

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

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

AFFIDAVIT OF GILBERT S KEELEY

I am Gilbert S Keeley. I am presently employed by Consumers Power Company as the Project Manager, Midland Project. Based upon knowledge, information, and belief my testimony in the Midland Soils Case, which is attached hereto, is true and correct.

Dated June 4, 1981

Consumers Power Company

By Gilbert S. Keeley

Sworn and subscribed to before me on this 4th day of June, 1981.

Pamela J. Sullivan  
Notary Public, Jackson County, Michigan  
My commission expires September 16, 1981

6/5/82

I. INTRODUCTION AND SCOPE OF TESTIMONY

My name is James W. Cook. I am Vice President Projects, Engineering and Construction for Consumers Power Company. In this capacity, I am responsible for the engineering and construction, including quality assurance, for all the Company's production, generation and transmission facilities and major modifications thereto. Because of the nature of the Company's construction program, both currently and for the immediate future, the vast majority of my responsibilities focus on the construction of the Midland Nuclear Plant. I have been in my current position since October 1980, and I have been directly responsible for the Midland Project since March 1980 when I was appointed Vice President for the Midland Project. In my present position, I retain the direct responsibility for and involvement with the Midland Project.

I graduated from Princeton University in 1962 with a Bachelor of Science Degree in Chemical Engineering. I also attended Pennsylvania State University and received a Master of Engineering Degree in Nuclear Engineering in 1965. In addition, I attended, on a part-time basis, the Polytechnic Institute of Brooklyn (now part of the State University of New York) where I took a number of graduate courses in the Chemical Engineering Department. I am a registered professional engineer in the State of New York.

After graduation from Princeton, I joined the American Electric Power Service Corporation, the technical and management services arm of the American Electric Power System. During my 10 years as part of the AEPS

Engineering Department in New York, I held a number of positions in the mechanical and nuclear engineering areas. The majority of my experience at AEPSC related to various activities associated with the design of the D C Cook Nuclear Plant located in Bridgeman, Michigan. I directly participated in and was responsible for the initial cost estimates and design studies, the safety analyses and technical licensing activities leading to the construction permit, and the initial formulation of the analytical methods and staffing of the fuel management program for the D C Cook Plant. My final position at AEP was Section Head, Physics and Fuel Management. In 1972, I joined the Stone and Webster Engineering Corporation in Boston. At Stone and Webster, I undertook a number of assignments, first, as an Assistant Project Engineer and then as a Project Engineer with responsibility for the engineering of several nuclear power plants being designed by Stone and Webster. My final assignment at Stone and Webster was as Project Engineer for Millstone Unit 3 currently under construction near Waterford, Connecticut. In 1977, I joined Consumers Power Company as Vice President Energy Planning, a staff position coordinating the Company's overall corporate planning activities and reporting directly to the Company's top management. I held this position until March 1980.

I hold membership in various professional societies and industry committees related to my work. I have been a member of the American Nuclear Society since my graduation from Penn State either through individual or corporate membership. Among my more recent industry committee activities are the following: I am a member of the Executive

Advisory Committee on Nuclear Power of the Edison Electric Institute. I am a member of the Steering Committee of the Utility Occupational Radiation Standards Group (UORSG). I am a member of the Policy Committee of the Atomic Industrial Forum's Industry Degraded Core Rulemaking (IDCOR) Group. I have also recently joined the Atomic Industrial Forum's Policy Committee on Nuclear Regulation.

I am testifying today about the commitment of Consumers Power Company management to construct the Midland Nuclear Plant in a manner so as to comply with all applicable regulatory requirements and to operate safely and reliably when the plant is placed into operation. My testimony on the subject of this commitment is limited in light of the ruling of the Atomic Safety and Licensing Board (ASLB) dated October 24, 1980 which limited the scope of the intervenor Stamiris's contentions on "management attitude" as follows:

" We note that the contentions are to be understood as limited to the resolution of the soils settlement issues, to the implementation of the QA/QC program with respect to the resolution of such issues and to factors which could be said to bear upon the Applicant's managerial attitude in resolving such issues."

Accordingly, my testimony on management attitude covers the time period beginning March of 1980 and running to the present. The period prior to March 1980 is covered in the testimony of Mr Stephen H. Howell.

My testimony will generally address the points raised in the ASLB order; ie, how management has gone about trying to resolve the soils settlement issues and how we have implemented the QA/QC program. In addition, I will follow the same general approach utilized in Mr Howell's testimony but describing activities that occurred only in the time period of my direct involvement. This approach was chosen because I agree that any useful discussion of Consumers Power Company management attitude must focus on actions taken or planned to assure that the Midland Plant is built in a manner consistent with the protection of public health and safety. The actions I describe will be organized according to the following criteria which seem appropriate with regard to management attitude:

1. The existence of an organizational structure to keep management informed of construction and quality issues and management's willingness to be informed on those subjects;
2. Prompt, effective and complete communication with the NRC on matters affecting the construction permit and the operating license;
3. Prompt and effective investigations of deviations from design or construction specifications;
4. Expedited management decision-making on programs and measures essential for the successful completion of the project; and
5. Management's willingness to expend effort and resources to meet regulatory requirements.

## II. INDICATORS OF A POSITIVE MANAGEMENT ATTITUDE

### A. Information Flow to Management - Midland Project Organization

The recognition in the second half of 1979 that the Midland Nuclear Plant could not be completed on the then existing schedule led to a reappraisal by many knowledgeable individuals in the Company, including the Chief Executive Officer, of how the entire project could best be organized to successfully complete the project. This reappraisal was in full swing when I was approached in March 1980 to become directly involved in completing the project. I accepted the assignment of heading the Midland Project and was thereafter involved in the reorganization of the project. The general format of the organizational planning was to identify and evaluate every idea and experience that the Company's management had accumulated over the years in their individual participation in building nuclear power plants both for Consumers Power Company and elsewhere. This retrospective included my own experience in both another utility's and an architect/engineer's organization and the views of the Company's Chief Executive Officer from his experiences at General Electric prior to joining Consumers Power Company.

In my view the Company was able to benefit from industry's collective experience and management's own perspective of the specific external environment that the Company would face in proceeding with the project. The major results of this project restructuring were put into place starting in March of 1980 and

continuing until August. The general objectives that the reorganization sought to achieve can be summarized as follows:

- Increasing participation by Consumers Power Company in all aspects of the project while still recognizing that major portions of the project would be the direct undertaking of the other major participants; ie, Bechtel and B&W.
- Evaluating all the participating organizations with regard to the quality and depth of personnel in the leadership positions and the adequacy of the project resources to accomplish the work required to finish the project.
- Making the project within Consumers Power Company as self-contained as practicable. This meant that any resource being utilized on more than a minimal basis would be reassigned to full-time project involvement.
- Aligning the resources of all the participating organizations to the extent possible to reinforce the concept of a single project team working together as opposed to separate organizations working more or less as independent contractors. This organizational concept spanned all phases of the project including quality assurance, operations and the various contractor organizations.

The net result of this reorganization when combined with the replanning of the work required to complete the project resulted in significant increases in the professional personnel assigned to the

job in all of the major organizations participating in the job. One of the benefits that derive from this approach, which culminated in the March reorganization but had been evolving for several years previously, was more direct Consumers Power Company involvement and control over the subtier activities in the contractor organizations. This involvement meant that more timely decisions can be made due to the Consumers Power project personnel now dealing more closely with the activities within the contractor organizations. This also meant that potential problems can be identified and escalated to Consumers' management attention earlier. Also the utility personnel, with more of a hands-on approach, become more sensitized to the specific problems encountered by contractor personnel. As a result, better working relationships and mutual respect can be developed, and the single team approach can be fostered within the entire project organization.

The CP Co Midland Project organizational structure that resulted from the 1980 reorganization is depicted in general form in Exhibit 1 to my testimony. Although not detailed here, considerable thought was given to making the major organizational units interface properly. The importance of proper interfaces and communications becomes apparent when recognition is given to the fact that over 500 employees currently report through the CP Co project organization and well over 4,000 employees are currently at work on Midland through the Bechtel organizational structure.



I should also note that during the time frame of the overall reorganization (second half of 1979 through the first half of 1980) most of the key management positions for the Midland Project at both Bechtel and B&W were restaffed and expanded in recognition of the magnitude and complexity of the remaining work.

The specific organizational change effecting quality assurance was to completely integrate the Consumers Power Company and Bechtel quality assurance organizations into a single entity called the Midland Project Quality Assurance Department (MPQAD). This organization, headed by Consumers Power Company quality assurance personnel, was made a direct part of the Midland Project and not only directly reports to me as the head of the Midland Project Office but also supports the Bechtel Project Manager in terms of his needs for quality assurance staff. The details of the quality assurance organization are more fully discussed in the testimony of Mr Benjamin W. Marguglio.

The ability of the corporate and project management to be informed on the progress and problems of the project under the new organization can be described in several ways. First, by having a corporate officer involved directly in the day-to-day management of the project, corporate management's involvement and awareness has to be increased. Second, the extent of management's access to information can be charted by the amount of correspondence, of which a large fraction is in the quality assurance area, that is sent

conclusions of those involved in this matter that nobody was listening on the other end. However, I also realized as I became more familiar with the detailed issues that the complete analytical responses sought by the NRC staff in certain areas were still to be provided on a schedule tied to the completion of detailed engineering. My concern over the lack of review rapidly changed as significant review activities proceeded in 1980; and, as these activities proceeded, significant additional submittals to the staff also followed. In addition to the amount of written material that has been presented to the staff, there have been numerous meetings with staff personnel on both the working level and management level on an ongoing basis throughout the period that I have been associated with the project. As a result, it is my firm belief that the lines of communication were wide open for the entire time period that my testimony covers. As I will discuss further here and under Section II D of this testimony, there has been and continues to be direct management level communication regarding the items in this proceeding that are deemed to be significant and which are in need of resolution between the Company and the NRC. These include both engineering and quality assurance topics. The meetings with the NRC in which I have participated during the past year are summarized in Exhibit 2 of this testimony.

In the quality assurance area, I have had a number of direct conversations with Mr Keppler, the Director of Region III. The majority of these discussions have occurred as a result of his

directly to the Vice President Projects, Engineering and Construction. In addition, there are a number of monthly and other periodic project management level meetings that directly discuss project progress and problems and are either partially or totally devoted to quality assurance matters. Further, there have been and continue to be ad hoc problem-solving sessions chaired by myself which are directly related to quality matters.

Finally not only am I fully informed, both on a formal and informal basis of the overall project status, but also considerable information goes directly to the Company's Chief Executive Officer (CEO). Shortly after the Midland Project was reorganized, the project established biweekly briefings for the Company's CEO on all aspects of the project and specifically including quality assurance. The majority of these briefings take place at the jobsite. These meetings were established to increase the level of information flow to the CEO in addition to his previous level of regularly scheduled and informal briefings.

B. Communication with the NRC

As one who has dealt on and off with the NRC over the past 16 years, I must express amazement with the amount of information which has been forwarded to the NRC as part of this proceeding. To have lack of information as even a potential issue in this proceeding caused me some initial puzzlement. In fact, my perception upon joining the project was to sense a frustration that existed based on the

report to me and others in Consumers Power's management with regard to the NRC's systematic analysis of licensee performance (SALP). I have met with Mr Keppler and his senior staff three times at his headquarters as part of my follow-up to his report. The culmination of this effort was the March 13, 1981 presentation to Mr Keppler and his staff by me and my associates regarding a number of quality assurance program improvements, some of which are directly discussed in this proceeding in Mr Marguglio's testimony. During that March 13 presentation to Mr Keppler, I urged him to personally visit the Midland site to view on a first hand basis the operation of our Midland Project organization. Mr Keppler did visit the site during May as part of an exhaustive NRC audit of our quality assurance program; and I believe that as a result of his visit, he now has an improved understanding of the MPQAD operation.

Although not directly related to the soils issues, the general approach the Company has always taken with regard to reporting to the NRC under Section 50.55(e) of the Code of Federal Regulations, Part 10, is indicative of a positive management attitude. The general approach has been to be conservative on the side of conservatism and report any potentially reportable situation including those that are still indeterminate because of the need to conduct more analysis. This policy gives the NRC staff an additional opportunity to review and comment on our internal evaluation logic. It is my perception that the NRC staff are generally supportive of and appreciate this approach.

In conclusion, I believe we have implemented and are currently maintaining a significant level of communication with the NRC not only on soils related activities but also on the entire range of project activities. It is my belief that this policy and its continued execution are paramount to the successful completion of the Midland Plant. I believe that the NRC staff management shares this belief and is committed to working with me to the extent they are able within the requirements of the overall discharge of their duties.

C. Investigation of Deviations from Construction Specifications

Since this testimony is limited to the specific soils deviations that occurred in the period of 1975 through 1977, this topic has been fully covered in the testimony of Mr Stephen E Howell. Nevertheless, I would emphasize that we are committed to investigate thoroughly any deviations from specifications, as they are identified. This will continue until the completion of the project.

D. Improved Decision-Making Via the Midland Project Organization

The general aspects of the reorganization of the Midland Project were discussed under Section II A of this testimony. In this section let me address specifically how that organization has operated in a decision-making mode in relation to the matters of this proceeding. Very shortly after joining the project, I recognized that the scope and depth of the soils related activities

required considerable senior supervisory attention. This realization led to the assignment, on an essentially full-time basis, of Consumers Power's second ranking manager for Midland, the Project Manager, Mr Gilbert S Keeley, to oversee all activities associated with this proceeding. Mr Keeley's involvement soon led to a comparable commitment in the Bechtel organization and an Assistant Project Manager, Mr Al Boos, was named to work directly with Mr Keeley. The scope of the activities required to resolve and complete the matters related to the "soils" area has led to the development of essentially a mini-project working within the overall project on nothing but "soils" issues. This arrangement means there is continuous senior project supervision for soils matters.

The soils mini-project does not mean that either myself or others in the Company's top management are not involved or aware of the major issues in this matter. A specific example will illustrate my point. As analyses and detailed design of the remedial fixes proceeded, and NRC preferences and positions about them became better known, certain decisions of considerable importance in this matter have been undertaken. By the first of this year, it became clear that the original remedial fixes, particularly, the service water pump structure underpinning design would not have sufficient margin above the original design basis for the plant to meet the new NRC staff position for seismic margin analysis as communicated by the NRC letter of October 14, 1980. Certain options as to how we could best meet this new staff position were prepared, and a technical summary

and recommendation was presented to me in late January, 1981 by those directly involved in formulating the design. Based on my evaluation of the ultimate acceptability of the various options as inferred from this new, initial stage of design information, I reversed the recommendation and selected the more extensive and therefore more costly revision to the underpinning design for the service water structure. This information was then conveyed to the NRC staff management by a telephone call in February and formally documented together with a number of additional "soils" items by letter in March. The above example is indicative of management involvement and their attitude in the resolution of the various issues in this proceeding, both technically and as a matter of policy. It is not an isolated example. Over the course of the past year, I have had continuing discussions on various "soils" related issues with both NRR technical management and as mentioned previously with the I&E quality assurance management.

My contact with the NRR technical management, specifically Mr Vollmer and Mr Knight, began in the summer of 1980. The Company had requested an opportunity to ask the NRC to reconsider its request for additional soils borings. These borings were deemed necessary by the NRC to supplement the data supporting the conclusion of preeminent consultants, Bechtel, and ourselves that the preload program for the diesel generator building had been successful. The Company, with the benefit of advice from our consultants, believed that these borings were unnecessary for a variety of reasons. I

pursued this matter with the staff management both formally and informally trying to achieve a responsible resolution. Upon finally recognizing that we would be unable to convince the staff to alter their request, rather than appeal further or resort to the litigation of this issue, I directed the project to undertake the additional borings. I did this even though I remained concerned that these borings may be inconclusive or even confusing and may not aid either the Company or the NRC in resolving the issues in question. My decision rested on a conviction that it was more productive to supply the NRC with the information they sought rather than to vindicate our initial position by means of long hearings on the question.

In addition to the ongoing discussions regarding the borings, I have expended considerable effort in both direct meetings and telephone conversations with the NRR technical management to explore ways to satisfy the NRC concerns on the other outstanding issues in a manner that will be productive to all parties - the NRC, the Company and the public. These discussions have included the issues of the seismic input parameters for the Midland Plant margin check and the underpinning designs for both the auxiliary building and the service water pump house. I believe, based on the good faith efforts to resolve the issues in this hearing on the basis of a full exchange of relevant technical data, that we are significantly closer to resolving many of the NRC's concerns than we were when these discussions commenced. It is also clear to me that the decisions



being made are probably going to increase to some extent the direct costs of the Midland Plant.

E. Management's Willingness to Expend Effort and Resources to Successfully Execute Quality Assurance Programs

Earlier portions of my testimony, specifically Section II A, provide an indication of the Company's willingness to essentially put all available resources into the effort to successfully complete Midland. That this was not a single occurrence but a continuing trend has been indicated in both Mr Stephen H. Howell's and Mr Benjamin W. Marguglio's testimony. During my tenure, this commitment has been particularly gratifying based on the generally depressed economic conditions in which the Company has been operating. In a time of severe cost-cutting and a Company-wide hiring freeze, the nuclear power program at Consumers Power Company has been the only area in which requests for additional resources have been fully supported. With specific reference to the quality assurance organization, we have continued to build an expanded organization in both scope and depth. The only constraint that we have experienced has been the difficulty in locating and recruiting top quality, experienced quality assurance professionals. The problem is that the market for these individuals is difficult because demand far outweighs supply. Even so, we have met with considerable success in this effort as can be demonstrated by a review of the background of the current quality assurance staff.

In addition to building a top level quality assurance staff, we have also been willing to look outside the Company for additional assistance and consultation. Mr Howell's and Mr Marguglio's testimony have identified the use of an outside consulting firm to conduct a biennial audit of the Company's quality assurance program. As part of the Company's response to the Midland Plant portion of our SALP review, we commissioned the same consultant, Management Analysis Company, to perform a more extensive quality assessment of not only the overall program but also of our responses and follow through to past quality problems and an assessment, on a sampling basis, of the in-place hardware at the plant. This study has been completed and the consultant's report has been forwarded to the NRC for their information.

Further, in the management consulting field, the Company has retained and is currently proceeding with a review of quality management approaches utilizing the services of Phillip Crosby and Associates. Mr Crosby is a nationally known quality assurance consultant whose experience chiefly relates to manufacturing operations but whose overall philosophy and quality management approach appear to have generic applications and are therefore of possible value in the nuclear power field. One of the first major steps in working with Mr Crosby is a consultation over a two-day period at his office with the 10 or so top officers and managers directly involved in the Midland Project, including the Company's CEO and myself. This consultation will be held in June. The

necessary research and orientation of Mr Crosby's staff to our Company and the Midland Project has already been completed.

### III. CONTENTIONS OF INTERVENOR STAMIRIS

Allegations regarding the commitment of Consumers Power Company's management to a responsible construction program arise from certain contentions of intervenor Stamiris. These contentions are attached as an appendix to the ASLB's prehearing conference order in this matter, dated October 24, 1980.

Contention 1 and Contention 2, Parts a, b, c and d, all relate to activities that occurred prior to my participation on the project and as such have been addressed in the testimony of others. Contention 2e asserts that "Consumers Power Company's financial and time schedule pressures have directly and adversely affected resolution of soils issues....by failing to freely comply with NRC testing requests to further evaluate soils settlements remediation inasmuch as such programs are not allowed time for in the new completion schedule presented July 29, 1980."

First, as noted previously Consumers Power has accommodated the NRC's request for additional borings and test data. The borings are essentially complete and the testing is well underway. These activities are reflected on current soils schedules which have been provided to both the NRC and the intervenor.

Further, I disagree with this contention both as a matter of fact and of logic. By matter of fact, it is the Company's right to appeal any NRC staff decision to staff management at several levels and to the NRC

Commissioners if the Company so desires. If there were no appeals process in the nuclear regulatory arena, I am sure there would be a race to the nearest court or Congressional Committee between both licensees and intervenors to rectify that situation. Therefore, I find it difficult to understand how the Company's wish to avail itself of that right would be questioned in terms of bad management attitude. To set the record straight, Consumers Power Company has utilized the finest consulting talent available in this field; in fact, these are consultants who have done considerable work in the past for the NRC. Dr Ralph Peck, one of the consultants and a world reknown authority in soils engineering, expressed his conviction that these borings would not add any further data with respect to his conclusions regarding the status of the soils under the Diesel Generator Building. Therefore, it should not be surprising that the Company chose to follow the advice of the consultants and tried to convince the NRC staff that additional borings were unnecessary.

With regard to logic, the contention seems backwards. The NRC staff was under no obligation to reverse its original position based on our utilization of the appeal process. This is in fact what has happened. Subsequently, the Company in order to move this issue forward felt obliged to accommodate the staff request. My own personal involvement in this matter was outlined earlier in this testimony. It could therefore be argued that having failed to convince the staff to change their mind, I have in fact adversely impacted the financial and time schedule of this aspect of the project by utilizing the appeal.

Thus, both in fact and in logic, I conclude that the Contention 2e is without merit.

IV. CONCLUSION

In this testimony, I have attempted no more than to cover some of the more salient indicators of Consumers Power Company's management commitment to construct the Midland Plant in a responsible way. We are first and foremost mindful of our obligation as an NRC licensee to protect the public health and safety. In addition, the very factor asserted to foster a "poor" management attitude - time and schedule considerations - have just the opposite effect. We now estimate that the Midland Plant when completed will have cost approximately 3.1 billion dollars. This enormous sum is approximately equal to the total value (at original acquisition cost) of all Consumers Power Company's other electric assets put together. No rational person and no responsible corporate management could possibly be indifferent to design and construction quality when so enormous a sum of money is at stake. Contrary to popular belief, cost and schedule are important incentives to achieving quality. Anyone who has any experience in nuclear plant project management or any other business for that matter, soon becomes aware that the best guarantee of achieving project budgets or schedules is to "Do it right the first time." Also, in the electric power industry today, the result corporate management is striving for is to design and operate all their facilities at high capacity factors; ie, high reliability. Thus, the laws of practical economics directly reinforce the need to achieve a quality product.

EXHIBIT 1

MIDLAND PROJECT ORGANIZATION

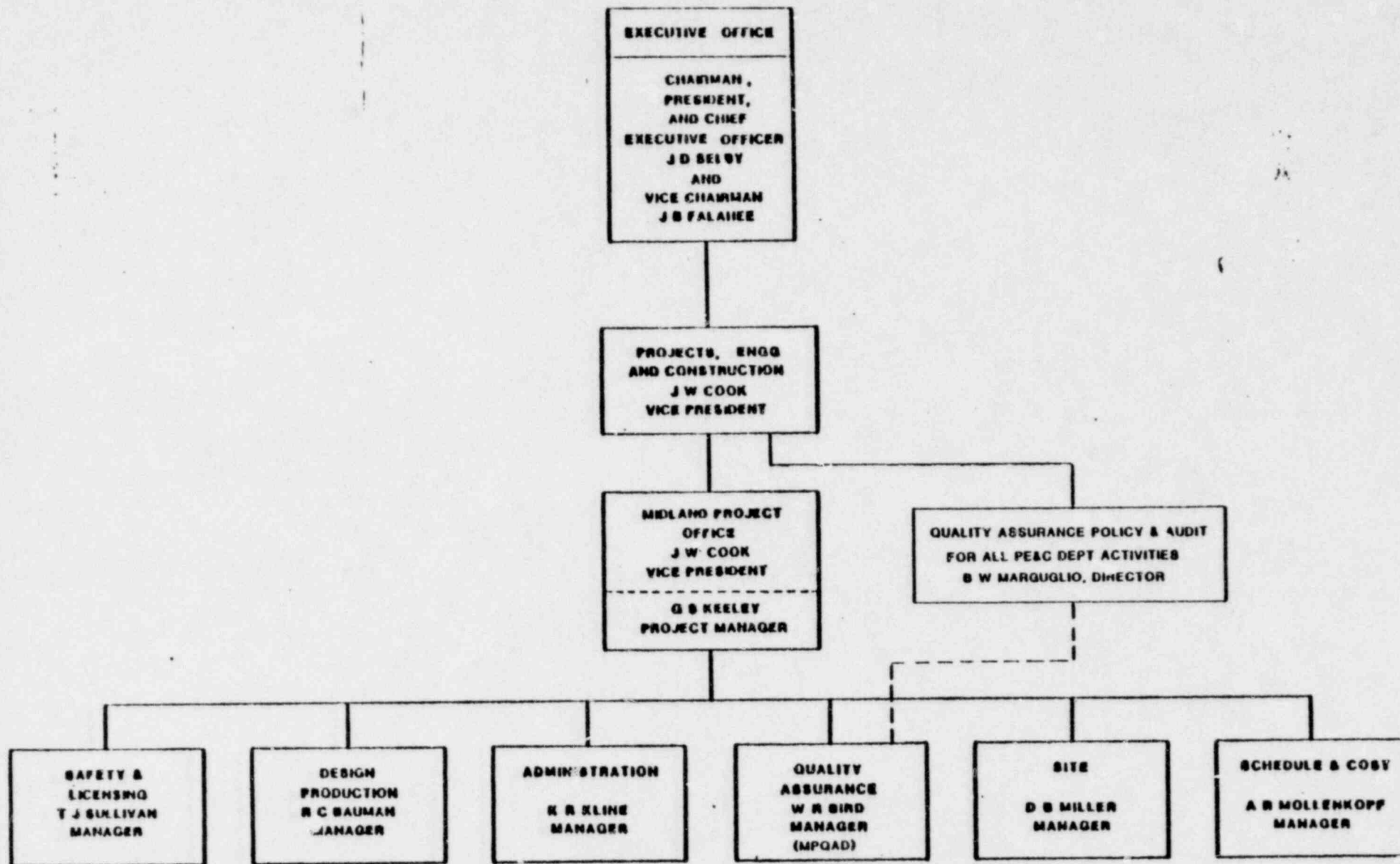




EXHIBIT 2

J W Cook Participation in Meetings  
with NRC on Midland Nuclear Plant

<u>Meeting Date</u>	<u>Location</u>	<u>NRC Participation</u>	<u>Subject</u>
1. 5/ 2/80	Glen Ellyn, IL	J Keppler, G Fiorelli et al	RV Holddown Bolts and HVAC Audit Findings; Project Reorganization
2. 5/23/80	Bethesda, MD	D Hood et al	RV Support Modifications
3. 5/28/80	Washington, DC	D Eisenhut, H Thornburg et al	Licensing and Soils Issues
4. 6/13/80	Bethesda, MD	R Purple, R Tedesco et al	Licensing and Construction Status; Project Reorganization
5. 8/25/80	Besthesda, MD	H Denton, D Eisenhut et al	Licensing Review Plan
6. 8/29/80	Midland, MI	R Vollmer, J Knight et al	Appeals Meeting on Additional Borings
7. 11/24/80	Jackson, MI	J Keppler et al	SALP Program
8. 12/ 2/80	Glen Ellyn, IL	G Fiorelli, R Knop et al	SALP Follow-Up and QA Organization
9. 12/ 5/80	Bethesda, MD	R Jackson, D Hood et al	Site Specific Seismic Response Spectra
10. 12/ 5/80	Bethesda, MD	R Vollmer	Issues in Soils Hearings
11. 12/11/80	Ann Arbor, MI	J Gilray, E Gallagher	Exit Meeting - Follow-Up to 50.54(f) Question Responses
12. 12/17/80	Glen Ellyn, IL	J Keppler et al	SALP Follow-Up and QA Organization
13. 3/13/81	Glen Ellyn, IL	J Keppler et al	Project Organization and QA Program Update

EXHIBIT 2J W Cook Participation in Meetings with  
NRC on Midland Nuclear Plant (contd)

<u>Meeting Date</u>	<u>Location</u>	<u>NRC Participation</u>	<u>Subject</u>
14. 4/16/81	Bethesda, MD	R Jackson, D Hood et al	Site Specific Seismic Response Spectra
15. 4/16/81	Bethesda, MD	R Vollmer, J Knight et al	Seismic Requirements for Soils Hearings and Operating License
16. 5/ 1/81	Midland, MI	C Williams et al	Exit Meeting - Electrical Inspection
17. 5/ 8/81	Bethesda, MD	J Knight, D Hood et al	Soils Issues Summary
18. 5/18, 20 21/81	Midland, MI	C Williams et al	General Midland QA Audit
19. 5/21/81	Midland, MI	J Keppler	Presentation on Midland Project Organization and Operation
20. 5/22/81	Midland, MI	J Keppler, C Williams et al	Exit Meeting - QA Program Inspection and Site Visit

NOTE: Meeting List does not include telephone contacts.

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(Midland Plant, Units 1 and 2)

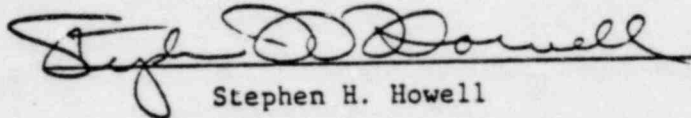
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Docket Nos. 50-329-OM  
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50-329-OL  
50-330-OL

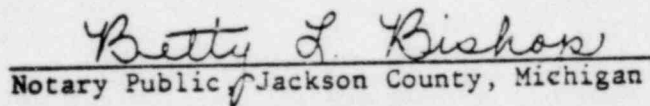
County of Jackson)  
  )ss  
State of Michigan)

AFFIDAVIT OF STEPHEN H. HOWELL

I am Stephen H. Howell. I am presently employed by Consumers Power Company as Executive Vice President, Energy Distribution and General Services. Based upon knowledge, information and belief my testimony for the Midland Soils Hearing, which has been sent in a separate mailing, is true and correct.

  
Stephen H. Howell

Subscribed and sworn to before me this 8th day of June, 1981.

  
Notary Public, Jackson County, Michigan

My Commission Expires: September 21, 1982

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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In the Matter of

CONSUMERS POWER COMPANY

(Midland Nuclear Power Plant,  
Units 1 and 2)

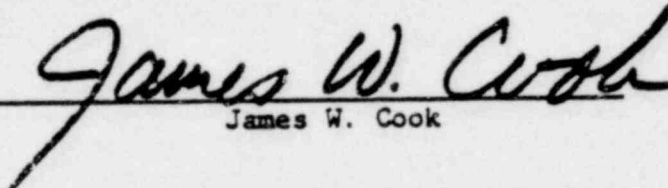
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Docket Nos. 50-329-OM  
50-330-OM  
50-329-OL  
50-329-OL


County of Jackson)  
                                  )ss  
State of Michigan)

AFFIDAVIT OF JAMES W. COOK

I am James W. Cook. I am presently employed by Consumers Power Company as Vice President, Projects, Engineering and Construction. Based upon knowledge, information and belief my testimony in the Midland Soils Hearing, which is attached hereto, is true and correct.

  
James W. Cook

Subscribed and sworn to before me this 5th day of June, 1981.

  
Notary Public, Jackson County, Michigan  
My Commission Expires: September 21, 1982

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50-329-OL  
50-330-OL

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CERTIFICATE OF SERVICE

I hereby certify that copies of Testimony of J. W. Cook, G. S. Keeley, with attached affidavits, and an affidavit of G. H. Howell, were served upon the following persons by depositing copies thereof in the United States Mail, first class postage, on this 8th day of June, 1981.

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