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A circular 'RECEIVED' stamp from the U.S. Nuclear Regulatory Commission. The word 'RECEIVED' is at the top, followed by the date 'JUN 29 1981' and a small triangle pointing right. Below that is 'U. S. NUCLEAR REGULATORY COMMISSION'. The outer ring of the stamp contains numbers 1 through 12, with the number 12 positioned at the right edge, aligned with the date.

SUBJECT: SUMMARY OF MEETING WITH AP&L CONCERNING LICENSED
OPERATOR TRAINING AND CERTIFICATION

The purpose of the meeting held May 1, 1981 was to discuss the training and certification of operator and senior operator licensee candidates at ANO. The meeting was prompted by our concern that the ANO training program has been deficient in providing the requisite training for applicants and in determining whether an acceptable level of competence has been achieved. The attendees are identified in Enclosure 1.

Results of recent ANO-1 and ANO-2 exams were reviewed. The staff noted deficiencies in the written exams, especially with respect to the inability to achieve the scores required under the new grading criteria. In addition, a review of previous written exam grades at ANO showed that had the increased passing criteria been in effect, the denial rate would have been greater than 60%. Although such a comparison was not done for other utilities, results since the new criteria went into effect on May 1, 1980 show an industry wide denial rate for written exams of somewhat below 30%. At ANO, the denial rate for written exams since May 1, 1980 has been 69% and 47% for Units 1 and 2 respectively. Specific weaknesses were observed by the staff in the ability to completely answer questions and to address the specific point required by an exam question. The results of oral exams were also reviewed. The denial rate for oral exams at ANO was found to be at least equal to or less than the industry average.

The staff also commented on the inadequacy of training material provided to the staff for exam preparation. AP&L stated that training material was being revised. A subsequent telephone conversation resulted in an AP&L commitment to provide the staff with revised training material for the next exams, even if the material is still in draft form.

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The results of the latest review (January 1980) of the requalification exam were also discussed by the staff. The SRQ written exam content and grading was judged unsatisfactory. The staff noted that follow up audits should have been conducted on the requalification exams and that future exams will receive more attention.

AP&L personnel made the presentation outlined in Enclosure 2. Long range training plans were discussed. These plans encompass the hiring, training, and certification of license candidates. Specifically, improvements were noted in the following areas:

- Training facilities, including a simulator for each unit.
- Formal classroom and on-the-job training.
- Instructor effectiveness.
- Training materials.
- Evaluation and certification of candidates.

Since it will take several years to complete the long range training program, the staff requested information on the efforts taken by AP&L to upgrade license candidates in the near future. In response, AP&L outlined several improvements that have been instituted to enhance candidate performance on future exams.

Conclusions

It was agreed that AP&L would keep the staff posted on the progress of the revised training program.

In addition, based upon the improvements instituted to upgrade candidate performance, the staff agreed to accept AP&L certification of license candidates for the exams scheduled in August 1981. Candidate performance on these exams will determine the course of future examination efforts.

Bruce A. Boger
Operator Licensing Branch
Division of Human Factors Safety

Enclosures:

1. Attendance List
2. AP&L Presentation

DISTRIBUTION:

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DATE	6/12/81	6/16/81	6/15/81			



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

Docket Files

JUN 18 1981

Docket Nos. 50-313
368

FACILITY: Arkansas Nuclear One (ANO), Units No. 1 & 2
LICENSEE: Arkansas Power and Light Company (AP&L)
SUBJECT: SUMMARY OF MEETING WITH AP&L CONCERNING LICENSED
OPERATOR TRAINING AND CERTIFICATION

Introduction

The purpose of the meeting held May 1, 1981 was to discuss the training and certification of operator and senior operator licensee candidates at ANO. The meeting was prompted by our concern that the ANO training program has been deficient in providing the requisite training for applicants and in determining whether an acceptable level of competence has been achieved. The attendees are identified in Enclosure 1.

Discussion

Results of recent ANO-1 and ANO-2 exams were reviewed. The staff noted deficiencies in the written exams, especially with respect to the inability to achieve the scores required under the new grading criteria. In addition, a review of previous written exam grades at ANO showed that had the increased passing criteria been in effect, the denial rate would have been greater than 60%. Although such a comparison was not done for other utilities, results since the new criteria went into effect on May 1, 1980 show an industry wide denial rate for written exams of somewhat below 30%. At ANO, the denial rate for written exams since May 1, 1980 has been 69% and 47% for Units 1 and 2 respectively. Specific weaknesses were observed by the staff in the ability to completely answer questions and to address the specific point required by an exam question. The results of oral exams were also reviewed. The denial rate for oral exams at ANO was found to be at least equal to or less than the industry average.

The staff expressed concern because a meeting was held in 1976 to discuss similar deficiencies. AP&L noted that this meeting had been held at their request.

The staff also commented on the inadequacy of training material provided to the staff for exam preparation. AP&L stated that training material was being revised. A subsequent telephone conversation resulted in an AP&L commitment to provide the staff with revised training material for the next exams, even if the material is still in draft form.

REGULATORY DOCKET FILE COPY

The results of the latest review (January 1980) of the requalification exam were also discussed by the staff. The SRO written exam content and grading was judged unsatisfactory. The staff noted that follow up audits should have been conducted on the requalification exams and that future exams will receive more attention.

AP&L personnel made the presentation outlined in Enclosure 2. Long range training plans were discussed. These plans encompass the hiring, training, and certification of license candidates. Specifically, improvements were noted in the following areas:

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In addition, based upon the improvements instituted to upgrade candidate performance, the staff agreed to accept AP&L certification of license candidates for the exams scheduled in August 1981. Candidate performance on these exams will determine the course of future examination efforts.



Bruce A. Boger
Operator Licensing Branch
Division of Human Factors Safety

Enclosures:

1. Attendance List
2. AP&L Presentation

ENCLOSURE 1

ATTENDANCE LIST

FOR MEETING WITH AP&L

CONCERNING OPERATOR EXAMINATION & TRAINING

May 1, 1981

NRC

J. J. Kramer
P. F. Collins
B. A. Boger
B. A. Wilson
J. Gagnon
R. Eaton
W. D. Johnson
R. E. Martin
G. Vissing

AP&L

R. A. Roderick
J. P. O'Hanlon
J. D. Vandergrift
R. C. Evans
J. M. Griffin

ENCLOSURE 2

INTRODUCTION

J. M. GRIFFIN

ARKANSAS NUCLEAR ONE
TRAINING OVERVIEW

J. P. O'HANLON

LONG-TERM PLAN
CHRONOLOGY OF EVENTS

R. A. RODERICK

- o LICENSE EXAMINATIONS EXPERIENCES
- o CONTRIBUTING FACTORS TO FAILURES
- o CORRECTIVE ACTIONS

J. D. VANDERGRIFF

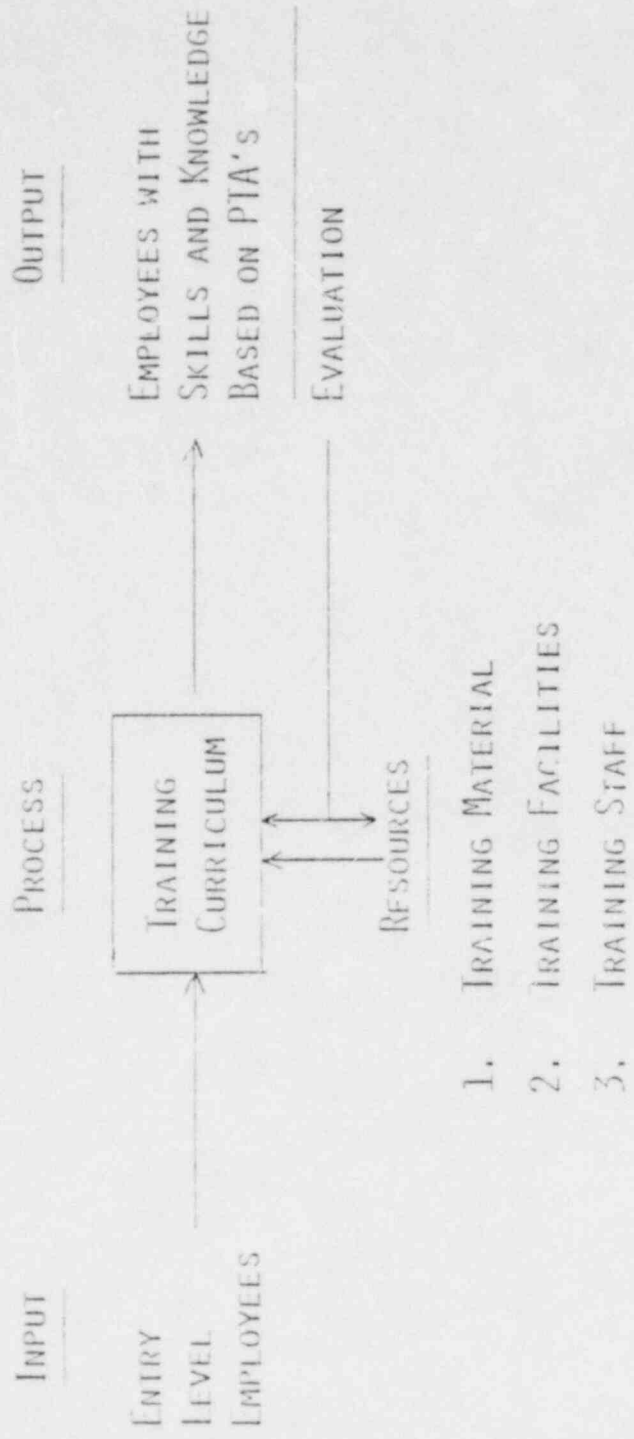
TRAINING EVALUATION PROCESS

B. EVANS

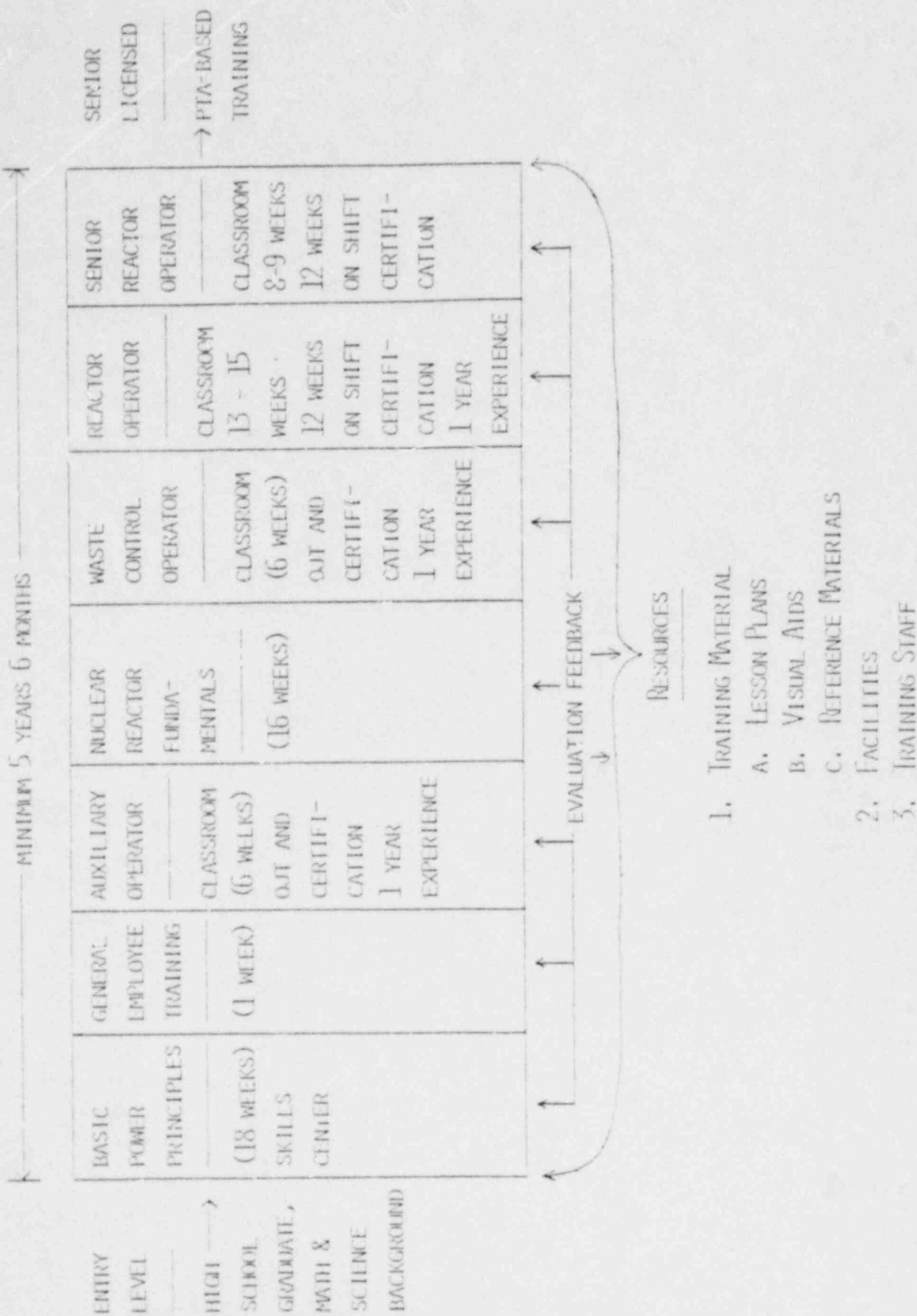
SUMMARY

J. M. GRIFFIN

QUESTIONS AND ANSWERS



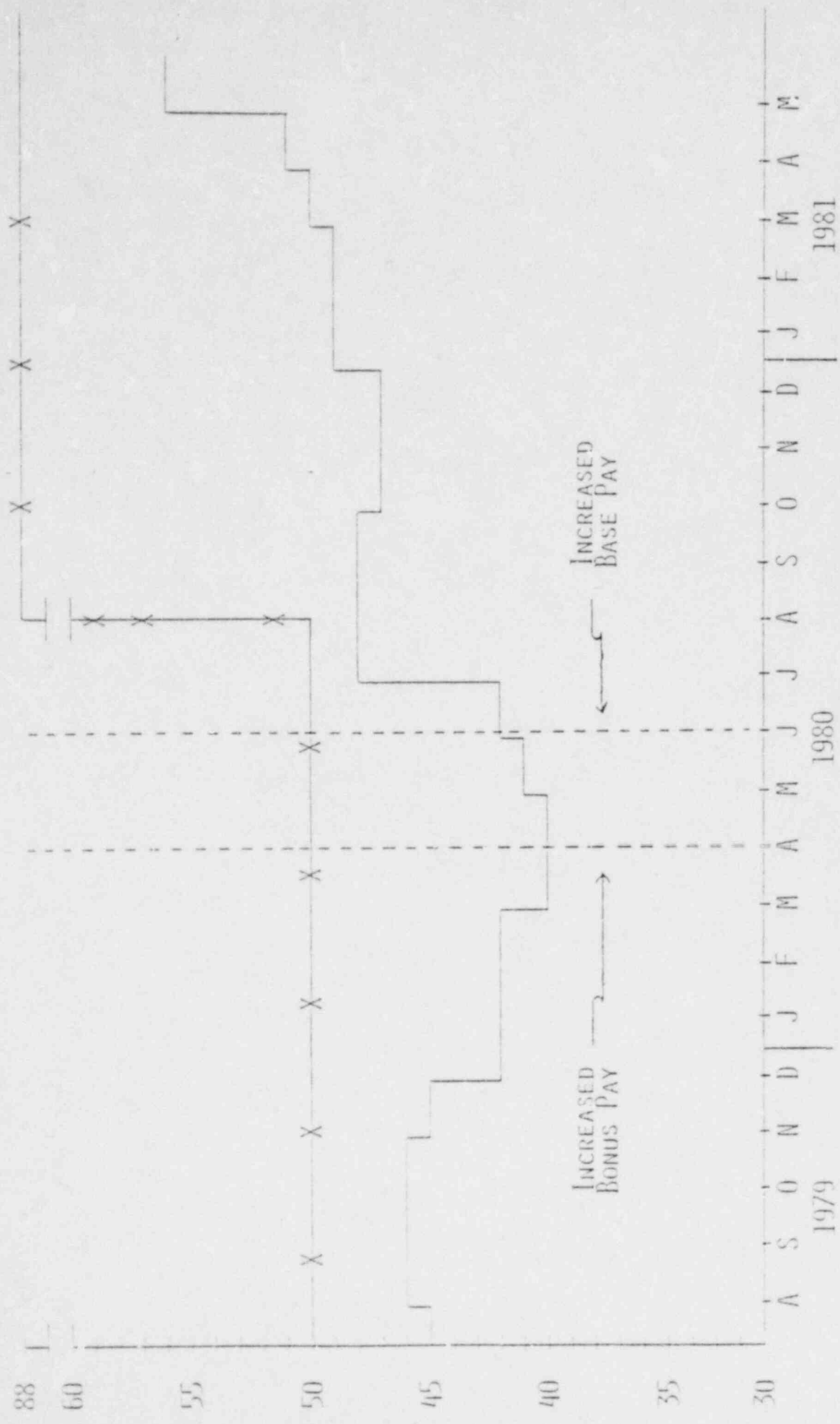
OPERATOR TRAINING SEQUENCE



TRAINING EVALUATION METHODS

- COURSE WRITTEN EXAMINATION
- OJT WRITTEN AND ORAL EXAMINATION
- STUDENT AND SUPERVISOR CRITIQUES
- TRAINING FEEDBACK FROM OPERATIONAL ASSESSMENTS,
QC AUDITS, NRC CORRESPONDENCE, INFO AND SAFETY
VIA A TRAINING REVIEW TASK FORCE
- EFFECTIVENESS EVALUATION COMMITTEE
 - o GENERAL OFFICE PERSONNEL
 - o EVALUATE ALL PHASES OF TRAINING

OPERATOR STAFFING VS. TIME



X X AUTHORIZED STAFF
 ACTUAL STAFF

COMPLETED ACTION

MAY 79 - JAN 80	COMPLETE STUDY ON TRAINING NEEDS AND MAKE RECOMMENDATIONS TO MANAGEMENT
JAN 80	CONCEPT APPROVED BY MANAGEMENT AND TRAINING STAFF INCREASE AUTHORIZED FROM FIVE TO ELEVEN
FEB 80	BEGAN POSITION TASK ANALYSIS PROJECT AND TRAINING PROGRAM DESIGN
APR 80	INCREASED OPERATOR BONUS PAY
APR 80	BEGAN TRAINING CENTER CONSTRUCTION
JUNE 80	INCREASED OPERATOR BASE PAY
JUNE 80	CONTRACT DEVELOPMENT OF AO, WCO, THERMO AND MITIGATING DAMAGE LESSON PLANS
AUG 80	MET WITH REGION IV NRC REPRESENTATIVES TO DISCUSS AO TRAINING PLAN AND AP&L'S CORRECTIVE ACTIONS TO AUDIT FINDINGS
AUG 80	AUTHORIZED TO INCREASE OPERATOR STAFF BY 56 POSITIONS INCLUDING ALLOWANCES FOR SIX-SHIFT ROTATIONS, 20% OVERSTAFF FOR TRAINING AND TECHNICAL POSITIONS
AUG 80	THERMO/MITIGATING LESSON PLANS DRAFTED

COMPLETED ACTION

AUG 80	BEGAN SPECIFICATIONS WRITING FOR UNIT ONE SIMULATOR
SEPT 80	CONTRACTED FOR FOUR CONSULTANTS TO HELP OPERATOR TRAINING
OCT 80	BEGAN TRAINING EFFECTIVENESS EVALUATION COMMITTEE
NOV 80	COMPLETED PTA
NOV 80	CONTRACTED DEVELOPMENT OF RO AND SRO TRAINING PROGRAM LESSON PLANS AND SYSTEMS TRAINING MANUALS
JAN 81 FEB 81	SCREENED APPROXIMATELY 300 APPLICANTS FOR OPERATOR BLOCK HIRE
MAR 81	TRAINING STAFF REQUEST SUBMITTED FOR MANAGEMENT APPROVAL
MAR 81	95 A0 LESSON PLAN DRAFTS COMPLETED
MAR 81	25 CANDIDATES HIRED FOR A0 TRAINING
MAR 81	BEGAN SPECIFICATION WRITING FOR UNIT TWO SIMULATOR
APR 81	INTERVIEW TWO CANDIDATES FOR PERMANENT OPERATOR TRAINING POSITION
APR 81	UNIT ONE SIMULATOR ACQUISITION PACKAGE - 120111-000

ITEMS SCHEDULED FOR COMPLETION

MAY 81	UNIT ONE SIMULATOR PACKAGE TO AP&L'S BOARD OF DIRECTORS FOR CONTRACT APPROVAL
MAY 81	MOVE INTO NEW TRAINING FACILITY
JULY 81	BEGIN USING NEW WCO TRAINING MATERIAL
AUG 81	BEGIN ON-SITE TRAINING OF FIRST AO BLOCK HIRE USING THE NEW AO TRAINING PROGRAM
AUG 81	COMPLETE UNIT TWO SIMULATOR SPECIFICATIONS
AUG 81 DEC 81	BLOCK HIRE SECOND AO TRAINING GROUP
SEPT 81	IMPLEMENT NEW RO PROGRAM
OCT 81	COMPLETE SYSTEMS TRAINING MANUAL DRAFTS
DEC 81	SUBMIT UNIT TWO SIMULATOR ACQUISITION PACKAGE TO CEO AND BOARD FOR APPROVAL
DEC 81	IMPLEMENT SRO TRAINING WITH NEW MATERIALS
MAR 82	BEGIN ON-SITE TRAINING OF SECOND AO BLOCK HIRE
APR 82	ALL INITIAL DEVELOPMENT WORK AND REVIEWS COMPLETED

UNIT ONE EXAM RESULTS
(PAST TWO YEARS)

REACTOR OPERATOR

<u>DATE</u>	<u>PASS</u>	<u>% PASS</u>
NOVEMBER 1978	4/5	80%
FEBRUARY 1980	3/5	60%
*JANUARY 1981	2/7	29%

SENIOR REACTOR OPERATOR

*JULY 1980	2/6	33%
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*INCREASED PASSING CRITERIA - 80% OVERALL

OVERALL ORAL EXAM SUCCESS - 77%

UNIT TWO EXAM RESULTS
(PAST TWO YEARS)

REACTOR OPERATOR		
DATE	PASS	% PASS
JANUARY 1979	5/5	100%
SEPTEMBER 1979	4/4	100%
FEBRUARY 1980	3/3	100%
*JUNE 1980	4/4	100%
*FEBRUARY 1981	2/3	66%
SENIOR REACTOR OPERATOR		
FEBRUARY 1980	2/3	66%
*JUNE 1980	1/3	33%
*FEBRUARY 1981	1/5	20%

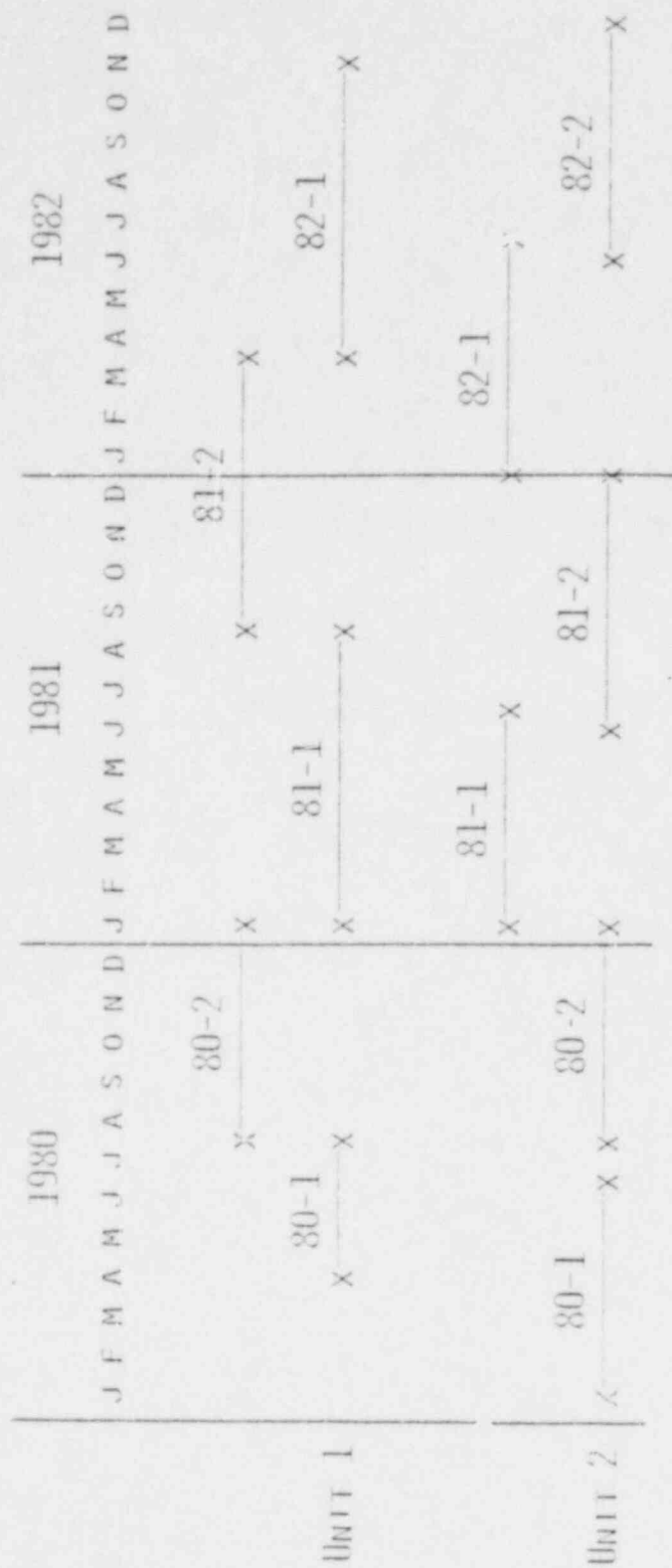
*INCREASED PASSING CRITERIA - 80% OVERALL

OVERALL ORAL EXAM SUCCESS - 100%

FACTORS THAT EFFECTED RECENT LICENSE RESULTS

- INSTRUCTIONAL EFFORT AND EFFECTIVENESS
- INSTRUCTIONAL STAFF WORKLOAD
- CURRICULUM
- ADMINISTRATION OF CLASS BY CONSULTANTS
- SCHEDULING

RO/SRO SCHEDULE TO MEET NUREG 0650



INSTRUCTIONAL EFFORT AND EFFECTIVENESS

- AP&L INSTRUCTORS COMPLETED A 40-HOUR INSTRUCTOR TRAINING COURSE
- USE NEW LESSON PLANS AS THEY ARE DEVELOPED, REVIEWED, AND APPROVED.
(IMPROVE INSTRUCTOR AIDS)
- MEETINGS ARE BEING CONDUCTED BETWEEN OPERATIONS SUPERVISION AND TRAINING ON LICENSE CLASS PROBLEMS.
- USE QUALIFIED CONSULTANTS HELP IN TEACHING THEORETICAL SUBJECTS.
- CHANGE CLASSROOM HOURS TO STRUCTURE CONTROLLED ACTIVITIES.

INSTRUCTIONAL STAFF WORKLOAD

- CONTRACTED FOUR CONSULTANTS TO AUGMENT OPERATOR TRAINING STAFF.
- FILLED TWO ADDITIONAL OPERATOR TRAINING PERMANENT POSITIONS LATE 1930.
- TWO ADDITIONAL OPERATOR TRAINING POSITIONS ARE AUTHORIZED TO BE FILLED.
- USE OTHER QUALIFIED STATION PERSONNEL FOR INSTRUCTORS.

CURRICULUM

- INCREASED TOTAL INSTRUCTION TIME.
- INCREASED RADIATION SAFETY TRAINING AND THERMODYNAMIC TRAINING FOR SRO CANDIDATES.
- REVISED THERMODYNAMICS COURSE.
- ADDED THREE MONTHS ON SHIFT TRAINING.

ACTION BEING TAKEN TO IMPROVE
CERTIFICATION OF CANDIDATES

1. EVALUATE TRAINEE PROGRESS THROUGHOUT THE TRAINING AND REVIEW WITH OPERATIONS SUPERVISION.
2. CONDUCT WRITTEN AUDIT EXAM EARLIER SO THAT ADDITIONAL TRAINING COULD BE CONDUCTED IN WEAK AREAS.
3. OPERATION SUPERINTENDENT CONDUCT A WALK-THRU EXAMINATION IN ADDITION TO THAT CONDUCTED IN TRAINING AND CERTIFY THE CANDIDATES READINESS.
4. PROVIDE ADDITIONAL TRAINING INFORMATION, PERSONAL INFORMATION, AND STATION CERTIFICATION TO THE COMPANY CERTIFYING OFFICIAL.