

**McCarver, Sammy**

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**From:** Polasek, Patrick J [ppolase@entergy.com]  
**Sent:** Friday, September 10, 2010 5:37 AM  
**To:** Cataldo, Paul  
**Subject:** PTRG Report for IP3-2010-02682  
**Attachments:** ipcpr029000.PDF

PTRG report as requested.

*Patrick J. Polasek*  
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Information in this record was deleted  
in accordance with the Freedom of Information  
Act, exemptions 6

FOIA-  
*2011-0212*

*B-7*

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|--|----------------------|
| <b>POST TRANSIENT EVALUATION</b>                             | IP-SMM-OP-105 Rev: 6 |
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| <b>Attachment 10.1 POST TRANSIENT EVALUATION COVER SHEET</b> |                      |

Unit No.: 3 Transient (CR) No.: IP3-2010-02682  
 Transient Description: Unit 3 manually tripped due to water leak in the  
 Transient Date: 9/9/10 Transient Time: 21:29 Exciter housing

**A. Attachments:**

- Attachment 10.1, POST TRANSIENT EVALUATION COVER SHEET
- Attachment 10.2, GENERAL INFORMATION
- Attachment 10.3, DATA SUMMARY
- Attachment 10.4, EVENT ANALYSIS
- Attachment 10.5, POST TRANSIENT REVIEW GROUP SUMMARY AND RECOMMENDED ACTIONS
- Attachment 10.6, ITRG TRANSIENT SUMMARY *Not required or recommended*
- Attachment 10.7, OSRC REVIEW
  - Required prior to Restart/ Recovery
  - IF OSRC review is required THEN ISSUE CA to ensure Post Transient Evaluation is reviewed by OSRC within 14 days of approval date.
- Attachment 10.8, OM REVIEW AND APPROVAL

**B. Reviews and Approvals**

- Report final  
 PTRG Chairperson: Patrick J. Pulasek  Date: 9/10/10
- All recommendations properly resolved for restart/recovery AND all required regulatory approvals have been obtained.

OSRC Review Meeting No.: \_\_\_\_\_ Date: \_\_\_\_\_

Assistant Operations Manager: \_\_\_\_\_ Date: \_\_\_\_\_

Operations Manager: \_\_\_\_\_ Date: \_\_\_\_\_

C. Plant Restart Recovery Authorized  YES  NO  N/R

GMPO: \_\_\_\_\_ Date: \_\_\_\_\_

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| <b>Attachment 10.2 GENERAL INFORMATION</b> |                      |

Unit No.: 3 Transient (CR) No.: IP3-2010-02682  
 Transient Description: Unit 3 manually tripped due to water leak in the  
 Transient Date: 9/9/10 Transient Time: 21:29 Exciter housing

**NOTE**

- The tracking number for the trip OR transient SHALL use the CA number that required the event investigation.
- The report without the data package SHALL be attached to the CA that required the PTRG.

**General Trip/Transient Information**

1.0 Reactor Trip/Transient Actuated By: Manual  Auto

1.1 Reason for Manual Trip/Transient: Water leak in the Exciter housing (Service Water from the Exciter coolers)

1.2 Reason for the Auto Trip/Transient (include component/system): \_\_\_\_\_

2.0 Plant Personnel On Shift (print names)

SM Tom Ras <sup>to</sup> Nick Lizzo

ST/AWE Vin DeClemente

CRS Ron Carpino

FSS John Graham

RO Chris Nilssen

BOP Chee Yun

\*NPO \_\_\_\_\_

\*Other Ralph Orzo

\* If involved with the Trip/Transient Event

|  |                      |
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| <b>Attachment 10.2 GENERAL INFORMATION</b> |                      |

**3.0 Notifications**

All notifications SHALL be made in accordance with IP-SMM-LI-108/ AP-8.3/ AP-21 and documented in the plant logs.

Comments: LI-108 Attachment <sup>YES</sup> 10.2 <sup>NO</sup> attached

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**4.0 Emergency Plan Implemented?**

YES

NO

IF yes, THEN give classification and explain:

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**5.0 Systems Identified with Inadequate Performance**

Document in General Information and Data Gathering, the plant parameters immediately prior to and after the trip or transient and identify any abnormal performance of plant systems and components.

34RCP trip  
IR-35, 36 did not trend per expectations

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**6.0 Off Normal Status of Any Trains/Portions of Safety Systems**

32 diesel tagged out for maintenance

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**7.0 Unusual or Abnormal Status of Other Plant Equipment, Systems**

None

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|                                  |                            |
|----------------------------------|----------------------------|
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| <b>Attachment 10.2</b>           | <b>GENERAL INFORMATION</b> |

8.0 List any AOTs/LCOs in effect  
See attached.

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9.0 Testing/Surveillance/Maintenance in Progress (pertinent to transient)  
None

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10.0 Plant Status

Start-Up in progress   
 Shutdown in progress   
 Power Operation   
 Other (Explain)

Other Informative Details: \_\_\_\_\_

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|                  | Maximum   | Minimum   |
|------------------|-----------|-----------|
| NIS Power Ranges | 100       | 0         |
| CET Temperature  | 640°F     | 553°F     |
| RCS Pressure     | 2234 psig | 2007 psig |
| RCS Temperature  | 570°F     | 543°F     |
| VC Pressure      | 0.5 psig  | 0.12 psig |
| VC Temperature   | 111.5°F   | 111.5°F   |

11.0 For reactor trips, obtain the "Sequence of Events" and "Post Trip Logs" per Section 6.2.1.1 (Reference 3.13)

Completed:   *BB*                          9/16/10                          0230  

Initials                                      Date                                      Time

Other Informative Details: \_\_\_\_\_

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1.0 Initial Plant Conditions Just Prior to Trip/Transient Phase 1, Part 1

1.1 Plant Parameters

|                        |                                |        |
|------------------------|--------------------------------|--------|
| Reactor Power Level    | 100                            | %      |
| Electrical Output      | 1073                           | MWe    |
| RCS Temperature (Tave) | 569.3                          | °F     |
| RCS Pressure           | 22.42                          | psig   |
| Pressurizer Level      | 46.2                           | %      |
| Control Bank Position  | Bank <u>0</u> Steps <u>230</u> |        |
| RCS Boron              | 671                            | ppm    |
| Condenser Vacuum       | 27.86                          | In. Hg |

1.2 Source and Status of Offsite Power

|           |     |     |      |               |     |     |      |
|-----------|-----|-----|------|---------------|-----|-----|------|
| STA Aux   | I/S | OOS | STBY | GT Substation | I/S | OOS | STBY |
| APP R DG: | I/S | OOS | STBY | N/A           |     |     |      |

*APR 10/10*

480 Volt Buses/EDGs:

|                  |                        |
|------------------|------------------------|
| 2A: I/S OOS STBY | EDG 22/31 I/S OOS STBY |
| 3A: I/S OOS STBY |                        |
| 5A: I/S OOS STBY | EDG 21/33 I/S OOS STBY |
| 6A: I/S OOS STBY | EDG 23/32 I/S OOS STBY |

6.9 KV Buses

|                 |                 |
|-----------------|-----------------|
| 1: I/S OOS STBY | 2: I/S OOS STBY |
| 3: I/S OOS STBY | 4: I/S OOS STBY |
| 5: I/S OOS STBY | 6: I/S OOS STBY |

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Attachment 10.3

DATA SUMMARY

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1.3 Plant Equipment in Operation (circle appropriately)

|                              |         |           |       |       |       |           |
|------------------------------|---------|-----------|-------|-------|-------|-----------|
| Reactor Coolant Pumps        | 21/31   | 22/32     | 23/33 | 24/34 |       |           |
| Charging Pumps               | 21/31   | 22/32     | 23/33 |       |       |           |
| Main Boiler Feed Pumps       | 21/31   | 22/32     |       |       |       |           |
| Aux. Boiler Feed Pumps       | 21/31   | 22/32     | 23/33 |       |       | Stby.     |
| Condensate Pumps             | 21/31   | 22/32     | 23/33 |       |       |           |
| Feed Reg. Valves             | Main    | Low Flow  |       |       |       | Aux. Feed |
| Heater Drain Tank Pumps      | 21/31   | 22/32     |       |       |       |           |
| Condensate Polisher          | Partial | Full Flow | (NIS) |       |       | N/A       |
| C.P. Vessels in Service      | A       | B         | C     | D     | E     | F         |
| Circulating Water Pumps      | 21/31   | 22/32     | 23/33 | 24/34 | 25/35 | 26/36     |
| Circulating Water Pump Speed | 350     | 360       | 345   | 365   | 350   | 355       |

1.4 Status of Controllers (circle appropriately)

|                               |                    |        |                   |          |
|-------------------------------|--------------------|--------|-------------------|----------|
| Rod Control                   | (AUTO)             | MANUAL |                   |          |
| Condenser Steam Dumps         | (AUTO)             | MANUAL | TEMPERATURE       | PRESSURE |
| RCS Makeup                    | (AUTO)             | MANUAL |                   |          |
| Charging Pumps                | (AUTO)             | MANUAL |                   |          |
| PRZR Pressure Control Channel | 1                  |        |                   |          |
| PRZR Level Control Channel    | 2                  |        |                   |          |
| Main Feed Reg. Valves in AUTO | 21/31              | 22/32  | 23/33             | 24/34    |
| Steam Generator SF/FF:        | Steam Flow Channel |        | Feed Flow Channel |          |
| 21/31 S/G                     | A                  | (B)    | A                 | (B)      |
| 22/32 S/G                     | A                  | (B)    | A                 | (B)      |
| 23/33 S/G                     | A                  | (B)    | A                 | (B)      |
| 24/34 S/G                     | A                  | (B)    | A                 | (B)      |

1.5 PORV/ Block Valve Status (circle as appropriate)

|                          |                                       |                              |                                       |              |
|--------------------------|---------------------------------------|------------------------------|---------------------------------------|--------------|
| 535<br>RCS-MOV-535       | <input checked="" type="radio"/> OPEN | <input type="radio"/> CLOSED | TRIP PULLOUT                          | DE-ENERGIZED |
| 536<br>RCS-MOV-536       | <input checked="" type="radio"/> OPEN | <input type="radio"/> CLOSED | TRIP PULLOUT                          | DE-ENERGIZED |
| PCV-455C<br>RCS-MOV-455C | <input type="radio"/> OPEN            | <input type="radio"/> CLOSED | <input checked="" type="radio"/> AUTO |              |
| PCV-456<br>RCS-MOV-456   | <input type="radio"/> OPEN            | <input type="radio"/> CLOSED | <input checked="" type="radio"/> AUTO |              |

1.6 Steam Generator Chemistry Parameters During Transient

|                                 |                |                  |
|---------------------------------|----------------|------------------|
| Chloride (highest)              | 0.35 ppb       | Time <u>8:33</u> |
| Cation Conductivity (highest)   | 1.71 μmho/cm   | Time <u>8:33</u> |
| Specific Conductivity (highest) | 17.3 μmho/cm   | Time <u>8:33</u> |
| Sodium (highest)                | 0.32 ppb       | Time <u>8:33</u> |
|                                 | <u>Maximum</u> | <u>Minimum</u>   |
| S/G Pressure                    | 1005 psig      | 740 psig         |
| S/G Level                       | 42 %           | 0 %              |

1.7 RCS Parameters During Transient

- |   |                                      |                          |     |
|---|--------------------------------------|--------------------------|-----|
| 1.7.1 RCS Pressure remained above setpoint for automatic SI actuation                   | <input checked="" type="radio"/> YES | <input type="radio"/> NO | N/A |
| 1.7.2 RCS Pressure remained below setpoint for PRZR PORV or code safety valve actuation | <input checked="" type="radio"/> YES | <input type="radio"/> NO | N/A |
| 1.7.3 RCS temperature decreased less than 100 °F/hr                                     | <input checked="" type="radio"/> YES | <input type="radio"/> NO | N/A |
| 1.7.4 Indicated PRZR level remained on scale  | <input checked="" type="radio"/> YES | <input type="radio"/> NO | N/A |

IF any of the above are NO, THEN EXPLAIN: \_\_\_\_\_

\_\_\_\_\_

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Attachment 10.3

DATA SUMMARY

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- 1.8 **ATTACH and CHECK below** sequence of events printout and any other printout, chart, or data which can be used to determine the cause of the reactor transient or to show any abnormal condition during transient or transient recovery. (Reference 3.13)

- Sequence of Events
- Alarm Typewriter Printout (Unit 3)
- Trend Typewriter Printout (Unit 3)
- Log Typewriter Printout (Unit 3)
- Plant Information Computer System (Unit 2)
- S/G SF/FF Level Charts/ Paperless Recorders
- Reactor Power Charts/ Paperless Recorders
- RCS Pressure Chart/ Paperless Recorder
- PRZR Pressure Chart/ Paperless Recorder
- PRZR Level Chart/ Paperless Recorder
- RCS Temp. Chart/ Paperless Recorder
- Condenser Vacuum Chart/ Paperless Recorder
- Unit Log
- NPO Logs
- Other Logs or Charts (Chemistry, RP, etc.)

**Plant response to Event Phase 1, Part 2 (Reference 3.2)**

- |     |   |                    |    |     |
|-----|---|--------------------|----|-----|
| 1.0 | All Reactor Trip Breakers OPEN  | YES                | NO | N/A |
| 1.1 | All Rod Bottom Lights   | YES                | NO | N/A |
| 1.2 | Actuation Time Time Last Breaker Open   | 21:28:51           |    | N/A |
|     | Time of Initial Trip Signal   | 21:28:54           |    |     |
|     | Difference  | 40 milliseconds.   |    |     |
| 1.3 | Reactor Trip First Out Annunciator  | <u>MANUAL TRIP</u> |    |     |
|     | <u>OR</u>   |                    |    |     |
| 1.4 | Turbine Trip First Out Annunciator  | _____              |    |     |
| 1.5 | Did all Control Rods fully insert?  |                    |    |     |
|     | • (Unit 2) A rod is considered fully inserted if rod bottom light is lit and IRPI indicates < 12 steps.   | YES                | NO | N/A |
|     | • (Unit 3) A rod is considered fully inserted if rod bottom light is lit and IRPI indicates < 20 steps.   | YES                | NO | N/A |
| 1.6 | IF any control Rods did <u>NOT</u> insert, <u>THEN</u> :  |                    |    |     |
|     | • RECORD the rod numbers that did <u>NOT</u> insert:  | _____              |    |     |
|     | • INITIATE a CR   |                    |    |     |
|     | • CONTACT Reactor Engineering and DIRECT them to assess the operability of the affected rod(s) based on available data and performance trends of the rod(s) |                    |    |     |
|     | • NOTIFY Reactor Engineering to evaluate rod drop times and rod recoil and determine whether any tests need to be conducted.                                |                    |    |     |

**NOTE**

**(Unit 3 Only)** The opening of the Trip Breakers can be obtained from the Sequence of Events print out. The initial trip time will be equal to zero milliseconds, and Reactor Trip Breaker opening is obtained from address Y0007D and Y0006D

- 1.7 What was the digital point and its description which initiated the Sequence of Events printout?  
21:28:54 sec. Reactor MANUAL TRIP
- 1.8 What was the real time corresponding to elapsed time = 0 on the Sequence of Events printout?  
21:28:54 sec.
- 1.9 Did either Reactor Trip Breaker open in 150 milliseconds or greater?  
 RECORD Time Breaker A 40 milliseconds  
 Breaker B 34 milliseconds
- 1.10 IF 150 milliseconds or greater, THEN INITIATE a CR and CONTACT I&C.
- 1.11 Did both Reactor Trip Breakers open within the following time periods from the time of the trip signal indication?
- 1.11.1 45 – 92 milliseconds (for auto trip) YES NO N/A MANUAL TRIP
- 1.11.2 145 – 190 milliseconds (for SI initiated trip – time from SI signal to trip breaker opening)  
 YES NO N/A MANUAL TRIP  
NO SI
- 2.0 Feedwater Response:
- Feedwater Isolation YES NO N/A
- Aux. Feedwater Auto Start YES NO N/A
- 3.0 SI Initiated On Demand? YES NO N/A
- 3.1 IF yes THEN CHECK safety features actuated

|                           |                      |
|---------------------------|----------------------|
| SI Train A _____          | Cont. Spray _____    |
| SI Train B _____          | M.S. Isolation _____ |
| Cont. Isol. Phase A _____ | IVSWS _____          |
| Cont. Isol. Phase B _____ | 480V EDG Start _____ |

- 3.1 Did SI cause actual injection into the core? YES NO N/A

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Attachment 10.3

DATA SUMMARY

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3.2 Did any EDG fail to perform properly?

YES

NO

N/A

IF yes, THEN EXPLAIN:

3.3 Did any system fail to function properly?

YES

NO

N/A

IF yes, THEN EXPLAIN: 34 RCP Trip Stand Pipe high level NO SCAL Return flow.

4.0 Did Pressurizer pressure and level fail to respond normally?

YES

NO

N/A

IF yes, THEN EXPLAIN:

5.0 Did any primary system fail to function properly?

YES

NO

IF yes, THEN EXPLAIN:

6.0 Did any secondary system fail to function properly?

YES

NO

IF yes, THEN EXPLAIN:

7.0 Any unusual conditions during Rx transient or transient recovery?

YES

NO

N/A

IF yes, THEN EXPLAIN:

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Attachment 10.3

DATA SUMMARY

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8.0 Any unusual or unexplained annunciators during transient or transient recovery?

YES  NO

IF yes, THEN EXPLAIN: Source Range Loss of Detector Voltage IN/OUT  
34 Stand Pipe <sup>to 9/10/03</sup> to High Level, Low REP Seal return flow.

9.0 Did Pressurizer PORV and Safetys fail to perform properly?

YES  NO  N/A

IF yes, THEN EXPLAIN: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10.0 Did any Main Steam Safety Valves lift on demand?

YES  NO  N/A

IF yes, THEN EXPLAIN: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

11.0 Control System Response

11.1 Turbine Runback

YES  NO  N/A

IF yes: Runback from \_\_\_\_\_ MW to \_\_\_\_\_ MW

Rx Power from \_\_\_\_\_ % to \_\_\_\_\_ %

12.0 Does Initiating Event agree with:

12.1 First Out Alarm Panel ?

YES  NO

12.2 Control Room Indications

YES  NO

IF NO, THEN EXPLAIN: \_\_\_\_\_  
\_\_\_\_\_

13.0 Any radiological release:

YES  NO

IF yes, THEN EXPLAIN: \_\_\_\_\_  
\_\_\_\_\_

Chronology of Events

| TIME     | EVENT DESCRIPTION  |
|----------|--|
| 2105 *   | BOP (RO) notified by SM of Service water leak              |
| ~ 2115 * | BOP (RO) informed CESO and reduced MVARS to unity          |
| ~ 2123 * | Attempts to isolate leak unsuccessful                      |
| 2129     | Manual trip due to Service Water leak in Generator housing |

See IP3 Unit Log for subsequent actions / descriptions

\* approximate time based on event recollection forms.

|                                  |                       |
|----------------------------------|-----------------------|
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| <b>Attachment 10.4</b>           | <b>EVENT ANALYSIS</b> |

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Description of Event (ATTACH additional sheets as necessary)

SM notified to BOP (RO) of service water leak into the exciter enclosure. Attempts to isolate leaks were unsuccessful and reports indicated that the leak was getting worse. Manual Reactor trip at 2129

**IF more space is required, THEN DUPLICATE Page**

|  |                      |
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| <b>Attachment 10.5 POST TRANSIENT REVIEW GROUP SUMMARY AND RECOMMENDED ACTIONS</b> |                      |

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**Section 1: Preliminary Safety Assessment**

After reviewing the data NOTE here any indications that are unexpected or abnormal.

34 RCP tripped  
 34 RCP ~~seal~~ seal #2 seal hung open (cocked)  
 IR-35, 36 did not trend per expectations - off scale low  
 31 MBFP relief valve lifted, CO2 discharged  
 Section 2 Initiating Cause for Reactor Trip/Transient  
 manual reactor trip initiated due to  
 SW leakage into exciter enclosure

**Section 3 Plant Parameters Consistent with FSAR, Technical Specifications, Technical Requirements Manual, Design Basis Documents, and Safety Limits for the Type of Transient**

Yes

**Section 4 Unexpected Aspect of Trip/Transient Behavior**

See section 1

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**Attachment 10.5 POST TRANSIENT REVIEW GROUP SUMMARY AND RECOMMENDED ACTIONS**

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**Section 5: Personnel Performance Problems**

None identified

**Section 6 Was conservative decision-making evident during the event?**

Yes - manually tripped reactor when attempts to isolate leak failed was conservative decision making

**Section 7 Procedural Problems**

None observed

**Section 8 Were actions taken outside established procedures? Were they documented and evaluated? Was a CR initiated? (Reference 3.3)**

No - operators were OK

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Section 9: Any Detrimental effect on Plant Equipment

34 RCP seal

Section 10 Any data unsupported by other diverse indications

No.

Section 11 Additional Remarks (explain any degraded trends or equipment responses, unanticipated alarms or indications, repeat transients, any areas of concern, or extent of condition)

See section none.

Section 12 Any further reviews/evaluations needed?

- 1) Determine why ~~WATNED~~ CO-99-2 lifted
- 2) Understand 34 RCP fast transient trip
  - 3) Determine why CO<sub>2</sub> discharge ~~WATNED~~
  - 4) Determine cause of 34 RCP seal leak

|  |                      |
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| <b>Attachment 10.5 POST TRANSIENT REVIEW GROUP SUMMARY AND RECOMMENDED ACTIONS</b> |                      |

**Section 13 CORRECTIVE ACTIONS**

**Section 13A: For Reactor Trips: Is corrective action recommended prior to returning to power?**

YES     
  NO     
  N/A

Specify Recommended Corrective Actions prior to returning to power:

- mode 1      • Isolate exciter leak and repair

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- mode 2      • ~~Repair~~ Restore 34 RCP seals

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- mode 2      • Return to normal operations IR-35, 36

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- Ensure CD-99-2 is understood and repair as necessary

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- Restore or establish compensating measures as required for CO<sub>2</sub>

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**Section 13B:**

Specify Recommended Corrective Actions after returning to power: (Include a CA to Simulator Support to benchmark and review the event for simulator and plant differences)

None

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**Section 14: Plant Transient Response** : IF post-transient response is determined to be abnormal, OR there were non-conservative actions/decisions made, OR the PTRG feels the need to have an additional review for any reason, THEN the PTRG can recommend that an ITRG be convened. The basis for this recommendation must be explained below:

|                          |        |  |                 |
|--------------------------|--------|--|-----------------|
|                          | NORMAL |  |                 |
| Is the ITRG recommended: | NO     |  | ABNORMAL<br>YES |

IF yes, THEN EXPLAIN: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Section 15: Recommended Changes to Plant Status** (e.g., Proceed to Cold Shutdown)

Hold in Mode 3 until recommended actions are completed.

**Section 16** Indicate below any additional information or remarks that could be used to reconstruct the event or identify the cause of the transient.

None

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Attachment 10.5 POST TRANSIENT REVIEW GROUP SUMMARY AND RECOMMENDED ACTIONS

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Section 17: Event Determination

- 1.0 Is the cause of the trip/transient positively known (to the extent of a component, e.g., a fuse that requires detailed laboratory analysis for type of failure need NOT be known at the time of Trip/Transient Review) and has been corrected OR appropriate corrective action restraints are in place AND either of the following:
- 1.1 All safety-related and other important equipment functioned properly during the transient
- OR
- 1.2 IF any safety-related or other important equipment did NOT function properly during the transient, THEN the equipment malfunction has either been corrected OR appropriate corrective action restraints are in place OR redundant equipment is available.
- YES                       NO
- 2.0 IF the answer to question 1.0 (above) is YES, THEN review by an Independent Transient Review Group (ITRG) is NOT required due to the cause of the trip. OSRC review is required within 14 days of SVP signature)
- 3.0 IF the answer to question 1.0 (above) is NO, THEN review by ITRG and OSRC is required prior to startup. (Reference 3:14)
- 4.0 Was a safety limit violated during this transient?
- YES                       NO
- 5.0 IF the answer to question 4.0 (above) is YES, THEN ITRG, OSRC, and NRC approval is required prior to Startup.

**Plant Transient Review Group Members**

|                    |            |              |
|--------------------|------------|--------------|
| Patrick J. Polasek | IT         | 9/10/10 0312 |
| PTRG Chairperson   | Department | Date/ Time   |
| Joe Reynolds       | CA&A       | 9/10/10 0312 |
| Member             | Department | Date/ Time   |
| Art Singer         | Training   | 9/10/10 0312 |
| Member             | Department | Date/ Time   |
| Tom Ras            | Operations | 9/10/10 0312 |
| Member             | Department | Date/ Time   |
| Tat Chan           | Eng        | 9/10/10 0312 |
| Member             | Department | Date/ Time   |
| Kevin Curley       | Eng        | 9/10/10 0312 |

**Operations Review and Approval**

Reviewed: \_\_\_\_\_  
Manager, Operations Date/ Time

**OM Review and Approval**

Is ITRG Required? YES NO  
 Is ITRG Required prior to restart? YES NO

List approved PTRG Recommended Actions (have PTRG member create and attach CR sheets)

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\_\_\_\_\_  
Operations Manager Date/ Time

|   |                      |
|---|----------------------|
| <b>POST TRANSIENT EVALUATION</b>              | IP-SMM-OP-105 Rev: 6 |
|   | Page 37 of 40        |
| <b>Attachment 10.6 ITRG TRANSIENT SUMMARY</b> |                      |

1.0 Unit No.: \_\_\_\_\_ Transient (CR) No.: \_\_\_\_\_

2.0 Transient Date: \_\_\_\_\_ Transient Time: \_\_\_\_\_

3.0 Adequacy and Accuracy of PTRG Evaluation: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

4.0 Adequacy and Accuracy of PTRG Initiating Cause Determination: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

5.0 Adequacy and Accuracy of PTRG Evaluation of Plant, Procedure, and Personnel Performance: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

6.0 Evaluation of Impact of Criteria Requiring the ITRG: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**POST TRANSIENT EVALUATION**

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**Attachment 10.6**

**ITRG TRANSIENT SUMMARY**

Page 2 of 2

7.0 Safety Significance of Event: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

8.0 Recommended Corrective Actions:  
Prior to Recovery Restart: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Following Recovery Restart: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

9.0 ITRG Members:

| Name                       | Signature | Date  |
|----------------------------|-----------|-------|
| _____                      | _____     | _____ |
| RCA Experienced Individual | _____     | _____ |
| _____                      | _____     | _____ |
| Licensing                  | _____     | _____ |
| _____                      | _____     | _____ |
| System Engineering Manager | _____     | _____ |

|                                    |                      |
|------------------------------------|----------------------|
| <b>POST TRANSIENT EVALUATION</b>   | IP-SMM-OP-105 Rev: 6 |
|                                    | Page 39 of 40        |
| <b>Attachment 10.7 OSRC REVIEW</b> |                      |

Page 1 of 1

Unit No.: \_\_\_\_\_ Transient (CR) No.: \_\_\_\_\_

Transient Date: \_\_\_\_\_

OSRC Meeting Number: \_\_\_\_\_ Date: \_\_\_\_\_

Detail any pertinent OSRC comments below:

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**NOTE**

OSRC Review Required within 14 days of Post Transient Evaluation Approval Date

Completion of Independent Review:

1. Forward a copy of this independent review to CA&A for the CR file.
2. Attach CR forms for all actions that resulted from the independent review and which will be carried against the CR for this event.

Presented by:

| Name                                   | Signature | Date |
|--|-----------|------|
| Assistant Operations Manager/ designee |           |      |

|   |                      |
|---|----------------------|
| <b>POST TRANSIENT EVALUATION</b>              | IP-SMM-OP-105 Rev: 6 |
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| <b>Attachment 10.8 OM REVIEW AND APPROVAL</b> |                      |

Page 1 of 1

|   |     |    |     |
|---|-----|----|-----|
| All required reviews complete   | YES | NO |     |
| The initiating cause of the transient has been identified   | YES | NO |     |
| Safety-related and other essential equipment has functioned properly during the transient if required, and if <u>NOT</u> , corrective maintenance has been completed and the equipment satisfactorily tested <u>OR</u> appropriate restraints are in place. | YES | NO |     |
| Provisions for additional monitoring of plant equipment or personnel have been provided if required   | YES | NO |     |
| Extent of condition adequately addressed  | YES | NO |     |
| The plant is in a condition to restart/recovery and is consistent with the requirements of the FSAR, Technical Specifications, Technical Requirements Manual, and station procedures  | YES | NO |     |
| If a technical specification safety limit exceeded, NRC approval obtained   | YES | NO | N/A |
| Plant Restart/ Recovery Recommended   | YES | NO |     |

|                    |           |           |
|--------------------|-----------|-----------|
| Name               | Signature | Date/Time |
| Operations Manager |           |           |

*Entergy*

**CONDITION REPORT**

**CR-IP3-2010-02682**

**Originator:** Lewis, Matthew W.

**Originator Phone:** 8281

**Originator Site Group:** IP3 Operations Mgmt IP3

**Operability Required:** Y

**Supervisor Name:** Dinelli, John

**Reportability Required:** Y

**Discovered Date:** 09/09/2010 21:54

**Initiated Date:** 09/09/2010 22:06

**Condition Description:**

Unit 3 was manually tripped at 21:29 due to water leak in the Exciter housing (Service Water, from the Exciter Coolers). Anomalies noted on the plant trip: 34 RCP tripped during the 6.9KV Bus transfer (6.9KV Bus 2; Bus 2 did re-energize via UT2/ST5 tie breaker and Bus 2 did not receive an undervoltage), 31 MBFP suction relief valve lifted causing a CO2 discharge on 31 MBFP (subsequently reseated and CO2 secured).

**Immediate Action Description:**

Entered E-0 and ES-0.1.

**Suggested Action Description:**

Additional parameters noted on 34 RCP following the trip: Standpipe high level alarm, loss of seal return flow on both indicators, RCDT trending up abnormally fast (frequent pump-downs); possible #2 seal failure.

**Entergy**

**CORRECTIVE ACTION**

**CR-IP3-2010-02682**

CA Number: 1

|              | Site | Group                    | Name              |
|--------------|------|--------------------------|-------------------|
| Assigned By: | IP3  | Info Technology Mgmt IP3 | Polasek,Patrick J |
| Assigned To: | IP3  | Info Technology Mgmt IP3 | Polasek,Patrick J |

Subassigned To :

Originated By: Polasek,Patrick J 9/9/2010 23:27:37

Performed By:

Subperformed By:

Approved By:

Closed By:

Current Due Date: 09/13/2010

Initial Due Date: 09/13/2010

CA Type: ACTION

Plant Constraint: MODE 1/PWR OPERATION

CA Description:

Perform a PTRG on the September 9, 2010 manual reactor trip.

Response:

Subresponse :

Closure Comments:

**Entergy**

**CORRECTIVE ACTION**

**CR-IP3-2010-02682**

CA Number: 2

|              | Site | Group                    | Name              |
|--------------|------|--------------------------|-------------------|
| Assigned By: | IP3  | Info Technology Mgmt IP3 | Polasek,Patrick J |
| Assigned To: | IP3  | Info Technology Mgmt IP3 | Polasek,Patrick J |

Subassigned To :

Originated By: Polasek,Patrick J 9/9/2010 23:36:26  
Performed By:  
Subperformed By:  
Approved By:  
Closed By:

Current Due Date: 09/23/2010

Initial Due Date: 09/24/2010

CA Type: ACTION

Plant Constraint: #NONE

**CA Description:**

In accordance with IP-SMM-OP-105, section 6.5.7, ensure OSRC review is completed within 14 days of the PTRG approval date.

Response:

Subresponse :

Closure Comments:

*Entergy*

**CORRECTIVE ACTION**

**CR-IP3-2010-02682**

CA Number: 3

|              | Site | Group                    | Name               |
|--------------|------|--------------------------|--------------------|
| Assigned By: | IP3  | Info Technology Mgmt IP3 | Polasek,Patrick J  |
| Assigned To: | IP3  | Training Mgmt IP3        | Robenstein,Richard |

Subassigned To :

Originated By: Polasek,Patrick J 9/9/2010 23:45:44

Performed By:

Subperformed By:

Approved By:

Closed By:

Current Due Date: 11/29/2010

Initial Due Date: 11/30/2010

CA Type: ACTION

Plant Constraint: #NONE

CA Description:

In accordance with procedure IP-SMM-OP-105, benchmark the event for simulator and plant differences.

Response:

Subresponse :

Closure Comments:

**Entergy**

**CORRECTIVE ACTION**

**CR-IP3-2010-02682**

CA Number: 4

|              | Site | Group                     | Name              |
|--------------|------|---------------------------|-------------------|
| Assigned By: | IP3  | Info Technology Mgmt IP3  | Polasek,Patrick J |
| Assigned To: | IP3  | Operations Watch Mgmt IP3 | Dinelli,John      |

Subassigned To :

Originated By: Polasek,Patrick J 9/10/2010 00:06:03  
Performed By:  
Subperformed By:  
Approved By:  
Closed By:

Current Due Date: 10/21/2010

Initial Due Date: 10/22/2010

CA Type: ACTION

Plant Constraint: #NONE

**CA Description:**

In accordance with procedure, IP-SMM-OP-105, section 6.7.3, Operations to assemble an operations performance review (OPRC) to evaluate crew performance during the transient.

Response:

Subresponse :

Closure Comments:

**Entergy**

**CORRECTIVE ACTION**

**CR-IP3-2010-02682**

CA Number: 5

|              | Site | Group                    | Name              |
|--------------|------|--------------------------|-------------------|
| Assigned By: | IP3  | Info Technology Mgmt IP3 | Polasek,Patrick J |
| Assigned To: | IP3  | Maint Mech Mgmt IP3      | Bouderau,Gregory  |

Subassigned To :

Originated By: Polasek,Patrick J

9/10/2010 03:36:13

Performed By:

Subperformed By:

Approved By:

Closed By:

Current Due Date: 09/13/2010

Initial Due Date: 09/13/2010

CA Type: ACTION

Plant Constraint: MODE 1/PWR OPERATION

CA Description:

\*\* MODE 1 \*\* Isolate exciter leak and repair.

Response:

Subresponse :

Closure Comments:

**Entergy**

**CORRECTIVE ACTION**

**CR-IP3-2010-02682**

CA Number: 6

|              | Site | Group                               | Name              |
|--------------|------|-------------------------------------|-------------------|
| Assigned By: | IP3  | Info Technology Mgmt IP3            | Polasek,Patrick J |
| Assigned To: | IP3  | System Eng Primary System Staff IP3 | Chan,Tat          |

Subassigned To :

Originated By: Polasek,Patrick J 9/10/2010 03:39:20

Performed By:

Subperformed By:

Approved By:

Closed By:

Current Due Date: 09/11/2010

Initial Due Date: 09/11/2010

CA Type: ACTION

Plant Constraint: MODE 2/STARTUP-CRITI

CA Description:

\*\* MODE 2 \*\* Restore 34 RCP seals.

Response:

Subresponse :

Closure Comments:

**Entergy**

**CORRECTIVE ACTION**

**CR-IP3-2010-02682**

CA Number: 7

|              | Site | Group                        | Name                  |
|--------------|------|------------------------------|-----------------------|
| Assigned By: | IP3  | Info Technology Mgmt IP3     | Polasek,Patrick J     |
| Assigned To: | IP3  | System Eng Elec/I&C Mgmt IP3 | Andreozzi,Vincent Jos |

Subassigned To :

Originated By: Polasek,Patrick J

9/10/2010 03:42:18

Performed By:

Subperformed By:

Approved By:

Closed By:

Current Due Date: 09/11/2010

Initial Due Date: 09/11/2010

CA Type: ACTION

Plant Constraint: #NONE

CA Description:

Determine the cause of 34 RCP trip.

Response:

Subresponse :

Closure Comments:

**Entergy**

**CORRECTIVE ACTION**

**CR-IP3-2010-02682**

CA Number: 8

|              | Site | Group                    | Name              |
|--------------|------|--------------------------|-------------------|
| Assigned By: | IP3  | Info Technology Mgmt IP3 | Polasek,Patrick J |
| Assigned To: | IP3  | Maint Elect Mgmt IP3     | Lijoi,John J      |

Subassigned To :

Originated By: Polasek,Patrick J 9/10/2010 03:44:42  
Performed By:  
Subperformed By:  
Approved By:  
Closed By:

Current Due Date: 09/11/2010

Initial Due Date: 09/11/2010

CA Type: ACTION

Plant Constraint: MODE 2/STARTUP-CRITI

CA Description:

\*\*\* MODE 2 \*\*\* Return to normal operations IR-35, 36.

Response:

Subresponse :

Closure Comments:

**Entergy**

**CORRECTIVE ACTION**

**CR-IP3-2010-02682**

CA Number: 9

|              | Site | Group                                | Name              |
|--------------|------|--------------------------------------|-------------------|
| Assigned By: | IP3  | Info Technology Mgmt IP3             | Polasek,Patrick J |
| Assigned To: | IP3  | System Eng Secondary System Mgmt IP3 | Vasely,Michael J  |

Subassigned To :

Originated By: Polasek,Patrick J 9/10/2010 03:47:19

Performed By:

Subperformed By:

Approved By:

Closed By:

Current Due Date: 09/13/2010

Initial Due Date: 09/13/2010

CA Type: ACTION

Plant Constraint: #NONE

CA Description:

Ensure CD-99-2 is understood and repair as necessary.

Response:

Subresponse :

Closure Comments:

**Entergy**

**CORRECTIVE ACTION**

**CR-IP3-2010-02682**

CA Number: 10

|              | Site | Group                    | Name              |
|--------------|------|--------------------------|-------------------|
| Assigned By: | IP3  | Info Technology Mgmt IP3 | Polasek,Patrick J |
| Assigned To: | IP3  | P&C Eng Codes Mgmt IP3   | Troy,Michael J    |

Subassigned To :

Originated By: Polasek,Patrick J 9/10/2010 03:49:11  
Performed By:  
Subperformed By:  
Approved By:  
Closed By:

Current Due Date: 09/13/2010 Initial Due Date: 09/13/2010

CA Type: ACTION

Plant Constraint: #NONE

CA Description:

Restore or establish compensatory measures as required for CO2.

Response:

Subresponse :

Closure Comments:

*Entergy*

ADMIN

CR-IP3-2010-02682

Remarks Description:

Closure Description:

|  |   |                          |                    |
|--|---|--------------------------|--------------------|
|  <b>IPEC SITE<br/>MANAGEMENT<br/>MANUAL</b> | <b>QUALITY RELATED<br/>ADMINISTRATIVE PROCEDURE</b> | <b>IP-SMM<br/>LI-108</b> | <b>Revision 11</b> |
|  | <b>INFORMATIONAL USE</b>                            | <b>Page</b>              | <b>67 of 112</b>   |

**ATTACHMENT 10.2**

**NOTIFICATIONS**

Page 1 of 10

**GENERAL INSTRUCTIONS**

Do not delay in making a required NRC immediate notification. If unable to contact an Entergy individual, proceed to the next appropriate step and try to contact the individual again after the attachment is completed.

**INITIAL NOTIFICATIONS**

1. **IF** an Emergency Event, enter the Emergency Plan IP-EP-120, "Emergency Plan Classifications" and make required notifications (1-Hour NRC hotline notification is required).
2. **IF** a Non-Emergency Event (1-hr, 4-hr, 8-hr, or 24-hour NRC hotline notification is required), **THEN NOTIFY** the NRC Operation Center by the first of the following which ever is successful within the time limit specified in Attachment 10.1:

| Telephone System  | Telephone Number             |
|---|------------------------------|
| a. Emergency Notification System (Control Room Telephone) | Lift Receiver                |
| b. NRC Operations Center Commercial Telephone             |                              |
| 1. Primary  | (301) 816-5100/ 800-532-3469 |
| 2. Backup (1 <sup>st</sup> )                              | 301-951-0550/800-449-3694    |
| 3. Backup (2 <sup>nd</sup> ) & 3rd                        | 301-415-0550/301-415-0553    |

Maintain a continuous open communications channel with the NRC when requested.

**NOTE**

AS AN AID TO THE NOTIFICATION PROCESS, INFORMATION MAY BE FAXED TO THE NRC OPERATIONS CENTER AT (301) 816-5151 AFTER THE PHONE NOTIFICATION IS COMPLETED. A FAX SHALL NOT BE USED IN LIEU OF TELEPHONE NOTIFICATION.

3) For contaminated spills/leaks or release of hazardous substances notify as follows:

- a. ~~For radiological contaminated spills and leaks notify radiation protection and if reporting is required~~ ensure IPEC Communications and the Corporate Duty Manager is notified with direction to notify ENN Government Affairs and ENN Corporate Communications with the need for them to inform local, state and municipality stakeholders of the contaminated spill/leak. Notification of State, County, Town should be within one business day (See EN-RP-113).
- b. For releases of a hazardous substance in transportation accidents involving radioactive material that meet the criteria of Title 40 CFR 302.6, EPA Notification Requirements and Title 40 CFR 355.40, Emergency Planning and Notification, refer to IPEC procedure OAP-039 (Transportation Incidents Involving Radioactive Material). Reporting requirements are also contained in 6 NYCRR Part 597.2, Table 1 and Title 49 CFR, DOT, Subpart C, Hazardous Material, Part 171.15 and 171.16.

4) If NRC Region I is specified for a Non-Emergency event on Attachment 10.1, **THEN** notify the NRC Region Office by the first of the following means which is successful within the time limit specified in Attachment 10.1:

|                           |                |
|---------------------------|----------------|
| USNRC Regional Office     | (610) 337-5000 |
| Via NRC Operations Center | (301) 816-5100 |

5. For ALL notifications:

a. NOTIFY the first of one of the following:

| Name                                 | Work                  | Home   | Beeper/Mobile |
|--------------------------------------|-----------------------|--------|---------------|
| Joseph E. Pollock<br>(Site VP -IPEC) | 734-6700,<br>734-6701 |        | 845-803-5785  |
| Anthony Vitale<br>(GMPO)             | 734-5221              | (b)(6) | (b)(6)        |
| Anthony Williams<br>(OM)             | 598-5162              |        |               |

EXEMPTION 6

OCC

b. Notify the Corporate Duty Manager, WPO in accordance with corporate policy EN-OM-128.

| Name                      | Work | Home | Beeper/Mobile |
|---------------------------|------|------|---------------|
| Corporate Duty<br>Manager | N/A  | N/A  | (b)(6)        |

EXEMPTION 6  
2158

**NOTE**

The individual contacted shall ensure the remaining personnel in step 5.a are notified as required.

c. IF unable to contact one of the individuals in Step 5.a, contact the following "designated manager":

| Name                  | Work                | Home              | Beeper/Mobile     |
|-----------------------|---------------------|-------------------|-------------------|
| <del>Pat Conroy</del> | <del>734-6668</del> | <del>(b)(6)</del> | <del>(b)(6)</del> |

N/A

EXEMPTION 6

The designated manager contacted shall ensure the personnel in Step 4.a are notified.

d. Notify Communications by the first of one of the following:

| Name            | Work     | Home   | Beeper/Mobile |
|-----------------|----------|--------|---------------|
| Jerry Nappi     | 271-7132 | (b)(6) | (b)(6)        |
| Andrea Blizzard | 271-7081 |        |               |

EXEMPTION 6

Voice  
mail



ATTACHMENT 10.2

NOTIFICATIONS

e. Notify Emergency Planning by the first of one of the following:

| Name           | Work     | Home   | Beeper/Mobile |
|----------------|----------|--------|---------------|
| Brian Sullivan | 271-7479 | (b)(6) |               |
| Frank Phillips | 271-7170 |        |               |

EXEMPTION 6

① Ensure Notification of the other Indian Point Unit Control Rooms

Unit 2 numbers - (b)(6)  
Unit 3 numbers -

EXEMPTION 6

**NOTE**

For items of interest or of management discretion - the individual contacted in step 5.a or step 5.b shall review the event circumstances and explicitly determine the need for further reporting and advise directly the SM as to the reporting required.

② For reportable events notify an NRC Resident Inspector.

- a. For an Item of Interest, notify an NRC Resident Inspector ONLY if told to do so by the individual contacted in Step 5.a or Step 5.c.
- b. For Management Discretion, notify an NRC Resident Inspector if Item 80 is being reported.

③ IF the Senior Resident Inspector CANNOT be notified, call the alternate inspector:

| Name  | Work                               | Home | Beeper/Mobile |
|---|------------------------------------|------|---------------|
| Unit 2 - Resident Inspector<br>Odunayo Ayegbusi | Int: 734-5347<br>Ext: 914-739-8585 |      | (b)(6)        |
| Unit 3 - Resident Inspector<br>Paul Cataldo     | Int: 734-5347<br>Ext: 914-739-8585 |      |               |

EXEMPTION 6

2204

④ IF the NRC Resident Inspectors cannot be contacted at work or at home, THEN Notify the NRC Resident Inspector by dialing 739-8565, 739-9360 and leave a recorded message.

**IP3 Unit Log**  
**Friday, September 10, 2010**

**Midnight**  
**OAP-5**

- 
- 9/9/2010 08:00:00** 32 EDG CO2 system placed in manual IAW SOP-FP-3 to support 32 EDG outage [Dignam, John, FSS]
- 
- 9/9/2010 18:01:00** The following actions have been completed for STA turnover as per OAP-002: Reviewed the following: Shift Orders, Unit Log (since last watch or 5 days), AOT/ODCM Tracking Log, Standing Orders, Policy book and a Control Board walkdown with the off-going STA. [DeClemente, Vinnie, Shift Technical Advisor]
- 
- 9/9/2010 19:00:00** PLANT STATUS: Unit on line @ 100%, 3-POP-2.1 in effect, 1-2-3 Essential SW Header, Load Limit 1 in control, CPF bypassed via Post Filter Bypass. Aux steam inservice to Unit 2. EQUIPMENT OUT OF SERVICE: R-5, R-56C OOS. CET's R-10 & K-13 (Temp. Alt. R-10 removed from alarm ckt) OOS. Diesel Fire Pump PTO'd. 32 PZR BU Htr. Group Ckt #1 PTO'd. RCP Seal Water Return Filter PTO'd & bypassed. SFP Filter PTO'd & Demin bypassed for filter replacement. CO2 Tank 3-1 (North Tank) PTO'd & vented. CO2 tank 3-2 (South Tank) Low level alarm is up. FSB Fan PTO'd w/T. Alt removing fan from alarm ckt. 31 Primary Water Pump PTO'd. OTHER: Rx Vessel Outer O-ring I/S. IA/AA x-tied. TCV-1103 bypass open to lower VC temp. LCV-1129 In "Man" @ 10% open for CST temp control. Temp Alt. 31 EDG DF-LCV-1207B (disables limit switch for valve). SGBD I/S to SGBDR @ ~20 gpm each. GE Mobile I/S to CST @ 20 gpm. PROTECTED EQUIPMENT: Electric Fire Pump, Feeders 95891, 96951, 96952, 95331, 95332, 13W92 and 13W93, 32 Primary Water Pump, 31 & 33 EDG's. [Yun, Cheehun, BOP Operator and key 211]
- 
- 9/9/2010 19:16:00** Performed 50 gallon dilution in accordance with 3-SOP-CVCS-003, Reactor Coolant System Boron Concentration Control, to offset core burn up and maintain Reactor Power optimized near 100 %. Total anticipated Tave effect is less than 0.1 degree F. [Nilsson, Chris, Operator at the Controls]
- 
- 9/9/2010 20:40:00** Dilution reactivity addition effect complete. Less than a 0.1 degree F Tave change. [Nilsson, Chris, Operator at the Controls]
- 
- 9/9/2010 20:08:52** STA Vital Area Tours completed as per OAP-115, Operations Commitments and Policy Details. [DeClemente, Vinnie, Shift Technical Advisor]
- 
- 9/9/2010 21:00:00** Placed 32 Monitor Tank on Recirc @ 83 %. [Nilsson, Chris, Operator at the Controls]
- 
- 9/9/2010 21:10:00** Start 3-PT-Q028, Containment Isolation Valves PCV-1190, PCV-1191, and 1192 Pressure Relief System test. [Martin, Marc, Nuclear NPO and key 215]
- 9/9/2010 21:20:00** 3-PT-Q028, Containment Isolation Valves PCV-1190, PCV-1191, and 1192 Pressure Relief System test completed - Sat. [Martin, Marc, Nuclear NPO and key 215]
- 
- 9/9/2010 21:29:00** Manual Reactor Trip due to Service Water Leak in Generator Housing. 34 Reactor Coolant Pump Tripped immediately following Reactor Trip. [Hedges, Luke, MISC]

**IP3 Unit Log**  
**Friday, September 10, 2010**

**Midnight**  
**OAP-5**

|   |                                     |   |
|---|-------------------------------------|---|
|    | <b>9/9/2010</b><br><b>21:30:00</b>  | 34 RCP tripped when Reactor was tripped. [Yun, Cheehun, BOP Operator and key 211]   |
|    | <b>9/9/2010</b><br><b>21:31:00</b>  | 34 Spray valve isolated. [Yun, Cheehun, BOP Operator and key 211]   |
|    | <b>9/10/2010</b><br><b>02:16:24</b> | No entry text specified. [Hedges, Luke, MISC]   |
|    | <b>9/9/2010</b><br><b>21:33:00</b>  | CO2 Discharge at 31 MBFP. Cause determined to be high temperature resulting from lifting of the 31 MBFP suction relief valve. [Hedges, Luke, MISC]  |
|    | <b>9/9/2010</b><br><b>21:35:00</b>  | Transitioned to ES 0.1 Reactor Trip Response [Hedges, Luke, MISC]   |
|    | <b>9/9/2010</b><br><b>21:38:00</b>  | Entered 3-TS -10-2845 due to CO2 inoperable due to low level in South CO2 tank (57%), Security providing continuous fire watch in 15' & 33" Control Building & Roving Fire watch in EDG cells Technical Specifications Unit: 3 Type: 3TRM Section: 3.7.A.7 Action Statement: 3TRM_3_3.7.A.7_A (2), Unit: 3 Type: 3TRM Section: 3.7.A.7 Action Statement: TRM_3_3.7.A.7_B (1) [DeClemente, Vinnie, MISC] |
|   | <b>9/9/2010</b><br><b>21:39:00</b>  | 345 KV Motor Operated Disconnect Switch F1-3 Open [Hedges, Luke, MISC]  |
|  | <b>9/9/2010</b><br><b>21:42:00</b>  | Both MBFPs verified tripped [Hedges, Luke, MISC]  |
|  | <b>9/9/2010</b><br><b>21:48:00</b>  | Condenser Steam Dumps transferred to Pressure Control Mode. [Hedges, Luke, MISC]  |
|  | <b>9/9/2010</b><br><b>21:50:00</b>  | Observed no Seal Return Flow from 34 RCP. [Hedges, Luke, MISC]  |
|  | <b>9/9/2010</b><br><b>21:52:00</b>  | 31 and 32 Source Range Detectors are energized with Source Range Loss Of Detector Voltage Alarm still in alarm. 31 and 32 Intermediate Range Detectors observed to be pegged low. Reference CR-IP3-2010-02686 [Hedges, Luke, MISC]  |
|  | <b>9/9/2010</b><br><b>21:53:00</b>  | Source Range Loss Of Detector Voltage Clear. [Hedges, Luke, MISC]   |
|  | <b>9/9/2010</b><br><b>21:57:00</b>  | Received Source Range Loss Of Detector Voltage Alarms. 31 and 32 Source Range Instruments observed to be energized. [Hedges, Luke, MISC]  |
|  | <b>9/9/2010</b><br><b>21:55:00</b>  | Secured 32 and 33 Condensate Pumps [Hedges, Luke, MISC]   |
|  | <b>9/9/2010</b><br><b>21:59:00</b>  | Opened turbine drain valves [Hedges, Luke, MISC]  |
|  | <b>9/9/2010</b><br><b>22:00:00</b>  | MSR Drain Tank Non-Return Check Valve 33A did not close as expected. [Hedges, Luke, MISC]   |

**IP3 Unit Log**  
**Friday, September 10, 2010**

**Midnight**  
**OAP-5**

- **9/9/2010**      Reheat Steam Block Valves Closed. [Hedges, Luke, MISC]  
**22:00:00**
- **9/9/2010**      33A is closed [Hedges, Luke, MISC]  
**22:18:00**

---

- **9/9/2010**      Performed 3-PT-W019, Electrical Verification - Offsite Power Sources and AC  
**22:00:00**      Distribution - Sat. Performed due to the inoperability of 32 EDG due to being  
PTO'd for Maintenance. [Yun, Cheehun, BOP Operator and key 211]

---

- **9/9/2010**      Completed 1 hour notifications IAW SMM-LI-108 to the following stakeholders:  
**22:50:35**      NRC resident Paul Cataldo  
PSC Paul Eddy  
CDM Sam Davis  
Power Marketing Joe Zirella [Dewey, Donald, MISC]

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- **9/9/2010**      Placed the Main Turbine Generator on the Turning Gear in accordance with  
**23:58:00**      3-SOP-TG-TG-001, Main Turbine Turning Gear Operation. [Nilsson, Chris,  
Operator at the Controls]

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- **9/9/2010**      Main Turbine on the Turning Gear. [Hedges, Luke, MISC]  
**23:58:00**

---

- **9/10/2010**      Start 3-PT-V1, Source Range Analog Channel Functional Test. [Nilsson, Chris,  
**00:05:00**      Operator at the Controls]
- **9/10/2010**      3-PT-V1, Source Range Analog Channel Functional Test completed - Sat.  
**00:47:00**      [Nilsson, Chris, Operator at the Controls]

---

- **9/10/2010**      Received "VC Sump Pump Running" alarm due to VC Sump Pumpout. Per  
**00:07:00**      3-ARP-009 actions: Watch Chemist notified, from Unit Log last VC pumpout  
occurred on 09/05/10 @ 16:35 hrs. R11, R12, VC Humidity, and FCU Weir  
levels all normal. [Nilsson, Chris, Operator at the Controls]

---

- **9/10/2010**      "VC Sump Pump Running" alarm clear. VC Sump Pumpout Secured. [Nilsson,  
**00:10:00**      Chris, Operator at the Controls]

---

- **9/10/2010**      Informed by Unit 2 CCR that 138kV and 13.8kV voltages are Sat. [Nilsson,  
**00:14:00**      Chris, Operator at the Controls]

---

- **9/10/2010**      Secured 32 Rod Drive MG set. [Yun, Cheehun, BOP Operator and key 211]  
**00:20:00**

---

- **9/10/2010**      Initiated 4 & 8 hour verbal report to the NRC (Howie Crouch) for today's reactor  
**00:29:16**      trip and aux boiler feed pump auto start.  
NRC issued the event notification #46241 and recorded the notification time as  
00:29. [Dewey, Donald, MISC]

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- **9/10/2010**      Energized VC Lighting and completed PAB prerequisites for VC Entry per  
**00:52:00**      OAP-007. [Banse, John, MISC]

**IP3 Unit Log**  
**Friday, September 10, 2010**

**Midnight**  
**OAP-5**

- 
- JA** 9/10/2010 01:36:00 VC lighting secured due to VC entry completed. 46' inner crane wall cages verified secured upon VC exit. [Banse, John, MISC]

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  - JA** 9/10/2010 01:30:00 Secured 32 and 35 Service Water pumps. [Yun, Cheehun, BOP Operator and key 211]

### Allowed Outage Time for Indian Point 3

| LCO Number      | Section Number   | Start Date            | Required Date                 | Status  | Required Action | Initiating Items     |
|-----------------|--|-----------------------|-------------------------------|---|-----------------|----------------------|
| 3-ODCM-06-0094  | Radiation Monitor 56C being taken out of service due to spiking causing spurious auto diversions. (PLT Report Submitted 11/20/2006). The Monitor is currently disconnected to prevent alarming.<br>On 7/26/09 Channel failures on R-56A, B, & C also rendered R-56 A & B non-functional per ONOP-RM-001. Ref WR 00170944 & CR IP3-2009-03201. R-56A and B are returned to service operable on 7/30/09 at 16:21. Refer to WO 00164743-01. |                       |                               |   |                 |                      |
| 3ODCM R-56A/B.  | 10/17/2007 1:44:00 AM  | 10/18/2007 2:40:49 AM | Exited 10/17/2007 10:47:00 AM | direct the chemist to take grab samples daily from the combined system for gross activity.                            | 3-PRM           | -IXMITR-RD-56C       |
| 3ODCM R-56A/B.  | 10/24/2006 8:30:00 PM  | 11/23/2006 8:30:00 PM | Exited 11/23/2006 12:00:00 PM | explain why this could not be done to the Plant Leadership Team (PLT)   |                 |                      |
| 3ODCM R-56A/B.  | 10/24/2006 8:30:00 PM  | 11/23/2006 8:30:00 PM | Exited 11/20/2006 3:59:00 PM  | explain why this could not be done to the Plant Leadership Team (PLT)   |                 |                      |
| 3ODCM R-56A/B.  |  |                       | Potential Future Action       | direct the chemist to take grab samples daily from the combined system for gross activity.                            |                 |                      |
| 3ODCM R-56A/B.  | 7/26/2009 7:19:00 PM   | 7/31/2009 10:45:48 AM | Exited 7/30/2009 4:21:00 PM   | direct the chemist to take grab samples daily from the combined system for gross activity                             |                 |                      |
| 3-PTS -08-0414  | R-5 did not perform all of its required function<br><br>***** R-5 also has a Part 21 issue against it. Refer to CR-IP3-2009-3590 *****<br><br>Unit 3FSB Exhaust fan has been rebuilt, however vibrations have been trending up steadily, on 8/31/10 Performance recommended no longer running this fan, the Exhaust fan is inoperable.<br>FSAT32 inlet damper replacement  |                       |                               |   |                 |                      |
| 3TS 3.3.8.A.1   |  |                       | Potential Future Action       | A.1 Place FSBEVS in operation.  | 3-ARM           | -COMPTR-R-5          |
| 3TS 3.3.8.A.2   |  |                       | Potential Future Action       | A.2 Suspend movement of recently irradiated fuel in the fuel storage building.  | 3-HVFS          | -DAMPER-FSAT32 INLET |
| 3TS 3.7.13.A.1  |  |                       | Potential Future Action       | A.1 Suspend movement of recently irradiated fuel assemblies in the fuel storage building.                             | 3-HVFS          | -FAN -FSBEF-FAN      |
| 3TRM 3.7.F.B.1  |  |                       | Potential Future Action       | B.1 Restore Operability   |                 |                      |
| 3TRM 3.7.F.B.2  |  |                       | Potential Future Action       | B.2 Isolate the FSBEVS when moving fuel in the FSB  |                 |                      |
| 3TRM 3.7.F.C.1  |  |                       | Potential Future Action       | C.1 Suspend movement of irradiated fuel in the associated building.   |                 |                      |
| 3TRM 3.7.F.D.1  |  |                       | Potential Future Action       | Present a report to OSRC on planned corrective action.  |                 |                      |
| 3-PTS -08-0416  | Triennial Fire Inspection revealed CCR prompt evacuation or fire in CCR may prevent securing PORVs by tripping 31/32 125VDC distribution panel breakers, and no RNO is provided. Hourly fire watch for all levels Control bldg, Electrical tunnels and EDG's.  |                       |                               |   |                 |                      |
| 3TRM 3.7.B.OTF_ | 4/17/2009 3:42:00 AM   | 9/13/2010 7:03:21 AM  | Open 83.6 hrs left            | I.1 Verify Fire Watches are being conducted as prescribed   |                 |                      |
| 3TRM 3.7.B.B.1  | 4/9/2009 7:25:00 AM  | 4/9/2009 8:25:00 AM   | Exited 4/9/2009 7:26:00 AM    | B.1 Establish an hourly fire watch in the Fire Watch Area(s) designated in Table 3.7.B-1 for the inoperable Function. |                 |                      |
| 3TRM 3.7.B.A.1  | 2/8/2008 4:46:00 PM  | 2/8/2008 4:46:00 PM   | Exited 2/8/2008 4:46:00 PM    | A.1 Enter the Condition(s) referenced in Table 3.7.B-1,   |                 |                      |

### Allowed Outage Time for Indian Point 3

| LCO Number     | Section Number   | Start Date | Required Date | Status                  | Required Action   | Initiating Items         |
|----------------|--|------------|---------------|-------------------------|---|--------------------------|
|                | 3TS 3.2.2.A.1.2.1  |            |               | Potential Future Action | A.1.2.1 Reduce THERMAL POWER to < 50% RTP.  |                          |
| 3-PTS -09-0526 | 31 Source range Unable to set High Flux @ shutdown   |            |               |                         |   |                          |
|                | 3TS 3.9.2.A.1  |            |               | Potential Future Action | A.1 Suspend CORE ALTERATIONS.   | 3-RPC -IBISSW-NC-31-101  |
|                | 3TS 3.9.2.A.2  |            |               | Potential Future Action | A.2 Suspend positive reactivity additions.  |                          |
|                | 3TS 3.9.2.B.1  |            |               | Potential Future Action | B.1 Initiate action to restore one source range neutron flux monitor to OPERABLE status.  |                          |
|                | 3TS 3.9.2.B.2  |            |               | Potential Future Action | B.2 Perform SR 3.9.1.1.   |                          |
| 3-PTS -10-0572 | Fire detector FP-DET-2-11 (CS-2-11) - Cable Spreading Room (FDCP ZONE 2) - Failed as per PT-SA13 |            |               |                         |   |                          |
|                | 3TRM 3.7.A.4.A.1   |            |               | Potential Future Action | A.1 Establish an hourly fire watch patrol, where accessibility permits, in the affected location(s).  | 3-FP -XMTR-FP-DET-2-11   |
|                | 3TRM 3.7.A.4.A.2   |            |               | Potential Future Action | A.2 Restore the required fire detectors to OPERABLE status.   |                          |
| 3-PTS -10-0582 | MET TOWER DIESEL GENERATOR out of service due to trip on high temperature during 3PT-M47         |            |               |                         |   |                          |
|                | 3TRM 3.3.B.A.1   |            |               | Potential Future Action | A.1 DEMONSTRATE the ability to obtain meteorological data, using IP-EP-510.   | 3-MTDG - -MET-DIESEL GEN |
|                | 3TRM 3.3.B.A.2   |            |               | Potential Future Action | A.2 Notify IP2 of system inoperability,   |                          |
|                | 3TRM 3.3.B.A.3   |            |               | Potential Future Action | A.3 Restore the inoperable Meteorological Instrument Channel to OPERABLE status.  |                          |
|                | 3TRM 3.3.B.B.1   |            |               | Potential Future Action | B.1 Prepare and submit a Special Report to the On-Site Safety Review Committee outlining the actions taken, the cause of the inoperability and the plans for restoring the meteorological monitoring instrumentation channel(s) to OPERABLE status. |                          |
| 3-PTS -10-0583 | Flux drive 'D' inoperable. The drive is not producing reliable traces for Flux Calculations.     |            |               |                         | Refer to CR-IP3-2010-2015 and WR 00206100.  |                          |
|                | 3TS 3.2.1.A.1  |            |               | Potential Future Action | A.1 Reduce THERMAL POWER ? 1% RTP for each 1% FQ(Z) exceeds limit.  | 3-INCO -TOOL -NDDM-F     |
|                | 3TS 3.2.2.A.1.1  |            |               | Potential Future Action | A.1.1 Restore FNDH to within limit.   |                          |
|                | 3TS 3.2.2.A.1.2.1  |            |               | Potential Future Action | A.1.2.1 Reduce THERMAL POWER to < 50% RTP.  |                          |
|                | 3TS 3.9.2.A.1  |            |               | Potential Future Action | A.1 Suspend CORE ALTERATIONS.   |                          |
|                | 3TS 3.9.2.A.2  |            |               | Potential Future Action | A.2 Suspend positive reactivity additions.  |                          |

### Allowed Outage Time for Indian Point 3

| LCO Number    | Section Number   | Start Date           | Required Date         | Status                       | Required Action   | Initiating Items   |
|---------------|--|----------------------|-----------------------|------------------------------|---|--|
|               | 3TRM 3.3.E.B.1   |                      |                       | Potential Future Action      | B.1 Prepare and submit a Special Report, "Inoperable Seismic Monitoring Instrumentation," PORC, outlining the cause of the malfunction(s) and the plans for restoring the instrument(s) to OPERABLE status.     |  |
|               | 3TRM 3.3.E.B.1   | 9/9/2009 9:00:00 AM  | 9/19/2009 9:00:00 AM  | Exited 9/19/2009 9:00:00 AM  | B.1 Prepare and submit a Special Report, "Inoperable Seismic Monitoring Instrumentation," PORC, outlining the cause of the malfunction(s) and the plans for restoring the instrument(s) to OPERABLE status.     |  |
| 3-TS -10-2579 | 32 EDG inop for Work Week 1037   |                      |                       |                              |   |  |
|               | 3TS 3.8.1.B.1  | 9/9/2010 7:23:00 AM  | 9/9/2010 10:00:29 PM  | Open 2.6 hrs left            | B.1 Perform SR 3.8.1.1 for the offsite circuits.  | 3-EDG -ENGINE-DE-32  |
|               | 3TS 3.8.1.B.2  | 9/9/2010 7:23:00 AM  | 9/9/2010 11:23:00 AM  | Exited 9/9/2010 7:27:00 AM   | B.2 Declare inoperable the required features supported by the inoperable DG when its required redundant feature is inoperable.  |  |
|               | 3TS 3.8.1.B.3.1  | 9/9/2010 7:23:00 AM  | 9/10/2010 7:23:00 AM  | Exited 9/9/2010 7:27:00 AM   | B.3.1 Determine OPERABLE DG(s) are not inoperable due to common cause failure.  |  |
|               | 3TS 3.8.1.B.3.2  |                      |                       | Potential Future Action      | B.3.2 Perform SR 3.8.1.2 for OPERABLE DGs.  |  |
|               | 3TS 3.8.1.B.4  | 9/9/2010 7:23:00 AM  | 9/12/2010 7:23:00 AM  | Open 60 hrs left             | B.4 Restore DG to OPERABLE status.  |  |
|               | 3TS 3.8.1.F.1  |                      |                       | Potential Future Action      | F.1 Be in MODE 3.   |  |
|               | 3TS 3.8.1.F.2  |                      |                       | Potential Future Action      | F.2 Be in MODE 5.   |  |
| 3-TS -10-2676 | Zone 117 for 32 RCP Smoke Detector (BSD-2) failed during the performance of 3PT-A39.<br><br>Report was submitted to OSRC and action completed 5/16/10 @ 1209 as per CR-IP3-2010-01243. |                      |                       |                              |   |  |
|               | 3TRM 3.7.A.4.A.1   | 4/30/2010 9:00:00 AM | 4/30/2010 10:00:00 AM | Exited 4/30/2010 9:00:00 AM  | A.1 Establish an hourly fire watch patrol, where accessibility permits, in the affected location(s).  | 3-FP -XMITR-BSD-2  |
|               | 3TRM 3.7.A.4.A.2   | 4/30/2010 9:00:00 AM | 5/14/2010 9:00:00 AM  | Open -2842.4 hrs left        | A.2 Restore the required fire detectors to OPERABLE status.   |  |
|               | 3TRM 3.7.A.4.C.1   | 5/14/2010 9:00:00 AM | 6/13/2010 9:00:00 AM  | Exited 5/26/2010 12:09:00 PM | C.1 Submit a Special Report to the PORC in accordance with specification 5.4.B.   |  |
| 3-TS -10-2713 | OAP-007 Operations Actions to support VC Entry (Weld Channel/Nitrogen isolated to 80' & 95' Air Locks -AOT and Incore Flux Drives off - PAOT)  |                      |                       |                              |   |  |
|               | 3TS 3.2.1.A.1  |                      |                       | Potential Future Action      | A.1 Reduce THERMAL POWER 1% RTP for each 1% FQ(Z) exceeds limit.  | 3-INCO - -INCORE CONTROL PAN<br>3-WCPS -VALVE -PS-24                 |
|               | 3TS 3.6.10.A.1   | 6/5/2010 1:15:00 AM  | 6/5/2010 5:15:00 AM   | Exited 6/5/2010 1:35:00 AM   | A.1 Isolate the WC&PPS supply to the affected components by use of at least one closed and de?activated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured. | 3-WCPS -VALVE -PS-25<br>3-WCPS -VALVE -PS-26<br>3-WCPS -VALVE -PS-27 |
|               | 3TS 3.6.2.A.1  |                      |                       | Potential Future Action      | A.1 Verify the OPERABLE door is closed in the affected air lock.  |  |

### Allowed Outage Time for Indian Point 3

| LCO Number | Section Number | Start Date          | Required Date        | Status                        | Required Action  | Initiating Items |
|------------|----------------|---------------------|----------------------|-------------------------------|--|------------------|
| 3TRM       | 3.7.A.1.F.1    | 9/1/2010 1:51:00 PM | 9/1/2010 2:51:00 PM  | Exited 9/1/2010<br>2:00:00 PM | F.1 Establish an hourly fire watch patrol in the Turbine Building (15' elevation south loading well), Control Building (15' elevation) and the Administration Service Building (15' elevation near the fire brigade room). |                  |
| 3TRM       | 3.7.A.1.F.1    |                     |                      | Potential Future<br>Action    | F.1 Establish an hourly fire watch patrol in the Turbine Building (15' elevation south loading well), Control Building (15' elevation) and the Administration Service Building (15' elevation near the fire brigade room). |                  |
| 3TRM       | 3.7.A.1.G.1    | 9/8/2010 1:51:00 PM | 10/8/2010 1:51:00 PM | Open 690.4 hrs left           | G.1 Submit a Special Report to the PORC in accordance with specification 3.7.A.8.C.  |                  |
| 3TRM       | 3.7.A.1.C.1    |                     |                      | Potential Future<br>Action    | C.1 For the diesel driven fire pump, enter Condition F.  |                  |

**Originator:** Lewis, Matthew W**Originator Phone:** 8281**Originator Site Group:** IP3 Operations Mgmt IP3**Operability Required:** Y**Supervisor Name:** Dinelli, John**Reportability Required:** Y**Discovered Date:** 09/09/2010 21:54**Initiated Date:** 09/09/2010 22:06**Condition Description:**

Unit 3 was manually tripped at 21:29 due to water leak in the Exciter housing (Service Water, from the Exciter Coolers). Anomalies noted on the plant trip: 34 RCP tripped during the 6.9KV Bus transfer (6.9KV Bus 2; Bus 2 did re-energize via UT2/ST5 tie breaker and Bus 2 did not receive an undervoltage), 31 MBFP suction relief valve lifted causing a CO2 discharge on 31 MBFP (subsequently reseated and CO2 secured).

**Immediate Action Description:**

Entered E-0 and ES-0.1.

**Suggested Action Description:**

Additional parameters noted on 34 RCP following the trip: Standpipe high level alarm, loss of seal return flow on both indicators, RCDT trending up abnormally fast (frequent pump-downs); possible #2 seal failure.

**Originator:** Martin,Dustin**Originator Phone:** 5298**Originator Site Group:** IP3 Operations Watch Staff IP3**Operability Required:** Y**Supervisor Name:** Buchal,Timothy J**Reportability Required:** Y**Discovered Date:** 09/09/2010 22:01**Initiated Date:** 09/09/2010 23:07**Condition Description:**

During unit 3 plant trip 34 RCP tripped during fast transere of inside busses to outside power. Subsequently 34 RCP seal return flow both high and low indicators are currently reading zero and 34 RCP stand pipe high level alarm is locked in.

**Immediate Action Description:**

WR# 212295 for RCP trip during fast transere  
WR# 212296 for RCP #1 seal return flow

**Suggested Action Description:**

Trouble shoot and repair

**EQUIPMENT:**

Tag Name  
RCPCPC4

Tag Suffix Name Component Code Process System Code  
NC/SR/MR PUMP RCS

**Originator:** Martin,Dustin**Originator Phone:** 5298**Originator Site Group:** IP3      Operations Watch Staff IP3**Operability Required:** N**Supervisor Name:** Buchal,Timothy J**Reportability Required:** N**Discovered Date:** 09/09/2010 23:11**Initiated Date:** 09/09/2010 23:14**Condition Description:**

During Unit 3 trip CD-99-2 31 MAIN BOILER FEED PUMP SUCTION RELIEF VALVE relieved.

**Immediate Action Description:**

WR# 212301

**Suggested Action Description:**

Verify relief valve setpoint correct.

**EQUIPMENT:**Tag Name

CD-99-2

Tag Suffix Name Component Code Process System Code

HCLM/NS      VALVE      COND

**REFERENCE ITEMS:**Type Code

WON

Item Desc

212301

*Entergy*

**CONDITION REPORT**

**CR-IP3-2010-02685**

**Originator:** Martin.Dustin

**Originator Phone:** 5298

**Originator Site Group:** IP2 Operations Watch Staff IP2

**Operability Required:** Y

**Supervisor Name:** Buchal,Timothy J

**Reportability Required:** Y

**Discovered Date:** 09/09/2010 23:16

**Initiated Date:** 09/09/2010 23:24

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**Condition Description:**

Due to CD-99-2 31 MBFP suction relief valve lifting during unit 3 plant trip CO2 was discharged on 31 MBFP.

**Immediate Action Description:**

Posted 5' with danger tape and set up blowers to ventilate 5'.

Entered TRM action statement 3.7.A.7 and implement required actions for having less than required amount of CO2

**Suggested Action Description:**

none

**Originator:** Martin,Dustin

**Originator Phone:** 5298

**Originator Site Group:** IP2      Operations Watch Staff IP2

**Operability Required:** Y

**Supervisor Name:** Buchal,Timothy J

**Reportability Required:** Y

**Discovered Date:** 09/09/2010 23:30

**Initiated Date:** 09/09/2010 23:33

**Condition Description:**

During Unit 3 trip IR 35 and IR 36 did trend as expected and are now pegged low.

**Immediate Action Description:**

Verified SR energized as required.  
WO # 212303,212304

**Suggested Action Description:**

Trouble shoot and repair if necessary N35, and N36

**EQUIPMENT:**

| <u>Tag Name</u> | <u>Tag Suffix Name</u> | <u>Component Code</u> | <u>Process System Code</u> |
|-----------------|------------------------|-----------------------|----------------------------|
| NIS             |                        | SYSTEM                | NIS                        |

**REFERENCE ITEMS:**

| <u>Type Code</u> | <u>Item Desc</u> |
|------------------|------------------|
| WON              | 212303, 212304   |

## EVENT RECOLLECTION

Event Description: Rx tripping following service water leak into exciter  
 Event Occurrence: Date 9/9/10 Time 2:29 Statement: Date/Time 9/9/10 2327  
 Name: Chee Yun Position BOP (RO) Dept: ops

## PERSONAL STATEMENTS

Use as many sheets as you need. Try to address as many of these questions as may be appropriate. For those questions you cannot answer write "did not observe" or "do not know" in the question. Please enter times when things happen so an accurate chronological time line can be reconstructed.

1. What happened? Concentrate first on what you saw or know first hand, but also include "what you heard". Don't be concerned if there are "holes" or inconsistencies in your understanding of the event.

Got report of service water leak into the exciter enclosure.  
Attempts to isolate leak was unsuccessful and the leak got worse.  
Directed by CRs to trip the Rx at that point.

2. What caused you to be aware of the event?

Notified by SM of the service water leak.

3. What conditions existed just prior to the event (note any abnormal or unusual lineups)?

Normal full power steady state.

4. Did you notice any specific PARAMETER VALUES you think may be particularly important?

YES  NO If you answered "YES", then explain:

5. Did you note any relays, annunciators, computer alarms, that changed state during the event?

YES  NO If you answered "YES", then explain:

## EVENT RECOLLECTION (cont'd)

6. WHEN did various events occur? Any times you remember may help us re-construct the incident.

Notified by Sm of service water leak @ 2105. Informed CEO and advised  
 moved to unity @ 2115. Attempts to isolate leak unsuccessful as of 2123.  
 Tripped the Rx @ 2129

7. What happened after the event?

Rx trip. 34 RCP tripped.

8. Did you notice ANY UNUSUAL SENSATIONS? Noises - smells - heat - moisture or mugginess?

YES  NO

If you answered "YES", then explain:

9. WAS HELP AVAILABLE when you needed it?

YES  NO

If you answered "NO", then explain:

10. Were COMMUNICATIONS audible and clear? Did they help you understand what was going on?

YES  NO

If you answered "NO", then explain:

11. Have you ever seen or known of this type of event before?

YES  NO

If you answered "YES", then explain:

Previous unit trip (transformer failure?) 34 RCP tripped  
 as well.

**EVENT RECOLLECTION (cont'd)**

12. Were the procedures adequate?

YES  NO

If you answered "NO", then explain:

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13. Was it necessary to take any actions outside established procedures? If so, document those actions here.

No

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14. Do you know of any lessons learned from this event?

YES  NO

If you answered "YES", then identify lessons:

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15. Do you know WHO ELSE was on watch that might have information on what occurred?

YES  NO

If you answered "YES", then identify individual(s):

Team 3B

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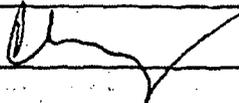
16. Is there any other information that you believe is relevant from your personal observations and experience with this event?

YES  NO

If you answered "YES", then provide details:

---

---

Chee Yun 

Print Name and Sign

9/9/10  
Date

8282  
Phone Extension

## EVENT RECOLLECTION

Event

Description: \_\_\_\_\_

Event Occurrence: Date 9/9/2010 Time ~2100 to 21:29 Statement: Date/Time 9/9/2010 OUISName: N.S. Lizzo Position SM Dept: OPERATIONS

## PERSONAL STATEMENTS

Use as many sheets as you need. Try to address as many of these questions as may be appropriate. For those questions you cannot answer write "did not observe" or "do not know" in the question. Please enter times when things happen so an accurate chronological time line can be reconstructed.

1. What happened? Concentrate first on what you saw or know first hand, but also include "what you heard". Don't be concerned if there are "holes" or inconsistencies in your understanding of the event.

CONV WATCH (SASDAR) REPORTED WATER LEAKING INTO EXCITER HOUSING. WATER WAS OBSERVED TRICKLING INTO SOUTHWEST CORNER FR PUMPS ABOVE AND "RAINING" ONTO WINDOW/WALL ON NORTHWEST SIDE. ATTEMPT TO SOLVE "B" COOLER BY CLOSING SWT-25-2 WAS NOT SUCCESSFUL. WATER WAS OBSERVED POOLING IN EXCITER HOUSING (~4.5"). I NOTIFIED THE CCR AND ORDERED RXTrip

2. What caused you to be aware of the event?

NPD CALL TO SM OFFICE.

3. What conditions existed just prior to the event (note any abnormal or unusual lineups)?

32 EDC OOS FOR PH. INCREASED MONITORING OF EXCITER HOUSING DUE TO PREVIOUSLY IDENTIFIED LEAKAGE INDICATION.

4. Did you notice any specific PARAMETER VALUES you think may be particularly important?

YES  NO If you answered "YES", then explain:

SEE ABOVE

5. Did you note any relays, annunciators, computer alarms, that changed state during the event?

YES  NO If you answered "YES", then explain:

## EVENT RECOLLECTION (cont'd)

6. WHEN did various events occur? Any times you remember may help us re-construct the incident.

~ 2100 ; INITIAL NOTIFICATION 21:29 - RX TRIP

7. What happened after the event?

ALL ABNORMAL CONDITIONS LISTED, IDENTIFIED + DOCUMENTED.

8. Did you notice ANY UNUSUAL SENSATIONS? Noises - smells - heat - moisture or mugginess?

YES  NO If you answered "YES", then explain:

NONE OTHER THAN THOSE NOTED ON CRS

9. WAS HELP AVAILABLE when you needed it?

YES  NO If you answered "NO", then explain:

10. Were COMMUNICATIONS audible and clear? Did they help you understand what was going on?

YES  NO If you answered "NO", then explain:

11. Have you ever seen or known of this type of event before?

YES  NO If you answered "YES", then explain:

OCT 2006 + ALSO 2005

EVENT RECOLLECTION (cont'd)

12. Were the procedures adequate?

YES  NO

If you answered "NO", then explain:

\_\_\_\_\_

13. Was it necessary to take any actions outside established procedures? If so, document those actions here.

Isolated flow to excited councils

\_\_\_\_\_

14. Do you know of any lessons learned from this event?

YES  NO

If you answered "YES", then identify lessons:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

15. Do you know WHO ELSE was on watch that might have information on what occurred?

YES  NO

If you answered "YES", then identify individual(s):

TEAM 3B, TEAM 3D Personnel & AOM MATT LEWIS

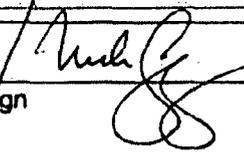
\_\_\_\_\_

16. Is there any other information that you believe is relevant from your personal observations and experience with this event?

YES  NO

If you answered "YES", then provide details:

\_\_\_\_\_

Nick Lizzo /   
Print Name and Sign

9/10/2010  
Date

8281  
Phone Extension

## EVENT RECOLLECTION

Event Description: UNIT 3 Trip due to SW leak in Exciter  
 Event Occurrence: Date 9/9/10 Time 2129 Statement: Date/Time 9/9/10 2253  
 Name: Vin DeClemente Position: STA Dept: Ops

## PERSONAL STATEMENTS

Use as many sheets as you need. Try to address as many of these questions as may be appropriate. For those questions you cannot answer write "did not observe" or "do not know" in the question. Please enter times when things happen so an accurate chronological time line can be reconstructed.

- 1. What happened?** Concentrate first on what you saw or know first hand, but also include "what you heard". Don't be concerned if there are "holes" or inconsistencies in your understanding of the event.

SM reported a leak was Idd in Exciter housing. Actions were taken to isolate the leak but were unsuccessful. SM + AOM discussed that if the leak was not isolable that a plant Trip would be needed. Manual Trip was performed.
- 2. What caused you to be aware of the event?** at 2129

SM reported that the NPO identified a SW leak in the Exciter
- 3. What conditions existed just prior to the event (note any abnormal or unusual lineups)?**

Service water leak in Exciter housing. Isolation was unsuccessful.
- 4. Did you notice any specific PARAMETER VALUES you think may be particularly important?**

YES  NO If you answered "YES", then explain:
- 5. Did you note any relays, annunciators, computer alarms, that changed state during the event?**

YES  NO If you answered "YES", then explain:

## EVENT RECOLLECTION (cont'd)

6. WHEN did various events occur? Any times you remember may help us re-construct the incident.

Manual Rx Trip at 2129, 34 RCP Trip at 2130.

7. What happened after the event?

34 RCP Tripped. 31 MBFP Relief Valve (suction) CD-99-2 lifted  
causing a CO<sub>2</sub> discharge; Approx 15 min later the relief valve seated.

8. Did you notice ANY UNUSUAL SENSATIONS? Noises - smells - heat - moisture or mugginess?

YES  NO If you answered "YES", then explain:

9. WAS HELP AVAILABLE when you needed it?

YES  NO If you answered "NO", then explain:

10. Were COMMUNICATIONS audible and clear? Did they help you understand what was going on?

YES  NO If you answered "NO", then explain:

11. Have you ever seen or known of this type of event before?

YES  NO If you answered "YES", then explain:

I remember OE on subject of RCP tripping on a Rx Trip.

**EVENT RECOLLECTION (cont'd)**

12. Were the procedures adequate?

YES  NO

If you answered "NO", then explain:

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---

13. Was it necessary to take any actions outside established procedures? If so, document those actions here.

No

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14. Do you know of any lessons learned from this event?

YES  NO

If you answered "YES", then identify lessons:

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15. Do you know **WHO ELSE** was on watch that might have information on what occurred?

YES  NO

If you answered "YES", then identify individual(s):

Team 3B - Ron Carpio, Chris Nilssen, Chee Yun, Ralph Orzo,  
Nick Lizzo, Matt Lewis.

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16. Is there any other information that you believe is relevant from your personal observations and experience with this event?

YES  NO

If you answered "YES", then provide details:

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Vin DeClemente  
Print Name and Sign

*Vin DeClemente*

9/9/10  
Date

5660  
Phone Extension

## EVENT RECOLLECTION

w 9/9/10  
Exciter  
EventDescription: He cooler leak / manual reactor TripEvent Occurrence: Date 9/9/10 Time 2129 Statement: Date/Time 9/9/10 2307Name: Chris N. Lissog Position RO (ATC) Dept: ops

## PERSONAL STATEMENTS

Use as many sheets as you need. Try to address as many of these questions as may be appropriate. For those questions you cannot answer write "did not observe" or "do not know" in the question. Please enter times when things happen so an accurate chronological time line can be reconstructed.

1. **What happened?** Concentrate first on what you saw or know first hand, but also include "what you heard". Don't be concerned if there are "holes" or inconsistencies in your understanding of the event.

Instructed to perform manual RX Trip due to SW Leak - RX Tripped,  
Turbine Tripped - 2 IAPI initials stuck until manually agitated  
34 RCP Tripped No seal return Low or Hi range

2. **What caused you to be aware of the event?**

was RO In CCR.

3. **What conditions existed just prior to the event (note any abnormal or unusual lineups)?**

attemp to Isolate SW leak in progress -  
report back was Leak was getting worse.

4. **Did you notice any specific PARAMETER VALUES you think may be particularly important?**

YES  NO If you answered "YES", then explain:

Source Range loss detector in/out a number  
of times. 34 stand pipe hi level, 34 seal return hi/lo  
LOW. 2 IAPI stuck.

5. **Did you note any relays, annunciators, computer alarms, that changed state during the event?**

YES  NO If you answered "YES", then explain:

34 RCP LO Flow, Source Range loss det. Voltage

## EVENT RECOLLECTION (cont'd)

6. WHEN did various events occur? Any times you remember may help us re-construct the incident.

2129 Trip, 2135 into ES-0.1, 2148 3rd dump in  
pressure control, 2300 BAK 1+3 closed

7. What happened after the event?

monitored plant.

8. Did you notice ANY UNUSUAL SENSATIONS? Noises - smells - heat - moisture or mugginess?

YES  NO If you answered "YES", then explain:

9. WAS HELP AVAILABLE when you needed it?

YES  NO If you answered "NO", then explain:

10. Were COMMUNICATIONS audible and clear? Did they help you understand what was going on?

YES  NO If you answered "NO", then explain:

11. Have you ever seen or known of this type of event before?

YES  NO If you answered "YES", then explain:

previous manual trip due to SW in Exciter  
last recent trip was 34 RCP trips

CV  
9/2/10

**EVENT RECOLLECTION (cont'd)**

12. Were the procedures adequate?

YES  NO

If you answered "NO", then explain:

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13. Was it necessary to take any actions outside established procedures? If so, document those actions here.

*NO*

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14. Do you know of any lessons learned from this event?

YES  NO

If you answered "YES", then identify lessons:

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15. Do you know WHO ELSE was on watch that might have information on what occurred?

YES  NO

If you answered "YES", then identify individual(s):

*wait 3 watch staff for 9/19/10*

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16. Is there any other information that you believe is relevant from your personal observations and experience with this event?

YES  NO

If you answered "YES", then provide details:

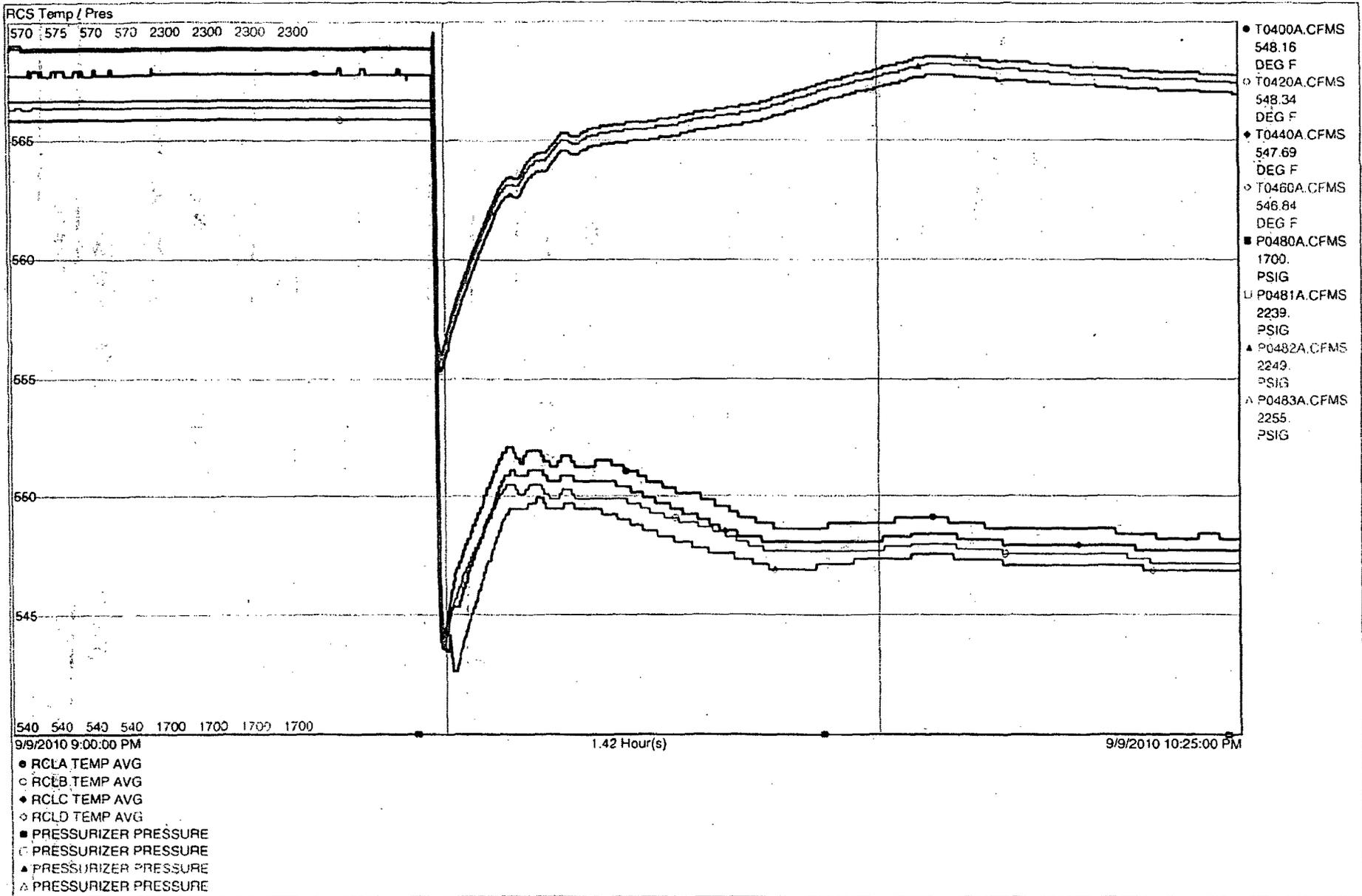
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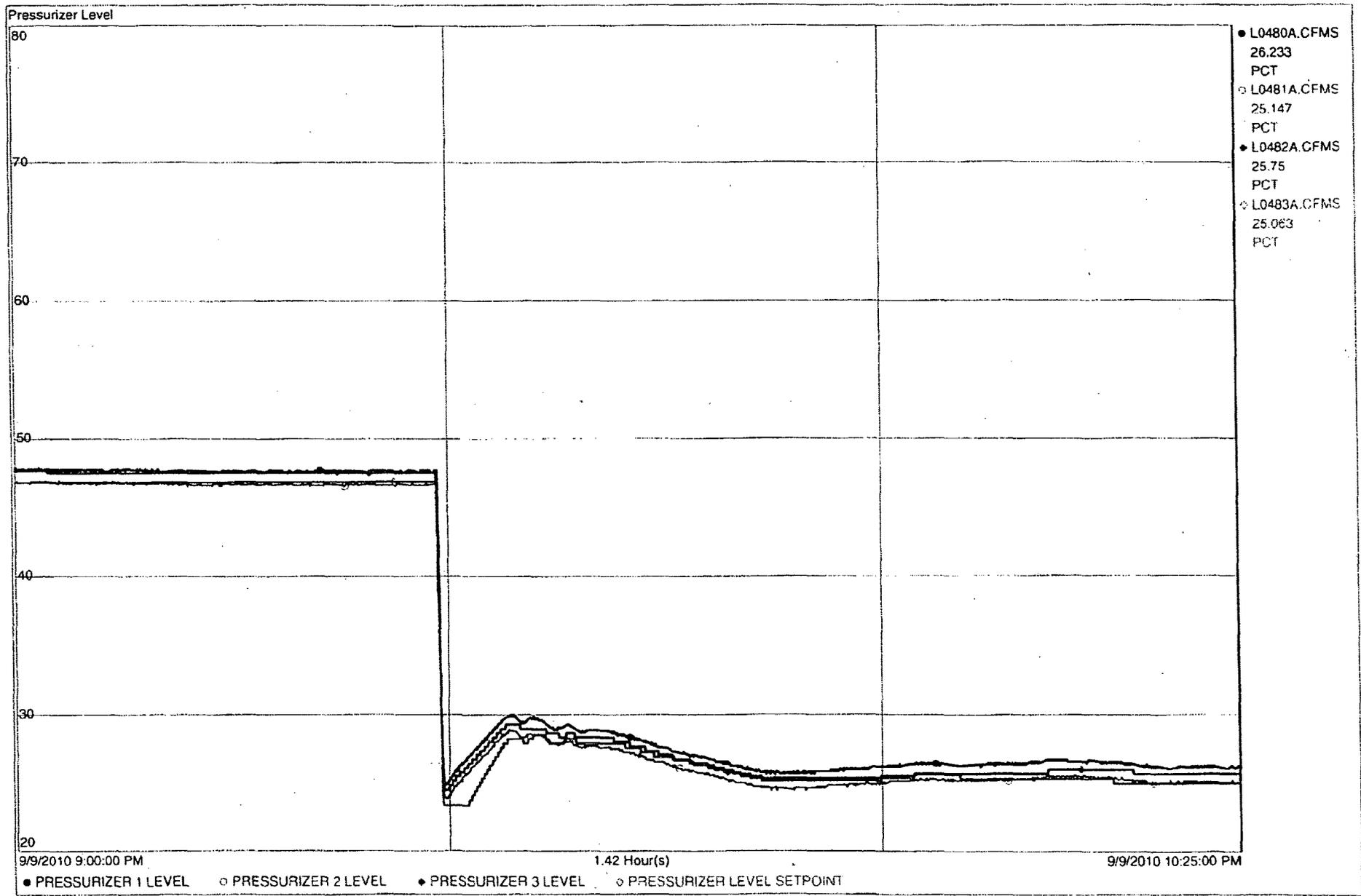
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*Chris N. Lyson*  
Print Name and Sign

*9/19/10*  
Date

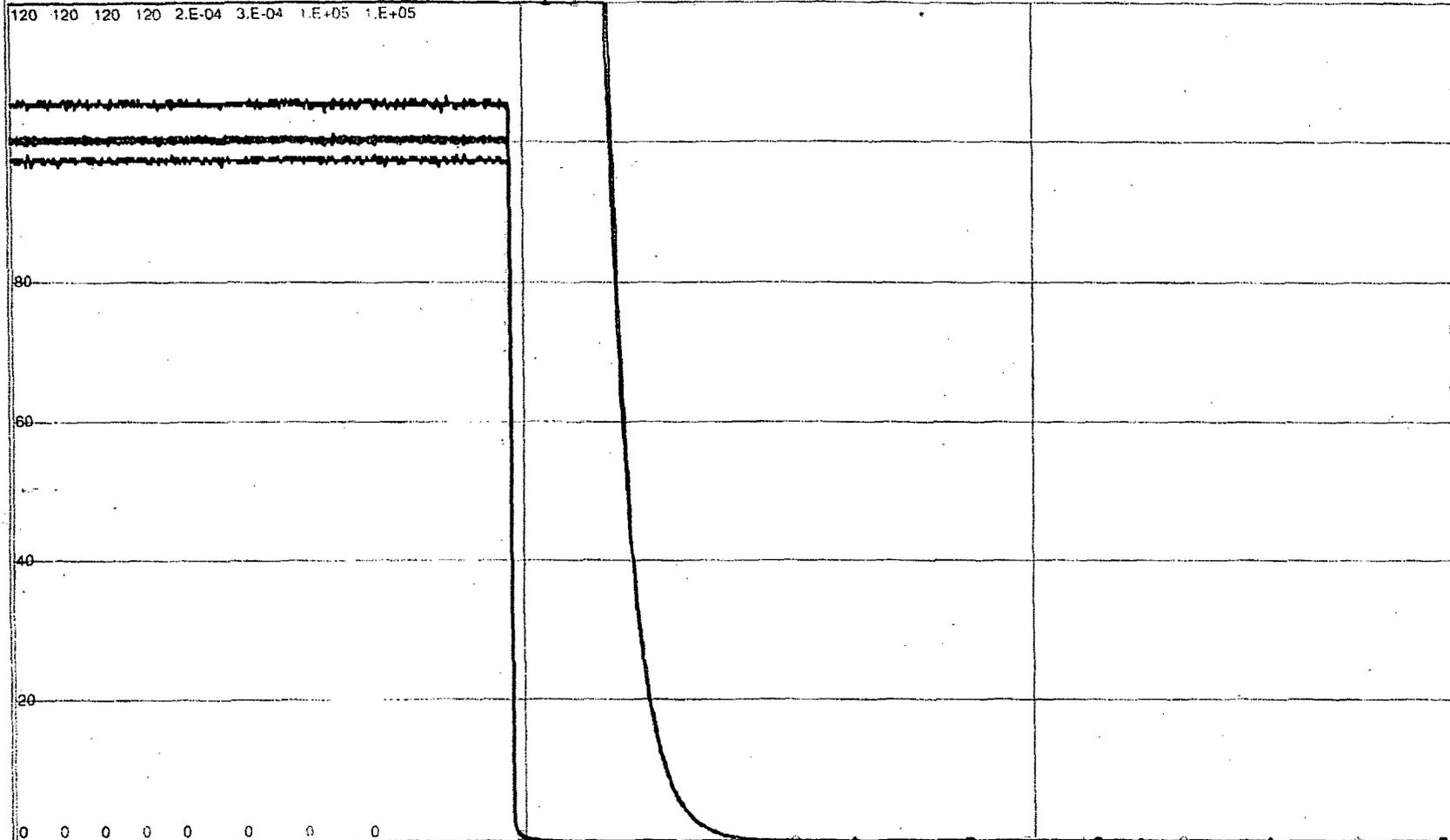
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Phone Extension





NIS

120 120 120 120 2.E-04 3.E-04 1.E+05 1.E+05



- N0049A.CFMS  
1.1553E-02  
PCT
- N0050A.CFMS  
9.2473E-03  
PCT
- ◆ N0051A.CFMS  
9.0373E-03  
PCT
- ◇ N0052A.CFMS  
1.0031E-02  
PCT
- N0035A.CFMS  
0.  
AMPS
- N0036A.CFMS  
0.  
AMPS
- ▲ N0381A.CFMS  
42.  
CPS
- △ N0391A.CFMS  
40.667  
CPS

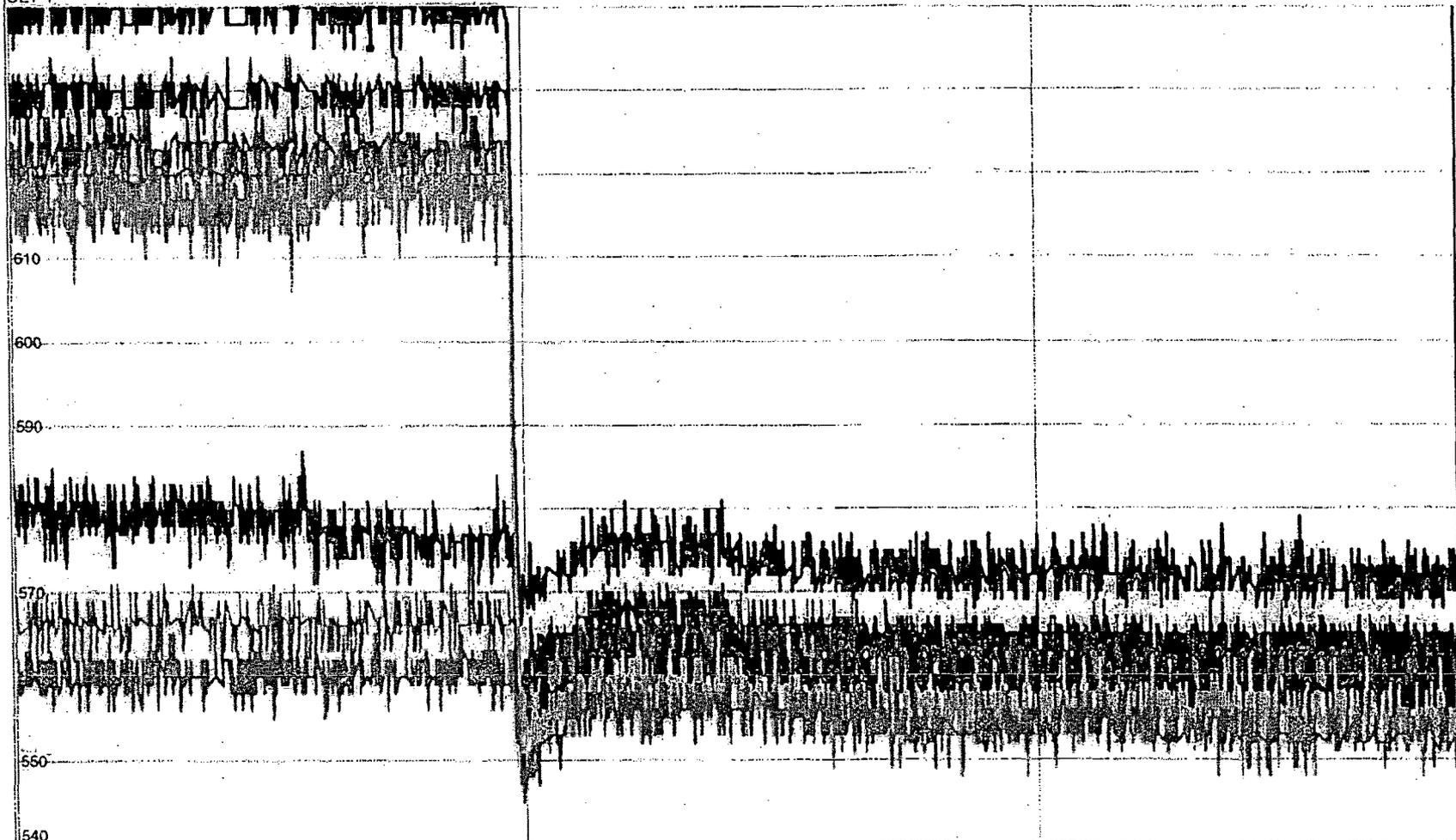
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1.42 Hour(s)

9/9/2010 10:25:00 PM

- POWER RANGE CHANNEL 41: OU
- POWER RANGE CHANNEL 42: OU
- ◆ POWER RANGE CHANNEL 43: OU
- ◇ POWER RANGE CHANNEL 44: OU
- INTERMEDIATE RANGE DETECTOR
- INTERMEDIATE RANGE DETECTOR
- ▲ SOURCE RANGE DETECTOR N38
- △ SOURCE RANGE DETECTOR N39

CET-1



- TRCET.CFMS  
569.5  
DEG F
- T0002A.CFMS  
563.  
DEG F
- T0009A.CFMS  
560.89  
DEG F
- T0010A.CFMS  
558.8  
DEG F
- T0021A.CFMS  
566.  
DEG F
- T0023A.CFMS  
561.33  
DEG F
- ▲ T0032A.CFMS  
553.87  
DEG F

540

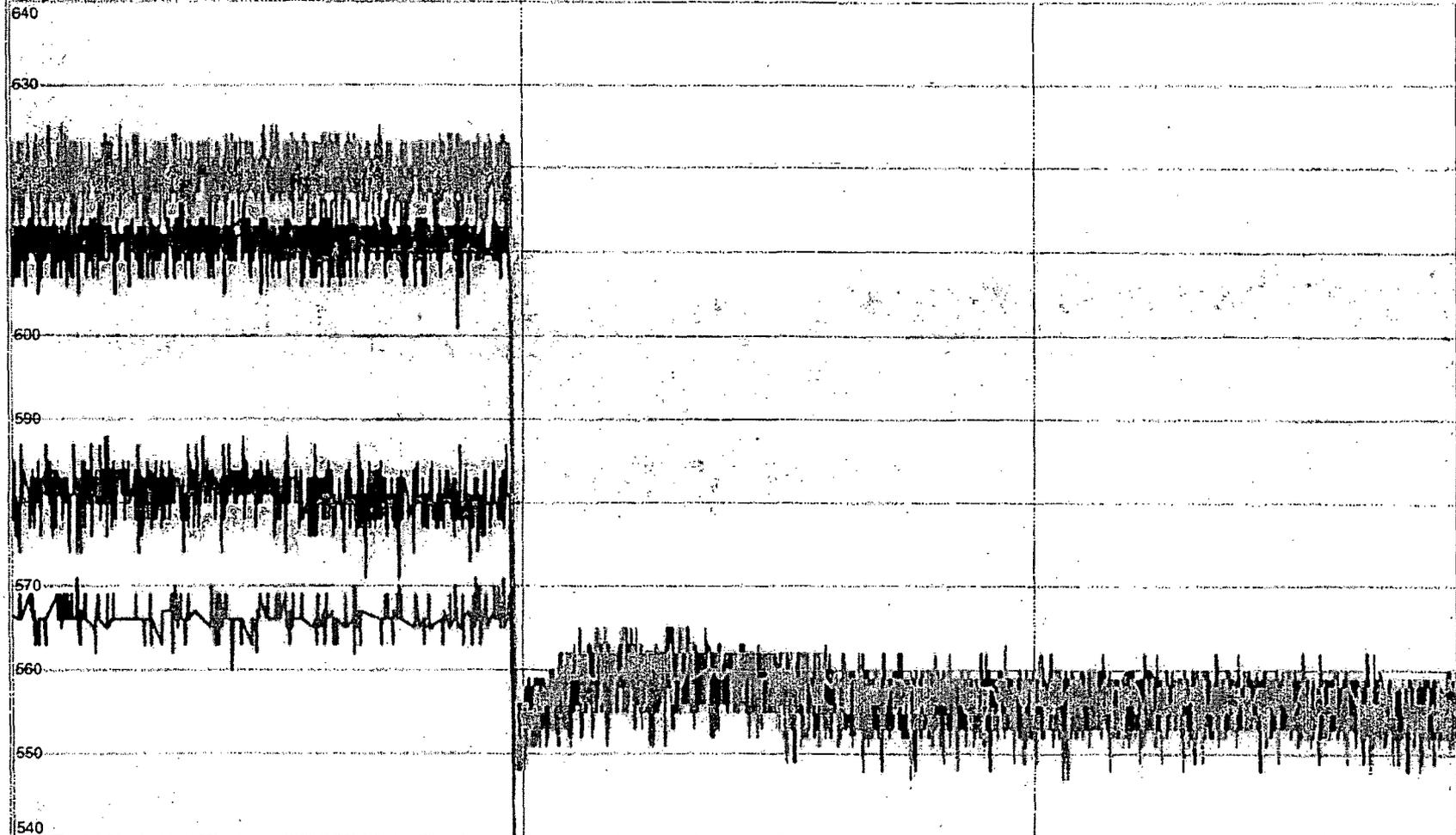
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1.42 Hour(s)

9/9/2010 10:25:00 PM

- HIGHEST QSPDS REP TEMP
- IN CORE TEMP E03
- ◆ IN CORE TEMP E10
- IN CORE TEMP F12
- IN CORE TEMP K03
- IN CORE TEMP L01
- ▲ IN CORE TEMP L12
- ▲ IN CORE TEMP P13

CET-2



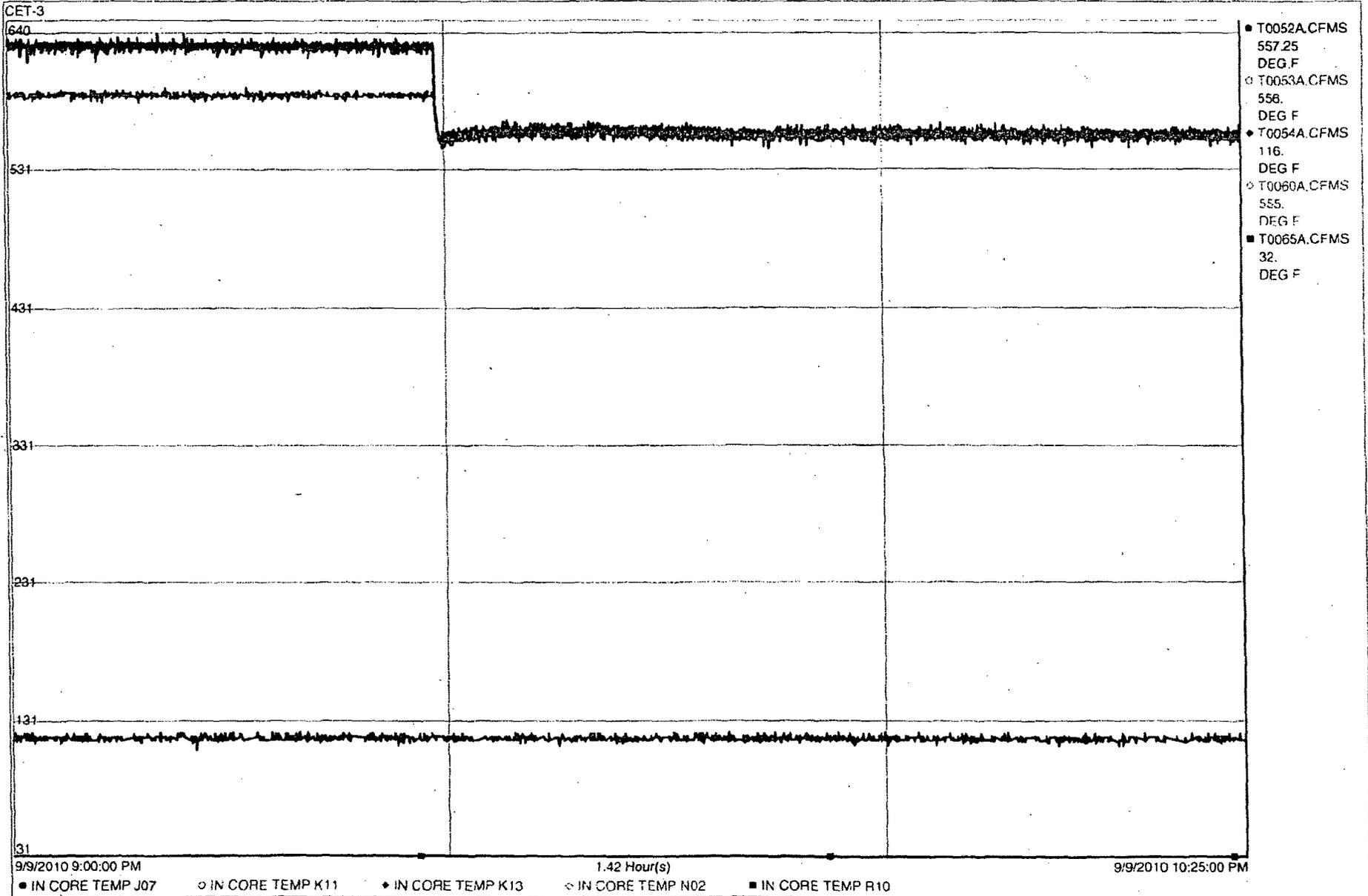
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1.42 Hour(s)

9/9/2010 10:25:00 PM

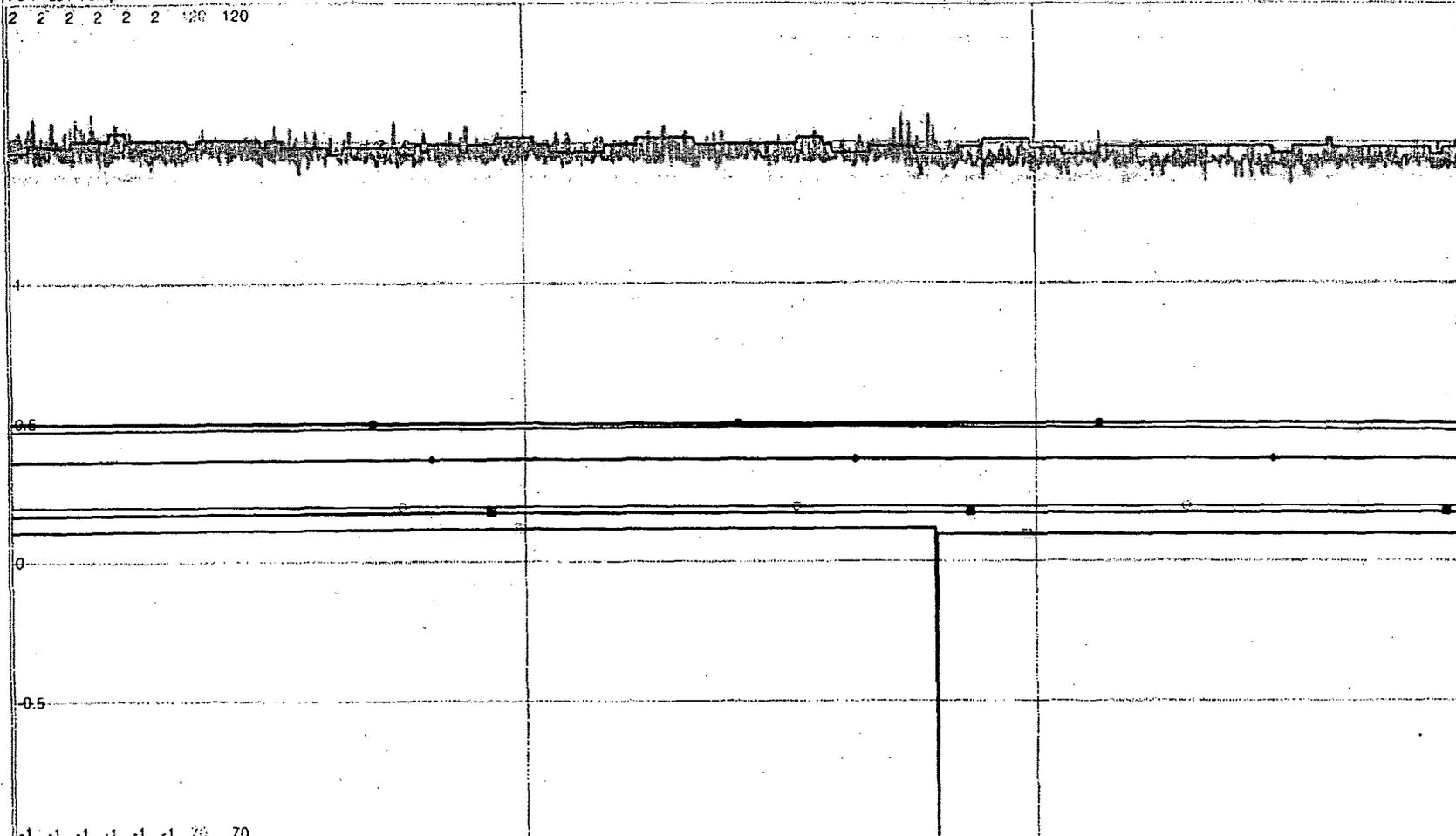
- IN CORE TEMP A11
- IN CORE TEMP B06
- ◆ IN CORE TEMP C12
- ⊙ IN CORE TEMP D09
- IN CORE TEMP E05
- ◇ IN CORE TEMP F05
- ▲ IN CORE TEMP G04
- ▲ IN CORE TEMP H05

- T0034A.CFMS  
557.25  
DEG F
- T0035A.CFMS  
556.67  
DEG F
- ◆ T0037A.CFMS  
555.  
DEG F
- T0040A.CFMS  
558.  
DEG F
- T0042A.CFMS  
558.33  
DEG F
- ⊙ T0045A.CFMS  
521.  
DEG F
- ▲ T0047A.CFMS  
558.16  
DEG F
- ▲ T0049A.CFMS  
Bad Data  
DEG F



VC Pres / Temp

2 2 2 2 2 2 120 120



- P1000A.CFMS  
0.5  
PSIG
- P1001A.CFMS  
0.2  
PSIG
- ◆ P1002A.CFMS  
0.37241  
PSIG
- ◐ P1003A.CFMS  
0.47339  
PSIG
- P1004A.CFMS  
0:17704  
PSIG
- ◑ P1005A.CFMS  
9.8901E-02  
PSIG
- ▲ T0100A.CFMS  
110.5  
DEG F
- △ T0161A.CFMS  
111.82  
DEG F

-1 -1 -1 -1 -1 -1 70 70

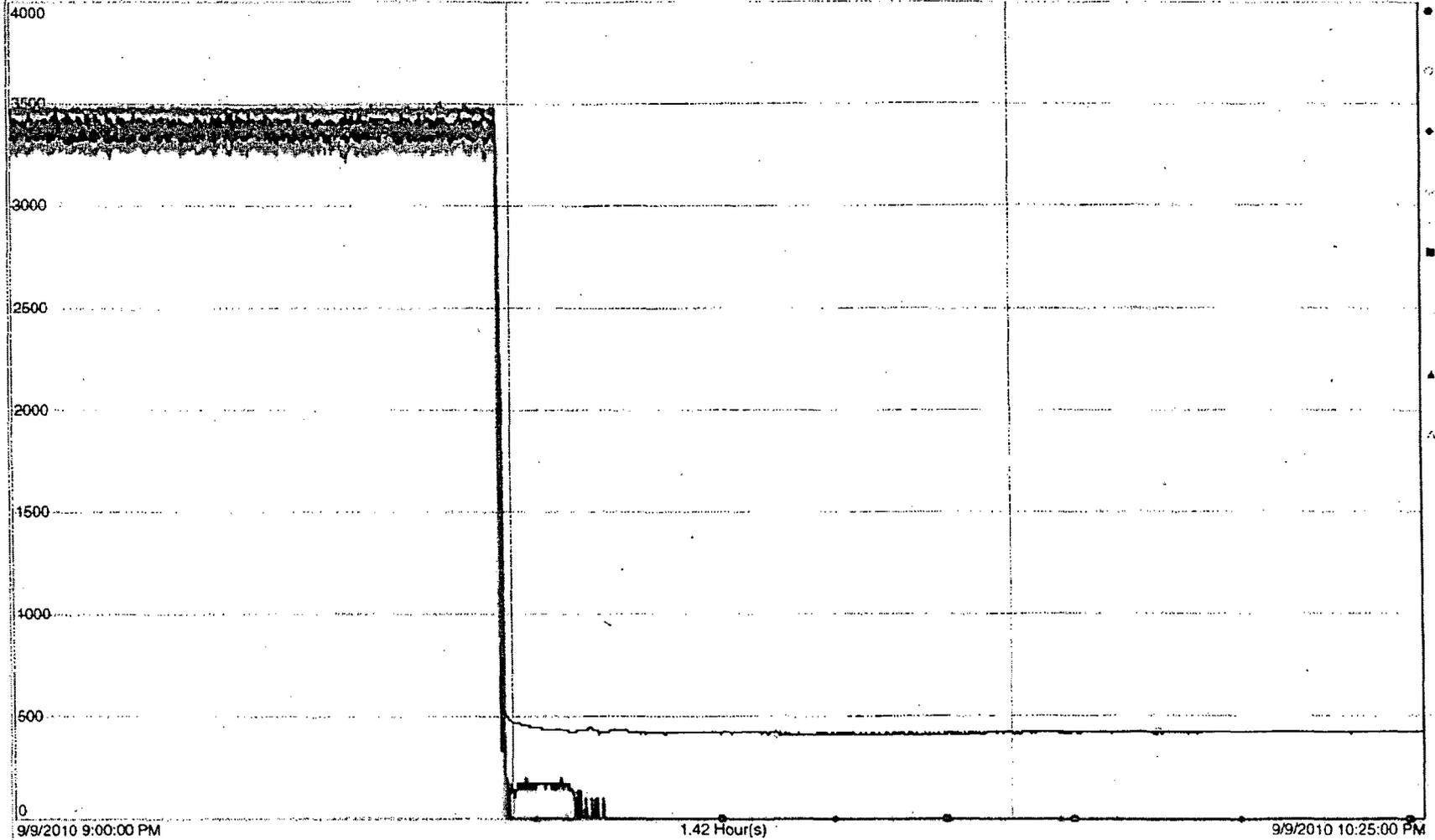
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1.42 Hour(s)

9/9/2010 10:25:00 PM

- CONTAINMENT PRESSURE LOOP
- CONTAINMENT PRESSURE LOOP
- ◆ CONTAINMENT PRESSURE LOOP
- ◐ CONTAINMENT PRESSURE LOOP
- CONTAINMENT PRESSURE LOOP
- ◑ CONTAINMENT PRESSURE LOOP
- ▲ CONTAINMENT AVG TEMPERATURE
- △ CONTAINMENT TEMPERATURE CH

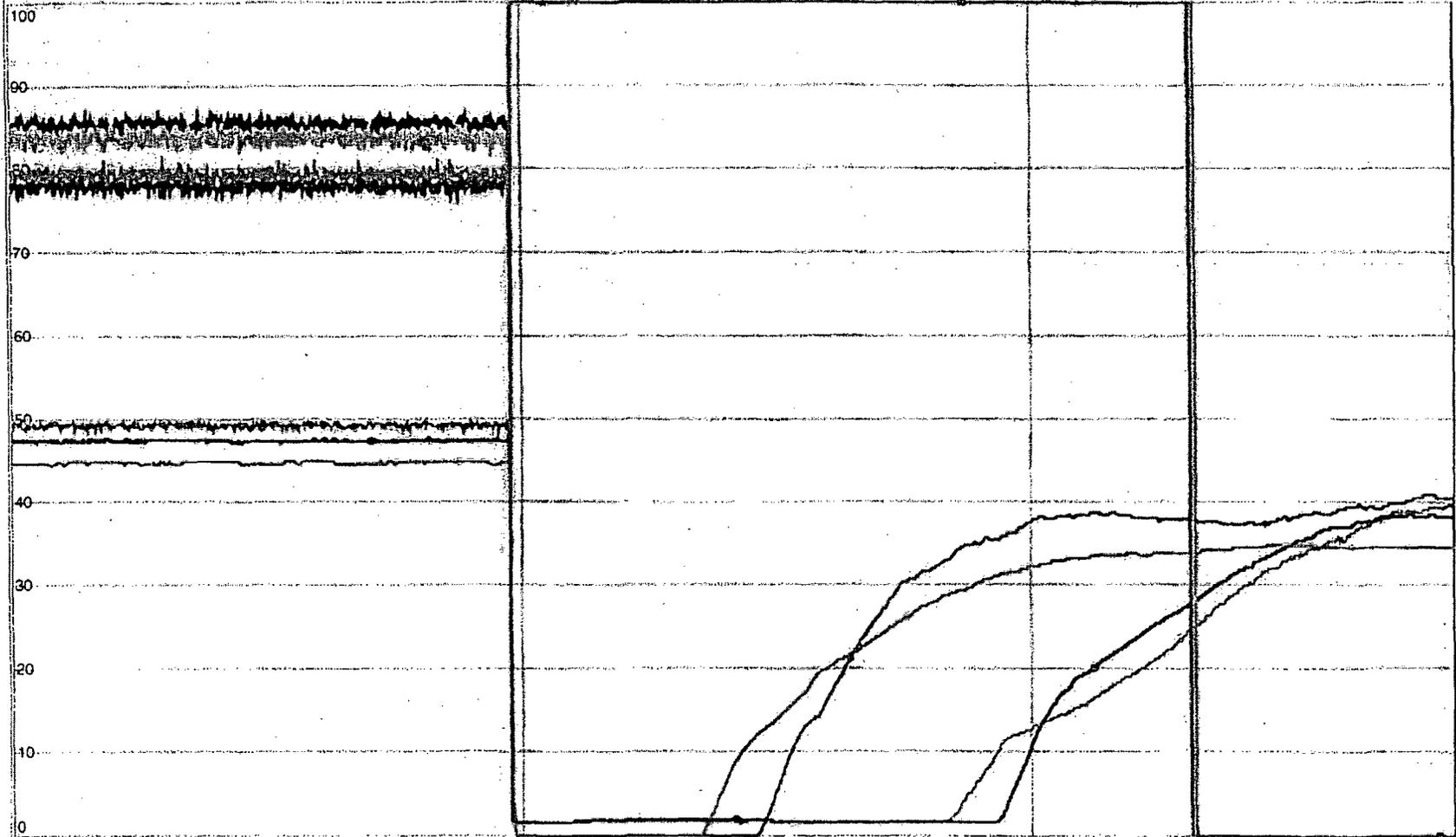
Flow Steam / Feed



9/9/2010 9:00:00 PM

- SG #31 STEAM FLOW
- SG #32 STEAM FLOW
- ◆ SG #33 STEAM FLOW
- SG #34 STEAM FLOW
- MAIN FD FLOW TO SG #31
- MAIN FD FLOW TO SG #32
- ▲ MAIN FD FLOW TO SG #33
- MAIN FD FLOW TO SG #34

SG Level / FRV Demand



- L0400A.CFMS 38.188 PCT
- L0420A.CFMS 39.75 PCT
- ◆ L0440A.CFMS 40.75 PCT
- L0460A.CFMS 34.5 PCT
- ZT417A.CFMS 0. PCTOP
- ZT427A.CFMS 0. PCTOP
- ▲ ZT437A.CFMS 0. PCTOP
- ▲ ZT447A.CFMS 0. PCTOP

9/9/2010 9:00:00 PM

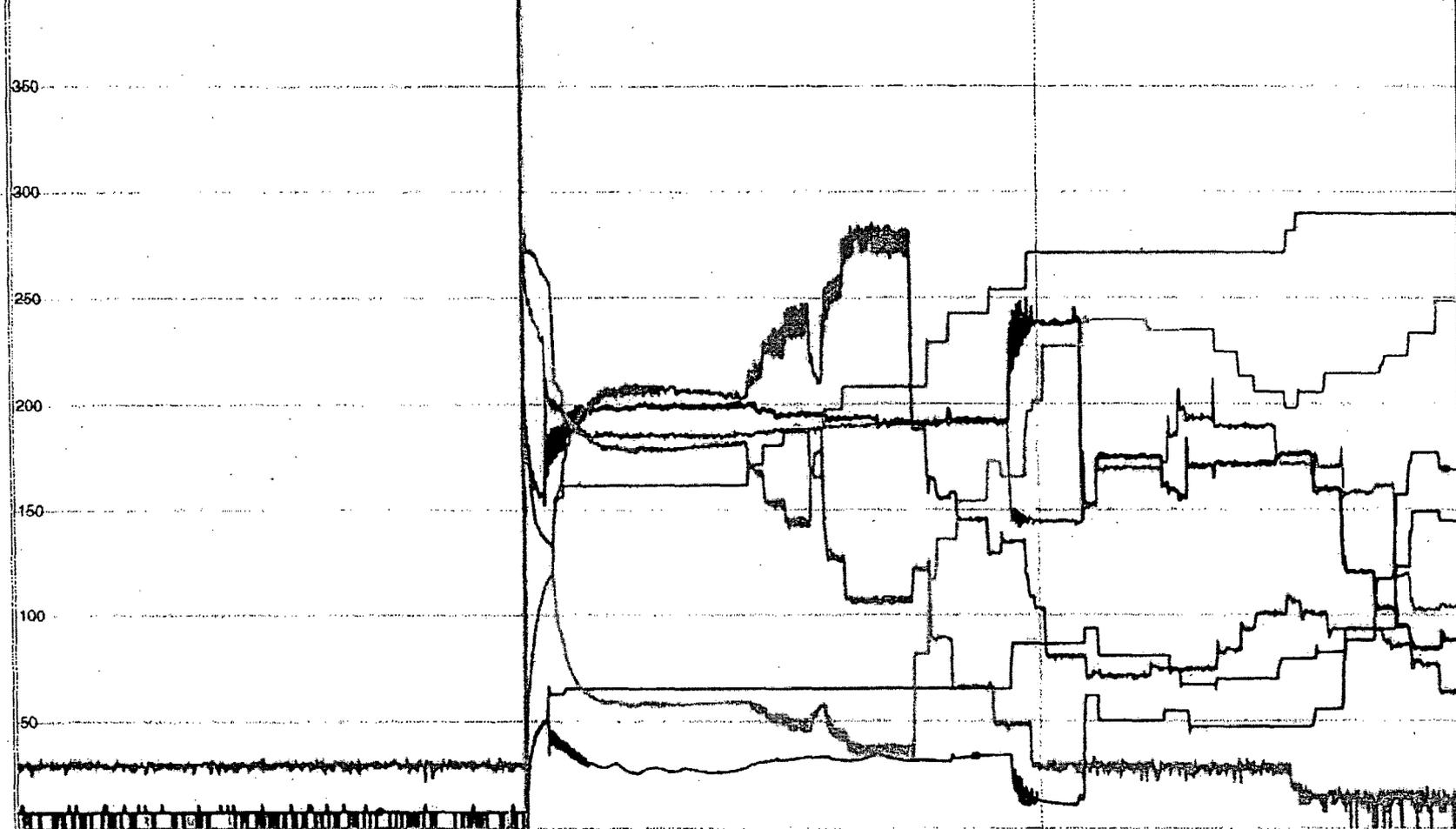
1.42 Hour(s)

9/9/2010 10:25:00 PM

- STM GEN #31 LVL NR
- STM GEN #32 LVL NR
- ◆ STM GEN #33 LVL NR
- STM GEN #34 LVL NR
- SG #31 FEED WATER CONTROL
- SG #32 FEED WATER CONTROL
- ▲ SG #33 FEED WATER CONTROL
- ▲ SG #34 FEED WATER CONTROL

Aux Feed Flow / AFRV

400 400 400 400 100 100 100 100



- F1200A.CFMS  
88.2  
GPM
- F1201A.CFMS  
104.  
GPM
- ◆ F1202A.CFMS  
64.3  
GPM
- ◐ F1203A.CFMS  
17.5  
GPM
- ZH406AD.CFMS  
42.333  
PCTCL
- ◑ ZH406BD.CFMS  
36.177  
PCTCL
- ▲ ZH406CD.CFMS  
62.175  
PCTCL
- △ ZH406DD.CFMS  
72.479  
PCTCL

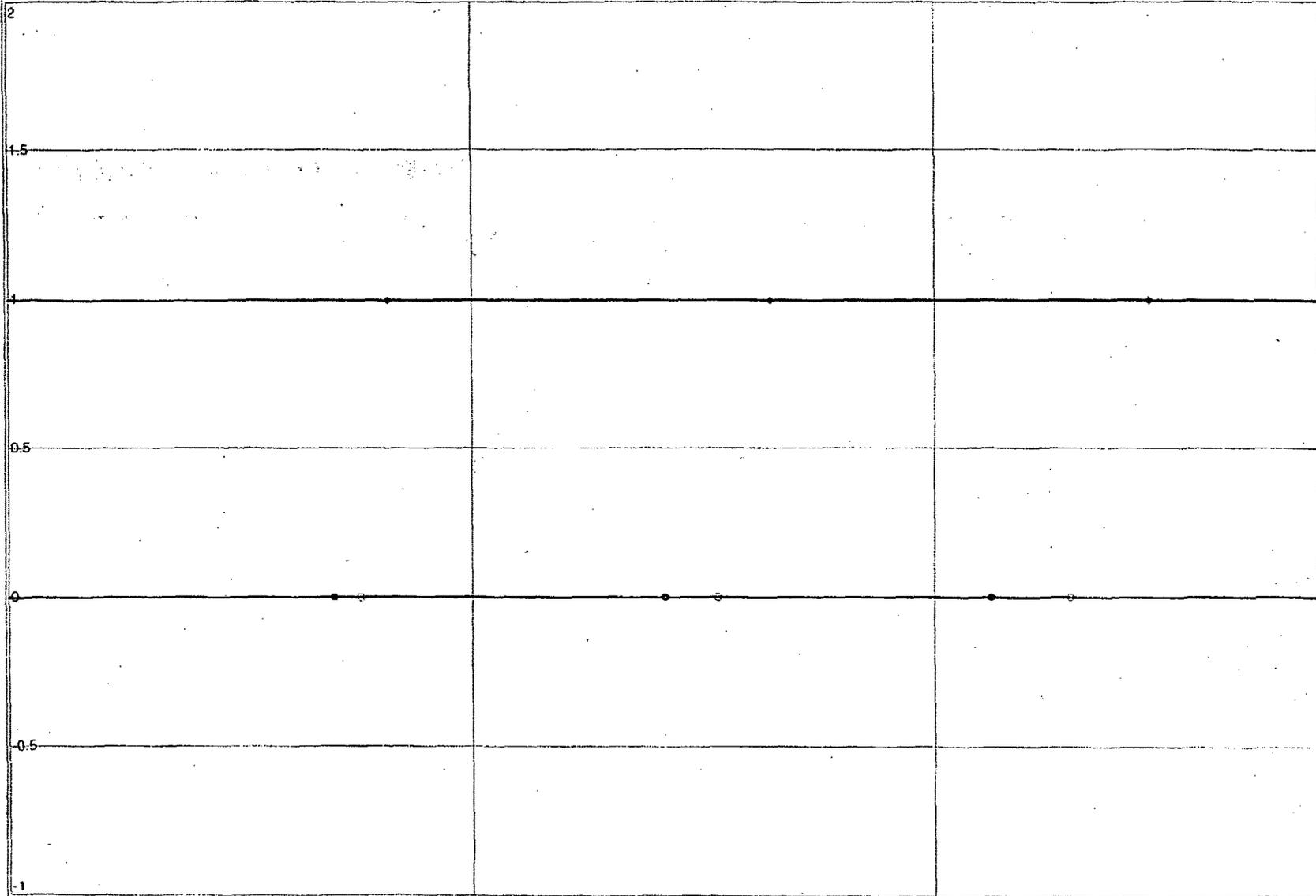
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9/9/2010 10:25:00 PM

- AUX FD FLOW TO SG #31
- AUX FD FLOW TO SG #32
- ◆ AUX FD FLOW TO SG #33
- ◐ AUX FD FLOW TO SG #34
- AUX FEED TO SG #31
- ◑ AUX FEED TO SG #32
- ▲ AUX FEED TO SG #33
- △ AUX FEED TO SG #34

Charging Pump Status



- Y0100D.CFMS OPEN
- ◻ Y0101D.CFMS OPEN
- ◆ Y0102D.CFMS CLOSED

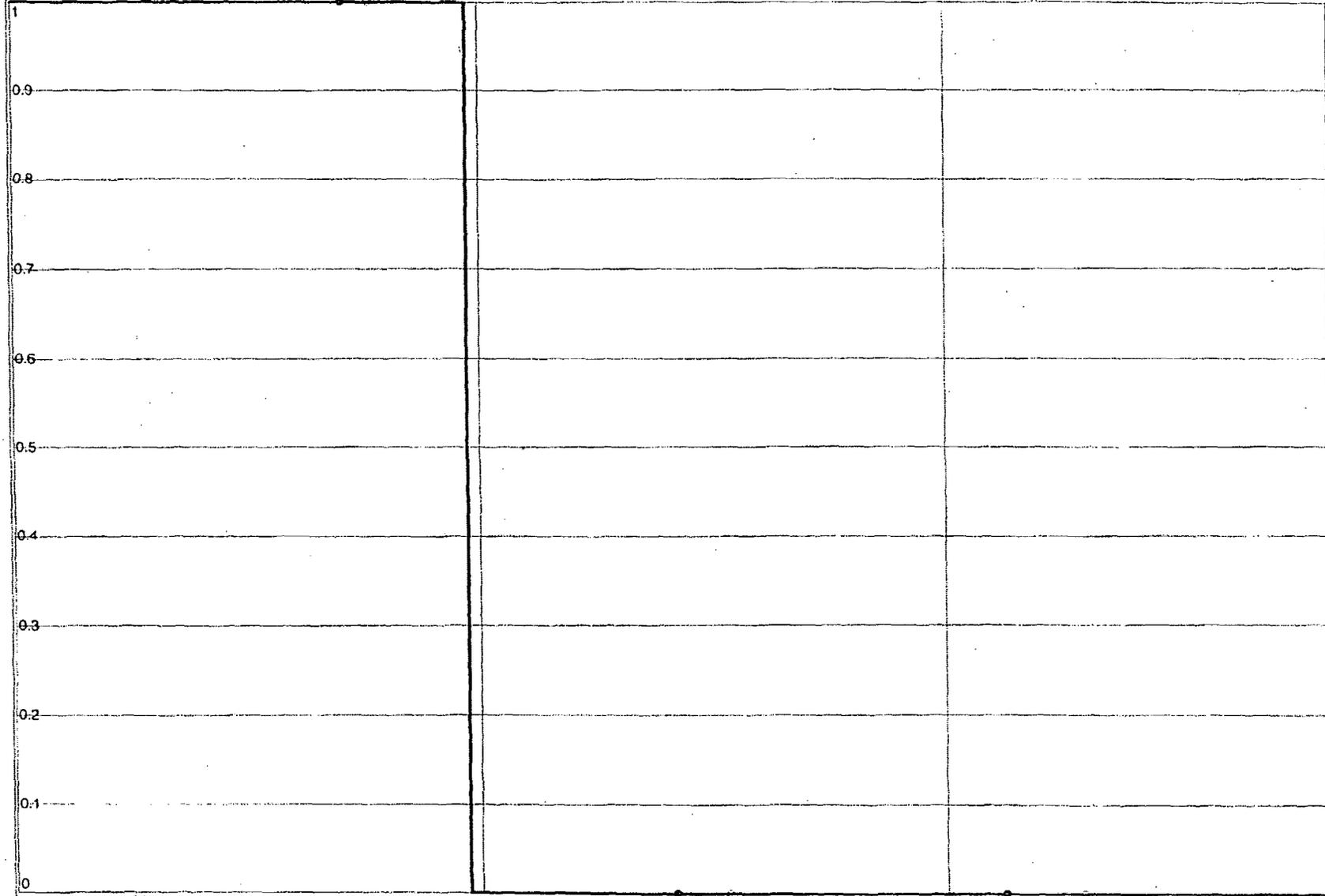
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1.42 Hour(s)

9/9/2010 10:25:00 PM

● CHARGING PMP A BKR   ◻ CHARGING PMP B BKR   ◆ CHARGING PMP C BKR

Reactor Trip Breaker



● Y0006D.CFMS  
OPEN

○ Y0007D.CFMS  
OPEN

9/9/2010 9:00:00 PM

1.42 Hour(s)

9/9/2010 10:25:00 PM

● REAC MAIN TRIP BRKR A   ○ REAC MAIN TRIP BRKR B