DCD/DCB

May 14, 1998

Mr. J. B. Hosmer
Engineering Vice President
Commonwealth Edison Company
Executive Towers West III
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: ENGINEERING MANAGEMENT MEETING SUMMARY

Dear Mr. Hosmer:

On May 12, 1998, we met with you and members of your staff to discuss engineering activities at ComEd. Specifically, the meeting discussion focused on the engineering learning process. The handout you provided to us during the meeting to aid in the discussion is enclosed.

In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter and the enclosure will be placed in the NRC Public Document Room.

Sincerely,

original /s/ J. A. Grobe

John A. Grobe, Director
Division of Reactor Safety

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

Enclosure: As stated

See Attached Distribution

70037

IE45

DOCUMENT NAME: G:DRS\COM04158.DRS
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DATE	05/13/98		05/18/98		05/ /98		05/ /98	

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cc w/encl: M. Wallace, Senior Vice President
D. Helwig, Senior Vice President
G. Stanley, PWR Vice President
J. Perry, BWR Vice President
D. Farrar, Regulatory Services Manager
I. Johnson, Licensing Director
DCD - Licensing
T. Tulon, Braidwood Site Vice President
K. Graesser, Byron Site Vice President
M. Heffley, Dresden Site Vice President
F. Dacimo, LaSalle Site Vice President
J. Dimmette, Jr., Quad Cities Site Vice President
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Braidwood Station Manager
K. Kofron, Byron Station Manager
P. Swafford, Dresden Station Manager
T. O'Connor, LaSalle Station Manager
W. Pearce, Quad Cities Station Manager
R. Starkey, Zion Plant General Manager
T. Simpkin, Braidwood Regulatory Assurance Supervisor
D. Brindle, Byron Regulatory Assurance Supervisor
F. Spangenberg, Dresden Regulatory Assurance Manager
P. Barnes, LaSalle Regulatory Assurance Supervisor
C. Peterson, Quad Cities Regulatory Affairs Manager
R. Godley, Zion Regulatory Assurance Supervisor
R. Hubbard, MHB Technical Associates
N. Schloss, Economist, Office of the Attorney General
State Liaison Officer
State Liaison Officer, Wisconsin
Mayor, City of Zion
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COMMONWEALTH EDISON ENGINEERING MEETING
MAY 12, 1998

LIST OF ATTENDEES

ComEd

J. Hosmer, Vice President, Engineering
D. Farrar, Licensing
R. Renhart, Engineering

USNRC

J. Grobe, Director, Division of Reactor Safety
J. Gavula, Chief, Engineering Specialists Branch 1
J. Jacobson, Chief, Lead Engineers Branch
M. Jordan, Chief, Branch 3, Division of Reactor Projects
D. Butler, Reactor Engineer
E. Duncan, Reactor Engineer

MidAmerican

D. Tubbs, Senior Engineer

ENGINEERING LEARNING PROCESS

COMED MEETING WITH NRC REGION III

May 12, 1998

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AGENDA

Topic	Slides	By
◆ Introduction		
– Objectives of Presentation	3	Hosmer
– Nuclear Safety	4, 5	Hosmer
◆ The Learning Process	6	Hosmer
◆ Dresden ISI and SSFI Lessons	7-13	Renuart
◆ Quad Cities Lessons	14-16	Hosmer
◆ Measuring Learning	17-20	Renuart
◆ Conclusions	21	Hosmer

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OBJECTIVES OF PRESENTATION

- Present the Learning Process
- Provide Examples of Learning by ComEd Engineering
- Discuss Measurements of Effectiveness
- Draw Conclusions about Effectiveness

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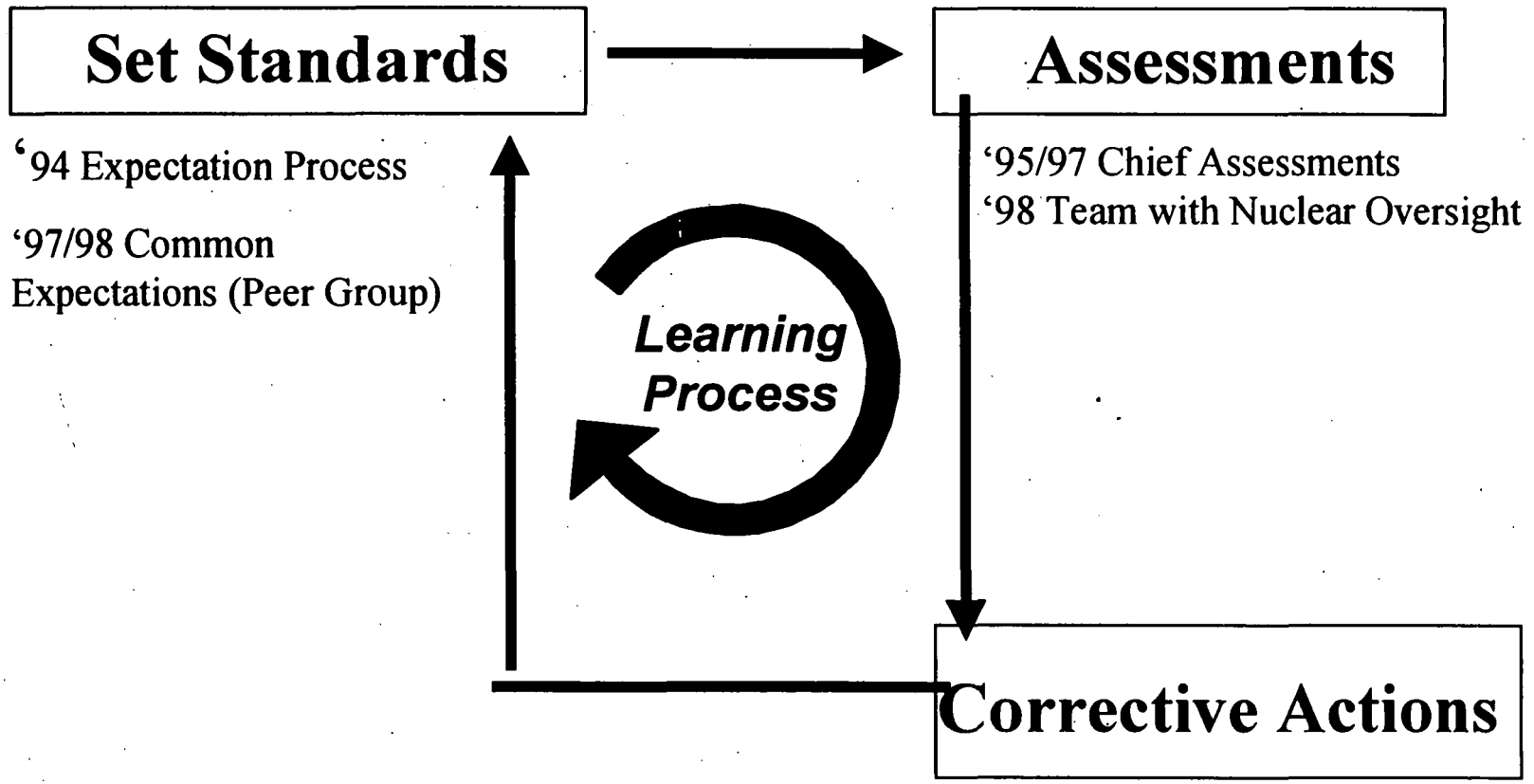
NUCLEAR SAFETY

Outcome	Achieved By
Avoidance of Events	**Setting High Standards and Expectations**
Learning from Experiences (Internal and External)	**Effective Learning Model** - Assessment - Corrective Action

GENERAL LEARNING PROCESS MODEL



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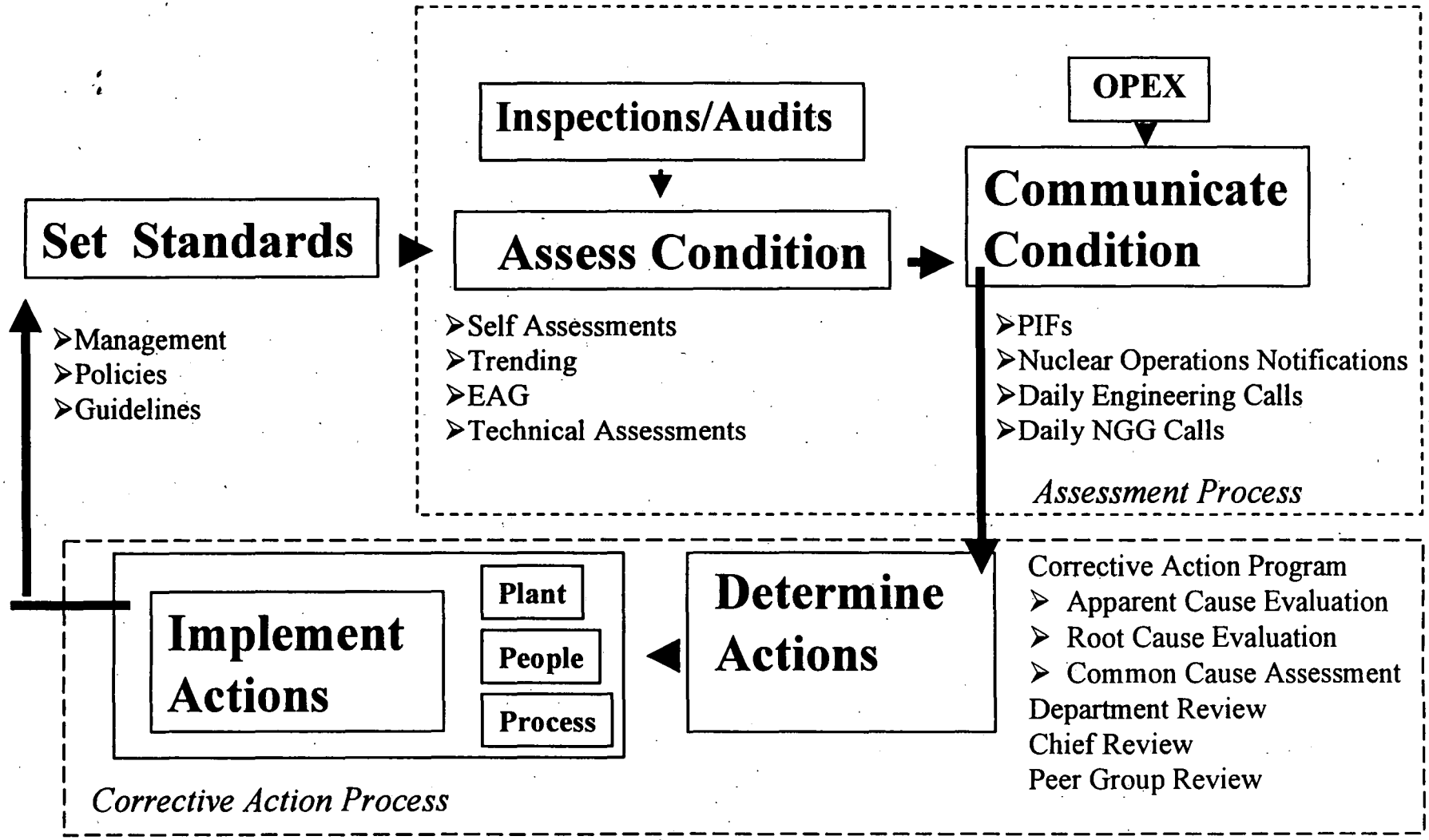
THE LEARNING PROCESS AT COMED



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DRESDEN ISI

◆ Assessment Process:

- Need to Better Understand and Maintain Design Basis
- Need to Improve Quality and Access to Calculations
- Improve the Quality of Operability Assessments
- Improve the Quality of Safety Evaluations

◆ Corrective Actions Process:

– Common NSPs (Operating Evaluations, 50.59, UFSAR)	Ongoing
– Safety Evaluation Training	Ongoing
– SSFIs in Engineering	Ongoing
– Design Basis Improvement Project	Started
– EAG Program	Started

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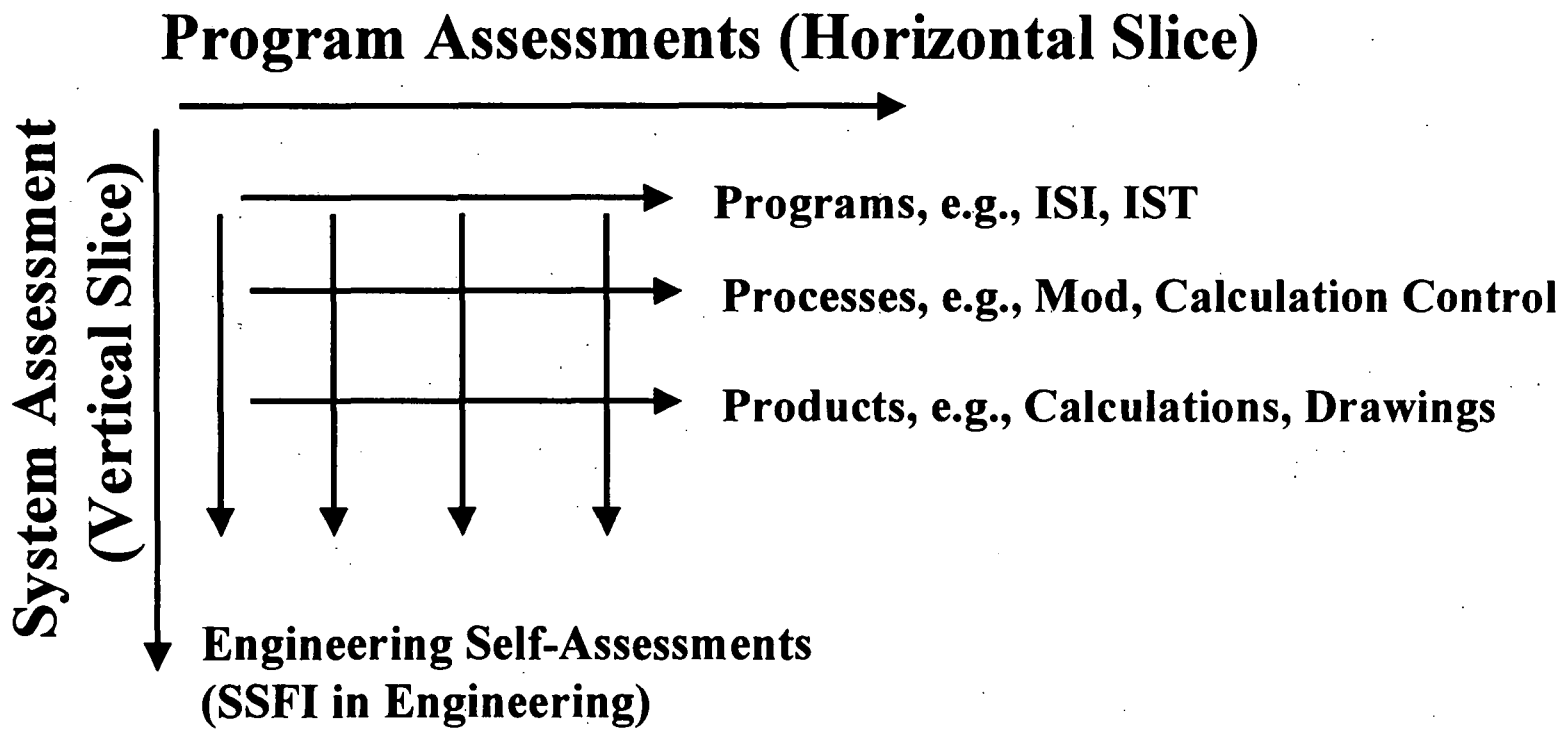
Engineering Assessment Model



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SUMMARY OF THE OVERSIGHT ACTIVITIES BY THE CHIEFS

OVERSIGHT PERFORMED IN 1995-97

Programs/Plants	BRAIDWOOD	BYRON	DRESDEN	LASALLE	QUAD	ZION
ISI	YES	YES	YES	YES	YES	YES
IST	YES	YES	YES	YES	YES	YES
GL 89-13	NO*	NO*	NO*	YES	NO*	YES
Maint. Rule	YES	YES	YES	YES	YES	YES
Appendix R	YES	YES	YES	YES	YES	YES
Flow Acc. Coros	YES	YES	YES	YES	YES	YES
GL 89-10	YES	YES	YES	YES	YES	YES
VETIP	YES	YES	YES	YES	Yes	YES
Appendix J	YES	YES	YES	YES	YES	YES
Environ. Qual.	YES	YES	YES	YES	YES	YES
Setpoint Control	YES	YES	YES	YES	NO	YES
NDT/IST	YES	YES	YES	YES	YES	YES

* Although the oversight is indicated as "No", support was provided to the site.

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EFFECTIVENESS of CHIEFS' OVERSIGHT

ASSESSMENT

- Did Not Influence Standard Programs
- Did Not Conduct Effectiveness Reviews
- Did Not Get Non-conformances Into Corrective Action Program

CORECTIVE ACTION

Five Programs Underway
(ISI, MR, Appx R, IST, 89-13)

Conduct 3 - 6 Months

PIFS Generated by Stations with Corrective Actions Identified

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SSFI SUMMARY

- **Assessment:**
  - **Most Issues had been Previously Identified and Lacked Closure**
    - » **Low Priority for Correcting Old Problems**
    - » **Engineering Culture did not Encourage Problem Identification Assessment**
- **Corrective Action:**
  - **Better Procedural Adherence**
  - **Better PIF Initiation as Problems are Discovered**
  - **Accountability through Nuclear Tracking System**
  - **Improved Engineering Work Control Program**

SSFI RESULTS

- Identified 154 Issues
- 66 (43%) Issues Are Closed
- Open Items Are Tracked Through NTS

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SSFI RESULTS AND ACTIONS

- **Resolution to Common General Process Weaknesses**

Assessments	Corrective Actions
– Design Basis	Design Basis Improvements (DBI) Project
– Design Control	Training, Process Improvements, NEP Revisions for Design
– Not Learning From Other Stations	Strengthen Assessment Process Case Studies on Generic Items

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QCNPS-LESSONS LEARNED: GOOD RESULTS

- RW Clean-up Pipe Break Upgrade
  - Identified at Monticello Station
- ECCS Strainer, NPSH Requirement Issue
  - Identified at Dresden
- Clean out of Reactor Bottom Head Drain
  - Identified at Dresden

QCNPS-LESSONS LEARNED:MIXED RESULTS

- **Dresden ISI**
  - **HPCI Gland Seal Steam Condenser**
    - » **Reevaluated And Reclassified In The SOPI Preparation Phase**
- **Air Start Motors**
  - » **Identified at Quad Cities**

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QCNPS-LESSONS LEARNED: POOR RESULTS

- **Maintenance Rule**
  - **Inadequate Overall Performance**
  - **Several NRC Violations**
- **Appendix R "Fire Protection"**
  - **Lack of recognition of commitments**
  - **SSA, FHA**

MEASURING LEARNING PROCESS

- Major Engineering Events
- Repeat Events
- Percent PIFS Identified by Engineering on Engineering
- ComEd Monitors All of Above

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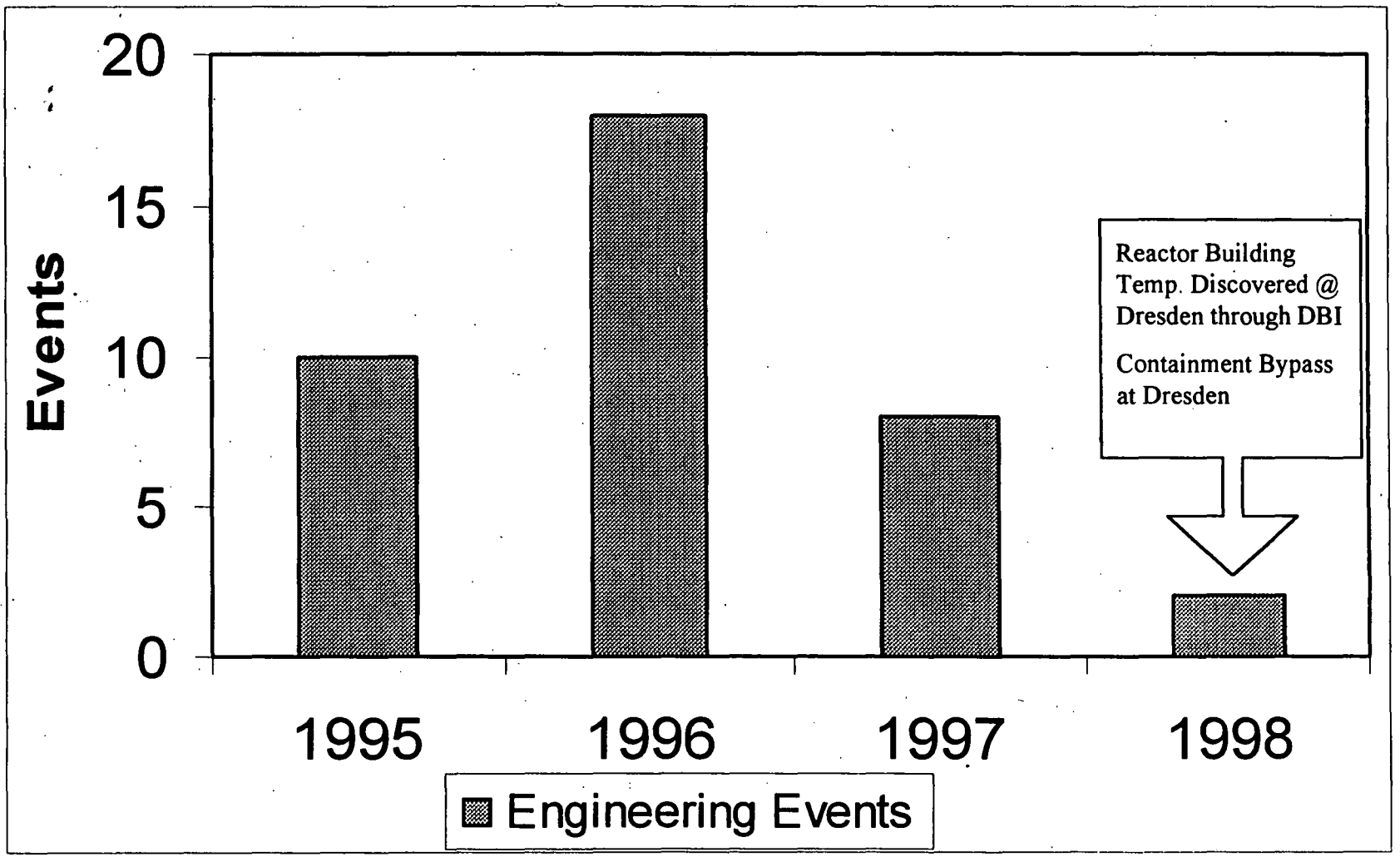
MAJOR ENGINEERING EVENTS



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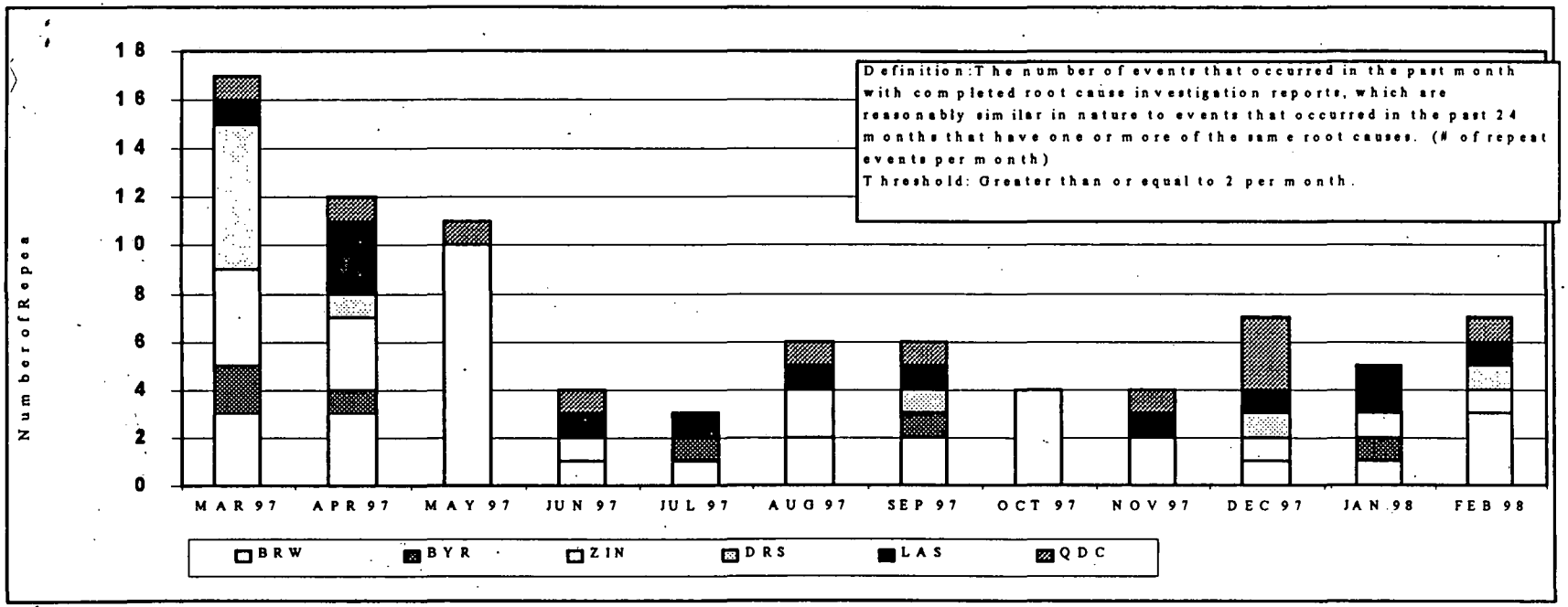
REPEAT EVENTS METRIC



	MAR 97	APR 97	MAY 97	JUN 97	JUL 97	AUG 97	SEP 97	OCT 97	NOV 97	DEC 97	JAN 98	FEB 98
BRW	3	3	0	1	1	2	2	0	2	1	1	3
BYR	2	1	0	0	1	0	1	0	0	0	1	0
ZIN	4	3	10	1	0	2	0	4	0	1	1	1
DRS	6	1	0	0	0	0	1	0	0	1	0	1
LAS	1	3	0	1	1	1	1	0	1	1	2	1
QDC	1	1	1	1	0	1	1	0	1	3	0	1

Graph displays total number of repeat events for a rolling 12 months. Table displays number of repeat events per month.

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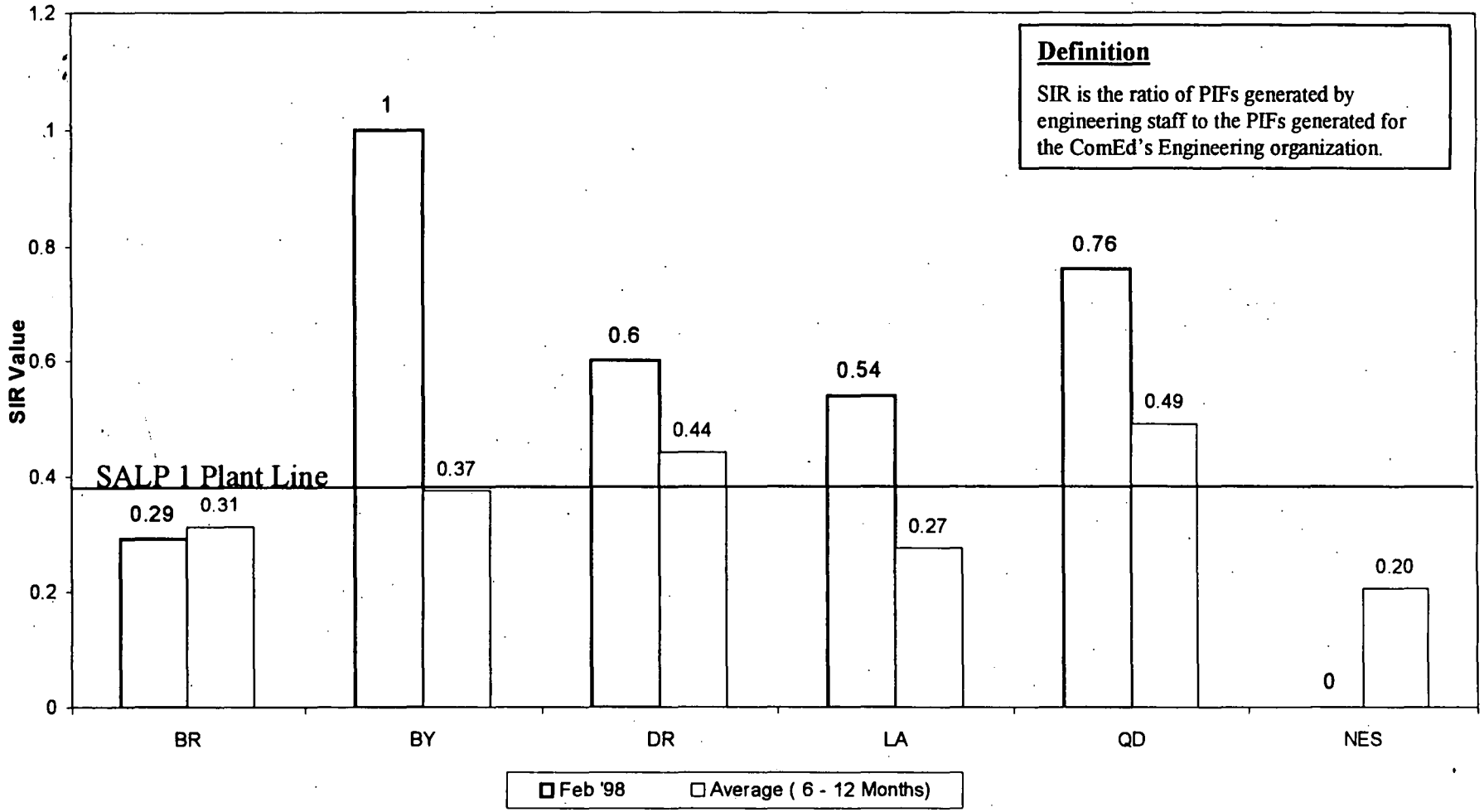
SELF-IDENTIFIED RATIO IN ENGINEERING



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CONCLUSIONS

- **Made significant fundamental changes to the learning process in ComEd's Engineering.**
- **Will monitor performance using the Significant Events, Repeat Event Metric and other indicators such as the Self-Identification Ratio for Engineering PIFs.**
- **Existing data and trends are in the correct direction. Still have declining performance trend at Quad Cities.**

Issue	Failure	Corrective Actions
Appendix R - QC	Lack of Recognition	Look Back
	Poor Program	Improved Std Programs
Appendix G - QC	Poor Communication	ISI Program Change
	Safety Culture	Licensing Reviews
		Culture Change
Maintenance Rule	Late Assessment	3 mos Prior to Inspection
	No Action	Team not Family Approach

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