



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV
811 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TEXAS 76011

JUN 23 1982

MEMORANDUM FOR: Daniel G. Eisenhut, Director, Division of Licensing
FROM: John T. Collins, Regional Administrator, Region IV
SUBJECT: RESULTS OF VPB INSPECTION OF TELEDYNE ENGINEERING SERVICES
REGARDING ALLEGATIONS CONCERNING THE FITZPATRICK AND
YANKEE ELECTRIC FACILITIES (VITS 82-39)

The Division of Licensing (D. G. Eisenhut) requested that Region IV determine the validity and safety significance of concerns expressed to NRC with respect to hydrodynamic analyses and design modifications of the torus and its associated components and piping of the Fitzpatrick and Vermont Yankee Nuclear Plants.

Results of our inspection are summarized in Section D.2 of inspection report 99900513/82-01, attached. Five nonconformances were identified.

The allegor indicated that the use of unqualified individuals, excessive management schedular pressure, inaccurate analytical models, and use of erroneous input data, could result in possible deficiencies in the hydrodynamic analyses for structural integrity, and in the subsequent design of internal and external component supports for the Mark I containment and its associated catwalks and piping.

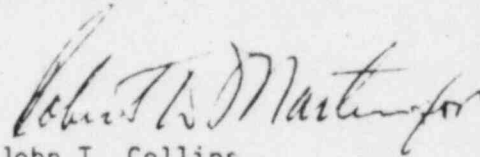
Review of available records and interviews with selected engineering, management, and "contract" personnel did not confirm the allegation that unqualified individuals were used to perform the analyses, nor that management applied excess schedular pressure to the analysts such that the quality and integrity of the analyses were compromised. The allegations concerning inaccurate analytical models, and the use of estimated dimensional input data for certain preliminary design modifications made in early 1981, were substantiated. However, it is recognized that the design activities performed during 1981 were preliminary in nature, using similar data from similar plants, all of which could be viewed by some as erroneous or inaccurate design methods. Plants involved in these analyses were J. A. Fitzpatrick, Millstone Unit 2, Nine Mile Point Unit 1, Pilgrim Unit 1, and Vermont Yankee nuclear power plants. Review of a sample of design modification drawings transmitted to the affected plants did not reveal any significant design defect or deficiency

8209100006 820729
PDR ADOCK 05000341
Q PDR

that would prevent the torus and the suppression system from performing their intended safety functions during a LOCA or system abnormal condition.

Teledyne Engineering Services management stated that all calculations related to the Mark I torus, and its internal components, would be reviewed and redone, as necessary. These actions will be completed by August 31, 1982.

This item will be further evaluated by VPB during future inspections. If you would like to discuss the matter further, please contact us.



John T. Collins
Regional Administrator

Attachments:

NRC Inspection Report 99900513/82-01

cc: R. F. Heishman, IE
R. L. Baer, IE
J. E. Gagliardo, RIV
E. H. Johnson, RIV
R. C. Haynes, RI
J. P. Knight, AD, CSE



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TEXAS 76011

JUN 11 1982

Docket No. 99900513/82-01

Teledyne Engineering Services
ATTN: Mr. F. C. Bailey
President
130 Second Avenue
Waltham, MA 02254

Gentlemen:

This refers to the inspection conducted by Mr. D. F. Fox of this office on March 29-April 2, 1982, of your facility at Waltham, Massachusetts, and to the discussion of our findings with you and members of your staff at the conclusion of the inspection.

This inspection was made as a result of concerns expressed to NRC pertaining to possible deficiencies in the structural analyses of the torus catwalks and piping of the Fitzpatrick and Vermont Yankee Nuclear Power Plants.

Areas examined during this inspection and our findings are discussed in the enclosed report. Within these areas, the inspection consisted of an examination of procedures and representative records, interviews with personnel, and observations by the inspector.

During this inspection it was found that you failed to meet certain NRC requirements. The specific findings and references to the pertinent requirements are identified in the enclosures to this letter.

Please provide us within 30 days from the date of this letter a written statement containing: (1) a description of steps that have been or will be taken to correct these items; (2) a description of steps that have been or will be taken to prevent recurrence; and (3) the dates your corrective actions and preventive measures were or will be completed. Consideration may be given to extending your response time for good cause shown.

PDR


~~8200280455~~

The response requested by this letter is not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-511.

In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you believe to be exempt from disclosure under 10 CFR 9.5(a)(4), it is necessary that you (a) notify this office by telephone within 10 days from the date of this letter of your intention to file a request for withholding; and (b) submit within 25 days from the date of this letter a written application to this office to withhold such information. If your receipt of this letter has been delayed such that less than 7 days are available for your review, please notify this office promptly so that a new due date may be established. Consistent with section 2.790(b)(1), any such application must be accompanied by an affidavit executed by the owner of the information which identifies the document or part sought to be withheld, and which contains a full statement of the reasons on the basis which it claimed that the information should be withheld from public disclosure. This section further requires the statement to address with specificity the considerations listed in 10 CFR 2.790(b)(4). The information sought to be withheld shall be incorporated as far as possible into a separate part of the affidavit. If we do not hear from you in this regard within the specified periods noted above, the report will be placed in the Public Document Room.

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,


Uldis Potapovs, Chief
Vendor Programs Branch

Enclosures:

1. Appendix A - Notice of Nonconformance
2. Appendix B - Inspection Report No. 99900513/82-01
3. Appendix C - Inspection Data Sheets (12 pages)

APPENDIX A

Teledyne Engineering Services
Docket No. 99900513/82-01

NOTICE OF NONCONFORMANCE

Based on the results of an NRC inspection conducted on March 29-April 2, 1982, it appears that certain of your activities were not conducted in full compliance with NRC requirements as indicated below:

Criterion V of Appendix B to 10 CFR Part 50 states: "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished."

Nonconformances with this criterion are as follows:

- A. Project 5511 Program Plan (Diablo Canyon Nuclear Power Plant - Design Reverification Program) imposes Pacific Gas and Electric specification, dated November 11, 1981. (Specification for Consultant's Quality Assurance Program), on Teledyne Engineering Services (TES). Paragraph 4.1.3 of the specification requires that records be retained in accordance with the storage requirements of ANSI/ASME NQA-1-1979 and that "Record storage shall include measures for protection from inadvertent destruction and include, as a minimum, two hour fire protection or duplicate storage at separate locations."

Contrary to the above, the QA record storage facility does not include measures for protection from inadvertent destruction described in ANSI/ASME NQA-1-1979, does not provide for 2-hour fire protection, nor were duplicate records stored at separate locations. Specifically, the TES single-record storage facility does not meet the NQA-1 criteria for facility construction, drainage control, 2-hour minimum fire rating, piping penetrations, and documentation of review for adequacy by an individual competent in the technical field of fire protection and fire extinguishing. Further, certain records relating to QA indoctrination and training, historical files of superseded issues of Quality Assurance Procedures and Technical Engineering Procedures, and specifications and other technical documents referenced in procurement documents, were neither stored in a single storage facility nor were duplicates stored at separate locations.

PDR

~~8206280462~~

- B. Section 3.1 of the TES Quality Assurance Manual (QAM) states in part that, "Design activities shall be prescribed and accomplished in accordance with this manual"

Contrary to the above, certain design activities were not being accomplished in accordance with the QAM. Deficiencies observed in the hydrodynamic analyses and design modifications for the torus of the Mark I containments of the Fitzpatrick, Millstone, Nine Mile Point, Pilgrim, and Vermont Yankee Nuclear Power Plants are as follows:

1. Section 3.0.1 of the QAM states in part that, "The Analyst . . . shall include sufficient referencing of source data, principles, equations, etc., to permit the ready traceability of his efforts for calculations"

Contrary to the above, the analyst did not include sufficient referencing of principles, equations, and source data, to permit ready traceability of his efforts for torus calculations (e.g., 2253-3 and 2252-2). Furthermore, the checker did not perform his prescribed duties as evidenced by the fact that these calculations, exhibiting his signature, did not accurately reference principles, design equations, data sources, and other means which provide traceability of the work.

2. Section 3.6.3 of the QAM states in part that, "Design verification documentation is a Project QA Record"

Contrary to the above, design verification documentation was not treated with the status of a Project QA record as evidenced by the fact that completed calculations which exhibited the signatures of the originator, checker, and design verifier were not entered into the TES document control system, nor were they stored in accordance with QA record storage requirements.

- C. Attachment 2 to the Project Quality Assurance Programs (PQAP) for the J. A. Fitzpatrick, Millstone, and Vermont Yankee projects, states in part, "The latest revision of the following documents are applicable . . . TES Engineering Procedure EP-1-001, General Control Procedure" Sections 1.1 and 2.1 of EP-1-001 state in part that, "The work controlled by this Engineering Procedure is being performed for the Power Authority of the State of New York (PASNY) under TES project number 2386 (J. A. Fitzpatrick) . . . the following Technical Engineering Procedures are invoked . . . TEP-1-003 (Design/Analysis Control) . . . (and) TEP-8-008 (Project Personnel Assignment)"

Contrary to the above:

1. Engineering Procedure EP-1-001 is not imposed on the Millstone or Vermont Yankee plants.
 2. Technical Engineering Procedures TEP-1-003 and TEP-8-008 were not being implemented on the Fitzpatrick project.
- D. PQAP's establish maximum intervals between audits of project activities by the Quality Assurance organization and the conditions and requirements under which they can be waived.

Contrary to the above, audits of project activities were not accomplished within the maximum allowed intervals, nor were they waived in accordance with the prescribed conditions and requirements as evidenced by the following examples:

1. Revision 1 of the PQAP for Fermi 2 established a requirement for bimonthly audits beginning in November 1981. Provisions for waiving a scheduled audit are also contained in the PQAP; however, the waiver must be documented and concurrence of the project manager and quality assurance manager is required.

Contrary to the above, an audit of the Fermi 2 project was not accomplished in November 1981, nor were records supporting a waiver of audit available.

2. Revision 6 of the PQAP for Vermont Yankee (October 29, 1981) established a requirement for internal QA audits to be conducted every 3 months. Revision 5 (August 8, 1980) established a requirement for bimonthly audits.

Contrary to the above, bimonthly audits of the Vermont Yankee project were not accomplished during the period from August 8, 1980, through October 29, 1981, nor has the quarterly audit scheduled for February 1982 been conducted to date.

3. Revision 4 of the PQAP for Millstone Unit 1 (October 30, 1981) established a requirement for internal audits to be conducted every 3 months. Revision 3 (August 8, 1980) established a requirement for bimonthly audits.

Contrary to the above, bimonthly audits of the Millstone Project were not accomplished during the period August 8, 1980, through October 30, 1981, nor have any quarterly audits, required since October 30, 1981, been conducted to date.

- E. Section 17.3.b of the Teledyne Engineering Services Quality Assurance Manual (Record Retention), contains a 6-year retention requirement for audit records.

Contrary to the above, all PQAP's examined (eight different projects) contained a QA Records Requirement List which required retention of audit reports for only 1 year.

ORGANIZATION: TELEDYNE ENGINEERING SERVICES
WALTHAM, MASSACHUSETTS

REPORT NO.:	99900513/82-01	INSPECTION DATE(S)	3/29-4/2/82	INSPECTION ON-SITE HOURS:	79
CORRESPONDENCE ADDRESS: Teledyne Engineering Services ATTN: Mr. F. C. Bailey President 130 Second Avenue Waltham, MA 02254					
ORGANIZATIONAL CONTACT: Mr. C. G. Sprangers, Manager, Quality Assurance TELEPHONE NUMBER: (617) 890-3350					
PRINCIPAL PRODUCT: Engineering and Consulting Services.					
NUCLEAR INDUSTRY ACTIVITY: Approximately 90% of the staff of the Waltham, Massachusetts, facility and 30% of the Hayward, California, facility are involved in nuclear activities. Major projects include work on Turkey Point Units 3 and 4, V. C. Summer Unit 1, Fermi Unit 2, Limerick Unit 1, and Diablo Canyon Unit 1.					
ASSIGNED INSPECTOR:		<u>C. J. Hale</u> D. F. Fox, Reactor Systems Section (RSS)		<u>5/20/82</u> Date	
OTHER INSPECTOR(S): A. L. Smith, Equipment Qualification Section					
APPROVED BY:		<u>C. J. Hale</u> C. J. Hale, Chief, RSS		<u>5/20/82</u> Date	
INSPECTION BASES AND SCOPE:					
A. <u>BASES</u> : 10 CFR Part 50, Appendix B.					
B. <u>SCOPE</u> : This inspection was made as a result of concerns expressed to NRC pertaining to possible deficiencies in the analysis for structural integrity of the torus catwalk and piping of the Fitzpatrick and Vermont Yankee Nuclear Power Plants; to evaluate the in-place quality assurance program; and conduct an initial management meeting.					
PLANT SITE APPLICABILITY: J. A. Fitzpatrick, Docket 50-333; Millstone Unit 1, Docket 50-245; Nine Mile Point Unit 1, Docket 50-220; Pilgrim Unit 1, Docket 50-293; Vermont Yankee, Docket 50-271; Diablo Canyon, Docket 50-275; and Enrico Fermi 2, Docket 50-341.					

~~8206280468~~

ORGANIZATION: TELEDYNE ENGINEERING SERVICES
WALTHAM, MASSACHUSETTS

REPORT
NO.:

99900513/82-01

INSPECTION
RESULTS:

PAGE 2 of 6

A. VIOLATIONS:

None

B. NONCONFORMANCES:

1. Contrary to the Criterion V of Appendix B to 10 CFR Part 50 and the Diablo Canyon Project Program Plan, QA records were not stored in a single record storage facility which meets the imposed requirements of ANSI/ASME NQA-1-1979, nor were the duplicate records stored in separate locations.
2. Contrary to Criterion V of Appendix B to 10 CFR Part 50 and section 3.0 of the QA Manual (QAM), design activities related to Mark I containment torus hydrodynamic analyses and design modifications for the J. A. Fitzpatrick, Millstone, Nine Mile Point, Pilgrim and Vermont Yankee Nuclear Power Plants were not being accomplished in accordance with the QAM. Specific examples of this nonconformance are:
 - (a) Hydrodynamic analyses did not include sufficient referencing of source data, principles and assumptions to permit ready traceability as required by section 3.6.1 of the QAM. Further, the checker of hydrodynamic analyses did not perform the duties prescribed in section 3.6.2 of the QAM as required by section 3.6.1 of the QAM.
 - (b) Calculations exhibiting the signatures of the originator, checker and the design verifier were not treated with the status of a QA record as required by section 3.6.3 of the QAM.
3. Contrary to Criterion V of Appendix B to 10 CFR Part 50 and the Project Quality Assurance Program (PQAP) for the J. A. Fitzpatrick, Millstone, and Vermont Yankee Nuclear Power Plants, activities affecting quality regarding Design/Analysis Control, Project Personnel Assignment, and Project General (Engineering) Control were not accomplished in accordance with prescribed procedures in that the required procedures were either not imposed or not being implemented on the above projects.

REPORT
NO.:

9990C513/82-01

INSPECTION
RESULTS:

PAGE 3 of 6

4. Contrary to Criterion V of Appendix B to 10 CFR Part 50 and the PQAP's for the Fermi 2, Millstone and Vermont Yankee projects, audits were not accomplished within the specified intervals, nor were they waived in accordance with the prescribed conditions and requirements.
5. Contrary to Criterion V of Appendix B to 10 CFR Part 50 and Section 17 of the QAM, PQAP's for eight projects contained a requirement to retain audit records for a period of 1 year, rather than for 6 years as required by the QAM.

C. UNRESOLVED ITEMS:

None

D. OTHER FINDINGS OR COMMENTS:

1. Management Meeting - The purpose, scope, and nature of the Licensee, Contractor and Vendor Inspection Program were reviewed with the President of Teledyne Engineering Services (TES) and the Quality Assurance Manager. The concerns expressed to NRC with respect to possible errors and deficiencies in the hydrodynamics load analyses of General Electric (GE) Mark I containment torus components, and in the subsequent design of related component supports, were outlined. The format, content, dissemination and publication of NRC inspection reports, and TES responses thereto, were discussed in detail.
2. Possible Analytical Deficiencies - An inspection was conducted to determine the validity and safety significant of concerns expressed to NRC that the use of unqualified individuals, inaccurate analytical models, erroneous input to structural calculations and excess management schedular pressure could result in possible deficiencies in the analyses for structural integrity, and in the subsequent design of internal and external component supports for the torus and its associated catwalks and piping of the Fitzpatrick and Vermont Yankee Nuclear Power Plants.

Review of TES records, and interviews with cognizant personnel, indicate that TES was contracted by the owners of the Fitzpatrick, Millstone Unit 1, Nine Mile Point Unit 1, Pilgrim Unit 1 and Vermont Yankee Nuclear Power Stations, in 1975-1976, to provide consulting services and to perform certain analyses and design

REPORT NO.: 99900513/82-01	INSPECTION RESULTS:	PAGE 4 of 6
<p>modifications pertaining to the torus of their Mark I containments. Some design modifications have already been supplied to and incorporated by the affected plants; however, the total contract effort is not scheduled for completion until late August 1982.</p> <p>Review of employment, training, and qualification records, and interviews with selected engineering, management, and "contract" personnel, did not confirm the concerns that unqualified individuals were employed to do this work nor that TES management subjected the analysts and designers to schedular pressures such that the quality of their work was compromised.</p> <p>However, the NRC inspector noted that TES did not have documented instructions or procedures to assure that the technical qualifications (education, training, and related experience) claimed by newly hired permanent or contract employees conducting safety-related activities, was verified, stored with the status of a QA record, or that appropriate corrective action was taken when anomalies or inconsistencies were uncovered. TES management stated that appropriate procedures would be developed and implemented prior to June 30, 1982. This item will be followed during future inspections.</p> <p>Detailed examination of the structural analyses, the resulting design modification drawings and their supporting stress calculations, and interviews with cognizant personnel, indicate that the allegations relative to use of inaccurate analytical models and erroneous input data to structural calculations were based on factual observations made during a 4-month period in early 1981.</p> <p>With respect to the use of inaccurate analytical models, the NRC inspector determined that the analysts:</p> <ol style="list-style-type: none">(1) used the structurally similar Millstone torus drawing to obtain needed dimensions as inputs to Pilgrim hydrodynamic scoping and analyses since all requisite Pilgrim data was not available at the time;(2) changed the analysis techniques from a dynamic analysis to an allegedly equivalent static analysis without documented justification;		

REPORT
NO.:

99900513/82-01

INSPECTION
RESULTS:

PAGE 5 of 6

- (3) used preliminary and undocumented hydraulic forces as inputs to the calculations;
- (4) did not document the sources of design inputs nor assumptions in the calculation packages.

TES management stated that: (1) these deficiencies are unique to work related to the identified plants and, therefore, are not generic in nature; and (2) the proper Pilgrim dimensional data has already been incorporated into Pilgrim calculations.

In response to nonconformance B.2 above, TES committed to the following corrective actions: (1) the engineering justification for using a static analysis method would be documented; (2) all affected calculations would be redone using the latest GE-published hydraulic forces and applicable analyses methodology; (3) sources of design inputs and assumptions would be documented in the calculation packages; (4) all resulting design modification drawings and supporting stress calculations, including those previously transmitted to the affected plants would be reviewed and revised as needed.

The above actions will be completed by August 31, 1982.

One other nonconformance was identified in this area of the inspection. (See item B.3 above.) This area will be further examined during a future inspection.

Furthermore, the NRC inspector noted that Revision 0 of Technical Engineering Procedures TEP-2-004, TEP-3-002, TEP-3-003, TEP-6-008, and TEP-7-004 were not reviewed and approved by the QA Manager as required by section 3.2.1 of the QAM as evidenced by the lack of signature of the QA Manager on the subject procedures. Since later revisions of these, and other procedures, were reviewed in accordance with the QAM, and since the QA Manager agreed to document his review and approval of the subject procedures, no nonconformance was identified. This item will be followed in a future inspection.

- 3. QA Program Evaluation - The TES Corporate Policy Manual, Quality Assurance Manual, unique PQAP's, and the related detailed implementing procedures governing the areas of QA Program, organization,

ORGANIZATION: TELEDYNE ENGINEERING SERVICES
WALTHAM, MASSACHUSETTS

REPORT NO.:	99900513/82-01	INSPECTION RESULTS:	PAGE 6 OF 6
----------------	----------------	------------------------	-------------

engineering control, procurement control, QA records, and audits were reviewed to determine that they were consistent with the quality and technical requirements that have been imposed on TES. The documentation of completed work in these areas, consisting of training records for 14 individuals, 1 management evaluation of the QA program, 8 internal QA audit files, 2 external QA audit files, qualification records for 2 audit team leaders, 4 purchase orders for TES services, 5 TES purchase orders to subcontractors, 3 drawing files, and applicable QA records, were examined to verify program implementation. Three nonconformances were identified in this area of the inspection. (See items B.1, B.4, and B.5 above.)

DOCUMENTS EXAMINED

1	2	TITLE/SUBJECT	3	4
1	3	TES Power Manual (Copy P2), Sections I, IV, II, VI	10-27-81	Various
2	3	TES Quality Assurance Manual (Structural part 18)	4-1-81	Various
3	1	2386-E-5475 "12" T QUADRAM ASSEMBLY AND INSTALLATION"	3-7-80	Various
4	8	55286-6 bars (14) & 80 bars: TA-2842-1, (3582, 3524, 2183, 2155), 988, 9121	11-13-81	8
5	8	Box of 988 project needs - Millstone 2 Cooling water cycle testing - Analysis of data	11-13-81	8
6	1	KEYS Bury TES FUGRO Year In Review Design I-1	Post	Various
7	3	Assurance Record for Design Power Plants	4-27-81	Various
8	3	MS24-15.2.9 Requirements for Collection, Storage, and Transportation of Quality	2-11-81	12
9	3	TEP-1-001 "Initiation, Revision, Approval, Implementation and Control"	1-27-80	0
10	2	Northwest Utilities Service Co. PO# 355628, Missive 2 - Tables Studies	4-14-81	1
11	4	MUSCO QA Spec. 4.01-B Requirements for a Ringdown & Sens. brackets	8-13-77	3
12	3	TES PQAP (Original QA Program) 5318	3-27-76	0
13	8	EP (Eng. Div.) EP-1-002 (General Control Procedure) for Project 2138	4-27-75	3
14	8	Vermonas Yearase Mfg. Co. PO# 7042, Vermont Yankee - Texas modification	8-20-77	0
15	8	DuBois Company FSAR PACIFIC GAS & ELECTRIC - Sections Appendix A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z	10-12-80	8
16	8	VERCO-21888 (GE) MARK I COORDINATION PARAGRAPH LOAD DEFINITION	2-3-80	0
17	7	VERCO-24581 (GE) MARK I COORD. PARAGRAPH LOAD DEF. - VERMONAS YANKEE	2-12-76	1
18	5	TES (Flaberty) & RCI (Iosue): Fermi 2 CRDS Design (Imp) and Analysis Series	1-29-81	4A
		RCI PO# 170-31 CRD Hydraulic Piping System Design Enrico Fermi 2	4-2-81	6

- Document Types:
1. Drawing
 2. Specification
 3. Procedure
 4. QA Manual
 5. Purchase Order
 6. Internal Memo
 7. Letter
 8. Other (Specify - If necessary)
- Columns:
1. Sequential Item Number
 2. Type of Document
 3. Date of Document
 4. Revision (If applicable)

scope/Module SPECIAL INSPECTION

DOCUMENTS EXAMINED

1	2	TITLE/SUBJECT	3	4
19	2	RCI EP-104 "Piping System Design for Enbridge Terminals Unit # 2 A.S. Miller Engineering Specification for Control and Drive Hydraulic	2/4/81 10/14-81 7-21-81	0 1 0
20	4	PQAP 5185-0001 Project QA Program for RC1/DECO E.F. CAD System	July 79	0
21	2	DECO 3071-SP6 "System Design Specification for Control and Drive System"	3-23-82	NA
22	8	Federal Register/Vol. 47, No. 56/Tuesday March 23, 1982/Notices 12405 for BWR Emergency	MARCH 82	NA
23	8	NUREG-D783 "Insurance and Availability: Suppression Pool Temperature Limits"	Sept. 1979 11-9-81 11-1-81	- Checker BAGANNA
24	8	STARDYNE-3 (Structural Analysis System) User's Guide	6-4-81 12-4-80	A.P. 1
25	8	CALC. (Preliminary) 5319 Vermont Yankee Catwalk Analysis Calculates static equivalent loads.	5-20-80 12-8-80	0 1
26	8	Compara XUV "POOLS" Box SVK JOBG - Calculates pool surface profile and equivalent combined center of mass	9-2-80 10-12-80	0 1
27	3	EP-1-001; EP for Project 2386 (PASNY-Fitzpatrick) General Center Procedure	10-7-80 11-12-80	0 1
28	3	EP-1-003; EP for Project 2252 (Yankee Station - Vermont Yankee)	12-12-80	0
29	3	EP-1-004; EP for Project 2255 (BECO - Pilgrim 1) General Center Procedure	12-12-80	1
30	3	EP-1-005; EP for Project 2271 (Niagra Mohawk - Nine Mile Point G.C.P.)	10-7-80 8-7-80 8-13-80 1-26-80 2-18-80 1-19-81	0 1 1 1 1 1
31	3	TEP-4-001; Analysis Checking Procedure	4-16-81 6-1-81	3 1
32	1	2255-E-5110 Saddle Support Assembly (Torus) Pilgrim Unit 1	3-1-80	0
33	1	2255-E-5110 Saddle Support Assembly (Torus) Pilgrim Unit 2	3-31-80 5-29-81 4-21-81	0 0 0
34	8	CALC. 2255-12 (5310 A-7L) Support Calc for DWG 2255-E-5110 Rev 11	3-23-82	5
35	8	CALC. 2255- Support Calc for DWG 2255-E-5110 Rev 3	6-11-81	0
36	1	5310-D-5622 Alternate Saddle Plate Tilt Down Alignment Unit 2		5 0

- Document Types:
1. Drawing
 2. Specification
 3. Procedure
 4. QA Manual
 5. Purchas Order
 6. Internal Memo
 7. Letter
 8. Other (Specify-if necessary)
- Columns:
1. Sequential Item Number
 2. Type of Document
 3. Date of Document
 4. Revision (If applicab

Scope/Module Special Inspection

EXHIBITS EXAMINED

1	2	TITLE/SUBJECT	3	4
37	1	5319-E-5854 Reinforcement For Existing Walkway - Vermont Yankee 5/10-18/82	2m Process	4
38	8	CALC 5319 - Vermont Yankee Civil Work Support Calculations 5/11-30/82	2m Process	0
39	1	2386-D-5669 Reinforcement for Existing Walkway Sheets 2,3	10-21-81	1
40	1	2386-D-5669 " " " " " " " "	12-11-81	2
41	8	CALC - Fitzpatrick Truss Calculations - Supports 8146 2386-D-5669 8/2-11/82	7-2-81	7
42	8	CALC 2386 - Fitzpatrick - Calculations Cross Bracing for Vermont Yankee 8/2-11/82	7-29-81	0
43	8	CALC 2252-2 West Valley - Review of Vermont Yankee 8/2-11/82	6-29-81	0
44	8	CALC 2252-3 West Valley - Review of Vermont Yankee 8/2-11/82	6-29-81	0
45	8	CALC 2252-5 West Valley 2m Bracing with Main Vent - Vermont Yankee	10-7-81	0
46	8	CALC 2252-4 Combined Loads, Vent Headers/Decks Vermont Yankee 7-9-81	8-13-81	0
47	4	PRAP 5322 FPIL Truss Point 3/4 - Pipe Stress & Support Analysis 4/20-81, EP-1-001 (GCP)	4-28-81	0
48	4	PRAP 2138/5318 NUSS Millstone 1 - Engineering Analysis 8-10-80	8-10-80	3
49	4	PRAP 2252/5319 Vermont Yankee E.Cip Vermont Yankee 8/2-11/82	8-10-80	4
			8-10-80	0

Document Types:

1. Drawing
2. Specification
3. Procedure
4. QA Manual
5. Purchase Order
6. Internal Memo
7. Letter
8. Other (Specify-If necessary)

Columns:

1. Sequential Item Number
2. Type of Document
3. Date of Document
4. Revision (If applicable)

Inspector ALVA L. SMITH

Report No. 82-01

Scop/Module QA PROGRAM EVALUATION

DOCUMENTS EXAMINED

Page 6 of 12

1	2	TITLE/SUBJECT	3	4
1	8	POLICY MANUAL - TELEDYNE ENGINEERING SERVICES	10/27/81	
2	4	QUALITY ASSURENCE MANUAL	3/2/80	
3	3	PROJECT QA PROGRAM PROJECT 2252/S319 A-F	10/27/81	6
4	3	PROJECT QA PROGRAM PROJECT 5322	9/29/81	1
5	3	PROJECT QA PROGRAM PROJECT 2138/S318 A-F	10/29/81	4
6	3	PROJECT QA PROGRAM PROJECT RCI I-120/SIBS	10/29/81	1
7	3	PROJECT QA PROGRAM PROJECT 4427	5/2/80	0
8	3	PROJECT QA PROGRAM PROJECT 4557	6/6/80	0
9	3	PROJECT QA PROGRAM PROJECT 4813	8/29/80	0
10	7	1981 MANAGEMENT AUDIT (SCHEDULE AND ASSIGNMENTS)		
11	7	MANAGEMENT AUDIT -1981- LETTER OF TRANSMITTAL FOR NON-CONFORMANCES	12/12/81	
12	7	MANAGEMENT AUDIT -1981- FINAL REPORT	1/20/82	
13	8	QA AUDIT SUMMARY PROJECT SIBS	2/20/82	
14	8	QA AUDIT SUMMARY PROJECT	2/20/82	

Document Types:

1. Drawing
2. Specification
3. Procedure
4. QA Manual
5. Purchase Order
6. Internal Memo
7. Letter
8. Other (Specify-if necessary)

1

Column Nos.

1. Sequential Item No.
2. Type of Document
3. Date of Document
4. Revision No., if applica

Scop/Module QA PROGRAM EVALUATION

DOCUMENTS EXAMINED

1	2	TITLE/SUBJECT	3	4
15	8	QA AUDIT SUMMARY PROJECT 5322	12/29/81	
16	8	QA AUDIT SUMMARY PROJECT 2252/5319	11/20/81	
17	8	QA AUDIT SUMMARY PROJECT 2252/5319	5/28/81	
18	8	QA AUDIT SUMMARY PROJECT 2252/5319	1/20/81	
19	8	QA AUDIT SUMMARY PROJECT 2138/5318	9/14/81	
20	8	QA AUDIT SUMMARY PROJECT 2138/5318	6/27/81	
21	8	QA AUDIT SUMMARY PROJECT 2138/5318	2/2/81	
22	8	QA AUDITOE QUALIFICATION RECORDS- OLIVER K. ONLUND	6/23/80	
23	8	QA AUDITOR QUALIFICATION RECORDS - J. H. MALOUSSON	6/23/80	
24	5	TELEDYNE PROPOSAL PR-5586	4/7/81	7/9/81
25	5	FLORIDA POWER FLIGHT P.O. 89617-86254	12/4/81	
26	5	FLORIDA POWER FLIGHT P.O. 89617-84882	12/2/81	SUP 1
27	5	FLORIDA POWER FLIGHT P.O. 89617-80882	9/23/81	
28	5	NORTHEAST UTILITIES SERVICE CO. P.O. 355628	7/29/81	SUP 1 9/24/81

Document Types:

- 1. Drawing
- 2. Specification
- 3. Procedure
- 4. QA Manual
- 5. Purchase Order
- 6. Internal Memo
- 7. Letter
- 8. Other (Specify-if necessary)

Column Nos.

- 1. Sequential Item No.
- 2. Type of Document
- 3. Date of Document
- 4. Revision No., if appll

1	2	TITLE/SUBJECT	3	4
29	5	TELEDYNE P.O. D5990 (CONTINUUM DYNAMICS)	9/10/81	CAC 9/22
30	2	NUSCO QA SPECIFICATION 4.01-B	9/25/81	3
31	2	ANSI NAS. 2.23-1978	1978	
32	2	SPECIAL QA DOCUMENT 1002 (FLORIDA POWER & LIGHT CO.)	9/29/81	3
33	2	SPECIAL QA DOCUMENT 1003 (FLORIDA POWER & LIGHT CO.)	9/29/81	2
34	5	TELEDYNE P.O. 5924 (THAMES VALLEY STEEL)	8/10/81	
35	5	TELEDYNE P.O. 5009 (ITT GRINNELL)	12/29/80	
36	5	TELEDYNE P.O. 5057 (CONAX CORP.)	1/14/81	
37	5	TELEDYNE P.O. 5003 (ATWOOD & MORRILL CO.)	11/13/80	
38	7	BAKER TESTING SERVICE, INC. (CERTIFYING DONALD MESSIGER)	3/4/82	
39	8	ECN 2080 PROJECT 4100 PQA PROGRAM	7/5/81	
40	8	ECN 2092 PROJECT 4798 CRD SCRAM DISCH PIPING	4/4/81	
41	8	ECN 2098 PROJECT 4798 NM PC/WINE MILE POINT 3/4" PIPE & VALVE ASSY B-5481	5/5/81	
42	8	TELEDYNE ENGR. SERVICES ECN LEDGER	N/A	

Document Types:

- Drawing
- Specification
- Procedure
- QA Manual
- 5. Purchase Order
- 6. Internal Memo
- 7. Letter
- 8. Other (Specify-if necessary)

Column Nos.

- 1. Sequential Item No.
- 2. Type of Document
- 3. Date of Document
- 4. Revision No., if appl

1	2	TITLE/SUBJECT	3	4
43	8	DOCUMENT CONTROL RECORD B-5481	-	01
44	7	DOCUMENT TRANSMITTAL D-53 (TO: NIAGARA MOHAWK POWER CORP)	5/21/81	
45	8	DOCUMENT CONTROL RECORD E-5470	n/a	5
46	7	DOCUMENT TRANSMITTAL D-47 (TO: NIAGARA MOHAWK POWER CORP)	5/4/81	
47	8	DOCUMENT CONTROL RECORD PQAP PROJECT 4100	n/a	1
48	7	DOCUMENT TRANSMITTAL D-33 (TO: BOSTON EDISON CO.)	2/4/81	
49	8	DOCUMENT CHANGE ORDER 2775	10/4/81	
50	7	REACTOR CONTROLS, INC. TRANSMITTAL RECORD 120-096	1/27/81	
51	3	PROJECT QA PROCEDURE PROJECT: 29#4/2935/2936	3/2/81	
52	8	PERSONNEL FILE FOLDER (PAUL SOONHO)	-	
53	8	PERSONNEL FILE FOLDER (EDWARD S. KOWYNIA)	-	
54	8	PERSONNEL FILE FOLDER (MIR S. ALI)	-	
55	8	PERSONNEL FILE FOLDER (MICK CELIA)	-	
56	8	PERSONNEL FILE FOLDER (COLLINS YANG)	-	

Document Types:

- Drawing
- Specification
- Procedure
- QA Manual
- 5. Purchase Order
- 6. Internal Memo
- 7. Letter
- 8. Other (Specify-if necessary)

Column Nos.

- 1. Sequential Item No.
- 2. Type of Document
- 3. Date of Document
- 4. Revision No., if applic

1	2	TITLE/SUBJECT	3	4
57	8	PERSONNEL FILE FOLDER (DUKE ENOS)	-	
58	8	PERSONNEL FILE FOLDER (DOUG INGRAM)	-	
59	8	PERSONNEL FILE FOLDER (SHAHRAM RAHMANI)	-	
60	8	PERSONNEL FILE FOLDER (RAMESH C. NAYAR)	-	
61	8	PERSONNEL FILE FOLDER (SUNHAJ THAVOLTISAL	-	
62	8	PERSONNEL FILE FOLDER (PRABHULAL I. RATHI)	-	
63	8	PERSONNEL FILE FOLDER (BAHADIR A. IJHAN)	-	
64	8	PERSONNEL FILE FOLDER (CYNTHIA M. AMIRAHLT)	-	
65	3	TELEDYNE ENGR. SERVICES INTERIM DOCUMENT CONTROL SYSTEM	8/2/86	
66	3	SPECIAL QA PROCEDURE SQAP-81-01	-	0
67	2	ANSI N45.2.9		
68	3	TES TECHNICAL ENGINEERING PROCEDURE TEP-1-004, REPORTING OF 10 CFR 21 OFFENSE	9/6/86	0
69	3	TES TECHNICAL ENGINEERING PROCEDURE TEP-6-003	11/7/81	3
70	3	TES PROJECT 5511, DCNPP DESIGN REVERIFICATION	-	-

Document Types:

- Drawing
- Specification
- Procedure
- QA Manual
- 5. Purchase Order
- 6. Internal Memo
- 7. Letter
- 8. Other (Specify-if necessary)

Column Nos.

- 1. Sequential Item No.
- 2. Type of Document
- 3. Date of Document
- 4. Revision No., if applic:

The response requested by this letter is not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-511.

In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you believe to be exempt from disclosure under 10 CFR 9.5(a)(4), it is necessary that you (a) notify this office by telephone within 10 days from the date of this letter of your intention to file a request for withholding; and (b) submit within 25 days from the date of this letter a written application to this office to withhold such information. If your receipt of this letter has been delayed such that less than 7 days are available for your review, please notify this office promptly so that a new due date may be established. Consistent with section 2.790(b)(1), any such application must be accompanied by an affidavit executed by the owner of the information which identifies the document or part sought to be withheld, and which contains a full statement of the reasons on the basis which it claimed that the information should be withheld from public disclosure. This section further requires the statement to address with specificity the considerations listed in 10 CFR 2.790(b)(4). The information sought to be withheld shall be incorporated as far as possible into a separate part of the affidavit. If we do not hear from you in this regard within the specified periods noted above, the report will be placed in the Public Document Room.

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

"Original Signed by
U. POTAPOVS"

Uldis Potapovs, Chief
Vendor Programs Branch

Enclosures:

1. Appendix A - Notice of Nonconformance
2. Appendix B - Inspection Report No. 999005i3/82-01
3. Appendix C - Inspection Data Sheets (12 pages)

bcc:

IE Files

AEOD

QAB

NRC:PDR

Reg. Administrators, I, II, III, IV,V

EHJohnson, RIV

OFFICE

NAME

DATE