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US NRC (FORMERLY AEC)
JAN STRASMA
799 ROOSEVELT RD
GLEN ELLYN IL 60137

MSG # ML8646

JACKSON, MICH, NOVEMBER 9, 1983 -- PRELIMINARY INDICATIONS FROM A STUDY BEING CONDUCTED BY CONSUMERS POWER COMPANY ARE THAT THE COMMERCIAL OPERATION DATE OF UNIT 2, THE ALL-ELECTRIC UNIT AT ITS MIDLAND NUCLEAR PLANT, MAY BE DELAYED UNTIL MID-1986.

UNIT 2 HAD BEEN SCHEDULED TO BEGIN COMMERCIAL OPERATION IN FEBRUARY 1985.

ON OCTOBER 6, 1983, THE COMPANY'S RECEIVED NOTIFICATION FROM THE NUCLEAR REGULATORY COMMISSION THAT IT HAD APPROVED THE COMPANY'S CONSTRUCTION COMPLETION PLAN FOR THE REMAINING WORK ON THE MIDLAND PLANT. THE PLAN, DESIGNED TO OVERCOME PERCEIVED QUALITY ASSURANCE PROBLEMS, IS A COMPREHENSIVE PROGRAM FOR COMPLETION OF THE FACILITY. NRC APPROVAL OF THE PLAN HAD BEEN EXPECTED IN THE SPRING OF 1983.

CONSUMERS POWER HAS BEEN CONDUCTING A STUDY TO DETERMINE THE IMPACT OF SEVERAL FACTORS ON THE ESTIMATED COMMERCIAL OPERATION DATE AND COST OF THE ALL-ELECTRIC UNIT. THE FACTORS INCLUDE TIMING OF NRC APPROVAL OF THE COMPLETION PLAN, IMPLEMENTATION OF THAT PLAN, THE EXPANDED REINSPECTION REQUIRED BY THE NRC IN CONNECTION WITH IMPLEMENTATION OF THE PLAN, PLUS THE EFFECT OF DECOUPLING CONSTRUCTION OF THE SECOND UNIT DUE TO DOW CHEMICAL COMPANY'S ATTEMPTED WITHDRAWAL FROM A CONTRACT TO PURCHASE STEAM FROM UNIT 1 OF THE PLANT.

THE STUDY IS EXPECTED TO BE COMPLETED BY THE END OF 1983.

THE CONSTRUCTION SCHEDULE FOR UNIT 1 WILL BE REVISED BASED ON COMPANY CASH-FLOW REQUIREMENTS, THE NEED FOR POWER, FINAL COST ESTIMATES AND THE CONSTRUCTION SCHEDULE FOR UNIT 2.

THE COMPANY ESTIMATES THAT THROUGH 1983 APPROXIMATELY $3.4 BILLION OF COSTS WILL HAVE BEEN INCURRED FOR THE MIDLAND PLANT. EXPENDITURES AFTER 1983 WHICH ARE STILL UNDER REVIEW ARE EXPECTED TO INCREASE SUBSTANTIALLY DUE TO THE DELAY IN THE COMMERCIAL OPERATION.

M G KOSCHIK

NOV 14 1983

Western Union Mailgram

END TO CEW

10:46 EST

MGMCOMP

October 31, 1983

Docket No. 50-[illegible]
Docket No. 50-[illegible]

MEMORANDUM FOR: Region III Files

FROM: James G. Keppler, Regional Administrator

SUBJECT: MIDLAND - MEETING WITH MESSRS. J. SELBY AND S. HOWELL

At the request of the NRC staff, Mr. J. Selby, President and Chief Executive Officer, and Mr. S. Howell, Executive Vice President of Consumers Power Company (CPCo) met on October 25, 1983 in Bethesda, Maryland with Mr. R. C. DeYoung, Director, Office of Inspection and Enforcement and Mr. James G. Keppler, Regional Administrator, Region III. The purpose of the meeting was for NRC management to discuss with CPCo the staff's perception of the need to include an independent audit of CPCo's management of the Midland project as part of CPCO's program of corrective actions at Midland. As a result of the discussions held, Mr. Selby agreed to include a proposal for an independent management audit in a plan of action which CPCo has been preparing for submittal to the NRC. This proposal would include for staff approval the nomination of an independent party to conduct the audit.

Messrs. Selby and Howell requested that CPCo be given the opportunity to further state their position with respect to the alleged violation of the construction permit conditions reflecting the Licensing Board's April 30, 1982 remedial soils order. An enforcement conference on this matter was held in Region III on October 11, 1983. Messrs. DeYoung and Keppler agreed to hold a second enforcement conference to consider this matter. The enforcement conference was subsequently scheduled to be held on November 4, 1983.

James G. Keppler
Regional Administrator

cc: See Attached Distribution List

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October 28, 1983

Harold R Denton
Office of Nuclear Reactor Regulation
U S Nuclear Regulatory Commission
Washington, DC 20555

MIDLAND ENERGY CENTER
MIDLAND DOCKET NOS 50-329, 50-330
CONSTRUCTION COMPLETION SCHEDULE
FILE: 0652.1 SERIAL: 26237

This letter is in response to T M Novak's letter of November 4, 1983 regarding a follow up meeting with the Case Load Forecast Panel on the schedule for the completion of the Midland Nuclear Plant. As indicated to your staff during the summer, we had hoped to meet with them last July to continue the schedule discussions initiated in April. However, the plan we set forth and reviewed with the Case Load Forecast Panel in April is no longer valid. The impact of the Dow termination and the delays in the approval of the CCP has significantly changed many of the major schedule assumptions in that plan. As a result, we do not believe that it is useful for either your staff or our own to participate in additional schedule reviews until we complete the new project plan now under preparation.

It is our intent to issue a new Unit 2 schedule shortly after the first of the year. This new schedule will incorporate a number of developments and information that were not able to be incoporated in our prior plan. In addition to the actual construction activities still to be completed, our new schedule will be able to incorporate a model of the actual CCP activities which have been developed in considerably more detail since the prior plan was released. In addition, now that the CCP has been released, we have an actual starting point from which to proceed and we will have the benefit from the results of preliminary walkdowns to more accurately identify the quantity of work in specific areas. In addition, the new plan will incorporate the conclusions of our work in decoupling the construction of Unit 1 from Unit 2 as a result of the Dow termination. We have also developed additional information and data on the test program portion of the schedule as a result of our discussions with your staff last spring. However, even that information will be modified somewhat in our new schedule. While our new schedule cannot resolve all of the uncertainties associated with our to-go activities, I believe it is a significant enough change that would warrant postponing a further Case Load Forecast Panel meeting until this new schedule is announced.

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The above discussion indicates the basis for our recommendation to defer further Case Load Forecast Panel meetings until our new schedule work is completed. This letter documents the discussions I have had on this subject with Mr Novak and Ms Adensam during the past two weeks. We are anxious to provide the staff with any information they may need as soon as it is available and, if necessary, we can provide a partial interim briefing if that will assist the staff in their immediate planning needs.

We will await your direction on how to proceed in bringing this matter to a conclusion.

James W. Cook

JWC/JNL/dlm

CC RJCook, Midland Resident Inspector
JGKeppler, Administrator, Region III

CONSUMERS POWER COMPANY
Midland Units 1 and 2
Docket No 50-329, 50-330

Letter Serial 26237 Dated October 28, 1983

At the request of the Commission and pursuant to the Atomic Energy Acts of 1954, and the Energy Reorganization Act of 1974, as amended and the Commission's Rules and Regulations thereunder, Consumers Power Company submits information concerning project scheduling matters.

CONSUMERS POWER COMPANY

By /s/ J W Cook
J W Cook, Vice President
Projects, Engineering & Construction

Sworn and subscribed before me this 28 day of October, 1983

/s/ Barbara P Townsend
Notary Public
Jackson County, Michigan

My Commission Expires September 8, 1984

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

ECM

OCT 2 1 1983

Docket No. 50-329
Docket No. 50-330

Consumers Power Company
ATTN: Mr. James W. Cook
Vice President
Midland Project
1945 West Parnall Road
Jackson, MI 49201

Gentlemen:

We have completed a review of your June 24, 1983, supplemental response to item B.6 of the Notice of Violation and Proposed Imposition of Civil Penalties sent to you with our letter dated February 8, 1983.

As stated in our August 29, 1983, letter, we forwarded your June 24, 1983, response to Item B.6 to the Division of Engineering, Region III, for their review and comment. As a result of that review your response has been determined to be unacceptable.

The requirement for a 70°F preheat for carbon steels is to ensure that cracks do not occur when welding is initiated on cold steel.

Liquid penetrant tests (PT) should be performed on all welds for which verification of preheat is not available, since weld metal and base metal cracks are likely to be visible from the surface.

In addition, page 189 of the Metals Handbook, Volume 6, Eighth Edition on Welding and Brazing published by the American Society for Metals reads as follows:

> "Welding at low ambient temperature (especially below room temperature) can cause cracking, and preheating to a safe-to-weld temperature is usually the easiest and most effective preventive."

Similar statements on the need for preheating carbon steels can be found in handbooks of the American Welding Society (AWS) as well as G. E. Linnert's Text on Welding Metallurgy, 2 volumes, Third Edition, ASW, 1965-1967.

In view of the above, it is our position that you PT the welds and heat affected zones for all welds for which the required preheat verifications were not performed and documented.

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Therefore, we request that you submit to this office a schedule for the PT program within twenty-five (25) days of the date of receipt of this letter.

Your cooperation with us is appreciated.

Sincerely,

"Original signed by R. F. Warnick"

R. F. Warnick, Director
Office of Special Cases

cc:
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Keppler
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Consumers Power Company

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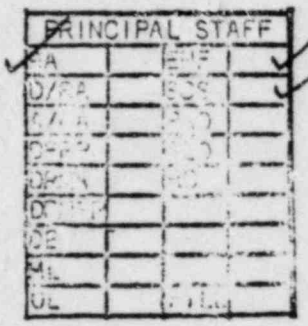

Ltr +3

June 24, 1983

Mr J G Keppler, Regional Administrator
US Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

MIDLAND ENERGY CENTER
DOCKET NO 50-329 AND 50-330 - MIDLAND PROJECT RESPONSE TO NRC,
REGION III LETTER DATED May 23, 1983
File: 0.4.2 OFI: 70*01 Serial: CSC-6764
0485.16 42*05*22*04

REFERENCES: (1) J G Keppler letter to J W Cook, dated May 23, 1983
(2) J G Keppler letter to J D Selby dated February 8, 1983; Notice of Violation EA 83-3

This letter, including Attachment 1, provides our response to Reference 1, which requested additional information on our earlier response to Reference 2.

James W. Cook

JWC/BHP/lrb

cc: RFWarnick, NRC Region III
JJHarrison, NRC Region III
RNGardner, NRC Region III
RJCook, NRC Senior Resident Inspector, Midland Site
RBLandsman, NRC Region III
RLBurgess, NRC Resident Inspector, Midland Site

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Docketing and Service Station
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U S Nuclear Regulatory

Washington, DC 20555

Attachment 1

Response to J G Keppler letter to J W Cook dated May 23, 1983

The response to J G Keppler letter to J W Cook dated May 23, 1983 is submitted in the following format:

NOV Item B Identification Number

A. Statement of Original Violation (from J G Keppler letter to J D Selby dated February 8, 1983: Notice of Violation EA 83-3.)

B. Request For Additional Information (from J G Keppler letter to J W Cook dated May 23, 1983.)

C. Statement of Additional Information

NOV Item B - 1.a (82-22-02A)

A. Statement of Original Violation

"Installation of diesel generator engine control panels 1C111, 1C112, 2C111, and 2C112 was not in accordance with the requirements delineated on foundation Drawing 7220-M18-250 in that the foundation bolt washers required by the subject drawing were not installed."

B. Request For Additional Information

"Regarding Item B.1.a, your response to this item and subsequent items does not address the measures you have taken or plan to take to provide training to craft personnel and engineering personnel to ensure that quality requirements will be recognized and complied with during future installation/construction activities. A revised response addressing this training is necessary."

C. Statement of Additional Information

The construction training procedure (FPG-2.000, Rev 3 approved May 11, 1983 and subsequently Rev 4 approved June 20, 1983) has been revised to establish a program which assures that Construction personnel working on the Midland Project receive appropriate training necessary for the execution of the Construction Completion (CCP) Activities such as status assessment and installation work activities.

The procedure sets down specific requirements for type of training and subject matter for each organization element. The training requirements by type and subject are defined in a matrix for each organization, management and staff level including craftpersons. The training matrix has been approved by Consumers Power Company.

The team training matrix includes the major elements described below:

1. General training will be provided in

   A. Quality requirements for nuclear work

   B. Requirements of the CCP

   C. Safety orientation

   D. Inspection and work procedures

Formal training in Items (A) through (C) and selected parts of (D) will be conducted, and will be given to all personnel including the craftpersons.

NOV Item B - 1.a (82-22-02A) Continued

In addition, a "tool box" training session will be conducted at least monthly for the craftpersons by the foreman. The subject matter will be developed by the training coordinator, and will include information regarding quality issues across the job.

2. Training in the procedures used to govern the performance of work will be conducted for designated field engineering, support personnel and craft personnel as defined in the training matrices.

Formal training will be conducted for identified procedures that define the control of designated work processes, procedures for control of special processes and requirements for inspection and acceptance of completed work. Formal training includes classroom or field demonstration/discussion sessions.

Required training in all applicable procedures will be completed prior to start of "Q" work for each specific work activity.

NOV Item B - 2.a (82-22-08)

A. Statement of Original Violation

"Measures were not established for the selection and review for suitability of application of "Q" materials associated with the diesel generator exhaust muffler in that design drawings and specifications did not indicate the material identity of the installed muffler saddle supports and plates."

B. Request For Additional Information

"Regarding Item B.2.a, we reiterate our position that the lack of design documentation which specified the material requirements for the diesel generator exhaust mufflers constituted an item of noncompliance. Please provide any additional information supplied by the vendor regarding the traceability of the exhaust muffler materials, and as appropriate, your corrective actions and the results achieved, corrective actions taken to avoid futher noncompliance, and the date when full compliance will be achieved."

C. Statement of Additional Information

New information has just been received from the vendor and is being evaluated. We expect that an amended response will be submitted by July 8, 1983.

NOV Item B - 2.c (82-22-15C)

A. Statement of Original Violation

"Design Drawings C-1004 and C-147 did not specify the sizes of the diesel generator building HVAC fan gusset plates. A "combo" shop work order request was used to design the gusset plates without appropriate review and approval.

B. Request for Additional Information

"Regarding Item B.2.c, your response does not address any revision to the onsite practice of utilizing unapproved, unreviewed field sketches or shop work orders to perform design activities. Please provide an additional response addressing this concern."

C. Statement of Additional Information

FIG-1.600 Rev 3, Preparation of Shop Work Request Form, allowed the use of "free hand" sketches for the craft in the combination shop for clarification purposes only" as long as the sketch portrays only "information already given in the design documents." FCR C-5174 was issued and approved to clarify the design drawing criteria to be utilized for detailing bracing connections.

Subsequently, FIG-1.600 Rev 4 was processed as part of the overall CCP procedure review process, and approved on April 19, 1983. Revision 4 eliminates the use of the above mentioned free hand sketches and now requires the use of reviewed and approved field sketches.

NOV Item B - 4.a (82-22-25)

A. Statement of Original Violation

"An inspection program was not established to ensure segregation of cables installed in horizontal trays which used metal dividers to segregate control and instrumentation cables in accordance with design requirements."

B. Request for Additional Information

"Your response is incomplete in that the corrective action delineated in your response does not include the establishments of an inspection program to ensure required segregation during future cable installations. Please provide an additional response addressing this concern."

C. Statement of Additional Information

Quality Control Inspection Plan PQCI 7220-E-4.0, Rev 13 and Change Notice AA 5042 currently establishes the control necessary to ensure required segregation during future cable installation. These controls are noted in activity 2.10 for correct installation and activity 3.2 for tie downs in horizontal tray sections.

Activity 2.10 states, as follows:

> "Verify that the cable is correctly installed in the identified vias as specified on the cable pull card by highlighting those vias which are complete."

This activity is identified as a Witness Point and an Inspect and Measure item. This requires that an inspector be present during the execution of the work and that he perform a visual examination and measurement to verify the conformance of the work operation to predetermined quality requirements.

The following exclusions on raceway and pull cards are authorized by Project Engineering Specifications and Drawings as follows:

a. Conduits shown terminating to a tray section can be installed a maximum of 18 inches into the adjoining tray section without requiring revision to the cable routing as it appears in the circuit schedule (Drawing E-37) or raceway schedule (Drawing E-36).

b. A cable can be installed a maximum of 18 inches into the adjoining tray section, without requiring revision to the cable routing as it appears in the circuit schedule (Drawing E-37). Construction is to furnish a FCN if a section change affects cable routing.

NOV Item B - 4.a (82-22-25) Continued

Activity 3.2 states, as follows:

> "Verify that cables are tied down in horizontal tray sections at each horizontal change of direction, within two rungs in each direction and in accordance with FPE-4.000(Q) Rev 7 dated 3/18/83."

This activity is an Inspect and Measure Item. This requires the inspector to perform a visual examination and measurement to verify the conformance of the work operation to predetermined quality requirements.

This PQCI will be used for the installation of Class "1E" cables, and will be further assured by means of the Construction Work Plans which will include the required inspection points (MPQAD Procedure T-3).

NOV Item B - 6. (82-22-13)

A. Statement of Original Violation

". . . During welding of the diesel generator building exhaust piping hanger support steel, the licensee did not verify preheat of existing safety-related structural steel at a temperature of 70°F as required by site specifications and the AWS 1974 Code."

B. Request for Additional Information

"Regarding Item B.6, it is our position that a 100% preheat verification be accomplished for preheats of all welds made between 32° and 70° until such time as you establish confidence in the welders' compliance with preheat requirements. In addition, we request that you supply this office with the written evaluation of all welds for which preheat verifications were not previously identified. Please provide an additional response addressing this concern."

C. Statement of Additional Information

(1) PQCI's that address welding inspection are being revised to include hold points to witness welders performing preheat checks for preheats between 32° and 70°F (using calibrated thermometers) 100% of the time until MPQAD is confident that welders are complying with preheat verification requirements. Thereafter, MPQAD will witness the preheat checks (done by welders) on a sampling basis.

The PQCI's involved will be revised prior to performance of related work and are forecast for completion by July 15, 1983.

(2) Preheat is covered by Bechtel specifications and welding procedures which are in accordance with the applicable code requirements and satisfy the project engineering technical requirements. One hundred percent in-process inspection for preheat verification between 32° and 70°F was not performed previously based on the following:

1. ANSI N45.2.5-1974, Section 5.5 refers to AWS D1.1 1972/74, Section 6, for inspection of structural steel welding.

2. AWS D1.1, Section 6.5.4 states: "The inspector shall at suitable intervals, observe the technique and performance of each welder, welding operator, and tacker to make certain that the applicable requirements of Section 4 are met."

Section 4 of AWS D1.1 contains the requirements to perform welding including the requirements for preheat.

The key words are "suitable intervals" and "observe". This wording is what Engineering has based their requirements on.

CONSUMERS POWER COMPANY
Midland Units 1 and 2
Docket No 50-329/50-330

Letter Serial CSC-6764 Dated June 24, 1983

At the request of the Commission and pursuant to the Atomic Energy Act of 1954, and the Energy Reorganization Act of 1974, as amended and the Commission's Rules and Regulations thereunder, Consumers Power Company submits the response to J G Keppler letter to J W Cook dated May 23, 1983.

CONSUMERS POWER COMPANY

By J W Cook

J W Cook, Vice President
Projects, Engineering and Construction

Sworn and subscribed before me this 24 day of June 1983.

Barbara P Townsend
Notary Public

My Commission Expires September 8, 1984

Consumers Power Company is confident, based on the following, that welds made which required preheats between 32° and 70°F were done in accordance with engineering and code preheat requirements. This confidence is based on a review of the records generated by PQCI W-1.60 from April 1, 1981 to the present. During this time period the W-1.60 was used to monitor, on a sampling basis, weld preheats under 70°F. In the three and one half years of implementation, no discrepancies concerning preheats were identified. However, considering that the monitoring was performed on a sampling basis, a possibility exists that some welds may have been made with less than the required preheat. Accordingly, the following rationale is offered:

The omission of the requirement for preheat between 32°F and 70°F for low carbon and mild steels as used at Midland would not have significant technical ramifications. If preheat requirements were not observed, defects that could be produced would be detected during weld final acceptance. Any weld that meets the acceptance criteria of the applicable project specifications is technically acceptable whether or not the required preheat requirements between 32° and 70°F were met.

The requirement for a 70°F preheat for carbon steels is certainly not a universal requirement of construction codes. In fact, even the AWS Structural Welding Code D1.1 reduced the required preheat to 50°F beginning with the 1975 edition.[1] Project specifications have subsequently been revised to adopt this change in the AWS requirement.

For carbon steels (P1, Group 1) such as those used for the structural work at Midland, Section III of the ASME Boiler and Pressure Vessel Code suggests, but does not require 50°F preheat.[2] The Power Piping Code B31.1 required only a 50°F preheat.[3] The API Standard 650, Weld Steel Tanks for Oil Storage[4] does not require preheat for carbon steels less than 1 1/4 inch in thickness unless the base metal temperature is less 32°F, and then the preheat is only that required to make the metal warm to the hand. The API Standard 1104, Welding Pipelines and Related Facilities impose no minimum preheat requirements.[5]

Both AWS and ASME codes recognize preheat as an essential variable in procedure *qualification*, but allow considerable latitude. In the preheat specified on the welding procedure specification in relation to the procedure qualification specified preheat for AWS may be 25°F lower than the test temperature; for ASME Qualification, 100°F lower.

NOV Item B - 6. (82-22-13) Continued

Preheat could influence a number of conditions related to welding:

Reducing Distortion	Reducing Residual Stress
Reducing Porosity	Insuring Arc Stability
Affecting Toughness	Reducing Cold Cracking
Reducing Hardness	Promoting Hydrogen Diffusion

The reduction of distortion and residual stress is achieved with preheat of hundreds of degrees; the difference on the order of tens of degress is not significant. Whether or not preheat requirements are observed, the porosity acceptance criteria of the code and project specification must be met. Erratic arc behavior due to moisture aggravates welders, especially on starts, but causes no inherent welding problems as long as the final product meets the inspection criteria.

Experimental data from test welds[6] on low carbon and mild steel indicate preheat and low hydrogen practices do not directly affect notch toughness. The main consideration is cold cracking due to hydrogen embrittlement (toe cracks or underbead cracking[8] in the heat effected zone). This results when monatomic hydrogen is supersaturated in the weld metal and diffused into the base metal that is hardened by the existence of martensite. The purpose of preheat is primarily to reduce the temperature gradient between the weld and base metal, thereby reducing the cooling rate of the weld and heat affected zone. The slower cooling rate reduces the formation of martensite. The cooling rate of importance here is in the vicinity of 1000F. Calculations[9] indicate the cooling rate would be increased on the order of 10 percent (8% greater for thick material, 12% for thin material) if welding started at 32°F as opposed to 70°F.

In low carbon and mild steels such as those used in the structures at Midland the difference in cooling rates as result of preheat is not important. No appreciable quantity of martensite is formed even at very high cooling in the low-carbon steels. The martensite question does not enter into the fusion welding of homogenous low carbon steels.[10] The S-curve on the isothermal transformation diagram (TTT curve) shifts increasingly to the left (shorter times) with lower carbon content.[11] Below 0.30% carbon, the influence of martensite in low hydrogen welds and heat affected zone is not a problem. The benefit of token preheat to 70°F or even 150°F, with respect to underbead cracking in this case is negligible.[12] In a hardenable steel, this difference could be significant in certain situations.

Whether the welds were made between 32 and 70°F or below 32°F, the arguments presented remain the same. The temperature gradient increase of tens of degrees is not significant.

NOV Item B - 6. (82-22-13) Continued

For conventional construction, structural steel is often erected in this temperature range and it is rarely preheated. The same goes for pipelines. Welding on a pipe filled with water or flowing compressed gas is not uncommon and for the most part, is more severe than welding on cold structural steel. Years of experience in the construction and piping industry show that there is no real problem in these cases even when low hydrogen electrodes are not used.

Recently at the Midland jobsite several A36 plates 1½" thick were cooled below 0°F with dry ice and welded as a test. They were sectioned and etched as required by the structural code, and not only visually examined but examined with liquid penetrant on the face and cross sections. No cracking was uncovered.

The discussions above apply to the thin material as well as the thick, but the thinner materials are most forgiving.

For the case where welds require a 32° to 70°F preheat, the materials are less than 3/4" thick, and are less of a heat sink. The cooling rate is slower and therefore less likely to produce cracking. The residual stress is, on the average, lower with thinner metal because it is more flexible (less restraint) and the weld sizes are usually smaller.

Based on the above rationale, coupled with the fact that we believe that most welds made have met the requirements, it is our belief that the existing welds made requiring preheats between 32° and 70°F are of acceptable quality.

References

1. AWS D1.1-75, Structural Welding Code, p32

2. ASME Boiler and Pressure Vessel Code 1980 Edition, Section III, Nuclear Power Plant Components, Division 1- Appendices, Article D-100, Nonmandatory Preheat Procedures, p525

3. AWSI/ASME B32.1-1980 Edition, Power Piping Code, Paragraph 131.4.2, P-No 1, p73

4. API Standard 650, Seventh Edition, November 1980, Welded Steel Tanks for Oil Storage, Paragraph 5.2.1.2, p5-1

5. API Standard 1104, Fifteenth Edition, September 1980, Standard for Welding Pipelines and Related Facilities, Paragraph 4.11, p19

6. McGeady, L J, "Effects of Preheating, Thermal Stress Relief and Electrode Type on Notch Toughness," Welding Research Supplement, December 1958, pp543-5 - 553-5

7. Baillie, J G, "Underhead and Toe Cracks," British Welding Journal, 14 (2) February 1967, pp51-61

8. Welding Handbook, Volume Four, Seventh Edition, "Metals and Their Weldability," American Welding Society, Miami, Florida, 1976, pp2-7

9. Welding Handbook, Volume One, Seventh Edition, "Fundamentals for Welding," American Society, Miami, Florida, 1976, pp84-85

10. Udin H, Funk E R Wulff J, "Welding for Engineers," John Wiley & Sons, Inc, New York, 1954, p237

11. Stout, R D, Doty, M D, Weldability of Steels, Second Edition, Welding Research Council, New York, 1971, pp71-73

12. Linnert, G E, Welding Metallurgy, Vol 2, Third Edition, American Welding Society, New York, 1967, p392

Midland Project: PO Box 1963, Midland, MI 48640 • (517) 631-6650

October 20, 1983

Mr John J Harrison
Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

MIDLAND ENERGY CENTER
MIDLAND DOCKET NOS 50-329 and 50-330
CONSTRUCTION COMPLETION PROGRAM
RELEASE OF PHASE 1 ACTIVITIES
File: 0655 UFI: 99*08 Serial: CSM-0694

References: 1) Letter to Mr J G Keppler dated August 26, 1983 from Mr J W Cook regarding Construction Completion Program

2) Letter to Mr J W Cook dated October 6, 1983 from Mr Richard C DeYoun regarding Confirmatory Order for Modification of Construction Permits for the Midland Plant

The initiation of status assessment and verification of completed work (Phase 1 of the Construction Completion Program) requires a release from NRC as defined in References 1 and 2. This is to inform you that Consumers Power Company has completed its preparation and required Management Reviews for Phase 1 and is requesting NRC release to initiate Phase 1 in a portion of the plant defined herein. The Construction Implementation Overview (CIO) has released their hold points on Phase 1 activities. (See Attachments)

We have planned an initial implementation of Phase 1 that is restricted to specific areas of the plant as defined in Attachment 2. The initial activities will be restricted to five modules which represent approximately 10 percent of the total number of modules covered by the CCP. During the initial effort, all team activities and elements of the Quality Verification Program (QVP) will be exercised in a slow, controlled manner. Frequent internal review and assessment will be carried out to ensure all objectives and commitments of the CCP are being met during this initial effort. Full NRC release for Phase 1 will be requested after this initial effort has demonstrated effective implementation of the CCP. We are prepared to support any additional reviews above those already conducted on our procedures and training that the NRC may require.

Dean L Quennie
Site Manager

DLQ/pp

8310270171

STONE & WEBSTER MICHIGAN, INC.

P.O. BOX 2325, BOSTON, MASSACHUSETTS 02107

CONSUMERS POWER CO.
RECEIVED
OCT 12 1983
Site Mgr.
Midland Project

Mr. J. G. Keppler, Administrator, Region III
Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

October 12, 1983
J.O. No. 14509
NRC File #83-10-12

RE: DOCKET NO. 50-329/330
MIDLAND PLANT - UNITS 1 AND 2
OVERVIEW OF THE CONSTRUCTION COMPLETION PROGRAM

The purpose of this letter is to indicate the status of CIO approval of QVP, BHO and Status Assessment.

QVP was conditionally approved by CIO letter, NRC File #83-06-17 dated June 17, 1983. The conditions were satisfied as reported in weekly reports No's 5 and 6. Status Assessment was conditionally approved by CIO letter, NRC File #83-06-30 dated June 30, 1983 and the conditions were satisfied as reported in weekly report No. 12.

BHO and CIO reported 5 observations resulting from the Management Review Committee meeting on May 18, 1983. These observations were satisfactorily responded to in CPCo letter, Serial CSM-0656 dated July 1, 1983. CIO weekly report No. 4 dated July 12, 1983 closes this item.

CIO considers QVP, BHO and Status Assessment ready for implementation.

CIO requires NIRs #002, 003, 004 and 005 to be dispositioned prior to assignment of the referenced 45 MPQAD personnel to QVP. A "Hold Point," has been established against the use of the 45 personnel to perform QVP.

CIO report No. 16 identifies the review of "Vendor Equipment Program" as a Hold Point to Phase II of CCP.

Very truly yours,

S. W. Baranow
Program Manager

SWB/ka

cc: JJHarrison, US NRC, Glen Ellyn, IL
RCook, US NRC Midland (site)
DBMiller Jr., CPCo Midland (site)
RBKelly, S&W
APAmoruso, S&W
CORichardson, S&W

8310270176

ATTACHMENT #2

MODULES REQUESTED FOR RELEASE

340 - Balance of Unit #2 Containment

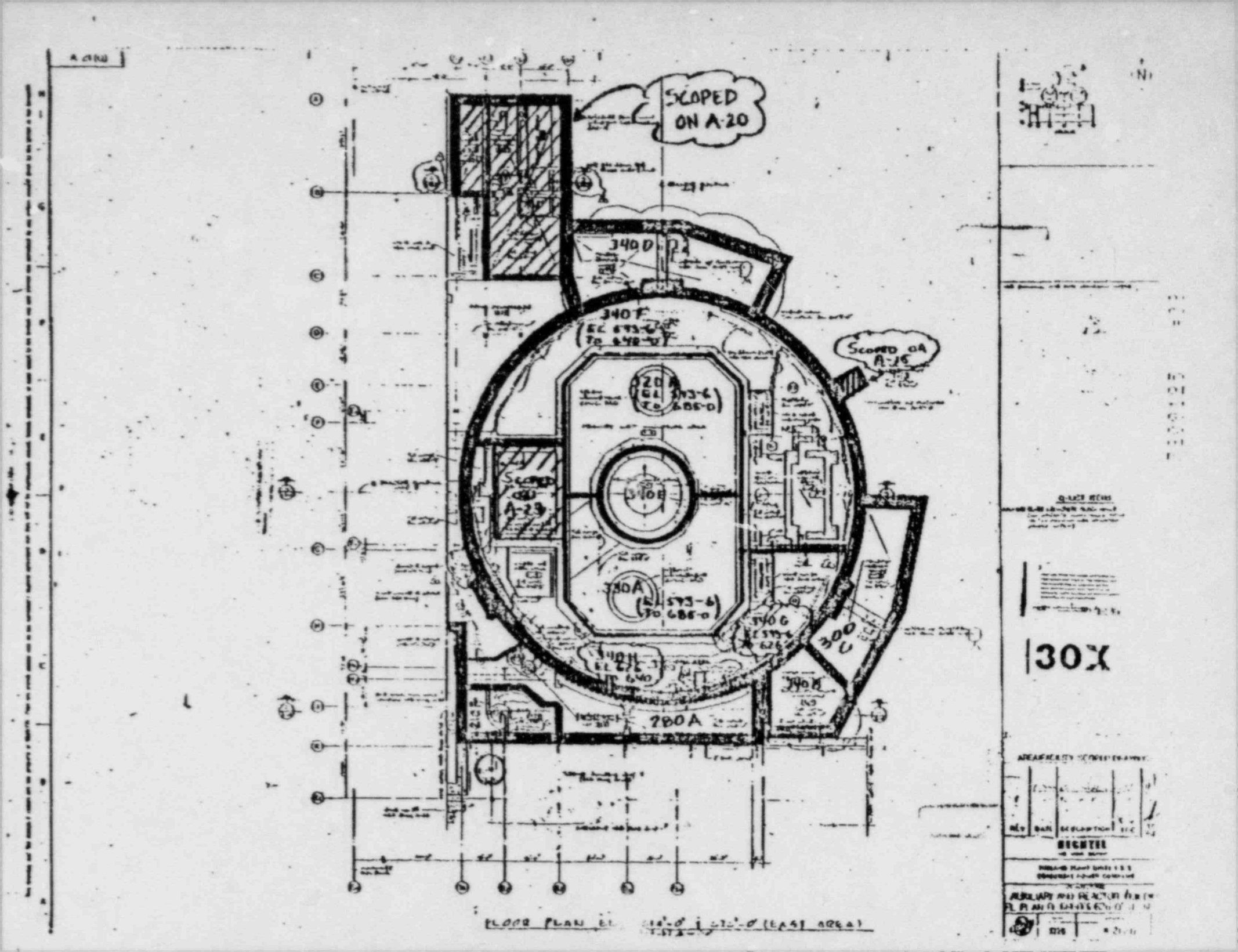
102 - Unit #2 Pipeway & Valve Galleries

120 - Elevation 584 Auxiliary Building

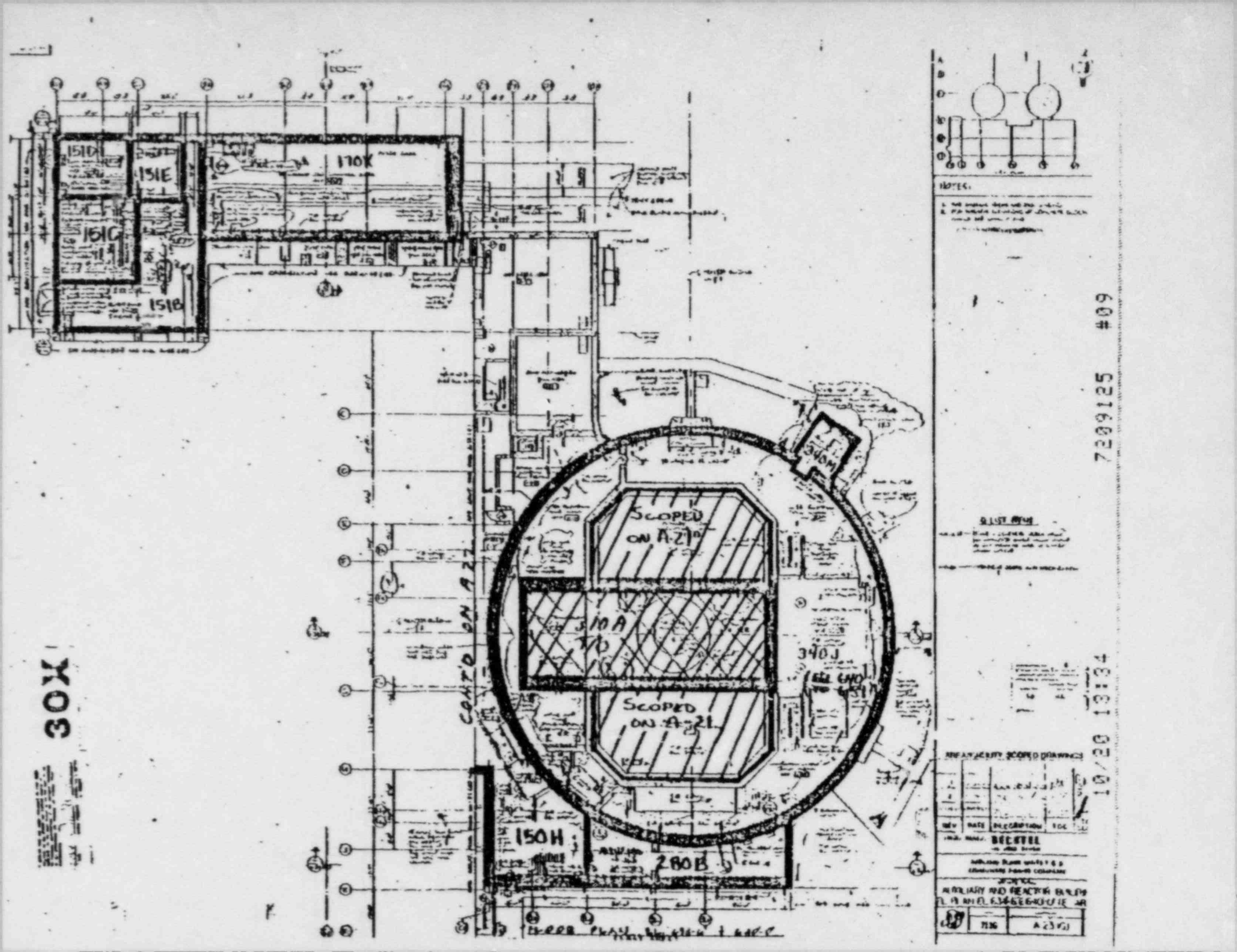
410 - Elevation 614 Unit #2 Turbine Building

800 - Service Water Building

NOTE: Drawings describing the modules are attached.



FLOOR PLAN EL [illegible] (EAST AREA)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151E
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340J
SCOPED ON A-21
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AUXILIARY AND REACTOR BUILDING
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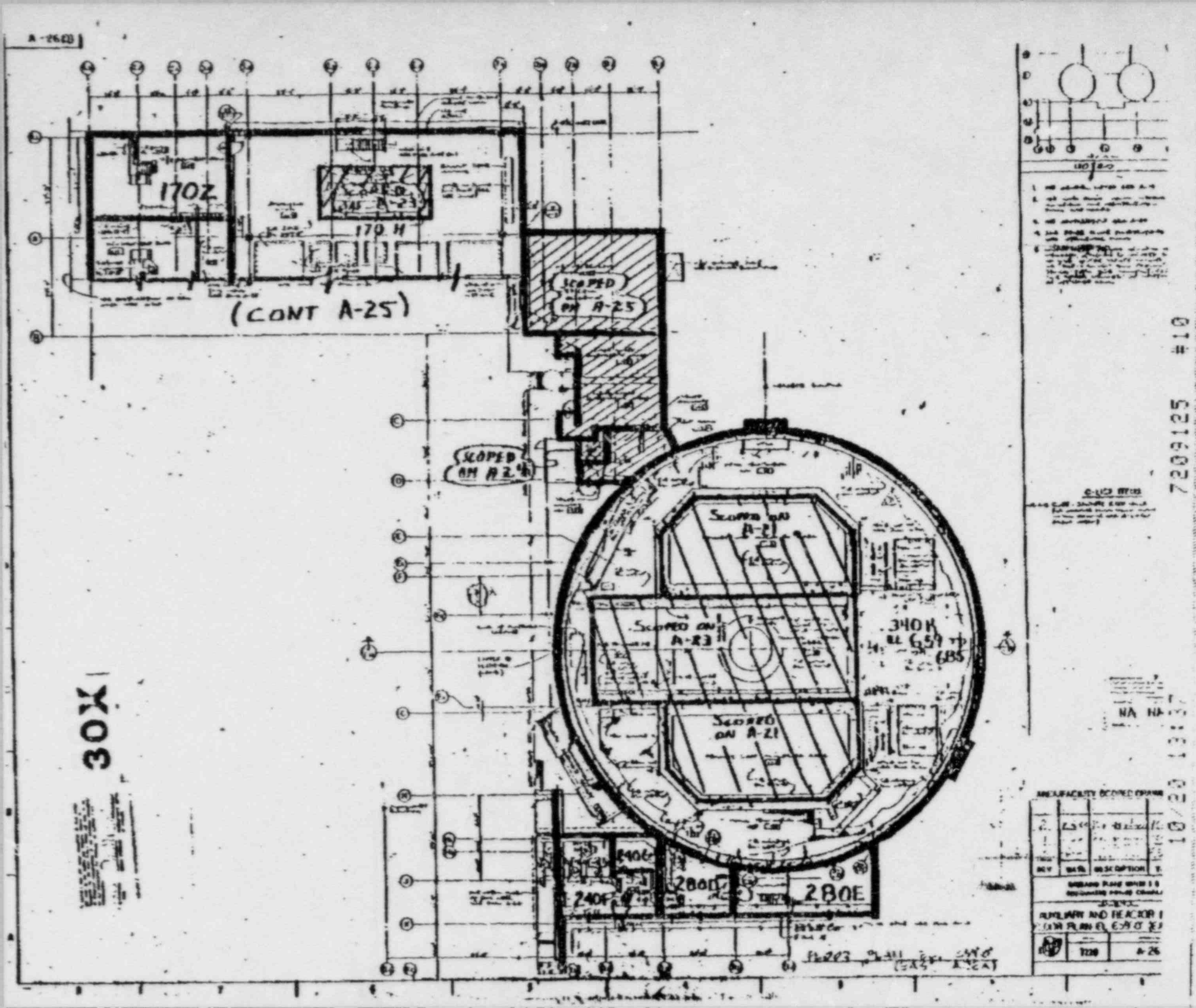
10/30 13:34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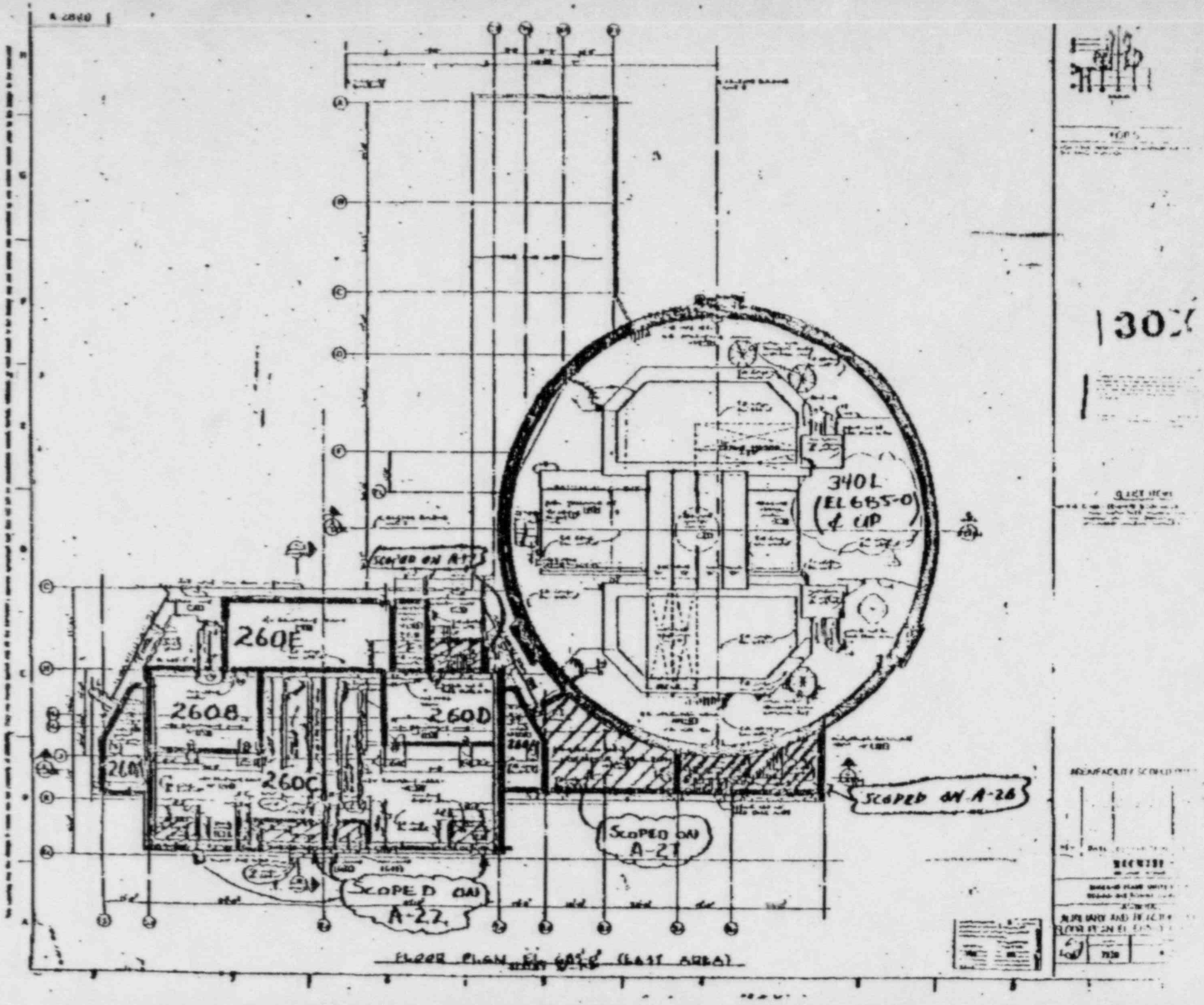
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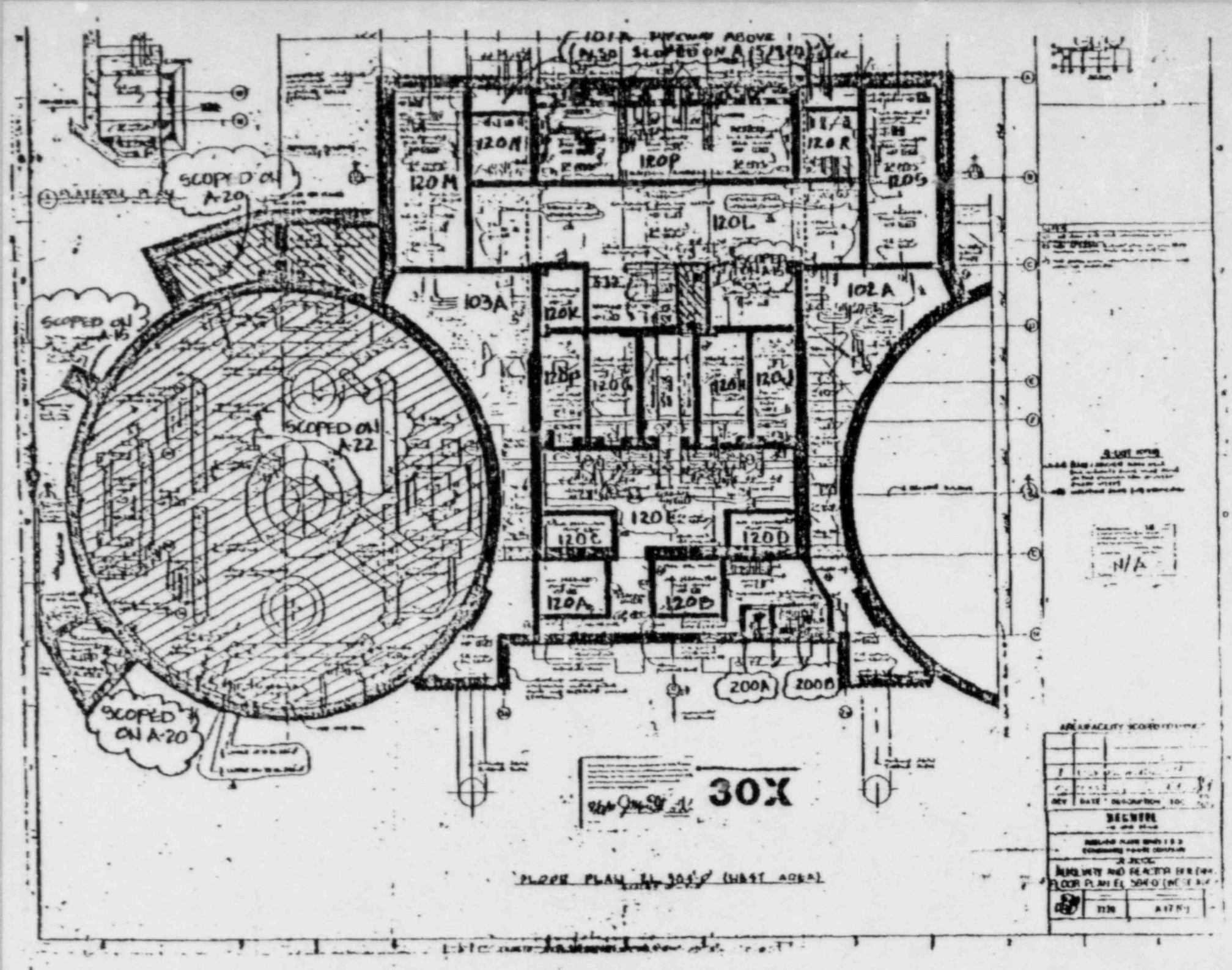

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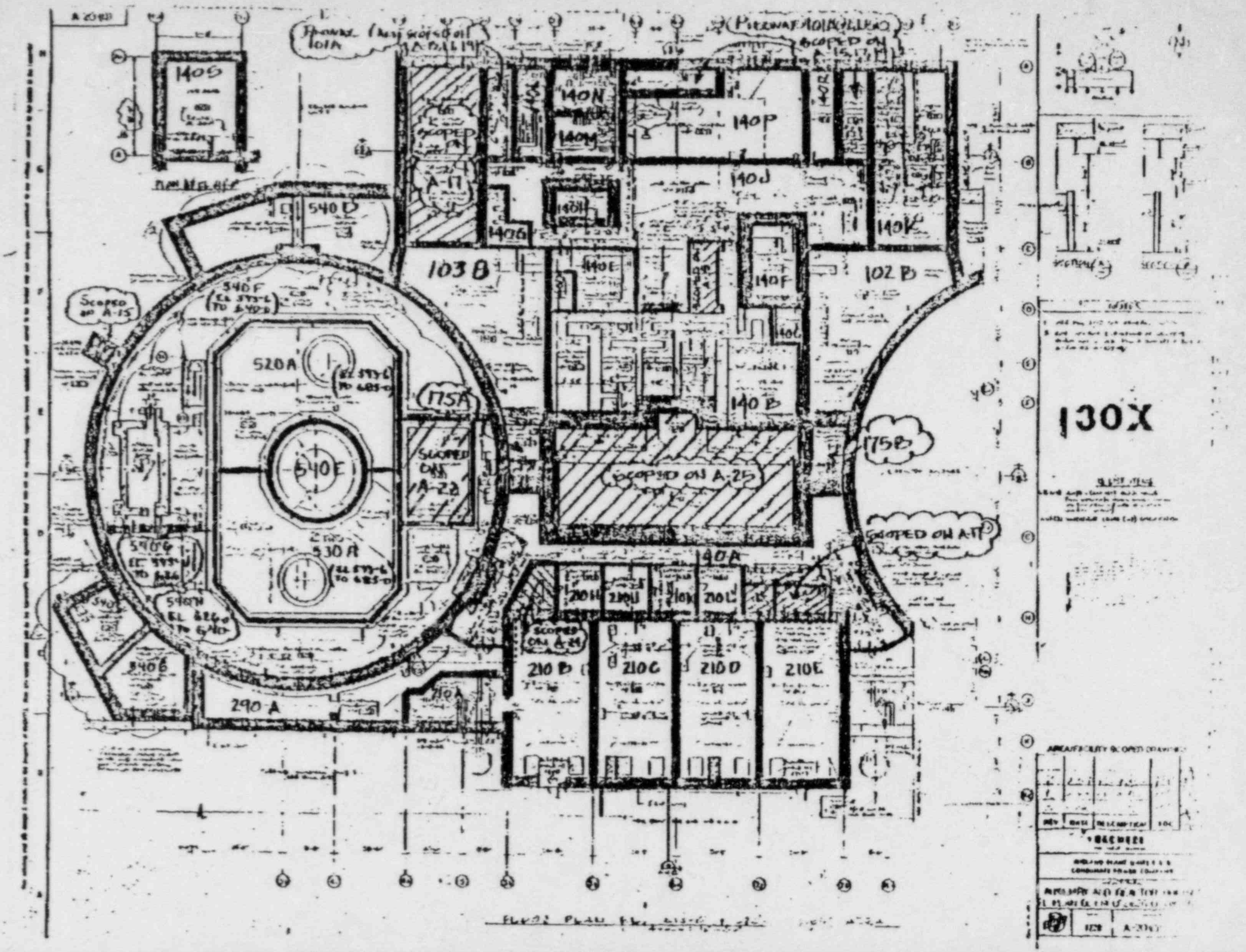

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102 B
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Scoped on A-17
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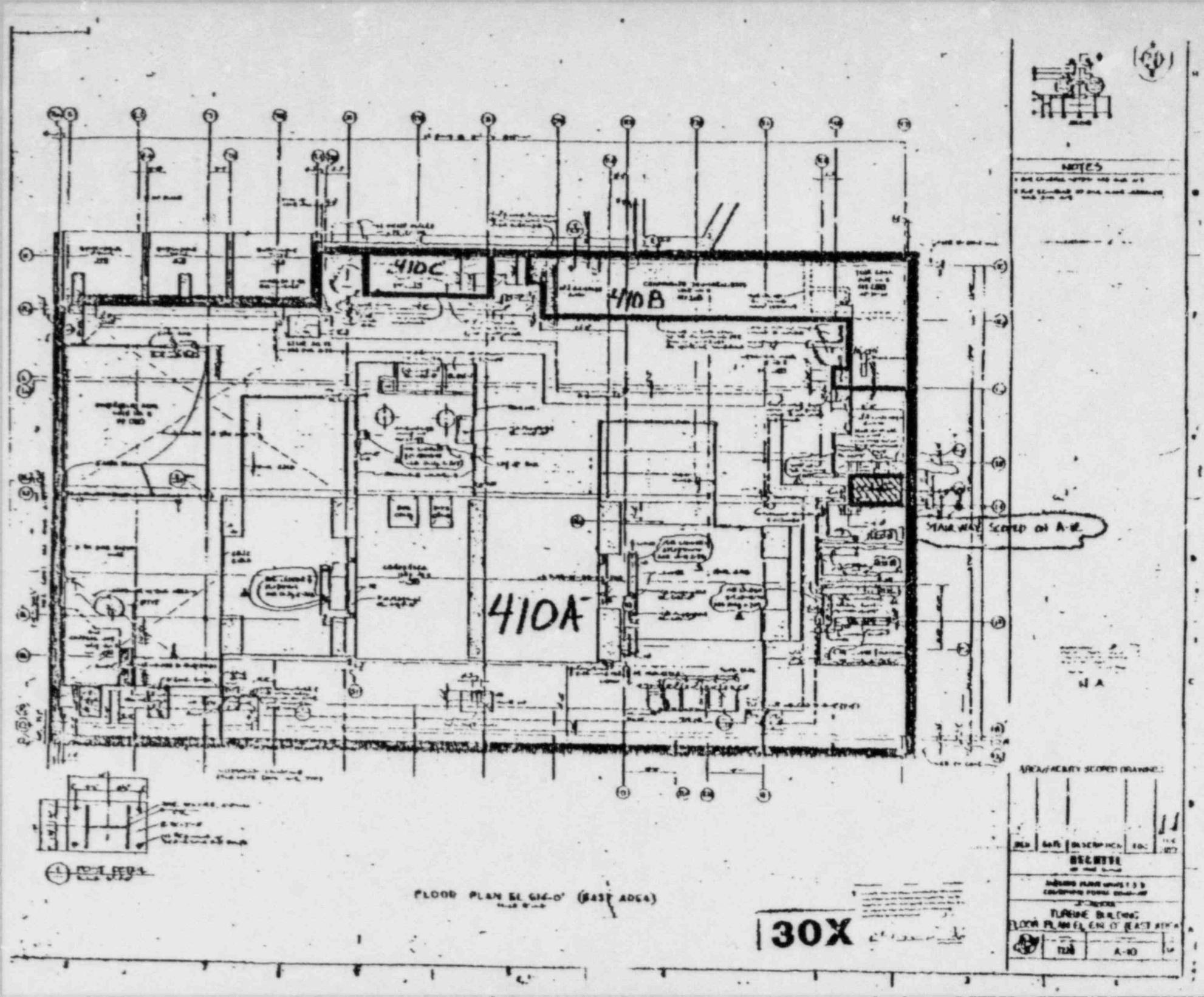
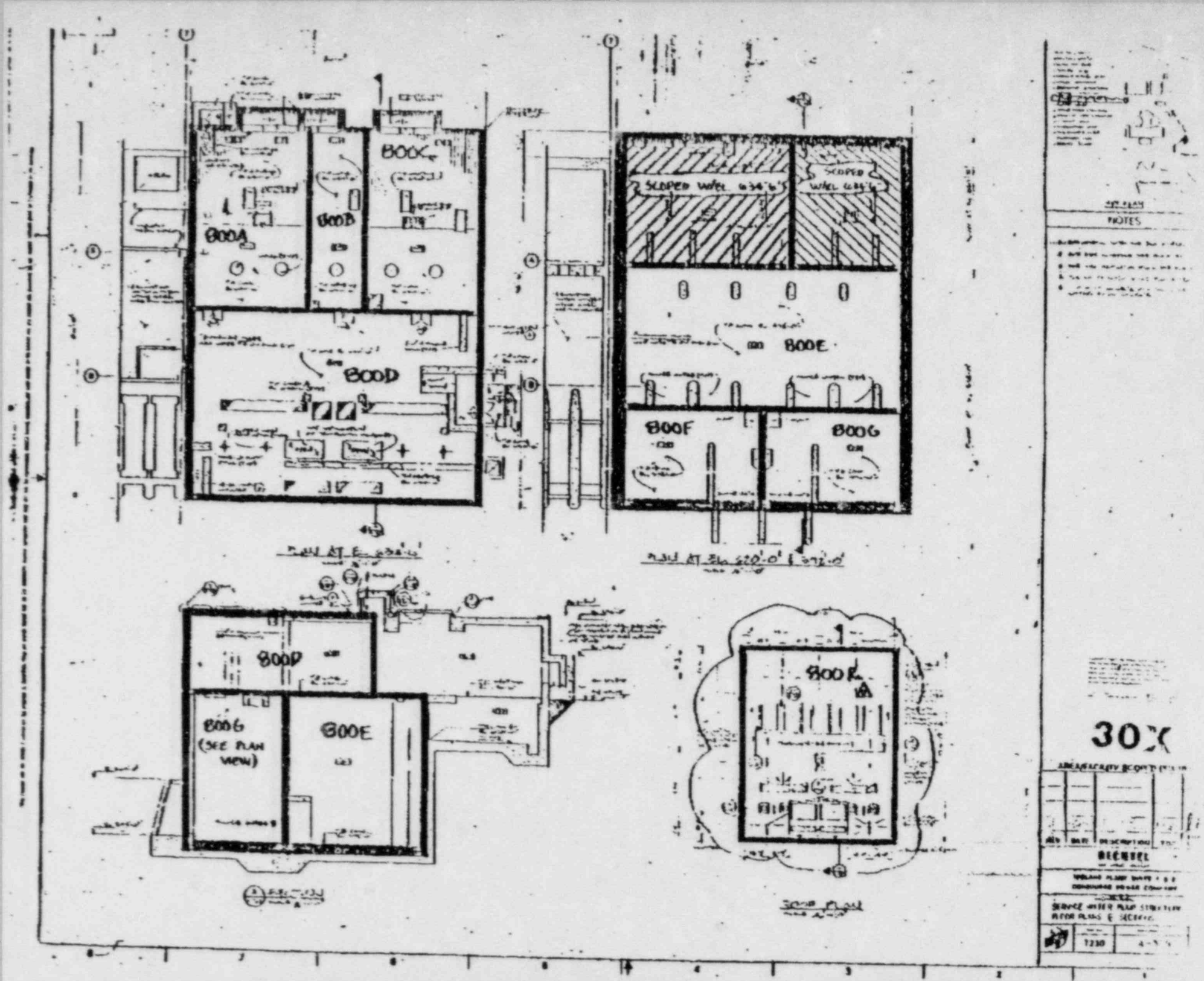
A-2010



FLOOR PLAN EL 614'-0" (EAST AREA)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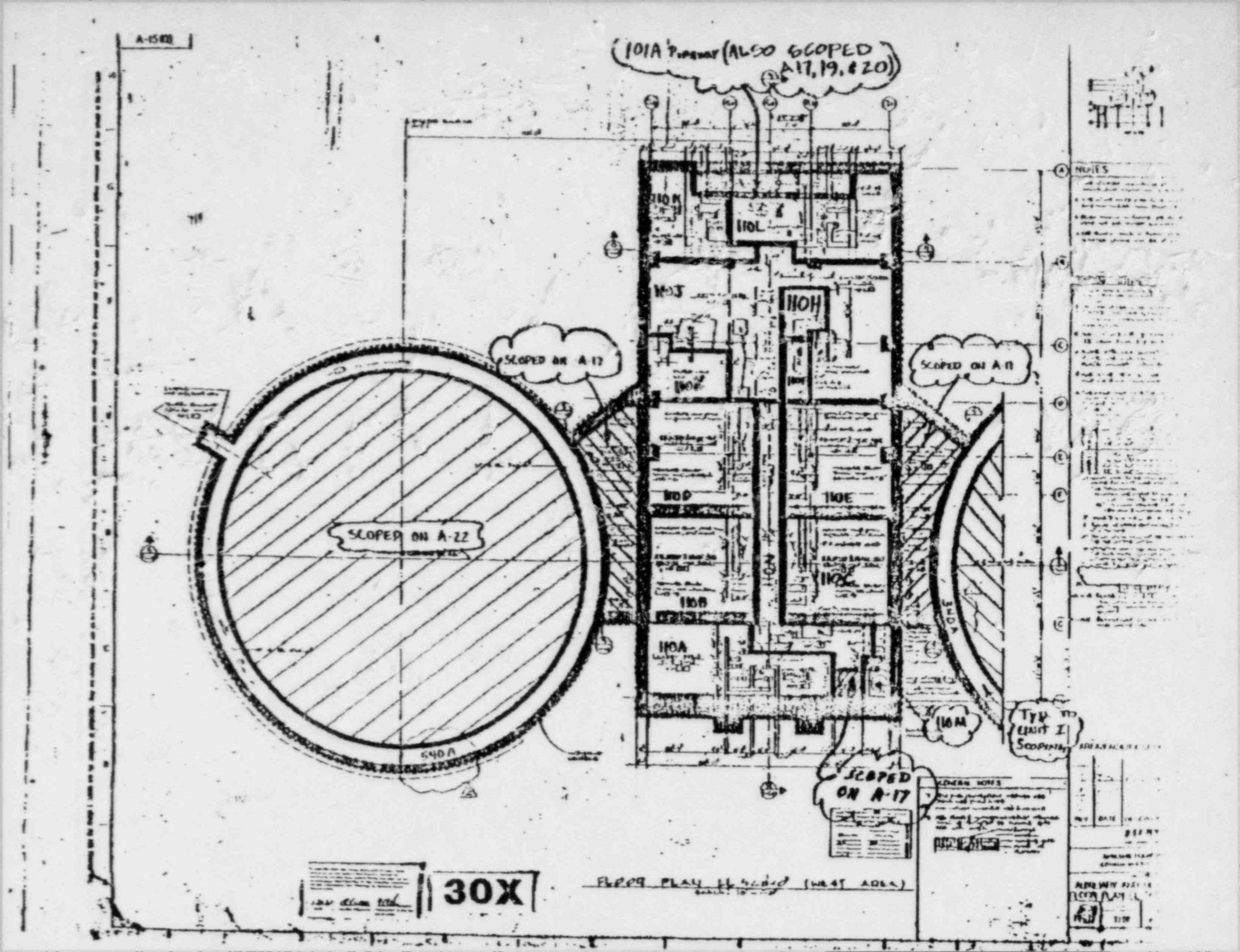
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

RON

OCT 1 1 1983

MEMORANDUM FOR: D. G. Eisenhut, Director, Division of Licensing, NRR

FROM: R. F. Warnick, Director, Office of Special Cases

SUBJECT: NRC AUXILIARY BUILDING AUDIT

On September 14 and 15, 1983, an NRC team comprised of Messrs. J. Kane and F. Rinaldi of NRR; Mr. R. Landsman of RIII and Consultants S. Poulous and G. Harstead, audited the licensee reanalysis of the Midland Auxiliary Building. This audit was performed at the Bechtel Office in Ann Arbor, Michigan. As a result of the audit, the team identified several design concerns and issues requiring resolution. These are referred to the Office of Nuclear Reactor Regulation for action as appropriate.

a. The design of the remedial soils slab fix at Elev. 659 (i.e. the eye bars) was performed to ACI 318 and not to ACI 349. The acceptability of the licensee's decision to use ACI 318 in lieu of ACI 349 needs to be evaluated.

b. In view of the critical nature of the eye bars, the question arose as to the need for some type of monitoring on this fix (i.e. strain gages) due to the anticipated settlement over the life of the plant. Do monitoring requirements need to be imposed?

c. Because of the anticipated differential settlement expected to occur during the life of the plant, the control tower will be pulling away from the main auxiliary building. Has the mechanical branch determined that equipment between the two buildings can withstand this elongation?

d. The licensee performed an analysis on differential settlement of the buildings that was different from that which the NRC anticipated. The staff expected the differential settlement to be measured between the edge of the main auxiliary building and the edge of the control tower. In reality, the licensee performed an analysis using the center of the main auxiliary building as one point instead of the edge. Thus, for the requested 0.25" differential settlement analysis, the actual value was 0.17", and for the requested 0.50" differential, the actual value was 0.24". Is the licensee's analysis acceptable to NRR?

e. There appears to be a lot of confusion as to what upward building movements the licensee and NRC staff should allow during underpinning. What are the allowable upward movements during jacking operations?

f. The licensee stated that existing structures were analyzed according to ACI 318 as agreed to with NRR. The SSER #2 states that the buildings have been checked against ACI 349. Is this acceptable to NRR?

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g. The analysis of the existing structures has been performed by assuming that the existing settlement stresses will be removed during the permanent underpinning jacking. The audit team feels that the existing stresses cannot be jacked out in their entirety and must be included in the final analysis of the building. What is the NRC position in regards to including existing settlement stresses in the analysis?

Should you or members of your staff need additional information, please feel free to contact R. Landsman (388-5587).

"Original signed by R. F. Warnick"

R. F. Warnick, Director
Office of Special Cases

cc: J. C. Stone, IE
E. G. Adensam, NRR
J. D. Kane, NRR
F. Rinaldi, NRR

RIII	RIII	RIII	RIII
Landsman/db	Gardner	Harrison	Warnick
10/07/83	for	10/11/83	RFW 10/11/83

UNITED STATES
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	Docket No. 50-329
CONSUMERS POWER COMPANY	)	50-330
(Midland Plant Units 1 and 2)	)	EA-83-109

CONFIRMATORY ORDER FOR MODIFICATION OF
CONSTRUCTION PERMITS (EFFECTIVE IMMEDIATELY)

I

Consumers Power Company (the "licensee") is the holder of construction permits CPPR-81 and CPPR-82 issued by the Atomic Energy Commission (now the Nuclear Regulatory Commission, hereafter "Commission"), which authorize the construction of the Midland Plant, Units 1 and 2 (the "facility"). The facility is under construction in Midland, Michigan.

II

Since the start of construction, the facility has experienced significant quality assurance ("QA") problems. Although the licensee took corrective actions in each case, problems continued to be experienced in the implementation of its QA program.

An NRC Region III inspection, commenced in October 1982 and completed in January 1983, identified significant problems with the QA inspection process and with the conformance to design documents of installed components in the Diesel Generator Building ("DGB"). These findings were identified to the licensee in an exit meeting following the inspection in November 1982. The licensee subsequently made similar findings in other areas of the facility. In view of 1) the widespread nature of the problems identified, 2) the history of QA problems at the facility,

and 3) the ineffectiveness of past corrective actions to resolve these problems, the NRC staff requested the licensee to develop a comprehensive program to verify the adequacy of previous construction and to assure the adequacy of future construction. On December 2, 1982, the licensee directed that the majority of safety related work at the site be halted and presented to the staff the outlines of a Construction Completion Program ("CCP"). By letter dated December 30, 1982, the NRC confirmed the licensee's stopping work and other commitments undertaken by the licensee. In accordance with those commitments, the CCP was formally submitted to the staff on January 10, 1983.

The CCP is a program to provide guidance in the planning and management of the construction and QA activities necessary for completion of the facility in accordance with Commission regulations. The CCP has undergone revisions in response to questions and comments raised by the staff and by members of the public and was submitted in final form on August 26, 1983.

Part of the CCP is a Construction Implementation Overview ("CIO") to be conducted by an independent third party. The CIO effort is described in the CCP and documents provided to NRC on April 6 and 11, May 19, August 30 and September 9, 1983.

The CIO was necessitated by the NRC staff's loss of confidence in the licensee alone to implement an effective QA program. In response to this concern, the licensee has committed to keep the CIO in effect until the licensee has demonstrated to the NRC staff that a third party overview is no longer necessary to provide reasonable assurance that the facility can be constructed in compliance with the Commission's QA criteria (10 CFR Part 50, Appendix B). The licensee has proposed and the staff has approved, by letter dated September 29, 1983, Stone and Webster Engineering Corporation to perform the CIO.

III

The NRC staff has conducted a review of the CCP and has concluded that it constitutes a program which provides reasonable assurance that the facility can be satisfactorily completed in accordance with Commission requirements. I have concluded that the activities halted by the licensee on December 2, 1982, may resume provided they are conducted in accordance with the CCP. I, therefore, find that the public health, safety and interest requires that any continuation of construction be in accordance with the CCP and that the CCP be confirmed by order made immediately effective.

IV

Accordingly, pursuant to Sections 103 and 161i of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR Parts 2 and 50, Construction Permits CPPR-81 and CPPR-82 are hereby modified to include the following provisions:

a. The licensee shall adhere to the Construction Completion Program, dated August 26, 1983, for the duration of construction of the facility.

b. The licensee shall maintain in effect the Construction Implementation Overview provision of the Construction Completion Program with the Stone and Webster Engineering Corporation as the third party overviewer until the Regional Administrator, NRC Region III, finds in writing that the third party overview is no longer necessary to provide reasonable assurance that the facility can be constructed in compliance with 10 CFR Part 50.

c. The licensee may make changes to the Construction Completion Program provided such changes (1) do not decrease its effectiveness, (2) are submitted to the Regional Administrator with appropriate justification, and (3) are approved in writing by the Regional Administrator prior to their implementation.

V

The licensee may request a hearing on this Order within 25 days of the date of this Order. Any request for hearing shall be submitted to the Director, Office of Inspection and Enforcement, U.S. Nuclear Regulatory

Commission, Washington, D.C. 20555. A copy of the request shall also be sent to the Executive Legal Director at the same address and to the Regional Administrator, NRC Region III, 799 Roosevelt Road, Glen Ellyn, Illinois 60137. A REQUEST FOR HEARING SHALL NOT STAY THE IMMEDIATE EFFECTIVENESS OF SECTION IV OF THIS ORDER.

If a hearing is to be held concerning this Order, the Commission will issue an order designating the time and place of hearing. If a hearing is held, the issue to be considered at such hearing shall be whether this Order should be sustained.

FOR THE NUCLEAR REGULATORY COMMISSION

Richard C. DeYoung, Director
Office of Inspection and Enforcement

Dated at Bethesda, Maryland,
this 6th day of October, 1983

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

OCTOBER 6 1983

Docket No. 50-329
50-330

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

Dear Mr. Cook:

Enclosed please find a Confirmatory Order for Modification of Construction Permits (Effective Immediately) for the Midland Plant issued this day. In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," Part 2. Title 10, Code of Federal Regulations, a copy of this letter and the enclosure will be placed in the NRC's Public Document Room.

Sincerely,

Richard C. DeYoung, Director
Office of Inspection and Enforcement

Enclosure: Confirmatory Order

cc: Michael Miller, Esq.
Billie Pirner Garde,
Government Accountability Project

8311200375

OCT 20 1983

OCTOBER 6 1983

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50-330

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Vice President
Consumers Power Company
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Sincerely,

*Original Signed By
R. C. DeYoung*

Richard C. DeYoung, Director
Office of Inspection and Enforcement

Enclosure: Confirmatory Order

cc: Michael Miller, Esq.
Billie Pirner Garde,
Government Accountability Project

Distribution

JLieberman, OELD
HDenton, NRR
DEisenhut, NRR
JKeppler, RIII
GCunningham, ELD
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EDO 13229
J. Douglas, IE
J. Axelrad, IE
Central files

SEE PREVIOUS CONCURRENCES *

OFC	:OELD *	:NRR *	:RIII*	:IE *	:IE	: IE*	:
NAME	:Lieberman/cb	:Eisenhut	:Keppler	:Stone	:DeYoung	: JAxelrad	:
DATE	:10/4/83	:10/ 4/83	:10/ 4/83	:10/ 5/83	:10/ 6/83	: 10/4/83	:

8311020375

UNITED STATES
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
CONSUMERS POWER COMPANY	)	Docket No. 50-329
(Midland Plant Units 1 and 2)	)	50-330
		EA-83-109

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The CIO was necessitated by the NRC staff's loss of confidence in the licensee alone to implement an effective QA program. In response to this concern, the licensee has committed to keep the CIO in effect until the licensee has demonstrated to the NRC staff that a third party overview is no longer necessary to provide reasonable assurance that the facility can be constructed in compliance with the Commission's QA criteria (10 CFR Part 50, Appendix B). The licensee has proposed and the staff has approved, by letter dated September 29, 1983, Stone and Webster Engineering Corporation to perform the CIO.

III

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IV

Accordingly, pursuant to Sections 103 and 161i of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR Parts 2 and 50, Construction Permits CPPR-81 and CPPR-82 are hereby modified to include the following provisions:

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b. The licensee shall maintain in effect the Construction Implementation Overview provision of the Construction Completion Program with the Stone and Webster Engineering Corporation as the third party overviewer until the Regional Administrator, NRC Region III, finds in writing that the third party overview is no longer necessary to provide reasonable assurance that the facility can be constructed in compliance with 10 CFR Part 50.

c. The licensee may make changes to the Construction Completion Program provided such changes (1) do not decrease its effectiveness, (2) are submitted to the Regional Administrator with appropriate justification, and (3) are approved in writing by the Regional Administrator prior to their implementation.

V

The licensee may request a hearing on this Order within 25 days of the date of this Order. Any request for hearing shall be submitted to the Director, Office of Inspection and Enforcement, U.S. Nuclear Regulatory

Commission, Washington, D.C. 20555. A copy of the request shall also be sent to the Executive Legal Director at the same address and to the Regional Administrator, NRC Region III, 799 Roosevelt Road, Glen Ellyn, Illinois 60137. A REQUEST FOR HEARING SHALL NOT STAY THE IMMEDIATE EFFECTIVENESS OF SECTION IV OF THIS ORDER.

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FOR THE NUCLEAR REGULATORY COMMISSION

Richard C. DeYoung, Director
Office of Inspection and Enforcement

Dated at Bethesda, Maryland,
this 6th day of October 1983

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

OCT 06 1983

Docket Nos. 50-329
50-330

(10 CFR 2.206)

Ms. Billie Pirner Garde
Government Accountability Project
Institute for Policy Studies
1091 Que Street, N.W.
Washington, D.C. 20009

Dear Ms. Garde:

This is in response to your letter of June 13, 1983 on behalf of the Lone Tree Council and others, requesting that the Commission take a number of actions with respect to the Midland Plant. Your letter was treated as a request for action under 10 CFR 2.206 of the Commission's regulations.

For the reasons set forth in the enclosed "Director's Decision" under 10 CFR 2.206, your request has been granted in part and denied in part. A copy of the decision will be referred to the Secretary for the Commission's review in accordance with 10 CFR 2.206. For your information, I have also enclosed a copy of the notice filed with the Office of the Federal Register for publication.

Sincerely,

Richard C. DeYoung, Director
Office of Inspection and Enforcement

Enclosures: as stated

cc w/encl.:
Consumers Power Company
Michael Miller, Esq.

8310040326

OCT 20 1983

DD-83-16

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF INSPECTION AND ENFORCEMENT
Richard C. DeYoung, Director

In the Matter of	)	
CONSUMERS POWER COMPANY	)	Docket Nos. 50-329 50-330
(Midland Nuclear Power Plant, Units 1 and 2)	)	(10 CFR 2.206)

DIRECTOR'S DECISION UNDER 10 CFR 2.206

Introduction

By letter to the Nuclear Regulatory Commission (NRC) dated June 13, 1983, Billie Pirner Garde of the Government Accountability Project, on behalf of the Lone Tree Council and others (hereinafter referred to as the petitioners), requested that, among other relief, the NRC take immediate action with regard to the Midland project. The letter was referred to the Director of the Office of Inspection and Enforcement for treatment as a request for action pursuant to 10 CFR 2.206 of the Commission's regulations.

On July 22, 1983, Edward L. Jordan, Acting Director of the Office of Inspection and Enforcement, acknowledged receipt of the petition and informed the petitioners that their request for immediate action was denied. Mr. Jordan noted that safety-related work at the Midland site had been stopped, with the exception of certain specified activities, and that the NRC staff was closely

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following the current activities at the Midland site. Mr. Jordan further noted that Consumers Power Company had agreed not to proceed with implementation of a construction completion program until such a program had been reviewed by the NRC. The staff expected to be able to complete its evaluation of the request before final action was taken on that program. Consequently, Mr. Jordan concluded that "continuation of currently authorized activities at Midland should not affect the staff's ability to grant the requested relief." Letter from Edward L. Jordan, Acting Director, Office of Inspection and Enforcement to Billie Pirner Garde (July 22, 1983). The staff has now completed its evaluation of the petition, and for the reasons stated herein, the request is granted in part and denied in part.

Issues Raised

Petitioners requested that the following six actions be taken by the Commission:

> Modify the Construction Permit (Midland Nuclear Power Plant, Units 1 and 2) to include mandatory "hold points" on the balance-of-plant (BOP) work and incorporate the current Atomic Safety and Licensing Board (ASLB or Board) ordered "hold points" on the soils remedial work into the Midland Construction permit (sic).
>
> Require a management audit of Consumers Power Company (CPCo) by an independent, competent management auditing firm that will determine the causes of the management failures that have resulted in the soils settlement disaster and the recently discovered Quality Assurance breakdown.
>
> Reject the Construction Completion Plan (CCP) as currently proposed, including a rejection of Stone and Webster to conduct the third party audit of the plant. Instead a truly independent, competent, and credible third party auditor should be selected with public participation in the process.

Remove the Quality Assurance/Quality Control function from the Midland Project Quality Assurance Department (MPQAD) and replace them with an independent team of QA/QC personnel that reports simultaneously to the NRC and CPCo management.

Increase the assignment of NRC personnel to include additional technical and inspection personnel as requested by the Midland Section of the Office of Special Cases.

Require a detailed review of the soils settlement resolution as outlined in the Supplemental Safety Evaluation Report, incorporating a technical analysis of the implementation of the underpinning project at the current stage of completion.

Petition at 1. The fifth issue relates to a matter of internal Commission organization and staffing, namely the allocation of staff to inspection of facilities. The staff is expecting to augment inspection personnel available to work on Midland. However, the creation of positions within the Office of Special Cases is a matter that will be determined by the Commission budget process. For these reasons, the staff is not considering this aspect of the request in this decision.

Background

The Consumers Power Company (CPCo or licensee) holds Construction Permits No. CPPR-81 (Unit 1) and No. CPPR-82 (Unit 2), issued by the Atomic Energy Commission in 1972, which authorized construction of the Midland Plant. The Midland nuclear plant is located in Midland, Michigan, and consists of two pressurized water reactors of Babcock and Wilcox design and related facilities for use in the commercial generation of electric power.

Since the start of construction, Midland has experienced significant construction problems attributable to deficiencies in implementation of

its quality assurance (QA) program. 1/ Following the identification of these problems, the licensee took action to identify the cause and correct each problem. Steps were also taken to upgrade the Midland QA program. Nevertheless, the licensee continued to experience problems in the implementation of its quality assurance program.

In 1980, the licensee reorganized its QA department so as to increase the involvement of high level CPCo management in onsite QA activities. Among its other tasks, the reorganized QA department, called the Midland Project Quality Assurance Department (MPQAD), was given the responsibility for quality control (QC) of heating, ventilation and air conditioning (HVAC) work in place of the HVAC contractor, Zack Company.

In May 1981, the NRC conducted a special, in-depth team inspection of the Midland site to examine the status of implementation and effectiveness of the QA program. Based on this inspection, Region III concluded that the newly

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1/ Significant construction problems identified to date include:

1973 - cadweld splicing deficiencies
1976 - rebar omissions
1977 - bulge in the Unit 2 Containment Liner Plate
1977 - tendon sheath location errors
1978 - discovery of soil settlement problem
1980 - Zack Company heating, ventilation, and air conditioning deficiencies
1980 - reactor pressure vessel anchor stud failures
1981 - piping suspension system installation deficiencies
1982 - electrical cable misinstallations

Several of these deficiencies resulted in the Commission taking escalated enforcement action.

organized QA program was acceptable. See Inspection Reports 50-329/81-12; 50-330/81-12. The special team did, however, identify deficiencies in previous QC inspections of piping supports and restraints, and electrical cable installations.2/ QC functions were further reorganized by the licensee's integration of the QC organization of its architect-engineer, Bechtel Power Corporation, into MPQAD in September 1982. This reorganization reflected the recommendations of the NRC staff. As part of this change, the licensee also undertook to retrain and recertify all previously certified Bechtel QC inspectors.

Nevertheless, construction difficulties continued to be identified at the Midland site. An inspection conducted during the period of October 1982 through January 1983 found significant problems with equipment in the diesel generator building. The subsequent identification of similar findings by CPCo in other portions of the plant prompted the licensee to halt the majority of the safety related work activities in December 1982. In view of the history of QA problems at the Midland plant and the lack of effectiveness of corrective actions to implement an adequate quality assurance program, the NRC indicated to the licensee that it was necessary to develop a comprehensive program to verify the adequacy of previous construction activities and to assure the adequacy of future construction. In view of the licensee's performance history, such an

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2/ As a result of staff discussions about the seriousness of such findings and of similar indications of deficiencies as identified in the Systematic Assessment of Licensee Performance Report issued in April 1982, a special Midland Section in Region III was formed in July 1982. The Midland Section devoted increased attention to inspection of the Midland facility, including upgrading the QC program of the project's constructor, the Bechtel Power Corporation.

effort was necessary to restore staff's confidence in CPCo's ability to properly construct the Midland plants.

Consequently, CPCo discussed with the NRC the concept of a construction completion program which would address the concerns raised by the staff. These discussions were followed by a formal submittal of the Midland Construction Completion Program (CCP).

The CCP is the licensee's program for the planning and management of the construction and quality activities necessary for its completion of the construction of the Midland facility. An important aspect of the CCP is the third party overview, which is designed to provide additional assurance as to the effectiveness of the CCP. In response to comments from the NRC and members of the public, the CCP underwent several revisions. As revised and submitted by the licensee on August 26, 1983,[4/] the CCP includes: (1) NRC hold points; (2) the requirement for 100% reinspection of accessible installations; (3) the integration of Bechtel's QC program with MPQAD; (4) the retraining and recertification of QC inspectors; (5) the general training of licensee and contractor personnel in quality requirements for nuclear work, requirements of the CCP, safety orientation and inspection, and work procedures; (6) the revision, as necessary, of Project Quality Control Instructions (PQCI's); (7) CCP team training; and (8) an independent third party overview of CCP activities.

4/ The Petition was apparently based upon the June 3, 1983 version of the CCP. Subsequent versions of the CCP, as described in this decision, address a number of issues raised by petitioners.

The CCP is divided into two phases. Phase 1 consists of a systematic review of the safety-related systems and areas of the plant. This review will be conducted on an area-by-area basis and will be done by teams with responsibility for particular systems. Phase 1 is intended to provide a clear identification of remaining installation work, including any necessary rework and an up-to-date inspection to verify the quality of existing work.

Phase 2 will take the results of the Phase 1 review and complete any necessary work or rework, thereby bringing the project to completion. The teams organized for Phase 1 activities will continue as the responsible organizational units to complete the work in Phase 2.

It should be noted that the CCP does not include the remedial soils program, nuclear steam supply system installation, HVAC installation, and the reinspection of pipe hangers and electrical cable. The remedial soils activities are being closely inspected under the conditions of the construction permits which implement the Atomic Safety and Licensing Board's April 30, 1982, order and under a work authorization procedure. Therefore, the staff does not consider it necessary to require the remedial soils activities to be included in the CCP. Controls over the soils work have been implemented under a separate program. Similarly, reinspection of the pipe hangers and electrical cable were not included in Phase I of the CCP because that reinspection is being done under a separate commitment to the NRC. See letters from James G. Keppler, Regional Administrator, NRC Region III to James W. Cook, Consumers Power Company (August 30, September 2, 1982). Nuclear Steam Supply System installation and HVAC installation were not drawn into question by the diesel generator building inspection.

The staff has not developed facts to indicate that installation of these systems should be included in the CCP. However, these activities will be included in the construction implementation overview to be conducted by the third party overviewer.

The CCP is designed to address the generic applicability of the problems identified by the NRC's inspection of the diesel generator building. The objective of the CCP is to look at the plant hardware and equipment, identify existing problems, correct these problems and complete construction of the plant.

Consideration of Issues Raised

1. Modification of Midland Construction Permits

Petitioners request that the Commission modify the Midland construction permits in two respects: 1) require "hold points" at various stages of the construction completion process; and, 2) incorporate those hold points concerning remedial soils work previously authorized by the Atomic Safety and Licensing Board panel with jurisdiction over the Midland proceeding.

The hold points are fundamental elements of the Midland CCP. As used by both the staff and petitioners, hold points refer to predetermined stages beyond which activities cannot proceed until authorized. Only when such prior work is found to be satisfactory will new work be authorized under the CCP. In this regard, the petitioners requested that three specific hold points be incorporated into the CCP to require NRC or third party review prior to continuation of work.

Based on their review of an early version of the CCP, petitioners asserted that the Midland project had been detrimentally affected by the lack of organizational freedom for its QA staff. See Petition at 13. Accordingly, the petitioners requested that a hold point be incorporated into the CCP whereby the success of the proposed program for the retraining and recertification of QA/QC personnel would be evaluated before any actual work was authorized under Phase 1 of the CCP. Id. at 13, 15. Subsequent to its initial discussions with the staff concerning development of a comprehensive construction completion program,[5/] the licensee began preliminary work, such as team training and recertification of QC inspectors in preparation for its anticipated Phase 1 activities, quality verification program and status assessments. The NRC was informed when training and recertification of QA/QC personnel and CCP team training would begin, and conducted a review of the licensee's actions. The staff suggested that the licensee undertake additional work before proceeding with some of its training effort. Consequently, the retraining hold point requested by petitioners has already been satisfied by the staff.

5/ On December 2, 1982, when CPCo first discussed a construction completion plan with the NRC staff, CPCo was informed by Region III staff that it would be necessary to incorporate NRC hold points. The staff identified four points at which it would require NRC inspectors to review completed work before the next activity could be undertaken. These hold points were identified as:

1. Review and approval of training and recertification of QC inspectors before beginning Phase 1;
2. Review and approval of CCP team training before beginning Phase 1;
3. Review and approval of the Quality Verification Program (QVP) and status assessments before beginning Phase 1;
4. Review and approval of the program for rework or systems completion work before beginning Phase 2.

The petitioners also viewed the proposed CCP as lacking in comprehensiveness. To remedy this deficiency, petitioners proposed that "either a third party or NRC 'hold point' be contained in the reinspection Phase I activities [of the CCP] to determine the adequacy of the 'accessible systems' approach."[6/] Petition at 13.

As described in section three, infra, a third party will be conducting an extensive overview of the CCP and other construction completion activities. The fact that the third party overviewer will also have hold point controls over the licensee should provide additional assurance that construction is proceeding in accordance with all applicable requirements. See Consumers Power Company, Construction Completion Program (August 26, 1983) at 34. The NRC and the third party will monitor the reinspection activities. The staff believes that these monitoring activities will provide the control sought by the petitioners in their request to establish a hold point during Phase 1 reinspection to determine the adequacy of the accessible systems approach.

The third hold point requested by petitioners derives from another criticism of the proposed CCP - the failure of that plan to specify inspection procedures and evaluation criteria. See Petition at 10-11. Accordingly, petitioners request a systematic and thorough review of the construction and quality work packages which will be completed as a prerequisite to initiation of new construction work under Phase 2 of the CCP. Id. at 11.

6/ The accessible systems approach refers to the extent of reinspection under the CCP. Inaccessible areas of the plant will be reinspected by utilizing a records review and destructive and non-destructive testing as required. See Consumers Power Company, Construction Completion Program (August 26, 1983) at 22-23.

The CCP requires that representative construction and quality work packages be reviewed to assure that any completed work is consistent with statements made by the licensee in both its Final Safety Analysis Report and Quality Assurance Topical Report. In addition, the third party overviewer will be using sampling techniques and reviewing selected work and quality packages prior to and during Phase II. Should the results of this sampling approach identify inadequate work packages, the sampling size will be increased as necessary to provide the needed assurance that work packages are adequately reviewed. Moreover, the NRC staff, in performing its inspection activities, will overview this entire process, including reviewing selected quality and work packages.

In summary, the staff believes that those hold points it has incorporated into the CCP, when viewed in the aggregate, substantially satisfy the hold points requested by petitioners. The licensee is required to adhere to these hold points as part of the CCP in conformance with the Confirmatory Order for Modification of Construction Permits (Effective Immediately).

With respect to the second aspect of the requested relief, incorporation of NRC hold points authorized by the Licensing Board's April 30, 1982, Memorandum and Order, the petitioners' request has been satisfied by previous action of the Commission. By amendment dated May 26, 1982, the hold points ordered by the Board were incorporated into the construction permits. See 47 Fed. Reg. 23999 (June 2, 1982). Accordingly, the construction permits already prohibit CPCo from performing the following activities without "explicit prior approval" from the staff:

(a) any placing, compacting, excavating, or drilling soil materials around safety-related structures and systems;

(b) physical implementation of remedial action for correction of soil-related problems under and around safety-related structures and systems, including but not limited to:

(i) dewatering systems

(ii) underpinning of service water building

(iii) removal and replacement of fill beneath the feedwater isolation valve pit areas, auxiliary building electrical penetration areas and control tower, and beneath the turbine building

(iv) placing of underpinning supports beneath any of the structures listed in (iii) above

(v) compaction and loading activities;

(c) construction work in soil materials under or around safety-related structures and systems such as field installation, or rebedding, of conduits and piping.

Construction Permits No. CPPR-81 and CPPR-82, Amendment No. 3 (May 26, 1982).

2. Management audit of CPCo

The petitioners request that the NRC require a management audit of CPCo's performance on the Midland project. The staff does not believe that a management audit is necessary at this time as a condition for going forward with the CCP. The staff expects that the CCP, with its built-in hold points and third party overview, should provide an effective process to satisfactorily complete construction at Midland, without the previous quality assurance problems. The third party overview together with the planned staff inspection activities should provide information to determine the adequacy of the licensee's implementation of the CCP. Nevertheless, the staff will continue to review information concerning the licensee's performance in other areas to determine whether an audit is required.

3. Rejection of Construction Completion Program and Third Party Overview Organization

In requesting that the Commission reject the Midland construction completion plan, petitioners based their position on the unacceptability of the Stone and Webster Engineering Corporation (S&W) to conduct the third party overview of the CCP. Petitioners raised three objections to the selection of S&W: the failure of S&W to meet the Commission's criteria for the independence required of a third party, see Petition at 19; the failure of S&W to submit a minimally adequate audit proposal, id. at 18-19; and the lack of public participation in the selection of S&W as the third party review organization for the Midland project. Id. at 19-20.

In support of its argument that S&W is not sufficiently independent to monitor implementation of the CCP, the petitioners asserted that "under both a literal and realistic reading of the Commission's primary financial criteria, ...the third party not have any direct previous involvement with the Company." Petition at 19. In order to evaluate whether an audit organization is sufficiently independent to conduct a third party review, the Commission generally utilizes the guidance originally set forth in a letter from Chairman Palladino to Representatives Ottinger and Dingell. The Commission's standard does not require that a proposed third party reviewer have had no previous involvement with the utility whose program it will be reviewing. Rather, the criteria require that the audit organization, including those employees who will be participating in the third party review, will not be reviewing specific

activities in which they were previously involved. See Letter from Chairman Palladino to Representatives Ottinger and Dingell (Feb. 1, 1982), Attachment 1, at 1. Petitioners stated that S&W's role as the overviewer of remedial soils work at Midland prohibits that organization from serving in the same capacity for the CCP. The staff disagrees. Since the remedial soils activities are outside the scope of the CCP, S&W will not be called upon to review its own work. Consequently, the staff does not agree that S&W's overview activities will conflict with the established independence criteria.7/

7/ The petitioners questioned why TERA was disqualified from consideration as the overviewer under the CCP while S&W was not disqualified on the ground of independence. See Petition at 19. TERA's disqualification was based on the potential for conflict that could be raised by TERA overview under the CCP of determinations that TERA had previously made under the Independent Design and Construction Verification Program (IDCVP) of the adequacy of the construction of the Auxiliary Feedwater System, the onsite emergency AC power supplies and the HVAC system for the control room. Since TERA has been approved by the NRC to perform the IDCVP, the staff determined that TERA would not satisfy the Commission independence criteria for the third party overview of the CCP. See letter from James G. Keppler, Regional Administrator, Region III to James W. Cook, Consumers Power Company (March 28, 1983) at 3.

The written program documents being utilized to directly control and implement the Construction Implementation Overview (CIO) program[8/] and the applicable S&W corporate master program documents[9/] have been reviewed by the staff. These documents are representative of the scope and depth of the S&W overview. The NRC staff also met with S&W on August 25, 1983, in Midland, Michigan in order to gain additional insight into the total S&W program. Based upon its document review and discussions with S&W at the August 25, 1983, meeting, the staff has found the S&W proposal to constitute an acceptable third party overview program. To provide additional assurance that the third party audit is being properly implemented, the CIO program will also be audited independently by the S&W corporate quality assurance staff. NRC inspectors will also monitor the adequacy of the CIO program.

8/ The documents written expressly for the CIO include:

1. CIO Program Document dated April 1, 1983.
2. CIO Quality Assurance Plan.
3. Third Party CIO Plan.
4. CIO Assessment Procedure, 10.01.
5. Nonconformance Identification and Reporting Procedure, 15.01.
6. A detailed attribute checklist for each CPCo Project Quality Control Instruction (PQCI).
7. A detailed checklist to review generic types of requirements (for non-PQCI activities); e.g., QA Audits and Surveillances.
8. Additional Quality Control Instruction as needed to provide adequate overview control.

9/ The following S&W corporate master program documents will also be utilized for the CIO, as required:

1. QA Topical Report SWSQAP 1-74A, S&W Standard Nuclear Quality Assurance Program.
2. S&W Quality Standards; e.g., for quality sampling.
3. S&W Quality Assurance Directives.

Of particular concern to the petitioners was the number of personnel which S&W had assigned to the Midland overview. See Petition at 18. The number of qualified people will vary with the demand of the work activities to be overviewed. S&W's CIO staffing plan currently has nine people assigned at the Midland site and there are planned increases to 32 people as work activities progress. These numbers, however, are only estimates and S&W has represented that it will commit whatever personnel are necessary to conduct the CIO. Furthermore, the number of personnel utilized by S&W is not subject to limitation by CPCo.

S&W has already begun to review preliminary activities of the licensee in preparation for initiation of the CCP.[10/] This effort has identified various concerns and one nonconformance that required CPCo action to resolve. The NRC staff has reviewed the CIO activities performed to date and has found this overview, including actions taken by CPCo, to be of the quality expected of a third party overview.

10/ The activities being overviewed have included the following CCP and non-CCP activities:

- Program and procedure reviews.
- Review of PQCI's.
- Review of MPQAD QA/QC personnel training and certification.
- Review of general training of CPCo and Bechtel personnel, including construction craftspersons.
- Review of CCP Management Reviews.
- Review of System Interaction Walkdowns.
- Review of Design Documents.

The purpose of the independent third party overview is to provide additional assurance that the CCP is adequate and will be properly implemented. This overview requirement was necessitated by the loss of NRC staff confidence in CPCo to successfully implement a quality assurance program for the Midland project. The CIO will remain in place at the Midland site until the necessary level of confidence in the ability of the licensee to construct the Midland project has been restored to the satisfaction of the NRC staff.[11/] Given that the third party overview is expected to continue until NRC confidence in the Midland project is restored, petitioners' criticism that the CIO is of insufficient duration appears unfounded.

Opportunity has been provided to the public to participate in the selection of S&W as the third party overviewer, and to comment on the CCP itself. A meeting was held on February 8, 1983, between CPCo and the staff to discuss the CCP. On August 11, 1983, the staff met with the intervernors, representatives of the Government Accountability Project (GAP) and the Lone Tree Council to discuss the CCP and the CIO. Subsequently, on August 25, 1983, the staff met with S&W to discuss the CIO. These meetings were conducted in Midland, Michigan and were open to public observation. Evening sessions to receive public comments regarding the CCP were held on February 8, and August 11, 1983. Similarly, public comments were received following the August 11 and August 25, 1983, meetings. Several additional meetings between the staff, intervenors and a representative of GAP to discuss the CCP and CIO have also been held.

11/ The staff anticipates that the third party overview will be a long term effort.

The petitioners' reference in its request to "closed door" meetings appears to refer to working level meetings that have been held principally between the Midland section of the Region III staff and CPCo site personnel, and, in some cases, S&W onsite personnel. See Petition at 19. Such meetings continue to be necessary to enable the NRC staff to achieve a full understanding of the CCP, including the CIO, and to discharge its inspection duties.

For the reasons set forth above, petitioners' request to reject the selection of S&W to conduct the CIO, and to reject the CCP, is denied. 12/

4. Removal of the Licensee from Primary Responsibility for the Midland Quality Assurance Program

The petitioners request that MPQAD be relieved of responsibility for the QA/QC function at the Midland plant and that an independent team of QA/QC personnel be created which would report simultaneously to the NRC staff and CPCo. In support of their request, petitioners cite much of the same history of QA/QC deficiencies that the staff summarized in the background section of this decision. See Petition at 20.

12/ The staff has approved S&W to conduct the CIO. See Staff Evaluation of Consumers Power Company Proposal to Use Stone and Webster Michigan, Inc. to Conduct the Third Party Construction Implementation Overview of the Midland Nuclear Plant (Sept. 29, 1983).

The changes that CPCo has most recently instituted through development of the CCP should improve its capability to discharge its responsibility under applicable Commission regulations, such as 10 CFR 50.34(a)(7) and Appendix B to 10 CFR Part 50, which require the establishment and execution of a QA/QC program. While Criterion I of Appendix B permits a construction permit holder to delegate to other organizations the detailed execution of the QA/QC program, the history of the Midland project makes it clear that the licensee has retained too little control over the QA/QC program. CPCo seems to be proceeding in a positive direction by integrating the implementation of the QC function formerly under the control of Bechtel into the MPQAD. This consolidation of quality control and quality assurance functions should reinforce the separation between the QC function, which will be assumed by MPQAD, and the construction function, which will remain with Bechtel.

While it might be permissible under Appendix B to 10 CFR Part 50 for CPCo to retain an independent organization to execute the QA/QC program, the licensee remains ultimately responsible for the establishment and execution of the program. As stated above, the staff considers the strengthening of MPQAD to be a positive step in improving CPCo's capability to assure the quality of construction of the Midland facility. In view of the relatively short existence of the MPQAD, there does not currently exist any justification for requiring CPCo to retain an outside organization to execute the QA/QC program. Therefore, this aspect of petitioners' request is denied.

Petitioners also requested that the independent QA/QC team report simultaneously to the NRC and to CPCo management. The petitioners apparently intended that

the NRC would be involved in making management decisions regarding construction of the facility based upon the reports of the independent QA/QC team. There appears to be no basis for this extraordinary departure from the NRC's regulatory function. Accordingly, this aspect of the petition is denied.

5. Detailed Review of Soils Settlement Resolution

The petitioners requested that the staff conduct a detailed review of the resolution of the soils settlement problems, including a technical analysis of the implementation of the underpinning project at the current stage of completion. Petition at 23. In its supporting discussion, the petition focused upon the questionable structural integrity of the diesel generator building.

A detailed review of the program for resolution of the soils settlement problem has previously been conducted by the NRC staff and its consultants. In 1979 the U.S. Army Corps of Engineers was contracted to assist the staff in the safety review of the Midland project in the field of geotechnical engineering. After the soils problem became known, additional assistance to the staff in specialized engineering fields (structural, mechanical, and underpinning) was obtained from the U.S. Naval Surface Weapons Center, Harstead Engineering Associates, Geotechnical Engineers, Inc., and Energy Technology Engineering Center. These consultants assisted in the review of technical studies, participated in design audits, visited the site, provided input to the Safety Evaluation Report, and provided expert testimony before the Atomic Safety and

Licensing Board. Thus, the approach to the resolution of the soils settlement issue has been thoroughly studied by the staff and its consultants.

The implementation of the remedial soils activities is being closely followed as part of the NRC's inspection program. This inspection effort includes ongoing technical review of the remedial soils program and its implementation by a Region III soils specialist. Technical expertise to evaluate implementation is also provided by the NRC's Office of Nuclear Reactor Regulation. Additionally, the NRC is utilizing Geotechnical Engineers Inc. in assessing aspects of the remedial soils and underpinning activities. In addition, the soils settlement question has been in litigation for over two years before an Atomic Safety and Licensing Board. Consequently, the relief requested with regard to the soils settlement issue has been substantially satisfied by prior action of the Commission.

Along with review of the soils settlement issue, petitioners requested that another study of the seismic design deficiencies of the Midland plant, with emphasis on the diesel generator building, be conducted. The petitioners further requested that this review would be conducted by a "non-nuclear construction consultant." See Petition at 23.

The NRC staff has initiated a task force study by consultants from Brookhaven National Laboratory (BNL) and NRC structural engineers to evaluate concerns about the structural integrity of the diesel generator building raised by a NRC Region III inspector in testimony before the Subcommittee on Energy and the Environment of the House Committee on Interior and Insular Affairs. Following their review, a report will be issued addressing the concerns raised by the inspector. Decisions on whether further actions are required will be

made based upon that report. Additional details on the task force were provided to the Government Accountability Project by letter dated August 10, 1983, and in Board Notifications 83-109 and 83-142, which were transmitted to GAP on July 27 and September 22, 1983, respectively.

As to the request that a review of the diesel generator building be conducted by a "non-nuclear construction consultant", BNL has established an expert team to resolve the concerns raised by the Region III inspector. Expertise rather than the label "non nuclear construction consultant" should be the governing criteria. The staff has reviewed the qualifications of the team members and is satisifed with their experience. The task force study currently in progress substantially satisfies this aspect of the petition.

The petition also appears to be requesting an additional review of the seismic design of structures other than the diesel generator building. Petitioners have not, however, stated any basis why additional reviews beyond those reflected in the Safety Evaluation Report and Supplements are necessary. The staff does not believe that an additional review by an outside organization of the facility's seismic design is required at this time.

Conclusion

Based upon the foregoing discussion, I have granted the petition in part and denied it in part.

A copy of this decision will be filed with the Office of the Secretary of the Commission for the Commission's review in accordance with 10 CFR 2.206(c) of the Commission's regulations. This decision will become the final action of the Commission twenty-five days after date of issuance unless the Commission, on its own motion, institutes a review of the decision within that time.

Richard C. DeYoung, Director
Office of Inspection and Enforcement

Dated at Bethesda, Maryland,
this 6th day of October 1983

[7590-01]

NUCLEAR REGULATORY COMMISSION

[Docket Nos. 50-329 and 50-330]

CONSUMERS POWER COMPANY

(Midland Plant, Units 1 and 2)

ISSUANCE OF DIRECTOR'S DECISION UNDER 10 CFR 2.206

Notice is hereby given that the Director, Office of Inspection and Enforcement, has issued a decision concerning a petition dated June 13, 1983, filed by Billie Pirner Garde of the Government Accountability Project on behalf of the Lone Tree Council and others. The petitioners had requested that the Commission take a number of actions with respect to the Midland Plant. The Director, Office of Inspection and Enforcement, has decided to grant in part and deny in part the petitioners' request.

The reasons for this decision are explained in a "Director's Decision" under 10 CFR 2.206 (DD-83-16), which is available for public inspection in the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. 20555, and in the Local Public Document Room for the Midland Plant, located at the Grace Dow Memorial Library, 1910 W. St. Andrews Road, Midland, Michigan, 48640.

Dated at Bethesda, Maryland this 6th day of October, 1983.

FOR THE NUCLEAR REGULATORY COMMISSION

Richard C. DeYoung, Director
Office of Inspection and Enforcement

8310200340

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of:	)	Docket Nos. 50-329-OL
	)	50-330-OL
CONSUMERS POWER COMPANY	)	50-329-OM
	)	50-330-OM
(Midland Plant, Units 1 and 2)	)	
	)	

SUPPLEMENTAL MEMORANDUM IN SUPPORT OF
INTERVENOR BARBARA STAMIRIS' MOTION TO LITIGATE DOW ISSUES

Intervenor Barbara Stamiris submits the following supplemental memorandum in support of her motion to litigate Dow issues.

I. BACKGROUND

On August 8, 1983, intervenor Barbara Stamiris submitted a motion to litigate issues raised by the Dow Chemical Company in its suit against Consumers Power Company, filed July 14, 1983. The three issues raised by the Dow Complaint, which intervenor argued presented important new evidence on applicant's poor management attitude were the following:

(1) Applicant misrepresented its schedule for completion of the two Midland plants to the Nuclear Regulatory Commission ("NRC"), including the NRC Staff and this Atomic Safety and Licensing Board ("Licensing Board");

(2) Applicant used and relied on U.S. Testing test results to fulfill NRC regulatory requirements even though it knew the test results were invalid; and

(3) Applicant knowingly misrepresented to the NRC that a single test boring taken near the diesel generator building

demonstrated that unmixed cohesive fill had been used as a foundation.

On August 17, 1983, applicant filed a lengthy response to intervenor's motion and offered to allow the parties and the Board to review a number of documents provided to Dow prior to its filing suit against Consumers ("the Dow documents").

In a conference call on August 25, 1983, this Licensing Board deferred ruling on intervenor's motion and request for discovery until such time as all parties had a chance to review the Dow documents.

On September 14, 1983, applicant's counsel submitted a three-page letter and a fifth box of documents to the Licensing Board and the parties. Applicant presented a new argument in this letter that because the 1980 NRC Caseload Forecast Panel estimated completion dates only three months later than Consumers, the information Consumers disclosed on schedule to the NRC was accurate. Unfortunately both Consumers and the NRC were wrong by at least three years.[1]

Moreover, these and other documents obtained by intervenor's counsel, the Government Accountability Project ("GAP")

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1. Mr. Brunner's letter is clearly an unauthorized pleading. However, intervenor will not object to its filing since the documents submitted in support of the pleading support intervenor's position. Further, many of the documents and arguments are simply irrelevant to the dispute before this Board.

pursuant to the Freedom of Information Act ("FOIA") demonstrate that the NRC Staff has had long debates about the accuracy of applicant's schedule figures. However, it has always been true even up through the present, that an informed segment of the NRC Staff has estimated completion dates years ahead of Consumers. Further, these completion dates have been revised after Consumers Power has exerted pressure to make the Panel conform their dates to Consumers' figures. An informed and sizeable segment of the NRC Staff has always held the opinion that Consumers' figures are inaccurate and unreliable.

Even a cursory reading of the Dow documents reveals that the fuel load dates Consumers presented to the NRC Staff from July, 1980, until April, 1983, indicate Consumers knew the figures were false and used them in the face of tough questioning by a sizeable segment of the NRC Staff.

Moreover it appears that Bechtel did not use these completion dates but the Bechtel Forecast 6 schedule to plan construction work. In these circumstances it appears Consumers deliberately submitted false figures to the Commission.

Intervenor submits this Supplemental Memorandum to support its claim that the documents Consumers released support Dow's and intervenors'allegations that Consumers knowingly misrepresented the scheduled completion dates for the two Midland plants.[2]

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2. Intervenor does not address the second and third issues she believes are raised in the Dow Complaint. If the Board should rule that she may not litigate these issues as management attitude issues, Mrs. Stamiris requests the opportunity to submit a supplemental memorandum demonstrating how the Dow documents substantiate these allegations.

II. DOCUMENTS PRODUCED BY CONSUMERS DEMONSTRATE THAT CONSUMERS AND BECHTEL DELIBERATELY MAINTAINED A DUAL SCHEDULE AND MISLED THE NRC ABOUT COMPLETION DATES FOR THE TWO MIDLAND REACTORS.

Bechtel released its Forecast 6 in January, 1980. In Forecast 6 Bechtel calculated the fuel load dates for Unit 1 to be September, 1984 and for Unit 2 to be April, 1984.

On January 15, 1980, K. R. Kline requested that a Forecast Review Team evaluate Bechtel Forecast 6. The Review Team was comprised of staff from Consumers' home office, field offices, testing staff and Control and Administrative Services. This team concluded that it generally agreed with Bechtel on cost and schedule; it recommended a total project estimate based on Forecast 6 Cost and Schedule figures. See Kline/Randolph Memo of May 5, 1980, Attachment 7 to Applicant's August 17, 1983 Response, Intro. at 1-4; History/Background at 7.

On June 25, 1980, Consumers and Bechtel held an "Executive Management Meeting." At that meeting Consumers and Bechtel agreed to establish target dates of July, 1983 and December, 1983 for fuel load of Units 2 and 1, respectively. These dates were based on the assumption that the scope of work at the project would not be increased. This assumption was clearly invalid as the magnitude of the soils settlement problems became apparent. See July 31, 1980 Mollenkopf Memo on 6/25/80 Meeting at 4-5, Attachment 8 to Applicants' 8/17/83 Response.

On July 10, 1980, Mr. Rutgers reported that Bechtel would maintain two sets of cost and schedule figures. The first figures were defined as the "current project schedule." The current project schedule listed fuel load dates for Unit 2 as

July, 1983. (Consumers agreed to use the term "target schedule" for these fuel load dates.)

Bechtel was instructed to use these target or current project schedules in all correspondence with Consumers and in all documents intended for public consumption. Bechtel was to continue to use its Forecast 6 schedule or the "current forecast" to plan and control its construction work. As stated in Attachment 2 to the Rutgers' Meeting Notes, "Forecasting ... is an ongoing schedule monitoring and control process which indicates the responsible team members' evaluation of construction scope, duration, and time-of-accomplishment."

Obviously Consumers directed Bechtel to keep two schedules -- one false and inaccurate and the other based on Forecast 6 to guide its work. See generally, Rutgers Notes of 7/10/80 Meeting, attached and incorporated herein as Attachment 1.

In its August, 1980 Cost Trend Report submitted to Consumers Bechtel carried out these directions. In its earlier June and July 1980 Cost Trend Reports Bechtel presented two schedule columns for each reactor: A Trend Base Schedule and an Actual Forecast. The "Actual Forecast" schedules were the Forecast 6 fuel load dates.[3] See Cost Trend Schedules for June, 1980, and July, 1980, attached and incorporated herein as Attachments 2 and 3.

The August Cost Trend Report has the two "actual forecast"

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3. Apparently the July, 1980, Cost Trend Report was prepared before the July 10, 1980 Management Meeting in which Bechtel was ordered to remove the forecast column from the Cost Trend Reports.

columns literally "whited out" or cut out. The form of the chart which appears in the Bechtel cost trend reports does not change over the years up through 1983, even though all columns except for the current project schedule columns remain blank. This leads one to believe that Bechtel maintained the two sets of figures in the cost trend reports it kept for its own use. Not until April 27, 1983 do the current project schedule dates change. See April, 1983 Cost Trend Report Schedule, attached and incorporated herein as Attachment 4.[4]

In a June 10, 1981 project management meeting, Bechtel and Consumers apparently discussed the internal project schedules. Don Miller expressed his concern that intermediate project schedules had not been formally coordinated. John Rutgers suggested compiling a fully coordinated schedule of interim construction dates. But James Cook vetoed the idea, apparently because Consumers did not want Bechtel to compile another comprehensive set of schedule forecast figures, such as Forecast 6. See Rutgers Meetings Notes of 6/25/81 Meeting, attached and incorporated herein as Attachment 6.

The Dow documents, therefore, illustrate that Consumers ordered Bechtel not to disclose to Consumers any schedule data other than the inaccurate schedule for public consumption, using fuel load dates of July and December, 1983. Moreover it is clear that Consumers, from the Summer of 1980 until April, 1983, did

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4. The two actual forecast schedule columns inexplicably appear in the January, 1981 Bechtel Cost Trend Report, and then disappear until April, 1983. See April, 1983 Cost Trend Report schedule, attached and incorporated herein as Attachment 5.

did not change these fuel load dates, even when it knew the Bechtel Monthly "Critical Items Action Reports" were reporting throughout 1981 and 1982, delays of 10 months and more. See, e.g., Bechtel Critical Items Action Reports for November, 1981 and December 1981, attached and incorporated herein as Attachments 7 and 8.[5]

III. FROM AUGUST, 1980 UP TO THE PRESENT THE NRC STAFF HAS BEEN DIVIDED AS TO THE ACCURACY OF CONSUMERS' COMPLETION DATES

In August, 1980, after the release of Forecast 6, the NRC Staff came to a preliminary estimate of fuel load dates of May, 1984 and November, 1984 for Units 2 and 1, respectively. See Sullivan Telecon Record of 8/12/80; and Sullivan Telecon Record of 8/18/80, attached and incorporated herein as Attachments 9 and 10. Only after Consumers exerted pressure on the NRC Staff, through numerous meetings, did William Lovelace agree to revise the NRC Staff estimate to bring it in line with Consumers' fuel load dates of October, 1983 and April, 1984. See Sullivan Meeting Notes of 8/25/80 attached and incorporated herein as Attachment 11.

On September 16, 1980, the Staff publicly announced that its fuel load dates substantially agreed with Consumers', differing by three months. See Hood Summary of 8/25/80 Meeting, attached and incorporated herein as Attachment 12.

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5. In compiling Forecast 7, Bechtel did not estimate construction completion dates. Rather it assumed the target fuel load dates of 1973 and determined an estimated cost based on these dates.

Hidden behind the 1983 NRC Caseload Forecast Panel completion dates is a similar debate. The Caseload Forecast Panel in May, 1983 estimated fuel load dates in the third quarter of 1986, not taking into account delays caused by consideration of the Construction Completion Program and time needed for rework and corrective action. See Draft Novak Letter, attached and incorporated herein as Attachment 13.

This draft letter was never sent. Instead Consumers succeeded in convincing the NRC Staff to cancel three public meetings scheduled during theSummer of 1983. Finally, after a FOIA request and administrative appeal by GAP, the NRC Staff released a revised case load forecast of fuel load dates in the third quarter of 1985. Mr. Novak's letter dated August 9, 1983, varies significantly in tone and substance from his earlier draft letter. See Novak Letter of August 9, 1983, attached and incorporated herein as Attachment 14.

Consumers convinced the NRC to cancel three successive public meetings during the Summer of 1983 and ultimately convinced the Caseload Forecast Panel to shave an entire year off its estimated construction completion dates for the Midland plants. See Affidavit of Billie Garde and exhibits, attached and incorporated herein as Attachment 15.

Just as in 1980, an informed segment of the panel wished to inform the Licensing Board and the public of the NRC estimates, which differed from the applicant's figures by at least two years. Through pressure exerted on the NRC Staff, Consumers

succeeded in delaying any public meeting and forcing the NRC Staff to radically revise its original completion dates.

It is obvious from the Caseload Forecast Panel's original estimates in 1980 and again in 1983 that at least a portion of the NRC Staff has had grave doubts about the accuracy and reliability of information provided by Consumers. Yet under constant pressure from Consumers the NRC Staff has been willing to change its forecast dates to conform more closely to those of Consumers.

In these circumstances, the NRC Staff may see that litigation of the dual schedule issue will be embarrassing to the NRC Staff. Nonetheless the significance of this issue to the decision before this Board is beyond argument. Clearly Consumers' duty to report full and accurate information to the NRC Staff and this Licensing Board at all times is absolute. Consumers' failure to report accurate information about projected completion dates to the NRC from 1980 to the present is highly probative of its untrustworthiness today to carry out the sensitive soils remedial work, even under strict Board-imposed controls.

IV. CONCLUSION

For the foregoing reasons, intervenor respectfully requests this Licensing Board to allow litigation of the three Dow issues described above and reopen discovery against the NRC Staff and Consumers regarding these issues.

Respectfully submitted,

Lynne Bernabei

LYNNE BERNABEI

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DATED: September 21, 1983

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NUCLEAR REGULATORY COMMISSION
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October 4, 1983

Docket Nos. 50-329/330 OM, OL

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

Dear Mr. Cook:

SUBJECT: Followup Meeting on Construction Completion Dates

My letter of August 9, 1983, noted that since the April 19-21, 1983, NRC staff visit to assess construction completion schedules for Midland, Consumers Power Company had requested a followup meeting to review the material previously provided, to provide additional information, and to discuss reconsideration of scheduling priorities between Units 1 and 2 in light of recent actions by Dow Chemical Company. The letter also noted that at Consumers' request, the staff would be scheduling this meeting in September 1983.

On September 2, 1983, Messrs. B. Hershe, N. Leech and others from your Company advised us that the week of October 24, 1983, would be the earliest time that Consumers would be prepared to discuss scheduling priorities between Units 1 and 2, and that some months beyond this may be needed to establish a scheduling projection basis.

The staff views this as a significant delay in our efforts to consider your views regarding the schedule for plant completion at Midland. Unless your dates for establishing a firm schedule for plant completion are substantially improved, the staff will consider the estimate it developed based upon the April 19-21, 1983 visit to be appropriate for its planning purposes. Please advise me of your intent in this regard within two weeks of receipt of this letter.

Sincerely,

Thomas M. Novak, Assistant Director
for Licensing
Division of Licensing

cc: See next page

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OCT 6 1983

MIDLAND

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