E4C-082 Rev 1, CCN N-3 System Dynamic Voltages During DBAs

Southern California Edison Company	CALC. NO. E4C-082	ICCN NO./ PRELIM. CCN NO. N-3	PAGE 1	TOTAL NO. OF PAGES 453
INTERIM CALCULATION CHANGE NOTICE (ICCN)/ CALCULATION CHANGE NOTICE (CCN)	BASE CALC. REV. 1	UNIT 2 & 3	CCN CONVERSION : CCN NO. CCN- 9	CALC. REV. 1
	CALCULATION SUBJECT : SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT			

CALCULATION CROSS-INDEX	ENGINEERING SYSTEM NUMBER	PRIMARY STATION SYSTEM DESIGNATOR	Q-CLASS
☒ New/Updated index included ☐ Existing index is complete	1804	PBA,PBB,PEA,PEB	II

CONTROLLED PROGRAM OR DATABASE IN ACCORDANCE WITH NES&L 41-5-1	PROGRAM / DATABASE NAME (S) ☐ ALSO, LISTED BELOW	VERSION/RELEASE NO.(S)
☒ PROGRAM ☐ DATA BASE	PSS/E	19.0

1. BRIEF DESCRIPTION OF ICCN / CCN:

THIS CCN (N-3) IS INTENDED TO VERIFY THE CAPABILITY OF ELECTRICAL AUXILIARY SYSTEM WHEN ESF LOADS ARE STARTED OUT OF SEQUENCE DUE TO A POSSIBLE OVERLAPPING OPERATION OF THEIR AGASTAT RELAY TIMER. THE ANALYSES INCLUDED IN THIS CCN (N-3) ARE IN ADDITION TO THE EXISTING ANALYSES IN THE BASE CALCULATION (E4C-082, REVISION 1). SEE NEXT SHEETS.

INITIATING DOCUMENT (DCP / MMP, FCN, OTHER) ~~ROTS ITEM~~ NCR NO. 93070031 REV. _____ 4REV 10/6/94

2. OTHER AFFECTED DOCUMENTS (CHECK AS APPLICABLE FOR CCN ONLY):

☐ YES ☒ NO OTHER AFFECTED DOCUMENTS EXIST AND ARE IDENTIFIED ON ATTACHED FORM 26-503.

3. APPROVAL :

DISCIPLINE / ESC : NEDO-ELECTRICAL

L. R. MURIEL/LRM 5/215	[signature]	
ORIGINATOR (Print name/initial) PAX	GS (Signature)	Other (Signature)
A. M. PATEL/AMP 5/864	K L Gilmore	10/24/94
IRE (Print name/initial) PAX	NES&L DM (Signature)	DATE

.. ASSIGNED SUPPLEMENT ALPHA DESIGNATOR : _____

CONVERSION TO CCN DATE 10/27/94

Tamara Castello
SCE CDM - SONGS

CALCULATION CROSS-INDEX

ICCN NO./ PRELIM. CCN NO. N-3	PAGE 2 OF 453

Calculation No. E4C-082 REV. 1 Sheet No. _____ CCN CONVERSION: CCN NO. CCN- 9

Calc. rev. number and responsible supervisor initials and date	INPUTS: These interfacing calculations and / or document provide input to the subject calculation and if revised may require revision of the subject calculation.		OUTPUTS: Results and conclusions of the subject calculation are used in these interfacing calculations and / or documents.		Does the output interface calc/ document require revision?	Identify output interface calc / document CCN, DCN, TCN / Rev. FIDCN, or tracking number
	Calc / Document No.	Rev. No.	Calc / Document No.	Rev. No.	YES / NO	
E4C-082 REV 1 Cahn 10/6/94	SO23-302-15-10 SO23-302-15-11 SO23-302-15-12 SO23-302-15-13 SO23-302-15-14	1 1 1 1 1	E4C-098 E4C-099	0 0	NO NO	
	DCP 2&3 6754.00SP DCP 2&3 6742.07SM E4C-086 CCN 1 E4C-087 CCN 1	0 0 0 0				
	LOG ITEM BC-93-159 LOG ITEM BC-93-205		NOTE: The input documents shown in this form are additional items to the existing Calculation Cross Index.			

SCE 26-424 REV. 0 7/92 (REFERERNCE: NES&L 24-7-15)

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REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

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	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

1.0 PURPOSE AND ACCEPTANCE CRITERIA:

1.1 PURPOSE:

This CCN verifies the capability of electrical auxiliary system when ESF loads are started out of sequence due to a possible overlapping operation of their Agastat relay timer.

A. Data contained in the CCNs identified below are considered in the analyses for this electrical auxiliary system capability verification.

1. CCN 3. This CCN revises the 1500 KVA loadcenter transformer data to reflect the impedance of the replacement (spare) loadcenter transformer with the highest (worst case) impedance value.

   The transformer data indicated in CCN 3 was based on the transformer specification provided by SCE to the vendor. This CCN (N-3) considers the transformer data which are based from the more accurate vendor test reports (References 6.2 through 6.6). The new parameters for the 1500 KVA loadcenter transformers are as follows:

   Impedance = 10.18%
   X-R Ratio = 7.0
   Nominal Tap Voltage = 4155 Volts

2. CCN 5 (Unit 2) and CCN 6 (Unit 3). These CCNs revise the loading in the emergency diesel generator MCCs to reflect the new 2-HP motor for the Lube Oil Circulating Pumps/Auxiliary Turbocharger Pump. These changes support the plant modifications described in Design Change Package 2&3 6754.00SP (Reference 6.10).

3. CCN 7 (Unit 2) and CCN 8 (Unit 3). These CCNs reflect the addition of Component Cooling Water (CCW) Seismic Makeup Pumps P-1018 and P-1019. These changes support the plant modifications described in Design Change Package 2&3 6742.07SM (Reference 6.11).

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4. CCN 2 (Unit 2) and CCN 4 (Unit 3). These CCNs indicate that equipment hatch electric hoists 2Z028, 2Z029, 3Z028 and 3Z029 can be fed from their respective 480-V ESF Buses 2B04, 2B06, 3B04 and 3B06 via pressurizer heater panels 2BHP04, 2BHP08, 3BHP04 and 3BHP08. However, these loads have no bearing in these analyses because they are not operated during Mode 1 or during a design basis accident considered in these analyses.

B. In addition, this CCN includes the following changes and updates to the base calculation:

1. The new load inertia for the Control Room Emergency Air Conditioning Units E-418 and E-419 per Log Item BC-93-159 (Reference 6.8) to reflect the new (lower) values provided by the vendor (Reference 6.7, Attachment 9.2.1).

2. The new motor base (MBASE) for the Auxiliary Feedwater Pumps 2P141, 2P504, 3P141 and 3P504 is 0.6832 MVA per Calculations E4C-086, Rev. 0, CCN 1 and E4C-087, Rev. 0, CCN 1.

3. The single train operation of Component Cooling Water Pumps and Saltwater Cooling Pumps per Log Item BC-93-205 (Reference 6.9)

4. The change in the operating modes considered for the Dome Air Circulator Fans to cover the possibility of single train operation of these fans.

5. For systems containing a swing or redundant components, the load with the highest impedance feeder cable is selected as the starting load to obtain the most limiting voltage profile:

1. Component Cooling Water Pump 2P025 at 4-kV Bus 2A04
2. Component Cooling Water Pump 2P025 at 4-kV Bus 2A06
3. Component Cooling Water Pump 3P024 at 4-kV Bus 3A04
4. Component Cooling Water Pump 3P025 at 4-kV Bus 3A06
5. Saltwater Cooling Pump 2P307 at 4-kV Bus 2A04
6. Saltwater Cooling Pump 2P114 at 4-kV Bus 2A06
7. Saltwater Cooling Pump 3P307 at 4-kV Bus 3A04
8. Saltwater Cooling Pump 3P114 at 4-kV Bus 3A06

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6. In cases where the 4-kV ESF buses are deenergized and transferred to the corresponding ESF buses of the companion unit, motor loads that are initially running during the normal plant operation are stopped and restarted when the tie breaker closes during bus transfer. In the base calculation, these loads continue to run rather than being stopped and restarted when the bus transfer occurs.

Completion and issuance of this CCN closes NEDOTRAK Item 93070031, Sub. 01, (Reference 6.1).

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1.2 ACCEPTANCE CRITERIA:

A. All ESF motor loads that are required to mitigate the consequences of a design basis accident should accelerate to their rated operating speeds under credible worst case loading conditions, and with these motor loads started out of sequence due to a possible overlapping operation of their Agastat relay timer.

The motor terminal voltage during the starting and accelerating period should be adequate such that the corresponding motor torque is constantly more than the load requires, allowing the motor to accelerate to its rated speed. Note that the torque developed by the motor at any speed is directly proportional to the square of the voltage and inversely proportional to the square of the frequency.

B. At no time during the automatic sequencing period should the generator loading exceed the generator's 4700 KW rating or 5170 KW short time rating (each diesel generator unit in SONGS 2&3 can be loaded up to 5170 KW for 2 hours within a 24-hour period).

C. The following acceptance criteria for the emergency diesel generators, based on Section C.1.4 of Regulatory Guide 1.9 (Reference 6.12) apply:

1. Each emergency diesel generator should be capable of starting and accelerating to rated speed all the required ESF loads in the required sequence.

2. At no time during the loading sequence should the frequency of the generator decrease to less than 95% of nominal (60 Hertz) nor the voltage decrease to less than 75% of nominal (4.36 KV).

3. The generator frequency should be restored to within 2% of nominal (60 Hertz) in less than 60% of each load-sequence interval for step load increase.

4. The generator voltage should be restored to within 10% of nominal (4.36 KV) within 60% of each load-sequence time interval.

D. The acceleration times determined in these analyses should remain bounded by the existing motor protective device settings per Class 1E 4KV Protection Calculation E4C-098 (Reference 6.16) and Class 1E 480V Protection Calculation E4C-099 (Reference 6.17).

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2.0 RESULTS, CONCLUSIONS AND RECOMMENDATION:

2.1 RESULTS:

The results of the dynamic simulations are presented in the form of voltage profiles for the ESF buses and MCCs; voltage and speed/acceleration profiles for ESF motors; and voltage, frequency and power profiles for the emergency diesel generators. The dynamic profiles established by this CCN represent the bounding values for the ESF motors, buses and emergency diesel generators during a postulated design basis accident coincident with the worst case system voltages in the ESF buses.

Voltage is specified in per unit at 4.16 KV, 4.36 KV or 480 V base. The time scale is specified in seconds. Motor speed is specified in per unit slip. The generator power is specified in megawatts (MW) and frequency in per unit at 60-cycle.

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INTERPRETATION OF THE DYNAMIC VOLTAGE PROFILES

Refer to the voltage profiles on the following pages. A time scale from t=0 to t=40 seconds is provided in the voltage profiles for the 4-KV buses, 480-V Buses and 480-V MCCs. Automatic sequencing of ESF loads occurs from time t=0 second.

The definition of time t=0 varies depending on the bus alignment considered in each case. In CASEs IIIAX and IIIAY t=0 is the time at which the emergency diesel generator output breakers close. This occurs after a delay from the initiation of the safety signal during which the emergency diesel generators start and come up to their rated speeds and voltages (normally within 10 seconds). In CASEs IVBX and IVBY, t=0 is the time when the tie breakers close.

At time t=0, the profiles show the voltage dip that occurs when the first load group starts. Other ESF loads are started out of sequence thereafter at t=2.5, t=7.5, t=12.5, t=17.5, t=27.5 and t=32.5 seconds.

The voltage profiles for emergency diesel generator CASEs IIIAX and IIIAY indicate a sharp increase in voltage (spike) when motors from the last sequenced load group approach their rated speeds. This condition is due to the fact that the generator must constantly adjust its power output to match the power demand of the motors while they start and accelerate to their rated speeds. As these motors attain their rated speeds, the power demand quickly diminishes, causing the generator to readjust to this change. However, the drop in motor power demand occurs quicker than the generator is able to compensate, resulting in a momentary surge in generator voltage. This generator response characteristic is normal and is expected during the starting and sequencing of motors supplied from their associated diesel generator.

Project or DCP/MMP SONGS 2 & 3 Calc No. E4C-082 Rev.1

Subject SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT Sheet No.

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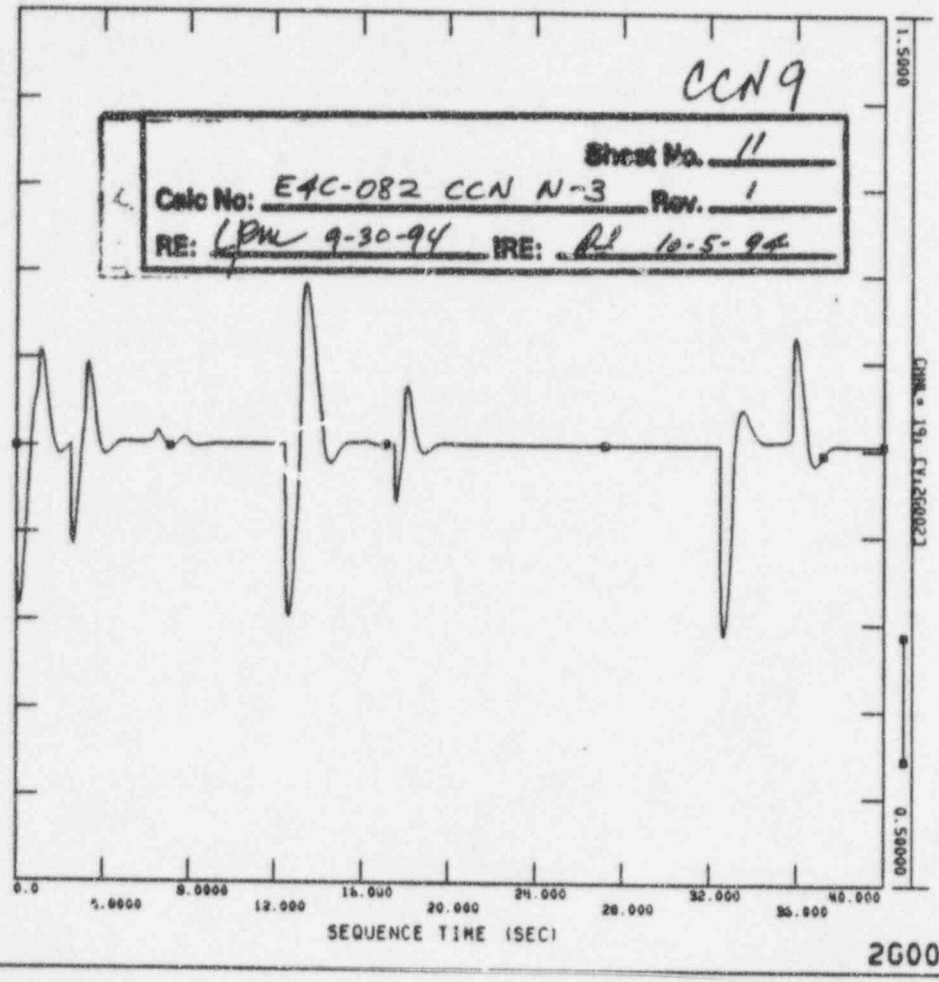
CASE IIIAX DYNAMIC PROFILES

CCN 9

Sheet No. 11

Calc No: E4C-082 CCN N-3 Rev. 1

RE: LPW 9-30-94 IRE: RL 10-5-94



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PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
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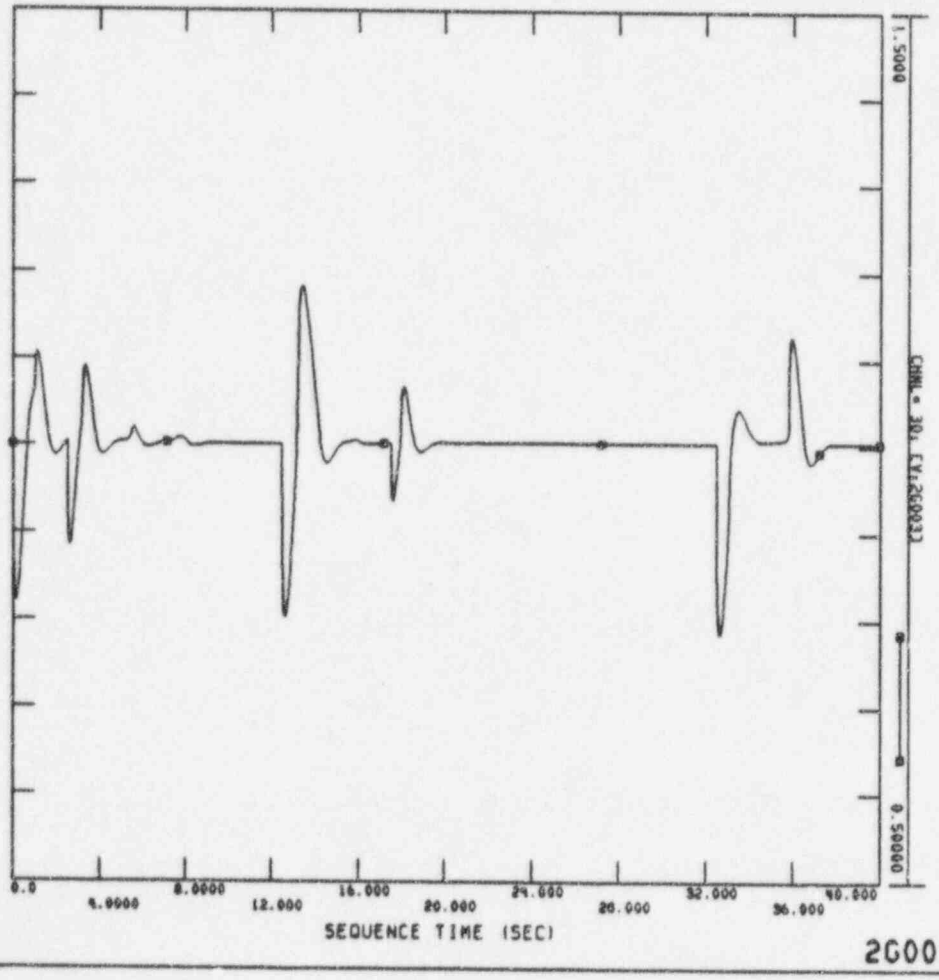

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2G003 (14.36-KV BASE)

CCN 9

Sheet No. 12

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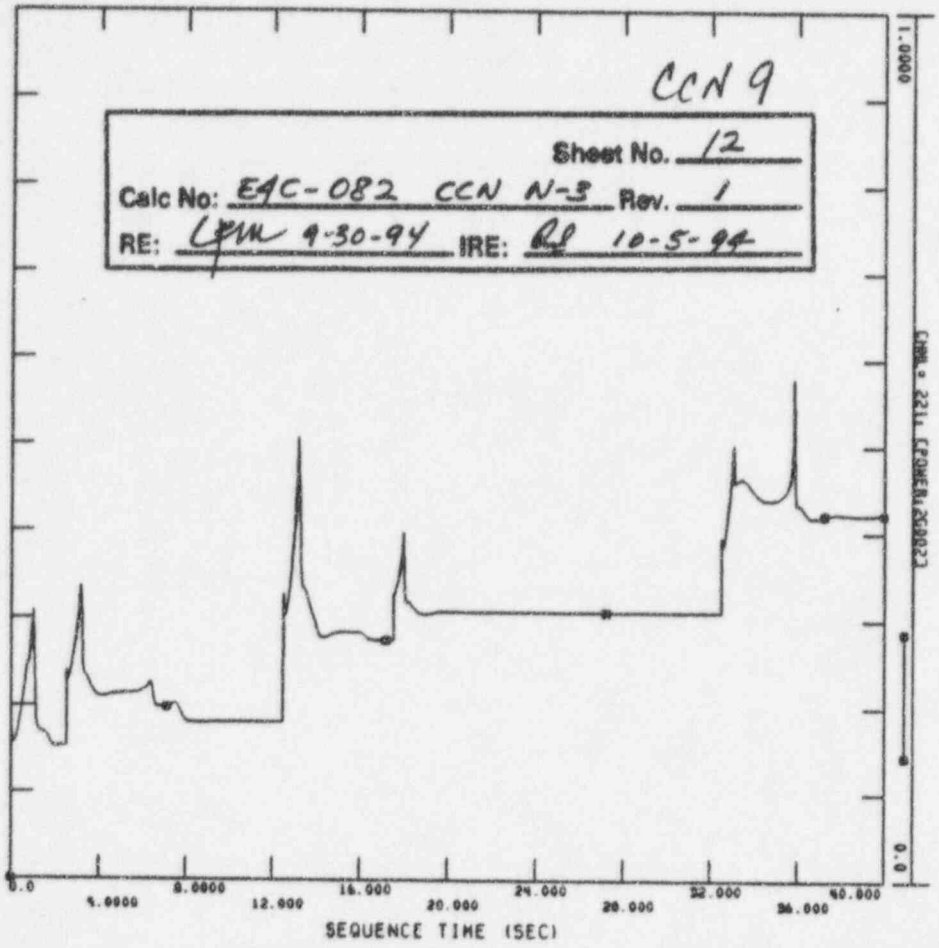

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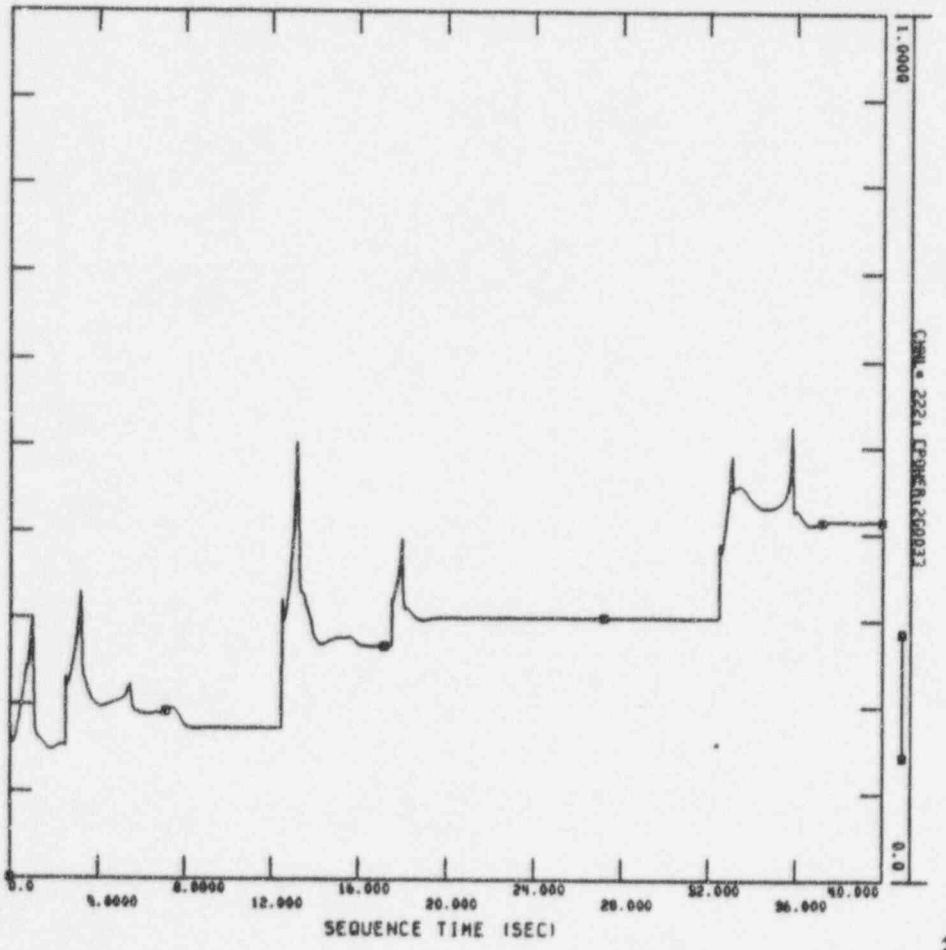

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20003 POWER (MW)

CCN9

Sheet No. 13

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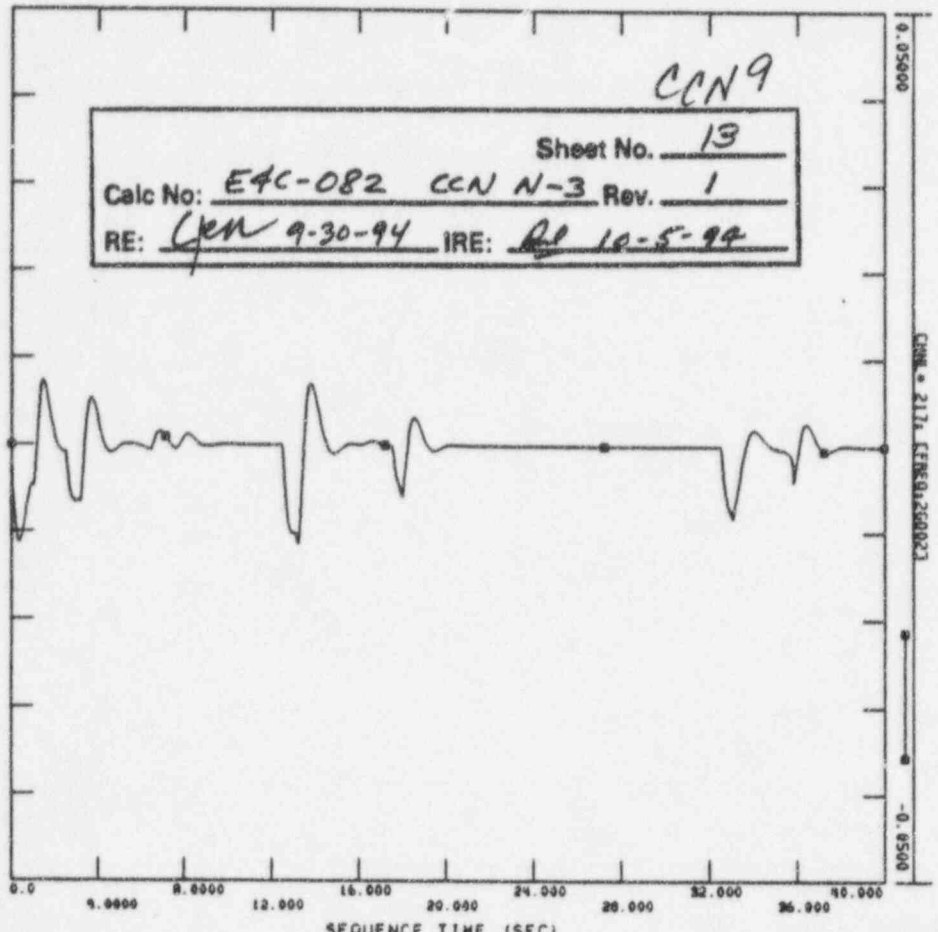

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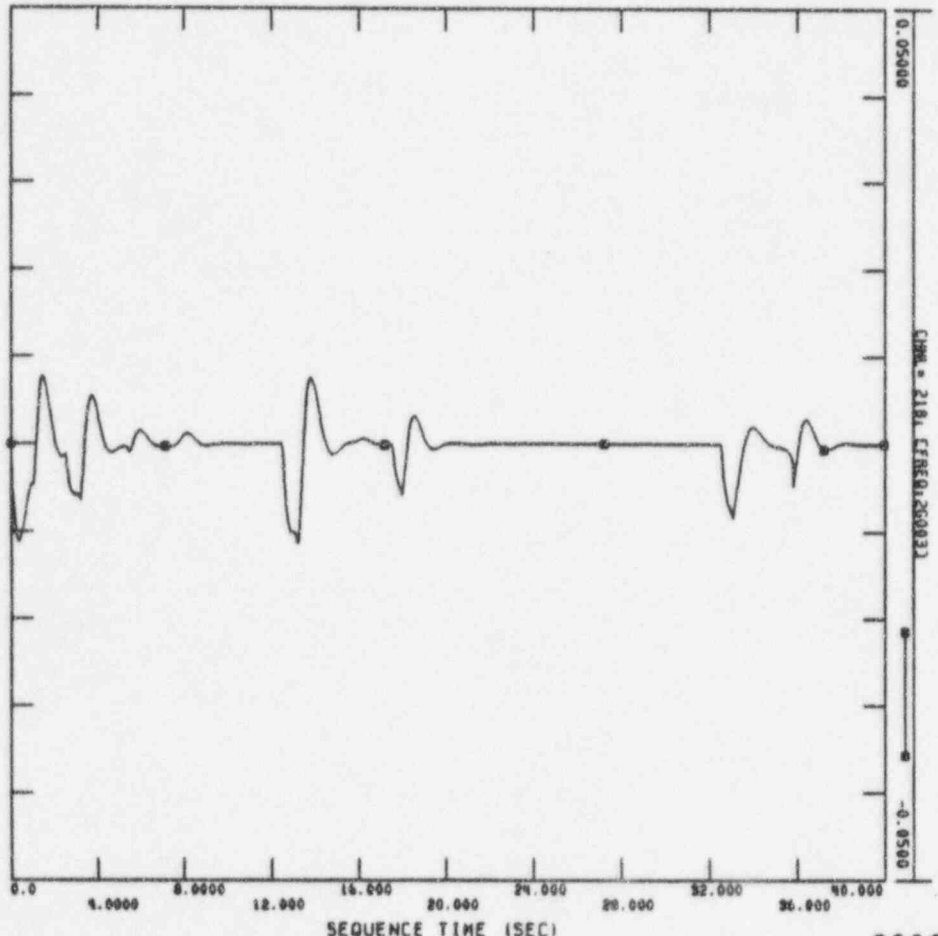

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2G003 FREQ DEVIATION

CCN 9

Sheet No. 14

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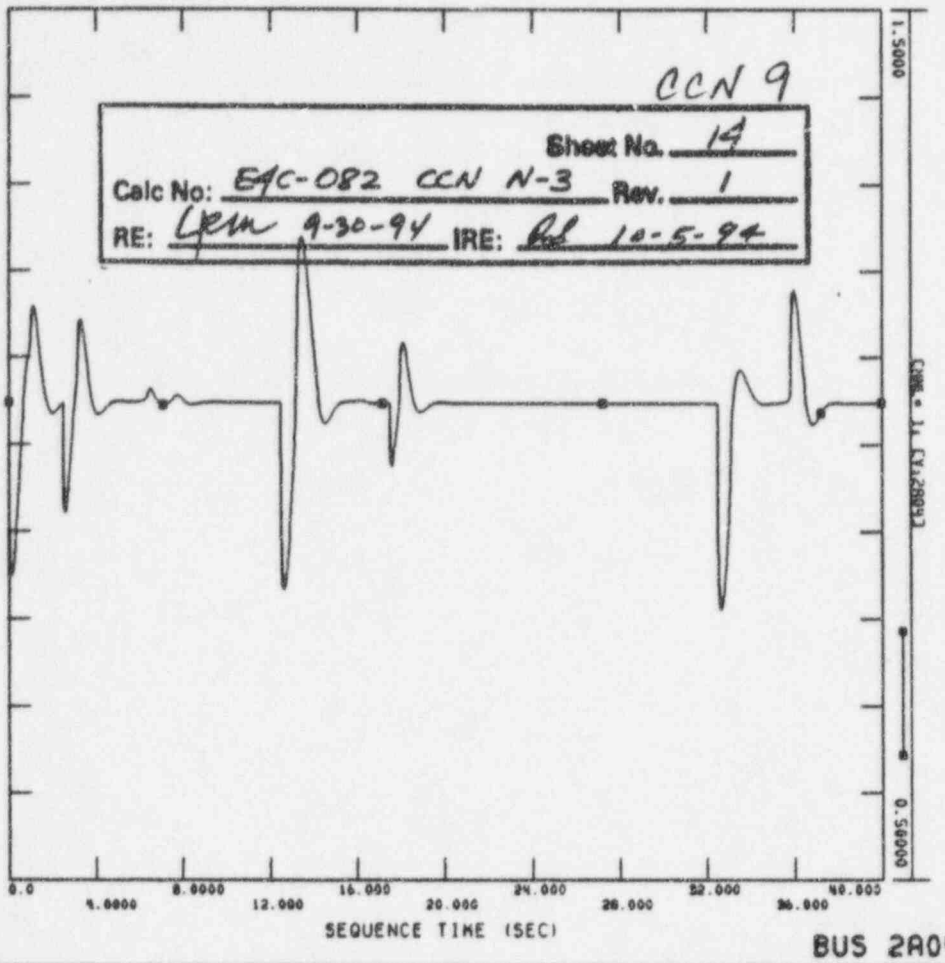

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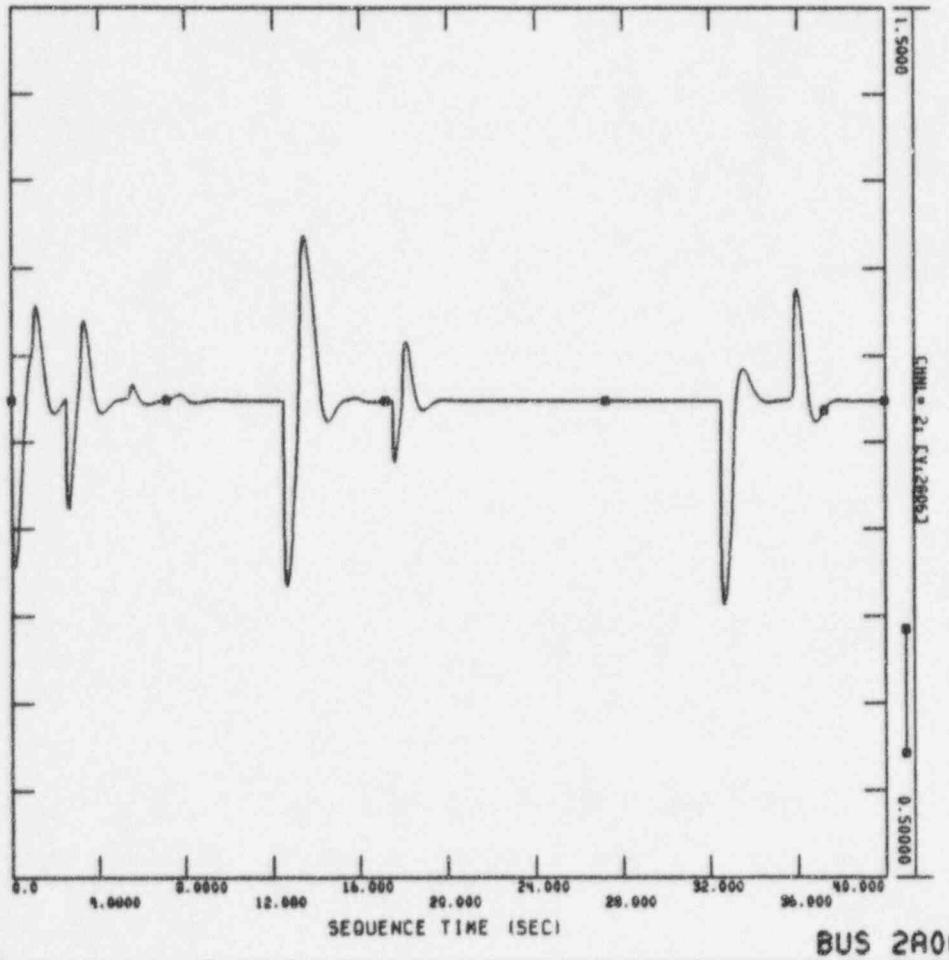
BUS 2A04 (4.16-KV BASE)



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BUS 2A06 (4.16-KV BASE)

CCN 9

Sheet No. 15

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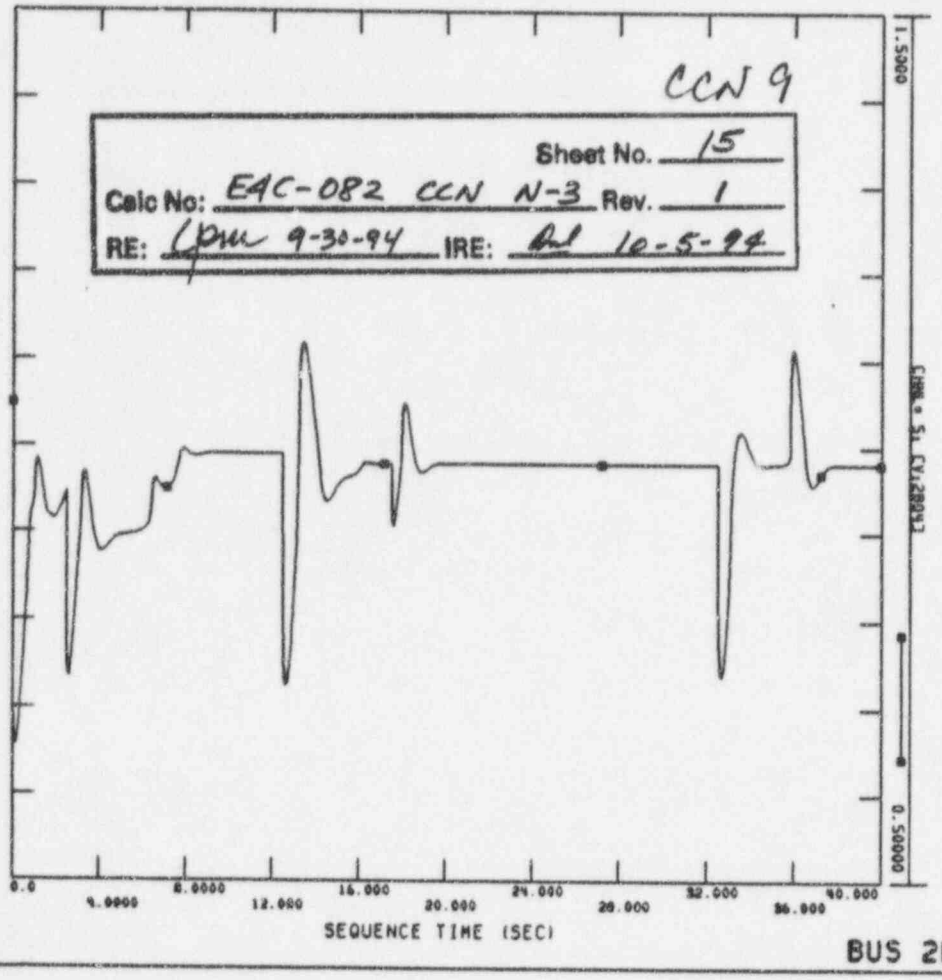

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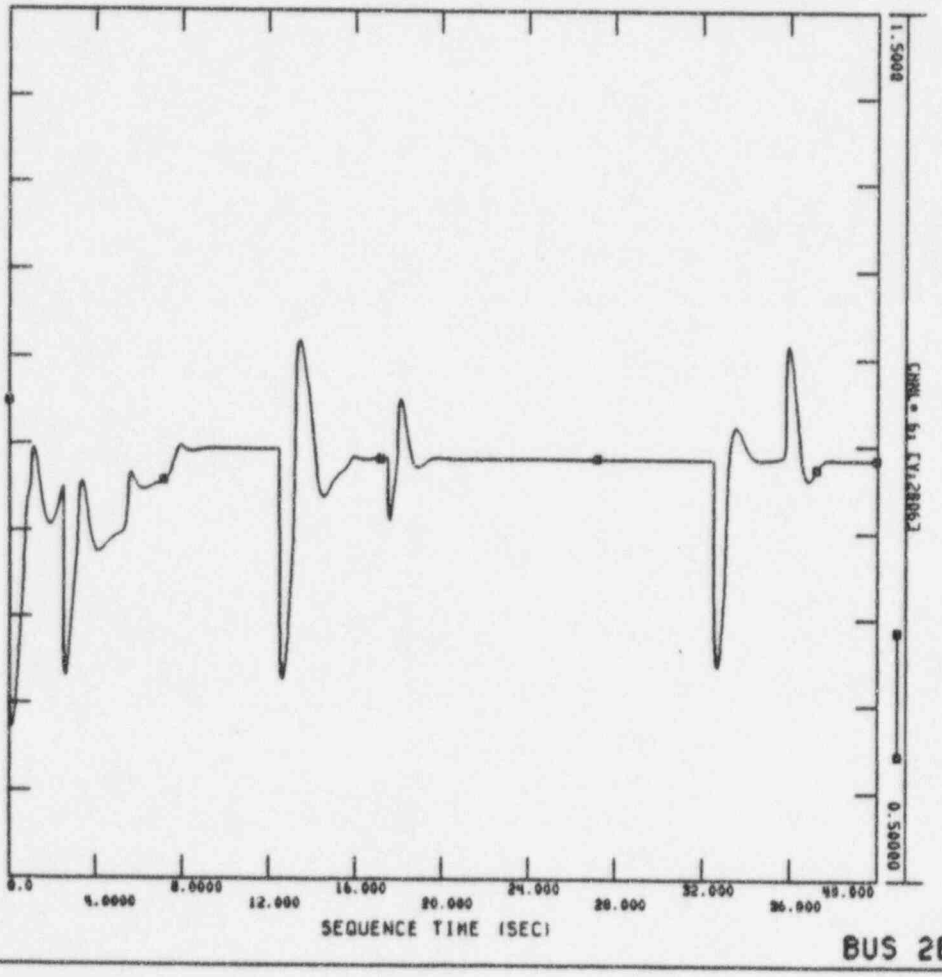

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BUS 2B06 (480-V BASE)

CCN 9

Sheet No. 16

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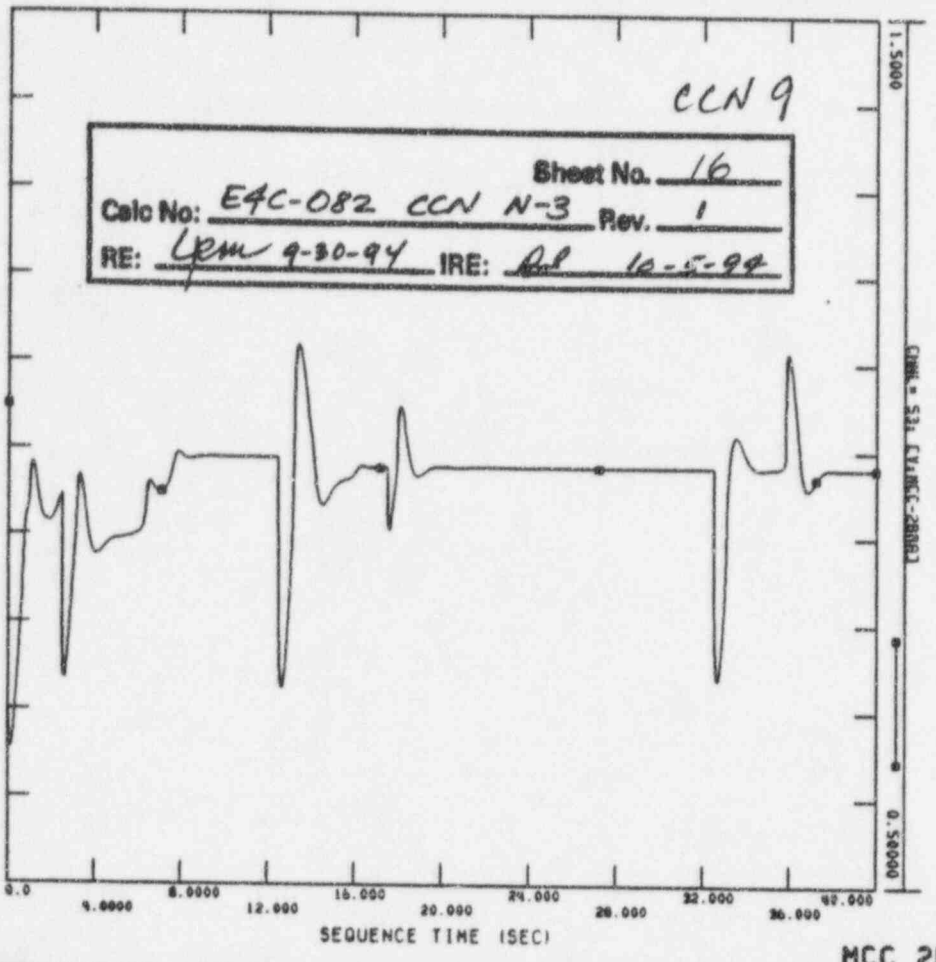

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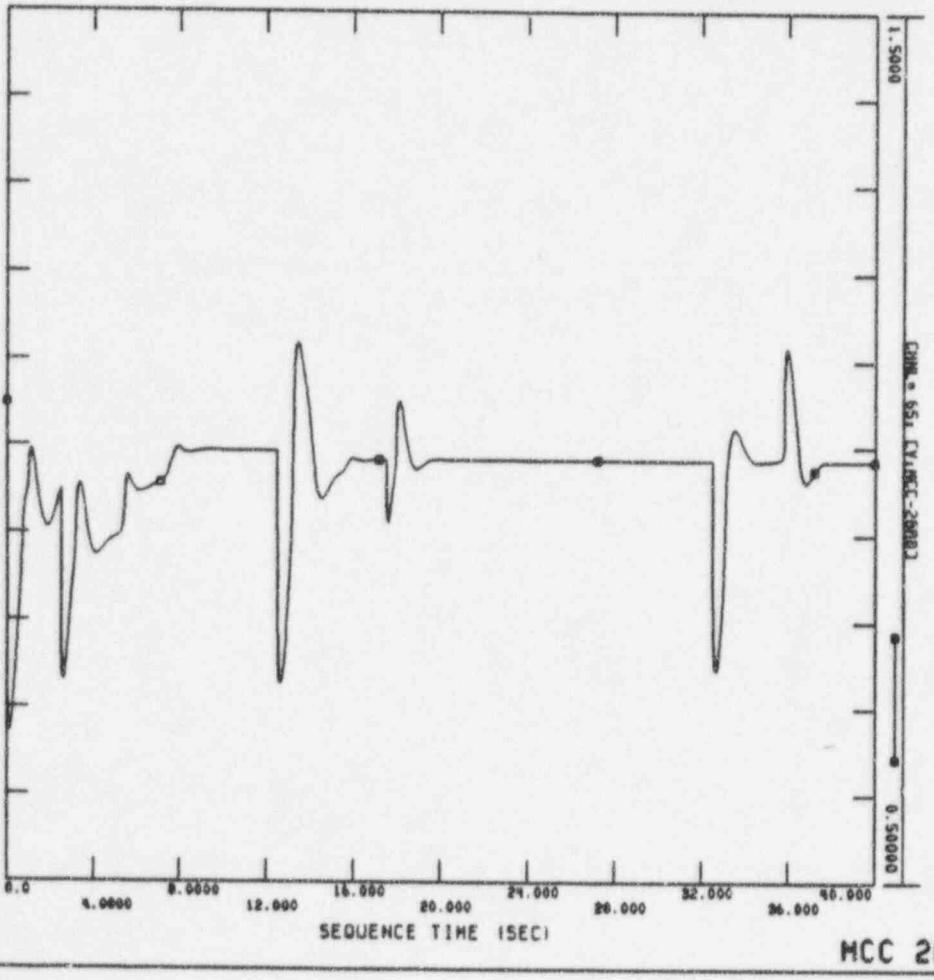

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MCC 2BRB (480-V BASE)

CCN 9

Sheet No. 17

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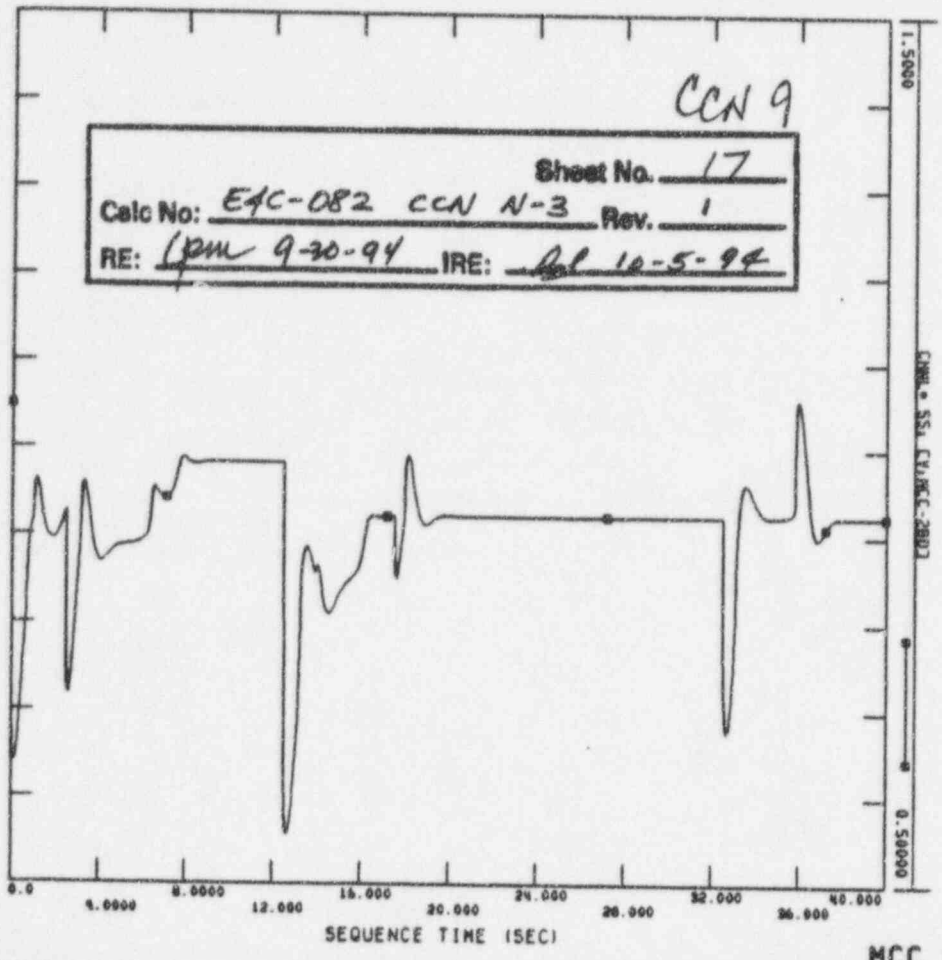

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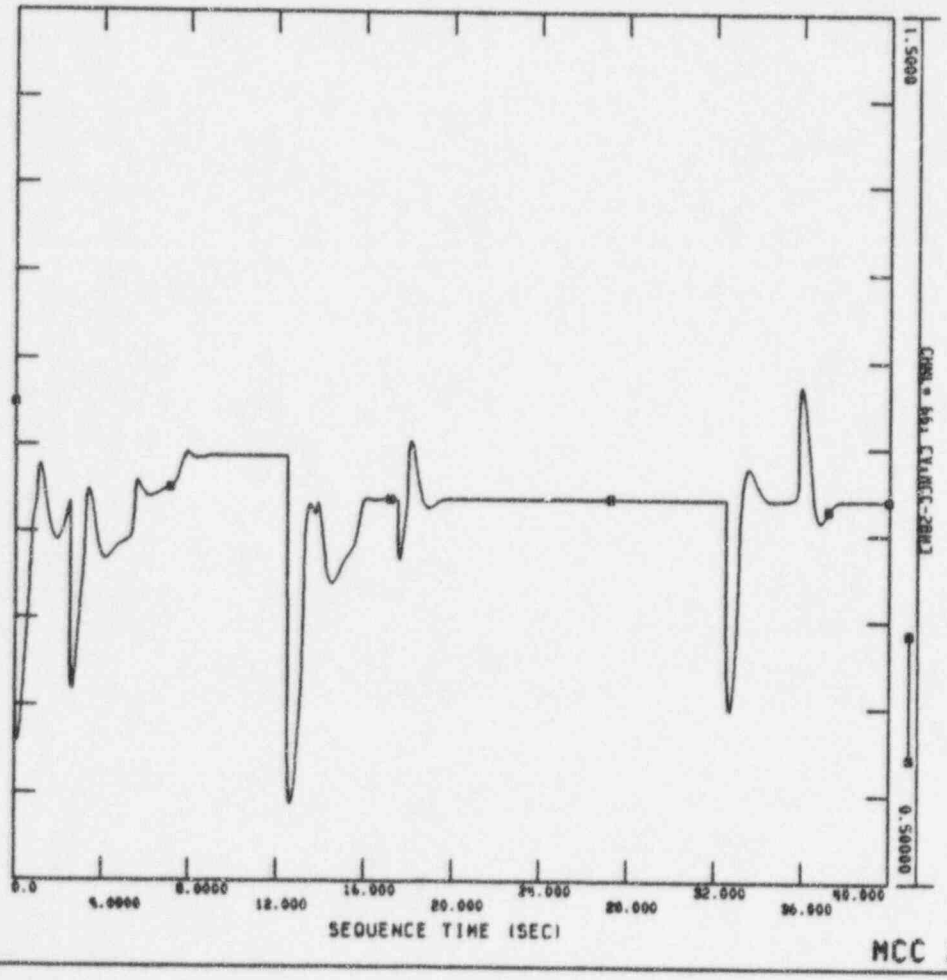

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CCN 9

Sheet No. 18

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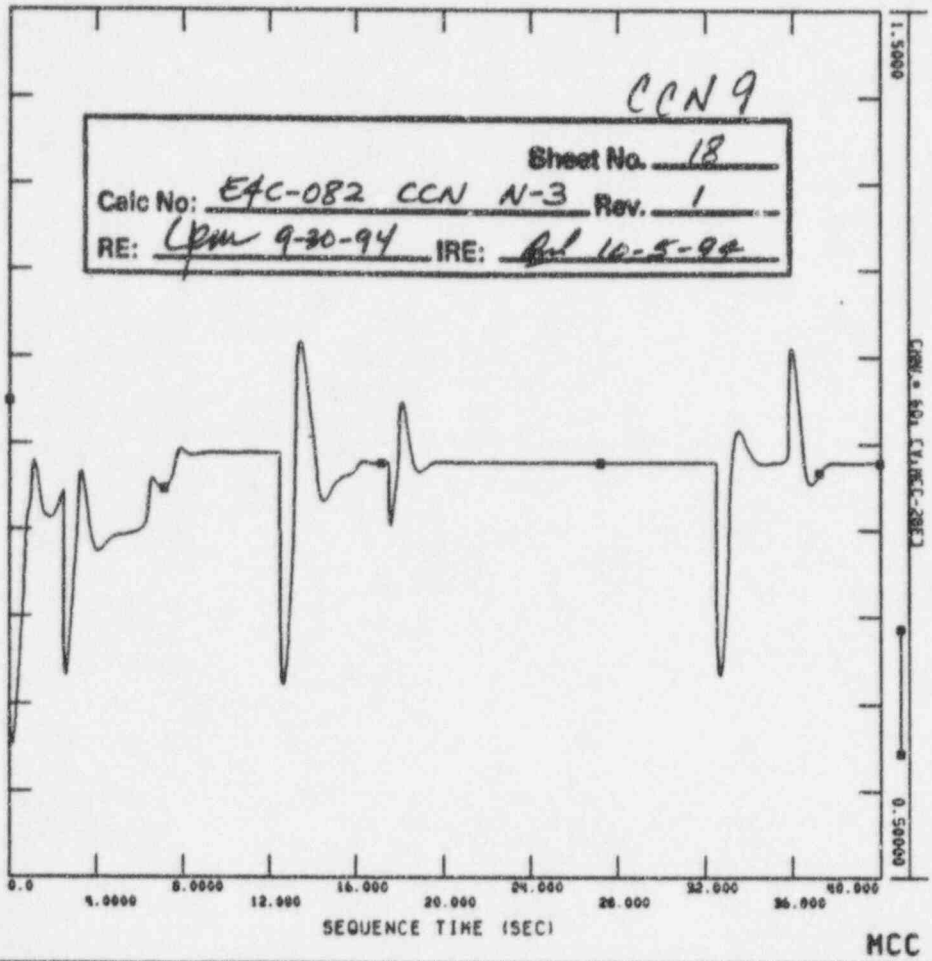

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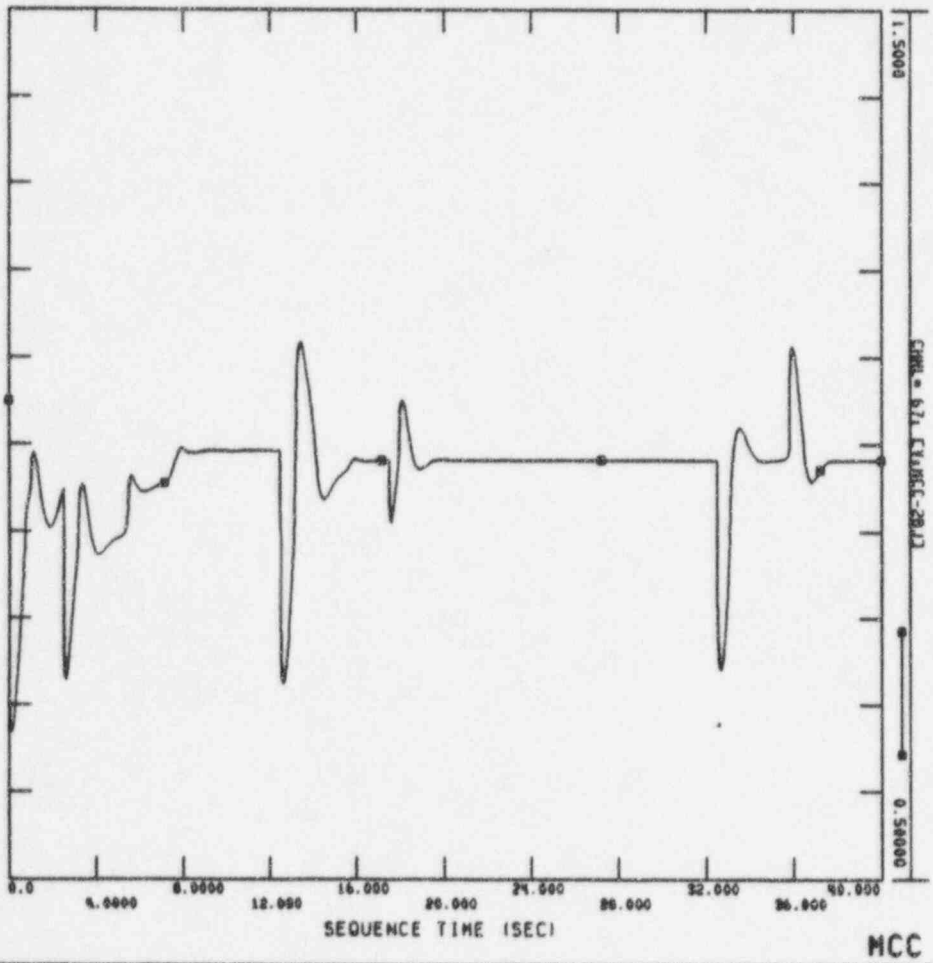


SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C:CASE_IIIAX1CHANOUT_IIIAX

FRI, SEP 16 1994 14:04

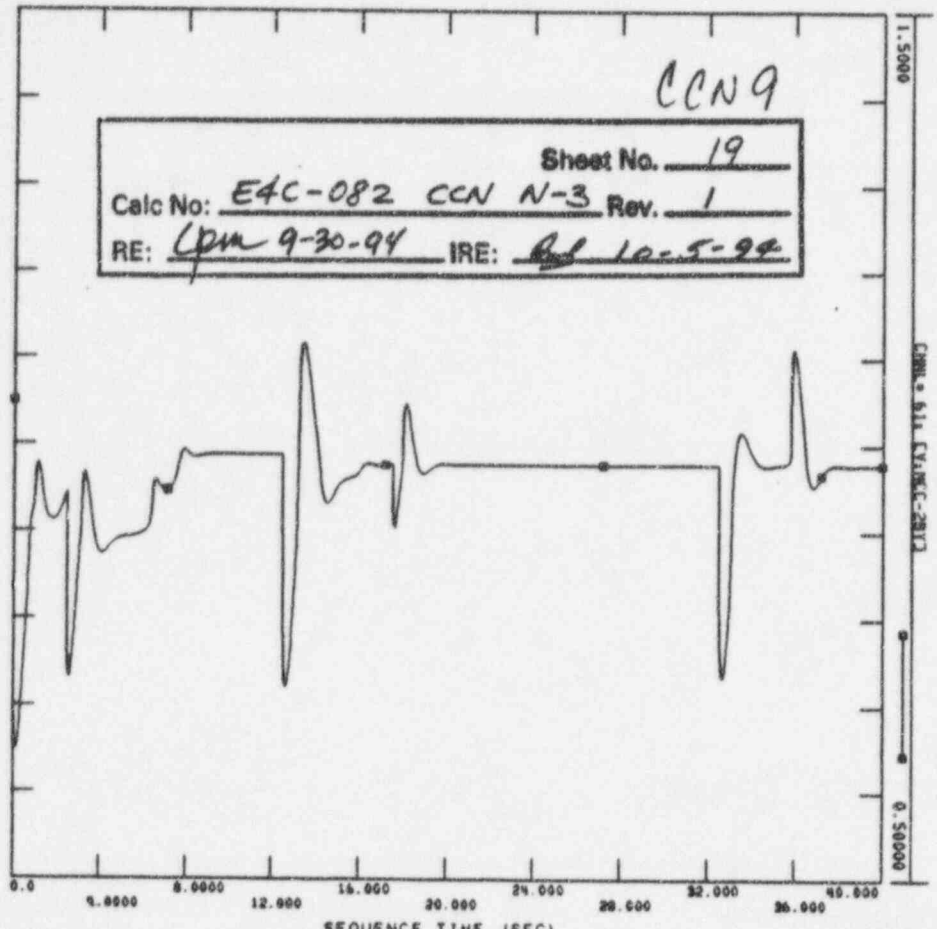
MCC 2BJ (480-V BASE)

CCN 9

Sheet No. 19

Calc No: E4C-082 CCN N-3 Rev. 1

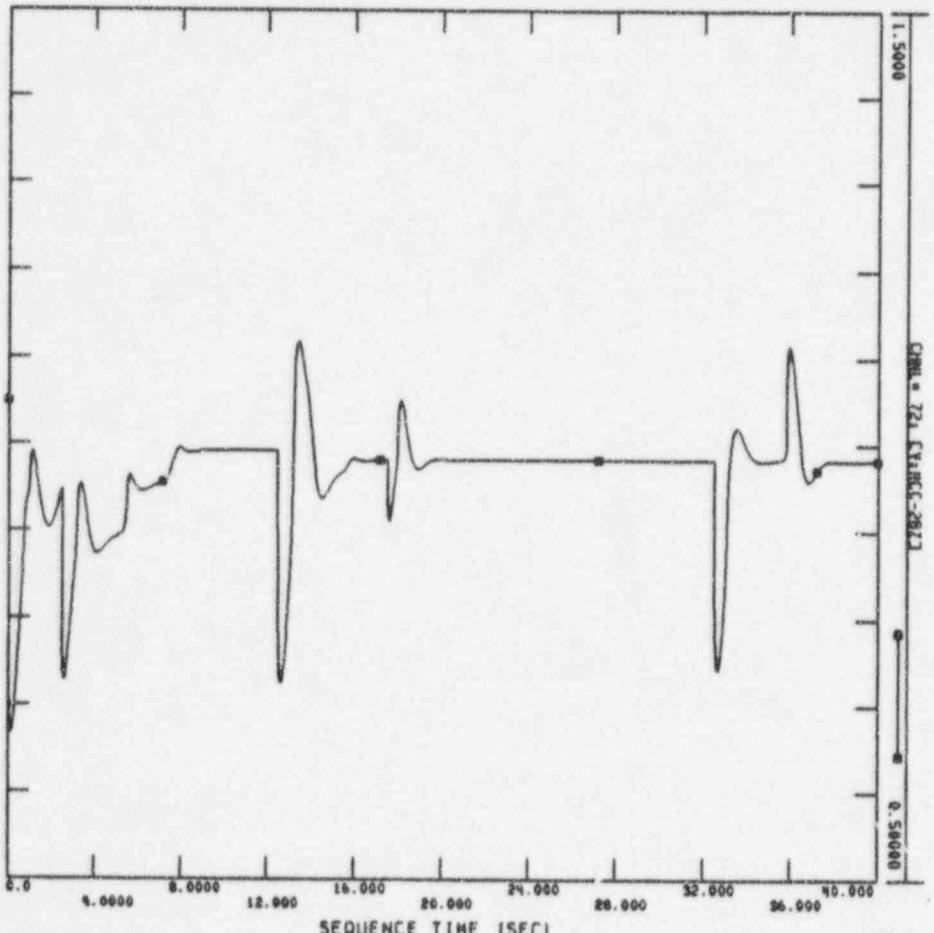
RE: Lpm 9-30-94 IRE: Bd 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:04

MCC 2BY (480-V BASE)



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:04

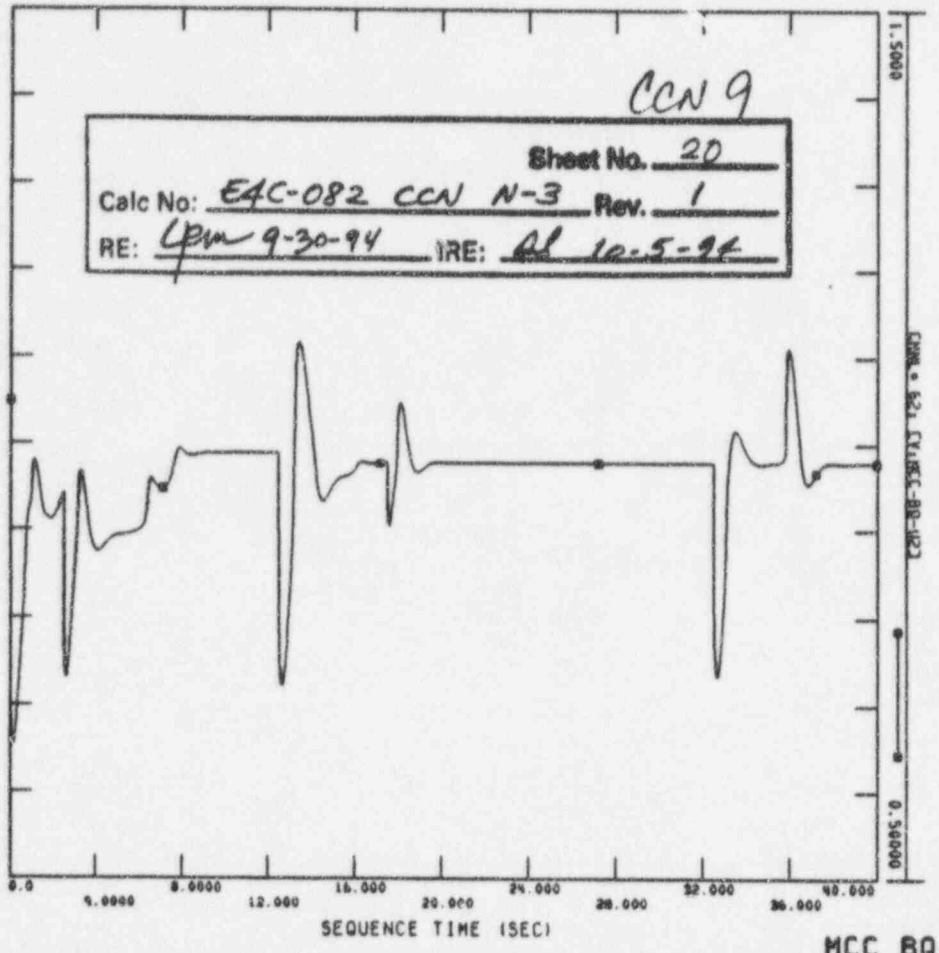
MCC 2BZ (480-V BASE)

CCN 9

Sheet No. 20

Calc No: E4C-082 CCN N-3 Rev. 1

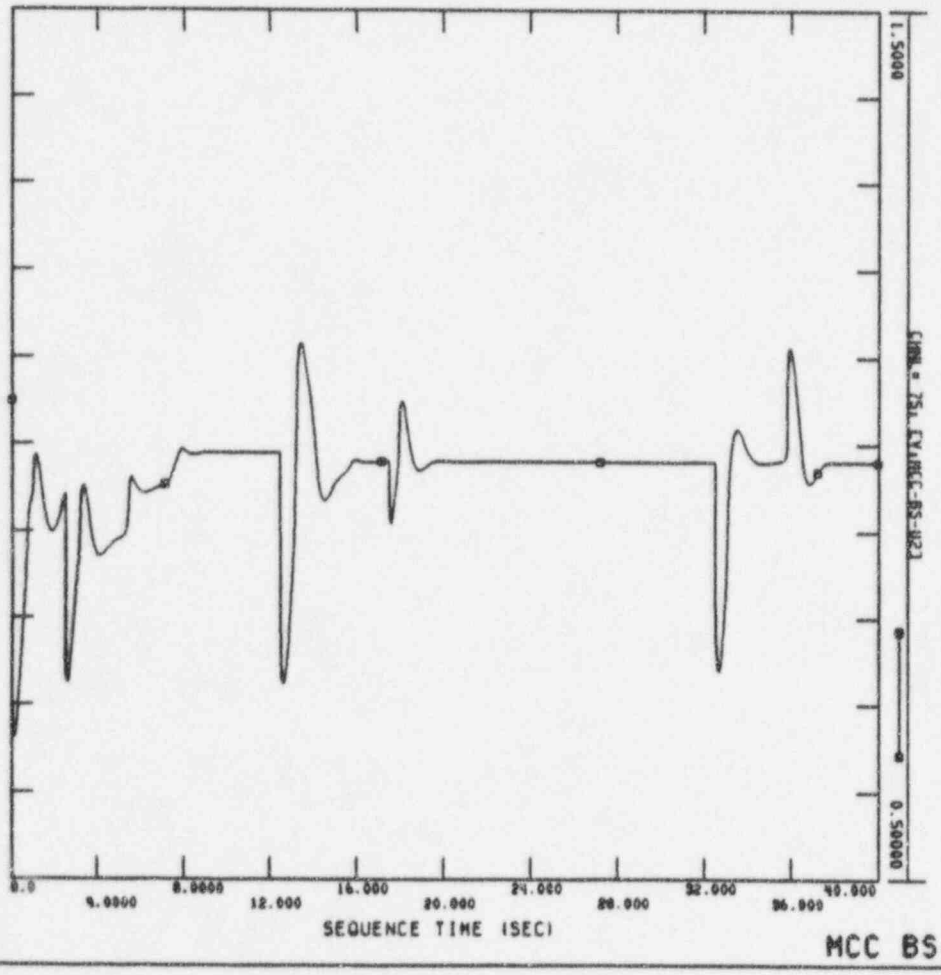
RE: Lpm 9-30-94 IRE: AL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:04

MCC BQ-U2 (480-V BASE)



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:04

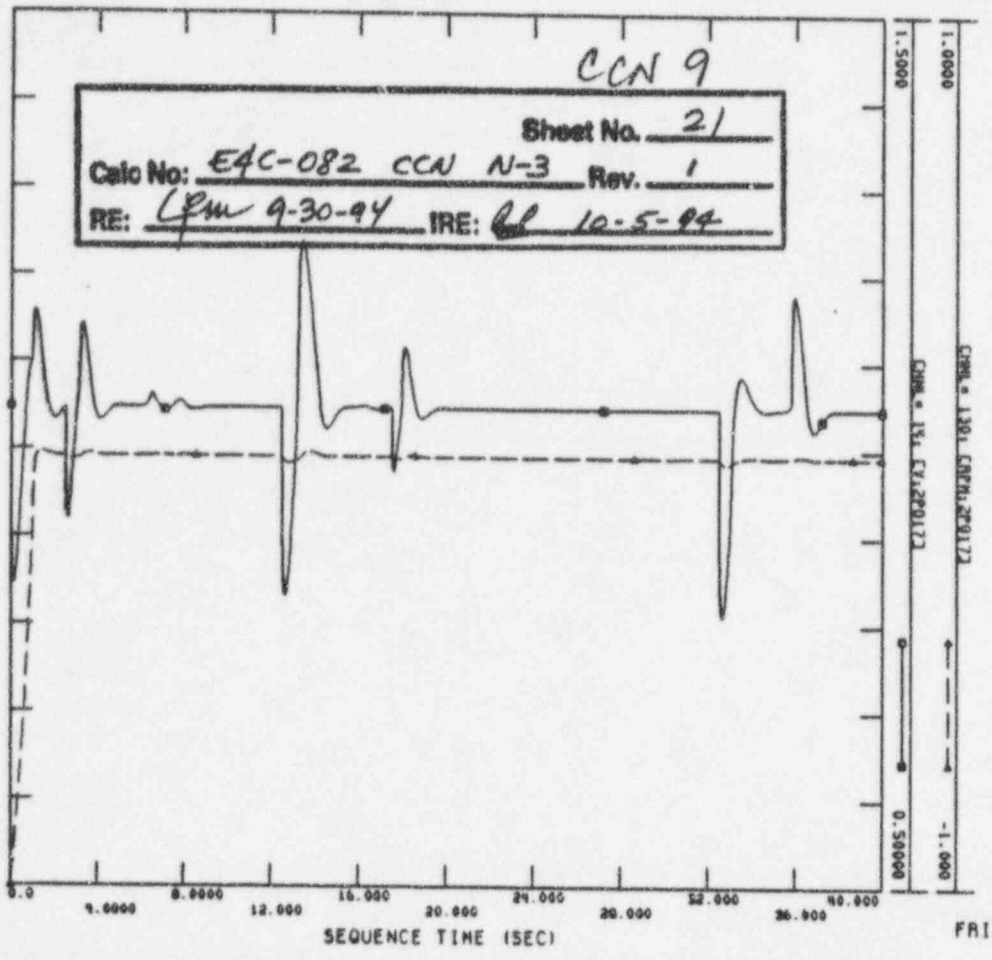
MCC BS-U2 (480-V BASE)

CCN 9

Sheet No. 21

Calc No: E4C-082 CCN N-3 Rev. 1

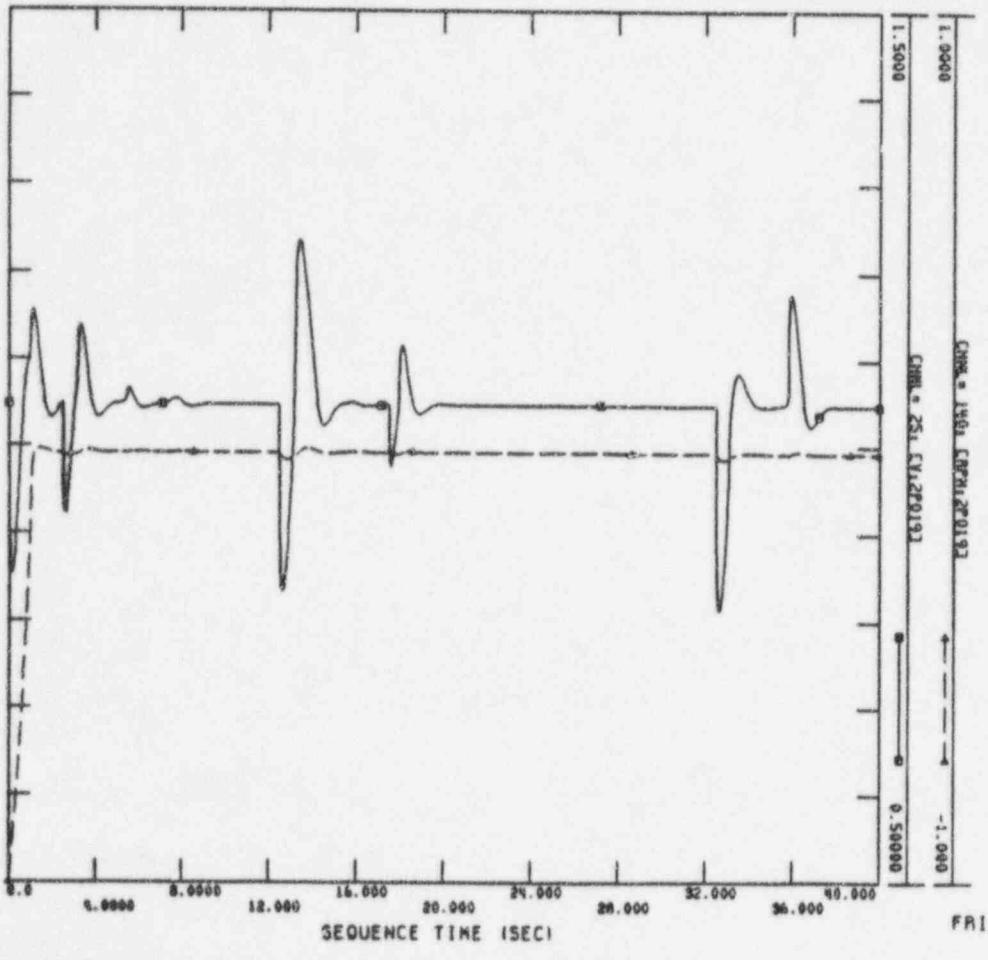
RE: CPM 9-30-94 IRE: RL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:04

2P017



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:05

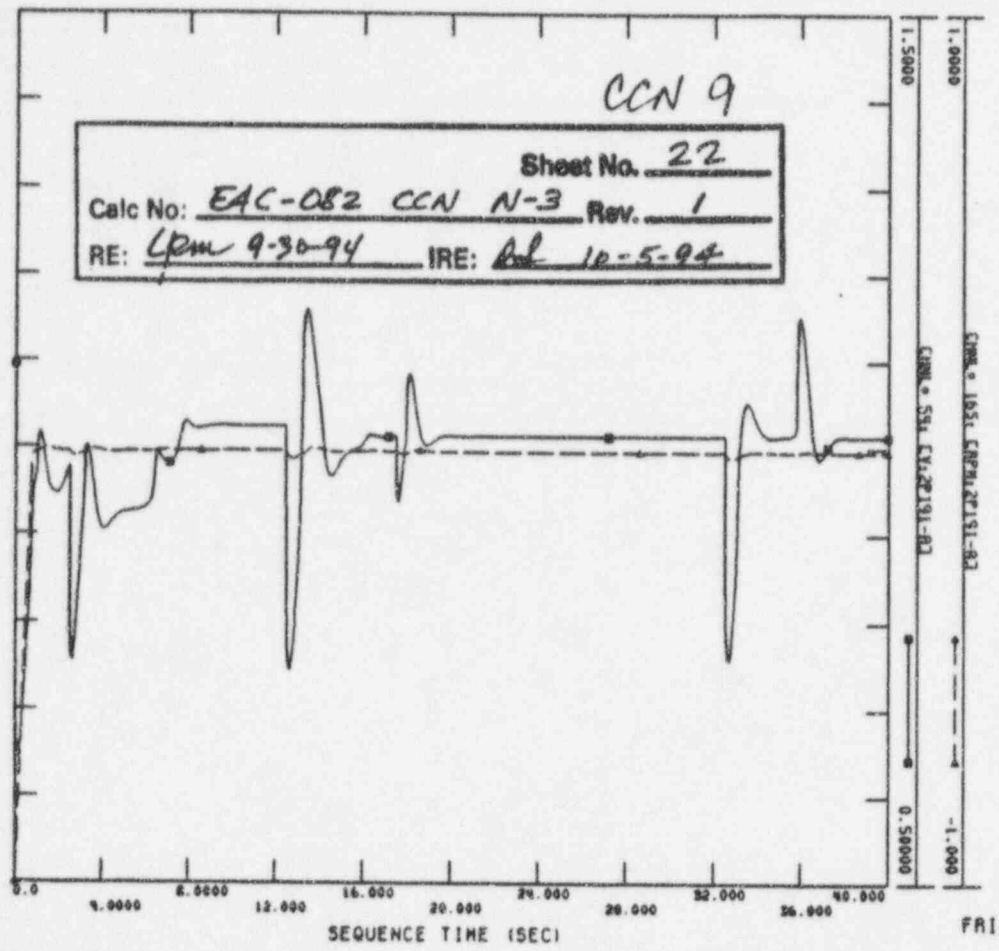
2P019

CCN 9

Sheet No. 22

Calc No: EAC-082 CCN N-3 Rev. 1

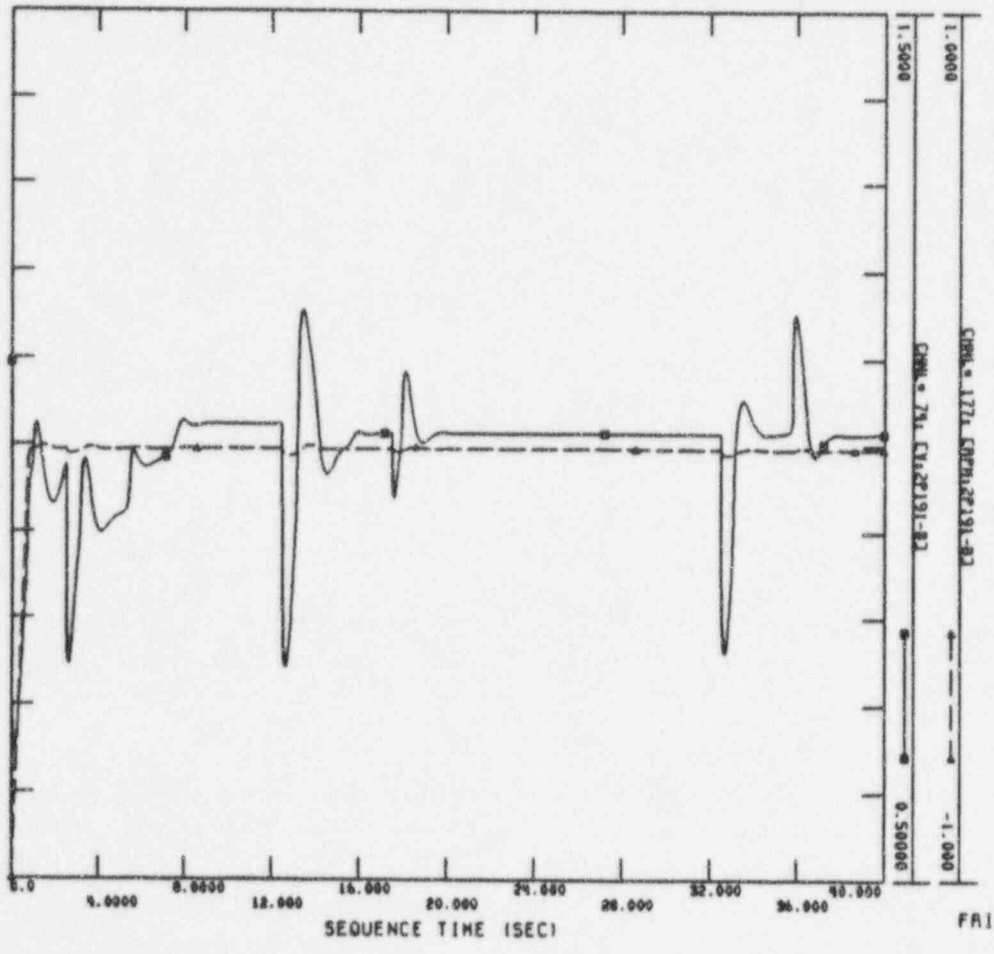
RE: LPm 9-30-94 IRE: Rd 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX\CHANOUT_IIIAX

FRI, SEP 16 1994 14:05

2P191-A



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX\CHANOUT_IIIAX

FRI, SEP 16 1994 14:05

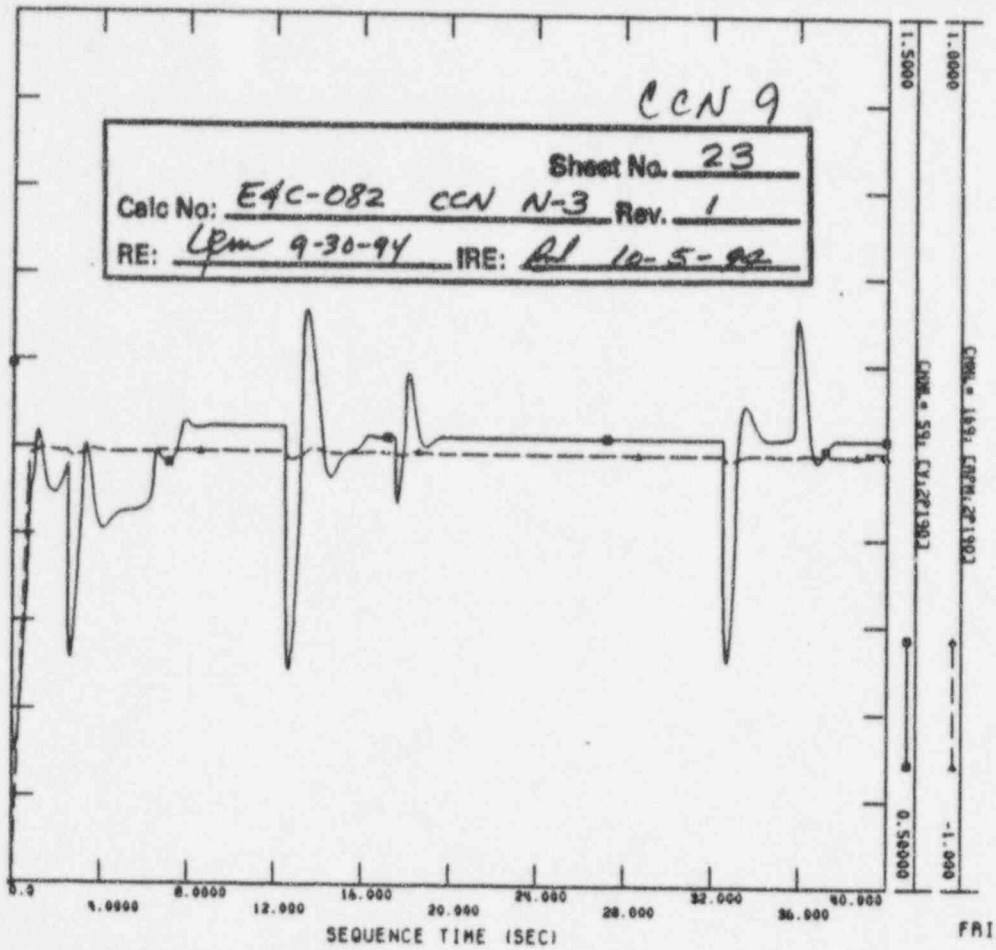
2P191-B

CCN 9

Sheet No. 23

Calc No: E4C-082 CCN N-3 Rev. 1

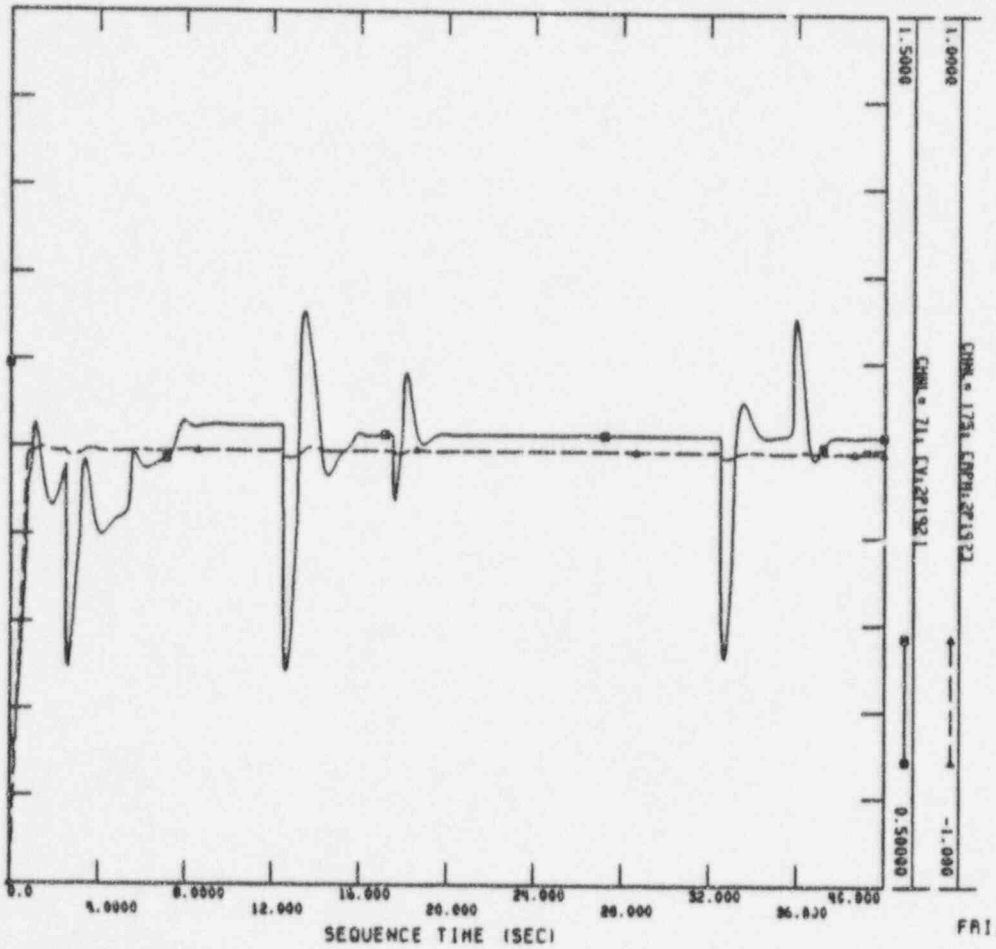
RE: Lpm 9-30-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C:CASE_IIIAX]CHANOUT_IIIAX

FRI, SEP 16 1994 14:05

2P190



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
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FRI, SEP 16 1994 14:05

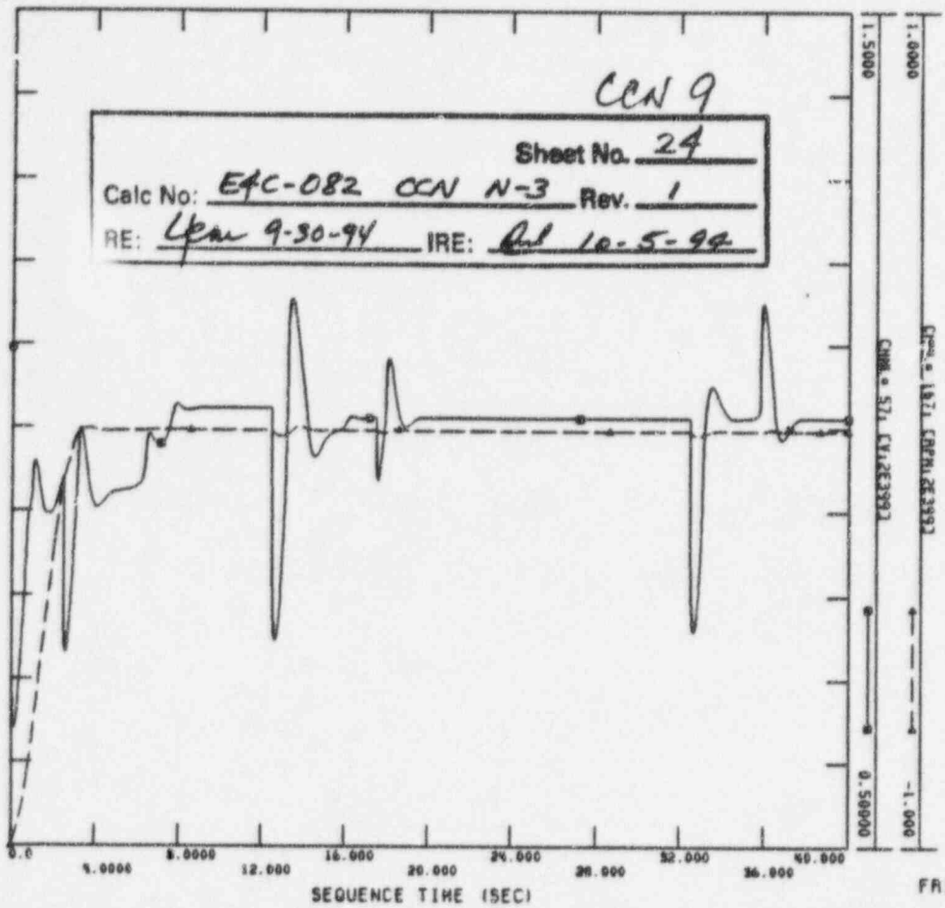
2P192

CCN 9

Sheet No. 24

Calc No: E4C-082 CCN N-3 Rev. 1

RE: Upon 9-30-94 IRE: Ref 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
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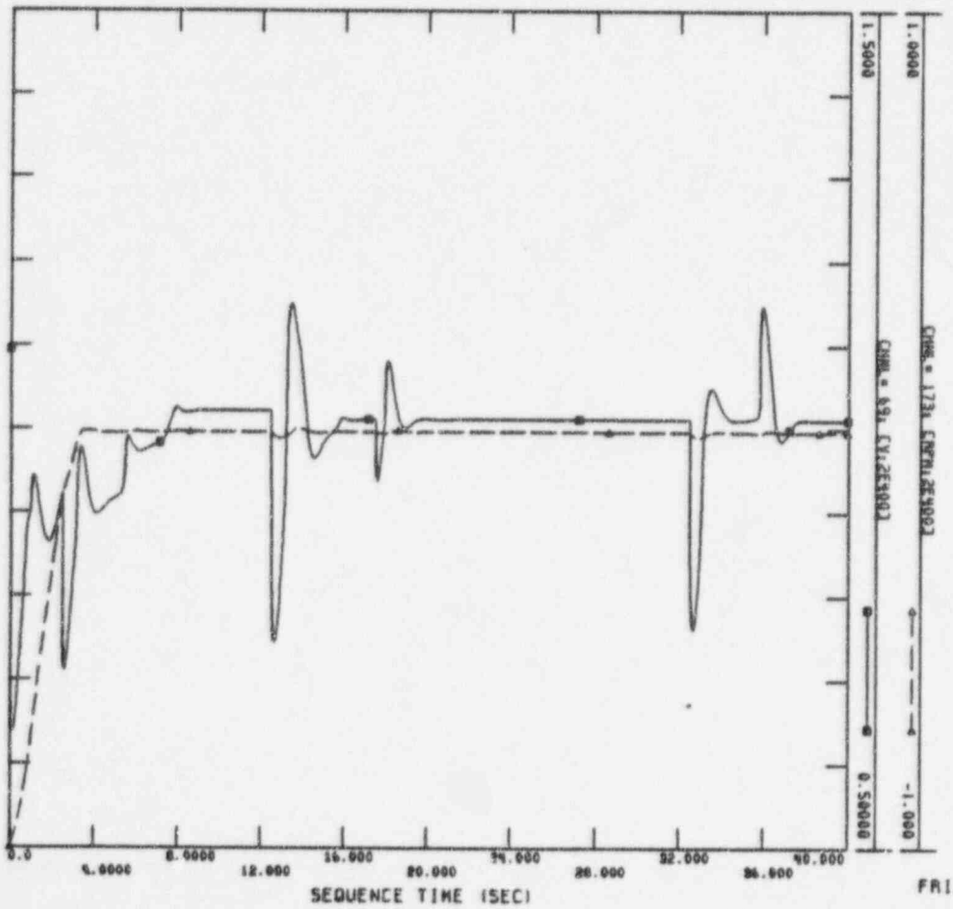
FRI, SEP 16 1994 14:05

2E399



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
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FRI, SEP 16 1994 14:05

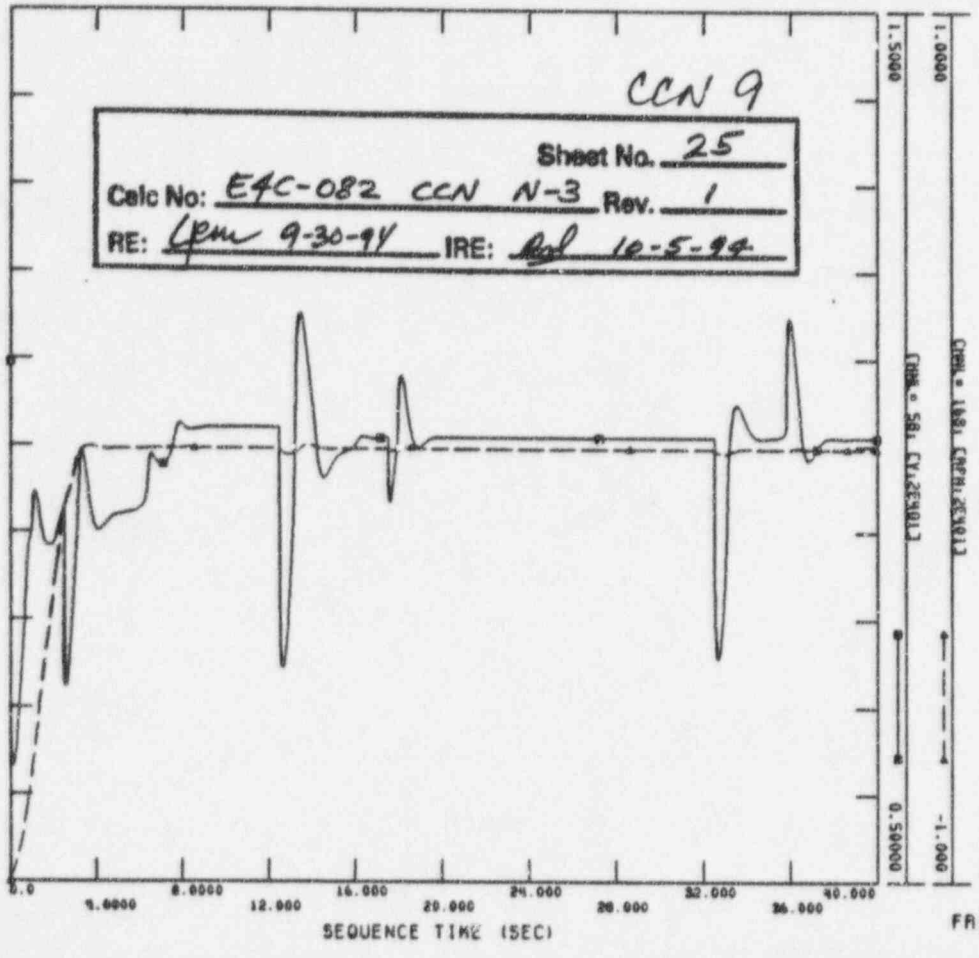
2E400

CCN 9

Sheet No. 25

Calc No: E4C-082 CCN N-3 Rev. 1

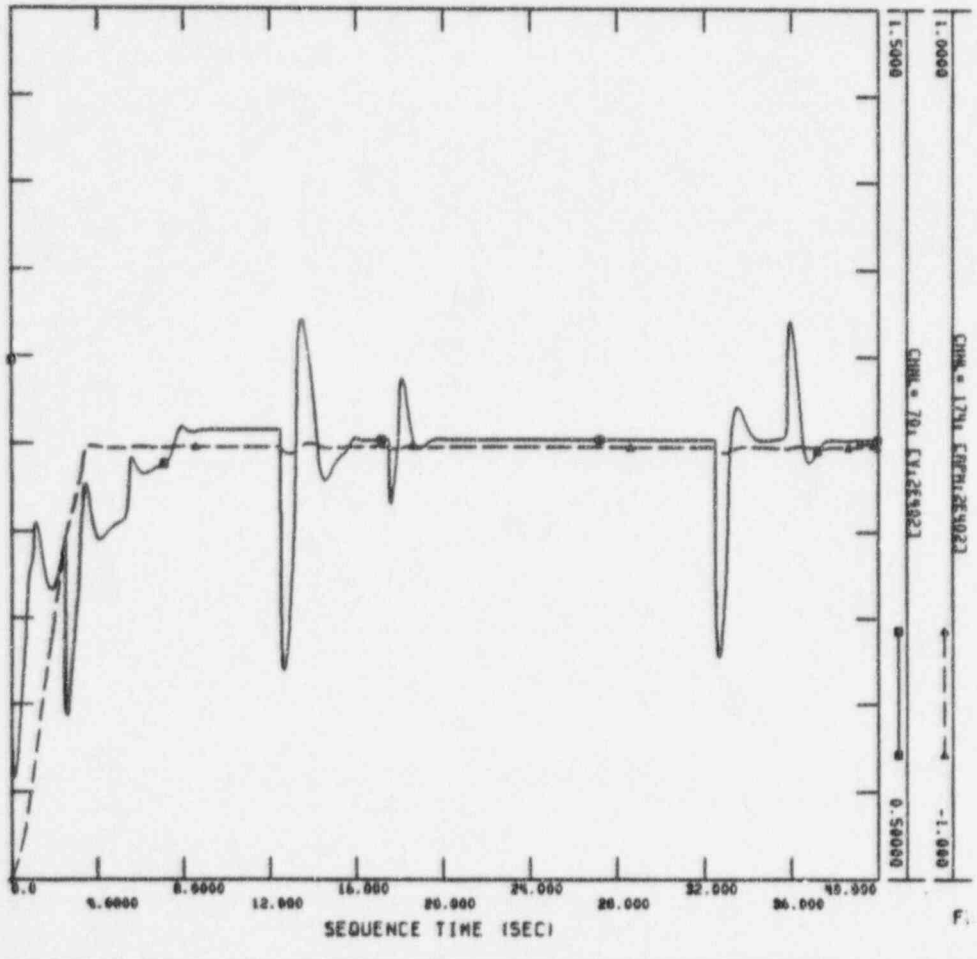
RE: Lpm 9-30-94 IRE: Rpl 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:05

2E401



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

F. I, SEP 16 1994 14:05

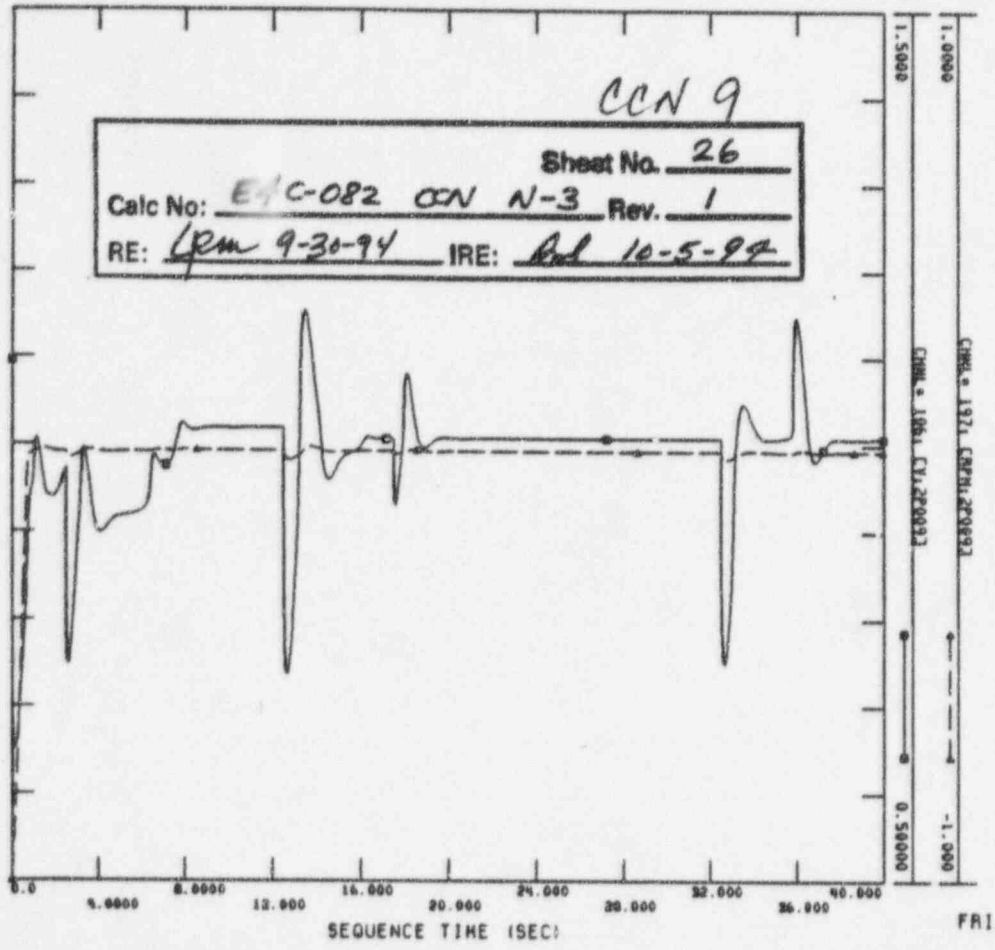
2E402

CCN 9

Sheet No. 26

Calc No: E4C-082 CCN N-3 Rev. 1

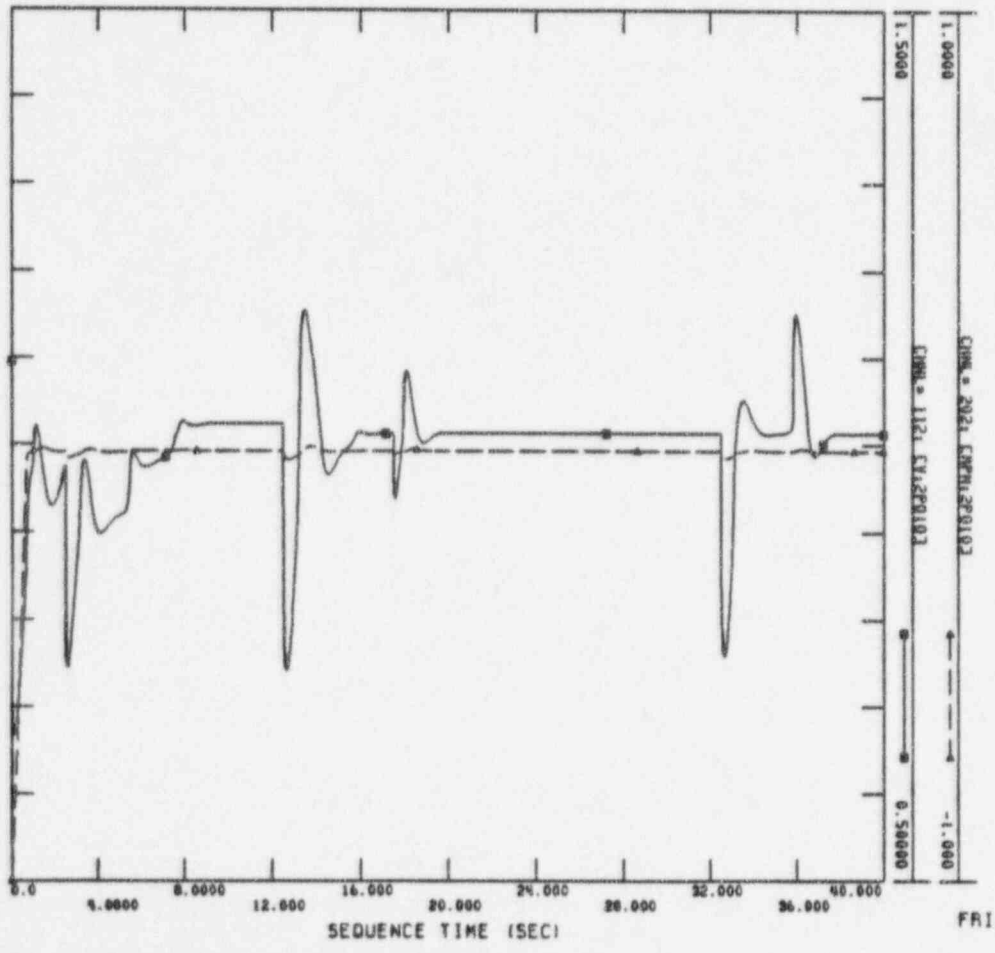
RE: Lpm 9-30-94 IRE: Bal 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:05

2P009



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIBX.CHANOUT_IIIBX

FRI, SEP 16 1994 14:05

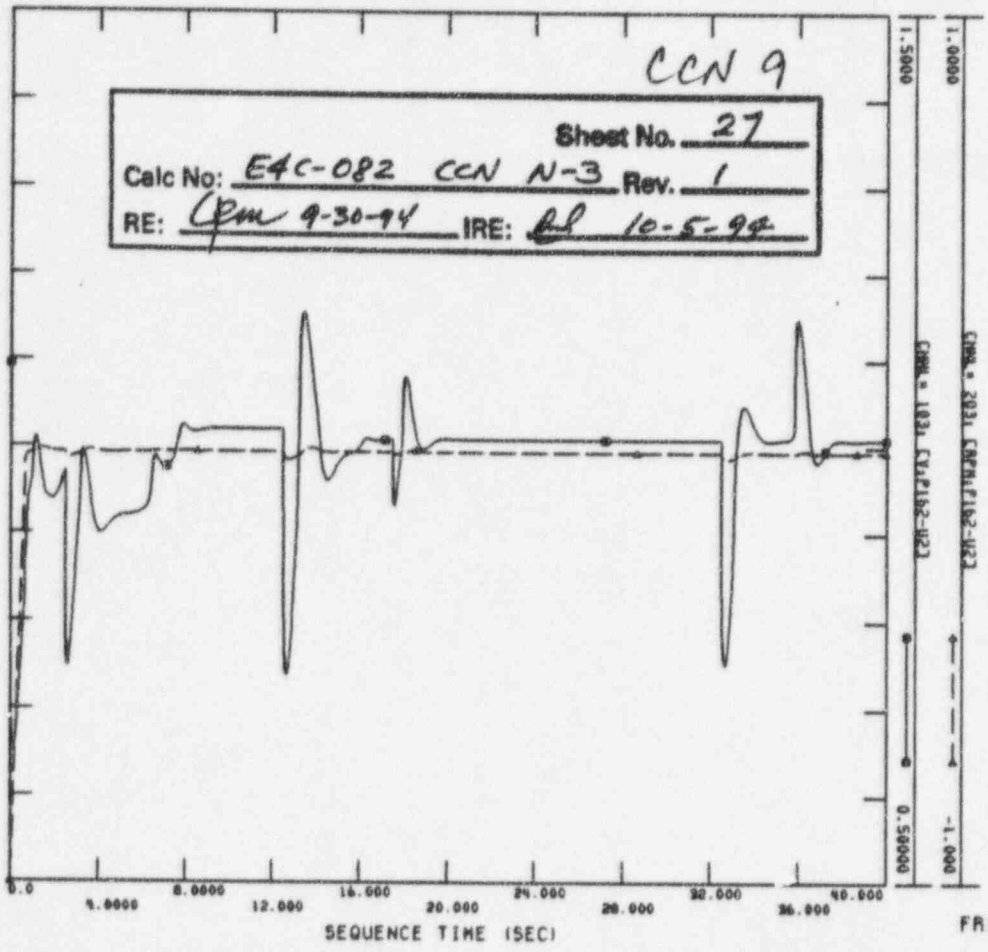
2P010

CCN 9

Sheet No. 27

Calc No: E4C-082 CCN N-3 Rev. 1

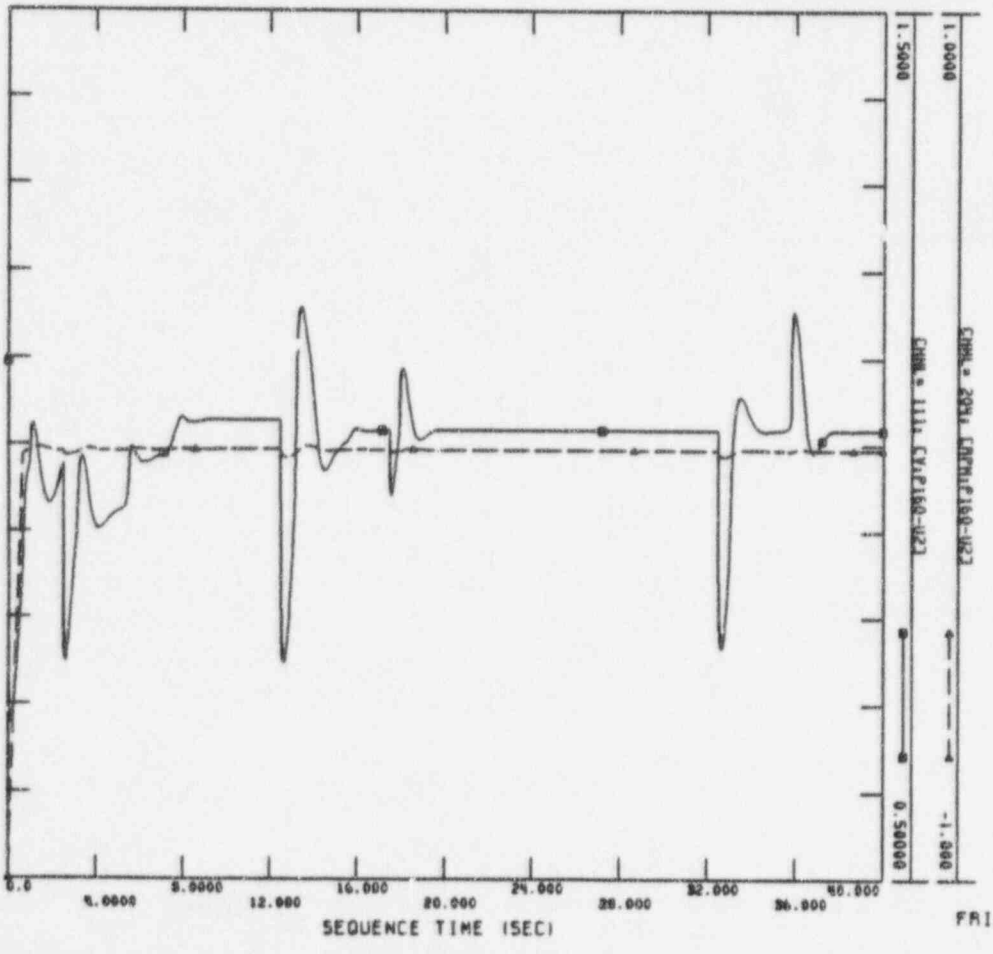
RE: CPM 9-30-94 IRE: RL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:05

P162-U2



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:06

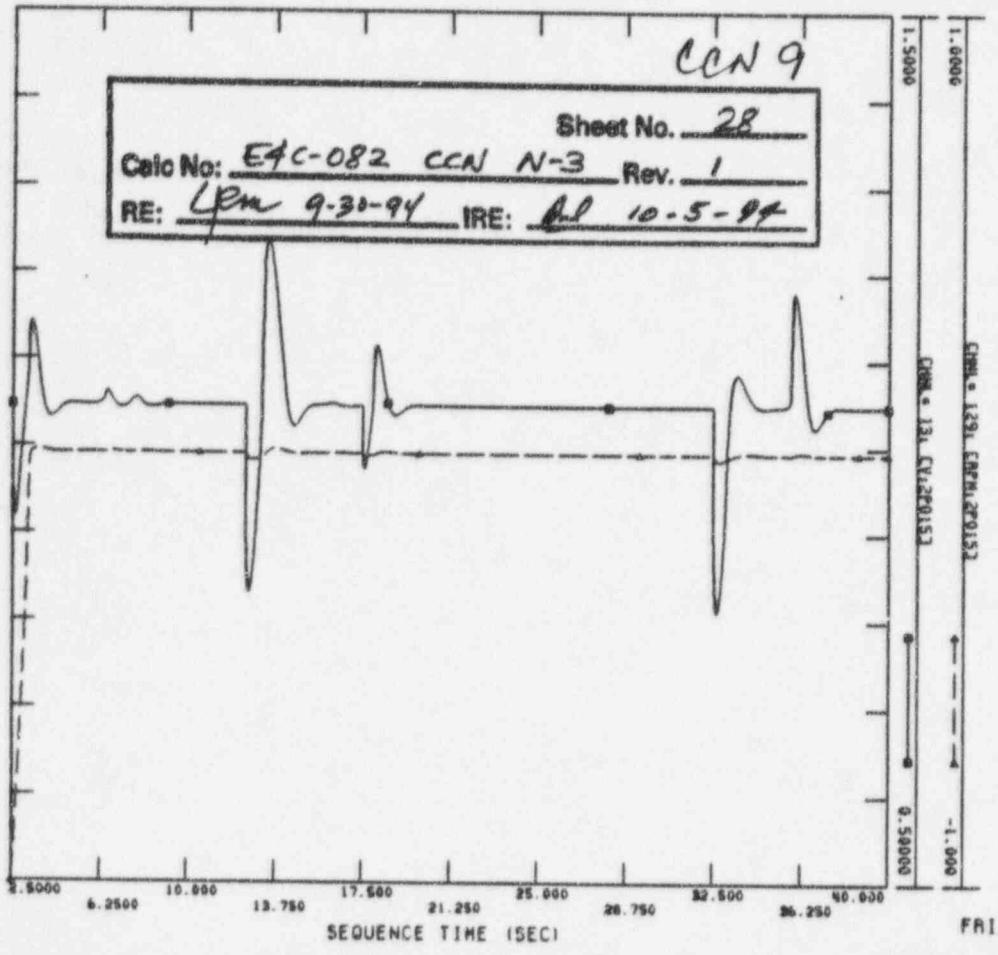
P160-U2

CCN 9

Sheet No. 28

Calc No: E4C-082 CCN N-3 Rev. 1

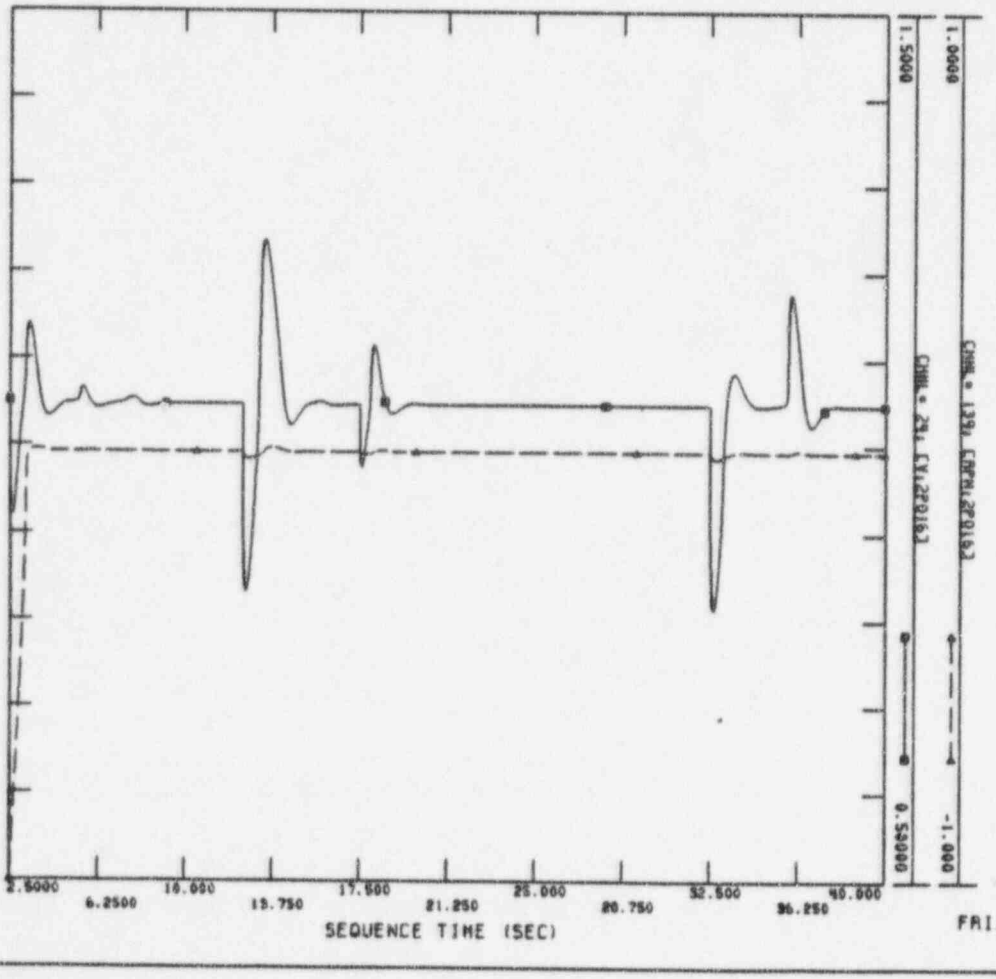
RE: LPM 9-30-94 IRE: AL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:06

2P015



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:06

2P016

CCN 9

Sheet No. 29

Calc No: E4C-082 CCN N-3 Rev. 1

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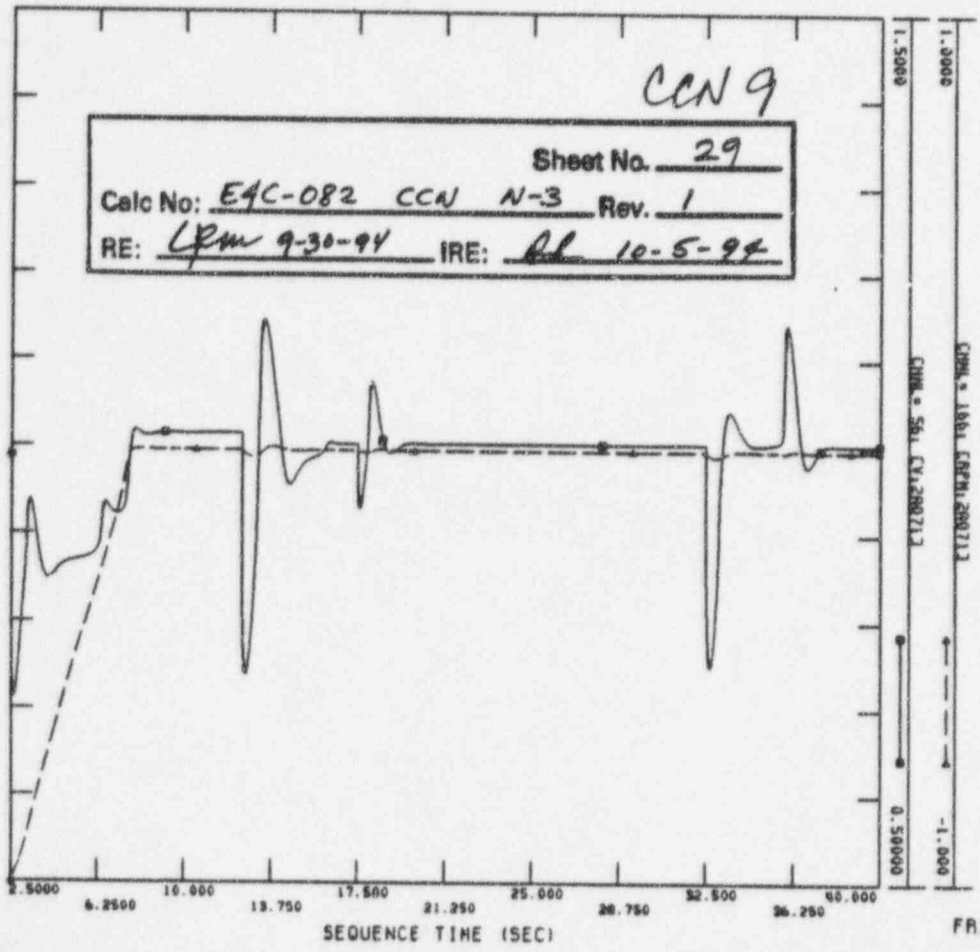
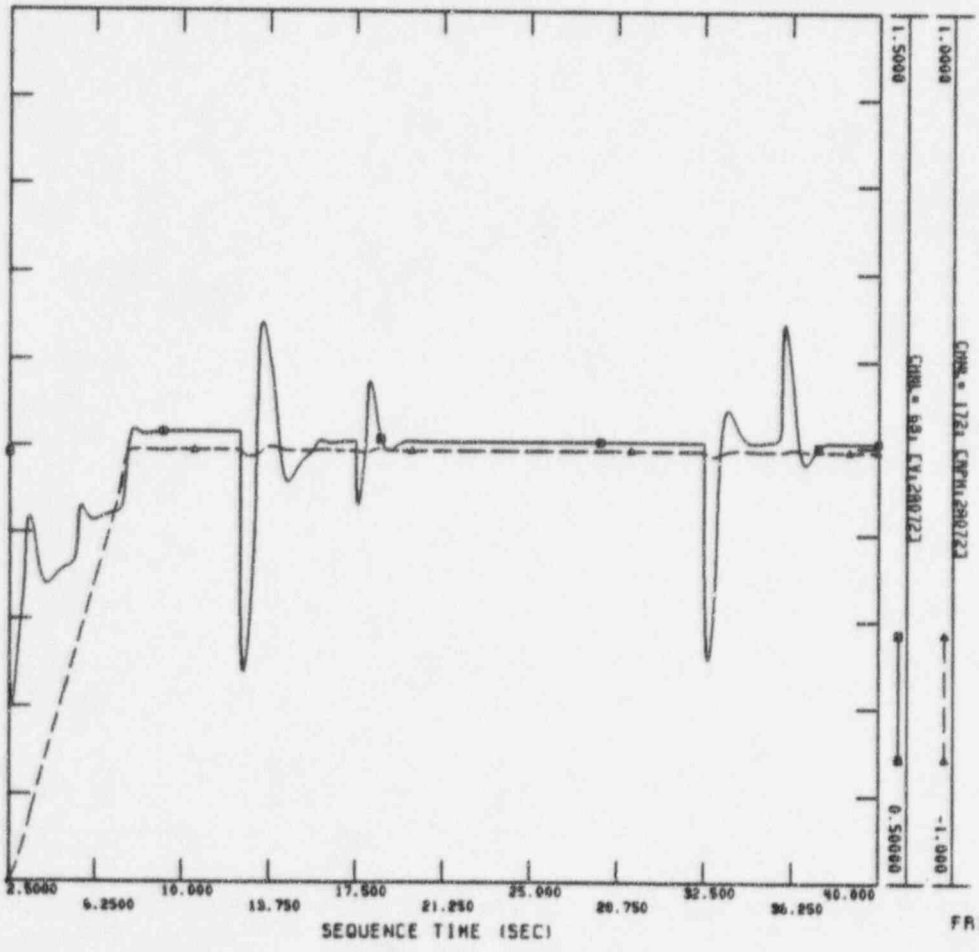


SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:06

2A071



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:06

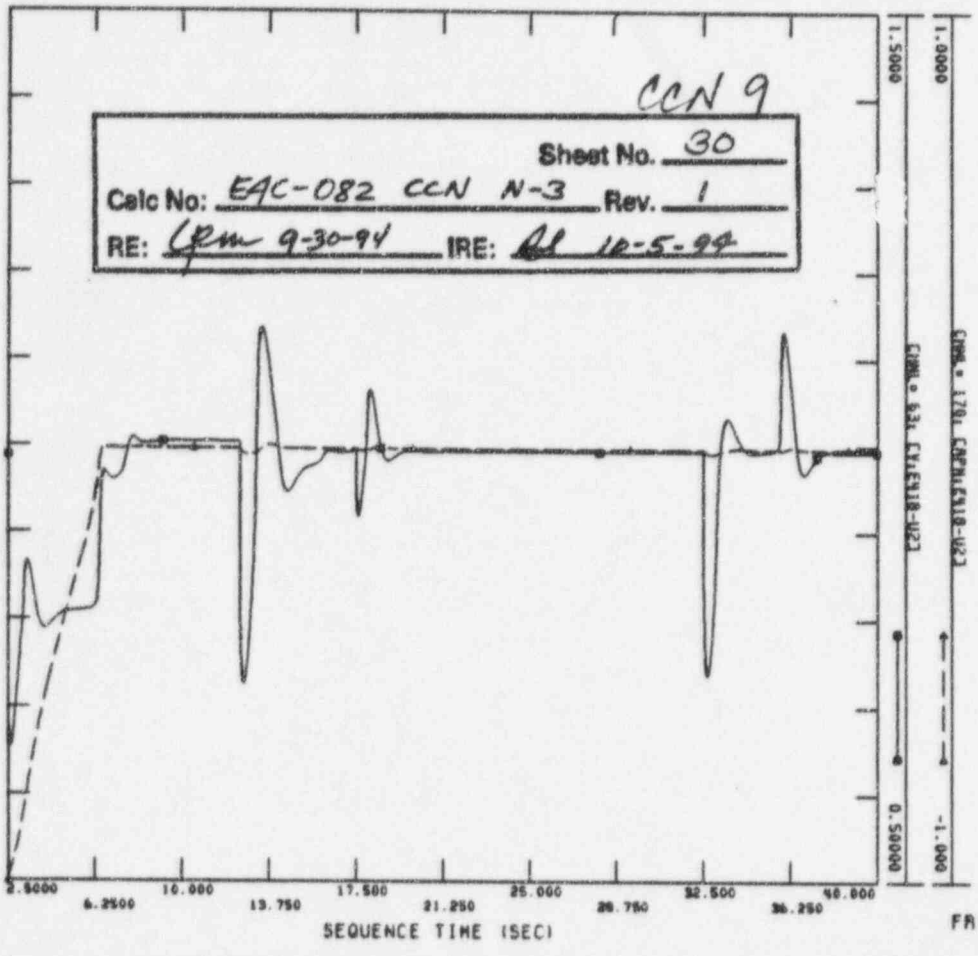
2A072

CCN 9

Sheet No. 30

Calc No: EAC-082 CCN N-3 Rev. 1

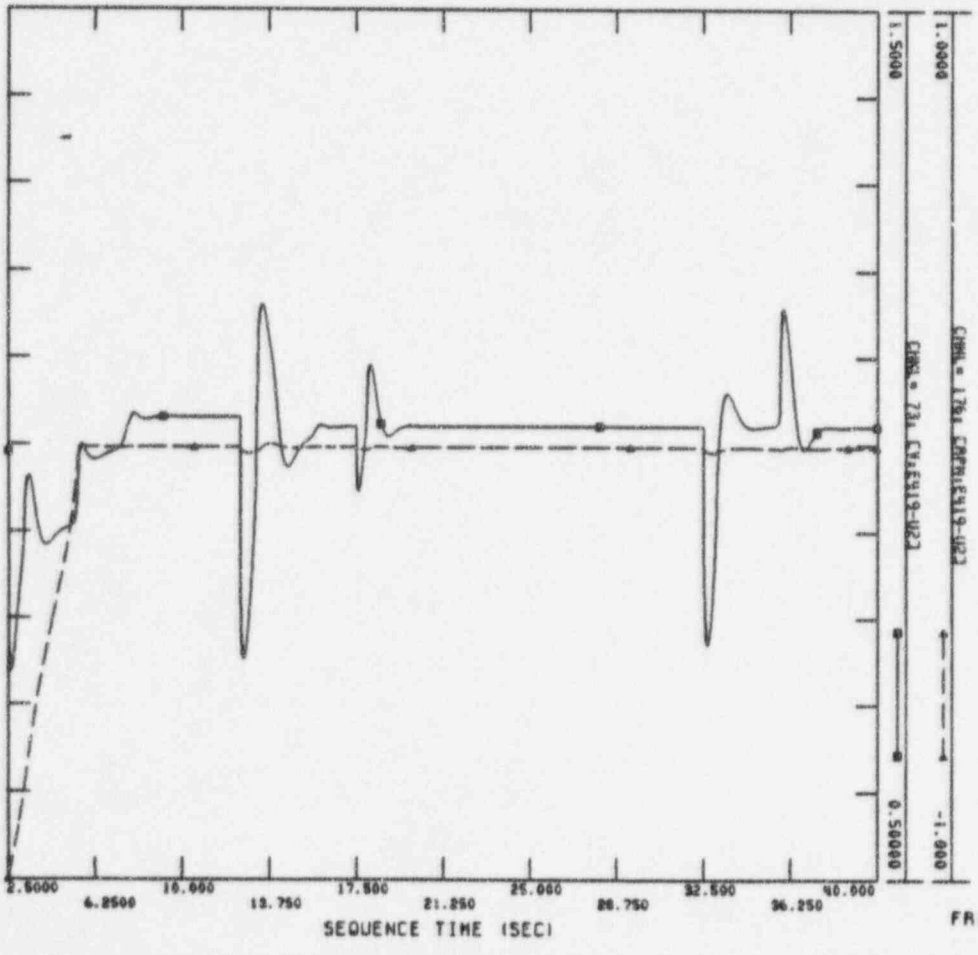
RE: CPm 9-30-94 IRE: Ad 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:06

E418-U2



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:07

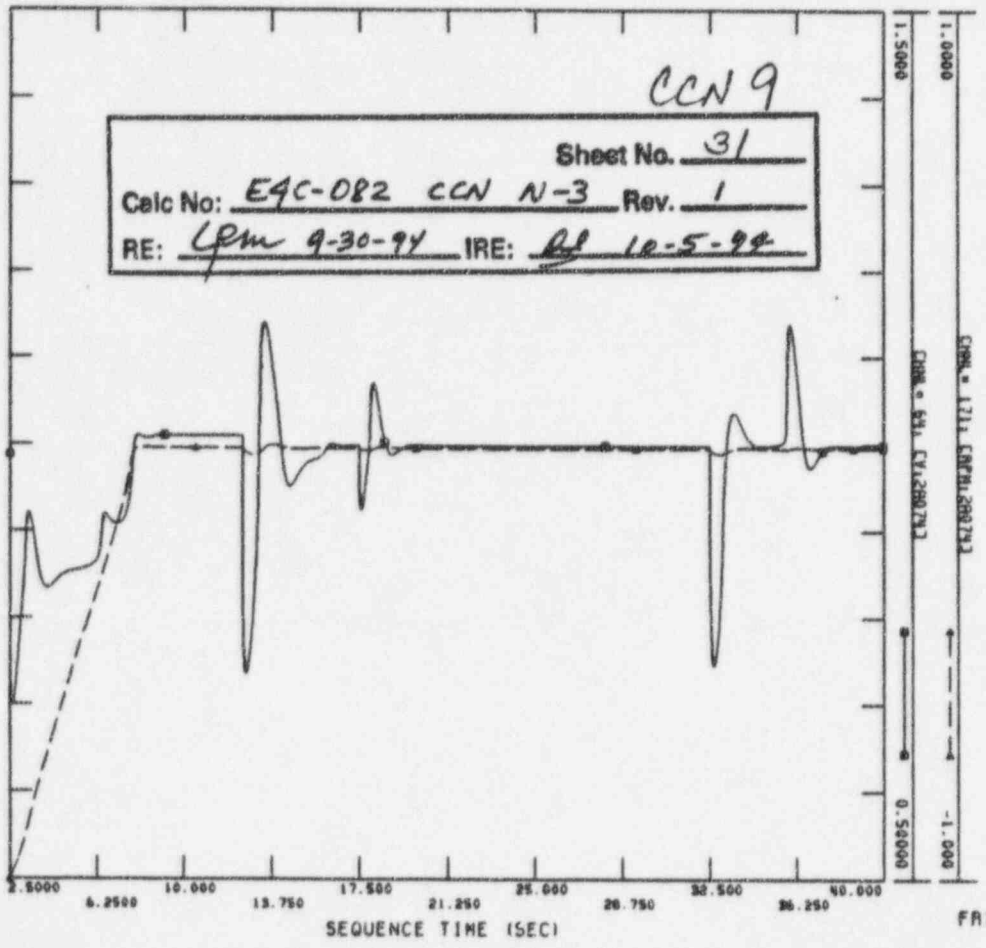
E419-U2

CCN 9

Sheet No. 31

Calc No: E4C-082 CCN N-3 Rev. 1

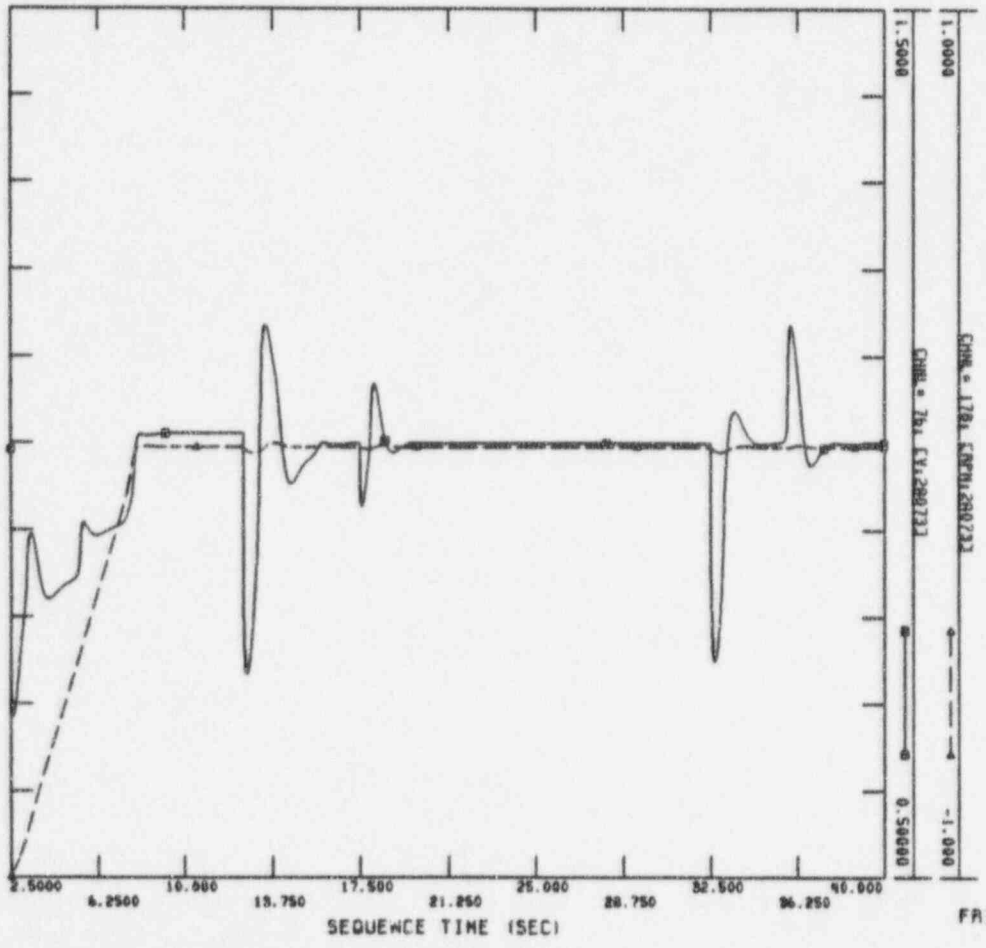
RE: Lpm 9-30-94 IRE: Rf 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:07

2A074



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:07

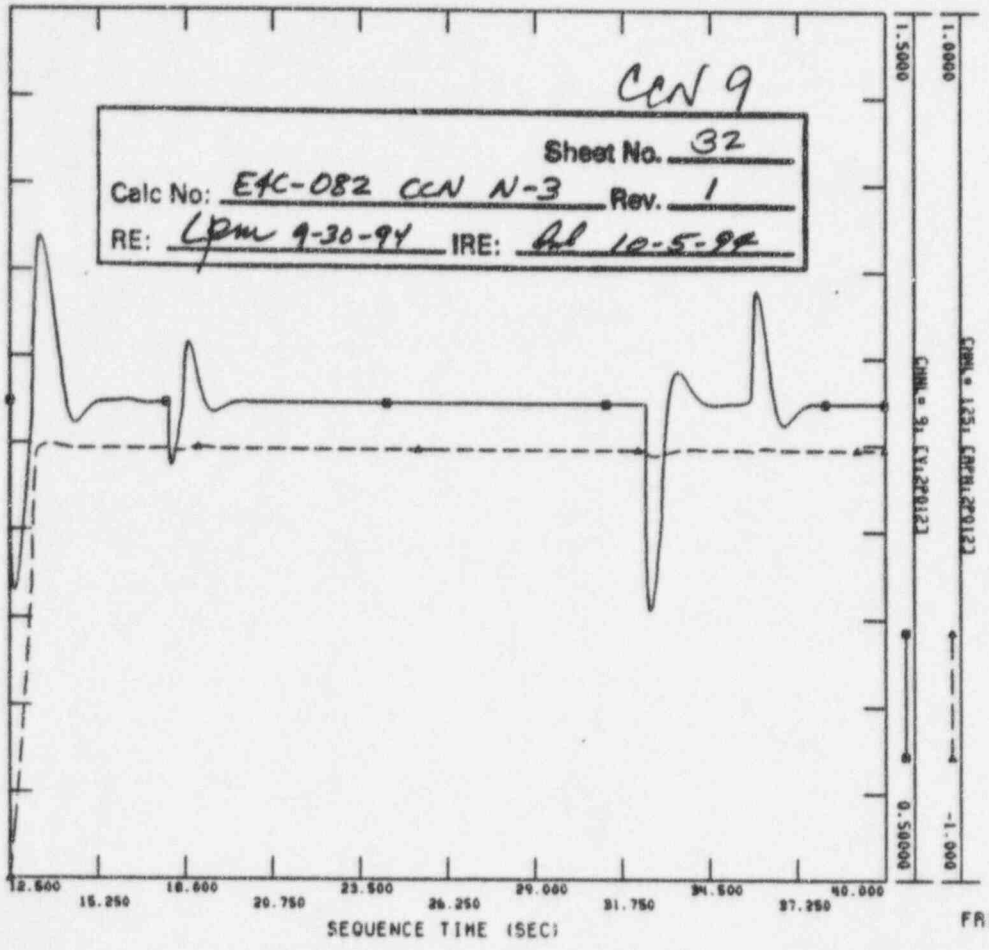
2A073

CCN 9

Sheet No. 32

Calc No: E4C-082 CCN N-3 Rev. 1

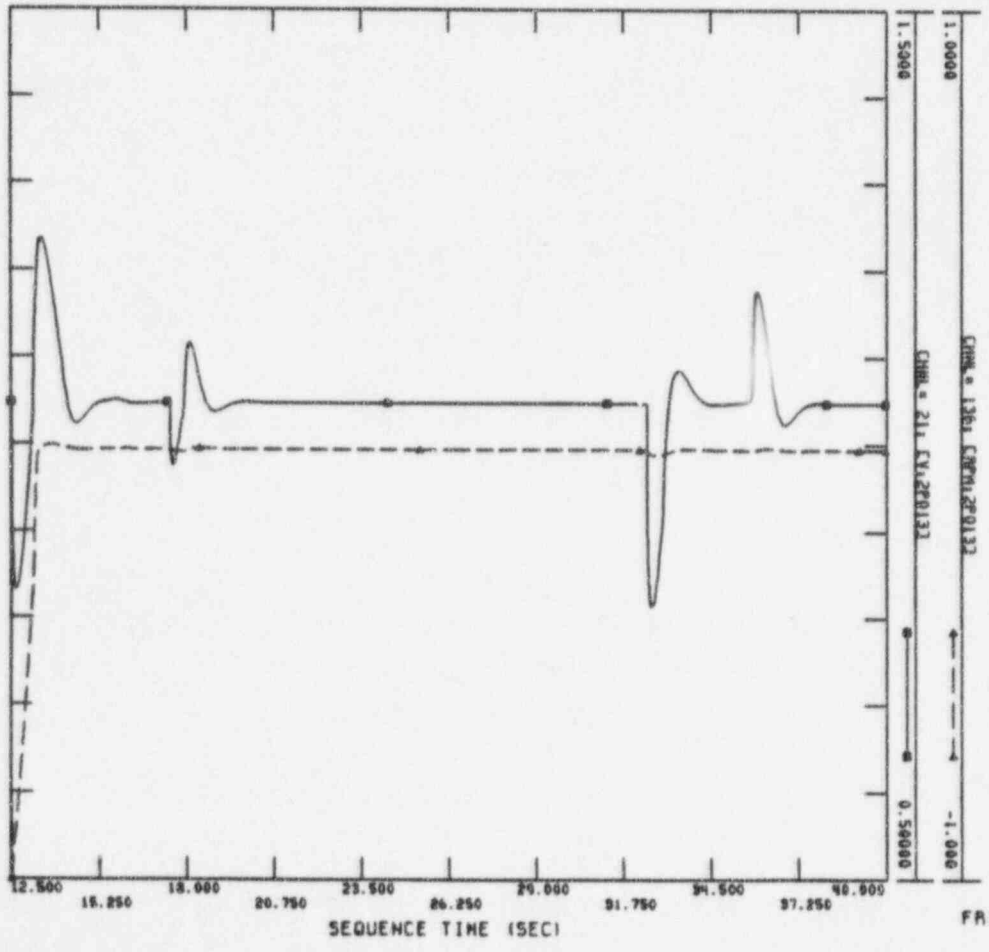
RE: LPM 9-30-94 IRE: AL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.. PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX\CHANOUT_IIIAX

FRI, SEP 16 1994 14:07

2P012



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.. PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX\CHANOUT_IIIAX

FRI, SEP 16 1994 14:07

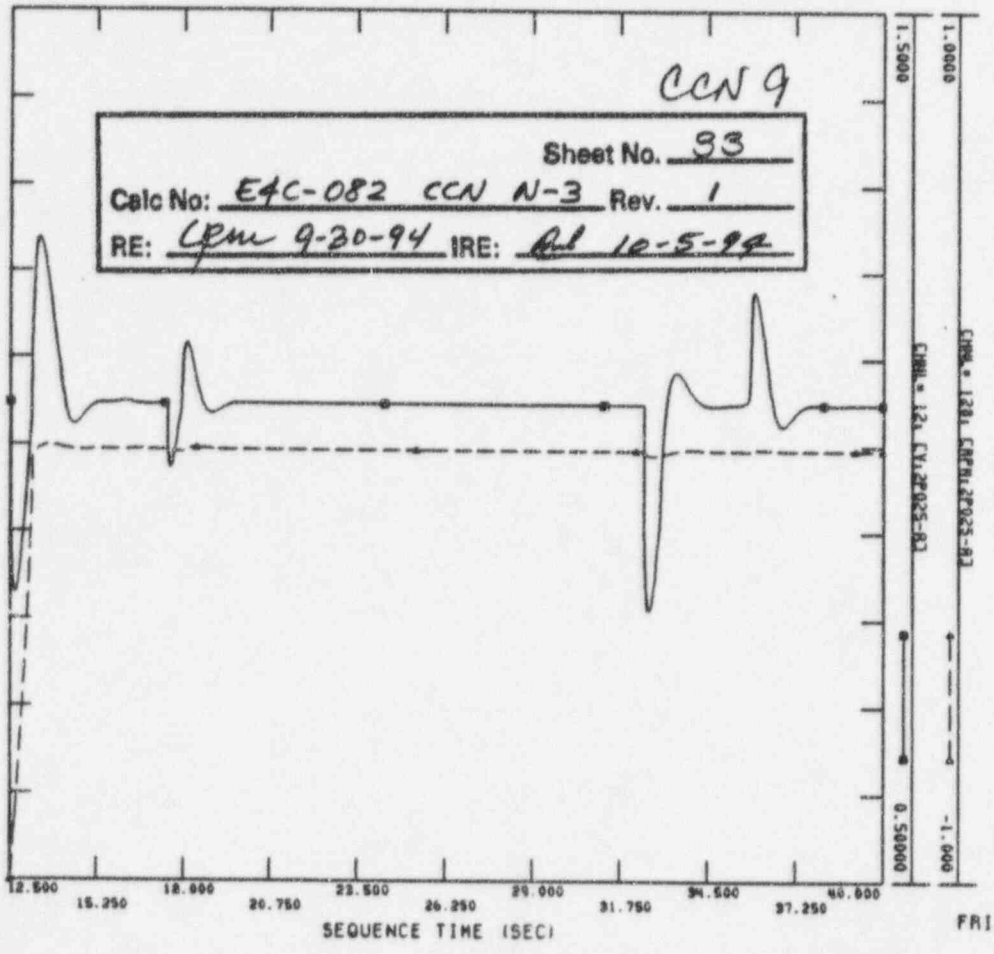
2P013

CCN 9

Sheet No. 93

Calc No: E4C-082 CCN N-3 Rev. 1

RE: CPM 9-30-94 IRE: AL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
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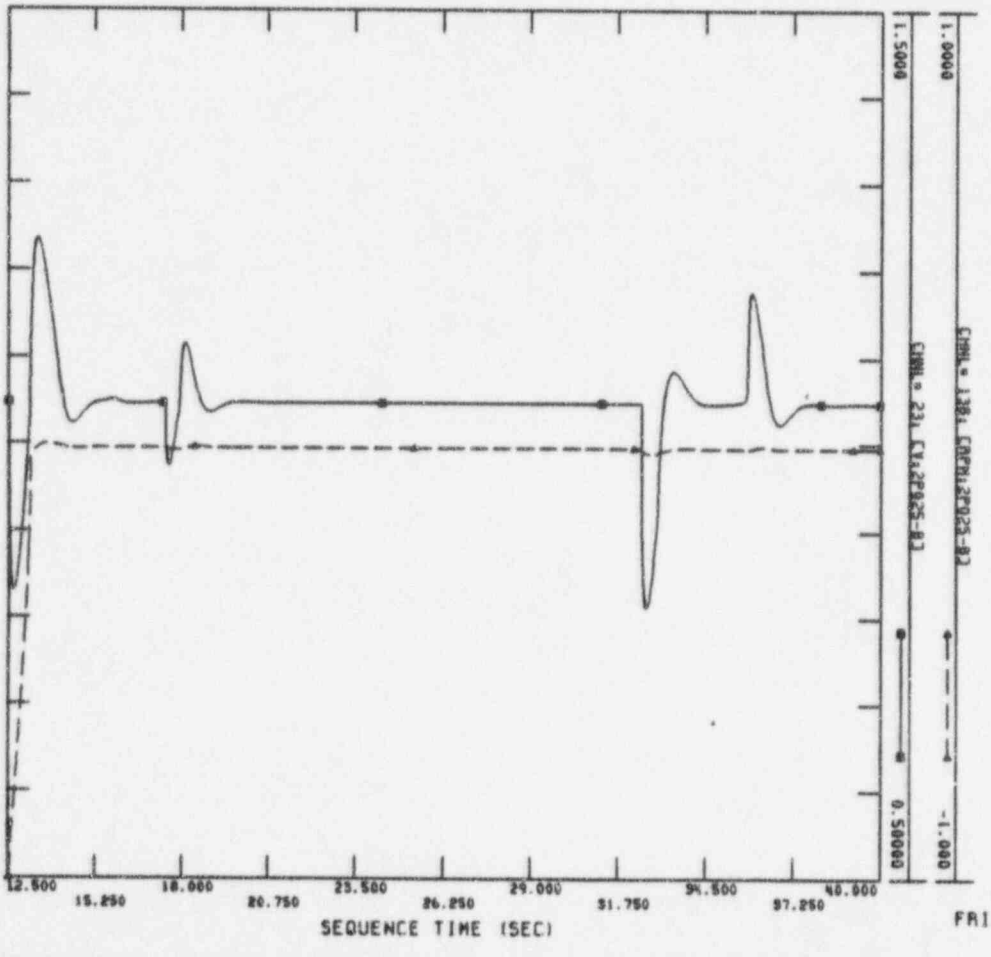
FRI, SEP 16 1994 14:07

2P025-A



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:08

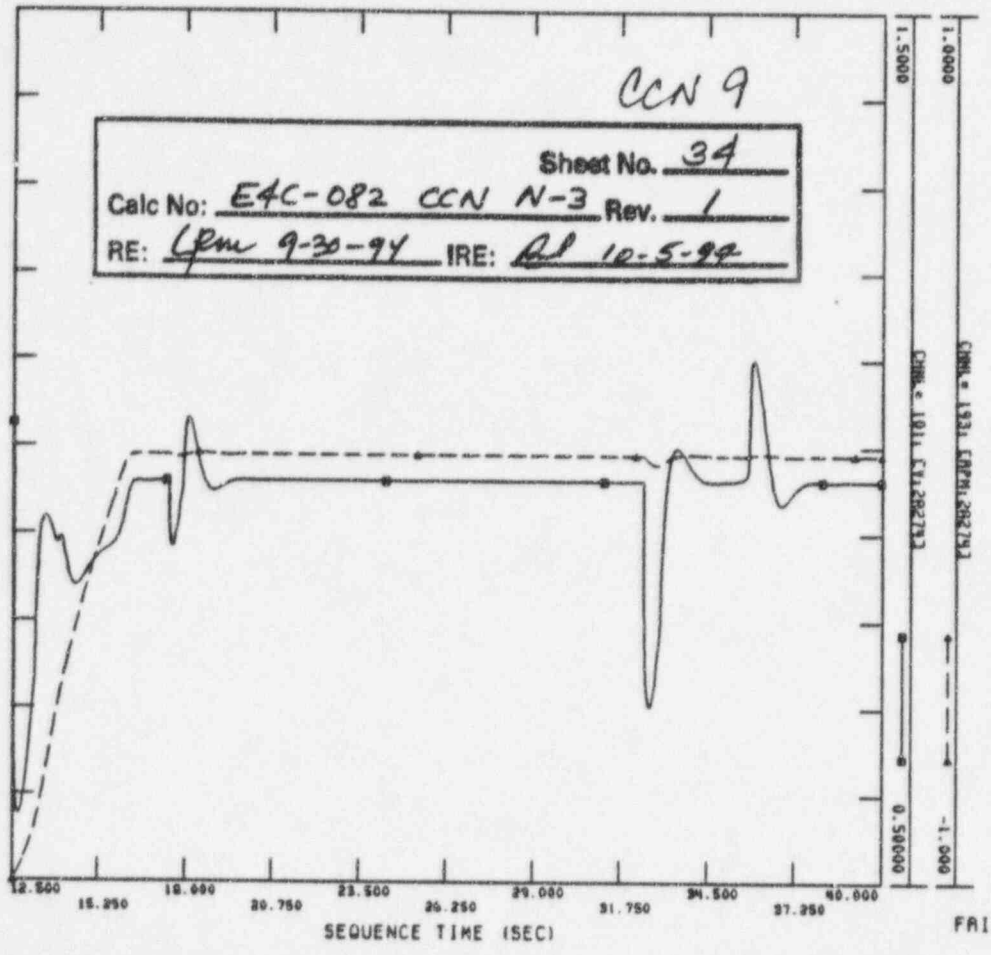
2P025-B

CCN 9

Sheet No. 34

Calc No: E4C-082 CCN N-3 Rev. 1

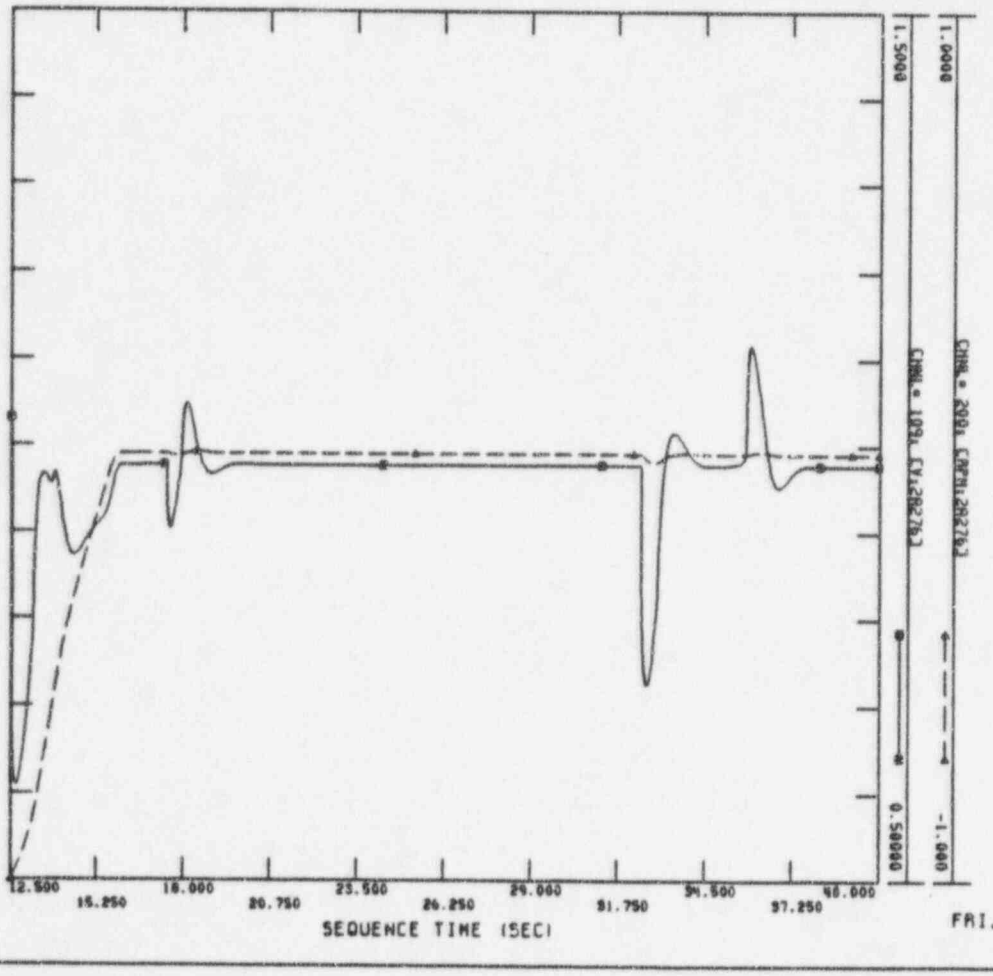
RE: Lpm 9-30-94 IRE: AL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX\CHANOUT_IIIAX

FRI, SEP 16 1994 14:08

2A274



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX\CHANOUT_IIIAX

FRI, SEP 16 1994 14:08

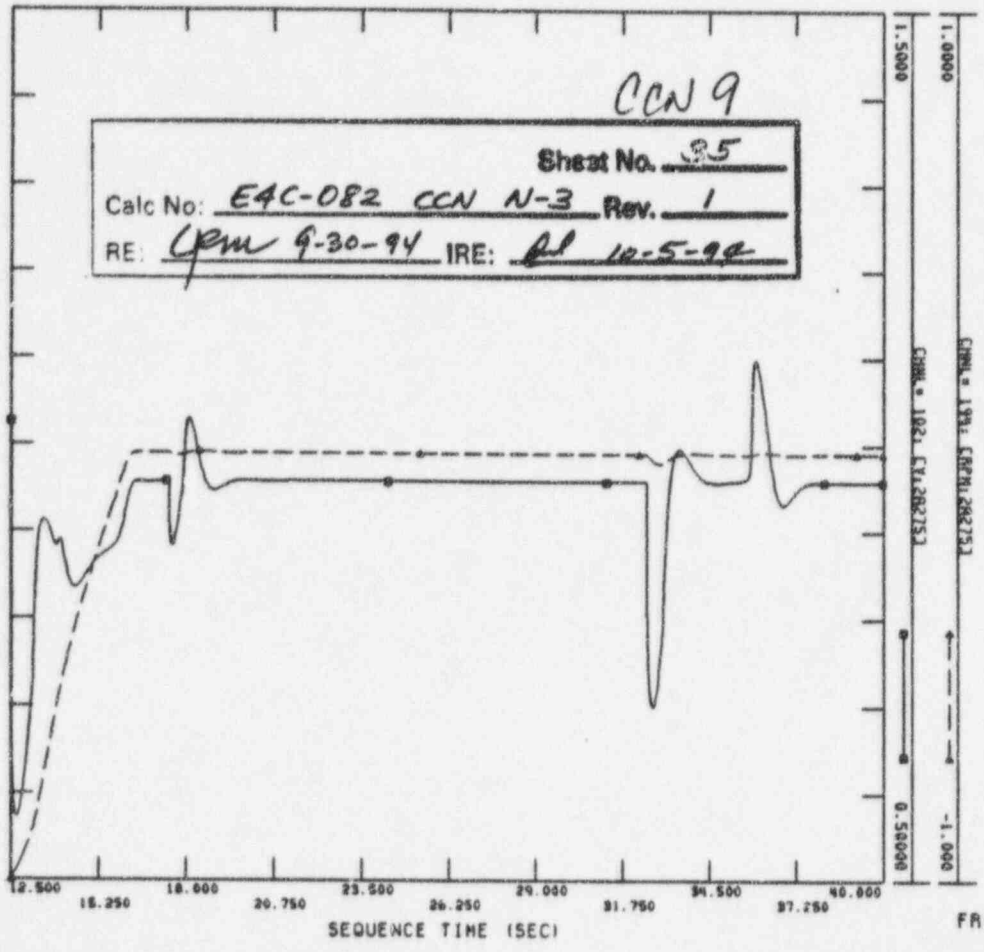
2A276

CCN 9

Sheet No. 25

Calc No: E4C-082 CCN N-3 Rev. 1

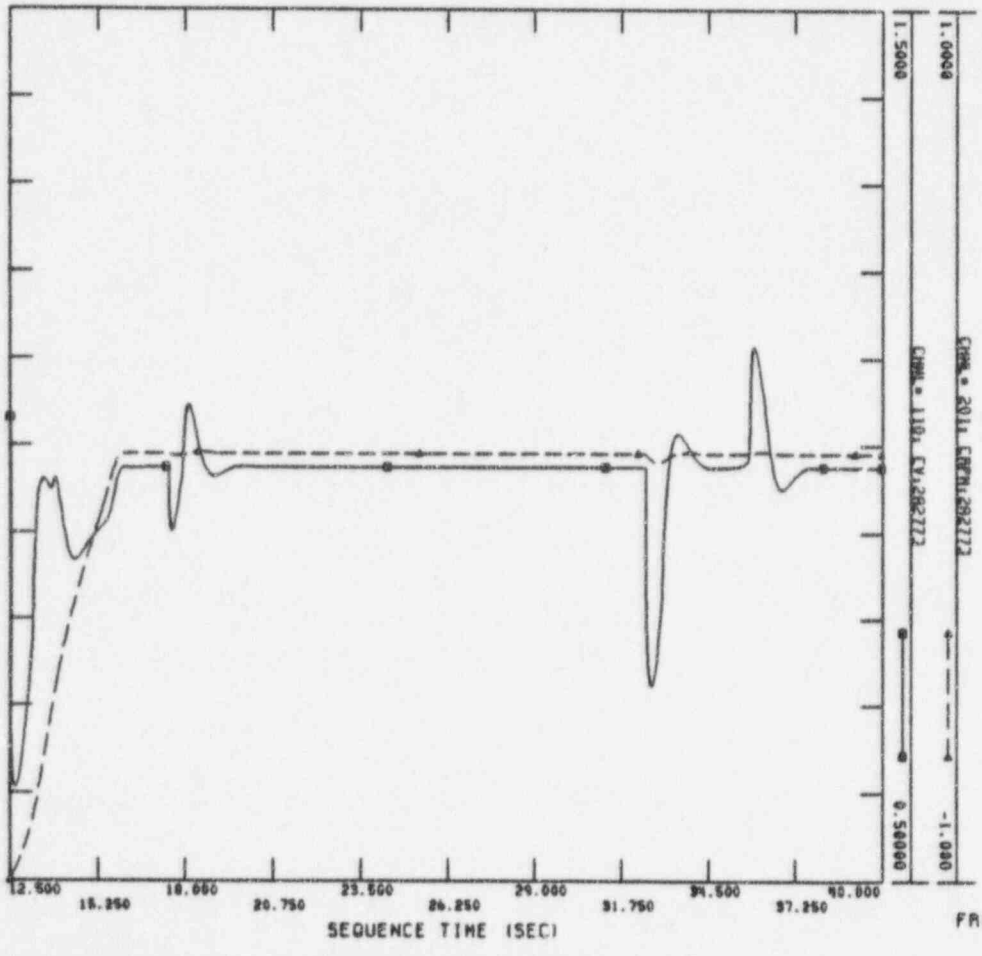
RE: Cpm 9-30-94 IRE: Rl 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:08

2A275



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:08

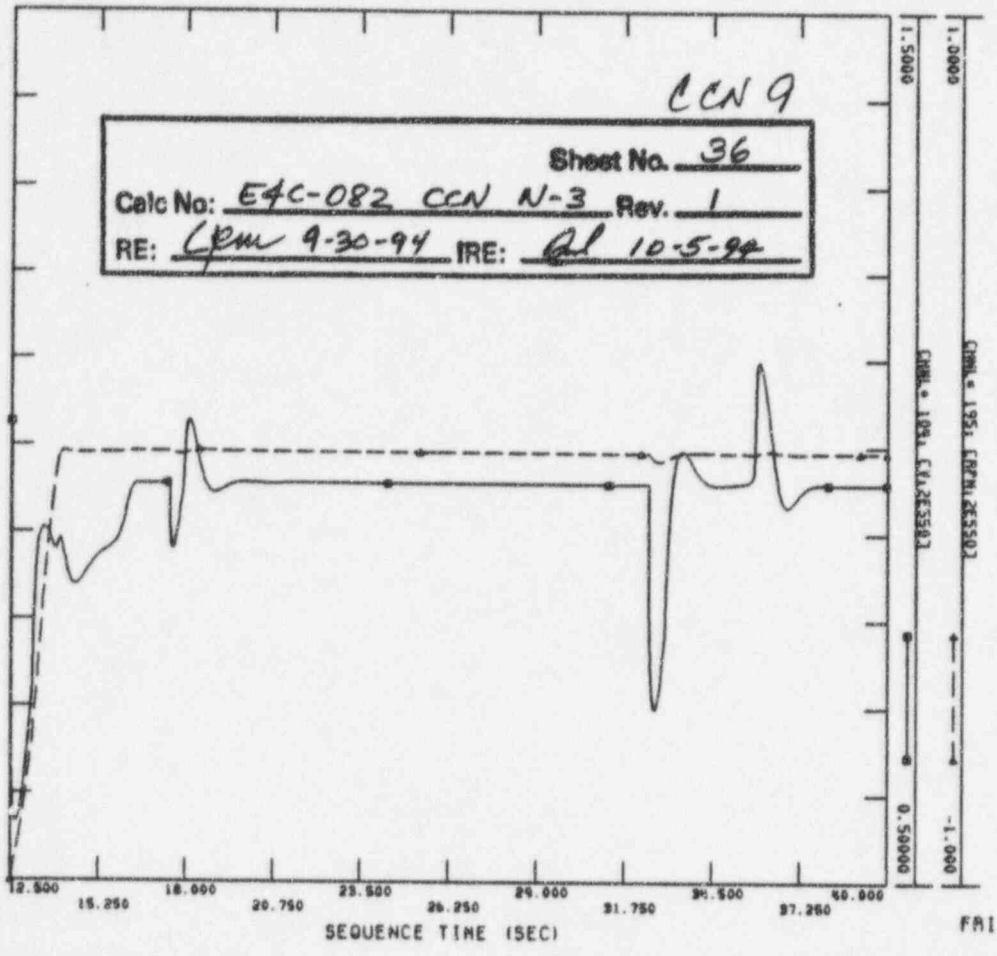
2A277

CCN 9

Sheet No. 36

Calc No: E4C-082 CCN N-3 Rev. 1

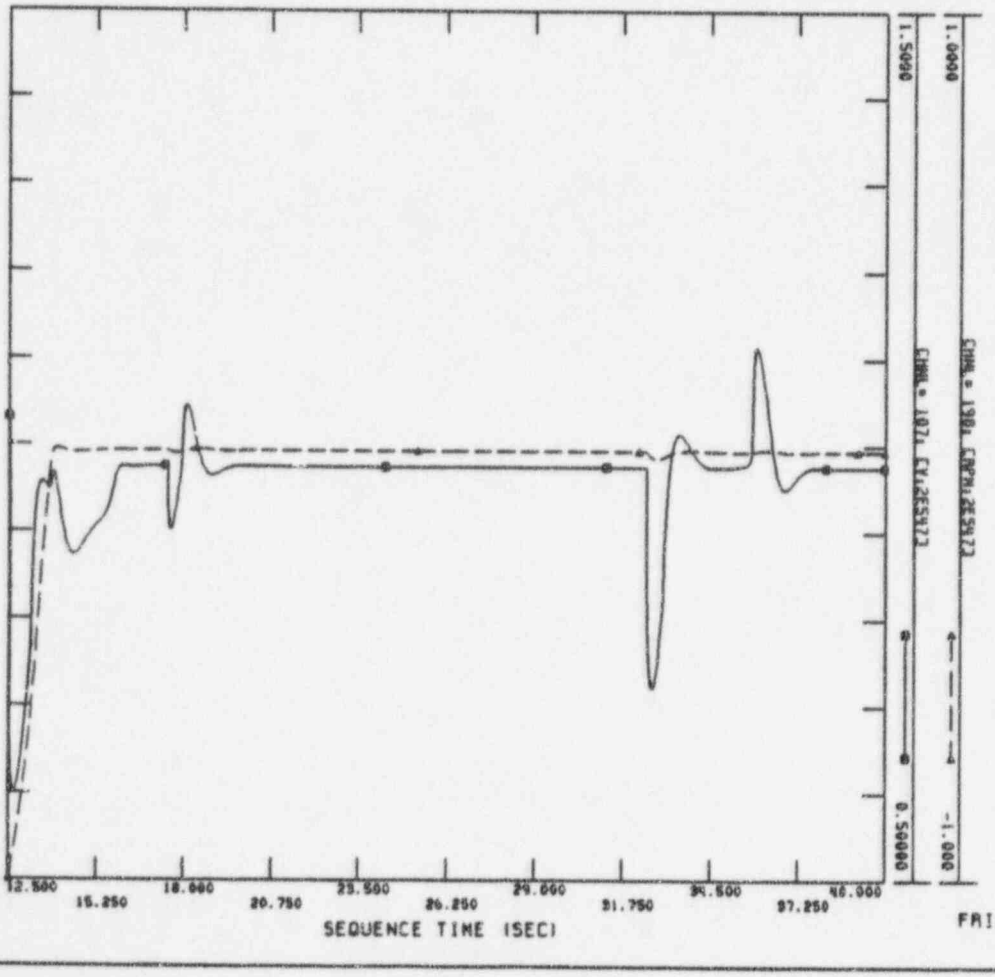
RE: CPM 9-30-94 IRE: CPM 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C:CASE_IIIAX\CHANOUT_IIIAX

FRI, SEP 16 1994 14:08

2E550



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C:CASE_IIIAX\CHANOUT_IIIAX

FRI, SEP 16 1994 14:08

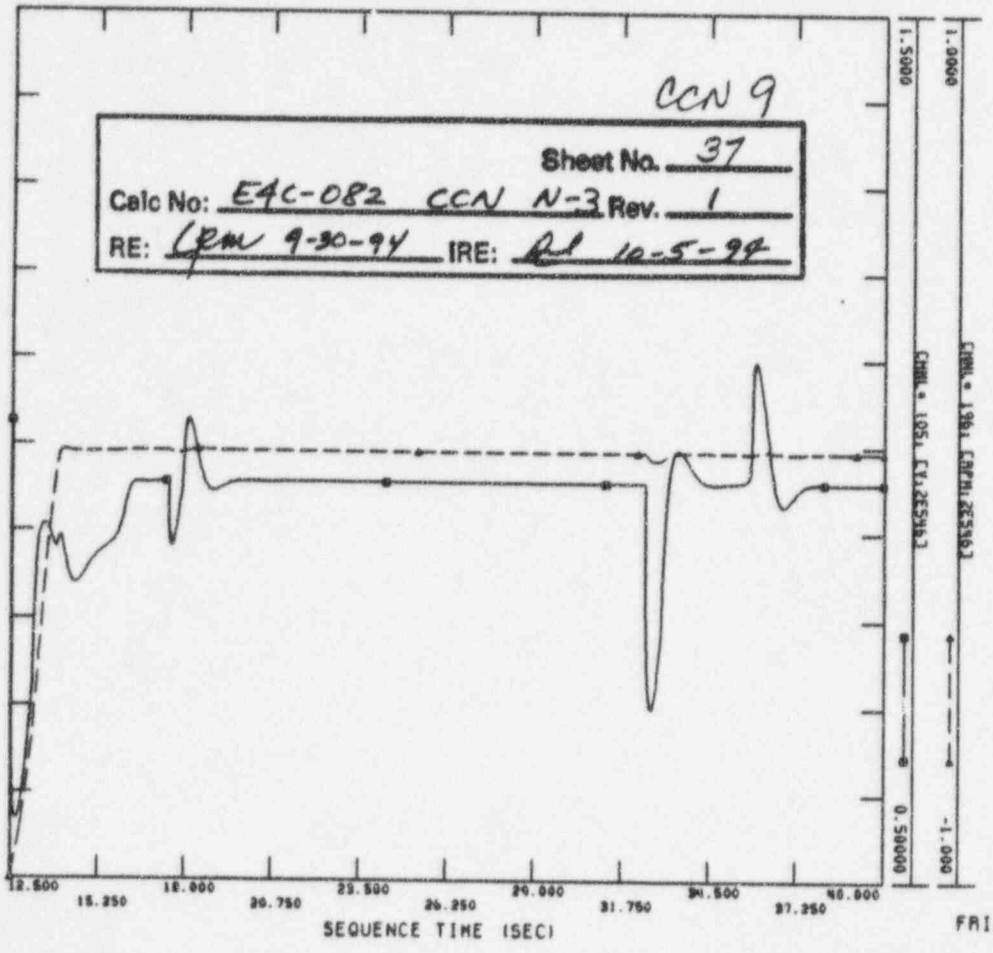
2E547

CCN 9

Sheet No. 37

Calc No: E4C-082 CCN N-3 Rev. 1

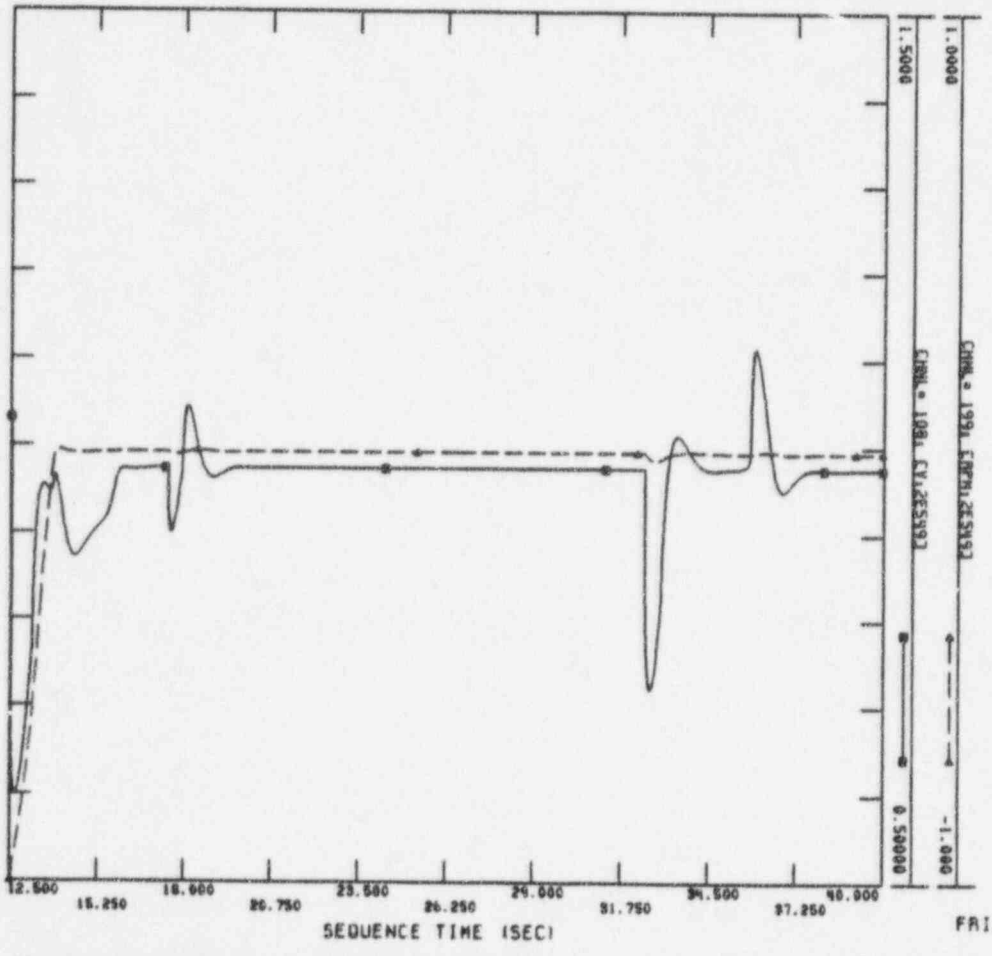
RE: CPM 9-30-94 IRE: PM 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:08

2E546



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:08

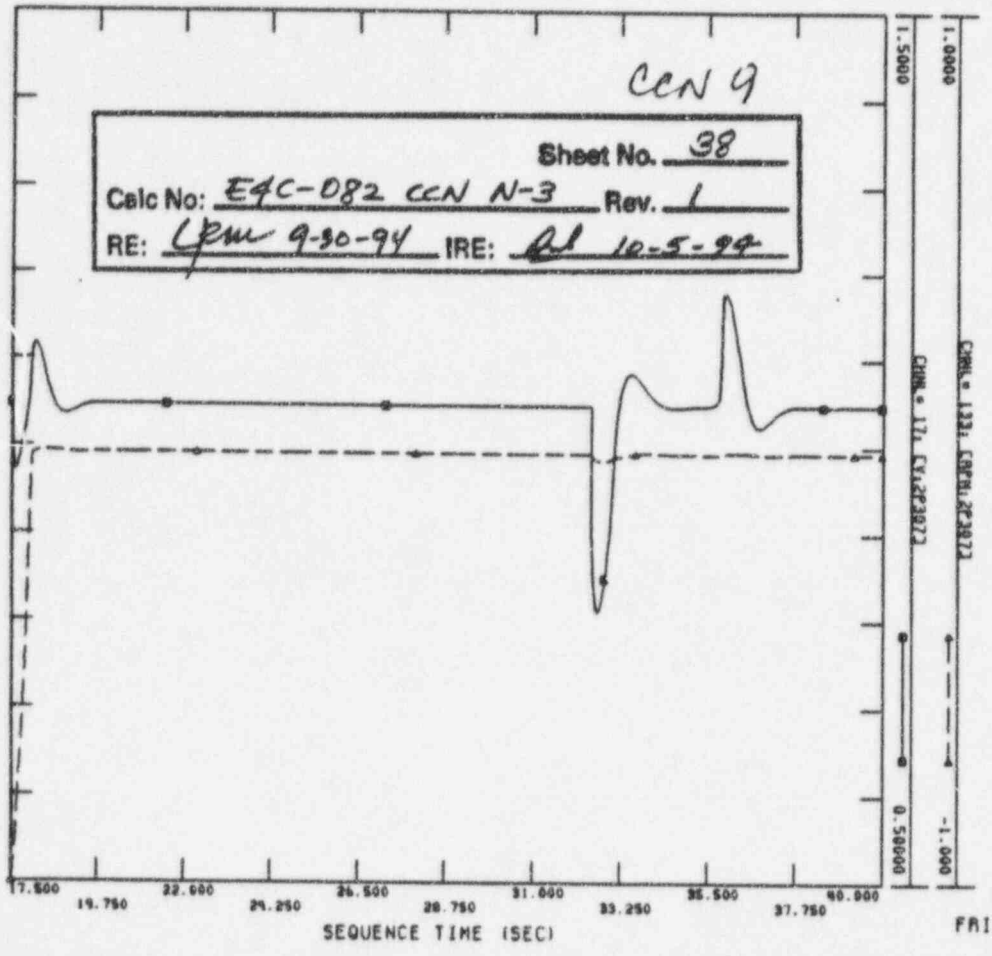
2E549

CCN 9

Sheet No. 38

Calc No: E4C-082 CCN N-3 Rev. 1

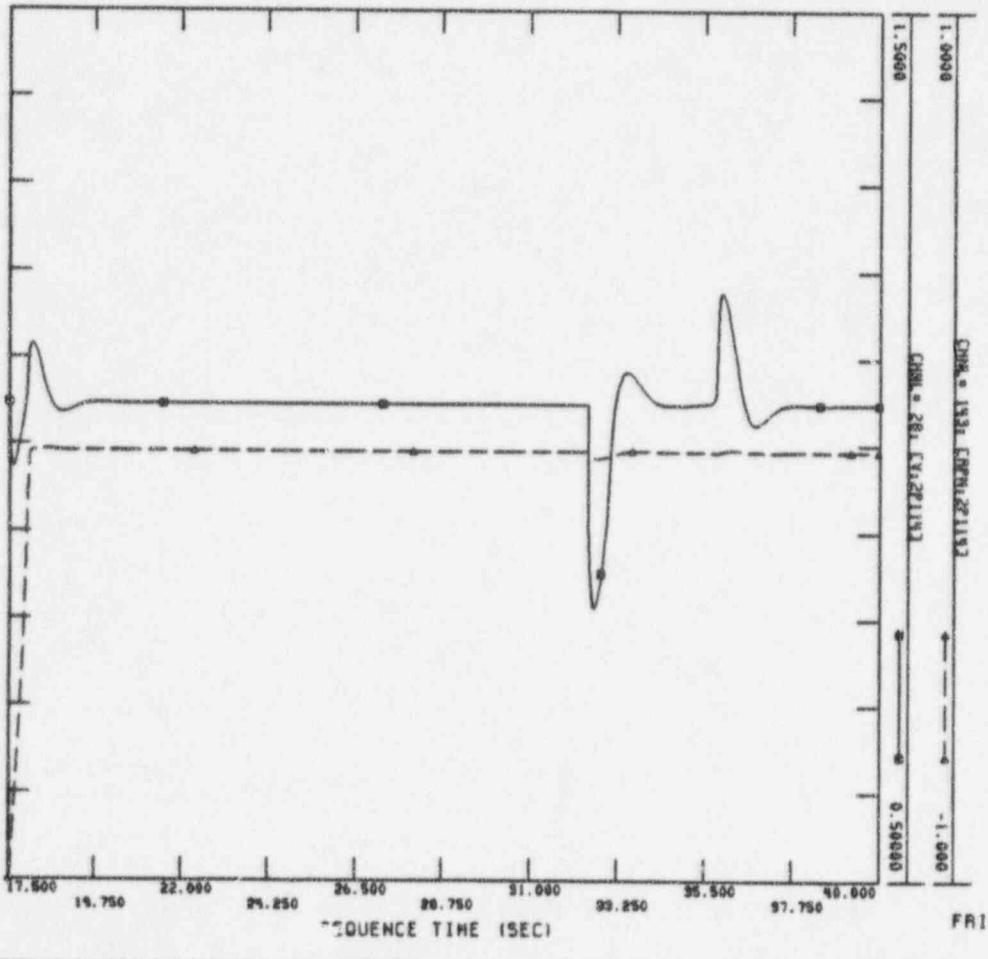
RE: LPM 9-30-94 IRE: AL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.. PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:08

2P307



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.. PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:09

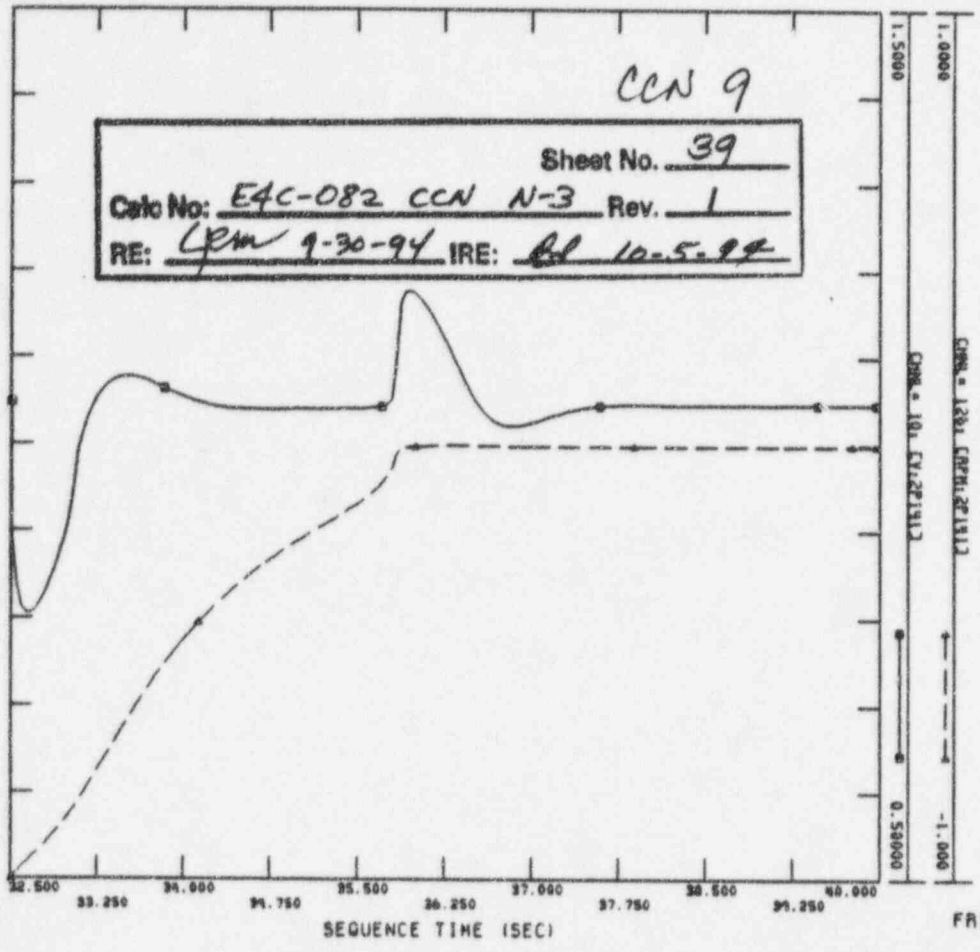
2P114

CCN 9

Sheet No. 39

Calc No: E4C-082 CCN N-3 Rev. 1

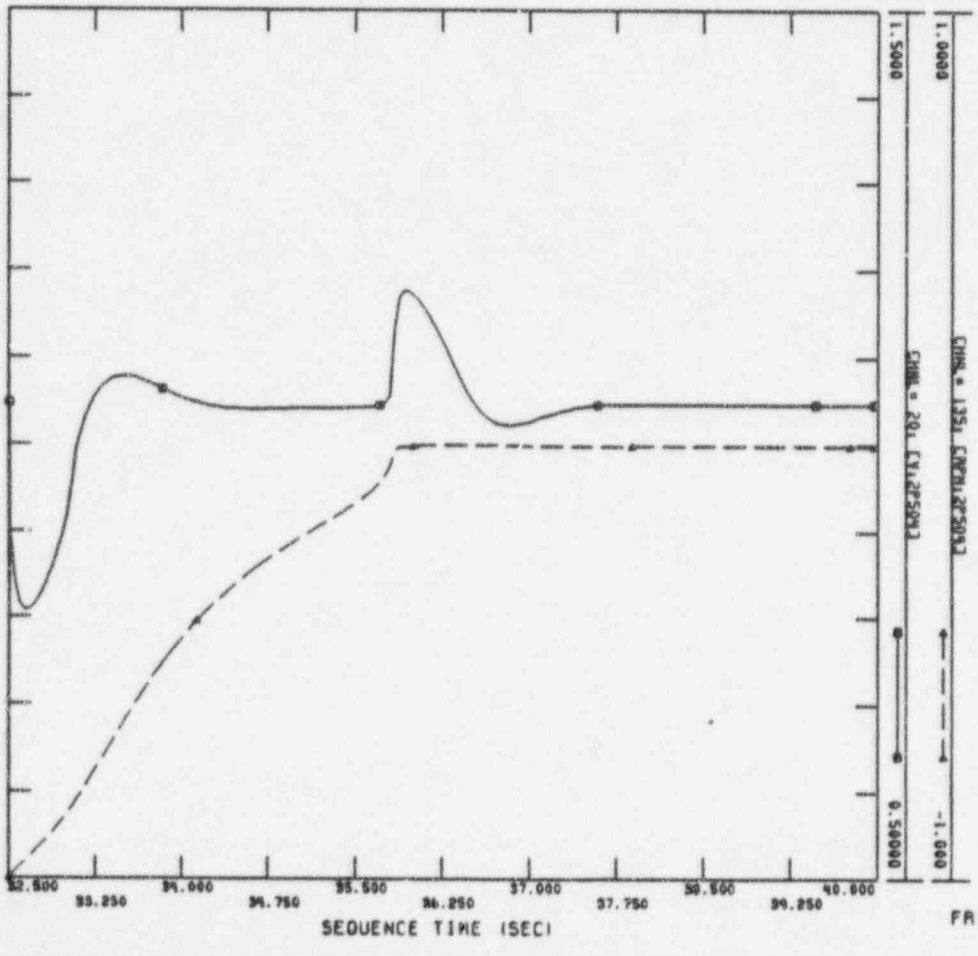
RE: CPM 9-30-94 IRE: BL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC., PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:09

2P141



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC., PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:09

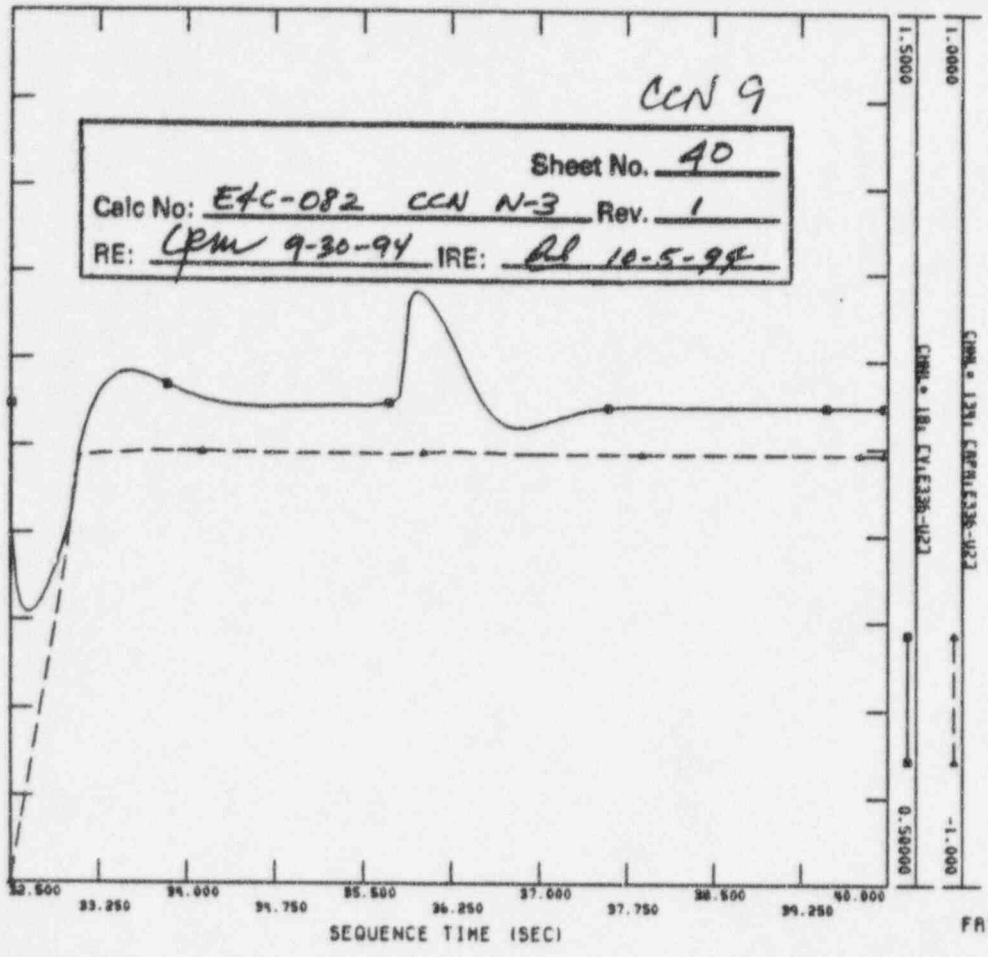
2P504

CCN 9

Sheet No. 40

Calc No: E4C-082 CCN N-3 Rev. 1

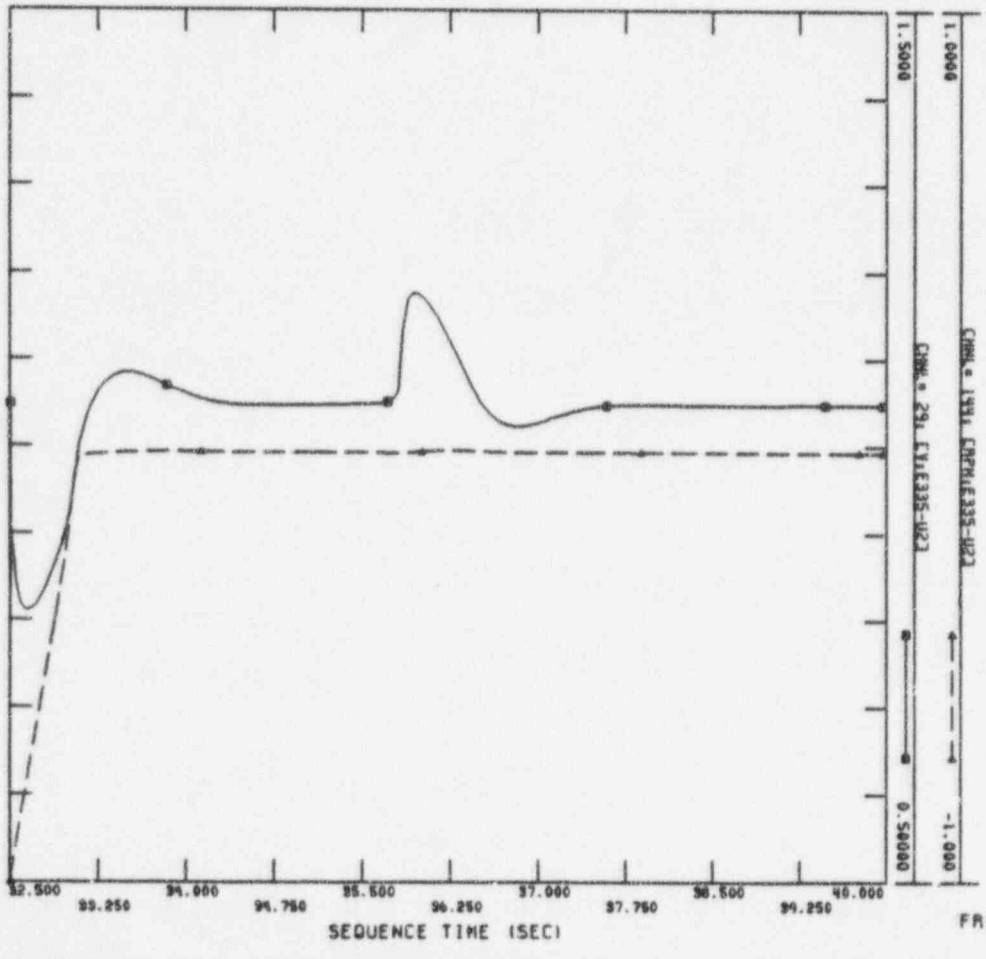
RE: CPM 9-30-94 IRE: RL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.. PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: E.CASE_IIIAXJCHANOUT_IIIAX

FRI, SEP 16 1994 14:09

E336-U2



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.. PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: E.CASE_IIIAXJCHANOUT_IIIAX

FRI, SEP 16 1994 14:09

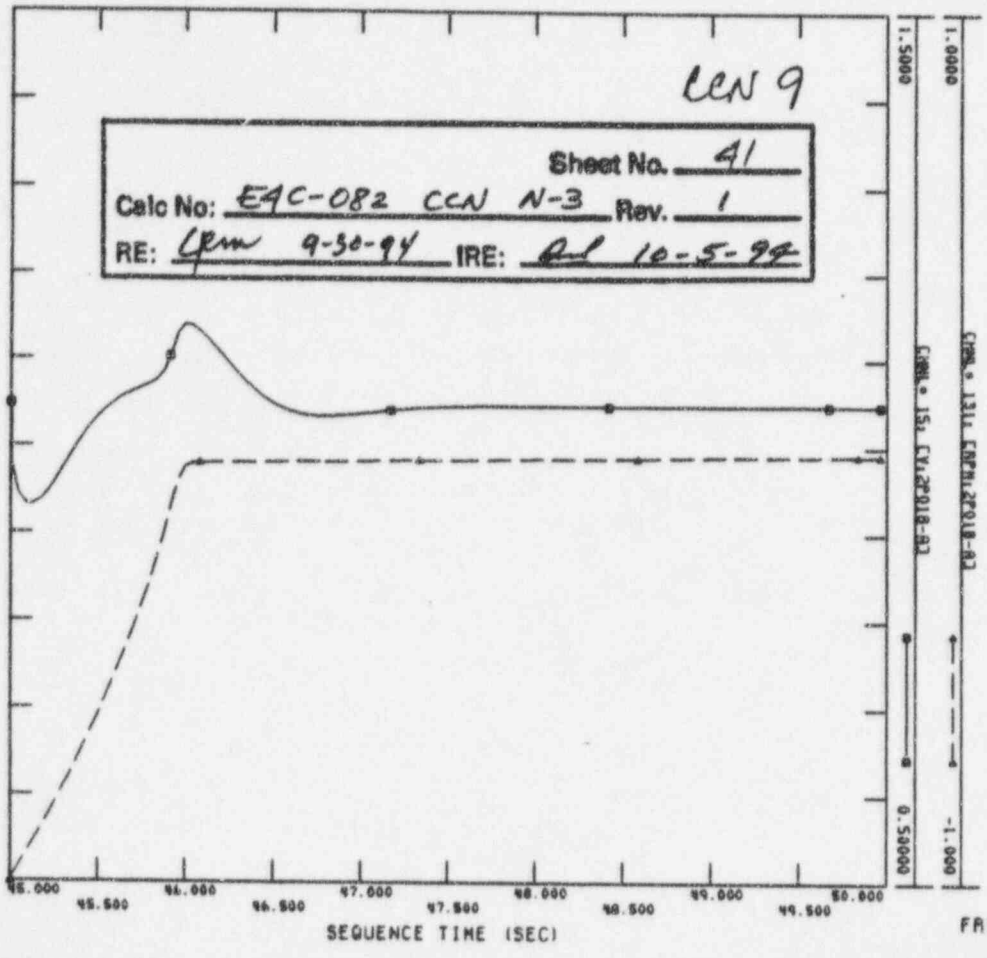
E335-U2

CCN 9

Sheet No. 41

Calc No: E4C-082 CCN N-3 Rev. 1

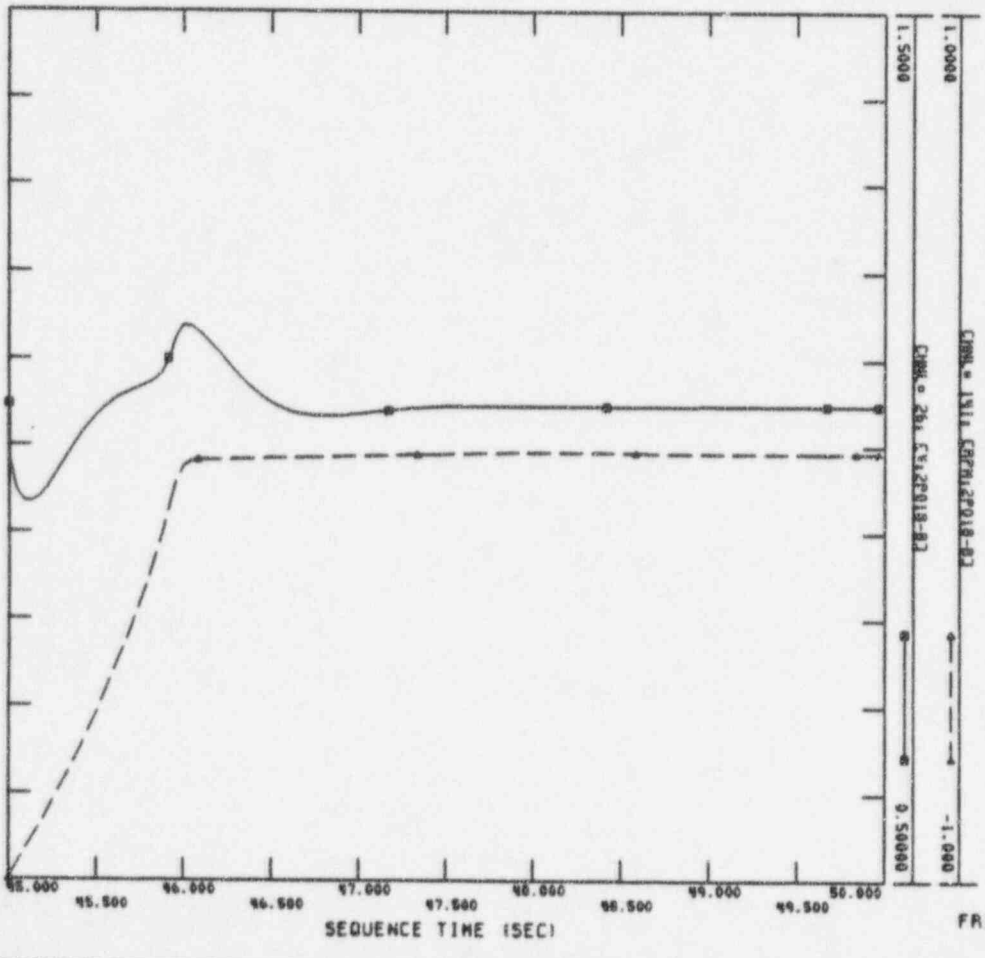
RE: Cpm 9-30-94 IRE: Rel 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:09

2P018-A



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAX.CHANOUT_IIIAX

FRI, SEP 16 1994 14:10

2P018-B

Project or DCP/MMP SONGS 2 & 3 Calc No. E4C-082 Rev.1

Subject SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT Sheet No.

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURTY	9-30-94	A. M. PATEL	10-5-94					

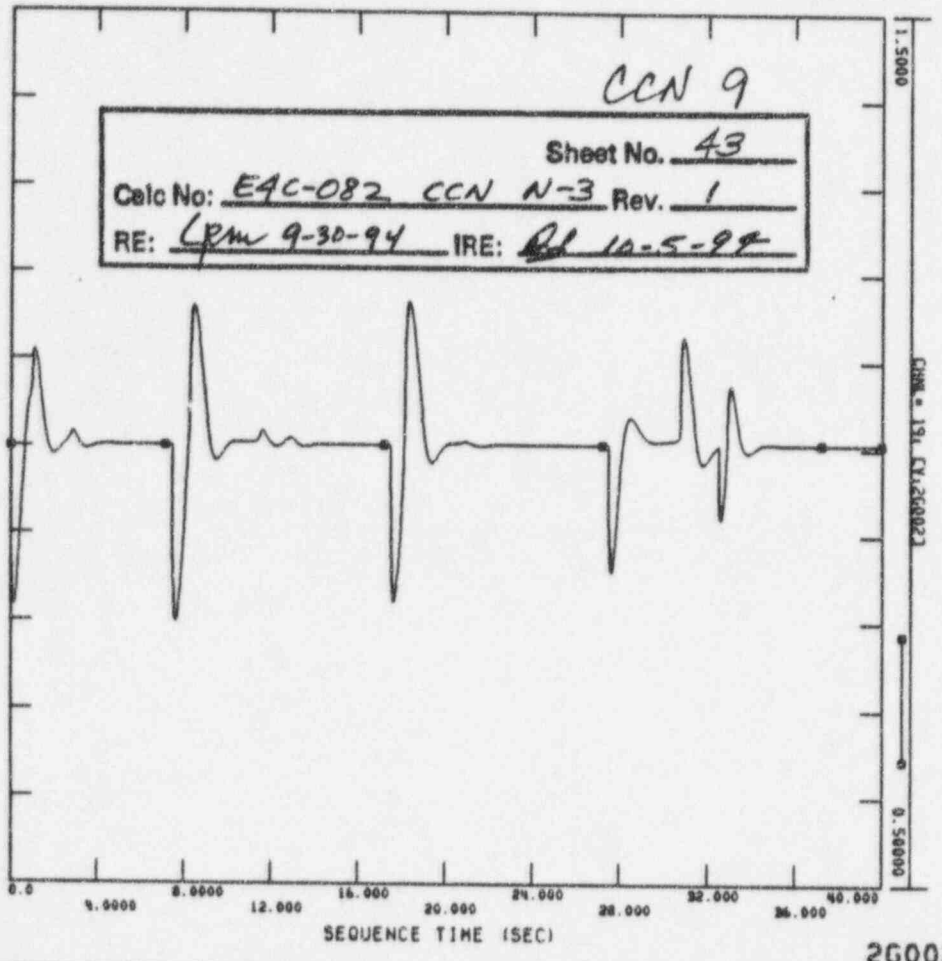
CASE IIIAY DYNAMIC PROFILES

CCN 9

Sheet No. 43

Calc No: E4C-082 CCN N-3 Rev. 1

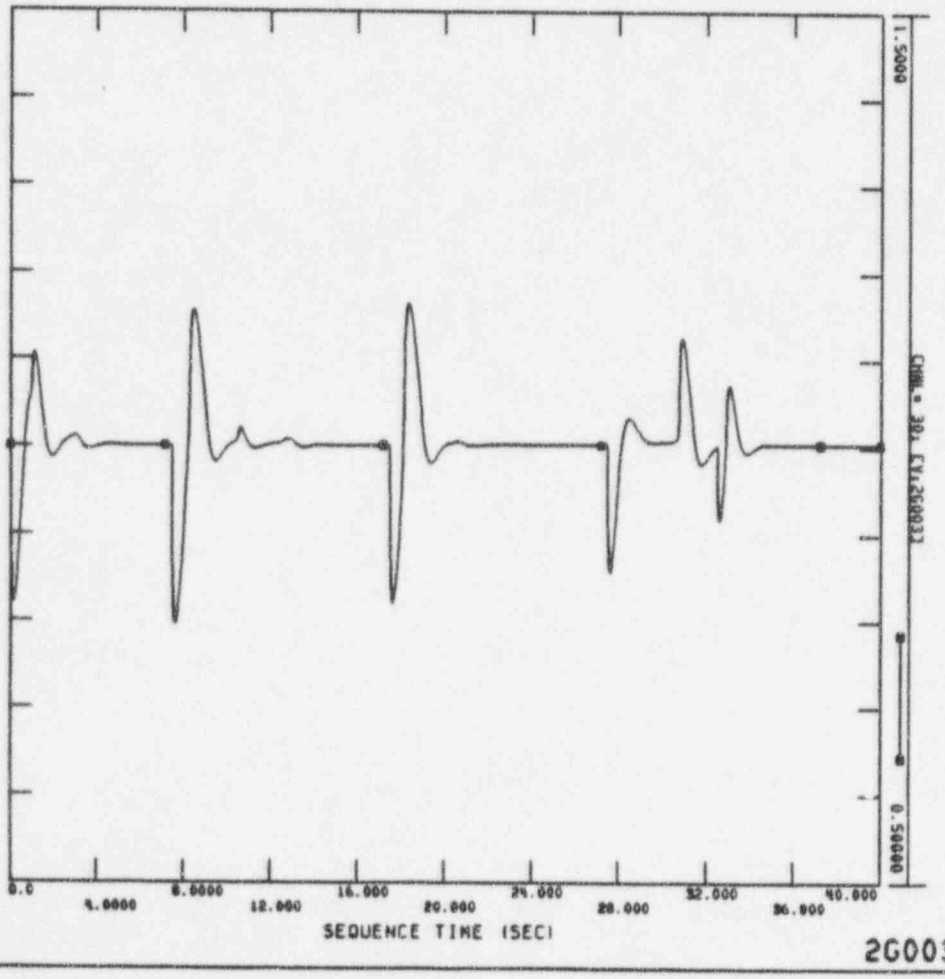
RE: Lpm 9-30-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:27

2G002 (14.36-KV BASE)



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:28

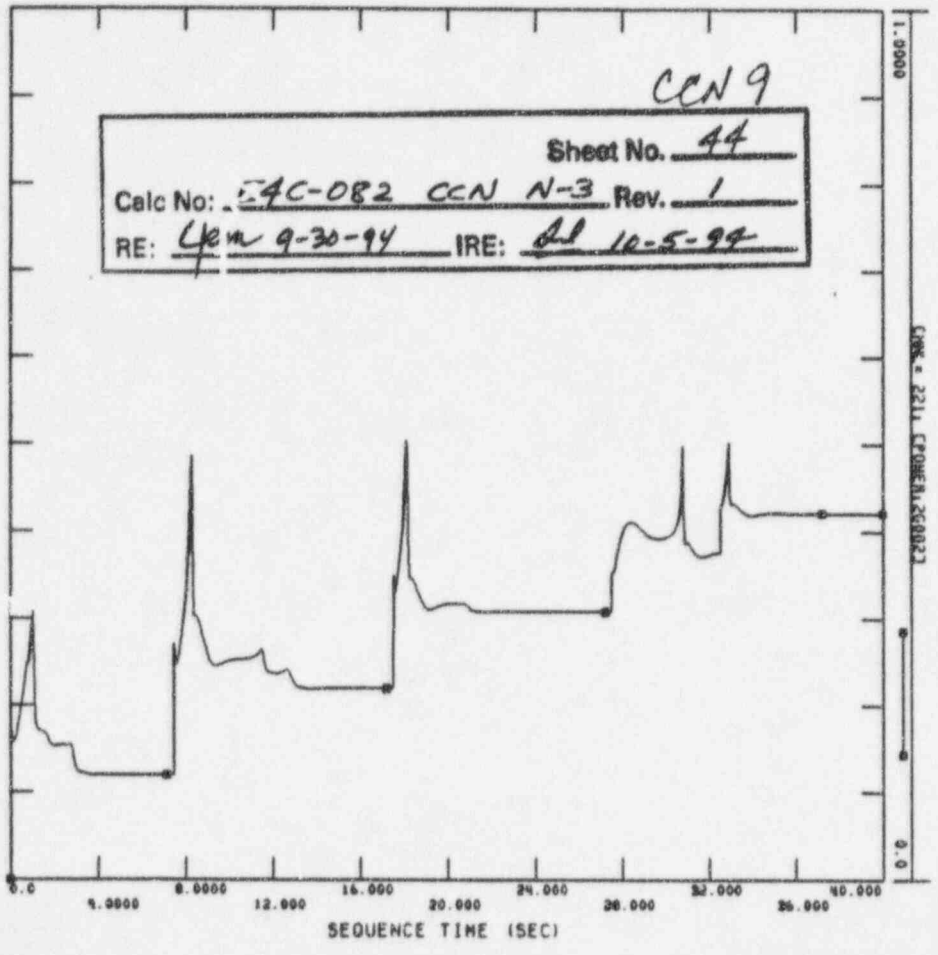
2G003 (14.36-KV BASE)

CCN 9

Sheet No. 44

Calc No: C4C-082 CCN N-3 Rev. 1

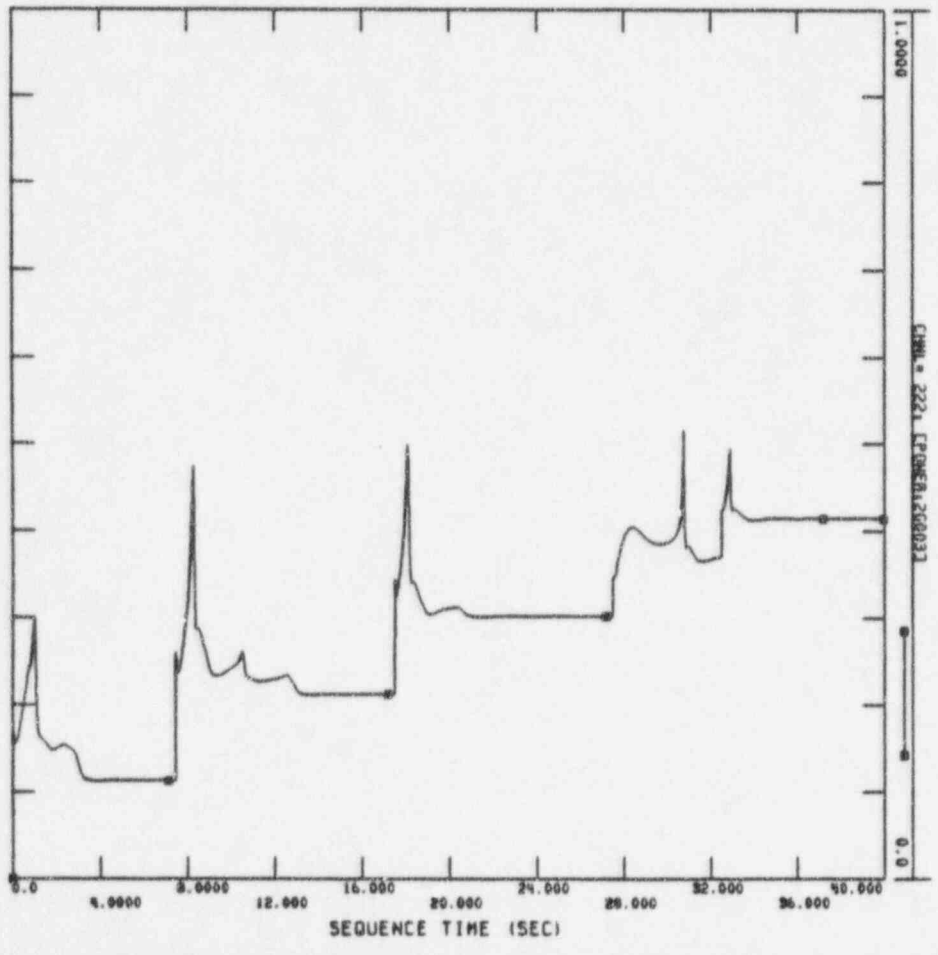
RE: [illegible] 9-30-94 IRE: [illegible] 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHAMOUT_IIIAY

FRI, SEP 16 1994 14:28

20002 POWER (MW)



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHAMOUT_IIIAY

FRI, SEP 16 1994 14:28

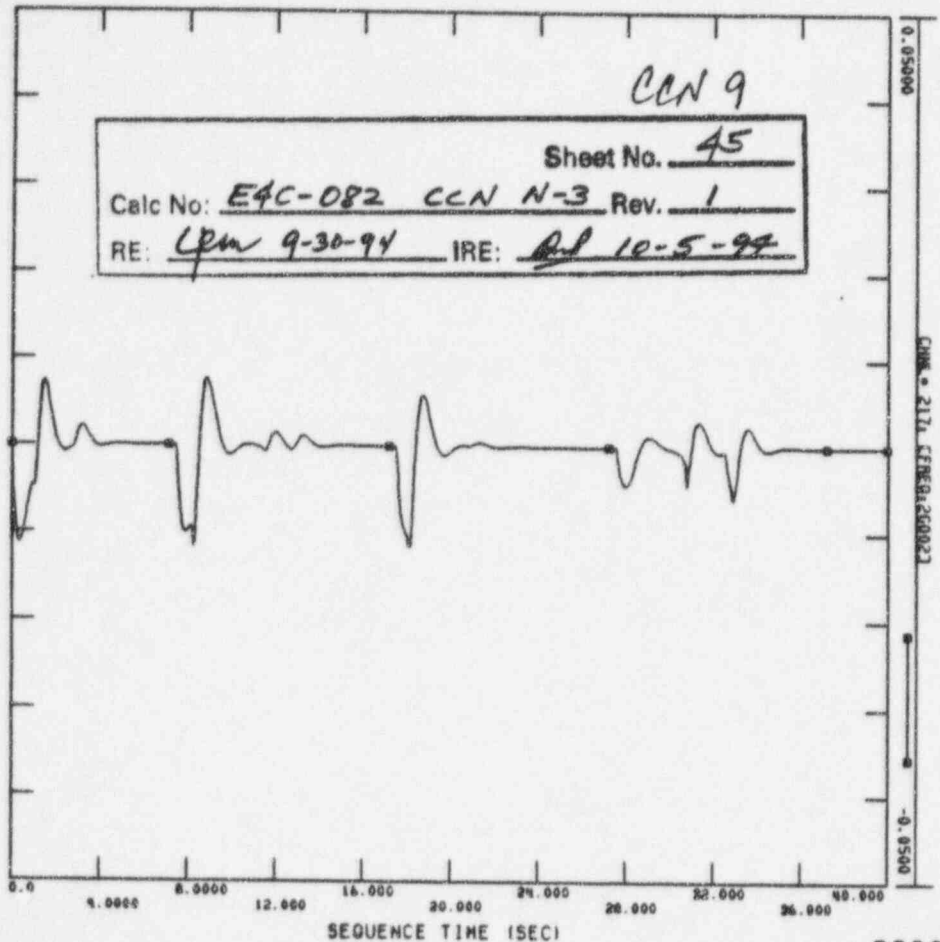
20003 POWER (MW)

CCN 9

Sheet No. 45

Calc No: E4C-082 CCN N-3 Rev. 1

RE: Lpm 9-30-94 IRE: Rd 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY\CHANOUT_IIIAY

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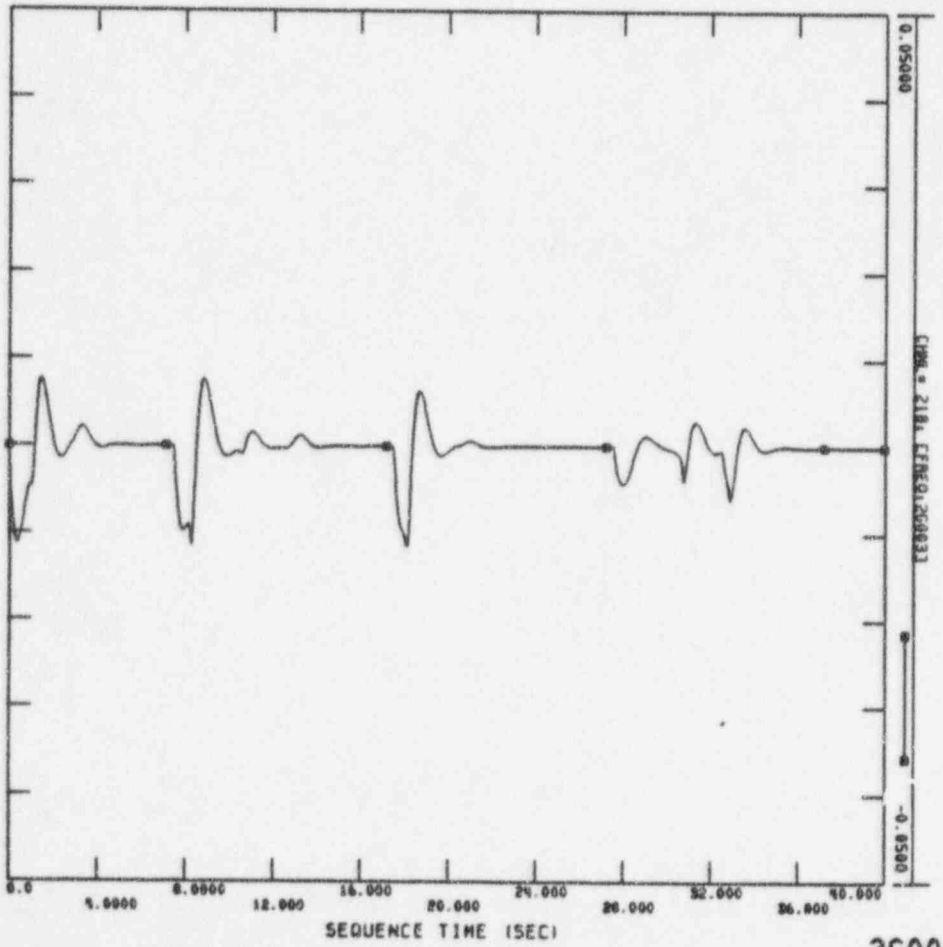
2G002 FREQ DEVIATION



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY\CHANOUT_IIIAY

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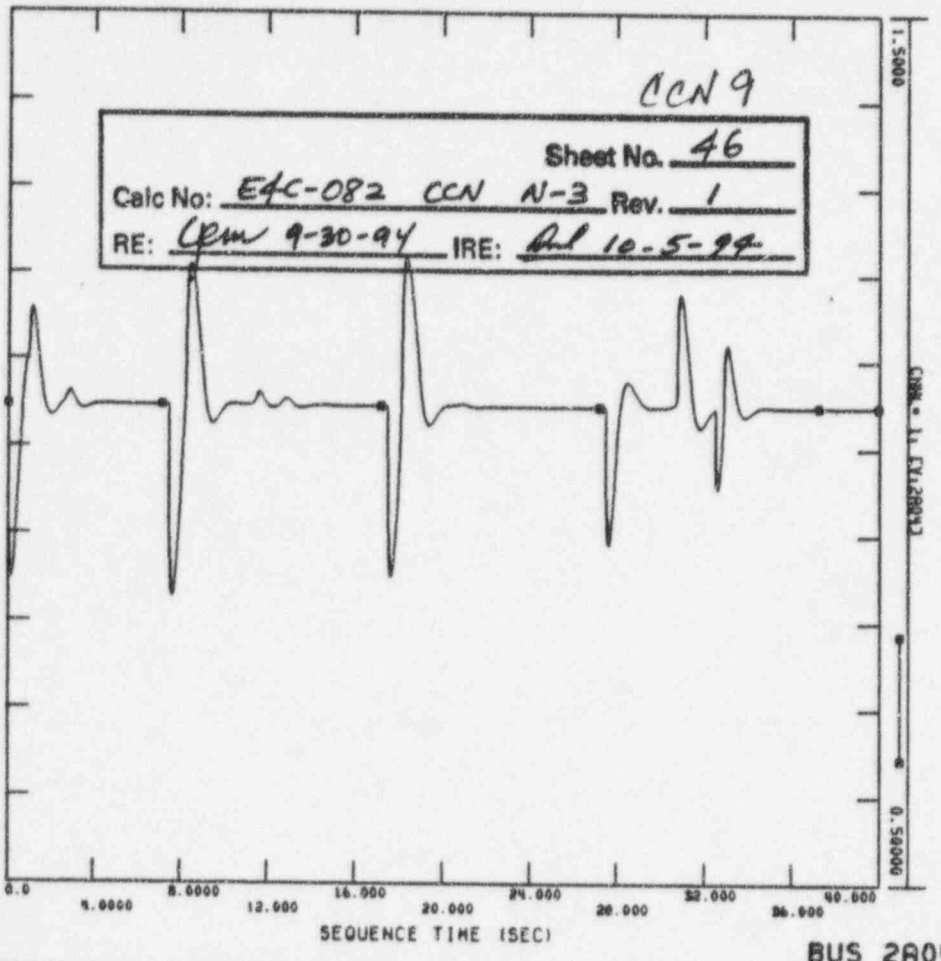
2G003 FREQ DEVIATION

CCN 9

Sheet No. 46

Calc No: E4C-082 CCN N-3 Rev. 1

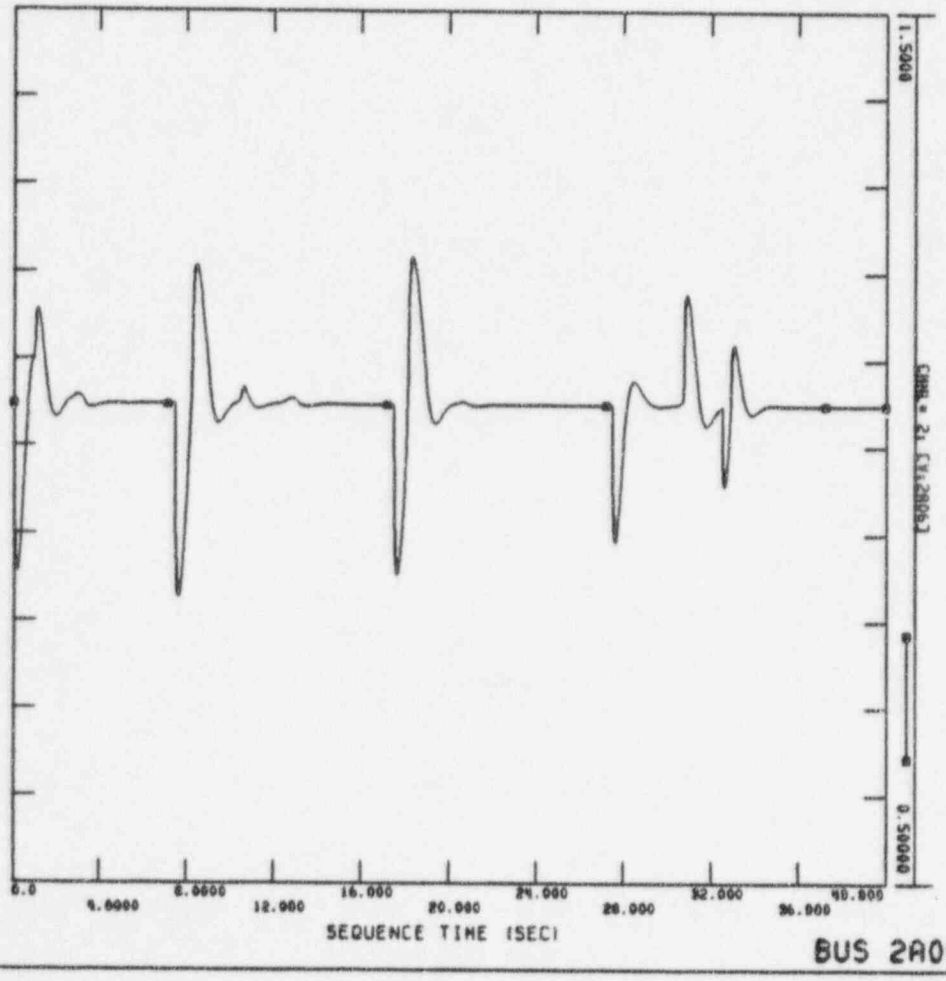
RE: CPM 9-30-94 IRE: AM 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:28

BUS 2A04 (4.16-KV BASE)



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:28

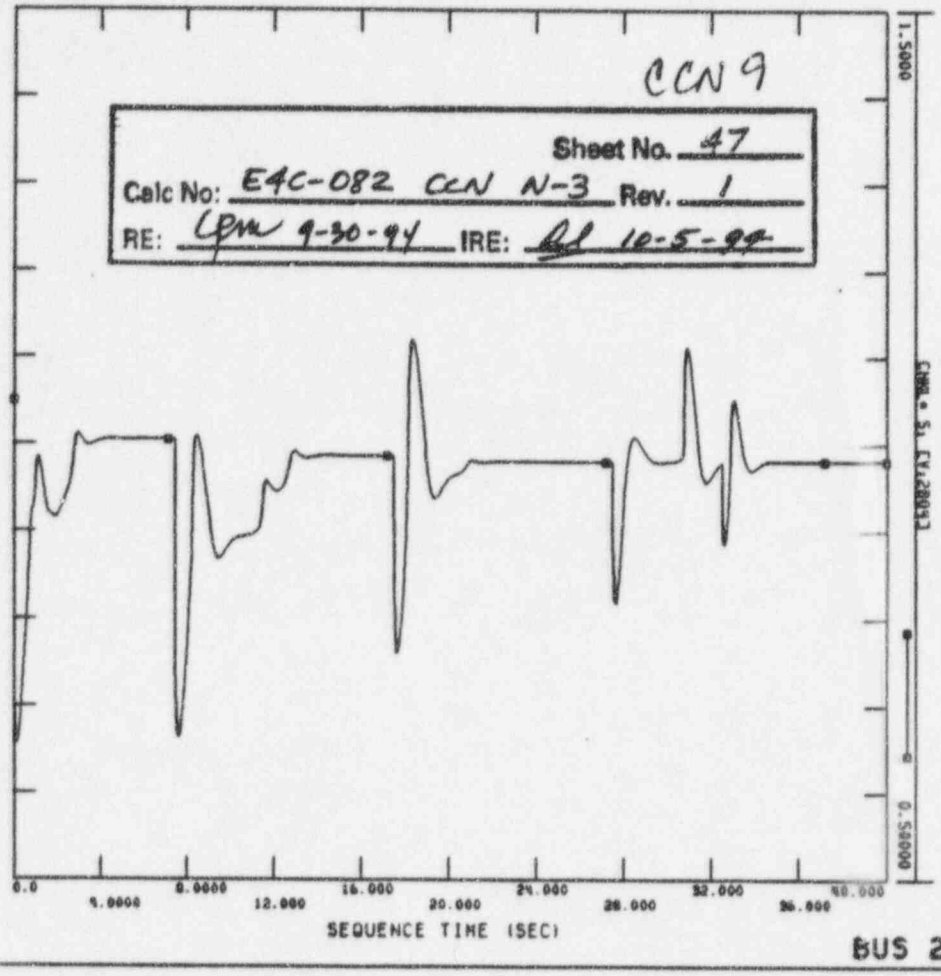
BUS 2A06 (4.16-KV BASE)

CCN 9

Sheet No. 47

Calc No: E4C-082 CCN N-3 Rev. 1

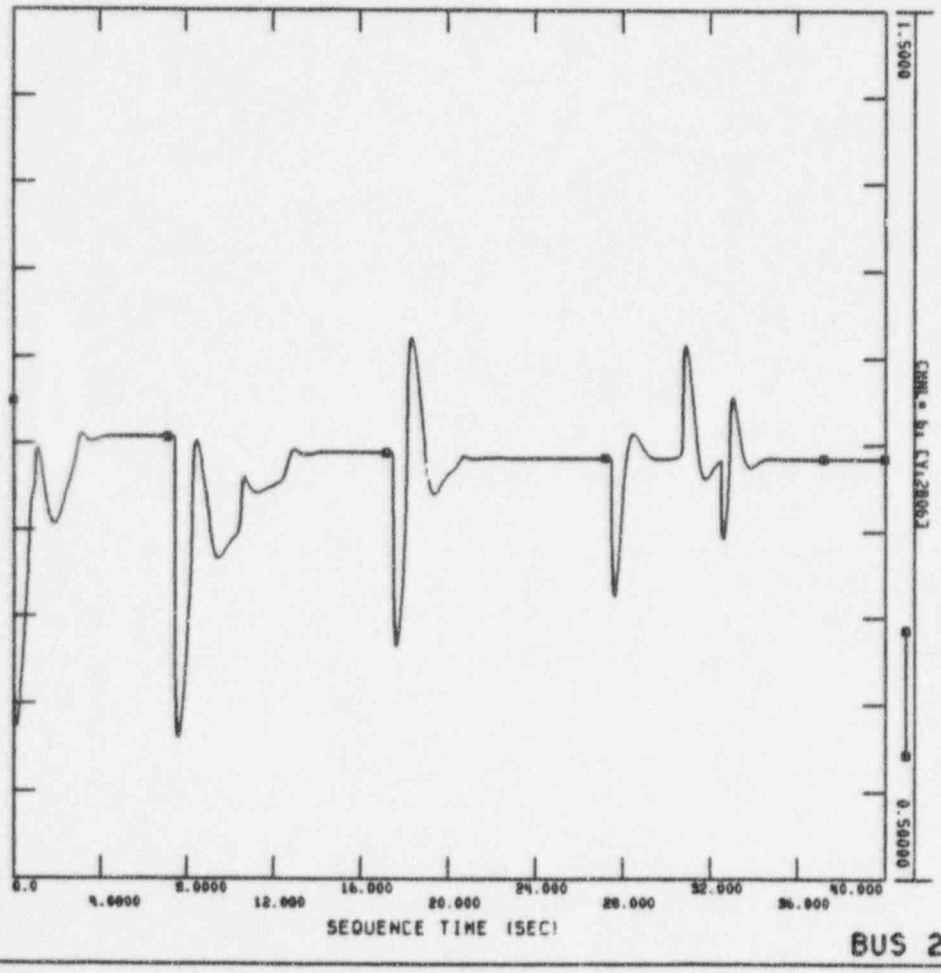
RE: Lpm 9-30-94 IRE: RL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:29

BUS 2B04 (480-V BASE)



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

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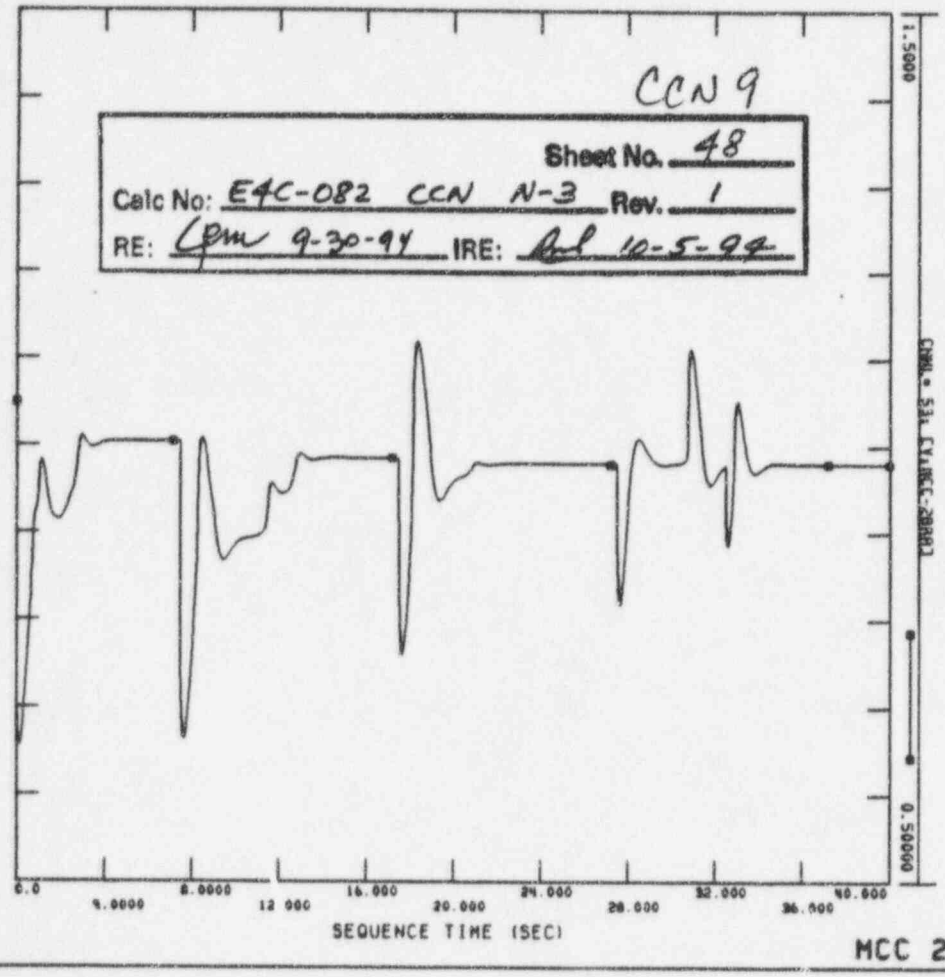
BUS 2B06 (480-V BASE)

CCN 9

Sheet No. 48

Calc No: E4C-082 CCN N-3 Rev. 1

RE: Lpm 9-30-94 IRE: Rel 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC., PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

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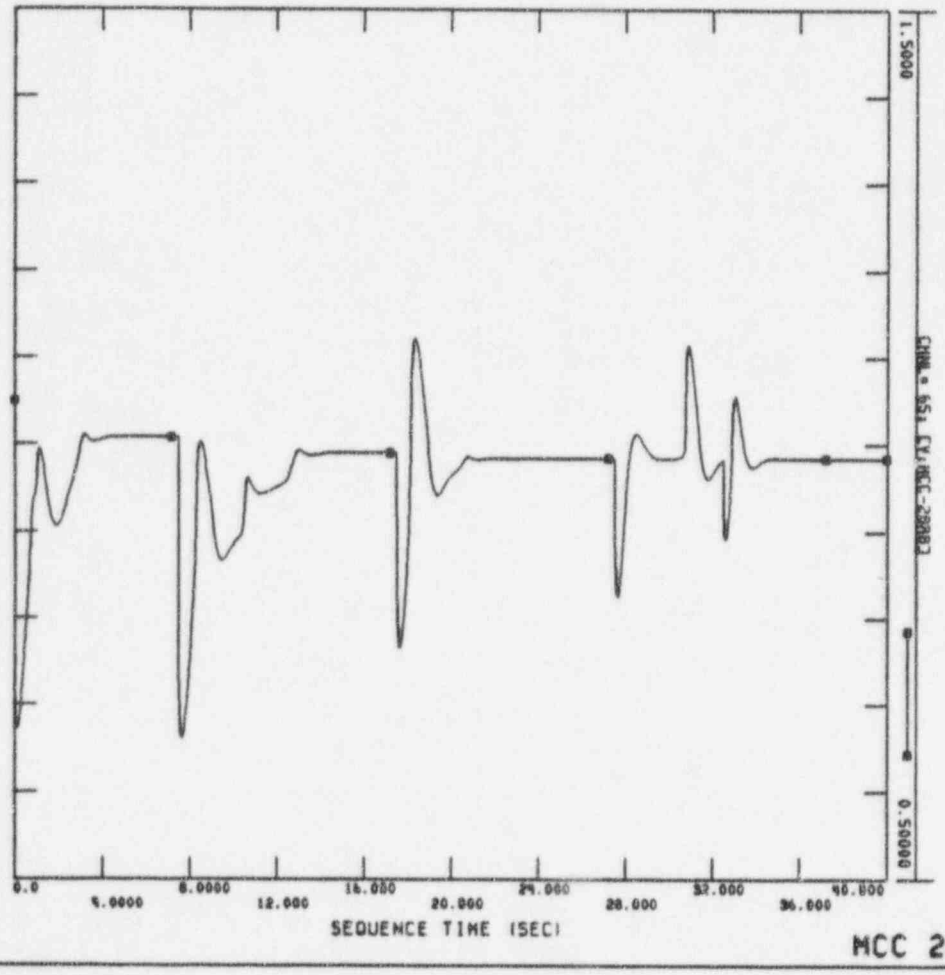
MCC 2BRA (480-V BASE)



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC., PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:29

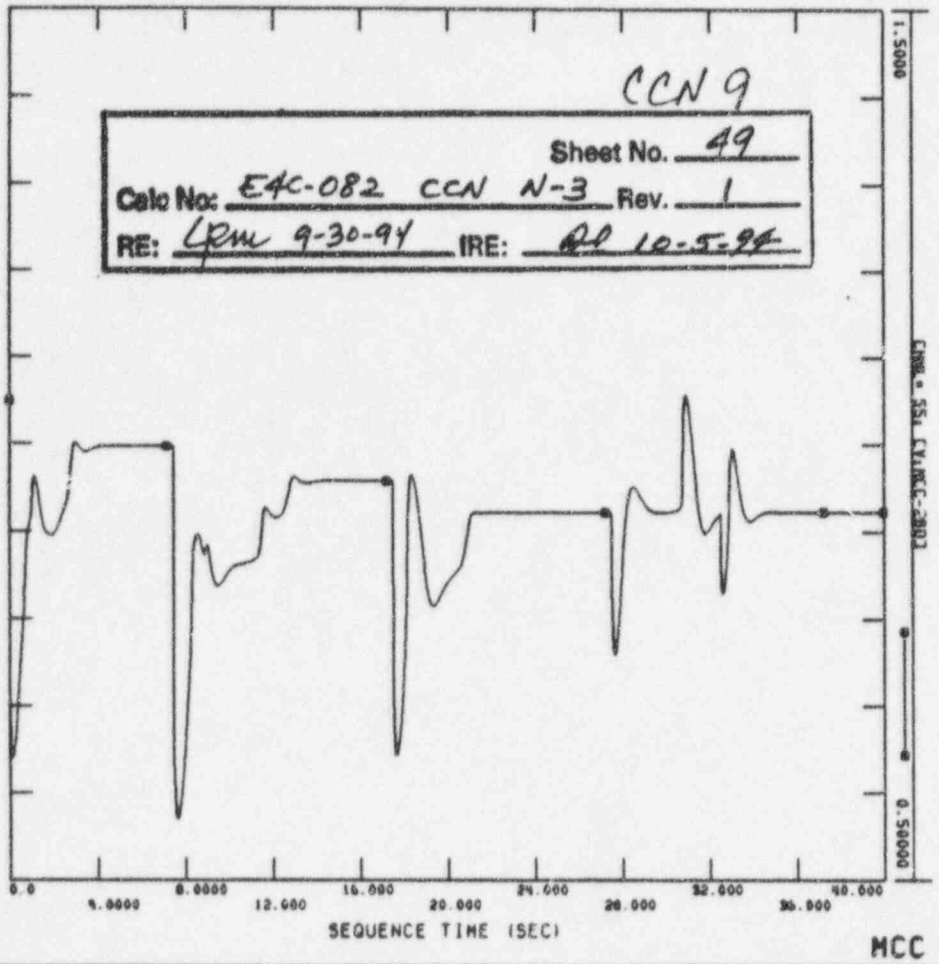
MCC 2BRB (480-V BASE)

CCN 9

Sheet No. 49

Calc No: E4C-082 CCN N-3 Rev. 1

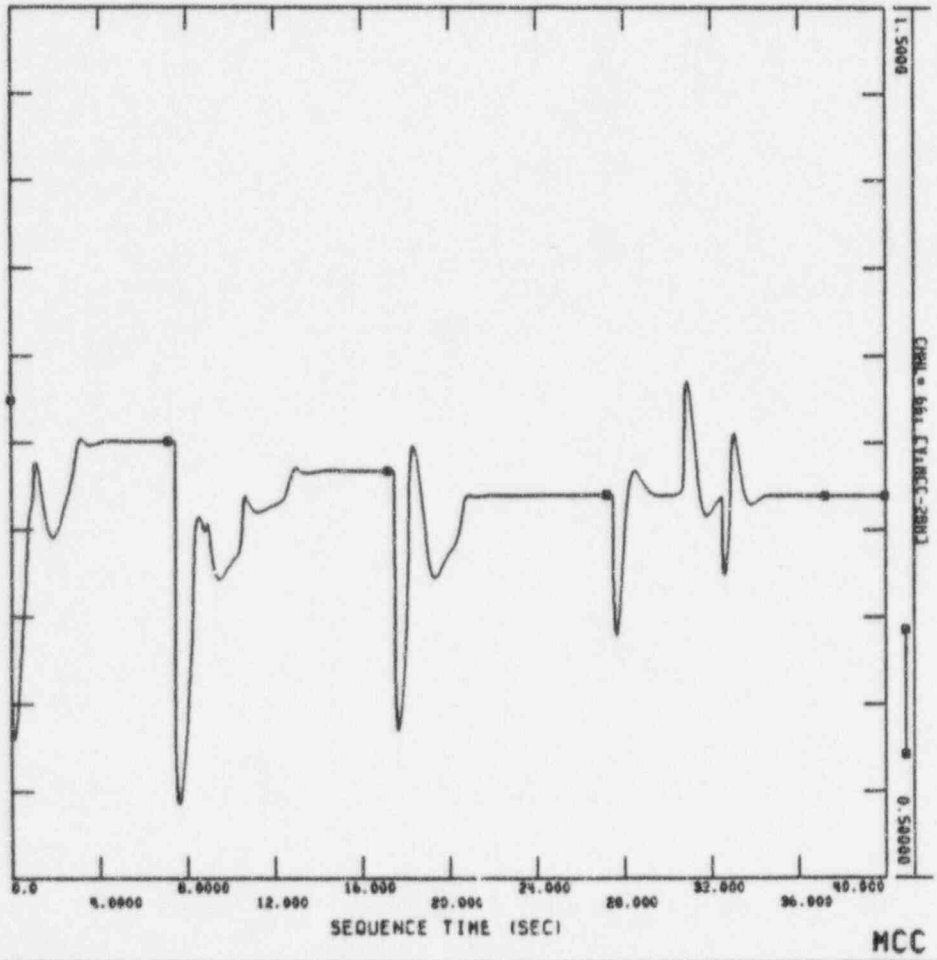
RE: LPM 9-30-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:29

MCC 2BD (480-V BASE)



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:29

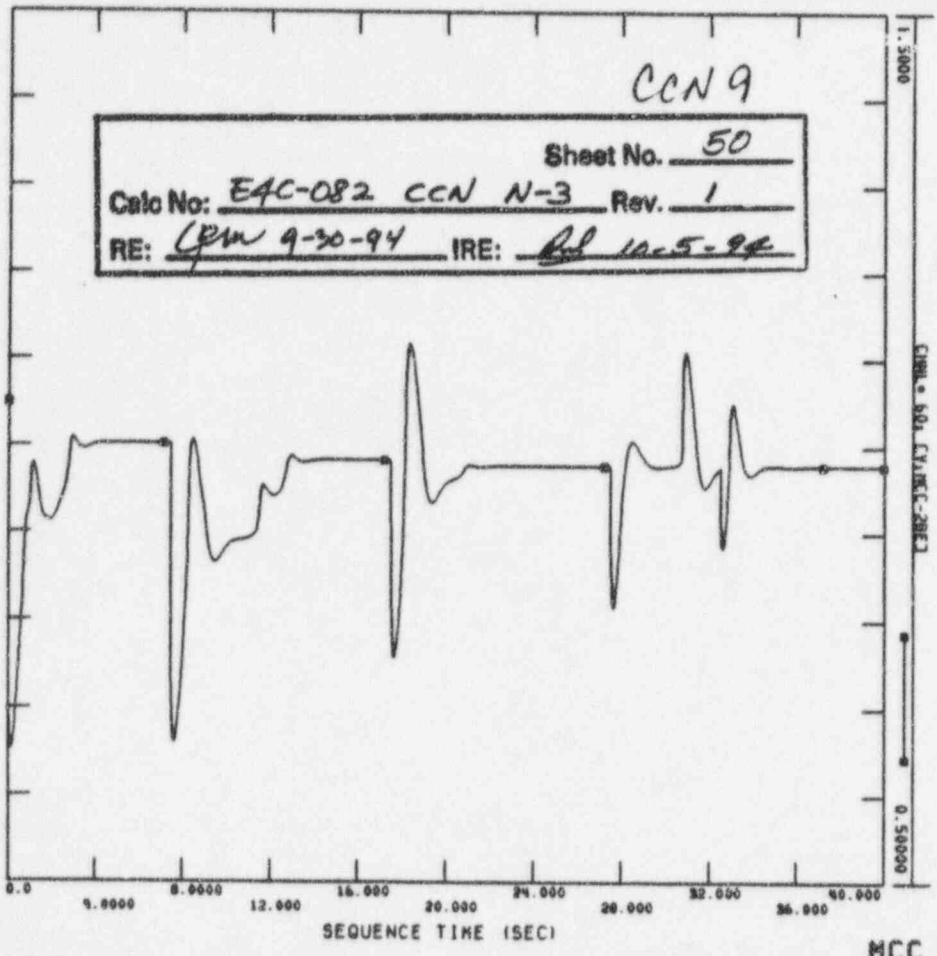
MCC 2BH (480-V BASE)

CCN 9

Sheet No. 50

Calc No: E4C-082 CCN N-3 Rev. 1

RE: CPW 9-30-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:29

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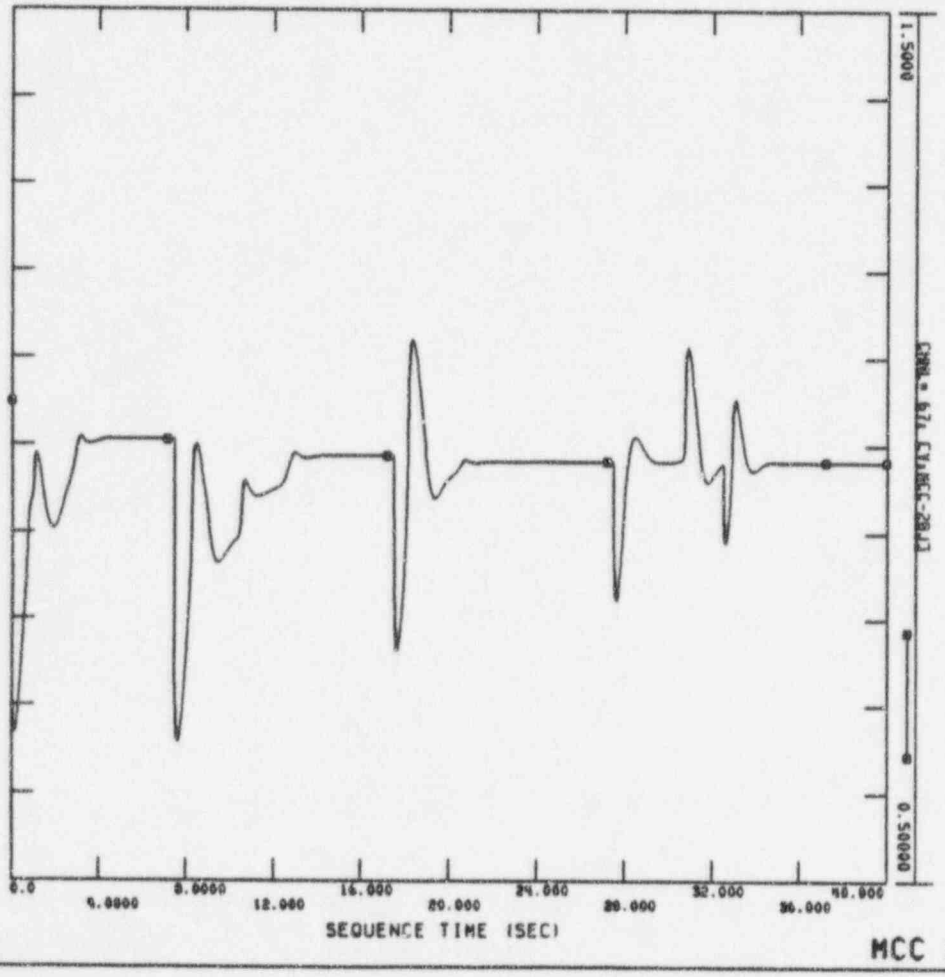


SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:29

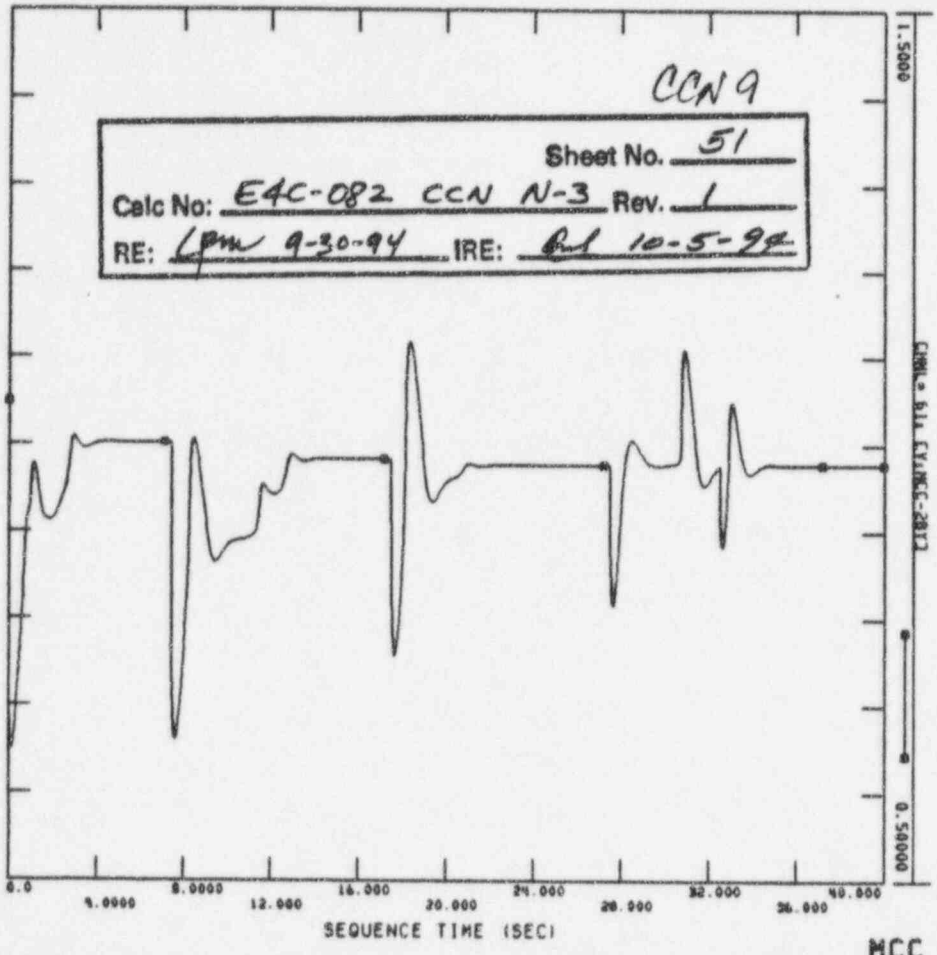
MCC 2BJ (480-V BASE)

CCN 9

Sheet No. 51

Calc No: E4C-082 CCN N-3 Rev. 1

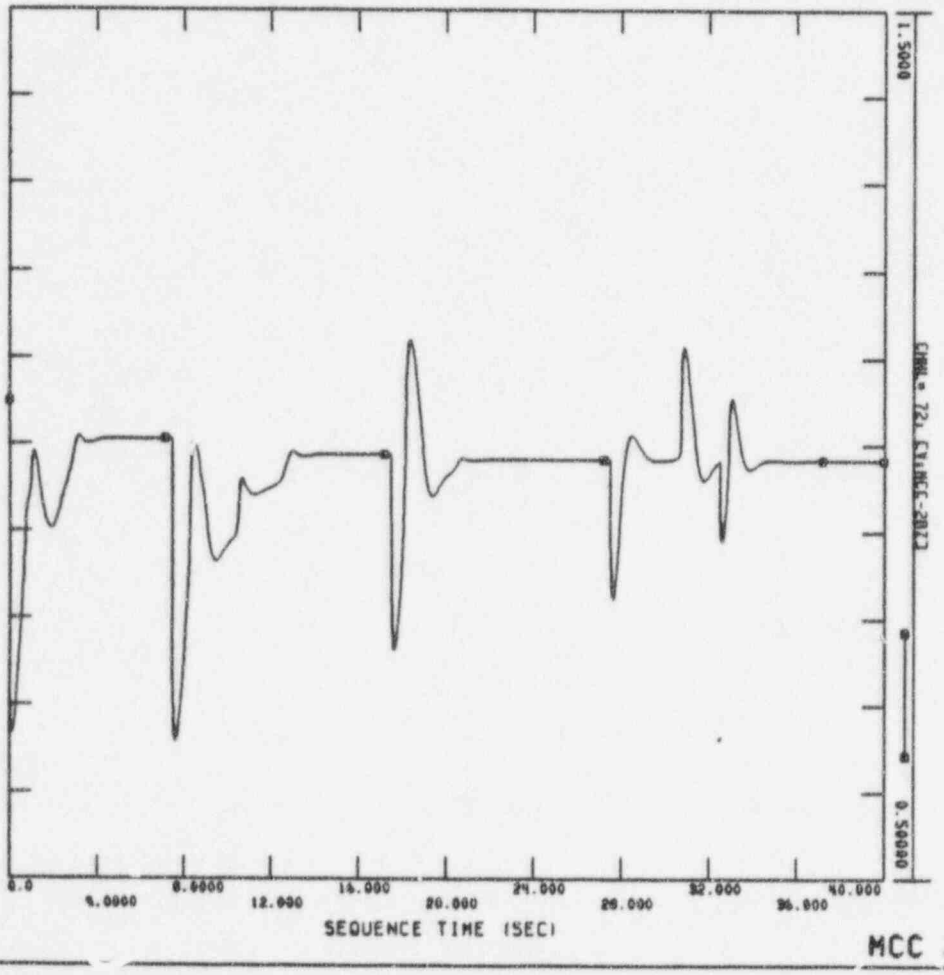
RE: Lpm 9-30-94 IRE: Rd 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:29

MCC 2BY (480-V BASE)



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:29

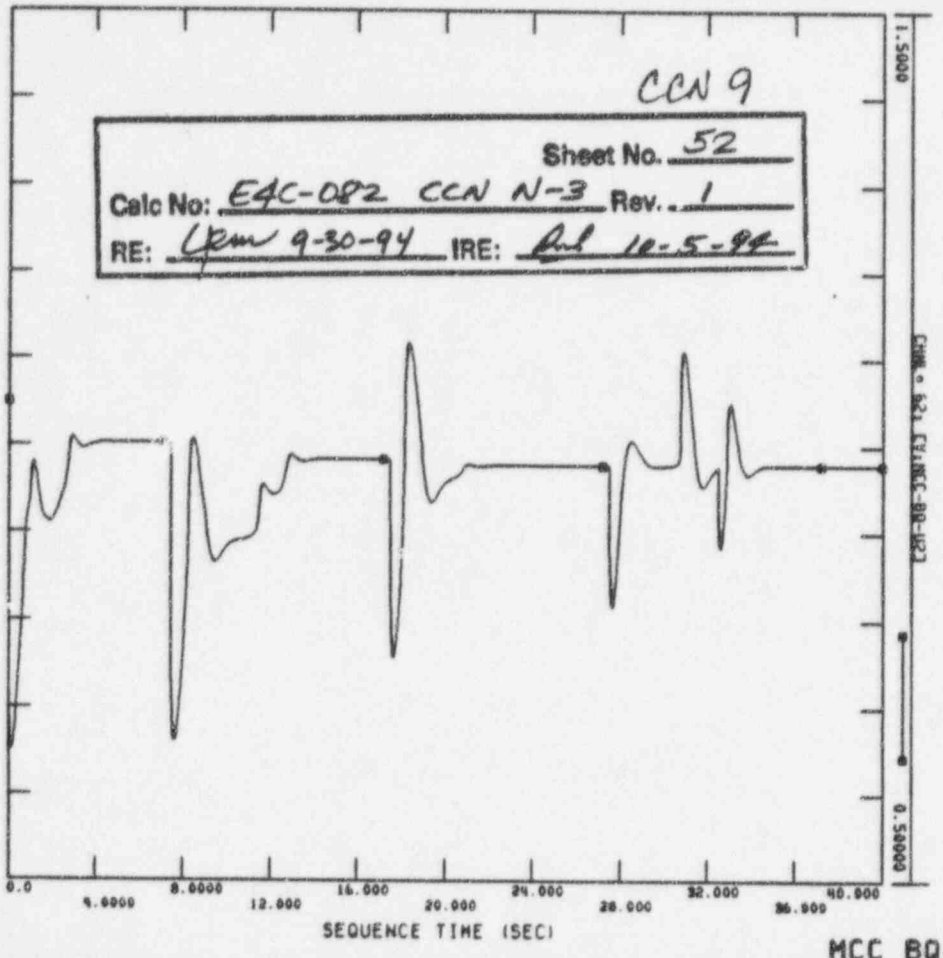
MCC 2BZ (480-V BASE)

CCN 9

Sheet No. 52

Calc No: E4C-082 CCN N-3 Rev. 1

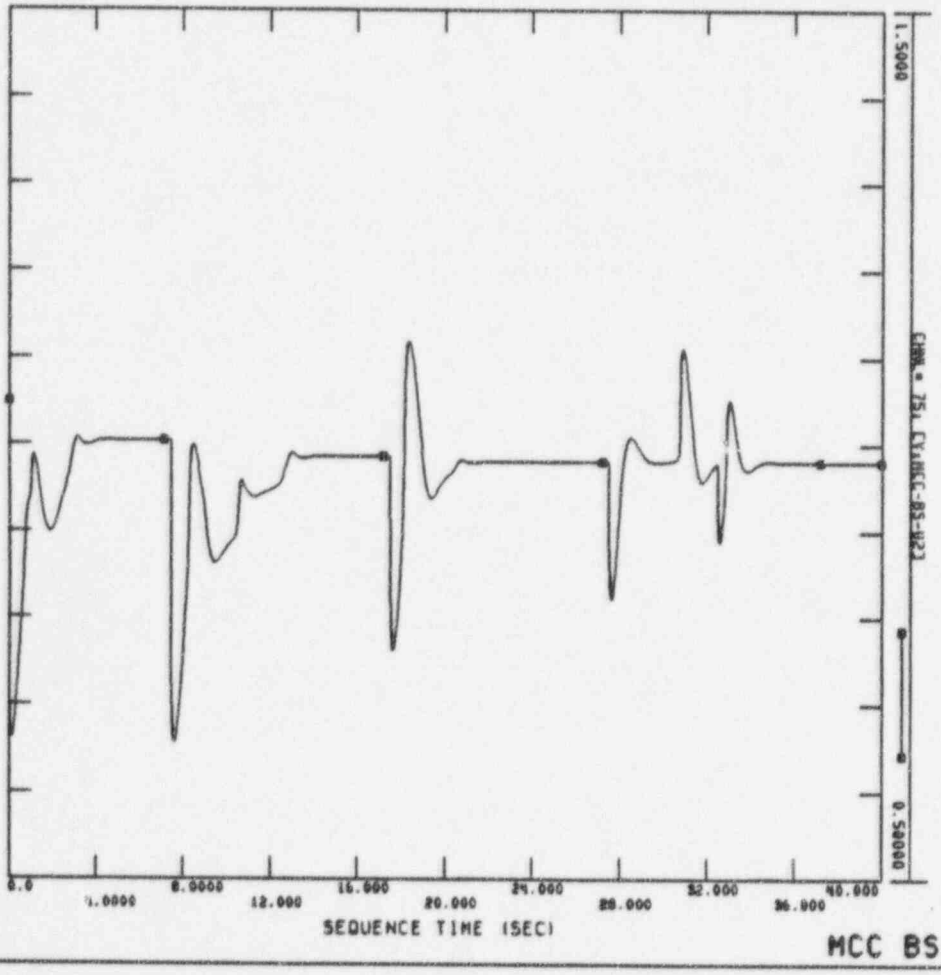
RE: Upm 9-30-94 IRE: Ad 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:29

MCC BQ-U2 (480-V BASE)



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:29

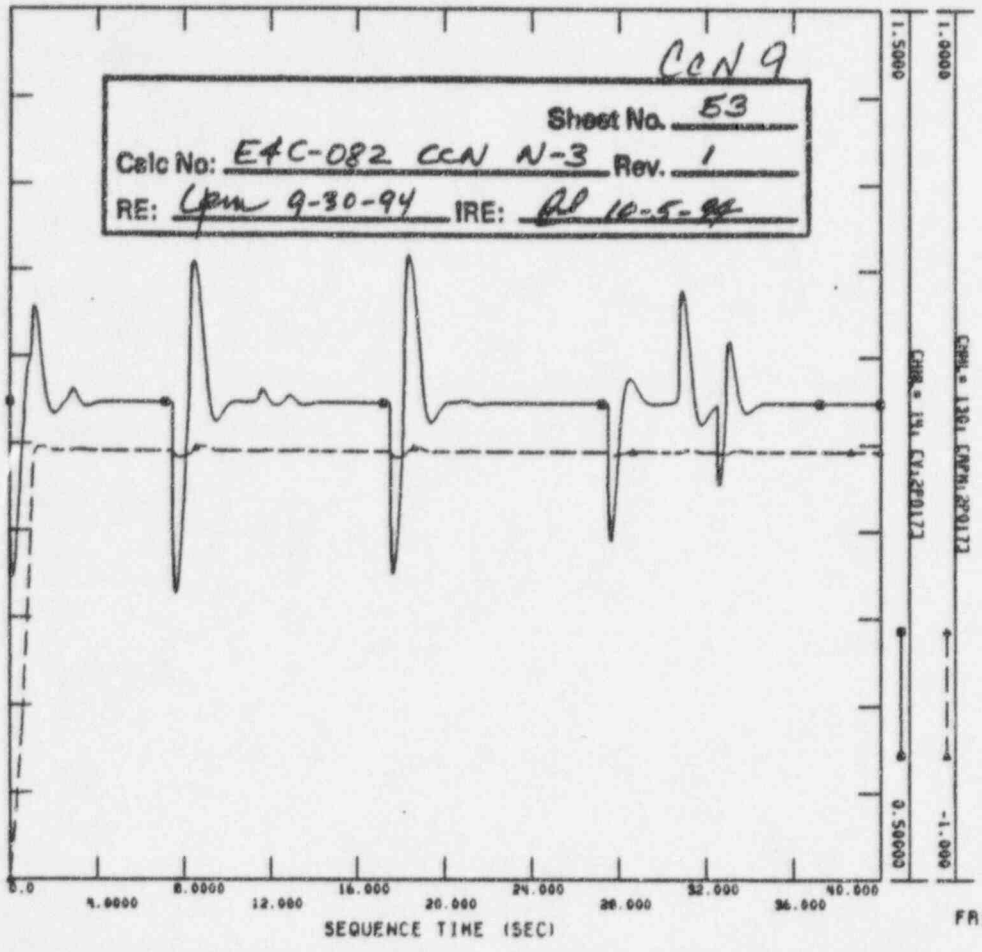
MCC BS-U2 (480-V BASE)

CCN 9

Sheet No. 53

Calc No: E4C-082 CCN N-3 Rev. 1

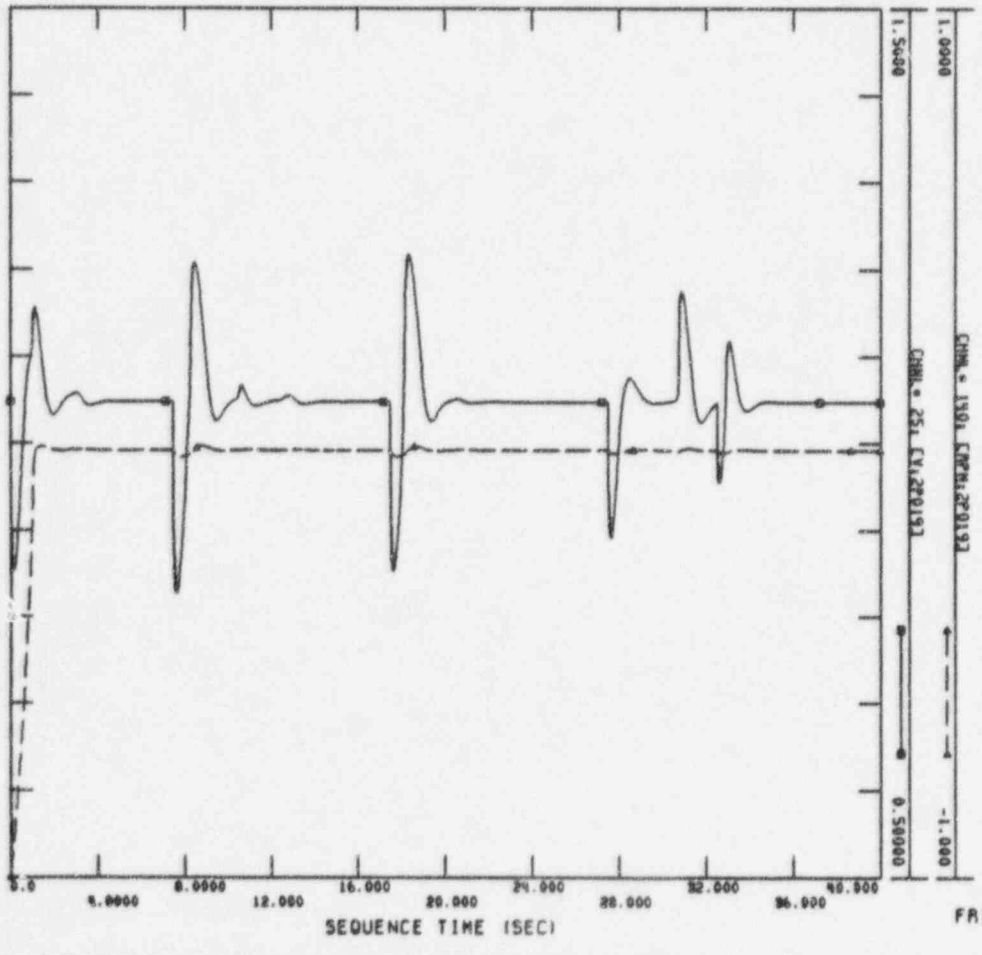
RE: Cpm 9-30-94 IRE: AP 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY\CHANOUT_IIIAY

FRI, SEP 16 1994 14:29

2P017



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY\CHANOUT_IIIAY

FRI, SEP 16 1994 14:30

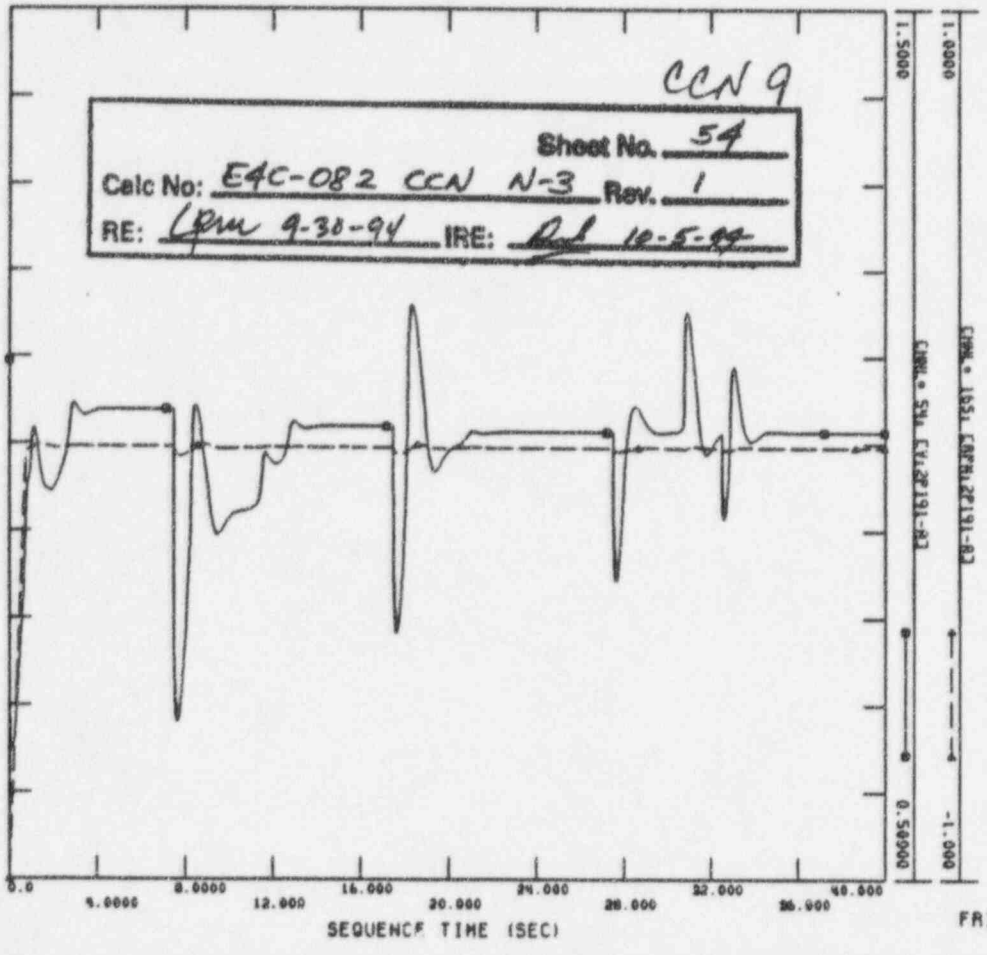
2P019

CCN 9

Sheet No. 54

Calc No: E4C-082 CCN N-3 Rev. 1

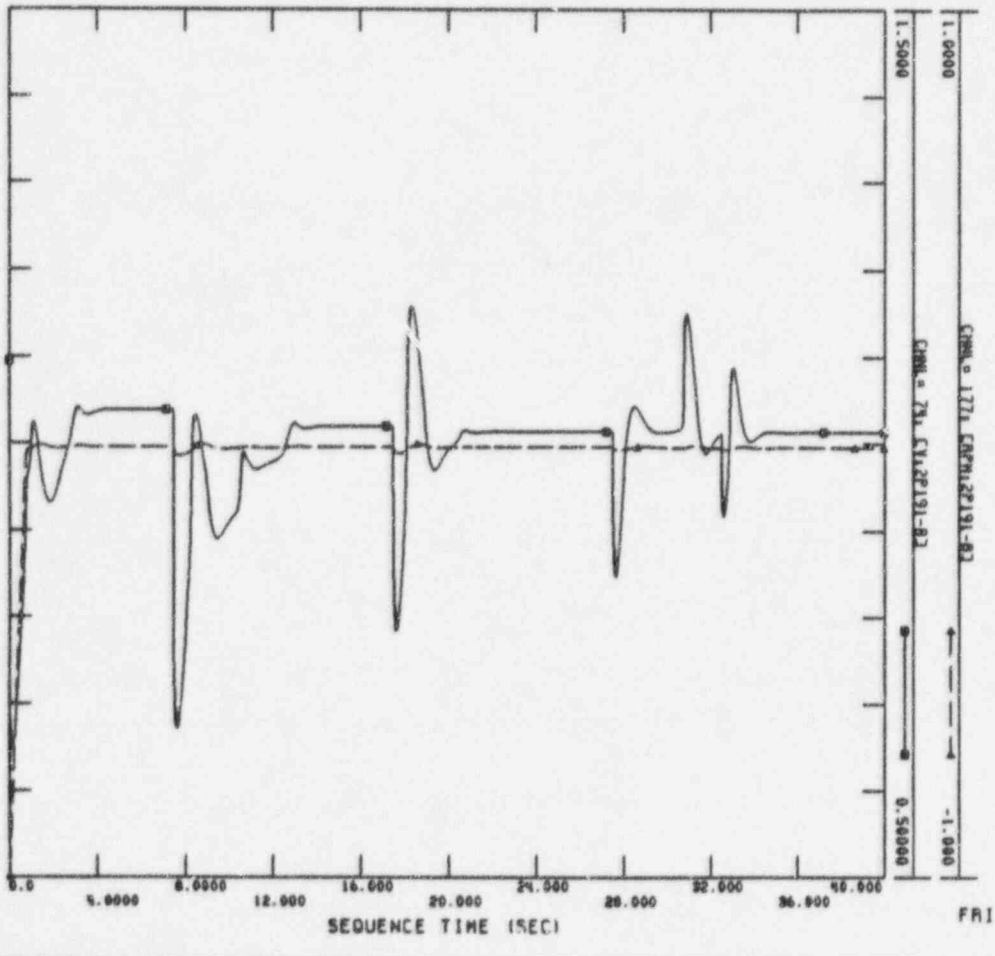
RE: LPM 9-30-94 IRE: Ref 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C:CASE_IIIAY\CHANOUT_IIIAY

FRI, SEP 16 1994 14:30

2P191-A



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C:CASE_IIIAY\CHANOUT_IIIAY

FRI, SEP 16 1994 14:30

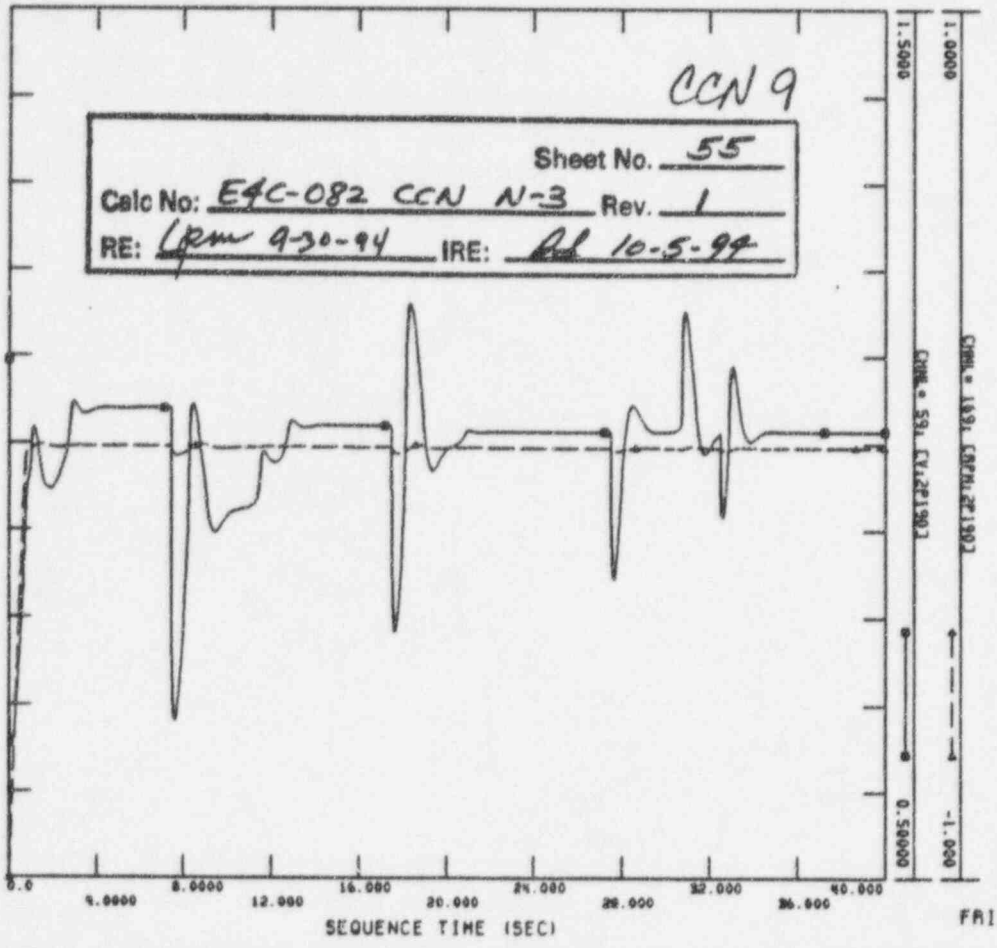
2P191-B

CCN 9

Sheet No. 55

Calc No: E4C-082 CCN N-3 Rev. 1

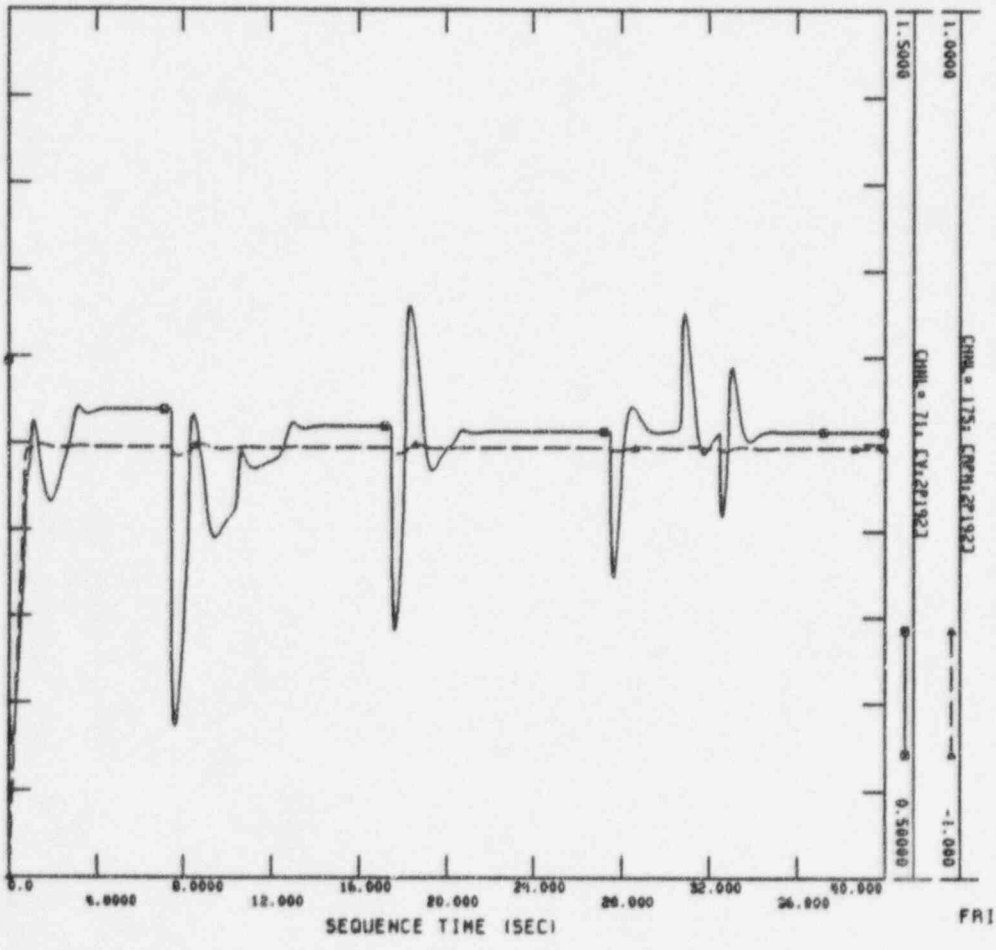
RE: LPrm 9-30-94 IRE: RL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:30

2P190



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:30

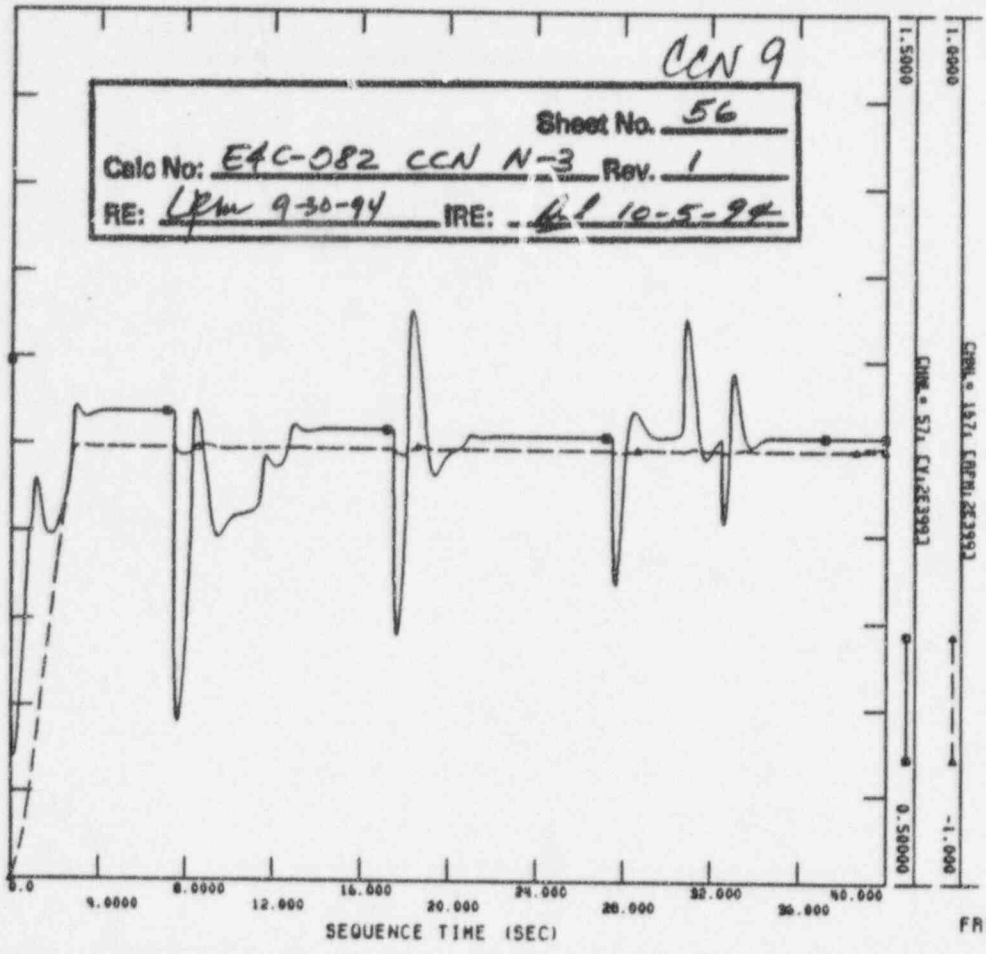
2P192

CCN 9

Sheet No. 56

Calc No: E4C-082 CCN N-3 Rev. 1

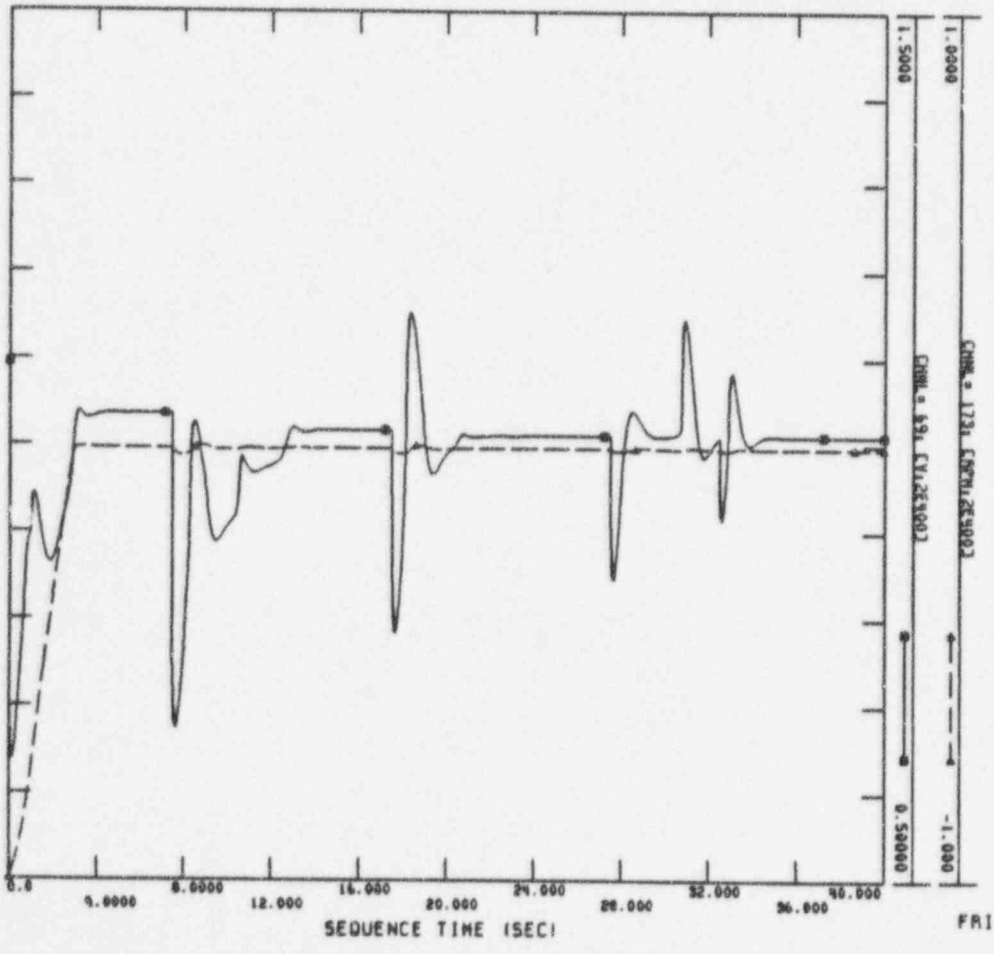
RE: LPM 9-30-94 IRE: [illegible] 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:30

2E399



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:30

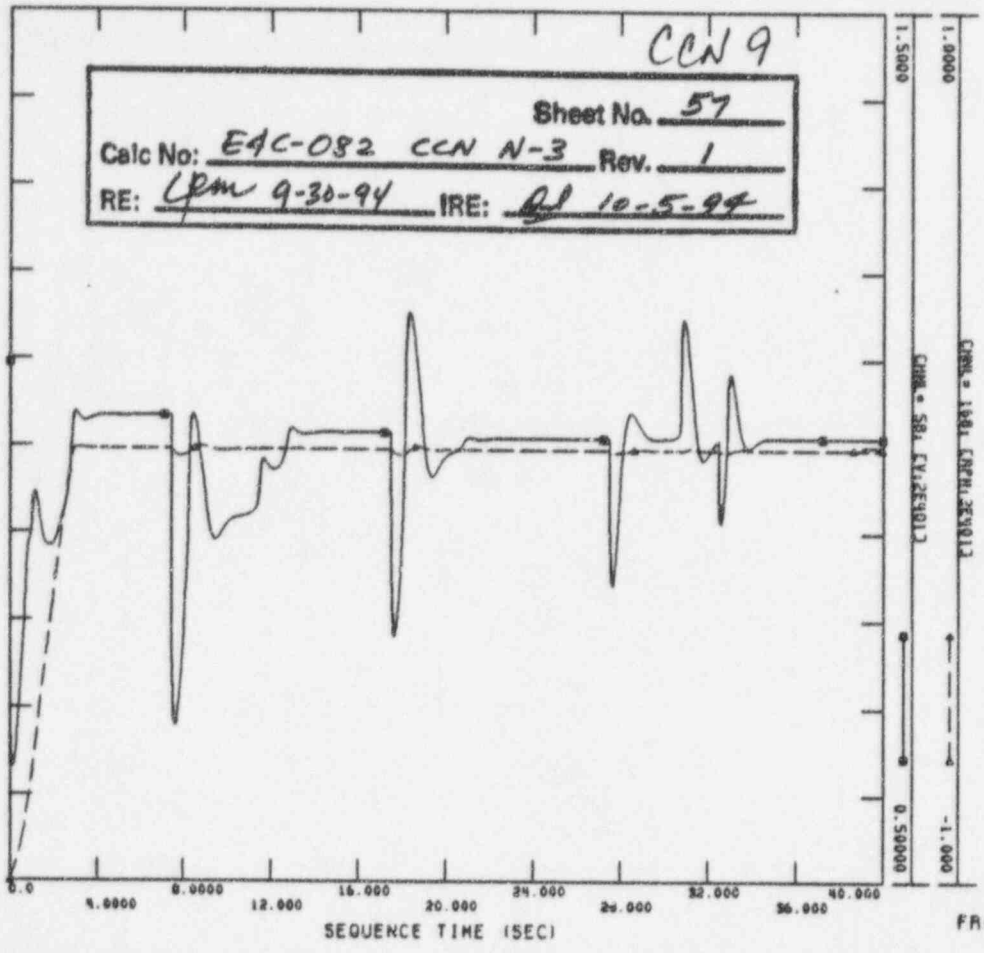
2E400

CCN 9

Sheet No. 57

Calc No: E4C-082 CCN N-3 Rev. 1

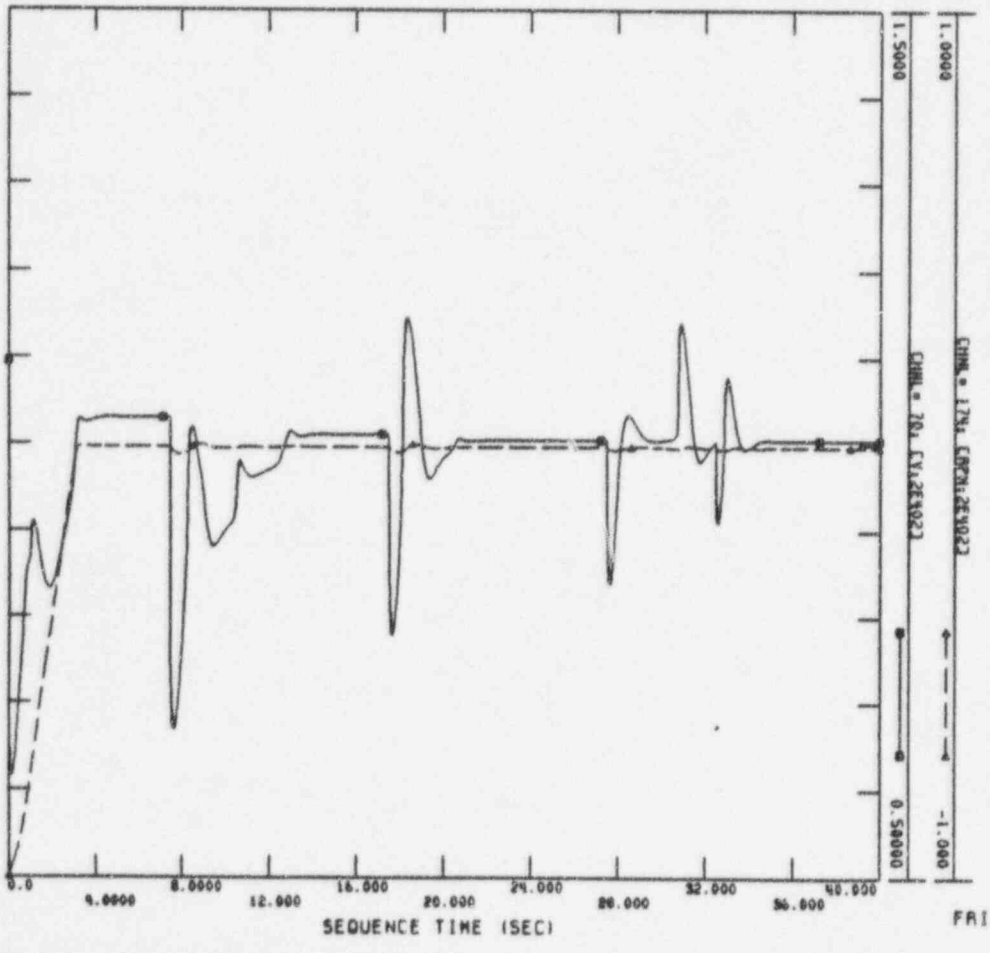
RE: LPM 9-30-94 IRE: DJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:30

2E401



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:30

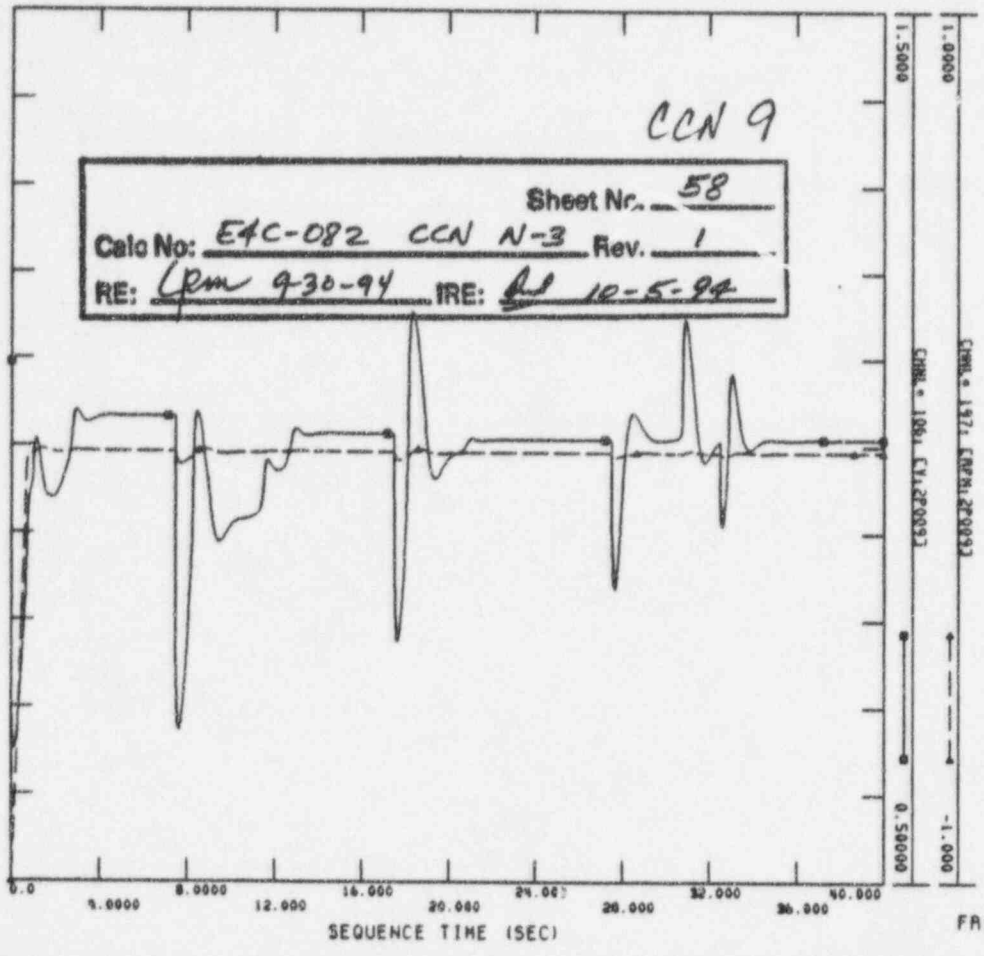
2E402

CCN 9

Sheet Nr. 58

Calc No: E4C-082 CCN N-3 Rev. 1

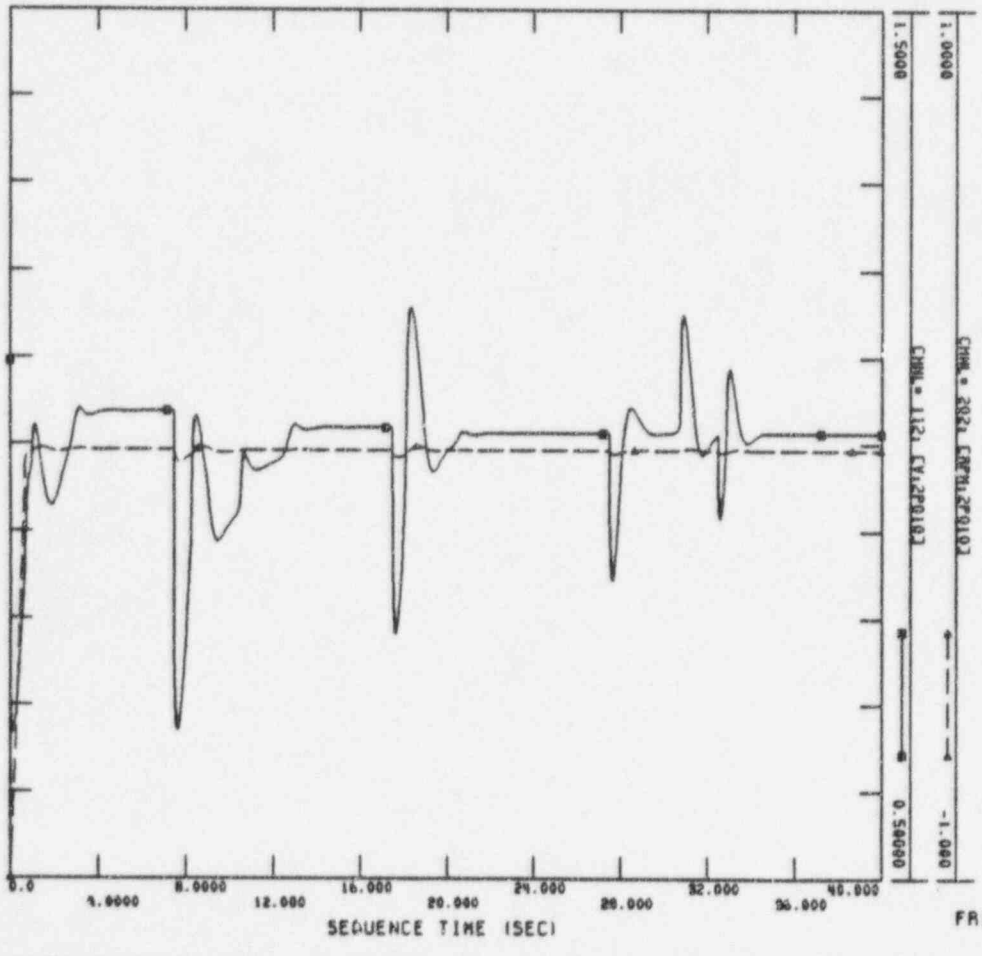
RE: Cpm 9-30-94 IRE: AJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: E:CASE_IIIAY3CHANOUT_IIIAY

FRI, SEP 16 1994 14:30

2P009



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
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FRI, SEP 16 1994 14:30

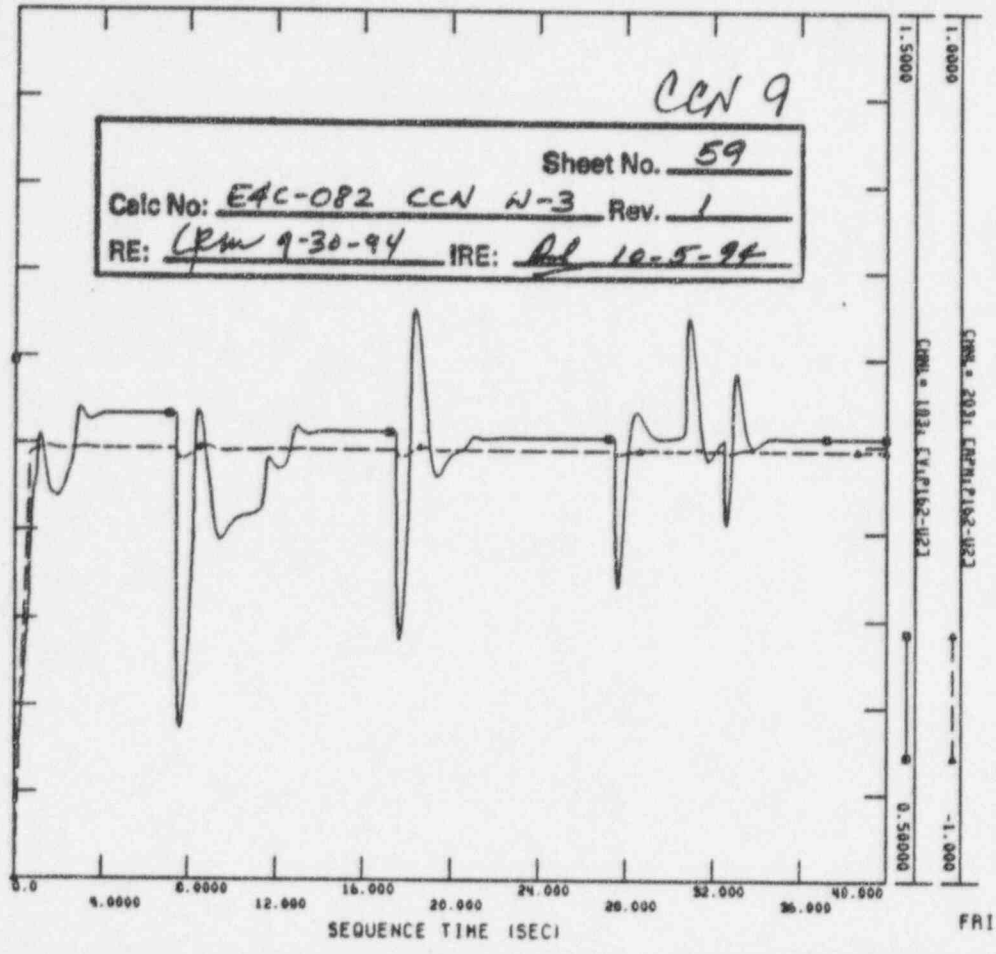
2P010

CCN 9

Sheet No. 59

Calc No: E4C-082 CCN N-3 Rev. 1

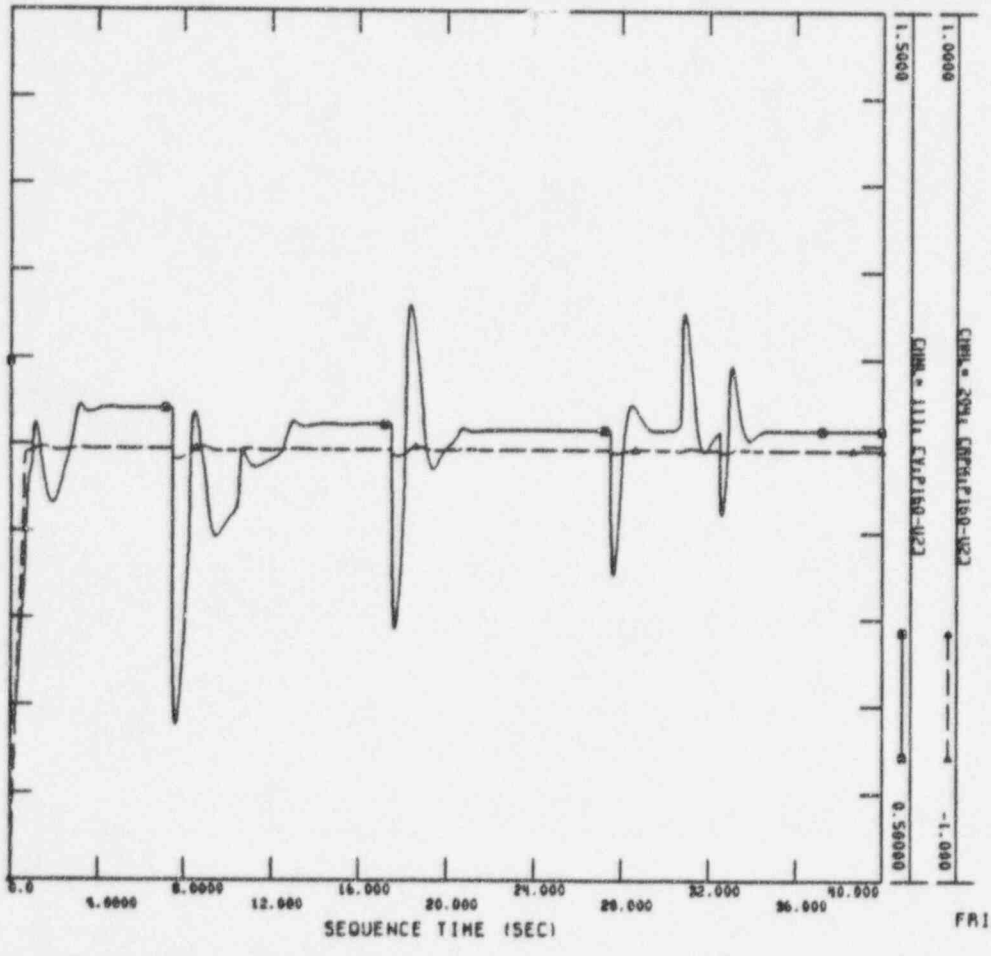
RE: CRM 9-30-94 IRE: DL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY\CHANOUT_IIIAY

FRI, SEP 16 1994 14:31

P162-U2



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY\CHANOUT_IIIAY

FRI, SEP 16 1994 14:31

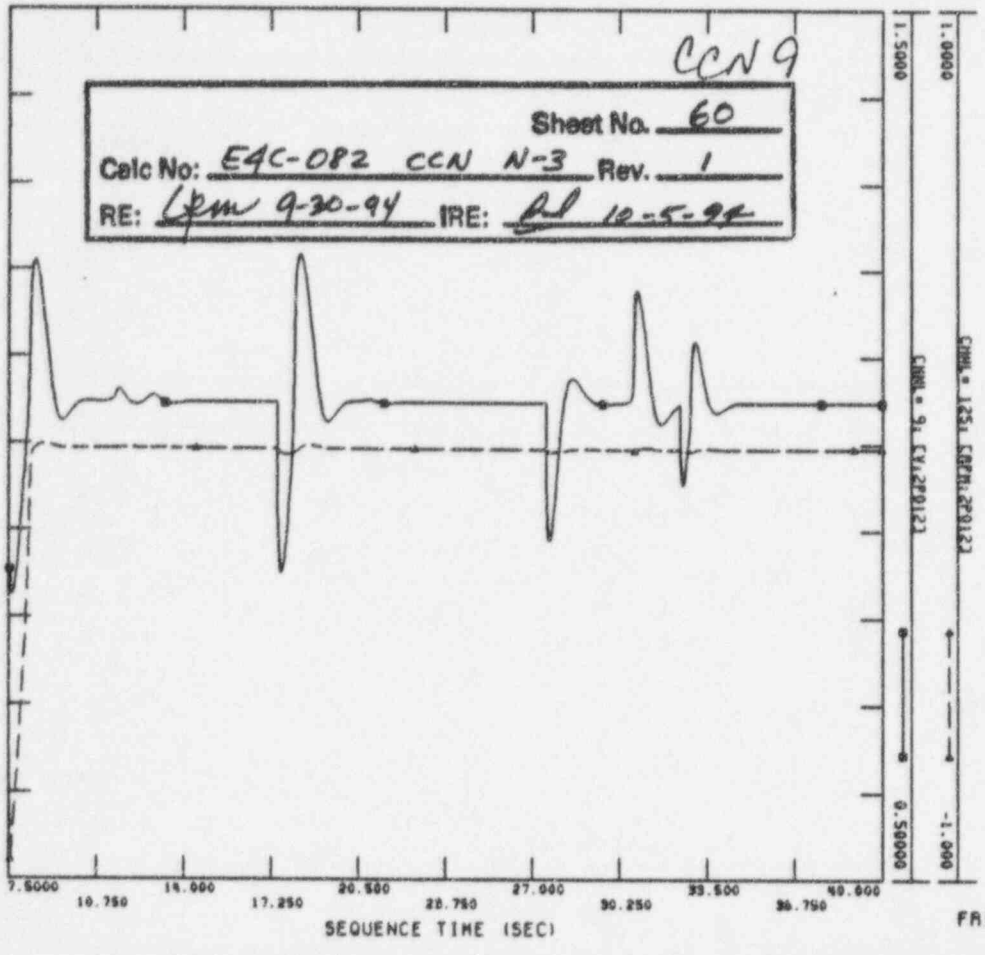
P160-U2

CCN 9

Sheet No. 60

Calc No: E4C-082 CCN N-3 Rev. 1

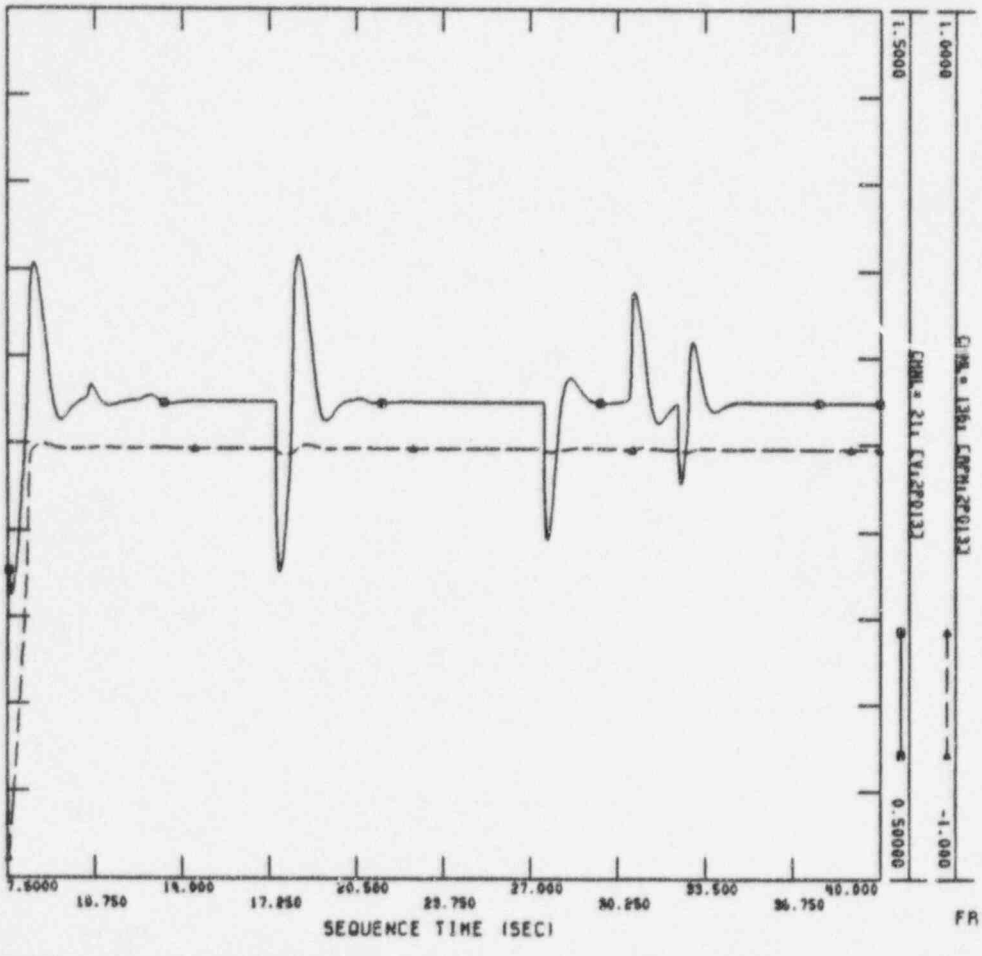
RE: Lpm 9-30-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAYJCHANOUT_IIIAY

FRI, SEP 16 1994 14:31

2P012



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAYJCHANOUT_IIIAY

FRI, SEP 16 1994 14:31

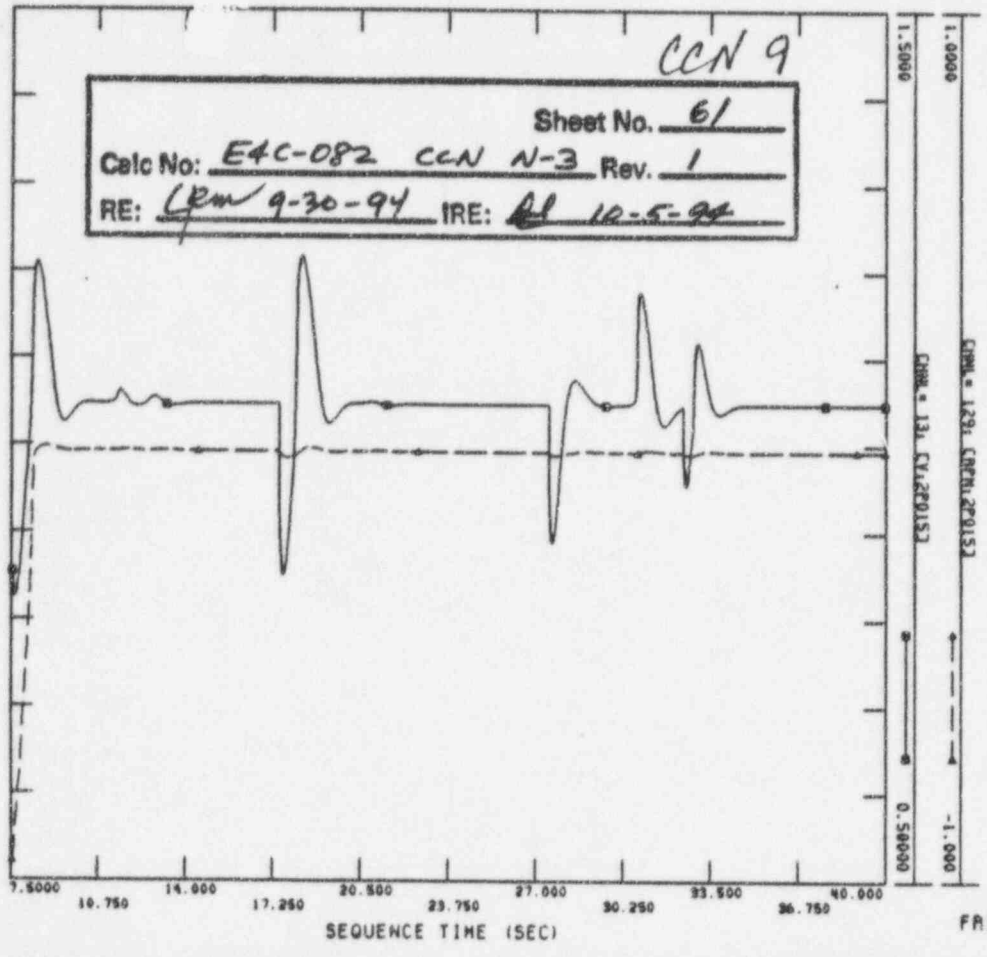
2P013

CCN 9

Sheet No. 61

Calc No: E4C-082 CCN N-3 Rev. 1

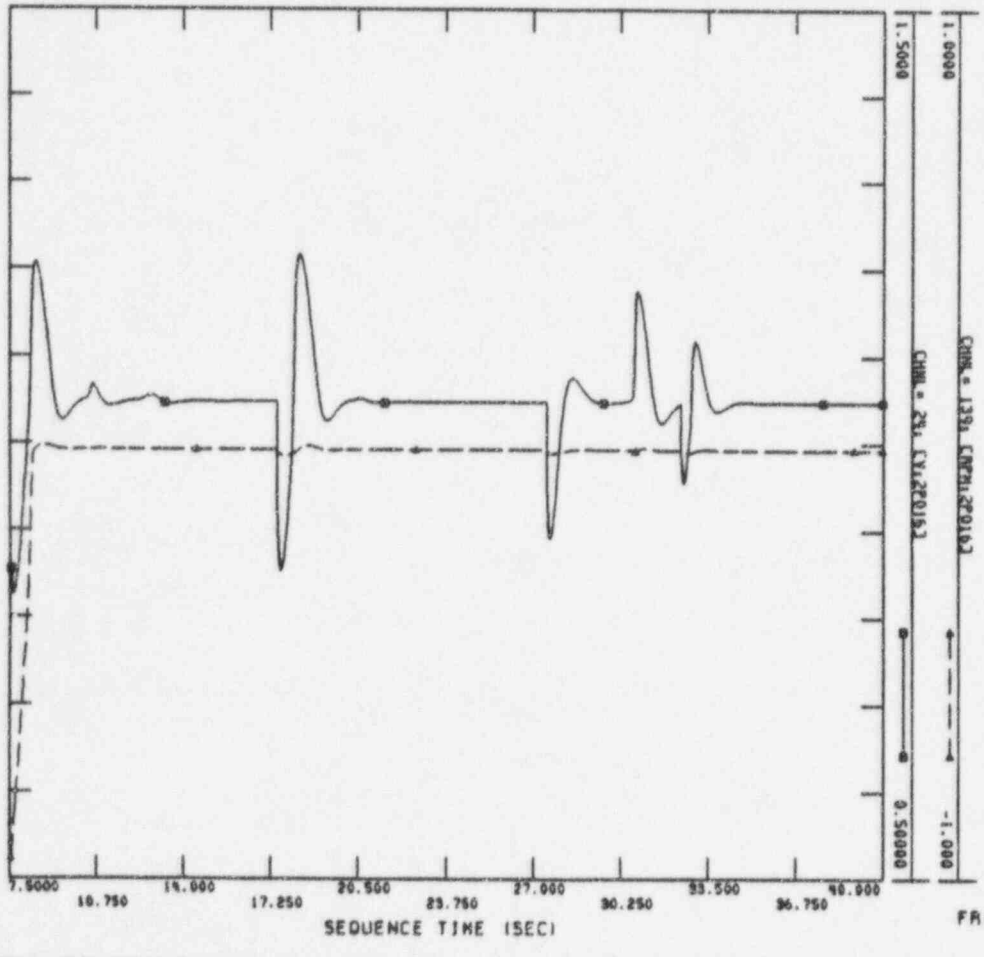
RE: LRM 9-30-94 IRE: RL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY\CHANOUT_IIIAY

FRI, SEP 16 1994 14:31

2P015



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY\CHANOUT_IIIAY

FRI, SEP 16 1994 14:31

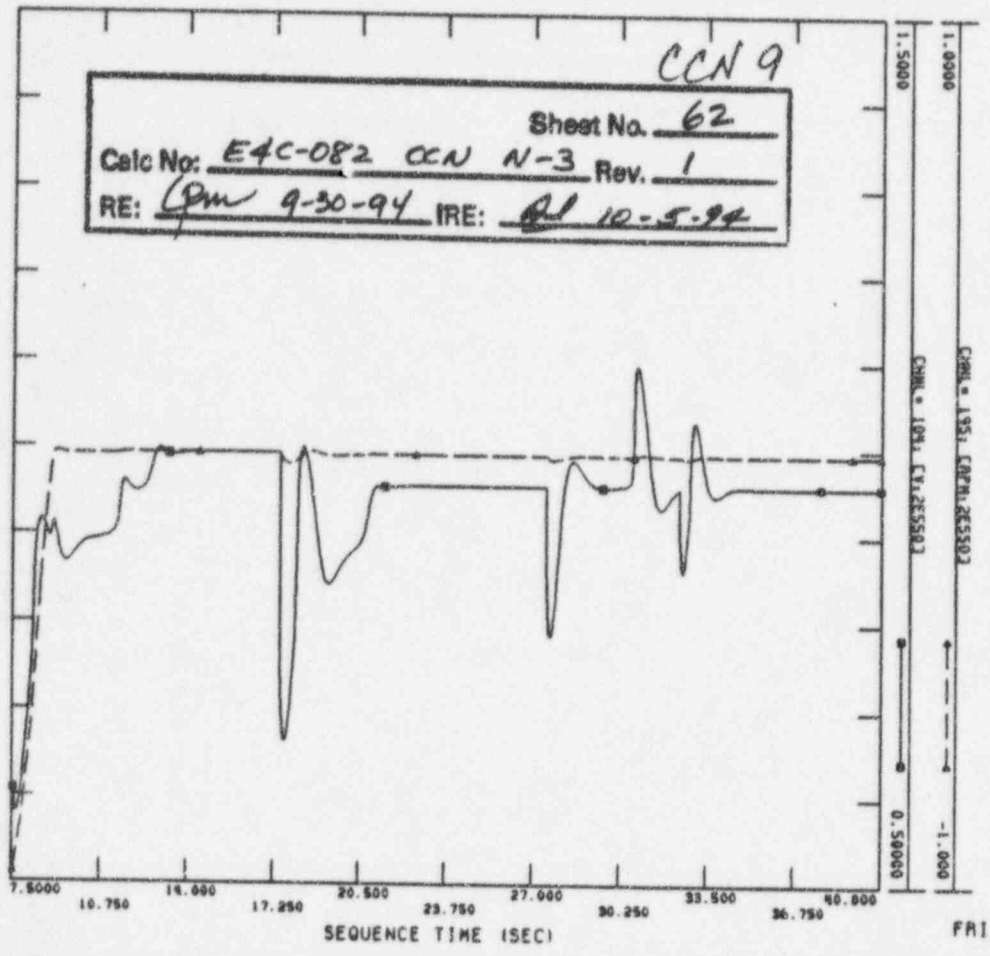
2P016

CCN 9

Sheet No. 62

Calc No: E4C-082 CCN N-3 Rev. 1

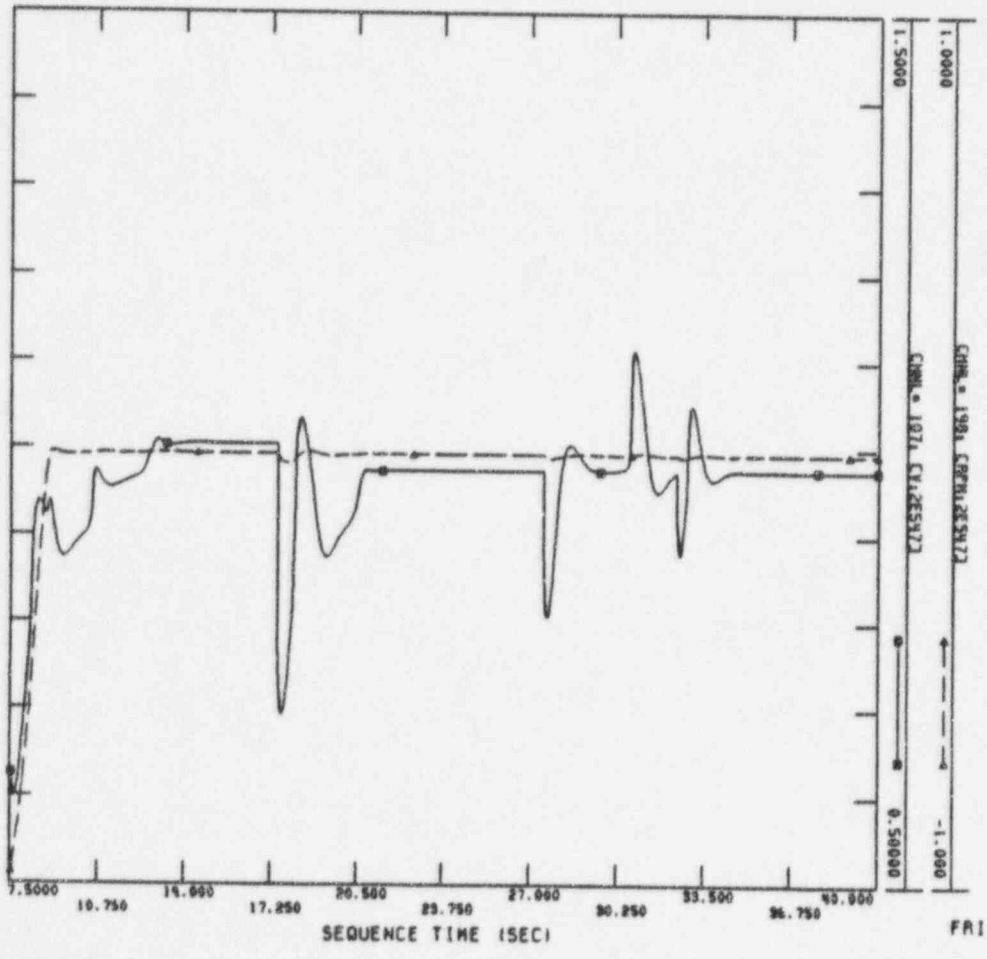
RE: CPM 9-30-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:31

2E550



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:32

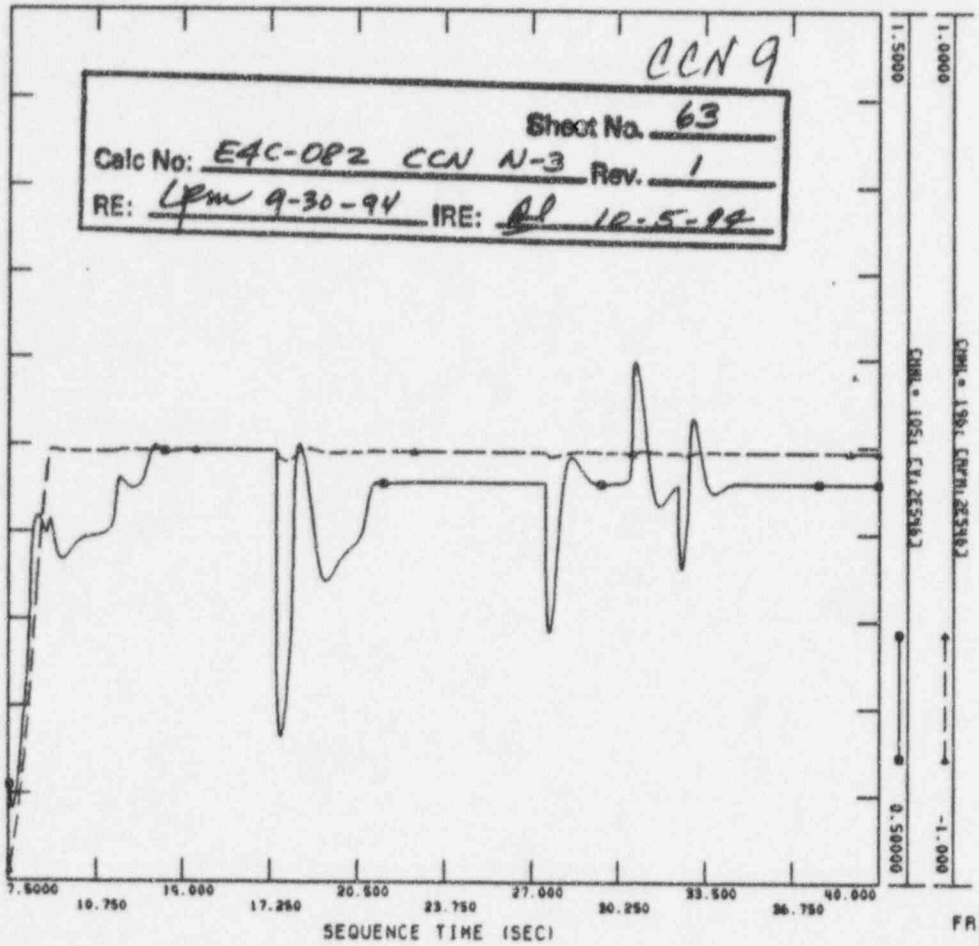
2E547

CCN 9

Sheet No. 63

Calc No: E4C-082 CCN N-3 Rev. 1

RE: LPM 9-30-94 IRE: RL 12-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
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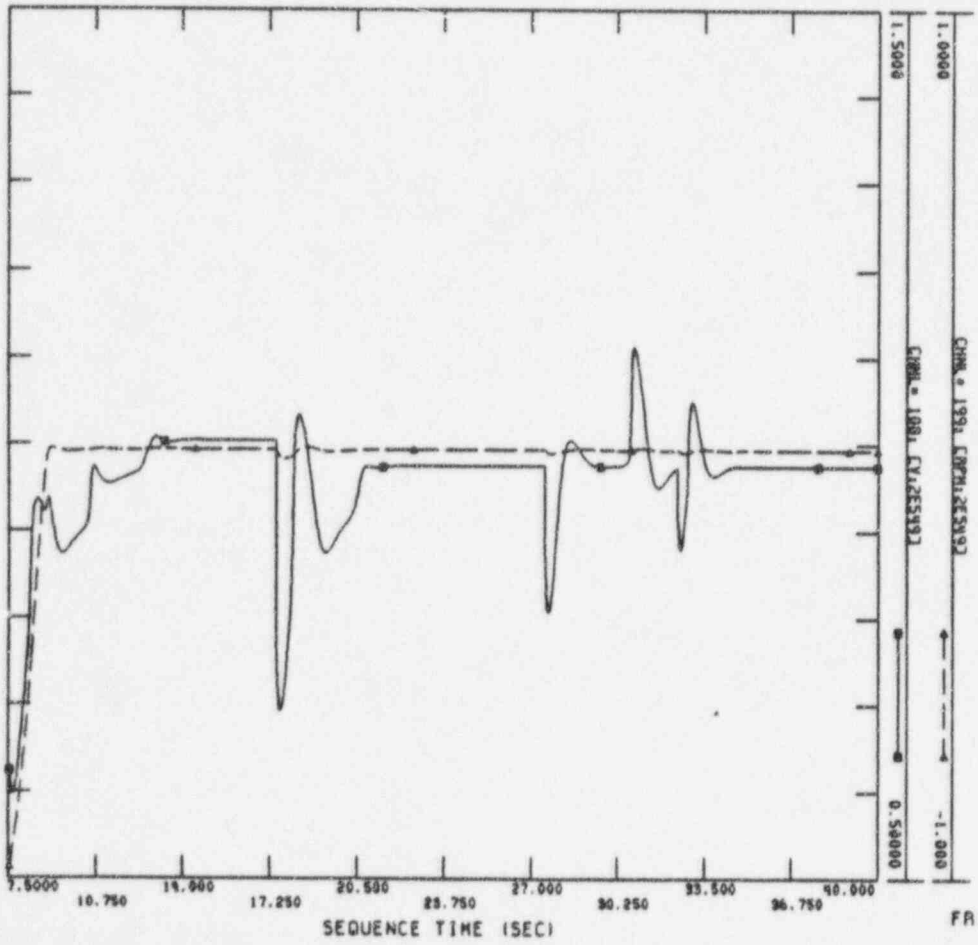
FRI, SEP 16 1994 14:32

2E546



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAYJCHANOUT_IIIAY

FRI, SEP 16 1994 14:32

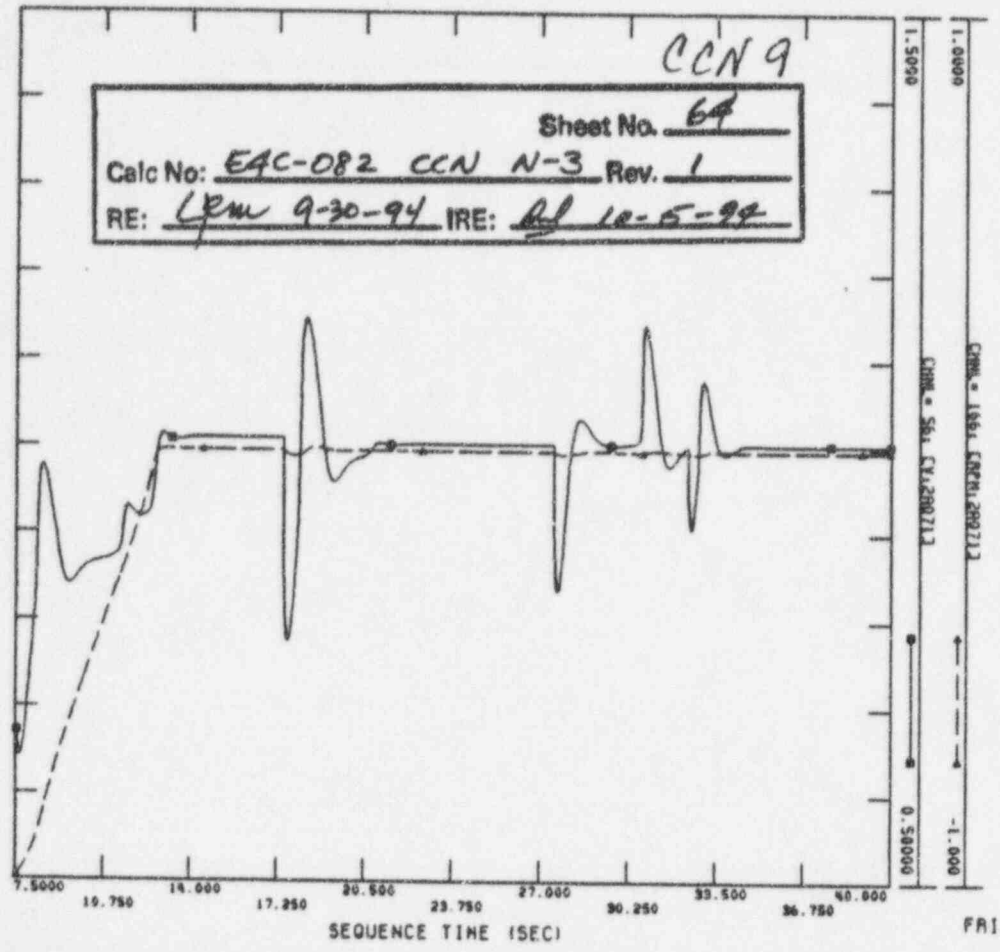
2E549

CCN 9

Sheet No. 64

Calc No: EAC-082 CCN N-3 Rev. 1

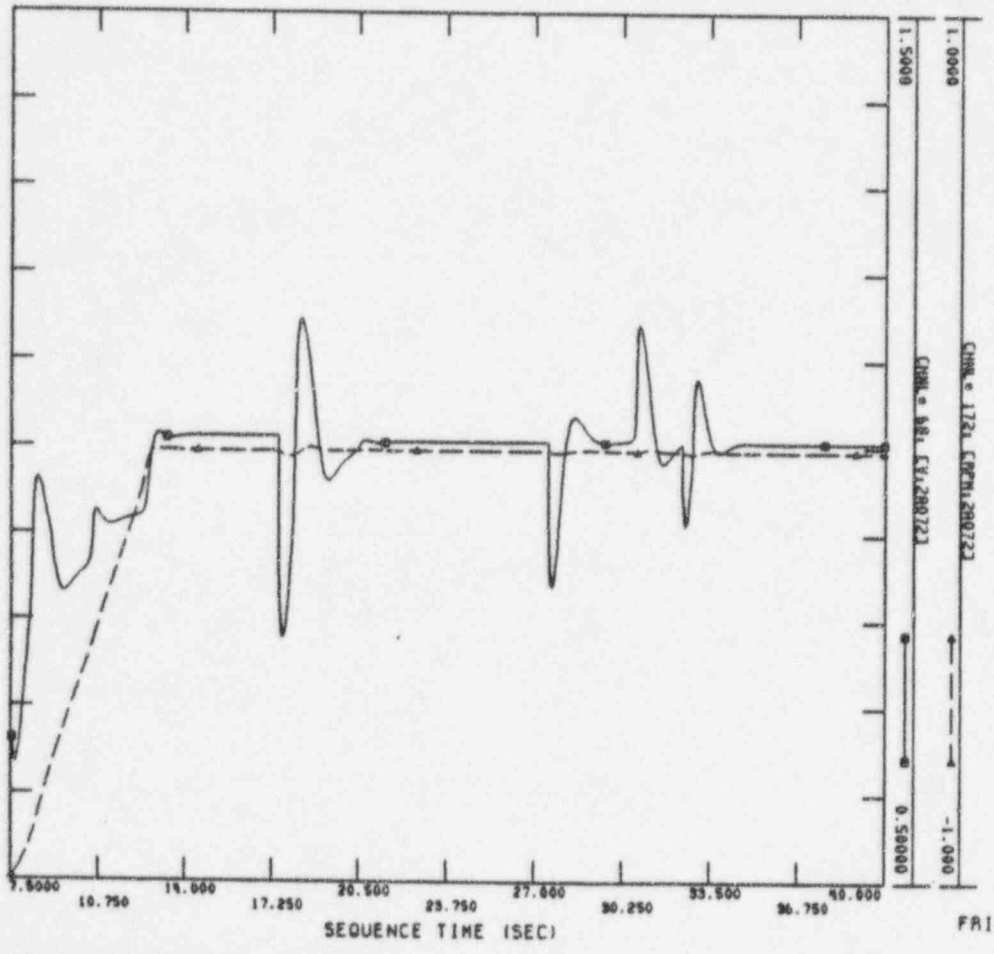
RE: LPM 9-30-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:32

2A071



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:32

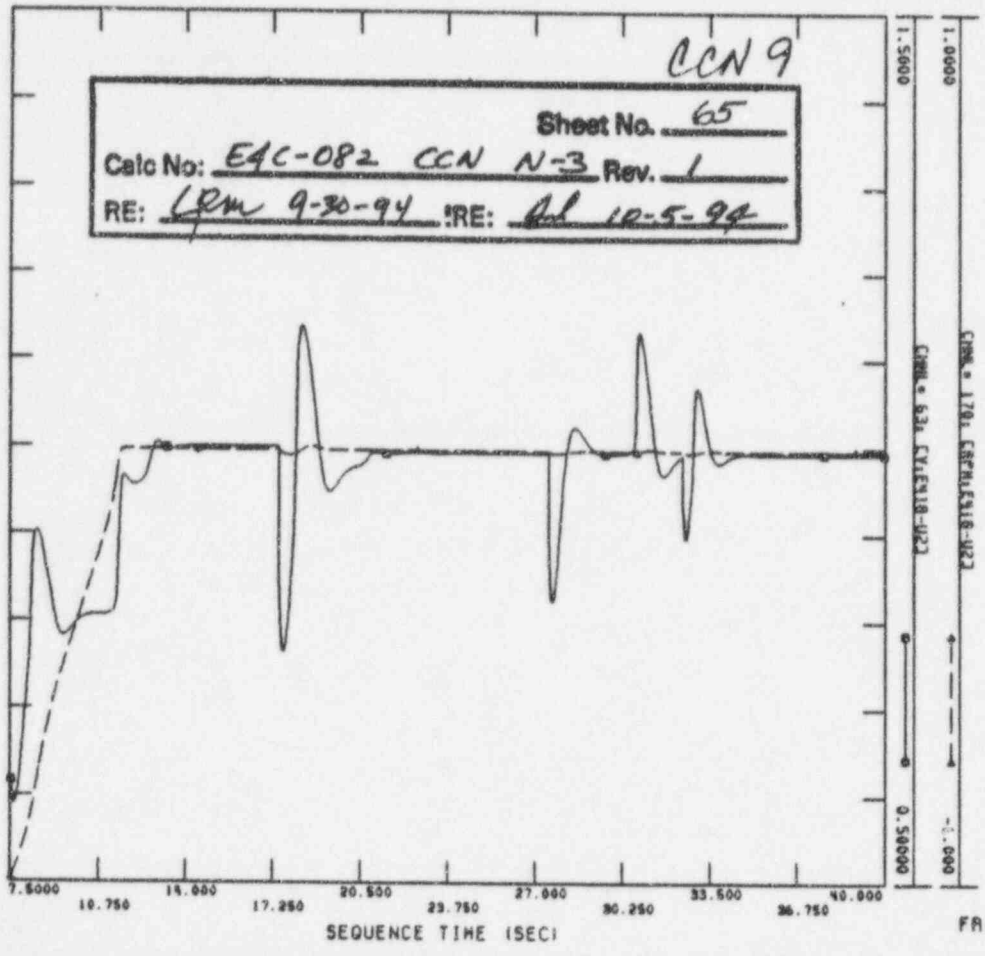
2A072

CCN 9

Sheet No. 65

Calc No: E4C-082 CCN N-3 Rev. 1

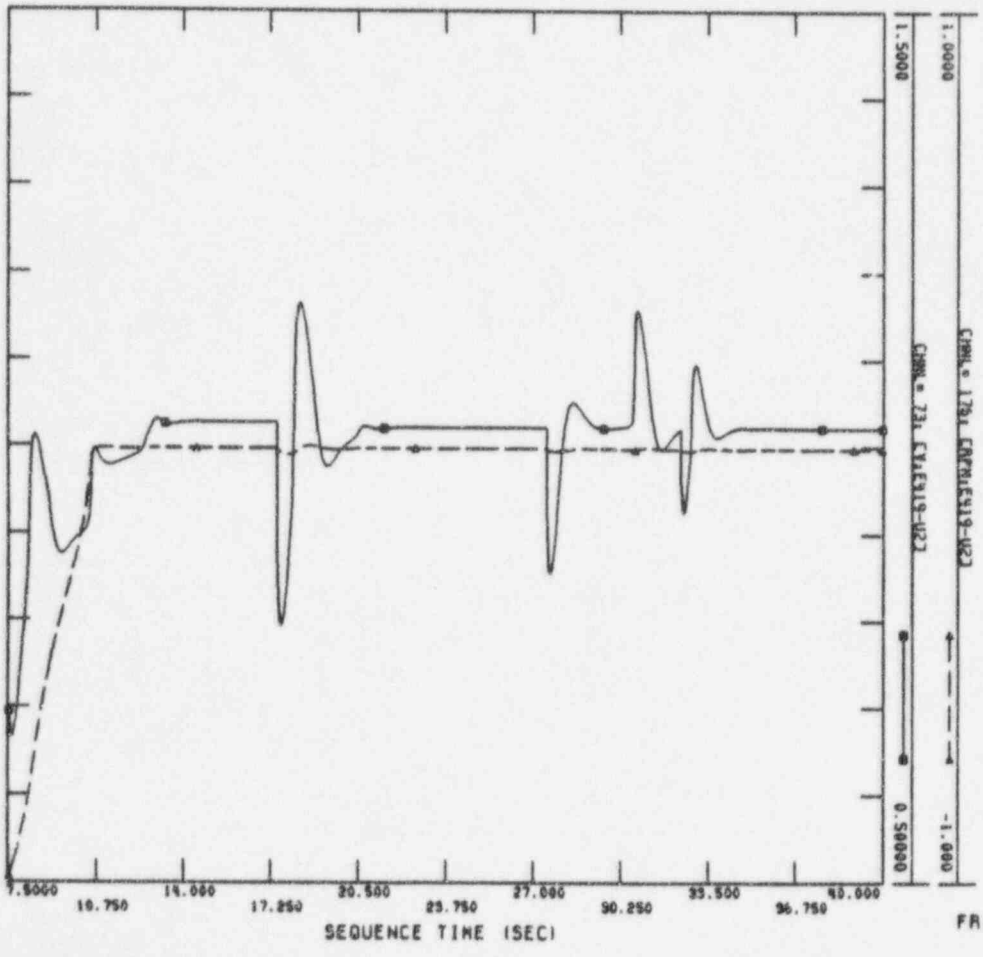
RE: LPM 9-30-94 RE: AL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:32

E418-U2



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:32

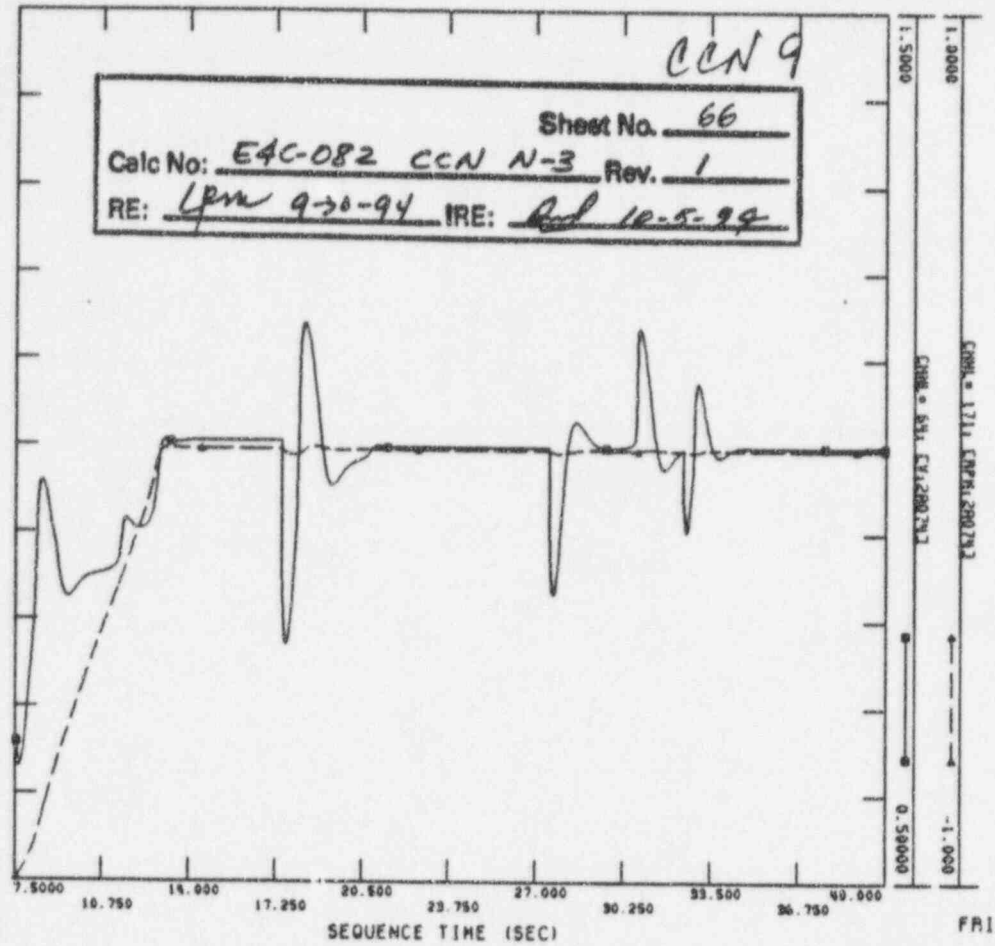
E419-U2

CCN 9

Sheet No. 66

Calc No: E4C-082 CCN N-3 Rev. 1

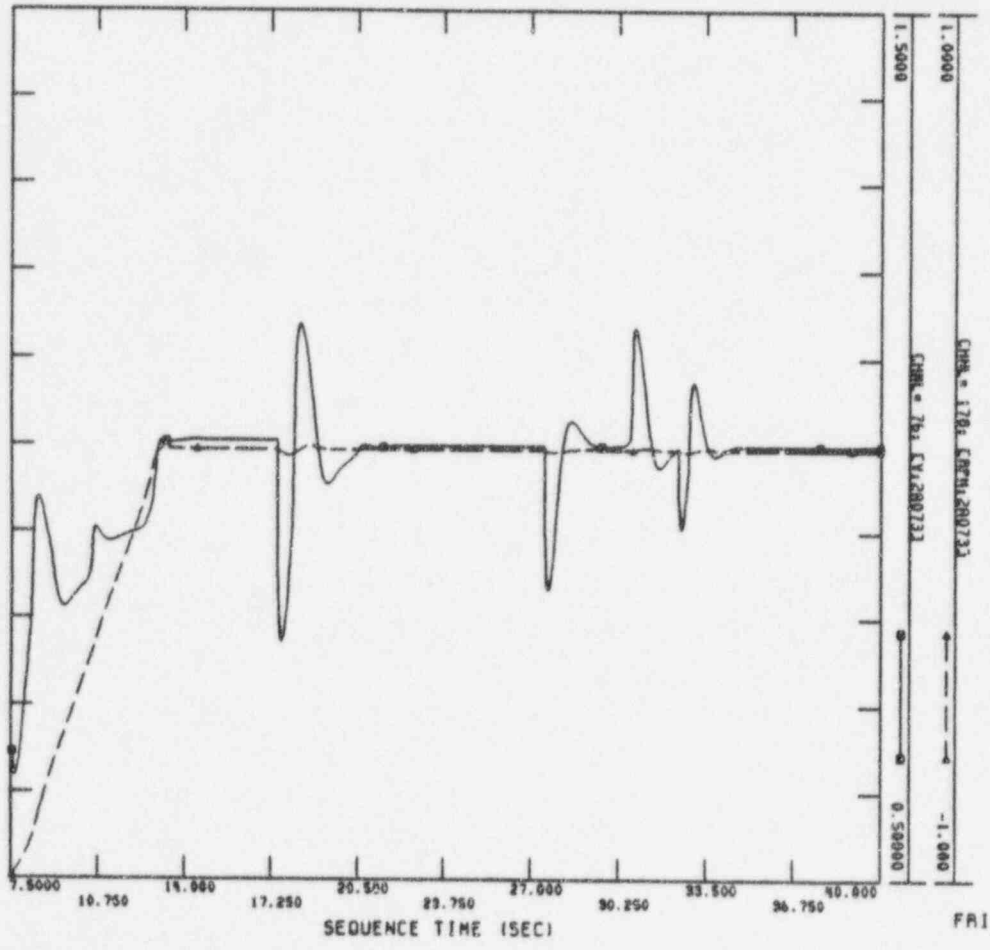
RE: Lpm 9-30-94 IRE: Rad 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:32

2A074



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:32

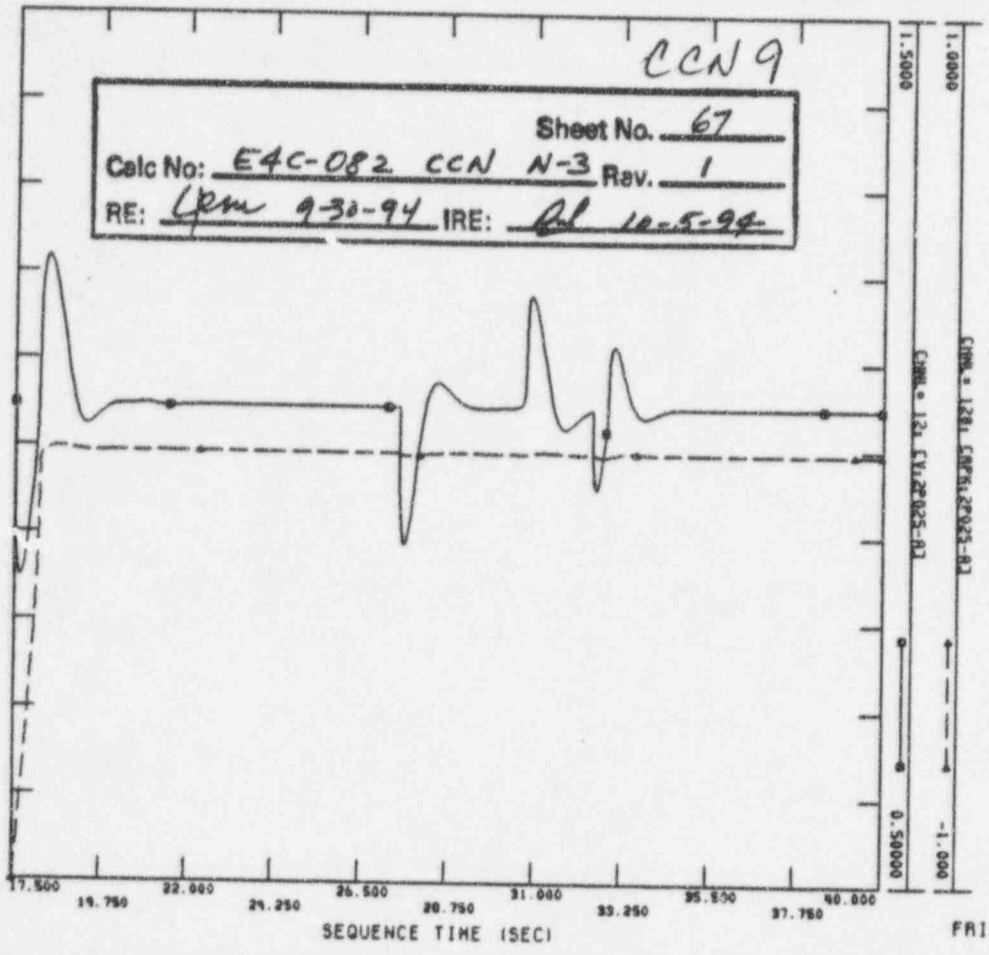
2A073

CCN 9

Sheet No. 67

Calc No: E4C-082 CCN N-3 Rev. 1

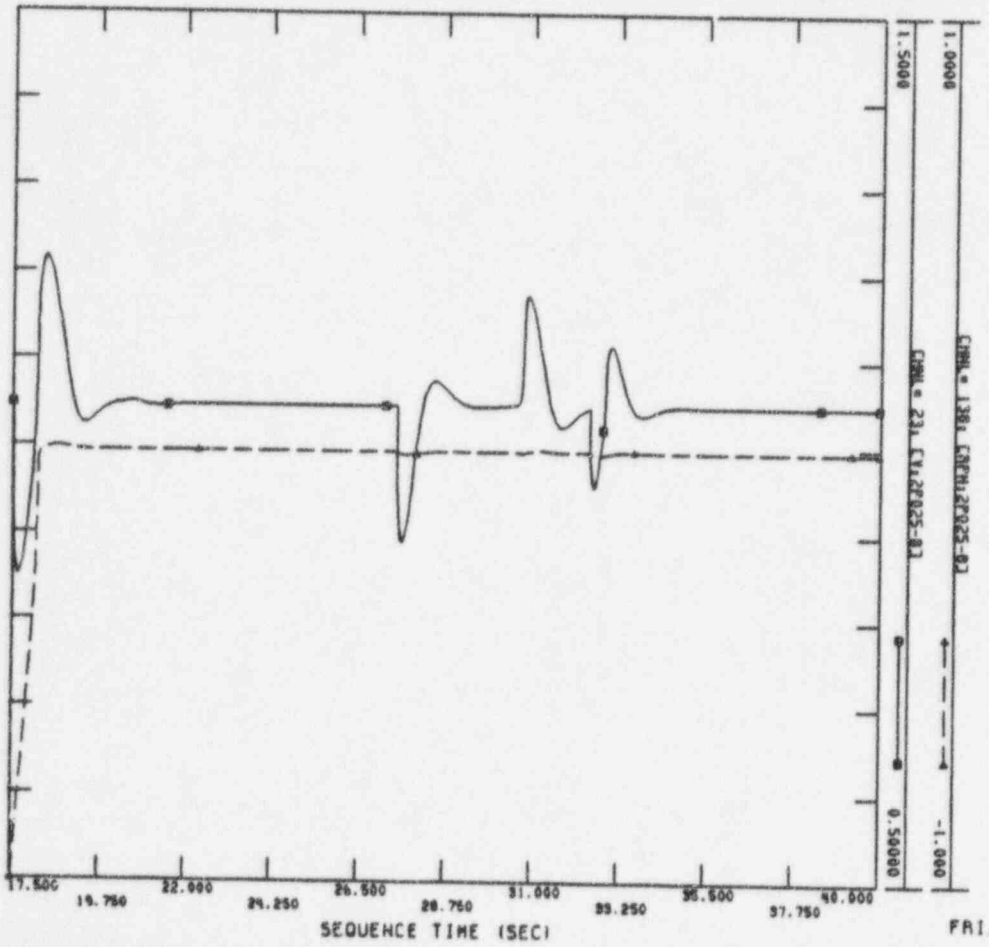
RE: Lpm 9-30-94 IRE: RL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:32

2P025-A



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:33

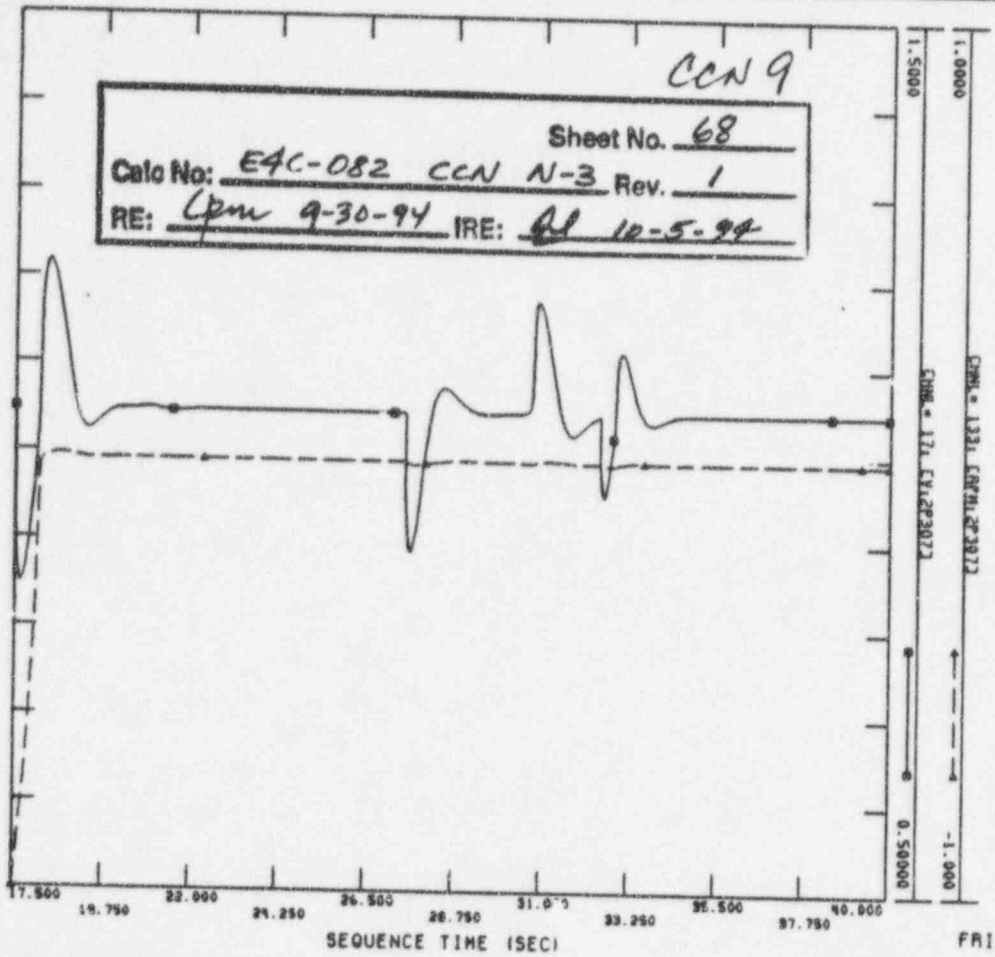
2P025-B

CCN 9

Sheet No. 68

Calc No: E4C-082 CCN N-3 Rev. 1

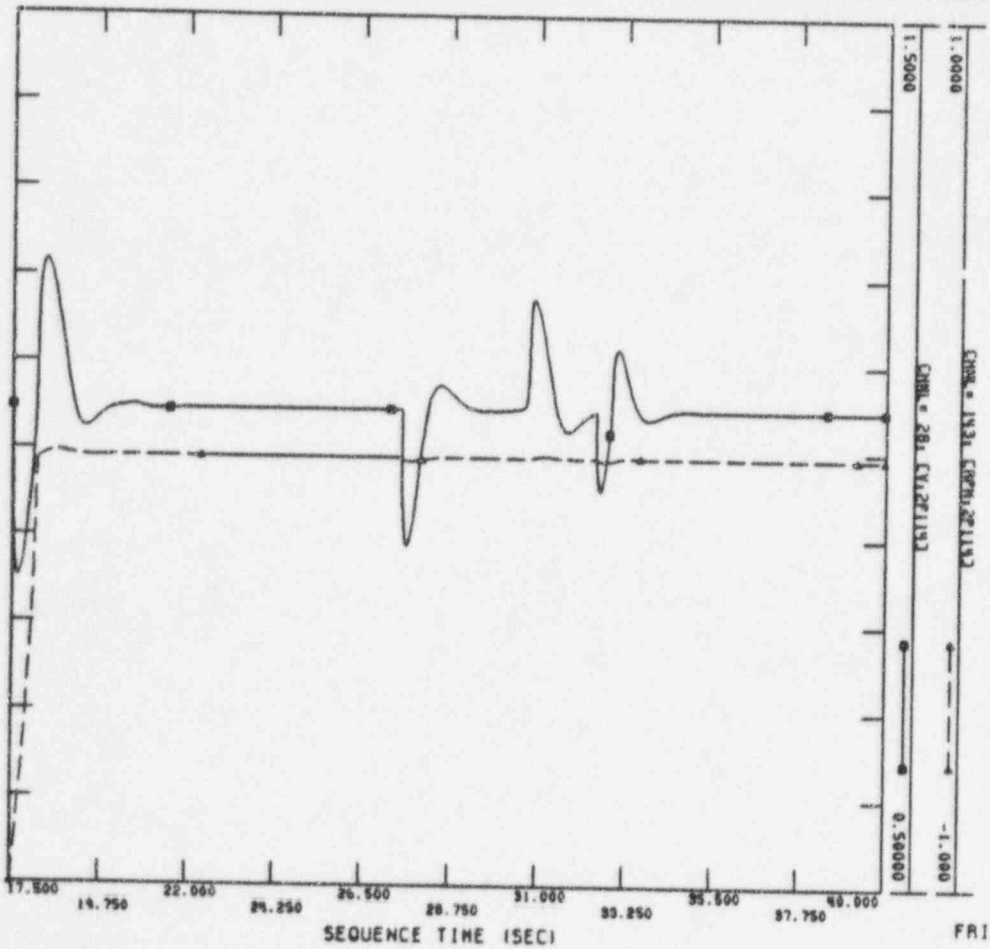
RE: Cpm 9-30-94 IRE: [illegible] 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC., PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:33

2P307



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC., PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:33

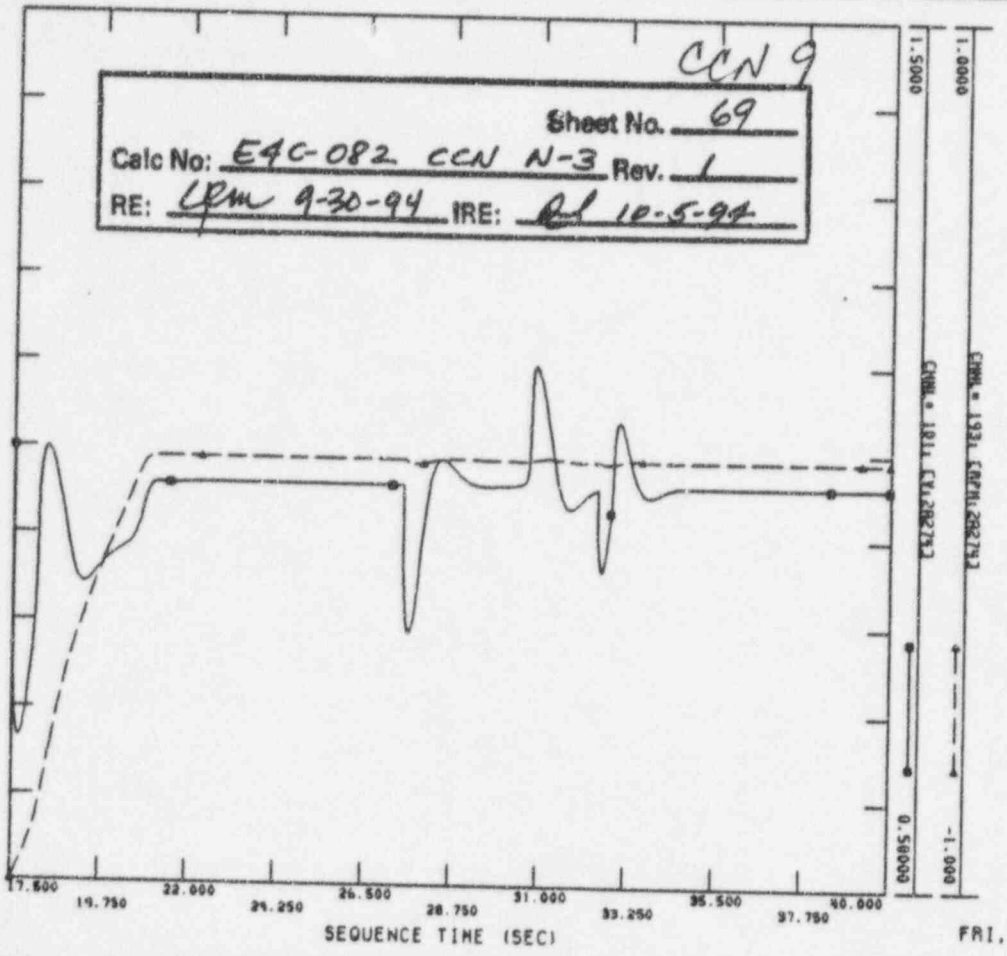
2P114

CCN 9

Sheet No. 69

Calc No: E4C-082 CCN N-3 Rev. 1

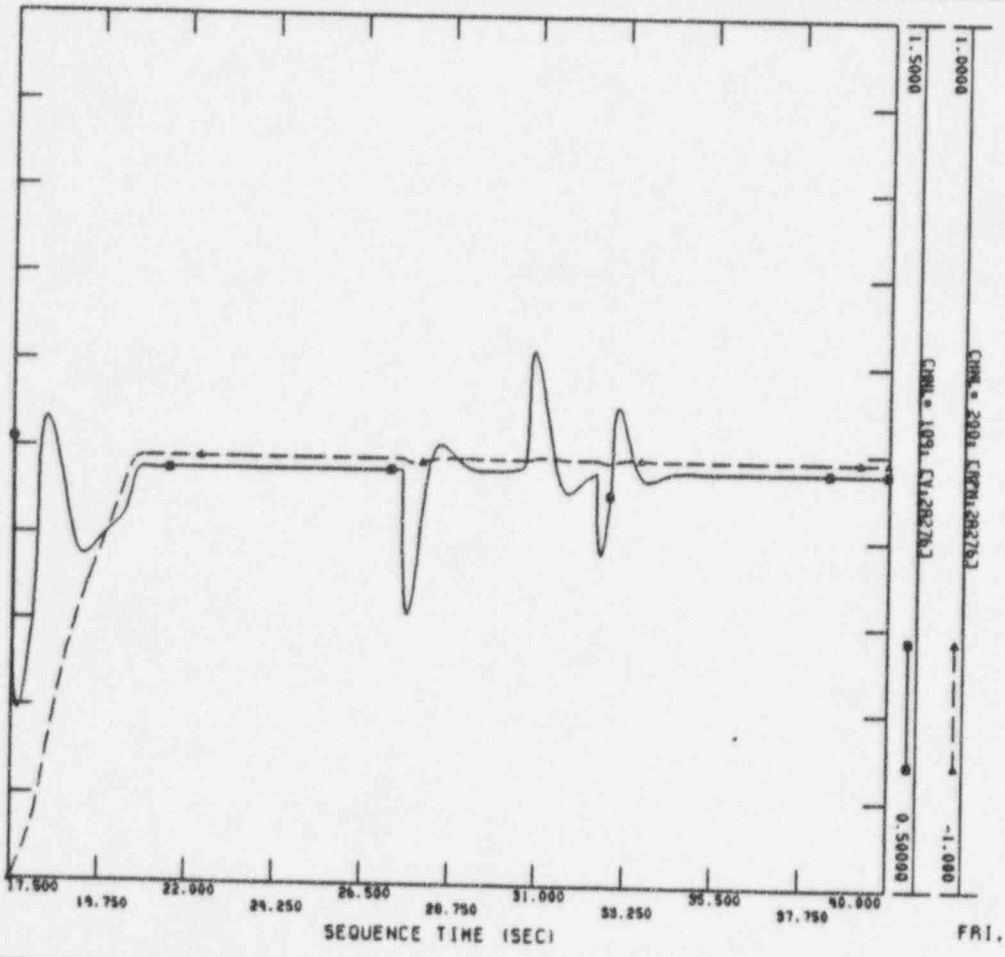
RE: CPM 9-30-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: E:CASE_IIIAY3CHANOUT_IIIAY

FRI, SEP 16 1994 14:33

2A274



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: E:CASE_IIIAY3CHANOUT_IIIAY

FRI, SEP 16 1994 14:33

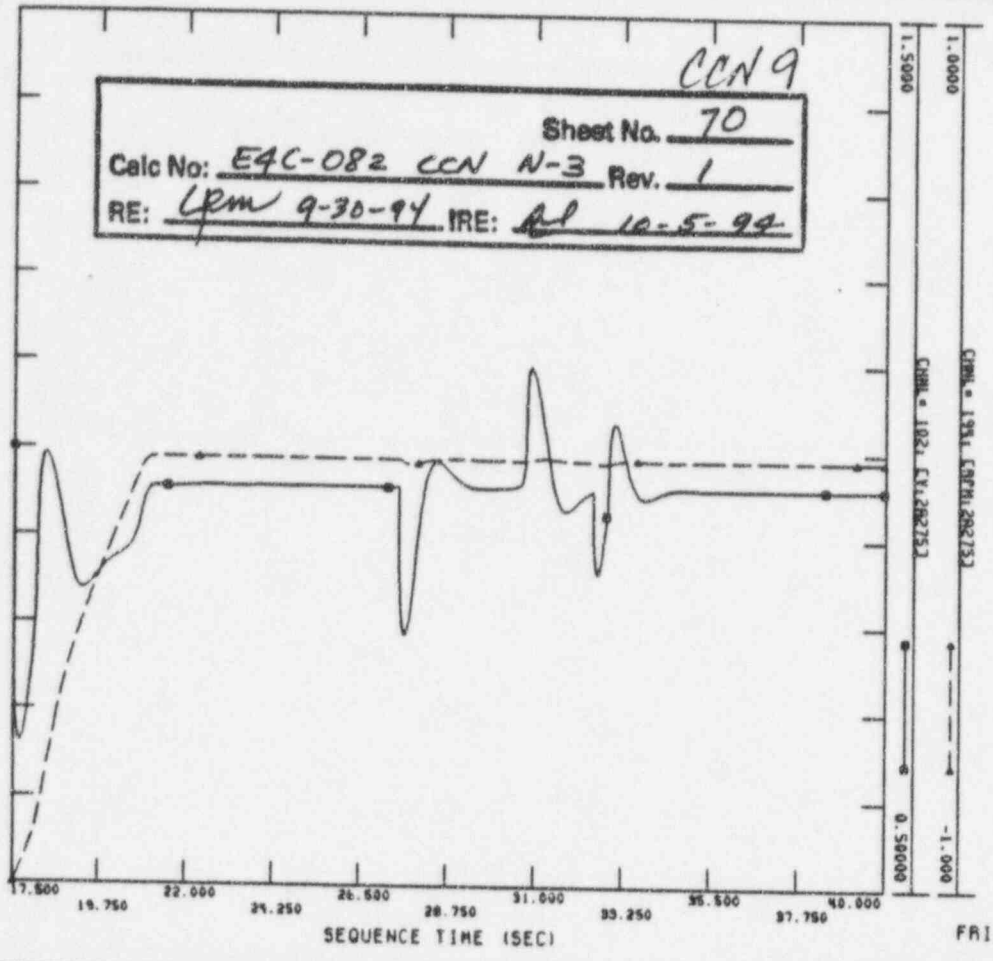
2A276

CCN 9

Sheet No. 70

Calc No: E4C-082 CCN N-3 Rev. 1

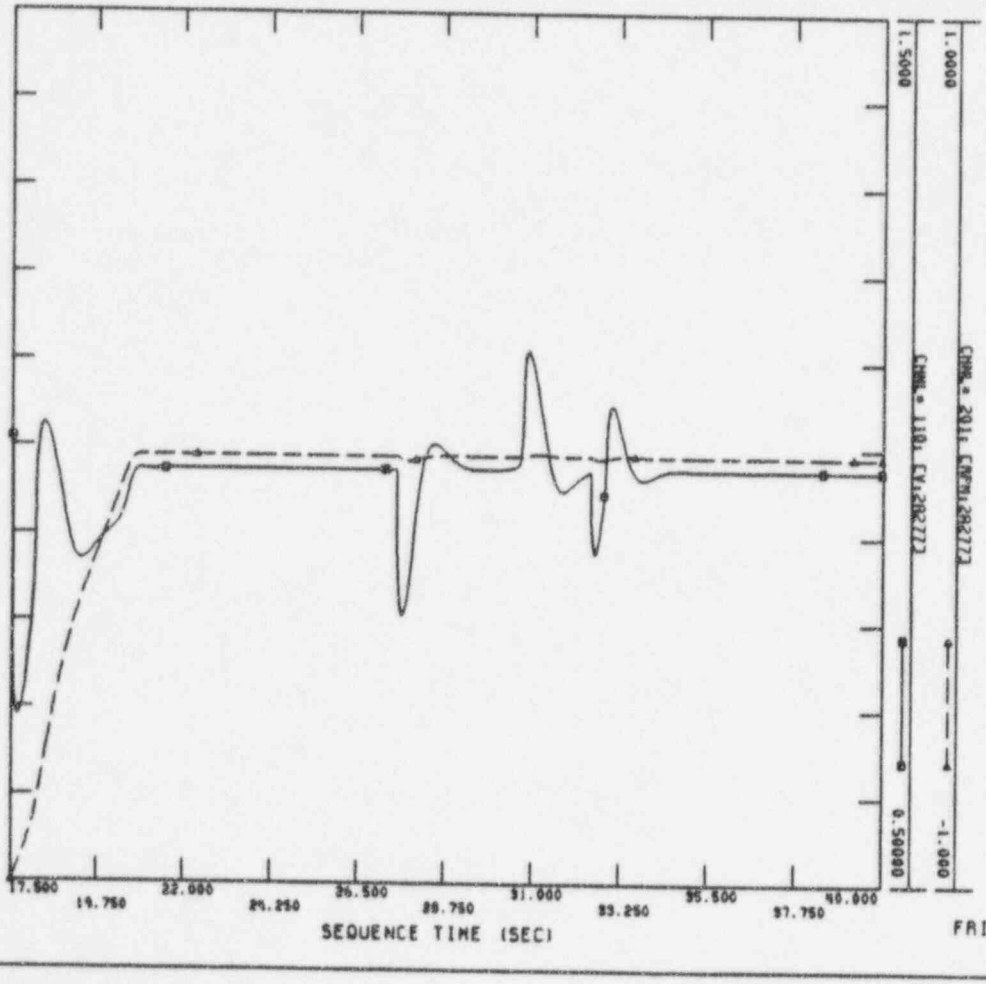
RE: Lpm 9-30-94 IRE: AL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:33

2A275



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:33

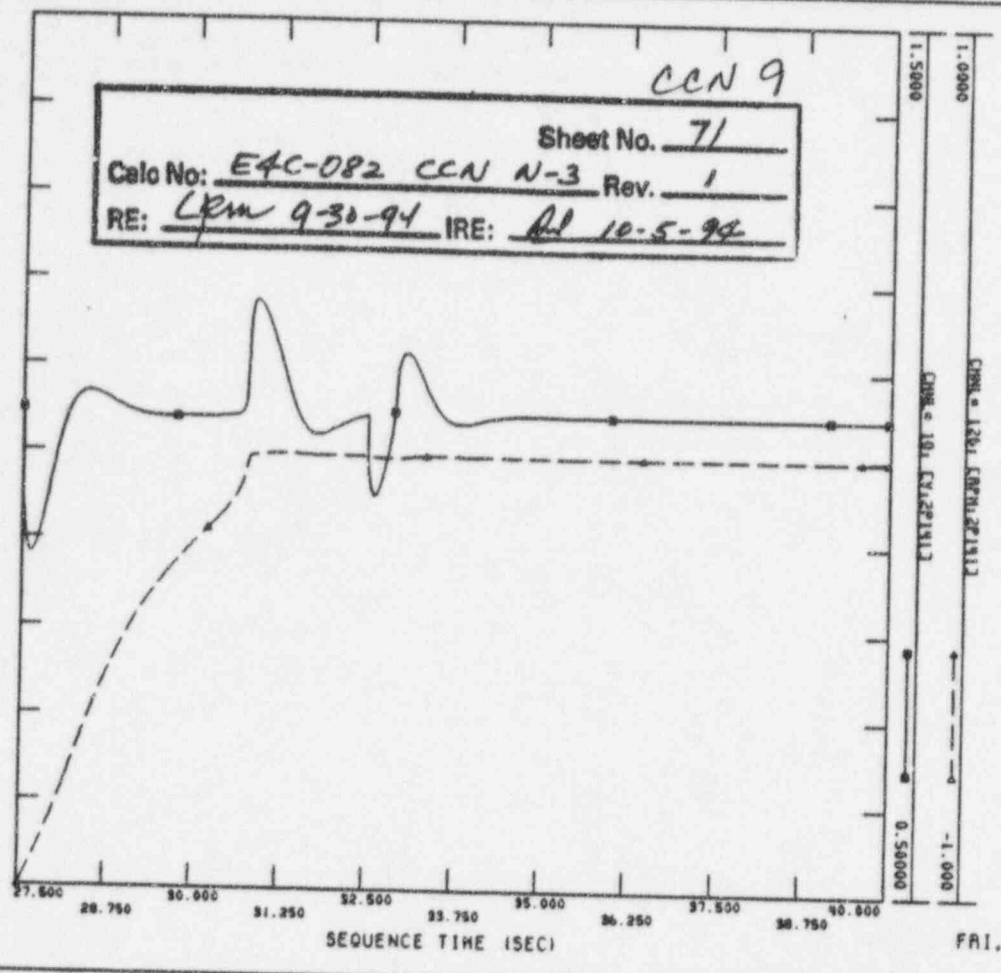
2A277

CCN 9

Sheet No. 71

Calc No: E4C-082 CCN N-3 Rev. 1

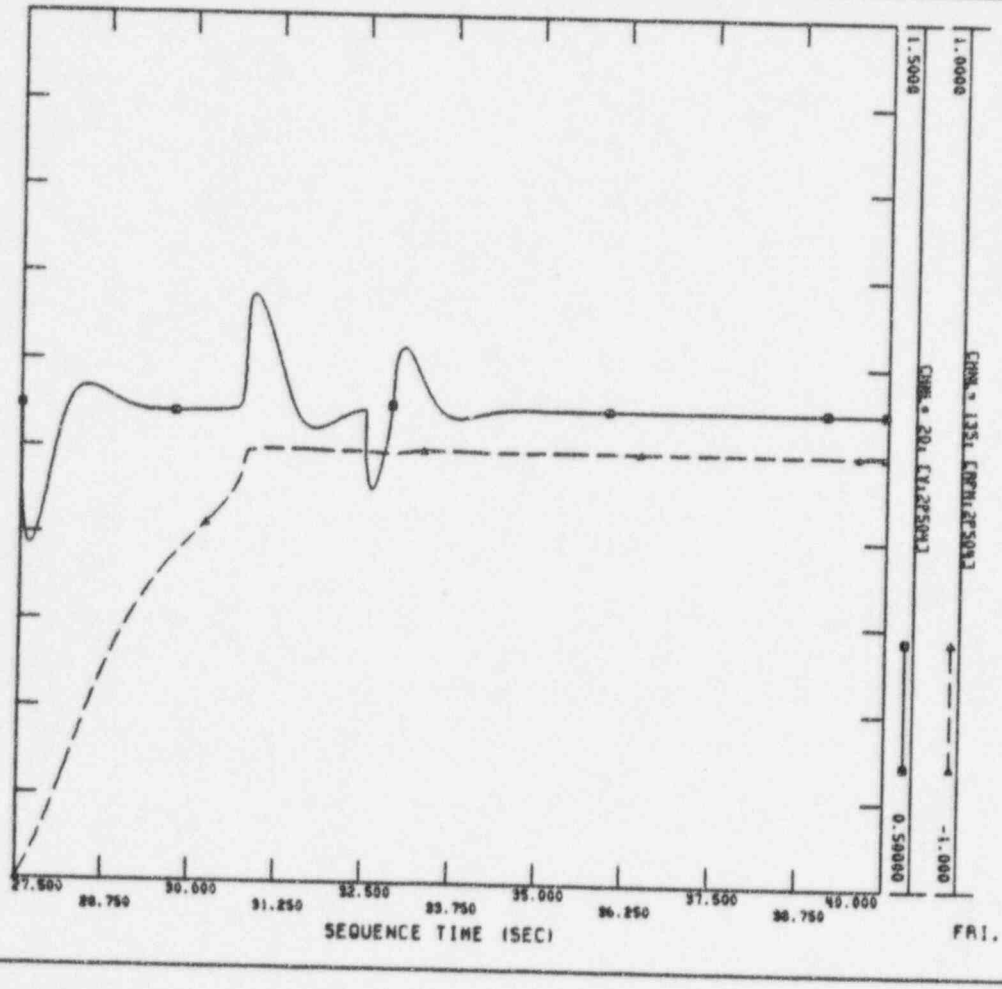
RE: CPM 9-30-94 IRE: AL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY3CHANOUT_IIIAY

FRI, SEP 16 1994 14:33

2P141



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY3CHANOUT_IIIAY

FRI, SEP 16 1994 14:34

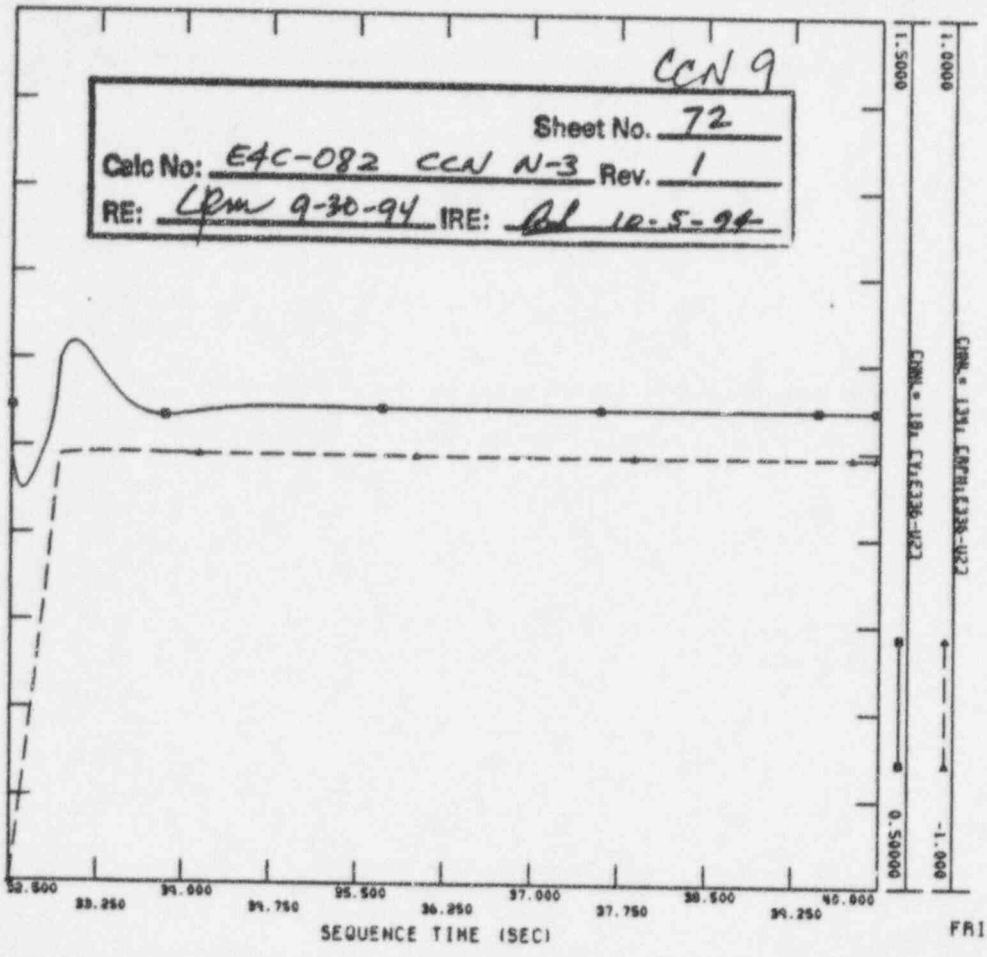
2P504

CCN 9

Sheet No. 72

Calc No: E4C-082 CCN N-3 Rev. 1

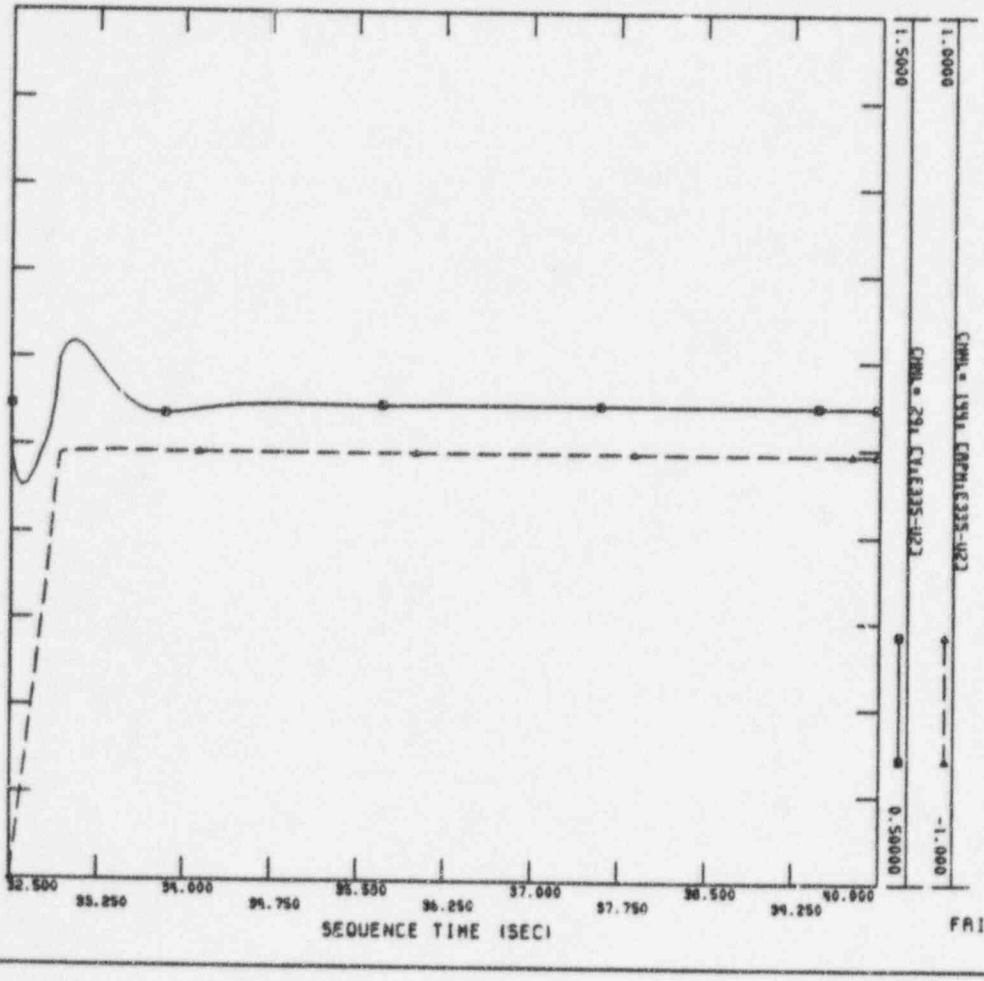
RE: CPM 9-30-94 IRE: BL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:34

E336-U2



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:34

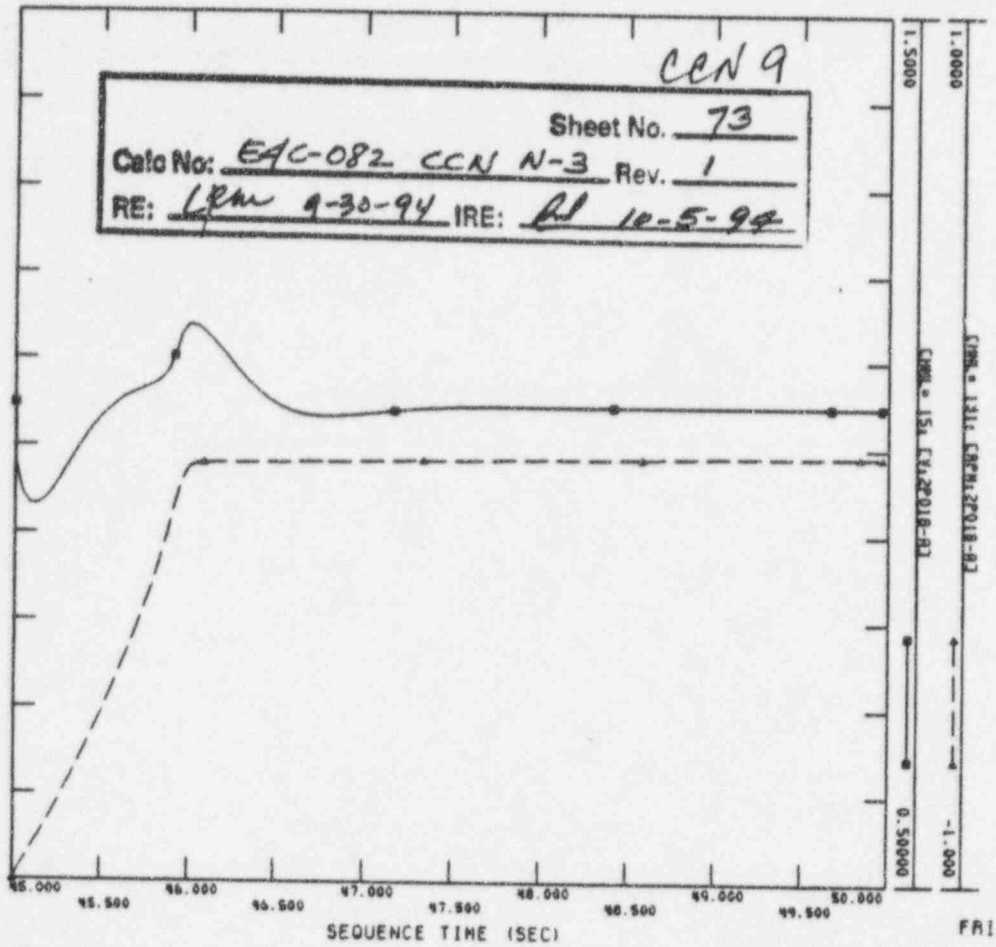
E335-U2

CCN 9

Sheet No. 73

Calc No: EAC-082 CCN N-3 Rev. 1

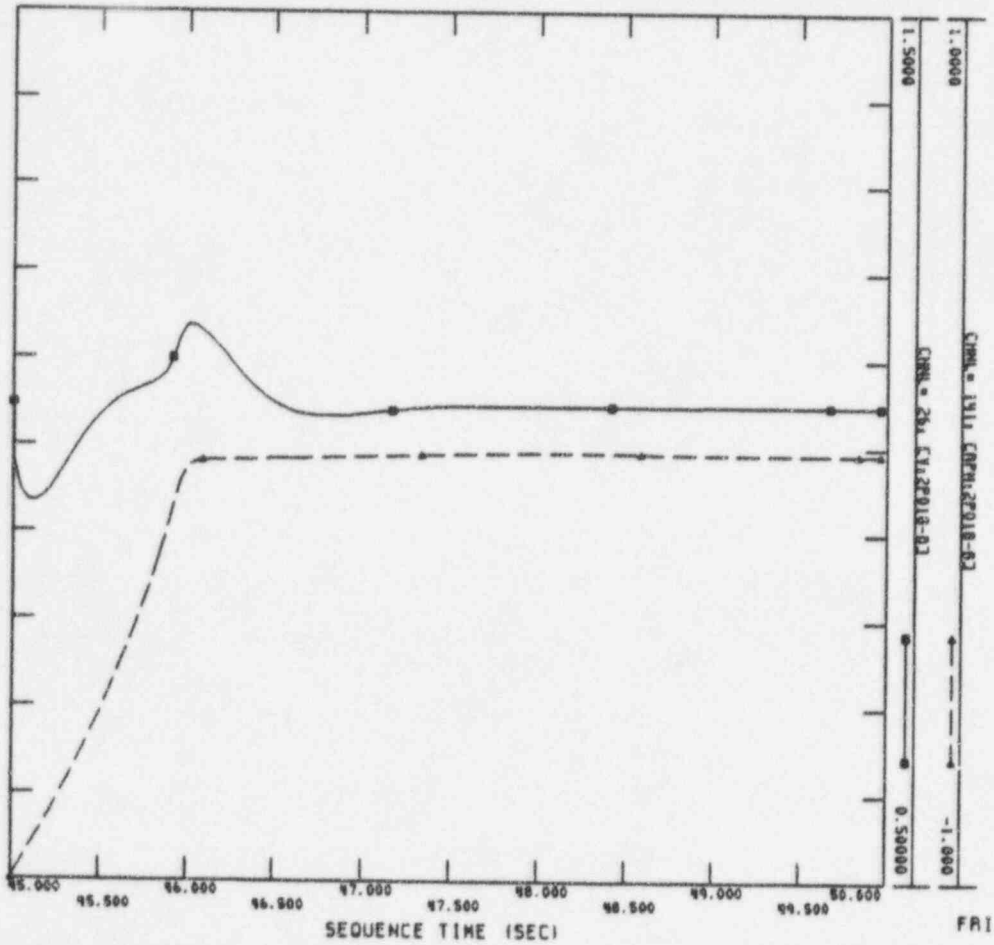
RE: LRM 9-30-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:34

2P018-A



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IIIAY.CHANOUT_IIIAY

FRI, SEP 16 1994 14:35

2P018-B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

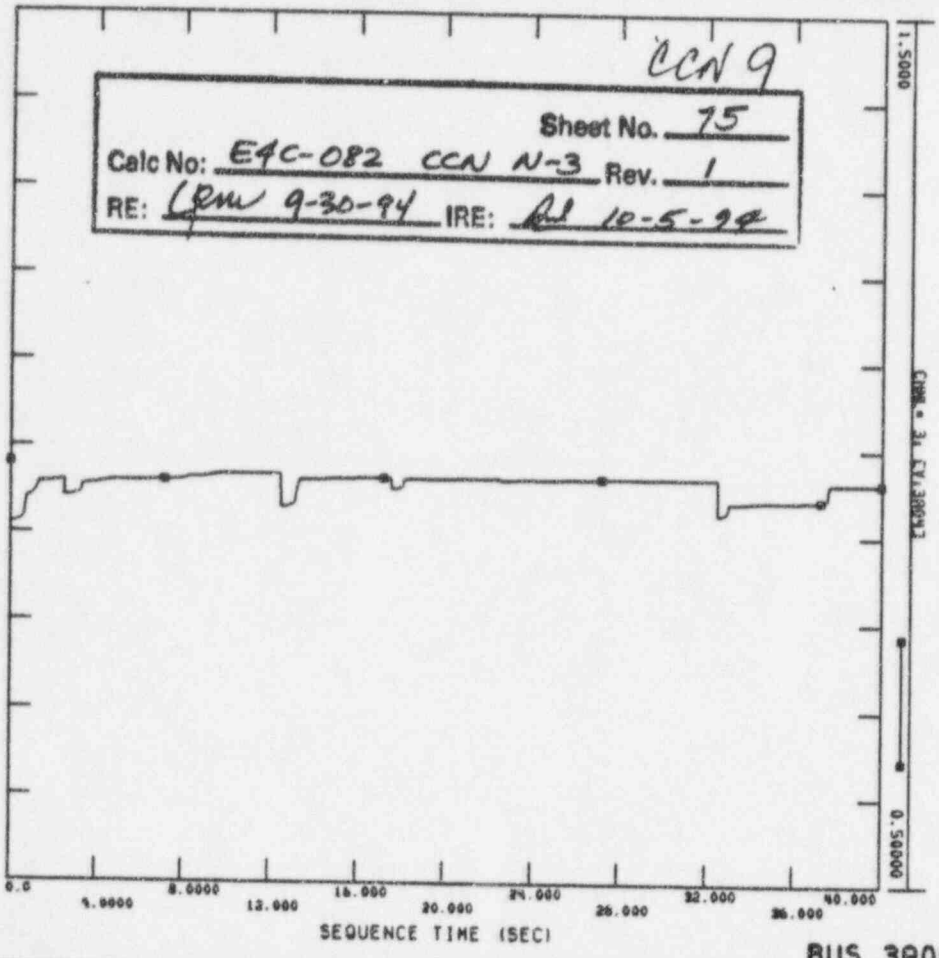
CASE IVBX DYNAMIC PROFILES

CCN 9

Sheet No. 75

Calc No: E4C-082 CCN N-3 Rev. 1

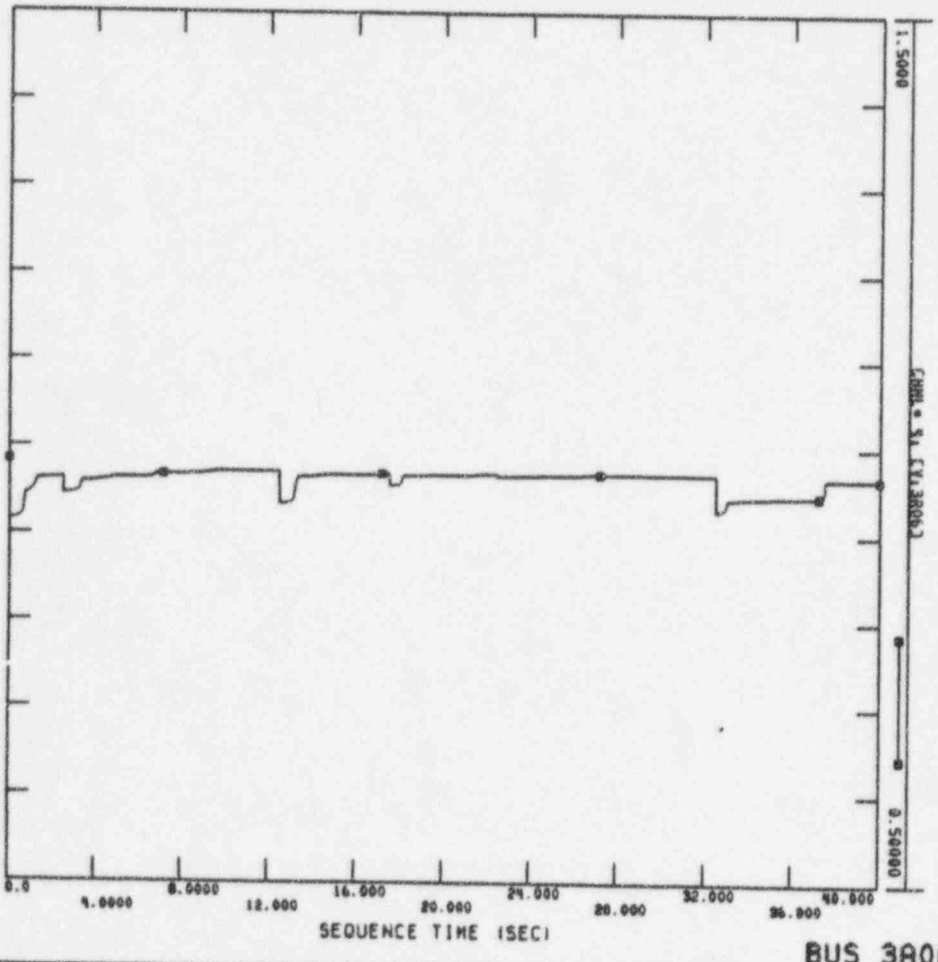
RE: LRW 9-30-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBX.CHANOUT_IVBX

FRI, SEP 16 1994 15:19

BUS 3A04 (4.16-KV BASE)



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBX.CHANOUT_IVBX

FRI, SEP 16 1994 15:19

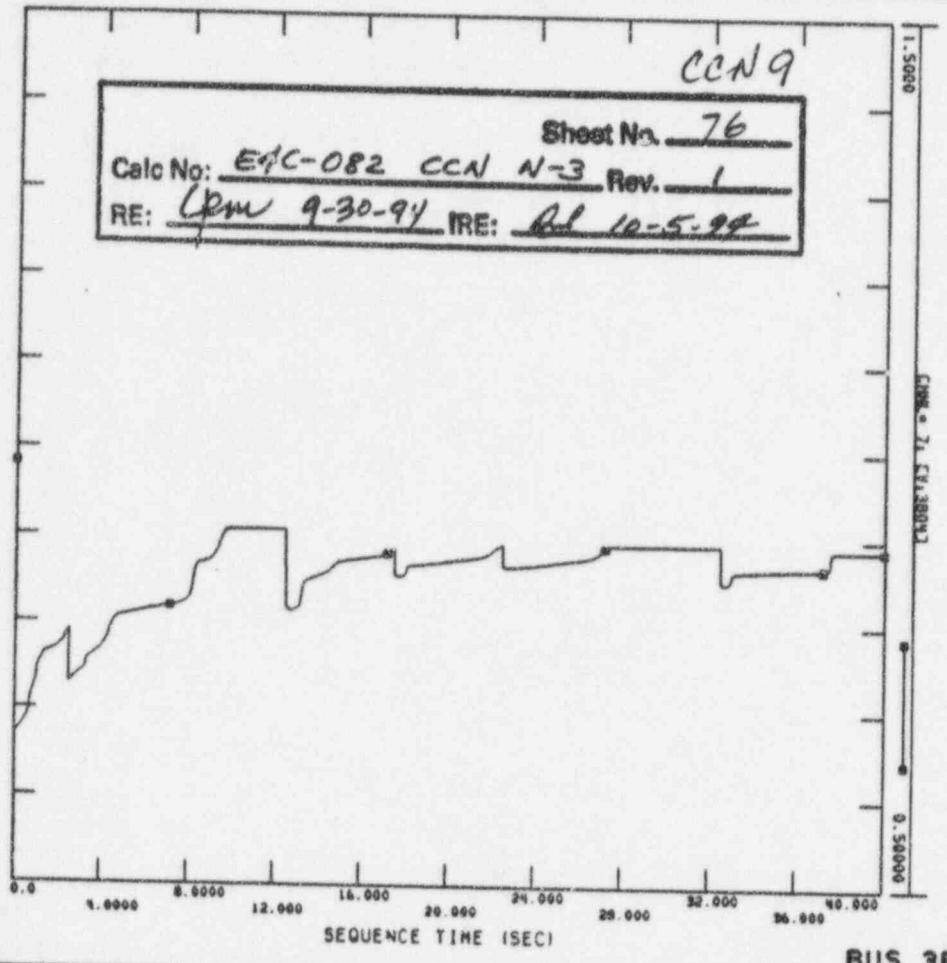
BUS 3A06 (4.16-KV BASE)

CCN 9

Sheet No. 76

Calc No: EAC-082 CCN N-3 Rev. 1

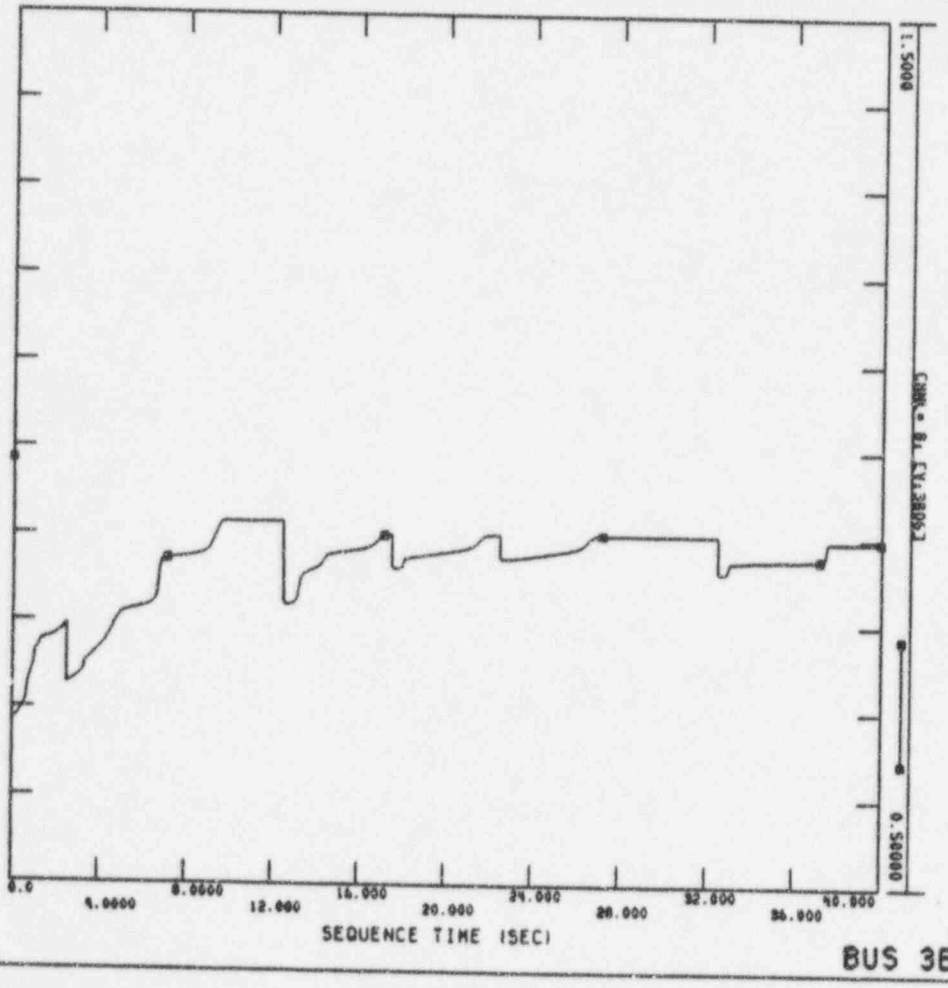
RE: Cpm 9-30-94 IRE: Bd 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8X.CHANOUT_IV8X

FRI, SEP 16 1994 15:19

BUS 3B04 (480-V BASE)



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8X.CHANOUT_IV8X

FRI, SEP 16 1994 15:19

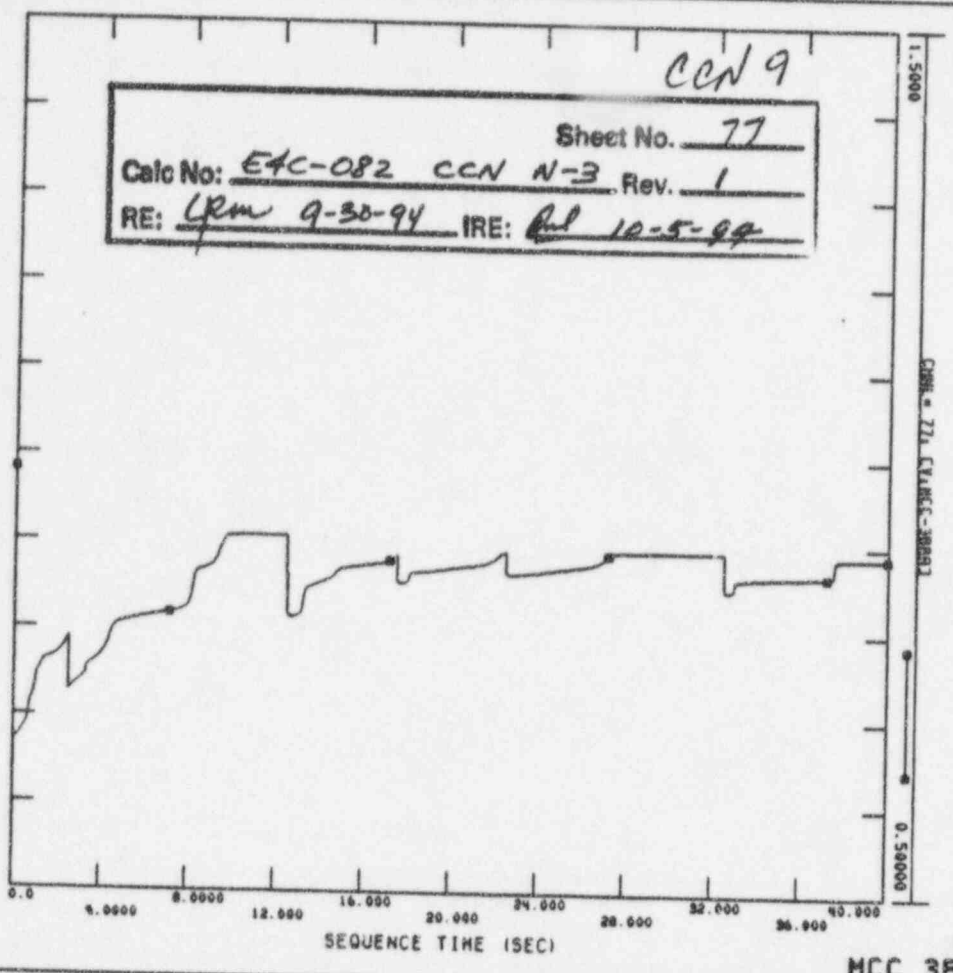
BUS 3B06 (480-V BASE)

CCN 9

Sheet No. 77

Calc No: E4C-082 CCN N-3 Rev. 1

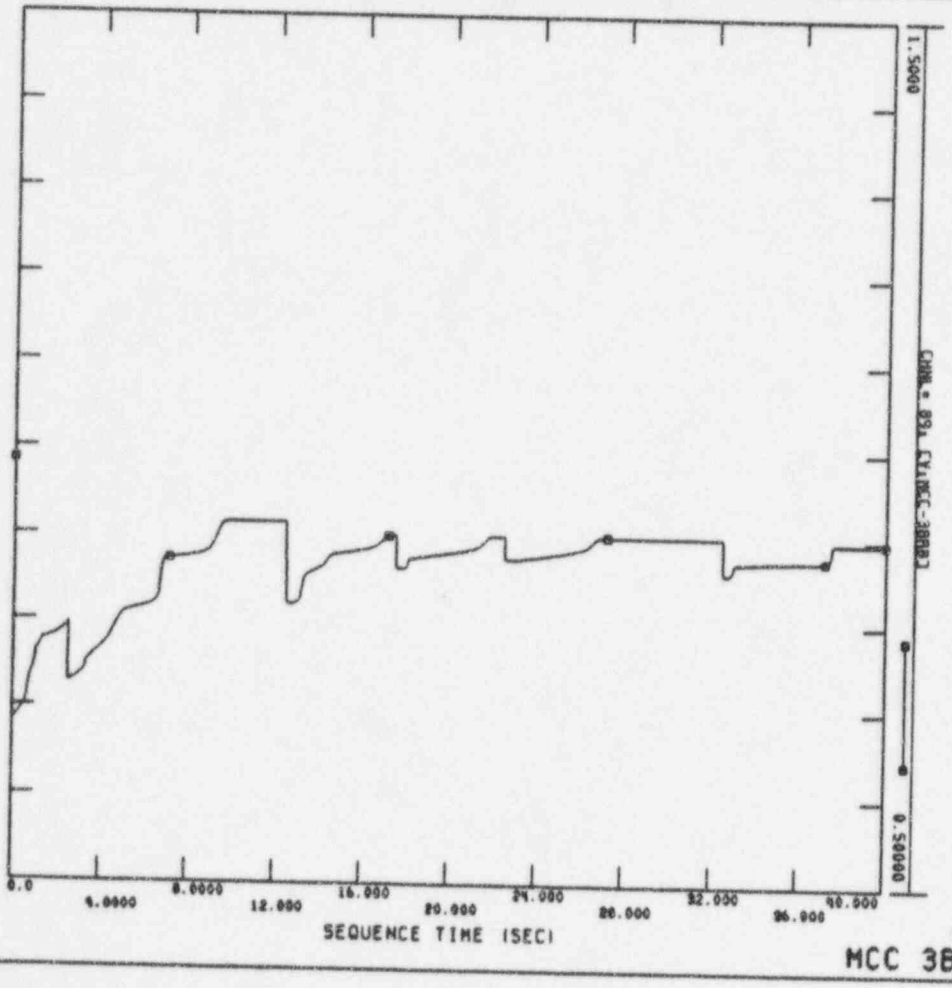
RE: LRM 9-30-94 IRE: Rel 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: E.CASE_IVBX.CHANOUT_IVBX

FRI, SEP 16 1994 15:20

MCC 3BRA (480-V BASE)



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: E.CASE_IVBX.CHANOUT_IVBX

FRI, SEP 16 1994 15:20

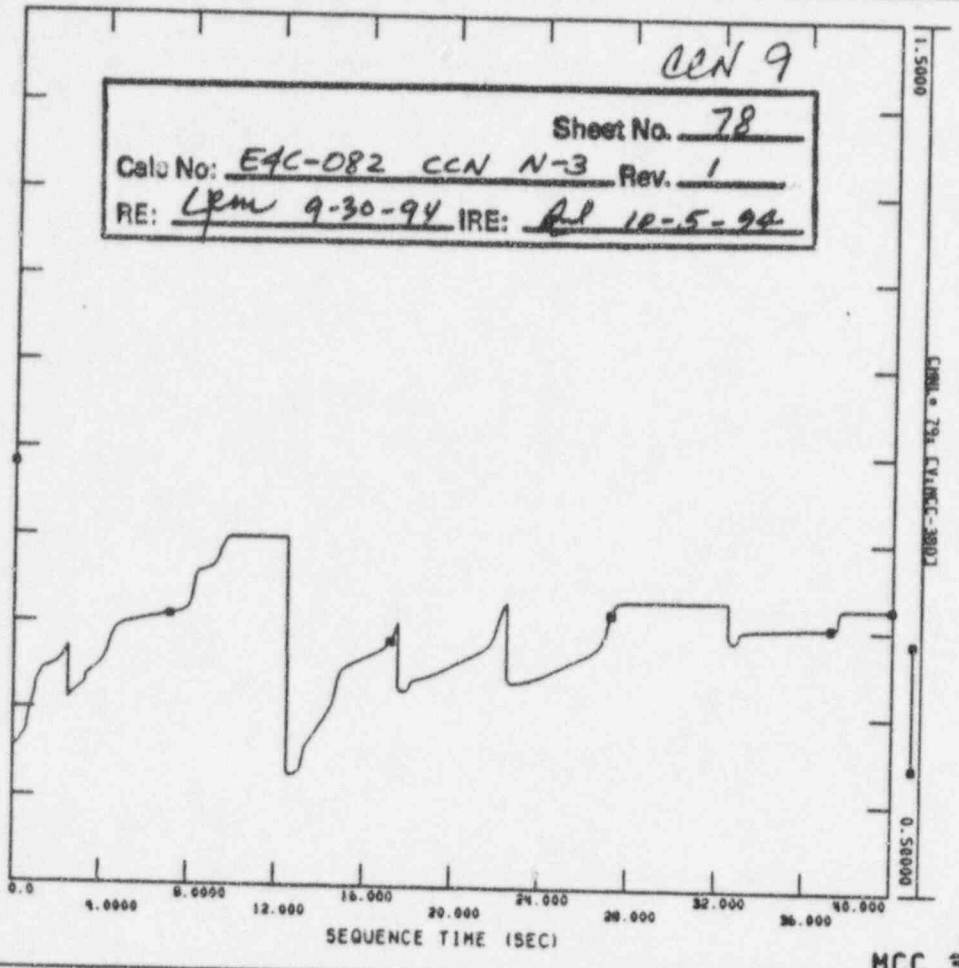
MCC 3BRB (480-V BASE)

CCN 9

Sheet No. 78

Calc No: E4C-082 CCN N-3 Rev. 1

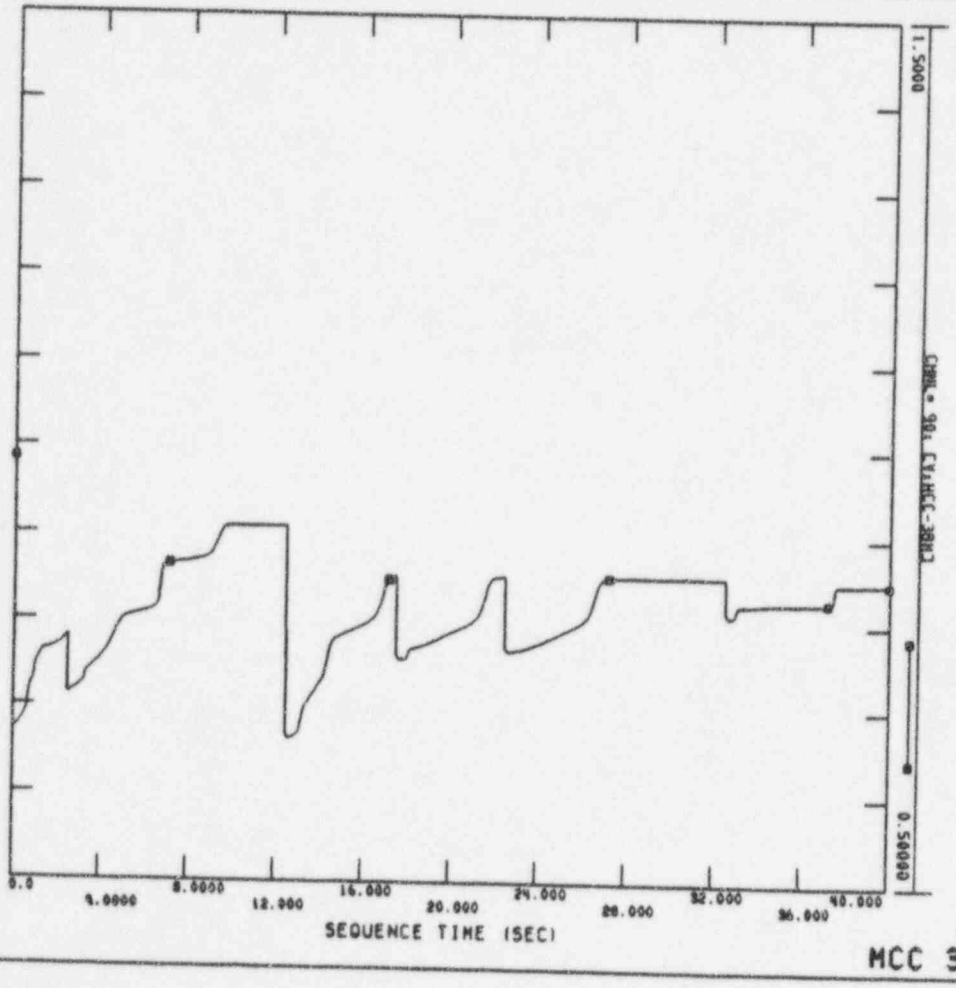
RE: Lpm 9-30-94 IRE: Rd 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8X.CHANOUT_IV8X

FRI, SEP 16 1994 15:20

MCC 3BD (480-V BASE)



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8X.CHANOUT_IV8X

FRI, SEP 16 1994 15:20

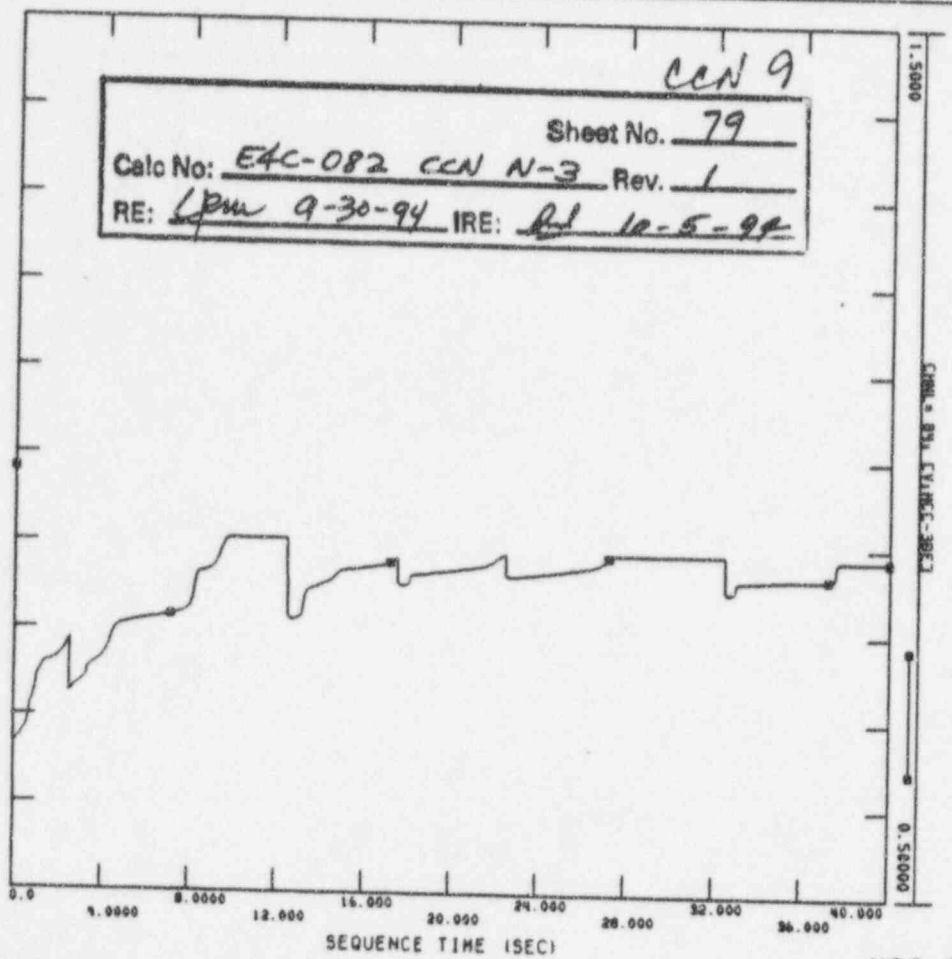
MCC 3BH (480-V BASE)

CCN 9

Sheet No. 79

Calc No: E4C-082 CCN N-3 Rev. 1

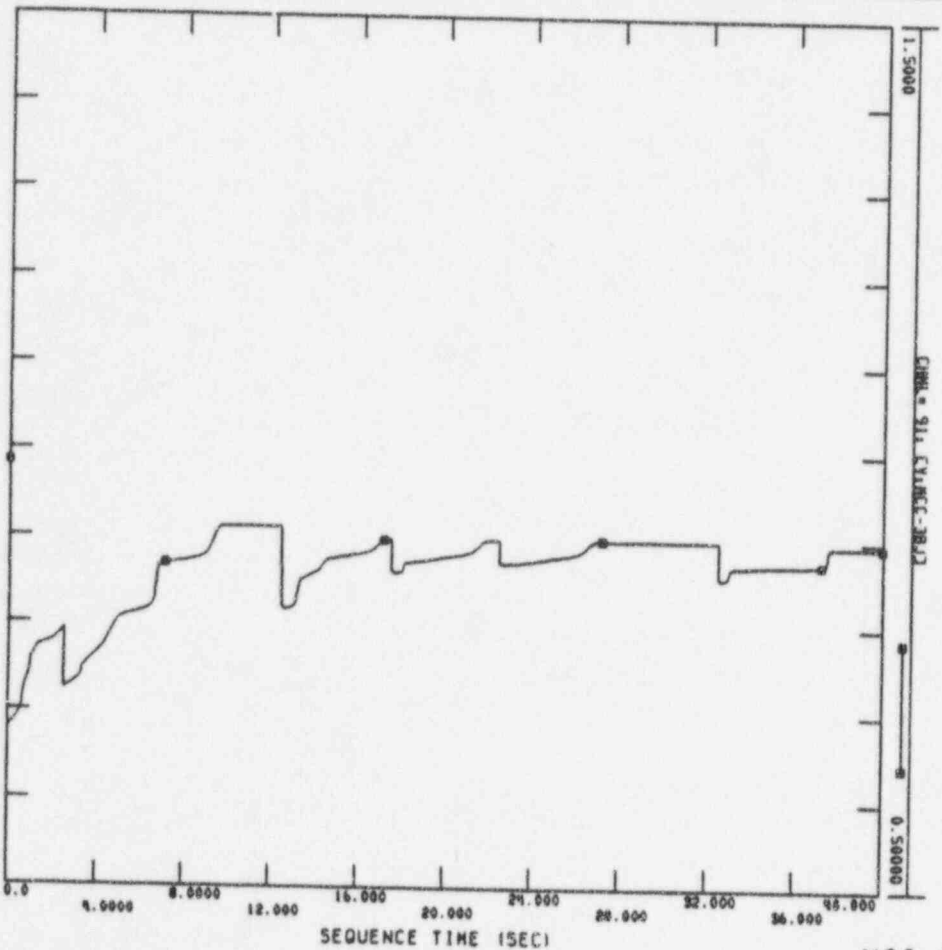
RE: LPM 9-30-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC., PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C:\CASE_IV8X\CHANOUT_IV8X

FRI, SEP 16 1994 15:20

MCC 3BE (480-V BASE)



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC., PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C:\CASE_IV8X\CHANOUT_IV8X

FRI, SEP 16 1994 15:20

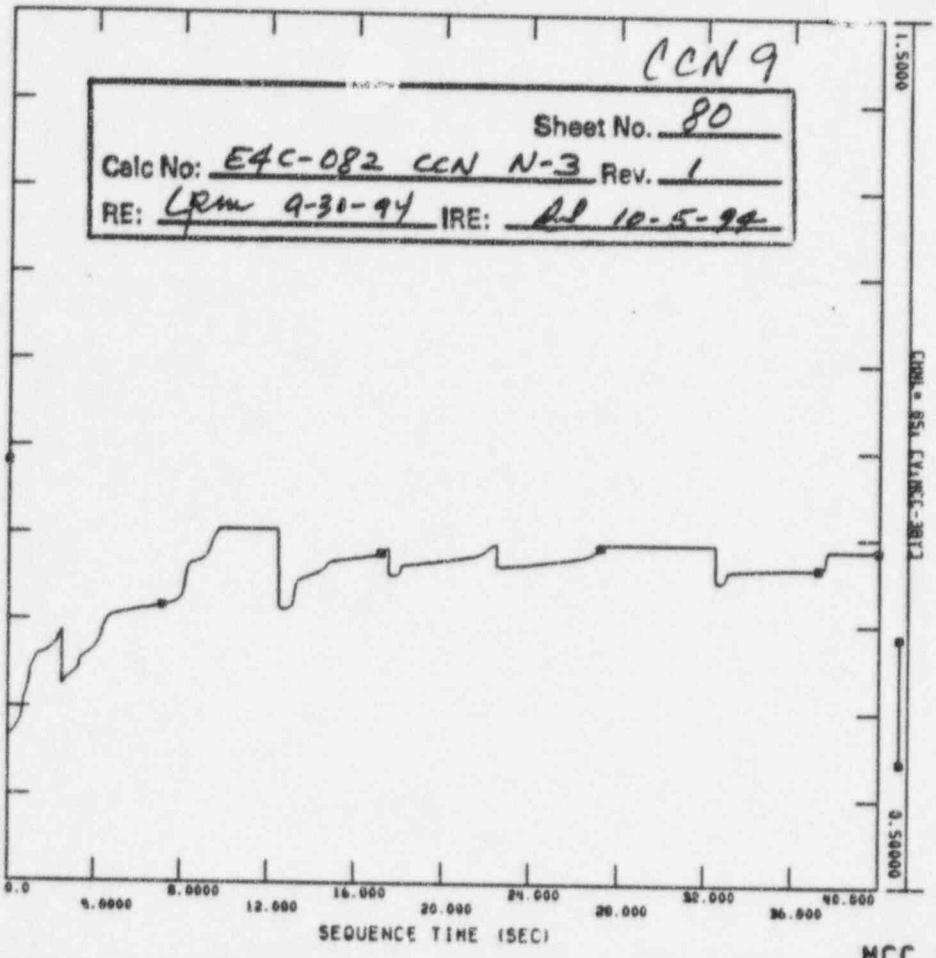
MCC 3BJ (480-V BASE)

CCN 9

Sheet No. 80

Calc No: E4C-082 CCN N-3 Rev. 1

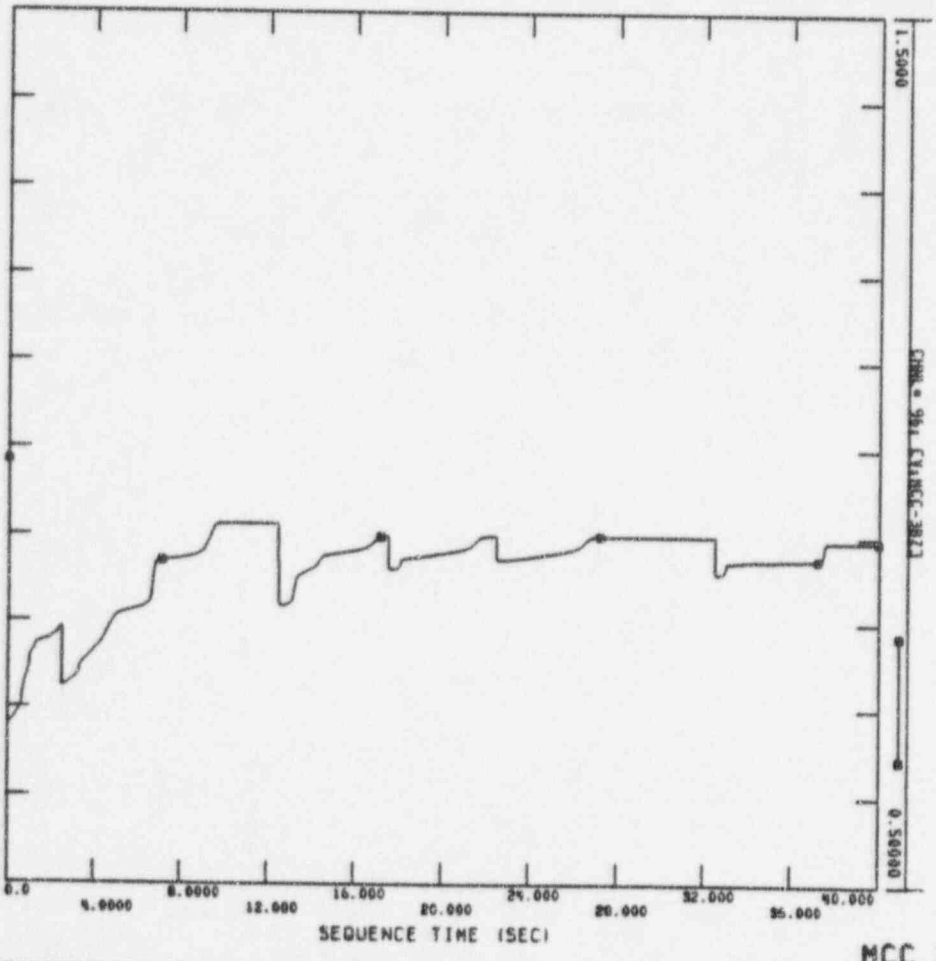
RE: LRm 9-31-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBX.CHANOUT_IVBX

FRI, SEP 16 1994 15:20

MCC 3BY (480-V BASE)



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBX.CHANOUT_IVBX

FRI, SEP 16 1994 15:20

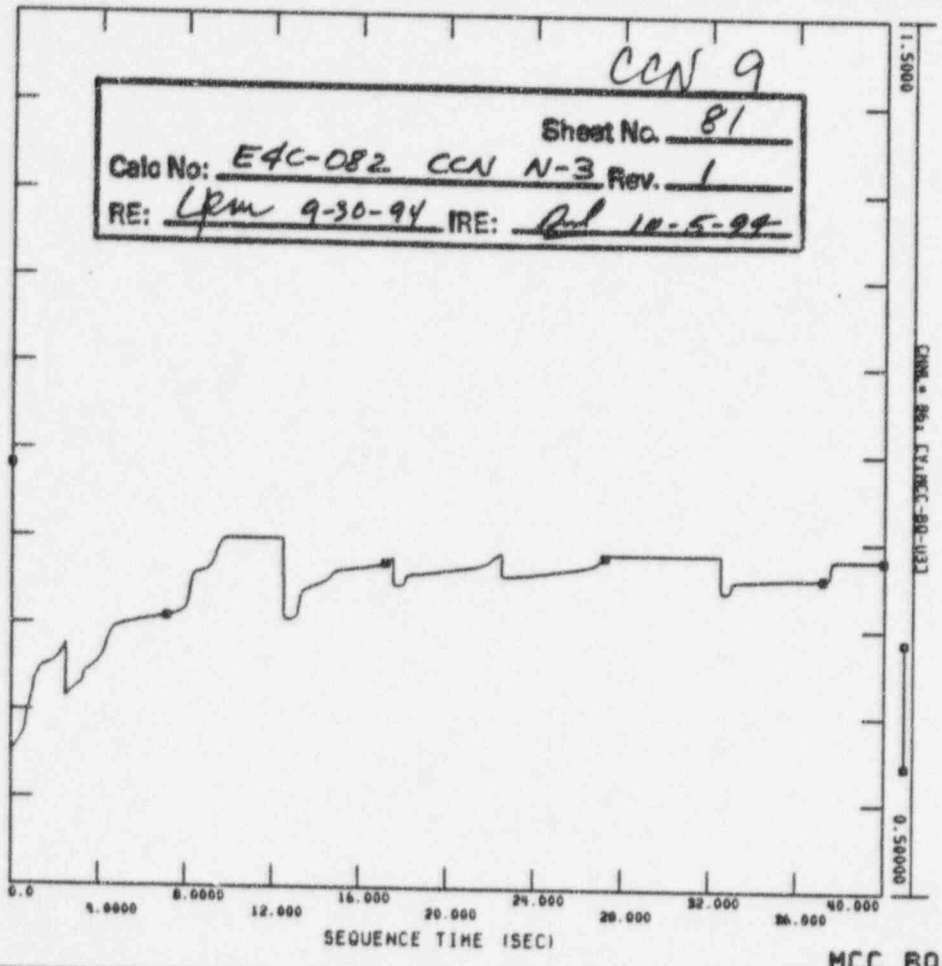
MCC 3BZ (480-V BASE)

CCN 9

Sheet No. 81

Calc No: E4C-082 CCN N-3 Rev. 1

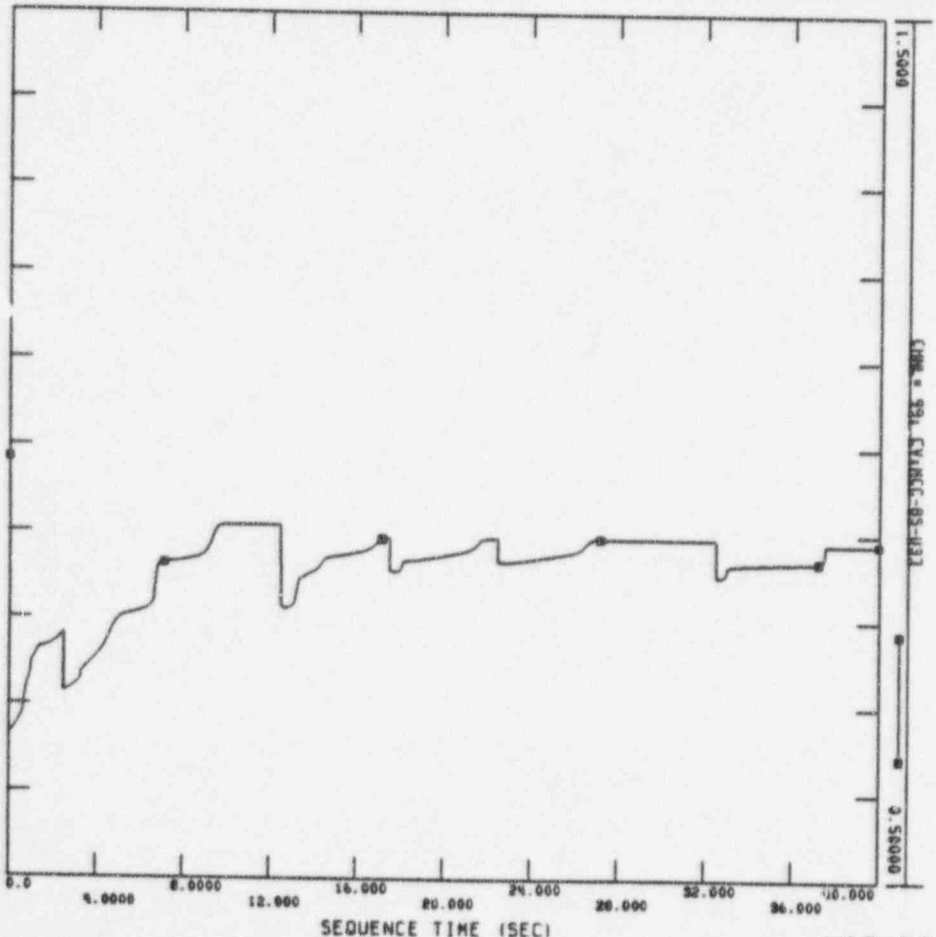
RE: Lpm 9-30-94 IRE: Qd 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8X.CHANOUT_IV8X

FRI. SEP 16 1994 15:20

MCC BQ-U3 (480-V BASE)



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8X.CHANOUT_IV8X

FRI. SEP 16 1994 15:20

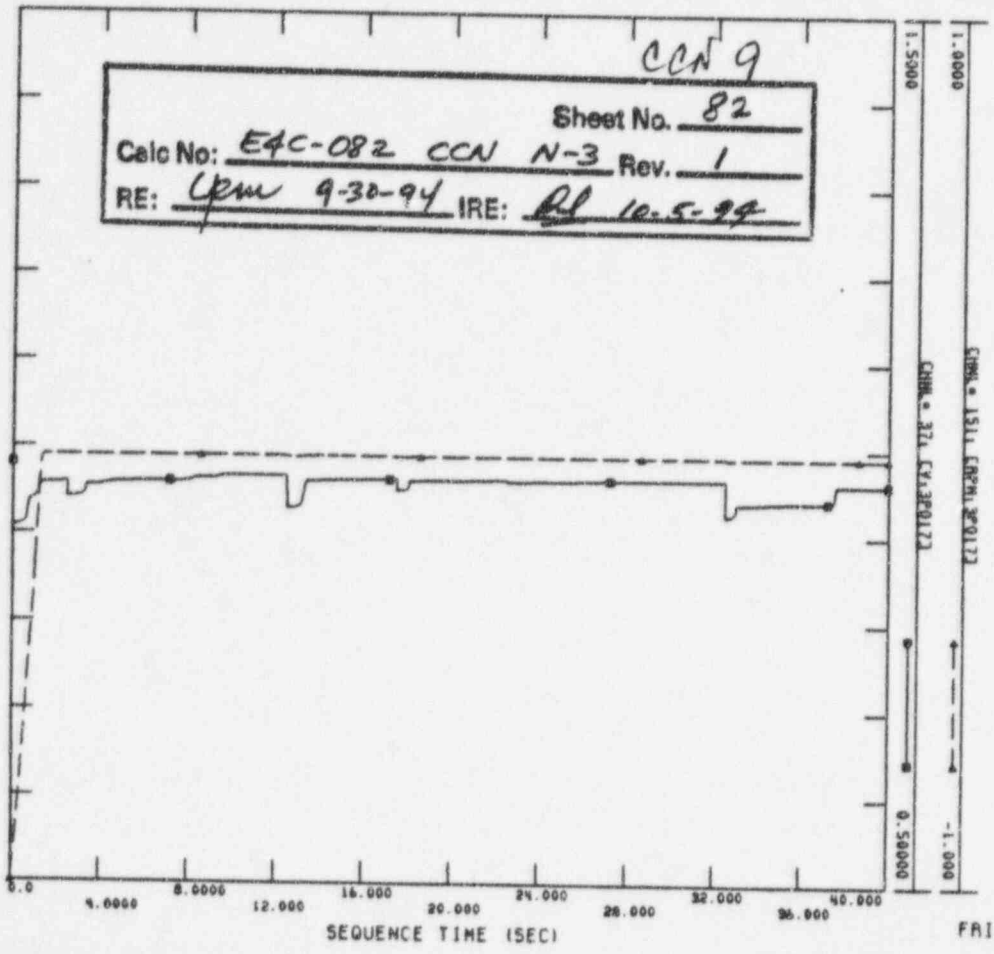
MCC BS-U3 (480-V BASE)

CCN 9

Sheet No. 82

Calc No: E4C-082 CCN N-3 Rev. 1

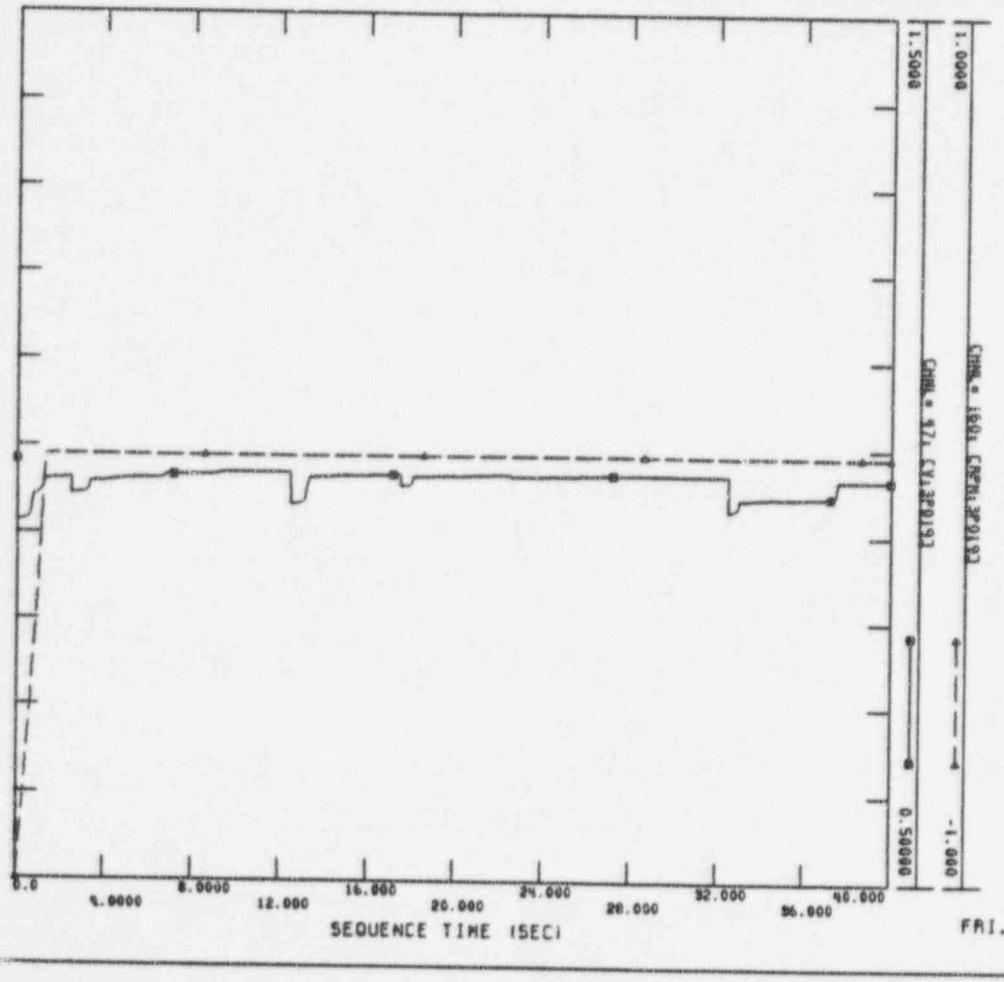
RE: Lpm 9-30-94 IRE: RL 10.5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: E.CASE_IV8X.CHANOUT_IV8X

FRI, SEP 16 1994 15:20

3P017



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: E.CASE_IV8X.CHANOUT_IV8X

FRI, SEP 16 1994 15:20

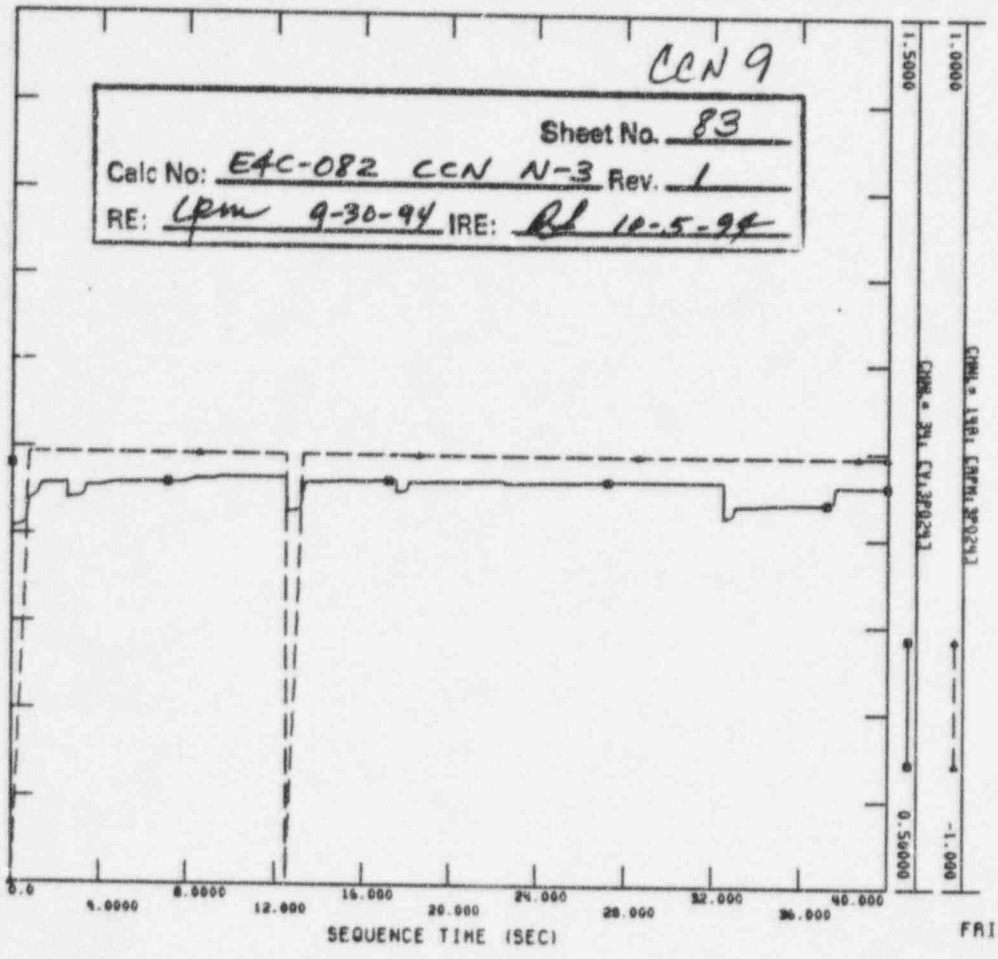
3P019

CCN 9

Sheet No. 83

Calc No: E4C-082 CCN N-3 Rev. 1

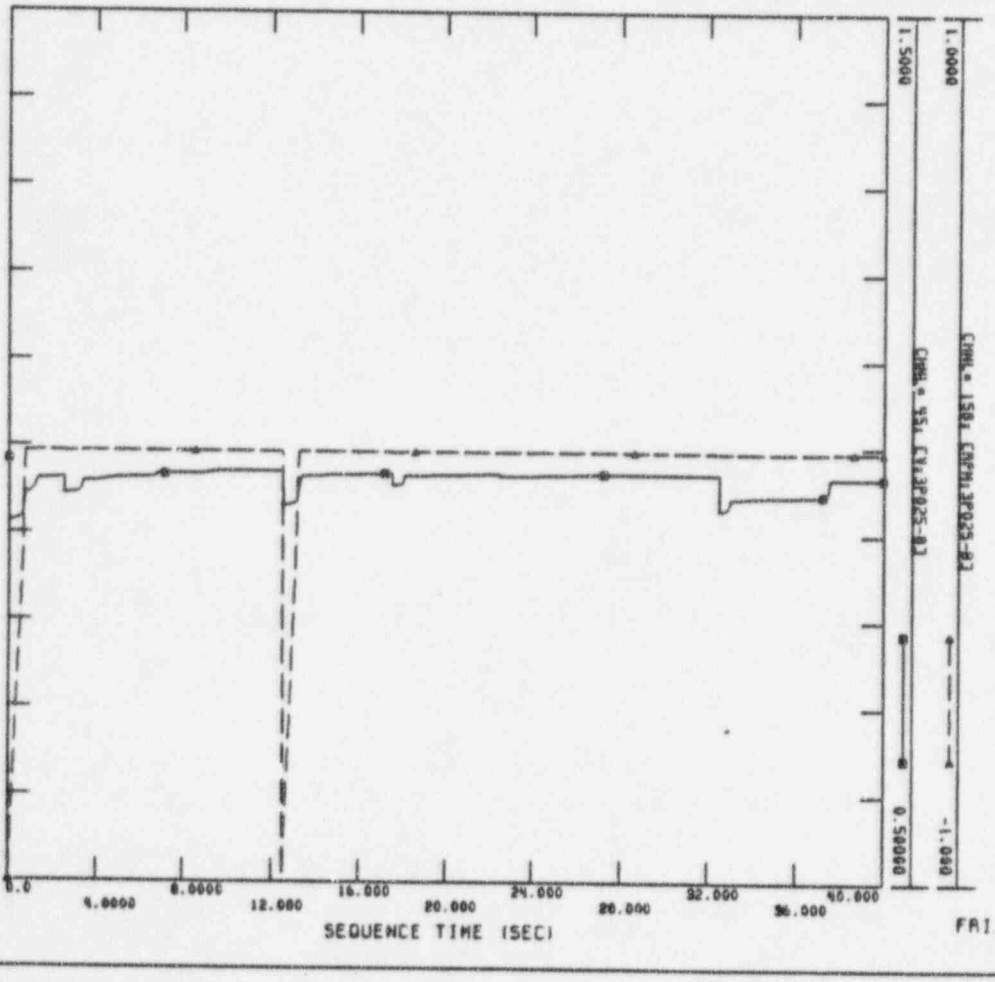
RE: Lpm 9-30-94 IRE: RL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8X.CHANOUT_IV8X

FRI, SEP 16 1994 15:20

3P024



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8X.CHANOUT_IV8X

FRI, SEP 16 1994 15:21

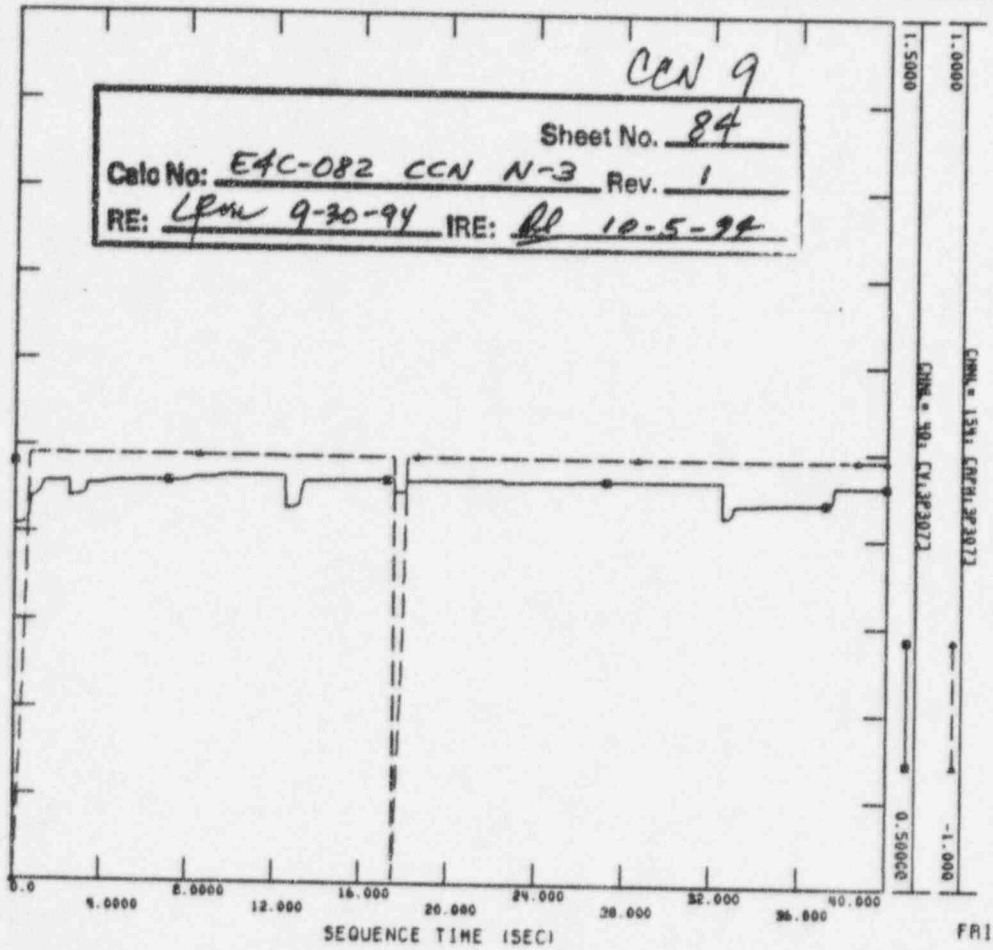
3P025-B

CCN 9

Sheet No. 84

Calc No: E4C-082 CCN N-3 Rev. 1

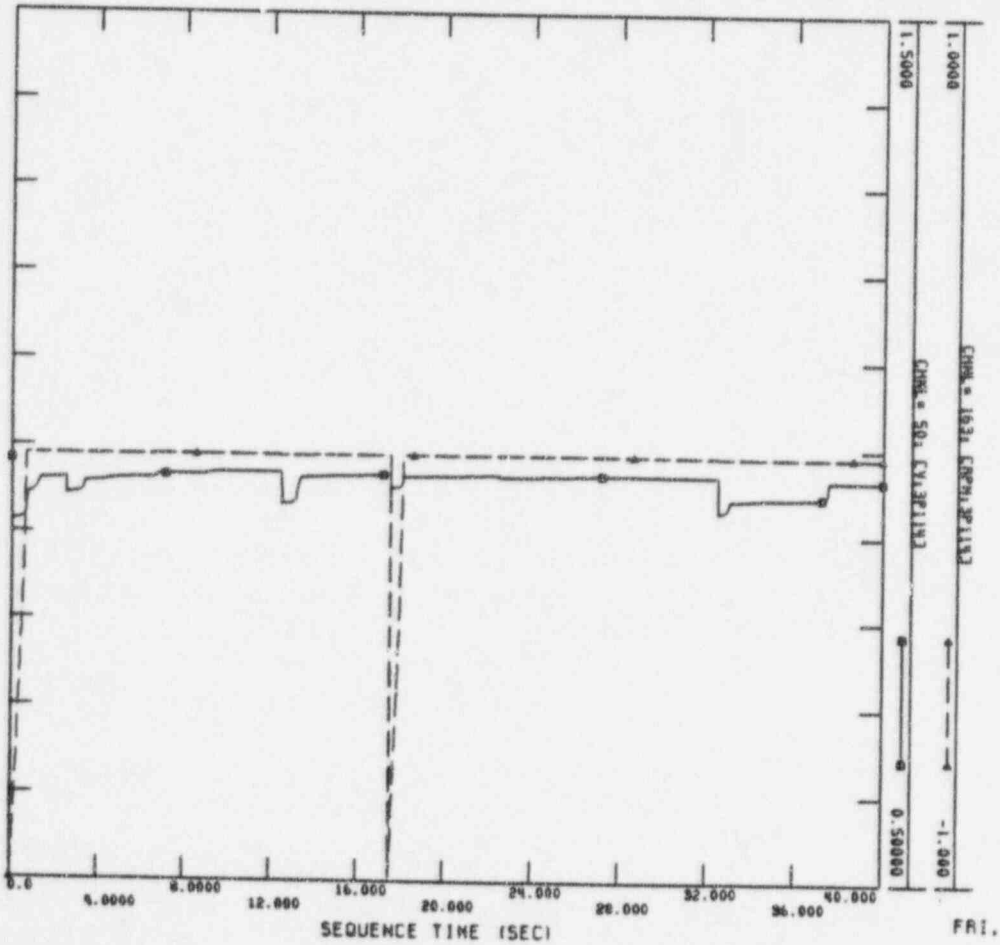
RE: LPM 9-30-94 IRE: RL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBX]CHANOUT_IVBX

FRI, SEP 16 1994 15:21

3P307



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBX]CHANOUT_IVBX

FRI, SEP 16 1994 15:21

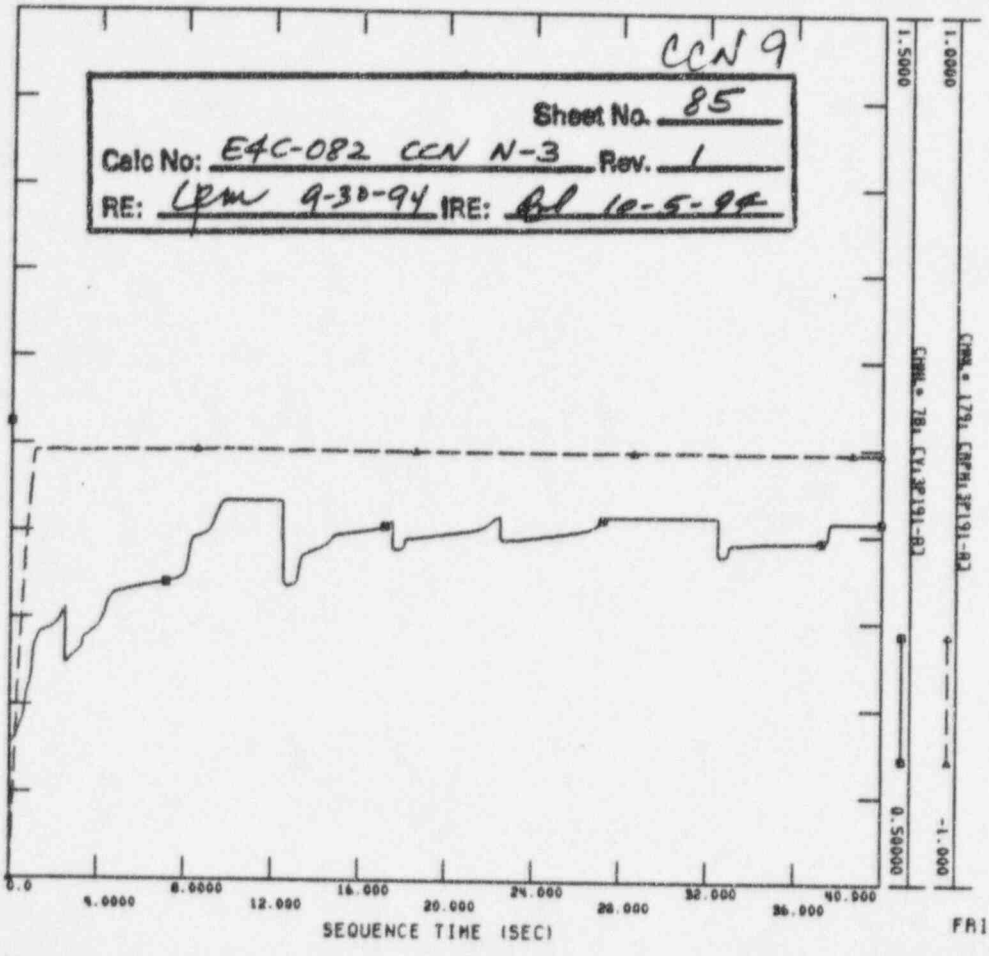
3P114

CCN 9

Sheet No. 85

Calc No: E4C-082 CCN N-3 Rev. 1

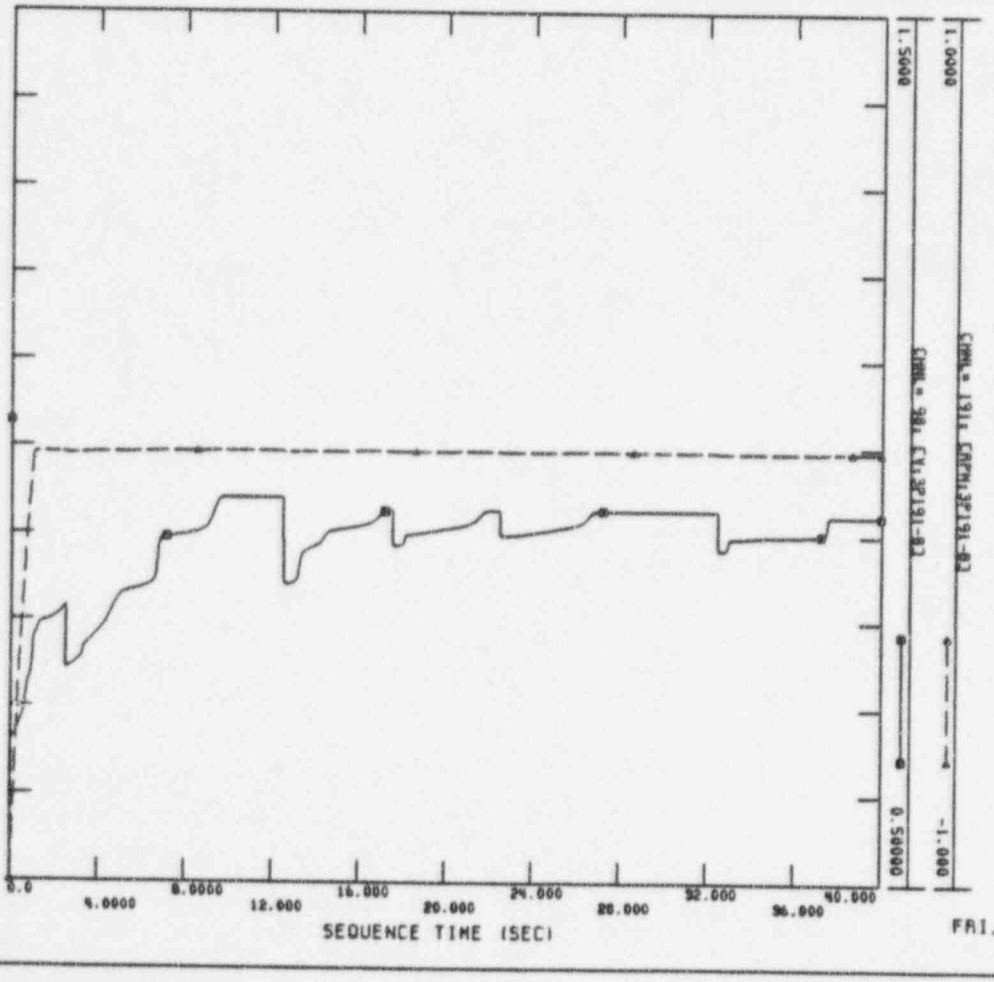
RE: LPM 9-30-94 IRE: BL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBXJCHANOUT_IVBX

FRI, SEP 16 1994 15:21

3P191-A



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBXJCHANOUT_IVBX

FRI, SEP 16 1994 15:21

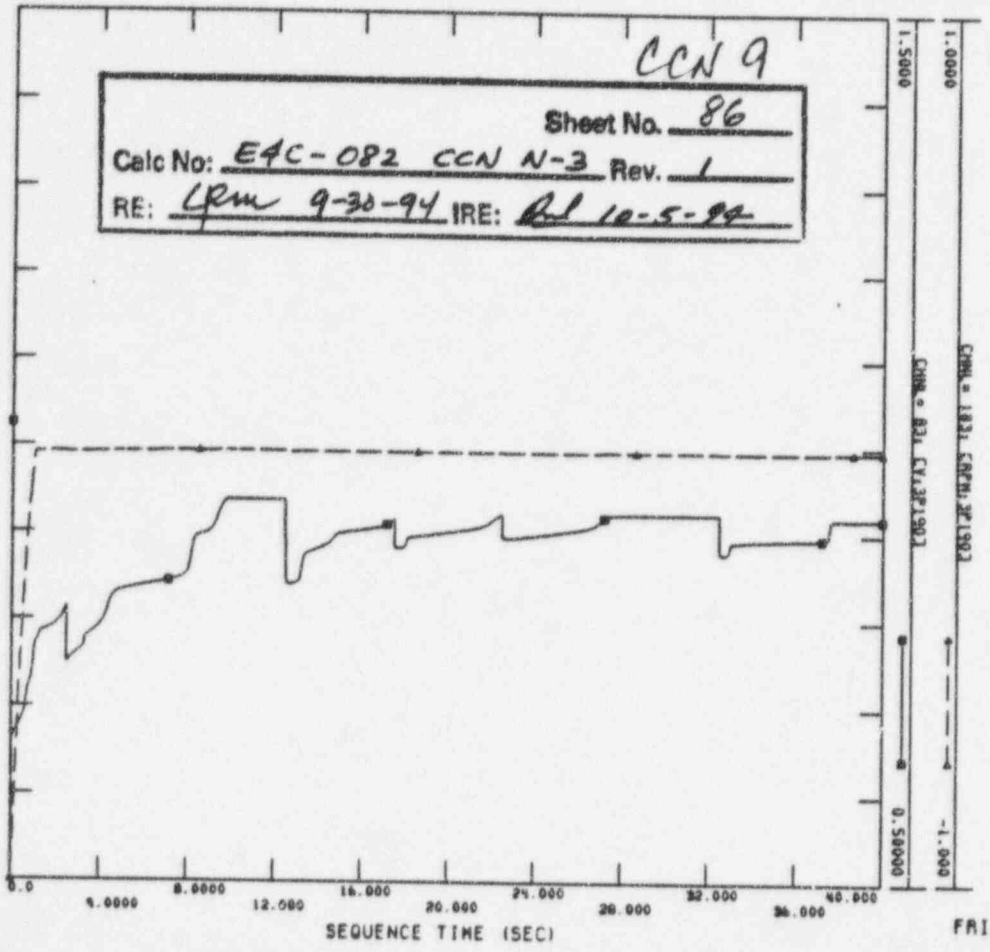
3P191-B

CCN 9

Sheet No. 86

Calc No: E4C-082 CCN N-3 Rev. 1

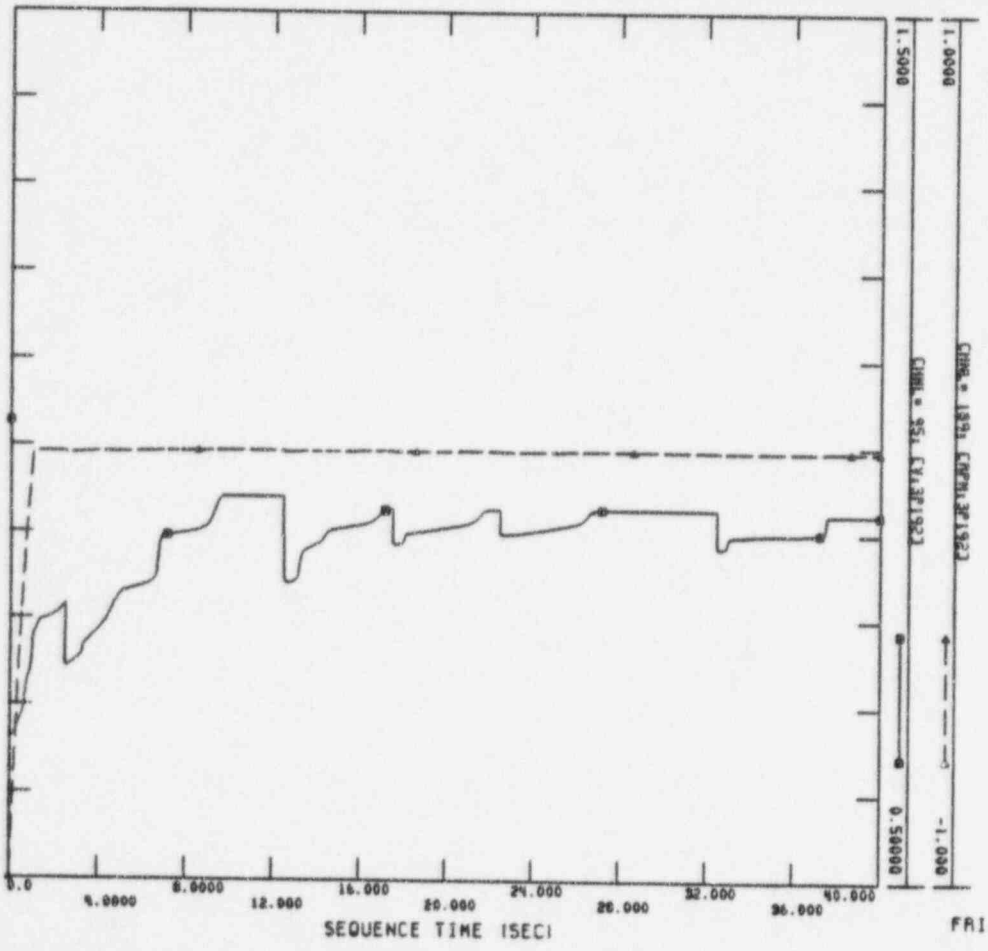
RE: LRM 9-30-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBXJCHANOUT_IVBX

FRI, SEP 16 1994 15:21

3P190



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBXJCHANOUT_IVBX

FRI, SEP 16 1994 15:21

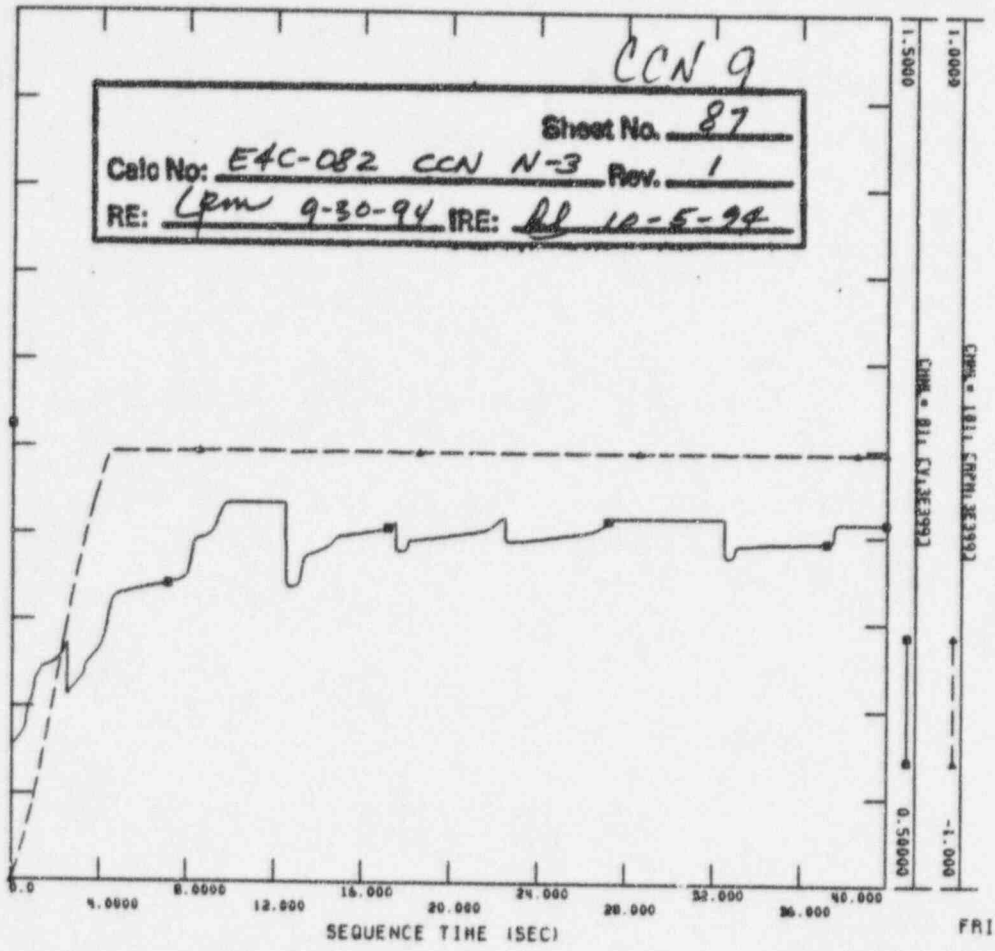
3P192

CCN 9

Sheet No. 87

Calc No: E4C-082 CCN N-3 Rev. 1

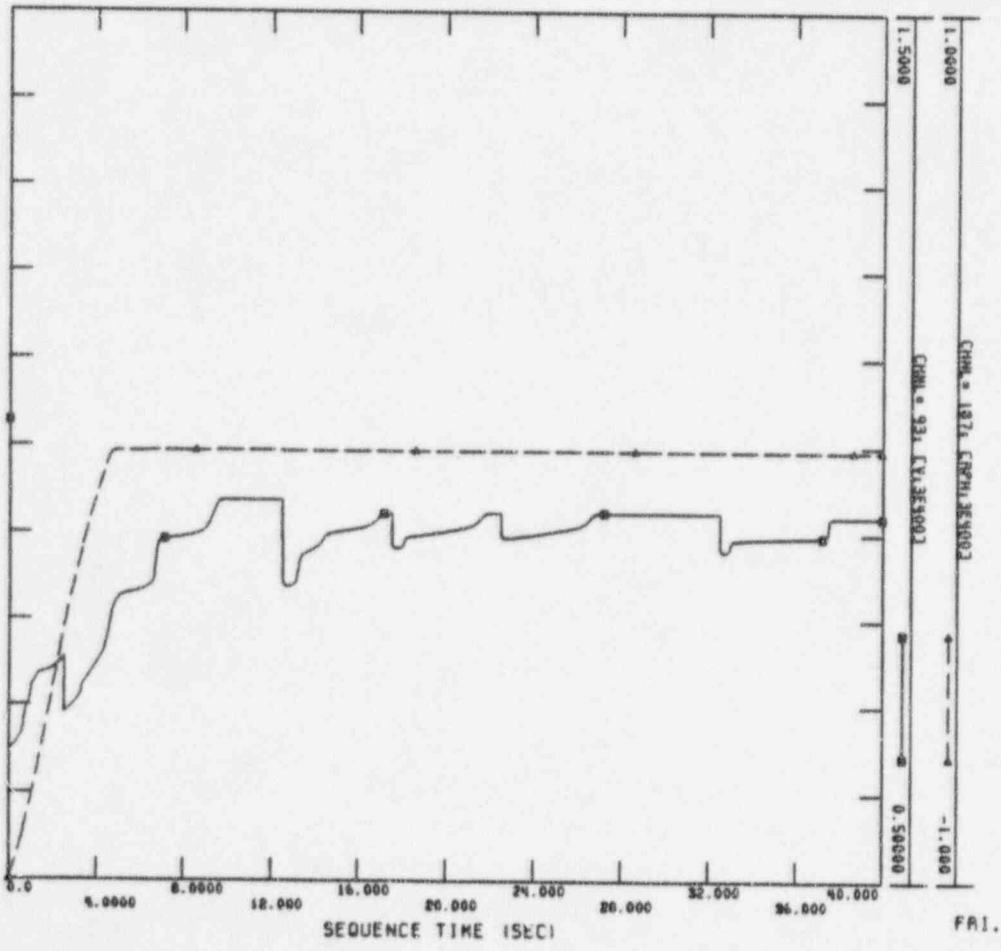
RE: Lpm 9-30-94 IRE: RL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: E.CASE_IVBX.CHANOUT_IVBX

FRI, SEP 16 1994 15:21

3E399



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: E.CASE_IVBX.CHANOUT_IVBX

FRI, SEP 16 1994 15:21

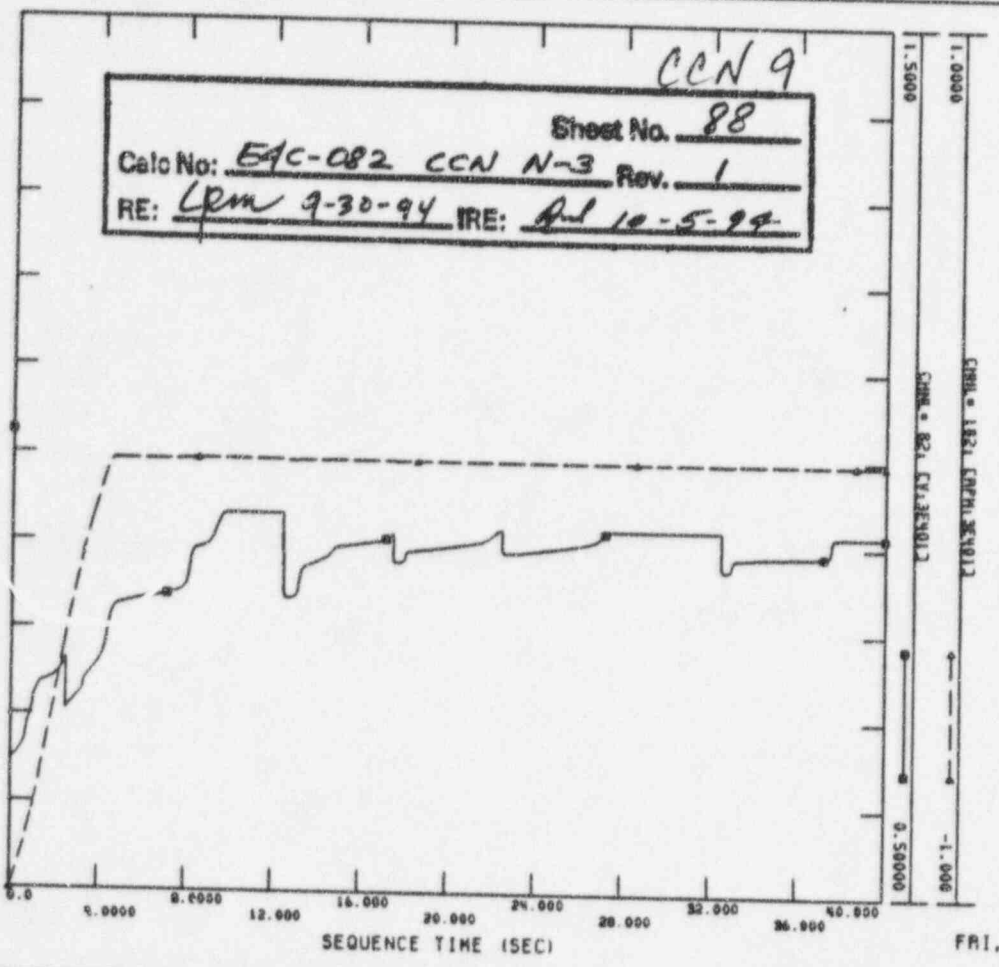
3E400

CCN 9

Sheet No. 88

Calc No: E4C-082 CCN N-3 Rev. 1

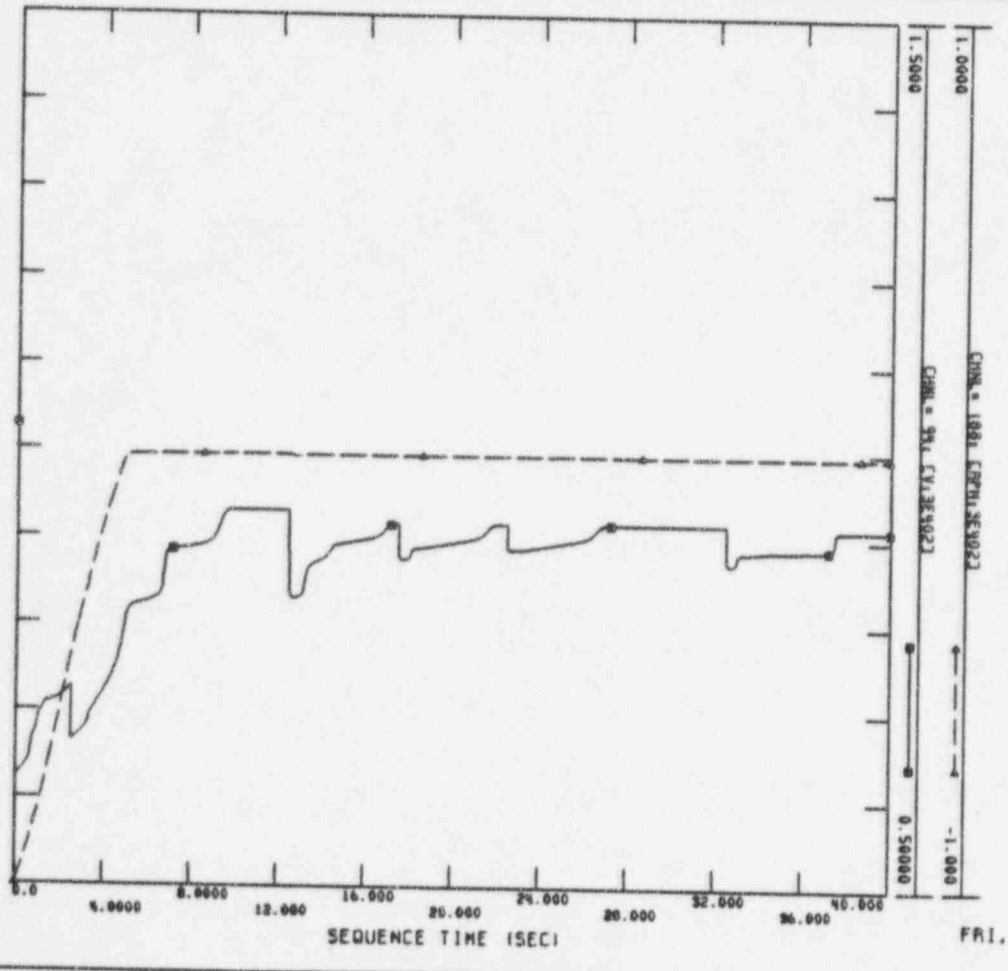
RE: Lpm 9-30-94 IRE: Ad 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC., PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: E.CASE_IVBX]CHANOUT_IVBX

FRI, SEP 16 1994 15:21

3E401



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC., PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: E.CASE_IVBX]CHANOUT_IVBX

FRI, SEP 16 1994 15:22

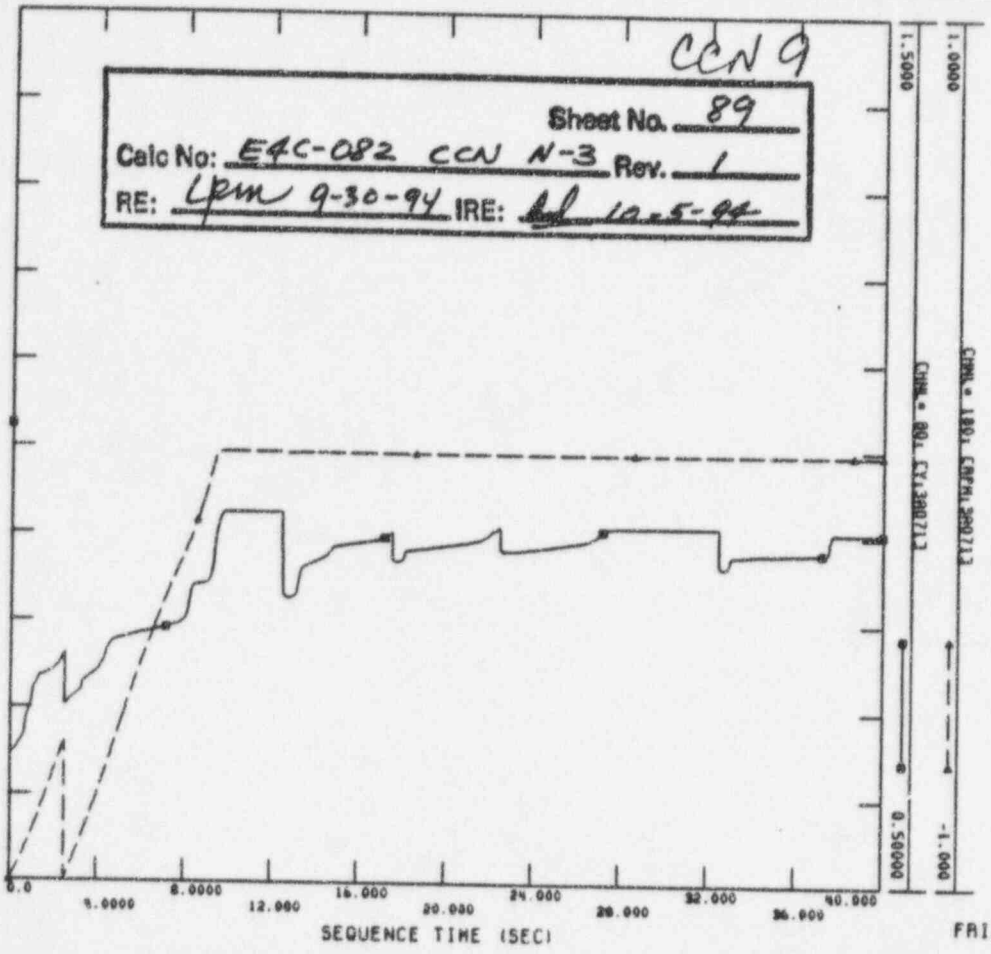
3E402

CCN 9

Sheet No. 89

Calc No: E4C-082 CCN N-3 Rev. 1

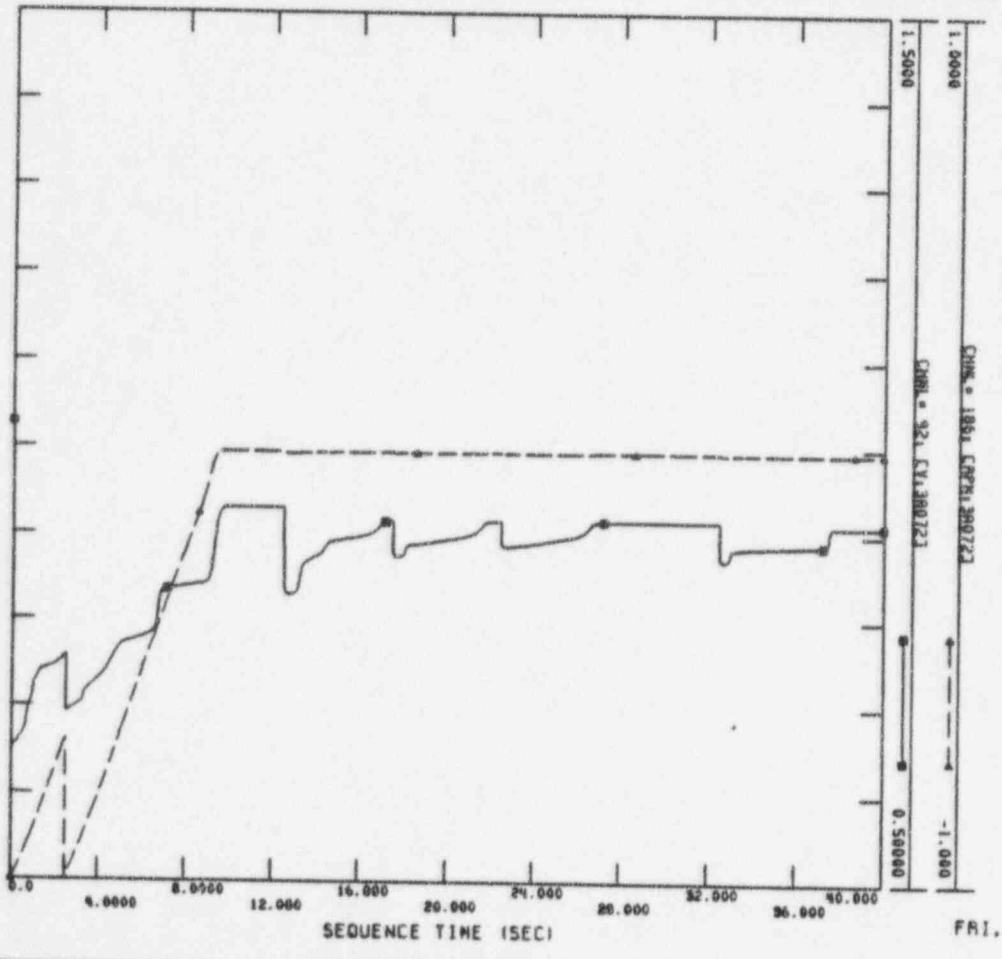
RE: Lpm 9-30-94 IRE: [illegible] 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC., PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8X]CHANOUT_IV8X

FRI, SEP 16 1994 15:22

3A071



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC., PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
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FRI, SEP 16 1994 15:22

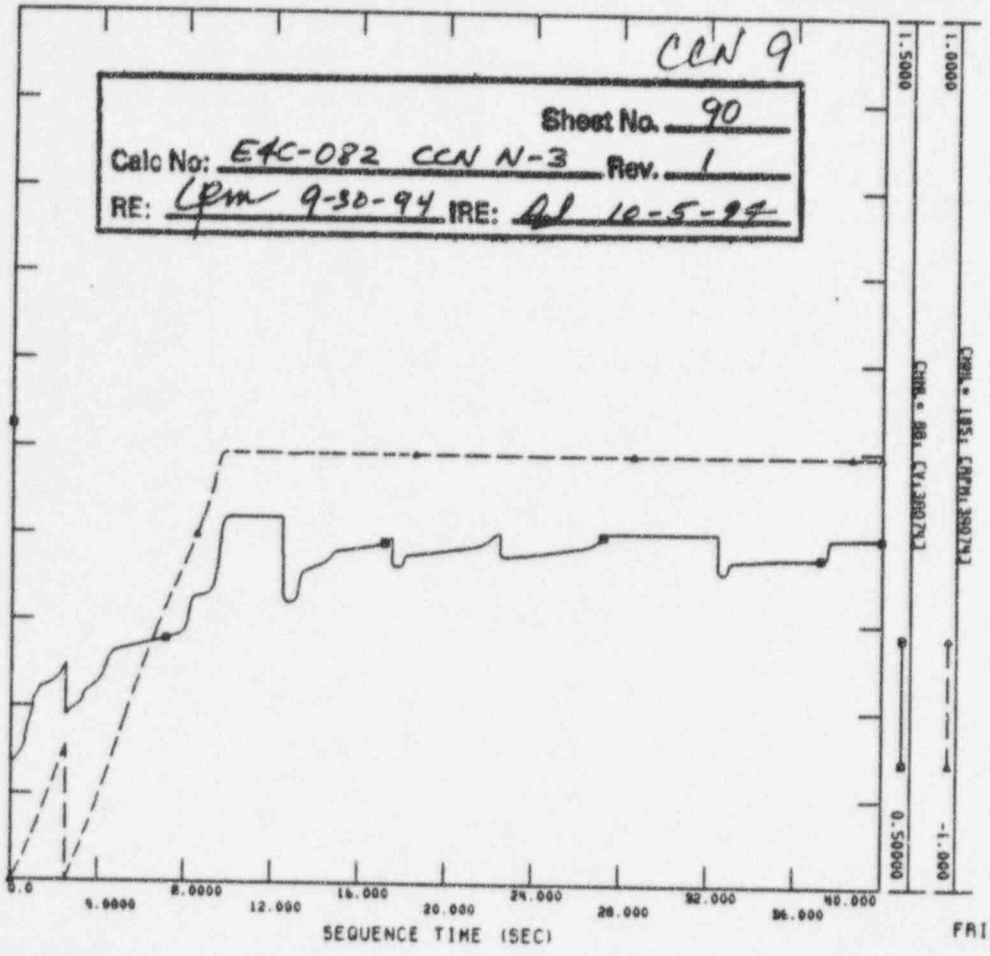
3A072

CCN 9

Sheet No. 90

Calc No: E4C-082 CCN N-3 Rev. 1

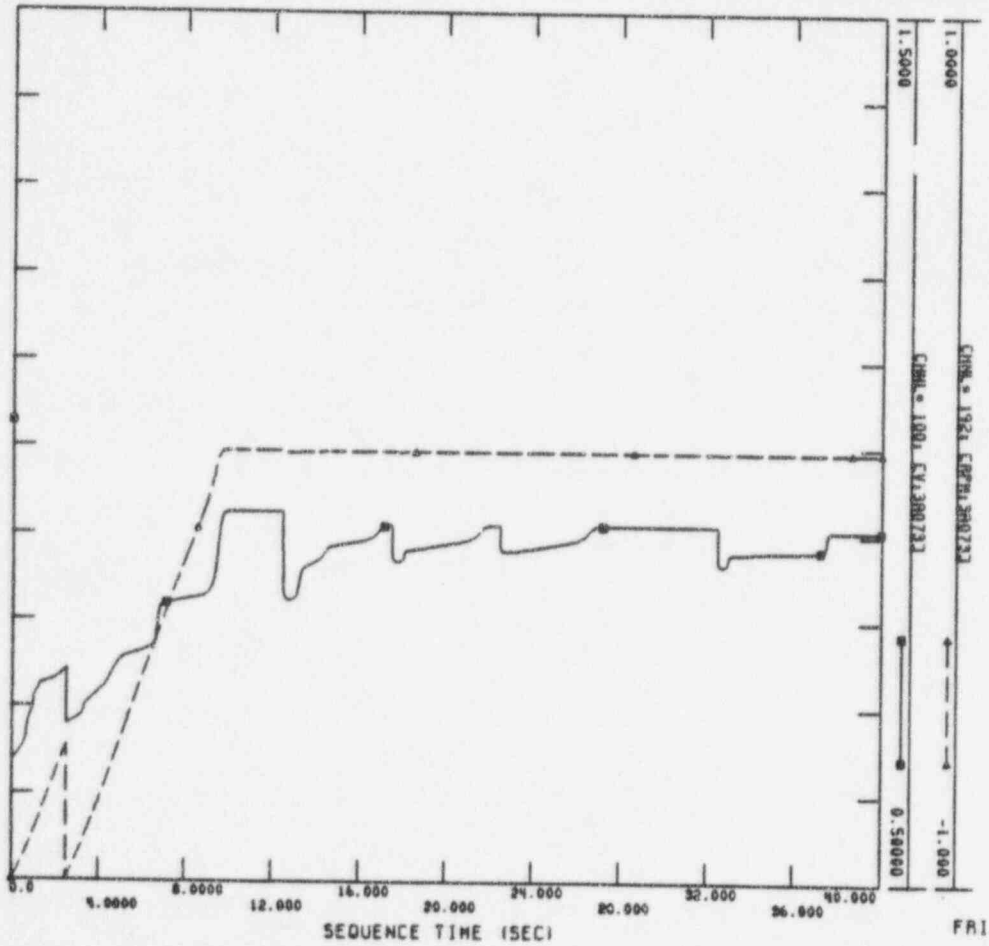
RE: CPM 9-30-94 IRE: AL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBX.CHANOUT_IVBX

FRI, SEP 16 1994 15:22

3A074



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBX.CHANOUT_IVBX

FRI, SEP 16 1994 15:22

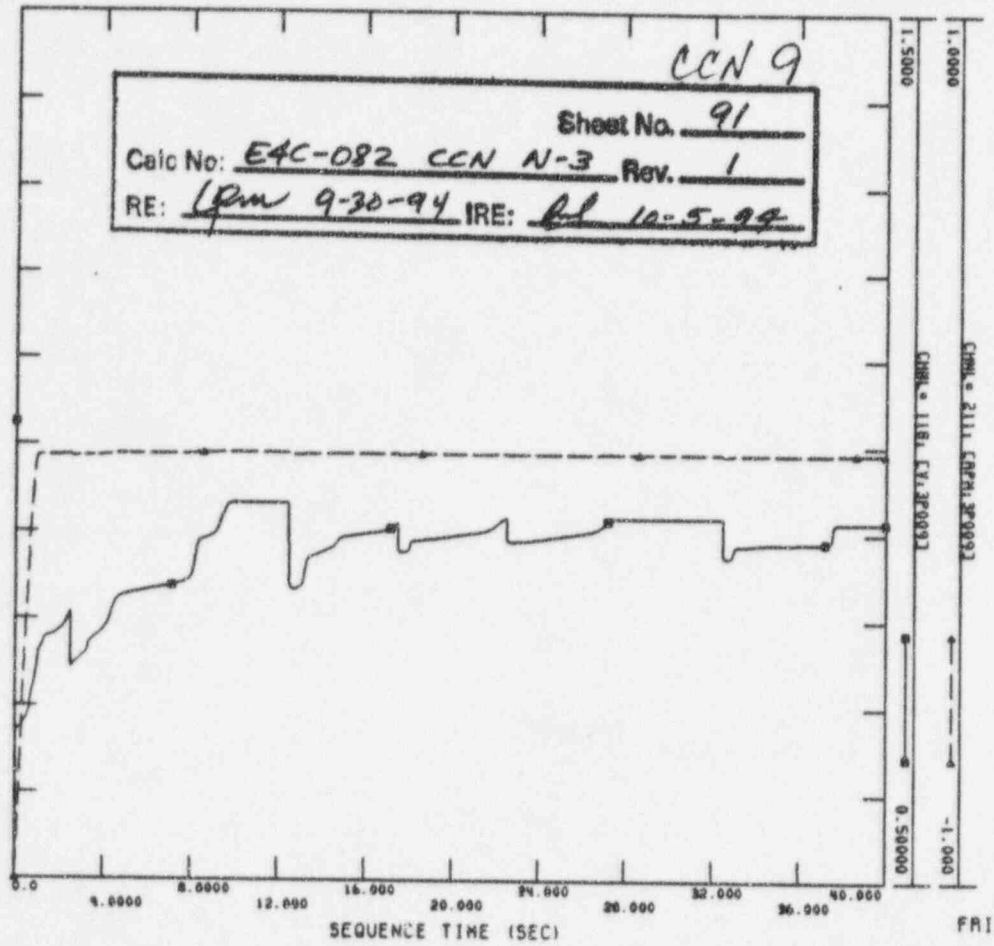
3A073

CCN 9

Sheet No. 91

Calc No: E4C-082 CCN N-3 Rev. 1

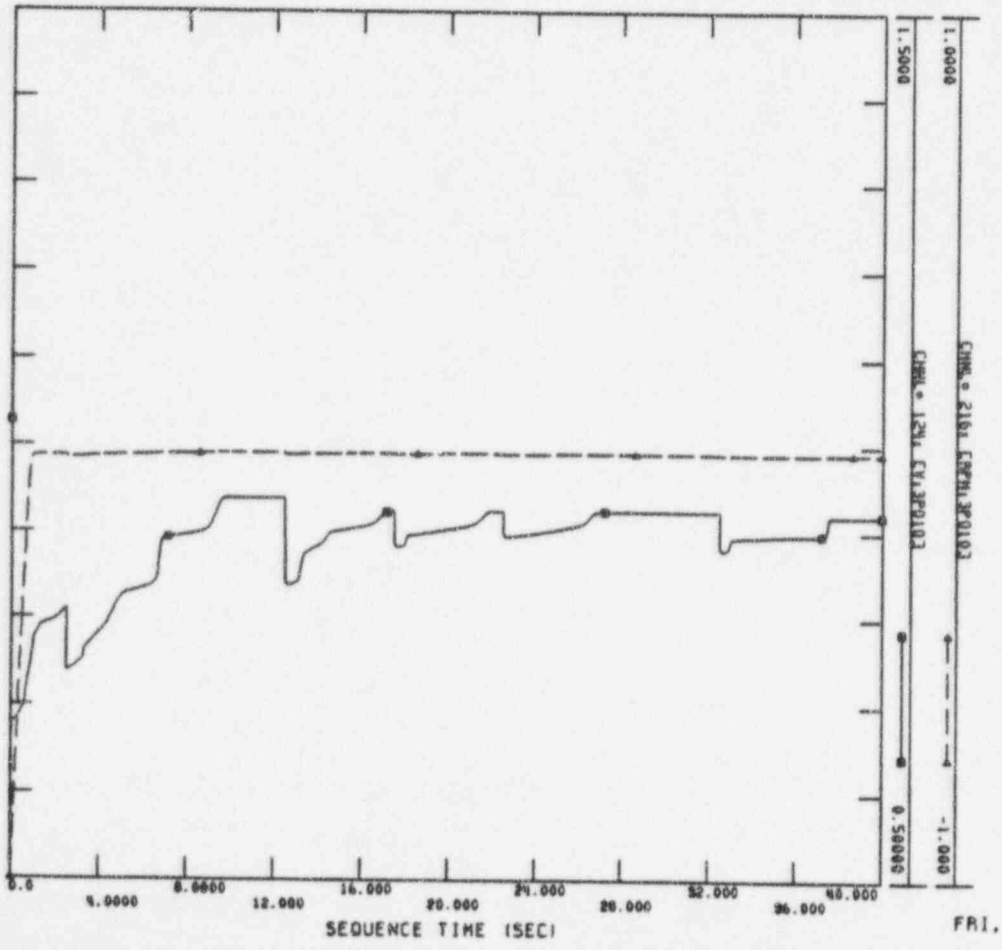
RE: LPM 9-30-94 IRE: RL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8X]CHANOUT_IV8X

FRI, SEP 16 1994 15:22

3P009



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8X]CHANOUT_IV8X

FRI, SEP 16 1994 15:22

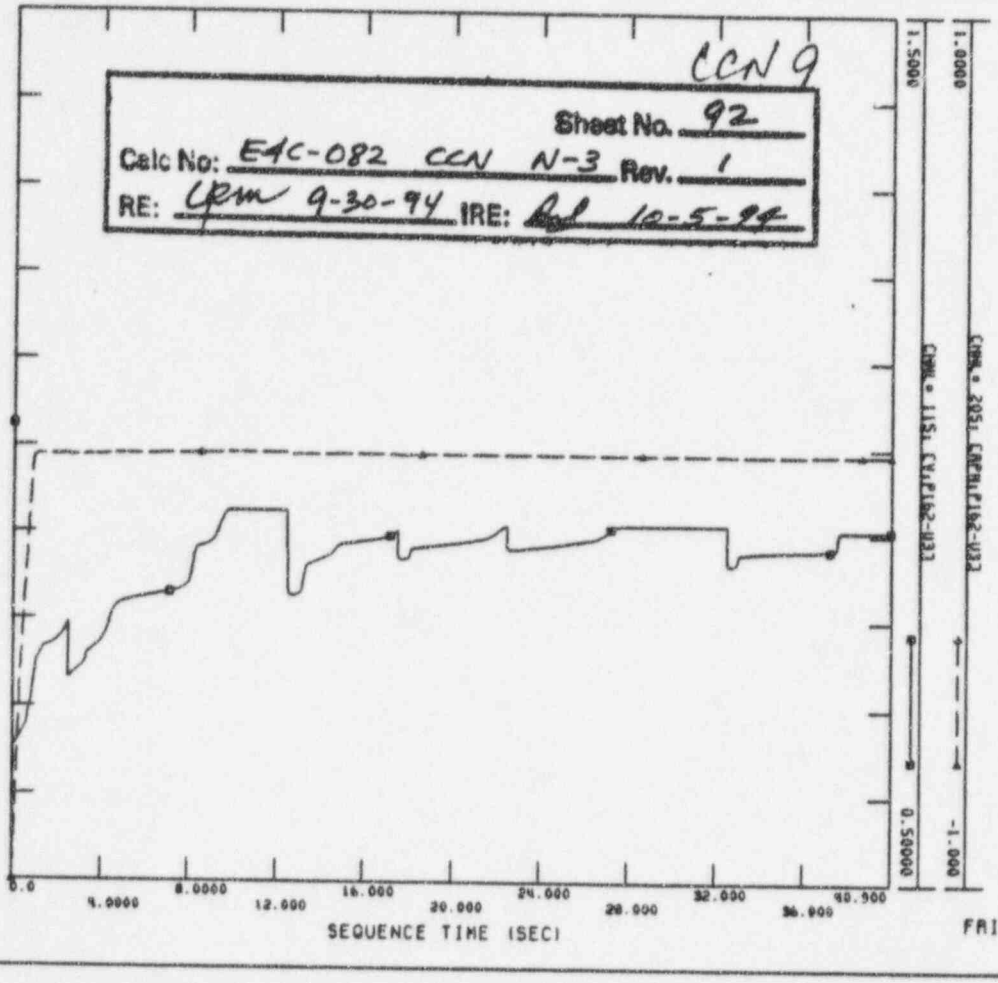
3P010

CCN 9

Sheet No. 92

Calc No: E4C-082 CCN N-3 Rev. 1

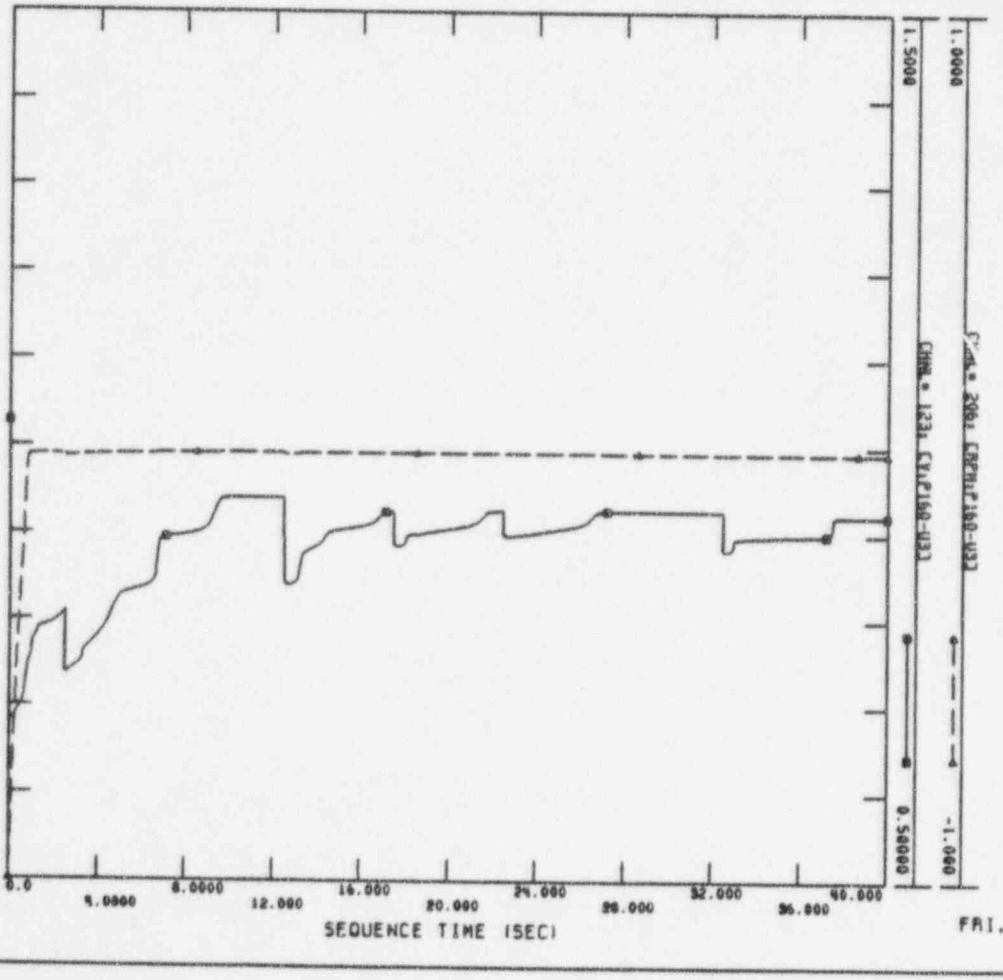
RE: CPM 9-30-94 IRE: RJL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: E.CASE_IVBX]CHANOUT_IVBX

FRI, SEP 16 1994 15:22

P162-U3



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: E.CASE_IVBX]CHANOUT_IVBX

FRI, SEP 16 1994 15:22

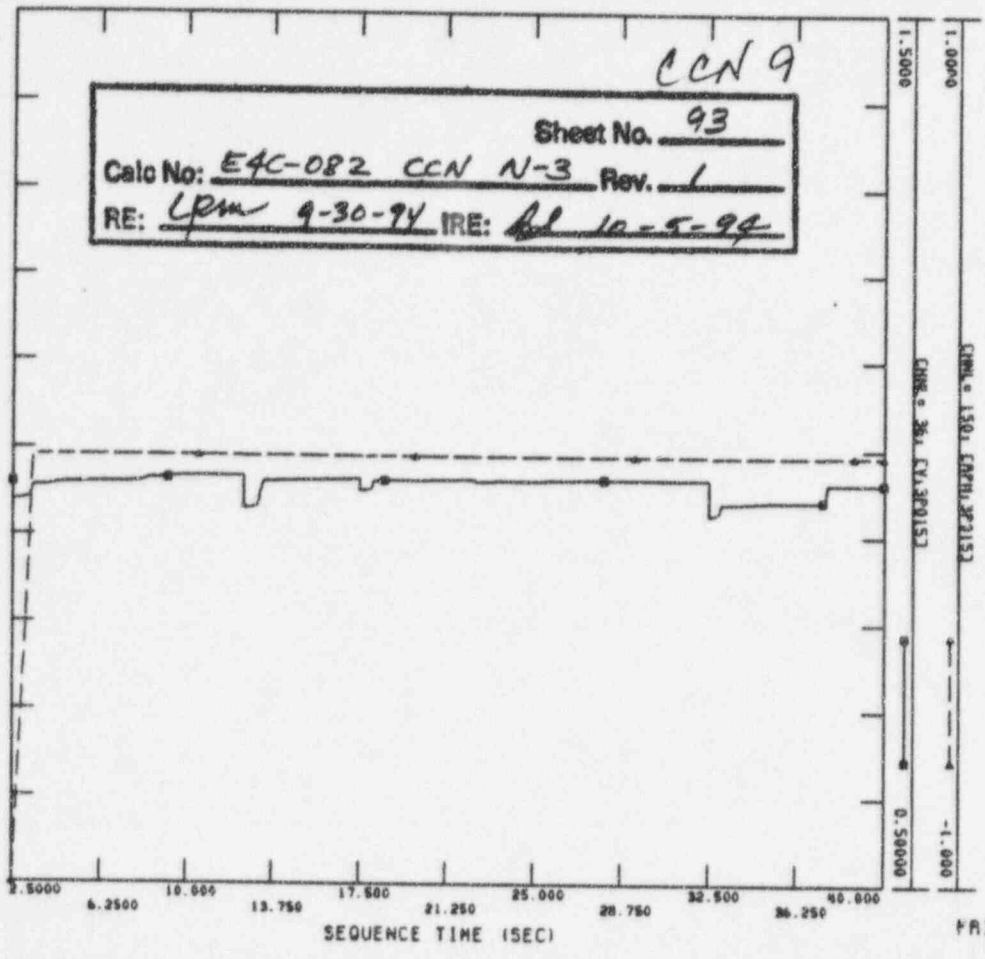
P160-U3

CCN 9

Sheet No. 93

Calc No: E4C-082 CCN N-3 Rev. 1

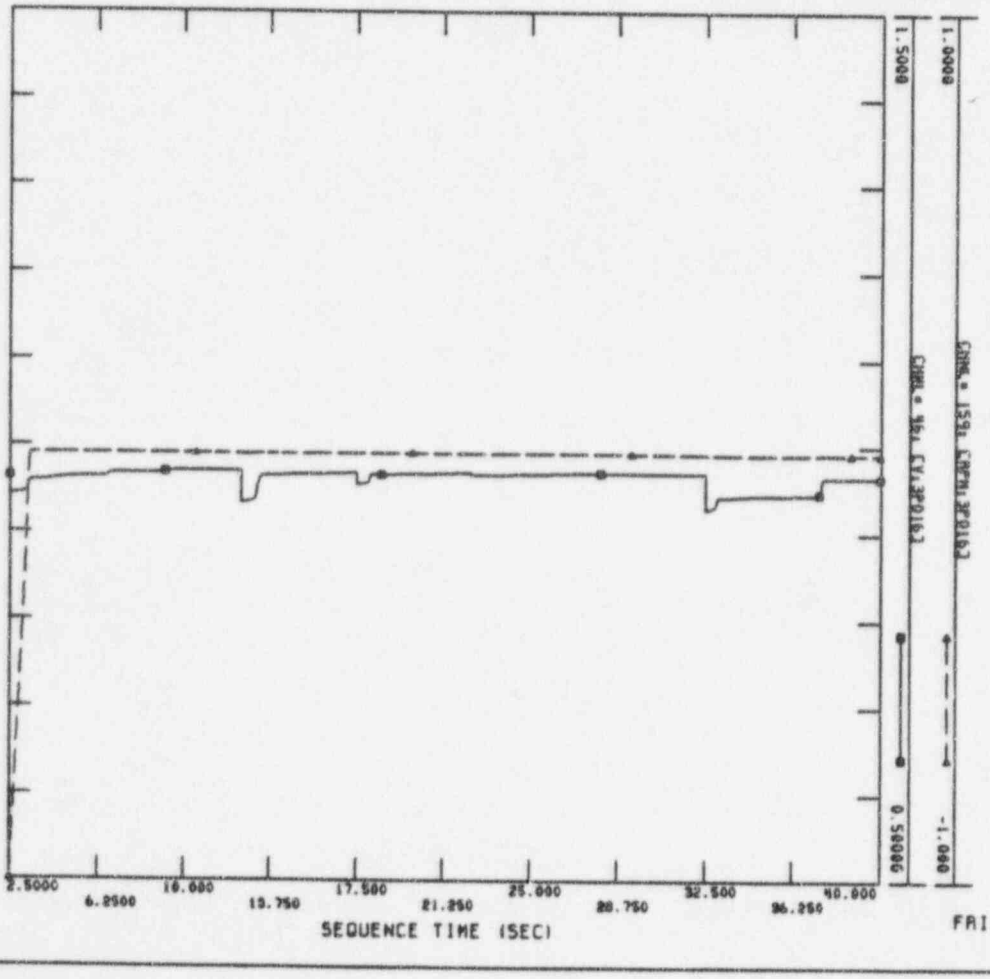
RE: LPM 9-30-94 IRE: RL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBX.CHANOUT_IVBX

FRI, SEP 16 1994 15:22

3P015



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBX.CHANOUT_IVBX

FRI, SEP 16 1994 15:23

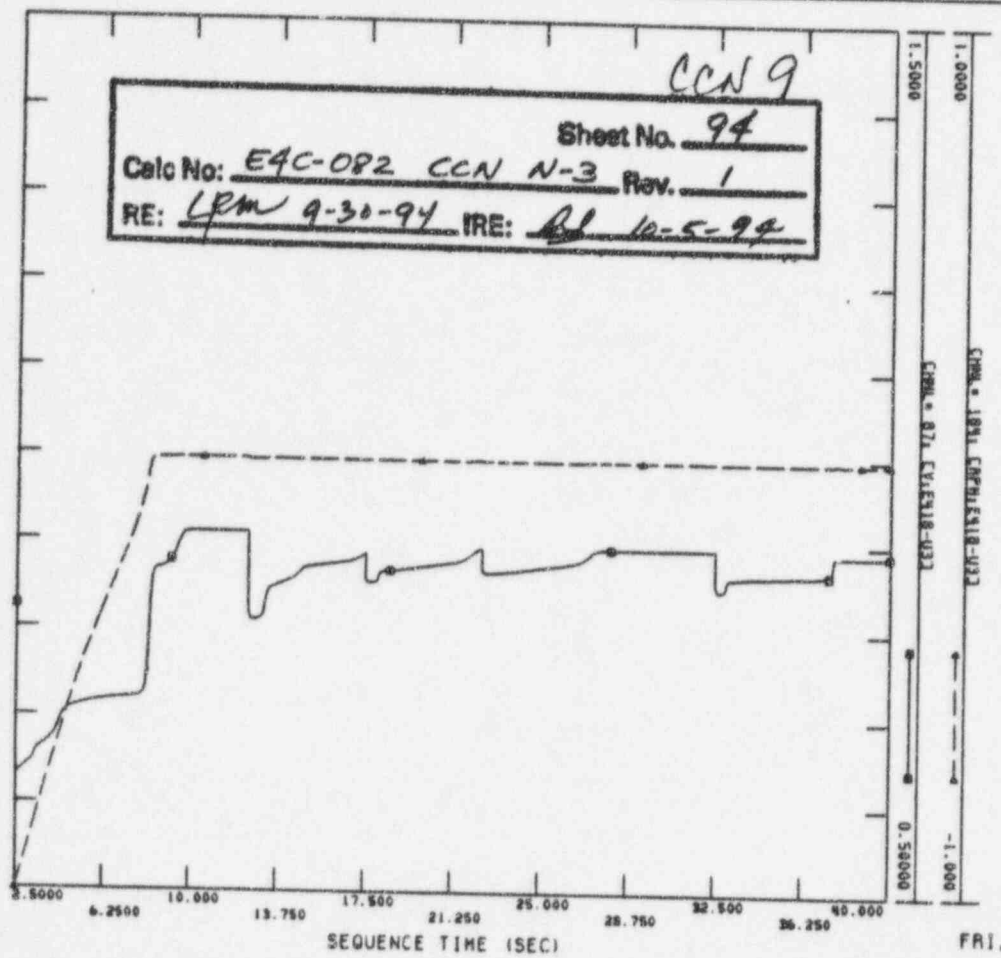
3P016

CCN 9

Sheet No. 94

Calc No: E4C-082 CCN N-3 Rev. 1

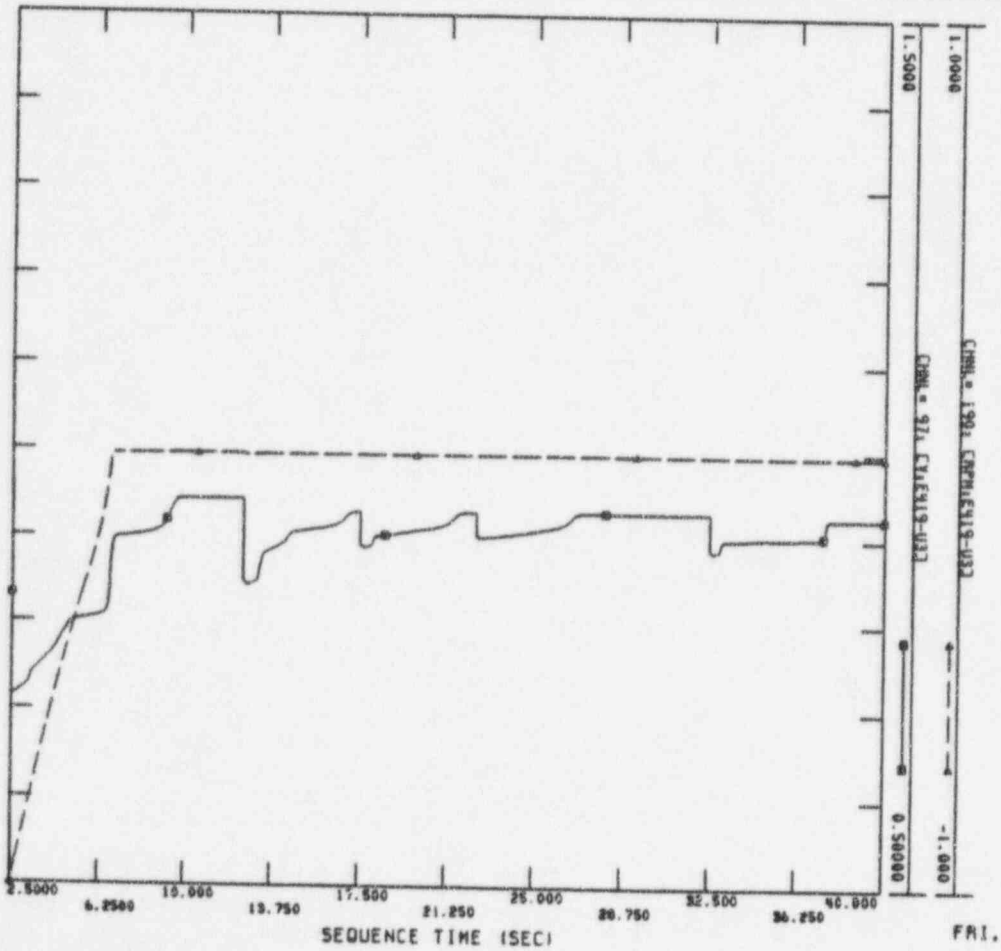
RE: LPM 9-30-94 IRE: BL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8X.CHANOUT_IV8X

FRI, SEP 16 1994 15:23

E418-U3



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8X.CHANOUT_IV8X

FRI, SEP 16 1994 15:23

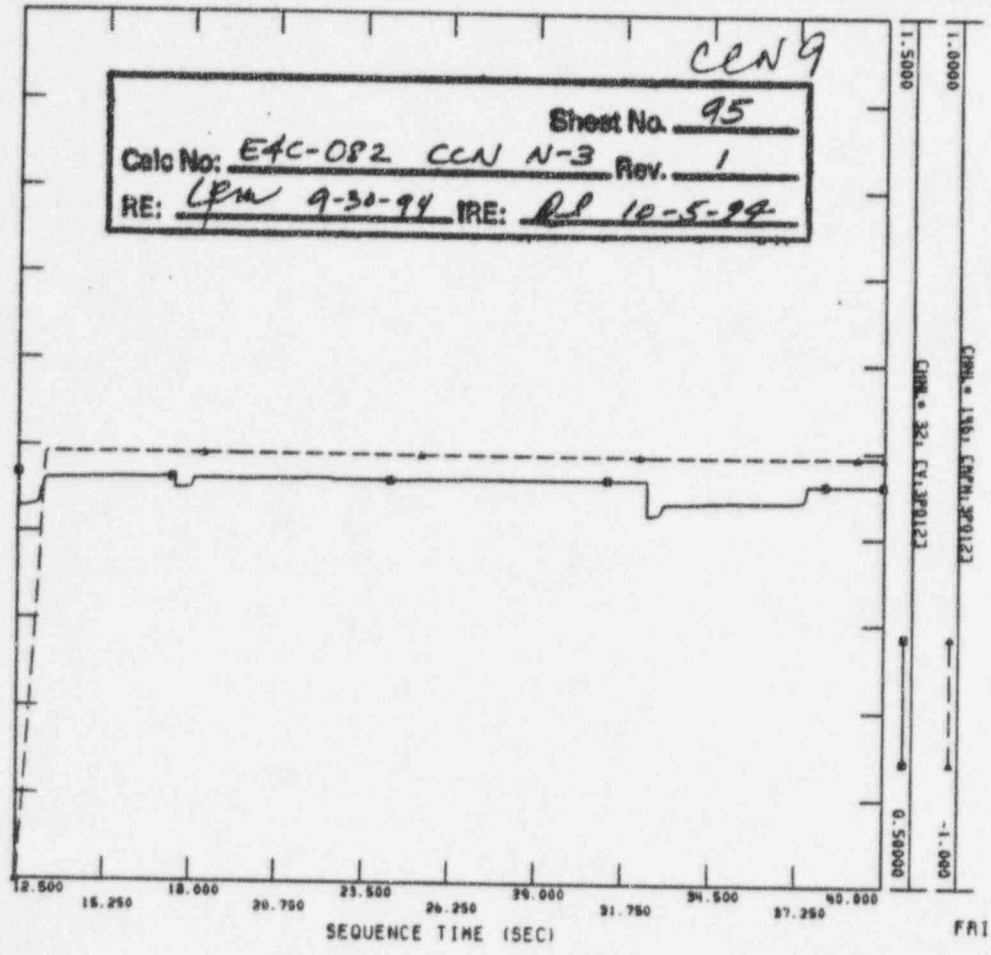
E419-U3

CCN 9

Sheet No. 95

Calc No: E4C-082 CCN N-3 Rev. 1

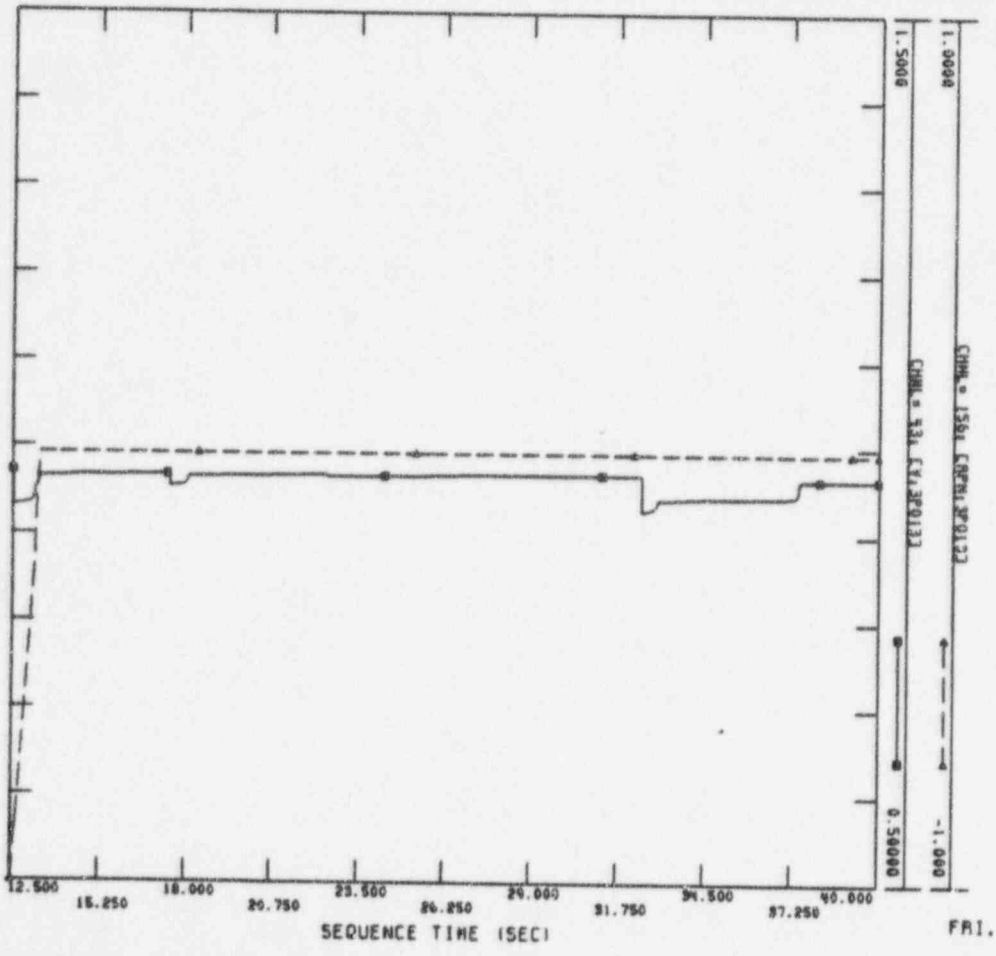
RE: LPM 9-30-94 IRE: RS 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBX.CHANOUT_IVBX

FRI, SEP 16 1994 15:23

3P012



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBX.CHANOUT_IVBX

FRI, SEP 16 1994 15:24

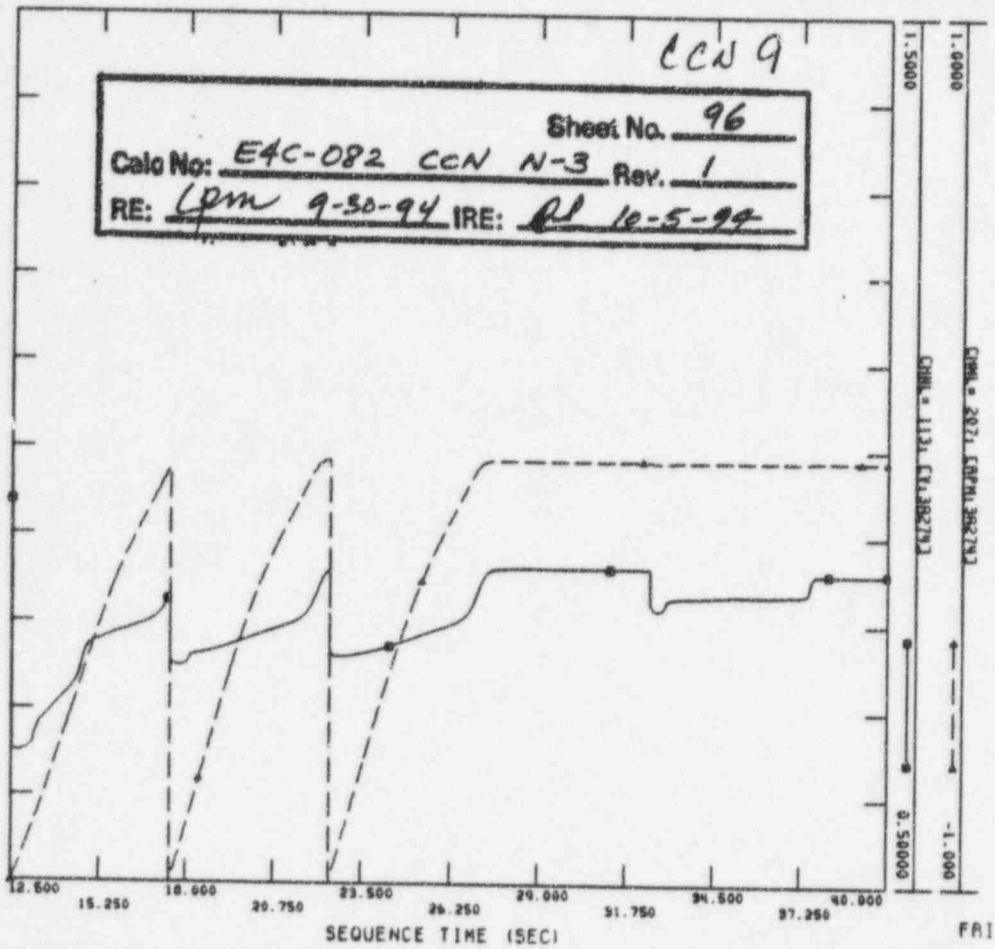
3P013

CCN 9

Sheet No. 96

Calc No: E4C-082 CCN N-3 Rev. 1

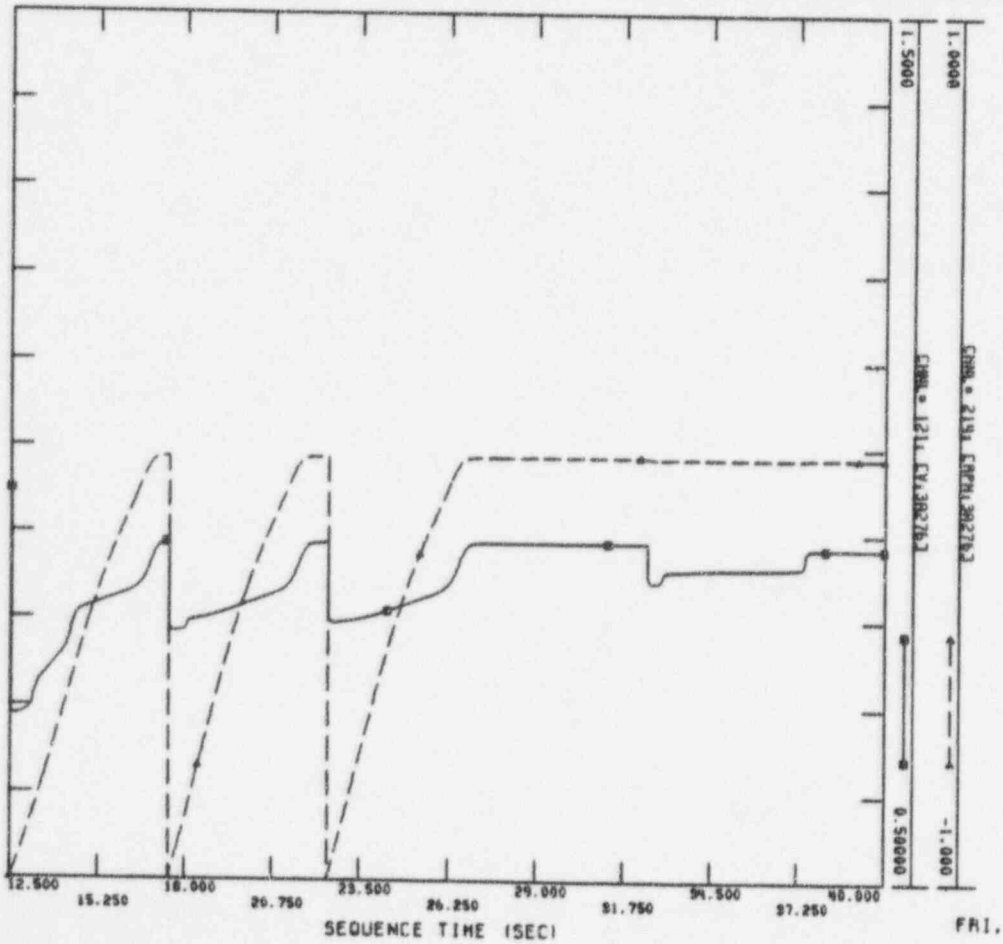
RE: LPM 9-30-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8X.CHANOUT_IV8X

FRI, SEP 16 1994 15:24

3A274



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8X.CHANOUT_IV8X

FRI, SEP 16 1994 15:24

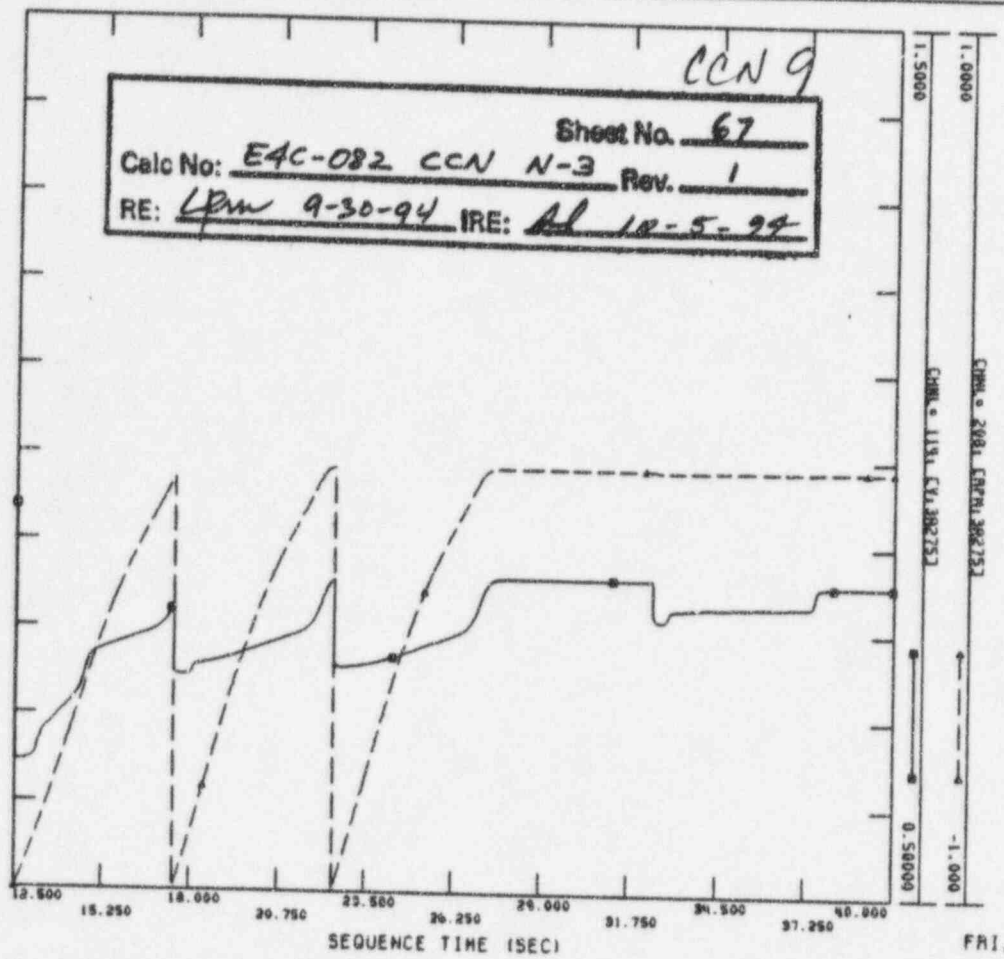
3A276

CCN 9

Sheet No. 67

Calc No: E4C-082 CCN N-3 Rev. 1

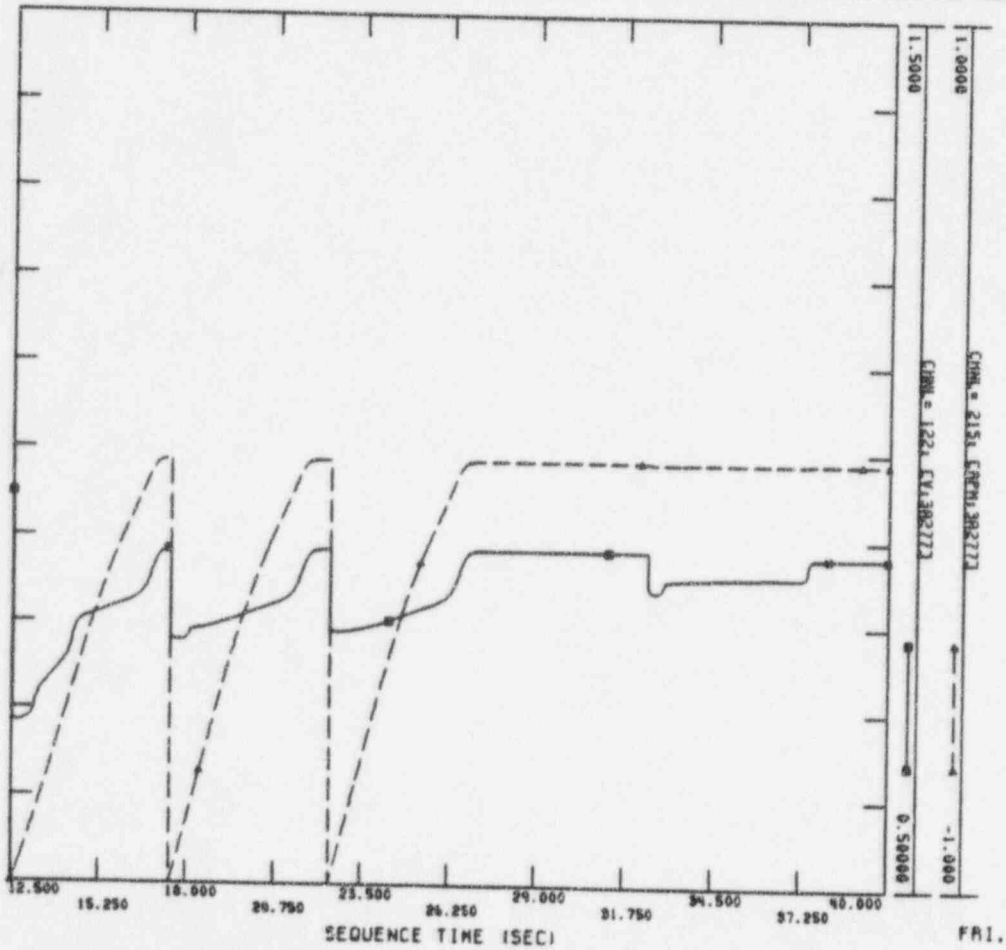
RE: LPM 9-30-94 IRE: AL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC., PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8X.CHANOUT_IV8X

FRI, SEP 16 1994 15:24

3A275



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC., PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8X.CHANOUT_IV8X

FRI, SEP 16 1994 15:24

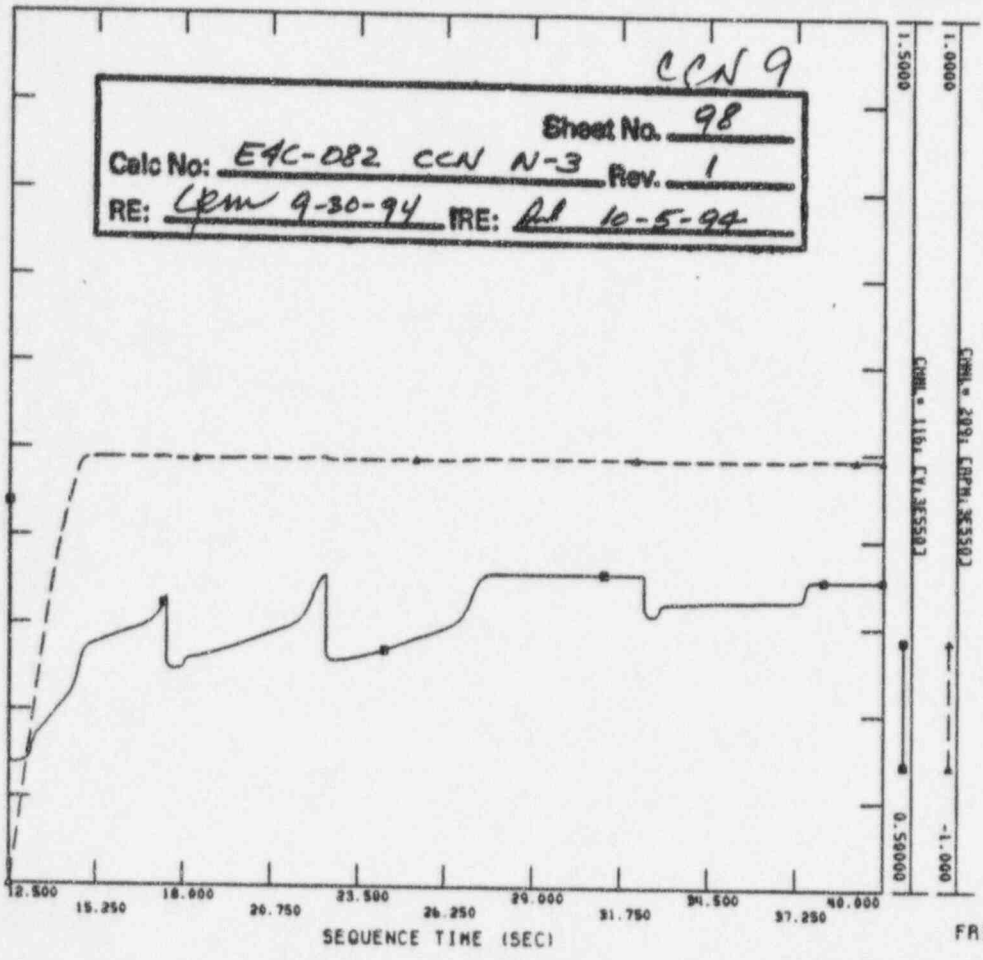
3A277

CCN 9

Sheet No. 98

Calc No: E4C-082 CCN N-3 Rev. 1

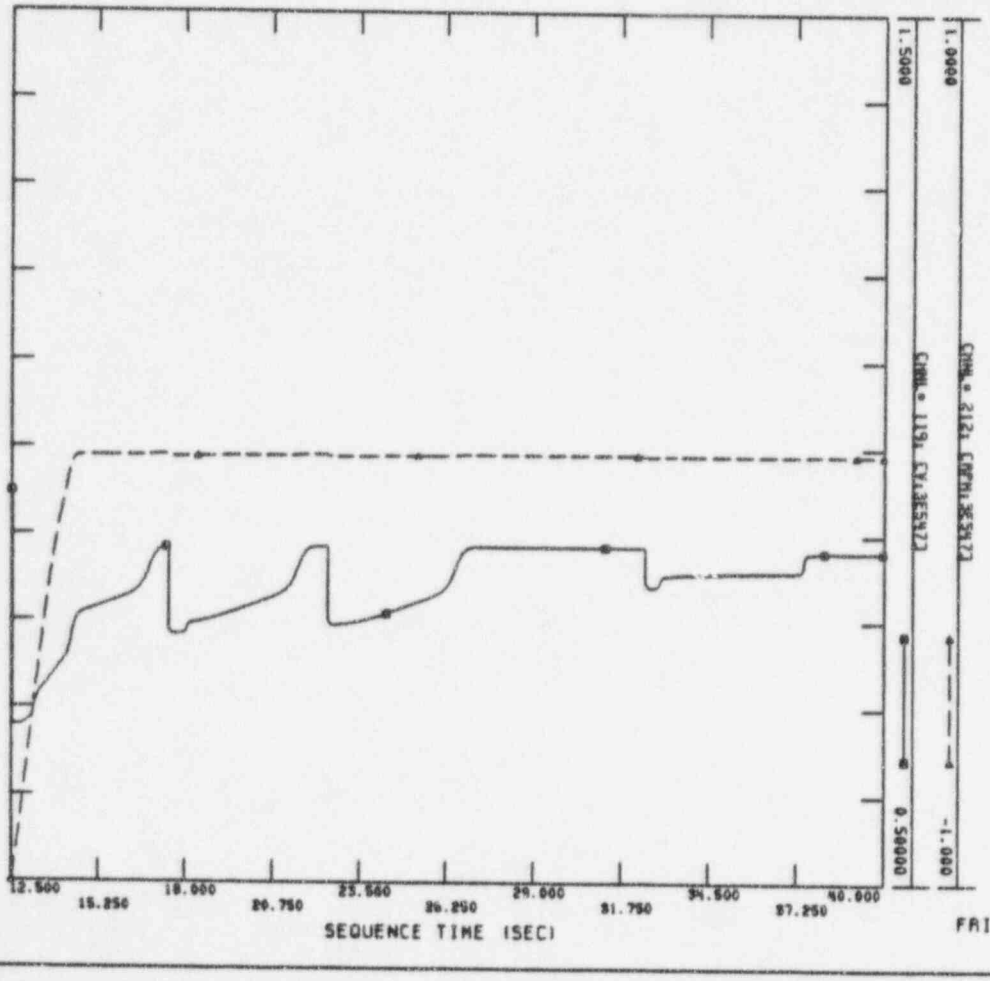
RE: Cpm 9-30-94 IRE: Al 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: E.CASE_IV8X.CHANOUT_IV8X

FRI, SEP 16 1994 15:24

3E550



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: E.CASE_IV8X.CHANOUT_IV8X

FRI, SEP 16 1994 15:24

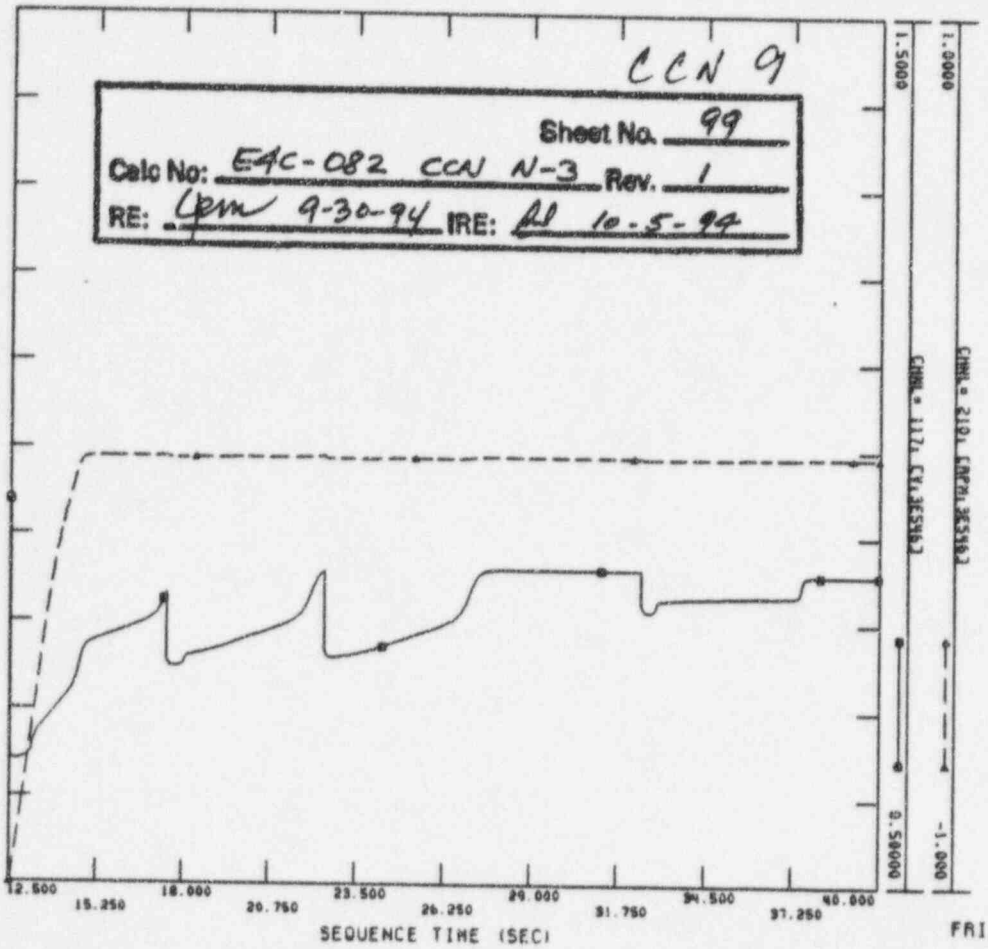
3E547

CCN 9

Sheet No. 99

Calc No: E4C-082 CCN N-3 Rev. 1

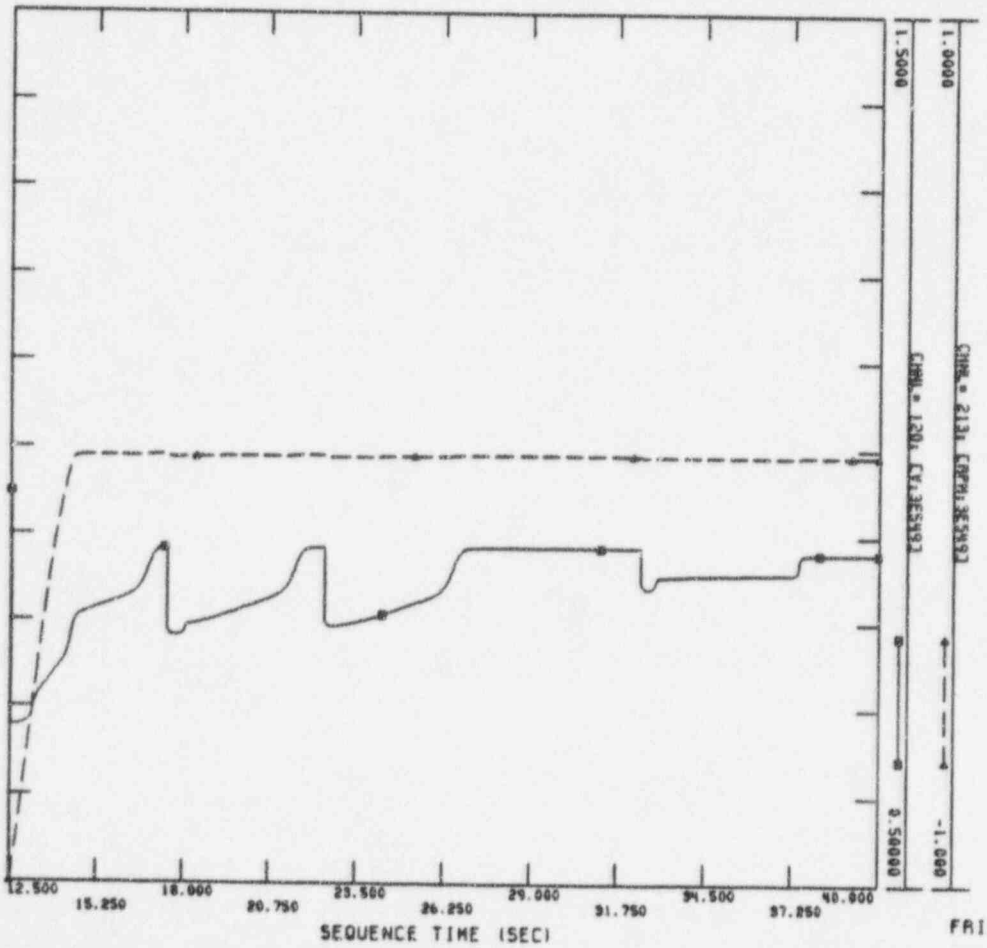
RE: Lpm 9-30-94 IRE: AJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8X.CHANOUT_IV8X

FRI, SEP 16 1994 15:24

3E546



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8X.CHANOUT_IV8X

FRI, SEP 16 1994 15:24

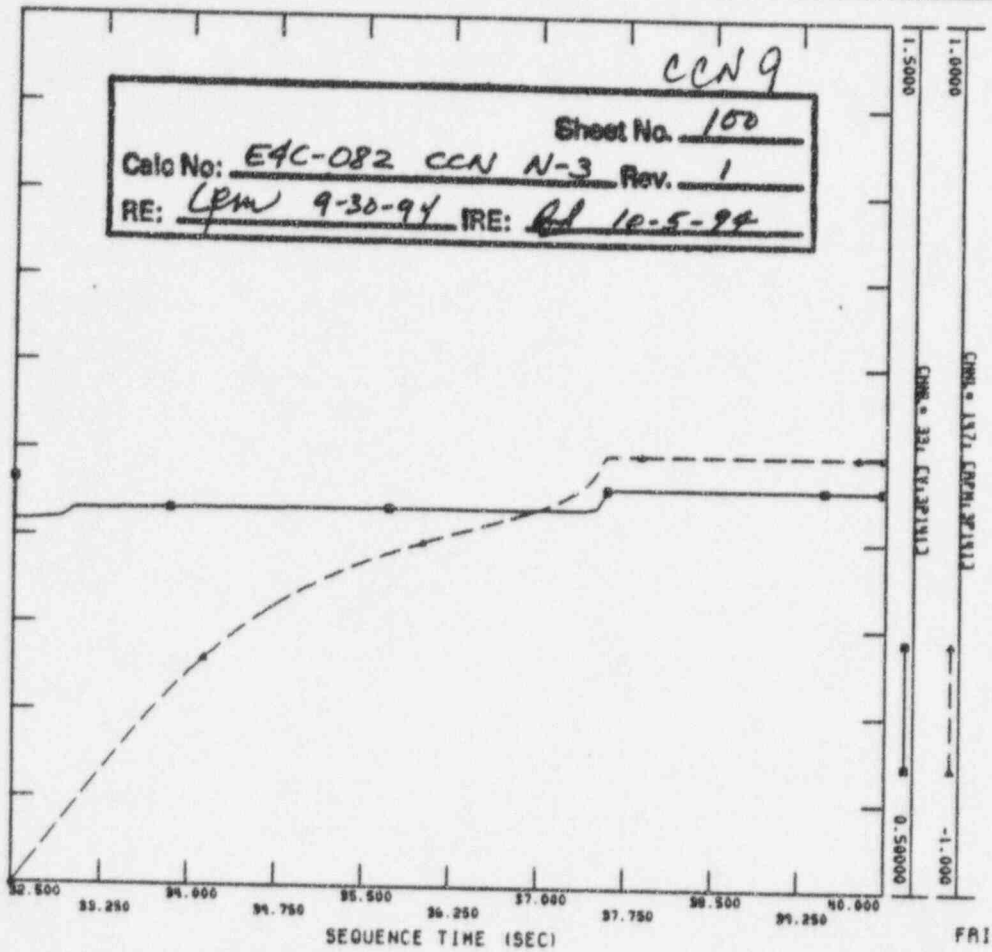
3E549

CCN 9

Sheet No. 100

Calc No: E4C-082 CCN N-3 Rev. 1

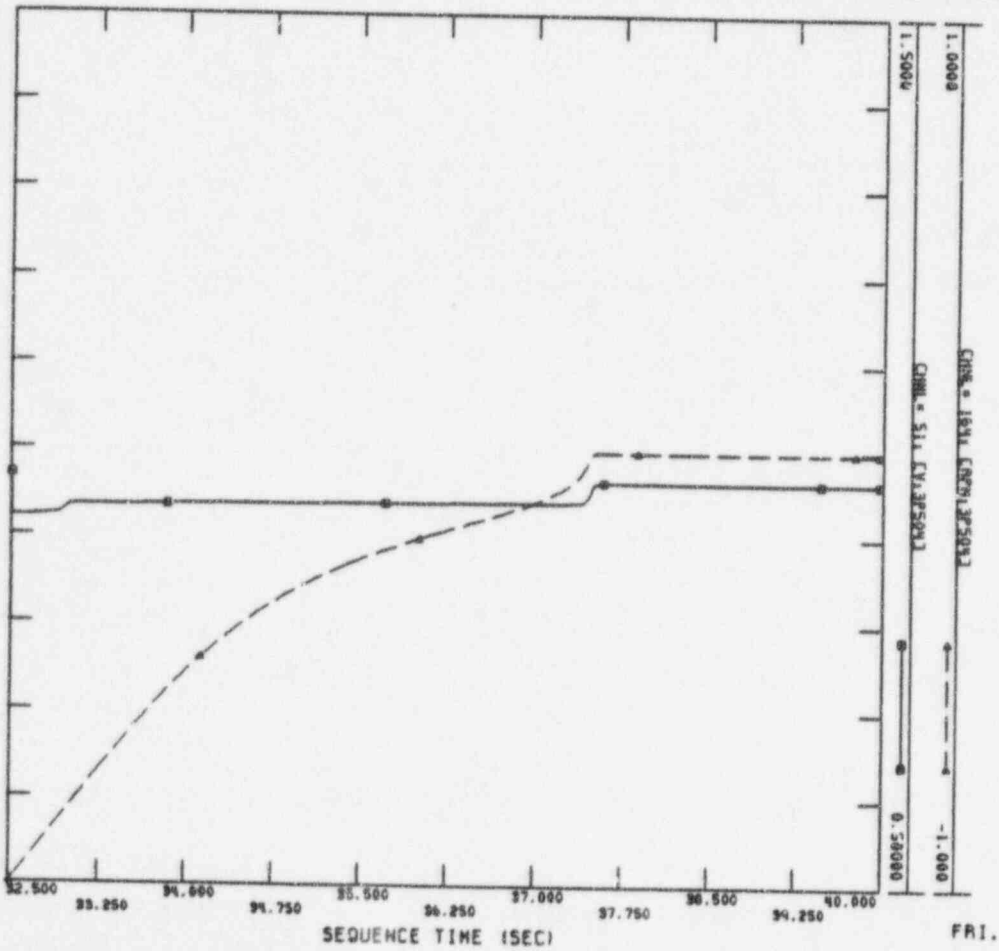
RE: LPW 9-30-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBX.CHANOUT_IVBX

FRI, SEP 16 1994 15:24

3P141



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBX.CHANOUT_IVBX

FRI, SEP 16 1994 15:25

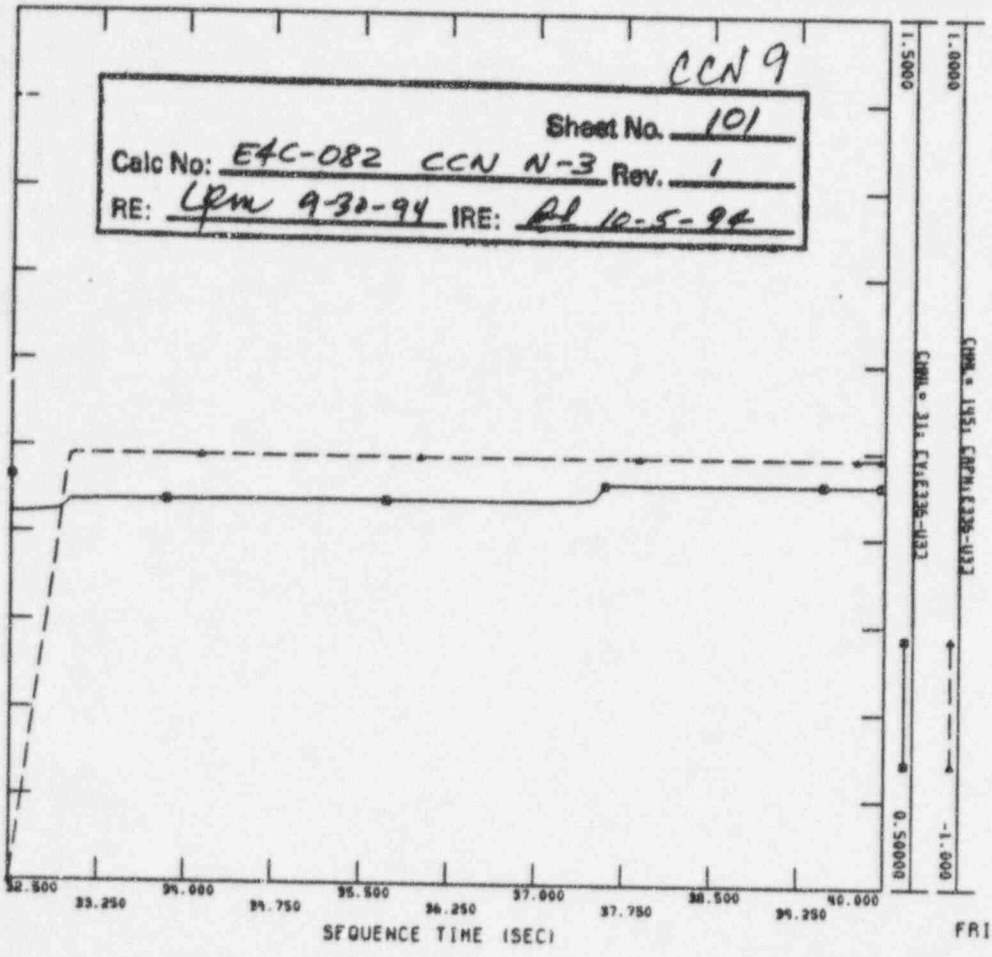
3P504

CCN 9

Sheet No. 101

Calc No: E4C-082 CCN N-3 Rev. 1

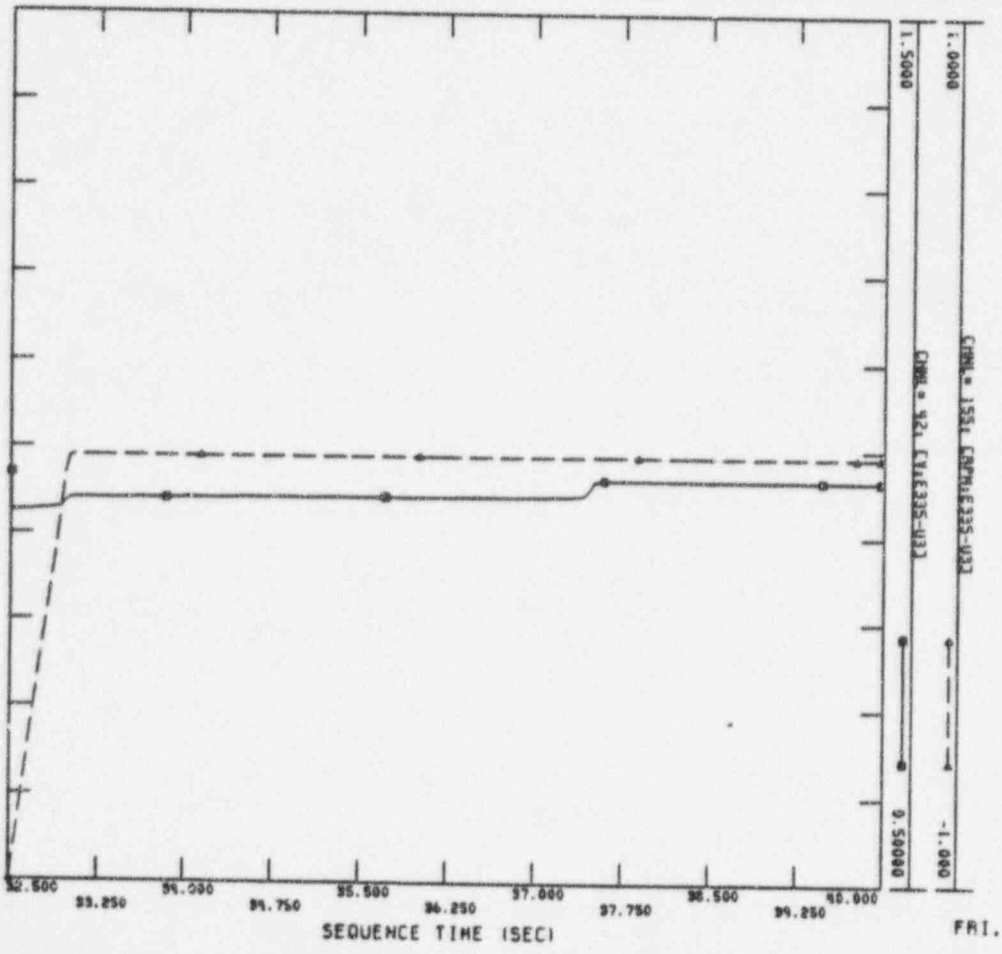
RE: LPM 9-30-94 IRE: RL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBX.CHANOUT_IVBX

FRI, SEP 16 1994 15:25

E336-U3



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBX.CHANOUT_IVBX

FRI, SEP 16 1994 15:25

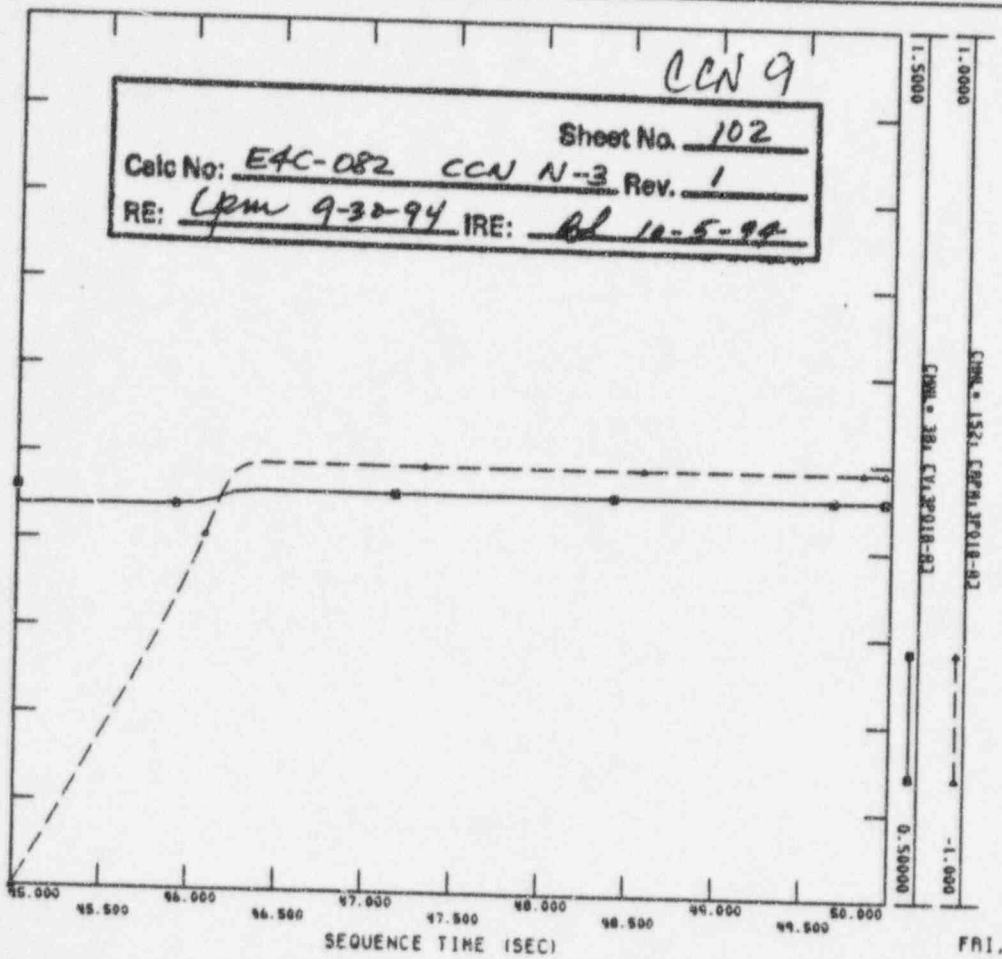
E335-U3

CCN 9

Sheet No. 102

Calc No: E4C-082 CCN N-3 Rev. 1

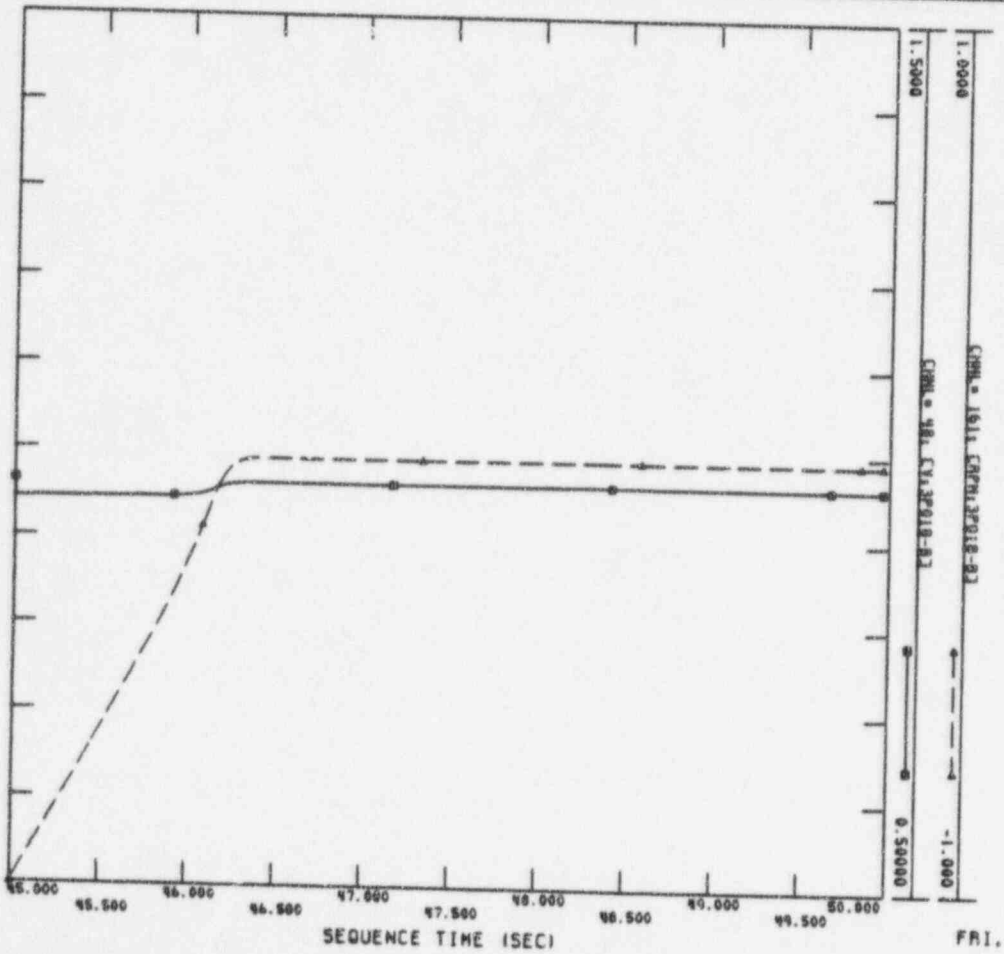
RE: Cpm 9-30-94 IRE: BL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBX\CHANOUT_IVBX

FRI, SEP 16 1994 15:25

3P018-A



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBX\CHANOUT_IVBX

FRI, SEP 16 1994 15:26

3P018-B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

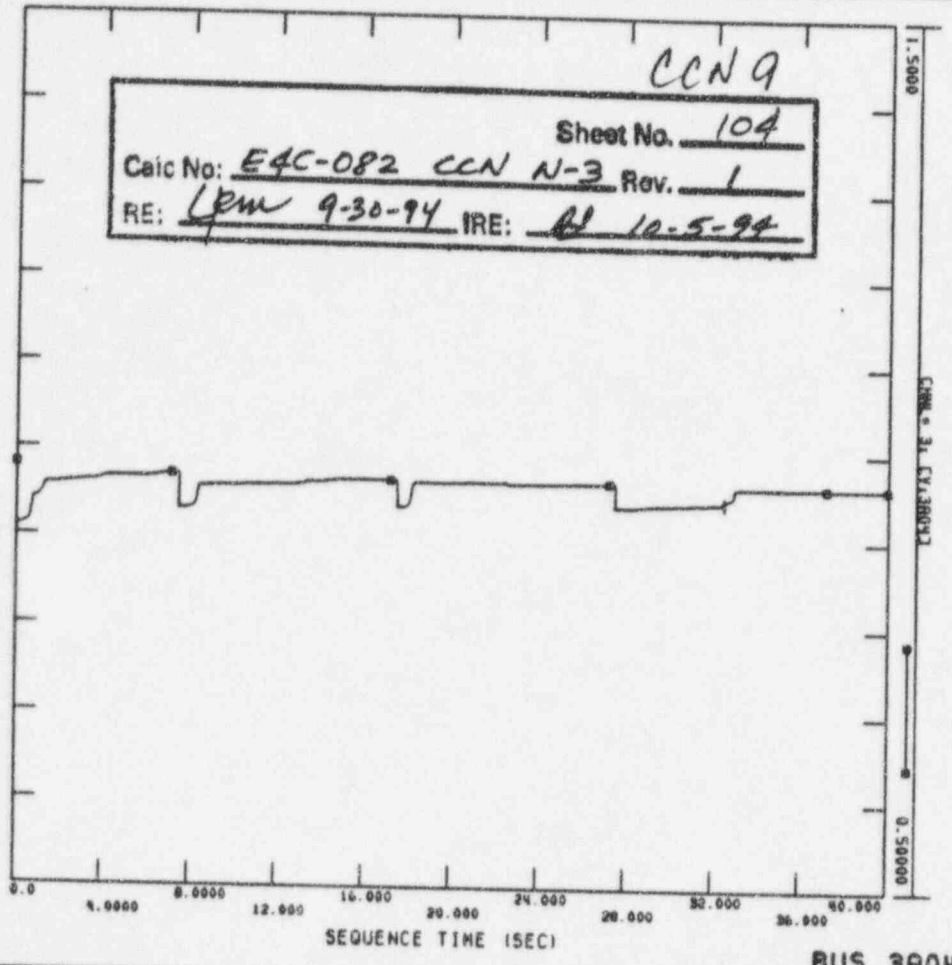
CASE IVBY DYNAMIC PROFILES

CCN 9

Sheet No. 104

Calc No: E4C-082 CCN N-3 Rev. 1

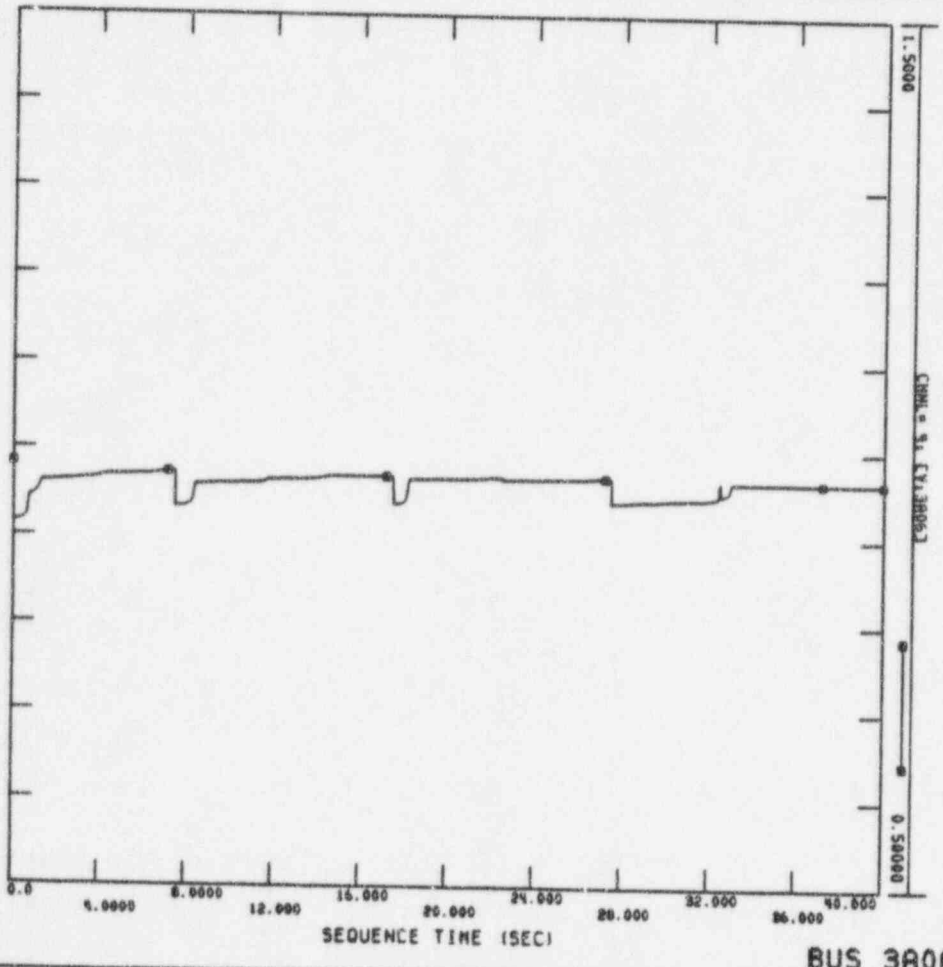
RE: Lpm 9-30-94 IRE: AJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.. PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBY.CHANOUT_IVBY

FRI, SEP 16 1994 15:42

BUS 3A04 (4.16-KV BASE)



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.. PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBY.CHANOUT_IVBY

FRI, SEP 16 1994 15:43

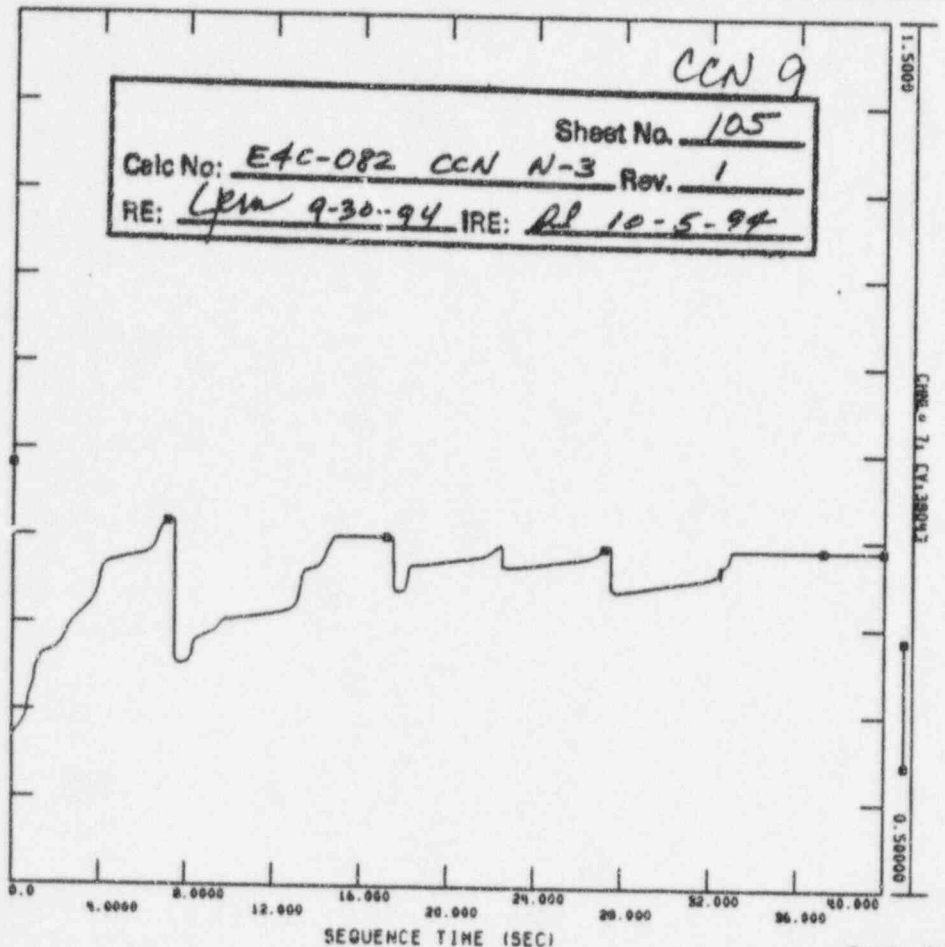
BUS 3A06 (4.16-KV BASE)

CCN 9

Sheet No. 105

Calc No: E4C-082 CCN N-3 Rev. 1

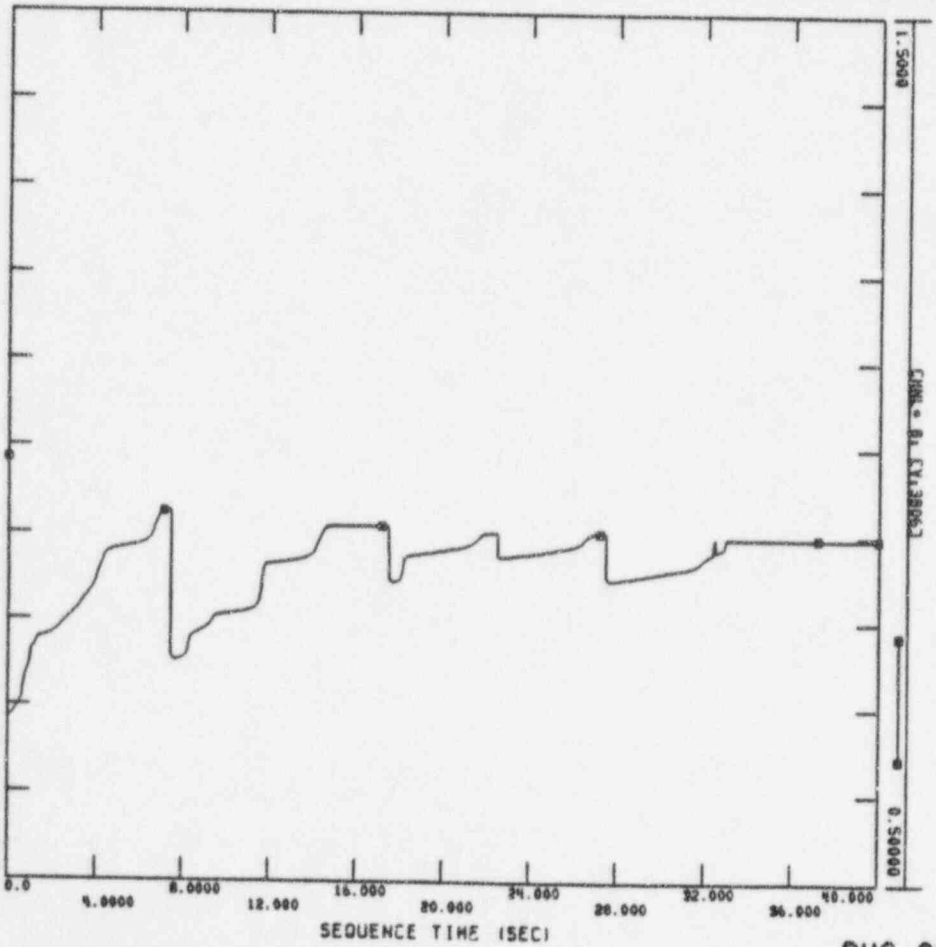
RE: Lpm 9-30-94 IRE: RL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC., PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBYJCHANOUT_IVBY

FRI, SEP 16 1994 15:43

BUS 3B04 (480-V BASE)



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC., PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBYJCHANOUT_IVBY

FRI, SEP 16 1994 15:43

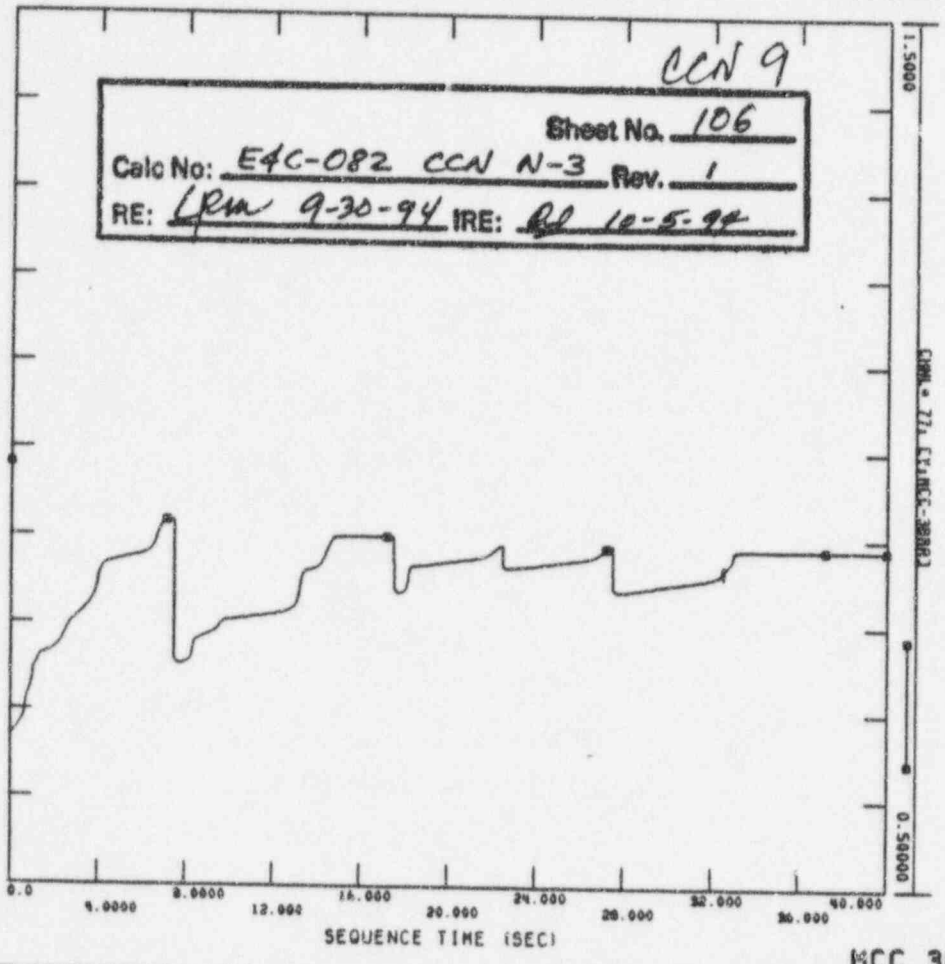
BUS 3B06 (480-V BASE)

CCN 9

Sheet No. 106

Calc No: E4C-082 CCN N-3 Rev. 1

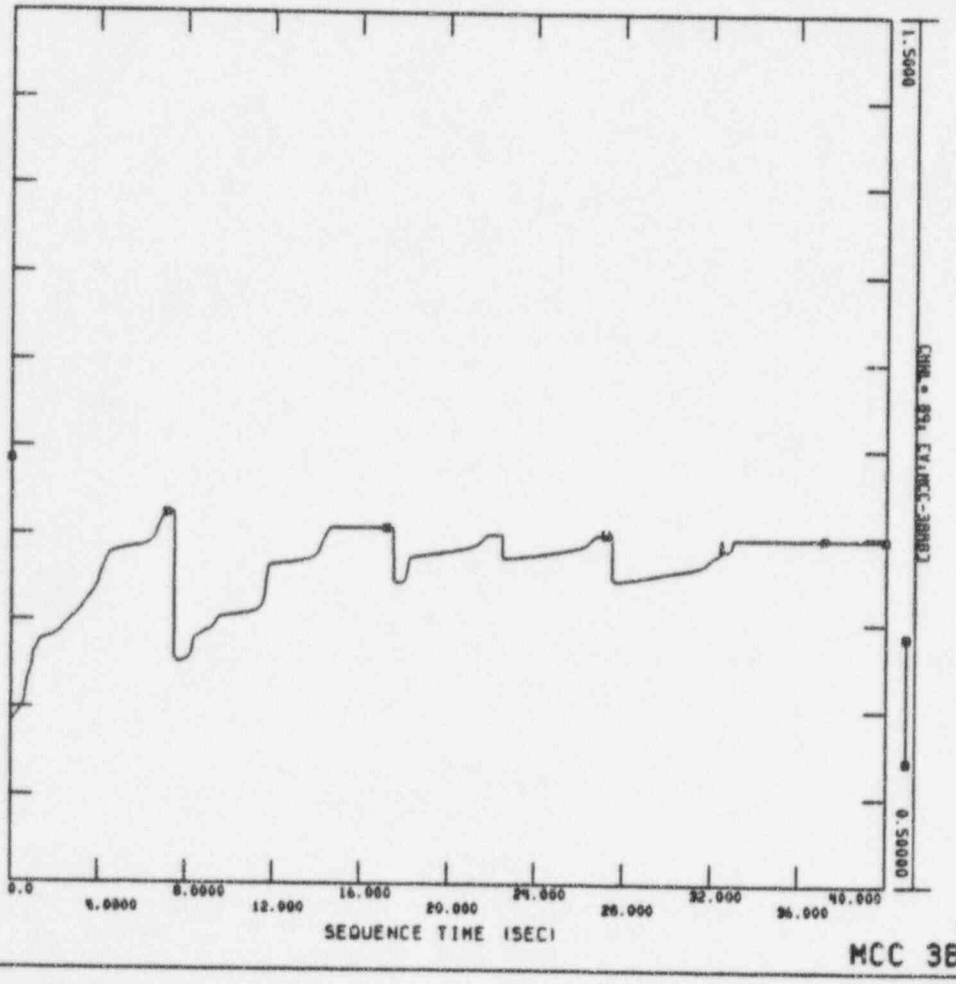
RE: LPM 9-30-94 IRE: BL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBY\CHANOUT_IVBY

FRI, SEP 16 1994 15:43

MCC 3BRA (480-V BASE)



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBY\CHANOUT_IVBY

FRI, SEP 16 1994 15:43

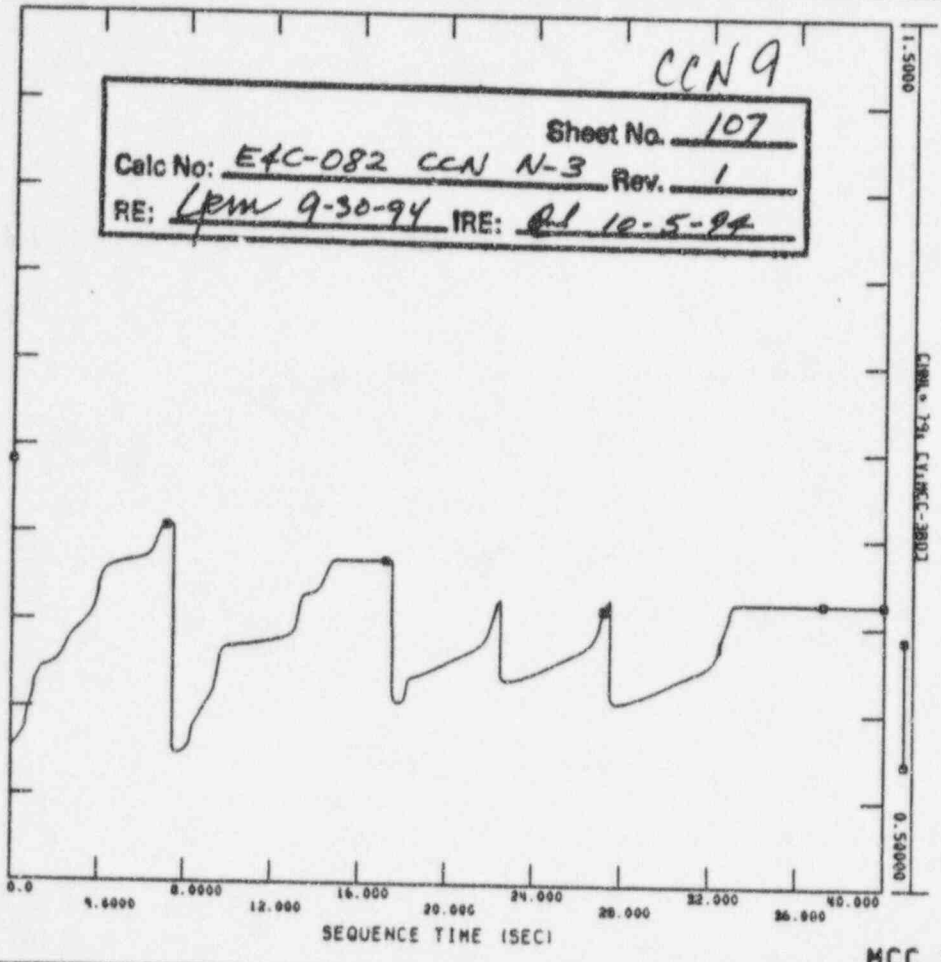
MCC 3BRB (480-V BASE)

CCN 9

Sheet No. 107

Calc No: E4C-082 CCN N-3 Rev. 1

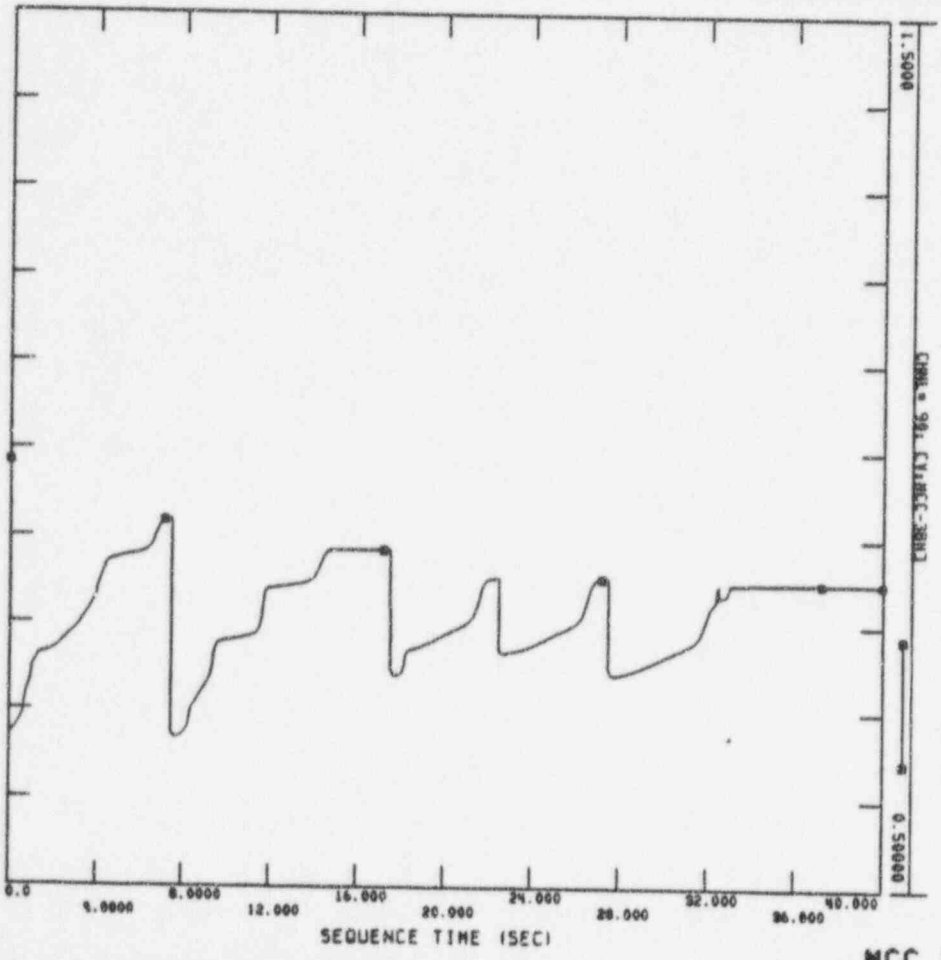
RE: LPM 9-30-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8YJCHANOUT_IV8Y

FRI, SEP 16 1994 15:43

MCC 3BD (480-V BASE)



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8YJCHANOUT_IV8Y

FRI, SEP 16 1994 15:43

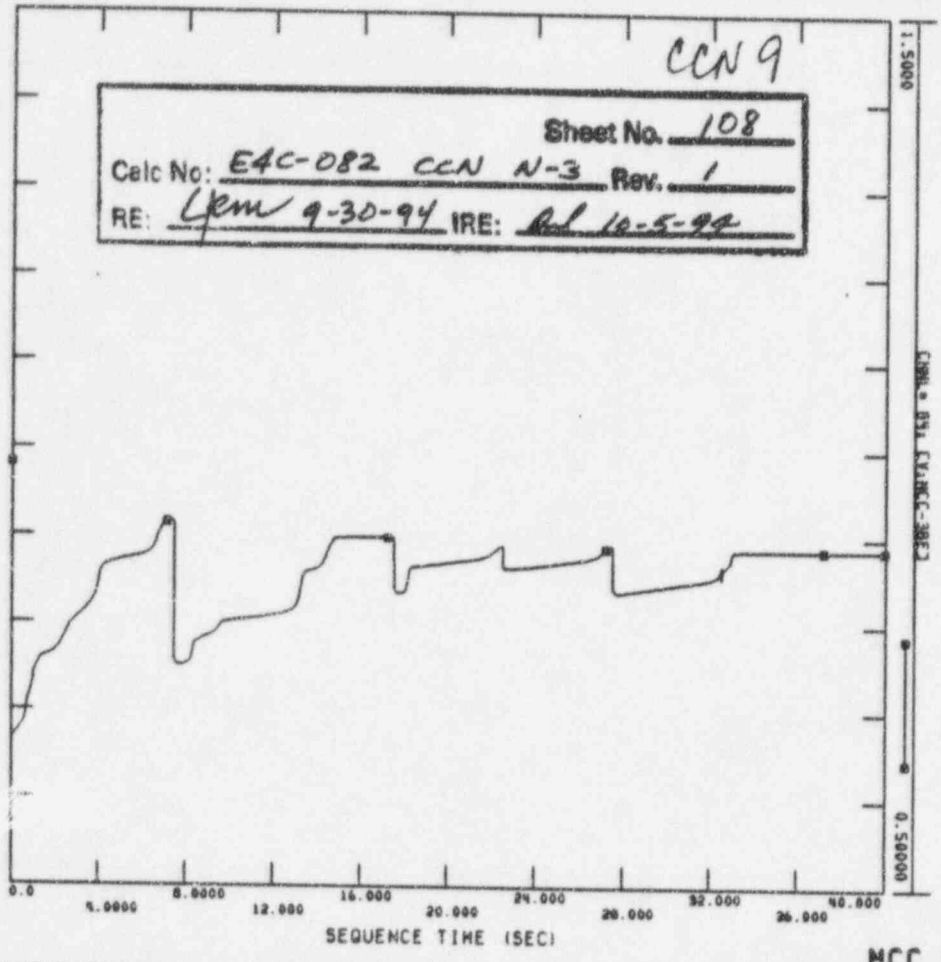
MCC 3BH (480-V BASE)

CCN 9

Sheet No. 108

Calc No: E4C-082 CCN N-3 Rev. 1

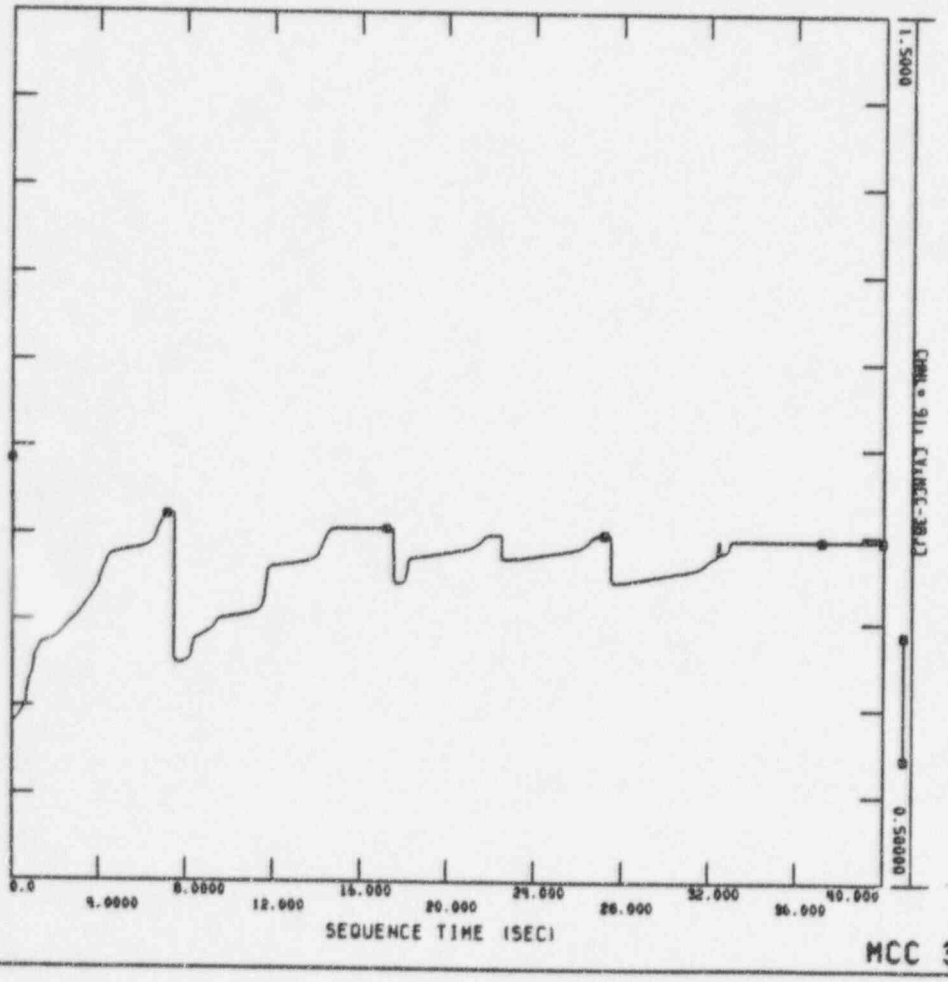
RE: Lpm 9-30-94 IRE: Rel 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: E.CASE_IV8YJCHANOUT_IV8Y

FRI, SEP 16 1994 15:43

MCC 3BE (480-V BASE)



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: E.CASE_IV8YJCHANOUT_IV8Y

FRI, SEP 16 1994 15:43

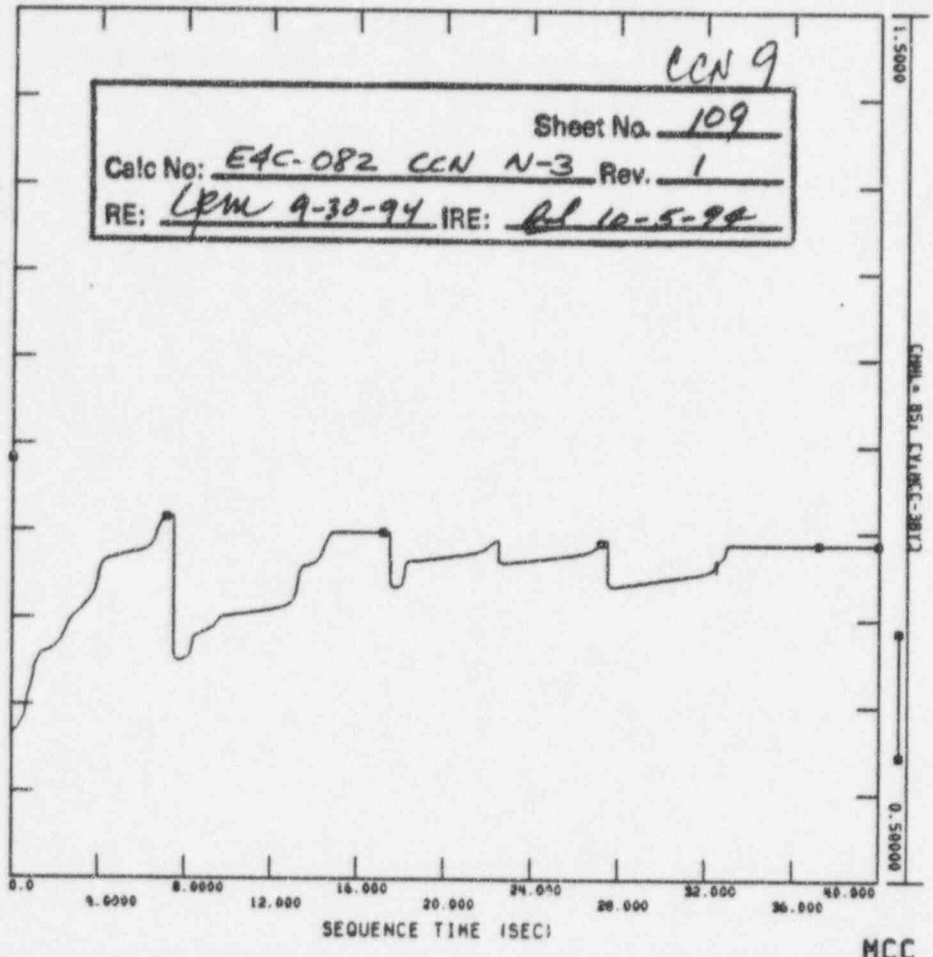
MCC 3BJ (480-V BASE)

CCN 9

Sheet No. 109

Calc No: E4C-082 CCN N-3 Rev. 1

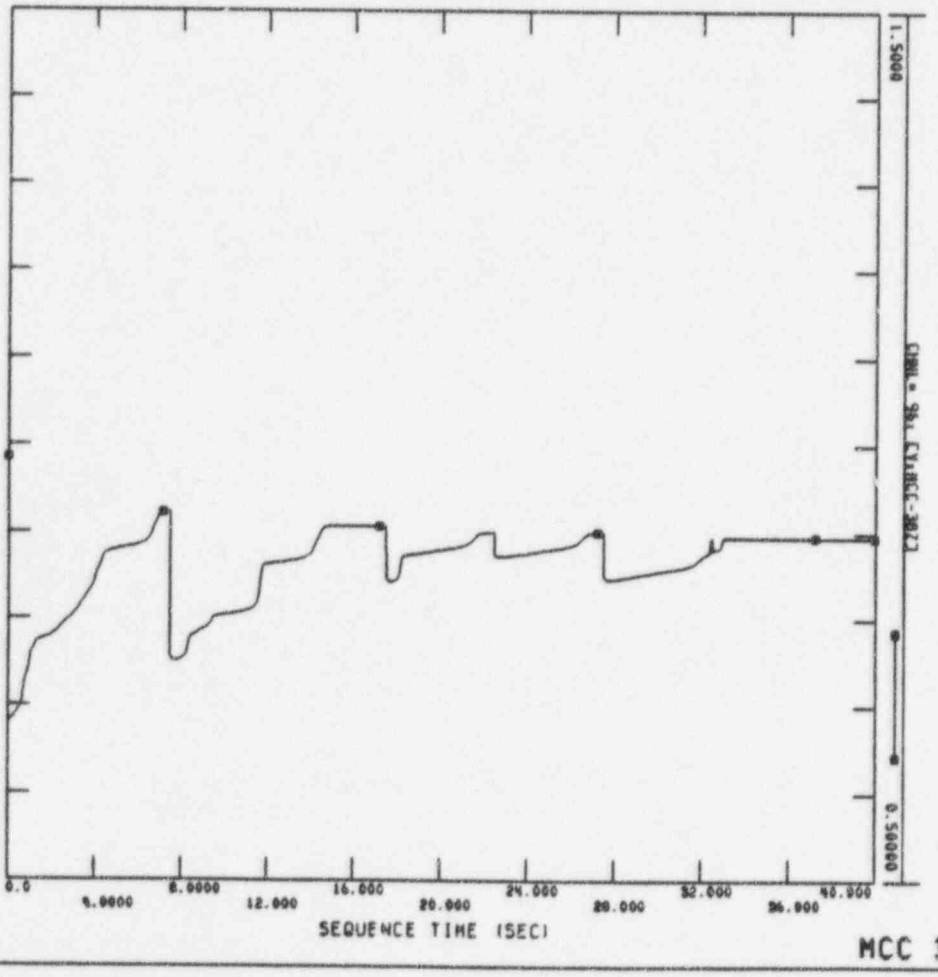
RE: LPM 9-30-94 IRE: BL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8YJCHANOUT_IV8Y

FRI, SEP 16 1994 15:44

MCC 3BY (480-V BASE)



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8YJCHANOUT_IV8Y

FRI, SEP 16 1994 15:44

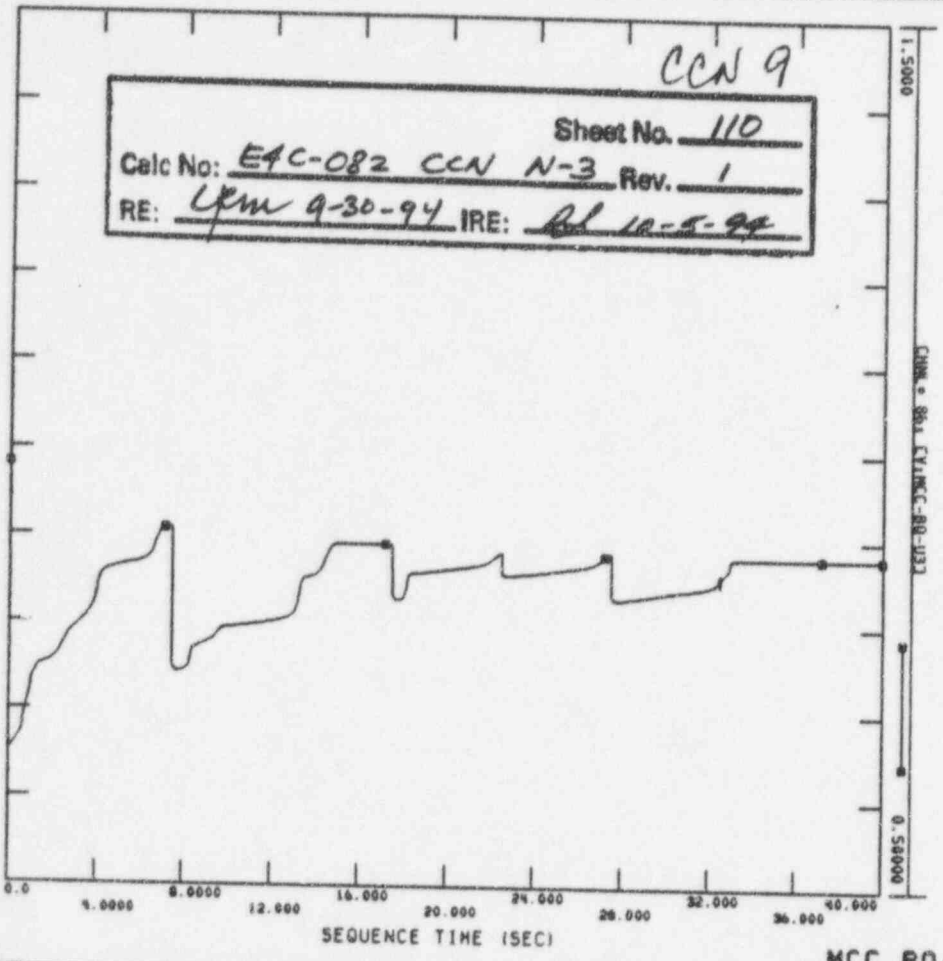
MCC 3BZ (480-V BASE)

CCN 9

Sheet No. 110

Calc No: E4C-082 CCN N-3 Rev. 1

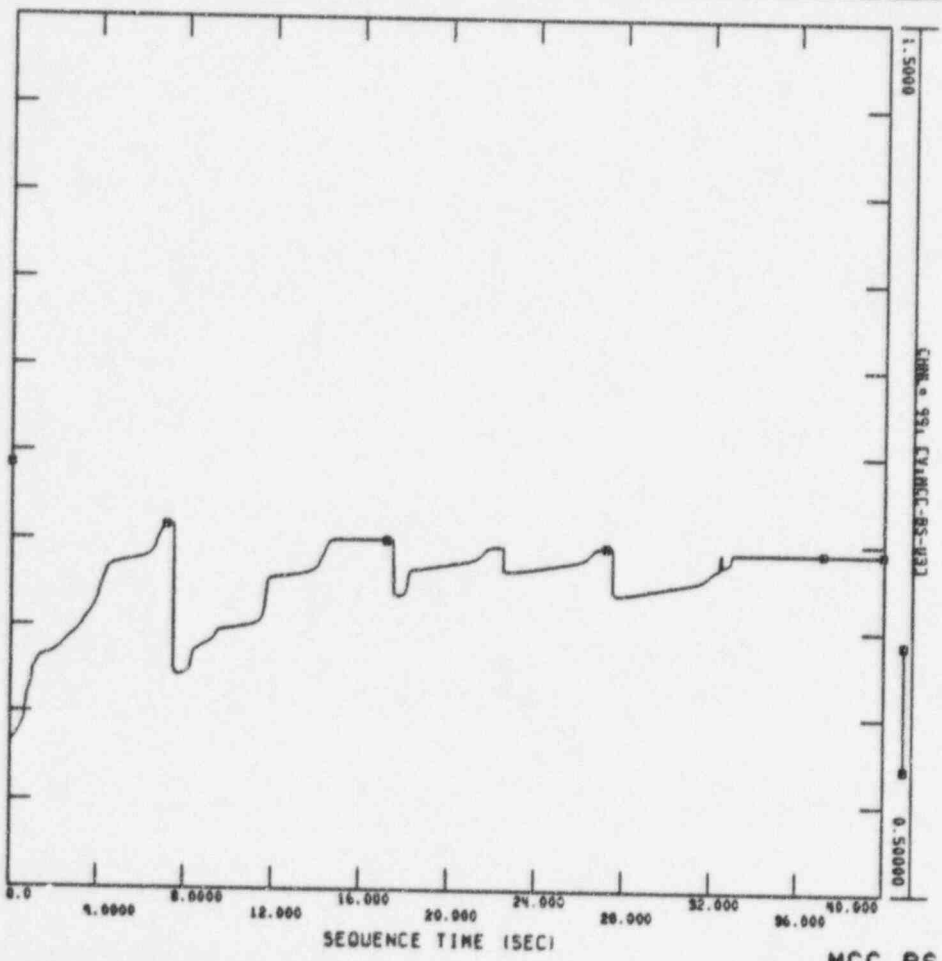
RE: Lpm 9-30-94 IRE: RL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8Y.CHANOUT_IV8Y

FRI, SEP 16 1994 15:44

MCC B0-U3 (480-V BASE)



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8Y.CHANOUT_IV8Y

FRI, SEP 16 1994 15:44

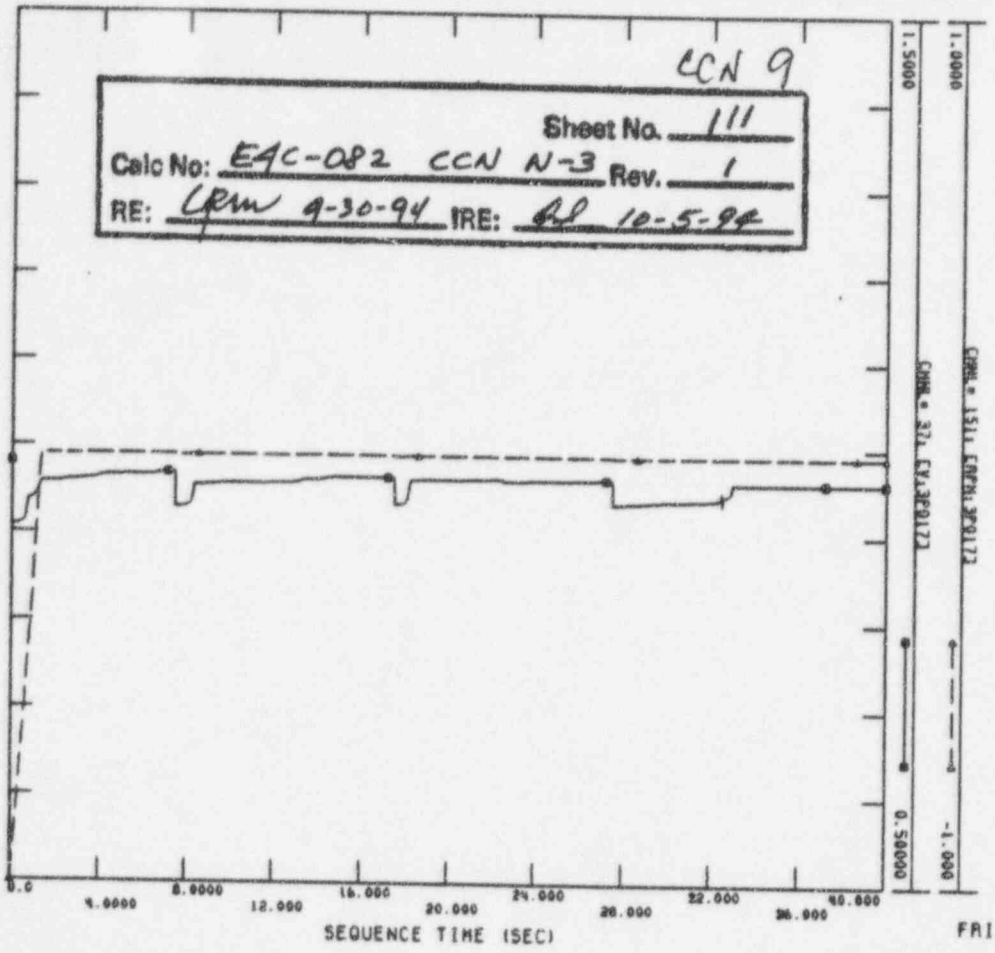
MCC BS-U3 (480-V BASE)

CCN 9

Sheet No. 111

Calc No: EAC-082 CCN N-3 Rev. 1

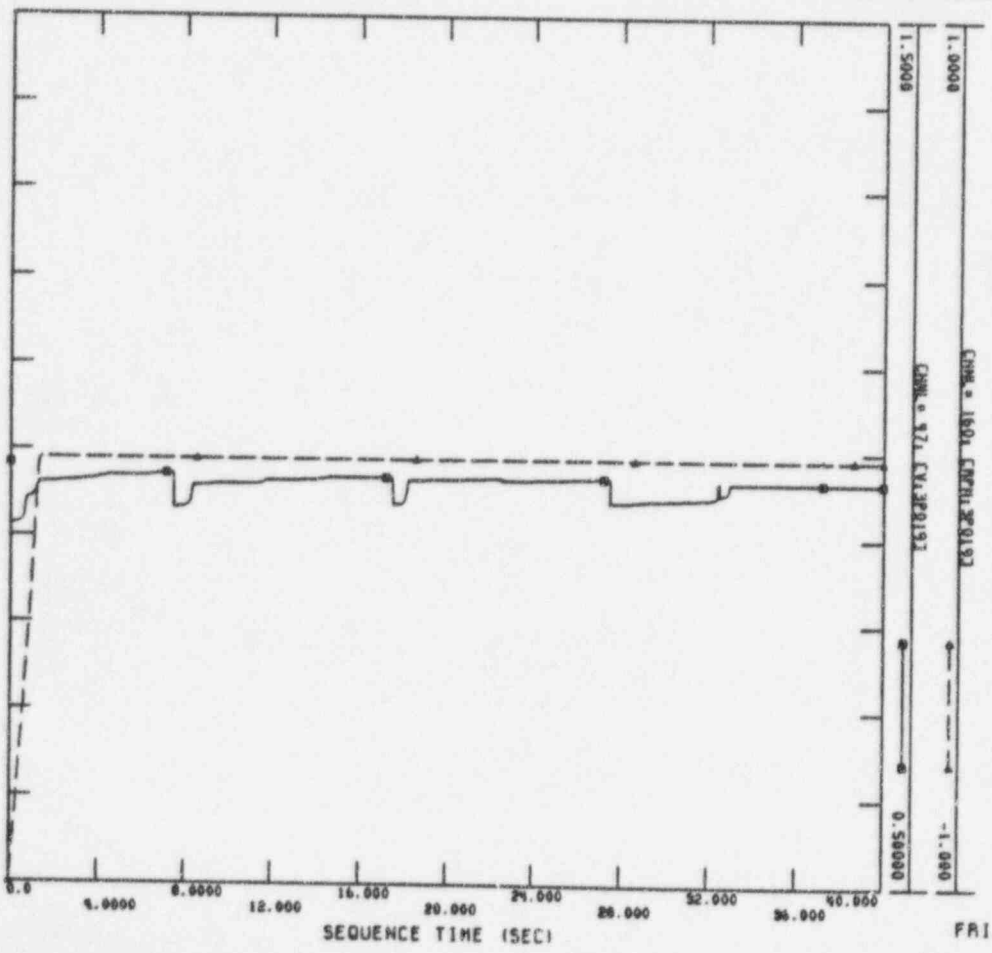
RE: CRM 9-30-94 IRE: RP 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBY3CHANOUT_IVBY

FRI, SEP 16 1994 15:44

3P017



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBY3CHANOUT_IVBY

FRI, SEP 16 1994 15:44

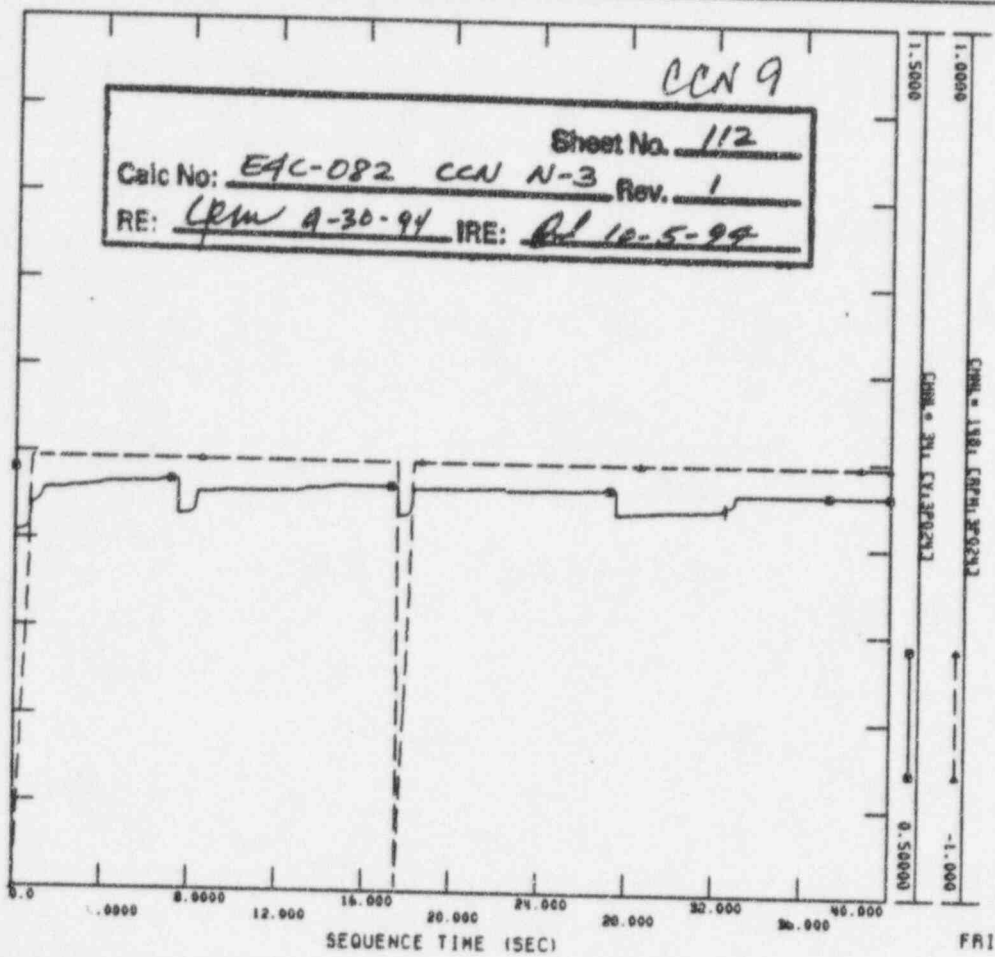
3P019

CCN 9

Sheet No. 112

Calc No: E4C-082 CCN N-3 Rev. 1

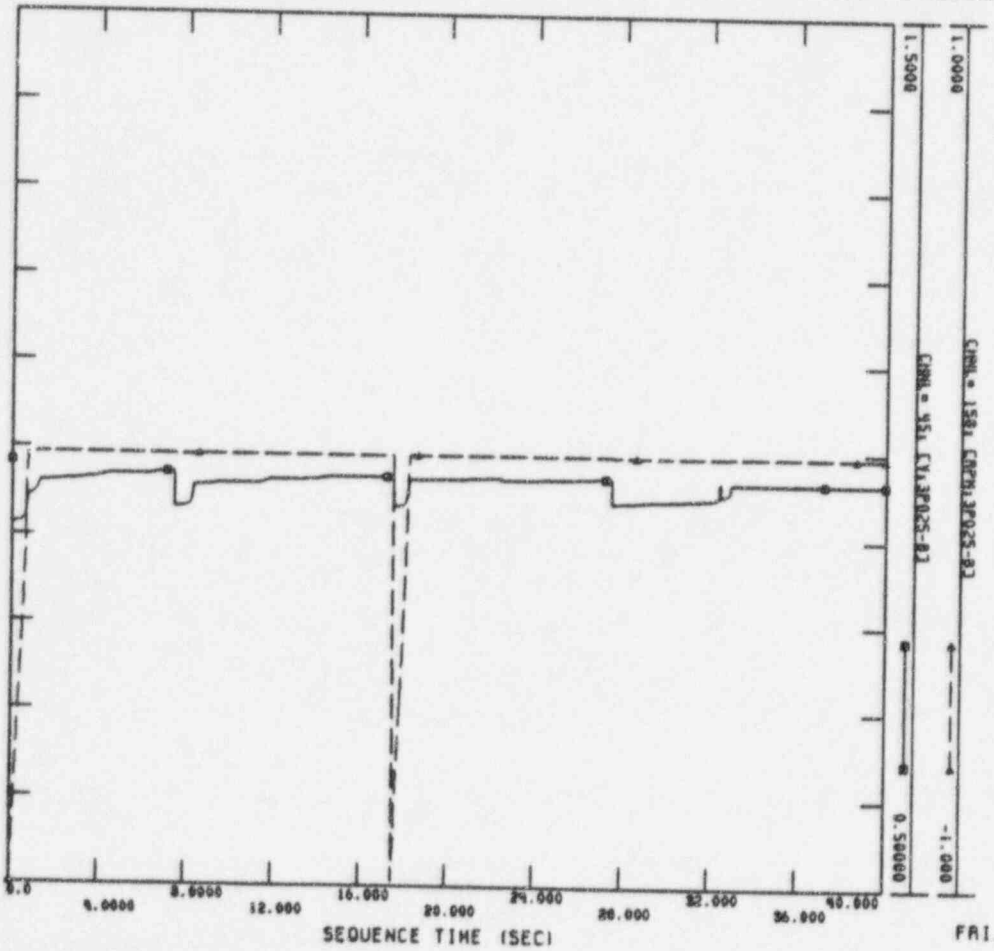
RE: CRM 9-30-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBY.CHANOUT_IVBY

FRI, SEP 16 1994 15:44

3P024



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBY.CHANOUT_IVBY

FRI, SEP 16 1994 15:44

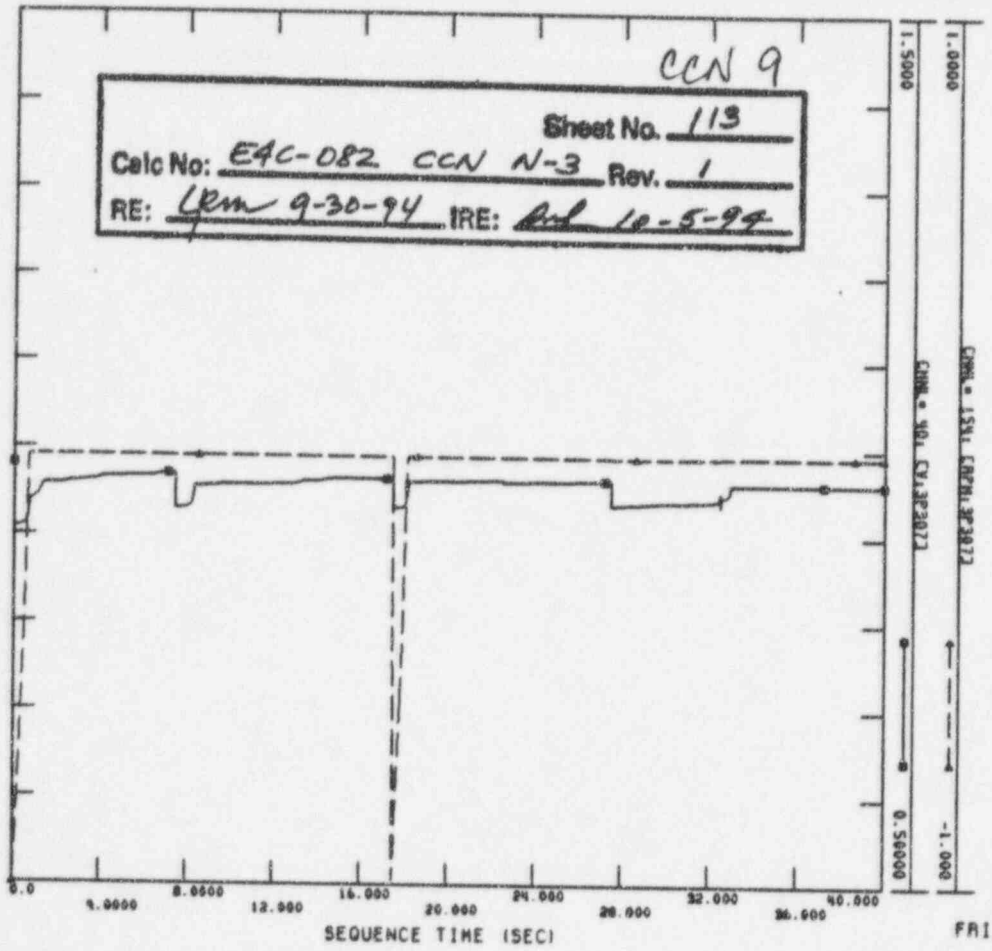
3P025-B

CCN 9

Sheet No. 113

Calc No: E4C-082 CCN N-3 Rev. 1

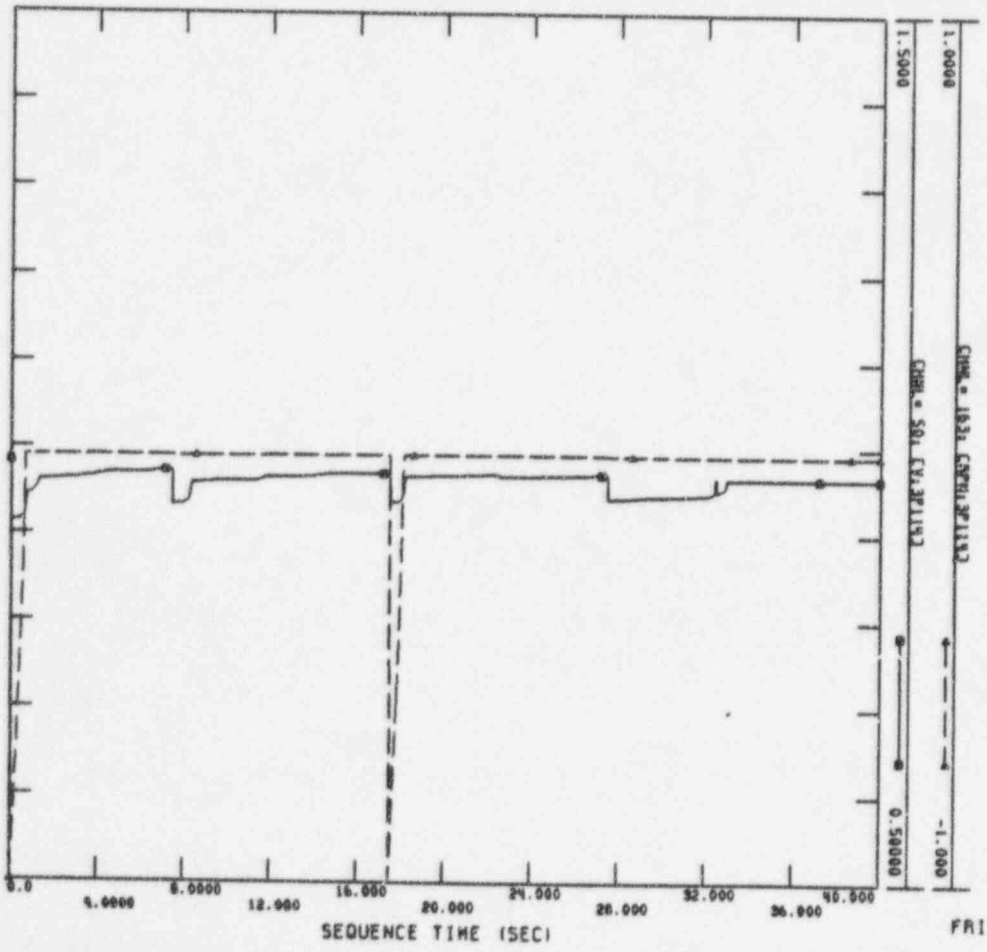
RE: Lpm 9-30-94 IRE: Ard 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBYJCHANOUT_IVBY

FRI, SEP 16 1994 15:44

3P307



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBYJCHANOUT_IVBY

FRI, SEP 16 1994 15:44

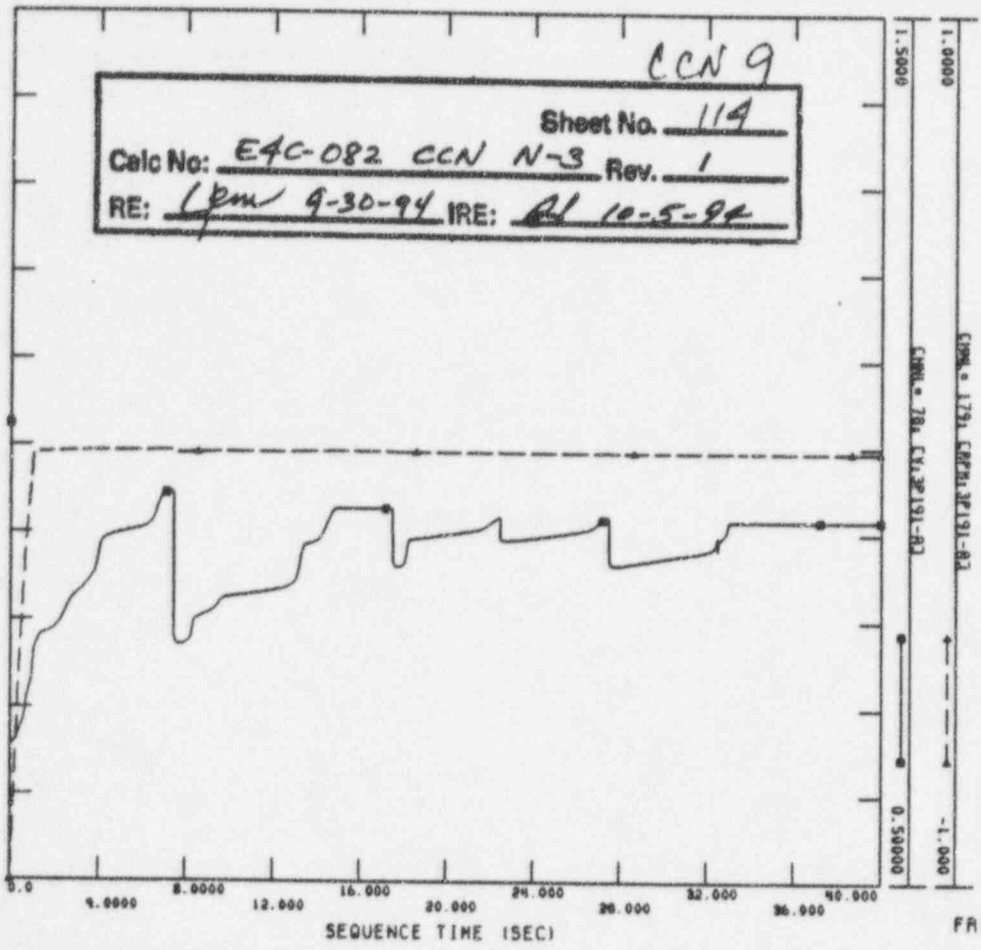
3P114

CCN 9

Sheet No. 114

Calc No: E4C-082 CCN N-3 Rev. 1

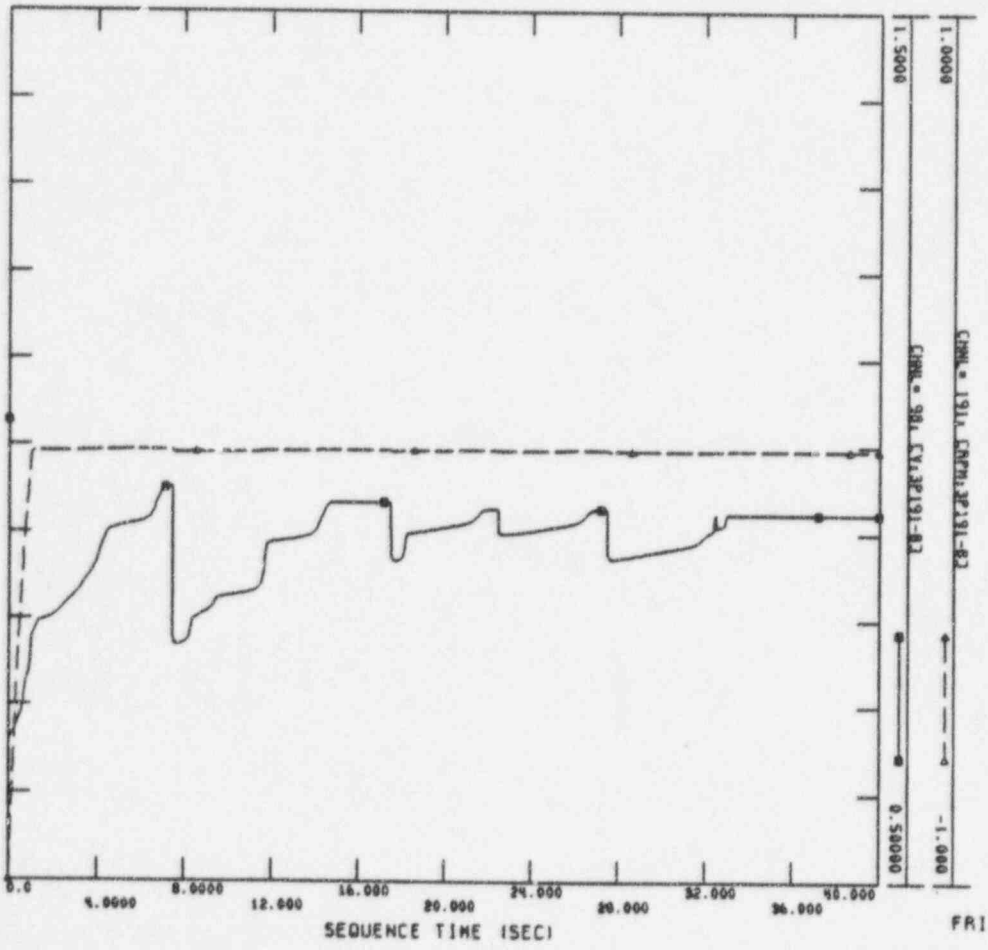
RE: Lpm 9-30-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBYJCHANOUT_IVBY

FRI, SEP 16 1994 15:44

3P191-A



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBYJCHANOUT_IVBY

FRI, SEP 16 1994 15:44

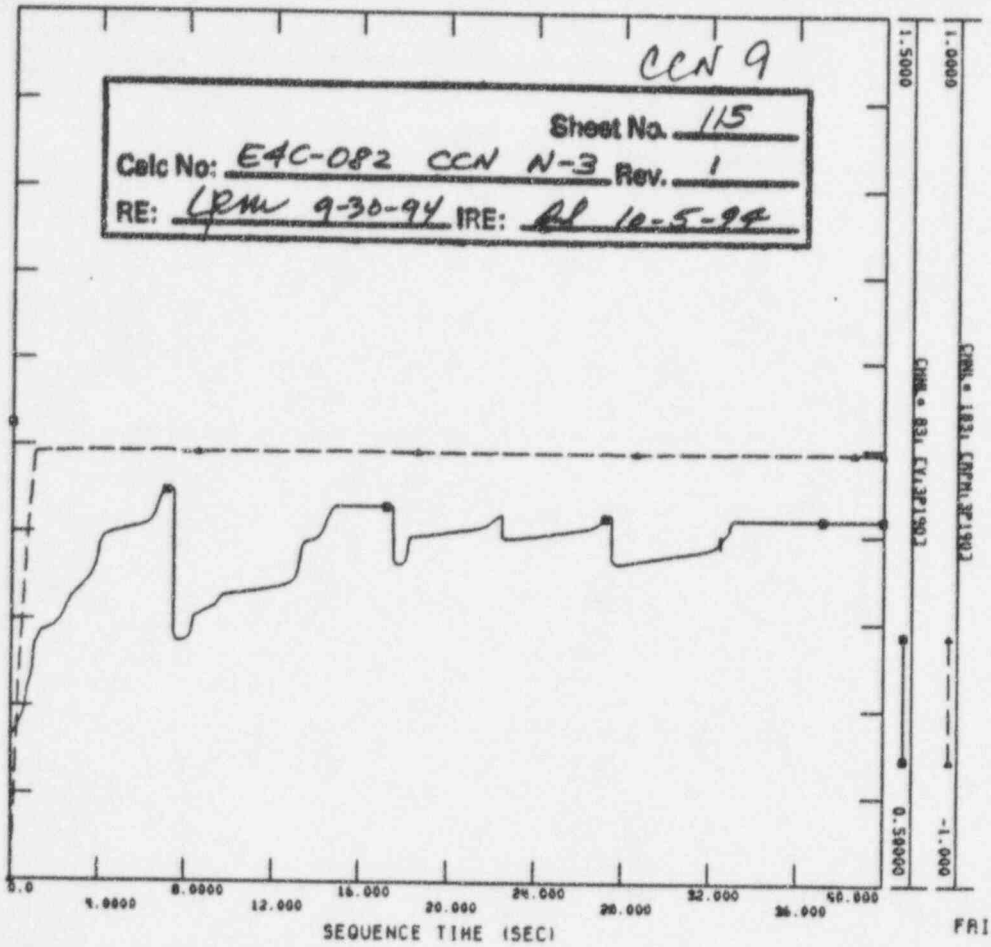
3P191-B

CCN 9

Sheet No. 115

Calc No: E4C-082 CCN N-3 Rev. 1

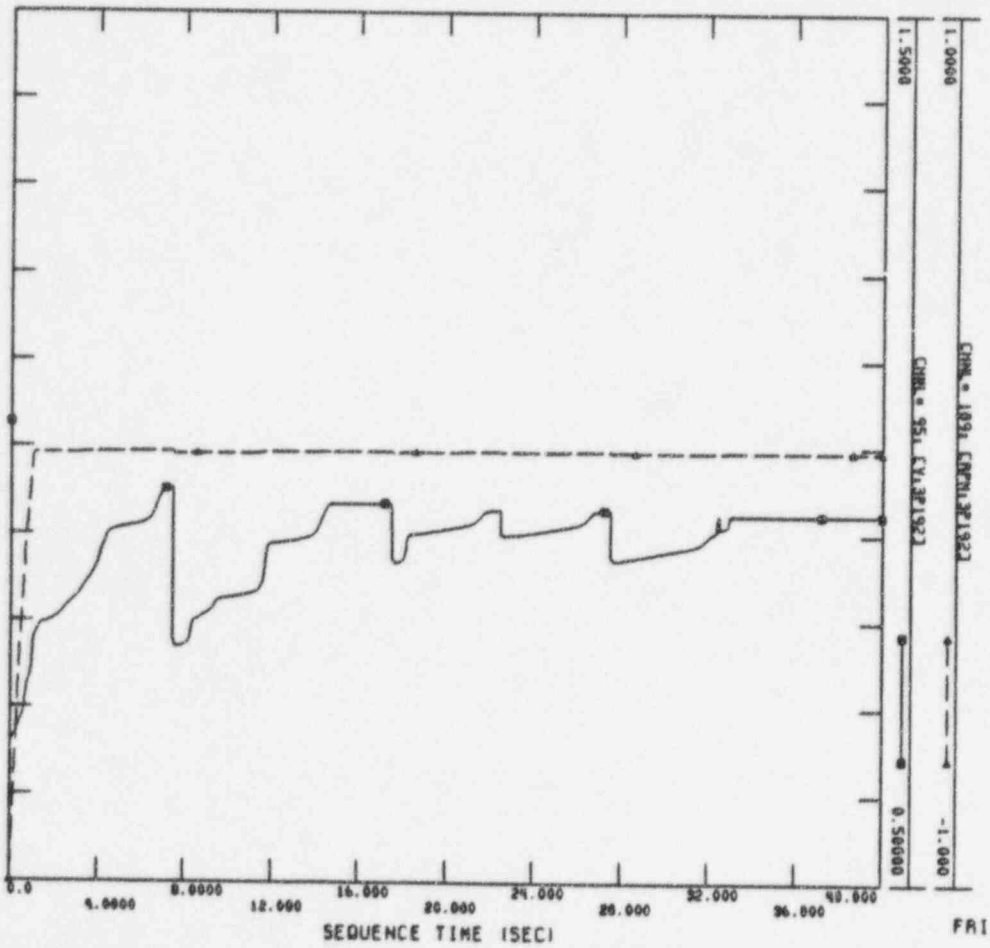
RE: LPM 9-30-94 IRE: BL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBYJCHANOUT_IVBY

FRI, SEP 16 1994 15:45

3P190



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBYJCHANOUT_IVBY

FRI, SEP 16 1994 15:45

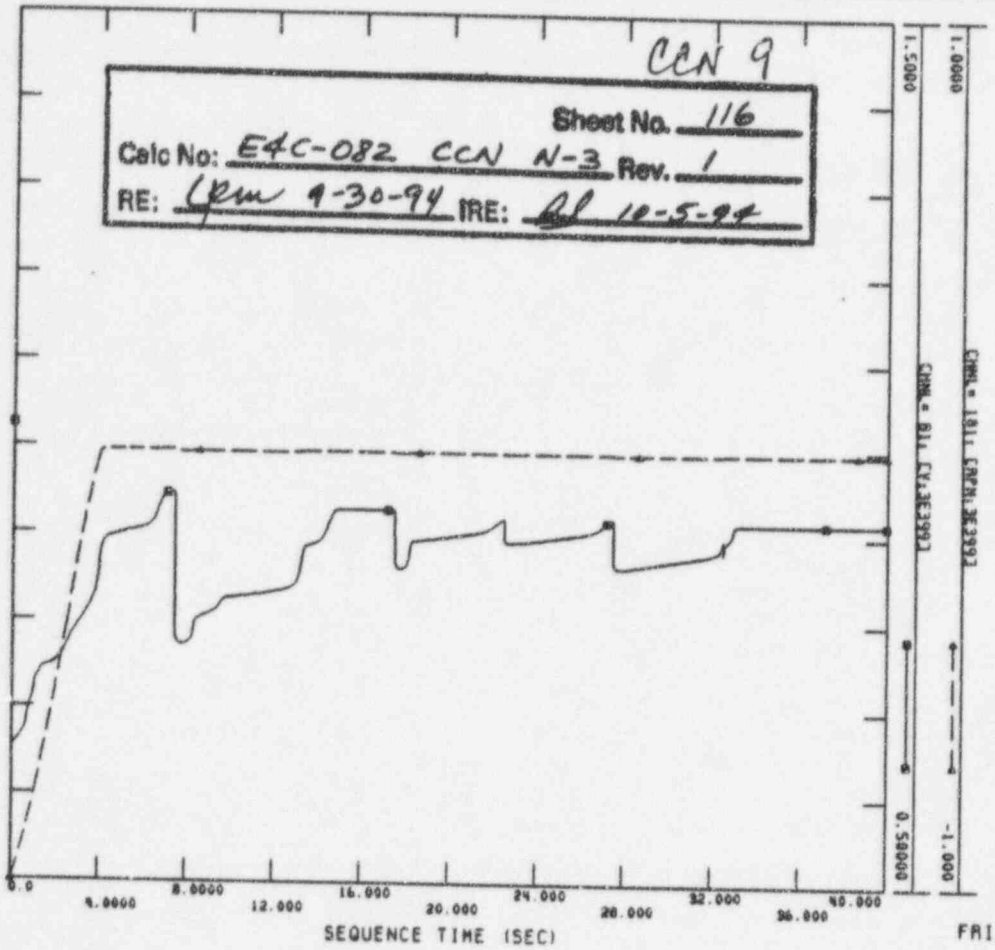
3P192

CCN 9

Sheet No. 116

Calc No: E4C-082 CCN N-3 Rev. 1

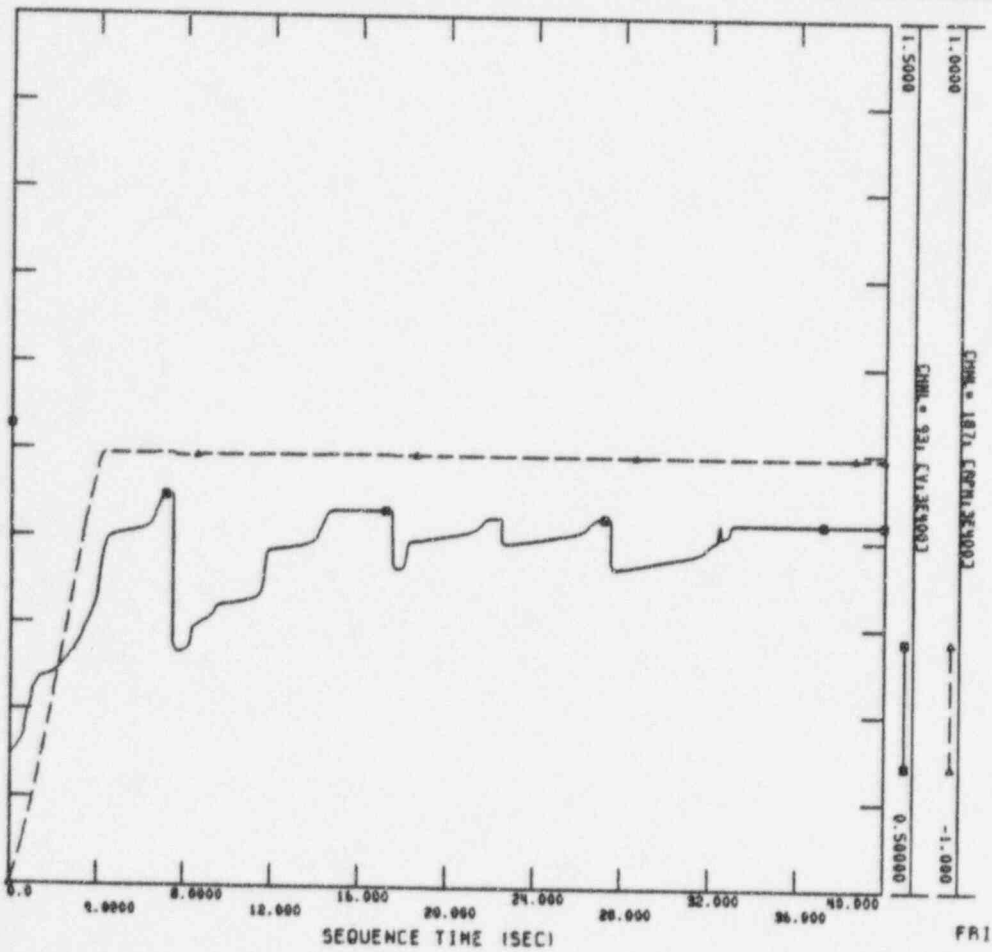
RE: CPM 9-30-94 IRE: RL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBYJCHANOUT_IVBY

FRI, SEP 16 1994 15:45

3E399



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBYJCHANOUT_IVBY

FRI, SEP 16 1994 15:45

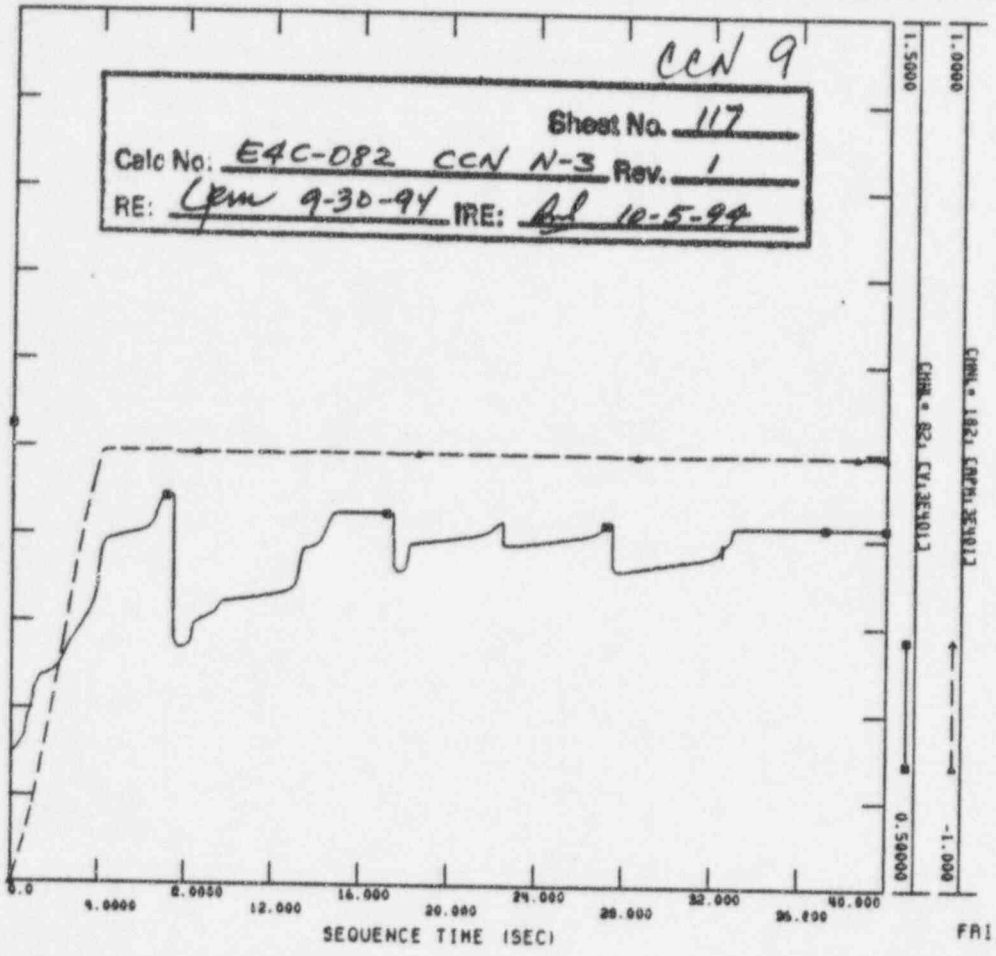
3E400

CCN 9

Sheet No. 117

Calc No: E4C-082 CCN N-3 Rev. 1

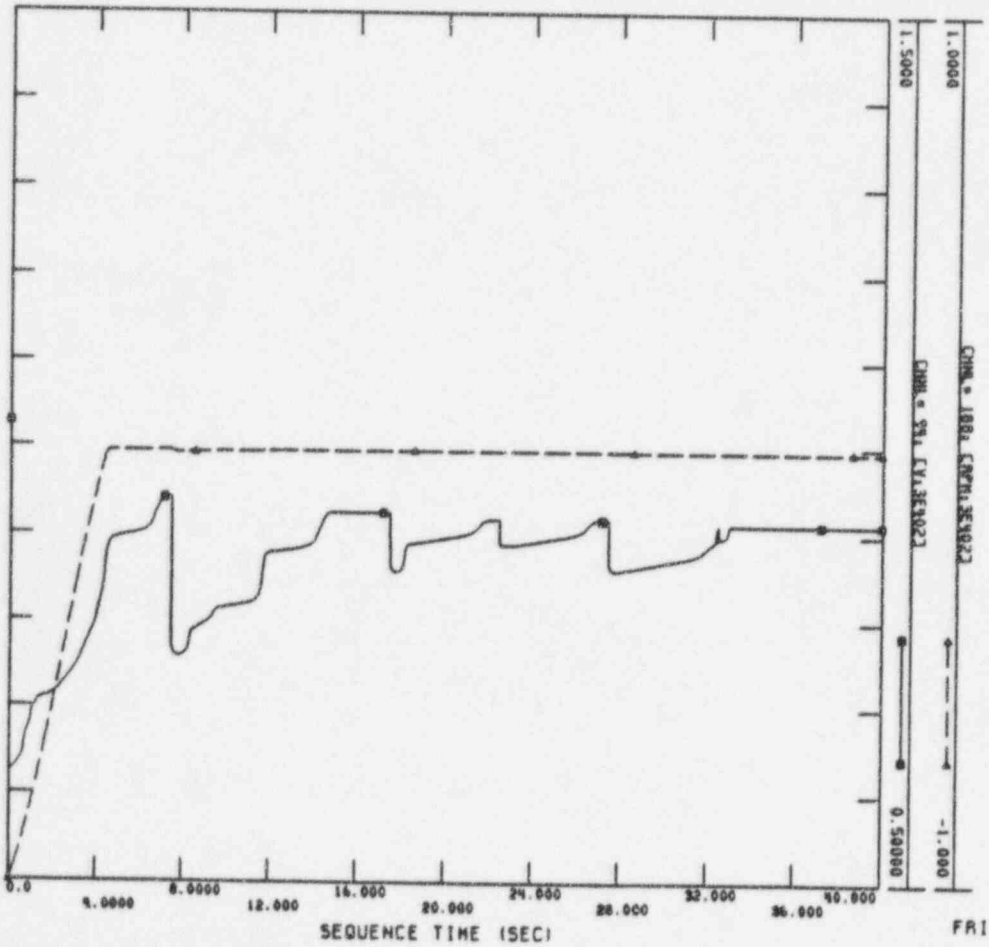
RE: Cpm 9-30-94 IRE: Bjl 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8Y.CHANOUT_IV8Y

FRI, SEP 16 1994 15:45

3E401



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8Y.CHANOUT_IV8Y

FRI, SEP 16 1994 15:45

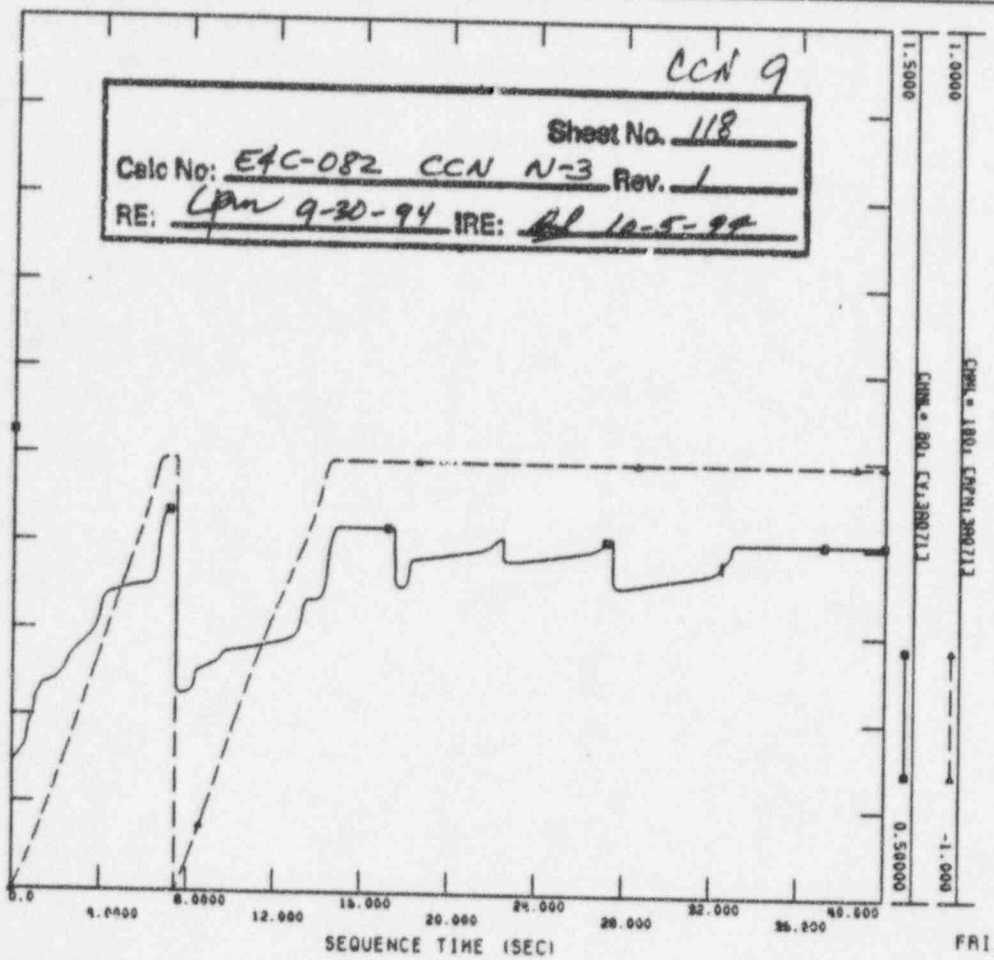
3E402

CCN 9

Sheet No. 118

Calc No: E4C-082 CCN N-3 Rev. 1

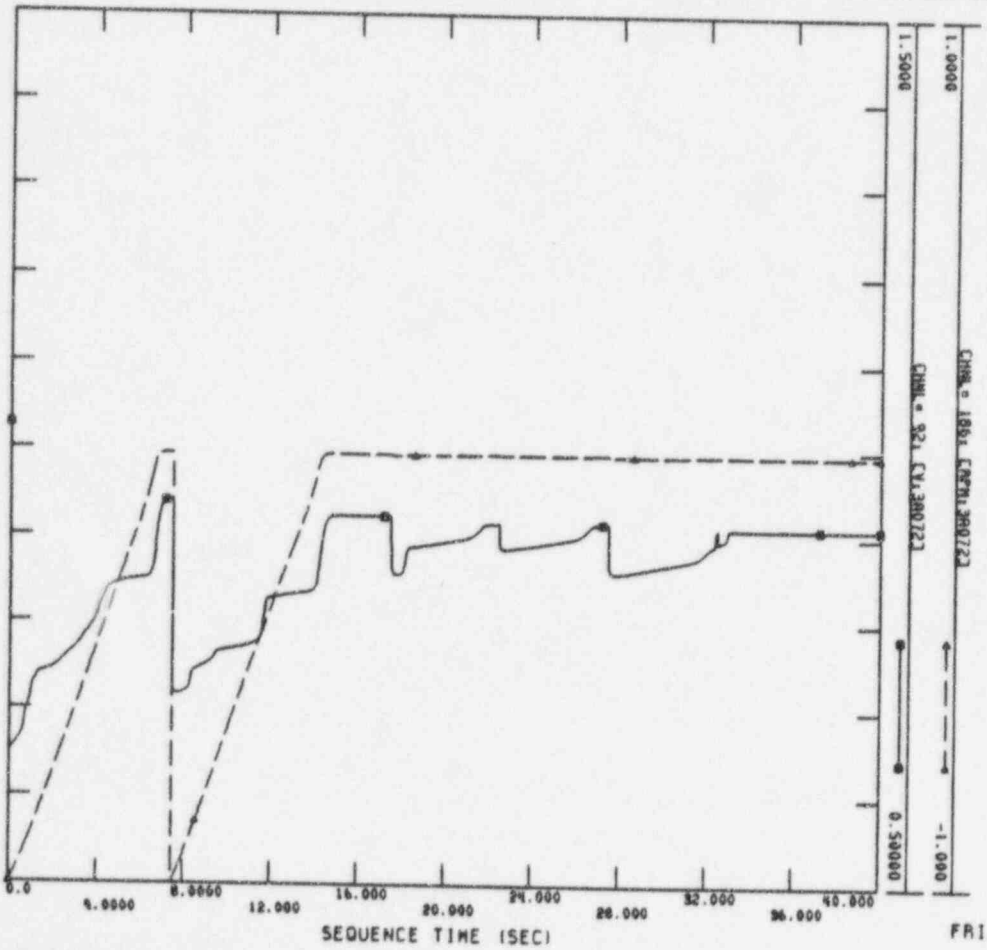
RE: CPM 9-30-94 IRE: BL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBYJCHANOUT_IVBY

FRI, SEP 16 1994 15:45

3A071



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBYJCHANOUT_IVBY

FRI, SEP 16 1994 15:45

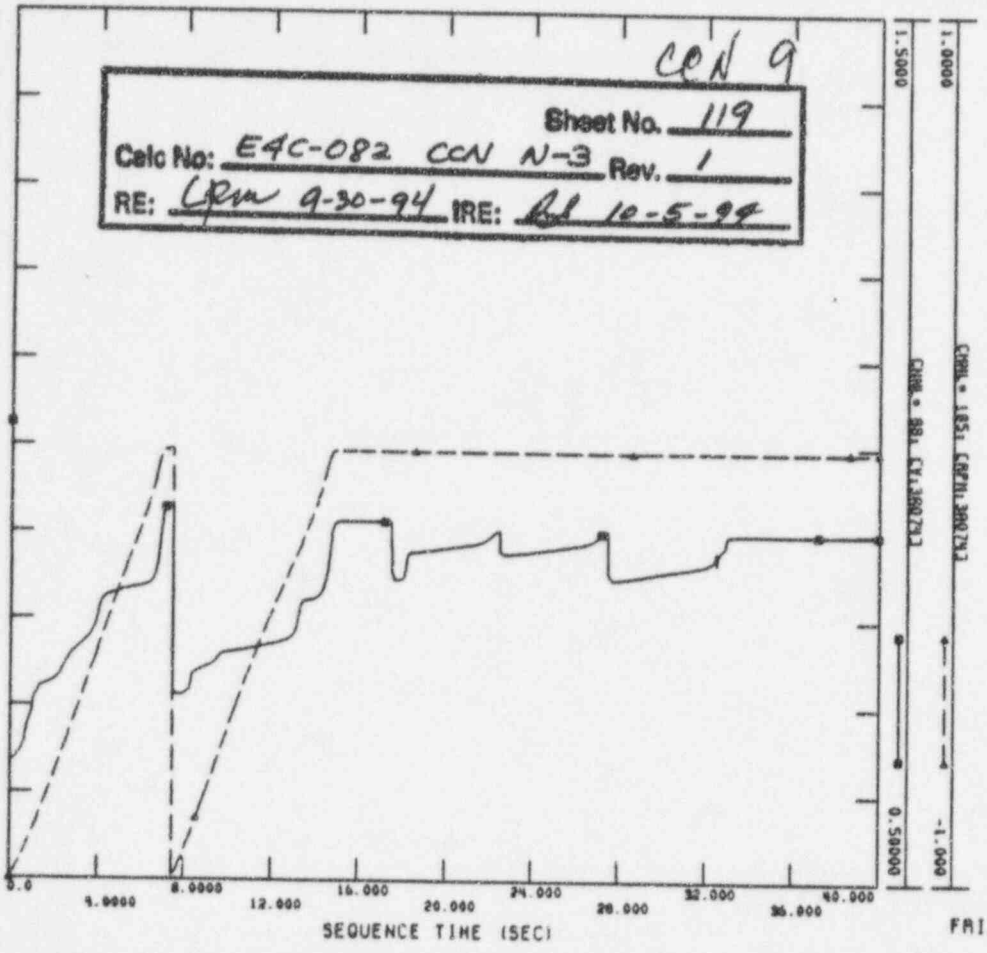
3A072

CCN 9

Sheet No. 119

Calc No: E4C-082 CCN N-3 Rev. 1

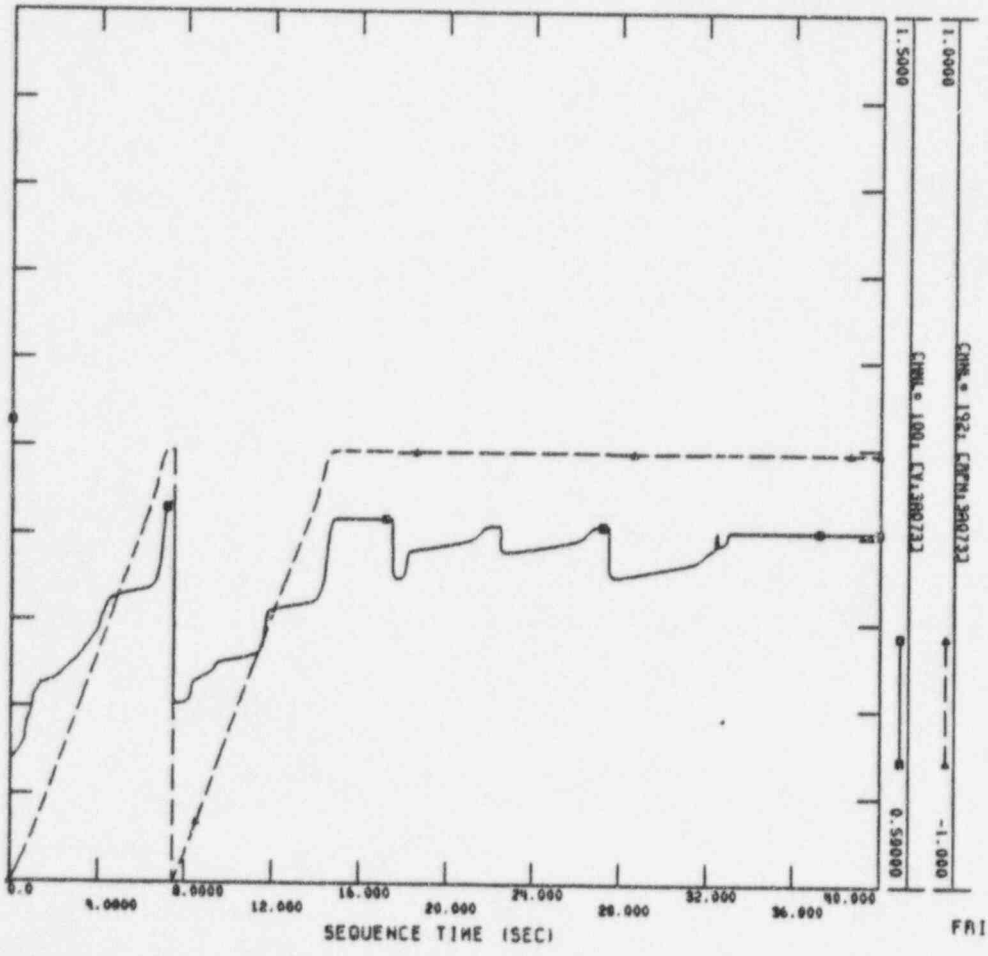
RE: CPM 9-30-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8Y.CHANOUT_IV8Y

FRI, SEP 16 1994 15:45

3A074



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8Y.CHANOUT_IV8Y

FRI, SEP 16 1994 15:45

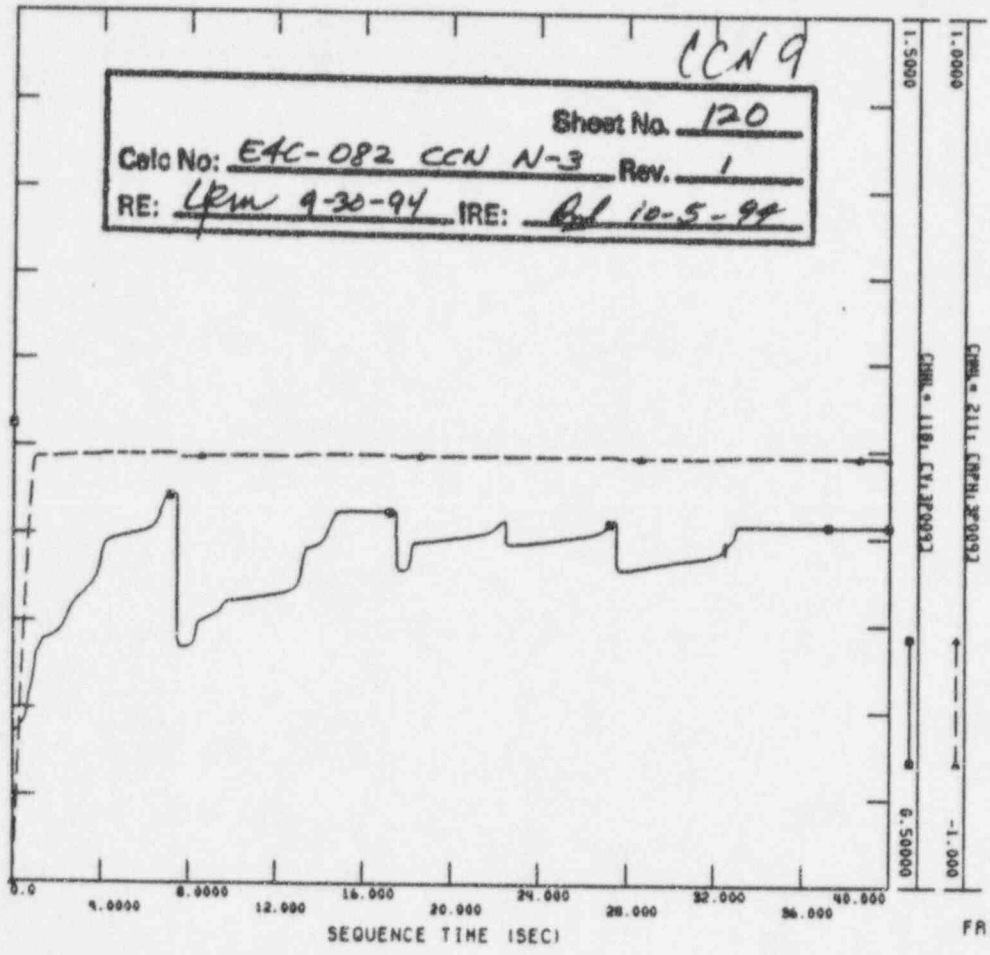
3A073

CCN 9

Sheet No. 120

Calc No: E4C-082 CCN N-3 Rev. 1

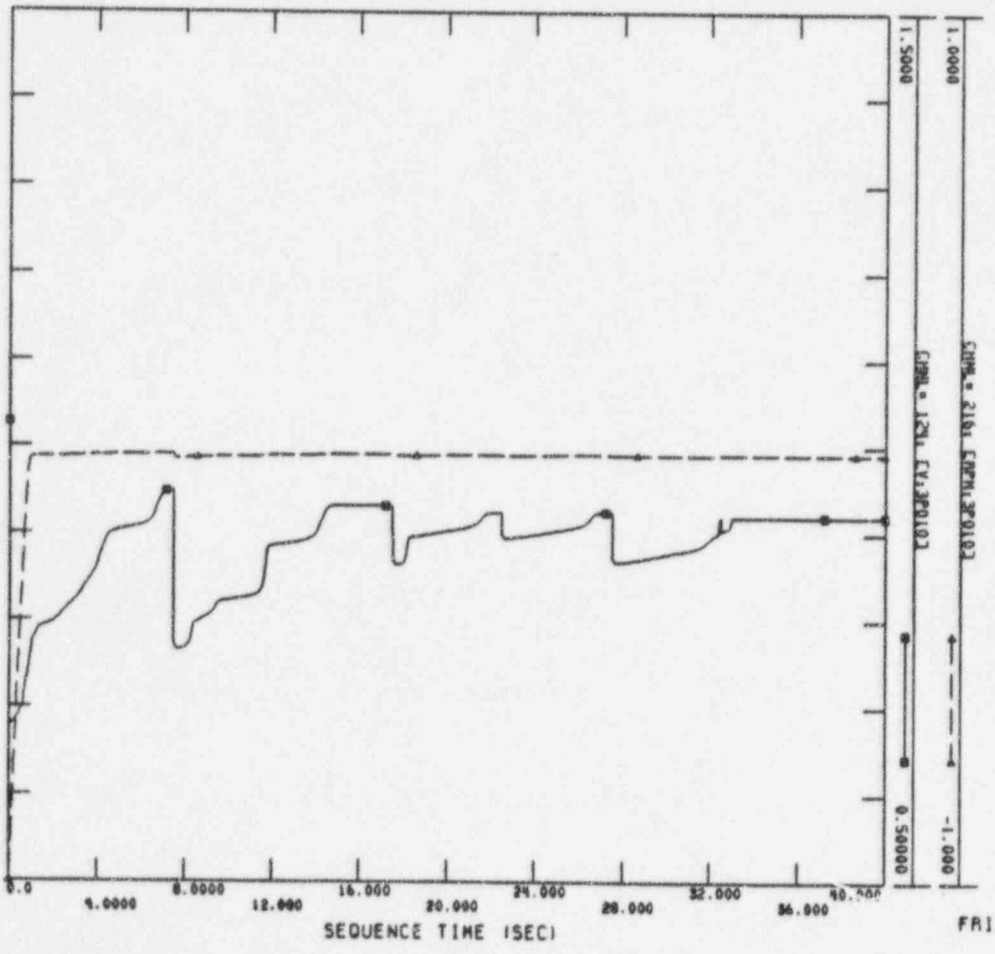
RE: LPM 9-30-94 IRE: RJ 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.. PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8Y3CHANOUT_IV8Y

FRI, SEP 16 1994 15:45

3P009



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.. PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8Y3CHANOUT_IV8Y

FRI, SEP 16 1994 15:46

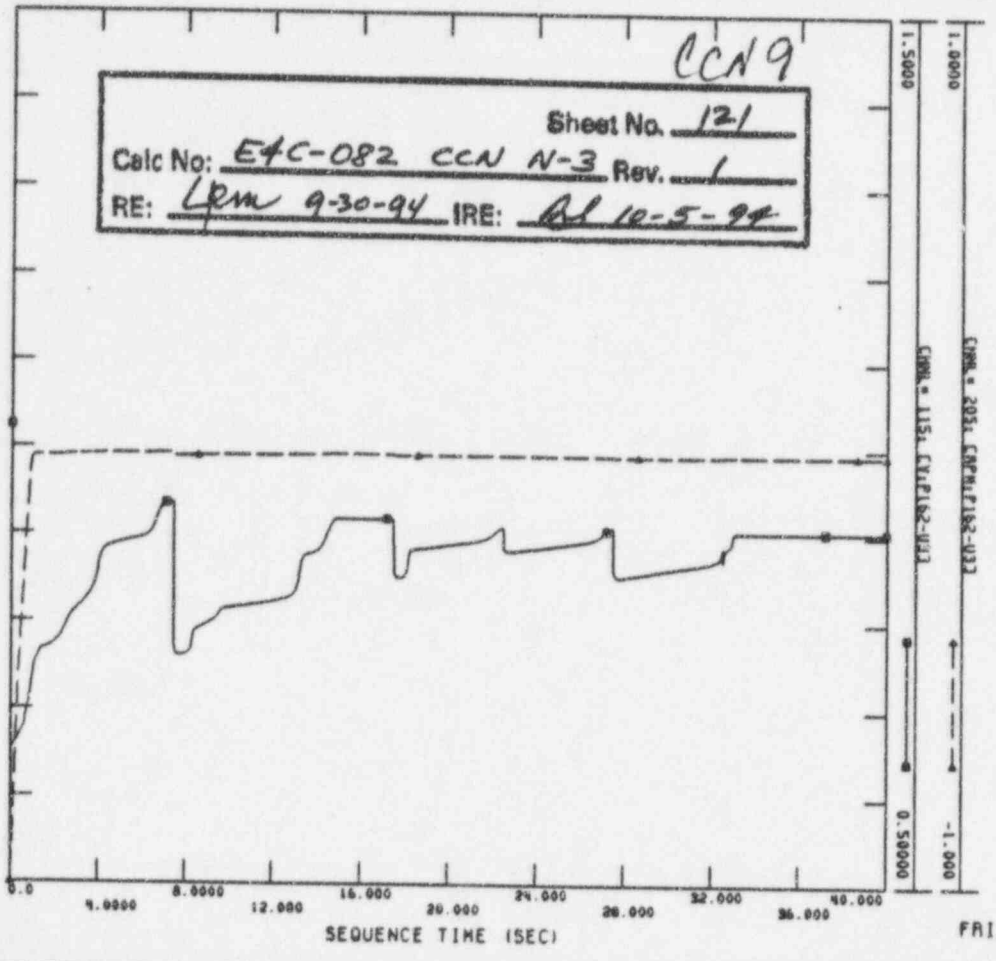
3P010

CCN 9

Sheet No. 121

Calc No: E4C-082 CCN N-3 Rev. 1

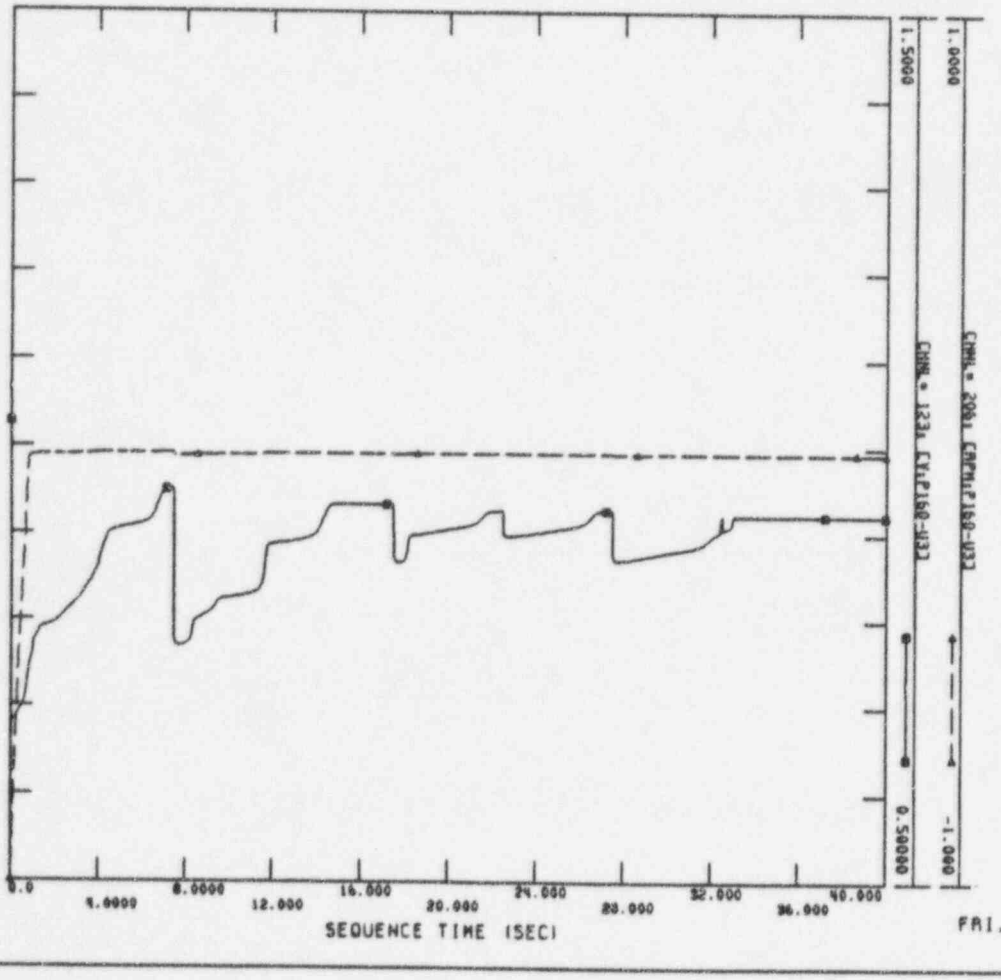
RE: Lpm 9-30-94 IRE: Rd 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8YJCHANOUT_IV8Y

FRI, SEP 16 1994 15:46

P162-U3



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IV8YJCHANOUT_IV8Y

FRI, SEP 16 1994 15:46

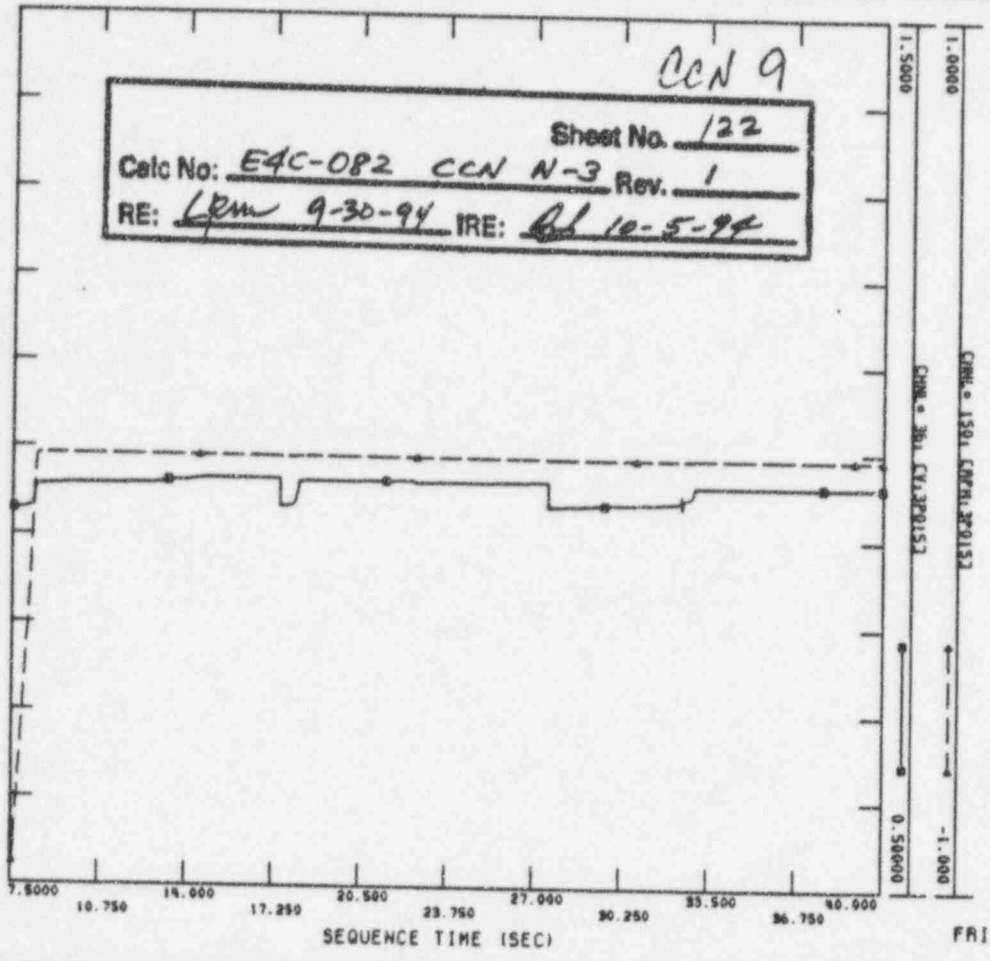
P160-U3

CCN 9

Sheet No. 122

Calc No: E4C-082 CCN N-3 Rev. 1

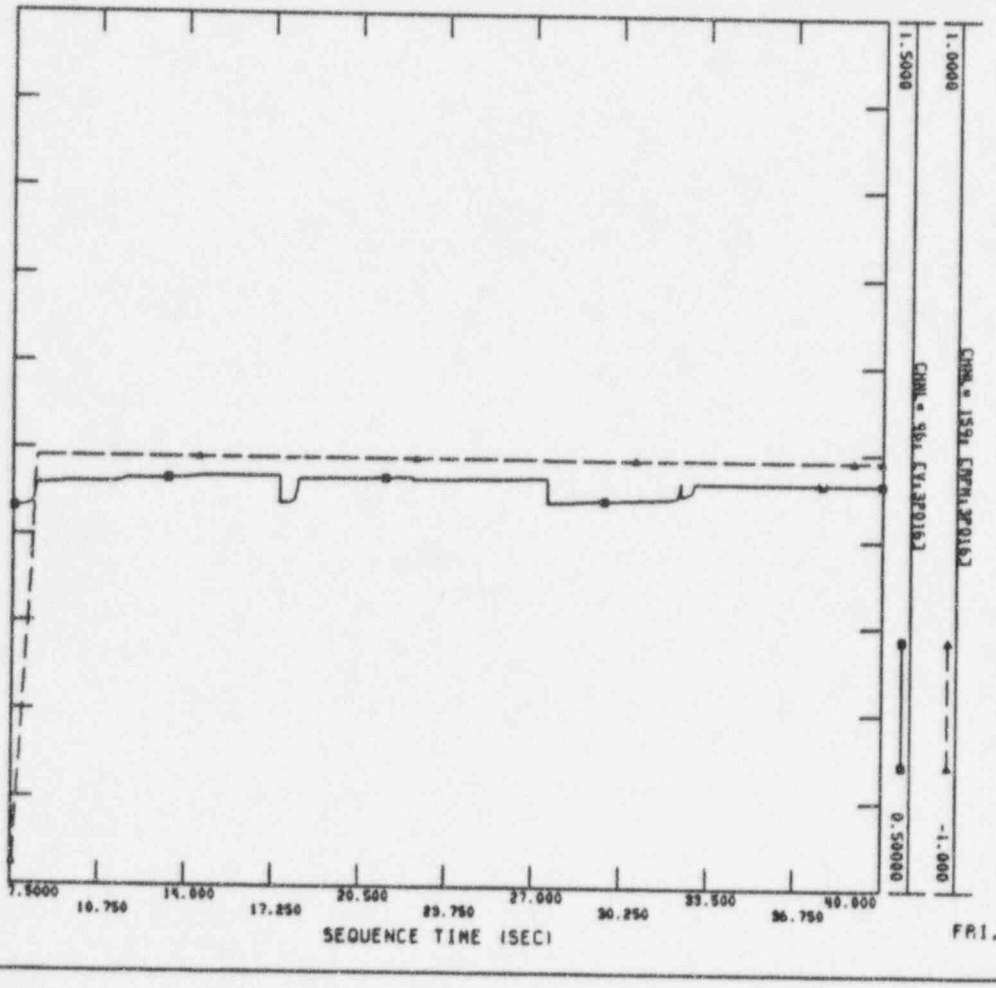
RE: LPM 9-30-94 IRE: RL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBYJCHANOUT_IVBY

FRI, SEP 16 1994 15:46

3P015



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.: PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBYJCHANOUT_IVBY

FRI, SEP 16 1994 15:47

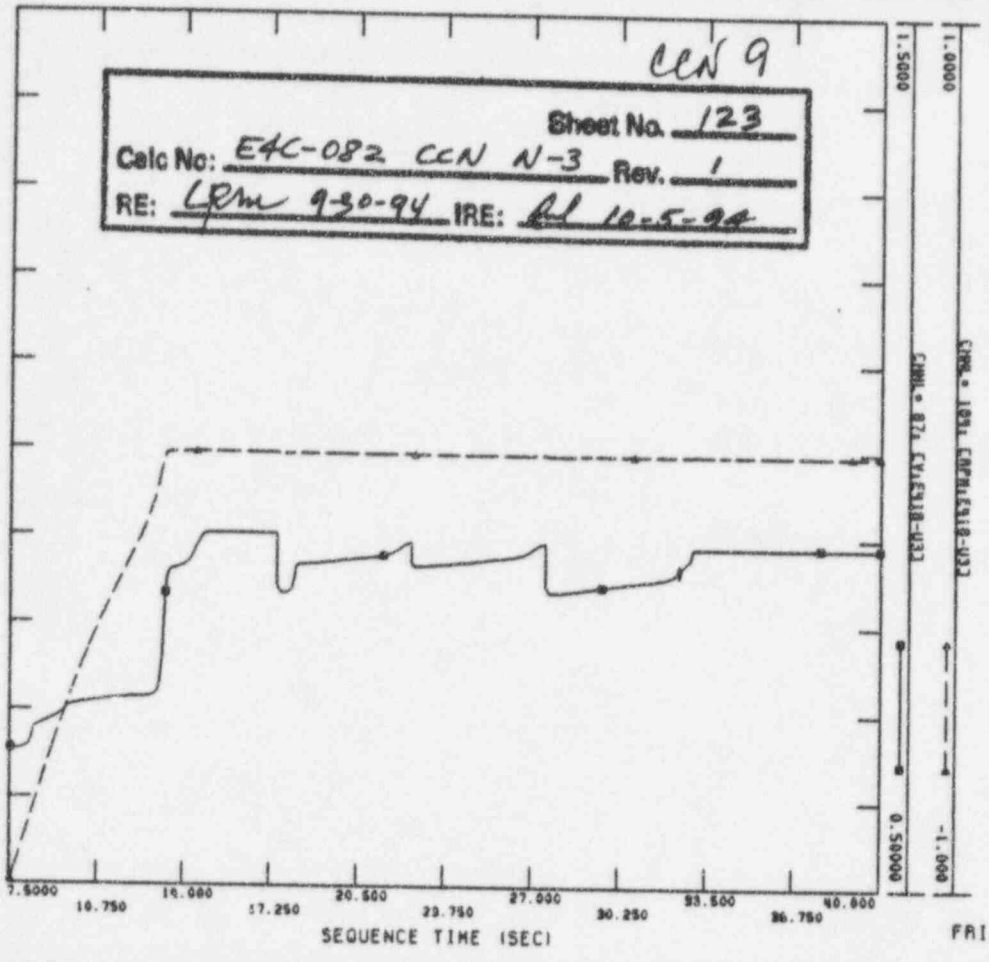
3P016

CCN 9

Sheet No. 123

Calc No: E4C-082 CCN N-3 Rev. 1

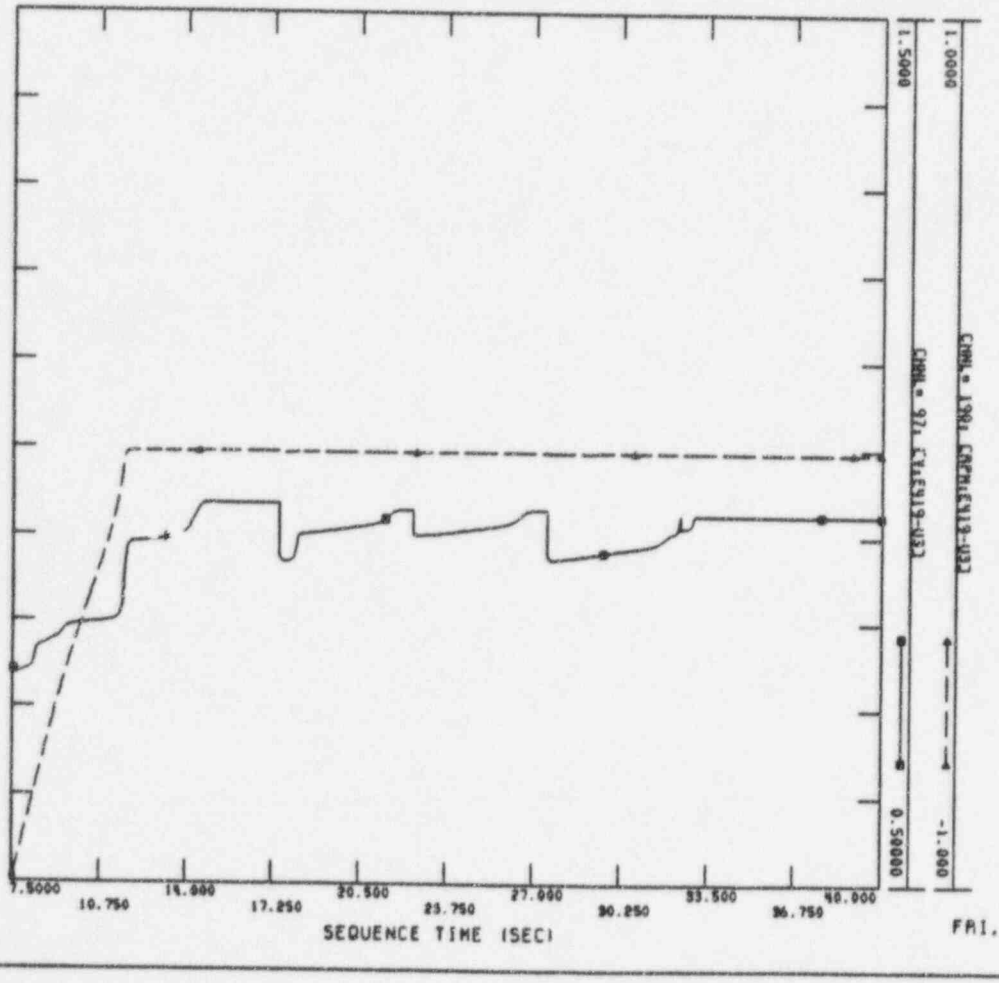
RE: LPm 9-30-94 IRE: RL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBY.CHANOUT_IVBY

FRI, SEP 16 1994 15:47

E418-U3



SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBY.CHANOUT_IVBY

FRI, SEP 16 1994 15:47

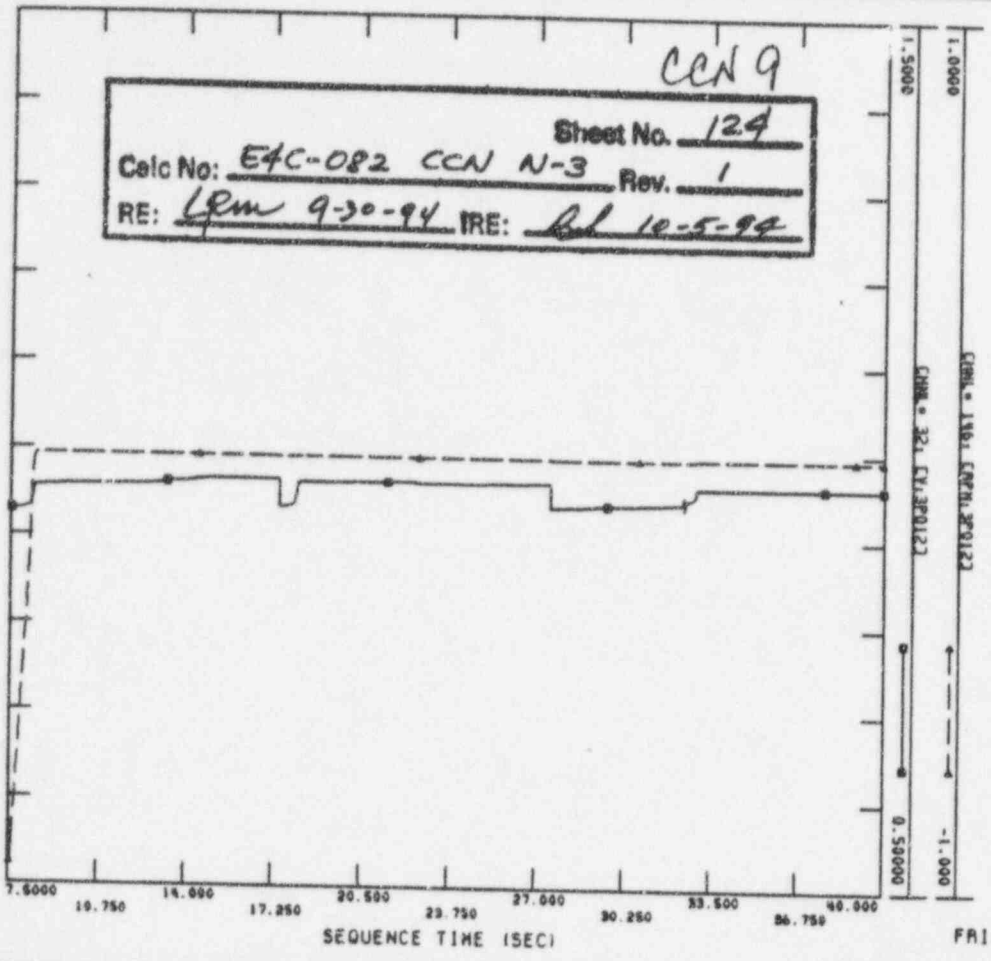
E419-U3

CCN 9

Sheet No. 124

Calc No: E4C-082 CCN N-3 Rev. 1

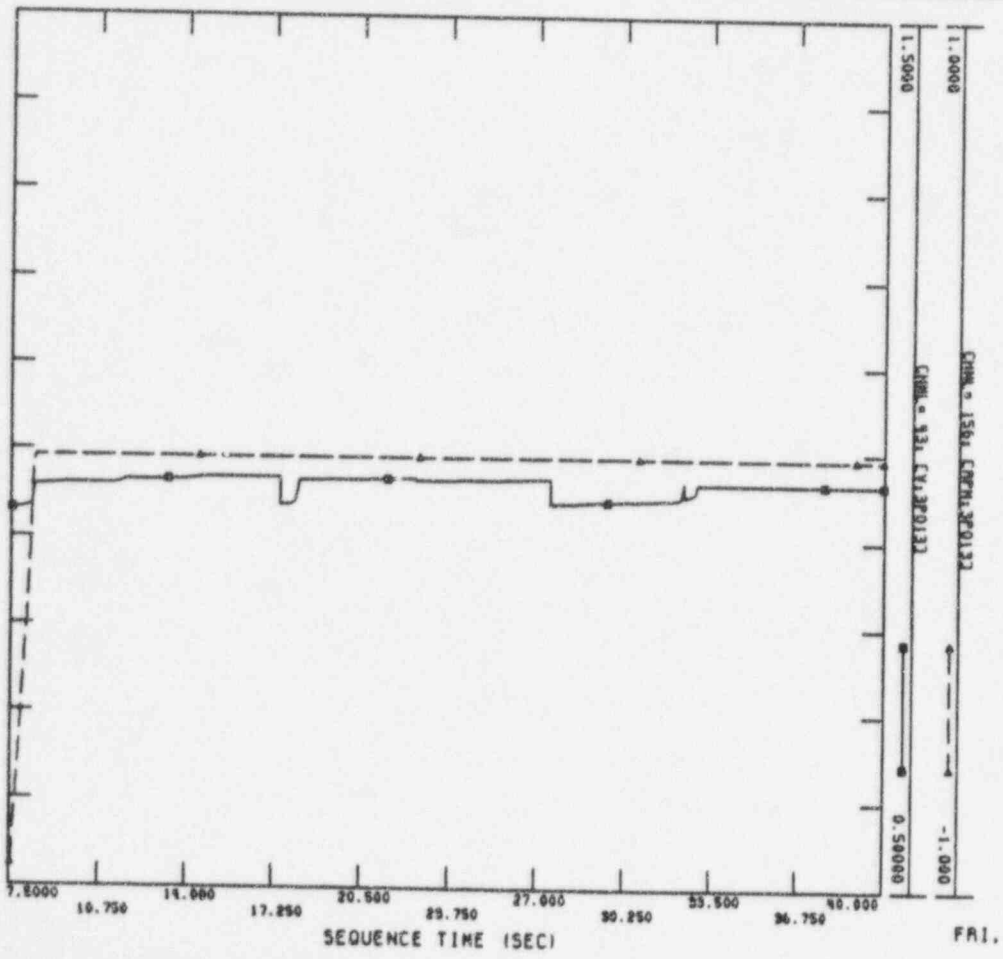
RE: LPm 9-30-94 IRE: Bd 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBY.CHANOUT_IVBY

FRI, SEP 16 1994 15:46

3P012



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
POWER TECHNOLOGIES INC.; PSS/E RELEASE 19.0
PTI INTERACTIVE PLOTTING PROGRAM - PSSPLT
FILE: C.CASE_IVBY.CHANOUT_IVBY

FRI, SEP 16 1994 15:46

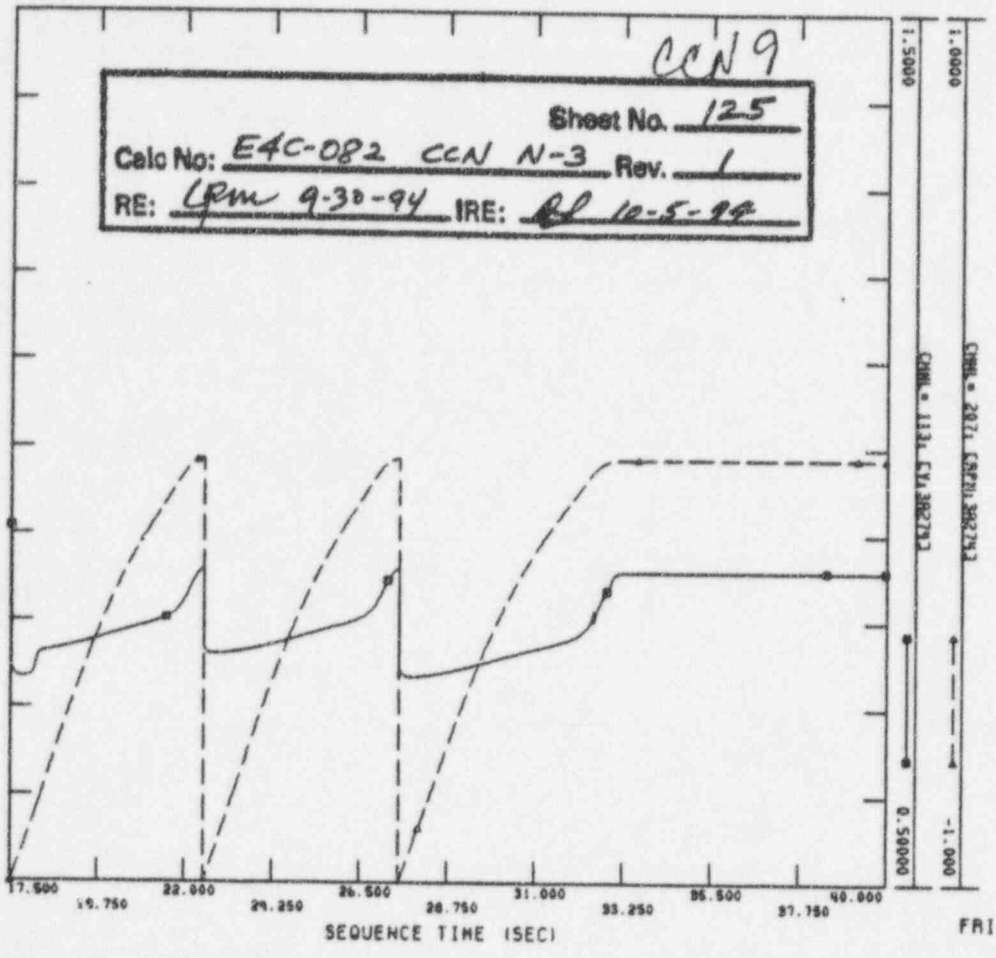
3P013

CCN 9

Sheet No. 125

Calc No: E4C-082 CCN N-3 Rev. 1

RE: LPM 9-30-94 IRE: RL 10-5-94



SAN ONOFRE NUCLEAR GENERATING STATION. UNITS 2 AND 3
SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
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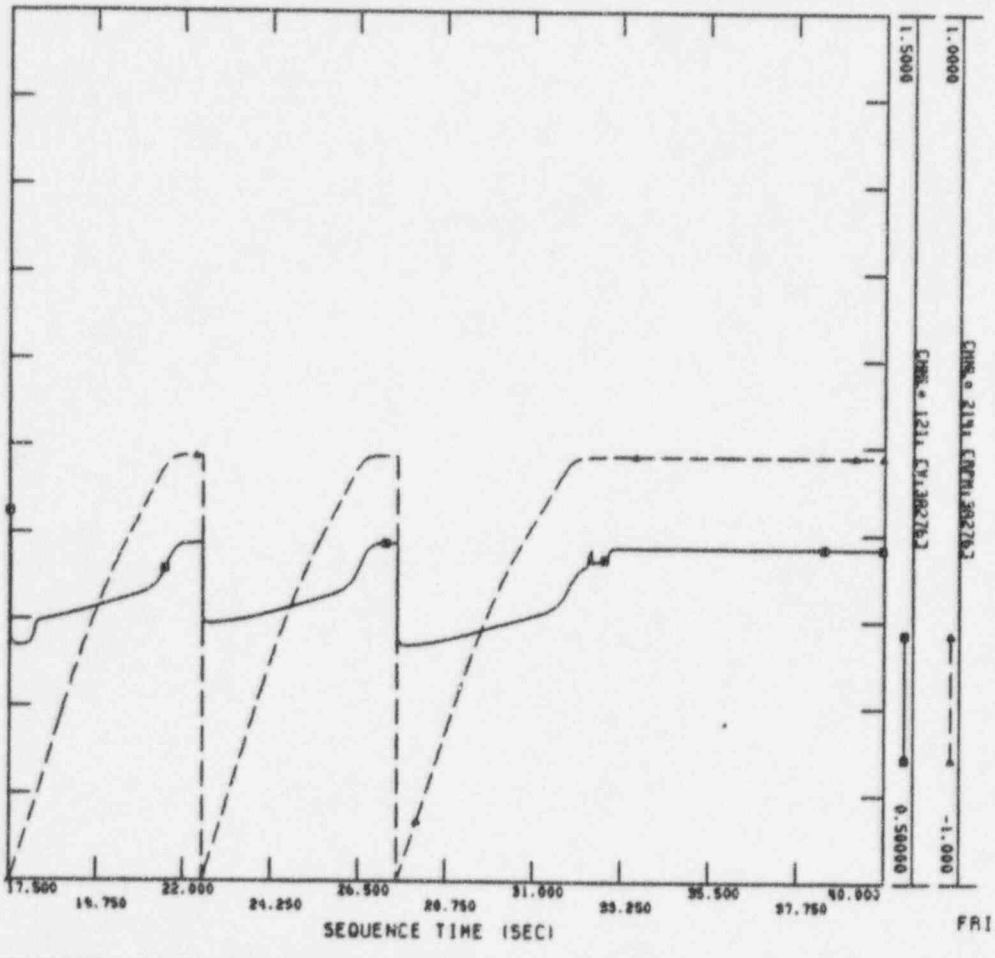

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Sheet No. 126

Calc No: E4C-082 CCN N-3 Rev. 1

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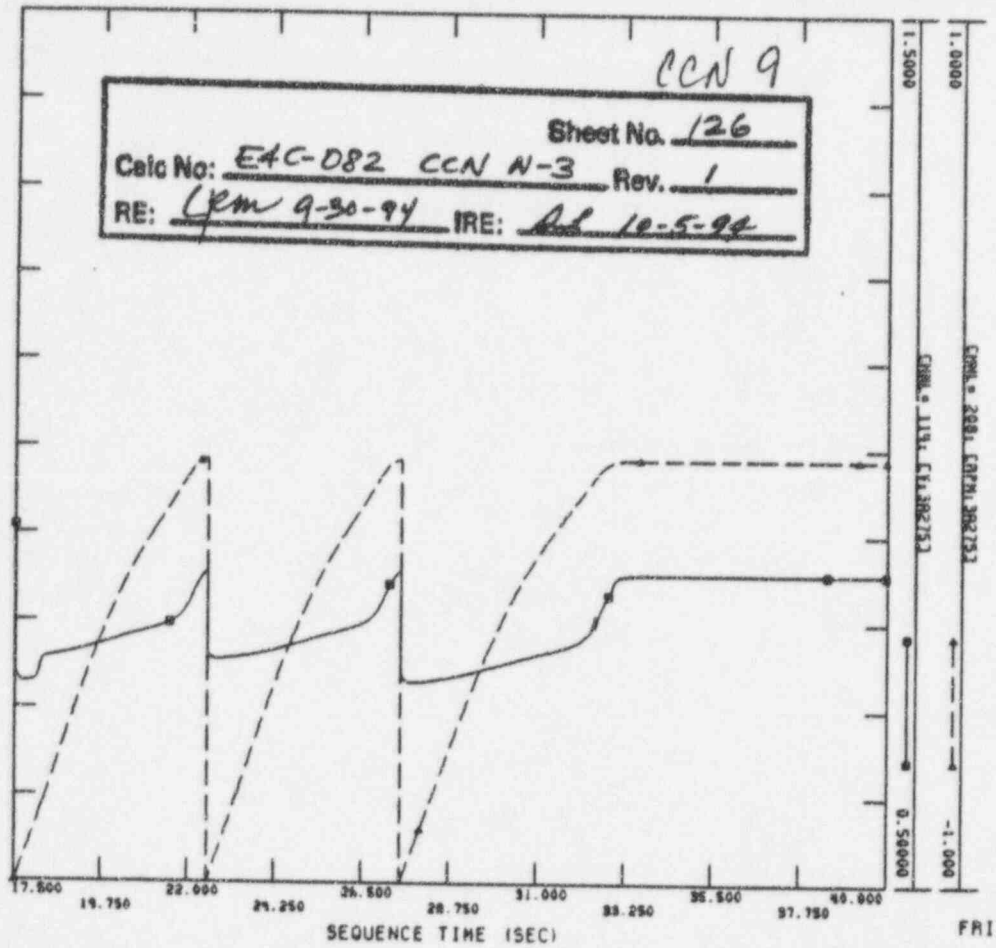

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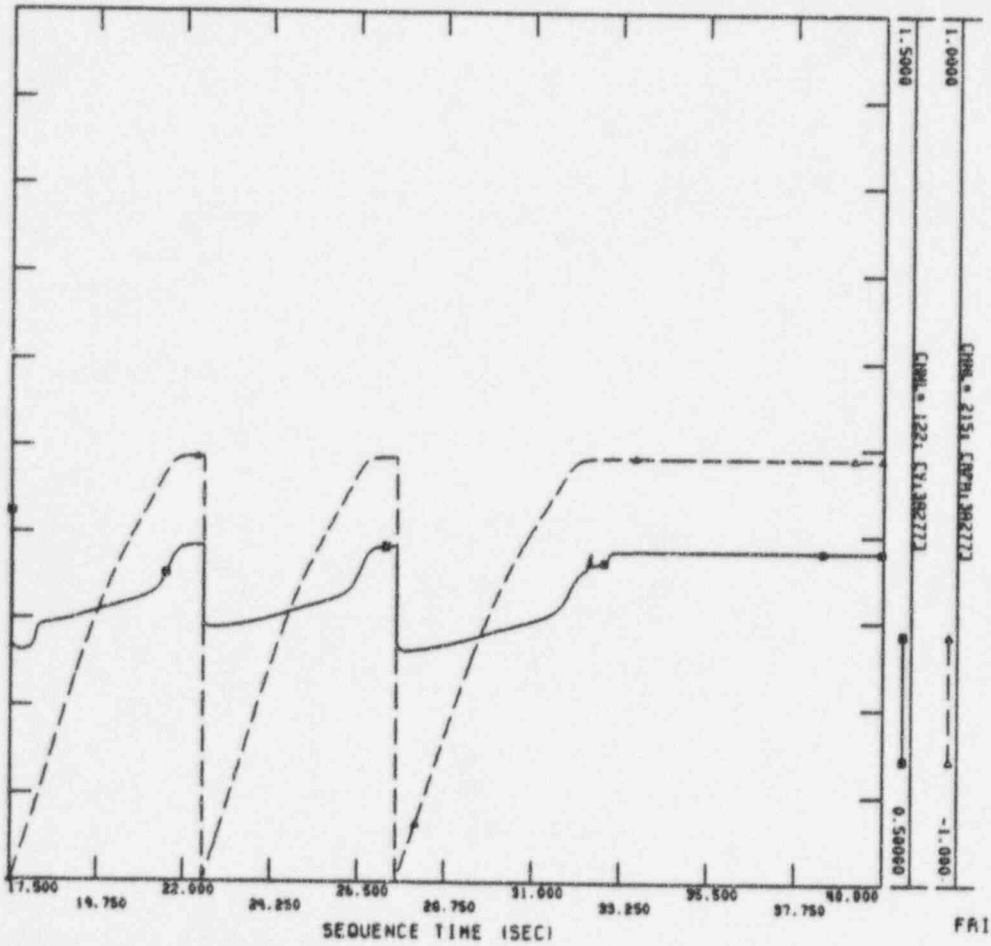

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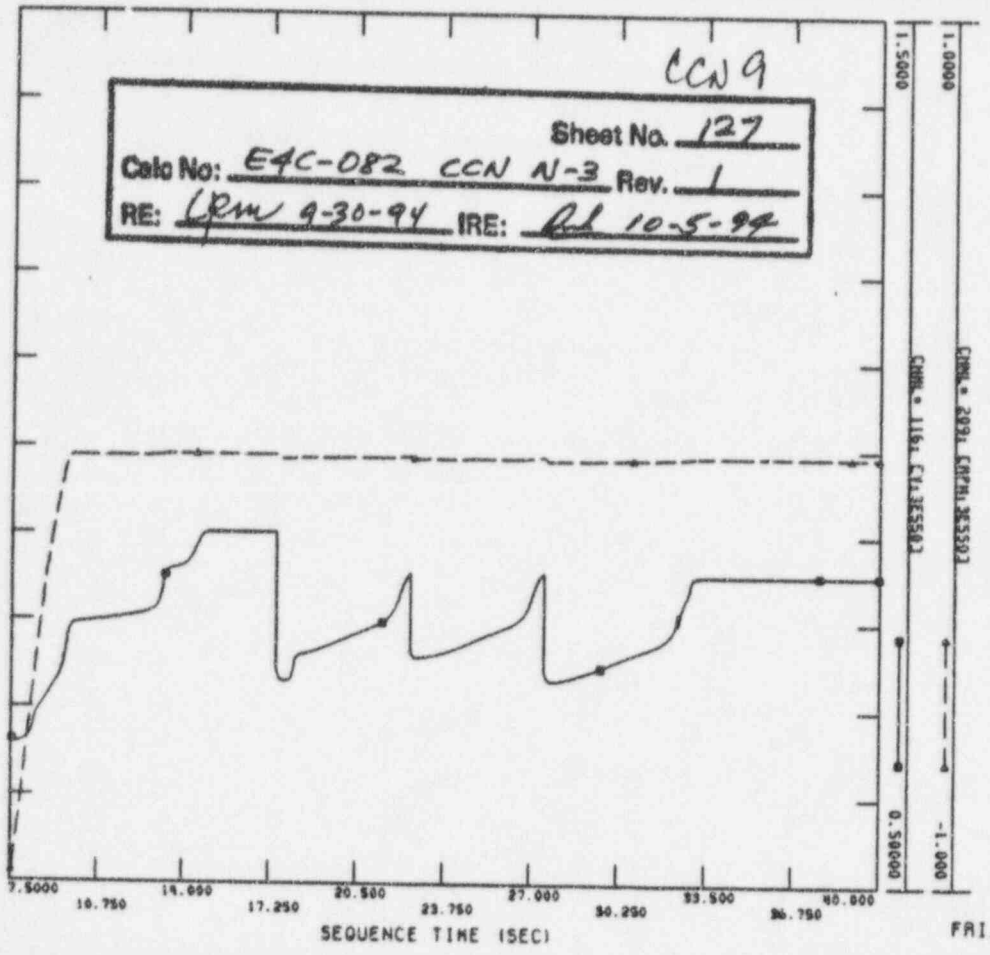
Sheet No. 127

Calc No: E4C-082 CCN N-3 Rev. 1

RE: LRM 9-30-94 IRE: RL 10-5-94



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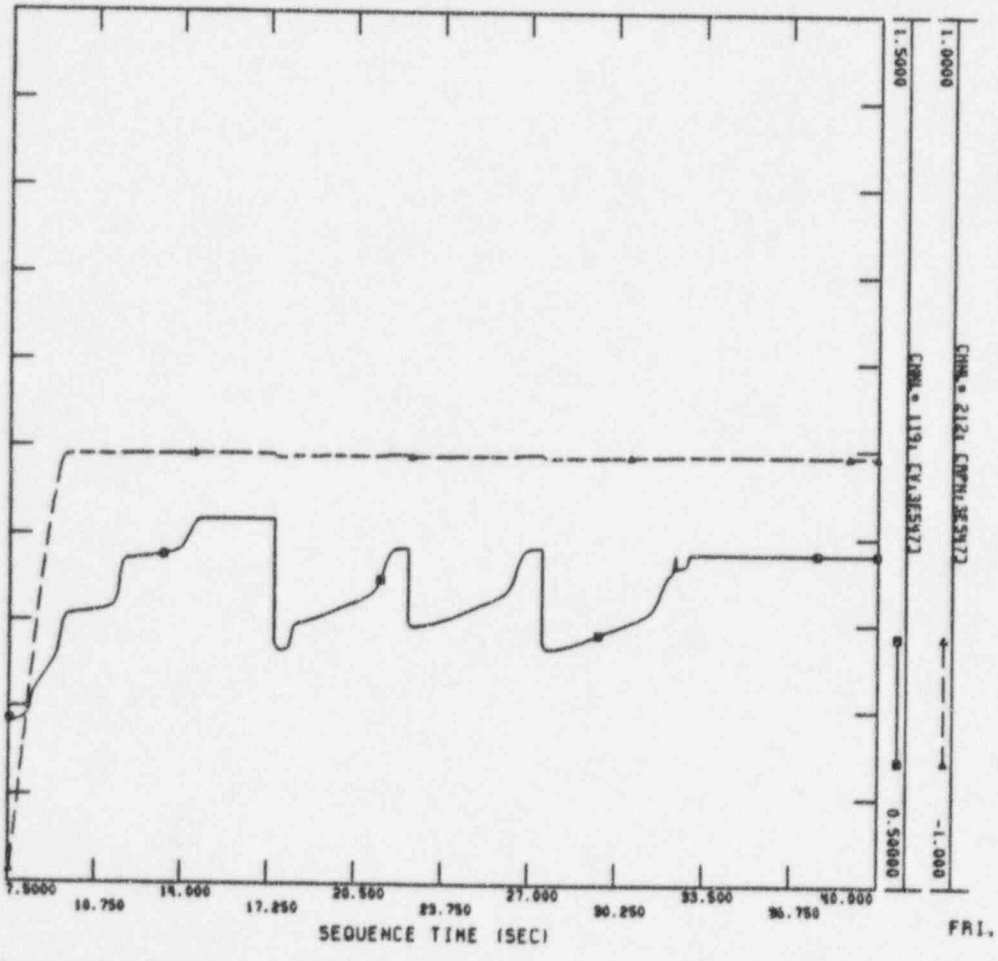

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Sheet No. 128

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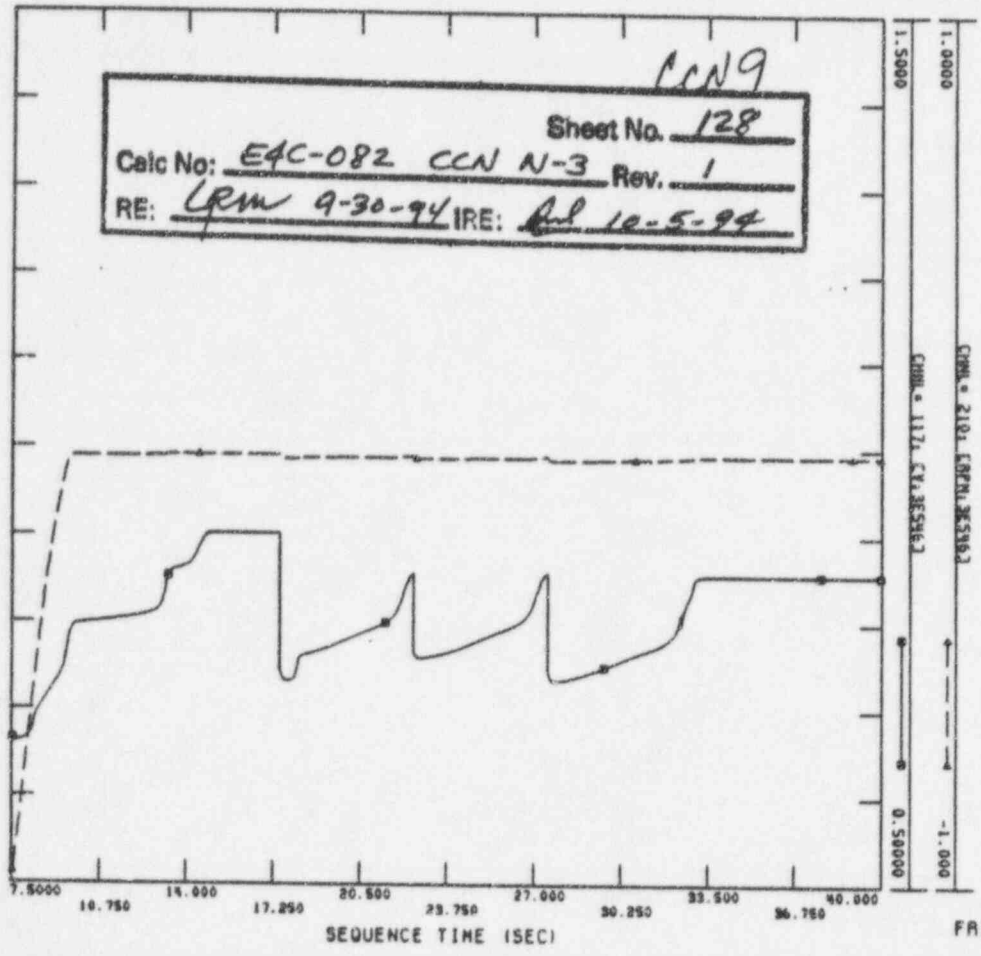

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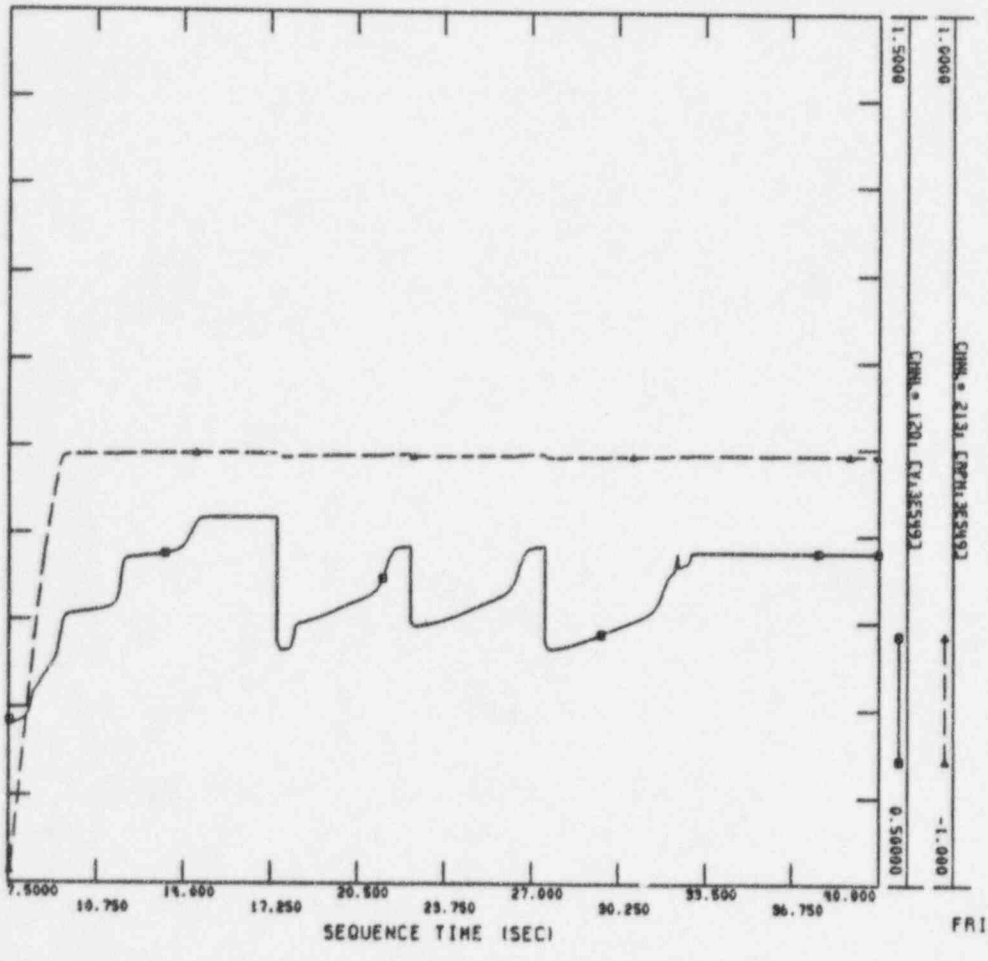

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Sheet No. 129

Calc No: E4C-082 CCN N-3 Rev. 1

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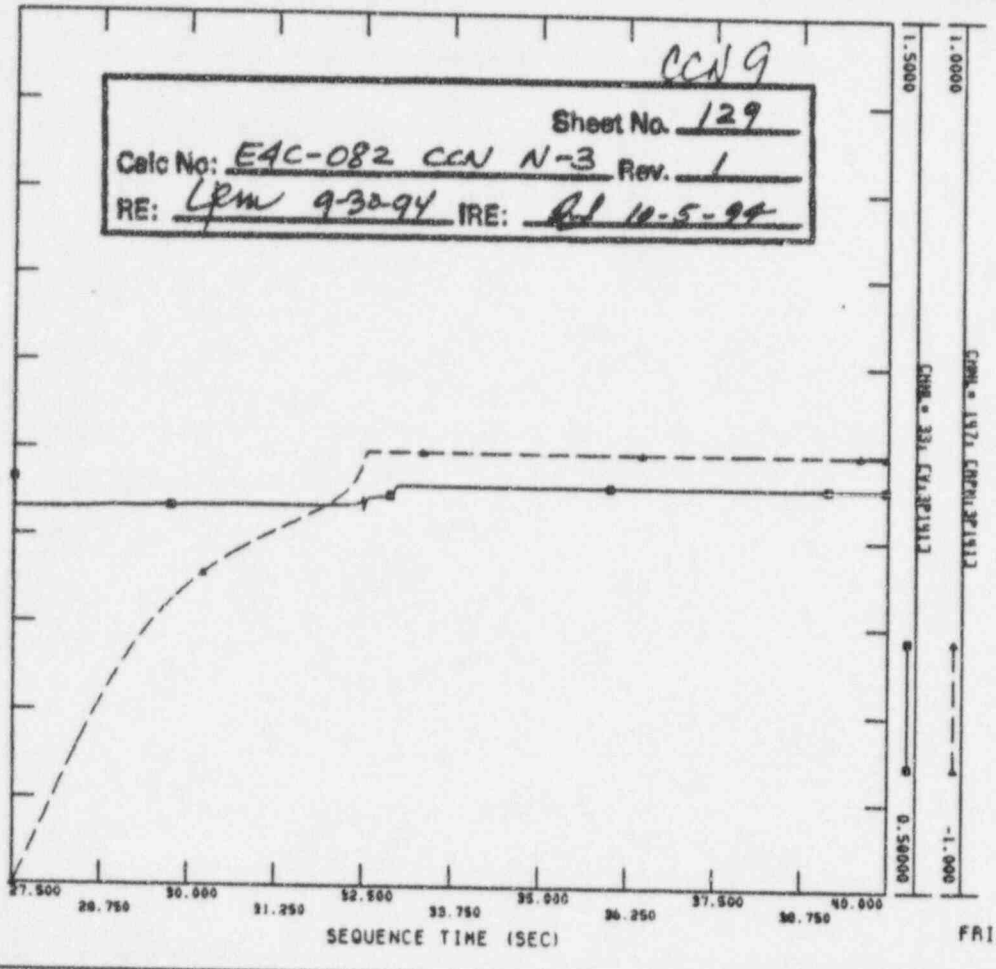

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SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
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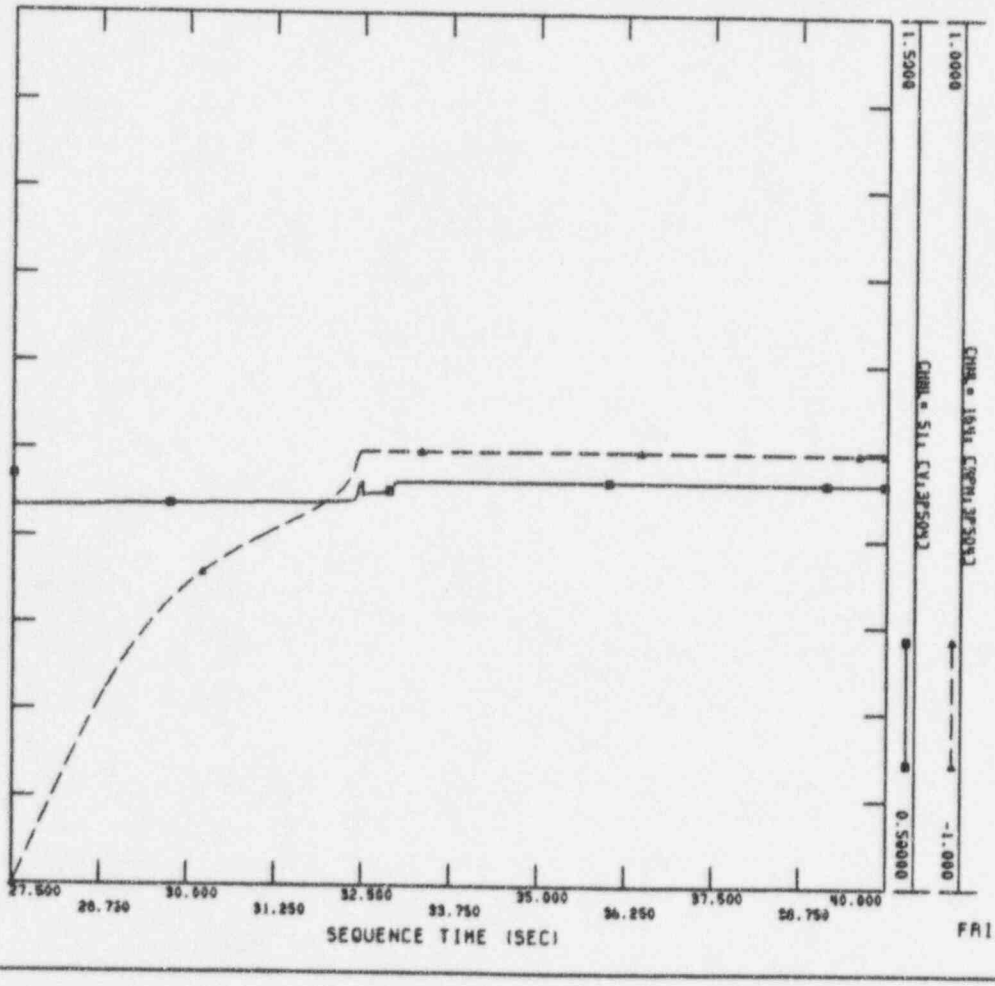

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SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
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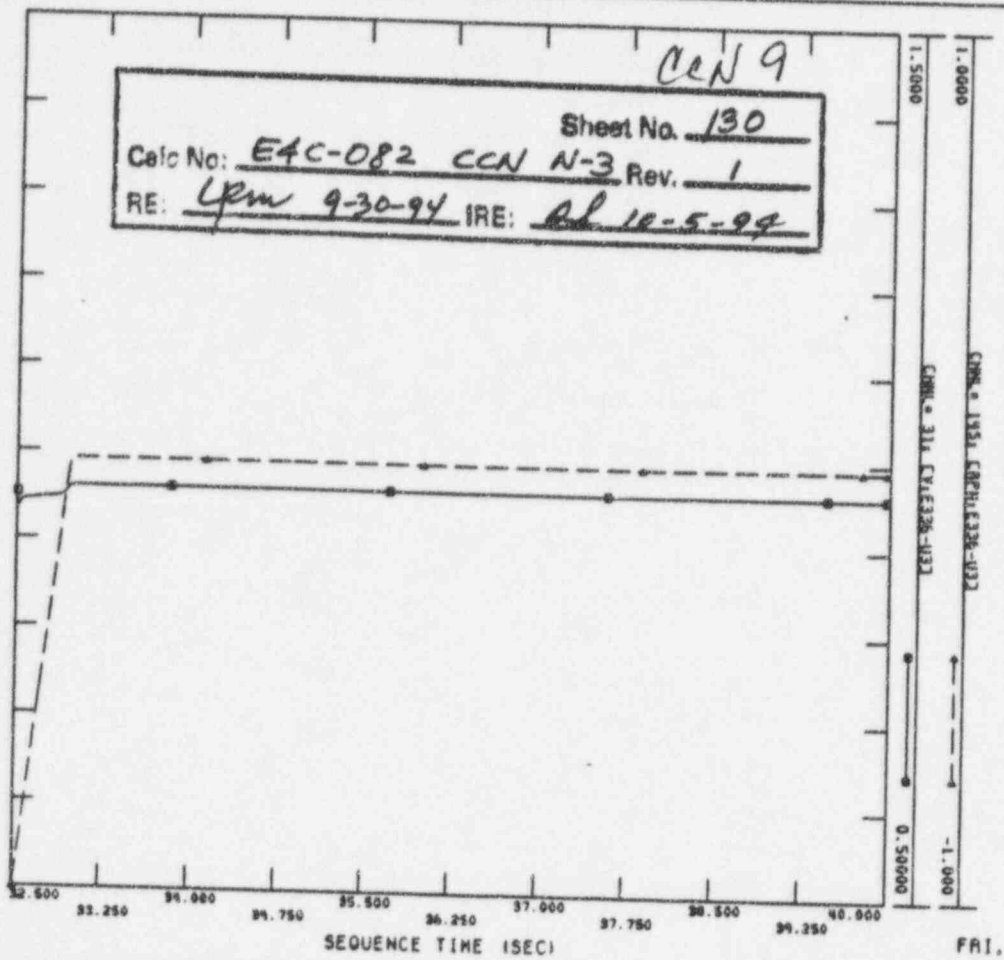
CCN 9

Sheet No. 130

Calc No: E4C-082 CCN N-3 Rev. 1

RE: LPM 9-30-94 IRE: RL 10-5-94



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SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
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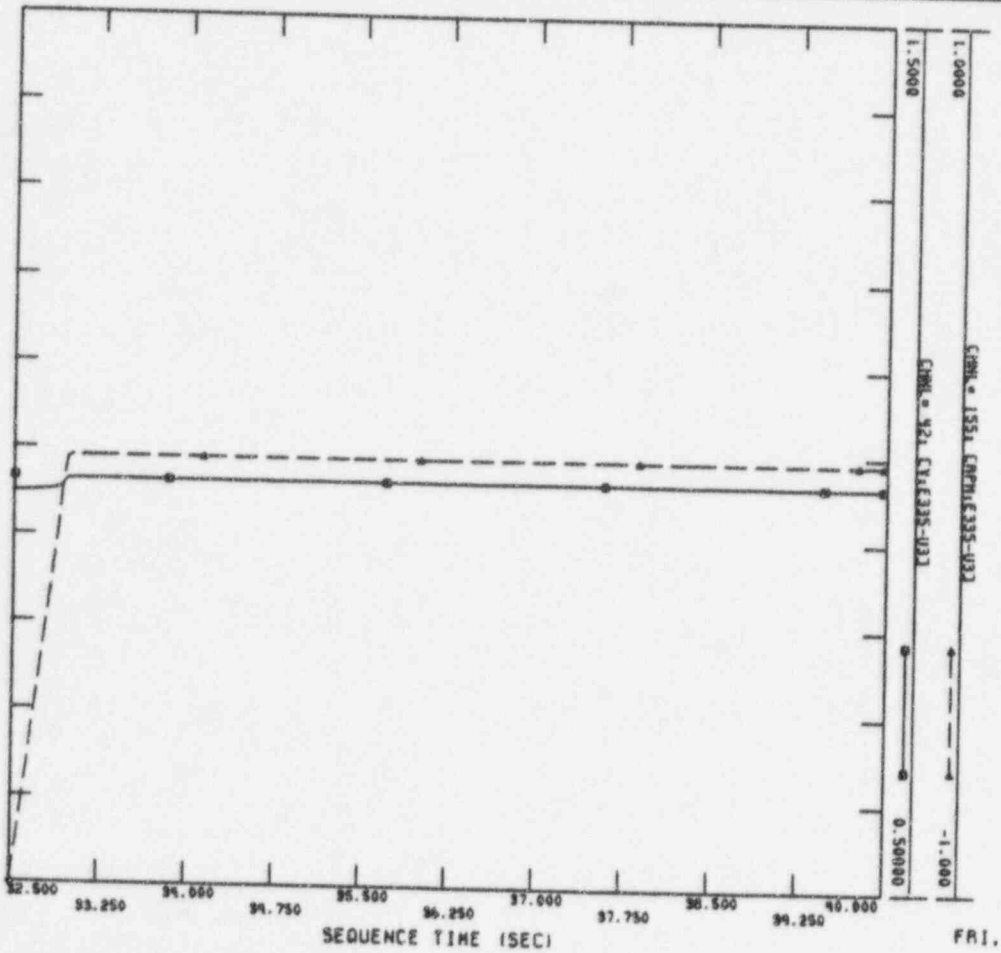

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SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
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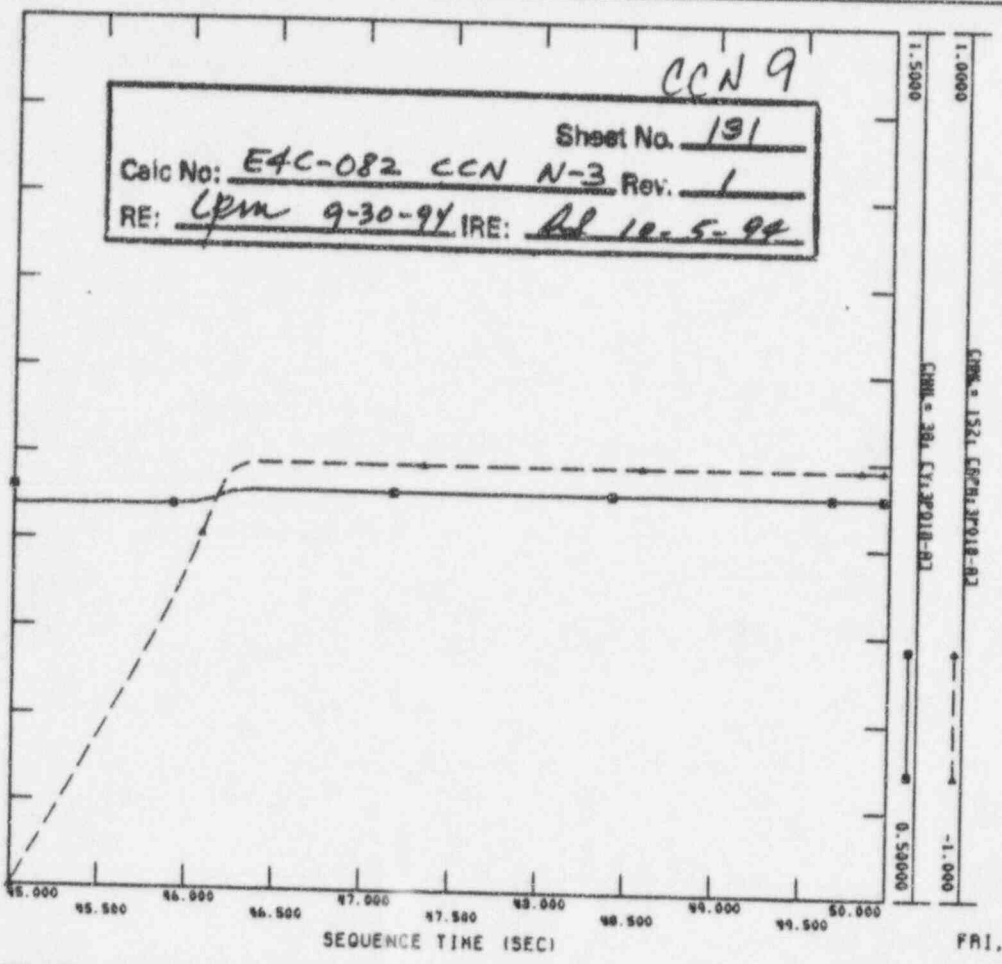
Sheet No. 191

Calc No: E4C-082 CCN N-3 Rev. 1

RE: Lpm 9-30-94 IRE: Rd 10-5-94



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SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT
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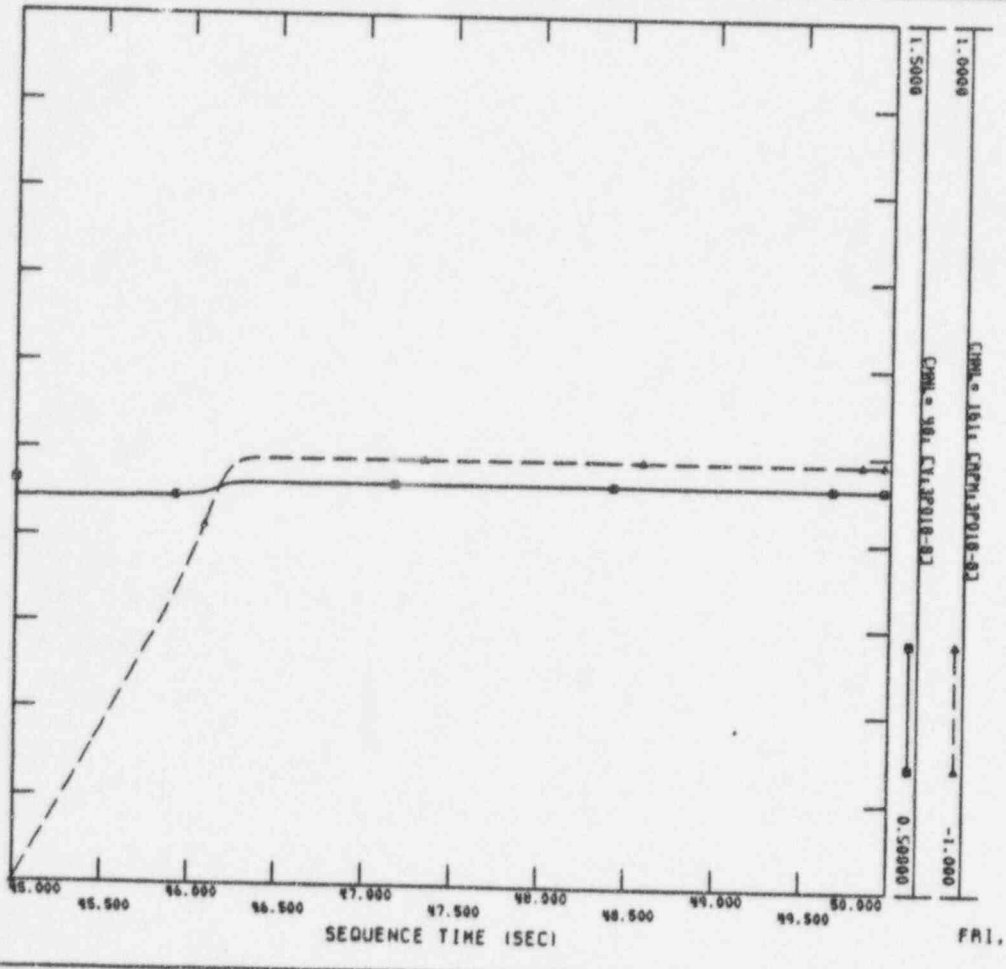

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REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

2.2 CONCLUSIONS:

A. In response to Acceptance Criteria Section 1.2.A, the results of these analyses demonstrate that all ESF motor loads can successfully accelerate to their rated speeds without spurious tripping of their associated circuit breakers, when fed from either the switchyard (CASEs IVBX and IVBY) or the emergency diesel generators (CASEs IIIAX and IIIAY), under the following conditions:

1. Maximum loading.
2. Minimum system voltages.
3. Out-of-sequence starting of ESF loads.

Successful acceleration of ESF motors to their rated speeds indicate that the calculated voltage at the motor terminals are adequate to maintain a corresponding motor torque higher than the load torque requirement.

The following Tables 2.1 and 2.2 show the time (seconds) it would take for each motor to accelerate to its rated speed from standstill. The first column indicates the redundant motor loads. The second column shows the longest acceleration time expected when these redundant motor loads are started out of sequence when powered from the emergency diesel generators. The third column shows the longest acceleration time when these motors are started out of sequence when powered from the offsite power supply (switchyard).

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
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TABLE 2.1 - UNIT 2 ESF MOTORS OUT-OF-SEQUENCE ACCELERATION TIME

UNIT 2	FED FROM EDG	FED FROM SWITCHYARD
4-KV MOTOR LOADS		
CONTAINMENT SPRAY PUMP 2P012/2P013	0.87	0.87
AUXILIARY FEEDWATER PUMP 2P141/2P504	3.30	5.00
COMPONENT COOLING WATER PUMP 2P024/2P025/2P026	0.73	0.80
LOW PRESSURE SAFETY INJECTION PUMP 2P015/2P016	0.87	0.87
HIGH PRESSURE SAFETY INJECTION PUMP 2P017/2P018/2P019	1.07	1.40
SALTWATER COOLING PUMP 2P112/2P113/2P114/2P307	0.57	0.53
AUXILIARY BUILDING EMERGENCY CHILLER E335/E336	0.50	0.50
480-V LOADCENTER MOTOR LOADS		
CHARGING PUMP 2P190/2P191/2P192	0.80	1.07
DOME AIR CIRCULATOR FAN 2A071/2A072/2A073/2A074	5.42	7.50
CONTAINMENT EMERGENCY FAN 2E399/2E400/2E401/2E402	3.20	5.07
CONTROL ROOM EMERGENCY AC UNIT E418/E419	4.12	5.85
480-V MCC MOTOR LOADS		
EDG BUILDING EMERGENCY FAN 2A274/2A275/2A276/2A277	3.85	5.00
EDG RADIATOR FAN 2E546/2E547/2E549/2E550	1.52	2.20
SPENT FUEL PUMP 2P009/2P010	0.80	1.07
CONTROL BLDG EMERGENCY CHILLED WATER PUMP 2P160/2P162	0.53	1.07

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

TABLE 2.2 - UNIT 3 ESF MOTORS OUT-OF-SEQUENCE ACCELERATION TIME

UNIT 3	FED FROM EDG	FED FROM SWITCHYARD
4-KV MOTOR LOADS		
CONTAINMENT SPRAY PUMP 3P012/3P013	0.87	0.87
AUXILIARY FEEDWATER PUMP 3P141/3P504	3.30	5.00
COMPONENT COOLING WATER PUMP 3P024/3P025/3P026	0.73	0.80
LOW PRESSURE SAFETY INJECTION PUMP 3P015/3P016	0.87	0.87
HIGH PRESSURE SAFETY INJECTION PUMP 3P017/3P018/3P019	1.07	1.40
SALTWATER COOLING PUMP 3P112/3P113/3P114/3P307	0.57	0.53
AUXILIARY BUILDING EMERGENCY CHILLER E335/E336	0.50	0.50
480-V LOADCENTER MOTOR LOADS		
CHARGING PUMP 3P190/3P191/3P192	0.80	1.07
DOME AIR CIRCULATOR FAN 3A071/3A072/3A073/3A074	5.42	7.50
CONTAINMENT EMERGENCY FAN 3E399/3E400/3E401/3E402	3.20	5.07
CONTROL ROOM EMERGENCY AC UNIT E418/E419	4.12	5.85
480-V MCC MOTOR LOADS		
EDG BUILDING EMERGENCY FAN 3A274/3A275/3A276/3A277	3.85	5.00
EDG RADIATOR FAN 3E546/3E547/3E549/3E550	1.52	2.20
SPENT FUEL PUMP 3P009/3P010	0.80	1.07
CONTROL BLDG EMERGENCY CHILLED WATER PUMP 3P160/3P162	0.53	1.07

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

B. In response to Acceptance Criteria Section 1.2.B, loading profiles for the emergency diesel generators show that the steady state loading in each generator is within its 4700 KW rating. The momentary power surges above the 4700 KW rating during automatic sequencing are acceptable because each diesel generator unit is capable of being loaded to 5170 KW for 2 hours within 24-hour period.

C. In response to Acceptance Criteria Section 1.2.C.1, results of the dynamic simulations performed for the emergency diesel generators demonstrate that each emergency diesel generator is capable of starting and accelerating their respective ESF loads to their rated speeds at their designated sequence. See Table 2.1 and 2.2 above.

D. In response to Acceptance Criteria Section 1.2.C.2, results of the dynamic simulations performed for the emergency diesel generators indicate that the minimum generator frequency throughout the duration of automatic sequencing is no less than 98.8% of the nominal (60 Hertz), which is above the minimum limit of 95% nominal required by Regulatory Guide 1.9, and the corresponding minimum generator voltage is no less than 78% of the nominal voltage (4.36 KV), which is above the minimum limit of 75% nominal.

E. Acceptance Criteria Section 1.2.C.3 requires that the generator frequency be restored to within 2% of nominal (60 Hertz) in less than 60% of each load-sequence interval for step load increase. Since the minimum generator frequency throughout the duration of automatic sequence is 98.8% per Section 2.2.D above, the frequency criterion of Section 1.2.C.3 is correspondingly satisfied.

F. Acceptance Criteria Section 1.2.C.4 requires that the generator voltage be restored to 10% of nominal (4.36 KV) within 60% of each load-sequence time interval. Based on the results of dynamic simulations performed for the emergency diesel generators, full recovery to nominal voltage is achieved in less than 60% of each loading sequence.

G. In response to Acceptance Criteria 1.2.D, results of these analyses were reviewed against Calculations E4C-098 (Reference 6.16) and E4C-099 (Reference 6.17). Based on these reviews, the acceleration times determined in these analyses, per Tables 2.1 and 2.2 above, remain bounded by the existing motor protective device settings per Class 1E 4KV Protection Calculation E4C-098 (Reference 6.16) and Class 1E 480V Protection Calculation E4C-099 (Reference 6.17).

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H. The multiple starting of Saltwater Cooling Pumps, Component Cooling Water Pumps and Dome Air Circulator Fans during the dynamic simulation for single train operation insures that the results of these analyses are bounding for all operating modes of these loads when the auxiliary system is fed from the offsite power supply.

I. For systems which have swing or redundant components, the starting of load with the highest impedance feeder cable insures that the results of these analyses are bounding and are applicable to any of the redundant components.

J. In cases where the 4-kV ESF buses are deenergized and transferred to the corresponding ESF buses of the companion unit (CASEs IVBX and IVBY), motor loads that are initially running during the normal plant operation are stopped and restarted when the tie breaker closes during bus transfer. This insures that the resulting voltage profiles established by this CCN for these cases are bounding. The results of the analyses performed for these cases are acceptable.

K. The post accident steady state voltage in some cases may not recover to 90% of the motor rated voltage per ANSI Standard C50.41-1982 (Reference 6.18). However, this condition is rare because the corresponding switchyard voltage considered in these analyses is based on the expected minimum of 218 KV at the switchyard which could occur only when all the Units in San Onofre are off-line during summer peak loading conditions. In most cases this minimum switchyard voltage (218 KV) would not persist for an indefinite period since it is normal for the Edison Energy Control Center to reconfigure the 230-KV system and restore the system voltage to within normal (230 KV). For specifics, see System Operating Bulletin No. 17 (Reference 6.19). A more severe instability in the grid causing extreme degradation of voltage below 218 KV would cause the auxiliary system to be powered from the emergency diesel generators. Detailed analyses of the effect of post accident steady state voltages on the running motor loads are addressed in Calculation E4C-090 (Reference 6.15).

L. This CCN does not impact any relevant provisions of the SONGS 2&3 Technical Specifications, Updated Final Safety Analysis Report and Design Bases Documentation.

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIE	9-30-94	A. M. PATEL	10-5-94					

2.3 RECOMMENDATION:

None identified. No further action is required by this CCN.

NES&L DEPARTMENT

CALCULATION SHEET

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Project or DCP/MMP SONGS 2 & 3 Calc No. E4C-082 Rev.1

Subject SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT Sheet No.

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

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REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

3.0 ASSUMPTIONS:

3.1 All assumptions established in the base calculation are applicable to this CCN.

3.2 This CCN considers the most limiting impedance value for the new 1500 KVA loadcenter transformers based on the vendor test reports (References 6.2 through 6.6). This limiting impedance value is used in all ESF loadcenter transformers to allow their replacement without exceeding the bounds of these analyses.

3.3 This CCN considers only the analyses performed in the base calculation for CASE IIIA, when fed from the emergency diesel generators, and CASE IVB, when fed from the offsite power supply. These cases are chosen for this CCN because they represent the most limiting conditions (minimum voltage and maximum loading) for dynamic simulations. This will ensure that the results of these analyses are bounding.

3.4 Motor Control Center Loading Assumptions:

A. MCC load data, except MOVs, are taken from Calculations E4C-086 and E4C-087 (References 6.13 and 6.14). The equivalent KW and KVAR values for the MOVs are determined in Table 5.2 based on their horsepower rating and typical power factor and efficiency of 60% and 70% respectively, per Limitorque Publication SEL-17 (Attachment 9.2.2). MCC load schedules are shown in Table 5.3.

MCC loads are lumped and classified as follows:

1. Initial Condition Equivalent Load - This equivalent load is a constant KVA load consisting of both static and motor loads at steady state running condition. These loads are considered operating prior to the initiation of accident signal.

2. Accident Condition Equivalent Motor Load - This equivalent load is the starting motor load representative of all ESF motors that are required for accident mitigation. For conservatism, these motors are assumed to start at Sequence 1 or at t=0 second and include motors that would continue to run after the completion of automatic sequencing. Motor Operated Valves (MOVs) are assumed to operate during the entire dynamic simulation, regardless of their position when the safety signal is received.

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3. Accident Condition Equivalent Static And Running Load - This equivalent load is a constant KVA load consisting of both static and motor loads at steady state running condition. It represents all the static and motor loads that are continuously running through the entire sequencing period.

B. Based on Calculations E4C-086 and E4C-087 (References 6.13 and 6.14) a load margin of 5 KVA for the equivalent static load and 15 HP margin for the equivalent starting motor load are provided in each of the ESF MCCs for future load addition.

The corresponding calculations for the MCC equivalent loading are shown in Sections 8.3 through 8.20. The results of these calculations are shown in Tables 3.1 and 3.2.

C. The equivalent inertia constant for the starting lumped MCC motor model is based on the total inertia of the individual motors. Inertia values used in the CMOTOR models for the lumped MCC motors are typical values from Calculations E4C-086 and E4C-087 (References 6.13 and 6.14). Inertia values for each motor is determined based on the size and rating of the motor. The corresponding inertia ratio is taken from Table 1, "Load Characteristics Of Various Machines", in the Motor Application and Maintenance Handbook (Reference 6.20). Inertia ratio for each motor is determined based on the type of motor application. Accordingly, the inertia ratio for fans and the 15 HP margin discussed in Section 3.4.B (above) is assumed at 25. The inertia ratio for compressors is assumed at 8 and the inertia ratio for pumps and MOVs is assumed at 1.

Inertia constants used in the CMOTOR models are determined per Section 5.8 of the base calculation. The corresponding calculations are shown in Table 5.4 and the results of these calculations are shown in Table 3.3 below.

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	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

TABLE 3.1 - MCC EQUIVALENT LOADS

MCC	PSS/E BUS NUMBER	INITIAL CONDITION EQUIV. LOADS		ACCIDENT CONDITION EQUIV. STATIC LOADS	
		P (MW)	Q (MVAR)	P (MW)	Q (MVAR)
2BRA	23403	0.00850	0.00526	0.00850	0.00526
2BD	23407	0.04586	0.00928	0.00850	0.00526
2BE	23414	0.08944	0.06408	0.08944	0.06408
2BY	23415	0.11821	0.07427	0.11248	0.07808
BQ	23417	0.07591	0.04579	0.07591	0.04579
2BRB	23603	0.00850	0.00526	0.00850	0.00526
2BH	23605	0.04586	0.00928	0.00850	0.00526
2BJ	23607	0.07924	0.05776	0.07924	0.05776
2BZ	23614	0.09305	0.06040	0.12438	0.08390
BS	23618	0.01233	0.00763	0.04263	0.02343
3BRA	33403	0.00850	0.00526	0.00850	0.00526
3BD	33407	0.04586	0.00928	0.00850	0.00526
3BE	33414	0.08944	0.06408	0.08944	0.06408
3BY	33415	0.11821	0.07427	0.11248	0.07808
BQ	33417	0.07591	0.04579	0.07591	0.04579
3BRB	33603	0.00850	0.00526	0.00850	0.00526
3BH	33605	0.04586	0.00928	0.00850	0.00526
3BJ	33607	0.07924	0.05776	0.07924	0.05776
3BZ	33614	0.09291	0.06040	0.12438	0.08390
BS	33618	0.01233	0.00763	0.04263	0.02343

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

TABLE 3.2 - MCC EQUIVALENT MOTOR LOADS

MCC	PSS/E BUS NUMBER	ACCIDENT CONDITION EQUIVALENT MOTOR LOADS		
		MBASE (MVA)	P (MW)	Q (MVAR)
2BRA	22403	0.01756	0.01445	0.00997
2BD	22407	0.02279	0.01829	0.01360
2BE	22414	0.06785	0.04503	0.05076
2BY	22415	0.10244	0.08615	0.05542
BQ	22417	0.05149	0.04362	0.02736
2BRB	22603	0.01756	0.01445	0.00997
2BH	22605	0.02279	0.01829	0.01360
2BJ	22607	0.06777	0.04498	0.05069
2BZ	22614	0.06445	0.04996	0.04071
BS	22618	0.05149	0.04362	0.02736
3BRA	32403	0.01756	0.01445	0.00997
3BD	32407	0.02279	0.01829	0.01360
3BE	32414	0.06931	0.04591	0.05193
3BY	32415	0.10244	0.08615	0.05542
BQ	32417	0.05149	0.04362	0.02736
3BRB	32603	0.01756	0.01445	0.00997
3BH	32605	0.02279	0.01829	0.01360
3BJ	32607	0.06776	0.04497	0.05068
3BZ	32614	0.06749	0.05183	0.04322
BS	32618	0.05149	0.04362	0.02736

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
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TABLE 3.3 - MCC EQUIVALENT MOTOR INERTIA CONSTANTS

MCC	BUS NUMBER	EQUIVALENT INERTIA CONSTANT
2BRA	22403	1.467
2BD	22407	1.045
2BE	22414	0.586
2BY	22415	0.595
BQ	22417	1.041
2BRB	22603	1.467
2BH	22605	1.045
2BJ	22607	0.590
2BZ	22614	0.892
BS	22618	1.041
3BRA	32403	1.467
3BD	32407	1.045
3BE	32414	0.575
3BY	32415	0.595
BQ	32417	1.041
3BRB	32603	1.467
3BH	32605	1.045
3BJ	32607	0.590
3BZ	32614	0.868
BS	32618	1.041

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

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REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

4.0 DESIGN INPUT:

4.1 Except for the following changes and updates, all design inputs considered in the base calculation are applicable to this CCN.

4.2 The new load inertia for the Control Room Emergency Air Conditioning Units E-418 and E-419 is 272 lb-ft^2 to reflect the new inertia values provided by the vendor (Reference 6.7, Attachment 9.2.1). The corresponding calculation for inertia constant is shown in Section 8.21.

4.3 The new motor base (MBASE) for the Auxiliary Feedwater Pumps 2P141, 2P504, 3P141 and 3P504 is 0.6832 MVA per Calculations E4C-086, Rev. 0, CCN 1 and E4C-087, Rev. 0, CCN 2.

4.4 Per Section 3.2, these analyses consider the most limiting impedance value of the replacement 1500 KVA loadcenter transformers at nominal tap. The X-R ratio and the nominal tap voltage are bounding values applicable to all in-service and replacement 1500 KVA loadcenter transformers. The new parameters considered for the 1500 KVA loadcenter transformers are shown below and are based on the (bounding) vendor test reports (S023-302-15-11-1, Reference 6.3).

Impedance = 10.18%
X-R Ratio = 7.0
Nominal Tap Voltage = 4155 Volts

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
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5.0 METHODOLOGY:

5.1 This CCN follows the same methodology in the base calculation except for the following:

5.2 For the purpose of simplifying the analysis for sequence overlaps, only the most limiting cases in the base calculation are considered in this CCN. The most limiting cases are chosen on the basis of maximum loading and minimum voltage at the buses and MCCs under consideration.

In the case where the ESF buses are fed from their respective emergency diesel generators, only CASE IIIA (Unit 2) is considered. Two sub-cases of CASE IIIA are established, i.e., CASE IIIAX and CASE IIIAY, to cover all possible out-of-sequence starting times of ESF load groups during automatic sequencing. See Section 5.8 below for case description.

In the case where the ESF buses are fed from the offsite power supply, only CASE IVBT (Unit 3) is considered. Two sub-cases of CASE IVBT are established, i.e., CASE IVBX and CASE IVBY, to cover all possible out-of-sequence starting times of ESF load groups during automatic sequencing. See Section 5.8 below for case description.

To insure that the results of these analyses bound all possible operating conditions, the more conservative MCC 2BD main feeder parameters are considered for MCC 3BD main feeder in CASEs IVBX and IVBY.

5.3 The results of these dynamic simulations are shown in the form of voltage profiles for all buses, MCCs, and motor loads. For motor loads, speed profiles are also shown. These voltage and speed profiles are the bounding profiles established for this CCN.

5.4 In order to address the single train operation of the Component Cooling Water (CCW) Pumps, Saltwater Cooling (SWC) Pumps and Dome Air Circulator Fans (one Pump or one Fan running in anyone train) in the dynamic simulations, they are started in the first load group and restarted again at their designated starting sequence. This will result in the voltage profiles that are bounding and applicable in all modes of plant operations.

Single train operation of these loads does not affect the existing analyses for CASEs IIIAX and IIIAY where the loads are shed and then restarted at their designated sequence.

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5.5 For systems containing a swing or redundant components, the load with the highest impedance feeder cable is selected as the starting load to obtain the most limiting voltage profile:

1. Component Cooling Water Pump 2P025 at 4-kV Bus 2A04
2. Component Cooling Water Pump 2P025 at 4-kV Bus 2A06
3. Component Cooling Water Pump 3P024 at 4-kV Bus 3A04
4. Component Cooling Water Pump 3P025 at 4-kV Bus 3A06
5. Saltwater Cooling Pump 2P307 at 4-kV Bus 2A04
6. Saltwater Cooling Pump 2P114 at 4-kV Bus 2A06
7. Saltwater Cooling Pump 3P307 at 4-kV Bus 3A04
8. Saltwater Cooling Pump 3P114 at 4-kV Bus 3A06

5.6 These analyses consider the new inertia constant calculated in Section 8.0 for the Control Room Emergency Air Conditioning Units E-418 and E-419 to reflect the new (lower) inertia values provided by the vendor (References 6.7). Likewise, these analyses consider the new Motor Base (MBASE) for the Auxiliary Feedwater Pumps P141 and P504 per Section 1.1.B.2.

5.7 Results of the power flow solution for the initial steady state condition (t=0) and post accident steady state condition (t=40) are shown in Appendices 9.1.3 through 9.1.6. They are shown in both one-line output format and the "traditional" power flow output format.

5.8 The following cases are developed for this CCN to establish the new bounding voltage and speed profiles for all ESF motors, buses and MCCs when these loads are started out of sequence:

I. Powered From Emergency Diesel Generators

a. **CASE IIIAX** - This case considers the Unit 2 ESF buses when supplied from their dedicated emergency diesel generators during a postulated design basis accident in Unit 2 coincident with a loss of offsite power. ESF loads are started per load schedule in Table 5.1.

b. **CASE IIIAY** - This case is the same as CASE IIIAX except for the starting times of ESF loads. See Table 5.1.

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II. Powered From Offsite Power Supply

c. **CASE IVBTX** - This case considers the bus alignment where the Unit 3 4-KV ESF buses are tied to the corresponding Unit 2, 4-KV ESF buses with the Unit 2 Reserve Auxiliary Transformers 2XR1 and 2XR2 inoperable. All the ESF loads are supplied from the Unit 2 Main Transformer 2XM via Unit Auxiliary Transformer 2XU1. Loading for the associated non-ESF buses is determined per Table 3.1 in the base calculation. A design basis accident is postulated in Unit 3 while Unit 2 is in Mode 5 or 6 with its ESF loads running at steady state due to a spurious accident signal postulated in the Unit 2. ESF loads are started per load schedule in Table 5.1.

d. **CASE IVBTY** - This case is the same as CASE IVBTX except for the starting times of ESF loads. See Table 5.1.

5.9 The following are the PSS/E files associated with each case analyzed in this CCN:

a. CASE IIIAX:

```
Directory          - DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAX]
LF-1_IIIAX.SAV     - Initial Condition Power Flow Saved Case.
LF-2_IIIAX.SAV     - Post Accident Condition Power Flow Saved Case.
SNAP_IIIAX.SNP     - Dynamic Simulation Snapshot.
CHANOUT_IIIAX.BIN  - Channel Output.
```

b. CASE IIIAY:

```
Directory          - DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAY
LF-1_IIIAY.SAV     - Initial Condition Power Flow Saved Case.
LF-2_IIIAY.SAV     - Post Accident Condition Power Flow Saved Case.
SNAP_IIIAY.SNP     - Dynamic Simulation Snapshot.
CHANOUT_IIIAY.BIN  - Channel Output.
```

c. CASE IVBX:

```
Directory          - DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]
LF-1_IVBX.SAV      - Initial Condition Power Flow Saved Case.
LF-2_IVBX.SAV      - Post Accident Condition Power Flow Saved Case.
SNAP_IVBX.SNP      - Dynamic Simulation Snapshot.
CHANOUT_IVBX.BIN   - Channel Output.
```

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d. CASE IVBY:

Directory - DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]
LF-1_IVBY.SAV - Initial Condition Power Flow Saved Case.
LF-2_IVBY.SAV - Post Accident Condition Power Flow Saved Case.
SNAP_IVBY.SNP - Dynamic Simulation Snapshot.
CHANOUT_IVBY.BIN - Channel Output.

5.10 Validation of the PSS/E program was performed by manual calculation. The manual calculation and the corresponding computer simulation (benchmark/test case) were documented in the Design Calculation DC-3128, Rev. 0 (Reference 6.21). Validation is performed by comparing the results (plots) of the original benchmark/test case run with the latest rerun. Comparison of plots from the latest rerun with corresponding plots from the original benchmark/test case shows identical results. This verifies the integrity of the PSS/E program. See Appendix 9.1.7 for these plots. PSS/E is controlled by Installation Report No. PC004R00.

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

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REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
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TABLE 5.1

Postulated Accident Loading With Sequence Overlaps

TABLE 5.1

CASE III.AX : UNIT 2 ESF LOAD SCHEDULE FOR UNIT 2 DBA FED FROM EMERGENCY DIESEL GENERATOR

EQUIPMENT	PSSE BUS #	INIT COND	Agastat Time Delay Relay Operating Times (seconds) 0	2.5	7.5	12.5	17.5	22.5	27.5	32.5	POST ACC
4-KV BUS 2A04											
Cntmt Spray Pump P012	2403	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON	ON
AFW Pump P141	2404	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START	ON
CCW Pump P024	2405	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
CCW Pump P025	2406	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON	ON
Lo Press S I Pump P015	2407	OFF	OFF	START	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P017	2408	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P018*	2409	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START
SWC Pump P112	2410	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SWC Pump P307	2411	OFF	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON
Aux Bldg Chiller E336	2412	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START	ON
Non-1E UPS*	2416	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
Loadcenter 2B04	2420	-	-	-	-	-	-	-	-	-	-
4-KV BUS 2A06											
AFW Pump P504	2603	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START	ON
Cntmt Spray Pump P013	2604	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON	ON
CCW Pump P026	2605	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
CCW Pump P025	2606	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON	ON
Lo Press S I Pump P016	2607	OFF	OFF	START	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P019	2608	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P018*	2609	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START
SWC Pump P113	2610	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SWC Pump P114	2611	OFF	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON
Aux Bldg Chiller E335	2612	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START	ON
Loadcenter 2B06	2620	-	-	-	-	-	-	-	-	-	-

*Additional loads that are started manually during post accident steady state conditions.

TABLE 5.1 Contd...

CASE III.AX : UNIT 2 ESF LOAD SCHEDULE FOR UNIT 2 DBA FED FROM EMERGENCY DIESEL GENERATOR

EQUIPMENT	PSSE BUS #	INIT COND	Agastat Time Delay Relay Operating Times (seconds) 0	2.5	7.5	12.5	17.5	22.5	27.5	32.5	POST ACC
480-V BUS 2B04											
Press Htr E615-E618**	21402	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
MCC 2BRA	21403	-	-	-	-	-	-	-	-	-	-
2BRA Lumped Motor	22403	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
2BRA Lumped Static	23403	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
Charging Pump P191	21405	OFF*	RESTART	ON	ON	ON	ON	ON	ON	ON	ON
H2 Recomb E145 Panel	21406	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MCC 2BD (DG-MCC)	21407	-	-	-	-	-	-	-	-	-	-
2BD Lumped Motor	22407	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
2BD Lumped Static	23407	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
EDG Bldg Fan A274	24412	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON	ON
EDG Bldg Fan A275	24413	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON	ON
Radiator Fan E550	24421	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON	ON
Radiator Fan E546	24422	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON	ON
Dome Air Circ A071	21409	OFF*	OFF*	RESTART	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E399	21410	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E401	21411	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Charging Pump P190	21413	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
MCC 2BE	21414	-	-	-	-	-	-	-	-	-	-
2BE Lumped Motor	22414	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
2BE Lumped Static	23414	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC 2BY	21415	-	-	-	-	-	-	-	-	-	-
2BY Lumped Motor	22415	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
2BY Lumped Static	23415	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
Spent Fuel Pump P009	24434	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
MCC EQ	21417	-	-	-	-	-	-	-	-	-	-
BQ Lumped Motor	22417	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
BQ Lumped Static	23417	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
Chilled Wtr Pump P162	24417	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Control Rm AC Unit E418	21418	OFF	OFF	START	ON	ON	ON	ON	ON	ON	ON
Stdby Dome Air Circ A074	21419	OFF	OFF	START	ON	ON	ON	ON	ON	ON	ON

* Temporarily deenergized during transition to Emergency Diesel Generator power

**Additional loads that are started manually during post accident steady state conditions.

TABLE 5.1 Contd...

CASE III.AX : UNIT 2 ESF LOAD SCHEDULE FOR UNIT 2 DBA FED FROM EMERGENCY DIESEL GENERATOR

EQUIPMENT	PSSE BUS #	INIT COND	Agastat Time Delay Relay Operating Times (seconds) 0	2.5	7.5	12.5	17.5	22.5	27.5	32.5	POST ACC
480-V BUS 2B06											
Pre Htr E627-E629/E622**	21602	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
MCC 2BRB	21603	-	-	-	-	-	-	-	-	-	-
2BRB Lumped Motor	22603	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
2BRB Lumped Static	23603	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC 2BH (DG-MCC)	21605	-	-	-	-	-	-	-	-	-	-
2BH Lumped Motor	22605	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
2BH Lumped Static	23605	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
Radiator Fan E547	24606	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON	ON
Radiator Fan E549	24607	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON	ON
EDG Bldg Fan A276	24611	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON	ON
EDG Bldg Fan A277	24612	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON	ON
H2 Recomb E146 Panel	21606	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MCC 2BJ	21607	-	-	-	-	-	-	-	-	-	-
2BJ Lumped Motor	22607	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
2BJ Lumped Static	23607	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
Dome Air Circ A072	21609	OFF*	OFF*	RESTART	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E400	21610	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E402	21611	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Charging Pump P192	21613	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
MCC 2BZ	21614	-	-	-	-	-	-	-	-	-	-
2BZ Lumped Motor	22614	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
2BZ Lumped Static	23614	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
Spent Fuel Pump P010	24622	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Control Rm AC E419	21615	OFF	OFF	START	ON	ON	ON	ON	ON	ON	ON
Charging Pump P191	21617	OFF*	RESTART	ON	ON	ON	ON	ON	ON	ON	ON
MCC BS	21618	-	-	-	-	-	-	-	-	-	-
BS Lumped Motor	22618	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
BS Lumped Static	23618	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
Chilled Wtr Pump P160	24618	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Stdby Dome Air Circ A073	21619	OFF	OFF	START	ON	ON	ON	ON	ON	ON	ON

* Temporarily deenergized during transition to Emergency Diesel Generator power

**Additional loads that are started manually during post accident steady state conditions.

TABLE 5.1 Contd...

CASE III.AY : UNIT 2 ESF LOAD SCHEDULE FOR UNIT 2 DBA FED FROM EMERGENCY DIESEL GENERATOR

EQUIPMENT	PSSE BUS #	INIT COND	Agastat Time Delay Relay Operating Times (seconds) 0	2.5	7.5	12.5	17.5	22.5	27.5	32.5	POST ACC
4-KV BUS 2A04											
Cntmt Spray Pump P012	2403	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
AFW Pump P141	2404	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START	ON	ON
CCW Pump P024	2405	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
CCW Pump P025	2406	OFF	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON
Lo Press S I Pump P015	2407	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P017	2408	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P018*	2409	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START
SWC Pump P112	2410	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SWC Pump P307	2411	OFF	OFF	OFF	OFF	OFF	START	OFF	ON	ON	ON
Aux Bldg Chiller E336	2412	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START	ON
Non-1E UPS*	2416	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
Loadcenter 2B04	2420	-	-	-	-	-	-	-	-	-	-
4-KV BUS 2A06											
AFW Pump P504	2603	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START	ON	ON
Cntmt Spray Pump P013	2604	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
CCW Pump P026	2605	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
CCW Pump P025	2606	OFF	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON
Lo Press S I Pump P016	2607	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P019	2608	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P018*	2609	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START
SWC Pump P113	2610	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SWC Pump P114	2611	OFF	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON
Aux Bldg Chiller E335	2612	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START	ON
Loadcenter 2B06	2620	-	-	-	-	-	-	-	-	-	-

*Additional loads that are started manually during post accident steady state conditions.

TABLE 5.1 Contd...

CASE III.AY : UNIT 2 ESF LOAD SCHEDULE FOR UNIT 2 DBA FED FROM EMERGENCY DIESEL GENERATOR

EQUIPMENT	PSSE BUS #	INIT COND	Agastat Time Delay Relay Operating Times (seconds) 0	2.5	7.5	12.5	17.5	22.5	27.5	32.5	POST ACC
480-V BUS 2B04											
Press Htr E615-E618**	21402	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
MCC 2BRA	21403	-	-	-	-	-	-	-	-	-	-
2BRA Lumped Motor	22403	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
2BRA Lumped Static	23403	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
Charging Pump P191	21405	OFF*	RESTART	ON	ON	ON	ON	ON	ON	ON	ON
H2 Recomb E145 Panel	21406	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MCC 2BD (DG-MCC)	21407	-	-	-	-	-	-	-	-	-	-
2BD Lumped Motor	22407	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
2BD Lumped Static	23407	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
EDG Bldg Fan A274	24412	OFF	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON
EDG Bldg Fan A275	24413	OFF	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON
Radiator Fan E550	24421	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
Radiator Fan E546	24422	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
Dome Air Circ A071	21409	OFF*	OFF*	OFF*	RESTART	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E399	21410	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E401	21411	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Charging Pump P190	21413	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
MCC 2BE	21414	-	-	-	-	-	-	-	-	-	-
2BE Lumped Motor	22414	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
2BE Lumped Static	23414	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC 2BY	21415	-	-	-	-	-	-	-	-	-	-
2BY Lumped Motor	22415	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
2BY Lumped Static	23415	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
Spent Fuel Pump P009	24434	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
MCC BQ	21417	-	-	-	-	-	-	-	-	-	-
BQ Lumped Motor	22417	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
BQ Lumped Static	23417	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
Chilled Wtr Pump P162	24417	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Control Rm AC Unit E418	21418	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
Stdby Dome Air Circ A074	21419	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON

* Temporarily deenergized during transition to Emergency Diesel Generator power

**Additional loads that are started manually during post accident steady state conditions.

TABLE 5.1 Contd...

CASE III.AY : UNIT 2 ESF LOAD SCHEDULE FOR UNIT 2 DBA FED FROM EMERGENCY DIESEL GENERATOR

EQUIPMENT	PSSE BUS #	INIT COND	Agastat Time Delay Relay Operating Times (seconds) 0	2.5	7.5	12.5	17.5	22.5	27.5	32.5	POST ACC
480-V BUS 2B06											
Pre Htr E627-E629/E622**	21602	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
MCC 2BRB	21603	-	-	-	-	-	-	-	-	-	-
2BRB Lumped Motor	22603	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
2BRB Lumped Static	23603	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC 2BH (DG-MCC)	21605	-	-	-	-	-	-	-	-	-	-
2BH Lumped Motor	22605	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
2BH Lumped Static	23605	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
Radiator Fan E547	24606	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
Radiator Fan E549	24607	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
EDG Bldg Fan A276	24611	OFF	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON
EDG Bldg Fan A277	24612	OFF	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON
H2 Recomb E146 Panel	21606	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MCC 2BJ	21607	-	-	-	-	-	-	-	-	-	-
2BJ Lumped Motor	22607	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
2BJ Lumped Static	23607	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
Dome Air Circ A072	21609	OFF*	OFF*	OFF*	RESTART	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E400	21610	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E402	21611	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Charging Pump P192	21613	OFF*	START	ON	ON	ON	ON	ON	ON	ON	ON
MCC 2BZ	21614	-	-	-	-	-	-	-	-	-	-
2BZ Lumped Motor	22614	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
2BZ Lumped Static	23614	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
Spent Fuel Pump P010	24622	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Control Rm AC E419	21615	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
Charging Pump P191	21617	OFF*	RESTART	ON	ON	ON	ON	ON	ON	ON	ON
MCC BS	21618	-	-	-	-	-	-	-	-	-	-
BS Lumped Motor	22618	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
BS Lumped Static	23618	OFF*	ON	ON	ON	ON	ON	ON	ON	ON	ON
Chilled Wtr Pump P160	24618	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Stdby Dome Air Circ A073	21619	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON

* Temporarily deenergized during transition to Emergency Diesel Generator power

**Additional loads that are started manually during post accident steady state conditions.

TABLE 5.1 Contd...

CASE IV.BX: UNIT 2 ESF LOAD SCHEDULE FOR DBA IN BOTH UNITS - FED FROM 2XU1*

EQUIPMENT	PSSE BUS #	INIT COND	Agastat Time Delay Relay Operating Times (seconds) 0	2.5	7.5	12.5	17.5	22.5	27.5	32.5	POST ACC
4-KV BUS 2A04											
Cntmt Spray Pump P012	2403	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
AFW Pump P141	2404	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
CCW Pump P024	2405	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
CCW Pump P025	2406	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Lo Press S I Pump P015	2407	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P017	2408	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P018	2409	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SWC Pump P112	2410	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SWC Pump P307	2411	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Aux Bldg Chiller E336	2412	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Non-1E UPS	2416	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Loadcenter 2B04	2420	-	-	-	-	-	-	-	-	-	-
4-KV BUS 2A06											
AFW Pump P504	2603	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Cntmt Spray Pump P013	2604	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
CCW Pump P026	2605	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
CCW Pump P025	2606	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Lo Press S I Pump P016	2607	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P019	2608	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P018	2609	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SWC Pump P113	2610	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SWC Pump P114	2611	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Aux Bldg Chiller E335	2612	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Loadcenter 2B06	2620	-	-	-	-	-	-	-	-	-	-

*DBA in Unit 3, Post Accident Loading in Unit 2.

TABLE 5.1 Contd...

CASE IV.BX: UNIT 2 ESF LOAD SCHEDULE FOR DBA IN BOTH UNITS - FED FROM 2XU1*

EQUIPMENT	PSSE BUS #	INIT COND	Agastat Time Delay Relay Operating Times (seconds) 0	2.5	7.5	12.5	17.5	22.5	27.5	32.5	POST ACC
480-V BUS 2B04											
Press Htr E615-E618	21402	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MCC 2BRA	21403	-	-	-	-	-	-	-	-	-	-
2BRA Lumped Motor	22403	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
2BRA Lumped Static	23403	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Charging Pump P191	21405	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
H2 Recomb E145 Panel	21406	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MCC 2BD (DG-MCC)	21407	-	-	-	-	-	-	-	-	-	-
2BD Lumped Motor	22407	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
2BD Lumped Static	23407	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
EDG Bldg Fan A274	24412	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
EDG Bldg Fan A275	24413	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Radiator Fan E550	24421	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Radiator Fan E546	24422	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Dome Air Circ A071	21409	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E399	21410	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E401	21411	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Charging Pump P190	21413	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC 2BE	21414	-	-	-	-	-	-	-	-	-	-
2BE Lumped Motor	22414	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
2BE Lumped Static	23414	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC 2BY	21415	-	-	-	-	-	-	-	-	-	-
2BY Lumped Motor	22415	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
2BY Lumped Static	23415	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Spent Fuel Pump P009	24434	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC BQ	21417	-	-	-	-	-	-	-	-	-	-
BQ Lumped Motor	22417	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
BQ Lumped Static	23417	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Chilled Wtr Pump P162	24417	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Control Rm AC Unit E418	21418	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Dome Air Circ A074	21419	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON

*DBA in Unit 3, Post Accident Loading in Unit 2.

TABLE 5.1 Contd...

CASE IV.BX: UNIT 2 ESF LOAD SCHEDULE FOR DBA IN BOTH UNITS - FED FROM 2XU1*

EQUIPMENT	PSSE BUS #	INIT COND	Agastat Time Delay Relay Operating Times (seconds) 0	2.5	7.5	12.5	17.5	22.5	27.5	32.5	POST ACC
480-V BUS 2B06											
Press Htr E627-E629/E622	21602	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MCC 2BRB	21603	-	-	-	-	-	-	-	-	-	-
2BRB Lumped Motor	22603	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
2BRB Lumped Static	23603	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC 2BH (DG-MCC)	21605	-	-	-	-	-	-	-	-	-	-
2BH Lumped Motor	22605	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
2BH Lumped Static	23605	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Radiator Fan E547	24606	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Radiator Fan E549	24607	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
EDG Bldg Fan A276	24611	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
EDG Bldg Fan A277	24612	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
H2 Recomb E146 Panel	21606	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MCC 2BJ	21607	-	-	-	-	-	-	-	-	-	-
2BJ Lumped Motor	22607	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
2BJ Lumped Static	23607	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Dome Air Circ A072	21609	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E400	21610	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E402	21611	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Charging Pump P192	21613	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC 2BZ	21614	-	-	-	-	-	-	-	-	-	-
2BZ Lumped Motor	22614	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
2BZ Lumped Static	23614	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Spent Fuel Pump P010	24622	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Control Rm AC E419	21615	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Charging Pump P191	21617	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC BS	21618	-	-	-	-	-	-	-	-	-	-
BS Lumped Motor	22618	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
BS Lumped Static	23618	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Chilled Wtr Pump P160	24618	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Dome Air Circ A073	21619	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON

*DBA in Unit 3, Post Accident Loading in Unit 2.

CCN 9

TABLE 5.1 Contd...

CASE IV.BX: UNIT 3 ESF LOAD SCHEDULE FOR DBA IN BOTH UNITS - FED FROM 2XU1*

EQUIPMENT	PSSE BUS #	INIT COND	Agastat Time Delay Relay Operating Times (seconds) 0	2.5	7.5	12.5	17.5	22.5	27.5	32.5	POST ACC
4-KV BUS 3A04											
Aux Bldg Chiller E336	3402	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START	ON
Cntmt Spray Pump P012	3403	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON	ON
AFW Pump P141	3404	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START	ON
CCW Pump P024***	3405	OFF	START	ON	ON	START	ON	ON	ON	ON	ON
CCW Pump P025	3406	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Lo Press S I Pump P015	3407	OFF	OFF	START	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P017	3408	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P018**	3409	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START
SWC Pump P112	3410	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SWC Pump P307***	3411	OFF	START	ON	ON	ON	START	ON	ON	ON	ON
Non-1E UPS**	3412	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
Loadcenter 3B04	3417	-	-	-	-	-	-	-	-	-	-
4-KV BUS 3A06											
Aux Bldg Chiller E335	3602	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START	ON
Cntmt Spray Pump P013	3604	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON	ON
CCW Pump P026	3605	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
CCW Pump P025***	3606	OFF	START	ON	ON	START	ON	ON	ON	ON	ON
Lo Press S I Pump P016	3607	OFF	OFF	START	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P019	3608	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P018**	3609	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START
SWC Pump P113	3610	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SWC Pump P114***	3611	OFF	START	ON	ON	ON	START	ON	ON	ON	ON
AFW Pump P504	3612	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START	ON
Loadcenter 3B06	3619	-	-	-	-	-	-	-	-	-	-

*DBA in Unit 3, Post Accident Loading in Unit 2.

E082SEQX.WK1

**Additional loads that are started manually during post accident steady state conditions.

***Restarted during sequencing to simulate starting of these motors at their designated starting times.

TABLE 5.1 Contd...

CASE IV.BX: UNIT 3 ESF LOAD SCHEDULE FOR DBA IN BOTH UNITS - FED FROM 2XU1*

EQUIPMENT	PSSE BUS #	INIT COND	Agastat Time Delay Relay Operating Times (seconds) 0	2.5	7.5	12.5	17.5	22.5	27.5	32.5	POST ACC
480-V BUS 3B04											
Press Htr E615-E618**	31402	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
MCC 3BRA	31403	-	-	-	-	-	-	-	-	-	-
3BRA Lumped Motor	32403	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
3BRA Lumped Static	33403	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
Charging Pump P191	31405	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
H2 Recomb E145 Panel	31406	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MCC 3BD (DG-MCC)	31407	-	-	-	-	-	-	-	-	-	-
3BD Lumped Motor	32407	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
3BD Lumped Static	33407	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
EDG Bldg Fan A274***	34412	OFF	OFF	OFF	OFF	START	START	START	ON	ON	ON
EDG Bldg Fan A275***	34413	OFF	OFF	OFF	OFF	START	START	START	ON	ON	ON
Radiator Fan E550	34421	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON	ON
Radiator Fan E546	34422	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON	ON
Dome Air Circ A071***	31409	OFF	START	START	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E399	31410	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E401	31411	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Charging Pump P190	31413	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
MCC 3BE	31414	-	-	-	-	-	-	-	-	-	-
3BE Lumped Motor	32414	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
3BE Lumped Static	33414	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC 3BY	31415	-	-	-	-	-	-	-	-	-	-
3BY Lumped Motor	32415	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
3BY Lumped Static	33415	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
Spent Fuel Pump P009	34434	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
MCC BQ	31417	-	-	-	-	-	-	-	-	-	-
BQ Lumped Motor	32417	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
BQ Lumped Static	33417	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
Chilled Wtr Pump P162	34417	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Control Rm AC Unit E418	31418	OFF	OFF	START	ON	ON	ON	ON	ON	ON	ON
Dome Air Circ A074***	31419	OFF	START	START	ON	ON	ON	ON	ON	ON	ON

*DBA in Unit 3, Post Accident Loading in Unit 2.

**Additional loads that are started manually during post accident steady state conditions.

***Restarted to simulate all possible starting times.

TABLE 5.1 Contd...

CASE IV.BX: UNIT 3 ESF LOAD SCHEDULE FOR DBA IN BOTH UNITS - FED FROM 2XU1*

EQUIPMENT	PSSE BUS #	INIT COND	Agastat Time Delay Relay Operating Times (seconds) 0	2.5	7.5	12.5	17.5	22.5	27.5	32.5	POST ACC
480-V BUS 3B06											
Press Htr E627-E630**	31602	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
MCC 3BRB	31603	-	-	-	-	-	-	-	-	-	-
3BRB Lumped Motor	32603	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
3BRB Lumped Static	33603	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC 3BH (DG-MCC)	31605	-	-	-	-	-	-	-	-	-	-
3BH Lumped Motor	32605	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
3BH Lumped Static	33605	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
Radiator Fan E547	34606	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON	ON
Radiator Fan E549	34607	OFF	OFF	OFF	OFF	START	ON	ON	ON	ON	ON
EDG Bldg Fan A276***	34611	OFF	OFF	OFF	OFF	START	START	START	ON	ON	ON
EDG Bldg Fan A277***	34612	OFF	OFF	OFF	OFF	START	START	START	ON	ON	ON
H2 Recomb E146 Panel	31606	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MCC 3BJ	31607	-	-	-	-	-	-	-	-	-	-
3BJ Lumped Motor	32607	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
3BJ Lumped Static	33607	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
Dome Air Circ A072***	31609	OFF	START	START	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E400	31610	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E402	31611	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Charging Pump P192	31613	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
MCC 3BZ	31614	-	-	-	-	-	-	-	-	-	-
3BZ Lumped Motor	32614	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
3BZ Lumped Static	33614	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
Spent Fuel Pump P010	34622	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Control Rm AC Unit E419	31615	OFF	OFF	START	ON	ON	ON	ON	ON	ON	ON
Charging Pump P191	31617	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
MCC BS	31618	-	-	-	-	-	-	-	-	-	-
BS Lumped Motor	32618	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
BS Lumped Static	33618	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
Chilled Wtr Pump P160	34618	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Dome Air Circ A073***	31619	OFF	START	START	ON	ON	ON	ON	ON	ON	ON

*DBA in Unit 3, Post Accident Loading in Unit 2.

**Additional loads that are started manually during post accident steady state conditions.

***Restarted to simulate all possible starting times.

TABLE 5.1 Contd...

CASE IV.BY: UNIT 2 ESF LOAD SCHEDULE FOR DBA IN BOTH UNITS - FED FROM 2XU1*

EQUIPMENT	PSSE BUS #	INIT COND	Agastat Time Delay Relay Operating Times (seconds) 0	2.5	7.5	12.5	17.5	22.5	27.5	32.5	POST ACC
4-KV BUS 2A04											
Cntmt Spray Pump P012	2403	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
AFW Pump P141	2404	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
CCW Pump P024	2405	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
CCW Pump P025	2406	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Lo Press S I Pump P015	2407	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P017	2408	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P018	2409	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SWC Pump P112	2410	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SWC Pump P307	2411	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Aux Bldg Chiller E336	2412	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Non-1E UPS	2416	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Loadcenter 2B04	2420	-	-	-	-	-	-	-	-	-	-
4-KV BUS 2A06											
AFW Pump P504	2603	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Cntmt Spray Pump P013	2604	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
CCW Pump P026	2605	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
CCW Pump P025	2606	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Lo Press S I Pump P016	2607	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P019	2608	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P018	2609	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SWC Pump P113	2610	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SWC Pump P114	2611	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Aux Bldg Chiller E335	2612	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Loadcenter 2B06	2620	-	-	-	-	-	-	-	-	-	-

*DBA in Unit 3, Post Accident Loading in Unit 2.

TABLE 5.1 Contd...

CASE IV.BY: UNIT 2 ESF LOAD SCHEDULE FOR DBA IN BOTH UNITS - FED FROM 2XU1*

EQUIPMENT	PSSE BUS #	INIT COND	Agastat Time Delay Relay Operating Times (seconds) 0	2.5	7.5	12.5	17.5	22.5	27.5	32.5	POST ACC
480-V BUS 2B04											
Press Htr E615-E618	21402	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MCC 2BRA	21403	-	-	-	-	-	-	-	-	-	-
2BRA Lumped Motor	22403	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
2BRA Lumped Static	23403	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Charging Pump P191	21405	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
H2 Recomb E145 Panel	21406	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MCC 2BD (DG-MCC)	21407	-	-	-	-	-	-	-	-	-	-
2BD Lumped Motor	22407	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
2BD Lumped Static	23407	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
EDG Bldg Fan A274	24412	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
EDG Bldg Fan A275	24413	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Radiator Fan E550	24421	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Radiator Fan E546	24422	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Dome Air Circ A071	21409	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E399	21410	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E401	21411	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Charging Pump P190	21413	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC 2BE	21414	-	-	-	-	-	-	-	-	-	-
2BE Lumped Motor	22414	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
2BE Lumped Static	23414	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC 2BY	21415	-	-	-	-	-	-	-	-	-	-
2BY Lumped Motor	22415	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
2BY Lumped Static	23415	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Spent Fuel Pump P009	24434	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC BQ	21417	-	-	-	-	-	-	-	-	-	-
BQ Lumped Motor	22417	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
BQ Lumped Static	23417	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Chilled Wtr Pump P162	24417	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Control Rm AC Unit E418	21418	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Dome Air Circ A074	21419	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON

*DBA in Unit 3, Post Accident Loading in Unit 2.

TABLE 5.1 Contd...

CASE IV.BY: UNIT 2 ESF LOAD SCHEDULE FOR DBA IN BOTH UNITS - FED FROM 2XU1*

EQUIPMENT	PSSE BUS #	INIT COND	Agastat Time Delay Relay Operating Times (seconds) 0	2.5	7.5	12.5	17.5	22.5	27.5	32.5	POST ACC
480-V BUS 2B06											
Press Htr E627-E629/E622	21602	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MCC 2BRB	21603	-	-	-	-	-	-	-	-	-	-
2BRB Lumped Motor	22603	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
2BRB Lumped Static	23603	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC 2BH (DG-MCC)	21605	-	-	-	-	-	-	-	-	-	-
2BH Lumped Motor	22605	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
2BH Lumped Static	23605	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Radiator Fan E547	24606	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Radiator Fan E549	24607	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
EDG Bldg Fan A276	24611	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
EDG Bldg Fan A277	24612	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
H2 Recomb E146 Panel	21606	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MCC 2BJ	21607	-	-	-	-	-	-	-	-	-	-
2BJ Lumped Motor	22607	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
2BJ Lumped Static	23607	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Dome Air Circ A072	21609	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E400	21610	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E402	21611	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Charging Pump P192	21613	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC 2BZ	21614	-	-	-	-	-	-	-	-	-	-
2BZ Lumped Motor	22614	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
2BZ Lumped Static	23614	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Spent Fuel Pump P010	24622	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Control Rm AC E419	21615	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Charging Pump P191	21617	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC BS	21618	-	-	-	-	-	-	-	-	-	-
BS Lumped Motor	22618	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
BS Lumped Static	23618	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Chilled Wtr Pump P160	24618	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Dome Air Circ A073	21619	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON

*DBA in Unit 3, Post Accident Loading in Unit 2.

TABLE 5.1 Contd...

CASE IV.BY: UNIT 3 ESF LOAD SCHEDULE FOR DBA IN BOTH UNITS - FED FROM 2XU1*

EQUIPMENT	PSSE BUS #	INIT COND	Agastat Time Delay Relay Operating Times (seconds) 0	2.5	7.5	12.5	17.5	22.5	27.5	32.5	POST ACC
4-KV BUS 3A04											
Aux Bldg Chiller E336	3402	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START	ON
Cntmt Spray Pump P012	3403	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
AFW Pump P141	3404	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START	ON	ON
CCW Pump P024***	3405	OFF	START	ON	ON	ON	START	ON	ON	ON	ON
CCW Pump P025	3406	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Lo Press S I Pump P015	3407	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P017	3408	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P018**	3409	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START
SWC Pump P112	3410	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SWC Pump P307***	3411	OFF	START	ON	ON	ON	START	ON	ON	ON	ON
Non-1E UPS**	3412	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
Loadcenter 3B04	3417	-	-	-	-	-	-	-	-	-	-
4-KV BUS 3A06											
Aux Bldg Chiller E335	3602	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START	ON
Cntmt Spray Pump P013	3604	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
CCW Pump P026	3605	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
CCW Pump P025***	3606	OFF	START	ON	ON	ON	START	ON	ON	ON	ON
Lo Press S I Pump P016	3607	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P019	3608	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Hi Press S I Pump P018**	3609	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START
SWC Pump P113	3610	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SWC Pump P114***	3611	OFF	START	ON	ON	ON	START	ON	ON	ON	ON
AFW Pump P504	3612	OFF	OFF	OFF	OFF	OFF	OFF	OFF	START	ON	ON
Loadcenter 3B06	3619	-	-	-	-	-	-	-	-	-	-

*DBA in Unit 3, Post Accident Loading in Unit 2.

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**Additional loads that are started manually during post accident steady state conditions.

***Restarted during sequencing to simulate starting of these motors at their designated starting times.

TABLE 5.1 Contd...

CASE IV.BY: UNIT 3 ESF LOAD SCHEDULE FOR DBA IN BOTH UNITS - FED FROM 2XU1*

EQUIPMENT	PSSE BUS #	INIT COND	Agastat Time Delay Relay Operating Times (seconds) 0	2.5	7.5	12.5	17.5	22.5	27.5	32.5	POST ACC
480-V BUS 3B04											
Press Htr E615-E618**	31402	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
MCC 3BRA	31403	-	-	-	-	-	-	-	-	-	-
3BRA Lumped Motor	32403	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
3BRA Lumped Static	33403	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
Charging Pump P191	31405	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
H2 Recomb E145 Panel	31406	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MCC 3BD (DG-MCC)	31407	-	-	-	-	-	-	-	-	-	-
3BD Lumped Motor	32407	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
3BD Lumped Static	33407	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
EDG Bldg Fan A274***	34412	OFF	OFF	OFF	OFF	OFF	START	START	START	ON	ON
EDG Bldg Fan A275***	34413	OFF	OFF	OFF	OFF	OFF	START	START	START	ON	ON
Radiator Fan E550	34421	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
Radiator Fan E546	34422	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
Dome Air Circ A071***	31409	OFF	START	ON	START	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E399	31410	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E401	31411	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Charging Pump P190	31413	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
MCC 3BE	31414	-	-	-	-	-	-	-	-	-	-
3BE Lumped Motor	32414	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
3BE Lumped Static	33414	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC 3BY	31415	-	-	-	-	-	-	-	-	-	-
3BY Lumped Motor	32415	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
3BY Lumped Static	33415	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
Spent Fuel Pump P009	34434	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
MCC BQ	31417	-	-	-	-	-	-	-	-	-	-
BQ Lumped Motor	32417	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
BQ Lumped Static	33417	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
Chilled Wtr Pump P162	34417	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Control Rm AC Unit E418	31418	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
Dome Air Circ A074***	31419	OFF	START	ON	START	ON	ON	ON	ON	ON	ON

*DBA in Unit 3, Post Accident Loading in Unit 2.

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**Additional loads that are started manually during post accident steady state conditions.

***Restarted to simulate all possible starting times.

TABLE 5.1 Contd...

CASE IV.BY: UNIT 3 ESF LOAD SCHEDULE FOR DBA IN BOTH UNITS - FED FROM 2XU1*

EQUIPMENT	PSSE BUS #	INIT COND	Agastat Time Delay Relay Operating Times (seconds) 0	2.5	7.5	12.5	17.5	22.5	27.5	32.5	POST ACC
480-V BUS 3B06											
Press Htr E627-E630**	31602	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
MCC 3BRB	31603	-	-	-	-	-	-	-	-	-	-
3BRB Lumped Motor	32603	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
3BRB Lumped Static	33603	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
MCC 3BH (DG-MCC)	31605	-	-	-	-	-	-	-	-	-	-
3BH Lumped Motor	32605	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
3BH Lumped Static	33605	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
Radiator Fan E547	34606	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
Radiator Fan E549	34607	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
EDG Bldg Fan A276***	34611	OFF	OFF	OFF	OFF	OFF	START	START	START	ON	ON
EDG Bldg Fan A277***	34612	OFF	OFF	OFF	OFF	OFF	START	START	START	ON	ON
H2 Recomb E146 Panel	31606	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MCC 3BJ	31607	-	-	-	-	-	-	-	-	-	-
3BJ Lumped Motor	32607	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
3BJ Lumped Static	33607	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
Dome Air Circ A072***	31609	OFF	START	ON	START	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E400	31610	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Cntmt Emergency Fan E402	31611	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Charging Pump P192	31613	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
MCC 3BZ	31614	-	-	-	-	-	-	-	-	-	-
3BZ Lumped Motor	32614	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
3BZ Lumped Static	33614	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
Spent Fuel Pump P010	34622	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Control Rm AC Unit E419	31615	OFF	OFF	OFF	START	ON	ON	ON	ON	ON	ON
Charging Pump P191	31617	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
MCC BS	31618	-	-	-	-	-	-	-	-	-	-
BS Lumped Motor	32618	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
BS Lumped Static	33618	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
Chilled Wtr Pump P160	34618	OFF	START	ON	ON	ON	ON	ON	ON	ON	ON
Dome Air Circ A073***	31619	OFF	START	ON	START	ON	ON	ON	ON	ON	ON

*DBA in Unit 3, Post Accident Loading in Unit 2.

**Additional loads that are started manually during post accident steady state conditions.

***Restarted to simulate all possible starting times.

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

TABLE 5.2

Motor Operated Valve (MOV) Data

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TABLE 5.2

UNIT 2 TRAIN A MOV MOTOR PARAMETERS

MOV	SIZE	HP	EQUIV KW*	EQUIV KVAR*
- MCC 2BRA -				
2HV-4763: P141 Discharge Bypass	-	0.750	1.44	1.91
2HV-0396: Shutdown Cooling Control	SMB-1	1.000	1.91	2.55
2HV-8161: Shutdown Cooling Bypass Control	SMB-1	2.600	4.98	6.64
2HV-8163: LPSI Pump P016 Mini Recirculation	SMB-000	0.670	1.28	1.71

*Based on 60% PF and 70% EFF. See Section 3.4.a.

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TABLE 5.2 Contd...

UNIT 2 TRAIN A MOV MOTOR PARAMETERS

MOV	SIZE	HP	EQUIV KW*	EQUIV KVAR*
- MCC 2BE -				
2HV-4713: AFW To Steam Generator Control	SMB-000	0.130	0.25	0.33
2HV-9334: SI Tank Drain To RWST	SMB-00	1.330	2.55	3.40
2HV-9350: SI Tank T007 To RC Loop 1B	SB-1	5.300	10.15	13.53
2HV-9360: SI Tank T009 To RC Loop 2A	SB-1	5.300	10.15	13.53
2HV-9325: Lo Pressure SI Header To RC Loop 1B	SMB-1	2.600	4.98	6.64
2HV-9328: Lo Pressure SI Header To RC Loop 2A	SMB-1	2.600	4.98	6.64
2HV-9201: Auxiliary Spray To Pressurizer	SMB-000	0.330	0.63	0.84
2HV-9327: Hi Pressure SI Header To RC Loop 1B	SMB-00	0.700	1.34	1.79
2HV-9330: Hi Pressure SI Header To RC Loop 2A	SMB-00	0.700	1.34	1.79
2HV-6223: CCW Containment Inlet Isolation	SMB-000	0.330	0.63	0.84
2HV-9324: Hi Pressure SI Header To RC Loop 1A	SMB-00	0.700	1.34	1.79
2HV-9333: Hi Pressure SI Header To RC Loop 2B	SMB-00	0.700	1.34	1.79
2HV-9337: Shutdown Flow From RC Loop 2	SB-4	9.900	18.96	25.28
2HV-0516: RC Drain Tank Containment Isolation	SMB-000	0.125	0.24	0.32
2HV-7512: Containment Isol RC Drain To Radwaste	SMB-000	0.125	0.24	0.32
2HV-9367: Shutdown Heat Exch To Spray Header 1	SMB-00	1.300	2.49	3.32
2HV-0514: Quench Tk Vap Sample Containment Isol	SMB-000	0.125	0.24	0.32
2HV-5803: Containment Sump To Radwaste Sump	SMB-000	0.125	0.24	0.32
2HV-9949: Containment Purge Inlet	SMB-0	3.200	6.13	8.17
2HV-9305: Containment Emergency Sump Outlet	SMB-00	0.700	1.34	1.79
2HV-4731: AFW To Steam Generator E089 Isolation	-	1.000	1.91	2.55
2HV-8150: Shutdown Cooling Sys Heat Exch Outlet	SMB-1	1.000	1.91	2.55
2HV-8152: Shutdown Cooling Sys Heat Exch Inlet	SMB-1	2.600	4.98	6.64
2HV-6366: CCW To Emergency Cooling Unit	SB-00S	1.900	3.64	4.85
2HV-6367: CCW To Emergency Cooling Unit	SB-00S	1.900	3.64	4.85
2HV-6236: CCW Non-Critical Containment Isol	SMB-000	0.330	0.63	0.84
2HV-6370: CCW To Emergency Cooling Unit	SB-00S	1.900	3.64	4.85
2HV-6371: CCW To Emergency Cooling Unit	SB-00S	1.900	3.64	4.85

*Based on 60% PF and 70% EFF. See Section 3.4.a.

TABLE 5.2 Contd...

UNIT 2 TRAIN A MOV MOTOR PARAMETERS

MOV	SIZE	HP	EQUIV KW*	EQUIV KVAR*
- MCC 2BY -				
2HV-9306: Safety Injection Pump Miniflow	SMB-00	0.330	0.63	0.84
2HV-9307: Safety Injection Pump Miniflow	SMB-00	0.330	0.63	0.84
2HV-9247: BA Pumps To Charging Pump Suction	SMB-00	0.700	1.34	1.79
2HV-9379: Shutdown Cooling Flow To LPSI	SB-0	3.200	6.13	8.17
2HV-9353: Shutdown Cooling Warm-Up	SMB-00	0.170	0.33	0.43
2HV-9303: Containment Emergency Sump Outlet	SMB-00	0.700	1.34	1.79
2HV-9420: Hi Pressure SI Header To RC Loop 2	SMB-00	0.670	1.28	1.71
2HV-6497: Saltwater From CCW Heat Exchanger	SMB-00	1.000	1.91	2.55
2HV-9300: Radwaste East Outlet	SB-1	5.300	10.15	13.53

*Based on 60% PF and 70% EFF. See Section 3.4.a.

TABLE 5.2 Contd...

UNIT 2 TRAIN B MOV MOTOR PARAMETERS

MOV	SIZE	HP	EQUIV KW*	EQUIV KVAR*
- MCC 2BRB -				
2HV-4762: AFW Pump P504 Discharge	-	0.750	1.44	1.91
2HV-8160: Shutdown Cooling Heat Exch Bypass	SMB-1	1.000	1.91	2.55
2HV-8162: LPSI Pump P015 Mini Recirculation	SMB-000	0.700	1.34	1.79

*Based on 60% PF and 70% EFF. See Section 3.4.a.

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TABLE 5.2 Contd...

UNIT 2 TRAIN B MOV MOTOR PARAMETERS PAGE 5

MOV	SIZE	HP	EQUIV KW*	EQUIV KVAR*
- MCC 2BJ -				
2HV-9339: Shutdown Flow From RC Loop 2	SB-4	9.900	18.96	25.28
2HV-9340: SI Tank T008 To RC Loop 1A	SB-1	5.300	10.15	13.53
2HV-9370: SI Tank T010 To RC Loop 2B	SB-1	5.300	10.15	13.53
2HV-9347: SI Pump Minimum Recirculation	SMB-00	0.330	0.63	0.84
2HV-9322: Lo Pressure SI Header To RC Loop 1A	SMB-1	2.600	4.98	6.64
2HV-9331: Lo Pressure SI Header To RC Loop 2B	SMB-1	2.600	4.98	6.64
2HV-9348: SI Pump Minimum Recirculation	SMB-00	0.330	0.63	0.84
2HV-9323: Hi Pressure SI Header To RC Loop 1A	SMB-00	0.700	1.34	1.79
2HV-9332: Hi Pressure SI Header To RC Loop 2B	SMB-00	0.700	1.34	1.79
2HV-9217: RCP Bleed Off To VCT	SMB-000	0.125	0.24	0.32
2HV-9326: Hi Pressure SI Header To RC Loop 1B	SMB-00	0.700	1.34	1.79
2HV-9329: Hi Pressure SI Header To RC Loop 2A	SMB-00	0.700	1.34	1.79
2HV-7258: Containment Isol SI Tank Vent Header	SMB-000	0.125	0.24	0.32
2HV-0508: RC Hot Leg Sample Containment Isol	SMB-000	0.330	0.63	0.84
2HV-0517: RC Hot Leg Sample Containment Isol	SMB-000	0.330	0.63	0.84
2HV-9368: Shutdown Heat Exch To Spray Header 2	SMB-00	1.300	2.49	3.32
2HV-0510: Press Vapor Sample Containment Isol	SMB-000	0.333	0.64	0.85
2HV-0512: Press Surge Line Liquid Sample Isol	SMB-000	0.333	0.64	0.85
2HV-9950: Containment Purge Outlet	SMB-0	3.200	6.13	8.17
2HV-9917: H2 Purge Exhaust Inlet	SMB-000	0.125	0.24	0.32
2HV-9946: H2 Purge Supply Unit Discharge	SMB-000	0.125	0.24	0.32
2HV-9302: Containment Emergency Sump Outlet	SMB-00	0.700	1.34	1.79
2HV-9304: Containment Emergency Sump Outlet	SMB-00	0.700	1.34	1.79
2HV-6211: CCW To Containment	SMB-000	0.330	0.63	0.84
2HV-6368: CCW To Emergency Cooling Unit	SB-00S	1.900	3.64	4.85
2HV-6369: CCW To Emergency Cooling Unit	SB-00S	1.900	3.64	4.85
2HV-6216: CCW From Containment	SMB-000	0.330	0.63	0.84
2HV-6372: CCW To Emergency Cooling Unit	SB-00S	1.900	3.64	4.85
2HV-6373: CCW To Emergency Cooling Unit	SB-00S	1.900	3.64	4.85
2LV-0227C: RWT Outlet To Charging Pump Header	SMB-00	0.700	1.34	1.79
2HV-9900: Containment Norm Cooling Supply Isol	SMB-000	0.330	0.63	0.84
2HV-9971: Containment Norm Cooling Return Isol	SMB-000	0.330	0.63	0.84

*Based on 60% PF and 70% EFF. See Section 3.4.a.

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TABLE 5.2 Contd...

UNIT 2 TRAIN B MOV MOTOR PARAMETERS

MOV	SIZE	HP	EQUIV KW*	EQUIV KVAR*
- MCC 2BZ -				
2HV-4712: AFW Pump P504 Discharge Control	SMB-000	0.125	0.24	0.32
2HV-5686: Firewater Containment Isolation	SMB-000	0.125	0.24	0.32
2LV-0227B: VCT Drain Return	SMB-00	0.700	1.34	1.79
2HV-9235: BA Tank T072 To Chrging Pump Suction	SMB-00	0.700	1.34	1.79
2HV-9240: BA Tank T071 To Chrging Pump Suction	SMB-00	0.700	1.34	1.79
2HV-4714: AFW To Steam Generator E088 Isolation	-	1.000	1.91	2.55
2HV-9336: Shutdown Cooling Flow To LPSI	SMB-1	2.600	4.98	6.64
2HV-9359: Shutdown Cooling Warm-Up	SMB-00	0.170	0.33	0.43
2HV-9301: Radwaste West Outlet	SB-1	5.300	10.15	13.53
2HV-6495: Saltwater From CCW Heat Exchanger	SMB-00	1.000	1.91	2.55
2TV-9267: RC Regen Heat Exchanger Isolation	SB-00	1.000	1.91	2.55
2HV-8151: Shutdown Cooling Heat Exch Outlet	SMB-1	1.000	1.91	2.55
2HV-8153: Shutdown Cooling Heat Exch Inlet	SMB-1	2.600	4.98	6.64
2HV-9434: Hi Pressure SI To RC Loop 1	SMB-00	0.700	1.34	1.79

*Based on 60% PF and 70% EFF. See Section 3.4.a.

TABLE 5.2 Contd...

UNIT 3 TRAIN A MOV MOTOR PARAMETERS

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MOV	SIZE	HP	EQUIV KW*	EQUIV KVAR*
- MCC 3BRA -				
3HV-4763: AFW Pump P141 Discharge Bypass	-	0.750	1.44	1.91
3HV-0396: Shutdown Cooling Control	SMB-1	1.000	1.91	2.55
3HV-8161: Shutdown Cooling Bypass Control	SMB-1	2.600	4.98	6.64
3HV-8163: LPSI Pump P016 Mini Recirculation	SMB-000	0.700	1.34	1.79

*Based on 80% PF and 70% EFF. See Section 3.4.a.

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TABLE 5.2 Contd...

UNIT 3 TRAIN A MOV MOTOR PARAMETERS PAGE 8

MOV	SIZE	HP	EQUIV KW*	EQUIV KVAR*
- MCC 3BE -				
3HV-4713: AFW To Steam Generator Control	SMB-000	0.130	0.25	0.33
3HV-9334: SI Tank Drain To RWST	SMB-00	1.330	2.55	3.40
3HV-9350: SI Tank T007 To RC Loop 1B	SB-1	5.300	10.15	13.53
3HV-9360: SI Tank T009 To RC Loop 2A	SB-1	5.300	10.15	13.53
3HV-9325: Lo Pressure SI Header To RC Loop 1B	SB-1	2.600	4.98	6.64
3HV-9328: Lo Pressure SI Header To RC Loop 2A	SB-1	2.600	4.98	6.64
3HV-9201: Auxiliary Spray To Pressurizer	SMB-000	0.330	0.63	0.84
3HV-9327: Hi Pressure SI Header To RC Loop 1B	SMB-00	0.700	1.34	1.79
3HV-9330: Hi Pressure SI Header To RC Loop 2A	SMB-00	0.700	1.34	1.79
3HV-6223: CCW Containment Inlet Isolation	SMB-000	0.330	0.63	0.84
3HV-9324: Hi Pressure SI Header To RC Loop 1A	SMB-00	0.700	1.34	1.79
3HV-9333: Hi Pressure SI Header To RC Loop 2B	SMB-00	0.700	1.34	1.79
3HV-9337: Shutdown Flow From RC Loop 2	SB-4	9.900	18.96	25.28
3HV-0516: RC Drain Tank Containment Isolation	SMB-000	0.125	0.24	0.32
3HV-7512: Containment Isol RC Drain To Radwaste	SMB-000	0.130	0.25	0.33
3HV-9367: Shutdown Heat Exch To Spray Header 1	SMB-00	1.300	2.49	3.32
3HV-0514: Quench Tk Vap Sample Containment Isol	SMB-000	0.125	0.24	0.32
3HV-5803: Containment Sump To Radwaste Sump	SMB-000	0.330	0.63	0.84
3HV-9949: Containment Purge Inlet	SMB-0	3.200	6.13	8.17
3HV-9305: Containment Emergency Sump Outlet	SMB-00	0.700	1.34	1.79
3HV-4731: AFW To Steam Generator E089 Isolation	-	1.250	2.39	3.19
3HV-8150: Shutdown Cooling Sys Heat Exch Outlet	SMB-1	1.000	1.91	2.55
3HV-8152: Shutdown Cooling Sys Heat Exch Inlet	SMB-1	2.600	4.98	6.64
3HV-6366: CCW To Emergency Cooling Unit	SB-00S	1.900	3.64	4.85
3HV-6367: CCW To Emergency Cooling Unit	SB-00S	1.900	3.64	4.85
3HV-6236: CCW Non-Critical Containment Isol	SMB-000	0.330	0.63	0.84
3HV-6370: CCW To Emergency Cooling Unit	SB-00S	1.900	3.64	4.85
3HV-6371: CCW To Emergency Cooling Unit	SB-00S	1.900	3.64	4.85

*Based on 60% PF and 70% EFF. See Section 3.4.a.

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TABLE 5.2 Contd...

UNIT 3 TRAIN A MOV MOTOR PARAMETERS

MOV	SIZE	HP	EQUIV KW*	EQUIV KVAR*
- MCC 3BY -				
3HV-9306: Safety Injection Pump Miniflow	SMB-00	0.330	0.63	0.84
3HV-9307: Safety Injection Pump Miniflow	SMB-00	0.330	0.63	0.84
3HV-9247: BA Pumps To Chrging Pump Suction	SMB-00	0.700	1.34	1.79
3HV-9379: Shutdown Cooling Flow To LPSI	SB-0	3.200	6.13	8.17
3HV-9353: Shutdown Cooling Warm-Up	SMB-00	1.900	3.64	4.85
3HV-9303: Containment Emergency Sump Outlet	SMB-00	0.700	1.34	1.79
3HV-9420: Hi Pressure SI Header To RC Loop 2	SMB-00	0.700	1.34	1.79
3HV-6497: Saltwater From CCW Heat Exchanger	SMB-00	1.000	1.91	2.55
3HV-9300: Radwaste East Outlet	SB-1	5.200	9.96	13.28

*Based on 60% PF and 70% EFF. See Section 3.4.a.

TABLE 5.2 Contd...

UNIT 3 TRAIN B MOV MOTOR PARAMETERS

MOV	SIZE	HP	EQUIV KW*	EQUIV KVAR*
- MCC 3BRB -				
3HV-4762: AFW Pump P504 Discharge	-	0.750	1.44	1.91
3HV-8160: Shutdown Cooling Heat Exch Bypass	SMB-1	1.000	1.91	2.55
3HV-8162: LPSI Pump P015 Mini Recirculation	SMB-000	0.700	1.34	1.79

*Based on 60% PF and 70% EFF. See Section 3.4.a.

TABLE 5.2 Contd...

UNIT 3 TRAIN B MOV MOTOR PARAMETERS

MOV	SIZE	HP	EQUIV KW*	EQUIV KVAR*
- MCC 3BJ -				
3HV-9339: Shutdown Flow From RC Loop 2	SB-4	9.900	18.96	25.28
3HV-9340: SI Tank T008 To RC Loop 1A	SB-1	5.200	9.96	13.28
3HV-9370: SI Tank T010 To RC Loop 2B	SB-1	5.300	10.15	13.53
3HV-9347: SI Pump Minimum Recirculation	SMB-000	0.330	0.63	0.84
3HV-9322: Lo Pressure SI Header To RC Loop 1A	SMB-1	2.600	4.98	6.64
3HV-9331: Lo Pressure SI Header To RC Loop 2B	SMB-1	2.600	4.98	6.64
3HV-9348: SI Pump Minimum Recirculation	SMB-00	0.330	0.63	0.84
3HV-9323: Hi Pressure SI Header To RC Loop 1A	SMB-00	0.700	1.34	1.79
3HV-9332: Hi Pressure SI Header To RC Loop 2B	SMB-00	0.700	1.34	1.79
3HV-9217: RCP Bleed Off To VCT	SMB-000	0.125	0.24	0.32
3HV-9326: Hi Pressure SI Header To RC Loop 1B	SMB-00	0.700	1.34	1.79
3HV-9329: Hi Pressure SI Header To RC Loop 2A	SMB-00	0.700	1.34	1.79
3HV-7258: Containment Isol SI Tank Vent Header	SMB-000	0.130	0.25	0.33
3HV-0508: RC Hot Leg Sample Containment Isol	SMB-000	0.330	0.63	0.84
3HV-0517: RC Hot Leg Sample Containment Isol	SMB-000	0.330	0.63	0.84
3HV-9368: Shutdown Heat Exch To Spray Header 2	SMB-00	1.300	2.49	3.32
3HV-0510: Press Vapor Sample Containment Isol	SMB-000	0.330	0.63	0.84
3HV-0512: Press Surge Line Liquid Sample Isol	SMB-000	0.330	0.63	0.84
3HV-9950: Containment Purge Outlet	SMB-0	3.200	6.13	8.17
3HV-9917: H2 Purge Exhaust Inlet	SMB-000	0.125	0.24	0.32
3HV-9946: H2 Purge Supply Unit Discharge	SMB-000	0.130	0.25	0.33
3HV-9302: Containment Emergency Sump Outlet	SMB-00	0.700	1.34	1.79
3HV-9304: Containment Emergency Sump Outlet	SMB-00	0.700	1.34	1.79
3HV-6211: CCW To Containment	SMB-000	0.330	0.63	0.84
3HV-6368: CCW To Emergency Cooling Unit	SB-00S	1.900	3.64	4.85
3HV-6369: CCW To Emergency Cooling Unit	SB-00S	1.900	3.64	4.85
3HV-6216: CCW From Containment	SMB-000	0.330	0.63	0.84
3HV-6372: CCW To Emergency Cooling Unit	SB-00S	1.900	3.64	4.85
3HV-6373: CCW To Emergency Cooling Unit	SB-00S	1.900	3.64	4.85
3LV-0227C: RWT Outlet To Chrging Pump Header	SMB-00	0.700	1.34	1.79
3HV-9900: Containment Norm Cooling Supply Isol	SMB-000	0.330	0.63	0.84
3HV-9971: Containment Norm Cooling Return Isol	SMB-000	0.330	0.63	0.84

*Based on 60% PF and 70% EFF. See Section 3.4.a.

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TABLE 5.2 Contd...

UNIT 3 TRAIN B MOV MOTOR PARAMETERS — PAGE 12

MOV	SIZE	HP	EQUIV KW*	EQUIV KVAR*
- MCC 3BZ -				
3HV-4712: AFW Pump P504 Discharge Control	SMB-000	0.125	0.24	0.32
3HV-5686: Firewater Containment Isolation	SMB-000	0.130	0.25	0.33
3LV-0227B: VCT Drain Return	SMB-00	0.700	1.34	1.79
3HV-9235: BA Tank T072 To Charging Pump Suction	SMB-00	0.700	1.34	1.79
3HV-9240: BA Tank T071 To Charging Pump Suction	SMB-00	0.700	1.34	1.79
3HV-4714: AFW To Steam Generator E088 Isolation	-	2.000	3.83	5.11
3HV-9336: Shutdown Cooling Flow To LPSI	SMB-1	2.600	4.98	6.64
3HV-9359: Shutdown Cooling Warm-Up	SMB-00	0.170	0.33	0.43
3HV-9301: Radwaste West Outlet	SB-1	5.300	10.15	13.53
3HV-6495: Saltwater From CCW Heat Exchanger	SMB-00	1.000	1.91	2.55
3TV-9267: RC Regen Heat Exchanger Isolation	SB-00	1.000	1.91	2.55
3HV-8151: Shutdown Cooling Heat Exch Outlet	SMB-1	1.000	1.91	2.55
3HV-8153: Shutdown Cooling Heat Exch Inlet	SMB-1	2.600	4.98	6.64
3HV-9434: Hi Pressure SI To RC Loop 1	SMB-00	0.670	1.28	1.71

*Based on 60% PF and 70% EFF. See Section 3.4.a.

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REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

TABLE 5.3

Motor Control Center Load Schedule

TABLE 5.3

UNIT 2 MCC TRAIN A ESF LOAD SCHEDULE - SONGS 2 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 2BRA													
HV-4763: P141 Disch Valve Bypass	2BRA05	1.44	1.91	OFF	CLOSE	0.00	0.00	-	-	1.44	1.91	-	-
HV-0396: Shutdown Cooling Ctrl Valve	2BRA13	1.91	2.55	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-8161: Shutdown Clg Bypass Ctrl Vlv	2BRA15	4.98	6.64	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-8163: LPSI Pump P016 Min Recrc Vlv	2BRA16	1.28	1.71	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Panel 2Q074 15KVA Xfmr 2T074	2BRA22	4.25	2.63	ON	ON	-	-	4.25	2.63	-	-	4.25	2.63
MCC 2BRA EQUIVALENT LOADING ON INITIAL CONDITION						0.00	0.00	4.25	2.63				
MCC 2BRA EQUIVALENT LOADING ON ACCIDENT CONDITION										1.44	1.91	4.25	2.63

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-086, REV 0, FOR OTHER LOADS.

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TABLE 5.3 Contd...

UNIT 2 MCC TRAIN A ESF LOAD SCHEDULE - SONGS 2 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS INITIAL COND	STATUS ACC COND	INITIAL CONDITION MOTOR LOAD KW	INITIAL CONDITION MOTOR LOAD KVAR	INITIAL CONDITION STATIC LOAD KW	INITIAL CONDITION STATIC LOAD KVAR	ACCIDENT CONDITION LOADS STARTING MOTOR KW	ACCIDENT CONDITION LOADS STARTING MOTOR KVAR	ACCIDENT CONDITION LOADS STATIC+RUNNING KW	ACCIDENT CONDITION LOADS STATIC+RUNNING KVAR
MOTOR CONTROL CENTER 2BD													
Diesel Generator Immersion Heater E654	2BD06	15.00	0.00	ON	OFF	-	-	15.00	0.00	-	-	0.00	0.00
Diesel Generator Immersion Heater E655	2BD07	15.00	0.00	ON	OFF	-	-	15.00	0.00	-	-	0.00	0.00
Diesel Generator Space Heater EG002	2BD08	1.50	0.00	ON	OFF	-	-	1.50	0.00	-	-	0.00	0.00
DG Lube Oil/Turbocharger P996/P1015**	2BD10	1.91	2.01	ON	ON	1.91	2.01	-	-	1.91	2.01	-	-
DG Lube Oil/Turbocharger P997/P1014**	2BD11	1.91	2.01	ON	ON	1.91	2.01	-	-	1.91	2.01	-	-
Diesel Bldg Emergency Supply Fan A274	2BD12	<<<<<< CMOTOR MODEL >>>>>>											
Diesel Bldg Emergency Supply Fan A275	2BD13	<<<<<< CMOTOR MODEL >>>>>>											
Diesel Fuel Transf Pump P093 Htrs	2BD18-A	0.25	0.00	ON	OFF	-	-	0.25	0.00	-	-	0.00	0.00
Diesel Fuel Transf Pump P096 Htrs	2BD18-B	0.25	0.00	ON	OFF	-	-	0.25	0.00	-	-	0.00	0.00
Diesel Radiator Fan E550 Heaters	2BD18-C	0.77	0.00	ON	OFF	-	-	0.77	0.00	-	-	0.00	0.00
Diesel Radiator Fan E546 Heaters	2BD18-D	0.77	0.00	ON	OFF	-	-	0.77	0.00	-	-	0.00	0.00
Diesel Radiator Fan E550	2BD21	<<<<<< CMOTOR MODEL >>>>>>											
Diesel Radiator Fan E546	2BD22	<<<<<< CMOTOR MODEL >>>>>>											
Diesel Fuel Transfer Pump P093	2BD23	0.73	0.76	OFF	START	0.00	0.00	-	-	0.73	0.76	-	-
Diesel Fuel Transfer Pump P096	2BD24	0.73	0.76	OFF	START	0.00	0.00	-	-	0.73	0.76	-	-
Strip Heater Panel 2Q020	2BD26	4.25	2.63	ON	ON	-	-	4.25	2.63	-	-	4.25	2.63
MCC 2BD EQUIVALENT LOADING ON INITIAL CONDITION						3.82	4.02	37.79	2.63				
MCC 2BD EQUIVALENT LOADING ON ACCIDENT CONDITION										5.28	5.54	4.25	2.63

*REFERENCE: CALCULATION E4C-086, REV 0.

**RESTARTED AFTER THE LOSS OF BUS VOLTAGE CONDITION.

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TABLE 5.3 Contd...

UNIT 2 MCC TRAIN A ESF LOAD SCHEDULE - SONGS 2 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 2BE													
Fuel Handling Airborne Monitor RT7822	2BE02	1.70	1.05	ON	ON	-	-	1.70	1.05	-	-	1.70	1.05
Fuel Handling Bldg Emergency Htr E464	2BE03	28.70	0.00	OFF	OFF	-	-	0.00	0.00	-	-	0.00	0.00
Battery Charger D3 (125V) B003	2BE04	66.49	49.87	ON	ON	-	-	66.49	49.87	-	-	66.49	49.87
HV-4713: AFW To Steam Gen Control	2BE06	0.25	0.33	OFF	OPEN	0.00	0.00	-	-	0.25	0.33	-	-
HV-9334: SI Tank Drain To RWST	2BE09	2.55	3.40	OFF	CLOSE	0.00	0.00	-	-	2.55	3.40	-	-
HV-9350: SI Tank T007 To RC Loop 1B	2BE10	10.15	13.53	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9360: SI Tank T009 To RC Loop 2A	2BE11	10.15	13.53	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9325: Lo Press SI Hdr To RC Loop 1B	2BE14	4.98	6.64	OFF	OPEN	0.00	0.00	-	-	4.98	6.64	-	-
HV-9328: Lo Press SI Hdr To RC Loop 2A	2BE15	4.98	6.64	OFF	OPEN	0.00	0.00	-	-	4.98	6.64	-	-
HV-9201: Aux Spray To Pressurizer	2BE17	0.63	0.84	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9327: Hi Press SI Hdr To RC Loop 1B	2BE18	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
HV-9330: Hi Press SI Hdr To RC Loop 2A	2BE19	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
HV-6223: CCW Cntmt Inlet Isol Valve	2BE21	0.63	0.84	OFF	CLOSE	0.00	0.00	-	-	0.63	0.84	-	-
HV-9324: Hi Press SI Hdr To RC Loop 1A	2BE22	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
HV-9333: Hi Press SI Hdr To RC Loop 2B	2BE23	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
HV-9337: Shutdown Flow From RC Loop 2	2BE25	18.96	25.28	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-0516: RC Drain Tank Cntmt Isol Vlv	2BE26	0.24	0.32	OFF	CLOSE	0.00	0.00	-	-	0.24	0.32	-	-
HV-7512: Cntmt Isol RC Drain To Rdwst	2BE27	0.24	0.32	OFF	CLOSE	0.00	0.00	-	-	0.24	0.32	-	-
HV-9367: Shtdwn Ht Exch To Spray Hdr 1	2BE29	2.49	3.32	OFF	OPEN	0.00	0.00	-	-	2.49	3.32	-	-

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-086, REV 0, FOR OTHER LOADS.

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TABLE 5.3 Contd...

UNIT 2 MCC TRAIN A ESF LOAD SCHEDULE - SONGS 2 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 2BE Contd...													
HV-0514: Quench Tk Vap Smpl Cntmt Isol	2BE30	0.24	0.32	OFF	CLOSE	0.00	0.00	-	-	0.24	0.32	-	-
HV-5803: Cntmt Sump To Radwaste Sump	2BE31	0.24	0.32	OFF	CLOSE	0.00	0.00	-	-	0.24	0.32	-	-
HV-9949: Containment Purge Inlet	2BE33	6.13	8.17	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9305: Cntmt Emerg Sump Outlet	2BE35	1.34	1.79	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-4731: AFW To Steam Gen E089 Isol	2BE36	1.91	2.55	OFF	OPEN	0.00	0.00	-	-	1.91	2.55	-	-
HV-8150: Shtdwn Clg Sys Ht Exch Outlet	2BE38	1.91	2.55	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-8152: Shtdwn Clg Sys Ht Exch Inlet	2BE39	4.98	6.64	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Containment Airborne Monitor RT7804	2BE41	1.70	1.05	ON	ON	-	-	1.70	1.05	-	-	1.70	1.05
Boric Acid Make-up Heat Trace Pnl L266	2BE42	15.30	9.48	ON	ON	-	-	15.30	9.48	-	-	15.30	9.48
HV-6366: CCW To Emergency Cooling Unit	2BE44	3.64	4.85	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-6367: CCW To Emergency Cooling Unit	2BE45	3.64	4.85	OFF	OPEN	0.00	0.00	-	-	3.64	4.85	-	-
HV-6236: CCW Non-Critical Cntmt Isol	2BE46	0.63	0.84	OFF	CLOSE	0.00	0.00	-	-	0.63	0.84	-	-
HV-6370: CCW To Emergency Cooling Unit	2BE47	3.64	4.85	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-6371: CCW To Emergency Cooling Unit	2BE48	3.64	4.85	OFF	OPEN	0.00	0.00	-	-	3.64	4.85	-	-
Post Accident Cleanup Unit Heater E652	2BE49	3.80	0.00	OFF	OFF	-	-	0.00	0.00	-	-	0.00	0.00
Vital Bus Backup Panel 2Q063	2BE51	21.25	13.17	OFF	OFF	-	-	0.00	0.00	-	-	0.00	0.00
MCC 2BE EQUIVALENT LOADING ON INITIAL CONDITION						0.00	0.00	85.19	61.45				
MCC 2BE EQUIVALENT LOADING ON ACCIDENT CONDITION										32.02	42.70	85.19	61.45

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-086, REV 0, FOR OTHER LOADS.

E082MCC.WK1

CCN 9

TABLE 5.3 Contd...

UNIT 2 MCC TRAIN A ESF LOAD SCHEDULE - SONGS 2 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 2BY													
Battery Charger D1	2BY03	66.49	49.87	ON	ON	-	-	66.49	49.87	-	-	66.49	49.87
Intake Structure Cooling Fan A370	2BY07	3.18	2.14	OFF	START	0.00	0.00	-	-	3.18	2.14	-	-
Intake Structure Cooling Fan A373	2BY08	3.18	2.14	OFF	START	0.00	0.00	-	-	3.18	2.14	-	-
HV-9306: Safety Inject Pump Mini Flow	2BY09	0.63	0.84	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
CCW Seismic Make-Up Pump P1018	2BY10	6.58	4.25	OFF	ON	0.00	0.00	-	-	-	-	6.58	4.25
Boric Acid Makeup Emergency ACU E439	2BY11	0.97	1.02	OFF	START	0.00	0.00	-	-	0.97	1.02	-	-
Boric Acid Makeup Emergency ACU E440	2BY12	0.97	1.02	OFF	START	0.00	0.00	-	-	0.97	1.02	-	-
HV-9307: Safety Inject Pump Mini Flow	2BY13	0.63	0.84	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Boric Acid Makeup Pump P174***	2BY14	20.81	11.23	ON	ON	20.81	11.23	-	-	20.81	11.23	-	-
Boric Acid Makeup Pump P175	2BY15	20.81	11.23	OFF	START	0.00	0.00	-	-	20.81	11.23	-	-
HV-9247: BA Pumps To Chrg Pump Suction	2BY16	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
Control Room Essential Lighting**	2BY19	4.25	2.63	OFF	ON	-	-	0.00	0.00	-	-	4.25	2.63
Charging Pump Area Emergency ACU E437	2BY20	0.48	0.51	OFF	START	0.00	0.00	-	-	0.48	0.51	-	-
Charging Pump Area Emergency ACU E438	2BY21	0.97	1.02	OFF	START	0.00	0.00	-	-	0.97	1.02	-	-
Control Room Cabinet Emerg ACU E424	2BY22	6.58	4.25	OFF	START	0.00	0.00	-	-	6.58	4.25	-	-
EPPM Panel 2L411 (NON-1E)	2BY23	0.43	0.26	OFF	ON	-	-	0.00	0.00	-	-	0.43	0.26
Safety Equip Bldg Emergency ACU E417	2BY24	5.26	3.40	OFF	START	0.00	0.00	-	-	5.26	3.40	-	-
Safety Equip Bldg Emergency ACU E517	2BY25	0.87	0.75	OFF	START	0.00	0.00	-	-	0.87	0.75	-	-

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-086, REV 0, FOR OTHER LOADS.

**CAN BE FED FROM TRAIN B (2BZ11).

***RESTARTED AFTER THE LOSS OF BUS VOLTAGE CONDITION.

E082MCC.WK1

CCN 9

TABLE 5.3 Contd...

UNIT 2 MCC TRAIN A ESF LOAD SCHEDULE - SONGS 2 DESIGN BASIS EVENTS

PAGE 6

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS: INITIAL COND	STATUS: ACC COND	INITIAL CONDITION MOTOR LOAD KW	INITIAL CONDITION MOTOR LOAD KVAR	INITIAL CONDITION STATIC LOAD KW	INITIAL CONDITION STATIC LOAD KVAR	ACCIDENT CONDITION LOADS STARTING MOTOR KW	ACCIDENT CONDITION LOADS STARTING MOTOR KVAR	ACCIDENT CONDITION LOADS STATIC+RUNNING KW	ACCIDENT CONDITION LOADS STATIC+RUNNING KVAR
MOTOR CONTROL CENTER 2BY Contd...													
HV-9379: Shutdown Cooling Flow To LPSI	2BY26	6.13	8.17	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9353: Shutdown Cooling Warm-Up Vlv	2BY27	0.33	0.43	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9303: Containment Emerg Sump Outlet	2BY28	1.34	1.79	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9420: Hi Press SI Hdr To RC Loop 2	2BY29	1.28	1.71	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
CCW Bldg Pump Room Emergency ACU E453	2BY30	0.68	0.71	OFF	START	0.00	0.00	-	-	0.00	0.00	-	-
CCW Bldg Pump Room Emergency ACU E454	2BY31	0.74	0.77	OFF	START	0.00	0.00	-	-	0.74	0.77	-	-
OTSC Computer Inverter Assy 2Y010	2BY33	12.75	7.90	OFF	ON	-	-	0.00	0.00	-	-	12.75	7.90
Spent Fuel Pool Pump P009	2BY34	<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<< CMOTOR MODEL >>											
HV-6497: Saltwater From CCW Heat Exchg	2BY35	1.91	2.55	OFF	OPEN	0.00	0.00	-	-	1.91	2.55	-	-
Feedwater Pump Room Fan A394	2BY36	4.39	2.83	OFF	START	0.00	0.00	-	-	4.39	2.83	-	-
Fuel Handling Bldg Emergency ACU E441	2BY37	0.77	0.81	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Fuel Handling Bldg Accident ACU E370	2BY38	40.53	26.18	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Lo Press SI Pump P015 Encl Heaters	2BY39-A	2.00	0.00	ON	OFF	-	-	2.00	0.00	-	-	0.00	0.00
Hi Press SI Pump P017 Encl Heaters	2BY39-B	2.00	0.00	ON	OFF	-	-	2.00	0.00	-	-	0.00	0.00
Hi Press SI Pump P018 Encl Heaters**	2BY39-C	2.00	0.00	ON	OFF	-	-	2.00	0.00	-	-	0.00	0.00
SWC Pump P112 Enclosure Heaters	2BY39-D	0.40	0.00	OFF	OFF	-	-	0.00	0.00	-	-	0.00	0.00
SWC Pump P307 Enclosure Heaters	2BY39-E	0.40	0.00	OFF	ON	-	-	0.00	0.00	-	-	0.40	0.00

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-086, REV 0, FOR OTHER LOADS.
**CAN BE FED FROM TRAIN B (2BZ37-B).

Ccn 9

TABLE 5.3 Contd...

UNIT 2 MCC TRAIN A ESF LOAD SCHEDULE - SONGS 2 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 2BY Contd...													
Fuel Bldg Acc ACU E370 Encl Heaters	2BY39-F	0.33	0.00	OFF	ON	-	-	0.00	0.00	-	-	0.33	0.00
Spray Chem Add Pump P020 Encl Heaters	2BY39-G	0.14	0.00	OFF	OFF	-	-	0.00	0.00	-	-	0.00	0.00
AFW Pump P141 Enclosure Heaters	2BY39-H	0.66	0.00	ON	OFF	-	-	0.66	0.00	-	-	0.00	0.00
Containment Spray Pump P012 Encl Htrs	2BY40-A	2.00	0.00	ON	OFF	-	-	2.00	0.00	-	-	0.00	0.00
Cntmt Bldg Emerg ACU E399 Encl Heaters	2BY40-B	0.26	0.00	ON	OFF	-	-	0.26	0.00	-	-	0.00	0.00
Boric Acid Makeup Pump P174 Encl Htrs	2BY40-C	0.12	0.00	ON	OFF	-	-	0.12	0.00	-	-	0.00	0.00
Boric Acid Makeup Pump P175 Encl Htrs	2BY40-D	0.12	0.00	ON	OFF	-	-	0.12	0.00	-	-	0.00	0.00
Charging Pump P191 Enclosure Htrs**	2BY40-E	0.12	0.00	ON	OFF	-	-	0.12	0.00	-	-	0.00	0.00
Cntmt Bldg Emerg ACU E401 Encl Heaters	2BY40-F	0.26	0.00	ON	OFF	-	-	0.26	0.00	-	-	0.00	0.00
Charging Pump P190 Enclosure Heaters	2BY40-G	0.12	0.00	ON	OFF	-	-	0.12	0.00	-	-	0.00	0.00
HV-9300: RWST East Outlet	2BY41	10.15	13.53	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Motor & Strip Heater Panel 2Q039	2BY42	17.00	10.54	ON	ON	-	-	17.00	10.54	-	-	17.00	10.54
MCC 2BY EQUIVALENT LOADING ON INITIAL CONDITION						20.81	11.23	93.15	60.41				
MCC 2BY EQUIVALENT LOADING ON ACCIDENT CONDITION										73.14	47.36	108.23	75.45

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-086, REV 0, FOR OTHER LOADS.
**CAN BE FED FROM TRAIN B (2BZ38-G).

CCN 9

RE: Lpm DATE: 9-30-94
IRE: [illegible] DATE: 10-5-94

TABLE 5.3 Contd...

COMMON TRAIN A ESF LOAD SCHEDULE - SONGS 2 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER BQ**													
Control Room Airborne Monitor RT7824	BQ03	1.70	1.05	ON	ON	-	-	1.70	1.05	-	-	1.70	1.05
Control Bldg Emerg Vent Elect Htr E297	BQ04	4.80	0.00	ON	ON	-	-	4.80	0.00	-	-	4.80	0.00
Cntmt Spray Chem Heat Trace Pnl 2L270	BQ05	5.10	3.16	OFF	OFF	-	-	0.00	0.00	-	-	0.00	0.00
Cntmt Spray Chem Heat Trace Pnl 3L270	BQ06	5.10	3.16	OFF	OFF	-	-	0.00	0.00	-	-	0.00	0.00
Battery Room Emerg Exhaust Fan U2 A173	BQ07	2.55	1.71	OFF	START	0.00	0.00	-	-	2.55	1.71	-	-
ESF Switchgear Room Emerg ACU U2 E255	BQ08	7.68	4.55	OFF	START	0.00	0.00	-	-	7.68	4.55	-	-
Control Room Emergency Supply Fan A207	BQ09	5.04	2.99	OFF	START	0.00	0.00	-	-	5.04	2.99	-	-
Health Physics Comp HVAC Panel 2/3L437	BQ11	6.60	4.09	ON	ON	-	-	6.60	4.09	-	-	6.60	4.09
Emerg Siren Control Panel 2/3L211-1	BQ13	16.24	10.06	ON	ON	-	-	16.24	10.06	-	-	16.24	10.06
Battery Room Emerg Exhaust Fan U3 A173	BQ14	2.55	1.71	OFF	START	0.00	0.00	-	-	2.55	1.71	-	-
ESF Switchgear Room Emerg ACU U3 E255	BQ15	7.68	4.55	OFF	START	0.00	0.00	-	-	7.68	4.55	-	-
Battery Charger 2/3B014 (HPC Computer)	BQ17	13.33	10.00	ON	ON	-	-	13.33	10.00	-	-	13.33	10.00
Chiller E336 Oil Pump P445	BQ20	1.45	1.24	OFF	START	0.00	0.00	-	-	1.45	1.24	-	-
Ctrl Bldg Chiller Rm Supply Fan A053	BQ22	2.73	1.83	OFF	START	0.00	0.00	-	-	2.73	1.83	-	-
Ctrl Bldg Chiller Rm Exhaust Fan A056	BQ23	0.93	0.72	OFF	START	0.00	0.00	-	-	0.93	0.72	-	-
Ctrl Bldg Emerg Chilled Wtr Pump P162	BQ24	<<<<<<<<<<<<<<<<<<<< CMOTOR MODEL >>>>>>>>>>>>>>>>>>>>											
Chiller E336 Pumpout W310	BQ25	1.86	1.45	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Strip Heater Panel Q033	BQ27	12.75	7.90	ON	ON	-	-	12.75	7.90	-	-	12.75	7.90
Emerg Siren Control Panel 2/3L211-4	BQ30	16.24	10.06	ON	ON	-	-	16.24	10.06	-	-	16.24	10.06
MCC BQ EQUIVALENT LOADING ON INITIAL CONDITION						0.00	0.00	71.66	43.16				
MCC BQ EQUIVALENT LOADING ON ACCIDENT CONDITION										30.61	19.30	71.66	43.16

*REFERENCE: CALCULATION E4C-086, REV 0.
**POWERED FROM EITHER UNIT 2 OR UNIT 3.

E082MCC.WK1

CCN 9

TABLE 5.3 Contd...

UNIT 2 MCC TRAIN B ESF LOAD SCHEDULE - SONGS 2 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 2BRB													
HV-4762: AFW Pump P504 Disch Valve	2BRB05	1.44	1.91	OFF	CLOSE	0.00	0.00	-	-	1.44	1.91	-	-
HV-8160: Shutdown Clg Ht Exch Bypass	2BRB15	1.91	2.55	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-8162: LPSI Pump P015 Mini Recirc	2BRB16	1.34	1.79	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Panel 2Q075	2BRB22	4.25	2.63	ON	ON	-	-	4.25	2.63	-	-	4.25	2.63
MCC 2BRB EQUIVALENT LOADING ON INITIAL CONDITION						0.00	0.00	4.25	2.63				
MCC 2BRB EQUIVALENT LOADING ON ACCIDENT CONDITION										1.44	1.91	4.25	2.63

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-086, REV 0, FOR OTHER LOADS.

E082MCC.WK1

CCN 9

SONGS 2 AND 3
CALCULATION NO. E4C-082, REV 1, CCN N-3
SUBJECT: SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT

RE: [signature] SHEET NO. 193
DATE: 9-30-94
IRE: [signature] DATE: 10-5-94

TABLE 5.3 Contd...

UNIT 2 MCC TRAIN B ESF LOAD SCHEDULE - SONGS 2 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS INITIAL COND	STATUS ACC COND	INITIAL CONDITION MOTOR LOAD KW	INITIAL CONDITION MOTOR LOAD KVAR	INITIAL CONDITION STATIC LOAD KW	INITIAL CONDITION STATIC LOAD KVAR	ACCIDENT CONDITION LOADS STARTING MOTOR KW	ACCIDENT CONDITION LOADS STARTING MOTOR KVAR	ACCIDENT CONDITION LOADS STATIC+RUNNING KW	ACCIDENT CONDITION LOADS STATIC+RUNNING KVAR
MOTOR CONTROL CENTER 2BH													
Diesel Fuel Transf Pump P094 Encl Htrs	2BH03-A	0.25	0.00	ON	OFF	-	-	0.25	0.00	-	-	0.00	0.00
Diesel Fuel Transf Pump P095 Encl Htrs	2BH03-B	0.25	0.00	ON	OFF	-	-	0.25	0.00	-	-	0.00	0.00
Diesel Radiator Fan E547 Encl Heaters	2BH03-C	0.77	0.00	ON	OFF	-	-	0.77	0.00	-	-	0.00	0.00
Diesel Radiator Fan E549 Encl Heaters	2BH03-D	0.77	0.00	ON	OFF	-	-	0.77	0.00	-	-	0.00	0.00
Diesel Radiator Fan E547	2BH06	<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<< CMOTOR MODEL >>											
Diesel Radiator Fan E549	2BH07	<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<< CMOTOR MODEL >>											
Diesel Fuel Transfer Pump P095	2BH08	0.73	0.76	OFF	START	0.00	0.00	-	-	0.73	0.76	-	-
Diesel Fuel Transfer Pump P094	2BH09	0.73	0.76	OFF	START	0.00	0.00	-	-	0.73	0.76	-	-
Diesel Bldg Emergency Supply Fan A276	2BH11	<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<< CMOTOR MODEL >>											
Diesel Bldg Emergency Supply Fan A277	2BH12	<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<< CMOTOR MODEL >>											
Diesel Generator Space Heater EG003	2BH17	1.50	0.00	ON	OFF	-	-	1.50	0.00	-	-	0.00	0.00
Diesel Generator Immersion Heater E656	2BH22	15.00	0.00	ON	OFF	-	-	15.00	0.00	-	-	0.00	0.00
Diesel Generator Immersion Heater E657	2BH23	15.00	0.00	ON	OFF	-	-	15.00	0.00	-	-	0.00	0.00
DG Lube Oil/Turbocharger P998/P1017**	2BH24	1.91	2.01	ON	ON	1.91	2.01	-	-	1.91	2.01	-	-
DG Lube Oil/Turbocharger P999/P1016**	2BH25	1.91	2.01	ON	ON	1.91	2.01	-	-	1.91	2.01	-	-
Strip Heater Panel 2Q023	2BH26	4.25	2.63	ON	ON	-	-	4.25	2.63	-	-	4.25	2.63
MCC 2BH EQUIVALENT LOADING ON INITIAL CONDITION						3.82	4.02	37.79	2.63				
MCC 2BH EQUIVALENT LOADING ON ACCIDENT CONDITION										5.28	5.54	4.25	2.63

*REFERENCE: CALCULATION E4C-086, REV 0.

**RESTARTED AFTER THE LOSS OF BUS VOLTAGE CONDITION.

E082MCC.WK1

CCN 9

TABLE 5.3 Contd...

UNIT 2 MCC TRAIN B ESF LOAD SCHEDULE - SONGS 2 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 2BJ													
HV-9339: Shutdown Flow From RC Loop 2	2BJ05	18.96	25.28	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9340: SI Tank T008 To RC Loop 1A	2BJ06	10.15	13.53	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9370: SI Tank T010 To RC Loop 2B	2BJ07	10.15	13.53	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9347: SI Pump Minimum Recirculation	2BJ09	0.63	0.84	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9322: Lo Press SI Hdr To RC Loop 1A	2BJ10	4.98	6.64	OFF	OPEN	0.00	0.00	-	-	4.98	6.64	-	-
HV-9331: Lo Press SI Hdr To RC Loop 2B	2BJ11	4.98	6.64	OFF	OPEN	0.00	0.00	-	-	4.98	6.64	-	-
HV-9348: SI Pump Minimum Recirculation	2BJ13	0.63	0.84	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9323: Hi Press SI Hdr To RC Loop 1A	2BJ14	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
HV-9332: Hi Press SI Hdr To RC Loop 2B	2BJ15	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
HV-9217: RCP Bleed Off To VCT	2BJ17	0.24	0.32	OFF	CLOSE	0.00	0.00	-	-	0.24	0.32	-	-
HV-9326: Hi Press SI Hdr To RC Loop 1B	2BJ18	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
HV-9329: Hi Press SI Hdr To RC Loop 2A	2BJ19	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
HV-7258: Cntmt Isol SI Tank [illegible]nt Hdr	2BJ21	0.24	0.32	OFF	CLOSE	0.00	0.00	-	-	0.24	0.32	-	-
HV-0508: RC Hot Leg Sample Cntmt Isol	2BJ22	0.63	0.84	OFF	CLOSE	0.00	0.00	-	-	0.63	0.84	-	-
HV-0517: RC Hot Leg Sample Cntmt Isol	2BJ23	0.63	0.84	OFF	CLOSE	0.00	0.00	-	-	0.63	0.84	-	-
HV-9368: Shtdwn Ht Exch To Spray Hdr 2	2BJ25	2.49	3.32	OFF	OPEN	0.00	0.00	-	-	2.49	3.32	-	-
HV-0510: Pressr Vapor Smpl Cntmt Isol	2BJ26	0.64	0.85	OFF	CLOSE	0.00	0.00	-	-	0.64	0.85	-	-
HV-0512: Pressr Surge Ln Liq Smpl Isol	2BJ27	0.64	0.85	OFF	CLOSE	0.00	0.00	-	-	0.64	0.85	-	-
HV-9950: Containment Purge Outlet	2BJ29	6.13	8.17	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9917: H2 Purge Exhaust Inlet	2BJ30	0.24	0.32	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-

*REFERENCE: TABLE 5.2.

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TABLE 5.3 Contd...

UNIT 2 MCC TRAIN B ESF LOAD SCHEDULE - SONGS 2 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 2BJ Contd...													
HV-9946: H2 Purge Supply Unit Disch	2BJ31	0.24	0.32	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9302: Cntmt Emergency Sump Outlet	2BJ33	1.34	1.79	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9304: Cntmt Emergency Sump Outlet	2BJ34	1.34	1.79	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-6211: CCW To Containment	2BJ35	0.63	0.84	OFF	CLOSE	0.00	0.00	-	-	0.63	0.84	-	-
HV-6368: CCW To Emergency Cooling Unit	2BJ37	3.64	4.85	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-6369: CCW To Emergency Cooling Unit	2BJ38	3.64	4.85	OFF	OPEN	0.00	0.00	-	-	3.64	4.85	-	-
HV-6216: CCW From Containment	2BJ39	0.63	0.84	OFF	CLOSE	0.00	0.00	-	-	0.63	0.84	-	-
HV-6372: CCW To Emergency Cooling Unit	2BJ41	3.64	4.85	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-6373: CCW To Emergency Cooling Unit	2BJ42	3.64	4.85	OFF	OPEN	0.00	0.00	-	-	3.64	4.85	-	-
LV-0227C: RWT Outlet To Chrg Pump Hdr	2BJ43	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
Fuel Handling Vent Air Monitor RT7823	2BJ44	1.70	1.05	ON	ON	-	-	1.70	1.05	-	-	1.70	1.05
Fuel Handling Bldg Emergency Htr E465	2BJ45	32.30	0.00	OFF	OFF	-	-	0.00	0.00	-	-	0.00	0.00
Battery Charger D4	2BJ46	66.49	49.87	ON	ON	-	-	66.49	49.87	-	-	66.49	49.87
HV-9900: Cntmt Normal Clg Supply Isol	2BJ47	0.63	0.84	OFF	CLOSE	0.00	0.00	-	-	0.63	0.84	-	-
HV-9971: Cntmt Normal Clg Return Isol	2BJ48	0.63	0.84	OFF	CLOSE	0.00	0.00	-	-	0.63	0.84	-	-
Containmet Airborne Monitor RT7807	2BJ49	1.70	1.05	ON	ON	-	-	1.70	1.05	-	-	1.70	1.05
Boric Acid Make-up Heat Trace Pnl L267	2BJ50	5.10	3.16	ON	ON	-	-	5.10	3.16	-	-	5.10	3.16
Vital Bus Backup Panel 2Q062	2BJ51	21.25	13.17	OFF	OFF	-	-	0.00	0.00	-	-	0.00	0.00
MCC 2BJ EQUIVALENT LOADING ON INITIAL CONDITION						0.00	0.00	74.99	55.13				
MCC 2BJ EQUIVALENT LOADING ON ACCIDENT CONDITION										31.97	42.63	74.99	55.13

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-086, REV 0, FOR OTHER LOADS.

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TABLE 5.3 Contd...

UNIT 2 MCC TRAIN B ESF LOAD SCHEDULE - SONGS 2 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS INITIAL COND	STATUS ACC COND	INITIAL CONDITION MOTOR LOAD KW	INITIAL CONDITION MOTOR LOAD KVAR	INITIAL CONDITION STATIC LOAD KW	INITIAL CONDITION STATIC LOAD KVAR	ACCIDENT CONDITION LOADS STARTING MOTOR KW	ACCIDENT CONDITION LOADS STARTING MOTOR KVAR	ACCIDENT CONDITION LOADS STATIC+RUNNING KW	ACCIDENT CONDITION LOADS STATIC+RUNNING KVAR
MOTOR CONTROL CENTER 2BZ													
Battery Charger D2	2BZ03	66.49	49.87	ON	ON	-	-	66.49	49.87	-	-	66.49	49.87
HV-4712: AFW Pump P504 Disch Control	2BZ04	0.24	0.32	OFF	OPEN	0.00	0.00	-	-	0.24	0.32	-	-
Cntmt Spray Heat Trace Panel L271**	2BZ05	5.10	3.16	OFF	OFF	-	-	0.00	0.00	-	-	0.00	0.00
Intake Structure Cooling Fan A371	2BZ07	3.18	2.14	OFF	START	0.00	0.00	-	-	3.18	2.14	-	-
Intake Structure Cooling Fan A372	2BZ08	3.18	2.14	OFF	START	0.00	0.00	-	-	3.18	2.14	-	-
HV-5686: Firewater Cntmt Isolation	2BZ09	0.24	0.32	OFF	CLOSE	0.00	0.00	-	-	0.24	0.32	-	-
LV-0227B: VCT Drain Return	2BZ10	1.34	1.79	OFF	CLOSE	0.00	0.00	-	-	1.34	1.79	-	-
Cont Rm Essen Lighting Panel 2LP35***	2BZ11	4.25	2.63	OFF	ON	-	-	0.00	0.00	-	-	4.25	2.63
Emergency Spray Water Pump P145	2BZ12	29.33	16.62	OFF	ON	0.00	0.00	-	-	-	-	29.33	16.62
HV-9235: BA Tk T072 To Chrg Pump Suct	2BZ13	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
HV-9240: BA Tk T071 To Chrg Pump Suct	2BZ14	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
Feedwater Pump Room Fan A443	2BZ15	4.39	2.83	OFF	START	0.00	0.00	-	-	4.39	2.83	-	-
Charging Pump Area Emergency ACU E435	2BZ17	0.48	0.51	OFF	START	0.00	0.00	-	-	0.48	0.51	-	-
Charging Pump Area Emergency ACU E436	2BZ18	0.97	1.02	OFF	START	0.00	0.00	-	-	0.97	1.02	-	-
CCW Seismic Make-Up Pump P1019	2BZ19	6.58	4.25	OFF	ON	0.00	0.00	-	-	-	-	6.58	4.25
Control Room Cabinet Emerg ACU E423	2BZ20	6.58	4.25	OFF	START	0.00	0.00	-	-	6.58	4.25	-	-
HV-4714: AFW To E088 Isolation	2BZ21	1.91	2.55	OFF	OPEN	0.00	0.00	-	-	1.91	2.55	-	-
Spent Fuel Pool Pump P010	2BZ22	<<<<<<<< CMOTOR MODEL >>>>>>>>											

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-086, REV 0, FOR OTHER LOADS.
**CAN BE FED FROM UNIT 3 MCC (3BZ05).
***CAN BE FED FROM TRAIN A (2BY19).

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TABLE 5.3 Contd...

UNIT 2 MCC TRAIN B ESF LOAD SCHEDULE - SONGS 2 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 2BZ Contd...													
Safety Equip Bldg Emergency ACU E416	2BZ24	5.46	3.67	OFF	START	0.00	0.00	-	-	5.46	3.67	-	-
Safety Equip Bldg Emergency ACU E445	2BZ25	0.87	0.75	OFF	START	0.00	0.00	-	-	0.87	0.75	-	-
HV-9336: Shutdown Cooling Flow To LPSI	2BZ26	4.98	6.64	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9359: Shutdown Cooling Warm-Up Vlv	2BZ27	0.33	0.43	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9301: RWST West Outlet	2BZ28	10.15	13.53	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
CCW Bldg Pump Room Emergency ACU E455	2BZ29	0.74	0.77	OFF	START	0.00	0.00	-	-	0.74	0.77	-	-
Safety Equip Bldg Emergency ACU E518	2BZ30	0.87	0.91	OFF	START	0.00	0.00	-	-	0.87	0.91	-	-
HV-6495: Saltwater From CCW Heat Exch	2BZ31	1.91	2.55	OFF	OPEN	0.00	0.00	-	-	1.91	2.55	-	-
TV-9267: RC Regen Heat Exchanger Isol	2BZ32	1.91	2.55	OFF	CLOSE	0.00	0.00	-	-	1.91	2.55	-	-
Fuel Handling Bldg Emergency ACU E442	2BZ33	0.77	0.81	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Fuel Handling Bldg Accident ACU E371	2BZ34	40.53	26.18	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-8151: Shtdwn Clg Heat Exch Outlet	2BZ35	1.91	2.55	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-8153: Shtdwn Clg Heat Exch Inlet	2BZ36	4.98	6.64	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Lo Press SI Pump P016 Encl Heaters	2BZ37-A	2.00	0.00	ON	OFF	-	-	2.00	0.00	-	-	0.00	0.00
Hi Press SI Pump P018 Encl Htrs**	2BZ37-B	2.00	0.00	ON	OFF	-	-	2.00	0.00	-	-	0.00	0.00
Hi Press SI Pump P019 Encl Heaters	2BZ37-C	2.00	0.00	ON	OFF	-	-	2.00	0.00	-	-	0.00	0.00
SWC Pump P113 Enclosure Heaters	2BZ37-D	0.40	0.00	OFF	OFF	-	-	0.00	0.00	-	-	0.00	0.00

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-086, REV 0, FOR OTHER LOADS.

**CAN BE FED FROM TRAIN A (2BY39-C).

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TABLE 5.3 Contd...

UNIT 2 MCC TRAIN B ESF LOAD SCHEDULE - SONGS 2 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 2BZ Contd...													
SWC Pump P114 Enclosure Heaters	2BZ37-E	0.40	0.00	OFF	ON	-	-	0.00	0.00	-	-	0.40	0.00
Fuel Bldg Acc ACU E371 Encl Heaters	2BZ37-F	0.33	0.00	OFF	ON	-	-	0.00	0.00	-	-	0.33	0.00
AFW Pump P504 Enclosure Heaters	2BZ37-H	0.66	0.00	ON	OFF	-	-	0.66	0.00	-	-	0.00	0.00
Spray Chem Addn Pump P021 Encl Heater	2BZ37-I	0.14	0.00	ON	OFF	-	-	0.14	0.00	-	-	0.00	0.00
Containment Spray Pump P013 Encl Htrs	2BZ38-A	2.00	0.00	ON	OFF	-	-	2.00	0.00	-	-	0.00	0.00
Cntmt Bldg Emerg ACU E400 Encl Heaters	2BZ38-B	0.26	0.00	ON	OFF	-	-	0.26	0.00	-	-	0.00	0.00
Cntmt Bldg Emerg ACU E402 Encl Heaters	2BZ38-C	0.26	0.00	ON	OFF	-	-	0.26	0.00	-	-	0.00	0.00
Charging Pump P192 Enclosure Heaters	2BZ38-E	0.12	0.00	ON	OFF	-	-	0.12	0.00	-	-	0.00	0.00
Chrg Pump P191 Enclosure Heaters**	2BZ38-G	0.12	0.00	ON	OFF	-	-	0.12	0.00	-	-	0.00	0.00
HV-9434: Hi Press SI To RC Loop 1	2BZ39	1.34	1.79	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Motor & Strip Heater Panel 20041	2BZ40	12.75	7.90	ON	ON	-	-	12.75	7.90	-	-	12.75	7.90
MCC 2BZ EQUIVALENT LOADING ON INITIAL CONDITION						0.00	0.00	88.80	57.77				
MCC 2BZ EQUIVALENT LOADING ON ACCIDENT CONDITION										36.95	32.65	120.13	81.27

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-086, REV 0, FOR OTHER LOADS.
**CAN BE FED FROM TRAIN A (2BY40-E).

can 9

TABLE 5.3 Contd...

COMMON TRAIN B ESF LOAD SCHEDULE - SONGS 2 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS INITIAL COND	STATUS ACC COND	INITIAL CONDITION MOTOR LOAD KW	INITIAL CONDITION MOTOR LOAD KVAR	INITIAL CONDITION STATIC LOAD KW	INITIAL CONDITION STATIC LOAD KVAR	ACCIDENT CONDITION LOADS STARTING MOTOR KW	ACCIDENT CONDITION LOADS STARTING MOTOR KVAR	ACCIDENT CONDITION LOADS STATIC+RUNNING KW	ACCIDENT CONDITION LOADS STATIC+RUNNING KVAR
MOTOR CONTROL CENTER BS**													
Control Room Airborne Monitor RT7825	BS03	1.70	1.05	ON	ON	-	-	1.70	1.05	-	-	1.70	1.05
Control Bldg Emerg Vent Elect Htr E296	BS04	4.80	0.00	OFF	ON	-	-	0.00	0.00	-	-	4.80	0.00
Chiller E335 Pumpout W309A	BS05	1.86	1.45	OFF	OFF	0.00	0.00	-	-	-	-	-	-
Battery Room Emerg Exhaust Fan U2 A174	BS07	2.55	1.71	OFF	START	0.00	0.00	-	-	0.00	0.00	-	-
ESF Switchgear Room Emerg ACU U2 E257	BS08	7.68	4.55	OFF	START	0.00	0.00	-	-	2.55	1.71	-	-
Control Room Emergency Supply Fan A206	BS09	5.04	2.99	OFF	START	0.00	0.00	-	-	7.68	4.55	-	-
Fire Act & Det Ctrl Dist Pnl 2L-414***	BS11	12.75	7.90	OFF	ON	-	-	0.00	0.00	5.04	2.99	-	-
Fire Act & Det Ctrl Dist Pnl 3L-414***	BS12	12.75	7.90	OFF	ON	-	-	0.00	0.00	-	-	12.75	7.90
Battery Room Emerg Exhaust Fan U3 A174	BS14	2.55	1.71	OFF	START	0.00	0.00	-	-	-	-	12.75	7.90
ESF Switchgear Room Emerg ACU U3 E257	BS15	7.68	4.55	OFF	START	0.00	0.00	-	-	2.55	1.71	-	-
Chiller E335 Oil Pump P444	BS16	1.45	1.24	OFF	START	0.00	0.00	-	-	7.68	4.55	-	-
Ctrl Bldg Chiller Rm Supply Fan A054	BS18	2.73	1.83	OFF	START	0.00	0.00	-	-	1.45	1.24	-	-
Ctrl Bldg Chiller Rm Exhaust Fan A055	BS19	0.93	0.72	OFF	START	0.00	0.00	-	-	2.73	1.83	-	-
Ctrl Bldg Emerg Chilled Wtr Pump P160	BS20	<<<<<<<<<< CMOTOR MODEL >>>>>>>>>>								0.93	0.72	-	-
Strip Heater Panel Q035	BS22	6.38	3.95	ON	ON	-	-	6.38	3.95	-	-	6.38	3.95
MCC BS EQUIVALENT LOADING ON INITIAL CONDITION						0.00	0.00	8.08	5.00				
MCC BS EQUIVALENT LOADING ON ACCIDENT CONDITION										30.61	19.30	38.38	26.80

*REFERENCE: CALCULATION E4C-086, REV 0.
**POWERED FROM EITHER UNIT 2 OR UNIT 3.
***NON-CLASS 1E.

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TABLE 5.3 Contd...

UNIT 3 MCC TRAIN A ESF LOAD SCHEDULE - SONGS 3 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC→RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 3BRA													
HV-4763: AFW Pump P141 Disch Valve	3BRA05	1.44	1.91	OFF	CLOSE	0.00	0.00	-	-	1.44	1.91	-	-
HV-0396: Shutdown Cooling Ctrl Valve	3BRA13	1.91	2.55	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-8161: Shutdown Clg Bypass Ctrl Vlv	3BRA15	4.98	6.64	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-8163: LPSI Pump P016 Min Recrc Vlv	3BRA16	1.34	1.79	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Panel 3Q074	3BRA22	4.25	2.63	ON	ON	-	-	4.25	2.63	-	-	4.25	2.63
MCC 3BRA EQUIVALENT LOADING ON INITIAL CONDITION						0.00	0.00	4.25	2.63				
MCC 3BRA EQUIVALENT LOADING ON ACCIDENT CONDITION										1.44	1.91	4.25	2.63

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-087, REV 0, FOR OTHER LOADS.

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TABLE 5.3 Contd...

UNIT 3 MCC TRAIN A ESF LOAD SCHEDULE - SONGS 3 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS INITIAL COND	STATUS ACC COND	INITIAL CONDITION MOTOR LOAD KW	MOTOR LOAD KVAR	STATIC LOAD KW	STATIC LOAD KVAR	ACCIDENT CONDITION LOADS STARTING MOTOR KW	STARTING MOTOR KVAR	STATIC+RUNNING KW	STATIC+RUNNING KVAR
MOTOR CONTROL CENTER 3BD													
Diesel Generator Immersion Heater E654	3BD06	15.00	0.00	ON	OFF	-	-	15.00	0.00	-	-	0.00	0.00
Diesel Generator Immersion Heater E655	3BD07	15.00	0.00	ON	OFF	-	-	15.00	0.00	-	-	0.00	0.00
Diesel Generator Space Heater EG002	3BD08	1.50	0.00	ON	OFF	-	-	1.50	0.00	-	-	0.00	0.00
DG Lube Oil/Turbocharger P996/P1015**	3BD10	1.91	2.01	ON	ON	1.91	2.01	-	-	1.91	2.01	-	-
DG Lube Oil/Turbocharger P997/P1014**	3BD11	1.91	2.01	ON	ON	1.91	2.01	-	-	1.91	2.01	-	-
Diesel Bldg Emergency Supply Fan A274	3BD12	<<<<<< CMOTOR MODEL >>>>>>											
Diesel Bldg Emergency Supply Fan A275	3BD13	<<<<<< CMOTOR MODEL >>>>>>											
Diesel Fuel Transf Pump P093 Encl Htrs	3BD18-A	0.25	0.00	ON	OFF	-	-	0.25	0.00	-	-	0.00	0.00
Diesel Fuel Transf Pump P096 Encl Htrs	3BD18-B	0.25	0.00	ON	OFF	-	-	0.25	0.00	-	-	0.00	0.00
Diesel Radiator Fan E550 Encl Heaters	3BD18-C	0.77	0.00	ON	OFF	-	-	0.77	0.00	-	-	0.00	0.00
Diesel Radiator Fan E546 Encl Heaters	3BD18-D	0.77	0.00	ON	OFF	-	-	0.77	0.00	-	-	0.00	0.00
Diesel Radiator Fan E550	3BD21	<<<<<< CMOTOR MODEL >>>>>>											
Diesel Radiator Fan E546	3BD22	<<<<<< CMOTOR MODEL >>>>>>											
Diesel Fuel Transfer Pump P093	3BD23	0.73	0.76	OFF	START	0.00	0.00	-	-	0.73	0.76	-	-
Diesel Fuel Transfer Pump P096	3BD24	0.73	0.76	OFF	START	0.00	0.00	-	-	0.73	0.76	-	-
Strip Heater Panel 3Q020	3BD26	4.25	2.63	ON	ON	-	-	4.25	2.63	-	-	4.25	2.63
MCC 3BD EQUIVALENT LOADING ON INITIAL CONDITION						3.82	4.02	37.79	2.63				
MCC 3BD EQUIVALENT LOADING ON ACCIDENT CONDITION										5.28	5.54	4.25	2.63

*REFERENCE: CALCULATION E4C-087, REV 0.
**RESTARTED AFTER THE LOSS OF BUS VOLTAGE CONDITION.

TABLE 5.3 Contd...

UNIT 3 MCC TRAIN A ESF LOAD SCHEDULE - SONGS 3 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 3BE													
Fuel Handling Vent Air Monitor RT7822	3BE02	1.70	1.05	ON	ON	-	-	1.70	1.05	-	-	1.70	1.05
Fuel Handling Bldg Emergency Htr E464	3BE03	28.70	0.00	OFF	OFF	-	-	0.00	0.00	-	-	0.00	0.00
Battery Charger D3, B003	3BE04	66.49	49.87	ON	ON	-	-	66.49	49.87	-	-	66.49	49.87
HV-4713: AFW To Steam Gen Control	3BE06	0.25	0.33	OFF	OPEN	0.00	0.00	-	-	0.25	0.33	-	-
HV-9334: SI Tank Drain To RWST	3BE09	2.55	3.40	OFF	CLOSE	0.00	0.00	-	-	2.55	3.40	-	-
HV-9350: SI Tank T007 To RC Loop 1B	3BE10	10.15	13.53	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9360: SI Tank T009 To RC Loop 2A	3BE11	10.15	13.53	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9325: Lo Press SI Hdr To RC Loop 1B	3BE14	4.98	6.64	OFF	OPEN	0.00	0.00	-	-	4.98	6.64	-	-
HV-9328: Lo Press SI Hdr To RC Loop 2A	3BE15	4.98	6.64	OFF	OPEN	0.00	0.00	-	-	4.98	6.64	-	-
HV-9201: Aux Spray To Pressurizer	3BE17	0.63	0.84	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9327: Hi Press SI Hdr To RC Loop 1B	3BE18	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
HV-9330: Hi Press SI Hdr To RC Loop 2A	3BE19	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
HV-6223: CCW Cntmt Inlet Isol Valve	3BE21	0.63	0.84	OFF	CLOSE	0.00	0.00	-	-	0.63	0.84	-	-
HV-9324: Hi Press SI Hdr To RC Loop 1A	3BE22	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
HV-9333: Hi Press SI Hdr To RC Loop 2B	3BE23	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
HV-9337: Shutdown Flow From RC Loop 2	3BE25	18.96	25.28	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-0516: RC Drain Tank Cntmt Isol Vlv	3BE26	0.24	0.32	OFF	CLOSE	0.00	0.00	-	-	0.24	0.32	-	-
HV-7512: Cntmt Isol RC Drain To Rdwst	3BE27	0.25	0.33	OFF	CLOSE	0.00	0.00	-	-	0.25	0.33	-	-
HV-9367: Shtdwn Ht Exch To Spray Hdr 1	3BE29	2.49	3.32	OFF	OPEN	0.00	0.00	-	-	2.49	3.32	-	-

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-087, REV 0, FOR OTHER LOADS.

CCN 9

TABLE 5.3 Contd...

UNIT 3 MCC TRAIN A ESF LOAD SCHEDULE - SONGS 3 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 3BE Contd...													
HV-0514: Quench Tk Vap Smpl Cntmt Isol	3BE30	0.24	0.32	OFF	CLOSE	0.00	0.00	-	-	0.24	0.32	-	-
HV-5803: Cntmt Sump To Radwaste Sump	3BE31	0.63	0.84	OFF	CLOSE	0.00	0.00	-	-	0.63	0.84	-	-
HV-9949: Containment Purge Inlet	3BE33	6.13	8.17	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9305: Cntmt Emergency Sump Outlet	3BE35	1.34	1.79	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-4731: AFW To Steam Gen E089 Isol	3BE36	2.39	3.19	OFF	OPEN	0.00	0.00	-	-	2.39	3.19	-	-
HV-8150: Shtdwn Clg Sys Ht Exch Outlet	3BE38	1.91	2.55	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-8152: Shtdwn Clg Sys Ht Exch Inlet	3BE39	4.98	6.64	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Containment Airborne Monitor RT7804	3BE41	1.70	1.05	ON	ON	-	-	1.70	1.05	-	-	1.70	1.05
Boric Acid Make-up Heat Trace Pnl L266	3BE42	15.30	9.48	ON	ON	-	-	15.30	9.48	-	-	15.30	9.48
HV-6366: CCW To Emergency Cooling Unit	3BE44	3.64	4.85	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-6367: CCW To Emergency Cooling Unit	3BE45	3.64	4.85	OFF	OPEN	0.00	0.00	-	-	3.64	4.85	-	-
HV-6236: CCW Non-Critical Cntmt Isol	3BE46	0.63	0.84	OFF	CLOSE	0.00	0.00	-	-	0.63	0.84	-	-
HV-6370: CCW To Emergency Cooling Unit	3BE47	3.64	4.85	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-6371: CCW To Emergency Cooling Unit	3BE48	3.64	4.85	OFF	OPEN	0.00	0.00	-	-	3.64	4.85	-	-
Post Accident Cleanup Unit Heater E652	3BE49	3.80	0.00	OFF	OFF	-	-	0.00	0.00	-	-	0.00	0.00
Vital Bus Backup Panel 3Q063	3BE51	21.25	13.17	OFF	OFF	-	-	0.00	0.00	-	-	0.00	0.00
MCC 3BE EQUIVALENT LOADING ON INITIAL CONDITION						0.00	0.00	85.19	61.45				
MCC 3BE EQUIVALENT LOADING ON ACCIDENT CONDITION										32.90	43.87	85.19	61.45

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-087, REV 0, FOR OTHER LOADS.

CCN 9

TABLE 5.3 Contd...

UNIT 3 MCC TRAIN A ESF LOAD SCHEDULE - SONGS 3 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 3BY													
Battery Charger D1, B001	3BY03	66.49	49.87	ON	ON	-	-	66.49	49.87	-	-	66.49	49.87
Intake Structure Cooling Fan A370	3BY07	3.18	2.14	OFF	START	0.00	0.00	-	-	3.18	2.14	-	-
Intake Structure Cooling Fan A373	3BY08	3.18	2.14	OFF	START	0.00	0.00	-	-	3.18	2.14	-	-
HV-9306: Safety Inject Pump Mini Flow	3BY09	0.63	0.84	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
CCW Seismic Make-Up Pump P1018	3BY10	6.58	4.25	OFF	ON	0.00	0.00	-	-	-	-	6.58	4.25
Boric Acid Makeup Emergency ACU E439	3BY11	0.97	1.02	OFF	START	0.00	0.00	-	-	0.97	1.02	-	-
Boric Acid Makeup Emergency ACU E440	3BY12	0.97	1.02	OFF	START	0.00	0.00	-	-	0.97	1.02	-	-
HV-9307: Safety Inject Pump Mini Flow	3BY13	0.63	0.84	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Boric Acid Makeup Pump P174***	3BY14	20.81	11.23	ON	ON	20.81	11.23	-	-	20.81	11.23	-	-
Boric Acid Makeup Pump P175	3BY15	20.81	11.23	OFF	START	0.00	0.00	-	-	20.81	11.23	-	-
HV-9247: BA Pumps To Chrg Pump Suction	3BY16	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
Cont Rm Essential Lighting 3LP35**	3BY19	4.25	2.63	OFF	ON	-	-	0.00	0.00	-	-	4.25	2.63
Charging Pump Area Emergency ACU E437	3BY20	0.48	0.51	OFF	START	0.00	0.00	-	-	0.48	0.51	-	-
Charging Pump Area Emergency ACU E438	3BY21	0.97	1.02	OFF	START	0.00	0.00	-	-	0.97	1.02	-	-
Control Room Cabinet Emerg ACU E427	3BY22	6.58	4.25	OFF	START	0.00	0.00	-	-	6.58	4.25	-	-
EPPM Panel 3L411 (NON-1E)	3BY23	0.43	0.26	OFF	ON	-	-	0.00	0.00	-	-	0.43	0.26
Safety Equip Bldg Emergency ACU E417	3BY24	5.26	3.40	OFF	START	0.00	0.00	-	-	5.26	3.40	-	-
Safety Equip Bldg Emergency ACU E517	3BY25	0.87	0.75	OFF	START	0.00	0.00	-	-	0.87	0.75	-	-

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-087, REV 0, FOR OTHER LOADS.

**CAN BE FED FROM TRAIN B (3BZ11).

***RESTARTED AFTER THE LOSS OF BUS VOLTAGE CONDITION.

CCN 9

TABLE 5.3 Contd...

UNIT 3 MCC TRAIN A ESF LOAD SCHEDULE - SONGS 3 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS: INITIAL COND	STATUS: ACC COND	INITIAL CONDITION: MOTOR LOAD KW	INITIAL CONDITION: MOTOR LOAD KVAR	INITIAL CONDITION: STATIC LOAD KW	INITIAL CONDITION: STATIC LOAD KVAR	ACCIDENT CONDITION LOADS: STARTING MOTOR KW	ACCIDENT CONDITION LOADS: STARTING MOTOR KVAR	ACCIDENT CONDITION LOADS: STATIC+RUNNING KW	ACCIDENT CONDITION LOADS: STATIC+RUNNING KVAR
MOTOR CONTROL CENTER 3BY Contd...													
HV-9379: Shutdown Cooling Flow To LPSI	3BY26	6.13	8.17	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9353: Shutdown Cooling Warm-Up Vlv	3BY27	3.64	4.85	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9303: Containment Emerg Sump Outlet	3BY28	1.34	1.79	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9420: Hi Press SI Hdr To RC Loop 2	3BY29	1.34	1.79	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
CCW Bldg Pump Room Emergency ACU E453	3BY30	0.68	0.71	OFF	START	0.00	0.00	-	-	0.68	0.71	-	-
CCW Bldg Pump Room Emergency ACU E454	3BY31	0.74	0.77	OFF	START	0.00	0.00	-	-	0.74	0.77	-	-
OTSC Computer Inverter Assy 3Y010	3BY33	12.75	7.90	OFF	ON	-	-	0.00	0.00	-	-	12.75	7.90
Spent Fuel Pool Pump P009	3BY34	<<<<<<<<<<<<<<<<<<<< CMOTOR MODEL >>>>>>>>>>>>>>>>>>>>											
HV-6497: Saltwater From CCW Heat Exchg	3BY35	1.91	2.55	OFF	OPEN	0.00	0.00	-	-	1.91	2.55	-	-
Feedwater Pump Room Fan A394	3BY36	4.39	2.83	OFF	START	0.00	0.00	-	-	4.39	2.83	-	-
Fuel Handling Bldg Emergency ACU E441	3BY37	0.77	0.81	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Fuel Handling Bldg Accident ACU E370	3BY38	40.53	26.18	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Lo Press SI Pump P015 Encl Heaters	3BY39-A	2.00	0.00	ON	OFF	-	-	2.00	0.00	-	-	0.00	0.00
Hi Press SI Pump P017 Encl Heaters	3BY39-B	2.00	0.00	ON	OFF	-	-	2.00	0.00	-	-	0.00	0.00
Hi Press SI Pump P018 Encl Heaters**	3BY39-C	2.00	0.00	ON	OFF	-	-	2.00	0.00	-	-	0.00	0.00
SWC Pump P112 Enclosure Heaters	3BY39-D	0.40	0.00	OFF	OFF	-	-	0.00	0.00	-	-	0.00	0.00
SWC Pump P307 Enclosure Heaters	3BY39-E	0.40	0.00	OFF	ON	-	-	0.00	0.00	-	-	0.40	0.00

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-087, REV 0, FOR OTHER LOADS.
**CAN BE FED FROM TRAIN B (3BZ37-B).

E082MCC.WK1

CCN 9

TABLE 5.3 Contd...

UNIT 3 MCC TRAIN A ESF LOAD SCHEDULE - SONGS 3 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 3BY Contd...													
Fuel Bldg Acc ACU E370 Encl Heaters	3BY39-F	0.33	0.00	OFF	ON	-	-	0.00	0.00	-	-	0.33	0.00
AFW Pump P141 Enclosure Heaters	3BY39-H	0.66	0.00	ON	OFF	-	-	0.66	0.00	-	-	0.00	0.00
Containment Spray Pump P012 Encl Htrs	3BY40-A	2.00	0.00	ON	OFF	-	-	2.00	0.00	-	-	0.00	0.00
Cntmt Bldg Emerg ACU E399 Encl Heaters	3BY40-B	0.26	0.00	ON	OFF	-	-	0.26	0.00	-	-	0.00	0.00
Boric Acid Makeup Pump P174 Encl Htrs	3BY40-C	0.12	0.00	ON	OFF	-	-	0.12	0.00	-	-	0.00	0.00
Boric Acid Makeup Pump P175 Encl Htrs	3BY40-D	0.12	0.00	ON	OFF	-	-	0.12	0.00	-	-	0.00	0.00
Chrg Pump P191 Enclosure Heaters**	3BY40-E	0.12	0.00	ON	OFF	-	-	0.12	0.00	-	-	0.00	0.00
Cntmt Bldg Emerg ACU E401 Encl Heaters	3BY40-F	0.26	0.00	ON	OFF	-	-	0.26	0.00	-	-	0.00	0.00
Charging Pump P190 Enclosure Heaters	3BY40-G	0.12	0.00	ON	OFF	-	-	0.12	0.00	-	-	0.00	0.00
HV-9300: RWST East Outlet	3BY41	9.96	13.28	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Motor & Strip Heater Panel 3Q039	3BY42	17.00	10.54	ON	ON	-	-	17.00	10.54	-	-	17.00	10.54
MCC 3BY EQUIVALENT LOADING ON INITIAL CONDITION						20.81	11.23	93.15	60.41				
MCC 3BY EQUIVALENT LOADING ON ACCIDENT CONDITION										73.14	47.36	108.23	75.45

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-087, REV 0, FOR OTHER LOADS.
**CAN BE FED FROM TRAIN B (3BZ38-G).

E082MCC.WK1

CCN 9

TABLE 5.3 Contd...

UNIT 3 MCC TRAIN B ESF LOAD SCHEDULE - SONGS 3 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 3BRB													
HV-4762: AFW Pump P504 Disch Valve	3BRB05	1.44	1.91	OFF	CLOSE	0.00	0.00	-	-	1.44	1.91	-	-
HV-8160: Shutdown Clg Ht Exch Bypass	3BRB15	1.91	2.55	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-8162: LPSI Pump P015 Mini Recirc	3BRB16	1.34	1.79	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Panel 3Q075	3BRB22	4.25	2.63	ON	ON	-	-	4.25	2.63	-	-	4.25	2.63
MCC 3BRB EQUIVALENT LOADING ON INITIAL CONDITION						0.00	0.00	4.25	2.63				
MCC 3BRB EQUIVALENT LOADING ON ACCIDENT CONDITION										1.44	1.91	4.25	2.63

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-087, REV 0, FOR OTHER LOADS.

CCN 9

RE: Ukm IRE: Bml

DATE: 9-30-94
DATE: 10-5-94

TABLE 5.3 Contd...

UNIT 3 MCC TRAIN B ESF LOAD SCHEDULE - SONGS 3 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS INITIAL COND	STATUS ACC COND	INITIAL CONDITION MOTOR LOAD KW	INITIAL CONDITION MOTOR LOAD KVAR	INITIAL CONDITION STATIC LOAD KW	INITIAL CONDITION STATIC LOAD KVAR	ACCIDENT CONDITION LOADS STARTING MOTOR KW	ACCIDENT CONDITION LOADS STARTING MOTOR KVAR	ACCIDENT CONDITION LOADS STATIC+RUNNING KW	ACCIDENT CONDITION LOADS STATIC+RUNNING KVAR
MOTOR CONTROL CENTER 3BH													
Diesel Fuel Transf Pump P094 Encl Htrs	3BH03-A	0.25	0.00	ON	OFF	-	-	0.25	0.00	-	-	0.00	0.00
Diesel Fuel Transf Pump P095 Encl Htrs	3BH03-B	0.25	0.00	ON	OFF	-	-	0.25	0.00	-	-	0.00	0.00
Diesel Radiator Fan E547 Encl Heaters	3BH03-C	0.77	0.00	ON	OFF	-	-	0.77	0.00	-	-	0.00	0.00
Diesel Radiator Fan E549 Encl Heaters	3BH03-D	0.77	0.00	ON	OFF	-	-	0.77	0.00	-	-	0.00	0.00
Diesel Radiator Fan E547	3BH06	<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<< CMOTOR MODEL >>											
Diesel Radiator Fan E549	3BH07	<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<< CMOTOR MODEL >>											
Diesel Fuel Transfer Pump P095	3BH08	0.73	0.76	OFF	START	0.00	0.00	-	-	0.73	0.76	-	-
Diesel Fuel Transfer Pump P094	3BH09	0.73	0.76	OFF	START	0.00	0.00	-	-	0.73	0.76	-	-
Diesel Bldg Emergency Supply Fan A276	3BH11	<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<< CMOTOR MODEL >>											
Diesel Bldg Emergency Supply Fan A277	3BH12	<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<< CMOTOR MODEL >>											
Diesel Generator Space Heater EG003	3BH17	1.50	0.00	ON	OFF	-	-	1.50	0.00	-	-	0.00	0.00
Diesel Generator Immersion Heater E656	3BH22	15.00	0.00	ON	OFF	-	-	15.00	0.00	-	-	0.00	0.00
Diesel Generator Immersion Heater E657	3BH23	15.00	0.00	ON	OFF	-	-	15.00	0.00	-	-	0.00	0.00
DG Lube Oil/Turbocharger P998/P1017**	3BH24	1.91	2.01	ON	ON	1.91	2.01	-	-	1.91	2.01	-	-
DG Lube Oil/Turbocharger P999/P1015**	3BH25	1.91	2.01	ON	ON	1.91	2.01	-	-	1.91	2.01	-	-
Strip Heater Panel 3Q023	3BH26	4.25	2.63	ON	ON	-	-	4.25	2.63	-	-	4.25	2.63
MCC 3BH EQUIVALENT LOADING ON INITIAL CONDITION						3.82	4.02	37.79	2.63				
MCC 3BH EQUIVALENT LOADING ON ACCIDENT CONDITION										5.28	5.54	4.25	2.63

*REFERENCE: CALCULATION E4C-087, REV 0.
**RESTARTED AFTER THE LOSS OF BUS VOLTAGE CONDITION.

E082MCC.WK1

CCN 9

TABLE 5.3 Contd...

UNIT 3 MCC TRAIN B ESF LOAD SCHEDULE - SONGS 3 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 3BJ													
HV-9339: Shutdown Flow From RC Loop 2	3BJ05	18.96	25.28	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9340: SI Tank T008 To RC Loop 1A	3BJ06	9.96	13.28	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9370: SI Tank T008 To RC Loop 2B	3BJ07	10.15	13.53	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9347: SI Pump Minimum Recirculation	3BJ09	0.63	0.84	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9322: Lo Press SI Hdr To RC Loop 1A	3BJ10	4.98	6.64	OFF	OPEN	0.00	0.00	-	-	4.98	6.64	-	-
HV-9331: Lo Press SI Hdr To RC Loop 2B	3BJ11	4.98	6.64	OFF	OPEN	0.00	0.00	-	-	4.98	6.64	-	-
HV-9348: SI Pump Minimum Recirculation	3BJ13	0.63	0.84	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9323: Hi Press SI Hdr To RC Loop 1A	3BJ14	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
HV-9332: Hi Press SI Hdr To RC Loop 2B	3BJ15	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
HV-9217: RCP Bleed Off To VCT	3BJ17	0.24	0.32	OFF	CLOSE	0.00	0.00	-	-	0.24	0.32	-	-
HV-9326: Hi Press SI Hdr To RC Loop 1B	3BJ18	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
HV-9329: Hi Press SI Hdr To RC Loop 2A	3BJ19	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
HV-7258: Cntmt Isol SI Tank Vent Hdr	3BJ21	0.25	0.33	OFF	CLOSE	0.00	0.00	-	-	0.25	0.33	-	-
HV-0508: RC Hot Leg Sample Cntmt Isol	3BJ22	0.63	0.84	OFF	CLOSE	0.00	0.00	-	-	0.63	0.84	-	-
HV-0517: RC Hot Leg Sample Cntmt Isol	3BJ23	0.63	0.84	OFF	CLOSE	0.00	0.00	-	-	0.63	0.84	-	-
HV-9368: Shtdwn Ht Exch To Spray Hdr 2	3BJ25	2.49	3.32	OFF	OPEN	0.00	0.00	-	-	2.49	3.32	-	-
HV-0510: Pressr Vapor Smpl Cntmt Isol	3BJ26	0.63	0.84	OFF	CLOSE	0.00	0.00	-	-	0.63	0.84	-	-
HV-0512: Pressr Surge Ln Liq Smpl Isol	3BJ27	0.63	0.84	OFF	CLOSE	0.00	0.00	-	-	0.63	0.84	-	-
HV-9950: Containment Purge Outlet	3BJ29	6.13	8.17	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9917: H2 Purge Exhaust Inlet	3BJ30	0.24	0.32	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-

*REFERENCE: TABLE 5.2.

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TABLE 5.3 Contd...

UNIT 3 MCC TRAIN B ESF LOAD SCHEDULE - SONGS 3 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 3BJ Contd...													
HV-9946: H2 Purge Supply Unit Disch	3BJ31	0.25	0.33	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9302: Cntmt Emergency Sump Outlet	3BJ33	1.34	1.79	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9304: Cntmt Emergency Sump Outlet	3BJ34	1.34	1.79	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-6211: CCW To Containment	3BJ35	0.63	0.84	OFF	CLOSE	0.00	0.00	-	-	0.63	0.84	-	-
HV-6368: CCW To Emergency Cooling Unit	3BJ37	3.64	4.85	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-6369: CCW To Emergency Cooling Unit	3BJ38	3.64	4.85	OFF	OPEN	0.00	0.00	-	-	3.64	4.85	-	-
HV-6216: CCW From Containment	3BJ39	0.63	0.84	OFF	CLOSE	0.00	0.00	-	-	0.63	0.84	-	-
HV-6372: CCW To Emergency Cooling Unit	3BJ41	3.64	4.85	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-6373: CCW To Emergency Cooling Unit	3BJ42	3.64	4.85	OFF	OPEN	0.00	0.00	-	-	3.64	4.85	-	-
LV-0227C: RWT Outlet To Chrg Pump Hdr	3BJ43	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
Fuel Handling Vent Air Monitor RT7823	3BJ44	1.70	1.05	ON	ON	-	-	1.70	1.05	-	-	1.70	1.05
Fuel Handling Bldg Emergency Htr E465	3BJ45	32.30	0.00	OFF	OFF	-	-	0.00	0.00	-	-	0.00	0.00
Battery Charger D4, B004	3BJ46	66.49	49.87	ON	ON	-	-	66.49	49.87	-	-	66.49	49.87
HV-9900: Cntmt Normal Clg Supply Isol	3BJ47	0.63	0.84	OFF	CLOSE	0.00	0.00	-	-	0.63	0.84	-	-
HV-9971: Cntmt Normal Clg Return Isol	3BJ48	0.63	0.84	OFF	CLOSE	0.00	0.00	-	-	0.63	0.84	-	-
Containmet Airborne Monitor RT7807	3BJ49	1.70	1.05	ON	ON	-	-	1.70	1.05	-	-	1.70	1.05
Boric Acid Make-up Heat Trace Pnl L267	3BJ50	5.10	3.16	ON	ON	-	-	5.10	3.16	-	-	5.10	3.16
Vital Bus Backup Panel 3Q062	3BJ51	21.25	13.17	OFF	OFF	-	-	0.00	0.00	-	-	0.00	0.00
MCC 3BJ EQUIVALENT LOADING ON INITIAL CONDITION						0.00	0.00	74.99	55.13				
MCC 3BJ EQUIVALENT LOADING ON ACCIDENT CONDITION										31.96	42.62	74.99	55.13

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*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-087, REV 0, FOR OTHER LOADS.

TABLE 5.3 Contd...

UNIT 3 MCC TRAIN B ESF LOAD SCHEDULE - SONGS 3 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 3BZ													
Battery Charger D2, B002	3BZ03	66.49	49.87	ON	ON	-	-	66.49	49.87	-	-	66.49	49.87
HV-4712: AFW Pump P504 Disch Control	3BZ04	0.24	0.32	OFF	OPEN	0.00	0.00	-	-	0.24	0.32	-	-
Cont Spray Chem Sto Ht Trace Pnl L271**	3BZ05	5.10	3.16	OFF	OFF	-	-	0.00	0.00	-	-	0.00	0.00
Intake Structure Cooling Fan A371	3BZ07	3.18	2.14	OFF	START	0.00	0.00	-	-	3.18	2.14	-	-
Intake Structure Cooling Fan A372	3BZ08	3.18	2.14	OFF	START	0.00	0.00	-	-	3.18	2.14	-	-
HV-5686: Firewater Cntmt Isolation	3BZ09	0.25	0.33	OFF	CLOSE	0.00	0.00	-	-	0.25	0.33	-	-
LV-0227B: VCT Drain Return	3BZ10	1.34	1.79	OFF	CLOSE	0.00	0.00	-	-	1.34	1.79	-	-
Cont Rm Essen Lighting Panel 3LP35***	3BZ11	4.25	2.63	OFF	ON	-	-	0.00	0.00	-	-	4.25	2.63
Emergency Spray Water Pump P145	3BZ12	29.33	16.62	OFF	ON	0.00	0.00	-	-	-	-	29.33	16.62
HV-9235: BA Tk T072 To Chrg Pump Suct	3BZ13	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
HV-9240: BA Tk T072 To Chrg Pump Suct	3BZ14	1.34	1.79	OFF	OPEN	0.00	0.00	-	-	1.34	1.79	-	-
Feedwater Pump Room Fan A443	3BZ15	4.39	2.83	OFF	START	0.00	0.00	-	-	4.39	2.83	-	-
Charging Pump Area Emergency ACU E435	3BZ17	0.48	0.51	OFF	START	0.00	0.00	-	-	0.48	0.51	-	-
Charging Pump Area Emergency ACU E436	3BZ18	0.97	1.02	OFF	START	0.00	0.00	-	-	0.97	1.02	-	-
CCW Seismic Make-Up Pump P1019	3BZ19	6.58	4.25	OFF	ON	0.00	0.00	-	-	-	-	6.58	4.25
Control Room Cabinet Emerg ACU E426	3BZ20	6.58	4.25	OFF	START	0.00	0.00	-	-	6.58	4.25	-	-
HV-4714: AFW To E088 Isolation	3BZ21	3.83	5.11	OFF	OPEN	0.00	0.00	-	-	3.83	5.11	-	-
Spent Fuel Pool Pump P010	3BZ22	<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<< CMOTOR MODEL >>											

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-087, REV 0, FOR OTHER LOADS.
**CAN BE FED FROM UNIT 2 MCC (2BZ11).
***CAN BE FED FROM TRAIN A (3BY19).

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TABLE 5.3 Contd...

UNIT 3 MCC TRAIN B ESF LOAD SCHEDULE - SONGS 3 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 3BZ Contd...													
Safety Equip Bldg Emergency ACU E416	3BZ24	5.46	3.67	OFF	START	0.00	0.00	-	-	5.46	3.67	-	-
Safety Equip Bldg Emergency ACU E445	3BZ25	0.87	0.75	OFF	START	0.00	0.00	-	-	0.87	0.75	-	-
HV-9336: Shutdown Cooling Flow To LPSI	3BZ26	4.98	6.64	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9350: Shutdown Cooling Warm-Up Vlv	3BZ27	0.33	0.43	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-9301: RWST West Outlet	3BZ28	10.15	13.53	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
CCW Bldg Pump Room Emergency ACU E455	3BZ29	0.68	0.71	OFF	START	0.00	0.00	-	-	0.68	0.71	-	-
Safety Equip Bldg Emergency ACU E518	3BZ30	0.87	0.91	OFF	START	0.00	0.00	-	-	0.87	0.91	-	-
HV-6495: Saltwater From CCW Heat Exch	3BZ31	1.91	2.55	OFF	OPEN	0.00	0.00	-	-	1.91	2.55	-	-
TV-9267: RC Regen Heat Exchanger Isol	3BZ32	1.91	2.55	OFF	CLOSE	0.00	0.00	-	-	1.91	2.55	-	-
Fuel Handling Bldg Emergency ACU E442	3BZ33	0.77	0.81	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Fuel Handling Bldg Accident ACU E371	3BZ34	40.53	26.18	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-8151: Shtdwn Clg Heat Exch Outlet	3BZ35	1.91	2.55	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
HV-8153: Shtdwn Clg Heat Exch Inlet	3BZ36	4.98	6.64	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Lo Press SI Pump P016 Encl Heaters	3BZ37-A	2.00	0.00	ON	OFF	-	-	2.00	0.00	-	-	0.00	0.00
Hi Press SI Pump P018 Encl Heaters**	3BZ37-B	2.00	0.00	ON	OFF	-	-	2.00	0.00	-	-	0.00	0.00
Hi Press SI Pump P019 Encl Heaters	3BZ37-C	2.00	0.00	ON	OFF	-	-	2.00	0.00	-	-	0.00	0.00
SWC Pump P113 Enclosure Heaters	3BZ37-D	0.40	0.00	OFF	OFF	-	-	0.00	0.00	-	-	0.00	0.00

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-087, REV 0, FOR OTHER LOADS.

**CAN BE FED FROM TRAIN A (3BY39-C).

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TABLE 5.3 Contd...

UNIT 3 MCC TRAIN B ESF LOAD SCHEDULE - SONGS 3 DESIGN BASIS EVENTS

EQUIPMENT	BREAKER	EQUIV KW*	EQUIV KVAR*	STATUS		INITIAL CONDITION				ACCIDENT CONDITION LOADS			
						MOTOR LOAD		STATIC LOAD		STARTING MOTOR		STATIC+RUNNING	
				INITIAL COND	ACC COND	KW	KVAR	KW	KVAR	KW	KVAR	KW	KVAR
MOTOR CONTROL CENTER 3BZ Contd...													
SWC Pump P114 Enclosure Heaters	3BZ37-E	0.40	0.00	OFF	ON	-	-	0.00	0.00	-	-	0.40	0.00
Fuel Bldg Acc ACU E371 Encl Heaters	3BZ37-F	0.33	0.00	OFF	ON	-	-	0.00	0.00	-	-	0.33	0.00
AFW Pump P504 Enclosure Heaters	3BZ37-H	0.66	0.00	ON	OFF	-	-	0.66	0.00	-	-	0.00	0.00
Containment Spray Pump P013 Encl Htrs	3BZ38-A	2.00	0.00	ON	OFF	-	-	2.00	0.00	-	-	0.00	0.00
Cntmt Bldg Emerg ACU E400 Encl Heaters	3BZ38-B	0.26	0.00	ON	OFF	-	-	0.26	0.00	-	-	0.00	0.00
Cntmt Bldg Emerg ACU E402 Encl Heaters	3BZ38-C	0.26	0.00	ON	OFF	-	-	0.26	0.00	-	-	0.00	0.00
Charging Pump P192 Enclosure Heaters	3BZ38-E	0.12	0.00	ON	OFF	-	-	0.12	0.00	-	-	0.00	0.00
Chrg Pump P191 Enclosure Heaters**	3BZ38-G	0.12	0.00	ON	OFF	-	-	0.12	0.00	-	-	0.00	0.00
HV-9434: Hi Press SI To RC Loop 1	3BZ39	1.28	1.71	OFF	OFF	0.00	0.00	-	-	0.00	0.00	-	-
Motor & Strip Heater Panel 3Q041	3BZ40	12.75	7.90	ON	ON	-	-	12.75	7.90	-	-	12.75	7.90
MCC 3BZ EQUIVALENT LOADING ON INITIAL CONDITION						0.00	0.00	88.66	57.77				
MCC 3BZ EQUIVALENT LOADING ON ACCIDENT CONDITION										38.82	35.16	120.13	81.27

*REFERENCE: TABLE 5.2 FOR MOVs, CALCULATION E4C-087, REV 0, FOR OTHER LOADS.

**CAN BE FED FROM TRAIN A (3BY40-E).

E082MCC.WK1

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REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

TABLE 5.4

Equivalent MCC Starting Motor Inertia

TABLE 5.4

UNIT 2 TRAIN A MCC EQUIVALENT INERTIA CONSTANT

PAGE 1

STARTING MOTORS	HP	MOTOR INERTIA	INERTIA RATIO	LOAD INERTIA	TOTAL INERTIA	PF	EFF	RATED KVA
MCC 2BRA								
HV-4763: P141 Disch Valve Bypass	0.750	0.055	1.000	0.055	0.110	0.60	0.70	1.3321
Margin for future load growth	15.000	1.250	25.000	31.250	32.500	0.85	0.86	15.3078
TOTAL INERTIA & RATED KVA					32.610			16.640
EQUIVALENT MCC 2BRA INERTIA CONSTANT								1.467

E082WK2.WK1

NOTE: 1. Refer to Section 3.4.c.
2. LOAD INERTIA is equivalent to MOTOR INERTIA x INERTIA RATIO.
3. PF and EFF, except for MOVs, are taken from Calculation E4C-086, Rev. 0.
4. MOV PF and EFF are 60% and 70% respectively. See Section 3.4.a.

TABLE 5.4 Contd...

UNIT 2 TRAIN A MCC EQUIVALENT INERTIA CONSTANT

STARTING MOTORS	HP	MOTOR INERTIA	INERTIA RATIO	LOAD INERTIA	TOTAL INERTIA	PF	EFF	RATED KVA
MCC 2BD								
DG Lube Oil/Turbocharger P996/P1015	2.000	0.077	1.000	0.077	0.154	0.69	0.78	2.7722
DG Lube Oil/Turbocharger P997/P1014	2.000	0.077	1.000	0.077	0.154	0.69	0.78	2.7722
Diesel Fuel Transfer Pump P093	1.000	0.055	1.000	0.055	0.110	0.69	0.77	1.4041
Diesel Fuel Transfer Pump P096	1.000	0.055	1.000	0.055	0.110	0.69	0.77	1.4041
Margin for future load growth	15.000	1.250	25.000	31.250	32.500	0.85	0.86	15.3078
TOTAL INERTIA & RATED KVA					33.028			23.660
EQUIVALENT MCC 2BD INERTIA CONSTANT								1.045

E082WK2.WK1

NOTE: 1. Refer to Section 3.4.c.
2. LOAD INERTIA is equivalent to MOTOR INERTIA x INERTIA RATIO.
3. PF and EFF are taken from Calculation E4C-086, Rev. 0.

CCN 9

TABLE 5.4 Contd...

UNIT 2 TRAIN A MCC EQUIVALENT INERTIA CONSTANT

STARTING MOTORS	HP	MOTOR INERTIA	INERTIA RATIO	LOAD INERTIA	TOTAL INERTIA	PF	EFF	RATED KVA
MCC 2BE								
HV-4713: AFW To Steam Gen Control	0.130	0.055	1.000	0.055	0.110	0.60	0.70	0.2309
HV-9334: SI Tank Drain To RWST	1.330	0.060	1.000	0.060	0.120	0.60	0.70	2.3623
HV-9325: Lo Press SI Hdr To RC Loop 1B	2.600	0.210	1.000	0.210	0.420	0.60	0.70	4.6181
HV-9328: Lo Press SI Hdr To RC Loop 2A	2.600	0.210	1.000	0.210	0.420	0.60	0.70	4.6181
HV-9327: Hi Press SI Hdr To RC Loop 1B	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-9330: Hi Press SI Hdr To RC Loop 2A	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-6223: CCW Cntmt Inlet Isol Valve	0.330	0.055	1.000	0.055	0.110	0.60	0.70	0.5861
HV-9324: Hi Press SI Hdr To RC Loop 1A	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-9333: Hi Press SI Hdr To RC Loop 2B	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-0516: RC Drain Tank Cntmt Isol Vlv	0.125	0.055	1.000	0.055	0.110	0.60	0.70	0.2220
HV-7512: Cntmt Isol RC Drain To Rdwst	0.125	0.055	1.000	0.055	0.110	0.60	0.70	0.2220
HV-9367: Shtdwn Ht Exch To Spray Hdr 1	1.300	0.060	1.000	0.060	0.120	0.60	0.70	2.3090
HV-0514: Quench Tk Vap Smpl Cntmt Isol	0.125	0.055	1.000	0.055	0.110	0.60	0.70	0.2220
HV-5803: Cntmt Sump To Radwaste Sump	0.125	0.055	1.000	0.055	0.110	0.60	0.70	0.2220
HV-4731: AFW To Steam Gen E089 Isol	1.000	0.055	1.000	0.055	0.110	0.60	0.70	1.7762
HV-6367: CCW To Emergency Cooling Unit	1.900	0.077	1.000	0.077	0.154	0.60	0.70	3.3748
HV-6236: CCW Non-Critical Cntmt Isol	0.330	0.055	1.000	0.055	0.110	0.60	0.70	0.5861
HV-6371: CCW To Emergency Cooling Unit	1.900	0.077	1.000	0.077	0.154	0.60	0.70	3.3748
Margin for future load growth	15.000	1.250	25.000	31.250	32.500	0.85	0.86	15.3078
TOTAL INERTIA & RATED KVA					35.208			45.006
EQUIVALENT MCC 2BE INERTIA CONSTANT								0.586

E082WK2.WK1

NOTE: 1. Refer to Section 3.4.c.
2. LOAD INERTIA is equivalent to MOTOR INERTIA x INERTIA RATIO.
3. PF and EFF, except for MOVs, are taken from Calculation E4C-086, Rev. 0.
4. MOV PF and EFF are 60% and 70% respectively. See Section 3.4.a.

TABLE 5.4 Contd...

UNIT 2 TRAIN A MCC EQUIVALENT INERTIA CONSTANT

STARTING MOTORS	HP	MOTOR INERTIA	INERTIA RATIO	LOAD INERTIA	TOTAL INERTIA	PF	EFF	RATED KVA
MCC 2BY								
Intake Structure Cooling Fan A370	5.000	0.310	25.000	7.750	8.060	0.83	0.82	5.4805
Intake Structure Cooling Fan A373	5.000	0.310	25.000	7.750	8.060	0.83	0.82	5.4805
Boric Acid Makeup Emergency ACU E439	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
Boric Acid Makeup Emergency ACU E440	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
Boric Acid Makeup Pump P174	25.000	2.380	1.000	2.380	4.760	0.88	0.86	24.6432
Boric Acid Makeup Pump P175	25.000	2.380	1.000	2.380	4.760	0.88	0.86	24.6432
HV-9247: BA Pumps To Chrg Pump Suction	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
Charging Pump Area Emergency ACU E437	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
Charging Pump Area Emergency ACU E438	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
Control Room Cabinet Emerg ACU E424	7.500	0.620	8.000	4.960	5.580	0.84	0.85	7.8361
Safety Equip Bldg Emergency ACU E417	7.500	0.620	8.000	4.960	5.580	0.84	0.85	7.8361
Safety Equip Bldg Emergency ACU E517	1.500	0.060	8.000	0.480	0.540	0.76	0.77	1.9122
CCW Bldg Pump Room Emergency ACU E453	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
CCW Bldg Pump Room Emergency ACU E454	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
HV-6497: Saltwater From CCW Heat Exchg	1.000	0.055	1.000	0.055	0.110	0.60	0.70	1.7762
Feedwater Pump Room Fan A394	7.250	0.620	25.000	15.500	16.120	0.84	0.85	7.5749
Margin for future load growth	15.000	1.250	25.000	31.250	32.500	0.85	0.86	15.3078
TOTAL INERTIA & RATED KVA					89.150			112.159
EQUIVALENT MCC 2BY INERTIA CONSTANT								0.595

E082WK2.WK1

NOTE: 1. Refer to Section 3.4.c.
2. LOAD INERTIA is equivalent to MOTOR INERTIA x INERTIA RATIO.
3. PF and EFF are taken from Calculation E4C-086, Rev. 0.

TABLE 5.4 Contd...

COMMON TRAIN A MCC EQUIVALENT INERTIA CONSTANT

STARTING MOTORS	HP	MOTOR INERTIA	INERTIA RATIO	LOAD INERTIA	TOTAL INERTIA	PF	EFF	RATED KVA
MCC BQ								
Battery Room Emerg Exhaust Fan U2 A173	5.000	0.310	25.000	7.750	8.060	0.83	0.82	5.4805
ESF Switchgear Room Emerg ACU U2 E255	10.000	0.770	8.000	6.160	6.930	0.86	0.85	10.2052
Control Room Emergency Supply Fan A207	10.000	0.770	25.000	19.250	20.020	0.86	0.85	10.2052
Battery Room Emerg Exhaust Fan U3 A173	5.000	0.310	25.000	7.750	8.060	0.83	0.82	5.4805
ESF Switchgear Room Emerg ACU U3 E255	10.000	0.770	8.000	6.160	6.930	0.86	0.85	10.2052
Chiller E336 Oil Pump P445	1.500	0.060	1.000	0.060	0.120	0.76	0.77	1.9122
Cntrl Bldg Chiller Rm Supply Fan A053	5.000	0.310	25.000	7.750	8.060	0.83	0.82	5.4805
Cntrl Bldg Chiller Rm Exhaust Fan A056	2.000	0.077	25.000	1.925	2.002	0.79	0.80	2.3608
Margin for future load growth	15.000	1.250	25.000	31.250	32.500	0.85	0.86	15.3078
TOTAL INERTIA & RATED KVA					92.682			66.638
EQUIVALENT MCC BQ INERTIA CONSTANT								1.041

E082WK2.WK1

NOTE: 1. Refer to Section 3.4.c.
2. LOAD INERTIA is equivalent to MOTOR INERTIA x INERTIA RATIO.
3. PF and EFF are taken from Calculation E4C-086, Rev. 0.

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TABLE 5.4 Contd...

UNIT 2 TRAIN B MCC EQUIVALENT INERTIA CONSTANT

STARTING MOTORS	HP	MOTOR INERTIA	INERTIA RATIO	LOAD INERTIA	TOTAL INERTIA	PF	EFF	RATED KVA
MCC 2BRB								
2HV-4762: AFW Pump P504 Disch Valve	0.750	0.055	1.000	0.055	0.110	0.60	0.70	1.3321
Margin for future load growth	15.000	1.250	25.000	31.250	32.500	0.85	0.86	15.3078
TOTAL INERTIA & RATED KVA					32.610			16.640
EQUIVALENT MCC 2BRB INERTIA CONSTANT								1.467

E082WK2.WK1

NOTE: 1. Refer to Section 3.4.c.
2. LOAD INERTIA is equivalent to MOTOR INERTIA x INERTIA RATIO.
3. PF and EFF, except for MOVs, are taken from Calculation E4C-086, Rev. 0.
4. MOV PF and EFF are 60% and 70% respectively. See Section 3.4.a.

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TABLE 5.4 Contd...

UNIT 2 TRAIN B MCC EQUIVALENT INERTIA CONSTANT

STARTING MOTORS	HP	MOTOR INERTIA	INERTIA RATIO	LOAD INERTIA	TOTAL INERTIA	PF	EFF	RATED KVA
MCC 2BH								
Diesel Fuel Transfer Pump P095	1.000	0.055	1.000	0.055	0.110	0.69	0.77	1.4041
Diesel Fuel Transfer Pump P094	1.000	0.055	1.000	0.055	0.110	0.69	0.77	1.4041
DG Lube Oil/Turbocharger P998/P1017	2.000	0.077	1.000	0.077	0.154	0.69	0.78	2.7722
DG Lube Oil/Turbocharger P999/P1016	2.000	0.077	1.000	0.077	0.154	0.69	0.78	2.7722
Margin for future load growth	15.000	1.250	25.000	31.250	32.500	0.85	0.86	15.3078
TOTAL INERTIA & RATED KVA					33.028			23.660
EQUIVALENT MCC 2BH INERTIA CONSTANT								1.045

E082WK2.WK1

NOTE: 1. Refer to Section 3.4.c.
2. LOAD INERTIA is equivalent to MOTOR INERTIA x INERTIA RATIO.
3. PF and EFF are taken from Calculation E4C-086, Rev. 0.

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TABLE 5.4 Contd...

UNIT 2 TRAIN B MCC EQUIVALENT INERTIA CONSTANT

STARTING MOTORS	HP	MOTOR INERTIA	INERTIA RATIO	LOAD INERTIA	TOTAL INERTIA	PF	EFF	RATED KVA
MCC 2BJ								
HV-9322: Lo Press SI Hdr To RC Loop 1A	2.600	0.210	1.000	0.210	0.420	0.60	0.70	4.6181
HV-9331: Lo Press SI Hdr To RC Loop 2B	2.600	0.210	1.000	0.210	0.420	0.60	0.70	4.6181
HV-9323: Hi Press SI Hdr To RC Loop 1A	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-9332: Hi Press SI Hdr To RC Loop 2B	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-9217: RCP Bleed Off To VCT	0.125	0.055	1.000	0.055	0.110	0.60	0.70	0.2220
HV-9326: Hi Press SI Hdr To RC Loop 1B	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-9329: Hi Press SI Hdr To RC Loop 2A	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-7258: Cntmt Isol SI Tank Vent Hdr	0.125	0.055	1.000	0.055	0.110	0.60	0.70	0.2220
HV-0508: RC Hot Leg Sample Cntmt Isol	0.330	0.055	1.000	0.055	0.110	0.60	0.70	0.5861
HV-0517: RC Hot Leg Sample Cntmt Isol	0.330	0.055	1.000	0.055	0.110	0.60	0.70	0.5861
HV-9368: Shtdwn Ht Exch To Spray Hdr 2	1.300	0.060	1.000	0.060	0.120	0.60	0.70	2.3090
HV-0510: Pressr Vapor Smpl Cntmt Isol	0.333	0.055	1.000	0.055	0.110	0.60	0.70	0.5915
HV-0512: Pressr Surge Ln Liq Smpl Isol	0.333	0.055	1.000	0.055	0.110	0.60	0.70	0.5915
HV-6211: CCW To Containment	0.330	0.055	1.000	0.055	0.110	0.60	0.70	0.5861
HV-6369: CCW To Emergency Cooling Unit	1.900	0.077	1.000	0.077	0.154	0.60	0.70	3.3748
HV-6216: CCW From Containment	0.330	0.055	1.000	0.055	0.110	0.60	0.70	0.5861
HV-6373: CCW To Emergency Cooling Unit	1.900	0.077	1.000	0.077	0.154	0.60	0.70	3.3748
LV-0227C: RWT Outlet To Chrg Pump Hdr	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-9900: Cntmt Normal Clg Supply Isol	0.330	0.055	1.000	0.055	0.110	0.60	0.70	0.5861
HV-9971: Cntmt Normal Clg Return Isol	0.330	0.055	1.000	0.055	0.110	0.60	0.70	0.5861
Margin for future load growth	15.000	1.250	25.000	31.250	32.500	0.85	0.86	15.3078
TOTAL INERTIA & RATED KVA					35.418			44.963
EQUIVALENT MCC 2BJ INERTIA CONSTANT								0.590

E082WK2.WK1

NOTE: 1. Refer to Section 3.4.c.
2. LOAD INERTIA is equivalent to MOTOR INERTIA x INERTIA RATIO.
3. PF and EFF are taken from Calculation E4C-086, Rev. 0.

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TABLE 5.4 Contd...

UNIT 2 TRAIN B MCC EQUIVALENT INERTIA CONSTANT

STARTING MOTORS	HP	MOTOR INERTIA	INERTIA RATIO	LOAD INERTIA	TOTAL INERTIA	PF	EFF	RATED KVA
MCC 2BZ								
HV-4712: AFW Pump P504 Disch Control	0.125	0.055	1.000	0.055	0.110	0.60	0.70	0.2220
Intake Structure Cooling Fan A371	5.000	0.310	25.000	7.750	8.060	0.83	0.82	5.4805
Intake Structure Cooling Fan A372	5.000	0.310	25.000	7.750	8.060	0.83	0.82	5.4805
HV-5686: Firewater Cntmt Isolation	0.125	0.055	1.000	0.055	0.110	0.60	0.70	0.2220
LV-0227B: VCT Drain Return	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-9235: BA Tk T072 To Chrg Pump Suct	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-9240: BA Tk T071 To Chrg Pump Suct	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
Feedwater Pump Rm Fan A443	7.250	0.620	25.000	15.500	16.120	0.84	0.85	7.5749
Charging Pump Area Emergency ACU E435	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
Charging Pump Area Emergency ACU E436	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
Control Room Cabinet Emerg ACU E423	7.500	0.620	8.000	4.960	5.580	0.84	0.85	7.8361
HV-4714: AFW To E088 Isolation	1.000	0.055	1.000	0.055	0.110	0.60	0.70	1.7762
Safety Equip Bldg Emergency ACU E416	5.000	0.310	8.000	2.480	2.790	0.83	0.82	5.4805
Safety Equip Bldg Emergency ACU E445	1.500	0.060	8.000	0.480	0.540	0.76	0.77	1.9122
CCW Bldg Pump Room Emergency ACU E455	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
Safety Equip Bldg Emergency ACU E518	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
HV-6495: Saltwater From CCW Heat Exch	1.000	0.055	1.000	0.055	0.110	0.60	0.70	1.7762
TV-9267: RC Regen Heat Exchanger Isol	1.000	0.055	1.000	0.055	0.110	0.60	0.70	1.7762
Margin for future load growth	15.000	1.250	25.000	31.250	32.500	0.85	0.86	15.3078
TOTAL INERTIA & RATED KVA					76.510			64.191
EQUIVALENT MCC 2BZ INERTIA CONSTANT								0.892

E082WK2.WK1

NOTE: 1. Refer to Section 3.4.c.
2. LOAD INERTIA is equivalent to MOTOR INERTIA x INERTIA RATIO.
3. PF and EFF, except for MOVs, are taken from Calculation E4C-086, Rev. 0.
4. MOV PF and EFF are 60% and 70% respectively. See Section 3.4.a.

TABLE 5.4 Contd...

COMMON TRAIN B MCC EQUIVALENT INERTIA CONSTANT

STARTING MOTORS	HP	MOTOR INERTIA	INERTIA RATIO	LOAD INERTIA	TOTAL INERTIA	PF	EFF	RATED KVA
MCC BS								
Battery Room Emerg Exhaust Fan U2 A174	5.000	0.310	25.000	7.750	8.060	0.83	0.82	5.4805
ESF Switchgear Room Emerg ACU U2 E257	10.000	0.770	8.000	6.160	6.930	0.86	0.85	10.2052
Control Room Emergency Supply Fan A206	10.000	0.770	25.000	19.250	20.020	0.86	0.85	10.2052
Battery Room Emerg Exhaust Fan U3 A174	5.000	0.310	25.000	7.750	8.060	0.83	0.82	5.4805
ESF Switchgear Room Emerg ACU U3 E257	10.000	0.770	8.000	6.160	6.930	0.86	0.85	10.2052
Chiller E335 Oil Pump P444	1.500	0.060	1.000	0.060	0.120	0.76	0.77	1.9122
Ctrl Bldg Chiller Rm Supply Fan A054	5.000	0.310	25.000	7.750	8.060	0.83	0.82	5.4805
Ctrl Bldg Chiller Rm Exhaust Fan A055	2.000	0.077	25.000	1.925	2.002	0.79	0.80	2.3608
Margin for future load growth	15.000	1.250	25.000	31.250	32.500	0.85	0.86	15.3078
TOTAL INERTIA & RATED KVA					92.682			66.638
EQUIVALENT MCC BS INERTIA CONSTANT								1.041

E082WK2.WK1

NOTE: 1. Refer to Section 3.4.c.
2. LOAD INERTIA is equivalent to MOTOR INERTIA x INERTIA RATIO.
3. PF and EFF are taken from Calculation E4C-086, Rev. 0.

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TABLE 5.4 Contd...

UNIT 3 TRAIN A MCC EQUIVALENT INERTIA CONSTANT

STARTING MOTORS	HP	MOTOR INERTIA	INERTIA RATIO	LOAD INERTIA	TOTAL INERTIA	PF	EFF	RATED KVA
MCC 3BRA								
HV-4763: P141 Disch Bypass	0.750	0.055	1.000	0.055	0.110	0.60	0.70	1.3321
Margin for future load growth	15.000	1.250	25.000	31.250	32.500	0.85	0.86	15.3078
TOTAL INERTIA & RATED KVA					32.610			16.640
EQUIVALENT MCC 3BRA INERTIA CONSTANT								1.467

E082WK2.WK1

NOTE: 1. Refer to Section 3.4.c.
2. LOAD INERTIA is equivalent to MOTOR INERTIA x INERTIA RATIO.
3. PF and EFF, except for MOVs, are taken from Calculation E4C-087, Rev. 0.
4. MOV PF and EFF are 60% and 70% respectively. See Section 3.4.a.

TABLE 5.4 Contd...

UNIT 3 TRAIN A MCC EQUIVALENT INERTIA CONSTANT

STARTING MOTORS	HP	MOTOR INERTIA	INERTIA RATIO	LOAD INERTIA	TOTAL INERTIA	PF	EFF	RATED KVA
MCC 3BD								
DG Lube Oil/Turbocharger P996/P1015	2.000	0.077	1.000	0.077	0.154	0.69	0.78	2.7722
DG Lube Oil/Turbocharger P997/P1014	2.000	0.077	1.000	0.077	0.154	0.69	0.78	2.7722
Diesel Fuel Transfer Pump P093	1.000	0.055	1.000	0.055	0.110	0.69	0.77	1.4041
Diesel Fuel Transfer Pump P096	1.000	0.055	1.000	0.055	0.110	0.69	0.77	1.4041
Margin for future load growth	15.000	1.250	25.000	31.250	32.500	0.85	0.86	15.3078
TOTAL INERTIA & RATED KVA					33.028			23.660
EQUIVALENT MCC 3BD INERTIA CONSTANT								1.045

E082WK2.WK1

NOTE: 1. Refer to Section 3.4.c.
2. LOAD INERTIA is equivalent to MOTOR INERTIA x INERTIA RATIO.
3. PF and EFF are taken from Calculation E4C-087, Rev. 0.

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TABLE 5.4 Contd...

UNIT 3 TRAIN A MCC EQUIVALENT INERTIA CONSTANT

STARTING MOTORS	HP	MOTOR INERTIA	INERTIA RATIO	LOAD INERTIA	TOTAL INERTIA	PF	EFF	RATED KVA
MCC 3BE								
HV-4713: AFW To Steam Gen Control	0.130	0.055	1.000	0.055	0.110	0.60	0.70	0.2309
HV-9334: SI Tank Drain To RWST	1.330	0.060	1.000	0.060	0.120	0.60	0.70	2.3623
HV-9325: Lo Press SI Hdr To RC Loop 1B	2.600	0.210	1.000	0.210	0.420	0.60	0.70	4.6181
HV-9328: Lo Press SI Hdr To RC Loop 2A	2.600	0.210	1.000	0.210	0.420	0.60	0.70	4.6181
HV-9327: Hi Press SI Hdr To RC Loop 1B	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-9330: Hi Press SI Hdr To RC Loop 2A	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-6223: CCW Cntmt Inlet Isol Valve	0.330	0.055	1.000	0.055	0.110	0.60	0.70	0.5861
HV-9324: Hi Press SI Hdr To RC Loop 1A	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-9333: Hi Press SI Hdr To RC Loop 2B	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-0516: RC Drain Tank Cntmt Isol Vlv	0.125	0.055	1.000	0.055	0.110	0.60	0.70	0.2220
HV-7512: Cntmt Isol RC Drain To Rdwst	0.130	0.055	1.000	0.055	0.110	0.60	0.70	0.2309
HV-9367: Shtdwn Ht Exch To Spray Hdr 1	1.300	0.060	1.000	0.060	0.120	0.60	0.70	2.3090
HV-0514: Quench Tk Vap Smpl Cntmt Isol	0.125	0.055	1.000	0.055	0.110	0.60	0.70	0.2220
HV-5803: Cntmt Sump To Radwaste Sump	0.330	0.055	1.000	0.055	0.110	0.60	0.70	0.5861
HV-4731: AFW To Steam Gen E089 Isol	1.250	0.060	1.000	0.060	0.120	0.60	0.70	2.2202
HV-6367: CCW To Emergency Cooling Unit	1.900	0.077	1.000	0.077	0.154	0.60	0.70	3.3748
HV-6236: CCW Non-Critical Cntmt Isol	0.330	0.055	1.000	0.055	0.110	0.60	0.70	0.5861
HV-6371: CCW To Emergency Cooling Unit	1.900	0.077	1.000	0.077	0.154	0.60	0.70	3.3748
Margin for future load growth	15.000	1.250	25.000	31.250	32.500	0.85	0.86	15.3078
TOTAL INERTIA & RATED KVA					35.218			45.823
EQUIVALENT MCC 3BE INERTIA CONSTANT								0.575

E082WK2.WK1

NOTE: 1. Refer to Section 3.4.c.
2. LOAD INERTIA is equivalent to MOTOR INERTIA x INERTIA RATIO.
3. PF and EFF, except for MOVs, are taken from Calculation E4C-087, Rev. 0.
4. MOV PF and EFF are 60% and 70% respectively. See Section 3.4.a.

TABLE 5.4 Contd...

UNIT 3 TRAIN A MCC EQUIVALENT INERTIA CONSTANT

STARTING MOTORS	HP	MOTOR INERTIA	INERTIA RATIO	LOAD INERTIA	TOTAL INERTIA	PF	EFF	RATED KVA
MCC 3BY								
Intake Structure Cooling Fan A370	5.000	0.310	25.000	7.750	8.060	0.83	0.82	5.4805
Intake Structure Cooling Fan A373	5.000	0.310	25.000	7.750	8.060	0.83	0.82	5.4805
Boric Acid Makeup Emergency ACU E439	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
Boric Acid Makeup Emergency ACU E440	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
Boric Acid Makeup Pump P174	25.000	2.380	1.000	2.380	4.760	0.88	0.86	24.6432
Boric Acid Makeup Pump P175	25.000	2.380	1.000	2.380	4.760	0.88	0.86	24.6432
HV-9247: BA Pumps To Chrg Pump Suction	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
Charging Pump Area Emergency ACU E437	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
Charging Pump Area Emergency ACU E438	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
Control Room Cabinet Emerg ACU E427	7.500	0.620	8.000	4.960	5.580	0.84	0.85	7.8361
Safety Equip Bldg Emergency ACU E417	7.500	0.620	8.000	4.960	5.580	0.84	0.85	7.8361
Safety Equip Bldg Emergency ACU E517	1.500	0.060	8.000	0.480	0.540	0.76	0.77	1.9122
CCW Bldg Pump Room Emergency ACU E453	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
CCW Bldg Pump Room Emergency ACU E454	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
HV-6497: Saltwater From CCW Heat Exchg	1.000	0.055	1.000	0.055	0.110	0.60	0.70	1.7762
Feedwater Pump Room Fan A394	7.250	0.620	25.000	15.500	16.120	0.84	0.85	7.5749
Margin for future load growth	15.000	1.250	25.000	31.250	32.500	0.85	0.86	15.3078
TOTAL INERTIA & RATED KVA					89.150			112.159
EQUIVALENT MCC 3BY INERTIA CONSTANT								0.595

E082WK2.WK1

NOTE: 1. Refer to Section 3.4.c.
2. LOAD INERTIA is equivalent to MOTOR INERTIA x INERTIA RATIO.
3. PF and EFF are taken from Calculation E4C-087, Rev. 0.

TABLE 5.4 Contd...

UNIT 3 TRAIN B MCC EQUIVALENT INERTIA CONSTANT

STARTING MOTORS	HP	MOTOR INERTIA	INERTIA RATIO	LOAD INERTIA	TOTAL INERTIA	PF	EFF	RATED KVA
MCC 3BRB								
2HV-4762: AFW Pump P504 Disch Bypass	0.750	0.055	1.000	0.055	0.110	0.60	0.70	1.3321
Margin for future load growth	15.000	1.250	25.000	31.250	32.500	0.85	0.86	15.3078
TOTAL INERTIA & RATED KVA					32.610			16.640
EQUIVALENT MCC 3BRB INERTIA CONSTANT								1.467

E082WK2.WK1

NOTE: 1. Refer to Section 3.4.c.
2. LOAD INERTIA is equivalent to MOTOR INERTIA x INERTIA RATIO.
3. PF and EFF, except for MOVs, are taken from Calculation E4C-087, Rev. 0.
4. MOV PF and EFF are 60% and 70% respectively. See Section 3.4.a.

TABLE 5.4 Contd...

UNIT 3 TRAIN B MCC EQUIVALENT INERTIA CONSTANT

STARTING MOTORS	HP	MOTOR INERTIA	INERTIA RATIO	LOAD INERTIA	TOTAL INERTIA	PF	EFF	RATED KVA
MCC 3BH								
Diesel Fuel Transfer Pump P095	1.000	0.055	1.000	0.055	0.110	0.69	0.77	1.4041
Diesel Fuel Transfer Pump P094	1.000	0.055	1.000	0.055	0.110	0.69	0.77	1.4041
DG Lube Oil/Turbocharger P998/P1017	2.000	0.077	1.000	0.077	0.154	0.69	0.78	2.7722
DG Lube Oil/Turbocharger P999/P1016	2.000	0.077	1.000	0.077	0.154	0.69	0.78	2.7722
Margin for future load growth	15.000	1.250	25.000	31.250	32.500	0.85	0.86	15.3078
TOTAL INERTIA & RATED KVA					33.028			23.660
EQUIVALENT MCC 3BH INERTIA CONSTANT								1.045

E082WK2.WK1

NOTE: 1. Refer to Section 3.4.c.
2. LOAD INERTIA is equivalent to MOTOR INERTIA x INERTIA RATIO.
3. PF and EFF are taken from Calculation E4C-087, Rev. 0.

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TABLE 5.4 Contd...

UNIT 3 TRAIN B MCC EQUIVALENT INERTIA CONSTANT

STARTING MOTOR	HP	MOTOR INERTIA	INERTIA RATIO	LOAD INERTIA	TOTAL INERTIA	PF	EFF	RATED KVA
MCC 3BJ								
HV-9322: Lo Press SI Hdr To RC Loop 1A	2.600	0.210	1.000	0.210	0.420	0.60	0.70	4.6181
HV-9331: Lo Press SI Hdr To RC Loop 2B	2.600	0.210	1.000	0.210	0.420	0.60	0.70	4.6181
HV-9323: Hi Press SI Hdr To RC Loop 1A	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-9332: Hi Press SI Hdr To RC Loop 2B	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-9217: RCP Bleed Off To VCT	0.125	0.055	1.000	0.055	0.110	0.60	0.70	0.2220
HV-9326: Hi Press SI Hdr To RC Loop 1B	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-9329: Hi Press SI Hdr To RC Loop 2A	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-7258: Cntmt Isol PT Tank Vent Hdr	0.130	0.055	1.000	0.055	0.110	0.60	0.70	0.2309
HV-0508: RC Hot Leg Sample Cntmt Isol	0.330	0.055	1.000	0.055	0.110	0.60	0.70	0.5861
HV-0517: RC Hot Leg Sample Cntmt Isol	0.330	0.055	1.000	0.055	0.110	0.60	0.70	0.5861
HV-9368: Shtdwn Hx Exch To Spray Hdr 2	1.300	0.060	1.000	0.060	0.120	0.60	0.70	2.3090
HV-0510: Pressr Vapor Smpl Cntmt Isol	0.330	0.055	1.000	0.055	0.110	0.60	0.70	0.5861
HV-0512: Pressr Surge Ln Liq Smpl Isol	0.330	0.055	1.000	0.055	0.110	0.60	0.70	0.5861
HV-6211: CCW To Containment	0.330	0.055	1.000	0.055	0.110	0.60	0.70	0.5861
HV-6369: CCW To Emergency Cooling Unit	1.900	0.077	1.000	0.077	0.154	0.60	0.70	3.3748
HV-6216: CCW From Containment	0.330	0.055	1.000	0.055	0.110	0.60	0.70	0.5861
HV-6373: CCW To Emergency Cooling Unit	1.900	0.077	1.000	0.077	0.154	0.60	0.70	3.3748
LV-0227C: RWT Outlet To Chrg Pump Hdr	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-9900: Cntmt Normal Clg Supply Isol	0.330	0.055	1.000	0.055	0.110	0.60	0.70	0.5861
HV-9971: Cntmt Normal Clg Return Isol	0.330	0.055	1.000	0.055	0.110	0.60	0.70	0.5861
Margin for future load growth	15.000	1.250	25.000	31.250	32.500	0.85	0.86	15.3078
TOTAL INERTIA & RATED KVA					35.418			44.961
EQUIVALENT MCC 3BJ INERTIA CONSTANT								0.590

E082WK2.WK1

NOTE: 1. Refer to Section 3.4.c.
2. LOAD INERTIA is equivalent to MOTOR INERTIA x INERTIA RATIO.
3. PF and EFF are taken from Calculation E4C-087, Rev. 0.

TABLE 5.4 Contd...

UNIT 3 TRAIN B MCC EQUIVALENT INERTIA CONSTANT

STARTING MOTORS	HP	MOTOR INERTIA	INERTIA RATIO	LOAD INERTIA	TOTAL INERTIA	PF	EFF	RATED KVA
MCC 3BZ								
HV-4712: AFW Pump P504 Disch Control	0.125	0.055	1.000	0.055	0.110	0.60	0.70	0.2220
Intake Structure Cooling Fan A371	5.000	0.310	25.000	7.750	8.060	0.83	0.82	5.4805
Intake Structure Cooling Fan A372	5.000	0.310	25.000	7.750	8.060	0.83	0.82	5.4805
HV-5686: Firewater Cntmt Isolation	0.130	0.055	1.000	0.055	0.110	0.60	0.70	0.2309
LV-02278: VCT Drain Return	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-9235: BA Tk T072 To Chrg Pump Suct	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
HV-9240: BA Tk T071 To Chrg Pump Suct	0.700	0.055	1.000	0.055	0.110	0.60	0.70	1.2433
Feedwater Pump Rm Fan A443	7.250	0.620	25.000	15.500	16.120	0.84	0.85	7.5749
Charging Pump Area Emergency ACU E435	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
Charging Pump Area Emergency ACU E436	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
Control Room Cabinet Emerg ACU E426	7.500	0.620	8.000	4.960	5.580	0.84	0.85	7.8361
HV-4714: AFW To E088 Isolation	2.000	0.077	1.000	0.077	0.154	0.60	0.70	3.5524
Safety Equip Bldg Emergency ACU E416	5.000	0.310	8.000	2.480	2.790	0.83	0.82	5.4805
Safety Equip Bldg Emergency ACU E445	1.500	0.060	8.000	0.480	0.540	0.76	0.77	1.9122
CCW Bldg Pump Room Emergency ACU E455	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
Safety Equip Bldg Emergency ACU E518	1.000	0.055	8.000	0.440	0.495	0.69	0.77	1.4041
HV-6495: Saltwater From CCW Heat Exch	1.000	0.055	1.000	0.055	0.110	0.60	0.70	1.7762
TV-9267: RC Regen Heat Exchanger Isol	1.000	0.055	1.000	0.055	0.110	0.60	0.70	1.7762
Margin for future load growth	15.000	1.250	25.000	31.250	32.500	0.85	0.86	15.3078
TOTAL INERTIA & RATED KVA					76.554			65.977
EQUIVALENT MCC 3BZ INERTIA CONSTANT								0.868

E082WK2.WK1

NOTE: 1. Refer to Section 3.4.c.
2. LOAD INERTIA is equivalent to MOTOR INERTIA x INERTIA RATIO.
3. PF and EFF, except for MOVs, are taken from Calculation E4C-087, Rev. 0.
4. MOV PF and EFF are 60% and 70% respectively. See Section 3.4.a.

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

6.0 REFERENCES:

This CCN adds the following reference documents in the Reference Section (Section 6.0) of the base calculation. The specified reference numbers are arbitrarily assigned and are applicable to this CCN only. It does not replace the corresponding reference numbers in the base calculation:

6.1 NEDOTRAK Item No. 93070031 - Operability Of Emergency Diesel Generators Due To Load Sequence Overlapping Condition Per Information Notice IN 92-77.

6.2 Vendor Document S023-302-15-10-1 - Report of Transformer Tests, Purchase Order #6V2D001, Shop Order #24-34274S01.

6.3 Vendor Document S023-302-15-11-1 - Report of Transformer Tests, Purchase Order #6V2D001, Shop Order #24-34274S02.

6.4 Vendor Document S023-302-15-12-1 - Report of Transformer Tests, Purchase Order #6V2D001, Shop Order #24-34274S03.

6.5 Vendor Document S023-302-15-13-1 - Report of Transformer Tests, Purchase Order #6V2D001, Shop Order #24-3274S04.

6.6 Vendor Document S023-302-15-14-1 - Report of Transformer Tests, Purchase Order #6V2D001, Shop Order #24-3274S05.

6.7 FAX transmittal from Daniel R. Otto of Joy Technologies Inc. to Bill Lennartz of SCE, dated May 11, 1993 (Attachment 9.2.1).

6.8 Log Item BC-93-159 - New Inertia Data For E-418/E-419.

6.9 Log Item BC-93-205 - Single Train Operations Of Saltwater Cooling and Component Cooling Water Pumps.

6.10 DCP No. 2&3 6754.00SP, Rev. 0 - Pre-Lubrication Modification, Units 2&3 Diesel Generator Lube Oil System.

6.11 DCP No. 2&3 6742.07SM, Rev. 0 - CCW System Seismic Makeup Upgrade.

6.12 Regulatory Guide 1.9, Revision 3, July 1993 - Selection, Design, Qualification And Testing Of Emergency Diesel Generator Units Used As Class 1E Onsite Electric Power Systems At Nuclear Power Plants.

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

6.13 Calculation E4C-086, Rev. 0 - SONGS 2 BECAP and PSS/E Data Development And Documentation.

6.14 Calculation E4C-087, Rev. 0 - SONGS 3 BECAP and PSS/E Data Development And Documentation.

6.15 Calculation E4C-090, Rev. 1 - SONGS 2&3 Auxiliary System Voltage Regulation.

6.16 Calculation E4C-098, Rev. 0 - SONGS 2&3 4-KV Switchgear Protective Relay Setting Calculations.

6.17 Calculation E4C-099, Rev. 0 - SONGS 2&3 Safety Related 480-V Power Circuit Breaker Settings.

6.18 ANSI Standard C50.41-1982 - American National Standard for Polyphase Induction Motors for Power Generating Stations.

6.19 System Operating Bulletin No. 17, Revised June 11, 1990, and Appendix Applying to San Onofre, Revised May 9, 1986.

6.20 Motor Application and Maintenance Handbook by Robert W Smeaton, Published by McGraw-Hill Book Co., San Francisco 1969.

6.21 Calculation DC-3128, Rev. 0 - SONGS 1 PTI Program Verification.

7.0 NOMENCLATURE:

All applicable items in the Nomenclature Section of the base calculation is valid for this CCN.

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

8.0 COMPUTATIONS:

8.1 SONGS 2 LOADCENTER TRANSFORMER 2B04X & 2B06X EQUIVALENT CIRCUIT:

Reference: Section 4.4

Z_{GIVEN} = 10.18 % at 1.5 MVA Base

X/R = 7.0

Nominal Tap Voltage = 4155 V

Z_{GIVEN} = 0.0144 + j0.1008 P.U. at 1.5 MVA Base

$$Z_{INPUT} = Z_{GIVEN} \times \frac{MVA_{NEW}}{MVA_{OLD}} = (0.0144 + j0.1008) \times \frac{10}{1.5}$$

Z_{INPUT} = 0.096 + j0.672 P.U. at 10 MVA Base

Transformation Ratio (Input) = 4155/4160 = 0.9988

8.2 SONGS 3 LOADCENTER TRANSFORMER 3B04X & 3B06X EQUIVALENT CIRCUIT:

Reference: Section 4.4

Z_{GIVEN} = 10.18 % at 1.5 MVA Base

X/R = 7.0

Nominal Tap Voltage = 4155 V

Z_{GIVEN} = 0.0144 + j0.1008 P.U. at 1.5 MVA Base

$$Z_{INPUT} = Z_{GIVEN} \times \frac{MVA_{NEW}}{MVA_{OLD}} = (0.0144 + j0.1008) \times \frac{10}{1.5}$$

Z_{INPUT} = 0.096 + j0.672 P.U. at 10 MVA Base

Transformation Ratio (Input) = 4155/4160 = 0.9988

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

8.3 MOTOR CONTROL CENTER 2BRA EQUIVALENT LOADS:

A. INITIAL CONDITION EQUIVALENT LOAD:

Initial Condition Equivalent Motor Load*	=	0.00 + j0.00	KVA
Initial Condition Equivalent Static Load*	=	4.25 + j2.63	KVA
5 KVA Allowance**	=	4.25 + j2.63	KVA
Total Initial Condition Equivalent Load	=	8.50 + j5.26	KVA

Initial Condition Equivalent P = 0.00850 MW
Initial Condition Equivalent Q = 0.00526 MVAR

B. EQUIVALENT STARTING MOTOR LOAD:

Equivalent Starting Motor Load*	=	1.44 + j1.91	KVA
15 HP Allowance**	=	13.01 + j8.06	KVA
Total Starting Motor Load	=	14.45 + j9.97	KVA
	=	17.56 ∠34.60°	KVA

Starting Motor MBASE = 0.01756 (MVA)
Starting Motor Equivalent P = 0.01445 MW
Starting Motor Equivalent Q = 0.00997 MVAR

C. ACCIDENT CONDITION EQUIVALENT STATIC & RUNNING LOADS:

Accident Condition Static & Running Loads*	=	4.25 + j2.63	KVA
5 KVA Allowance**	=	4.25 + j2.63	KVA
Total Accident Condition Equivalent Load	=	8.50 + j5.26	KVA

Accident Condition Equivalent P = 0.00850 MW
Accident Condition Equivalent Q = 0.00526 MVAR

*From TABLE 5.3 **Reference: Section 3.4.B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

8.4 MOTOR CONTROL CENTER 2BD EQUIVALENT LOADS:

A. INITIAL CONDITION EQUIVALENT LOAD:

Initial Condition Equivalent Motor Load*	=	3.82 + j4.02	KVA
Initial Condition Equivalent Static Load*	=	37.79 + j2.63	KVA
5 KVA Allowance**	=	4.25 + j2.63	KVA
Total Initial Condition Equivalent Load	=	45.86 + j9.28	KVA

Initial Condition Equivalent P = 0.04586 MW
Initial Condition Equivalent Q = 0.00928 MVAR

B. EQUIVALENT STARTING MOTOR LOAD:

Equivalent Starting Motor Load*	=	5.28 + j 5.54	KVA
15 HP Allowance**	=	13.01 + j 8.06	KVA
Total Starting Motor Load	=	18.29 + j 13.60	KVA
	=	22.79 $\angle$36.63°	KVA

Starting Motor MBASE = 0.02279 (MVA)
Starting Motor Equivalent P = 0.01829 MW
Starting Motor Equivalent Q = 0.01360 MVAR

C. ACCIDENT CONDITION EQUIVALENT STATIC & RUNNING LOADS:

Accident Condition Static & Running Loads*	=	4.25 + j2.63	KVA
5 KVA Allowance**	=	4.25 + j2.63	KVA
Total Accident Condition Equivalent Load	=	8.50 + j5.26	KVA

Accident Condition Equivalent P = 0.00850 MW
Accident Condition Equivalent Q = 0.00526 MVAR

*From TABLE 5.3 **Reference: Section 3.4.B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

8.5 MOTOR CONTROL CENTER 2BE EQUIVALENT LOADS:

A. INITIAL CONDITION EQUIVALENT LOAD:

Initial Condition Equivalent Motor Load*	=	0.00 + j 0.00	KVA
Initial Condition Equivalent Static Load*	=	85.19 + j61.45	KVA
5 KVA Allowance**	=	4.25 + j 2.63	KVA
Total Initial Condition Equivalent Load	=	89.44 + j64.08	KVA

Initial Condition Equivalent P = 0.08944 MW
Initial Condition Equivalent Q = 0.06408 MVAR

B. EQUIVALENT STARTING MOTOR LOAD:

Equivalent Starting Motor Load*	=	32.02 + j42.70	KVA
15 HP Allowance**	=	13.01 + j 8.06	KVA
Total Starting Motor Load	=	45.03 + j50.76	KVA
	=	67.85 $\angle$48.42°	KVA

Starting Motor MBASE = 0.06785 (MVA)
Starting Motor Equivalent P = 0.04503 MW
Starting Motor Equivalent Q = 0.05076 MVAR

C. ACCIDENT CONDITION EQUIVALENT STATIC & RUNNING LOADS:

Accident Condition Static & Running Loads*	=	85.19 + j61.45	KVA
5 KVA Allowance**	=	4.25 + j 2.63	KVA
Total Accident Condition Equivalent Load	=	89.44 + j64.08	KVA

Accident Condition Equivalent P = 0.08944 MW
Accident Condition Equivalent Q = 0.06408 MVAR

*From TABLE 5.3 **Reference: Section 3.4.B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

8.6 MOTOR CONTROL CENTER 2BY EQUIVALENT LOADS:

A. INITIAL CONDITION EQUIVALENT LOAD:

Initial Condition Equivalent Motor Load*	=	20.81 + j11.23	KVA
Initial Condition Equivalent Static Load*	=	93.15 + j60.41	KVA
5 KVA Allowance**	=	4.25 + j 2.63	KVA
Total Initial Condition Equivalent Load	=	118.21 + j74.27	KVA

Initial Condition Equivalent P = 0.11821 MW
Initial Condition Equivalent Q = 0.07427 MVAR

B. EQUIVALENT STARTING MOTOR LOAD:

Equivalent Starting Motor Load*	=	73.14 + j47.36	KVA
15 HP Allowance**	=	13.01 + j 8.06	KVA
Total Starting Motor Load	=	86.15 + j55.42	KVA
	=	102.44 ∠32.75°	KVA

Starting Motor MBASE = 0.10244 (MVA)
Starting Motor Equivalent P = 0.08615 MW
Starting Motor Equivalent Q = 0.05542 MVAR

C. ACCIDENT CONDITION EQUIVALENT STATIC & RUNNING LOADS:

Accident Condition Static & Running Loads*	=	108.23 + j75.45	KVA
5 KVA Allowance**	=	4.25 + j 2.63	KVA
Total Accident Condition Equivalent Load	=	112.48 + j78.08	KVA

Accident Condition Equivalent P = 0.11248 MW
Accident Condition Equivalent Q = 0.07808 MVAR

*From TABLE 5.3 **Reference: Section 3.4.B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

8.7 MOTOR CONTROL CENTER BQ EQUIVALENT LOADS:

A. INITIAL CONDITION EQUIVALENT LOAD:

Initial Condition Equivalent Motor Load*	=	0.00 + j 0.00	KVA
Initial Condition Equivalent Static Load*	=	71.66 + j43.16	KVA
5 KVA Allowance**	=	4.25 + j 2.63	KVA
Total Initial Condition Equivalent Load	=	75.91 + j45.79	KVA

Initial Condition Equivalent P = 0.07591 MW
Initial Condition Equivalent Q = 0.04579 MVAR

B. EQUIVALENT STARTING MOTOR LOAD:

Equivalent Starting Motor Load*	=	30.61 + j19.30	KVA
15 HP Allowance**	=	13.01 + j 8.06	KVA
Total Starting Motor Load	=	43.62 + j27.36	KVA
	=	51.49 ∠32.10°	KVA

Starting Motor MBASE = 0.05149 (MVA)
Starting Motor Equivalent P = 0.04362 MW
Starting Motor Equivalent Q = 0.02736 MVAR

C. ACCIDENT CONDITION EQUIVALENT STATIC & RUNNING LOADS:

Accident Condition Static & Running Loads*	=	71.66 + j43.16	KVA
5 KVA Allowance**	=	4.25 + j 2.63	KVA
Total Accident Condition Equivalent Load	=	75.91 + j45.79	KVA

Accident Condition Equivalent P = 0.07591 MW
Accident Condition Equivalent Q = 0.04579 MVAR

*From TABLE 5.3 **Reference: Section 3.4.B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

8.8 MOTOR CONTROL CENTER 2BRB EQUIVALENT LOADS:

A. INITIAL CONDITION EQUIVALENT LOAD:

Initial Condition Equivalent Motor Load*	=	0.00 + j0.00	KVA
Initial Condition Equivalent Static Load*	=	4.25 + j2.63	KVA
5 KVA Allowance**	=	4.25 + j2.63	KVA
Total Initial Condition Equivalent Load	=	8.50 + j5.26	KVA

Initial Condition Equivalent P = 0.00850 MW
Initial Condition Equivalent Q = 0.00526 MVAR

B. EQUIVALENT STARTING MOTOR LOAD:

Equivalent Starting Motor Load*	=	1.44 + j1.91	KVA
15 HP Allowance**	=	13.01 + j8.06	KVA
Total Starting Motor Load	=	14.45 + j9.97	KVA
	=	17.56 ∠34.60°	KVA

Starting Motor MBASE = 0.01756 (MVA)
Starting Motor Equivalent P = 0.01445 MW
Starting Motor Equivalent Q = 0.00997 MVAR

C. ACCIDENT CONDITION EQUIVALENT STATIC & RUNNING LOADS:

Accident Condition Static & Running Loads*	=	4.25 + j2.63	KVA
5 KVA Allowance**	=	4.25 + j2.63	KVA
Total Accident Condition Equivalent Load	=	8.50 + j5.26	KVA

Accident Condition Equivalent P = 0.00850 MW
Accident Condition Equivalent Q = 0.00526 MVAR

*From TABLE 5.3 **Reference: Section 3.4.B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

8.9 MOTOR CONTROL CENTER 2BH EQUIVALENT LOADS:

A. INITIAL CONDITION EQUIVALENT LOAD:

Initial Condition Equivalent Motor Load*	=	3.82 + j4.02	KVA
Initial Condition Equivalent Static Load*	=	37.79 + j2.63	KVA
5 KVA Allowance**	=	4.25 + j2.63	KVA
Total Initial Condition Equivalent Load	=	45.86 + j9.28	KVA

Initial Condition Equivalent P = 0.04586 MW
Initial Condition Equivalent Q = 0.00928 MVAR

B. EQUIVALENT STARTING MOTOR LOAD:

Equivalent Starting Motor Load*	=	5.28 + j 5.54	KVA
15 HP Allowance**	=	13.01 + j 8.06	KVA
Total Starting Motor Load	=	18.29 + j13.60	KVA
	=	22.79 ∠36.63°	KVA

Starting Motor MBASE = 0.02279 (MVA)
Starting Motor Equivalent P = 0.01829 MW
Starting Motor Equivalent Q = 0.01360 MVAR

C. ACCIDENT CONDITION EQUIVALENT STATIC & RUNNING LOADS:

Accident Condition Static & Running Loads*	=	4.25 + j2.63	KVA
5 KVA Allowance**	=	4.25 + j2.63	KVA
Total Accident Condition Equivalent Load	=	8.50 + j5.26	KVA

Accident Condition Equivalent P = 0.00850 MW
Accident Condition Equivalent Q = 0.00526 MVAR

*From TABLE 5.3 **Reference: Section 3.4.B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-99	A. M. PATEL	10-5-99					

8.10 MOTOR CONTROL CENTER 2BJ EQUIVALENT LOADS:

A. INITIAL CONDITION EQUIVALENT LOAD:

Initial Condition Equivalent Motor Load*	=	0.00 + j 0.00	KVA
Initial Condition Equivalent Static Load*	=	74.99 + j55.13	KVA
5 KVA Allowance**	=	4.25 + j 2.63	KVA
Total Initial Condition Equivalent Load	=	79.24 + j57.76	KVA

Initial Condition Equivalent P = 0.07924 MW
Initial Condition Equivalent Q = 0.05776 MVAR

B. EQUIVALENT STARTING MOTOR LOAD:

Equivalent Starting Motor Load*	=	31.97 + j42.63	KVA
15 HP Allowance**	=	13.01 + j 8.06	KVA
Total Starting Motor Load	=	44.98 + j50.69	KVA
	=	67.77 ∠48.42°	KVA

Starting Motor MBASE = 0.06777 (MVA)
Starting Motor Equivalent P = 0.04498 MW
Starting Motor Equivalent Q = 0.05069 MVAR

C. ACCIDENT CONDITION EQUIVALENT STATIC & RUNNING LOADS:

Accident Condition Static & Running Loads*	=	74.99 + j55.13	KVA
5 KVA Allowance**	=	4.25 + j 2.63	KVA
Total Accident Condition Equivalent Load	=	79.24 + j57.76	KVA

Accident Condition Equivalent P = 0.07924 MW
Accident Condition Equivalent Q = 0.05776 MVAR

*From TABLE 5.3 **Reference: Section 3.4.B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

8.11 MOTOR CONTROL CENTER 2BZ EQUIVALENT LOADS:

A. INITIAL CONDITION EQUIVALENT LOAD:

Initial Condition Equivalent Motor Load*	=	0.00 + j 0.00	KVA
Initial Condition Equivalent Static Load*	=	88.80 + j57.77	KVA
5 KVA Allowance**	=	4.25 + j 2.63	KVA
Total Initial Condition Equivalent Load	=	93.05 + j60.40	KVA

Initial Condition Equivalent P = 0.09305 MW
Initial Condition Equivalent Q = 0.06040 MVAR

B. EQUIVALENT STARTING MOTOR LOAD:

Equivalent Starting Motor Load*	=	36.95 + j32.65	KVA
15 HP Allowance**	=	13.01 + j 8.06	KVA
Total Starting Motor Load	=	49.96 + j40.71	KVA
	=	64.45 $\angle$39.17°	KVA

Starting Motor MBASE = 0.06445 (MVA)
Starting Motor Equivalent P = 0.04996 MW
Starting Motor Equivalent Q = 0.04071 MVAR

C. ACCIDENT CONDITION EQUIVALENT STATIC & RUNNING LOADS:

Accident Condition Static & Running Loads*	=	120.13 + j81.27	KVA
5 KVA Allowance**	=	4.25 + j 2.63	KVA
Total Accident Condition Equivalent Load	=	124.38 + j83.90	KVA

Accident Condition Equivalent P = 0.12438 MW
Accident Condition Equivalent Q = 0.08390 MVAR

*From TABLE 5.3 **Reference: Section 3.4.B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

8.12 MOTOR CONTROL CENTER BS EQUIVALENT LOADS:

A. INITIAL CONDITION EQUIVALENT LOAD:

Initial Condition Equivalent Motor Load*	=	0.00 + j0.00	KVA
Initial Condition Equivalent Static Load*	=	8.08 + j5.00	KVA
5 KVA Allowance**	=	4.25 + j2.63	KVA
Total Initial Condition Equivalent Load	=	12.33 + j7.63	KVA

Initial Condition Equivalent P = 0.01233 MW
Initial Condition Equivalent Q = 0.00763 MVAR

B. EQUIVALENT STARTING MOTOR LOAD:

Equivalent Starting Motor Load*	=	30.61 + j19.30	KVA
15 HP Allowance**	=	13.01 + j 8.06	KVA
Total Starting Motor Load	=	43.62 + j27.36	KVA
	=	51.49 ∠32.10°	KVA

Starting Motor MBASE = 0.05149 (MVA)
Starting Motor Equivalent P = 0.04362 MW
Starting Motor Equivalent Q = 0.02736 MVAR

C. ACCIDENT CONDITION EQUIVALENT STATIC & RUNNING LOADS:

Accident Condition Static & Running Loads*	=	38.38 + j20.80	KVA
5 KVA Allowance**	=	4.25 + j 2.63	KVA
Total Accident Condition Equivalent Load	=	42.63 + j23.43	KVA

Accident Condition Equivalent P = 0.04263 MW
Accident Condition Equivalent Q = 0.02343 MVAR

*From TABLE 5.3 **Reference: Section 3.4.B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

8.13 MOTOR CONTROL CENTER 3BRA EQUIVALENT LOADS:

A. INITIAL CONDITION EQUIVALENT LOAD:

Initial Condition Equivalent Motor Load*	=	0.00 + j0.00	KVA
Initial Condition Equivalent Static Load*	=	4.25 + j2.63	KVA
5 KVA Allowance**	=	4.25 + j2.63	KVA
Total Initial Condition Equivalent Load	=	8.50 + j5.26	KVA

Initial Condition Equivalent P = 0.00850 MW
Initial Condition Equivalent Q = 0.00526 MVAR

B. EQUIVALENT STARTING MOTOR LOAD:

Equivalent Starting Motor Load*	=	1.44 + j1.91	KVA
15 HP Allowance**	=	13.01 + j8.06	KVA
Total Starting Motor Load	=	14.45 + j9.97	KVA
	=	17.56 ∠34.60°	KVA

Starting Motor MBASE = 0.01756 (MVA)
Starting Motor Equivalent P = 0.01445 MW
Starting Motor Equivalent Q = 0.00997 MVAR

C. ACCIDENT CONDITION EQUIVALENT STATIC & RUNNING LOADS:

Accident Condition Static & Running Loads*	=	4.25 + j2.63	KVA
5 KVA Allowance**	=	4.25 + j2.63	KVA
Total Accident Condition Equivalent Load	=	8.50 + j5.26	KVA

Accident Condition Equivalent P = 0.00850 MW
Accident Condition Equivalent Q = 0.00526 MVAR

*From TABLE 5.3 **Reference: Section 3.4.B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

8.14 MOTOR CONTROL CENTER 3BD EQUIVALENT LOADS:

A. INITIAL CONDITION EQUIVALENT LOAD:

Initial Condition Equivalent Motor Load*	=	3.82 + j4.02	KVA
Initial Condition Equivalent Static Load*	=	37.79 + j2.63	KVA
5 KVA Allowance**	=	4.25 + j2.63	KVA
Total Initial Condition Equivalent Load	=	45.86 + j9.28	KVA

Initial Condition Equivalent P = 0.04586 MW
Initial Condition Equivalent Q = 0.00928 MVAR

B. EQUIVALENT STARTING MOTOR LOAD:

Equivalent Starting Motor Load*	=	5.28 + j 5.54	KVA
15 HP Allowance**	=	13.01 + j 8.06	KVA
Total Starting Motor Load	=	18.29 + j13.60	KVA
	=	22.79 ∠36.63°	KVA

Starting Motor MBASE = 0.02279 (MVA)
Starting Motor Equivalent P = 0.01829 MW
Starting Motor Equivalent Q = 0.01360 MVAR

C. ACCIDENT CONDITION EQUIVALENT STATIC & RUNNING LOADS:

Accident Condition Static & Running Loads*	=	4.25 + j2.63	KVA
5 KVA Allowance**	=	4.25 + j2.63	KVA
Total Accident Condition Equivalent Load	=	8.50 + j5.26	KVA

Accident Condition Equivalent P = 0.00850 MW
Accident Condition Equivalent Q = 0.00526 MVAR

*From TABLE 5.3 **Reference: Section 3.4.B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

8.15 MOTOR CONTROL CENTER 3BE EQUIVALENT LOADS:

A. INITIAL CONDITION EQUIVALENT LOAD:

Initial Condition Equivalent Motor Load*	=	0.00 + j 0.00	KVA
Initial Condition Equivalent Static Load*	=	85.19 + j61.45	KVA
5 KVA Allowance**	=	4.25 + j 2.63	KVA
Total Initial Condition Equivalent Load	=	89.44 + j64.08	KVA

Initial Condition Equivalent P = 0.08944 MW
Initial Condition Equivalent Q = 0.06408 MVAR

B. EQUIVALENT STARTING MOTOR LOAD:

Equivalent Starting Motor Load*	=	32.90 + j43.87	KVA
15 HP Allowance**	=	13.01 + j 8.06	KVA
Total Starting Motor Load	=	45.91 + j51.93	KVA
	=	69.31 ∠48.52°	KVA

Starting Motor MBASE = 0.06931 (MVA)
Starting Motor Equivalent P = 0.04591 MW
Starting Motor Equivalent Q = 0.05193 MVAR

C. ACCIDENT CONDITION EQUIVALENT STATIC & RUNNING LOADS:

Accident Condition Static & Running Loads*	=	85.19 + j61.45	KVA
5 KVA Allowance**	=	4.25 + j 2.63	KVA
Total Accident Condition Equivalent Load	=	89.44 + j64.08	KVA

Accident Condition Equivalent P = 0.08944 MW
Accident Condition Equivalent Q = 0.06408 MVAR

*From TABLE 5.3 **Reference: Section 3.4.B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

8.16 MOTOR CONTROL CENTER 3BY EQUIVALENT LOADS:

A. INITIAL CONDITION EQUIVALENT LOAD:

Initial Condition Equivalent Motor Load*	=	20.81 + j11.23	KVA
Initial Condition Equivalent Static Load*	=	93.15 + j60.41	KVA
5 KVA Allowance**	=	4.25 + j 2.63	KVA
Total Initial Condition Equivalent Load	=	118.21 + j74.27	KVA

Initial Condition Equivalent P = 0.11821 MW
Initial Condition Equivalent Q = 0.07427 MVAR

B. EQUIVALENT STARTING MOTOR LOAD:

Equivalent Starting Motor Load*	=	73.14 + j47.36	KVA
15 HP Allowance**	=	13.01 + j 8.06	KVA
Total Starting Motor Load	=	86.15 + j55.42	KVA
	=	102.44 ∠32.75°	KVA

Starting Motor MBASE = 0.10244 (MVA)
Starting Motor Equivalent P = 0.08615 MW
Starting Motor Equivalent Q = 0.05542 MVAR

C. ACCIDENT CONDITION EQUIVALENT STATIC & RUNNING LOADS:

Accident Condition Static & Running Loads*	=	108.23 + j75.45	KVA
5 KVA Allowance**	=	4.25 + j 2.63	KVA
Total Accident Condition Equivalent Load	=	112.48 + j78.08	KVA

Accident Condition Equivalent P = 0.11248 MW
Accident Condition Equivalent Q = 0.07808 MVAR

*From TABLE 5.3 **Reference: Section 3.4.B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

8.17 MOTOR CONTROL CENTER 3BRB EQUIVALENT LOADS:

A. INITIAL CONDITION EQUIVALENT LOAD:

Initial Condition Equivalent Motor Load*	=	0.00 + j0.00	KVA
Initial Condition Equivalent Static Load*	=	4.25 + j2.63	KVA
5 KVA Allowance**	=	4.25 + j2.63	KVA
Total Initial Condition Equivalent Load	=	8.50 + j5.26	KVA

Initial Condition Equivalent P = 0.00850 MW
Initial Condition Equivalent Q = 0.00526 MVAR

B. EQUIVALENT STARTING MOTOR LOAD:

Equivalent Starting Motor Load*	=	1.44 + j1.91	KVA
15 HP Allowance**	=	13.01 + j8.06	KVA
Total Starting Motor Load	=	14.45 + j9.97	KVA
	=	17.56 ∠34.60°	KVA

Starting Motor MBASE = 0.01756 (MVA)
Starting Motor Equivalent P = 0.01445 MW
Starting Motor Equivalent Q = 0.00997 MVAR

C. ACCIDENT CONDITION EQUIVALENT STATIC & RUNNING LOADS:

Accident Condition Static & Running Loads*	=	4.25 + j2.63	KVA
5 KVA Allowance**	=	4.25 + j2.63	KVA
Total Accident Condition Equivalent Load	=	8.50 + j5.26	KVA

Accident Condition Equivalent P = 0.00850 MW
Accident Condition Equivalent Q = 0.00526 MVAR

*From TABLE 5.3 **Reference: Section 3.4.B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

8.18 MOTOR CONTROL CENTER 3BH EQUIVALENT LOADS:

A. INITIAL CONDITION EQUIVALENT LOAD:

Initial Condition Equivalent Motor Load*	=	3.82 + j4.02	KVA
Initial Condition Equivalent Static Load*	=	37.79 + j2.63	KVA
5 KVA Allowance**	=	4.25 + j2.63	KVA
Total Initial Condition Equivalent Load	=	45.86 + j9.28	KVA

Initial Condition Equivalent P = 0.04586 MW
Initial Condition Equivalent Q = 0.00928 MVAR

B. EQUIVALENT STARTING MOTOR LOAD:

Equivalent Starting Motor Load*	=	5.28 + j 5.54	KVA
15 HP Allowance**	=	13.01 + j 8.06	KVA
Total Starting Motor Load	=	18.29 + j13.60	KVA
	=	22.79 $\angle$36.63°	KVA

Starting Motor MBASE = 0.02279 (MVA)
Starting Motor Equivalent P = 0.01829 MW
Starting Motor Equivalent Q = 0.01360 MVAR

C. ACCIDENT CONDITION EQUIVALENT STATIC & RUNNING LOADS:

Accident Condition Static & Running Loads*	=	4.25 + j2.63	KVA
5 KVA Allowance**	=	4.25 + j2.63	KVA
Total Accident Condition Equivalent Load	=	8.50 + j5.26	KVA

Accident Condition Equivalent P = 0.00850 MW
Accident Condition Equivalent Q = 0.00526 MVAR

*From TABLE 5.3 **Reference: Section 3.4.B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

8.19 MOTOR CONTROL CENTER 3BJ EQUIVALENT LOADS:

A. INITIAL CONDITION EQUIVALENT LOAD:

Initial Condition Equivalent Motor Load*	=	0.00 + j 0.00	KVA
Initial Condition Equivalent Static Load*	=	74.99 + j55.13	KVA
5 KVA Allowance**	=	4.25 + j 2.63	KVA
Total Initial Condition Equivalent Load	=	79.24 + j57.76	KVA

Initial Condition Equivalent P = 0.07924 MW
Initial Condition Equivalent Q = 0.05776 MVAR

B. EQUIVALENT STARTING MOTOR LOAD:

Equivalent Starting Motor Load*	=	31.96 + j42.62	KVA
15 HP Allowance**	=	13.01 + j 8.06	KVA
Total Starting Motor Load	=	44.97 + j50.68	KVA
	=	67.76 ∠48.42°	KVA

Starting Motor MBASE = 0.06776 (MVA)
Starting Motor Equivalent P = 0.04497 MW
Starting Motor Equivalent Q = 0.05068 MVAR

C. ACCIDENT CONDITION EQUIVALENT STATIC & RUNNING LOADS:

Accident Condition Static & Running Loads*	=	74.99 + j55.13	KVA
5 KVA Allowance**	=	4.25 + j 2.63	KVA
Total Accident Condition Equivalent Load	=	79.24 + j57.76	KVA

Accident Condition Equivalent P = 0.07924 MW
Accident Condition Equivalent Q = 0.05776 MVAR

*From TABLE 5.3 **Reference: Section 3.4.B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

8.20 MOTOR CONTROL CENTER 3BZ EQUIVALENT LOADS:

A. INITIAL CONDITION EQUIVALENT LOAD:

Initial Condition Equivalent Motor Load*	=	0.00 + j 0.00	KVA
Initial Condition Equivalent Static Load*	=	88.66 + j57.77	KVA
5 KVA Allowance**	=	4.25 + j 2.63	KVA
Total Initial Condition Equivalent Load	=	92.91 + j60.40	KVA

Initial Condition Equivalent P = 0.09291 MW
Initial Condition Equivalent Q = 0.06040 MVAR

B. EQUIVALENT STARTING MOTOR LOAD:

Equivalent Starting Motor Load*	=	38.82 + j35.16	KVA
15 HP Allowance**	=	13.01 + j 8.06	KVA
Total Starting Motor Load	=	51.83 + j43.22	KVA
	=	67.49 ∠39.82°	KVA

Starting Motor MBASE = 0.06749 (MVA)
Starting Motor Equivalent P = 0.05183 MW
Starting Motor Equivalent Q = 0.04322 MVAR

C. ACCIDENT CONDITION EQUIVALENT STATIC & RUNNING LOADS:

Accident Condition Static & Running Loads*	=	120.13 + j81.27	KVA
5 KVA Allowance**	=	4.25 + j 2.63	KVA
Total Accident Condition Equivalent Load	=	124.38 + j83.90	KVA

Accident Condition Equivalent P = 0.12438 MW
Accident Condition Equivalent Q = 0.08390 MVAR

*From TABLE 5.3 **Reference: Section 3.4.B

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

8.21 CONTROL ROOM EMERGENCY AC UNITS E418 & E419 INERTIA CONSTANT:

Given: $WK^2_{LOAD} = 272$ LB-FT^2 (Reference: Sections 4.2)
$WK^2_{MOTOR} = 57$ LB-FT^2
Motor Rated KVA = 140.22 KVA

$WK^2_{LOAD+MOTOR} = 329$ LB-FT^2

$$H^* = \frac{0.231 \times WK^2_{LOAD+MOTOR} \times (RPM_{SYN})^2 \times 10^{-6}}{\text{Rated KVA}}$$

$$H = \frac{0.231 \times 329 \times 1800^2 \times 10^{-6}}{140.22}$$

$$H = 1.75607$$

*See Section 5.8 of the base calculation.

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

9.0 APPENDICES AND ATTACHMENTS:

9.1 APPENDICES:

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

APPENDIX 9.1.1

Network Data

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:47
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 SYSTEM SUMMARY
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

BUSES							GENERATION		AREAS	ZONES	SYSTEM
TOTAL	PQ<>0.	PQ=0.	PE/E	PE/Q	SWING	OTHER	PLANTS	MACHS	USED	USED	BASE
199	146	40	0	0	1	12	5	5	1	1	10.0

AC BRANCHES							MULTI-SECTION		DC LINES	
TOTAL	RXB	RX	RXT	RX=0.	IN	OUT	LINES	SECTIONS	2-TERM	N-TERM
204	0	84	80	40	186	18	0	0	0	0

	TOTAL GENERATION	PQLOAD	I LOAD	Y LOAD	SHUNTS	CHARGING	LOSSES	SWING
MW	91.7	91.0	0.0	0.0	0.0	0.0	0.7	91.7
MVAR	63.6	54.3	0.0	0.0	0.0	0.0	9.3	63.6

TOTAL SYSTEM MISMATCH =	0.01	MVA	AT BUS		SWING	
LARGEST BUS MISMATCH =	0.00	MVA	4 2XR2*	4.36	1 SYSTEM	230
HIGH VOLTAGE =	1.0003	PU	14 2XR2X	4.16		
LOW VOLTAGE =	0.8381	PU	31407 3BD	0.48		

THRSHZ
0.000100

SOLV					FNSL			TYSL				
ACCP	ACCQ	ACCM	TOL	ITER	ACCN	TOL	ITER	ACCTY	TOL	ITER	BLOW UP	PQ BRAK
1.600	1.600	1.000	0.00010	100	1.00	0.100	20	1.000	0.000010	20	3.0	0.70

CCN 9

Calc No: E4C-082 CCN N-3 Sheet No. 257 Rev. 1
RE: LPM 9-30-94 IRE: RLD 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:47

SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3

E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

WORST MISMATCHES

BUS#	NAME	BSKV	MW	MVAR	MVA
4	2XR2*	4.36	0.00	0.00	0.00

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Calc No: E4C-082 CCN N-3 Rev. 1

RE: Lpmr 9-30-94 IRE: Ref 12-5-94

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:47
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 BUS DATA
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

BUS#	NAME	BSKV	CODE	VOLT	ANGLE	PLOAD	QLOAD	S N U N T	AREA	ZONE
1	SYSTEM	230	3	0.9478	0.0	0.0	0.0	0.0 0.0	1	1
2	2XR1*	4.36	1	0.9717	0.0	0.0	0.0	0.0 0.0	1	1
3	2XR1Y	4.16	1	0.9682	-4.0	17.0	10.5	0.0 0.0	1	1
4	2XR2*	4.36	1	0.9717	0.0	0.0	0.0	0.0 0.0	1	1
5	2XR2Y	4.16	1	0.9682	-4.0	17.0	10.5	0.0 0.0	1	1
6	3XR1*	4.36	1	0.9695	-0.2	0.0	0.0	0.0 0.0	1	1
7	3XR1Y	4.16	1	0.9683	-3.9	17.0	10.5	0.0 0.0	1	1
8	3XR2*	4.36	1	0.9691	-0.2	0.0	0.0	0.0 0.0	1	1
9	3XR2Y	4.16	1	0.9637	-4.3	17.0	10.5	0.0 0.0	1	1
12	2XR1X	4.16	1	0.9991	-1.7	0.0	0.0	0.0 0.0	1	1
14	2XR2X	4.16	1	1.0003	-1.6	0.0	0.0	0.0 0.0	1	1
16	3XR1X	4.16	1	0.9968	-1.9	0.0	0.0	0.0 0.0	1	1
18	3XR2X	4.16	1	0.9970	-1.9	0.0	0.0	0.0 0.0	1	1
24	2A04	4.16	1	0.9962	-1.8	0.0	0.0	0.0 0.0	1	1
26	2A06	4.16	1	0.9970	-1.7	0.0	0.0	0.0 0.0	1	1
34	3A04	4.16	1	0.9939	-2.0	0.0	0.0	0.0 0.0	1	1
36	3A06	4.16	1	0.9937	-2.0	0.0	0.0	0.0 0.0	1	1
41	2XMS	22.0	4	1.0000	0.0	0.0	0.0	0.0 0.0	1	1
44	2XU1Y	4.16	4	1.0000	0.0	0.0	0.0	0.0 0.0	1	1
45	2XU1*	4.36	4	1.0000	0.0	0.0	0.0	0.0 0.0	1	1
46	2XU1X	4.16	4	1.0000	0.0	0.0	0.0	0.0 0.0	1	1
51	3XMS	22.0	4	1.0000	0.0	0.0	0.0	0.0 0.0	1	1
54	3XU1Y	4.16	4	1.0000	0.0	0.0	0.0	0.0 0.0	1	1
55	3XU1*	4.36	4	1.0000	0.0	0.0	0.0	0.0 0.0	1	1
56	3XU1X	4.16	4	1.0000	0.0	0.0	0.0	0.0 0.0	1	1
214	2B04	0.48	1	0.9156	-7.7	0.0	0.0	0.0 0.0	1	1
216	2B06	0.48	1	0.9254	-7.1	0.0	0.0	0.0 0.0	1	1
314	3B04	0.48	1	0.9126	-8.0	0.0	0.0	0.0 0.0	1	1
316	3B06	0.48	1	0.9215	-7.4	0.0	0.0	0.0 0.0	1	1
2403	2P012	4.16	1	0.9957	-1.8	0.3	0.2	0.0 0.0	1	1
2404	2P141	4.16	1	0.9946	-1.8	0.7	0.3	0.0 0.0	1	1
2405	2P024	4.16	1	0.9958	-1.8	0.5	0.3	0.0 0.0	1	1
2406	2P025-A	4.16	1	0.9956	-1.8	0.5	0.3	0.0 0.0	1	1
2407	2P015	4.16	1	0.9957	-1.8	0.4	0.2	0.0 0.0	1	1
2408	2P017	4.16	1	0.9957	-1.8	0.4	0.2	0.0 0.0	1	1
2409	2P018-A	4.16	1	0.9957	-1.8	0.4	0.2	0.0 0.0	1	1
2410	2P112	4.16	1	0.9956	-1.8	0.3	0.2	0.0 0.0	1	1
2411	2P307	4.16	1	0.9956	-1.8	0.3	0.2	0.0 0.0	1	1
2412	E336-U2	4.16	1	0.9953	-1.8	0.5	0.3	0.0 0.0	1	1
2413	2G002	4.36	4	1.0000	0.0	0.0	0.0	0.0 0.0	1	1
2416	2T014	4.16	1	0.9959	-1.8	0.1	0.1	0.0 0.0	1	1
2420	2B04X	4.16	1	0.9959	-1.8	0.0	0.0	0.0 0.0	1	1
2603	2P504	4.16	1	0.9956	-1.8	0.7	0.3	0.0 0.0	1	1
2604	2P013	4.16	1	0.9965	-1.7	0.3	0.2	0.0 0.0	1	1
2605	2P026	4.16	1	0.9965	-1.7	0.5	0.3	0.0 0.0	1	1
2606	2P025-B	4.16	1	0.9963	-1.7	0.5	0.3	0.0 0.0	1	1
2607	2P016	4.16	1	0.9964	-1.7	0.4	0.2	0.0 0.0	1	1
2608	2P019	4.16	1	0.9965	-1.7	0.4	0.2	0.0 0.0	1	1
2609	2P018-B	4.16	1	0.9965	-1.7	0.4	0.2	0.0 0.0	1	1
2610	2P113	4.16	1	0.9965	-1.7	0.3	0.2	0.0 0.0	1	1
2611	2P114	4.16	1	0.9964	-1.7	0.3	0.2	0.0 0.0	1	1
2612	E335-U2	4.16	1	0.9961	-1.7	0.5	0.3	0.0 0.0	1	1
2613	2G003	4.36	4	1.0000	0.0	0.0	0.0	0.0 0.0	1	1
2620	2B06X	4.16	1	0.9966	-1.7	0.0	0.0	0.0 0.0	1	1
3402	E336-U3	4.16	1	0.9933	-2.0	0.5	0.3	0.0 0.0	1	1
3403	3P012	4.16	1	0.9934	-2.0	0.3	0.2	0.0 0.0	1	1

CCN 9

Sheet No. 259
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Lpmw 9-30-94 IRE: Rel 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:47
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 BUS DATA
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

BUS#	NAME	BSKV	CODE	VOLT	ANGLE	PLOAD	QLOAD	SHUNT	AREA	ZONE
3404	3P141	4.16	1	0.9924	-2.0	0.7	0.3	0.0	1	1
3405	3P024	4.16	1	0.9932	-2.0	0.5	0.3	0.0	1	1
3406	3P025-A	4.16	1	0.9932	-2.0	0.5	0.3	0.0	1	1
3407	3P015	4.16	1	0.9933	-2.0	0.4	0.2	0.0	1	1
3408	3P017	4.16	1	0.9933	-2.0	0.4	0.2	0.0	1	1
3409	3P018-A	4.16	1	0.9933	-2.0	0.4	0.2	0.0	1	1
3410	3P112	4.16	1	0.9933	-2.0	0.3	0.2	0.0	1	1
3411	3P307	4.16	1	0.9932	-2.0	0.3	0.2	0.0	1	1
3412	3T014	4.16	1	0.9936	-2.0	0.1	0.1	0.0	1	1
3413	3G002	4.36	4	1.0000	0.0	0.0	0.0	0.0	1	1
3417	3B04X	4.16	1	0.9934	-2.0	0.0	0.0	0.0	1	1
3602	E335-U3	4.16	1	0.9931	-2.0	0.5	0.3	0.0	1	1
3604	3P013	4.16	1	0.9932	-2.0	0.3	0.2	0.0	1	1
3605	3P026	4.16	1	0.9932	-2.0	0.5	0.3	0.0	1	1
3606	3P025-B	4.16	1	0.9932	-2.0	0.5	0.3	0.0	1	1
3607	3P016	4.16	1	0.9932	-2.0	0.4	0.2	0.0	1	1
3608	3P019	4.16	1	0.9932	-2.0	0.4	0.2	0.0	1	1
3609	3P018-B	4.16	1	0.9933	-2.0	0.4	0.2	0.0	1	1
3610	3P113	4.16	1	0.9933	-2.0	0.3	0.2	0.0	1	1
3611	3P114	4.16	1	0.9931	-2.0	0.3	0.2	0.0	1	1
3612	3P504	4.16	1	0.9920	-2.0	0.7	0.3	0.0	1	1
3613	3G003	4.36	4	1.0000	0.0	0.0	0.0	0.0	1	1
3619	3B06X	4.16	1	0.9933	-2.0	0.0	0.0	0.0	1	1
21402	2E61N	0.48	1	0.9045	-8.5	0.2	0.0	0.0	1	1
21403	2BRA	0.48	1	0.9152	-7.8	0.0	0.0	0.0	1	1
21405	2P191-A	0.46	1	0.9454	-7.7	0.1	0.0	0.0	1	1
21406	2E145	0.48	1	0.8820	-8.5	0.1	0.0	0.0	1	1
21407	2BD	0.48	1	0.8414	-9.1	0.0	0.0	0.0	1	1
21409	2A071	0.46	1	0.9343	-7.4	0.1	0.0	0.0	1	1
21410	2E399	0.46	1	0.9435	-7.7	0.1	0.0	0.0	1	1
21411	2E401	0.46	1	0.9410	-7.7	0.1	0.0	0.0	1	1
21413	2P190	0.46	1	0.9463	-7.7	0.1	0.0	0.0	1	1
21414	2BE	0.48	1	0.9128	-7.8	0.0	0.0	0.0	1	1
21415	2BY	0.48	1	0.9124	-7.9	0.0	0.0	0.0	1	1
21417	BQ-U2	0.48	1	0.9130	-7.8	0.0	0.0	0.0	1	1
21418	E418-U2	0.46	1	0.9232	-7.6	0.1	0.1	0.0	1	1
21419	2A074	0.46	1	0.9291	-7.4	0.1	0.0	0.0	1	1
21602	2E62N	0.48	1	0.9127	-7.9	0.2	0.0	0.0	1	1
21603	2BRB	0.48	1	0.9252	-7.1	0.0	0.0	0.0	1	1
21605	2BH	0.48	1	0.8684	-8.1	0.0	0.0	0.0	1	1
21606	2E146	0.48	1	0.8889	-7.9	0.1	0.0	0.0	1	1
21607	2BJ	0.48	1	0.9227	-7.1	0.0	0.0	0.0	1	1
21609	2A072	0.46	1	0.9424	-6.7	0.1	0.0	0.0	1	1
21610	2E490	0.46	1	0.9490	-7.0	0.1	0.0	0.0	1	1
21611	2E402	0.46	1	0.9423	-7.0	0.1	0.0	0.0	1	1
21613	2P192	0.46	1	0.9521	-7.0	0.1	0.0	0.0	1	1
21614	2BZ	0.48	1	0.9236	-7.1	0.0	0.0	0.0	1	1
21615	E419-U2	0.46	1	0.9591	-7.1	0.1	0.1	0.0	1	1
21617	2P191-B	0.46	1	0.9514	-7.0	0.1	0.0	0.0	1	1
21618	BS-U2	0.48	1	0.9223	-7.1	0.0	0.0	0.0	1	1
21619	2A073	0.46	1	0.9355	-6.6	0.1	0.0	0.0	1	1
22403	2BRA-M	0.48	1	0.9152	-7.8	0.0	0.0	0.0	1	1
22407	2BD-M	0.48	1	0.8414	-9.1	0.0	0.0	0.0	1	1
22414	2BE-M	0.48	1	0.9128	-7.8	0.0	0.1	0.0	1	1
22415	2BY-M	0.48	1	0.9124	-7.9	0.1	0.1	0.0	1	1
22417	BQ-U2-M	0.48	1	0.9130	-7.8	0.0	0.0	0.0	1	1

CCN 9

Calc No: E4C-082 CCN N-3 Rev. 1
Sheet No. 260
RE: Lynn 9-30-94 IRE: Rad 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:47
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 BUS DATA
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

BUS#	NAME	BSKV	CODE	VOLT	ANGLE	PLOAD	QLOAD	S H U N T	AREA	ZONE
22603	2BRB-M	0.48	1	0.9252	-7.1	0.0	0.0	0.0	1	1
22605	2BH-M	0.48	1	0.8684	-8.1	0.0	0.0	0.0	1	1
22607	2BJ-M	0.48	1	0.9227	-7.1	0.0	0.1	0.0	1	1
22614	2BZ-M	0.48	1	0.9236	-7.1	0.0	0.0	0.0	1	1
22618	BS-U2-M	0.48	1	0.9223	-7.1	0.0	0.0	0.0	1	1
23403	2BRA-S	0.48	1	0.9152	-7.8	0.0	0.0	0.0	1	1
23407	2BD-S	0.48	1	0.8414	-9.1	0.0	0.0	0.0	1	1
23414	2BE-S	0.48	1	0.9128	-7.8	0.1	0.1	0.0	1	1
23415	2BY-S	0.48	1	0.9124	-7.8	0.1	0.1	0.0	1	1
23417	BQ-U2-S	0.48	1	0.9130	-7.8	0.1	0.0	0.0	1	1
23603	2BRB-S	0.48	1	0.9252	-7.1	0.0	0.0	0.0	1	1
23605	2BH-S	0.48	1	0.8684	-8.1	0.0	0.0	0.0	1	1
23607	2BJ-S	0.48	1	0.9227	-7.1	0.1	0.1	0.0	1	1
23614	2BZ-S	0.48	1	0.9236	-7.1	0.1	0.1	0.0	1	1
23618	BS-U2-S	0.48	1	0.9223	-7.1	0.0	0.0	0.0	1	1
24412	2A274	0.46	1	0.8747	-9.0	0.0	0.0	0.0	1	1
24413	2A275	0.46	1	0.8717	-8.9	0.0	0.0	0.0	1	1
24417	P162-U2	0.46	1	0.9398	-7.5	0.0	0.0	0.0	1	1
24421	2E550	0.46	1	0.8713	-8.9	0.0	0.0	0.0	1	1
24422	2E546	0.46	1	0.8720	-8.9	0.0	0.0	0.0	1	1
24434	2P009	0.46	1	0.9389	-7.6	0.0	0.0	0.0	1	1
24606	2E547	0.46	1	0.9008	-8.0	0.0	0.0	0.0	1	1
24607	2E549	0.46	1	0.9001	-7.9	0.0	0.0	0.0	1	1
24611	2A276	0.46	1	0.9031	-8.0	0.0	0.0	0.0	1	1
24612	2A277	0.46	1	0.9005	-8.0	0.0	0.0	0.0	1	1
24618	P160-U2	0.46	1	0.9561	-7.0	0.0	0.0	0.0	1	1
24622	2P010	0.46	1	0.9504	-6.9	0.0	0.0	0.0	1	1
31402	3E61N	0.48	1	0.9016	-8.7	0.2	0.0	0.0	1	1
31403	3BRA	0.48	1	0.9123	-8.0	0.0	0.0	0.0	1	1
31405	3P191-A	0.46	1	0.9406	-7.9	0.1	0.0	0.0	1	1
31406	3E145	0.48	1	0.8880	-8.5	0.1	0.0	0.0	1	1
31407	3BD	0.48	1	0.8381	-9.3	0.0	0.0	0.0	1	1
31409	3A071	0.46	1	0.9298	-7.6	0.1	0.0	0.0	1	1
31410	3E399	0.46	1	0.9406	-7.9	0.1	0.0	0.0	1	1
31411	3E401	0.46	1	0.9386	-7.9	0.1	0.0	0.0	1	1
31413	3P190	0.46	1	0.9433	-7.9	0.1	0.0	0.0	1	1
31414	3BE	0.48	1	0.9105	-8.0	0.1	0.0	0.0	1	1
31415	3BY	0.48	1	0.9104	-8.0	0.0	0.0	0.0	1	1
31417	BQ-U3	0.48	1	0.9039	-8.1	0.0	0.0	0.0	1	1
31418	E418-U3	0.46	1	0.9142	-7.8	0.1	0.1	0.0	1	1
31419	3A074	0.46	1	0.9244	-7.5	0.1	0.0	0.0	1	1
31602	3E62N	0.48	1	0.9091	-8.2	0.2	0.0	0.0	1	1
31603	3BRB	0.48	1	0.9212	-7.4	0.0	0.0	0.0	1	1
31605	3BH	0.48	1	0.8649	-8.4	0.0	0.0	0.0	1	1
31606	3E146	0.48	1	0.8854	-8.2	0.1	0.0	0.0	1	1
31607	3BJ	0.48	1	0.9186	-7.4	0.0	0.0	0.0	1	1
31609	3A072	0.46	1	0.9359	-7.0	0.1	0.0	0.0	1	1
31610	3E400	0.46	1	0.9445	-7.3	0.1	0.0	0.0	1	1
31611	3E402	0.46	1	0.9374	-7.2	0.1	0.0	0.0	1	1
31613	3P192	0.46	1	0.9480	-7.3	0.1	0.0	0.0	1	1
31614	3BZ	0.48	1	0.9196	-7.4	0.0	0.0	0.0	1	1
31615	E419-U3	0.46	1	0.9499	-7.3	0.1	0.1	0.0	1	1
31617	3P191-B	0.46	1	0.9480	-7.3	0.1	0.0	0.0	1	1
31618	BS-U3	0.48	1	0.9154	-7.5	0.0	0.0	0.0	1	1
31619	3A073	0.46	1	0.9304	-6.9	0.1	0.0	0.0	1	1
32403	3BRA-M	0.48	1	0.9123	-8.0	0.0	0.0	0.0	1	1

Calc No: E4C-082 CCN N-3 Sheet No. 261
RE: LPM 9-30-94 IRE: [signature] 10-5-94 Rev. 1

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:47
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 BUS DATA
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

BUS#	NAME	BSKV	CODE	VOLT	ANGLE	PLOAD	QLOAD	SHUNT	AREA	ZONE
32407	3BD-M	0.48	1	0.8381	-9.3	0.0	0.0	0.0	1	1
32414	3BE-M	0.48	1	0.9105	-8.0	0.0	0.1	0.0	1	1
32415	3BY-M	0.48	1	0.9104	-8.0	0.1	0.1	0.0	1	1
32417	BQ-U3-M	0.48	1	0.9039	-8.1	0.0	0.0	0.0	1	1
32603	3BRB-M	0.48	1	0.9212	-7.4	0.0	0.0	0.0	1	1
32605	3BH-M	0.48	1	0.8649	-8.4	0.0	0.0	0.0	1	1
32607	3BJ-M	0.48	1	0.9186	-7.4	0.0	0.1	0.0	1	1
32614	3BZ-M	0.48	1	0.9196	-7.4	0.1	0.0	0.0	1	1
32618	BS-U3-M	0.48	1	0.9154	-7.5	0.0	0.0	0.0	1	1
33403	3BRA-S	0.48	1	0.9123	-8.0	0.0	0.0	0.0	1	1
33407	3BD-S	0.48	1	0.8381	-9.3	0.0	0.0	0.0	1	1
33414	3BE-S	0.48	1	0.9105	-8.0	0.1	0.1	0.0	1	1
33415	3BY-S	0.48	1	0.9104	-8.0	0.1	0.1	0.0	1	1
33417	BQ-U3-S	0.48	1	0.9039	-8.1	0.1	0.0	0.0	1	1
33603	3BRB-S	0.48	1	0.9212	-7.4	0.0	0.0	0.0	1	1
33605	3BH-S	0.48	1	0.8649	-8.4	0.0	0.0	0.0	1	1
33607	3BJ-S	0.48	1	0.9186	-7.4	0.1	0.1	0.0	1	1
33614	3BZ-S	0.48	1	0.9196	-7.4	0.1	0.1	0.0	1	1
33618	BS-U3-S	0.48	1	0.9154	-7.5	0.0	0.0	0.0	1	1
34412	3A274	0.46	1	0.8714	-9.3	0.0	0.0	0.0	1	1
34413	3A275	0.46	1	0.8681	-9.2	0.0	0.0	0.0	1	1
34417	P162-U3	0.46	1	0.9302	-7.8	0.0	0.0	0.0	1	1
34421	3E550	0.46	1	0.8675	-9.1	0.0	0.0	0.0	1	1
34422	3E546	0.46	1	0.8687	-9.2	0.0	0.0	0.0	1	1
34434	3P009	0.46	1	0.9382	-7.8	0.0	0.0	0.0	1	1
34606	3E547	0.46	1	0.8968	-8.2	0.0	0.0	0.0	1	1
34607	3E549	0.46	1	0.8964	-8.2	0.0	0.0	0.0	1	1
34611	3A276	0.46	1	0.8999	-8.3	0.0	0.0	0.0	1	1
34612	3A277	0.46	1	0.8965	-8.2	0.0	0.0	0.0	1	1
34618	P160-U3	0.46	1	0.9489	-7.3	0.0	0.0	0.0	1	1
34622	3P010	0.46	1	0.9453	-7.2	0.0	0.0	0.0	1	1

Sheet No. 262
Calc No: E4C-082 CCN N-3 Rev. 1
RE: LPM 9-30-94 IRE: RL 10-5-94

CCNG

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:47
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 SWITCHED
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA SHUNT DATA
BUS# MOD VH1 VLO SHUNT X--------X X--------X X--------X X--------X REMOTE

* NONE *

CCN Q

Sheet No. 263
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Qam 9-30-94 IRE: RLP 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:47
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

BUS#	NAME	BSKV	COD	MCNS	PGEN	QGEN	QMAX	QMIN	VSCHED	VACT.	GENERATING PLANT DATA REMOT	PCT Q
1	SYSTEM	230	3	1	91.7	63.6	9999.0	-9999.0	0.9478	0.9478		
2413	2G002	4.36	4	1	0.0	0.0	0.0	0.0	1.0000	1.0000		
2613	2G003	4.36	4	1	0.0	0.0	0.0	0.0	1.0000	1.0000		
3413	3G002	4.36	4	1	0.0	0.0	0.0	0.0	1.0000	1.0000		
3613	3G003	4.36	4	1	0.0	0.0	0.0	0.0	1.0000	1.0000		

Sheet No. 264
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Lpm 9-30-94 IRE: [illegible]

CCN

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:47
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

GENERATOR UNIT DATA

BUS#	NAME	BSKV	COD	ID	ST	PGEN	QGEN	QMAX	QMIN	PMAX	PMIN	MBASE	Z S O R C E	X T R A N	GENTAP
1	SYSTEM	230	3	1	1	92	64	9999	-9999	9999	-9999	10	0.0000 0.0011		
2413	2G002	4.36	4	1	0	0	0	4	0	9999	-9999	6	0.0000 0.1070		
2613	2G003	4.36	4	1	0	0	0	4	0	9999	-9999	6	0.0000 0.1070		
3413	3G002	4.36	4	1	0	0	0	4	0	9999	-9999	6	0.0000 0.1070		
3613	3G003	4.36	4	1	0	0	0	4	0	9999	-9999	6	0.0000 0.1070		

CCNG

Sheet No. 265
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Lpm 9-30-94 IRE: [illegible] 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:47
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 BRANCH DATA
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
1*	2	1	SYSTEM	2XR1*	0.0000	0.0003	0.0000	F	1	0	0	0
1*	4	1	SYSTEM	2XR2*	0.0000	0.0003	0.0000	F	1	0	0	0
1*	6	1	SYSTEM	3XR1*	0.0001	0.0015	0.0000	F	1	0	0	0
1*	8	1	SYSTEM	3XR2*	0.0001	0.0018	0.0000	F	1	0	0	0
1	41*	1	SYSTEM	2XMS	0.0000	0.0010	0.0000	T	0	0	0	0
1	51*	1	SYSTEM	3XMS	0.0000	0.0010	0.0000	T	0	0	0	0
2	3*	1	2XR1*	2XR1Y	0.0017	0.0372	0.0000	T	1	0	0	0
2	12*	1	2XR1*	2XR1X	0.0022	0.0467	0.0000	T	1	0	0	0
4	5*	1	2XR2*	2XR2Y	0.0017	0.0372	0.0000	T	1	0	0	0
4	14*	1	2XR2*	2XR2X	0.0022	0.0467	0.0000	T	1	0	0	0
6	7*	1	3XR1*	3XR1Y	0.0017	0.0355	0.0000	T	1	0	0	0
6	16*	1	3XR1*	3XR1X	0.0022	0.0464	0.0000	T	1	0	0	0
8	9*	1	3XR2*	3XR2Y	0.0018	0.0382	0.0000	T	1	0	0	0
8	18*	1	3XR2*	3XR2X	0.0023	0.0477	0.0000	T	1	0	0	0
12*	24	1	2XR1X	2A04	0.0026	0.0039	0.0000		1	0	0	0
14*	26	1	2XR2X	2A06	0.0031	0.0048	0.0000		1	0	0	0
16*	34	1	3XR1X	3A04	0.0026	0.0040	0.0000		1	0	0	0
18*	36	1	3XR2X	3A06	0.0031	0.0047	0.0000		1	0	0	0
24*	34	1	2A04	3A04	0.0014	0.0017	0.0000		0	0	0	0
24	44*	1	2A04	2XU1Y	0.0031	0.0047	0.0000		0	0	0	0
24*	2403	1	2A04	2P012	0.0110	0.0083	0.0000		1	0	0	0
24*	2404	1	2A04	2P141	0.0176	0.0132	0.0000		1	0	0	0
24*	2405	1	2A04	2P024	0.0068	0.0051	0.0000		1	0	0	0
24*	2406	1	2A04	2P025-A	0.0097	0.0073	0.0000		1	0	0	0
24*	2407	1	2A04	2P015	0.0103	0.0078	0.0000		1	0	0	0
24*	2408	1	2A04	2P017	0.0104	0.0079	0.0000		1	0	0	0
24*	2409	1	2A04	2P018-A	0.0098	0.0074	0.0000		1	0	0	0
24*	2410	1	2A04	2P112	0.0118	0.0089	0.0000		1	0	0	0
24*	2411	1	2A04	2P307	0.0130	0.0097	0.0000		1	0	0	0
24*	2412	1	2A04	E336-U2	0.0140	0.0105	0.0000		1	0	0	0
24	2413*	1	2A04	2G002	0.0087	0.0106	0.0000	T	0	0	0	0
24*	2416	1	2A04	2T014	0.0184	0.0139	0.0000		1	0	0	0
24*	2420	1	2A04	2B04X	0.0015	0.0012	0.0000		1	0	0	0
26*	36	1	2A06	3A06	0.0011	0.0013	0.0000		0	0	0	0
26	46*	1	2A06	2XU1X	0.0032	0.0049	0.0000		0	0	0	0
26*	2603	1	2A06	2P504	0.0149	0.0112	0.0000		1	0	0	0
26*	2604	1	2A06	2P013	0.0104	0.0079	0.0000		1	0	0	0
26*	2605	1	2A06	2P026	0.0065	0.0049	0.0000		1	0	0	0
26*	2606	1	2A06	2P025-B	0.0098	0.0074	0.0000		1	0	0	0
26*	2607	1	2A06	2P016	0.0097	0.0073	0.0000		1	0	0	0
26*	2608	1	2A06	2P019	0.0088	0.0067	0.0000		1	0	0	0
26*	2609	1	2A06	2P018-B	0.0087	0.0065	0.0000		1	0	0	0
26*	2610	1	2A06	2P113	0.0095	0.0072	0.0000		1	0	0	0
26*	2611	1	2A06	2P114	0.0119	0.0090	0.0000		1	0	0	0
26*	2612	1	2A06	E335-U2	0.0123	0.0093	0.0000		1	0	0	0
26	2613*	1	2A06	2G003	0.0063	0.0077	0.0000	T	0	0	0	0
26*	2620	1	2A06	2B06X	0.0015	0.0012	0.0000		1	0	0	0
34	54*	1	3A04	3XU1Y	0.0031	0.0047	0.0000		0	0	0	0
34*	3402	1	3A04	E336-U3	0.0081	0.0061	0.0000		1	0	0	0
34*	3403	1	3A04	3P012	0.0102	0.0077	0.0000		1	0	0	0
34*	3404	1	3A04	3P141	0.0166	0.0125	0.0000		1	0	0	0
34*	3405	1	3A04	3P024	0.0101	0.0076	0.0000		1	0	0	0
34*	3406	1	3A04	3P025-A	0.0096	0.0072	0.0000		1	0	0	0
34*	3407	1	3A04	3P015	0.0104	0.0078	0.0000		1	0	0	0
34*	3408	1	3A04	3P017	0.0112	0.0084	0.0000		1	0	0	0
34*	3409	1	3A04	3P018-A	0.0096	0.0073	0.0000		1	0	0	0

CCNG

Calc No: E4C-082 CCN N-3 Sheet No. 266
RE: Lpaw 9-30-94 IRE: Rob 10-5-94 Rev. 1

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:47
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 BRANCH DATA
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34*	3410	1	3A04	3P112	0.0110	0.0083	0.0000		1	0	0	0
34*	3411	1	3A04	3P307	0.0132	0.0099	0.0000		1	0	0	0
34*	3412	1	3A04	3T014	0.0142	0.0107	0.0000		1	0	0	0
34	3413*	1	3A04	3G002	0.0060	0.0073	0.0000	T	0	0	0	0
34*	3417	1	3A04	3B04X	0.0022	0.0016	0.0000		1	0	0	0
36	56*	1	3A06	3XU1X	0.0032	0.0049	0.0000		0	0	0	0
36*	3602	1	3A06	E335-U3	0.0087	0.0065	0.0000		1	0	0	0
36*	3604	1	3A06	3P013	0.0107	0.0081	0.0000		1	0	0	0
36*	3605	1	3A06	3P026	0.0072	0.0055	0.0000		1	0	0	0
36*	3606	1	3A06	3P025-B	0.0077	0.0058	0.0000		1	0	0	0
36*	3607	1	3A06	3P016	0.0099	0.0074	0.0000		1	0	0	0
36*	3608	1	3A06	3P019	0.0086	0.0065	0.0000		1	0	0	0
36*	3609	1	3A06	3P018-B	0.0079	0.0059	0.0000		1	0	0	0
36*	3610	1	3A06	3P113	0.0088	0.0066	0.0000		1	0	0	0
36*	3611	1	3A06	3P114	0.0115	0.0086	0.0000		1	0	0	0
36*	3612	1	3A06	3P504	0.0190	0.0143	0.0000		1	0	0	0
36	3613*	1	3A06	3G003	0.0063	0.0077	0.0000	T	0	0	0	0
36*	3619	1	3A06	3B06Z	0.0017	0.0012	0.0000		1	0	0	0
41*	45	1	2XMS	2XU1*	0.0000	0.0007	0.0000	F	0	0	0	0
44*	45	1	2XU1Y	2XU1*	0.0021	0.0399	0.0000	F	0	0	0	0
45	46*	1	2XU1*	2XU1X	0.0021	0.0399	0.0000	T	0	0	0	0
51*	55	1	3XMS	3XU1*	0.0000	0.0007	0.0000	F	0	0	0	0
54*	55	1	3XU1Y	3XU1*	0.0021	0.0399	0.0000	F	0	0	0	0
55	56*	1	3XU1*	3XU1X	0.0021	0.0399	0.0000	T	0	0	0	0
214	2420*	1	2B04	2B04X	0.0960	0.6720	0.0000	T	1	0	0	0
214*	21402	1	2B04	2E61N	0.4985	0.5265	0.0000		1	0	0	0
214*	21403	1	2B04	2BRA	0.1055	0.1114	0.0000		1	0	0	0
214	21405*	1	2B04	2P191-A	1.1325	0.6523	0.0000	T	1	0	0	0
214*	21406	1	2B04	2E145	3.9484	1.4658	0.0000		1	0	0	0
214*	21407	1	2B04	2BD	1.7456	1.8436	0.0000		1	0	0	0
214	21409*	1	2B04	2A071	2.6447	0.9818	0.0000	T	1	0	0	0
214	21410*	1	2B04	2E399	1.2311	0.6910	0.0000	T	1	0	0	0
214	21411*	1	2B04	2E401	1.4868	0.8345	0.0000	T	1	0	0	0
214	21413*	1	2B04	2P190	1.0428	0.5853	0.0000	T	1	0	0	0
214*	21414	1	2B04	2BE	0.1021	0.1078	0.0000		1	0	0	0
214*	21415	1	2B04	2BY	0.0601	0.1117	0.0000		1	0	0	0
214*	21417	1	2B04	BQ-U2	0.1021	0.1078	0.0000		1	0	0	0
214	21418*	1	2B04	E418-U2	1.7020	0.9553	0.0000	T	1	0	0	0
214	21419*	1	2B04	2A074	3.2645	1.2119	0.0000	T	1	0	0	0
216	2620*	1	2B06	2B06X	0.0960	0.6720	0.0000	T	1	0	0	0
216*	21602	1	2B06	2E62N	0.5785	0.6109	0.0000		1	0	0	0
216*	21603	1	2B06	2BRB	0.0630	0.0665	0.0000		1	0	0	0
216*	21605	1	2B06	2BH	1.3866	1.4645	0.0000		1	0	0	0
216*	21606	1	2B06	2E146	4.3170	1.6027	0.0000		1	0	0	0
216*	21607	1	2B06	2BJ	0.1055	0.1114	0.0000		1	0	0	0
216	21609*	1	2B06	2A072	2.9279	1.0870	0.0000	T	1	0	0	0
216	21610*	1	2B06	2E400	1.7290	0.9704	0.0000	T	1	0	0	0
216	21611*	1	2B06	2E402	2.4051	1.3499	0.0000	T	1	0	0	0
216	21613*	1	2B06	2P192	1.5473	0.8685	0.0000	T	1	0	0	0
216*	21614	1	2B06	2BZ	0.0462	0.0859	0.0000		1	0	0	0
216	21615*	1	2B06	E419-U2	0.3504	0.2202	0.0000	T	1	0	0	0
216	21617*	1	2B06	2P191-B	1.6168	0.9242	0.0000	T	1	0	0	0
216*	21618	1	2B06	BS-U2	0.2178	0.2300	0.0000		1	0	0	0
216	21619*	1	2B06	2A073	3.7667	1.3984	0.0000	T	1	0	0	0
314	3417*	1	3B04	3B04X	0.0960	0.6720	0.0000	T	1	0	0	0
314*	31402	1	3B04	3E61N	0.4934	0.5211	0.0000		1	0	0	0

CCN 9

Calc No: E4C-082 CCN N-3 Sheet No. 267
RE: Lpan 9-30-94 IRE: Rel 10-5-94 Rev. 1

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:47
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 BRANCH DATA
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
314*	31403	1	3B04	3BRA	0.0851	0.0898	0.0000		1	0	0	0
314	31405*	1	3B04	3P191-A	1.3253	0.7439	0.0000	T	1	0	0	0
314*	31406	1	3B04	3E145	2.9119	1.0810	0.0000		1	0	0	0
314*	31407	1	3B04	3BD	1.7456	1.8436	0.0000		1	0	0	0
314	31409*	1	3B04	3A071	2.7997	1.0394	0.0000	T	1	0	0	0
314	31410*	1	3B04	3E399	1.2109	0.6797	0.0000	T	1	0	0	0
314	31411*	1	3B04	3E401	1.4128	0.7930	0.0000	T	1	0	0	0
314	31413*	1	3B04	3P190	1.0226	0.5740	0.0000	T	1	0	0	0
314*	31414	1	3B04	3BE	0.0749	0.0791	0.0000		1	0	0	0
314*	31415	1	3B04	3BY	0.0416	0.0773	0.0000		1	0	0	0
314*	31417	1	3B04	BQ-U3	0.3301	0.3486	0.0000		1	0	0	0
314	31418*	1	3B04	E418-U3	1.9913	1.1177	0.0000	T	1	0	0	0
314	31419*	1	3B04	3A074	3.4408	1.2774	0.0000	T	1	0	0	0
316	3619*	1	3B06	3B06X	0.0960	0.6720	0.0000	T	1	0	0	0
316*	31602	1	3B06	3E62N	0.5615	0.5930	0.0000		1	0	0	0
316*	31603	1	3B06	3BRB	0.0681	0.0719	0.0000		1	0	0	0
316*	31605	1	3B06	3BH	1.3713	1.4483	0.0000		1	0	0	0
316*	31606	1	3B06	3E146	4.2529	1.5789	0.0000		1	0	0	0
316*	31607	1	3B06	3BJ	0.1123	0.1186	0.0000		1	0	0	0
316	31609*	1	3B06	3A072	3.2057	1.1901	0.0000	T	1	0	0	0
316	31610*	1	3B06	3E400	1.7659	0.9912	0.0000	T	1	0	0	0
316	31611*	1	3B06	3E402	2.4757	1.3896	0.0000	T	1	0	0	0
316	31613*	1	3B06	3P192	1.5473	0.8685	0.0000	T	1	0	0	0
316*	31614	1	3B06	3BZ	0.0462	0.0859	0.0000		1	0	0	0
316	31615*	1	3B06	E419-U3	0.6262	0.3751	0.0000	T	1	0	0	0
316	31617*	1	3B06	3P191-B	1.5473	0.8685	0.0000	T	1	0	0	0
316*	31618	1	3B06	BS-U3	0.4151	0.4384	0.0000		1	0	0	0
316	31619*	1	3B06	3A073	3.8682	1.4361	0.0000	T	1	0	0	0
21403*	22403	1	2BRA	2BRA-M	0.0000	0.0001	0.0000	Z	1	0	0	0
21403*	23403	1	2BRA	2BRA-S	0.0000	0.0001	0.0000	Z	1	0	0	0
21407*	22407	1	2BD	2BD-M	0.0000	0.0001	0.0000	Z	1	0	0	0
21407*	23407	1	2BD	2BD-S	0.0000	0.0001	0.0000	Z	1	0	0	0
21407	24412*	1	2BD	2A274	0.5272	0.0961	0.0000	T	1	0	0	0
21407	24413*	1	2BD	2A275	1.0033	0.1828	0.0000	T	1	0	0	0
21407	24421*	1	2BD	2E550	1.4454	0.2634	0.0000	T	1	0	0	0
21407	24422*	1	2BD	2E546	1.3094	0.2386	0.0000	T	1	0	0	0
21414*	22414	1	2BE	2BE-M	0.0000	0.0001	0.0000	Z	1	0	0	0
21414*	23414	1	2BE	2BE-S	0.0000	0.0001	0.0000	Z	1	0	0	0
21415*	22415	1	2BY	2BY-M	0.0000	0.0001	0.0000	Z	1	0	0	0
21415*	23415	1	2BY	2BY-S	0.0000	0.0001	0.0000	Z	1	0	0	0
21415	24434*	1	2BY	2P009	4.4724	0.8150	0.0000	T	1	0	0	0
21417*	22417	1	BQ-U2	BQ-U2-M	0.0000	0.0001	0.0000	Z	1	0	0	0
21417*	23417	1	BQ-U2	BQ-U2-S	0.0000	0.0001	0.0000	Z	1	0	0	0
21417	24417*	1	BQ-U2	P162-U2	3.9792	0.7252	0.0000	T	1	0	0	0
21603*	22603	1	2BRB	2BRB-M	0.0000	0.0001	0.0000	Z	1	0	0	0
21603*	23603	1	2BRB	2BRB-S	0.0000	0.0001	0.0000	Z	1	0	0	0
21605*	22605	1	2BH	2BH-M	0.0000	0.0001	0.0000	Z	1	0	0	0
21605*	23605	1	2BH	2BH-S	0.0000	0.0001	0.0000	Z	1	0	0	0
21605	24606*	1	2BH	2E547	1.1904	0.2169	0.0000	T	1	0	0	0
21605	24607*	1	2BH	2E549	1.3604	0.2479	0.0000	T	1	0	0	0
21605	24611*	1	2BH	2A276	0.4932	0.0899	0.0000	T	1	0	0	0
21605	24612*	1	2BH	2A277	0.9183	0.1673	0.0000	T	1	0	0	0
21607*	22607	1	2BJ	2BJ-M	0.0000	0.0001	0.0000	Z	1	0	0	0
21607*	23607	1	2BJ	2BJ-S	0.0000	0.0001	0.0000	Z	1	0	0	0
21614*	22614	1	2BZ	2BZ-M	0.0000	0.0001	0.0000	Z	1	0	0	0
21614*	23614	1	2BZ	2BZ-S	0.0000	0.0001	0.0000	Z	1	0	0	0

CCN 9

Sheet No. 268
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Lgn 9-30-94 IRE: RLD 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:47
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 BRANCH DATA
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
21614	24622*	1	2BZ	2P010	4.5914	0.8367	0.0000	T	1	0	0	0
21618*	22618	1	BS-U2	BS-U2-M	0.0000	0.0001	0.0000	Z	1	0	0	0
21618*	23618	1	BS-U2	BS-U2-S	0.0000	0.0001	0.0000	Z	1	0	0	0
21618	24618*	1	BS-U2	P160-U2	1.9726	0.3595	0.0000	T	1	0	0	0
31403*	32403	1	3BRA	3BRA-M	0.0000	0.0001	0.0000	Z	1	0	0	0
31403*	33403	1	3BRA	3BRA-S	0.0000	0.0001	0.0000	Z	1	0	0	0
31407*	32407	1	3BD	3BD-M	0.0000	0.0001	0.0000	Z	1	0	0	0
31407*	33407	1	3BD	3BD-S	0.0000	0.0001	0.0000	Z	1	0	0	0
31407	34412*	1	3BD	3A274	0.4932	0.0899	0.0000	T	1	0	0	0
31407	34413*	1	3BD	3A275	1.0203	0.1859	0.0000	T	1	0	0	0
31407	34421*	1	3BD	3E550	1.5135	0.2758	0.0000	T	1	0	0	0
31407	34422*	1	3BD	3E546	1.2584	0.2293	0.0000	T	1	0	0	0
31414*	32414	1	3BE	3BE-M	0.0000	0.0001	0.0000	Z	1	0	0	0
31414*	33414	1	3BE	3BE-S	0.0000	0.0001	0.0000	Z	1	0	0	0
31415*	32415	1	3BY	3BY-M	0.0000	0.0001	0.0000	Z	1	0	0	0
31415*	33415	1	3BY	3BY-S	0.0000	0.0001	0.0000	Z	1	0	0	0
31415	34434*	1	3BY	3P009	3.9962	0.7253	0.0000	T	1	0	0	0
31417*	32417	1	BQ-U3	BQ-U3-M	0.0000	0.0001	0.0000	Z	1	0	0	0
31417*	33417	1	BQ-U3	BQ-U3-S	0.0000	0.0001	0.0000	Z	1	0	0	0
31417	34417*	1	BQ-U3	P162-U3	3.9792	0.7252	0.0000	T	1	0	0	0
31603*	32603	1	3BRB	3BRB-M	0.0000	0.0001	0.0000	Z	1	0	0	0
31603*	33603	1	3BRB	3BRB-S	0.0000	0.0001	0.0000	Z	1	0	0	0
31605*	32605	1	3BH	3BH-M	0.0000	0.0001	0.0000	Z	1	0	0	0
31605*	33605	1	3BH	3BH-S	0.0000	0.0001	0.0000	Z	1	0	0	0
31605	34606*	1	3BH	3E547	1.2584	0.2293	0.0000	T	1	0	0	0
31605	34607*	1	3BH	3E549	1.3604	0.2479	0.0000	T	1	0	0	0
31605	34611*	1	3BH	3A276	0.4251	0.0775	0.0000	T	1	0	0	0
31605	34612*	1	3BH	3A277	0.9693	0.1766	0.0000	T	1	0	0	0
31607*	32607	1	3BJ	3BJ-M	0.0000	0.0001	0.0000	Z	1	0	0	0
31607*	33607	1	3BJ	3BJ-S	0.0000	0.0001	0.0000	Z	1	0	0	0
31614*	32614	1	3BZ	3BZ-M	0.0000	0.0001	0.0000	Z	1	0	0	0
31614*	33614	1	3BZ	3BZ-S	0.0000	0.0001	0.0000	Z	1	0	0	0
31614	34622*	1	3BZ	3P010	4.8805	0.8894	0.0000	T	1	0	0	0
31618*	32618	1	BS-U3	BS-U3-M	0.0000	0.0001	0.0000	Z	1	0	0	0
31618*	33618	1	BS-U3	BS-U3-S	0.0000	0.0001	0.0000	Z	1	0	0	0
31618	34618*	1	BS-U3	P160-U3	1.9726	0.3595	0.0000	T	1	0	0	0

Calc No: E4C-082 CCN N-3 Rev. 1 Sheet No. 269
RE: Upon 9-30-94 IRE: [illegible] 10-5-94

CCN9

PTI INTERACTIVE POWER SYSTEM SIMULATOR---PSS/E THU, SEP 15 1994 14:47
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 TRANSFORMER DATA
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

FROM	TO	CKT	TP	RATIO	ANGLE	RG	CONT	RMAX	RMIN	VMAX	VMIN	STEP	TAB
1	2	1	F	0.9750	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
1	4	1	F	0.9750	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
1	6	1	F	0.9750	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
1	8	1	F	0.9750	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
1	41	1	T	0.9727	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
1	51	1	T	0.9727	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
2	3	1	T	1.0481	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
2	12	1	T	1.0481	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
4	5	1	T	1.0481	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
4	14	1	T	1.0481	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
6	7	1	T	1.0481	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
6	16	1	T	1.0481	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
8	9	1	T	1.0481	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
8	18	1	T	1.0481	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
24	2413	1	T	0.9541	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
26	2613	1	T	0.9541	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
34	3413	1	T	0.9541	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
36	3613	1	T	0.9541	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
41	45	1	F	0.9500	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
44	45	1	F	1.0481	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
45	46	1	T	1.0481	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
51	55	1	F	0.9500	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
54	55	1	F	1.0481	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
55	56	1	T	1.0481	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
214	2420	1	T	0.9988	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
214	21405	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
214	21409	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
214	21410	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
214	21411	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
214	21413	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
214	21418	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
214	21419	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
216	2620	1	T	0.9988	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
216	21609	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
216	21610	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
216	21611	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
216	21613	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
216	21615	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
216	21617	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
216	21619	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
314	3417	1	T	0.9988	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
314	31405	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
314	31409	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
314	31410	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
314	31411	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
314	31413	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
314	31418	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
314	31419	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
316	3619	1	T	0.9988	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
316	31609	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
316	31610	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
316	31611	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
316	31613	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
316	31615	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
316	31617	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
316	31619	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	

Sheet No. 270
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Lpmr 9-30-94 IRE: [illegible] 10-5-94

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:47
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 TRANSFORMER DATA
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

FROM	TO	CKT	TP	RATIO	ANGLE	RG	CONT	RMAX	RMIN	VMAX	VMIN	STEP	TAB
21407	24412	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
21407	24413	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
21407	24421	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
21407	24422	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
21415	24434	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
21417	24417	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
21605	24606	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
21605	24607	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
21605	24611	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
21605	24612	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
21614	24622	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
21618	24618	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
31407	34412	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
31407	34413	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
31407	34421	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
31407	34422	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
31415	34434	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
31417	34417	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
31605	34606	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
31605	34607	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
31605	34611	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
31605	34612	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
31614	34622	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	
31618	34618	1	T	1.0435	0.00	1	0	1.5000	0.5100	1.5000	0.5100	0.00625	

Calc No: E4C-082 CCW N-3 Sheet No. 27
RE: Upon 9-30-94 IRE: Rev. 1

Conq

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:47
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 LINE SHUNT DATA
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

X-------FROM-------X	X--------TO--------X	CKT	LINE G,B (FROM)	LINE G,B (TO)	ST

* NONE *

CCN 9

Calc No: E4C-082 CCN N-3 Rev. 1 Sheet No. 272
RE: Lpm 9-30-94 IRE: [illegible] 10-5-94

* NONE *

CAN 9

Sheet No. 273
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Open 1-30-95 IRE: Rel 10-5-95

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:47
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 AREA DATA
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

AREA	BUS#	NAME	BSKV	PGEN	PMAX	PMIN	DESIRED INTERCHANGE	TOLER	BUSES
1	0						0.0	10.0	199
					SUMMATION:		0.0		

CAN 9

Calc No: E4C-082 CCN N-3 Rev. 1 Sheet No. 274
RE: Lpm 9-30-94 IRE: [illegible] 10.5.94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:47
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 TRANSFORMER 2
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA CORRECTION DATA

* NONE *

Can 9

Sheet No. 275
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Lpnr 9-30-94 IRE: RD 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:47
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 MULTI-SECTION
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA LINE DATA

MULTI-SECTION LINE GROUPING				LINE SECTIONS			
FROM	TO	ID	FROM	TO	CKT
* NONE *					

CCN 9

Sheet No. 276
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Lpm 9-30-94 IRE: Rel 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR---PSS/E THU, SEP 15 1994 14:47
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 ZONE DATA
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA
X-- ZONE --X BUSES
1 199

CCN 9

Sheet No. 277
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Lpmw 9-30-94 IRE: RJL 10-5-94

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURILLO	9-30-94	A. M. PATEL	10-5-94					

APPENDIX 9.1.2

Dynamic Simulation Data

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:56
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

ALL BUSES

*** CALL GENCLS(1,'1', 1, 1, 1) ***

BUS	NAME	BASKV	MACH	KOUNT	C O N ' S		STATE'S		SLOT
1	SYSTEM	230	1	1	1-	2	1-	2	1

MBASE	Z S O R C E		X T R A N		GENTAP	H	DAMP
10.0	0.00004+J	0.00108	0.00000+J	0.00000	1.00000	0.00	0.000

Sheet No. 279
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Lyon 9-30-94 IRE: RLH 10-5-94

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:56
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

ALL BUSES

** GENSAL **	BUS	NAME	BASKV	MACH	C O N ' S	STATE'S
	2413	2G002	4.36	1	3- 14	3- 7

MBASE	Z S O R C E	X T R A N	GENTAP
5.9	0.00000+J 0.10700	0.00000+J 0.00000	1.00000

T'DO	T''DO	T''QO	H	P	XD	XQ	X'D	X''D	XL
5.350	0.050	0.050	1.71	0.00	0.9987	0.7261	0.2020	0.1070	0.0740

S(1.0)	S(1.2)
0.0750	0.2100

*** CALL IEEEVC(2413,'1', 2, 51) ***

BUS	NAME	BSVLT	MACH	KOUNT	C O N ' S	SLOT	RC	XC
2413	2G002	4.36	1	2	51- 52	2	-0.00513	-0.00623

*** CALL IEEET2(2413,'1', 2, 59, 23, 1) ***

BUS	NAME	BSVLT	MACH	KOUNT	C O N ' S	STATE'S	VAR	SLOT
2413	2G002	4.36	1	2	59- 72	23- 27	1	2

TR	KA	TA	VRMAX	VRMIN	KE	TE	KF	TF1	TF2
0.000	500.00	0.020	3.600	0.000	0.650	0.130	0.030	0.590	0.140

E1	S(E1)	E2	S(E2)	KE VAR
4.0000	0.0000	5.5000	0.0000	0.0000

*** CALL DEGOV(2413,'1', 2, 115, 43, 5) ***

BUS	NAME	BSVLT	MACH	KOUNT	C O N ' S	STATE'S	V A R ' S	SLOT
2413	2G002	4.36	1	2	115- 124	43- 47	5- 17	2

T1	T2	T3	K	T4	T5	T6	TD	TMAX	TMIN
0.022	0.000	0.060	60.000	0.250	0.039	0.009	0.020	0.850	-0.500

Sheet No. 280
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Cpnr 9-30-94 IRE: RO 10-5-94

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:56
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

ALL BUSES

** GENSAL **	BUS	NAME	BASKV	MACH	C O N ' S	STATE'S
	2613	2G003	4.36	1	15- 26	8- 12

MBASE	Z S O R C E	X T R A N	GENTAP
5.9	0.00000+J 0.10700	0.00000+J 0.00000	1.00000

T'D0	T''D0	T''Q0	H	DAMP	XD	XQ	X'D	X''D	XL
5.350	0.050	0.050	1.71	0.00	0.9987	0.7261	0.2020	0.1070	0.0740

S(1.0)	S(1.2)
0.0750	0.2100

*** CALL IEEEVC(2613,'1', 3, 53) ***

BUS	NAME	BSVLT	MACH	KOUNT	C O N ' S	SLOT	RC	XC
2613	2G003	4.36	1	3	53- 54	3	-0.00371	-0.00451

*** CALL IEEET2(2613,'1', 3, 73, 28, 2) ***

BUS	NAME	BSVLT	MACH	KOUNT	C O N ' S	STATE'S	VAR	SLOT
2613	2G003	4.36	1	3	73- 86	28- 32	2	3

TR	KA	TA	VRMAX	VRMIN	KE	TE	KF	TF1	TF2
0.000	500.00	0.020	3.600	0.000	0.650	0.130	0.030	0.590	0.140

E1	S(E1)	E2	S(E2)	KE VAR
4.0000	0.0000	5.5000	0.0000	0.0000

*** CALL DEGOV(2613,'1', 3, 125, 48, 18) ***

BUS	NAME	BSVLT	MACH	KOUNT	C O N ' S	STATE'S	V A R ' S	SLOT
2613	2G003	4.36	1	3	125- 134	48- 52	18- 30	3

T1	T2	T3	K	T4	T5	T6	TD	TMAX	TMIN
0.022	0.000	0.060	60.000	0.250	0.039	0.009	0.020	0.850	-0.500

Calc No: E4C-082 CCN N-3 Rev. 1
Sheet No. 281
RE: [illegible] 9-30-94 IRE: [illegible] 10-5-94

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:56
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

ALL BUSES

** GENSAL **	BUS	NAME	BASKV	MACH	C O N ' S	STATE'S
	3413	3G002	4.36	1	27- 38	13- 17

MBASE	S O R C E	X T R A N	GENTAP
5.9	0.00000+J 0.10700	0.00000+J 0.00000	1.00000

T'DO	T''DO	T''QO	H	DAMP	ND	NQ	X'D	X''D	XL
5.350	0.050	0.050	1.71	0.00	0.9987	0.7261	0.2020	0.1070	0.0740

S(1.0)	S(1.2)
0.0750	0.2100

*** CALL IEEEVC(3413,'1', 4, 55) ***

BUS	NAME	BSVLT	MACH	KOUNT	C O N ' S	SLOT	RC	XC
3413	3G002	4.36	1	4	55- 56	4	-0.00351	-0.00427

*** CALL IEEET2(3413,'1', 4, 87, 33, 3) ***

BUS	NAME	BSVLT	MACH	KOUNT	C O N ' S	STATE'S	VAR	SLOT
3413	3G002	4.36	1	4	87- 100	33- 37	3	4

TR	KA	TA	VRMAX	VRMIN	KE	TE	KF	TF1	TF2
0.000	500.00	0.020	3.600	0.000	0.650	0.130	0.030	0.590	0.140

E1	S(E1)	E2	S(E2)	KE VAR
4.0000	0.0000	5.5000	0.0000	0.0000

*** CALL DEGOV(3413,'1', 4, 135, 53, 31) ***

BUS	NAME	BSVLT	MACH	KOUNT	C O N ' S	STATE'S	V A R ' S	SLOT
3413	3G002	4.36	1	4	135- 144	53- 57	31- 43	4

T1	T2	T3	K	T4	T5	T6	TD	TMAX	TMIN
0.022	0.000	0.060	60.000	0.250	0.039	0.009	0.020	0.850	-0.500

Conf

Sheet No. 282
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Cpm 9-30-94 IRE: RLL 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:56
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

ALL BUSES

** GENSAL **	BUS	NAME	BASKV	MACH	C O N ' S	STATE'S
	3613	3G003	4.36	1	39- 50	18- 22

MBASE	Z S O R C E	X T R A N	GENTAP
5.9	0.00000+J 0.10700	0.00000+J 0.00000	1.00000

T'D0	T''D0	T''Q0	H	DAMP	XD	XQ	X'D	X''D	XL
5.350	0.050	0.050	1.71	0.00	0.9987	0.7261	0.2020	0.1070	0.0740

S(1.0)	S(1.2)
0.0750	0.2100

*** CALL IEEEVC(3613,'1', 5, 57) ***

BUS	NAME	BSVLT	MACH	KOUNT	C O N ' S	SLOT	RC	XC
3613	3G003	4.36	1	5	57- 58	5	-0.00371	-0.00451

*** CALL IEEET2(3613,'1', 5, 101, 38, 4) ***

BUS	NAME	BSVLT	MACH	KOUNT	C O N ' S	STATE'S	VAR	SLOT
3613	3G003	4.36	1	5	101- 114	38- 42	4	5

TR	KA	TA	VRMAX	VRMIN	KE	TE	KF	TF1	TF2
0.000	500.00	0.020	3.600	0.000	0.650	0.130	0.030	0.590	0.140

E1	S(E1)	E2	S(E2)	KE VAR
4.0000	0.0000	5.5000	0.0000	0.0000

*** CALL DEGOV(3613,'1', 5, 145, 58, 44) ***

BUS	NAME	BSVLT	MACH	KOUNT	C O N ' S	STATE'S	V A R ' S	SLOT
3613	3G003	4.36	1	5	145- 154	58- 62	44- 56	5

T1	T2	T3	K	T4	T5	T6	TD	TMAX	TMIN
0.022	0.000	0.060	60.000	0.250	0.039	0.009	0.020	0.850	-0.500

Sheet No. 283
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Lpm 9-30-94 IRE: RL 10-5-94

Cen 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:56
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
E4C-082, REV 1 - SYSTEN DYNAMIC VOLTAGES DURING A DBA

CONEC MODELS

*** CALL CMOTOR(1, 155, 162, 63, 57, 167) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S		ACC CON
2403	2P012	4.16	1	155-	161	162-	166	63	57-	64	167

RA	LA	LM	R1	L1	R2	L2
0.019	0.077	3.200	0.050	0.077	0.027	0.063

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.45	0.420	2.000	0.01350	0.689	0.7000

*** CALL CMOTOR(2, 168, 175, 64, 65, 180) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S		ACC CON
2404	2P141	4.16	2	168-	174	175-	179	64	65-	72	180

RA	LA	LM	R1	L1	R2	L2
0.004	0.065	3.680	0.029	0.068	0.004	0.050

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.68	1.196	2.000	0.00600	0.983	0.7000

*** CALL CMOTOR(3, 181, 188, 65, 73, 193) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S		ACC CON
2405	2P024	4.16	3	181-	187	188-	192	65	73-	80	193

RA	LA	LM	R1	L1	R2	L2
0.025	0.068	2.500	0.042	0.068	0.017	0.040

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.55	0.304	2.000	0.01160	0.849	0.7000

*** CALL CMOTOR(4, 194, 201, 66, 81, 206) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S		ACC CON
2406	2P025-A	4.16	4	194-	200	201-	205	66	81-	88	206

RA	LA	LM	R1	L1	R2	L2
0.025	0.068	2.500	0.042	0.068	0.017	0.040

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.55	0.304	2.000	0.01160	0.849	0.7000

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*** CALL CMOTOR(5, 207, 214, 67, 89, 219) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S		ACC CON
2407	2P015	4.16	5	207-	213	214-	218	67	89-	96	219

RA	LA	LM	R1	L1	R2	L2
0.019	0.077	3.200	0.050	0.077	0.027	0.063

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.45	0.420	2.000	0.01670	0.850	0.7000

*** CALL CMOTOR(6, 220, 227, 68, 97, 232) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S		ACC CON
2408	2P017	4.16	6	220-	226	227-	231	68	97-	104	232

RA	LA	LM	R1	L1	R2	L2
0.010	0.068	4.100	0.072	0.068	0.031	0.071

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.52	0.870	2.000	0.01820	0.778	0.7000

*** CALL CMOTOR(7, 233, 240, 69, 105, 245) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S		ACC CON
2409	2P018-A	4.16	7	233-	239	240-	244	69	105-	112	245

RA	LA	LM	R1	L1	R2	L2
0.010	0.068	4.100	0.072	0.068	0.031	0.071

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.52	0.870	2.000	0.01820	0.778	0.7000

*** CALL CMOTOR(8, 246, 253, 70, 113, 258) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S		ACC CON
2410	2P112	4.16	8	246-	252	253-	257	70	113-	120	258

RA	LA	LM	R1	L1	R2	L2
0.034	0.095	2.157	0.020	0.070	0.140	0.005

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.38	0.233	2.000	0.01720	0.832	0.7000

*** CALL CMOTOR(9, 259, 266, 71, 121, 271) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S		ACC CON
2411	2P307	4.16	9	259-	265	266-	270	71	121-	128	271

RA	LA	LM	R1	L1	R2	L2
0.034	0.095	2.157	0.020	0.070	0.140	0.005

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MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.38	0.233	2.000	0.01720	0.832	0.7000

*** CALL CMOTOR(10, 272, 279, 72, 129, 284) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
2412	E336-U2	4.16	10	272- 278	279- 283	72	129- 136	284

RA	LA	LM	R1	L1	R2	L2
0.019	0.080	3.050	0.040	0.095	0.030	0.130

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.53	0.209	2.000	0.01670	0.856	0.7000

*** CALL CMOTOR(11, 285, 292, 73, 137, 297) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
2603	2P504	4.16	11	285- 291	292- 296	73	137- 144	297

RA	LA	LM	R1	L1	R2	L2
0.004	0.065	3.680	0.029	0.068	0.004	0.050

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.68	1.196	2.000	0.00600	0.983	0.7000

*** CALL CMOTOR(12, 298, 305, 74, 145, 310) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
2604	2P013	4.16	12	298- 304	305- 309	74	145- 152	310

RA	LA	LM	R1	L1	R2	L2
0.019	0.077	3.200	0.050	0.077	0.027	0.063

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.45	0.420	2.000	0.01350	0.689	0.7000

*** CALL CMOTOR(13, 311, 318, 75, 153, 323) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
2605	2P026	4.16	13	311- 317	318- 322	75	153- 160	323

RA	LA	LM	R1	L1	R2	L2
0.025	0.068	2.500	0.042	0.068	0.017	0.040

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.55	0.304	2.000	0.01160	0.849	0.7000

*** CALL CMOTOR(14, 324, 331, 76, 161, 336) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON

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2606 2P025-B 4.16   14      324-  330     331-  335     76   161- 168      336

      RA        LA        LM        R1        L1        R2        L2
   0.025     0.068     2.500     0.042     0.068     0.017     0.040

     MOTOR BASE        H        DAMP  INIT SLIP    TORQUE   ACCEL
           0.55     0.304     2.000    0.01160     0.849  0.7000


        *** CALL CMOTOR(   15,  337,  344,   77,  169,  349) ***

 BUS    NAME BASKV ICON  CIRCUIT CON'S  RATING CON'S  STATE  V A R ' S  ACC CON
2607 2P016   4.16   15      337-  343     344-  348     77   169- 176      349

      RA        LA        LM        R1        L1        R2        L2
   0.019     0.077     3.200     0.050     0.077     0.027     0.063

     MOTOR BASE        H        DAMP  INIT SLIP    TORQUE   ACCEL
           0.45     0.420     2.000    0.01670     0.850  0.7000


        *** CALL CMOTOR(   16,  350,  357,   78,  177,  362) ***

 BUS    NAME BASKV ICON  CIRCUIT CON'S  RATING CON'S  STATE  V A R ' S  ACC CON
2608 2P019   4.16   16      350-  356     357-  361     78   177- 184      362

      RA        LA        LM        R1        L1        R2        L2
   0.010     0.068     4.100     0.072     0.068     0.031     0.071

     MOTOR BASE        H        DAMP  INIT SLIP    TORQUE   ACCEL
           0.52     0.870     2.000    0.01820     0.778  0.7000


        *** CALL CMOTOR(   17,  363,  370,   79,  185,  375) ***

 BUS    NAME BASKV ICON  CIRCUIT CON'S  RATING CON'S  STATE  V A R ' S  ACC CON
2609 2P018-B 4.16   17      363-  369     370-  374     79   185- 192      375

      RA        LA        LM        R1        L1        R2        L2
   0.010     0.068     4.100     0.072     0.068     0.031     0.071

     MOTOR BASE        H        DAMP  INIT SLIP    TORQUE   ACCEL
           0.52     0.870     2.000    0.01820     0.778  0.7000


        *** CALL CMOTOR(   18,  376,  383,   80,  193,  388) ***

 BUS    NAME BASKV ICON  CIRCUIT CON'S  RATING CON'S  STATE  V A R ' S  ACC CON
2610 2P113   4.16   18      376-  382     383-  387     80   193- 200      388

      RA        LA        LM        R1        L1        R2        L2
   0.034     0.095     2.157     0.020     0.070     0.140     0.005

     MOTOR BASE        H        DAMP  INIT SLIP    TORQUE   ACCEL
           0.38     0.233     2.000    0.01720     0.832  0.7000
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*** CALL CMOTOR(19, 389, 396, 81, 201, 401) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
2611	2P114	4.16	19	389- 395	396- 400	81	201- 208	401

RA	LA	LM	R1	L1	R2	L2
0.034	0.095	2.157	0.020	0.070	0.140	0.005

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.38	0.233	2.000	0.01720	0.832	0.7000

*** CALL CMOTOR(20, 402, 409, 82, 209, 414) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
2612	E335-U2	4.16	20	402- 408	409- 413	82	209- 216	414

RA	LA	LM	R1	L1	R2	L2
0.019	0.080	3.050	0.040	0.095	0.030	0.130

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.53	0.209	2.000	0.01670	0.856	0.7000

*** CALL CMOTOR(21, 415, 422, 83, 217, 427) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3402	E336-U3	4.16	21	415- 421	422- 426	83	217- 224	427

RA	LA	LM	R1	L1	R2	L2
0.019	0.080	3.050	0.040	0.095	0.030	0.130

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.53	0.209	2.000	0.01670	0.856	0.7000

*** CALL CMOTOR(22, 428, 435, 84, 225, 440) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3403	3P012	4.16	22	428- 434	435- 439	84	225- 232	440

RA	LA	LM	R1	L1	R2	L2
0.019	0.077	3.200	0.050	0.077	0.027	0.063

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.45	0.420	2.000	0.01350	0.689	0.7000

*** CALL CMOTOR(23, 441, 448, 85, 233, 453) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3404	3P141	4.16	23	441- 447	448- 452	85	233- 240	453

RA	LA	LM	R1	L1	R2	L2

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0.004	0.065	3.680	0.029	0.068	0.004	0.050

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.68	1.196	2.000	0.00600	0.983	0.7000

*** CALL CMOTOR(24, 454, 461, 86, 241, 466) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S		ACC CON
3405	3P024	4.16	24	454-	460	461-	465	86	241-	248	466

RA	LA	LM	R1	L1	R2	L2
0.025	0.068	2.500	0.042	0.068	0.017	0.040

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.55	0.304	2.000	0.01160	0.849	0.7000

*** CALL CMOTOR(25, 467, 474, 87, 249, 479) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S		ACC CON
3406	3P025-A	4.16	25	467-	473	474-	478	87	249-	256	479

RA	LA	LM	R1	L1	R2	L2
0.025	0.068	2.500	0.042	0.068	0.017	0.040

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.55	0.304	2.000	0.01160	0.849	0.7000

*** CALL CMOTOR(26, 480, 487, 88, 257, 492) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S		ACC CON
3407	3P015	4.16	26	480-	486	487-	491	88	257-	264	492

RA	LA	LM	R1	L1	R2	L2
0.019	0.077	3.200	0.050	0.077	0.027	0.063

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.45	0.420	2.000	0.01670	0.850	0.7000

*** CALL CMOTOR(27, 493, 500, 89, 265, 505) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S		ACC CON
3408	3P017	4.16	27	493-	499	500-	504	89	265-	272	505

RA	LA	LM	R1	L1	R2	L2
0.010	0.068	4.100	0.072	0.068	0.031	0.071

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.52	0.870	2.000	0.01820	0.778	0.7000

*** CALL CMOTOR(28, 506, 513, 90, 273, 518) ***

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BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3409	3P018-A	4.16	28	506- 512	513- 517	90	273- 280	518

RA	LA	LM	R1	L1	R2	L2
0.010	0.068	4.100	0.072	0.068	0.031	0.071

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.52	0.870	2.000	0.01820	0.778	0.7000

*** CALL CMOTOR(29, 519, 526, 91, 281, 531) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3410	3P112	4.16	29	519- 525	526- 530	91	281- 288	531

RA	LA	LM	R1	L1	R2	L2
0.034	0.095	2.157	0.020	0.070	0.140	0.005

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.38	0.233	2.000	0.01720	0.832	0.7000

*** CALL CMOTOR(30, 532, 539, 92, 289, 544) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3411	3P307	4.16	30	532- 538	539- 543	92	289- 296	544

RA	LA	LM	R1	L1	R2	L2
0.034	0.095	2.157	0.020	0.070	0.140	0.005

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.38	0.233	2.000	0.01720	0.832	0.7000

*** CALL CMOTOR(31, 545, 552, 93, 297, 557) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3602	E335-U3	4.16	31	545- 551	552- 556	93	297- 304	557

RA	LA	LM	R1	L1	R2	L2
0.019	0.080	3.050	0.040	0.095	0.030	0.130

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.53	0.209	2.000	0.01670	0.856	0.7000

*** CALL CMOTOR(32, 558, 565, 94, 305, 570) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3604	3P013	4.16	32	558- 564	565- 569	94	305- 312	570

RA	LA	LM	R1	L1	R2	L2
0.019	0.077	3.200	0.050	0.077	0.027	0.063

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL

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0.45	0.420	2.000	0.01350	0.689	0.7000

*** CALL CMOTOR(33, 571, 578, 95, 313, 583) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S		ACC CON
3605	3P026	4.16	33	571-	577	578-	582	95	313-	320	583

RA	LA	LM	R1	L1	R2	L2
0.025	0.068	2.500	0.042	0.068	0.017	0.040

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.55	0.304	2.000	0.01160	0.849	0.7000

*** CALL CMOTOR(34, 584, 591, 96, 321, 596) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S		ACC CON
3606	3P025-B	4.16	34	584-	590	591-	595	96	321-	328	596

RA	LA	LM	R1	L1	R2	L2
0.025	0.068	2.500	0.042	0.068	0.017	0.040

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.55	0.304	2.000	0.01160	0.849	0.7000

*** CALL CMOTOR(35, 597, 604, 97, 329, 609) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S		ACC CON
3607	3P016	4.16	35	597-	603	604-	608	97	329-	336	609

RA	LA	LM	R1	L1	R2	L2
0.019	0.077	3.200	0.050	0.077	0.027	0.063

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.45	0.420	2.000	0.01670	0.850	0.7000

*** CALL CMOTOR(36, 610, 617, 98, 337, 622) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S		ACC CON
3608	3P019	4.16	36	610-	616	617-	621	98	337-	344	622

RA	LA	LM	R1	L1	R2	L2
0.010	0.068	4.100	0.072	0.068	0.031	0.071

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.52	0.870	2.000	0.01820	0.778	0.7000

*** CALL CMOTOR(37, 623, 630, 99, 345, 635) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S		ACC CON
3609	3P018-B	4.16	37	623-	629	630-	634	99	345-	352	635

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RA	LA	LM	R1	L1	R2	L2
0.010	0.068	4.100	0.072	0.068	0.031	0.071

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.52	0.870	2.000	0.01820	0.778	0.7000

*** CALL CMOTOR(38, 636, 643, 100, 353, 648) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3610	3P113	4.16	38	636- 642	643- 647	100	353- 360	648

RA	LA	LM	R1	L1	R2	L2
0.034	0.035	2.157	0.020	0.070	0.140	0.005

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.38	0.233	2.000	0.01720	0.832	0.7000

*** CALL CMOTOR(39, 649, 656, 101, 361, 661) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3611	3P114	4.16	39	649- 655	656- 660	101	361- 368	661

RA	LA	LM	R1	L1	R2	L2
0.034	0.095	2.157	0.020	0.070	0.140	0.005

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.38	0.233	2.000	0.01720	0.832	0.7000

*** CALL CMOTOR(40, 662, 669, 102, 369, 674) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3612	3P504	4.16	40	662- 668	669- 673	102	369- 376	674

RA	LA	LM	R1	L1	R2	L2
0.004	0.065	3.680	0.029	0.068	0.004	0.050

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.68	1.196	2.000	0.00600	0.983	0.7000

*** CALL CMOTOR(41, 675, 682, 103, 377, 687) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21405	ZP191-A	0.46	41	675- 681	682- 686	103	377- 384	687

RA	LA	LM	R1	L1	R2	L2
0.000	0.065	3.202	0.065	0.085	0.019	0.220

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.10	0.314	2.000	0.00970	0.593	0.7000

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*** CALL CMOTOR(42, 688, 695, 104, 385, 700) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21409	2A071	0.46	42	688- 694	695- 699	104	385- 392	700

RA	LA	LM	R1	L1	R2	L2
0.000	0.060	2.250	0.030	0.062	0.013	0.090

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.06	2.950	2.000	0.00940	0.962	0.7000

*** CALL CMOTOR(43, 701, 708, 105, 393, 713) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21410	2E399	0.46	43	701- 707	708- 712	105	393- 400	713

RA	LA	LM	R1	L1	R2	L2
0.001	0.060	2.720	0.035	0.086	0.018	0.260

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.10	1.771	2.000	0.00810	0.614	0.7000

*** CALL CMOTOR(44, 714, 721, 106, 401, 726) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21411	2E401	0.46	44	714- 720	721- 725	106	401- 408	726

RA	LA	LM	R1	L1	R2	L2
0.001	0.060	2.720	0.035	0.086	0.018	0.260

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.10	1.771	2.000	0.00810	0.614	0.7000

*** CALL CMOTOR(45, 727, 734, 107, 409, 739) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21413	2P190	0.46	45	727- 733	734- 738	107	409- 416	739

RA	LA	LM	R1	L1	R2	L2
0.000	0.065	3.202	0.065	0.085	0.019	0.220

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.10	0.314	2.000	0.00970	0.593	0.7000

*** CALL CMOTOR(46, 740, 747, 108, 417, 752) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21418	E418-U2	0.46	46	740- 746	747- 751	108	417- 424	752

RA	LA	LM	R1	L1	R2	L2
0.003	0.050	2.190	0.059	0.050	0.009	0.056

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MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.14	1.756	2.000	0.00670	0.839	0.7000

*** CALL CMOTOR(47, 753, 760, 109, 425, 765) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21419	2A074	0.46	47	753- 759	760- 764	109	425- 432	765

RA	LA	LM	R1	L1	R2	L2
0.000	0.060	2.250	0.030	0.062	0.013	0.090

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.06	2.950	2.000	0.00940	0.962	0.7000

*** CALL CMOTOR(48, 766, 773, 110, 433, 778) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21609	2A072	0.46	48	766- 772	773- 777	110	433- 440	778

RA	LA	LM	R1	L1	R2	L2
0.000	0.060	2.250	0.030	0.062	0.013	0.090

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.06	2.950	2.000	0.00940	0.962	0.7000

*** CALL CMOTOR(49, 779, 786, 111, 441, 791) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21610	2E400	0.46	49	779- 785	786- 790	111	441- 448	791

RA	LA	LM	R1	L1	R2	L2
0.001	0.060	2.720	0.035	0.086	0.018	0.260

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.10	1.771	2.000	0.00810	0.614	0.7000

*** CALL CMOTOR(50, 792, 799, 112, 449, 804) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21611	2E402	0.46	50	792- 798	799- 803	112	449- 456	804

RA	LA	LM	R1	L1	R2	L2
0.001	0.060	2.720	0.035	0.086	0.018	0.260

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.10	1.771	2.000	0.00810	0.614	0.7000

*** CALL CMOTOR(51, 805, 812, 113, 457, 817) ***

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BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21613	2P192	0.46	51	805- 811	812- 816	113	457- 464	817

RA	LA	LM	R1	L1	R2	L2
0.000	0.065	3.202	0.065	0.085	0.019	0.220

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.10	0.314	2.000	0.00970	0.593	0.7000

*** CALL CMOTOR(52, 818, 825, 114, 465, 830) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21615	E419-U2	0.46	52	818- 824	825- 829	114	465- 472	830

RA	LA	LM	R1	L1	R2	L2
0.003	0.050	2.190	0.059	0.050	0.009	0.056

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.14	1.756	2.000	0.00670	0.839	0.7000

*** CALL CMOTOR(53, 831, 838, 115, 473, 843) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21617	2P191-B	0.46	53	831- 837	838- 842	115	473- 480	843

RA	LA	LM	R1	L1	R2	L2
0.000	0.065	3.202	0.065	0.085	0.019	0.220

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.10	0.314	2.000	0.00970	0.593	0.7000

*** CALL CMOTOR(54, 844, 851, 116, 481, 856) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21619	2A073	0.46	54	844- 850	851- 855	116	481- 488	856

RA	LA	LM	R1	L1	R2	L2
0.000	0.060	2.250	0.030	0.062	0.013	0.090

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.06	2.950	2.000	0.00940	0.962	0.7000

*** CALL CMOTOR(55, 857, 864, 117, 489, 869) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31405	3P191-A	0.46	55	857- 863	864- 868	117	489- 496	869

RA	LA	LM	R1	L1	R2	L2
0.000	0.065	3.202	0.065	0.085	0.019	0.220

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.10	0.314	2.000	0.00970	0.593	0.7000

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*** CALL CMOTOR(56, 870, 877, 118, 497, 882) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31409	3A071	0.46	56	870- 876	877- 881	118	497- 504	882

RA	LA	LM	R1	L1	R2	L2
0.000	0.060	2.250	0.030	0.062	0.013	0.090

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.06	2.950	2.000	0.00940	0.962	0.7000

*** CALL CMOTOR(57, 883, 890, 119, 505, 895) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31410	3E399	0.46	57	883- 889	890- 894	119	505- 512	895

RA	LA	LM	R1	L1	R2	L2
0.001	0.060	2.720	0.035	0.086	0.018	0.260

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.10	1.771	2.000	0.00810	0.614	0.7000

*** CALL CMOTOR(58, 896, 903, 120, 513, 908) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31411	3E401	0.46	58	896- 902	903- 907	120	513- 520	908

RA	LA	LM	R1	L1	R2	L2
0.001	0.060	2.720	0.035	0.086	0.018	0.260

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.10	1.771	2.000	0.00810	0.614	0.7000

*** CALL CMOTOR(59, 909, 916, 121, 521, 921) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31413	3P190	0.46	59	909- 915	916- 920	121	521- 528	921

RA	LA	LM	R1	L1	R2	L2
0.000	0.065	3.202	0.065	0.085	0.019	0.220

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.10	0.314	2.000	0.00970	0.593	0.7000

*** CALL CMOTOR(60, 922, 929, 122, 529, 934) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31418	E418-U3	0.46	60	922- 928	929- 933	122	529- 536	934

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Conv

RA	LA	LM	R1	L1	R2	L2
0.003	0.050	2.190	0.059	0.050	0.009	0.056

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.14	1.756	2.000	0.00670	0.839	0.7000

*** CALL CMOTOR(61, 935, 942, 123, 537, 947) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S	ACC	CON
31419	3A074	0.46	61	935-	941	942-	946	123	537- 544		947

RA	LA	LM	R1	L1	R2	L2
0.000	0.060	2.250	0.030	0.062	0.013	0.090

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.06	2.950	2.000	0.00940	0.962	0.7000

*** CALL CMOTOR(62, 948, 955, 124, 545, 960) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S	ACC	CON
31609	3A072	0.46	62	948-	954	955-	959	124	545- 552		960

RA	LA	LM	R1	L1	R2	L2
0.000	0.060	2.250	0.030	0.062	0.013	0.090

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.06	2.950	2.000	0.00940	0.962	0.7000

*** CALL CMOTOR(63, 961, 968, 125, 553, 973) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S	ACC	CON
31610	3E400	0.46	63	961-	967	968-	972	125	553- 560		973

RA	LA	LM	R1	L1	R2	L2
0.001	0.060	2.720	0.035	0.086	0.018	0.260

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.10	1.771	2.000	0.00810	0.614	0.7000

*** CALL CMOTOR(64, 974, 981, 126, 561, 986) ***

BUS	NAME	BASKV	ICON	CIRCUIT	CON'S	RATING	CON'S	STATE	V A R ' S	ACC	CON
31611	3E402	0.46	64	974-	980	981-	985	126	561- 568		986

RA	LA	LM	R1	L1	R2	L2
0.001	0.060	2.720	0.035	0.086	0.018	0.260

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.10	1.771	2.000	0.00810	0.614	0.7000

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*** CALL CMOTOR(65, 987, 994, 127, 569, 999) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31613	3P192	0.46	65	987- 993	994- 998	127	569- 576	999

RA	LA	LM	R1	L1	R2	L2
0.000	0.065	3.202	0.065	0.085	0.019	0.220

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.10	0.314	2.000	0.00970	0.593	0.7000

*** CALL CMOTOR(66, 1000, 1007, 128, 577, 1012) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31615	E419-U3	0.46	66	1000- 1006	1007- 1011	128	577- 584	1012

RA	LA	LM	R1	L1	R2	L2
0.003	0.050	2.190	0.059	0.050	0.009	0.056

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.14	1.756	2.000	0.00670	0.839	0.7000

*** CALL CMOTOR(67, 1013, 1020, 129, 585, 1025) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31617	3P[illegible]-B	0.46	67	1013- 1019	1020- 1024	129	585- 592	1025

RA	LA	LM	R1	L1	R2	L2
0.000	0.065	3.202	0.065	0.085	0.019	0.220

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.10	0.314	2.000	0.00970	0.593	0.7000

*** CALL CMOTOR(68, 1026, 1033, 130, 593, 1038) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31619	3A073	0.46	68	1026- 1032	1033- 1037	130	593- 600	1038

RA	LA	LM	R1	L1	R2	L2
0.000	0.060	2.250	0.030	0.062	0.013	0.090

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.06	2.950	2.000	0.00940	0.962	0.7000

*** CALL CMOTOR(69, 1039, 1046, 131, 601, 1051) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
22403	2BRA-M	0.48	69	1039- 1045	1046- 1050	131	601- 608	1051

RA	LA	LM	R1	L1	R2	L2
0.011	0.092	2.930	0.043	0.160	999.000	999.000

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MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.02	1.467	2.000	0.04167	0.840	0.5000

*** CALL CMOTOR(70, 1052, 1059, 132, 609, 1064) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
22407	2BD-M	0.48	70	1052- 1058	1059- 1063	132	609- 616	1064

RA	LA	LM	R1	L1	R2	L2
0.011	0.092	2.930	0.043	0.160	999.000	999.000

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.02	1.045	2.000	0.04167	0.840	0.5000

*** CALL CMOTOR(71, 1065, 1072, 133, 617, 1077) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
22414	2BE-M	0.48	71	1065- 1071	1072- 1076	133	617- 624	1077

RA	LA	LM	R1	L1	R2	L2
0.011	0.092	2.930	0.043	0.160	999.000	999.000

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.07	0.586	2.000	0.04167	0.840	0.5000

*** CALL CMOTOR(72, 1078, 1085, 134, 625, 1090) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
22415	2BY-M	0.48	72	1078- 1084	1085- 1089	134	625- 632	1090

RA	LA	LM	R1	L1	R2	L2
0.011	0.092	2.930	0.043	0.160	999.000	999.000

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.10	0.595	2.000	0.04167	0.840	0.5000

*** CALL CMOTOR(73, 1091, 1098, 135, 633, 1103) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
22417	BQ-U2-M	0.48	73	1091- 1097	1098- 1102	135	633- 640	1103

RA	LA	LM	R1	L1	R2	L2
0.011	0.092	2.930	0.043	0.160	999.000	999.000

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.05	1.041	2.000	0.04167	0.840	0.5000

*** CALL CMOTOR(74, 1104, 1111, 136, 641, 1116) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON

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BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
22603	2BRB-M	0.48	74	1104- 1110	1111- 1115	136	641- 648	1116

RA	LA	LM	R1	L1	R2	L2
0.011	0.092	2.930	0.043	0.160	999.000	999.000

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.02	1.467	2.000	0.04167	0.840	0.5000

*** CALL CMOTOR(75, 1117, 1124, 137, 649, 1129) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
22605	2BR-M	0.48	75	1117- 1123	1124- 1128	137	649- 656	1129

RA	LA	LM	R1	L1	R2	L2
0.011	0.092	2.930	0.043	0.160	999.000	999.000

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.02	1.045	2.000	0.04167	0.840	0.5000

*** CALL CMOTOR(76, 1130, 1137, 138, 657, 1142) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
22607	2BJ-M	0.48	76	1130- 1136	1137- 1141	138	657- 664	1142

RA	LA	LM	R1	L1	R2	L2
0.011	0.092	2.930	0.043	0.160	999.000	999.000

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.07	0.590	2.000	0.04167	0.840	0.5000

*** CALL CMOTOR(77, 1143, 1150, 139, 665, 1155) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
22614	2BZ-M	0.48	77	1143- 1149	1150- 1154	139	665- 672	1155

RA	LA	LM	R1	L1	R2	L2
0.011	0.092	2.930	0.043	0.160	999.000	999.000

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.06	0.892	2.000	0.04167	0.840	0.5000

*** CALL CMOTOR(78, 1156, 1163, 140, 673, 1168) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
22618	BS-U2-M	0.48	78	1156- 1162	1163- 1167	140	673- 680	1168

RA	LA	LM	R1	L1	R2	L2
0.011	0.092	2.930	0.043	0.160	999.000	999.000

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.05	1.041	2.000	0.04167	0.840	0.5000

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*** CALL CMOTOR(79, 1169, 1176, 141, 681, 1181) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
32403	3BRA-M	0.48	79	1169- 1175	1176- 1180	141	681- 688	1181

RA	LA	LM	R1	L1	R2	L2
0.011	0.092	2.930	0.043	0.160	999.000	999.000

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.02	1.467	2.000	0.04167	0.840	0.5000

*** CALL CMOTOR(80, 1182, 1189, 142, 689, 1194) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
32407	3BD-M	0.48	80	1182- 1188	1189- 1193	142	689- 696	1194

RA	LA	LM	R1	L1	R2	L2
0.011	0.092	2.930	0.043	0.160	999.000	999.000

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.02	1.045	2.000	0.04167	0.840	0.5000

*** CALL CMOTOR(81, 1195, 1202, 143, 697, 1207) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
32414	3BE-M	0.48	81	1195- 1201	1202- 1206	143	697- 704	1207

RA	LA	LM	R1	L1	R2	L2
0.011	0.092	2.930	0.043	0.160	999.000	999.000

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.07	0.575	2.000	0.04167	0.840	0.5000

*** CALL CMOTOR(82, 1208, 1215, 144, 705, 1220) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
32415	3BY-M	0.48	82	1208- 1214	1215- 1219	144	705- 712	1220

RA	LA	LM	R1	L1	R2	L2
0.011	0.092	2.930	0.043	0.160	999.000	999.000

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.10	0.595	2.000	0.04167	0.840	0.5000

*** CALL CMOTOR(83, 1221, 1228, 145, 713, 1233) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
32417	BQ-U3-M	0.48	83	1221- 1227	1228- 1232	145	713- 720	1233

RA	LA	LM	R1	L1	R2	L2

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0.011	0.092	2.930	0.043	0.160	999.000	999.000

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.05	1.041	2.000	0.04167	0.840	0.5000

*** CALL CMOTOR(84, 1234, 1241, 146, 721, 1246) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
32603	3BRB-M	0.48	84	1234- 1240	1241- 1245	146	721- 728	1246

RA	LA	LM	R1	L1	R2	L2
0.011	0.092	2.930	0.043	0.160	999.000	999.000

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.02	1.467	2.000	0.04167	0.840	0.5000

*** CALL CMOTOR(85, 1247, 1254, 147, 729, 1259) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
32605	3BH-M	0.48	85	1247- 1253	1254- 1258	147	729- 736	1259

RA	LA	LM	R1	L1	R2	L2
0.011	0.092	2.930	0.043	0.160	999.000	999.000

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.02	1.045	2.000	0.04167	0.840	0.5000

*** CALL CMOTOR(86, 1260, 1267, 148, 737, 1272) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
32607	3BJ-M	0.48	86	1260- 1266	1267- 1271	148	737- 744	1272

RA	LA	LM	R1	L1	R2	L2
0.011	0.092	2.930	0.043	0.160	999.000	999.000

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.07	0.590	2.000	0.04167	0.840	0.5000

*** CALL CMOTOR(87, 1273, 1280, 149, 745, 1285) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
32614	3BZ-M	0.48	87	1273- 1279	1280- 1284	149	745- 752	1285

RA	LA	LM	R1	L1	R2	L2
0.011	0.092	2.930	0.043	0.160	999.000	999.000

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.07	0.868	2.000	0.04167	0.840	0.5000

*** CALL CMOTOR(88, 1286, 1293, 150, 753, 1298) ***

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BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
2618	[illegible]-U3-M	0.48	88	1286- 1292	1293- 1297	150	753- 760	1298

RA	LA	LM	R1	L1	R2	L2
0.011	0.092	2.930	0.043	0.160	999.000	999.000

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.05	1.041	2.000	0.04167	0.840	0.5000

*** CALL CMOTOR(89, 1299, 1306, 151, 761, 1311) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24412	2A274	0.46	89	1299- 1305	1306- 1310	151	761- 768	1311

RA	LA	LM	R1	L1	R2	L2
0.001	0.090	2.400	0.055	0.075	0.027	0.210

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.05	1.607	2.000	0.01830	0.887	0.7000

*** CALL CMOTOR(90, 1312, 1319, 152, 769, 1324) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24413	2A275	0.46	90	1312- 1318	1319- 1323	152	769- 776	1324

RA	LA	LM	R1	L1	R2	L2
0.001	0.090	2.400	0.055	0.075	0.027	0.210

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.05	1.607	2.000	0.01830	0.887	0.7000

*** CALL CMOTOR(91, 1325, 1332, 153, 777, 1337) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24421	2E550	0.46	91	1325- 1331	1332- 1336	153	777- 784	1337

RA	LA	LM	R1	L1	R2	L2
0.001	0.060	2.813	0.054	0.091	0.027	0.280

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.05	0.751	2.000	0.01320	0.658	0.7000

*** CALL CMOTOR(92, 1338, 1345, 154, 785, 1350) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24422	2E546	0.46	92	1338- 1344	1345- 1349	154	785- 792	1350

RA	LA	LM	R1	L1	R2	L2
0.001	0.060	2.813	0.054	0.091	0.027	0.280

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL

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0.05	0.751	2.000	0.01320	0.658	0.7000

*** CALL CMOTOR(93, 1351, 1358, 155, 793, 1363) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24434	2P009	0.46	93	1351- 1357	1358- 1362	155	793- 800	1363

RA	LA	LM	R1	L1	R2	L2
0.001	0.082	4.000	0.042	0.066	0.028	0.230

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.03	0.361	2.000	0.01500	0.811	0.7000

*** CALL CMOTOR(94, 1364, 1371, 156, 801, 1376) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24606	2E547	0.46	94	1364- 1370	1371- 1375	156	801- 808	1376

RA	LA	LM	R1	L1	R2	L2
0.001	0.060	2.813	0.054	0.091	0.027	0.280

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.05	0.751	2.000	0.01320	0.658	0.7000

*** CALL CMOTOR(95, 1377, 1384, 157, 809, 1389) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24607	2E549	0.46	95	1377- 1383	1384- 1388	157	809- 816	1389

RA	LA	LM	R1	L1	R2	L2
0.001	0.060	2.813	0.054	0.091	0.027	0.280

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.05	0.751	2.000	0.01320	0.658	0.7000

*** CALL CMOTOR(96, 1390, 1397, 158, 817, 1402) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24611	2A276	0.46	96	1390- 1396	1397- 1401	158	817- 824	1402

RA	LA	LM	R1	L1	R2	L2
0.001	0.090	2.400	0.055	0.075	0.027	0.210

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.05	1.607	2.000	0.01830	0.887	0.7000

*** CALL CMOTOR(97, 1403, 1410, 159, 825, 1415) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24612	2A277	0.46	97	1403- 1409	1410- 1414	159	825- 832	1415

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RA	LA	LM	R1	L1	R2	L2
0.001	0.090	2.400	0.055	0.075	0.027	0.210

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.05	1.607	2.000	0.01830	0.887	0.7000

*** CALL CMOTOR(98, 1416, 1423, 160, 833, 1428) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24082	P0010	0.48	98	1416- 1422	1423- 1427	160	833- 840	1428

RA	LA	LM	R1	L1	R2	L2
0.001	0.082	4.000	0.042	0.066	0.028	0.230

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.03	0.301	2.000	0.01500	0.811	0.7000

*** CALL CMOTOR(99, 1429, 1436, 161, 841, 1441) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24417	P162-U2	0.46	99	1429- 1435	1436- 1440	161	841- 848	1441

RA	LA	LM	R1	L1	R2	L2
0.001	0.095	2.855	0.073	0.070	0.023	0.152

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.04	0.199	2.000	0.01250	0.631	0.7000

*** CALL CMOTOR(100, 1442, 1449, 162, 849, 1454) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24629	P160-U2	0.46	100	1442- 1448	1449- 1453	162	849- 856	1454

RA	LA	LM	R1	L1	R2	L2
0.001	0.095	2.855	0.073	0.070	0.023	0.152

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.04	0.199	2.000	0.01250	0.631	0.7000

*** CALL CMOTOR(101, 1455, 1462, 163, 857, 1467) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34417	P162-U3	0.46	101	1455- 1461	1462- 1466	163	857- 864	1467

RA	LA	LM	R1	L1	R2	L2
0.001	0.095	2.855	0.073	0.070	0.023	0.152

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.04	0.199	2.000	0.01250	0.631	0.7000

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*** CALL CMOTOR(102, 1468, 1475, 164, 865, 1480) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34618	P160-U3	0.46	102	1468- 1474	1475- 1479	164	865- 872	1480

RA	LA	LM	R1	L1	R2	L2
0.001	0.095	2.655	0.073	0.070	0.023	0.152

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.04	0.199	2.000	0.01250	0.631	0.7000

*** CALL CMOTOR(103, 1481, 1488, 165, 873, 1493) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34412	3A274	0.46	103	1481- 1487	1488- 1492	165	873- 880	1493

RA	LA	LM	R1	L1	R2	L2
0.001	0.090	2.400	0.055	0.075	0.027	0.210

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.05	1.607	2.000	0.01830	0.887	0.7000

*** CALL CMOTOR(104, 1494, 1501, 166, 881, 1506) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34413	3A275	0.46	104	1494- 1500	1501- 1505	166	881- 888	1506

RA	LA	LM	R1	L1	R2	L2
0.001	0.090	2.400	0.055	0.075	0.027	0.210

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.05	1.607	2.000	0.01830	0.887	0.7000

*** CALL CMOTOR(105, 1507, 1514, 167, 889, 1519) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34421	3E550	0.46	105	1507- 1513	1514- 1518	167	889- 896	1519

RA	LA	LM	R1	L1	R2	L2
0.001	0.060	2.813	0.054	0.091	0.027	0.280

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.05	0.751	2.000	0.01320	0.658	0.7000

*** CALL CMOTOR(106, 1520, 1527, 168, 897, 1532) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34422	3E546	0.46	106	1520- 1526	1527- 1531	168	897- 904	1532

RA	LA	LM	R1	L1	R2	L2
0.001	0.060	2.813	0.054	0.091	0.027	0.280

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MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.05	0.751	2.000	0.01320	0.658	0.7000

*** CALL CMOTOR(107, 1533, 1540, 169, 905, 1545) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34434	3P009	0.46	107	1533- 1539	1540- 1544	169	905- 912	1545

RA	LA	LM	R1	L1	R2	L2
0.001	0.082	4.000	0.042	0.066	0.028	0.230

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.03	0.301	2.000	0.01500	0.811	0.7000

*** CALL CMOTOR(108, 1546, 1553, 170, 913, 1558) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34606	3E547	0.46	108	1546- 1552	1553- 1557	170	913- 920	1558

RA	LA	LM	R1	L1	R2	L2
0.001	0.060	2.813	0.054	0.091	0.027	0.280

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.05	0.751	2.000	0.01320	0.658	0.7000

*** CALL CMOTOR(109, 1559, 1566, 171, 921, 1571) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34607	3E549	0.46	109	1559- 1565	1566- 1570	171	921- 928	1571

RA	LA	LM	R1	L1	R2	L2
0.001	0.060	2.813	0.054	0.091	0.027	0.280

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.05	0.751	2.000	0.01320	0.658	0.7000

*** CALL CMOTOR(110, 1572, 1579, 172, 929, 1584) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34611	3A276	0.46	110	1572- 1578	1579- 1583	172	929- 936	1584

RA	LA	LM	R1	L1	R2	L2
0.001	0.090	2.400	0.055	0.075	0.027	0.210

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.05	1.607	2.000	0.01830	0.887	0.7000

*** CALL CMOTOR(111, 1585, 1592, 173, 937, 1597) ***

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BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34612	3A277	0.46	111	1585- 1591	1592- 1596	173	937- 944	1597

RA	LA	LM	R1	L1	R2	L2
0.001	0.090	2.400	0.055	0.075	0.027	0.210

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.05	1.607	2.000	0.01830	0.887	0.7000

*** CALL CMOTOR(112, 1598, 1605, 174, 945, 1610) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34622	3P010	0.46	112	1598- 1604	1605- 1609	174	945- 952	1610

RA	LA	LM	R1	L1	R2	L2
0.001	0.082	4.000	0.042	0.066	0.028	0.230

MOTOR BASE	H	DAMP	INIT SLIP	TORQUE	ACCEL
0.03	0.301	2.000	0.01500	0.811	0.7000

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RF: CPM 9-30-94 IRE: [illegible]

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PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:56
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
E4C-082, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

CONET MODELS

*** CALL TMOTOR(1, 155, 162, 63, 57, 167) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
2403	2P012	4.16	1	155- 161	162- 166	63	57- 64	167

*** CALL TMOTOR(2, 168, 175, 64, 65, 180) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
2404	2P141	4.16	2	168- 174	175- 179	64	65- 72	180

*** CALL TMOTOR(3, 181, 188, 65, 73, 193) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
2405	2P024	4.16	3	181- 187	188- 192	65	73- 80	193

*** CALL TMOTOR(4, 194, 201, 66, 81, 206) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
2406	2P025-A	4.16	4	194- 200	201- 205	66	81- 88	206

*** CALL TMOTOR(5, 207, 214, 67, 89, 219) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
2407	2P015	4.16	5	207- 213	214- 218	67	89- 96	219

*** CALL TMOTOR(6, 220, 227, 68, 97, 232) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
2408	2P017	4.16	6	220- 226	227- 231	68	97- 104	232

*** CALL TMOTOR(7, 233, 240, 69, 105, 245) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
2409	2P018-A	4.16	7	233- 239	240- 244	69	105- 112	245

*** CALL TMOTOR(8, 246, 253, 70, 113, 258) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON

2410	2P112	4.16	8	246-	252	253-	257	70	113-	120		258		

*** CALL TMOTOR(9, 259, 266, 71, 121, 271) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S		RATING CON'S		STATE	V A R ' S		ACC CON
2411	2P307	4.16	9	259-	265	266-	270	71	121-	128	271

*** CALL TMOTOR(10, 272, 279, 72, 129, 284) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S		RATING CON'S		STATE	V A R ' S		ACC CON
2412	E336-U2	4.16	10	272-	278	279-	283	72	129-	136	284

*** CALL TMOTOR(11, 285, 292, 73, 137, 297) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S		RATING CON'S		STATE	V A R ' S		ACC CON
2603	2P504	4.16	11	285-	291	292-	296	73	137-	144	297

*** CALL TMOTOR(12, 298, 305, 74, 145, 310) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S		RATING CON'S		STATE	V A R ' S		ACC CON
2604	2P013	4.16	12	298-	304	305-	309	74	145-	152	310

*** CALL TMOTOR(13, 311, 318, 75, 153, 323) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S		RATING CON'S		STATE	V A R ' S		ACC CON
2605	2P026	4.16	13	311-	317	318-	322	75	153-	160	323

*** CALL TMOTOR(14, 324, 331, 76, 161, 336) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S		RATING CON'S		STATE	V A R ' S		ACC CON
2606	2P025-B	4.16	14	324-	330	331-	335	76	161-	168	336

*** CALL TMOTOR(15, 337, 344, 77, 169, 349) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S		RATING CON'S		STATE	V A R ' S		ACC CON
2607	2P016	4.16	15	337-	343	344-	348	77	169-	176	349

*** CALL TMOTOR(16, 350, 357, 78, 177, 362) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S		RATING CON'S		STATE	V A R ' S		ACC CON
2608	2P019	4.16	16	350-	356	357-	361	78	177-	184	362

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*** CALL TMOTOR(17, 363, 370, 79, 185, 375) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
2609	2P018-B	4.16	17	363- 369	370- 374	79	185- 192	375

*** CALL TMOTOR(18, 376, 383, 80, 193, 388) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
2610	2P113	4.16	18	376- 382	383- 387	80	193- 200	388

*** CALL TMOTOR(19, 389, 396, 81, 201, 401) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
2611	2P114	4.16	19	389- 395	396- 400	81	201- 208	401

*** CALL TMOTOR(20, 402, 409, 82, 209, 414) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
2612	E335-U2	4.16	20	402- 408	409- 413	82	209- 216	414

*** CALL TMOTOR(21, 415, 422, 83, 217, 427) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3402	E336-U3	4.16	21	415- 421	422- 426	83	217- 224	427

*** CALL TMOTOR(22, 428, 435, 84, 225, 440) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3403	3P012	4.16	22	428- 434	435- 439	84	225- 232	440

*** CALL TMOTOR(23, 441, 448, 85, 233, 453) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3404	3P141	4.16	23	441- 447	448- 452	85	233- 240	453

*** CALL TMOTOR(24, 454, 461, 86, 241, 466) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3405	3P024	4.16	24	454- 460	461- 465	86	241- 248	466

*** CALL TMOTOR(25, 467, 474, 87, 249, 479) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3406	3P025-A	4.16	25	467- 473	474- 478	87	249- 256	479

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*** CALL TMOTOR(26, 480, 487, 88, 257, 492) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3407	3P015	4.16	26	480- 486	487- 491	88	257- 264	492

*** CALL TMOTOR(27, 493, 500, 89, 265, 505) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3408	3P017	4.16	27	493- 499	500- 504	89	265- 272	505

*** CALL TMOTOR(28, 506, 513, 90, 273, 518) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3409	3P018-A	4.16	28	506- 512	513- 517	90	273- 280	518

*** CALL TMOTOR(29, 519, 526, 91, 281, 531) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3410	3P112	4.16	29	519- 525	526- 530	91	281- 288	531

*** CALL TMOTOR(30, 532, 539, 92, 289, 544) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3411	3P307	4.16	30	532- 538	539- 543	92	289- 296	544

*** CALL TMOTOR(31, 545, 552, 93, 297, 557) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3602	E335-U3	4.16	31	545- 551	552- 556	93	297- 304	557

*** CALL TMOTOR(32, 558, 565, 94, 305, 570) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3604	3P013	4.16	32	558- 564	565- 569	94	305- 312	570

*** CALL TMOTOR(33, 571, 578, 95, 313, 583) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3605	3P026	4.16	33	571- 577	578- 582	95	313- 320	583

*** CALL TMOTOR(34, 584, 591, 96, 321, 596) ***

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BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3606	3P025-B	4.16	34	584- 590	591- 595	96	321- 328	596

*** CALL TMOTOR(35, 597, 604, 97, 329, 609) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3607	3P016	4.16	35	597- 603	604- 608	97	329- 336	609

*** CALL TMOTOR(36, 610, 617, 98, 337, 622) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3608	3P019	4.16	36	610- 616	617- 621	98	337- 344	622

*** CALL TMOTOR(37, 623, 630, 99, 345, 635) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3609	3P018-B	4.16	37	623- 629	630- 634	99	345- 352	635

*** CALL TMOTOR(38, 636, 643, 100, 353, 648) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3610	3P113	4.16	38	636- 642	643- 647	100	353- 360	648

*** CALL TMOTOR(39, 649, 656, 101, 361, 661) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3611	3P114	4.16	39	649- 655	656- 660	101	361- 368	661

*** CALL TMOTOR(40, 662, 669, 102, 369, 674) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
3612	3P504	4.16	40	662- 668	669- 673	102	369- 376	674

*** CALL TMOTOR(41, 675, 682, 103, 377, 687) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21405	2P191-A	0.46	41	675- 681	682- 686	103	377- 384	687

*** CALL TMOTOR(42, 688, 695, 104, 385, 700) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21409	2A071	0.46	42	688- 694	695- 699	104	385- 392	700

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*** CALL TMOTOR(43, 701, 708, 105, 393, 713) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21410	2E399	0.46	43	701- 707	708- 712	105	393- 400	713

*** CALL TMOTOR(44, 714, 721, 106, 401, 726) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21411	2E401	0.46	44	714- 720	721- 725	106	401- 408	726

*** CALL TMOTOR(45, 727, 734, 107, 409, 739) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21413	2P190	0.46	45	727- 733	734- 738	107	409- 416	739

*** CALL TMOTOR(46, 740, 747, 108, 417, 752) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21418	E418-U2	0.46	46	740- 746	747- 751	108	417- 424	752

*** CALL TMOTOR(47, 753, 760, 109, 425, 765) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21419	2A074	0.46	47	753- 759	760- 764	109	425- 432	765

*** CALL TMOTOR(48, 766, 773, 110, 433, 778) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21609	2A072	0.46	48	766- 772	773- 777	110	433- 440	778

*** CALL TMOTOR(49, 779, 786, 111, 441, 791) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21610	2E400	0.46	49	779- 785	786- 790	111	441- 448	791

*** CALL TMOTOR(50, 792, 799, 112, 449, 804) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21611	2E402	0.46	50	792- 798	799- 803	112	449- 456	804

*** CALL TMOTOR(51, 805, 812, 113, 457, 817) ***

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BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21613	2P192	0.46	51	805- 811	812- 816	113	457- 464	817

*** CALL TMOTOR(52, 818, 825, 114, 465, 830) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21615	E419-U2	0.46	52	818- 824	825- 829	114	465- 472	830

*** CALL TMOTOR(53, 831, 838, 115, 473, 843) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21617	2P191-B	0.46	53	831- 837	838- 842	115	473- 480	843

*** CALL TMOTOR(54, 844, 851, 116 [illegible], 856) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
21619	2A073	0.46	54	844- 850	851- 855	116	481- 488	856

*** CALL TMOTOR(55, 857, 864, 117, 489, 869) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31405	3P191-A	0.46	55	857- 863	864- 868	117	489- 496	869

*** CALL TMOTOR(56, 870, 877, 118, 497, 882) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31409	3A071	0.46	56	870- 876	877- 881	118	497- 504	882

*** CALL TMOTOR(57, 883, 890, 119, 505, 895) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31410	3E399	0.46	57	883- 889	890- 894	119	505- 512	895

*** CALL TMOTOR(58, 896, 903, 120, 513, 908) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31411	3E401	0.46	58	896- 902	903- 907	120	513- 520	908

*** CALL TMOTOR(59, 909, 916, 121, 521, 921) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31413	3P190	0.46	59	909- 915	916- 920	121	521- 528	921

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*** CALL TMOTOR(60, 922, 929, 122, 529, 934) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31418	E418-U3	0.46	60	922- 928	929- 933	122	529- 536	934

*** CALL TMOTOR(61, 935, 942, 123, 537, 947) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31419	3A074	0.46	61	935- 941	942- 946	123	537- 544	947

*** CALL TMOTOR(62, 948, 955, 124, 545, 960) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31609	3A072	0.46	62	948- 954	955- 959	124	545- 552	960

*** CALL TMOTOR(63, 961, 968, 125, 553, 973) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31610	3E400	0.46	63	961- 967	968- 972	125	553- 560	973

*** CALL TMOTOR(64, 974, 981, 126, 561, 986) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31611	3E402	0.46	64	974- 980	981- 985	126	561- 568	986

*** CALL TMOTOR(65, 987, 994, 127, 569, 999) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31613	3P192	0.46	65	987- 993	994- 998	127	569- 576	999

*** CALL TMOTOR(66, 1000, 1007, 128, 577, 1012) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31615	E419-U3	0.46	66	1000- 1006	1007- 1011	128	577- 584	1012

*** CALL TMOTOR(67, 1013, 1020, 129, 585, 1025) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
31617	3P191-B	0.46	67	1013- 1019	1020- 1024	129	585- 592	1025

*** CALL TMOTOR(68, 1026, 1033, 130, 593, 1038) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON

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31619 3A073   0.46   68     1026- 1032    1033- 1037    130   593- 600     1038


         *** CALL TMOTOR(   69, 1039, 1046,  131,  601, 1051) ***

  BUS    NAME BASKV ICON  CIRCUIT CON'S  RATING CON'S  STATE  V A R ' S  ACC CON
22403 2BRA-M  0.48   69     1039- 1045    1046- 1050    131   601- 608     1051


         *** CALL TMOTOR(   70, 1052, 1059,  132,  609, 1064) ***

  BUS    NAME BASKV ICON  CIRCUIT CON'S  RATING CON'S  STATE  V A R ' S  ACC CON
22407 2BD-M   0.48   70     1052- 1058    1059- 1063    132   609- 616     1064


         *** CALL TMOTOR(   71, 1065, 1072,  133,  617, 1077) ***

  BUS    NAME BASKV ICON  CIRCUIT CON'S  RATING CON'S  STATE  V A R ' S  ACC CON
22414 2BE-M   0.48   71     1065- 1071    1072- 1076    133   617- 624     1077


         *** CALL TMOTOR(   72, 1078, 1085,  134,  625, 1090) ***

  BUS    NAME BASKV ICON  CIRCUIT CON'S  RATING CON'S  STATE  V A R ' S  ACC CON
22415 2BY-M   0.48   72     1078- 1084    1085- 1089    134   625- 632     1090


         *** CALL TMOTOR(   73, 1091, 1098,  135,  633, 1103) ***

  BUS    NAME BASKV ICON  CIRCUIT CON'S  RATING CON'S  STATE  V A R ' S  ACC CON
22417 BQ-U2-M 0.48   73     1091- 1097    1098- 1102    135   633- 640     1103


         *** CALL TMOTOR(   74, 1104, 1111,  136,  641, 1116) ***

  BUS    NAME BASKV ICON  CIRCUIT CON'S  RATING CON'S  STATE  V A R ' S  ACC CON
22603 2BRB-M  0.48   74     1104- 1110    1111- 1115    136   641- 648     1116


         *** CALL TMOTOR(   75, 1117, 1124,  137,  649, 1129) ***

  BUS    NAME BASKV ICON  CIRCUIT CON'S  RATING CON'S  STATE  V A R ' S  ACC CON
22605 2BH-M   0.48   75     1117- 1123    1124- 1128    137   649- 656     1129


         *** CALL TMOTOR(   76, 1130, 1137,  138,  657, 1142) ***

  BUS    NAME BASKV ICON  CIRCUIT CON'S  RATING CON'S  STATE  V A R ' S  ACC CON
22607 2BJ-M   0.48   76     1130- 1136    1137- 1141    138   657- 664     1142
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*** CALL TMOTOR(77, 1143, 1150, 139, 665, 1155) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
22614	2BE-M	0.48	77	1143- 1149	1150- 1154	139	665- 672	1155

*** CALL TMOTOR(78, 1156, 1163, 140, 673, 1168) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
22618	BS-U2-M	0.48	78	1156- 1162	1163- 1167	140	673- 680	1168

*** CALL TMOTOR(79, 1169, 1176, 141, 681, 1181) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
32403	3BRA-M	0.48	79	1169- 1175	1176- 1180	141	681- 688	1181

*** CALL TMOTOR(80, 1182, 1189, 142, 689, 1194) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
32407	3BD-M	0.48	80	1182- 1188	1189- 1193	142	689- 696	1194

*** CALL TMOTOR(81, 1195, 1202, 143, 697, 1207) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
32414	3BE-M	0.48	81	1195- 1201	1202- 1206	143	697- 704	1207

*** CALL TMOTOR(82, 1208, 1215, 144, 705, 1220) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
32415	3BY-M	0.48	82	1208- 1214	1215- 1219	144	705- 712	1220

*** CALL TMOTOR(83, 1221, 1228, 145, 713, 1233) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
32417	BQ-U3-M	0.48	83	1221- 1227	1228- 1232	145	713- 720	1233

*** CALL TMOTOR(84, 1234, 1241, 146, 721, 1246) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
32603	3BRB-M	0.48	84	1234- 1240	1241- 1245	146	721- 728	1246

*** CALL TMOTOR(85, 1247, 1254, 147, 729, 1259) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
32605	3BH-M	0.48	85	1247- 1253	1254- 1258	147	729- 736	1259

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*** CALL TMOTOR(86, 1260, 1267, 148, 737, 1272) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
32607	3BJ-M	0.48	86	1260- 1266	1267- 1271	148	737- 744	1272

*** CALL TMOTOR(87, 1273, 1280, 149, 745, 1285) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
32614	3B3-M	0.48	87	1273- 1279	1280- 1284	149	745- 752	1285

*** CALL TMOTOR(88, 1286, 1293, 150, 753, 1298) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
32618	BS-U3-M	0.48	88	1286- 1292	1293- 1297	150	753- 760	1298

*** CALL TMOTOR(89, 1299, 1306, 151, 761, 1311) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24412	2A274	0.46	89	1299- 1305	1306- 1310	151	761- 768	1311

*** CALL TMOTOR(90, 1312, 1319, 152, 769, 1324) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24413	2A275	0.46	90	1312- 1318	1319- 1323	152	769- 776	1324

*** CALL TMOTOR(91, 1325, 1332, 153, 777, 1337) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24421	2E550	0.46	91	1325- 1331	1332- 1336	153	777- 784	1337

*** CALL TMOTOR(92, 1338, 1345, 154, 785, 1350) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24422	2E546	0.46	92	1338- 1344	1345- 1349	154	785- 792	1350

*** CALL TMOTOR(93, 1351, 1358, 155, 793, 1363) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24434	2P009	0.46	93	1351- 1357	1358- 1362	155	793- 800	1363

*** CALL TMOTOR(94, 1364, 1371, 156, 801, 1376) ***

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BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24606	2E547	0.46	94	1364- 1370	1371- 1375	156	801- 808	1376

*** CALL TMOTOR(95, 1377, 1384, 157, 809, 1389) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24607	2E549	0.46	95	1377- 1383	1384- 1388	157	809- 816	1389

*** CALL TMOTOR(96, 1390, 1397, 158, 817, 1402) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24611	2A276	0.46	96	1390- 1396	1397- 1401	158	817- 824	1402

*** CALL TMOTOR(97, 1403, 1410, 159, 825, 1415) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24612	2A277	0.46	97	1403- 1409	1410- 1414	159	825- 832	1415

*** CALL TMOTOR(98, 1416, 1423, 160, 833, 1428) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24622	2P010	0.46	98	1416- 1422	1423- 1427	160	833- 840	1428

*** CALL TMOTOR(99, 1429, 1436, 161, 841, 1441) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24417	P162-U2	0.46	99	1429- 1435	1436- 1440	161	841- 848	1441

*** CALL TMOTOR(100, 1442, 1449, 162, 849, 1454) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
24618	P160-U2	0.46	100	1442- 1448	1449- 1453	162	849- 856	1454

*** CALL TMOTOR(101, 1455, 1462, 163, 857, 1467) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34417	P162-U3	0.46	101	1455- 1461	1462- 1466	163	857- 864	1467

*** CALL TMOTOR(102, 1468, 1475, 164, 865, 1480) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34618	P160-U3	0.46	102	1468- 1474	1475- 1479	164	865- 872	1480

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*** CALL TMOTOR(103, 1481, 1488, 165, 873, 1493) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34412	3A274	0.46	103	1481- 1487	1488- 1492	165	873- 880	1493

*** CALL TMOTOR(104, 1494, 1501, 166, 881, 1506) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34413	3A275	0.46	104	1494- 1500	1501- 1505	166	881- 888	1506

*** CALL TMOTOR(105, 1507, 1514, 167, 889, 1519) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34421	3E550	0.46	105	1507- 1513	1514- 1518	167	889- 896	1519

*** CALL TMOTOR(106, 1520, 1527, 168, 897, 1532) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34422	3E546	0.46	106	1520- 1526	1527- 1531	168	897- 904	1532

*** CALL TMOTOR(107, 1533, 1540, 169, 905, 1545) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34434	3P009	0.46	107	1533- 1539	1540- 1544	169	905- 912	1545

*** CALL TMOTOR(108, 1546, 1553, 170, 913, 1558) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34606	3E547	0.46	108	1546- 1552	1553- 1557	170	913- 920	1558

*** CALL TMOTOR(109, 1559, 1566, 171, 921, 1571) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34607	3E549	0.46	109	1559- 1565	1566- 1570	171	921- 928	1571

*** CALL TMOTOR(110, 1572, 1579, 172, 929, 1584) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S	RATING CON'S	STATE	V A R ' S	ACC CON
34611	3A276	0.46	110	1572- 1578	1579- 1583	172	929- 936	1584

*** CALL TMOTOR(111, 1585, 1592, 173, 937, 1597) ***

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BUS	NAME	BASKV	ICON	CIRCUIT CON'S		RATING CON'S		STATE	V A R ' S		ACC CON
34612	3A277	0.46	111	1585-	1591	1592-	1596	173	937-	944	1597

*** CALL TMOTOR(111, 1598, 1605, 174, 945, 1610) ***

BUS	NAME	BASKV	ICON	CIRCUIT CON'S		RATING CON'S		STATE	V A R ' S		ACC CON
34622	3P010	0.46	112	1598-	1604	1605-	1609	174	945-	952	1610

*** CALL NETFRQ ***

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RE CRM 9-30-99 IRE 10-5-99

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PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 14:56
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
E4C-087, REV 1 - SYSTEM DYNAMIC VOLTAGES DURING A DBA

CHAN MODELS

*** CALL VOLMAG(113, 953, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
113	953	0	24	2A04	4.16

*** CALL VOLMAG(114, 954, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
114	954	0	26	2A06	4.16

*** CALL VOLMAG(115, 955, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
115	955	0	34	3A04	4.16

*** CALL VOLMAG(116, 956, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
116	956	0	36	3A06	4.16

*** CALL VOLMAG(117, 957, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
117	957	0	214	2B04	0.48

*** CALL VOLMAG(118, 958, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
118	958	0	216	2B06	0.48

*** CALL VOLMAG(119, 959, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
119	959	0	314	3B04	0.48

*** CALL VOLMAG(120, 960, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV

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RE: Gene 9-30-94 IRE: RLP 10-5-94

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120	960	0	316	3B06	0.48

*** CALL VOLMAG(121, 961, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
121	961	0	2403	2P012	4.16

*** CALL VOLMAG(122, 962, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
122	962	0	2404	2P141	4.16

*** CALL VOLMAG(123, 963, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
123	963	0	2405	2P024	4.16

*** CALL VOLMAG(124, 964, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
124	964	0	2406	2P025-A	4.16

*** CALL VOLMAG(125, 965, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
125	965	0	2407	2P015	4.16

*** CALL VOLMAG(126, 966, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
126	966	0	2408	2P017	4.16

*** CALL VOLMAG(127, 967, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
127	967	0	2409	2P018-A	4.16

*** CALL VOLMAG(128, 968, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
128	968	0	2410	2P112	4.16

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RE: Lynn 9-30-94 IRE: Rod 10-5-94

Lynn 9

*** CALL VOLMAG(129, 969, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
129	969	0	2411	2P307	4.16

*** CALL VOLMAG(130, 970, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
130	970	0	2412	E336-U2	4.16

*** CALL VOLMAG(131, 971, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
131	971	0	2413	2G002	4.36

*** CALL VOLMAG(132, 972, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
132	972	0	2603	2P504	4.16

*** CALL VOLMAG(133, 973, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
133	973	0	2604	2P013	4.16

*** CALL VOLMAG(134, 974, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
134	974	0	2605	2P026	4.16

*** CALL VOLMAG(135, 975, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
135	975	0	2606	2P025-B	4.16

*** CALL VOLMAG(136, 976, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
136	976	0	2607	2P016	4.16

*** CALL VOLMAG(137, 977, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
137	977	0	2608	2P019	4.16

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*** CALL VOLMAG(138, 978, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
138	978	0	2609	2P018-B	4.16

*** CALL VOLMAG(139, 979, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
139	979	0	2610	2P113	4.16

*** CALL VOLMAG(140, 980, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
140	980	0	2611	2P114	4.16

*** CALL VOLMAG(141, 981, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
141	981	0	2612	E335-U2	4.16

*** CALL VOLMAG(142, 982, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
142	982	0	2613	2G003	4.36

*** CALL VOLMAG(143, 983, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
143	983	0	3402	E336-U3	4.16

*** CALL VOLMAG(144, 984, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
144	984	0	3403	3P012	4.16

*** CALL VOLMAG(145, 985, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
145	985	0	3404	3P141	4.16

*** CALL VOLMAG(146, 986, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
146	986	0	3405	3P024	4.16

*** CALL VOLMAG(147, 987, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
147	987	0	3406	3P025-A	4.16

*** CALL VOLMAG(148, 988, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
148	988	0	3407	3P015	4.16

*** CALL VOLMAG(149, 989, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
149	989	0	3408	3P017	4.16

*** CALL VOLMAG(150, 990, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
150	990	0	3409	3P018-A	4.16

*** CALL VOLMAG(151, 991, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
151	991	0	3410	3P112	4.16

*** CALL VOLMAG(152, 992, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
152	992	0	3411	3P307	4.16

*** CALL VOLMAG(153, 993, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
153	993	0	3413	3G002	4.36

*** CALL VOLMAG(154, 994, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
154	994	0	3602	E335-U3	4.16

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*** CALL VOLMAG(155, 995, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
155	995	0	3604	3P013	4.16

*** CALL VOLMAG(156, 996, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
156	996	0	3605	3P026	4.16

*** CALL VOLMAG(157, 997, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
157	997	0	3606	3P025-B	4.16

*** CALL VOLMAG(158, 998, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
158	998	0	3607	3P016	4.16

*** CALL VOLMAG(159, 999, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
159	999	0	3608	3P019	4.16

*** CALL VOLMAG(160, 1000, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
160	1000	0	3609	3P018-B	4.16

*** CALL VOLMAG(161, 1001, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
161	1001	0	3610	3P113	4.16

*** CALL VOLMAG(162, 1002, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
162	1002	0	3611	3P114	4.16

*** CALL VOLMAG(163, 1003, 0) ***

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ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
163	1003	0	3612	3P504	4.16

*** CALL VOLMAG(164, 1004, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
164	1004	0	3613	3G003	4.36

*** CALL VOLMAG(165, 1005, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
165	1005	0	21403	2BRA	0.48

*** CALL VOLMAG(166, 1006, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
166	1006	0	21405	2P191-A	0.46

*** CALL VOLMAG(167, 1007, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
167	1007	0	21407	2BD	0.48

*** CALL VOLMAG(168, 1008, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
168	1008	0	21409	2A071	0.46

*** CALL VOLMAG(169, 1009, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
169	1009	0	21410	2E399	0.46

*** CALL VOLMAG(170, 1010, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
170	1010	0	21411	2E401	0.46

*** CALL VOLMAG(171, 1011, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
171	1011	0	21413	2P190	0.46

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*** CALL VOLMAG(172, 1012, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
172	1012	0	21414	2BE	0.48

*** CALL VOLMAG(173, 1013, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
173	1013	0	21415	2BY	0.48

*** CALL VOLMAG(174, 1014, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
174	1014	0	21417	BQ-U2	0.48

*** CALL VOLMAG(175, 1015, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
175	1015	0	21418	E418-U2	0.46

*** CALL VOLMAG(176, 1016, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
176	1016	0	21419	2A074	0.46

*** CALL VOLMAG(177, 1017, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
177	1017	0	21603	2BRB	0.48

*** CALL VOLMAG(178, 1018, 0) ***

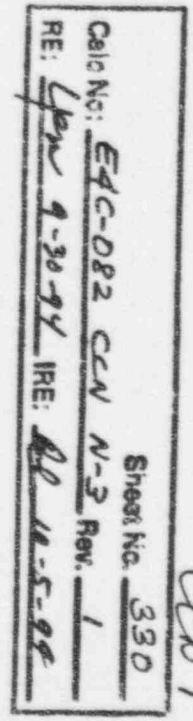
ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
178	1018	0	21605	2BH	0.48

*** CALL VOLMAG(179, 1019, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
179	1019	0	21607	2BJ	0.48

*** CALL VOLMAG(180, 1020, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV



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180	1020	0	21609	2A072	0.46

*** CALL VOLMAG(181, 1021, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
181	1021	0	21610	2E400	0.46

*** CALL VOLMAG(182, 1022, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
182	1022	0	21611	2E402	0.46

*** CALL VOLMAG(183, 1023, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
183	1023	0	21613	2P192	0.46

*** CALL VOLMAG(184, 1024, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
184	1024	0	21614	2BZ	0.48

*** CALL VOLMAG(185, 1025, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
185	1025	0	21615	E419-U2	0.46

*** CALL VOLMAG(186, 1026, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
186	1026	0	21617	2P191-B	0.46

*** CALL VOLMAG(187, 1027, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
187	1027	0	21618	BS-U2	0.48

*** CALL VOLMAG(188, 1028, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
188	1028	0	21619	2A073	0.46

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*** CALL VOLMAG(189, 1029, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
189	1029	0	31403	3BRA	0.48

*** CALL VOLMAG(190, 1030, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
190	1030	0	31405	3P191-A	0.46

*** CALL VOLMAG(191, 1031, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
191	1031	0	31407	3BD	0.48

*** CALL VOLMAG(192, 1032, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
192	1032	0	31409	3A071	0.46

*** CALL VOLMAG(193, 1033, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
193	1033	0	31410	3E399	0.46

*** CALL VOLMAG(194, 1034, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
194	1034	0	31411	3E401	0.46

*** CALL VOLMAG(195, 1035, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
195	1035	0	31413	3P190	0.46

*** CALL VOLMAG(196, 1036, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
196	1036	0	31414	3BE	0.48

*** CALL VOLMAG(197, 1037, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
197	1037	0	31415	3BY	0.48

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RE: Lpmr 9-30-94 IRE: [illegible] 10-5-94

LWG

*** CALL VOLMAG(198, 1038, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
198	1038	0	31417	BQ-U3	0.48

*** CALL VOLMAG(199, 1039, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
199	1039	0	31418	E418-U3	0.46

*** CALL VOLMAG(200, 1040, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
200	1040	0	31419	3A074	0.46

*** CALL VOLMAG(201, 1041, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
201	1041	0	31603	3BRB	0.48

*** CALL VOLMAG(202, 1042, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
202	1042	0	31605	3BH	0.48

*** CALL VOLMAG(203, 1043, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
203	1043	0	31607	3BJ	0.48

*** CALL VOLMAG(204, 1044, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
204	1044	0	31609	3A072	0.4

*** CALL VOLMAG(205, 1045, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
205	1045	0	31610	3E400	0.46

*** CALL VOLMAG(206, 1046, 0) ***

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RE: Lpm 9-30-97 IRE: BD 10-5-97

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ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
206	1046	0	31611	3E402	0.46

*** CALL VOLMAG(207, 1047, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
207	1047	0	31613	3P192	0.46

*** CALL VOLMAG(208, 1048, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
208	1048	0	31614	3BZ	0.48

*** CALL VOLMAG(209, 1049, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
209	1049	0	31615	E419-U3	0.46

*** CALL VOLMAG(210, 1050, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
210	1050	0	31617	3P191-B	0.46

*** CALL VOLMAG(211, 1051, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
211	1051	0	31618	BS-U3	0.48

*** CALL VOLMAG(212, 1052, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
212	1052	0	31619	3A073	0.46

*** CALL VOLMAG(213, 1053, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
213	1053	0	24412	2A274	0.46

*** CALL VOLMAG(214, 1054, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
214	1054	0	24413	2A275	0.46

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*** CALL VOLMAG(215, 1055, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
215	1055	0	24417	P162-U2	0.46

*** CALL VOLMAG(216, 1056, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
216	1056	0	24421	2E550	0.46

*** CALL VOLMAG(217, 1057, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
217	1057	0	24422	2E546	0.46

*** CALL VOLMAG(218, 1058, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
218	1058	0	24434	2P009	0.46

*** CALL VOLMAG(219, 1059, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
219	1059	0	24606	2E547	0.46

*** CALL VOLMAG(220, 1060, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
220	1060	0	24607	2E549	0.46

*** CALL VOLMAG(221, 1061, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
221	1061	0	24611	2A276	0.46

*** CALL VOLMAG(222, 1062, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
222	1062	0	24612	2A277	0.46

*** CALL VOLMAG(223, 1063, 0) ***

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ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
223	1063	0	24618	P160-U2	0.46

*** CALL VOLMAG(224, 1064, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
224	1064	0	24622	2P010	0.46

*** CALL VOLMAG(225, 1065, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
225	1065	0	34412	3A274	0.46

*** CALL VOLMAG(226, 1066, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
226	1066	0	34413	3A275	0.46

*** CALL VOLMAG(227, 1067, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
227	1067	0	34417	P162-U3	0.46

*** CALL VOLMAG(228, 1068, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
228	1068	0	34421	3E550	0.46

*** CALL VOLMAG(229, 1069, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
229	1069	0	34422	3E546	0.46

*** CALL VOLMAG(230, 1070, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
230	1070	0	34434	3P009	0.46

*** CALL VOLMAG(231, 1071, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
231	1071	0	34606	3E547	0.46

Sheet No. 336
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Lpnr 9-30-94 IRE: RB 10-5-94

ACN 9

*** CALL VOLMAG(232, 1072, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
232	1072	0	34607	3E549	0.46

*** CALL VOLMAG(233, 1073, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
233	1073	0	34611	3A276	0.46

*** CALL VOLMAG(234, 1074, 0) ***

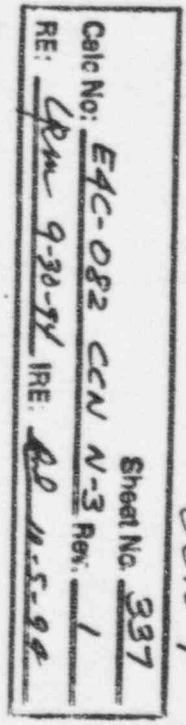
ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
234	1074	0	34612	3A277	0.46

*** CALL VOLMAG(235, 1075, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
235	1075	0	34618	P160-U3	0.46

*** CALL VOLMAG(236, 1076, 0) ***

ICON	VOLTAGE VAR	ANGLE VAR	BUS	NAME	BSKV
236	1076	0	34622	3P010	0.46



CCN 9

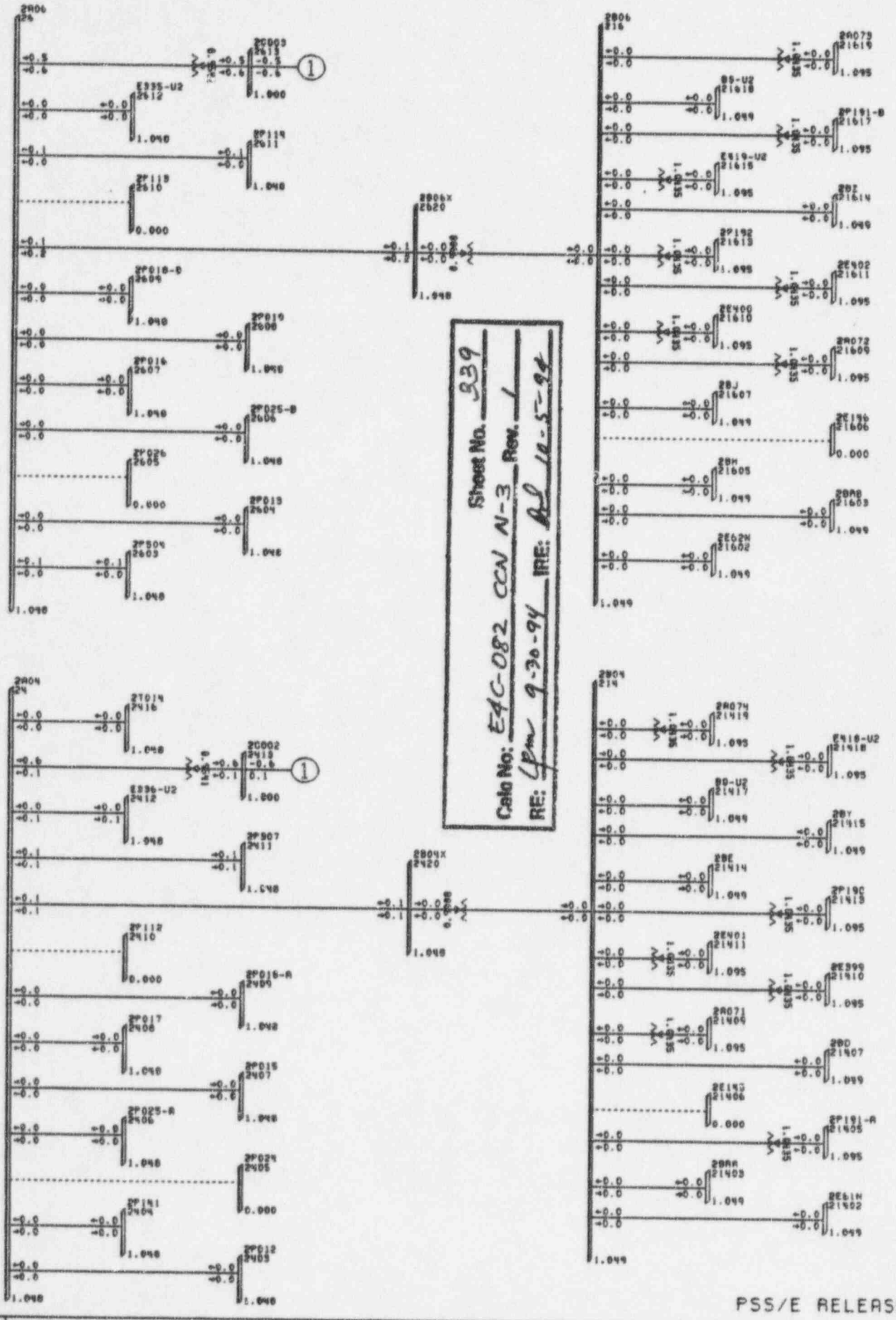
REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

APPENDIX 9.1.3

CASE IIIAX

Initial Condition Power Flow (Steady State) Report
Post Accident Condition Power Flow (Steady State) Report

CCN 9



PSS/E RELEASE 19.0

CASE III.AX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAX]LF-1_IIIAX.SAV
WED. SEP 14 1994 15:01

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 15:01
CASE III.AX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAX]LF-1_IIIAX.SAV

BUS DATA								LINE DATA								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
24	2A04 4.16	1	1.048	0.0	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	2403	2P012 4.16	1	1	0.0	0.0				
								2404	2P141 4.16	1	1	0.0	0.0				
								2406	2P025-A 4.16	1	1	0.0	0.0				
								2407	2P015 4.16	1	1	0.0	0.0				
								2408	2P017 4.16	1	1	0.0	0.0				
								2409	2P018-A 4.16	1	1	0.0	0.0				
								2411	2P307 4.16	1	1	0.1	0.1				
								2412	E336-U2 4.16	1	1	0.0	0.1				
								2413	2G002 4.36	1	1	0.6	-0.1	0.954UN			
								2416	2T014 4.16	1	1	0.0	0.0				
								2420	2B04X 4.16	1	1	-0.1	0.1				
									M I S M A T C H			-0.6	-0.1				
26	2A06 4.16	1	1.048	0.0	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	2603	2P504 4.16	1	1	-0.1	0.0				
								2604	2P013 4.16	1	1	0.0	0.0				
								2606	2P025-B 4.16	1	1	0.0	0.0				
								2607	2P016 4.16	1	1	0.0	0.0				
								2608	2P019 4.16	1	1	0.0	0.0				
								2609	2P018-B 4.16	1	1	0.0	0.0				
								2611	2P114 4.16	1	1	-0.1	0.0				
								2612	E335-U2 4.16	1	1	0.0	0.0				
								2613	2G003 4.36	1	1	0.5	0.6	0.954UN			
								2620	2B06X 4.16	1	1	-0.1	0.2				
									M I S M A T C H			-0.3	-0.6				
214	2B04 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	2420	2B04X 4.16	1	1	0.0	0.0	0.999UN			
								21402	2E61N 0.48	1	1	0.0	0.0				
								21403	2BRA 0.48	1	1	0.0	0.0				
								21405	2P191-A 0.46	1	1	0.0	0.0	1.043UN			
								21407	2BD 0.48	1	1	0.0	0.0				
								21409	2A071 0.46	1	1	0.0	0.0	1.043UN			
								21410	2E399 0.46	1	1	0.0	0.0	1.043UN			
								21411	2E401 0.46	1	1	0.0	0.0	1.043UN			
								21413	2P190 0.46	1	1	0.0	0.0	1.043UN			
								21414	2BE 0.48	1	1	0.0	0.0				
								21415	2BY 0.48	1	1	0.0	0.0				
								21417	BQ-U2 0.48	1	1	0.0	0.0				
								21418	E418-U2 0.46	1	1	0.0	0.0	1.043UN			
								21419	2A074 0.46	1	1	0.0	0.0	1.043UN			

Sheet No. 340
Calc No: E4C-082 CCN N-3 Rev: 1
RE: Lpm 9-30-94 IRE: [illegible] 10-5-94

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 15:01
CASE III.AX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAX]LP-1_IIIAX.SAV

FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
216	2B06	0.48	1	1.049	0.0	0.0	0.0	0.0											
			1	0.50		0.0	0.0	0.0	2620	2B06X	4.16	1	1	0.0	0.0	0.999UN			
									21602	2E62N	0.48	1	1	0.0	0.0				
									21603	2BRB	0.48	1	1	0.0	0.0				
									21605	2BH	0.48	1	1	0.0	0.0				
									21607	2BJ	0.48	1	1	0.0	0.0				
									21609	2A072	0.46	1	1	0.0	0.0	1.043UN			
									21610	2E400	0.46	1	1	0.0	0.0	1.043UN			
									21611	2E402	0.46	1	1	0.0	0.0	1.043UN			
									21613	2P192	0.46	1	1	0.0	0.0	1.043UN			
									21614	2BE	0.48	1	1	0.0	0.0				
									21615	E419-U2	0.46	1	1	0.0	0.0	1.043UN			
									21617	2P191-B	0.46	1	1	0.0	0.0	1.043UN			
									21618	BS-U2	0.48	1	1	0.0	0.0				
									21619	2A073	0.46	1	1	0.0	0.0	1.043UN			
2403	2P012	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	0.0	0.0				
2404	2P141	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	0.0	0.0				
2406	2P025-A	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	0.0	0.0				
2407	2P015	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	0.0	0.0				
2408	2P017	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	0.0	0.0				
2409	2P018-A	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	0.0	0.0				
2411	2P307	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	-0.1	-0.1				
2412	E336-U2	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	0.0	-0.1				
2413	2G002	4.36	1	1.000	0.0	-0.6	0.0	0.0											
			1	4.36		0.1R	0.0	0.0	24	2A04	4.16	1	1	-0.6	0.1	0.954LK			
2416	2T014	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	0.0	0.0				
2420	2B04X	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	0.1	-0.1				
									214	2B04	0.48	1	1	0.0	0.0	0.999LK			
2603	2P504	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	26	2A06	4.16	1	1	0.1	0.0				

Calc No: E4C-082 CCN N-3 Sheet No. 341
RE: LPmr 9-30-94 IRE: RD 11-6-94 Rev: 1

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 15:01
CASE III.AX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAX]LF-1_IIIAX.SAV

BUS DATA								LINE DATA								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
2604	2P013 4.16	1	1.048	0.0	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	0.0	0.0				
2606	2P025-B 4.16	1	1.048	0.0	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	0.0	0.0				
2607	2P016 4.16	1	1.048	0.0	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	0.0	0.0				
2608	2P019 4.16	1	1.048	0.0	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	0.0	0.0				
2609	2P018-B 4.16	1	1.048	0.0	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	0.0	0.0				
2611	2P114 4.16	1	1.048	0.0	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	0.1	0.0				
2612	E335-U2 4.16	1	1.048	0.0	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	0.0	0.0				
2613	2G003 4.36	1	1.000	0.0	-0.5	0.0	0.0										
		1	4.36		-0.6L	0.0	0.0	26	2A06 4.16	1	1	-0.5	-0.6	0.954LK			
2620	2B06X 4.16	1	1.048	0.0	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	0.1	-0.2				
								216	2B06 0.48	1	1	0.0	0.0	0.999LK			
21402	2E61N 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	214	2B04 0.48	1	1	0.0	0.0				
21403	2BRA 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	214	2B04 0.48	1	1	0.0	0.0				
								22403	2BRA-M 0.48	1	1	0.0	0.0				
								23403	2BRA-S 0.48	1	1	0.0	0.0				
21405	2P191-A 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	214	2B04 0.48	1	1	0.0	0.0	1.043LK			
21407	2BD 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	214	2B04 0.48	1	1	0.0	0.0				
								22407	2BD-M 0.48	1	1	0.0	0.0				
								23407	2BD-S 0.48	1	1	0.0	0.0				
								24412	2A274 0.46	1	1	0.0	0.0	1.043UN			
								24413	2A275 0.46	1	1	0.0	0.0	1.043UN			
								24421	2E550 0.46	1	1	0.0	0.0	1.043UN			
								24422	2E546 0.46	1	1	0.0	0.0	1.043UN			
21409	2A071 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	214	2B04 0.48	1	1	0.0	0.0	1.043LK			
21410	2E399 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	214	2B04 0.48	1	1	0.0	0.0	1.043LK			

Calc No: E4C-082 CCN N-3 Sheet No. 342
RE: Lpw 9-30-94 IRE: Rel 10-5-94 Rev. 1
CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 15:01
CASE III.AX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAX]LF-1_IIIAX.SAV

BUS DATA								LINE DATA								
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
21411	2E401	0.46	1	1.095	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	214	2B04	0.48	1	1	0.0	0.0	1.043LK		
21413	2P190	0.46	1	1.095	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	214	2B04	0.48	1	1	0.0	0.0	1.043LK		
21414	2BE	0.48	1	1.049	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	214	2B04	0.48	1	1	0.0	0.0			
									22414	2BE-M	0.48	1	1	0.0	0.0			
									23414	2BE-S	0.48	1	1	0.0	0.0			
21415	2BY	0.48	1	1.049	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	214	2B04	0.48	1	1	0.0	0.0			
									22415	2BY-M	0.48	1	1	0.0	0.0			
									23415	2BY-S	0.48	1	1	0.0	0.0			
									24434	2P009	0.46	1	1	0.0	0.0	1.043UN		
21417	BQ-U2	0.48	1	1.049	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	214	2B04	0.48	1	1	0.0	0.0			
									22417	BQ-U2-M	0.48	1	1	0.0	0.0			
									23417	BQ-U2-S	0.48	1	1	0.0	0.0			
									24417	P162-U2	0.46	1	1	0.0	0.0	1.043UN		
21418	E418-U2	0.46	1	1.095	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	214	2B04	0.48	1	1	0.0	0.0	1.043LK		
21419	2A074	0.46	1	1.095	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	214	2B04	0.48	1	1	0.0	0.0	1.043LK		
21602	2E62N	0.48	1	1.049	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	216	2B06	0.48	1	1	0.0	0.0			
21603	2BRB	0.48	1	1.049	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	216	2B06	0.48	1	1	0.0	0.0			
									22603	2BRB-M	0.48	1	1	0.0	0.0			
									23603	2BRB-S	0.48	1	1	0.0	0.0			
21605	2BH	0.48	1	1.049	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	216	2B06	0.48	1	1	0.0	0.0			
									22605	2BH-M	0.48	1	1	0.0	0.0			
									23605	2BH-S	0.48	1	1	0.0	0.0			
									24606	2E547	0.46	1	1	0.0	0.0	1.043UN		
									24607	2E549	0.46	1	1	0.0	0.0	1.043UN		
									24611	2A276	0.46	1	1	0.0	0.0	1.043UN		
									24612	2A277	0.46	1	1	0.0	0.0	1.043UN		
21607	2BJ	0.48	1	1.049	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	216	2B06	0.48	1	1	0.0	0.0			
									22607	2BJ-M	0.48	1	1	0.0	0.0			
									23607	2BJ-S	0.48	1	1	0.0	0.0			
21609	2A072	0.46	1	1.095	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	216	2B06	0.48	1	1	0.0	0.0	1.043LK		
21610	2E400	0.46	1	1.095	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	216	2B06	0.48	1	1	0.0	0.0	1.043LK		

Sheet No. 343
Calc No: E4C-082 CCN 11-3 Rev: 1
RE: Lpmr 9-30-94 IRE: RLB 10-5-94

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 15:01
CASE III.AX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAX]LF-1_IIIAX.SAV

BUS DATA									LINE DATA								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
21611	2E402 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	216	2B06 0.48	1	1	0.0	0.0	1.043LK			
21613	2P192 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	216	2B06 0.48	1	1	0.0	0.0	1.043LK			
21614	2BZ 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	216	2B06 0.48	1	1	0.0	0.0				
								22614	2BZ-M 0.48	1	1	0.0	0.0				
								23614	2BZ-S 0.48	1	1	0.0	0.0				
								24622	2P010 0.46	1	1	0.0	0.0	1.043UN			
21615	E419-U2 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	216	2B06 0.48	1	1	0.0	0.0	1.043LK			
21617	2P191-B 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	216	2B06 0.48	1	1	0.0	0.0	1.043LK			
21618	BS-U2 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	216	2B06 0.48	1	1	0.0	0.0				
								22618	BS-U2-M 0.48	1	1	0.0	0.0				
								23618	BS-U2-S 0.48	1	1	0.0	0.0				
								24618	P160-U2 0.46	1	1	0.0	0.0	1.043UN			
21619	2A073 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	216	2B06 0.48	1	1	0.0	0.0	1.043LK			
22403	2BRA-M 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21403	2BRA 0.48	1	1	0.0	0.0				
22407	2BD-M 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21407	2BD 0.48	1	1	0.0	0.0				
22414	2BE-M 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21414	2BE 0.48	1	1	0.0	0.0				
22415	2BY-M 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21415	2BY 0.48	1	1	0.0	0.0				
22417	BQ-U2-M 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21417	BQ-U2 0.48	1	1	0.0	0.0				
22603	2BRB-M 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21603	2BRB 0.48	1	1	0.0	0.0				
22605	2BH-M 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21605	2BH 0.48	1	1	0.0	0.0				
22607	2BJ-M 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21607	2BJ 0.48	1	1	0.0	0.0				
22614	2BZ-M 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21614	2BZ 0.48	1	1	0.0	0.0				

Calc No: E4C-082 CCN N-3 Sheet No. 344
RE: Lpm 9-30-94 IRE: RBL 10-5-94 Rev: 1

Cen 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 15:01
CASE III.AX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAX]LF-1_IIIAX.SAV

FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
22618	BS-U2-M 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21618	BS-U2 0.48	1	1	0.0	0.0				
23403	2BRA-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21403	2BRA 0.48	1	1	0.0	0.0				
23407	2BD-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21407	2BD 0.48	1	1	0.0	0.0				
23414	2BE-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21414	2BE 0.48	1	1	0.0	0.0				
23415	2BY-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21415	2BY 0.48	1	1	0.0	0.0				
23417	BQ-U2-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21417	BQ-U2 0.48	1	1	0.0	0.0				
23603	2BRB-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21603	2BRB 0.48	1	1	0.0	0.0				
23605	2BH-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21605	2BH 0.48	1	1	0.0	0.0				
23607	2BJ-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21607	2BJ 0.48	1	1	0.0	0.0				
23614	2BZ-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21614	2BZ 0.48	1	1	0.0	0.0				
23618	BS-U2-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21618	BS-U2 0.48	1	1	0.0	0.0				
24412	2A274 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21407	2BD 0.48	1	1	0.0	0.0	1.043LK			
24413	2A275 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21407	2BD 0.48	1	1	0.0	0.0	1.043LK			
24417	P162-U2 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21417	BQ-U2 0.48	1	1	0.0	0.0	1.043LK			
24421	2E550 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21407	2BD 0.48	1	1	0.0	0.0	1.043LK			
24422	2E546 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21407	2BD 0.48	1	1	0.0	0.0	1.043LK			
24434	2P009 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21415	2BY 0.48	1	1	0.0	0.0	1.043LK			

Calc No: E4C-082 CCN N-3 Sheet No. 345
RE: Lpm 9-30-94 IRE: Rel 10-5-94 Rev. 1

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 15:01
CASE III.AX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAX]LF-1_IIIAX.SAV

FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
24606	2E547	0.46	1	1.095	0.0	0.0	0.0	0.0									
			1	0.50		0.0	0.0	0.0	21605 2BH	0.48	1	1	0.0	0.0	1.043LK			
24607	2E549	0.46	1	1.095	0.0	0.0	0.0	0.0									
			1	0.50		0.0	0.0	0.0	21605 2BH	0.48	1	1	0.0	0.0	1.043LK			
24611	2A276	0.46	1	1.095	0.0	0.0	0.0	0.0									
			1	0.50		0.0	0.0	0.0	21605 2BH	0.48	1	1	0.0	0.0	1.043LK			
24612	2A277	0.46	1	1.095	0.0	0.0	0.0	0.0									
			1	0.50		0.0	0.0	0.0	21605 2BH	0.48	1	1	0.0	0.0	1.043LK			
24618	P160-U2	0.46	1	1.095	0.0	0.0	0.0	0.0									
			1	0.50		0.0	0.0	0.0	21618 BS-U2	0.48	1	1	0.0	0.0	1.043LK			
24622	2P010	0.46	1	1.095	0.0	0.0	0.0	0.0									
			1	0.50		0.0	0.0	0.0	21614 2BZ	0.48	1	1	0.0	0.0	1.043LK			

Calc No: E4C-082 CCN N-3 Rev. 1
RE: Lpmw 9-30-94 IRE: Rob 10-5-94
Sheet No. 346

CCN 9

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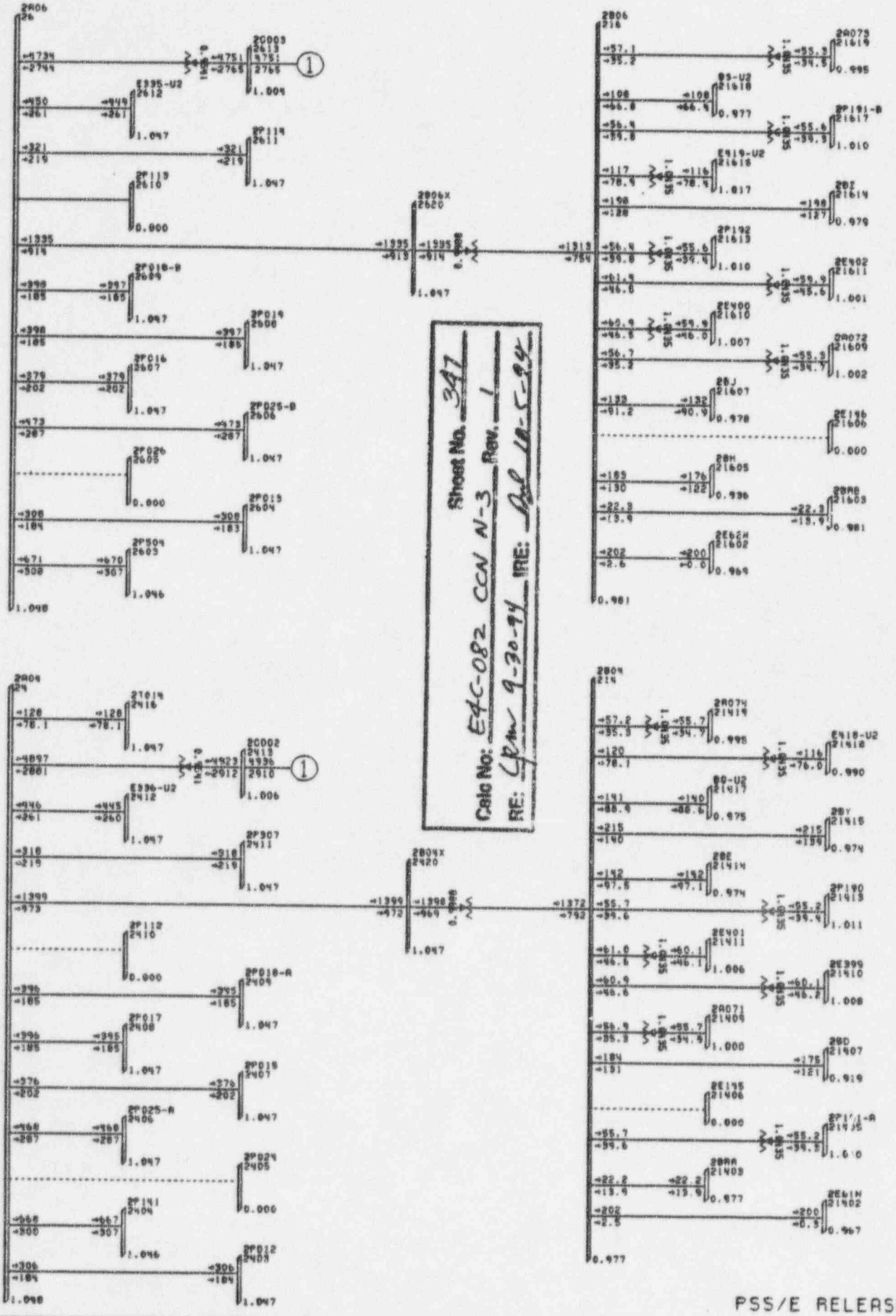
Sheet No. 347
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Ltr 9-30-94 IRE: Rel 10-5-94
PSS/E RELEASE 19.0

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 17:18
CASE III.AX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAX]LF-2_IIIAX.SAV

FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
24	2A04 4.16	1	1.048	171.2	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	2403	2P012 4.16	1	1	306.0	183.7				
								2404	2P141 4.16	1	1	668.0	307.8				
								2406	2P025-A 4.16	1	1	468.4	287.4				
								2407	2P015 4.16	1	1	376.2	201.7				
								2408	2P017 4.16	1	1	395.6	185.0				
								2409	2P018-A 4.16	1	1	395.7	185.0				
								2411	2P307 4.16	1	1	317.7	219.4				
								2412	E336-U2 4.16	1	1	445.6	260.5				
								2413	2G002 4.36	1	1	-4897.5	-2880.7	0.954UN			
								2416	2T014 4.16	1	1	127.8	78.1				
								2420	2B04X 4.16	1	1	1399.0	972.5				
									M I S M A T C H			-2.5	-0.6				
26	2A06 4.16	1	1.048	-111.5	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	2603	2P504 4.16	1	1	670.9	307.5				
								2604	2P013 4.16	1	1	308.4	183.6				
								2606	2P025-B 4.16	1	1	472.8	287.4				
								2607	2P016 4.16	1	1	379.4	201.9				
								2608	2P019 4.16	1	1	397.6	184.7				
								2609	2P018-B 4.16	1	1	397.6	184.7				
								2611	2P114 4.16	1	1	320.8	219.4				
								2612	E335-U2 4.16	1	1	449.7	261.1				
								2613	2G003 4.36	1	1	-4733.5	-2744.0	0.954UN			
								2620	2B06X 4.16	1	1	1335.3	913.7				
									M I S M A T C H			1.0	0.1				
214	2B04 0.48	1	0.977	166.5	0.0	0.0	0.0										
		1	0.47		0.0	0.0	0.0	2420	2B04X 4.16	1	1	-1372.3	-792.4	0.999UN			
								21402	2E61N 0.48	1	1	201.8	2.5				
								21403	2BRA 0.48	1	1	22.2	13.9				
								21405	2P191-A 0.46	1	1	55.7	39.6	1.043UN			
								21407	2BD 0.48	1	1	184.2	130.8				
								21409	2A071 0.46	1	1	56.9	35.3	1.043UN			
								21410	2E399 0.46	1	1	60.9	46.6	1.043UN			
								21411	2E401 0.46	1	1	61.0	46.6	1.043UN			
								21413	2P190 0.46	1	1	55.7	39.6	1.043UN			
								21414	2BE 0.48	1	1	142.3	97.5				
								21415	2BY 0.48	1	1	215.0	140.1				
								21417	BQ-U2 0.48	1	1	140.7	88.9				
								21418	E418-U2 0.46	1	1	120.1	78.1	1.043UN			
								21419	2A074 0.46	1	1	57.2	35.3	1.043UN			
									M I S M A T C H			-1.4	-2.5				

Sheet No. 348
Calc No: E4C-082 CCN N-3 Rev: 1
RE: Lpac 9-30-94 IRE: RLP 10-5-94

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 17:18
CASE III.AX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAX]LF-2_IIIAX.SAV

BUS DATA									LINE DATA									
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
216	2B06	0.48	1	0.981	-116.0	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	2620	2B06X	4.16 1	1	-1312.5	-753.5	0.999UN			
									21602	2E62M	0.48 1	1	202.5	2.6				
									21603	2BRB	0.48 1	1	22.3	13.9				
									21605	2BH	0.48 1	1	182.9	129.7				
									21607	2BJ	0.48 1	1	132.6	91.2				
									21609	2A072	0.46 1	1	56.7	35.2	1.043UN			
									21610	2E400	0.46 1	1	60.9	46.5	1.043UN			
									21611	2E402	0.46 1	1	61.4	46.5	1.043UN			
									21613	2P192	0.46 1	1	56.4	39.8	1.043UN			
									21614	2BZ	0.48 1	1	198.3	127.5				
									21615	E419-U2	0.46 1	1	117.2	78.9	1.043UN			
									21617	2P191-P	0.46 1	1	56.4	39.8	1.043UN			
									21618	BS-U2	0.48 1	1	107.9	66.8				
									21619	2A073	0.46 1	1	57.1	35.2	1.043UN			
2403	2P012	4.16	1	1.047	171.2	0.0	0.0	0.0										
			1	4.36		0.0	0.0	0.0	24	2A04	4.16 1	1	-305.8	-183.6				
										M I S M A T C H			305.8	183.6				
2404	2P141	4.16	1	1.046	171.2	0.0	0.0	0.0										
			1	4.35		0.0	0.0	0.0	24	2A04	4.16 1	1	-667.1	-307.2				
										M I S M A T C H			667.1	307.2				
2406	2P025-A	4.16	1	1.047	171.2	0.0	0.0	0.0										
			1	4.36		0.0	0.0	0.0	24	2A04	4.16 1	1	-468.1	-287.2				
										M I S M A T C H			468.1	287.2				
2407	2P015	4.16	1	1.047	171.2	0.0	0.0	0.0										
			1	4.36		0.0	0.0	0.0	24	2A04	4.16 1	1	-376.1	-201.6				
										M I S M A T C H			376.1	201.6				
2408	2P017	4.16	1	1.047	171.2	0.0	0.0	0.0										
			1	4.36		0.0	0.0	0.0	24	2A04	4.16 1	1	-395.4	-184.9				
										M I S M A T C H			395.4	184.9				
2409	2P018-A	4.16	1	1.047	171.2	0.0	0.0	0.0										
			1	4.36		0.0	0.0	0.0	24	2A04	4.16 1	1	-395.5	-184.9				
										M I S M A T C H			395.5	184.9				
2411	2P307	4.16	1	1.047	171.2	0.0	0.0	0.0										
			1	4.36		0.0	0.0	0.0	24	2A04	4.16 1	1	-317.6	-219.2				
										M I S M A T C H			317.6	219.2				
2412	E336-U2	4.16	1	1.047	171.2	0.0	0.0	0.0										
			1	4.35		0.0	0.0	0.0	24	2A04	4.16 1	1	-445.2	-260.3				
										M I S M A T C H			445.2	260.3				
2413	2G002	4.36	1	1.006	171.3	4936.1	0.0	0.0										
			1	4.39		2909.8R	0.0	0.0	24	2A04	4.16 1	1	4923.1	2911.8	0.954LK			
										M I S M A T C H			13.0	-2.1				
2416	2T014	4.16	1	1.047	171.2	0.0	128.0	0.0										
			1	4.36		0.0	78.0	0.0	24	2A04	4.16 1	1	-127.8	-78.1				
2420	2B04X	4.16	1	1.047	171.2	0.0	0.0	0.0										
			1	4.36		0.0	0.0	0.0	24	2A04	4.16 1	1	-1398.6	-972.2				
									214	2B04	0.48 1	1	1397.6	969.2	0.999LK			
										M I S M A T C H			1.0	3.0				
2603	2P504	4.16	1	1.046	-111.5	0.0	0.0	0.0										
			1	4.35		0.0	0.0	0.0	26	2A06	4.16 1	1	-670.1	-307.0				

Calc No: E4C-082 CCN N-3 Sheet No. 349
RE: Upon 9-30-94 IRE: Rel 11-5-94 Rev. 1

CCN 9

CCN 9

Sheet No. 350

Calc No: E4C-082 CCN N-3 Rev. 1

RE: LPM 9-30-94 IRE: RL 10-5-94

MISMATCH 670.1 307.0

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 17:18
CASE III.AX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAX]LP-2_IIIAX.SAV

BUS DATA								LINE DATA								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
2604	2P013 4.16	1	1.047	-111.5	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	-308.2	-183.5				
									M I S M A T C H			308.2	183.5				
2606	2P025-B 4.16	1	1.047	-111.5	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	-472.6	-287.2				
									M I S M A T C H			472.6	287.2				
2607	2P016 4.16	1	1.047	-111.5	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	-379.2	-201.7				
									M I S M A T C H			379.2	201.7				
2608	2P019 4.16	1	1.047	-111.5	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	-397.4	-184.6				
									M I S M A T C H			397.4	184.6				
2609	2P018-B 4.16	1	1.047	-111.5	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	-397.5	-184.6				
									M I S M A T C H			397.5	184.6				
2611	2P114 4.16	1	1.047	-111.5	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	-320.6	-219.2				
									M I S M A T C H			320.6	219.2				
2612	E335-U2 4.16	1	1.047	-111.5	0.0	0.0	0.0										
		1	4.35		0.0	0.0	0.0	26	2A06 4.16	1	1	-449.4	-260.8				
									M I S M A T C H			449.4	260.8				
2613	2G003 4.36	1	1.004	-111.4	4750.7	0.0	0.0										
		1	4.38		2764.9R	0.0	0.0	26	2A06 4.16	1	1	4750.8	2764.9	0.954LK			
2620	2B06X 4.16	1	1.047	-111.5	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	-1335.0	-913.4				
								216	2B06 0.48	1	1	1335.4	913.6	0.999LK			
21402	2E61N 0.48	1	0.967	165.8	0.0	200.0	0.0										
		1	0.46		0.0	0.0	0.0	214	2B04 0.48	1	1	-199.7	-0.3				
21403	2BRA 0.48	1	0.977	166.5	0.0	0.0	0.0										
		1	0.47		0.0	0.0	0.0	214	2B04 0.48	1	1	-22.2	-13.9				
								22403	2BRA-M 0.48	1	1	13.8	8.6				
								23403	2BRA-S 0.48	1	1	8.5	5.3				
21405	2P191-A 0.46	1	1.010	166.5	0.0	0.0	0.0										
		1	0.46		0.0	0.0	0.0	214	2B04 0.48	1	1	-55.2	-39.3	1.043LK			
									M I S M A T C H			55.2	39.3				
21407	2BD 0.48	1	0.919	165.8	0.0	0.0	0.0										
		1	0.44		0.0	0.0	0.0	214	2B04 0.48	1	1	-174.9	-120.9				
								22407	2BD-M 0.48	1	1	17.6	10.8				
								23407	2BD-S 0.48	1	1	8.5	5.3				
								24412	2A274 0.46	1	1	42.3	29.9	1.043UN			
								24413	2A275 0.46	1	1	42.5	29.9	1.043UN			
								24421	2E550 0.46	1	1	32.1	22.6	1.043UN			
								24422	2E546 0.46	1	1	32.1	22.6	1.043UN			
21409	2A071 0.46	1	1.000	166.7	0.0	0.0	0.0										
		1	0.46		0.0	0.0	0.0	214	2B04 0.48	1	1	-55.7	-34.9	1.043LK			
									M I S M A T C H			55.7	34.9				
21410	2E399 0.46	1	1.008	166.6	0.0	0.0	0.0										
		1	0.46		0.0	0.0	0.0	214	2B04 0.48	1	1	-60.1	-46.2	1.043LK			
									M I S M A T C R			60.1	46.2				

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RE: Lpm 9-30-94 IRE: Rob 10-5-94

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 17:18
CASE III.AX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAX]LF-2_IIIAX.SAV

BUS DATA									LINE DATA								
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
21411	2E401	0.46	1	1.006	166.6	0.0	0.0	0.0										
			1	0.46		0.0	0.0	0.0	214	2B04	0.48 1	1	-60.1	-46.1	1.043LK			
										M I S M A T C H			60.1	46.1				
21413	2P190	0.46	1	1.011	166.5	0.0	0.0	0.0										
			1	0.46		0.0	0.0	0.0	214	2B04	0.48 1	1	-55.2	-39.4	1.043LK			
										M I S M A T C H			55.2	39.4				
21414	2BE	0.48	1	0.974	166.4	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	214	2B04	0.48 1	1	-142.0	-97.1				
									22414	2BE-M	0.48 1	1	52.9	33.0				
									23414	2BE-S	0.48 1	1	89.4	64.1				
21415	2BY	0.48	1	0.974	166.4	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	214	2B04	0.48 1	1	-214.6	-139.3				
									22415	2BY-M	0.48 1	1	79.8	59.8				
									23415	2BY-S	0.48 1	1	112.5	78.1				
									24434	2P009	0.46 1	1	22.9	11.5	1.043UN			
										M I S M A T C H			-0.7	-0.1				
21417	BQ-U2	0.48	1	0.975	166.4	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	214	2B04	0.48 1	1	-140.4	-88.6				
									22417	BQ-U2-M	0.48 1	1	40.2	25.1				
									23417	BQ-U2-S	0.48 1	1	75.9	45.8				
									24417	P162-U2	0.46 1	1	24.6	17.6	1.043UN			
21418	E418-U2	0.46	1	0.990	166.6	0.0	0.0	0.0										
			1	0.46		0.0	0.0	0.0	214	2B04	0.48 1	1	-116.4	-76.0	1.043LK			
										M I S M A T C H			116.4	76.0				
21419	2A074	0.46	1	0.995	166.7	0.0	0.0	0.0										
			1	0.46		0.0	0.0	0.0	214	2B04	0.48 1	1	-55.7	-34.7	1.043LK			
										M I S M A T C H			55.7	34.7				
21602	2E62N	0.48	1	0.969	-116.7	0.0	200.0	0.0										
			1	0.47		0.0	0.0	0.0	216	2B06	0.48 1	1	-200.0	0.0				
21603	2BRB	0.48	1	0.981	-116.0	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	216	2B06	0.48 1	1	-22.3	-13.9				
									22603	2BRB-M	0.48 1	1	13.8	8.6				
									23603	2BRB-S	0.48 1	1	8.5	5.3				
21605	2BH	0.48	1	0.936	-116.5	0.0	0.0	0.0										
			1	0.45		0.0	0.0	0.0	216	2B06	0.48 1	1	-175.6	-122.0				
									22605	2BH-M	0.48 1	1	17.7	10.9				
									23605	2BH-S	0.48 1	1	8.5	5.3				
									24608	2E547	0.46 1	1	32.2	22.9	1.043UN			
									24607	2E549	0.46 1	1	32.3	22.9	1.043UN			
									24611	2A276	0.46 1	1	42.4	30.0	1.043UN			
									24612	2A277	0.46 1	1	42.5	30.0	1.043UN			
21607	2BJ	0.48	1	0.978	-116.0	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	216	2B06	0.48 1	1	-132.4	-90.9				
									22607	2BJ-M	0.48 1	1	53.1	33.1				
									23607	2BJ-S	0.48 1	1	79.2	57.8				
21609	2A072	0.46	1	1.002	-115.7	0.0	0.0	0.0										
			1	0.46		0.0	0.0	0.0	216	2B06	0.48 1	1	-55.3	-34.7	1.043LK			
										M I S M A T C H			55.3	34.7				
21610	2E400	0.46	1	1.007	-115.9	0.0	0.0	0.0										
			1	0.46		0.0	0.0	0.0	216	2B06	0.48 1	1	-59.9	-46.0	1.043LK			

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RE: Lpw 9-30-94 IRE: RL 12-5-94
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Sheet No. 353

Calc No: E4C-082 CCN N-3 Rev: 1

RE: LRm 9-30-94 IRE: RL 10-5-94

MISMATCH 59.9 46.0

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 17:18
CASE III.AX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAX]LF-2_IIIAX.SAV

FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
21611	2E402	0.46	1	1.001	-115.8	0.0	0.0	0.0											
			1	0.46		0.0	0.0	0.0	216	2B06	0.48	1	1	-59.9	-45.6	1.043LK			
										M I S M A T C H				59.9	45.6				
21613	2P192	0.46	1	1.010	-115.9	0.0	0.0	0.0											
			1	0.46		0.0	0.0	0.0	216	2B06	0.48	1	1	-55.6	-39.4	1.043LK			
										M I S M A T C H				55.6	39.4				
21614	2BZ	0.48	1	0.979	-116.1	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	216	2B06	0.48	1	1	-198.0	-127.0				
									22614	2BZ-M	0.48	1	1	50.5	31.5				
									23614	2BZ-S	0.48	1	1	124.4	83.9				
									24622	2P010	0.46	1	1	23.1	11.6	1.043UN			
21615	E419-U2	0.46	1	1.017	-116.0	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	216	2B06	0.48	1	1	-116.5	-78.4	1.043LK			
										M I S M A T C H				116.5	78.4				
21617	2P191-B	0.46	1	1.010	-115.9	0.0	0.0	0.0											
			1	0.46		0.0	0.0	0.0	216	2B06	0.48	1	1	-55.6	-39.3	1.043LK			
										M I S M A T C H				55.6	39.3				
21618	BS-U2	0.48	1	0.977	-116.1	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	216	2B06	0.48	1	1	-107.6	-66.4				
									22618	BS-U2-M	0.48	1	1	40.4	25.2				
									23618	BS-U2-S	0.48	1	1	42.6	23.4				
									24618	P160-U2	0.46	1	1	24.6	17.8	1.043UN			
21619	2A073	0.46	1	0.995	-115.7	0.0	0.0	0.0											
			1	0.46		0.0	0.0	0.0	216	2B06	0.48	1	1	-55.3	-34.5	1.043LK			
										M I S M A T C H				55.3	34.5				
22403	2BRA-M	0.48	1	0.977	166.5	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	21403	2BRA	0.48	1	1	-13.8	-8.6				
										M I S M A T C H				13.8	8.6				
22407	2BD-M	0.48	1	0.919	165.8	0.0	0.0	0.0											
			1	0.44		0.0	0.0	0.0	21407	2BD	0.48	1	1	-17.6	-10.8				
										M I S M A T C H				17.6	10.8				
22414	2BE-M	0.48	1	0.974	166.4	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	21414	2BE	0.48	1	1	-52.9	-33.0				
										M I S M A T C H				52.9	33.0				
22415	2BY-M	0.48	1	0.974	166.4	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	21415	2BY	0.48	1	1	-79.8	-49.8				
										M I S M A T C H				79.8	49.8				
22417	BQ-U2-M	0.48	1	0.975	166.4	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	21417	BQ-U2	0.48	1	1	-40.2	-25.1				
										M I S M A T C H				40.2	25.1				
22603	2BRB-M	0.48	1	0.981	-116.0	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	21603	2BRB	0.48	1	1	-13.8	-8.6				
										M I S M A T C H				13.8	8.6				
22605	2BH-M	0.48	1	0.936	-116.5	0.0	0.0	0.0											
			1	0.45		0.0	0.0	0.0	21605	2BH	0.48	1	1	-17.7	-10.9				
										M I S M A T C H				17.7	10.9				
22607	2BJ-M	0.48	1	0.978	-116.0	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	21607	2BJ	0.48	1	1	-53.1	-33.1				
										M I S M A T C H				53.1	33.1				
22614	2BZ-M	0.48	1	0.979	-116.1	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	21614	2BZ	0.48	1	1	-50.5	-31.5				

Calc No. E4C-082 CCN N-3 Rev. 1
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RE Glenn 9-30-94 IRE Bob 10-5-94
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CCN9

Sheet No. 355

Calc No: E4C-082 CCN N-3 Rev. 1

RE: LPM 9-30-94 IRE: RAL 10-5-94

MISMATCH 50.5 31.5

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 17:18
CASE III.AX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MUELEL.E4C-082-AGA.CASE_IIIAX]LF-2_IIIAX.SAV

FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
22618	BS-U2-M 0.48	1	0.977	-116.1	0.0	0.0	0.0										
		1	0.47		0.0	0.0	0.0	21618	BS-U2 0.48	1	1	-40.4	-25.2				
									M I S M A T C H			40.4	25.2				
23403	2BRA-S 0.48	1	0.977	166.5	0.0	8.5	0.0										
		1	0.47		0.0	5.3	0.0	21403	2BRA 0.48	1	1	-8.5	-5.3				
23407	2BD-S 0.48	1	0.919	165.8	0.0	8.5	0.0										
		1	0.44		0.0	5.3	0.0	21407	2BD 0.48	1	1	-8.5	-5.3				
23414	2BE-S 0.48	1	0.974	166.4	0.0	89.4	0.0										
		1	0.47		0.0	64.1	0.0	21414	2BE 0.48	1	1	-89.4	-64.1				
23415	2BY-S 0.48	1	0.974	166.4	0.0	112.5	0.0										
		1	0.47		0.0	78.1	0.0	21415	2BY 0.48	1	1	-112.5	-78.1				
23417	BQ-U2-S 0.48	1	0.975	166.4	0.0	75.9	0.0										
		1	0.47		0.0	45.8	0.0	21417	BQ-U2 0.48	1	1	-75.9	-45.8				
23603	2BRB-S 0.48	1	0.971	-116.0	0.0	8.5	0.0										
		1	0.47		0.0	5.3	0.0	21603	2BRB 0.48	1	1	-8.5	-5.3				
23605	2BH-S 0.48	1	0.936	-116.5	0.0	8.5	0.0										
		1	0.45		0.0	5.3	0.0	21605	2BH 0.48	1	1	-8.5	-5.3				
23607	2BJ-S 0.48	1	0.978	-116.0	0.0	79.2	0.0										
		1	0.47		0.0	57.8	0.0	21607	2BJ 0.48	1	1	-79.2	-57.8				
23614	2BZ-S 0.48	1	0.979	-116.1	0.0	124.4	0.0										
		1	0.47		0.0	83.9	0.0	21614	2BZ 0.48	1	1	-124.4	-83.9				
23618	BS-U2-S 0.48	1	0.977	-116.1	0.0	42.6	0.0										
		1	0.47		0.0	23.4	0.0	21618	BS-U2 0.48	1	1	-42.6	-23.4				
24412	2A274 0.46	1	0.957	165.8	0.0	0.0	0.0										
		1	0.44		0.0	0.0	0.0	21407	2BD 0.48	1	1	-42.2	-29.8	1.043LK			
									M I S M A T C H			42.2	29.8				
24413	2A275 0.46	1	0.954	165.9	0.0	0.0	0.0										
		1	0.44		0.0	0.0	0.0	21407	2BD 0.48	1	1	-42.2	-29.8	1.043LK			
									M I S M A T C H			42.2	29.8				
24417	P162-U2 0.46	1	1.005	166.7	0.0	0.0	0.0										
		1	0.46		0.0	0.0	0.0	21417	BQ-U2 0.48	1	1	-24.2	-17.6	1.043LK			
									M I S M A T C H			24.2	17.6				
24421	2E550 0.46	1	0.954	165.9	0.0	0.0	0.0										
		1	0.44		0.0	0.0	0.0	21407	2BD 0.48	1	1	-31.9	-22.5	1.043LK			
									M I S M A T C H			31.9	22.5				
24422	2E546 0.46	1	0.954	165.9	0.0	0.0	0.0										
		1	0.44		0.0	0.0	0.0	21407	2BD 0.48	1	1	-31.9	-22.5	1.043LK			
									M I S M A T C H			31.9	22.5				
24434	2P009 0.46	1	1.004	166.6	0.0	0.0	0.0										
		1	0.46		0.0	0.0	0.0	21415	2BY 0.48	1	1	-22.6	-11.5	1.043LK			
									M I S M A T C H			22.6	11.5				

Calc No: E4C-082 CCN N-3 Sheet No. 356 Rev: 1
RE: Item 1-30-94 IRE: BL 11-5-96
CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 17:18
CASE III.AX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAX]LF-2_IIIAX.SAV

FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
24606	2E547	0.46	1	0.971	-116.4	0.0	0.0	0.0											
			1	0.45		0.0	0.0	0.0	21605	2BH	0.48 1	1	-32.0	-22.9	1.043LK			
										M I S M A T C H			32.0	22.9				
24607	2E549	0.46	1	0.971	-116.4	0.0	0.0	0.0											
			1	0.45		0.0	0.0	0.0	21605	2BH	0.48 1	1	-32.0	-22.9	1.043LK			
										M I S M A T C H			32.0	22.9				
24611	2A276	0.46	1	0.974	-116.5	0.0	0.0	0.0											
			1	0.45		0.0	0.0	0.0	21605	2BH	0.48 1	1	-42.2	-30.0	1.043LK			
										M I S M A T C H			42.2	30.0				
24612	2A277	0.46	1	0.971	-116.4	0.0	0.0	0.0											
			1	0.45		0.0	0.0	0.0	21605	2BH	0.48 1	1	-42.2	-30.0	1.043LK			
										M I S M A T C H			42.2	30.0				
24618	P160-U2	0.46	1	1.013	-115.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	21618	BS-U2	0.48 1	1	-24.4	-17.7	1.043LK			
										M I S M A T C H			24.4	17.7				
24622	2P010	0.46	1	1.009	-115.9	0.0	0.0	0.0											
			1	0.46		0.0	0.0	0.0	21614	2BZ	0.48 1	1	-22.8	-11.6	1.043LK			
										M I S M A T C H			22.8	11.6				

Sheet No. 357
Calc No: E4C-082 CCN N-3 Rev: 1
RE: Lpw 9-30-94 IRE: BL 10-7-94

CCN 9

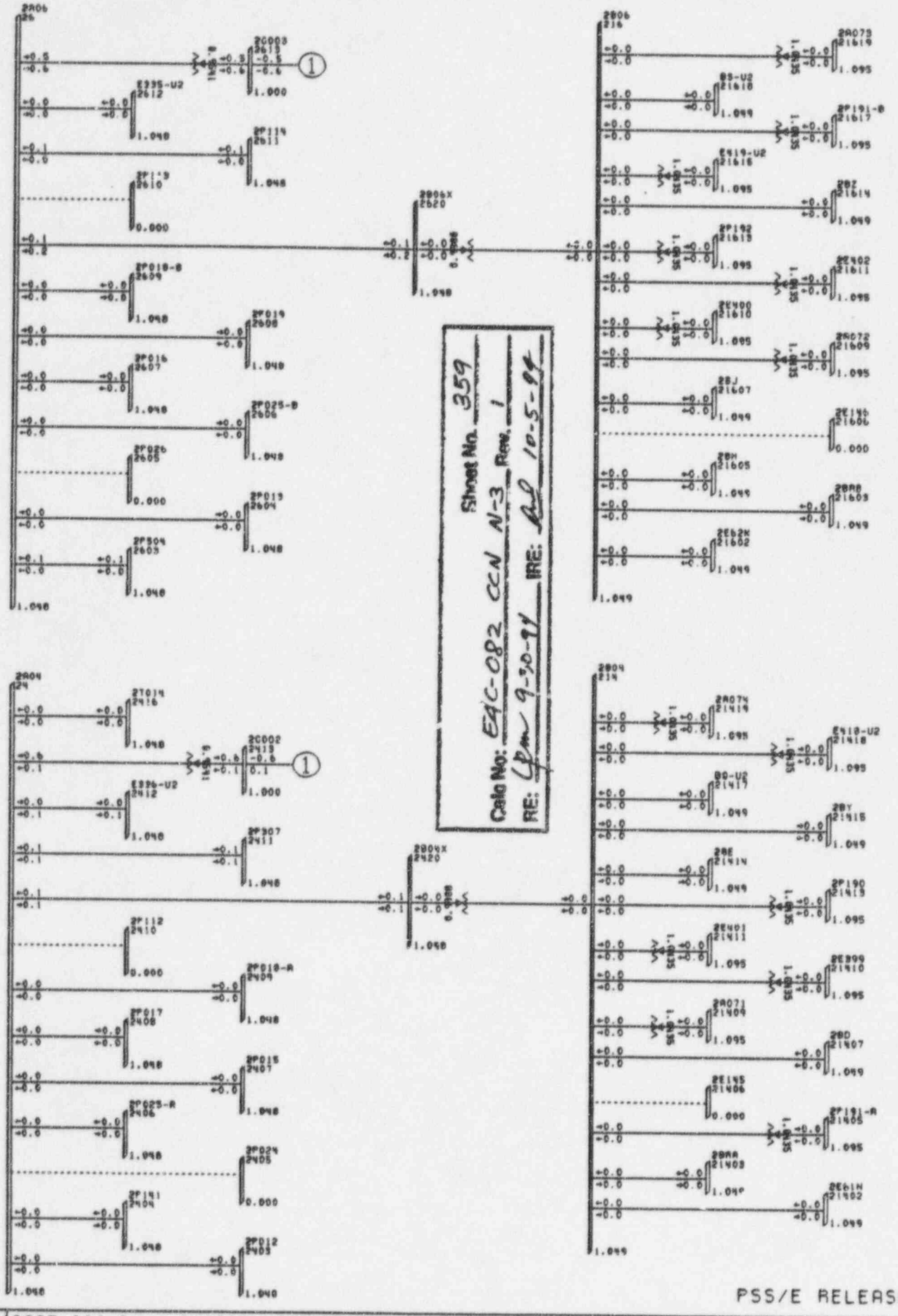
REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

APPENDIX 9.1.4

CASE IIIAY

Initial Condition Power Flow (Steady State) Report
Post Accident Condition Power Flow (Steady State) Report

CCN 9



PSS/E RELEASE 19.0

CASE III.AY - INITIAL STEADY STATE CONDITION
DKB200:CMURIEL.E4C-082-AGA.CASE_IIIAYJLF-1_IIIAY.SAV
WED, SEP 14 1994 15:05

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 15:06
CASE III.AY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAY]LF-1_IIIAY.SAV

FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
24	2A04	4.16	1 1.048	0.0	0.0	0.0	0.0										
			1 4.36		0.0	0.0	0.0	2403	2P012	4.16	1	1	0.0	0.0				
								2404	2P141	4.16	1	1	0.0	0.0				
								2406	2P025-A	4.16	1	1	0.0	0.0				
								2407	2P015	4.16	1	1	0.0	0.0				
								2408	2P017	4.16	1	1	0.0	0.0				
								2409	2P018-A	4.16	1	1	0.0	0.0				
								2411	2P307	4.16	1	1	0.1	0.1				
								2412	E336-U2	4.16	1	1	0.0	0.1				
								2413	2G002	4.36	1	1	0.6	-0.1	0.954UN			
								2416	2T014	4.16	1	1	0.0	0.0				
								2420	2B04X	4.16	1	1	-0.1	0.1				
									M I S M A T C H				-0.6	-0.1				
26	2A06	4.16	1 1.048	0.0	0.0	0.0	0.0										
			1 4.36		0.0	0.0	0.0	2603	2P504	4.16	1	1	-0.1	0.0				
								2604	2P013	4.16	1	1	0.0	0.0				
								2606	2P025-B	4.16	1	1	0.0	0.0				
								2607	2P016	4.16	1	1	0.0	0.0				
								2608	2P019	4.16	1	1	0.0	0.0				
								2609	2P018-B	4.16	1	1	0.0	0.0				
								2611	2P114	4.16	1	1	-0.1	0.0				
								2612	E335-U2	4.16	1	1	0.0	0.0				
								2613	2G003	4.36	1	1	0.5	0.6	0.954UN			
								2620	2B06X	4.16	1	1	-0.1	0.2				
									M I S M A T C H				-0.3	-0.6				
214	2B04	0.48	1 1.049	0.0	0.0	0.0	0.0										
			1 0.50		0.0	0.0	0.0	2420	2B04X	4.16	1	1	0.0	0.0	0.999UN			
								21402	2E61N	0.48	1	1	0.0	0.0				
								21403	2BRA	0.48	1	1	0.0	0.0				
								21405	2P191-A	0.46	1	1	0.0	0.0	1.043UN			
								21407	2BD	0.48	1	1	0.0	0.0				
								21409	2A071	0.46	1	1	0.0	0.0	1.043UN			
								21410	2E399	0.46	1	1	0.0	0.0	1.043UN			
								21411	2E401	0.46	1	1	0.0	0.0	1.043UN			
								21413	2P190	0.46	1	1	0.0	0.0	1.043UN			
								21414	2BE	0.48	1	1	0.0	0.0				
								21415	2BY	0.48	1	1	0.0	0.0				
								21417	E[illegible]-U2	0.48	1	1	0.0	0.0				
								21418	E418-U2	0.46	1	1	0.0	0.0	1.043UN			
								21419	2A074	0.46	1	1	0.0	0.0	1.043UN			

Calc No: E4C-082 CCN N-3 Sheet No. 360
RE: LPM 9-30-94 IRE: RLL 11-5-94 Rev. 1

CCN 9

CCN 9

Sheet No. 361
Calc No: E4C-082 CCN N-3 Rev. 1
RE: [signature] 9-30-94 IRE: [signature] 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 15:06
CASE III.AY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAY]LF-1_IIIAY.SAV

FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME		CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	KVA
216	2B06	0.48	1	1.049	0.0	0.0	0.0	0.0											
			1	0.50		0.0	0.0	0.0	2620	2B06X	4.16	1	1	0.0	0.0	0.999UN			
									21602	2E62N	0.48	1	1	0.0	0.0				
									21603	2BRB	0.48	1	1	0.0	0.0				
									21605	2BH	0.48	1	1	0.0	0.0				
									21607	2BJ	0.48	1	1	0.0	0.0				
									21609	2A072	0.46	1	1	0.0	0.0	1.043UN			
									21610	2E400	0.46	1	1	0.0	0.0	1.043UN			
									21611	2E402	0.46	1	1	0.0	0.0	1.043UN			
									21613	2P192	0.46	1	1	0.0	0.0	1.043UN			
									21614	2BZ	0.48	1	1	0.0	0.0				
									21615	E419-U2	0.46	1	1	0.0	0.0	1.043UN			
									21617	2P191-B	0.46	1	1	0.0	0.0	1.043UN			
									21618	BS-U2	0.48	1	1	0.0	0.0				
									21619	2A073	0.46	1	1	0.0	0.0	1.043UN			
2403	2P012	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	0.0	0.0				
2404	2P141	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	0.0	0.0				
2406	2P025-A	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	0.0	0.0				
2407	2P015	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	0.0	0.0				
2408	2P017	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	0.0	0.0				
2409	2P018-A	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	0.0	0.0				
2411	2P307	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	-0.1	-0.1				
2412	E336-U2	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	0.0	-0.1				
2413	2G002	4.36	1	1.000	0.0	-0.6	0.0	0.0											
			1	4.36		0.1R	0.0	0.0	24	2A04	4.16	1	1	-0.6	0.1	0.954LK			
2416	2T014	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	0.0	0.0				
2420	2B04X	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	24	2A04	4.16	1	1	0.1	-0.1				
									214	2B04	0.48	1	1	0.0	0.0	0.999LK			
2603	2P504	4.16	1	1.048	0.0	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	26	2A06	4.16	1	1	0.1	0.0				

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 15:06
CASE III.AY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAY]LP-1_IIIAY.SAV

BUS DATA									LINE DATA								
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
2604	2P013	4.16	1	1.048	0.0	0.0	0.0	0.0										
			1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	0.0	0.0				
2606	2P025-B	4.16	1	1.048	0.0	0.0	0.0	0.0										
			1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	0.0	0.0				
2607	2P016	4.16	1	1.048	0.0	0.0	0.0	0.0										
			1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	0.0	0.0				
2608	2P019	4.16	1	1.048	0.0	0.0	0.0	0.0										
			1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	0.0	0.0				
2609	2P018-B	4.16	1	1.048	0.0	0.0	0.0	0.0										
			1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	0.0	0.0				
2611	2P114	4.16	1	1.048	0.0	0.0	0.0	0.0										
			1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	0.1	0.0				
2612	E335-U2	4.16	1	1.048	0.0	0.0	0.0	0.0										
			1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	0.0	0.0				
2613	2G003	4.36	1	1.000	0.0	-0.5	0.0	0.0										
			1	4.36		-0.6L	0.0	0.0	26	2A06 4.16	1	1	-0.5	-0.6	0.954LK			
2620	2B06X	4.16	1	1.048	0.0	0.0	0.0	0.0										
			1	4.36		0.0	0.0	0.0	26	2A06 4.16	1	1	0.1	-0.2				
									216	2B06 0.48	1	1	0.0	0.0	0.999LK			
21402	2E61N	0.48	1	1.049	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	214	2B04 0.48	1	1	0.0	0.0				
21403	2BRA	0.48	1	1.049	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	214	2B04 0.48	1	1	0.0	0.0				
									22403	2BRA-M 0.48	1	1	0.0	0.0				
									23403	2BRA-S 0.48	1	1	0.0	0.0				
21405	2P191-A	0.46	1	1.095	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	214	2B04 0.48	1	1	0.0	0.0	1.043LK			
21407	2BD	0.48	1	1.049	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	214	2B04 0.48	1	1	0.0	0.0				
									22407	2BD-M 0.48	1	1	0.0	0.0				
									23407	2BD-S 0.48	1	1	0.0	0.0				
									24412	2A274 0.46	1	1	0.0	0.0	1.043UN			
									24413	2A275 0.46	1	1	0.0	0.0	1.043UN			
									24421	2E550 0.46	1	1	0.0	0.0	1.043UN			
									24422	2E546 0.46	1	1	0.0	0.0	1.043UN			
21409	2A071	0.46	1	1.095	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	214	2B04 0.48	1	1	0.0	0.0	1.043LK			
21410	2E399	0.46	1	1.095	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	214	2B04 0.48	1	1	0.0	0.0	1.043LK			

Calc No: E4C-082 CCN N-3 Sheet No. 262
RE: LPnr 9-30-94 IRE: Rel 10-5-94 Rev. 1

ANS

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 15:06
CASE III.AY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAY]LF-1_IIIAY.SAV

BUS DATA									LINE DATA							
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
21411	2E401 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	214	2B04 0.48	1	1	0.0	0.0	1.043LK			
21413	2P190 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	214	2B04 0.48	1	1	0.0	0.0	1.043LK			
21414	2BE 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	214	2B04 0.48	1	1	0.0	0.0				
								22414	2BE-M 0.48	1	1	0.0	0.0				
								23414	2BE-S 0.48	1	1	0.0	0.0				
21415	2BY 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	214	2B04 0.48	1	1	0.0	0.0				
								22415	2BY-M 0.48	1	1	0.0	0.0				
								23415	2BY-S 0.48	1	1	0.0	0.0				
								24434	2P009 0.46	1	1	0.0	0.0	1.043UN			
21417	BQ-U2 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	214	2B04 0.48	1	1	0.0	0.0				
								22417	BQ-U2-M 0.48	1	1	0.0	0.0				
								23417	BQ-U2-S 0.48	1	1	0.0	0.0				
								24417	P162-U2 0.46	1	1	0.0	0.0	1.043UN			
21418	E418-U2 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	214	2B04 0.48	1	1	0.0	0.0	1.043LK			
21419	2A074 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	214	2B04 0.48	1	1	0.0	0.0	1.043LK			
21602	2E62N 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	216	2B06 0.48	1	1	0.0	0.0				
21603	2BRB 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	216	2B06 0.48	1	1	0.0	0.0				
								22603	2BRB-M 0.48	1	1	0.0	0.0				
								23603	2BRB-S 0.48	1	1	0.0	0.0				
21605	2BH 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	216	2B06 0.48	1	1	0.0	0.0				
								22605	2BH-M 0.48	1	1	0.0	0.0				
								23605	2BH-S 0.48	1	1	0.0	0.0				
								24606	2E547 0.46	1	1	0.0	0.0	1.043UN			
								24607	2E549 0.46	1	1	0.0	0.0	1.043UN			
								24611	2A276 0.46	1	1	0.0	0.0	1.043UN			
								24612	2A277 0.46	1	1	0.0	0.0	1.043UN			
21607	2BJ 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	216	2B06 0.48	1	1	0.0	0.0				
								22607	2BJ-M 0.48	1	1	0.0	0.0				
								23607	2BJ-S 0.48	1	1	0.0	0.0				
21609	2A072 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	216	2B06 0.48	1	1	0.0	0.0	1.043LK			
21610	2E400 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	216	2B06 0.48	1	1	0.0	0.0	1.043LK			

Sheet No. 363
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Lpm 9-30-94 IRE: [illegible]

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 15:06
CASE III.AY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AG..._IIIAY]LF-1_IIIAY.SAV

FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	KVA
21611	2E402	0.46	1	1.095	0.0	0.0	0.0	0.0											
			1	0.50		0.0	0.0	0.0	216	2B06	0.48	1	1	0.0	0.0	1.043LK			
21613	2P192	0.46	1	1.095	0.0	0.0	0.0	0.0											
			1	0.50		0.0	0.0	0.0	216	2B06	0.48	1	1	0.0	0.0	1.043LK			
21614	2BE	0.48	1	1.049	0.0	0.0	0.0	0.0											
			1	0.50		0.0	0.0	0.0	216	2B06	0.48	1	1	0.0	0.0				
									22614	2BZ-M	0.48	1	1	0.0	0.0				
									23614	2BZ-S	0.48	1	1	0.0	0.0				
									24622	2P010	0.46	1	1	0.0	0.0	1.043UN			
21615	E419-U2	0.46	1	1.095	0.0	0.0	0.0	0.0											
			1	0.50		0.0	0.0	0.0	216	2B06	0.48	1	1	0.0	0.0	1.043LK			
21617	2P191-B	0.46	1	1.095	0.0	0.0	0.0	0.0											
			1	0.50		0.0	0.0	0.0	216	2B06	0.48	1	1	0.0	0.0	1.043LK			
21618	BS-U2	0.48	1	1.049	0.0	0.0	0.0	0.0											
			1	0.50		0.0	0.0	0.0	216	2B06	0.48	1	1	0.0	0.0				
									22618	BS-U2-M	0.48	1	1	0.0	0.0				
									23618	BS-U2-S	0.48	1	1	0.0	0.0				
									24618	P160-U2	0.46	1	1	0.0	0.0	1.043UN			
21619	2A073	0.46	1	1.095	0.0	0.0	0.0	0.0											
			1	0.50		0.0	0.0	0.0	216	2B06	0.48	1	1	0.0	0.0	1.043LK			
22403	2BRA-M	0.48	1	1.049	0.0	0.0	0.0	0.0											
			1	0.50		0.0	0.0	0.0	21403	2BRA	0.48	1	1	0.0	0.0				
22407	2BD-M	0.48	1	1.049	0.0	0.0	0.0	0.0											
			1	0.50		0.0	0.0	0.0	21407	2BD	0.48	1	1	0.0	0.0				
22414	2BE-M	0.48	1	1.049	0.0	0.0	0.0	0.0											
			1	0.50		0.0	0.0	0.0	21414	2BE	0.48	1	1	0.0	0.0				
22415	2BY-M	0.48	1	1.049	0.0	0.0	0.0	0.0											
			1	0.50		0.0	0.0	0.0	21415	2BY	0.48	1	1	0.0	0.0				
22417	BQ-U2-M	0.48	1	1.049	0.0	0.0	0.0	0.0											
			1	0.50		0.0	0.0	0.0	21417	BQ-U2	0.48	1	1	0.0	0.0				
22603	2BRB-M	0.48	1	1.049	0.0	0.0	0.0	0.0											
			1	0.50		0.0	0.0	0.0	21603	2BRB	0.48	1	1	0.0	0.0				
22605	2BH-M	0.48	1	1.049	0.0	0.0	0.0	0.0											
			1	0.50		0.0	0.0	0.0	21605	2BH	0.48	1	1	0.0	0.0				
22607	2BJ-M	0.48	1	1.049	0.0	0.0	0.0	0.0											
			1	0.50		0.0	0.0	0.0	21607	2BJ	0.48	1	1	0.0	0.0				
22614	2BZ-M	0.48	1	1.049	0.0	0.0	0.0	0.0											
			1	0.50		0.0	0.0	0.0	21614	2BZ	0.48	1	1	0.0	0.0				

Calc No: E4C-082 CCN N-3 Rev: 1
Sheet No. 364
RE: Lpan 9-30-94 IRE: RL 11-5-94
CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 15:06
CASE III.AY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAY]LF-i_IIIAY.SAV

BUS DATA								LINE DATA							
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
22618	BS-U2-M 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21618	BS-U2	0.48	1	1	0.0	0.0			
23403	2BRA-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21403	2BRA	0.48	1	1	0.0	0.0			
23407	2BD-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21407	2BD	0.48	1	1	0.0	0.0			
23414	2BE-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21414	2BE	0.48	1	1	0.0	0.0			
23415	2BY-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21415	2BY	0.48	1	1	0.0	0.0			
23417	BQ-U2-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21417	BQ-U2	0.48	1	1	0.0	0.0			
23603	2BRB-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21603	2BRB	0.48	1	1	0.0	0.0			
23605	2BH-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21605	2BH	0.48	1	1	0.0	0.0			
23607	2BJ-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21607	2BJ	0.48	1	1	0.0	0.0			
23614	2BZ-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21614	2BZ	0.48	1	1	0.0	0.0			
23618	BS-U2-S 0.48	1	1.049	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21618	BS-U2	0.48	1	1	0.0	0.0			
24412	2A274 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21407	2BD	0.48	1	1	0.0	0.0	1.043LK		
24413	2A275 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21407	2BD	0.48	1	1	0.0	0.0	1.043LK		
24417	P162-U2 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21417	BQ-U2	0.48	1	1	0.0	0.0	1.043LK		
24421	2E550 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21407	2BD	0.48	1	1	0.0	0.0	1.043LK		
24422	2E546 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21407	2BD	0.48	1	1	0.0	0.0	1.043LK		
24434	2P009 0.46	1	1.095	0.0	0.0	0.0	0.0										
		1	0.50		0.0	0.0	0.0	21415	2BY	0.48	1	1	0.0	0.0	1.043LK		

Sheet No. 365
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Lpmc 9-30-94 IRE: RLP 10-5-94

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 15:06
CASE III.AY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAY]LF-1_IIIAY.SAV

BUS DATA								LINE DATA								
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
24606	2E547	0.46	1	1.095	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	21605	2BH 0.48	1	1	0.0	0.0	1.043LK			
24607	2E549	0.46	1	1.095	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	21605	2BH 0.48	1	1	0.0	0.0	1.043LK			
24611	2A276	0.46	1	1.095	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	21605	2BH 0.48	1	1	0.0	0.0	1.043LK			
24612	2A277	0.46	1	1.095	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	21605	2BH 0.48	1	1	0.0	0.0	1.043LK			
24618	P160-U2	0.46	1	1.095	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	21618	BS-U2 0.48	1	1	0.0	0.0	1.043LK			
24622	2P010	0.46	1	1.095	0.0	0.0	0.0	0.0										
			1	0.50		0.0	0.0	0.0	21614	2BZ 0.48	1	1	0.0	0.0	1.043LK			

Sheet No. 366
Calc No: E4C-OP2 CCN N-3 Rev: 1
RE: Lpw 9-30-94 IRE: RL 10-5-94

CCN 9

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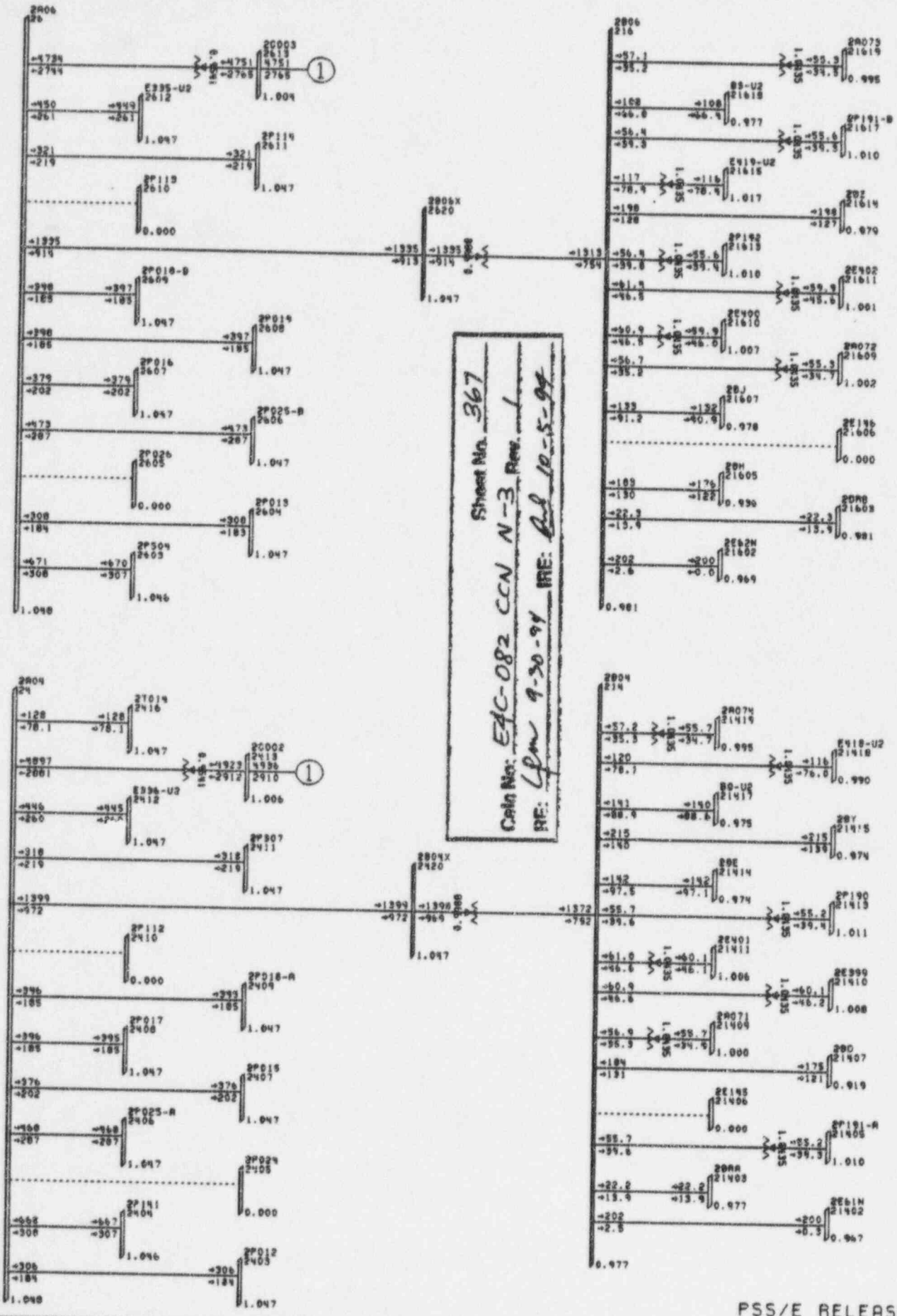

CASE III.AY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAY]LF-2_IIIAY.SAV
WED. SEP 14 1994 17:20

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 17:20
CASE III.AY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAY]LF-2_IIIAY.SAV

BUS DATA								LINE DATA								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
24	2A04 4.16	1	1.048	-173.2	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	2403	2P012 4.16	1	1	306.0	183.7				
								2404	2P141 4.16	1	1	668.0	307.8				
								2406	2P025-A 4.16	1	1	468.4	287.4				
								2407	2P015 4.16	1	1	376.3	201.8				
								2408	2P017 4.16	1	1	395.5	185.0				
								2409	2P018-A 4.16	1	1	395.6	185.1				
								2411	2P307 4.16	1	1	317.8	219.4				
								2412	E336-U2 4.16	1	1	445.5	260.5				
								2413	2G002 4.36	1	1	-4897.4	-2880.6	0.954UN			
								2416	2T014 4.16	1	1	127.8	78.1				
								2420	2B04X 4.16	1	1	1399.1	972.4				
									M I S M A T C H			-2.7	-0.6				
26	2A06 4.16	1	1.048	-106.4	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	2603	2P504 4.16	1	1	670.9	307.5				
								2604	2P013 4.16	1	1	308.3	183.6				
								2606	2P025-B 4.16	1	1	472.9	287.4				
								2607	2P016 4.16	1	1	379.4	201.9				
								2608	2P019 4.16	1	1	397.5	184.7				
								2609	2P018-B 4.16	1	1	397.6	184.7				
								2611	2P114 4.16	1	1	320.8	219.4				
								2612	E335-U2 4.16	1	1	449.7	261.0				
								2613	2G003 4.36	1	1	-4733.5	-2744.0	0.954UN			
								2620	2B06X 4.16	1	1	1335.4	913.7				
									M I S M A T C H			1.0	0.2				
214	2B04 0.48	1	0.977	-177.9	0.0	0.0	0.0										
		1	0.47		0.0	0.0	0.0	2420	2B04X 4.16	1	1	-1372.3	-792.4	0.999UN			
								21402	2E61H 0.48	1	1	201.8	2.5				
								21403	2BRA 0.48	1	1	22.2	13.9				
								21405	2P191-A 0.46	1	1	55.7	39.6	1.043UN			
								21407	2BD 0.48	1	1	184.2	130.8				
								21409	2A071 0.46	1	1	56.9	35.3	1.043UN			
								21410	2E399 0.46	1	1	60.9	46.6	1.043UN			
								21411	2E401 0.46	1	1	61.0	46.6	1.043UN			
								21413	2P190 0.46	1	1	55.7	39.6	1.043UN			
								21414	2BE 0.48	1	1	142.3	97.5				
								21415	2BY 0.48	1	1	215.0	140.1				
								21417	BQ-U2 0.48	1	1	140.7	88.9				
								21418	E418-U2 0.46	1	1	120.1	78.1	1.043UN			
								21419	2A074 0.46	1	1	57.2	35.3	1.043UN			
									M I S M A T C H			-1.4	-2.5				

Calc No: E4C-082 CCN N-3 Sheet No 368
RE: Epm 9-30-94 IRE: RL 12-5-94
Rev 1

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 17:20
CASE III.AY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAY]LF-2_IIIAY.SAV

FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING %I	RATING A KVA
216	2B06 0.48	1	0.981	-110.9	0.0	0.0	0.0										
		1	0.47		0.0	0.0	0.0	2620	2B06X 4.16	1	1	-1312.5	-753.5	0.999UN			
								21602	2E62N 0.48	1	1	202.5	2.6				
								21603	2BRB 0.48	1	1	22.3	13.9				
								21605	2BH 0.48	1	1	182.9	129.7				
								21607	2BJ 0.48	1	1	132.6	91.2				
								21609	2A072 0.46	1	1	56.7	35.2	1.043UN			
								21610	2E400 0.46	1	1	60.9	46.5	1.043UN			
								21611	2E402 0.46	1	1	61.4	46.5	1.043UN			
								21613	2P192 0.46	1	1	56.4	39.8	1.043UN			
								21614	2BZ 0.48	1	1	198.3	127.5				
								21615	E419-U2 0.46	1	1	117.2	78.9	1.043UN			
								21617	2P191-B 0.46	1	1	56.4	39.8	1.043UN			
								21618	BS-U2 0.48	1	1	107.9	66.8				
								21619	2A073 0.46	1	1	57.1	35.2	1.043UN			
2403	2P012 4.16	1	1.047	-173.2	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	24	2A04 4.16	1	1	-305.9	-183.7				
									M I S M A T C H			305.9	183.7				
2404	2P141 4.16	1	1.046	-173.2	0.0	0.0	0.0										
		1	4.35		0.0	0.0	0.0	24	2A04 4.16	1	1	-667.2	-307.2				
									M I S M A T C H			667.2	307.2				
2406	2P025-A 4.16	1	1.047	-173.2	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	24	2A04 4.16	1	1	-468.2	-287.2				
									M I S M A T C H			468.2	287.2				
2407	2P015 4.16	1	1.047	-173.2	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	24	2A04 4.16	1	1	-376.1	-201.6				
									M I S M A T C H			376.1	201.6				
2408	2P017 4.16	1	1.047	-173.2	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	24	2A04 4.16	1	1	-395.4	-184.8				
									M I S M A T C H			395.4	184.8				
2409	2P018-A 4.16	1	1.047	-173.2	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	24	2A04 4.16	1	1	-395.5	-184.9				
									M I S M A T C H			395.5	184.9				
2411	2P307 4.16	1	1.047	-173.2	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	24	2A04 4.16	1	1	-317.6	-219.2				
									M I S M A T C H			317.6	219.2				
2412	E336-U2 4.16	1	1.047	-173.2	0.0	0.0	0.0										
		1	4.35		0.0	0.0	0.0	24	2A04 4.16	1	1	-445.2	-260.2				
									M I S M A T C H			445.2	260.2				
2413	2G002 4.36	1	1.006	-173.1	4936.1	0.0	0.0										
		1	4.39		2909.8R	0.0	0.0	24	2A04 4.16	1	1	4923.0	2911.7	0.954LK			
									M I S M A T C H			13.0	-2.0				
2416	2T014 4.16	1	1.047	-173.2	0.0	128.0	0.0										
		1	4.36		0.0	78.0	0.0	24	2A04 4.16	1	1	-127.7	-78.1				
2420	2B04X 4.16	1	1.047	-173.2	0.0	0.0	0.0										
		1	4.36		0.0	0.0	0.0	24	2A04 4.16	1	1	-1398.7	-972.1				
								214	2B04 0.48	1	1	1397.6	969.2	0.999LK			
									M I S M A T C H			1.1	2.9				
2603	2P504 4.16	1	1.046	-106.4	0.0	0.0	0.0										
		1	4.35		0.0	0.0	0.0	26	2A06 4.16	1	1	-670.1	-307.0				

Sheet No. 369
Calc No: E4C-082 CCN N-3 Rev. 1
RE: LPM 9-30-94 IRE: [illegible] 10-5-94

CCN 9

CCN 9

Sheet No. 370

Calc No: E4C-082 CCN N-3 Rev. 1

RE: LPm 9-30-94 IRE: RL 10-5-94

MISMATCH 670.1 307.0

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 17:20
CASE III.AY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAY]LF-2_IIIAY.SAV

FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME		CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
2604	2P013	4.16	1	1.047	-106.4	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	26	2A06	4.16	1	1	-308.2	-183.5				
										M I S M A T C H				308.2	183.5				
2606	2P025-B	4.16	1	1.047	-106.4	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	26	2A06	4.16	1	1	-472.6	-287.2				
										M I S M A T C H				472.6	287.2				
2607	2P016	4.16	1	1.047	-106.4	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	26	2A06	4.16	1	1	-379.3	-201.7				
										M I S M A T C H				379.3	201.7				
2608	2P019	4.16	1	1.047	-106.4	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	26	2A06	4.16	1	1	-397.4	-184.6				
										M I S M A T C H				397.4	184.6				
2609	2P018-B	4.16	1	1.047	-106.4	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	26	2A06	4.16	1	1	-397.5	-184.6				
										M I S M A T C H				397.5	184.6				
2611	2P114	4.16	1	1.047	-106.4	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	26	2A06	4.16	1	1	-320.7	-219.2				
										M I S M A T C H				320.7	219.2				
2612	E335-U2	4.16	1	1.047	-106.4	0.0	0.0	0.0											
			1	4.35		0.0	0.0	0.0	26	2A06	4.16	1	1	-449.4	-260.8				
										M I S M A T C H				449.4	260.8				
2613	2G003	4.36	1	1.004	-106.3	4750.7	0.0	0.0											
			1	4.38		2764.9R	0.0	0.0	26	2A06	4.16	1	1	4750.8	2764.9	0.954LK			
2620	2B06X	4.16	1	1.047	-106.4	0.0	0.0	0.0											
			1	4.36		0.0	0.0	0.0	26	2A06	4.16	1	1	-1335.0	-913.4				
									216	2B06	0.48	1	1	1335.4	913.6	0.999LK			
21402	2E61N	0.48	1	0.967	-178.6	0.0	200.0	0.0											
			1	0.46		0.0	0.0	0.0	214	2B04	0.48	1	1	-199.7	-0.3				
21403	2BRA	0.48	1	0.977	-177.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	214	2B04	0.48	1	1	-22.2	-13.9				
									22403	2BRA-M	0.48	1	1	13.8	8.6				
									23403	2BRA-S	0.48	1	1	8.5	5.3				
21405	2P191-A	0.46	1	1.010	-177.9	0.0	0.0	0.0											
			1	0.46		0.0	0.0	0.0	214	2B04	0.48	1	1	-55.2	-39.3	1.043LK			
										M I S M A T C H				55.2	39.3				
21407	2BD	0.48	1	0.919	-178.6	0.0	0.0	0.0											
			1	0.44		0.0	0.0	0.0	214	2B04	0.48	1	1	-174.9	-120.9				
									22407	2BD-M	0.48	1	1	17.6	10.8				
									23407	2BD-S	0.48	1	1	8.5	5.3				
									24412	2A274	0.46	1	1	42.3	29.9	1.043UN			
									24413	2A275	0.46	1	1	42.5	29.9	1.043UN			
									24421	2E550	0.46	1	1	32.1	22.6	1.043UN			
									24422	2E546	0.46	1	1	32.1	22.6	1.043UN			
21409	2A071	0.46	1	1.000	-177.7	0.0	0.0	0.0											
			1	0.46		0.0	0.0	0.0	214	2B04	0.48	1	1	-55.7	-34.9	1.043LK			
										M I S M A T C H				55.7	34.9				
21410	2E399	0.46	1	1.008	-177.8	0.0	0.0	0.0											
			1	0.46		0.0	0.0	0.0	214	2B04	0.48	1	1	-60.1	-46.2	1.043LK			
										M I S M A T C H				60.1	46.2				

Calc No: E4C-082 CCN N-3 Rev: 1
Sheet No. 371
RE: LPM 9-30-94 IRE: [illegible] 10-5-94

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 17:20
CASE III.AY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAY]LF-2_IIIAY.SAV

FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME		CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
21411	2E401	0.46	1	1.006	-177.9	0.0	0.0	0.0											
			1	0.46		0.0	0.0	0.0	214	2B04	0.48	1	1	-60.1	-46.1	1.043LK			
										M I S M A T C H				60.1	46.1				
21413	2P190	0.46	1	1.011	-177.9	0.0	0.0	0.0											
			1	0.46		0.0	0.0	0.0	214	2B04	0.48	1	1	-55.2	-39.4	1.043LK			
										M I S M A T C H				55.2	39.4				
21414	2BE	0.48	1	0.974	-178.0	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	214	2B04	0.48	1	1	-142.0	-97.1				
									22414	2BE-M	0.48	1	1	52.9	33.0				
									23414	2BE-S	0.48	1	1	89.4	64.1				
21415	2BY	0.48	1	0.974	-178.0	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	214	2B04	0.48	1	1	-214.6	-139.3				
									22415	2BY-M	0.48	1	1	79.8	49.8				
									23415	2BY-S	0.48	1	1	112.5	78.1				
									24434	2P009	0.46	1	1	22.9	11.5	1.043UN			
										M I S M A T C H				-0.7	-0.1				
21417	BQ-U2	0.48	1	0.975	-178.0	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	214	2B04	0.48	1	1	-140.4	-88.6				
									22417	BQ-U2-M	0.48	1	1	40.2	25.1				
									23417	BQ-U2-S	0.48	1	1	75.9	45.8				
									24417	P162-U2	0.46	1	1	24.6	17.6	1.043UN			
21418	E418-U2	0.46	1	0.990	-177.8	0.0	0.0	0.0											
			1	0.46		0.0	0.0	0.0	214	2B04	0.48	1	1	-116.4	-76.0	1.043LK			
										M I S M A T C H				116.4	76.0				
21419	2A074	0.46	1	0.995	-177.7	0.0	0.0	0.0											
			1	0.46		0.0	0.0	0.0	214	2B04	0.48	1	1	-55.7	-34.7	1.043LK			
										M I S M A T C H				55.7	34.7				
21602	2E62N	0.48	1	0.969	-111.6	0.0	200.0	0.0											
			1	0.47		0.0	0.0	0.0	216	2B06	0.48	1	1	-200.0	0.0				
21603	2BRB	0.48	1	0.981	-110.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	216	2B06	0.48	1	1	-22.3	-13.9				
									22603	2BRB-M	0.48	1	1	13.8	8.6				
									23603	2BRB-S	0.48	1	1	8.5	5.3				
21605	2BH	0.48	1	0.936	-111.5	0.0	0.0	0.0											
			1	0.45		0.0	0.0	0.0	216	2B06	0.48	1	1	-175.6	-122.0				
									22605	2BH-M	0.48	1	1	17.7	10.9				
									23605	2BH-S	0.48	1	1	8.5	5.3				
									24606	2E547	0.46	1	1	32.2	22.9	1.043UN			
									24607	2E549	0.46	1	1	32.3	22.9	1.043UN			
									24611	2A276	0.46	1	1	42.4	30.0	1.043UN			
									24612	2A277	0.46	1	1	42.5	30.0	1.043UN			
21607	2BJ	0.48	1	0.978	-110.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	216	2B06	0.48	1	1	-132.4	-90.9				
									22607	2BJ-M	0.48	1	1	53.1	33.1				
									23607	2BJ-S	0.48	1	1	79.2	57.8				
21609	2A072	0.46	1	1.002	-110.7	0.0	0.0	0.0											
			1	0.46		0.0	0.0	0.0	216	2B06	0.48	1	1	-55.3	-34.7	1.043LK			
										M I S M A T C H				55.3	34.7				
21610	2E400	0.46	1	1.007	-110.8	0.0	0.0	0.0											
			1	0.46		0.0	0.0	0.0	216	2B06	0.48	1	1	-59.9	-46.0	1.043LK			

Sheet No. 372
Calc No: E4C-082 CCN N-3 Rev: 1
RE: Lpw 9-30-94 IRE: RL 10-5-94

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Sheet No. 373

Calc No: E4C-082 CCN N-3 Rev. 1

RE: Lfm 9-30-94 IRE: RJ 10-5-94

NISMATCH 59.9 46.0

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 17:20
CASE III.AY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAY]LF-2_IIIAY.SAV

FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
21611	2E402	0.46	1	1.001	-110.7	0.0	0.0	0.0											
			1	0.46		0.0	0.0	0.0	216	2B06	0.48	1	1	-59.9	-45.6	1.043LK			
										M I S M A T C H				59.9	45.6				
21613	2P192	0.46	1	1.010	-110.8	0.0	0.0	0.0											
			1	0.46		0.0	0.0	0.0	216	2B06	0.48	1	1	-55.6	-39.4	1.043LK			
										M I S M A T C H				55.6	39.4				
21614	2BZ	0.48	1	0.979	-111.0	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	216	2B06	0.48	1	1	-198.0	-127.0				
									22614	2BZ-M	0.48	1	1	50.5	31.5				
									23614	2BZ-S	0.48	1	1	124.4	83.9				
									24622	2P010	0.46	1	1	23.1	11.6	1.043UN			
21615	E419-U2	0.46	1	1.017	-110.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	216	2B06	0.48	1	1	-116.5	-78.4	1.043LK			
										M I S M A T C H				116.5	78.4				
21617	2P191-B	0.46	1	1.010	-110.8	0.0	0.0	0.0											
			1	0.46		0.0	0.0	0.0	216	2B06	0.48	1	1	-55.6	-39.3	1.043LK			
										M I S M A T C H				55.6	39.3				
21618	BS-U2	0.48	1	0.977	-111.0	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	216	2B06	0.48	1	1	-107.6	-66.4				
									22618	BS-U2-M	0.48	1	1	40.4	25.2				
									23618	BS-U2-S	0.48	1	1	42.6	23.4				
									24618	P160-U2	0.46	1	1	24.6	17.8	1.043UN			
21619	2A073	0.46	1	0.995	-110.6	0.0	0.0	0.0											
			1	0.46		0.0	0.0	0.0	216	2B06	0.48	1	1	-55.3	-34.5	1.043LK			
										M I S M A T C H				55.3	34.5				
22403	2BRA-M	0.48	1	0.977	-177.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	21403	2BRA	0.48	1	1	-13.8	-8.6				
										M I S M A T C H				13.8	8.6				
22407	2BD-M	0.48	1	0.919	-178.6	0.0	0.0	0.0											
			1	0.44		0.0	0.0	0.0	21407	2BD	0.48	1	1	-17.6	-10.8				
										M I S M A T C H				17.6	10.8				
22414	2BE-M	0.48	1	0.974	-178.0	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	21414	2BE	0.48	1	1	-52.9	-33.0				
										M I S M A T C H				52.9	33.0				
22415	2BY-M	0.48	1	0.974	-178.0	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	21415	2BY	0.48	1	1	-79.8	-49.8				
										M I S M A T C H				79.8	49.8				
22417	BQ-U2-M	0.48	1	0.975	-178.0	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	21417	BQ-U2	0.48	1	1	-40.2	-25.1				
										M I S M A T C H				40.2	25.1				
22603	2BRB-M	0.48	1	0.981	-110.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	21603	2BRB	0.48	1	1	-13.8	-8.6				
										M I S M A T C H				13.8	8.6				
22605	2BH-M	0.48	1	0.936	-111.5	0.0	0.0	0.0											
			1	0.45		0.0	0.0	0.0	21605	2BH	0.48	1	1	-17.7	-10.9				
										M I S M A T C H				17.7	10.9				
22607	2BJ-M	0.48	1	0.978	-110.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	21607	2BJ	0.48	1	1	-53.1	-33.1				
										M I S M A T C H				53.1	33.1				
22614	2BZ-M	0.48	1	0.979	-111.0	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	21614	2BZ	0.48	1	1	-50.5	-31.5				

Sheet No. 374
Calc No. E4C-082 CCN N-3 Rev. 1
RE: Lpm 9-30-94 IRE: RL 10-5-94

CCN 9

CCN 9

Sheet No. 375

Calc No: E4C-082 CCN N-3 Rev: 1

RE: CPM 9-30-94 IRE: RJJ 10-5-94

MISMATCH 50.5 31.5

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 17:20
CASE III.AY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAY]LF-2_IIIAY.SAV

BUS DATA								LINE DATA								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
22618	BS-U2-M 0.48	1	0.977	-111.0	0.0	0.0	0.0										
		1	0.47		0.0	0.0	0.0	21618	BS-U2 0.48	1	1	-40.4	-25.2				
									M I S M A T C H			40.4	25.2				
23403	2BRA-S 0.48	1	0.977	-177.9	0.0	8.5	0.0										
		1	0.47		0.0	5.3	0.0	21403	2BRA 0.48	1	1	-8.5	-5.3				
23407	2BD-S 0.48	1	0.919	-178.6	0.0	8.5	0.0										
		1	0.44		0.0	5.3	0.0	21407	2BD 0.48	1	1	-8.5	-5.3				
23414	2BE-S 0.48	1	0.974	-178.0	0.0	89.4	0.0										
		1	0.47		0.0	64.1	0.0	21414	2BE 0.48	1	1	-89.4	-64.1				
23415	2BY-S 0.48	1	0.974	-178.0	0.0	112.5	0.0										
		1	0.47		0.0	78.1	0.0	21415	2BY 0.48	1	1	-112.5	-78.1				
23417	BQ-U2-S 0.48	1	0.975	-178.0	0.0	75.9	0.0										
		1	0.47		0.0	45.8	0.0	21417	BQ-U2 0.48	1	1	-75.9	-45.8				
23603	2BRB-S 0.48	1	0.981	-110.9	0.0	8.5	0.0										
		1	0.47		0.0	5.3	0.0	21603	2BRB 0.48	1	1	-8.5	-5.3				
23605	2BH-S 0.48	1	0.936	-111.5	0.0	8.5	0.0										
		1	0.45		0.0	5.3	0.0	21605	2BH 0.48	1	1	-8.5	-5.3				
23607	2BJ-S 0.48	1	0.978	-110.9	0.0	79.2	0.0										
		1	0.47		0.0	57.8	0.0	21607	2BJ 0.48	1	1	-79.2	-57.8				
23614	2BZ-S 0.48	1	0.979	-111.0	0.0	124.4	0.0										
		1	0.47		0.0	83.9	0.0	21614	2BZ 0.48	1	1	-124.4	-83.9				
23618	BS-U2-S 0.48	1	0.977	-111.0	0.0	42.6	0.0										
		1	0.47		0.0	23.4	0.0	21618	BS-U2 0.48	1	1	-42.6	-23.4				
24412	2A274 0.46	1	0.957	-178.6	0.0	0.0	0.0										
		1	0.44		0.0	0.0	0.0	21407	2BD 0.48	1	1	-42.2	-29.8	1.043LK			
									M I S M A T C H			42.2	29.8				
24413	2A275 0.46	1	0.954	-178.5	0.0	0.0	0.0										
		1	0.44		0.0	0.0	0.0	21407	2BD 0.48	1	1	-42.2	-29.8	1.043LK			
									M I S M A T C H			42.2	29.8				
24417	P162-U2 0.46	1	1.005	-177.7	0.0	0.0	0.0										
		1	0.46		0.0	0.0	0.0	21417	BQ-U2 0.48	1	1	-24.2	-17.6	1.043LK			
									M I S M A T C H			24.2	17.6				
24421	2E550 0.46	1	0.954	-178.5	0.0	0.0	0.0										
		1	0.44		0.0	0.0	0.0	21407	2BD 0.48	1	1	-31.9	-22.5	1.043LK			
									M I S M A T C H			31.9	22.5				
24422	2E546 0.46	1	0.954	-178.5	0.0	0.0	0.0										
		1	0.44		0.0	0.0	0.0	21407	2BD 0.48	1	1	-31.9	-22.5	1.043LK			
									M I S M A T C H			31.9	22.5				
24434	2P009 0.46	1	1.004	-177.8	0.0	0.0	0.0										
		1	0.46		0.0	0.0	0.0	21415	2BY 0.48	1	1	-22.6	-11.5	1.043LK			
									M I S M A T C H			22.6	11.5				

Calc No: E4C-082 CCN N-3 Rev: 1
Sheet No. 376
RE: LPsw 9-30-94 IRE: Rob 10-5-94
CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, SEP 14 1994 17:20
CASE III.AY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IIIAY]LF-2_IIIAY.SAV

BUS DATA								LINE DATA									
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
24606	2E547	0.46	1	0.971	-111.3	0.0	0.0	0.0										
			1	0.45		0.0	0.0	0.0	21605	2BH	0.48 1	1	-32.0	-22.9	1.043LK			
										M I S M A T C H			32.0	22.9				
24607	2E549	0.46	1	0.971	-111.3	0.0	0.0	0.0										
			1	0.45		0.0	0.0	0.0	21605	2BH	0.48 1	1	-32.0	-22.9	1.043LK			
										M I S M A T C H			32.0	22.9				
24611	2A276	0.46	1	0.974	-111.4	0.0	0.0	0.0										
			1	0.45		0.0	0.0	0.0	21605	2BH	0.48 1	1	-42.2	-30.0	1.043LK			
										M I S M A T C H			42.2	30.0				
24612	2A277	0.46	1	0.971	-111.3	0.0	0.0	0.0										
			1	0.45		0.0	0.0	0.0	21605	2BH	0.48 1	1	-42.2	-30.0	1.043LK			
										M I S M A T C H			42.2	30.0				
24618	P160-U2	0.46	1	1.013	-110.8	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	21618	BS-U2	0.48 1	1	-24.4	-17.7	1.043LK			
										M I S M A T C H			24.4	17.7				
24622	2P010	0.46	1	1.009	-110.8	0.0	0.0	0.0										
			1	0.46		0.0	0.0	0.0	21614	2BZ	0.48 1	1	-22.8	-11.6	1.043LK			
										M I S M A T C H			22.8	11.6				

Calc No: E4C-082 CCN N-3 Rev: 1
RE: Lpow 9-30-94 IRE: RD 12-5-94
Sheet No. 377
CCN 9

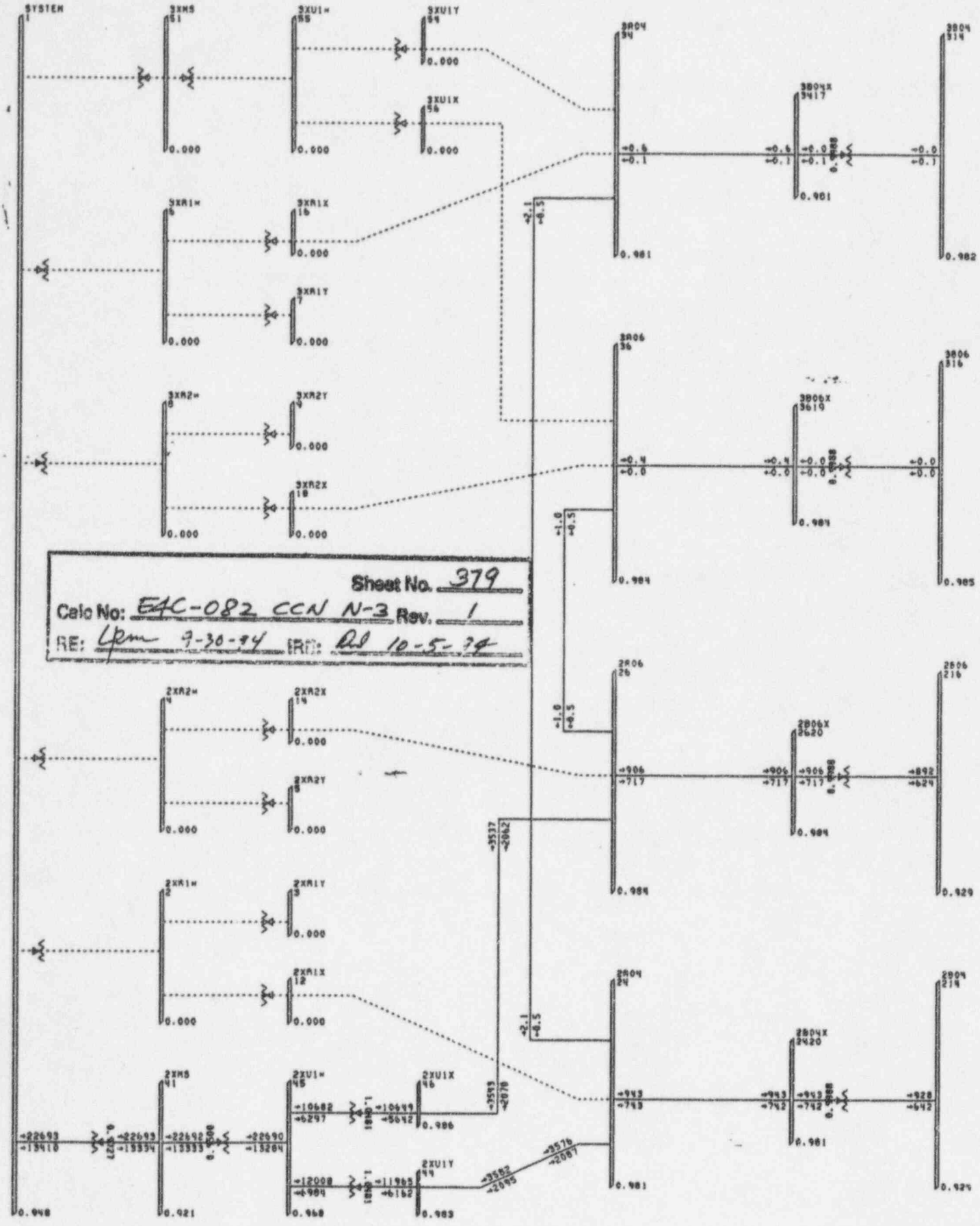
REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

APPENDIX 9.1.5

CASE IVBX

Initial Condition Power Flow (Steady State) Report
Post Accident Condition Power Flow (Steady State) Report

CCN 9



Sheet No. 379

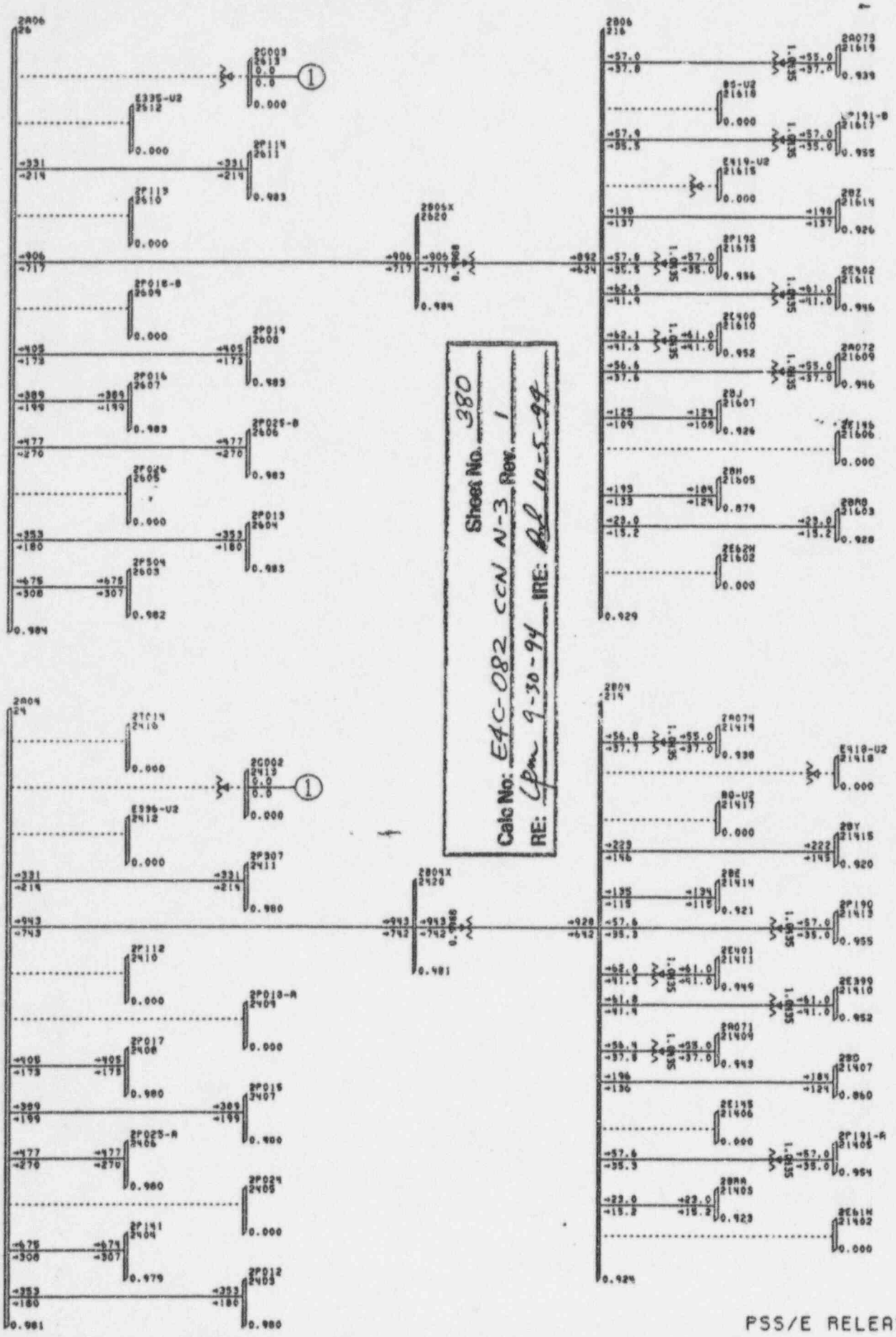
Calc No: E4C-082 CCN N-3 Rev. 1

RE: Lpm 9-30-94 RD: RJ 10-5-94

PSS/E RELEASE 19.0

CASE IV.BX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-1_IVBX.SAV
THU, SEP 15 1994 11:11

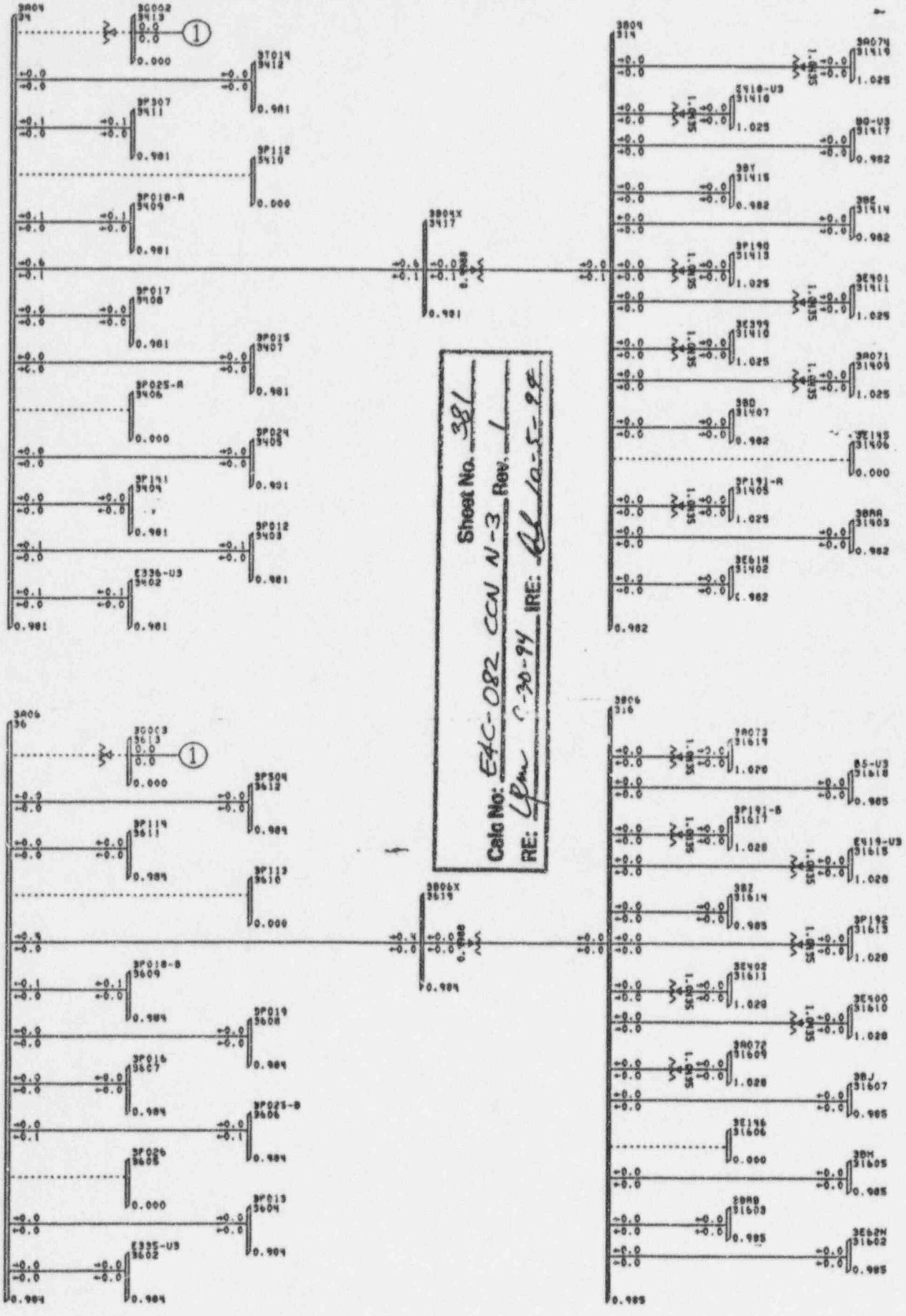
CCN 9



PSS/E RELEASE 19.0

CASE IV.BX - INITIAL STEADY STATE CONDITION
DKB200:CMURIEL.E4C-082-AGA.CASE_IVBXJLF-1_IVBX.SAV
THU. SEP 15 1994 11:11

CCN 9



PSS/E RELEASE 19.0

CASE IV.BX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-1_IVBX.SAV
THU, SEP 15 1994 11:12

PTI INTERACTIVE POWER SYSTEM SIMULATOR---PSS/E THU, SEP 15 1994 11:12
CASE IV.BX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]L?-1_IVBX.SAV

BUS DATA								LINE DATA								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
1	SYSTEM	230	1 0.948	0.0	22693.3	0.0	0.0										
			1 218.0		13410.3R	0.0	0.0	41	2XMS 22.0	1	1	22693.3	13410.3	0.973UN			
24	2A04	4.16	1 0.981	-3.2	0.0	0.0	0.0										
			1 4.08		0.0	0.0	0.0	34	3A04 4.16	1	1	2.1	-0.5				
								44	2XU1Y 4.16	1	1	-3576.1	-2086.7				
								2403	2P012 4.16	1	1	353.0	180.1				
								2404	2P141 4.16	1	1	675.5	308.1				
								2406	2P025-A 4.16	1	1	477.3	270.2				
								2407	2P015 4.16	1	1	389.2	199.1				
								2408	2P017 4.16	1	1	405.2	173.1				
								2411	2P114 4.16	1	1	331.2	214.1				
								2420	2B04X 4.16	1	1	942.7	742.6				
26	2A06	4.16	1 0.984	-2.9	0.0	0.0	0.0										
			1 4.09		0.0	0.0	0.0	36	3A06 4.16	1	1	-1.0	-0.5				
								46	2XU1X 4.16	1	1	-3537.2	-2061.6				
								2603	2P504 4.16	1	1	675.4	308.0				
								2604	2P013 4.16	1	1	353.0	180.1				
								2606	2P025-B 4.16	1	1	477.3	270.2				
								2607	2P016 4.16	1	1	389.2	199.1				
								2608	2P019 4.16	1	1	405.1	173.2				
								2611	2P114 4.16	1	1	331.3	214.2				
								2620	2B06X 4.16	1	1	905.8	717.1				
									M I S M A T C H			1.2	0.2				
34	3A04	4.16	1 0.981	-3.2	0.0	0.0	0.0										
			1 4.08		0.0	0.0	0.0	24	2P04 4.16	1	1	-2.1	0.5				
								3402	E336-U3 4.16	1	1	-0.1	0.0				
								3403	3P012 4.16	1	1	0.1	0.0				
								3404	3P141 4.16	1	1	0.0	0.0				
								3405	3P024 4.16	1	1	0.0	0.0				
								3407	3P015 4.16	1	1	0.0	0.0				
								3408	3P017 4.16	1	1	0.0	0.0				
								3409	3P018-A 4.16	1	1	0.1	0.0				
								3411	3P307 4.16	1	1	0.1	0.0				
								3412	3T014 4.16	1	1	0.0	0.0				
								3417	3B04X 4.16	1	1	0.6	-0.1				
									M I S M A T C H			1.3	-0.5				
36	3A06	4.16	1 0.984	-2.9	0.0	0.0	0.0										
			1 4.09		0.0	0.0	0.0	26	2A06 4.16	1	1	1.0	0.5				
								3602	E335-U3 4.16	1	1	0.0	0.0				
								3604	3P013 4.16	1	1	0.0	0.0				
								3606	3P025-B 4.16	1	1	0.0	-0.1				
								3607	3P016 4.16	1	1	0.0	0.0				
								3608	3P019 4.16	1	1	0.0	0.0				
								3609	3P018-B 4.16	1	1	-0.1	0.0				
								3611	3P114 4.16	1	1	0.0	0.0				
								3614	3T504 4.16	1	1	0.0	0.0				
								3619	3B06X 4.16	1	1	0.4	0.0				
									M I S M A T C H			-1.2	-0.2				

Sheet No. 382
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Lfm 9-30-94 IRE: RLP 10-5-94
CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:12
CASE IV.BX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-1_IVBX.SAV

FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
41	2XMS	22.0	1 0.921	-0.1	0.0	0.0	0.0										
		1	20.25		0.0	0.0	0.0	1	SYSTEM 230	1	1	**********		0.973LK			
								45	2XU1* 4.36	1	1	22692.4	13333.4	0.950LK			
									M I S M A T C H			0.1	1.1				
	2XU1Y	4.16	1 0.983	-3.2	0.0	8384.0	0.0										
		1	4.09		0.0	4067.0	0.0	24	2A04 4.16	1	1	3581.6	2095.1				
								45	2XU1* 4.36	1	1	*******	-6161.8	1.048LK			
45	2XU1*	4.36	1 0.968	-0.2	0.0	0.0	0.0										
		1	4.22		0.0	0.0	0.0	41	2XMS 22.0	1	1	**********		0.950UN			
								44	2XU1Y 4.16	1	1	12007.9	6984.4	1.048UN			
								46	2XU1X 4.16	1	1	10682.5	6297.5	1.048UN			
									M I S M A T C H			-0.1	2.0				
46	2XU1X	4.16	1 0.986	-2.8	0.0	7106.0	0.0										
		1	4.10		0.0	3572.0	0.0	26	2A06 4.16	1	1	3542.7	2070.1				
								45	2XU1* 4.36	1	1	*******	-5642.0	1.048LK			
214	2B04	0.48	1 0.924	-6.8	0.0	0.0	0.0										
		1	0.44		0.0	0.0	0.0	2420	2J04X 4.16	1	1	-928.3	-641.9	0.999UN			
								21403	2BEA 0.48	1	1	23.0	15.2				
								21405	2P191-A 0.46	1	1	57.6	35.3	1.043UN			
								21407	2BD 0.48	1	1	195.6	136.2				
								21409	2A071 0.46	1	1	56.4	37.5	1.043UN			
								21410	2E399 0.46	1	1	61.8	41.4	1.043UN			
								21411	2E401 0.46	1	1	62.0	41.5	1.043UN			
								21413	2P190 0.46	1	1	57.6	35.3	1.043UN			
								21414	2BE 0.48	1	1	134.8	115.2				
								21415	2BY 0.48	1	1	222.7	146.4				
								21419	2A074 0.46	1	1	56.8	37.7	1.043UN			
216	2B06	0.48	1 0.929	-6.3	0.0	0.0	0.0										
		1	0.45		0.0	0.0	0.0	2620	2J06X 4.16	1	1	-892.4	-624.2	0.999UN			
								21605	2BBB 0.48	1	1	23.0	15.2				
								21605	2BH 0.48	1	1	192.7	133.2				
								21607	2BJ 0.48	1	1	124.6	108.8				
								21609	2A072 0.46	1	1	56.6	37.6	1.043UN			
								21610	2E400 0.46	1	1	62.1	41.6	1.043UN			
								21611	2E402 0.46	1	1	62.6	41.9	1.043UN			
								21613	2P192 0.46	1	1	57.8	35.5	1.043UN			
								21614	2BZ 0.48	1	1	198.2	137.2				
								21617	2P191-B 0.46	1	1	57.9	35.5	1.043UN			
								21619	2A073 0.46	1	1	57.0	37.8	1.043UN			

Sheet No. 383
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Lpnc 9-30-94 IRE: Rob Mc 5-9-94

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:12
CASE IV.BX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-1_IVBX.SAV

BUS DATA									LINE DATA									
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
314	3B04	0.48	1	0.982	-3.2	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	3417	3B04X	4.16	1	1	0.0	0.1	0.999UN		
									31402	3E61N	0.48	1	1	0.0	0.0			
									31403	3BRA	0.48	1	1	0.0	0.0			
									31405	3P191-A	0.46	1	1	0.0	0.0	1.043UN		
									31407	39D	0.48	1	1	0.0	0.0			
									31409	3A071	0.46	1	1	0.0	0.0	1.043UN		
									31410	3E399	0.46	1	1	0.0	0.0	1.043UN		
									31411	3E401	0.46	1	1	0.0	0.0	1.043UN		
									31413	3P190	0.46	1	1	0.0	0.0	1.043UN		
									31414	3BE	0.48	1	1	0.0	0.0			
									31415	3BY	0.48	1	1	0.0	0.0			
									31417	BQ-U3	0.48	1	1	0.0	0.0			
									31418	E418-U3	0.46	1	1	0.0	0.0	1.043UN		
									31419	3A074	0.46	1	1	0.0	0.0	1.043UN		
316	3B06	0.48	1	0.985	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	3619	3B06X	4.16	1	1	0.0	0.0	0.999UN		
									31602	3E62N	0.48	1	1	0.0	0.0			
									31603	3BRB	0.48	1	1	0.0	0.0			
									31605	3BH	0.48	1	1	0.0	0.0			
									31607	3BJ	0.48	1	1	0.0	0.0			
									31609	3A072	0.46	1	1	0.0	0.0	1.043UN		
									31610	3E400	0.46	1	1	0.0	0.0	1.043UN		
									31611	3E402	0.46	1	1	0.0	0.0	1.043UN		
									31613	3P192	0.46	1	1	0.0	0.0	1.043UN		
									31614	3BZ	0.48	1	1	0.0	0.0			
									31615	E419-U3	0.46	1	1	0.0	0.0	1.043UN		
									31617	3P191-B	0.46	1	1	0.0	0.0	1.043UN		
									31618	BS-U3	0.48	1	1	0.0	0.0			
									31619	3A073	0.46	1	1	0.0	0.0	1.043UN		
2403	2P012	4.16	1	0.980	-3.2	0.0	352.9	0.0										
			1	4.08		0.0	180.0	0.0	24	2A04	4.16	1	1	-352.8	-180.0			
2404	2P141	4.16	1	0.979	-3.3	0.0	674.5	0.0										
			1	4.07		0.0	307.3	0.0	24	2A04	4.16	1	1	-674.5	-307.3			
2406	2P025-A	4.16	1	0.980	-3.2	0.0	477.0	0.0										
			1	4.08		0.0	270.0	0.0	24	2A04	4.16	1	1	-477.0	-270.0			
2407	2P015	4.16	1	0.980	-3.2	0.0	389.0	0.0										
			1	4.08		0.0	199.0	0.0	24	2A04	4.16	1	1	-389.0	-199.0			
2408	2P017	4.16	1	0.980	-3.2	0.0	405.0	0.0										
			1	4.08		0.0	173.0	0.0	24	2A04	4.16	1	1	-405.0	-173.0			
2411	2P307	4.16	1	0.980	-3.2	0.0	331.0	0.0										
			1	4.08		0.0	214.0	0.0	24	2A04	4.16	1	1	-331.0	-214.0			
2420	2B04X	4.16	1	0.981	-3.2	0.0	0.0	0.0										
			1	4.08		0.0	0.0	0.0	24	2A04	4.16	1	1	-942.5	-742.4			
									214	2B04	0.48	1	1	942.6	742.2	0.999LK		

Calc No: E4C-082 CCN W-3 Rev. 1
Sheet No. 384
RE: Lpmr 9-30-94 RE: Bb 12-5-94
CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:12
CASE IV.BX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-1_IVBX.SAV

FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
2603	2P504 4.16	1	0.982	-2.9	0.0	674.5	0.0										
		1	4.09		0.0	307.3	0.0	26	2A06 4.16	1	1	-674.5	-307.3				
2604	2P013 4.16	1	0.983	-2.9	0.0	352.9	0.0										
		1	4.09		0.0	180.0	0.0	26	2A06 4.16	1	1	-352.9	-180.0				
2606	2P025-B 4.16	1	0.983	-2.9	0.0	477.0	0.0										
		1	4.09		0.0	270.0	0.0	26	2A06 4.16	1	1	-477.0	-270.0				
2607	2P016 4.16	1	0.983	-2.9	0.0	389.0	0.0										
		1	4.09		0.0	199.0	0.0	26	2A06 4.16	1	1	-389.0	-199.0				
2608	2P019 4.16	1	0.983	-2.9	0.0	405.0	0.0										
		1	4.09		0.0	173.0	0.0	26	2A06 4.16	1	1	-404.9	-173.1				
2611	2P114 4.16	1	0.983	-2.9	0.0	331.0	0.0										
		1	4.09		0.0	214.0	0.0	26	2A06 4.16	1	1	-331.1	-214.0				
2620	2B06X 4.16	1	0.984	-2.9	0.0	0.0	0.0										
		1	4.09		0.0	0.0	0.0	26	2A06 4.16	1	1	-905.6	-717.0				
								216	2B06 0.48	1	1	905.6	716.6	0.999LK			
3402	E336-U3 4.16	1	0.981	-3.2	0.0	0.0	0.0										
		1	4.08		0.0	0.0	0.0	34	3A04 4.16	1	1	0.1	0.0				
3403	3P012 4.16	1	0.981	-3.2	0.0	0.0	0.0										
		1	4.08		0.0	0.0	0.0	34	3A04 4.16	1	1	-0.1	0.0				
3404	3P141 4.16	1	0.981	-3.2	0.0	0.0	0.0										
		1	4.08		0.0	0.0	0.0	34	3A04 4.16	1	1	0.0	0.0				
3405	3P024 4.16	1	0.981	-3.2	0.0	0.0	0.0										
		1	4.08		0.0	0.0	0.0	34	3A04 4.16	1	1	0.0	0.0				
3407	3P015 4.16	1	0.981	-3.2	0.0	0.0	0.0										
		1	4.08		0.0	0.0	0.0	34	3A04 4.16	1	1	0.0	0.0				
3408	3P017 4.16	1	0.981	-3.2	0.0	0.0	0.0										
		1	4.08		0.0	0.0	0.0	34	3A04 4.16	1	1	0.0	0.0				
3409	3P018-A 4.16	1	0.981	-3.2	0.0	0.0	0.0										
		1	4.08		0.0	0.0	0.0	34	3A04 4.16	1	1	-0.1	0.0				
3411	3P307 4.16	1	0.981	-3.2	0.0	0.0	0.0										
		1	4.08		0.0	0.0	0.0	34	3A04 4.16	1	1	-0.1	0.0				
3412	3T014 4.16	1	0.981	-3.2	0.0	0.0	0.0										
		1	4.08		0.0	0.0	0.0	34	3A04 4.16	1	1	0.0	0.0				
3417	3B04X 4.16	1	0.981	-3.2	0.0	0.0	0.0										
		1	4.08		0.0	0.0	0.0	34	3A04 4.16	1	1	-0.6	0.1				
								314	3B04 0.48	1	1	0.0	-0.1	0.999LK			

Calc No: E4C-082-CCN-N-3 Rev: 1 Sheet No: 385
RE: Lpm 9-[illegible] 'Y' IRE: RLO 10-5-94

CCN 9

LCN 9

Sheet No. 386

Calc No: E4C-082 CCN N-3 Rev. 1

RE: Lpm 9-30-94 IRE: RL 10-5-94

HISMATCH 0.6 0.0

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:12
CASE IV.BX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-1_IVBX.SAV

FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
3602	E33S-U3 4.16	1	0.984	-2.9	0.0	0.0	0.0										
		1	4.09		0.0	0.0	0.0	36	3A06 4.16	1	1	0.0	0.0				
3604	3P013 4.16	1	0.984	-2.9	0.0	0.0	0.0										
		1	4.09		0.0	0.0	0.0	36	3A06 4.16	1	1	0.0	0.0				
3606	3P025-B 4.16	1	0.984	-2.9	0.0	0.0	0.0										
		1	4.09		0.0	0.0	0.0	36	3A06 4.16	1	1	0.0	0.1				
3607	3P016 4.16	1	0.984	-2.9	0.0	0.0	0.0										
		1	4.09		0.0	0.0	0.0	36	3A06 4.16	1	1	0.0	0.0				
3608	3P019 4.16	1	0.984	-2.9	0.0	0.0	0.0										
		1	4.09		0.0	0.0	0.0	36	3A06 4.16	1	1	0.0	0.0				
3609	3P018-B 4.16	1	0.984	-2.9	0.0	0.0	0.0										
		1	4.09		0.0	0.0	0.0	36	3A06 4.16	1	1	0.1	0.0				
3611	3P114 4.16	1	0.984	-2.9	0.0	0.0	0.0										
		1	4.09		0.0	0.0	0.0	36	3A06 4.16	1	1	0.0	0.0				
3612	3P504 4.16	1	0.984	-2.9	0.0	0.0	0.0										
		1	4.09		0.0	0.0	0.0	36	3A06 4.16	1	1	0.0	0.0				
3619	3B06X 4.16	1	0.984	-2.9	0.0	0.0	0.0										
		1	4.09		0.0	0.0	0.0	36	3A06 4.16	1	1	-0.4	0.0				
								316	3B06 0.48	1	1	0.0	0.0	0.999LK			
21403	2BRA 0.48	1	0.923	-6.8	0.0	0.0	0.0										
		1	0.44		0.0	0.0	0.0	214	2B04 0.48	1	1	-23.0	-15.2				
								22403	2BRA-M 0.48	1	1	14.5	10.0				
								23403	2BRA-S 0.48	1	1	8.5	5.3				
21405	2P191-A 0.46	1	0.954	-6.8	0.0	57.0	0.0										
		1	0.44		0.0	35.0	0.0	214	2B04 0.48	1	1	-57.0	-35.0	1.043LK			
21407	2BD 0.48	1	0.860	-7.7	0.0	0.0	0.0										
		1	0.41		0.0	0.0	0.0	214	2B04 0.48	1	1	-184.0	-123.9				
								22407	2BD-M 0.48	1	1	18.3	13.6				
								23407	2BD-S 0.48	1	1	8.5	5.3				
								24412	2A274 0.46	1	1	45.3	30.3	1.043UN			
								24413	2A275 0.46	1	1	45.5	30.4	1.043UN			
								24421	2B550 0.46	1	1	33.2	22.2	1.043UN			
								24422	2B551 0.46	1	1	33.2	22.2	1.043UN			
21409	2A071 0.46	1	0.943	-6.5	0.0	55.0	0.0										
		1	0.43		0.0	37.0	0.0	214	2B04 0.48	1	1	-55.0	-37.0	1.043LK			
21410	2E399 0.46	1	0.952	-6.7	0.0	61.0	0.0										
		1	0.44		0.0	41.0	0.0	214	2B04 0.48	1	1	-61.0	-41.0	1.043LK			
21411	2E401 0.46	1	0.949	-6.7	0.0	61.0	0.0										
		1	0.44		0.0	41.0	0.0	214	2B04 0.48	1	1	-61.0	-41.0	1.043LK			

Calc No: E4C-082 CCN N-3 Sheet No. 387
RE: Lpm 9-30-94 IRE: RLP 10-5-94 Rev. 1

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:12
CASE IV.BX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-1_IVBX.SAV

BUS DATA									LINE DATA								
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
21413	2P190	0.46	1	0.955	-6.8	0.0	57.0	0.0										
			1	0.44		0.0	35.0	0.0	214	2B04	0.48	1	1	-57.0	-35.0	1.043LK		
21414	2BE	0.48	1	0.921	-6.8	0.0	0.0	0.0										
			1	0.44		0.0	0.0	0.0	214	2B04	0.48	1	1	-134.5	-114.9			
									22414	2BE-M	0.48	1	1	45.0	50.8			
									23414	2BE-S	0.48	1	1	89.4	64.1			
21415	2BY	0.48	1	0.920	-5.9	0.0	0.0	0.0										
			1	0.44		0.0	0.0	0.0	214	2B04	0.48	1	1	-222.2	-145.5			
									22415	2BY-M	0.48	1	1	86.2	55.4			
									23415	2BY-S	0.48	1	1	112.5	78.1			
									24434	2P009	0.46	1	1	23.6	12.0	1.043UN		
21419	2A074	0.46	1	0.938	-6.4	0.0	55.0	0.0										
			1	0.43		0.0	37.0	0.0	214	2B04	0.48	1	1	-55.0	-37.0	1.043LK		
21603	2BRB	0.48	1	0.928	-6.3	0.0	0.0	0.0										
			1	0.45		0.0	0.0	0.0	216	2B06	0.48	1	1	-23.0	-15.2			
									22603	2BRB-M	0.48	1	1	14.5	10.0			
									23603	2BRB-S	0.48	1	1	8.5	5.3			
21605	2BH	0.48	1	0.879	-7.0	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	216	2B06	0.48	1	1	-183.9	-123.9			
									22605	2BH-M	0.48	1	1	18.3	13.6			
									23605	2BH-S	0.48	1	1	8.5	5.3			
									24606	2B547	0.46	1	1	33.1	22.1	1.043UN		
									24607	2B519	0.46	1	1	33.2	22.2	1.043UN		
									24611	2A276	0.46	1	1	45.3	30.3	1.043UN		
									24612	2A277	0.46	1	1	45.5	30.4	1.043UN		
21607	2BJ	0.48	1	0.926	-6.3	0.0	0.0	0.0										
			1	0.44		0.0	0.0	0.0	216	2B06	0.48	1	1	-124.2	-108.5			
									22607	2BJ-M	0.48	1	1	45.0	50.7			
									23607	2BJ-S	0.48	1	1	79.2	57.8			
21609	2A072	0.46	1	0.946	-6.0	0.0	55.0	0.0										
			1	0.44		0.0	37.0	0.0	216	2A06	0.48	1	1	-55.0	-37.0	1.043LK		
21610	2E400	0.46	1	0.952	-6.2	0.0	61.0	0.0										
			1	0.44		0.0	41.0	0.0	216	2E06	0.48	1	1	-61.0	-41.0	1.043LK		
21611	2E402	0.46	1	0.946	-6.2	0.0	61.0	0.0										
			1	0.44		0.0	41.0	0.0	216	2B06	0.48	1	1	-61.0	-41.0	1.043LK		
21613	2P192	0.46	1	0.956	-6.3	0.0	57.0	0.0										
			1	0.44		0.0	35.0	0.0	216	2B06	0.48	1	1	-57.0	-35.0	1.043LK		
21614	2BZ	0.48	1	0.926	-6.4	0.0	0.0	0.0										
			1	0.44		0.0	0.0	0.0	216	2B06	0.48	1	1	-197.9	-136.6			
									22614	2BZ-M	0.48	1	1	50.0	40.7			
									23614	2BZ-S	0.48	1	1	124.4	83.9			
									24622	2P010	0.46	1	1	23.6	12.0	1.043UN		
21617	2P191-B	0.46	1	0.955	-6.3	0.0	57.0	0.0										
			1	0.44		0.0	35.0	0.0	216	2B06	0.48	1	1	-57.0	-35.0	1.043LK		

Sheet No. 388
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Lpm 9-30-94 IRE: RL 10-5-94

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR—PSS/E THU, SEP 15 1994 11:12
CASE IV.BX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-1_IVBX.SAV

BUS DATA									LINE DATA									
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
21619	2A073	0.46	1	0.939	-5.9	0.0	55.0	0.0										
			1	0.43		0.0	37.0	0.0	216	2B06	0.48	1	1	-55.0	-37.0	1.043LK		
22403	2BRA-M	0.48	1	0.923	-6.8	0.0	14.4	0.0										
			1	0.44		0.0	10.0	0.0	21403	2BRA	0.48	1	1	-14.5	-10.0			
22407	2BD-M	0.48	1	0.860	-7.7	0.0	18.3	0.0										
			1	0.41		0.0	13.6	0.0	21407	2BD	0.48	1	1	-18.3	-13.6			
22414	2BE-M	0.48	1	0.921	-6.8	0.0	45.0	0.0										
			1	0.44		0.0	30.8	0.0	21414	2BE	0.48	1	1	-45.0	-30.8			
22415	2BY-M	0.48	1	0.920	-6.9	0.0	86.2	0.0										
			1	0.44		0.0	55.4	0.0	21415	2BY	0.48	1	1	-86.2	-55.4			
22603	2BRB-M	0.48	1	0.928	-6.3	0.0	14.4	0.0										
			1	0.45		0.0	10.0	0.0	21603	2BRB	0.48	1	1	-14.5	-10.0			
22605	2BH-M	0.48	1	0.879	-7.0	0.0	18.3	0.0										
			1	0.42		0.0	13.6	0.0	21605	2BH	0.48	1	1	-18.3	-13.6			
22607	2BJ-M	0.48	1	0.926	-6.3	0.0	45.0	0.0										
			1	0.44		0.0	30.7	0.0	21607	2BJ	0.48	1	1	-45.0	-30.7			
22614	2BZ-M	0.48	1	0.926	-6.4	0.0	60.0	0.0										
			1	0.44		0.0	40.7	0.0	21614	2BZ	0,48	1	1	-50.0	-40.7			
23403	2BRA-S	0.48	1	0.923	-6.8	0.0	8.5	0.0										
			1	0.44		0.0	5.3	0.0	21403	2BRA	0.48	1	1	-8.5	-5.3			
23407	2BD-S	0.48	1	0.860	-7.7	0.0	8.5	0.0										
			1	0.41		0.0	5.3	0.0	21407	2BD	0.48	1	1	-8.5	-5.3			
23414	2BE-S	0.48	1	0.921	-6.8	0.0	89.4	0.0										
			1	0.44		0.0	64.1	0.0	21414	2BE	0.48	1	1	-89.4	-64.1			
23415	2BY-S	0.48	1	0.920	-6.9	0.0	112.5	0.0										
			1	0.44		0.0	78.1	0.0	21415	2BY	0.48	1	1	-112.5	-78.1			
23603	2BRB-S	0.48	1	0.928	-6.3	0.0	8.5	0.0										
			1	0.45		0.0	5.3	0.0	21603	2BRB	0.48	1	1	-8.5	-5.3			
23605	2BH-S	0.48	1	0.879	-7.0	0.0	8.5	0.0										
			1	0.42		0.0	5.3	0.0	21605	2BH	0.48	1	1	-8.5	-5.3			
23607	2BJ-S	0.48	1	0.926	-6.3	0.0	79.2	0.0										
			1	0.44		0.0	57.8	0.0	21607	2BJ	0.48	1	1	-79.2	-57.8			
23614	2BZ-S	0.48	1	0.926	-6.4	0.0	124.4	0.0										
			1	0.44		0.0	83.9	0.0	21614	2BZ	0.48	1	1	-124.4	-83.9			

Calc No: E4C-082 CCN N-3 Rev. 1 Sheet No. 389
RE: Ltmr 9-30-94 IRE: [illegible] 10-5-94

CCN 9

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:12
CASE IV.BX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-1_IVBX.SAV

BUS DATA									LINE DATA								
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
24412	2A274	0.46	1	0.894	-7.6	0.0	45.1	0.0										
			1	0.41		0.0	30.3	0.0	21407	2BD	0.48	1	-45.1	-30.3	1.043LK			
24413	2A275	0.46	1	0.891	-7.5	0.0	45.1	0.0										
			1	0.41		0.0	30.3	0.0	21407	2BD	0.48	1	-45.1	-30.3	1.043LK			
24421	2E550	0.46	1	0.890	-7.5	0.0	32.9	0.0										
			1	0.41		0.0	22.1	0.0	21407	2BD	0.48	1	-32.9	-22.1	1.043LK			
24422	2E546	0.46	1	0.891	-7.5	0.0	32.9	0.0										
			1	0.41		0.0	22.1	0.0	21407	2BD	0.48	1	-32.9	-22.1	1.043LK			
24434	2P009	0.46	1	0.947	-6.7	0.0	23.2	0.0										
			1	0.44		0.0	11.9	0.0	21415	2BY	0.48	1	-23.2	-11.9	1.043LK			
24606	2E547	0.46	1	0.912	-6.8	0.0	32.9	0.0										
			1	0.42		0.0	22.1	0.0	21605	2BH	0.48	1	-32.9	-22.1	1.043LK			
24607	2E549	0.46	1	0.911	-6.8	0.0	32.9	0.0										
			1	0.42		0.0	22.1	0.0	21605	2BH	0.48	1	-32.9	-22.1	1.043LK			
24611	2A276	0.46	1	0.914	-6.9	0.0	45.1	0.0										
			1	0.42		0.0	30.3	0.0	21605	2BH	0.48	1	-45.1	-30.3	1.043LK			
24612	2A277	0.46	1	0.912	-6.8	0.0	45.1	0.0										
			1	0.42		0.0	30.3	0.0	21605	2BH	0.48	1	-45.1	-30.3	1.043LK			
24622	2P010	0.46	1	0.953	-6.1	0.0	23.2	0.0										
			1	0.44		0.0	11.9	0.0	21614	2BZ	0.48	1	-23.2	-11.9	1.043LK			
31402	3E61N	0.48	1	0.982	-3.2	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	314	3B04	0.48	1	0.0	0.0				
31403	3BRA	0.48	1	0.982	-3.2	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	314	3B04	0.48	1	0.0	0.0				
									32403	3BRA-M	0.48	1	0.0	0.0				
									33403	3BRA-S	0.48	1	0.0	0.0				
31405	3P191-A	0.46	1	1.025	-3.2	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	314	3B04	0.48	1	0.0	0.0	1.043LK			
31407	3BD	0.48	1	0.982	-3.2	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	314	3B04	0.48	1	0.0	0.0				
									32407	3BD-M	0.48	1	0.0	0.0				
									33407	3BD-S	0.48	1	0.0	0.0				
									34412	3A274	0.46	1	0.0	0.0	1.043UN			
									34413	3A275	0.46	1	0.0	0.0	1.043UN			
									34421	3E550	0.46	1	0.0	0.0	1.043UN			
									34422	3E546	0.46	1	0.0	0.0	1.043UN			
31409	3A071	0.46	1	1.025	-3.2	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	314	3B04	0.48	1	0.0	0.0	1.043LK			

9 Sheet No. 390
Calc No: E4C-082 CCN N-3 Rev. 1
RE: Lpw 9-30-94 IRE: RP 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:12
CASE IV.BX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-1_IVBX.SAV

FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
31410	3E399	0.46	1	1.025	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	314	3B04	0.48	1	1	0.0	0.0	1.043LK			
31411	3E401	0.46	1	1.025	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	314	3B04	0.48	1	1	0.0	0.0	1.043LK			
31413	3P190	0.46	1	1.025	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	314	3B04	0.48	1	1	0.0	0.0	1.043LK			
31414	3BE	0.48	1	0.982	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	314	3B04	0.48	1	1	0.0	0.0				
									32414	3BE-M	0.48	1	1	0.0	0.0				
									33414	3BE-S	0.48	1	1	0.0	0.0				
31415	3BY	0.48	1	0.982	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	314	3B04	0.48	1	1	0.0	0.0				
									32415	3BY-M	0.48	1	1	0.0	0.0				
									33415	3BY-S	0.48	1	1	0.0	0.0				
									34434	3A009	0.46	1	1	0.0	0.0	1.043UN			
31417	BQ-U3	0.48	1	0.982	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	314	3B04	0.48	1	1	0.0	0.0				
									32417	BQ-U3-M	0.48	1	1	0.0	0.0				
									33417	BQ-U3-S	0.48	1	1	0.0	0.0				
									34417	P162-U3	0.46	1	1	0.0	0.0	1.043UN			
31418	E418-U3	0.46	1	1.025	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	314	3B04	0.48	1	1	0.0	0.0	1.043LK			
31419	3A074	0.46	1	1.025	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	314	3B04	0.48	1	1	0.0	0.0	1.043LK			
31602	3E62N	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	316	3B06	0.48	1	1	0.0	0.0				
31603	3BRB	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	316	3B06	0.48	1	1	0.0	0.0				
									32603	3BRB-M	0.48	1	1	0.0	0.0				
									33603	3BRB-S	0.48	1	1	0.0	0.0				
31605	3BH	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	316	3B06	0.48	1	1	0.0	0.0				
									32605	3BH-M	0.48	1	1	0.0	0.0				
									33605	3BH-S	0.48	1	1	0.0	0.0				
									34606	3E547	0.46	1	1	0.0	0.0	1.043UN			
									34607	3E549	0.46	1	1	0.0	0.0	1.043UN			
									34611	3A276	0.46	1	1	0.0	0.0	1.043UN			
									34612	3A277	0.46	1	1	0.0	0.0	1.043UN			
31607	3BJ	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	316	3B06	0.48	1	1	0.0	0.0				
									32607	3BJ-M	0.48	1	1	0.0	0.0				
									33607	3BJ-S	0.48	1	1	0.0	0.0				
31609	3A072	0.46	1	1.028	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	316	3B06	0.48	1	1	0.0	0.0	1.043LK			

Calc No: E4C-082 CCN N-3 Rev: 1
RE: CRM 9-30-94 IRE: [illegible] 10-5-94
Sheet No. 391

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:12
CASE IV.BX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LP-1_IVBX.SAV

BUS DATA									LINE DATA								
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME		CKT	AREA	KW	KVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	KVA
31610	3E400	0.46	1	1.028	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	316	3B06	0.48	1	1	0.0	0.0	1.043LK			
31611	3E402	0.46	1	1.028	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	316	3B06	0.48	1	1	0.0	0.0	1.043LK			
31613	3P192	0.46	1	1.028	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	316	3B06	0.48	1	1	0.0	0.0	1.043LK			
31614	3BZ	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	316	3B06	0.48	1	1	0.0	0.0				
									32614	3BZ-M	0.48	1	1	0.0	0.0				
									33614	3BZ-S	0.48	1	1	0.0	0.0				
									34622	3P010	0.46	1	1	0.0	0.0	1.043UN			
31615	E419-U3	0.46	1	1.028	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	316	3B06	0.48	1	1	0.0	0.0	1.043LK			
31617	3P191-B	0.46	1	1.028	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	316	3B06	0.48	1	1	0.0	0.0	1.043LK			
31618	BS-U3	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	316	3B06	0.48	1	1	0.0	0.0				
									32618	BS-U3-M	0.48	1	1	0.0	0.0				
									33618	BS-U3-S	0.48	1	1	0.0	0.0				
									34618	P160-U3	0.46	1	1	0.0	0.0	1.043UN			
31619	3A073	0.46	1	1.028	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	316	3B06	0.48	1	1	0.0	0.0	1.043LK			
32403	3BRA-M	0.48	1	0.982	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31403	3BRA	0.48	1	1	0.0	0.0				
32407	3BD-M	0.48	1	0.982	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31407	3BD	0.48	1	1	0.0	0.0				
32414	3BE-M	0.48	1	0.982	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31414	3BE	0.48	1	1	0.0	0.0				
32415	3BY-M	0.48	1	0.982	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31415	3BY	0.48	1	1	0.0	0.0				
32417	BQ-U3-M	0.48	1	0.982	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31417	BQ-U3	0.48	1	1	0.0	0.0				
32603	3BRB-M	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31603	3BRB	0.48	1	1	0.0	0.0				
32605	3BH-M	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31605	3BH	0.48	1	1	0.0	0.0				
32607	3BJ-M	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31607	3BJ	0.48	1	1	0.0	0.0				

Calc No: E4C-082 CCN 9 Sheet No. 392
RE: Rev. N-3 Rev. 1
RE: 9-30-94 IRE: 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:12
CASE IV.BX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-1_IVBX.SAV

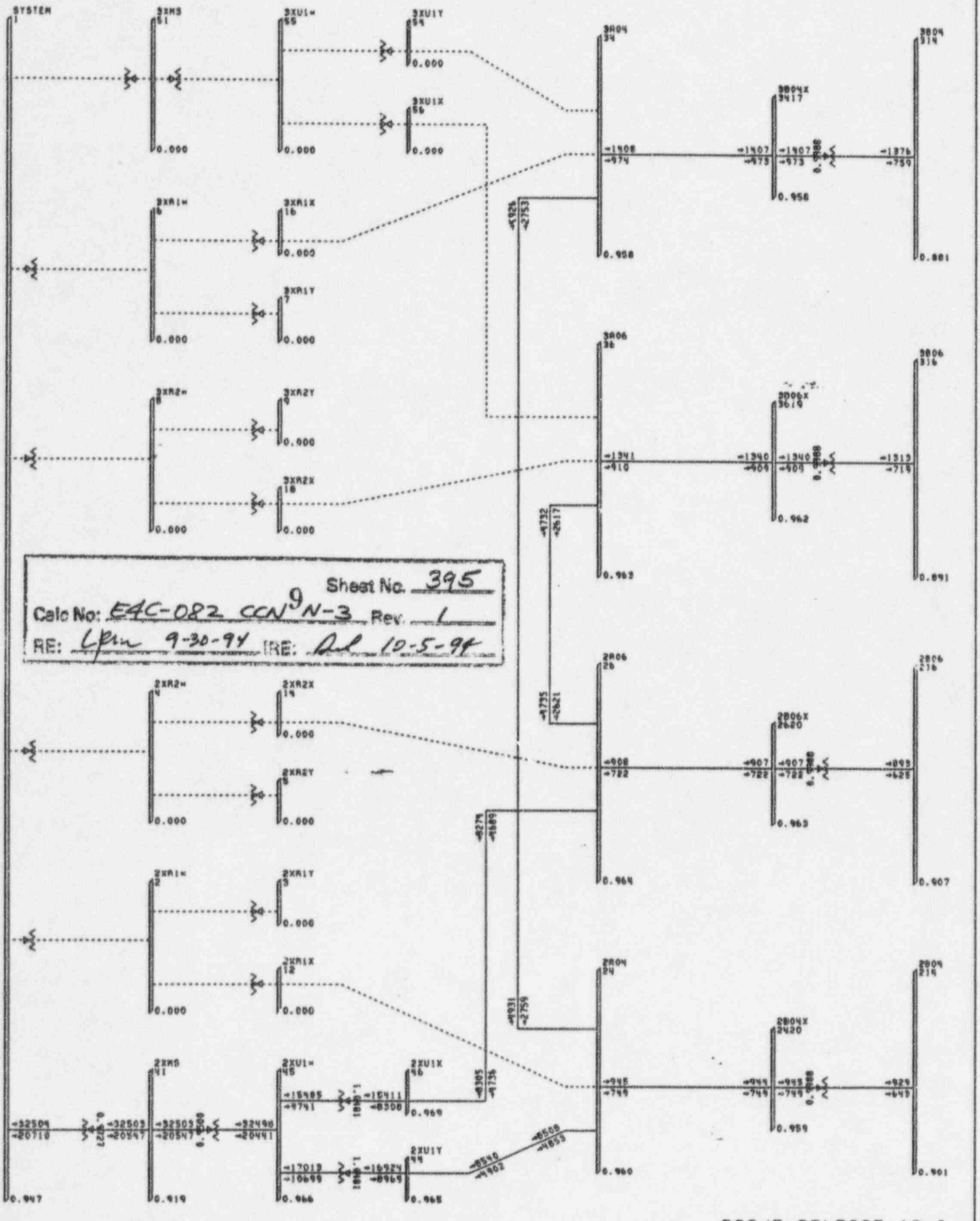
BUS DATA									LINE DATA								
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME		CKT	AREA	KW	KVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	KVA
32614	3BZ-M	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31614	3BZ	0.48	1	1	0.0	0.0				
32618	BS-U3-M	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31618	BS-U3	0.48	1	1	0.0	0.0				
33403	3BRA-S	0.48	1	0.982	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31403	3BRA	0.48	1	1	0.0	0.0				
33407	3BD-S	0.48	1	0.982	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31407	3BD	0.48	1	1	0.0	0.0				
33414	3BE-S	0.48	1	0.982	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31414	3BE	0.48	1	1	0.0	0.0				
33415	3BY-S	0.48	1	0.982	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31415	3BY	0.48	1	1	0.0	0.0				
33417	BQ-U3-S	0.48	1	0.982	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31417	BQ-U3	0.48	1	1	0.0	0.0				
33603	3BRB-S	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31603	3BRB	0.48	1	1	0.0	0.0				
33605	3BH-S	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31605	3BJ	0.48	1	1	0.0	0.0				
33607	3BJ-S	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31607	3BJ	0.48	1	1	0.0	0.0				
33614	3BZ-S	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31614	3BZ	0.48	1	1	0.0	0.0				
33618	AS-U3-S	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31618	BS-U3	0.48	1	1	0.0	0.0				
34412	3A274	0.46	1	1.025	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31407	3BD	0.48	1	1	0.0	0.0	1.043	LK		
34413	3A275	0.46	1	1.025	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31407	3BD	0.48	1	1	0.0	0.0	1.043	LK		
34417	P162-U3	0.46	1	1.025	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31417	BQ-U3	0.48	1	1	0.0	0.0	1.043	LK		
34421	3E550	0.46	1	1.025	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31407	3BD	0.48	1	1	0.0	0.0	1.043	LK		
34422	3E546	0.46	1	1.025	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31407	3BD	0.48	1	1	0.0	0.0	1.043	LK		

Calc No: E4C-082 CCN 9 N-3 Rev. 1
RE: LPM 9-30-94 IRE: RP 10-5-94
Sheet No. 393

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:12
CASE IV.BX - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LP-1_IVBX.SAV

BUS DATA									LINE DATA								
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
34434	3P009	0.46	1	1.025	-3.2	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31415	3BY	0.48 1	1	0.0	0.0	1.043LK			
34606	3E547	0.46	1	1.028	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31605	3CH	0.48 1	1	0.0	0.0	1.043LK			
34607	3E549	0.46	1	1.028	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31605	3DH	0.48 1	1	0.0	0.0	1.043LK			
34611	3A276	0.46	1	1.028	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31605	3BH	0.48 1	1	0.0	0.0	1.043LK			
34612	3A277	0.46	1	1.028	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31605	3BH	0.48 1	1	0.0	0.0	1.043LK			
34618	P160-U3	0.46	1	1.028	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31615	BS-U3	0.48 1	1	0.0	0.0	1.043LK			
34622	3P010	0.46	1	1.028	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31614	3BZ	0.48 1	1	0.0	0.0	1.043LK			

Sheet No. 294
Celo No: E4C-082 CCNV-3 Rev: 1
RE: Lpm 9-30-94 IRE: RL 11-3-94



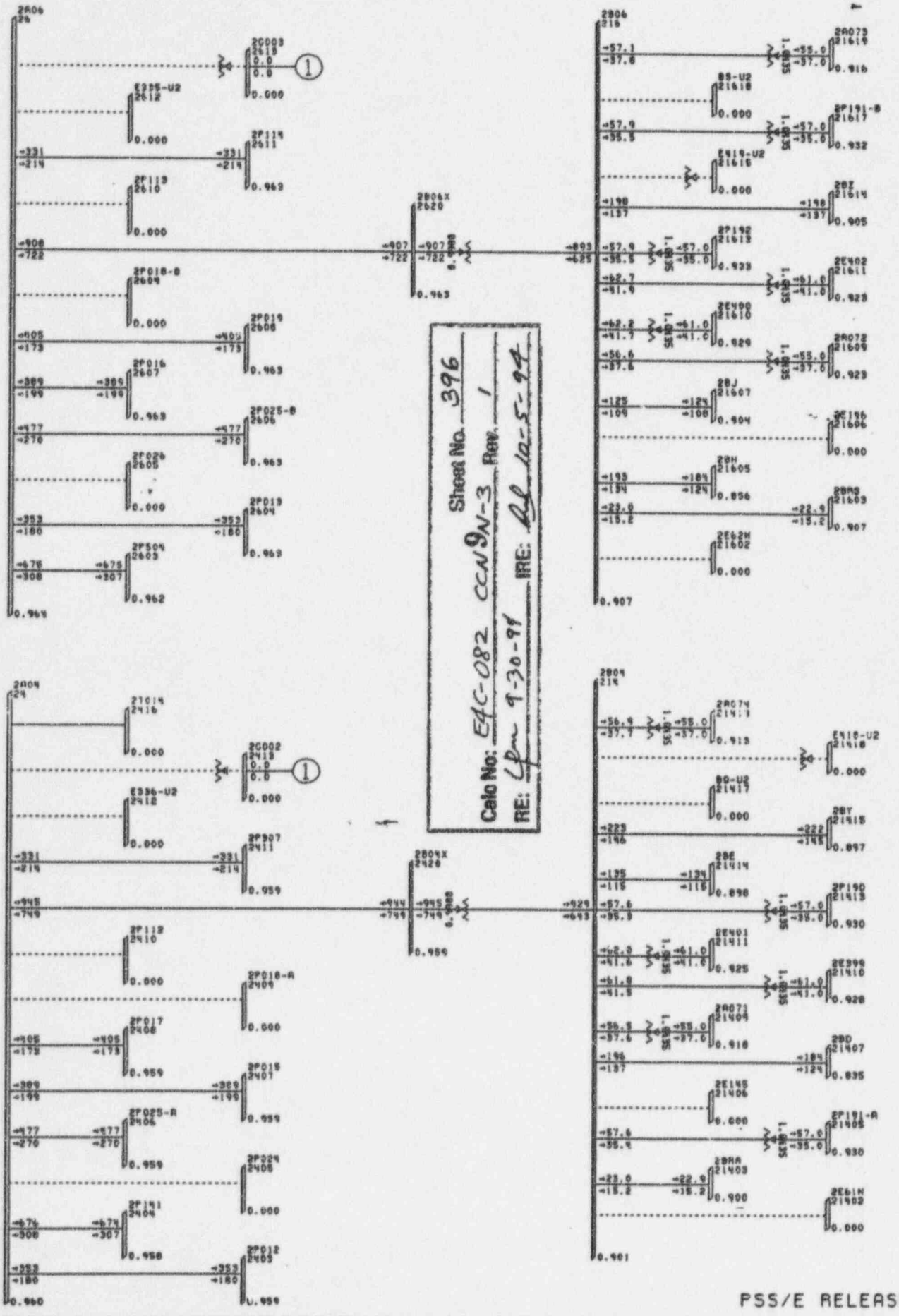
Sheet No. 395

Calc No: E4C-082 CCN 9 N-3 Rev. 1

RE: Lpm 9-30-94 IRE: Al 10-5-94

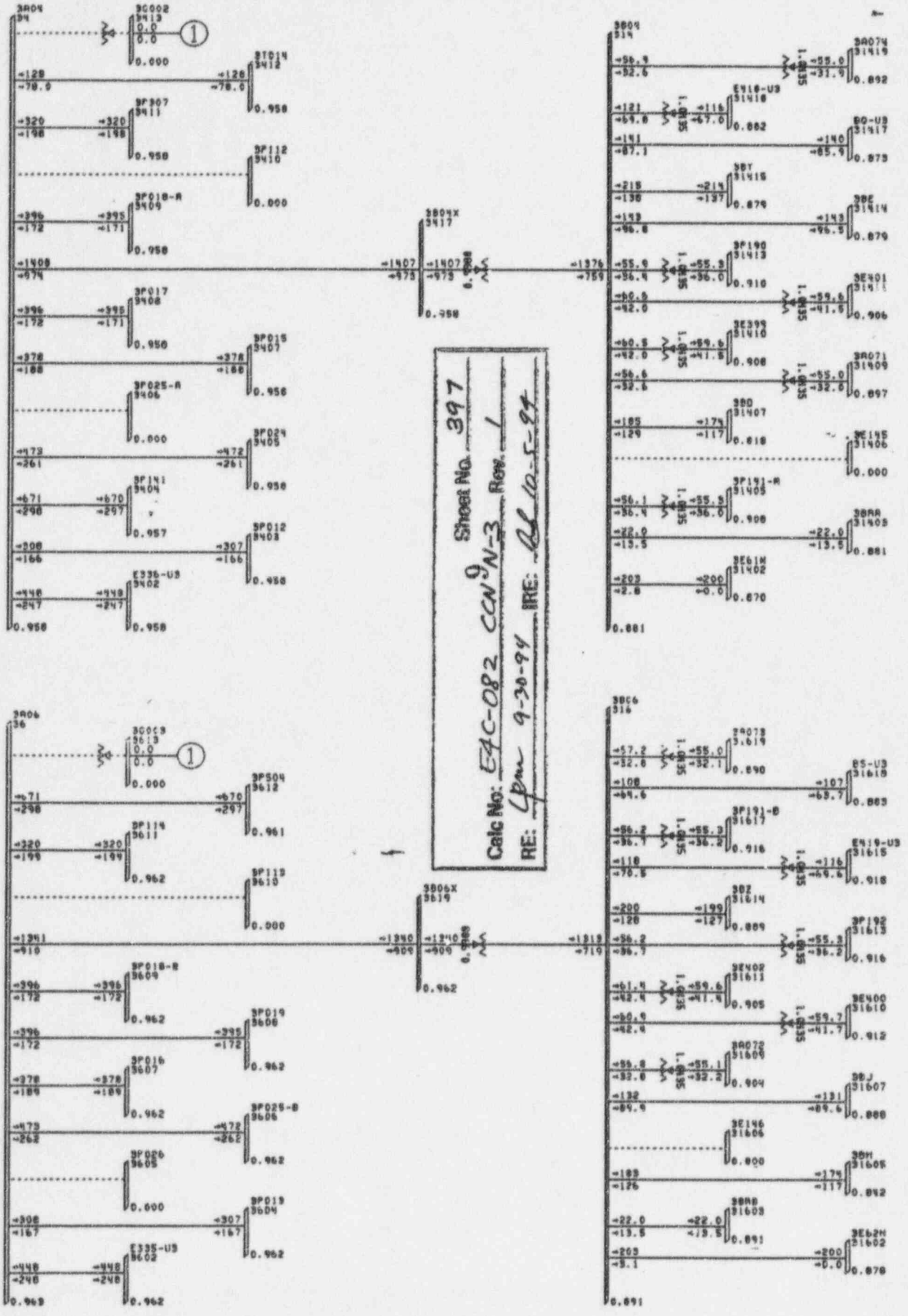
PSS/E RELEASE 19.0

CASE IV.BX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:CMURIEL.E4C-082-AGA.CASE_IVBXJLF-2_IVBX.SAV
THU. SEP 15 1994 13:23



PSS/E RELEASE 19.0

CASE IV.BX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-2_IVBX.SAV
THU, SEP 15 1994 13:23



PSS/E RELEASE 19.0

CASE IV.BX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:CMURIEL.E4C-082-AGA.CASE_IVBXJLF-2_IVBX.SAV
THU, SEP 15 19[illegible] 13:23

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:24
CASE IV.BX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-2_IVBX.SAV

FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
1	SYSTEM	230	1 0.947	-0.1	32504.4	0.0	0.0										
			1 217.8		20709.0R	0.0	0.0	41	2[illegible]S	22.0	1	1	32504.4	20709.7	0.973UN		
									M I S M A T C H				0.0	-0.7			
24	2A04	4.16	1 0.960	-4.8	0.0	0.0	0.0										
			1 3.99		0.0	0.0	0.0	34	3A04	4.16	1	1	4930.5	2758.7			
								44	2XU1Y	4.16	1	1	-8507.7	-4853.5			
								2403	2P012	4.16	1	1	353.1	180.2			
								2404	2P141	4.16	1	1	675.6	308.1			
								2406	2P025-A	4.16	1	1	477.3	270.3			
								2407	2P015	4.16	1	1	389.2	199.2			
								2408	2P017	4.16	1	1	405.2	173.2			
								2411	2P307	4.16	1	1	331.2	214.2			
								2420	2P04X	4.16	1	1	944.6	748.9			
									M I S M A T C H				0.9	0.8			
26	2A06	4.16	1 0.964	-4.4	0.0	0.0	0.0										
			1 4.01		0.0	0.0	0.0	36	3A06	4.16	1	1	4735.0	2621.1			
								46	2XU1X	4.16	1	1	-8274.3	-4688.8			
								2603	2P504	4.16	1	1	675.4	308.0			
								2604	2P013	4.16	1	1	353.1	180.1			
								2606	2P025-B	4.16	1	1	477.4	270.3			
								2607	2P016	4.16	1	1	389.2	199.2			
								2608	2P019	4.16	1	1	405.2	173.1			
								2611	2P114	4.16	1	1	331.2	214.2			
								2620	2P06X	4.16	1	1	907.5	722.5			
									M I S M A T C H				0.4	0.4			
34	3A04	4.16	1 0.958	-4.8	0.0	0.0	0.0										
			1 3.99		0.0	0.0	0.0	24	2A04	4.16	1	1	-4925.7	-2752.8			
								3402	E3P6-U3	4.16	1	1	448.3	247.3			
								3403	3P012	4.16	1	1	307.6	166.1			
								3404	3P141	4.16	1	1	670.6	297.6			
								3405	3P024	4.16	1	1	472.6	261.2			
								3407	3P015	4.16	1	1	378.2	188.3			
								3408	3P017	4.16	1	1	395.5	171.6			
								3409	3P018-A	4.16	1	1	395.5	171.6			
								3411	3P307	4.16	1	1	320.4	197.7			
								3412	3T014	4.16	1	1	128.0	78.0			
								3417	3E04X	4.16	1	1	1407.5	973.7			
									M I S M A T C H				1.5	-0.2			
36	3A06	4.16	1 0.963	-4.4	0.0	0.0	0.0										
			1 4.01		0.0	0.0	0.0	26	2A06	4.16	1	1	-4731.6	-2616.9			
								3602	E3P5-U3	4.16	1	1	448.3	247.8			
								3604	3P013	4.16	1	1	307.6	166.9			
								3606	3P025-B	4.16	1	1	472.5	262.3			
								3607	3P016	4.16	1	1	378.3	188.8			
								3608	3P019	4.16	1	1	395.5	172.0			
								3609	3P018-B	4.16	1	1	395.7	172.1			
								3611	3P114	4.16	1	1	320.3	198.7			
								3612	3P504	4.16	1	1	670.7	297.9			
								3619	3B06X	4.16	1	1	1340.6	909.5			
									M I S M A T C H				1.9	1.0			

Calc No: E4C-082-CCN.9W-3 Rev. 1 Sheet No. 398
RE: Lpmc 9-30-94 IRE: [illegible] 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:24
CASE IV.BX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-2_IVBX.SAV

BUS DATA								LINE DATA								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
41	2XMS 22.0	1	0.919	-0.3	0.0	0.0	0.0										
		1	20.22		0.0	0.0	0.0	1	SYSTEM 230	1	1	**********		0.973LK			
								45	2XU1* 4.36	1	1	32502.6	20547.0	0.950LK			
44	2XU1Y 4.16	1	0.965	-4.6	0.0	8384.0	0.0										
		1	4.01		0.0	4067.0	0.0	24	2A04 4.16	1	1	8539.6	4902.3				
								45	2XU1* 4.36	1	1	*******	-8969.2	1.048LK			
45	2XU1* 4.36	1	0.966	-0.4	0.0	0.0	0.0										
		1	4.21		0.0	0.0	0.0	41	2XMS 22.0	1	1	**********		0.950UN			
								44	2XU1Y 4.16	1	1	17012.8	10698.9	1.048UN			
								46	2XU1X 4.16	1	1	15485.1	9741.4	1.048UN			
									M I S M A T C H			0.0	0.9				
46	2XU1X 4.16	1	0.969	-4.2	0.0	7106.0	0.0										
		1	4.03		0.0	3572.0	0.0	26	2A06 4.16	1	1	8305.3	4736.3				
								45	2XU1* 4.36	1	1	*******	-8308.1	1.048LK			
214	2B04 0.48	1	0.901	-8.5	0.0	0.0	0.0										
		1	0.43		0.0	0.0	0.0	2620	2B04X 4.16	1	1	-929.5	-642.9	0.999UN			
								21403	2BRA 0.48	1	1	23.0	15.2				
								21405	2P191-A 0.46	1	1	57.6	35.4	1.043UN			
								21407	2BD 0.48	1	1	196.4	136.9				
								21409	2A071 0.46	1	1	56.5	37.6	1.043UN			
								21410	2E399 0.46	1	1	61.8	41.5	1.043UN			
								21411	2E401 0.46	1	1	62.0	41.6	1.043UN			
								21413	2P190 0.46	1	1	57.6	35.3	1.043UN			
								21414	2BE 0.48	1	1	134.9	115.3				
								21415	2BY 0.48	1	1	222.7	146.4				
								21419	2A074 0.46	1	1	56.9	37.7	1.043UN			
216	2B06 0.48	1	0.907	-7.9	0.0	0.0	0.0										
		1	0.44		0.0	0.0	0.0	2620	2B06X 4.16	1	1	-893.4	-625.0	0.999UN			
								21603	2BRB 0.48	1	1	23.0	15.2				
								21605	2BH 0.48	1	1	193.2	133.7				
								21607	2BJ 0.48	1	1	124.6	108.8				
								21609	2A072 0.46	1	1	56.6	37.6	1.043UN			
								21610	2E400 0.46	1	1	62.2	41.7	1.043UN			
								21611	2E402 0.46	1	1	62.7	41.9	1.043UN			
								21613	2P192 0.46	1	1	57.9	35.5	1.043UN			
								21614	2BZ 0.48	1	1	198.3	137.2				
								21617	2P191-B 0.46	1	1	57.9	35.5	1.043UN			
								21619	2A073 0.46	1	1	57.1	37.8	1.043UN			

Sheet No. 399
Calc No: E4C-082 CCN 9N-3 Rev. 1
RE: Lpm 9-30-94 IRE: RD 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:24
CASE IV.BX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-2_IVBX.SAV

FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
314	3B04	0.48	1 0.881	-10.6	0.0	0.0	0.0										
			1 0.42		0.0	0.0	0.0	3417	3B04X	4.16	1	1	-1376.4	-759.3	0.999UN		
								31402	3E51N	0.48	1	1	202.6	2.8			
								31403	3BRA	0.48	1	1	22.0	13.5			
								31407	3E191-A	0.46	1	1	56.1	36.4	1.043UN		
								31407	3DD	0.48	1	1	185.1	129.3			
								31408	3A071	0.46	1	1	56.6	32.6	1.043UN		
								31410	3E399	0.46	1	1	60.5	42.0	1.043UN		
								31411	3E401	0.46	1	1	60.6	42.0	1.043UN		
								31413	3P190	0.46	1	1	55.9	36.4	1.043UN		
								31414	3BE	0.48	1	1	143.1	96.8			
								31415	3BY	0.48	1	1	214.6	138.0			
								31417	BQ-U3	0.48	1	1	141.3	87.1			
								31418	E118-U3	0.46	1	1	121.0	69.8	1.043UN		
								31419	3A074	0.46	1	1	56.9	32.6	1.043UN		
316	3B06	0.48	1 0.891	-9.9	0.0	0.0	0.0										
			1 0.43		0.0	0.0	0.0	3619	3B06X	4.16	1	1	-1313.1	-719.3	0.999UN		
								31602	3E62N	0.48	1	1	202.9	3.1			
								31603	3BRB	0.48	1	1	22.0	13.5			
								31605	3BH	0.48	1	1	182.6	126.4			
								31607	3BJ	0.48	1	1	131.8	89.9			
								31609	3A072	0.46	1	1	56.8	32.8	1.043UN		
								31610	3E400	0.46	1	1	60.9	42.4	1.043UN		
								31611	3E402	0.46	1	1	61.4	42.4	1.043UN		
								31613	3P192	0.46	1	1	56.2	36.7	1.043UN		
								31614	3BZ	0.48	1	1	199.8	127.5			
								31615	E419-U3	0.46	1	1	117.6	70.5	1.043UN		
								31617	3E191-B	0.46	1	1	56.2	36.7	1.043UN		
								31618	BS-U3	0.48	1	1	107.6	64.6			
								31619	3A073	0.46	1	1	57.2	32.8	1.043UN		
2403	2P012	4.16	1 0.959	-4.8	0.0	352.9	0.0										
			1 3.99		0.0	180.0	0.0	24	2A04	4.16	1	1	-352.9	-180.0			
2404	2P141	4.16	1 0.958	-4.8	0.0	674.5	0.0										
			1 3.99		0.0	307.3	0.0	24	2A04	4.16	1	1	-674.5	-307.3			
2406	2P025-A	4.16	1 0.959	-4.8	0.0	477.0	0.0										
			1 3.99		0.0	270.0	0.0	24	2A04	4.16	1	1	-477.0	-270.0			
2407	2P015	4.16	1 0.959	-4.8	0.0	389.0	0.0										
			1 3.99		0.0	199.0	0.0	24	2A04	4.16	1	1	-389.0	-199.0			
2408	2P017	4.16	1 0.959	-4.8	0.0	405.0	0.0										
			1 3.99		0.0	173.0	0.0	24	2A04	4.16	1	1	-405.0	-173.0			
2411	2P307	4.16	1 0.959	-4.8	0.0	331.0	0.0										
			1 3.99		0.0	214.0	0.0	24	2A04	4.16	1	1	-331.0	-214.0			
2420	2B04X	4.16	1 0.959	-4.8	0.0	0.0	0.0										
			1 3.99		0.0	0.0	0.0	24	2A04	4.16	1	1	-944.4	-748.7			
								211	2B04	0.48	1	1	944.6	748.7	0.999LK		

Sheet No. 400
Calc No: E4C-082-CCN/GN-3 Rev. 1
RE: Lpenc 9-30-94 IRE: AP 12-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:24
CASE IV.BX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-2_IVBX.SAV

BUS DATA								LINE DATA								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
2603	2P504	4.16	1 0.962	-4.4	0.0	674.5	0.0										
		1	4.00		0.0	307.3	0.0	26	2A06	4.16 1	1	-674.5	-307.3				
2604	2P013	4.16	1 0.963	-4.4	0.0	352.9	0.0										
		1	4.01		0.0	180.0	0.0	26	2A06	4.16 1	1	-352.9	-180.0				
2606	2P025-B	4.16	1 0.963	-4.4	0.0	477.0	0.0										
		1	4.01		0.0	270.0	0.0	26	2A06	4.16 1	1	-477.1	-270.0				
2607	2P016	4.16	1 0.963	-4.4	0.0	389.0	0.0										
		1	4.01		0.0	199.0	0.0	26	2A06	4.16 1	1	-389.0	-199.0				
2608	2P019	4.16	1 0.963	-4.4	0.0	405.0	0.0										
		1	4.01		0.0	173.0	0.0	26	2A06	4.16 1	1	-405.0	-173.0				
2611	2P114	4.16	1 0.963	-4.4	0.0	331.0	0.0										
		1	4.01		0.0	214.0	0.0	26	2A06	4.16 1	1	-331.0	-214.0				
2620	2B06X	4.16	1 0.963	-4.4	0.0	0.0	0.0										
		1	4.01		0.0	0.0	0.0	26	2A06	4.16 1	1	-907.3	-722.3				
								216	2B06	0.48 1	1	907.3	722.1	0.999LK			
3402	E336-U3	4.16	1 0.958	-4.8	0.0	0.0	0.0										
		1	3.98		0.0	0.0	0.0	34	3A04	4.16 1	1	-448.0	-247.1				
									M I S M A T C H			448.0	247.1				
3403	3P012	4.16	1 0.958	-4.8	0.0	0.0	0.0										
		1	3.99		0.0	0.0	0.0	34	3A04	4.16 1	1	-307.5	-166.0				
									M I S M A T C H			307.5	166.0				
3404	3P141	4.16	1 0.957	-4.8	0.0	0.0	0.0										
		1	3.98		0.0	0.0	0.0	34	3A04	4.16 1	1	-669.6	-296.9				
									M I S M A T C H			669.6	296.9				
3405	3P024	4.16	1 0.958	-4.8	0.0	0.0	0.0										
		1	3.98		0.0	0.0	0.0	34	3A04	4.16 1	1	-472.3	-260.9				
									M I S M A T C H			472.3	260.9				
3407	3P015	4.16	1 0.958	-4.8	0.0	0.0	0.0										
		1	3.98		0.0	0.0	0.0	34	3A04	4.16 1	1	-378.0	-188.1				
									M I S M A T C H			378.0	188.1				
3408	3P017	4.16	1 0.958	-4.8	0.0	0.0	0.0										
		1	3.98		0.0	0.0	0.0	34	3A04	4.16 1	1	-395.3	-171.4				
									M I S M A T C H			395.3	171.4				
3409	3P018-A	4.16	1 0.958	-4.8	0.0	0.0	0.0										
		1	3.99		0.0	0.0	0.0	34	3A04	4.16 1	1	-395.3	-171.4				
									M I S M A T C H			395.3	171.4				
3411	3P307	4.16	1 0.958	-4.8	0.0	0.0	0.0										
		1	3.98		0.0	0.0	0.0	34	3A04	4.16 1	1	-320.2	-197.5				
									M I S M A T C H			320.2	197.5				
3412	3T014	4.16	1 0.958	-4.8	0.0	128.0	0.0										
		1	3.99		0.0	78.0	0.0	34	3A04	4.16 1	1	-128.0	-78.0				
3417	3B04X	4.16	1 0.958	-4.8	0.0	0.0	0.0										
		1	3.99		0.0	0.0	0.0	34	3A04	4.16 1	1	-1406.8	-973.1				
								314	3B04	0.48 1	1	1406.9	973.1	0.999LK			

Calc No: E4C-082 CCN 9N-3 Rev. 1 Sheet No. 401
RE: Lpw 9-30-94 IRE: RL 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:24
CASE IV.BX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-2_IVBX.SAV

FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
3602	E335-U3 4.16	1	0.962	-4.4	0.0	0.0	0.0										
		1	4.00		0.0	0.0	0.0	36	3A06 4.16	1	1	-448.1	-247.6				
									M I S M A T C H			448.1	247.6				
3604	3P013 4.16	1	0.962	-4.4	0.0	0.0	0.0										
		1	4.00		0.0	0.0	0.0	36	3A06 4.16	1	1	-307.5	-166.8				
									M I S M A T C H			307.5	166.8				
3606	3P025-B 4.16	1	0.962	-4.4	0.0	0.0	0.0										
		1	4.00		0.0	0.0	0.0	36	3A06 4.16	1	1	-472.3	-262.1				
									M I S M A T C H			472.3	262.1				
3607	3P016 4.16	1	0.962	-4.4	0.0	0.0	0.0										
		1	4.00		0.0	0.0	0.0	36	3A06 4.16	1	1	-378.1	-188.7				
									M I S M A T C H			378.1	188.7				
3608	3P019 4.16	1	0.962	-4.4	0.0	0.0	0.0										
		1	4.00		0.0	0.0	0.0	36	3A06 4.16	1	1	-395.4	-171.9				
									M I S M A T C H			395.4	171.9				
3609	3P018-B 4.16	1	0.962	-4.4	0.0	0.0	0.0										
		1	4.00		0.0	0.0	0.0	36	3A06 4.16	1	1	-395.5	-172.0				
									M I S M A T C H			395.5	172.0				
3611	3P114 4.16	1	0.962	-4.4	0.0	0.0	0.0										
		1	4.00		0.0	0.0	0.0	36	3A06 4.16	1	1	-320.2	-198.5				
									M I S M A T C H			320.2	198.5				
3612	3P504 4.16	1	0.961	-4.4	0.0	0.0	0.0										
		1	4.00		0.0	0.0	0.0	36	3A06 4.16	1	1	-669.6	-297.1				
									M I S M A T C H			669.6	297.1				
3619	3B06X 4.16	1	0.962	-4.4	0.0	0.0	0.0										
		1	4.00		0.0	0.0	0.0	36	3A06 4.16	1	1	-1340.2	-909.2				
								316	[illegible] 0.48	1	1	1340.2	909.1	0.999LK			
21403	2BRA 0.48	1	0.900	-8.5	0.0	0.0	0.0										
		1	0.43		0.0	0.0	0.0	214	2B04 0.48	1	1	-22.9	-15.2				
								2240[illegible]	[illegible]A-M 0.48	1	1	14.4	10.0				
								2340[illegible]	[illegible]RA-S 0.48	1	1	8.5	5.3				
21405	2P191-A 0.46	1	0.930	-8.5	0.0	57.0	0.0										
		1	0.43		0.0	35.0	0.0	214	2B04 0.48	1	1	-57.0	-35.0	1.043LK			
21407	2BD 0.48	1	0.835	-9.5	0.0	0.0	0.0										
		1	0.40		0.0	0.0	0.0	214	2B04 0.48	1	1	-184.1	-123.9				
								22407	2BD-M 0.48	1	1	18.3	13.6				
								23407	2BD-S 0.48	1	1	8.5	5.3				
								24412	2A274 0.46	1	1	45.3	30.3	1.043UN			
								24413	2A275 0.46	1	1	45.5	30.4	1.043UN			
								24421	2E550 0.46	1	1	33.2	22.2	1.043UN			
								24422	2E546 0.46	1	1	33.2	22.2	1.043UN			
21409	2A071 0.46	1	0.918	-8.2	0.0	55.0	0.0										
		1	0.42		0.0	37.0	0.0	214	2B04 0.48	1	1	-55.0	-37.0	1.043LK			
21410	2E399 0.46	1	0.928	-8.5	0.0	61.0	0.0										
		1	0.43		0.0	41.0	0.0	214	2B04 0.48	1	1	-61.0	-41.0	1.043LK			
21411	2E401 0.46	1	0.925	-8.5	0.0	61.0	0.0										
		1	0.43		0.0	41.0	0.0	214	2B04 0.48	1	1	-61.0	-41.0	1.043LK			

Sheet No 402
Calc No: E4C-082 CCN 9N-3 Rev 1
RE: Lpnr 9-30-94 IRE: [illegible] 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:24
CASE IV.BX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-2_IVBX.SAV

BUS DATA									LINE DATA								
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
21413	2P190	0.46	1	0.930	-8.5	0.0	57.0	0.0										
			1	0.43		0.0	35.0	0.0	214	2B04	0.48	1	1	-57.0	-35.0	1.043LK		
21414	2BE	0.48	1	0.898	-8.5	0.0	0.0	0.0										
			1	0.43		0.0	0.0	0.0	214	2B04	0.48	1	1	-134.5	-114.8			
									22414	2BE-M	0.48	1	1	45.0	50.8			
									23414	2BE-S	0.48	1	1	89.4	64.1			
21415	2BY	0.48	1	0.897	-8.6	0.0	0.0	0.0										
			1	0.43		0.0	0.0	0.0	214	2B04	0.48	1	1	-222.2	-145.5			
									22415	2BY-M	0.48	1	1	86.2	55.4			
									23415	2BY-S	0.48	1	1	112.5	78.1			
									24434	2P009	0.46	1	1	23.6	12.0	1.043UN		
21419	2A074	0.46	1	0.913	-8.1	0.0	55.0	0.0										
			1	0.42		0.0	37.0	0.0	214	2B04	0.48	1	1	-55.0	-37.0	1.043LK		
21603	2BRB	0.48	1	0.907	-7.9	0.0	0.0	0.0										
			1	0.44		0.0	0.0	0.0	216	2B06	0.48	1	1	-22.9	-15.2			
									22603	2BRB-M	0.48	1	1	14.4	10.0			
									23603	2BRB-S	0.48	1	1	8.5	5.3			
21605	2BH	0.48	1	0.856	-8.7	0.0	0.0	0.0										
			1	0.41		0.0	0.0	0.0	216	2B06	0.48	1	1	-183.9	-123.9			
									22605	2BH-M	0.48	1	1	18.3	13.6			
									23605	2BH-S	0.48	1	1	8.5	5.3			
									24606	P547	0.46	1	1	33.2	22.1	1.043UN		
									24607	2B549	0.46	1	1	33.2	22.2	1.043UN		
									24611	2A276	0.46	1	1	45.3	30.3	1.043UN		
									24612	2A277	0.46	1	1	45.5	30.4	1.043UN		
21607	2BJ	0.48	1	0.904	-8.0	0.0	0.0	0.0										
			1	0.43		0.0	0.0	0.0	216	2B06	0.48	1	1	-124.2	-108.4			
									22607	2BJ-M	0.48	1	1	45.0	50.7			
									23607	2BJ-S	0.48	1	1	79.2	57.8			
21609	2A072	0.46	1	0.923	-7.6	0.0	55.0	0.0										
			1	0.42		0.0	37.0	0.0	216	2B06	0.48	1	1	-55.0	-37.0	1.043LK		
21610	2E400	0.46	1	0.929	-7.9	0.0	61.0	0.0										
			1	0.43		0.0	41.0	0.0	216	2B06	0.48	1	1	-61.0	-41.0	1.043LK		
21611	2E402	0.46	1	0.923	-7.8	0.0	61.0	0.0										
			1	0.42		0.0	41.0	0.0	216	2B06	0.48	1	1	-61.0	-41.0	1.043LK		
21613	2P192	0.46	1	0.933	-7.9	0.0	57.0	0.0										
			1	0.43		0.0	35.0	0.0	216	2B06	0.48	1	1	-57.0	-35.0	1.043LK		
21614	2BZ	0.48	1	0.905	-8.0	0.0	0.0	0.0										
			1	0.43		0.0	0.0	0.0	216	2B06	0.48	1	1	-197.9	-136.6			
									22614	2BZ-M	0.48	1	1	50.0	40.7			
									23614	2BZ-S	0.48	1	1	124.4	83.9			
									24622	2P010	0.46	1	1	23.6	12.0	1.043UN		
21617	2P191-B	0.46	1	0.932	-7.9	0.0	57.0	0.0										
			1	0.43		0.0	35.0	0.0	216	2B06	0.48	1	1	-57.0	-35.0	1.043LK		

Sheet No. 403
Calc No: E4C-082-CCN9W-3 Rev. 1
RE: LBnw 9-30-94 IRE: RJ 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:24
CASE IV.BX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-2_IVBX.SAV

BUS DATA									LINE DATA								
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	FW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
21619	2A073	0.46	1	0.916	-7.5	0.0	55.0	0.0										
			1	0.42		0.0	37.0	0.0	21[illegible]06	0.48	1	1	-55.0	-37.0	1.043LK			
22403	2BRA-M	0.48	1	0.900	-8.5	0.0	14.4	0.0										
			1	0.43		0.0	10.0	0.0	21403 2BRA	0.48	1	1	-14.4	-10.0				
22407	2BD-M	0.48	1	0.835	-9.5	0.0	18.3	0.0										
			1	0.40		0.0	13.6	0.0	21407 2BD	0.48	1	1	-18.3	-13.6				
22414	2BE-M	0.48	1	0.898	-8.5	0.0	45.0	0.0										
			1	0.43		0.0	50.8	0.0	21414 2BE	0.48	1	1	-45.0	-50.8				
22415	2BY-M	0.48	1	0.897	-8.6	0.0	86.2	0.0										
			1	0.43		0.0	55.4	0.0	21415 2BY	0.48	1	1	-86.2	-55.4				
22603	2BRB-M	0.48	1	0.907	-7.9	0.0	14.4	0.0										
			1	0.44		0.0	10.0	0.0	21603 2BRB	0.48	1	1	-14.4	-10.0				
22605	2BH-M	0.48	1	0.856	-8.7	0.0	18.3	0.0										
			1	0.41		0.0	13.6	0.0	21605 2BH	0.48	1	1	-18.3	-13.6				
22607	2BJ-M	0.48	1	0.904	-8.0	0.0	45.0	0.0										
			1	0.43		0.0	50.7	0.0	21607 2BJ	0.48	1	1	-45.0	-50.7				
22614	2BZ-M	0.48	1	0.905	-8.0	0.0	50.0	0.0										
			1	0.43		0.0	40.7	0.0	21614 2BZ	0.48	1	1	-50.0	-40.7				
23403	2BRA-S	0.48	1	0.900	-8.5	0.0	8.5	0.0										
			1	0.43		0.0	5.3	0.0	21403 2BRA	0.48	1	1	-8.5	-5.3				
23407	2BD-S	0.48	1	0.835	-9.5	0.0	8.5	0.0										
			1	0.40		0.0	5.3	0.0	2140[illegible] 2BD	0.48	1	1	-8.5	-5.3				
23414	2BE-S	0.48	1	0.898	-8.5	0.0	89.4	0.0										
			1	0.43		0.0	64.1	0.0	21414 2BE	0.48	1	1	-89.4	-64.1				
23415	2BY-S	0.48	1	0.897	-8.6	0.0	112.5	0.0										
			1	0.43		0.0	78.1	0.0	21415 2BY	0.48	1	1	-112.5	-78.1				
23603	2BRB-S	0.48	1	0.907	-7.9	0.0	8.5	0.0										
			1	0.44		0.0	5.3	0.0	21603 2BRB	0.48	1	1	-8.5	-5.3				
23605	2BH-S	0.48	1	0.856	-8.7	0.0	8.5	0.0										
			1	0.41		0.0	5.3	0.0	21605 2BH	0.48	1	1	-8.5	-5.3				
23607	2BJ-S	0.48	1	0.904	-8.0	0.0	79.2	0.0										
			1	0.43		0.0	57.8	0.0	21607 2BJ	0.48	1	1	-79.2	-57.8				
23614	2BZ-S	0.48	1	0.905	-8.0	0.0	124.4	0.0										
			1	0.43		0.0	83.9	0.0	21614 2BZ	0.48	1	1	-124.4	-83.9				

Sheet No. 404
Calc No: E4C-082-CCN0W-3 Rev. 1
RE: Lpm 9-30-94 IRE: Rob 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 15[illegible] 13:24
CASE IV.BX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-2_IVBX.SAV

BUS DATA								LINE DATA								
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
24412	2A274	0.46	1	0.868	-9.4	0.0	45.1	0.0										
			1	0.40		0.0	30.3	0.0	21407	2DD	0.48	1	1	-45.1	-30.3	1.043LK		
24413	2A275	0.46	1	0.865	-9.3	0.0	45.1	0.0										
			1	0.40		0.0	30.3	0.0	21407	2DD	0.48	1	1	-45.1	-30.3	1.043LK		
24421	2E550	0.46	1	0.864	-9.3	0.0	32.9	0.0										
			1	0.40		0.0	22.1	0.0	21407	2DD	0.48	1	1	-32.9	-22.1	1.043LK		
24422	2E546	0.46	1	0.865	-9.3	0.0	32.9	0.0										
			1	0.40		0.0	22.1	0.0	21407	2DD	0.48	1	1	-32.9	-22.1	1.043LK		
24434	2P009	0.46	1	0.923	-8.4	0.0	23.2	0.0										
			1	0.42		0.0	11.9	0.0	21415	2BY	0.48	1	1	-23.2	-11.9	1.043LK		
24606	2E547	0.46	1	0.888	-8.5	0.0	32.9	0.0										
			1	0.41		0.0	22.1	0.0	21605	2BH	0.48	1	1	-32.9	-22.1	1.043LK		
24607	2E549	0.46	1	0.887	-8.5	0.0	32.9	0.0										
			1	0.41		0.0	22.1	0.0	21605	2BH	0.48	1	1	-32.9	-22.1	1.043LK		
24611	2A276	0.46	1	0.890	-8.6	0.0	45.1	0.0										
			1	0.41		0.0	30.3	0.0	21605	2BH	0.48	1	1	-45.1	-30.3	1.043LK		
24612	2A277	0.46	1	0.887	-8.5	0.0	45.1	0.0										
			1	0.41		0.0	30.3	0.0	21605	2BH	0.48	1	1	-45.1	-30.3	1.043LK		
24622	2P010	0.46	1	0.930	-7.8	0.0	23.2	0.0										
			1	0.43		0.0	11.9	0.0	21614	2BZ	0.48	1	1	-23.2	-11.9	1.043LK		
31402	3E61N	0.48	1	0.870	-11.4	0.0	200.0	0.0										
			1	0.42		0.0	0.0	0.0	314	3B04	0.48	1	1	-200.0	0.0			
31403	3BRA	0.48	1	0.881	-10.6	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	314	3B04	0.48	1	1	-22.0	-13.5			
									32403	3BRA-M	0.48	1	1	13.5	8.2			
									33403	3BRA-S	0.48	1	1	8.5	5.3			
31405	3P191-A	0.46	1	0.908	-10.6	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	314	3B04	0.48	1	1	-55.3	-36.0	1.043LK		
									M I S M A T C H					55.3	36.0			
31407	3BD	0.48	1	0.818	-11.5	0.0	0.0	0.0										
			1	0.39		0.0	0.0	0.0	314	3B04	0.48	1	1	-173.7	-117.2			
									324[illegible]	[illegible]-M	0.48	1	1	17.3	10.6			
									33407	3BD-S	0.48	1	1	8.5	5.3			
									3441[illegible]	[illegible]274	0.46	1	1	41.8	29.5	1.043UN		
									34413	3A275	0.46	1	1	42.0	29.5	1.043UN		
									34421	3E550	0.46	1	1	32.1	21.2	1.043UN		
									34422	3E546	0.46	1	1	32.0	21.1	1.043UN		
31409	3A071	0.46	1	0.897	-10.4	0.0	0.0	0.0										
			1	0.41		0.0	0.0	0.0	314	3B04	0.48	1	1	-55.0	-32.0	1.043LK		
									M I S M A T C H					55.0	32.0			

Sheet No. 405
Calc No: E4C-082 CCN 9N-3 Rev: 1
RE: Lpm 1-30-94 IRE: [illegible] 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:24
CASE IV.BX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-2_IVBX.SAV

FROM BUS	NAME		AREA ZONE	VOLT PU/FV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A EVA
31410	3E399	0.46	1	0.908	-10.5	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	314	3B04	0.48	1	1	-59.6	-41.5	1.043LK		
										M I S M A T C H				59.6	41.5			
31411	3E401	0.46	1	0.906	-10.5	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	314	3B04	0.48	1	1	-59.6	-41.5	1.043LK		
										M I S M A T C H				59.6	41.5			
31413	3P190	0.46	1	0.910	-10.6	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	314	3B04	0.48	1	1	-55.3	-36.0	1.043LK		
										M I S M A T C H				55.3	36.0			
31414	3BE	0.48	1	0.879	-10.6	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	314	3B04	0.48	1	1	-142.8	-96.5			
									32414	3BE-M	0.48	1	1	53.3	32.5			
									33414	3BE-S	0.48	1	1	89.4	64.1			
31415	3BY	0.48	1	0.879	-10.7	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	314	3B04	0.48	1	1	-214.3	-137.3			
									32415	3BY-M	0.48	1	1	78.8	48.0			
									33415	3BY-S	0.48	1	1	112.5	78.1			
									34434	31009	0.46	1	1	23.0	11.3	1.043UN		
31417	BQ-U3	0.48	1	0.873	-10.8	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	314	3B04	0.48	1	1	-140.1	-85.9			
									32417	BQ-U3-M	0.48	1	1	39.6	24.1			
									33417	BQ-U3-S	0.48	1	1	75.9	45.8			
									34417	2162-U3	0.46	1	1	24.7	16.0	1.043UN		
31418	E418-U3	0.46	1	0.882	-10.6	0.0	0.0	0.0										
			1	0.41		0.0	0.0	0.0	314	3B04	0.48	1	1	-116.0	-67.0	1.043LK		
										M I S M A T C H				116.0	67.0			
31419	3A074	0.46	1	0.892	-10.3	0.0	0.0	0.0										
			1	0.41		0.0	0.0	0.0	314	3B04	0.48	1	1	-55.0	-31.9	1.043LK		
										M I S M A T C H				55.0	31.9			
31602	3E62N	0.48	1	0.878	-10.7	0.0	200.0	0.0										
			1	0.42		0.0	0.0	0.0	316	3B06	0.48	1	1	-200.0	0.0			
31603	3BRB	0.48	1	0.891	-9.9	0.0	0.0	0.0										
			1	0.43		0.0	0.0	0.0	316	3B06	0.48	1	1	-22.0	-13.5			
									32603	3BRB-M	0.48	1	1	13.5	8.2			
									33603	3BRB-S	0.48	1	1	8.5	5.3			
31605	3BH	0.48	1	0.842	-10.6	0.0	0.0	0.0										
			1	0.40		0.0	0.0	0.0	316	3B06	0.48	1	1	-174.1	-117.4			
									32605	3BH-M	0.48	1	1	17.4	10.6			
									33605	3BH-S	0.48	1	1	8.5	5.3			
									34605	3E547	0.46	1	1	32.1	21.4	1.043UN		
									34606	2165-9	0.46	1	1	32.1	21.4	1.043UN		
									34611	3A276	0.46	1	1	41.9	29.3	1.043UN		
									34612	3A277	0.46	1	1	42.1	29.4	1.043UN		
31607	3BJ	0.48	1	0.888	-9.9	0.0	0.0	0.0										
			1	0.43		0.0	0.0	0.0	316	3B06	0.48	1	1	-131.5	-89.6			
									32607	3BJ-M	0.48	1	1	52.2	31.8			
									33607	3BJ-S	0.48	1	1	79.2	57.8			
31609	3A072	0.46	1	0.904	-9.6	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	316	3B06	0.48	1	1	-55.1	-32.2	1.043LK		
										M I S M A T C H				55.1	32.2			

Sheet No. 406
Calc No: E4C-082 CCN9N-3RH 1
RE: Lpnc 9-30-94 IRE: RJL 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:24
CASE IV.BX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-2_IVBX.SAV

BUS DATA									LINE DATA								
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
31610	3E400	0.46	1	0.912	-9.8	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	316	3B06	0.48 1	1	-59.7	-41.7	1.043LK			
										M I S M A T C H			59.7	41.7				
31611	3E402	0.46	1	0.905	-9.7	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	316	3B06	0.48 1	1	-59.6	-41.4	1.043LK			
										M I S M A T C H			59.6	41.4				
31613	3P192	0.46	1	0.916	-9.8	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	316	3B06	0.48 1	1	-55.3	-36.2	1.043LK			
										M I S M A T C H			55.3	36.2				
31614	3BZ	0.48	1	0.889	-9.9	0.0	0.0	0.0										
			1	0.43		0.0	0.0	0.0	316	3B06	0.48 1	1	-199.5	-126.9				
									32614	3BZ-M	0.48 1	1	52.0	31.7				
									33614	3BZ-S	0.48 1	1	124.4	83.9				
									34622	3P010	0.46 1	1	23.1	11.3	1.043UN			
31615	E419-U3	0.46	1	0.918	-9.9	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	316	3B06	0.48 1	1	-116.2	-69.6	1.043LK			
										M I S M A T C H			116.2	69.6				
31617	3P191-B	0.46	1	0.916	-9.8	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	316	3B06	0.48 1	1	-55.3	-36.2	1.043LK			
										M I S M A T C H			55.3	36.2				
31618	BS-U3	0.48	1	0.883	-10.0	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	316	3B06	0.48 1	1	-106.7	-63.7				
									32618	BS-U3-M	0.48 1	1	39.6	24.1				
									33618	BS-U3-S	0.48 1	1	42.6	23.4				
									34618	P160-U3	0.46 1	1	24.5	16.2	1.043UN			
31619	3A073	0.46	1	0.898	-9.5	0.0	0.0	0.0										
			1	0.41		0.0	0.0	0.0	316	3B06	0.48 1	1	-55.0	-32.1	1.043LK			
										M I S M A T C H			55.0	32.1				
32403	3BRA-M	0.48	1	0.881	-10.6	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	31403	3BRA	0.48 1	1	-13.5	-8.2				
										M I S M A T C H			13.5	8.2				
32407	3BD-M	0.48	1	0.818	-11.5	0.0	0.0	0.0										
			1	0.39		0.0	0.0	0.0	31407	3BD	0.48 1	1	-17.3	-10.6				
										M I S M A T C H			17.3	10.6				
32414	3BE-M	0.48	1	0.879	-10.6	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	31414	3BE	0.48 1	1	-53.3	-32.5				
										M I S M A T C H			53.3	32.5				
32415	3BY-M	0.48	1	0.879	-10.7	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	31415	3BY	0.48 1	1	-78.8	-48.0				
										M I S M A T C H			78.8	48.0				
32417	BQ-U3-M	0.48	1	0.873	-10.8	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	31417	BQ-U3	0.48 1	1	-39.6	-24.1				
										M I S M A T C H			39.6	24.1				
32603	3BRB-M	0.48	1	0.891	-9.9	0.0	0.0	0.0										
			1	0.43		0.0	0.0	0.0	31603	3BRB	0.48 1	1	-13.5	-8.2				
										M I S M A T C H			13.5	8.2				
32605	3BH-M	0.48	1	0.842	-10.6	0.0	0.0	0.0										
			1	0.40		0.0	0.0	0.0	31605	3BH	0.48 1	1	-17.4	-10.6				
										M I S M A T C H			17.4	10.6				
32607	3BJ-M	0.48	1	0.888	-9.9	0.0	0.0	0.0										
			1	0.43		0.0	0.0	0.0	31607	3BJ	0.48 1	1	-52.2	-31.8				

Sheet No. 407
Calc No: E4C-082 CCN 9V-3 Rev: 1
RE: LPM 9-30-94 IRE: RLP 10-5-94

Sheet No. 408

Calc No: E4C-082 CCN 9 N-3 Rev. 1

RE: Lpm 9-30-94 IRE: Ad 10-5-94

MISMATCH 52.2 31.8

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:24
CASE IV.BX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]LF-2_IVBX.SAV

BUS DATA								LINE DATA								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
32614	3BZ-M 0.48	1	0.889	-9.9	0.0	0.0	0.0										
		1	0.43		0.0	0.0	0.0	31614	3BZ 0.48	1	1	-52.0	-31.7				
									M I S M A T C H			52.0	31.7				
32618	BS-U3-M 0.48	1	0.883	-10.0	0.0	0.0	0.0										
		1	0.42		0.0	0.0	0.0	31618	BS-U3 0.48	1	1	-39.6	-24.1				
									M I S M A T C H			39.6	24.1				
33403	3BRA-S 0.48	1	0.881	-10.6	0.0	8.5	0.0										
		1	0.42		0.0	5.3	0.0	31403	3BRA 0.48	1	1	-8.5	-5.3				
33407	3BD-S 0.48	1	0.818	-11.5	0.0	8.5	0.0										
		1	0.39		0.0	5.3	0.0	31407	3BD 0.48	1	1	-8.5	-5.3				
33414	3BE-S 0.48	1	0.879	-10.6	0.0	89.4	0.0										
		1	0.42		0.0	64.1	0.0	31414	3BE 0.48	1	1	-89.4	-64.1				
33415	3BY-S 0.48	1	0.879	-10.7	0.0	112.5	0.0										
		1	0.42		0.0	78.1	0.0	31415	3BY 0.48	1	1	-112.5	-78.1				
33417	BQ-U3-S 0.48	1	0.873	-10.8	0.0	75.9	0.0										
		1	0.42		0.0	45.8	0.0	31417	BQ-U3 0.48	1	1	-75.9	-45.8				
33603	3BRB-S 0.48	1	0.891	-9.9	0.0	8.5	0.0										
		1	0.43		0.0	5.3	0.0	31603	3BRB 0.48	1	1	-8.5	-5.3				
33605	3BH-S 0.48	1	0.842	-10.6	0.0	8.5	0.0										
		1	0.40		0.0	5.3	0.0	31605	3BH 0.48	1	1	-8.5	-5.3				
33607	3BJ-S 0.48	1	0.888	-9.9	0.0	79.2	0.0										
		1	0.43		0.0	57.8	0.0	31607	3BJ 0.48	1	1	-79.2	-57.8				
33614	3BZ-S 0.48	1	0.889	-9.9	0.0	124.4	0.0										
		1	0.43		0.0	83.9	0.0	31614	3BZ 0.48	1	1	-124.4	-83.9				
33618	BS-U3-S 0.48	1	0.883	-10.0	0.0	42.6	0.0										
		1	0.42		0.0	23.4	0.0	31618	BS-U3 0.48	1	1	-42.6	-23.4				
34412	3A274 0.46	1	0.850	-11.4	0.0	0.0	0.0										
		1	0.39		0.0	0.0	0.0	31407	3BD 0.48	1	1	-41.6	-29.4	1.043LK			
									M I S M A T C H			41.6	29.4				
34413	3A275 0.46	1	0.847	-11.3	0.0	0.0	0.0										
		1	0.39		0.0	0.0	0.0	31407	3BD 0.48	1	1	-41.6	-29.4	1.043LK			
									M I S M A T C H			41.6	29.4				
34417	P162-U3 0.46	1	0.897	-10.4	0.0	0.0	0.0										
		1	0.41		0.0	0.0	0.0	31417	BQ-U3 0.48	1	1	-24.2	-15.9	1.043LK			
									M I S M A T C H			24.2	15.9				
34421	3E550 0.46	1	0.846	-11.3	0.0	0.0	0.0										
		1	0.39		0.0	0.0	0.0	31407	3BD 0.48	1	1	-31.7	-21.1	1.043LK			
									M I S M A T C H			31.7	21.1				
34422	3E546 0.46	1	0.848	-11.4	0.0	0.0	0.0										
		1	0.39		0.0	0.0	0.0	31407	3BD 0.48	1	1	-31.7	-21.1	1.043LK			
									M I S M A T C H			31.7	21.1				

Sheet No. 409
Calc No: E4C-082 CCNGW-3 Rev. 1
RE: Lpm 9-30-94 IRE: RJL 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR---PSS/E THU, SEP 15 1994 13:24
CASE IV.BX - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBX]L7-2_IVBX.SAV

FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
34434	3P009	0.46	1	0.905	-10.5	0.0	0.0	0.0											
			1	0.42		0.0	0.0	0.0	31415	3BY 0.48	1	1	-22.6	-11.2	1.043LK			
										M I S M A T C H			22.6	11.2				
34606	3E547	0.46	1	0.873	-10.4	0.0	0.0	0.0											
			1	0.40		0.0	0.0	0.0	31605	3BH 0.48	1	1	-31.8	-21.3	1.043LK			
										M I S M A T C H			31.8	21.3				
34607	3E549	0.46	1	0.873	-10.4	0.0	0.0	0.0											
			1	0.40		0.0	0.0	0.0	31605	3BH 0.48	1	1	-31.8	-21.3	1.043LK			
										M I S M A T C H			31.8	21.3				
34611	3A276	0.46	1	0.876	-10.5	0.0	0.0	0.0											
			1	0.40		0.0	0.0	0.0	31605	3BH 0.48	1	1	-41.8	-29.3	1.043LK			
										M I S M A T C H			41.8	29.3				
34612	3A277	0.46	1	0.873	-10.4	0.0	0.0	0.0											
			1	0.40		0.0	0.0	0.0	31605	3BH 0.48	1	1	-41.8	-29.3	1.043LK			
										M I S M A T C H			41.8	29.3				
34618	P160-U3	0.46	1	0.915	-9.8	0.0	0.0	0.0											
			1	0.42		0.0	0.0	0.0	31618	BS-U3 0.48	1	1	-24.3	-16.1	1.043LK			
										M I S M A T C H			24.3	16.1				
34622	3P010	0.46	1	0.913	-9.7	0.0	0.0	0.0											
			1	0.42		0.0	0.0	0.0	31614	3BZ 0.48	1	1	-22.6	-11.2	1.043LK			
										M I S M A T C H			22.6	11.2				

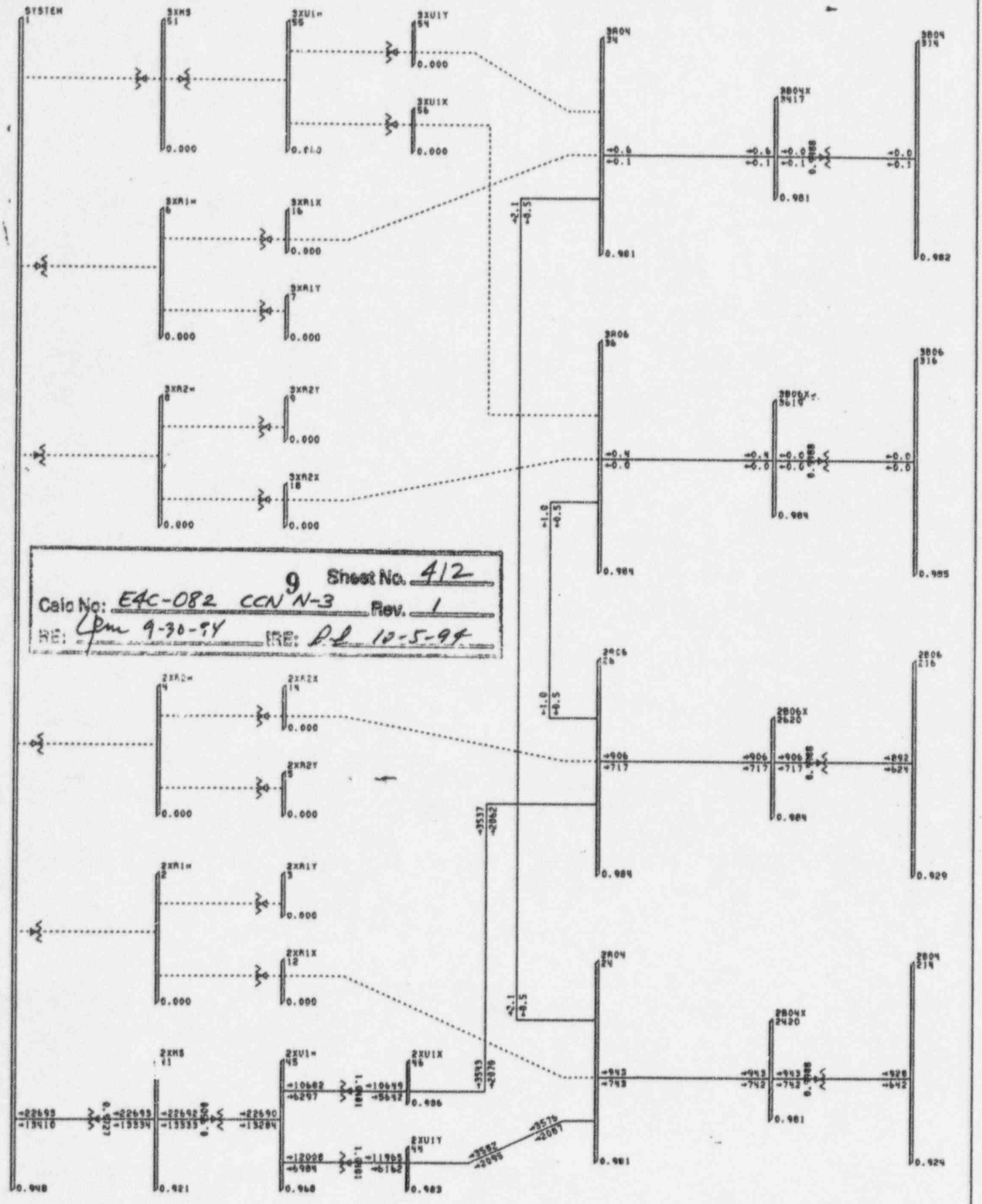
Calc No: E4C-082 CCN 9N-3 Rev. 1
RE: Lpm 9-30-94 IRE: RP 10-5-94
Sheet No. 410

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

APPENDIX 9.1.6

CASE IVBY

Initial Condition Power Flow (Steady State) Report
Post Accident Condition Power Flow (Steady State) Report



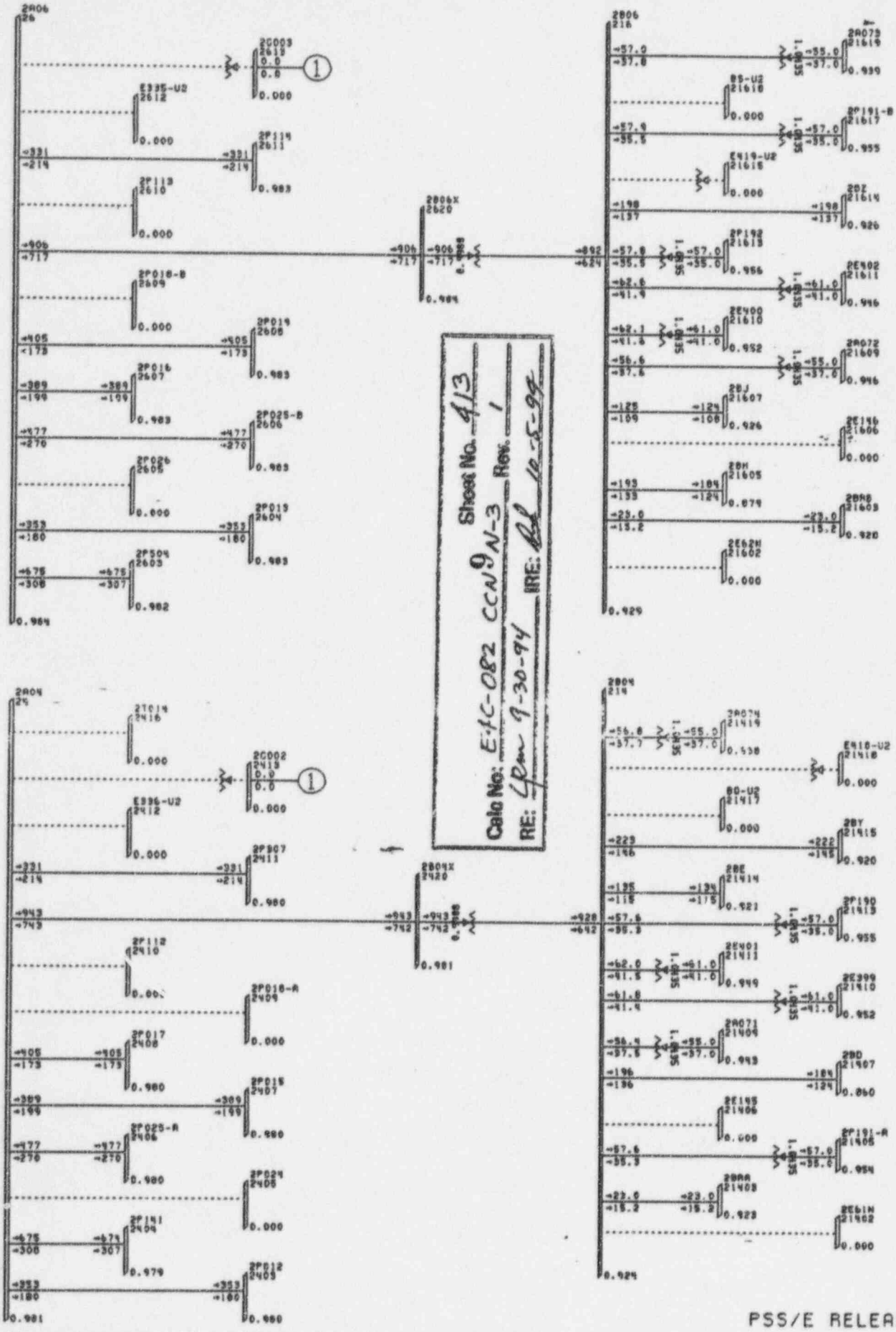
Calc No: E4C-082 CCN 9 Sheet No. 412

Calc No: E4C-082 CCN N-3 Rev. 1

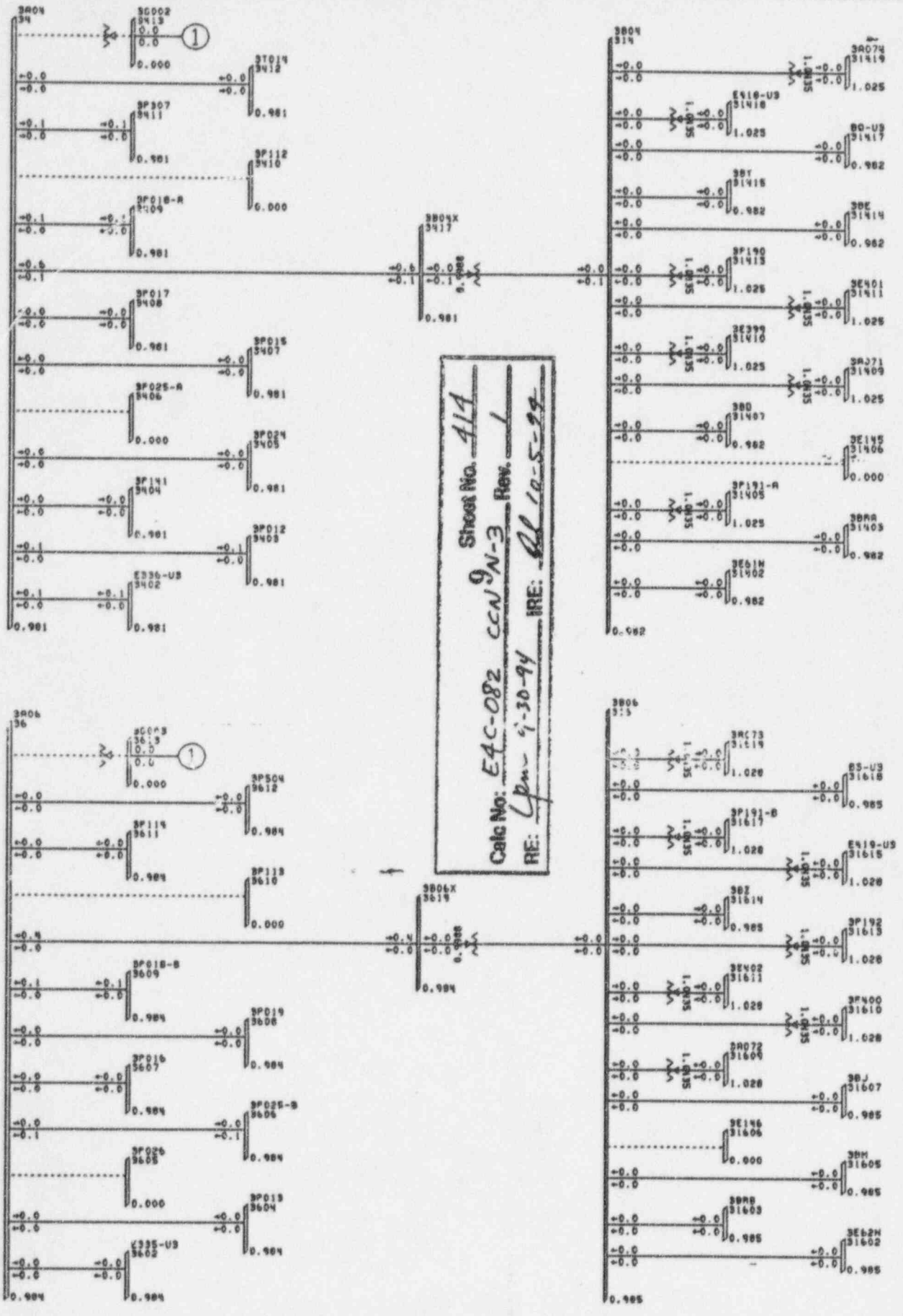
RE: Cpm 9-30-94 IRE: D-L 10-5-94

PSS/E RELEASE 19.0

CASE IV.BY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-1_IVBY.SAV
THU, SEP 15 1994 11:17



CASE IV.BY - INITIAL STEADY STATE CONDITION
DKB200:CMURIEL.E4C-082-AGA.CASE_IVBYJLF-1_IVBY.SAV
THU, SEP 15 1994 11:17



PSS/E RELEASE 19.0

CASE IV.BY - INITIAL STEADY STATE CONDITION
DKB200:CMURIEL.E4C-082-AGA.CASE_IVBYDLF-1_IVBY.SAV
THU, SEP 15 1994 11:17

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:18
CASE IV.BY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-1_IVBY.SAV

BUS DATA								LINE DATA								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
1	SYSTEM	230	0.948	0.0	22693.3	0.0	0.0										
		1	218.0		13410.3R	0.0	0.0	41	2XMS 22.0	1	1	22693.3	13410.3	0.973UN			
24	2A04	4.16	0.981	-3.2	0.0	0.0	0.0										
		1	4.08		0.0	0.0	0.0	34	3A04 4.16	1	1	2.1	-0.5				
								44	2XU1Y 4.16	1	1	-3576.1	-2086.7				
								2403	2P012 4.16	1	1	353.0	180.1				
								2404	2P141 4.16	1	1	675.5	308.1				
								2406	2P025-A 4.16	1	1	477.3	270.2				
								2407	2P015 4.16	1	1	389.2	199.1				
								2408	2P017 4.16	1	1	405.2	173.1				
								2411	2P307 4.16	1	1	331.2	214.1				
								2420	2B04F 4.16	1	1	942.7	742.6				
26	2A06	4.16	0.984	-2.9	0.0	0.0	0.0										
		1	4.09		0.0	0.0	0.0	36	3A06 4.16	1	1	-1.0	-0.5				
								46	2XU1X 4.16	1	1	-3537.2	-2061.6				
								2603	2P504 4.16	1	1	675.4	308.0				
								2604	2P013 4.16	1	1	353.0	180.1				
								2606	2P025-B 4.16	1	1	477.3	270.2				
								2607	2P016 4.16	1	1	389.2	199.1				
								2608	2P019 4.16	1	1	405.1	173.2				
								2611	2P114 4.16	1	1	331.3	214.2				
								2620	2B06X 4.16	1	1	905.8	717.1				
									M I S M A T C H			1.2	0.2				
34	3A04	4.16	0.981	-3.2	0.0	0.0	0.0										
		1	4.08		0.0	0.0	0.0	24	2A04 4.16	1	1	-2.1	0.5				
								3402	E336-U3 4.16	1	1	-0.1	0.0				
								3403	3P012 4.16	1	1	0.1	0.0				
								3404	3P141 4.16	1	1	0.0	0.0				
								3405	3P024 4.16	1	1	0.0	0.0				
								3407	3P015 4.16	1	1	0.0	0.0				
								3408	3P017 4.16	1	1	0.0	0.0				
								3409	3P018-A 4.16	1	1	0.1	0.0				
								3411	3P307 4.16	1	1	0.1	0.0				
								3412	3T014 4.16	1	1	0.0	0.0				
								3417	3B04X 4.16	1	1	0.6	-0.1				
									M I S M A T C H			1.3	-0.5				
36	3A06	4.16	0.984	-2.9	0.0	0.0	0.0										
		1	4.09		0.0	0.0	0.0	26	2A06 4.16	1	1	1.0	0.5				
								3602	E335-U3 4.16	1	1	0.0	0.0				
								3604	3P013 4.16	1	1	0.0	0.0				
								3606	3P025-B 4.16	1	1	0.0	-0.1				
								3607	3P016 4.16	1	1	0.0	0.0				
								3608	3P019 4.16	1	1	0.0	0.0				
								3609	3P018-B 4.16	1	1	-0.1	0.0				
								3611	3P114 4.16	1	1	0.0	0.0				
								3612	3P504 4.16	1	1	0.0	0.0				
								3619	3B06X 4.16	1	1	0.4	0.0				
									M I S M A T C H			-1.2	-0.2				

Sheet No. 4/5
Calc No: E4C-082-CCN 9W-3 Rev. 1
RE: LPW 4-30-94 IRE: RLP 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:18
CASE IV.BY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-1_IVBY.SAV

FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME		CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
41	2XMS	22.0	1	0.921	-0.1	0.0	0.0	0.0												
			1	20.25		0.0	0.0	0.0	1	SYSTEM	230	1	1	**********		0.973LK			
									45	2XU1*	4.36	1	1	22692.4	13333.4	0.950LK			
										M I S M A T C H				0.1	1.1				
44	2XU1Y	4.16	1	0.983	-3.2	0.0	8384.9	0.0												
			1	4.09		0.0	4067.0	0.0	24	2A04	4.16	1	1	3581.6	2095.1				
									45	2XU1*	4.36	1	1	*******	-6161.8	1.048LK			
45	2XU1*	4.36	1	0.968	-0.2	0.0	0.0	0.0												
			1	4.22		0.0	0.0	0.0	41	2XMS	22.0	1	1	**********		0.950UN			
									44	2XU1Y	4.16	1	1	12007.9	6984.4	1.048UN			
									46	2XU1X	4.16	1	1	10682.5	6297.5	1.048UN			
										M I S M A T C H				-0.1	2.0				
46	2XU1X	4.16	1	0.986	-2.8	0.0	7106.0	0.0												
			1	4.10		0.0	3572.0	0.0	26	2A06	4.16	1	1	3542.7	2070.1				
									45	2XU1*	4.36	1	1	*******	-5642.0	1.048LK			
214	2B04	0.48	1	0.924	-6.8	0.0	0.0	0.0												
			1	0.44		0.0	0.0	0.0	2420	2B04X	4.16	1	1	-928.3	-641.9	0.999UN			
									21403	2BRA	0.48	1	1	23.0	15.2				
									21405	2P191-A	0.46	1	1	57.6	35.3	1.043UN			
									21407	2BD	0.48	1	1	195.6	136.2				
									21409	2A071	0.46	1	1	56.4	37.5	1.043UN			
									21410	2E399	0.46	1	1	61.8	41.4	1.043UN			
									21411	2E401	0.46	1	1	62.0	41.5	1.043UN			
									21413	2P190	0.46	1	1	57.6	35.3	1.043UN			
									21414	2BE	0.48	1	1	134.8	115.2				
									21415	2BY	0.48	1	1	222.7	146.4				
									21419	2A074	0.46	1	1	56.8	37.7	1.043UN			
216	2B06	0.48	1	0.929	-6.3	0.0	0.0	0.0												
			1	0.45		0.0	0.0	0.0	2620	2B06X	4.16	1	1	-892.4	-624.2	0.999UN			
									21603	2BRB	0.48	1	1	23.0	15.2				
									21605	2BH	0.48	1	1	192.7	133.2				
									21607	2BJ	0.48	1	1	124.6	108.8				
									21609	2A072	0.46	1	1	56.6	37.6	1.043UN			
									21610	2E400	0.46	1	1	62.1	41.6	1.043UN			
									21612	2E402	0.46	1	1	62.6	41.9	1.043UN			
									21613	2P192	0.46	1	1	57.8	35.5	1.043UN			
									21611	2BZ	0.48	1	1	198.2	137.2				
									21617	2P191-B	0.46	1	1	57.9	35.5	1.043UN			
									21619	2A073	0.46	1	1	57.0	37.8	1.043UN			

Sheet No. 4/6
Calc No: E4C-082 CCN 9 N-3 Rev. 1
RE: Lpm 9-30-94 RE: RL 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:18
CASE IV.BY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-1_IVBY.SAV

FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
314	3B04	0.48	1	0.982	-3.2	0.0	0.0	0.0									
			1	0.47		0.0	0.0	0.0	3417 3B04X	4.16	1	1	0.0	0.1	0.999UN		
									31402 3E61N	0.48	1	1	0.0	0.0			
									31403 3BRA	0.48	1	1	0.0	0.0			
									31405 3P191-A	0.46	1	1	0.0	0.0	1.043UN		
									31407 3BD	0.48	1	1	0.0	0.0			
									31409 3A071	0.46	1	1	0.0	0.0	1.043UN		
									31410 3E399	0.46	1	1	0.0	0.0	1.043UN		
									31411 3E401	0.46	1	1	0.0	0.0	1.043UN		
									31413 3P190	0.46	1	1	0.0	0.0	1.043UN		
									31414 3BE	0.48	1	1	0.0	0.0			
									31415 3BY	0.48	1	1	0.0	0.0			
									31417 BQ-U3	0.48	1	1	0.0	0.0			
									31418 E418-U3	0.46	1	1	0.0	0.0	1.043UN		
									31419 3A074	0.46	1	1	0.0	0.0	1.043UN		
316	3B06	0.48	1	0.985	-2.9	0.0	0.0	0.0									
			1	0.47		0.0	0.0	0.0	3e19 3B06X	4.16	1	1	0.0	0.0	0.999UN		
									31602 3E62N	0.48	1	1	0.0	0.0			
									31603 3BRB	0.48	1	1	0.0	0.0			
									31605 3BH	0.48	1	1	0.0	0.0			
									31607 3BJ	0.48	1	1	0.0	0.0			
									31609 3A072	0.46	1	1	0.0	0.0	1.043UN		
									31610 3E400	0.46	1	1	0.0	0.0	1.043UN		
									31611 3E402	0.46	1	1	0.0	0.0	1.043UN		
									31613 3P192	0.46	1	1	0.0	0.0	1.043UN		
									31614 3BZ	0.48	1	1	0.0	0.0			
									31615 E119-U3	0.46	1	1	0.0	0.0	1.043UN		
									31617 3P191-B	0.46	1	1	0.0	0.0	1.043UN		
									31618 BS-U3	0.48	1	1	0.0	0.0			
									31619 3A073	0.46	1	1	0.0	0.0	1.043UN		
2403	2P012	4.16	1	0.980	-3.2	0.0	352.9	0.0									
			1	4.08		0.0	180.0	0.0	24 2A04	4.16	1	1	-352.8	-180.0			
2404	2P141	4.16	1	0.979	-3.3	0.0	674.5	0.0									
			1	4.07		0.0	307.3	0.0	24 2A04	4.16	1	1	-674.5	-307.3			
2406	2P025-A	4.16	1	0.980	-3.2	0.0	477.0	0.0									
			1	4.08		0.0	270.0	0.0	24 2A04	4.16	1	1	-477.0	-270.0			
2407	2P015	4.16	1	0.980	-3.2	0.0	389.0	0.0									
			1	4.08		0.0	199.0	0.0	24 2A04	4.16	1	1	-389.0	-199.0			
2408	2P017	4.16	1	0.980	-3.2	0.0	405.0	0.0									
			1	4.08		0.0	173.0	0.0	24 2A04	4.16	1	1	-405.0	-173.0			
2411	2P307	4.16	1	0.980	-3.2	0.0	331.0	0.0									
			1	4.08		0.0	214.0	0.0	24 2A04	4.16	1	1	-331.0	-214.0			
2420	2B04X	4.16	1	0.981	-3.2	0.0	0.0	0.0									
			1	4.08		0.0	0.0	0.0	24 2A04	4.16	1	1	-942.5	-742.4			
									214 2B04	0.48	1	1	942.6	742.2	0.999LK		

Stress No. 417
Calc No: E4C-082 CCN 9W-3 Rev: 1
RE: Lpm 9-30-94 RE: RL 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:18
CASE IV.BY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-1_IVBY.SAV

FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME		CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
2603	2P504	4.16	1	0.982	-2.9	0.0	674.5	0.0											
			1	4.09		0.0	307.3	0.0	26	2A06	4.16	1	1	-674.5	-307.3				
2604	2P013	4.16	1	0.983	-2.9	0.0	352.9	0.0											
			1	4.09		0.0	180.0	0.0	26	2A06	4.16	1	1	-352.9	-180.0				
2606	2P025-B	4.16	1	0.983	-2.9	0.0	477.0	0.0											
			1	4.09		0.0	270.0	0.0	26	2A06	4.16	1	1	-477.0	-270.0				
2607	2P016	4.16	1	0.983	-2.9	0.0	389.0	0.0											
			1	4.09		0.0	199.0	0.0	26	2A06	4.16	1	1	-389.0	-199.0				
2608	2P019	4.16	1	0.983	-2.9	0.0	405.0	0.0											
			1	4.09		0.0	173.0	0.0	26	2A06	4.16	1	1	-404.9	-173.1				
2611	2P114	4.16	1	0.983	-2.9	0.0	331.0	0.0											
			1	4.09		0.0	214.0	0.0	26	2A06	4.16	1	1	-331.1	-214.0				
2620	2B06X	4.16	1	0.984	-2.9	0.0	0.0	0.0											
			1	4.09		0.0	0.0	0.0	26	2A06	4.16	1	1	-905.6	-717.0				
									216	2B06	0.48	1	1	905.6	716.6	0.999LK			
3402	E336-U3	4.16	1	0.981	-3.2	0.0	0.0	0.0											
			1	4.08		0.0	0.0	0.0	34	3A04	4.16	1	1	0.1	0.0				
3403	3P012	4.16	1	0.981	-3.2	0.0	0.0	0.0											
			1	4.08		0.0	0.0	0.0	34	3A04	4.16	1	1	-0.1	0.0				
3404	3P141	4.16	1	0.981	-3.2	0.0	0.0	0.0											
			1	4.08		0.0	0.0	0.0	34	3A04	4.16	1	1	0.0	0.0				
3405	3P024	4.16	1	0.981	-3.2	0.0	0.0	0.0											
			1	4.08		0.0	0.0	0.0	34	3A04	4.16	1	1	0.0	0.0				
3407	3P015	4.16	1	0.981	-3.2	0.0	0.0	0.0											
			1	4.08		0.0	0.0	0.0	34	3A04	4.16	1	1	0.0	0.0				
3408	3P017	4.16	1	0.981	-3.2	0.0	0.0	0.0											
			1	4.08		0.0	0.0	0.0	34	3A04	4.16	1	1	0.0	0.0				
3409	3P018-A	4.16	1	0.981	-3.2	0.0	0.0	0.0											
			1	4.08		0.0	0.0	0.0	34	3A04	4.16	1	1	-0.1	0.0				
3411	3P307	4.16	1	0.981	-3.2	0.0	0.0	0.0											
			1	4.08		0.0	0.0	0.0	34	3A04	4.16	1	1	-0.1	0.0				
3412	3T014	4.16	1	0.981	-3.2	0.0	0.0	0.0											
			1	4.08		0.0	0.0	0.0	34	3A04	4.16	1	1	0.0	0.0				
3417	3B04X	4.16	1	0.981	-3.2	0.0	0.0	0.0											
			1	4.08		0.0	0.0	0.0	34	3A04	4.16	1	1	-0.6	0.1				
									314	3B04	0.48	1	1	0.0	-0.1	0.999LK			

Calc No: E4C-082 CCN 9N-3 Rev. 1
Sheet No. 418
RE: Lpw 9-20-94 IRE: RU 10-5-94

Sheet No. 419

Calc No: E4C-082 CCN9N-3 Rev. 1

RE: LRM 9-30-94 IRE: BL 10-5-94

MISMATCH 0.6 0.0

PTI INTERACTIVE POWER SYSTEM SIMULATOR---PSS/E THU, SEP 15 1994 11:18
CASE IV.BY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LT-1_IVBY.SAV

BUS DATA									LINE DATA								
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING %I	RATING A KVA
3602	E335-U3	4.16	1	0.984	-2.9	0.0	0.0	0.0										
			1	4.09		0.0	0.0	0.0	36	3A06	4.16	1	1	0.0	0.0			
3604	3P013	4.16	1	0.984	-2.9	0.0	0.0	0.0										
			1	4.09		0.0	0.0	0.0	36	3A06	4.16	1	1	0.0	0.0			
3606	3P025-B	4.16	1	0.984	-2.9	0.0	0.0	0.0										
			1	4.09		0.0	0.0	0.0	36	3A06	4.16	1	1	0.0	0.1			
3607	3P016	4.16	1	0.984	-2.9	0.0	0.0	0.0										
			1	4.09		0.0	0.0	0.0	36	3A06	4.16	1	1	0.0	0.0			
3608	3P019	4.16	1	0.984	-2.9	0.0	0.0	0.0										
			1	4.09		0.0	0.0	0.0	36	3A06	4.16	1	1	0.0	0.0			
3609	3P018-B	4.16	1	0.984	-2.9	0.0	0.0	0.0										
			1	4.09		0.0	0.0	0.0	36	3A06	4.16	1	1	0.1	0.0			
3611	3P114	4.16	1	0.984	-2.9	0.0	0.0	0.0										
			1	4.09		0.0	0.0	0.0	36	3A06	4.16	1	1	0.0	0.0			
3612	3P504	4.16	1	0.984	-2.9	0.0	0.0	0.0										
			1	4.09		0.0	0.0	0.0	36	3A06	4.16	1	1	0.0	0.0			
3619	3B06X	4.16	1	0.984	-2.9	0.0	0.0	0.0										
			1	4.09		0.0	0.0	0.0	36	3A06	4.16	1	1	-0.4	0.0			
									316	3B06	0.48	1	1	0.0	0.0	0.999LK		
21403	2BRA	0.48	1	0.923	-6.8	0.0	0.0	0.0										
			1	0.44		0.0	0.0	0.0	214	2B04	0.48	1	1	-23.0	-15.2			
									22403	2BRA-M	0.48	1	1	14.5	10.0			
									23403	2BRA-S	0.48	1	1	8.5	5.3			
21405	2P191-A	0.46	1	0.954	-6.8	0.0	57.0	0.0										
			1	0.44		0.0	35.0	0.0	214	2B04	0.48	1	1	-57.0	-35.0	1.043LK		
21407	2BD	0.48	1	0.860	-7.7	0.0	0.0	0.0										
			1	0.41		0.0	0.0	0.0	214	2B04	0.48	1	1	-184.0	-123.9			
									22407	2BD-M	0.48	1	1	18.3	13.6			
									23407	2BD-S	0.48	1	1	8.5	5.3			
									24412	2A274	0.46	1	1	45.3	30.3	1.043UN		
									24413	2A275	0.46	1	1	45.5	30.4	1.043UN		
									24421	2E550	0.46	1	1	33.2	22.2	1.043UN		
									24422	2E546	0.46	1	1	33.2	22.2	1.043UN		
21409	2A071	0.46	1	0.943	-6.5	0.0	55.0	0.0										
			1	0.43		0.0	37.0	0.0	214	2B04	0.48	1	1	-55.0	-37.0	1.043LK		
21410	2E399	0.46	1	0.952	-6.7	0.0	61.0	0.0										
			1	0.44		0.0	41.0	0.0	214	2B04	0.48	1	1	-61.0	-41.0	1.043LK		
21411	2E401	0.46	1	0.949	-6.7	0.0	61.0	0.0										
			1	0.44		0.0	41.0	0.0	214	2B04	0.48	1	1	-61.0	-41.0	1.043LK		

Calc No: E4C-082-CCN-N-3 Sheet No. 9 of 420
RE: Lpm 9-30-94 IRE: RL 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:18
CASE IV.BY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LP-1_IVBY.SAV

FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A KVA
21413	2P190	0.46	1	0.955	-6.8	0.0	57.0	0.0											
			1	0.44		0.0	35.0	0.0	214	2B04	0.48	1	1	-57.0	-35.0	1.043LK			
21414	2BE	0.48	1	0.921	-6.8	0.0	0.0	0.0											
			1	0.44		0.0	0.0	0.0	214	2B04	0.48	1	1	-134.5	-114.9				
									22414	2BE-M	0.48	1	1	45.0	50.8				
									23414	2BE-S	0.48	1	1	89.4	64.1				
21415	2BY	0.48	1	0.920	-6.9	0.0	0.0	0.0											
			1	0.44		0.0	0.0	0.0	214	2B04	0.48	1	1	-222.2	-145.5				
									22415	2BY-M	0.48	1	1	86.2	55.4				
									23415	2BY-S	0.48	1	1	112.5	78.1				
									24434	2P009	0.46	1	1	23.6	12.0	1.043UN			
21419	2A074	0.46	1	0.938	-6.4	0.0	55.0	0.0											
			1	0.43		0.0	37.0	0.0	214	2B04	0.48	1	1	-55.0	-37.0	1.043LK			
21603	2BRB	0.48	1	0.928	-6.3	0.0	0.0	0.0											
			1	0.45		0.0	0.0	0.0	216	2B06	0.48	1	1	-23.0	-15.2				
									22603	2BRB-M	0.48	1	1	14.5	10.0				
									23603	2BRB-S	0.48	1	1	8.5	5.3				
21605	2BH	0.48	1	0.879	-7.0	0.0	0.0	0.0											
			1	0.42		0.0	0.0	0.0	216	2B06	0.48	1	1	-183.9	-123.9				
									22605	2BH-M	0.48	1	1	18.3	13.6				
									23605	2BH-S	0.48	1	1	8.5	5.3				
									24606	2E547	0.46	1	1	33.1	22.1	1.043UN			
									24607	2E549	0.46	1	1	33.2	22.2	1.043UN			
									24611	2A276	0.46	1	1	45.3	30.3	1.043UN			
									24612	2A277	0.46	1	1	45.5	30.4	1.043UN			
21607	2BJ	0.48	1	0.926	-6.3	0.0	0.0	0.0											
			1	0.44		0.0	0.0	0.0	216	2B06	0.48	1	1	-124.2	-108.5				
									22607	2BJ-M	0.48	1	1	45.0	50.7				
									23607	2BJ-S	0.48	1	1	79.2	57.8				
21609	2A072	0.46	1	0.946	-6.0	0.0	55.0	0.0											
			1	0.44		0.0	37.0	0.0	216	2B06	0.48	1	1	-55.0	-37.0	1.043LK			
21610	2E400	0.46	1	0.952	-6.2	0.0	61.0	0.0											
			1	0.44		0.0	41.0	0.0	216	2B06	0.48	1	1	-61.0	-41.0	1.043LK			
21611	2E402	0.46	1	0.946	-6.2	0.0	61.0	0.0											
			1	0.44		0.0	41.0	0.0	216	2B06	0.48	1	1	-61.0	-41.0	1.043LK			
21613	2P192	0.46	1	0.956	-6.3	0.0	57.0	0.0											
			1	0.44		0.0	35.0	0.0	216	2B06	0.48	1	1	-57.0	-35.0	1.043LK			
21614	2BZ	0.48	1	0.926	-6.4	0.0	0.0	0.0											
			1	0.44		0.0	0.0	0.0	216	2B06	0.48	1	1	-197.9	-136.6				
									22614	2BZ-M	0.48	1	1	50.0	40.7				
									23614	2BZ-S	0.48	1	1	124.4	83.9				
									24622	2P010	0.46	1	1	23.6	12.0	1.043UN			
21617	2P191-B	0.46	1	0.955	-6.3	0.0	57.0	0.0											
			1	0.44		0.0	35.0	0.0	216	2B06	0.48	1	1	-57.0	-35.0	1.043LK			

Sheet No. 421
Calc No: E4C-082 CCN 9W-3 Rev: 1
RE: LPM 9-30-94 IRE: [illegible] 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:18
CASE IV.BY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-1_IVBY.SAV

FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
21619	2A073	0.46	1	0.939	-5.9	0.0	55.0	0.0											
			1	0.43		0.0	37.0	0.0	21616	2B06	0.48	1	1	-55.0	-37.0	1.043LK			
22403	2BRA-M	0.48	1	0.923	-6.8	0.0	14.4	0.0											
			1	0.44		0.0	10.0	0.0	21403	2BRA	0.48	1	1	-14.5	-10.0				
22407	2BD-M	0.48	1	0.860	-7.7	0.0	18.3	0.0											
			1	0.41		0.0	13.6	0.0	21407	2BD	0.48	1	1	-18.3	-13.6				
22414	2BE-M	0.48	1	0.921	-6.8	0.0	45.0	0.0											
			1	0.44		0.0	50.8	0.0	21414	2BE	0.48	1	1	-45.0	-50.8				
22415	2BY-M	0.48	1	0.920	-6.9	0.0	86.2	0.0											
			1	0.44		0.0	55.4	0.0	21415	2BY	0.48	1	1	-86.2	-55.4				
22603	2BRB-M	0.48	1	0.928	-6.3	0.0	14.4	0.0											
			1	0.45		0.0	10.0	0.0	21603	2BRB	0.48	1	1	-14.5	-10.0				
22605	2BH-M	0.48	1	0.879	-7.0	0.0	18.3	0.0											
			1	0.42		0.0	13.6	0.0	21605	2BH	0.48	1	1	-18.3	-13.6				
22607	2BJ-M	0.48	1	0.926	-6.3	0.0	45.0	0.0											
			1	0.44		0.0	50.7	0.0	21607	2BJ	0.48	1	1	-45.0	-50.7				
22614	2BZ-M	0.48	1	0.926	-6.4	0.0	50.0	0.0											
			1	0.44		0.0	40.7	0.0	21614	2BZ	0.48	1	1	-50.0	-40.7				
23403	2BRA-S	0.48	1	0.923	-6.8	0.0	8.5	0.0											
			1	0.44		0.0	5.3	0.0	21103	2BRA	0.48	1	1	-8.5	-5.3				
23407	2BD-S	0.48	1	0.860	-7.7	0.0	8.5	0.0											
			1	0.41		0.0	5.3	0.0	21407	2BD	0.48	1	1	-8.5	-5.3				
23414	2BE-S	0.48	1	0.921	-6.8	0.0	89.4	0.0											
			1	0.44		0.0	64.1	0.0	21414	2BE	0.48	1	1	-89.4	-64.1				
23415	2BY-S	0.48	1	0.920	-6.9	0.0	112.5	0.0											
			1	0.44		0.0	78.1	0.0	21415	2BY	0.48	1	1	-112.5	-78.1				
23603	2BRB-S	0.48	1	0.928	-6.3	0.0	8.5	0.0											
			1	0.45		0.0	5.3	0.0	21603	2BRB	0.48	1	1	-8.5	-5.3				
23605	2BH-S	0.48	1	0.879	-7.0	0.0	8.5	0.0											
			1	0.42		0.0	5.3	0.0	21605	2BH	0.48	1	1	-8.5	-5.3				
23607	2BJ-S	0.48	1	0.926	-6.3	0.0	79.2	0.0											
			1	0.44		0.0	57.8	0.0	21607	2BJ	0.48	1	1	-79.2	-57.8				
23614	2BZ-S	0.48	1	0.926	-6.4	0.0	124.4	0.0											
			1	0.44		0.0	83.9	0.0	21614	2BZ	0.48	1	1	-124.4	-83.9				

Sheet No. 422
Calc No: E4C-082 CCN 9N-3 Rev: 1
RE: Lbm 9-30-94 IRE: RLO 12-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:18
CASE IV.BY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-1_IVBY.SAV

BUS DATA									LINE DATA									
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	KVA
24412	2A274	0.46	1	0.894	-7.6	0.0	45.1	0.0										
			1	0.41		0.0	30.3	0.0	21407	2BD	0.48	1	1	-45.1	-30.3	1.043LK		
24413	2A275	0.46	1	0.891	-7.5	0.0	45.1	0.0										
			1	0.41		0.0	30.3	0.0	21407	2BD	0.48	1	1	-45.1	-30.3	1.043LK		
24421	2E550	0.46	1	0.890	-7.5	0.0	32.9	0.0										
			1	0.41		0.0	22.1	0.0	21407	2BD	0.48	1	1	-32.9	-22.1	1.043LK		
24422	2E546	0.46	1	0.891	-7.5	0.0	32.9	0.0										
			1	0.41		0.0	22.1	0.0	21407	2BD	0.48	1	1	-32.9	-22.1	1.043LK		
24434	2P009	0.46	1	0.947	-6.7	0.0	23.2	0.0										
			1	0.44		0.0	11.9	0.0	21415	2BY	0.48	1	1	-23.2	-11.9	1.043LK		
24606	2E547	0.46	1	0.912	-6.8	0.0	32.9	0.0										
			1	0.42		0.0	22.1	0.0	21605	2BH	0.48	1	1	-32.9	-22.1	1.043LK		
24607	2E549	0.46	1	0.911	-6.8	0.0	32.9	0.0										
			1	0.42		0.0	22.1	0.0	21605	2BH	0.48	1	1	-32.9	-22.1	1.043LK		
24611	2A276	0.46	1	0.914	-6.9	0.0	45.1	0.0										
			1	0.42		0.0	30.3	0.0	21605	2BH	0.48	1	1	-45.1	-30.3	1.043LK		
24612	2A277	0.46	1	0.912	-6.8	0.0	45.1	0.0										
			1	0.42		0.0	30.3	0.0	21605	2BH	0.48	1	1	-45.1	-30.3	1.043LK		
24622	2P010	0.46	1	0.953	-6.1	0.0	23.2	0.0										
			1	0.44		0.0	11.9	0.0	21[illegible]	2BZ	0.48	1	1	-23.2	-11.9	1.043LK		
31402	3E61N	0.48	1	0.982	-3.2	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	314	3B04	0.48	1	1	0.0	0.0			
31403	3BRA	0.48	1	0.982	-3.2	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	314	3B04	0.48	1	1	0.0	0.0			
									32403	3BRA-M	0.48	1	1	0.0	0.0			
									33403	3BRA-S	0.48	1	1	0.0	0.0			
31405	3P191-A	0.46	1	1.025	-3.2	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	314	3B04	0.48	1	1	0.0	0.0	1.043LK		
31407	3BD	0.48	1	0.982	-3.2	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	314	3B04	0.48	1	1	0.0	0.0			
									32407	3BD-M	0.48	1	1	0.0	0.0			
									33407	3BD-S	0.48	1	1	0.0	0.0			
									34412	3A274	0.46	1	1	0.0	0.0	1.043UN		
									34413	3A275	0.46	1	1	0.0	0.0	1.043UN		
									34421	3E550	0.46	1	1	0.0	0.0	1.043UN		
									34422	3E546	0.46	1	1	0.0	0.0	1.043UN		
31409	3A071	0.46	1	1.025	-3.2	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	314	3B04	0.48	1	1	0.0	0.0	1.043LK		

Calc No: E4C-082 CCN 9 Sheet No. 423
RE: Lpmr 9-30-94 IRE: [illegible] 10-5-94 Rev: 1

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:18
CASE IV.BY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-1_IVBY.SAV

BUS DATA								LINE DATA								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
31410	3E399	0.46	1	1.025	-3.2	0.0	0.0	0.0									
			1	0.47		0.0	0.0	0.0	314 3B04	0.48	1	1	0.0	0.0	1.043LK		
31411	3E401	0.46	1	1.025	-3.2	0.0	0.0	0.0									
			1	0.47		0.0	0.0	0.0	314 3B04	0.48	1	1	0.0	0.0	1.043LK		
31413	3P190	0.46	1	1.025	-3.2	0.0	0.0	0.0									
			1	0.47		0.0	0.0	0.0	314 3B04	0.48	1	1	0.0	0.0	1.043LK		
31414	3BE	0.48	1	0.982	-3.2	0.0	0.0	0.0									
			1	0.47		0.0	0.0	0.0	314 3B04	0.48	1	1	0.0	0.0			
									32414 3BE-M	0.48	1	1	0.0	0.0			
									33414 3BE-S	0.48	1	1	0.0	0.0			
31415	3BY	0.48	1	0.982	-3.2	0.0	0.0	0.0									
			1	0.47		0.0	0.0	0.0	314 3B04	0.48	1	1	0.0	0.0			
									32415 3BY-M	0.48	1	1	0.0	0.0			
									33415 3BY-S	0.48	1	1	0.0	0.0			
									34434 3P009	0.46	1	1	0.0	0.0	1.043UN		
31417	BQ-U3	0.48	1	0.982	-3.2	0.0	0.0	0.0									
			1	0.47		0.0	0.0	0.0	314 3B04	0.48	1	1	0.0	0.0			
									32417 BQ-U3-M	0.48	1	1	0.0	0.0			
									33417 BQ-U3-S	0.48	1	1	0.0	0.0			
									34417 P162-U3	0.46	1	1	0.0	0.0	1.043UN		
31418	E418-U3	0.46	1	1.025	-3.2	0.0	0.0	0.0									
			1	0.47		0.0	0.0	0.0	314 3B04	0.48	1	1	0.0	0.0	1.043LK		
31419	3A074	0.46	1	1.025	-3.2	0.0	0.0	0.0									
			1	0.47		0.0	0.0	0.0	314 3B04	0.48	1	1	0.0	0.0	1.043LK		
31602	3E62N	0.48	1	0.985	-2.9	0.0	0.0	0.0									
			1	0.47		0.0	0.0	0.0	316 3B06	0.48	1	1	0.0	0.0			
31603	3BRB	0.48	1	0.985	-2.9	0.0	0.0	0.0									
			1	0.47		0.0	0.0	0.0	316 3B06	0.48	1	1	0.0	0.0			
									32603 3BRB-M	0.48	1	1	0.0	0.0			
									33603 3BRB-S	0.48	1	1	0.0	0.0			
31605	3BH	0.48	1	0.985	-2.9	0.0	0.0	0.0									
			1	0.47		0.0	0.0	0.0	316 3B06	0.48	1	1	0.0	0.0			
									32605 3BH-M	0.48	1	1	0.0	0.0			
									33605 3BH-S	0.48	1	1	0.0	0.0			
									34606 3E547	0.46	1	1	0.0	0.0	1.043UN		
									34607 3E549	0.46	1	1	0.0	0.0	1.043UN		
									34611 3A276	0.46	1	1	0.0	0.0	1.043UN		
									34612 3A277	0.46	1	1	0.0	0.0	1.043UN		
31607	3BJ	0.48	1	0.985	-2.9	0.0	0.0	0.0									
			1	0.47		0.0	0.0	0.0	316 3B06	0.48	1	1	0.0	0.0			
									32607 3BJ-M	0.48	1	1	0.0	0.0			
									33607 3BJ-S	0.48	1	1	0.0	0.0			
31609	3A072	0.46	1	1.028	-2.9	0.0	0.0	0.0									
			1	0.47		0.0	0.0	0.0	316 3B06	0.48	1	1	0.0	0.0	1.043LK		

Case No: E4C-082 ccw 9W-3 Sheet No. 424
RE: Gen 9-30-94 IRE: Rel 12-5-94 Rev. 1

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:18
CASE IV.BY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-1_IVBY.SAV

BUS DATA									LINE DATA								
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
31610	3E400	0.46	1	1.028	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	316	3B06	0.48 1	1	0.0	0.0	1.043LK			
31611	3E402	0.46	1	1.028	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	316	3B06	0.48 1	1	0.0	0.0	1.043LK			
31613	3P192	0.46	1	1.028	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	316	3B06	0.48 1	1	0.0	0.0	1.043LK			
31614	3BZ	0.48	1	0.985	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	316	3B06	0.48 1	1	0.0	0.0				
									32614	3BZ-M	0.48 1	1	0.0	0.0				
									33614	3BZ-S	0.48 1	1	0.0	0.0				
									34622	3P010	0.46 1	1	0.0	0.0	1.043UN			
31615	E419-U3	0.46	1	1.028	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	316	3B06	0.48 1	1	0.0	0.0	1.043LK			
31617	3P191-B	0.46	1	1.028	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	316	3B06	0.48 1	1	0.0	0.0	1.043LK			
31618	BS-U3	0.48	1	0.985	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	316	3B06	0.48 1	1	0.0	0.0				
									32618	BS-U3-M	0.48 1	1	0.0	0.0				
									33618	BS-U3-S	0.48 1	1	0.0	0.0				
									34613	P150-U3	0.46 1	1	0.0	0.0	1.043UN			
31619	3A073	0.46	1	1.028	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	316	3B06	0.48 1	1	0.0	0.0	1.043LK			
32403	3BRA-M	0.48	1	0.982	-3.2	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31403	3BRA	0.48 1	1	0.0	0.0				
32407	3BD-M	0.48	1	0.982	-3.2	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31407	3BD	0.48 1	1	0.0	0.0				
32414	3BE-M	0.48	1	0.982	-3.2	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31414	3BE	0.48 1	1	0.0	0.0				
32415	3BY-M	0.48	1	0.982	-3.2	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31415	3BY	0.48 1	1	0.0	0.0				
32417	BQ-U3-M	0.48	1	0.982	-3.2	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31417	BQ-U3	0.48 1	1	0.0	0.0				
32603	3BRB-M	0.48	1	0.985	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31603	3BRB	0.48 1	1	0.0	0.0				
32605	3BH-M	0.48	1	0.985	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31605	3BH	0.48 1	1	0.0	0.0				
32607	3BJ-M	0.48	1	0.985	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31607	3BJ	0.48 1	1	0.0	0.0				

Sheet No. 425
Calc No: E4C-082 CCN 9N-3 Rev. 1
RE: Lpm 9-30-94 IRE: RLD 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 11:18
CASE IV.BY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-1_IVBY.SAV

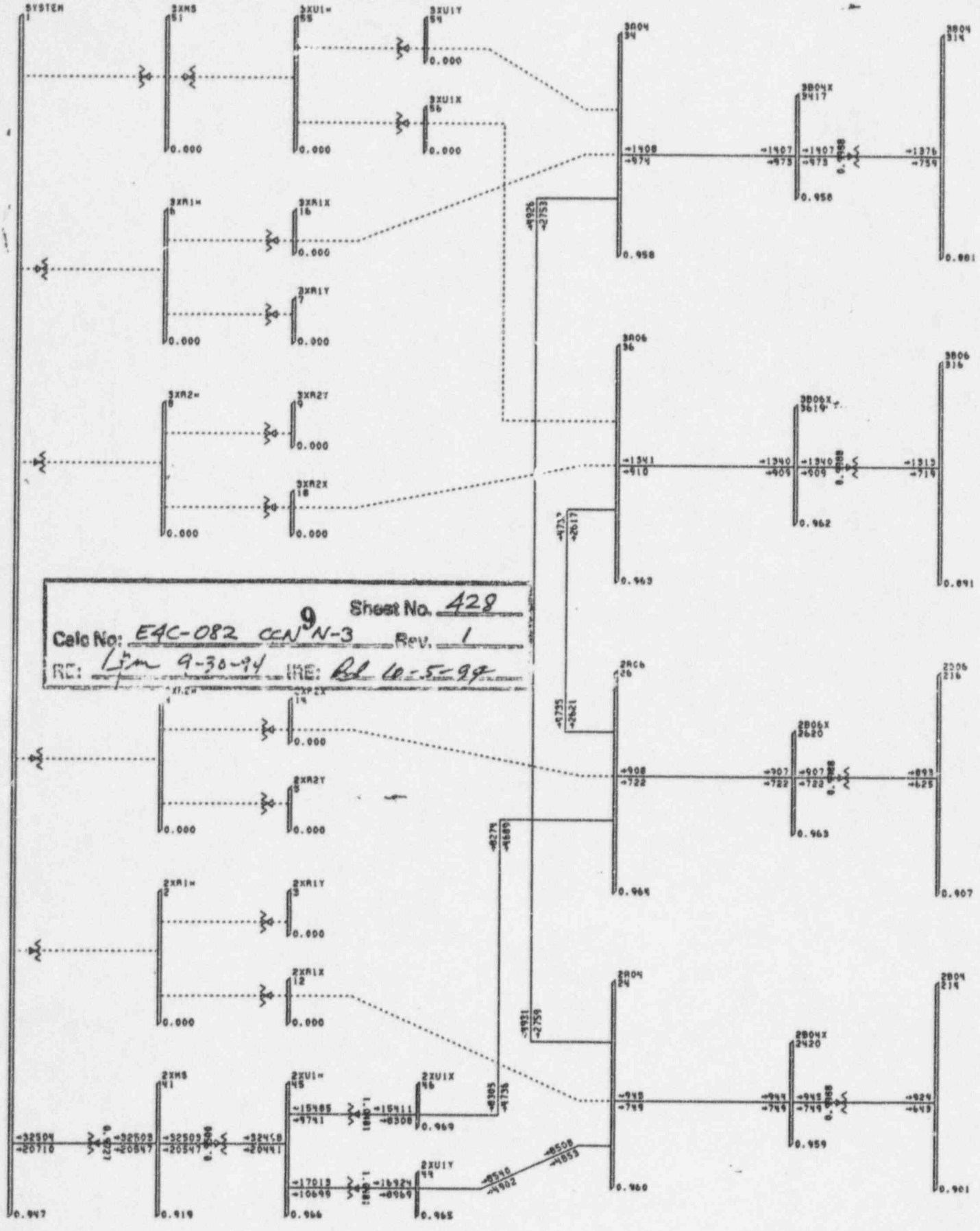
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME		CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING %I	RATING A KVA
32614	3BZ-M	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31614	3BZ	0.48	1	1	0.0	0.0				
32618	BS-U3-M	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31618	BS-U3	0.48	1	1	0.0	0.0				
33403	3BRA-S	0.48	1	0.982	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31403	3BRA	0.48	1	1	0.0	0.0				
33407	3BD-S	0.48	1	0.982	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31407	3BD	0.48	1	1	0.0	0.0				
33414	3BE-S	0.48	1	0.982	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31414	3BE	0.48	1	1	0.0	0.0				
33415	3BY-S	0.48	1	0.982	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31415	3BY	0.48	1	1	0.0	0.0				
33417	BQ-U3-S	0.48	1	0.982	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31417	BQ-U3	0.48	1	1	0.0	0.0				
33603	3BRB-S	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31603	3BRB	0.48	1	1	0.0	0.0				
33605	3BH-S	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31605	3BH	0.48	1	1	0.0	0.0				
33607	3BJ-S	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31607	3BJ	0.48	1	1	0.0	0.0				
33614	3BZ-S	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31614	3BZ	0.48	1	1	0.0	0.0				
33618	BS-U3-S	0.48	1	0.985	-2.9	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31618	BS-U3	0.48	1	1	0.0	0.0				
34412	3A274	0.46	1	1.025	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31407	3BD	0.48	1	1	0.0	0.0	1.043LK			
34413	3A275	0.46	1	1.025	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31407	3BD	0.48	1	1	0.0	0.0	1.043LK			
34417	P162-U3	0.46	1	1.025	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31417	BQ-U3	0.48	1	1	0.0	0.0	1.043LK			
34421	3E550	0.46	1	1.025	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31407	3BD	0.48	1	1	0.0	0.0	1.043LK			
34422	3E546	0.46	1	1.025	-3.2	0.0	0.0	0.0											
			1	0.47		0.0	0.0	0.0	31407	3BD	0.48	1	1	0.0	0.0	1.043LK			

Calc No: E4C-082 CCN 9N-3 Rev. 1 Sheet No. 426
RE: Lpm 9-30-94 RE: Rel 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR---PSS/E THU, SEP 15 1994 11:18
CASE IV.BY - INITIAL STEADY STATE CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-1_IVBY.SAV

BUS DATA									LINE DATA								
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
34434	3P009	0.46	1	1.025	-3.2	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31415	3BY	0.48	1	1	0.0	0.0	1.043LK		
34606	3E547	0.46	1	1.028	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31605	3BH	0.48	1	1	0.0	0.0	1.043LK		
34607	3E549	0.46	1	1.028	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31605	3BH	0.48	1	1	0.0	0.0	1.043LK		
34611	3A276	0.46	1	1.028	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31605	3BH	0.48	1	1	0.0	0.0	1.043LK		
34612	3A277	0.46	1	1.028	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31605	3BH	0.48	1	1	0.0	0.0	1.043LK		
34618	P160-U3	0.46	1	1.028	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31618	P-U3	0.48	1	1	0.0	0.0	1.043LK		
34622	3P010	0.46	1	1.028	-2.9	0.0	0.0	0.0										
			1	0.47		0.0	0.0	0.0	31614	3BZ	0.48	1	1	0.0	0.0	1.043LK		

Street No. 427
Calc No: E4C-082 CCN9W-3 Rev. 1
RE: Lpm 9-30-94 IRE: RJ 10-5-94



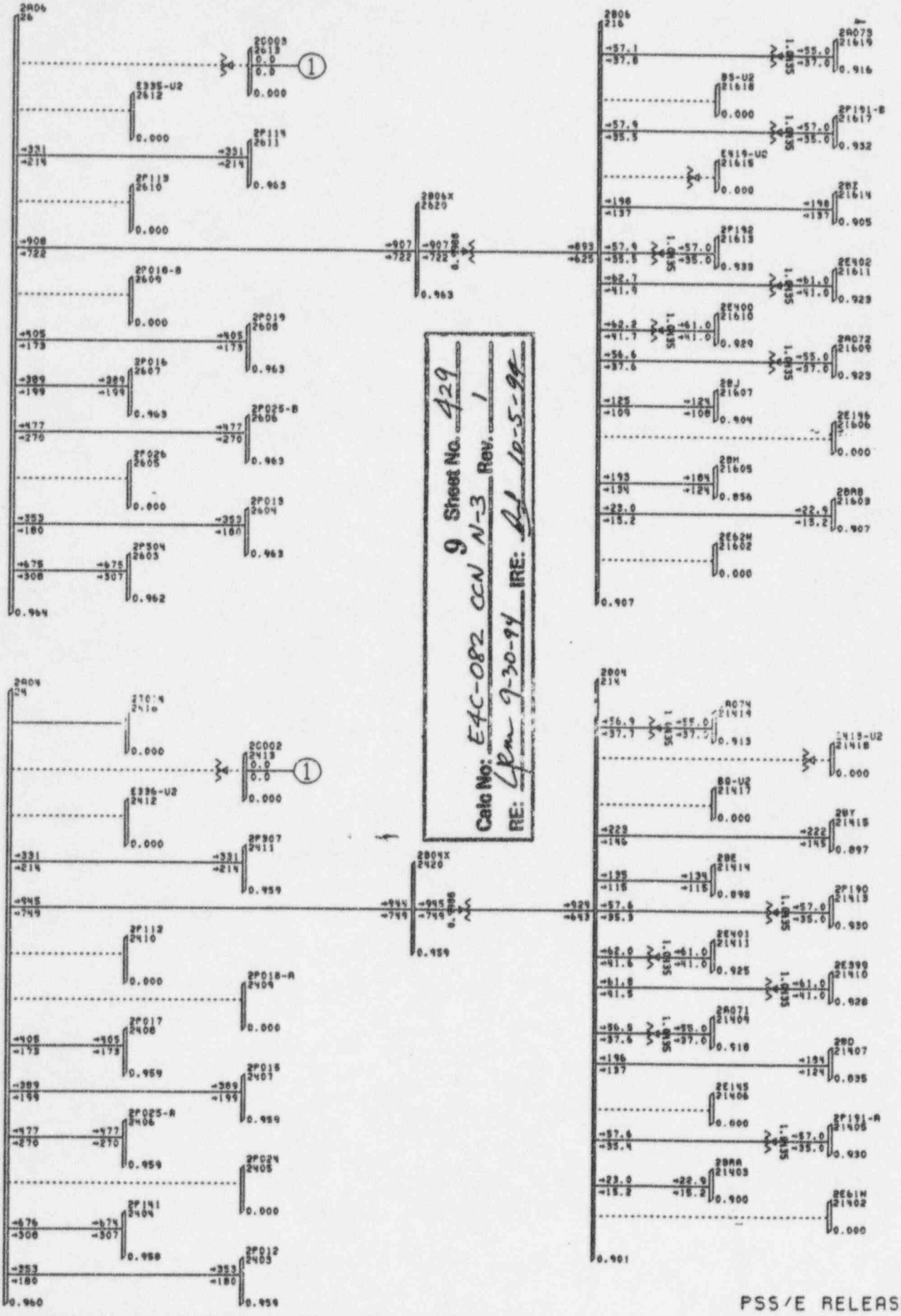
Sheet No. 428

Calc No: E4C-082 CCN 9 N-3 Rev. 1

RE: [illegible] 9-30-94 INIT: RBL 10-5-94

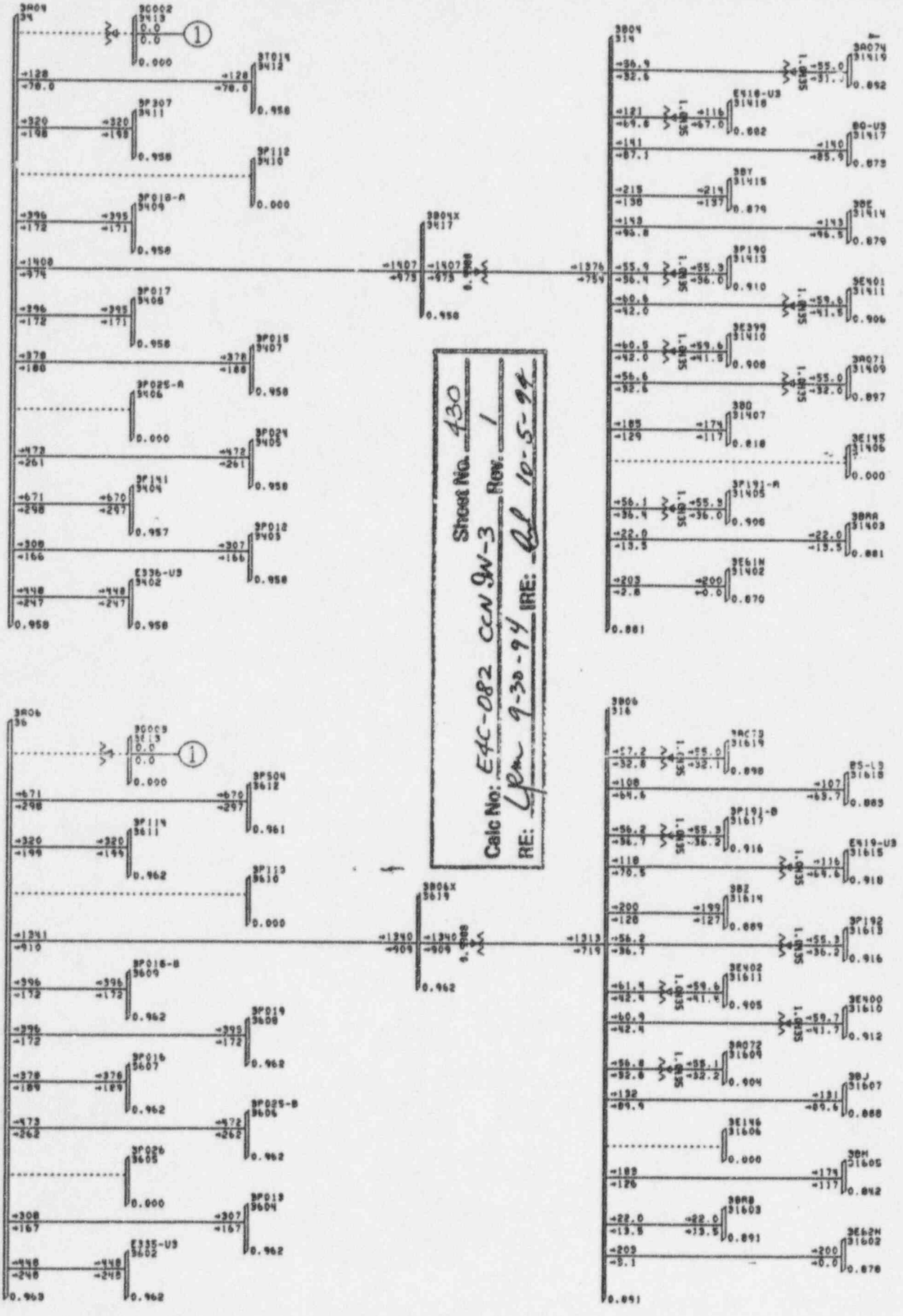
PSS/E RELEASE 19.0

CASE IV.BY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:CMURIEL.E4C-082-AGA.CASE_IVBYJLF-2_IVBY.SAV
THU, SEP 15 1994 13:25



PSS/E RELEASE 19.0

CASE IV.BY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBYJLF-2_IVBY.SAV
THU. SEP 15 1994 13:25



PSS/E RELEASE 19.0

CASE IV.BY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-2_IVBY.SAV
THU, SEP 15 1994 13:25

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:26
CASE IV.BY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-2_IVBY.SAV

FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	LINE DATA KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
1	SYSTEM	230 1	0.947	-0.1	32504.4	0.0	0.0										
		1	217.8		20709.0R	0.0	0.0	41	2XMS 22.0	1	1	32504.4	20709.7	0.973UN			
									M I S M A T C H			0.0	-0.7				
24	2A04	4.16 1	0.960	-4.8	0.0	0.0	0.0										
		1	3.99		0.0	0.0	0.0	34	3A04 4.16	1	1	4930.5	2758.7				
								44	2XU1Y 4.16	1	1	-8507.7	-4853.5				
								2403	2P012 4.16	1	1	353.1	180.2				
								2404	2P141 4.16	1	1	675.6	308.1				
								2406	2P025-A 4.16	1	1	477.3	270.3				
								2407	2P015 4.16	1	1	389.2	199.2				
								2408	2P017 4.16	1	1	405.2	173.2				
								2411	2P307 4.16	1	1	331.2	214.2				
								2420	2B04X 4.16	1	1	944.6	748.9				
									M I S M A T C H			0.9	0.8				
26	2A06	4.16 1	0.964	-4.4	0.0	0.0	0.0										
		1	4.01		0.0	0.0	0.0	36	3A06 4.16	1	1	4735.0	2621.1				
								46	2XU1X 4.16	1	1	-8274.3	-4688.8				
								2603	2P504 4.16	1	1	675.4	308.0				
								2604	2P013 4.16	1	1	353.1	180.1				
								2606	2P025-B 4.16	1	1	477.4	270.3				
								2607	2P016 4.16	1	1	389.2	199.2				
								2608	2P019 4.16	1	1	405.2	173.1				
								2611	2P114 4.16	1	1	331.2	214.2				
								2620	2B06X 4.16	1	1	907.5	722.5				
									M I S M A T C H			0.4	0.4				
34	3A04	4.16 1	0.958	-4.8	0.0	0.0	0.0										
		1	3.99		0.0	0.0	0.0	24	2A04 4.16	1	1	-4925.7	-2752.8				
								3402	3336-U3 4.16	1	1	448.3	247.3				
								3403	3P012 4.16	1	1	307.6	166.1				
								3404	3P141 4.16	1	1	670.6	297.6				
								3405	3P024 4.16	1	1	472.6	261.2				
								3407	3P015 4.16	1	1	378.2	188.3				
								3408	3P017 4.16	1	1	395.5	171.6				
								3409	3P018-A 4.16	1	1	395.5	171.6				
								3411	3P307 4.16	1	1	320.4	197.7				
								3412	3T014 4.16	1	1	128.0	78.0				
								3417	3B04X 4.16	1	1	1407.5	973.7				
									M I S M A T C H			1.5	-0.2				
36	3A06	4.16 1	0.963	-4.4	0.0	0.0	0.0										
		1	4.01		0.0	0.0	0.0	26	2A06 4.16	1	1	-4731.6	-2616.9				
								3602	3335-U3 4.16	1	1	448.3	247.8				
								3604	3P013 4.16	1	1	307.6	166.9				
								3606	3P025-B 4.16	1	1	472.5	262.3				
								3607	3P016 4.16	1	1	378.3	188.8				
								3608	3P019 4.16	1	1	395.5	172.0				
								3609	3P018-B 4.16	1	1	395.7	172.1				
								3611	3P114 4.16	1	1	320.3	198.7				
								3612	3P504 4.16	1	1	670.7	297.9				
								3619	3B06X 4.16	1	1	1340.6	909.5				
									M I S M A T C H			1.9	1.0				

Calc No: E4C-082 CALC-3 Rev. 1
RE: LPW 9-30-94 IRE: [illegible] 10-5-94
Sheet No. 431

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:26
CASE IV.BY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-2_IVBY.SAV

FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
41	2XMS	22.0	1	0.919	-0.3	0.0	0.0	0.0											
			1	20.22		0.0	0.0	0.0	1	SYSTEM	230	1	1	**********		0.973LK			
									45	2XU1*	4.36	1	1	32502.6	20547.0	0.950LK			
44	2XU1Y	4.16	1	0.965	-4.6	0.0	8384.0	0.0											
			1	4.01		0.0	4067.0	0.0	24	2A04	4.16	1	1	8539.6	4902.3				
									45	2XU1*	4.36	1	1	*******	-8969.2	1.048LK			
45	2XU1*	4.36	1	0.966	-0.4	0.0	0.0	0.0											
			1	4.21		0.0	0.0	0.0	41	2XMS	22.0	1	1	**********		0.950UN			
									44	2XU1Y	4.16	1	1	17012.8	10698.9	1.048UN			
									46	2XU1X	4.16	1	1	15485.1	9741.4	1.048UN			
										M I S M A T C H				0.0	0.9				
46	2XU1X	4.16	1	0.969	-4.2	0.0	7106.0	0.0											
			1	4.03		0.0	3572.0	0.0	26	2A06	4.16	1	1	8305.3	4736.3				
									45	2XU1*	4.36	1	1	*******	-8308.1	1.048LK			
214	2B04	0.48	1	0.901	-8.5	0.0	0.0	0.0											
			1	0.43		0.0	0.0	0.0	2420	2B04X	4.16	1	1	-929.5	-642.9	0.999UN			
									21403	2BRA	0.48	1	1	23.0	15.2				
									21405	2P191-A	0.46	1	1	57.6	35.4	1.043UN			
									21407	2BD	0.48	1	1	196.4	136.9				
									21409	2A071	0.46	1	1	56.5	37.6	1.043UN			
									21410	2E399	0.46	1	1	61.8	41.5	1.043UN			
									21411	2E401	0.46	1	1	62.0	41.6	1.043UN			
									21413	2P190	0.46	1	1	57.6	35.3	1.043UN			
									214[illegible]	2BE	0.48	1	1	134.9	115.3				
									21[illegible]	2BY	0.48	1	1	222.7	146.4				
									21419	2A074	0.46	1	1	56.9	37.7	1.043UN			
216	2B06	0.48	1	0.907	-7.9	0.0	0.0	0.0											
			1	0.44		0.0	0.0	0.0	2620	2B06X	4.16	1	1	-893.4	-625.0	0.999UN			
									21603	2BRB	0.48	1	1	23.0	15.2				
									21605	2BH	0.48	1	1	193.2	133.7				
									21607	2BJ	0.48	1	1	124.6	108.8				
									21609	2A072	0.46	1	1	56.6	37.6	1.043UN			
									21610	2E400	0.46	1	1	62.2	41.7	1.043UN			
									21611	2E402	0.46	1	1	62.7	41.9	1.043UN			
2161[illegible]									2161[illegible]	2P192	0.46	1	1	57.9	35.5	1.043UN			
21614									21614	2BZ	0.48	1	1	198.3	137.2				
									21617	2P191-B	0.46	1	1	57.9	35.5	1.043UN			
									21619	2A073	0.46	1	1	57.1	37.8	1.043UN			

Calc No: E4C-082 CCN 9W-3 Rev. 1
RE: LBmr 9-30-94 IRE: RLP 10-5-94
Sheet No. 432

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:26
CASE IV.BY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-2_IVBY.SAV

FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
314	3B04	0.48	1 0.881	-10.6	0.0	0.0	0.0										
		1	0.42		0.0	0.0	0.0	3417	3E04X	4.16	1	1	-1376.4	-759.3	0.999UN		
								31402	3E61N	0.48	1	1	202.6	2.8			
								31403	3BRA	0.48	1	1	22.0	13.5			
								31405	3P191-A	0.46	1	1	56.1	36.4	1.043UN		
								31407	3BD	0.48	1	1	185.1	129.3			
								31408	3A071	0.46	1	1	56.6	32.6	1.043UN		
								31410	3E399	0.46	1	1	60.5	42.0	1.043UN		
								31411	3E401	0.46	1	1	60.6	42.0	1.043UN		
								31413	3P190	0.46	1	1	55.9	36.4	1.043UN		
								31414	3BE	0.48	1	1	143.1	96.8			
								31415	3BY	0.48	1	1	214.6	138.0			
								31417	BQ-U3	0.48	1	1	141.3	87.1			
								31418	L418-U3	0.46	1	1	121.0	69.8	1.043UN		
								31419	3A074	0.46	1	1	56.9	32.6	1.043UN		
316	3B06	0.48	1 0.891	-9.9	0.0	0.0	0.0										
		1	0.43		0.0	0.0	0.0	3619	3B06X	4.16	1	1	-1313.1	-719.3	0.999UN		
								31602	3E62N	0.48	1	1	202.9	3.1			
								31603	3BRB	0.48	1	1	22.0	13.5			
								31605	3BH	0.48	1	1	182.6	126.4			
								31607	3BJ	0.48	1	1	131.8	89.9			
								31609	3A072	0.46	1	1	56.8	32.8	1.043UN		
								31610	3E400	0.46	1	1	60.9	42.4	1.043UN		
								31611	3E402	0.46	1	1	61.4	42.4	1.043UN		
								31613	3P192	0.46	1	1	56.2	36.7	1.043UN		
								31614	3BZ	0.48	1	1	199.8	127.5			
								31615	E419-U3	0.46	1	1	117.6	70.5	1.043UN		
								31617	3P191-B	0.46	1	1	56.2	36.7	1.043UN		
								31618	BS-U3	0.48	1	1	107.6	64.6			
								31619	3A073	0.46	1	1	57.2	32.8	1.043UN		
2403	2P012	4.16	1 0.959	-4.8	0.0	352.9	0.0										
		1	3.99		0.0	180.0	0.0	21	2A04	4.16	1	1	-352.9	-180.0			
2404	2P141	4.16	1 0.953	-4.8	0.0	674.5	0.0										
		1	3.99		0.0	307.3	0.0	24	2A04	4.16	1	1	-674.5	-307.3			
2406	2P025-A	4.16	1 0.959	-4.8	0.0	477.0	0.0										
		1	3.99		0.0	270.0	0.0	24	2A04	4.16	1	1	-477.0	-270.0			
2407	2P015	4.16	1 0.959	-4.8	0.0	389.0	0.0										
		1	3.99		0.0	199.0	0.0	21	2A04	4.16	1	1	-389.0	-199.0			
2408	2P017	4.16	1 0.959	-4.8	0.0	405.0	0.0										
		1	3.99		0.0	173.0	0.0	24	2A04	4.16	1	1	-405.0	-173.0			
2411	2P307	4.16	1 0.959	-4.8	0.0	331.0	0.0										
		1	3.99		0.0	214.0	0.0	24	2A04	4.16	1	1	-331.0	-214.0			
2420	2B04X	4.16	1 0.959	-4.8	0.0	0.0	0.0										
		1	3.99		0.0	0.0	0.0	24	2A04	4.16	1	1	-944.4	-748.7			
								214	2B04	0.48	1	1	944.6	748.7	0.999LK		

Calc No: E4C-082-CCN9N-3 Sheet No. 433
RE: LPM 9-30-94 IRE: RLP 10-5-94 Rev. 1

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:26
CASE IV.BY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-2_IVBY.SAV

FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
2603	2P504 4.16	1	0.962	-4.4	0.0	674.5	0.0										
		1	4.00		0.0	307.3	0.0	26	2A06 4.16	1	1	-674.5	-307.3				
2604	2P013 4.16	1	0.963	-4.4	0.0	352.9	0.0										
		1	4.01		0.0	180.0	0.0	26	2A06 4.16	1	1	-352.9	-180.0				
2606	2P025-B 4.16	1	0.963	-4.4	0.0	477.0	0.0										
		1	4.01		0.0	270.0	0.0	26	2A06 4.16	1	1	-477.1	-270.0				
2607	2P016 4.16	1	0.963	-4.4	0.0	389.0	0.0										
		1	4.01		0.0	199.0	0.0	26	2A06 4.16	1	1	-389.0	-199.0				
2608	2P019 4.16	1	0.963	-4.4	0.0	405.0	0.0										
		1	4.01		0.0	173.0	0.0	26	2A06 4.16	1	1	-405.0	-173.0				
2611	2P114 4.16	1	0.963	-4.4	0.0	331.0	0.0										
		1	4.01		0.0	214.0	0.0	26	2A06 4.16	1	1	-331.0	-214.0				
2620	2B06X 4.16	1	0.963	-4.4	0.0	0.0	0.0										
		1	4.01		0.0	0.0	0.0	26	2A06 4.16	1	1	-907.3	-722.3				
								216	2B06 0.48	1	1	907.3	722.1	0.999LK			
3402	E336-U3 4.16	1	0.958	-4.8	0.0	0.0	0.0										
		1	3.98		0.0	0.0	0.0	34	3A04 4.16	1	1	-448.0	-247.1				
									M I S M A T C H			448.0	247.1				
3403	3P012 4.16	1	0.958	-4.8	0.0	0.0	0.0										
		1	3.99		0.0	0.0	0.0	34	3A04 4.16	1	1	-307.5	-166.0				
									M I S M A T C H			307.5	166.0				
3404	3P141 4.16	1	0.957	-4.8	0.0	0.0	0.0										
		1	3.98		0.0	0.0	0.0	34	3A04 4.16	1	1	-669.6	-296.9				
									M I S M A T C H			669.6	296.9				
3405	3P024 4.16	1	0.958	-4.8	0.0	0.0	0.0										
		1	3.98		0.0	0.0	0.0	31	3A04 4.16	1	1	-472.3	-260.9				
									M I S M A T C H			472.3	260.9				
3407	3P015 4.16	1	0.958	-4.8	0.0	0.0	0.0										
		1	3.98		0.0	0.0	0.0	34	3A04 4.16	1	1	-378.0	-188.1				
									M I S M A T C H			378.0	188.1				
3408	3P017 4.16	1	0.958	-4.8	0.0	0.0	0.0										
		1	3.98		0.0	0.0	0.0	34	3A04 4.16	1	1	-395.3	-171.4				
									M I S M A T C H			395.3	171.4				
3409	3P018-A 4.16	1	0.958	-4.8	0.0	0.0	0.0										
		1	3.99		0.0	0.0	0.0	34	3A04 4.16	1	1	-395.3	-171.4				
									M I S M A T C H			395.3	171.4				
3411	3P307 4.16	1	0.958	-4.8	0.0	0.0	0.0										
		1	3.98		0.0	0.0	0.0	34	3A04 4.16	1	1	-320.2	-197.5				
									M I S M A T C H			320.2	197.5				
3412	3T014 4.16	1	0.958	-4.8	0.0	128.0	0.0										
		1	3.99		0.0	78.0	0.0	34	3A04 4.16	1	1	-128.0	-78.0				
3417	3B04X 4.16	1	0.958	-4.8	0.0	0.0	0.0										
		1	3.99		0.0	0.0	0.0	34	3A04 4.16	1	1	-1406.8	-973.1				
								314	3B04 0.48	1	1	1406.9	973.1	0.999LK			

Sheet No. 434
Calc No: E4C-082 CCN 9W-3 Rev. 1
RE: Lpw 9-30-94 IRE: [illegible]

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:26
CASE IV.BY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LP-2_IVBY.SAV

FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW,'KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
3602	E335-U3 4.16	1	0.962	-4.4	0.0	0.0	0.0										
		1	4.00		0.0	0.0	0.0	36	3A06 4.16	1	1	-448.1	-247.6				
									M I S M A T C H			448.1	247.6				
3604	3P013 4.16	1	0.962	-4.4	0.0	0.0	0.0										
		1	4.00		0.0	0.0	0.0	36	3A06 4.16	1	1	-307.5	-166.8				
									M I S M A T C H			307.5	166.8				
3606	3P025-B 4.16	1	0.962	-4.4	0.0	0.0	0.0										
		1	4.00		0.0	0.0	0.0	36	3A06 4.16	1	1	-472.3	-262.1				
									M I S M A T C H			472.3	262.1				
3607	3P016 4.16	1	0.962	-4.4	0.0	0.0	0.0										
		1	4.00		0.0	0.0	0.0	36	3A06 4.16	1	1	-378.1	-188.7				
									M I S M A T C H			378.1	188.7				
3608	3P019 4.16	1	0.962	-4.4	0.0	0.0	0.0										
		1	4.00		0.0	0.0	0.0	36	3A06 4.16	1	1	-395.4	-171.9				
									M I S M A T C H			395.4	171.9				
3609	3P018-B 4.16	1	0.962	-4.4	0.0	0.0	0.0										
		1	4.00		0.0	0.0	0.0	36	3A06 4.16	1	1	-395.5	-172.0				
									M I S M A T C H			395.5	172.0				
3611	3P114 4.16	1	0.962	-4.4	0.0	0.0	0.0										
		1	4.00		0.0	0.0	0.0	3[illegible]	3A06 4.16	1	1	-320.2	-198.5				
									M I S M A T C H			320.2	198.5				
3612	3P504 4.16	1	0.961	-4.4	0.0	0.0	0.0										
		1	4.00		0.0	0.0	0.0	36	3A06 4.16	1	1	-669.6	-297.1				
									M I S M A T C H			669.6	297.1				
3619	3B06X 4.16	1	0.962	-4.4	0.0	0.0	0.0										
		1	4.00		0.0	0.0	0.0	36	3A06 4.16	1	1	-1340.2	-909.2				
								316	2B06 0.48	1	1	1340.2	909.1	0.999LK			
21403	2BRA 0.48	1	0.900	-8.5	0.0	0.0	0.0										
		1	0.43		0.0	0.0	0.0	214	2B04 0.48	1	1	-22.9	-15.2				
								22403	2BRA-M 0.48	1	1	14.4	10.0				
								23403	2BRA-S 0.48	1	1	8.5	5.3				
21405	2P191-A 0.46	1	0.930	-8.5	0.0	57.0	0.0										
		1	0.43		0.0	35.0	0.0	214	2B04 0.48	1	1	-57.0	-35.0	1.043LK			
21407	2BD 0.48	1	0.835	-9.5	0.0	0.0	0.0										
		1	0.40		0.0	0.0	0.0	214	2B04 0.48	1	1	-184.1	-123.9				
								22107	2BD-M 0.48	1	1	18.3	13.6				
								23407	2BD-S 0.48	1	1	8.5	5.3				
								24412	2A274 0.46	1	1	45.3	30.3	1.043UN			
								24413	2A275 0.46	1	1	45.5	30.4	1.043UN			
								24421	2E590 0.46	1	1	33.2	22.2	1.043UN			
								24422	2E546 0.46	1	1	33.2	22.2	1.043UN			
21409	2A071 0.46	1	0.918	-8.2	0.0	55.0	0.0										
		1	0.42		0.0	37.0	0.0	214	2B04 0.48	1	1	-55.0	-37.0	1.043LK			
21410	2E399 0.46	1	0.928	-8.5	0.0	61.0	0.0										
		1	0.43		0.0	41.0	0.0	214	2B04 0.48	1	1	-61.0	-41.0	1.043LK			
21411	2E401 0.46	1	0.925	-8.5	0.0	61.0	0.0										
		1	0.43		0.0	41.0	0.0	214	2B04 0.48	1	1	-61.0	-41.0	1.043LK			

Sheet No. 435
Calc No: E4C-082 CCN 9N-3 Rev. 1
RE: LPrun 9-30-94 IRE: Rel 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:26
CASE IV.BY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-2_IVBY.SAV

BUS DATA									LINE DATA									
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	KVA
21413	2P190	0.46	1	0.930	-8.5	0.0	57.0	0.0										
			1	0.43		0.0	35.0	0.0	214	2B04	0.48	1	1	-57.0	-35.0	1.043LK		
21414	2BE	0.48	1	0.898	-8.5	0.0	0.0	0.0										
			1	0.43		0.0	0.0	0.0	214	2B04	0.48	1	1	-134.5	-114.8			
									22414	2BE-M	0.48	1	1	45.0	50.8			
									23414	2BE-S	0.48	1	1	89.4	64.1			
21415	2BY	0.48	1	0.897	-8.6	0.0	0.0	0.0										
			1	0.43		0.0	0.0	0.0	214	2B04	0.48	1	1	-222.2	-145.5			
									22415	2BY-M	0.48	1	1	86.2	55.4			
									23415	2BY-S	0.48	1	1	112.5	78.1			
									24434	2P009	0.46	1	1	23.6	12.0	1.043UN		
21419	2A074	0.46	1	0.913	-8.1	0.0	55.0	0.0										
			1	0.42		0.0	37.0	0.0	214	2B04	0.48	1	1	-55.0	-37.0	1.043LK		
21603	2BRB	0.48	1	0.907	-7.9	0.0	0.0	0.0										
			1	0.44		0.0	0.0	0.0	216	2B06	0.48	1	1	-22.9	-15.2			
									22603	2BRB-M	0.48	1	1	14.4	10.0			
									23603	2BRB-S	0.48	1	1	8.5	5.3			
21605	2BH	0.48	1	0.856	-8.7	0.0	0.0	0.0										
			1	0.41		0.0	0.0	0.0	216	2B06	0.48	1	1	-183.9	-123.9			
									22605	2BH-M	0.48	1	1	18.3	13.6			
									23605	2BH-S	0.48	1	1	8.5	5.3			
									24606	2E547	0.46	1	1	33.2	22.1	1.043UN		
									24607	2E549	0.46	1	1	33.2	22.2	1.043UN		
									24611	2A276	0.46	1	1	45.3	30.3	1.043UN		
									24612	2A277	0.46	1	1	45.5	30.4	1.043UN		
21607	2BJ	0.48	1	0.904	-8.0	0.0	0.0	0.0										
			1	0.43		0.0	0.0	0.0	216	2B06	0.48	1	1	-124.2	-108.4			
									22607	2BJ-M	0.48	1	1	45.0	50.7			
									23607	2BJ-S	0.48	1	1	79.2	57.8			
21609	2A072	0.46	1	0.923	-7.6	0.0	55.0	0.0										
			1	0.42		0.0	37.0	0.0	216	2B06	0.48	1	1	-55.0	-37.0	1.043LK		
21610	2E400	0.46	1	0.929	-7.9	0.0	61.0	0.0										
			1	0.43		0.0	41.0	0.0	216	2B06	0.48	1	1	-61.0	-41.0	1.043LK		
21611	2E402	0.46	1	0.923	-7.8	0.0	61.0	0.0										
			1	0.42		0.0	41.0	0.0	216	2B06	0.48	1	1	-61.0	-41.0	1.043LK		
21613	2P192	0.46	1	0.933	-7.9	0.0	57.0	0.0										
			1	0.43		0.0	35.0	0.0	216	2B06	0.48	1	1	-57.0	-35.0	1.043LK		
21614	2BZ	0.48	1	0.905	-8.0	0.0	0.0	0.0										
			1	0.43		0.0	0.0	0.0	216	2B06	0.48	1	1	-197.9	-136.6			
									22614	2BZ-M	0.48	1	1	50.0	40.7			
									23614	2BZ-S	0.48	1	1	124.4	83.9			
									24622	2P010	0.46	1	1	23.6	12.0	1.043UN		
21617	2P191-B	0.46	1	0.932	-7.9	0.0	57.0	0.0										
			1	0.43		0.0	35.0	0.0	216	2B06	0.48	1	1	-57.0	-35.0	1.043LK		

Calc No: E4C-082 CCN 9W-3 Rev. 1
RE: Lbw 9-30-94 IRE: RLP 10-5-94
Sheet No. 236

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:26
CASE IV.BY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LP-2_IVBY.SAV

BUS DATA									LINE DATA									
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
21619	2A073	0.46	1	0.916	-7.5	0.0	55.0	0.0										
			1	0.42		0.0	37.0	0.0	216	2306	0.48	1	-55.0	-37.0	1.043LK			
22403	2BRA-M	0.48	1	0.900	-8.5	0.0	14.4	0.0										
			1	0.43		0.0	10.0	0.0	21403	2BRA	0.48	1	-14.4	-10.0				
22407	2BD-M	0.48	1	0.835	-9.5	0.0	18.3	0.0										
			1	0.40		0.0	13.6	0.0	21407	2BD	0.48	1	-18.3	-13.6				
22414	2BE-M	0.48	1	0.898	-8.5	0.0	45.0	0.0										
			1	0.43		0.0	50.8	0.0	21414	2BE	0.48	1	-45.0	-50.8				
22415	2BY-M	0.48	1	0.897	-8.6	0.0	86.2	0.0										
			1	0.43		0.0	55.4	0.0	21415	2BY	0.48	1	-86.2	-55.4				
22603	2BRB-M	0.48	1	0.907	-7.9	0.0	14.4	0.0										
			1	0.44		0.0	10.0	0.0	21603	2BRB	0.48	1	-14.4	-10.0				
22605	2BH-M	0.48	1	0.856	-8.7	0.0	18.3	0.0										
			1	0.41		0.0	13.6	0.0	21605	2BH	0.48	1	-18.3	-13.6				
22607	2BJ-M	0.48	1	0.904	-8.0	0.0	45.0	0.0										
			1	0.43		0.0	50.7	0.0	21607	2BJ	0.48	1	-45.0	-50.7				
22614	2BZ-M	0.48	1	0.905	-8.0	0.0	50.0	0.0										
			1	0.43		0.0	40.7	0.0	21614	2BZ	0.48	1	-50.0	-40.7				
23403	2BRA-S	0.48	1	0.900	-8.5	0.0	8.5	0.0										
			1	0.43		0.0	5.3	0.0	21403	2BRA	0.48	1	-8.5	-5.3				
23407	2BD-S	0.48	1	0.835	-9.5	0.0	8.5	0.0										
			1	0.40		0.0	5.3	0.0	21407	2BD	0.48	1	-8.5	-5.3				
23414	2BE-S	0.48	1	0.898	-8.5	0.0	89.4	0.0										
			1	0.43		0.0	64.1	0.0	21414	2BE	0.48	1	-89.4	-64.1				
23415	2BY-S	0.48	1	0.897	-8.6	0.0	112.5	0.0										
			1	0.43		0.0	78.1	0.0	21415	2BY	0.48	1	-112.5	-78.1				
23603	2BRB-S	0.48	1	0.907	-7.9	0.0	8.5	0.0										
			1	0.44		0.0	5.3	0.0	21603	2BRB	0.48	1	-8.5	-5.3				
23605	2BH-S	0.48	1	0.856	-8.7	0.0	8.5	0.0										
			1	0.41		0.0	5.3	0.0	21605	2BH	0.48	1	-8.5	-5.3				
23607	2BJ-S	0.48	1	0.904	-8.0	0.0	79.2	0.0										
			1	0.43		0.0	57.8	0.0	21607	2BJ	0.48	1	-79.2	-57.8				
23614	2BZ-S	0.48	1	0.905	-8.0	0.0	124.4	0.0										
			1	0.43		0.0	83.9	0.0	21614	2BZ	0.48	1	-124.4	-83.9				

Sheet No. 437
Calc No: E4C-082 CCN 9W-3 Rev. 1
RE: LPM 9-30-94 IRE: RMD 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:26
CASE IV.BY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-2_IVBY.SAV

FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME		CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
24412	2A274	0.46	1	0.868	-9.4	0.0	45.1	0.0											
			1	0.40		0.0	30.3	0.0	21407	2BD	0.48	1	1	-45.1	-30.3	1.043LK			
24413	2A275	0.46	1	0.865	-9.3	0.0	45.1	0.0											
			1	0.40		0.0	30.3	0.0	21407	2BD	0.48	1	1	-45.1	-30.3	1.043LK			
24421	2E550	0.46	1	0.864	-9.3	0.0	32.9	0.0											
			1	0.40		0.0	22.1	0.0	21407	2BD	0.48	1	1	-32.9	-22.1	1.043LK			
24422	2E546	0.46	1	0.865	-9.3	0.0	32.9	0.0											
			1	0.40		0.0	22.1	0.0	21407	2BD	0.48	1	1	-32.9	-22.1	1.043LK			
24434	2P009	0.46	1	0.923	-8.4	0.0	23.2	0.0											
			1	0.42		0.0	11.9	0.0	21415	2BY	0.48	1	1	-23.2	-11.9	1.043LK			
24606	2E547	0.46	1	0.888	-8.5	0.0	32.9	0.0											
			1	0.41		0.0	22.1	0.0	21605	2BH	0.48	1	1	-32.9	-22.1	1.043LK			
24607	2E549	0.46	1	0.887	-8.5	0.0	32.9	0.0											
			1	0.41		0.0	22.1	0.0	21605	2BH	0.48	1	1	-32.9	-22.1	1.043LK			
24611	2A276	0.46	1	0.890	-8.6	0.0	45.1	0.0											
			1	0.41		0.0	30.3	0.0	21605	2BH	0.48	1	1	-45.1	-30.3	1.043LK			
24612	2A277	0.46	1	0.887	-8.5	0.0	45.1	0.0											
			1	0.41		0.0	30.3	0.0	21605	2BH	0.48	1	1	-45.1	-30.3	1.043LK			
24622	2P010	0.46	1	0.930	-7.8	0.0	23.2	0.0											
			1	0.43		0.0	11.9	0.0	21614	2BZ	0.48	1	1	-23.2	-11.9	1.043LK			
31402	3E61N	0.48	1	0.870	-11.4	0.0	200.0	0.0											
			1	0.42		0.0	0.0	0.0	314	3B04	0.48	1	1	-200.0	0.0				
31403	3BRA	0.48	1	0.881	-10.6	0.0	0.0	0.0											
			1	0.42		0.0	0.0	0.0	314	3B04	0.48	1	1	-22.0	-13.5				
									32403	3BRA-M	0.48	1	1	13.5	8.2				
									33403	3BRA-S	0.48	1	1	8.5	5.3				
31405	3P191-A	0.46	1	0.908	-10.6	0.0	0.0	0.0											
			1	0.42		0.0	0.0	0.0	314	3B04	0.48	1	1	-55.3	-36.0	1.043LK			
										M I S M A T C H				55.3	36.0				
31407	3BD	0.48	1	0.818	-11.5	0.0	0.0	0.0											
			1	0.39		0.0	0.0	0.0	314	3B04	0.48	1	1	-173.7	-117.2				
									32407	3BD-M	0.48	1	1	17.3	10.6				
									33407	3BD-S	0.48	1	1	8.5	5.3				
									34412	3A274	0.46	1	1	41.8	29.5	1.043UN			
									34413	3A275	0.46	1	1	42.0	29.5	1.043UN			
									34421	3E550	0.46	1	1	32.1	21.2	1.043UN			
									34422	3E546	0.46	1	1	32.0	21.1	1.043UN			
31409	3A071	0.46	1	0.897	-10.4	0.0	0.0	0.0											
			1	0.41		0.0	0.0	0.0	314	3B04	0.48	1	1	-55.0	-32.0	1.043LK			
										M I S M A T C H				55.0	32.0				

Sheet No. 438
Calc No: E4C-082 CCNQV-3 Rev. 1
RE: Lpm 9-30-94 IRE: RU 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR---PSS/E THU, SEP 15 1994 13:26
CASE IV.BY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-2_IVBY.SAV

FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
31410	3E399	0.46	1 0.908	-10.5	0.0	0.0	0.0										
			1 0.42		0.0	0.0	0.0	314	3B04 0.48	1	1	-59.6	-41.5	1.043LK			
									M I S M A T C H			59.6	41.5				
31411	3E401	0.46	1 0.906	-10.5	0.0	0.0	0.0										
			1 0.42		0.0	0.0	0.0	314	3B04 0.48	1	1	-59.6	-41.5	1.043LK			
									M I S M A T C H			59.6	41.5				
31413	3P190	0.46	1 0.910	-10.6	0.0	0.0	0.0										
			1 0.42		0.0	0.0	0.0	314	3B04 0.48	1	1	-55.3	-36.0	1.043LK			
									M I S M A T C H			55.3	36.0				
31414	3BE	0.48	1 0.879	-10.6	0.0	0.0	0.0										
			1 0.42		0.0	0.0	0.0	314	3B04 0.48	1	1	-142.8	-96.5				
								32414	3BE-M 0.48	1	1	53.3	32.5				
								33414	3BE-S 0.48	1	1	89.4	64.1				
31415	3BY	0.48	1 0.879	-10.7	0.0	0.0	0.0										
			1 0.42		0.0	0.0	0.0	314	3B04 0.48	1	1	-214.3	-137.3				
								32415	3BY-M 0.48	1	1	78.8	48.0				
								33415	3BY-S 0.48	1	1	112.5	78.1				
								34104	3P009 0.46	1	1	23.0	11.3	1.043UH			
31417	BQ-U3	0.48	1 0.873	-10.8	0.0	0.0	0.0										
			1 0.42		0.0	0.0	0.0	314	3B04 0.48	1	1	-140.1	-85.9				
								32417	BQ-U3-M 0.48	1	1	39.6	24.1				
								33417	BQ-U3-S 0.48	1	1	75.9	45.8				
								34417	4162-U3 0.46	1	1	24.7	16.0	1.043UN			
31418	E418-U3	0.46	1 0.882	-10.6	0.0	0.0	0.0										
			1 0.41		0.0	0.0	0.0	314	3B04 0.48	1	1	-116.0	-67.0	1.043LK			
									M I S M A T C H			116.0	67.0				
31419	3A074	0.46	1 0.892	-10.3	0.0	0.0	0.0										
			1 0.41		0.0	0.0	0.0	314	3B04 0.48	1	1	-55.0	-31.9	1.043LK			
									M I S M A T C H			55.0	31.9				
31602	3E62N	0.48	1 0.878	-10.7	0.0	200.0	0.0										
			1 0.42		0.0	0.0	0.0	316	3B06 0.48	1	1	-200.0	0.0				
31603	3BRB	0.48	1 0.891	-9.9	0.0	0.0	0.0										
			1 0.43		0.0	0.0	0.0	316	3B06 0.48	1	1	-22.0	-13.5				
								32603	3BRB-M 0.48	1	1	13.5	8.2				
								33603	3BRB-S 0.48	1	1	8.5	5.3				
31605	3BH	0.48	1 0.842	-10.6	0.0	0.0	0.0										
			1 0.40		0.0	0.0	0.0	316	3B06 0.48	1	1	-174.1	-117.4				
								32605	3BH-M 0.48	1	1	17.4	10.6				
								33605	3BH-S 0.48	1	1	8.5	5.3				
								34606	3E547 0.46	1	1	32.1	21.4	1.043UN			
								34607	3E549 0.46	1	1	32.1	21.4	1.043UN			
								34611	3A276 0.46	1	1	41.9	29.3	1.043UN			
								34612	3A277 0.46	1	1	42.1	29.4	1.043UN			
31607	3BJ	0.48	1 0.888	-9.9	0.0	0.0	0.0										
			1 0.43		0.0	0.0	0.0	316	3B06 0.48	1	1	-131.5	-89.6				
								32607	3BJ-M 0.48	1	1	52.2	31.8				
								33607	3BJ-S 0.48	1	1	79.2	57.8				
31609	3A072	0.46	1 0.904	-9.6	0.0	0.0	0.0										
			1 0.42		0.0	0.0	0.0	316	3B06 0.48	1	1	-55.1	-32.2	1.043LK			
									M I S M A T C H			55.1	32.2				

Sheet No. 4139
Code No: E4C-082 CCN 9W-3 Rev. 1
RE: Upon 9-30-94 IRE: Rel 10-5-94

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:26
CASE IV.BY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-2_IVBY.SAV

FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
31610	3E400	0.46	1	0.912	-9.8	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	316	3B06	0.48	1	1	-59.7	-41.7	1.043LK			
										M I S M A T C H				59.7	41.7				
31611	3E402	0.46	1	0.905	-9.7	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	316	3B06	0.48	1	1	-59.6	-41.4	1.043LK			
										M I S M A T C H				59.6	41.4				
31613	3P192	0.46	1	0.916	-9.8	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	316	3B06	0.48	1	1	-55.3	-36.2	1.043LK			
										M I S M A T C H				55.3	36.2				
31614	3BZ	0.48	1	0.889	-9.9	0.0	0.0	0.0										
			1	0.43		0.0	0.0	0.0	316	3B06	0.48	1	1	-199.5	-126.9				
									32614	3BZ-M	0.48	1	1	52.0	31.7				
									33614	3BZ-S	0.48	1	1	124.4	83.9				
									34622	3P010	0.46	1	1	23.1	11.3	1.043UN			
31615	E419-U3	0.46	1	0.918	-9.9	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	316	3B06	0.48	1	1	-116.2	-69.6	1.043LK			
										M I S M A T C H				116.2	69.6				
31617	3P191-B	0.46	1	0.916	-9.8	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	316	3B06	0.48	1	1	-55.3	-36.2	1.043LK			
										M I S M A T C H				55.3	36.2				
31618	BS-U3	0.48	1	0.883	-10.0	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	316	3B06	0.48	1	1	-106.7	-63.7				
									32618	BS-U3-M	0.48	1	1	39.6	24.1				
									33618	BS-U3-S	0.48	1	1	42.6	23.4				
									34618	P160-U3	0.46	1	1	24.5	16.2	1.043UN			
31619	3A073	0.46	1	0.898	-9.5	0.0	0.0	0.0										
			1	0.41		0.0	0.0	0.0	316	3B06	0.48	1	1	-55.0	-32.1	1.043LK			
										M I S M A T C H				55.0	32.1				
32403	3BRA-M	0.48	1	0.881	-10.6	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	31403	3BRA	0.48	1	1	-13.5	-8.2				
										M I S M A T C H				13.5	8.2				
32407	3BD-M	0.48	1	0.818	-11.5	0.0	0.0	0.0										
			1	0.39		0.0	0.0	0.0	31407	3BD	0.48	1	1	-17.3	-10.6				
										M I S M A T C H				17.3	10.6				
32414	3BE-M	0.48	1	0.879	-10.6	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	31414	3BE	0.48	1	1	-53.3	-32.5				
										M I S M A T C H				53.3	32.5				
32415	3BY-M	0.48	1	0.879	-10.7	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	31415	3BY	0.48	1	1	-78.8	-48.0				
										M I S M A T C H				78.8	48.0				
32417	BQ-U3-M	0.48	1	0.873	-10.8	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	31417	BQ-U3	0.48	1	1	-39.6	-24.1				
										M I S M A T C H				39.6	24.1				
32603	3BRB-M	0.48	1	0.891	-9.9	0.0	0.0	0.0										
			1	0.43		0.0	0.0	0.0	31603	3BRB	0.48	1	1	-13.5	-8.2				
										M I S M A T C H				13.5	8.2				
32605	3BH-M	0.48	1	0.842	-10.6	0.0	0.0	0.0										
			1	0.40		0.0	0.0	0.0	31605	3BH	0.48	1	1	-17.4	-10.6				
										M I S M A T C H				17.4	10.6				
32607	3BJ-M	0.48	1	0.888	-9.9	0.0	0.0	0.0										
			1	0.43		0.0	0.0	0.0	31607	3BJ	0.48	1	1	-52.2	-31.8				

Case No: E4C-082 CCN 9N-3 Rev. 1
RE: Gpw 9-30-94 IRE: RLP 10-5-94
Sheet No. A40

Sheet No. 441

Calc No: EAC-082 CCN 9 N-3 Rev. 1

RE: LPM 9-30-94 IRE: RJL 10-5-94

MISMATCH . 52.2 31.8

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:26
CASE IV.BY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-2_IVBY.SAV

FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	LINE KW	LINE KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
32614	3BZ-M 0.48	1	0.889	-9.9	0.0	0.0	0.0										
		1	0.43		0.0	0.0	0.0	31611	3BZ 0.48	1	1	-52.0	-31.7				
									M I S M A T C H			52.0	31.7				
32618	BS-U3-M 0.48	1	0.883	-10.0	0.0	0.0	0.0										
		1	0.42		0.0	0.0	0.0	31618	BS-U3 0.48	1	1	-39.6	-24.1				
									M I S M A T C H			39.6	24.1				
33403	3BRA-S 0.48	1	0.881	-10.6	0.0	8.5	0.0										
		1	0.42		0.0	5.3	0.0	31403	3BRA 0.48	1	1	-8.5	-5.3				
33407	3BD-S 0.48	1	0.818	-11.5	0.0	8.5	0.0										
		1	0.39		0.0	5.3	0.0	31407	3BD 0.48	1	1	-8.5	-5.3				
33414	3BE-S 0.48	1	0.879	-10.6	0.0	89.4	0.0										
		1	0.42		0.0	64.1	0.0	31414	3BE 0.48	1	1	-89.4	-64.1				
33415	3BY-S 0.48	1	0.879	-10.7	0.0	112.5	0.0										
		1	0.42		0.0	78.1	0.0	31415	3BY 0.48	1	1	-112.5	-78.1				
33417	BQ-U3-S 0.48	1	0.873	-10.8	0.0	75.9	0.0										
		1	0.42		0.0	45.8	0.0	31417	BQ-U3 0.48	1	1	-75.9	-45.8				
33603	3BRB-S 0.48	1	0.891	-9.9	0.0	8.5	0.0										
		1	0.43		0.0	5.3	0.0	31603	3BRB 0.48	1	1	-8.5	-5.3				
33605	3BH-S 0.48	1	0.842	-10.6	0.0	8.5	0.0										
		1	0.40		0.0	5.3	0.0	31605	3BH 0.48	1	1	-8.5	-5.3				
33607	3BJ-S 0.48	1	0.888	-9.9	0.0	79.2	0.0										
		1	0.43		0.0	57.8	0.0	31607	3BJ 0.48	1	1	-79.2	-57.8				
33614	3BZ-S 0.48	1	0.889	-9.9	0.0	124.4	0.0										
		1	0.43		0.0	83.9	0.0	31614	3BZ 0.48	1	1	-124.4	-83.9				
33618	BS-U3-S 0.48	1	0.883	-10.0	0.0	42.6	0.0										
		1	0.42		0.0	23.4	0.0	31618	BS-U3 0.48	1	1	-42.6	-23.4				
34412	3A274 0.46	1	0.850	-11.4	0.0	0.0	0.0										
		1	0.39		0.0	0.0	0.0	31607	3BD 0.48	1	1	-41.6	-29.4	1.043LK			
									M I S M A T C H			41.6	29.4				
34413	3A275 0.46	1	0.847	-11.3	0.0	0.0	0.0										
		1	0.39		0.0	0.0	0.0	31607	3BD 0.48	1	1	-41.6	-29.4	1.043LK			
									M I S M A T C H			41.6	29.4				
34417	P162-U3 0.46	1	0.897	-10.4	0.0	0.0	0.0										
		1	0.41		0.0	0.0	0.0	31417	BQ-U3 0.48	1	1	-24.2	-15.9	1.043LK			
									M I S M A T C H			24.2	15.9				
34421	3E550 0.46	1	0.846	-11.3	0.0	0.0	0.0										
		1	0.39		0.0	0.0	0.0	31607	3BD 0.48	1	1	-31.7	-21.1	1.043LK			
									M I S M A T C H			31.7	21.1				
34422	3E546 0.46	1	0.848	-11.4	0.0	0.0	0.0										
		1	0.39		0.0	0.0	0.0	31407	3BD 0.48	1	1	-31.7	-21.1	1.043LK			
									M I S M A T C H			31.7	21.1				

Calc No: E4C-082. CCN 9W-3 Rev. 1
RE: Lpw 1-30-94 IRE: RL 10-5-94
Sheet No. 442

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, SEP 15 1994 13:26
CASE IV.BY - POST ACCIDENT (STEADY STATE) CONDITION
DKB200:[MURIEL.E4C-082-AGA.CASE_IVBY]LF-2_IVBY.SAV

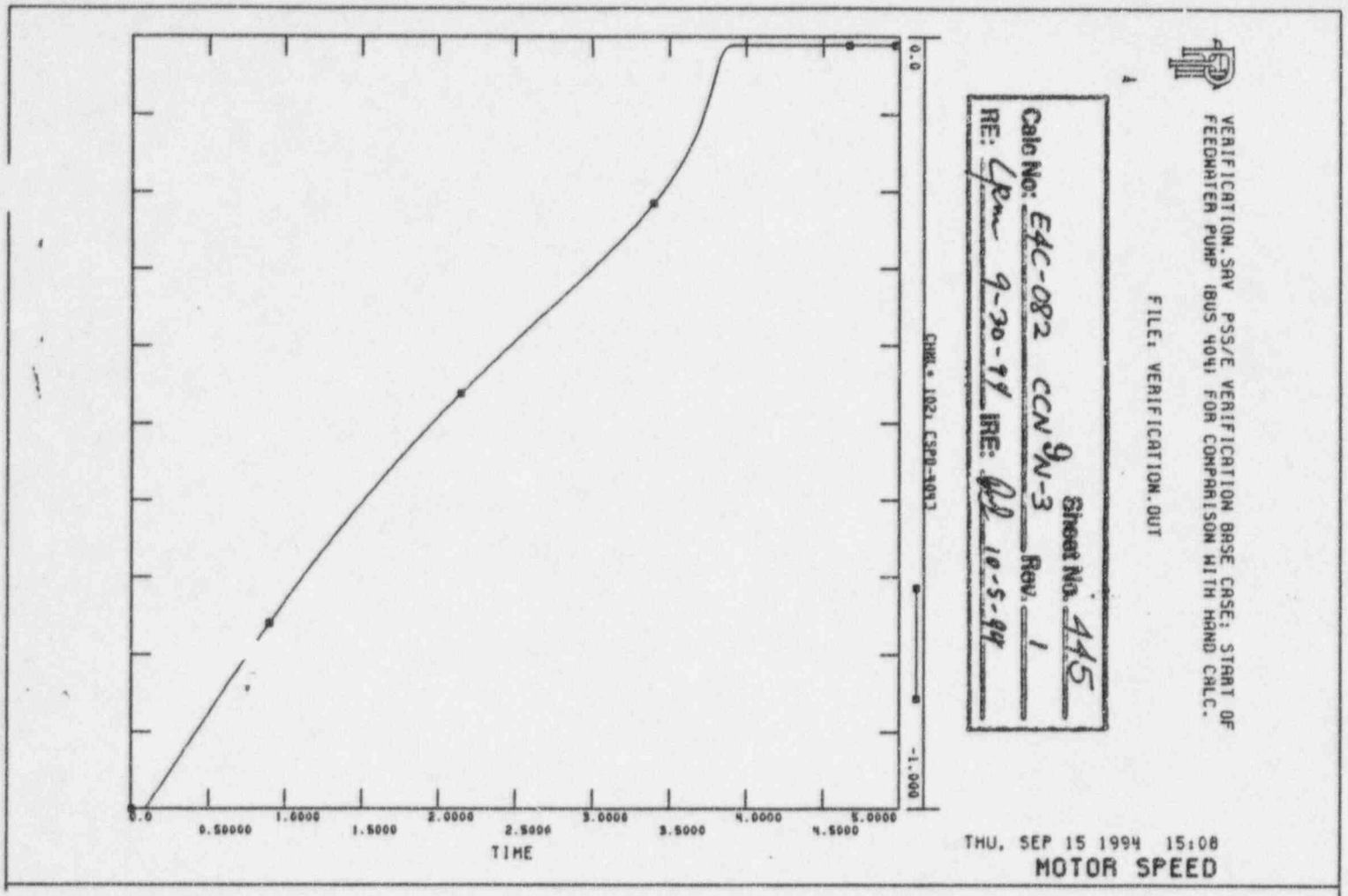
FROM BUS	NAME		AREA ZONE	VOLT PU/KV	ANGLE	GEN KW/KVAR	LOAD KW/KVAR	SHUNT KW/KVAR	TO BUS	NAME	CKT	AREA	KW	KVAR	TRANSFORMER RATIO	TRANSFORMER ANGLE	RATING A %I	RATING A KVA
34434	3P009	0.46	1	0.905	-10.5	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	31415	3BY	0.48	1	1	-22.6	-11.2	1.043LK			
										M I S M A T C H				22.6	11.2				
34606	3E547	0.46	1	0.873	-10.4	0.0	0.0	0.0										
			1	0.40		0.0	0.0	0.0	31605	3BH	0.48	1	1	-31.8	-21.3	1.043LK			
										M I S M A T C H				31.8	21.3				
34607	3E549	0.46	1	0.873	-10.4	0.0	0.0	0.0										
			1	0.40		0.0	0.0	0.0	31605	3BH	0.48	1	1	-31.8	-21.3	1.043LK			
										M I S M A T C H				31.8	21.3				
34611	3A276	0.46	1	0.876	-10.5	0.0	0.0	0.0										
			1	0.40		0.0	0.0	0.0	31605	3BH	0.48	1	1	-41.8	-29.3	1.043LK			
										M I S M A T C H				41.8	29.3				
34612	3A277	0.46	1	0.873	-10.4	0.0	0.0	0.0										
			1	0.40		0.0	0.0	0.0	31605	3BH	0.48	1	1	-41.8	-29.3	1.043LK			
										M I S M A T C H				41.8	29.3				
34618	P160-U3	0.46	1	0.915	-9.8	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	31618	BS-U3	0.48	1	1	-24.3	-16.1	1.043LK			
										M I S M A T C H				24.3	16.1				
34622	3P010	0.46	1	0.913	-9.7	0.0	0.0	0.0										
			1	0.42		0.0	0.0	0.0	31611	3BZ	0.48	1	1	-22.6	-11.2	1.043LK			
										M I S M A T C H				22.6	11.2				

Sheet No. 443
Celo No: E4C-082 CCN 9N-3 Rev. 1
RE: Lpw 9-20-94 IRE: RL 10-5-94

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

APPENDIX 9.1.7

PSS/E VALIDATION


VERIFICATION.SAV PSS/E VERIFICATION BASE CASE: START OF FEEDWATER PUMP (BUS 404) FOR COMPARISON WITH HAND CALC.
FILE: VERIFICATION.OUT
Calc No: E4C-082 CCN 9 N-3 Sheet No. 445 Rev. 1
RE: Rem 9-30-94 IRE: 10-5-94
CHNL = 102, CSPB-1003
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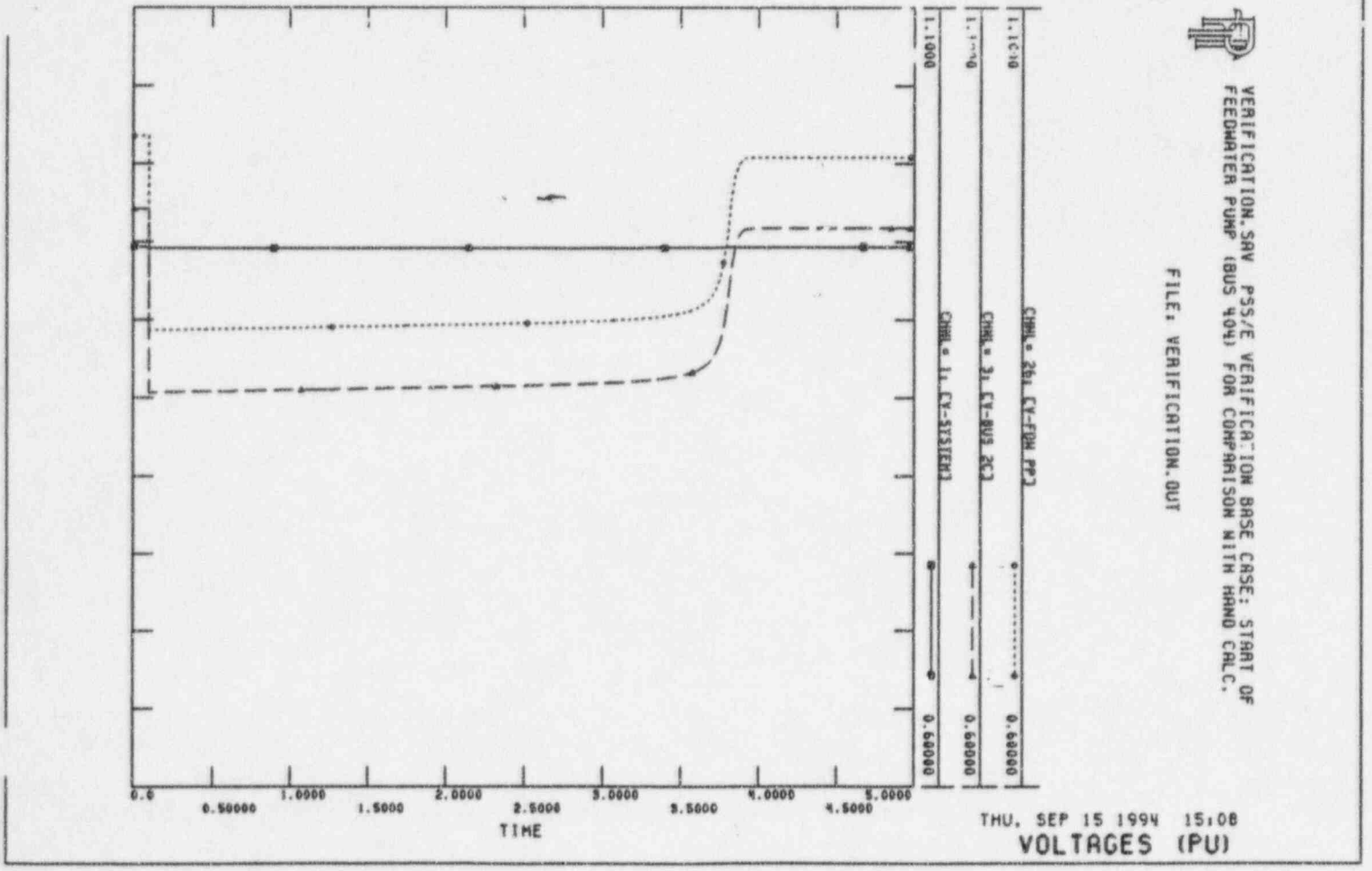
-1.000
0.0
0.50000
1.0000
1.5000
2.0000
2.5000
3.0000
3.5000
4.0000
4.5000
5.0000
TIME
THU, SEP 15 1994 15:08
MOTOR SPEED


VERIFICATION.SAV PSS/E VERIFICATION BASE CASE: START OF FEEDWATER PUMP (BUS 404) FOR COMPARISON WITH HAND CALC.
FILE: VERIFICATION.OUT
CHNL = 26, CY-FDW PP2
CHNL = 3, CY-BUS 2C3
CHNL = 1, CY-SYSTEM3
1.1000
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0.0
0.50000
1.0000
1.5000
2.0000
2.5000
3.0000
3.5000
4.0000
4.5000
5.0000
TIME
THU, SEP 15 1994 15:08
VOLTAGES (PU)

NES&L DEPARTMENT

CALCULATION SHEET

ICCN NO./ PRELIM. CCN NO. N-3 | PAGE 446 OF 453

CCN CONVERSION CCN NO. CCN - 9

Project or DCP/MMP SONGS 2 & 3 Calc No. E4C-082 Rev.1

ubject SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT Sheet No.

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
1	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

SHEET OF SHEETS

ENGINEERING DEPARTMENT

CALCULATION SHEET

SUBJECT: PTI Program Verification Start of FDW Pump G3A DESIGN CALCULATION NO. DC-3128 REVISION 0

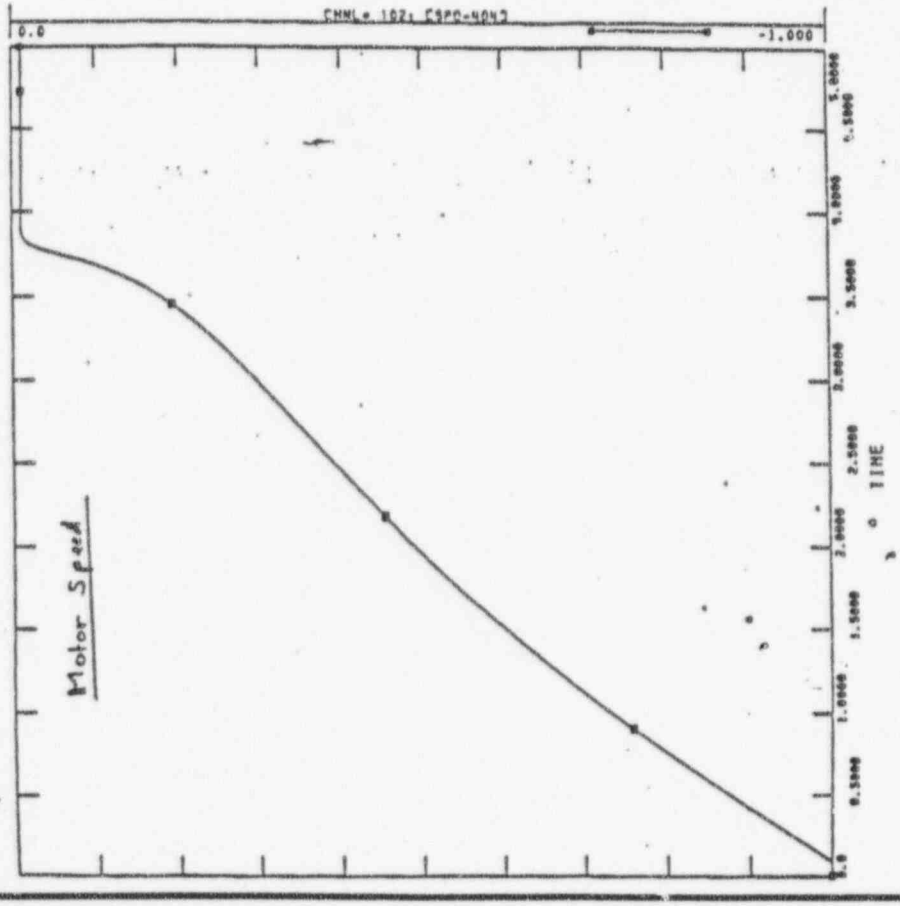
J.O. NO. MADE BY P Snaar DATE 2-14-89 CHK. BY [illegible] DATE 4/14/

A-3
OF 3

ALL LOADS OFF - FEEDWATER PUMP TO BE STARTED
FEEDWATER PUMP STARTING AT T=0.1SEC

FILE: FWSTART.OUT

TUE, DEC 29 1988 16:58



NES&L DEPARTMENT

CALCULATION SHEET

ICCN NO./ PRELIM. CCN NO. N-3	PAGE 447 OF 453
CCN CONVERSION CCN NO. CCN - 9	

Project or DCP/MMP SONGS 2 & 3 Calc No. E4C-082 Rev.1

ubject SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT Sheet No.

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
1	L. R. MURIEL	9-30-91	A. M. PATEL	10-5-94					

SHEET OF SHEETS

ENGINEERING DEPARTMENT

CALCULATION SHEET

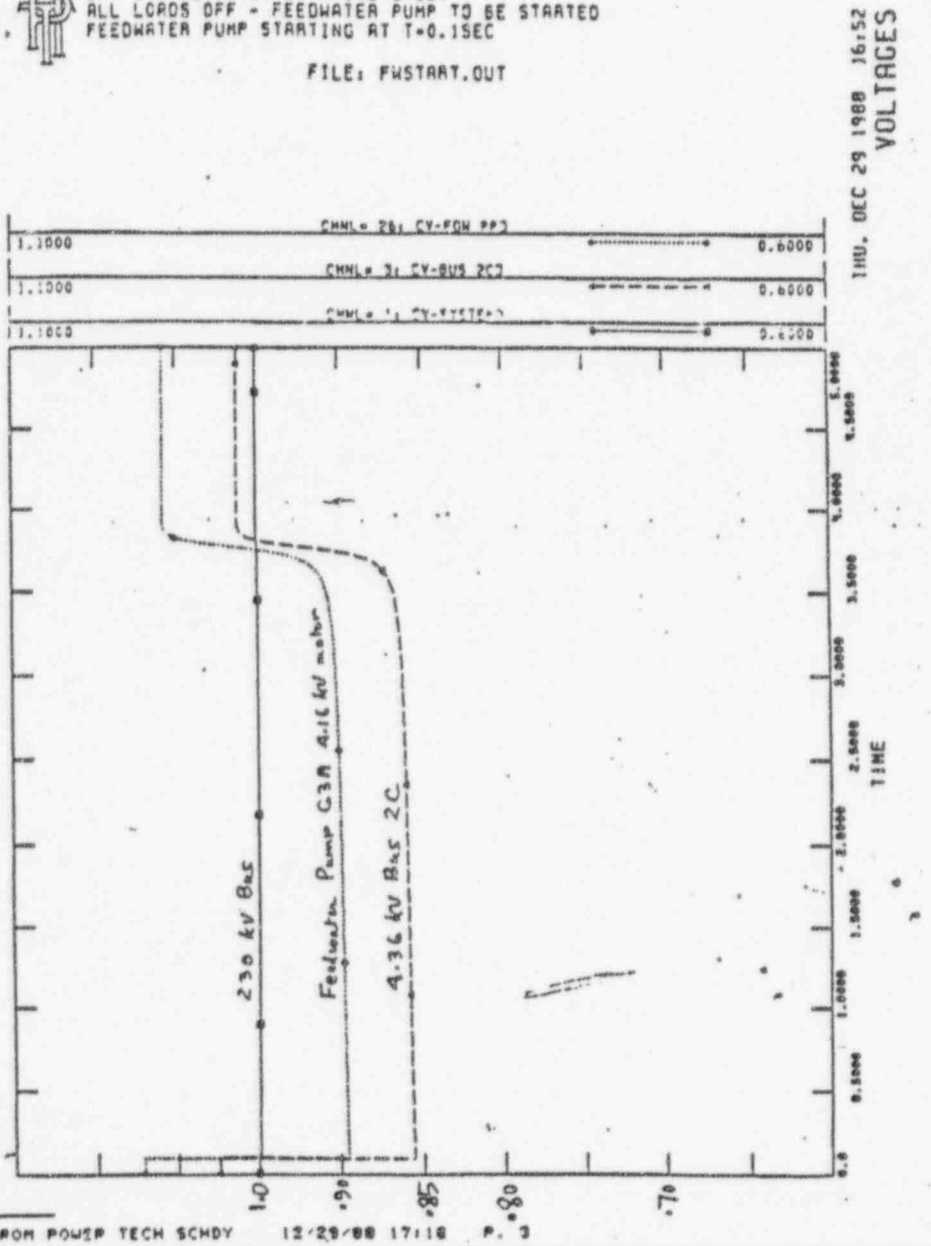
SUBJECT: PTI Program Verification Start of FDW Pump G3A DESIGN CALCULATION NO. DC-3128 REVISION 0

J.O. NO. MADE BY PSanga DATE 2.19.89 CHK. BY [illegible] DATE 2/11/89

A-2
OF 3

SAN ONOFRE MOTOR STARTING STUDY
ALL LOADS OFF - FEEDWATER PUMP TO BE STARTED
FEEDWATER PUMP STARTING AT T=0.1SEC

FILE: FWSTART.OUT



FROM POWER TECH SCHDY 12/29/88 17:18 P. 3

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

9.2 ATTACHMENTS:

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

ATTACHMENT 9.2.1

FAX Transmittal From D. Otto of Joy Technologies, Inc. To B. Lennartz of SCE
SUBJECT: Inertia For E-418/E-419

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
1	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

MAY 11 '93 09:07 FROM JOYTECH NEWPHILA OH . PAGE.001

FAX TRANSMITTAL

TO: Mr. Bill Lennarts

DATE: May 11, 1993

COMPANY: Southern California Edison

FROM: Dan Otto
Joy Technologies, Inc.
New Philadelphia, Ohio

FAX NO: 714-458-4876

NUMBER OF PAGES SENT INCLUDING THIS COVER SHEET: 1

CALL 216-339-1111 IF THERE ARE ANY PROBLEMS WITH THIS TRANSMITTAL.

SUBJECT: Rotor inertia for your Joy vaneaxial fan

Per our phone conversation, you have two Joy fans, model 38-26-1770 two stage, serial numbers GF-20776 & 777, with full bladed aluminum rotors. You requested the rotational inertia for this fan so that you could perform some starting time calculations. The number you need is 136 lb.-ft.^{2} per rotor, 272 lb.-ft.^{2} total.

Please let us know if we can be of further assistance.

Best regards,

Dan Otto

Daniel R. Otto, P.E.
Project engineer for nuclear fans

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

ATTACHMENT 9.2.2

Typical MOV Data
Limitorque Publication SEL-17

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
1	L. R. MURIEL	9-30-99	A. M. PATEL	10-5-99					

APPROXIMATE MOTOR DATA
3/60/460° or 3/50/380°
15 Min. Duty, 20% Run

Certified Values Can Be Supplied On Receipt Of A Purchase Order

UNIT TYPE	SIZE FT/LB	SPEED RPM	FRAME	H.P.	FULL LOAD	LOCKED ROTOR
SMB	2	1800	48	.13	.45	3.2
		3600	48	.25	.55	5.0
SMC	2	1800	42	.13	.4	2
SMC	3	1200	42	.13	.7	2.2
		1800	42	.2	.6	2.8
SMB	5	1800	48/56	.33	.83	5.0
SMC	5	1800	42	.33	1.0	4.6
SMC	7½	1800	42	.48	2.25	7.5
SMB	10	1800	56	.66	2.5	12.0
		3600	56	1.33	2.5	16.0
SMB	15	1800	56	1.0	3.0	16.0
		3600	56	2.0	3.5	26.0
SMB	25	1800	56	1.6	5.0	26.0
		3600	56	3.3	6.0	50.0
SMB	40	1800	56	2.6	6.0	37.0
		3600	184	5.3	8.5	72.3
SMB	60	1800	184	3.9	9.0	60.0
		3600	184	7.9	12.0	95.0
SMB	80	1800	184	5.2	11.0	60.0
		3600	215	10.5	16.0	124.0
SMB	100	1800	215	6.4	10.0	85.0
		3600	215	13.0	18.5	154.0
SMB	130	1800	215	9.5	20.0	130.0
		3600	256	20.0	26.0	217.0
SMB	200	1800	256	13.0	23.0	164.0
		3600	256	26.0	38.0	332.0
SMB	250	1800	256	16.0	26.0	211.0
		3600	256	32.0	43.0	400.0
SMB	300	1800	256	19.0	30.0	215.0
		3600	326	38.0	50.0	444.0
SMB	350	1800	256	22.0	36.0	280.0
		3600	326	44.0	64.0	510.0

*For voltages other than those shown - the amps will vary as follows:

@ 60 Hz $\frac{460 \text{ volts}}{\text{Required volts}}$ = Revised Amps

@ 50 Hz $\frac{380 \text{ volts}}{\text{Required volts}}$ = Revised Amps

COMMON TO ALL MOTORS

Manufacturer	- Limitorque
Type	- Induction
Enclosure	- TENV (for W.P.) or TEXP (for X.P.)
Service Factor	- 1.0
Rotation	- Reversible
Horiz. or Vert.	- Universal
Bearings	- Permanently Lubricated Ball
WK^2	- N.A.
Weight	- N.A. (Motor is an integral part of actuator)

	Power Factor	Efficiency	
100% Load	60	70	
75% Load	50	60	SEL-17
50% Load	40	50	5/1/78

CALCULATION SHEET

ICCN NO./ PRELIM. CCN NO. N-3

CCN CONVERSION ←
CCN NO. CCN - 9

Project or DCP/MMP SONGS 2 & 3 Calc No. E4C-082 Rev.1

Subject SYSTEM DYNAMIC VOLTAGES DURING DESIGN BASIS ACCIDENT Sheet No.

REV	ORIGINATOR	DATE	IRE	DATE	REV	ORIGINATOR	DATE	IRE	DATE
	L. R. MURIEL	9-30-94	A. M. PATEL	10-5-94					

LAST PAGE