ORGANIZATION: HENRY PRATT COMPANY
AURORA, ILLINOIS

REPORT NO.: 99900056/83-01	INSPECTION DATE(S) 2/14-18/83	INSPECTION ON-SITE HOURS: 31

CORRESPONDENCE ADDRESS: Henry Pratt Company
ATTN: Mr. A. Kenneth Wilson
Vice President, Manager of Engineering
401 South Highland Avenue
Aurora, IL 60507

ORGANIZATIONAL CONTACT: Mr. Bruce Cummins, Manager, QA
TELEPHONE NUMBER: (312) 844-4126

PRINCIPAL PRODUCT: Nuclear valves.

NUCLEAR INDUSTRY ACTIVITY: Approximately 5 percent of the 1982 production.

ASSIGNED INSPECTOR: Wm D. Kelley 4/21/83
for J. T. Conway, Reactive and Component Program Section (R&CPS) Date

OTHER INSPECTOR(S): D. Norman, R&CPS

APPROVED BY: Wm D. Kelley 4/21/83
for I. Barnes, Chief, R&CPS Date

INSPECTION BASES AND SCOPE:

A. BASES: 10 CFR Part 50, Appendix B.

B. SCOPE: This inspection was made as a result of: (a) several Licensee Event Reports (LERs) relating to leakage and closure problems with 16" and 18" butterfly valves supplied to D. C. Cook, Units 1 and 2, and Dresden, Units 2 and 3; (b) 10 CFR Part 21 reports issued by Mississippi Power & Light (MP&L), (Cont. on next page)

PLANT SITE APPLICABILITY:

Leaking 16" and 18" valves - 50-315/316 and 50-237/249; yoke failure in valve actuator - 50-416/417, 50-390/391, and 50-518/519; angle bracing on 6" valves - 50-416/417; yoke attachment bolt - 50-529; and valve position indicator - 50-416.

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SCOPE: (Cont.) Henry Pratt, and G. H. Bettis relating to yoke failures in Bettis' valve actuators on Pratt 24" butterfly valves for Grand Gulf, Units 1 and 2; (c) a Construction Deficiency Report (CDR) issued by Tennessee Valley Authority (TVA) relating to yoke failures (see item b) in 24" butterfly valves for Watts Bar, Units 1 and 2, and Hartsville, Units 1 and 2; (d) a CDR issued by MP&L relating to the angle bracing on 6" motor operated butterfly valves for Grand Gulf, Units 1 and 2; (e) a notification issued by Arizona Public Service Company relating to a loose yoke attachment bolt on a motor operated butterfly valve for Palo Verde, Unit 1; and (f) a notification issued by MP&L relating to a reversed valve position indicator on a butterfly valve for Grand Gulf, Unit 1.

In addition, the following programmatic areas were inspected: training/indoctrination, procurement control; document control; control of manufacturing processes; calibration of measuring and test equipment (M&TE); identification and control of material, parts, and components; corrective action; quality assurance (QA) records; audits (external/internal); and control of purchased material and services.

A. VIOLATIONS:

None

B. NONCONFORMANCES:

1. Contrary to Criterion V of Appendix B to 10 CFR Part 50, Subsection NCA-4134.2 of Section III of the ASME Code and paragraphs 5.5.7.1 and 5.5.7.2 of the Quality Assurance Manual (QAM), a review of auditor qualifications and QA training/indoctrination records from 1979 through 1982 revealed the following:

   (a) Employee No. 9663 had performed internal audits in August and September 1981, but was noted on the record of Auditor Qualifications as being qualified to perform only vendor audits during this time frame.

   (b) No documented evidence that employee No. 6898 who had calibrated M&TE used on nuclear valves was trained or indoctrinated.

   (c) No documented evidence that the shop personnel associated with the "elastomer seat" process had received any training in the activities relating to this process.

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2. Contrary to Criterion V of Appendix B to 10 CFR Part 50, Subsection NCA-4134.4 of Section III of the ASME Code, and paragraph 10.4.4.3 of the QAM, a review of purchase orders to Wyle Laboratories to perform seismic vibration tests on nuclear valves and to three vendors (Chemical Products, Hughson Chemical, and Lavelle Rubber) supplying material used in the "elastomer seat" process for nuclear valves indicated that the purchase orders: (a) contained no requirements for the vendor to have a QA program, (b) were not approved by the QA Manager, and (c) were not prefixed with a "U".

3. Contrary to Criterion V of Appendix B to 10 CFR Part 50, Subsection NCA-4134.7 of Section III of the ASME Code, and paragraphs 10.3.1 and 10.4.3 of the QAM, a review of vendor audit reports from 1979 to the present and a review of the Approved Vendor List for the years 1981 and 1982 revealed that the following vendors were neither surveyed nor audited: (a) Wyle Laboratories - welded angle bracing on a nuclear valve assembly and performed seismic testing on nuclear valves, and (b) Chemical Products, Hughson Chemical, and Lavelle Rubber - suppliers of material used in the "elastomer seat" process for nuclear valves.

4. Contrary to Criterion V of Appendix B to 10 CFR Part 50 and paragraph 8.5.7.2 of the QAM, letters dated November 15, 1982, from Henry Pratt Company (HPCO) to Lavelle Rubber Company and August 9, 1982, from HPCO to Albert Trostel Packings, Ltd., had not been reviewed and approved using the same controls as the Resilseal C Rubber specification dated March 1, 1982. The contents of these letters formed the basis for accepting the revision of the rubber from the vendors that was not the same as values in the original specification.

5. Contrary to Criterion V of Appendix B to 10 CFR Part 50, paragraph 5.6 of QAP No. 31, and paragraph 12.5.3 of the QAM, a review of quality data packages which included material certifications, test reports, etc., relating to the repair of three 18" safety-related butterfly valves for Commonwealth Edison (Job Nos. D-28261, D-28262, and D-28254) indicated the absence on test records of heat, serial, or other identifying numbers to assure material traceability.

6. Contrary to Criterion V of Appendix B to 10 CFR Part 50 and paragraph 9.5.1 of Section 9 of the QAM, Nuclear Methods Sheets did not reference a Pratt procedure number and revision for the following operations associated with two nuclear valves:

   Job No. D-28261 -

   a. Hydrostatic test of the body at 300 psi for 10 minutes;

   b. Leak test at 150 psi for 5 minutes, both sides of disc;

   c. Operate valve three times open and close; and

   d. Clean and prepare valve for final inspection.

   Job No. D-28262 -

   a. Prepare body for rubberizing, and

   b. Rubber body with EPT material.

7. Contrary to Criterion V of Appendix B to 10 CFR Part 50 and paragraph 7.3.1 of the QAM, a review of quality data packages relating to the three nuclear valves for Commonwealth Edison indicated there was no evidence that the bonding agent for the valve seat had been tested at the required temperature and radiation levels nor had tests been conducted to determine valve (seat) performance after being exposed to the allowable service temperature and radiation.

8. Contrary to Criterion V of Appendix B to 10 CFR Part 50, Subsection NCA-4134.12 of Section III of the ASME Code, paragraph 5.5.1 of the QAM, and paragraph 6.3 of Procedure No. QAP-2, three measuring and testing devices were observed in an inspection area for elastomer seats on nuclear valves with the following results:

   a. Brinell Hardness Tester (King Tester Corp.) had no serial number, and the calibration due date of August 1982 as noted on the sticker was not met.

   b. I.D. Micrometer (No. 823C) had no serial number.

c. Shore Durometer (Type A - Model 306L/Serial No. 8028) had not been calibrated on a 2-year frequency, and a calibration label was not attached to the instrument or its case. In addition, the QA Manager told the NRC inspector that there was no calibration performed to secondary standards on this instrument.

A review of calibration records from 1975 through 1982 also revealed that master gage block HPCO-GB-202 used to calibrate M&TE for nuclear valves did not have any certifications for the years 1976 though 1982.

9. Contrary to Criterion V of Appendix B to 10 CFR Part 50, Subsection NCA-4134.18 of Section III of the ASME Code, and paragraph 5.5.4.1 of the QAM, a review of internal audit reports for 1979 through 1982 including 19 audit checklists used for internal audits revealed that the activities associated with the "elastomer seat" process were not audited from 1979 to the present time.

C. UNRESOLVED ITEMS:

See item D.5.

D. OTHER FINDINGS OR COMMENTS:

1. Leaking 16" and 18" Butterfly Valves - Several LERs address leaking 16" and 18" butterfly valves supplied by HPCO to the D. C. Cook, Units 1 and 2, and Dresden, Units 2 and 3, facilities. Based upon discussions with HPCO's QA and engineering personnel, an evaluation of the "elastomer seat" process and a review of applicable documentation, the NRC inspector's findings are as follows:

a. D. C. Cook - American Electric Power Service Corporation (AEPSC) ordered six 16" model 2FII butterfly valves from HPCO as Class 1, Level D, replacement valves in December 1975. The Level D category required that HPCO furnish to AEPSC the following information: (a) certification on seismic loading, (b) material certifications limited to the physical and chemical analysis of the body and disc, and (c) hydrotest results.

Since neither the purchase order (PO) nor AEPSC's specification for the valves required the valves to be fabricated under an approved nuclear QA program, the valves were manufactured by

HPCO in 1976 as commercial valves. The valves were shipped to the D. C. Cook site in January 1977, and following a storage period of approximately 5 years, three valves failed (i.e., elastomer seat pulled loose from the valve body) after brief service, and two valves failed while in storage.

Three of the valves were returned to HPCO and the defective rubber was removed and analyzed. Impressions of machine grooves on the rubber surface in contact with the valve body indicated that the machined surfaces had not been sandblasted prior to adding the primer, bonding material, and rubber. In addition, the valves were not given a 100 percent inspection for bond quality as they were manufactured to commercial requirements. Both NRC inspectors were shown a sample of rubber from a failed valve with the machine-groove impressions. The three valves were rerubberized and returned to AEPSC. The replaced elastomer seats were manufactured under HPCO's exisitng QA program for nuclear valves.

Although the reason for the unbonded rubber on the five valves in question appears to be the result of an operator error on the manufacturing line, HPCO was not able to determine how many other valves fabricated as commercial valves and sent to nuclear sites may be suspect in regard to the quality of the bond.

b. DRESDEN - LERs from Dresden have reported several incidents of leaking 18" model 2FII butterfly valves manufactured by HPCO. A sample of six LERs covering the period of 1976 to 1981 reported 16 cases of leaking valves. Eight valves were included in the reports, with six being reported twice, and one being reported three times. Four cases involved worn rubber valve seats which required removal of the valve from the system and replacement of the seat. The remainder were caused by worn shaft seals which are repaired on site. One valve required valve seat replacement in 1976 and again in 1981.

A review of the QA records for the eight leaking valves indicated the following:

(1) Expected time of failure for the model 2FII valves is not published. It was verbally indicated that valve seats should last for 5 years, but HPCO does not guarantee this life expectancy.

(2) Six of the eight valves were purchased in 1968 to Sargent and Lundy Specification No. R-2396 (Revised October 10, 1968). They were designed for maximum service conditions of 150 psi and 200°F with no requirements for radiation exposure. It should also be noted that neither the specification nor the PO from General Electric required the valves to be fabricated under a nuclear QA program.

(3) It could not be determined if the leaking model 2FII valves were original valves (i.e., manufactured to non-nuclear requirements) or repaired by installation of new elastomer seats in accordance with HPCO's nuclear QA program.

Based on the QA records evaluated by the NRC inspectors, it is not possible to factually state that the leaking HPCO valves at Dresden, Units 2 and 3, are a generic problem resulting from a deficiency in the vendor's fabrication process.

2. Yoke Failures in Valve Actuators - A 10 CFR Part 21 report was issued by MP&L and a CDR was issued by TVA in regard to yoke failures in Bettis valve actuators on HPCO 24" butterfly valves that had been furnished to the Grand Gulf, Watts Bar, and Hartsville nuclear sites. On June 9, 1982, MP&L notified Bettis and HPCO of 24" butterfly valves with T3 series actuators having defective yokes (one broken and two cracked) at the Grand Gulf site. The problem was analyzed as a design deficiency and after performing stress calculations on the T3 and T4 series actuators, Bettis concluded (ref. Mama/Pinto (MP&L) letter dated June 14, 1982) that the T3 series yokes (3" or greater bore and 3/4" x 3/8" keyway) would encounter possible failures due to high stress levels in the yoke. HPCO transmitted (ref. Wilson/Pinto letter dated June 15, 1982) to MP&L the stress calculations justifying the new yoke modification (i.e., keyway changed to 3/4" x 1/4") which would lower the stress levels in service.

Bettis (ref. Locascio/Stello letter dated June 15, 1982) and HPCO (ref. Wilson/Keppler letter dated June 15, 1982) submitted 10 CFR Part 21 reports, and HPCO notified Cleveland Electric Illuminating Co., MP&L, and TVA that a 10 CFR Part 21 report was filed, and that their particular plant may have similar valves.

Modified T3 series yokes were sent to the Grand Gulf site by Bettis for replacement of the original yokes. Bettis is supplying (ref. Chandley (TVA)/Wilson letter dated January 20, 1983) repair kits to TVA to modify the existing T3 yokes, and it is planned to take similar action with Cleveland Electric Illuminating Company.

3. Angle Bracing on Bonnet - A CDR was issued by MP&L relating to angle bracing received on three 6" motor operated butterfly valves shipped to the Grand Gulf nuclear site. HPCO notified Bechtel (ref. Cummins/Trickovic letter dated February 26, 1982) that operability assurance testing required that bracing (1" x 1" x 4" angles) be added to the bonnet to raise the resonant frequency to 33 Hz. Wyle Laboratories added the bracing to the valve being tested, but three similar valves had been shipped to the Grand Gulf site prior to the seismic testing being completed. Angle bracing was added to the preshipped valves and the HPCO QA Manager visited the Grand Gulf site to confirm that the angle bracing was installed properly. HPCO changed the bonnet configuration to a tee-type design and revised (ref. Cummins/Trickovic letter dated May 19, 1982) the bonnet detail drawing and Bill of Material for the modified 6" valves.

4. Loose Yoke Attachment Bolt in Containment Purge System Valve - A motor operated valve, provided by HPCO for use in the containment purge system at Palo Verde, Unit 1, was found with a loose yoke attachment bolt.

   A letter from Bechtel to HPCO dated November 24, 1982, included Nonconformance Report JC-775 which identified "a loose bolt where yoke is bolted to body." The letter requested that HPCO determine if one loose bolt could invalidate seismic acceptability and result in a failure of the valve to operate. An engineering report dated December 8, 1982, showed that the combined stress in the three remaining bolts would be one-half of the allowable; therefore, one loose bolt would not invalidate the seismic acceptability. It was determined that measures are taken by HPCO during assembly to ensure that all bolts are tight. Since valves are worked on at the site, it was not possible to determine responsibility for the loose bolt.

5. Valve Position Indicator - A notification was issued by MP&L relating to a reversed valve position indicator on a butterfly valve shipped to the Grand Gulf site. Appropriate action has not been initiated by HPCO on this item, since the vendor had not received any notification from the licensee. This item will be considered open and will be covered during the next NRC inspection.

6. Spring Guide Sleeve Shifting Internally Will Prevent Movement of Actuator - G. H. Bettis reported to the NRC pursuant to 10 CFR Part 21 that a deficiency existed in Bettis actuators concerning the spring guide shifting internally. Five actuators installed on HPCO valves located at Grand Gulf, Unit 2, were identified.

   This item was closed during a previous NRC inspection at G. H. Bettis; however, the final report by MP&L indicated that an Engineering Change Notice was to be issued by G. H. Bettis to correct the problem. This subject was included in this inspection to determine if any action was required by HPCO relative to the problem. It was found that G. H. Bettis has design responsibility for the actuators and that no action was required by HPCO except to monitor the change through the normal QA system.

7. Henry Pratt Valves do not Meet the Specification Closing Time Requirements - MP&L submitted a 10 CFR Part 50.55(e) report to the NRC which identified that eight Henry Pratt ASME Class III butterfly valves with Bettis air actuators had closing times of 9 to 15 seconds. The applicable purchase specification closing time requirement was 4 seconds.

   The problem was identified as vent ports on the actuator solenoids being too small to allow the cylinder to exhaust in 4 seconds. A final report from MP&L stated that the deficiency was related to a documentation error by HPCO. The problem was, therefore, included in this inspection.

   Prior to the reported problem, HPCO issued a 10 CFR Part 21 which identified a potential problem with the subject solenoids; i.e., a possibility that certain solenoid parts were not suitable for radiation requirements. A letter was also written to MP&L asking that they formally request replacement solenoids from HPCO. Instead, the solenoids were purchased from a vendor based on information provided by HPCO. The closure time problem was discovered while testing the valves after replacing the solenoids. As a result, it was discovered that information provided by HPCO was in error and the wrong solenoids had been purchased. Prior to this incident, solenoid model numbers were not recorded by HPCO, which resulted in the inaccurate information. HPCO now records solenoid model number on their assembly and test records (A&TR). The NRC inspector verified the corrective action by reviewing the A&TR for Production Order D-0188.

8. Training/Indoctrination - Qualification records for eight audit personnel, certifications for three NDE personnel, and training and indoctrination records from 1979 through 1982 were reviewed to assure that personnel performing quality-affecting activities are trained and qualified in the principles, techniques, and requirements of the activity being performed. Nonconformance B.1 was identified in this area of the inspection.

9. Procurement Control - Approximately 16 purchase orders from HPCO to suppliers of material and services relating to the manufacture of nuclear valves were reviewed to assure that applicable technical and QA program requirements are included or referenced in procurement documents. Nonconformance B.2 was identified in this area of the inspection.

10. Calibration of M&TE - M&TE was evaluated, and calibration records from 1975 through 1982 were reviewed to assure that gages, instruments, and other measuring and testing devices are properly identified, controlled, calibrated, and adjusted at specified intervals. Nonconformance B.8 was identified in this area of the inspection.

11. Control of Purchased Material, Equipment, and Services - The Approved Vendor List for 1980, 1981, and 1982 and vendor audits conducted by HPCO from 1979 through 1982 were reviewed to assure that purchased material and services were adequately controlled. Nonconformance B.3 was identified in this area of the inspection.

12. Audits - Internal audit reports from 1979 through 1982 including audit checklists used for internal audits and management audits for 1980, 1981, and 1982 were reviewed to assure that all areas of the QA program are effectively and properly implemented. Nonconformance B.9 was identified in this area of the inspection.

13. Document Control - Control of documents was evaluated by reviewing procedures, specifications, and POs to determine that release and changes to documents were in compliance with approved procedures. Nonconformance B.4 was identified in this area of the inspection.

14. Identification and Control of Material, Parts, and Components - Since there was no nuclear activity in the manufacturing area of the Aurora facility during the NRC inspection, this area was evaluated by reviewing documentation for prior production items. Nonconformances B.5 and B.7 were identified in this area of the inspection.

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15. QA Records - QA records for the repair of 18" 2FII butterfly valves for Commonwealth Edison were reviewed. Retention and storage of records was not evaluated during this inspection. No nonconformances were identified in this area of the inspection.

16. Control of Manufacturing Processes - Evaluation of this area consisted of reviewing the production line physical layout and evaluating Nuclear Method Sheets from prior production items. Nonconformance B.6 was identified in this area of the inspection.

PERSONS CONTACTED

Company HENRY PRATT

Dates FEB 14-18 1983

Docket/Report No. 99900056/83-01

Inspector J. CONWAY / D. NORMAN

NAME(Please Print)	TITLE(Please Print)	ORGANIZATION(Please Print)
BRUCE CUMMINS *	MGR - Q.A.	HENRY PRATT
A. KENNETH WILSON *	V-P MGR. of ENGINEERING	" "
DONALD DAY	ENGINEERING SYSTEMS SPECIALIST	" "
ROBERT BLAIR	CONSULTING CHEMIST	—
RODGER GUDDERNODORF	CHIEF INSPECTOR	HENRY PRATT
DERAL WILLIAMS	INSPECTOR	" "
RICK SAUER	NUCLEAR BUYER	" "
GREG KURKYIAN *	V-P, MGR of MARKETING	" "
* ATTENDED EXIT MEETING		

INSPECTOR J. CONWAY / D. NORMAN

SCOPE

DOCUMENTS EXAMINED

DOCKET NO. 99900056

REPORT NO. 83 - 01

ITEM NO.	TYPE OF DOCUMENT	DOCUMENT NO.	REV.	DATE	TITLE / SUBJECT
1	QAM	–	2	2/25/81	QUALITY ASSURANCE MANUAL
2	PRO	–		10/30/80	Q.A.P. PROCEDURES
3	LTR	–	–	1/20/83	CHANDLEY (TUA) / WILSON (PRATT) - Re: BETTIS SUPPLIED REPAIR KITS TO TUA TO MODIFY DEFECTIVE VALVES
4	LTR	–	–	6/14/82	MAMA (BETTIS) / PINTO (MP&L) - Re: CRACKED T-3 YOKES
5	LTR	–	–	6/15/82	WILSON / PINTO - Re: TRANSMITTED STRESS CALCULATIONS FOR MODIFIED VALVES
6	LTR	–	–	6/18/82	LETTERS FROM WILSON TO CLEVELAND ELECTRIC, MP&L & TUA NOTIFYING THE LICENSEE OF PRATT'S PART 21 REPORT - (T-3 YOKE PROBLEM)
7	LTR	–	–	2/17/82	TRICKOVIC (BECHTEL) / CUMMINS (PRATT) - Re: BRACING FOR BONNETT (6" M.O. VALVE)
8	LTR	–	–	2/26/82	CUMMINS / TRICKOVIC - Re: PRATT REQUESTED P.O. TO INSTALL BRACING ON 3 VALVES
9	LTR	–	–	4/8/82	HEATON (BECHTEL) / REAVES (MP&L) - Re: STATUS REPORT ON SEISMIC BRACING ADDED TO PRATT'S 6" M.O. VALVES AT GRAND GULF
10	LTR	–	–	4/29/82	TRICKOVIC / CUMMINS - Re: REQUESTED PRATT TO TAKE PREVENTIVE ACTION REGARDING SEISMIC BRACING REQUIRED ON 6" M.O. VALVES
11	LTR	–	–	5/19/82	CUMMINS / TRICKOVIC - Re: DOCUMENTED PRATT'S CORRECTIVE ACTION ON NEW BONNET DESIGN FOR 6" VALVES

TYPE OF DOC:

DWG - DRAWING
SPEC - SPECIFICATION
PRO - PROCEDURE
QAM - QA MANUAL
QCD - QC DOCUMENT
P.O. - PURCHASE ORDER
INM - INTERNAL MEMO

LTR - LETTER

INSPECTOR J. CONWAY / D. NORMAN

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ITEM NO.	TYPE OF DOCUMENT	DOCUMENT NO.	REV.	DATE	TITLE / SUBJECT
12	OTH	–	–	–	QA DATA PACKAGE - (D-0028-9) - 4, 6" BUTTERFLY VALUES (GRAND GULF)
13	DWG	E -2901	–	6/29/82	8" REPLACABLE PACKING BONNET WELDMENT ASSEMBLY"
14	DWG	C-2665	2	8/27/75	"GENERAL ARRANGEMENT NRS VALVE - HB OPERATOR SMB00 MOTOR REPLACEABLE PACKING BONNET"
15	DWG	C-3593			" 6" x 12" ASME SECTION III CLASS NRS VALVE CROSS SECTION"
16	P.O.	9645-M-258.0	33	6/1/81	BECHTEL / PRATT for BUTTERFLY VALVES - 20 INCH & SMALLER
17	OTH	–	–	–	APPROVED VENDOR LIST for 1981 & 1982
18	REP	–	–	–	MANAGEMENT AUDITS FOR 1980, 1981 & 1982
19	OTH	–	–	–	AUDIT CHECKLISTS (19) FOR INTERNAL AUDITS
20	REP	–	–	–	INTERNAL AUDITS FOR 1979, 1980, 1981 & 1982
21	REP	–	–	–	VENDOR AUDITS FOR 1979, 1980, 1981, 1982 & 1983
22	OTH	–	–	–	QA TRAINING & INDOCTRINATION RECORDS ('79 thru '82)
23	OTH	–	–	–	AUDITOR QUALIFICATIONS (EIGHT PERSONNEL)
24	OTH	–	–	–	RECORDS for NDE PERSONNEL (FIVE)
25	P.O.	–	–	12/19/75	AMERICAN ELECTRIC POWER SERVICE CORP. TO PRATT FOR SPARE VALVES for D.C. COOK STATION

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INSPECTOR J. CONWAY / P. NORMAN

SCOPE _____

DOCUMENTS EXAMINED

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ITEM NO.	TYPE OF DOCUMENT	DOCUMENT NO.	REV.	DATE	TITLE / SUBJECT
26	OTH	P-68-4447B		10/23/75	PRATT TO AEPSC - PROPOSAL & CONTRACT for REPLACEMENT BUTTERFLY VALVES for D.C. COOK STATION
27	OTH	–	–	–	BILL of LADING for REPLACEMENT BUTTERFLY VALVES for D.C. COOK
28	DWG	B-46	–	7/1/67	"MODEL 2FII - BUTTERFLY VALVE REPLACEABLE PACKING BONNET"
29	OTH	–	–	–	CERTIFICATIONS FROM PRATT ON HYDRO TEST & LEAKAGE TEST FOR REPLACEMENT BUTTERFLY VALVES for D.C. COOK
30	OTH	–	–	–	CMTR's from UNIVERSAL ELECTRIC FOUNDARY, ST. LOUIS STEEL CASTING & LEBANON STEEL FOUNDARY for VALVES for D.C. COOK
31	DWG	B-00065	–	1/1/71	"MODEL 2FII - BUTTERFLY VALVE"
32	P.O.	–	–	–	FIVE P.O.'s from PRATT to WYLE LABORATORIES for SEISMIC TESTING
33	OTH	–	–	–	CALIBRATION RECORDS (175 to present)
34	OTH	–	–	–	RECORDS - TRAINING & INDOCTRINATION of MACHINISTS
35	REP	–	–	12/8/70	"FUNCTIONAL QUALIFICATION REPORT for QUALIFIED TEST VALVE ASSEMBLY" from WYLE LABS to H. PRATT
36	PRO	MAN-2		6/1/71	"GENERAL PRODUCTION RUBBER MOLDING PROCEDURE"

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INSPECTOR J. CONWAY/D.

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ITEM NO.	TYPE OF DOCUMENT	DOCUMENT NO.	REV.	DATE	TITLE / SUBJECT
37	PRO	–	–	–	GENERAL "RUBBER PRESS MOLDING PROCEDURES" for RESILOSEAL "C" & RESILOSEAL "W" RUBBER
38	P.O.	402265		4/5/82	To G&H Inc. for an 8" N-2FTI Valve (Body)
39	P.O.	402274		4/27/82	To QUAKER ALLOY CASTING for valve disk
40	P.O.	4-2324		11/10/82	To PRESSURE VESSEL NUCLEAR STEELS for SHAFT
41	LTR	–		11/29/82	BECHTEL LTR TO PRATT, RE: LOOSE BOLT WHERE YOKE IS BOLTED TO BODY, INCL. DER 82-71 AND NCR JC 775
42	REPORT	–		12/8/82	STRESS CALCULATIONS WITH ONE OF 4 YOKE BOLTS LOOSE
43	LTR	–		12/10/82	PRATT LTR TO BECHTEL PRESENTING RESULTS OF STRESS STUDY
44	REPORT	~~2J-NC-A-UV-402~~			REPORT FROM PRATT FIELD SERVICE ON LEAKAGE OF 18" VALVES (TAG # 2J-NC-A-UV-402, 2J-NC-B-UV-401) AT DRESDEN
45	P.O.	728271	-	5/3/79	FROM COMMONWEALTH EDISON FOR RESEAL OF 18" HENRY PRATT BUTTERFLY VALVE
46	RECORDS				PRATT RECORDS RELATED TO ~~P.O.~~ SHOP ORDER D-28261 (P.O. 728271)

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INSPECTOR J. CONWAY/D. NORMAN

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DOCKET NO. 99900056

REPORT NO. 83 - 01

ITEM NO.	TYPE OF DOCUMENT	DOCUMENT NO.	REV.	DATE	TITLE / SUBJECT
47	P.O	725088 ~~PC~~		3-7-78	FROM COMMONWEALTH EDISON FOR NEW SEAT, STEM AND DISC IN 18" HENRY PRATT BUTTERFLY VALVE
48	RECORDS				PRATT RECORDS RELATED TO SHOP ORDER D-28262 (PO 725088)
49	PO	729479		-	FROM COMMONWEALTH EDISON FOR NEW SEAL IN 18" HENRY PRATT BUTTERFLY VALVE
50	RECORDS				PRATT RECORDS RELATED TO SHOP ORDER D-28254 (PO 729479)
51	LTR	-	-	9-19-68	PRATT TO G.E. ATOMIC POWER EQUIPMENT DEPT, RE: MISC. BUTTERFLY VALVES FOR QUAD CITIES UNITS 1 AND 2.
52	LTR	-	-	2-6-68	PRATT TO SARGENT ~~NOT~~ LUNDY AND LUNDY INC., RE: DRESDEN UNITS 2 AND 3.
53	LTR	-	-	10-10-68	SARGENT LUNDY TO PRATT, RE: INTENT OF AWARD OF CONTRACT FOR VALVES TO SPEC R-2396
54	PROPOSAL	-	-	9-19-68	HENRY PRATT PROPOSAL FOR BUTTERFLY VALVES FOR QUAD CITIES UNITS 1 AND 2.
55	P.O.	3620-192		10-10-68	ORDER FROM G.E. FOR DESIGN, DEVELOP, FAB OF

TYPE OF DOC:

DWG - DRAWING
SPEC - SPECIFICATION
PRO - PROCEDURE
QAM - QA MANUAL
QCD - QC DOCUMENT
P.O. - PURCHASE ORDER
INM - INTERNAL MEMO

LTR - LETTER

INSPECTOR J. CONWAY / D. NORMAN

SCOPE _____ DOCUMENTS EXAMINED

DOCKET NO. 99900056

REPORT NO. 83 - 61

ITEM NO.	TYPE OF DOCUMENT	DOCUMENT NO.	REV.	DATE	TITLE / SUBJECT
					MISCELLANEOUS BUTTERFLY VALVES TO SPEC R-2396
56	CERTS	VARIOUS		VARIOUS	CERTIFICATIONS FROM VENDORS FOR RUBBER USED IN VALVE SEATS
57	QCD	VARIOUS		-	QUALITY CONTROL TEST REPORTS FOR INCOMING RUBBER USED IN VALVE SEATS
58	SPEC	-		2-25-81	SPECIFICATION FOR RESILOSEAL "W"
59	SPEC	-		3-1-82	SPECIFICATION FOR RESILOSEAL "C"
60	P.O.	VARIOUS		-	PRATT PURCHASE ORDERS TO VARIOUS VENDORS FOR SEAL RUBBER AND BONDING AGENTS.
61	LTR	-		3-18-81	FROM ISOMEDEX TO PRATT, RE: RESULTS OF RADIATION TESTS CONDUCTED ON SEAL RUBBER

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