2. To: (Receiving Organization)  
See DISTRIBUTION SHEET

3. From: (Originating Organization)  
15510

4. Related EDT No.:  
Paw 1

5. Proj./Prog./Dept./Div.:  
Plutonium Finishing Plant (PFP)

6. Originator Remarks:  
This document identifies the components, design media, procedures, and defines the critical characteristics of Commercial Grade Items necessary to ensure the HVAC system provides these functions.

11. Receiver Remarks:  
11A. Design Baseline Document?  
\[ \text{Yes} \quad \text{No} \]

15. DATA TRANSMITTED

<table>
<thead>
<tr>
<th>(A) Item No.</th>
<th>(B) Document/Drawing No.</th>
<th>(C) Sheet No.</th>
<th>(D) Rev. No.</th>
<th>(E) Title or Description of Data Transmitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HNF-5186</td>
<td>0</td>
<td></td>
<td>PFP HVAC Sys Comp. index</td>
</tr>
</tbody>
</table>

18. Signature of EDT Originator:  
G.N. Diaz, Oct 26, 1999

19. Authorized Representative for Receiving Organization Date:  

20. Design Authority/Cognizant Manager Date:  
G.A. Glover, Oct 26, 1999

21. DOE APPROVAL (if required)

Chn No.  
\[ \text{Approved} \quad \text{Approved w/comments} \quad \text{Disapproved w/comments} \]
PFP HVAC SYSTEM COMPONENT INDEX

J. D. Dick
B&W Hanford Company, Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-96RL13200

EDT/ECN: 27537  UC: 506
Org Code: 15510  Charge Code: 101400
B&R Code: EW7002000  Total Pages: 3

Key Words: PFP, Standby Power, CGI, Critical Characteristics

Abstract: This document identifies the components, design media, procedures and defines the critical characteristics of Commercial Grade Items necessary to ensure the HVAC system provides these functions.

TRADEMARK DISCLAIMER. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

Printed in the United States of America. To obtain copies of this document, contact: Document Control Services, P.O. Box 950, Mailstop H6-08, Richland WA 99352, Phone (509) 372-2420; Fax (509) 376-4989.

Approved for Public Release
1.0 PURPOSE

This document lists safety class (SC) and safety significant (SS) components for the Heating Ventilation Air Conditioning (HVAC) and specifies the critical characteristics for Commercial Grade Items (CGI), as required by HNF-PRO-268 and HNF-PRO-1819. These are the minimum specifications that the equipment must meet in order to properly perform its safety function. There may be several manufacturers or models that meet the critical characteristics for any one item.

2.0 BACKGROUND

The Plutonium Finishing Plant (PFP) HVAC System includes sub-systems 25A through 25K. Specific system boundaries and justifications are contained in HNF-SD-CP-SDD-005, “Definition and Means of Maintaining the Ventilation System Confinement Portion of the PFP Safety Envelope.” The procurement requirements associated with the system necessitates procurement of some system equipment as Commercial Grade Items in accordance with HNF-PRO-268, “Control of Purchased Items and Services.”

3.0 SCOPE

The following list contains all engineering and maintenance documentation associated with each component including critical characteristics that describes the minimum specifications for standard industry equipment. The critical characteristics are verified through a combination of receipt inspections and installation testing.

The critical characteristic list assumes the new part is either the same manufacturer or part number or a replacement part specified by the vendor. Further information for the listed equipment is available from the appropriate Vendor Information (VI) files.

4.0 CRITICAL CHARACTERISTIC LISTING

1. Motor, Electric
   For RF-1 and RF-2, Building 2736ZB

   Critical Characteristics:
   - HP = 15
   - Full load AMP = 19.4
   - Voltage = 460
   - Phase = 3
   - RPM = 1725 (4 pole)
   - NEMA code = G
   - Frequency = 60 Hz
   - Frame = 254T
   - Duty = Continuous
   - Enclosure = Drip Proof
   - Insulation = B
2. Belt

Critical Characteristics:
- Drive Belt for Bldg 232 Exhaust Fans 1 & 2
- Size = B47
- Outside Circumference = 50 inches \( \pm \frac{1}{8} \)"
- Pitch Length = 48.8" \( \pm \frac{1}{8} \)"

3. Transmitter

For differential pressure transmitter PX-2, Building 2736ZB

Critical Characteristics:
- Part # DPT 2200-0.5"-3
- Manufacturer = Brandt Instruments, Inc.
- Calibrated 0.00 to 0.50" w.g.
- Output = 3-15 psig, linear with DP
- Continuous purge through high & low legs
- Inst Aid requirement = 20 psig
- Process connections = \( \frac{1}{4} \) NPTF
- Accuracy = \pm 0.5%
- Repeatability & Hysteresis

4. Bearings

Critical Characteristics:
- Configuration = Split Spherical Pillow Block Assembly
- Bearing Dimensions:
  - Shaft size = 4 \( \frac{7}{16} \)" \([+.000/-.004]\)
  - Outer Diameter = 9.055 \( \pm 0.001 \)"
  - Width of Inner Ring = 4.094 \( \pm 0.001 \)"
  - Width of Outer Ring = 2.519 \( \pm 0.001 \)"
  - \( D_1 = 5.984 \pm 0.001 \)" R = 0.12"
- Model # = Dodge #043972

5. Bolts

Critical Characteristics:
- Configuration = Hex head
- Dimensions = \( \Omega \) 7/8-UNC-2A x 4L
- Material = ASTM A307 Grade A or B (4 PL)

6. Lock washers

Critical Characteristics:
- Configuration = Helical lock, regular
- Dimensions = \( \Omega \) 7/8
- Material = Any ASTM grade, CS (4 PL)
## DISTRIBUTION SHEET

**To:** Distribution  
**From:** PFP Engineering  
**Page 1 of 1**  
**Date:** 10/26/99  
**EDT No.:** 627537  
**ECN No.:** A-6000-135 (10/97)

### Project Title/Work Order
PFP HVAC System Component Index

<table>
<thead>
<tr>
<th>Name</th>
<th>MSIN</th>
<th>Text With All Attach.</th>
<th>Text Only</th>
<th>Attach./ Appendix Only</th>
<th>EDT/ECN Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>J.D. Dick</td>
<td>T4-20</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G.A. Glover</td>
<td>T4-20</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.R. Groth</td>
<td>T4-15</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.L. Norman</td>
<td>T4-20</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.N. Diaz</td>
<td>T4-20</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOE/RL Reading Room</td>
<td>H2-53</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Files</td>
<td>B1-07</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>