TERA

BALTIMORE GAS AND ELECTRIC COMPANY

P. O. BOX 1475
BALTIMORE, MARYLAND 21203

December 8, 1980

ARTHUR E. LUNDVALL, JR.
VICE PRESIDENT
SUPPLY

Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attn: Mr. Robert A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing

Subject: Calvert Cliffs Nuclear Power Plant
Unit No. 2, Docket No. 50-318
Westinghouse Low Pressure Turbine Disc Inspection

References: a) NRC letter dated 2/25/80 from D. G. Eisenhut to A. E. Lundvall, Jr., same subject.
b) BG&E letter dated 3/18/80 from A. E. Lundvall, Jr. to D. G. Eisenhut, same subject.
c) BG&E letter dated 3/24/80 from A. E. Lundvall, Jr. to D. G. Eisenhut, same subject.

Gentlemen:

Enclosed please find a revised set of data for Calvert Cliffs Unit No. 2 Low Pressure Turbine Discs. The original data, which was submitted in response to Reference (a), was contained in References (b) and (c). The revised data is a result of additional experience gained from field inspection. It also considers thermal stresses and bending stresses not previously used in preparing disc data.

The data consists of Attachment 1 (proprietary) which supersedes Attachment 3 of Reference (b), and Attachment 2 (non-proprietary) which supersedes Attachment 4 of Reference (b).

It is requested that Attachment 1 of this letter be treated as proprietary information and withheld from public disclosure. The Application and Affidavit for withholding proprietary information found in Attachments 1 and 2 of reference (c) apply to this letter.

Very truly yours,

A. E. Lundvall, Jr.

Attachments (2)

cc: J. A. Biddison, Esquire
G. F. Trowbridge, Esquire
Mr. E. L. Conner, Jr. - NRC

8012120 479

[ ] INDICATES WESTINGHOUSE PROPRIETARY LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100901

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 1
5. LOCATION GOV
6. DISC# 1
7. TEST NO. TM1513

B. MATERIAL PROPERTIES (HUB)
1. TYPE TB
(MIN. Y.S. [ ](KSI))
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100901

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 1
5. LOCATION GOV
6. DISC# 2
7. TEST NO. TN1868

B. MATERIAL PROPERTIES (HUB)

1. TYPE TB
   (MIN. Y.S. [ ](KSI)]
2. SUPPLIER: BETHLEHEM STEEL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100901

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 1
5. LOCATION GOV
6. DISC# 3
7. TEST NO. TN1515

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [ ](KSI)) TB
2. SUPPLIER: BETHLEHEM STEEL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100901

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 1
5. LOCATION GOV
6. DISC# 9
7. TEST NO. TN1579

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [ ](KSI)) TB
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : 0080100901

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 1
5. LOCATION GOV
6. DISC# 5
7. TEST NO. TN1511

B. MATERIAL PROPERTIES (HUB)

1. TYPE TB
(MIN. Y.S. [ ](KSI))
2. SUPPLIER MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

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LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100901

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 1
5. LOCATION GOV
6. DISC# 4
7. TEST NO. TN1903

B. MATERIAL PROPERTIES (HUB)
1. TYPE TC
(MIN. Y.S. [ ](KSI)]
2. SUPPLIER: BETHLEHEM STEEL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100902

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 1
5. LOCATION GEN
6. DISC# 1
7. TEST NO. TN1507

B. MATERIAL PROPERTIES (HUB)
1. TYPE TB
(MIN. Y.S. [ ](KSI))
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : 0080100902

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 1
5. LOCATION GEN
6. DISC# 2
7. TEST NO. TN1508

B. MATERIAL PROPERTIES (HUB)
1. TYPE TB
(MIN. Y.S. [ ](KSI))
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100902

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 1
5. LOCATION GEN
6. DISC# 3
7. TEST NO. TN1509

B. MATERIAL PROPERTIES (HUB)
1. TYPE TB
(MIN. Y.S. [ ](KSI))
2. SUPPLIER: BETHLEHEM STEEL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : 0080100902

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 1
5. LOCATION GEN
6. DISC# 4
7. TEST NO. TN1510

B. MATERIAL PROPERTIES (HUB)
1. TYPE TB
(MIN. Y.S. [ ](KSI))
2. SUPPLIER: MIDVALE HEPPENSTALL
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)	[ ]
4. Crack Length Projected Til Inspection (in)	[ ]
5. Critical Crack Ratio (A ÷ Acr(os))	[ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100902

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 1
5. LOCATION GEN
6. DISC# 5
7. TEST NO. TN1516

B. MATERIAL PROPERTIES (HUB)
1. TYPE TB
(MIN. Y.S. [ ](KSI))
2. SUPPLIER: BETHLEHEM STEEL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100902

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 1
5. LOCATION GEN
6. DISC# 6
7. TEST NO. TNI900

B. MATERIAL PROPERTIES (HUB)
1. TYPE TA
2. SUPPLIER: [MIN. Y.S. [ ](KSI)] MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100903

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 2
5. LOCATION GOV
6. DISC# 1
7. TEST NO. TN1529

B. MATERIAL PROPERTIES (HUB)
1. TYPE TB
(MIN. Y.S. [ ](KSI))
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : 0080100903

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 2
5. LOCATION GOV
6. DISC# 2
7. TEST NO. TN1525

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [ ](KSI)) TB
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100903

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 2
5. LOCATION GOV
6. DISC# 3
7. TEST NO. TN1526

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [ ](KSI)) TB
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100903

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 2
5. LOCATION GOV
6. DISC# 4
7. TEST NO. TN1527

B. MATERIAL PROPERTIES (HUB)
1. TYPE TB
(MIN. Y.S. [ ](KSI))
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100903

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 2
5. LOCATION GOV
6. DISC# 5
7. TEST NO. TN1528

B. MATERIAL PROPERTIES (HUB)
1. TYPE TB
(MIN. Y.S. [ ](KSI))
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : 0080100903

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BAL. MORE G&E
4. LP# 2
5. LOCATION GOV
6. DISC# 6
7. TEST NO. TN1529

B. MATERIAL PROPERTIES (HUB)
1. TYPE (MIN. Y.S. [ ](KSI)) TA
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : 0080100904

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 80
2. UNIT
3. CUSTOMER: BALTIMORE G&E
4. LP# 2
5. LOCATION GEN
6. DISC# 1
7. TEST NO. TN1518

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [ ](KSI)) TB
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100909

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 2
5. LOCATION GEN
6. DISC# 2
7. TEST NO. TN1519

B. MATERIAL PROPERTIES (HUB)

1. TYPE T8
2. SUPPLIER: MIDVALE HEPPENSTALL
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.)) [ ]

MIN. Y.S. [ ](KSI)

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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100904

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 2
5. LOCATION GEN
6. DISC# 3
7. TEST NO. TN1520

B. MATERIAL PROPERTIES (HUB)

1. TYPE TB
(MIN. Y.S. [ ](KSI))
2. SUPPLIER MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : 0080100904

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 2
5. LOCATION GEN
6. DISC# 5
7. TEST NO. TN1522

B. MATERIAL PROPERTIES (HUB)

1. TYPE T8
(MIN. Y.S. [ ](KSI))
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100904

LP TURB..E DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 2
5. LOCATION GEN
6. DISC# 6
7. TEST NO. TN1523

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [ ](KSI))	TA	
2. SUPPLIER	MIDVALE HEPPENSTALL	
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	[ ]
AL	[ ]	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)	[ ]
4. Crack Length Projected Til Inspection (in)	[ ]
5. Critical Crack Ratio (A ÷ Acr(os))	[ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY LEVELS B,C,E

DATE OF REPORT : 092280

ID # : 0080100905

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 3
5. LOCATION GOV
6. DISC# 1
7. TEST NO. TN1536

B. MATERIAL PROPERTIES (HUB)
1. TYPE [ ] TB (MIN. Y.S. [ ](KSI))
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100905

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 3
5. LOCATION GOV
6. DISC# 2
7. TEST NO. TN1537

B. MATERIAL PROPERTIES (HUB)
1. TYPE TB
(MIN. Y.S. [ ](KSI))
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D08C100905

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 3
5. LOCATION GOV
6. DISC# 3
7. TEST NO. TN1538

B. MATERIAL PROPERTIES (HUB)
1. TYPE T8
(MIN. Y.S. [ ](KSI))
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100905

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 3
5. LOCATION GOV
6. DISC# 4
7. TEST NO. TN1539

B. MATERIAL PROPERTIES (HUB)
1. TYPE TB
(MIN. Y.S. [ ](KSI))
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : 0080100905

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 3
5. LOCATION GOV
6. DISC# 5
7. TEST NO. TN1540

B. MATERIAL PROPERTIES (HUB)
1. TYPE TB
(MIN. Y.S. [ ](KSI))
2. SUPPLIER: MIDVALE HEPPENSTAL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : 0080100905

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 3
5. LOCATION GOV
6. DISC# 6
7. TEST NO. TN1541

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [ ](KSI)) TA
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A -> Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D08010090A

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT
3. CUSTOMER: BALTIMORE G&E
4. LP# 3
5. LOCATION GEN
6. DISC# 1
7. TEST NO. TN1530

B. MATERIAL PROPERTIES (HUB)
1. TYPE [ ] TE
(MIN. Y.S. [ ](KSI))
2. SUPPLIER: [ ] MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (In.) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : 0080100906

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 3
5. LOCATION GEN
6. DISC# 2
7. TEST NO. TN153I

B. MATERIAL PROPERTIES (HUB)

1. TYPE TB
(MIN. Y.S. [ ](KSI))
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100906

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 3
5. LOCATION GEN
6. DISC# 3
7. TEST NO. TN1532

B. MATERIAL PROPERTIES (HUB)
1. TYPE TB
(MIN. Y.S. [ ](KSI))
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100906

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 3
5. LOCATION GEN
6. DISC# 4
7. TEST NO. TN1521

B. MATERIAL PROPERTIES (HUB)
1. TYPE TB
(MIN. Y.S. [ ](KSI))
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 092280

ID # : D080100906

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION
1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 3
5. LOCATION GEN
6. DISC# 5
7. TEST NO. TN1534

B. MATERIAL PROPERTIES (HUB)
1. TYPE [ ] TB
(MIN. Y.S. [ ](KSI))
2. SUPPLIER: BETHLEHEM
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)	[ ]
4. Crack Length Projected Til Inspection (in)	[ ]
5. Critical Crack Ratio (A ÷ Acr(os))	[ ]

H. INSPECTION STATUS

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

[ ] INDICATES WESTINGHOUSE PROPRIETARY LEVELS B,C,E

DATE OF REPORT : 092280

ID # : DD80100906

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 80
2. UNIT CALVERT CLIFFS #2
3. CUSTOMER: BALTIMORE G&E
4. LP# 3
5. LOCATION GEN
6. DISC# 6
7. TEST NO. TN1535

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [ ](KSI) TA
2. SUPPLIER: MIDVALE HEPPENSTALL
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) [ ], 31

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) [ ]
4. Crack Length Projected Til Inspection (in) [ ]
5. Critical Crack Ratio (A ÷ Acr(os)) [ ]

H. INSPECTION STATUS

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