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November 3, 1976

Director of Nuclear Reactor Regulation
Att: Mr Roger Boyd, Director
Division of Project Management
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555



MIDLAND PROJECT
DOCKET NUMBERS 50-329 & 50-330
QA REGULATORY GUIDE RESPONSES
FILE: 0505.2 SERIAL: 2912

On March 29, 1976, we sent proposed "Quality Assurance Program" description to the Director of Nuclear Reactor Regulation with a request that it be reviewed.

On September 24, 1976, S. A. Varga provided the Staff Evaluation of this program description in a letter to S. H. Howell. This evaluation listed five items to be resolved and a request for information relative to Regulatory Guide 1.55.

In response to the September 24, 1976 letter, the March 29, 1976 submittal has been revised and is attached to this letter. Following is information as to how the five items in the September 24, 1976 letter were resolved:

- (1) In response to the first question the reference to CPC-1 has been modified to identify CPC-1A, Revision No. 4, as the appropriate reference.
- (2) The request for quality assurance information relative to Regulatory Guides 1.54 and 1.94 has been responded to as follows:
 - (a) The information contained in Consumers Power letters of November 7, 1975 and February 3, 1976 to the Director of Nuclear Reactor Regulation have been combined to produce the position on Regulatory Guide 1.54 which appears in Section I-G of the attachment.
 - (b) The information contained in Consumers Power letters of October 15, 1975 and February 10, 1976 to the Director of Nuclear Reactor Regulation have been combined to produce the position on Regulatory Guide 1.94 which appears in Section I-K of the attachment.
- (3) With the exception of Babcock & Wilcox activities, the effectivity date for implementation of the program commitments is shown in Section II of the attachment. The effectivity date for the Babcock & Wilcox commitments will be the date of publication of Revision 3 of their Topical Report #BAW-10096A which is currently undergoing review by the QA Branch of the Division of Nuclear Reactor Regulation. When this date has been established it will be inserted into Section II of the attachment and

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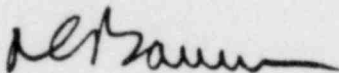
copies will be forwarded to you.

- (4) The exceptions to commitments are contained in Section III of the attachment.
- (5) The reference to ANSI N45.2.3-1973 has been corrected in Section I-F of the attachment.

Relative to Regulatory Guide 1.55, the Project has changed its position described in our letter of December 1, 1975 and will implement Section C.2.a of Regulatory Guide 1.55 for the balance of the project.

Subsequent to the March 29, 1976 submittal, it has been decided to commit to Revision 3 of the Babcock & Wilcox Quality Assurance Topical Report #BAW-10096A in lieu of the commitment to Revision 1 of that document. This change has eliminated the need for Section II, "Babcock & Wilcox Alternative," in the March 29, 1976 submittal which, in turn, resulted in the re-numbering of Sections III and IV of that submittal.

Please review the attached proposed "Quality Assurance Program" description and provide an evaluation as to the acceptability of that description with the understanding that the effectivity date for implementation of the Babcock & Wilcox commitments will be provided when it has been determined.



R. C. Bauman
Project Engineer

RCB/HWS/lc

QUALITY ASSURANCE PROGRAM

Subject to those effectivity dates shown in Section II below, the Midland Project Quality Assurance Program will comply with the requirements of the following documents:

1. For Consumers Power Activities;
The Consumers Power Company Quality Assurance Program Manual (Topical Report No. CPC-1A Revision 4)
2. For Bechtel (Architect-Engineer, Constructor) Activities;
Bechtel Quality Assurance Program for Nuclear Power Plants (Topical Report No. BQ-TOP-1, Revision 1A)
3. For Babcock and Wilcox (Nuclear Steam Supply System Supplier) Activities;
B&W N.P.G.D. Quality Assurance Program for Nuclear Equipment (Topical Report No. BAW-10096A, Revision 3)

This compliance is subject to the following alternatives, interpretations, and exceptions:

I BECHTEL ALTERNATIVES AND INTERPRETATIONS

Note: Unless specifically noted otherwise all organizations, groups, and personnel discussed in this Section I are Bechtel organizations, groups, and personnel.

The following alternatives and interpretations apply to the implementation of the Bechtel QA Topical Report (BP-TOP-1):

A. Construction Work Procedures

The Bechtel Quality Assurance Topical (Section 1.5.4, page 12, paragraph 1) requires that "Construction Managers are responsible for the management and technical direction of assigned projects, and for assuring that construction projects are provided with appropriate personnel, and are following prescribed division practices and procedures for conduct of construction activities.

Chief Construction Engineers are responsible for providing division standard work procedures to the projects". The Topical (Section 1.5.2, page 11, subparagraph 3) further requires that the Quality Assurance Manager be responsible for "Approving quality related procedures and manuals prepared by departments and projects within his division for conformance to quality assurance policies".

In lieu of this requirement the Bechtel Midland Quality Assurance Program requires that Construction personnel perform their quality program related functions using either division standard work procedures prepared by Construction Engineering or project work procedures prepared by Project Field Engineering personnel. The final decision on which to use rests with the Project Field Engineer. All quality program related procedures used by Construction personnel are approved by Project Quality Assurance.

Project Field Engineering has already prepared and is in the process of preparing approximately 75% of the required construction work procedures. Many of these work procedures were prepared prior to the existence and issue of procedures issued by the Division Chief Construction Engineer.

B. Review of Quality Control Instructions

The Bechtel Quality Assurance Topical (Section 1.6.1, page 14, subparagraph 13) requires that Project Quality Assurance "Review, prior to use,...Quality Control Instructions..."

In lieu of this requirement the Consumers Power Company Quality Assurance Topical Report requires that all Quality Control Instructions be reviewed and approved by Consumers Power Company Quality Assurance prior to use. This review implements the commitments for review described in Section 1.6.1 subparagraph 13 of the Bechtel Quality Assurance Topical.

The Bechtel Midland Quality Assurance Program also requires that this activity be audited by the Project Quality Assurance Engineer.

C. Titles

In the following cases, Midland Project organizations and personnel have titles differing from those in Bechtel Quality Assurance Topical Report but the responsibilities are the same.

<u>Bechtel Quality Assurance Topical Report Title</u>	<u>Midland Project Title</u>
Materials, Fabrication and Quality Control Services Department	Materials and Quality Services Department
Field Construction Manager	Project Superintendent
Project Construction Quality Control Engineer	Project Field Quality Control Engineer
Field Contracts Administrator	Field Subcontracts Administrator
Division Chief Engineer	Cognizant Chief Engineer

D. Supplemental Interpretations of Regulatory Guide 1.37 (ANSI N45.2.1-1973)

Section 4 (Pre-Installation cleanliness) of ANSI N45.2.1 states "Items should not be delivered to the point of installation site sooner than necessary unless the installed location is considered a better storage area". In lieu of this requirement items might, in some cases, be delivered to the installation site sooner than necessary at the direction of the Project Field Engineer and will be protected in accordance with Section 5 of ANSI N45.2.1.

E. Supplemental Alternates and Interpretation of Regulatory Guide 1.38 (ANSI N45.2.2-1972)

The following alternates and interpretation apply to ANSI N45.2.2:

- 1) Section 2.7 Classification of Items. The listings in paragraph 2.7.1 through 2.7.4 will be used as a guide in determining the categorizing of items under levels A through D for the project. Categorization differing from Section 2.7 will be considered acceptable provided that no degradation in commodity quality is assured.

As in the case of electric motors, exterior pumps, and exterior valves, which are designed for outside service and could possibly be stored in areas other than those in which they are designated, i.e. outside service electric motors shown in Level B could possibly be placed in a Level C area.

The same would apply to exterior pumps and valves shown in Level C which could possibly be placed in a Level D area. In all cases however, the classifications shown in ANSI N45.2.2 will be reviewed and considered by field engineering.

- 2) Section 2.7.4 Level D Classification. The last sentence 1st. paragraph is interpreted to read "These items require protection against the elements, airborne contamination, and physical damage as necessary and commensurate with the ultimate use of the item". This determination is made by Field Engineering in accordance with Project prepared and Project Quality Assurance approved procedures.
 - 3) Section 6.2.2 Cleanliness and Housekeeping Practices in Storage Areas. Detrimental soil is defined as material or items which could degrade the stored material.
- F. Supplemental Alternates to Regulatory Guide 1.39 (ANSI N45.2.3 - 1973)
- 1) Section 2.1 Planning. The Project will use four cleanliness zones instead of the five zones listed in this paragraph. These zones will provide the necessary cleanliness and will provide less confusion in the field. The requirements of zones I and II in the standard will be included in Zones A and B of the field procedure. The requirements of Zone III of the standard will be covered by including these items into Zone B or upgrading Zone C for the particular items. Zone IV will be included in Zone C except the restrictions on tobacco or eating is not required.

This zone can be upgraded to include these restrictions for particular items if necessary.

Zone V will be incorporated into Zones C or D as required.

Note:

Zone C provides no restriction except that the areas will be maintained free of detrimental scrap materials and will be swept regularly. Protective coverings will be utilized in work areas to minimize grease and oil spillage on finished surface. Zone D areas will be heavy construction areas without cleanliness restrictions and will be upgraded to Zone C when the heavy construction is completed.

<u>Restriction List</u>	<u>Zones</u>			
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Clothing changes	Yes	No	No	No
Clean gloves, shoe covers, head covering	Yes	Yes	No	No
Filtered air	Yes	No	No	No
Material precleaning	Yes	No	No	No
Material accountability	Yes	Yes	No	No
Personnel accountability	Yes	Yes	No	No
No use of tobacco or eating	Yes	Yes	No	No

- 2) Para 2.2 Procedures and Instructions. This paragraph requires procedures for safety and fire regulations. The Project will use procedures which describe existing National State and Local codes and regulations to control safety and fire. NFPA is the national fire code followed at the site.
- G. Alternates and Interpretations of Regulatory Guide 1.54 (ANSI N101.4-1972)

The following alternates and interpretations apply to the implementation of Regulatory Guide 1.54 and ANSI N101.4.

- 1) The painting requirements for the Midland project are specified in four project painting specifications, most of which were developed prior to the issuance of Regulatory Guide 1.54. ANSI N101.4 was used extensively in the development of these specifications and

compliance to ANSI N45.2 is required by Consumers Power Company for equipment procured for the Midland project. Although not specifically required in all four specifications, ANSI N101.4 and ANSI N101.2 are generally referenced and are used in the evaluation and approval of vendor painting procedures.

- 2) In instances where non-LOCA qualified paint is used on small components with a limited painted surface, such as valve operators, instrumentation, small accessory components and equipment trim, the FSAR will provide the total surface area painted with these non-LOCA qualified paints to substantiate their limited application and therefore acceptable use. It is the applicant's position that upon completing the tabulation of the amount of non-LOCA qualified paint used inside the Midland containment, should this amount be below 100 kilograms, the amount would be acceptable. In the calculation of this total weight, only components exposed to the LOCA environment will be considered. If upon completion of the tabulation of the amount of non-LOCA qualified paint used inside containment, this amount exceeds 100 kilograms, it is the applicant's position that the following will be considered in conjunction with system characteristics (sump screen size and spray nozzle openings) to determine acceptability or necessity of any corrective actions:
- a. The areas of paint exposed to the containment LOCA atmosphere
 - b. The mode of paint failure (i.e., flaking or solubility)
 - c. The potential of the paint reactants reaching the containment sump, considering possible surrounding traps such as insulation, etc

H. Alternate to Regulatory Guide 1.58 (ANSI N45.2.6-1973)

The Regulatory Guide states that the provisions of ANSI N45.2.6-1973 are "generally applicable.....during fabrication prior to receipt of items

at the construction site". The project will not impose ANSI N45.2.6 on suppliers during fabrication prior to receipt of items at the construction site. Instead, the following activities are performed to ensure that off-site inspection, examination or testing is performed adequately. Bechtel procurement documents will require that the supplier's Quality Assurance program provide measures to assure that personnel performing safety-related inspections, examinations and tests are qualified to perform these activities. Such measures include procedures for qualification of personnel describing the minimum experience, training and proficiency testing required for qualification. The measures also include requirements for records documenting qualifications for each of the supplier's inspection, examination, and testing personnel. Personnel qualification procedures will be reviewed by Bechtel prior to initiation of inspections, examinations, or tests.

Also, Bechtel performs surveillance inspection at suppliers facilities by using inspectors qualified in accordance with ANSI N45.2.6. Quality Assurance audits are performed on suppliers and additionally, nondestructive examinations performed according to the quality requirements of Section III of the ASME Boiler and Pressure Vessel Code are performed by supplier personnel certified to SNT-TC-1A.

I. Supplemental Alternate to Regulatory Guide 1.64 (ANSI N45.2.11-1974)

Paragraph C-2, of the Regulatory Guide places restrictions on the use of the supervisor for design verification. As an alternate the following controls will be exercised. Design verification may be performed by the originator's supervisor if the supervisor is the only individual in the project team competent to perform the design verification. In such cases, an additional review will be performed by either the next higher level of supervision or by off-project personnel. These personnel are qualified in the area of design review and verification.

J. Alternate to Regulatory Guide 1.88 (ANSI N45.2.9-1974)

Section 5.6 of ANSI N45.2.9 requires that the permanent record storage facility have "structure, doors, frames, and hardware class A fire rated with a recommended four hour minimum rating." In lieu of this the existing Jobsite record storage facility has a two hour fire rating.

K. Alternates and Interpretations of Regulatory Guide 1.94 (ANSI N45.2.5-1974)

The following alternates and interpretations apply to ANSI N45.2.5:

- 1) Sections 1.4 Definition of Sampling Point and 4.8 In-Process Tests on Concrete and Reinforcing Steel. These sections seem to require the sampling of concrete at the truck discharge or the end of the pump line. For the Midland project, the concrete receives its final mix at the central batch plant, and is transported by agitator trucks to the final conveying system.

The sampling point for the compressive strength test cylinders is from the discharge of the central batch plant stationary mixer, based on the following:

ANSI N45.2.5 Section 4.8 states that "Samples for inprocess tests shall be taken at the sampling point in accordance with ASTM C 172."

ASTM C 172, Section 2, Note 3, reads: "Sampling should normally be performed as the concrete is delivered from the concrete mixer to the conveying vehicle used to transport the concrete to the forms." ASTM C 172, Paragraph 3.2.1, Sampling from Stationary Mixers Except Paving Mixers, gives explicit instructions for stationary mixer sampling.

Compressive strength test cylinders are cast from representative samples taken from the discharge of the batch plant stationary mixer in accordance with Paragraph 3, ASTM C 172. Slump, air content, unit weight and temperature of the concrete will be recorded when cylinders are being cast. For purposes of correlation, cylinders will also be cast from a sample taken at the transport discharge of the same batch from which a sample was taken at the stationary mixer. After correlation has been established, correlation cylinders are continued on a periodic basis to verify the correlation.

The conveying vehicle is defined as an agitator truck. The drums are turned at agitating speeds and not at mixing speed, because the concrete is completely mixed before being loaded as evidenced by the mixer uniformity tests of ASTM C 94.

Concrete samples from the batch plant mixer allow for better control of preparing samples, as well as less disturbance of cylinders from preparation through initial curing.

The sampling point for final acceptance of air content, slump and temperature is at the truck discharge except for concrete conveyed by pump. Pumped concrete is sampled at the pump line discharge.

The production control for air content, slump and temperature can be at the batch plant discharge or truck discharge provided that a correlation program is developed as recommended by ACI/304

Paragraph 9.7. The correlation program compares the test results for the same batch between the batch discharge and truck or pump discharge.

- 2) Section 4.5, Concrete Placement. Regulatory Guide 1.94 (C-3) requires that ACI-309-72 be used to determine the adequacy of consolidation equipment. ACI 309-72 was incorporated into the construction specification in 1973, subject to the following alternates:

a) Alternate to Equipment Requirements

The project concrete placement specification was written in 1970, and based on the then current ACI Committee 609 report. The equipment currently in use on the project was purchased in accordance with the ACI Committee 609 report, and has been maintained in conformance with it to date. Field inspection of concrete placements and concrete cores indicate satisfactory concrete consolidation has occurred. We therefore see no sound reason to justify the replacing of the project equipment to meet the recommendations of ACI 309-72, and discarding equipment that is currently performing in a satisfactory manner.

b) Alternate to Lift Thickness Requirements

ACI 309-72 Section 7.1 states: "The concrete should normally be deposited in layers 12 to 18 inches (30 to 45 cm) thick (depending on the length of the vibrator head and other factors)."

Other ACI specifications and recommendations for lift thickness are as follows:

- i) ACI 301-72 Chapter 8 on "Placing," Section 8.3.1 states:
"Concrete shall be deposited continuously, or in layers of such thickness that no concrete will be deposited on concrete which has hardened sufficiently to cause the formation of seams or planes of weakness within the section."

- ii) ACI 301-72 Chapter 14 on "Massive Concrete," Section 14.4.3 states: "Concrete shall be placed in layers approximately 18 inches thick."

- iii) ACI 301-72 Section 8.3 references ACI 304 for detailed recommendations for depositing concrete. ACI 304-73 Chapter 6, Section 6.1 states. "It (concrete-ed.) should be placed in horizontal layers not exceeding 2 ft. (60 cm) in depth, avoiding inclined layers and cold joints."

The project construction specifications require that concrete be placed in horizontal layers "of not greater depth than 24 inches so that satisfactory consolidation can be achieved with vibrators." Field inspections of concrete placements and concrete core samples indicate satisfactory consolidation and placement of concrete has occurred. By combining the foregoing requirements and other related factors (concrete mix consistency, and results of field inspection), the use of lifts not exceeding 24 inches is in accordance with ACI specifications.

3) Table B Required In-Process Tests. This table requires that the compressive strength of grout be in-process tested daily during production to the requirements of ASTM C 109. The following alternates to the testing of grout will be implemented:

a) Batch Plant Mixed Grout

The specifications require that each class of concrete has a companion grout mixture for use on construction joints, buttering pump lines and such other applications as shown on the drawings. As appropriate to the concrete mix, the grout mix is specified to be the concrete mix with the coarse aggregate removed, leaving the cement, pozzolan, sand and admixtures in the same ratio as before and enough water to provide the desired consistency, but not exceeding the maximum water/(cement + pozzolan) ratio established for the concrete mix. Since this will produce a grout at least as strong as its companion concrete (due to the high cement content per cubic yard), testing of all the materials used in manufacturing grout is done as part of the concrete in process testing program, and this accomplishes satisfactory quality control of the grout.

b) Premixed Grout

Factory packaged grout which requires addition of water and mixing in accordance with the manufacturer's instructions will be tested in accordance with ASTM C 109 for each lot purchased as a quality control check on the factory's production. Since the project specifications require proper storage to prevent deterioration, there is no reason to require daily testing.

4) Section 4.9.1, Qualification of Cadweld Operators. The standard can be interpreted to imply that qualifications of splicing crews is required for each position and each bar size. The Bechtel position is that the qualifications for each position will be for the largest bar to be used. This is also consistent with the May 15, 1973 staff memo and CPCo's Regulatory Guide 1.10 position.

5) Section 5.4, High Strength Bolting

a) The installation and inspection of high strength bolted joints are accomplished by one of three methods. Two of these methods, (i.e., automatic cutoff impact wrench, and the turn-of-the-nut method), concur with ANSI N45.2.5 requirements. The third method, the use of direct tension indicators, is a new method permitted by the Errata of October 22, 1974 to the "AISC Specification for Structural Bolts Using ASTM A 325 or A 490 Bolts."

The quality control procedures required for the use of direct tension indicators are as follows:

i) To verify the load indicating qualities of the load indicators, at least three load indicators from each bag or box shall be verified in a calibration device similar to that required for wrench calibration. If nut face washers are used between the indicators and the nuts, the indicators shall be tested with washers at the rate of three washers from each bag or box. Each verification test shall show not less than the specified gap when bolt is tightened to the specified tension.

- ii) Load indicator washers shall be installed in accordance with the manufacturer's instructions. When a load indicator is required under the nut a special nut face washer shall be fitted between the indicator and the nut.
 - iii) Bolted joints made with load indicators shall be inspected visually to ensure that all bolts have the load indicators properly installed and to the proper gap. At least 20% of the bolts in each connection but not less than two bolts shall be checked with a feeler gage to determine the bolts are properly tightened.
 - iv) Direct tension indicators used with bolts that have been tightened to the full extent specified in Section 5 of the AISC specification shall not be reused.
- b) The Midland project permits waiving of the AISC requirements for inspection by torque or power wrench provided special inspection procedures are followed.

II. EFFECTIVITY DATES

The preceding commitments will be implemented on the following dates for all safety related activities relative to the Midland Project:

- A. For Consumers Power Activities; April 21, 1976
- B. For Bechtel Activities; April 1, 1977
- C. For Babcock and Wilcox Activities; *concurrent with the B&W release date for Revision 3 to their QA Topical Report.*

The preceding dates do not apply to those instances where the Midland plant design, procurement, fabrication or construction would have to be modified to conform to meet the preceding commitments. These instances are defined below.

III. EXCEPTIONS BASED ON THE NEED FOR MODIFICATION OF THE PLANT DESIGN, PROCUREMENT, FABRICATION OR CONSTRUCTION

The following exceptions relate to specific commitments which will not be implemented because implementation would require unwarranted modifications of the Midland Project design, procurement, fabrication or construction:

A. General Exception to Consumers Power, Bechtel and Babcock and Wilcox Commitments

No attempt will be made to change procurement documents which have been issued prior to the effectivity date established for the Consumers Power, Bechtel or Babcock and Wilcox commitments in order to comply with those commitments. The relevant commitments will be applied to procurement documents which are issued on or after the effectivity date.

B. Specific Exceptions to Babcock and Wilcox Commitments

- 1) Section 2.2.1, paragraph 1 of the B&W Topical Report reads as follows: "The degree of QA involvement with any specific equipment/component is determined by the safety classification system defined in the B&W Safety Classification Specification derived from Regulatory Guide 1.26 and IEEE Standard 308-1973." In addition to the preceding, the Project Position for Regulatory Guide 1.26 (as described in R. C. Bauman's

October 10, 1975 letter to Mr Roger Boyd and as supplemented by R. C. Bauman's February 5, 1976 letter to Mr Roger Boyd and as evaluated in S. A. Varga's September 24, 1976 letter to S. H. Howell) is also a basis of the safety classification system.

- 2) The following design documents are discussed in the B&W Topical Report:

<u>Design Document</u>	<u>Topical Report Section</u>	<u>Paragraph</u>
System Requirements Specification (S.R.S.)	2.2.2	2
	3.2	1
	3.2	12
	4.0	1
	4.0	2
System Descriptions (S.D.)	3.2	1
	3.2	7
	3.2	12
Balance of Plant Criteria (BOP)	3.2	12
Contract Information Sheets (CIS)	4.0	1

In addition, B&W procedures which implement the Topical Report identify a Plant Parameter List (PPL) and Technical Deviation List (TDL). The TDL is a tabulation of all the technical and performance differences between the B&W Standard Plant and the "As-Sold" contract plant. For new projects, the issuance of the TDL establishes the preliminary contract technical baseline and is the basis for preparation of the contract technical documents. The PPL is used for new contracts to identify major factors of plant design.

None of the above documents have been (or will be) prepared for the non-fuel components supplied for the Midland Project. For new projects, these documents are used as the basis documents for the preparation of Equipment Specifications and Balance of Plant Criteria. However, these documents became a requirement of the B&W Design Control system after Equipment Specifications were issued and procurement activities initiated for the Midland Project. In addition, Balance of Plant Criteria requirements have been satisfied by other means without recourse to these documents. Formal Balance of Plant Criteria documents will not be prepared since this criteria has been forwarded to the Architect Engineer in the form of correspondence from B&W to Bechtel and B&W will review Bechtel design documents which contain NSSS interfaces for the adequacy of those interfaces. Therefore, since Equipment Specifications and Balance of Plant Criteria have been prepared without recourse to the SRS, SD, PPL, CIS and TDL documents, these documents are not needed for the Midland Project.

- 3) Section 17 and Appendix A of the Topical Report commit B&W to implement the requirements of ANSI N45.2.9-1974. Section 4.3.1 of ANSI N45.2.9-1974 requires for receipt control of QA Records that the system shall include: "A Records Checklist designating the required QA Records."

A Records Checklist has not been (and will not be) prepared for the Midland Project. The majority of B&W generated QA records

(i.e., calculations, specifications, procurement documents, etc) have been prepared and filed without recourse to a records checklist. However, they are listed on the Documents Historical Listing (DHL). The DHL is the output of an automated system that identifies and reports the status of contract documents originated by B&W. It also provides a convenient means of verifying that the necessary records have in fact been generated.

The remainder of QA records to be generated by B&W for the Midland Project consist primarily of documents to support FSAR activities, Core design and site support activities (i.e., Field Changes, Site Problem Reports, etc.). The need for the foregoing records is identified in work authorizations approved by the B&W Project Manager for the Midland Project. As these documents are prepared, they will be listed on the DHL.

The Quality Requirements Matrix (QRM) described in Section 4 of the Topical Report will continue to serve as the Records Checklist for vendor generated documents. The QRM identifies the QA Records required from vendors by the B&W procurement documents. As vendor documents are received, they are listed on the DHL described above. The B&W QA Engineer for the Midland Project is required by B&W administrative procedures to verify that the vendor QA Records required by the QRM have been received and properly dispositioned.

In summary, because the majority of B&W generated QA Records have been prepared and over 60% of the required vendor QA

Records have been received, a Records Checklist will not be prepared. The DHL and QRM provide an adequate means of verifying that the required QA Records have been generated.

NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL

TO: Mr Boyd	FROM: Consumers Power Co Jackson, Michigan R C Bauman	DATE OF DOCUMENT 11-3-76
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PROP	INPUT FORM	NUMBER OF COPIES RECEIVED one singed

DESCRIPTION

Ltr re their 3-29-76 submittal of Quality Assurance Program....trans the following:

PLANT NAME: Midland 1 & 2

ENCLOSURE

Responses to questions concerning the Quality assurance Program for Midland

(10 cys encl rec'd)

DO NOT REMOVE

OKNO

SAFETY	FOR ACTION/INFORMATION	ENVIRO	11-10-76	ehf
ASSIGNED AD:		ASSIGNED AD:		
BRANCH CHIEF:		BRANCH CHIEF:		
PROJECT MANAGER:	<i>Bowell</i>	PROJECT MANAGER:		
LIC. ASST.:	<i>Sevick</i>	LIC. ASST.:		

INTERNAL DISTRIBUTION			
<input checked="" type="checkbox"/> REG FILE	SYSTEMS SAFETY	PLANT SYSTEMS	SITE SAFETY &
<input checked="" type="checkbox"/> NRC PDR	HEINEMAN	TEDESCO	ENVIRO ANALYSIS
<input checked="" type="checkbox"/> I & E (2)	SCHROEDER	BENAROYA	DENTON & MULLER
<input type="checkbox"/> OELD		LAINAS	
GOSSICK & STAFF	ENGINEERING	IPPOLITO	ENVIRO TECH.
MIPC	MACCARRY	KIRKWOOD	ERNST
CASE	KNIGHT		BALLARD
HANAUER	SIHWEIL	OPERATING REACTORS	SPANGLER
HARLESS	PAWLICKI	STELLO	
			SITE TECH.
PROJECT MANAGEMENT	REACTOR SAFETY	OPERATING TECH.	GAMMILL
BOYD	ROSS	EISENHUT	STAPP
<input checked="" type="checkbox"/> P. COLLINS	NOVAK	SHAO	HULMAN
<input checked="" type="checkbox"/> HOUSTON	ROSZTOCZY	BAER	
PETERSON	CHECK	BUTLER	SITE ANALYSIS
MELTZ		GRIMES	VOLLNER
<input checked="" type="checkbox"/> HELTEMES	AT & I		BUNCH
SKOVHOLT	SALTZMAN		J. COLLINS
	RUTBERG		KREGER

EXTERNAL DISTRIBUTION			CONTROL NUMBER
<input checked="" type="checkbox"/> LPDR: <i>Midland, Mi</i>	NAT LAB:	BROOKHAVEN NAT LAB	14394 <i>mill 4</i>
TIC:	REG. VIE	ULRIKSON(ORNL)	
NSIC:	LA PDR		
ASLB:	CONSULTANTS		
ACRS CYS HOLDING/SENT			