PUBLIC SERVICE INDIANA LF 61-173 R 5/82	MARBLE HILL NUCLEAR GENERATING STATION PROJECT MANAGEMENT MANUAL	PROCEDURE NO. PMP 16-2
	TITLE: QUALITY TRENDING	PAGE 1 OF 13

PARAGRAPH	SUMMARY OF CHANGES

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REVISION	PREPARED BY	CHECKED BY	APPROVED SECTION MANAGER	APPROVED QUALITY ASSURANCE OFFICER	APPROVED VICE PRESIDENT NUCLEAR SERVICES
0	R. Russell	Russell	R. L. Kule	L. O. Ramsey	10-22-82 M. I. Rynchal W. Petro
DATE	10/20/82	10/20/82	10/21/82	10-22-82	10-22-82

1.0 SCOPE

1.1 This Procedure provides the cause, deficiency, and responsible organization codes for contractors and PSI organizations only to be utilized by individuals responsible for providing encoding on Corrective Action Requests (CARs), Audit Finding Reports (AFRs), and "For Action" Management Correcrive Action Requests (MCARs).

1.2 This Procedure provides the methods and responsibilities for performing quarterly programmatic quality trend analysis; investigating identified potential adverse quality trends; and assuring initiation of appropriate corrective action of adverse quality trends.

1.3 This Procedure provides requirements and responsibilities for the quarterly reporting to executive management, of the results of quarterly trending activities.

2.0 RESPONSIBILITIES

2.1 Individual Quality Assurance Department personnel identified in other applicable procedures are responsible for providing appropriate trend code information on deficiency documents identify PSI or [illegible] responsible organization in accordance with Attachment A.

2.2 The Quality Engineering Manager and Audit Manager are responsible for ensuring that appropriate required trend code information is entered into the appropriate Action Tracking/Trending System (ATTS) for each required deficiency document.

2.3 The Quality Administration Supervisor is responsible for accomplishing required trend analysis, providing the results to the Quality Engineering Manager, and for preparing the formal Quarterly Trend Report and providing it to the Quality Assurance Officer.

2.4 Identified Quality Assurance Department Section Managers are responsible for ensuring that required Suspected Trend Investigation Reports (STIRs) are completed for each area identified by trend analysis as a potential adverse quality trend and providing the completed STIRs to the Quality Administration Supervisor.

2.5 The Quality Assurance Officer is responsible for reviewing and approving the formal Quarterly Trend Report, initiating MCARs when necessary to assure corrective action, and making appropriate distribution of the Quarterly Trend Report to executive management.

3.0 PROCEDURE

3.1 Trend Coding Deficiency Documents

1. Responsible Quality Assurance Department personnel identified in other applicable procedures shall encode appropriate trend information into CARs, AFRs, and MCARs, as required for ultimate entry into ATTS.

2. AFRs and CARs need not be codified when the responsible organization is a supplier.

3. MCARs need not be codified if issued "For Information" or if issued as a result of trending activities described in this Procedure.

4. Attachment 1 provides PSI and Contractor responsible organization codes.

5. Attachment 2 provides program deficiency codes.

6. Attachment 3 provides program cause codes.

7. Each deficiency document should be written such that its scope includes only one responsible organization and only one program deficiency.

8. Encoding of trending information to ATTS from any deficiency document shall only take place after approval of the proposed disposition.

3.2 Trend Analysis

1. At the end of each calendar quarter the Quality Administration Supervisor shall initiate trend analysis in order to identify areas of potential adverse quality trends.

2. The quarterly trend analysis shall be accomplished utilizing ATTS data covering the previous twelve month period for CARs, AFRs, and MCARs.

3. Analysis will first consist of the quantitative distribution of all identified deficiencies within those responsible organizations listed in Attachment 1.

4. Analysis will then be accomplished on the PSI organizations and Contractor organizations which are responsible for the greater share of the deficiencies.

5. If this analysis results in a significant area(s) of deficiency(s) the Quality Administration Supervisor shall initiate a Suspected Trend Investigation Report as described in paragraph 3.3.

6. In addition to the above analysis the Quality Administration Supervisor shall perform an analysis of trends related to each of the deficiency document types in the following areas:

   a. Number issued during each of the last twelve months with a least squares trend line applied.

   b. Number remaining open at the end of each of the last twelve months with a least squares trend line applied.

7. Any significant deviations from the applied trend lines should be explainable by variances within project activities and such explanations included within formal Quarterly Trend Reports described in paragraph 3.4. Those that are not explainable in such a manner shall be cause for the Quality Administration Supervisor to initiate a Suspected Trend Investigation Report in accordance with paragraph 3.3.

3.3 Suspected Trend Investigation Reports

1. Suspected Trend Investigation Reports (STIRs), Attachment 4 shall be initiated by the Quality Administration Supervisor as the result of trend analysis described in paragraph 3.2.

2. The STIR shall be issued to the appropriate Quality Assurance Department Section Manager (Section Manager) for completion.

3. The responsible Section Manager shall ensure that the STIR is utilized to adequately document the methods used in the area(s) investigated as well as the results of the investigation.

4. The investigation shall be conducted using appropriate means to determine the existence, or non-existence, of an adverse quality trend in the area identified.

5. In either case, the responsible Section Manager shall ensure adequate justification is provided, or reference is made to specific documented objective evidence to provide justification for the conclusion.

6. If the conclusion of the responsible Section Manager is that an adverse quality trend does exist, the Section Manager shall initiate a Management Corrective Action Report (MCAR) per PMP 16-4 or CAR per PMP 16-1 and reference the MCAR/CAR number on the completed STIR.

7. Upon completion of the STIR, the responsible Section Manager shall sign and date the line provided and return the STIR to the Quality Administration Supervisor for inclusion in the formal Quarterly Trend Report.

3.4 Quarterly Trend Report

1. The Quality Administration Supervisor shall prepare a formal Quarterly Trend Report in a format directed by the Quality Assurance Officer. However, at a minimum the report shall contain the following:

   A. Results of trend analysis described in paragraph 3.2;

   B. Copies of any STIRs completed in accordance with paragraph 3.3;

   C. Status of results achieved in follow-up to the previous Quarterly Trend Report, if applicable.

2. After preparation of the Quarterly Trend Report the Quality Administration Supervisor shall submit it to the Quality Assurance Officer for review and approval on or before the fourth Monday following the close of the associated calendar quarter.

3. Upon approval by the Quality Assurance Officer the Quarterly Trend Report shall be submitted to the Senior Vice President - Nuclear Division and Vice President Nuclear Services with other distribution made as deemed necessary.

4.0 RECORDS

4.1 The following packaged records completed as a result of this procedure are Quality Assurance Records. They shall be transmitted for retention to Records Management using the Letter of Transmittal form (SF 96-8019). Each Letter of Transmittal form shall be clearly annotated in the Remarks section as transmitting Quality Assurance Records. Prior to transmittal to Records Management, the sender shall assure that each Quality Assurance Record is packaged when applicable, the QA program requirements have been fulfilled, each document is legible, completely filled out, adequately identifiable to the item or activity involved, and is stamped, initialed, signed, or otherwise authenticated and dated.

RESPONSIBILITY FOR TRANSMITTAL	Quality Administration Supervisor					PACKAGE DESCRIPTION
DOCUMENT	Pkg. #1					
Suspected Trend Investigation Report	X					#1 Each Quarterly Report
Quarterly Trend Report	X					

5.0 ATTACHMENTS

5.1 Attachment 1 - Responsible Organization Codes

5.2 Attachment 2 - Deficiency Codes

5.3 Attachment 3 - Cause Codes

5.4 Attachment 4 - Suspected Trend Investigation Report

ATTACHMENT 1
RESPONSIBLE ORGANIZATION CODES

ATTS/CODE	ORGANIZATION
AYI	Aycock International
BPC	Bechtel Power Corp.
CCT	Ceramic Cooling Tower Co.
CCC	Cherne Contracting Corp.
CBI	Chicago Bridge and Iron Works
CLJ	Commonwealth-Lord J.V.
JLM	Manta, J.L., Inc.
NMH	Newberg, Gust K. Const. Co.
NIS	Nuclear Installation Services Co.
PLI	Pullman Construction Industries, Inc.
SME	Stewart Mechanical Enterprises
WHS	Westinghouse Nuclear Energy Systems
WCJ	Whalen-Chilstrom J.V.
S&L	Sargent & Lundy
PAR	Division Administration
PPD	Division Personnel
SVM	Nuclear Regulations & Affairs
CCM	Contract Management - CIVIL
CMM	- MECHANICAL
CEM	- ELECTRICAL
COM	- COMPOSITE
CAM	- MATERIALS
CSM	Systems Construction Completion
PER	Project Engineering
PSR	Project Purchasing
QDQ	Quality Assurance - AUDITS
QER	- ENGINEERING
QAS	- ADMINISTRATION
QDO	- OPERATIONS
TDR	Test and Startup
ONP	Station Production
ONO	Station Support

ATTACHMENT 2
DEFICIENCY CODES

Deficiency Code - Example: 1. 0 4 2

- Secondary - Inadequate inclusion or reference to regulatory, technical, or quality requirements.
- Primary - 10CFR50, App. B, Criteria IV, "Procurement Document Control."

01 - Organization

1. Inadeqaute description of organizations, their interrelationships, or their authorities.
2. Inadequate organizational location of the QA organization or inadequate degree of independence and authority.

02 - Quality Assurance Program

1. Inadequate QA Program scope.
2. Inadequate provisions to assure the adequacy of personnel training and qualification.
3. Inadequate management involvement and/or periodic review and assessment.

03 - Design Control

1. Inadequate control of design interfaces.
2. Inadequate verification or checking of the technical adequacy of designs.
3. Inadequate control of design change.

ATTACHMENT 2 (Cont.)
DEFICIENCY CODES

04 - Procurement Document Control

1. Inadequate review and approval of procurement documents.

2. Inadequate inclusion or reference to regulatory, technical, or quality requirements.

3. Inadequate provisions or failure to adequately extend requirements to lower tier contractors and/or suppliers.

05 - Instruction, Procedures, and Drawings

1. Inadequate or no procedures or instructions to control a quality affecting activity.

2. Inadequate quantitative or qualitative acceptance criteria in instructions, procedures, or drawings.

06 - Document Control

1. Inadequate control to assure that documents and their revisions are reviewed, approved, or distributed to the location where the activity is to be performed.

07 - Control of Purchased Material, Equipment, and Services

1. Inadequate control of the selection of suppliers or contractors.

2. Inadequate verification of the quality of material, equipment, and services.

3. Inadequate documented evidence of conformance to procurement requirements prior to installation or use.

08 - Identification and Control of Materials, Parts, and Components

1. Inadequate identification or control of items or material.

09 - Control of Special Processes

1. Inadequate or incorrect conditions, personnel, procedures, or equipment and/or their qualifications for the control of special processes.

ATTACHMENT 2 (Cont.)
DEFICIENCY CODES

10 - Inspection

1. Inadequate or inappropriate inspection.
2. Inadequate independence of inspector(s).
3. Inadequate timing of inspection.
4. Inadequate inspection prerequisites.
5. Inadequately trained or qualified inspection personnel.
6. Inadequate inspection planning.
7. Inadequate control of established holdpoint(s).
8. Inadequate sampling basis.

11 - Test Control

1. Inadequate test/test program scope.
2. Inadequate test procedure.
3. Inadequate test documentation.
4. Inadequate test result evaluation.
5. Inadequate test prerequisites.

12 - Control of Measuring and Test Equipment

1. Inadequate control or calibration of M&TE.

13 - Handling, Storage, and Shipping

1. Inadequate handling.
2. Inadequate storage.
3. Inadequate shipping.
4. Inadequate cleaning/housekeeping.
5. Inadequate preservation/maintenance.

ATTACHMENT 2 (Cont.)
DEFICIENCY CODES

14 - Inspection, Test, and Operating Status

1. Inadequate inspection, test, or operating status control.

15 - Nonconforming Materials, Parts, or Components

1. Inadequate identification of nonconforming items or materials.
2. Inadequate physical identification or segregation of nonconforming items or material.
3. Inadequate disposition and/or disposition approval.
4. Inadequate disposition implementation.
5. Inadequate close-out.

16 - Corrective Action

1. Inadequate identification of the need for corrective action of a specific or generic condition.
2. Inadequate follow-up to assure proper implementation and close-out by appropriate management.

17 - Quality Assurance Records

1. Inadequate identification, storage, retention, or retrieval of QAR.
2. Inadequate documented evidence of the adequacy of activities affecting quality.

18 - Audits

1. Inadequate system of comprehensive, planned, and documented audits.
2. Inadequate audit follow-up.
3. Inadequate audit scheduling.
4. Inadequate auditor qualification.
5. Inadequate management review and assessment of audit results.

ATTACHMENT 3
CAUSE CODES

CODE	CAUSE
A	Not covered in the approved program or procedure.
B	Not implementing approved program or procedure.

ATTACHMENT 4
SUSPECTED TREND INVESTIGATION REPORT

PUBLIC SERVICE INDIANA
LF 61-733 R 10/82

QUALITY ASSURANCE DEPARTMENT
SUSPECTED TREND INVESTIGATION REPORT

PAGE OF

INITIATION

TO:	QA SECTION:	REPORT NO.:	DATE:
RESPONSIBLE ORG:		REPORT QUARTER: ____ QTR ____ YEAR	

SUSPECTED TREND:

☐ ATTACHMENT(S) _____ QUALITY ADMINISTRATION SUPERVISOR _____ DATE

DESCRIPTION OF INVESTIGATION

INVESTIGATION PROCESS AND METHODS USED: (INCLUDED OBJECTIVE EVIDENCE REVIEWED)

☐ ATTACHMENT(S) _____ RESPONSIBLE INVESTIGATOR _____ DATE

RESULTS

IS CONDITION ADVERSE TO QUALITY? YES ☐ NO ☐ MCAR / CAR NO. _____

COMMENTS

☐ ATTACHMENT(S) _____ QA DEPT. SECTION MANAGER _____ DATE

16-2

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PUBLIC
SERVICE
INDIANA

November 22, 1982

Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Attn: Willard D. Altman, Ph.D
Mail: EWS-305A
Washington, DC 20555

Dear Dr. Altman:

As you requested in our meeting of November 19, 1982, attached please find PMP 16-2, Quality Trending.

R. P. Keele
Quality Administration Supervisor

RPK:clg

Attachment

FOIA-84-293
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LF 61-365 9/80

P.O. Box 190, New Washington, Indiana 47162 812 . 289 . 1000