

Manual No. _____

FULLMAN POWER PRODUCTS
CORPORATION
WILLIAMSPORT, PENNSYLVANIA

MECHANICAL CONSTRUCTION OPERATIONS

CORPORATE FIELD

NUCLEAR QUALITY ASSURANCE PROGRAM MANUAL

ASME SECTION III, DIV. 1

ISSUE #3 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
REVISION DATED 1/17/83
REVISION DATED 2/10/83

RECEIVED
U.E. & C. INC.

FEB 11 1983

SEABROOK
STATION

Assigned To: _____

Organization: _____

Date Assigned: _____

43747-11

PULLMAN POWER PRODUCTS
CORPORATION
WILLIAMSPORT, PENNSYLVANIA

MECHANICAL CONSTRUCTION OPERATIONS

CORPORATE FIELD
NUCLEAR QUALITY ASSURANCE PROGRAM MANUAL
ASME SECTION III, DIV. 1

ISSUE #3 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
REVISION DATED 1/17/83
REVISION DATED 2/10/83

RECEIVED
U. E. & C. INC.

FEB 11 1983

SEABROOK
STATION

Assigned To: _____

Organization: _____

Date Assigned: _____

43747-11

A Whittaker - Frye Company

P. O. Box 3508, Paxon Road
Allentown, Pennsylvania 17701
Telephone (717) 270-8901
Telex 841416
Cable Ppwrng Allentown



Pullman Power Products

AUTHORIZED INSPECTION AGENCY STATUS SHEET

PROPOSED REVISION, DATED 2/10/83

TO THE

PULLMAN POWER PRODUCTS CORPORATION

SEABROOK PROJECT

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

ACCEPTED AS IS J. C. Amvino 2/10/83
INSPECTION SPECIALIST DATE
ROYAL INDEMNITY

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

UNACCEPTABLE
(See Attached) _____
INSPECTION SPECIALIST DATE
ROYAL INDEMNITY



Pullman Power Products

INDEX

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

INDEX

PAGE NO. 1 of 1

<u>SECTION</u>	<u>TITLE</u>	<u>DATE OF LAST REVISION</u>
Index	Index	2/10/83
Introduction	Introduction	3/1/82
Definitions	Definitions	2/10/83
I	Organization	2/10/83
II	Quality Assurance Program	1/17/83
III	Design Control	2/10/83
IV	Procurement Document Control	1/17/83
V	Instructions, Procedures & Drawings	2/10/83
VI	Document Control	2/10/83
VII	Control of Purchased Material, Items and Services	2/10/83
VIII	Identification and Control of Materials and Items	2/10/83
IX	Control Special Processes	2/10/83
X	Inspection	2/10/83
XI	Test Control	1/17/83
XII	Control of Measuring and Test Equipment	1/17/83
XIII	Handling, Storage and Shipping	2/10/83
XIV	Inspection, Test and Operating Status	1/17/83
XV	Nonconforming Materials, Parts or Components	2/10/83
XVI	Corrective Action	1/17/83
XVII	Quality Assurance Records	2/10/83
XVIII	Audits	1/17/83
Forms Index	Forms	2/10/83



Pullman Power Products

DEFINITIONS

SECTION NO.

PREPARED BY: R.G. DAVIS

APPROVED BY: E.F. GERWIN

2/10

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

DEFINITIONS

PAGE NO. 1 of 9

ABBREVIATIONS

AS REFERRED TO IN THE MANUAL

DEFINITIONS

10CFR50

Code of Federal Regulations - Title 10, Part 50 of Appendix B.

Acceptance

The act of reviewing to ensure that information and/or detail provided is sufficient; for inspection it is the act of ensuring that the activity or item conforms to all requirements, signified by signature or initials and date.

Section III, Div. 1.

Approval

To assume responsibility for and give sanction to content, 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 QEC Department (Williamsport) as conforming to the applicable requirements of ASME Code 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.

10/83



Pullman Power Products

DEFINITIONS

SECTION NO.

PREPARED BY: R.G. DAVIS

APPROVED BY: E.F. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

DEFINITIONS

PAGE NO. 2 of 9

ABBREVIATIONS

AS REFERRED TO IN THE MANUAL

DEFINITIONS

Audit

An audit is a documented activity performed in accordance with written procedures or checklists to verify, by examination and evaluation of objective evidence, that applicable elements of the 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.

ALA

Authorized Inspection Agency

The Agency or Society of the ASME Code which has an agreement to monitor the Company QA Program and perform third party inspection at specific field site.

ANI

Authorized Nuclear Inspector

A Qualified Inspector employed by ALA having jurisdiction at the field site.

ANIS

Authorized Nuclear Inspector Supervisor

The Authorized Nuclear Inspector Supervisor of the ALA 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 of Authorization to perform work under the jurisdiction of the ASME Code maintaining specific responsibilities in the operations authorized.

Check

To compare with a source original or authoritative document. Completion signified by signature or initials and date.

Checklist

A pre-established list of activities, operations, or requirements to be reviewed and/or verified as being accomplished. Checklists will not be exhibited in this manual but will be addressed in individual Project Procedures.



Pullman Power Products

DEFINITIONS

SECTION NO.

PREPARED BY: E.G. DAVIS

APPROVED BY: E.F. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

DEFINITIONS

PAGE NO. 3 of 9

ABBREVIATIONS

AS REFERRED TO IN THE MANUAL

DEFINITIONS

Code

American Society of Mechanical Engineers Boiler and Pressure Vessel Code Section III, Division 1 Nuclear Power Plant Components, 1977 Edition through and including the Winter 1977 Addenda.

Company

The Seabrook Mechanical Construction Operations of Pullman Power Products Corporation, with headquarters in Williamsport, Pennsylvania.

system.

Component Support

Metal supports which are designed to transmit loads from the pressure retaining barrier or the component to the load carrying building structure.

Corporate QA Program

The Quality Assurance Program of the Company's Corporate Headquarters 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.

Data Report

Appropriate ASME forms 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.



Pullman Power Products

DEFINITIONS

PREPARED BY: E.G. DAVIS

APPROVED BY: E.F. GERWIN *EW*

SECTION NO.

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

DEFINITIONS

PAGE NO. 4 of 9

ABBREVIATIONS

AS REFERRED TO IN THE MANUAL

DEFINITIONS

Design Specification

A Certified Owner's or AE 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

Field Drawing is defined as a drawing of piping subassemblies, component supports or parts thereof, or the installation of piping systems. Subsequent to the issuance of the 1/17/83 revision, UE&C assumes responsibility for all Field Drawings. New Field Drawings will be initiated by UE&C and revisions to existing Field Drawings will be done by UE&C as well as control, copy and transmittal to the Company FDCC.

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.

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.

Item

Material, vessels, appurtenances, parts, valves, pumps, piping sub-assemblies and component supports.



Pullman Power Products

DEFINITIONS

SECTION NO.

PREPARED BY: R.G. DAVIS

APPROVED BY: E.F. GERWIN *EG*

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

DEFINITIONS

PAGE NO. 5 of 9

ABBREVIATIONS

AS REFERRED TO IN THE MANUAL

DEFINITIONS

	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.
	Nonconformance	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, UE&C or Code requirements initiated by anyone but controlled and issued by the QA Manager or his designee.
NDE	Nondestructive Examination	An examination which does not alter the physical characteristics or composition of the item such as radiography, liquid penetrant, magnetic particle, ultrasonic, leak testing, 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.
	Point of Installation	A point at which UE&C relinquishes control of material such as a building within the physical power plant or an area used for unloading immediately adjacent thereto or possibly a fabrication shop in the case of fabrication.
	Piping Sub-Assembly	Piping Sub-assemblies are defined as sections of a piping system consisting of fittings 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).



Pullman Power Products

DEFINITIONS

SECTION NO.

PREPARED BY: R. G. DAVIS

APPROVED BY: E. F. GERWIN *EF*

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

DEFINITIONS

PAGE NO. 6 of 9

ABBREVIATIONS

AS REFERRED TO IN THE MANUAL

DEFINITIONS

PQR

Procedure Qualification Records

Welding or Nondestructive Examination procedure qualification records incorporating all necessary parameters to prove adequacy.

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 revisions as applied to the field site, approved by the Vice-President of QA, accepted by the Authorized Inspection Agency and the ASME as a result of a Site Survey and on file 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 the Code.

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 those examinations.

2. Quality Control Administration, which is the management and documentation which assures that the specified Quality Control Examination is carried out.

1/10/83



Pullman Power Products

DEFINITIONS

SECTION NO.

PREPARED BY: R.G. DAVIS

APPROVED BY: E.F. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

DEFINITIONS

PAGE NO. 7 of 9

ABBREVIATIONS

AS REFERRED TO IN THE MANUAL

DEFINITIONS

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.

QC Inspector

As used in this Manual, QC Inspector is the Company QC Inspector.

Records

All data used as evidence that the required level of quality has been attained.

Reject

A disposition which may be imposed on a non-conformance to indicate that the item or operation does not conform to the specified requirements. An unacceptable NDE condition, as well as, the refusal to approve or accept a document in review.

Review

To examine critically or deliberately. Completion signified by signature or initials and date.

Repair

To restore the item to an acceptable condition, in conformance with the Code, drawings and/or specifications, but may not conform to the original design requirement.

Rework

To restore the item to an acceptable condition in conformance with the Code, drawing, and specification requirements using a previously approved procedure.

Return for Replacement

A disposition of a nonconformance in which the item is returned to the original manufacturer for replacement with one having the correct requirements.



Pullman Power Products

DEFINITIONS

SECTION NO.

PREPARED BY: R.G. DAVIS

APPROVED BY: E.F. GERWIN

EB

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

DEFINITIONS

PAGE NO. 8 of 9

ABBREVIATIONS

AS REFERRED TO IN THE MANUAL

DEFINITIONS

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 activity to evaluate an organization's capabilities, including its quality program, to meet the requirements of the Code.

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.

UE&C

The Organization that has contracted with the Company to furnish installation and fabrication services.

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. Use-As-Is is synonymous with Accept-As-Is.

Weld History Records

The accumulation of completed records which describe the operations and examinations performed, including the applicable specifications and procedures used in making the weld.



Pullman Power Products

DEFINITIONS

SECTION NO.

PREPARED BY: E.C. DAVIS

APPROVED BY: E.F. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE
PROCEDURE

DEFINITIONS

PAGE
NO. 9 of 9

ABBREVIATIONS

AS REFERRED TO
IN THE MANUAL

DEFINITIONS

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 detail all of the variables which are essential and nonessential to the welding process(es) employed in that procedure.



Pullman Power Products

I

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN S

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

ORGANIZATION

PAGE
NO. 1 of 14

1.0 ORGANIZATION

1.1 SCOPE

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

1.2 ORGANIZATION 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 further 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.



Pullman Power Products

I

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN 2/7

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

ORGANIZATION

PAGE
NO. 2 of 14

1.3.2 Senior Vice President, Piping and Mechanical Group

The Senior Vice President, Piping and Mechanical Group reports to the 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.

1.3.3 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.

1.3.4 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.



Pullman Power Products

1

SECTION NO.

PREPARED BY: R. G. DAVIS

APPROVED BY: E. F. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

ORGANIZATION

PAGE
NO. 3 of 14

1.3.5 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.



Pullman Power Products

I

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

ORGANIZATION

PAGE
NO. 4 of 14

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.

1.3.6 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.

1.3.7 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 Director of Quality Assurance will be responsible for the training, qualification, certification, and continuity records for Auditors and Lead Auditors associated with Nuclear Facility Audits.



Pullman Power Products

I

SECTION NO.

PREPARED BY: R. C. DAVIS

APPROVED BY: E. F. GERVIN *Eb*

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

ORGANIZATION

PAGE
NO. 5 of 14

1.3.8 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.

1.3.9 QA WELDING ENGINEER, QEG

The QA Welding Engineer QEG, reports to the Director of Quality Assurance. He has the authority and responsibility for 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 UE&C 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.



Pullman Power Products

SECTION NO.

1

PREPARED BY: R. G. DAVIS

APPROVED BY: E. F. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

ORGANIZATION

PAGE
NO. 6 of 14

1.3.10 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.

1.3.11 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.



Pullman Power Products

I

SECTION NO.

PREPARED BY: R. G. DAVIS

APPROVED BY: E. F. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

ORGANIZATION

PAGE NO. 7 of 14

2/10/83

1.3.12 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 1.3.14. 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.

1.3.13 Assistant Resident Construction Manager

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

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.



Pullman Power Products

I

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN *EG*

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

ORGANIZATION

PAGE
NO. 8 of 14

Once a Project Quality Assurance Manual is established by virtue 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 necessary 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.

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.



Pullman Power Products

I

SECTION NO.

PREPARED BY: R. G. DAVIS

APPROVED BY: E. F. GERWIN ⁴³

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

ORGANIZATION

PAGE
NO. 9 of 14

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.

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.



Pullman Power Products

I

SECTION NO.

PREPARED BY: A. G. DAVIS

APPROVED BY: E. F. GERWIN *EG*

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

ORGANIZATION

PAGE NO. 10 of 14

2/10/83

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/She shall conduct audits and perform internal systems studies on the implementation of the QA Program. The results of these activities shall be reported to the QA Manager and Field QA Supervisor for evaluation.

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.

2/10/83

1.3.20 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, 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.

2/10/83

1.3.21 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.

2/10/83

1.3.22 QA Specialist - Welding

The QA Specialist-Welding reports to the QA Engineer responsible for Welding. He is responsible for disbursement 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.



Pullman Power Products

SECTION NO.
270783

PREPARED BY: E. G. DAVIS

APPROVED BY: E. T. COWEN

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

ORGANIZATION

PAGE 11 of 14
NO.

1.3.23 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.

1.3.24 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, Mechanical 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.

1.3.25 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.

1.3.26 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.



Pullman Power Products

I

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. CERVIN *EF*

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

ORGANIZATION

PAGE NO. 12 of 14

1.3.27 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 UE&C regarding drawings, specifications, engineering change authorizations, 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 nonconformances. The Chief Field Engineer is also responsible for review and acceptance of UE&C prepared Design/Erection Documents and approval of UE&C prepared Company Process Sheets for incorporation of Code/Specification requirements and specification and incorporation of Company Special Processes. He is also responsible for preparation and Certification of the Data Reports.

1.3.28 Construction Superintendent

The Construction Superintendent reports to the Resident Construction 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.

1.3.29 Building Superintendent

The Building 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.

1.3.30 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 Nonconformance Reports and/or Engineering Change Authorizations as may be required; and preparation of Process Sheets and Data Reports when assigned by and under the direction of the Chief Field Engineer.



Pullman Power Products

SECTION NO. 1

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERVIN

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

ORGANIZATION

PAGE
NO. 13 of 14

2/10/83

1.3.31 Field Drawing Control Clerk

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

2/10/83

1.3.32 Piping Detailer

The Piping Detailer reports to the Chief Field Engineer and is responsible for review and acceptance of UE&C prepared Design/Erection Documents and approval of UE&C prepared Company Process Sheets for incorporation of Code/Specification requirements and incorporation of Company Special Processes.



Pullman Power Products

I

DOCUMENT NO.

PREPARED BY: R.G. DAVIS

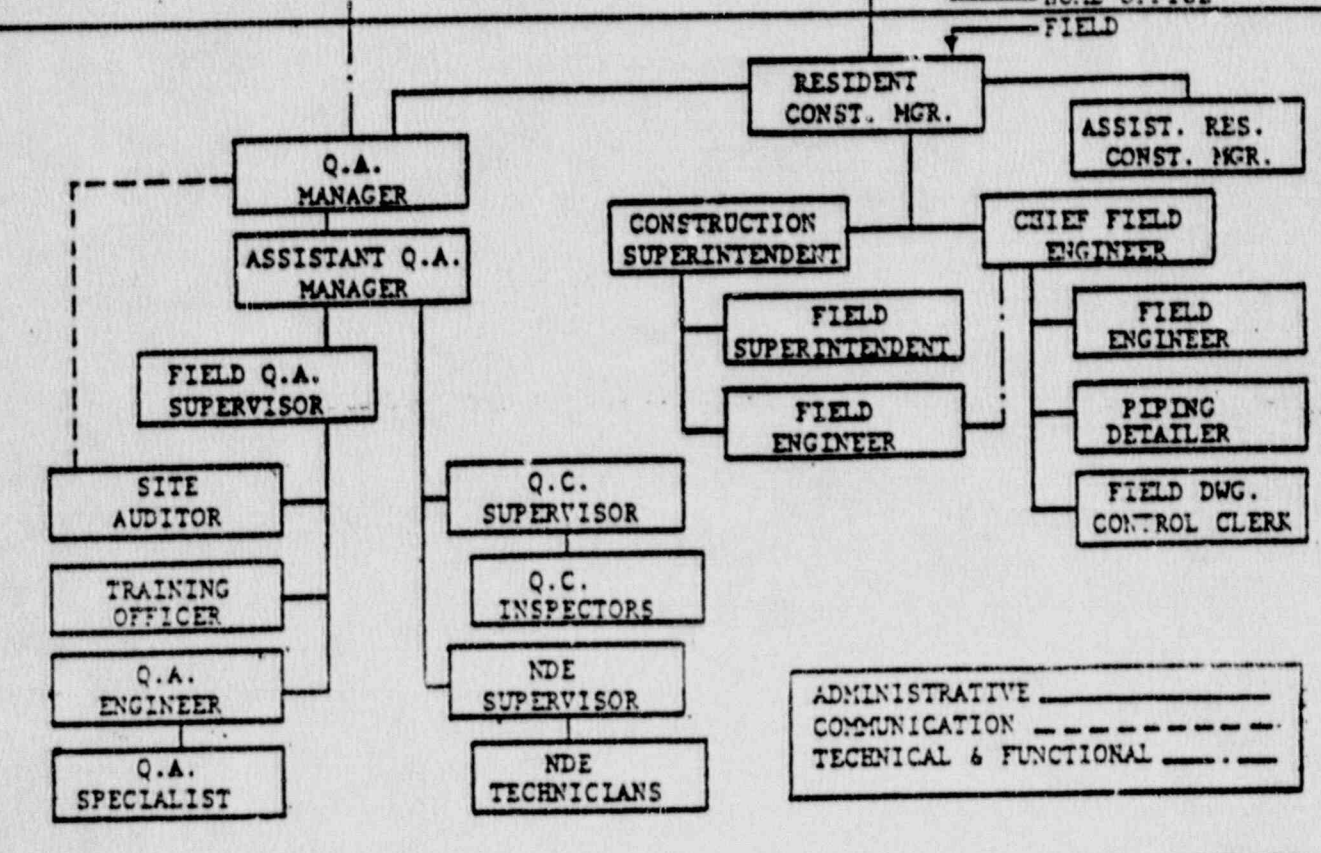
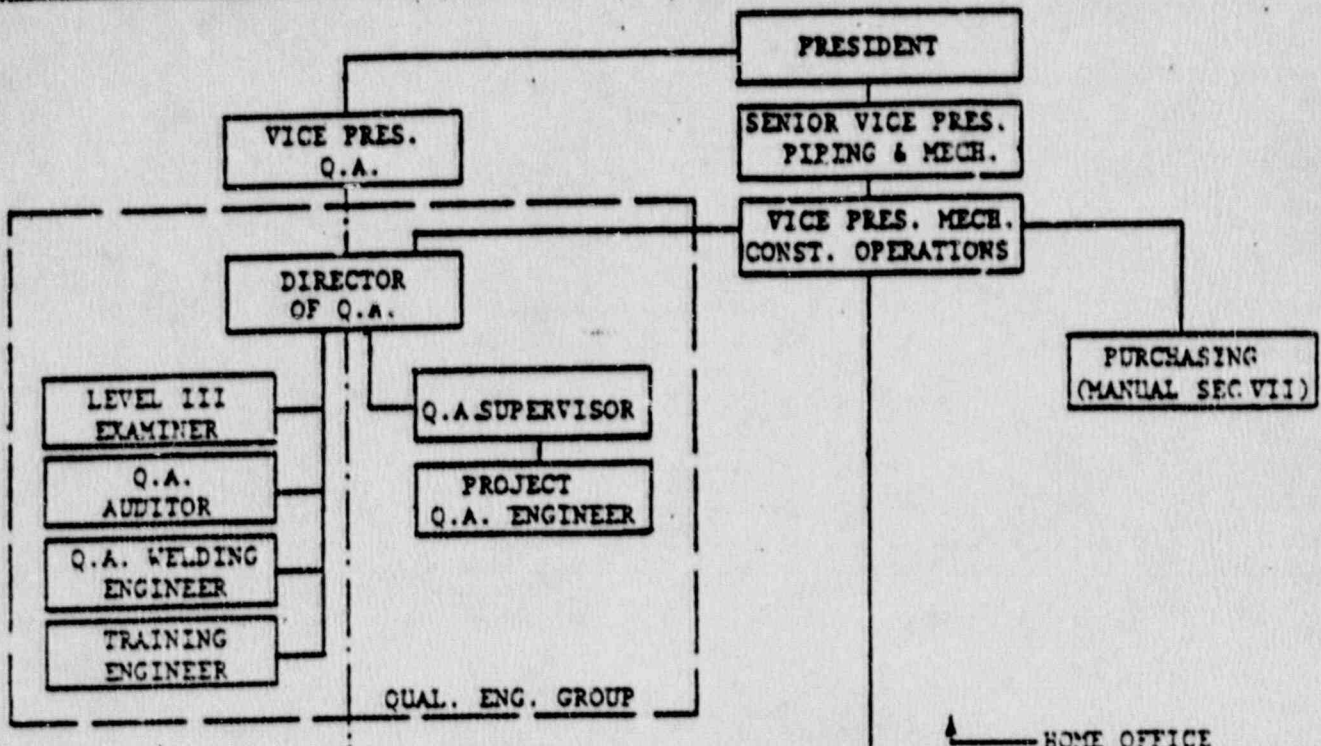
APPROVED BY: E. F. GERWIN *Eb*

ISSUE DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

ORGANIZATION.

PAGE NO. 14 of 14



ADMINISTRATIVE _____
 COMMUNICATION - - - - -
 TECHNICAL & FUNCTIONAL



Pullman Power Products

III

SECTION NO.

PREPARED BY: E. C. DAVIS

APPROVED BY: E. F. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

DESIGN CONTROL

PAGE 1 of 6
NO.

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 Design Documents to the completion of the installation.

3.2 POLICY

3.2.1 The Company will not perform any design work. All design work will be performed by others responsible to the Owner for piping system design, or by the responsible component designer.

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

3.3 RESPONSIBILITY

3.3.1 The Chief Field Engineer is responsible for assuring that all fabrication and installation is in conformance with the design requirements furnished by UE&C. 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 his designee, will review the UE&C 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.



PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN

SECTION NO.
DATE: 2/10/83QUALITY ASSURANCE
PROGRAM

DESIGN CONTROL

PAGE 2 of 6
NO.

3.5 FIELD DRAWINGS FOR PIPING AND PIPE SUPPORTS

- 3.5.1 Prior to the issuance of the 1/17/83 revision to this manual, the Company prepared Field Drawings such as Pipe Support Details (Form 6) or Installation Isometrics (Form 7), which either added to or reflected UE&C drawings in greater detail, in order to affectively accomplish the work.
- 3.5.2 Subsequent to the issuance of manual revision dated 1/17/83, UE&C shall prepare and transmit Field Drawings (Design Drawings) to be utilized, as received by the Company to accomplish the work. The UE&C prepared Field Drawings shall also designate the Company Special Process Requirements and field weld mapping locations necessary to perform the work. In addition, all existing Field Drawing originals will be turned over to UE&C and it will henceforth be the responsibility of UE&C to maintain all Field Drawings to the latest design conditions, either through revision or issuance of ECA's to the affected Field Drawing, refer to 3.7.2.
- 3.5.3 Prior to the issuance of the 1/17/83 revision to this manual, the Company Field Engineering Department prepared all Process Sheets (Form 19).
- 3.5.4 Subsequent to the issuance of manual revision dated 1/17/83, UE&C shall, as a clerical function, prepare all Process Sheets (Form 19). (For exception see Paragraph 3.6).
- 3.5.5 Subsequent to the issuance of manual revision dated 1/17/83, UE&C may elect to revise previously prepared Company Field Drawings as revisions occur. At their option, UE&C may elect to prepare and issue Field Drawing (Design Drawings) in lieu of the Company Field Drawings at which time the Company Field Drawings will be voided. The voided Company Drawings shall be retained for record purposes and the new Field Drawing (Design Drawing) shall make reference to the voided Field Drawing(s).
- 3.5.6 A package consisting of the new or revised UE&C or Company Field Drawing and applicable Process Sheets shall be transmitted to the Company Chief Field Engineer, or his designee. He shall review for acceptance of the Field Drawing per Paragraph 3.4.1 and approval of the Company Process Sheets to assure that they properly reflect sequential operations necessary to perform the work activities including special processes, reference Company Project Procedures which control these operations and include applicable UE&C specification requirements.



Pullman Power Products

III

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. Y. GERWIN

DATE: 2/10/63

QUALITY ASSURANCE
PROGRAM

DESIGN CONTROL

PAGE 3 of 6
NO.

3.5.7 The package is then forwarded to the QA Manager or his designee for review and acceptance of the Field Drawing as well as approval of the Process Sheets per the requirements of the Code.

3.5.8 If the package is found acceptable by both QA and Engineering, it is submitted to the ANI for review of the Process Sheets per Section X. Upon completion, the Field Drawing shall be returned to Engineering for transmittal back to UE&C. The Company Process Sheets are retained by QA and controlled per Section X. If any portion of the package is rejected by Engineering, QA or the ANI, the entire package shall be transmitted back to UE&C by Engineering with comment(s). All transmittals shall be made utilizing Form 15.

3.5.9 Field Instructions (Form 18) utilized as an aid to installation may be prepared by the Company or by UE&C. Company initiated Field Instructions require Company approval. UE&C initiated Field Instructions shall be reviewed and accepted by the Company in the same manner as a UE&C Field Drawing.

3.6 FIELD DRAWINGS FOR MECHANICAL ERECTION

3.6.1 In order to effectively accomplish the mechanical erection work Field Instructions (form 18) may be prepared by the Company to reflect the UE&C drawings, specifications, manufacturer's information and Code requirements in greater detail.

3.6.2 A Field Engineer shall prepare and revise the necessary Field Instructions, Process Sheets and checklists.

3.6.3 The Field Instructions, Process Sheets and checklists are then checked and approved by the Chief Field Engineer, or his designee, to assure that they properly reflect the Design Requirements as to materials, dimensions, special process requirements, manufacturer's requirements and quality levels.

3.6.4 Prior to release for work (See Section X) the Field Instructions, Process Sheets, checklists and revisions thereon are checked and approved for Code Compliance by the QA Manager or his designee and submitted to the ANI for his review.



PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GIBLIN

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

DESIGN CONTROL

PAGE NO. 4 of 6

3.7 DEVIATIONS FROM DESIGN

3.7.1 In the events that deviations from design may be required, the Chief Field Engineer or his designee 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 UE&C for review and approval and reconciliation with Design Reports or Load Capacity Data Sheets when required.

3.7.2 Engineering Change Authorization (ECA)

- A. In the event a deviation from design or a design change is required, UE&C shall transmit an Engineering Change Authorization (ECA) (Form S-4) to the Company. The ECA shall include a complete description of the change, a sketch illustrating the affected work, designation of Company Special Processes, and Company Process Sheets as necessary to perform the work.
- B. The ECA shall reference the UE&C or Company Field Drawing it affects and will be treated in the same manner as the Field Drawing as a package with Company Process Sheets; refer to Paragraphs 3.5.6 through 3.5.8.
- C. In the event an immediate deviation from design is required, UE&C shall prepare an "On-the-Spot" ECA (Form S-5). The "On-the-Spot" ECA differs from the conventional ECA in that it is issued for construction prior to UE&C design verification and the Company review and accept/approval cycle which remains a requirement may vary slightly from that described in Paragraph B above, and as such will be addressed in detail in the Project Procedures Manual. In addition, final inspection as addressed in Section X must be delayed until the design verified "On-the-Spot" ECA is issued.
- D. When the design verified "On-the-Spot" ECA is prepared by UE&C, it will be controlled the same as the conventional ECA per Paragraph B above. If it differs from the initial "On-the-Spot" ECA, it will contain within the package any additional Company Process Sheets that are required to implement the change.



Pullman Power Products

III

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN

SECTION NO.

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

DESIGN CONTROL

PAGE 5 of 6
NO.

3.8 STOP WORK ORDERS

- 3.8.1 In the event that revised UE&C specifications affecting piping systems or any UE&C documents affecting mechanical equipment installations are received through new issue or via ECA, the Chief Field Engineer or his designee shall perform a review and determine whether affected fabrication or installation is in progress.
- 3.8.2 If so, the Chief Field Engineer or his designee shall issue a Stop Work Order (Form 9) to withdraw Company Process Sheets and thus cause work to discontinue on affected items. He shall then request that UE&C supply the necessary revised and/or new Field Drawings or ECA's and Company Process Sheets.
- 3.8.3 If UE&C, as a result of Design Changes, which they are unable to incorporate into the affected Field Drawings or issue new or revised ECA's in a timely manner, as determined by UE&C, they may elect to issue a UE&C Engineering Stop Work Order (Form S-6) to the Company to be controlled by Engineering and utilized to withdraw Company Process Sheets and thus cause work to discontinue on affected items.

3.9 VERIFICATION OF FINAL INSTALLATION

- 3.9.1 UE&C is responsible for incorporation of all design conditions and changes on the UE&C or Company Prepared Field Drawings.
- 3.9.2 UE&C will "As-Built" the piping installation and incorporate such information on the UE&C or Company Prepared Field Drawings.
- 3.9.3 It is the responsibility of the Company (The Chief Field Engineer or his designee) to assure that the final installation meets the requirements of the latest UE&C or Company Prepared Field Drawings by completing the "Installation Verification" Form (Form 10A).



Pullman Power Products

III

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

DESIGN CONTROL

PAGE
NO. 6 of 6

2/10/83

3.9.4 The Chief Field Engineer, or his designee, 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. The "N" Certificate Holder by signing the N5 Data Report on the back side certifying the system conforms with ASME Section III Division I, is responsible for the "Certification of Design for Piping System Installation" section of the N5 and as such, assures that the as-built installations are in compliance with The Code.

3.9.5 The QA Manager through his Inspection personnel shall final inspect each installation utilizing the UE&C prepared "As-built" Field Drawing and "Final Inspection Form" (Form 10B).

3.9.6 It is the responsibility of the Chief Field Engineer or his designated Field Engineer to prepare or modify the Data Reports.

3.10 FORMS

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

Forms referenced are:

- (6) Field Drawing
- (7) Field Drawing
- (9) Stop Work Order
- (10A) Installation Verification
- (10B) Final Inspection
- (15) Transmittal Record
- (18) Field Instruction
- (S-3) Proposed Engineering Change Authorization (ECA)
- (S-4) Engineering Change Authorization
- (S-5) "On-the-Spot" ECA
- (S-6) UE&C Engineering Stop Work Order
- (19) Generic Reference to Process Sheets as indicated on the Forms Index (Forms 19A to 19G)



Pullman Power Products

V

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN *EB*

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAMINSTRUCTIONS, PROCEDURES
AND DRAWINGSPAGE
NO. 1 of 2

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 PROCEDURES MANUAL

- 5.2.1 In order to effectively implement the requirements of this QA Program, required procedures will be included in a Project Procedures Manual. These are 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 Procedures Manual. Actual preparation and revision is handled as in 2.4.4. Maintenance and distribution of the Project Procedures Manuals to field personnel is the responsibility of the QA Manager or his designee.
- 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.
- 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 (Form 18).



Pullman Power Products

V

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. P. GERWIN

52

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

INSTRUCTIONS, PROCEDURES AND DRAWINGS

PAGE NO. 2 of 2

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
Nonconformance Control	Records Control

5.2.6 All procedures are available to UE&C for information and/or approval and to the Authorized Nuclear Inspector.

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

5.3 DRAWINGS

5.3.1 All field fabrication and installation shall conform to UE&C furnished drawings, specifications and instructions.

Field Drawings/Instructions required to implement field fabrication and installation are prepared as outlined in Section III. These in turn are used to prepare process sheets (Form 19) 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) Field Drawing
- (7) Field Drawing
- (19) Generic Reference to Process Sheets
(Form 19A thru 19C)
- (18) Field Instruction

2/10/83



Pullman Power Products

VI

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERVIN

25

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

DOCUMENT CONTROL

PAGE
NO. 1 of 5

6.0 DOCUMENT CONTROL

6.1 SCOPE

- 6.1.1 To control the issuance of all UE&C and Company documents including all changes thereto, assuring they are approved or accepted for release by Authorized Company Personnel and 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, UE&C and those initiated by the Company on site. The treatment afforded each document is outlined in the Project Procedure Manual.

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 and, 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 Level III designee.
- A. Indexing and distribution to the field site of QEG documents are the responsibility of the Project QA Engineer, QEG or his designee.
- 6.2.3 The Project 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.
- 6.2.4 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.

2/10/83



PREPARED BY: R. G. DAVIS

APPROVED BY: E. F. GERWIN

DATE: 2/10/85

QUALITY ASSURANCE PROGRAM

DOCUMENT CONTROL

PAGE NO. 2 of 5

6.3 UE&C FURNISHED DOCUMENTS

6.3.1 The initiation, revision, adequacy and approvals of UE&C furnished documents are the responsibility of UE&C under their Quality Assurance Program.

These include but are not limited to Design Specifications, piping drawings, flow sheets, equipment drawings, Field Drawings, and special instructions and any other information required to form a basis for fabrication and installation. UE&C initiated Field Drawings, ECA's and Company Process Sheets shall, in addition to the requirements of UE&C, be reviewed by the Company (see Section III).

6.3.2 Once received by the Company at the field site, it is the responsibility of the Chief Field Engineer or his designee to maintain and index these documents and control their release to authorized personnel at the location where the activity is being performed, with the exception of Process Sheets which shall be controlled by the QA Manager.

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.

6.4 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 (or their designees).



Pullman Power Products

VI

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

DRAWING CONTROL

PAGE NO. 3 of 5

6.4.2 The Chief Field Engineer is responsible for: (see Section III)

DOCUMENT

RESPONSIBILITY

- A. Company Field Drawings (Form 6 and 7) Indexing and distribution only
- B. Field Instructions (Form 18) All Per 6.4.1
- C. Stop Work Orders (Form 9) (Form 5-6) Engineering maintains control per Project Procedures Manual if originated by Company Engineering or UE&C.
- D. Process Sheet. Mechanical (Form 19) All per 6.4.1 except - no indexing, adequacy and approval by Engineering and QA, maintenance and distribution by QA.
- E. Company Process Sheets (Form 19) Initiated and revised by UE&C, adequacy and approval by Engineering and QA, maintenance and distribution by QA.

6.4.3 The Field Drawing Control Clerk (FDCC) maintains an index - Drawing Record (Form 14) for 6.4.2A and 6.4.2B per Project Procedures Manual.

6.4.4 The FDCC shall distribute documents and record on Drawing Record (Form 14) via Transmittal Record (Form 15) latest revisions of documents (6.4.2A and 6.4.2B). Transmittal Record requires the return of voids, except as permitted by Paragraph 6.3.3.

The Chief Field Engineer, or his designee, shall provide access to a copy of all void drawings either through retention or through UE&C.

6.4.5 The QA Manager is responsible for:

- Field Drawings (acceptance only; see Section III) Procedures (Form 16)
- Nonconformance Reports (Form 17)
- Field Instruction (Form 18) (acceptance only; see Section III)
- Process Sheets (Form 19) (Approval, Distribution and Retention)
- Stop Work Orders (Form 9) (QA maintains control per Project Procedures Manual if originated by QA)



Pullman Power Products

VI

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIE

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

DRAWING CONTROL

PAGE 4 of 5
NO.

6.4.6 Due to their limited distribution, transmittal letters are not required for Stop Work Orders, Nonconformance Reports, and Process Sheets. The index is considered adequate control.

6.4.7 The QA Manager or his designee will maintain an index by number and revision and a distribution list of all procedures (Form 13) and an index of Nonconformance Reports. When procedures are superseded, 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 (Form 19) may be prepared by the Company or by UE&C. All Process Sheets shall be reviewed by the Chief Field Engineer or his designee. The Process Sheets shall be approved by the QA Engineer responsible for Process. They are then presented to the ANI for concurrence and retained by QA Engineer responsible for Process for issuance (see Sections III and X). At the time of issuance the QA Specialist responsible for Process will record the latest approved revision of the Field Drawings on the process sheets utilizing a list of Field Drawings distributed daily by the Field Drawing Control Clerk. The latest revision to procedures shall also be recorded in the applicable sections of the process sheets.

6.4.9 The QA Engineer responsible for records shall retain the filed copy of the voided Process Sheet for record purposes per Project Procedures Manual.



Pullman Power Products

VI

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

DOCUMENT CONTROL

PAGE
NO. 5 of 5

6.5 FORMS PER PROJECT PROCEDURES MANUAL

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

Forms referenced are:

- (6) Field Drawing
- (7) Field Drawing
- (9) Stop Work Order
- (13) Document Status Record
- (14) Drawing Control Card
- (15) Transmittal Record
- (16) Procedures
- (17) Nonconformance Report
- (18) Field Instruction
- (19) Generic Reference to Process Sheets as indicated on the Forms Index (Forms 19A thru 19C)
- (40) Document Index

/10/83



Pullman Power Products

VII

SECTION NO.

PREPARED BY: B. G. DAVIS

APPROVED BY: E. F. GERWIN 27

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

CONTROL OF PURCHASED MATERIAL, ITEMS AND SERVICES

PAGE NO. 1 of 3

7.0 CONTROL OF PURCHASED 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 the site from the issuance of the Purchase Order to and including Receiving Inspection.

7.2 PURCHASE BY OTHERS

7/10/83

7.2.1 In all instances, the Company installs items or material furnished by others under their Quality Assurance and Procurement Document Control Programs and Certificates of Authorization. Procurement of these items shall be the responsibility of the Certificate Holder who originates the order.

7/10/83

7.2.2 Materials or items furnished by others may be accepted if the purchaser, including the "N" Stamp Holder responsible for the piping system design, has been accepted by the Company as an approved material supplier, appearing on the AVL.

7/10/83

7.2.3 Actual program responsibility for initial receipt inspection, storage, handling, and control of materials and items belongs to UE&C. The company will be notified by UE&C for performance of a joint document review. Company responsibilities for this document review are detailed in Paragraphs 7.2.5 and 7.2.6.

7/10/83

7.2.4 The Company performs Receipt Inspection at the time of disbursement, as described in Section VIII (Paragraph 8.3).

7/10/83

7.2.5 The QA Engineer responsible for materials will review all Code Data Reports for Code stamped items, and all CMTR's, Certificates of Compliance and/or other documents furnished as evidence of compliance for purchased materials or services to assure that they are applicable, complete, and correct for the item(s) involved.

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



Pullman Power Products

VII

SECTION NO.

PREPARED BY: E. G. DAVID

APPROVED BY: E. F. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

CONTROL OF PURCHASED MATERIAL, ITEMS AND SERVICES

PAGE NO. 2 of 3

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

Upon completion of the documentation review the QA Engineer responsible for materials shall initial or sign and date the checklist and forward evidence of review to the QC Inspector-Receiving as delineated in project procedures. A Records copy will be retained by the QA Records Department and made available to the AMI.

10/83 7.2.6 Nonconforming items identified during the joint UE&C/Company document review shall be handled through the UE&C Nonconformance procedure.

If an impasse is reached between UE&C and Company personnel regarding the validity of a nonconformance, UE&C management shall initiate an NCR to identify the condition.

10/83 7.2.7 Handling and storage of items are performed as outlined in Section XIII.

7.3 PURCHASE AT SITE

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

7.3.2 Purchase of services is limited to Vendors who appear on the Approved Vendor List furnished by the Quality Engineering Group (QEG) - Fabrication Operations. Vendor acceptance, source evaluation, and auditing is performed as specified in Section IV.

10/83 7.3.3 Physical inspection and document review shall be accomplished in accordance with Paragraphs 7.2.4 and 7.2.5.

10/83 7.3.4 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.



Pullman Power Products

VII

SECTION 1.3.

PREPARED BY: E. C. DAVIS

APPROVED BY: E. F. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

CONTROL OF PURCHASED MATERIAL, ITEMS AND SERVICES

PAGE NO. 3 of 3

The QA Manager will forward copies of the Purchase Order (Form S-1) and other applicable purchase documents to the QA Manager - Williamsport to conduct the source inspection using these documents, to verify compliance of the items and its backup evidence of compliance.

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

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

7.4 SUBCONTRACTED SERVICES

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

7.4.2 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.

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

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

7.5 FORMS

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

Items referenced are:

(S-1) Purchase Order



Pullman Power Products

VIII

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERVIN

25

DATE: 2/15/83

QUALITY ASSURANCE PROGRAM

IDENTIFICATION AND CONTROL OF MATERIALS AND ITEMS

PAGE 1 of 5 NO.

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.
- 8.1.2 UES&C, under their Quality Assurance Program has the responsibility for identification and control of items and materials until they are delivered to the point of installation or fabrication.
- 8.1.3 Once an item or material is delivered to the point of installation or fabrication, and is acceptable to the Company, it becomes the responsibility of the Company to assure that identification and control of material and items is maintained.

8.2 IDENTIFICATION AND TRACEABILITY OF MATERIALS AND ITEMS FURNISHED BY OTHERS

- 8.2.1 Code stamped items shall be identified by the Assembly Mark Number or the manufacturer's serial number.

When it is necessary to cut a piping sub-assembly, traceability will be maintained by identifying each piece 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.

- 8.2.2 Material shall be identified by Purchase Order, 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.

Before material is cut, the Purchase Order and Item Number and Heat Number or suitable code, shall be transferred to each cut piece by the cutter, and monitored by a QC Inspector. Transfer of identification shall be done assuring that the markings are legible, not detrimental to the item(s) or material involved and located in an area(s) that will not interfere with the quality or function of the item(s) or material. Process sheets are not required for cutting of materials.



Pullman Power Products

VIII

PREPARED BY: R. G. DAVIS

APPROVED BY: E. F. GERWIN *EF*

SECTION NO.
DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

IDENTIFICATION AND CONTROL
OF MATERIALS AND ITEMS

PAGE 2 of 5
NO.

8.2.3 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 CONTROL OF MATERIALS AND ITEMS

8.3.1 DISBURSEMENT AND CONTROL FROM ACCEPTED STORES: EXCEPT WELD STORES

- 0/83
- A. Disbursement of Components and Material shall be by requisition: Component Requisition (Form 23) or Field Warehouse Requisition (Form 24). These requisitions shall also serve as Receiving Inspection Reports to Document Receipt Inspection as described below. The Field Engineer/Area Superintendent shall approve either requisition using the latest revision of the Field Drawing or fabrication detail applicable to assure correct information regarding component or sub-assembly identification, (Form 23) and for material, the quantity and item description including size, material specification, etc. (Form 24)
- B. The requisition for Material or Components is presented to the QA Engineer responsible for Materials or his designee for review of accuracy, completeness and authorization to be proceeded by initialing and dating the applicable form on the QA Verification Line.
- C. The requisition is then forwarded to UE&C to be filled.
- D. For materials, the Purchase Order Number and Heat Number or suitable Code (ref. Section IX) of the materials to be disbursed is recorded on the requisition by UE&C personnel. All copies of the Field Warehouse Requisition are signed by the UE&C Warehouse Attendant after completing the order.
- 0/83
- E. UE&C will notify the QC Inspector-Receiving when the necessary items or material have been gathered^a to complete the requisition. The QC Inspector-Receiving shall review the requisition for heat number verification and traceability for materials, and that the correct components are being shipped for items. He shall also verify that the applicable documentation has been previously reviewed and accepted by the QA Engineer responsible for materials (Ref. Section VII, Paragraph 7.2.5) and shall perform Receipt Inspection as delineated in project procedures.
- 0/83



Pullman Power Products

VIII

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GEEVIS

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

IDENTIFICATION AND CONTROL OF MATERIALS AND ITEMS

PAGE 3 of 5 NO.

After acceptance, by signing and dating the applicable portion of the Requisition/Receiving Inspection Report, he authorizes release for delivery to the Foreman indicated on the requisition.

- F. The appropriate copy of the requisition is removed and retained for reference by the QC Inspector-Receiving. The other copies are forwarded with the order.
- G. Materials are tagged by UE&C personnel with appropriate identification tags to identify them to the Field Drawing or fabrication detail.
- H. Upon receipt at the point of installation or fabrication by the Foreman, he shall sign and date the forwarded copies of the requisition to acknowledge receipt. The QC-Inspector Receiving shall also initial and date the copies adjacent to the Foreman's signature as verification that the Material or Component has remained in an acceptable condition during transit. If any portion of the shipment is found unacceptable, that portion of the shipment shall be refused and returned to UE&C for disposition and corrective action. It is at this point that the Company assumes programmatic responsibility for the material or item.
- I. Distribution of copies of the requisition will be made in accordance with site procedures.
- J. If it becomes necessary to return material or items from installation or fabrication areas back to storage, the system of requisitions and approvals described above will be followed in reverse order, as defined in Project Procedures.
- K. Nonconforming items or materials identified during Receipt Inspection shall be handled through the UE&C nonconformance procedure.

If an impasse is reached between UE&C and Company inspection personnel regarding the validity of a nonconformance, UE&C management shall initiate an NCR to identify the condition.

10/83

10/83

10/83

10/83

10/83



Pullman Power Products

VIII

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN *EF*

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

IDENTIFICATION AND CONTROL OF MATERIALS AND ITEMS

PAGE NO. 4 of 5

8.3.2 DISBURSEMENT AND CONTROL OF WELD STORES

- A. Initial disbursement of bulk quantities of weld stores from UE&C to the weld material distribution centers shall be controlled by requisition as delineated in Project Procedures, which will include Company Receipt Inspection.
- B. When welding is involved, the Craft Foreman will prepare a Weld Rod Stores Requisition (Form 25) in accordance with latest revision of the Field Drawings 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 XIV). 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.
- C. The welder retains the process sheet and the 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 QA 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.



Pullman Power Products

VII

SECTION NO.

PREPARED BY: B. G. DAVIS

APPROVED BY: E. F. GERVIN

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAMIDENTIFICATION AND CONTROL
OF MATERIALS AND ITEMSPAGE 9 OF 9
NO.

Process Sheets shall be released 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 electrodes are put back into storage by correct type, lot, heat or control number.

0.6 SITE FABRICATED SUB-ASSEMBLIES

0.6.1 Piping sub-assemblies, parts, appurtenances, and component supports fabricated on site by the Company will not be Code Stamped or permitted by NCA 0333.2 (c). Fabricated items will be controlled by unique markings to permit traceability during and after installation in accordance with a procedure acceptable to the API. A Process Sheet (Form 19), satisfying the requirements of NCA 0333.2 (c) for a transmittal form shall be initiated for each field shop fabricated item to provide for Company QA/QC and API review, prior to movement to storage or installation areas.

0.5 NONCONFORMANCES

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

0.5.2 In no case will any Material, Piping sub-assembly or Component which is on "held" per Section XV be issued for work unless a Limited Work Authorization has been approved. (See Section XV)

0.6 FORMS

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

Forms referenced are:

- (19) Generic Reference to Process Sheets as indicated on the Form Index (19A through 19C)
- (23) Material/Component Requisition
- (24) Field Warehouse Requisition
- (25) Weld Rod Stores Requisition



Pullman Power Products

IX

SECTION NO.

PREPARED BY: E.G. DAVIS

APPROVED BY: E.F. GERVIN

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

CONTROL OF SPECIAL PROCESSES

PAGE
NO. 1 of 4

9.0 CONTROL OF SPECIAL PROCESSES

9.1 SCOPE

9.1.1 To assure that all special processes, including welding, heat treating and nondestructive 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 QEC as part of the Project Procedures Manual. Preparation, revision, and qualification of such special procedures is the responsibility of the Director of Quality Assurance or his designated representative.

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, 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, QEC. 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 Procedures Manual and are available to the ANI. The field site may qualify additional procedures with the approval of the QA Welding Engineer, QEC. (See Section V).



Pullman Power Products

II

SECTION NO.

DRAWN BY: R.G. DAVIS

APPROVED BY: E.F. GERWIN *EG*

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

CONTROL OF SPECIAL PROCESSES

PAGE
NO. 2 of 4

- 9.2.3 All nondestructive examination procedures are prepared and qualified in accordance with the requirements of ASME Section V and ASME Section III, Div. 1. Approval of these procedures and qualifications is by an NDE 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. 1.3.8). He cooperates with the Project QA Engineer, QEG, in selecting all required NDE procedures 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 are 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 Examination Report (Form 29)
Liquid Penetrant Examination 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 (Form 32) to accompany the Field Weld Process Sheet to assure that the rework is completed satisfactorily and is 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.



Pullman Power Products

IX

SECTION NO.

PREPARED BY: E.G. DAVIS

APPROVED BY: E.F. GEWIN

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

CONTROL OF SPECIAL PROCESSES

PAGE
NO. 3 of 4

- 9.2.6 Procedures for heat treatment of weld including preheat, inter-pass temperature and post-weld heat treatment are prepared, revised and maintained by the QA Welding Engineer, QEC. 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 Project Procedures 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.

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 Welding Engineer, QEC, after consulting with the QA Engineer-Welding. These procedures will be revised and maintained by the QA Welding Engineer, QEC. They are forwarded to the job site as part of the Project Procedures Manual.

9.3 PROCEDURE CONTROL

- 9.3.1 When special processes are to be used, the controlling procedure will be shown on the Company Process Sheet or other applicable documents by the specific procedure number and revision. Company Process Sheets and Field Instructions shall be reviewed by a QA Engineer-Process to assure that welding procedures and non-destructive examination procedures have been properly selected. This review shall be under the guidance of the QA Engineer-Welding or the site 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.



Pullman Power Products

IX

SECTION NO.

PREPARED BY: R.G. DAVIS

APPROVED BY: E.F. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

CONTROL OF SPECIAL PROCESSES

PAGE
NO. 4 of 4

9.4 QUALIFIED PERSONNEL

9.4.1 All personnel performing special processes shall be trained, qualified and certified to specific levels of competence as required by applicable codes and standards and as presented in the Project Procedures 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 shall be 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) Generic reference to Welding Procedure Specification as indicated on the Forms Index (Forms 26A and 26B)
- (27) Generic reference to Procedure Qualification Record - Welding - as indicated on the Forms Index (Forms 27A and 27B)
- (28) Procedure Qualification Record - (NDE)
- (29) Magnetic Particle Examination Record
- (30) Liquid Penetrant Examination Record
- (31) Radiographic Examination Report
- (32) Generic reference to Weld Repair Orders as indicated on the Forms Index (Forms 32A thru 32D)
- (36) Ultrasonic Flaw Detection Record

2/10/83



Pullman Power Products

2

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN *EG*

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

INSPECTION

PAGE
NO. 1 of 3

10.1 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 involving Special Processes or a Field Weld Process Sheet for each weld. These are prepared (see Section III) to indicate the sequence of the work, including inspection, examination or tests. (Forms 10 & 19)

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 latest design conditions and applicable Code requirements (see Section XIV).

10.2.4 Before a Process Sheet is issued, it is reviewed and approved by the QA Engineer-Process, and QA "Hold Points" are established, presented to the ANI with drawings and other supporting documents for review and establishment of ANI "Hold Points" as he deems appropriate. He acknowledges his review by initialing and dating the Process Sheet.

10.2.5 Upon receipt of the applicable issued for construction Field Drawing, the Process Sheets and the Field Drawings are forwarded to the Weld Material Distribution Center where the Process Sheets are issued to the area of fabrication or installation as required. During the fabrication or installation cycle, the Process Sheets are 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 foreman must return the Process Sheet at the completion of each weld or at the end of the shift even if the activity is not completed.



Pullman Power Products

I

SECTION NO.

PREPARED BY: R. G. DAVIS

APPROVED BY: E. P. GERWIN

DATE: 2/10/89

QUALITY ASSURANCE
PROGRAM

INSPECTION

PAGE
NO. 2 of 3

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

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, nondestructive 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 nondestructive examination or tests 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, 19, 21, 29, 30, 31, 32 and 36).

10.3.2 Inspection shall be performed by a QC Inspector in accordance with written procedures and/or checklists. 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 Section I of the Manual 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.



Pullman Power Products

I

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN *EG*

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

INSPECTION

PAGE
NO. 3 of 3

10.5.3 The ANI will be given the opportunity to establish Hold Points on each Process Sheet, and all revisions.

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 required requalification of welding or nondestructive examination procedures or personnel as outlined in Section II and IX.

10.5.6 The ANI shall have free access at all times to document in support of Code activities including those concerned with supply or manufacture of materials.

10.5.7 The Chief Field Engineer, or his designee, shall sign the Code Data Reports and transmit them to the ANI for 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 outline in Section XVII.

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

Forms referenced are:

- (10) Generic reference to Final Inspection Report forms as indicated on the Forms Index (Forms 10A through 10J)
- (19) Generic reference to Process Sheets as indicated on the Forms Index (Forms 19A through 19G)
- (21) Inspection Report
- (29) Magnetic Particle Examination Record
- (30) Liquid Penetrant Examination Record
- (31) Radiographic Inspection Report
- (32) Weld Repair Order
- (36) Ultrasonic Flaw Detection Record



PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN *EF*

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

HANDLING STORAGE AND SHIPPING

PAGE 1 of 2
NO.

13.0 HANDLING, STORAGE AND SHIPPING

13.1 SCOPE

13.1.1 The control of handling, storage, shipping, cleaning and preservation of materials and equipment is the responsibility of UE&C, from the initial receipt of the item(s) and/or material until delivery to the point of installation or fabrication.

13.1.2 Company responsibility in these areas will be assumed once accepted items and/or materials are delivered to the point of installation or fabrication by UE&C.

13.2 PROCEDURES

13.2.1 Procedures will be prepared by the Project QA Engineer, QEG, or the QA Manager or his designee, and as a minimum will address:

- A. Storage facilities will be established and maintained for various levels of equipment sensitivity as outlined in ANSI N45.2.2 "Packaging, Shipping, Receiving, Storage and Handling of Items for Nuclear Power Plants".
- B. The QA Manager will assign a QC Inspector to regularly monitor the Company storage areas to check for damage or signs of deterioration on a regularly established schedule. Nonconformances will be handled in accordance with Section XV.
- C. Covers and seals will remain in place until removal is required and subsequently replaced, when required.
- D. All stainless steel items are to be handled with nylon slings, or chain slings wrapped in burlap or cloth.

1/83



Pullman Power Products

XIII

SECTION NO.

PREPARED BY: R. G. DAVIS

APPROVED BY: E. F. GERWIN *ES*

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

HANDLING STORAGE
AND SHIPPING

PAGE
NO. 2 of 2

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

RESPONSIBILITY

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



Pullman Power Products

XV

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. G. GERVIN

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAMNONCONFORMING MATERIALS
PARTS OR COMPONENTSPAGE
NO. 1 of 6

15.0 NONCONFORMING 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.

15.1.2 Nonconformances identified during Receipt Inspection or Documentation Review of materials and items furnished by UE&C shall be handled through the UE&C nonconformance procedure, as described in Sections VII and VIII.

15.2 POLICY

15.2.1 Nonconformance in Items may be detected at source inspection, receiving inspection, in process inspection during fabrication or installation, at final inspection, examination or during testing.

15.2.2 Any item which does not completely fulfill the requirements of specifications, procedures, purchase order, codes, 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 QC Inspector by controls imposed by the Process Sheet for that operation are not required to be documented on a Nonconformance Report (Form 17).

15.2.4 Unacceptable conditions other than those outlined in 15.2.3 above or as provided in Nonconformance Procedures are considered as nonconformances and shall be reported on a Nonconformance Report. Proposed disposition of all nonconformances shall have the concurrence of the ANI.

15.2.5 Items for which an NCR has been initiated will be segregated when possible by a QC Inspector and a Hold Tag (Form 22) will be placed on them. This will prevent their inadvertent use in installation. For nonconforming items or operations discovered during installation, a Hold Tag will be placed on the item by a QC Inspector, or adjacent to the operation (as in the case of welding) and the Process Sheet shall be withdrawn by the QC Inspector who notes on the Process Sheet the point at which the

2/10/83



Pullman Power Products

XV

SECTION NO.

PREPARED BY: R. G. DAVIS

APPROVED BY: E. G. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

NONCONFORMING MATERIALS
PARTS OR COMPONENTS

PAGE
NO. 2 of 6

nonconformance occurred and the NCR number when applicable. It is then returned to the Welding Materials Distribution Center to be held pending resolution of the nonconformance. Once the nonconformance 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 Nonconformance Report and such other documents as are appropriate and defined in the specific Project Procedure for Nonconformances. 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 proposed disposition to the nonconformance will be determined by the Field Engineering Department in conjunction with Quality Assurance, UE&C and QEG consultants if necessary. The proposed resolution shall be acceptable to the Authorized Nuclear Inspector. The Hold Tags will remain until the nonconformance is dispositioned.

15.2.8 When a Hold Tag is in effect and continuation of work in the area affected by that Hold Tag is desired, 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 the document number(s) which is related to that Hold Tag.

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

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

(3) Each LWA shall be made available to the ANI so that he may review and have the opportunity to assign hold points.

15.2.9 Upon approval of the LWA Request by UE&C, a copy will be returned to the QA Manager or his designee who will initiate an LWA Tag. 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 Requisition for movement when the Item is released to the field, and will be



Pullman Power Products

XV

SECTION NO.

PREPARED BY: R. G. DAVIS

APPROVED BY: E. G. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

NONCONFORMING MATERIALS
PARTS OR COMPONENTS

PAGE
NO. 2 of 6

nonconformance occurred and the NCR number when applicable. It is then returned to the Welding Materials Distribution Center to be held pending resolution of the nonconformance. Once the nonconformance 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 Nonconformance Report and such other documents as are appropriate and defined in the specific Project Procedure for Nonconformances. 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 proposed disposition to the nonconformance will be determined by the Field Engineering Department in conjunction with Quality Assurance, UE&C and QEG consultants if necessary. The proposed resolution shall be acceptable to the Authorized Nuclear Inspector. The Hold Tags will remain until the nonconformance is dispositioned.
- 15.2.8 When a Hold Tag is in effect and continuation of work in the area affected by that Hold Tag is desired, 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 the document number(s) which is related to that Hold Tag.
- (1) The responsible Field Engineer shall submit the LWA Request to the Chief Field Engineer or his designee and the QA Manager or his designee for review and approval.
 - (2) Upon approval as required in Paragraph (1) above, the LWA Request (for NCR only) shall be submitted to UE&C for review and approval.
 - (3) Each LWA shall be made available to the ANI so that he may review and have the opportunity to assign hold points.
- 15.2.9 Upon approval of the LWA Request by UE&C, a copy will be returned to the QA Manager or his designee who will initiate an LWA Tag. 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 Requisition for movement when the Item is released to the field, and will be



Pullman Power Products

XV

SECTION NO.

PREPARED BY: R. G. DAVIS

APPROVED BY: E. G. GERWIN *EG*

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

NONCONFORMING MATERIALS
PARTS (OR COMPONENTS)

PAGE
NO. 3 of 6

returned upon completion of LWA work to the QA Office. The QA Manager or designee is responsible for maintaining a log of all LWAs.

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 Field Drawings, Process Sheets, etc.

15.2.12 Upon completion of an LWA, QC 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 QA 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 QC 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 QA Office.

15.3 PROPOSED RESOLUTION AND DISPOSITION OF NONCONFORMANCE

15.3.1 The Field Engineering Department may resolve the nonconformance by accepting the recommendation of the QA Manager, by instituting a solution of its own or by obtaining a solution from UE&C. In all cases, the final resolution shall be reviewed by the QA Manager, or his designee, for Code compliance and concurrence by the ANI shall be obtained.

15.3.2 For nonconformances 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 items to prevent inadvertent use.

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



PREPARED BY: R. C. DAVIS

APPROVED BY: E. G. GERWIN *EG*

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

NONCONFORMING MATERIALS
PARTS OR COMPONENTS

PAGE
NO. 4 of 6

- 15.3.4 In all cases where rework or repair is the proposed resolution, the Authorized Nuclear Inspector shall be notified and his concurrence received prior to the repair.
- 15.3.5 In cases of rework or repair, UE&C will issue instructions, drawings, rework procedures, Company Process Sheets and other documents which may be required to properly effect the rework or repair 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 Nonconformance Report, the cognizant QC 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 QC Inspector will remove the Repair Tag and coordinate with the QA Records Engineer for closing of the NCR.
- 15.3.7 All Nonconformance reports are submitted to the "N" Certificate Holder via the site Nonconformance Review Board which includes representation of the "N" Certificate Holder design group. In the event design changes are required, the "N" Certificate Holder may issue an Engineering Change Authorization (ECA Form S-4) or effect the change through the disposition of the NCR. The disposition of the NCR and ECA, if required, are evidence to the Company that the "N" Certificate Holder has the required information to reconcile changes with the design report.
- 15.4 RESPONSIBILITY**
- 15.4.1 It is the responsibility of the QA Manager to implement this policy through his examination, inspection and testing personnel and in accordance with Nonconformance Procedures.
- 15.4.2 Status indicator (applicable tag) shall be removed (or changed) from an item, by QA/QC personnel in conjunction with the disposition of an NCR.



PREPARED BY: E. G. DAVIS

APPROVED BY: E. G. GERWIN *EG*

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

NONCONFORMING MATERIALS
PARTS OR COMPONENTS

PAGE
NO. 5 of 6

15.5 PROCEDURES

15.5.1 Specific, additional nonconformance controls beyond those outlined herein, shall be provided in applicable Nonconformance Procedures, as required.

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

15.5.3 Nonconforming items discovered after a system has been turned over to UE&C for operation shall also be reported to UE&C to permit him to report to the Owner under the provisions of 10 CFR 50.55(a).

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 thereof must be stopped in order to preserve the quality of the project.

15.6.2 Company Stop Work Orders (Form 9) 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 Guidelines required to effectively stop work shall be established as specified in project procedures.

15.7 RECORDS

15.7.1 Records of all nonconformances 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.



Pullman Power Products

IV

SECTION NO.

PREPARED BY: R. G. DAVIS

APPROVED BY: E. G. GERVIN

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAMNONCONFORMING MATERIALS
PARTS OR COMPONENTSPAGE
NO. 6 of 6

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

15.7.4 All documents, procedures, codes, design criteria, drawings, written instruction, process sheets, etc. that were involved with the initiation of a Stop Work Order shall be retained by QA.

15.8 FORMS

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

Forms referenced are:

- (9) Stop Work Order
- (17) Nonconformance Report
- (18) Field Process Sheet
- (19) Field Weld Process Sheet
- (22) Hold Tag
- (22A) Repair Tag
- (39) Limited Work Authorization Request
- (41) Limited Work Authorization Tag
- (S-3) Proposed Engineering Change Authorization



PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN

DATE: 2/10/83

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 The Project QA Engineer, QEG, will prepare a Records Procedure after consulting with UE&C. 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.

17.2.3 Documents associated with items and materials purchased and supplied by UE&C, after Company review as described in Section VII, shall remain the responsibility of UE&C for retention. These documents include, but are not limited to ASME Data Reports, Certified Material Test Reports and Certificates of Compliance, Purchase Orders, and other manufacturer and/or supplier evidence of acceptable quality.

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 UE&C, the 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 others designated by UE&C as permanent records shall be transmitted to the Owner or his Agent for retention.

10/83



Pullman Power Products

XVII

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN *ef*

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

QUALITY ASSURANCE RECORDS

PAGE NO. 2 of 3

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

* For exclusions refer to Paragraph 17.2.3

2/10/83



Pullman Power Products

IVII

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN EG

DATE: 2/10/83

~~QUALITY ASSURANCE~~
PROGRAM

QUALITY ASSURANCE RECORDS

PAGE
NO. 3 of 3

- 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
- Y. Corrective Action Reports.

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
- (6) Field Drawing
- (7) Field Drawing



Pullman Power Products

INDEX

SECTION NO.

PREPARED BY: R. G. DAVIS

APPROVED BY: E. F. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 4

<u>FORM NO.</u>	<u>SECTION</u>	<u>DESCRIPTION</u>	<u>REVISION</u>
1	II	Quality Assurance Manual-Distribution List	1/8/81
2	II	Transmittal Letter	1/10/83
3	II	Qualification Records	2/10/83
4	II	Welder Qualification	1/17/83
5	II	Welder Qualification Status	1/17/83
6	III, V, VI XVII	Field Drawing - Pipe Support Detail	1/17/83
7	III, V, VI, XVII	Field Drawing - Installation Isometric	5/8/81
9	III, VI, XV	Stop Work Order	1/17/83
10A	III, X	Installation Verification	1/17/83
10B	III, X	QA/QC Final Inspection	1/17/83
10C	X	Process Sheet and As/Built Status Log	9/1/82
10D	X	Field Pressure Test Cover Sheet	1/17/83
10E	X	Field Pressure Test Report	1/17/83
10F	X	Valve Line-up Checklist	1/17/83
10G	X	Leak Test Boundary Description	1/17/83
10H	X	Exception and Deficiency List	1/17/83
10I	X	Pre-Leak Test Checklist	1/17/83
10J	X	Documentation Review	1/17/83



Pullman Power Products

INDEX

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERVIN

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 2 of 4

<u>FORM NO.</u>	<u>SECTION</u>	<u>DESCRIPTION</u>	<u>REVISION</u>
12	IV	Approved Vendor List	3/1/82
13	II, VI	Document Status Record	1/17/83
14	VI	Drawing Control Card	1/17/83
15	VI	Transmittal Record	1/17/83
16	VI	Procedures	1/17/83
17	VI, XV, XVI	Nonconformance Report	1/17/83
18	III, V, VI	Field Instruction	1/17/83
19A	III, V, VI, VIII, X, XIV	Field Weld Process Sheet/Repair	2/10/83
19B	III, V, VI, VIII, X, XIV	Field Weld Process Sheet (Class 1 Hanger)	1/17/83
19C	III, V, VI, VIII, X, XIV	Hanger Field Weld Process Sheet (Class 1 or 2)	2/10/83
19D	III, V, VI, VIII, X, XIV	Expansion Anchor Process Sheet	1/17/83
19E	III, V, VI, VIII, X, XIV	(Mechanical) Snubber Process Sheet	2/10/83
19F	III, V, VI, VIII, X, XIV	Field Process Sheet	1/17/83
19G	III, V, VI, VIII, X, XIV	Field Weld Process Sheet	1/17/83
22	XV	Hold Tag	5/16/78



Pullman Power Products

INDEX

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN 25

DATE: 2/10/83

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 3 of 4

<u>FORM NO.</u>	<u>SECTION</u>	<u>DESCRIPTION</u>	<u>REVISION</u>
22A	XV	Repair Tag	5/8/81
23	VIII	(Material) Component Requisition	2/10/83
24	VIII	Field Warehouse Requisition	2/10/83
25	VIII	Weld Rod Stores Requisition	1/17/83
26 A & B	IX	Welding procedure Specification	5/16/78
27 A & B	IX	Procedure Qualification Record (Welding)	5/16/78
28	IX	Procedure Qualification Record (NDE)	5/16/78
29	IX, X	Magnetic Particle Examination Record	3/1/82
30	IX, X	Liquid Penetrant Examination Record	3/1/82
31	IX, X	Radiographic Inspection Record	3/1/82
32A	IX	Weld Repair Order	3/1/82
32B	IX	Weld Repair Order	3/1/82
32C	IX	Weld Repair Order	3/1/82
32D	IX	Weld Repair Order	3/1/82
33	XII	Calibration Record	5/8/81
34A	XII	Calibration Sticker	1/17/83
34B	XII	Calibration Sticker	1/17/83
35	XVIII	Quality Audit Checklist	5/16/78
36	IX, X	Ultrasonic Flaw Detection Record	1/17/83
37	XII	Calibrated Tools Check-Out Log	1/17/83



Pullman Power Products

INDEX

SECTION NO.

PREPARED BY: E. G. DAVIS

APPROVED BY: E. F. GERWIN EG

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 4 of 4

<u>FORM NO.</u>	<u>SECTION</u>	<u>DESCRIPTION</u>	<u>REVISION</u>
38	XVII	Field Quality Assurance Records Index	5/8/81
39	XV	Limited Work Authorization Request	2/10/83
40	VI	Document Index	1/17/83
41	XV	Limited Work Authorization Tag	5/8/81
42	XVI	Corrective Action Report	9/1/82
42A	XVI	Corrective Action Report Log	5/8/81
S-1	IV, VII	UE&C/Seabrook Central Purchase Order	5/8/81
S-2	IV	UE&C/Seabrook Central Field Purchase Requisition	5/8/81
S-3	III	Proposed Engineer Change Authorization	2/10/83
S-4	III, XV	Engineering Change Authorization	9/1/82
S-5	III	Minor-"On-the-Spot"-Engineering Change Authorization	1/17/83
S-6	III	UE&C Engineering Stop Work Order	1/17/83



Pullman Power Products

FORM 1
SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: E.P. Gentry

DATE: 5/8/81

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1

QUALITY ASSURANCE MANUAL - STOCKHOLM LINE

MANUAL TITLE: Project 04 Annual-AGE, Section III, Division 1, Stockholm
MANUAL ISSUE/REVISED LEVEL: 03 dated 5/10/79

1 - SHEETS

Sheet Number	Assigned To	Location	Date Assigned	Date Original Sheet Destroyed	Remarks
1	Don. Spas	All. Pull. Pa.	8/15/77	8/16/77	
2	E. Gentry	Pullman Power Williamsport	8/15/77	8/16/77	
3	E. Gentry	Pullman Power Williamsport	8/15/77	8/16/77	

827-12 (1-7-83)



Pullman Power Products

Form 2
SECTION NO.

PREPARED BY: R. G. DAVIS

APPROVED BY: E. F. GERWIN

DATE: 2/10/89

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1



Pullman Power Products

A Whittaker - Ray Company

P. O. Box 1600, Seabrook Station
Seabrook, New Hampshire 03874
Phone (603) 833-4201
Telex 821490
Cable Pulling International

Attention:

Enclosed is your personal copy of the Pullman Power Products Project Quality Assurance Manual. This manual documents the quality system in effect for those activities defined within the scope of ASME Certificates of Authorization Nos. B-1101-2 (NPT) and B-1102-2 (SA).

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 Higgins, QA Department, Seabrook, New Hampshire.

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 - Higgins
P. O. Box 160
Seabrook, New Hampshire 03874

Attention: QA Manager

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

Sincerely yours,

Richard G. Davis
QA Manager
Seabrook Station

This Manual is assigned to: Jack Smith QA Manual Ser. No. 2

Issued/Rev./Suppl./Date: 87, 9/9/80 Project: Seabrook

Date Manual/Supplement Assigned: 9/9/80

Signature of
Manual Holder

Date: 9/9/80



Pullman Power Products

Form 3
SECTION NO.

PREPARED BY: R.G. DAVIS

APPROVED BY: E.P. GERWIN

23

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 2



Pullman Power Products PERSONNEL RESUME

DOB: 1/13/44

Badge # 0080

SEP -14 (1-13-83)

Name: John Saiche

SSAN:

Hire Date: 11/15/82

1. EDUCATION:

	NAME OF INSTITUTION	CITY/STATE	HIGHEST GRADE COMPLETED	YEAR
GRAMMAR SCHOOL				
HIGH SCHOOL	Wilmington High	Bedford, Ct.	12	74
COLLEGE/UNIVERSITY	Manchester University	Richdale, N.H.	2	76

2. TECHNICAL TRAINING: (All courses listed must be supported with documentation)

COURSE/SEMINAR	SUBJECT	ADMINISTERED BY	CREDIT HOURS	YEAR
AS4-AWS	welding inspection	Home Study	5	77

3. DEGREES/CERTIFICATIONS: (Submitting documents required)

DEGREES/CERTIFICATIONS	ISSUED BY	DATE
AWS - C W I	AWS - MIAMI	78

4. WORK HISTORY: (Chronological order, current work last)

POS/YS MONTH-YEAR	TITLE	ORGANIZATION
1978 - 1982	Weld Inspector Visual inspection of structural steel and welds; certification of welders	Transstar Corp



Pullman Power Products

Form 3
SECTION NO.

PREPARED BY: R.G. DAVIS

APPROVED BY: E.F. GERWY

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 2 of 2

PULLMAN POWER PRODUCTS Quality Assurance Examination Record

NAME: John Cee

Qualification	Level	Grade	Date	Examined by	Re-exam by	Grade	Date
Process Engineering	II	93	1/12/83	J.D.			
Materials Engineering	II	95	1/12/83	J.D.			
Welding Engineering							
Records Maintenance	II	98	1/12/83	J.D.			
Code Compliance Verif.							

Examination Grades in Percent

Qualification	General	Specific	Practical
Process Engineering	93	94	95
Materials Engineering	95	95	95
Welding Engineering			
Records Maintenance	98	97	98
Code Compliance Verif.			

Percentile Weight

Qualification	General	Specific	Practical
Process Engineering	.3	.2	.5
Materials Engineering	.3	.2	.5
Welding Engineering	.3	.2	.5
Records Maintenance	.3	.2	.5
Code Compliance Verif.	.3	.2	.5
	.3	.2	.5
	.3	.2	.5
	.3	.2	.5

557-14A (1-13-83) Form 2.13, 6-8-82



Pullman Power Products

FORM 4
SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: E.F. Getzlin

DATE: 1-17-83

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1

ENR-84 SUGGESTED FORMAT FOR MANUFACTURER'S RECORD OF WELDER OR WELDING OPERATOR
QUALIFICATION TESTS
Use ENR-87, Section II, ASME Code and Pressure Vessel Code

Welder Name: R. L. Davis Date: 1-17-83 Weld No. ED
 Working Position: QUAL Job: WALD
 ASME Code: SECTION II, PART B, DIV. 1
 Welding Process: SHIELD METAL ARC (SMA)
 Electrode: E7018 Shielding Gas: AR
 Position: 1G Thickness: 1/2" Diameter: 1"
 Test Piece: WALD Case No. 17018-1-17-83 Page: 1 of 1
 Test Results: ACCEPTABLE
 Test Location: NEW YORK ANALYTICAL LABORATORY
 Test Operator: Richard D. Rol
 Test Date: 1-17-83

Test Results: ACCEPTABLE
 Test Location: NEW YORK ANALYTICAL LABORATORY
 Test Operator: Richard D. Rol
 Test Date: 1-17-83

Test Conducted by: Richard D. Rol Location: NEW YORK
 To certify that the conditions of the record are correct and that the test results were prepared, verified and tested in accordance with the requirements of Section II of the ASME Code.
 Date: 1-17-83 Organization: PULLMAN POWER PRODUCTS
 By: R. J. Thomas



Pullman Power Products

FORM 7
SECTION NO.

PREPARED BY: E.G. Davis

APPROVED BY: E.F. Gerwin

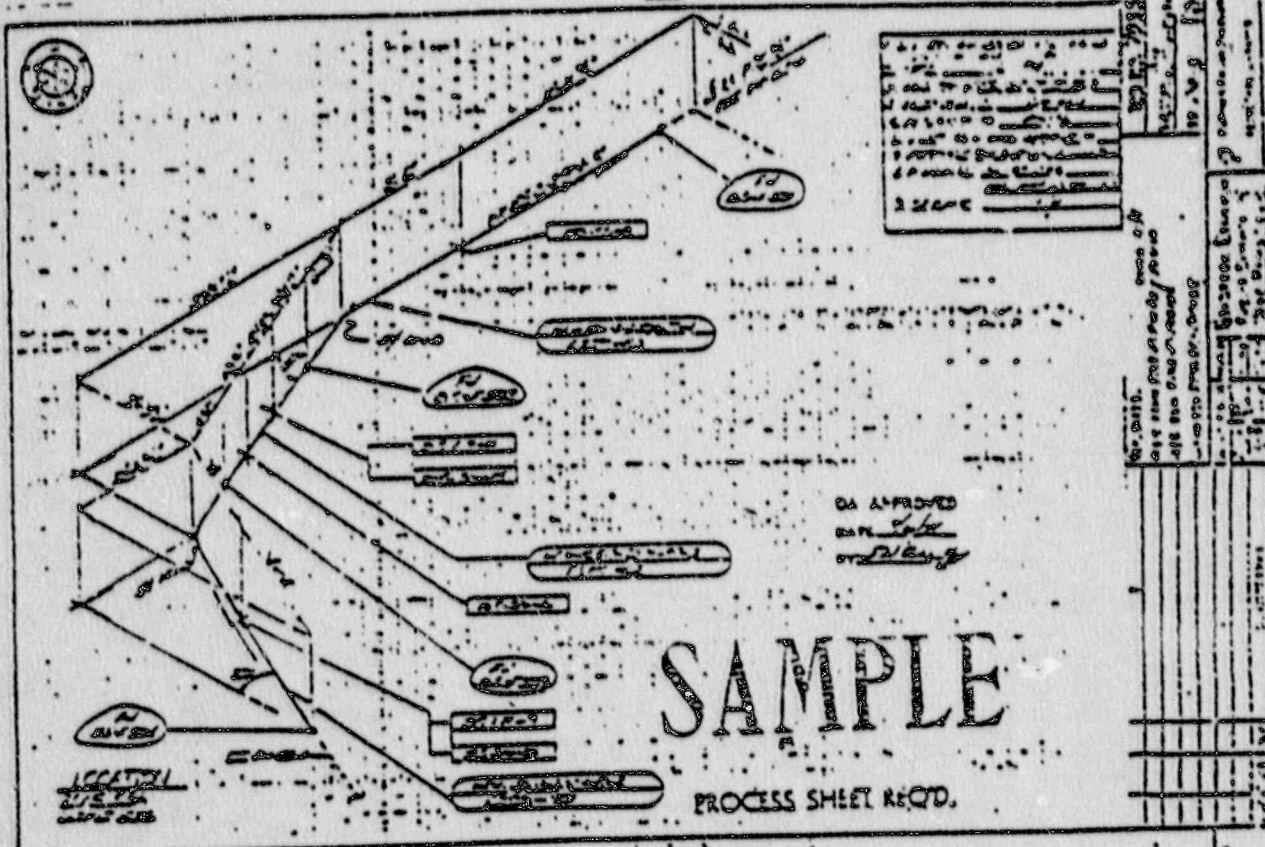
DATE: 5/8/81

QUALITY ASSURANCE
PROGRAM

FILMS

PAGE
NO. 1 of 1

FIELD DRAWING



NO.	DESCRIPTION	DATE	BY
1	FIELD WELDS	5/8/81	E.G. Davis
2			
3			
4			
5			
6			
7			
8			
9			
10			

Pullman Power Products
FIELD DRAWING

DATE: 5/8/81
BY: E.G. Davis

APPROVED BY: E.F. Gerwin

DATE: 5/8/81

FIELD WELDS

15-7-20
15-7-202
15-7-203
15-7-204

TO BE USED ONLY FOR JOB No. 7035



Pullman Power Products

FORM 10A
SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: E.F. Gerwin

DATE: 1/17/83

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1

FORM

PAGE 1 of 1

INSTALLATION VERIFICATION

UNIT: SW-27

ISO 15019 12-03 REV. 1.2

The following items have been checked to ensure complete and correct installation of systems for development of applicable "As-Built" documentation.

ITEM	ACCEPT	REJECT	N/A	REMARKS
1) Prefabricated Assemblies	✓			
2) Components (valves, pumps, vessels, etc.)			✓	
3) Supports & Restraints	✓			
4) Radiograph Films			✓	
5) Tests	✓			
6) Drawings			✓	
7) Random Ins Piping			✓	
8) Removal of Temporary Attachments	✓			
9) ICA & SAC Received	✓			

J. D. Bean 6/1/80
Signature & Date Area Inspector

557-4 (4-83)



Pullman Power Products

FORM 10B
SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: P. F. GARDNER

DATE: 11/17/80

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 OF 1

FORM
REV. 1 11-18-80

QA/QC FINAL INSPECTION

SYSTEM: SW ISO: SW-1810-01

Part I: Documentation Review

Based on ISO Rev. # 9
SW-23

	Verified	N/A	Remarks
1) Process Sheet Documentation	<u>DR</u>		
2) EOI Documentation	<u>DR</u>		
3) Test Test Records		<u>DR</u>	
4) Non-Conformance Reports	<u>DR</u>		<u>None on tested welds</u>
5) Shop Mark Orders	<u>DR</u>		<u>None written</u>
6) Coating and Wrapping	<u>DR</u>		<u>CPW TEST OF FLOW WELDS AND REWORKED BY SLOW TEST</u>

Documentation Review Acceptable D. DeLuca 8/5/80
QA Records Date

Part II: As-Built Inspection

Based on As-Built ISO Rev. # _____

	Verified	N/A	Remarks
1) Permanent hangars installed in accordance with as-built dog.		<input checked="" type="checkbox"/>	
2) System complete in accordance with as-built ISO	<input checked="" type="checkbox"/>		
3) Material Data Reports (MFR-1) reflect any changes made to steel pieces as a result of field revisions		<input checked="" type="checkbox"/>	
4) No apparent damage	<input checked="" type="checkbox"/>		
5) Classification Requirements	<input checked="" type="checkbox"/>		
6) Torque Seal verified undisturbed		<input checked="" type="checkbox"/>	

As Built Acceptable Richard Ror 8/5/80
QC Inspector Date

The As Built ISO Rev. # _____ has been compared to the Documentation

Review ISO Rev. # _____ . Documentation is acceptable.

QA Records Date

957-9 (1-4-83)



Pullman Power Products

FORM 10C
SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: E.F. Gentry

DATE: 9/2/82

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1

Process Sheet and AS/Built Status Log

ITEM #	CR#-PART #		
FORM #	CR#-1	CR#-2	
FORM 10A DATE	7-30-80	7-30-80	
FORM 10B PART I DATE	7-31-80	7-31-80	
FORM 10B PART II DATE	NA	NA	
AS BUILT REV. #	3	3	
AS BUILT REV. DATE	1-12-82	1-12-82	
REV. REV. NOTED DATE	1-12-82	1-12-82	
PLAN REV. DATE	NA	NA	
APP. REV. DATE	NA	NA	
TRAC REV. DATE	11-21-79	11-21-79	
DES. CHECKLIST #			
DES. APPROVAL DATE			
ITEM #			
FORM #			
FORM 10A DATE			
FORM 10B PART I DATE			
FORM 10B PART II DATE			
AS BUILT REV. #			
AS BUILT REV. DATE			
REV. REV. NOTED DATE			
PLAN REV. DATE			
APP. REV. DATE			
TRAC REV. DATE			
DES. CHECKLIST #			
DES. APPROVAL DATE			

SEP-11 (1-11-82)



Pullman Power Products

FORM 100
SECTION NO.

PREPARED BY: E.G. Davis

APPROVED BY: E.P. Corvia

DATE: 1/17/82

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE 1 of 1
NO.

Pullman Power Products

PAGE 1 of 1

SEABROOK STATION
JOB FILE

PULLMAN POWER PRODUCTS FIELD PRESSURE TEST COVER SHEET

Title: Condensate

Test No.: 90-16

PRE-TEST REVIEW

Prepared By:	<u>J. Smith</u>	Date:	<u>6/29/82</u>
P.P.P. Eng.:	<u>J. Smith</u>	Date:	<u>7/6/82</u>
T.A.E.C. Scribe US/DA:	<u>AIA</u>	Date:	<u> </u>
UE & C Scribe US:	<u>Bob Black</u>	Date:	<u>10/12/82</u>
P.P.P. DA:	<u>J.P. Williams</u>	Date:	<u>10/20/82</u>

RESULTS REVIEW

P.P.P. DA:	<u>J.P. Jones</u>	Date:	<u>11/1/82</u>
UE & C Scribe US:	<u>Joe Daniels</u>	Date:	<u>11/10/82</u>
T.A.E.C. Scribe US/DA:	<u>AIA</u>	Date:	<u> </u>

897-50 (1-7-82)



Pullman Power Products

FORM 108

SECTION NO.

PREPARED BY: E.G. Davis

APPROVED BY: E.F. Garvin

DATE: 1/17/82

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 1 of 1

BRANCH STATION
JOB 7000

Pullman Power Products

PAGE 1 of 1

FIELD PRESSURE TEST REPORT

No. 250-1

Boundary Description: Boiler 2-122
2-2-80-481-11 To 2-1-8200
2-2-80-802-1-22
P.P.P. Insp. E.G. Davis Date 1-16-82
Case/Class 2-2-80-662

Type of Test:

- Hydrostatic
- Pneumatic
- Inservice
- Other: _____

TEST PARAMETERS

Design Pressure: 150 PSIG A.D.T.T. Limits 25 %
 Test Pressure: (Min.) 127.5 / (Max.) 192 PSIG Test Temp. 45 °F
 Boiler Valve Setting 100 PSIG Temp. Inst. Ser. # 4056 Date 2-16-82
 Test Media Water Test Hold Time 10 min.
 Test Gauge Ser. # 4-2 Date 3-25-82 Start Time 2:00
 Test Gauge Range 0-200 Completion Time 3:10
 Test Pressure Achieved 191
 Inspection Test Pressure 150 Inspected by J. De Date 1-26-82

All welds within the boundaries of this test, unless they are found in the exception list (Form 108), have been tested to procedure II-1, Rev. 1 and found to be acceptable.

Exception List Yes No

Witnessed A.R.I. D. A. C.

Date 1-26-82

Witnessed Owner Rep. S. L. H.

Date 1-26-82

Approved P.P.P. E. G. Davis

Date 1-26-82

Witnessed NRC Insp. E. F. Garvin

Date 1-26-82

SEP 82 (1-7-82)



Pullman Power Products

FORM 101
SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: E.F. Gentry

DATE: 1/17/81

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1

PAGE 1 OF 1

PULLMAN POWER PRODUCTS PRE-LIAR TEST CHECKLIST

Test # 200-1

- | | ACT. | REL. | Y/A |
|---|------|------|-----|
| 1. Forms 101 and 102, Part I, reference procedure 101 are signed off for the listing within the test boundary. | ✓ | | |
| 2. All supports are consistent support members. Take note of all hydrostatic loads in test cell. | ✓ | | |
| 3. Temporary members have been added in order of test times if necessary to support the weight of test fluid. | ✓ | | |
| 4. Location of joints are shown and with temporary restrictions or otherwise isolated from the test. | ✓ | | |
| 5. Equipment not to be tested is disconnected from the system or isolated by valving or blow flanges. vents outside test boundaries are to be open. | ✓ | | |
| 6. All joints including welds are left uninsulated and exposed for examination during the test, unless otherwise indicated by the designer. | ✓ | | |
| 7. Inspection personnel are to witness and accept test tests and be qualified and certified in accordance with Procedure 101-1. | ✓ | | |
| 8. Verification that test parameters agree with applicable line specifications. | ✓ | | |

K.C. Smith

Pullman Power Products Co.

1/13/81

1414

887-22 (1-10-83)



Pullman Power Products

FORM 10J
SECTION NO.

PREPARED BY: R.C. Davis

APPROVED BY: R.F. Gentry

DATE: 9/17/82

QUALITY ASSURANCE
PROGRAM

FORMS

FORM NO. 1 of 1

PAGE 7 OF 7

DOCUMENTATION REVIEW

TEXT - 2CO-1

The following documentation has been reviewed to ensure complete and correct installation of systems for performance of integrity testing, as detailed in the Integrity Test Assembly Description, Attachment 2.1, of Fire Protection System.

	Verified	N/A	Comments
1. Process Sheet Documentation	✓		
2. NFI Documentation	✓		
3. PWT Complete	NA		
4. Non Conformance Reports	NA		
5. Fire Protection System Desc.	NA		
6. Shop Work Orders	✓		PW-46
7. Other		✓	

Documentation Review Acceptable

D. Watts 3-22-82

QA Records

ISS-23 (1-12-81)



Pullman Power Products

FORM 12

SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: E.F. Gerwin

EG

DATE: 3/1/82

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1

Pullman Power Products

APPROVED VENDOR LIST

ISSUED 9/27/81
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 32786	8	-	4/22/82	NH	1
BARR-SAUNDERS, INC.	West Frontage Rd. 155 & Route 8 Channahon, IL 60410	26	OSC-257 11/26/82		MS	1
CHICAGO TUBE & IRON	2531 West 48th St. Chicago, IL 60632	34	N-1397 6/7/82	-	MS	1
LEWIS P. CANISO, INC.	Cedar & Spruce Sts. Deptford, NJ 08096	44	OSC-396 1/31/83	-	MS	1
CORNER & LADA COMPANY, INC.	1341 Elmwood Ave. Cranston, RI 02510	45	OSC-287 N-1776 6/10/83	-	MS NH	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. 7025 ONLY						

REMARKS:

SAMPLE



Pullman Power Products

FORM 16

SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: E.P. Garcia

6/2

DATE: 2/17/83

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 1 of 1



Pullman Power Products

VI-6

DOCUMENT NO.

PREPARED BY: C.F. Gossell

APPROVED BY: H. Hinkley

22

DATE: 7/17/79

SEABROOK PROJECT PROCEDURE

TO BE USED ONLY ON JOB #

7035

PAGE NO. 1 of 7

CONTROL OF PROCESS SHEETS

LATEST REV. DATE 7/9/82



Pullman Power Products

VI-6

DOCUMENT NO.

PREPARED BY: C.F. Gossell

APPROVED BY: H. Hinkley

22

DATE: 7/17/79

SEABROOK PROJECT PROCEDURE

TO BE USED ONLY ON JOB #

7035

PAGE NO. 3 of 7

1.0 SCOPE

- 1.1 This procedure is intended to provide a detailed method for issuing control of drawings, specifications, and materials for process sheets. It includes sheets and work order assignments.
- 1.2 The Process Sheets are prepared to control special processes as they relate to activities which affect quality. Its use shall be mandatory for all fabrication and erection activities which are performed in accordance with the requirements of ASME Section III and ANSI B31.1 critical and ungraded. Its use shall be optional for all other activities.

2.0 RESPONSIBILITY

- 2.1 It shall be the responsibility of the Chief Field Engineer, or his designee, to prepare all required Process Sheets.
- 2.1.1 The assigned Field Drawing Control Clerk (FDCC) shall prepare and distribute a list (consisting of several copies) of all Section III Pullman initiated controlled drawings indicating the latest revision level, to be updated daily by distributing copies which have changed or have been added as a result of drawing revisions or new issues. Distribution is made to the QA Specialist-Process daily, and then updates Red Room distribution centers.
- 2.2 The QA Manager or the QA Engineer-Process shall review process sheets for correctness, completeness, accuracy and applicability with Code requirements prior to issuance. He is also responsible for assigning Company "hold points".
- 2.2.1 The QA Manager, or his designee, shall prepare and distribute to the applicable QA Specialists-Process, a type-written document index, reflecting document number, revision number, revision date and document title. This index shall be updated and distributed each time a procedure revision is accepted.
- 2.3 The QA Specialist-Process shall be responsible for control of Process Sheets.
- 2.3.1 This shall include the controlled issuance from the Process Issue Area by system, isotropic, and weld number. He is responsible for maintenance of a daily log indicating the format to which the Process Sheet was issued, and a daily review of the status of the activities being controlled by the Process Sheet.
- 2.4 The QA Engineer-Records shall be responsible for retention and filing of Process Sheets in a systematic and orderly fashion to enable immediate retrieval upon request.

REV. CODE
12
REVISION
03
7/17/79
04
10/29/79
06
6/27/80
08
8/7/80
07
3/23/81
08
7/15/81
09
9/15/81
10
1/7/82
11
5/18/82
12
7/9/82

7/9/82

1/7/82

3/23/81



PREPARED BY: R.G. Davis

APPROVED BY: E.P. Gentry

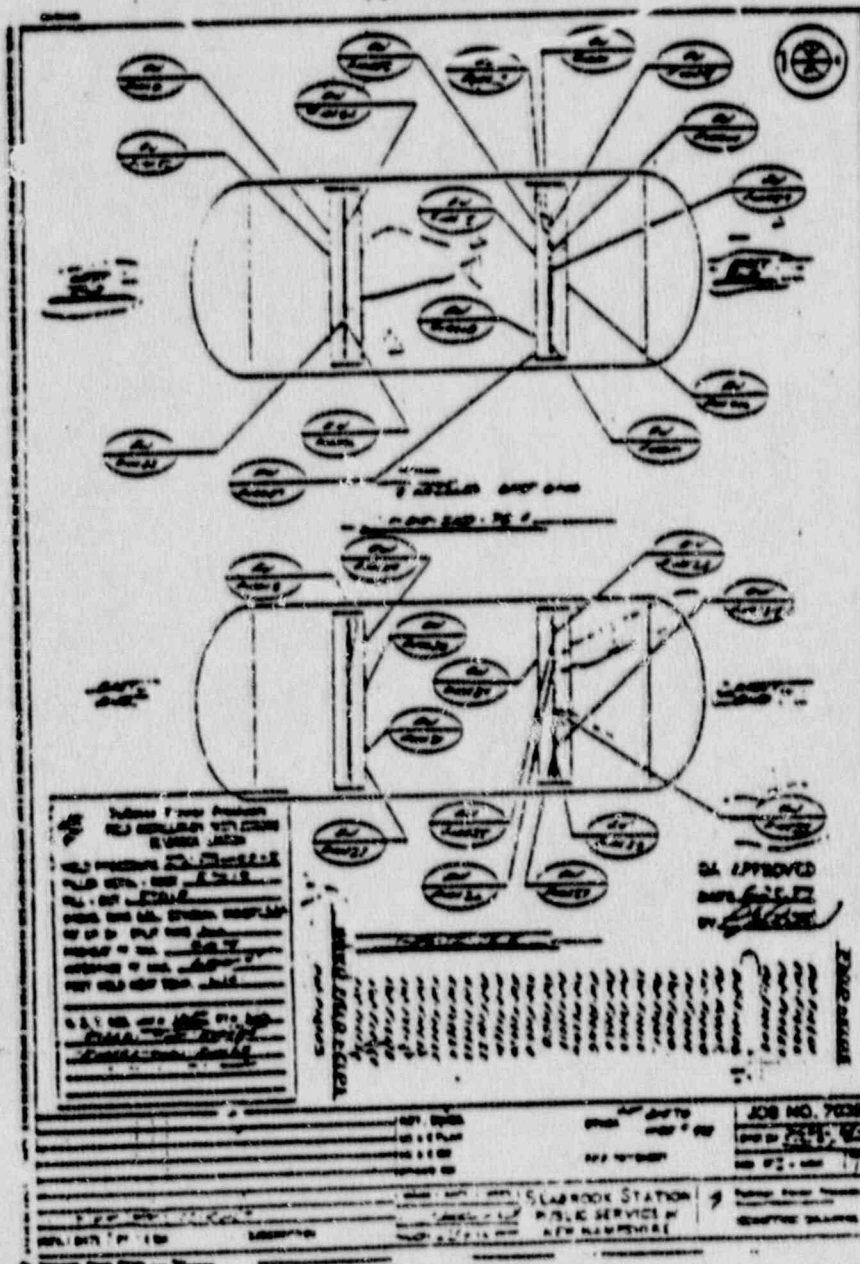
DATE: 7/17/83

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1

FIELD INSTRUCTION





Pullman Power Products

FORM 19D
ELECTION NO.

PREPARED BY: R.G. DEVLIS

APPROVED BY: E.F. GARDNER

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1

PULLMAN POWER PRODUCTS EXPANSION ANCHOR FIELD PROCESS SHEET

BBP-82 (2-10-83)

N/A = NOT APPLICABLE

CUSTOMER		SYSTEM - LINE NO.		SUPPORT NO.		REV.		SHEET NO.	
Public Service Co. of Mo. Job No. 7028								OF	
BOLT SIZE	PLA. EMBED	PLATE NO.	BOLT NO.		CODE	CLASS			
REQUIRES:		INIT.	1	2	PROC.	HOLD AKI	HOLD P.P.P.	P.P.P. DATE	AKI DATE
OPERATIONS		INI	SAT	INI	SAT	INI	SAT		
1 PRE TORQUE INSPECT									
Verify-									
-Bolt Dia./Type/Length.....		X	X	X	X				
-Edge Distance.....		X	X	X	X	13-1			
-Spacing.....		X	X	X	X	REV.			
-Gap.....		X	X	X	X				
-Angular Deviation.....		X	X	X	X				
2 APPLY TORQUE									
Verify-									
-Nut Flush.....		X	X	X	X	13-1			
-Bolt Condition.....		X	X	X	X	REV.			
-Min. Torque Achieved....		X	X	X	X				
-Max. Torque Not Exceeded		X	X	X	X				
-Check Exposed Bolt.....		X	X	X	X				
Unsat. Cond = QC Reject w/ Date:									
TORQUE DEVICE NO: _____									
CAL. DUE DATE: _____									
3 Reinspect (Min. 5 days after install)									
Verify-									
-Bolt Condition.....		X	X	X	X	13-1			
-Min. Torque Achieved....		X	X	X	X	REV.			
-Max. Torque Not Exceeded		X	X	X	X				
-Min. Torque Achieved....		X	X	X	X				
-Check Exposed Bolt.....		X	X	X	X				
Unsat. Cond = QC Reject w/ Date:									
TORQUE DEVICE NO: _____									
CAL. DUE DATE: _____									
PREP. BY: _____	DATE: _____	P-W ENG. APP: _____	DATE: _____	FINAL QA CHECK: _____	DATE: _____				
O.A. APP: _____	DATE: _____	AKI REVIEW: _____	DATE: _____	ORIG. CODE: PX-52					
				RECORD TYPE: _____					
				IMS INDEX NO: _____					
*SEE INSTALLATION CHECKLIST FOR W/LT: BOLT LOCATION									
CORRECTIONS/REQUIRED REWORK:									



Pullman Power Products

FORM 19E
REVISION NO.

PREPARED BY: R.G. DAVIS

APPROVED BY: E.F. GERVIN

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1



Pullman Power Products

PI 52 _____
RECORD TYPE _____
INS INDEX _____

SEABROCK STATION

SEABROCK PROCESS SHEET

Reaper: _____ ISO: _____ Seaboard: _____ Rev: _____

Code: _____ Class: _____ Holder: _____
TAPCO: _____

Oper. No.	Operation	Procedure	N/A	Held APT	Held PPP	PPP Date	APT Date
1	Seubber Alignment						
2	Rear Ball Joint Loose						
3	Clamp Nut Tightened						
4							

SAMPLE

"A" SETTING _____
PI5 TO PID DIMENSION _____
TORQUE RANGE _____ TO _____
TORQUE WRENCH NO. _____
FINAL CHECK
QA _____ DATE _____

ENG. APPROVAL _____
PREPARED BY _____
QA APPROVAL _____
APT REVIEW _____
CALIBRATION DATE _____

557-31 (1-12-83)



Pullman Power Products

FORM 190
SECTION NO.

PREPARED BY: R.G. DAVIS

APPROVED BY: E.F. GAYLOR

DATE: 1/17/63

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 1 OF 1

QTY	DESCRIPTION	DATE	BY	INITIALS	DATE	INITIALS	DATE
1	Visual Inspection	1-17-63	RGD				
2	Fit up and pack	1-17-63	RGD				
3	Final Check	1-17-63	RGD				

SAMPLE

NOT FOR USE ONLY FOR JOB NO. 2034

1. Material from project
 2. Standard Station
 3. Pullman Process - SHERB
 4. Job No. 2034
 5. Code: 1-155-5
 6. Date: 1-17-63
 7. Code: 1-155-5
 8. Material: 1/2" dia. 106
 9. Material: 1/2" dia. 106
 10. Material: 1/2" dia. 106
 11. Material: 1/2" dia. 106
 12. Material: 1/2" dia. 106
 13. Material: 1/2" dia. 106
 14. Material: 1/2" dia. 106
 15. Material: 1/2" dia. 106
 16. Material: 1/2" dia. 106
 17. Material: 1/2" dia. 106
 18. Material: 1/2" dia. 106
 19. Material: 1/2" dia. 106
 20. Material: 1/2" dia. 106
 21. Material: 1/2" dia. 106
 22. Material: 1/2" dia. 106
 23. Material: 1/2" dia. 106
 24. Material: 1/2" dia. 106
 25. Material: 1/2" dia. 106
 26. Material: 1/2" dia. 106
 27. Material: 1/2" dia. 106
 28. Material: 1/2" dia. 106
 29. Material: 1/2" dia. 106
 30. Material: 1/2" dia. 106
 31. Material: 1/2" dia. 106
 32. Material: 1/2" dia. 106
 33. Material: 1/2" dia. 106
 34. Material: 1/2" dia. 106
 35. Material: 1/2" dia. 106
 36. Material: 1/2" dia. 106
 37. Material: 1/2" dia. 106
 38. Material: 1/2" dia. 106
 39. Material: 1/2" dia. 106
 40. Material: 1/2" dia. 106
 41. Material: 1/2" dia. 106
 42. Material: 1/2" dia. 106
 43. Material: 1/2" dia. 106
 44. Material: 1/2" dia. 106
 45. Material: 1/2" dia. 106
 46. Material: 1/2" dia. 106
 47. Material: 1/2" dia. 106
 48. Material: 1/2" dia. 106
 49. Material: 1/2" dia. 106
 50. Material: 1/2" dia. 106
 51. Material: 1/2" dia. 106
 52. Material: 1/2" dia. 106
 53. Material: 1/2" dia. 106
 54. Material: 1/2" dia. 106
 55. Material: 1/2" dia. 106
 56. Material: 1/2" dia. 106
 57. Material: 1/2" dia. 106
 58. Material: 1/2" dia. 106
 59. Material: 1/2" dia. 106
 60. Material: 1/2" dia. 106
 61. Material: 1/2" dia. 106
 62. Material: 1/2" dia. 106
 63. Material: 1/2" dia. 106
 64. Material: 1/2" dia. 106
 65. Material: 1/2" dia. 106
 66. Material: 1/2" dia. 106
 67. Material: 1/2" dia. 106
 68. Material: 1/2" dia. 106
 69. Material: 1/2" dia. 106
 70. Material: 1/2" dia. 106
 71. Material: 1/2" dia. 106
 72. Material: 1/2" dia. 106
 73. Material: 1/2" dia. 106
 74. Material: 1/2" dia. 106
 75. Material: 1/2" dia. 106
 76. Material: 1/2" dia. 106
 77. Material: 1/2" dia. 106
 78. Material: 1/2" dia. 106
 79. Material: 1/2" dia. 106
 80. Material: 1/2" dia. 106
 81. Material: 1/2" dia. 106
 82. Material: 1/2" dia. 106
 83. Material: 1/2" dia. 106
 84. Material: 1/2" dia. 106
 85. Material: 1/2" dia. 106
 86. Material: 1/2" dia. 106
 87. Material: 1/2" dia. 106
 88. Material: 1/2" dia. 106
 89. Material: 1/2" dia. 106
 90. Material: 1/2" dia. 106
 91. Material: 1/2" dia. 106
 92. Material: 1/2" dia. 106
 93. Material: 1/2" dia. 106
 94. Material: 1/2" dia. 106
 95. Material: 1/2" dia. 106
 96. Material: 1/2" dia. 106
 97. Material: 1/2" dia. 106
 98. Material: 1/2" dia. 106
 99. Material: 1/2" dia. 106
 100. Material: 1/2" dia. 106



Pullman Power Products

FORM 22

SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: E.F. Gervin

DATE: 5/16/78

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 1 of 1

HOLD TAG

81-21-12

JOB NO. <u>7026</u>	PO <u>201</u>
ITEM NO. <u>N218</u>	HEAT OR SERIAL NO. <u>K-1246</u>
HOLD	
NO. <u>12</u>	DATE <u>2/13/78</u>

- HOLD FOR INSPECTION
 - WAIT FOR TEST REPORT
 - WAIT FOR - NCR - REPORT
 - RETURN TO VENDOR
 - WAIT FOR ENGINEERING SPEC OR DRAWING CLARIFICATION
 - _____
- SAMPLE A*
INSPECTED BY J. Williams

DISPOSITION

Retain in Hold Area until reports are received and approved

(11) SL OR N/A APPLICABLE FOR MS MS ONLY

SSF-36 (1-12-83)



Pullman Power Products

FORM 22A

SECTION NO.

PREPARED BY: E.G. Davis

APPROVED BY: E.F. Gerwin

5

DATE: 5/8/82

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 1 of 1

REPAIR TAGS

PULLMAN POWER PRODUCTS

SEABROOK STATION.. JOB 7035

QA/QC REPAIR

TAG # 15

REWORK

REPAIR

OTHER ACTIVITY

APPLICABLE FOR
JOB No. 7035 ONLY

SAMPLE

NCR # 753

HOLD TAG # 1015

REMARKS

REPAIR GRIND & WELD NOZZLE B

QA/QC INSPECTOR

[Signature]

DATE APPLIED

5/25/82

PPPSB 8-18-7 Rev D
 ORIGINATOR CODE PX-82
 RECORD TYPE 41-R-11-000
 RMS INDEX



Pullman Power Products
 SEABROOK STATION

№ 02046
 JOB 7035

FIELD WAREHOUSE REQUISITION

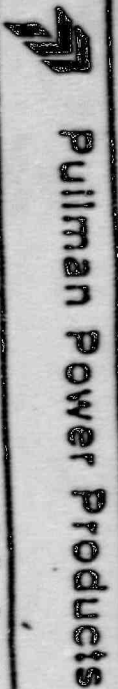
SYSTEM WLD LINE SPEC A3 DATE 5-7-79
 ISO NO. 2054-01 DETAIL NA OR NO. NA ACT NO. NA PAGE 1 of 1

QUANTITY	QUANTITY DELIVERED	ITEM DESCRIPTION	PO. NO.	ITEM NO.	HEAT NO.
10'	10'	6" sch 40 LSA 312 TP316 Pipe	14040	1	NZF-3W
SAMPLE					
APPLICABLE FOR JOB No. 7035 ONLY					

Deliver to Area _____ Foreman _____
 Rec'd By _____
 Eng. Approval _____
 Filled By _____

QA Approved _____ Date _____
 RECEIPT INSPECTED
 QC RELEASE _____ DATE _____

QUALITY ASSURANCE PROGRAM
 PREPARED BY: R.G. Davis
 APPROVED BY: E.F. Gerwin
 FORMS
 DATE 2/10/83
 PAGE NO. 1 of 1
 SECTION NO.
 FORM 26





Pullman Power Products

FORM 26A

SECTION NO.

PREPARED BY: R. G. Davis

APPROVED BY: E. F. Corvin

DATE: 5/16/78

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1

Pullman Power Products

71-2-4/1-21-28
DOCUMENT NO.

PREPARED BY: R. J. Deery

APPROVED BY: F. J. Richards

DATE: 3/13/78

WELDING
PROCEDURE SPECIFICATIONTO BE USED
ONLY ON JOB #PAGE 2 of 3
NO.THIS SPE MUST BE USED IN CONJUNCTION WITH CW5-DN-1
THE GENERAL WELDING STANDARD (S1).WELDING CODE NO.
307

BASE METALS (EN-100)

P NO. 4 OR NO. TO P NO. 1 OR NO.

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

TO SPECIFICATION TYPE & GRADE Carbon Steel

SAMPLE

APPLICABLE FOR

WELDING SEQUENCE

JOB No. 7035 ONLY

	ROOT WELD	INTERMEDIATE WELD	BALANCE
PROCESS	GTAW	SPAW	SPAW
SP/APP SPEC. NO.	W811 or equiv.	1.9/FR018-82	1.9/FR018-82
F-NO. / G-NO.	A3	F6/A3	F6/A3
SHIELDING FLUX/GAS	AT808	N/A	N/A

GAS (EN-408)

WELDING GAS/SHIELD AT808POSITION QUALIFIED All PositionsPERCENT CARBON EQUIVALENT 99.52THICKNESS RANGE QUALIFIED 3/16" to 1.186"PREHEAT 20 C.V.Y. MIN.CONSUMABLE IDENTIFY SYMBOL ER515 or Equiv.GAS DROPLET AT808 PurgeWELDED ELECTRODE SIZE & TYPE 3/32 or 1/8-72

REQUIREMENTS (EN-410)

COEFFICIENT OF EXP. EXP. DIST. 6-7WAVELENGTH OR WAVE PERIOD NoneWELD TOOTH TO WELD DISTANCE N/AWAVE PERIOD TO WAVE PERIOD Max. width of wave shall be 5WAVE PERIOD TO WAVE PERIOD N/AWAVE PERIOD TO WAVE PERIOD Close the core size of the weld rod being usedWAVE PERIOD TO WAVE PERIOD N/AWAVE PERIOD TO WAVE PERIOD SingleWAVE PERIOD TO WAVE PERIOD MultiplePREHEAT & INTERPASS TEMPERATURE REQUIREMENTS: 300°F. MIN. for materials 3/6" or
3000 lb thickness—400°F. MIN for materials greater than 3/6" 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 P.W.T., refer to
page 20 of the CW5-Cr-Mo-1.APPLICABLE FOR
JOB No. 7035 ONLY

FOR GAS BACKING SEE "BACKING GAS PURGE CHART," PAGE 25 of the CW5-DN-1

ADDITIONAL INSTRUCTIONS:



Pullman Power Products

FORM 26B
SECTION NO.

PREPARED BY: E.G. Davis

APPROVED BY: E.F. Garvin

DATE: 5/16/78

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1



Pullman Power Products

71-1-4/1-EI-12

DOCUMENT NO.

PREPARED BY: E.G. Davis

APPROVED BY: F.J. Richards

DATE: 3/13/78

WELDING
PROCEDURE SPECIFICATION

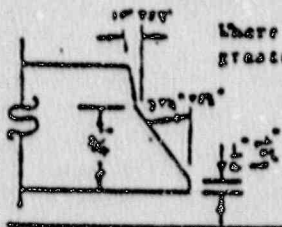
TO BE USED
ONLY ON JOBS

PAGE
NO. 3 of 3

WELDING MATERIAL / GASE METAL CONTROL

GASE METAL	ELECTRODE	GASE WIRE	FLUX
3-1/4 Cr-1/2 Mo LO Carbon Steel	E8018-E2 or E8018-E3	ER315 or equivalent	

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

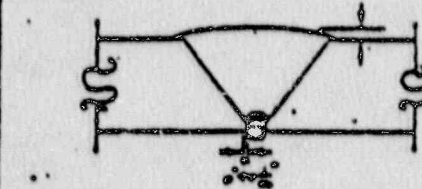


Where the thickness is greater than 1"

Reinforcement is permitted in accordance with Table 64, page 27 of the AWS-D11.1.



Where the thickness is 1" or less



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

SAMPLE

Counterparts may be used, when used, care will be taken to insure min. wall

WELD TYPE OR PROCESS	FILLER METAL		ELECTRODE		VOLT RANGE	WELDER SPEED RANGE	Min. Torch Gas
	CLASS.	SIZE	TYPE	SIZE			
The following parameters shall be used on all GTA welding	The R insert and 1/16 or 3/32 size wire		Straight	65-100	11-13	2 IPM	20 C.F.E.
			Straight	100-150	12-14	3 IPM	20 C.F.E.
			Straight	150-200	13-15	4 IPM	20 C.F.E.
			Straight	200-275	14-16	5 IPM	20 C.F.E.
SHAW	E8018-E2	1/8	Reverse	100-150	20-23	4 IPM	None
SHAW	E8018-E2	5/32	Reverse	120-200	21-24	5 IPM	
SHAW	E8018-E2	3/16	Reverse	200-275	22-25	5 IPM	
APPLICABLE FOR JOB No. 7033 ONLY							
1/16 or 3/32 size fillet-weld. ER315 base wire may be used for intermittent welds or mismatch in							

SAMP



Pullman Power Products

FORM 27A
SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: E.F. Gerwin

DATE: 5/16/78

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1



Pullman Power Products

FORM No. - 307
DOCUMENT NO.

PREPARED BY: R.L. Rowy

APPROVED BY: P.J. Richards

DATE: 6/6/78

AS WELDED
PROCEDURE
QUALIFICATION RECORD (PQR)

TO BE USED
ONLY ON JOB #

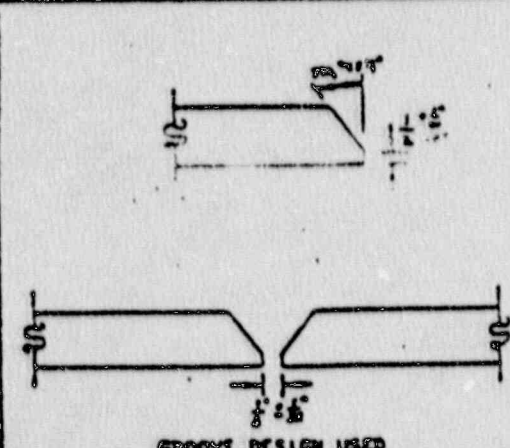
PAGE 2 of 3
NO.

WPS NO. 78-3/1-08-2

WPS DATE 6/1/77

WELDING PROCESS (ES) SMAW
Detailed reprint of AWS P5/P1-08-P4-SMAW-4-AC

TYPES Manual
(MANUAL, AUTOMATIC, SEMI-AUTO)



BASE METAL (DM-403)

MATERIAL SPEC. A333 GR. A-106
 TYPE OF GRADE P22 GR. B
 OF P. NO. 1 TO P. NO. 1
 THICKNESS (IF PIPE, DIAMETER AND WALL
 THICKNESS) 3.75"

PREHEAT (DM-406)
 PREHEAT TEMP. 300° F. MIN.
 INTERPASS TEMP. 700° F. MAX.
 OTHER

GAS (DM-408)
 TYPE OF GAS OR GASES None
 POSITION OF GAS MIXTURE N/A
 OTHER

TECHNIQUE PROCEDURES (DM-410)
 STRIKE OR PLATE BEG. Both
 ORIENTATION 3 T Dia. of Hold Rod Being used
 MULTIPASS OR SINGLE PASS Multipass
 SINGLE OR MULTIPLE ELECTRODES Single

FILLED METALS (DM-404)
 WELD METAL ANALYSIS & NO. 9 FILLER METAL 6
 S.W.A. SPEC. 5.5 AWS CLASS E6010-B2

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

ELECTRICAL CHARACTERISTICS (DM-409)

WELDING PROCESS	ELECTRODE DIA.	BASE FILLER DIA.	CURRENT (AMP)	VOLTS	ARC POLARITY	MIN. WELD SPEED	COMMENTS
SMAW	3/32	-	70-120	20-23	DC Reverse	2 IPH	
SMAW	1/4	-	100-150	20-23	DC Reverse	2 IPH	

APPLICABLE FOR
JOB No. 7035 ONLY

SAMPLE



Pullman Power Products

FORM 27B
SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: E.F. Gerwin

ES

DATE: 5/16/78

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1



Pullman Power Products

PQR No. - 307
DOCUMENT NO.

PREPARED BY: R.L. Bover

APPROVED BY: T.J. Richards

DATE: 4/6/78

PROCEDURE
QUALIFICATION RECORD (PQR)

TO BE USED
ONLY ON JOB #

PAGE
NO. 3 of 3

AS WELDED

TENSILE TEST (QV-150)

SPECIMEN NO.	WIDTH	THICKNESS	AREA	ULTIMATE TOTAL LOAD LB.	ULTIMATE UNIT STRESS PSI	CHARACTER OF FAILURE & LOCATION
72-21-1	.745	.227	.165	12,300	74,500	Broke in C/S Base Metal
72-21-2	.740	.225	.169	12,600	74,600	Broke in C/S Base Metal

GUIDED BEND TESTS (QV-160)

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

TOUGHNESS TESTS (QV-170)

SPECIMEN NO.	NOTCH LOCATION	NOTCH TYPE	TEST TEMP.	IMPACT VALUES	LATERAL FTP	
					AVE	± SHEAR HTLS

SAMPLE

APPLICABLE FOR
JOB NO. 7085 ONLY

Welder's Name F. Cavitt Clock No. 356 Stamp No. 77
 Test Conducted by: Pullman Power Products Laboratory Test No. PL-72-71
 Per: R.L. 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.

API Acceptance R.J. Roberts Signed Pullman Power Products

Date April 6, 1978 By R.L. Bover



Pullman Power Products

FORM 28
SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: E.F. Gerwin

DATE: 5/16/78

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1



Pullman Power Products

IX-PT-1-W75

DOCUMENT NO.

PREPARED BY: A. ECK

APPROVED BY: A. BAIR

DATE: 11/4/77

PERRY
PROJECT PROCEDURE

TO BE USED
ONLY ON JOB #

7026

PAGE
NO. 1 of 2

Appendix D

LIQUID PENETRANT METHOD Visible Dye - Solvent removable
TEST MATERIAL USED Liquid Penetrant Comparator - sect. V Article 6

LIQUID PENETRANT MANUFACTURER Trico Products - Analysis in Parts per million
MANUFACTURER'S ORDER NUMBER By Check Developer - 2, By Check Cleaner No. 3.
PENETRANT SULPHUR 21.0% HALOGEN 4.3% ZINC 3.0% LEAD NIL TIN NIL BATCH NO. XL-101

CLEANER SULPHUR 18.0% HALOGEN 4.4% 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: B-96 Cleaner - Applied with clean cloths - Five (5) minutes Drying Time.

PENETRANT APPLICATION METHOD: Brush-Time - Ten (10) minutes - Penetrant XI-150R

PENETRANT TEMPERATURE: Approximately 70°

TEST SURFACE TEMPERATURE: Approximately 70°

AIR TEMPERATURE: 70°

DEVELOPING TIME: NA

EXCESS PENETRANT REMOVAL: Lint free cloth moistened with B-96 Cleaner

FORCE OF WATER SPRAY: NA

TEMPERATURE OF WATER: NA

EASE OF PENETRANT REMOVAL: Good

DRYING TIME: Ten (10) minutes

DEVELOPING TIME: A215 Developer - Straying

BLACK LIGHT INTENSITY: NA

SEIZABILITY: Good

TYPE OF INDICATIONS VISIBLE: Cracks

EVALUATION OF METHOD USE: Good

APPLICABLE FOR

JOB No. 7026 ONLY

POST CLEANING METHOD: B-96 Cleaner - Scraved - Wiped Clean

TIME AFTER DEVELOPER WAS APPLIED UNTIL PHOTOGRAPH WAS TAKEN: Fifteen (15) minutes

TYPE PHOTOGRAPH: Cracks - Black and White

TYPE FILM: Kodak - Tri-X Orcho

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

A. Bair
Level III

AMI Acceptance

James A. Blair



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

Inspection Station

MAGNETIC PARTICLE EXAMINATION RECORD

APPLICABLE FOR
SSB NO. 200 ONLY

CC	798	01	P0101
System	Line No.	Job	P. N. No.

Examination Procedure 17-MT-2-477 Rev. _____

Acceptance Criteria (if separate from procedure) Spec

Manufacturer's Name: Pullman Products

- (1) Manufacturer: Pullman Products
- (2) Model No.: D-200
- (3) Serial No.: 8215
- (4) Calibration Due Date: 12-18-81

SAMPLE

(Mark method if applicable)
AC RC

Inspection Parameters

- (1) Method: Dry continuous: Prod , Take , Other NA
- (2) Prod (yoke) spacing: 6 inches.
- (3) Ammeter Reading: N/A amperes.
- (4) Particle Material: Color(s) Red Manufacturer Meane Flux
- (5) Inspected area type: Section (flange or pipe end) 24" x 375 inch.
Weld Joints: Butt , ID , Fillet , Groove
Base Metal , Other NA

Inspection Results Summary

APPLICABLE FOR

- (1) Did material (weld and adjacent base) SSB NO. 200 ONLY contain defects repairable without weld repair, (ie: surface reconditioning or grinding)?
Yes No
- (2) Prod ARC Strikes removed and area overlaid: 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 J. J. [Signature] Level II Date 12-10-81

Witnessed/Verified by ART J. C. [Signature] Comp. No. ART Date 12-10-81

Order NA Agency NA Date _____
Order NA Agency NA Date _____

Note: Mark all blank spaces N/A if non-applicable.

SSF-41 (1-12-83) ---



Pullman Power Products

FORM 28

SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: E.F. Gerwin

EG

DATE: 5/16/78

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1

Pullman Power Products

IX-PT-1-175

DOCUMENT NO.

PREPARED BY: A.ECF

APPROVED BY: A.BAIR

AB

DATE: 11/4/77

PERRY
PROJECT PROCEDURETO 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	Three Products - Analysis in Parts per million	
MANUFACTURER'S ORDER NUMBER	By-Chloro Penetrant No. 1, By-Chloro Cleaner No. 3,	
PENETRANT SULPHUR 21.0% HALOGEN 4.3% ZINC 3.0% LEAD NIL TIN NIL	By-Chloro Developer - Nil	BATCH NO. XL-101
CLEANER SULPHUR 10.0% HALOGEN 4.4% ZINC NIL LEAD NIL TIN NIL		BATCH NO. B096
DEVELOPER SULPHUR 10.0% HALOGEN 34.0% ZINC NIL LEAD NIL TIN NIL		BATCH NO. A215
SURFACE PREPARATION	Liquid Penetrant Comparator	
PRE-CLEANING METHOD	B096 Cleaner - Applied with clean cloths - Five (5) minutes Drying Time.	
PENETRANT APPLICATION METHOD	Brush-Timed - Ten (10) minutes - Penetrant XL-1508	
PENETRANT TEMPERATURE	Approximately 70°	
TEST SURFACE TEMPERATURE	Approximately 70°	
AIR TEMPERATURE	70°	
DEVELOPING TIME	Nil	
EXCESS PENETRANT REMOVAL	Lint free cloth moistened with B096 Cleaner	
FORCE OF WATER SPRAY	NA	
TEMPERATURE OF WATER	NA	
EASE OF PENETRANT REMOVAL	Normal	
DRYING TIME	Ten (10) minutes	
DEVELOPING TIME	A215 Developer - Spray	
BLACK LIGHT INTENSITY	NA	
SEASIBILITY	Good	APPLICABLE FOR
TYPE OF INDICATIONS VISIBLE	Cracks	JOB No. 7026 ONLY
EVALUATION OF METHOD EASE	Good	
POST CLEANING METHOD	B-96 Cleaner - Strayed - Wiped Clean	
TIME AFTER DEVELOPER WAS APPLIED UNTIL PHOTOGRAPH WAS TAKEN	Fifteen (15) minutes	
TYPE PHOTOGRAPH	Grates - Black and White	
TYPE FILM	Kodak - Tri-X Orho	
DISTANCE CAMERA LENS-TO-TEST SURFACE	---	
ILLUMINATION	Rayline	
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

A. Bair
Level III

AMI Acceptance

James A. Bellier



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

R0101

System

Line No.

ISO No.

T. U. No.

Examination Procedure IR-MT-2-77 Rev 1Acceptance Criteria (if separate from procedure) Spec

Magnetic Particle Testing Equipment

- (1) Manufacturer: Peter Research
 (2) Model No.: D-200
 (3) Serial No.: 8919
 (4) Calibration Due Date: 12-18-91

SAMPLE(Note method if yoke used)
AC YK

Testing Parameters

- (1) Method: Dry continuous Prod Yoke Other NA
 (2) Prod (yoke) spacing: 6 inches
 (3) Ammeter Reading: N/A amp ts.
 (4) Particle Material: Color(s) Red Manufacturer Magneflux
 (5) Inspected area type: Section (thickness or pipe size) 24" x 375 inch.
 Weld Joint: Butt OD ID Fillet Socket
 Base Metal Other NA

APPLICABLE FOR

Inspection Permit Report

- (1) Did material (weld and adjacent base) NO, 7035 ONLY contain defects repairable without weld repair. (i.e. surface reconditioning or grinding):
 Yes No
 (2) Prod AEC Strikes removed and area examined: Yes No Reason: No ac strikes created
 (3) Results of Examination (Check only when process sheet completed):
 Accept Reject Reason: NA

P.P.P. Inspector M. J. MacLean Level II Date 12-10-91Witnessed/Verified by APT G. C. O'Connell CAPN. NO. CPNT Date 12-10-91Other NA Agency NA Date NA

Note: Mark all blank spaces N/A if non-applicable.

SSF-41 (1-12-83)



Pullman Power Products

FORM 30
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

SEASONING STATION

LIQUID PENETRANT EXAMINATION RECORD

<u>CBS</u>	<u>1201</u>	<u>01</u>	<u>F0101</u>
System	Line No.	ISO No.	F. V. No.

Examination Procedure II-PT-1-UT7

Acceptance Criteria (if separate from procedure) SAME

Penetrant Testing Material 1-PT-1

(1) Manufacturer Sheep

A. Penetrant Batch No. 1K-018

B. Cleaner/Remover Batch No. 12-9-82

C. Developer Batch No. GL-008

Brand Name Deli-Check

Brand Logo

Brand Logo

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 Cal. Due Date: 2-18-82

(4) Penetrant dwell time used 10 minutes.

(5) Inspector: AFM Type:

Weld Joint: Butt ID Fillet Arcbet

Base Metal Other NA

Inspection Result Report

(1) Did material (weld and adjacent base metal (or 4" on work side)
exhibit 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

PTI Inspector Eric Cross Level: II Date 1-28-82

Witnessed/Verified by AMT 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

SSF-42 (1-12-83)



Pullman Power Products

FORM 32A

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

Orig. Code PX-52
 Proc. Type 41-03-010
 I M S Inchoz
 Heat Treatment 174-15-81
 Hydrostatic Test 174-15-81
 Repair Cycle Completed 0
 Actual Wall Thickness .375

SEABROOK STATION
 PULLMAN POWER PRODUCTS
 WELD REPAIR ORDER
 JOB 7035

Spec.	Ulns No.	Ins. Dwg.	Weld No.	Standards	Size	Thk.
CC	752	02	1	1	20°	.375
INDICATION						
Prepared By S.C.P. Date 5-15-81						
NORTH side of weld						
EXCESSIVE REINFORCEMENT						
over 1/2" side						
Pattern						
600						
900						
APPLICABLE FOR JOB NO. 7035 ONLY						
Cavity						
AREM BLENDED: NO CAVITY						
CALMIED						

SSF-44 (1-12-83)



Pullman Power Products

FORM 32B

SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: E.F. Garvin

DATE: 3/1/82

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 1 of 1

SEABROOK STATION
 PULLMAN POWER PRODUCTS
 WELD REPAIR ORDER

CONTRACT NO. 238
 JOB NO. 7035

Orig. No. 1400
 No. C. in 011
 W.P. No. FOR 101

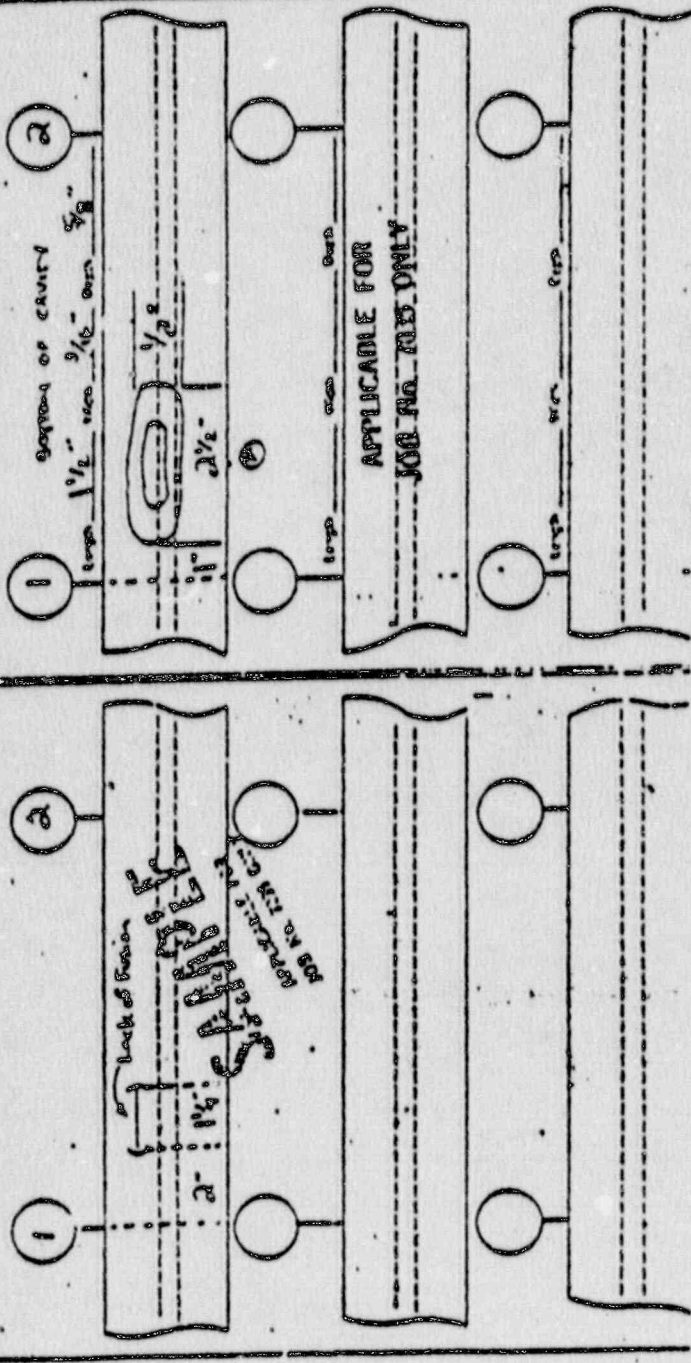
Statist 1
 Fast Treatment 1
 Hydrostatic Test 1
 Repair Code 1

Orig. Code PX-52
 Rec. Type 41-03-010
 I M S Index 1
 School Mail Address 1527

Spec.	W.P. No.	No. C. in	W.P. No.	Spec.
FW	1400	011	FOR 101	1-531"
			C/S	2-1"

INDICATION

Prepared By C.F. Williams Date 1-9-82



APPLICABLE FOR
 JOB NO. 7035 ONLY

SSF-45 (1-17-83)

SEABROOK STATION
PULLMAN POWER PRODUCTS

CONTROL NO. 483 WELD REPAIR ORDER

JOB 7035

Orig. Code PX-52
Rec. Type 41-03-010
I M S Index _____

Notes:
Heat Treatment N/A
Hydrostatic Test None
Repair Cycle Completed 2
Actual Wall Thickness .219"

Spa	Libo No	Ins. No	Weld No	W. Spec	Size	Thick.
CS	302	03	F0303	S/S	3"	.216"

Beveled Insert

0°

1/2"

0°

Depth Thru Wall
Bottom of Cavity.

SAMPLE

APPROVED FOR AS-BUILT ONLY

Length _____ Width _____ Depth _____

Length _____ Width _____ Depth _____

Length _____ Width _____ Depth _____



Pullman Power Products

PREPARED BY: R. C. DAVIS

APPROVED BY: E. J. GERVIN

DATE: 3/1/82

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 1 OF 1

FORM 32C
SECTION NO.

SSF-46 (1-12-83)



Pullman Power Products

FORM 32D

SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: E.F. Gerwin

EB

DATE: 3/1/82

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 1 of 1

Orig. Code PX-52
Rec. Type 41-01-010
I M S Index

Actual Wall Thickness .256"

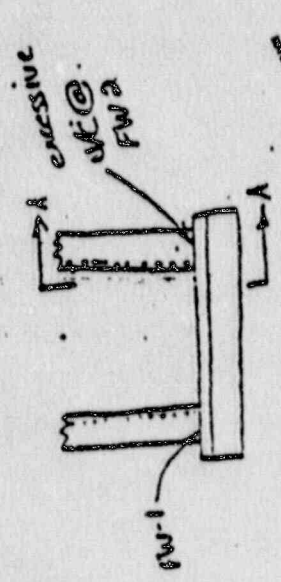
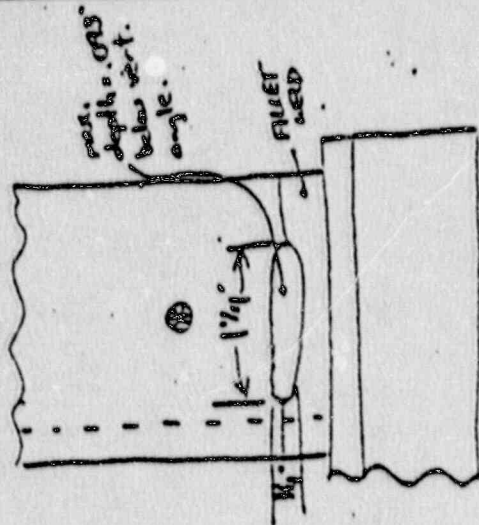
SEABROOK STATION
PULLMAN POWER PRODUCTS
WELD REPAIR ORDER

Post Treatment N/A
Post-Heat Treat
Pyrotable Test
Piper Creig (1-318-07)

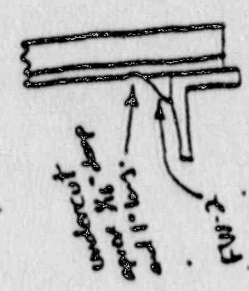
CONTROL NO. 303

JOB 7035

Spec. C85	Use No. SG-7	Ins. No. N/A	Spec. No. FW2	Material C/S	Size 2 x 2 x 1/4"	Ins. 1/4"
-----------	--------------	--------------	---------------	--------------	-------------------	-----------



SAMPLE
SPECIFIC FOR
THIS SIZE ONLY



SSF-47 (1-12-83)



Pullman Power Products

FORM 34A

SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: E.F. Gerwin

EG

DATE: 1/17/83

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1

CALIBRATION STICKER

Serial No:	35
Calibrated By:	<i>J.F.</i>
Cal. Date:	1/22/78
Cal. Due:	6/22/78

APPLICABLE FOR
JOB No. 7135 ONLY

SAMPLE



Pullman Power Products

FORM 34B
SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: E.P. Gerwin

DATE: 3/17/83

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1

CALIBRATION STICKER

SAMPLE

CALIBRATION	
By <u>JF</u>	Date <u>1/20/81</u>
S/N <u>35</u>	Due <u>4/20/81</u>

APPLICABLE FOR
JOB No. 7035 ONLY



PREPARED BY: R.G. Davis

APPROVED BY: E.F. Gerwin

ED

DATE: 5/16/78

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 1 of 1

QUALITY AUDIT CHECKLIST

STAFF-MANAGEMENT AUDIT

12/13/77

DATE

Audit

Barley #2

Audit

Audit

Audit

Audit

Audit

QUALITY ASSURANCE PROGRAM

EVALUATION

OBSERVATIONS

SAMPLE

I. ORGANIZATION

PURPOSE - To evaluate the organizational structure, functional responsibilities, and lines of communication necessary to effectively implement the Quality Assurance Program.

- 1. An organization chart showing the functions, responsibilities and reporting chain of all persons involved in actions that effect quality.
- 2. Organizational Chart - Current and Documented.
- 3. QA/QC Antonomy in Organizational Chart.
APPLICABLE FOR
JOB No. 7035 ONLY
- 4. Designation of QA/QC communication Channels.

- 1. Organization charts were available for Job site and Corporate Personnel for review. The Jobette chart was verified as being satisfactory and lines of responsibility and reporting were found to be acceptable.
- 2. Both the Corporate and Site Organizational Charts were of the latest revision and dated.
- 3. Antonomy 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 site QA Manager to implement a QA Program.
- 4. The following list of communication channels to QA were observed during the Audit and found to be adequate:
 - A. QA Inspection
 - B. Receipt Inspection
 - C. QA Record
 - D. Voiding
 - E. NDE
 - F. Engineering

S



Pullman Power Products

FORM 34B
SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: E.P. Gervin *EG*

DATE: 1/17/83

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1

CALIBRATION STICKER

SAMPLE

CALIBRATION	
By <u>SF</u>	Date <u>1/20/81</u>
S/N <u>35</u>	Due <u>6/20/81</u>

APPLICABLE FOR
JOB No. 703 ONLY

SSF-53

SF 1.06



Pullman Power Products

PREPARED BY: R.G. DAVIS

APPROVED BY: E.F. GELVIN

DATE: 5/16/78

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 1 of 1

FORM 35
SECTION NO.

QUALITY AUDIT CHECKLIST
STAFF-MANAGEMENT AUDIT

AUDIT Scale #2 DATE 12/13/77

QUALITY ASSURANCE PROGRAM

EVALUATION	OBSERVATIONS
<p>I. ORGANIZATION</p> <p>PURPOSE - To evaluate the organizational structure, functional responsibilities, and lines of communication necessary to effectively implement the Quality Assurance Program.</p> <ol style="list-style-type: none"> 1. An organization chart showing the functions, responsibilities and reporting chain of all persons involved in actions that effect quality. 2. Organizational Chart - Current and Documented. 3. QA/QC Autonomy in Organizational Chart. 4. Designation of QA/QC communication channels. <p style="text-align: center;">APPLICABLE FOR JOB No. 7035 ONLY</p> <p style="text-align: center;"><i>S</i></p>	<p style="text-align: center; font-size: 2em;">SAMPLE</p> <ol style="list-style-type: none"> 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. Both the Corporate and Site Organizational Charts were of the latest revision and dated. 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 site QA Manager to implement a QA Program. 4. The following list of communication channels to QA were observed during the Audit and found to be adequate: <ul style="list-style-type: none"> A. QA Inspection B. Receipt Inspection C. QA Record D. Welding E. NDE F. Engineering



Pullman Power Products

FORM 36

SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: E.F. Gerwin *EH*

DATE: 1/17/83

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 1 of 1



Pullman Power Products

ULTRASONIC FLAW DETECTION RECORD

JOB NO. 3053 DATE 1/17/83
 PIECE NO. 10-106-4 "P" NO. 123
 EXAMINATION PROCEDURE NO. IS-UT-2 Rev 2
 ACCEPTANCE CRITERIA IS-UT-2 Rev 2
 EQUIPMENT MODEL NO. Transducer - 0117-10V
 TRANSDUCER: SIZE 4" X4" FREQUENCY 2.25 MHz SHOE 1" X1"
 ANGLE 45° MODE Scanned CONTACT Tape
 COMPLANT: #20 011
 DESCRIPTION OF INSPECTION TECHNIQUE: MANUAL ROTATION STATIONARY
 CALIBRATION DATA: 75db Range 0 to 5

RECORD OF EXAMINATION RESULTS

Part No. 2 54611
 1" Sch 80 Smls
 Length 13'

SAMPLE

Ultrasonic Inspected 100% in two directions
 ACCEPTABLE

WITNESSED/VERIFIED BY ART SA Smith NAME OF INSPECTOR R. Pelt
 DATE: 1/17/83 SNT-TC-1A LEVEL II

RECORD OF RE-EXAMINATION

NAME OF INSPECTOR _____
 SNT-TC-1A LEVEL _____

887-54 (1-13-83)



Pullman Power Products

FORM 37

SECTION NO.

PREPARED BY: R.G. Davis

APPROVED BY: E.P. Gerwin *EG*

DATE: 1/17/83

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 1 of 1

Pullman Power Products
CALIBRATED TOOL CHECK - 007 LOG

Type of Measuring Equipment: Micrometer, Inside

Serial No	Checked by	Check no.	Date of issuance	Date of receipt	Request used to be returned	Date of last calibration	Calibration due date
1	J. D. Hill	226	1/12/76	1/10/76	Setting Bar Pump	1/10/76	2/10/76
2	L. E. Puryan	162	1/13/76	1/13/76	Setting Bar Pump	1/10/76	2/10/76
3	C. T. Borun	335	1/14/76	1/15/76	Setting Bar Pump	1/10/76	2/10/76
4	E. Lee	217	1/14/76	1/10/76	Setting Bar Pump	1/10/76	2/10/76

APPLICABLE FOR
JOB No. 7035 ONLY

AT PULLMAN

SSF-55

SF 1.06



PREPARED BY: E.G. Davis

APPROVED BY: E.F. Garvin

DATE: 5/8/81

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 1 of 1

FIELD QUALITY ASSURANCE RECORD INDEX

REPORT	DURATION (PERS)	STORAGE	RESPONSIBLE
	TIME	AREA	PERSONNEL
Fabrication Spec.	Duration of Job	Engineering Gen.	Responsible Jobsite Personnel
Original Isometrics & Detail Drawings All Revisions	Duration of Job	Engineering or through Customer	Revisions, Field QA Engineering
Special Process Procedures a. Welding b. S.S.E. c. Repair d. Root Treat	Duration of Job	QA	Responsible Jobsite Personnel
Welder Performance Qualification Record	Duration of Job	Q.A. Files	None
Non-Conformance Reports	Duration of Job	Q.A. Files	MT, Customer, Engineering, Insp. Jobsite Personnel
Calibration Records	Duration of Job	Q.A. Files	None
Process Sheets a. Field b. Field and Field Hold Repair c. Repair/Support Class 1 d. Repair/Support Class 2 & 3 e. Expansion Anchor f. Scaffolding	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. Engineer QAIS 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.

TO BE USED ONLY FOR JOB No. 7035



Pullman Power Products

FORM 39
SECTION NO.

PREPARED BY: R.G. DAVIS

APPROVED BY: E.F. GERWIN

DATE: 2/10/83

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1

CONTROLLED COPY FROM
RECORD TYPE
AND OTHER



Pullman Power Products

SEABROOK STATION
LIMITED WORK AUTHORIZATION REQUEST
For Procedure SF-1 Rev. _____

LMA# _____

DATE _____

PAGE _____ OF _____

A. ITEM(S) NAME/IDENTITY (INCLUDE UNIT, SYSTEM, ISO/DWG. AS APPLICABLE)

DOCUMENTS RELATED TO BOLD TAG

Stop Work Order (SBO) _____
Deviation Request (DR) _____

Nonconformance Report (NCR) _____
Receiving "BOLD" Inspection Report _____

B. REASON FOR LMA REQUEST

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.)

Signature of Field Engineer _____ Date _____

D. STATUS OF ITEMS HAS BEEN REVIEWED INCLUDING ALL DOCUMENTATION RELATED TO BOLD TAG AND LMA IS APPROVED. INSPECTION BOLD POINTS SHALL NOT BE BY-PASSED AND WORK SHALL NOT PROCEED BEYOND THE FOLLOWING POINT TO PERMIT ACCESSIBILITY TO ITEM(S):

LMA DENIED FOR THE FOLLOWING REASONS:

Approval <input type="checkbox"/>	Chief Engineer _____	Date _____
Disapproval <input type="checkbox"/>	Signature _____	Date _____
Approval <input type="checkbox"/>	Field QA Manager _____	Date _____
Disapproval <input type="checkbox"/>	Signature _____	Date _____
Approval <input type="checkbox"/>	ERAC Engineer _____	Date _____
Disapproval <input type="checkbox"/>	Signature _____	Date _____
	AST Review _____	Date _____

I. LMA CLOSED BY FULL PERFORMANCE OF WORK SCOPE. NEED FOR LMA TERMINATED BY REMOVAL OF BOLD TAG. LAST ELEMENT OF WORK SCOPE COMPLETED:

QC INSPECTOR REMOVING LMA TAG _____ DATE _____
Signature

CLOSED BY QA OFFICE: _____ DATE _____
Signature

SSF-56 (1-19-83)



Pullman Power Products

FORM 41

SECTION NO.

PREPARED BY: E.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-1818201

Spout Piece - 512316

~~SECRET~~
SECRET OF LWA

TO COMPLETE FIELD
WELD F0106

APPLICABLE FOR
JOB No. 705 ONLY

QA INSP 7/2/81 DATE 5-7-79
TO BE ATTACHED OR REMOVED
BY QC PERSONNEL ONLY



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 EXECUTIVE ACTION NUMBER CAR NO. 3
 CONTROL: TRAC PART 1 of 1
 PROJECT: CRABBOCK TRAINING

1. GOVERNING REQUIREMENT: ANSE 445.2.2, PARA. 3.5.2

2. BASIS OF CAR: YABC SUPERVISOR REPORT #11 ADD CODE YES NO

3. POTENTIAL SIGNIFICANT DEFICIENCIES YES NO
10CFR50.33 (c) _____
10CFR50 _____

4. CONDITIONS APPLICABLE TO QUALITY (SECTION): _____

Item 1 - Monthly Advisory Report for August indicated that ten NCRs were generated for failure to implement the first bolt torquing procedure. Efforts from supervisor personnel to indoctrinate craft and torquing requirements has not been satisfying.

Recommendation

Establish a formal training program to indoctrinate craft and responsible supervisors in first bolt torquing requirements.

PREPARED BY: R.G. Davis APPROVED BY: E.F. Gerwin ACKNOWLEDGED BY: J. Batts

5. RESPONSE DUE BY: 9/6/82 EXTENSION APPROVED BY: N/A

ALL CAR RESPONSES COMPLETED AND VERIFIED

R.G. Davis 9/16/82 E.F. Gerwin 9/16/82
 OR SUPERVISOR DATE SUPERVISOR DATE



Pullman Power Products

FORM S-1

SECTION NO.

PREPARED BY: R.C. Davis

APPROVED BY: E.F. Carver

DATE: 5/8/81

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 1 of 1

Page 1 of 2

FIELD PURCHASE ORDER

United Engineers
Public Service Company Of New Hampshire
475 Main Street, Concord, N.H. 03301
P. O. Box 700
Eastbrook, New Hampshire 03874

PURCHASER

SELLER
Carbon Steel Products Corporation
883 Julia Street
Elizabeth, NJ 07201

SHIP VIA Motor Freight **CONSIGN TO** Public Service Company Of New Hampshire
475 Main Street, Concord, N.H. 03301
Route No. 1 - Elm Avenue Road
Eastbrook, New Hampshire 03874

TERMS: 4 of 12-16 Days-Net 30

DELIVERIES ACCEPTED
8:30 A.M. TO 3:30 P.M.
MONDAY THRU FRIDAY ONLY.

QTY	DESCRIPTION	PRICE
1	4 ft. x 4 ft. x 1/2 in. thick plate furnished in accordance with the following Quality Control Requirements: 1. ASME Section II, SA 26 1977 Edition with all addenda to and including Victor 1977. 2. ASME Section III, Subsection NCA 3000 1977 Edition with all addenda to and including Victor 1977. 3. Repair by welding is not permitted without prior approval by Pullman Power Products. NOTE: UNLESS noted on additional requirements beyond those in SA 26. 4. After manufacture and prior to acceptance, the supplier shall furnish the following documents for review: A. A Certified Material Test Report as defined in NCA-3041.4a 5. Pullman Power Products has the right of source inspection prior to shipment of material. 6. Marking identification shall be in accordance with K2-2150. Items set forth in this purchase order are for use in Nuclear Safety-related Components subject to regulatory 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 1225, Mt. Laurel, Pennsylvania 17701.	\$195.00

SAMPLE

APPLICABLE FOR JOB NO. 7035 ONLY

CONDITIONS OF SALE: ORDER IS ACCEPTED BY Gert Groshen ON BEHALF OF PURCHASER ON 5-10-79 AT MT LAUREL

BY ACCEPTING AND FILLING THIS ORDER ON ANY DATE THE BUYER, THE SELLER AGREES TO AND SHALL BE BOUND BY THE TERMS AND CONDITIONS CONTAINED ON THE BACK OF THIS ORDER. THE SELLER SHALL BE RESPONSIBLE FOR THE ORDER UNTIL IT IS FULLY SHIPPED.

Pullman Power Products
United Engineers
 P. O. Box 700
 Eastbrook, New Hampshire 03874
 E. H. Watson, Supervisor

TOTAL \$195.00
 ORDER NO. 8763.811-12482
 DATE APR 30, 1979



Fullman Power Products

FORM S-2

SECTION NO.

PREPARED BY: R.G. Davis

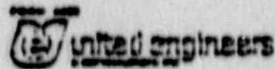
APPROVED BY: E.F. Gerwin

27

DATE: 5/8/83

QUALITY ASSURANCE
PROGRAM

FORMS

PAGE
NO. 1 of 1ORIGINAL
FIELD PURCHASE REQUISITION

JOB NO. 5680

DATE: 5-1-78

DELIVER TO: OFFICE

REQUIRED BY DATE: 5-15-78

ITEM	QUANTITY	DESCRIPTION	UNIT	TOTAL	ACCOUNT	CODE
1	1000 LB	57016 STEEL PIPE 4" DIAMETER IN STEEL RINGS WITH SPOCS TO 500 REV. 10-1-77				
<p>NOTE: A FIELD ORDER MUST BE RECEIVED TO MEET ASME SECTION III 10TH EDITION THROUGH THE 10TH WILKINSON ADDENDA SCHEDULED MATERIAL TEST REPORTS MUST BE OBTAINED AS AGENCY REQUIREMENT - UNLESS NEW JOB</p>						
FIELD	CHARGE TO	DIRECTOR	APPROVED			
1	CANTONABLE COILS MATERIAL	H.M. Sinclair 5-1-78		APPLICABLE FOR JOB NO. 7035 ONLY		
SUPERVISOR			SUPERVISOR			
QUALITY ASSURANCE - P.D.P.		<input type="checkbox"/> NOT DONE <input type="checkbox"/> DONE <input type="checkbox"/> NOT DONE <input type="checkbox"/> DONE				
CHECK NO. _____ DATE _____ TO _____ FROM _____ BY _____ DATE _____ TOTAL _____		CHECK NO. _____ DATE _____ TO _____ FROM _____ BY _____ DATE _____ TOTAL _____				



Pullman Power Products

FORM 8-4
SECTION NO.

PREPARED BY: R.G. Davis

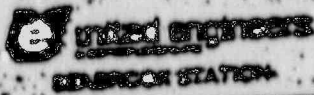
APPROVED BY: E.F. Gerwin

DATE: 9/1/82

QUALITY ASSURANCE PROGRAM

FORMS

PAGE NO. 1 of 1



ENGINEERING CHANGE AUTHORIZATION (ECA)
REQUEST FOR INFORMATION (RFI)

71316101014

DESCRIPTION

REQUEST DATED BY: []

DATE: []

PROBLEM STATEMENT

4" of vent running on 2'-0" north of "10" line at elev. 43'-4" will interfere with existing line 1-12-4973-11-1" on 2'-0" north of "10" line at elev. 43'-2".

See 102.

SOLUTION

Remove 4" of vent, referred above, as shown on attached sketch. Install support 76-85-14 per attached sketch.

SAMPLE

APPROVALS

APPROVED BY: [Signature]

DATE: 8/16/82

REVISIONS

NO.	DATE	DESCRIPTION

FIELD WORK COMPLETED OR DESIGN INCORPORATED

DATE: []

SEE REVERSE SIDE FOR INSTRUCTIONS AND DISTRIBUTION

PURCHASE ORDER		FOREIGN		VENDOR DRAWING OR DOCUMENT NO		REV		NO			
JOB NO	COMM	SEQ	PRINT NO								
716	01	(SUBJ NO)	435	17	23	24	25	26	05219		
DESCRIPTION							VENDOR'S NAME				
NUC GA PROGRAM MAIL							P-H				
LETTER TO UE&C	UE&C LOG-IN DATE	CLIENT'S REVIEW		UE&C REVIEW		FINAL DISTRIBUTION DATE		DISTRIB	CHECK #		
		TO CLIENT	FROM CLIENT	TO VENDOR							
01	19830126	83	PP9	52	STE	2292	8/2/83				
UNITED ENGINEERS & CONSTRUCTORS INC. Subject to the provisions of the contract and the conditions of sale of the drawings and specifications. The user shall be responsible for the accuracy of the data and the results of the design and construction of the project.				<input checked="" type="checkbox"/> ISSUED AS PER NO IN CONTRACT <input type="checkbox"/> SEND REVISED DRAWINGS FOR REVIEW <input type="checkbox"/> SEND CORRECTED DRAWINGS FOR RECORD				BY <u>[Signature]</u> DATE <u>1/26/83</u>			

INFORMATION ONLY