

Messrs. Michelson and Shewmon inquired regarding licensee experience with the Westinghouse Eagle 21 solid state protection system. A region representative indicated that following some initial start-up problems, the system has performed well.

- Details of the region's inspection effort were noted. Generally, inspection resources are concentrated at the "problem plants" (Figure 6). However, a Master Inspection Plan is employed, in part, to ensure that a disproportionate amount of these resources are not spent on a problem plant situation.

- Pros, cons and the personal concerns of the resident inspectors were noted. Among the pros cited included the capability of rapid event response, personal knowledge of the plant management, and continuous coverage of activities. The cons noted included lack of direct supervision, isolation, fear of loss of objectivity ("capture"), and support problems associated with the field offices. Concerns raised by the RIs themselves included: the five-year rotation policy, lack of visibility in the Agency, and the paperwork burden.

In response to Dr. Shewmon, Mr. Merschoff indicated that the performance record of the newly-replaced steam generators at Surry has been good. The licensee is maintaining strict control of the secondary-side water chemistry.

#### Reactor Operations - A. Gibson

Mr. Gibson addressed the topics of operator requalification, use of risk-based methodology in plant operations and engineering issues. He began by noting that the requalification programs are considered very effective, since the exams are now administered jointly by the NRC and industry; he said that this change represents a real success story. Beginning in August of this year, the simulator exams will be revised in that they will be graded on a team-only basis. There is also a proposed rule change (expected to be approved) that will delete the requirement for the NRC to be involved in administration of these exams; the Agency would then proceed to an audit-only mode.

Regarding use of risk-based methodology, Mr. Gibson said that a set of risk-based inspection guidelines will be available for use by the inspectors by the end of this year. Their value is expected to be limited; more useful in this regard are the IPes. The IPes are used both to sharpen the focus of inspections and as an aid to operator exams (e.g. selection of simulator events).

Engineering issues cited included: licensee design-based reconstitution (DBR) programs, analog-to-digital (A-to-D) change outs and so-called region-based issues (erosion/corrosion, MOVs, service water systems, electrical distribution system functional inspections). Points noted here included:



- DBR programs are underway for the Region plants. Approximately 56% of the plants will have completed these programs by 1995.
- Many PWRs have installed digital auxiliary feedwater control equipment under A-to-D change outs in order to minimize plant trips during start up.
- Regarding the implementation of the NRC strictures pertaining to MOVs, the industry is not moving as fast on this matter as the staff would prefer.

In response to Dr. Shewmon, Mr. Gibson said that fuel failure events have been recently experienced at the Hatch, Brunswick and Browns Ferry plants. With the exception of the Hatch event (debris induced failure), the root cause(s) of the other incidents is(are) not known at this time.

#### Radiological Protection and Safeguards - P. Stohr

Mr. Stohr discussed the issues of ALARA, licensees' effluent and environmental monitoring inspection program as well as their fitness for duty (FFD) programs. Regarding ALARA, it was noted that licensees' efforts to institute ALARA (as low as reasonably achievable) dose reductions began to pay off in the early 1980's. In 1992, the average collective dose per reactor was 230 person-rem. Figures 7-8 show evidence of this dose history. Figures 9-10 give details of the various ALARA initiatives undertaken at the Region II PWRs and BWRs, respectively. The recent revision to 10 CFR Part 20 mandates ALARA programs at all power reactor sites.

The region conducts inspections of licensees' effluent and environmental monitoring programs. The general findings are that doses to workers are typically orders of magnitude below regulatory requirements. In response to Dr. Shewmon, Mr. Stohr indicated that no NRC-related certification requirements exist for health physics technicians. There are requirements mandated for the position of Radiation Protection Manager however.

Regarding the FFD programs, Mr. Stohr noted some "positive" and "negative" aspects of the Region's FFD inspections. On the positive side, all licensees have successfully incorporated FFD into existing employee health and safety programs; licensees generally choose lower cutoff levels and screen for a greater panel of drugs than are mandated by NRC, and many have instituted proactive measures including psychological testing and family support programs. On the negative side, it was noted that the testing is not truly random (anyone can be immediately retested); and, there is some employee distrust generated by the testing.

The rate of positives found for the chemical tests both on a national basis and for Region II licensees were discussed (Figure 11). Region II licensees have shown a slightly lower rate of positives than is the national average.

Region II State and Government Affairs - R. Trojanowski

Details of the liaison between the Region and the state governments were provided by Mr. Trojanowski. Key points of note during his presentation were:

- All states constituting Region II are Agreement States (AS), except Virginia and West Virginia. NRC transfers regulatory authority to these states, except for power and research reactors, fuel facilities and federal licensees. Three recurring concerns identified by NRC reviews of AS programs are: high staff turnovers, budget constraints and failure of states to maintain their regulations current.
- A (governor-appointed) state liaison officer is designated to coordinate state-NRC interface activities. Efforts are taken to ensure that rapid two-way communications exist at all levels in the event of the need for emergency response.
- The working relationship between Region II and its ASs is outstanding. Basically, the state governments trust the NRC to do its job. No states have expressed interest in stationing their own resident inspectors at Region II power reactor sites. In response to Dr. Shewmon, Mr. Trojanowski said that none of the Region II state PUCs have instituted putative rate actions against nuclear-based utilities.
- Regarding the issue of low-level waste (LLW) disposal, the Low-Level Waste Policy Act of 1980 mandated the states to take responsibility for the disposal of LLW, and strongly encouraged the formation of compacts (Figure 12). Unfortunately, little progress has been made nationwide, as political and legal opposition has effectively stalled the site selection process. LLW disposal will remain a political issue and will be an expensive endeavor.

In Region II the Barnwell (South Carolina) site is still operational. After June 1994, Barnwell will only accept waste generated in the states of the Southeast Compact (most of Region II states). Attempts are underway to characterize new disposal sites in North Carolina but local opposition is intense (cognizant individuals have had their lives threatened, vandalism of site equipment has occurred).

Closing Comments

Mr. Ebnetter thanked the Subcommittee for coming down to the Region II Offices. He indicated that its visit forced them to take an introspective look at themselves and the Offices' operations. Mr. Ebnetter said that he believes that his staff, both at the Atlanta Office and the resident inspectors at the plant sites, are the best qualified that he's ever had.

Key issues/concerns for the future noted by Ebnetter included:

- SALP program - is controversial, changes are coming and are necessary.
- Licensee O&M costs - continually rising, NRC is blamed for a large part of this (e.g. EP drills are quite costly).
- Waste disposal - both high- and low-level, a major political problem. Licensees have little to show to date for the impact fees assessed on spent fuel disposal.
- Steam generator replacements - many replacement projects planned within the coming few years
- Anti-nuclear activism - see evidence of rising activism in the Region.

In response to a question from Mr. Davis regarding O&M costs, Mr. Ebnetter indicated that he believes that most utilities can significantly reduce such costs by enhancement of worker productivity, particularly that of the crafts workers.

Dr. Shewmon thanked Mr. Ebnetter and his staff for a round of excellent presentations.

The meeting was adjourned at 3:22 pm.

FUTURE SUBCOMMITTEE ACTIONS ON THIS MATTER AND ITEMS FOR FOLLOW-UP

Future Subcommittee Actions:

The Subcommittee will continue its round of meetings with the regional offices. The next meeting will be held at the Region IV Office and will be scheduled in the near future as time/resources permit.

Follow-up Items:

No follow-up items were identified as a result of this meeting.

BACKGROUND MATERIAL PROVIDED THE SUBCOMMITTEE FOR THIS MEETING

Regional Prog. Sub. Mtg. 8  
March 23, 1993

1. Minutes of the May 20, 1992 Regional Programs Subcommittee, NRC Region V Office, Walnut Creek Ca.
2. Minutes of the June 18-19, 1991 Regional Programs Subcommittee, NRC Region III Office, Glen Ellyn Ill.
3. Resumes of Senior Managers, NRC Region II Office
4. Organization charts, NRC Region II Office
5. NRC Region II Operating Plan - Fiscal Year 1993

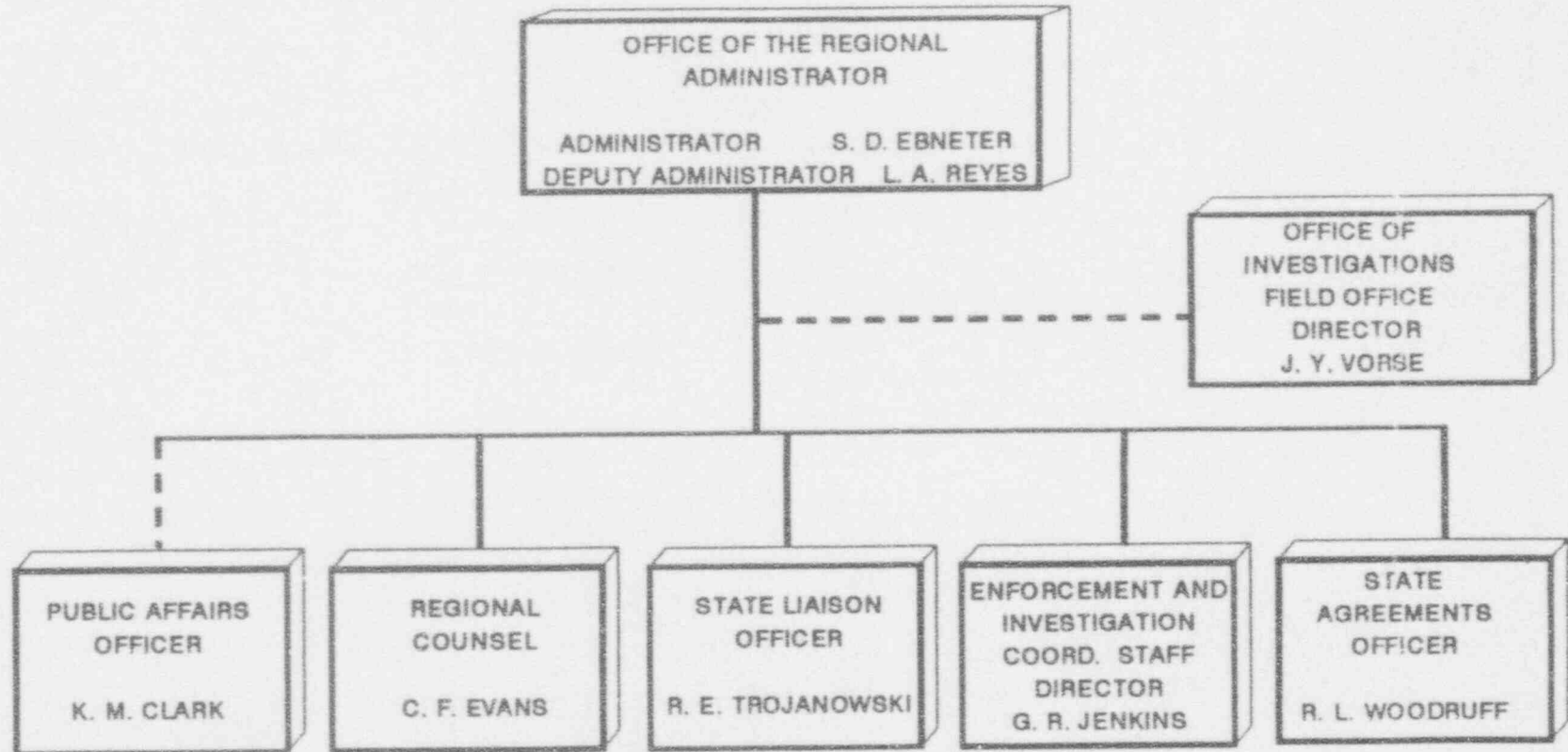
**Note:** Additional meeting details can be obtained from a transcript of this meeting available in the NRC Public Document Room, 2120 L St., NW, Washington DC 20006, (202) 634-3273, or can be purchased from Ann Riley and Associates, Ltd., 1612 K St., NW, Suite 300, Washington, DC 20006, (202) 293-3950

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# U.S. NUCLEAR REGULATORY COMMISSION

## OFFICE OF THE REGIONAL ADMINISTRATOR

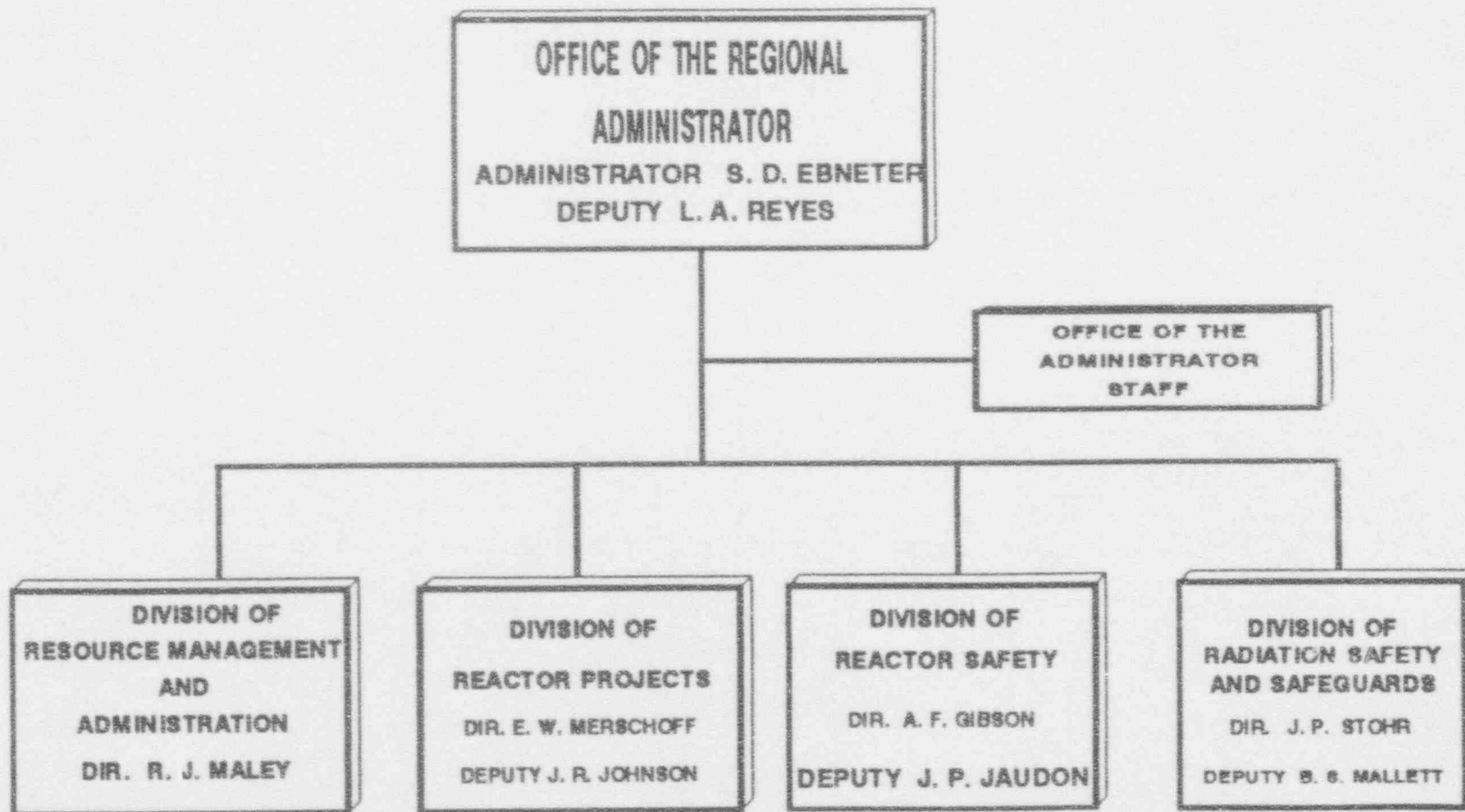


———— DIRECT SUPERVISION  
- - - - COORDINATION

FIG. 1

RIIRAO.CH3

# U.S. NUCLEAR REGULATORY COMMISSION REGION II ORGANIZATION CHART



F16-2

# ACTIVITIES TO MAINTAIN UNIFORMITY AMONG REGIONS

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- \* • RII executives held supervisory and managerial positions in other regions
  
- Technical Divisions have:
  - Conference calls
  - Counterpart meetings
  - Team inspections in other regions
  - Attendance at SALP Boards in other regions
  - Regulatory Impact Survey
  - Management Team Visits
  - Task Force membership
  - Rotational assignments
  
- Division of Resource Management and Administration
  - Copy of Regional Office Instructions
  - Counterpart meetings
  - Rotational assignments
  - \* - Weekly conference calls with Office of Personnel
  
- Enforcement and Allegations
  - Headquarters review of proposed escalated enforcement actions
  - Counterpart meetings
  - Allegations Program review
  - Weekly conference calls with Office of Enforcement

# SUPERVISORY/MANAGERIAL TRAINING

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- SUPERVISORS ARE REQUIRED TO TAKE FOUR BASIC COURSES DURING FIRST 18 MONTHS:
  - SUPERVISING HUMAN RESOURCES
  - MANAGEMENT WORKSHOP
  - PERSONNEL MANAGEMENT PRACTICES
  - PERFORMANCE APPRAISAL WORKSHOP
  
- THESE COURSES ARE SUPPLEMENTED WITH REQUIRED TRAINING IN SUCH AREAS AS:
  - EEO
  - SEXUAL HARASSMENT
  - ETHICS
  
- MIDDLE MANAGERS ARE ENCOURAGED TO TAKE SUCH NRC COURSES AS:
  - THE REGULATORY PROCESS
  - CONDUCTING AND PARTICIPATING IN MEETINGS
  - MEDIA TRAINING
  - THE NRC AND ITS ENVIRONMENT
  
- FURTHER MANAGERIAL DEVELOPMENT OBTAINED THROUGH OPM's:
  - EXECUTIVE SEMINAR CENTERS
  - FEDERAL EXECUTIVE INSTITUTE



# REGION II ESCALATED ENFORCEMENT

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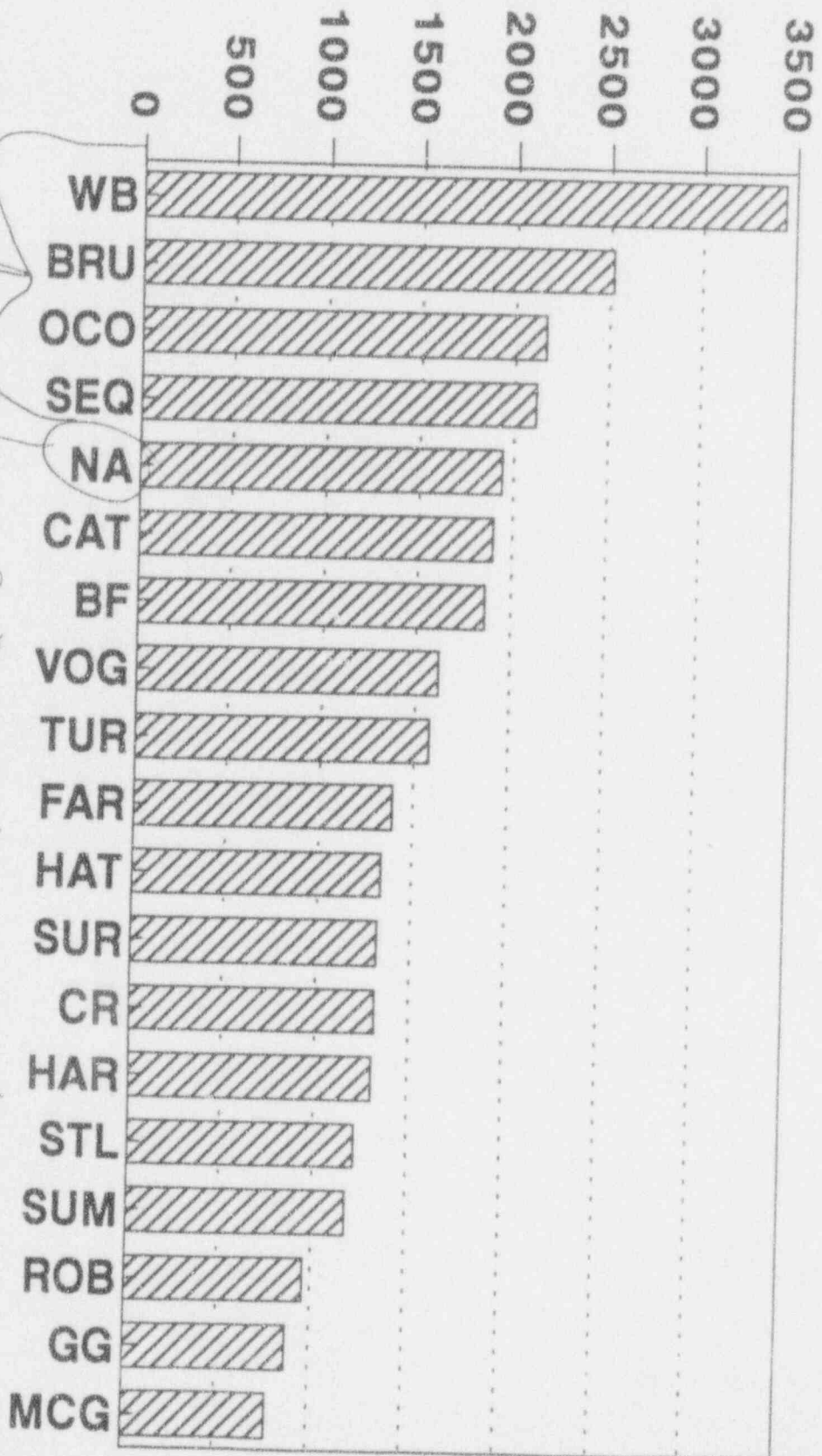
|                                      | <u>(7/91 - 6/92)</u> | <u>(7/92 - 3/15/93)</u> |
|--------------------------------------|----------------------|-------------------------|
| <b>I. <u>REACTORS:</u></b>           |                      |                         |
| ENFORCEMENT CONFERENCES              | 27                   | 18                      |
| CIVIL PENALTIES ISSUED               | 13                   | 5                       |
| TOTAL CIVIL PENALTIES                | \$977,500            | \$487,500               |
| <br>                                 |                      |                         |
| <b>II. <u>MEDICAL/MATERIALS:</u></b> |                      |                         |
| ENFORCEMENT CONFERENCES              | 18                   | 5                       |
| CIVIL PENALTIES ISSUED               | 12                   | 4                       |
| TOTAL CIVIL PENALTIES                | \$58,875             | \$8,625                 |
| <br>                                 |                      |                         |
| <b>III. <u>FUEL FACILITIES:</u></b>  |                      |                         |
| ENFORCEMENT CONFERENCES              | 3                    | 2                       |
| CIVIL PENALTIES ISSUED               | 1                    | 1                       |
| TOTAL CIVIL PENALTIES                | \$20,000             | \$37,500                |
| <br>TOTAL =                          | <br>\$1,056,375      | <br>\$533,625           |

F16-5

# REGION II ACTUAL HOURS

INSPECTION EFFORT (DIE) BY SITE

FY93 (10/1/92 - 2/28/93)



F16VRE6

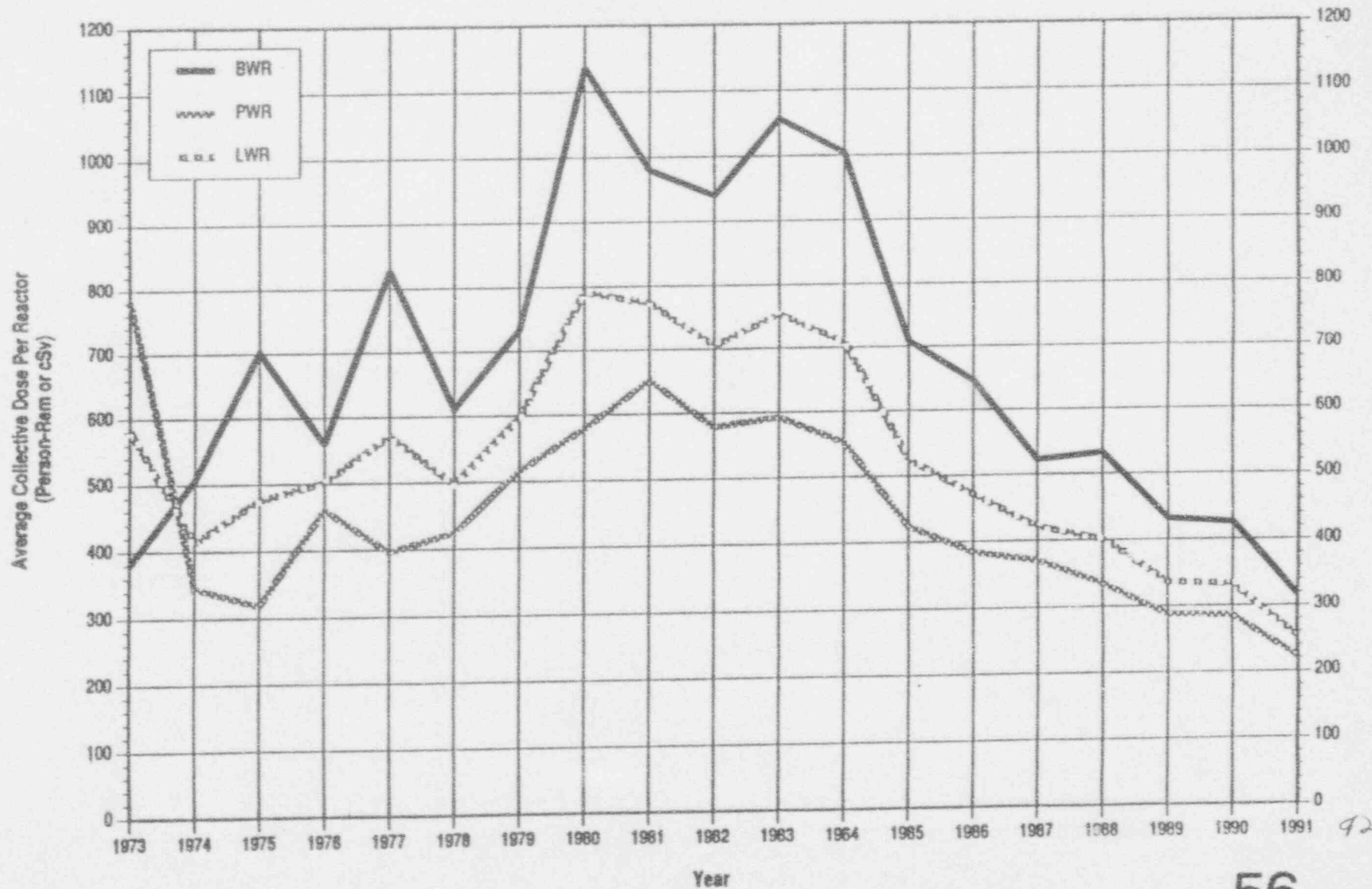
DRP3.CH3

"Midcomplant"

POI - Good job - undergoing S& replacement

(add map)

Figure 1  
Average Collective Dose Per Reactor



[F16.7]

1992 - avg ~ 230

92

Figure 2  
Total Number of Reactors and Collective Dose



FIG. 8



# ALARA INITIATIVES AT REGION II PWRs

| <u>METHOD</u>   | <u>TYPE</u> | <u>IMPACT</u> | <u>AVERAGE POSTULATED SAVINGS (PERSON-REM)</u>   |
|---|-------------|---------------|--|
| REPLACEMENT OF RESISTANCE TEMPERATURE DETECTORS BYPASS SYSTEMS  | M           | HIGH          | 50-60% OF DOSE REDUCTIONS RATES IN AREA FOR REMAINDER OF PLANT LIFE (DOSE RANGE UP TO FEW R/HR)          |
| CHEMICAL DECON OF STEAM GENERATOR (S/G) CHANNEL HEADS           | C           | HIGH          | > 50 PERSON-REM (WHERE CHANNEL OF HEAD ENTRIES ARE REQUIRED)   |
| ROBOTICS (EDDY CURRENT TESTING S/G TUBE PLUGGING)               | M           | HIGH          | 400-500 PERSON-REM   |
| CONTROLLED SHUTDOWN (EARLY BORATION-COBALT DISSOLUTION-CLEANUP) | C           | MEDIUM        | * > 10 PERSON-REM  |
| ULTRA FILTRATION OF RCS (REDUCE PARTICLE SIZE)                  | M           | MEDIUM        | * > 5 PERSON-REM   |
| REACTOR HEAD SHIELD   | M           | HIGH          | 50% OF DOSE RATES IN THE R/V HEAD DURING DISASSEMBLY/ASSEMBLY FOR REFUELING (DOSE RANGES UP TO 1 REM/HR) |

\* ESTIMATE

61

# ALARA INITIATIVES AT REGION II BWRs

| <u>METHOD</u>   | <u>TYPE</u> | <u>IMPACT</u> | <u>AVERAGE POSTULATED SAVINGS</u>         |
|---|-------------|---------------|---|
| CHEMICAL DECON<br>OF RECIRCULATION/<br>CORE SPRAY SYSTEMS | C           | HIGH          | 350-450 PERSON-REM<br>(REFUELING OUTAGES) |
| PASSIVATION OF<br>NEW PIPING                              | M           | MED           | * > 10 PERSON-REM                         |
| ELECTROPOLISHING  | C           | MED           | * > 50 PERSON-REM                         |
| ZINC INJECTION<br>(MINIMIZE IGSCC)                        | C           | HIGH          | * > 100 PERSON-REM                        |

\* ESTIMATE

F16.10

# CHEMICAL TESTING RESULTS

'90            90,729 TESTS  
                  .79% (REGIONAL) POSITIVES  
                  .86% (NATIONAL) POSITIVES

'91            79,636 TESTS  
                  .49% (REGIONAL) POSITIVES  
                  .67% (NATIONAL) POSITIVES

'92 \*         46,003 TESTS  
                  .59% (REGIONAL) POSITIVES  
                  .7% (NATIONAL) POSITIVES

NOTE:  
TEMPORARY WORKERS (NON-LICENSEE)

'90 - .97% POSITIVE  
'91 - .69% POSITIVE  
'92\* - .81% POSITIVE

\*SEMI-ANNUAL RESULTS ONLY AVAILABLE

DRSS3.CH3

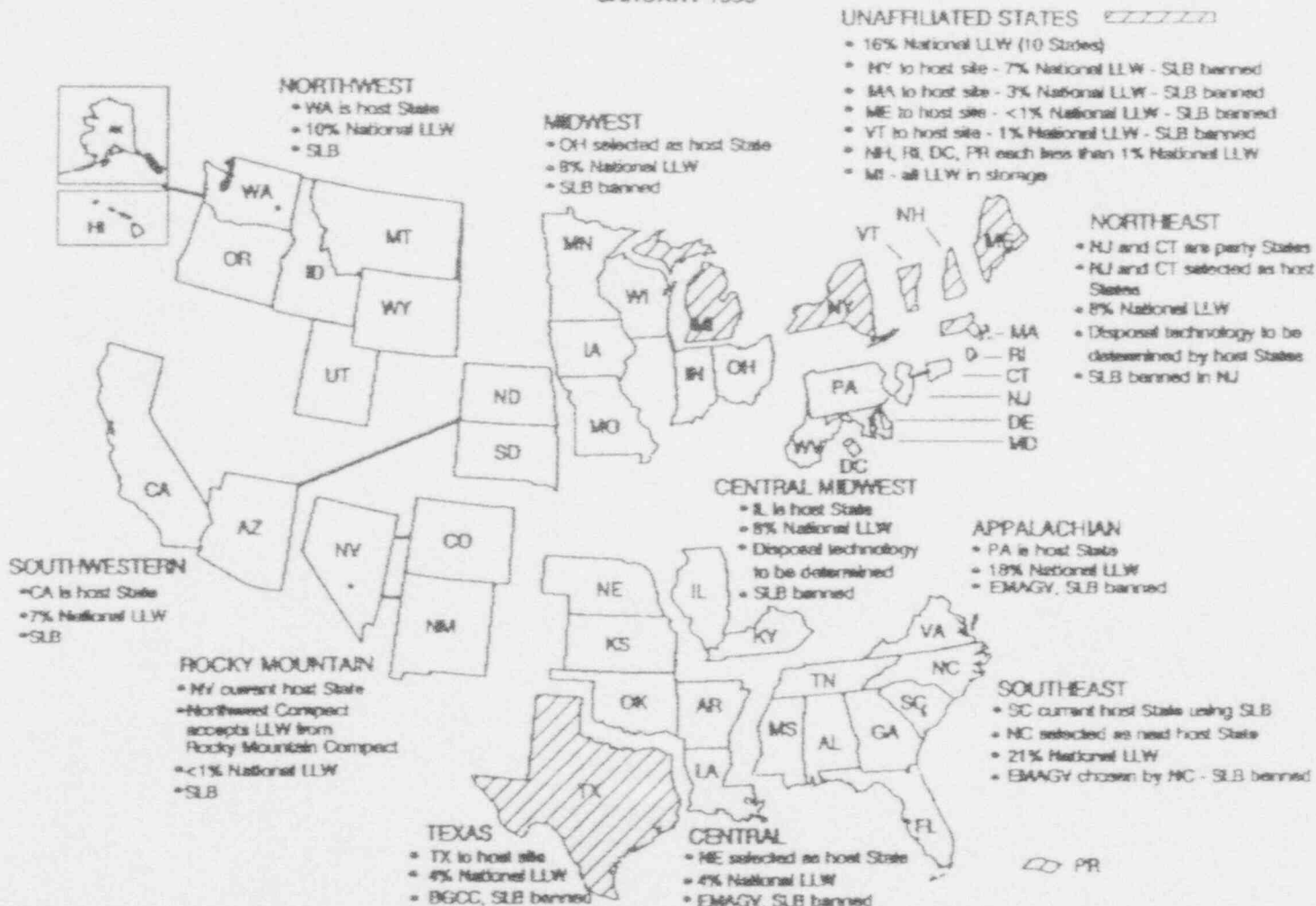
71

F16.11

W

# LOW-LEVEL RADIOACTIVE WASTE COMPACT STATUS

JANUARY 1993



\*Operating LLW Deposit Sites

Note: National LLW volume for 1991 = 1.4 million cubic feet disposed

SLB = shallow land burial

EMAGV = Earth mounded above grade vault

BGCC = below ground concrete cisterns

Source: Office of State Programs, NRC

F16-12