Manual No._____

PULLMAN POWER PRODUCTS
DIVISION OF M. W. KELLOGG

WILLIAMSPORT, PENNSYLVANIA

MECHANICAL CONSTRUCTION OPERATIONS

CORPORATE FIELD

NUCLEAR QUALITY ASSURANCE PROGRAM MANUAL

ASME SECTION III, DIV. 1

ISSUE #0 DATED 5/16/78
REVISION DATED 2/1/79
REVISION DATED 3/29/79
REVISION DATED 11/16/79
REVISION DATED 9/29/80
REVISION DATED 5/8/81
REVISION DATED 3/1/82
REVISION DATED 9/1/82

Assigned To:_____

Organization: Pullman Higgins

Date Assigned:_____

43747.09

AUTHORIZED INSPECTION AGENCY STATUS SHEET

PROPOSED REVISION, DATED 9/1/82

TO THE

PULLMAN POWER PRODUCTS CORPORATION

SEABROOK PROJECT

QUALITY ASSURANCE PROGRAM MANUAL
ASME SECTION III, DIVISION 1
ISSUE #3, REVISION 3-1-82

ACCEPTED AS IS _____ 10/20/82
INSPECTION SPECIALIST DATE
ROYAL INDEMNITY

ACCEPT WITH COMMENT
(See Attached) _____
INSPECTION SPECIALIST DATE
ROYAL INDEMNITY

UNACCEPTABLE
(See attached) _____
INSPECTION SPECIALIST DATE
ROYAL INDEMNITY

FORWARD

WORK UNDER THIS CONTRACT WILL BE PERFORMED UNDER A JOINT VENTURE OF PULLMAN POWER PRODUCTS CO. AND J.C. HIGGIN S CO., INC.

ALL WORK PERFORMED PURSUANT TO THE CONTRACT BY THE JOINT VENTURE WILL BE SUBJECT TO THE QUALITY ASSURANCE PROGRAM OF PPP IN FULL ACCORDANCE WITH ASME SECTION III NUCLEAR CODE. THE JOINT VENTURE SHALL BE SUBJECT TO, AND ADOPT PPP'S QUALITY ASSURANCE PROGRAM, AS ITS OWN. THE PRESIDENT, PULLMAN POWER PRODUCTS, SHALL RETAIN SOLE AUTHORITY FOR ANY DECISIONS RELATIVE TO QUALITY.

7/1/81

J. E. Bowes
Senior Vice President
Piping & Mechanical Group

TO BE USED ONLY FOR JOB No. 7035

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

Certificate of Authorization

Number N - 1101-2

This is to accredit

PULLMAN POWER PRODUCTS
DIVISION OF PULLMAN, INC.
REACH ROAD INDUSTRIAL PARK
WILLIAMSPORT, PENNSYLVANIA 17701

as authorized to use the

N PT

symbol of The American Society of Mechanical Engineers for

CLASS 1, 2, 3 & MC VESSEL PARTS & APPURTENANCES AND CLASS 1, 2 & 3 PENETRATION ASSEMBLIES, PIPING SUBASSEMBLIES & COMPONENT SUPPORTS AT THE SEABROOK NUCLEAR STATION, UNITS #1 & #2; SEABROOK, NEW HAMPSHIRE ONLY

in accordance with the applicable rules of the Boiler and Pressure Vessel Code of The American Society of Mechanical Engineers. The use of the Code symbol and the authority granted by this certificate of authorization are subject to the provisions of the agreement set forth in the application. Any construction stamped with this symbol shall have been built strictly in accordance with the provisions of the Boiler and Pressure Vessel Code of The American Society of Mechanical Engineers.

THIS AUTHORIZATION *expires on* : OCTOBER 27, 1983

Authorized on OCTOBER 27, 1980 *for*

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS
by the BOILER AND PRESSURE VESSEL COMMITTEE

Chairman Walter L. Harding

Secretary [signature]

Director, Accreditation [signature]

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

Certificate of Authorization

Number N - 1102-2

This is to accredit

PULLMAN POWER PRODUCTS
DIVISION OF PULLMAN, INC.
REACH ROAD INDUSTRIAL PARK
WILLIAMSPORT, PENNSYLVANIA 17701

as authorized to use the

NA

symbol of The American Society of Mechanical Engineers for

INSTALLATION OF CLASS 1, 2 & 3 COMPONENTS, PARTS, APPURTENANCES, PIPING SUBASSEMBLIES & COMPONENT SUPPORTS AT THE SEABROOK NUCLEAR STATION, UNITS #1 & #2; SEABROOK, NEW HAMPSHIRE ONLY

in accordance with the applicable rules of the Boiler and Pressure Vessel Code of The American Society of Mechanical Engineers. The use of the Code symbol and the authority granted by this certificate of authorization are subject to the provisions of the agreement set forth in the application. Any construction stamped with this symbol shall have been built strictly in accordance with the provisions of the Boiler and Pressure Vessel Code of The American Society of Mechanical Engineers.

THIS AUTHORIZATION *expires on* OCTOBER 27, 1983

Authorized on OCTOBER 27, 1980 *for*

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS
by the BOILER AND PRESSURE VESSEL COMMITTEE

Chairman Walter L. Harding

Secretary Gill Ensinger

Director, Accreditation John A. Spadafora

Pullman Power Products		INDEX SECTION NO.
PREPARED BY: D. G. Davis	APPROVED BY: F. F. Gilkin	DATE: 9/1/82
QUALITY ASSURANCE PROGRAM	INDEX	PAGE NO. 1 of 1

SECTION	TITLE	DATE OF LAST REVISION
Index	Index	9/1/82
Introduction	Introduction	5/8/81
Definitions	Definitions	5/8/81
I	Organization	9/1/82
II	Quality Assurance Program	9/1/82
III	Design Control	9/1/82
IV	Procurement Document Control	5/8/81
V	Instructions, Procedures & Drawings	9/1/82
VI	Document Control	9/1/82
VII	Control of Purchased Material, Items and Services	5/8/81
VIII	Identification and Control of Materials and Items	5/8/81
IX	Control Special Processes	5/8/81
X	Inspection	5/8/81
XI	Test Control	5/8/81
XII	Control of Measuring and Test Equipment	5/8/81
XIII	Handling, Storage and Shipping	5/8/81
XIV	Inspection, Test and Operating Status	5/8/81
XV	Nonconforming Materials, Parts or Components	9/1/82
XVI	Corrective Action	5/8/81
XVII	Quality Assurance Records	5/8/81
XVIII	Audits	9/1/82
Forms Index	Forms	9/1/82

SF 1.06

Pullman Power Products		INDEX DOCUMENT NO.
PREPARED BY: R. G. Davis	APPPROVED BY: E. F. Gerwin	ISSUE DATE: 5/8/81
Quality Assurance Program	TO BE USED ONLY ON JOB # INDEX	PAGE NO. 1 of 3

P O Box 3350 Peach Road
Wellsville, Pennsylvania 17701
Telephone (717) 323 9901
Telex 84-1616
Cable Pullman Wellsville

Pullman Power Products

INDEX OF REVISIONS

☑ ASME SECTION III, DIV. 1 ☐ ASME SECTION VIII, DIV. 1 ☐ SHOP

☐ ASME SECTION I ☐ ANSI 331.1 ☐ FIELD

REVISION DATE 5/8/81

NEW MANUAL N/A

ALL PAGES REVISED N/A
(Check Blanks if Applicable

SECTION	PAGE ___ OF ___	PARAGRAPH
Statement of Authority		
DEF	1 of 7	Audit
	2 of 7	Authorized Nuclear Inspector Supervisor
	2 of 7	Company
	5 of 7	Procedure Qualification Records
	6 of 7	Survey
1	1 of 13	1.3.1
	1 of 13	1.3.2
	2 of 13	1.3.3
	2 of 13	1.3.4
1	2 of 13	1.3.5
	2 of 13	1.3.6
	3 of 13	1.3.7
	4 of 13	1.3.8
	4 of 13	1.3.9
	4 of 13	1.3.10
	5 of 13	1.3.11
	5 of 13	1.3.12
	5 of 13	1.3.13
	6 of 13	1.3.14
	7 of 13	1.3.15
	7 of 13	1.3.16
	7 of 13	1.3.17
	8 of 13	1.3.18
	8 of 13	1.3.19
	8 of 13	1.3.20
	8 of 13	1.3.21
	8 of 13	1.3.22

Pullman Power Products

P O Box 3309 Harsh Road
Wilmington, North Carolina 1/20
Telephone (919) 343 0391
Telex 841416
Cable Address Information

INDEX OF REVISIONS

☒ ASME SECTION III, DIV. 1 ☐ ASME SECTION VIII, DIV. 1 ☐ SHOP

☐ ASME SECTION I ☐ ANSI B31.1 ☐ FIELD

REVISION DATE 5/8/81

NEW MANUAL N/A

ALL PAGES REVISED N/A
(Check Blanks if Applicable

SECTION	PAGE ___ OF ___	PARAGRAPH
I	9 of 13	1.3.23
	9 of 13	1.3.24
	9 of 13	1.3.25
	9 of 13	1.3.26
	10 of 13	1.3.27
	10 of 13	1.3.28
	10 of 13	1.3.29
	10 of 13	1.3.30
	10 of 13	1.3.31
	11 of 13	1.3.32
	11 of 13	1.3.33
	11 of 13	1.3.34
	11 of 13	1.3.35
	11 of 13	1.3.36
	13 of 13	Organiza-tion Chart
II	1 of 7	2.1.1
	1 of 7	2.2.5
	2 of 7	2.2.6
	2 of 7	2.2.7
	2 of 7	2.2.8
	2 of 7	2.2.9
II	2 of 7	2.3.2
	3 of 7	2.3.3
	3 of 7	2.3.4
	3 of 7	2.3.5
	4 of 7	2.3.6
	4 of 7	2.4.4
	4 of 7	2.4.5
	4 of 7	2.5.1
	6 of 7	2.5.5
III	3 of 4	3.8.3
IV	1 of 3	4.2.1
VII	3 of 5	7.4.2
	4 of 5	7.4.6
	5 of 5	7.5.5
IX	3 of 4	9.3.1

Pullman Power Products		INDEX DOCUMENT NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin EG	ISSUE DATE: 5/8/81
Quality Assurance Program	TO BE USED ONLY ON JOB # INDEX	PAGE NO. 3 of 3

Pullman Power Products

P O Box 5308 [illegible]
[illegible] 17701
[illegible] (717) [illegible]
[illegible]
[illegible]

INDEX OF REVISIONS

☑ ASME SECTION III, DIV. 1 ☐ ASME SECTION VIII, DIV. 1 ☐ SHOP

☐ ASME SECTION I ☐ ANSI B31.1 ☐ FIELD

REVISION DATE 5/8/81			NEW MANUAL N/A ALL PAGES REVISED N/A (Check Blanks if Applicable		
SECTION	PAGE ___ OF ___	PARAGRAPH	SECTION	PAGE ___ OF ___	PARAGRAPH
XII	3 of 3	12.4.5			
XV	4 of 5	15.3.6			
XVI	2 of 3	16.3.6			
XVIII	2 of 3 3 of 3	18.7.1 18.7.4			
FORMS	2 10 10B 19D 20 22A 25 32 34A 53				

Pullman Power Products		INDEX SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	INDEX	PAGE NO. 1 of 1

P O Box 3200 Darwin Road
Bradford, Pennsylvania 16701
Telephone (814) 362-3501
Telex 091-1468
Cable Pullco Bradford

Pullman Power Products

INDEX OF REVISIONS

☒ ASME SECTION III, DIV. 1 ☐ ASME SECTION VIII, DIV. 1 ☐ SHOP

☐ ASME SECTION I ☐ ANSI B31.1 ☒ FIELD

REVISION DATE 11/16/79

Issue #3, Dated 5/16/78

NEW MANUAL N/A

ALL PAGES REVISED N/A
(Check Blanks if Applicable)

SECTION	PAGE ___ OF ___	PARAGRAPH	SECTION	PAGE ___ OF ___	PARAGRAPH
I	5 of 12	1.3.23			
VI	3 of 4	6.4.8			

SF 1.06

Pullman Power Products		INDEX SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	INDEX	PAGE NO. 1 of 3

Pullman Power Products

P. O. Box 3350, Oliver Road
Wilkes-Barre, Pennsylvania 18701
Telephone (717) 823-7161
Telex 84-2438
Cable Pullmanpower Wilkesbarre

INDEX OF REVISIONS

[X] ASME SECTION III, DIV. 1 [ ] ASME SECTION VIII, DIV. 1 [ ] SHOP

[ ] ASME SECTION I [ ] ANSI B31.1 [X] FIELD

REVISION DATE 2/1/79

Issue #3, Dated 5/15/78

NEW MANUAL N/A

ALL PAGES REVISED N/A
(Check Blanks if Applicable)

SECTION	PAGE ___ OF ___	PARAGRAPH
Policy Statement		
Definitions	4 of 7	NDE
	5 of 7	QEG
	5 of 7	Reject
	6 of 7	Use-As-Is
I	1 of 12	1.2
	1 of 12	1.3.1
	2 of 12	1.3.4
	2 of 12	1.3.5
	2 of 12	1.3.6
	3 of 12	1.3.7
	4 of 12	1.3.8
	4 of 12	1.3.9
	4 of 12	1.3.10
	5 of 12	1.3.11
	5 of 12	1.3.12
	5 of 12	1.3.13
	6 of 12	1.3.14
	7 of 12	1.3.15
	7 of 12	1.3.16
	7 of 12	1.3.17
	8 of 12	1.3.21
	9 of 12	1.3.23
	9 of 12	1.3.25
	10 of 12	1.3.27
	10 of 12	1.3.31
	11 of 12	1.4

SECTION	PAGE ___ OF ___	PARAGRAPH
II	1 of 6	2.2.4
	1 of 6	2.2.5
	2 of 6	2.2.6
	2 of 6	2.2.7
	2 of 6	2.2.8
	2 of 6	2.3.3
	3 of 6	2.3.4
	3 of 6	2.3.5
	3 of 6	2.3.6
	4 of 6	2.4.1
	4 of 6	2.4.2
	4 of 6	2.4.4
	5 of 6	2.5.3
	6 of 6	2.6.2
	6 of 6	2.7.1
III	2 of 4	3.5.5
	2 of 4	3.6.1
	2 of 4	3.6.2
	2 of 4	3.7.2
	3 of 4	3.7.3
	3 of 4	3.7.4
	3 of 4	3.8.2
IV	2 of 3	4.2.3
	2 of 3	4.2.4
	2 of 3	4.3.1
	2 of 3	4.3.2
V	1 of 2	5.2.1

Pullman Power Products

INDEX OF REVISIONS

REVISION DATE: 2/1/79
Issue #3, Dated 5/16/78

NEW MANUAL N/A
ALL PAGES REVISED N/A (Check Blanks if Applicable)

SECTION	PAGE OF	PARAGRAPH
V con'td	1 of 2	5.2.2
	1 of 2	5.2.3
	1 of 2	5.2.4
	1 of 2	5.2.5
VI	1 of 4	6.1.1
	1 of 4	6.1.2
	1 of 4	6.2.1
	1 of 4	6.2.2
	1 of 4	6.2.3
	1 of 4	6.2.4
	2 of 4	6.3.3
	2 of 4	6.3.4
	2 of 4	6.4.1
	2 of 4	6.4.2
	3 of 4	6.4.4
	3 of 4	6.4.6
	3 of 4	6.4.7
	4 of 4	6.5.1
VII	2 of 5	7.2.4
	2 of 5	7.2.5
	2 of 5	7.3.2
	2 of 5	7.3.3
	3 of 5	7.3.4
	3 of 5	7.4.2
	4 of 5	7.4.6
	4 of 5	7.4.7
	4 of 5	7.4.9
	5 of 5	7.5.2
	5 of 5	7.5.3
VIII	1 of 4	8.2.2
	2 of 4	8.3.1 E
	2 of 4	8.3.2 A
	2 of 4	8.3.2 B
	2 of 4	8.3.2 C
	2 of 4	8.3.2 D
	3 of 4	8.3.2 G
	3 of 4	8.3.2 H
	3 of 4	8.3.2 I
	4 of 4	8.5.1
IX	1 of 4	9.2.1
	1 of 4	9.2.2
	1 of 4	9.2.3
	2 of 4	9.2.6
	2 of 4	9.2.7
	3 of 4	9.2.1
X	1 of 4	10.2.1
	1 of 4	10.2.4
	1 of 4	10.2.6
	2 of 4	10.3.1
	2 of 4	10.5.2
XI	1 of 2	11.2.3
	1 of 2	11.2.5
XII	1 of 3	12.3.1
	1 of 3	12.3.2
	3 of 3	12.6.5
	3 of 3	12.5.2
XIII	1 of 2	13.[illegible].2
	1 of 2	13.[illegible].2 B
	2 of 2	13.3
XIV	2 of 3	14.4.2
XV	1 of 5	15.2.4
	1 of 5	15.2.5
	1 of 5	15.2.6
	2 of 5	15.2.7
	3 of 5	15.3.1
	4 of 5	15.3.6
	4 of 5	15.4.1
	4 of 5	15.5.1
XVI	1 of 3	16.2.2
	1 of 3	16.3.2
	2 of 3	16.3.4
	2 of 3	16.3.6
	2 of 3	16.4.1
	3 of 3	16.5.1

Pullman Power Products

INDEX OF REVISIONS

REVISION DATE 2/1/79
Issue #2, Dated 5/16/78

NEW MANUAL N/A
ALL PAGES REVISED N/A
(Check Blanks if Applicable)

SECTION	PAGE OF	PARAGRAPH
XVII	1 of 3	17.2.1
	1 of 3	17.2.2
	1 of 3	17.3.1
XVIII	1 of 3	18.2.1
	1 of 3	18.3.1
	2 of 3	18.5.3
	2 of 3	18.6.1
	2 of 3	18.7.1
	3 of 3	18.7.3
	3 of 3	18.7.5
	3 of 3	18.7.6

SECTION	PAGE OF	PARAGRAPH

Pullman Power Products

P O Box 3308 [illegible]
[illegible] Pennsylvania 17701
Telephone (717) 2[illegible]
Telex 84[illegible]
Cable Pullman Power Products

INDEX OF REVISIONS

☒ ASME SECTION III, DIV. 1 ☐ ASME SECTION VIII, DIV. 1 ☐ SHOP

☐ ASME SECTION I ☐ ANSI B31.1 ☒ FIELD

REVISION DATE 3/29/79

Issue #3, Dated 5/16/78

NEW MANUAL N/A

ALL PAGES REVISED N/A
(Check Blanks if Applicable)

SECTION	PAGE ___ OF ___	PARAGRAPH
Index	1 of 1	
Definitions	1 of 7	Administrative
	2 of 7	Communication
	6 of 7	Technical & Functional
I	1 of 12	1.2.1
	4 of 12	1.3.9
	5 of 12	1.3.13
	9 of 12	1.3.23
	10 of 12	1.3.31
	12 of 12	Org. Chart
II	5 of 6	2.5.3
IV	3 of 3	4.3.4
VI	3 of 4	6.4.8
X	2 of 3	10.5.3
XII	1 of 3	12.2.2
	3 of 3	12.5.2
XIII	1 of 2	13.1.1
XIV	2 of 3	14.4.1
	2 of 3	14.4.2
XV	3 of 5	15.3
	3 of 5	15.3.5

Pullman Power Products

March 1, 1982

REFERENCE: CORPORATE AND PROJECT QUALITY ASSURANCE MANUAL
INTRODUCTION AND STATEMENT OF AUTHORITY

This manual has been prepared for Pullman Power Products Corporation, Mechanical Construction Operations, headquartered at Williamsport, PA, to document the system in effect for assuring that items installed or fabricated by Pullman Power Products at various field sites meet or exceed the requirements for the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section III, Division 1, and Title 10CFR50, Appendix B, Code of Federal Regulations. It covers installation of items, and field fabrication, repair or alteration of piping subassemblies, component supports, appurtenances, or parts therof at field sites. The Certificate of Authorization issued by the ASME describes and specifies the scope and limits of work for which this Manual has been accepted.

It meets the quality assurance requirements contained in Section III, Division 1, of the ASME Code, entitled "Nuclear Power Plant Components" and specifically responds to the requirements for establishment of a Quality Assurance Program, as defined in Article NCA-4000.

Prior to the presentation of a proposal, all customer inquiries will be reviewed by the Quality Engineering Group, to assure that the Program contained herein will adequately satisfy the Inquiry Quality Assurance Requirements and to recommend any supplements or revisions which may be required. This shall be confirmed in writing to the Vice President, Mechanical Construction Operations. Additionally any change to contract specifications after contract award will be handled in the same manner.

In recognition of our obligations under the Code, Pullman Power Products will maintain the controlled system as outlined in this manual for all items under the jurisdiction of the Code.

A continuing series of audits by QEG Audit personnel are conducted to assure that this program, as outlined, together with supplementing procedures is adequate and is being implemented.

The Quality Assurance Program as described in this manual has my unqualified support. The authority for establishing and implementing this program at various field sites, has been assigned to the Vice President, Quality Assurance.

All differences of opinion concerning quality assurance which cannot be resolved will be referred to me for final resolution.

S. Handler
President

Pullman Power Products

P. O. Box [illegible]
[illegible]

INDEX OF REVISIONS

☒ ASME SECTION III, DIV. 1 ☐ ASME SECTION VIII, DIV. 1 ☐ SHOP

☐ ASME SECTION I ☐ ANSI B31.1 ☒ FIELD

REVISION DATE 3-1-82

NEW MANUAL ______

ALL PAGES REVISED ______
(Check Blocks If Applicable)

SECTION	PAGE __ OF __	PARAGRAPH	SECTION	PAGE __ OF __	PARAGRAPH
INT	2 of 7	Company	VII	4 of 6	7.4.5
I	13 of 13	Organizational Chart	IX	1 of 6	9.2.2
				1 of 6	9.2.3
II	3 of 7	2.3.1		3 of 6	9.2.6
	3 of 7	2.3.4		3 of 6	9.2.7
	4 of 7	2.3.5		6 of 6	9.6.1
III	3 of 6	3.6.1	X	1 of 4	10.2.1
	[illegible] 6	3.6.2		2 of 4	10.3.1
	3 of 6	3.7.6		4 of 4	10.7.1
	3 of 6	3.8.3	XV	2 of 6	15.2.6
	3 of 6	3.9.1		3 of 6	15.6
V	1 of 2	5.2.1		3 of 6	15.7
	2 of 2	5.3.1		3 of 6	15.8.1
VI	1 of 4	6.2.1	XVIII	1 of 3	18.4.2
	2 of 4	6.3.3		2 of 3	18.5.3
	2 of 4	6.3.4		2 of 3	18.6.1
	2 of 4	6.4.1			
VII	3 of 6	7.4.3			
	3 of 6	7.4.4			

ABBREVIATIONS	AS REFERRED TO IN THE MANUAL	DEFINITIONS
	10CFR50	Code of Federal Regulations - Title 10, Part 50 of Appendix B.
	Approval	To accept as satisfactory and give formal and official sanction to. Approval signified by signature or initials and date.
	Administrative Reporting	The Company's organizational interface wherein personnel are obligated to make known to, and take direction from, appropriate supervision in matters relating to costs personnel, etc.
ASME	American Society of Mechanical Engineers	American Society of Mechanical Engineers
ANSI	ANSI	American National Standards Institute
	Approved Vendor List	List of vendors whose QA programs have been reviewed and accepted by the Company QA Department (Williamsport) as conforming to the applicable requirements of ASME Section III for Products involved.
	Appurtenance	An item (as defined in ASME Section III) which is attached to a component which has been completed and previously stamped
	Audit	An audit is a documented evaluation performed in accordance with written procedures or checklists to verify, by examination and evaluation of objective evidence, that selected elements of a previously approved quality program have been developed, documented, and implemented in accordance with specified requirements. An audit does not include surveillance or inspection for the purpose of process control or acceptance of material or items.

ABBREVIATION	AS REFERRED TO IN THE MANUAL	DEFINITIONS
AIA	AUTHORIZED INSPECTION AGENCY	The Agency is required by and defined in the Code which has a contract with the Company to monitor the Company QA Program and perform third party inspection at specific field sites.
ANI	AUTHORIZED NUCLEAR INSPECTOR	A Qualified Inspector employed by AIA having jurisdiction at the field site.
ANIS	AUTHORIZED NUCLEAR INSPECTOR SUPERVISOR	The Authorized Nuclear Inspector Supervisor of the AIA as defined in the Code shall participate in the Society's review of an applicants QA Program and shall review and accept any modifications to the QA Manual before they are put into effect.
	CERTIFICATE OF AUTHORIZATION	ASME Certificate certifying authorization to use a particular ASME code symbol.
	CHECK	To compare with a source original or authorative document. Completion signified by signature or initials and date.
	CODE	American Society of Mechanical Engineers Boiler and Pressure Vessel Code Section III, Division 1 Nuclear Power Plant Components.
/1/82	COMPANY	The Mechanical Construction Operations of Pullman Power Products Corporation, with headquarters in Williamsport, Pennsylvania.
	COMPONENTS	Vessels, storage tanks, piping systems, pumps or valves which are part of a nuclear energy system.
	COMPONENT STORAGE	Metal supports which are designed to transmit loads from the pressure retaining barrier or the component to the load carrying building structure.

ABBREVIATION	AS REFERRED TO IN THE MANUAL	DEFINITIONS
	Corporated QA Program	The Quality Assurance Program as the Company accepted by the ASME as a result of a Manual Review and on file with the Authorized Inspection Agency.
	Communication	The interface between individuals or groups having no direct technical, functional or administrative responsibilities to each other.
	Customer	The Organization that has contracted with the Company to furnish installation services.
	Data Report	Appropriate ASME form completed by the manufacturer or installer for each component support, part, piping sub-assembly, pump, piping system, valve or vessel per the Code.
	Design Report	The Design Report is the design document which includes stress analysis or calculations or both to show that the allowable limits are not exceeded for the loadings specified in the Design Specification.
	Design Specification	A certified Owners document which defines the functions of the component or appurtenance, design requirements, environmental conditions, code classification, and boundaries. (See ASME Section III)
	Document	Any drawing, instruction, procedure, or specification which is used as a basis for performing, controlling, modifying, or inspecting an item or activity.
	Field Drawing	Drawings initiated by the Company Field Engineering Department which give specific details for the fabrication of piping sub-assemblies, component supports or parts thereof, or the installation of piping systems.

ABBREVIATION	AS REFERRED TO IN THE MANUAL	DEFINITIONS
	Hold Points	A point in the receiving, fabrication or installation process that requires inspection by either the Authorized Nuclear Inspector, Customers or Company Inspectors before performing the next operation.
	Item	Material, vessels, appurtenances, parts, valves, pumps, piping sub-assemblies and component supports.
	Material	Items manufactured to an SA, SB, or SFA specification or any other material permitted by ASME Section III.
CMTR	Certified Material Test Report	A certified material test report as defined in the Code.
	Non-Conformance	Any deviation from specifications or Code which by itself or in relation to other components, might adversely affect performance, or reliability.
NCR	Nonconformance Report	A report explaining any deviation from Company, Customer, or Code requirements initiated by anyone but controlled and issued by the QA Manager or his designee.
NDE	Nondestructive Examination	Radiography, liquid penetrant, magnetic particle, ultrasonic, leak testing, visual examination, etc.
	Part	Parts are those items having work performed on them which require the presence of an ANI which are incorporated into a component or component support furnished by one certificate holder or another.
	Piping Sub-Asembly	Piping Sub-assemblies are defined as sections of a piping system consisting of fitting and pipes or tubes which are fabricated as sub-assemblies in a shop or in the field before they are installed in a nuclear power system. (NCA-1232).

ABBREVIATION	AS REFERRED TO IN THIS MANUAL	DEFINITIONS
PQR	Procedure Qualification Records	Welding or Nondestructive Examination procedure qualification records.
	Process Sheet	A document which outlines in detail the sequence of operations necessary to perform a specific work activity. It provides for reference to special processes, accept/reject criteria and for status sign off by the operator, inspector and ANI.
	Project Procedures Manual	A compilation of procedures and instruction which provide specific information required to implement the Project QA Program.
	Project QA Program	The Corporate QA Program with necessary supplement as applied to a specific field site, accepted by the Authorized Inspection Agency and the ASME as a result of a Site Survey and on field with the Authorized Inspection Agency.
QA	Quality Assurance	As used in this manual, Quality Assurance comprises all those planned and systemic actions necessary to provide adequate confidence that all items manufactured or installed are in accordance with the rules of this Section. Quality Assurance Includes: 1. Quality Control Examination, which comprises the examination of the physical characteristics of material, or item to establish conformance to the acceptance standards associated with these examinations. 2. Quality Control Administration, which is the management and documentation which assures that the specified Quality Control Examination is carried out.
	QA Department	Unless specifically referenced otherwise, the term QA Department as used in this Manual means the Pullman Power Products Field QA Department.
	Quality Engineering Group	The term Quality Engineering Group or QEG as used in this Manual means the Pullman Power Products Mechanical Construction Quality Engineering group at the Corp. Headquarters.

Pullman Power Products		DEF SECTION NO.
PREPARED BY: D. E. Davis	APPROVED BY: E. E. Ferris	DATE: 3-1-82
QUALITY ASSURANCE PROGRAM	DEFINITIONS	PAGE NO. 6 of 7

ABBREVIATION	AS REFERRED TO IN THE MANUAL	DEFINITIONS
	QC Inspector	As used in this Manual, QC Inspector is the Company QC Inspector.
	Records	All required data used as evidence that the required level of quality has been attained.
	Reject	A disposition which may be imposed on a nonconformance to indicate that the item or operation is not to be considered for use-as-is.
	Review	To examine critically or deliberately. Completion signified by signature or initials and date.
	Rework or Repair	For purposes of this Manual, the term Rework and Repair are synonymous. They are the process by which a nonconforming item is made to conform to a prior specified requirement by remachining, rewelding, or other corrective means.
	Return or Replacement	A disposition of a nonconformance in which the item is returned to the original manufacturer for replacement with one having the correct requirements.
	Scrap	A disposition of a nonconformance in which the item or operation is totally discarded.
	Stress Report	A complete set of certified stress analysis calculations establishing that the designs shown by the drawings, used or to be used for construction, comply with the requirements of the Design Specification and with the rules of the Code.
	Survey	A survey is a documented evaluation of an organization's ability to perform Code activities as verified by a determination of the adequacy of the organization's quality program and by a review of the implementation.

ABBREVIATION	AS REFERRED TO IN THE MANUAL	DEFINITION
		of that program at the location of the work.
	Technical and Functional Reporting	The Company's organizational interface wherein personnel are obligated to make known to, and take direction from, appropriate management who are directly responsible for implementing specific Company activities, such as assuring that Technical and Quality Assurance requirements of the Code and Customer Specifications are met.
	Use-as-is	A disposition which may be imposed for a nonconformance when it can be established that the discrepancy will result in no adverse condition and the item under consideration will meet the requirements of the Code, and the Design Specifications.
	Weld History Records	The accumulation of completed records which describe the operations and examinations performed, including the applicalbe specifications and procedures used in making the weld.
	Welding Procedure Specification	A written welding procedure prepared to provide direction to the welder or welding operator while making production welds. A complete procedure specification will describe in detial all of the variables which are essential and nonessential to the welding process (es) employed in that procedure.
	Installation	Those activities required to place and attach components to their support, and join items of a nuclear power system by welding or mechanical means.

1.0 ORGANIZATION

1.1 SCOPE

1.1.1 This section of the manual describes the organization of the Pullman Power Products, Mechanical Constructions Operations and the reporting relationships, duties and responsibilities of the Company Quality Assurance Program at various field sites.

1.2 ORANIZATION OF PERSONNEL

1.2.1 The relationships of the various individuals involved in activities affecting the safety-related function of systems and components are shown on the Organization Chart accompanying this Section.

QA Personnel shown, have sufficient, well defined responsibility, authority, and organizational freedom to identify quality problems, to initiate, recommend or provide solutions to problems, to verify implementation of solutions, and to control furtner work on nonconforming items or conditions until proper disposition is made.

1.3 REPORTING RELATIONSHIPS, DUTIES AND RESPONSIBILITIES

1.3.1 President

The President, Pullman Power Products, reports directly to the Executive Vice President, Wheelabrator-Frye, Inc. He has the authority and responsibility for the administration of all activities within the Division including all Mechanical Construction and Piping Fabrication. He is the final Authority in all matters relating to Quality Assurance.

1.3.2 Executive Vice President, Pullman Power Products

The Executive Vice President, Pullman Power Products reports to the President. He has the authority and responsibility for administration of all Mechanical Construction and Piping Fabrication. He delegates authority for administration of Mechanical Construction to the Senior Vice President, Piping and Mechanical Group.

1.3.3 Senior Vice President, Piping and Mechanical Group

The Senior Vice President, Piping and Mechnical Group reports to the Executive Vice President of Pullman Power Products. He has the authority and responsibility for administration of all Piping Fabrication and Mechanical Construction lines of business. He delegates authority for administration of Mechanical Construction to the Vice President, Mechanical Construction Operations.

09/01/82 1.3.4 Vice President, Quality Assurance

Vice President, Quality Assurance reports to the President. He is responsible for establishing Corporate policies relating to Quality Assurance and for assuring their effective implementation by the Director of Quality Assurance at various field sites. He shall have overall responsibility for indoctrination and training of all personnel affecting quality.

1.3.5 Vice President, Mechanical Construction Operations

The Vice President, Mechanical Construction Operations reports to the Senior Vice President, Piping and Mechanical Group. He has the authority and responsibility for the administration and execution of all mechanical construction projects. This includes selection, indoctrination, and training of personnel assigned to specific field sites and evaluation of their performance. He delegates authority for administration at each field site to the Resident Construction Manager.

1.3.6 Director of Quality Assurance

The Director of Quality Assurance reports to the Vice President, Quality Assurance, on all technical and functional matters relating to quality assurance. He reports administratively to the Senior Vice President, Piping and Mechanical Group.

He is responsible for the verification of effective implementation of Quality Assurance and Quality Control Programs (as applicable) at the various Nuclear Sites. He has the authority, responsibility and organizational freedom for implementing Quality Assurance Programs and Quality Control Programs as directed by the Vice President, Quality Assurance. In cases of conflict in matters relating to Quality Assurance, he reports to the President, through the Vice President, Quality Assurance.

He is responsible for, but may delegate to others, the preparation, revision, maintenance, updating and distribution of the Corporate Quality Assurance Manual for Mechanical Construction. He will submit all Manuals and Manual revisions to the Vice President, Quality Assurance for approval.

Until such time as a Project Quality Assurance Manual is established and accepted by virtue of an acceptable ASME site survey, the Director of Quality Assurance will prepare, revise, maintain, control, and distribute supplements to the Corporate Quality Assurance Manuals as necessary for the particular job site situations.

He is responsible for, but may delegate to others for specific nuclear sites, the preparation, revision, maintenance, and updating of all Quality Assurance Procedures required for field operation.

He is responsible for, but may delegate to others the selection, indoctrination, training, qualification, and when applicable, the examination and certification of all QA personnel, NDE personnel, auditing personnel and inspectors, in the Quality Engineering Group.

He, or his designee is responsible for conducting audits on a regularly scheduled basis of each field site to verify adequacy of the implementation of the QA Program. He shall report the results of such audits to the Vice President, Quality Assurance.

He has the authority, responsibility and freedom to identify quality problems, and to recommend corrective action.

1.3.7 Project Quality Assurance Engineer, QEG

The Project QA Engineer, QEG, reports to the Quality Assurance Supervisor. He is responsible for Code and specification interpretation. He has the authority and responsibility for writing, revising, maintaining and controlling the Project Quality Assurance Manual and Project Quality Assurance, Quality Control Procedures required to implement the program. When a Project QA Manual and Project Procedures are approved for use at a specific site, he delegates responsibility for the revision, maintenance, control and distribution to the QA Manager. The Project QA Engineer, QEG will give assistance in the performance of Mechanical Construction Audits of the Nuclear Facilities.

1.3.8 QUALITY ASSURANCE AUDITOR, QEG

The Quality Assurance Auditor, QEG reports to the Director of Quality Assurance. He has the authority and responsibility for writing Audit Procedures, establishing audit schedules, preparation of audit plans, and checklists, for the performance, evaluation, and verification of the QA Program as implemented at the field sites. The Quality Assurance Auditor, QEG will also be responsible for the training, qualification, certification, and continuity records for Auditors and Lead Auditors associated with Nuclear Facility Audits.

1.3.9 LEVEL III EXAMINER QEG

The Level III Examiner, QEG reports to the Director of Quality Assurance. He has the authority and responsibility for evaluation, qualification, proficiency examination (as required) and certification of the Level III personnel who may be assigned to specific field sites.

He is also responsible for evaluating and qualifying the written examination, inspection and testing procedures. For nondestructive examination, he shall be qualified and certified in accordance with the Company's written practices which meet the requirements of SNT-TC-1A-1975 Edition, and the ASME Code.

Authority to perform these functions may be delegated by the Level III Examiner to a certified Level III and so documented. He shall be responsible for the recertification of Level III personnel.

1.3.10 QA WELDING ENGINEER, QEG

The QA Welding Engineer QEG, reports to the Director of Quality Assurance. He has the authority and responsibility for the the preparation, verification of qualification, and maintenance of all Welding Procedure Specifications. He shall select, prepare and qualify new welding procedure specifications for nuclear projects.

He shall consult with the Customer, regarding additional procedures or recommendations for revisions to existing procedures as may be required to satisfy specific project requirements. He shall consult with the Director of Quality Assurance in weld related QA procedures. He shall assist each field QA Engineer-Welding and provide technical direction on weld related problems.

He shall also assist in the performance of Audits of nuclear facilities.

1.3.11 Training Engineer, QEG

The Training Engineer, QEG, reports to the Director of Quality Assurance.

He has the authority and responsibility for the development of training aids with emphasis on code, contract and specification requirements. He is responsible for the coordination and administration of training aids developed between QEG and the nuclear field sites.

The Training Engineer may delegate specific functions for the development of training materials for implementation to other qualified individuals.

He shall assist in the training and qualification of QEG Project QA Engineers.

He shall be responsible for the verification of training, implemented in the field to assure compliance to QA Program, implementation of the training program, qualifications and certifications of personnel. He shall be responsible for retaining current records of qualification and certification of all Level III personnel for each specific nuclear site. He may also assist in the performance of audits of nuclear facilities.

1.3.12 Supervisor of Quality Assurance, QEG

The Supervisor of Quality Assurance, QEG reports to the Director of Quality Assurance. He has the authority and responsibility for administering the Quality Assurance program and coordinating the activities of the Project QA Engineers, Document Control Specialists, Clerks and other personnel assigned to the Quality Engineering Group. He shall have responsibility for the review of Quality Assurance, Quality Control Project QA Manuals and Procedures as required by various codes and Customer specifications.

1.3.13 Resident Construction Manager

The Resident Construction Manager reports to the Senior Vice President Piping and Mechanical, through the Vice President, Mechanical Construction Operations. He has the authority and responsibility for the administration of all required functions at the field site. This includes selection, indoctrination and training of personnel, other than QA personnel, in cooperation with the Quality Assurance Manager as outlined in Section II, Para. 2.5.4, as required to effect a quality installation. His compliance with QA requirements are controlled as described in 1.3.15. The Resident Construction Manager is the top line of authority at the construction site and is ultimately responsible for adequate implementation of the Quality Assurance Program.

1.3.14 Quality Assurance Manager

The Quality Assurance Manager reports on all technical and functional matters relating to quality assurance to the Director of Quality Assurance. He reports administratively to the Resident Construction Manager.

He is responsible to the Director of Quality Assurance for the effective implementation of Quality Assurance and Quality Control procedures (as applicable) at the field site to which he is assigned.

He has the authority, responsibility, and organizational freedom for implementing Quality Assurance or Quality Control Programs as directed by the Director of Quality Assurance. In cases of conflict in matters relating to Quality Assurance, he may report directly to the President, through the Vice President of Quality Assurance and Director of Quality Assurance.

Once a Project Quality Assurance Manual is established by virture of an acceptable ASME site survey, the Quality Assurance Manager will be responsible for its revision, maintenance, control and distribution. He will obtain approval for all revisions from the Vice President of Quality Assurance, through the Director of Quality Assurance.

He is responsible for the control and distribution on site of the Quality Assurance Procedures established for the job, and any other duties relative to such procedures as may be delegated to him by the Director of Quality Assurance.

This includes selection, indoctrination, training qualification and certification of QA personnel who may be hired in the field. He cooperates with the Resident Construction Manager by coordinating the activities as necesary to assure the attainment of the desired quality levels. He has the authority, responsibility and freedom to identify quality problems and to initiate, recommend or provide solutions and to verify implementation of solutions, and control of further processing of any nonconforming item or condition until proper disposition is made.

09/01/82

1.3.15 Assistant QA Manager

The Assistant QA Manager reports to the QA Manager. He is responsible for the implementation of the QA Manager's responsibilities in his absence and other duties as assigned by the QA Manager.

09/01/82

1.3.16 Field QA Supervisor

The Field QA Supervisor reports to the Assistant QA Manager. He is responsible for the accumulation, evaluation, retention, control and disbursement of QA documents and records. This responsibility includes review of drawings, process sheets and data reports, and control of materials, procedures, process sheets, nonconformance reports and records storage. The Field QA Supervisor is also responsible for training and qualification of QA personnel and the qualification of welders. He is responsible for control and maintenance of procedure specifications, directives and QA Manuals. He assures that these documents, and revisions thereto, are properly controlled and distributed and that correct distribution records are retained. He is also responsible for control of nonconformance reports. He assists the QA Manager in internal systems studies and audits and coordinates all procedure revisions initiated on site. He delegates these activities to other QA personnel under his supervision.

09/01/82

1.3.17 Training Officer

The Training Officer reports to the Field QA Supervisor. A Group Leader may be appointed to assist in the supervision of personnel within an assigned group. He is responsible for the coordination and administration of all field training. It is the responsibility of the Training Officer, or his representative, to conduct training using the various materials and aids necessary for the implementation of a complete Training Program. Classroom Training shall be conducted by the Training Officer or qualified personnel designated by him. On-the-job training shall be documented.

09/01/82 1.3.18 Site Auditor

The Site Auditor reports to the Field QA Supervisor. A Group Leader may be appointed to assist in the supervision of personnel within an assigned group. He shall conduct audits and perform internal systems studies of the implementation of the QA Program. The results of these activities shall be reported to the QA Manager and Field QA Supervisor for evaluation.

09/01/82 1.3.19 QA Engineer

The QA Engineer reports to the Field QA Supervisor. A Group Leader may be appointed to assist in the supervision of personnel within an assigned group. The term QA Engineer includes personnel who are trained, qualified, and certified to applicable levels of competence in Quality Assurance functions such as Material Document Examination, Process Document Examination, Welding Engineering, Records Management or other functions as assigned by the Field QA Supervisor.

09/01/82 1.3.20 QA Specialist-Receiving

The QA Specialist-Receiving, reports to the QA Engineer responsible for Materials. He is responsible for identification of all materials and maintenance of the storage area. He assures that acceptable stores are properly disbursed and retains written records of his activities.

09/01/82 1.3.21 QA Specialist-Process

The QA Specialist-Process, reports to the QA Engineer responsible for Process. He is responsible for control of the issuance of each process sheet prepared by Engineering, the return and review on a daily basis of all completed process sheets issued and maintaining the latest revisions of drawings which are required to verify control of weld numbers, procedures and electrode selection.

09/01/82 1.3.22 QA Specialist - Records

The QA Specialist-Records, reports to the QA Engineer responsible for Records. He is responsible for maintaining security and preservation of records assigned to the vault. He maintains control of records by receiving all records and maintaining a control log of records which are signed out and returned.

09/01/82 1.3.23 QA Specialist - Welding

The QA Specialist-Welding reports to the QA Engineer responsible for Welding. He is responsible for disbursal of electrodes as indicated on a Weld Rod Stores Requisition by exact quantity, type and size. He assures that the correct lot or heat of weld material is recorded on the requisition. He bends and discards damaged electrodes when returned.

09/ /82 1.3.24 QC Supervisor

The QC Supervisor reports to the Assistant QA Manager. He is responsible for scheduling and performing all QC activities. Included are the following: receiving inspection, in-process inspection, weld inspection, final inspection, and test control. He shall assure that only qualified personnel are assigned to perform the above listed activities and that the activities are properly documented as work progresses.

09/01/82 1.3.25 QC Inspector

The QC Inspector reports to the QC Supervisor. A Group Leader may be appointed to assist in the supervision of personnel within an assigned group. The term QC Inspector includes Visual Inspectors, Receiving Inspectors, Welding Inspectors and Testing personnel who are trained, qualified and certified to applicable levels of competence through the QA Manager. They perform functions as assigned by the QC Supervisor, in accordance with written approved procedures, and are responsible for the acceptability of the activity to which assigned.

/01/82 1.3.26 NDE Supervisor

The NDE Supervisor reports to the Assistant QA Manager. He is a certified Level II or III in one or more NDE methods. He is responsible for assuring that Level I and II NDE Technicians are trained and for supervising their work. He is responsible for assuring that all NDE is performed in accordance with the qualified procedures approved for the job. He may work in conjunction with the Level III Examiner in preparation and qualification of new or revised procedures for the site.

/01/82 1.3.27 NDE Technician

The NDE Technician reports to the NDE Supervisor. A Group Leader may be appointed to assist in the supervision of personnel within an assigned group. He is trained qualified and certified to applicable levels of competence by an NDE Level III. The NDE Technician will perform examination functions as assigned by the NDE Supervisor, in accordance with written, qualified and approved procedures. Level II or Level III technicians will be responsible for the interpretation of the examination and acceptability of the item examined.

/01/82 1.3.28 Chief Field Engineer

The Chief Field Engineer reports to the Resident Construction Manager. He is responsible for administration, coordination, training and supervision of all field engineering activities and personnel, as assigned. This includes liaison with the Owner regarding drawings, specifications, field change requests, and other technical information and their receipt, interpretation, control and distribution as needed to implement the work. He cooperates with the QA Manager in resolving non-conformances. He is also responsible for having Process Sheets and Data Reports prepared.

09/01/82

1.3.29 Construction Superintendent

The Construction Superintendent reports to the Resident Contruction Manager. He is responsible for administration, coordination, training, and supervision of personnel as assigned. He is responsible for the installation of the project in accordance with the established QA Program under the direction of the Resident Construction Manager.

1.3.30 Area Superintendent

The Area Superintendent reports to the Construction Superintendent. He is assigned and is responsible for the installation activities for a specific system/building area of the project in accordance with the established QA program.

1.3.31 Field Engineer

The Field Engineer reports to the Chief Field Engineer or Construction Superintendent as assigned. He is responsible for engineering duties as assigned: control of drawings and specifications in his area; installation inspections with the assigned QC Inspector; cooperation in the preparation of Non-Conformance Reports and/or Field Change request, PCR (Form S-3) as may be required; and preparation of Process Sheets and Data Reports when assigned by and under the Direction of the Chief Field Engineer.

1.3.32 Field Drawing Control Clerk

The Field Drawing Control Clerk reports to the chief Field Engineer and is responsible for implementing the control of Customer drawings, specifications and company prepared field details to assure that the latest revisions are used for fabrication, installation and inspection of the project.

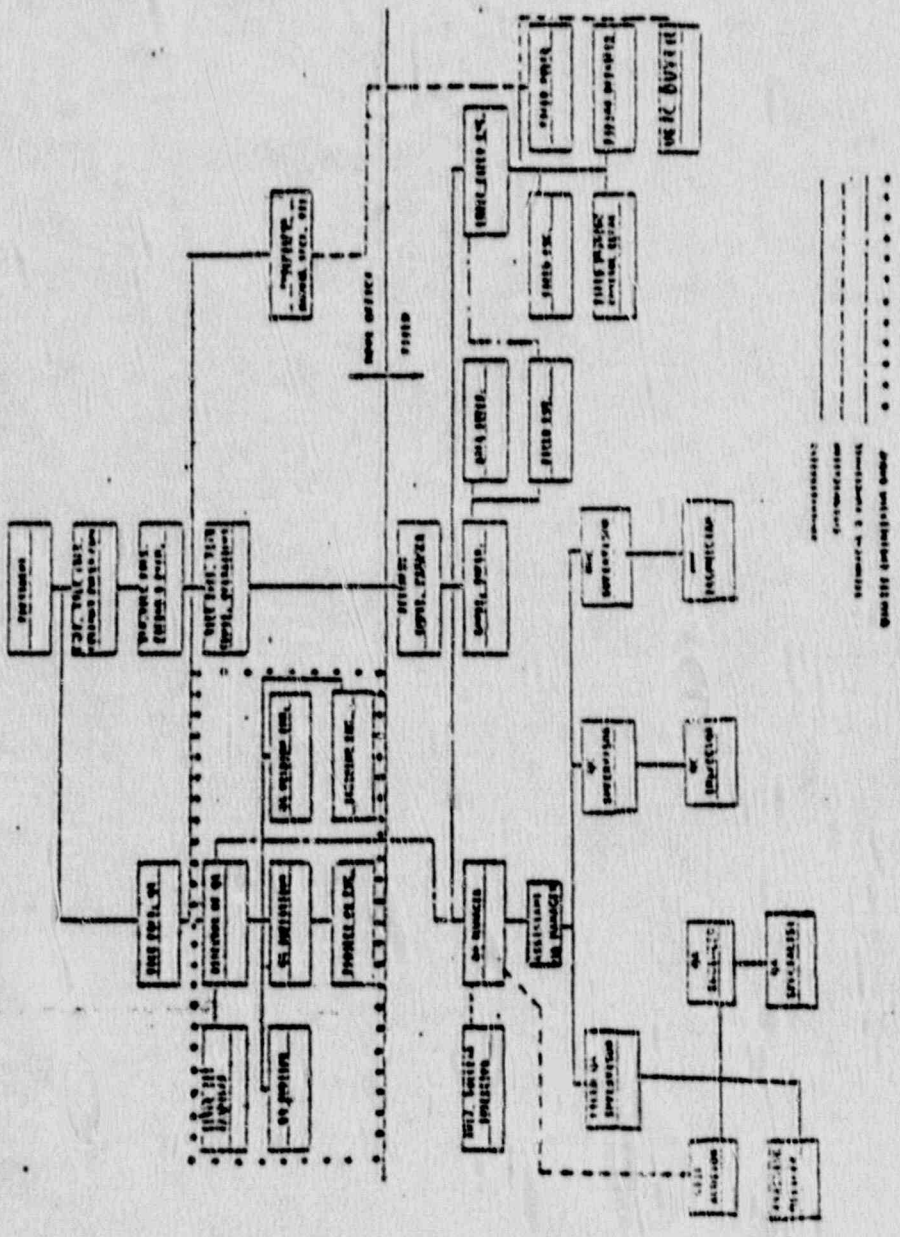
1.3.33 Piping Detailer

The Piping Detailer reports to the Chief Field Engineer and is responsible for preparation of required piping or component support details and installation isometrics in accordance with the latest revision of customer drawings and specifictions.

1.3.34 Field Buyer

The Field Buyer works in conjunction with the Chief Field Engineer in all matters relating to purchases from approved vendors and s responsible for the distribution of procurement documents. "This description is not applicable to any work performed within the scope of Seabrook Central Purchasing Procedure as set forth in Supplements to Section IV and VI of this Manual".

Pullman Power Products		I
		SECTION NO.
PREPARED BY: R.G. Davis	APPROVED BY: E.F. Gerwin	DATE: 9/1/82
QUALITY ASSURANCE PROGRAM	ORGANIZATION	PAGE NO. 15 of 15



SF 1.06

2.0 QUALITY ASSURANCE PROGRAM

2.1 SCOPE

2.1.1 This manual is intended to cover Corporate Code activities and field fabrication of piping subassemblies, component supports, appurtenances and parts and the installation of Items, at field sites by Pullman Power Products, Mechanical Construction Operations.

2.1.2 This section describes the method used by the Company in documenting its Quality Assurance Program in the form of a Quality Assurance Manual.

2.1.3 The QA Program is regulated by the Corporate QA Manual which outlines minimum requirements. Since individual job sites may require differing, but equally effective staffing, and additional jurisdictional or customer imposed obligations, supplements specific to the site will be added to the Corporate QA Manual to form a Project QA Manual.

2.2 CORPORATE QA MANUAL

2.2.1 The QA Program as outlined in this manual represents corporate requirements which will be applied over all installation and field fabrication work under the rules of the Code.

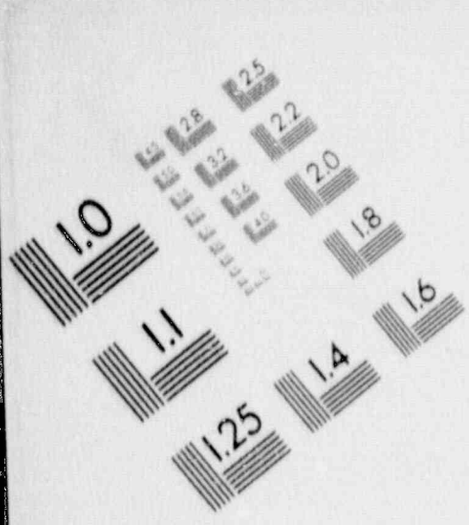
2.2.2 These requirements establish specific actions to assure compliance. They establish who is responsible, who is to perform the task, what is to be done, where it is to be accomplished, under what conditions, the documents required and the records which are evidence of compliance.

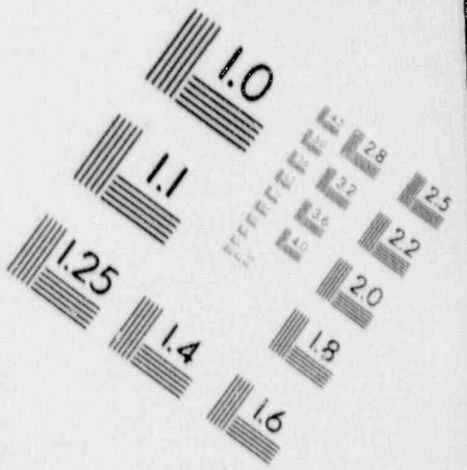
2.2.3 Separate written procedures and instructions provide the information as to <u>how</u> to accomplish these requirements. These are contained in a separate Project Procedure manual.

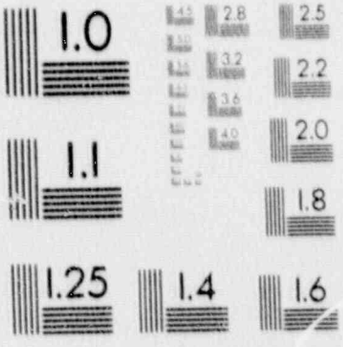
2.2.4 The preparation, revision, maintenance and control of this Manual is the responsibility of the Director of Quality Assurance. Approval of this manual and all revisions is the responsibility of the Vice President of QA.

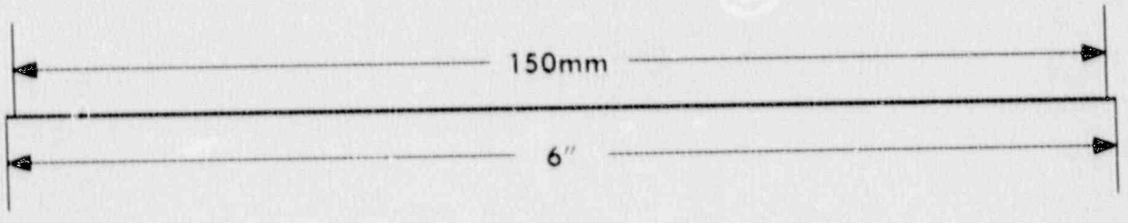
1

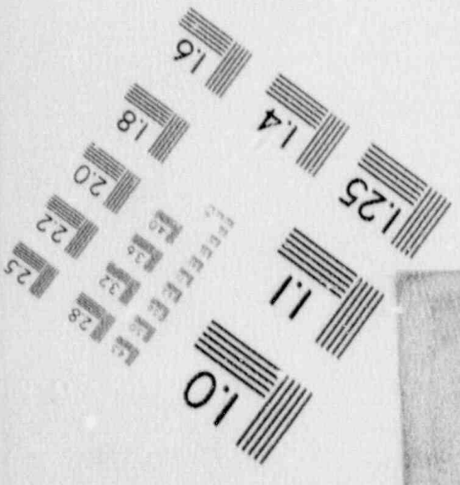
IMAGE EVALUATION TEST TARGET (MT-3)

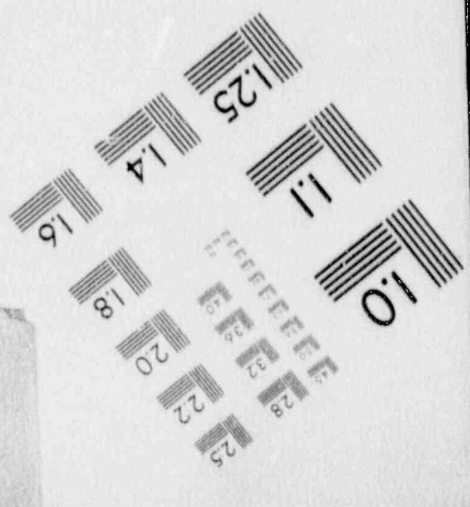












2.2.5 After acceptance of this Manual the QA Engineer, QEG will assign copies, utilizing the QA Manual Distribution (Form 1), controlled by number to those involved in the implementation of the program. Distribution will be by a transmittal letter (Form 2) which requires acknowledgement of receipt and destruction of prior issues.

2.2.6 Before putting changes into effect, any proposed changes will be sent to the Authorized Nuclear Inspector Supervisor of the Authorized Inspection Agency for his review and acceptance. Copies of all accepted changes and evidence of acceptance by the ANIS will be distributed to the Authorized Nuclear Inspector and holders of the Manual by a transmittal letter which requires acknowledgement of receipt and destruction of voided sections. An index sheet revised to show the latest revision of each section will be included.

2.2.7 Distribution of Manuals (Para. 2.2.5) and changes (Para. 2.2.6) within QEG requires acknowledgement within 15 days, distribution outside QEG requires acknowledgement within 60 days. If not received, the Document Control Specialist QEG will initiate a follow up letter. If receipt is not received within 15 days from date of letter, the Document Control Specialist will contact the individual to determine if the manual has been lost and if receipt of the manual or manual revision can not be obtained, the manual distribution list shall be revised to declare the manual "void" and reflect the issuance of a new serial number.

2.2.8 The QA Engineer, QEG regularly reviews the Manual for possible changes in light of revisions to the Code or 10CFR50, in accordance with Paragraph 2.6.1.

2.2.9 Uncontrolled copies may be distributed to authorized individuals outside of the Company when approved by the Director of Quality Assurance.

2.3 PROJECT QA MANUAL

2.3.1 The Corporate QA Manual as outlined above is the basic document which defines the QA Program to be implemented at each field site.

2.3.2 Considering that field sites may vary one from another in type of activity performed, organizational structure, etc., additions to corporate requirements may be required. If so, these will be prepared in the form of Yellow Sheet supplements to the Corporate Manual to form a Project QA Manual. If there is a need for additional supplements to the Corportate QA Manual the provisions of all earlier supplements shall be included in the latest supplement so that onlhy one supplement will be in effect for each project.

2.3.3 Once the manual and supplements, if any, are accepted by the Authorized Inspection Agency and subsequently by ASME at a field site survey, they will become the Project QA Manual of record since they will respond to the requirements of the Code and 10FR50 effective for the specific contract. When required for use on specific job sites, forms other than those shown in the manual may be presented as Yellow Sheet supplements. Alternate forms shall contain all the information of the original form needed to fulfill the controls outlined in this Manual.

2.3.4 After the acceptance by the ASME Survey Team, the QA Manager, or his designee, will incorporate the Supplement into the main body of the Manual forming the Project QA Manual. The Supplement number shall be recorded in the left margin adjacent to the paragraph involved indicating the provisions of the Supplement were included. Once the Supplement has been added, subsequent changes to the Manual shall be in the form of a revision. The revision date shall be recorded in the left margin adjacent to the paragraph revised. Any previous Supplement numbers or revision dates will be deleted as applicable. The QA Manager will be responsible for maintenance, revision and control of the Project Qa Manual. He will assign copies controlled by number to the Authorized Nuclear Inspector, the Customer or his Agent as required, and all others at the site involved in implementation of the program. Distribution will be a transmittal letter (Form 2) which requires acknowledgement of receipt and destruction of obsolete sections. No uncontrolled copies will be permitted. If receipt is not acknowledged in thirty (30) working days, the QA Manager or his designee will initiate a follow up letter. If receipt is not acknowledged in an additional thirty (30) days, the QA Manager will send a representative to any site personnel and obtain the receipt acknowledgement. If a mannual is lost, or receipt acknowledgement of later revisions can not be obtained, the distribution list will be revised to reflect the status of that manual, and if necessary, a new manual of a different serial number will be issued.

09/01/82

2.3.5 Proposed changes to the Project QA Manual, in the form of revisions, may be initiated by the QA Manager or QA Engineer, QEG. These changes shall not be less restrictive than the requirements of the Corporate QA Manual. After obtaining Customer concurrence with, and approval of the revisions by the Vice President of QA, the QA Manager, prior to implementation will forward these revisions to the Authorized Nuclear Inspector Supervisor who has jurisdiction at the site, for his review and acceptance. Copies of all accepted revisions and evidence of acceptance by the ANIS will be provided to the Authorized Nuclear Inspector and holders of the Project QA Manual by a transmittal letter which requires aknowledgement of receipt and destruction of "obsolete" sections. An index of all revised sections indicating the latest revision will be included.

2.3.6 Changes to the Corporate QA Manual made and accepted after acceptance of the Project QA Manual by the ASME survey team will not automatically become part of the Project QA Manual. The QA Engineer, QEG, shall review them in detail with the Customer or his designee, the ANIS having jurisdiction at the site, and the QA Manager to determine applicability to the site. If applicable, they may be incorporated in the Project QA Manual as revisions .

2.4 PROJECT PROCEDURES MANUAL

2.4.1 At the time of the contract award, the QA Engineer, QEG, shall review the contract requirements, and after consulting with the Mechanical Construction Manager, the Director of Quality Assurance, the QA Manager and other personnel as required, will establish the procedures required to implement the work and QA program.

'01/82

2.4.2 Required procedures in any combination will constitute a Project Procedures Manual. The QA Manager will prepare sufficient copies of the Project Procedures Manual for distribution at the site using a Document Status Record which requires acknowledgement (Form 13).

2.4.3 Distribution of individual procedures, as required, to personnel performing controlled functions is outlined in Section VI of this manual.

2.4.4 The QA Engineer, QEG, the QA Manager, or the Chief Field Engineer may initiate new or revised procedures which may be needed to fulfill specific requirements at any time. In all cases, these shall be prepared and revised by qualified individuals, and approved by a certified Level III at QEG who is certified in the applicable function. These become part of the Project Procedures Manual. Distribution is as outlined in 2.4.2 and 2.4.3 above.

2.4.5 Use of procedures which meet the requirements of later Editions or Addenda of the Code may be implemented only with prior approval by the Owner or his Designee, and the jurisdiction when required.

2.5 PERSONNEL

2.5.1 All personnel who perform activities affecting quality whether they are designated as Quality Assurance personnel or not will be suitably indoctrinated, trained, and qualified for the function they perform and they shall maintain proficiency in these functions.

2.5.2 All personnel fulfilling the functions shown on the Organization Chart are selected on the basis of education, experience and when required, demonstrated proficiency in their area of responsibility.

2.5.3 It is the responsibility of the QA Manager (through the Training Officer) to select, train, qualify, and certify, as required, all personnel reporting to him in the QA Department unless they have been previously qualified by the Company. This includes all nondestructive examination, inspection, testing, auditing and records personnel. NDE personnel shall be certified by a Level III to Company procedures prepared in accordance with ASNT-TC-1A 1975 Edition and ASME Section III. Specified requirements for selection, training, qualifying, proficiency testing and certification are outlined in applicable personnel qualification and training procedures. Records of subject matter, results of proficiency test, and attendance at each training session will be maintained by the QA Department. Copies of all qualification records (Form 3) including those of personnel previously qualified shall be maintained by the QA Department and available to the ANI.

When there is specific reason to question the qualifications of any NDE personnel, the QA Manager or ANI may require requalification of the individual.

2.5.4 Personnel outside the QA Department, who are engaged in peforming activities which affect quality, are indoctrinated and trained by their respective supervisor or others as directed by the Resident Construction Manager with the concurrence of the QA Manager. This will cover a thorough review of procdures applicable to the individuals area of activity, followed by extensive on the job training. Each supervisor will evaluate those assigned to him. Records of subject matter and attendance records will be maintained by the QA Department.

2.5.5 All welders will be required to qualify under the requirements of ASME Sections III and IX in accordance with the Welding Qualification Procedures. Qualification is under the supervision of the Welding Engineer assigned by the QA Manager, and he shall certify the welder Performance Qualification Record (Form 4). All records of welder qualification (Form 4) and welder qualification status (Form 5) are retained by the QA Department.

If there is a specific reason to question the ability of a welder to make welds which meet the requirements of the specification, the ANI may require requalification before the welder is permitted to continue welding on work subject to his inspection.

2.5.6 If in the opinion of the Resident Construction Manager or the QA Manager, any individual does not demonstrate suitable competency or skill in his assigned area, he shall not be permitted to work in his assigned area until suitable competency is demonstrated.

2.5.7 Periodic review of policies, procedures and instructions with the production and QA personnel will be conducted by the Resident Construction Manager or others designated by him to assure continued proficiency in their activity.

2.6 PROGRAM REVIEW

2.6.1 The Director of Quality Assurance will review the QA Program as outlined in this manual to verify its adequacy in light of changes which may occur in the Code or 10CFR50. This will be accomplished after the issuance of each Code or Addenda and within six (6) months of the issue date of the Edition or Addenda. The results of this review will be documented and forwarded to the Authorized Nuclear Inspector Supervisor.

2.6.2 As part of this review, the Director of Quality Assurance will establish a schedule to assure that all aspects of the Program for the specific site are effectively implemented, and that individuals responsible for verifying that an activity has been correctly performed are independent of the group directly responsible for performing the activity. Each QA Manager will submit a monthly report summarizing significant QA events, audits and nonconformances including trends noted, and suggestions for QA Program improvement, if any. See Section XVIII.

2.7 FORMS

2.7.1 Forms referred to in this section are exhibited in the back of this manual.

Forms referenced are:

(1) QA Manual-Distribution List
(2) Transmittal Letter
(3) Qualification Records
(4) Welder Qualification
(5) Welder Qualification Status
(13) Document Status Record

3.0 DESIGN CONTROL

3.1 SCOPE

3.1.1 This section outlines the extent to which the Company assumes responsibility for Design Control from the receipt of Customer Drawings to the completion of the installation.

3.2 POLICY

3.2.1 The Comapny will <u>not</u> perform any design work. All design work will be performed by an Engineering Organization responsible to the Owner for piping system design, or by the responsible component designer.

3.2.2 The Company will install items, and prefabricate on site, piping sub-assemblies, component supports, parts and appurtenances in accordance with applicable data from the Design Specifications, such as drawings, specifications, procedures or other instructions furnished by the Owner or his Designee.

3.3 RESPONSIBILITY

3.3.1 The Chief Field Engineer is responsible for assuring that all prefabrication and installation is in conformance with the design requirements furnished by the Owner or his Agent. He may delegate various aspects of this function to Field Engineers, Piping Detailers or Document Control Clerks.

3.4 DESIGN REVIEW

3.4.1 The Chief Field Engineer, or a Field Engineer designated by him, will review the Customer drawings, specifications, procedures or other instructions. He shall verify that they contain information in sufficient detail regarding materials, dimensions, fabrication requirements and quality levels as necessary to permit fabrication or installation to meet Code Requirements.

3.5 FIELD DRAWINGS

3.5.1 In order to effectively accomplish the work, field drawings such as piping sub-assembly drawings (Form 6) or installation isometrics (Form 7) which reflect the Customer drawings in greater detail may be required.

3.5.2 The Chief Field Engineer or a Field Engineer designated by him will outline, by means of marked Customer drawings and specifications, the requirements for specific field drawings or revisions to them.

3.5.3 Using these instructions, the Piping Detailer prepares or revises the necessary field drawings.

3.5.4 They are then checked by the Field Engineer or other Piping Detailers to assure that they properly reflect the design requirements as to materials, dimensions, special processes requirements and quality levels.

3.5.5 Prior to the preparation of process sheets and release for work (See Section X) the field drawing or revision thereto is checked and approved for code compliance by the QA Manager or his representative.

3.6 DEVIATIONS FROM DESIGN

3.6.1 In the events that deviations from design may be required, the Chief Field Engineer or his designated Field Engineer will review the deviation for compliance with the Code. If acceptable under the code, he shall prepare a proposed Engineering Change Authorization (Form S-3), outlining the proposed deviation, and justification. Then, the proposed Engineering Change Authorization will be submitted to the Customer, or his agent, for his review and approval and reconciliation with Design Reports or Load Capacity Data Sheets when required. No work in the effected areas will be permitted until the deviation is resolved.

9/01/82

A. In the event immediate minor deviation from design may be required an authorized representative of the Customer may initiate an "On-the-Spot" (minor) ECA. He shall prepare this "On-the-Spot" (minor) ECA (Form S-4) outlining the proposed deviation and justification. He shall review this for compliance with the Code. The Chief Field Engineer or his disignated Field Engineer shall review it for compliance with the Code and signify this verification on the form. Upon verification by the authorized Customer representative on the form in the "approval" section as preparer, the work may proceed. The On-the-Spot" ECA is then submitted for review and approval and reconciliation with Design Reports or Load Capacity Data Sheets when required. Final acceptance inspection shall only be performed after receipt of the official, design verified "On-the-Spot" (Minor) ECA.

3.6.2 When the approved Engineering Change Authorization, ECA (Form S-3) is returned by the Customer, necessary instruction in the form of new or revised field drawings will be issued as in Para. 3.5 above to implement the deviation.

09/01/82

A. When the official, design verified "On-the-Spot" (minor) ECA (Form S-4) is received from the Customer, the necessary instructions in the form of new or revised field drawings, not already issued since initiation of the ECA, will be issued as in PARAGRAPH 3.5 above to implement the deviation.

3.7 DESIGN CHANGES

3.7.1 In the event that revised Customer drawings are received, the Chief Field Engineer or a Field Engineer designated by him will review the revision to determine whether fabrication or installation work is in progress, or completed to earlier revisions.

3.7.2 If so, he will issue a Stop Work Order (Form 9) to withdraw process sheets to discontinue the work.

3.7.3 Revised or new field drawings will then be prepared, approved and released as in Para. 3.5 above to accomplish the installation to the new requirements.

3.7.4 For completed work, new field drawings will be prepared to remove the old work and install to new drawings as in Para. 3.5 unless the Customer agrees to leave the work to the earlier revision by an approved Engineering Change Authorization, ECA (Form S-3), Para. 3.6.

3.8 VERIFICATION OF FINAL INSTALLATION

3.8.1 It is the responsibility of the Chief Field Engineer or his designated Field Engineer to assure that the final installation meets the requirements of the latest Customer drawings.

3.8.2 He shall obtain, to the satisfaction of the Authorized Nuclear Inspector, whatever evidence is necessary to verify that the required Design Specification and Design Reports or Load Capacity Data Sheets are on file and are in agreement with the as-built installation.

3.8.3 He, or his designated representative, shall review each installation against customer drawings and customer approved changes using the applicable final inspection forms (Form 10A through 10J).

3.9 FORMS

3.9.1 Forms referred to in this section are exhibited in the back of this manual.

Forms referenced are:

(S-3) Proposed Engineering Change Authorization
(6) Sub-Assembly Drawing
(7) Installation Isometric
(9) Stop Work Order
(10) Final Inspection Form
(10A) Final Inspection Installation Verification
(10B) QA/QC Final Inspection
(10C) Process Sheet and As-Built Status Log
(10D) Integrity Test Cover Sheet
(10E) Integrity Test Data
(10F) Valve Line Up
(10G) Integrity Test Boundary Description
(10H) Exception List
(10I) Pre-Test Verification
(10J) Documentation Review

Pullman Power Products		IV SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	PROCURMENT DOCUMENT CONTROL	PAGE NO. 1 of 3

4.0 PROCUREMENT DOCUMENT CONTROL

4.1 SCOPE

4.1.1 To assure that all applicable requirements of the Customer Specifications relating to quality are properly included or referenced in procurement documents for items and subcontracted services purchased by the site, from the preparation of the purchase requisition to issuance of the purchase order. "Specific instructions for implementing this procedure and for supplementing it to meet Code requirements are set forth in this Manual and in specific operating procedures. "Procurement at the field site shall be in accordance with the Seabrook Centralized Purchasing Procedure. Specific instructions for implementing this procedure and for supplementing it to meet Code requirements are set forth in this Manual and in specific operating procedures.

4.2 RESPONSIBILITIES

4.2.1 The Chief Field Engineer or his designated representative is responsible for the initiation of all field purchase requisitions (Form 11) or UE&C/Seabrook Centralized Purchasing Requisition (Form S-2) as applicable and any revisions thereto, for materials and subcontracted services in those cases where field purchase may be required. He shall indicate on the field purchase requisition all data required to assure that the required quality levels are met.

These include but are not limited to:

(1) Clear and adequate quantitative and qualitative materials description.
(2) Applicable ASME Section II Specification
(3) Applicable ASME Section III Class and quality requirements.
(4) Special process and/or inspection requirements.
(5) Requirements for prior approval of vendor/subcontractor procedures, personnel qualification and QA program.
(6) Requirements for traceability.
(7) Requirements for evidence of quality.
(8) Requirements for a Quality Assurance Program in accordance with the requirements of NCA 3800, as applicable.
(9) Requirements for identifying on the CMTR, as applicable, the Vendors Quality Assurance Program which was accepted by the Company and was used during the manufacture and/or supply of material if the vendor does not possess a Quality System Certificate (Materials). If he does possess a Quality System Certificate he shall include the Certificate number and expiration date.

This information may be included in supplementary purchasing specifications.

4.2.2 The completed field purchase requisition and purchasing specification, if any, is then sent to the Field Buyer or UE&C Purchasing Agent as applicable who will solicit bids and select a potential vendor from the Approved Vendor List (Form 12).

4.2.3 The field purchase requisition of UE&C Purchase Order (Form S-1) with the vendor indicated is then forwarded to the QA Manager where he, or a designated representative will review it to assure that purchase is from an approved vendor and that all of the Code quality requirements are shown and are correct. He will then approve the requisition and forward it to the Buyer for purchase.

4.2.4 Copies are sent to the QA Department and shall be used in receiving inspection and for record files and to others as required.

4.2.5 All purchase requisitions are subject to the approval of the Resident Construction Manager.

4.2.6 All Purchase Orders shall contain a statement establishing the company or the client's right to source inspection prior to shipment or materials.

4.2.7 All revisions to purchase orders will be handled in the same manner as the original purchase order.

4.3 APPROVED VENDORS

4.3.1 The establishment and maintenance of the Approved Vendor List is the responsibility of the Quality Assurance Department, Fabrication Operation as delegated by the Vice President, Quality Assurance. To preclude duplication of effort, the Approved Vendor List and revisions thereto, together with the applicable backup documents, is distributed from Williamsport to all field sites.

4.3.2 Use of any vendor on the list is subject to the approval of the QA Manager. He is responsible for distribution and control of the Approved Vendor List at the field site.

4.3.3 Vendors are placed on the Approved Vendor List by virtue of a Certificate of Authorization or a Quality System Certificate (Materials) issued by the ASME.

4.3.4 Vendors who do not possess a Quality System Certificate or Certificate of Authorization may be placed on the list by virtue of a survey of their facitlities and acceptance by QA audit personnel from Williamsport, Paramount, or a Company nuclear field site. Vendors in this category shall be audited at least once a year. If such a vendor has not been used in over a year, he shall be resurveyed and reinstated as the result of a successful audit or dropped from the Approved Vendors list. When schedule conflicts arise, an additional thirty (30) days shall be allowed.

4.3.5 Vendors who are qualified by virtue of a Company survey shall notify the Company of proposed modifications to his Quality [illegible] Program. [illegible]

4.4 FORMS

4.4.1 Forms referred to in this section are exhibited in the back of this manual.

Forms referenced are:

(11) Field Requisition/Purchase Order/Receiving Report
(12) Approved Vendor List
(S-1) UE&C/Seabrook Central Purchasing Order Form
(S-2) UE&C/Seabrook Central Purchasing Requistion Form

5.0 INSTRUCTIONS, PROCEDURES AND DRAWINGS

5.1 SCOPE

5.1.1 To assure that all activities affecting quality during field fabrication and installation are prescribed in documented instructions, procedures and drawings and that these include appropriate acceptance criteria for determining that the activities have been satisfactorily accomplished.

5.2 PROJECT PROCEDURE MANUAL

[illegible] included [illegible] selected by the QA Engineer, QEG, to suit specific requirements. (See Section II, Paragraph 2.4)

5.2.2 The QA Manager or his designee, is responsible for the establishment of the Project Porcedures Manual. Actual preparation and revision is handled as in 2.4.4. Maintenance and distribution of the Project Procedure Manuals to field personnel is the responsibility of the QA Manager or his designee.

/01/82 5.2.3 The QA Manager is responsible for distribution of Procedures in any combination to site personnel as required.

5.2.4 Additional procedures which might be required to suit specific situations may be initiated and/or prepared by the QA Manager, his designee, the Chief Field Engineer, or QEG. In all cases, they shall be approved by the director of Quality Assurance or his Level III representative.

1/82 5.2.5 Procedures as required by Code, Contract Specifications and by this manual shall be implemented. Procedural information relating to the following subjects may be included in the QA Manual, Project Procedures, or Field Instructions.

Organizational	QA Manual Control
Design Control	Receiving Inspection
Procurement	Final Inspection
Nondestructive Examination	Authorized Inspection
Welding Procedures	Heat Treatment
Welding Materials Control	Tool & Equipment Calibration
Storage and Handling	Personnel Qualifications
Non-Conformance Control	Records Control

5.2.6 All procedures are available to the Customer for his information and/or approval and to the Authorized Nuclear Inspector.

5.2.7 Records of procedure qualifications, when applicable, are available to the Customer and the Authorized Nuclear Inspector.

5.3 DRAWINGS

5.3.1 All field fabrication and installation shall conform to Customers furnished drawings, specifications and instructions.

Field Drawings and Instructions (Forms 6, 7, 18, 19, 19A, 19B, 19C, 19D, and 19E) required to implement field fabrication and installation are prepared as outlined in Section III. These in turn are used to prepare process sheets which outline in detail the sequence of operations, and reference the applicable procedures required to complete the activity. (See Section X).

5.4 FORMS

5.4.1 Forms referred to in this section are exhibited in the back of this manual.

Forms referenced are:

(6) Sub-Assembly Drawing
(7) Installation Isometric
(18) Field Process Sheet
(19A) Field Weld Repair Process Sheet
(19B) Hanger Field Weld Process Sheet Class 1
(19C) Hanger Field Weld Process Sheet Class 2 or 3
(19D) Expansion Anchor Process Sheet
(19E) Mechanical Snubber Process Sheet

6.0 DOCUMENT CONTROL

6.1 SCOPE

6.1.1 To control the issuance of all Customer and Company documents (instructions, procedures, and drawings including changes thereto) and to assure that these documents, including all changes, are reviewed for adequacy, approved for release by authorized personnel and are distributed to and used by the personnel at the location where the activity is being performed.

6.1.2 Documents considered are from three sources: The QEG, the customer and those initiated by the site. The treatment afforded each document is outlined in document control procedures.

6.2 QEG INITIATED DOCUMENTS

6.2.1 QEG initiated documents are those furnished to the field site by the Quality Engineering Group. These include but are not limited to the Corporate QA Manual, when applicable, the Project QA Manual, and Project Procedures. (See Section II)

6.2.2 The initiation, revision, adequacy, approval and maintenance of QEG documents are the responsibility of the Director of Quality Assurance or his designated representative.

09/01/82 A. Indexing and distribution to various field sites of QEG documents are the responsibility of the QA Engineer, QEG or his designee.

6.2.3 The QA Engineer, QEG or his designee will establish a Document Status Record (Form 13) for each field site. The DSR functions as an index of each document and distribution list.

09/01/82 6.2.4 At each job site, the QA Manager or his designee will maintain a Document Status Record (DSR) of all procedures to be distributed to individual personnel or work stations. Distribution will be by the DSR which requires return of void documents.

6.3 CUSTOMER INITIATED DOCUMENTS

6.3.1 Customer prepared documents are those furnished to the Company by the Owner or his Designee. The initiation, revision, adequacy and approvals of these documents are the responsibility of the Owner or his Designee under other Quality Assurance Program.

These include but are not limited to Design Specifications, piping drawings, flow sheet, equipment drawings and special instructions and any other information required to form a basis for fabrication and installation.

6.3.2 Once received by the Company at the field site, it is the responsibility of the Chief Field Engineer to maintain and index these documents and control their release to authorized personnel at the location where the activity is being performed.

6.3.3 The Field Drawing Control Clerk maintains a Document Index (Form 40) or a Drawing Record (Form 14) which records each type of document by number and revision. Transmittal for reference purposes to authorized personnel is by transmittal (Form 15) which requires return of void documents. In cases where a voided drawing may be required to be retained, the returned form shall bear a statement that the drawing is marked "void" by the Field Engineer and is attached to the later revision for record purposes. No "void" drawings will be permitted at work stations.

6.3.4 When Customer drawings are used for fabrication or installation purposes, copies shall be marked up with any necessary information and they shall be treated in the same fashion as field drawings in Para. 6.4 below and the Company accepts responsibility for work performed to these drawings.

6.4 FIELD INITIATED DOCUMENTS

6.4.1 The initiation, revision, adequacy, approvals, maintenance, indexing and distribution of field initiated documents is the responsibility of the Chief Field Engineer or QA Manager.

6.4.2 The chief Field Engineer is responsible for:

Field Drawings - Sub-assembly drawings (Form 6) and installation isometrics (Form 7).
Stop Work Orders (Form 9)
Field Requisitions (Form 11)
Drawing Record (Form 14)

In addition, he shall also be responsible for the initiation, revision and distribution only for Process Sheets, Forms 18, 19, 19A, B, C, D, E.

6.4.3 The Field Drawing Control Clerk maintains an index which records each type of document by number and revision.

6.4.4 The Chief Field Engineer or his designated representative shall maintain a record and transmittal (Form 15) of all field drawings with the latest revision of each, date and quantity of copies, issues, and persons to whom they were issued.

Revisions will also be distributed by transmittal which requires the return of void drawings for destruction.

The Chief Field Engineer shall provide access to a copy of all void drawings either through retention of voids or through the Customer.

The QA Engineer-Records shall retain the filed copy of the voided process sheet for record purposes.

6.4.5 Due to their limited distribution transmittal letters are not required for Stop Work Orders and Field Purchase Requisitions. The index is considered adequate control.

6.4.6 The QA Manager is responsible for:

Procedures (Form 16)
Nonconformance Reports (Form 17)
Process Sheets (Form 18)
Field Weld Process Sheets (Form 19)
(Approval and Distribution only)

09/01/82 6.4.7 He will maintain an index by number and revision and a distribution list of all procedures (Form 13) and Nonconformance Reports. When procedures are superceded, he will assign an individual to distribute later revisions to those on the distribution list, by use of a transmittal (Form 13) which requires return of void documents.

6.4.8 Process Sheets and their revisions (Forms 18, 19, 19A, B, C, D, E,....) are prepared by the Chief Field Engineer or his designee and approved by the QA Engineer - Process. They are then presented to the ANI for review. The Field Drawing Control Clerk shall prepare a list of field initiated and/or revised drawings (isometrics and fabrication sheets) indicating the latest approved revision and distribute daily to the QA Specialist - Process. The QA Specialist - Process using this list shall record the current isometric or fabrication sheet revision level, as applicable, to all Process Sheets at the time of issuance. Completed Process Sheets are returned to the QA Specialist - Process for review and retention in the QA Records file in accordance with the requirements of Section XVII.

6.5 FORMS

6.5.1 Forms referred to in this section are exhibited in the back of this manual.

Forms referenced are:

(6) Sub-Assembly drawing
(7) Installation Isometric
(9) Stop Work Order
(11) Field Requisition
(13) Document Status Record
(14) Drawing Record
(15) Transmittal Record
(16) Procedures
(17) Nonconformance Report
(18) Field Process Sheet
(19) Field Weld Process Sheet
(19A,B,C,D,E) Field Process Sheets
(40) Document Index

7.0 CONTROL OF PURCHASE MATERIAL, ITEMS AND SERVICES

7.1 SCOPE

7.1.1 To outline the policy of the Company relating to the control of purchased items and services at various field sites from the issuance of the Purchase Order to and including Receiving Inspection.

7.2 PURCHASE BY OTHERS

7.2.1 In most instances, the Company installs fabricated items furnished to the Owner by others (including the Company Fabrication Shops) under the Quality Assurance Programs and Certificates of Authorization. The degree to which the company may be required to participate in the acceptance inspection of these items will be a matter of agreement on the specific field site and the subject of a written procedure to be used at that site. Procurement shall be as detailed in the Seabrook Central Purchasing Procedure. Under this procedure, the Chief Field Engineer, or his designee, will initiate all Field Requisitions on applicable UE&C forms. This will include all technical and quality assurance requirements needed to assure compliance with the Code. (See Paragraph 4.2.1) The requisition shall be reviewed by the Field QA Manager for all Code requirements and approved if acceptable. It will then be forwarded to UE&C Field Purchase Agent, who will procure the material from a vendor on the Company Approved Vendor List.

Receiving of materials purchased under this program will be as outlined in paragraph 7.4.

7.2.2 As a minimum, the Company will inspect for shipping damage. For nuclear stamped components, copies of the appropriate ASME Data Report will be obtained by the QC Inspector - Receiving and made available to the Authorized Nuclear Inspector at that site. "For code stamped items he will check for damage and the Code Symbol Stamp and nameplate markings. He will aslo verify that the required Data Report is available and that the nameplate markings agree."

7.2.3 (Not applicable to the Seabrook Project.)

7.2.4 Materials furnished by others may be accepted if:

(1) the vendor appears on the Company's Approved Vendor List, or

(2) the purchaser has been accepted by the Company as an approved material supplier, or

(3) the material is furnished by the "N" Stamp Holder responsible for the piping system design.

In all case, the material, Certified Material Test Reports, Certificate of Compliance, Required Code Data Reports and/or other required evidence of compliance will be checked by the QA Department against the applicable Purchase Order or Purchasing Specification. In addition to the above paragraph 7.4.3 through 7.4.9 of the section will be implemented.

7.2.5 There will be some occasions when the QA Department will be required to perform the required inspection function on materials furnished by one of the Company fabrication shops under other Certificates of Authorization. In this case, a copy of the applicable Purchase Order and all applicable documents will be furnished by the shop to the QA Manager. Inspection will then be completed as outlined below.

7.3 PURCHASE BY CORPORATE HEADQUARTERS

7.3.1 In order to expedite the work prior to the establishment of the on-site activities, procurement of Certain items may be performed at Corporate Headquarters.

7.3.2 The Mechanical Construction Manager or his designee initiates a requisition for the required items. This shall include all the Code and Customer requirements as outlined in Section IV Paragraph 4.2.1.

7.3.3 The requisition is forwarded to the Purchasing Department - Williamsport Shop who prepares a Purchase Order, solicits bids and selects a potential vendor from the Approved Vendor List (Form 12). The Purchase Order is then forwarded to the Quality Assurance Department Williamsport Shop where it is reviewed to assure that all Code and Customer requirements are shown and correct and that purchase is from a vendor approved for the item involved. It will then be approved and forwarded for purchase to the Purchasing Department - Williamsport Shop.

7.3.4 Copies are then sent to the QA Department when site activity starts, to be used for receiving inspection and record files.

7.4 PURCHASE AT SITE

7.4.1 Initiation and control of field purchase documents are covered in Section IV.

7.4.2 Purchase of Items or Services is limited to Vendors who appear on the Approved Vendor List furnished by the QA Department - Fabrication Operations. Vendor acceptance, source evaluation, auditing and source inspection is performed under the Williamsport Shop as an approved supplier.

3/1/82 7.4.3 As purchased items are received at site, they will be segregated from accepted items or placed on hold by the Receiving Department until inspection is performed and documentation verified.

3/1/82 7.4.4 The QC Inspector-Receiving, will obtain the Purchase Order (Form 11) for materials procured by the field or other applicable procurement documents when material is furnished by others and initiate a Receiving Inspection Report (Form 21).

He will then physically check materials for damage, identification and other required markings and if necessary, for dimensions with calibrated tools.

For code stamped items he will check for damage and the Code Symbol Stamp and nameplate markings. He will also verify that the required Data Report is available and that the nameplate markings agree.

Upon completion of the physical inspection, the Receiving Inspector shall sign and date the physical inspection block of Form 21 and forward it to the QA Engineer-Materials.

The QA Engineer-Materials will review all CMTR's and other documents furnished as evidence of compliance for purchased materials or services to assure that they are applicable, complete and correct for the item involved.

All characteristics required to be reported by the material specification of Section III of the Code shall be shown on checklists.

Characteristics shown on the CMTR s need not be duplicated, but the checklist shall provide a record that the CMTR or C of C has been received, reviewed and found acceptable.

Upon completion of the documentation review the QA Engineer-Material shall sign and date the documentation verification block, assign a sequential Receiving Inspection Report number and forward copies of the Receiving Report tp the Receiving Inspector, the ANI, Field Purchasing (or the Customer or Company Shop if applicable). A Records copy including the applicable supporting documentation will be retained by the QA Records Department.

The ANI, via receipt of a copy of the Receiving Report, will be informed that copies of CMTR's showing the results of all tests and examinations performed in accordance with the material specification and the applicable requirements of Section III of the Code have been received and are in QA Records for his review.

3/1/82 7.4.5 Accepted items will then be tagged with an Accept Tag (Form 20) or placed in a designated "Accept" container/area and released for storage or installation by the Receiving Inspector.

7.4.6 Nonconforming items shall be marked with a Hold Tag (Form 22) and will be treated as outlined under Section XV. All vendor related problems will be documented in writing, copies of which will be placed in the appropriate vendor file. A review of nonconformances will be made on a monthly basis, or more frequently as required, by the QA Manager to evaluate trends and possible disciplinary action. This evaluation will be part of the monthly report sent to the Director of Quality Assurance.

7.4.7 All Inspection Reports and documentary evidence of compliance will be filed by the QA Department as outlined under Section XVIII.

7.4.8 Handling and storage of items are performed as outlined in Section XIII.

7.4.9 No source inspection is anticipated under this program. If required, the QA Manager shall contact the QA Manager - Williamsport Shop and request that he provide these services.

The QA Manager will forward copies of the Purchase Order (Form 11) and other applicable purchase documents to the QA Manager- Williamsport Shop. He will assign a QC Inspector from Williamsport to conduct the source inspection using these documents, to verify compliance of the items and its backup evidence of compliance. Upon acceptance, he will complete the Inspection Report (Form 21).

All purchase documents and completed Inspection Reports will be sent to the QA Manager.

When source inspection is performed, the QC Inspector-Materials at site will use the Inspection Report to check for identification upon receipt.

7.5 SUBCONTRACTED SERVICES

7.5.1 Purchase documents for subcontracted services shall be controlled in the same manner as required by Section IV.

7.5.2 The Quality Assurance Manual, procedures and qualification of personnel which the subcontractor intends to use at site, shall be reviewed and approved by the QA Manager or his designated Level III representative, for verification of conformance to all applicable Code requirements.

7.5.3 All services performed will be monitored by the QA Department consistent with the importance, complexity and volume.

7.5.4 Documented evidence of compliance will be retained by the QA Department as outlined in Section XVII.

7.5.5 When audits are subcontracted to an auditing firm, that agency will be placed on the Company's AVL based upon review of personnel qualifications by Director Quality Assurance, QEG. Copies of personnel qualification shall be maintained in the QEG files and shall be made available to Authorized Inspection Agency personnel upon request.

7.6 FORMS

7.6.1 Forms referred to in this section are exhibited in the back of this manual.

Forms referenced are:

(11) Purchase Order
(20) Accept Tag
(21) Receiving Inspection Report
(22) Hold Tag

8.0 IDENTIFICATION AND CONTROL OF MATERIALS AND ITEMS

8.1 SCOPE

8.1.1 To assure that Items are identifiable and controlled from receipt to installation to prevent the use of incorrect or defective items.

8.2 OWNER FURNISHED ITEMS

8.2.1 In working with Items furnished by the Owner or his agent, the Company will use the manufacturer's serial number, or other designated customer control system for identification and traceability.

8.2.2 The degree and manner of control which the customer may wish to institute will be outlined in his Quality Assurance Manual. The Company will initiate specific procedures to provide an interface with this activity. Such procedures will define responsibility for receiving and inspection, storage, identification, and disbursement. When the Company is responsible for any of these functions, the procedures of Paragraph 8.3 as applicable will be applied.

8.2.3 The control shall be described in Section VII, Paragraph 7.2.

8.3 COMPANY FURNISHED ITEMS

8.3.1 IDENTIFICATION AND TRACEABILITY

A. All components, piping sub-assemblies or component supports furnished by the Company will use the manufacturer's serial number for identification and traceability.

B. All material furnished by the Company will be identified by a standard marking procedure which requires identification by Purchase Order and Item Number and Heat Number or a suitable Code explained on the Certified Material Test Report. This is in addition to the marking requirements of the material specification. This procedure assures that the markings are legible and not detrimental to the items involved. The markings will be located in areas which will not interfere with the function or quality of the items.

C. Before material is cut, the Purchase Order and Item Number and heat number or suitable Code shall be transferred, by the

Cutter and monitored by a QC Inspector, to each cut piece. This verification shall be documented on the process sheet.

D. When it is necessary to cut a piping sub-assembly, each piece shall be identified with the Assembly Mark Number and the serial number from the Code Name Plate, prior to cutting, and transfer of marking shall be subject to verification by the Authorized Nuclear Inspector and under the supervision of a QC Inspector and documented on the process sheet.

E. Welding materials will be stored under suitable environmental conditions, involving permanent and portable storage ovens for low hydrogen electrodes. Identification will be in accordance with manufacturer's lot, heat or control numbers as appropriate.

8.3.2 DISBURSEMENT AND CONTROL FROM ACCEPTED STORES

A. Disbursement of components and material shall be by requisition; Component Requisition (Form 23) or Field Warehouse Requisition (Form 24). The Field Engineer/Area Superintendent shall approve either requisition using the latest revision of the installation isometric or fabrication detail applicable to assure correct information regarding component or sub-assembly identification, size, quantities and specification for materials.

B. The requisition for material or components are presented to the QA Engineer - Materials or his Designee for review of accuracy, completeness and required approval.

C. For materials, the Purchase Order Number and heat number of the materials disbursed is recorded on the requisition by warehouse Personnel.

D. The QA Engineer or his designee reviews the requisition for heat number verification and traceability. After approval, he authorizes release for delivery to the Foreman indicated on the requisition.

E. All copies of the Field Warehouse Requisiton are signed by the Warehouse Attendant after completing the order. He removes the "Warehouse" copy which is retained for reference and the other four copies are forwarded with the order.

F. Materials are tagged by Warehouse Personnel with appropriate identification tags to identify them to the installation isometric or fabrication detail.

G. Upon receipt, the Foreman signs the forwarded copies to acknowlege receipt, keeps the copy marked Field Engineer's and returns the QA copy to the QA Engineer - Records.

H. When welding is involved, the Craft Foreman will prepare a Weld Rod Stores Requisition (Form 25) in duplicate, in accordance with latest revision of the isometric or detail drawing as applicable. It is submitted to the process sheet control center where it is reviewed for accuracy and completeness by the QA Specialist - Process. The QA Specialist - Process then issues the applicable Process Sheet for each specific weld (See Section X). This, plus the Weld Rod Stores Requisition is taken to the welding materials distribution center, by the welder, where the quantity, type and size of weld material is issued and the correct lot, heat or control number of weld material is recorded on the requisition by the QA Specialist - Welding. Only one Heat/Lot or Control Number can be issued at one time for one type and size of filler material.

I. The welder retains the process sheet and a original of the Weld Rod Stores Requisition while he is welding. All low hydrogen electrodes will be maintained in portable electrode holding ovens after withdrawal from storage. A copy of the Weld Rod Stores Requisition is retained at the center and forwarded to the QA Department for record on a daily basis. The Process Sheet and Requisition must be returned at the completion of each weld or at the end of the shift, even if welding is not completed. All portable electrode holding ovens will be returned to the weld rod distribution center at the end of the shift. The Q.A. - Specialist - Welding assures they are plugged in and functioning and secures them until the following day. At the beginning of the shift, the QA Specialist-Welding shall again verify that the portable ovens are functioning prior to re-distribution to the Welders. Process Sheets shall be reissued for uncompleted activities. At the completion of a weld, all excess electrodes are returned by the welder, to the weld material distribution center for restorage. Damaged electrodes are bent and discarded by the QA Specialist - Welding. Undamaged electro-

des are put back into storage by correct type, lot, heat or control number.

8.4 SITE FABRICATED SUB-ASSEMBLIES

8.4.1 Piping sub-assemblies, parts, appurtenances, and component supports fabricated on site by the Company will not be Code Stamped as permitted by NCA 8233.2 (c). Fabricated items will be controlled by unique markings to permit traceability during and after installation in accordance with a procedure acceptable to the ANI. A Field Process Sheet, (Form 18), satisfying the requirements of NCA 8233.2 (c) for a transmittal form shall be initiated for each field shop fabricated item to provide for Company QA/QC and ANI review prior to acceptance for use in installation areas.

8.5 NON-CONFORMANCES

8.5.1 Any item whose identification is lost or questionable shall be "Held" in accordance with Section XV.

8.5.2 In no case will any material, piping sub-assembly or component which is on "hold" per Section XV be issued for work unless a Limited Work Authorization has been approved.

8.6 FORMS

8.6.1 Forms referred to in this section are exhibited in the back of this manual.

Forms referenced are:

(18) Field Process Sheet
(19) Field Weld Process Sheet
(23) Material/Component Requisition
(24) Field Warehouse Requisition
(25) Weld Rod Stores Requisition

9.0 CONTROL OF SPECIAL PROCESSES

9.1 SCOPE

9.1.1 To assure that all special processes, including welding, heat treating and non-destructive examination are prepared, controlled and performed by qualified personnel using qualified procedures in accordance with the applicable code, standards, criteria and other requirements.

9.2 QUALIFIED PROCEDURES

9.2.1 In general, all special process procedures will be issued from QEG as part of the Project Procedures Manual. Preparation, revision, and qualification of such special [illegible] are [illegible] of the Director of Quality Assurance [illegible] tive.

9.2.2 All welding procedures are qualified in accordance with the requirements of ASME Section IX and Section III, Div. 1. Full details as to material requirements, joint preparation, preheat, interpass temperature, post-heat treatments, required specimens, required results, etc., are all included in an approved written procedure.

Preparation, revision and maintenance of these procedures and their qualification records is the responsibility of the QA Welding Engineer, QEG. He will select the necessary Welding Procedures Specifications (Form 26) for each job site. Copies of all required Welding Procedure Specifications and their Procedure Qualification Records (Form 27) are forwarded to the job site as part of the Project Procedure Manual and available to the ANI. The field site may qualify additional procedures with the approval of the QA Welding Engineer (See Section V). /82

9.2.3 All non-destructive examination procedures are prepared and qualified in accordance with the requirement of ASME Section V and ASME Section III, Div. 1. Approval of these procedures and qualifications is by a Level III.

Preparation, revision and maintenance of these procedures and the NDE Procedure Qualification Record (Form 28) is the responsibility of the Level III Examiner. (See Para. 1.3.10). He cooperates with the QA Engineer, QEG, in selecting all required NDE procedures /82

for each jobsite. Copies of all NDE Procedures and their Qualification Records are forwarded to the jobsite as part of the Project Procedure Manual and available to the ANI. (See Section V)

Acceptability of all NDE procedures prepared and qualified by a Level III shall be demonstrated to the satisfaction of an ANI. The site Level III and the site ANI must satisfy themselves that such procedures are satisfactory for the particular site requirements.

9.2.4 Results of nondestructive examination shall be recorded on appropriate record forms:

Magnetic Particle Inspection Report (Form 29)
Liquid Penetrant Inspection Report (Form 30)
Radiographic Inspection Report (Form 31)
Ultrasonic Flaw Detection Report (Form 36)

Any rework required as a result of nondestructive examination shall be shown on a Weld Repair Order (Forms 32A,B,C,D) to accompany the Field Weld Process Sheet to assure that the rework is completed satisfactorily and documented on the process sheets.

9.2.5 When there is specific reason to question the suitability of a Welding Procedure, or NDE Procedure, the ANI or QA Manager at the site may require requalification of the procedure in question.

9.2.6 Procedures for heat treatment of weld including preheat, interpass temperature and post-weld heat treatment are prepared, revised and maintained by the QA Welding Engineer, QEG. They define the methods to be used and meet the requirements of Section III, Division I. They are forwarded to the job site as part of the Procedure Manual.

Included in the procedures are such items as requirements for thermocouples, potentiometers, calibration of equipment, heating and cooling rates, holding temperatures and time, records, etc.

9.2.7 Normally bending of pipe in the field is limited to those sizes which can be bent cold, and do not require post bending heat treatment or involve impact tested materials. Bends in the latter categories shall be made in one of the Company fabrication shops.

3/1/82

If the need should arise to adjust a pipe line in the field by application of heat, this shall be the subject of a special procedure prepared by the QA Engineer, QEC, after consulting with the QA Welding Engineer. Such special procedures shall be controlled as outlined in Section V.

9.3 PROCEDURE CONTROL

9.3.1 When the need for use of a special process is indicated, this requirement will be shown on the process sheet or other document which accompanies it by specific procedures number and revision. (See Section X) All Welding Procedures & Nondestructive Examination Procedures are selected by Engineering during preparation of the process sheets or field instruction and approved by a QA Engineer-Process. The selection and approval is under the guidance of the Welding Engineer or NDE Level III respectively.

9.3.2 Individuals involved in the performance, examination and/or inspection of the special process will have copies of the required procedures and/or instructions at or near his work station.

9.4 QUALIFIED PERSONNEL

9.4.1 All personnel performing special process shall be trained, qualified and certified to specific levels of competence as required by applicable codes and standards and as presented in the Project Procedure Manual (See Section II).

9.5 RECORDS

9.5.1 All procedure and personnel qualification records shall be retained in accordance with the requirements of Section XVII and available to the Authorized Nuclear Inspector.

9.6 FORMS

9.6.1 Forms referred to in this section are exhibited in the back of this manual.

Forms referenced are:

(26) Welding Procedure Specification
(27) Procedure Qualification Record - (Welding)

(28) Procedure Qualification Record - (NDE)
(29) Magnetic Particle Examination Record
(30) Liquid Penetrant Examination Record
(31) Radiographic Examination Report
1/82 (32A) Weld Repair Order
1/82 (32B) Weld Repair Order
1/82 (32C) Weld Repair Order
1/82 (32D) Weld Repair Order
(33) Ultrasonic Flaw Detection Record

10.0 INSPECTION

10.1 SCOPE

10.1.1 To assure that inspection of activities affecting quality are performed as necessary to verify conformance to drawings, procedures and instructions and appropriate quantitative or qualitative acceptance criteria.

10.2 INSPECTION CONTROL

10.2.1 Inspection control will be maintained by the use of a Field Process Sheet for each work activity or a field weld Process Sheet for each weld. These are prepared by the Chief Field Engineer or his designee and indicate the sequence of the work, including inspection, examination or tests. (Forms 10, 10A, 10B, 10C, 10D, 10E, 10F, 10G, 10H, 10I, 10J, 18, 19, 19A, 19B, 19C, 19D and 19E). 3/1/82

10.2.2 Special process procedures are specifically referenced by number and revision (See Section IX).

10.2.3 A process sheet is prepared using the information on the field drawing which reflects the customer specifications and applicable section of the Code.

10.2.4 Before a process sheet is issued, it is reviewed by the QA Engineer - Process, presented to the ANI with drawings and other supporting documents for review and establishment of "hold" points as he deems appropriate. He acknowledges his review by initialing and dating the Process Sheet. When requested, these items shall also be submitted to the Owner or his designee for establishment of his "hold" points.

10.2.5 After this, it is forwarded to the Process Sheet Control Center where it is issued to the area of fabrication or installation as required. During the fabrication or installation cycle the process sheet is used as the controlling document.

10.2.6 No work shall be allowed to proceed beyond any "hold" point until the required inspection, test or examination has been performed and signed-off by the individual responsible, indicating release of the "hold". The welder or forman must return the process sheet at the completion of each weld or at the end of the shift even if welding is not completed.

10.2.7 Upon completion of the work, the completed process sheet shall be returned to the QA Department by the QA Specialist - Process for retention in the QA Records file in accordance with the requirements of Section XVII.

10.3 INSPECTION PROCEDURE

/1/82

10.3.1 Inspection shall be performed by a QC Inspector to verify that the dimensional, material and quality requirements specified on the drawings or other documents have been attained. It shall verify that welding, non-destructive examination or test were performed to the procedure number and revision shown on the process sheet by qualified personnel, that rework required as a result of non-destructive examination or test were performed and re-examined and that all the work has been properly documented on the process sheet and/or other appropriate examination and inspection forms. (Forms 10, 10A, 10B, 10C, 10D, 10E, 10F, 10G, 10H, 10I, 10J, 18, 19, 19A, 19B, 19C, 19D, 19E, 21, 29, 30, 31, 32A, 32B, 32C, 32D, 32E, 32F and 36.

10.3.2 Inspection shall be performed by a QC Inspector in accordance with written procedures and/or check lists. Appropriate quantitative or qualitative acceptance criteria will be outlined on the drawing and/or the inspection procedure.

10.4 PERSONNEL

10.4.1 Personnel performing inspections, tests or examinations shall be qualified as required (See Section II and IX).

10.4.2 The site organization as outlined in Section I precludes the possibility that inspections, tests or examinations of materials or work operations are performed by personnel who report to an immediate supervisor who is responsible for the work being performed.

10.5 AUTHORIZED INSPECTION

10.5.1 Prior to start of work, the Company, through headquarters, will advise its Authorized Inspection Agency that services will be required at a specific field site.

10.5.2 In advance of the start of work, the QA Manager will establish a working arrangement and review the job requirements with the Authorized Nuclear Inspector.

10.5.3 The ANI will be given the opportunity to establish Hold Points on each process sheet, and all revisions. He will be notified in advance of a Hold Point and whenever there is a Company Audit.

10.5.4 The ANI shall have free access at all times to those locations where Code activities, including those concerned with supply or manufacture of materials, are being performed.

He shall be kept informed of the progress of the work and notified reasonably in advance when an item will be ready for required test or inspections.

10.5.5 The Authorized Nuclear Inspector may require requalification of welding or [illegible] outlined [illegible]

10.5.6 The ANI shall have free access at all times to [illegible] port of Code activities, including those concerned with supply or manufacture of materials.

10.5.7 The Chief Field Engineer shall sign the Code Data Reports and transmit them to the ANI for review and acceptance. Code Stamping shall not be allowed prior to review and acceptance by the ANI.

10.6 RECORDS

10.6.1 Results of all inspection, examination and test records will identify the inspector or examiner, type of observation, results, and acceptability of the work operation or item, and shall be retained by the QA Department as outlined in Section XVII.

10.7.1 Forms referred to in this section are exhibited in the back of this manual.

Forms referenced are:

(10) Final Inspection Report
(10A) Final Inspection Installation Verification
(10B) QA/QC Final Inspection
(10C) Process Sheet and As/Built Status Log
(10D) Integrity Test Cover Sheet

3/1/82

/1/82	(10E)	Integrity Test Data
/1/82	(10F)	Valve Line Up
/1/82	(10G)	Integrity Test Boundary Description
/1/82	(10H)	Exception List
/1/82	(10I)	Pre-Test Verification
/1/82	(10J)	Documentation Review
	(18)	Field Process Sheet
	(19)	Field Weld Process Sheet
	(19A)	Field Weld Process Sheet/Repair
	(19B)	Ranger Field Weld Process Sheet (Class 1)
	(19C)	Ranger Field Weld Process Sheet (Class 2-3)
	(19D)	Expansion Anchor Process Sheet
	(19E)	Snubber Process Sheet
	(21)	Inspection Report
	(29)	Magnetic Particle Examination Report
	(30)	Liquid Penetrant Examination Report
	(31)	Radiographic Examination Report
/1/82	(32A)	Weld Repair Order
/1/82	(32B)	Weld Repair Order
	(32C)	Weld Repair Order
/1	(32D)	Weld Repair Order
/1/82	(32E)	Base Material Surveillance Report
/1/82	(32F)	Arc Strike Surveillance Report
	(36)	Ultrasonic Flaw Detection Record

Pullman Power Products		XI SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: F. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	TEST CONTROL	PAGE NO. 1 of 2

11.0 TEST CONTROL

11.1 SCOPE

11.1.1 To assure that all tests required to demonstrate satisfactory performance in service are performed to written procedures which include requirements and acceptance limits of the design specification, adequate instrumentation requirements and environmental requirements as they apply to the leak tightness testing required by the Code.

11.2 PROCEDURES

11.2.1 All hydrostatic and pneumatic tests shall be performed by qualified personnel in accordance with written procedures which meet the requirements of the Code.

11.2.2 It is the responsibility of the Director of Quality Assurance or his representative to prepare, revise, maintain and approve the required test procedures.

11.2.3 The Project QA Engineer, QEG, selects appropriate test procedures which become part of the Project Procedure Manual (See Section II).

11.2.4 The Chief Field Engineer or his designated representative shall prepare a specific instruction sheet to implement the test procedure for each required test. He will submit this to the ANI for review and establishment for Hold Points.

11.2.5 Gas and Bubble Formation Tests, Vacuum Tests, Halogen Diode Detector, Helium Mass Spectrometer Reverse Probe ("Sniffer") and Helium Mass Spectrometer are considered as NDE Examinations.

All procedures shall be prepared and qualified as described in Section IX Para. 9.2.3.

All personnel shall be qualified as required for NDE as described in Section II, Para. 2.5.3.

11.3 TEST CONDITIONS

11.3.1 The test shall be performed using appropriate, properly calibrated equipment and the system shall be suitably instrumented to assure that the intent of the test is met.

11.3.2 Requirements for temperature of test medium, additional support, isolation of components as required by the procedure shall be observed.

11.3.3 For the system to be tested, these items shall be specifically identified on the instruction sheet which accompanies the test procedure.

11.4 PERSONNEL

11.4.1 The test inspection personnel shall be qualified in accordance with Company's Personnel Qualification Procedures for testing personnel. (Section II).

11.5 RECORDS

11.5.1 Records of the test shall include acceptance by the inspector, the type of observation, test procedure number and revision, results, and acceptability. Records shall be retained by the QA Department as outlined in Section XVIII.

Pullman Power Products		XII SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	CONTROL OF MEASURING AND TEST EQUIPMENT	PAGE NO. 1 of 3

12.0 CONTROL OF MEASURING AND TEST EQUIPMENT

12.1 SCOPE

12.1.1 To assure that tools, guages, instruments and other measuring and testing devices are controlled, calibrated and adjusted at specific periods to maintain accuracy within necessary limits.

12.2 ITEMS COVERED

12.2.1 This policy covers, but is not limited to micrometers, depth guages, hydrostatic test gueages, recording potentiometer, thermometers, ammeters, voltmeters, magnetic particle test equipment, ultrasonic equipment, densitometers, and ferritie indicators. Depending on intended service, other equipment such as thermometers, levels, squares and straight edges may require calibration as determined by the QA Manager or his designee.

12.2.2 It is not intended to apply to rulers, tapes, levels, squares, individual portable rod ovens and other such devices where used in situations where normal commercial practices provide adequate accuracy.

12.2.3 Personal tools are not allowed on site.

12.3 RESPONSIBILITY

12.3.1 It is the responsibility of the QA Manager or his designated representative to assure that all required tools, guages, instruments and other measuring and test devices are calibrated and maintained in calibration during the installation work.

12.3.2 Calibration may be performed by any of the following organization:

1. Qualified Pullman Power Products Personnel
2. Vendor Personnel whose firm appears on the Pullman Approved Vendor List as an approved Calibration Agency.
3. Personnel of any "N" type certificate holder whose program includes calibration and who appears on the Pullman AVL for calibration.
4. Personnel of the manufacturer of the equipment..

12.4 PROCEDURE

12.4.1 Calibration shall be performed in accordance with a written procedure prepared by the Company, the equipment manufacturer or calibration agency.

12.4.2 In all cases calibration will be to standards traceable to a national standard or other approved standard if a national standard does not exist.

12.4.3 Calibration shall be performed at intervals specified in the procedure unless specifically required by the code.

A. All pressure guages shall be calibrated prior to and after each test or [illegible] group of [illegible] which are conducted within a period not [illegible]

B. Calibration of temperature instruments and Ch[illegible]y-Notch impact test machines used in impact testing [illegible] be performed at the following frequency.

1. Temperature instruments used to control test temperatures of impact specimines shall be calibrated and results recorded at least once in each three month interval.

2. Charpy V-Notch test machines shall be calibrated and results recorded at least once a year using methods outlined in ASTM E-23-72 and employing standard specimens obtained from the U.S. Army Material Research Center.

C. Ultrasonic examination equipment shall be calibrated by use of the reference specimens in accordance with specific procedures.

12.4.4 Each item calibrated except UT Equipment and Densitometers or other equipment which are periodically calibrated while in use, will be recorded on an Equipment Calibration Record Card (Form 33). This will designate the equipment by name, the serial number assigned, calibration frequency, date of last calibration, initials of the inspector and the next recalibration date. In addition each item calibrated will be permanently marked with the serial number assigned to facilitate identification. A tickler system shall be established to jobsite to assure timely recalibration of all required measuring and test equipment.

12.4.5 A calibration sticker (Form 34 or 34A)will be applied to each item including exceptions in Paragraph 12.4.4 indicating its last calibration date and the date when calibration is due.

12.5 REINSPECTION

12.5.1 In the event that a particular piece of measuring or test equipment is found to be out of tolerance, the tools shall be withdrawn from use immediately.

12.5.2 The QA Manager shall then determine whether the out-of-tolerance condition would have any detrimental effect on quality. If so, he shall take the necessary steps to identify the work in which the out-of-tolerance tool was used since its last valid calibration, segregate the work or materials if possible and reinspect it with calibrated equipment, and take the steps necessary to assure Code requirements have been met.

12.5.3 To facilitate this, a checkout log for calibrated portable tools will be used. (Form 37)

12.6 PERSONNEL QUALIFICATIONS

All personnel performing calibration activities shall be qualified in the methods they use. (See Section II)

12.7 Forms

Forms referred to in this section or exhibited in the back of this manual.

12.7.1 Forms referenced are:

(33) Equipment Calibration Record Chart
(34) Calibration Sticker
(35A) Calibration Sticker
(37) Check Out Log

13.0 HANDLING, STORAGE AND SHIPPING

13.1 SCOPE

13.1.1 To control handling, storage, shipping, cleaning and preservation of materials and equipment as necessary to prevent damage or deterioration from receipt until it is installed, tested and accepted.

13.2 PROCEDURES

13.2.1 Specific customer requirements and procedures will be reviewed and accepted by the Company and will be instituted at the field site for handling, storage, shipping, cleaning, preservation and instorage monitoring of materials and components.

13.2.2 If Specific customer procedures are not mandated, the required procedures will be prepared either by the Project QA Engineer, QEG, the QA Manager or his designee. Control will be as outlined in Section V.

A. Storage facilities will be established and maintained for various [illegible] N45.2.2 "[illegible] of Items for Nuclear Power Plants".

B. The QA Manager will assign a QC Inspector to regularly monitor the storage areas, to check for damage or signs of deterioration on a regularly established schedule. Non-conformances will be handled in Section XV.

C. During installation, covers and seals will remain in place until removal is required.

D. All stainless steel items are to be handled with nylon slings, or chain slings wrapped in burlap or cloth.

E. All stainless steel welds will be cleaned with stainless steel wire brushes not previously used on carbon or low alloy steels.

F. In addition any requirements which may be specified by Design Specification shall be satisfied.

Pullman Power Products		XIII SECTION NO.
PREPARED BY: R. G. Davis	APPPOVED BY: E. F. Gerwin EG	DATE: 5 8/81
QUALITY ASSURANCE PROGRAM	HANDLING STORAGE AND SHIPPING	PAGE NO. 2 of 2

13.3 RESPONSIBILITY

13.3.1 The QA Manager is responsible for verifying implementation of these procedures, and for corrective action as necessary.

14.0 INSPECTION, TEST AND OPERATING STATUS

14.1 SCOPE

14.1.1 To control the status of inspections and tests performed on individual items, to provide for identification of items and preclude inadvertent by-passing of inspections and tests during installation.

14.1.2 The Company provides for status control of inspection and tests on the fabrication and installation work it performs at each field site.

14.2 EXCEPTION

14.2.1 The Company will normally not engage in any pre-operational activities. Should company employees be required to perform pre-operational activities, such work will be done under the direct supervision of the Owner or his Agent and under his Quality Assurance Program and Procedures.

14.3 PROCEDURES

14.3.1 The Company will operate under a system of process sheets (Ref. Sections IX and X, [illegible] in the preparation for fabrication of each piping subassembly, or for each inspection activity involving special processes as defined by Section IX of this Manual.

14.3.2 Process Sheets shall indicate the required sequence of events including inspection, tests, applicable procedures with revision level required for each fabrication and/or installation activity.

14.3.3 The process sheet will provide for the identification of each person who performs an operation. It shall also provide for sign-off of inspection, testing and examination operations.

14.3.4 The Process sheet will also provide for the "Hold Point" designations as may be required by the Authorized Nuclear Inspector, (Section X)

14.3.5 It will be used by personnel performing the activity to proceed in the proper sequence, using qualified procedures, instructions and/or drawings.

14.3.6 Work will not proceed beyond any "Hold Point" until it has been accepted by the Authorized Nuclear Inspector, or QC Inspector as applicable. (Section X).

14.4 RESPONSIBILITY

14.4.1 It is the responsibility of the Chief Field Engineer or his designated representative to prepare the process sheet, and all revisions, and include or reference all required welding procedures, special process procedures, examination or test procedures chosen by the QA Engineer - Process. (See also Section IX and X.)

14.4.2 It is the responsibility of the QA Manager or his designated representative to review and approve the process sheet and all revisions, and referenced documents for correctness, completeness, sequence and applicability with the code requirements, prior to issuance. He then forwards the process sheet to the ANI for his review and acceptance.

After all work is complete, the QA Manager or his representative reviews the process sheet to assure that all required operations were performed and signed off, all "Hold Points" initialed and dated, and that the activity was completed and documented to Code and Customer requirements.

14.5 NON-CONFORMANCE

14.5.1 Items or operations which have been found to be in non-conformance will be tagged with a "Hold Tag" (Form 22). The tag will not be removed and work will not progress until the non-conformance is resolved (See Section XV). A notation will be made on the process sheet to indicate the point at which the non-conformance was found. The NCR number, when applicable, shall be recorded.

Concurrent with appropriate resolution of the Non-Conformance, the concept of a Limited Work Authorization (LWA) may be employed. An LWA is the controlled release of an item which has a "Hold" Tag affixed. The purpose of the LWA is to permit movement of items and related work to proceed concurrent with resolution of the cause for the Hold Tag. The system for issue and control of Limited Work Authorizations will be defined in the specific field site procedure for Non-Conformances.

14.3 FORMS

14.6.1 Forms referred to in this section are exhibited in the back of this manual.

Forms referenced are:

(18) Field Process Sheet
(19) Field Weld Process Sheet
(22) Hold Tag

15.0 NON-CONFORMING MATERIALS, PARTS OR COMPONENTS

15.1 SCOPE

15.1.1 To control Items which do not conform to requirements in order to prevent their inadvertent use or installation.

15.2 POLICY

15.2.1 Non-conformance in Items may be detected at source inspection, receiving inspection, in process inspection during fabrication or installation, at final inspection or during testing.

15.2.2 Any Item which does not completely fulfill the requirement of the purchase order, drawing or process sheet, in regard to identification, dimensions, specifications, procedures, quality levels or completeness of documents shall be considered unacceptable.

15.2.3 Unacceptable conditions which can be corrected at the time of discovery and made acceptable to the Q. C. Inspector by controls imposed by the process sheet for that operation are not required to be documented on a Non-Conformance Report.

15.2.4 Unacceptable conditions other than those outlined in 15.2.3 above are considered as non-conformances. Disposition of all non-conformances shall have the concurrence of the ANI.

15.2.5 In the case of non-conformances, the Items involved will be segregated when possible by a Q. C. Inspector and a "Hold" Tag (Form 22) will be placed on them. This will prevent their inadvertent use in installation. For non-conforming items or operations discovered during installation, a "Hold" Tag will be placed on the item by a Q. C. Inspector, or adjacent to the operation (as in the case of welding) and the Field Process Sheet (Form 18) or Field Weld Process Sheet (Form 19) shall be withdrawn by the Q.C. Inspector who notes on the process sheet the point at which the non-conformance occurred and the NCR number when applicablle. It is then returned to the Q.A. Department. Once the non-conformance is resolved, the original process sheet, revised if necessary, or a new process sheet together with revised drawing is issued to resume work (Section X).

15.2.6 A Company Representative will initiate a Non-Conformance Report (Form 17), a proposed Engineering Change Authorization (Form S-3) or such other documents as are appropriate and defined in the specific field site procedure for Non-Conformances. The report will include the description, cause, proposed disposition, justification and the steps that shall be taken to prevent recurrence.

15.2.7 Appropriate resolution of the non-conformance will be determined by the Field Engineering Department in conjunction with Quality Assurance, the customer and QEG consultants if necessary. The proposed resolution shall be acceptable to the Authorized Nuclear Inspector. The "Hold" Tags will remain until the non-conformance is resolved. When the work is completed, the "Steps to prevent recurrence" portion of the NCR form will be completed.

15.2.8 An LWA Request (Form 39) will be prepared by the responsible Field Engineer. It shall delineate the specific LWA scope of work and cross reference document number(s) which are related to the "Hold Tag.

(1) The responsible Field Engineer shall submit the LWA Request to the Chief Field Engineer and the QA Manager or his designee for review and approval.

(2) Upon approval as required in "1" above, the LWA Request for NCR only shall be submitted to UE&C Resident Construction Engineer for review and approval.

15.2.9 Upon approval of the LWA Request, the QA Manager or his designee shall initiate the LWA tag. Any ISO's, Field Process Sheet(s) which may have been withdrawn will be reviewed and revised if necessary. The approved LWA request will cover the scope of work i.e. the specific Process Sheet(s) and operations to be performed and/or the "From" and "To" move locations. A copy of the approved LWA request will accompany the Process Sheet(s) or Requsition for movement when the Item is released to the field, and will be returned upon completion of LWA work to the QA office. The Field QA Manager is responsible for maintaining a log of all LWA's.

15.2.10 Concurrent with release to the field of an approved LWA request and prior to Item work or movement, QC Inspection will affix an LWA tag (Form 41) adjacent to the "Hold" tag on any concerned Item(s).

15.2.11 Inspection and acceptance of LWA scope work will be that associated with procedures called out on applicable Iso's, Field Process Sheets, etc.

15.2.12 Upon completion of an LWA, Q. C. Inspection will remove the LWA Tag and return it along with all documentation pertaining to completed Final Inspection of LWA Scope of Work to the Q. A. Office.

15.2.13 If action has been taken which allows removal of the "Hold" Tag prior to completion of the LWA Scope of Work, the field copy of the LWA Request will be withdrawn by the Q. C. Inspector. The Inspector will note on the withdrawn LWA Request the last element of work scope which was completed, remove the LWA Tag and "Hold" Tag. The Inspector will return the withdrawn LWA Request, LWA Tag, "Hold Tag" and all documentation pertaining to acceptance of the LWA Scope of Work to the Q. A. Office.

15.3 RESOLUTION OF NON-CONFORMANCE

15.3.1 The Field Engineering Department may resolve the non-conformance by accepting the recommendation of the Q. A. Manager, by instituting a solution of its own or by obtaining a solution from the customer. In all cases, the final resolution shall be reviewed by the Q. A. Manager,or his designee, for Code compliance and concurrence by the ANI.

15.3.2 For Non-Conformances which do not meet the Code, the Item may be scrapped, returned for replacement, or reworked to bring it within the Code requirements. All scrapped materials shall be positively identified and totally segregated from all other materials to prevent inadvertent use.

15.3.3 For Non-Conformances which meet the Code but deviate from Customer requirements, the Item may be scrapped or returned for replacement, reworked or repaired to bring into specification, or accepted to "use-as-is."

15.3.4 In all cases where rework is the solution, the Authorized Nuclear Inspector shall be notified and his concurrence received prior to the repair.

15.3.5 In cases of rework, the Field Engineering Department will issue instructions, drawings, rework procedures, process sheets and other documents which may be required to properly effect the rework to acceptable quality. All such documents will be controlled as in Section VI. The Authorized Nuclear Inspector shall be given the opportunity to establish "Hold Points" on the process sheets as he deems necessary.

15.3.6 Prior to performing rework or repairs required by the disposition of a Non-Conformance Report, the cognizant Q. C. Inspector shall remove the applicable "Hold" Tag and attach a Repair Tag (Form 22A) to the Item requiring rework/repair. The Repair Tag will reference the NCR and "Hold" Tag. Upon completion of rework required by the NCR, the Q. C. Inspector will remove the Repair Tag and coordinate with the Q. A. Records Engineer for closing of the NCR.

15.3.7 All Non-Conformance Reports are submitted to the "N" Certificate Holder via the site NCR [illegible] Board which includes representation of the "N" [illegible]ate holder design group. In the event design changes are required, the "N" Certificate Hol[illegible]r will issue an Engineering Change A[illegible]horization (ECA). [illegible]e disposition of the NCR [illegible] ECA, if [illegible]quired evidence to the Company that the "[illegible]rtificate Holder has the required information [illegible]e changes with the design report.

15.4 RESPONSIBILITY

15.4.1 It is the responsibility of the Q. A. Manager to implement this policy through his examination, inspection and testing personnel and in accordance with Non-Conformance Procedures.

15.4.2 Status indicator shall be removed from an Item by the QC Inspector upon receipt of satisfactory resolution of the Item in question.

15.5 PROCEDURES

09/01/82 15.5.1 Specific, additional Non-Conformance control beyond those outlined herein, shall be provided in applicable Nonconformance procedures, as required.

15.5.2 Non-Conformances which require reporting under 10 CFR 21 will be handled as outlined in the applicable Non-Conformance Procedure and Procedure XV-3 "Reporting of Defects and Noncompliances to the NRC."

15.5.3 Non-Conforming Items discovered after a system has been turned over to the Owner for operation shall also be reported to the Owner to permit him to report to the NRC under the provisions of 10 CFR 50-55(e).

15.6 STOP WORK ORDERS

15.6.1 Work activities may be stopped when design changes are received (Reference Section 3) or project work or major portions there of must be stopped in order to preserve the quality of the project.

09/01/82 5.6.2 Stop Work Orders shall be issued and controlled through the Engineering or QA Departments. Verification of the disposition of corrective action shall be handled through the QA Department.

15.6.3 Guide lines required to effectively stop work shall be established as specified in project procedures.

15.7 RECORDS

15.7.1 Records of all non-conformances and their disposition will be retained by the QA Department as outlined in Section XVII.

15.7.2 In cases where "scrap" is decided, all records relating to the scrapped Item will be properly noted as to disposition and retained.

15.7.3 In all cases where "return" for replacement is decided, the records will be returned with the Item.

Pullman Power Products		XVI SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	CORRECTIVE ACTION	PAGE NO. 1 of 3

16.0 CORRECTIVE ACTION

16.1 SCOPE

16.1.1 The institution of measures which assure that conditions adverse to quality such as failures, malfunctions, deficiencies, deviations, defective material, equipment and non-conformances are promptly identified and corrected, during installation.

16.1.2 In addition, to determine the cause of the adverse quality conditions, to institute corrective action, to prevent recurrence and to document the cause and corrective action taken and report them to appropriate levels of management.

16.2 POLICY

16.2.1 Non-conformances in Items are identified, documented, segregated, reviewed and repaired or rejected as outlined in Section XV.

16.2.2 To determine the cause of non-conformances, a review of Non-conformance Reports (Form 17) will be made on a monthly basis by the QA Manager.

16.2.3 Conditions which are not documented within another quality system such as NCR's, Audits, Surveillances, etc. will be handled through the Corrective Action Procedure. (Form 42)

16.2.4 When Corrective Action has been implemented, the Field QA Manager, or his designee, shall verify that the measures established to correct the adverse condition are adequate. Follow-up action shall be conducted and documented on Form 42. Corrective Action Reports shall remain open until the follow-up action has been performed, verified and documented.

16.3 CAUSES AND ACTIONS

16.3.1 The cause of the non-conformance may be determined as resulting from an isolated instance of human error, or if they are recurring from an omission or deficiency in the QA Program or its implementation.

16.3.2 In the case of repeated non-conformances, the QA Manager will notify the responsible supervisor in writing with copy to the resident Construction Manager of the inadequacy and Corrective

Action required. The implementation of the Corrective Action will subsequently be verified by the QA Manager.

16.3.3 Repeated non-conformances determined as being from a particular individual will require that the individual be given additional training or be removed.

16.3.4 Repeated non-conformances may be determined as originating in a particular activity due to inadequate procedures. In this case the QA Manager or his designated representative shall review the questionable procedures, request revisions from QEG as necessary to correct the deficiency, and arrange for personnel responsible for the activity to be instructed in the revised procedure.

16.3.5 Repeated non-conformances may be determined as originating in a particular activity due to improper or inadequate implementation of procedures. In the case of inadequate implementation of procedures, the QA Manager shall notify the Resident Construction Manager. The Resident Construction Manager shall arrange with the QA Manager and the responsible supervisor for added training in implementing the procedures.

16.3.6 In reviewing nonconformances for trends, the QA Manager may discover inadequacies in the QA [illegible] shall immediately notify the Director of Quality Assurance.

Alternatively, the Director of Quality Assurance, in reviewing the monthly reports from all sites (Section II) may discover trends which indicate need for strengthening particular areas of the Corporate QA Program.

If further study indicates Program inadequacies, the Director of Quality Assurance will notify the Vice President Quality Assurance The Vice President Quality Assurance will consult with responsible individuals and the Authorized Inspection Agency's Authorized Nuclear Inspector Supervisor to determine a course of action. This will be implemented as appropriate in the Corporate QA Program and affected Project QA Programs.

Revision to QA Manuals shall be handled as outlined in Section II.

16.4 RECORDS

16.4.1 All significant conditions adverse to quality shall be recorded in the form of a narrative report initiated by the QA Manager and submitted to the Director of Quality Assurance for review and/or further action as deemed necessary. This report is to be written in addition to any other requirements as specified in Section XV and shall specify the condition, its cause and corrective action taken to prevent recurrence.

16.4.2 The Field QA Manager, or his designee, shall maintain a Corrective Action Report Log of all CAR's using Form 42A.

16.5 FORMS

16.5.1 Forms referred to in this section are exhibited in the back of this manual.

Forms referenced are:

(17) Nonconformance Report
(42) Corrective Action Report
(42A) Corrective Action Report Log

16.4 RECORDS

16.4.1 All significant conditions adverse to quality shall be recorded in the form of a narrative report initiated by the QA Manager and submitted to the Director of Quality Assurance for review and/or further action as deemed necessary. This report is to be written in addition to any other requirements as specified in Section XV and shall specify the condition, its cause and corrective action taken to prevent recurrence.

16.4.2 The Field QA Manager, or his designee, shall maintain a Corrective Action Report Log of all CAR's using Form 42A.

16.5 FORMS

16.5.1 Forms referred to in this section are exhibited in the back of this manual.

Forms referenced are:

(17) Nonconformance Report
(42) Corrective Action Report
(42A) Corrective Action Report Log

Pullman Power Products		XVII SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	QUALITY ASSURANCE RECORDS	PAGE NO. 1 of 3

17.0 QUALITY ASSURANCE RECORDS

17.1 SCOPE

17.1.1 To outline the system by which all inspection and quality assurance records are maintained for ready reference and the retention of such records

17.2 RESPONSIBILITY

17.2.1 The accumulation, evaluation, retention and distribution of QA records are the responsibility of the QA Manager. See Quality Assurance Records Procedures for details. He delegates performance of this function to the QA Engineer - Records.

17.2.2 For each field site, the Project QA Engineer, QEG, will prepare a Records Procedure after consulting with the Customer QA Department. This procedure will outline the content of the record file, filing and retrievability technique, method of identification, custodial responsibility, permanent and non-permanent records, duration of the file, and manner in which the records are to be transferred to the owner. This procedure will be issued as part of the Project Procedures Manual.

17.3 MAINTENANCE AND ACCESS TO RECORDS

17.3.1 All quality assurance records shall be maintained under the supervision of the QA Manager, and shall be easily retrievable for review by the client, Authorized Nuclear Inspector or other authorized personnel.

17.3.2 At the completion of each contract, all quality assurance records designated in Paragraph NCA-4134.17 of the Code, and any other designated by the customer as permanent records shall be transmitted to the Owner or his Agent for retention.

17.3.3 Other records beyond those required above which are needed to verify compliance with the Code and this QA Program for Class 1 items shall be maintained at a place mutually agreed upon by the Owner and the Company for a period of 5 years after completion, but not less than 2 years after commercial operation of the plant.

17.4 PERSONNEL

17.4.1 Personnel assigned to custodial responsibility of quality assurance records shall be trained and qualified in accordance with written procedures which are a part of the Project Procedures Manual.

17.5 CONTENTS OF RECORD FILE

17.5.1 As a minimum, the quality assurance record file shall contain the following:

A. Field Quality Assurance Records Index (Form 38)
B. Purchase Order, Sketches, Drawings, etc.
C. Certified Material Test Reports, Certificates of Compliance
D. Isometric and Detail Drawings. (As Constructed/As Built - See Form 6A and Form 7)
E. Radiographs and Reader Sheet
F. Appropriate ASME Data Reports
G. Heat Treat Charts
H. Nondestructive Examination Records
I. Welder/Welding Operator Qualification Reports
J. Receiving Inspection Reports
K. Final Inspection Reports
L. Inspection Check Lists
M. Nonconformance Reports
N. Deviation Requests
O. Calibration Records and Reports
P. Weld Rod Stores Requisitions
Q. Qualification of NDE Personnel and Procedures
R. Qualification of Inspection, Testing & Examination Personnel
S. Field Process Sheets
T. Weld History Record
U. Design Specifications, when applicable
V. Stress Reports, when applicable
W. Audit Reports
X. Any other records required by Code or Contract

17.6 FORMS

17.6.1 Forms referred to in this section are exhibited in the back of this manual.

Forms referenced are:

(38) Field Quality Assurance Records Index
(6A) Pipe Support Detail
(7) Field Drawing - Installation Isometric

Pullman Power Products		XVIII SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 9/1/82
QUALITY ASSURANCE PROGRAM	AUDITS	PAGE NO. 1 of 5

18.0 AUDITS

18.1 SCOPE

18.1.1 To present a comprehensive system of planned and periodic audits which shall be carried out to assure compliance with all aspects of the Quality Assurance Program and to determine the effectiveness of the program.

18.2 PROCEDURES

18.2.1 All audits will be performed by the QA Auditor, QEG, or his designated representative in accordance with a written procedure. This procedure contains the instructions relative to the responsibility of the perfomance of audits including qualification and independence of persons performing audits, frequency of audits and prescribed methods of performing and documenting and reporting results. Preparation of audit checklists (Form 35) will be the respon--sibility of the QA Auditor, QEG. Copies of the procedure wil be included in the Project Procedure Manual. Any revisions to such procedures by others for specific application to client contract requirements or requests shall be reviewed and approved by the Director of QA, QEG. In preparing the audit plan, the QA Auditor, QEG, will review prior audits for possible trends.

18.3 PERSONNEL

18.3.1 All Lead Auditors will be trained, qualified and certified based on a combination of factors which include education, experience and examination.

18.3.2 Audit team members will be selected, trained and qualified on the basis of their knowledge of the area or activity being audited and ability to evaluate the activity and write reports based on objective evidence. Such factors as sincerity, tenacity and sound judgement shall be considered in evaluation of all personnel.

18.3.3 Individuals assigned the responsibility for auditing shall be independent of the individual or group directly responsible for performing the specific activity.

18.4 AUDIT FREQUENCY

18.4.1 A schedule of periodic audits will be established to assure that an audit will be conducted as soon as practical after the start of installation, and to assure thereafter that all aspects of the QA Program will be audited annually.

18.4.2 Regularly scheduled audits will be supplemented by additional unannounced audits, as required.

18.5 REPORTS

18.5.1 All audit reports shall be substantiated in writing in the form of an audit report in accordance with the applicable procedure being used. Reports shall include proposed corrective action for deficiencies and follow-up action to be taken. In addition, objective evidence of the notification of the individual responsible for the activity being audited shall be contained in the audit report.

18.5.2 Audit reports shall be distributed to the individual responsible for the activity being audited and management personnel for review evaluation and action and shall be available to the client and Authorized Nuclear Inspector for review.

18.5.3 The Resident Construction Manager in conjunction with the QA Manager shall respond in writing to the QA Auditor, QEG within thirty (30) days after the post-audit conference. In their written response they shall address the violation defined in the Audit Report, specify corrective action taken, date for completion of implemented corrective action taken, date for completion of implemented corrective action, and measures taken to preclude recurrence. The records shall be maintained by the QA Auditor, QEG, for review and reference in subsequent audits.

18.6 FOLLOW-UP ACTION

18.6.1 Whenever deficiencies are noted in an audit report, immediate corrective action shall be initiated by the Resident Construction Manager in conjunction with the QA Manager of the activity audited. As soon as practical, upon receipt of corrective action implemented, the Lead Auditor, QEG, or his designee, shall conduct an on-site review to verify the adequacy of the corrective action implemented prior to final acceptance and close-out of the audit finding. This verification shall be documented in the follow-up section of the audit report.

18.7.1 AUDITS BY MANAGEMENT

09/01/82

18.7.1 The Vice President, Quality Assurance will arrange for annual audits to verify that the corporate functions as outlined in this Quality Assurance Program are being effectively implemented. Individuals assigned the responsibility for auditing shall be independent of the individual or group directly responsible for performing the specific activity. A written document attesting to this shall be made part of the audit report record.

18.7.2 Audit results shall be outlined in writing and shall include proposed corrective action for deficiencies.

18.7.3 The audit report will be distributed to the President, Vice President of Quality Assurance, other responsible management personnel, and the Director of Quality Assurance.

18.7.4 The Director of Quality Assurance will respond to audit findings on the Quality Engineering Group, QEG and the QA Managers shall be responsible to respond to findings at the Nuclear Field Sites. The written response shall specify the violation, corrective action to be taken, measures to preclude recurrence, and a schedule for implementation.

18.6 FOLLOW-UP ACTION

18.6.1 Whenever deficiencies are noted in an audit report, immediate corrective action shall be initiated by the Resident Construction Manager in conjunction with the QA Manager of the activity audited. As soon as practical, upon receipt of corrective action implemented, the Lead Auditor, QEG, or his designee, shall conduct an on-site review to verify the adequacy of the corrective action implemented prior to final acceptance and close-out of the audit finding. This verification shall be documented in the follow-up section of the audit report.

18.7.1 AUDITS BY MANAGEMENT

09/01/82 18.7.1 The Vice President, Quality Assurance will arrange for annual audits to verify that the corporate functions as outlined in this Quality Assurance Program are being effectively implemented. Individuals assigned the responsibility for auditing shall be independent of the individual or group directly responsible for performing the specific activity. A written document attesting to this shall be made part of the audit report record.

18.7.2 Audit results shall be outlined in writing and shall include proposed corrective action for deficiencies.

18.7.3 The audit report will be distributed to the President, Vice President of Quality Assurance, other responsible management personnel, and the Director of Quality Assurance.

18.7.4 The Director of Quality Assurance will respond to audit findings on the Quality Engineering Group, QEG and the QA Managers shall be responsible to respond to findings at the Nuclear Field Sites. The written response shall specify the violation, corrective action to be taken, measures to preclude recurrence, and a schedule for implementation.

18.6 FOLLOW-UP ACTION

18.6.1 Whenever deficiencies are noted in an audit report, immediate corrective action shall be initiated by the Resident Construction Manager in conjunction with the QA Manager of the activity audited. As soon as practical, upon receipt of corrective action implemented, the Lead Auditor, QEG, or his designee, shall conduct an on-site review to verify the adequacy of the corrective action implemented prior to final acceptance and close-out of the audit finding. This verification shall be documented in the follow-up section of the audit report.

18.7.1 AUDITS BY MANAGEMENT

09/01/82

18.7.1 The Vice President, Quality Assurance will arrange for annual audits to verify that the corporate functions as outlined in this Quality Assurance Program are being effectively implemented. Individuals assigned the responsibility for auditing shall be independent of the individual or group directly responsible for performing the specific activity. A written document attesting to this shall be made part of the audit report record.

18.7.2 Audit results shall be outlined in writing and shall include proposed corrective action for deficiencies.

18.7.3 The audit report will be distributed to the President, Vice President of Quality Assurance, other responsible management personnel, and the Director of Quality Assurance.

18.7.4 The Director of Quality Assurance will respond to audit findings on the Quality Engineering Group, QEG and the QA Managers shall be responsible to respond to findings at the Nuclear Field Sites. The written response shall specify the violation, corrective action to be taken, measures to preclude recurrence, and a schedule for implementation.

18.6 FOLLOW-UP ACTION

18.6.1 Whenever deficiencies are noted in an audit report, immediate corrective action shall be initiated by the Resident Construction Manager in conjunction with the QA Manager of the activity audited. As soon as practical, upon receipt of corrective action implemented, the Lead Auditor, QEG, or his designee, shall conduct an on-site review to verify the adequacy of the corrective action implemented prior to final acceptance and close-out of the audit finding. This verification shall be documented in the follow-up section of the audit report.

18.7.1 AUDITS BY MANAGEMENT

09/01/82 18.7.1 The Vice President, Quality Assurance will arrange for annual audits to verify that the corporate functions as outlined in this Quality Assurance Program are being effectively implemented. Individuals assigned the responsibility for auditing shall be independent of the individual or group directly responsible for performing the specific activity. A written document attesting to this shall be made part of the audit report record.

18.7.2 Audit results shall be outlined in writing and shall include proposed corrective action for deficiencies.

18.7.3 The audit report will be distributed to the President, Vice President of Quality Assurance, other responsible management personnel, and the Director of Quality Assurance.

18.7.4 The Director of Quality Assurance will respond to audit findings on the Quality Engineering Group, QEG and the QA Managers shall be responsible to respond to findings at the Nuclear Field Sites. The written response shall specify the violation, corrective action to be taken, measures to preclude recurrence, and a schedule for implementation.

The Director of Quality Assurance, after consulting with other responsible management, will prepare a written response which specifies the violation, corrective action to be taken, measures to preclude recurrence, and a schedule for implementation.

18.7.5 The Director of Quality Assurance will notify the President and Vice President of Quality Assurance in writing when all implementation is complete.

18.7.6 Records will be maintained by the QA Auditor, QEG, for review, follow-up and reference in subsequent audits.

18.8 FORMS

18.8.1 Forms referred to in this section are exhibited in the back of this manual.

Forms referenced are:

(35) Quality Audit Questionnaire

Pullman Power Products		INDEX SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 9/1/82
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 4

FORM NO.	SECTION	DESCRIPTION
1	II	QA Manual- Distribution List
2	II	Transmittal Letter
3	II	Qualification Records
4	II	Welder Qualification
5	II	Welder Qualification Status
6	III, V, VI	Sub-Assembly Drawing
6A	XVII	Pipe Support Detail
7	III, V, VI, XVII	Installation Isometric
9	III, VI, XV	Stop Work Order
10	III, X	Final Inspection Report Form
10A	III, X	Final Inspection Installation Verification
10B	III, X	QA/QC Final Inspection
10C	III, X	Process Sheet and As/Built Status Log
10D	III, X	Integrity Test Cover Sheet
10E	III, X	Integrity Test Data
10F	III, X	ValverLineTUpt Data
10G	III, X	Integrity Test Boundary Description
10H	III, X	Exception List
10I	III, X	Pre-Test Verification
10J	III, X	Documentation Review
11	IV, VI, VII	Field Requisition/Purchase Order/ Receiving Report
12	IV	Approved Vendor List

1/82

SF 1.06

Pullman Power Products		INDEX SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 9/1/82
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 2 of 4

	FORM NO.	SECTION	DESCRIPTION
	13	II, VI	Document Status Record
	14	VI	Drawing Record
	15	VI	Transmittal Record
	16	VI	Procedures
	17	VI, XV, XVI	Nonconformance Report
	18	V, VI, VII, X, XIV, XV	Field Process Sheet
	19	VI, VII, X, XIV, XV	Field Weld Process
1/82	19A	V, VI, X	Field Weld Repair Process Sheet
1/82	19B	V, VI, X	Hanger Field Weld Process Sheet Class 1
1/82	19C	V, VI, X	Hanger Field Weld Process Sheet Class 2 or 3
1/82	19D	V, VI, X	Expansion Anchor Process Sheet
	19E	V, VI, X	Mechanical Snubber Process Sheet
	20	VII	Accept Tag
	21	VII, X	Receiving Inspection Report
	22	XIV, XV	Hold Tag
	22A	XV	Repair Tag
	23	VIII	Material/ Component Requisition
	24	VIII	Field Warehouse Requisition
	25	VIII	Weld Rod Stores Requisition
	26A & B	IX	Welding Procedure Specification

FORM NO.	SECTION	DESCRIPTION
27 A & B	IX	Procedure Qualification Record (Welding)
28	IX	Procedure Qualification Record (NDE)
29	IX, X	Magnetic Particle Examination Record
30	IX, X	Liquid Penetrant Examination Record
31	IX, X	Radiographic Examination Record
32A	IX, X	Weld Repair Order
32B	IX, X	Weld Repair Order
32C	IX, X	Weld Repair Order
32D	IX, X	Weld Repair Order
32E	X	Base Metal Surveillance Report
32F	X	Arc Strike Surveillance Report
33	XII	Equipment Calibration Record Chart
34	XII	Calibration Sticker
34A	XII	Calibration Sticker
35	XIII	Quality Audit Questionnaire
36	IX, X	Ultrasonic Flow Detection Record
37	XII	Check Out Log
38	XVII	Field Quality Assurance Records Index
39	XV	Limited Work Authorization Report
40	VI	Document Index
41	XV	Limited Work Tag

FORM NO.	SECTION	DESCRIPTION
27 A & B	IX	Procedure Qualification Record (Welding)
28	IX	Procedure Qualification Record (NDE)
29	IX, X	Magnetic Particle Examination Record
30	IX, X	Liquid Penetrant Examination Record
31	IX, X	Radiographic Examination Record
32A	IX, X	Weld Repair Order
32B	IX, X	Weld Repair Order
32C	IX, X	Weld Repair Order
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
32F	X	Arc Strike Surveillance Report
33	XII	Equipment Calibration Record Chart
34	XII	Calibration Sticker
34A	XII	Calibration Sticker
35	XIII	Quality Audit Questionnaire
36	IX, X	Ultrasonic Flow Detection Record
37	XII	Check Out Log
38	XVII	Field Quality Assurance Records Index
39	XV	Limited Work Authorization Report
40	VI	Document Index
41	XV	Limited Work Tag

Pullman Power Products		INDEX SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 9/1/82
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 4 of 4

	FORM NO.	SECTION	DESCRIPTION
9/1/82	42	XVI	Corrective Action Report
	42A	XVI	Corrective Action Report Log
	S-1	IV	UE&C/Seabrook Central Purchasing Order Form
	S-2	IV	UE&C/Seabrook Central Purchasing Requisiting Form
9/1/82	S-3	III	Proposed Engineer Change Authorization
9/1/82	S-4	III	Minor-"On the Spot"-Engineering Change Authorization

Pullman Power Products		FORM 1 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

Pullman Power Products

QUALITY ASSURANCE MANUAL - DISTRIBUTION LIST

MANUAL TITLE: Corporate Field QA Manual - ASME, Sec. III, Division 1

MANUAL ISSUE/REVISION LEVEL: 8/1/77

Manual Number	Assigned To	Location	Issued	Date Control Sheet Returned	Remarks
1	Insp. Spec.	AIA, Phila. Pa.	8/5/77	8/9/77	
2	E. Gerwin	Pullman Power Williamsport	8/5/77	8/9/77	
3	K. Swisher	Pullman Power Williamsport	8/5/77	8/9/77	

SAMPLE

APPLICABLE FOR JOB No. 7035 ONLY

Pullman Power Products		FORM 2 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

A Wheelabrator - Frye Company

P. O Box 3308, Reach Road
Williamsport, Pennsylvania 17701
Telephone (717) 323-9991
Telex 841416
Cable Pipeing Williamsport

Pullman Power Products

Pullman Power Products
P.O. Box 3308, Reach Road
Williamsport, PA 17701

SAMPLE

Attention: E.F. Gerwin

Gentlemen:

Enclosed is your personal copy of the Pullman Power Products Quality Assurance Manual. This manual documents the quality system in effect for those activities defined within the scope of ASME Certificates of Authorization Nos. N-1101 (NPT) and N-1102 (NA).

This manual is issued as a controlled document and will be updated each time a revision is made. Your name, and the serial number of the manual assigned to you, is kept on a master list at Pullman Power Products, QEG, Williamsport, Penna.

Each time a revision is made you will receive copies of all pages within the revised Section. All pages within the revised Section bear the new revision date and supersede any previous issues. You must replace the superseded Sections with the revised Sections, destroy the Old Sections, and return this letter to:

Pullman Power Products
P.O. Box 3308
Williamsport, Penna. 17701

Attn: Document Control Specialist
Quality Engineering Group

Please maintain a copy of this letter with your manual for future reference.

Sincerely yours,

TO BE USED ONLY FOR JOB No. 7035

Document Control Specialist
Quality Engineering Group

This Manual is assigned to: E.F. Gerwin

QA Manual Serial No.: 2 Issue/Revision Date: #3, 9/9/80

Project: NA Date Manual Assigned: 9/9/80

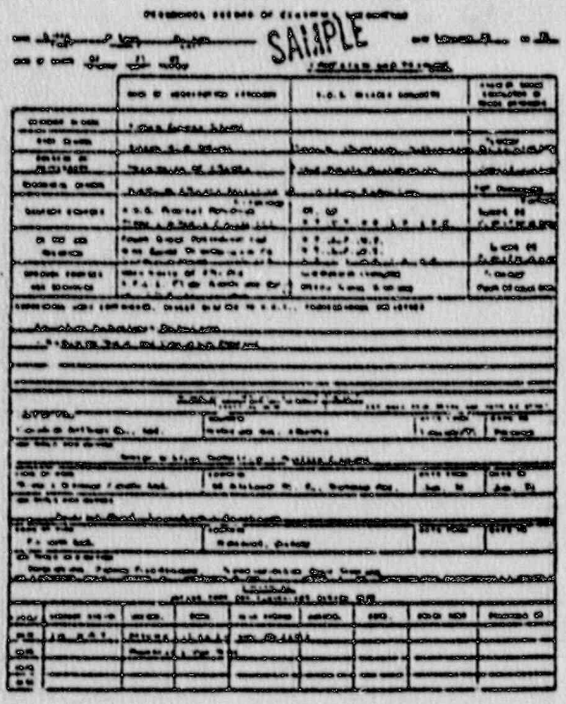
Signature of Manual Holder Edward F. Gerwin Date 9/9/80

SF 1 06

Pullman Power Products		FORM 3 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

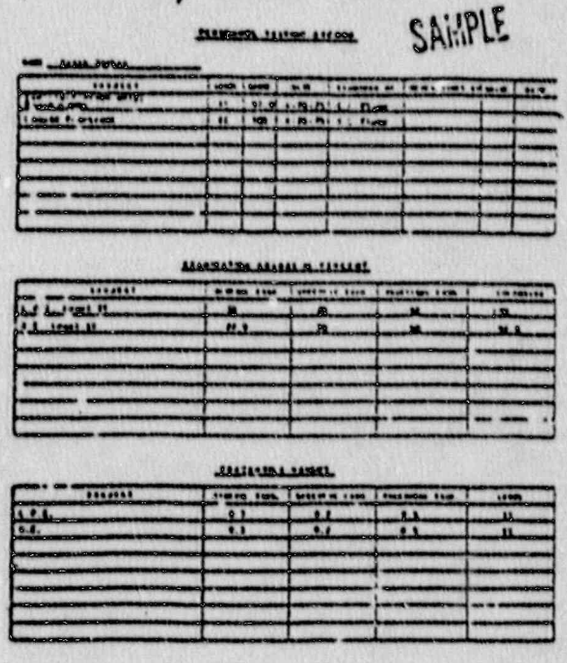
Pullman Power Products

SAMPLE



Pullman Power Products

SAMPLE



APPLICABLE FOR
JOB No. 7035 ONLY

Pullman Power Products		FORM 4 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin EG	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

OW-484 SUGGESTED FORMAT FOR MANUFACTURER'S RECORD OF WELDER OR WELDING OPERATOR QUALIFICATION TESTS

(See QW-301, Section IX, ASME Boiler and Pressure Vessel Code)

Welder Name J. B. LOW Clock No. 7269 Stamp No. EO

Welding Process(es) GTAW, SMAW Type(s) MANUAL

In accordance with Welding Procedure Specification (WPS) No. P1-III-1-M-12, 1-1-1-M-12

Backing (QW-402) INERT GAS (ARGON)

Material (QW-403) Spec. SA-106 GrB to SA-106 GrB P-No. 1 to P-No. 1

Thickness .432 Dia 6"

Filler Metal (QW-404) Spec. No. SFA-5.18, SFA 5.2 Class No. E 70S-2, E 7018 F-No. F4, F6

Other WELD METAL ANALYSIS A-1 TABLE A-1

Position (QW-405) 1G, 2G, 5G

Gas (QW-408) Type ARGON % Composition 99.5%

Electrical Characteristics (QW-409) Current DC Polarity STRAIGHT GTAW, REVERSE SMAW

Weld Progression (QW-410) DOWNHAND

Other N/A

For Information Only

Filler Metal Diameter and Trade Name LINCOLN 1/8 x 5/32 ARCOS, E 7018 AIRCO

Submerged Arc Flux Trade Name NA

Gas Metal Arc Welding Shield Gas Trade Name N/A

Guided Bend Test Results QW-462.2(a), QW-462.3(a), QW-462.3(b)

Type and Fig. No.	Result
2G 1 SIDE BEND QW-462.2A	Acceptable
2G 2 " " " "	Acceptable
5G 1 " " " "	Acceptable
2 " " " "	Acceptable
3 " " " "	Acceptable
4 " " " "	Acceptable

Radiographic Test Results (QW-304 & QW-305)

For alternative qualification of groove welds by radiography

Radiographic Results NA

Fillet Weld Test Results (QW-462.4(b))

Fractured Test (Describe the location, nature and size of any crack or tearing of the specimen) NA

Length and Per Cent of Defects ___ inches ___ %

Macro Test—Fusion ___

Appearance—Fillet Size (leg) ___ by ___ in. Convexity ___ in. or Concavity ___ in.

Test Conducted by Detroit Outfall Laboratory—Test No. NA

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Sections IX of the ASME Code.

Organization PULLMAN-POWER PRODUCTS

By [signature]

Date 6.9.79

(Detail of record of tests are illustrative only and may be modified to conform to the type and number of tests required by the Code.)

NOTE: Any essential variables in addition to those above shall be recorded.

TO BE USED ONLY FOR JOB No. 7035 1

(10/30/78) This form (E00008) may be obtained from the Order Dept., ASME, 345 E. 47 St., New York, N.Y. 10017

SF 1.06

Pullman Power Products		FORM 5 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin EG	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

WELDER QUALIFICATION STATUS

PROCESS	DATE	ISO. NO.	F.N.	DUE DATE	PROCESS	DATE	ISO. NO.	F.N.	DUE DATE
SMAW	5-17-78	RH-155-5,0H		5-20-80					
GTAW	5-17-78	RH-155-5,0H		5-20-80					

SAMPLE

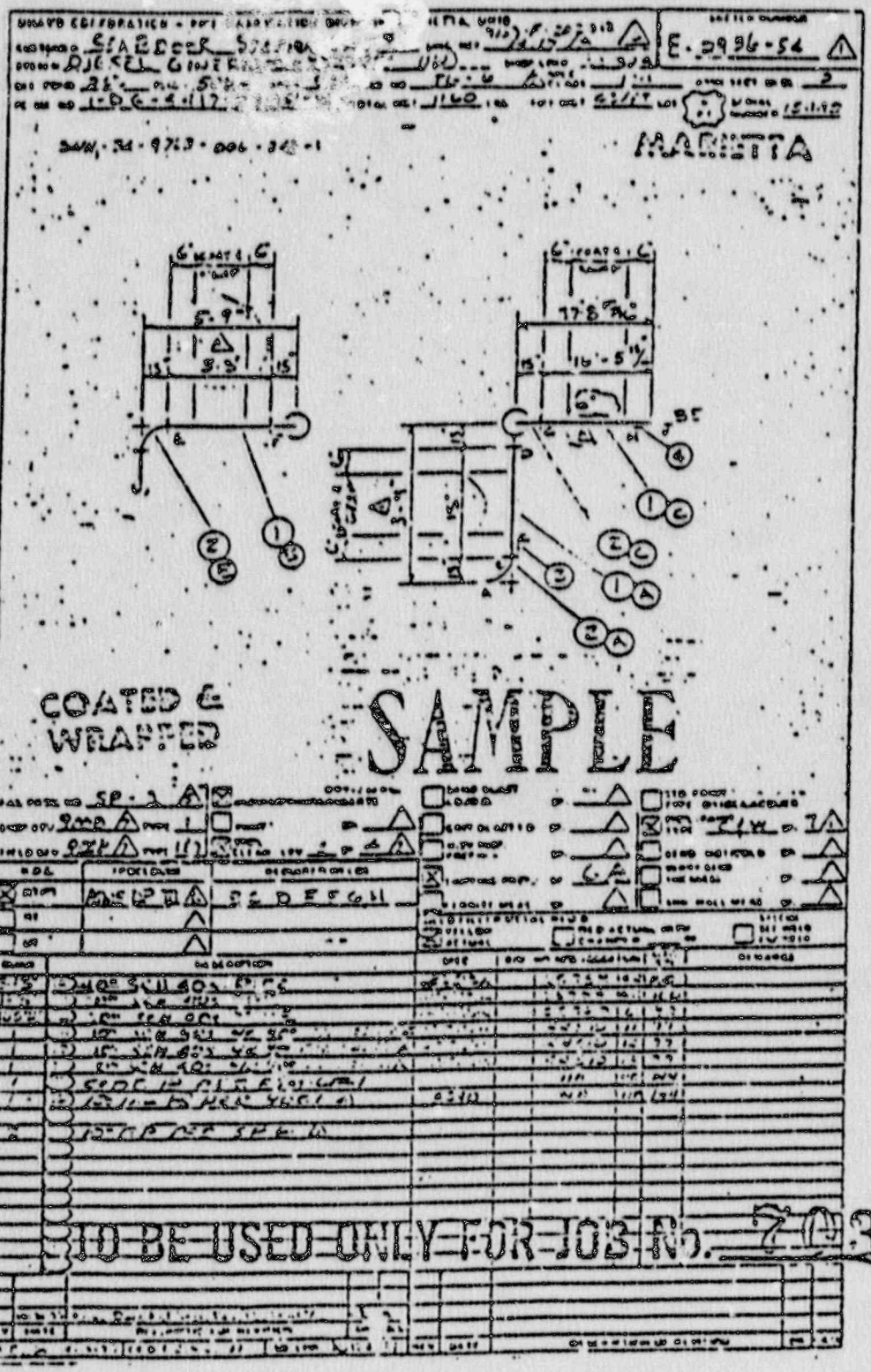
TO BE USED ONLY FOR JOB No. 7035

Welder Bill Kempt Clock No. 356 Stamp A-1

Date Term 10-3-77 Date Term _____ Date Term _____

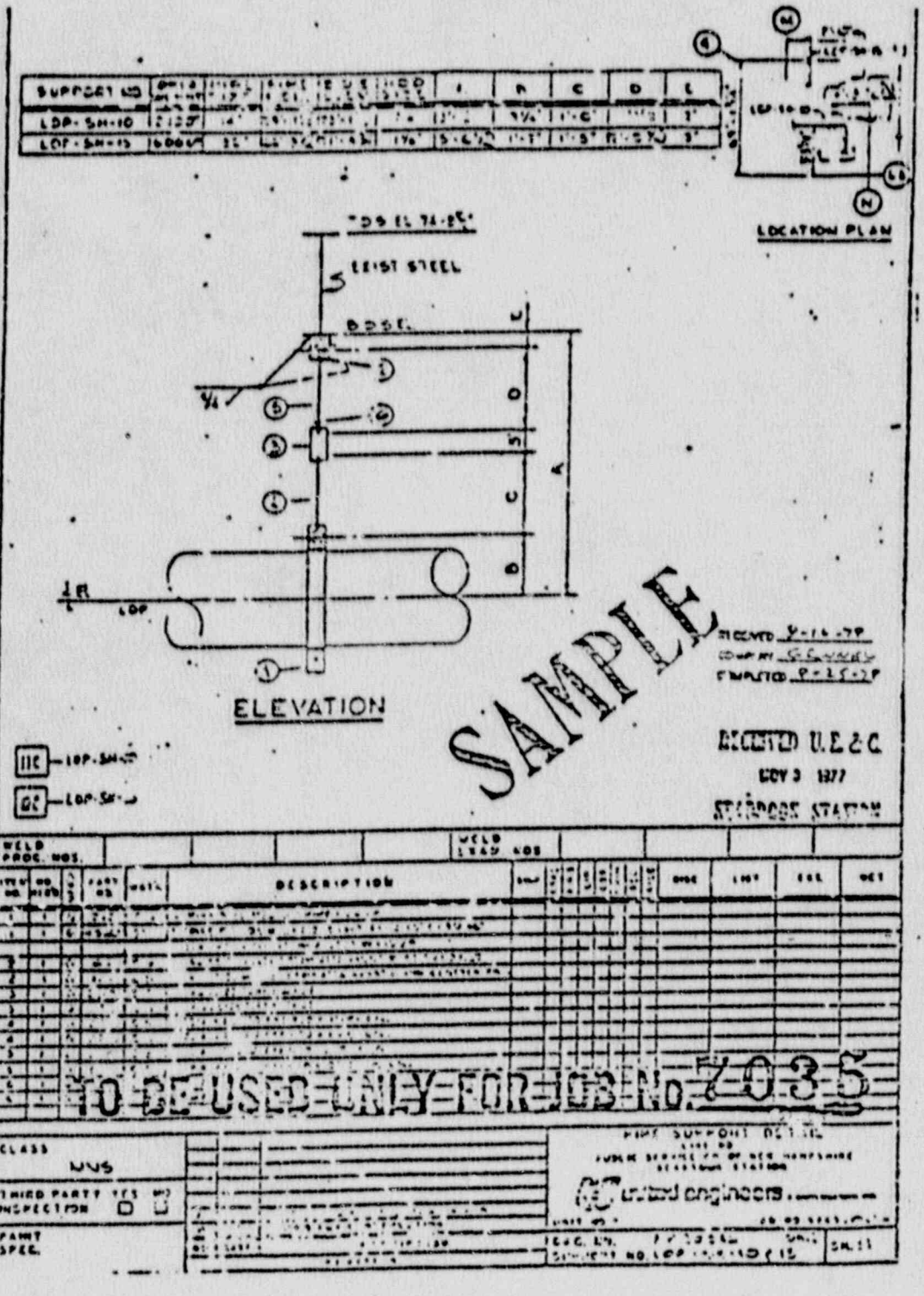
Date Rehired 5-3-78 Date Rehired _____ Date Rehired _____

Pullman Power Products		FORM 6 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

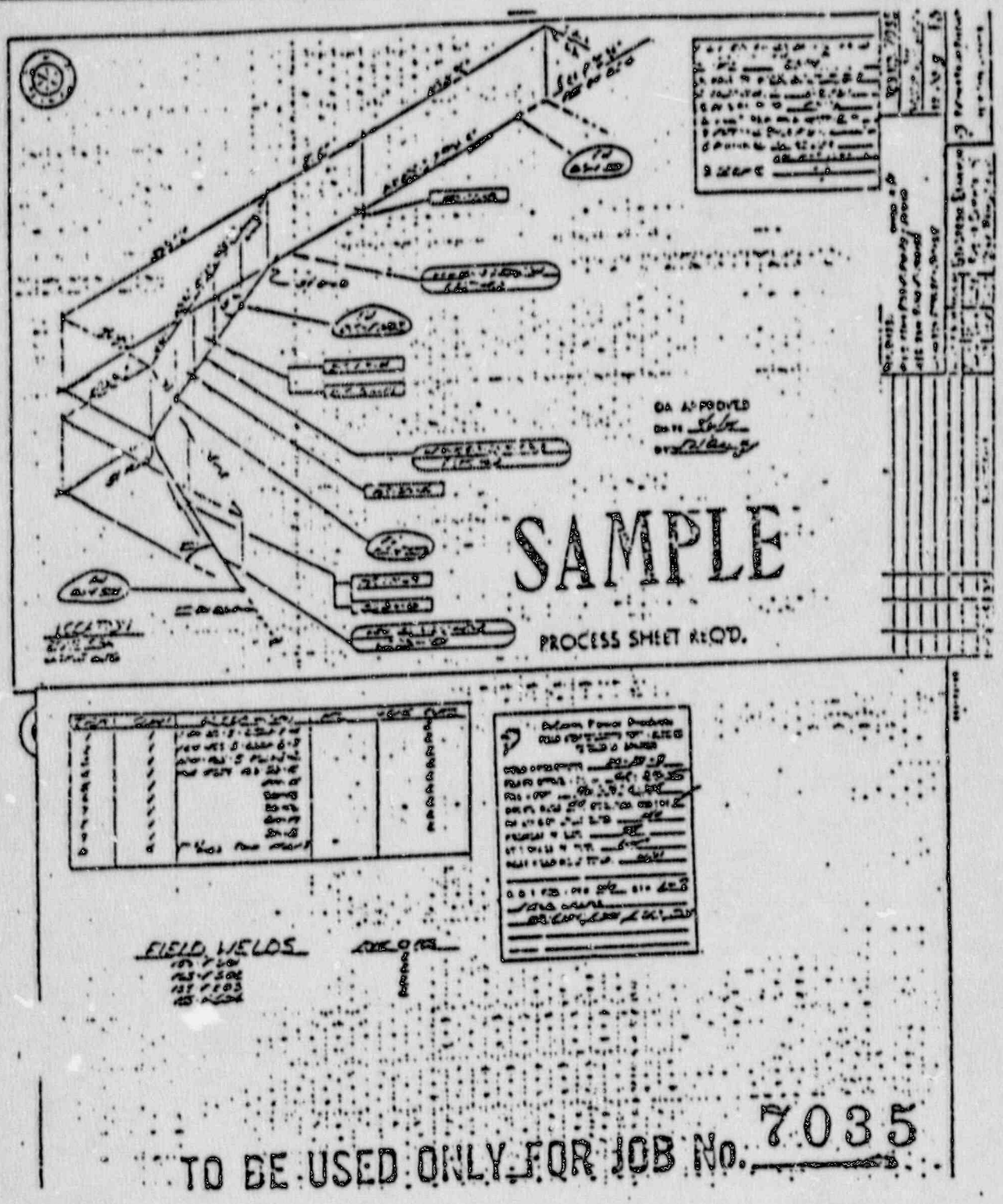


TO BE USED ONLY FOR JOB No. 7035

Pullman Power Products		FORM 6A SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Serwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1



Pullman Power Products		FORM 7 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1



TO BE USED ONLY FOR JOB No. 7035

QF 1.06

Pullman Power Products		FORM 9 SECTION NO.
		DATE: 5/8/81
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

Pullman Power Products
BEAVERDAM STATION

STOP WORK ORDER

SWO #
DATE

ISSUED BY D. H. SCHEELKA
APPROVED BY Z. Z. Lindsey

MARK NO	DWG NO	REV	STATUS	DESCRIPTION	REVISED REV NO	CLOSED LETTER
151-56 R	151-56-18	1	HOLD	MAT'L ON SITE NOT USED SHALL BACK FILL TRUCK TO 12" FULL		

SAMPLE

REMARKS APPLICABLE FOR JOB NO. 7035 ONLY

SF 1.06

Pullman Power Products	FORM 10 SECTION NO.
PREPARED BY: R. G. Davis / APPROVED BY: E. F. Gerwin [illegible]	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM / FORMS	PAGE NO. 1 of 1

SEABROOK STATION
JOB 7035

Pullman Power Products

TESTING DATA OF PIPING SYSTEM
EXCEPTION & DEFICIENCY LIST
FOR TEST # SW-25

Pullman Power Products

Job 7035

LEAK TEST BOUNDARY DESCRIPTION

TEST # SW-25

SEABROOK STATION
JOB 7035

Pullman Power Products

TESTING DATA OF PIPING SYSTEMS
VALVE LINE UP CHECK LIST
FOR TEST NO. SW-25

SEABROOK STATION
JOB 7035

Pullman Power Products

APPLICABLE FOR JOS No. 7035 ONLY

10 D

PULLMAN POWER PRODUCTS
FIELD PRESSURE TEST COVER SHEET

SEABROOK STATION 10 E Pullman Power Products
JOB 7035

PAGE ___ OF ___

FIELD PRESSURE TEST REPORT
No. SW-25

Boundary Description: [illegible] TO THE 50 TO LINE

Type Of Test:

- [x] Hydrostatic
- [ ] Pneumatic
- [ ] Inservice
- [ ] Other: ___

P.P.P. Eng. [illegible] Date 8-4-80

Code/Class ASME III CL.3

TEST PARAMETERS

Design Pressure: 150 PSIG

Test Pressure: (Min.) 182.5 (Max.) [illegible] PSIG

Relief Valve Setting 196.25 PSIG

Test Gauge [illegible] Date [illegible]

Test Gauge [illegible] PSIG

Test Pressure Achieved [illegible] PSIG

Inspection Test Pressure 150 PSIG

R.D.T.T. Limits 35 °F

Test Temp. 69 °F

Temp. Inst. Ser. # 9442 Date [illegible]

Test Hold Time 10 minutes

Start Time 15:09

Completion Time 15:24

[illegible] 2-5-80
Reviewed By / Date

All welds with in the boundary of this leak test, unless they are found in the exception list (Form 10F), have been tested to procedure [illegible], Rev. 4 and found to be acceptable.

Exception List [ ] Yes [x] No

Witnessed A.N.I. [illegible] Date [illegible]

Witnessed Owner Rep. [illegible] Date 2-5-80

Accepted P.P.P. QC [illegible] Date 8-5-80

Witnessed USNRC Rep. ___ Date ___

Pullman Power Products		FORM 10A SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

FORM 10A

INSTALLATION VERIFICATION

TEST# SW-27

ISO: SW-1812-03 REV. 2

The following items have been checked to assure complete and correct installation of systems for development of applicable "as built" isometrics.

ITEM	ACCEPT	REJECT	N/A	REMARKS
1) Prefabricated Assemblies	✓			
2) Components (valves, pumps, vessels, etc.)			✓	
3) Supports & Restraints	✓			
4) Radiograph Plugs			✓	
5) Vents	✓			
6) Drains			✓	
7) Random Run Piping			✓	
8) Removal of Temporary Attachments	✓			
9) ECA & SAC Resolved	✓			

J. D. Burch 6/6/80
Signature & Date Area Engineer

TO BE USED ONLY FOR JOB No. 7035

SF 1.06

Pullman Power Products		FORM 10B SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

FORM 10B
Rev. 1 11-20-80

QA/QC FINAL INSPECTION

SYSTEM SW ISO: SW-1810-01

Part 1 Documentation Review — Isos to Iso Rev. 1 9, SW-25-

	Verified	D/A	Remarks
1) Process Sheet Documentation			
2) NDE Documentation			
3) Heat Treat Records			
4) Non-Conformance Reports			NCR 4 WELDS
5) Stop Work Orders			
6) Cavities and Wrapping			

Documentation Review Acceptable — QA Inspector — Date 5/5/80

SAMPLE

Part 2 Physical Inspection — Isos to As-built ISO Rev. 1

	Verified	D/A	Remarks
1) Pipe/Component hangers installed in accordance with as-built dwg.		✓	
2) System complete in accordance with As-built ISO	✓		
3) Partial Data Reports (NPP-1) reflect any changes made to spool pieces as a result of field revisions		✓	
4) No apparent damage	✓		
5) Cleanliness Requirement	✓		
6) Torque Seal verified undisturbed		✓	

As Built Acceptable — QC Inspector — Date 5/5/80

The As Built Iso Rev. 1 has been compared to the Documentation Review Iso Rev. 1. Documentation is acceptable.

QA Inspector — Date

TO BE USED ONLY FOR JOB No. 7035

QF 1 06

Pullman Power Products		Form 10C SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. T. Gervin	DATE: 9/2/82
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

Process Sheet and As/Built Status Log — Form 10C

ISO #	[illegible]				
Hydro #	088.1	088.2			
Form 10A Date	7.30.82	7.30.82			
Form 10B Part I Date	7.31.82	7.31.82			
Form 10B Part II Date	NA	NA			
As Built Rev. #	3	3			
As Built Appr. Date	11-3-82	11-3-82			
Rst. Rev. Notif. Date	11-3-82	11-3-82			
TAEC Appr. Date	NA	NA			
ANI Appr. Date	NA	NA			
UT&C Appr. Date	11-21-79	11-21-79			
DCC Checklist #					
DCC Approval Date					

ISO #					
Hydro #					
Form 10A Date					
Form 10B Part I Date					
Form 10B Part II Date					
As Built Rev. #					
As Built Appr. Date					
Rev. Rev. Notif. Date					
TAEC Appr. Date					
ANI Appr. Date					
UT&C Appr. Date					
DCC Checklist #					
DCC Approval Date					

SAC FILE
SERVED

SF 1.06

Pullman Power Products		Form 10D SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 3/1/82
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

PAGE 1 OF 2

SEABROOK STATION
UNIT NO. 2
INTEGRIT TEST COVER SHEET
TEST NO. PCO-1
SYSTEM Containment
LCO NOS. NA

PPP 10D
QUAC 8.2

PRE-TEST REVIEW

PREPARED BY: J. J. Kenneally P-H Eng DATE: 3-24-82
NAME/TITLE/COMPANY

CONTRACTOR: Pullman-Higgins

APPROVED BY: [signature] DATE: 3-25-82
CONTRACTOR ENGINEER

APPROVED BY: L. O. Flanagan DATE: 3-25-82
CONTRACTOR Q.A.

CONTRACTOR: NA

APPROVED BY: NA DATE:
CONTRACTOR ENGINEER

APPROVED BY: NA DATE:
CONTRACTOR Q.A.

APPROVED BY: R. V. Dunphy DATE: 3-25-82
STARTUP TEST GROUP

TEST RESULTS REVIEW

APPLICABLE FOR
NSO NO. TEST ONLY

ACCEPTED BY: Duane Hunt DATE: 3-30-82
CONTRACTOR Q.A.

ACCEPTED BY: NA DATE:
CONTRACTOR Q.A.

ACCEPTED BY: R. V. Dunphy DATE: 3-30-82
USGC TEST & START-UP

ACCEPTED BY: NA DATE:
YANKEE STARTUP TEST GROUP

SF 1.06

Pullman Power Products		Form 10E SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gervin ST	DATE: 3/1/82
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

Page 2 of 1

SEABROOK STATION

INTEGRITY TEST DATA

PPP 10E
UE&C 8.4

TEST # 2CO-1

TEST DESCRIPTION

Boundary Description: From FW FE104 1CO-2CO-4001-01 To FW FE106 1CO-2CO-4001-02

Code/Class ASME III CL2

P&ID/MITD NA

Type of Test:

Hydrostatic ✓

Pneumatic ______

Inservice ______

Other ______

TEST PARAMETERS

SAMPLE

APPLICABLE FOR JOB No. 7XXX ONLY

Design Pressure: 150 PSIG

Test Pressure: (Min) 187.5 (Max) 196 PSIG

Relief Valve Setting 198 PSIG

Test Medium Demin Water

Min. Test Temp. 56 °F

Test Exceptions: ______ Yes ✓ NO

Test Hold Time 10 min

FIELD DATA

Test Gage Ser. # G-3 Cal. Date 3-24-82 Start Time 2:50

Test Gage Range 0-400 Completion Time 3:10

Test Pressure Achieved 191 Temp. Inst. Ser. # 5956 Cal. Date 2-16-82

Inspection Test Pressure 150 Test Temperature 65 °F

Performed By: John Doe Date 3-26-82

WITNESSES

UE&C TSI ST Dunphy Date 3-26-82

A.N.I. [illegible] Date 3-26-82

A.N.I. NA Date 3-26-82

Owner Rep. [illegible] Date 3-26-82

Contractor Rep. [illegible] Date 3
Name/Title/Company

Contractor Rep. NA Date ______
Name/Title/Company

Contractor Rep. NA Date ______
Name/Title/Company

Pullman Power Products		Form 10F SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gervin	DATE: 3/1/82
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

PAGE 3 OF 7

SEABROOK STATION

TEST # ICO-1

VALVE LINEUP

FTP 10T
SEAC 8.6

VALVE NO.	CONDITION	CHECKED BY INITIALS/DATE	VALVE NO.	CONDITION	CHECKED BY INITIALS/DATE
NA					

X - SHUT 0 - OPEN

1. GAUGE INSTALLED
2. PUMP INSTALLED
3. GAGGED
4. BLANKED
5. INTERNALS REMOVED
6. JUMPERS INSTALLED
7. TEMPORARY ADAPTER
8. OTHER _____

Pullman Power Products	Form 10G SECTION NO.
PREPARED BY: R. G. Davis / APPROVED BY: E. F. Garcia	DATE: 3/1/82
QUALITY ASSURANCE PROGRAM / FORMS	PAGE NO. 1 of 1

PPP 10G
UE&C 8.9

SEABROOK STATION

INTEGRITY TEST BOUNDARY DESCRIPTION

TEST # 200-1

LINE NO.	ISO. NO.	REV.	FROM	TO	REMARKS
200-4[illegible]-01-151	200-[illegible]	7	FW-F104	FW-F0166	[illegible]
					[illegible]
200-4681-01-151	200-4001-02	1	FW-F0166	FW-F0205	[illegible]

Pullman Power Products		Form 10E SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 3/1/82
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

FFF 10E
UEAC 8.8

SEABROOK STATION

TEST # SCO-1

EXCEPTIONS LIST

ITEM	DESCRIPTION	INITIALS/ DATE	DISPOSITION	INITIALS/ DATE
	NA			

Pullman Power Products		Form 101 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. E. Germain	DATE: 3/1/82
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

PPP 101
QAAC 8.3

SEABROOK STATION

INTEGRITY TEST DATA

PRETEST VERIFICATION

TEST # 200-1

SAMPLE

		INITIAL/DATE
1.	Piping system properly supported.	3-25-82
2.	All welds and mechanical joints exposed and accessible.	3-25-82
3.	Valve line-up.	3-25-82
4.	Equipment downstream of boundary points is properly protected from over pressurization.	3-25-82
5.	Expansion joints are isolated or restrained as required by vendor.	N/A
6.	System is filled and vented.	3-25-82
7.	Test equipment is flushed and cleaned to meet Class C cleanliness requirements.	3-25-82
8.	Test gage is installed.	3-25-82
9.	Gage is visable to operator controlling pressure.	3-25-82
10.	Remove plugs on Grinell valves.	N/A
11.	Automatic relief valve is set at ≤ 106% of test pressure prior to starting the test.	3-25-82
12.	Pre-test walk down complete.	3-25-82
13.	Pre-test briefing has been conducted.	3-25-82

APPLICABLE FOR
JOB No. 7XXX ONLY

Pullman Power Products		Form 10J SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 3/1/82
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

PPP 10J
UE&C 8.10

DOCUMENTATION REVIEW

TEST # 200-1

The following documentation has been reviewed to assure complete and correct installation of systems for performance of integrity testing, as detailed on the Integrity Test Boundary Description, Attachment 8.9, or Fire Protection System

		Verified	N/A	Remarks
1.	Process Sheet Documentation	✓		
2.	NDE Documentation	✓		
3.	Stress Relieving Complete	NA		
4.	Non Conformance Reports	NA		
5.	Fire Protection System Docu.	NA		
6.	Stop Work Orders	✓		PW 4
7.	Other AS-Built I-4	✓		

SAMPLE

APPLICABLE FOR JOB NO. XXXX

Documentation Review Acceptable [signature] 3-22-82

SF 1.06

Pullman Power Products

PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

FORM 11
SECTION NO.

Pullman Power Products

FIELD REQUISITION - PURCHASE ORDER - RECEIVING REPORT

JOB NO.	DATE	SHEET NO.	SHIPPING ADDRESS:	P.O. NO.
7127	3/10/72	1 of 1	Pullman Power Products C/o P.G.&E. Diablo Canyon, Calif.	NO. F-7177-000
VIA: Best Way			VENDOR: Texas Bolt Co. Houston, Texas	JOB COST CODE: 173

MAIL 4 COPIES OF INVOICES TO: P.O. BOX 1001, WILLIAMSPORT, PA. [illegible] ATTN: FIELD ACCTG.

ITEM	QTY.	DESCRIPTION	UNIT PRICE	TOTAL	DATE REC'D	QTY. REC'D
A	20	1/8" x 10" long [illegible] heavy hex bolts [illegible] ASME SA-307				
		[illegible] ASME SA-194 [illegible]				
		1. Three copies of a notarized test report.				
		2. Test reports shall be traceable to our P.O. and item no.				
		3. All required documentation shall be sent on the day of each shipment att. Q.A. Dept.				
		4. Any nonconformance to the requirements of this P.O. will be considered just cause for return of materials.				
		5. Mill test reports shall indicate all the requirements of SA-307 and SA-194. Test results shall be actual, not typical.				
		6. Material shall be identified in accordance with SA-307 and SA-194. In addition, the heat or heat code number shall be on each piece.				
		7. Marking shall be done with raised letters or steel stamping.				
		8. If marking is by steel stamping it shall be with round-nose or interrupted-dot die stamping.				

TOTAL PRICE

ORDER FOR:		
DATE NEEDED:	DATE ORDERED:	DATE PROMISED:
PREPARED BY: F. Badger	APPROVED BY: P.F./V.S.Pro	PURCHASED BY: H. Yarish

IMPORTANT: THIS ORDER IS SUBJECT TO ALL OF THE TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE HEREOF.

OUR ORDER NUMBER MUST APPEAR ON ALL INVOICES, BILLS OF LADING, EXPRESS RECEIPTS AND CORRESPONDENCE [illegible]

REMARKS: Pullman Power Products — Reviewed BY QA LJW 3/11/72

RECEIVING DEPARTMENT — CARRIER: — COMPLETE ☐ PARTIAL ☐ — RECEIVED BY:

SAMPLE

APPLICABLE FOR
JOB No. 7035 ONLY

Pullman Power Products		FORM 12 SECTION NO.
PREPARED BY: R. G. DAVIS	APPROVED BY: E. F. GERWIN	DATE: 3-1-82
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

Pullman Power Products

APPROVED VENDOR LIST

ISSUED 9/21/81
REVISED

APPROVED FOR: WELDED PIPE (WITHOUT ADDITION OF FILLER METAL)

NOTES: See Appendix "A for Legend of Principle Functions, and Principle Audit Classifications

VENDOR NAME	VENDOR ADDRESS	VENDOR NO.	CERT. NO. & EXPIRATION	AUDIT DUE DATE	PRINC FUNCT	PRINC AUDIT CL
ARMCO STEEL CORP.	Route 301 North Wildwood, FL 32785	8	-	4/22/82	MM	1
[illegible], INC.	West Frontage Rd. I-95 & Route 6 [illegible]	26	[illegible]	-	-	-
CHICAGO TUBE & IRON	2531 West 48th St. Chicago, IL 60632	34	N-1397 6/7/82	-	MS	1
LOUIS P. CANUSO, INC.	Cedar & Spruce Sts Deptford, NJ 08096	44	OSC-396 1/31/83	-	MS	1
CORNIER & LADA COMPANY, INC.	1341 Elmwood Ave. Cranston, RI 02510	45	OSC-287 N-1776 6/10/83	-	MS MM	1
CAPITOL PIPE & STEEL	301 City Line Ave. Bala Cynwyd, PA 19004	47	OSC-206 5/6/84	-	MS	1
CAPITOL PIPE & STEEL	8200 Henderson Rd. Charlotte, NC 28113	48	OSC-206-2 5/26/82	-	MS	1
CAPITOL PIPE & STEEL	4201 Orange St. Pearland, TX 77581	49	OSC-206-1 5/6/84	-	MS	1
	APPLICABLE FOR JOB No. 7035 ONLY					

REMARKS:

SAMPLE

Page 2.1

SF 1.06

Pullman Power Products		FORM 13 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin EG	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

ACKNOWLEDGEMENT COPY/INDEX/DISTRIBUTION COPY SECTION II

Pullman Power Products

DOCUMENT STATUS RECORD FOR PROJECT PROCEDURES - SECTION II

7035 SEABROOK

SAMPLE

CC	DISTRIBUTION
1	K. Swisher
1	D. Gehr
1	H. Hinkley
1	K. Davis
1	J. Townsend
1	H. Sinclair
1	J. Cochran
1	D. Jones
1	R. Davis
1	Y. Acevedo
1	J. Singleton
1	O. Ohlund

DIST. # 7035 21 — INDEX PAGE 1 of 1

DOCUMENT NUMBER	ISSUE OR REVISION DATE	DOCUMENT DESCRIPTION	7035 21	STATUS CODE	← ACTION TO DATE								
II-2	3/1/78	NDE Pers. Qual.-Level I & II		DIST. 8/4							DIST. 8/4	ACP 6/26	SUB 5/15
II-3	4/8/78	NDE Pers. Qual. - Level III		DIST. 8/4				--			DIST. 8/4	ACP 6/26	SUB 5/15
II-4	10/4/78	Inspection Pers. Qual.	X	DIST. 12/29				DIST. 12/29	ACP 12/22	SUB 11/22	DIST. 8/4	ACP 6/26	SUB 5/15
II-5	12/20/78	QA Engrg. Pers. Qual.		SUB 12/21									SUB 12/21
II-8	8/30/78	Welder Qual.		DIST. 11/30				DIST. 11/30	ACP 9/29	SUB 9/7	DIST. 8/4	ACP 7/11	SUB 5/15

ORIGINATING DEPARTMENT: Quality Assurance — DATE DISTRIBUTED: 12/29/78 — RETURN ACK. TO: R. Davis

NOTES: APPLICABLE FOR JOB No. 7035 ONLY

CODE LEGEND
ACP-Accepted by Cust. and Pullman.
AP -Accepted by Pullman only.
CON-Condit. Accept
DIST-Dist. for use
SUB-Subm. for approv.
RES-Resub. for approv.
DAP-Disapproved
CC-No. of Copies Dist.
#-Dist. No.

TO ACKNOWLEDGE RECEIPT, SIGN, DATE AND RETURN A COPY OF THIS FORM TO ORIGINATING DEPARTMENT.

RECEIPT ACKNOWLEDGED BY: D. Jones DATE 12/29/78

VOID DOCUMENT REC'D BY: R. Davis DATE 12/30/78

SF 1.06

DRAWING CONTROL CARD

Pullman Power Products

F-32A — DRAWING NUMBER

MAIN STEAM PLAN — DRAWING TITLE

1 — UNIT NO.

TURBINE ELEVATION — BUILDING LOCATION

1 — STICK NO.

REVISION NO.	REVISION DATE	DATE REC'D.	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL DIST.	TOTAL RET'D.
			NUMBER DISTRIBUTED													
2	6/22/78	6/25/78	3/1	1	1	1	2	1			5					

SAMPLE

APPLICABLE FOR
JOB No. 7035 ONLY

1	Stick
2	Q.A.
3	STORAGE
4	Smith
5	Jones
6	Brown
7	
8	
9	Customer
10	
11	
12	

ORIGINAL ISOMETRIC STATUS

DRAWING FILE	
DRAFTING	
ENG. REV. CHECK	
Q.A. REV. CHECK	
TO C.E.I.	
PRINT ROOM	

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 1 of 1

PREPARED BY: R. G. Davis

APPROVED BY: E. F. Gerwin

DATE: 5/8/81

Pullman Power Products

FORM 14
SECTION NO.

SF 1.06

Pullman Power Products		FORM 15 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

TRANSMITTAL RECORD

Pullman Power Products

Job 7026

DATE: 3/1/78

TO: T. Jones
FROM: B. Williams
SUBJECT: VOID DOCUMENTS

REPLY TO:

THE DOCUMENTS BELOW ARE READY FOR ISSUANCE. THE RESPONSIBLE PERSON IS FULLY AWARE THAT COPIES OF THE SAME DOCUMENTS WHICH ARE SUPERCEDED MUST BE RETURNED WHEN THE BELOW LISTED DOCUMENTS ARE RECEIVED. SUBMIT THIS LIST WITH THE VOID DOCUMENTS TO THE DRAWING CONTROL COORDINATOR.

DWG. NUMBER	REV.	NO. REC'D.	DATE	NO. RETURNED	REV.
A-62316	4	1	3/1/78	1	3

SAMPLE

Please acknowledge receipt of this transmittal by signing and returning one copy to Pullman Power Products, Drawing Control and retain one copy for your own records.

APPLICABLE FOR JOB No. 7035 ONLY

T. Jones — Signature of Recipient — 3/1/78 — Date

Void Documents Received By: G. M. Robinson — Signature, Drawing Control Coordinator — 3/1/78 — Date

SF 1.06

Pullman Power Products		FORM 16 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

Pullman Power Products		XIII-10 DOCUMENT NO.
PREPARED BY: J.E.MILLER	APPROVED BY: K.A.SWISHER	DATE: 9/1/76
PERRY PROJECT PROCEDURE	TO BE USED ONLY ON JOB # 7026	PAGE NO. 1 OF 5

SHIPPING PROCEDURE

Pullman Power Products		XIII-10 DOCUMENT NO.
PREPARED BY: J.E.MILLER	APPROVED BY: K.A.SWISHER	DATE: 9/1/76
PERRY PROJECT PROCEDURE	TO BE USED ONLY ON JOB # 7026	PAGE NO. 2 OF 5

REVISION
9/1/76

1.0 General

This section covers the requirements for loading and shipment of piping sub-assemblies. Described are environmental protection during transit, procedures to minimize damage in transit, precaution required when handling items during loading and transit, and identification.

The mode of transportation used shall be consistent with the protection classification of the item and with the packaging methods employed.

2.0 Transportation Requirements

2.1 Open Carriers. For shipment on open carriers where items may be exposed to adverse environmental conditions, the following shall apply:

2.1.1 Stainless steel sub-assemblies shall be covered for protection from environmental conditions. Tarpaulins, when used, shall be fire retardant; and they shall be installed in a manner to provide drainage and to insure air circulation to prevent condensation.

2.1.2 Barrier and wrapping materials subject to transportation damage shall be covered with waterproof shrouds such as tarpaulins, so that they are not exposed directly to the environment.

APPLICABLE FOR JOB NO. 7035 ONLY

2.1.3 Carbon and Ferritic Alloy materials packaged in accordance with Pullman Power Products' Procedure "Standard Method of Protecting Ends of Fabricated Pipe" need no extra protection.

2.2 Closed Carriers. For shipment on closed carriers the following shall apply:

2.2.1 When stainless steel items cannot be adequately protected from weather or environment on open carriers, closed carriers shall be used.

Pullman Power Products	FORM 17 SECTION NO.
PREPARED BY: R. G. Davis — APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM — FORMS	PAGE NO. 1 of 1

TO BE USED ONLY FOR JOB No. 7035

Pullman Power Products

NONCONFORMANCE REPORT

7035 011	0 1	1	7030-RR-3	Spool — Quantity: 1
Issued by	D R Jones	DRB Pullman lower lead		Date: 2-28-79
Item/Material	Source: Customer	Current status: Held	Location: Fab Shop	
Responsible organization	Site organization	Potentially signif.: ☒ NA ☐ Part 21 ☐ 50.55(e)	Spec. No.: NA	
NCR type	Category — Type ☒ (E) Equip./Mat'l. ☐ (I) Installation ☐ (P) Program			
Governing requirement	Include acceptance criteria and doc'mt. no.: Foster Wheeler supplied			

Description of nonconformance — NC code: [illegible] — Relate to line no.

Gouge in pipe, ½" from weld bevel (FW 7030-[illegible]) approx ⅛" deep & ⅜" across

Cause of nonconformance — Cause code: 37

Cause unknown

SAMPLE

APPLICABLE FOR
JOB No. 7035 ONLY

Proposed disposition: ☐ SCRAP ☒ REPAIR ☐ USE AS IS ☐ OTHER

JUSTIFICATION: Blend gouged area, perform P.T. to base metal, weld area using W.P.S. 8-I-1-RR-2, visual inspect weld & P.T. finished area

SEE NPBRF FOR NCR #011 "REPAIR"

Steps to prevent recurrence: Cause unknown

Resp. org. approval	[signature]	[signature]	Date: 2-28-79
Review board	[signature] — ☒ Yes ☐ No — Date: 2-28-79	[signature] — Decision: ☐ Accept ☐ Reject	Date: 2-28-79
Disposition verified	David R [signature]	Title: NDE Supervisor	Date: 3-[illegible]-79

COPY DISTRIBUTION: WHITE-QA YELLOW-FIELD ENGINEER GOLD-TANAGE PINK-ANI GREEN-QA

SF 1.05

Pullman Power Products		FORM 18 SECTION NO.
PREPARED BY: R. G. Davis	APPPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

76-76-213

PULLMAN POWER PRODUCTS

FIELD PROCESS SHEET

N/A = NOT APPLICABLE

CUSTOMER	SYSTEM - LINE NO.	ISOMETRIC DR. NO.	DETAIL DR. NO.	SHEET NO.
Public Service Co. of NH	P11 - RHC	F136	M-36	1 OF 1

PREPARED BY	JOB NO.	DATE	CODE	CLASS	PLANT NO.
H M Sawtelle	7035	8-22-78	ASME III	II	Q.A. 316

OPER. NO.	OPERATION	N/A	PROC. NO.	HOLD ANI	HOLD P.S.I.	OPER.	P.P.P. Insp. & Date	ANI Insp. & Date
	CUTTING OPERATION FOR							
	C/S PIPE WITH WALL THICKNESS							
	GREATER THAN 3/4"							
	FIELD WELD No. F136-21							
1.	PREHEAT AREA TO BE MIN. 200°F MIN		IX-3 4-11-78		✓	A/S	P.P.P. 8-22-78	
2.	CUT PIPE		IX-3 4-11-78			A/S	P.P.P. 8-22-78	
3.	VISUALLY INSPECT		VT-2 8-3-78	✓	✓		P.P.P. 8-22-78	C.E. 8-22-78
	REPAIR TO GOUGED AREAS	N/A						
4.	PREHEAT 200°F MIN.		IX-3 4-11-78 C.H.-78		✓			
5	BUILD-UP BY WELDING		IX-3-8					

Q.A. Approval G.H. Date: 8-22-78

ANI Review C.E. Date: 8-22-78

Final Check

Q.A. H. Kassar DATE: 8-22-78

Originator Code PS-52

Record Type 41-5-03-005

JMS Index No.

TO BE USED ONLY FOR JOB No. 7035

SAMPLE

TO BE USED ONLY FOR JOB No. 7035

PULLMAN POWER PRODUCTS
SEABROOK STATION
FIELD WELD PROCESS SHEET

Job No. 7035 Cust. Public Service Co. NH
Sys./LINE/ISO No. RH-155-5
Weld No. 155-F501
Mat'l P8 Code ASME Class III

Size 6" Thk. .406 Insert ECJ
WPS No. 24-3-8
Bare Wire ER 308 Electrode E308
Preheat Range °F Min. 50
Interpass Temp °F Max. 350
PWHT Temp °F N/A
Hold Time Hrs. N/A
Heat Rate °F/hr. N/A
Cool Rate °F/hr. N/A
Type of Joint: Groove
Type of Purge Dam: Soluable
LIMITED ACCESS WELD YES NO ✓
Other: N/A

Prepared By: H. Swale Date: 8-10-78
QA Approved: RG Davis Date: 8-10-78
ANI Review: Joe Smith Date: 8-10-78

WELD RECORD
Welder(s) Symbol - Root J-1 Final A-1
Insert/Backing Ring HT. No. 30424
Electrode LT. No(s). 421M1AC
Heat Chart No. N/A

Final Check
QA RG Davis Date: 8-15-78

Originator Code PX-52
Record Type 41-5-03-006
INS Index Number

LOCATION:

Opr. No.	OPERATION	F/A	Proc. No.	HOLD ANI	HOLD P.P.P.	Oper.	P.P.P. Ins. and Date	ANI Ins. & Date
	Material Description P.P.E. TO 90° ELL						DA 8-15-78	
1	PC. MARK OR HT. NO. 30772 TO AV8		IX-3				PA 8-15-78	
2	VISUAL INSPECTION		X-9					
3	FIT UP AND TACK		24-III-8	✓	✓	A-1	A 8-15-78	JS 8-15-78
4	PREHEAT		24-III-8					
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								

SAMPLE

TO BE USED ONLY FOR JOB No. 7035

PULLMAN POWER PRODUCTS
FIELD WELD PROCESS SHEET/REPAID

Job No. 7035 Cust. Public Ser. Co. OK
Spec.-Line/Iso No. RH-155-S
Weld No. 155 - 501
Mat'l P-8 Code Class Class III

WPS No. 24-1-8 Electrode E308
Back Gas n/a
Preheat Temp. Min. 60
Interpass Temp. Max. 350
For PWHT Refer To Orig. Process Sheet

Other n/a

Prepared By: R. Sanders Date 8-16-81
QA Approved: R. Davis Date 8-16-81
ANI Review: J. Smith Date 8-17-81

REPAIR WELD RECORD

Opr. No.	OPERATION	M/A	Proc. No.	Weldmold PPP	Oper.	P.P.P. Ins. Date	ANI Ins. Date
A1	REPAIR NO. 1		IX-14			QA 8-17-81	IS: 8-17-81

Walker (s) Symbol A-1
Insert Backing Ring Mt. No. n/a
Back Gas Mt. No. n/a
Electrode LT. No (s). 431 MIAC
Heat Check No. n/a

Final Check
QA RS Date 8-17-81
Qualification Code PX-52
Record Type 21-5-83-601
IMS Index No.
LOCATION

TO BE USED ONLY FOR JOB No. 7035

SAMPLE

Pullman Power Products

Form 19B

SECTION NO.

PREPARED BY: R. G. Davis | APPROVED BY: E. T. Gervin | DATE: 9/1/82

QUALITY ASSURANCE PROGRAM — FORMS — PAGE NO. 1 of 1

PULLMAN POWER PRODUCTS
FIELD WELD PROCESS SHEET

Job No. 7035 Cust. Public Ser. Co. NH
SUPPORT NO. 201-SG-1
Weld No. 201-SG-101
Mat'l TT Code ASME Class I

WPS No. IIA III-1 BR2
Base Wire N/A Electrode E 7018
Preheat Temp°F Min. 50°
Interpass Temp°F Max. 600°

Other

Prepared By: [signature] Date 9/22/82
QA Approved: [signature] Date 9/30/82
ANI Review: [signature] Date 10/6/82

Welder (s) Symbol
Insert/Backing Ring HT.No.
Base Wire Ht.No.
Electrode LT.No (s).
Heat Chart No.

Final Check
QA Date
Originator Code PX-32
Record Type 41-8-03-703
IHS Index No.
LOCATION:

Opr. No.	Operation (CLASS 1 SW WELD WORK)	N/A	Proc. No.	Hold ANI	Hold PPP	Oper	P.P.P. Insp. Date	ANI Insp. Date
	JOINT NO. FW 1							
1	VISUAL INSPECTION		35-1X-6 REV		//			
2	FIT UP & TACK		35-1X-6 REV		//			
3	PREHEAT		IIA III-1 BR2 REV					
4	WELDOUT		IIA III-1 BR2 REV					
5	INTERPASS TEMP		IIA III-1 BR2 REV					
6	PREP SURFACE FOR EXAM		IX XT6 W77 REV					
7	FINAL VISUAL		35-1X-6 REV		//			
8	MAG PARTICLE EXAM		IX MT III W77 REV		//			
9*	RADIOGRAPHY EXAM		IX-RT-6 W77 REV		//			
	RT DOES NOT YIELD MEANINGFUL RESULTS (SEE 9/17) CONCURRENCE: PH ___ UE&C ___ ANI ___							
*	PROCEED WITH ALTERNATIVE EXAM (S) BELOW AFTER CONCURRENCE ABOVE							
10	ULTRASONIC EXAM (W/ CONC)		IX UT 1 W77 REV		//			

THIS CERTIFIES ALL WELDS ON THIS SUPPORT WERE MADE BY WELDERS QUALIFIED IN ACCORDANCE WITH NF-4320 AND SECTION IX
BY ________ DATE ________
REMARKS ________

SF 1.06

Pullman Power Products	Form 190 SECTION NO.

PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gervin	DATE: 9/1/82
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

PULLMAN POWER PRODUCTS
SEABROOK STATION
HANGER FIELD WELD
PROCESS SHEET

Job No. 7035 Cust. PSNH
Hanger Dwg. No. 202-AG-3
Ref F.W. No. 202-AG-3-01
Mat'l (P) Code: ASME III Class: 2
WPS No. ITP-III-1-BP-2
Electrode: E7018
Preheat Range: 50 °F Min.
Interpass Temp: 600 °F Max.
P.W.H.T. Temp: N/A °F
Hold Time: N/A Hrs.
Heat Rate: N/A °F/Hr.
Cool Rate: N/A °F/Hr.
Sheet: [illegible]
PFP Ref. ISO [illegible]
Exam. Ck. Loc Cont.
Prepared By: [illegible] Date: [illegible]
QC Approved: [illegible] Date: [illegible]
ANI Review: [illegible] Date: [illegible]

QA FINAL REVIEW
By ____________ Date ________

W Welder	JNT WLD NOS	OPERATIONS (H = Hold Point) 1 ANI	PP	2 ANI	PP	3 ANI	PP	4 ANI	PP	5 ANI	PP	6 ANI	PP	7 ANI	PP
	FW# 1 LA: Y/N				✓										✓
	FW# 2 LA: Y/N				✓										✓
	FW# 3 LA: Y/N				✓										✓
	FW# 4 LA: Y/N				✓										✓
	FW# 5 LA: Y/N				✓										✓
	FW# LA: Y/N														
	FW# LA: Y/N														
	FW# LA: Y/N														
	FW# LA: Y/N														
	FW# LA: Y/N														

OPERATIONS

No.	Procedure	N/A
1	Visual Inspection JS-IX-6 Rev	
2	Fit-Up & Tack JS-IX-6 Rev	
3	Preheat ITP-III-1-BP-2 Rev	
4	Weldout ITP-III-1-BP-2 Rev	
5	Interpass Temp. ITP-III-1-BP-2 Rev	
6	Prep. Surface Rev	N/A
7	Visual Insp-Fin Wld JS-IX-6 Rev	

SAMPLE

THIS CERTIFIES THAT ALL WELDS ON THIS SUPPORT WERE MADE BY WELDERS QUALIFIED IN ACCORDANCE WITH NF-4320 AND SECTION IX.

By ______________________ Date ________
Remarks ______________________

Limited Access Welds

LA = Limited Access Welds
Y = Yes N = No
LA (Y) Weld Nos. ____________

Reviewed By ____________
Weld Insp

LA (Y) Welds
Req. Spec. Proc. ____________

Originator Code: PPSI
Record Type: ____________
I M Index: ____________
Date ____________ By ____________

Pullman Power Products	Form 19D SECTION NO.

PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gervin [illegible]	DATE: 9/1/82
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

1. ORIGINATOR CODE PPI-SL

Pullman Power Products
Page 8
SEABROOK STATION
ATTACHMENT NO. 1
REVISE AS INDICATED

RECORD TYPE______________

IMS INDEX______________

DATE_____/_____/_____ BY______________

ECA #______

SRC #______

EXPANSION ANCHOR PROCESS SHEET

SYSTEM/LINE # ISO # SUPPORT # REV.

CODE CLASS WELDER/FITTER

OPER. NO.	OPERATION	PROCEDURE	HOLD ANI	HOLD PPP	PPP DATE	ANI DATE
1	After drilling and prior to plate installation inspect wall (floor)	13-1, Rev.				
2	Verify bolt dia. & length LENGTH CODE______	13-1, Rev.				
3	Verify correct edge distance and [illegible] spacing maintained	13-1, Rev.				
4	Verify angular deviation	13-1, Rev.				
5	Verify no thread damage or hammer blow damage	13-1, Rev.				
6	Verify end of bolt flush with top of nut prior to torque	13-1, Rev.				
7	Apply initial torque	13-1, Rev.				
8	Verify final retorque (0 min. of 5 days after initial torque [illegible] and apply torque seal) or [illegible] marks	13-1, Rev.				
9	Verify length of exposed thread are correct	13-1, Rev.				

SEABROOK

NUMBER OF BOLTS______________

SIZE OF BOLTS______ X ______

MINIMUM HOLE DEPTH______ MIN. EMBEDMENT______

MIN. TORQUE (OPER. 6 & 7)______ FT. LBS.

MAX. TORQUE______ FT. LBS.

MIN. TURNS______ MAX EXPOSED LENGTH______

TORQUE WRENCH #______ CAL. DATE ① ___/___/___ ② ___/___/___

② #______ CAL. DUE DATE ① ___/___/___ ② ___/___/___

① = INITIAL TORQUE
② = FINAL TORQUE

FINAL CHECK

QA______________ DATE_____/_____/_____

Prepared By Date

QA Approval Date

ANI Review Date

Pullman Power Products

SEABROOK STATION

PX SZ
RECORD TYPE
IMS INDEX

SNUBBER PROCESS SHEET

SYSTEM:	ISO:	SNUBBER#:	REV.:
CODE:	CLASS:	WELDER: FITTER:	

OPER NO.	OPERATION	PROCEDURE	N/A	HOLD ANI	HOLD PPP	PPP DATE	ANI DATE
1	Snubber Alignment						
2	Rear Ball Joint Loose						
3	Clamp Nuts Tightened						
4							

"A" SETTING_____
PIN TO PIN DIMENSION_____
TORQUE RANGE_____TO_____
TORQUE WRENCH NO._____

PREPARED BY_____
QA APPROVAL_____
ANI REVIEW_____
CALIBRATION DATE_____

FINAL CHECK
QA_____DATE_____

Pullman Power Products		FORM 20 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

PULLMAN POWER PRODUCTS ACCEPT
INSP. [signature] DATE 5-8-81

APPLICABLE FOR
JOB No. 7035 ONLY

SAMPLE

JOB No 7035 SEABROOK STATION

PULLMAN POWER PRODUCTS ACCEPT

P.O. No. 248-54

ITEM(S) No. 1

QUANTITY 23 LENGTHS PIPE

INSPECTION REPORT # 2541

INSP. BY [signature] DATE 5/6/81

REMARKS

SF 1.06

RECEIVING INSPECTION REPORT NO.: 3131 DATE: 7/27/80 PAGE 1 OF 1

VENDOR: Guyon Alloys P.O. NO. 248-54

ATTACHMENTS: ☐ P.O. ☐ PURCH. SPEC. ☐ B/M ☐ OTHER

Pullman Power Products
Seabrook Station

RECEIVING INSPECTION REPORT

PROJECT PROCEDURE X-5 REV. 2
Job 7035

ITEM NO.	QUAN	PIECE OR ID NO.	DESCRIPTION AND/OR MTL. TYPE	HEAT NO. OR SYMBOL	PHYS. INSP. BY	PHYS. INSP. DATE	DOC. VERIFIED BY	DOC. VERIFIED DATE
1	25	N/A	2" SBO SA106 GR B. SMLS PIPE 20'-0"	E1472	RP	7/28/80	[illegible]	7/28/80
2	15	N/A	1½" S40 SA106 GR B. SMLS PIPE	G2793	RP	7/28/80	[illegible]	7/28/80
3	10	N/A	1½" SBO SA106 GR B. SMLS. PIPE ↓	G26059	RP	7/28/80	[illegible]	7/28/80

SAMPLE

APPLICABLE FOR JOB NO. 7035 ONLY

ANI Review

QUALITY ASSURANCE PROGRAM

FORMS

PREPARED BY: R. G. Davis

APPROVED BY: E. F. Gerwin

DATE: 5/8/81

PAGE NO. 1 of 1

Pullman Power Products

FORM 21 SECTION NO.

Pullman Power Products		FORM 22 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

81-81-17

JOB NO. 7026 PO 201.

ITEM NO. N218 HEAT OR SERIAL NO. K-1246

HOLD

NO. 12 DATE 2/13/78

- ☐ HOLD FOR INSPECTION
- ☒ WAIT FOR TEST REPORT
- ☐ WAIT FOR - NCR - REPORT
- ☐ RETURN TO VENDOR
- ☐ WAIT FOR ENGINEERING SPEC OR DRAWING CLARIFICATION
- ☐ _____

SAMPLE JA

J. B. Wilson
INSPECTED BY

DISPOSITION

Retain in Hold Area until reports are received and approved

(REF) NCR NO 51 DR NO N/A APPLICABLE FOR JOB NO. 7035 ONLY

SF 1.06

Pullman Power Products		FORM 22A SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin EG	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

PULLMAN POWER PRODUCTS
SEABROOK STATION JOB 7035

QA/QC REPAIR
TAG # 15

SAMPLE

☐ REWORK

☒ REPAIR

☐ OTHER ACTIVITY

APPLICABLE FOR JOB No. 7035 ONLY

NCR # 753

HOLD TAG # 1015

REMARKS
REPAIR GRIND & WELD NOZZLE 3"

QA/QC INSPECTOR [signature] DATE APPLIED 5/25/81

SF 1.06

Pullman Power Products		FORM 23 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

PPPSB 6-16 3 Rev 0
ORIGINATOR CODE PS-57
RECORD TYPE 41-A 11-200
SYS FIDER

Pullman Power Products

SEABROOK STATION
COMPONENT REQUISITION

JOB 7035
DATE 7-1-80

O Sub-assembly O Component Support B Valve O Other

		COMPONENT ID #	ISO NO.	STORAGE AREA	COMMENTS
(1)	1	1-RH-V001	1-RH-1103 SH 3	UCLH	None
(1)	1	1-RH-V002	"	"	None

SAMPLE

TO BE USED ONLY FOR JOB No. 7035

DELIVER TO AREA — FOREMAN — Q.A APPROVED 7-1-80

RECD BY — DATE

ENG. APPROVAL — FILLED BY

SF 1.06

PPPSB 6-16-2 Rev O
ORIGINATOR CODE PX-52
RECORD TYPE 41-R-31-024
IMS INDEX

Pullman Power Products
SEABROOK STATION
FIELD WAREHOUSE REQUISITION

№ 02046
JOB 7035

SYSTEM WLD LINE SPEC A3 DATE 5-7-79

ISO NO. 2054-01 DETAIL Dwg. NO. DR NO NA ACT NO NA PAGE NO 1 of 1

QUANTITY	QUANTITY DELIVERED	ITEM DESCRIPTION	P.O. NO.	ITEM NO.	HEAT NO.
10'	10'	3/4 SMLS SA 312 TP316 Pipe	14840	1	NZF-3W

SAMPLE

APPLICABLE FOR
JOB No. 7035 ONLY

DELIVER TO APEL FAB SHOP Bubba Brown FOREMAN
REC'D BY O. J. Hollenbeck
ENG. APPROVAL

Q.A APPROVED T. Hambley
DATE 5-7-79
FILLED BY V. Willis

QUALITY ASSURANCE PROGRAM
PREPARED BY: R. G. Davis
FORMS
APPROVED BY: E. F. Gervin
PAGE NO 1 of 1
Pullman Power Products
DATE 5/8/81
FORM 24
SECTION NO.

SF 1.06

SEABROOK STATION
PULLMAN POWER PRODUCTS
WELD ROD STORES REQUISITION JOB 7035

№ 19802

Sys.	Line No.	Iso./Drwg. No./Rev.	Weld No.	Date
CBS	1225	06 Rev2	F0602	3-17-82

Weld Procedure/Rev.: 24-III-8-KI
Weld Type: Socket ☐ Hanger ☐ Butt ☑ Other ______

Insert ☑ 6" 304 or Backing Ring ☐ — Insert or Backing Ring Heat No.: 34-7829 — Insert/BR Returned Yes ☐ No ☐

Rod Type	Size & Amount 1/16	3/32	1/8	5/32	3/16	Heat Lot No. or Control No.	Issued LB./PCS.	Returned LB./PCS.	Returned LB./PCS.	Return LB./PCS.
ER308	2					8002				
E308		1				87643	1			
ER308		2				8002	2			

Applicable To Welds Not Requiring Process Sheets

Final Visual Accept. ______ Date ______ Production ______ Date ______ QC

Welder R. Donald Symbol XX Issued By LAR Time 1:00 A.M./P.M.

Foreman J. MILLS QA Approval [signature]

APPLICABLE FOR JOB No. 7035 ONLY — Heat Number Verified QA [signature]

Pullman Power Products		FORM 26A SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

Pullman Power Products		71-1-6/1-K1-12 DOCUMENT NO.
PREPARED BY: R. J. Royer	APPROVED BY: F. J. Richards	DATE 3/13/78
WELDING PROCEDURE SPECIFICATION	TO BE USED ONLY ON JOB #	PAGE NO. 2 of 3

THIS WPS MUST BE USED IN CONJUNCTION WITH CWS-DM-I
THE GENERAL WELDING STANDARD (S) CWS-CrMo-I

SUPPORTING PQR NO. 302

BASE METALS (QW-403)

P NO. 4 GR. NO. _____ TO P NO. 1 GR. NO. _____
OR

SPECIFICATION TYPE & GRADE 1-1/4Cr-1/2Mo

TO SPECIFICATION TYPE & GRADE Carbon Steel

SAMPLE

APPLICABLE FOR JOB No. 7035 ONLY	WELDING SEQUENCE		
	ROOT WELD	INTERMEDIATE WELD	BALANCE
PROCESS	GTAW	SMAW	SMAW
SFA/AWS SPEC. NO.	Basis of Equiv.	S.S/TRD18-B2	S.S/TRD18-B2
F-NO./A-NO.	A3	F4/A3	F4/A3
SHIELDING FLUX/GAS	Argon	N/A	N/A

GAS (QW-408)

SHIELDING GAS(ES) Argon

PERCENT COMPOSITION (MIXTURES) 99.5%

FLOW RATE 20 C.F.H. Min.

GAS BACKING Argon Purge

POSITION QUALIFIED All Positions

THICKNESS RANGE QUALIFIED 3/16" to 1.196"

CONSUMABLE INSERT MATERIAL ER515 or Equiv.

TUNGSTEN ELECTRODE SIZE & TYPE 3/32 or 1/8-2%

TECHNIQUE (QW-410)

ORIFICE OR GAS CUP SIZE 6-7

CONTACT TUBE TO WORK DISTANCE N/A

OTHER N/A

STRINGER OR WEAVE BEAD Both

WEAVE BEAD TECH. Max. width of weave shall be 5 times the core dia. of the weld rod being use

SINGLE OR MULTIPLE ARC Single

SINGLE OR MULTIPASS Multipass

PREHEAT & INTERPASS TEMPERATURE REQUIREMENTS: 300°F. Min. for materials 3/4" or less in thickness---400°F. Min for materials greater than 3/4" thick---600°F.

POST WELD HEAT TREATMENT REQUIREMENTS: Stress relieve at 1350°F. ± 25°F., hold for 1 hour per inch of thickness. For additional instructions on PWHT, refer to page 20 of the CWS-Cr-Mo-I.

APPLICABLE FOR
JOB No. 7035 ONLY

FOR GAS BACKING SEE "BACKING GAS PURGE CHART," PAGE 26 of the CWS-DM-I

ADDITIONAL INSTRUCTIONS:

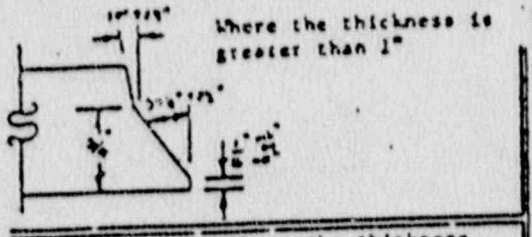
SF 1.06

Pullman Power Products		FORM 26B SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

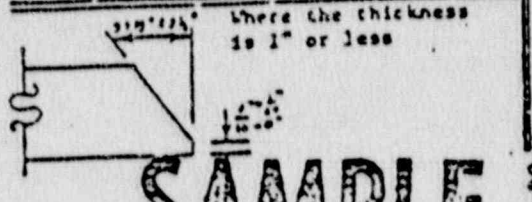
Pullman Power Products	71-1-4/1-K1-12 DOCUMENT NO.
PREPARED BY R.I. Boyer — APPROVED BY: F.J. Richards	DATE 3/13/78
WELDING PROCEDURE SPECIFICATION — TO BE USED ONLY ON JOB #	PAGE NO. 3 of 3

WELDING MATERIAL / BASE METAL CONTROL			
BASE METAL	ELECTRODE	BARE WIRE	FLUX
1-1/4 Cr-1/2 Mo to Carbon Steel	E8016-B2 or E8018-B2	ER515 or equivalent	

(CS-402) JOINT DESIGN(S) SHOWN HERE IS A TYPICAL ILLUSTRATION ONLY

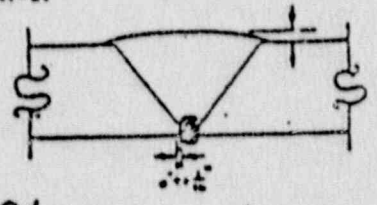


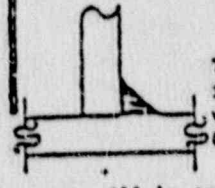
Where the thickness is greater than 1"



Where the thickness is 1" or less

Reinforcement is permitted in accordance with Table #4, page 27 of the CWS-DM-1.





This procedure is qualified for any size fillet weld, with or without GTA Welding

Counterbore may ~~may not be~~ used, when used, care will be taken to insure min. wall

WELD LAYER OR PASS	PROCESS	FILLER METAL CLASS.	FILLER METAL DIA.	CURRENT TYPE POLA.	CURRENT AMP. RANGE	VOLT RANGE	TRAVEL SPEED RANGE	
The following parameters shall be used on all GTA welding		The K insert and 1/16 bare wire	or 3/32	Straight Straight Straight Straight	65-100 100-150 150-200 200-230	11-13 12-14 13-15 14-16	Min. 2 IPM 3 IPM 4 IPM 5 IPM	Min. Torch Gas 20 C.F.H. 20 C.F.H. 20 C.F.H. 20 C.F.H.
	SMAW SMAW SMAW	E8018-B2 E8018-B2 E8018-B2	1/8 5/32 3/16	Reverse Reverse Reverse	100-150 120-200 200-275	20-23 21-24 22-25	Min. 4 IPM 5 IPM 5 IPM	--- --- ---
1/16 or 3/32 root fit-up.		ER515 bare wire may be used for intermittent voids or mismatch in						

APPLICABLE FOR JOB NO. 7035 ONLY

Pullman Power Products

FORM 27A
SECTION NO.

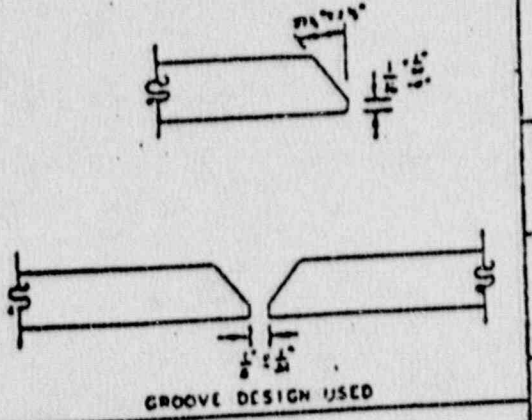
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin EG	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

Pullman Power Products

PQR No. - 307
DOCUMENT NO.

PREPARED BY: R. J. Rover	APPROVED BY: F. J. Richards	DATE: 4/6/78
AS WELDED PROCEDURE QUALIFICATION RECORD (PQR)	TO BE USED ONLY ON JOB #	PAGE 2 of 3 NO.

WPS NO. 76-5/1-OR-2
WPS DATE 8/1/78
WELDING PROCESS (ES) SMAW
TYPES Manual (MANUAL, AUTOMATIC, SEMI-AUTO)
Updated reprint of MPR PS/PI-OE-F6-SMAW-6-AC



BASE METAL (QW-403)
MATERIAL SPEC. A335 to A-106
TYPE OR GRADE P22 to B
OF P NO. 5 TO P NO. 1
THICKNESS (IF PIPE, DIAMETER AND WALL THICKNESS) 2" x .343"

POSITION (QW-405)
POSITION OF GROOVE Inclined Angle 45° (AG)
WELD PROGRESSION Uphill (UPHILL - DOWNHILL)

PREHEAT (QW-406)
PREHEAT TEMP. 300°F. Min.
INTERPASS TEMP. 700°F. Max.
OTHER

GAS (QW-408)
TYPE OF GAS OR GASES None
COMPOSITION OF GAS MIXTURE N/A
OTHER

FILLER METALS (QW-404)
WELD METAL ANALYSIS A NO. 3
S.F.A. SPEC. 5.5
FILLER METAL F NO. 4
AWS CLASS E8018-B2

TECHNIQUE PROCEDURES (QW-410)
STRING OR WEAVE BEAD Both
OSCILLATION 3 T Dia. of Weld Rod Being use
MULTIPASS OR SINGLE PASS Multipass (PER SIDE)
SINGLE OR MULTIPLE ELECTRODES Single

POSTWELD HEAT TREATMENT (QW-407)
TEMPERATURE None
TIME N/A
OTHER

ELECTRICAL CHARACTERISTICS (QW-409)

WELDING PROCESS	ELECTRODE DIA.	GAS FILLER WIRE DIA.	CURRENT (AMPS)	VOLTS	AC/DC POLARITY	Min. TRAVEL SPEED	COMMENTS
SMAW	3/32	-	70-120	20-23	DC Reverse	2 IPM	
SMAW	1/8	-	100-150	20-23	DC Reverse	2 IPM	

APPLICABLE FOR JOB No. 7035 ONLY

SAMPLE

SF 1.06

Pullman Power Products		FORM 27B SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin EFG	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

Pullman Power Products		PQR No. - 307 DOCUMENT NO.
PREPARED BY: R.I. Bover	APPROVED BY: F.J. Richards FJR	DATE: 4/6/78
PROCEDURE QUALIFICATION RECORD (PQR)	TO BE USED ONLY ON JOB #	PAGE NO. 3 of 3

TENSILE TEST (QW-150)

AS WELDED

SPECIMEN NO.	WIDTH	THICKNESS	AREA	ULTIMATE TOTAL LOAD LB.	ULTIMATE UNIT STRESS PSI	CHARACTER OF FAILURE & LOCATION
72-21-1	.745	.222	.165	12,300	74,500	Broke in C/S Base Metal
72-21-2	.740	.229	.169	12,600	74,600	Broke in C/S Base Metal

GUIDED BEND TESTS (QW-160)

TYPE AND FIGURE NO.	RESULTS	TYPE AND FIGURE NO.	RESULTS
FB-1	Rear 180° Passed	FB-1	Rear 180° Passed
FB-2	Rent 180° Passed	FB-2	Rear 180° Passed

TOUGHNESS TESTS (QW -170)

SPECIMEN NO.	NOTCH LOCATION	NOTCH TYPE	TEST TEMP.	IMPACT VALUES	AVE	LATERAL EXP. % SHEAR	LATERAL EXP. MILS

SAMPLE

APPLICABLE FOR JOB No. 7035 ONLY

Welder's Name F. Gavitt Clock No. 146 Stamp No. FV

Test Conducted by: Pullman Power Products Laboratory Test No. M-72-21

Per: R.I. Bover

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

ANI Acceptance A.J. Roberts

Signed Pullman Power Products

By Robert J. Bover
R.I. Bover

Date April 6, 1978

SF 1.06

Pullman Power Products		FORM 28 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin EG	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

Pullman Power Products		IX-PT-1-W75 DOCUMENT NO.
PREPARED BY: A. ECP	APPROVED BY: A. BAIR AB	DATE: 11/4/77
PERRY PROJECT PROCEDURE	TO BE USED ONLY ON JOB # 7026	PAGE NO. 1 OF 2

LIQUID PENETRANT METHOD: Visible Dye - Solvent Removable — Appendix D

TEST MATERIAL USED: Liquid Penetrant Comparator - Sect. V Article 6

LIQUID PENETRANT MANUFACTURER: Turco Products - Analysis in Parts per million

MANUFACTURER'S ORDER NUMBER: By-Check Penetrant No. 2, By-Check Cleaner No. 3, By-Check Developer - AAW

PENETRANT SULPHUR 21.0% HALOGEN 4.3% ZINC < 3.0% LEAD NIL % TIN NIL % BATCH NO. XL-10

CLEANER SULPHUR 10.0% HALOGEN 6.4% ZINC NIL % LEAD NIL % TIN NIL % BATCH NO. 8096

DEVELOPER SULPHUR 10.0% HALOGEN 34.0% ZINC NIL % LEAD NIL % TIN NIL % BATCH NO. A215

SURFACE PREPARATION: Liquid Penetrant Comparator

PRE-CLEANING METHOD: 8096 Cleaner - Applied with clean cloths - Five (5) minutes Drying Time.

PENETRANT APPLICATION METHOD: Brush-Time - Ten (10) minutes - Penetrant XL-150B

PENETRANT TEMPERATURE: Approximately 70°

TEST SURFACE TEMPERATURE: Approximately 70°

AIR TEMPERATURE: 70°

EMULSIFICATION TIME: NA

EXCESS PENETRANT REMOVAL: Lint free cloth moistened with 8096 Cleaner

FORCE OF WATER SPRAY: NA

TEMPERATURE OF WATER: NA

EASE OF PENETRANT REMOVAL: Normal

DRYING TIME: Ten (10) minutes

DEVELOPING TIME: A215 Developer - Spraying

BLACK LIGHT INTENSITY: NA

SENSABILITY: Good

TYPE OF INDICATIONS VISIBLE: Cracks

EVALUATION OF METHOD EASE: Good

APPLICABLE FOR JOB No. 7035 ONLY

POST CLEANING METHOD: 8-96 Cleaner - Sprayed - Wiped Clean

TIME AFTER DEVELOPER WAS APPLIED UNTIL PHOTOGRAPH WAS TAKEN: Fifteen (15) minutes

TYPE PHOTOGRAPH: Graflex - Black and White

TYPE FILM: Kodak - Tri-X Ortho

DISTANCE CAMERA LENS-TO-TEST SURFACE: ---

ILLUMINATION: Daylight

BACKGROUND: Dark

TYPE OF ETCH USED: ---

PERCENT OF SOLUTION: ---

METHOD OF APPLICATION: ---

TIME OF ETCH: ---

SAMPLE

COMPARISON OF PHOTOGRAPH AFTER PENETRANT TEST AND AFTER ETCH, PROVED PENETRANT TO HAVE A --- % EFFECTIVENESS.

QA Approved L. Bair Level III

ANI Acceptance Donna B. Blair

SF 1.06

Pullman Power Products		FORM 29 SECTION NO.
PREPARED BY: R. G. DAVIS	APPROVED BY: E. F. GERWIN	DATE: 3-1-82
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

Pullman Power Products

Seabrook Station

MAGNETIC PARTICLE EXAMINATION RECORD

APPLICABLE FOR JOB No. 7035 ONLY

CC	798	01	F0101
System	Line No.	ISO No.	P. W. No.

Examination Procedure 13-MT-8-(1) Rev 1

Acceptance Criteria (If separate from procedure) Same

SAMPLE

Magnetic Particle Testing Equipment:

(1) Manufacturer: Parker Research

(2) Model No.: D-200

(3) Serial No.: 2915

(4) Calibration Due Date: 12-19-81

(Note method if yoke used) AC ☐ DC ☒

Testing Parameters:

(1) Method: Dry continuous Prod ☐ Yoke ☒ Other NA

(2) Prod (yoke) spacing 6 inches.

(3) Amperage Reading N/A amperes.

(4) Particle Material: Color(s) Red Manufacturer MagnaFlux.

(5) Inspected area type: Section thickness or pipe size .84" x .375" inch.

Weld Joint: Butt OD ☒, ID ☐, Fillet ☐, Socket ☐.

Base Metal ☐, Other NA.

Inspection Result Report:

APPLICABLE FOR JOB No. 7035 ONLY

(1) Did material (weld and adjacent base metal) contain defects repairable without weld repair, (ie: Surface reconditioning or grinding):

Yes ☒ No ☐

(2) Prod ARC Strikes removed and area examined: Yes ☐ No ☒ Reason: No arc strikes created

(3) Results of Examination (Check only when process sheet completed):

Accept ☒ Reject ☐ Reason NA

P.P.P. Inspector [illegible] Level II Date 12-10-81

Witnessed/Verified by ANI [illegible] Cert. No. [illegible] Date 12-10-81

Other NA Agency ____ Date ____

NA Agency ____ Date ____

Note: Mark all blank spaces N/A if non-applicable.

FF 1 06

Pullman Power Products

SEABROOK STATION

LIQUID PENETRANT EXAMINATION RECORD

CBS	1201	01	F0101
System	Line No.	ISO No.	F. W. No.

Examination Procedure IX-PT-1-W77 Rev 3

Acceptance Criteria (if separate from procedure) SAME

SAMPLE APPLICABLE FOR [illegible] ONLY

Penetrant Testing Materials [illegible]

(1) Manufacturer ~~[illegible]~~ Sherwin

A. Penetrant Batch No. 1K-2[illegible] No. ___ Brand Name Dubl-Chek

B. Cleaner/Remover Batch No. 12-9A[illegible] Brand Name "

C. Developer Batch No. GL-008 Brand Name "

Inspection Test Parameters

(1) Method: Solvent removed-visible color contrast ☒

Other N/A

(2) Temperature of inspection item 47 °F

(3) Temperature Measuring device S/N 9728 Calib. Due Date 2-18-82

(4) Penetrant Dwell Time used 10 Minutes.

(5) Inspected Area Type:

Weld Joint: Butt Cu ☒ In ☐, Fillet ☐ Socket ☐

Base Metal ☐ Other NA

Inspection Result Report

(1) Did material (weld and adjacent base metal for ½" on each side) contain defects repairable without weld repair. (i.e. Surface reconditioning or grinding)? Yes ☐ No ☒.

(2) Post Examination cleaning satisfactory? Yes ☒ No ☐ Reason NA

(3) Results of examination (Check only when process sheet completed).

Accept ☒ Reject ☐ Reason N/A

PPP Inspector [signature] Level II Date 1-29-82

Witnessed/Verified by ANI N/A Comm. No. ___ Date ___

Other N/A Agency ___ Date ___

N/A Agency ___ Date ___

APPLICABLE FOR
JOB No. 7035 ONLY

Note: Mark all blank spaces N/A if non-applicable

Pullman Power Products	FORM 31 SECTION NO.

PREPARED BY: R. G. DAVIS	APPROVED BY: E. F. GERWIN	DATE: 3-1-82
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

RADIOGRAPHIC INSPECTION REPORT

Pullman Power Products
SEABROOK STATION

JOB 7035 APPLICABLE FOR JOB No. 7035 ONLY

UNIT	SYSTEM	LINE NO.	ISO NO.	FIELD WELD NO.
1	CS	328	02	F0202

3"	.438"	.550"	PAB	328
			3-12-81	-5'

RADIATION SOURCE — FILM DATA — INTENSIFYING SCREENS

4 1/2	.010 / .010
.10 x .10	
25"	
5	
5	

PENETRAMETER DATA

12	1/16"	S/S
15	1/16"	S/S

PROCESSING DATA

SAMPLE

APPLICABLE FOR JOB NO 7035 ONLY

Michael E. MacCoss — 3-12-81

SEABROOK STATION
PULLMAN POWER PRODUCTS
WELD REPAIR ORDER

CONTROL NO. 155

JOB 7035

Orig. Code PX-52
Rec. Type 41-03-010
I M S Index

Status:
Heat Treatment N/A
Hydrostatic Test
Repair Cycle Completed

Actual Wall Thickness

Sys.	Line No.	Iso./Cog.	Weld No.	Material	Size	Thks.
CC	752	02	F0201	T1	20"	.375

INDICATION

Prepared By Cet Date 5-15-81

NORTH side of weld.

EXCESSIVE REINFORCEMENT

"over 1/2" side

Horizontal Weldlock

Vertical Weldlock

APPLICABLE FOR JOB No. 7035 ONLY

CAVITY

Prepared By _____ Date _____

Length _____ Width _____ Depth _____

Width _____ Depth _____

Length _____ Width _____ Depth _____

EXAMPLE

Pullman Power Products

QUALITY ASSURANCE PROGRAM

PREPARED BY: R. G. Davis

APPROVED BY: E. F. Gerwin

DATE: 5/8/81

FORM 32
SECTION NO.

FORMS

PAGE NO. 1 of 1

SF 1.06

SEABROOK STATION
PULLMAN POWER PRODUCTS
WELD REPAIR ORDER

CONTROL NO. 155

JOB 7035

Orig. Code PX-52
Rec. Type 41-02-010
I M S Index

Status:
Heat Treatment
Hydrostatic Test
Repair Cycle Completed

Actual Wall Thickness .371"

Sys.	Line No.	Iso Dwg.	Weld No.	Material	Dia	Thk.
CC	752	02	F-201	P1	20"	.375

INDICATION

Prepared By CRL Date 5-15-81

NINTH side of weld

EXCESSIVE REINFORCEMENT

"over fill" style

Bottom 6 o'clock

90° clock

APPLICABLE FOR JOB No. 7035 ONLY

CAVITY

Prepared By M. MacCrea Date 5-18-81

AREA BLENDED: NO CAVITY CREATED

6 o'clock

9 o'clock

SAMPLE

Length ____ Width ____ Depth ____

PREPARED BY: R. C. DAVIS — QUALITY ASSURANCE PROGRAM

APPROVED BY: E. F. GERRIN — FORMS

DATE: 3-1-82

PAGE NO. 1 of 1

Pullman Power Products

FORM 32A SECTION NO.

CP 1 76

SEABROOK STATION
PULLMAN POWER PRODUCTS
WELD REPAIR ORDER

CONTROL NO. 238 JOB 7035

Orig. Code PX-52
Rec. Type 41-03-010
I M S Index

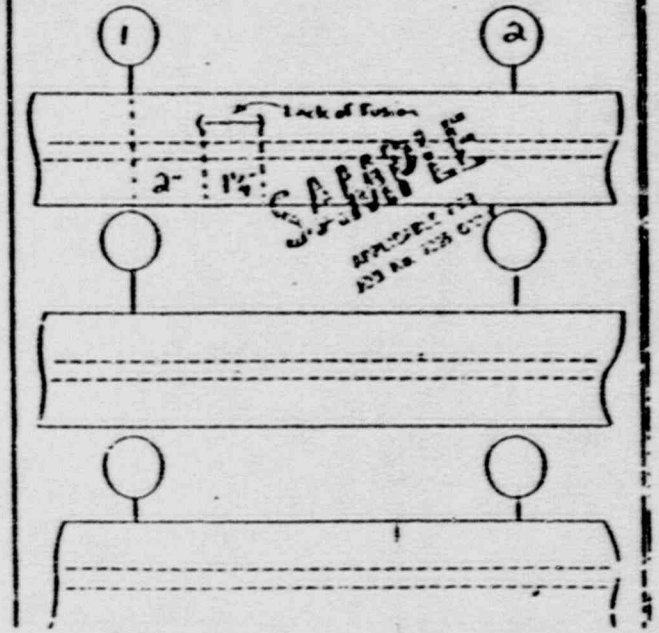
Status:
Post Treatment Later
Hydrostatic Test Later
Cyclic Cycle Completed

Actual Wall Thickness 1.527"

Sys.	Line No.	Iso Dwg	Weld No.	Material	Size	Thk
FW	4600	04	F0401	C/S	24"	1.531"

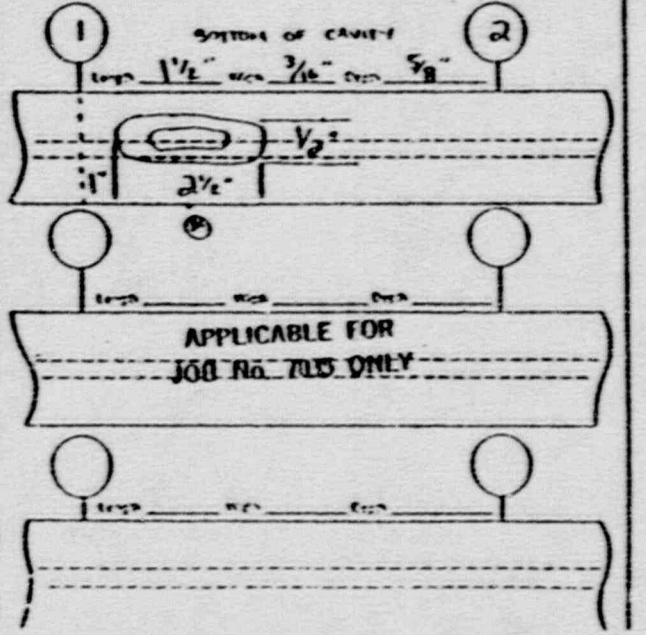
INDICATION

Prepared By M. MacLean Date 1-6-82



CAVITY

Prepared By C.F. Williams Date 1-9-82



QUALITY ASSURANCE PROGRAM

FORMS

PREPARED BY: R. G. DAVIS
APPROVED BY: E. F. GERWIN

DATE: 3-1-82

PAGE NO. 1 of 1

Pullman Power Products

FORM 32B
SECTION NO.

SEABROOK STATION
PULLMAN POWER PRODUCTS
WELD REPAIR ORDER

CONTROL NO. 1432

JOB 7035

Orig. Code CX-52
Rec. Type 11-03-010
I M S Index

Sketch:
Heat Treatment N/A
Hydrostatic Test Date
Repair Cycle Completed

Actual Wall Thickness .219"

Sys	Line No	Pos/Dwg	Welds No	Material	Size	Thk
CS	302	03	F0303	S/S	3"	.216"

PREPARED BY: R. C. DAVIS
APPROVED BY: E. F. GERETY
DATE: 3-1-82

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 1 of 1

Pullman Power Products

SECTION NO. 32C

SEABROOK STATION
PULLMAN POWER PRODUCTS
WELD REPAIR ORDER

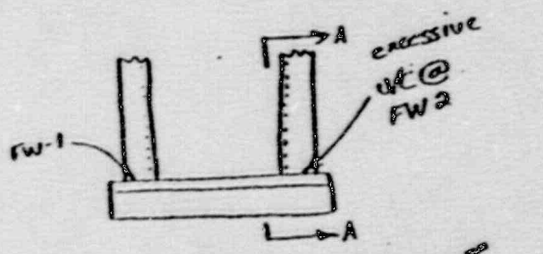
CONTROL NO. 303 JOB 7035

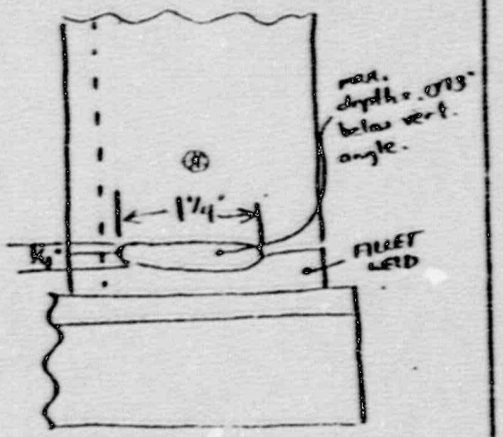
Orig. Code PX-52
Rec. Type 41-03-010
I M S Index

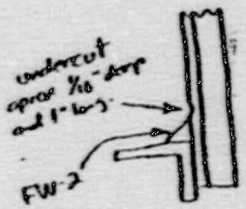
Station:
Post Treatment N/A
Hydrostatic Test
Ferrite Check Required

Actual Wall Thickness .256"

Sys	Line No	Iso Dwg	Weld No	Elbow	Size	Thk
CBS	SG-7	N/A	FW 2	C/S	2x2x¼"	¼"







SAMPLE

APPLICABLE FOR JOB NO. 7035 ONLY

QUALITY ASSURANCE PROGRAM

PREPARED BY: R. G. DAVIS

APPROVED BY: E. F. GERKIN

STRS

PAGE NO. 1 of 1

DATE: 3-1-82

Pullman Power Products

FORM 32D

SECTION NO.

SEABROOK STATION
PULLMAN POWER PRODUCTS

Orig. Code PX-52
Rec. Type 41-03-010
I.M.S Index

Status:

CONT. NO. 172 BASE MATERIAL SURVEILLANCE REPORT

JOB 7035

Heat Treatment N/A
Hydrostatic Test SATAC
Corrosion Cycle (if applicable)

Actual Wall Thickness .377

Sys.	Line No.	Iso/Dwg	Weld No	Material	Size	Thk.
CC	752	02	F0201	P1	20"	.375"

INDICATION

Prepared By CG Date 1-25-82

LOOKING NORTH

Gouge 1/4" Lg x 5/8" W x 1/16 Dp.
LOCATED ON PIPE 4" FROM F0201
left

LOOKING EAST

LOOKING WEST

LOOKING SOUTH

CAVITY

Prepared By Mr. MacCrea Date 1-26-82
Length 1/2" Width 1/2" Depth 1/16"

F0201

1/2"

Length ____ Width ____ Depth ____

Length ____ Width ____ Depth ____

Length ____ Width ____ Depth ____

SAMPLE
NOT APPLICABLE FOR JOB 7035 JOB ONLY

SF 1.06

QUALITY ASSURANCE PROGRAM

FORMS

PREPARED BY: R. G. DAVIS

APPROVED BY: E. F. GREEN

PAGE NO. 1 OF 1

DATE: 2-1-82

Pullman Power Products

FORM 323
SECTION NO.

SEABROOK STATION
PULLMAN POWER PRODUCTS

Status:

Orig. Code PX-52
Rec. Type 41-03-010
I M S Index

Cont. No. 125 ARC STRIKE SURVEILLANCE REPORT JOB 7035

Heat Treatment n/a
Hydrostatic Test Later
Actual Wall Thickness #1 .359" #2 .352"

Sys.	Iso No.	Iso/Dwg	Weld No. (Piece)	Material	Size	Thk.
CO	40419	01	F0101	C/S	42"	.375"

INDICATION

Prepared By P. Colletta Date 12-10-81

LOOKING FROM TOP

F0101

#1 1" x ⅛ (1" Gro-Foam)
#2 ⅛" ø (⅛" Gro-Foam)

LOOKING EAST

APPLICABLE FOR JOB NO. 7035 ONLY

LOOKING NORTH

LOOKING SOUTH

CAVITY

Prepared By M. MacCoss Date 12-12-81

Length ____ Width ____ Depth ____

F0101

#1
#2

Both areas blended
No cavities created

Length ____ Width ____ Depth ____

Length ____ Width ____ Depth ____

Length ____ Width ____ Depth ____

QUALITY ASSURANCE PROGRAM

FORMS

PREPARED BY: R. G. DAVIS

APPROVED BY: E. F. GERWIN

PAGE NO. 1 of 1

DATE: 3-1-82

SECTION NO.

FORM 32F

Pullman Power Products

Pullman Power Products		FORM 33 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

PULLMAN POWER PRODUCTS

Q.A. DEPARTMENT

CALIBRATION RECORD

PER P.P.P. PROCEDURE XII-2 REV. 04

ITEM Current/Voltage Monitor SERIAL/CONTROL # 279-B-6

DESCRIPTION (RANGE) 0-300 Amps CALIBRATION FREQUENCY 3 Mos

CALIBRATION TOLERANCE Voltmeter ±1.0% Ammeter ±1.5%

CAL. DATE	CAL. DUE	CAL. BY	CALIBRATION STANDARD SERIAL #/REMARKS
5/1/80	8/1/80	J.KLEINED N.NEWCLIP	VOLTMETER Simpson 3600 Ser# 11110 AMMETER Simpson 46 Ser#4678

SAMPLE

APPLICABLE FOR
JOB No. 7035 ONLY

SF 1.06

Pullman Power Products		FORM 34 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin EG	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

Serial No:	35
Calibrated By:	J.F.
Cal. Date:	1/22/78
Cal. Due:	6/22/78

APPLICABLE FOR JOB No. 7035 ONLY

SAMPLE

Pullman Power Products		FORM 34A SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

SAMPLE

CALIBRATION	
By JF	Date 1/20/81
S/N 35	Due 6/20/81

APPLICABLE FOR
JOB No. 7035 ONLY

Pullman Power Products		FORM 34A SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

SAMPLE

CALIBRATION	
By JF	Date 1/20/81
S/N 35	Due 6/20/81

APPLICABLE FOR
JOB No. 7035 ONLY

Pullman Power Products

FORM 35 SECTION NO.

DATE: 5/8/81

PAGE NO. 1 of 1

FORMS

APPROVED BY: E. F. Gerwin

PREPARED BY: R. G. Davis

QUALITY ASSURANCE PROGRAM

QUALITY AUDIT CHECKLIST

STAFF-MANAGEMENT AUDIT AUDIT Baxley #2 DATE 12/13/77

QUALITY ASSURANCE PROGRAM

EVALUATION	OBSERVATIONS
I. ORGANIZATION PURPOSE - To evaluate the organizational structure, functional responsibilities, and lines of communication necessary to effectively implement the Quality Assurance Program.	SAMPLE
1. An organization chart showing the functions responsibilities and reporting chain of all persons involved in actions that effect quality	1. Organization charts were available for Job site and Corporate Personnel for review. The Jobsite chart was verified as being satisfactory and lines of responsibility and reporting were found to be acceptable.
2. Organizational Chart - Current and Documented.	2. Both the Corporate and Site Organizational Charts were of the latest revision and dated.
3. QA/QC Autonomy in Organizational Chart. APPLICABLE FOR JOB No. 7035 ONLY	3. Autonomy is provided in the Site Organizational Chart and in the site QA Manual. The site QA Manual, Section I, Para. 3.11, provide for the Administrative and Technical function necessary for the sit QA Manager to implement a QA Program.
4. Designation of QA/QC communication Channels.	4. The following list of communication channels to QA were observed during the Audit and found to be adequate: A. QA Inspection D. Welding B. Receipt Inspection E. NDE C. QA Record F. Engineering

SF 1.06

Pullman Power Products

FORM 36
SECTION NO.

PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

Pullman Power Products

QUALITY ASSURANCE DEPARTMENT
ULTRASONIC FLAW DETECTION RECORD

JOB NO. 5055 DATE 1/19/78

PIECE NO. 10-106-4 WP NO. 123

MATERIAL SA 333 Gr 1

EXAMINATION PROCEDURE NO. 1X-UT-2 Rev. 2

ACCEPTANCE CRITERIA 1X-UT-2 Rev. 2

EQUIPMENT / MODEL NO. Krautkramer - USIP-10

TRANSDUCER 45° - 2.25 M/HZ - 1" X 1"

COUPLANT #20 Oil

CALIBRATION DATA 5% Notch - ID & OD Test Piece

DESCRIPTION OF INSPECTION TECHNIQUE Rotation - 6" or Less per sec. Search 100%

RECORD OF EXAMINATION RESULTS

Heat No. Z 54611
1" Sch 80 Smls
Length 15'

Ultrasonic Inspected 100% in two directions

ACCEPT ☒ REJECT ☐

INSPECTOR R. D. Wilson

SNT-TC-1A LEVEL II

RECORD OF RE-EXAMINATION

TO BE USED ONLY FOR JOB No. 7035

ACCEPT ☐ REJECT ☐

INSPECTOR _____

SNT-TC-1A LEVEL _____

SF 1.06

Pullman Power Products	FORM 37 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS PAGE NO. 1 of 1

Pullman Power Products

CALIBRATED TOOLS CHECK-OUT LOG

Type of Measuring Equipment: Micrometer or Inside

Manual No	Issued To	Gage No	Date of Issuance	Date of Return	Engineering Work to be Performed	Date of Last Calibration	Calibration Due Date
1	J. D. Hill	224	1/12/76	1/14/76	Setting RHR Pump	1/10/76	2/10/76
2	L. R. Parsen	162	1/13/76	1/13/76	Setting RHR Pump	1/10/76	2/10/76
3	C. T. Borum	335	1/14/76	1/15/76	Setting RHR Pump	1/10/76	2/10/76
4	K. Lee	217	1/14/76	1/18/76	Setting RHR Pump	1/10/76	2/10/76

APPLICABLE FOR
JOB No. 7035 ONLY

SF 1.06

Pullman Power Products		FORM 38 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

(NPS)

RECORD	RETENTION TIME	STORAGE AREA	DISTRIBUTION
Fabrication Spec.	Duration of Job	Engineering Q.A.	Responsible Jobsite Personnel
Original Isometric & Detail Drawings All Revisions	Duration of Job	Engineering or through Customer	Revisions, Field QA Engineering
Special Process Procedures a. Welding b. N.D.E. c. Repair d. Heat Treat	Duration of Job	QA	Responsible Jobsite Personnel
Welder Performance Qualification Record	Duration of Job *	Q.A. Files	None
Pre-Conference Reports	Duration of Job *	Q.A. Files *	ANI, Customer, Engineering, Resp. Jobsite Personnel
Calibration Records	Duration of Job	Q.A. Files	None
Process Sheets a. Field b. Field and Field Weld Repair c. Hanger/Support Class 1 d. Hanger/Support Class 2 & 3 e. Expansion Anchor f. Snubber	Duration of Job *	Q.A. Files *	None
Receiving Inspection Reports	Duration of Job *	Q.A. Files	Customer, Engineering
Approved Vendor List	Duration of Job	Q.A. Files	Q.A. Manager ULAC Purchasing

* Records to be turned over to Records Management System (RMS) six (6) months after completion. Where as built drawings are required as part of the record package, turnover will be accomplished six (6) months after completion of as built.

SAMPLE COPY

TO BE USED ONLY FOR JOB No. 7035

SF 1.06

Pullman Power Products		FORM 39 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

Pullman Power Products
SEABROOK STATION

LWA No. 21
DATE 2-7-80
PAGE 1 OF 1

LIMITED WORK AUTHORIZATION REQUEST
for Procedure QV-2 Rev. 03

A. ITEM(S) NAME/IDENTITY (INCLUDE UNIT, SYSTEM, S.O./DWG. AS APPLICABLE)

DOCUMENTS RELATED TO HOLD TAG
Stop Work Order (SWO) N/A
Deviation Request (DR) N/A

B. REASON FOR LWA REQUEST To move several pieces of stock pipe to Fab Shop for test of I. D. Airoperated cleaning tools.

C. SCOPE OF WORK WHICH WILL BE PERFORMED (INCLUDE SPECIFIC PROCESS SHEET(S, AND OPERATIONS TO BE PERFORMED AND/OR THE "FROM" AND "TO" MOVE LOCATIONS.
From stock storage area to Fab. Shop. Test of I. D. cleaning equipment (Air-operated) will be performed. Return pipe to stock hold storage area after test.

Signature of Field Engineer _____ DATE _____

D. STATUS OF ITEMS LWA HAS BEEN REVIEWED INCLUDING ALL DOCUMENTATION RELATED TO HOLD TAG AND LWA IS APPROVED. INSPECTION HOLD POINTS SHALL NOT BE BY-PASSED AND WORK SHALL NOT PROCEED BEYOND THE FOLLOWING POINT TO PERMIT ACCESSIBILITY TO ITEM(S): NCR 096 has not been dispositioned by NCR Review Board. Pipe I. D. will be cleaned. Pipe will be returned to storage hold after cleaning test.

LWA ISSUED FOR THE FOLLOWING REASON: APPLICABLE FOR JOB No. 7035 ONLY

Approval ☐ Chief Engineer _____ DATE 2-11-80
Disapproval ☐
Approval ☐ Field QA Manager _____ DATE 2-11-80
Disapproval ☐
Approval ☐ UE&C Engineering _____ Date 2-11-80
Disapproval ☐

E. LWA CLOSED BY FULL PERFORMANCE OF WORK SCOPE.
HOLD FOR LWA TERMINATED BY REMOVAL OF HOLD TAG. LAST ELEMENT OF WORK SCOPE COMPLETED: _____

QC INSPECTOR REMOVING LWA TAG: _____ DATE _____
Signature

CLOSED BY QA OFFICE: _____ DATE _____
Signature

SF 1.06

Pullman Power Products		FORM 40 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

PULLMAN POWER PRODUCTS
SLADDOCK STATION
JOB 7031

TYPE OF DOCUMENT

LESS SPECIFICATION

5763-.005-

DOC. NO.	TITLE OR DESCRIPTION	REV. / DATE	DISTRIBUTION: Chief Engineer File	File
1917-23	Main Steam Isolation Valves	2 / 4-21-81	1	1

SAMPLE

APPLICABLE FOR
JOB NO. 7032 ONLY

Pullman Power Products		FORM 41 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

PULLMAN POWER PRODUCTS
SEABROOK STATION

LIMITED WORK AUTHORIZATION

001

ITEM IDENTIFICATION

SW-1818-01

Spool Piece SPL-7216

SCOPE OF L.W.A.

To Complete Field Weld FB106

APPLICABLE FOR JOB No. 7035 ONLY

QA INSP [signature] DATE 5-7-79

TO BE ATTACHED OR REMOVED BY QC PERSONNEL ONLY

SF 1.06

Pullman Power Products		FORM 42 SECTION NO.
PREPARED BY: R.G. Davis	APPROVED BY: E.F. Gerwin	DATE 9/1/82
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

DATE: 9/1/82 CORRECTIVE ACTION REPORT CAR NO. 3
CUSTOMER: YAEC
PROJECT: SEABROOK STATION PAGE 1 of 1

1. GOVERNING REQUIREMENT: ANSI N45.2.2, PARA 3.5.2

2. BASIS OF CAR: YAEC SURVEILLANCE REPORT #11 ASME CODE ITEM ___YES X NO

3. POTENTIAL SIGNIFICANT DEFICIENCY ___YES, X NO
10CFR50.55 (e) ___
10CFR21 ___

4. CONDITIONS ADVERSE TO QUALITY (Identified):

Item 1 - Monthly Advisory Report for August indicated that ten NCRs were generated for failure to implement the Hilti Bolt Torquing Procedures. Efforts from supervisory personnel to indoctrinate craft on torquing requirements has not been effective.

Recommendation

Establish a formal training program to indoctrinate craft and responsible supervision in Hilti Bolt torquing requirements.

PREPARED BY: [signature] APPROVED BY: [signature] ACKNOWLEDGED BY: [signature]

5. RESPONSE DUE BY: 9/6/82 EXTENSION APPROVED BY: N/A

6. ALL CAR RESPONSES COMPLETED AND VERIFIED

[signature] 9/14/82 [signature] 9/14/82
QA SUPERVISOR DATE QC MANAGER DATE

SF 1.06

Pullman Power Products		FORM 42A SECTION NO
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

CORRECTIVE ACTION
REPORT LOG

REPORT NO.	BRIEF DESCRIPTION	DATE CLOSED
01	MASKING TAPE ON C/S SPOOL	6-17-80
02	HEAT NUMBER IMPROPERLY TRANSF.	8-3-80
03	WELD I.D. REVERSED	8-5-80

SAMPLE

TO BE USED ONLY FOR JOB # 7035

SF 1.06

Pullman Power Products		FORM S-1 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

Page 1 of 2

FIELD PURCHASE ORDER

United Engineers & Constructors

Public Service Company Of New Hampshire
c/o United Engineers & Constructors Inc., Agents
P. O. Box 700
Seabrook, New Hampshire 03874 — PURCHASER

P. O. NO. 9763.011-12402

ACCT. NO. 9321.72225

Carbon Steel Products Corporation
883 Julia Street
Elizabeth, NJ 07201 — SELLER

DELIVERIES ACCEPTED
8:30 A.M. TO 3:30 P.M.
MONDAY THRU FRIDAY ONLY.

SHIP VIA Motor Freight CONSIGN TO Public Service Company Of New Hampshire
c/o United Engineers & Constructors Inc.
Route No. 1 - Site Access Road
Seabrook, New Hampshire 03874

TERMS 4 of 11-10 Days-Net 30

DESCRIPTION	PRICE
PURCHASE F.O.B. Elizabeth, NJ DELIVERY:- April 24, 1979	
1. 1 Sht. 4 ft. x 8 ft. x 4 in. thick plate furnished in conformance with the following Quality Control Requirements:	$195.00
1. ASME Section II, SA 36 1977 Edition with all addenda to and including Winter 1977.	
2. ASME Section III, Subsection NCA 3800 1977 Edition with all addenda to and including Winter 1977.	
2(a). Repair by welding is not permitted without prior approval by Pullman Power Products. NOTE: NC2000 adds no additional requirements beyond those in SA 36.	
3. After manufacture and prior to acceptance, the supplier shall furnish the following documents for record: A. A Certified Material Test Report as defined in NCA-3862.4a	
4. Pullman Power Products has the right of source inspection prior to shipment of material.	
5. Marking identification shall be in accordance with NC-2150.	
6. Items set forth in this purchase order are for use in Nuclear Safety-Related Components subject to reporting requirements pursuant to Section 205 of the Energy Reorganization Act of 1974 as implemented by 10 CFR 21. Notice of any defects identified by Vendor pursuant to such law shall be immediately made to our plant or job site Quality Assurance Manager with copy to our Director of Quality Assurance at P. O. Box 3308, Williamsport, Pennsylvania 17701.	

SAMPLE

APPLICABLE FOR JOB No. 7035 ONLY

CONDITIONS VERBAL ORDER AWARDED TO AND ACCEPTED BY Gerry Crenshaw AS REPRESENTATIVE REPRESENTATIVE OF SELLER ON 4-19-79 (OR NOT APPLICABLE)

BY EFFECTING AND FILLING THIS ORDER OR ANY PART THEREOF, THE SELLER AGREES TO AND SHALL BE BOUND BY THE TERMS AND CONDITIONS PRINTED ON THE BACK HEREOF. NO CHANGE WILL BE PERMITTED IN THIS ORDER UNLESS BY WRITTEN AGREEMENT.

Public Service Company Of New Hampshire

United Engineers, AGENTS

BY P. H. Watrous
FIELD PURCHASING AGENT

E. H. Watrous, Supervisor

TOTAL $195.00

ORDER NO. 9763.011-12402

DATE April 20, 1979

CF 1 PG

Pullman Power Products		FORM S-2 SECTION NO.
PREPARED BY: R. G. Davis	APPROVED BY: E. F. Gerwin	DATE: 5/8/81
QUALITY ASSURANCE PROGRAM	FORMS	PAGE NO. 1 of 1

ORIGINAL

FIELD PURCHASE REQUISITION

PM 5680

united engineers

DATE 8.1.78

DELIVER TO OFFICE — REQUIRED BY (DATE): 8.15.78

ITEM	QUANTITY	DESCRIPTION	UNIT	TOTAL AMOUNT	COST
1	1000 LB	ETOIL ELECTRODE 3/32" DIAMETER, IN ACCORDANCE WITH SPEC TT-500 REV. 10-7-77			
		NOTES: 1) WELD MATERIAL MUST BE CERTIFIED TO MEET ASME SECTION III 1977 EDITION INCLUDING THE 1977 WINTER ADDENDA 2) CERTIFIED MATERIAL TEST REPORTS MUST BE SUBMITTED AS ACCEPTANCE SUPPLEMENT — CONTINUED NEXT PAGE			

ORIGINATOR: W. M. Sinclair 8-1-78

APPROVED

CHARGE TO: Construction Work Material

APPLICABLE FOR JOB No. 7035 ONLY

FOREMAN OR SUPERVISOR — SUPERINTENDENT

QUALITY ASSURANCE - Q.P.P.

SIGNATURE: Richard D. Sims 8-1-78

SF 1.06

Pullman Power Products	Form 5-3 SECTION NO.
PREPARED BY: R. G. Davis / APPROVED BY: E. F. Gervin	DATE: 9/1/82
QUALITY ASSURANCE PROGRAM / FORMS	PAGE NO. 1 of 1

united engineers
SEABROOK STATION

ENGINEERING CHANGE AUTHORIZATION (ECA) [X]
REQUEST FOR INFORMATION (RFI) [ ]

NUMBER 7 3 6 0 0 0 6

REQUEST INITIATED BY: B. Lovan
TITLE: FE — DATE: 8-11-82

QUESTION

4" of vent running at 2'-0" north of "10" line at elev. 63'-6" will interfere with existing line 1-1A-4892-01-A-4" at 2'-3" north of "10" line at elev. 63'-2".

Zone 102.

RESPONSIBLE CONTRACTORS: Pullman-Higgins

SOLUTION

Reroute 4" DF vent, referred above, as shown on attached sketch.
Revise support TG-SG-54 per attached sketch.

SAMPLE

AFFECTED DOCUMENTS

ISSUE DATE 8/16/82

REVIEW OF RECORD: Not required

SEE REVERSE SIDE FOR INSTRUCTIONS AND DISTRIBUTION

SF 1.06

Pullman Power Products

Form 5-4
SECTION NO.

PREPARED BY: R.G. Davis | APPROVED BY: E.F. Gerner | DATE: 9/1/82

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 1 of 1

united engineers

SEABROOK STATION

ON-THE-SPOT

ENGINEERING CHANGE AUTHORIZATION (ECA) [X] NUMBER

REQUEST INITIATED BY

NAME

TITLE

DATE

ORGANIZATION

WORKING DOCUMENT REQUIRED BY

REFERENCE DOCUMENTS

RESPONSIBLE CONTRACTORS

BUILDING UNIT | SYSTEM | ASME SECT III DIV 1: YES [X] NO | SAFETY RELATED: YES [X] NO

QUESTION

[illegible] ... in the "as-fabricated" condition, to pass through ... This is the only access hole available. ... be cut to facilitate installation.

SOLUTION

... location ... shop weld ... shall be permanently marked on new spool with shop welder I.D. ... shall remain ... spool ... other piece shall become spool ... to ... new data plate ... Pullman-Higgins to install data plate upon ... (per ... 1982 ...).

- Weld and precautions shall be per UE&C drawing ...
- All work to be performed per approved procedures.

Reviewed for Code compliance
[signature] - ANI CPE

AFFECTED DOCUMENTS

APPROVALS

PREPARED BY

CHECKED BY | APPROVED BY

RELEASED FOR CONSTRUCTION [ ] | (IF) RESPONSE VOID ECA [ ]

ECA REJECTED [ ] | DATE

THIS IS A MAJOR ECA [ ] MINOR ECA [ ]

(IF) RESPONSES AND MINOR CHANGES DO NOT REQUIRE HOME OFFICE CONCURRENCE

HOME OFFICE CONCURRENCE

ACCEPTED [ ] REJECTED [ ]

REVIEWER | CHECKER

	YES	NO
REWORK REQUIRED	[ ]	[ ]
RETEST REQUIRED	[ ]	[ ]

IF YES SEE DETAILS IN BODY OF ECA

SITE REVIEW GROUP	INITIAL	DATE	H.O. REVIEW GROUP	INITIAL	DATE

FIELD WORK COMPLETED/INCORPORATED

CONTRACTOR | DATE

SF 1.06

JOB NO.	PURCHASE ORDER COMM.	SEQ. (SUBT. NO.)	FOREIGN PRINT NO.	VENDOR DRAWING OR DOCUMENT NO.	REV. NO.	
9763011	248	005	457470811	ØRP-H QA MANL.	02219	1

DESCRIPTION LINE 1	LINE 2	VENDOR'S NAME	
NUC. QA PRØGRAM MANL		P-H	2

LETTER TO UE&C	UE&C LOG-IN DATE	CLIENT'S REVIEW TO CLIENT	CLIENT'S REVIEW FROM CLIENT	UE&C REVIEW TO VENDOR	FINAL DISTRIBUTION DATE	
041482	042182	N/A		TF1737 042282		3

DISTRIBUT.		CHECK	
FILE		QA	
[illegible]		ELEC	
CLIENT		MECH [illegible]	
[illegible]		MECH	
FIELD		STRUCT	
[illegible]		[illegible]	
		NUCLEAR	

UNITED ENGINEERS & CONSTRUCTORS INC.

[illegible]

- [x] PROCEED AS PER P.O. OR CONTRACT
- [ ] SUBMIT REVISED DRAWINGS FOR REVIEW
- [ ] SEND CORRECTED DRAWINGS FOR RECORD

BY [signature] DATE 4/29/82

FORM [illegible]

Contains proposed revision 3/1/82