

Bechtel Power Corporation

777 East Eisenhower Parkway
Ann Arbor, Michigan

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



50-329

50-330

September 8, 1983

PRINCIPAL STAFF			
✓ RA	INF		
D/RA	SCS		✓ orig +3
A/RA	PAO		
DPRP	SLO		
DRMA	RC		
DRMSP			
DE			
ML			
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Mr. James G. Keppler
Regional Administrator
U.S. Nuclear Regulatory Commission Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Dear Mr. *Jim* Keppler:

Subject: Quality

Per our conversation the other day, I am enclosing a write-up on the Quality Improvement Program currently in existence in the Ann Arbor Power Division. This program was initially developed for the Midland project and was expanded to the total division shortly after implementation on Midland.

We would anticipate implementing a similar program on the Zimmer project and would appreciate any questions or comments you may have.

Yours truly,

Howard

Howard W. Wahl
Vice President
and General Manager

HWW/msh

Attachment

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ANN ARBOR POWER DIVISION - QUALITY IMPROVEMENT PROGRAM

Several years ago, a new emphasis was placed on the subject of quality within the Ann Arbor Power Division - not quality assurance, quality control or quality engineering, but the quality of accomplishment in the assignments of every Ann Arbor employee. A video tape introduction of the program featuring Howard Wahl, Ann Arbor's General Manager and the program's sponsor, was used to acquaint employees not only with the basic idea of the program but management's backing of it.

The program is based on several basic principles related to the work of each employee. These include:

- a) a division management belief that personnel wish to do their jobs correctly the first time.
- b) a recognition that to do this the employee must be provided with clear and visible job requirements and workable tools and methods.
- c) a commitment by management that such requirements and methods will be provided and that the employee will be given a chance, and encouraged, to point out areas needing change or improvement.
- d) encouragement of an attitude wherein the employee will work in conformance to the given requirements or cause the requirements to be officially changed.
- e) an expectancy that a program based on those principles should lead to a higher frequency of work done correctly the first time and a lower frequency of necessary error correction and associated costs.

This program is being called "Quality Improvement". Its prime purpose is to create an attitude and atmosphere in which excellence and correctness are the norm rather than the goal. Its success should also have a positive contribution on productivity improvement. It is a program designed to also increase AAPD's competitiveness in the marketplace.

The program operates within the present structure of the division which is organized into teams of small work groups established to communicate ideas, designs, and methods to achieve the best results. A new organization or new work function has not been created. Instead, the present organization is now equipped with concepts and a program by which it can perform its various work functions using quality improvement principles.

To implement the program, the employee has been asked to practice five concepts:

- a) a clear definition of quality being conformance to requirements, a definition used by Steve Bechtel, Jr., in a 1977 management memo.
- b) a concept that too much time is spent looking for errors and not enough time is spent preventing them.

- c) a concept that errors occur because requirements are not clear, not because people do not want to do a good job.
- d) a standard to be applied by every employee in which every job is expected to be done right the first time.
- e) a realization that work can be measured by quality as well as by quantity.

These concepts allow establishment of a program which applies to every organization, not just Construction, Engineering, and Procurement. Included are such organizations as Accounting, Office Services, Data Processing, etc.

Five implementation programs are used to initiate and maintain the Quality Improvement Program. These include:

- a) Training - a program designed to communicate the concepts to all employees.
- b) Promotion - a program designed to provide continual visibility and awareness.
- c) Employee Feedback - a program designed to encourage open communication from the employees to their supervisors as to problems, hindrances or recommendations in quality improvement.
- d) Quality Measurement - a program designed to encourage measurements and goals related to quality improvement.
- e) Recognition - a program designed to recognize extra-ordinary performances by employees in support of the QIP program.

Each of the programs has been assigned a senior management sponsor to aid in program development and to provide management monitoring. The sponsors are part of a Senior Management Steering Group reporting directly to the General Manager.

A basic two-hour training session was developed and approved by AAPD Senior Management and was given to all employees in early 1982.

Promotion has been a continuing effort; some of them are monthly articles in the Ann Arbor Bechtel News, posters strategically located throughout the Division, noon-time presentations, etc.

To date over 84 employees' suggestions (out of 153 formally submitted) have been put into effect. These range from color-coding microfilm aperture cards to facilitate distribution, to changing our banking practices to reduce our average daily balance.

Page three
AAPD-QIP

The work groups have developed over 100 measurements of areas within their groups which could be improved. These areas of self-measurement range from "percent of document pages processed that are error free and on time," to "quality of drawings/calculations as measured against a checklist of attributes."

We have presented 144 bronze, 47 silver, and 6 gold awards to AAPD employees under the recognition program. These awards are in recognition for the employees contribution to the quality of operations of AAPD.

A Quality Improvement Program directed at employees of both Bechtel and Consumers Power was initiated for the Midland Project in late 1981. The remainder of the division participates in the general division program. Visitors to AAPD will see visible evidence of the program in the way of displayed policies, posters, and slogans. More than that, they should expect to hear over and over again the key phrase, "Let's do it right the first time."

ANN ARBOR POWER DIVISION INSTRUCTION

No. 1-4
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December 21, 1981

SUBJECT: Division Quality Improvement Program

PURPOSE: This instruction defines the organization and responsibilities for implementing the AAPD Quality Improvement Program.

BACKGROUND:

This instruction establishes a quality improvement program to promote, implement, and maintain a plan for achievement and improvement of quality within AAPD. It is pertinent to all division employees and all assignments. Quality assurance activities, as described in AAPDIs 7.1 and 7.2, are not modified by this instruction.

The AAPD Quality Improvement Policy is as follows:

TO IMPROVE QUALITY, WE SHALL PROVIDE CLEARLY STATED REQUIREMENTS, EXPECTING EACH PERSON TO DO THE JOB RIGHT THE FIRST TIME IN ACCORDANCE WITH SUCH REQUIREMENTS OR CAUSE THE REQUIREMENTS TO BE OFFICIALLY CHANGED.

DEFINITIONS:

Quality is conformance to requirements.

Improvement of quality is an increase in the frequency at which work is done correctly the first time.

BASIS:

Quality is achieved when work is done correctly the first time, negating the need for repeating the activity. Individuals may achieve quality by following established requirements, and through teamwork, including controlled coordination among discipline groups.

The Quality Improvement Program is based on the following principles:

1. It is believed that personnel wish to do their job correctly the first time.
2. Necessary attributes of doing jobs correctly the first time include "attention to detail," "clear and visible job requirements," and "workable tools and methods."
3. Each employee must be aware of his/her role in any improvement program for that program to succeed. Teamwork, in which efforts may have to be coordinated with other employees, is also necessary.

ANN ARBOR POWER DIVISION INSTRUCTION

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4. A successful quality improvement program must include certain concepts:
 - 1) A clear definition of quality being conformance to requirements rather than indefinite terms such as good, bad, etc.
 - 2) Too much time is spent looking for errors and not enough time is spent preventing them.
 - 3) A majority of errors occur because requirements are not clear, not because people do not want to do a good job.
 - 4) The only standard we should accept for ourselves is that of doing each job right the first time. In other words, do it once, know it's right.
 - 5) A willingness to measure work by quality as well as quantity.
5. All requirements, tools, and methods are subject to review for improvement.

INSTRUCTION:

The AAPD Quality Improvement Program is sponsored by the general manager creating an interdepartmental steering group with responsibility for maintaining a program that promotes achievement and improvement of quality by all employees in all assignments. Typical organization is shown in Figure 1.

Primary membership of the Steering Group for the AAPD Quality Improvement Program will consist of the following managers:

- a) Division Project Operations and Services
- b) Division Engineering
- c) Division Construction
- d) Division Quality Assurance
- e) Division Controller/Commercial Manager
- f) Division Procurement
- g) Division Services
- h) Division Administrative Services

ANN ARBOR POWER DIVISION INSTRUCTION

No. 1-4

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December 21, 1981

The steering group will conceive, develop, and implement four programs in response to the quality improvement policy. These shall be programs for Training, Promotion, Feedback, and Quality Measurement as further defined in this instruction. The programs shall be designed to reach each employee and maintain a positive attitude towards achievement and improvement of quality regardless of assignments. A quality improvement program manager reporting to the steering group shall be selected to provide overall management of program activities. Each program shall be assigned a senior management sponsor from within the steering group. The sponsors and the program manager must be submitted to the general manager for approval.

A description and plan for implementation and maintenance shall be prepared for each required program. Each shall contain the following attributes:

- 1) clear definition of program
- 2) detailed implementation plan
- 3) clear description of personnel involvement
- 4) an integrated method of measuring program effectiveness

RESPONSIBILITIES:

1. Steering Group

- a) Provide guidance and direction to the program manager and his team regarding the implementation and maintenance of the quality improvement program
- b) Review, approve, and authorize implementation of programs
- c) Monitor activities and effectiveness of programs
- d) Provide input as may be required to the general manager on activity and effectiveness of overall program

2. Program Sponsors

- a) Participate with program manager in development of program descriptions to be implemented under authority of the steering group
- b) Provide management guidance to program manager as required
- c) Monitor program activities to assure steering group of implementation, maintenance, and effectiveness in accordance with original program description

ANN ARBOR POWER DIVISION INSTRUCTION

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3. Program Manager

- a) Organize and manage the implementation of programs as authorized by the steering group
- b) Periodically report program status to steering committee, and carry out all administrative activities required for effective operations of the quality improvement program

4. Requirements of Training Program

- a) An initial training program shall communicate the quality policy and concepts.
- b) An orientation program shall communicate the policy and concepts to new employees.
- c) Followup training materials shall maintain emphasis on the quality policy, elaborate on concepts where proven needed, and complement work of Employee Feedback and/or Quality Measurement Programs.

5. Requirements of Promotion Program

- a) An initial promotional program shall complement the training program developed above. The program shall consist of appropriate visual aids, publicity, noontime presentations, or other methods necessary to create awareness of the quality improvement plan.
- b) A promotional program shall maintain awareness on quality improvement after initial training and promotion.

6. Requirements of Employee Feedback Program

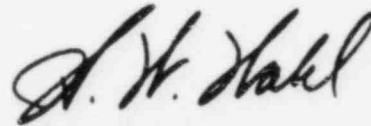
- a) A feedback program shall allow employees to participate in the quality improvement plan by communicating through their normal organizational structure such things as:
 - 1) hindrances to doing jobs right the first time
 - 2) examples when jobs are not being done right the first time
 - 3) suggestions on doing jobs right the first time
 - 4) difficulties caused by given requirements or methods

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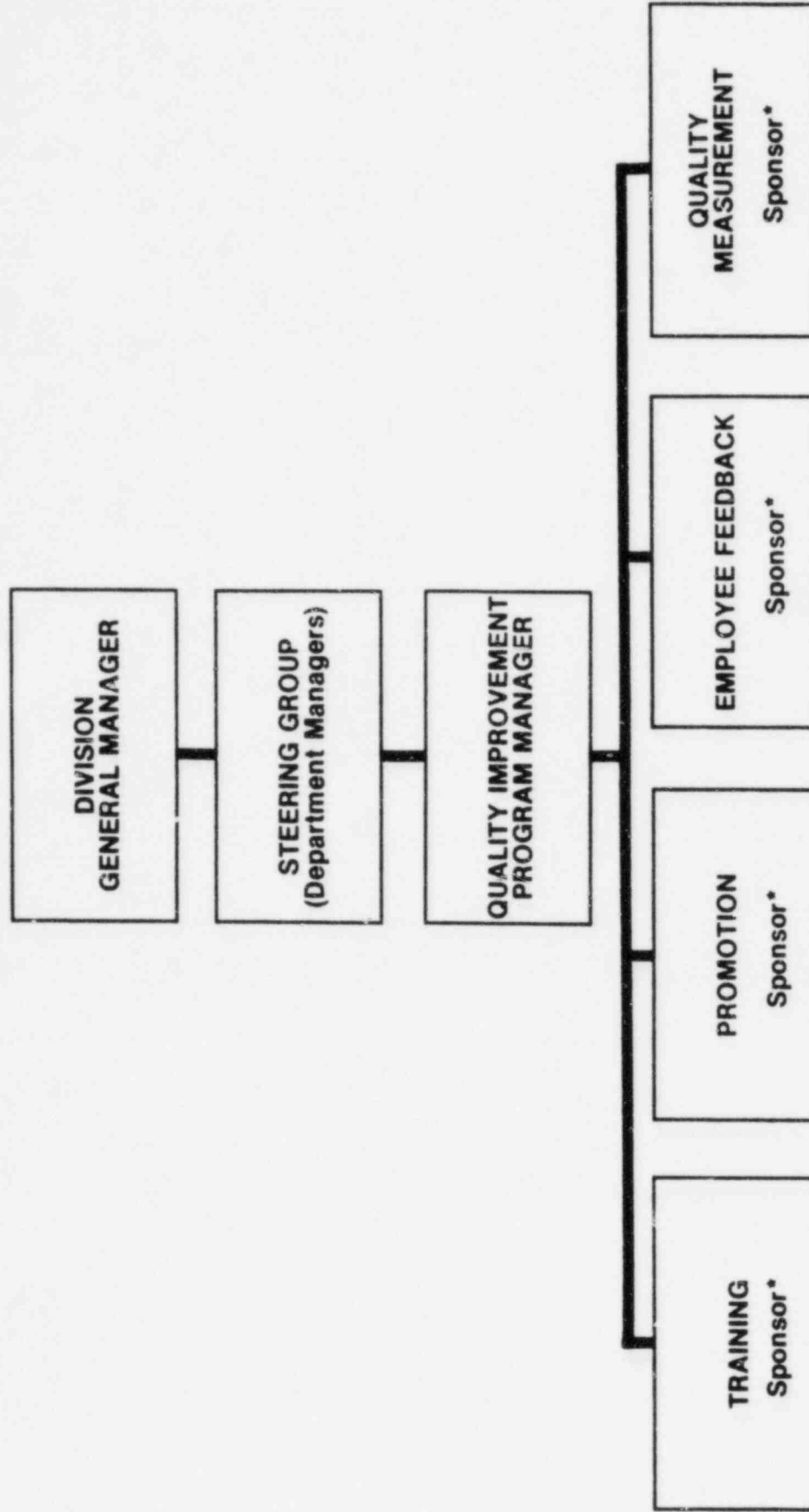
- b) A plan shall complement the employee feedback program in which employees are recognized for significant contribution to the program.
7. Requirements of Quality Measurement Program
- a) A program shall make results of the quality improvement plan evident to management and employees by selected quantitative measurements. Factors to be considered shall include:
 - 1) identification of significant items, directly pertinent to quality improvement, which can be quantitatively measured
 - 2) setting of goals for quality improvements connected with the above significant items
 - 3) visibility of goals, measurements, and achievements
 - b) A plan shall complement the quality measurement program in which employees are recognized for significant contribution to the program.

SPONSOR: General Manager



H.W. Wahl

QUALITY IMPROVEMENT PROGRAM ORGANIZATION



*SELECTED FROM STEERING GROUP



NOMINATION FOR QUALITY ACHIEVEMENT RECOGNITION

Silver

I wish to nominate an individual/group for quality achievement recognition honors and award. I recognize that the Ann Arbor Power Division is trying to identify those individuals or groups who, in the judgment of their peers and supervisors, best represent those characteristics of quality performance and attitudes that can make our division the standard of quality in the power industry.

Individual or Group Nominee GUY JEAN - PHILIPPEIndividual or Group Function DESIGNER

Criterion Met: (Refer to back of this page for standards.)

One ☒ Two ☐ Three ☒ Four ☐ Five ☐

Why Nominee Should Be Recognized GUY HAS RECEIVED HIS INITIAL QUALITY ACHIEVEMENT RECOGNITION IN SEPT. OF 1982 FOR OUTSTANDING PERFORMANCE IN CONSISTENTLY DISPLAYING QUALITY STANDARDS AND SUGGESTING CHANGES THAT CONTRIBUTE TO THE GROUPS EFFECTIVENESS. THIS OUTSTANDING PERFORMANCE HAS CONTINUED FOR OVER A YEAR AND HE IS ACCREDITED TO PRODUCING A DRAWING CHECKLIST WHICH COMBINED HIS HIGH STANDARDS IN DESIGN AND KNOWLEDGE OF ENGINEERING PROCEDURES. THIS LET HAS ENABLED BOTH DESIGNERS AND DRAFTERS TO BE IN COMPLIANCE WITH COMPANY DESIGN AND TECHNICAL POLICIES BEFORE THE RELEASE OF DWG'S FOR ISSUE, AND HAS RESULTED IN A REDUCTION OF DWG'S BEING RETURNED TO THE DESIGNER FOR FURTHER CORRECTIONS, ALSO REDUCING TIME SPENT ON EACH DWG.

Nominator's Signature [Signature]Date 5-4-83Supervisor's Signature [Signature]Date 5-6-83

Project, Department or Category II

Manager's Signature [Signature]Date 5/5/83

Quality Improvement Recognition

Committee Concurrence _____
(Silver and Gold Awards Only)

Date _____

Honors Selected:

☐ Bronze Award ☒ Silver Award ☐ Gold Award

Copies of Approved Nominations to:

Nominee	Project Manager
Nominator	QIP Manager
Approving Manager	Nominee Personnel File



ANN ARBOR

MEMORANDUM

TO L. ADAMSON DWG. NO. SH. REV.
FROM DATE 19

DRAWING CHECKLIST

BEFORE SENDING DRAWING FOR FINAL CHECK THE FOLLOWING WAS DONE:

- ☐ MEMO, DRVCL, DCAR EXEMPTION & DRR ATTACHED
- ☐ DWG. ISSUE WARNING ATTACHED TO STICK PRINT
- ☐ ALL DOCUMENTS ON 'MAPPER' INCORP. ON DWG.
- ☐ START-UP STICKER BACK CIRCLED, SIGNED & INCLUDES ALL R.W.S.#'S
- ☐ CHECK FOR HOLD CIRCLES & LOTUS, RECORD IN 'HOLD BOOK' OR CLEAR
- ☐ ALL ITEMS IN CHG. LIST ARE BACK CIRCLED / ALL BACK CIRCLED ITEMS ARE IN CHG. LIST OR LISTED IN REV. BLOCK.
- ☐ ALL DCN'S, FCN'S & FCR'S INCORP. AND BLUE LINED
- ☐ ALL MARKS ON STICKPRINT BLUE LINED
- ☐ ELECTRICAL STICKER NEAR TITLE BLOCK
- ☐ SCG MARKED ON PULLPACK MEMO / ABOVE REV. BLOCK
- ☐ DOCUMENTS WITH INFO. CONTINUED ON ASSOCIATED DWG.'S, ARE ATTACHED OR INFO. & DOCUMENT# RECORDED ON ASSOC. DWG'S.
- ☐ ALL CHG'S MADE ON DWG., OTHER THAN INFO. ON DCN'S, FCN'S & FCR'S, HAVE LEAD DOC. LISTED ON DCAR EXEMP. FORM
- ☐ ALL DCN'S, FCN'S & FCR'S CORRECTLY INCORP.
- ☐ ALL DRAWING MARKINGS CORRECTLY INCORP.
- ☐ ALL INSTRUMENT LOCATION SHEETS COMPLETED
- ☐ CHECK FOR OUTSTANDING DWG. RELEASE RECORDS
- ☐ DWG. WITHIN 2 WEEKS OF REQUIRED ISSUE DATE
- ☐ DWG. SIGNED BY, AT LEAST, EVERYONE WHO SIGNED DRVCL
- ☐ ALL UN-NOTED 'P'SHITS ARE SENT WITH DWG.



ANN ARBOR POWER DIVISION
NOMINATION FOR QUALITY ACHIEVEMENT RECOGNITION

I wish to nominate an individual/group for quality achievement recognition honors and award. I recognize that the Ann Arbor Power Division is trying to identify those individuals or groups who, in the judgment of their peers and supervisors, best represent those characteristics of quality performance and attitudes that can make our division the standard of quality in the power industry.

Individual or Group Nominee John C. Dominy

Individual or Group Function Senior Designer for Control Systems responsible for construction interface activities and drawings

Criterion Met: (Refer to back of this page for standards.)

One ☒ Two ☒ Three ☐ Four ☐ Five ☐

Why Nominee Should Be Recognized John constantly performs his work at a high degree of quality. The preciseness and accuracy of his work makes his work an example for others performing similar tasks. John has prepared an installation specification which simplifies the calculations for and installation of sensor tubing for electronic instruments. John is singularly responsible for the supervision, layout, and preparation and issuance of all the installation details (approximately 40 multisheet drawings) for the Palisades Plant 1983 refueling outage. Considering the unexpected increase of installation details required for the HVAC modifications within the same time frame, John accomplished this task in an unusually short period of time. This extensive effort is an example of Johns dedication to his job; the quality and accuracy of his work; and the performance of his job "RIGHT" and on schedule.

Nominator's Signature [Signature]

Date 12 Apr 83

Supervisor's Signature [Signature]

Date 12 Apr 83

Project, Department or Category II

Manager's Signature [Signature]

Date 4/15/83

Quality Improvement Recognition

Committee Concurrence _____
(Silver and Gold Awards Only)

Date _____

Honors Selected:

☐ Bronze Award ☒ Silver Award ☐ Gold Award

Copies of Approved Nominations to:

Nominee
Nominator
Approving Manager

Project Manager
QIP Manager
Nominee Personnel File

[Signature] 6/20/83
MWB Drant 6/20/83
presented 6/20/83
H. G. Mars 6/20/83



NOMINATION FOR QUALITY ACHIEVEMENT RECOGNITION

enrg - startup

I wish to nominate an individual/group for quality achievement recognition honors and award. I recognize that the Ann Arbor Power Division is trying to identify those individuals or groups who, in the judgment of their peers and supervisors, best represent those characteristics of quality performance and attitudes that can make our division the standard of quality in the power industry.

Individual or Group Nominee Robert PerkinsIndividual or Group Function Assistant to engineering startup coordinator

Criterion Met: (Refer to back of this page for standards.)

One ☒ Two ☒ Three ☐ Four ☐ Five ☐

Why Nominee Should Be Recognized Bob consistently supports the efforts of startup by resolving engineering problems related to startup in a timely manner. His insistence on the correctness and timely solution to problems to support completion and turnover of startup systems leads to early and correct system completion.

Nominator's Signature

Date

4/15/83More info
GME

Supervisor's Signature

Date

4/15/83

VerkinB

Project, Department or Category II

Manager's Signature

Date

more info
807

Quality Improvement Recognition

Committee Concurrence

Date

(Silver and Gold Awards Only)

yes EMT

Honors Selected:

☒ Bronze Award ☐ Silver Award ☐ Gold Award

Copies of Approved Nominations to:

Nominee

Project Manager

Nominator

QIP Manager

Approving Manager

Nominee Personnel File

108936

Bechtel Power Corporation
Inter-office Memorandum

To	Distribution	Date	March 21, 1983
Subject	Midland Plant Units 1 and 2 Bechtel Job 7220 QUALITY IMPROVEMENT ACHIEVEMENT AWARDS	From	J.A. Rutgers
Copies to	Copy Distribution	Of	Project Management
		At	Ann Arbor

It is with pleasure that I announce the award of the Quality Achievement Badges to the following individuals for their quality improvement achievements.

<u>Name</u>	<u>Group</u>	<u>Achievement</u>
<u>Gold</u>		
F. Shepard	Procurement	Exceptionally outstanding performance in negotiating bid evaluations and achieving zero commercial defects in vendor purchase orders
<u>Silver</u>		
C. Hubert	Nuclear	Outstanding performance in devising a group procedure for efficiently processing P&ID revisions
<u>Bronze</u>		
R. Atencio	Mechanical	Outstanding performance in incorporating 100 outstanding change documents in compliance with new EDP requirements
B. Burdick	Nuclear	Outstanding performance in reviewing engineering field changes and design change documentation
J.A. Clements	Nuclear	Outstanding performance in implementing and providing leadership for an effective discipline quality improvement program

Bechtel Power Corporation

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IOM to Distribution

March 21, 1983

Page 2

<u>Name</u>	<u>Group</u>	<u>Achievement</u>
M. Deegan	Administrative Services	Outstanding performance in providing timely and accurate secretarial support for a nuclear quality assurance manual revision
N. Eidsmoe	Engineering	Outstanding performance in ensuring that NCDs for the recent manpower forecast complied with stringent management requirements
D. Fredlund	Division Services	Outstanding performance in coordinating replanning efforts and establishing a new project plan for the Project/2 program
K. Koh	Civil	Outstanding performance in completing a quality and timely analysis for the ASLB testimony
J. Kovach	Electrical	Outstanding performance in implementing and providing leadership for an effective discipline quality improvement program
B. Oxender	Civil	Outstanding performance in analyzing and checking auxiliary building interior walls in compliance with schedule requirements
L. Proulx	Administrative Services	Outstanding performance in accurately inputting SDDR data into the MAPPER system under tight schedule requirements
G. Singh	Control Systems	Outstanding performance in implementing and providing leadership for an effective discipline quality improvement program

Bechtel Power Corporation

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March 21, 1983
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S. Sobkowski	Civil	Outstanding performance in implementing and providing leadership for an effective discipline quality improvement program
W. Stevens	Engineering Planning	Outstanding performance in improving the quality of the Advanced Master Punchlist and overall group accuracy
G. Vasonis	Civil	Outstanding performance in completing a quality and timely analysis for the ASLB testimony
P. Wicker	Cost and Schedule	Outstanding performance in consistently producing quality work for the project replanning task force
E. Wong	Mechanical	Outstanding performance in incorporating overdue change documents to support an NRC audit

Please extend my personal congratulations to each recipient and my sincere thanks for their contribution toward completing the Midland plant on schedule and in a manner which meets regulatory requirements and assures successful operations.

I ask that you present the awards at an appropriate in-office ceremony and ensure that a copy of this memorandum is placed in each recipient's personnel record.



J.A. Rutgers

JAR/MNB/dlp*

Distribution:

M.N. Bakarich	E.M. Hughes
R.M. Collins, Jr.	S.K. Jain

Bechtel Power Corporation

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IOM to Distribution
March 21, 1983
Page 4

Copy Distribution:

R. Atencio	C. Hubert	L. Proulx	G. Vasonis
B. Burdick	K. Eoh	F. Shepard	P. Wicker
J.A. Clements	J. Kovach	G. Singh	E. Wong
M. Deegan	B. Oxender	S. Sobkowski	

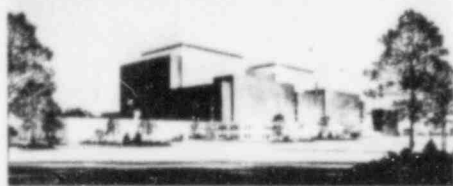
Additional Distribution:

J.M. Anderson	B. Dhar	M.A. Hughes	E. Smith
T.G. Ballweg	A.J. Boos	M. Elgaaly	D.F. Lewis
N.W. Swanberg	D.J. Fredlund	J. Milandin	R.F. Tulloch
L.H. Curtis	R.C. Hollar	R. Silver	

Written Response Requested: No

Com Use: NA

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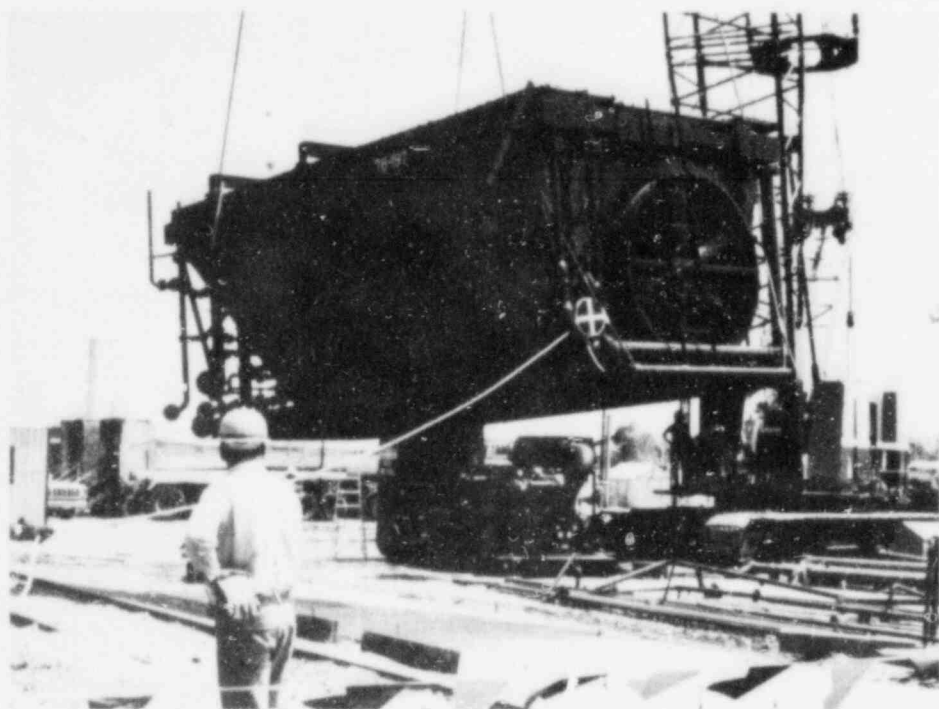
BELLE RIVER

BEACON



Volume 5, Number 6

JUNE, 1983



Pipefitters guide first compressor onto concrete slab.

Air Blow process to begin in July A major step before Unit 1 Boiler Hydro

The Belle River project is about to start the first major step before boiler hydro — the process of Air Blow of the boiler and related piping.

This process of pressurizing the boiler to 800 psi and then letting the pressure decay to 600 psi, will force 14,000 inlet cubic feet per minute of air flow through the pipe and discharge to atmosphere through the silencer. The air blow is a major step before Unit 1 boiler hydro.

(continued on page 7)

Jobsite stewards to ask for United Way contributions beginning July 12

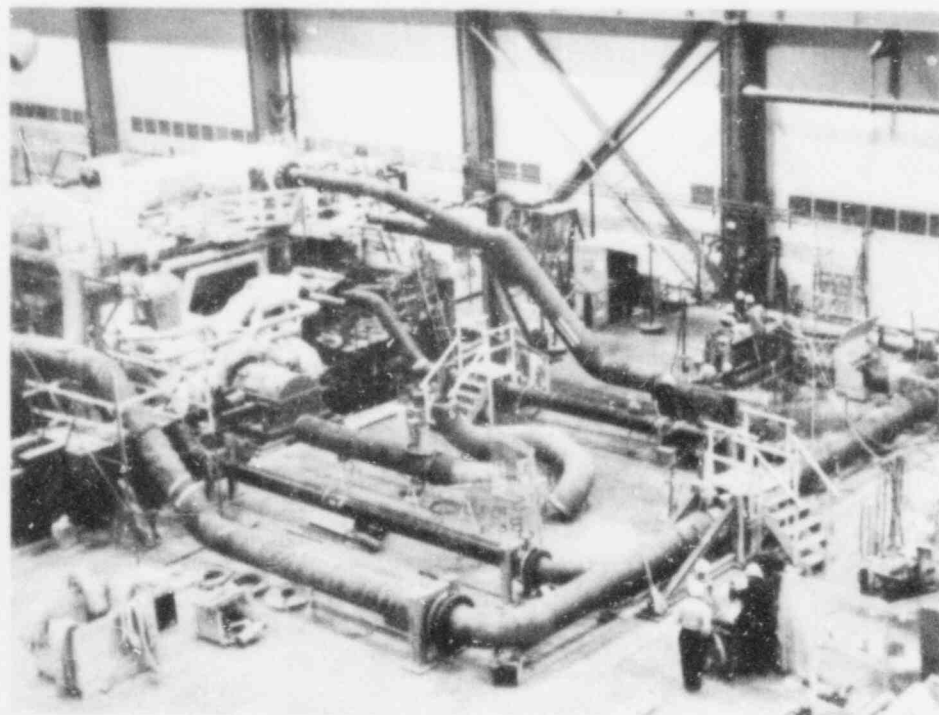
Donations will be received next month from craftsmen and non-manual employees as the Belle River jobsite United Way Fund Drive gets underway.

A goal of \$14,000 has been set for the jobsite. Last year a total of \$13,175 was collected from crafts and non-manuals.

Contributions will be taken by jobsite stewards, who will contact the craftsmen individually for donations. The Stewards will meet July 11 with United Way Fund Drive representatives at Conference Room "C". They will include Ray Glowski, Business Representative, Greater Detroit Building and Construction Trades Council, Pat Courtney, United Way Labor Representative, and Tom Melms, United Way Executive Director.

Following the meetings with stewards, United Way representatives will meet with foremen and general foremen and non-manual employees.

This is the third year that payroll deductions will be allowed at Belle River for jobsite donations. Jobsite United Way Chairman is Jack Wood.



Special air blow piping has been installed on the Unit 1 Turbine deck.

Construction progress report

June, 1983

The following information was supplied by the Cost-Scheduling Department.

Overall construction progress is 65% complete. Construction of Unit 1 and common is 78% complete, and Unit 2 is 37% complete.

Structural steel bolt-up was completed for the Unit 2 boiler leave-out steel. Installation of miscellaneous handrail, grating, pipe bridges, and platforms continued in Unit 1 powerblock and yard.

Unit 1 turbine-generator assembly continued with installation of lube oil flush pipe, electrical work, and insulation.

Unit 2 turbine-generator work focused on completing the upper-inner casings, and alignment of the rotors for the low pressure turbines.

Unit 1 boiler assembly continued with erection of sootblower, seal air, and fuel oil ignitor pipe, hopper, roof, and penthouse casings, and the snubber system. Erection of pulverizers 1007 and 1010 continued. Ash hopper rough erection is basically complete

with weld out continuing.

Unit 2 boiler assembly continued with the erection of coal pipe, buckstays, wall panels, crossover and riser tubes, convection pass elements, front windbox, ductwork, and pulverizers.

Unit 1 precipitator assembly continued with completion of outlet duct supports and manifolds. Roof and hopper electrical work, and control room terminations continued. Duct and manifold insulation was ongoing.

Unit 2 precipitator erection continued with installation of 2B pipeframes, 2C DS support frames, 2D supporting steel, welding inlet ducts, and fabricating hoppers, nozzles, and manifolds.

Installation of liner and conduit continued in the Unit 2 chimney, with 360 ft. of liner in place as of May 20, 1983.

Thirty-six of 128 Unit 1 and common turnover packages have been turned over.

Thirty-six of 42 Phase IIB systems have been turned over.



Electricians Bill Galliker and Vance LaMee terminate panels for coal burners at elev. 695.

Narang presents engineering paper

Paul Narang, Assistant Project Field Engineer, April 19 presented an engineering paper "Field Testing of Trench Excavation and Concrete Bedding for Circulating Water Piping (for a Power Plant) Results in Substantial Cost Savings." The paper was presented at the American Power Conference, sponsored by

Illinois Institute of Technology, held at the Palmer House in Chicago.

The conference is an annual national forum for the discussion of problems and the exchange of information concerning the power industry and associated activities.

Lands a big one

Jerry Rachel, Civil Supt, last month landed a 25 lb. Chinook salmon on 8 lb. test line during a 20 minute battle on Lake Huron. This pleased him so much he went right out the following weekend and landed some more big ones. Fishing with him was carpenter GF Roy Jokic.

THE BELLE RIVER BEACON

Bechtel Power Corporation

P.O. BOX 167

ST. CLAIR, MI 48079

JACK WOOD

Editor/Photographer

*Published monthly for the employees at the Belle River Project and their families
An Equal Opportunity Employer M/F*

PROJECT STATUS FOR MONTH OF MAY, 1983

CONSTRUCTION COMPLETION 65%

	THIS MONTH	TO DATE
Structural Concrete (cubic yards)	551	119,774
Large Process Piping (lineal feet)	8,293	352,771
Small Process Piping (lineal feet)	6,339	118,998
Cable Tray (lineal feet)	5,909	123,111
Conduit (lineal feet)	22,585	342,402
Wire & Cable (lineal feet)	331,981	3,347,401
Terminations	13,738	101,588

* Excludes contractor quantities



Electricians Janet Cochran, Gerry Garascia and Ed Kohler, preparing Unit 2 isophase bus for insulation.

Sprinkler fitters, electricians completing fire protection system

The fire protection system — one of the most important in terms of plant safety, before, during and after startup — is now being completed by sprinkler fitters and electricians.

The function of the fire protection system is to detect, announce, minimize, confine and extinguish all types of fires encountered in all plant areas.

The fire protection system is comprised of

diversified monitoring, detection, alarm, and extinguishing facilities to protect the areas of equipment from damage by fire.

The system includes the following: Fire pumps and jockey pump, yard fire loop and hydrants, sprinkler systems, water spray systems, standpipe and hose systems, portable fire extinguishers, fire detection and alarm systems, fire barriers and mechanical foam system.

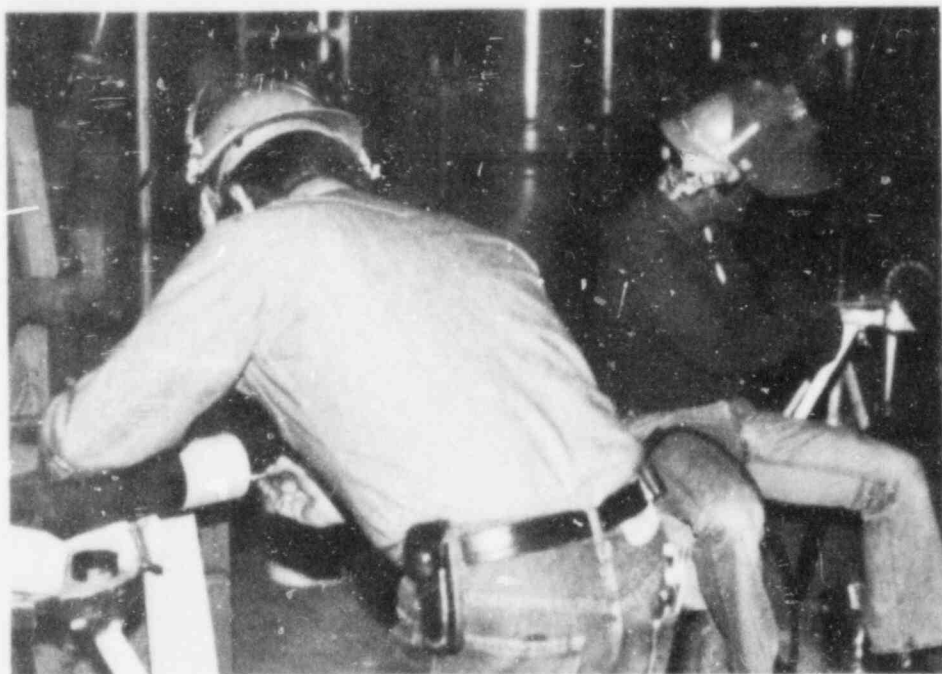
The fire protection system also includes the carbon dioxide system, pre-action systems for the coal conveyors and water spray systems for the dust collectors in the main building coal conveyor galleries area, or the yard coal handling fire protection systems.

A ground level fire water storage tank is the primary source of water for the fire protection system. Hose stations in the boiler, turbine, administration, and service building are supplied from wet standpipes and are installed within or adjacent to stairwells and at interior columns.

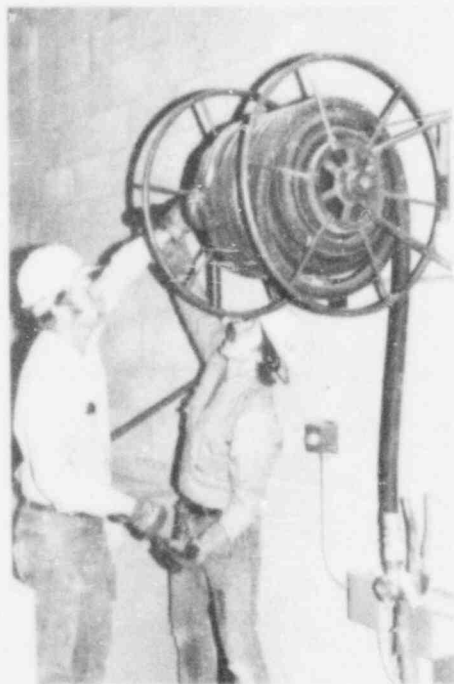
Automatic sprinkler systems are installed in key areas of the power plant and heat and smoke detectors are installed in various areas or ducts throughout the plant to provide alarms locally and in the main control room.

Wheeled dry chemical extinguishers, 150 lb. size, ready for immediate use, will be located in the switchyard relay control house, on the ground floor of Units 1 and 2 turbine areas, in the intake structure, and in the fire pumphouse electrical room.

A mechanical foam extinguishing system, located in the fuel oil/foam pumphouse, is provided to protect the outdoor, above ground No. 2 fuel oil storage tank and the fuel oil pump room.



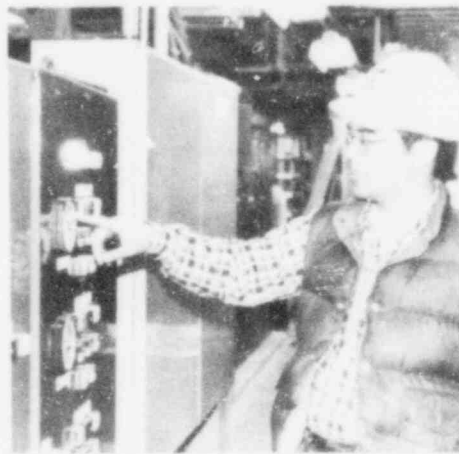
Sprinkler fitters preparing CO₂ piping for installation.



Randy Schneider and Bruce Hewitt, sprinkler fitters, install CO₂ hose reel station outside Turbine Building switchgear room.

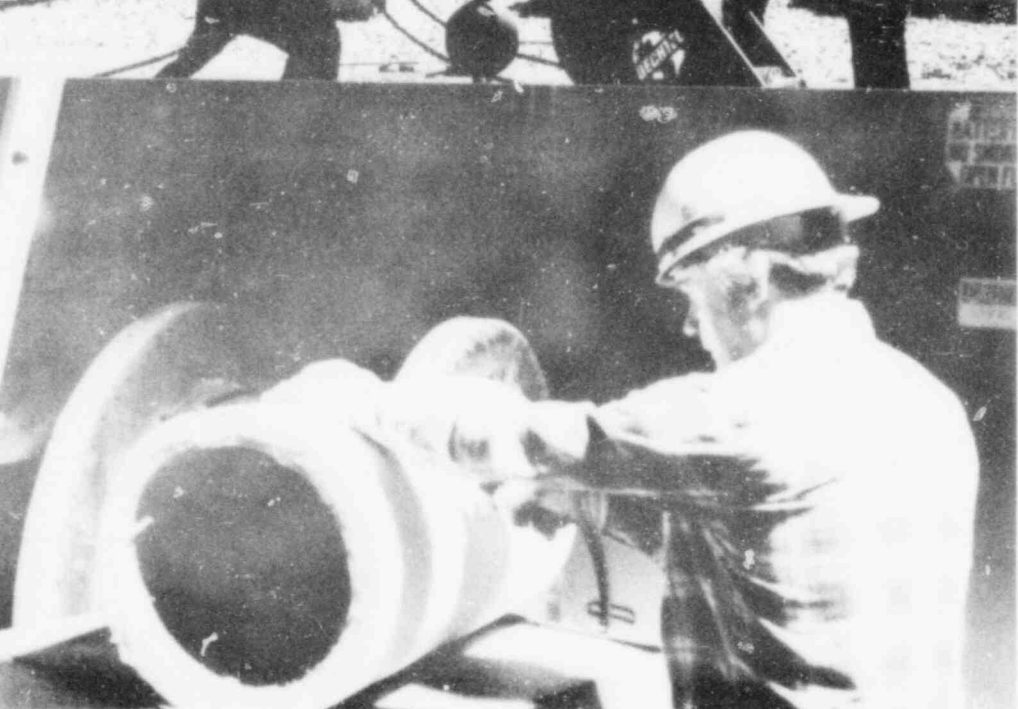
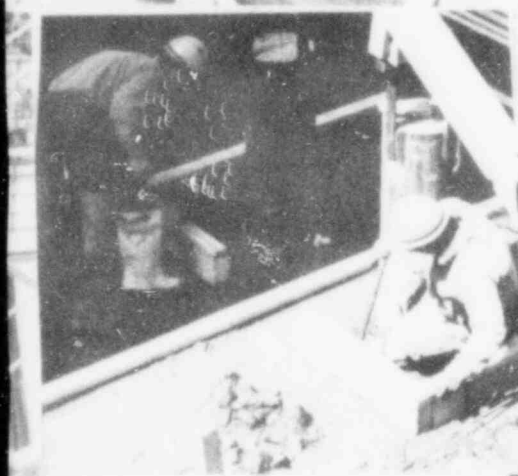
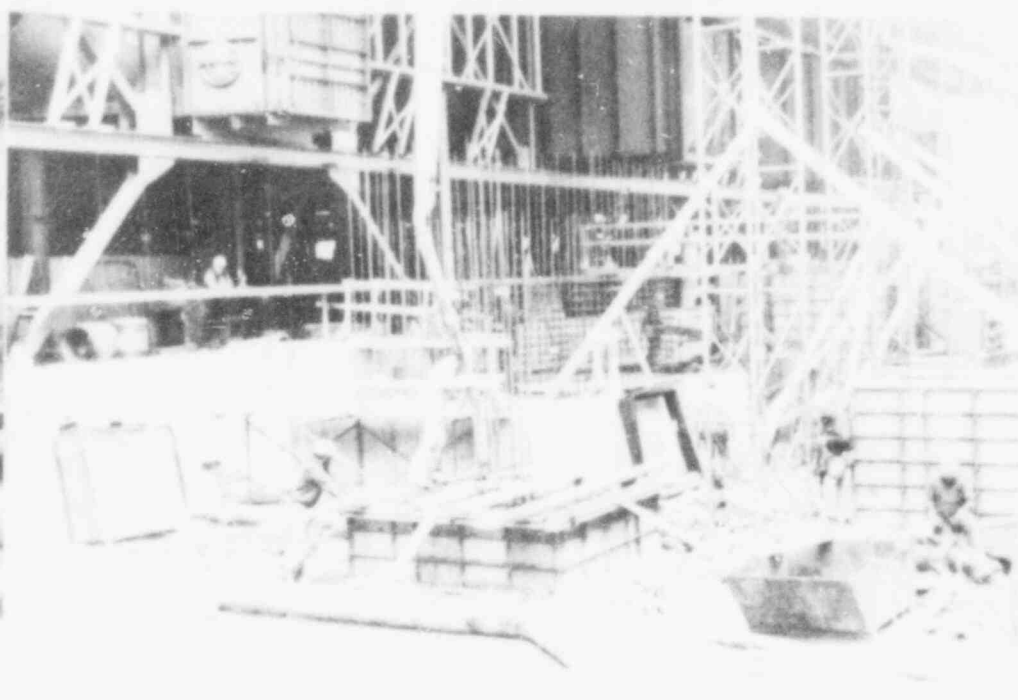
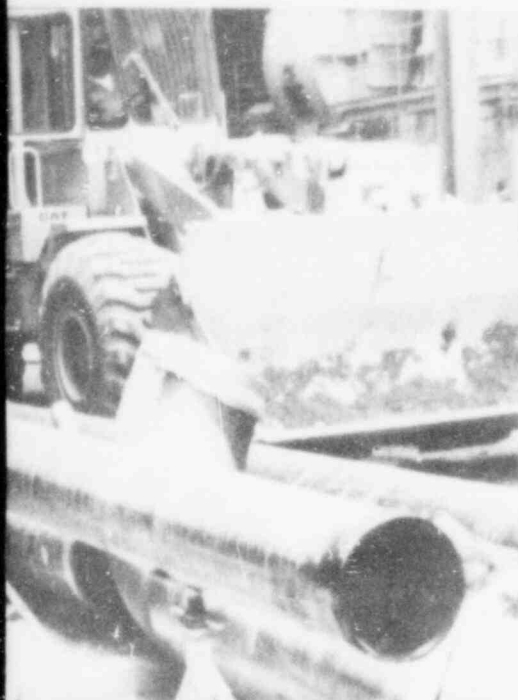


Pulling cable for fire detection and alarm system, electricians Jim Mathew, left, and Dave Frumveller.



Thermal detection panels inspected by Larry Louie, Construction Engineer.





Hard hitting Sparkies jolt Dillos 13-3, Contracts 6-3

*"There is no one who lies
of the Dillos demise
on that warm, sunny eve on June 2
when the Sparkies grew bold
as their story unfolds
and their fame and team standings both grew*

The nine-banded Armadillo suffered from ring around the collar June 2 as the Electrical Sparkies, blasting rifle shots over the heads of outfielders, crushed the Dillos 13-3 in a game which featured fifth and sixth inning rallies.

The combination of the Sparkies' tough

defense and John Armando hurling an 8 hitte: made it possible to hold the Dillos to 3 runs.

The Sparkies led off with 2 runs in the first inning with singles by Simmons, Uganski and Grider. The Dillos answered back with 1 run in the bottom of the second with singles by Pons and Choy Hee. The Sparkies added 1 in the fourth with singles by Wade and Sitar. The Dillos also scored 1 run as Foley tripled and Lynch singled.

It was in the fifth inning when the Sparkies exploded scoring 6 runs on 7 hits. Page started off the inning with a double followed by Armando's single. Uganski continued the

rally with a triple plus Grider, Wurmlinger, Wade and Rittenger added singles.

The Sparkies continued to batter the ball in the seventh adding 4 more runs with singles by Uganski, Grider, Wurmlinger and Rittenger.

The Dillos were only able to answer back in the fifth scoring 1 run on a double by Choy Hee and a single by Nuttal.

New Employees

New Hires:

Steven M. DiGaetano, Sr. Eng. Aide-casual - Piping; Louis C. Carducci, Const. Ast. - Piping; Thomas J. Martin, Fld. Summer/Tech. - Safety; Greg S. Curson, Fld. Summer/Tech. - Instrumentation; Daniel E. Harris, Int. Clk. - casual - Document Control; James E. Boelter, Sr. Eng. Aide - casual - Mechanical

Rehires:

Julia M. Corner, Fld. Co-Op/Tech. - Mechanical; Mark F. Nemeth, Fld. Co-Op/Tech. - Civil; Todd D. Wanley, Fld. Co-Op/Tech. - Electrical; Fred J. Zweng, Const. Eng. - Civil; Dan Santaviceca, Fld. Ast. - casual - Procurement; Gerald M. Karl, Fld. Co-Op/Tech. - Piping; Doug E. Potocki, Fld. Summer/Tech. - Piping

Transfer:

Bruce K. Moulton, Sr. Const. Eng. - Instrumentation (Richland, WA)



ELECTRICAL SPARKIES softball team, left, Glenn Rittenger, Larry Simmons, Tim Wade, Daryl Sitar, Neil Wurmlinger, Rene DeHondt, Todd Wanley, Bob Nicholas, Ken Uganski, Mike Shelton, Steve Grider, John Armando and Paul Anderson.

LEAGUE HIGHLIGHTS

June 17

Halfway through the regular season, the Dillos are holding on to second place after recently pounding the Pirates 7-3. Hard on the Dillos heels are Uncivilized (3-1) and last year's champs, F & A, who seem to be recapturing last year's form after beating the Blues and Contracts.

The Pirates this year seem to be floundering, and the Blues are still looking for their first win. Steve Rider of the Sparkies and Reggie Campbell of the

Pirates lead the home run derby with three apiece.

Highlights of the Dillos/Pirates contest included Santaviceca and Suenkel going for two for three while seven other devoted Dillos had one hit apiece (what balance). Lynch homered to deep right field and Seaman gunned down Phillipich going to second (no problem). Hero for the Pirates was Reggie, who went 4 for 4 with homers over the fence. Way to go with the refreshments. Walt! (we even had squeeze mustard)!!



F & A vs. Blues softball action.

MOLSON CUP STANDINGS

June 17 Dillos 7 Pirates 3
6 week results F & A 15 Contracts 9

Standings	W	L	PTS
SPARKYS	5	0	5
DILLOS	4	2	4
UNCIVILIZED	3	1	3
F & A	3	3	3
MOD SQUAD	2	3	2
CONTRACTS	2	4	2
PIRATES	1	3	1
BLUES	0	4	0

HOME RUN LEADERS:	Rider (SPARKYS)	3
	R. Campbell (PIR.)	3
	Phillipich (PIR.)	1
	Karl (PIR.)	1

Seven Craftsmen on top notch Class A ball team

Seven Belle River craftsmen are among the starting 10 players on the undefeated Championship Class A "Beverage Shop" softball team which recently won the "Round Robin" softball tournament in Port Huron.

Now trying to win a state championship this fall, the team consists of short stop Craig Seaman, laborer; pitcher Vick Donaghy, boilermaker, Wheelabrator-Frye; third baseman John Rich, Bechtel laborer; left center fielder Dave Thomas, Bechtel laborer; right centerfielder Jim Mott, Supt. Wheelabrator-Frye; second baseman Greg Thomas, laborer Power Process Piping and left fielder Billy Bartlett, Bechtel laborer foreman.

Undefeated so far in their Class A Open League, last year the team finished ninth in the state and second in the District and City Port Huron competitive sports Class A Slow Pitch tournament.

Air Blow process to begin

(continued from page 1)

The objective of this air blow is to remove any foreign material from the critical piping and boiler. This will be accomplished through a series of blows in different paths of the system.

The system is divided into the following flow paths:

(1. Main steam flow path. (2. Turbine seals and boiler feed pump turbine flow path. (3. Cold reheat leg 1. (4. Cold reheat leg 2. (5. Hot reheat leg 1. (6. Hot reheat leg 2.

The air blow will be accomplished over a six day period starting July 9 and will consist of 20 blows each in each flow path.

The boiler and main steam lines will be pressurized to 1000 psi and will blow 20 times at 800 psi to 600 psi.

The Ingersol - Rand compressors are capable of pressurizing the system from 600 to 800 psi in 30 minutes.

Crafts donate for Special Olympic Games

Sixty eight craftsmen at Belle River donated a total of \$680.00, plus the use of a bus on behalf of the mentally impaired athletes representing Michigan at the International Summer Special Olympics in Baton Rouge, Louisiana.

Bud Quidley, foreman, Instrument Fitters, donated his bus for the Olympic Games. He collected the donations from his people who ride on his bus to work each day and from others on the jobsite.

The contribution helped defray expenses involved in the games competition. "It is tremendous having your support and dedication to our program. Many thanks," said John P. Walsh, Executive Director, Michigan Special Olympics.

Laborer saved from that 'sinking feeling'

It was a sight wondrous to behold when laborer Howard "E" Price III rescued fellow worker, Clair Curtis, from a dangerous situation.

While dewatering a manhole, Clair stepped into what appeared to be a shallow pool, and immediately started to sink in the mud and water up to his hips, and was still sinking when his partner, Howard, snatched Clair "single handedly" from the mud hole.

"We all want to thank and commend Howard on his quick reaction and disregard for his own safety," his fellow workmen stated.

Two electric powered high volume, low pressure 4160 volt Centac air compressors will feed up to 150 psi maximum per square inch into three three-stage PDS natural gas powered 1100 horsepower rotary engine reciprocating air compressors. These will deliver from 133 PSIG to 1,015 PSIG. The RDS compressors weigh 80,000 lbs. each and were lifted from flat bed trucks by crane and guided into position onto specially constructed concrete mats in front of the power plant by pipefitters. These compressors were then leveled and grouted.

According to Hollis Smith, Ingersol Rand supervisor, the air blow by power plants allows time saving on schedules, and at the same time, delivers a better cleaning job.

Normally, he said, a plant using a steam blow to clean out critical piping has to wait until boiler hydro is completed. An air blow can be accomplished before boiler hydro, and thus saves time because it doesn't stop construction, he said.

Belle River Golf League

The May golf outing was scheduled for May 28th which was one of the Memorial Day weekend days. In spite of this fact we had an excellent turnout — 84 signed up and we had one "no show". The weather was great (Saturday was the only good day of the weekend) and Max had the course in excellent shape.

The scramble results:

- The number one team with a low score of 66, was the DECo group of Howard MacIntosh, Jay Lawson, Rick Luberacki, and Dennis Magolan.
- Second place team with a score of 67, was the Wheelabrator-Frye entourage of Dan Randolph, Clyde and Roger Rushon, and Gerry Cook.
- The third place team with a score of 68, was another DECo entrant consisting of Dennis Toune, Dave Jones, Dave Baker, and Sam Mancuso.

Note: The Bechtel team of Paul Wade, Bud Sayers, Jack Williams, and Larry Rodgers also came in with a 68 but they lost in a card play-off starting at the 14th hole. Sorry guys.

- Longers drives and closest to the pin results were as follows:

Longest drive - No. 13 - Rick Palo

No. 8 - Bob Jeffers

Closest to the pin - No. 2 - Bob George

No. 14 - Dan Hudolin

Al Frantz



Guyer, left, was presented award by Naren Bhatia, Project Manager.

Quality Improvement Nomination for Guyer

Tom Guyer has been nominated for a Quality Improvement Achievement Award. The nomination reads as follows:

"As Startup Construction Coordinator in the Client Organization, Tom Guyer has created a high degree of mutual trust and cooperation between the Construction Organization and the Client Startup Organization at the Belle River jobsite. By individual perseverance and attention to detail, Tom has helped Construction to achieve a high system completion rate and in the same manner assisted the Startup Organization in accepting systems and placing them in service.

"This 'can do' attitude has contributed significantly to the project schedule and to quality of the completed product."

Volunteer math teacher receives letter of thanks

Mechanical engineer Dave Tratt received a letter of thanks recently from the Oak Park School District for volunteering to teach Geometry to high school students enrolled in the evening math tutorial program. In a letter to the Belle River Personnel Dept., Oak Park Supt. Malcolm Katz wrote:

"Dear Mr. Nacu:

Your employee, Mr. Dave Tratt, has made a significant contribution to the students of Oak Park Schools and thus the Oak Park Community. This past year Mr. Tratt volunteered two hours per week in an evening math tutorial program for our High School students. In some instances, remedial services that are no longer funded by the Federal government were provided by our volunteers. This valuable program would not have been possible without your employee's dedication to the education of our youth.

I thought it important to let you know that your employee is an asset to this School District. We thank them for joining our team and involving themselves in the educational process."

WHO'S WHO AT BELLE RIVER

Marian Jury, Junior Accountant, Accounting Dept., is the lady people see about employee expenses. "They like me because of that." She is also the person people see about backcharges. "Everybody hates me for that."

She says she enjoys the work. "I like the people and everything."

A St. Clair resident, whose family originally moved to Marine City from Detroit, Marian has one sister and five brothers, including Bob, who works at Belle River as Lead Piping Engineer.

She has a seven month old son, Ryan. "He's my main hobby." She also likes to swim in the St. Clair River, "the bluest river I've ever seen," and she enjoys water skiing.

Her family has perfected a beer batter for frying walleye. She has never caught one, but said someday she hopes to land a big one.



Glad to be back in Michigan, his home state, after three and one half years at the Richland, Washington WNP-2 nuclear project is **Bruce Moulton, Instrumentation Engineer.**

Bruce served at the Greenwood project with the Instrumentation Dept. from 1977 through March of 1979 before transferring to Washington. While working at Richland, he met and married Candy, who happens to be the daughter of Tom Wynne, Lead Civil Supt. at Belle River.

Bruce said he is happy to be back in a boating state, and has brought his water skiing boat with him. At Richland he lived within a mile of the Columbia River.

Serving at Richland, Bruce worked in the Instrumentation Dept. and as Quality Control Engineer. He also tried his hand at elk hunting in the mountains, which surround the area.

During his western sojourn, he took lessons and obtained his pilot's license and enjoyed fishing and camping in Idaho.



Electrician Jim Jones

White water rafting on the wild Youghiogheny

The eight mile stretch of the Youghiogheny River is a classic white water. Calm pools of clear blue water interrupting turbulent rapids created over the years by the river slicing through the Laurel Mountains of Southwestern Pennsylvania.

A veteran of the white water rafting trips is **electrician Jim Jones**, who has made this adrenalin pumping white water journey 15 times and annually hosts group tours to the area.

Jim got into white water rafting at the invitation of a friend several years ago. He made the trip to the Youghiogheny River and has been hooked ever since.

Located in the Ohiopyle wilderness area and located one and one half hours drive southeast of Pittsburgh, the Youghiogheny is a sparkling river — a challenge — alternating experiences through roaring white water and calm river stretches...all wrapped in the sights, scents and sounds of the wilderness.

Jim went the first time on a guided raft tour and has since purchased his own equipment. He takes groups of four to six persons along with him, and splits expenses. They split the raft rental fee of \$30 between them. The groups meet at the park and "suit up." Recommended attire for rafting is cut-offs, swim suits, etc. for summer wear and wool socks, sweaters or diver's swim suits in the spring and fall. Tennis shoes are a must, but no sharp objects should be worn. They also bring a change of clothing since getting wet is as sure as the fun they will have. Also, non-swimmers should not attempt this sport and life jackets are worn at all times.

Rated from 1-6, the 6-7 hour trip on the river is nothing you can take for granted, Jim said. "It's a real challenge." In the past 20 years 15 persons have been killed on the river, he said.



Each year in July, Jones takes a week vacation to this area. Last year he made the white water trip in a canoe with his girl friend. This was accomplished while paddling in the kneeling position on knee pads. Inside the canoe were special floatation pads.

But it was a piece of cake for a man who has made the trip 15 times.

"I'm really impressed with this river," Jim said. "But, over in West Virginia there are some rivers a lot more vicious than this."



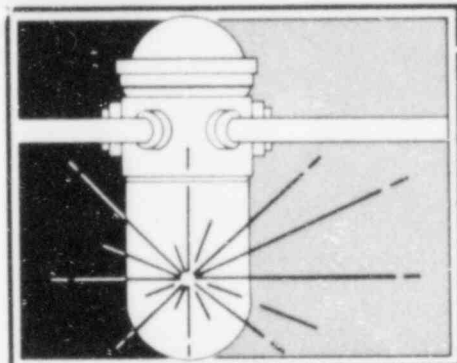


**Rats
and
bugs**
page 7



**Project
in
capital
spotlight**
page 4

**From the
pro tour
to
Midland**
page 8

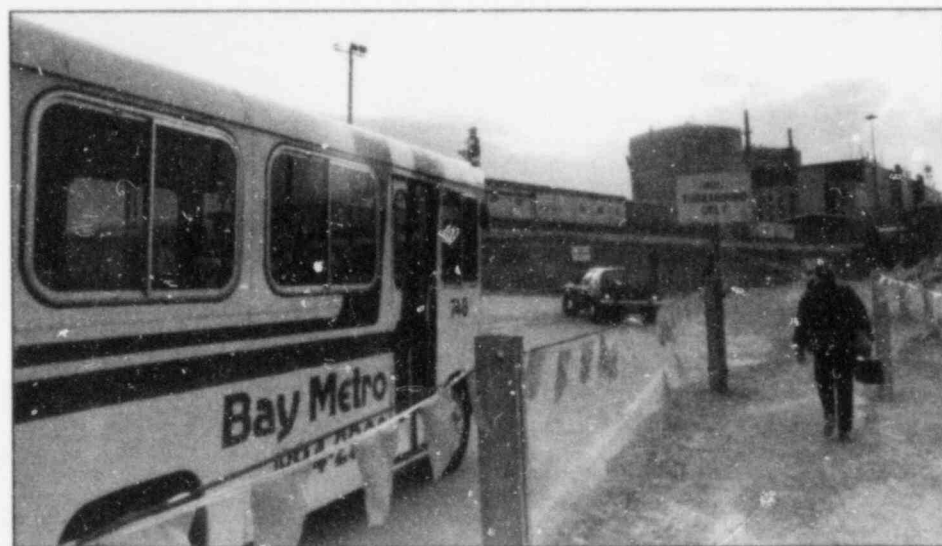


Midland REACTOR

Volume 8, No. 3

June-July 1983

Site managers re-affirm quality



MORNING HAS BROKEN—It's 6:55 a.m., and on a typical morning the Bay Metro bus has dropped its load of 16-17 passengers at receiving. The return trip starts at 4:10 p.m., and its about 30 minutes back to the starting point, downtown Bay City.

Dow Suit of CPCo.

Turning on a relationship of more than 18 years, Dow Chemical Company announced July 14 that it was pulling out of the Midland Nuclear Cogeneration Plant.

Dow's announcement that it wants out of the Midland project gives an ironic twist to the history of the facility.

For it was as a result of an idea forwarded by then-Dow President

Herbert (Ted) Doan to then-CPCo. Chairman A.H. Aymond in 1965 that Consumers Power first considered and planned for a nuclear cogeneration facility at Midland. In fact, the land upon which the plant is being built was made available for purchase to CPCo. by Dow.

In successive moves, the chemical company filed suit against CPCo.,
(See Dow Suit, page 2)

As the Midland Project enters a critical phase in the construction process — completion of the last 17 percent of the plant for the October, 1984 fuel load date set for Unit 2 —, both Bechtel Site Manager Gus Hierzer and Consumers Site Manager Don Miller re-affirm the importance of quality workmanship.

In a memorandum to all non-manual personnel, all foremen and all subcontractors, Hierzer noted that despite the creation of the Midland Project Quality Assurance Department (MPQAD) by CPCo., quality remains the responsibility of Bechtel's Construction Department.

"Doing each job right the first time (meeting requirements) is still the prime responsibility of construction personnel," Hierzer stated.

"We must work in a way that we know our work is right before it is submitted for official verification," he continued.

Hierzer noted that prior to the creation of MPQAD, the BPCo. quality control unit worked closely with construction. While MPQAD's presence on the Construction Completion Program (CCP) teams will continue the working relationship, the BPCo. site boss stated that the relationship will change in another respect.

(See Quality, page 5)

Major work release given soils

"Rolling ten," hour shifts are now the order of the day in the Mergentime soils responsibility area — the underpinning of the EPA, feedwater isolation valve pits, and the control tower.

A major release of work for the soils in mid-June by Regulatory Commission Region III officials permitted the start of around the clock work by the soils organization.

The release authorized the first work on the installation of grillage beams which will support the electrical penetration areas between the containment buildings and the control tower.

The beams will be installed from piers 8 east and west to the ledge of the containment buildings two and one, respectively.

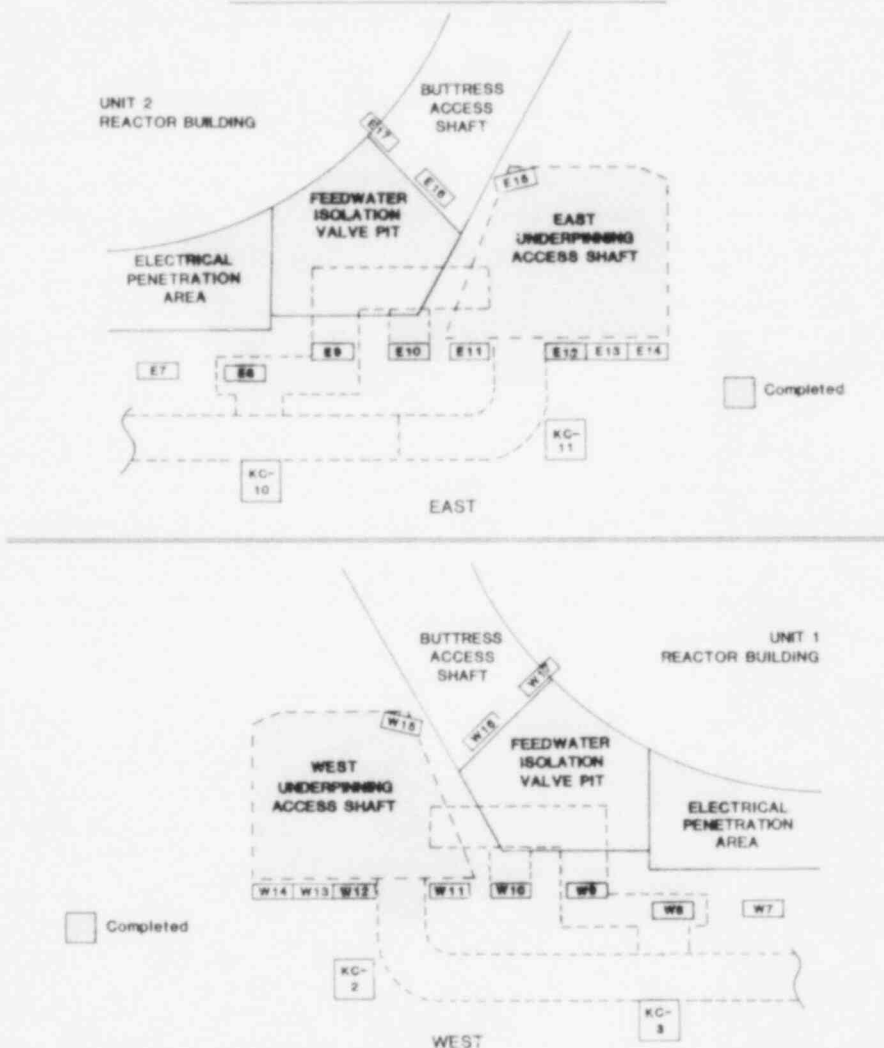
Two more sets of grillage beams are called for in planning before the area can be excavated for the permanent foundation.

Piers 2, 5, and 8 east and west will eventually support four grillage beams each. The release authorized by the NRC permits the remedial soils organization to start work on the first eight of the eventual 24 beams to be installed.

Excavation to the containment building ledge and construction of the structure on top of piers 5 east and west to which the grillage beams will be connected is expected to take 10 weeks.

The soils work is a major pacing item towards fuel load in October, 1984.

PHASE II OF AUX. BLDG. UNDERPINNING



soils progress to mid-July

CPCo. refutes Dow continued from page one

announced its decision to the media and then notified the office of CPCo. Vice President James W. Cook.

In the suit Dow alleges that CPCo. deliberately misled the firm on the completion date of the plant. The suit seeks relief from an agreement dating to 1967 under which Dow agreed to purchase up to 4,000,000 pounds per hour of process steam.

Further, Dow sued CPCo. to recover the costs it estimates at \$60 million for building the steam receiving facilities on Dow-Michigan Division Property.

Under the terms of a 1978 revision of the original contract, Dow could terminate the agreement if CPCo. did not deliver steam by December 31, 1984. On April 12, CPCo. Chairman John Selby announced the plant would not be finished in time to provide the steam by the 1984 deadline.

In its suit, Dow alleges that CPCo. was untruthful about soils problems and project schedule.

CPCo. Vice Chairman James B. Falahee issued a general denial of the allegations. Cook told a Midland Daily News reporter "we feel they are totally erroneous and totally deny we have done anything except manage

the project prudently and live up to all of our contractual obligations."

Both Bechtel Project Manager John Rutgers and CPCo. Site Manager Don Miller vowed to continue work on the plant.

"The plan as of today is to complete the plant as a two unit plant. Bechtel Power has an obligation to finish the plant and I ask you to get behind that plan," Rutgers said July 15 to an assembly of workers for QIP awards.

Miller noted that he had completed three nuclear power plants in the East and expected to complete this one, with or without Dow's continued presence.

Quality Corner



June Awards – BPCo. awarded bronze awards to the individuals at the left. From left to right they are: Jim Mohny, John Mattioli, Darleen Randall, Jack Bureau, F. Kanchwala, Dawn Schulz, and Bob Mac-Glashan. Absent from the picture are Sandy Shirley, Dan Buiard, Dave Henricks, Ron Hienkle, Gerry Jones, Paul Milward, and Virender Solanki.



Nurse Mary Sue Potter accepted a group bronze award for all members of the site nursing corps.



Richard Coates (left) and Richard Sherman, electricians assigned to B & W by BPCo., were awarded bronze pins.

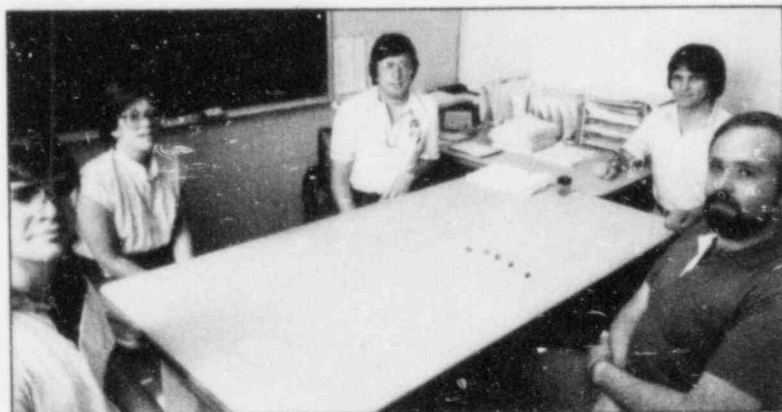


Bronze awards were also presented to Judy Davis, Mark St. Cyr, and Jodie Dore.



Silver QIP awards were presented to Jan Russell, electrical field engineering clerk and Mike Orr, MPQAD (QC) Mechanical.

QIP QIP QIP QIP



Resident Engineering presented bronze QIP awards to Dave Heron, Margaret Simpson, Wayne Wells, Jan Mazurak and Rich Ducham who gathered in the office of Dave Anderson (center) for the presentations.



MPQAD presented QIP awards to several individuals recently. Above Frank Mahala receives congratulations from MPQAD Executive Manager Roy A. Wells. Others receiving awards were: Ed Jones, Grant Germann, Ron Oberle, and Ron Field.

"Quality is built into the job – not inspected in"

Midland Project probed by Congress

Labor leaders from the national and local level told a Congressional Subcommittee that Midland employees are qualified and competent to perform their jobs properly and that they take great pride in their workmanship in constructing the plant properly. Labor officials testifying June 16 before the U.S. House Subcommittee on Energy and the Environment were: George Such, business manager for United Association Local 85; Joseph M. Cribben, legislative and research director of the United Association of Plumbers and Pipefitters; and Marshall Hicks, secretary-treasurer of the Utility Workers Union of America.

The subcommittee, chaired by U.S. Rep. Morris Udall, D-Arizona, also heard from John D. Selby, Consumers Power Chairman and President, and James W. Cook, Vice President for Projects, Engineering and Construction.

Such, speaking on behalf of the Michigan Construction and Building Trades Council, said, "Our highest priority and responsibility is to follow regulations and procedures properly to ensure that we are building a safe plant. Most of our construction force at Midland are local residents. They are not going to take shortcuts in building the plant that could impact on their safety and the safety of their families. The construction codes and regulations for building a nuclear plant are stricter and more detailed than for building any other type of electric generation plant. We see this daily in the performance of our jobs.

"The craftsmen follow strict Quality Control and Quality Assurance rules and regulations at the Midland Plant to ensure that Safety is not compromised. We have in place at the local union a program for our workers to tell their union leadership if they believe that safety and quality are being compromised. The business agent or Local President in turn can meet with the contractor or utility to make sure that any problems are corrected. The overwhelming attitude of our workers is that they believe that the quality of the Midland job is first-rate."



Consumers Power Chairman — and Chief Executive Officer, John D. Selby, (right) and James W. Cook, vice president for projects, engineering and construction, testified before the House Subcommittee on Energy and the Environment on June 16. Seated behind Selby and Cook, are Dennis M. Budzik, CPCo. licensing head and (right) William G. Henry, vice president and deputy general manager, AAPD-BPCo.

"I want to reassure this committee that the Midland Nuclear Plant is being built safely," Such said. The craftsmen and women at the job-site would have it no other way. The union leadership of my local and other building trades local unions working at Midland also will have it no other way."

Cribben, whose office is at UA headquarters in Washington, D.C., said he was appearing with the approval of general president Marvin J. Beode of the UA and Robert A. George of the AFL-CIO Building and Construction Trades Department.

He told the Udall subcommittee that:

"Training our people in the skills necessary to qualify them for their work is one of the principal obligations of the union at both international union and local union levels.

"Our training programs are sponsored, supervised and financed jointly by management and labor, under the careful scrutiny of the U.S. Department of Labor's Bureau of Apprenticeship Training."

"The training programs are financed by collective bargaining agreements that allocate a certain amount of money for each hour worked by UA members. If there were no training program, this money would go into the pay envelopes of the craftsmen involved. Therefore, we have a unique situation in which the journeyman himself contributes from ten to twenty-five cents an hour to train an apprentice who will eventually compete within the same area of work as the journeyman.

"Our members know that their skill is their stock-in-trade. They take great pride in their work and, on the practical level, they know that top quality performance on the job will mean increased job opportunities in their working lives."

"In view of the sometimes scathing and shot-gun attacks on not only inspections but on the quality of the craftsman's work itself at Midland and at other nuclear construction sites, we feel our presence at this hearing may help to put our concern about top quality training programs

"The overwhelming attitude of our workers is that they believe that the quality of the Midland job is first rate . . . I want to assure this committee that the Midland Nuclear Plant is being built safely."

—George Such, Business Manager
United Association Local 85

ssional panel

"Our members know that their skill is their stock-in-trade. They take great pride in their work and, on the practical level, they know that top quality performance ... will mean increased job opportunities."

*—Joseph M. Cribben
Legislative Director
United Association*

in sharper focus for the benefit of the committee and, perhaps to provide a certain amount of reassurance for the general public."

Marshall Hicks told the Udall subcommittee that he represented about 250 OM & C union employees for Consumers Power at the plant and another 5,000 employees elsewhere in the Company. He said that members of his union at Midland are committed to the safety of the plant and are not reluctant to report to management any problems they encounter in their daily work. Hicks said that he believes that management has been candid and open with UWUA workers on site and that his union will continue to support the commitment of operating the plant in conformance to applicable federal safety codes and requirements.

Hicks reviewed with the Congressional delegation how his members are responsible for testing and operating plant equipment when it has been turned over to Consumers Power.

MIDLAND REACTOR

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Jackie Mills ... Contributing Artist
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Published monthly for the
employees of the Midland Project
and their families.

Safety notes

The Midland Project recorded an overall injury frequency rate of eight for the month of May. This compares favorably with the target of 50 established by the Ann Arbor Power Division (AAPD), BPCo.

Injury-free crafts included bricklayers, boilermakers, cement masons, electricians, ironworkers (riggers and rebar), mill wrights, operating engineers, laborers, painters, surveyors, and teamsters. Injuries incurred last month by pipefitters, ironworkers (structural) and carpenters contributed to the recorded project frequency.

In June, the Midland Project recorded an overall injury frequency rate of 12, again in positive comparison with the target of 50 established by AAPD.

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On June 1, a CPCo. warehouse employee suffered a back injury when three tailgates of a stake rack struck the employee in the back. This accident resulted in the first lost time injury a CPCo. employee has suffered since February 2, 1982. During this time, CPCo. employees at the Midland Project have worked 485 days and 1,481,000 man hours without a lost time injury.



1,000,000 Hours — GB Slade, CPCo. Superintendent, Gordon Wall, safety director, and Joe Bogart of the UWUA prepare plaque signifying Midland Plant's 1,000,000 man hours worked without a lost time injury for placement in trophy case. The award was presented by the Edison Electric Institute.

Managers stress quality (continued from page one)

"Any previous dependence on this group (QC/MPQAD) to tell us what is wrong with our work must now be eliminated. We will know the work is correct!"

While pointing out that an effective quality program depends on all personnel, Hierzer emphasized a few more points in his memorandum:

— "I will be holding construction supervision and field engineering accountable for the success of our quality program. As I have stated repeatedly, we build quality into construction; we do not inspect it in.

— "One message that should ring

loud and clear to all personnel is the importance of procedure adherence. I am directing construction supervision to take a tough stance on this requirement, and remove from positions of authority those individuals who cannot or will not comply... There simply is not latitude for deviations on this matter," Hierzer wrote.

The new BPCo. site manager said that he will be an active part of the Quality Improvement Program (QIP) and added "This (QIP) is not to be taken lightly. It is my philosophy."

(continued on page 8 see Quality)

MPQAD readies massive inspections

Verifying the Midland project is built according to specifications is the basic responsibility of the Midland Project Quality Assurance Department (MPQAD).

Since last January when Consumers Power took over management of both quality control and quality assurance, MPQAD has been rapidly expanding to meet its project commitments.

MPQAD is presently preparing a 100% reinspection of safety-related work that has already been completed as well as providing support for the resumption of quality work when released by the NRC.

To provide the support needed for this massive undertaking, MPQAD has built a staff of just over 700 individuals. Of these, approximately 310 are inspectors. MPQAD is budgeted for 782 positions, which should be fully staffed by September 1.

Gary Ewert, head of MPQAD administration and training, said that setting staff levels is based on meeting project commitments.

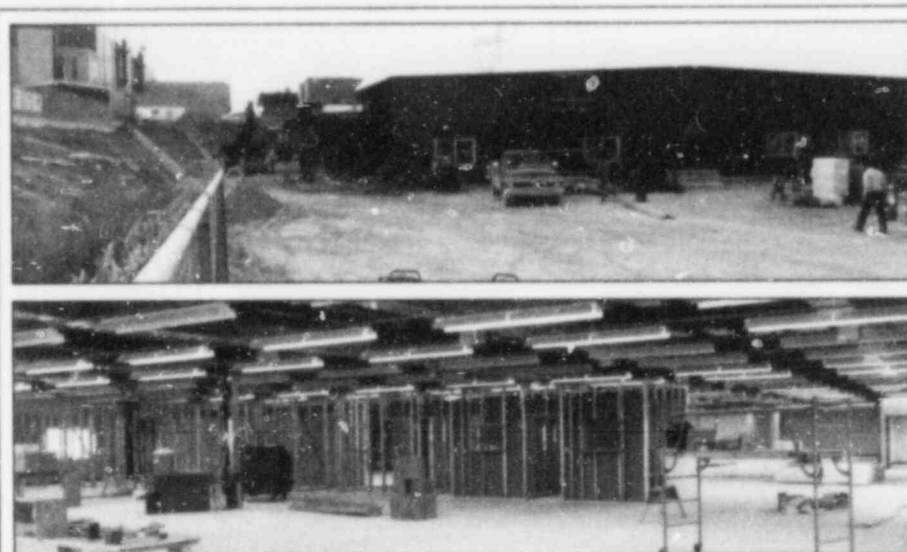
The housing of the added inspection effort has been a major consideration. This will be partly relieved with the completion of the Support Services Building. Two-thirds of the building is occupied by MPQAD's Quality Control Division and the Plant Assurance Engineering Section.

Besides determining how many new inspectors are needed, a major effort of MPQAD is finding qualified individuals needed to satisfy requirements to verify that work has been completed according to specifications.

All inspectors, whether or not they have previous experience at the Midland project, will be retrained, Ewert points out.

"The training program does not take credit for previous experience," Ewert states. Inspection training is given to all inspectors whether or not they worked at Midland Project or other projects.

All inspectors will receive both programmatic training and technical training. The programmatic training continues for three and one-half days while the technical training varies in length according to the previous experience of the individual.



Support Services Complete — Construction was recently completed of the new support services building. Moving in started over the July 16-17 weekend for portions of the MPQAD staff and BPCo. construction staff.

Ewert says that in addition to training and regardless of the previous work of an individual inspector, each Midland project inspector must successfully pass a performance demonstration. During the demonstration, the individual must show an understanding of the inspection plan and an ability to complete the documentation required.

MPQAD has completed a 100% reinspection of electric cable. The reinspection concluded that of some 9,200 cables, only nine were installed with improper codes.

Of the nine cables, four have been replaced, two will be replaced at a later date, one has been deleted from plant design and two likely will be dispositioned to use "as-is." None of the other cable characteristics, in-

cluding voltage rating, electrical shielding, insulation, environmental qualification and fire protection failed to meet the appropriate specifications as had been claimed.

The lengthy reinspection was prompted by the allegations of an anonymous former site electrician that numerous wrong size cables were installed and the possibility existed of spurious signals. The allegations were proven by the MPQAD reinspection to be false.

Other inspections include those of hangers which is now underway and work completed by Bechtel's General Services Organization. MPQAD has also trained and certified inspectors to work continuously on the soils underpinning and HVAC work.

PROJECT STATUS FOR MONTH OF JUNE

DESIGN COMPLETION 95%*

ENGINEERING COMPLETION 82%*

CONSTRUCTION COMPLETION 34%*

*except remedial soils

	THIS MONTH	TO-DATE	(F/C # 7)
Large Process Piping (lineal feet) ...	169	276,723	280,000
Small Process Piping (lineal feet) ...	1,638	310,327	325,350
Conduit (lineal feet)	1,003	570,066	610,000
Wire & Cable (lineal feet)	49,386	9,971,274	10,750,000
Connections (each)	1,384	290,379	356,000
Large Pipe Hangers	81	14,517	15,485
Small Pipe Hangers	109	14,702	18,260

Keeping pests under the "thumb"

Warm weather can bring out many good things to enjoy. Tennis rackets, golf clubs, baseball and softball mits and bats, picnic hampers and the like are dusted off as mid-Michigan enjoys one of the warmest summers in recent memory.

The warm weather also brings out other not-so-welcome guests.

Climbing, flying, slithering, crawling, digging, and just plain sneaking their way into the site where they can cause serious problems and difficult working conditions is an assortment of rodents and insects.

Nor has the problem of these unwanted visitors been just a matter of concern to employees and management on the Midland project. Not so long ago a story on the havoc caused by rats was carried in area newspapers.

Keeping the critters under control is the job of Mark Grauf and, until recently when he accepted a return to work at one of the valley's General Motors plants, Jim Macaig assigned full time to Midland project site by Thumb Pest Control of Bay City-Saginaw.

The company is no stranger to difficult assignments. Among its more interesting commercial clients are Wurtsmith Air Force Base near Oscoda, all the GM plants, and the Pepsi-Cola and Coca Cola bottling plants.

However, the Midland Project is among the most challenging of all, according to Thumb's Jann Osbourne of the firm's Bay City office.

"The Midland Project poses a high degree of difficulty," she told the Reactor.



Thumb's agents place these boxes around site for the convenience of Midland Project rodents. Flavors vary to keep rats from developing immunity to particular poison.



Mark Grauf, newly assigned to Midland Project by Thumb Pest Control, sprays for insects inside one of the steel buildings on site. Internal spraying is done when buildings are vacant to prevent noxious fumes from affecting employees.

"Because of its location — the open spaces, the abundant water availability — it is a perfect rodent environment," Osbourne says.

But for Macaig and Grauf it is a challenge built upon their leisure time activities of hunting and trapping.

Perhaps the most challenging animal to corral, though, is the common rat. Macaig says that Midland is fortunate to face only country rats and not their more sophisticated city brethren.

Macaig notes that rats are among the smartest mammals and in order to keep them under control he switches the flavor of the poison — an anti-coagulant — often. He notes with certainty that common rat bait poisons are just too routinely used to be effective. The rat takes a small bite of it, realizes the material is poisonous and won't touch it again.

Among the flavors offered Midland Project rodents are fish, apple, grain, peanut butter and molasses, and chocolate. The bait is placed in small, white boxes clearly labelled around the site where rats have been reported by site workers.

"The site has cleaned up considerably since I started here last Labor Day," Macaig states. He says that the biggest draw the rats have is food scraps left around the site.

Both Macaig and Grauf say their strongest allies are employees themselves. They encourage employees to volunteer information about rats, insects or any other pests around the site.

In addition to laying poison for rats, Macaig and Grauf are often called in to help stamp out spiders, mosquitos, ants and other insects. For this they use a variety of sprays that are non-toxic to humans and also which mostly carry no odor.

Both Macaig and Grauf are careful of the amount of spraying they do.

Besides rats and insects, the "rat patrol" is also responsible for containing other forms of wildlife which wander onto the site. These include skunks, raccoons, and woodchucks.

The latter carnivore is something of a challenge for Thumb. Macaig and Grauf consider the woodchuck's presence a threat to the integrity of the cooling pond, but have been somewhat unsuccessful in luring him into one of the live traps set for his or her use.

The live trap and its use expresses a philosophy of Thumb that is out of the ordinary for pest control companies.

"You don't have to kill everything just to rid the site of pests," Macaig notes. He said Thumb tries to use live traps for every animal except rats.

Employees who notice rodents or other pests can contact Thumb's agent, Mark Grauf, through Harold Adler in Bechtel subcontracts. His extension is BPCo. 411.

Eliminating rats and other pests can be done and according to those who've seen their work on site, Thumb's agents have them, well, under the thumb at Midland.

June Oldman: pro golfer/CHP technician

Looking over the Pacific Ocean while lining up a putt on the seventeenth at Pebble Beach may not be the same as looking over the cooling pond at Midland while performing a chemistry sampling program.

But for one chemistry/health physics technician the water may lead to a bit of reminiscing about days of competitive golf.

For June Oldman, playing professional golf became an introduction to the nuclear energy business and her job as a chem/HP tech at the Midland Nuclear Cogeneration Plant.

focus

Oldman toured for eight months in 1979 on the woman's pro golfing tour. She golfed at some of the best known courses in the country — Pebble Beach, Spy Glass and Broadmoore — while on tour with both the Ladies Professional Golfing Association (LPGA) and the Women's Professional Golfing Association (WPGA).

The pro tour was just the midpoint in her career with golf.

While at Michigan State University, Oldman starred for the Spartan women's golf team.

She wore the green and white for three years and, not surprisingly, in those three years she helped the Spartan women to three straight Big Ten championships in 1974-1976. In 1975, Oldman was named the Big Ten Golfer of the year.

What does she say about the pro tour?

"It's not all it's cracked up to be,"



June Oldman

she notes, but quickly adds "It was a great experience. I travelled all over and met a lot of people who are prominent in golf," Oldman said.

In noting the constant travel she encountered on the tour, the attractive, easy smiling Oldman said that in order to succeed, a pro golfer can't be concerned about other players.

"You have to be for yourself and only for yourself," Oldman observed. "You can't care for anyone else because no one cares about you."

After getting off the pro circuit, Oldman was the club pro at a golf course near Jackson. While there she put her chemistry background to use in overseeing turf management. It was there her technical background was discovered and put to use for CPCo.

Coming to Midland in January, 1982, Oldman checks out radiation detection instruments. She and her colleagues insure detection equipment is operating properly and will be an integral part of the radiation protection team when the plant is operational.

As for golf, Oldman says the key to a successful round is in the head.

"Everyone's golf game is the same," she says matter-of-factly, "but it's how you think that's important."

"Some people with the best swings and the best shots don't get the card," she adds.

As for herself, Oldman tries to play four times a week during the summer, but says the winter lay-off noticeably affects her game in the spring.

And the comparison when she was a pro?

"I enjoy the game more because I'm more relaxed when I play," she says.

As for her favorite courses, she picks two, both in northern lower Michigan: the Garland Country Club near Lewiston and Boyne Highlands near Harbor Springs. On the West Coast, June Oldman remembers a number of courses in Oregon as her favorites.

Recalling her days as club pro in the Jackson area, Oldman says the best part of the job was playing at least once a day and often twice. It was playing with club members that opened her knowledge of the need for individuals with a chemistry background for work on the Midland nuclear project.

Oh yes, Oldman does give lessons — by appointment.

Quality continued from pg.5

In an interview with the **Reactor**, Don Miller stated a similarly strong stand on the continuing need for adherence to quality on the Midland Project.

The CPCo. site leader, though, noted that the construction completion plan is a vital part of the quality effort at Midland.

"We recently received clearance to start training our CCP system teams," he reported.

"The CCP is 'our' plan to finish the Midland Nuclear Project in a manner

that satisfies the NRC regulatory requirements and at the same time meets cost and schedule," Miller explained.

"The CCP is only a plan to finish the project in the manner described. But the implementation of that program depends on the individual and by individual I mean every employee on the Midland Project whether he or she be craftsman, a plant operator, supervisor, quality representative or superintendent," Miller said.

"The individual performance of each person in accordance with ap-

proved procedures and drawings is the key to making the CCP a viable program to finish the plant," Miller

"As always, if any employee sees a problem that he or she believes is not being properly resolved by the immediate supervisor, the employee should bring it to the attention of higher authority," Miller stressed.

"I want to emphasize the need for individual performance: implementation of the CCP requires the support of all site personnel. No one is less important than anyone else to its success," he added.