

ORGANIZATION: ELMA ENGINEERING INCORPORATED
PALO ALTO, CALIFORNIA

REPORT NO.: 99900827/84-01	INSPECTION DATE(S): 11/5-8/84	INSPECTION ON-SITE HOURS: 75
CORRESPONDENCE ADDRESS: Elma Engineering Incorporated ATTN: Mr. T. A. Beno Vice President and QA Manager 1066 East Meadow Circle Palo Alto, California 94303		
ORGANIZATIONAL CONTACT: Mr. T. A. Beno, Vice President & QA Manager TELEPHONE NUMBER: (415) 494-7303		
PRINCIPAL PRODUCT: DC Power Supplies and Cast Coil Transformers. NUCLEAR INDUSTRY ACTIVITY: The plant currently has two active orders for DC power supply units.		
ASSIGNED INSPECTOR: <u>R. E. Oller</u> <u>12-17-84</u> R. E. Oller, Reactive Inspection Section (RIS) Date		
OTHER INSPECTOR(S): J. J. Petrosino, RIS W. E. Gunther, Brookhaven National Laboratory		
APPROVED BY: <u>E. W. Merschhoff</u> <u>12-21-84</u> E. W. Merschhoff, Chief, RIS Date		
INSPECTION BASES AND SCOPE: A. <u>BASES</u> : 10 CFR Part 21 and Appendix B to 10 CFR Part 50. B. <u>SCOPE</u> : This inspection was made as a result of deficiencies reported in Elma Engineering DC power supply units at Peach Bottom, Vermont Yankee, and Browns Ferry Nuclear Power Stations and by Nutherm International Incorporated. Concurrently the implementation of the Elma QA program and compliance with 10 CFR Part 21 were inspected.		
PLANT SITE APPLICABILITY: Degradation of power supply units 50-277/278 and 50-271. Defective workmanship in power supply units 50-259/260 and 50-296.		

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A. VIOLATIONS:

1. Contrary to Section 21.6 of 10 CFR Part 21, Elma Engineering failed to post: (a) a current copy of 10 CFR Part 21; (b) Section 206 of the Energy Reorganization Act of 1974; (c) procedures adopted to meet Part 21 requirements; or (d) a notice as described in Part 21.

This is a Severity Level V violation (Supplement VII).

2. Contrary to Section 21.21(a) of 10 CFR Part 21, Elma Engineering had not adopted appropriate documented procedures to provide for: evaluating deviations, informing the purchaser, and assuring that a responsible officer is informed of a defect in a basic component supplied for a facility.

This is a Severity Level V violation (Supplement VII).

3. Contrary to Section 21.21(b)(1)a of 10 CFR Part 21, Elma Engineering failed to evaluate and report the following defects in Class 1E power supply units shipped to customers:

- a. Unacceptable workmanship deviations in power supply unit SN 573801 and spare capacitors, transformers, and diodes furnished to Browns Ferry Nuclear Power Station on TVA contract No. 83PN7-341119.
- b. Unacceptable workmanship deviations in several Model 164C5261P004 Class 1E power supply units shipped to Nutherm International Incorporated on purchase order No. 1214-15 for use in safety related systems.
- c. Damaged transformers in Class 1E power supply units SN's 5124001, 5124002 and 5124004 shipped to Vermont Yankee Nuclear Power Station, and low voltage output in Class 1E power supply units SN's 545001 and 545002 also shipped to Vermont Yankee NPS.

This is a Severity Level IV violation (Supplement VII).

B. NONCONFORMANCES:

1. Contrary to Criterion V of Appendix B to 10 CFR 50, and the Preface in Elma Engineering's QA manual, Issue 4, the following were identified:

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- a. The QA manual did not provide measures for identification and control of materials, parts and components. (Reference Section 9 of ANSI N45.2.)
 - b. The QA manual did not provide measures to control tools utilized in activities affecting quality, (such as wire terminal crimpers and wire strippers), as required by ANSI N45.2.
2. Contrary to Criterion V of Appendix B to 10 CFR Part 50, and Sections 11.3 and 14.1 of Elma's QA manual, quality records, such as: Procedure Test Data Sheets, Planning Route Sheets or Route Tags; were not filed and retained in the Elma job order file No. 5738 for TVA Contract No. 83PN7-341119.
3. Contrary to Criterion V of Appendix B to 10 CFR Part 50, and customer purchase order no. 1214-15, dated June 15, 1983, from Nutherm International for 10 ferroresonant 24 VDC power supply units, Elma failed to include Output Ripple test values on the Production Test Data Sheet records for P.S. units SNS 572001 and 572010.
4. Contrary to Criterion V of Appendix B to 10 CFR Part 50, and Section 5.2, 7.1, and 7.2, of Elma's QA manual, Production Test Data Sheet records for Elma job order Nos. 5601, 5616, 5794, and 5834 did not reference a test procedure and an issue date. Production Test Data Sheet records for job order nos. 5865, 5450, 5437, 5601, 5610, and 5794 did not identify acceptance criteria such as voltage limits or percent ripple voltage allowed. Production Test Data Sheet records for job order nos. 5601 and 5616 had test data voltage values below the specified minimum of 23.5 volts and the test results had been approved by Elma test engineers.
5. Contrary to Criterion V of Appendix B to 10 CFR Part 50, and Section 1.4(b) of Elma's QA manual, Issue 4, qualification records for one of three test personnel who performed tests on Class 1E P.S. units for job order No. 5450, could not be located.
6. Contrary to Criterion V of Appendix B to 10 CFR Part 50, and Section 10.1(b) of Elma's QA manual, Elma test inspectors have been performing P.S. unit assembly work, inspections, and functional tests during the same period of time.
7. Contrary to Criterion V of Appendix B to 10 CFR Part 50; Section 8.1 of Elma's QA manual, and Section 13 of ANSI N45.2, the following were identified:

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- a. Wire terminal crimping tools and wire stripping tools had not been identified or controlled by written procedures to assure calibration.
 - b. Elma's "schedule of inspections" for measuring and test equipment had not been maintained to assure calibration at the required intervals.
 - c. Functional electrical testing instruments for the P.S. units, did not have unique identification numbers assigned to assure traceability.
 - d. One Weston A.C. ammeter SN 151350, had not been recalibrated on schedule. A six month calibration frequency was required but the sticker indicated a one year calibration frequency was performed.
8. Contrary to Criterion V of Appendix B to 10 CFR Part 50, Section 10.1 of Elma's QA manual, and Section 6 of ANSI N45.2, documented quality assurance procedures or instructions were not available to assure that P.S. unit process activities were verified in conformance with requirements.

C. UNRESOLVED ITEMS:

None.

D. OTHER FINDINGS OR COMMENTS:

1. Deficiencies Reported In Elma Engineering Power Supply Units at Peach Bottom, Vermont Yankee, and Browns Ferry Nuclear Power Stations and by Nutherm International Incorporated:

a. Introduction:

The two problems concerning Elma Engineering (Elma) 24 V.D.C. power supply (PS) units were: (1) degradation of operation possibly due to capacitor overheating, and (2) alleged defects consisting of defective wiring, inadequately soldered joints, a leaking oil filled capacitor and overall poor workmanship. The degraded P.S. units were identified in NRC Information Notice No. 83-04, dated February 18, 1983, as having occurred at Peach Bottom Units 2 and 3 on June 19, 1982, and at Vermont Yankee on May 13, 1982. The alleged defective workmanship was reported by the Tennessee Valley Authority Browns Ferry Nuclear Power

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Station (TVA/BF) in a 10 CFR Part 21 report dated January 11, 1984, and by Nutherm International Incorporated (NI) in a letter dated June 21, 1984, to the NRC. As a result of these reports an inspection was performed on November 5-8, 1984 at Elma Engineering, located in Palo Alto, California.

b. Findings:

The NRC inspectors and an NRC consultant performed an independent verification of the problems by means of interviews with cognizant Elma personnel, review of documents and observations. As a result of this review, the following information was obtained.

The TVA/BF reported problem was verified to have been found in a TVA stores replacement Model 164C5261P004 P.S. unit and in spare transformers, capacitors and diodes shipped to TVA/BF by Elma in September 1983 on TVA/BF contract No. 83PN7-341119. These items were returned to Elma by TVA/BF in December 1983. The defects reported by TVA/BF were defective wiring, inadequately soldered joints, overall poor workmanship in the P.S. unit, and physical damage to the spare parts. Elma then repaired this equipment; tested it and issued a new Certification of Compliance.

Discussions with Elma management and review of records indicated that the assembler who had performed the soldering on the defective P.S. unit was certified on April 2, 1982, as an electrical test engineer, but had worked as an assembler on ferroresonant DC P.S. units during the period of July through December 1983. This person is no longer employed at Elma. Review of the Elma Customer Order Book verified that during the above period this assembler may have performed assembly work on the following customer orders:

1. NI P.O. No. 1214-15 (entered by Elma Sales June 15, 1983) for 10 1E P.S. units.*
2. TVA/BF P.O. No. 3PN7-341119 (entered by Elma Sales August 1, 1983) for one 1E P.S. unit.

*Two of these units were identified by NI as containing inadequate soldering and one as having a leaking oil filled capacitor.

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3. Philadelphia Electric (Peach Bottom) P.O. No. 368284-N, (entered by Elma Sales December 30, 1983) for four 1E P.S. units.
4. General Electric (material Services Warehouse, San Jose, California) P.O. No. 20583E887 (entered by Elma Sales December 28, 1983) for one non-1E P.S. Unit.

Discussions indicated that Elma had not evaluated the above deficient conditions in the NI and TVA/BF equipment nor reported them to the NRC with regard to the reporting requirements of 10 CFR Part 21. This matter is identified as a violation.

Review of the records in the job file No. 5738 for the TVA/BF order, verified that while there were signed Certificates of Compliance for the original equipment shipped to TVA/BF in September 1983, there were no Production Test Data Sheet records or inspection records available. This matter is identified as a nonconformance.

Since the NI letter, dated June 21, 1984, to the NRC had identified defects in a P.S. unit Model 164C5261P004 in a lot of 10, purchased on NI P.O. No. 1214-15, July 22, 1983, a review was made of job order file 5720 for this NI work. It was found that while the Certificates of Compliance were in order, the "Ripple P to P" test data, test acceptance criteria and test procedure identification were omitted from the Production Test Data Sheets for the 10 P.S. units. These omissions are identified as nonconformances.

Further review included job order file No. 5470, concerning NI's earlier P.O. No. 1078-9, dated June 3, 1982 for 41 P.S. units of the same model. The Production Test Data Sheets in this order file did not contain the test values for the "Ripple P to P" tests (in all cases), the acceptance criteria or the test procedure identification. The Ripple test values were later sent by Elma to NI on February 2, 1983.

The problems reported by Vermont Yankee and Peach Bottom NPSs were reviewed by the NRC's consultant. Job order files for several orders to both customers were reviewed. One file, job order no. 5437, contained information concerning three P.S. units SNs 5124001, 5124002, and 5124004, which were returned to Elma on February 18, 1981 by Vermont Yankee due to damaged

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transformers which resulted in zero output of these P.S. units. These original units had been shipped to VY on January 9, 1980 by Elma. Another job file, No. 5450, contained information concerning two P.S. units SNs 545001 and 545002 which were returned by Vermont Yankee to Elma on May 14, 1982 due to low voltage output. These original units were shipped to VY on July 31, 1981 by Elma. Elma failed to perform fault analyses for the above problems to determine their 10 CFR Part 21 applicability, and as a result did not notify the NRC. These matters are categorized as a violation.

Other job order files were also reviewed for this period. Job order Nos. 5601, 5616, 5794 (for Peach Bottom orders) and 5834 (for a Reliance Electric order) were also found to contain Production Test Data Sheet records which did not reference a test procedure and an issue date. Records for Job order Nos. 5865, 5450, and 5437 (Vermont Yankee orders) and nos. 5601, 5616 and 5794 (Peach Bottom orders) did not identify test acceptance criteria. Also, contrary to General Electric design specification No. 164C5261, Production Test Data Sheet records for job order nos. 5601 and 5616 (Peach Bottom orders) had test voltage values below the specified minimum limit of 23.5 volts and ripple test values were not recorded. These test results had been approved by Elma's test engineer.

2. 10 CFR Part 21 Requirements:

The NRC inspector, discussed the requirements of 10 CFR Part 21 with Elma Management, and observed the employee bulletin board. Elma's management indicated that they had not adopted documented procedures to provide for defect evaluation and notification. Observation verified that the documents required by 10 CFR Part 21 had not been posted. These conditions were identified as violations.

3. Elma's Quality Assurance Program:

Selected sections of Elma's Quality Assurance Manual-Magnetic Products, Issue 4, dated January 22, 1981, concerning ferroresonant power supply units, were reviewed for adequacy to Regulatory requirements and National Standards. Review verified that contrary to the manual commitment to ANSI N45.2, there were no provisions in the manual for identification and control of materials, parts and

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components as referenced in Section 9 of ANSI N45.2. The QAM also, did not provide measures to control tools utilized in activities affecting quality (such as wire terminal crimpers and wire strippers).

The areas of indoctrination and training were not adequately addressed. Discussions with personnel and review of qualification training documents appear to indicate that little or no indoctrination of new or existing personnel was performed. The manual omissions were identified as nonconformances.

4. Design Change:

Review of Elma's control of design changes showed that once equipment is qualified for Class 1E applications, design control must be maintained to insure that this qualification is maintained. The original specification and testing of the Elma power supply unit occurred in 1975 in close coordination with General Electric who was interested in a 24 VDC power supply for its Analog Trip system, a system which relates to ECCS and RPS instrumentation channels. The design specification by General Electric, dwg. no. 164C5261, actually became the Elma part/model number. The original specification and bill of material were reviewed against present documents, including revision 8 of the General Electric drawing issued in July 15, 1978 and revision E of the power supply bill of material issued on January 5, 1984. This review indicated no significant design revision since its qualification testing. Capacitor C1 was changed in September 17, 1979 from 54 F, 660 volt, General Electric Part number 45F607 to 64 F, 660 volt, General Electric part number 26F6623FA. There was a generic revision to the transformer bill of material BM-6256 on January 14, 1982, however, the changes were cosmetic in nature.

5. Measuring and Test Equipment (MT&E):

In this area, the NRC inspector reviewed M&TE records of calibration and identification, a card file, and a schedule of inspection. Observations of M&TE were made and Elma personnel were interviewed. Meters which were examined had calibration stickers from outside calibration services, but the meters were not uniquely identified to provide traceability to M&TE records or specific P.S. units which were tested. The Elma's schedule of inspection, to control calibration status, was not up to date. Review of the calibration record book identified a Weston AC Ammeter which was designated on a six

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month calibration frequency, however, the calibration sticker on the meter indicated it was on a one year frequency. With regard to assembly tools, several electrical wire strippers and wire terminal tools were observed to be without calibration stickers or unique identification numbers. No records were available to verify that these tools were controlled and calibrated. These matters were identified as nonconformances.

Three electrical test personnel were selected from the test data sheets for review of their qualification records. One of the testers who performed testing on 1E P.S. units, did not have a qualification record on file as required by the QA manual. This matter was identified as a nonconformance.

Review of a procedures manual verified that an appropriate documented production test procedure was not available. A "Functional and Environmental Test Procedure" No. 4037-FETP dated April 1, 1977 was made available, however, there was no evidence in any of the job files inspected, to verify that this procedure had been utilized.

6. Current Ferroresonant Power Supply Manufacturing Practices:

The NRC inspector and the consultant reviewed the P.S. manufacturing processes and held discussions with cognizant Elma personnel. Observations of the assembly and testing area were also made. The processes reviewed included P.S. component assembly, wiring methods, inspection methods and functional testing.

Current P.S. unit component assembly is performed utilizing pictorial information which is shown on the below listed Elma drawings, specifically:

1. D6119C F.P.S. Assembly 20A, No. 164C5261-4, 10/15/79;
2. D8640A F.P.S. Assembly 20A, No. 164C5261B, 10/15/79;
3. D8642A F.P.S. Assembly 10A, No. 164C5261-7, 10/9/79;
4. D8641A F.P.S. Assembly 10A, No. 164C5261-3, 10/9/79;
5. 5965C Outline F.P.S., No. 164C5261, 8/1/80.

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These drawings appeared to be adequate for P.S. component mounting, electrical wire routing and interconnections.

Two P.S. units being assembled were inspected. Overall workmanship appeared adequate. A book of workmanship standards was made available to the NRC inspectors, but the Elma P.S. assembler did not appear to be aware of the presence of this standard.

Further discussions and a review revealed that Elma did not have documented quality assurance procedures or instructions to control inprocess and final inspections or functional testing of the P.S. units. During the period of mid 1979 to present Elma, has had five employees performing assembly work. Currently there is one assembler. The NRC inspector learned that the assemblers had also inspected their own work and performed functional testing on the units which they assembled. The need for separation of QA/QC activities from production was discussed with Elma management. The above deficiencies were identified as nonconformances.

INSPECTOR R.E. Oller
SCOPE All Documents

DOCUMENTS EXAMINED

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ITEM NO.	TYPE OF DOCUMENT	DOCUMENT NO.	REV.	DATE	TITLE / SUBJECT
1	QAM	QAM-1	55604	1-22-81	Elma Engineering Inc. QA Manual
2	QCD	556-7372	-	-	TVA Shipping Ticket covering return of 24vdc power supply unit and spare transformers, capacitors and diodes for TVA contract no. 83 PN7-341119.
3	LTR	-	-	11-21-83 12-30-83	TVA Letters transmitting photos of damaged P.S. unit and spare parts
4	MEM	-	-	12-2-83	TVA Memo. IIS to Power Stores describing unacceptable workmanship in Elma P.S. unit and spare parts
5	QCD	5738	-	1-3-84	Elma Returned Goods form record covering repairs to P.S. unit and spare parts returned by TVA.
6	QCD	-	-	4-13-84	Elma Production Test Data Sheet record for P.S. unit SN 573801.
7	QCD	-	-	4-13-84	Elma Certificate of Compliance for P.S. unit SN 573801.

TYPE OF DOC.:

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

LTR - LETTER
MEMO - MEMORANDUM

(continued)

INSPECTOR R.E. Oliver
SCOPE All Documents

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ITEM NO.	TYPE OF DOCUMENT	DOCUMENT NO.	REV.	DATE	TITLE / SUBJECT
14	QCD	-	-	7-24-83	SNS 572001 through 572010 furnished to Nutherm Int'l. Elma Production Test Data Sheets for P.S. units S.N.s 572001 through 572010 furnished to Nutherm Int'l.
15	LTR	-	-	11-15-83	Nutherm Int'l. letter to Elma discussing ^{on 12/14/83} 10 P.S. units and damage found on receipt by Nutherm Int'l.
16	P.O.	1078-9	-	6-3-82	Nutherm Int'l. P.O. to Elma for 41 ferroresonant 1 S. units Model # 164C 52610004
17	QCD	-	-	7-8-81 8-2-1982	Elma Certificates of Compliance for 41 P.S. units furnished to Nutherm Int'l. on P.O. 1078-9.
18	QCD	-	-	11-10- 1982	Elma Production Test Data Sheets for 41 P.S. unit furnished to N.I. on P.O. 1078-9.
19	LTR	-	-	10-14-84	Elma letter to Nutherm Int'l. references TV A 10581-19, Elma Job Order 5470 and indicates acquisition 69-827232

(continued)

TYPE OF DOC: LTR - LETTER

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

LTR - LETTER

INSPECTOR W. GUNTHER
SCOPE ELMA Power Supply - 24VDC

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1	DWG. SPEC	164CS261	8	7/15/82	General Electric Co Purchased Part Dwg. for 24VDC Power Supply
2	Job Book	-	-	-	List of all jobs from 3/16/4 to present including 24VDC Power Supply's
3	P.O.	5601	0	8/18/82	Elma Job order folder for 24VDC, 20A power supply for Peachbottom
4	P.O.	BW342773	0	8/5/82	PECO P.O. for Job order 5601; 164CS261-P004, Unit, S/N 560101
5	P.O.	5616	0	8/31/82	Elma Job order for 4 1E power supplys to Peachbottom, 24VDC, 20A
6	P.O.	BW321143	0	8/31/82	PECO P.O. for 5616; S/N 561601 to 04
7	P.O.	5794	0	5/16/84	Elma job order for 4 1E 20amp power supplys for Peachbottom
8	P.O.	BW368284	0	11/1/83	PECO P.O. for 5794; S/N 579401-404
9	B/M OF MATERIAL	BM-6120E	E	1/5/84	B/M for 20amp power supplys (NOTED capacitor CI changed in 9/17/79)
10	"	BM-6256	G	1/5/84	Transformer B/M used in 101 20amp power supplys - General revision in 11/14/82.
11	P.O.	5495	0	10/26/81	Elma Job order for 4 1E power supplys - 20 AMP supplys
12	P.O.	BW316091	0	11/12/81	PECO P.O. for Job order 5495 S/N 549501 to 04
13	P.O.	5865	0	10/17/84	Job order for 2 - 6amp 1E units for V-Y
14	P.O.	23039	0	6/16/87	Vermont Yankee P.O. resulting in job order 5865

TYPE OF DOCUMENT:

DWG - Drawing
SPEC - Specification
PRO - Procedure
QAM - QA Manual
QCD - QC Document
P.O. - Purchase Order
INM - Internal Memo

LTR - Letter
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-
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INSPECTOR W. G. Gantner

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SCOPE Elma 24 VDC Power Supplies

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15	P.O.	5450	0	7/31/81	Elma Job order for 4- Camp power supply for V-Y
16	P.O.	16624	0	6/7/81	V-Y P.O. for Job order 5450
17	Letter	VYV-245		5/14/82	V-Y to Elma on return of 2 power supplies due to low voltage
18	P.O.	5437		6/12/81	Recondition and retest 3 power supplies from V-Y.
19	P.O.	16565		6/11/81	V-Y P.O. for 5437 for S/N 5124001, 002, 004
20	QCD	-	-	4/21/82	Qual. Function record for M. Khan as Elec. Test Eng.
21	Personnel File				Personnel file for Tester John E. Furgis Jr.
22	P.O.	5834	0	8/20/84	Elma Job Order for 14 Power Supplies to Reliance Electric Co. - 10 Amp S/N 583401 + 583414
23	P.O.	5792	0	4/30/84	Job Order for one non IE QSA power supply P/N 169C8734/001 to GE. (P.O. #205-832887) S/N 579201
24	DOC				Record of Calibration - book includes list of MITE, cal. freq, and certifications.
25	DOC				Procedure Manual - Eng. Manufacturing, and Test procedures

TYPE OF DOCUMENT:

LTR - Letter

DWG - Drawing _____
 SPEC - Specification _____
 PRO - Procedure _____
 QAM - QA Manual _____
 QCD - QC Document _____
 P.O. - Purchase Order _____
 INM - Internal Memo _____

INSPECTOR Petrosino
SCOPE Elma Engineering RS Units

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1	Job Book	N/A	N/A	N/A	Master job book - record of nuclear / non nuclear jobs that Elma Eng has received since March 1964 - indexed by job number
2	QAM	QAM-1	4	1-1-83	Elma QM Manual (Magnetic Products) (Issue date was 1/22/81)
3	MPRO	4122-BCSP	A	7/24/74	Braid Copper Splice procedure
4	MPRO	5540	none	7/7/83	Cleaning & Deburring (coils - prior to wrapping)
5	MPRO	4330-TP	A	3/15/77	Taping Procedure
6	MPRO	none	none	10/14/77	Oxygen/Acetylene Welding Practices
7	MPRO	SI-C12-80	none	12/14/80	Testing, QC and Shipping Procedures
8	TIS	N/A	N/A	N/A	Elma Test & Inspection sheet for incoming, in process, final or repair activities - Identified processes are Electrical Test, Water Flow, Mechanical Insp, Reference by disposition
9	QAM ML	none	2	7/12/76	EE QA manually utilized to record where QAM were transmitted
10	VER	84-33-1	none	10/12/84	Yankee Atomic Vendor Evaluation
11	VER	Audit #88445	N/A	7/22/84	Scope QA Review evaluation - Pacific Gas & Electric
12	EAS	N/A	N/A	N/A	Internal Audit Schedule
13	Qualification	Q17	N/A	7/14/84	Qualification Record for VP & QA Mgr
14	Qualification	N/A	N/A	7/14/84	" " " Materials Mgr

TYPE OF DOC:

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

LTR - LETTER
MPRO - Manufacturing Procedures
TIS - Test & Inspection sheet
QAM - QAM Log
VER - Vendor Evaluation Report
EAS - Internal Audit Schedule

INSPECTOR Petrosino

SCOPE Elma Power Supply

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TYPE OF DOC: 300 50 BDL

DWG - DRAWING
SPEC - SPECIFICATION
PRO - PROCEDURE
QAM - QA MANUAL
QCD - QC DOCUMENT
POD - PURCHASE ORDER
IHM - INTERNAL MEMO

LTR - LETTER

PERSONS CONTACTED

Company Elma Engineering
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Inspector Oiler/Petrosino/Gunther

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* Attended exit meeting.

NAME(Please Print)

TITLE(Please Print)

ORGANIZATION(Please Print)

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