Docket Nos: 50-413
and 50-414

OCT 1 1982

APPLICANT: Duke Power Company

FACILITY: Catawba Nuclear Station, Units 1 and 2

SUBJECT: SUMMARY OF MEETING ON COLD LICENSE EXAMINATION SCHEDULE OF CATAWBA OPERATORS

On September 9, 1982, the NRC staff met in Cornelius, North Carolina with representatives from Duke Power Company to discuss cold license examination schedule of Catawba operators. A list of attendees is attached (Enclosure 1).

Duke's representatives initiated the discussion and presented viewgraphs (Enclosure 2) regarding their plans and proposals for training and staffing personnel to start-up and operate both Catawba units. The five proposals made by Duke are summarized on the last page of Enclosure 2. Duke's proposals and the staff responses are stated below:

1. Regarding Duke's proposal that the NRC examinations be conducted at Catawba and not at the McGuire simulator, the staff stated that SECY 82-232 applies (i.e. no examinations on non-plant specific simulator). The staff plans to be involved in the certification examinations on the McGuire simulator. Duke should notify the staff of the exact examination dates which will be around the October-November 1982 time-frame.

2. Regarding Duke's proposal that three cold license examinations be conducted prior to 20% full power on Unit 1, the staff stated that this is acceptable subject to staff resources and schedule changes. Duke stated that they need 45 to 60 persons to start-up Unit 1 and go to Unit 2. In addition, they plan to have all the instructors licensed or certified as senior reactor operators (SROs).

3. Regarding Duke's proposal that Unit 1 cold license examinations be conducted within a one year window prior to fuel load, and the course of action if there is a schedule delay, the staff stated that the one year window should be changed to six months, and in case of a minor (up to several months) schedule delay, the staff would like to maintain the schedule for written examinations, but will slip orals as fuel load date slips.

OFFICE ▶							
SURNAME ▶							
DATE ▶							

4. Regarding Duke's proposal to have the option to cold license people on Unit 2 prior to 20% full power, the staff stated that they disagreed in principle with the intent of this option (i.e. to bypass the 1-year reactor operator (RO) requirement to be eligible for SRO, by licensing those individuals on a cold plant, Unit 2 instead of a hot plant, Unit 1). However, Duke must recognize that all SRO applicants, whether on Unit 1 or Unit 2, must meet the 4 years of responsible power plant experience requirement.

5. Regarding Duke's proposal to upgrade the facility certified reactor operators to take SRO NRC examinations, the staff stated that upgrading is acceptable, however, the staff will have to check applications against existing SRO eligibility criteria.

At the conclusion of the meeting, the staff toured the McGuire simulator and the Catawba control room.

/S/
Bruce A. Wilson, Section Chief
Operator Licensing Section
Division of Engineering and
Technical Programs
Region II

/S/
Kahtan N. Jabbour, Project Manager
Licensing Branch No. 4
Division of Licensing
Office of Nuclear Reactor Regulation

OFFICE	DL:LB #4	RIII	DL:LB #4				
SURNAME	KJabbour/hmc	BWilson	EAdensam				
DATE	9/23/82	9/28/82	9/ /82				

Mr. H. B. Tucker, Vice President
Nuclear Production Dept.
Duke Power Company
422 South Church Street
Charlotte, North Carolina 28242

cc: William L. Porter, Esq.
Duke Power Company
P.O. Box 33189
Charlotte, North Carolina 28242

J. Michael McGarry, III, Esq.
Debevoise & Liberman
1200 Seventeenth Street, N.W.
Washington, D. C. 20036

North Carolina MPA-1
P.O. Box 95162
Raleigh, North Carolina 27625

Mr. F. J. Twogood
Power Systems Division
Westinghouse Electric Corp.
P.O. Box 355
Pittsburgh, Pennsylvania 15230

Mr. J. C. Plunkett, Jr.
NUS Corporation
2536 Countryside Boulevard
Clearwater, Florida 33515

Mr. Jesse L. Riley, President
Carolina Environmental Study Group
854 Henley Place
Charlotte, North Carolina 28208

Richard P. Wilson, Esq.
Assistant Attorney General
S.C. Attorney General's Office
P.O. Box 11549
Columbia, South Carolina 29211

Mr. Henry Presler, Chairman
Charlotte - Mecklenburg Environmental Coalition
943 Henly Place
Charlotte, North Carolina 28207

North Carolina Electric Membership Corp.
3333 North Boulevard
P.O. Box 27306
Raleigh, North Carolina 27611

Saluda River Electric Cooperative, Inc.
207 Sherwood Drive
Laurens, South Carolina 29360

Mr. Peter K. VanDoorn
Route 2, Box 179N
York, South Carolina 29745

James P. O'Reilly, Regional Administrator
U.S. Nuclear Regulatory Commission, Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Robert Guild, Esq.
314 Pall Mall
Columbia, South Carolina 29201

Palmetto Alliance
2135 1/2 Devine Street
Columbia, South Carolina 29205

Enclosure 1

Attendees List

NRC	Duke
K. Jabbour	J. Wolfmayer
B. Wilson	S. Frye
P. Bemis	B. Graves
P. Hopkins	C. Muse
	R. Koehler

OFFICE ▶							
SURNAME ▶							
DATE ▶							

INTRODUCTION

WE APPRECIATE THIS OPPORTUNITY TO DISCUSS OUR LICENSE PREPARATORY PLANS WITH YOU TODAY.

THE PURPOSE OF THIS MEETING IS TO REVIEW AND DISCUSS OUR PLANS AND PROPOSALS AND TO RECEIVE NRC APPROVAL OF OUR APPROACH.

IN 1978 WE HAD A SIMILAR MEETING WITH JOE BUZY IN ATLANTA. AT THAT TIME, WE RECEIVED VERBAL APPROVAL THAT THE NRC EXAMS WOULD BE GIVEN ON CATAWBA NUCLEAR STATION RATHER THAN THE MCGUIRE NUCLEAR STATION SIMULATOR. WE WOULD LIKE TO RECONFIRM THAT POSITION TODAY.

WE ARE REQUESTING NRC APPROVAL OF OUR APPROACH NOW, APPROXIMATELY TWO (2) YEARS PRIOR TO FUEL LOADING, SO THAT WE CAN MAKE THE NECESSARY TRAINING AND STAFFING DECISIONS TO START-UP AND OPERATE BOTH UNITS WITHOUT AN INORDINATE AMOUNT OF OVERTIME.

AS A FOLLOW-UP TO THIS MEETING, WE WOULD LIKE TO SUBMIT TO THE APPROPRIATE NRC REPRESENTATIVE, THE PROPOSALS THAT WE HAVE AGREED TO TODAY AND RECEIVE WRITTEN APPROVAL OF THESE PROPOSALS. THIS WILL ALLOW US TO PROCEED WITH SOME ASSURANCE OF PROGRAM ACCEPTABILITY IN THE FUTURE.

MILESTONES

(SCHEDULED DATES)

UNIT #1

• Start HFT	6-84
• End HFT	8-84
• Fuel Load	11-84
• Initial Criticality	2-85
• Synchronize to System	3-85
• 20% FP	4-85

Unit #2

• Start HFT	6-86
• End HFT	8-86
• Fuel Load	11-86
• Initial Criticality	2-87
• Synchronize to System	3-87
• 20% FP	4-87

TRAINING PROPOSALS

I. USE OF THE MCGUIRE NUCLEAR STATION (MNS) SIMULATOR FOR CATAWBA NUCLEAR STATION (CNS) LICENSING EXAMINATIONS

II. COLD LICENSE EXAMINATIONS

III. QUALIFICATIONS OF RO CERTIFIED OPERATORS FOR THE SRO NRC EXAMINATION

DUKE POWER COMPANY
CATAWBA NUCLEAR STATION
TRAINING PROPOSAL

I. USE OF THE MCGUIRE SIMULATOR FOR CATAWBA LICENSING EXAMINATIONS

A. Position

Due to design and procedural differences, NRC licensing training and examinations can be more effectively conducted at the Catawba Nuclear Station than at the McGuire Simulator.

B. Basis

The differences between McGuire Nuclear Station and the Catawba Nuclear Station fall into three categories:

1. System/Component Design Differences
2. Control Board Layout Differences
3. Procedure Differences

Attachment #1 outlines some of the system/component design differences.

Control board layout differences are shown in the accompanying book comparing McGuire's boards and Catawba's boards.

The Catawba procedures vary from McGuire procedures due to design differences and also vary to some extent in format, style and organization. Catawba's Administrative Procedures are also different.

In summary, our Licensing Training Program would have to include two different courses - one for the McGuire Simulator Examination and one for the Catawba Examination. It is inappropriate and negative training to spend time in training on McGuire when this time could be spent learning Catawba information or participating in pre-operational testing activities.

C. Recommendation

The NRC licensing examinations be conducted at the Catawba Nuclear Station and not on the McGuire Simulator.

II. COLD LICENSE EXAMINATIONS

A. Position

Three (3) cold license examinations need to be given prior to 20% full power on Unit #1 and cold license examinations should be given on Unit #2 after Unit #1 reaches 20% full power. This will provide the personnel necessary to startup and operate both units.

B. Basis

Our experience at Oconee and McGuire Nuclear Stations indicates the need to cold license more operators. By licensing more operators, we will be able to operate Unit #1 and start-up Unit #2 and hold overtime to a minimum.

C. Recommendation

Conduct three (3) cold license examinations prior to Unit #1 at 20% full power. Conduct cold license examinations on Unit #2 after Unit #1 reaches 20% full power and conduct Unit #1 hot licenses as required (See Attachment #2). After application, we assume that all licensed operators will receive Unit #1 and Unit #2 licenses prior to Unit #2 fuel loading without taking a separate examination on each unit. This is justified since the units are essentially identical and training will be conducted on any differences.

Retraining will commence after the first examination is given so that knowledge and skills can be maintained.

III. QUALIFICATION OF RO CERTIFIED OPERATORS FOR THE SRO NRC EXAMINATION

A. Position

Upgrade RO certified operators to allow them to take the SRO NRC examination by providing sufficient training and experience.

B. Basis

By providing sufficient training and experience, RO certified operators can be developed so that by the time for the NRC license examination they will be qualified to be SRO licensed.

The time between certification and the actual licensing of an individual is probably several years. During this time, one is exposed to several years of pre-operational activities and months of training. This is sufficient to qualify a person to take a SRO examination providing his performance has been satisfactory.

C. Recommendation

RO certified operators will be upgraded to take the SRO NRC examination by the following means:

1. One additional month of observation/OJT at McGuire Unit #1
2. Participation in Catawba plant specific SRO training
3. On-shift participation in pre-operational startup activities

ATTACHMENT #1
DUKE POWER COMPANY
MCGUIRE - CATAWBA SYSTEM/COMPONENT
DESIGN DIFFERENCES

Typical Major Differences

	SYSTEM/COMPONENT	MCGUIRE	CATAWBA
1.	Turbine	Westinghouse	General Electric
2.	Turbine Controls	D.E.H.	E.H.C.
3.	Steam Generators	Different Model S/G's	
		Programmed level is ramped	Unit #1 - Programmed level is ramped
			Unit #2 - Programmed level is constant
4.	Condenser	Waterboxes in Parallel	Waterboxes in Series
		Uniform Pressure	Three Different Pressures
5.	Condenser Heat Sink	Lake Water	Forced Draft Cooling Towers
6.	Condensate and Feedwater	3 Trains of Heaters	2 Trains of Heaters
		Condensate Coolers	No Condensate Coolers
7.	Cond./Fdw. Heater Drains	Vertical Heaters	Horizontal Heaters
		3-C Htr Drain Pumps	2-C Htr Drain Pumps
		3-G Htr Drain Pumps	
8.	Residual Heat Removal (RHR)	1 Reactor Coolant Loop Suction	2 Reactor Coolant Loop Suctions
9.	ECCS Swapover From Injection to Cold Leg Recirc	Manual Swap/ Auto Backup	Auto Swap/ Manual Backup
10.	Nuclear Service Water	Essential Train Separation	Essential Train Separation
		(1) S_s	(1) S_p
		(2) B/O	
		Swap to SNSWP	Swap to SNSWP
		(1) S_s	(1) S_p
		(2) B/O	(2) Lo-lo Pit Lvl

ATTACHMENT #1
DUKE POWER COMPANY
MCGUIRE - CATAWBA SYSTEM/COMPONENT
DESIGN DIFFERENCES

Typical Major Differences

	SYSTEM/COMPONENT	MCGUIRE	CATAWBA
		Auto Pump Start	Auto Pump Start
		(1) S_s	(1) S_s
		(2) B/O	(2) B/O
			(3) Lo-lo Pit Lvl
11.	ECCS Motor Coolers	Cooled by Nuclear Service Water	Cooled by Component Cooling
12.	Component Cooling	Common Surge Tank (Split)	Each Train has Separate Surge Tanks
		Flow Capacity	More Capacity than MNS
13.	Auxiliary Transformers	Two Per Unit	Four Per Unit
14.	Esseptial Power	Common Essential and Blackout Bus	Separate Blackout Bus
		Nordberg D/G - 4000 KW	DeLaval D/G - 7000 KW
		Switching Logic is Different	
15.	6.9 KV Distribution	Major Differences in Switching Logic	
16.	Vital DC	One Source	Isolating Diode to D/G Battery

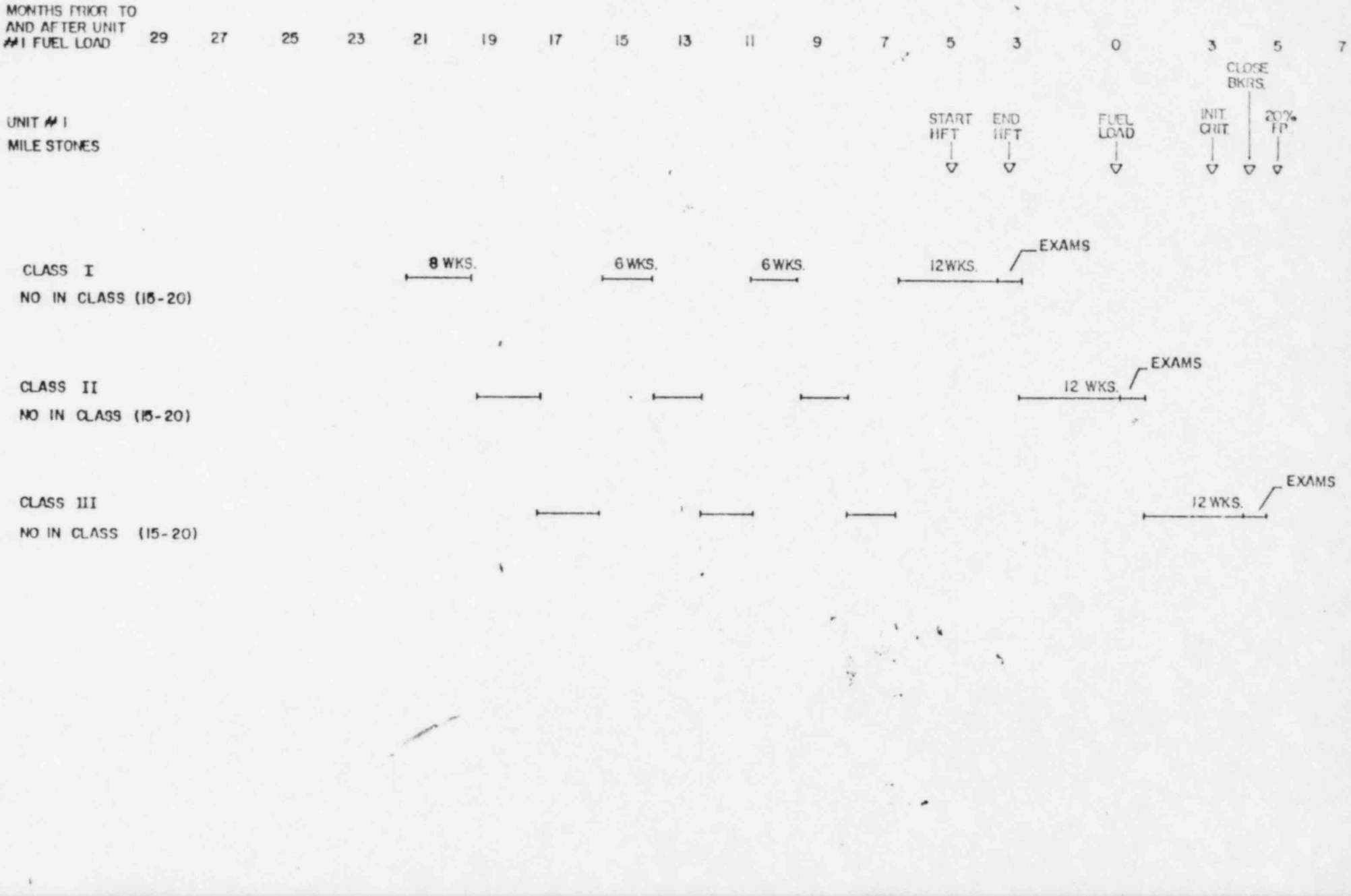
ATTACHMENT # 2

DUKE POWER COMPANY

CATAWBA NUCLEAR STATION

COLD LICENSE TRAINING AND EXAM SCHEDULE

DATE _____



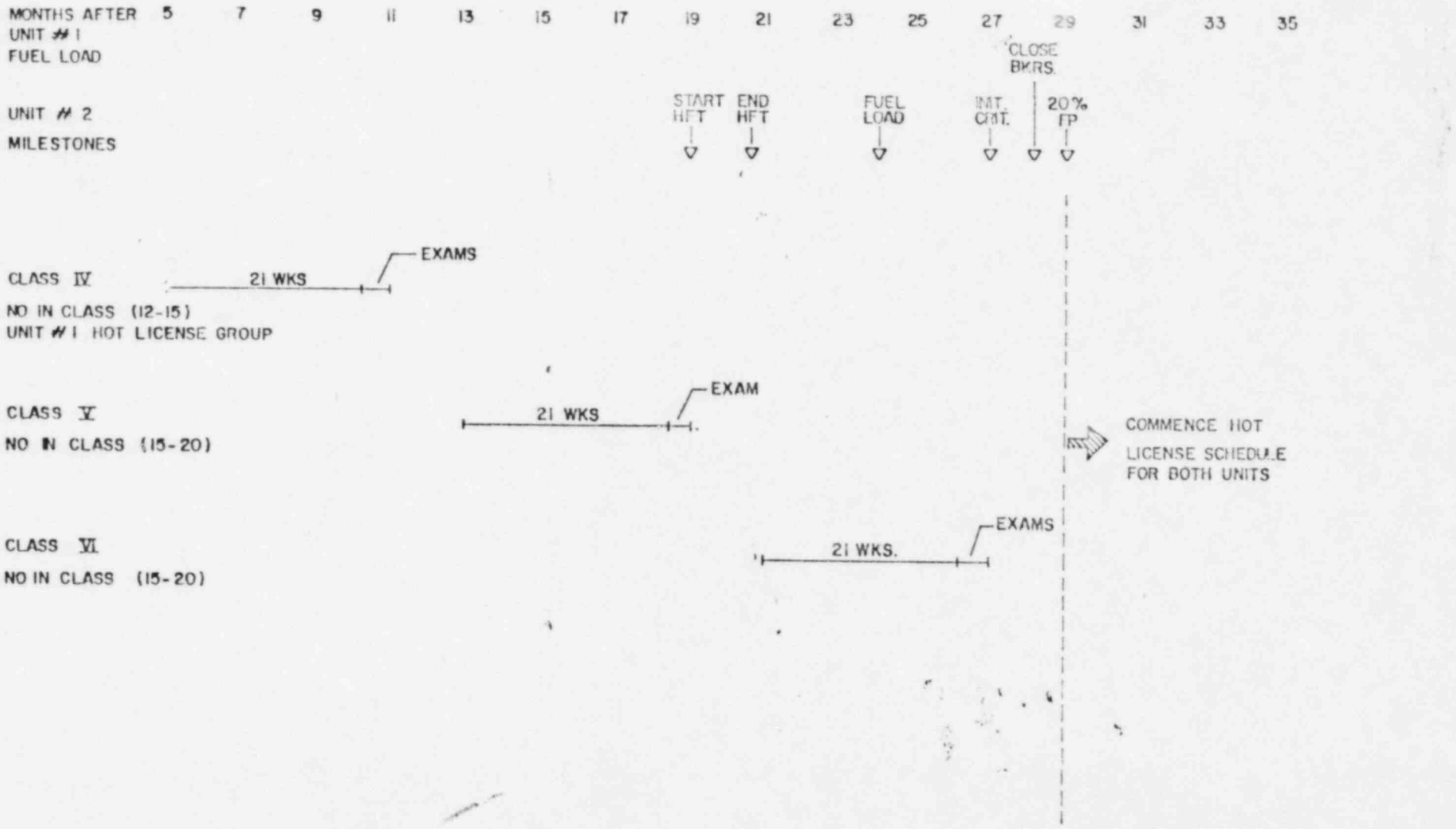
ATTACHMENT # 2

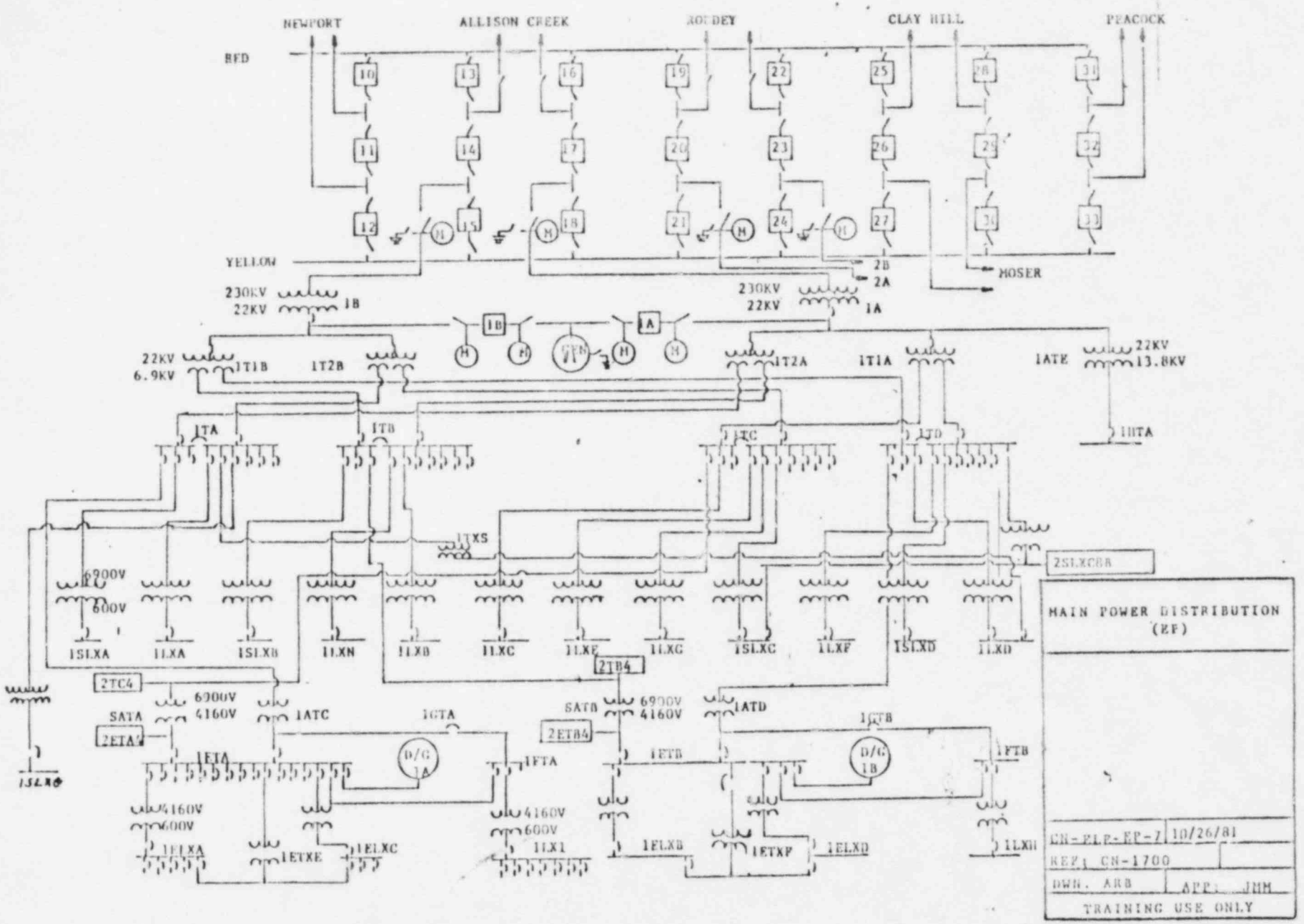
DUKE POWER COMPANY

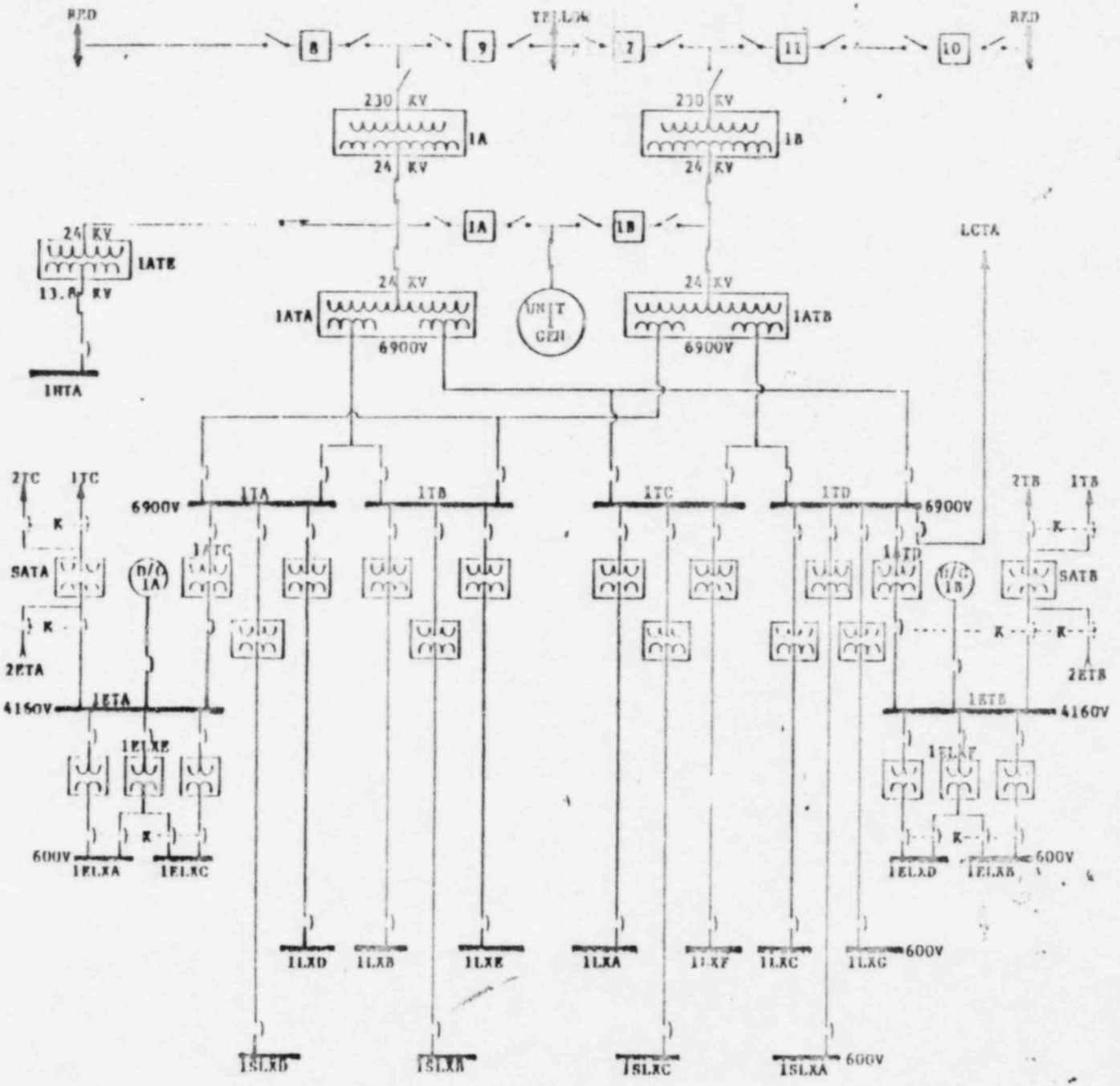
CATAWBA NUCLEAR STATION

COLD LICENSE TRAINING AND EXAM SCHEDULE

DATE _____




NEWPORT
ALLISON CREEK
ROUDEY
CLAY HILL
PEACOCK
RED
YELLOW
MOSER
230KV
22KV
1B
1A
2B
2A
22KV
6.9KV
1T1B
1T2B
1T2A
1T1A
1ATE
22KV
13.8KV
1HTA
1TA
1TB
1TC
1TD
1TXS
2SLXCBA
6900V
600V
1SLXA
1LXA
1SLXB
1LXN
1LXB
1LXC
1LXE
1LXG
1SLXC
1LXF
1SLXD
1LXD
2TB4
2TC4
SATA
6900V
4160V
1ATC
2ETA4
1GTA
D/G
1A
1ETA
1FTA
SATB
6900V
4160V
1ATD
2ETB4
1GTB
D/G
1B
1ETB
1FTB
4160V
600V
1ELXA
1ETXE
1ELXC
4160V
600V
1LX1
1ELXB
1ETXF
1ELXD
1LXH
1SLXB
MAIN POWER DISTRIBUTION
(EF)
CN-PLP-EP-7
10/26/81
REF: CN-1700
DWN. ARB
APP. JHM
TRAINING USE ONLY

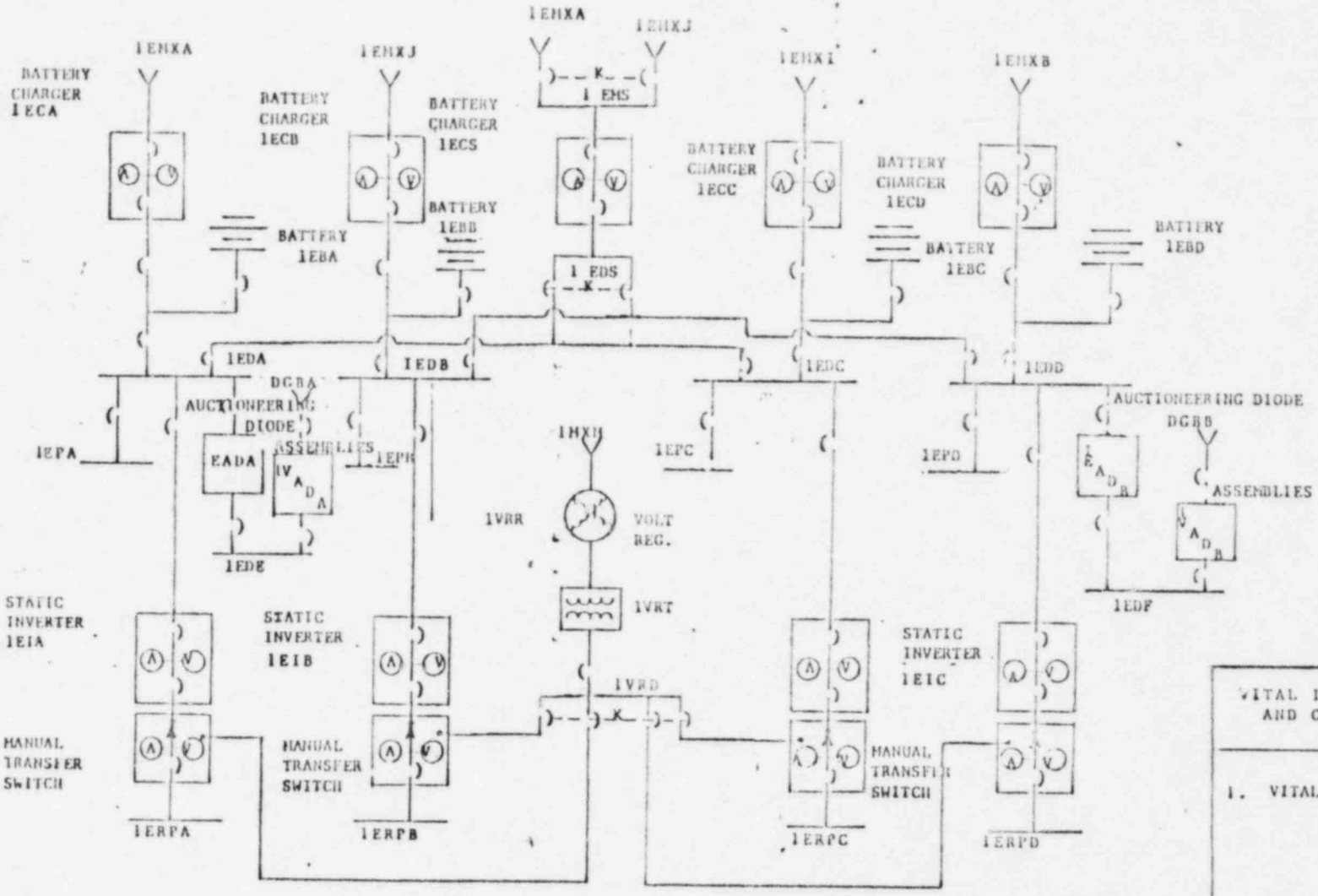


MAIN POWER DISTRIBUTION (EP)

1. UNIT 1 INTERCONNECTIONS
2. TWO K-KEYS REQUIRED TO CLOSE BKR. SUPPLYING 600V ESSENTIAL BUS FROM 1ELXE OR 1ELXF.

MC-SYS-EP-1	DATE 8/16/75
REF. MC-1700 SERIES	EP/6235
DRAWN: DDB	APP. WMC

TRAINING USE ONLY

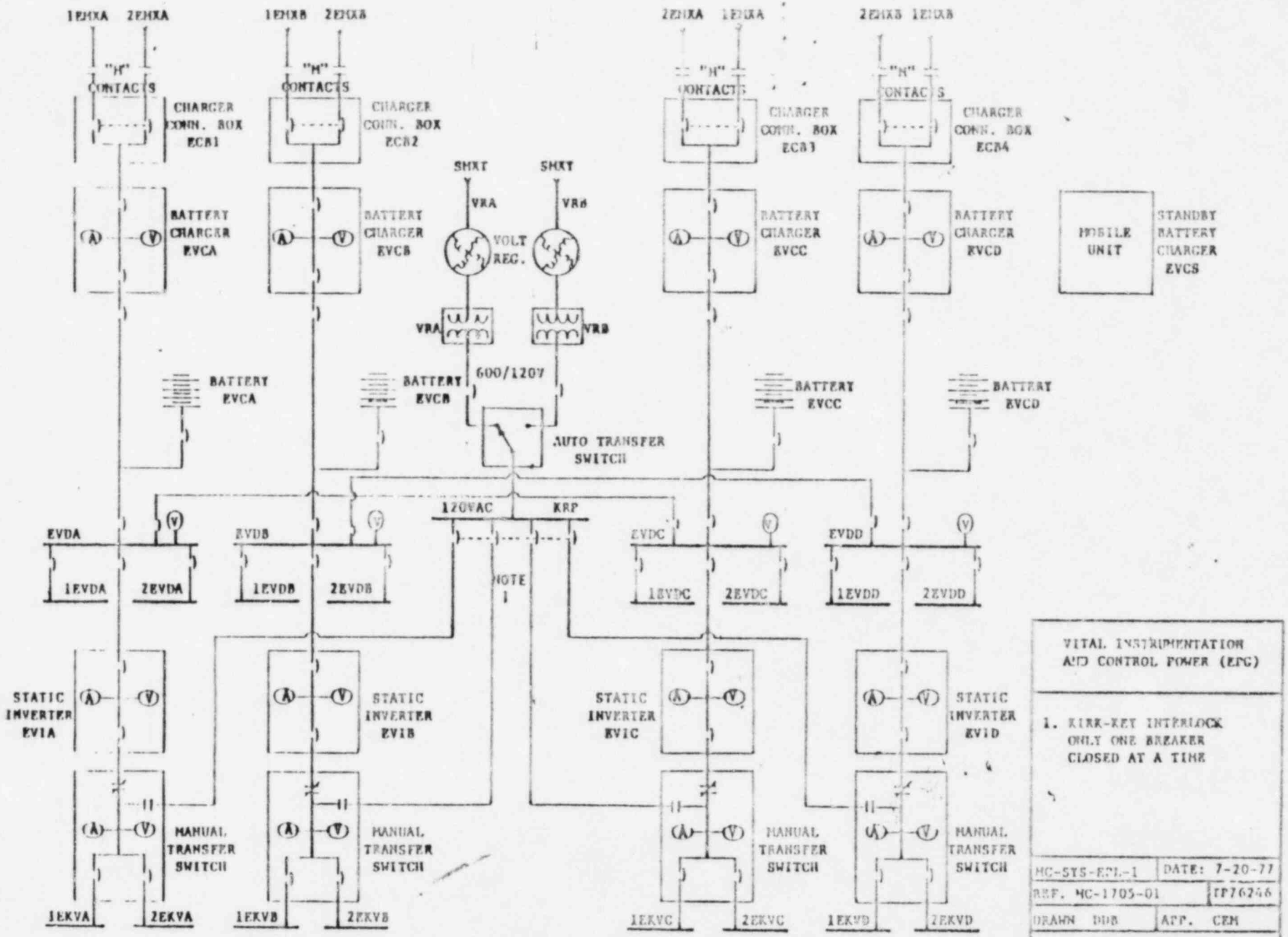


VITAL INSTRUMENTATION AND CONTROL

1. VITAL I & C UNIT 1

N-SYS-BPG-1	DATE: 4-11-81
EF :1705-81.02	
DRAWN: ARB	APP: CTK

TRAINING USE ONLY

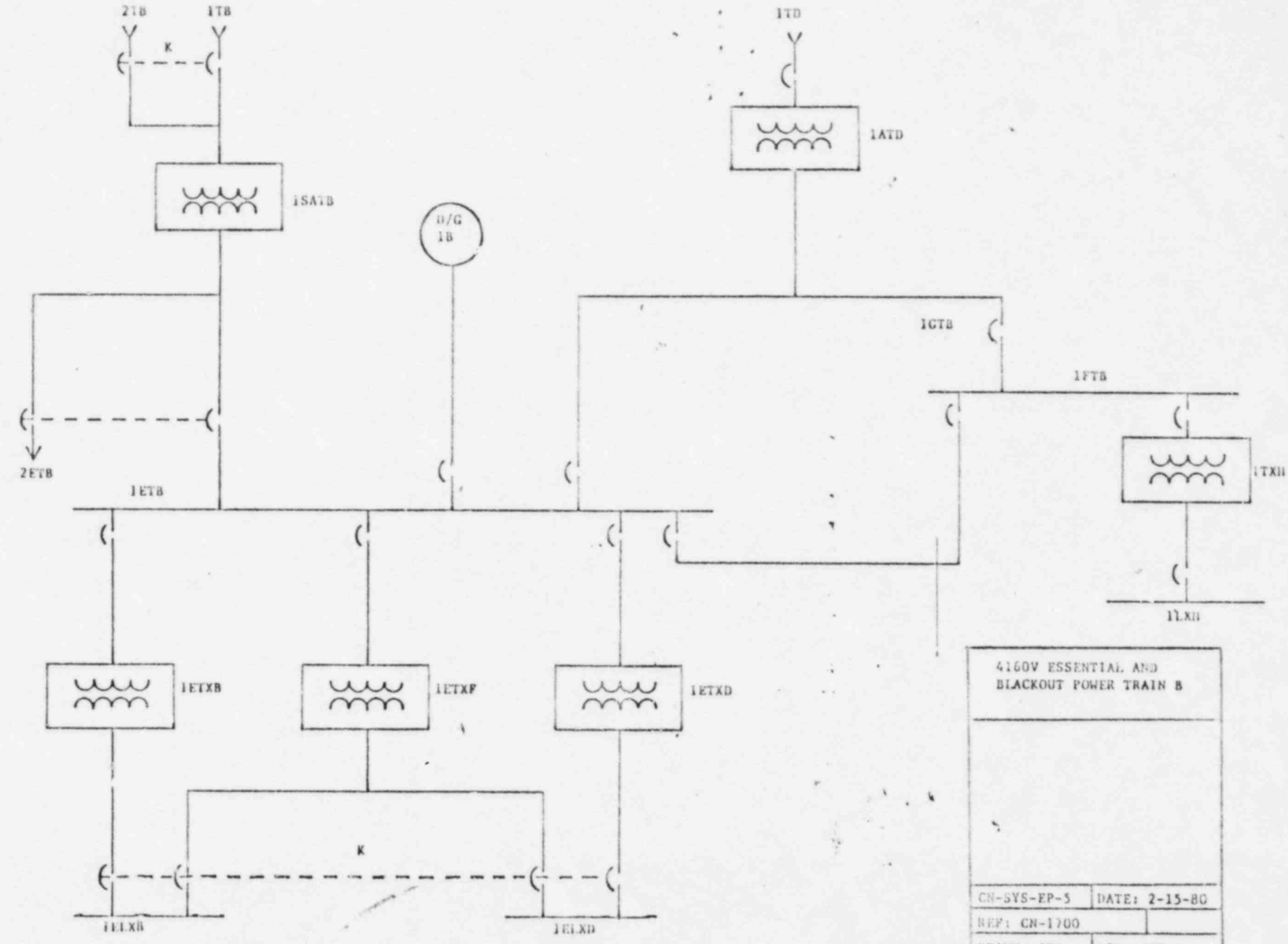


VITAL INSTRUMENTATION AND CONTROL POWER (EPG)

1. KIRK-KEY INTERLOCK ONLY ONE BREAKER CLOSED AT A TIME

MC-SYS-EPL-1	DATE: 7-20-77
REF. MC-1705-01	IP76246
DRAWN DDB	APP. CEM

TRAINING USE ONLY


2TB
1TB
K
1SATB
D/G
1B
1TD
1ATD
1GTB
1FTB
1TXH
1LXH
2ETB
1ETB
1ETXB
1ETXF
1ETXD
K
1E1XB
1E1XD
4160V ESSENTIAL AND
BLACKOUT POWER TRAIN B
CN-SYS-EP-5
DATE: 2-15-80
REF: CN-1700
DRAWN: ARB
APP: CTK
TRAINING USE ONLY

ITEMS REQUIRING NRC APPROVAL

1. NRC EXAM CONDUCTED AT CNS AND NOT AT MNS SIMULATOR

2. THREE (3) COLD LICENSE EXAMS CONDUCTED PRIOR TO UNIT #1 AT 20% FP

3. CONDUCT UNIT #1 COLD LICENSE EXAMS WITHIN A ONE (1) YEAR WINDOW PRIOR TO FUEL LOAD, IF THERE IS A SCHEDULE DELAY

4. HAVE THE OPTION TO COLD LICENSE PEOPLE ON UNIT #2 PRIOR TO 20% FP

5. UPGRADE THE RO CERTIFIED OPERATORS TO TAKE THE SRO NRC EXAM BY:

   - ONE (1) ADDITIONAL MONTH OF OJT AT MNS #1
   - PARTICIPATION IN CNS SRO TRAINING
   - ON-SHIFT PARTICIPATION IN PRE-OPERATIONAL START-UP ACTIVITIES

MEETING SUMMARY DISTRIBUTION

OCT 1 1982

Docket No(s): 50-413, 414
NRC/PDR
Local PDR
TIC/NSIC/TERA
LB #4 r/f
Attorney, OELD
OIE
E. Adensam
Project Manager K. Jabbour
Licensing Assistant M. Duncan

NRC Participants:

K. Jabbour
B. Wilson, RII
P. Bemis
P. Hopkins

bcc: Applicant & Service List