ATTACHMENT #3

September 14, 1983

Mr Charles Bechhoefer, Esq
Atomic Safety & Licensing
Board Panel
US Nuclear Regulatory Commission
Washington, DC 20555

Dr Frederick P Cowan
6152 N Verde Trail
Apt B-125
Boca Raton, FL 33433

Mr Jerry Harbour
Atomic Safety & Licensing
Board Panel
US Nuclear Regulatory Commission
Washington, DC 20555

Dear Board Members

In a conference call on August 25, 1983, Chairman Bechhoefer requested a copy of information supplied by Consumers Power Company as input for the NRC's Yellow Book (NUREG 0030). Attached is the Company's Response to the Chairman's request. These documents were obtained from a file maintained at the jobsite. My staff is in the process of attempting to confirm the completeness of this file. If a problem is found, the Board will be advised.

In addition to the requested Yellow Book input data, I have attached, pursuant to the McGuire disclosure standard, certain other documents relevant and material to the schedule issue presently before the Board for decision. These documents reflect communications between the Company and the NRC's caseload forecast panel.1/

1/ This is believed to be a relatively complete compilation, although a comprehensive search of Company files for caseload forecast panel communications has not been made. For convenience, the documents are, for the most part, in chronological order, and the Board's copy has been tabbed.

OC0983-0016A-MP04

8309210214 84pp 1pdr

Of particular interest are the minutes of a July 28-29, 1980, caseload forecast panel visit to the jobsite. See Tab 1, K R Kline, August 21, 1980 "NRC Caseload Forecast Panel visit/Schedule Status," Bates 00240-00343. Some of the attachments to these minutes are slides or handouts used by the Company during the meeting. The meeting was attended by Messrs Hood, Paton, and Mrs Stamiris, among others. There was discussion at this meeting of the evolution of project schedules after January, 1980, when Forecast 6 was completed. A slide used in the presentation of Mr Mollenkopf (bearing number 00260; see Tab 2 attached to Mr Kline's minutes) lists reasons for the most recent schedule improvement. See also the attachment with number 00266, showing a number of items with possible negative impact (i.e. "float") on the new schedule.2/ The NRC Staff asked for and was sent by separate mailing a copy of Mr Mollenkopf's slides (documents 260 to 269), attached to Mr Kline's minutes. See Tab 3, August 12, 1980 telecon of T J Sullivan, numbered 00237. I have also provided a copy of the prepared text of Mr Mollenkopf's presentation for this meeting. (document numbered 0611 to 0626)

The caseload forecast panel held a follow-up meeting on August 22, 1980 (see Tab 4, minutes, August 25, 1980, T J Sullivan, 00344). The meeting minutes reflect a frank discussion between CPCo and NRC Staff on bulk installation rates, among other subjects. On September 16, 1980, the forecast panel announced its conclusion. See Tab 5, summary of August 25, 1980 meeting on Licensing Status of the Midland Plant, Units 1 and 2, dated September 16, 1980 by D S Hood. Although the forecast panel's schedule disagreed with the Company's adjusted forecast 6 schedule by three months, the Staff's letter announced that the panel's conclusions were in "reasonable agreement" with the Applicant's.3/ These documents and the yellow books demonstrate that the prediction of schedule is an inexact art and that the NRC's caseload panel draws independent conclusions from data presented to it.4/ More importantly, they show that the Company has not misrepresented its schedule to the NRC Staff.5/

Other documents of possible interest or bearing on these issues are attached. The Company would be happy to respond to any further requests of the hearing Board in relation to this matter.

Very truly yours,

James E Brunner

James E Brunner

Notes

2/ These minutes demonstrate that the Company's scheduling methodology and the completion dates derived from it were apparently not only revealed but also discussed at this meeting (See notes at p.2 and the attachement at pp 00252-00253). The Company stated the reason why it thought the schedule could be improved upon. It also disclosed significant negative floats (up to six months) associated with some items (see numbered p 00266 attached to document #1) indicating a clear uncertainty in the revised schedule and the need for improvements to achieve it.

3/ Of course the reasonableness of the target fuel load date is not an issue before the Board.

4/ See also, e.g., memo to T R Tourtellote from Roger S Boyd dated March 7, 1978 numbered 00001.

5/ See also, minutes of a June 13, 1980 meeting relative to NRC review of the Midland OL application (doc 00234 et seq). (These notes were authored by J E Brunner. No privilege is claimed regarding these notes, which merely recite what happened at a public meeting attended by a number of other attorneys and other persons. The disclosure of the notes does not waive any applicable privileges regarding other notes or communications of Mr Brunner. Further, see D S Hood's notice of the June 13, 1980 meeting, doc 0607-0610.

ATTACHMENT 1

009546

July 16, 1980

BLC-9466

Consumers Power Company
1945 West Parnall Road
Jackson, Michigan 49201

Attention: Mr. J.W. Cook
Vice President
Midland Project

Subject: Midland Plant Units 1 and 2
Consumers Power Company
Bechtel Job 7220
Transmittal of Midland Project
Team Meeting Notes

Attached are the notes of the July 10, 1980, Midland Project Management Team meeting conducted at the Midland jobsite.

Corrections to these notes, if required, will be considered during the next project team management meeting to be held on August 14, 1980, in Ann Arbor (tentative).

The following dates have been set aside each month for the Midland Project Management Team meetings:

September 11, 1980	November 13, 1980
October 9, 1980	December 11, 1980

(Time and Place to be determined)

Please call if you have any questions.

Very truly yours,

John A. Ruttgers
Project Manager

JAR/kes
Attachment: Midland Project Management Team Meeting Notes No. 1179

cc: Mr. G.S. Keeley
bcc: R.C. Ash; M.N. Bakarich/J.F. Miller; L.H. Curtis [redacted] L.A. Dreisbach; W.G. Jones, [redacted] (all w/a)
Response Requested: No

Com Use: N/A

Bechtel Power Corporation

777 East Eisenhower Parkway
Ann Arbor, Michigan

Mail Address: P.O. Box 1000, Ann Arbor, Michigan 48106

009546

MEETING NOTES NO. 1179

MIDLAND PLANT UNITS 1 AND 2

CONSUMERS POWER COMPANY

BECHTEL JOB 7220

DATE: July 10, 1980

PLACE: Midland Jobsite

SUBJECT: Midland Project Management Meeting

FILE:

ATTENDEES:

Bechtel	Consumers Power Company
J.A. Rutgers	J.W. Cook
M.N. Bakarich	G.S. Keeley
[illegible] Curtis	K.R. Kline
[illegible] Davis	D.B. Miller
*L.A. Dreisbach	T.J. Sullivan
W.G. Jones	A.R. Mollenkopf (represented by Ken Cross)

*Part-time

ITEMS DISCUSSED:

1) Meeting Logistics and Conduct

John Rutgers proposed that project management meetings be held monthly, alternate between Ann Arbor and Midland, be chaired by Bechtel, and follow a specified agenda (see Attachment 1). He also indicated that the project administrator would record the meeting minutes. The group agreed to the proposal with the following modifications/clarifications:

a) The location will be determined based on convenience of presenting agenda items.

b) Agendas should be published at least 1 week in advance.

c) Status of drawings and design changes should be included in the "Briefing" section of the agenda outline.

d) Attendees should be advised of problems to be discussed as early as practicable, but at least 2 weeks in advance, as indicated in the agenda outline (Attachment 1, Section II-B.1).

e) Personnel asked to make presentations should be notified of the requirement as soon as possible.

f) Part II-B.3 of the Attachment 1 outline is intended for discussion of adverse trends.

g) Minutes of meetings should indicate tasking. Bechtel and Consumers Power Company should follow-up on the tasking.

h) Consumers Power Company will undertake as a project the identification of issues and administration of a 90-day decision concept.

ACTION STATEMENT: Revise Attachment 1 to reflect these agreements and follow in preparation of subsequent agendas.

ACTION ASSIGNMENT: John Rutgers

2) Status Reporting and Schedule and Budget Development

Bill Jones presented Bechtel's definition of current project schedule, current project forecast, current budget, and current budget forecast (Attachments 2 and 3). In addition, he proposed a reporting system for keeping management advised of the status of the project and provided an estimate of the latest budget adjustment. The following were brought out during his presentation:

a) [illegible] were accepted as Bechtel's. Specifically, Bechtel plans to use a mechanism of assuring that current project scope is reflected in the current budget which ties to the current project schedule.

b) Forecasts will reflect work-around plans to achieve the current project schedule. [Correspondence between Bechtel and Consumers Power Company and items for public consumption will list fuel load dates in the current project schedule.]

c) In August, Bechtel will publish the auxiliary building 18-month schedule.

d) Consumers Power Company engineers, working with Bechtel engineers, should learn plans in detail and work from the front of the plans, not replow old ground (i.e., work the plan now).

e) Bechtel will develop the current budget, based on the current scope and current project schedule (7/31/83, Unit 2 fuel load) and transmit it to Consumers Power Company by August 15, 1980.

g) Consumers Power Company is holding in reserve $8 million of the Bechtel 1980 cash flow forecast of $195 million.

h) Project status reports should be in the hands of project management team members approximately 2 days prior to monthly meetings.

i) Given the Project Status Report, a quarterly "historical" report is not required.

j) To measure progress against the schedule, the monthly status summary should be revised to include a column titled "Scheduled Accumulative."

k) The monthly status summary should include the change and hold status of drawings.

l) Bechtel will clean up the June 1980 advance copy of the Project Status Report. Revisions will include:

1. Deletion of last sentence on MCAR 24 (Page 19)

2. Deletion of old forecast load dates and realignment of curves to reflect new dates

3. More detail in the Engineering Manpower Status Table (Page 17)

4. Determination of whether CIAR items should be included as problems in the Project/Problem Action Sheet (not to be decided until report has been published several times)

5. Separation of key items into a performance appendix

ACTION STATEMENT: 1) Revise monthly status summary format.
2) Publish June 1980 Project Status Report.
3) Prepare current budget.

ACTION ASSIGNMENT: Bill Jones

3) Scope Control and Design Change Incorporation

Gil Keeley proposed that we accelerate our means of implementing design changes. He questioned the need for the DCAR program. John Rutgers tasked the project administrator to review the DCAR program to see if it could be eliminated or, if not eliminated, streamlined.

ACTION STATEMENT: Review, and if required, revise or eliminate DCAR program.

ACTION ASSIGNMENT: Mike Bakarich/John Rutgers

4) Project Engineering Priorities

Lynn Curtis presented project engineering priorities. Jim Cook noted that priority was going to long lead-time items for the auxiliary building and suggested priority be given also to all other long lead-time items. Lynn Curtis stated that this would be done. Don Miller noted that Bechtel had published an earlier priority list (matrix form) and said that there would be confusion

between the two published priorities. Lynn Curtis said the matrix was misnamed; its purpose was to indicate where work was available, not priorities. He said he had already issued instructions to change the matrix title to reflect its intent.

ACTION STATEMENT: Update priority list to reflect agreements, then publish.

ACTION ASSIGNMENT: Lynn Curtis/John Rutgers

5) Short-Cutting Administrative Procedures

Gil Keeley emphasized the continuing need to shorten administrative procedures. The group's concensus was that the problem is not with the procedures, but with the way Bechtel and Consumers Power Company follow them. Both John Rutgers and Jim Cook instructed their people to notify them immediately when a requirement gets held up on administrative procedures.

ACTION STATEMENT: Notify project management on perceived administrative restraints to timely action.

ACTION ASSIGNMENT: All team members, as required

6) FSAR Update Plans

Terry Sullivan provided a progress report on licensing/safety items. He mentioned that the Master List of Licensing Activities had been updated and the review plan for Midland was being placed today (7/ /80) on a Consumers Power Company-automated text management system and will be distributed for comment on July 18, 1980. He reported that a plan had been developed to address open items in the Question and Response volumes of the FSAR and that he intended to include the latest status of these in the October amendment. He concluded that Mr. Denton of the NRC will be available August 5, 1980, and Consumers Power Company will be briefing him on or about that date regarding the suggested plan for conducting the FSAR review with the NRC.

ACTION ASSIGNMENT: None

ACTION STATEMENT: None

7) Vendor Contact for Qualification

Gil Keeley suggested that, in the interest of using the engineers more productively it may be prudent to relieve Bechtel engineering of responsibility for the vendor contact required to pursue qualification.

Bechtel accepted this suggestion with the proviso that a good division of responsibility, including QA aspects, is worked out for each order, with Bechtel retaining the responsibility for commercial communication with each vendor.

ACTION STATEMENT: Make decision on whether to pursue the suggestion.

ACTION ASSIGNMENT: Jim Cook/Gil Keeley

8. Next Meeting

John Rutgers announced that the next meeting will be August 10, 1980, and agreed to publish a list of future meeting dates.

ACTION STATEMENT: Publish a list of future meeting dates

ACTION ASSIGNMENT: John Rutgers

JAR/ccb
7/15/18

009546

PROJECT MANAGEMENT MEETINGS

Outline of Discussion

I. LOGISTICS

A. Frequency: Monthly
B. Duration : 4 to 6 hours
C. Location : Alternate between Ann Arbor and Midland Jobsite (Jackson ?)
D. General Chairmanship: Bechtel

II. OUTLINE AGENDA

		Duration	Preparer/ Presenter
A.	Briefing	1 hour (approx.)	
	1. Schedule/cost		WGJ/ARM
	2. Manpower/staffing		LHC/LED/others
	3. Quality assurance		WRB/LAD
	4. Licensing		TJS
	5. Other significant items		As required
B.	Project Problems/Action Summary	2 hours (approx.)	JAR
	1. Specific items identified not later than 2 weeks prior to monthly project management meeting		As required
	2. "Write-in" items identified not later than 24 hours prior to monthly project management meeting		As required
	3. Significant Performance Deviations		As required
C.	Decisions Needed	1 hour (approx.)	JWC/GSK
	1. 30-day decisions table		
	2. Status of activities leading to decisions required within next 30 days		
D.	Other Topics for Discussion	As required	As required

SCHEDULE

CURRENT PROJECT SCHEDULE

- The project schedule to be used for planning, scheduling, and measurement of performance at client direction
- i.e.; July 31, 1983, Unit 2 fuel load
- CPCo equivalent: TARGET SCHEDULE

CURRENT FORECAST

- The Bechtel project team's most current evaluation of the project schedule. This evaluation need not be approved by the client
- i.e.; Forecast 6 April 1984 Unit 2 fuel load
- CPCo equivalent: CURRENT SCHEDULE

Forecasting of schedule activities is an ongoing schedule monitoring and control process which indicates the responsible team members' evaluation of activity scope, duration, and time-of-acccomplishment.

The visibility of the current forecast of schedule activities is maintained for schedules at the intermediate level and below in the schedule hierarchy.

009546

COST

CURRENT BUDGET

- The budget based on the current project schedule and scope approved by the client. . .plus
- All scope changes and trends evaluated and approved (resolved) by Bechtel project management whether or not they have been submitted or approved (resolved) by the client

CURRENT FORECAST

- The Bechtel project team's most current evaluation of the project cost
- All trends resolved by Bechtel project management whether or not they have been sent to the client will be included
- Based on the current schedule forecast and scope

ATTACHMENT 2

0012770

008588

Bechtel Power Corporation

777 East Eisenhower Parkway
Ann Arbor, Michigan

Mail Address: P.O. Box 1000, Ann Arbor, Michigan 48106

June 2, 1980

BLC-9331

Consumers Power Company
1945 West Parnall Road
Jackson, Michigan 49201

Attention: Mr. J.W. Cook
Vice President
Midland Project

Subject: Midland Plant Units 1 and 2
Consumers Power Company
Bechtel Job 7220
Cost Trend Report 6-4

Attached for your information are seven copies of Cost Trend Report 6-4 and the Cost Trend Register, dated May 20, 1980. New trends identified by this report are:

6.6C and 6.27 through 6.44 inclusive

Included in these are the following trends which Bechtel considers resolved and are now being incorporated into the project plan.

6.6C Delete Forecast 6 costs for the reactimeter patch panel which will not be required

6.27 Delete Forecast 6 costs for the condensate demineralizer upgrade - Callex II

6.28 Delete the unexpended engineering and other home office manhours for the toxic gas monitoring penthouse

6.29 Miscellaneous engineering and other home office changes

6.30 Upgrade the permanent plant dewatering Forecast 6 allowance to an estimate based on issued drawings

6.32 Manual labor impact resulting from the tendon protection procedures required by specification C-87

6.33 Manual Startup and Unit price startup

6.34 Delete Forecast 6 costs for the refueling and miscellaneous equipment carriages on PO M-95

JUN 4 1980

1696 1142

006586

6.35 Add estimated costs for the Hydrogen and Nitrogen bulk storage pad and control room pressurization tank foundations

6.36 Added manual labor for the diesel generator building concrete block installation

6.37 Additional subcontract assistance for administration building

6.38 Added manual labor for installation of miscellaneous steel for diesel generator monorail

6.39 Additional concrete weather protection

6.40 Temporary dewatering support

6.41 Added manual labor for auxiliary building small pipe installation

6.43 Estimate of costs to provide an administration building cooling tower to supply a temporary cooling water supply

6.44 Estimate of costs for replacing a section of main steam line pipe with a seamless pipe spool

Previously identified cost trends that have been revised by report are:

6.6A Plant computer replacement
Bechtel now considers this trend resolved

*6.8 Allowance for relocation of the Bailey 855 plant computer

*6.8 Increased unit costs over Forecast 6 for flow orifices

*6.9 Allowance for costs over Forecast 6 for obtaining an alternate supplier for hydraulic snubbers

*6.11 Additional costs to add traveling screens to the circulating water intake

*6.19 Plant status indication MLLA #306 increase in cost

*6.20 Relocation of main feedwater crosstie valves for mode 4 operation

*Changes to these trends include updates of action statements and due by whom statements and not estimate changes or status changes.

1696 1143

The following trends, which were unresolved as of April 17, 1980, remain unresolved as of May 20, 1980, pending further review or direction.

6.3 Costs for chemical cleaning of the steam generators

6.6B Allowance for relocation of the Bailey 855 plant computer

6.7 Allowance for obtaining acceptable vendor drawings

6.8 Increased unit costs over Forecast 6 for flow orifices

6.9 Allowance for costs over Forecast 6 for obtaining an alternate supplier for the hydraulic snubbers

6.10B Allowance for potential design changes which may result when the tornado depressurization venting analysis is completed

6.11 Additional costs to add traveling screens to the circulating water intake

6.12 Allowance for potential changes to our present design basis for fire protection

6.18 Removal of weld backing rings for venturis

6.19 Plant status indication MCAR #306 increase in cost

[illegible] Relocation of main feedwater crosstie valves for mode 4 operation

New trends this month include the following items identified as unresolved.

6.31 Process steam line transfer valve bypass

6.42 Water and sewer line to warehouse No 2

In addition to the above status, seven (7) trends have been identified which remain unevaluated for cost or schedule impact due to indeterminate or unavailable scope. These trends are discussed on Attachment 2.

008586

Please advise me if you have any questions or wish Bechtel to take any specific action beyond that identified in the Cost Trend Register.

Very truly yours,

John A. Rutgers
Project Manager

JAR/WGJ/sll
5/27/2

Attachments (7) 1. Cost Trend Graph for Trend Report 6-4
2. Trends Unevaluated for Trend Report 6-4
3. Cost Trend Report 6-4
4. Cost Trend Register 6-4, dated May 21, 1980

cc: G.S. Keeley w/o
D.B. Miller w/a
[redacted] w/a

1145

16996

Response Requested: No

0012774

PROJECT TRENDS

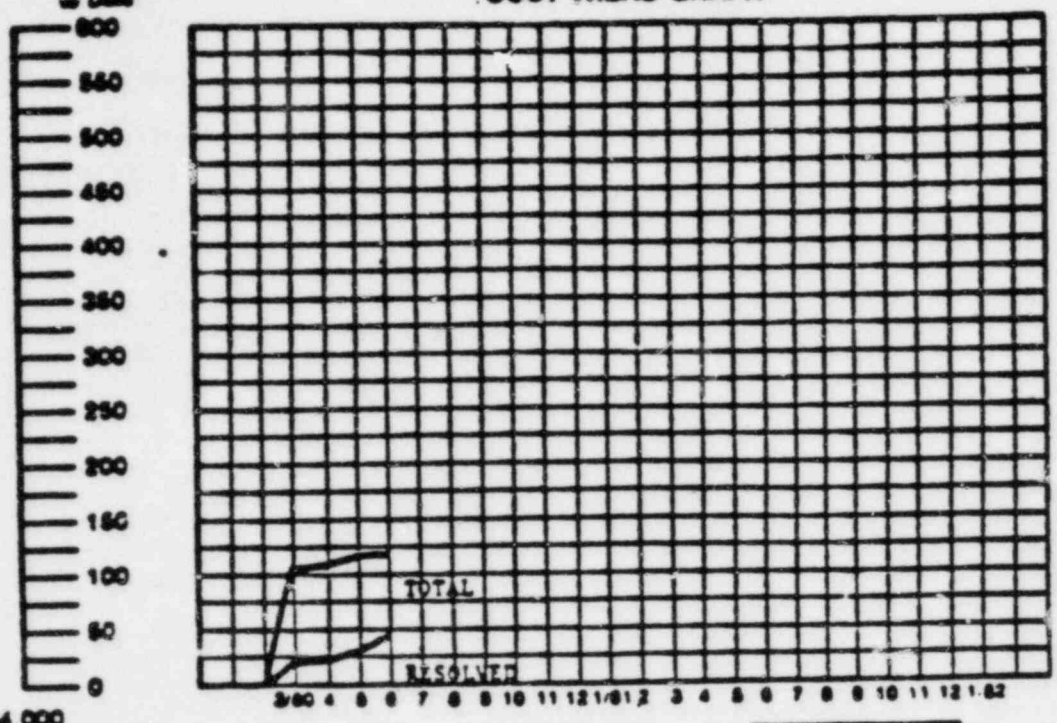
Attachment 1

TREND NO.: 6-4	JOB NO.: 7220	PROJECT: Midland Units 1 & 2

ALL COSTS $1,000 Cost changes [illegible] magnitude and should not be used as a current Project Forecast

0000300

COST TREND GRAPH



1,784,000
(F/C No. 6)

	TRENDS THRU NO. 6-3 DATED: 4/17/80	TREND NO. 6-4 DATED: 5/21/80	TOTAL TRENDS TO DATE
[illegible] (F/C No. 6)	1,784,000		1,784,000
TRENDS RESOLVED			
[illegible] Changes	28,400	7,110	35,510
Other Changes	4,650	(700)	3,950
SIT RESOLVED CHANGES	33,050	6,410	39,460
Total Unresolved	81,330	1,250	82,580
TOTAL TRENDED	1,898,380	7,660	1,906,040

SCHEDULE TREND

MAJOR MILESTONES	UNIT ONE				UNIT TWO			
	Trend Base Schedule	Actual Forecast	CHANGE (in months) To Date	CHANGE (in months) This Trend	Trend Base Schedule	Actual Forecast	CHANGE (in months) To Date	CHANGE (in months) This Trend
Start Engineering	3/73	3/73 A			3/73	3/73 A		
Issue NRC CP Application	12/72	12/72 A			12/72	12/72 A		
Start Construction	9/73	9/73 A			9/73	9/73 A		
Start [illegible]	10/74	10/74 A			9/74	9/74 A		
Set Reactor	9/78	9/78 A			9/78	9/78 A		
Set Turbine Building	6/79	6/79 A			9/78	9/78 A		
Hot Functional	1/84	1/84			10/83	10/83		
Fuel Load	9/84	9/84			4/84	4/84		
Commercial Operation	6/85	6/85			9/84	9/84		

DATE June 1980 PAGE [illegible]

ATTACHMENT 3

0012804

009499

Bechtel Power Corporation

777 East Eisenhower Parkway
Ann Arbor, Michigan

Mail Address: P.O. Box 1000, Ann Arbor, Michigan 48106

BLC-9462

July 15, 1980

cc: Serial

Consumers Power Company
1945 West Parnall Road
Jackson, Michigan 49201

Attention: Mr. J.W. Cook
Vice President
Midland Project

Subject: Midland Plant Units 1 and 2
Consumers Power Company
Bechtel Job 7220
Cost Trend Report 6-5

Attached for your information are seven copies of Cost Trend Report 6-5 and the Cost Trend Register, dated July 9, 1980. New trends identified by this report are:

6-45 through 6-73 inclusive

Included in these are the following trends which Bechtel considers resolved and are now being incorporated into the project plan.

6.45 Allowance for B&W/Bechtel numbering of NSSS components (Trend report 6-4 unevaluated item #2)

6.46 Repair of cooling pond riprap

6.47A&B New estimate for ESF Filtration System addition per the direction outlined in the restatement of the Forecast 6 Cost Package included with BLC-9325 as list #3 item 4/77

6.48 Delete the Forecast 6 value for the load sequencer per the direction outlined on list #3 item 7

6.49A&B New estimate for the ART system addition per the direction outlined on Serial 8652 and list #3 items 46, 57 and 159

6.50 [illegible] forecast 6 value for Passive Failures after LOCA per the direction outlined on list #3 item 50

6.51 Modify the forecast 6 value for System Integrity for High Radioactive Leak Reduction Outside Containment per the direction outlined on list #3 items 101 and 104

Bechtel Power Corporation

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6.52A Delete the forecast 6 value for the Onsite Operational and Technical Support Centers per the direction outlined on list #3 items 119, 120 and 170

6.52B New estimate for the Onsite Technical Support Center per the direction outlined on list #3 items 119, 120 and 170

6.53A&B New estimate to Upgrade RCS Overpressure Protection System per the direction outlined on list #3 items 157, 158 and 165

6.54 Added allowance for engineering Main Feedwater Overfill additions per the direction outlined on list #3 item 160

6.55 Added allowance for engineering Feedwater Reliability Assessment per the direction outlined on list #3 item 161

6.56 Added allowance for engineering ICS FMEA Modifications and NNI/ICS Modifications per the direction outlined on list #3 items 162, 171 and 172

6.57 Added allowance for engineering to Study Effects of Dow Challenges to Safety Systems per the direction outlined on list #3 item 163

6.58 Estimate of engineering manhours required to support the Training Simulator study per the direction outlined on list #3 item 166

6-59 Added allowance for Control Room Design Review per the direction outlined on list #3 item 167

6.60 Added allowance for engineering to support the Interim Reliability Evaluation Program per the direction outlined on list #3 item 168

6.61 Added allowance to add In-plant Radiation Monitoring per the direction outlined on list #3 item 169

6.62 Allowance for 72 NCDs from Engineering Matrix "Non Scope"

6.63 Allowance for 9 NCDs from Engineering Matrix "Scope Nonlicensing"

Bechtel Power Corporation

009493

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6.64 Allowance for 9 NCDs from Engineering Matrix "Scope Licensing non TMI-2 related"

6.65A Allowance for 2 NCDs from Engineering Matrix "Scope Licensing TMI-2 Primary"

6.65B Allowance for NCD 6-123 from Engineering Matrix "Scope Licensing TMI-2 Secondary"

6.66 Changes to Radwaste Gas System drain and vent valves

6.67 Transfer field small pipe group to Ann Arbor payroll

6.68 Additions to current Midland sampling system

6.69 Review of Liquid Radwaste System

6.70 Added manhours for Large Process Pipe Hanger Installation

6.71 Added manhours for installation of Pipe Restraint Cover Plates

6.72 Firewatch Labor Increase

6.73 Post hydro Liquid Penetrant Testing of Borated Water Storage Tanks

Previously identified cost trends that have been revised by this report are:

**6.6 Radwaste Pump Seal Unit PC M-376

**6.6A Plant computer replacement

**6.6C Reactimeter Patch Panel

**6.7 Supplier Drawing Resubmittal

**6.8 Flow Orifices PC J-232

**6.9 Hydraulic Snubber Alternate Suppler

6.10 Design for Tornado Depressurization (Updated estimate to include all of the auxiliary building not just the control tower)

009199

**6.10B	Design for Tornado Depressurization
6.12	Fire Protection Design (Increase this allowance to include transfer switches in the control room)
*6.13	Large Pipe Hanger Resident Engineering Group
*6.14	Replace Compressor Building
6.15	Pressurizer Lower Support (Added allowance for construction)
6.19	Plant Status Indication (Bechtel now considers this resolved)
**6.20	Relocation of Main Feedwater Crosstie Valves
*6.21	Review of Vendor Large Pipe Hanger Design
*6.22	Reanalysis of Main Steam Piping
*6.23	B 31.1 Hanger Isometrics Design Check
*6.25	Core Drilling for Fire Protection System
**6.26A&B	Consumers Power Company Operations Trailer Fire
**6.29A&B	Miscellaneous Engineering and Other Home Office Changes
*6.30	Permanent Plant Dewatering
[illegible]	Manual Startup and Unit Price Startup
*6.35	Hydrogen and Nitrogen Bulk Storage Pad and Control Room Pressurization Tank Foundations
*6.36	Diesel Generator Building Concrete Block installation
*6.37	Subcontract Assistance for Administration Building
*6.38	Installation of Miscellaneous Steel for Diesel Generator Monorail
*6.40	Temporary Dewatering Support
**6.42	Water and Sewer Line to Warehouse No 2

Bechtel Power Corporation

009499

*6.44 Main Steam Pipe Replacement

*These trends are now resolved by Consumers Power Company. Ref Serial #880

**Changes to these trends include updates of action statements and due by whoo statements and not estimate changes or status changes.

The following trends, which were unresolved as of May 20, 1980, remain unresolved as of July 9, 1980, pending further review or direction.

6.3	Costs for chemical cleaning of the steam generators
6.68	Allowance for relocation of the Bailey 855 plant computer
6.7	Allowance for obtaining acceptable vendor drawings
6.8	Increased unit costs over Forecast 6 for flow orifices
6.9	Allowance for costs over Forecast 6 for obtaining an alternate supplier for the hydraulic snubbers
6.108	Allowance for potential design changes which may result when the tornado depressurization venting analysis is completed
6.11	Additional costs to add traveling screens to the circulating water intake
6.12	Allowance for potential changes to our present design basis for fire protection
6.18	Removal of weld backing rings for venturis
6.20	Relocation of main feedwater crosstie valves for mode 4 operation
6.31	Process steam line transfer valve bypass
6.42	Water and sewer line to warehouse No 2

No new unresolved trends have been added to the report this month.

In addition to the above status, three (3) trends have been identified which remain unevaluated for cost or schedule impact due to indeterminate or unavailable scope. These trends are discussed on Attachment 2.

Bechtel Power Corporation

009499

Please advise me if you have any questions or wish Bechtel to take any specific action beyond that identified in the Cost Trend Register.

Very truly yours,

John A. Rutgers
Project Manager

JAR/WGJ/sll
7/8/1

Attachments (7)
1. Cost Trend Graph for Trend Report 6-5
2. Trends Unevaluated for Trend Report 6-5
3. Cost Trend Report 6-5
4. Cost Trend Register 6-5, dated July 9, 1980

cc: G.S. Keeley w/o
D.B. Miller w/a
A.R. Mollenkopf w/a

Response Requested: No

009455

MIDLAND PLANT UNITS 1 AND 2
BECHTEL JOB 7220
CONSUMERS POWER COMPANY

TRENDS UNEVALUATED FOR TREND REPORT 6-5

The following trends have been identified which remain unevaluated for cost or schedule impact due to indeterminate or unavailable scope:

1. Nondestructive Examination for Concavity

   Client requested additional requirements to assure ASME Section III was not violated while preparing welds for ASME Section XI in service inspection. Bechtel believes that this work is exceptional to the prime contract and might better be handled under separate contract.

2. Installed Instrument Inspection

   The client has indicated a desire for quarterly inspection of 100% of the instruments released for construction. Bechtel is recommending that 15% of these instruments be inspected quarterly using random sampling techniques.

3. Requirements to comply with the resource conservation and recovery act

   A program will have to be adopted to comply with the requirements of the subject act pertaining to identification, [illegible] and eventual [illegible] hazardous wastes.

0012811

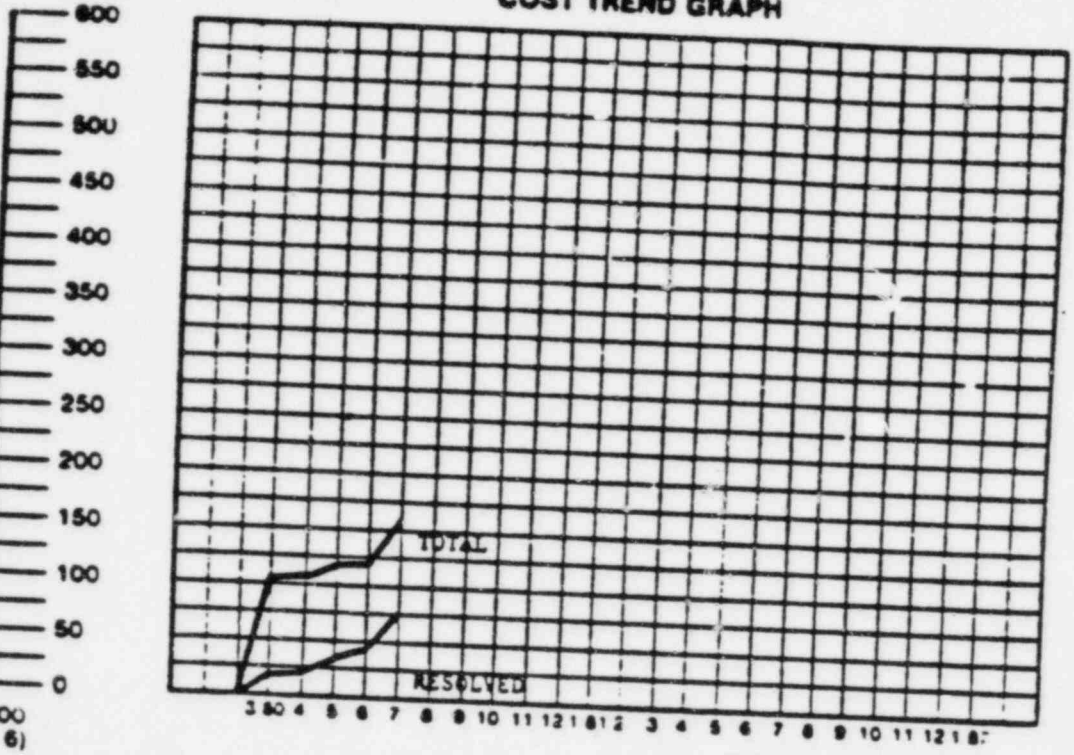
PROJECT TRENDS

TREND NO.: 4-5 | JOB NO.: 7220 | PROJECT: Midland Units 1 & 2

ALL COSTS $1,000. Cost denotes order-of-magnitude and should not be used as a current Project Forecast

Total Trends to Date 009;99

COST TREND GRAPH



1,784,000 (F C No 6)

	TRENDS THRU NO. --- DATED: 5/21/80	TREND NO. 4-5 DATED: 7/9/80	TOTAL TRENDS TO DATE
COST TREND BASE (F/C No. 6)	1,784,000		1,784,000
TRENDS RESOLVED			
Scope Changes	35,510	14,370	49,880
Other Changes	3,950	27,860	31,810
S/T RESOLVED CHANGES	39,460	42,230	81,690
Total Unresolved	82,580	4,800	87,380
TOTAL TRENDED	1,906,040	47,030	1,953,070

SCHEDULE TREND

MAJOR MILESTONES	UNIT ONE				UNIT TWO			
	CURRENT PROJECT Schedule	Actual Forecast	CHANGE (+ or -) To Date	CHANGE (+ or -) This Trend	CURRENT PROJECT Schedule	Actual Forecast	CHANGE (+ or -) To Date	CHANGE (+ or -) This Trend
Start Engineering	2 73	2 73A			2 73	2 73A		
Issue NRC (AEC) Permit	12 72	12 72A			12 72	12 72A		
Start Construction	6 73	6 73A			6 73	6 73 A		
Start Liner Pour	10 74	10 74A			6 74	6 74 A		
Set Reactor	6 76	6 78A			6 78	5 78 A		
Set Turbine Casing	4 79	4 79A			9 78	9 78 A		
Hot Functional	5 81	1 84			2 80	10 80		
Fuel Load	12 81	9 84			7 80	4 84		
Commercial Operation	7 84	6 [illegible]			12 80	9 84		

DATE: JULY 1980 | PAGE | OF

ATTACHMENT 4

0012859

Bechtel Power Corporation

0IC656

Quie

August 1, 19

6-6

Consumers Power Company
1945 West Parnall Road
Jackson, Michigan 49201

Attention: Mr. John [illegible]
Vice President
Midland Project

D152.1

Subject: Midland Plant Units 1 and 2
Consumers Power Company
Bechtel Job 7220
Cost Trend Report 6-6

JWC
GSK
DSM
KRK
TTS
RCB
WRB
ARm
JDS
WR
JRB

Attached for your information are seven copies of Cost Trend Report 6-6 and the Cost Trend Register, dated August 1, 1980. New trends identified by this report are:

[illegible] through 6-9 inclusive

Included in these are the following trends which Bechtel considers resolved and are now being incorporated into the project plan.

6.[illegible] A&B	Revise estimate for RCP oil collection and removal system
6.[illegible]	Estimate for providing a Nitrogen pressurization system to the radwaste degasifier
6.[illegible]	Estimate of design changes to Instrument and Tubing supports
6.[illegible]	Modifications to [illegible] cabinet locations
6.[illegible] A&B	Revise estimate for Reactor Anchor Bolt repair
[illegible]	Recheck stress calculations from staff
6.[illegible] A&B	Allowance costs for [illegible] wall Redesign
6.[illegible]	Added tornado missile protection framing to the Auxiliary Building Roof
6.[illegible]	Delete Forecast - engineering manhours for Seismic design criteria

0012860

Bechtel Power Corporation

910630

6.86	Added engineering manhours to complete hanger [illegible] from field
6.87	[illegible] system for RCP seal coolers
6.88	Eliminate engineering assistance by craftsmen
6.89	Added costs for installation of RCP snubbers by B&W [illegible]
6.90 A,B,C	[illegible] Impact of the 7/31/83 Unit 2 fuel load schedule

Previously identified cost trends that have been revised by this report are:

*6.8	Flow orifices PO J-232
*6.9	Hydraulic snubber alternate supplier
6.10 A	Design for Tornado Depressurization Auxiliary Building (increased costs based on firmer scope definition)
6.11	Circulating water Intake Structure Traveling Screens (increased trend to reflect estimate in BLC-9139)
*6.18	Removal of Weld Backing Rings for Venturis
6.20	Relocation of Main Feedwater Crosstie Valves for [illegible] Operation
6.29 A&B	Miscellaneous Engineering and other home office (Added Engineering NCDs less than 5K each)
**6.32	Tendon Protection Procedures
**6.39	Additional Concrete Weather Protection
6.41	Auxiliary Building Small Pipe (Added miscellaneous operations which were omitted from previous issue)
6.62	Other - Engineering from Matrix (Additions, revisions and deletions to NCDs summarized in this trend)

0012861

Bechtel Power Corporation

August 6, 198[illegible]
BLC-[illegible]
Page [illegible]

010630

6.63 Scope [illegible] Licensing - Engineering from Matrix (Additions, Revisions and deletions to SCDs summarized in this trend)

6.66 [illegible] Licensing [illegible] - Engineering from Matrix (Additions, Revisions and deletions to SCDs summarized in this trend)

6.67 Transfer Field Small Pipe Group to Engineering (Because of pricing basis and mix between Bechtel direct hire and Contract hire personnel)

*These trends are now resolved by Bechtel.

**Changes to these trends include updates of action statements and due by whom statements and not estimate changes or status changes.

The following trends, which were unresolved as of July 9, 1980, remain unresolved as of August [illegible], 1980, pending further review or direction.

6.3 Costs for chemical cleaning of the steam generators

6.6B Allowance for relocation of the Bailey 855 plant computer

6.7 Allowance for obtaining acceptable vendor drawings

6.10B Allowance for potential design changes which may result when the tornado depressurization venting analysis is completed

6.11 Additional costs to add traveling screens to the circulating water intake

6.12 Allowance for potential changes to our present design basis for fire protection

6.20 Relocation of main feedwater throttle valves for mode 4 operation

6.31 Process steam line transfer valve bypass

6.62 Water and sewer line to warehouse No. 2

New trends this month include the following items identified as unresolved.

6.81 Security Fencing Around the Steam Lines

0012862

Bechtel Power Corporation

August ?, 1980
?: ??
Page ?

010656

6.?1 Moisture Removal Precepara?? ? ?ains to MSRs

6.?5 Temperature Compensation ?? ?ressurizer Level Measurement

In addition ?? the above status, tw? (2) trends ?ave been identified which remain unevaluated for cost or schedule impact due to indeterminate or unavailable scope. These trends are discussed on Attachment 2.

Please advise me if you have any questions or wish Bechtel to take any specific action beyond that identified in the Cost Trend Register.

Very truly yours,

John A. Rutgers
Project Manager

JAR/???
8/1/?

Attachments (?) 1. Cost Trend Graph for Trend Report 6-6
2. Trends Unevaluated for Trend Report 6-6
3. Cost Trend Report 6-?
4. Cost Trend Register 6-6, dated August 1, 1980

cc: G.S. ?awley w/?
[illegible]
A.R. Mallenkopf w/a

Response Requested: No

0012863

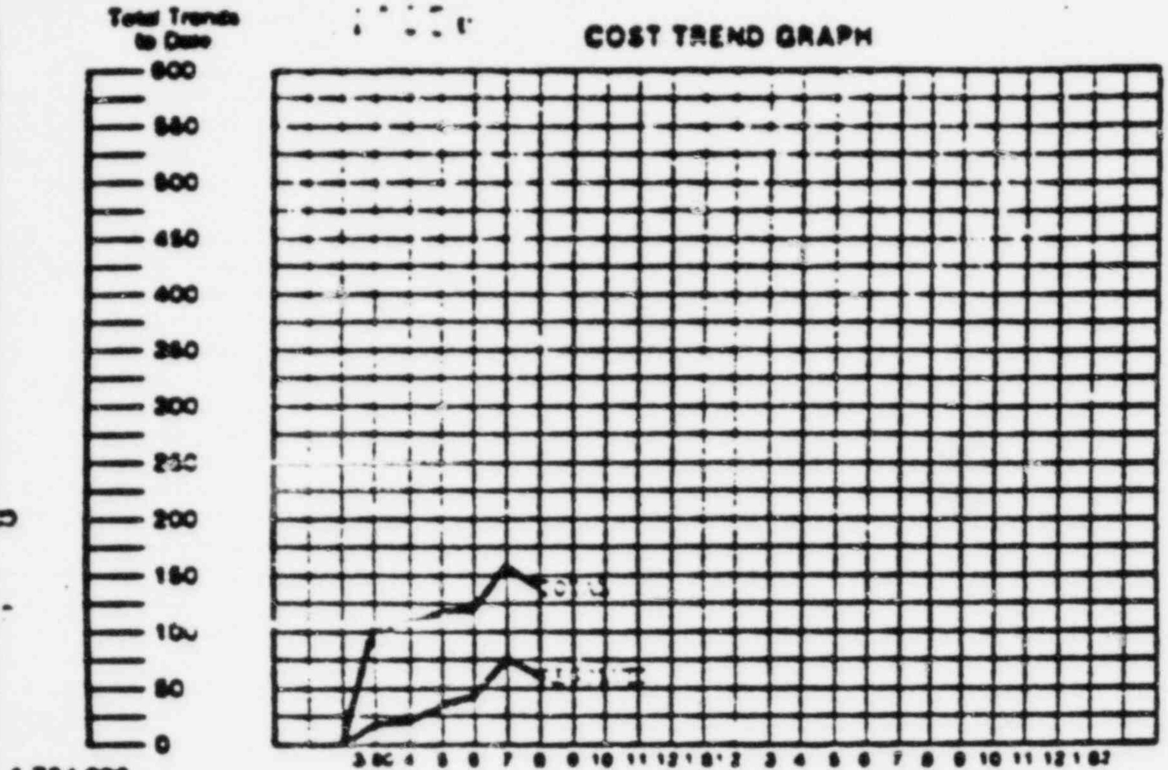
Attachment 1

PROJECT TRENDS

TRENDNO. 6-6 | JOB NO. 7220 | PROJECT: Midland Units 1 & 2

ALL COSTS $1,000 DOLLARS. Cost denotes order of magnitude and should not be used as a current Project Forecast

COST TREND GRAPH



1,784,000
(F/C No. 6)

	TRENDS THRU NO. 6-5 DATED:	TREND NO. 6-6 DATED: 6 .80	TOTAL TRENDS TO DATE
COST TREND BASE (F/C No. 6)	1,784,000		1,784,000
TRENDS RESOLVED			
Scope Changes	49,980	6,385	56,265
Other Changes	31,611	(23,650)	8,160
	81,591		
B/T RESOLVED CHANGES		(17,265)	64,425
Total Unresolved	87,380	(6,090)	81,290
TOTAL TRENDED	1,953,071	(23,355)	1,929,715

SCHEDULE TREND -

MAJOR MILESTONES	UNIT ONE			UNIT TWO			
	CURRENT PROJECT Schedule	CHANGE in months		CURRENT PROJECT Schedule		CHANGE in months	
		To Date	This Trend			To Date	This Trend
Start Engineering	2 7-			2 73			
Issue NRC (AEC) Permit	12 72			12 72			
Start Construction	6 73			6 73			
Start Loop Piping	[illegible]			6 74			
Set Reactor	6 70			9 79			
Set Turbine Casing	4 79			6 78			
Hot Functional	8/82			2/83			
Fuel Load	12/83			7/83			
Commercial Operation	7/84			12/83			

DATE: August 1980 | PAGE OF

ATTACHMENT 5

Bechtel Power Corporation

777 East Eisenhower Parkway
Ann Arbor, Michigan

Mail Address: P.O. Box 1000, Ann Arbor, Michigan 48106

113246

April 27, 1983

0002999

BLC- 16632

Consumers Power Company
1945 West Parnall Road
Jackson, MI 49201

Attention: Mr. A.R. Mollenkopf
Schedule/Cost Manager
Midland Project

Subject: Midland Plant Units 1 and 2
Consumers Power Company
Bechtel Job 7220
COST TREND REPORT 7A-16

A copy of Cost Trend Report 7A-16 is attached for your information.

This is the closing trend report for Forecast 7R, the Project Replanning Forecast. The cost trend base will be adjusted next month to the Forecast 7R total of $2,402,000,000.

New and revised trends identified by this report are 7.34B, 7.41P, 7.63C, 7.77B, 7.139B, 7.143B, and 7.169 through 7.187 inclusive. The cost trend graph (Attachment 1) displays the history of cost trends to the trend base of $1,975,000,000.

In addition to the trends included in the register, 4 trends have been identified that remain unevaluated for cost or schedule because of indeterminate or unavailable scope. These trends are base project items and are discussed in Attachment 2.

Please advise me if you have any questions or wish Bechtel to take specific action beyond that identified in the Cost Trend Report.

Very truly yours,

S.K. Main
Project Cost/Schedule
Supervisor

SKJ/JSF/vmk
111602/IV

Attachments: 1. Cost Trend Graph for Trend Report 7A-16
2. Trends Unevaluated as of Trend Report 7A-16
3. Cost Trend Report 7A-16

cc: J.W. Cook w/a
D.B. [illegible] w/a
A.R. Mollenkopf w/12
J.A. Mooney w/a

Written Response Requested: Yes

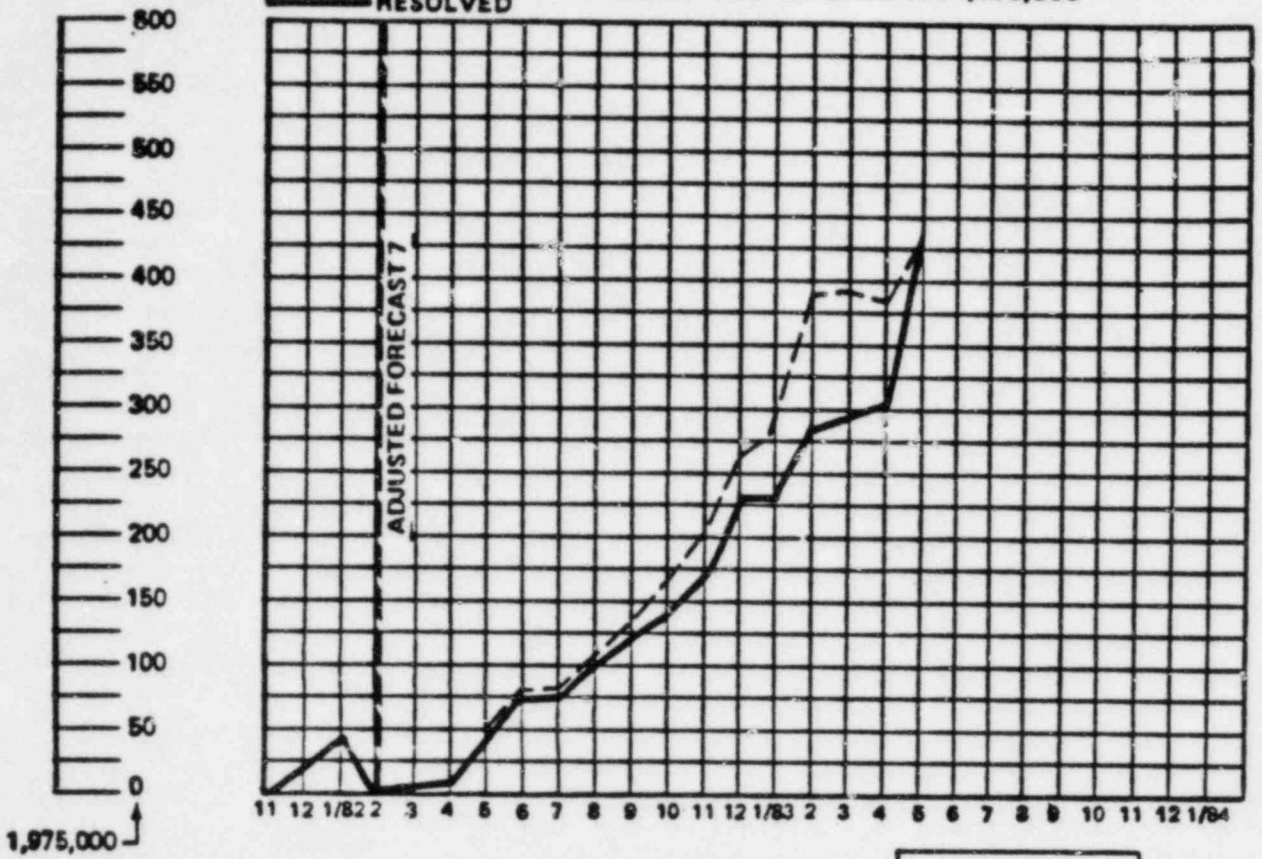
TREND NO.: 7A-16	JOB NO.: 7220	PROJECT: Midland Units 1 & 2

13246

Cost denotes order-of-magnitude

0003902

COST TREND GRAPH $1,000,000



$ 1,000	TRENDS THRU NO. 7A-15 DATED: 3/22/83	TREND NO. 7A-16 DATED: 4/22/83	TOTAL TRENDS TO DATE
COST TREND BASE	1,975,000		1,975,000
TRENDS RESOLVED			
Scope Changes	92,664	57,100	149,764
Other Changes	208,540	68,696	277,236
S/T RESOLVED CHANGES	301,204	125,796	427,000
Total Unresolved	79,400	(79,400)	0
TOTAL TRENDED	2,355,604	46,396	2,402,000

SCHEDULE TREND

MAJOR MILESTONES	UNIT ONE				UNIT TWO			
	Trend Base Schedule		CHANGE (in months) To Date	CHANGE (in months) This Trend	Trend Base Schedule		CHANGE (in months) To Date	CHANGE (in months) This Trend
Start Engineering	2/73				2/73			
Issue NRC (AEC) Permit	12/72				12/72			
Start Construction	6/73				6/73			
Start Liner Plate	10/74				6/74			
Set Reactor	6/78				6/78			
Set Turbine Casing	4/79				9/78			
Hot Functional	5/83			7/84	1/83			5/84
Fuel Load	12/83			2/85	7/83			10/84
Commercial Operation	7/84			8/85	12/83			2/85

B-1003

DATE

PAGE OF

ATTACHMENT 6

034400

Bechtel Power Corporation

777 East Eisenhower Parkway
Ann Arbor, Michigan
Mail Address P.O. Box 1000, Ann Arbor, Michigan 48106

June 25, 1981

BLC-11057

Consumers Power Company
1945 West Parnall Road
Jackson, Michigan 49201

Attention: Mr. J.W. Cook
Vice President
Projects, Engineering and Construction

Subject: Midland Plant Units 1 and 2
Consumers Power Company
Bechtel Job 7220
Meeting Notes No. 1374

The notes of the June 10, 1981, project management meeting are attached. The following dates have been reserved for meetings for the next 4 months.

July 9, 1981
August 27, 1981 (Executive Review, Midland Jobsite)*
September 10, 1981
October 15, 1981

Please call if you have any questions.

* Preparation [illegible] be announced.

Very truly yours,

John A. Rutgers
Project Manager

JAR/MB/bjm
6/4/10L

Attachment: Meeting Notes No. 1374

cc: D.F. Judd (B&W w/a)
K.R. Kline w/a

RECEIVED
JUN 30 1981
MIDLAND PROJECT MANAGEMENT

Written Response Requested: No

Bechtel Power Corporation

034400

777 East Eisenhower Parkway
Ann Arbor, Michigan

Mail Address: P.O. Box 1000, Ann Arbor, Michigan 48106

MEETING NOTES NO. 1374

MIDLAND PLANT UNITS 1 AND 2

CONSUMERS POWER COMPANY

BECHTEL JOB 7220

DATE: June 10, 1981

PLACE: Midland Jobsite

SUBJECT: Midland Project Management Meeting

ATTENDEES:

Bechtel	Consumers Power Company	Babcock & Wilcox
M.N. Bakarich	R. C. Bauman	D.F. Judd
R.M. Collins	W.R. Bird	A.H. Lazar
L.H. Curtis	J.W. Cook	
L.E. Davis	D. Johnson	
M.A. Dietrich	K.R. Kline	
L.A. Dreisbach	R. McCue	
E.M. Hughes	D.B. Miller	
S.K. Jain	A.R. Mollenkopf	
T. Milendin	D. Ronk	
W.H. Nielson	G. Slade	
J.A. Rutgers	T.J. Sullivan	

ITEMS DISCUSSED:

A. Introduction of New Personnel

J.A. Rutgers introduced D.F. Judd, and A.H. Lazar, Babcock & Wilcox's Midland Senior Project Manager and Manager, Nuclear Steam System Product Line, respectively. D.B. Miller introduced Jerry Slade, Consumers Power Company's Assistant Site Superintendent. J.A. Rutgers reminded all present that the purpose of the meetings is to facilitate communications, exchange ideas freely, and provide a decision-making forum.

B. Action Item Review

J.A. Rutgers reviewed the status of action items from previous meetings. During the discussion of these items, the following observations and additional actions were assigned.

Item 61 - HVAC Anchorages: L.A. Dreisbach reported that the number of drop-in anchors to be replaced is 600 rather than the 400 indicated on the Action Item Status Sheet. J.W. Cook asked if there are any other areas in the plant where bolts are a problem. L.E. Dreisbach informed him that there are several other problem areas, but programs are in place addressing them. J.W. Cook emphasized that he wanted to ensure there are no hidden areas that might surprise us later.

Item 65 - DCAR Procedure: J.W. Cook asked who would be involved in decision-making in processing DCARs. He was informed that if the change proposed by the DCAR has a schedule impact, both he and J.A. Rutgers will have final approval. J. Milandin indicated he would have a working meeting on the proposed procedure before its publication on or about June 19, 1981, to ensure all parties understand and agree to it.

Item 70 - Reactor Upper Lateral Supports: R.C. Bauman asked for a date on which firm design criteria would be established. J.A. Rutgers indicated he would provide it, but must first receive interface criteria from B&W. D.F. Judd said he would take as an action item the requirement to provide the information.

Item 89 - Reconcile Through Long Lead Time Items: Eleven issues are planned for field review in June. The major issue then remaining for field review is MLLA 6, Fire Protection. S.K. Jain will coordinate the effort.

Item 110 - Associate Systems with Blockwall Replacement/Modifications and Incorporate a Long Lead Time Item Scheduling: S.K. Jain indicated he will accomplish the requirement based on a sample of 20 blockwalls. He will provide an update at the next meeting.

Item 119 - Installation Recovery Schedule for Small Pipe: Preparation of the recovery schedule has been delayed because of the diversion of resources to review calculations in the small pipe area.

Item 125 - Statement of Bechtel's Basis for Having No Safety Concerns on Design for Soils Modulus of Elasticity (E): Consumers Power Company will study Bechtel's statement (BLC-10960). The item will remain on the Action Item Status List for an additional month.

Item 126 - Review Procedures for Determining Workarounds: This item is to be deleted from the Action Item Status List because it relates to Item 129.

Item 127 - Review Task Force Program for MLLA Issues: A Bechtel letter indicating task force membership is being prepared. Task force implementation to resolve initial schedule paths still needs to be agreed upon.

Item 130 - Painting Steel in Containment: D.M. Miller said he is still reviewing input from interested parties and is looking at various options. J.W. Cook reminded the group that at the last meeting he had asked for an engineering recommendation from Bechtel. L.H. Curtis advised him that T.J. Murphy is working closely with D.M. Miller and is providing the technical input.

ACTION STATEMENT:

Provide Bechtel interface criteria on the reactor vessel

ACTION ASSIGNMENT:

D.F. Judd

B. Schedule/Cost

S.K. Jain presented the schedule status for engineering and construction. He noted engineering, design, and construction are 70, 81, and 68% complete, respectively, for a composite completion of 68%. He reported that the cash flow for May 1981 was $19.4 million, and the total for the year to date was $83 million, $6.7 million under the amount forecast. He noted that the underrun had dropped by about $2 million from the previous month; he attributed this to quicker deliveries.

L.H. Curtis advised the group that he is looking into developing a more precise method for estimating design and engineering percent complete.

D.B. Miller voiced a general concern that the intermediate project schedules are not being coordinated fully. J.A. Rutgers replied that the intermediate schedules reflect early forecasts and that the alternative would be to wait until a comprehensive package is assembled, fully coordinated, and issued. J.W. Cook indicated he is not ready to eliminate early forecasts, but asked, if practicable, they be better coordinated. Bechtel will conduct internal team coordination of schedule data to be presented at project management meetings prior to future meetings.

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During the discussion on small pipe hangers, P. Corcoran apprised the group that resident engineering is into the third week of the recovery effort on stress calculations. They had reviewed 9% of the Seismic Category I calculations and had discovered one significant discrepancy. He defined a significant discrepancy as one in which stress exceeds code allowables. He further indicated that approximately 47 people were doing the review, and that the diversion of resources to this task was having an adverse affect on design production.

F. Young informed the group of the recovery plan for the design of small pipe hangers. He presented production and schedule figures for March, April, and May, and noted part of the shortfall between the two was caused by more accurate bookkeeping and issuing hangers and isometrics as a unit. He described a recovery plan limited by two items: First, it is not practicable to reduce the lead time between engineering and installation. Second, it is difficult to obtain manpower to do the job. He presented a recovery plan with the production of an upper limit of 575 hangers per month and a lower limit of 385. He cautioned, however, that to achieve the upper limit he would require 30 additional people. He indicated that either the upper or the lower limit would have the total plant back on schedule, but neither would achieve recovery during the current project schedule in the containments. J.W. Cook asked if there are any reasons why we should not get the extra people. L.H. Curtis stated he would look into the matter.

J.W. Cook asked if the new subcontract design team for large pipe hangers is in place and working. E.M. Hughes replied that a small cadre for the team was at the jobsite, but the team is not fully functional at this time.

In response to a question from J.A. Rutgers, S.K. Jain stated that the status of instrumentation tubing would be presented at the July meeting.

J.W. Cook asked how many packages have been issued to Zack. L.H. Curtis informed him one had been issued and two remained to be issued.

J.A. Rutgers reminded L.H. Curtis to coordinate space requirements with L.E. Davis and D.B. Miller for the personnel who are to perform HELLA and deflection barrier analysis. L.H. Curtis and D.B. Miller stated that the coordination is being accomplished.

034400

C. Manpower/Staffing

1. Engineering

L.H. Curtis reported the equivalent engineering manpower had increased from 835 at the end of April to 842 at the end of May. He indicated the figure would continue to climb, with the estimated peak above 1,000, having increased by 50 over the past month. He added that the increase takes into account the recent HELBA technical services agreement and additional engineers required in control systems and plant design.

2. Construction

L.E. Davis reported construction manpower as follows:

	June 8	Second Quarter	Third Quarter
Manual			
First shift	1,600		
Second shift	498		
Total	2,098	2,130	2,170
Pipefitters			
First shift	590		
Second shift	221		
Total	811	850	870
Electricians			
First shift	530		
Second shift	172		
Total	702	700	700
Nonmanual			
First shift	515		
Second shift	79		
Total	584	620	700
Comstock	100	100	100

034400

D. Quality Control

J.W. Cook briefly reviewed the results of the May NRC audit. He thanked Bechtel and Consumers Power Company personnel for their responsiveness to the NRC team's requests and indicated he is pleased with the results of the audit, which showed the Midland Quality Assurance program is adequate and working.

Using the NRC activity and open action items charts, W.R. Bird apprised the group of the status of quality assurance activities. He noted a significant increase in the average points on the NRC activity chart, and explained the increase was caused by points accrued by an audit of the electrical discipline and the NRC audit of the plant in May. He seconded J.W. Cook's laudatory remarks about the team effort to get as many items resolved as practicable while the NRC members were present. While discussing the summary of open action items chart, he pointed out that the MPQAD had achieved one of its goals: to reduce the number of open action items for which it is responsible to below 100 (now 97).

W.R. Bird also reported that the MAC assessment of the Midland project QA program had been published and distributed. He indicated the report concludes that the Midland QA program meets NRC requirements and is adequate; however, response time for corrective actions is excessive. W.R. Bird also mentioned that the report describes the Midland QA program as "somewhat above average" for a r[illegible] Rutgers emphasized the great effort being expended for responsiveness to QA items, and encouraged the team members to ensure that inspectors/auditors are made aware of this responsiveness.

M.A. Dietrich informed the group of the results of an SDDR audit. He indicated that 200 of 2,000 SDDRs were checked and that the completion of action reflected in the SDDRs had not been verified in all cases. He said the following program is necessary to correct the [illegible]:

1) Review all SDDRs to ensure that required action has been taken; follow up for those cases in which the records indicate action is not complete

2) Review procedures and revise them as required to ensure they provide for ongoing checks of action required by SDDRs

M.A. Dietrich further indicated that the report on the SDDR audit would be issued that week. L.E. Davis asked if the audit findings could also apply to hardware already installed. He was informed that they could.

E. Licensing and Safety

T.J. Sullivan informed the group that the size of the FSAR amendment for June was significantly reduced from that originally expected. In addition, Chapter 7 commitments were completed, but only 60% of the SCNs were approved. He reminded the group that last month he had indicated LOLA items would soon be computerized. He stated that the items were now on the computer, and he needed Bechtel and B&W personnel to attend meetings to work out requirements for disciplines, determine priorities, and give visibility to important items. He indicated he had met with the Reactor Systems and Accident Analysis Branch of the NRC, but the Control Systems Branch would not be able to review the FSAR until September. He cautioned that the Control Systems Branch, because of its late start, may compress the review schedule to an intensive 1 week effort, and hold the review in the Bechtel Ann Arbor office. He further indicated that the Health Physics Branch is reviewing Chapter 12 and is expressing some concern about the post-accident shielding review. Other reviews, he reported, are pointing toward a November SER input. He apprised the group that the Midland plant is sixth in line for 1983 licensing, and noted that much activity in the rule change area could shorten the licensing process. J.A. Rutgers cautioned that the NRC will use the project's proposed licensing schedule, and reminded the group that it is a project responsibility to adhere to it.

F. Calculation to Support Large Pipe

E.M. Hughes informed the group that Bechtel is reviewing its calculations in support of large pipe hangers. He indicated that Bechtel is looking at two areas: 1) whether there are isometrics that have been issued for fabrication for which committed preliminary calculations do not exist, and 2) whether piping isometric supporting calculations are complete in accordance with applicable EDPs. L.H. Curtis indicated the EDP on calculations is not as specific as it should be and thus would be revised. When told that the problem with calculations in the large pipe area appeared to be insignificant, J.W. Cook asked if that determination is judgmental. E.M. Hughes apprised him that currently it is.

G. Long Lead Time Items Scoreboard and Critical Path Activities of Most Negative Issues

A.R. Rollenkopf provided a schedule analysis of critical schedule items. He then reviewed the critical path of the four most negative issues. A general discussion followed his presentation in which the efficacy of the MLLA long lead time item scoreboard/ Project/2 program was questioned. Specific questions raised were:

034400

1) How do tasks identified in Project/2 get into the appropriate schedule, 2) What effect does Project/2 have on completing systems and getting them turned over, 3) Should Project/2 be subordinated to the completion working group, and 4) If Project/2 were under the system working group, would its many requirements render the group ineffective?

J.W. Cook asked that J.A. Rutgers and he be given an action item to review the MLLA and Project/2 program to ensure that sufficient mangement direction and emphasis necessary to achieve schedule impact resolution are being given to the effort.

ACTION STATEMENT:

Review Project/2 to ensure that sufficient management direction and emphasis to achieve schedule impact resolution are being given to the program.

ACTION ASSIGNMENT:

J.W. Cook, J.A. Rutgers

H. Proximity Criteria

E.M. Hughes apprised the group of the history of the proximity issue on the Midland jobsite. He indicated that the criteria were established to satisfy an NRC inspection concern regarding potential physical interaction of elements of systems necessary for shutdown in the event of an earthquake. He said that under current plans, adequacy of physical separation is to be checked by area walkdowns. He discussed three options in light of renewed interest in the proximity issue: 1) continue as we are currently with emphasis on the final walkdown to check separation, 2) make guidelines mandatory now and verify that everything already installed meets separation criteria, and 3) review and eliminate the requirement.

E.M Hughes further indicated that proximity criteria had been made mandatory for Zack, and construction had issued cards advising the crafts of the requirement for minimum physical separation distances for installation in Class 1 areas.

E.M. Hughes concluded his discussion by presenting the recommendations of a joint Bechtel/Consumers Power Company task group that had met on the issue. The recommendations constitute a plan of action for the short run; a final decision may well be based on the results of the short run plan.

0344 010

Complete a single draft specification combining all proximity requirements (potentially available in a month)

2) Organize a team to conduct a review of a limited number of essentially completed areas to identify proximity violations. Then conduct engineering evaluations to determine the number of physical changes required. Extrapolate the results of the review to other areas.

3) Obtain within 2 months a project management decision on whether to make the existing guidelines mandatory and when a walkdown program should be instituted.

The project decision was to continue the status quo on installations, but to proceed with the task group's recommendations. J.W. Cook also asked that quality control personnel be involved with the development of the specification, so that they may simultaneously work on a draft inspection plan.

I. System Completion Status

Referring to the five key elements for system completion which he had presented at the last team meeting, J. Milandin provided an update of each item. Of special note he emphasized that Management Systems Agreement 1, a system for hardware system configuration control, had been approved by both Bechtel and Consumers Power Company and would be published by June 19, 1981. He presented the progress of systems turnover since May, as indicated below:

Status	5/81	6/81
Turned over to startup to date (cumulative)	140	142
Scheduled for turnover 6/1/-12/31/81 (Rev 11, CPS)	195	195
Scheduled for turnover in 1982 (Rev 11, CPS)	403	403
Scheduled for turnover in 1983 (Rev 11, CPS)	62	62
Scheduled for turnover 6/81	N/A	17
Submitted for acceptance (to date) 6/81	N/A	8
Cumulative forward pass reviews by engineering	159	231
Cumulative forward pass review by completion working group	27	36

034400 D.B. Miller asked if turnover of Q-listed systems would start. J. Milandin replied turnover of Q-systems would start when procedures are in place for configuration control. He expected turnover of Q-listed systems to begin shortly after he published the procedure on configuration control on June 19, 1981.

J. Milandin indicated that the goal of the completion working group is to get 9 months ahead of turnover for the forward pass review. He also described the forward pass review by engineering as a design status review of the remaining work.

J. Proposed Format for Presenting System Completion Status

S.K. Jain presented the format below as a proposed vehicle for presenting system completion status at management team meetings.

1) System turnover progress

2) System construction completion progress

3) System design level review progress

4) Completion working group activities

5) System turnover schedule analysis

Following a general discussion of his proposal, S.J. Boos asked those present to submit any recommendations for change to S.K. Jain. He also asked S.K. Jain and A.R. Mollenkopf to work together on the format and to initiate its use during the August team meeting.

ACTION STATEMENT:

Develop, by August 13, 1981, a format for presenting system completion status

ACTION ASSIGNMENT:

S.K. Jain, A.R. Mollenkopf

K. Coordination of Design Changes with Operating Plant Procedures

R.C. Rauman informed the group that three procedures are required for plant operations: test, operating, and maintenance procedures. He voiced concern that key, up-to-date information, otherwise available, is not being included in these procedures. He gave examples of areas of concern which included cycle limits, system pressures, vibration assumptions, and temperatures.

D34400 D.B. Miller mentioned that Westinghouse has a manual listing all points of concern regarding the NSSS system. The title of the manual, as he recalled, is Cautions, Limitations, and Setpoints. He thought the Midland project might need a similar manual and he asked B&W representatives if they had one. D.F. Judd replied B&W had test and operating specifications.

J.W. Cook asked R.C. Bauman and G. Slade to identify for Bechtel engineering the areas of concern.

R.C. Bauman asked D.F. Judd how B&W intended to incorporate field change authorizations (FCAs) into its manuals. D.F. Judd replied that the FCAs would interface with Bechtel's field change packages (FCPs).

J.W. Cook advised the group that Consumers Power Company is inquiring if all vendor manuals must have current drawings. He indicated he would resolve the matter with Bechtel after first obtaining an in-house position.

ACTION STATEMENT:

Identify the areas of concern in operating plant procedures

ACTION ASSIGNMENT:

R.C. Bauman, G. Slade

L. Rework Control

L.E. Davis advised the group of the following schedule for publishing administrative procedures to control rework:

Procedure	Issue Date
Guidelines for raceway and cable	6/19
Control systems	6/22
Small pipe hangers	6/15
Large pipe hangers	6/15
Civil	6/26

He further indicated that quality control is also working on rework procedures and should have them ready for issuance 1 week following the publication of the administrative procedures.

034.40 Ninety-Day Decision Table

Due to lack of time, A.R. Mollenkopf did not review the 90-day decision table with the team members. Instead, he referred them to the table he had updated and distributed earlier, and asked for comments.

N. Adjournment

The meeting adjourned at 3 p.m.; the members to meet again at the call of the chairman.

6/12/15

5728

Bechtel Power Corporation
777 East Eisenhower Parkway
Ann Arbor, Michigan
Mail Address: P.O. Box 1000, Ann Arbor, Michigan 48106

November 23, 1981

0482.4

cc: [redacted]
CHRON

BLC- 11891

Consumers Power Company
1945 West Parnall Road
Jackson, Michigan 49201

Attention: Mr. J.W. Cook
Vice President
Projects, Engineering and Construction

Subject: Midland Plant Units 1 and 2
Consumers Power Company
Bechtel Job 7220
November Critical
Items Action Report

Attached for your information is the November issue of the Critical Items Action Report.

Very truly yours,

for John A. Rutgers
Project Manager

JAR/DJF/ksc
11/20/2s

Attachments: 1. Critical Items Action Report
2. Current Schedule Analysis

cc: D.R. Miller w/a
[redacted]

Written Response Requested: No

50020

5729

NOVEMBER 1981

MIDLAND PLANT UNITS 1 AND 2

CRITICAL ITEMS ACTION REPORT

(SYSTEMS SECTION)

CRITICAL ITEMS ACTION REPORT

Table of Contents - Systems Section

Note: System 0EGA is not covered in Critical Items Action Report but is being reviewed by Completion Working Group.

* Key Startup Systems

MIDLAND UNITS 1 and 2
JOB NO 7220

(SYSTEM)
CRITICAL ITEMS ACTION REPORT

DATE ISSUED 11/12/81
SHEET 1 OF 16

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion	
						Schedule Requirement	Forecast/ Actual
2SAA	ECCAS SYSTEM -	T/O 12/01/81 *					
1 (5/80)	Core flood system bistables	The fabrication and shipping of the bistables forms the critical path for this issue.	-38	a. (5/81) Fabricate and ship bistables	B&W	08/27/81	05/28/82 05/28/82F
ORCC	PLANT ACCESS AND MONITORING SECURITY SYSTEM	T/O 05/03/82					
1 (8/81)			-34	a. (8/81) Expedite delivery of missile and pressure resistant doors (AAO P.O.) (RWS No. A-30007)	Proc RMC		
		WT Doors A-178 (Wooley) Design calculations returned Code 4 on 11/17/81, to be resubmitted 11/23/81. All material is to be available by 12/31/81. Doors 4, 29, and 28 are to be shipped 3/26/82, and doors 79, 82, 113, and 114 will be shipped 5/7/82. Doors 130, 132, 168, and 184 are to be shipped 6/4/82.		WT doors F-48910 (Wooley)		10/81	12/81 06/82F
		WT Doors A-17-A (Mock) A meeting is scheduled for 11/23/81 with Mock to discuss delivery requirements and review preliminary drawings. Drawings and calculation are to be submitted the week of 11/30/81. QA manual returned Code 3 on 10/13/81.		WT doors F-46366 (Mock)		12/81	02/82 07/82F
		AT Doors A-8-A (Overly) Drawings and calculations returned Codes 2 and 3 on 11/12/81. Material lead time is 6 to 8 weeks. Delivery is scheduled for 1/29/82.		AT doors F-45440 (Overly)		10/81	12/81 02/82F
		Missile and Pressure Resistant Doors A-66 (Overly) These doors are in the bid stages. Tentative delivery was quoted as 12 to 14 weeks ARAD.		Missile and pressure resistant doors (Overly A-66)		Later	12/81 04/[illegible]/82F

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* Key Startup Systems

MIDLAND UNITS 1 and 2
JOB NO. 7220

NAVEMBER
(SYSTEMS)

CRITICAL ITEMS ACTION REPORT

DATE ISSUED 11/12/81

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion	
						Schedule Requirement	Forecast/ Actual
2EGA	COMPONENT COOLING WATER	Testing Need Date 01/04/82 ✱					
1 (5/80)	NRIA 06 - Fire Protection - safe shutdow	Issue of DCPs is the critical activity	-32	a. (11/81) Issue system DCPs	Engr Elec BPK	10/21/81	04/30/82 05/30/82F
		Procurement of the transfer switch panel is the critical activity	-29	b. (5/80) Fabricate and ship transfer switch panel	Proc RMC	09/16/81	04/30/82 04/08/82F
2RBC	REACTOR COOLANT PUMPS	T/O 12/01/81 ✱					
1 (7/79)	Hydraulic snubbers	All snubbers have been received at the jobsite.	-24	a. (8/81) Complete stress and hanger design for tubing design	Engr S.Pip DR	07/20/81	03/01/ 01/02/8x
		Approximately 4,500 lin ft of tubing and associated hangers will be required. This may cause delays in construction completion of the RCP/ steam generator cubicles.	-53	b. (9/81) Complete tubing installation	Const LED	09/19/81	05/01/82 10/01/82F
			Indeterminate	c. (7/81) Resolve interferences encountered during snubber installation (Ref BCBE-3678)	Engr Civil SS	Later	Later 12/18/81F
				d. (11/81) Decision on work-around: Is the tubing and reservoir installation required for system turnover?	QAC JH	Later	Later Later
2ADC	MAIN CONDENSERS AND INTERNAL	T/O 09/01/81 ✱					
1 (11/81)	Main condensers and internal		-24	a. (11/81) Resolve condenser hydrotest tubesheet to shell leak. Issue test specification (AMP No. 040, RWS No. 10129D)	Engr Mech TCB	06/01/81	10/25/81 11/16/F
2ECB	REFUELING CANAL AND TRANSFER TUBE	T/O 10/15/81 ✱					
1 (11/81)	New cable pull system	All embeds have been designed and installed (5 each per unit). Vendor drawings are in coordination.	-24	a. (11/81) Review as-built dimensions from field on fuel transfer system (AMP No. 020, RWS No. 10511)	Engr Civil SS	07/15/81	12/31/81 10/26/81A

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MIDLAND UNITS 1 and 2
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CRITICAL ITEMS ACTION REPORT

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SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion: Schedule Requirement	Date for Action Completion: Forecast/ Actual
2APA	CONDENSATE STORAGE	T/O 09/01/81 *					
1 (11/81)	Condensate storage	Review of vendor prints for Q stations and issuance of the connection list are currently shown as "yee" items in AH's. CMC is reviewing these prints to determine if there are workarounds.	-22	a. (11/81) Vendor prints review for Q stations (AMP No. 32, BWS No. 51391)	Engr Elec BPK	06/01/81	05/03/82 10/28/81A
			-34	b. (12/81) Prepare and issue connection list cables (AMP No. 016, BWS No. 10478D)	Engr Elec BPK	06/01/81	01/01/82 01/01/82F
ORCD	SECURITY SYSTEM CONSOLES AND COMPUTERS	T/O 02/08/82					
1 (8/81)		Consoles are currently in fabrication at subvendor AMED and are scheduled for delivery to Sygnetron by late 1/82 (potential early shipment date of 3/82)	-20	a. (8/81) Procure and ship consoles OCAS002 and OCAS003 (A-50) (BWS No. A-40057, AMP No. 043)	Proc RHC		
				1) Fabricate and ship		12/01/81	04/15/82 04/15/82F
ORCB	PERIMETER INTRUSION DETECTION SYSTEM	T/O 06/01/82					
1 (7/80)		Current design completions for the E-field microwave system and security fence may not support construction requirements for installation and testing prior to system turnover.		a. (1/81) UPS facility HVAC procurement			
			Potential Critical	1) M-319, Mech Rep-A/C Ship	Proc RHC	11/03/81	10/30/81 10/30/81A
		Note: Item a in the action required column is not a part of the security system but is required for the turnover of the system.	-10	2) M-156, Joy-fans (OVV-135 through OVV-138) Ship	Proc RHC	01/12/82	02/26/F 03/26/t
			-20	b. (8/81) Update alarm point list to depict final alarm points for entire security system			
				1) Alarm point list, Rev 6 (BWS No. A-40042)	Engr Arch MH	Later	10/16/81 11/06/81A
				2) Routing	Engr Elec BPK	Later	12/01/81 12/01/81F

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MIDLAND UNITS 1 and 2
JOB NO. 7220

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(SYSTEM)

CRITICAL ITEMS ACTION REPORT

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SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE (Months)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion	
						Schedule Requirement	Forecast/ Actual
DEAA	SERVICE WATER SUPPLY	T/O 10/11/81 *					
1 (10/81)	Resolution of NCR 2944 - Swing Jets: Cracks in Type C-2 Switches [illegible]	NCR dispositioned by engineering on 1/6/79 to use as is, in accordance with Gould's recommendation. CPCo requires confirmation in writing from Gould before accepting disposition. *Based on 7/11 81 requirement for 3 months prior to T/O	-199	a. (10/81) Issue final disposition to field	Engr Elec BFK	07/11/81	11/30/81 11/20/81F
2 (10/81)	Completion of pipe profiling on a train	CPCo is completing profiling and out-of-roundness tests.	-15	a. (10/81) Complete profiling	CPCo	07/11/81	10/28/81 10/23/81A
				b. (10/81) Decision by management on closing up train	CPCo	Later	Later 11/02/81A
DBLA	PRIMARY WATER STORAGE AND TRANSFER	T/O 10/01/81 *					
1 (10/81)		A reinforcing wall is being added around the ring foundation for primary water storage tank OT-54 to resolve the problem of cracking in foundation. Construction is currently drilling and grouting.	-19	a. (10/81) Revise isometric drawings for pipe modifications required for civil fix to primary water storage tank (OT-54 foundation)	Engr PD RFT	07/01/81	11/13/81 11/13/81F
			-19	b. (10/81) Redesign 7 hangers	Engr PD RFT	07/01/81	12/11/81 12/11/81F
			-19	c. (10/81) Place forms and add reinforcing wall around ring foundation	Const LFD	Later	10/20/81 01/31/82F
			-37	d. (11/81) Issue IDCN/DCN to revise Schematic 7220-E-487 for under voltage	Engr Elec BFK	06/01/81	02/15/82 02/15/82F

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MIDLAND UNITS 1 and 2
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NOVEMBER (SYSTEMS)

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SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion	
						Schedule Requirement	Forecast/ Actual
1 and 2EAD	AUXILIARY BUILDING SERVICE WATER	T/O 10/01/81 *					
1 (10/81)	Delivery of 8 motor-operated valves 1MO-3831, 841 and 82	The valves were inspected and released for shipment on 10/22/81.	-16	a. (10/81) Ship valves	Proc RHC	07/01/81	10/23/81 10/23/81A
2 (10/81)	Resolution of NCR 3246 - Subject: Terminal Strips in Motor-Operated Valves	Disposition is to be completed by 10/26/81	-17	a. (10/81) Resolve NCR 3246, Service Water and CCW, MCAR 46 (related to Item 55, Page 12)	Engr Mech TGB	07/01/81	10/26/81 12/02/81F
2BBA-1 1BBA-1	REFUELING CANAL, HEAD, VESSEL, INTERNALS, AND PLENUM	T/O 10/15/81 AND 12/01/81 *					
1 (11/80)	Reactor vessel anchor stud fracture Option 1	Option 1 (Installation of lateral supports) is being pursued as the remedial action for both Units 1 and 2. B&W and Bechtel are analyzing the new supporting system to relax the gap.	-17	a. (8/81) Unit 2			
				1) (11/81) Determine seal plate elevation for Zack to reinstall HVAC	Const LED	07/22/81	11/03/81 11/21/81F
			-17	2) (9/81) Reinstall HVAC	Const LED	07/22/81	11/04/81 11/23/81F
			-17	3) (10/81) Weld out HVAC supports	Const LED	08/17/81	11/16/81 12/07/81F
			-17	4) (8/81) Hook up flex connection; leak test	Const LED	08/25/81	11/04/81 12/21/81F
			-17	5) (10/81) Install B&W trolley hoist on monorail	Const LED	08/26/81	12/11/81 12/23/81F
			Potential Critical	6) (10/81) Remove hold on yokes (Ref: BEBC-5520)	Engr Mech JC	Later	10/23/81 10/29/81F
				b. (10/81) Unit 1			
			-14	1) (10/81) Fabricate HVAC fan supports	Const LED	07/16/81	10/23/81 10/30/81A
			-14	2) (10/81) Install HVAC fan supports	Const LED	08/06/81	11/13/81 11/13/81F
			-14	3) (10/81) Set fans	Const LED	08/13/81	11/20/81 11/20/81F

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MIDLAND UNITS 1 and 2
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CRITICAL ITEMS ACTION REPORT

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SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for action Completion	
						Schedule Requirement	Forecast/ Actual
1 and 2SCA	NNI INSTRUMENTATION	T/O 10/01/81					
1 (8/81)	Pressurizer heaters	Control systems requested an FCP from B&W for nonnuclear instrumentation (NNI) changes. The review of FCP 12-57A was completed 11/26/81.	-15	a. (8/81) Coordinate review of FCP 12-57A	Engr Nuc JAC	07/14/81	12/04/81 10/26/81A
			-15	b. (8/81) Modify NNI cabinet for FCA 12-57A (Ref BCCC-5819)	B&W	08/19/81	01/13/82 12/09/81F
2 (8/81)	Overpressure protection at lower temperature	The critical activities are B&W's incorporation of Bechtel comments and the final issue of FCA 12-108.	-10	a. (9/81) Modify NNI cabinets to delete PORV control	B&W	08/19/81	10/30/81 10/30/81F
2BHA	CORE FLOOD SYSTEM	T/O 03/01/82					
1 (7/81)	Core flood tank depressurization	Purchase order has been placed and vendor information has been received.	-13	a. (9/81) Fabricate and ship 8 solenoid valves	Proc BMC	01/14/82	04/20/82 04/20/82F
2BIA	PLANT COMPUTER	BCP COMPLETION 2/15/82					
1 (5/81)	Plant computer replacement and floor modification	A hold has been placed on new cable installation beneath the floor. Construction has removed existing cables; electrical has completed layouts to determine minimum space requirements for cable; and mechanical has determined minimum space requirements above the cables for a plenum.	-8	a. (11/81) Software acceptance test, Phase II Part I	CPCo	11/04/81	01/04/82 01/04/82F
			-8	b. (11/81) Phase II front-end programming computer	CPCo	11/04/81	01/04/82 01/04/82F
1 and 2ECA	CCW SYSTEM	T/O 12/15/81 ✱					
1 (12/80)	CCW system	A project production schedule has been developed. Engineering is proceeding with small pipe and hanger design, and large pipe stress analysis and hanger design. Large pipe support design status for containment Units 1 and 2: 80 complete (Bechtel) 73 complete (CAI) 7 F/C 11/16/81 (CAI)	-6	a. (12/80) Issue design for large pipe supports in containment Units 1 and 2	Engr PD RT	10/05/81	11/01/81 11/16/81F
			-6	b. (8/81) Complete erection of first two CCW surge tanks [P.O. 7220-M-233(Q)]	Const LED		
				1) Tank 2T173B		11/17/81	12/15/81 12/23/81F
				2) Tank 1T173A		12/11/81	01/08/82 01/22/82F
			-6	c. (8/81) Complete erection of last two CCW surge tanks [P.O. 7220-M-233(Q)]	Const LED		

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MIDLAND UNITS 1 and 2
JOB NO 7220

CRITICAL ITEMS ACTION REPORT

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SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion	
						Schedule Requirement	Forecast/ Actual
				1) Tank 1T173B		01/01/82	01/29/82 02/12/82F
				2) Tank 2T173A		01/22/82	02/19/82 03/05/82F
ODAA	CIRCULATING WAT R SUPPLY	T/O 4/1/82					
1 (9/81)	Modifications to circulating water structure wall fix	Model testing indicates the need to increase the clearance between the pumps and back wall of the structure.	-3	a. (9/81) Decision on design concept	Engr Civil SS	10/02/81	10/23/81 11/10/81A
OSOB	HAZARDOUS GAS MONITORING SYSTEM	T/O 11/12/82					
1 (9/81)	Hazardous gas monitors on P.O. 7220-J-281	Bendix is continuing to work on P.O. 7220-J-281 but does not appear to be expending any effort to recover the 9-10 weeks already lost. No additional effort is expected until the claim is resolved.	Potential Critical	a. (9/81) Charge electrical supply for UPS			
				1. Get quotation from vendor	Proc RHC	Later	09/30/81 11/30/81F
				2. Evaluate proposal	Engr CS JMA	Later	10/15/81 12/12/81F
				b. (9/81) Final delivery software completion	Proc RHC	Later	04/01/82 04/01/82F
				c. (9/81) Complete qualification testing	Proc RHC	Later	07/15/82 07/15/82F
				d. (9/81) Resolve claim			
				1) Make recommendation to client	Proc RHC	Later	09/30/81 11/02/81A
				2) Make counteroffer to vendor and negotiate	Proc RHC	Later	10/15/81 11/02/81F

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MIDLAND UNITS 1 and 2
JOB NO 7220

MWEHHEK
(SYSTEMS)

CRITICAL ITEMS ACTION REPORT

DATE ISSUED 11/12/81

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion: Schedule Requirement	Date for Action Completion: Forecast/Actual
28BC	REACTOR COOLANT PUMPS AND AUXILIARIES	T/O 12/01/81 *					
28CA	DECAY HEAT REMOVAL	T/O 12/01/81 *					
1 (10/81)	Electrical cable	These are shortages of particular cable types. The most critical need of 9,945 feet [illegible] on P.O. 7220-E-26, Rev 9, was air freighted to the jobsite 10/16/81. The hold by project quality engineering on P.O. 7220-E-21, Rev 10, was released 11/11/81. [Ref: IOM (Com 046294)]. Note: Forecast dates shown are for the start of deliveries.	Indeterminate	a. (10/81) Expedite the outstanding shipments of electrical cable on the following P.O.s:	Proc / RHC		
				1) 7220-E-21		Later	Later 12/15/81F
				2) 7220-E-22		Later	10/30/81 11/30/81F
				3) 7220-E-26 (8-31 cables)		Later	11/15/81 11/20/81F
				4) 7220-E-60		Later	Later 12/11/81F

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MIDLAND PLANT UNITS 1 AND 2

CRITICAL ITEMS ACTION REPORT

(MULTI-SYSTEMS SECTION)

NOVEMBER
MULTI-SYSTEMS

CRITICAL ITEMS ACTION REPORT

MIDLAND UNITS 1 and 2
JOB NO 7220

DATE ISSUED 11/12/81
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SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion	
						Schedule Requirement	Forecast/ Actual
40(5/80)	Completion of the FSAR review and issuance of the Safety Evaluation Report (SER) by the NRC	The amount of delay is dependent on the resumption of systematic review, completion of review, SER issuance, duration of ACRS meeting and duration of hearing process. Presently, the potential delay is 5 to 10 months based on the NRC-scheduled SER date of 5/82. The NRC considers that a 5/82 SER issue will support a 7/83 operating license issue.	Indeterminate	a. (4/81) Issue SER by 12/81	CPCo (NRC)	12/81	5/82 5/82F
34(4/80)	High-energy line break analysis (HELBA) and MCAR 40 (pipe whip restraints)	Reanalysis of systems for HELBA has begun, incorporating redesign and rerouting since the initial analysis in 1976. Reanalysis of pipe supports with transient thrust forces, utilizing time history curves, must be performed because the earlier analysis used steady-state thrust forces. The transient thrust forces may be significantly greater than steady-state thrust forces. Engineering is to recommend if the office or field should procure material for pipe restraints.	Potential Critical	a. (7/81) MCAR 40			
				1) Phase II - Time-history analysis on hold by NUC chief	Engr Civil SS	02/01/81 through 12/01/81	02/01/81 (A) through Later 12/15/81F
				2) Phase III - Restraint design	Engr Civil SS	07/01/81 through 07/01/82	07/19/81 (A) through 07/01/82 07/01/82F
				b. (7/81) HELBA			
				1) Stress design input	Engr PD RT	06/27/80 through 10/15/81	06/27/80 (A) through 10/15/81 11/25/81F
				2) Nuclear design input	Engr Nuc JAC	09/02/80 through 01/15/82	09/02/80 (A) through 07/15/82 07/15/82F
				3) Restraint and barrier design	Engr Civil SS	07/15/81 through 07/15/82	07/15/81 (A) through 07/15/82 07/15/82F

S/740

CRITICAL ITEMS ACTION REPORT

MIDLAND UNITS 1 and 2
JOB NO. 7220

DATE ISSUED 11/12/81
SHEET 10 OF 16

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion	
						Schedule Requirement	Forecast/ Actual
				4) (9/81) Revise and issue schedule for release of restraint and barrier design to construction. All NSSS and whip restraints on hold. (See BEBC-5415 and 5479.)	Engr Civil SS	Later	10/09/81 11/22/81F
				c. (7/81) Provide quantity information and typicals to the field to facilitate material ordering	Engr Civil SS	08/27/81	12/01/81 11/20/81F
59(4/81)	Seismic Reanalysis	Seismic schedule has been issued. Seismic reanalysis of all major structures is in process. New response spectra are scheduled to be available for comparison with original spectra by mid 1981 for most structures. Issue of spectra for the diesel generator building is complete.	Potential Critical	a. (4/81) Complete seismic reanalysis of structures and issues spectra	Engr Civil SS		
				1) Auxiliary Building			
				a) Piping Spectra		Later	Later 11/13/81A
				b) Other Spectra		Later	Later 11/27/81F
				2) Service Water Pump Structure			
				a) Piping Spectra		Later	Later 11/27/81F
				b) Other Spectra		Later	Later 12/04/81F
				3) Containment Building 2			
				a) Piping Spectra		Later	Later 12/15/81
				b) Other Spectra		Later	Later 12/31/81
				b. (4/81) Compare new seismic response spectra with old spectra for Seismic Category I equipment	Engr Civil SS	03/15/82	03/15/82 03/15/82F

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MULTI-SYSTEMS

MIDLAND UNITS 1 and 2
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CRITICAL ITEMS ACTION REPORT

DATE ISSUED 11/12/81
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SYSTEM ITEM NO	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion	
						Schedule Requirement	Forecast/ Actual
21(11/79)	Tectonic provinces - seismic design criteria	The NRC issued a letter on 10/14/80 on seismological input for the Midland jobsite proposing two bases for developing site-specific response spectra 1) Standardized response spectra based on Regulatory Guide 1.60 or, 2) site-specific spectra from time history information on 5.3 ( )0.5 M_{blg} at the top of the fill. The CPCo consultant has reviewed the NRC letter and has finalized the site-specific spectra based on the latter method. A meeting between CPCo/CPCo consultant/Bechtel and the NRC was held to address the NRC letter and the spectra developed by the consultant to establish a seismic base.	Indeterminate	a. (11/80) Develop an agreeable site-specific spectra for Midland plant	CPCo/ NRC	Later	11/01/81 10/15/81A
				b. (12/80) Develop a plan for completing the reanalysis based on the site-specific spectra agreed upon in the meeting with the NRC	CPCo	Later	Later 04/82F
38 (5/80)	Anchor bolts (NRC Bulletin 79-02 and MCAR 31)	Bulletin 7902 requires further inspection of the anchor bolts to ensure compliance. MCAR 31 addresses other problems with anchor bolts. Development of instructions, specifications, and/or inspections is underway. Relaxation tests indicate a preload less than allowable bolt load.	Potential Critical	a. (11/80) TSA for relaxation test of steel anchors (7220-C-115) and torque tension relaxation (7220-C-116)			
				1) Torque tension test preliminary report	Engr Civil SS	Later	10/30/81 11/06/81A
				2) Relaxation testing vendor preliminary report	Engr Civil SS	Later	11/15/81 11/15/81
				3) Issue draft report	Engr Civil SS	Later	11/30/81 11/30/81F
				4) Issue final torque and tension report	Engr Civil SS	Later	01/01/82 01/01/82F

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MULTI-SYSTEMS

DATE ISSUED 11/12/81

SHEET 12 OF 16

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion: Schedule Requirement	Forecast/Actual
55 (4/81)	Motor-operated valves (Limitorque) MCAR 46	Terminals are underrated (Reference NCR 3246). Vendor drawing do not match valve wiring as supplied. Terminal board motor power leads not supplied. Reference 101, L.H. Curtis to B.C. Ash 03/31/81 (File M120Q, M132Q).	Potential Critical	a. (4/81) Procure terminal board for motor power leads	Proc / RMC	Later	Later
				b. (9/81) Limitorque complete environmental qualification of Marathon 300 terminal blocks	Proc / RMC	Later	10/30/81A
				c. (9/81) Limitorque complete inspection of M-132 valves for non-Marathon 300 terminal blocks	Proc / RMC	Later	Later
				d. (9/81) Limitorque complete replacing all M-132 non-Marathon 300 terminal block	Proc / RMC	Later	Later
				e. (9/81) Resolve Westinghouse M-123A environmental qualification	Proc / RMC	Later	Later
58(4/81)	Construction Restraints	The items on the construction restraint list have been categorized and compiled to be an indicator of the types and magnitudes of restraints that by themselves are not always critical, but when added together are preventing the sequential installation of materials to support system turnover.	Potential Critical	a. (7/81) Increased attention to and resolution of items on the construction restraint list with specific attention to priority items	Project Team		Ongoing

Category	10/12/81	11/02/81
Blockwalls	2	2
Material Delivery and Subcontract Award	40	35
Instrumentation	2	6
Elect Equip and Raceway Design	18	18
Large Pipe and Hgr Design	51	32

MIDLAND UNITS 1 and 2
JOB NO. 7220

MULTI-SYSTEMS

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DATE ISSUED 11/12/81

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion	
						Schedule Requirement	Forecast/ Actual
		Category 10/12/81 11/02/81 Civil Design 18 29 HVAC Design 27 12 S. Pipe and Instr Design 107 35 Pipe Des. to Meet Hydros 7 3 Open NCRs 5 7 Total 272 225					
62 (5/81)	End routings of cables	Construction is currently experiencing a significant number of cable routings that do not allow termination into equipment at the proper location, causing cable congestion within the equipment.	Potential Critical	a. (5/81) Review final routing of cables into equipment (i.e., motor control center, control panels), and re-route to accommodate terminations	Engr Elec BPE	Later	10/07/81 10/29/81A
68(9/81)	Radiation Monitoring System	Schedule impact may result from redesign, fabrication, and assembly of electronic modules (Victoreen P.O. 7220-J-244). The estimated potential schedule delay could extend delivery by 3 to 4 months. a) Computers (2) Assembled and operational b) Airborne Monitors (15) Initial assembly (05/04/81) (11) Redesign c) Class 1E monitors (16) Ordering parts for area monitors (1E) (18) Redesign airborne monitors	Potential Critical	a. (10/81) Management level meeting to be held with Victoreen to firm up schedule b. (9/81) Submit engineering data to Bechtel engineering for both mini-computers c. (9/81) Submit engineering data to Bechtel engineering for all 26 monitors	Proc BMC Proc BMC Proc BMC	Later Later Later	11/02/81 11/02/81 11/13/81 12/30/81F 11/15/81 02/01/82F

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MIDLAND UNITS 1 and 2
JOB NO 7220

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DATE ISSUED 11/12/81

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion: Schedule Requirement	Date for Action Completion: Forecast/Actual
		d) Liquid Monitors (18) Final assembly (4) Redesign		d. (9/81) Submit test procedure and submit redesign drawings	Proc / RHC	Later	10/15/81 12/01/81F
		e) Safety-related ... cabinets (SRDCs) (2) Ordering parts pertaining to subassembly II. Meetings with the vendor are continuing on a weekly basis.		e. (9/81) Submit engineering data to Bechtel engineering for both SRDCs	Proc / RHC	Later	11/15/81 02/01/82F
		f) Cable 7500' 5400' procurement		f. (9/81) Receive cable from supplier (Boston Insulated Wire)	Proc / RHC	Later	02/28/82 02/28/82F
		g) Partially qualified airborne monitors (2) Design		g. (9/81) Submit engineering data to Bechtel engineering for both monitors	Proc / RHC	Later	Later 02/15/82F
		h) Qualification report (1) Partially developed		h. (9/81) Resubmit procedure addressing comments; fabricate and deliver hardware to Wyle	Proc / RHC	Later	Later 11/30/81F
				i. (9/81) Final shipment of all of the above	Proc / RHC	Later	04/30/82 07/30/82F
				j. (9/81) Complete qualification testing program	Proc / RHC	Later	07/30/82 Later
66 (6/81)	Unqualified wiring in motor control centers (MCCs) and switchgear	Wire is being qualified by the vendor. Electrical is to review drawings, and this item will be resolved upon electrical's concurrence.	Potential Critical	a. (6/81) Vendor to complete qualification testing and submit qualification report for MCC wiring (P.O. 7220-E-7)	Proc / RHC	Later	10/05/81 10/23/81A
				b. (6/81) Replace any unqualified MCC wiring	Const / LED	Later	Later Later
				c. (10/81) Resolve NCR M-01-9-1-119 (issued 9/30/81) on field-installed wire in switchgear	Engr Elec / PK	Later	Later 11/30/81F

MIDLAND UNITS 1 and 2
JOB NO. 7220

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DATE ISSUED 11/12/81
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SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion	
						Scheduled Requirement	Forecast/ Actual
67 (9/81)	HVAC instrumentation specification	Current revision of specification M-20-M-380 and M-381 is incomplete for design. (Reference BCRE-3774RQ-and TVK dated 09/0 /81) Will impact T/O of selected HVAC systems	Potential Critical	a. (9/81) Revise Specifications for HVAC Instrumentation	Engr Mech TCB		
				1) 7220-M-380		Later	10/25/81 11/18/81F
				2) 7220-M-381		Later	10/25/81 11/30/81F
73 (11/81)	SA-36 bolting materials in ASME Pipe Support	The field has installed SA-36 bolting material in accordance with the design drawings. Project engineering has notified the field that SA-36 is not acceptable for ASME pipe supports. It was agreed that project engineering would pursue a code case to allow use of SA-36 bolting in ASME supports. Presently, no action is being taken by the field	Potential Critical	a. (11/81) Submit inquiry to ASME Code Committee for code case	Engr Mech TCB	Later	Later 12/01/81F
				b. (11/81) Acceptance of code case for bolting material	Engr Mech TCB	Later	3/82 3/82F
69 (11/81)	Field's bolting position paper (BCRE-3142)	This item concerns classification of bolting material with regard to ASME III Subsection NF pipe supports. It was agreed in the meeting that bolting material for ASME pipe supports is a component standard support.	Potential Critical	a. (11/81) Respond to letter BCRE-3142 specifically addressing the agreement, and to the field's position on civil grout bolts	Engr Mech TCB	Later	12/01/81 12/01/81F
70 (11/81)	Fabrication tolerances for clamps and pads	Tolerance criteria is needed, other than those given in draft Specification 7220-M-366, for fabrication of clamps and anchor pads for pipe supports.	Potential Critical	a. (11/81) Issue additional tolerance information (FCR-M-3040)	Engr Mech TCB	Later	Later
71 (11/81)	Threaded load bolts (BCRE-3537 R)	It was agreed that the load bearing part of the shank will not be considered a problem, but that clarification would be obtained by engineering and the support vendors.	Potential Critical	a. (11/81) Respond to letter and provide standard form letter for use in obtaining clarification from the field's component standard support vendors	Engr Mech TCB	Later	11/15/81 11/15/81F
				b. (11/81) Clarification is also needed from ITT Grinnell	Engr Mech TCB	Later	12/01/81 12/01/81F

MIDLAND UNITS 1 and 2
JOB NO 7220

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MULTI-SYSTEMS
CRITICAL ITEMS ACTION REPORT

DATE ISSUED 11/12/81

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SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion	
						Schedule Requirement	Forecast/ Actual
72 (11/81)	Substitution of component standard supports, manufactured by companies other than ITT Grinnell, in Class 1 pipe supports.	The field has purchased CSS from several manufacturers, after which project engineering notified the field that CSS manufactured by ITT Grinnell could be used in Class 1 pipe supports. It was agreed that the field could substitute component standard supports in Class 1 pipe supports and project engineering would make allowances for this in revised stress reports.	Potential Critical	a. (11/81) Incorporate data regarding various manufacturers' items into Class 1 stress reports	Engr PD RFT	Later	01/04/82 01/04/82?

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ATTACHMENT TO NOVEMBER 1981

CRITICAL ITEMS ACTION REPORT

CURRENT SCHEDULE ANALYSIS

MIDLAND PLANT UNITS 1 AND 2
BECHTEL JOB 7220

5749

CURRENT SCHEDULE ANALYSIS
OF
CRITICAL ITEMS

Schedule evaluation reflects the potential schedule impact on system completion and turnovers or other major milestones.

MLLA[4]/ Problem Areas	Description	Schedule Impact November 1981 Current Update[3] Status (wk) Early	Late	Schedule Impact October 1981 Current Update[2] Status (wk) Early	Late
6	Fire protection system		40		31
6A	Fire protection safe shutdown		32		38
___[1]	Reactor coolant pump hydraulic snubbers (Unit 1) (PPS-007)		26		26
___[1]	Reactor coolant pump hydraulic snubbers (Unit 2) (PPS-007)		24		33
65G	Cold shutdown - DHR system upgrade Decay heat removal		21		21
___[1]	Plant security (PPS-004)		20		7
204	PORV and safety valve position indication - refueling canal		19		19
___[1]	Fuel pool turnover (Unit 2) (To 2BBA-1)		17		
59A	HVAC-ART-ASP Room Safety-Related Rooms Unit Coolers		16		16
___[1]	Fuel pool turnover (Unit 1) (To 1BBA-1)		14		15
446	Class I pipe analysis in containment reactor anchor stud failure (Fuel load)		12		12
61	Boron dilution transients		10	2	
65A	Cold shutdown - MAD valves (upgrade and add)		9		2

Current Schedule Analysis of
Critical Items (continued)

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MLLA(4)/ Problem Areas	Description	Schedule Impact November 1981 Current Update(3) Status (wk) Early	Late	Schedule Impact October 1981 Current Update(2) Status (wk) Early	Late
2300	Plant computer replacement		8		2
19	Post-accident monitoring Safety Parameter Display Console Neutron Detector		8	12	21
59(86)	ATWS - provide ARTS		8		4
65C	Cold shutdown - miniboration		7		7
___	Component cooling water		6		4
306	Plant status indication		4		5
69	Small-break LOCA Emergency core cooling		3		3
65F	Cold shutdown - emergency power to block valves		3		3

(1) Items which are not in Project/2 system
(2) Status through 10/23/81
(3) Status through 9/25/81
(4) Master List of Licensing Activities
(5) Evaluation based on Bechtel's best judgement

ATTACHMENT 9

5751

Bechtel Power Corporation

777 East Eisenhower Parkway
Ann Arbor, Michigan
Mail Address P.O. Box 1000, Ann Arbor, Michigan 48106

653133

December 21, 1981

0482.4

cc ARM WRB RCB FJS GSK RAW JBP WEI CHRON

BLC-12102

Consumers Power Company
1945 West Parnall Road
Jackson, Michigan 49201

Attention: Mr. J.W. Cook
Vice President
Projects, Engineering and Construction

Subject: Midland Plant Units 1 and 2
Consumers Power Company
Bechtel Job 7220
December Critical
Items Action Report

Attached for your information is the December issue of the Critical Items Action Report.

Very truly yours,

for John A. Rutgers
Project Manager

JAR/DJF/db

Attachments: 1. Critical Items Action Report
2. Current Schedule Analysis

cc: ... Miller w/a
A.R. Mollenkopf w/a

DEC 2 1981

Written Response Requested: No

5752

DECEMBER 1981

MIDLAND PLANT UNITS 1 AND 2

CRITICAL ITEMS ACTION REPORT

(SYSTEMS SECTION)

CRITICAL ITEMS ACTION REPORT

Table of Contents - Systems Section

NOTE. System OEGA is not covered in Critical Items Action Report but is being reviewed by completion working group.

✸ Key Startup Systems

DELETABLE

CRITICAL ITEMS ACTION REPORT

SYSTEMS

MIDLAND UNITS 1 and 2
JOB NO. 7220

DATE ISSUED 12/10/81
SHEET 1 OF 20

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion	
						Schedule Requirement	Forecast/ Actual
1&2ABB	MAIN STEAM ISOLATION	T/O Unit 2 - 9/1/82 ✸ Unit 1 - 9/1/82					
		Constr. T/C Completion Date NA CWC T/C Completion Date NA					
1 (12/81)	Replace control panels and modify actuators for the main steam isolation valves	Engineering is reviewing with the vendor the new requirements (IEEE Std 323-1974 and NUREG 0588) for new panels and modification to the actuators.	Unit 2 -75 weeks Unit 1 -70 weeks	a. (12/81) Develop technical specification to request quotes	Engr Mech TGB	08/06/80	12/31/81 12/31/81F
			Unit 2 -75 weeks Unit 1 -70 weeks	b. (12/81) Review and issue revision to P.O. 7220-M-118A. (ANF No. 001, BWS No. M-40228)	Engr Mech TGB	05/01/82	11/15/83 11/15/83F
2BBC	REACTOR COOLANT PUMPS	T/O 12/01/81 ✸					
		Constr. T/C Completion Date NA CWC T/C Completion Date 08/24/82					
1 (7/79)	Hydraulic snubbers	All snubbers have been received at the jobsite. Approximately 4,500 lin ft of tubing and associated hangers will be required. This may cause delays in construction completion of the RCP/ steam generator cubicles.	-38	a. (8/81) Complete stress and hanger design for tubing design (Unit 1 forecasted for 12/08/81)	Engr S.Pipe DR	01/19/81	03/01/82 01/08/82F
				b. (11/81) Complete permanent reservoirs	Const LED		
			-25	Unit 2		12/22/81	06/15/82 06/15/82F
				Unit 1			07/15/82 07/15/82F
				c. (9/81) Complete tubing and hanger installation	Const LED		
			-49	Unit 2		09/19/81	09/01/82 09/01/82F
				Unit 1			10/01/82 10/01/82F
			-38	d. (11/81) Resolve all items on snubbers status log	Engr Civil SS	07/23/81	04/15/82 04/15/82F

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✸Key Startup Systems

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CRITICAL ITEMS ACTION REPORT

SYSTEMS

MIDLAND UNITS 1 and 2
JOB NO 7220

DATE ISSUED 12/10/81
SHEET 2 OF 20

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion: Schedule Requirement	Date for Action Completion: Forecast/ Actual
				e. (11/81) Decision on work-around: Is the tubing and reservoir installation required for system turn-over?	CWG JM	Later	Later Later
2EAE	TURBINE BUILDING SERVICE WATER	T/O 10/01/81 ✸					
		Constr. F/C Completion Date NA CWG F/C Completion Date 01/30/82					
1 (12/81)	Turbine building service water	Vendor is to provide two quotes - one for normal delivery and the other for an expedited delivery.		a. (12/81) Receive vendor quotes on rotometer	Proc RMC	Later	12/[illegible]/81 12/14/81F
				b. (12/81) Award purchase order	Proc RMC	Later	12/28/81 12/28/81F
			-43	c. (12/81) Fabricate and deliver rotometer (AMP No. 062)	Proc RMC	07/01/81	04/01/82 05/01/82F
2SAA	ECCAS SYSTEM	T/O 12/01/81 ✸					
		Constr. F/C Completion Date NA CWG F/C Completion Date NA					
1 (5/80)	Core flood system bistables	Fabrication and shipping of the bistables forms the critical path for this issue.	-38	a. (5/81) Fabricate and ship bistables (RWS No. B-90004X)	B&W	08/27/81	05/28/82 05/28/82F
2BNA	BORATED WATER STORAGE	T/O 11/01/81 ✸					
		Constr. F/C Completion Date NA CWG F/C Completion Date NA					
1 (5/80)	MELA 06 - Fire protection - safe shutdown	Issue of DCPs and procurement of the transfer switch panel are the critical activities.	-37	a. (11/81) Issue system DCPs	Engr CS JMA	08/14/81	04/30/82 04/30/82F
			-36	b. (5/80) Fabricate and ship transfer switch panel 1C and 2C 468	Proc RMC	08/06/81	04/30/82 04/15/82F
2 (12/81)	HPI supply valves		-17	a. (12/81) Analyze HPI supply valves for fire protection and issue 7220-E-248 (AMP No. 010, E-10247B)	Engr Elec BPK	08/01/81	01/01/82 11/30/81A

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CRITICAL ITEMS ACTION REPORT

SYSTEMS

DATE ISSUED 11/10/81
SHEET 3 OF 20

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion	
						Schedule Requirement	Forecast/ Actual
			-17	b. (12/81) Analyze MPI supply valves for fire protection and issue 7220-E-248 (AMP No. 011)	Engr Elec EPX	08/01/81	01/01/82 12/01/81A
ORGC	PLANT ACCESS AND MONITORING SECURITY SYSTEM	[illegible] 03/82 *					
		[illegible] P/C Comple[illegible] Da NA ORG F/C Completion Da NA					
1 (8/81)	Plant access and monitoring security system			a. (12/81) Issue material requisition for A-17A, A-17B, and A-8-A so that Ann Arbor purchase orders can be issued to replace field purchase orders	Engr Arch MH	Later	12/24/81 12/24/81P
				b. (8/81) Expedite delivery of missile and pressure resistant doors (AAO P.O.) (RWS No. A-30007)	Proc RMC		
		WT Doors A-17B (Wooley) Design calculations returned Code 4 on 11/17/81, to be resubmitted 12/11/81. All material is to be available by 11/31/82. Doors 4, 20, and 28 are to be shipped 3/26/82, and doors 79, 82, 113, and 114 will be shipped 5/7/82. Doors 130, 137, 168, and 184 are to be shipped 6/4/82. Bechtel procurement management and expediting will meet with Wooley, which is scheduled for 12/15/81 to discuss ways to accelerate deliveries to meet turnover priorities.	-34	1) WT doors F-48910 (Wooley)		10/81	12/81 06/04/82P

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JOB NO. 7220

DECEMBER

CRITICAL ITEMS ACTION REPORT

SYSTEMS

DATE ISSUED 12/10/81

SHEET 4 OF 20

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Encrcvd)	ACTION BY	Date for Action Completion	
						Schedule Requirement	Forecast/ Actual
		WT Doors A-17-A (Mock) A partial submittal of drawings were received on 12/07/81. Calculations were received on 12/07/81. Project procurement and engineering met with Mock on 11/3/81 and obtained its commitment to expedite system turnover priorities. Mock committed to a schedule improvement of 2 weeks.	-28	2) WT doors F-46366 (Mock)		12/81	02/82 06/15/82F
		AT Doors A-8-A (Overly) Drawings and calculations returned Codes 2 and 3 on 11/12/81. Material lead time is 6 to 8 weeks. Delivery is scheduled for 02/15/82.	-15	3) AT doors F-45440 (Overly)		10/81	12/81 02/15/82F
		Missile and Pressure Resistant Doors A-66 (Overly) These doors are in the bid stages. Tentative delivery was quoted as 12 to 14 weeks AHAD. A telex award was made on 11/30/81; however, a formal purchase order cannot be issued until the material requisition is received from engineering.		4) Missile and pressure resistant doors (Overly A-66) a) Release material requisition for purchase b) Fabricate and deliver missile and pressure resistant doors	Engr Arch MH Proc RMC	Later Later	12/24/81 12/24/81F 12/81 04/30/82F
OBI.A	PRIMARY WATER STORAGE AND TRANSFER	T/O 10/01/81 ✱ Constr. F/C Completion Date : NA CWC F/C Completion Date NA					
1 (10/81)		MCAR 53 indicates a voltage potentially below the limits for proper operations due to long control cables.	-33	a. (11/81) Issue IDCN/DCP to revise Schematic 7220-E-487 for under voltage (MCAR 53) (AMP No. 064, RWS No. E-11524A)	Engr Elec BPK	06/01/81	02/15/82 01/15/82F

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MIDLAND UNITS 1 and 2
JOB NO. 7220

CRITICAL ITEMS ACTION REPORT

SYSTEMS

DATE ISSUED 12/10/81

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion	
						Schedule Requirement	Forecast/ Actual
2(10/81)		A reinforcing wall is being added around the ring foundation for primary water storage tank OT-54 to resolve the problem of cracking in foundation. Construction is currently drilling and grouting.	-19	a. (10/81) Revise isometric drawings for pipe modifications required for civil fix to primary water storage tank (OT-54 foundation) (AMP No. 053, RWS No. D-10504)	Engr PD RFT	07/01/81	11/13/81 11/19/81A
		Items a and b are scoped under system 08L8 but retain T/O of 08LA.	-21	b. (10/81) Redesign 5 hangers (AMP No. 054, RWS No. D-32504)	Engr PD RFT	07/01/81	12/11/81 12/11/81F
				c. (10/81) Place forms and add reinforcing wall around ring foundation	Const LED	Later	10/20/81 12/20/81F
28CA	DECAY HEAT REMOVAL	T/O 12/01/81 *					
		Constr. F/C Completion Date NA CWC F/C Completion Date NA					
1 (12/81)	Electrical cable	Expediting efforts continue for the solenoid valves, local control stations, and pressure relief valves.	-30	a. (12/81) Add cables to connection lists 2AB5515D, E, & F; 2BB5616D, E, F, 2BB5616D, E, & F; 2AB5516D E, & F; and panels 2C04, & 2C30/31 (AMP No. 080, RWS No. E-10257D)	Engr Elec BPK	09/01/81	04/01/82 04/01/82F
		These are shortages of particular cable types. The most critical need of 9,945 feet of Item 7 on P.O. 7220-E-26, Rev 9, was air freighted to the jobsite 10/16/81. The hold by project quality engineering on P.O. 7220-E-21, Rev 10, was released 11/11/81. [Ref: IOM (Com 046294)].	Indeterminate	b. (10/81) Expedite the outstanding shipments of electrical cable on the following P.O.s:	Proc RMC	Later	Later Later
		Note: Forecast dates shown are for the start of deliveries.					

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SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion: Schedule Requirement	Forecast Actual
		1) 7220-E-21 Approximately 8,000 linear feet were shipped as of 11/25/81. The remaining 2,000 linear feet will be shipped 12/2?/81		1) 7220-E-21		Later	12/15/81 12/21/81F
		2) 7220-E-22 16,000 linear feet are to be shipped.		2) 7220-E-22		Later	10/30/81 12/28/81F
		3) 7220-E-31 cables 68,000 linear feet were shipped as of 11/23/81. Approximately 50,000 linear feet will be shipped by 12/21/81, and the balance by the end of 1/82.		3) 7220-E-26 (E-31 cables)		Later	11/15/81 01/30/82F
		4) 7220-E-60 Shipment is in process and expected to be completed by 02/26/82.		4) 7220-E-60		Later	12/11/81 02/26/82F
ORCB	PERIMETER INTRUSION DETECTION SYSTEM	T/O 06/01/82 Constr. F/C Completion Date NA CMC F/C Completion Date NA					
1 (7/80)	Perimeter intrusion detection system	Current design completions for the E-field microwave system and security fence may not support construction requirements for installation and testing prior to system turnover. Note: Item a in the action required column is not a part of the security system but is required for the turnover of the system.		a. (1/81) UFS facility HVAC procurement 1) M-156, Joy-fans ship	Proc RMC		
			-2	OVV-135		01/12/82	02/26/82 01/22/82F
			-10	OVV-136		01/12/82	02/26/82 03/26/82F
			-10	OVV-137		01/12/82	02/26/82 03/26/82F
			-28	OVV-138		01/12/82	02/26/82 07/30/82F

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DECEMBER

MIDLAND UNITS 1 and 2
JOB NO. 7220

CRITICAL ITEMS ACTION REPORT

SYSTEMS

DATE ISSUED 11/19/81
SHEET 7 OF 20

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion	
						Schedule Requirement	Forecast/ Actual
			-30	b. (8/81) Update alarm point list to depict final alarm points for entire security system			
				1) Routing	Engr Elec BPK	07/15/81	12/01/81 02/15/82F
IKE1	FUEL TRANSFER EQUIPMENT	T/O 11/26/81 ✱					
		Constr. F/C Completion Date NA CWC F/C Completion Date 03/01/82					
1 (12/81)	Fuel transfer equipment	FCA 13-124 needs to be submitted by B&W. Civil and electrical drawings, issued for construction, are needed for interface between Bechtel and B&W.	-30	a. (12/81) Issue FCA 13-124 to add cable pull system to the cart of the fuel handling system (AMP No. 023), RWS No. 8-17090 and 8-90061E)	B&W	05/26/81	10/15/81 12/18/81F
			-26	b. (12/81) Obtain engineer approval and issue implementation letter for cable pull system (RWS No. M-30192C)	Engr NUC JAC	08/26/81	03/01/82 03/01/82F
			-24	c. (12/81) Issue PCP for cable pull system FCA-13-124 (AMP No. 024, RWS No. 8-90061) (DCAR 442)	B&W	07/26/81	11/20/82 01/15/82
2BCC	MAKEUP	T/O 01/01/82 ✱					
		Constr. F/C Completion Date NA CWC F/C Completion Date 02/15/82					
1 (12/81)	Makeup	EP modules for signals to computers (FCA 094) were delivered. MMI deletions were also incorporated.	-27	a. (12/81) Deliver isolation panel for fire protection 2C468 transfer switch panel (AMP No. 128)	Proc RMC	10/01/81	04/30/82 04/08/82F
			-20	b. (12/81) Deliver local control station, P.O. 7220-E-34, Items Q-54 and Q-55 (AMP No. 038)	Proc RMC	10/01/81	02/19/82 02/19/82F

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DECEMBER

MIDLAND UNIT [illegible] 2
JOB NO. 7220

CRITICAL ITEMS ACTION REPORT

SYSTEMS

DATE ISSUED 12/10/81
SHEET 6 OF 30

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion	
						Schedule Requirement	Forecast/ Actual
2ADC	MAIN CONDENSERS AND INTERNAL	T/O 09/01/81 *					
		Constr. F/C Completion Date NA CWG F/C Completion Date NA					
1 (11/81)	Main condensers and internal		-27	a. (11/81) Resolve condenser [illegible]ment tubesheet to shell leak. Issue test specification (AMP No. 040, RWS No. 101290)	Engr Mech TGB	06/01/81	10/25/81 12/07/81A
2KEL	FUEL TRANSFER EQUIPMENT	T/O 09/23/81 *					
		Constr. F/C Completion Date NA CWG F/C Completion Date 02/15/82					
1 (12/81)	Fuel transfer equipment	Vendor Prints 7220-C-46-33-1, Sh 1-6, and C-46-1-11 require revision. Unused equipment, made obsolete by the cable pulling system, should be deleted.	-18	a. (12/81) Resolve PCA 12-133 to add cable pull system to fuel handling system (AMP No. 023, RWS No. 5-170[illegible])	B&W	06/23/81	11/01/81 10/30/81A
			-24	b. (12/81) Obtain engineer approval and issue implementation letter for cable pull system (AMP No. 025, RWS No. M-301928)	Engr Nuc JAC	06/23/81	11/30/81 12/08/81A
2APA	CONDENSATE STORAGE	T/O 09/01/81 *					
		Constr. F/C Completion Date NA CWG F/C Completion Date 02/15/82					
1 (11/81)	Condensate storage	Review of vendor prints for Q stations and issuance of the connection list are currently shown as "yes" items in AMP. CWG is reviewing these prints to determine if there is a workaround. Large pipe hanger/anchor design is affecting hydrostatic system AP-CT-142.	-24	a. (11/81) Prepare and issue connection list cables (AMP No. 016, RWS No. 10478D)	Engr Elec BPK	06/01/81	01/01/82 11/15/81A

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MIDLAND UNITS 1 and 2
JOB NO. 7220

DECEMBER

CRITICAL ITEMS ACTION REPORT

SYSTEMS

DATE ISSUED 12/10/81
SHEET 9 OF 20

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion: Schedule Requirement	Date for Action Completion: Forecast/Actual
1APA	CONDENSATE STORAGE	T/O 09/01/81 ✱					
		Constr. F/C Completion Date NA CWG F/C Completion Date 02/15/82					
1 (12/81)	Condensate storage	Plant design has provided Specification 7220-P-1295 and manpower to assist in stress walkdown of hangers.	-21	a. (12/81) Review vendor prints for Q stations (AMP No. 025, RWS No. E-50058)	Engr Elec BPK	06/01/81	02/22/82 10/28/81A
1SAB	EMERGENCY SAFETY FEATURES ACTUATION	T/O 01/01/82 ✱					
		Constr. F/C Completion Date NA CWG F/C Completion Date 01/01/82					
1 (12/81)	Emergency safety features actuation	Deliver of pressure transmitter is the critical activity. Temporary transmitters, Model 1151, are onsite.	-21	a. (12/81) Deliver pressure transmitter J-245, Item 3.1 (AMP No. 026)	Proc RMC	10/01/81	05/28/82 02/26/82F
0RGD	SECURITY SYSTEM CONSOLES AND COMPUTERS	T/O 02/08/82 ✱					
		Constr. F/C Completion Date NA CWG F/C Completion Date NA					
1 (8/81)	Security system consoles and computers	Consoles are currently in fabrication at subvendor AMED and are scheduled for delivery to Sygnetron by late 4/82 (potential early shipment date of 1/82)	-20	a. (8/81) Procure and ship consoles OCAS002 and OCAS003 (A-50) (RWS No. A-40057, AMP No. 043)	Proc RMC		
				1) Fabricate and ship		12/01/81	04/15/82 04/15/82F
			-20	b. (11/81) Procure and ship metal detectors (AMP No. 037, RWS No. A-30007)	Proc RMC	11/30/81	04/20/82 04/20/82F
			-20	c. (11/81) Procure and ship explosive detectors (AMP No. 038, RWS No. A-30007)	Proc RMC	11/30/81	04/20/82 04/20/82F
			-20	d. (11/81) Procure and ship X-ray machines (AMP No. 039, RWS No. A-30007)	Proc RMC	11/30/81	04/20/82 04/20/82F

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MIDLAND UNITS 1 and 2
JOB NO. 7220

CRITICAL ITEMS ACTION REPORT

SYSTEMS

DATE ISSUED 12/10/81
SHEET 10 OF 20

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion: Schedule Requirement	Date for Action Completion: Forecast/ Actual
1 and 2EAD	AUXILIARY BUILDING SERVICE WATER	T/O 10/01/81 ✱					
		Constr. F/C Completion Date NA CWC F/C Completion Date 01/01/82					
1 (10/81)	Resolution of NCR 3246 - Subject: Terminal Strips in Motor-Operated Valves	Release of pull package by resident electrical engineering to field engineering was completed 10/06/81.	-19	a. (10/81) Resolve NCR 3246, Service Water and CCW, PCAR 46 (related to Item 55, Page 15) (AMP No. 184)	Engr Mech TGB	07/01/81	10/26/81 11/12/81A
28BA-1 18BA-1	REFUELING CANAL, HEAD, VESSEL, INTERNALS, AND PLUGS	T/O 10/15/81 AND 12/01/81					
		Constr. F/C Completion Date NA CWC F/C Completion Date 03/01/82					
1 (11/80)	Reactor vessel Anchor stud fracture Option 1	Option 1 (installation of lateral supports) is being pursued as the remedial action for both Units 1 and 2. B&W and Bechtel are analyzing the new supporting system to relax the gap.		a. (10/81) Unit 2			
			-18	1) Weld HVAC supports	Const LED	08/13/81	10/07/81 11/25/81A
			-18	2) Hook HVAC flex connections to head, leak test	Const LED	08/24/81	12/16/81 12/31/81F
			-11	3) Install trolley hoist on monorail	Const LED	08/26/81	12/22/81 11/25/81A
			-18	4) Tension/detension 6 bolts on reactor vessel head	Const LED	08/28/81	12/22/81 01/07/82F
			-14	5) Remove hold on yokes (Ref: BEBC 5597, Com.047243); hold was released 10/29/81	Engr Nuc JC	07/17/81	10/29/81 10/29/81A
			-20	6) Paint fuel handling bridges	Const LED	08/16/81	12/11/81 01/04/82F
				b. (8/81) Unit 1			
			-13	1) Need welding procedure for yoke restraints (BEBC-5741, Com 051303)	Res. Engr PC	08/21/81	11/25/81 11/20/81A

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MIDLAND UNITS 1 and 2
JOB NO. 7220

DECEMBER
CRITICAL ITEMS ACTION REPORT
SYSTEMS

DATE ISSUED 12/10/81
SHEET 11 OF 29

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion: Schedule Requirement	Date for Action Completion: Forecast/Actual
			-15	2) Weld drill and pin yoke restraints to storage arms	Const LED	08/27/81	12/15/81 12/17/81F
			- 5	3) Deliver HVAC ductwork	Const LED	08/28/81	12/07/81 12/16/81F
			- 5	4) Install HVAC	Const LED	09/28/81	01/12/82 01/19/82F
			- 5	5) Hook HVAC flex connections to head, leak test	Const LED	10/07/81	01/21/82 01/28/82F
2 (12/81)	Reactor building fuel handling bridges	The reactor building fuel handling bridges have been primed, but require an additional coating in accordance with Specification 7220-A-41(Q) and Drawing 7220-A-72(Q), Rev 12. (Ref: BEBC-552A)	-45	a. (12/81) Revise Specification 7220-A-41 and Drawing 7220-A-72 to include direction on painting bridges. (Ref: BCBE-3874)	Engr Arch MI	02/12/81	12/24/81 12/24/81F
1 AND 2EGA	CCW SYSTEM	T/O 12/15/81 ✱					
		Constr. F/C Completion Date NA CWC F/C Completion Date 03/15/82					
1 (12/80)	CCW system	A project production schedule has been developed. Engineering is proceeding with small pipe hanger design, and large pipe stress analysis and hanger design. Small pipe was issued 11/19/81.	-11	a. (12/80) Issue design for large pipe supports in containment Units 1 and 2	Engr PD RT	09/15/81	11/31/81 12/02/81A
				b. (8/81) Complete erection of first two CCW surge tanks [P.O. 7220-M-233(Q)]	Const LED		
		Large pipe support design status for containment Units 1 and 2:	-14	1) Tank 2T173B		09/15/81	12/15/81 12/23/81F
		80 complete (Bechtel) 80 complete (GCA)	-17	2) Tank 1T173A		09/26/81	01/08/82 01/22/82F

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DECEMBER

CRITICAL ITEMS ACTION REPORT

SYSTEMS

MIDLAND UNITS 1 and 2
JOB NO 7220

DATE ISSUED 12/10/81
SHEET 12 OF 20

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion	
						Schedule Requirement	Forecast/ Actual
2 ADA	CONDENSATE SUPPLY & LP FEEDWATER HEATING	T/C 12/01/81 ✱					
		Constr. F/C Completion Date NA CWI F/C Completion Date 01/31/82					
1 (12/81)	Condensate supply and P feedwater heating			a. (12/81) Ship large bore hanger material 2-639-5-19 (P.O. 7220-M-106)	Const LED	Later	Later Later
				b. (12/81) Ship instrument 2TV-3938 (P.O. 7220-M-3.1)	Const LED	Later	Later Later

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DECEMBER 1981

MIDLAND PLANT UNITS 1 AND 2

CRITICAL ITEMS ACTION REPORT

(MULTI-SYSTEMS SECTION)

DECEMBER

CRITICAL ITEMS ACTION REPORT

MULTI-SYSTEMS

MIDLAND UNITS 1 and 2
JOB NO. 7220

DATE ISSUED 12/10/81
SHEET 11 OF 20

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion	
						Schedule Requirement	Forecast/ Actual
40(5/80)	Completion of the FSAR review and issuance of the Safety Evaluation Report (SER) by the NRC	The amount of delay is dependent on the resumption of systematic review, completion of review, SER issuance, duration of ACRS meetings, and duration of hearing process. Presently, the potential delay is [illegible] to 11 months based on the NRC-scheduled SER date of 5/82. The NRC considers that a 5/82 SER issue will support a 7/83 operating license issue.	Indeterminate	a. (4/81) Issue SER by 12/81	CPCo (NRC)	12/81	5/82 5/82F
34(4/80)	High-energy line break analysis (HELBA) and MCAR 40 (pipe whip restraints)	Reanalysis of systems for HELBA has begun, incorporating redesign and rerouting since the initial analysis in 1976. Reanalysis of pipe supports with transient thrust forces, utilizing time history curves, must be performed because the earlier analysis used steady-state thrust forces. The transient thrust forces may be significantly greater than steady-state thrust forces. Engineering is to recommend if the office or field should procure material for pipe restraints. Nuclear design input is needed for completion of the Units 1 and 2 pressurizer relief valves.	Potential Critical	a. (7/81) MCAR 40			
				1) Phase II - Time-history analysis on hold by NRC chief	Engr Civil SS	02/01/81 through 12/01/81	02/01/81 (A) through Later 12/15/81F
				2) Phase III - Restraint design	Engr Civil SS	07/01/81 through 07/01/82	07/19/81 (A) through 07/01/82 07/01/82F
				b. (7/81) HELBA			
				1) Nuclear design input	Engr Nuc JAC	09/02/80 through 01/15/82	09/02/80 (A) through 07/15/82 02/01/82F
				2) Stress design input	Engr PD RT	06/27/80 through 10/15/81	06/27/80 (A) through 10/15/81 03/15/82F
				3) Restraint and barrier design	Engr Civil SS	07/15/81 through 07/15/82	07/15/81 (A) through 07/15/82 07/15/82F

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Exhibit II

DECEMBER

MIDLAND UNITS 1 and 2
JOB NO. 7220

CRITICAL ITEMS ACTION REPORT

MULTI-SYSTEMS

DATE ISSUED 12/10/81
SHEET 14 OF 20

SYSTEM ITEM NO.	DESCRIPTION	CURRENT STATUS	SCHEDULE IMPACT (Weeks)	ACTION REQUIRED (Date Entered)	ACTION BY	Date for Action Completion	
						Schedule Requirement	Forecast/ Actual
				4) (9/81) Revise and issue schedule for release of restraint and barrier design to construction. All NSSS and whip restraints on hold. (See BLBC-5415 and 5479.)	Engr Civil SS	Later	10/09/81 12/22/81F
			-13	c. (7/81) Provide quantity information and typicals to the field to facilitate material ordering	Engr Civil SS	08/27/81	12/04/81 12/01/81A
59(4/81)	Seismic reanalysis	Seismic schedule has been issued. Seismic reanalysis of all major structures is in process. New response spectra are scheduled to be available for comparison with original spectra by mid 1981 for most structures. Issue of spectra for the diesel generator building is complete.	Potential Critical	a. (4/81) Complete seismic reanalysis of structures and issues spectra	Engr Civil SS		
				1) Auxiliary Building			
				a) Piping Spectra		Later	Later 11/13/81A
				b) Other Spectra		Later	11/27/81 12/12/81F
				2) Service Water Pump Structure			
				a) Piping Spectra		Later	11/27/81 12/11/81F
				b) Other Spectra		Later	12/04/81 12/16/81F
				3) Containment Building 2			
				a) Piping Spectra		Later	12/15/81 12/22/81F
				b) Other Spectra		Later	Later 12/31/81F
				b. (4/81) Compare new seismic response spectra with old spectra for Seismic Category I equipment	Engr Civil SS	03/15/82	03/15/82 03/15/82F

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ATTACHMENT 13

Docket Nos. 50-329/330 OM, OL

L PDR
NSIC
PRC System
LB#4 Rdg
MDuncan
DHood
OELD
ACRS (16)
ELJordan, IE
JMTaylor, IE

Mr. J. W. Cook
Vice President
Consumers Power Company
1945 West Parnall Road
Jackson, Michigan 49201

Dear Mr. Cook:

Subject: Caseload Forecast Panel Estimate of Construction Completion Schedule

On April 19-21, 1983, the NRC Caseload Forecast Panel visited the Midland Plant to evaluate construction completion schedules. The meeting discussed in detail the basis for Consumer's revised estimates of October 1984 (Unit 2) and February 1985 (Unit 1). On April 20, 1983 the Panel conducted an extensive tour of both units to observe construction progress. The Panel has now completed its own evaluation of construction completion schedules for Midland Plant, Units 1 & 2.

The Panel concludes that some months beyond the second quarter of 1986 is the earliest date that completion of Unit 2 can reasonably be expected. Unit 1 is expected to be completed about 6 to 9 months thereafter. The critical pathway involves reinspection and rework of pipe supports, followed by execution of preoperational and acceptance testing.

The Panel believes that Consumer's estimate of 14 months to complete preoperational and acceptance testing for both units is unduly optimistic. The record for a recent single unit to date has been about 24 months. Using a more realistic, but slightly optimistic, duration for two units and Consumer's present status results in a completion date in the second quarter of 1986. However, the Panel also believes that Consumer's forecast does not realistically account for large uncertainties in the work which must precede start of critical path testing, and that this can be expected to add some months to Consumer's schedule. The Panel believes that completion of reinspections of large and small bore pipe hangers and the amount of rework resulting from this effort is a notable example of the items expected to delay start of critical path testing by some months.

OFFICE ▶							
SURNAME ▶							
DATE ▶							

NRC FORM 318 (10-80) NRCM 0240 OFFICIAL RECORD COPY USGPO 1981-

The Panel's estimate includes no provision for delay associated with future plant financing.

Sincerely,

Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing
Office of Nuclear Reactor Regulation

cc: See next page

OFFICE	LB#4	LB#4	RM	RIII	AD/L		
SURNAME	CHood:im	EAdensam	WLovelace	JHarrison	TMNovak		
DATE	5/ 5/83	5/ /83	5/ 5/83	5/ 5/83	5/ /83		

NRC FORM 318 (10-80) NRCM 0240 OFFICIAL RECORD COPY

ATTACHMENT 12

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SEP 1 6 1980

1980
NRC CASELOAD
F/e PANEL

SEP 22 1980
MIDLAND PROJECT

Docket Nos.: 50-329/330

APPLICANT: Consumers Power Company

FACILITY: Midland Plant, Units 1 and 2

CC: [illegible]

SUBJECT: SUMMARY OF AUGUST 25, 1980 MEETING ON LICENSING STATUS OF THE MIDLAND PLANT, UNITS 1 AND 2

On August 25, 1980 management personnel from Consumers Power Company (the applicant) and the NRC staff met in Bethesda, Maryland to review briefly the potential timing and methods for resuming the NRC's formal docket review of the Midland Plant application. This was a followup meeting to that of June 1[illegible], 1980 during which the need of preparations for resumption of the review and the need for efficiencies in the review process were recognized. The Midland OL review has been suspended since the March 28, 1979 accident at Three Mile Island, Unit 2. Meeting attendees are listed in Enclosure 1. The meeting duration was two hours.

On the basis of its latest (forecast #6) completed construction schedules which reflect changes due to TMI-2 requirements, NRC open issues and other construction matters, the applicant noted that licensing could delay the scheduled fuel load unless the NRC resumes full review of the OL application immediately. This is illustrated by the applicants enclosed proposed licensing s[illegible] applicant's schedule for Unit 2 calls for a July 1983 fuel load and December 1983 commercial operation. For Unit 1, the corresponding dates are December 1983 and July 1984 (electrical and steam). The staff noted that the July 29, 1980 visit by the NRC's Caseload Forecast Panel and a followup meeting on August 22, 1980 resulted in a finding of reasonable agreement with the applicant's projected construction completion estimates; the Panel's projected dates are about three months later. The staff intends to prepare and process a licensing schedule change request on the basis of the Panel's revised estimates; however, such processing will recognize the staff's overall workload priorities and resources and the processed result may not necessarily coincide with the construction completion dates.

The applicant described a review plan emphasizing the full use of previously completed review efforts and the use of proposed guidelines to determine whether repeated or reopened staff reviews of particular questions and other potential new requirements would provide substantial additional protection to public health and safety. The staff rejected these proposed guidelines and noted that any procedures for the conduct of staff review must be left entirely to the NRC as a matter of NRC administrative policy.

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2pp/pdr

The NRC Director of NRR, Mr. H. Denton, reviewed previous trial approaches which have provided for efficient use of staff resources in the review process. This included the approach used on Palo Verde in which the Utility utilized outside consultants to supplement its internal reviews of its systems to meet the Commission's regulations, and in which the NRC staff participated in the applicant's internal meetings. The approach used on Susquehanna for the seismic qualification review by the NRC was also cited as an example of review efficiency. Mr. Denton stated that the Palo Verde results, in particular, were most encouraging, and that the NRC would be willing to participate in a similar approach for Midland. Mr. Selby of Consumers Power Company replied that this approach would be examined further, but noted that the success of this or any other approach would be doubtful unless a sustained core of staff reviewers can be assigned to the project through review completion, particularily in the reactor systems and electrical systems branches.

Mr. Denton also noted that current FSARs and PSARs are deficient in their explicit display of conformance to each of the Commission's rules and regulations of significance to safety. The staff will require explicit documentation in the Midland FSAR upon which to base its conclusions pursuant to 10 CFR 50.57(a)(1) and (2).

Darl Hood

D. S. Hood, Project Manager
Licensing Branch No. 3
Division of Licensing

Enclosures:
As stated

cc: See next page

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

ATTACHMENT 14

AUG 09 1983

Docket Nos. 50-329/330 OM, OL

Mr. J. W. Cook
Vice President
Consumer Power Company
1945 West Parnall Road
Jackson, Michigan 49201

Dear Mr. Cook:

Subject: Construction Completion Schedule for Midland

On April 19-21, 1983, the NRC staff visited the Midland Plant to evaluate construction completion schedules. The meeting discussed the basis for Consumer's revised estimates of October 1984 (Unit 2) and February 1985 (Unit 1). On April 20, 1983, the staff conducted an tour of both units to observe construction progress.

The staff believes that your estimate of 14 months to complete preoperational and acceptance testing for both units is unduly optimistic. Recent experience for a single unit has indicated that this activity will require at least 24 months to complete. Moreover, the staff believes that your forecast does not realistically account for large uncertainties in the work that must precede start of critical path testing, and that this can be expected to add some months to your schedule. These factors alone would infer that your October 1984 projected completion date is optimistic by at least a year.

Since the staff's visit, you have requested an opportunity to meet with the staff to review the material previously provided as well as to provide any additional information for its further consideration in this matter. We also understand that you plan to reconsider your scheduling priorities between Units 1 and 2 in light of recent actions by Dow Chemical Company. At your request, we will be scheduling this meeting in September. A final staff position for Midland's construction completion date will be developed following this further meeting.

Sincerely,

Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing
Office of Nuclear Reactor Regulation

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