ORGANIZATION: NUCLEAR PACKAGING INCORPORATED
FEDERAL WAY, WASHINGTON

REPORT NO.: 99901047/86-01	INSPECTION DATE: May 5-8, 1986	INSPECTION ON-SITE HOURS: 128

CORRESPONDENCE ADDRESS: Pacific Nuclear Systems Incorporated
Nuclear Packaging Incorporated
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NUCLEAR INDUSTRY ACTIVITY: Designer and supplier of nuclear transportation and handling equipment.

ASSIGNED INSPECTOR: R. L. Cilimberg, Special Projects Inspection Section (SPIS) — Date 6/20/86

OTHER INSPECTOR(S): C. M. Abbate, SPIS
P. J. Prescott, SPIS
K. Aspinwall, Brookhaven National Laboratory

APPROVED BY: John W. Craig, Chief, SPIS, Vendor Program Branch — Date 6/20/86

INSPECTION BASES AND SCOPE:

A. BASES: 10 CFR Part 71, 10 CFR Part 21

B. SCOPE: Review the implementation of the Nuclear Packaging Incorporated (NUPAC) Quality Assurance (QA) program and compliance with the NRC requirements of 10 CFR Part 71 and 10 CFR Part 21 during the fabrication of transportation casks. Additionally, a limited review of the QA records for the two Model 125-B casks being used for the TMI-2 defueling.

PLANT SITE APPLICABILITY: Nuclear power facilities which use transportation casks fabricated by NUPAC, including Three Mile Island Unit 2.

A. VIOLATIONS:

1. Contrary to Section 21.21 of 10 CFR Part 21, Nuclear Packaging, Inc. (NUPAC) has not developed and implemented appropriate procedures to provide for evaluating defects, informing the licensee of the defect; or to assure that a director or responsible officer is informed if a basic component contains a defect, or to notify the Commission when information is obtained which reasonably indicates a defect.

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

2. Contrary to section 21.31 of 10 CFR Part 21, NUPAC issued purchase order number 3104-IB dated January 31, 1984, to Olympic Northwest Industries for a Type B cask without specifying that the provisions of 10 CFR Part 21 were applicable.

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

3. Contrary to paragraph 71.103 of Subpart H to 10 CFR Part 71, NUPAC, the licensee for the OH-142 cask, Certificate of Compliance (C of C) number 9073, which is being retrofitted to comply with C of C application number 9073, failed to ensure that an adequate QA program was established and executed at Ideal Machine and Manufacturing, Inc., a NUPAC subcontractor, as demonstrated by the following examples:

   Section 3 of QP-4, QP-7, QP-14 of the PNSI QAM requires, in part, that orientation and training programs be developed and administered, that quality functions be performed by personnel on the Quality Personnel List (QPL) and that quality records be maintained on PNSI form NPQ 004. However, NUPAC did not maintain documentation to exhibit that training had been developed and administered by the NUPAC quality department to maintain a listing of quality personnel at Ideal Machine and Manufacturing, Inc. Also, NUPAC did not record names of Ideal Machine and Manufacturing, Inc. personnel who performed quality related activities such as initiating SDRs, issuing hold tags, and procuring safety related material, on the QPL.

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

B. NONCONFORMANCES:

None.

C. UNRESOLVED ITEMS:

1. Nondestructive testing (NDT) documentation was not available in the Quality Record files for the Model 125-B casks fabricated under the requirements of NRC C of C number 9200. Applicable documentation for radiographic and liquid penetrant tests conducted during fabrication were not reviewed during this inspection.

2. Radiographic, liquid penetrant, visual, hydrostatic, ultrasonic and leak tests are required by the SAR prior to first use of the Model 125-B cask. The results of these Acceptance Tests were not reviewed during this inspection.

3. Leak testing of the Model 125-B casks is required by C of C number 9200. The qualification records for this individual were not reviewed during this inspection.

D. STATUS OF PREVIOUS INSPECTION FINDINGS:

Not applicable since this was the first NRC inspection of the NUPAC QA program.

E. INSPECTION FINDINGS AND OTHER COMMENTS:

1. Entrance and Exit Meetings

An entrance meeting was conducted on May 5, 1986 at the PNSI/NUPAC office in Federal Way, Washington. The purpose and scope of the inspection were discussed during this meeting. NUPAC is a subsidiary of Pacific Nuclear Systems Incorporated (PNSI), and therefore, NUPAC utilizes the PNSI QA manual (QAM). During the exit meeting, conducted on May 8, 1986, the inspection findings and observations were summarized.

2. Nondestructive Testing

The Safety Evaluation Report (SER) associated with NRC Certificate of Compliance Number 9200, "Model 125-B Transportation Package," dated April 11, 1986, states that nondestructive testing requirements are in accordance with the ASME Code, Section III, Subsection NB. This subsection of the ASME Code states that personnel performing NDT activities are to be qualified in accordance with the guidelines of ASNT SNT-TC-1A.

NUPAC has not established a program for NDT training and certification of personnel performing NDT activities and does not employ personnel qualified to perform NDT in accordance with the ASME Code, Section III, Subsection NB. Leak testing of the Model 125-B casks was performed by a NUPAC employee and is discussed in Section E.3 below.

NDT activities performed to satisfy ASME Code requirements are conducted for NUPAC by various subcontractors. X-Ray, Inc., a subcontractor to NUPAC performs NDT on casks being retrofitted at Ideal Machine and Manufacturing, Inc. The NUPAC Approved Supplier's List and the Quality Department Evaluation of Supplier Quality Report were reviewed before inspecting X-Ray, Inc. At X-Ray, Inc.'s facility, a NDT documentation review was performed. The inspectors reviewed the NDT Procedure Manual and a number of procedures. These procedures included training and certification, radiography (RT), magnetic particle (MT), liquid penetrant examination (PT), ultrasonic examination (UT), visual examination (VT), quality control, and gamma scan.

The personnel qualifications and certifications for three X-Ray, Inc. personnel were also reviewed. Each file contained the discipline (RT, UT, VT, MT, PT), the level to which the person is qualified in each discipline (Level I, II, or III), the certification date, the composite grade from written exams, and eye exam results.

3. Review of Model 125-B Cask Quality Records

A limited review of the QA records for two Model 125-B casks was performed during the inspection. The Model 125-B shipping casks will be used to transport canisters which will contain the Three Mile Island (TMI) Unit 2 core debris. During the review, the inspectors examined Subcontract C84-130482 dated August 7, 1984, between EG&G and NUPAC. This subcontract described the purpose, scope of work, delivery requirement criteria, payment, standard terms and conditions of the purchase order and subcontracts, and administrative details. Scope of Work 7255, Revision 2, dated December 12, 1984, outlined the quality clauses and documentation requirements applicable to the casks.

There are approximately 90 Quality Record Files which comprise the quality documentation for these casks; several of which were reviewed. Each file covers a step in the fabrication of the casks. The file

consists of the quality planners (shop travelers), Certified Material Test Reports (CMTRs), Certificates of Conformance, Document Change Notices (DCNs), Supplier Disposition Requests (SDRs), Quality Discrepancy Reports (QDRs), and drawings. Several of the packages reviewed were incomplete, in that, the SDRs, QDRs, radiographic and liquid penetrant test reports referenced in the shop travelers were not included in the file. NUPAC maintains a separate file of all SDRs and QDRs, and the NUPAC QA manager stated that upon completion of training of TMI personnel on the use of the casks, the files would be reviewed and required documents assembled to complete the file.

Unresolved Item C.1 was identified in this area.

Certificate of Compliance (C of C) number 9200 for the Model 125-B cask requires that each package meet the Acceptance Tests outlined in Section 8.0 of the application, the application being the Safety Analysis Report (SAR). Section 8.0 of the SAR lists the tests which are to be performed prior to first use of the cask. These acceptance tests include visual inspection, liquid penetrant testing, ultrasonic inspection, radiographic inspection, hydro testing, gamma scan, and eight separate leak tests.

The records of the Acceptance Tests were not reviewed during the inspection. The adequacy of the preparation of the NDT procedures, the performance of the tests and the review of the results are unresolved. This unresolved item will be reviewed in a subsequent inspection of NUPAC June 21-26, 1986.

Unresolved Item C.2 was identified in this area.

As discussed above in Section E.2, NUPAC currently does not perform NDT to comply with the requirements of the ASME Code. However, leak tests performed on the 125-B were conducted by NUPAC personnel. These tests are referenced on SDR 758 dated November 13, 1985. Leak tests are also required as part of the overall cask acceptance program.

This SDR was generated as a result of the inner containment vessel wall pipe's diameter being out of allowed tolerance. The disposition of the SDR required that three separate leak tests be performed on the Inner Containment Vessel (ICV). The disposition of the SDR also called for NUPAC QA personnel to be present for at least the third test. In an interview with NUPAC personnel, the inspectors

were told that the results corresponded to the three tests which were required by SDR 758 and that a NUPAC QA person was present and performed all three tests while the cask was located at Chicago Bridge and Iron in Salt Lake City, Utah.

The results of the tests were not attached to the SDR, but were later located in Quality Record File IT-58. The leak test results, dated November 19-21, 1985 did not reference the SDR, nor was there any indication that the third test had been witnessed by NUPAC QA personnel.

Based upon the three leak tests performed as a result of SDR758, and an understanding that all the leak tests performed on the 125-B casks were performed by the same NUPAC employee, questions concerning the adequacy of the leak tests were identified. While the NUPAC individual who performed these leak tests did not meet the training and certification requirements of SNT-TC-1A, the inspectors noted that the requirements concerning qualifications of individuals performing leak tests are subject to intepretation. However, individuals performing leak tests are required to have adequate training. The qualifications of the individual performing leak tests on the 125-B casks were not reviewed during this inspection.

Unresolved Item C.3 was identified in this area.

4. <u>10 CFR Part 21</u>

During the inspection, the inspectors reviewed QP-7 of the PNSI QAM, "Discrepancy Reporting and Control." During the review it was noted that Section 3.1 was not adequate for reporting 10 CFR Part 21 defects. The PNSI QAM requires that a discrepancy be written as a QDR or an SDR and the preparation and disposition be performed by approved quality personnel. The procedure fails to address a procedure to be followed by personnel in reporting, evaluating, or informing the licensees or purchaser of a deviation reportable to the NRC. Section 3.1 of QP-7 is a general statement which references 10 CFR Part 21. It is not a procedure to implement the requirements of Section 21.21 of 10 CFR Part 21.

Violation A.1 was identified in this area.

While reviewing a data package for a Type B transportation cask (not the Model 125-B casks), the NRC inspectors determined that NUPAC issued purchase order number 3104-IB, dated January 31, 1984, to Olympic Northwest Industries without specifying that the provisions of 10 CFR Part 21 were applicable.

Violation A.2 was identified in this area.

While at X-Ray Incorporated in Seattle, Washington and Ideal Machine and Manufacturing, Inc. in Tacoma, Washington, the NRC inspectors determined that a notice was not posted which describes the regulations and procedures that are required by Section 21.6 of 10 CFR Part 21.

5. Inspection of NUPAC Supplier

Fabrication, assembly, and modifications of NUPAC shipping casks are contracted to NUPAC approved suppliers. One such supplier's facility, Ideal Machine and Manufacturing, Inc., was audited during this inspection. NUPAC requires that Ideal Machine and Manufacturing, Inc. and other approved suppliers use the NUPAC QAM. Ideal Machine and Manufacturing, Inc. was audited to determine whether or not NUPAC was maintaining adequate control over applicable Ideal QA activities, as required by paragraph 71.103 of Subpart H to 10 CFR Part 71.

The NRC inspectors toured the Ideal Machine and Manufacturing, Inc. facility and reviewed applicable welding procedures, procedure qualification records, performance qualification records, drawings, procedures, instructions, instrument calibration records, calibration frequencies, and recall dates for the casks covered by C of C number 9073 issued to NUPAC by the NRC. These casks are being retrofitted by Ideal Machine and Manufacturing, Inc. to comply with NUPAC C of C application number 9208. Interviews with Ideal Machine and Manufacturing, Inc. personnel were also held to discuss the implementation of design changes, training, and the qualification of personnel. The following is a description of the areas reviewed and findings.

a) Supplier personnel not trained per PNSI QAM

Section 3 of procedures QP-4, QP-7, and QP-14 of the PNSI QAM requires, in part, that quality functions be performed by personnel who are on the Quality Personnel List (QPL) and that orientation and training programs shall be developed and administered by the NUPAC Quality Department as necessary to maintain quality personnel proficiency. Qualification records of personnel are also required to be maintained on PNSI form NPQ 004. The records should delineate the qualifications of Quality Department personnel performing quality related activity for NUPAC.

During an interview with Ideal Machine and Manufacturing, Inc. personnel, the NRC inspector requested the training and qualification records of Ideal Machine and Manufacturing, Inc. personnel. The records requested were for those personnel who initiate SDRs, issue hold tags, and procure safety related material and thus are required to have a working knowledge of the NUPAC QA program.

Neither Ideal nor NUPAC maintain the required documentation to show that training programs had been developed and administered by the NUPAC Quality Department to ensure the qualification of quality personnel at Ideal Machine and Manufacturing, Inc. as defined in QP-4, QP-7 and QP-14.

b) SDRs and "reject tags" issued by unqualified personnel

During a review of the documentation for work being performed on a cask for NUPAC, open SDR number 1024 was noted. The SDR is a document used by Ideal Machine and Manufacturing, Inc. to request design changes and report discrepant items noted during the manufacturing process. Issuing an SDR is considered a quality related activity and should be performed by quality personnel. However, SDR number 1024 was written by an Ideal Machine and Manufactuing Inc. employee who had not been listed on the QPL by NUPAC.

When an SDR is generated, items referenced on the open SDR are processed in accordance with Section 3.8 of procedure QP-7 of the PNSI QAM. This procedure requires that discrepant items be identified with a red "reject tag" and placed in a controlled segregated area pending disposition. The controlled area shall be clearly marked "Quality Discrepant Item Area" and totally controlled by the Quality Department. If the discrepant items are too large or heavy to facilitate their movement to the controlled area, the red "reject tag" will suffice.

The NRC inspector examined the cask which pertained to SDR number 1024. A "reject tag" had not been placed on the cask, an item too large to be placed in a controlled area.

c) Purchase Order (PO) issued by unqualified personnel

During the review of POs, it was noted that Ideal Machine and Manufacturing, Inc. issued PO 416200 dated November 15, 1985, to X-Ray, Inc. for magnetic particle examination. Section 3.1

of QP-4 of the PNSI QAM requires that all POs be reviewed by personnel on NUPAC's QPL. The personnel at Ideal who wrote and reviewed PO 416200 were not on the NUPAC approved QPL, NP Q004, dated August 8, 1984.

Violation A.3 was identified as a result of the above reviews.

6. Audits

a) Internal

The inspectors reviewed NUPAC's internal audit program. QP-13 of the PNSI QAM requires that independent internal audits be performed annually. Three audits of NUPAC performed by outside organizations are considered the equivalent of one NUPAC internal audit. The procedure also states that each audit will consist of an Audit Check Sheet, audit findings, and corrective action commitments.

The 1985 Internal Quality Audit was reviewed. The audit took place between November 1984 and March 1985 in order to determine the effectiveness of the NUPAC QA program. The audit was conducted by using a check list which encompassed, in detail, the 18 criteria of Subpart H to 10 CFR Part 71. The audit report listed the criteria, the finding under that criteria, the response, the corrective action and the commitment date.

The inspectors also reviewed the follow-up on the findings of this audit. In the majority of instances reviewed, the corrective action had not been performed. Items NUPAC committed to have completed in June or July 1985, were still not complete. The auditor who performed the original audit had reviewed the follow-up on the findings and also noted that the items were not being completed on time.

The lead auditor for this internal audit was performing the audit in the areas of design review and auditing; areas in which he had direct responsibilities. When the NRC inspectors questioned the NUPAC QA manager, he stated that the audit was performed as the employee's first assignment after being hired and the employee was not involved at that time in any of the activities he was auditing.

b) External

The inspector reviewed three audits performed by NUPAC of their subcontractors and suppliers. QP-13 of the PNSI QAM requires that audits be performed at approved suppliers' facilities every three years unless the supplier is "continuously" performing work for NUPAC ("continuously" is defined as having no more than a four month lapse between contracts). External audits are performed during the contract and confirm that the 18 criteria of Subpart H to 10 CFR Part 71 are being properly implemented. An audit check list is used to accomplish the audit and at the conclusion of the audit the Quality Inspector stamps and dates the Inspection Instruction to denote that the supplier has complied with the applicable criteria of 10 CFR Part 71.

The audits and follow-up on findings of Industrial Alloy Fabricators, Ideal Machine and Manufacturing, Inc., and Metalex Products were reviewed. These audits were performed by a qualified auditor as required by QP-13 of the PNSI QAM.

7. Auditor Qualifications

The qualification records for three NUPAC auditors were reviewed. In each file, a Certificate of Inspection, Examination and Testing Personnel was found. The NUPAC certificate included the qualification category (inspector, examination, testing), NUPAC qualification level (one, two, or three), activities the person is qualified in (mechanical, electrical, hydraulic, etc.), the basis of the certification (education, experience), and the dates of certification and future recertification.

Also in the files was a Record of Lead Auditor Qualifications. The record, which is evaluated annually, consisted of the qualification point requirements for education and experience, a record of audit communication skills, training courses and audit participation. Two of the NUPAC auditors are currently certified as lead auditors. Other documentation included in the files were resumes, professional engineer certifications, and certifications from societies such as the American Society of Quality Control and the American Welding Society.

8. Design Review

In addition to fabrication of transportation casks, NUPAC performs design activities. QP-2, QP-7, and QP-17 of the PNSI QAM were reviewed and describe the interfaces, review, and change procedures concerning the design of a cask.

Discrepancy Reporting and Control, QP-7 describes the requirements and procedures for identification, reporting and dispositioning discrepancies both within PNSI and its suppliers. The SDR is a form utilized by NUPAC's suppliers for the requests of design changes and the reporting of discrepant items noted during the manufacturing process. The SDR form presently being used does not clearly define that, in the event a deficiency is discovered by the sub-tier vendor, whether that deficiency is a routine design change or a significant nonconformance which could impair the intended function of the shipping cask.

The QDR is a document used to record quality discrepancies noted by NUPAC during activities, including material and equipment receipt, fabrication, testing, operation, and in-service inspection. Its range of applicability also includes all discrepancies from simple documentation errors up to major test failures.

After a QDR or SDR is written, it is required to be reviewed by the Material Review Board (MRB). The MRB is a group of representatives from quality, engineering, procurement, manufacturing, and operations who review and disposition QDRs and SDRs. If the disposition involves a design change, the quality and engineering departments are responsible for review of the change and must assure that the changes still comply with original requirements.

After the change is reviewed, a Document Change Request (DCR) is written and submitted to Document Control for review. After the DCR is accepted, a Document Change Notice (DCN) is written and attached to the applicable document until it is incorporated as a change to the design.

A potential weakness in the implementation of the SDR system is the absence of a distinction in the significance of discrepancies on the SDR. This practice has the potential to result in resolution of a SDR which may adversely impacts cask design without receiving appropriate review and approval.

9. Measuring and Test Equipment

During the inspection the inspectors reviewed calibration activities for Ideal Machine and Manufacturing, Inc.. The procedure, "Calibration of Inspection and Shop Measuring Instrumentation", dated December 11, 1981, stated that all master gage blocks and standards be calibrated once a year by an outside calibration firm and the

shop instruments be calibrated against the master gage blocks and standards twice a year. The calibration status of each piece of equipment was to be maintained in a master file and on the calibration sticker. Both the master file and sticker include the date of calibration, the calibration due date, the inspector's stamp or signature, and the signature of the person performing the calibration.

The inspector selected six pieces of equipment and verified that each was being calibrated as required by the Ideal Machine and Manufacturing, Inc. calibration procedure. The inspector also reviewed the documentation for the master gage blocks and standards. The gage blocks calibrated at Northwest Calibration System, Inc., were calibrated in accordance with the National Bureau of Standards Test 738/227675 and had a recertification date of June 12, 1986.

F. PERSONS CONTACTED:

Pacific Nuclear Systems Inc.
*D.F. Jones, Chairman/President
*E.L. Brooks, Staff

Nuclear Packaging Inc.

*R.T. Haelsig, President
*J.R. Olivadoti, Q.A. Manager
*D. Schmoker, Vice President of Engineering
H. Wunsch, Purchasing
*P. Pearson, Design Supervisor
K. Hanna, Q.C. Engineer
G. Hill, Quality Engineer
C. Peters, Document Control

X-Ray Inc.

G. Will, Vice President/NDT-Level III
J. Waddilove, NDT-Level III

Ideal Machine and Manufacturing Inc.

J. Anderson, Quality Control

*Attended Exit Meeting

INSPECTOR R. CILIMBERG

SCOPE

DOCUMENTS EXAMINED

DOCKET NO. 99901047

REPORT NO. 86 - 01

PAGE 1 OF

ITEM NO.	TYPE OF DOCUMENT	DOCUMENT NO.	REV.	DATE	TITLE / SUBJECT
1	QAM	134	13	2/25/86	Quality Assurance Manual - Controlled
2	SPEC	ES-01	5	3/14/86	Specification For Fabricating and Machining Steel Parts
3	PRO	VT-01	0	2/19/85	Procedure for Visual Inspection Weldments and Adjacent Materials
4	PRO	LT-04	3	12/7/82	Soap Bubble (Low Pressure) Leak Test
5	PRO	LT-29	1	4/2/86	Seal Integrity Leak Test - NUPAC 10-142 Type B Shipping CONTAINER
6	PRO	LT-23	1	10/24/85	Seal Integrity Leak Test - OH-142 Type B shipping Container
7	SPEC	NPI-F6	4	4/14/86	Urethane Foam Specification 19-20 lb/ft³ Density
8	PRO	GS-001	4	2/2/83	Gamma Scan of Shielded Container
9	PO	3104-IB	0	1/31/84	Model OH-142 Cask with Stainless Steel Liner
10	QCD	243	NA	6/4/84	Gamma Scan Report of Cask 14-210H-29, S/N 004-Z1
11	QCD	9279	NA	10/24/85	Gamma Scan Report of Cask 125-B, S/N 002-IT
12	QCD	9255	NA	10/2/85	Gamma Scan Report of Cask 125-B, S/N 001-IT
13	QCD	5380	NA	4/22/85	Gamma Scan Report of Cask OH-142, MK-1, S/N 007-JO
14	QCD	5181	NA	4/9/85	RT Report (FILM) for 14-210 Cask, Long seam 3/8" Thick PO-3206-Z19
15	QCD	5182	NA	4/9/85	RT Report for OH-142 Cask - Outer and Inner Walls PO-3206-JO

TYPE OF DOC:

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

LTR - LETTER

INSPECTOR Claudia Abbate

SCOPE _____

DOCUMENTS EXAMINED

DOCKET NO. 99901047

REPORT NO. 86 - 01

PAGE 1 OF 2

ITEM NO.	TYPE OF DOCUMENT	DOCUMENT NO.	REV.	DATE	TITLE / SUBJECT
1	QAM	—	13	2/25/86	Quality Assurance Manual
2	PRO	—	—	12/1/81	Ideal Calibration Plan Calibration of Inspection and Shop Manufacturing Instrumentation
3	QC	—	—	—	Qualifications of Joe Olivadoti
4	QC	—	—	—	Qualifications of Gerald Hill
5	QC	—	—	—	Qualifications of Keith Hanna
6	EX	—		7/25/85	Audit of Industrial Alloy Fabricators
7	EA	—		5/4/85	Audit of Industrial Alloy Fabricators
8	EA	—		10/2/85	Audit of Ideal Machine and Manufacturing
9	EA	—		4/29/85	Audit of Metalex Products
10	IA	—		1985	1985 Internal Quality Audit of NUPAC QA Program
11	QC	—		9/16/79	Vendor Evaluation Checklist for Metalex Products
12	PRO	IT-31	1	10/3/85	Quality Planner for Outer Shell Cask
13	PRO	IT-103	1	4/14/86	Quality Planner for NUPAC 125-B Shipping Cask Assembly
14	PRO	IT-41	1	12/10/85	Quality Planner for Lid, Cask
15	PRO	IT-57	1	12/10/85	Quality Planner for Lid Assy, ICV

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LTR - LETTER
EA - External Audit
IA - Internal Audit

INSPECTOR Claudia Abbate

SCOPE _____

DOCUMENTS EXAMINED

DOCKET NO. 99901047

REPORT NO. 86 - 01

PAGE 2 OF 2

ITEM NO.	TYPE OF DOCUMENT	DOCUMENT NO.	REV.	DATE	TITLE / SUBJECT
	PRO	IT-58	1	12/10/85	Quality Planner for ICV Assembly
	PRO	IT-30	1	12/10/85	Quality Planner for Inner Shell Outer Cask
	PRO	IT-59	1	12/09/85	Quality Planner for Cask Assembly
	SPEC	EG6/TMI 9255	2	12/18/84	Scope of Work for Shipping Casks To Transport TMI-2 Core
	—	C84-1304-82	—	8/7/84	Subcontract between EG&G and NUPAC for TMI Shipping Casks

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SPEC - SPECIFICATION
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QM - QA MANUAL
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LTR - LETTER

INSPECTOR Kenneth Aspinwall

SCOPE Documents Examined during NUPAC inspection 5/5-8/86

DOCKET NO 9990 1047

REPORT NO.

DOCUMENTS EXAMINED

ITEM NO.	TYPE OF DOCUMENT	DOCUMENT NO.	REV.	DATE	TITLE/SUBJECT
1	QAM	Control No. 137	13	2-25-86	Quality Assurance Manual - Pacific Nuc. Systems
2	PRO	QP-1	3	8-13-84	Quality Manual Control Procedure
3	PRO	QP-2	5	2-25-86	Design Review Procedure
4	PRO	QP-3	6	2-25-86	Document Control
5	PRO	QP-4	7	9-26-85	Procurement Control
6	PRO	QP-5	6	9-26-85	Quality Planning
7	PRO	QP-6	4	9-26-85	Inspection and Verification
8	PRO	QP-7	6	9-26-85	Discrepancy Reporting and Control
9	PRO	QP-8	3	8-13-84	Corrective Action
10	PRO	QP-9	5	9-26-85	Quality Records
11	PRO	QP-10	5	2-25-86	Quality Forms Control
12	PRO	QP-11	3	8-13-84	Calibration Control
13	PRO	QP-12	2	8-13-84	Material Control
14	PRO	QP-13	5	9-26-85	Audits

TYPE OF DOCUMENT:

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

LTR - Letter

INSPECTOR Kenneth Aspinwall
SCOPE Documents Examined during NUPAC inspection 5/5-8/86

DOCKET NO 99901047
REPORT NO.

DOCUMENTS EXAMINED

ITEM NO.	TYPE OF DOCUMENT	DOCUMENT NO.	REV.	DATE	TITLE/SUBJECT
15	PRO	QP-14	5	10/25/85	Quality Assurance Training
16	PRO	QP-15	1	8/13/84	Engineering Holds
17	PRO	QP-16	2	9/25/85	Special Process Qualification and Control
18	PRO	QP-17	2	9/25/85	Design Control
19	PRO	IM-7	6	7/10/85	Welding Procedure Specification (Stainless to Stainless)
20	PRO	IM-7	0	3/20/85	Procedure Qualification Record
21	PRO	IM-7	N/A	N/A	Welder Performance Qualification (R. Lavergne Stamp# RL)
22	P.O.	4863-Z41-Z44	0	3/28/86	Hansen Supply
23	PRO	VT-01	0	2/19/85	Visual Inspection Weldments & Adjacent Materials
24	PRO	LT-23	1	10/24/85	Seal Integrity Leak Test (OH-142 TYP "B" CASK)
25	PRO	RT001-80	3	3/14/86	Radiography Inspection - X-Ray, Inc.
26	PRO	PT002-70	9	9/17/85	Penetrant Testing - X-Ray, Inc.
27	PRO	RT030-84	1	1/19/84	Radiography Inspection - X-Ray, Inc.
28	PRO	RT006	2	2/7/83	Radiography Inspection - X-Ray, Inc.

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LTR - Letter

INSPECTOR Kenneth Aspinwall

SCOPE Documents Examined during NUPAC inspection 5/5-8/86

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REPORT NO.

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ITEM NO.	TYPE OF DOCUMENT	DOCUMENT NO.	REV.	DATE	TITLE/SUBJECT
29	PRO	MT003-72	5	9/4/84	Magnetic Particle Inspection - X-Ray, Inc
30	PRO	PT106	0	12/7/77	Penetrant Testing - X-Ray Inc.
31	PRO	UT009	0	4/28/77	Ultrasonic Examination - X-Ray, Inc.
32	PRO	UT021	3	3/8/85	Ultrasonic Examination - X-Ray, Inc.
33	PRO	VT-001	2	1/6/82	Visual Inspection - X-Ray, Inc
34	PRO	QC-002	0	10/3/79	Quality Control Inspection - X-Ray, Inc.

TYPE OF DOCUMENT:

DWG - Drawing
SPEC- Specification
PRO - Procedure
QAM - QA Manual
QCD - QC Document
P.O.- Purchase Order
[illegible] Memo

LTR - Letter
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___ - _____
___ - _____

INSPECTOR Prescott

SCOPE

DOCUMENTS EXAMINED

DOCKET NO. 99901047

REPORT NO. 86 - 01

PAGE ____ OF ____

ITEM NO.	TYPE OF DOCUMENT	DOCUMENT NO.	REV.	DATE	TITLE / SUBJECT
1	MANUAL	—	—	5/1/78	PACIFIC NUCLEAR SYS. QUALITY ASSURANCE MANUAL
2	—	—	—	5/2/86	SDR FOR DWG X-103-102 REV. C
3	—	—	—	—	DWG X-103-102 REV. C
—	—	—	—	—	WORK PACKAGE FOR OH142 MK1
					APPROVED

TYPE OF DOC:

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