

QUAD-CITIES NUCLEAR POWER STATION

UNITS 1 AND 2

MONTHLY PERFORMANCE REPORT

NOVEMBER 1982

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS & ELECTRIC COMPANY

NRC DOCKET NOS. 50-254 AND 50-265

LICENSE NOS. DPR-29 AND DPR-30

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I. INTRODUCTION

Quad-Cities Nuclear Power Station is composed of two Boiling Water Reactors, each with a Maximum Dependable Capacity of 769 MWe net, located in Cordova, Illinois. The Station is jointly owned by Commonwealth Edison Company and Iowa-Illinois Gas & Electric Company. The Nuclear Steam Supply Systems are General Electric Company Boiling Water Reactors. The Architect/Engineer was Sargent & Lundy, Incorporated, and the primary construction contractor was United Engineers & Constructors. The condenser cooling method is a closed cycle spray canal, and the Mississippi River is the condenser cooling water source. The plant is subject to license numbers DPR-29 and DPR-30, issued October 1, 1971, and March 21, 1972, respectively, pursuant to Docket Numbers 50-254 and 50-265. The date of initial reactor criticalities for Units 1 and 2 respectively were October 18, 1971, and April 26, 1972. Commercial generation of power began on February 18, 1973 for Unit 1 and March 10, 1973 for Unit 2.

This report was compiled by Becky Brown and Randall Buss, telephone number 309-654-2241, extensions 127 and 181.

II. SUMMARY OF OPERATING EXPERIENCE

A. Unit One

November 1-30: Unit One continued the End of Cycle Six Refueling Outage throughout the month.

B. Unit Two

November 1-6: Unit Two began the month increasing load at 5 MWe/hour following a load reduction on October 31 for a tripped 2B Recirculation Pump Motor-Generator Set. On November 2, 2B Recirculation Pump Motor-Generator Set tripped again on low oil pressure. Load was reduced to 350 MWe while repairs were made. On November 3, the unit began increasing load at 5 MWe/hour to a maximum achievable load of 801 MWe on November 6.

November 7-19: At 0010 hours, on November 7, load was reduced at 200 MWe/hour to 700 MWe for weekly Turbine testing. At 0141 hours, the unit scrambled on an Average Power Range Monitor High-High signal due to a spurious control valve fast closure signal during the weekly Turbine test. The Reactor was made critical at 1000 hours and the Generator was on line at 1308 hours. The unit began increasing load at 1600 hours at 100 MWe/hour. Load was reduced twice, on November 9 and 12, at the request of the Load Dispatcher due to low system demand and once on November 14, for weekly Turbine testing; otherwise maintaining an average load of approximately 800 MWe.

November 20-30: On November 20, at 2130 hours, the unit began decreasing load at 100 MWe/hour to minimum Recirculation Pump speed for a control rod pattern adjustment. Load was being held at 425 MWe by 0130 hours on November 21 and began increasing load at 0730 hours to 811 MWe by November 23. On November 26, load was dropped to 665 MWe to backwash and precoat a Condensate Demineralizer. Load was increased to 815 MWe on November 27. Load was reduced on November 29 at the request of the Load Dispatcher due to low system demand. Load began increasing on November 30 from 425 MWe at 0415 hours.

III. PLANT OR PROCEDURE CHANGES, TESTS, EXPERIMENTS, AND SAFETY RELATED MAINTENANCE

A. Amendments to Facility License or Technical Specifications

There were no amendments to Facility License or Technical Specifications for the reporting period.

B. Facility or Procedure Changes Requiring NRC Approval

There were no facility or procedure changes requiring NRC approval for the reporting period.

C. Tests and Experiments Requiring NRC Approval

There were no tests or experiments requiring NRC approval for the reporting period.

D. Corrective Maintenance of Safety Related Equipment

The following represents a tabular summary of the safety related maintenance performed on Unit One and Unit Two during the reporting period. The headings indicated in this summary include: Work Request Numbers, LER Numbers, Components, Cause of Malfunctions, Results and Effects on Safe Operation, and Action Taken to Prevent Repetition.

UNIT ONE MAINTENANCE SUMMARY

W. R. NUMBER	LER NUMBER	COMPONENT	CAUSE OF MALFUNCTION	RESULTS & EFFECTS ON SAFE OPERATION	ACTION TAKEN TO PREVENT REPETITION
Q22472	82-26/03L	M0-1-1001-37A Torus Spray Header Injection Valve	The torque switch would not close the valve tight enough.	Valve 37A was found to leak in excess of the Tech Spec limit during Local Leak Rate Testing.	The torque switch was adjusted & the leak rate test failed. A Work Request was written to inspect the valve internals.
Q22164	82-26/03L	1-220-62A Feed- water Check Valve	The valve seating surface was slightly corroded and the O-ring was worn.	The "A" loop Feedwater check valve, CV 1-220-62A failed to meet the Tech Spec requirements of less than or equal to 10.36 SCFH during Local Leak Rate Testing.	The valve internals were inspected and cleaned. The seat ring O-ring was replaced & the Local Leak Rate Test was performed.
Q22165	82-26/03L	1-220-58A Feed- water Check Valve	The valve seating surface was corroded and the O-ring was worn.	The "A" loop Feedwater check valve could not be pressurized to the required 40 psig during Local Leak Rate Testing.	The valve internals were inspected and cleaned. The seat ring O-ring was replaced & the Local Leak Rate Test was performed.
Q22291		Suppression Chamber Vacuum Breaker 1-1601-31A	The shaft packing and O-rings were worn.	The vacuum breaker valve stem packing was found to be leaking during Local Leak Rate Testing. The leakage was within the Tech Spec limits.	The shaft packing and O-rings were replaced and the Leak Rate Testing was performed.

UNIT TWO MAINTENANCE SUMMARY

W. R. NUMBER	LER NUMBER	COMPONENT	CAUSE OF MALFUNCTION	RESULTS & EFFECTS ON SAFE OPERATION	ACTION TAKEN TO PREVENT REPETITION
Q22388	82-19/03L	"A" Recirc Pump Discharge Valve 2-202-5A	The valve operator came loose due to missing bonnet-to-yoke bolts.	The valve could not be stroked. The Reactor was shutdown at the time.	The operator yoke was bolted to the bonnet & the valve was tested. The other valves in the containment were inspected.
Q22406	82-19/03L	Recirc Pump Discharge Valve 2-202-5A	The valve shaft was bent when the yoke came loose.	The valve could not be stroked. The Reactor was shutdown at the time.	The threaded part of the stem was cut off & a new piece was welded on. The valve was tested satisfactorily.
Q22709	82-23/03L	HPCI Turbine 2-2300-PS1	The oil pressure switch was found to be defective.	The HPCI Turbine could not be reset.	The pressure switch was replaced & HPCI was tested satisfactorily.
Q20196		HPCI Pump Minimum Flow Valve M0-2-2301-14	Worn parts in the operator caused the motor to draw high amperes.	The thermals trip when attempting to open the valve.	The Limitorque operator and motor was replaced.

IV. LICENSEE EVENT REPORTS

The following is a tabular summary of all licensee event reports for Quad-Cities Units One and Two occurring during the reporting period, pursuant to the reportable occurrence reporting requirements as set forth in sections 6.6.B.1. and 6.6.B.2. of the Technical Specifications.

UNIT ONE

There were no Licensee Event Reports for the reporting period for Unit One.

UNIT TWO

<u>Licensee Event Report Number</u>	<u>Date</u>	<u>Title of Occurrence</u>
82-23/03L	11-04-82	HPCI Inoperable - Dirty Oil Pressure Switch

V. DATA TABULATIONS

The following data tabulations are presented in this report:

- A. Operating Data Report
- B. Average Daily Unit Power Level
- C. Unit Shutdowns and Power Reductions

OPERATING DATA REPORT

DOCKET NO. 50-254

UNIT ONE

DATED December 01 1982

COMPLETED BY Randall D Buss

TELEPHONE 309-654-2241x181

OPERATING STATUS

0000 110182

1. Reporting period: 2400 113082 Gross hours in reporting period: 720

2. Currently authorized power level (MWt): 2511 Max. Depend capacity (MWe-Net): 769* Design electrical rating (MWe-Net): 789

3. Power level to which restricted (if any) (MWe-Net): NA

4. Reasons for restriction (if any):

	This Month	Yr. to Date	Cumulative
5. Number of hours reactor was critical	<u>0.0</u>	<u>5833.1</u>	<u>74932.2</u>
6. Reactor reserve shutdown hours	<u>0.0</u>	<u>0.0</u>	<u>3421.9</u>
7. Hours generator on line	<u>0.0</u>	<u>5777.1</u>	<u>71908.6</u>
8. Unit reserve shutdown hours.	<u>0.0</u>	<u>0.0</u>	<u>909.2</u>
9. Gross thermal energy generated (MWH)	<u>0</u>	<u>11000483</u>	<u>146058842</u>
10. Gross electrical energy generated (MWH)	<u>0</u>	<u>3533214</u>	<u>47062147</u>
11. Net electrical energy generated (MWH)	<u>-2045</u>	<u>3194639</u>	<u>43778723</u>
12. Reactor service factor	<u>0.0</u>	<u>72.8</u>	<u>81.0</u>
13. Reactor availability factor	<u>0.0</u>	<u>72.8</u>	<u>84.7</u>
14. Unit service factor	<u>0.0</u>	<u>72.1</u>	<u>77.7</u>
15. Unit availability factor	<u>0.0</u>	<u>72.1</u>	<u>78.7</u>
16. Unit capacity factor (Using MDC)	<u>-.4</u>	<u>51.8</u>	<u>61.5</u>
17. Unit capacity factor (Using Des. MWe)	<u>-.4</u>	<u>50.5</u>	<u>60.0</u>
18. Unit forced outage rate	<u>0.0</u>	<u>1.5</u>	<u>6.7</u>

19. Shutdowns scheduled over next 6 months (Type, Date, and Duration of each):

20. If shutdown at end of report period, estimated date of startup 12-19-82

*The MDC may be lower than 769 MWe during periods of high ambient temperature due to the thermal performance of the spray canal.

OPERATING DATA REPORT

DOCKET NO. 50-265

UNIT TWO

DATE December 01 1982

COMPLETED BY Randall D Buss

TELEPHONE 309-654-2241x181

OPERATING STATUS

0000 110182

1. Reporting period: 2400 113082 Gross hours in reporting period: 720

2. Currently authorized power level (MWt): 2511 Max. Depend capacity (MWe-Net): 769* Design electrical rating (MWe-Net): 789

3. Power level to which restricted (if any) (MWe-Net): NA

4. Reasons for restriction (if any):

	This Month	Yr. to Date	Cumulative
5. Number of hours reactor was critical	<u>711.8</u>	<u>6667.6</u>	<u>71519.4</u>
6. Reactor reserve shutdown hours	<u>0.0</u>	<u>0.0</u>	<u>2985.8</u>
7. Hours generator on line	<u>708.6</u>	<u>6602.9</u>	<u>68844.1</u>
8. Unit reserve shutdown hours.	<u>0.0</u>	<u>0.0</u>	<u>702.9</u>
9. Gross thermal energy generated (MWH)	<u>1589387</u>	<u>14948541</u>	<u>142835624</u>
10. Gross electrical energy generated (MWH)	<u>512650</u>	<u>4761755</u>	<u>45467995</u>
11. Net electrical energy generated (MWH)	<u>479794</u>	<u>4526014</u>	<u>42650598</u>
12. Reactor service factor	<u>98.9</u>	<u>83.2</u>	<u>78.1</u>
13. Reactor availability factor	<u>98.9</u>	<u>83.2</u>	<u>81.3</u>
14. Unit service factor	<u>98.4</u>	<u>82.4</u>	<u>75.1</u>
15. Unit availability factor	<u>98.4</u>	<u>82.4</u>	<u>75.9</u>
16. Unit capacity factor (Using MDC)	<u>86.7</u>	<u>73.4</u>	<u>60.5</u>
17. Unit capacity factor (Using Des. MWe)	<u>84.5</u>	<u>71.6</u>	<u>59.0</u>
18. Unit forced outage rate	<u>1.6</u>	<u>16.0</u>	<u>9.2</u>

19. Shutdowns scheduled over next 6 months (Type, Date, and Duration of each):

20. If shutdown at end of report period, estimated date of startup NA

*The MDC may be lower than 769 MWe during periods of high ambient temperature due to the thermal performance of the spray canal.

APPENDIX B
AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-265

UNIT TWO

DATE December 01 1982

COMPLETED BY Randall D Buss

TELEPHONE 309-654-2241x181

MONTH November 1982

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

1.	<u>523.6</u>
2.	<u>408.9</u>
3.	<u>387.6</u>
4.	<u>582.5</u>
5.	<u>672.9</u>
6.	<u>742.9</u>
7.	<u>236.9</u>
8.	<u>612.0</u>
9.	<u>658.0</u>
10.	<u>754.4</u>
11.	<u>742.5</u>
12.	<u>714.6</u>
13.	<u>769.5</u>
14.	<u>694.0</u>
15.	<u>754.8</u>
16.	<u>756.7</u>

17.	<u>761.5</u>
18.	<u>760.9</u>
19.	<u>764.5</u>
20.	<u>744.3</u>
21.	<u>459.0</u>
22.	<u>623.1</u>
23.	<u>728.7</u>
24.	<u>761.8</u>
25.	<u>762.4</u>
26.	<u>748.9</u>
27.	<u>725.4</u>
28.	<u>758.8</u>
29.	<u>758.0</u>
30.	<u>622.3</u>

INSTRUCTIONS

On this form, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.

These figures will be used to plot a graph for each reporting month. Note that when maximum dependable capacity is used for the net electrical rating of the unit, there may be occasions when the daily average power level exceeds the 100% line (or the restricted power level line). In such cases, the average daily unit power output sheet should be footnoted to explain the apparent anomaly.

APPENDIX B
AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-265

UNIT TWO

DATED December 01 1982

COMPLETED BY Randall D Buss

TELEPHONE 309-654-2241x181

MONTH November 1982

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

1. <u>523.6</u>	17. <u>761.5</u>
2. <u>408.9</u>	18. <u>760.9</u>
3. <u>387.6</u>	19. <u>764.5</u>
4. <u>582.5</u>	20. <u>744.3</u>
5. <u>672.9</u>	21. <u>459.0</u>
6. <u>742.9</u>	22. <u>623.1</u>
7. <u>236.9</u>	23. <u>728.7</u>
8. <u>612.0</u>	24. <u>761.8</u>
9. <u>658.0</u>	25. <u>762.4</u>
10. <u>754.4</u>	26. <u>748.9</u>
11. <u>742.5</u>	27. <u>725.4</u>
12. <u>714.6</u>	28. <u>758.8</u>
13. <u>769.5</u>	29. <u>758.0</u>
14. <u>694.0</u>	30. <u>622.3</u>
15. <u>754.8</u>	
16. <u>756.7</u>	

INSTRUCTIONS

On this form, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.

These figures will be used to plot a graph for each reporting month. Note that when maximum dependable capacity is used for the net electrical rating of the unit, there may be occasions when the daily average power level exceeds the 100% line (or the restricted power level line). In such cases, the average daily unit power output sheet should be footnoted to explain the apparent anomaly.

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APPENDIX D
UNIT SHUTDOWNS AND POWER REDUCTIONS

QTP 300-S13
Revision 6
August 1982

DOCKET NO. 050-254

UNIT NAME Quad-Cities Unit One

COMPLETED BY R. Buss

DATE December 1, 1982

REPORT MONTH NOVEMBER 1982

TELEPHONE 309-654-2241

NO.	DATE	TYPE F OR S	DURATION (HOURS)	REASON	METHOD OF SHUTTING DOWN REACTOR	LICENSEE EVENT REPORT NO.	SYSTEM CODE	COMPONENT CODE	CORRECTIVE ACTIONS/COMMENTS
82-85	820906	S	720.0	C	4		RC	FUELXX	Continuation of Cycle Six Refueling Outage

APPROVED
AUG 16 1982

ID/5A

APPENDIX D
UNIT SHUTDOWNS AND POWER REDUCTIONSQTP 300-S13
Revision 6
August 1982DOCKET NO. 050-265UNIT NAME Quad-Cities Unit TwoCOMPLETED BY R. BussDATE December 1, 1982REPORT MONTH NOVEMBER 1982TELEPHONE 309-654-2241

NO.	DATE	TYPE F OR S	DURATION (HOURS)	REASON	METHOD OF SHUTTING DOWN REACTOR	LICENSEE EVENT REPORT NO.	SYSTEM CODE	COMPONENT CODE	CORRECTIVE ACTIONS/COMMENTS
82-83	821102	F	0.0	B	5		CB	INSTRU	Load reduced after 2B Recirculation Pump Motor-Generator Set tripped on low oil pressure switch trip
82-84	821107	S	0.0	B	5		HA	XXXXXX	Reduced load to perform weekly Turbine test
82-85	821107	F	11.5	A	3		HA	RELAYX	Reactor scram on Average Power Range Monitor High-High signal due to control valve closure during weekly Turbine test
82-86	821109	S	0.0	F	5		EA	ZZZZZ	Load reduction requested by Load Dispatcher due to low system demand
82-87	821112	S	0.0	F	5		EA	ZZZZZ	Load reduction requested by Load Dispatcher due to low system demand
82-88	821114	S	0.0	B	5		HA	XXXXXX	Reduced load to perform weekly Turbine test

APPROVED
AUG 16 1982

ID/5A

APPENDIX D
UNIT SHUTDOWNS AND POWER REDUCTIONSQTP 300-S13
Revision 6
August 1982DOCKET NO. 050-265UNIT NAME Quad-Cities Unit TwoCOMPLETED BY R. BussDATE December 1, 1982REPORT MONTH NOVEMBER 1982TELEPHONE 309-654-2241

NO.	DATE	TYPE FOR S	DURATION (HOURS)	REASON	METHOD OF SHUTTING DOWN REACTOR	LICENSEE EVENT REPORT NO.	SYSTEM CODE	COMPONENT CODE	CORRECTIVE ACTIONS/COMMENTS
82-89	821120	S	0.0	H	5		RB	CONROD	Load reduction for Control Rod Pattern adjustment
82-90	821126	F	0.0	B	5		HG	DEMINX	Reduced load due to Condensate Demineralizer problems
82-91	821129	S	0.0	F	5		EA	ZZZZZZ	Load reduction requested by Load Dispatcher due to low system demand

APPROVED
AUG 16 1982

VI. UNIQUE REPORTING REQUIREMENTS

The following items are included in this report based on prior commitments to the commission:

A. MAIN STEAM RELIEF VALVE OPERATIONS

There were no Main Steam Relief Valve Operations for the reporting period.

B. CONTROL ROD DRIVE SCRAM TIMING DATA FOR UNITS ONE AND TWO

There was no Control Rod Drive Scram Timing Data for Units One and Two for the reporting period.

VII. REFUELING INFORMATION

The following information about future reloads at Quad-Cities Station was requested in a January 26, 1978, licensing memorandum (78-24) from D. E. O'Brien to C. Reed, et al., titled "Dresden, Quad-Cities, and Zion Station--NRC Request for Refueling Information", dated January 18, 1978.

QUAD-CITIES REFUELING
INFORMATION REQUEST

QTP 300-S32
Revision 1
March 1978

- *
1. Unit: 1 Reload: 6 Cycle: 7
2. Scheduled date for next refueling shutdown: Sept 12, 1982
3. Scheduled date for restart following refueling: Dec 4, 1982
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment:
YES
5. Scheduled date(s) for submitting proposed licensing action and supporting information:
JULY 26, 1982
6. Important licensing considerations associated with refueling, e.g., new or different fuel design or supplier, unreviewed design or performance analysis methods, significant changes in fuel design, new operating procedures:
IMPLEMENTATION OF THE ODYN TRANSIENT ANALYSIS CODE AND RESULTS
(MCPR SCRAM TIME DEPENDENCE)
7. The number of fuel assemblies.
a. Number of assemblies in core: 224 new/724 total
b. Number of assemblies in spent fuel pool: 1940 after the outage
8. The present licensed spent fuel pool storage capacity and the size of any increase in licensed storage capacity that has been requested or is planned in number of fuel assemblies:
a. Licensed storage capacity for spent fuel: 2920
b. Planned increase in licensed storage: 4636 new/7556 total
9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity:

LOSS OF FULL CORE DISCHARGE CAPABILITY - 3/84
LOSS OF RELOAD CORE DISCHARGE CAPABILITY - 2/86

APPROVED

APR 20 1978

Q. C. O. S. R.

QUAD-CITIES REFUELING
INFORMATION REQUEST

QTP 300-S32
Revision 1
March 1978

- *
1. Unit: 2 Reload: 6 Cycle: 7
2. Scheduled date for next refueling shutdown: Feb 27, 1983
3. Scheduled date for restart following refueling: April 23, 1983
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment:
NO
5. Scheduled date(s) for submitting proposed licensing action and supporting information:
NONE
6. Important licensing considerations associated with refueling, e.g., new or different fuel design or supplier, unreviewed design or performance analysis methods, significant changes in fuel design, new operating procedures:
NONE
7. The number of fuel assemblies.
a. Number of assemblies in core: 192 new/724 total
b. Number of assemblies in spent fuel pool: after the outage 2132
8. The present licensed spent fuel pool storage capacity and the size of any increase in licensed storage capacity that has been requested or is planned in number of fuel assemblies:
a. Licensed storage capacity for spent fuel: 2920
b. Planned increase in licensed storage: 4636 new/7556 total
9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity:

LOSS OF FULL CORE DISCHARGE CAPABILITY - 3/84
LOSS OF RELOAD CORE DISCHARGE CAPABILITY - 2/86

A P P R O V E D

APR 20 1978

Q. C. O. S. R.

VIII. GLOSSARY

The following abbreviations which may have been used in the Monthly Report, are defined below:

ACAD/CAM	-	Atmospheric Containment Atmospheric Dilution/Containment Atmospheric Monitoring
ANSI	-	American National Standards Institute
APRM	-	Average Power Range Monitor
ATWS	-	Anticipated Transient Without Scram
BWR	-	Boiling Water Reactor
CRD	-	Control Rod Drive
EHC	-	Electro-Hydraulic Control System
EOF	-	Emergency Operations Facility
GSEP	-	Generating Stations Emergency Plan
HEPA	-	High-Efficiency Particulate Filter
HPCI	-	High Pressure Coolant Injection System
HRSS	-	High Radiation Sampling System
IPCLRT	-	Integrated Primary Containment Leak Rate Test
IRM	-	Intermediate Range Monitor
ISI	-	Inservice Inspection
LER	-	Licensee Event Report
LLRT	-	Local Leak Rate Test
LPCI	-	Low Pressure Coolant Injection Mode of RHRS
LPRM	-	Local Power Range Monitor
MAPLHGR	-	Maximum Average Planar Linear Heat Generation Rate
MCPR	-	Minimum Critical Power Ratio
MFLCPR	-	Maximum Fraction Limiting Critical Power Ratio
MPC	-	Maximum Permissible Concentration
MSIV	-	Main Steam Isolation Valve
NIOSH	-	National Institute for Occupational Safety and Health
PCI	-	Primary Containment Isolation
PCIOMR	-	Preconditioning Interim Operating Management Recommendations
RBCCW	-	Reactor Building Closed Cooling Water System
RBM	-	Rod Block Monitor
RCIC	-	Reactor Core Isolation Cooling System
RHRS	-	Residual Heat Removal System
RPS	-	Reactor Protection System
RWM	-	Rod Worth Minimizer
SBGTS	-	Standby Gas Treatment System
SBLC	-	Standby Liquid Control
SDC	-	Shutdown Cooling Mode of RHRS
SDV	-	Scram Discharge Volume
SRM	-	Source Range Monitor
TBCCW	-	Turbine Building Closed Cooling Water System
TIP	-	Traveling Incore Probe
TSC	-	Technical Support Center