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Washington Public Power Supply System

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Docket Number 50-397

October 19, 1982
G02-82-857

Responds to: N/A
Response required by: N/A

Mr. R. H. Engelken, Director
Nuclear Regulatory Commission
Region V, Office of Inspection and Enforcement
1450 Maria Lane Suite 210
Walnut Creek, California 94596

Subject: SUPPLY SYSTEM NUCLEAR PROJECT NO. 2
TWELFTH PROGRESS REPORT - 10CFR50.54(f)

Reference: a) G02-80-153, N.O. Strand to USNRC, "WPPSS Nuclear
Project No. 2 Docket No. 50-397, EA-80-20, Notice
of Violation and Additional Information -
10CFR50.54(f)," dated July 17, 1980

This is the twelfth Progress Report on the actions we have taken in
regard to our commitments in Reference a). This is the first
"Quarterly" report, covering the period of July through September.

Verification reinspections of mechanical and electrical work are
still in progress but are approaching completion. Several of the
contractors have completed their programs and have submitted final
reports. Surveillance of activities in the program by Bechtel QC
continues. The scope of Supply System participation has increased
somewhat, with the addition of several past contracts to our review,
management of grout evaluation, and overview of testing activity.

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PDR ADOCK 05000397
R PDR

Add: W. Haass

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Should you have any questions regarding the nature or content of the review program or this report, please feel free to contact me at your convenience.


R.G. Matlock - 901A
Program Director, WNP-2

RLK/la

- Attachments: 1. WNP-2 Project Review of
Completed Safety-Related Work -
Progress Report
- 1A. Prepurchase and Inactive Contracts -
Status Report
- 1B. Deficiency Document Review -
Status Report

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TWELFTH PROGRESS REPORT
WNP-2 PROJECT REVIEW
of
COMPLETED SAFETY-RELATED WORK

A. INTRODUCTION

This report covers activities of the Supply System's Quality Verification Program (QVP) during the months of July, August, and September, 1982. Reinspection of hardware in the plant is very nearly complete. Several contract reports covering the contractor's activities have been completed, others are in progress.

B. GENERAL INFORMATION

1. Instruction PMI 12-8 was issued by the Project at the end of June to establish requirements for controlling and managing quality assurance records generated by Supply System personnel. In response to this instruction, the QVP office prepared and issued an internal instruction for documentation control, RCSW-12, which provides guidelines for safekeeping our quality documents until they are finally transmitted to the vault. QVP office files are now maintained in fire-resistant cabinets with limited access.
2. Staff levels of Bechtel organizations involved in this Program are being reduced in accordance with the completion status of contractor participation and Bechtel's own hardware reinspections. Early in October we expect to complete the contract 215/250 reinspections, and as discussed below, only one other contractor has not completed performance of the ten-percent-sample hardware reinspections.

Supply System staff levels remain as previously reported, and are not expected to change significantly until the Prepurchase and In-active Contract Reviews and Special Tasks have been completed --- anticipated during last quarter of the calendar year.

3. During this report period, 17 separate surveillances were conducted by the Bechtel QC organization on contractor verification activities. There were no deviations reported.
4. A separately-reported potential problem concerning low compressive strength grout under QC-I and SC-I baseplates, 10CFR50.55(e) condition No. 73 is being resolved by a grout evaluation program currently in progress at WNP-2. Management of this program has been transferred to the QVP and is now being accomplished under Special Tasks.

C. SYSTEMS COMPLETION

Following is a brief report for each of the active site contractors' reverification activities:

o Contract 210A, Peter Kiewit Sons

The Reverification Report for Contract 2808-210A, PKS Co. has been prepared, reviewed, and approved by the Supply System. This brief report records the conclusion that no work was completed and accepted prior to the stopwork (June, 1980). Nevertheless, an overall inspection of the Reactor Building siding accomplished in contract 210 was performed by this contractor, with no deficiencies identified. The report has been vaulted; copies are on file at the BRG office, the QVP office, and NRC Resident Inspector's office.

NOTE: All final contract reports discussed herein are similarly distributed and filed.

o Contract 213A, Pittsburg-DesMoines Steel

Complete, reported earlier.

o Contract 215/250, WBG/Bechtel

Review of documentation supporting contract 215 construction has been completed by WBG and Bechtel. A presentation of the accomplishments of the WBG Documentation Completion Program and related Bechtel activities was made in mid-August to Supply System management and the NRC Resident Inspector. A report is being prepared by Bechtel to record the accomplishments of this program, a copy of which will become a part of the QVP file.

Reinspection of contract 215 hardware by Bechtel continues, but is very nearly complete. Following is a summary of that work during the report period:

- Containment Drywell Structural Steel. All inspections have been completed in accordance with Instruction QVI-08 (team concept) and QVI-09 (special steel inspection criteria). Discrepancies are identified on QCIR's for evaluation by the Architect-Engineer, which is in progress at this time. Additionally, 19 pipe-whip-restraint supports are being reinspected inside the drywell; three of these have been completed.

- Systems necessary for RPV Hydro. Document review and hardware reinspections of the systems included in the RPV hydrostatic test boundary (or necessary for support of the test) were completed, and the hydrostatic test was successfully completed. Only one NCR was written for a deficient pressure boundary item - one of eight hex-nuts on a flange connection had an incorrect heat code number, and was replaced.

A special report entitled, Reverification Report for Reactor Pressure Vessel Hydro Boundary, was prepared and issued to inform the Project that verification reinspection of the systems involved was completed and would not restrain the test.

- Balance of Systems. All other document reviews and hardware reinspections for past work in contract 215 have been completed with few exceptions. Reinspection of all piping isometrics and most hangers is complete. A few pipe hangers and pipe-whip-restraint supports are all that remain to be reinspected. Minor discrepancies are identified on QCIR's and more-significant and indeterminate discrepancies are identified on NCR's, all for evaluation and disposition by the Architect-Engineer, a process that continues at this time.

Thirteen system reports covering 215/250 verification reinspections have been completed and issued to date. Eighteen more are being prepared at this time, and six remain to be started. These individual reports will become part of the Reverification Report for Contract 2808-215, WBG.

o Contract 216, The Waldinger Corporation

The Reverification Report for contract 216 has been completed, reviewed, and approved by the contractor, Bechtel, and the Supply System. The report addresses reverification of heating, ventilating, and air-conditioning systems, and the ductwork, plumbing, piping, and equipment drains associated with those systems. It concludes that reverification has been accomplished in accordance with Program requirements; that the contractor's quality program for that construction period had failed to detect a number of minor discrepancies, not significant enough to cause an escalation in the reinspection sample; and that the safety-related work completed prior to July, 1980 is adequate, as evidenced by the information presented in the report.

As a result of QVP Key Decision No. 2 a sample of the contractor's home office records were reviewed. These records cover ductwork fabricated at the home-office shop and furnished to the Site. The review revealed that the contractor's QA had not reviewed them, as is required by the QA Program. QA's review is now to be completed as part of the turnover process, which is being monitored by Bechtel QC Surveillance.

o Contract 217, Sentry

The Contract 2808-217 Reverification Report, Sentry Automatic Sprinkler Co., has been completed, reviewed, and approved by the contractor, Bechtel, and the Supply System. The report addresses reverification of pipe supports, fire extinguisher brackets, electrical supports and welds, all for fire protection systems in the plant. It concludes that reverification was accomplished in accordance with Program requirements; that the contractor's quality program failed to detect a small number of minor discrepancies; and that the prior work is adequate.

o Contract 218, Fischbach/Lord

Document review and hardware reinspection continues. To date, reverification of 26 systems has been completed and 35 systems are in progress. No deficiencies of such a nature or number as would cause an increase in the 10% sample of hardware originally selected for reverification have been encountered thus far.

o Contract 219/234, O.B. Cannon

Final contract reverification reports have been completed for each of these O.B. Cannon contracts.

With regard to contract 219 for containment drywell coatings, the Project has identified a significant amount of construction-associated damage to coated areas, which will require repair. As a result, the entire drywell is to be reinspected and recoated as necessary. The future inspection of the prior work, associated with preparation for this repair, has been evaluated and found in conformance with the objectives of the QVP. The report records this evaluation.

Contract 234 covers wetwell containment coatings in place prior to July, 1980. These have all been either reinspected or reworked since that time. The report concludes that the contractor's quality program at that time failed to detect a small number of minor documentation discrepancies, but that the work in place is acceptable as evidenced by the information included.

1990-1991

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o Contract 220, Johnson Controls

Verification reinspections, on-going with the contractor's normal as-built process, have been completed for 16 instrument racks and 26 various instruments. This amount is significantly in excess of a 10% sample of the hardware installed, inspected, and accepted prior to the June, 1980 stopwork.

In consideration of the amount of reinspections performed and the resulting paucity of significant deficiencies, QVP management has decided to end the periodic reporting requirements for this contractor. This action terminates Johnson Controls' specially-directed reverification activities under the Quality Verification Program, while their as-built program continues to the completion of work. A final report is now being prepared by the contractor for review and approval by Bechtel and the Supply System.

D. PREPURCHASE AND INACTIVE CONTRACTS

1. In the Eleventh Progress Report, we indicated that the review of quality documentation for prepurchase contracts and already-closed construction contracts was approaching completion. Since then we have again searched the records of all WNP-2 contracts to be certain that all QC-I and SC-I work has been addressed. That effort has yielded a short list of additional contracts to be reviewed. The list has been added to the contracts identified in Attachment 1A, where the status of work in this element of the Program is summarized. The document reviews and contract evaluations have resumed and are expected to be completed during the last quarter of the year.
2. Reinspection and retesting of the Reactor Building crane have been completed. A new inspection/test procedure was developed jointly by the Supply System and Bechtel, and the work similarly accomplished. Twelve significant deficiencies of a mechanical or electrical nature were discovered and are being identified on Startup Problem Reports (SPR's) and Startup Deficiency Reports (SDR's) as a result of this activity. Corrective action has been initiated and will be tracked by the Project's Master Work List (MWL).

Questionable test documentation originally opened this activity, so a cursory review of a sample of similar documentation for other cranes and hoists in the plant was made. This review indicated that other equipment may not have been tested in accordance with applicable codes. Therefore, a complete audit of documentation for cranes and hoists has been initiated to determine the potential need for retesting across the plant. The results of this effort will determine the appropriate corrective action to be undertaken by the Project.

3. Reinspection of the Diesel-Generators has been initiated by the Test and Startup organization but is not yet complete. A few problems have been identified, thus far. Deficiencies will be recorded on SPR's or SDR's as appropriate, for corrective action and tracking.

E. SPECIAL TASKS

1. Deficiency Document Review

Progress continues on task reports documenting the verification activities accomplished. The investigation, compiling, and review of documents for technical correctness continues, but at a slow pace. To meet a schedular need, emphasis has been placed on a new task (to this Program), grout evaluation, discussed below.

The status of document reviews and contractor-document evaluation is summarized in Attachment 1B to this report.

2. Personnel Qualifications

No significant progress to report this period.

3. Receiving Inspection

Special review by contractor organizations are being evaluated to determine their applicability to this task. Bechtel's report on repeat inspections for material in system 58.0 has been completed and submitted to the Supply System's QVP office for review.

4. Grout Evaluation Program

A program of resuming a previously-proven method of micro-coring samples of grout (used under baseplates and equipment supports) had been developed and carried out during the report period. The resulting approximately-half-inch-diameter cores were laboratory-tested for compressive strength to determine compliance with the specification requirements. A report is now being prepared to record the history, placement identification, sampling, testing, and results of grout installations at WNP-2. The report will establish that, based on results of the investigation and evaluation by the Architect-Engineer, the quality of the grout meets specifications and/or is fit for its intended use, or will be identified for replacement. This activity is also reported as 10CFR50.55(e) Condition 73.

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TWELFTH PROGRESS REPORT

SUPPLY SYSTEM REVIEW OF PREPURCHASE AND INACTIVE CONTRACTS STATUS REPORT

CONTRACTOR	DESCRIPTION OF CONTRACTOR'S WORK	STATUS OF OWNER FINAL DOCUMENTATION REVIEW (% COMPLETE)	RESULTS OF DOCUMENTATION REVIEW	STATUS OF OWNER EVALUATION ON NEED FOR REINSPECTION (% COMPLETE)
2808-2 General Electric	NSSS	100	No Deficiencies	100
7 Science Systems & Technology	Seepage Control From Ponds	100	No Deficiencies	100
17 Pathway Bellows	Refueling Bellows	0	Results not yet available	0
18 Farr Company	Standby Gas Treatment & HEPA Filters	100	No Deficiencies	100
22A Joy Manufacturing	HVAC Fans	100	No Significant Deficiencies	100
23 Bryon Jackson	Standby Service Water Pumps	100	No Deficiencies	100
24 HJICO Inc	Shop Fabricated Tanks	100	No Deficiencies	100
28 Buffalo Forge	HVAC Fans	100	No Significant Deficiencies	100
31A Whiting	Turbine Generator and Reactor Building Cranes	100	Potential Deficiencies, Reinspection Recommended	100
320D Clayton	JIB Overhead Cranes	100	No Significant Deficiencies	100
35A Crane Co.	Pumps & Motors	100	No Deficiencies	100
36 Acme Concrete	Production & Delivery of Concrete	100	No Significant Deficiencies	99

TWELFTH PROGRESS REPORT

SUPPLY SYSTEM REVIEW OF PREPURCHASE AND INACTIVE CONTRACTS STATUS REPORT

CONTRACTOR	DESCRIPTION OF CONTRACTOR'S WORK	STATUS OF OWNER FINAL DOCUMENTATION REVIEW (% COMPLETE)	RESULTS OF DOCUMENTATION REVIEW	STATUS OF OWNER EVALUATION ON NEED FOR REINSPECTION (% COMPLETE)
41A Velan Valve	Nuclear Valves	100	No Significant Deficiencies	100
41B Anchor/Darling	Nuclear Valves	100	No Deficiencies	100
42A Fisher Controls	Control Valves	100	No Deficiencies	100
42B Fisher Controls	Control Valves	100	No Significant Deficiencies	100
47A Westinghouse	Switchgear	100	No Deficiencies	100
48 Westinghouse	480 Volt Substation	100	No Deficiencies	100
49 I-T-E Imperial	Motor Control Centers	100	No Significant Deficiencies	100
51A ESB Inc.	Batteries	100	No Deficiencies	100
51B Power Conversion	Battery Chargers	100	No Significant Deficiencies	100
52 Solid State Controls	Uninterruptible Power Supply	100	No Deficiencies	100
53 Stewart Stevenson	Diesel Generators	100	Open Documentation Deficiencies	95
55 Westinghouse	Containment Electrical Penetrations	100	No Significant Deficiencies	99
57 Kinematics	Accelerometers	100	No Deficiencies	100

TWELFTH PROGRESS REPORT

SUPPLY SYSTEM REVIEW OF PREPURCHASE AND INACTIVE CONTRACTS STATUS REPORT

CONTRACTOR	DESCRIPTION OF CONTRACTOR'S WORK	STATUS OF OWNER FINAL DOCUMENTATION REVIEW (% COMPLETE)	RESULTS OF DOCUMENTATION REVIEW	STATUS OF OWNER EVALUATION ON NEED FOR REINSPECTION (% COMPLETE)
58 Jelco	Instrument Racks	100	No Significant Deficiencies	100
59 GE	Instrument & Control Boards	100	No Deficiencies	100
60A Sentry Equipment Corp.	Sampling and Analysis Systems	0	Results not yet available	0
62A Okonite	Cable	100	No Deficiencies	100
62B Raychem	Cable	100	No Significant Deficiencies	100
62C Rockbestos	Cable	100	Open Document Deficiencies	99
67 H K Porter	Air Handling Units	100	No Deficiencies	100
68 BIF	Isolation Valves	100	No Significant Deficiencies	100
69 Velan	Check Valves	100	No Significant Deficiencies	100
71 Air Products & Chemicals	Hydrogen Recombiner	100	No Deficiencies	100
73 Elgar	15KVA Inverters	100	No Deficiencies	100
90 Leckenby	Pipe Whip Restraints	100	Deficiencies Identified And Being Corrected thru Management System	99
92A Ingersoll Rand	Sampling Probes	This is an Active Pre-purchase Contract	No Deficiencies	100

TWELFTH PROGRESS REPORT

SUPPLY SYSTEM REVIEW OF PREPURCHASE AND INACTIVE CONTRACTS STATUS REPORT

CONTRACTOR	DESCRIPTION OF CONTRACTOR'S WORK	STATUS OF OWNER FINAL DOCUMENTATION REVIEW (% COMPLETE)	RESULTS OF DOCUMENTATION REVIEW	STATUS OF OWNER EVALUATION ON NEED FOR REINSPECTION (% COMPLETE)
92B Kaman Sciences	Vacuum Breaker Valves	This is an Active Pre-purchase Contract	No Deficiencies	100
93 GPE Controls	Vacuum Breaker Valves	100	No Deficiencies	100
94 B F Shaw	MSRV Discharge	100	No Deficiencies	100
12409 Buehler Nuclear Products	BWR High Density Spent Fuel Racks	0	Results not yet available	0
6426 Wright-Schuchart-Harbor	Interim Construction	0	Results not yet available	0
6904 Welk Brothers	Annular Sleeves	0	Results not yet available	0
6905 Welk Brothers	Skimmer Surge Tank	0	Results not yet available	0
6917 Texas Pipe	Fuel Pool Liner & Accessories	0	Results not yet available	0
7012 Brand Industrial	Separation System	0	Results not yet available	0
205 Stewart Erikson	Reactor Building Substructure	100	No Significant Deficiencies	100
206 Bovee Crail	General Construction	100	Open Documentation Deficiencies	95
206A Peter Kiewit	Architectural Const.	99	No Significant Deficiencies	90
207 PDM	Structural Steel	100	No Significant Deficiencies	100

TWELFTH PROGRESS REPORT

SUPPLY SYSTEM REVIEW OF PREPURCHASE AND INACTIVE CONTRACTS STATUS REPORT

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TWELFTH PROGRESS REPORT
DEFICIENCY DOCUMENT REVIEW SUMMARY
QC - 1 CONTRACTS

Attachment 1B
Page 1 of 3

QUALITY CLASS-I SEISMIC-I SITE WORK PERFORMED		SITE DOCUMENTATION SUBJECT TO QVP REVIEW				CONTRACTOR DOCUMENTATION SUBJECT TO QVP REVIEW						
Contract	Contractor	NCR		RFI		INTERNAL DOCUMENTS						
		Review	Status+	Review	Status+	DD	Review	Status+	DCD	Review	Status+	
205*	Stewart-Erickson	YES	11	YES	5	NCR	YES	5	NONE	-	-	
206*	Bovee-Crail	YES	11	YES	4	NCR	YES	3	NCR	YES	3	
206A*	Peter Kiewit Sons'	YES	10	YES	6	IR	YES	3	NONE	-	-	
207*	Pittsburgh-Des Moines	YES	11	YES	2		A	-		A	-	
209*	Lampson Inc	D	7	D	7		D	7		D	7	
210*	Peter Kiewit Sons'	YES	11	YES	7	IR	YES	7	NONE	-	-	
210A	Peter Kiewit Sons'	B	--	B	-	N/A	B	-	N/A	B	-	
6426*	Wright Schuchart Harbor	YES	11	YES	3		A	-		A	-	
213*	Pittsburgh-Des Moines	YES	11	YES	6	CAR	YES	3	ECAR	YES	3	
213A*	Pittsburgh-Des Moines	YES	11	YES	7	CAR	YES	7	ECAR	YES	11	
215	WSH/Boecon/GERI	YES	11	YES	9	IR	YES	7	FOR	C	7	
216	Waldinger	YES	11	YES	7	DR	YES	9	DR	YES	9	
217	Sentry	YES	11	YES	7	IR	D	7	IR	D	7	
218	Fischbach/Lord	YES	11	YES	7	IR	YES	7	IR	YES	7	
219	O.B. Cannon	YES	11	YES	7	IR	YES	7	NONE	-	-	
220	Johnson Controls	YES	11	YES	7	ISR	YES	7	JFRN	YES	7	
221*	Pacific Testing Labs	YES	11	A	-		A	-		A	-	
221A	Pacific Testing Labs	D	7	D	7		D	7		D	7	
225*	McMillan Brothers	YES	10	YES	6	ICL	YES	5	CAR	YES	5	
233*	BF Shaw	YES	11	YES	3		A	-		A	-	
234	O.B. Cannon	YES	11	YES	7	IR	YES	7	NONE	-	-	
235	GE IS&E	D	--	D	-	QR	YES	7	NONE	-	-	

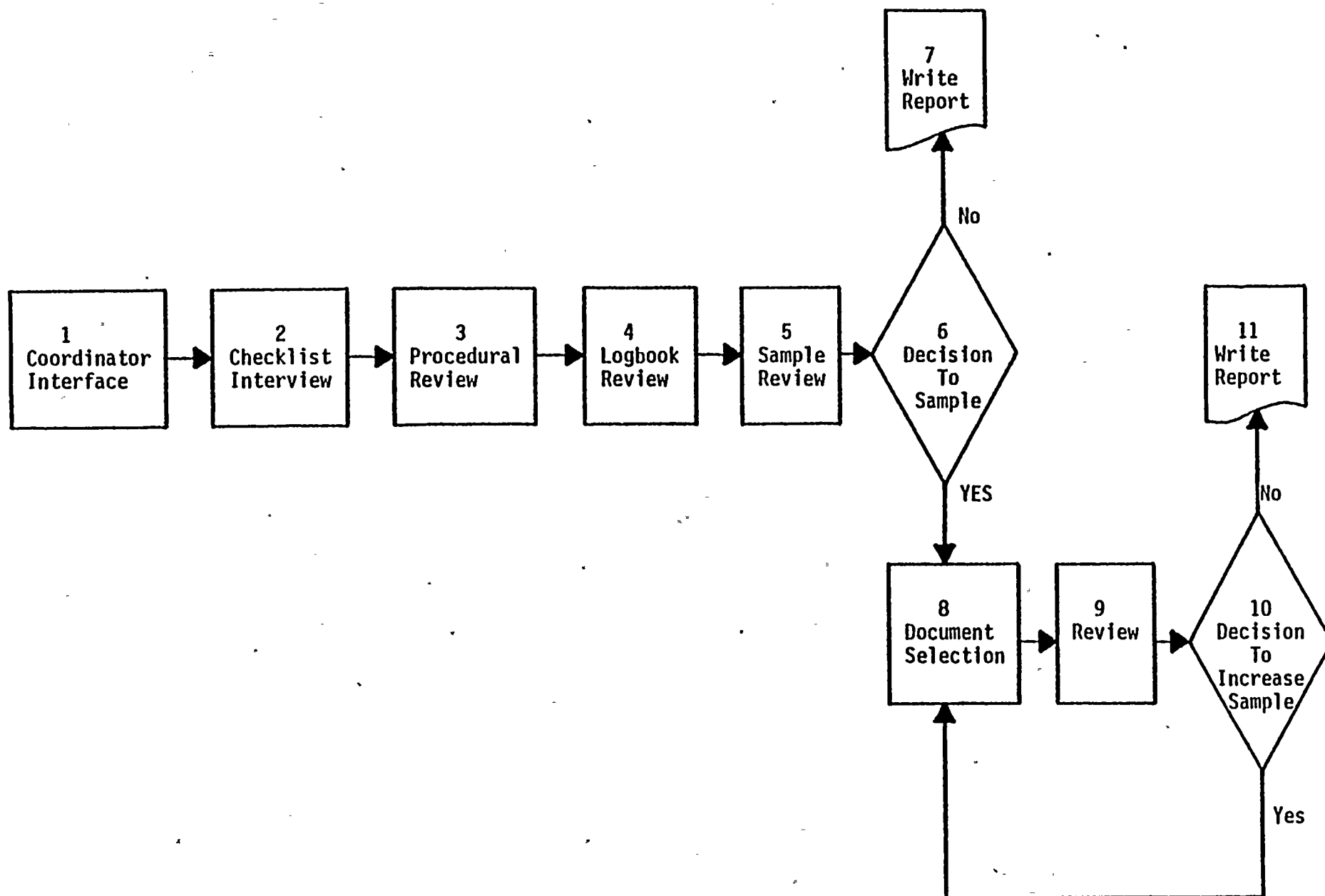
NOTES

A - Review not commenced
B - No QC-I Work performed prior to 7/80
C - Special Review
D - No QC-1 or QC-2/SC-1 Documentation closed prior to 7/80
DD - Deficiency Document
DCD - Design Change Document
* - Denotes Inactive Contract
+ - Numbers indicate action in Flow Chart, Page 2

LEGEND

IR - Inspection Report
CAR - Corrective Action Report
DR - Deficiency Report
ISR - Inspection Surveillance Report
QR - Quality Report
ECAR - Engineering Corrective Action Report
FOR - Field Change Request
JFRN - Johnson Controls Field Request Notice

TWELFTH PROGRESS REPORT
FLOW CHART FOR REVIEW OF
CONTRACTOR INTERNAL DOCUMENTATION



TWELFTH PROGRESS REPORT

Attachment 1B
Page 3 of 3DEFICIENCY DOCUMENT REVIEW TASK
NONCONFORMANCE REPORT (NCR)
REVIEW SUMMARY

CONTRACT	CONTRACTOR	CONTRACT ACTIVITY	NO. OF NCR'S CLOSED PRIOR TO 7/80	SAMPLE	DISCREPANCIES IDENTIFIED REQUIRING CLARIFICATION	CLARIFICATION PROVIDED - NCR CLEARED	REMARKS
205*	Stew-Erikson	Rx Bldg. Substructure	31	4	0	-	
206*	Bovee-Craill	General Construction	417	42	0	-	
206A*	Peter Kiewit Sons'	Arch. Construction	387	39	A	A	
207*	Pittsburgh-Des						
	Moines Steel Co.	Structural Steel	32	3	1	1	
209*	Lampson Inc.	Rigging of Reactor Pressure					
		Vessel	2	0	-	-	
210*	Peter Kiewit Sons'	Arch. Construction	41	5	0	-	
210A	Peter Kiewit Sons'	Arch. Construction	8	8	-	-	
6426*	Wright Schuchart						
	Harbor	Interim General Construction	113	11	0	-	
213*	Pittsburgh-Des						
	Moines Steel Co.	Primary Cont Vessel	104	10	1	1	
213A*	Pittsburgh-Des						
	Moines Steel Co.	Primary Cont Vessel Retrofit	75	10	1	1	
215	WSH/Boecon/GERI	Mechanical Construction	1016	126	11	11	
216	Waldinger	HVAC, Plumbing	420	49	14	14	
217	Sentry	Fire Protection	3	1	0	-	
218	Fischbach/Lord	Electrical Construction	375	37	6	6	
219	O.B. Cannon	Special Coatings	13	2	0	-	
220	Johnson Controls	Instrumentation	27	3	0	-	
221*	Pacific Testing Lab	Testing	6	1	0	-	
221A	Pacific Testing Lab	Testing	8	8	-	-	
225*	McMillan Brothers	Makeup Water Pump House.	24	2	A	A	
233*	BF Shaw	Spray Pond Alterations	4	1	0	-	
234	O.B. Cannon	Wetwell Coating	4	1	0	-	
235	GE IS&E	I&C Board Modification	8	8	-	-	
			3094	347	A	A	

*Inactive Site Contract

A: Review in progress, final data not available at this time.

B: No QC-1 NCR's closed prior to 7/80