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 TURLEY, K.L. Arizona Public Service Co.

SUBJECT: Forwards "Independent QA Evaluation of Palo Verde Nuclear
 Generating Station, Units 1, 2 & 3," Biweekly Status Rept 3
 for period ending 820813.

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A DIVISION OF GENERAL ATOMIC COMPANY

TPT:089:WAS:82
August 20, 1982

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Mr. Keith L. Turley
Chairman, President and
Chief Executive Officer
Arizona Public Service Company
411 N. Central Avenue
Phoenix, Arizona 85004

Dear Mr. Turley:

The enclosed bi-weekly status report on our Independent Quality Assurance Evaluation of the Palo Verde Nuclear Generating Station covers the period July 31 through August 13, 1982. Copies of this report are also being sent to the U. S. Nuclear Regulatory Commission, Bechtel Power Corporation and Combustion Engineering Corporation.

If you have any questions regarding the contents of this report, please call me.

Sincerely,

W. A. Simon
Project Manager

cc: T. W. Bishop/NRC
C. Ferguson/C-E
~~E. Licitra, NRC~~
E. E. Van Brunt, Jr./APS
G. Wessman/TPT
W. Wilson/BPC

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O. Parr

INDEPENDENT QUALITY ASSURANCE EVALUATION
OF PALO VERDE NUCLEAR GENERATING
STATIONS UNITS 1, 2 AND 3

BI-WEEKLY STATUS REPORT #3
for the
Period Ending August 13, 1982

TASK A - EVALUATION OF PROJECT MANAGEMENT ORGANIZATION

Work on this task is complete except for the completion of the Internal Summary Report.

Two Potential Finding Reports (PFRs) were initiated on this task.

TASK B - MANAGEMENT POLICIES TOWARD QUALITY ASSURANCE

Work on this task is complete except for evaluation of the APS Management Dedication and Commitment to the Independent Evaluation (Subtask B8) and issuance of the Internal Summary Report. A questionnaire has been drafted to provide the necessary data for Subtask B8.

Three PFRs were initiated on this task.

TASK C - QUALITY ASSURANCE ACTIVITIES

Work on this task is complete with respect to activities at the Palo Verde site and APS offices. The remaining work includes review and completion of checklists and verification of any open items, preparation of PFRs and preparation of the Internal Summary Reports.

No action has been taken yet on the APS Project Organization Evaluation (Subtask C2), pending the issuance of reports on Tasks A and B.

Fourteen PFRs were initiated on Subtasks C3 (APS Audit Program), C4 (APS Vendor Program), and C5 (APS Inspection Program). The Internal Summary Report for Subtask C6 (Review of APS Nonconformance System) was issued. No PFRs were initiated on this subtask.

TASK D - DESIGN VERIFICATION REVIEW

Subtask D1: During a visit to CE-Windsor, relevant CE procedures were reviewed, completing Subtask D1 (Procedure Review) except for the Internal Summary Report and follow-up on any open items of PFRs. Three PFRs have been initiated on this subtask.

Subtask D2: Work on Subtask D2 (Design Procedure Implementation Review) is in progress. The review will include all those features covered in the technical review (Subtask D3) plus thirty (30) other items selected for QA review only. Twenty-three (23) out of the 30 items have been reviewed at Bechtel. The remaining seven (7) items are CE-designed and are undergoing review at CE. QA review of the technical features being done in San Diego, with visits to Bechtel as necessary to complete the review. Eleven (11) PFRs have been initiated on this subtask.

Subtask D3: Technical review of selected PVNGS features is approximately 50% complete. The review status of each feature is summarized in Table 1.

Four (4) PFRs have been issued on this subtask to date.

TASK E - CONSTRUCTION VERIFICATION REVIEW

Subtask E1: Work on Subtask E1 (Field Change Design Control) is complete except for verification of a few on-site items and issuance of the Subtask Summary Report. No PFRs were initiated on this subtask.

Subtask E2: Work on Subtask E2 (As-Built Drawing Control) is complete with respect to the procedure review. The implementation evaluation is still to be completed. No PFRs have been initiated on this subtask.

Subtask E3: Under Subtask E3 (Physical Verification) a procedure for QA review of walkdown activities was prepared.

The engineering procedure for preparing verification documentation packages, performing the walkdown, and assembling reports was issued for use by the designated members of the walkdown team. The scope of the walkdown was defined; documents required for the walkdown were identified and requested from APS.

TASK F - PROCESSING OF FINDINGS

As of August 13, 37 potential finding report (PFR) numbers have been issued. Twenty-six have been sent to the original design organization (ODO), eight are in preparation, one was found to be invalid in internal review, 3 PFR's were combined to a single one, because they covered one document. Table 2 lists the PFRs and shows their status as of August 13.

COST AND SCHEDULE

The overall schedule is about one week behind the schedule shown in the program plan for reasons discussed in the last status report.

Pertinent manpower applied to the project is shown in Figure 1, in which the planned manhours curve has been adjusted to reflect the additional efforts for Design Procedure Review and Core Protection Calculator (CPC) Technical Review. Actual spending has not kept up with the plan largely due to the lack of a mutually acceptable confidentiality agreement regarding the CPC information, which has delayed that review.

TABLE 1
STATUS OF FEATURE REVIEW

Containment Spray Pump: Technical review is in progress.

Containment Spray Pump Motor: Review has been completed and Review Evaluation Report (RER) is in preparation.

Shutdown Cooling Heat Exchanger: The technical review has been completed. Preparation of RER is underway.

Condensate Storage Tank: Additional documentation has been received to complete review. Review is in progress. Two PFRs have been initiated. PFR:2426:021 and PFR:2426:028.

Auxiliary Feedwater Pump: Technical review is underway.

Auxiliary Feedwater Pump Motor: The design review has been completed and RER is being prepared.

Safety Injection and Shutdown Cooling System Piping: The design review has been completed. Preparation of RER is underway. Two PFRs have been filed to date, PFR 2426:017 and PFR 2426:018.

Safety Injection and Shutdown Cooling System Pipe Supports: Six support designs have been reviewed and found adequate. Preparation of RER is underway.

Auxiliary Feedwater System Piping: Technical review is underway. Additional piping analysis computer output has been requested from BPC.

Auxiliary Feedwater System Pipe Supports: One of 4 support designs has been reviewed; review of the other 3 support designs is in progress.

Safety Injection and Shutdown Cooling System Valves: Documentation has been received and is being reviewed for adequacy.

Auxiliary Feedwater System Valves: Documentation has been received and is being reviewed for adequacy.

Auxiliary Feedwater System Function: Adequate documentation has been received and the review is underway.

Motor Operated Valve Motors: The design review has been completed and the RER is in preparation.

Motor Control Center (480V): The design review has been completed and the RER is in preparation.

Switchgear (4160V): The design review has been completed and the RER is in preparation.

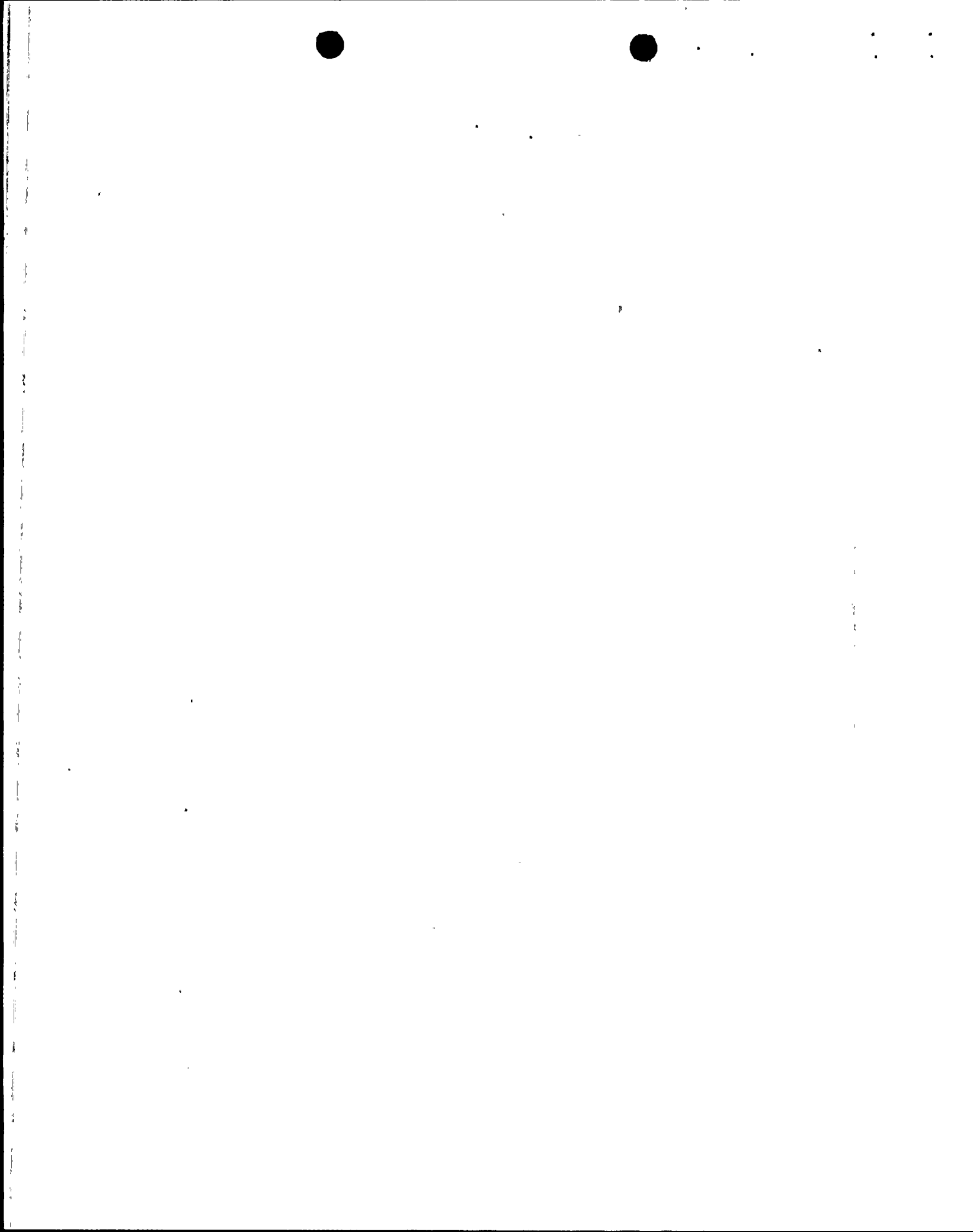


TABLE 1 (continued)
STATUS OF FEATURE REVIEW

Instrumentation and Controls: Considerable design documentation has been received. Review of the technical specifications is in progress.

Cable Tray Supports: Supports for trays between a) the containment spray pump and switchgear and b) the auxiliary feedwater flow transmitter and control room have been selected for review. Design review is underway. Additional documents were requested from BPC to complete review of support connections.

Pressurizer: Documents received to date appear adequate. The review status is as follows (a) surge nozzle review has been completed. RER is being prepared; (b) pressurizer support and the safety valve nozzle are being reviewed.

Equipment Supports: Technical review of the shutdown cooling heat exchanger and pressurizer supports is in progress. Review of the containment spray pump support is complete.

Containment Building Penetrations: Technical review is underway on penetrations U017 and U026.

Core Protection Calculator: Technical review has not started. Scope is being redefined due to status of design. CE is requiring a more stringent secrecy agreement with TPT, claiming need to protect proprietary and commercial (trade) secrets associated with CPC.

TABLE 2
STATUS OF
POTENTIAL FINDING REPORTS (PFR)
AS OF AUGUST 13, 1982

NUMBER	SUBJECT	DATE	COMMENTS
2426:PFR:001	Control of Design Criteria - Licensing	7/20	Sent to APS on 8/3
2426:PFR:002	Significant Corrective Action Report	7/26	Declared invalid in Internal Review
2426:PFR:003	Design as As-Built Conformance Checklist	7/26	In Preparation
2426:PFR:004	Non-existent Design Verification Procedures Referenced	7/26	In Preparation
2426:PFR:005	Dwg CN Incorporation Time Limit Exceeded	7/26	Sent to BPC on 8/6
2426:PFR:006	SDDR Disposition Variance	7/26	Sent to BPC on 8/6
2426:PFR:007	APS QA Staffing	7/26	Transmitted to APS on 7/30/82

TABLE 2
STATUS OF
POTENTIAL FINDING REPORTS (PFR)
AS OF AUGUST 13, 1982

NUMBER	SUBJECT	DATE	COMMENTS
2426:PFR:008	Salary Ranges of APS/WA Dept.	7/26	Transmitted to APS on 7/30/82
2426:PFR:009	Condensate Storage Tank (CTE-T01; SS Liner)	7/27	Sent to BPC on 8/11
2426:PFR:010	Shutdown HE, PO 9061519, Tag No. IM-SIB-E01	7/27	Sent to BPC on 8/11
2426:PFR:011	Aux. Feedwater Transmitter - Incorrect Dwg. Rev. Flow Transmitter 01-J-AFB-FT41B	7/27	Sent to APS on 8/11
2426:PFR:012	Aux. Feedwater Flow Transmitter - 01-J-AFB-FT 41B No. CIP	7/27	Sent to APS on 8/11
2426:PFR:013	COMP - Press. Transmitter 1-J8CD-PT352D 1-J8CD-PT351D, CIP Dated 4/29/82	7/27	Sent to BPC on 8/11
2426:PFR:014	Flow Transmitter 1-J-AFB-FT41B (unqualified inspector)	7/27	Sent to APS on 8/11

TABLE 2
STATUS OF
POTENTIAL FINDINGS REPORTS (PFR)
AS OF AUGUST 13, 1982

NUMBER	SUBJECT	DATE	COMMENTS
2426:PFR:015	Flow Transmitter 1-J-AFB-FT41B (Welding)	7/27	Sent to APS on 8/11
2426:PFR:016	Aux. Feedwater System Valve 01J-AFB-BHV-031	7/27	Sent to BPC on 8/11
2426:PFR:017	Small Bore Piping BPC Piping Anal. Calc S1516D	7/28	Sent to BPC on 8/11
2426:PFR:018	BPC Design Spec 13-PM-102 Comments	7/28	Sent to BPC on 8/3
2426:PFR:019	Calculations not Marked Prel. Per Procedure	7/29	Sent to BPC on 8/3
2426:PFR:020	Calculations not Initialed by Grp Leader per Procedure	7/29	Combined with PFR:019 on internal review
2426:PFR:021	Condensate Storage Tank Calc 13-CC-CT-015	7/29	Sent to BPC on 8/3
2426:PFR:022	Orig. Calcs not in File /	7/30	Combined with PFR:019 on internal review

TABLE 2
STATUS OF
POTENTIAL FINDING REPORTS (PFR)
AS OF AUGUST 13, 1982

NUMBER	SUBJECT	DATE	COMMENTS
2426:PFR:023	Transfer of System and Component from Construction and Operation	8/4	In Preparation
2426:PFR:024	Audit Reports not signed by Audit Team	8/5	Sent to APS on 8/13
2426:PFR:025	Pressure Relays - Bolts torqued to incorrect value	8/5	Sent to APS on 8/13
2426:PFR:026	Flow and Pressure Transmitters	8/5	Sent to APS on 8/13
2426:PFR:027	Instrumentation	8/5	Sent to APS on 8/13
2426:PFR:028	Condensate Storage Tank 13-CC-CT-015	8/5	Sent to BPC on 8/11
2426:PFR:029	Deficient QA Program in Bechtel Supplier Unistrut	8/6	Sent to BPC on 8/11.
2426:PFR:030	Review of Audit Performed did not have signature of Audit Team Leader	8/9	In Preparation

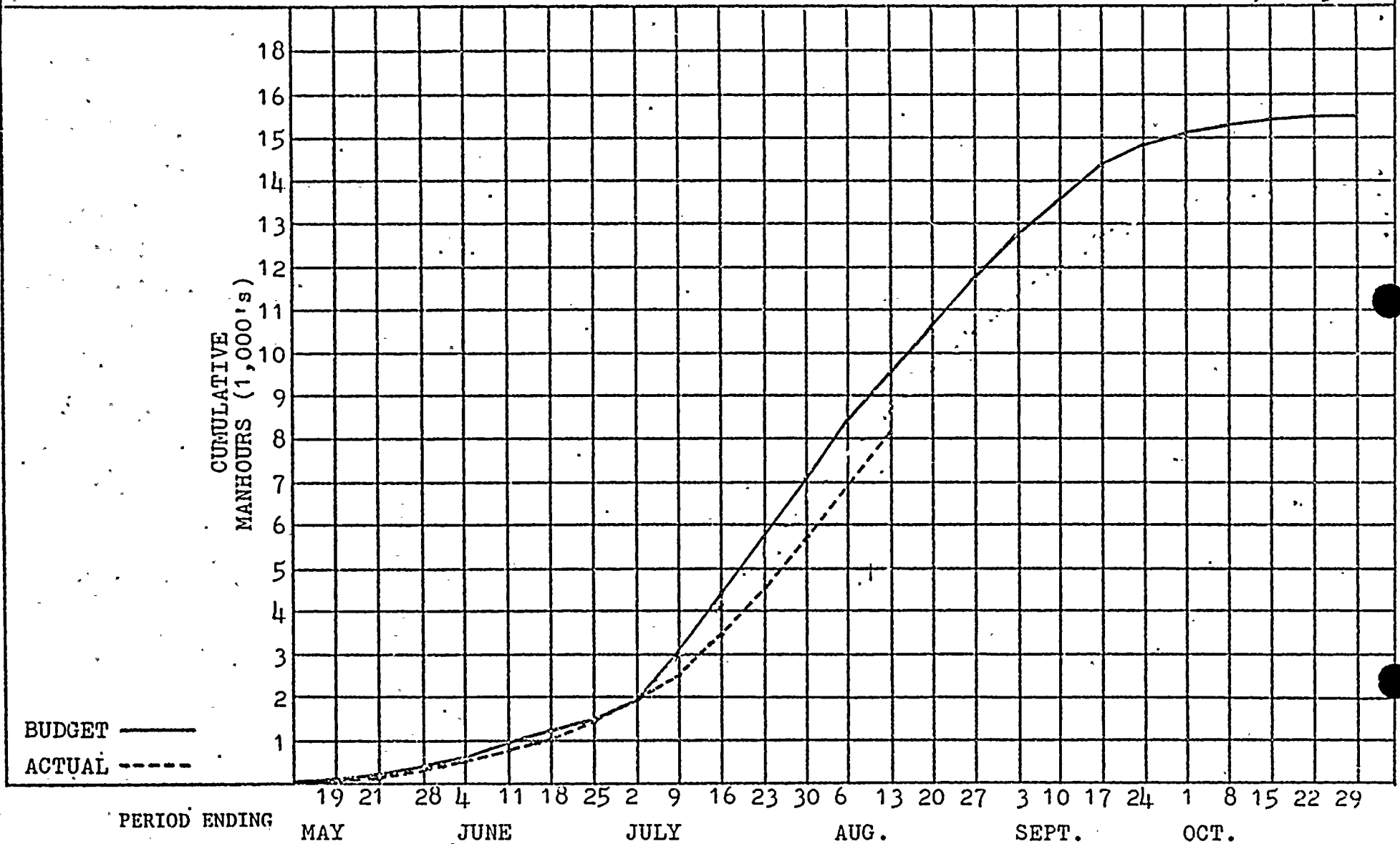
TABLE 2
STATUS OF
POTENTIAL FINDING REPORT (PFR)
AS OF AUGUST 13, 1982

NUMBER	SUBJECT	DATE	COMMENTS
2426:PFR:031	Discrepancies between Calc Title Sheets and CEBUS Log	8/10	Sent to BPC on 8/11
2426:PFR:032	Outstanding (Unincorporated) DCN's Against Drawings	8/10	Sent to BPC on 8/12
2426:PFR:033	PSAR & APSQAN Disagreement and review & Approval Policy	8/10	Sent to APS on 8/12
2426:PFR:034	Review & Approval of Bechtel Purchase Order/Spec.	8/11	In Preparation
2426:PFR:035	Engineering Responses SDDR	8/11	In Preparation
2426-PFR-036	SDDR Disposition Clarity	8/11	In Preparation
2426-PFR-037	Minor Discrepancy on Termination Records	8/13	In Preparation

FIGURE 1

MANHOOR STATUS AS OF: 8/13/82

PROJECT: INDEPENDENT QA EVAL. OF PVNGS 1,2 & 3

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