SOD/ECIS
IE-01

January 10, 1996

Mr. M. J. Wallace
Senior Vice President and
Chief Nuclear Officer
Commonwealth Edison Company
Executive Towers West III, Suite 500
1400 OPUS Place
Downers Grove, IL 60515

SUBJECT: PUBLIC MEETING WITH COMMONWEALTH EDISON COMPANY (COMED) - PLANS TO IMPROVE PERFORMANCE AT COMED NUCLEAR POWER STATIONS

Dear Mr. Wallace

This refers to the management meeting, open to public observation, conducted on December 8, 1995, at the NRC Region III Office, concerning the priorities and actions planned to improve the performance at your nuclear power stations over the next 6 months. Attendees at the meeting are listed in Attachment 1 to this letter. The handout you provided during the meeting is included as Attachment 2 to this letter.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and the attachments will be placed in the NRC's Public Document Room.

Should you have any questions concerning this matter, we will be pleased to discuss them with you.

Sincerely,

Original Signed by P. L. Hiland

Patrick L. Hiland, Chief
Reactor Projects Branch 1

Docket Nos.: 50-456; 50-457; 50-454;
50-455; 50-237; 50-249;
50-373; 50-374; 50-254;
50-265; 50-295; 50-304

License Nos.: NPF-72; NPF-77; NPF-37;
NPF-66; DPR-19; DPR-25;
DPR-29; DPR-30; NPF-11;
NPF-18; DPR-39; DPR-48

Attachments:
1. Attendance List
2. Presentation Slides

IA3

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J. S. Perry, Vice President, BWR Operations
K. A. Strahm, Vice President, PWR Operations
D. Farrar, Nuclear Regulatory
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T. Nauman, Station Manager Unit 1, Dresden
M. Heffley, Station Manager Units 2 and 3, Dresden
P. Holland, Regulatory Assurance
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L. W. Pearce, Station Manager, Quad Cities
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G. Schwartz, Station Manager, Zion
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K. Bartes, Regulatory
Assurance Supervisor, Braidwood
Richard Hubbard
Nathan Schloss, Economist
Office of the Attorney General
State Liaison Officer
Chairman, Illinois Commerce
Commission

PLEASE SEE CONTINUED DISTRIBUTION AND CONCURRENCES

Attachment 1

LIST OF ATTENDEES

for December 8, 1995 Meeting

NRC Attendees:
H. Miller, Regional Administrator, RIII
W. Axelson, Director, Division of Reactor Projects, RIII
R. Capra, Director, Project Directorate III-2, NRR
G. Grant, Director, Division of Reactor Safety, RIII
C. Pederson, Director, Division of Nuclear Materials Safety, RIII
Other staff members from RIII and NRR.

Commonwealth Edison Company Attendees:

M. Wallace, Senior Vice President and Chief Nuclear Officer
S. Perry, Vice President, BWR Operations
K. Strahm, Vice President, PWR Operations
E. Kraft, Quad Cities Site Vice President
Other staff members from the Commonwealth Edison Company.

Illinois Department of Nuclear Safety

R. White, Manager, Office of Nuclear Facility Safety

Dresden

1. SIGNIFICANT WORK ACTIONS COMPLETED OVER THE PAST 6-12 MONTHS

HUMAN PERFORMANCE

- Experienced managers added to the Dresden Management team, including:
  - Station Manager
  - Engineering Manager
  - Operations Manager
  - Work Control and Outage Manager
  - Plant Engineering Superintendent
  - Radiation Protection Manager
  - Maintenance Manager
- Most are from outside ComEd and were recruited based on their strong performance at other facilities. We now have a stronger management team.

EQUIPMENT PERFORMANCE

- During the Fall of 1994 and Spring of 1995, an extensive series of reviews and walkdowns was conducted to identify items that could impact safety or operations. Major items from these walkdowns/ reviews were prioritized and scheduled for review. The most important items, described in our 4/24/95 letter to the NRC, have been completed. Key among these were:
  - Unit 3 Feedwater level control logic improvement
  - Unit 2 Core Shroud repair
  - Unit 2 reactor bottom vessel drain restored
  - Operated "A: train of Unit 3 Steam Jet Air Ejector/Recombiner
- System Review Team established to identify latent/potential system problems and reviews of five pilot systems were completed.

1. SIGNIFICANT WORK ACTIONS COMPLETED OVER THE PAST 6-12 MONTHS
(continued)

HUMAN PERFORMANCE

DEVELOPMENT AND IMPLEMENTATION OF SITE STANDARDS

- Site-wide personnel performance standards developed and issued to personnel in booklet form
- Specific Operations standards developed and issued
- Maintenance Standards developed and issued with bargaining unit involvement
- Conservative Decision Making seminars conducted in Operations, Maintenance and Engineering
- Training of Maintenance First Line Supervisors on supervisory skills, standards and expectations completed.

OPERATIONS

- Formal plans and checklist for error-free startups and shutdowns of the units have been developed and successfully implemented on Unit 3.
- Three error-free startups of Unit 3 were accomplished, involving over 2000 rod manipulations.

EQUIPMENT PERFORMANCE

- Over 200,000 pounds of shielding and several surveillance cameras were installed to reduce personnel radiation exposure.
- Vacuuming and structural inspection of Unit 1 fuel pool and transfer canal was completed. The Unit 1 transfer tube has been permanently sealed, eliminating a potential fuel pool leakage pathway.
- Performance Centered Maintenance review of preventive maintenance was completed to evaluate and upgrade preventive maintenance on five key systems.

1. SIGNIFICANT WORK ACTIONS COMPLETED OVER THE PAST 6-12 MONTHS
(continued)

HUMAN PERFORMANCE

ASSESSMENT AND TRENDING

- Detailed performance measures were established to measure effectiveness of actions included in our Focus Area improvement plans. These measures are reviewed during weekly progress meetings and monthly performance meetings.
- Improved trend analysis methods and reports were established to permit more effective analysis of causes of problems.
- Routine reviews of corrective action effectiveness have been established
- The Management by Walking Around and Monitor Watch programs have been established to provide a formal method for line management self-assessment

HUMAN PERFORMANCE (continued)

WORK CONTROL

- The Operational Safety Predictor (OSPRE) software program for scheduling work has been implemented to minimize operational risk of work activities based on the Dresden PRA.
- A "Work It Now" (WIN) Team has been established and has been used to tackle emergent work.
- The Electronic Work Control System has been implemented.
- An upgraded industrial safety program and procedures were developed and implemented.

2. SIGNIFICANT PERFORMANCE RESULTS REALIZED OVER THE PAST 6-12 MONTHS

HUMAN PERFORMANCE

- Operations errors have been on a downward trend for four consecutive quarters.
- Over 40 industry experienced Design and System Engineers have been hired.
- Completed review of 250 administrative procedures resulting in a deletion of 66 procedures and revision to 100 others.
- The number of procedures in revision was reduced from over 900 in June 1995 to 486 as of October 31, 1995.
- Improved Industrial Safety Accident Rate from 2.4 in 1994 to 0.89 as of November 1995.
- Reduced the number of overdue corrective actions and investigations from over 40 each in the spring of 1995 to zero in November 1995.
- Reduced the number of PCEs from 300 in 1994 to 100 in November 1995 year to date.
- Since July 1, 1995 Dresden has experienced 2 LERs caused by personnel error as compared to 6 in the first half of 1995.
- As of October 31, 1995, daily non-outage exposure for 1995 has been 0.384 person-rem per day, compared with .790 per day in 1994 (a 48% reduction)..

EQUIPMENT PERFORMANCE

- WIN Team has completed over 1800 minor corrective maintenance items.
- Control Room Work Request backlog reduced from over 120 to 36 during 1995.
- Operator Work-arounds reduced from over 80 to 47 during 1995.
- Non-outage corrective backlog reduced from over 1600 to 1118 during 1995.
- With the exception of Unit 3 IPC/ISO unavailability on key safety systems is better than the INPO industry average since the beginning of July 1995.
- As of October 1995, there has been a 49% reduction in radioactive waste generated per month compared to 1994 levels.
- Forty-four of the 86 "hot spots" in plant piping and equipment have been eliminated.
- Contaminated area has been reduced from 15.5% to 10.34% during 1995.
- Reduction in the number of temporary alterations from 56 to 35 during 1995.

3. SIGNIFICANT WORK ACTIONS TO BE COMPLETED BY 4/30/96

HUMAN PERFORMANCE

OPERATIONS

- Achieve error-free restart of Unit 2.
- Implement revised Out-of-Service program and procedure to meet industry standards.

MANGEMENT DEVELOPMENT

- Complete evaluation of assignments and capabilities (360 degree assessments) of management supervisory personnel
- Complete remediation and reevaluation of site management personnel identified as low performers during Fall 1995 evaluations. .

ENGINEERING

- Complete upgrade of System Trending Program to provide a consistent basis for system manager monitoring of system performance.
- Complete Engineering Qualification Card Upgrade and Certification Guide Program to ensure that Engineering personnel are appropriately qualified for assigned tasks.

EQUIPMENT PERFORMANCE

- Replan and complete D2R14 refueling outage

SPECIFIC KEY MATERIAL CONDITION UPGRADES

- Install new feedwater regulating valves and control system on Unit 2.
- Complete Zinc addition modification on Unit 2.
- Install biometric hand geometry system to control plant access.
- Make Unit 2 Station Blackout (SBO) Diesel available.
- Complete Generic Letter 89-10 work on Unit 2 valves.
- Complete Unit 2 Reactor Water Cleanup system heat exchanger and major piping replacement.
- Complete addition of shielded reflective insulation to recirculation piping in Unit 2 to reduce drywell doses in future outages.

3. SIGNIFICANT WORK ACTIONS TO BE COMPLETED BY 4/30/96
(continued)

HUMAN PERFORMANCE

SUPERVISORY AND WORKFORCE SKILLS

- Provide MARC training for supervisors.
- Complete Phase I training and testing of site workforce to ensure that workforce members have the correct knowledge and skills for job assignments
- Complete three-day training on the upgraded work control process and fully implement the new process.

SELF-ASSESSMENT

- Complete development and implementation of periodic self-assessment programs in Operations, Maintenance, and Radiation Protection. (Operations program is now in place.)

EQUIPMENT PERFORMANCE

REVIEW OF SYSTEMS AND EQUIPMENT

- Complete reviews of an additional 14 systems to identify latent/potential problems.
- Complete Performance Centered Maintenance reviews of additional 14 systems.

HOUSEKEEPING

- Clean up 3 of 10 designated worst plant areas.

4. SIGNIFICANT PERFORMANCE RESULTS TO BE REALIZED BY 4/30/96

HUMAN PERFORMANCE

OPERATIONS

- Continued improving trend in Operations human performance (Level 3 events) from 8 per quarter by end of September, 1995 to 4 per quarter by end of March, 1996.
- End cyclical performance in out-of-service related events and achieve $\leq$ 1 Level 3 event per month by March, 1996.

GENERAL HUMAN PERFORMANCE

- Attain zero personnel error LERs during January - April 1996.
- Achieve goal of 40 days between plant events.
- Reduce ISAR to 0.8 during January-April 1996.

RADIATION PROTECTION

- Achieve fewer than 25 Personnel Contamination Events during January-April 1996.

EQUIPMENT PERFORMANCE

BACKLOG REDUCTION

- Reduce corrective maintenance backlog to 950.
- Reduce operator workarounds to 30.
- Reduce Control Room deficiencies to 30.
- Reduce non-outage temporary alterations to 10.
- Maintain zero overdue surveillances beyond critical date.
- Attain zero overdue preventive maintenance items past critical date.

PLANT SYSTEM PERFORMANCE

- Operate Units 2 and 3 with less than 3 LCO/DATR days per week.
- Attain key safety system availability levels at or above industry comparable plant averages for 1995.

4. SIGNIFICANT PERFORMANCE RESULTS TO BE REALIZED BY 4/30/96
(continued)

HUMAN PERFORMANCE

SELF ASSESSMENT/CORRECTIVE ACTION

- Maintain zero overdue investigations and corrective actions.

WORK CONTROL

- Achieve schedule starts within one hour 85% of the time.

LICENSED OPERATOR TRAINING

- Achieve 95% pass rate on operator license requalification exams.

Quad Cities

1. SIGNIFICANT WORK ACTIONS COMPLETED OVER THE PAST 6-12 MONTHS

HUMAN PERFORMANCE

- Implemented "Self Check" Program
- Completed "Conservative Decision Making" seminars for Operations, Engineering and Maintenance
- Completed one - month "Maintenance Stand-down" to improve work control processes
- Implemented Operational Safety Predictor (OSPRE) in Operations
- Created and implemented SQV monthly report
- Implemented Electronic Work Control System
- Senior site management overview of plant startups

EQUIPMENT PERFORMANCE

MATERIAL CONDITION UPGRADES COMPLETE

- Refurbished Unit 2 EHC
- Refurbished Unit 2 Feedwater Level Control
- Overhauled United CRD Hydraulic Control Unit 2 (HCUs)
- Refurbished Recirculation MG set speed controllers
- Completed core shroud repairs to Unit 2
- Replaced RWCU piping on Unit 2
- Overhauled Unit 2 Recirculation MG set fluid couplers
- Installed HPCI exhaust steam spargers Unit 2 (reduced HPCI vibrations)
- Cleaned and re-preserved Unit 2 torus
- Accelerated CRD replacement and overhaul on Unit 2
- GL 89-10 completed for Unit 2
- Operation of Unit 2 feedwater in 3 - element control

2. PERFORMANCE RESULTS REALIZED OVER THE PAST 6-12 MONTHS

HUMAN PERFORMANCE

IMPROVED RP STANDARDS

- Reduced contaminated floor space from approximately 10% (12/94) to 4% (Current).
- Reduced 1995 accumulated radiation exposure goal from 950 to 750 person-rem. (Compared to over 1128 person-rem in 1994.)
- Reduced Personnel contamination to event rate to below goal rate for 1995 year to date.

IMPROVED PERSONNEL ACCOUNTABILITY

- Reduced LERs from 25 in 1994 to 14 in 1995 year to date with only 4 involving human performance.
- Reduced significant overdue commitments to zero in November 1995
- Error free startups on Unit 1 and 2
- Implemented design change process improvement (SDV example)

OPERATIONS STANDARDS

- Operations standards elevated and operations performance monitoring in place; resulted in improved control room professionalism and demeanor

EQUIPMENT PERFORMANCE

IMPROVED RELIABILITY

- Unit 1 had 283 days continuous run

IMPROVED MATERIAL CONDITION

- Eliminated vibration problems with HPCI.
- Reduced vibration problems with other miscellaneous rotating machinery, particularly Reactor Feed Pumps from 77 outstanding problems in 1993 to 19 outstanding problems in Nov., 1995
- Can now operate Feedwater Level Control in 3-element mode.
- Removed 11 operator workarounds during Unit 2 refueling outage.
- Establish "Fix It Now" (FIN) Team
- Hot spots have been reduced by 35%
- Radwaste has been reduced by 33%
- Addressed 95% of all identified DET issues
- Completed 800 FIN team items since August, 1995
- Reduced operator workarounds by 50%
- Installed Biometrics to control plant access
- Reviewed and revised the system engineering notebooks

3. SIGNIFICANT WORK ACTIONS TO BE COMPLETED BY 4/30/96

HUMAN PERFORMANCE

WORK THE PLAN

- Issue 1996 Management Plan. (This is designed to close out the Quad Cities Course of Action.)
- Upgrade of work force to improve to improve radworker practices.
  - Train new employees with 2 day NGET.
  - Complete and distribute radworker handbook to all employees.
- Complete First Line Supervisor Training
- Implementation of Technical Specifications Upgrade Project
- Reduce ISAR to 0.5 during 1996

EQUIPMENT PERFORMANCE

MATERIAL CONDITION UPGRADES

- Overhaul CRD HCUs for Unit 1.
- Refurbish recirculation MG set speed controllers on Unit 1.
- Refurbish Unit 1 Feedwater Level Control
- Refurbish Unit 1 EHC
- Install core shroud repair on Unit 1
- Complete Unit 2 Reactor Water Cleanup system heat exchanger and major piping replacement
- Continue accelerated replacement/overhaul of CRDs on Unit 1
- Install improved feedwater flow measuring device

OTHER

- Unit 1 Station Blackout operational by end of Q1R14
- Removal of 10 operator workarounds during Q1R14
- Reduce the number of control room deficiencies by 25%
- Improve HPCI/RCIC reliability

4. SIGNIFICANT PERFORMANCE RESULTS TO BE REALIZED BY 4/30/96

HUMAN PERFORMANCE

- The Course of Action will be 50% complete after completion of the 1995 Management Plan.
- Expect improved productivity in Maintenance as a result of "Maintenance Stand-down".
- Achieve zero overdue investigations and corrective actions

EQUIPMENT PERFORMANCE

- Improved performance from major equipment that was refurbished or overhauled.
- Increase safety system availability to at or better than industry average (Except for HPCI)

LaSalle

1. SIGNIFICANT WORK ACTIONS COMPLETED OVER THE PAST 6-12 MONTHS

HUMAN PERFORMANCE

PERSONNEL DEVELOPMENT

- Conservative Decision Making training completed for all operating personnel
- Leadership Development III Seminar (Vision/Values rollout) completed by all management & union on site
- Systematic Approach to Training improvements implemented in all programs

PROCESS IMPROVEMENT & SIMPLIFICATION

- Revised Integrated Reporting process including trending, strengthened Event Screening meetings
- Electronic Operator rounds deployed; paperwork reduced, tracking improved
- Conversion process from Standard Tech Specs to Improved Tech Specs initiated; submittal to NRC 7/96
- Operations procedure group staffed; schedule for completion of procedure review/rework established

EQUIPMENT PERFORMANCE

MATERIAL CONDITION IMPROVEMENT

- 2 U1, 1 U2 Cond./CB pumps overhauled
- 1 U1, 1U2 CW Pump/motors overhauled
- 1 RR discharge valve & 1 RR FCV (U2) rebuilt
- 1 U2 MSIV Inboard valve rebuilt
- 75% U1, 50% U2 SSPV Diaphragms replaced
- U2 MSIV limit switched replaced
- U2 VQ Charcoal bed changed out, 2 VQ dampers rebuilt
- Material Condition Strategy and "living" Equipment Focus List established

PERFORMANCE IMPROVEMENT

- AOV flow scanning analysis resulted in 10 Mwe gain on U1; 6 Mwe gain on U2
- U2 Lovejoy Turbine Control modification/upgrade complete

1. SIGNIFICANT WORK ACTIONS COMPLETED OVER THE PAST 6-12 MONTHS
(continued)

HUMAN PERFORMANCE

- Root Cause investigation process strengthened; 4 people added
- Consolidated Facilities Maintenance (CFM) & Fix-It-Now (FIN) teams improve ability to get work done
  - CFM completing ~125 WR/wk; FIN completing ~45 WR/wk, freeing up Maintenance for corrective work

OTHER

- High quality Root Cause investigations on RR, CD/CB, NI systems completed
- Operations standards elevated and operations performance monitoring in place; resulted in improved CR professionalism and demeanor
- Tech Spec. Surveillance review completed; resulted in 60 GSRV changes

EQUIPMENT PERFORMANCE

OTHER

- Closed out GL 89-10 MOV comittments and actions; 2.5 years ahead of schedule, "leader in industry" per NRC

2. SIGNIFICANT PERFORMANCE RESULTS REALIZED OVER THE PAST 6-12 MONTHS

HUMAN PERFORMANCE

TRAINING

- Maintenance and technical training program accreditation renewed by INPO
- Training performance measures indicate improving trends including manager involvement
- Licensee generated requal exam accepted- an industry first with 6/7 students passing

CONSERVATIVE DECISION MAKING

- 1st Manual SCRAM since 1993; indicates conservative decision making beginning to have an effect
- Event-free days clock established; higher standards set for identifying human performance issues

ALARA

- Station dose reduced from 750 person-rem to 520 person-rem (projected EOY)

EQUIPMENT PERFORMANCE

AVAILABILITY

- HPCS/RCIC reliability improved
  - U1 unavailability .0078 in 1994, .0036 in 1995
  - U2 unavailability .0410 in 1994, .0119 in 1995
- Safety system availability increased by more than 60%
- 1 Autoscram in 1995 vs. 7 Autoscrams in 1994
- U1/U2 Unplanned capacity loss (except RFO extensions) factor improved due to material condition initiatives
- Reactor water chemistry significantly improved
  - Average sulfates decreased from over 6 PPB in 1993 to ~3 PPB in 1995. Nov. 1995 average ~2 PPB

ALARA

- Zinc Injection system installed on both units
  - 5 person-rem saved during 1995 forced outage
  - 247 person-rem savings projected in 1996
- Radwaste significantly reduced (EOY projection - second quartile in industry)

2. SIGNIFICANT PERFORMANCE RESULTS REALIZED OVER THE PAST 6-12 MONTHS
(continued)

HUMAN PERFORMANCE

ORGANIZATION

- New operations management in place; driving "Operations in Charge" philosophy
- Senior Management team strengthened with 6 experienced new members

OTHER

- Improved Work Planning - better schedule adherence with 3 week walkdowns in place

EQUIPMENT PERFORMANCE

- Reduction in contaminated floor area to 2.2% of total square footage (peaked at 15% during March)

BACKLOG REDUCTION

- 56 temporary system changes removed or converted to permanent installations - 39 remain as of Dec. 1995
- 103 design changes completed
- 70 operator workarounds eliminated

3. SIGNIFICANT WORK ACTIONS TO BE COMPLETED BY 4/30/96

HUMAN PERFORMANCE

TRAINING

- Complete Conservative Decision Making training for Engineering & Maintenance
- Complete training for all supervisors in Quality First/Employee Concerns
- Complete training of first line supervisors(FLS) to enhanced safety standards
- Complete MARC training for all FLS

PROCESS IMPROVEMENTS & SIMPLIFICATION

- Implementation of Improved Design Process
- Implementation of "Design-It-Now" process

EQUIPMENT PERFORMANCE

MATERIAL CONDITION IMPROVEMENT

- Overhaul 1 Cond/CB, 1 RR pumps, 2 RR FCVs, 1 RR discharge valve during L1R07
- Clean U1 Suppression Pool
- NI & RR to be a focus for improvement in L1R07
- Replace U1 MSIV outboard solenoid pilot valves and MSIV limit switches
- Complete upgrades to U1 Main Turbine Supervisory Instrumentation

BACKLOG REDUCTION

- Elimination of 14 Unit 1 workarounds
- 7 Unit 1 temporary system scanges to be removed or converted to permanent installations
- 97 design changes to be completed

PREVENTATIVE INSPECTIONS

- Enhanced core shroud inspection U1
- 6 year inspection on Main Generator
- 5 year overhaul of 1A TDRFP
- 6 year inspection of 1A DG

4. SIGNIFICANT PERFORMANCE RESULTS TO BE REALIZED BY 4/30/96

HUMAN PERFORMANCE

- L1R07 $\leq$ 264 Person Rem
- Lost time accidents $\leq$ 1
- Human Performance LERs $\leq$ 3

EQUIPMENT PERFORMANCE

- Reduce outstanding temporary system changes to less than 32
- Reduce operator workarounds to less than 54
- Improve HPCS/RCIC reliability; Unit 1/2 unavailability $\leq$ .015

Byron

1. SIGNIFICANT WORK ACTIONS COMPLETED OVER THE PAST 6-12 MONTHS

HUMAN PERFORMNANCE

MATERIAL CONDITION

- Fix It Now Team established 4/95
- Formed task force in 1994 to improve station chiller performanc.
- Formed working group in August, 1995 to develop standard definition for temporary alterations.

HUMAN PERFORMANCE IMPROVEMENT

- 1995 Operations Human Performance Initiatives to reduce errors
  - Communication of Operating Department Expectations
  - Emphasis on Conserative Decision Making
  - Department/Shift Crew Self Assessments
  - Expanded use of Trending Techiques

PERSONNEL SAFETY

- Improve personnel protective equipment usage compliance
- Senior management compliance surveys initiated in 1995

EQUIPMENT PERFORMANCE

MATERIAL CONDITION

- Shift operations sets FIN team priorities
- Condensate/CB pumps improvements
  - Install modifications for oil line flex hoses
  - Perform Lube Oil Pump modifications
  - Overhaul/refurbish motors - four completed by 4/96
- Temporary Alterations
  - Inspected plant for non-identified temporary alterations
- Station Chillers
  - All major chiller units overhauled
  - Aggressive PM program established

1. SIGNIFICANT WORK ACTIONS COMPLETED OVER THE PAST 6-12 MONTHS
(continued)

HUMAN PERFORMANCE

SECURITY EVENTS

- Formed a committee to improve security door event performancein March, 1995.

PERSONNEL DEVELOPMENT

- Conducted Leadership III Training for all Site Personnel
- Standards and Expectations Seminar for First Line Supervision Completed
- Initiated Systems Certification training for Engineering Personnel
- In 1995, 12 site personnel completed Nuclear Business Leadership training.

EQUIPMENT PERFORMANCE

SECURITY EVENTS

- Improve Security Door Event Performance
  - Repeat Doors identified and Repaired
  - Signs placed at doors with highest frequency of events

2. SIGNIFICANT PERFORMANCE RESULTS REALIZED OVER THE PAST 6-12 MONTHS

HUMAN PERFORMANCE

HUMAN PERFORMANCE IMPROVEMENT

- Major Reduction in Operations Human Performance Events

PERSONNEL SAFETY

- Improved from 80% Compliance in 4th Qtr '94 to 92% in 3rd Qtr '95

SECURITY EVENTS

- Improved Security Door Event Performance
- 1995 Target Performance at 16.5 Events/Month
  - Since Committee Development <16.5 Events/Month

PERSONNEL DEVELOPMENT

- Field Obseration Training for Site Supervisors completed

EQUIPMENT PERFORMANCE

MATERIEL CONDITION

- Corrective Now Backlog decreased 20%
- Station Chillers
  - Outstanding Chiller Performance in Summer 1995
  - 5 Modification Completed during 1995

SOURCE TERM REDUCTION EFFORTS

- Activities Monitored
  - "HOT" Spots
  - System Flushes
  - Tanks Cleaned
  - Equipment Sumps Cleaned

3. SIGNIFICANT WORK ACTIONS TO BE COMPLETED BY 4/30/96

HUMAN PERFORMANCE

MATERIAL CONDITION

- Expanded Fix It Now Team Work Scope
- Expansion of FIN Team Planned 1/96

PERSONNEL SAFETY

- Continued Site Emphasis on Industry Safety

SECURITY EVENTS

- Improve Security Door Event Performance
  - 1996 Performance Goal - 10 Events/Month

PERSONNEL DEVELOPMENT

- Quarterly Follow-up Sessions for Standards and Expectations for First Line Supersivison
- 5 Additional Site Personnel to attend Nuclear Business Leadership Training

EQUIPMENT PERFORMANCE

MATERIAL CONDITION

- 2 additional modifications will be completed on the station chillers
- Thermo-lag Effort Completed 7/96
- Unit 1 Cooling Tower Modification Completed 5/96

SOURCE TERM REDUCTION EFFORTS

- RTD Bypass Elimination Modification
  - Scheduled for both Unit 1 & 2 during 1996 Refueling Outages

4. SIGNIFICANT PERFORMANCE RESULTS TO BE REALIZED BY 4/30/96

HUMAN PERFORMANCE

PERSONNEL SAFETY

- 1996 ISAR Goal of 0.40
- 1996 PPE Compliance Goal at 95%

PERSONNEL DEVELOPMENT

- 1996 Use of NBL trained personnel to improve site processes and performance

EQUIPMENT PERFORMANCE

MATERIAL CONDITION

- Reduce corrective Now backlog to 220
- Temporary Alterations
  - Set Target Maximum Less Than
    - 15 by 4/96
    - 10 by 6/96
- Condensate/Condensate Booster Pumps Improvements/Overhaul
  - Four Condensate/Condensate Booster Pumps Completed by 4/96
  - Remaining Pumps by Unit 1 Spring Refueling Outage

Braidwood

1. SIGNIFICANT WORK ACTIONS COMPLETED OVER THE PAST 6-12 MONTHS

HUMAN PERFORMANCE

- Revised procedure adherence policy. Trained/tested all site personnel.
- Established on-shift procedure writers.
- Began site reinforcement sessions.
- Developed/communicated site human performance standards.
- Completed Expectations sessions for all First Line Supervisors
- Started conversion process from Standard Technical Specifications to Improved Technical Specifications.

EQUIPMENT PERFORMANCE

DEVELOPED MATERIAL CONDITION STRATEGY

- Equipment Focus List
- Operator Work Around List
- Material Condition System Status

WORK WEEK WINDOWS

- Work execution improvements
- Facility improvements
- Backlog/work execution indicators developed
- Implemented the on-line maintenance policy

2. SIGNIFICANT PERFORMANCE RESULTS REALIZED OVER THE PAST 6-12 MONTHS

HUMAN PERFORMANCE

- Improved procedure compliance, 800 changes made during A1R05.
- Improved trend in Personnel Error LERs from 8 (1994) to 6 (1995 YTD).
- Improved trend in Consequential Human Events from 19 (1994) to 10 (1995 YTD).
- Improved OSHA Recordable Injuries from 23 (1994) to 19 (1995 YTD).

EQUIPMENT PERFORMANCE

- 4 Unit 2 and 2 Unit 1 CD/CB pumps available 100% since being refurbished.
- 2 U1 RH pumps leak free since new seals installed.
- 1 B SX pump leak free since outboard seal replaced (long standing problem).

3. SIGNIFICANT WORK ACTIONS TO BE COMPLETED BY 4/30/96

HUMAN PERFORMANCE

- Implement Corrective Actions Group.
- Improve utilization of the Problem Identification system.
  - Provide timely feedback to initiators of PIFs
  - Improve trending of data to provide more meaningful information to line managers
- Continue communication of the Site Vision through:
  - Reinforcement Session
  - Plant walkdowns
  - Plant information meetings
  - RPM sessions
- Improve development of site personnel
  - Produce developmental plans for department heads

EQUIPMENT PERFORMANCE

WORK CONTROL IMPROVEMENTS

- Implement Work Week Managers
- Implement OE/Lead Unit Planner usage improvement initiatives

MATERIAL CONDITION IMPROVEMENTS

- Repair 2B RH seal
- Replace OB WS seals
- Complete U-1 cond/cond booster pump refurbishments
- Refurbish 1 Aux Building supply fan
- Repair liquid system leaks

4. SIGNIFICANT PERFORMANCE RESULTS TO BE REALIZED BY 4/30/96

HUMAN PERFORMANCE

- Continue improving trend in Personnel Error LERs to ≤ 2 by April 30, 1996. (1996 Goal - 5)
- Continue improving trend in Consequential Human Errors to ≤ 4 by April 30, 1996. (1996 Goal - 13)
- Continue reducing OSHA recordable injuries to ≤ 5 by April 30, 1996. (1996 Goal - 14)
- Extend time between events to > 50 days.
- Maintain zero significant overdue action items.

EQUIPMENT PERFORMANCE

MATERIAL CONDITION

- Planned maintenance will not increase PRA by more than a factor of 1.3.
- Refurbished Cond/CB pumps will be operating or available 95% of the time.
- Disposition an average of 2 operator workarounds per month.
- Repair 80 oil leaks (209 identified).
- Repair 100 other liquid leaks (263 identified, e.g., borated water, pure water and cooling water).
- Ability to operate VA exhaust fans in each plenum.

Zion

1. SIGNIFICANT WORK ACTIONS COMPLETED OVER THE PAST 6-12 MONTHS

HUMAN PERFORMANCE

- Instituted a "Just in Time" training concept to provide immediate training on complicated or infrequently performed tasks
- Undertaken a two year partnership with EdF to improve outage planning and execution
- Increased the emphasis on industrial safety
- Developed a computer program to enable the operating departing to identify issues that they feel are operator work arounds
- Elevated Operations Standards to enhance Control Room communications (ie, 3-way repeat back/phonetic alphabet); perform more frequent pre-job briefings; and increase expectation for shift turnovers and shift briefings; logkeeping, control board walkdowns
- Successsfully obtained INPO accreditation renewal for the Maintenance and Technical training programs
- Installed several new senior managers to increase the rate of plant improvements by focusing on safety, material condition, standards and getting work done

EQUIPMENT PERFORMANCE

MATERIAL CONDITION

- Engineering personnel performed a complete walkdown of all plant systems to identify material condition concerns and incorporate them into the work planning process
- Established a "Fix it Now" (FIN) Team to respond quickly to some material condition concerns and to address the needs of the operating unit, while the other unit is being refueled
- Established a senior management individual as the owner of the overall management of material condition
- Established a senior management individual as the owner of the overall management of operator workarounds
- Incorporated the VPOP valve packing program into the mechanical maintenance department
- Continue to use the Combined Facilities Maintenance group to expedite repairs to non-safety related equipment

1. SIGNIFICANT WORK ACTIONS COMPLETED OVER THE PAST 6-12 MONTHS
(continued)

HUMAN PERFORMANCE

- NRC has received licensing submittal for TSIP.
- TSIP technical reviews completed by plant and corporate staff.
- 1996 Business Plan developed by bargaining unit and management personnel focuses on improvements to human and equipment performance
- Elevated Fuel handling performance standards by emphasizing procedure adherence and compliance; and increased training
- Increased the emphasis on FME controls by increasing the level of management attention and knowledge level of the worker

EQUIPMENT PERFORMANCE

- "Clean Sweep" activities have met the milestones for 1995
- Action plan and funding established to decommission some of the outdated, and difficult to repair radiation monitors
- Higher standards were employed during the return to service of plant systems during the Unit 1 outage:
  - Previously acceptable leakage on the diesel generators was not tolerated
  - Additional time was allottted to repair main generator seal oil
  - Performed an extensive flush of the turbine oil system

1. SIGNIFICANT WORK ACTIONS COMPLETED OVER THE PAST 6-12 MONTHS
(continued)

EQUIPMENT PERFORMANCE

- Replaced control system on all emergency diesel generators
- Performed extensive repairs to Unit 1 Steam Generators including sleeving, tube re-rolling and plugging
- Replacement of nuclear instrumentation with Gamma-Metrics
- Circ Water System review completed
- Supported 7 week NRC safety related review

GETTING WORK DONE

- Instituted the 12-week rolling schedule philospohy to perform work - actual implementation is scheduled for 1/8/96
- Developed actions plans to address the requirements of the Maintenance Rule
- Developed a plan to manage the backlog of safety related PM's

2. SIGNIFICANT PERFORMANCE RESULTS REALIZED OVER THE PAST 6-12 MONTHS

HUMAN PERFORMANCE

TRAINING

- "Just in Time" training has enabled the following results:
  - Reduced the time to perform electrical bus outage surveillances from 3 days to 1 day
  - Reduced personnel exposure by 40% on the repairs to the guide funnel for the control rod thermal sleeve
  - Identified the need for special tools in the repair of Masoneilan and Copes Vulcan AOVs
- Developed a training concept called STORE, "Shift Training on Recent Events". During their training week, the crew reviews the logs from their last five weeks on shift and discuss and critique their response to actual events.
- Dramatically improved Fuel Handling performance during the Unit 1 outage with no significant PIFs realized

EQUIPMENT PERFORMANCE

MATERIAL CONDITION

- "Fix it Now" team has completed 750 actions to date
- The 400 action items that were identified during the engineering walkdown have been reviewed and prioritized in the work control system
- "Clean Sweep" efforts have passed the following milestones:
  - 560 elevation of TB cleaned, painted, some insulation replaced, etc.
  - Unit 1 and 2 ECCS pumps and cubicles reclaimed to allow entry without protective clothing
  - About 50,000 manhours of work expended from several crafts
  - Approximately $1.85 million spent
- Combined Facilities Maintenance Group has completed over 2000 activities to date
- 154 valves were repacked during the Unit 1 refueling outage utilizing the VPOP method

2. SIGNIFICANT PERFORMANCE RESULTS REALIZED OVER THE PAST 6-12 MONTHS
(continued)

HUMAN PERFORMANCE

SAFETY

- Industrial safety rate currently at 0.79. This is the best performance in the last three years.

ELEVATED STANDARDS

- Regarding FME, QC observations of jobs, during Z2R13, 3% of the 782 observations indicated FME concerns; during Z1R14, 2% of the 1763 observations indicated FME concerns
- No LCO clock violations either during required or voluntary entry into LCO conditions
- 86 of 196 Operator workarounds have been addressed- Operator workaround is one of the criteria evaluated as part of the 12-week rolling schedule
- Improved control of plant systems by eliminating human OOS and enforcing the temporary lift procedure

EQUIPMENT PERFORMANCE

GETTING WORK DONE

- Zero overdue safety related PM's, (by 1/1/96) down from the initial data point of 70
- Safety system performance rate at 0.012

3. SIGNIFICANT WORK ACTIONS TO BE COMPLETED BY 4/30/96

HUMAN PERFORMANCE

TRAINING/PERSONNEL DEVELOPMENT

- Complete a self-assessment of the Operator training programs
- Evaluate the type of management development training program that will be used to enhance the first line supervisor (MARC training)
- Eleven individuals will have completed the Nuclear Business Leadership class
- Develop and begin implementation of the Standards and Expectations Seminar for First Line Supervisors

EQUIPMENT PERFORMANCE

MATERIAL CONDITION

- Expand the size of the FIN team and use them to evaluate action requests prior to entry into the database
- Implement the 12-week rolling work schedule on 1/8/96.
- Refurbish the following pieces of equipment:
  - 2A AFW pump (LCO Maintenance)
  - 2A Heater Drain Pump
  - OD AB Exhaust Fan
  - Begin removal of IA compressors for installation of new compressor throughout the year

3. SIGNIFICANT WORK ACTIONS TO BE COMPLETED BY 4/30/96
(continued)

HUMAN PERFORMANCE

ELEVATE STANDARDS

- Full implementation of the post-job briefing activity
- Complete training on the visible STAR self-check method in the Operating Dept.
- Evaluate the lessons learned that were gathered in "real time" from the recent Unit 1 refueling outage - commitments and corrective actions for some of the items have already been written
- Implement the results of the Arthur Anderson commitment management study
- Review and implement the corrective actions that resulted from the Level 2 PIF investigation of the OOS process
- Evaluate the suggestions to improve outage performance that develop from the first phase of the EdF partnership
- Implement FPI process for performance data trending
- Review, revise and/or develop Station procedures to support implementation of TSIP
- Accomplish the Z2R14 outage planning milestones

EQUIPMENT PERFORMANCE

GETTING WORK DONE

- Establish the following measurement standards to evaluate the 12-week schedule:
  - A decrease in overdue of non-safety related PM's from the initial value of 500
  - no new overdue PM's
  - decrease in the WR backing from the initial value of 1350
- Complete an evaluation of the 1st cycle of 12 Week Rolling Schedule with Lessons Learned Incorporated into 2nd cycle

4. SIGNIFICANT PERFORMANCE RESULTS TO BE REALIZED BY 4/30/96

HUMAN PERFORMANCE

- Improve industrial safety accident rate (ISAR) $\leq$ 0.5
- Improve trend in Operations human performance errors
- Achieve a goal of 40 days between events
- Attain less than 3 personnel error LERs
- Achieve a PCE rate less than 0.9/1000 hours in the RCA
- Maintain zero overdue investigations and corrective actions
- Achieve greater than an 88% pass rate on the initial license operator exam

EQUIPMENT PERFORMANCE

MATERIAL CONDITION

- Achieve a capacity factor of 90% on Unit 1
- Attain key safety system availability levels at or above industry standards

GETTING WORK DONE

- Improved schedule adherence and as a result, getting more work done
  - no new overdue PM's
  - decrease in the number of backlogged WRs from the initial data point of 1350
  - decrease by half the number of overdue non-safety related PM's from the initial data point of 500