

Pullman Power Products		FF-3
PREPARED BY: E. FISHER	APPROVED BY: B. HINKLEY	ISSUE DATE: 2/16/83
SEABROOK PROJECT PROCEDURE	TO BE USED ONLY ON JOB # 7035	PAGE NO. 1 of 15
		LATEST REV. DATE 1/17/84

PROCEDURE FOR HANDLING
OF DEFICIENCIES AND LIMITED
VOSS AUTHORIZATION (FIELD)

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PULLMAN POWER PRODUCTS

HEADQUARTERS AT
WILLIAMSPORT, PENNSYLVANIA

RECEIVED
U. E. & C. INC.
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SEABROOK
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REVISION	PREPARED BY	APPROVED BY	INITIALS	DESCRIPTION
15 02/16/83	E. Fisher	B. Hinkley	EBH	Extensively revised; released.
16 04/14/83	W. Becksted	B. Hinkley	EBH	Revised Para. 6.1.2.B, 8.2, 8.2.2, 8.3, 8.3.2, 13.3 & Appendix L; Editorial corrections.
17 05/16/83	S. Elmore	B. Hinkley	EBH	Add Para. 4.2.12, Revised Para. 7.3.1, Deletion of Page 6, 11-18 of Appendix L; Editorial corrections.
18 07/14/83	S. Elmore	B. Hinkley	EBH	Editorial Corrections; Revised Appendix D, Appendix L (page 6).
19 01/17/84	W. Becksted	C. Beary	CBM	Revised Para. 2.1, 2.2, 3.2, 3.3, 4.1, 4.2.B, 4.2.10, 5.1, 6.1.2.B, 7.1, 8.1, 8.2.2, 8.4.2.A, 8.4.3.A, 8.5.2.A, 9.1, 10.1, 10.3, 10.3.B, 11.1, 11.2, 14.1, & Appendix A & B; Added Para. 2.1.1, 2.1.1.A, B & 3.1, 4.2.10.A, 4.3, 6.1.2.C, 6.2, 7.1.1, 7.7.2, 7.7.3, 9.2, 12.2, 12.3 & 13.6; Renumbered Para. 9.3, 9.3.1 & 13.7; Incorp. IPR/R18-1, Para. 5.1; Editorial correction.

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EV-2

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PROJECT PROCEDURE

TO BE USED
ONLY ON JOB # 7035

PAGE NO. 2 of 15

INDEX

<u>TITLE PAGE</u>	<u>PARAGRAPHS</u>	<u>PAGE</u>
Title Page	---	1
Index	---	2
Scope	1.0	3
Policy	2.0	3
Responsibility	3.0	3
Applicability of Nonconformance Report (NCR)	4.0	4
Immediate Action	5.0	6
Limited Work Authorization (LWO)	6.0	6
Processing and Evaluation of Nonconformance Reports	7.0	8
Proposing Disposition of NCR's	8.0	9
Formal Dispositioning/Approval of NCR's	9.0	12
Approved NCR (Interim Action)	10.0	12
Documenting	11.0	13
Records	12.0	13
Voiding NCR's	13.0	14
Review and Recurrence Prevention	14.0	15
NCR Form Instruction	Appendix A	1 of 7
Nonconformance Code	Appendix B	1 of 2
Cause Codes	Appendix C	1 of 1
Nonconformance Report	Appendix D	1 of 1
Field Process Sheet	Appendix E	1 of 1
Field Weld Process Sheet	Appendix F	1 of 1
Hold Tag	Appendix G	1 of 1
Limited Work Authorization Tag	Appendix H	1 of 1
Nonconformance Log	Appendix I	1 of 1
Limited Work Authorization Request	Appendix J	1 of 1
QA/QC Repair Tag	Appendix K	1 of 1
Standard Repair Spec. No. 1 thru 7	Appendix L	1 of 9



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PAGE
NO 3 of 15

1.0 SCOPE

- 1.1 This procedure defines the necessary action required to process nonconformances (NCS's) in accordance with Section IV of the Company's Quality Assurance Manual.
- 1.2 Nonconformances in ASME Section I, 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

1/17/84

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

1/17/84

- 2.1.1 Nonconformance Reports shall be classified as either minor or Major.

1/17/84

- A. A Minor Nonconformance is one which may be dispositioned as rework or scrap. UE&C evaluation/disposition is not required for Minor Nonconformance Reports.

1/17/84

- B. A Major Nonconformance is one which can not be classified as minor. UE&C evaluation/disposition is required for all Major Nonconformance Reports.

1/17/84

- 1.) Nonconforming conditions identified in B-Stamped components and their supports shall be classified as Major Nonconformances.

1/17/84

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

- 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.



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SEABOOK
PROJECT PROCEDURE

TO BE USED
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PAGE
NO. 6 of 15

1/17/84

3.2 The Chief Field Engineer, or his designee, shall provide the disposition of all Minor NCR's per this procedure.

1/17/84

3.3 U&C shall provide the disposition of all Major NCR's, per 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 IV-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 4.0.

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

4.0 APPLICABILITY OF NONCONFORMANCE REPORT (NCR)

1/17/84

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 and procedure or 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-LI-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 beveled uniformly into the surrounding surface.



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PROJECT PROCEDURETO BE USED
ONLY ON JOB # 7035PAGE
NO. 9 of 19

C. After removal of the unacceptable condition, the area is reexamined by magnetic particle 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 dimensions, elimination of surface imperfections as may be required for nondestructive examination and removal and repair of unacceptable indications in welds prior to final acceptance.

A. These conditions shall be corrected in accordance with Procedure JS-IX-14, "Defect Removal and Repair by Welding", and/or the applicable NDE 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/UEC 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 end preparations. (See Appendix L, Specification No. 4).

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

4.2.8 Misalignment of components beyond Code, procedure or specification tolerances, which can not be corrected by "Full Weld Repair" per Procedure JS-IX-14.

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PAGE
NO 6 of 13

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

1/17/84

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.

1/17/84

B. 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 X-9.

5/16/83

4.2.12 Repairs for correction of damaged or nonconforming urethane liners.

1/17/84

4.3 The conditions described in Paragraphs 4.2.4, 4.2.5, 4.2.8 and 4.2.9 shall be classified as Major Nonconformances. All others shall be classified as Major or Minor in accordance with the provisions of this procedure.

5.0 IMMEDIATE ACTION

1/17/84

5.1 When a nonconformance is discovered, the item involved shall be segregated, when possible. In accordance with procedure IV-4, a QC Inspector shall place a "Hold Tag" (Appendix G) on the item or adjacent to the operation (as in the case of welding). Simultaneous to the application of the Hold Tag, the QC Inspector/QC Tag Coordinator shall locate the applicable Field Process Sheet (Appendix E) or Field Weld Process Sheet (Appendix F), if one exists, and record the NCR number thereon at the point the violation occurred. If the Process Sheet has been issued to the field it will be returned to the QA Specialist-Process at the Document Verification Center (DVC) by the individual who signed it out. Hold Tags will be controlled through the EC 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 (LMA)

6.1 LMA is the controlled release of an item which has a Hold Tag affixed.



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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 III-3), a Nonconformance Report (NCR), etc. The purpose of the LMA 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 LMA authorize work which may affect, or be affected by the condition described in the initiating document (i.e., SWO or NCR). The LMA 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 V&C prior to approval of the LMA.

6.1.2 An LMA Request (Appendix J) will be prepared by the responsible Field Engineer. It shall delineate the specific LMA scope of work and cross reference document number(s) which are related to the Hold Tag.

A. The responsible Field Engineer shall submit the LMA 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 LMA Request, for Major NCR's only, shall be submitted to V&C Responsible Site Engineer for review and approval.

C. Each LMA shall be submitted to the AFI so that he may review and have the opportunity to assign Hold Points prior to performance of work.

6.1.3 Upon approval of the LMA request, the QA Manager, or his designee, shall initiate the LMA Tag. Suitable control tags, indicating LMA 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 LMA 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 LMA 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 LMA Request, and prior to item work or movement, a QC Inspector will affix an LMA Tag (Appendix H) adjacent to the Hold Tag on any affected item(s).

6.1.5 After the LMA work has been performed, the LMA Request shall be forwarded to QC Inspection. Inspection and acceptance of LMA scope of work will be defined in procedures called out on applicable Field Drawings, Field Process Sheets, or on the LMA Request.

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PAGE
NO. 8 of 15

6.1.6 Upon completed inspection of the scope of work, the applicable QC Inspector will remove the LMA Tag and return it to the QA Office. At the QA Office he will sign off the original LMA Request signifying completion of work. All other documentation pertaining to the LMA 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 LMA scope of work, the field copy of the LMA Request will be withdrawn by the QC Inspector. The Inspector will destroy the field copy of the LMA Request, remove the LMA 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 LMA 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 LMA scope of work completed, shall remain with the Process Sheet(s).

1/17/84

6.2 After RFP release (construction completion turnover), the Owner's Start up and Test Department (STD) may issue its own LMA to authorize pre-operational (i.e. PTOB) Testing only. When issued for this purpose, an STD LMA will take priority over previously applied Company tags, with respect to STD activities.

7.0 PROCESSING AND EVALUATION OF NONCONFORMANCE REPORTS

1/17/84

7.1 The Initiator, upon discovery of a condition believed to require a Nonconformance Report, shall initiate an NCR in accordance with this procedure (See Appendices A, B & C) and forward to the QA Manager's Designee (QA-NCR).

1/17/84

7.1.1 In all cases, the NCR shall include a proposed disposition as determined by the initiator, or in conjunction with Field Engineering, Quality Assurance, UELC and/or QAC consultants.

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.

5/16/83

7.3.1 If this review determines that the condition does not warrant reporting as an NCR, or should be reported by other means (i.e. non-Code reporting procedures) the NCR shall be voided per paragraph 13.0 of this procedure.



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DOCUMENT NO

PREPARED BY: K. SWISHER

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PAGE
NO. 9 of 11

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.~~

1/17/84

~~7.7.2 ANI review of Major NCR's shall be performed as part of the UE&C disposition process.~~

1/17/84

7.7.3 ANI review of Minor NCR's shall be performed as part of the Company disposition process.

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 8.0.

8.0 PROPOSED DISPOSITION OF NONCONFORMANCE REPORTS

1/7/84

8.1 The proposed disposition of a nonconformance will be reviewed by the Chief Field Engineer, or his designee, who will accept the recommendation of the originator or propose a disposition of his own. As necessary, he shall consult with Weld Engineering Personnel for technical evaluation and/or guidance. The proposed disposition shall be reviewed for proper classification (i.e. Major or Minor per Para. 2.1) and for Code compliance by the QA Manager, or his designee. If in this review the QA Manager does not concur, the NCR will be returned for reevaluation and/or revision of the classification or proposed disposition. Acceptable Major NCR dispositions, and their limitations, are defined in 8.2 through 8.6, below. Acceptable Minor NCR dispositions are limited to Scrap, per paragraph 8.2 and Rework per Paragraph 8.5.

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.)



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IV-2

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NO. 10 of 15

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".

4/14/83

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/or specification requirements and Repair or Rework is impractical or impossible.

1/17/84

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 material is marked "Scrap" and segregated for removal to the designated scrap area (i.e: return to UE&C). 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.

4/14/83

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.

4/14/83

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 comment of repair activities.



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XV-2

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PAGE
NO. 11 of 15

1/17/84

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

8.4.3 Repair of Weld Metal Defects

1/17/84

A. Unacceptable field weld defects and base metal defects detected by those methods required by the applicable Code, shall be eliminated and repaired in accordance with Procedure JS-IX-14 or IX-71, as applicable.

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

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

1/17/84

A. When rework activities involve a changed or new Special Process requirement, U&C shall initiate Field Drawing revision(s)/ECA(s); and new or revised Process Sheets shall be prepared per Project Procedures III-4 and VI-5. Work may commence when the required documents are prepared, approved and 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 ECR dispositioned "Use-As-Is" the QA Manager, or his designee, will arrange for removal of the Hold Tag.



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PAGE
NO. 11 of 15

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A. When repair 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 shall be prepared per Project Procedures III-4 and VI-5. Work may commence when the required documents are prepared, approved and received by the Field Engineer.

8.4.1 Repair of Weld Metal Defects

1/17/84

A. Unacceptable field weld defects and base metal defects detected by those methods required by the applicable Code, shall be eliminated and repaired in accordance with Procedure JS-II-16 or II-71, as applicable.

B. In addition to the above requirements, all repair(s) of base metal defects shall be performed in accordance with II-45.

8.5 Rework Disposition

8.5.1 Rework is normally defined as the reworking of an item to an acceptable condition in accordance with the specification requirements when a process deviation occurs.

8.5.2 Upon receipt of an approved ECR dispositioned "Re-work", the QA Manager shall forward a copy of the ECR to the Field Engineer for consent of rework activities.

1/17/84

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 shall be prepared per Project Procedures III-4 and VI-5. Work may commence when the required documents are prepared, approved and 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 ECR dispositioned "Use-As-Is" the QA Manager, or his designee, will arrange for removal of the Hold Tag.



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SEABROOK PROJECT PROCEDURE

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PAGE NO. 12 of 15

9.0 FORMAL DISPOSITIONING/APPROVAL OF ECR'S

1/17/84

9.1 All Major ECR's shall be reviewed, dispositioned and approved by O&C as outlined in 10.0 below.

1/17/84

9.2 All Minor ECR's shall be reviewed, dispositioned and approved by the Chief field Engineer as outlined in 10.0 below.

1/17/84

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

1/17/84

9.3.1 AMI Review is not required for Non-Code Safety Related ECR's.

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

10.1 A formal disposition (approved) form shall be required for each Major ECR and from the Chief field Engineer for each Minor ECR. The disposition of the ECR shall be reviewed and approved by the Chief field Engineer and the QA Manager, or his designee, and the AMI. This review will be performed and documented during the review and approval cycle of required Process Sheets per Project Procedure VI-5.

10.2 Interim action may require approval of the Chief field Engineer and the QA Manager, or his designee, and the AMI. This review will be performed and documented during the review and approval cycle of required Process Sheets per Project Procedure VI-5. Any documentation requirements.

10.3 Receipt of interim action or approved ECR disposition shall be controlled through the EC log.

10.4 Upon receipt of interim action and/or an approved ECR disposition involving repair or rework, QA-ECR shall notify the 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 EC 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 EC Log.



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PAGE
NO. 13 of 15

1/17/84

9. Work cannot proceed until an ECR is approved (except by LWA), and, when applicable, a Field Drawing revision or VCA is initiated (see Paragraphs 3.4.2.8 and 4.3.2.1). A Repair Tag shall 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 EC Log as required in Pullman Procedure IV-6, 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 EC Log may be updated. After the log has been updated, the Repair Tag may be destroyed.

4. The Inspector removing the QA/QC Repair Tag shall himself cast any other actions required by the log. These actions have been performed and verified.

11.0 DOCUMENTING

1/17/84

11.1 The QA Manager, or his designee, shall be responsible for the control of nonconformances. Through the use of the EC Log, he will assign ECR numbers. This log will also contain such information as date initiated, brief description of the nonconformance, ECR classification (Major or Minor), Hold Tags applicable, Repair Tags applicable, and status information. ECR's shall clearly identify the official building abbreviation and unit designation. (Appendix A, pages 3 thru 5).

1/17/84

11.2 Upon approval of an ECR by VEC or Chief Field Engineer as applicable, 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 ECR.

12.0 RECORDS

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



Pullman Power Products

EV-2

DOCUMENT NO.

PREPARED BY: R. EATSKER

APPROVED BY: B. HINKLEY

EDR

ISSUE DATE: 2/14/83

SEABROOK
PROJECT PROCEDURE

TO BE USED
ONLY ON JOB # 7035

PAGE
NO. 16 of 19

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.

1/17/84

12.2 A copy of each Minor ECR shall be forwarded to UEGC Disposition & Change Coordinator (DECC) upon disposition by the Chief Field Engineer and QA Manager concurrence, per paragraph 8.1.

1/17/84

12.3 Upon completion of all work required by the disposition, a copy of each Major and Minor ECR shall be forwarded to UEGC DECC.

13.0 VOIDING NONCONFORMANCE REPORTS

13.1 If it becomes necessary to void an ECR, it shall be voided only by the QA Manager, or his designee. The reason for voiding shall be identified on (or attached to) the ECR, 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 AFI only when their previous review and signature had been obtained (per paragraph 7.7). Concurrence shall be documented by signing and dating the voided ECR.

6/13/83

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

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

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

1/17/84

13.6 The QA-ECR shall ensure that any hold, LMA and/or Repair Tag, issued as a result of a voided ECR, are removed.



Pullman Power Products

IV-2

DOCUMENT NO

PREPARED BY: E. SMISHER

APPROVED BY: R. KIRKLEY

EDE

ISSUE DATE: 2/16/83

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PROJECT PROCEDURE

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ONLY ON JOB # 7035

PAGE NO. 15 of 15

1/17/84

13.7 NCR control numbers are assigned upon initial reporting of suspected nonconforming conditions. After further evaluation, the originator may determine the condition does not be nonconforming and may reclassify reporting as an NCR. In such cases, the originator will notify QA Manager. If circumstances (see Paragraph 13.2) are such that the originator has determined the NCR control number may be removed from the NCR, the originator shall provide the NCR control number to the QA Manager and the NCR control number may be removed.

14.0 REVIEW AND RECURRENCE PREVENTION

1/17/84

14.1 The QA Manager, or his designee, shall initiate and record on all Major and Minor NCR's 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 require the corrective action process by issuing a Corrective Action Order in accordance with Procedure IVI-3.

14.1.2 In order to evaluate the recurrence of nonconformities, the QA Manager shall evaluate NCR's in accordance with the NCR Process and IVI-3 Analysis, IVI-3.



Pullman Power Products

SP-2

DOCUMENT NO.

DEPARTMENT: **E. SERVICE**

APPROVED BY: **E. KINLEY**

DATE

ISSUE DATE: **2/16/83**

STANDARD PROJECT PROCEDURE

TO BE USED ONLY ON JOB # **7035**

PAGE NO.

APPENDIX A
1 of 7

1/17/84

INSTRUCTIONS FOR COMPLETING ECR FORM

- a) Enter Pullman ISO(s) effected and line(s) effected.
- b) Enter ECR Classification (Major or Minor).
- c) Enter Boundary Identification Package (BIP)
- 1a) ECR NO: Pullman Job No. (7035) and Control Number (i.e. 2295).
- 1b) Rev No: Initial issue is 0 with revisions to same ECR numbered in consecutive order.
- 1c) Sheets: ECR 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: Enter the item identification number of the item involved in the work order. This number should be the same as the item identification number on the work order. This number should only be used for items that are not standard items.
- 1e) Item Name: Generic name of item (identification code, e.g. field coil, 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 of ECR.
- 2b) Initials: Initials of 2a. (Optional - Not required)
- 2c) Organization: Organization originating ECR. For our application at Babcock Pullman Power Products.
- 2d) Date: Date of origination.
- 2e) Source: Name of company/department supplying the item.
- 2f) Current Status: Status of item in construction process and Hold Tag number
- 2g) Location: Location of item at time of writing ECR, including building, room, elevation, column, azimuth, as applicable.



Pullman Power Products

EV-2

DOCUMENT NO.

PREPARED BY: E. FISHER	APPROVED BY: R. HURLEY	DATE: 2/16/83
BLADDER PROJECT PROCEDURE	TO BE USED ON: JOB # 7035	PAGE NO: APPENDIX A 2 of 7

- 4a) Name: Name of company/department who will be responsible for nonconformance
- 4b) Spec. No: VEC purchase order specification involved in nonconformance (i.e., 268-51 - Pipe and Equipment Erection).
- 4c) Rev: Latest revision of the specification in effect at writing of NCR.
- 5a) Possible Significance: NA - Not identified as being under other rule; Part 21 - Can be reportable safety hazard per 10 CFR 21; 50.55e - pertaining to 10 CFR 50.55e.
- 5b) "T" for equipment/material supply NCR; "I" for installation; "P" for a QA Program.
- 6a) Governing Requirements: Specific documents, procedures, specifications, codes, drawing, diagrams, special instructions and 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.
- 8a) Cause Code: Code per Appendix C.
- 8b) Description of cause of nonconformance.
- 8c) 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.

1/17/84



Pullman Power Products

IV-2

DOCUMENT NO

PREPARED BY: E. SWISHER

APPROVED BY: E. HINLEY

EDS

ISSUE DATE: 2/14/83

SEABROCK
PROJECT PROCEDURE

TO BE USED
ONLY ON JOB # 7035

PAGE
NO.

APPENDIX A
3 of 7

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.

1/17/84 11c) Signature of Authorized Nuclear Inspector.

11d) Date signed by ANI (11c)

1/17/84 12) For Major NCR's check "YES" and Review Board Approval shall be by UL&C. Decision (Accept/Reject) to be indicated by UL&C. For Minor NCR's check "No" and Engineer/QA/QC approval is not applicable.

13) Disposition Verified - Authorized QA Representative will verify that complete disposition has been completed on NCR.



Pullman Power Products

SP-2

PROJECT NO.

PREPARED BY: E. WITBER

APPROVED BY: E. KIMBLEY

DATE

ISSUE

2/16/83

SEABROCK
PROJECT PROCEDURETO BE USED
ON: ON JOB # 7035PAGE
NO.APPENDIX A
6 of 7

LIST OF SYSTEM ABBREVIATIONS (From DEAC DAC R-500006)

ABBREVIATION

SYSTEM

AD	Atmospheric Air Handling
AE	Atmospheric Air Handling
AT	Atmosphere
AN	Argon Nitrogen
AR	Argon
AS	Condenser Air Evacuation
AS	Auxiliary Steam
ASC	Auxiliary Steam Condensate
ASH	Auxiliary Steam Heating
BS	Boiler Recovery System
BR	Building Water Return —Garagehouse Heat Pump
BW	Building Water Supply
CA	Chemical Analysis & Addition System
CA	Containment Air Handling
CA	Containment Air Purge
CA	Control Bldg. Air Handling
CA	Containment Bldg. Spray
CC	Component Cooling Water Primary
CD	Condenser Water
CG	Carbon Dioxide (ALL PLANT USAGE)
CG	Combustible Gas Control
CH	Chilled Cooling Water
CH	Chlorination Building H & V Condensate
CH	Containment on Line Purge
CH	Control & Position
CH	Check Point Air Cond. System
CH	Chlorination System
CH	Chemical & Volume Control
CH	Chemical Treatment & Test Chemistry
CH	Circulating Water
CH	Ch Pump House Air Handling
CH	Compressed Gases (ALL EXCEPT G1, G2, G02)
CH	Contaminated Waste Vent
CH	Contaminated Waste



Pullman Power Products

EV-2

DOCUMENT NO.

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APPROVED BY: R. BINKLEY

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2/16/83

STANDARD
PROJECT PROCEDURETO BE USED
ONLY ON JOB # 7035PAGE
NO.APPENDIX A
5 of 7ABBREVIATIONSYSTEM

DC	Diesel Generator (ALL SYSTEMS)
DCA	Diesel Gen. 1A (EQUIP. PLS.)
DGB	Diesel Gen. 1B (EQUIP. PLS.)
DAB	Diesel Generator Air Handling
DF	Drains Floor
DS	Demineralised water
DR	Drains Roof
DS	Drains Sanitary
LAB	Containment Enclosure Air Handling
ED	Electrical Distribution
EDI	Electrical Distribution - EMERGENCY
TE	Turbine Electro Hydraulic System
DA	Door TV P House Air Handling
ES	*Electrical Systems
ES	Extraction Steam
VAB	Fuel Storage Bldg. Air Handling
FO	*Fuel Handling - Reactor
FO	Fuel Oil
FP	Fire Protection
FPA	Fire Pumphouse Air Handling
FZA	Elec. Tunnel Air Handling
FV	Feedwater (INCL. *FC)
CAE	Cond House Air Handling
GSC	Generator Stator Coolant
ED	Header Drains
EL	Helium
EF	Hydraulic Fluid for EHE
ET	Heat Tracing
EGC	Hydrogen Gas at Generator
ED	G.E. Turbine Hydrogen Seal Oil Drain
HWB	Hot Water Heating Headers
HWB	Hot Water Heating Supply
IA	Increment Air
IC	*Incore Instrumentation
IE	Isobutane - Helium
LO	Lube Oil (ALL APPLICATIONS INCL. PURIFICATION)
LD	Leak Detection System
MAP	Makeup Gas
MC	Moisture Sep. & Leachate Drains
M	Miscellaneous (NOT SYS. CRITERIA) Equip.
MS	Main Stream (INCL. TURB. BYPASS STEAM)
MSS	Mechanical Seal Supply
MSD	Main Stream Drains
MVD	Miscellaneous Vents - Drains



Pullman Power Products

IV-2

DOCUMENT NO.

DEVELOPED BY: E. WISEB

APPROVED BY: E. HURLEY

DATE

REVISED: 2/16/83

SLASROCK
PROJECT PROCEDURETO BE USED
ONLY ON JOB # 7035PAGE
NOAPPENDIX
6 of 7ABBREVIATIONSYSTEM

NG	Nitrogen Gas
NI	Nuclear Instrumentation
NI	Nuclear Inside
TC	Thermocouple
PAH	Plant Air Handling
PAH	Plant Auxiliary Monitoring
PP	Propane
PW	Potable Water - CITY WATER
PWB	Potable Water - HOT
PWR	Potable Water - RECIRCULATING
RC	*Reactor Coolant
RE	*Residual Heat Removal
RM	Radiation Monitoring
RW	Reactor Make-Up Water
RS	Reactor Sluicing
SA	Service Air Systems
SAA	Service Air C-4A (EQUIP. PEG.)
SAB	Service Air C-4B (EQUIP. PEG.)
SAC	Service Air C-1A (EQUIP. PEG.)
SAD	Service Air C-1B (EQUIP. PEG.)
SAE	Service Air C-1C (EQUIP. PEG.)
SAU	Sanitary Sewer
SG	Steam Generator Blowdown
SC	Station Info. & Alarm Computer
SCC	Secondary Component Cooling
SCW	Screen Wash Water
SP	Spent Fuel Pool Cooling
SEA	Non-Essential Switchgear Air Handling
SI	Safety Injection
SO	Seal Oil-Generator
LPC	Local 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
TAB	Turbine Bldg. Air Handling
TDA	SCVP Turbine Drive A (EQUIP. PEG.)
TDB	SCVP Turbine Drive B (EQUIP. PEG.)
TE	Turbine Generator
TPC	Telephone Communications
TSI	Turb. Supervisory Instrumentation



Pullman Power Products

IV-2

DOCUMENT NO

PREPARED BY: R. SWISHER

APPROVED BY: B. HIRKLEY

EDH

ISSUE DATE: 2/14/83

SEARBOX
PROJECT PROCEDURE

TO BE USED
ONLY ON JOB # 7035

PAGE APPENDIX B
NO. 1 of 2

NONCONFORMANCE CODE

PREFIX DIGITS

1	Plant	2	Welds	3	Materials
4	Welding Process	5	Welding Conditions	6	Welding
7	Parent Metal	8	Vendor	9	Material

SUFFIX DIGITS

- | | | | |
|-----|---|-----|---------------------------------|
| 01 | Unacceptable Fit-up | 08 | Unacceptable Materials - Vendor |
| 011 | Misalignment/Out of Plumb | 081 | Damaged |
| 012 | Contourbars | 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/
Rilti Edge Distance | 102 | Inadequate Documentation |
| 032 | As Received | | Unacceptable Test |



Pullman Power Products

XV-2

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APPROVED BY: E. BINKLEY

EDB

1983

2/16/83

SLABBOOK
PROJECT PROCEDURE

TO BE USED
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PAGE
NO.

APPENDIX B
2 of 2

SUFFIX DIGITS (Continued)

- | | | | |
|----|--|----|---------------------------|
| 04 | Unacceptable Coating/Finishing | | |
| | 041 Upon Receipt | | |
| | 042 After Receipt | | |
| | 043 After Installation | | |
| 05 | Unacceptable Mechanical Operations | | |
| | 051 Grinding | | |
| | 052 Cutting | 14 | Unacceptable WTE |
| | 053 Torquing | | 141 Not Calibrated |
| | 054 Machining | | 142 Recalibration Overdue |
| | 055 Drilling | | 143 Unidentifiable |
| | 056 Threading | | 144 Damaged |
| 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 V&C Design Drawing | | |
| | 172 Inaccurate ISO | | |
| | 173 Design Documents | | |



Pullman Power Products

SP-2

DOCUMENT NO.

PREPARED BY: K. SWISHER

APPROVED BY: E. WINKLEY

DATE

ISSUE DATE: 2/16/83

SEABROOK
PROJECT PROCEDURE

TO BE USED
ONLY ON JOB # 7035

PAGE APPENDIX C
NO. 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/Incorrect Instructions
 - 04 Inadequate/Indeterminate Plans
 - 05 Improper Supervision
 - 06 Inadequate/Incorrect MTE
 - 07 Out of Calibration MTE
 - 08 Procedure - Wrong Revision
 - 09 Procedure - Inadequate Implementation
 - 10 Procedure - Inefficient Requirements/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

IV-2

DOCUMENT NO.

PREPARED BY: R.G. DAVIS

APPROVED BY: H.D. HINKLEY

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1983

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PROJECT PROCEDURE

TO BE USED
ONLY ON JOB # 7035

PAGE
NO.

APPENDIX D
1 of 1

/17/8-

		Pullman Power Products		(B)	
(A)		MODEL PERFORMANCE REPORT		REV: (C)	
NO.	DESCRIPTION	DATE	BY	TEST NO.	TEST RESULT
1	...	(1d)	(1e)	(1f)	(1g)
0	...	(2a)	(2b)	(2c)	(2d)
0	...	(3a)	(3b)	(3c)	(3d)
0	...	(4a)	(4b)	(4c)	(4d)
0	...	(5a)	(5b)	(5c)	(5d)
0	...	(6a)	(6b)	(6c)	(6d)
1	...	(7a)	(7b)	(7c)	(7d)
0	...	(8a)	(8b)	(8c)	(8d)
0	...	(9a)	(9b)	(9c)	(9d)
0	...	(10a)	(10b)	(10c)	(10d)
0	...	(11a)	(11b)	(11c)	(11d)
0	...	(12a)	(12b)	(12c)	(12d)
0	...	(13a)	(13b)	(13c)	(13d)
0	...	(14a)	(14b)	(14c)	(14d)
0	...	(15a)	(15b)	(15c)	(15d)
0	...	(16a)	(16b)	(16c)	(16d)
0	...	(17a)	(17b)	(17c)	(17d)
0	...	(18a)	(18b)	(18c)	(18d)
0	...	(19a)	(19b)	(19c)	(19d)
0	...	(20a)	(20b)	(20c)	(20d)



Pullman Power Products

IV-2

DOCUMENT NO

PREPARED BY: E.G. DAVIS

APPROVED BY: E.D. HINGLET

DATE

2/14/82

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PROJECT PROCEDURE

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ONLY ON JOB # 7035

PAGE
NO

APPENDIX F
1 of 1

NO	DESCRIPTION	DATE	BY	REVISION	DATE	BY	REVISION	DATE	BY
1	INITIAL DESIGN	1/15/82	ED	INITIAL DESIGN	1/15/82	ED	INITIAL DESIGN	1/15/82	ED
2	REVISED DESIGN	1/20/82	ED	REVISED DESIGN	1/20/82	ED	REVISED DESIGN	1/20/82	ED
3	REVISED DESIGN	1/25/82	ED	REVISED DESIGN	1/25/82	ED	REVISED DESIGN	1/25/82	ED
4	REVISED DESIGN	1/30/82	ED	REVISED DESIGN	1/30/82	ED	REVISED DESIGN	1/30/82	ED
5	REVISED DESIGN	2/5/82	ED	REVISED DESIGN	2/5/82	ED	REVISED DESIGN	2/5/82	ED
6	REVISED DESIGN	2/10/82	ED	REVISED DESIGN	2/10/82	ED	REVISED DESIGN	2/10/82	ED
7	REVISED DESIGN	2/15/82	ED	REVISED DESIGN	2/15/82	ED	REVISED DESIGN	2/15/82	ED
8	REVISED DESIGN	2/20/82	ED	REVISED DESIGN	2/20/82	ED	REVISED DESIGN	2/20/82	ED
9	REVISED DESIGN	2/25/82	ED	REVISED DESIGN	2/25/82	ED	REVISED DESIGN	2/25/82	ED
10	REVISED DESIGN	3/1/82	ED	REVISED DESIGN	3/1/82	ED	REVISED DESIGN	3/1/82	ED

SAMPLE

PULLMAN POWER PRODUCTS
 1100 WEST 10TH AVENUE
 DENVER, COLORADO 80202
 PHONE (303) 733-1000
 FAX (303) 733-1001
 TELETYPE (303) 733-1002
 CABLE PULLMAN
 PULLMAN POWER PRODUCTS
 1100 WEST 10TH AVENUE
 DENVER, COLORADO 80202
 PHONE (303) 733-1000
 FAX (303) 733-1001
 TELETYPE (303) 733-1002
 CABLE PULLMAN

DATE 2/14/82



Pullman Power Products

EV-2

DOCUMENT 160

PREPARED BY: R.G. DAVIS

APPROVED BY: E.D. KINLEY

ISSUE DATE: 2/14/83

SEABROOK
PROJECT PROCEDURE

TO BE USED
ONLY ON JOB # 7035

PAGE APPENDIX C
NO. 1 OF 1

07-07-12

JOB NO. <u>7036</u>	WEL. P.O. <u>201</u>
ITEM NO. <u>N218</u>	HEAT OR SERIAL NO. <u>K-1246</u>
HOLD	
NO. <u>3512</u>	DATE <u>2/17/83</u>

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


J. G. Wilson
INSPECTED BY


DISPOSITION

Reins in Hold Area until reports are received and approved

3512 - N/A

SEP-36 (2/17/83)

 Pullman Power Products		27-2 DOCUMENT NO.
PREPARED BY: R.G. DAVIS	APPROVED BY: E.D. HIXLEY	ISSUE DATE: 2/16/83
SEABROOK PROJECT PROCEDURES	TO BE USED ONLY ON JOB # 7035	PAGE APPENDIX B NO. 1 of 1

 PULLMAN POWER PRODUCTS SEABROOK STATION
LIMITED WORK AUTHORIZATION # <u>001</u> ITEM IDENTIFICATION <u>SW-181001</u> Span 2 use 2/16/83 _____ _____ SECRET OF LWA To Complete Field Work Field _____ _____ QA INSP <u>W. Hixley</u> DATE <u>5-2-83</u> TO BE ATTACHED OR REMOVED BY QC PERSONNEL ONLY

887-58 (1-13-83)

(COLOR-YELLOW)



Pullman Power Products

TV-2

PROJECT NO.

PREPARED BY: L.G. PATRICK

APPROVED BY: B.D. HINCHLEY

DATE: 2/16/83

CLASSROOM
PROJECT PROCEDURE

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PAGE NO. APPENDIX 3
1 of 1

Pullman Power Products

1. **ITEM(S) NAME/IDENTITY (INCLUDE UNIT, SYSTEM, TAG/BOX, AS APPLICABLE)**

2. **SCOPE OF WORK WHICH WILL BE PERFORMED (INCLUDE SPECIFIC PARTS AND OPERATIONS TO BE PERFORMED AND TO THE "TOP" AND "BT" OF THE LOCATION)**

3. **STATE OF WORK HAS BEEN OBTAINED INCLUDING ALL DOCUMENTATION RELATIVE TO WORK TAG AND LSA IS APPROVED. INSPECTION TAGS WHICH SHALL NOT BE FI-PASSED AND WHICH SHALL NOT PROCEED; REVIEW THE FOLLOWING POINTS: PERSONAL ACCOUNTABILITY TO ITEM(S):**

4. **LSA REQUIRED FOR THE FOLLOWING CLASS:**

5. **LSA CLASS BY FULL PERFORMANCE OF WORK SCOPE. TAG FOR LSA TERMINATED BY REMOVAL OF BT-2 TAG. LAST ELEMENT OF WORK SCOPE COMPLETED:**

6. **INSPECTION REPORTING TAG TAG** _____ DATE _____

7. **CLASS BY IS OFFICE** _____ DATE _____

Signature



Pullman Power Products

REVISED

DOCUMENT NO.

PREPARED BY: B.C. DAVIS

APPROVED BY: S.D. HINLEY

DATE

ISSUE DATE: 2/16/83

SEABROOK PROJECT PROCEDURE

TO BE USED ONLY ON JOB # 7033

PAGE APPENDIX B
NO. 1 of 1

PULLMAN POWER PRODUCTS

SEABROOK STATION JOB 7033

QA/QC REPAIR

TAG # 15

REWORK

REPAIR

OTHER ACTIVITY

APPLICABLE FOR
JOB NO. 7033 ONLY

SAMPLE

NCR # 753

HOLD TAG # 1015

REMARKS

REPAIR BEHIND E. WIND WALL 8"

QA/QC INSPECTOR [Signature]

DATE APPLIED [Signature]

557-37 (1-12-83)

(COLOR-PLATE)



Pullman Power Products

IV-2

DOCUMENT NO

PREPARED BY: E. BUSHNER

APPROVED BY: E. HINLEY

REV

ISSUE DATE: 2/16/83

SEABROOK
PROJECT PROCEDURE

TO BE USED
ONLY ON JOB: 7015

PAGE NO. APPENDIX L
1 of 9

STANDARD REPAIR SPECIFICATION No. 1

for

CONCRETE REPAIR

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 judgment 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 Sikader Low-mod gel. Sikader gel to be applied in accordance with the requirements of Pullman Procedure IX-30 (PP-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 US&C Construction Manager for record purposes.

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: ECA # 19/0232

5/16/83



Pullman Power Products

SV-2

DOCUMENT NO

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APPROVED BY: N. HIBBLEY

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PAGE NO APPENDIX L
2 of 9

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

Repair to conform with approved project specifications and design criteria.



Pullman Power Products

EV-2

DOCUMENT NO.

PREPARED BY: E. SUTSKER

APPROVED BY: W. HINLEY

DATE: 2/16/83

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PAGE
NO. APPENDIX L
3 of 9

STANDARD REPAIR SPECIFICATION NO. 2

for

TRANSITION ANGLES OF PIPE

BACKGROUND

The piping fabricator is permitted to perform a "skin 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. "Skin cutting" of this nature was not recognized by project specifications prior to the issuance of ECA 19/0199A and selected pipe spools may arrive onsite with end preps containing the "skin 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 DMC. 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 DMC. 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 (ET or LP). A wall thickness measurement shall be conducted where visual exam reveals potential wall thinning. Wall thickness less than 75% as shown in DMC. 5000-F-1382 shall be reported via nonconformance report.

TECHNICAL JUSTIFICATION

The existence of transition angles which do not comply with DMC. 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 19/0232



Pullman Power Products

EP-3

DOCUMENT NO

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DATE: 2/16/83

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PROJECT PROCEDURE

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PAGE
NO. APPENDIX 1
4 of 9

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 3.3.3 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 Tapesant 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

FP-2

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REV. NO.
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PAGE
NO

APPENDIX L
5 of 9

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 not 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 CONDITIONS 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:

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

STANDARD REPAIR CRITERIA

Normal fit-up classes may be used to repair minor end preparation damage. Excessive force (resulting in permanent deformation of the pipe) and hydraulic jacking are prohibited.

* REF: ECA 19/0232



Pullman Power Products

IV-2

DOCUMENT NO.

PREPARED BY: E. SWISHER

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PAGE NO. APPENDIX L
6 of 9

STANDARD REPAIR CRITERIA (continued)

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

7/16/83

Where a counterbore does not extend sufficiently far into a spool it may be remachined in the field to the original specifications. All remachined areas 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 specification 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.



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FP-3

DOCUMENT NO.

PREPARED BY: E. SWISHER

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PAGE NO. APPENDIX 1
7 of 9

STANDARD REPAIR SPECIFICATION NO. 3

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 \$300.00.

STANDARD REPLACEMENT CRITERIA

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

- For ANSI or similar code items, the replacement must be of equal or more stringent equality.
- For other items not included in a. above, the replacement item must exactly duplicate the lost item.
- The replacement item possesses the same or higher documentation.
- 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 instances of lost material, the E&C Piping Department 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 jeopardize material quality or system design criteria.

* REF: BCA 19/0232



Pullman Power Products

IV-2

DOCUMENT NO.

PREPARED BY: E. WIGNER

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STEELBOOK
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PAGE
NO.

APPENDIX 1
8 of 9

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 plates 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 REMOVAL 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 UG-81 of ASME B31.1 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; RT examination for ferromagnetic materials, LP examination for others.

All EDS 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: TCA 10/0102



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DOCUMENT NO.

PREPARED BY: E. SWISHER

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PROJECT PROCEDURE

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7035

PAGE
NO.

APPENDIX 1
9 of 9

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

In Piping:

- a. Review UE&C 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/NC/ND-6435 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 states design criteria.

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

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UNITED ENGINEERS & ARCHITECTS INC. General and Special Engineering and Survey Services 2000 10th St. S.W. Suite 1000 Seattle, WA 98148 Tel: (206) 461-1111 Fax: (206) 461-1112				<input checked="" type="checkbox"/> PRINTED AS PER NO. OF CONTRACT <input type="checkbox"/> SUBMIT REVISED DRAWINGS FOR REVIEW <input type="checkbox"/> SEND PRINTED DRAWINGS FOR RECORD BY <u>C.F. Espada</u> DATE <u>9/16/03</u>			

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