S

ENGINEERING CHANGE NOTICE

Page 1 of 2

1. ECN 657656

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental ○ Direct Revision ◉ Change ECN ○ Temporary ○ Standby ○ Supersedure ○ Cancel/Void ○	John D.Dick, 1AK00, T4-20, 373-4180	○ Yes ◉ No	2/18/00

6. Project Title/No./Work Order No.	7. Bldg./Sys./Fac. No.	8. Approval Designator
Plutonium Finishing Plant	PFP, sys. 25	Q

9. Document Numbers Changed by this ECN (includes sheet no. and rev.)	10. Related ECN No(s).	11. Related PO No.
HNF-5186 REV 0	None	None

12a. Modification Work	12b. Work Package No.	12c. Modification Work Completed	12d. Restored to Original Condition (Temp. or Standby ECNs only)
○ Yes (fill out Blk. 12b) ◉ No (NA Blks. 12b, 12c, 12d)	N/A	N/A Design Authority/Cog. Engineer Signature & Date	N/A Design Authority/Cog. Engineer Signature & Date

13a. Description of Change

13b. Design Baseline Document? ◉ Yes ○ No

Direct revision of the PFP HVAC SYSTEM COMPONENT INDEX (HNF-5186). This document identifies the critical characteristics of Commercial Grade Items necessary to ensure the HVAC system operates properly. The revision incorporates the additions of drive components for exhaust fans in buildings 241-Z, 2736-ZA and 2736-ZB and the zone transmitter for building 232-Z.

14a. Justification (mark one)	14b. Justification Details
Criteria Change ◉ Design Improvement ○ Environmental ○ Facility Deactivation ○ As-Found ○ Facilitate Const. ○ Const. Error/Omission ○ Design Error/Omission ○	Update list to include additional items

15. Distribution (include name, MSIN, and no. of copies)

See Distribution Sheet

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DATE: FEB 28 2000
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ID: 2

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1): 657656

16. Design Verification Required	17. Cost Impact		18. Schedule Impact (days)
	ENGINEERING	CONSTRUCTION	
○ Yes	Additional ○ $ N/A	Additional ○ $ N/A	Improvement ○ N/A
◉ No	Savings ○ $ N/A	Savings ○ $ N/A	Delay ○ N/A

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	☐	Seismic/Stress Analysis	☐	Tank Calibration Manual	☐
Functional Design Criteria	☐	Stress/Design Report	☐	Health Physics Procedure	☐
Operating Specification	☐	Interface Control Drawing	☐	Spares Multiple Unit Listing	☐
Criticality Specification	☐	Calibration Procedure	☐	Test Procedures/Specification	☐
Conceptual Design Report	☐	Installation Procedure	☐	Component Index	☐
Equipment Spec.	☐	Maintenance Procedure	☐	ASME Coded Item	☐
Const. Spec.	☐	Engineering Procedure	☐	Human Factor Consideration	☐
Procurement Spec.	☐	Operating Instruction	☐	Computer Software	☐
Vendor Information	☐	Operating Procedure	☐	Electric Circuit Schedule	☐
OM Manual	☐	Operational Safety Requirement	☐	ICRS Procedure	☐
FSAR/SAR	☐	IEFD Drawing	☐	Process Control Manual/Plan	☐
Safety Equipment List	☐	Cell Arrangement Drawing	☐	Process Flow Chart	☐
Radiation Work Permit	☐	Essential Material Specification	☐	Purchase Requisition	☐
Environmental Impact Statement	☐	Fac. Proc. Samp. Schedule	☐	Tickler File	☐
Environmental Report	☐	Inspection Plan	☐	None	☒
Environmental Permit	☐	Inventory Adjustment Request	☐		☐

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number/Revision
None		

21. Approvals

	Signature	Date		Signature	Date
Design Authority	J.D.Dick	2/18/00	Design Agent		
Cog. Eng.	J.D.Dick	2/18/00	PE		
Cog. Mgr.	R.A.Burk / G.A.Glowa	2/23/00	QA		
QA	D.R.Groth	2-22-00	Safety		
Safety			Design		
Environ.			Environ.		
Other			Other		

DEPARTMENT OF ENERGY

Signature or a Control Number that tracks the Approval Signature

ADDITIONAL

DISTRIBUTION SHEET

To	From	Page 1 of 1
Distribution	PFP Engineering	Date 2/17/00
Project Title/Work Order		EDT No. N/A
PFP HVAC System Component Index		ECN No. 657656

Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
J.D.Dick	T4-20	x			
G.A.Glover	T4-20	x			
D.R.Groth	T4-15	x			
D.L.Norman	T4-20	x			
E.N.Diaz	T4-20	x			
DOE/RL Reading Room	H2-53	x			
Central Files	B1-07	x			

HNF-5186
Revision 1

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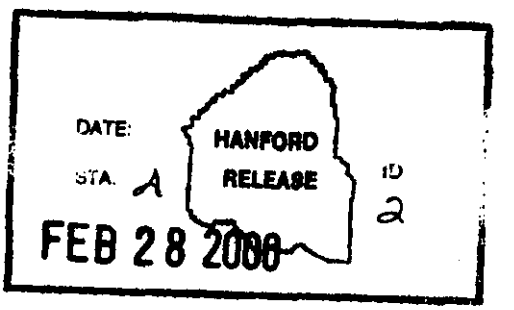
PFP HVAC SYSTEM COMPONENT INDEX



Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200
Fluor Hanford
P.O. Box 1000
Richland, Washington

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- ☐ Internet
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- ☒ Report
- ☐ Other _____

B. Document Number HNF-5186 / REV 1

C. Title PFP HVAC System Component Index

10 TOTAL PAGES.

D. Internet Address

E. Required Information

1. Is document potentially Classified? ● No ○ Yes (MANDATORY)

R.A. Burk RABurk
Manager's Signature Required

If Yes _____ ○ No ○ Yes Classified
ADC Signature Required

2. Internal Review Required? ○ No ○ Yes
If Yes, Document Signatures Below

Counsel _____

Program _____

3. References in the Information are Applied Technology ● No ○ Yes
Export Controlled Information ● No ○ Yes

4. Does Information Contain the Following: (MANDATORY)

a. New or Novel (Patentable) Subject Matter? ● No ○ Yes
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3. Date of Conference _____ 4. City/State _____
5. Will Information be Published in Proceedings? ○ No ○ Yes 6. Will Material be Handed Out? ○ No ○ Yes

H. Author/Requestor

J.A. Voogd
(Print and Sign)

Responsible Manager

(Print and Sign)

I. Reviewers

	Yes	Print	Signature	Public Y/N (If N, complete J)
General Counsel	☐			Y / N
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Other	☐			Y / N
Other	☐			Y / N

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- ☐ Patentable
- ☐ Other (Specify) _____

Information Clearance Approval

APPROVED FOR RELEASE ☆ OFFICIAL ☆ DOCUMENT
Date 2/25/00

K. If Additional Comments, Please Attach Separate Sheet

RELEASE AUTHORIZATION

Document Number: HNF-5186 Rev 1

Document Title: PFP HVAC System Component Index

This document, reviewed in accordance with DOE Order 241.1, "Scientific and Technical Information Management," and 241.1-1, "Guide to the Management of Scientific and Technical Information," does not contain classified or sensitive unclassified information and is:

APPROVED FOR PUBLIC RELEASE

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HNF-5186
Revision 1

PFP HVAC SYSTEM COMPONENT INDEX

J. D. Dick
Flour Hanford, Inc.

Date Published
February 2000

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Fluor Hanford
P.O. Box 1000
Richland, Washington

Printed in the United States of America

RECORD OF REVISION

(1) Document Number: HNF-5186

(2) Title: PFP HVAC SYSTEM COMPONENT INDEX

Change Control Record

(3) Revision	(4) Description of Change - Replace, Add, and Delete Pages	Authorized for Release	
		(5) Cog. Engr.	(6) Cog. Mgr. Date
1 RS	(7) Add pages 3 and 4, Items 7 though 11	J.D. Dick 2/18/00	~~C.A. Glover~~ R.A. Burk 2/23/00
	ECN-657656		

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.

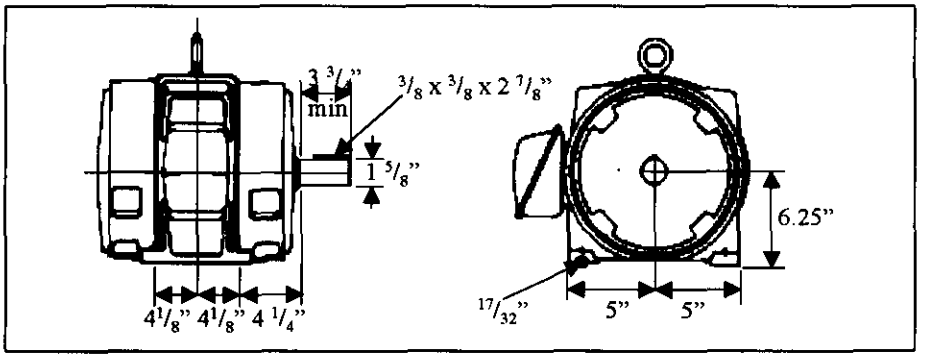
The critical characteristic list assumes the new part is either the same manufacturer or part number or a replacement part specified by the vendor. Further information for the listed equipment is available from the appropriate Vendor Information (VI) files.

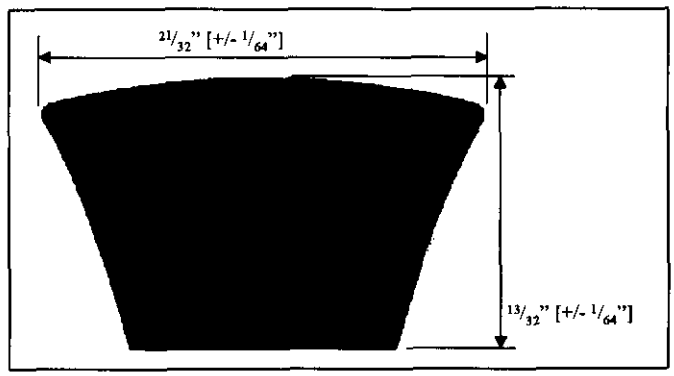
4.0 CRITICAL CHARACTERISTIC LISTING

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





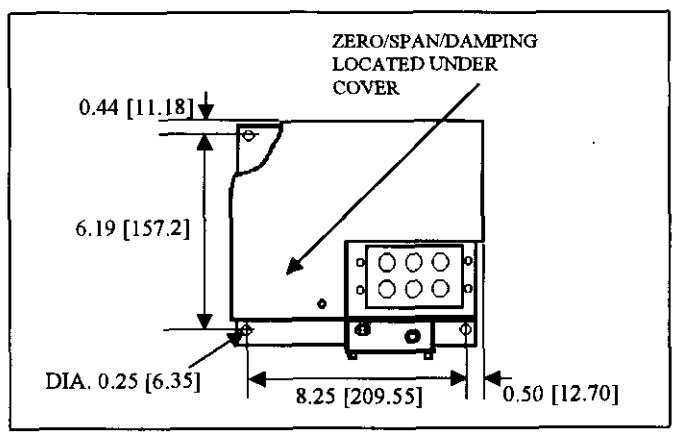
2. Belt

Critical Characteristics:

- Drive Belt for Bldg. 232 Exhaust Fans 1 & 2
- Size = B47
- Outside Circumference = 50 inches [± 1/8"]
- Pitch Length = 48.8" [± 1/8"]

3. Transmitter

For differential pressure transmitter PX-2, Building 2736ZB



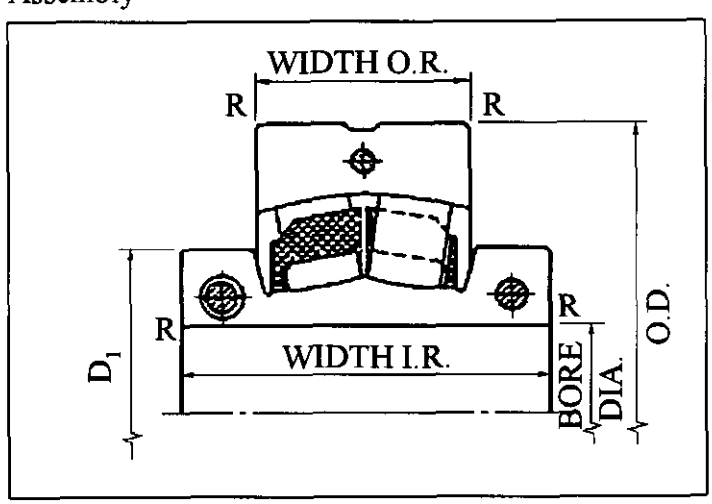
Critical Characteristics:

- 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 = ¼ NPTF
- Accuracy = ± 0.5%
- Repeatability & Hysteresis

4. Bearings

Critical Characteristics:

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



5. Bolts

Critical Characteristics:

- Configuration = Hex head
- Dimensions = ∅ 7/8-9UNC-2A x 4L
- Material = ASTM A307 Grade A or B (4 PL)

6. Lock washers

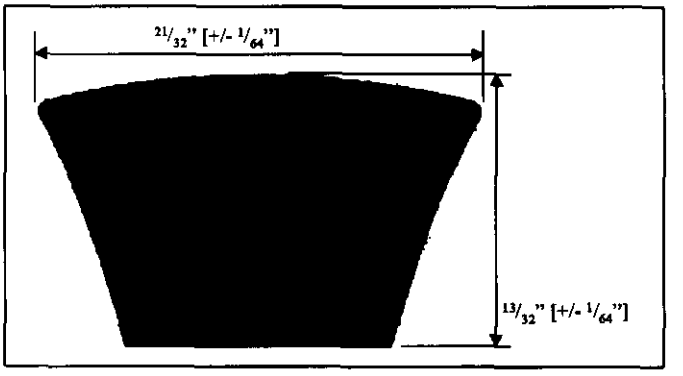
Critical Characteristics:

- Configuration = Helical lock, regular
- Dimensions = ∅ 7/8
- Material = Any ASTM grade, CS (4 PL)

7. Belt

Critical Characteristics:

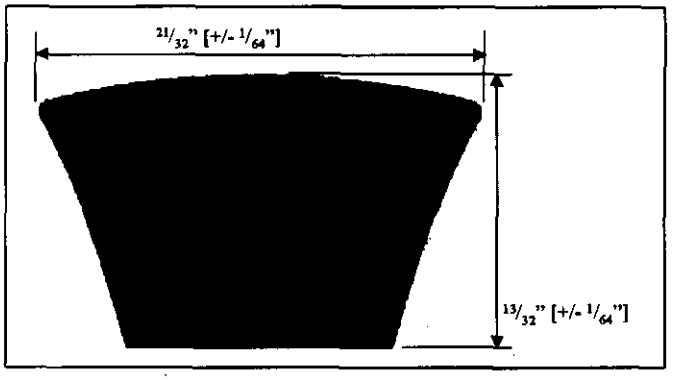
- Drive Belt for Bldg. 2736-ZB Exhaust Fans 1 & 2
- Size = B60
- Outside Circumference = 63 inches [± 1/8"]
- Pitch Length = 61.8" [± 1/8"]



8. Belt

Critical Characteristics:

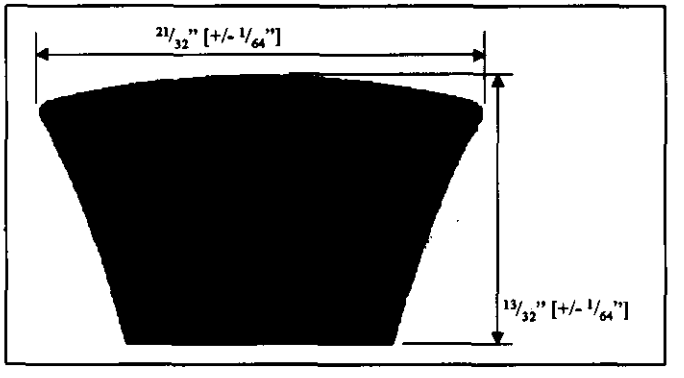
- Drive Belt for Bldg. 241 Exhaust Fans EF-21-241-Z
- Size = B46
- Outside Circumference = 49 inches [± 1/8"]
- Pitch Length = 47.8" [± 1/8"]



9. Belt

Critical Characteristics:

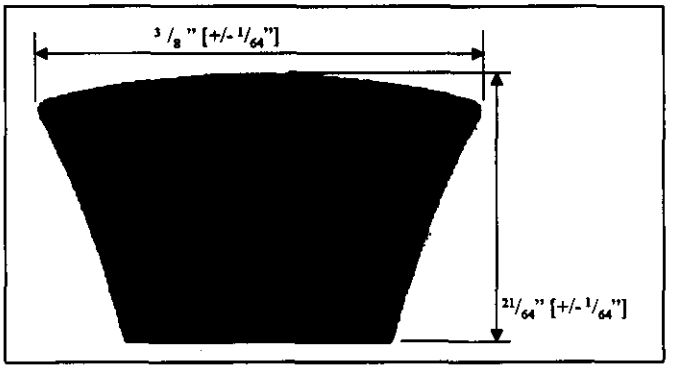
- Drive Belt for Bldg. 2736-ZA Exhaust Fans EF-1-1 & EF-1-2
- Size = B64
- Outside Circumference = 67 inches [± 1/8"]
- Pitch Length = 65.8" [± 1/8"]



10. Belt

Critical Characteristics:

- Drive Belt for Bldg. 241-Z Exhaust Fan EF-22-25D
- Size = 3V-800
- Outside Circumference = 80 inches [± 1/8"]



11. Transmitter
For differential pressure transmitter DPT-2 Building 232-Z

Critical Characteristics:

- Model # 264
- Manufacturer = SETRA
- Range 0.00 to 1.0" w.g.
- Output = 0-5 VDC
- Process connections = Barbed brass pressure fitting for ¼ push on tubing
- Accuracy = <± 1.0% Full Scale
- Repeatability <0.3% Full Scale