



Pullman Power Products

EV-2
DOCUMENT NO

PREPARED BY: E. SWISHER

APPROVED BY: E. BINKLEY

ISSUE DATE: 2/14/83

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PROJECT PROCEDURE

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ONLY ON JOB # 7035

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LATEST REV. DATE

5/1/83

PROCEDURE FOR HANDLING
NONCONFORMANCES AND LIMITED
WORK AUTHORIZATION (FIELD)

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PULLMAN POWER PRODUCTS

HEADQUARTERS AT
WILLIAMSPORT, PENNSYLVANIA

RECEIVED
U. E. & C. INC.

JUN 06 1983

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17

REVISION	PREPARED BY	APPROVED BY	INITIALS	DESCRIPTION
15 2/14/83	E. Swisher	E. Binkley	EB	Extensively revised; reissued.
16 4/14/83	W. Bechsted	E. Binkley	EB	Revised Para. 6.1.2.B, 8.2, 8.2.2, 8.3, 8.3.2, 13.3 & Appendix L; Editorial corrections.
17 5/16/83	S. Elmore	E. Binkley	EB	Add Para. 4.2.12, Revised Para. 7.3.1, Deletion of Page B, 11-18 of Appendix L; Editorial corrections.

~~See Additional
Revisions to
SEA 4/24/83~~

41497-17

SF 1.01 (02-79)



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DOCUMENT NO.

PREPARED BY: K. SWISHER

APPROVED BY: R. MINTLEY

ISSUE DATE: 3/16/83

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1.0 SCOPE

1.1 This procedure defines the necessary written details to process nonconformances (NCR's) in accordance with Section IV of the Company's Quality Assurance Manual.

1.2 Nonconformances in ASME Section 1, III, and VIII items, and items designated as safety related (ie: AWS Whip Restraints, etc.) shall be identified and processed in accordance with this procedure.

2.0 POLICY

2.1 Nonconformance in items may be detected at source inspection, receiving inspection, in-process inspection during fabrication or installation, at final inspection or during testing.

2.2 Nonconformances associated with Non-Code or Non-Safety related items are reported and controlled in accordance with Project Procedure XV-2 NMS.

2.3 Nonconformances identified during Receipt Inspection or Documentation Review of materials and items furnished by UE&C are not included in the scope of this procedure. The unacceptable material, items and/or documents will be rejected by the Company and shall be handled through the UE&C Nonconformance Procedure, as described in Sections VII and VIII of the Company's Quality Assurance Manual.

3.0 RESPONSIBILITY

3.1 It is the responsibility of the QA Manager for the implementation of this procedure through his examination, inspection and testing personnel.

3.2 The Chief Field Engineer, or his designee, shall provide recommended dispositions of all NCR's per Sections 7.0 and 8.0 of this procedure.

3.3 UE&C shall provide the disposition of all NCR's, through the Nonconformance Review Board, per Sections 9.0 and 10.0 of this procedure.

3.4 The QA Manager, or his designee, shall evaluate all nonconformances for applicability for reporting under 10 CFR 50.55 (e) to the Customer. This evaluation shall also take into consideration the Company's obligations to report defects or noncompliances under 10 CFR 21 (Ref: Procedure XV-3).

3.5 The QA Manager or his designee, upon evaluation of the NCR, will indicate the corrective action to be taken as described in Paragraph 14.0.

3.5.1 The corrective action will be implemented as soon as possible, to prevent repetition of the nonconformances.



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4.0 APPLICABILITY OF NONCONFORMANCE REPORT (NCR)

4.1 Unacceptable conditions will exist that do not require an NCR. These conditions are those that can be corrected at the time of discovery or during subsequent in-process operations, when the correction or repair will be in compliance with applicable Code, procedure and standard (Appendix L) repair specifications. All activities shall be performed under the control, and to the satisfaction of a qualified QC Inspector who will ensure that they are controlled by operations detailed in Process Sheets, or by Base Metal Surveillance Reports or Weld Repair Orders issued by him, per Procedure JS-IX-14.

4.1.1 These unacceptable conditions may be removed by additional grinding or machining, without an NCR, provided the requirements of subparagraph A through D below are met. In the event they cannot, they shall be reported on an NCR as described in Paragraph 4.2.

A. The remaining section thickness is not reduced below the required minimum thickness.

1. When the minimum thickness is suspect, UT or mechanical measurements shall be employed for thickness verification.

B. The depression, after unacceptable condition elimination, is blended uniformly into the surrounding surface.

C. After removal of the unacceptable condition, the area is reexamined by magnetic particles and/or liquid penetrant method, to assure that the unacceptable condition has been removed or reduced to an acceptable size.

D. Areas ground to remove oxide scale or other mechanically caused impressions for appearance or to facilitate proper ultrasonic testing need not be examined by magnetic particle or liquid penetrant test methods.

4.1.2 Unacceptable conditions not requiring an NCR include, but are not limited to: additional grinding of welds or base materials to attain required crown height or dimension, elimination of surface imperfections as may be required for nondestructive examination and removal and repair of unacceptable indications in welds prior to final acceptance.



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PREPARED BY: E. SWISHER

APPROVED BY: E. RINTLEY

ISSUE DATE: 5/16/83

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A. These conditions shall be corrected in accordance with Procedure JS-IX-16, "Defect Removal and Repair by Welding", and/or the applicable WDE procedure.

4.2 An NCR (Appendix D) shall be initiated under, but not limited to, the following conditions:

4.2.1 Incorrect materials (i.e., type, size, schedule, etc.,) that are in conflict with engineering design documents and/or Code.

4.2.2 Incomplete or incorrect acceptance of documentation or identification of Owner/UE&C furnished equipment or material, identified after receipt inspection acceptance.

4.2.3 Conditions which do not meet the requirements established by Project Procedures, Code, or specifications.

4.2.4 Weld repairs of base metal exceeding 1/3 of nominal thickness.

4.2.5 Repairs required in welds or base metal after third cycle of repair.

4.2.6 Weld repairs required to add preparations. (See Appendix 1; Specification No. 4).

4.2.7 Improper pressure retaining dimensions (minimum wall deviations) where weld repairs are not authorized.

4.2.8 Misalignment of components beyond Code, procedure or specification tolerances.

4.2.9 Repair welding following final leak (Hydrostatic/Pneumatic) testing, or final heat treatment.

4.2.10 Any damage, tampering, defect or deficiency in permanent plant equipment, installed by Pullman Power Products, that will render it inoperable or unable to meet the original design requirements. Any similar conditions in equipment installed by others shall be reported on a Construction Incident Interface Report (CIIR) per Procedure IX-57, not on an NCR.

4.2.11 Any inability to meet fit-up at closure joints on piping runs without the use of any external forces, as outlined in Project Procedure 1-9.

4.2.12 Repairs for correction of damaged or nonconforming urethane liners.

5/16/83



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5.0 IMMEDIATE ACTION

- 5.1 When a nonconformance is discovered, the item involved shall be segregated, when possible, by a QC Inspector and a "Hold Tag" (Appendix C) will be placed on the item or adjacent to the operation (as in the case of welding) and the Field Process Sheet (Appendix E) or Field Weld Process Sheet (Appendix F) shall be withdrawn. Where applicable, the QC Inspector will note the NCR number on the Process Sheet and return it to QA Specialist-Process at the WYDC. Hold Tags will be controlled through the RC Log (Appendix I).
- 5.2 The NCR form shall be initiated in a timely manner in accordance with instructions contained in Appendices A, B & C, and forwarded to QA for processing.

6.0 LIMITED WORK AUTHORIZATION (LWA)

- 6.1 LWA is the controlled release of an item which has a Hold Tag affixed.
 - 6.1.1 The Hold Tag indicates the status of items placed on "Hold" as the result of a Stop Work Order (SWO) (ref. Stop Work Order Procedure 111-3), a Nonconformance Report (NCR), etc. The purpose of the LWA is to permit specifically defined movement or related work to proceed on an item affected by a Hold Tag, concurrent with resolution of the cause for the Hold. In no case shall the LWA authorize work which may affect, or be affected by the condition described in the initiating document (i.e., SWO or NCR). The LWA shall not allow work to proceed to a point which would render any immediately adjacent item inaccessible for inspection or rework. This shall be evaluated by UE&C prior to approval of the LWA.
 - 6.1.2 An LWA Request (Appendix J) will be prepared by the responsible Field Engineer. It shall delineate the specific LWA scope of work and cross reference document number(s) which are related to the Hold Tag.
 - A. 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.
 - B. Upon approval as required in "A" above, the LWA Request shall be submitted to UE&C Responsible Site Engineer for review and approval.

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DOCUMENT NO

PREPARED BY: K. SWISHER

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ISSUE DATE: 2/14/87

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- 6.1.3 Upon approval of the LWA request, the QA Manager, or his designee, shall initiate the LWA Tag. Suitable control logs, indicating LWA status shall be maintained by him. Any Field Drawings or Field Process Sheet(s) which may have been withdrawn will be reviewed and revised, if necessary. The approved LWA Request will cover the scope of work, (i.e., the operations to be performed) and/or the "From" and "To" move locations. A copy of the approved LWA Request will be submitted to the field through the individual who requested it.
- 6.1.4 Concurrent with release to the field of an approved LWA Request, and prior to item work or movement, a QC Inspector will affix an LWA Tag (Appendix H) adjacent to the Hold Tag on any affected item(s).
- 6.1.5 After the LWA work has been performed, the LWA Request shall be forwarded to QC Inspection. Inspection and acceptance of LWA scope of work will be defined in procedures called out on applicable Field Drawings, Field Process Sheets, or on the LWA Request.
- 6.1.6 Upon completed inspection of the scope of work, the applicable QC Inspector will remove the LWA Tag and return it to the QA Office. At the QA Office he will sign off the original LWA Request signifying completion of work. All other documentation pertaining to the LWA scope of work shall remain with the Process Sheets.
- 6.1.7 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 destroy the field copy of the LWA Request, remove the LWA Tag and Hold Tag and return them to the QA Department to enable updating of the respective logs. The Inspector will note on the original LWA Request the last element of work scope which was completed and sign the request as completed. All other documentation pertaining to the last element of LWA scope of work completed, shall remain with the Process Sheet(s).



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ISSUE DATE: 5/16/83

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7.0 PROCESSING AND EVALUATION OF NONCONFORMANCE REPORTS

- 7.1 The initiator, upon discovery of a condition believed to require a Nonconformance Report, shall complete an NCR in accordance with this procedure (See Appendices A, B & C) and forward to the QA Manager's Designee (QA-NCR).
- 7.2 Upon receipt, QA-NCR shall verify that Hold Tag(s) have been assigned. For instances where they have not, and are required, steps shall be taken to assign Hold Tag(s) and arrange for their application in a timely manner.
- 7.3 The NCR shall then be reviewed by QA-NCR and Engineering to determine if it is, or is not, a nonconforming condition requiring reporting as an NCR, or can be handled by other established methods.
 - 7.3.1 If this review determines that the condition does not warrant reporting as an NCR, or should be reported by other means (ie: non-Code reporting procedures) the NCR shall be voided per paragraph 13.0 of this procedure.
- 7.4 A Nonconformance which requires reporting shall be reviewed for compliance with Appendices A, B & C requirements and that it adequately and accurately describes the nonconformance and establishes the cause for its occurrence.
- 7.5 Engineering shall be responsible for stating the final recommended disposition to include a detailed description of justification (as warranted).
- 7.6 QA-NCR shall be responsible for stating the final corrective action.
- 7.7 The proper signatures shall be obtained from the Chief Field Engineer (or designee), QA Manager (or designee) and ANI.
 - 7.7.1 ANI Review is not required for non-Code safety related NCR's.
- 7.8 Distribution shall be made as required, and controlled through the use of the NC Log. Approvals shall be obtained as outlined in Paragraph 8.3.

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DOCUMENT NO

PREPARED BY: E. SWISHER

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—NCR

ISSUE DATE: 2/16/83

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8.0 PROPOSING DISPOSITION OF NONCONFORMANCE REPORTS

8.1 The proposed disposition of the nonconformance will be determined by the Field Engineering Department in conjunction with Quality Assurance, or by the Resident Construction Manager, if necessary. The proposed disposition shall be reviewed for Code compliance by the QA Manager and the Authorized Nuclear Inspector. If in this review the QA Manager or Authorized Nuclear Inspector do not concur, the NCR will be returned to the originator for reevaluation and/or revision of the proposed disposition. Acceptable dispositions, and their limitations, are defined in 8.2 through 8.6, below.

8.1.1 For nonconformances which do not meet the Code, the item may be scrapped, returned for replacement, repaired, or reworked to bring it within Code requirements; (It cannot be accepted as is.)

8.1.2 For nonconformances which meet Code Requirements, but deviate from Customer requirements, the item may be scrapped, returned for replacement, reworked, repaired to bring it into specification or accepted to "Use-As-Is".

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8.2 Scrap Disposition (UE&C Disposition "Reject" with scrap instructions)

8.2.1 Scrap is normally defined as totally discarding an item or material. A "Scrap" disposition is used when an item does not meet Code and specification requirements and Repair or Rework is impractical or impossible.

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8.2.2 Upon receipt of an approved NCR, dispositioned "Scrap"(Reject), the QA Engineer responsible for Materials, or his designee will receive a copy of the NCR and ensure the the material is marked "Scrap" and segregated for removal to the designated scrap area. He will also complete Line #13 of the NCR.

8.2.3 The Chief Field Engineer, or his designee, will initiate (or cause to be initiated) the required documents for replacement, if necessary.



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DOCUMENT NO.

PREPARED BY: E. SWISHER

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8.3 Return Disposition (UE&C Disposition "Reject" with return instructions)

8.3.1 Return is normally defined as requiring removal and shipment back to the originating party.

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8.3.2 Upon receipt of an approved NCR dispositioned "Return" (Reject), QA-NCR will advise the QA Engineer-Materials who will arrange for the return of the item and complete line #13 of the NCR.

8.4 Repair Disposition

8.4.1 Repair is normally defined as the process of restoring an item to an acceptable condition, in conformance with Code, drawing and/or specification requirement, but may not conform to the original design requirements.

8.4.2 Upon receipt of an approved NCR dispositioned "Repair", QA-NCR shall forward a copy of the NCR to the Field Engineer for commencement of repair activities.

A. When repair activities involve a changed or new Special Process requirement, UE&C shall initiate Field Drawing revision(s)/ICA(s), and new or revised Process Sheets per Project Procedures 111-4 and V1-5. Work may commence when the required documents are received by the Field Engineer.

8.4.3 Repair of Weld Metal Defects

A. Unacceptable field weld defects and base metal defects detected by those methods required by the applicable subsections of the ASME Code, Section III, Division I, shall be eliminated and repaired in accordance with Procedure JS-IX-14.

B. In addition to the above requirements, all repair(s) of base metal defects shall be performed in accordance with NX-4450.

8.5 Rework Disposition

8.5.1 Rework is normally defined as the process of restoring an item to an acceptable condition in conformance with Code, drawing and specification requirements using a previously approved procedure.



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DOCUMENT NO.

PREPARED BY: K. SWISHER

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ISSUE DATE: 2/14/83

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8.5.2 Upon receipt of an approved NCR dispositioned "Rework", QA-NCR shall forward a copy of the NCR to the Field Engineer for commencement of rework activities.

A. When rework activities involve a changed or new Special Process requirement, UE&C shall initiate Field Drawing revision(s)/ECA(s), and new or revised Process Sheets per Project Procedures III-4 and VI-5. Work may commence when the required documents are received by the Field Engineer.

8.6 Use-As-Is Disposition (Synonymous with Accept-As-Is)

8.6.1 "Use-as-is" is normally defined as the acceptance of a deviation when it can be established that the discrepancy will result in no adverse condition and the item will meet Code and Design Specification requirements.

8.6.2 Upon receipt of an approved NCR dispositioned "Use-As-Is" the QA Manager, or his designee, will arrange for removal of the Hold Tag.

9.0 FORMAL DISPOSITIONING/APPROVAL OF NCR'S

9.1 All NCR's shall be reviewed, dispositioned and approved by UE&C through the Nonconformance Review Board (NRB) as outlined in 10.0 below.

9.2 Disposition of NCR's shall be reviewed by the QA Manager, or his designee, and the ANI. This review will be performed and documented during the review and approval cycle of required Process Sheets per Project Procedure VI-5.

9.2.1 ANI Review is not required for Non-Code Safety Related NCR's.

10.0 APPROVED NCR (INTERIM ACTION/WORKING TOWARD FORMAL DISPOSITION OF NCR)

10.1 A formal disposition (approved) from the NRB is required for each NCR. Prior to issuance of the formal disposition, interim action for additional information may be required. Interim action may also be required concurrent with the final disposition of the NCR.

10.2 Interim action may require supplemental information to be submitted to aid in making final disposition. Interim action directions should state any documentation requirements.

10.3 Receipt of interim action or an approved NCR disposition shall be controlled through the NC log.



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DOCUMENT NO

PREPARED BY: E. SWISHER

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10.4 Upon receipt of interim action and/or an approved NCR disposition involving repair or rework, QA-NCR shall notify QC department that rework/repair/other activity may be invoked through the timely application of a Repair Tag (Appendix K).

10.5 The responsible QC Inspector shall obtain a QA/QC Repair Tag from the QA Supervisor, or his designee, who controls their issuance through maintenance of an NC Log.

A. Prior to issuing the tag, the QA Supervisor, or his designee, shall complete the top portion of the Repair Tag and record the necessary information in the NC Log.

B. Work cannot proceed until an NCR is approved (except by LWA), and a Field Drawing revision or ECA is initiated (see Paragraphs 8.4.2.A and 8.5.2.A). A Repair Tag should be applied to the item in a timely manner prior to the start of work.

10.6 After completing the bottom of the Repair Tag (by signing and dating) the responsible QC Inspector shall remove the previously applicable Hold Tag and apply the QA/QC Repair Tag in its place. The Hold Tag shall be returned to the authorized individual maintaining the NC Log as required in Pullman Procedure XV-4, Paragraph 5.0.

10.7 Upon satisfactory completion and follow-up inspection of the activities required to fulfill the disposition which invoked the QA/QC Repair Tag, the responsible QC Inspector shall remove and forward the QA/QC Repair Tag to the QA Supervisor, or his designee, so that the NC Log may be updated. After the log has been updated, the Repair Tag may be destroyed.

A. The Inspector removing the QA /QC Repair Tag shall assure himself that any other action required by the NCR, Process Sheet, etc. has been performed and verified.

11.0 DOCUMENTING

11.1 The QA Manager, or his designee, shall be responsible for the control of nonconformances. Through the use of the NC Log, he will assign NCR numbers. This log will also contain such information as date initiated, brief description of the nonconformance, Hold Tags applicable, Repair



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PREPARED BY: E. SWISHER

APPROVED BY: H. HINKLEY

MDM

ISSUE DATE: 2/14/83

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Tags applicable, and status information. NCR's shall clearly identify the official building abbreviation and unit designation. (Appendix A, pages 3 thru 5).

11.2 Upon approval of an NCR by the NCB, the QA Manager, or designee, shall retain a copy in QA Records, and forward copies to the Chief Field Engineer and the Construction Superintendent.

11.3 When the disposition actions are completed and properly documented, QA Records will document these actions by completing line #13 of the NCR.

12.0 RECORDS

12.1 Records of all nonconformances and their disposition shall be maintained under the supervision of the QA Manager. NCR's shall be easily retrievable for review.

12.1.1 In the cases where disposition is to "Scrap", all records associated with the scrapped item shall be properly noted as to disposition and retained.

12.1.2 In all cases where "Return" for replacement is decided, the records shall be returned with the item.

13.0 VOIDING NONCONFORMANCE REPORTS

13.1 If it becomes necessary to void an NCR, it shall be voided only by the QA Manager, or his designee. The reason for voiding shall be identified on the NCR, along with the QA Manager (or designee) signature and date.

13.2 Concurrence with the action shall be obtained from the Chief Field Engineer (or designee) and the AKI only when their previous review and signature had been obtained (per paragraph 7.7). Concurrence shall be documented by signing and dating the voided NCR.

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13.3 NCR's voided prior to transmittal to UE&C shall not be transmitted to UE&C. They will, however, be advised of this action by interoffice correspondence to account for the sequential NCR numbers. NCR's transmitted to UE&C and subsequently voided, either prior to or after disposition (approval), shall be resubmitted to UE&C as supplemental information.

13.4 The initiator of an NCR which is subsequently voided shall be verbally advised of the action, and upon his request, may receive an informational copy of the voided NCR.



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13.5 Voided NCR's containing the information specified in paragraphs 13.1 and 13.2 above, shall be retained as permanent records.

13.6 NCR control numbers are assigned upon initial reporting of suspected nonconforming conditions. After further evaluation, the originator may determine the condition not to be nonconforming and not requiring reporting as an NCR. In such cases, the originator will notify QA-NCR so that, if concurrence (per Paragraph 7.7) has not yet been obtained, the NCR control number may be deleted from the NC Log. Deleted NCR control numbers are not considered "voided" NCR's and the control numbers may be re-used.

14.0 REVIEW AND RECURRENCE PREVENTION

14.1 The QA Manager, or his designee, shall initiate and record on the NCR the necessary steps to prevent recurrence of each nonconformity.

14.1.1 Where steps to prevent recurrence have not been taken in a timely manner or were not effective, the QA Manager, or his designee, may augment the corrective action process by issuing a Corrective Action Report in accordance with Procedure XVI-2.

14.2 In order to minimize the recurrence of repetitive NCR's, the QA Manager shall evaluate NCR's in accordance with the Pullman Procedure for Trend Analysis, XVI-3.



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DOCUMENT NO

PREPARED BY: E. SWISHB

APPROVED BY: H. BENTLEY

ISSUE DATE: 7/16/81

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INSTRUCTIONS FOR COMPLETING NCB FORM

- a) Enter Pullman ISO(s) effected and line(s) effected.
- b) Enter Boundary Identification Package (BIP)
- 1a) NCB NO: Pullman Job No. (7035) and Control Number (i.e. 2295).
- 1b) Rev No: Initial issue is 0 with revisions to same NCB numbered in consecutive order.
- 1c) Sheets: NCB is sheet 1. enter total number of sheets included in "of" box. All attachments should be identified by sheet number and total number of sheets.
- 1d) Item Identification No: Unique identifying number of component or item NCB is written about. This should be filled in whenever possible. "See Below" should only be used when too many items are involved.
- 1e) Item Name: Generic name of items identification number (i.e. spool, valve, field weld, pump, support).
- 1f) Quantity: Number of items involved in 1d.
- 1g) Blank: Used to identify code used for installation and/or supply.
- 2a) Name: Originator(s) of original NCB and its revision.
- 2b) Initials: Initials of 2a.
- 2c) Organization: Organization originating NCB. For our application at Seabrook Pullman Power Products.
- 2d) Date: Date of origination.
- 3a) Source: Name of company/department supplying the item.
- 3b) Current Status: Status of item in construction process and Hold Tag number
- 3c) Location: Location of item at time of writing NCB, including building, zone, elevation, column, azimuth, as applicable.
- 4a) Name: Name of company/department who will be responsible for nonconformance
- 4b) Spec. No. OE&C purchase order specification involved in nonconformance (i.e., 248-51 - Pipe and Equipment Erection).
- 4c) Rev: Latest revision of the specification in effect at writing of NCB.
- 5a) Possible Significance: NA - Not identified as being under other two; Part 21 - Can be reportable safety hazard per 10 CFR 21; 50.55e - pertaining to 10 CFR 50.55e.
- 5b) "E" for equipment/material supply NCB; "I" for installation; "P" for a QA Program.
- 6a) Governing Requirements: Specific documents, procedures, specification, codes, drawing, diagrams, special instruction used for acceptance standards.
- 7a) Nonconformance Code: Code per Appendix B.
- 7b) Description giving details of nonconformance and status. Provide a clear, concise description of the nonconforming condition detailed adequately to facilitate formulation of a disposition and resolution of the nonconformance. Include drawings, sketches, photographs, examination reports, etc., as appropriate to describe the condition thoroughly. If this is not practical, a statement to that effect and the supportive reasoning shall be included in the description portion of the report.



Pullman Power Products

EV-2

DOCUMENT NO.

PREPARED BY: R. SWISHER

APPROVED BY: H. HINTLEY

REV. DATE: 2/16/93

SEABROOK
PROJECT PROCEDURE

TO BE USED
ONLY ON JOB # 7035

PAGE APPENDIX A
NO. 2 of 6

- 8a) Cause Code: Code per Appendix C.
- 8b) Description of cause of nonconformance.
- 9a) Proposed disposition type.
- 9b) Justification: Detailed proposed disposition or a statement why such was not included. The Field Engineering Department, in conjunction with the Field QA Department, shall provide the technical content of all proposed dispositions. Nontechnical content of disposition, if applicable, shall be originated by Pullman Project Management. If in the opinion of the Chief Field Engineer it is not practical to provide a technical proposed disposition, then the circumstances making that proposal impractical shall be clearly stated in this section.
- 10a) QA description in detail of corrective measures taken or to be taken to prevent recurrence of nonconformance.
- 10b) Stamp of Customer/Owner's nonconformance board and its disposition of NCR.
- 11a) Signature and date of authorized representative of Field Engineering Department.
- 11b) Signature and date of Field QA Department.
- 11c) Signature and date of Field Authorized Nuclear Inspector.
- 11d) Date signed by AEI (11c)
- 12) For ASME III systems, review board approval shall be by Customer/Owner. For B31.1 systems, Section 8.1.3 and 8.1.4, clarify whether approval is by Pullman or by Customer/Owner. When approval by Pullman is allowed, an authorized representative of the Chief Field Engineer and QA Departments shall sign off in their applicable boxes.
- 13) Disposition Verified - Authorized QA Representative will verify that complete disposition has been completed on NCR.



Pullman Power Products

IV-2

DOCUMENT NO.

PREPARED BY: E. SVINER

APPROVED BY: R. HINKLEY

ISSUE DATE: 2/14/83

SEABROOK PROJECT PROCEDURE

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PAGE NO. APPENDIX A 3 of 6

LIST OF SYSTEM ABBREVIATIONS (From JE&C DMC M-50006)

ABBREVIATION

SYSTEM

AAB
 AB
 ACT
 AH
 AE
 AB
 AS
 ASC
 ASB
 SBS
 BVR

 BVS
 CAS
 CAN
 CAP
 CBA
 CIS
 CO
 COX
 COC
 COV
 COB
 COA
 COE
 COF
 COG
 COH
 COI
 COJ
 COK
 COL
 COM
 CON
 COO
 COP
 COQ
 COS
 COU
 COV
 COX
 COY
 COZ

Administration Services Bldg. Air Handling
 Auxiliary Boiler (All Systems)
 Acetyde
 Argon Methane
 Argon
 Condenser Air Evacuation
 Auxiliary Steam
 Auxiliary Steam Condensate
 Auxiliary Steam Heating
 Boron Recovery System
 Building Water Return
 --Guardhouse Heat Pump
 Building Water Supply
 Chemical Analysis & Addition System
 Containment Air Handling
 Containment Air Purge
 Control Bldg. Air Handling
 Containment Bldg. Spray
 Component Cooling Water Primary
 Condenser Water
 Carbon Dioxide (ALL PLANT GRADE)
 Combustible Gas Control
 Chilled Cooling Water
 Chlorination Building H & V
 Condensate
 Containment on Line Purge
 *Rod Control & Position
 Check Point Air Cond. System
 Chlorination System
 *Chemical & Volume Control
 Chemical Treatment & Sec. Chemistry
 Circulating Water
 CV Pump House Air Handling
 Compressed Gases (ALL EXCEPT N2, O2, CO2)
 Contaminated Waste Vent
 Contaminated Waste



Pullman Power Products

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DOCUMENT NO.

PREPARED BY: E. SWISHER

APPROVED BY: E. BINELEY

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2/16/83

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ABBREVIATION

SYSTEM

DC	Diesel Generator (ALL SYSTEMS)
DCA	Diesel Gen. 1A (EQUIP. PKG.)
DCB	Diesel Gen. 1B (EQUIP. PKG.)
DAB	Diesel Generator Air Handling
DF	Drains Floor
DM	Demineralized Water
DR	Drains Roof
DS	Drains Sanitary
EAB	Containment Enclosure Air Handling
ED	Electrical Distribution
EDE	Electrical Distribution -- EMERGENCY
EBC	Turbine Electro Hydraulic System
EPA	Emer FW P House Air Handling
ES	*Electrical Systems
ET	Extraction Steam
FAB	Fuel Storage Bldg. Air Handling
FA	*Fuel Handling - Reactor
FO	Fuel Oil
FP	Fire Protection
FPA	Fire Pump House Air Handling
ETA	Elec. Tunnel Air Handling
FV	Feedwater (INCL. *FC)
GAB	Guard House Air Handling
CSC	Generator Stator Cooling
HD	Heater Drains
HE	Helium
HF	Hydraulic Fluid for EBC
HT	Heat Tracing
BOG	Hydrogen Gas at Generator
HED	G.E. Turbine Hydrogen Seal Oil Drain
HVR	Hot Water Heating Return
HVS	Hot Water Heating Supply
IA	Instrument Air
IC	*Incore Instrumentation
IB	Isobutane - Helium
LO	Lube Oil (ALL APPLICATIONS INCL. PURIFICATION)
LD	Leak Detection System
NAP	Napp Gas
MO	Moisture Sep. & Reheater Drains
MI	Miscellaneous (NOT SYS. ORIENTED) Equip.
MS	Main Steam (INCL. TURB. BYPASS STEAM)
MSS	Mechanical Seal Supply
MSD	Main Steam Drains
MYD	Miscellaneous Vents - Drains



Pullman Power Products

IV-2

DOCUMENT NO.

PREPARED BY: E. SWISHER

APPROVED BY: M. HINLEY

ISSUE DATE: 2/16/83

SEABROOK
PROJECT PROCEDURE

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PAGE NO. APPENDIX A
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ABBREVIATION

SYSTEM

NG	Nitrogen Gas
NI	Nuclear Instrumentation
NZ	Nitrous Oxide
OC	Oxygen
PAC	Public Address Communications
PAB	PAB Air Handling
PAH	Post Accident Monitoring
PP	Propane
PW	Potable Water - CITY WATER
PWB	Potable Water - HOT
PWC	Potable Water - RECIRCULATING
RC	*Reactor Coolant
RR	*Residual Heat Removal
RM	Radiation Monitoring
RMW	Reactor Make-Up Water
RS	Resin Sludging
SA	Service Air Systems
SAA	Service Air C-6A (EQUIP. PEG.)
SAB	Service Air C-6B (EQUIP. PEG.)
SAC	Service Air C-1A (EQUIP. PEG.)
SAD	Service Air C-1B (EQUIP. PEG.)
SAE	Service Air C-1C (EQUIP. PEG.)
SAN	Sanitary Sewer
SB	Steam Generator Blowdown
SC	Station Info. & Alarm Computr.
SCC	Secondary Component Cooling
SCW	Screen Wash Water
SP	Spent Fuel Pool Cooling
SCA	Non-Essential Switchgear Air Handling
SI	*Safety Injection
SO	Seal Oil-Generator
SPC	Sound Powered Communications
SY	Switchyard
SM	Seismic Monitoring System
SS	Sample System
SSS	Turbine Steam Seal System
STO	Storm Sewer
SW	Service Water
SWA	SW Pump House Air Handling
TAN	Turbine Bldg. Air Handling
TDA	SGFP Turbine Drive A (EQUIP. PEG.)
TDB	SGFP Turbine Drive B (EQUIP. PEG.)
TH	Turbine Generator
TPC	Telephone Communications
TSI	Turb. Supervisory Instrumentation



Pullman Power Products

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DOCUMENT NO

PREPARED BY: E. SWISHER

APPROVED BY: P. HINKLEY

ISSUE

DATE: 2/16/83

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PROJECT PROCEDURE

TO BE USED
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NO.

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ABBREVIATION

SYSTEM

WAB	Waste Processing Air Handling
VC	Vents
WG	Waste Processing - GASEOUS
WL	WP - LIQUID
VLD	WP - LIQUID DRAINS (ALL TYPES)
VS	WP - SOLID
WT	Water Treatment
WW	Well Water
XI	Process Instrumentation
VB	Vibration Monitoring System
NSA	No System Applicable



Pullman Power Products

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DOCUMENT NO.

PREPARED BY: K. SWISHER

APPROVED BY: R. HINLEY

ISSUE DATE: 2/14/83

SEABROOK
PROJECT PROCEDURE

TO BE USED
ONLY ON JOB # 7035

PAGE NO. APPENDIX B
1 of 2

NONCONFORMANCE CODE

PREFIX DIGITS

1	Piping	2	Supports	3	Mechanical
4	UE&C Engineering	5	UE&C Const. Manager	6	Program
7	Other Contractors	8	Vendor	9	Miscellaneous

SUFFIX DIGITS

01	Unacceptable Fit-up	08	Unacceptable Materials - Vendor
011	Misalignment/Out of Plumb	081	Damaged
012	Counterbore	082	Missing/Incomplete
013	End Preparation	083	Inadequate Documentation
014	Transitions	084	Cleanliness
015	Gap	085	Dimensions
016	Socket Weld Pullback	086	Ident./Tagging
02	Unacceptable Welds	09	Unacceptable Materials - After
021	Interpass/Post/Pre-Heating	091	Damaged Receipt
022	Surface/Radial Shrinkage	092	Missing/Incomplete
023	Root	093	Inadequate Documentation
024	Insert	094	Cleanliness
025	Backing Ring	095	Indications
026	Size	10	Unacceptable Process Control
03	Unacceptable Dimensions	101	By-Passed Hold Points
031	As Installed/Out of Plumb/ Hilti Edge Distance	102	Inadequate Documentation
032	As Received	11	Unacceptable Test



Pullman Power Products

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DOCUMENT NO.

PREPARED BY: K. SWISHER

APPROVED BY: M. HINLEY

ISSUE DATE: 2/16/83

SEABROOK
PROJECT PROCEDURE

TO BE USED
ONLY ON JOB # 7035

PAGE NO. APPENDIX B
2 of 2

SUFFIX DIGITS (Continued)

- | | | | |
|----|--|-----|------------------------------|
| 04 | Unacceptable Coating/Lining | 111 | Failed |
| | 041 Upon Receipt | 112 | Inadequate Documentation |
| | 042 After Receipt | | |
| | 043 After Installation | 13 | Unacceptable Indent./Tagging |
| | | 131 | Prior to Installation |
| | | 132 | After Installation |
| 05 | Unacceptable Mechanical Operations | | |
| | 051 Grinding | 14 | Unacceptable MTE |
| | 052 Cutting | 141 | Not Calibrated |
| | 053 Torquing | 142 | Recalibration Overdue |
| | 054 Machining | 143 | Unidentifiable |
| | 055 Drilling | 144 | Damaged |
| | 056 Threading | | |
| 06 | Unacceptable Storage | | |
| 07 | Unacceptable Handling | | |
| 15 | Uncertified Personnel | | |
| | 151 Craft | | |
| | 152 QA/QC | | |
| 16 | Procedure/Specification/Manual Discrepancy | | |
| | 161 Conflicts with Spec. | | |
| | 162 Conflicts with Manual | | |
| 17 | Drawing Discrepancy | | |
| | 171 ISO Conflicts with DE&C Design Drawing | | |
| | 172 Inaccurate ISO | | |
| | 173 Design Documents | | |



Pullman Power Products

EV-2
DOCUMENT NO.

PREPARED BY: E. SWISHER

APPROVED BY: R. MURPHY

ISSUE DATE: 3/16/83

SEABROOK
PROJECT PROCEDURE

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PAGE NO. APPENDIX C
1 of 1

CAUSE CODES

- | | | | | | |
|---|-------------|---|-------------------|---|---------------|
| 1 | Craft | 3 | Quality Control | 5 | Others |
| 2 | Engineering | 4 | Quality Assurance | 6 | Indeterminate |
- 01 Workmanship
 - 02 Carelessness
 - 03 Inadequate indoctrination and Training
 - 04 Incorrect/Inadequate Planning
 - 05 Improper Supervision
 - 06 Inadequate/Incorrect MTE
 - 07 Out of Calibration MTE
 - 08 Procedure - Wrong Revision
 - 09 Procedure - Inadequate Implementation
 - 10 Procedure - Insufficient Requirements/Bills Edge Distance
 - 11 Procedure/Drawing Conflict
 - 12 Drawing - Wrong Revision
 - 13 Drawing - Misinterpretation
 - 14 Drawing - Incorrect Bill of Material
 - 15 Inadequate Review/Verification
 - 16 Inadequate Status Control
 - 17 Equipment Malfunction
 - 18 Environmental
 - 19 Mishandling



Pullman Power Products

XV-2

DOCUMENT NO

PREPARED BY: R.G. DAVIS

APPROVED BY: H.D. HINKLEY

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ISSUE DATE: 2/14/83

SEABROOK PROJECT PROCEDURE

TO BE USED ONLY ON JOB # 7035

APPENDIX D
PAGE NO. 1 of 1

PULLMAN POWER PRODUCTS		NONCONFORMANCE REPORT	
(a)		(b) FTD:	
1	(1c) (1b) (1d) (1e)	(1f) (1g)	(1h) (1i)
2	(2a) (2b) (2c)	(2d) (2e)	(2f) (2g)
3	(3a) (3b) (3c)	(3d) (3e)	(3f) (3g)
4	(4a) (4b) (4c)	(4d) (4e)	(4f) (4g)
5	(5a) (5b) (5c)	(5d) (5e)	(5f) (5g)
6	(6a) (6b) (6c)	(6d) (6e)	(6f) (6g)
7	(7a) (7b) (7c)	(7d) (7e)	(7f) (7g)
8	(8a) (8b) (8c)	(8d) (8e)	(8f) (8g)
9	(9a) (9b) (9c)	(9d) (9e)	(9f) (9g)
10	(10a) (10b) (10c)	(10d) (10e)	(10f) (10g)
11	(11a) (11b) (11c)	(11d) (11e)	(11f) (11g)
12	(12a) (12b) (12c)	(12d) (12e)	(12f) (12g)
13	(13a) (13b) (13c)	(13d) (13e)	(13f) (13g)
14	(14a) (14b) (14c)	(14d) (14e)	(14f) (14g)
15	(15a) (15b) (15c)	(15d) (15e)	(15f) (15g)
16	(16a) (16b) (16c)	(16d) (16e)	(16f) (16g)
17	(17a) (17b) (17c)	(17d) (17e)	(17f) (17g)
18	(18a) (18b) (18c)	(18d) (18e)	(18f) (18g)
19	(19a) (19b) (19c)	(19d) (19e)	(19f) (19g)
20	(20a) (20b) (20c)	(20d) (20e)	(20f) (20g)
21	(21a) (21b) (21c)	(21d) (21e)	(21f) (21g)
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25	(25a) (25b) (25c)	(25d) (25e)	(25f) (25g)
26	(26a) (26b) (26c)	(26d) (26e)	(26f) (26g)
27	(27a) (27b) (27c)	(27d) (27e)	(27f) (27g)
28	(28a) (28b) (28c)	(28d) (28e)	(28f) (28g)
29	(29a) (29b) (29c)	(29d) (29e)	(29f) (29g)
30	(30a) (30b) (30c)	(30d) (30e)	(30f) (30g)
31	(31a) (31b) (31c)	(31d) (31e)	(31f) (31g)
32	(32a) (32b) (32c)	(32d) (32e)	(32f) (32g)
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67	(67a) (67b) (67c)	(67d) (67e)	(67f) (67g)
68	(68a) (68b) (68c)	(68d) (68e)	(68f) (68g)
69	(69a) (69b) (69c)	(69d) (69e)	(69f) (69g)
70	(70a) (70b) (70c)	(70d) (70e)	(70f) (70g)
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72	(72a) (72b) (72c)	(72d) (72e)	(72f) (72g)
73	(73a) (73b) (73c)	(73d) (73e)	(73f) (73g)
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75	(75a) (75b) (75c)	(75d) (75e)	(75f) (75g)
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77	(77a) (77b) (77c)	(77d) (77e)	(77f) (77g)
78	(78a) (78b) (78c)	(78d) (78e)	(78f) (78g)
79	(79a) (79b) (79c)	(79d) (79e)	(79f) (79g)
80	(80a) (80b) (80c)	(80d) (80e)	(80f) (80g)
81	(81a) (81b) (81c)	(81d) (81e)	(81f) (81g)
82	(82a) (82b) (82c)	(82d) (82e)	(82f) (82g)
83	(83a) (83b) (83c)	(83d) (83e)	(83f) (83g)
84	(84a) (84b) (84c)	(84d) (84e)	(84f) (84g)
85	(85a) (85b) (85c)	(85d) (85e)	(85f) (85g)
86	(86a) (86b) (86c)	(86d) (86e)	(86f) (86g)
87	(87a) (87b) (87c)	(87d) (87e)	(87f) (87g)
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90	(90a) (90b) (90c)	(90d) (90e)	(90f) (90g)
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92	(92a) (92b) (92c)	(92d) (92e)	(92f) (92g)
93	(93a) (93b) (93c)	(93d) (93e)	(93f) (93g)
94	(94a) (94b) (94c)	(94d) (94e)	(94f) (94g)
95	(95a) (95b) (95c)	(95d) (95e)	(95f) (95g)
96	(96a) (96b) (96c)	(96d) (96e)	(96f) (96g)
97	(97a) (97b) (97c)	(97d) (97e)	(97f) (97g)
98	(98a) (98b) (98c)	(98d) (98e)	(98f) (98g)
99	(99a) (99b) (99c)	(99d) (99e)	(99f) (99g)
100	(100a) (100b) (100c)	(100d) (100e)	(100f) (100g)



Pullman Power Products

XV-2

DOCUMENT NO

PREPARED BY: R.G. DAVIS

APPROVED BY: H.D. HINKLEY

MDM

ISSUE DATE: 2/16/83

SEABROOK
PROJECT PROCEDURE

TO BE USED
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APPENDIX E
PAGE
NO. 1 of 1

OPERATOR		SYSTEM - LINE NO.	INSTRUMENT DR. NO.	DETAILED DR. NO.	DATE
Public Service Co. of NY		F118K	F136	# 30	10/1
OPER. NO.	OPERATION	DATE	TIME	CLASS	DATE
	CUTTING OPERATION FOR C/S PIPE WITH WALL THICKNESS GREATER THAN 3/4"	2-22-83			
	FIELD WELDING F136A1				
1	PERFORM WELD TO BE INSPECTED	2-22-83			
2	CUT PIPE	2-22-83			
3	VISUALLY INSPECT	2-22-83			
4	PERFORM TO COVER PIPE				
5	PERFORM JOINT WELD				
6	REWORK BY WELDING				
Ins. APPROVAL Date:					
C.A. APPROVAL Date 2/22/83					
APP. SYSTEM C.A. Date 2/22/83					
Special Ins.:					
C.A. APPROVAL Date 2/22/83					
OPERATOR Date 2/22/83					
SUPERVISOR Date 2/22/83					
DATE OF PRINTING 2/22/83					
JOB NO.					



Pullman Power Products

XV-2

DOCUMENT NO

PREPARED BY: R.G. DAVIS

APPROVED BY: H.D. HINKLEY

HDM

ISSUE DATE: 2/14/83

SEABROOK PROJECT PROCEDURE

TO BE USED ONLY ON JOB # 7035

APPENDIX F
PAGE NO. 1 of 1

REV	DESCRIPTION	DATE	BY	CHKD	DATE	BY	CHKD
1	Material Description Pump to 7035 PC model #1 of 10	8/15/78	RD				
2	OPERATION						
3	OPERATION INSTRUCTION	8/15/78	RD				
4	FIT UP PARTS & ASSEMBLY	8/15/78	RD				
5	OPERATION						
6	OPERATION						
7	OPERATION						
8	OPERATION						
9	OPERATION						
10	OPERATION						
11	OPERATION						
12	OPERATION						
13	OPERATION						
14	OPERATION						
15	OPERATION						
16	OPERATION						
17	OPERATION						
18	OPERATION						

SAMPLE

REV. 2001/11/011

PULLMAN POWER PRODUCTS
 SEABROOK STATION
 13000 11TH STREET
 SEABROOK, TEXAS 77407
 TEL: 281-333-1111
 FAX: 281-333-1112
 CIRCLE 11 ON READER SERVICE CARD



Pullman Power Products

XV-2

DOCUMENT NO.

PREPARED BY: E.C. DAVIS

APPROVED BY: H.D. HINCHLEY

MDM

ISSUE DATE: 2/16/83

SEABROOK
PROJECT PROCEDURE

TO BE USED
ONLY ON JOB # 7035

APPENDIX C

PAGE NO. 1 of 1

81-21-17

JOB NO. 7026 PO 201
ITEM NO. N218 HEAT OR SERIAL NO. K-1246

HOLD

NO 35/2

DATE 2/17/83

- HOLD FOR INSPECTION
 - WAIT FOR TEST REPORT
 - WAIT FOR - NDR - REPORT
 - RETURN TO VENDOR
 - WAIT FOR ENGINEERING SPEC OR DRAWING CLARIFICATION
 - _____
- Inspected by*
INSPECTED BY

SAMPLE

DISPOSITION

*Retain in Hold Area until
spec's are received and approved*

NO. 35/2 N/A APPLICABLE FOR
USE THE HOLD PROC

557-36 (2/17/83)



Pullman Power Products

XV-2

DOCUMENT NO

PREPARED BY: R.C. DAVIS

APPROVED BY: H.D. HINKLEY

HDB

ISSUE DATE: 2/14/83

SEABROOK
PROJECT PROCEDURE

TO BE USED
ONLY ON JOB # 7035

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PULLMAN POWER PRODUCTS
SEABROOK STATION

LIMITED WORK
AUTHORIZATION

001

ITEM IDENTIFICATION

SW-1818301

Spun Piece - 1818316

~~SECRET~~
SECRET OF LWA

TO COMPLETE FIELD

WELD F0106

APPENDIX B
JOB NO. 7035 ONLY

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

SSP-58 (1-10-83)

(COLOR YELLOW)



Pullman Power Products

IV-2

DOCUMENT NO.

PREPARED BY: E.C. DAVIS

APPROVED BY: H.D. HINLEY

ISSUE DATE: 2/16/83

SEABROOK
PROJECT PROCEDURE

TO BE USED
ONLY ON JOB # 7035

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PULLMAN POWER PRODUCTS





Pullman Power Products

XV-2

DOCUMENT NO.

PREPARED BY: R.G. DAVIS

APPROVED BY: H.D. HINLEY

MDM

ISSUE DATE: 2/14/83

SEABROOK
PROJECT PROCEDURE

TO BE USED
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REGULATOR CODE PS-32
FORM TYPE
REV. 0000



Pullman Power Products

SEABROOK STATION
NORTH CAROLINA
1987 PROCEDURE 0000 0000

DRAWN _____
DATE _____
PAGE _____ OF _____
ESP-36 (1-10-83)

1. ITEM(S) NAME/IDENTIFY (INCLUDE TEST, SYSTEM, LOCATION, AS APPLICABLE)

DOCUMENTS RELATED TO HOLD TAG
STEP WORK ORDER (S.W.O.) _____

Reason/Reference Report (R/R) _____

Involved Personnel (IP) _____

Receiving "HOLD" Supporting App. _____

2. REASON FOR TAG ACQUISITION

3. SCOPE OF WORK WHICH WILL BE PERFORMED (INCLUDE SYSTEMS PROCESS UNIT(S) AND OPERATIONS TO BE PERFORMED AND/OR THE "FROM" AND "TO" WORK LOCATIONS)

Signature of Field Engineer _____ Date _____

4. STATES OF ITEMS HAS BEEN REVIEWED INCLUDING ALL DOCUMENTATION RELATED TO HOLD TAG AND TAG IS APPROVED. INSPECTOR HOLD POINTS SHALL NOT BE BY-PASSED AND WORK SHALL NOT PROCEED BEYOND THE FOLLOWING POINT TO VERIFY ASSIGNMENT TO ITEM(S):

5. TAG ISSUED FOR THE FOLLOWING REASON:

Approval: <input type="checkbox"/>	Chief Engineer	_____	Date _____
Disapproval: <input type="checkbox"/>	Signature	_____	
Approval: <input type="checkbox"/>	Field CA Manager	_____	Date _____
Disapproval: <input type="checkbox"/>	Signature	_____	
Approval: <input type="checkbox"/>	Field Engineering	_____	Date _____
Disapproval: <input type="checkbox"/>	Signature	_____	
	ACT Review	_____	Date _____

6. TAG ISSUED IN FULL COMPLIANCE WITH ALL REQUIREMENTS AND TAG IS VALIDATED BY SIGNATURE OF FIELD CA MANAGER AND/OR FIELD ENGINEER

7. INSPECTOR REVIEWING TAG TAG _____ DATE _____

8. ISSUED BY CA OFFICE _____ SIGNATURE _____ DATE _____



Pullman Power Products

XV-2

DOCUMENT NO.

PREPARED BY: R.G. DAVIS

APPROVED BY: H.D. HINKLEY

WDR

ISSUE DATE: 2/14/83

SEABROOK
PROJECT PROCEDURE

TO BE USED
ONLY ON JOB # 7035

APPENDIX E
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PULLMAN POWER PRODUCTS

SEABROOK STATION JOB 7035

QA/QC REPAIR

TAG # 15

REWORK

SAMPLE

REPAIR

OTHER ACTIVITY

APPLICABLE FOR
JOB NO. 7035 ONLY

NCR #

753

HOLD TAG #

1015

REMARKS

REPAIR SLIP & WELD 2" DIA 3"

QA/QC INSPECTOR

[Signature]

DATE APPLIED

[Date]

557-37 (1-12-83)

(COLOR-BLUE)



Pullman Power Products

XV-2
DOCUMENT NO.

PREPARED BY: K. SWISHER

APPROVED BY: H. BINKLEY

ISSUE DATE: 2/16/83

SEABOOR
PROJECT PROCEDURE

TO BE USED
ONLY ON JOB # 7035

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STANDARD REPAIR SPECIFICATION No. 1

for

DAMAGED CEMENT LINING

BACKGROUND

Selected classes of prefabricated piping contain a cement lining which may become damaged during construction activities. The repair of their lining may be conducted in accordance with this specification.

DESCRIPTION OF THE CONDITION TO BE REPAIRED

Cement lining has cracks which exceed specification allowances (1/32"), is loosened, missing or otherwise damaged or which in the contractor's judgement is not sound. Use of this specification is limited to areas less than the full circumference of the pipe for a length along the pipe equal to 3 pipe diameters. Larger areas requiring repair shall be documented by nonconformance report.

STANDARD REPAIR CRITERIA

Single cracks up to 1/16" in width wherein cement lining appears to be tightly bonded to pipe may be accepted as-is.

Cement lining containing cracks wherein the lining appears not to be tightly bonded to the pipe shall be removed as required and shall be replaced by application of Sikadur Low-mod gel. Sikadur gel to be applied in accordance with the requirements of Pullman Procedure IX-30 (FP-42268) reflecting the requirements of Spec. 248-51. Interior finish of cement lining to be blended smoothly with the contour of existing cement lining.

Following completion of cement lining repair, conduct a visual inspection utilizing the inspection check list for cement lining and grouting as contained in the referenced procedure.

Record the location and extent of repairs on documents to be submitted to Construction Manager for record purposes. UE&C

TECHNICAL JUSTIFICATION

Acceptance of cracks up to 1/16" does not violate manufacturer's recommendation. Cracking in excess of specification tolerances is possible due to the extension of long term storage period beyond anticipated 6 months.

* REF. COM # 19/0200

5/16/83

SP 1.01A 11-81



Pullman Power Products

EV-2

DOCUMENT NO.

PREPARED BY: K. SWISHER

APPROVED BY: H. HINLEY

ISSUE DATE: 2/16/83

SEABROOK
PROJECT PROCEDURE

TO BE USED
ONLY ON JOB # 7035

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Repair of loose cement lining is required to obtain tightly adhering bond between pipe and lining to preclude subsequent lining failure.

Repair in accordance with approved procedures does not jeopardize material quality or system design criteria.



Pullman Power Products

IV-2

DOCUMENT NO.

PREPARED BY: R. SWISHER

APPROVED BY: R. WINKLEY

NDH

ISSUE DATE: 2/16/83

SEABROOK
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TO BE USED
ONLY ON JOB # 7035

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STANDARD REPAIR SPECIFICATION NO. 2

for

IMPROPER WELD PREP COUNTERBORE TRANSITION *

BACKGROUND

The piping fabricator is permitted to perform a "skim cut" counterboring operation on end preparations which otherwise do not require a counterbore but because of minor ovality in the pipe, the end prep land cannot be satisfactorily applied. "Skim cutting" of this nature was not recognized by project specifications prior to the issuance of ECA 19/0153A and selected pipe spools may arrive onsite with end preps containing the "skim cut" when it is not called for by the end prep detail drawings. This type of apparently improper end prep shall be repaired in accordance with this specification. Also the pipe fabricator on occasion has not conformed to DWG. 5000-F-1382 for transition angles.

DESCRIPTION OF THE CONDITION TO BE REPAIRED

Undocumented presence of a counterbore where not called for by end preparation details. Counterbore usually contains a sharp transition to nominal pipe inside diameter which violates code thickness transition criteria. Or, counter-bore transition did not conform to DWG. 5000-F-1382 or applicable code.

STANDARD REPAIR CRITERIA

Installing contractor shall confirm that the end preparation, other than the counterbore is acceptable. The counterbore may be left as-is but the transition to the nominal pipe I.D. shall be ground as required to meet applicable code requirements for transitions. Care shall be taken to preclude injury to the pressure boundary. No appreciable reduction of wall thickness is permitted.

Following grinding the affected area shall be examined visually and by suitable surface exam technique (MT or LP). A wall thickness measurement shall be conducted where visual exam reveals potential wall thinning. Wall thickness less than T_m as shown in DWG. 5000-F-1382 shall be reported via nonconformance report.

TECHNICAL JUSTIFICATION

The existence of transition angles which do not comply with DWG. 5000-F-1382 are not injurious provided it complies with code requirements for transition angles. Repair as described herein accomplishes code compliance without jeopardizing material quality or system design criteria.

*REF: ECA 19/01532



Pullman Power Products

XV-2
DOCUMENT NO.

PREPARED BY: E. SVISHER

APPROVED BY: H. RINELEY

ADM

ISSUE
DATE: 7/16/83

SEABOOK
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TO BE USED
ONLY ON JOB # 7035

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STANDARD REPAIR SPECIFICATION NO. 3

for

DAMAGED EXTERNAL COATING & WRAPPING *

BACKGROUND

The external coating and wrapping on pipe received on site may become damaged due to shipping, handling or storage operations. The repair of damaged coating and wrapping shall be conducted in the field in accordance with the requirements specified herein.

DESCRIPTION OF THE CONDITION TO BE REPAIRED

Visible damage to external coating & wrapping or its failure to pass electrical holiday detector examination. Where damage to the coating is contiguous with damage to the pipe pressure boundary, the pipe condition shall be reported and repaired in accordance with a contractor nonconformance report prior to commencing and coating repairs.

STANDARD REPAIR CRITERIA

Field repairs to external coating and wrapping shall be conducted in accordance with approved procedures reflecting the requirements of article 3.5.5 of specification 9763-248-51.

As an alternate, field repairs may be conducted in accordance with approved contractor procedures for application of hot-applied tape coatings such as Tapecoat 20 or engineer approved equal.

TECHNICAL JUSTIFICATION

Sound external coating and wrapping is required for proper corrosion protection of pipe pressure boundary. Repair in accordance with approved procedures does not jeopardize material quality or system design criteria.

*REF: ECA 19/0232



Pullman Power Products

EV-2

DOCUMENT NO

PREPARED BY: K. SWISHER

APPROVED BY: E. HINLEY

ISSUE DATE: 2/16/83

SLABROOK
PROJECT PROCEDURE

TO BE USED
ONLY ON JOB # 7035

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STANDARD REPAIR SPECIFICATION NO. 4

for

MINOR DAMAGE TO PIPE WELD END PREPARATIONS *

BACKGROUND

Due to some manufacturing processes as well as handling and shipping, pipe weld end preparations may be received on site with minor end preparation damage. In certain cases, the damage may be inconsequential enough so as not to jeopardize base or weld material or impair joint fit-up and weld out provided a single repair is performed. In these instances, repair may be made and welding continued in accordance with the criteria of this specification.

DESCRIPTION OF THE CONDITION TO BE REPAIRED

Any damage to a pipe weld end preparation which can be accommodated by the welding operator without appreciable additional risk to the successful completion of the weld. Mild grinding may be used but weld repair is prohibited (except to replace backing rings).

Examples of these conditions are:

- a. Machined end preparation which is out of round because the fabrication process clamped the pipe during machining.
- b. A small irregularity in the machined area which does not require weld repair.
- c. Insufficient counterbore length.
- d. A bent backing ring which can be straightened without weld repair or which can be replaced.
- e. Blend grind performed on counterbore transitions for the purpose of achieving the required code counterbore.

STANDARD REPAIR CRITERIA

Normal fit-up clamps may be used to round up an end preparation to achieve fit-up. Excessive force (resulting in permanent deformation or local irregularities in the pipe) and hydraulic jacking are prohibited.

* REF ECA 19 0030



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XV-2
DOCUMENT NO

PREPARED BY: E. SWISHER

APPROVED BY: H. BIRKLEY

ISSUE DATE: 2/16/83

SEABROOK
PROJECT PROCEDURE

TO BE USED
ONLY ON JOB # 7035

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STANDARD CRITERIA (continued)

Any local dent or other irregularity in a machined surface which after grinding would not affect base material thickness or impair the welding operation may be repaired. Ability to perform a sound weld may be repaired accordingly. Weld repair is prohibited. All grinding shall be followed by appropriate surface examination.

Where a counterbore does not extend sufficiently far into a spool it may be re-machined in the field to the original specifications. All shall be followed by surface examination and wall thickness measurements.

Bent backing rings may be straightened by use of hand tools. Beating and peening is prohibited. As an alternate, a damaged backing ring may be removed and a new one conforming to the applicable material specifications may be installed. Removed tack welds shall be ground flush and given a surface examination. Any reductions in wall thickness is prohibited.

TECHNICAL JUSTIFICATION

The conditions described herein are minor in nature and are readily recognized and repaired without risk of additional damage to the fabrication. Repair as described herein does not jeopardize material quality or system design criteria.



PREPARED BY: E. SWINER

APPROVED BY: H. HICKLEY

DATE: 2/14/83

SEABROOK
PROJECT PROCEDURE

TO BE USED
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STANDARD REPAIR SPECIFICATION NO. 5

for

MATERIAL LOST IN THE FIELD

BACKGROUND

Occasionally an item received onsite cannot be located and retrieved from the Contractor's storage facility. Some of these items are readily replaceable from field bulk stock.

DESCRIPTION OF THE CONDITION TO BE REPAIRED

An item known to have been received on site but which cannot be retrieved from the Contractor's storage facility. The item shall not have a value in excess of \$500.00.

STANDARD REPLACEMENT CRITERIA

A lost item may be replaced with a new item taken from undesignated field stock provided:

- a. For ASME or similar code items, the replacement must be of equal or more stringent equality.
- b. For other items not included in a. above, the replacement item must exactly duplicate the lost item.
- c. The replacement item possesses the same or higher quality documentation.
- d. The replacement item is retagged, where appropriate, in accordance with the approved site procedures.

Should a lost item be retrieved after a replacement has been installed, the item shall be placed in field stock.

In each case instance of lost material, the UE&C Piping Superintendent shall be notified verbally prior to installation of a replacement.

TECHNICAL JUSTIFICATION

Replacement of lost material with an exact duplicate taken from field stock does not guarantee material quality or system design criteria.

* EPC FCA 19/0232



Pullman Power Products

IV-2

DOCUMENT NO.

PREPARED BY: R. SWISHER

APPROVED BY: H. HINKLEY

SDR

ISSUE DATE:

2/16/87

SEABROOK
PROJECT PROCEDURE

TO BE USED
ONLY ON JOB #

7035

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STANDARD REPAIR SPECIFICATION No. 6

for

RELOCATION OF CODE DATA PLATES AND COMPONENT I.D. PLATES *

BACKGROUND

ASME Section III components and other pre-purchased materials may have code data plates or component identification plates attached. Where the location of the code data plate is in conflict with project requirements or where modification to pipe spools or components causes the code data plate to be discarded, the plates may require relocation in the field in accordance with the requirements specified herein.

DESCRIPTION OF THE CONDITION TO BE REPAIRED

The presence of a code data plate or component I.D. plate which either is in a location which is unserviceable because of interference or has been completely removed due to pipe spool or component modification.

STANDARD REWORK CRITERIA

For welded attachments, remove the data plate(s) by grinding with a mild grinding wheel in a manner which precludes injury to the pipe pressure boundary. Blend the ground area to the contour of the surface.

Conduct an examination to assure that grinding does not reduce the wall thickness below the minimum thickness (T_m) as stated on UELC DWG. 5000-F-1382 for piping or more than 5% of nominal thickness of other members. This examination may be a visual examination using a straight edge held against the contour of the pipe to verify that grinding does not result in a appreciable reduction of the wall thickness. Where this examination is not conclusive, a UT wall thickness measurement shall be conducted.

Conduct a surface examination of all areas affected by the grinding operation; MT examination for ferromagnetic materials, LP examination for others.

All NDE shall be performed by qualified Quality Assurance inspectors.

For riveted attachments (allowed in pipe support components only) the removal and reinstallation of rivets shall be per approved contractor procedures in accordance with the rivet manufacturer's instructions.

* REF. SCA 1970032

SP 1.01A (07-87)



Pullman Power Products

XV-2

DOCUMENT NO.

PREPARED BY: K. SWISHER

APPROVED BY: R. HINKLEY

ISSUE DATE: 2/16/83

SEABROOK
PROJECT PROCEDURES

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Relocate the data plate(s) in accordance with the following criteria:

IN PIPING:

- a. Review UEGC support isometric drawings and support detail drawings to select a location of the spool which will not interfere with a support.
- b. review applicable sleeve drawings to select a location not within a sleeve.
- c. review Drawo fabrication sketches and isometric sketches to determine if the affected pipe spool is to be subjected to in-service inspection. If not, select a convenient new location for the plate(s). If in-service inspection is required, select a new mounting location which satisfies the criteria of 9763-18-1 titled Design Guidelines for In-Service Inspection of Piping Systems.
- d. Treat the data plate(s) as a minor permanent attachment and consequently follow the rules of NB/KC/ND-4635 for ASME Section III Code Piping.

IN SUPPORT COMPONENTS

- a. Review the support design detail drawing and select a convenient location which satisfies the access criteria.

In all cases, the plate shall be readily visible for examination. Plates shall be oriented in a workmanlike manner leaving their longest edge either parallel or perpendicular to the major axis of the member. All work shall be in accordance with approved procedures.

Identify the exact location of the relocated data plate on as-built drawings. ** As-built location and drawing to be verified by authorized nuclear inspection.

TECHNICAL JUSTIFICATION

The location of data plates is arbitrary provided it satisfies the criteria referenced herein. Relocation (rework) in accordance with the Code as described herein per approved procedures does not jeopardize material quality or system design criteria.

4/14/83

- ** The location of the Data Plate may be established/identified by use of an On-The-Spot ECA, REF: Project Procedure III-4.

SF 1.001A (11-83)

JOB NO		13219	
9763011248005144973117KXV-2			
P.C.C FOR HANDLING		NOW-COMFORM	
		P-H	
35-41403, 882PP742BTFLB294-347-185			
UNITED ENGINEERS & ARCHITECTS INC. 1000 ... 1000 ... 1000 ... 1000 ...		XOX XOX DATE 6/1/56	

INFORMATION ONLY