



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555

P-124

TO: James McKnight

FROM: Drew PersinKo

Please place the following slides in the PDR.

They pertain to a presentation I made  
to the ACLS on 6/27/86. At that  
time, not all slides were presented and  
thus were not made public.

Pertinent information regarding that ACLS  
meeting: 1527 Accession # 8607070210

Drew PersinKo

8806080221 880608  
PDR ADOCK 05000346  
P PDR

MAINTENANCE REVIEW

AT

DAVIS-BESSE

- TWO MAINTENANCE SURVEYS CONDUCTED BY THE STAFF
  - SEPTEMBER 16-20, 1985
  - MARCH 24-27, 1986
  
- TEAM COMPOSITION
  - SEPTEMBER SURVEY: 2 NRR, 2 REGION III, 1 OIE, 2 CONTRACTORS (PNL)
  - MARCH SURVEY, 2 NRR, 2 REGION III, 2 OIE
  - FIVE OF SIX MEMBERS ON MARCH SURVEY HAD PARTICIPATED IN SEPTEMBER SURVEY
  
- BOTH SURVEYS CONSISTED OF INTERVIEWS WITH PLANT PERSONNEL
  
- SEPTEMBER SURVEY UTILIZED PROTOCOL DEVELOPED IN MSPP
  
- MARCH SURVEY
  - REVIEW OUTSTANDING MWOs
  - ACCOMPANYING SITE PERSONNEL
  - PLAN OF DAY, WEEKLY STATUS MEETINGS
  
- FINDINGS ARE CONSENSUS JUDGEMENT OF TEAM

- SEPTEMBER SURVEY FOUND WEAKNESSES IN:
  - CORPORATE COMMITMENT
  - SPARE PARTS/MATERIAL READINESS
  - SUPERVISION
  - PREVENTIVE MAINTENANCE
  - MAINTENANCE WORK ORDER BACKLOG
  - MAINTENANCE PROCEDURES
  - COMMUNICATIONS
  - DEFINED RESPONSIBILITIES
  - TRAINING
  
- CONCLUSIONS
  - MODIFICATIONS TO MAINTENANCE PROGRAM ADDRESSING WEAKNESSES
  - MANY CHANGES BEING IMPLEMENTED
  - TOO EARLY TO JUDGE EFFECTIVENESS
  - ANOTHER SURVEY BE CONDUCTED

- ° MARCH SURVEY

- ° REVIEWED SAME NINE AREAS OF WEAKNESS
- ° ALSO REVIEWED MAINTENANCE WORK ACTIVITY

PLANNING AND SCHEDULING; ADMINISTRATIVE PROCEDURES

- ° CONCLUSIONS

- ° CONSIDERABLE PROGRESS MADE IN IMPLEMENTING NEW MAINTENANCE PROGRAM
- ° CONSISTENTLY COMPLYING WITH STATED BASES FOR DETERMINING MWOs REQUIRED FOR RESTART
- ° SOME PROBLEMS NOTED BY TEAM - NOT CONSIDERED MAJOR PROGRAMMATIC WEAKNESSES
- ° FUNCTIONING AS INTENDED WITH NO MAJOR IDENTIFIABLE WEAKNESSES
- ° REGION III WILL MONITOR OUTSTANDING MWOs TO ASSURE CONTINUED CONTROL AND PROGRESS
- ° REGION III WILL CONTINUE TO MONITOR MAINTENANCE AT DAVIS-BESSE

## CORPORATE COMMITMENT

- ° SALARY FREEZES
- ° DELAYS IN CONSTRUCTION OF NEW PERSONNEL SUPPORT FACILITY (PSF)
- ° MONETARY LIMITS ON STOCK SPARE PARTS
- ° NO CORPORATE LEVEL PERSONNEL SPECIALIST DEDICATED TO DAVIS-BESSE
  
- ° INCREASED SALARY STRUCTURE
- ° NO MONETARY LIMITS ON SPARE PARTS INVENTORY
- ° IMPROVED MAINTENANCE TRAINING
- ° PROGRESS ON CONSTRUCTION OF PSF
- ° PERSONNEL SPECIALISTS

## SPARE PARTS/MATERIAL READINESS

- ° 8-10 WEEKS AND 26-28 SIGNATURES TO PROCESS A REQUISITION
- ° EXPEDITERS PERFORMING FOLLOW-UP OF MATERIAL STATUS
- ° WAREHOUSE INVENTORY NOT ALL KNOWN
  
- ° WAREHOUSE INVENTORY REVIEWED; MATERIAL DISCREPANCIES BEING DISPOSITIONED
- ° COMPUTERIZED AND MECHANICAL PARTS TRACKING SYSTEM IN PLACE
- ° EXPEDITING/PROCUREMENT PROCESS WORKING
- ° 3 DAYS AND 6-10 SIGNATURES TO PROCESS A REQUISITION
- ° PM PROGRAM FOR SPARE PARTS IMPLEMENTED

## SUPERVISION

- ° FOREMEN FIELD TIME LOW DUE TO PAPERWORK
- ° FOREMEN FIELD DUTIES PERFORMED BY CRAFT GROUP LEADERS
- ° MANAGEMENT NOT ALWAYS WILLING TO INTERCEDE TO SOLVE INTER-ORGANIZATIONAL PROBLEMS
  
- ° GENERAL FOREMEN ADDED
- ° ALTHOUGH STILL LESS THAN DESIRED, FOREMEN FIELD TIME HAS IMPROVED
- ° FOREMEN AVAILABLE WHEN NEEDED IN FIELD

PREVENTIVE MAINTENANCE

- ° PMS SKIPPED WITH LITTLE JUSTIFICATION
- ° SKIPPING PMS INCREASED AS MWOs INCREASED
  
- ° MULTIPLE MANAGEMENT REVIEWS AND WRITTEN JUSTIFICATION TO SKIP PM
- ° NO OUTSTANDING PMS AT RESTART
  - ° COMPLETED OR DEFERRED

## MAINTENANCE WORK ORDER BACKLOG

- ° PLANT PERSONNEL BELIEVED MWO BACKLOG EXCESSIVE
- ° RESULTED IN LESS THAN OPTIMAL STATE OF READINESS
- ° MAINTENANCE ITEMS OVERLOOKED
- ° PLANT STAFF SPENT SIGNIFICANT TIME TRACKING PAPERWORK
  
- ° LARGE NUMBER OF MWOs REMAIN
- ° MWOs INCLUDE MINOR ITEMS (E.G., REPLACE LOCK ON BREAKER PANEL DOOR)
- ° PLANT STAFF ABLE TO MAN GE MWOs
- ° MWOs PRIORITIZED AND DETERMINATION MADE REGARDING COMPLETION FOR RESTART
- ° PLANT STAFF ABLE TO RAPIDLY OBTAIN INFORMATION ON MWOs QUESTIONED BY STAFF
- ° PLANT STAFF IDENTIFYING NEEDED MAINTENANCE EVEN THOUGH BACKLOG IS SIGNIFICANT

## MAINTENANCE PROCEDURES

- TECHNICAL PROCEDURES NOT ALWAYS CLEARLY WRITTEN OR IN SUFFICIENT DETAIL
- RELIANCE ON SKILL OF CRAFT
- ONGOING PROJECT TO REVIEW AND REVISE OR GENERATE NEW PROCEDURES
- CONTROLS FOR UPDATING AND USING VENDOR MANUALS
- MTE GROUP TO ASSURE CORRECT CALIBRATION AT REQUIRED INTERVALS

## COMMUNICATIONS

- ° OPERATIONS NOT ALWAYS AWARE OF ONGOING MAINTENANCE
  - ° NOT BEGUN AS SCHEDULED
  - ° AFTER GIVING APPROVAL, OPERATORS NOT NOTIFIED OF WORK WHEN BEGUN
- ° MAINTENANCE TAGS REMAINED AFTER COMPLETION
- ° PLANNING GROUP AND SCHEDULING GROUP REPORTED TO DIFFERENT SUPERVISORS
- ° CRAFT MORALE BELOW AVERAGE
  
- ° POD, PRE-SHIFT BRIEFINGS
- ° PLANNING AND SCHEDULING INTERACTS FREQUENTLY WITH PLANT AND ENGINEERING GROUPS

DEFINED RESPONSIBILITIES

- ° CLEAR CUT RESPONSIBILITIES NOT ALWAYS EVIDENT
- ° POSITION DESCRIPTIONS NOT CURRENT
- ° PERSONNEL NOT ALWAYS AWARE OF ACCOUNTABILITY
  
- ° POSITION DESCRIPTIONS WRITTEN AND IMPLEMENTED
- ° PERSONNEL AWARE OF RESPONSIBILITIES AND RELATION TO OTHER GROUPS

MAINTENANCE TRAINING

- ° LITTLE FORMAL TRAINING - HIT OR MISS
- ° SMALL MECHANICAL LAB
- ° SCHEDULED TRAINING NOT ALWAYS ADHERED TO
  
- ° TRAINING LABS COMPLETED
- ° TRAINING SHIFT CONCEPT
  - ° IMPLEMENTED DURING THIS OUTAGE RATHER THAN AFTER RESTART

PLANNING AND SCHEDULING (PS) GROUP

- STAFFED WITH PERSONNEL KNOWLEDGEABLE IN PLANT MAINTENANCE
- MWO PACKAGES WELL ASSEMBLED
- PERSONNEL READILY ACCESSIBLE AND RESPONSIVE TO FIELD NEEDS

ADMINISTRATIVE PROCEDURES (AP)

- ° MAINTENANCE ORGANIZATION FUNCTIONING WELL WITH CURRENT STATUS OF AP
  
- ° IMPLEMENTATION OF NUCLEAR MISSION PROCEDURE SHOULD BE IMPLEMENTED

## PROBLEMS AND OBSERVATIONS

- ° NO WEALTH OF SPARE PARTS
  - ° LICENSEE MUST IDENTIFY FUTURE INVENTORY NEEDS
  - ° FOREMEN FIELD TIME LESS THAN DESIRED
  - ° FOREMEN SPAN OF CONTROL LARGER THAN PLANNED
  - ° FOREMEN, GENERAL FOREMEN WORKING LONG HOURS FOR PAST 9 MONTHS (10-12 HRS/DAY INC. SAT)
  - ° SHOULD COMPLETE PMs AND MWOs ON SEVERAL BOP SYSTEMS IN ADDITION TO PRIORITY SYSTEMS -- PLANT OPERATION JEOPARDIZED IF NOT OPERABLE
  - ° NO PRIORITIZATION OF REAs
  - ° PERCEPTION THAT TRAINING COUNCIL COMMENTS ARE NOT BEING CONSIDERED WILL DIMINISH CRAFT SUPPORT
  - ° ENGINEERING NOT COMPLYING WITH CORPORATE POLICY ON MBO
  - ° MANY WR TAGS DID NOT CROSS REFERENCE MWOs
  - ° PRIORITIZATION OF MWOs BY CRAFTS IN SENDING MWOs TO PS
- 
- ° MAINTENANCE PERSONNEL BELIEVE QUALITY OF WORK IS MANAGEMENT'S FIRST CONCERN
  - ° CRAFT MORALE IMPROVED

CRITERIA FOR DETERMINING  
WHICH MWOs TO BE COMPLETED  
PRIOR TO RESTART

THOSE MWOs

- REQUIRED FOR RESTART FROM THE SYSTEM REVIEW AND TEST PROGRAM (SRTP)
- REQUIRED BY THE ACTION PLANS FOR THE JUNE 9 EVENT
- REQUIRED TO ENSURE THE OPERABILITY OF THE 34 SYSTEMS REVIEWED BY THE SRTP
- NECESSARY TO ENSURE CONTAINMENT INTEGRITY
- NECESSARY FOR SAFE OPERATION OF SYSTEMS REQUIRED FOR PLANT OPERATION