March 14, 1980

Darrell G. Eisenhut
Division of Operating Reactors
Office of Nuclear Reactor Regulation
US Nuclear Regulatory Commission
Washington DC 20555

APPLICATION FOR WITHHOLDING PROPRIETARY INFORMATION FROM PUBLIC DISCLOSURE

Subject: Arkansas Nuclear Unit #1 Docket #50-313
Information in Response to NRC Request for Information of February 25, 1980, Relative to Low Pressure Turbine Disc Integrity.

Reference: Appendix A letter from D. Trimble to Eisenhut, dated 3/19/80

Dear Mr. Eisenhut:

This application for withholding is submitted by Westinghouse Electric Corporation ("Westinghouse") pursuant to the provisions of paragraph (b)(1) of Section 2.790 of the Commission's regulations. Withholding from public disclosure is requested with respect to the subject information which is further identified in the affidavit accompanying this application.

The undersigned has reviewed the information sought to be withheld and is authorized to apply for its withholding on behalf of Westinghouse, STG-TOD.

The affidavit accompanying this application sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of Section 2.790 of the Commission's regulations.

Accordingly, it is respectfully requested that the subject information which is proprietary to Westinghouse and which is further identified in the affidavit be withheld from public disclosure in accordance with 10CFR Section 2.790 of the Commission's regulations.

Correspondence with respect to this application for withholding or the accompanying affidavit should be addressed to the undersigned.

Very truly yours,

R. Williamson

R. Williamson, Manager
Customer Order Engineering
Westinghouse Electric Corporation

ATTACHMENT 2

AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF DELAWARE:

Before me, the undersigned authority, personally appeared Robert Williamson, who, being by me duly sworn according to law, deposes and says that he is authorized to execute this Affidavit on behalf of Westinghouse Electric Corporation ("Westinghouse") and that the averments of fact set forth in this Affidavit are true and correct to the best of his knowledge, information, and belief:

Robert Williamson

Robert Williamson, Manager
Customer Order Engineering

Sworn to and subscribed before me
this 15 day of JANUARY 80.

Henry E. Squillace

HENRY E. SQUILLACE
Notary Public, Marple Twp., Delaware Co.
My Commission Expires Oct. 18, 1980

(1) I am Manager, Customer Order Engineering in the Steam Turbine Generator Technical Operations Division of Westinghouse Electric Corporation and as such, I have been specifically delegated the function of reviewing the proprietary information sought to be withheld from public disclosure in connection with nuclear power plant licensing, and am authorized to apply for its withholding on behalf of the Westinghouse Power Generation Divisions.

(2) I am making this Affidavit in conformance with the provisions of 10 CFR Section 2.790 of the Commission's regulations and in conjunction with the Westinghouse application for withholding accompanying this Affidavit.

(3) I have personal knowledge of the criteria and procedures utilized by Westinghouse Power Generation Divisions in designating information as a trade secret, privileged or as confidential commercial or financial information.

(4) Pursuant to the provisions of paragraph (b)(4) of Section 2.790 of the Commission's regulations, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.

(i) The information sought to be withheld from public disclosure is owned and has been held in confidence by Westinghouse.

(ii) The information is of a type customarily held in confidence by Westinghouse and not customarily disclosed to the public. Westinghouse has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, utilizes a system to determine when and whether to hold certain types of information in confidence. The application of that system and the substance of that system constitutes Westinghouse policy and provides the rational basis required.

Under that system, information is held in confidence if it falls in one or more of several types, the release of which might result in the loss of an existing or potential competitive advantage, as follows:

(a) The information reveals the distinguishing aspects of a process (or component, structure, tool, method, etc.) where prevention of its use by any of Westinghouse's competitors without license from Westinghouse constitutes a competitive economic advantage over other companies.

(b) It consists of supporting data, including test data, relative to a process (or component, structure, tool, method, etc.), the application of which data secures a competitive economic advantage, e.g., by optimization or improved marketability.

(c) Its use by a competitor would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing a similar product.

(d) It reveals cost or price information, production capacities, budget levels, or commercial strategies of Westinghouse, its customers or suppliers.

(e) It reveals aspects of past, present, or future Westinghouse or customer funded development plans and programs of potential commercial value to Westinghouse.

(f) It contains patentable ideas, for which patent protection may be desirable.

(g) It is not the property of Westinghouse, but must be treated as proprietary by Westinghouse according to agreements with the owner.

(h) Public disclosure of this information would allow unfair and untruthful judgments on the performance and reliability of Westinghouse equipment components and improper comparison with similar components made by competitors.

There are sound policy reasons behind the Westinghouse system which include the following:

(a) The use of such information by Westinghouse gives Westinghouse a competitive advantage over its competitors. It is, therefore, withheld from disclosure to protect the Westinghouse competitive position.

(b) It is information which is marketable in many ways. The extent to which such information is available to competitors diminishes the Westinghouse ability to sell products and services involving the use of the information.

(c) Use by our competitor would put Westinghouse at a competitive disadvantage by reducing his expenditure of resources at our expense.

(d) Each component of proprietary information pertinent to a particular competitive advantage is potentially as valuable as the total competitive advantage. If competitors acquire components of proprietary information, any one component may be the key to the entire puzzle, thereby depriving Westinghouse of a competitive advantage.

(e) Unrestricted disclosure would jeopardize the position of prominence of Westinghouse in the world market, and thereby give a market advantage to the competition in those countries.

(f) The Westinghouse capacity to invest corporate assets in research and development depends upon the success in obtaining and maintaining a competitive advantage.

(iii) The information is being transmitted to the Commission in confidence and, under the provisions of 10 CFR Section 2.790, it is to be received in confidence by the Commission.

(iv) The information is not available in public sources to the best of our knowledge and belief.

(v) The proprietary information sought to be withheld in this submittal is that which is appropriately marked in Appendix A to letter from D. Trimble to Eisenhut, dated March 19, 1980 concerning information in response to NRC request for information of February 25, 1980, relative to low pressure turbine disc integrity.

The information enables Westinghouse to:

(a) Develop test inputs and procedures to satisfactorily verify the design of Westinghouse supplied equipment.

(b) Assist its customers to obtain licenses.

Further, the information has substantial commercial value as follows.

(a) Westinghouse can sell the use of this information to customers.

(b) Westinghouse uses the information to verify the design of equipment which is sold to customers.

(c) Westinghouse can sell services based upon the experience gained and the test equipment and methods developed.

Public disclosure of this information is likely to cause substantial harm to the competitive position of Westinghouse because it would enhance the ability of competitors to design, manufacture, verify, and sell electrical equipment for commercial turbine-generators without commensurate expenses. Also, public disclosure of the information would enable others having the same or similar equipment to use the information to meet NRC requirements for licensing documentation without purchasing the right to use the information.

The development of the equipment described in part by the information is the result of many years of development by Westinghouse and the expenditure of a considerable sum of money.

This could only be duplicated by a competitor if he were to invest similar sums of money and provided he had the appropriate talent available and could somehow obtain the requisite experience.

Further the deponent sayeth not.

ATTACHMENT 3; APPENDIX B; SUPPLEMENT 1

TN12213
FILES SEARCHED FOR TEST NUMBER TN12213
[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 060281

ID # : D201105302

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 201
2. UNIT NUCLEAR #1 SPARE
3. CUSTOMER: ARKANSAS P & L
4. LP# 2
5. LOCATION GEN
6. DISC# 1
7. TEST NO. TN12213
8. ROTOR NO. TN12075
9. S.G. NO. NOE93348

B. MATERIAL PROPERTIES (HUB)
1. TYPE (MIN. Y.S. [ ](KSI))
2. SUPPLIER:
3. Y.S. (KSI) [ ]
4. U.T.S. (KSI) [ ]
5. ELONGATION [ ]
6. R.A. [ ]
7. FATT (DEG.F) [ ]
8. R.T. IMPACT(FT.LB.) [ ]
9. U.S. IMPACT TEMP. (DEG.F) [ ]
10. U.S. IMPACT ENG. (FT.LB.) [ ]
11. U.S. KIC (KSI*SQRT(IN.)) [ ]

C. MATERIAL PROPERTIES (RIM)
1. Y.S. (KSI) [ ]
2. U.T.S. (KSI) [ ]
3. ELONGATION [ ]
4. R.A. [ ]
5. FATT (DEG.F) [ ]
6. R.T. IMPACT(FT.LB.) [ ]
7. U.S. IMPACT TEMP. (DEG.F) [ ]
8. U.S. IMPACT ENG. (FT.LB.) [ ]
9. U.S. KIC (KSI*SQRT(IN.)) [ ]

D. CHEMISTRY

C	MN	SI	P	CR	MO	V
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

NI	AS	SB	SN	AL	CU	S
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

E. BORE STRESS

SPEED (RPM)	STRESS	
1. 1800	(KSI)	[ ]
2. 2160 (120%)	(KSI)	[ ]

F. CRACK DATA (KEYWAY RADIUS (IN) [ ])
1. A-CR-OP (1800 RPM) (IN.) [ ]
2. A-CR-OS (OVERSPEED) (IN.) [ ]

G. SERVICE DATA
1. OPER. TEMP. METAL TEMP. HUB (DEG.F) [ ]
2. ESTIMATED MAX DA/DT (IN/HR) [ ]
3. ESTIMATED MAX DA/DT (IN/MONTH) [ ]

I. INSPECTION STATUS
1. FIRST INSPECTION DATE [ ]
2. OPERATING TIME AT INSPECTION (HR.) [ ]
3. KEYWAY CRACK DEPTH (MAX.)-(IN.) [ ]
4. BORE CRACK DEPTH (MAX.)-(IN.) [ ]
5. DISK STATUS [ ]

ENTER TYPE OF SEARCH IN BUILDING BLOCK 201 .: 'ID ','UNIT','ROTOR','SHOP ORDER','TEST NUMBER'
TERMINATE WITH 'NONE'
>TEST NUMBER
ENTER TYPE OF REPORT WANTED: 1 OR 2
1 = ONE PAGE USER REPORT
2 = TWO PAGE NON-PROPRIETARY WESTINGHOUSE REPORT
>1
ENTER TEST NUMBER
>

TN12215
FILES SEARCHED FOR TEST NUMBER TN12215
[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 060201

ID # : D281105302

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK		281
2. UNIT	NUCLEAR #1 SPARE	
3. CUSTOMER:	ARKANSAS P & L	
4. LP#		2
5. LOCATION		GEN
6. DISC#		2
7. TEST NO.	TN12215	
8. ROTOR NO.	TN12075	
9. S.O. NO.	N0E93348	

B. MATERIAL PROPERTIES (HUB)

1. TYPE
(MIN. Y.S. [ ](KSI))
2. SUPPLIER:
3. Y.S. (KSI) [ ]
4. U.T.S. (KSI) [ ]
5. ELONGATION [ ]
6. R.A. [ ]
7. FATT (DEG.F) [ ]
8. R.T. IMPACT(FT.LB.) [ ]
9. U.S. IMPACT TEMP. (DEG.F) [ ]
10. U.S. IMPACT ENG. (FT.LB.) [ ]
11. U.S. KIC (KSI*SQRT(IN.)) [ ]

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI) [ ]
2. U.T.S. (KSI) [ ]
3. ELONGATION [ ]
4. R.A. [ ]
5. FATT (DEG.F) [ ]
6. R.T. IMPACT(FT.LB.) [ ]
7. U.S. IMPACT TEMP. (DEG.F) [ ]
8. U.S. IMPACT ENG. (FT.LB.) [ ]
9. U.S. KIC (KSI*SQRT(IN.)) [ ]

D. CHEMISTRY

C	MN	SI	P	CR	MO	V
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

NI	AS	SB	SN	AL	CU	S
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

E. BORE STRESS

SPEED (RPM)	STRESS
1. 1800	(KSI) [ ]
2. 2160 (120%)	(KSI) [ ]

F. CRACK DATA (KEYWAY RADIUS (IN) [ ])

1. A-CR-OP (1800 RPM) (IN.) [ ]
2. A-CR-OS (OVERSPEED) (IN.) [ ]

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F) [ ]
2. ESTIMATED MAX DA/DT (IN/HR) [ ]
3. ESTIMATED MAX DA/DT (IN/MONTH) [ ]

I. INSPECTION STATUS

1. FIRST INSPECTION DATE [ ]
2. OPERATING TIME AT INSPECTION (HR.) [ ]
3. KEYWAY CRACK DEPTH (MAX.)-(IN.) [ ]
4. BORE CRACK DEPTH (MAX.)-(IN.) [ ]
5. DISK STATUS [ ]

ENTER TYPE OF SEARCH IN BUILDING BLOCK 281 : 'ID ','UNIT','ROTOR','SHOP ORDER','TEST NUMBER'
TERMINATE WITH 'NONE'
>TEST NUMBER
ENTER TYPE OF REPORT WANTED: 1 OR 2
1 = ONE PAGE USER REPORT
2 = TWO PAGE NON-PROPRIETARY WESTINGHOUSE REPORT
>1
ENTER TEST NUMBER

IN12104
FILES SEARCHED FOR TEST NUMBER TN12104
[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 060201

ID # : D281105302

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK	281
2. UNIT	NUCLEAR #1 SPARE
3. CUSTOMER	ARKANSAS P & L
4. LP#	2
5. LOCATION	GEN
6. DISC#	3
7. TEST NO.	TN12104
8. ROTOR NO.	TN12075
9. S.O. NO.	N0E93340

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [ ](KSI))	
2. SUPPLIER	
3. Y.S. (KSI)	[ ]
4. U.T.S. (KSI)	[ ]
5. ELONGATION	[ ]
6. R.A.	[ ]
7. FATT (DEG.F)	[ ]
8. R.T. IMPACT(FT.LB.)	[ ]
9. U.S. IMPACT TEMP. (DEG.F)	[ ]
10. U.S. IMPACT ENG. (FT.LB.)	[ ]
11. U.S. KIC (KSI*SQRT(IN.))	[ ]

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)	[ ]
2. U.T.S. (KSI)	[ ]
3. ELONGATION	[ ]
4. R.A.	[ ]
5. FATT (DEG.F)	[ ]
6. R.T. IMPACT(FT.LB.)	[ ]
7. U.S. IMPACT TEMP. (DEG.F)	[ ]
8. U.S. IMPACT ENG. (FT.LB.)	[ ]
9. U.S. KIC (KSI*SQRT(IN.))	[ ]

D. CHEMISTRY

C	MN	SI	P	CR	MO	V
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

NI	AS	SB	SN	AL	CU	S
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

E. BORE STRESS

SPEED (RPM)	STRESS	
1. 1800	(KSI)	[ ]
2. 2160 (120%)	(KSI)	[ ]

F. CRACK DATA (KEYWAY RADIUS (IN) [ ])

1. A-CR-OP (1800 RPM) (IN.)	[ ]
2. A-CR-OS (OVERSPEED) (IN.)	[ ]

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F)	[207]
2. ESTIMATED MAX DA/DT (IN/HR)	[ ]
3. ESTIMATED MAX DA/DT (IN/MONTH)	[ ]

I. INSPECTION STATUS

1. FIRST INSPECTION DATE	[ ]
2. OPERATING TIME AT INSPECTION (HR.)	[ ]
3. KEYWAY CRACK DEPTH (MAX.)-(IN.)	[ ]
4. BORE CRACK DEPTH (MAX.)-(IN.)	[ ]
5. DISK STATUS	[ ]

ENTER TYPE OF SEARCH IN BUILDING BLOCK 281 : 'ID ','UNIT','ROTOR','SHOP ORDER','TEST NUMBER'
TERMINATE WITH 'NONE'
>TEST NUMBER
ENTER TYPE OF REPORT WANTED: 1 OR 2
2 - END PAGE NONPROPRIETARY WESTINGHOUSE REPORT

TN12105
FILES SEARCHED FOR TEST NUMBER TN12105
[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS P,C,E

DATE OF REPORT : 080281

ID # : D701105302

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 201
2. UNIT NUCLEAR #1 SPARE
3. CUSTOMER: ARKANSAS P & L
4. LP# 2
5. LOCATION GEN
6. DISC# 4
7. TEST NO. TN12105
8. ROTOR NO. TN12075
9. S.O. NO. NOE93348

B. MATERIAL PROPERTIES (HUB)
1. TYPE
(MIN. Y.S. [ ](KSI))
2. SUPPLIER:
3. Y.S. (KSI) [ ]
4. U.T.S. (KSI) [ ]
5. ELONGATION [ ]
6. R.A. [ ]
7. FATT (DEG.F) [ ]
8. R.T. IMPACT(FT.LB.) [ ]
9. U.S. IMPACT TEMP. (DEG.F) [ ]
10. U.S. IMPACT ENG. (FT.LB.) [ ]
11. U.S. KIC (KSI*SQRT(IN.)) [ ]

C. MATERIAL PROPERTIES (RIM)
1. Y.S. (KSI) [ ]
2. U.T.S. (KSI) [ ]
3. ELONGATION [ ]
4. R.A. [ ]
5. FATT (DEG.F) [ ]
6. R.T. IMPACT(FT.LB.) [ ]
7. U.S. IMPACT TEMP. (DEG.F) [ ]
8. U.S. IMPACT ENG. (FT.LB.) [ ]
9. U.S. KIC (KSI*SQRT(IN.)) [ ]

D. CHEMISTRY

C	MN	SI	P	CR	MO	V
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

NI	AS	SB	SN	AL	CU	S
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

E. BORE STRESS

SPEED (RPM)	STRESS
1. 1800	(KSI) [ ]
2. 2160 (120%)	(KSI) [ ]

F. CRACK DATA (KEYWAY RADIUS (IN) [ ])
1. A-CR-OP (1800 RPM) (IN.) [ ]
2. A-CR-OS (OVERSPEED) (IN.) [ ]

G. SERVICE DATA
1. OPER. TEMP. METAL TEMP. HUB (DEG.F) [ ]
2. ESTIMATED MAX DA/DT (IN/HR) [ ]
3. ESTIMATED MAX DA/DT (IN/MONTH) [ ]

I. INSPECTION STATUS
1. FIRST INSPECTION DATE [ ]
2. OPERATING TIME AT INSPECTION (HR.) [ ]
3. KEYWAY CRACK DEPTH (MAX.)-(IN.) [ ]
4. BORE CRACK DEPTH (MAX.)-(IN.) [ ]
5. DISK STATUS [ ]

ENTER TYPE OF SEARCH IN BUILDING BLOCK 201 1 'ID ','UNIT','ROTOR','SHOP ORDER','TEST NUMBER'

IN11785
FILES SEARCHED FOR TEST NUMBER IN11785
[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS A,C,E

DATE OF REPORT : 060201

ID # : D2B1105302

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK		201
2. UNIT	NUCLEAR #1	SPARE
3. CUSTOMER	ARKANSAS P & L	
4. LP#		2
5. LOCATION		GEN
6. DISC#		5
7. TEST NO.	TN11785	
8. ROTOR NO.	TN12075	
9. S.O. NO.	N0E93348	

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [ ](KSI))

2. SUPPLIER		
3. Y.S. (KSI)	[	]
4. U.T.S. (KSI)	[	]
5. ELONGATION	[	]
6. R.A.	[	]
7. FATT (DEG.F)	[	]
8. R.T. IMPACT(FT.LB.)	[	]
9. U.S. IMPACT TEMP. (DEG.F)	[	]
10. U.S. IMPACT ENG. (FT.LB.)	[	]
11. U.S. KIC (KSI*SQRT(IN.))	[	]

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)	[	]
2. U.T.S. (KSI)	[	]
3. ELONGATION	[	]
4. R.A.	[	]
5. FATT (DEG.F)	[	]
6. R.T. IMPACT(FT.LB.)	[	]
7. U.S. IMPACT TEMP. (DEG.F)	[	]
8. U.S. IMPACT ENG. (FT.LB.)	[	]
9. U.S. KIC (KSI*SQRT(IN.))	[	]

D. CHEMISTRY

C	MN	SI	P	CR	MO	V
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

NI	AS	SB	SN	AL	CU	S
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

E. BORE STRESS

SPEED (RPM)	STRESS	
1. 1800	(KSI)	[ ]
2. 2160 (120%)	(KSI)	[ ]

F. CRACK DATA (KEYWAY RADIUS (IN) [ ])

1. A-CR-OP (1800 RPM) (IN.)	[ ]
2. A-CR-OS (OVERSPEED) (IN.)	[ ]

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F)	[ ]
2. ESTIMATED MAX DA/DT (IN/HR)	[ ]
3. ESTIMATED MAX DA/DT (IN/MONTH)	[ ]

I. INSPECTION STATUS

1. FIRST INSPECTION DATE	[ ]
2. OPERATING TIME AT INSPECTION (HR.)	[ ]
3. KEYWAY CRACK DEPTH (MAX.)-(IN.)	[ ]
4. BORE CRACK DEPTH (MAX.)-(IN.)	[ ]
5. DISK STATUS	[ ]

ENTER TYPE OF SEARCH IN BUILDING BLOCK 201 : 'ID ','UNIT','ROTOR','SHOP ORDER','TEST NUMBER'
TERMINATE WITH 'NONE'

TN12212
FILES SEARCHED FOR TEST NUMBER TN12212
[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 060281

ID # : D281105301

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK	281
2. UNIT	NUCLEAR #1 SPARE
3. CUSTOMER:	ARKANSAS P & L
4. LP#	2
5. LOCATION	GOV
6. DISC#	1
7. TEST NO.	TN12212
8. ROTOR NO.	TN12075
9. S.O. NO.	NOE93348

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [ ](KSI))	
2. SUPPLIER:	
3. Y.S. (KSI)	[ ]
4. U.T.S. (KSI)	[ ]
5. ELONGATION	[ ]
6. R.A.	[ ]
7. FATT (DEG.F)	[ ]
8. R.T. IMPACT(FT.LB.)	[ ]
9. U.S. IMPACT TEMP. (DEG.F)	[ ]
10. U.S. IMPACT ENG. (FT.LB.)	[ ]
11. U.S. KIC (KSI*SQRT(IN.))	[ ]

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)	[ ]
2. U.T.S. (KSI)	[ ]
3. ELONGATION	[ ]
4. R.A.	[ ]
5. FATT (DEG.F)	[ ]
6. R.T. IMPACT(FT.LB.)	[ ]
7. U.S. IMPACT TEMP. (DEG.F)	[ ]
8. U.S. IMPACT ENG. (FT.LB.)	[ ]
9. U.S. KIC (KSI*SQRT(IN.))	[ ]

D. CHEMISTRY

C	MN	SI	P	CR	MO	V
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

NI	AS	SB	SN	AL	CU	S
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

E. BORE STRESS

SPEED (RPM)	STRESS	
1. 1800	(KSI)	[ ]
2. 2160 (120%)	(KSI)	[ ]

F. CRACK DATA (KEYWAY RADIUS (IN) [.375])

1. A-CR-OP (1800 RPM) (IN.)	[ ]
2. A-CR-OS (OVERSPEED) (IN.)	[ ]

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F)	[320]
2. ESTIMATED MAX DA/DT (IN/HR)	[ ]
3. ESTIMATED MAX DA/DT (IN/MONTH)	[ ]

I. INSPECTION STATUS

1. FIRST INSPECTION DATE	[ ]
2. OPERATING TIME AT INSPECTION (HR.)	[ ]
3. KEYWAY CRACK DEPTH (MAX.)-(IN.)	[ ]
4. BORE CRACK DEPTH (MAX.)-(IN.)	[ ]
5. DISK STATUS	[ ]

ENTER TYPE OF SEARCH IN BUILDING BLOCK 281 : 'ID ','UNIT','ROTOR','SHOP ORDER','TEST NUMBER'
TERMINATE WITH 'NONE'
>NONE

IN12214
FILES SEARCHED FOR TEST NUMBER IN12214
[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 060281

ID # : B2B1105301

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 281
2. UNIT NUCLEAR #1 SPARE
3. CUSTOMER: ARKANSAS P & L
4. LP# 2
5. LOCATION GOV
6. DISC# 2
7. TEST NO. TN12214
8. ROTOR NO. TN12075
9. S.O. NO. N0E93348

B. MATERIAL PROPERTIES (HUB)
1. TYPE (MIN. Y.S. [3(KSI))
2. SUPPLIER:
3. Y.S. (KSI) [ ]
4. U.T.S. (KSI) [ ]
5. ELONGATION [ ]
6. R.A. [ ]
7. FATT (DEG.F) [ ]
8. R.T. IMPACT(FT.LB.) [ ]
9. U.S. IMPACT TEMP. (DEG.F) [ ]
10. U.S. IMPACT ENG. (FT.LB.) [ ]
11. U.S. KIC (KSI*SQRT(IN.)) [ ]

C. MATERIAL PROPERTIES (RIM)
1. Y.S. (KSI) [ ]
2. U.T.S. (KSI) [ ]
3. ELONGATION [ ]
4. R.A. [ ]
5. FATT (DEG.F) [ ]
6. R.T. IMPACT(FT.LB.) [ ]
7. U.S. IMPACT TEMP. (DEG.F) [ ]
8. U.S. IMPACT ENG. (FT.LB.) [ ]
9. U.S. KIC (KSI*SQRT(IN.)) [ ]

D. CHEMISTRY

C	MN	SI	P	CR	MO	V
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

NI	AS	SB	SN	AL	CU	S
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

E. BORE STRESS

SPEED (RPM)	STRESS	
1. 1000	(KSI)	[ ]
2. 2160 (120%)	(KSI)	[ ]

F. CRACK DATA (KEYWAY RADIUS (IN) [ ])
1. A-CR-OP (1000 RPM) (IN.) [ ]
2. A-CR-OS (OVERSPEED) (IN.) [ ]

G. SERVICE DATA
1. OPER. TEMP. METAL TEMP. HUB (DEG.F) [ ]
2. ESTIMATED MAX DA/DT (IN/HR) [ ]
3. ESTIMATED MAX DA/DT (IN/MONTH) [ ]

I. INSPECTION STATUS
1. FIRST INSPECTION DATE [ ]
2. OPERATING TIME AT INSPECTION (HR.) [ ]
3. KEYWAY CRACK DEPTH (MAX.)-(IN.) [ ]
4. BORE CRACK DEPTH (MAX.)-(IN.) [ ]
5. DISK STATUS [ ]

ENTER TYPE OF SEARCH IN BUILDING BLOCK 281 : 'ID ','UNIT','ROTOR','SHOP ORDER','TEST NUMBER'
TERMINATE WITH 'NONE'
>TEST NUMBER
ENTER TYPE OF REPORT WANTED: 1 OR 2
1 = ONE PAGE USER REPORT

TN12214
FILES SEARCHED FOR TEST NUMBER TN12214
[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 060281

ID # : D281105301

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 281
2. UNIT NUCLEAR #1 SPARE
3. CUSTOMER: ARKANSAS P & L
4. LP# 2
5. LOCATION GOV
6. DISC# 2
7. TEST NO. TN12214
8. ROTOR NO. TN12075
9. S.O. NO. NOE93348

B. MATERIAL PROPERTIES (HUB)
1. TYPE (MIN. Y.S. [](KSI))
2. SUPPLIER:
3. Y.S. (KSI) [ ]
4. U.T.S. (KSI) [ ]
5. ELONGATION [ ]
6. R.A. [ ]
7. FATT (DEG.F) [ ]
8. R.T. IMPACT(FT.LB.) [ ]
9. U.S. IMPACT TEMP. (DEG.F) [ ]
10. U.S. IMPACT ENG. (FT.LB.) [ ]
11. U.S. KIC (KSI*SQRT(IN.)) [ ]

C. MATERIAL PROPERTIES (RIM)
1. Y.S. (KSI) [ ]
2. U.T.S. (KSI) [ ]
3. ELONGATION [ ]
4. R.A. [ ]
5. FATT (DEG.F) [ ]
6. R.T. IMPACT(FT.LB.) [ ]
7. U.S. IMPACT TEMP. (DEG.F) [ ]
8. U.S. IMPACT ENG. (FT.LB.) [ ]
9. U.S. KIC (KSI*SQRT(IN.)) [ ]

D. CHEMISTRY

C	MN	SI	P	CR	MO	V
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

NI	AS	SB	SN	AL	CU	S
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

E. BORE STRESS

	SPEED (RPM)	STRESS
1.	1800	(KSI) [ ]
2.	2160 (120%)	(KSI) [ ]

F. CRACK DATA (KEYWAY RADIUS (IN) [ ])
1. A-CR-OF (1800 RPM) (IN.) [ ]
2. A-CR-OS (OVERSPEED) (IN.) [ ]

G. SERVICE DATA
1. OPER. TEMP. METAL TEMP. HUB (DEG.F) [ ]
2. ESTIMATED MAX DA/DT (IN/HR) [ ]
3. ESTIMATED MAX DA/DT (IN/MONTH) [ ]

I. INSPECTION STATUS
1. FIRST INSPECTION DATE [ ]
2. OPERATING TIME AT INSPECTION (HR.) [ ]
3. KEYWAY CRACK DEPTH (MAX.)-(IN.) [ ]
4. BORE CRACK DEPTH (MAX.)-(IN.) [ ]
5. DISK STATUS [ ]

ENTER TYPE OF SEARCH IN BUILDING BLOCK 281 : 'ID ','UNIT','ROTOR','SHOP ORDER','TEST NUMBER'
TERMINATE WITH 'NONE'
>TEST NUMBER
ENTER TYPE OF REPORT WANTED: 1 OR 2
1 = ONE PAGE USER REPORT

IN12103
FILES SEARCHED FOR TEST NUMBER IN12103
[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 060281

ID # : D281105301

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK	281
2. UNIT	NUCLEAR #1 SPARE
3. CUSTOMER:	ARKANSAS P & L
4. LP#	2
5. LOCATION	GOV
6. DISC#	3
7. TEST NO.	IN12103
8. ROTOR NO.	IN12075
9. S.O. NO.	NOE93348

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [](KSI))	
2. SUPPLIER:	
3. Y.S. (KSI)	[ ]
4. U.T.S. (KSI)	[ ]
5. ELONGATION	[ ]
6. R.A.	[ ]
7. FATT (DEG.F)	[ ]
8. R.T. IMPACT(FT.LB.)	[ ]
9. U.S. IMPACT TEMP. (DEG.F)	[ ]
10. U.S. IMPACT ENG. (FT.LB.)	[ ]
11. U.S. KIC (KSI*SQRT(IN.))	[ ]

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)	[ ]
2. U.T.S. (KSI)	[ ]
3. ELONGATION	[ ]
4. R.A.	[ ]
5. FATT (DEG.F)	[ ]
6. R.T. IMPACT(FT.LB.)	[ ]
7. U.S. IMPACT TEMP. (DEG.F)	[ ]
8. U.S. IMPACT ENG. (FT.LB.)	[ ]
9. U.S. KIC (KSI*SQRT(IN.))	[ ]

D. CHEMISTRY

C	MN	SI	P	CR	MO	V
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

NI	AS	SB	SN	AL	CU	S
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

E. BORE STRESS

SPEED (RPM)	STRESS	
1. 1800	(KSI)	[ ]
2. 2160 (120%)	(KSI)	[ ]

F. CRACK DATA (KEYWAY RADIUS (IN) [ ])

1. A-CR-OP (1800 RPM) (IN.)	[ ]
2. A-CR-OS (OVERSPEED) (IN.)	[ ]

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F)	[ ]
2. ESTIMATED MAX DA/DT (IN/HR)	[ ]
3. ESTIMATED MAX DA/DT (IN/MONTH)	[ ]

I. INSPECTION STATUS

1. FIRST INSPECTION DATE	[ ]
2. OPERATING TIME AT INSPECTION (HR.)	[ ]
3. KEYWAY CRACK DEPTH (MAX.)-(IN.)	[ ]
4. BORE CRACK DEPTH (MAX.)-(IN.)	[ ]
5. DISK STATUS	[ ]

ENTER TYPE OF SEARCH IN BUILDING BLOCK 281 : 'ID ','UNIT','ROTOR','SHOP ORDER','TEST NUMBER'
TERMINATE WITH 'NONE'

TN12106
FILES SEARCHED FOR TEST NUMBER TN12106
[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 060291

ID # : D281105301

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 281
2. UNIT NUCLEAR #1 SPARE
3. CUSTOMER: ARKANSAS P & L
4. LP# 2
5. LOCATION GOV
6. DISC# 4
7. TEST NO. TN12106
8. ROTOR NO. TN12075
9. S.O. NO. NOE93348

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [](KSI))
2. SUPPLIER:
3. Y.S. (KSI) [ ]
4. U.T.S. (KSI) [ ]
5. ELONGATION [ ]
6. R.A. [ ]
7. FATT (DEG.F) [ ]
8. R.T. IMPACT(FT.LB.) [ ]
9. U.S. IMPACT TEMP. (DEG.F) [ ]
10. U.S. IMPACT ENG. (FT.LB.) [ ]
11. U.S. KIC (KSI*SQRT(IN.)) [ ]

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI) [ ]
2. U.T.S. (KSI) [ ]
3. ELONGATION [ ]
4. R.A. [ ]
5. FATT (DEG.F) [ ]
6. R.T. IMPACT(FT.LB.) [ ]
7. U.S. IMPACT TEMP. (DEG.F) [ ]
8. U.S. IMPACT ENG. (FT.LB.) [ ]
9. U.S. KIC (KSI*SQRT(IN.)) [ ]

D. CHEMISTRY

C	MN	SI	P	CR	MO	V
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

NI	AS	SB	SN	AL	CU	S
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

E. BORE STRESS

	SPEED (RPM)	STRESS
1.	1800	(KSI) [ ]
2.	2160 (120%)	(KSI) [ ]

F. CRACK DATA (KEYWAY RADIUS (IN) [ ])

1. A-CR-OP (1800 RPM) (IN.) [ ]
2. A-CR-OS (OVERSPEED) (IN.) [ ]

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F) [ ]
2. ESTIMATED MAX DA/DT (IN/HR) [ ]
3. ESTIMATED MAX DA/DT (IN/MONTH) [ ]

I. INSPECTION STATUS

1. FIRST INSPECTION DATE [ ]
2. OPERATING TIME AT INSPECTION (HR.) [ ]
3. KEYWAY CRACK DEPTH (MAX.)-(IN.) [ ]
4. BORE CRACK DEPTH (MAX.)-(IN.) [ ]
5. DISK STATUS [ ]

ENTER TYPE OF SEARCH IN BUILDING BLOCK 281 : 'ID ','UNIT','ROTOR','SHOP ORDER','TEST NUMBER'
TERMINATE WITH 'NONE'

TN12071
FILES SEARCHED FOR TEST NUMBER TN12071
[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 060281

ID # : 0281105301

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK	281
2. UNIT	NUCLEAR #1 SPARE
3. CUSTOMER:	ARKANSAS P & L
4. LP#	2
5. LOCATION	GOV
6. DISC#	5
7. TEST NO.	TN12071
8. ROTOR NO.	TN12075
9. S.O. NO.	N0E9334B

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [ ](KSI))	
2. SUPPLIER:	
3. Y.S. (KSI)	[ ]
4. U.T.S. (KSI)	[ ]
5. ELONGATION	[ ]
6. R.A.	[ ]
7. FATT (DEG.F)	[ ]
8. R.T. IMPACT(FT.LB.)	[ ]
9. U.S. IMPACT TEMP. (DEG.F)	[ ]
10. U.S. IMPACT ENG. (FT.LB.)	[ ]
11. U.S. KIC (KSI*SQRT(IN.))	[ ]

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)	[ ]
2. U.T.S. (KSI)	[ ]
3. ELONGATION	[ ]
4. R.A.	[ ]
5. FATT (DEG.F)	[ ]
6. R.T. IMPACT(FT.LB.)	[ ]
7. U.S. IMPACT TEMP. (DEG.F)	[ ]
8. U.S. IMPACT ENG. (FT.LB.)	[ ]
9. U.S. KIC (KSI*SQRT(IN.))	[ ]

D. CHEMISTRY

C	MN	SI	P	CR	MO	V
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

NI	AS	SB	SN	AL	CU	S
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

E. BORE STRESS

SPEED (RPM)	STRESS	
1. 1800	(KSI)	[ ]
2. 2160 (120%)	(KSI)	[ ]

F. CRACK DATA (KEYWAY RADIUS (IN) [ ])

1. A-CR-OP (1800 RPM) (IN.)	[ ]
2. A-CR-OS (OVERSPEED) (IN.)	[ ]

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F)	[ ]
2. ESTIMATED MAX DA/DT (IN/HR)	[ ]
3. ESTIMATED MAX DA/DT (IN/MONTH)	[ ]

I. INSPECTION STATUS

1. FIRST INSPECTION DATE	[ ]
2. OPERATING TIME AT INSPECTION (HR.)	[ ]
3. KEYWAY CRACK DEPTH (MAX.)-(IN.)	[ ]
4. BORE CRACK DEPTH (MAX.)-(IN.)	[ ]
5. DISK STATUS	[ ]

ENTER TYPE OF SEARCH IN BUILDING BLOCK 281 : 'ID ','UNIT','ROTOR','SHOP ORDER','TEST NUMBER'