

50-305

RESPONSE TO NUREG-0737 ITEM II.D.1

Docket # *50-305*

Control # *8403280048*

Date *3/23/84* of Document:
REGULATORY DOCKET FILE

.3850	141.	-267.	290.	0.	0.	0.	.0170	-.0447	-.0042	-.0077	.0161	.0113	0.
.3860	246.	-216.	523.	0.	0.	-0.	.186	-.0447	.0001	.0166	.0195	.0007	0.
.3870	388.	-131.	700.	0.	0.	0.	.0200	-.0447	.0040	.0370	.0223	-.0112	0.
.3880	551.	-84.	810.	0.	0.	0.	.0212	-.0445	.0074	.0528	.0242	-.0236	0.
.3890	711.	87.	887.	0.	0.	0.	.0219	-.0443	.0101	.0639	.0253	-.0354	0.
.3900	851.	192.	909.	0.	-0.	0.	.0220	-.0442	.0122	.0702	.0252	-.0457	0.
.3910	973.	292.	981.	0.	-0.	0.	.0215	-.0443	.0136	.0711	.0240	-.0544	0.
.3920	1076.	382.	805.	0.	-0.	0.	.0204	-.0446	.0144	.0664	.0217	-.0610	0.
.3930	1139.	449.	695.	0.	-0.	0.	.0184	-.0451	.0146	.0568	.0184	-.0650	0.
.3940	1135.	475.	570.	0.	0.	0.	.0156	-.0460	.0143	.0432	.0139	-.0655	0.
.3950	1052.	451.	444.	0.	-0.	0.	.0120	-.0472	.0136	.0266	.0086	-.0619	0.

ADLPIPE PAGE 2320

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.27.

S/RV PIPING KEWAUNEE GKWOFF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.3960	907.	380.	314.	0.	-0.	0.	.0076	-.0488	.0125	.0071	.0028	-.0548	0.	
.3970	719.	279.	180.	-0.	-0.	0.	.0027	-.0506	.0113	-.0151	-.0030	-.0450	0.	
.3980	486.	152.	54.	0.	-0.	0.	-.0028	-.0526	.0099	-.0387	-.0086	-.0327	0.	
.3990	197.	-13.	-48.	0.	-0.	0.	-.0086	-.0546	.0086	-.0619	-.0142	-.0178	0.	
.4000	-130.	-219.	-118.	-0.	-0.	0.	-.0145	-.0567	.0072	-.0836	-.0196	-.0005	0.	

MAXIMUM VALUE OF STRESS OCCURS AT

TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.2020	435.	1332.	-272.	-0.	-0.	-0.	-.0398	-.0106	.0056	.0698	-.0063	-.1627	0.

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	0.	0.	-0.	0.	0.	0.	-.0000	.0000	.0000	-.0000	-.0000	-.0000	0.	
.0020	0.	0.	-0.	0.	0.	0.	-.0000	.0000	.0000	-.0000	.0000	-.0000	0.	
.0030	0.	0.	-0.	0.	0.	0.	.0000	-.0000	.0000	-.0000	.0000	.0000	0.	
.0040	0.	0.	0.	-0.	0.	0.	.0000	-.0000	.0000	-.0000	.0000	.0000	1.	
.0050	-0.	-0.	0.	-0.	0.	0.	-.0000	-.0000	.0000	-.0000	.0000	.0000	1.	
.0060	-1.	-1.	1.	-1.	-0.	-0.	-.0000	-.0000	.0000	-.0001	.0001	-.0000	2.	
.0070	-2.	-1.	1.	-1.	-1.	-1.	-.0000	-.0000	.0000	-.0002	.0001	-.0002	5.	
.0080	-3.	-1.	2.	0.	-3.	-2.	-.0001	-.0000	.0001	-.0003	.0000	-.0004	10.	
.0090	-5.	-2.	4.	1.	-6.	-4.	-.0002	-.0000	.0001	-.0003	-.0002	-.0008	21.	
.0100	-13.	-7.	8.	2.	-11.	-8.	-.0004	-.0000	.0002	-.0004	-.0005	-.0013	43.	
.0110	-24.	-14.	13.	4.	-20.	-17.	-.0007	-.0001	.0003	-.0005	-.0010	-.0023	81.	
.0120	-36.	-22.	19.	7.	-34.	-28.	-.0012	-.0001	.0004	-.0009	-.0017	-.0039	135.	
.0130	-48.	-29.	23.	14.	-52.	-42.	-.0020	-.0002	.0007	-.0012	-.0028	-.0063	207.	
.0140	-59.	-36.	29.	24.	-74.	-56.	-.0030	-.0003	.0009	-.0012	-.0042	-.0091	293.	
.0150	-70.	-44.	35.	37.	-100.	-71.	-.0041	-.0005	.0011	-.0006	-.0061	-.0118	389.	
.0160	-81.	-53.	41.	52.	-126.	-84.	-.0052	-.0007	.0011	.0007	-.0081	-.0136	487.	
.0170	-89.	-60.	46.	67.	-149.	-93.	-.0061	-.0011	.0011	.0029	-.0101	-.0142	573.	
.0180	-92.	-59.	47.	81.	-165.	-92.	-.0069	-.0014	.0009	.0058	-.0118	-.0131	625.	
.0190	-88.	-48.	43.	91.	-168.	-76.	-.0074	-.0018	.0006	.0093	-.0127	-.0102	626.	

ADLPIPE PAGE 2321

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.27.

S/RV PIPING KEWAUNEE GKWOFF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.0090	-5.	-2.	4.	1.	-6.	-4.	-.0002	-.0000	.0001	-.0003	-.0002	-.0008	21.
.0100	-17.	-7.	8.	2.	-11.	-8.	-.0004	-.0000	.0002	-.0004	-.0005	-.0013	43.
.0110	-24.	-14.	13.	4.	-20.	-17.	-.0007	-.0001	.0003	-.0005	-.0010	-.0023	81.
.0120	-36.	-22.	19.	7.	-34.	-28.	-.0012	-.0001	.0004	-.0009	-.0017	-.0039	135.
.0130	-48.	-29.	27.	14.	-52.	-42.	-.0020	-.0002	.0007	-.0012	-.0028	-.0063	207.
.0140	-59.	-36.	29.	24.	-74.	-56.	-.0030	-.0003	.0009	-.0012	-.0042	-.0091	293.
.0150	-70.	-44.	35.	37.	-100.	-71.	-.0041	-.0005	.0011	-.0006	-.0061	-.0118	389.
.0160	-81.	-53.	41.	52.	-126.	-84.	-.0052	-.0007	.0011	.0007	-.0081	-.0136	487.
.0170	-89.	-60.	46.	67.	-149.	-93.	-.0061	-.0011	.0011	.0029	-.0101	-.0142	573.
.0180	-92.	-59.	47.	81.	-165.	-92.	-.0069	-.0014	.0009	.0058	-.0118	-.0131	625.
.0190	-88.	-48.	47.	91.	-168.	-76.	-.0074	-.0018	.0006	.0093	-.0127	-.0102	626.

ADLPIPE PAGE 2321

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.27.

S/RV PIPING KEWAUNEE GKWOEF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	59	MEMBER	1	SEQUENCE	02	LOCATION	BEG	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0200	-75.	-24.	32.	96.	-152.	-45.	-.0075	-.0021	.0003	.0127	-.0126	-.0056	564.	
.0210	-53.	7.	14.	90.	-116.	-2.	-.0072	-.0024	-.0001	.0155	-.0108	.0004	449.	
.0220	-41.	18.	-4.	67.	-63.	32.	-.0066	-.0024	-.0004	.0171	-.0075	.0071	298.	
.0230	-19.	30.	-30.	34.	2.	64.	-.0059	-.0023	-.0005	.0168	-.0027	.0132	222.	
.0240	44.	62.	-68.	1.	72.	103.	-.0052	-.0020	-.0005	.0149	.0026	.0175	384.	
.0250	128.	120.	-109.	-20.	142.	159.	-.0042	-.0016	-.0009	.0137	.0069	.0211	651.	
.0260	167.	159.	-124.	-30.	203.	211.	-.0022	-.0009	-.0021	.0156	.0088	.0261	897.	
.0270	129.	109.	-102.	-53.	243.	201.	.0005	-.0002	-.0039	.0192	.0085	.0322	973.	
.0280	133.	65.	-102.	-75.	254.	160.	.0028	.0008	-.0052	.0197	.0075	.0345	940.	
.0290	231.	134.	-145.	-63.	250.	170.	.0045	.0019	-.0063	.0176	.0053	.0315	940.	
.0300	225.	139.	-136.	-52.	254.	172.	.0072	.0032	-.0083	.0192	.0010	.0303	945.	
.0310	113.	19.	-73.	-79.	268.	108.	.0107	.0044	-.0104	.0203	-.0019	.0313	913.	
.0320	89.	-20.	-64.	-119.	283.	55.	.0129	.0058	-.0105	.0115	.0001	.0263	948.	
.0330	169.	68.	-124.	-150.	298.	50.	.0134	.0070	-.0088	-.0062	.0059	.0140	1026.	
.0340	202.	103.	-159.	-194.	327.	35.	.0139	.0080	-.0068	-.0238	.0129	.0027	1162.	
.0350	161.	52.	-135.	-240.	364.	1.	.0151	.0085	-.0056	-.0364	.0189	-.0042	1325.	
.0360	111.	31.	-104.	-247.	361.	-15.	.0157	.0085	-.0046	-.0448	.0212	-.0109	1332.	
.0370	51.	14.	-83.	-220.	283.	-62.	.0150	.0080	-.0034	-.0510	.0188	-.0197	1106.	
.0380	-29.	-80.	-49.	-196.	136.	-192.	.0131	.0069	-.0020	-.0545	.0129	-.0287	912.	
.0390	-87.	-155.	-8.	-118.	-37.	-305.	.0108	.0053	-.0012	-.0523	.0037	-.0363	1001.	
.0400	-152.	-142.	45.	3.	-191.	-308.	.0088	.0034	-.0017	-.0418	-.0084	-.0405	1103.	
.0410	-323.	-229.	145.	85.	-307.	-330.	.0074	.0012	-.0023	-.0284	-.0177	-.0382	1395.	
.0420	-447.	-361.	212.	79.	-380.	-405.	.0051	-.0007	-.0005	-.0257	-.0163	-.0351	1705.	
.0430	-378.	-302.	156.	48.	-400.	-393.	.0008	-.0024	.0041	-.0363	-.0052	-.0382	1711.	
.0440	-249.	-96.	53.	31.	-345.	-240.	-.0037	-.0038	.0090	-.0475	.0093	-.0418	1283.	
.0450	-252.	-30.	39.	-16.	-228.	-94.	-.0061	-.0050	.0120	-.0498	.0238	-.0364	752.	
.0460	-316.	-84.	81.	-80.	-123.	-19.	-.0077	-.0061	.0139	-.0464	.0356	-.0271	451.	
.0470	-274.	-2.	55.	-78.	-113.	68.	-.0111	-.0067	.0160	-.0424	.0404	-.0263	464.	
.0480	-184.	145.	1.	-14.	-197.	136.	-.0156	-.0071	.0173	-.0348	.0367	-.0317	729.	
.0490	-208.	106.	47.	46.	-309.	102.	-.0185	-.0073	.0165	-.0167	.0270	-.0316	999.	
.0500	-311.	-16.	163.	119.	-399.	60.	-.0197	-.0073	.0134	.0108	.0135	-.0264	1280.	
.0510	-347.	-5.	230.	223.	-461.	106.	-.0211	-.0070	.0104	.0366	.0002	-.0249	1590.	
.0520	-266.	76.	224.	284.	-486.	155.	-.0234	-.0064	.0096	.0495	-.0050	-.0278	1775.	
.0530	-129.	115.	192.	258.	-447.	156.	-.0254	-.0056	.0108	.0499	.0006	-.0292	1640.	
.0540	-15.	167.	162.	207.	-334.	206.	-.0261	-.0048	.0120	.0478	.0108	-.0261	1348.	
.0550	49.	249.	144.	173.	-174.	325.	-.0254	-.0043	.0123	.0485	.0200	-.0188	1238.	
.0560	107.	273.	140.	129.	-28.	393.	-.0244	-.0042	.0125	.0481	.0283	-.0098	1262.	
.0570	201.	257.	124.	93.	45.	372.	-.0242	-.0045	.0132	.0446	.0333	-.0037	1175.	

ADLPIPE PAGE 2322

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.27.

S/RV PIPING KEWAUNEE GKWOEF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.0470	-274.	-2.	55.	-78.	-117.	68.	-.0111	-.0067	.0157	-.0424	.0404	-.0271	451.
.0480	-184.	145.	1.	-14.	-197.	136.	-.0156	-.0071	.0173	-.0348	.0367	-.0317	729.
.0490	-208.	106.	47.	46.	-309.	102.	-.0185	-.0073	.0165	-.0167	.0270	-.0316	999.
.0500	-311.	-16.	163.	119.	-399.	60.	-.0197	-.0073	.0134	.0168	.0135	-.0264	1280.
.0510	-747.	-9.	230.	223.	-461.	106.	-.0211	-.0070	.0104	.0366	.0002	-.0249	1590.
.0520	-266.	76.	224.	274.	-486.	155.	-.0234	-.0064	.0096	.0495	-.0050	-.0278	1775.
.0530	-129.	115.	192.	258.	-447.	156.	-.0254	-.0056	.0108	.0499	.0006	-.0292	1640.
.0540	-15.	167.	162.	207.	-334.	206.	-.0261	-.0048	.0120	.0478	.0108	-.0261	1348.
.0550	49.	249.	144.	173.	-174.	325.	-.0254	-.0043	.0123	.0485	.0200	-.0188	1238.
.0560	107.	273.	140.	129.	-28.	393.	-.0244	-.0042	.0125	.0481	.0283	-.0098	1262.
.0570	201.	257.	124.	93.	45.	372.	-.0242	-.0045	.0132	.0446	.0333	-.0037	1175.

ADLPIPE PAGE 2322

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02. 18.29.27.

S/RV PIPING KEWAUNEE CKNOOF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

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ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	59	MEMBER	1	SEQUENCE	02	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0580	298.	274.	92.	124.	34.	330.	-.0249	-.0054	.0131	.0446	.0296	-.0014	1078.		
.0590	330.	252.	99.	208.	-25.	272.	-.0248	-.0069	.0112	.0529	.0175	.0033	1045.		
.0600	284.	105.	177.	283.	-85.	157.	-.0231	-.0089	.0079	.0662	.0035	.0149	1018.		
.0610	230.	-59.	253.	337.	-128.	29.	-.0209	-.0112	.0048	.0759	-.0078	.0286	1100.		
.0620	244.	-127.	247.	366.	-139.	-57.	-.0195	-.0134	.0036	.0744	-.0135	.0386	1204.		
.0630	322.	-133.	176.	337.	-84.	-113.	-.0184	-.0155	.0044	.0600	-.0101	.0465	1110.		
.0640	396.	-158.	97.	243.	57.	-140.	-.0163	-.0174	.0060	.0381	.0007	.0568	870.		
.0650	424.	-167.	19.	131.	253.	-110.	-.0132	-.0190	.0072	.0150	.0129	.0681	930.		
.0660	429.	-146.	-79.	29.	435.	-65.	-.0103	-.0202	.0082	-.0083	.0220	.0758	1340.		
.0670	433.	-144.	-186.	-61.	539.	-83.	-.0080	-.0210	.0089	-.0317	.0258	.0779	1670.		
.0680	390.	-193.	-264.	-117.	544.	-173.	-.0061	-.0214	.0085	-.0494	.0207	.0750	1773.		
.0690	266.	-200.	-292.	-115.	468.	-289.	-.0041	-.0212	.0059	-.0559	.0046	.0684	1709.		
.0700	111.	-377.	-289.	-70.	351.	-401.	-.0020	-.0205	.0015	-.0537	-.0183	.0588	1635.		
.0710	-24.	-451.	-287.	-26.	234.	-500.	.0001	-.0191	-.0030	-.0507	-.0404	.0462	1681.		
.0720	-142.	-493.	-304.	-23.	153.	-575.	.0019	-.0169	-.0064	-.0530	-.0558	.0316	1811.		
.0730	-229.	-489.	-357.	-83.	142.	-607.	.0036	-.0139	-.0079	-.0633	-.0610	.0161	1914.		
.0740	-247.	-409.	-451.	-193.	219.	-561.	.0054	-.0104	-.0078	-.0801	-.0554	.0010	1924.		
.0750	-226.	-262.	-554.	-323.	370.	-423.	.0076	-.0063	-.0071	-.0976	-.0429	-.0121	1973.		
.0760	-226.	-115.	-629.	-451.	537.	-253.	.0102	-.0020	-.0065	-.1105	-.0285	-.0226	2267.		
.0770	-232.	-9.	-670.	-558.	648.	-122.	.0123	.0023	-.0060	-.1175	-.0157	-.0328	2629.		
.0780	-214.	96.	-685.	-605.	658.	-44.	.0133	.0065	-.0061	-.1164	-.0085	-.0455	2721.		
.0790	-221.	177.	-643.	-567.	562.	-3.	.0136	.0104	-.0075	-.1024	-.0098	-.0593	2427.		
.0800	-287.	174.	-513.	-467.	392.	-10.	.0137	.0140	-.0104	-.0752	-.0176	-.0714	1856.		
.0810	-345.	131.	-338.	-337.	180.	-45.	.0134	.0173	-.0135	-.0420	-.0265	-.0823	1181.		
.0820	-330.	153.	-188.	-190.	-14.	-50.	.0120	.0203	-.0155	-.0107	-.0318	-.0941	600.		
.0830	-276.	223.	-65.	-65.	-176.	-19.	.0102	.0230	-.0159	.0152	-.0298	-.1039	572.		
.0840	-223.	264.	59.	1.	-265.	21.	.0089	.0254	-.0146	.0351	-.0181	-.1068	808.		
.0850	-150.	308.	172.	23.	-281.	93.	.0083	.0274	-.0123	.0502	.0013	-.1030	903.		
.0860	-54.	408.	259.	48.	-259.	222.	.0079	.0290	-.0096	.0637	.0227	-.0956	1049.		
.0870	26.	497.	343.	84.	-246.	344.	.0074	.0302	-.0071	.0780	.0422	-.0857	1310.		
.0880	83.	506.	448.	123.	-274.	389.	.0069	.0309	-.0049	.0932	.0578	-.0740	1495.		
.0890	135.	486.	558.	193.	-356.	385.	.0060	.0311	-.0035	.1105	.0670	-.0626	1700.		
.0900	163.	469.	667.	305.	-472.	374.	.0049	.0309	-.0033	.1309	.0689	-.0519	2053.		
.0910	146.	399.	787.	412.	-586.	371.	.0043	.0304	-.0038	.1508	.0675	-.0397	2402.		
.0920	122.	283.	891.	475.	-666.	255.	.0038	.0296	-.0037	.1636	.0678	-.0265	2607.		
.0930	138.	218.	925.	502.	-695.	206.	.0028	.0288	-.0025	.1653	.0710	-.0155	2680.		
.0940	185.	224.	884.	500.	-664.	207.	.0016	.0278	-.0005	.1574	.0758	-.0068	2605.		
.0950	217.	214.	814.	460.	-584.	215.	.0008	.0266	.0017	.1441	.0805	.0033	2354.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02. 18.29.27.

S/RV PIPING KEWAUNEE CKNOOF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.0840	-227.	264.	57.	1.	-265.	21.	.0089	.0254	-.0146	.0351	-.0181	-.1068	808.
.0850	-150.	308.	172.	23.	-281.	93.	.0083	.0274	-.0123	.0502	.0013	-.1030	903.
.0860	-54.	408.	259.	48.	-259.	222.	.0079	.0290	-.0096	.0637	.0227	-.0956	1049.
.0870	26.	497.	343.	84.	-246.	344.	.0074	.0302	-.0071	.0780	.0422	-.0857	1310.
.0880	87.	506.	448.	123.	-274.	389.	.0069	.0309	-.0049	.0932	.0578	-.0740	1495.
.0890	135.	486.	558.	193.	-356.	385.	.0060	.0311	-.0035	.1105	.0670	-.0626	1700.
.0900	167.	469.	667.	305.	-477.	374.	.0049	.0309	-.0035	.1309	.0689	-.0519	2053.
.0910	146.	399.	787.	412.	-586.	331.	.0043	.0304	-.0038	.1508	.0675	-.0397	2402.
.0920	122.	283.	891.	475.	-666.	255.	.0038	.0296	-.0037	.1636	.0678	-.0265	2607.
.0930	138.	218.	925.	502.	-695.	206.	.0028	.0288	-.0025	.1653	.0710	-.0155	2680.
.0940	185.	224.	884.	500.	-664.	207.	.0016	.0278	-.0005	.1574	.0758	-.0068	2605.
.0950	217.	214.	814.	460.	-584.	215.	.0008	.0266	.0017	.1441	.0805	.0033	2354.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.27.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.0960	192.	157.	742.	402.	-488.	206.	.0006	.0251	.0030	.1297	.0815	.0153	2023.	
.0970	134.	94.	656.	362.	-426.	182.	.0005	.0233	.0033	.1169	.0749	.0264	1788.	
.0980	60.	24.	554.	349.	-417.	124.	.0000	.0213	.0025	.1063	.0598	.0351	1697.	
.0990	-32.	-83.	455.	347.	-445.	23.	-.0004	.0191	.0006	.0982	.0386	.0432	1720.	
.1000	-146.	-208.	363.	350.	-471.	-79.	-.0003	.0166	-.0023	.0928	.0137	.0522	1802.	
.1010	-259.	-304.	257.	345.	-456.	-141.	.0004	.0142	-.0057	.0872	-.0111	.0619	1793.	
.1020	-329.	-360.	112.	302.	-278.	-163.	.0015	.0120	-.0085	.0763	-.0309	.0716	1553.	
.1030	-346.	-372.	-74.	207.	-229.	-151.	.0031	.0100	-.0101	.0577	-.0436	.0812	1046.	
.1040	-334.	-341.	-283.	75.	-21.	-98.	.0055	.0083	-.0110	.0345	-.0507	.0906	380.	
.1050	-317.	-293.	-486.	-73.	225.	-19.	.0086	.0071	-.0118	.0104	-.0550	.0995	722.	
.1060	-294.	-255.	-665.	-221.	472.	50.	.0123	.0062	-.0129	-.0121	-.0586	.1056	1592.	
.1070	-251.	-220.	-814.	-346.	684.	89.	.0159	.0059	-.0141	-.0324	-.0633	.1059	2347.	
.1080	-170.	-166.	-936.	-433.	843.	103.	.0189	.0060	-.0154	-.0507	-.0692	.0982	2901.	
.1090	-59.	-111.	-1017.	-488.	960.	88.	.0217	.0066	-.0166	-.0664	-.0750	.0839	3286.	
.1100	8.	-159.	-1025.	-544.	1049.	-6.	.0245	.0076	-.0177	-.0791	-.0789	.0663	3595.	
.1110	121.	-166.	-1013.	-575.	1120.	-87.	.0268	.0089	-.0180	-.0917	-.0798	.0434	3838.	
.1120	311.	-77.	-1005.	-573.	1172.	-120.	.0285	.0105	-.0173	-.1051	-.0773	.0153	3983.	
.1130	473.	-32.	-956.	-567.	1199.	-177.	.0302	.0122	-.0161	-.1157	-.0728	-.0121	4071.	
.1140	550.	-65.	-851.	-552.	1185.	-272.	.0321	.0138	-.0151	-.1201	-.0692	-.0364	4061.	
.1150	594.	-82.	-722.	-497.	1107.	-359.	.0336	.0152	-.0139	-.1189	-.0678	-.0599	3849.	
.1160	642.	-85.	-581.	-410.	964.	-450.	.0342	.0165	-.0123	-.1138	-.0675	-.0828	3467.	
.1170	679.	-110.	-419.	-303.	779.	-552.	.0341	.0175	-.0105	-.1039	-.0671	-.1030	3047.	
.1180	646.	-175.	-225.	-187.	583.	-644.	.0339	.0183	-.0090	-.0880	-.0661	-.1175	2702.	
.1190	642.	-168.	-46.	-68.	405.	-660.	.0333	.0188	-.0067	-.0720	-.0598	-.1272	2365.	
.1200	685.	-122.	105.	10.	272.	-628.	.0324	.0192	-.0030	-.0608	-.0444	-.1304	2083.	
.1210	686.	-117.	241.	29.	192.	-585.	.0318	.0195	.0018	-.0525	-.0217	-.1253	1876.	
.1220	677.	-61.	333.	33.	155.	-471.	.0311	.0197	.0071	-.0452	.0038	-.1149	1512.	
.1230	649.	18.	403.	37.	126.	-315.	.0301	.0200	.0122	-.0369	.0280	-.1013	1036.	
.1240	616.	76.	465.	52.	60.	-173.	.0285	.0202	.0168	-.0260	.0472	-.0868	580.	
.1250	553.	111.	522.	111.	-77.	-64.	.0262	.0204	.0198	-.0087	.0561	-.0739	455.	
.1260	404.	107.	595.	224.	-289.	9.	.0238	.0208	.0206	.0178	.0527	-.0618	1112.	
.1270	234.	81.	682.	356.	-543.	53.	.0215	.0214	.0199	.0477	.0432	-.0496	1982.	
.1280	39.	-20.	786.	449.	-784.	41.	.0198	.0223	.0189	.0748	.0342	-.0357	2751.	
.1290	-125.	-88.	838.	502.	-958.	53.	.0183	.0237	.0182	.0942	.0288	-.0235	3295.	
.1300	-225.	-38.	802.	520.	-1032.	159.	.0167	.0256	.0184	.1030	.0284	-.0147	3548.	
.1310	-311.	26.	728.	468.	-1001.	300.	.0158	.0278	.0195	.1011	.0344	-.0058	3484.	
.1320	-365.	91.	627.	352.	-901.	445.	.0157	.0303	.0214	.0894	.0451	.0035	3239.	
.1330	-431.	168.	501.	231.	-788.	585.	.0160	.0329	.0228	.0750	.0528	.0114	3066.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.27.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.1230	649.	18.	403.	37.	126.	-315.	.0301	.0200	.0122	-.0369	.0280	-.1013	1036.
.1240	616.	76.	465.	52.	60.	-173.	.0285	.0202	.0168	-.0260	.0472	-.0868	580.
.1250	553.	111.	522.	111.	-77.	-64.	.0262	.0204	.0198	-.0087	.0561	-.0739	455.
.1260	404.	107.	595.	224.	-289.	9.	.0238	.0208	.0206	.0178	.0527	-.0618	1112.
.1270	234.	81.	682.	356.	-543.	53.	.0215	.0214	.0199	.0477	.0432	-.0496	1982.
.1280	39.	-20.	786.	449.	-784.	41.	.0198	.0223	.0189	.0748	.0342	-.0357	2751.
.1290	-125.	-38.	838.	502.	-958.	53.	.0183	.0237	.0182	.0942	.0288	-.0235	3295.
.1300	-225.	-38.	802.	520.	-1030.	159.	.0167	.0256	.0184	.1030	.0284	-.0147	3548.
.1310	-311.	26.	728.	468.	-1001.	300.	.0158	.0278	.0195	.1011	.0344	-.0058	3484.
.1320	-365.	91.	627.	352.	-901.	445.	.0157	.0303	.0214	.0894	.0451	.0035	3239.
.1330	-431.	168.	501.	231.	-788.	585.	.0160	.0329	.0228	.0750	.0528	.0114	3066.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.27.

S/RV PIPING KEWAUNEE CKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.1340	-530.	251.	370.	147.	-711.	704.	.0166	.0352	.0229	.0639	.0521	.0171	3077.	
.1350	-666.	250.	290.	90.	-691.	739.	.0177	.0372	.0214	.0580	.0438	.0224	3090.	
.1360	-813.	140.	271.	51.	-722.	671.	.0190	.0388	.0187	.0563	.0302	.0270	3001.	
.1370	-855.	92.	235.	67.	-773.	607.	.0197	.0400	.0155	.0563	.0130	.0266	2995.	
.1380	-830.	101.	181.	118.	-800.	573.	.0203	.0406	.0118	.0577	-.0043	.0247	3014.	
.1390	-788.	70.	156.	135.	-761.	532.	.0223	.0408	.0082	.0573	-.0154	.0284	2854.	
.1400	-729.	-14.	154.	84.	-646.	469.	.0257	.0406	.0057	.0510	-.0169	.0392	2443.	
.1410	-629.	-65.	114.	2.	-476.	426.	.0293	.0400	.0043	.0389	-.0124	.0517	1943.	
.1420	-427.	5.	7.	-64.	-277.	452.	.0324	.0391	.0036	.0231	-.0066	.0614	1624.	
.1430	-237.	54.	-76.	-122.	-74.	478.	.0358	.0380	.0026	.0099	-.0021	.0722	1517.	
.1440	-104.	8.	-90.	-174.	99.	447.	.0398	.0366	.0007	.0020	-.0010	.0850	1491.	
.1450	9.	-57.	-86.	-187.	207.	371.	.0432	.0350	-.0020	-.0015	-.0054	.0944	1412.	
.1460	119.	-103.	-92.	-155.	243.	262.	.0454	.0332	-.0049	-.0022	-.0149	.0978	1185.	
.1470	231.	-150.	-82.	-111.	246.	133.	.0471	.0315	-.0076	-.0030	-.0248	.0981	917.	
.1480	283.	-276.	-22.	-102.	263.	-25.	.0488	.0297	-.0101	-.0045	-.0318	.0995	861.	
.1490	331.	-368.	15.	-113.	315.	-140.	.0499	.0280	-.0115	-.0104	-.0351	.0983	1103.	
.1500	422.	-331.	-28.	-124.	400.	-167.	.0495	.0264	-.0113	-.0239	-.0345	.0914	1379.	
.1510	475.	-287.	-95.	-201.	505.	-180.	.0482	.0247	-.0093	-.0446	-.0290	.0828	1741.	
.1520	474.	-296.	-146.	-315.	610.	-219.	.0463	.0229	-.0059	-.0696	-.0198	.0747	2193.	
.1530	430.	-311.	-196.	-419.	684.	-258.	.0431	.0207	-.0023	-.0931	-.0124	.0641	2564.	
.1540	391.	-250.	-264.	-454.	699.	-253.	.0381	.0181	.0009	-.1108	-.0110	.0478	2649.	
.1550	316.	-215.	-294.	-444.	642.	-268.	.0317	.0151	.0036	-.1213	-.0144	.0288	2510.	
.1560	171.	-310.	-251.	-432.	515.	-375.	.0242	.0117	.0061	-.1263	-.0196	.0101	2342.	
.1570	66.	-365.	-218.	-389.	339.	-477.	.0149	.0080	.0091	-.1290	-.0256	-.0119	2137.	
.1580	-18.	-329.	-216.	-307.	147.	-514.	.0043	.0041	.0122	-.1285	-.0323	-.0364	1876.	
.1590	-159.	-321.	-188.	-243.	-19.	-525.	-.0063	.0001	.0153	-.1250	-.0365	-.0570	1762.	
.1600	-311.	-344.	-144.	-228.	-143.	-522.	-.0166	-.0037	.0191	-.1231	-.0346	-.0731	1788.	
.1610	-399.	-273.	-153.	-225.	-239.	-452.	-.0276	-.0071	.0240	-.1241	-.0287	-.0900	1698.	
.1620	-455.	-112.	-210.	-209.	-318.	-313.	-.0389	-.0099	.0290	-.1243	-.0221	-.1079	1499.	
.1630	-504.	47.	-248.	-199.	-380.	-156.	-.0493	-.0122	.0333	-.1201	-.0143	-.1218	1389.	
.1640	-587.	117.	-215.	-204.	-432.	-34.	-.0579	-.0137	.0361	-.1090	-.0054	-.1285	1456.	
.1650	-656.	180.	-157.	-187.	-490.	84.	-.0653	-.0145	.0374	-.0909	.0019	-.1328	1617.	
.1660	-627.	335.	-129.	-125.	-558.	236.	-.0722	-.0143	.0376	-.0692	.0076	-.1387	1882.	
.1670	-565.	465.	-81.	-61.	-616.	366.	-.0775	-.0132	.0366	-.0439	.0131	-.1421	2187.	
.1680	-507.	532.	11.	-11.	-645.	470.	-.0804	-.0112	.0342	-.0152	.0191	-.1400	2427.	
.1690	-441.	591.	109.	42.	-647.	579.	-.0814	-.0084	.0305	.0156	.0237	-.1346	2643.	
.1700	-321.	701.	170.	110.	-633.	704.	-.0810	-.0048	.0261	.0457	.0264	-.1288	2899.	
.1710	-162.	816.	218.	177.	-611.	810.	-.0791	-.0008	.0211	.0736	.0284	-.1211	3133.	

ADLPIPE PAGE 2325

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.27.

S/RV PIPING KEWAUNEE CKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.1600	-311.	-344.	-144.	-228.	-143.	-522.	-.0166	-.0037	.0191	-.1231	-.0346	-.0731	1788.
.1610	-399.	-273.	-153.	-225.	-239.	-452.	-.0276	-.0071	.0240	-.1241	-.0287	-.0900	1698.
.1620	-455.	-112.	-210.	-209.	-310.	-313.	-.0389	-.0099	.0290	-.1243	-.0221	-.1079	1499.
.1630	-504.	47.	-248.	-199.	-380.	-156.	-.0493	-.0122	.0333	-.1201	-.0143	-.1218	1389.
.1640	-587.	117.	-215.	-204.	-432.	-34.	-.0579	-.0137	.0361	-.1090	-.0054	-.1285	1456.
.1650	-656.	180.	-157.	-187.	-490.	84.	-.0653	-.0145	.0374	-.0909	.0019	-.1328	1617.
.1660	-627.	335.	-129.	-125.	-558.	236.	-.0722	-.0143	.0376	-.0692	.0076	-.1387	1882.
.1670	-565.	465.	-81.	-61.	-616.	366.	-.0775	-.0152	.0366	-.0439	.0131	-.1421	2187.
.1680	-507.	532.	11.	-11.	-645.	470.	-.0804	-.0112	.0342	-.0152	.0191	-.1400	2427.
.1690	-441.	591.	109.	42.	-647.	579.	-.0814	-.0084	.0305	.0156	.0237	-.1346	2643.
.1700	-321.	701.	170.	110.	-633.	704.	-.0810	-.0048	.0261	.0457	.0264	-.1288	2899.
.1710	-162.	816.	218.	177.	-611.	810.	-.0791	-.0008	.0211	.0736	.0284	-.1211	3133.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.27.

S/RV PIPING KEWAUNEE CKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	VA	DX	DY	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)							
.1720	-66.	812.	315.	221.	-583.	838.	-.0750	.0035	.0151	.1016	.0292	-.1079	3177.
.1730	39.	780.	419.	270.	-551.	831.	-.0697	.0077	.0084	.1278	.0287	-.0929	3143.
.1740	189.	775.	493.	339.	-515.	817.	-.0639	.0117	.0015	.1501	.0270	-.0788	3113.
.1750	338.	741.	561.	404.	-472.	769.	-.0577	.0152	-.0054	.1675	.0255	-.0638	3008.
.1760	472.	657.	631.	442.	-414.	680.	-.0509	.0179	-.0117	.1775	.0255	-.0459	2770.
.1770	567.	526.	685.	448.	-337.	557.	-.0438	.0196	-.0172	.1794	.0273	-.0249	2403.
.1780	650.	429.	683.	439.	-242.	449.	-.0370	.0201	-.0216	.1723	.0295	-.0031	2047.
.1790	671.	317.	646.	403.	-133.	340.	-.0306	.0194	-.0250	.1573	.0313	.0204	1655.
.1800	622.	150.	596.	328.	-17.	203.	-.0247	.0174	-.0271	.1342	.0337	.0457	1174.
.1810	570.	3.	502.	237.	95.	68.	-.0203	.0141	-.0278	.1026	.0358	.0685	806.
.1820	483.	-127.	369.	152.	189.	-61.	-.0176	.0098	-.0275	.0665	.0355	.0871	762.
.1830	358.	-258.	220.	69.	265.	-193.	-.0164	.0046	-.0266	.0278	.0332	.1021	1018.
.1840	193.	-432.	83.	-31.	325.	-351.	-.0165	-.0014	-.0251	-.0130	.0309	.1149	1458.
.1850	13.	-606.	-61.	-140.	370.	-511.	-.0180	-.0078	-.0228	-.0553	.0285	.1236	1967.
.1860	-147.	-702.	-245.	-235.	407.	-620.	-.0212	-.0142	-.0200	-.0978	.0244	.1258	2368.
.1870	-332.	-774.	-441.	-334.	444.	-695.	-.0255	-.0204	-.0169	-.1379	.0191	.1237	2706.
.1880	-529.	-835.	-631.	-447.	483.	-741.	-.0302	-.0261	-.0137	-.1748	.0133	.1188	3015.
.1890	-729.	-862.	-819.	-559.	516.	-750.	-.0354	-.0309	-.0107	-.2066	.0061	.1101	3249.
.1900	-911.	-825.	-1014.	-649.	533.	-709.	-.0412	-.0347	-.0080	-.2312	-.0035	.0961	3343.
.1910	-1057.	-731.	-1196.	-717.	536.	-626.	-.0470	-.0374	-.0059	-.2472	-.0141	.0782	3323.
.1920	-1201.	-653.	-1317.	-778.	534.	-537.	-.0522	-.0387	-.0047	-.2532	-.0239	.0592	3302.
.1930	-1310.	-560.	-1388.	-825.	530.	-429.	-.0569	-.0388	-.0042	-.2500	-.0316	.0382	3256.
.1940	-1329.	-396.	-1441.	-845.	530.	-279.	-.0613	-.0375	-.0037	-.2398	-.0361	.0134	3150.
.1950	-1267.	-181.	-1467.	-844.	540.	-96.	-.0653	-.0351	-.0033	-.2234	-.0366	-.0138	3061.
.1960	-1166.	29.	-1435.	-833.	560.	94.	-.0682	-.0318	-.0030	-.2001	-.0331	-.0399	3066.
.1970	-1035.	228.	-1345.	-802.	576.	280.	-.0699	-.0279	-.0029	-.1697	-.0271	-.0640	3121.
.1980	-858.	438.	-1217.	-730.	564.	460.	-.0709	-.0237	-.0030	-.1327	-.0208	-.0874	3135.
.1990	-643.	640.	-1044.	-607.	507.	609.	-.0713	-.0196	-.0034	-.0890	-.0157	-.1096	3038.
.2000	-411.	787.	-804.	-440.	399.	702.	-.0709	-.0159	-.0042	-.0387	-.0119	-.1289	2797.
.2010	-165.	871.	-499.	-229.	247.	734.	-.0697	-.0128	-.0054	.0168	-.0091	-.1441	2456.
.2020	102.	918.	-157.	20.	64.	719.	-.0678	-.0107	-.0067	.0743	-.0063	-.1556	2196.
.2030	389.	935.	201.	286.	-127.	664.	-.0655	-.0095	-.0077	.1294	-.0017	-.1630	2233.
.2040	682.	910.	560.	536.	-303.	570.	-.0626	-.0094	-.0076	.1774	.0071	-.1649	2551.
.2050	969.	850.	900.	752.	-442.	450.	-.0592	-.0103	-.0065	.2155	.0200	-.1611	2987.
.2060	1234.	781.	1192.	935.	-540.	320.	-.0552	-.0121	-.0044	.2427	.0351	-.1525	3435.
.2070	1456.	704.	1427.	1083.	-604.	211.	-.0510	-.0149	-.0016	.2587	.0499	-.1398	3825.
.2080	1614.	593.	1607.	1189.	-647.	71.	-.0466	-.0184	.0017	.2639	.0627	-.1236	4123.
.2090	1698.	440.	1734.	1257.	-685.	-102.	-.0422	-.0224	.0049	.2593	.0713	-.1048	4365.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.27.

S/RV PIPING KEWAUNEE CKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.1980	-850.	478.	-1217.	-710.	564.	460.	-.0709	-.0237	-.0070	-.1327	-.0208	-.0874	3135.
.1990	-643.	640.	-1044.	-607.	507.	609.	-.0713	-.0196	-.0034	-.0890	-.0157	-.1096	3038.
.2000	-411.	787.	-804.	-440.	390.	702.	-.0709	-.0159	-.0042	-.0387	-.0119	-.1289	2797.
.2010	-165.	871.	-499.	-229.	247.	734.	-.0697	-.0128	-.0054	.0168	-.0091	-.1441	2456.
.2020	102.	918.	-157.	70.	64.	719.	-.0678	-.0107	-.0067	.0743	-.0063	-.1556	2196.
.2030	389.	935.	201.	286.	-127.	664.	-.0655	-.0095	-.0077	.1294	-.0017	-.1630	2233.
.2040	682.	910.	560.	576.	-303.	570.	-.0626	-.0094	-.0076	.1774	.0071	-.1649	2551.
.2050	969.	850.	900.	752.	-442.	450.	-.0592	-.0103	-.0065	.2155	.0200	-.1611	2987.
.2060	1234.	781.	1193.	935.	-540.	330.	-.0552	-.0121	-.0044	.2427	.0351	-.1525	3435.
.2070	1456.	704.	1427.	1083.	-604.	211.	-.0510	-.0149	-.0016	.2587	.0499	-.1398	3825.
.2080	1614.	593.	1607.	1189.	-647.	71.	-.0466	-.0184	.0017	.2639	.0627	-.1236	4123.
.2090	1698.	440.	1734.	1257.	-685.	-102.	-.0422	-.0224	.0049	.2593	.0713	-.1048	4365.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.27.

S/RV PIPING KEWAUNEE CKW02F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	59	MEMBER	1	SEQUENCE	82	LOCATION	BEG	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2100	1706.	263.	1799.	1299.	-725.	-296.	-.0379	-.0267	.0077	.2467	.0739	-.0855	4613.	
.2110	1645.	72.	1801.	1316.	-760.	-498.	-.0339	-.0311	.0098	.2271	.0702	-.0664	4866.	
.2120	1510.	-138.	1743.	1295.	-775.	-703.	-.0301	-.0353	.0112	.2004	.0619	-.0472	5064.	
.2130	1342.	-350.	1617.	1221.	-752.	-894.	-.0265	-.0390	.0123	.1654	.0512	-.0283	5140.	
.2140	1135.	-526.	1404.	1091.	-676.	-1041.	-.0232	-.0422	.0135	.1219	.0393	-.0103	5028.	
.2150	902.	-650.	1102.	904.	-538.	-1127.	-.0200	-.0445	.0143	.0708	.0273	.0074	4688.	
.2160	632.	-743.	738.	657.	-337.	-1154.	-.0167	-.0460	.0152	.0148	.0157	.0260	4167.	
.2170	328.	-812.	329.	365.	-91.	-1129.	-.0133	-.0467	.0157	-.0431	.0039	.0451	3620.	
.2180	23.	-834.	-116.	59.	173.	-1053.	-.0102	-.0464	.0157	-.0994	-.0092	.0628	3252.	
.2190	-265.	-809.	-575.	-236.	429.	-936.	-.0075	-.0454	.0151	-.1507	-.0242	.0779	3215.	
.2200	-542.	-770.	-1008.	-507.	659.	-801.	-.0051	-.0437	.0136	-.1930	-.0411	.0913	3512.	
.2210	-809.	-727.	-1383.	-744.	855.	-663.	-.0027	-.0415	.0110	-.2241	-.0587	.1037	3994.	
.2220	-1041.	-691.	-1700.	-941.	1016.	-515.	-.0002	-.0386	.0079	-.2442	-.0754	.1144	4495.	
.2230	-1213.	-612.	-1961.	-1095.	1147.	-353.	.0021	-.0354	.0047	-.2547	-.0891	.1226	4940.	
.2240	-1319.	-508.	-2150.	-1213.	1256.	-177.	.0044	-.0317	.0019	-.2568	-.0978	.1284	5338.	
.2250	-1365.	-388.	-2279.	-1297.	1349.	8.	.0070	-.0277	-.0003	-.2508	-.1008	.1322	5691.	
.2260	-1349.	-251.	-2322.	-1339.	1417.	198.	.0099	-.0235	-.0019	-.2368	-.0984	.1334	5961.	
.2270	-1270.	-100.	-2283.	-1327.	1444.	376.	.0129	-.0191	-.0030	-.2146	-.0918	.1309	6075.	
.2280	-1133.	38.	-2149.	-1256.	1410.	514.	.0160	-.0147	-.0037	-.1841	-.0822	.1242	5953.	
.2290	-951.	142.	-1909.	-1121.	1303.	590.	.0192	-.0103	-.0042	-.1450	-.0707	.1132	5529.	
.2300	-731.	208.	-1570.	-920.	1122.	602.	.0225	-.0061	-.0048	-.0978	-.0586	.0975	4778.	
.2310	-473.	247.	-1148.	-658.	876.	557.	.0256	-.0020	-.0054	-.0446	-.0462	.0768	3738.	
.2320	-184.	261.	-666.	-355.	584.	462.	.0284	.0018	-.0056	.0108	-.0326	.0517	2510.	
.2330	123.	253.	-151.	-30.	270.	327.	.0311	.0054	-.0052	.0647	-.0170	.0235	1295.	
.2340	432.	234.	368.	274.	-44.	170.	.0334	.0086	-.0038	.1140	.0006	-.0065	991.	
.2350	729.	215.	865.	567.	-340.	11.	.0355	.0114	-.0016	.1566	.0200	-.0368	2011.	
.2360	998.	195.	1323.	827.	-605.	-143.	.0372	.0137	.0013	.1913	.0404	-.0660	3147.	
.2370	1224.	164.	1732.	1046.	-838.	-292.	.0385	.0154	.0049	.2174	.0608	-.0927	4173.	
.2380	1403.	126.	2075.	1224.	-1041.	-434.	.0390	.0165	.0087	.2350	.0797	-.1168	5062.	
.2390	1533.	90.	2340.	1364.	-1214.	-560.	.0386	.0169	.0127	.2446	.0957	-.1376	5811.	
.2400	1601.	50.	2524.	1463.	-1356.	-668.	.0373	.0165	.0163	.2470	.1078	-.1540	6400.	
.2410	1594.	-4.	2626.	1515.	-1460.	-754.	.0354	.0154	.0196	.2425	.1156	-.1646	6800.	
.2420	1514.	-61.	2635.	1515.	-1520.	-808.	.0327	.0136	.0224	.2308	.1189	-.1691	6977.	
.2430	1369.	-101.	2538.	1461.	-1531.	-819.	.0293	.0113	.0250	.2115	.1181	-.1676	6901.	
.2440	1165.	-125.	2339.	1350.	-1487.	-781.	.0254	.0086	.0272	.1848	.1135	-.1603	6555.	
.2450	905.	-135.	2049.	1186.	-1387.	-697.	.0212	.0057	.0291	.1520	.1055	-.1473	5942.	
.2460	607.	-129.	1682.	979.	-1236.	-570.	.0168	.0028	.0303	.1147	.0943	-.1292	5100.	
.2470	286.	-105.	1256.	742.	-1046.	-407.	.0125	-.0001	.0308	.0748	.0803	-.1074	4093.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.27.

S/RV PIPING KEWAUNEE CKW02F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.2360	998.	195.	1327.	877.	-605.	-143.	.0372	.0137	.0013	.1913	.0404	-.0660	3147.
.2370	1224.	164.	1732.	1046.	-838.	-292.	.0385	.0154	.0049	.2174	.0608	-.0927	4173.
.2380	1403.	126.	2075.	1224.	-1041.	-434.	.0390	.0165	.0087	.2350	.0797	-.1168	5062.
.2390	1533.	90.	2340.	1364.	-1214.	-560.	.0386	.0169	.0127	.2446	.0957	-.1376	5811.
.2400	1601.	50.	2524.	1463.	-1356.	-668.	.0373	.0165	.0163	.2470	.1078	-.1540	6400.
.2410	1594.	-4.	2626.	1515.	-1460.	-754.	.0354	.0154	.0196	.2425	.1156	-.1646	6800.
.2420	1514.	-61.	2635.	1515.	-1520.	-808.	.0327	.0136	.0224	.2308	.1189	-.1691	6977.
.2430	1369.	-101.	2538.	1461.	-1531.	-819.	.0293	.0113	.0250	.2115	.1181	-.1676	6901.
.2440	1165.	-125.	2339.	1350.	-1487.	-781.	.0254	.0086	.0272	.1848	.1135	-.1603	6555.
.2450	905.	-135.	2049.	1186.	-1387.	-697.	.0212	.0057	.0291	.1520	.1055	-.1473	5942.
.2460	607.	-129.	1682.	979.	-1236.	-570.	.0168	.0028	.0303	.1147	.0943	-.1292	5100.
.2470	286.	-105.	1256.	742.	-1046.	-407.	.0125	-.0001	.0308	.0748	.0803	-.1074	4093.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

85/12/02.

18.29.27.

S/RV PIPING KEWAUNEE CKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	VA	DX	DY	DZ	FX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)							
.2480	-44.	-76.	794.	405.	-829.	-227.	.0085	-.0027	.0305	.0342	.0640	-.0828	5004.
.2490	-370.	-52.	322.	219.	-596.	-47.	.0049	-.0049	.0293	-.0056	.0462	-.0564	1938.
.2500	-670.	-27.	-145.	-42.	-355.	132.	.0020	-.0066	.0272	-.0428	.0273	-.0294	1158.
.2510	-930.	9.	-593.	-287.	-109.	311.	.0001	-.0076	.0242	-.0762	.0080	-.0028	1329.
.2520	-1146.	47.	-1004.	-510.	135.	482.	-.0007	-.0079	.0204	-.1049	-.0109	.0229	2175.
.2530	-1316.	77.	-1361.	-711.	372.	633.	.0000	-.0075	.0160	-.1284	-.0285	.0475	3109.
.2540	-1430.	104.	-1656.	-882.	592.	757.	.0021	-.0063	.0113	-.1465	-.0440	.0700	3968.
.2550	-1478.	129.	-1880.	-1014.	788.	850.	.0056	-.0044	.0063	-.1588	-.0570	.0893	4683.
.2560	-1457.	146.	-2019.	-1099.	951.	906.	.0103	-.0018	.0011	-.1645	-.0671	.1048	5210.
.2570	-1367.	148.	-2063.	-1133.	1077.	919.	.0162	.0013	-.0042	-.1631	-.0740	.1161	5515.
.2580	-1212.	130.	-2010.	-1114.	1157.	882.	.0230	.0048	-.0095	-.1550	-.0776	.1227	5574.
.2590	-997.	96.	-1868.	-1044.	1188.	793.	.0304	.0085	-.0145	-.1412	-.0778	.1242	5381.
.2600	-730.	47.	-1647.	-928.	1168.	659.	.0381	.0124	-.0191	-.1226	-.0749	.1210	4962.
.2610	-431.	-14.	-1359.	-775.	1106.	490.	.0459	.0163	-.0231	-.1002	-.0690	.1139	4371.
.2620	-121.	-88.	-1017.	-595.	1008.	297.	.0536	.0200	-.0264	-.0750	-.0609	.1039	3674.
.2630	187.	-166.	-643.	-397.	880.	93.	.0610	.0236	-.0289	-.0485	-.0511	.0913	2950.
.2640	489.	-237.	-260.	-191.	725.	-113.	.0675	.0268	-.0305	-.0223	-.0399	.0763	2307.
.2650	771.	-302.	118.	14.	551.	-313.	.0729	.0296	-.0311	.0027	-.0278	.0600	1928.
.2660	1017.	-364.	481.	210.	365.	-500.	.0772	.0320	-.0310	.0264	-.0155	.0435	1988.
.2670	1204.	-421.	816.	389.	175.	-662.	.0803	.0340	-.0304	.0484	-.0036	.0277	2396.
.2680	1340.	-467.	1107.	543.	-10.	-792.	.0821	.0357	-.0293	.0678	.0076	.0130	2922.
.2690	1421.	-493.	1336.	663.	-183.	-882.	.0823	.0370	-.0276	.0852	.0177	-.0004	3401.
.2700	1444.	-488.	1490.	742.	-335.	-919.	.0810	.0382	-.0255	.0939	.0263	-.0121	3734.
.2710	1399.	-453.	1564.	776.	-456.	-895.	.0785	.0392	-.0230	.1002	.0329	-.0212	3860.
.2720	1275.	-398.	1560.	759.	-541.	-813.	.0751	.0402	-.0204	.1023	.0372	-.0269	3763.
.2730	1082.	-325.	1480.	692.	-592.	-681.	.0707	.0412	-.0178	.0998	.0392	-.0297	3460.
.2740	845.	-220.	1322.	584.	-612.	-502.	.0655	.0424	-.0151	.0929	.0390	-.0306	2992.
.2750	576.	-87.	1100.	445.	-606.	-280.	.0597	.0437	-.0125	.0827	.0363	-.0301	2439.
.2760	273.	52.	838.	283.	-575.	-33.	.0536	.0452	-.0104	.0713	.0313	-.0278	1950.
.2770	-55.	184.	558.	105.	-525.	224.	.0476	.0468	-.0089	.0594	.0244	-.0238	1766.
.2780	-381.	312.	265.	-81.	-465.	478.	.0417	.0486	-.0077	.0466	.0165	-.0193	2045.
.2790	-680.	447.	-35.	-265.	-400.	724.	.0359	.0506	-.0066	.0330	.0083	-.0154	2641.
.2800	-951.	577.	-322.	-440.	-329.	954.	.0307	.0525	-.0058	.0197	.0000	-.0115	3349.
.2810	-1201.	684.	-574.	-599.	-255.	1158.	.0264	.0544	-.0052	.0080	-.0078	-.0072	4042.
.2820	-1413.	762.	-780.	-737.	-185.	1324.	.0229	.0560	-.0047	-.0021	-.0145	-.0029	4644.
.2830	-1561.	825.	-940.	-843.	-130.	1444.	.0201	.0573	-.0041	-.0109	-.0198	.0002	5101.
.2840	-1635.	873.	-1047.	-905.	-99.	1513.	.0180	.0582	-.0035	-.0173	-.0238	.0016	5371.
.2850	-1654.	883.	-1080.	-918.	-95.	1523.	.0168	.0585	-.0031	-.0192	-.0269	.0027	5418.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

85/12/02.

18.29.27.

S/RV PIPING KEWAUNEE CKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.2750	576.	-87.	1100.	445.	-606.	-280.	.0597	.0437	-.0125	.0827	.0363	-.0301	2439.
.2760	273.	52.	838.	283.	-575.	-33.	.0536	.0452	-.0104	.0713	.0313	-.0278	1950.
.2770	-55.	184.	558.	105.	-525.	224.	.0476	.0468	-.0089	.0594	.0244	-.0238	1766.
.2780	-781.	312.	265.	-81.	-465.	478.	.0417	.0486	-.0077	.0466	.0165	-.0193	2045.
.2790	-680.	447.	-35.	-265.	-400.	724.	.0359	.0506	-.0066	.0350	.0083	-.0154	2641.
.2800	-951.	577.	-322.	-440.	-320.	954.	.0307	.0525	-.0058	.0197	.0000	-.0115	3349.
.2810	-1201.	684.	-574.	-599.	-255.	1158.	.0264	.0544	-.0052	.0080	-.0078	-.0072	4042.
.2820	-1413.	762.	-780.	-737.	-185.	1324.	.0229	.0560	-.0047	-.0021	-.0145	-.0029	4644.
.2830	-1561.	825.	-940.	-843.	-130.	1444.	.0201	.0573	-.0041	-.0109	-.0198	.0002	5101.
.2840	-1635.	873.	-1047.	-965.	-90.	1513.	.0180	.0582	-.0035	-.0173	-.0238	.0016	5371.
.2850	-1654.	883.	-1080.	-918.	-95.	1523.	.0168	.0585	-.0031	-.0192	-.0269	.0027	5418.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02. 18.29.27.

S/RV PIPING KEWAUNEE CKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	FX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.2860	-1627.	837.	-1026.	-884.	-119.	1467.	.0166	.0582	-.0031	-.0158	-.0292	.0045	5223.	
.2870	-1539.	753.	-901.	-803.	-173.	1349.	.0172	.0572	-.0035	-.0080	-.0303	.0062	4804.	
.2880	-1380.	656.	-726.	-676.	-252.	1184.	.0182	.0555	-.0035	.0026	-.0302	.0073	4220.	
.2890	-1164.	545.	-509.	-517.	-344.	985.	.0198	.0531	-.0037	.0156	-.0289	.0086	3543.	
.2900	-920.	407.	-251.	-342.	-432.	760.	.0222	.0502	-.0040	.0306	-.0260	.0120	2856.	
.2910	-654.	254.	27.	-162.	-506.	524.	.0252	.0469	-.0045	.0462	-.0216	.0174	2269.	
.2920	-360.	115.	299.	16.	-560.	293.	.0284	.0432	-.0046	.0606	-.0161	.0237	1923.	
.2930	-46.	-7.	547.	184.	-593.	74.	.0316	.0393	-.0047	.0729	-.0099	.0305	1902.	
.2940	262.	-126.	772.	333.	-602.	-134.	.0348	.0354	-.0051	.0833	-.0040	.0380	2151.	
.2950	546.	-243.	969.	459.	-585.	-323.	.0379	.0316	-.0060	.0919	.0004	.0463	2466.	
.2960	799.	-343.	1121.	562.	-547.	-483.	.0406	.0280	-.0074	.0985	.0022	.0541	2803.	
.2970	1014.	-421.	1214.	637.	-490.	-614.	.0427	.0246	-.0091	.1016	.0010	.0607	3076.	
.2980	1182.	-483.	1244.	671.	-412.	-717.	.0439	.0216	-.0110	.1002	-.0030	.0660	3240.	
.2990	1293.	-523.	1208.	662.	-308.	-782.	.0444	.0191	-.0131	.0938	-.0096	.0701	3254.	
.3000	1347.	-533.	1100.	610.	-173.	-797.	.0441	.0168	-.0152	.0823	-.0185	.0730	3097.	
.3010	1332.	-515.	925.	513.	-7.	-762.	.0428	.0149	-.0172	.0653	-.0288	.0748	2796.	
.3020	1266.	-475.	690.	371.	182.	-690.	.0406	.0132	-.0187	.0424	-.0394	.0753	2448.	
.3030	1157.	-412.	403.	193.	386.	-587.	.0374	.0116	-.0196	.0142	-.0499	.0743	2216.	
.3040	1011.	-328.	78.	-6.	593.	-455.	.0330	.0099	-.0199	-.0175	-.0602	.0718	2273.	
.3050	823.	-238.	-261.	-213.	793.	-304.	.0278	.0081	-.0198	-.0504	-.0705	.0683	2663.	
.3060	599.	-158.	-593.	-420.	973.	-153.	.0219	.0060	-.0193	-.0833	-.0801	.0642	3257.	
.3070	360.	-85.	-909.	-618.	1120.	-10.	.0151	.0035	-.0180	-.1156	-.0885	.0589	3891.	
.3080	127.	-8.	-1204.	-792.	1228.	124.	.0076	.0006	-.0160	-.1465	-.0951	.0518	4461.	
.3090	-98.	67.	-1462.	-935.	1296.	248.	-.0004	-.0027	-.0132	-.1743	-.0998	.0437	4920.	
.3100	-319.	121.	-1659.	-1046.	1327.	353.	-.0085	-.0064	-.0099	-.1973	-.1018	.0357	5249.	
.3110	-520.	152.	-1789.	-1120.	1317.	432.	-.0164	-.0104	-.0061	-.2152	-.1004	.0279	5421.	
.3120	-676.	177.	-1857.	-1151.	1262.	486.	-.0241	-.0145	-.0017	-.2278	-.0955	.0192	5402.	
.3130	-778.	200.	-1859.	-1132.	1162.	514.	-.0315	-.0187	.0030	-.2340	-.0875	.0095	5178.	
.3140	-837.	203.	-1781.	-1066.	1022.	512.	-.0382	-.0228	.0077	-.2325	-.0768	-.0001	4755.	
.3150	-860.	178.	-1621.	-956.	846.	478.	-.0437	-.0265	.0120	-.2226	-.0640	-.0089	4147.	
.3160	-936.	143.	-1394.	-802.	639.	421.	-.0482	-.0298	.0158	-.2048	-.0497	-.0177	3372.	
.3170	-761.	111.	-1119.	-611.	406.	347.	-.0516	-.0324	.0191	-.1806	-.0344	-.0268	2469.	
.3180	-645.	75.	-804.	-396.	160.	258.	-.0538	-.0342	.0217	-.1508	-.0182	-.0354	1519.	
.3190	-504.	32.	-455.	-170.	-83.	162.	-.0546	-.0352	.0235	-.1160	-.0016	-.0427	757.	
.3200	-341.	-8.	-90.	63.	-314.	72.	-.0539	-.0354	.0244	-.0775	.0147	-.0485	997.	
.3210	-159.	-35.	270.	294.	-524.	-7.	-.0521	-.0346	.0244	-.0370	.0302	-.0531	1828.	
.3220	35.	-53.	613.	511.	-711.	-78.	-.0494	-.0330	.0236	.0035	.0448	-.0566	2674.	
.3230	231.	-68.	928.	706.	-869.	-142.	-.0458	-.0308	.0221	.0426	.0580	-.0585	3432.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02. 18.29.28.

S/RV PIPING KEWAUNEE CKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.3120	-676.	177.	-1857.	-1151.	1262.	466.	-.0241	-.0145	-.0017	-.2278	-.0955	.0192	5402.
.3130	-778.	200.	-1859.	-1132.	1162.	514.	-.0315	-.0187	.0030	-.2340	-.0875	.0095	5178.
.3140	-837.	203.	-1781.	-1066.	1022.	512.	-.0382	-.0228	.0077	-.2325	-.0768	-.0001	4755.
.3150	-860.	178.	-1621.	-956.	846.	478.	-.0437	-.0265	.0120	-.2226	-.0640	-.0089	4147.
.3160	-836.	143.	-1394.	-802.	630.	421.	-.0482	-.0298	.0158	-.2048	-.0497	-.0177	3372.
.3170	-761.	111.	-1119.	-611.	406.	347.	-.0516	-.0324	.0191	-.1806	-.0344	-.0268	2469.
.3180	-645.	75.	-804.	-396.	160.	258.	-.0538	-.0342	.0217	-.1508	-.0182	-.0354	1519.
.3190	-504.	32.	-455.	-170.	-83.	162.	-.0546	-.0352	.0235	-.1160	-.0016	-.0427	757.
.3200	-341.	-8.	-90.	63.	-314.	72.	-.0539	-.0354	.0244	-.0775	.0147	-.0485	997.
.3210	-159.	-35.	270.	294.	-524.	-7.	-.0521	-.0346	.0244	-.0370	.0302	-.0531	1828.
.3220	35.	-53.	613.	511.	-711.	-78.	-.0494	-.0330	.0236	.0035	.0448	-.0566	2674.
.3230	231.	-68.	928.	706.	-869.	-142.	-.0458	-.0308	.0221	.0426	.0580	-.0585	3432.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.28.

S/RV PIPING KEWAUNEE GKW02F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	VA	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.3240	416.	-75.	1205.	876.	-992.	-190.	-.0416	-.0281	.0198	.0797	.0689	-.0586	4066.							
.3250	578.	-74.	1433.	1017.	-1076.	-218.	-.0370	-.0251	.0167	.1137	.0771	-.0566	4554.							
.3260	710.	-70.	1604.	1121.	-1122.	-229.	-.0322	-.0220	.0131	.1426	.0826	-.0525	4875.							
.3270	811.	-63.	1707.	1181.	-1128.	-227.	-.0276	-.0191	.0094	.1646	.0857	-.0464	5016.							
.3280	876.	-45.	1737.	1198.	-1095.	-207.	-.0234	-.0165	.0057	.1789	.0864	-.0384	4977.							
.3290	898.	-20.	1693.	1173.	-1023.	-167.	-.0196	-.0145	.0021	.1854	.0844	-.0285	4762.							
.3300	867.	-1.	1587.	1106.	-915.	-113.	-.0164	-.0132	-.0013	.1842	.0802	-.0163	4380.							
.3310	787.	8.	1423.	999.	-779.	-56.	-.0139	-.0128	-.0042	.1748	.0741	-.0025	3856.							
.3320	674.	17.	1201.	860.	-624.	2.	-.0124	-.0133	-.0065	.1573	.0664	.0116	3232.							
.3330	532.	31.	930.	697.	-458.	60.	-.0119	-.0146	-.0082	.1326	.0572	.0253	2545.							
.3340	357.	34.	629.	517.	-284.	114.	-.0121	-.0168	-.0095	.1024	.0468	.0389	1826.							
.3350	150.	19.	316.	322.	-105.	156.	-.0130	-.0197	-.0100	.0680	.0358	.0522	1133.							
.3360	-70.	-2.	-8.	120.	70.	187.	-.0144	-.0232	-.0100	.0302	.0246	.0642	709.							
.3370	-284.	-16.	-336.	-80.	236.	210.	-.0164	-.0271	-.0094	-.0099	.0137	.0739	993.							
.3380	-489.	-30.	-651.	-271.	390.	223.	-.0186	-.0311	-.0084	-.0501	.0034	.0813	1596.							
.3390	-686.	-54.	-933.	-449.	530.	220.	-.0208	-.0351	-.0072	-.0882	-.0061	.0867	2216.							
.3400	-861.	-83.	-1172.	-604.	649.	205.	-.0227	-.0389	-.0060	-.1223	-.0147	.0897	2769.							
.3410	-998.	-105.	-1368.	-728.	742.	178.	-.0244	-.0422	-.0048	-.1512	-.0222	.0895	3208.							
.3420	-1089.	-120.	-1511.	-818.	804.	138.	-.0257	-.0449	-.0038	-.1738	-.0284	.0857	3512.							
.3430	-1137.	-136.	-1591.	-872.	836.	83.	-.0265	-.0468	-.0031	-.1887	-.0330	.0792	3684.							
.3440	-1142.	-152.	-1605.	-891.	842.	20.	-.0265	-.0479	-.0027	-.1952	-.0360	.0703	3730.							
.3450	-1099.	-154.	-1560.	-872.	825.	-42.	-.0259	-.0480	-.0028	-.1931	-.0371	.0589	3652.							
.3460	-1006.	-142.	-1461.	-819.	785.	-101.	-.0246	-.0473	-.0031	-.1831	-.0361	.0454	3464.							
.3470	-869.	-120.	-1311.	-739.	726.	-160.	-.0228	-.0457	-.0036	-.1659	-.0329	.0305	3188.							
.3480	-697.	-89.	-1116.	-634.	649.	-213.	-.0204	-.0433	-.0044	-.1417	-.0276	.0147	2835.							
.3490	-496.	-44.	-883.	-504.	558.	-255.	-.0177	-.0403	-.0054	-.1112	-.0209	-.0014	2413.							
.3500	-276.	8.	-620.	-352.	452.	-287.	-.0147	-.0368	-.0066	-.0750	-.0131	-.0172	1949.							
.3510	-48.	60.	-335.	-187.	332.	-314.	-.0116	-.0331	-.0080	-.0348	-.0045	-.0322	1503.							
.3520	184.	114.	-40.	-14.	201.	-336.	-.0085	-.0293	-.0094	.0079	.0046	-.0459	1193.							
.3530	411.	171.	251.	164.	64.	-348.	-.0057	-.0256	-.0107	.0515	.0139	-.0581	1186.							
.3540	621.	229.	530.	338.	-72.	-348.	-.0031	-.0221	-.0119	.0946	.0229	-.0679	1491.							
.3550	800.	279.	789.	498.	-201.	-337.	-.0007	-.0190	-.0129	.1355	.0318	-.0749	1929.							
.3560	946.	322.	1014.	638.	-317.	-318.	.0013	-.0165	-.0136	.1721	.0404	-.0789	2373.							
.3570	1059.	366.	1193.	754.	-418.	-288.	.0027	-.0144	-.0138	.2028	.0483	-.0807	2765.							
.3580	1133.	406.	1321.	842.	-503.	-249.	.0037	-.0130	-.0137	.2268	.0551	-.0800	3078.							
.3590	1159.	434.	1402.	901.	-567.	-205.	.0042	-.0122	-.0134	.2438	.0605	-.0769	3297.							
.3600	1133.	445.	1435.	928.	-612.	-161.	.0045	-.0119	-.0128	.2535	.0640	-.0714	3415.							
.3610	1064.	445.	1415.	925.	-638.	-119.	.0044	-.0122	-.0121	.2555	.0655	-.0644	3438.							

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.28.

S/RV PIPING KEWAUNEE GKW02F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.3510	-48.	60.	-335.	-187.	332.	-314.	-.0116	-.0331	-.0080	-.0348	-.0045	-.0322	1503.
.3520	184.	114.	-40.	-14.	201.	-336.	-.0085	-.0293	-.0094	.0079	.0046	-.0459	1193.
.3530	411.	171.	251.	164.	64.	-348.	-.0057	-.0256	-.0107	.0515	.0139	-.0581	1186.
.3540	621.	279.	530.	338.	-72.	-348.	-.0031	-.0221	-.0119	.0946	.0229	-.0679	1491.
.3550	800.	279.	789.	498.	-201.	-337.	-.0007	-.0190	-.0129	.1355	.0518	-.0749	1929.
.3560	946.	322.	1014.	678.	-317.	-318.	.0013	-.0165	-.0136	.1721	.0404	-.0789	2373.
.3570	1059.	366.	1193.	754.	-418.	-288.	.0027	-.0144	-.0138	.2028	.0483	-.0807	2765.
.3580	1137.	406.	1321.	842.	-503.	-249.	.0037	-.0130	-.0137	.2268	.0551	-.0800	3078.
.3590	1159.	434.	1402.	901.	-567.	-205.	.0042	-.0122	-.0134	.2438	.0605	-.0769	3297.
.3600	1133.	445.	1435.	978.	-612.	-161.	.0045	-.0119	-.0128	.2535	.0640	-.0714	3415.
.3610	1064.	445.	1415.	925.	-630.	-119.	.0044	-.0122	-.0121	.2555	.0655	-.0644	3438.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.28.

S/RV PIPING KEWAUNEE GKWOZF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	VA	DX	DY	DZ	RX	RY	RZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.3620	957.	438.	1343.	893.	-648.	-80.	.0039	-.0129	-.0112	.2496	.0650	-.0565	3365.
.3630	811.	417.	1225.	831.	-638.	-47.	.0034	-.0139	-.0103	.2363	.0625	-.0476	3190.
.3640	630.	382.	1070.	741.	-605.	-17.	.0028	-.0153	-.0093	.2163	.0585	-.0378	2910.
.3650	423.	340.	879.	625.	-549.	10.	.0024	-.0168	-.0083	.1902	.0533	-.0274	2532.
.3660	203.	296.	657.	489.	-473.	36.	.0021	-.0185	-.0072	.1585	.0473	-.0170	2072.
.3670	-21.	249.	415.	336.	-379.	57.	.0019	-.0202	-.0061	.1225	.0409	-.0070	1550.
.3680	-243.	196.	165.	174.	-272.	70.	.0020	-.0220	-.0050	.0838	.0344	.0027	1004.
.3690	-455.	140.	-81.	12.	-158.	76.	.0024	-.0237	-.0041	.0445	.0277	.0118	536.
.3700	-649.	81.	-313.	-139.	-46.	75.	.0030	-.0254	-.0033	.0064	.0207	.0201	501.
.3710	-818.	18.	-520.	-274.	58.	61.	.0039	-.0271	-.0028	-.0291	.0137	.0273	873.
.3720	-954.	-49.	-695.	-387.	148.	33.	.0049	-.0288	-.0025	-.0609	.0070	.0334	1264.
.3730	-1053.	-116.	-833.	-472.	220.	-6.	.0061	-.0305	-.0024	-.0878	.0006	.0382	1585.
.3740	-1111.	-179.	-928.	-526.	276.	-50.	.0074	-.0322	-.0024	-.1088	-.0052	.0420	1815.
.3750	-1129.	-238.	-978.	-551.	317.	-98.	.0088	-.0338	-.0026	-.1237	-.0099	.0448	1955.
.3760	-1104.	-293.	-983.	-548.	343.	-149.	.0103	-.0355	-.0028	-.1325	-.0129	.0469	2017.
.3770	-1032.	-337.	-949.	-518.	355.	-200.	.0118	-.0370	-.0030	-.1358	-.0140	.0477	2006.
.3780	-915.	-367.	-878.	-464.	356.	-246.	.0132	-.0385	-.0030	-.1336	-.0133	.0473	1931.
.3790	-762.	-386.	-779.	-387.	347.	-288.	.0145	-.0399	-.0030	-.1260	-.0109	.0459	1807.
.3800	-582.	-399.	-629.	-291.	329.	-324.	.0158	-.0412	-.0030	-.1135	-.0072	.0437	1661.
.3810	-379.	-402.	-462.	-181.	301.	-357.	.0170	-.0423	-.0030	-.0971	-.0026	.0403	1523.
.3820	-158.	-394.	-282.	-59.	262.	-386.	.0179	-.0432	-.0030	-.0779	.0024	.0353	1431.
.3830	72.	-377.	-95.	70.	216.	-410.	.0185	-.0439	-.0028	-.0567	.0075	.0290	1427.
.3840	296.	-355.	96.	198.	167.	-429.	.0189	-.0444	-.0028	-.0345	.0121	.0217	133.
.3850	506.	-329.	281.	322.	117.	-440.	.0190	-.0447	-.0026	-.0124	.0161	.0136	1696.
.3860	699.	-300.	449.	433.	71.	-446.	.0189	-.0447	-.0024	.0081	.0193	.0047	1904.
.3870	872.	-264.	593.	529.	28.	-446.	.0183	-.0447	-.0019	.0256	.0223	-.0049	2107.
.3880	1017.	-226.	707.	605.	-7.	-440.	.0174	-.0445	-.0013	.0394	.0242	-.0146	2276.
.3890	1127.	-190.	791.	660.	-31.	-427.	.0162	-.0443	-.0004	.0494	.0253	-.0238	2392.
.3900	1196.	-158.	842.	692.	-46.	-408.	.0146	-.0443	.0006	.0553	.0252	-.0318	2447.
.3910	1224.	-131.	858.	701.	-52.	-385.	.0127	-.0443	.0019	.0567	.0240	-.0384	2439.
.3920	1213.	-111.	837.	687.	-54.	-362.	.0105	-.0446	.0034	.0533	.0217	-.0434	2369.
.3930	1163.	-100.	781.	653.	-50.	-340.	.0078	-.0451	.0052	.0454	.0184	-.0464	2243.
.3940	1074.	-96.	696.	601.	-42.	-314.	.0050	-.0460	.0072	.0339	.0139	-.0469	2067.
.3950	947.	-102.	586.	535.	-28.	-286.	.0019	-.0472	.0092	.0193	.0086	-.0447	1848.
.3960	790.	-120.	457.	455.	-12.	-260.	-.0013	-.0488	.0115	.0019	.0028	-.0400	1596.
.3970	615.	-145.	310.	365.	4.	-239.	-.0047	-.0506	.0140	-.0180	-.0030	-.0332	1328.
.3980	433.	-172.	150.	270.	20.	-219.	-.0082	-.0526	.0167	-.0396	-.0086	-.0248	1059.
.3990	242.	-202.	-11.	174.	37.	-199.	-.0116	-.0546	.0193	-.0611	-.0142	-.0146	812.

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ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.28.

S/RV PIPING KEWAUNEE GKWOZF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

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.3880	101.	-120.	791.	660.	-31.	-427.	.0174	-.0445	-.0013	.0394	.0242	-.0146	2276.
.3890	1127.	-158.	842.	692.	-46.	-408.	.0146	-.0443	.0006	.0553	.0252	-.0318	2447.
.3910	1224.	-131.	858.	701.	-52.	-385.	.0127	-.0443	.0019	.0567	.0240	-.0384	2439.
.3920	1217.	-111.	837.	677.	-54.	-362.	.0105	-.0446	.0034	.0533	.0217	-.0434	2369.
.3930	1163.	-100.	781.	653.	-50.	-340.	.0078	-.0451	.0052	.0454	.0184	-.0464	2243.
.3940	1074.	-96.	696.	601.	-42.	-314.	.0050	-.0460	.0072	.0339	.0139	-.0469	2067.
.3950	947.	-102.	586.	529.	-28.	-286.	.0019	-.0472	.0092	.0193	.0086	-.0447	1848.
.3960	790.	-120.	457.	455.	-12.	-260.	-.0013	-.0488	.0115	.0019	.0028	-.0400	1596.
.3970	615.	-145.	310.	365.	4.	-239.	-.0047	-.0506	.0140	-.0180	-.0030	-.0332	1328.
.3980	433.	-172.	150.	270.	20.	-219.	-.0082	-.0526	.0167	-.0396	-.0086	-.0248	1059.
.3990	242.	-202.	-11.	174.	37.	-199.	-.0116	-.0546	.0193	-.0611	-.0142	-.0146	812.

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INTERNAL FORCES IN THE PIPING
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SECTION	59	MEMBER	1	SEQUENCE	82	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.4000	46.	-242.	-163.	81.	54.	-182.		-.0147	-.0567	.0217	-.0817	-.0196	-.0028	627.	

MAXIMUM VALUE OF STRESS OCCURS AT

TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.2420	-1514.	61.	-2635.	-1515.	1520.	808.	.0327	.0136	.0224	.2308	.1189	-.1691	6977.

SECTION	59	MEMBER	1	SEQUENCE	84	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
0.0000	0.	0.	0.	0.	0.	0.		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	0.	0.	0.	0.	0.	0.		-.0000	-.0000	.0000	-.0000	-.0000	-.0000	0.	
.0020	0.	0.	0.	0.	0.	0.		-.0000	-.0000	.0000	-.0000	.0000	-.0000	0.	
.0030	0.	0.	0.	0.	0.	0.		.0000	-.0000	.0000	-.0000	.0000	-.0000	0.	
.0040	0.	0.	0.	0.	0.	0.		.0000	-.0000	.0000	-.0000	.0000	.0000	0.	
.0050	0.	0.	0.	0.	0.	0.		-.0000	-.0000	.0000	-.0000	.0000	.0000	0.	
.0060	0.	0.	0.	0.	0.	0.		-.0000	-.0000	.0000	-.0001	.0001	-.0000	0.	
.0070	0.	0.	0.	0.	0.	0.		-.0001	-.0000	.0000	-.0002	.0001	-.0001	0.	
.0080	0.	0.	0.	0.	0.	0.		-.0001	-.0001	.0001	-.0003	.0001	-.0004	0.	
.0090	0.	0.	0.	0.	0.	0.		-.0002	-.0001	.0001	-.0004	-.0000	-.0007	0.	
.0100	0.	0.	0.	0.	0.	0.		-.0004	-.0002	.0002	-.0005	-.0002	-.0011	0.	
.0110	0.	0.	0.	0.	0.	0.		-.0006	-.0003	.0003	-.0007	-.0005	-.0019	0.	
.0120	0.	0.	0.	0.	0.	0.		-.0011	-.0005	.0005	-.0012	-.0009	-.0033	0.	
.0130	0.	0.	0.	0.	0.	0.		-.0018	-.0008	.0008	-.0018	-.0015	-.0054	0.	
.0140	0.	0.	0.	0.	0.	0.		-.0027	-.0011	.0012	-.0021	-.0025	-.0078	0.	
.0150	0.	0.	0.	0.	0.	0.		-.0037	-.0015	.0015	-.0020	-.0037	-.0101	0.	
.0160	0.	0.	0.	0.	0.	0.		-.0047	-.0019	.0018	-.0011	-.0052	-.0116	0.	
.0170	0.	0.	0.	0.	0.	0.		-.0056	-.0022	.0019	.0007	-.0066	-.0120	0.	
.0180	0.	0.	0.	0.	0.	0.		-.0063	-.0023	.0019	.0032	-.0079	-.0109	0.	
.0190	0.	0.	0.	0.	0.	0.		-.0068	-.0023	.0017	.0064	-.0088	-.0082	0.	
.0200	0.	0.	0.	0.	0.	0.		-.0069	-.0020	.0014	.0098	-.0090	-.0043	0.	
.0210	0.	0.	0.	0.	0.	0.		-.0067	-.0016	.0009	.0129	-.0080	.0007	0.	
.0220	0.	0.	0.	0.	0.	0.		-.0063	-.0010	.0004	.0153	-.0058	.0066	0.	
.0230	0.	0.	0.	0.	0.	0.		-.0059	-.0004	-.0001	.0161	-.0026	.0118	0.	

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S/RV PIPING KEWAUNEE GKWOBE 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

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.0120	0.	0.	0.	0.	0.	0.	0.	-0.0011	-0.0005	.0005	-0.0012	-0.0009	-0.0033	0.
.0130	0.	0.	0.	0.	0.	0.	0.	-0.0018	-0.0008	.0008	-0.0018	-0.0015	-0.0054	0.
.0140	0.	0.	0.	0.	0.	0.	0.	-0.0027	-0.0011	.0012	-0.0021	-0.0025	-0.0078	0.
.0150	0.	0.	0.	0.	0.	0.	0.	-0.0037	-0.0015	.0015	-0.0020	-0.0037	-0.0101	0.
.0160	0.	0.	0.	0.	0.	0.	0.	-0.0047	-0.0019	.0018	-0.0011	-0.0052	-0.0116	0.
.0170	0.	0.	0.	0.	0.	0.	0.	-0.0056	-0.0022	.0019	.0007	-0.0066	-0.0120	0.
.0180	0.	0.	0.	0.	0.	0.	0.	-0.0063	-0.0023	.0019	.0032	-0.0079	-0.0109	0.
.0190	0.	0.	0.	0.	0.	0.	0.	-0.0068	-0.0023	.0017	.0064	-0.0088	-0.0082	0.
.0200	0.	0.	0.	0.	0.	0.	0.	-0.0069	-0.0020	.0014	.0098	-0.0090	-0.0043	0.
.0210	0.	0.	0.	0.	0.	0.	0.	-0.0067	-0.0016	.0009	.0129	-0.0080	.0007	0.
.0220	0.	0.	0.	0.	0.	0.	0.	-0.0063	-0.0010	.0004	.0153	-0.0058	.0066	0.
.0230	0.	0.	0.	0.	0.	0.	0.	-0.0059	-0.0004	-0.0001	.0161	-0.0026	.0118	0.

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INTERNAL FORCES IN THE PIPING
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SECTION	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	VA								STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ		(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)		
.0240	0.	0.	0.	0.	0.	0.	-0.0055	.0002	-0.0005	.0153	.0011	.0152	0.	0.
.0250	0.	0.	0.	0.	0.	0.	-0.0046	.0009	-0.0012	.0150	.0038	.0176	0.	0.
.0260	0.	0.	0.	0.	0.	0.	-0.0027	.0020	-0.0025	.0174	.0042	.0214	0.	0.
.0270	0.	0.	0.	0.	0.	0.	-0.0001	.0035	-0.0042	.0214	.0030	.0275	0.	0.
.0280	0.	0.	0.	0.	0.	0.	.0022	.0048	-0.0054	.0223	.0017	.0305	0.	0.
.0290	0.	0.	0.	0.	0.	0.	.0041	.0056	-0.0065	.0201	-0.0005	.0276	0.	0.
.0300	0.	0.	0.	0.	0.	0.	.0070	.0068	-0.0079	.0214	-0.0049	.0265	0.	0.
.0310	0.	0.	0.	0.	0.	0.	.0106	.0082	-0.0097	.0227	-0.0081	.0285	0.	0.
.0320	0.	0.	0.	0.	0.	0.	.0128	.0087	-0.0101	.0148	-0.0065	.0245	0.	0.
.0330	0.	0.	0.	0.	0.	0.	.0132	.0080	-0.0090	-0.0017	-0.0010	.0127	0.	0.
.0340	0.	0.	0.	0.	0.	0.	.0135	.0072	-0.0079	-0.0180	.0055	.0017	0.	0.
.0350	0.	0.	0.	0.	0.	0.	.0144	.0065	-0.0072	-0.0295	.0107	-0.0047	0.	0.
.0360	0.	0.	0.	0.	0.	0.	.0150	.0054	-0.0066	-0.0379	.0130	-0.0110	0.	0.
.0370	0.	0.	0.	0.	0.	0.	.0144	.0038	-0.0053	-0.0449	.0125	-0.0186	0.	0.
.0380	0.	0.	0.	0.	0.	0.	.0128	.0019	-0.0036	-0.0499	.0100	-0.0247	0.	0.
.0390	0.	0.	0.	0.	0.	0.	.0109	-0.0002	-0.0021	-0.0502	.0048	-0.0297	0.	0.
.0400	0.	0.	0.	0.	0.	0.	.0094	-0.0021	-0.0015	-0.0431	-0.0037	-0.0334	0.	0.
.0410	0.	0.	0.	0.	0.	0.	.0084	-0.0034	-0.0015	-0.0323	-0.0104	-0.0306	0.	0.
.0420	0.	0.	0.	0.	0.	0.	.0060	-0.0049	.0003	-0.0299	-0.0073	-0.0264	0.	0.
.0430	0.	0.	0.	0.	0.	0.	.0011	-0.0073	.0038	-0.0394	.0044	-0.0296	0.	0.
.0440	0.	0.	0.	0.	0.	0.	-0.0039	-0.0098	.0072	-0.0491	.0179	-0.0361	0.	0.
.0450	0.	0.	0.	0.	0.	0.	-0.0070	-0.0107	.0091	-0.0495	.0297	-0.0341	0.	0.
.0460	0.	0.	0.	0.	0.	0.	-0.0093	-0.0108	.0101	-0.0442	.0391	-0.0271	0.	0.
.0470	0.	0.	0.	0.	0.	0.	-0.0129	-0.0113	.0117	-0.0399	.0436	-0.0282	0.	0.
.0480	0.	0.	0.	0.	0.	0.	-0.0172	-0.0119	.0134	-0.0335	.0420	-0.0344	0.	0.
.0490	0.	0.	0.	0.	0.	0.	-0.0197	-0.0112	.0135	-0.0172	.0347	-0.0335	0.	0.
.0500	0.	0.	0.	0.	0.	0.	-0.0203	-0.0093	.0119	.0078	.0230	-0.0276	0.	0.
.0510	0.	0.	0.	0.	0.	0.	-0.0211	-0.0077	.0102	.0308	.0108	-0.0269	0.	0.
.0520	0.	0.	0.	0.	0.	0.	-0.0231	-0.0068	.0100	.0423	.0060	-0.0305	0.	0.
.0530	0.	0.	0.	0.	0.	0.	-0.0254	-0.0061	.0107	.0435	.0106	-0.0319	0.	0.
.0540	0.	0.	0.	0.	0.	0.	-0.0265	-0.0052	.0111	.0431	.0179	-0.0300	0.	0.
.0550	0.	0.	0.	0.	0.	0.	-0.0263	-0.0041	.0107	.0453	.0232	-0.0253	0.	0.
.0560	0.	0.	0.	0.	0.	0.	-0.0257	-0.0032	.0103	.0463	.0280	-0.0181	0.	0.
.0570	0.	0.	0.	0.	0.	0.	-0.0258	-0.0031	.0106	.0438	.0311	-0.0116	0.	0.
.0580	0.	0.	0.	0.	0.	0.	-0.0263	-0.0037	.0109	.0428	.0275	-0.0081	0.	0.
.0590	0.	0.	0.	0.	0.	0.	-0.0257	-0.0043	.0101	.0484	.0166	-0.0019	0.	0.
.0600	0.	0.	0.	0.	0.	0.	-0.0235	-0.0046	.0081	.0589	.0037	.0121	0.	0.
.0610	0.	0.	0.	0.	0.	0.	-0.0209	-0.0050	.0061	.0662	-0.0069	.0284	0.	0.

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18.29.28.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

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INTERNAL FORCES IN THE PIPING
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.0500	0.	0.	0.	0.	0.	0.	0.	-.0203	-.0093	.0119	.0078	.0230	-.0276	0.
.0510	0.	0.	0.	0.	0.	0.	0.	-.0211	-.0077	.0102	.0308	.0108	-.0269	0.
.0520	0.	0.	0.	0.	0.	0.	0.	-.0231	-.0068	.0100	.0423	.0060	-.0305	0.
.0530	0.	0.	0.	0.	0.	0.	0.	-.0254	-.0061	.0107	.0435	.0106	-.0319	0.
.0540	0.	0.	0.	0.	0.	0.	0.	-.0265	-.0052	.0111	.0431	.0179	-.0300	0.
.0550	0.	0.	0.	0.	0.	0.	0.	-.0263	-.0041	.0107	.0453	.0232	-.0253	0.
.0560	0.	0.	0.	0.	0.	0.	0.	-.0257	-.0032	.0103	.0463	.0280	-.0181	0.
.0570	0.	0.	0.	0.	0.	0.	0.	-.0258	-.0031	.0106	.0438	.0311	-.0116	0.
.0580	0.	0.	0.	0.	0.	0.	0.	-.0263	-.0037	.0109	.0428	.0275	-.0081	0.
.0590	0.	0.	0.	0.	0.	0.	0.	-.0257	-.0043	.0101	.0484	.0166	-.0019	0.
.0600	0.	0.	0.	0.	0.	0.	0.	-.0235	-.0046	.0081	.0589	.0037	.0121	0.
.0610	0.	0.	0.	0.	0.	0.	0.	-.0209	-.0050	.0061	.0662	-.0069	.0284	0.

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INTERNAL FORCES IN THE PIPING
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SECTION	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	VA	DX	DY	DZ	RX	RY	RZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.0620	0.	0.	0.	0.	0.	0.	-.0193	-.0064	.0054	.0634	-.0122	.0403	0.
.0630	0.	0.	0.	0.	0.	0.	-.0184	-.0084	.0058	.0496	-.0101	.0495	0.
.0640	0.	0.	0.	0.	0.	0.	-.0169	-.0103	.0063	.0302	-.0025	.0600	0.
.0650	0.	0.	0.	0.	0.	0.	-.0144	-.0120	.0065	.0102	.0054	.0702	0.
.0660	0.	0.	0.	0.	0.	0.	-.0119	-.0137	.0066	-.0101	.0108	.0767	0.
.0670	0.	0.	0.	0.	0.	0.	-.0097	-.0154	.0069	-.0310	.0127	.0790	0.
.0680	0.	0.	0.	0.	0.	0.	-.0076	-.0167	.0067	-.0475	.0080	.0780	0.
.0690	0.	0.	0.	0.	0.	0.	-.0048	-.0174	.0054	-.0546	-.0058	.0740	0.
.0700	0.	0.	0.	0.	0.	0.	-.0015	-.0173	.0030	-.0543	-.0255	.0669	0.
.0710	0.	0.	0.	0.	0.	0.	.0017	-.0168	.0004	-.0530	-.0446	.0566	0.
.0720	0.	0.	0.	0.	0.	0.	.0044	-.0160	-.0016	-.0537	-.0577	.0437	0.
.0730	0.	0.	0.	0.	0.	0.	.0065	-.0149	-.0028	-.0644	-.0620	.0289	0.
.0740	0.	0.	0.	0.	0.	0.	.0082	-.0135	-.0033	-.0777	-.0577	.0128	0.
.0750	0.	0.	0.	0.	0.	0.	.0101	-.0116	-.0037	-.0907	-.0482	-.0034	0.
.0760	0.	0.	0.	0.	0.	0.	.0121	-.0091	-.0044	-.0990	-.0372	-.0178	0.
.0770	0.	0.	0.	0.	0.	0.	.0138	-.0061	-.0050	-.1023	-.0267	-.0311	0.
.0780	0.	0.	0.	0.	0.	0.	.0146	-.0030	-.0057	-.0994	-.0197	-.0453	0.
.0790	0.	0.	0.	0.	0.	0.	.0150	.0003	-.0069	-.0861	-.0189	-.0597	0.
.0800	0.	0.	0.	0.	0.	0.	.0155	.0040	-.0091	-.0616	-.0232	-.0713	0.
.0810	0.	0.	0.	0.	0.	0.	.0156	.0079	-.0113	-.0323	-.0281	-.0812	0.
.0820	0.	0.	0.	0.	0.	0.	.0146	.0113	-.0127	-.0030	-.0294	-.0924	0.
.0830	0.	0.	0.	0.	0.	0.	.0126	.0143	-.0132	.0177	-.0244	-.1023	0.
.0840	0.	0.	0.	0.	0.	0.	.0108	.0173	-.0129	.0360	-.0114	-.1059	0.
.0850	0.	0.	0.	0.	0.	0.	.0091	.0204	-.0122	.0509	.0076	-.1037	0.
.0860	0.	0.	0.	0.	0.	0.	.0076	.0232	-.0113	.0644	.0278	-.0990	0.
.0870	0.	0.	0.	0.	0.	0.	.0061	.0258	-.0104	.0783	.0462	-.0917	0.
.0880	0.	0.	0.	0.	0.	0.	.0046	.0282	-.0096	.0926	.0618	-.0810	0.
.0890	0.	0.	0.	0.	0.	0.	.0031	.0303	-.0089	.1079	.0722	-.0695	0.
.0900	0.	0.	0.	0.	0.	0.	.0018	.0321	-.0088	.1251	.0761	-.0583	0.
.0910	0.	0.	0.	0.	0.	0.	.0010	.0337	-.0091	.1417	.0768	-.0450	0.
.0920	0.	0.	0.	0.	0.	0.	.0003	.0348	-.0090	.1521	.0785	-.0303	0.
.0930	0.	0.	0.	0.	0.	0.	-.0009	.0351	-.0082	.1529	.0821	-.0184	0.
.0940	0.	0.	0.	0.	0.	0.	-.0024	.0345	-.0066	.1450	.0862	-.0097	0.
.0950	0.	0.	0.	0.	0.	0.	-.0035	.0335	-.0049	.1327	.0894	-.0000	0.
.0960	0.	0.	0.	0.	0.	0.	-.0038	.0325	-.0037	.1197	.0886	.0118	0.
.0970	0.	0.	0.	0.	0.	0.	-.0037	.0312	-.0029	.1078	.0811	.0231	0.
.0980	0.	0.	0.	0.	0.	0.	-.0035	.0295	-.0024	.0971	.0666	.0329	0.
.0990	0.	0.	0.	0.	0.	0.	-.0030	.0277	-.0024	.0884	.0467	.0431	0.

ADLPIPE PAGE 2334

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.28.

S/RV PIPING KEWAUNEE CKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.0880	0.	0.	0.	0.	0.	0.	0.	.0046	.0282	-.0096	.0926	.0618	-.0810	0.
.0890	0.	0.	0.	0.	0.	0.	0.	.0031	.0303	-.0089	.1079	.0722	-.0695	0.
.0900	0.	0.	0.	0.	0.	0.	0.	.0018	.0321	-.0088	.1251	.0761	-.0583	0.
.0910	0.	0.	0.	0.	0.	0.	0.	.0010	.0337	-.0091	.1417	.0768	-.0450	0.
.0920	0.	0.	0.	0.	0.	0.	0.	.0003	.0348	-.0090	.1521	.0785	-.0303	0.
.0930	0.	0.	0.	0.	0.	0.	0.	-.0009	.0351	-.0082	.1529	.0821	-.0184	0.
.0940	0.	0.	0.	0.	0.	0.	0.	-.0024	.0345	-.0066	.1450	.0862	-.0097	0.
.0950	0.	0.	0.	0.	0.	0.	0.	-.0035	.0335	-.0049	.1327	.0894	-.0000	0.
.0960	0.	0.	0.	0.	0.	0.	0.	-.0038	.0325	-.0037	.1197	.0886	.0118	0.
.0970	0.	0.	0.	0.	0.	0.	0.	-.0037	.0312	-.0029	.1078	.0811	.0231	0.
.0980	0.	0.	0.	0.	0.	0.	0.	-.0035	.0295	-.0024	.0971	.0666	.0329	0.
.0990	0.	0.	0.	0.	0.	0.	0.	-.0030	.0277	-.0024	.0884	.0467	.0431	0.

ADLPIPE PAGE 2334

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/3/12/02. 18.29.28.

S/RV PIPING KEWAUNEE GKWOBF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	59	MEMBER	1	SEQUENCE	84	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)									(PSI)
.1000	0.	0.	0.	0.	0.	0.	0.	-.0018	.0259	-.0032	.0822	.0232	.0541	0.	
.1010	0.	0.	0.	0.	0.	0.	0.	.0000	.0242	-.0043	.0763	-.0011	.0649	0.	
.1020	0.	0.	0.	0.	0.	0.	0.	.0021	.0223	-.0053	.0662	-.0218	.0748	0.	
.1030	0.	0.	0.	0.	0.	0.	0.	.0043	.0203	-.0058	.0503	-.0370	.0838	0.	
.1040	0.	0.	0.	0.	0.	0.	0.	.0070	.0184	-.0060	.0309	-.0479	.0917	0.	
.1050	0.	0.	0.	0.	0.	0.	0.	.0105	.0167	-.0064	.0113	-.0569	.0985	0.	
.1060	0.	0.	0.	0.	0.	0.	0.	.0145	.0154	-.0071	-.0069	-.0654	.1027	0.	
.1070	0.	0.	0.	0.	0.	0.	0.	.0184	.0140	-.0079	-.0236	-.0744	.1019	0.	
.1080	0.	0.	0.	0.	0.	0.	0.	.0219	.0126	-.0086	-.0392	-.0837	.0938	0.	
.1090	0.	0.	0.	0.	0.	0.	0.	.0251	.0112	-.0093	-.0533	-.0921	.0800	0.	
.1100	0.	0.	0.	0.	0.	0.	0.	.0283	.0100	-.0101	-.0649	-.0983	.0644	0.	
.1110	0.	0.	0.	0.	0.	0.	0.	.0310	.0088	-.0104	-.0768	-.1012	.0433	0.	
.1120	0.	0.	0.	0.	0.	0.	0.	.0328	.0071	-.0100	-.0902	-.1005	.0165	0.	
.1130	0.	0.	0.	0.	0.	0.	0.	.0346	.0058	-.0093	-.1010	-.0975	-.0093	0.	
.1140	0.	0.	0.	0.	0.	0.	0.	.0366	.0051	-.0086	-.1061	-.0943	-.0314	0.	
.1150	0.	0.	0.	0.	0.	0.	0.	.0382	.0045	-.0076	-.1067	-.0919	-.0526	0.	
.1160	0.	0.	0.	0.	0.	0.	0.	.0388	.0040	-.0061	-.1043	-.0891	-.0731	0.	
.1170	0.	0.	0.	0.	0.	0.	0.	.0388	.0037	-.0045	-.0977	-.0854	-.0906	0.	
.1180	0.	0.	0.	0.	0.	0.	0.	.0386	.0039	-.0032	-.0854	-.0807	-.1029	0.	
.1190	0.	0.	0.	0.	0.	0.	0.	.0377	.0043	-.0015	-.0727	-.0712	-.1117	0.	
.1200	0.	0.	0.	0.	0.	0.	0.	.0360	.0049	.0008	-.0634	-.0535	-.1153	0.	
.1210	0.	0.	0.	0.	0.	0.	0.	.0342	.0060	.0035	-.0554	-.0297	-.1113	0.	
.1220	0.	0.	0.	0.	0.	0.	0.	.0321	.0075	.0065	-.0476	-.0037	-.1035	0.	
.1230	0.	0.	0.	0.	0.	0.	0.	.0297	.0092	.0094	-.0387	.0210	-.0934	0.	
.1240	0.	0.	0.	0.	0.	0.	0.	.0270	.0111	.0123	-.0276	.0415	-.0822	0.	
.1250	0.	0.	0.	0.	0.	0.	0.	.0241	.0133	.0145	-.0115	.0535	-.0717	0.	
.1260	0.	0.	0.	0.	0.	0.	0.	.0216	.0159	.0156	.0121	.0552	-.0611	0.	
.1270	0.	0.	0.	0.	0.	0.	0.	.0196	.0190	.0158	.0384	.0518	-.0497	0.	
.1280	0.	0.	0.	0.	0.	0.	0.	.0180	.0225	.0156	.0627	.0484	-.0358	0.	
.1290	0.	0.	0.	0.	0.	0.	0.	.0165	.0259	.0154	.0805	.0474	-.0241	0.	
.1300	0.	0.	0.	0.	0.	0.	0.	.0149	.0289	.0157	.0893	.0492	-.0176	0.	
.1310	0.	0.	0.	0.	0.	0.	0.	.0136	.0317	.0162	.0894	.0552	-.0121	0.	
.1320	0.	0.	0.	0.	0.	0.	0.	.0129	.0344	.0171	.0816	.0643	-.0064	0.	
.1330	0.	0.	0.	0.	0.	0.	0.	.0129	.0369	.0178	.0712	.0703	-.0019	0.	
.1340	0.	0.	0.	0.	0.	0.	0.	.0135	.0391	.0179	.0631	.0688	.0010	0.	
.1350	0.	0.	0.	0.	0.	0.	0.	.0150	.0413	.0172	.0589	.0609	.0054	0.	
.1360	0.	0.	0.	0.	0.	0.	0.	.0169	.0434	.0157	.0578	.0484	.0111	0.	
.1370	0.	0.	0.	0.	0.	0.	0.	.0184	.0445	.0140	.0570	.0328	.0121	0.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/3/12/02. 18.29.28.

S/RV PIPING KEWAUNEE GKWOBF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.1260	0.	0.	0.	0.	0.	0.	0.	.0216	.0159	.0156	.0121	.0552	-.0611	0.
.1270	0.	0.	0.	0.	0.	0.	0.	.0196	.0190	.0158	.0384	.0518	-.0497	0.
.1280	0.	0.	0.	0.	0.	0.	0.	.0180	.0225	.0156	.0627	.0484	-.0358	0.
.1290	0.	0.	0.	0.	0.	0.	0.	.0165	.0259	.0154	.0805	.0474	-.0241	0.
.1300	0.	0.	0.	0.	0.	0.	0.	.0149	.0289	.0157	.0893	.0492	-.0176	0.
.1310	0.	0.	0.	0.	0.	0.	0.	.0136	.0317	.0162	.0894	.0552	-.0121	0.
.1320	0.	0.	0.	0.	0.	0.	0.	.0129	.0344	.0171	.0816	.0643	-.0064	0.
.1330	0.	0.	0.	0.	0.	0.	0.	.0129	.0369	.0178	.0712	.0703	-.0019	0.
.1340	0.	0.	0.	0.	0.	0.	0.	.0135	.0391	.0179	.0631	.0688	.0010	0.
.1350	0.	0.	0.	0.	0.	0.	0.	.0150	.0413	.0172	.0589	.0609	.0054	0.
.1360	0.	0.	0.	0.	0.	0.	0.	.0169	.0434	.0157	.0578	.0484	.0111	0.
.1370	0.	0.	0.	0.	0.	0.	0.	.0184	.0445	.0140	.0570	.0328	.0121	0.

ADLPIPE PAGE 2335 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 8/12/02. 18.29.28.

S/RV PIPING KEWAUNEE GKWOEF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	59	MEMBER	1	SEQUENCE	04	LOCATION	DIS	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1380	0.	0.	0.	0.	0.	0.	.0199	.0451	.0119	.0568	.0162	.0112	0.	
.1390	0.	0.	0.	0.	0.	0.	.0224	.0456	.0094	.0556	.0043	.0159	0.	
.1400	0.	0.	0.	0.	0.	0.	.0258	.0461	.0070	.0504	-.0001	.0277	0.	
.1410	0.	0.	0.	0.	0.	0.	.0292	.0462	.0053	.0402	.0002	.0407	0.	
.1420	0.	0.	0.	0.	0.	0.	.0320	.0455	.0042	.0265	.0014	.0499	0.	
.1430	0.	0.	0.	0.	0.	0.	.0352	.0447	.0028	.0150	.0009	.0601	0.	
.1440	0.	0.	0.	0.	0.	0.	.0391	.0441	.0009	.0083	-.0024	.0733	0.	
.1450	0.	0.	0.	0.	0.	0.	.0427	.0432	-.0012	.0048	-.0096	.0842	0.	
.1460	0.	0.	0.	0.	0.	0.	.0454	.0419	-.0032	.0026	-.0204	.0901	0.	
.1470	0.	0.	0.	0.	0.	0.	.0475	.0402	-.0051	.0000	-.0308	.0936	0.	
.1480	0.	0.	0.	0.	0.	0.	.0495	.0387	-.0069	-.0026	-.0387	.0983	0.	
.1490	0.	0.	0.	0.	0.	0.	.0508	.0367	-.0081	-.0087	-.0436	.0995	0.	
.1500	0.	0.	0.	0.	0.	0.	.0505	.0338	-.0079	-.0217	-.0450	.0934	0.	
.1510	0.	0.	0.	0.	0.	0.	.0491	.0304	-.0065	-.0404	-.0418	.0852	0.	
.1520	0.	0.	0.	0.	0.	0.	.0468	.0267	-.0041	-.0624	-.0348	.0777	0.	
.1530	0.	0.	0.	0.	0.	0.	.0435	.0224	-.0013	-.0830	-.0287	.0678	0.	
.1540	0.	0.	0.	0.	0.	0.	.0386	.0175	.0016	-.0995	-.0272	.0515	0.	
.1550	0.	0.	0.	0.	0.	0.	.0325	.0123	.0044	-.1103	-.0289	.0332	0.	
.1560	0.	0.	0.	0.	0.	0.	.0253	.0070	.0073	-.1161	-.0309	.0168	0.	
.1570	0.	0.	0.	0.	0.	0.	.0164	.0012	.0105	-.1204	-.0326	-.0028	0.	
.1580	0.	0.	0.	0.	0.	0.	.0063	-.0049	.0140	-.1222	-.0346	-.0259	0.	
.1590	0.	0.	0.	0.	0.	0.	-.0039	-.0106	.0174	-.1205	-.0346	-.0460	0.	
.1600	0.	0.	0.	0.	0.	0.	-.0143	-.0158	.0209	-.1189	-.0296	-.0622	0.	
.1610	0.	0.	0.	0.	0.	0.	-.0254	-.0209	.0252	-.1196	-.0211	-.0804	0.	
.1620	0.	0.	0.	0.	0.	0.	-.0370	-.0255	.0295	-.1193	-.0121	-.1010	0.	
.1630	0.	0.	0.	0.	0.	0.	-.0477	-.0290	.0330	-.1146	-.0024	-.1180	0.	
.1640	0.	0.	0.	0.	0.	0.	-.0566	-.0307	.0350	-.1026	.0077	-.1275	0.	
.1650	0.	0.	0.	0.	0.	0.	-.0644	-.0311	.0357	-.0845	.0164	-.1343	0.	
.1660	0.	0.	0.	0.	0.	0.	-.0715	-.0306	.0356	-.0636	.0235	-.1431	0.	
.1670	0.	0.	0.	0.	0.	0.	-.0770	-.0287	.0342	-.0394	.0300	-.1490	0.	
.1680	0.	0.	0.	0.	0.	0.	-.0803	-.0252	.0315	-.0116	.0360	-.1491	0.	
.1690	0.	0.	0.	0.	0.	0.	-.0816	-.0205	.0278	.0182	.0399	-.1461	0.	
.1700	0.	0.	0.	0.	0.	0.	-.0813	-.0152	.0234	.0470	.0417	-.1427	0.	
.1710	0.	0.	0.	0.	0.	0.	-.0795	-.0092	.0186	.0736	.0424	-.1370	0.	
.1720	0.	0.	0.	0.	0.	0.	-.0756	-.0024	.0128	.1005	.0418	-.1245	0.	
.1730	0.	0.	0.	0.	0.	0.	-.0704	.0046	.0065	.1251	.0397	-.1093	0.	
.1740	0.	0.	0.	0.	0.	0.	-.0647	.0109	-.0001	.1454	.0363	-.0948	0.	
.1750	0.	0.	0.	0.	0.	0.	-.0585	.0166	-.0066	.1606	.0327	-.0786	0.	

ADLPIPE PAGE 2336 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 8/12/02. 18.29.28.

S/RV PIPING KEWAUNEE GKWOEF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.1650	0.	0.	0.	0.	0.	0.	0.	-.0644	-.0311	.0357	-.0845	.0164	-.1343	0.
.1660	0.	0.	0.	0.	0.	0.	0.	-.0715	-.0306	.0356	-.0656	.0235	-.1431	0.
.1670	0.	0.	0.	0.	0.	0.	0.	-.0770	-.0287	.0342	-.0394	.0300	-.1490	0.
.1680	0.	0.	0.	0.	0.	0.	0.	-.0803	-.0252	.0315	-.0116	.0360	-.1491	0.
.1690	0.	0.	0.	0.	0.	0.	0.	-.0816	-.0205	.0278	.0182	.0399	-.1461	0.
.1700	0.	0.	0.	0.	0.	0.	0.	-.0813	-.0152	.0234	.0470	.0417	-.1427	0.
.1710	0.	0.	0.	0.	0.	0.	0.	-.0795	-.0092	.0186	.0736	.0424	-.1370	0.
.1720	0.	0.	0.	0.	0.	0.	0.	-.0756	-.0024	.0128	.1005	.0418	-.1245	0.
.1730	0.	0.	0.	0.	0.	0.	0.	-.0704	.0046	.0065	.1251	.0397	-.1093	0.
.1740	0.	0.	0.	0.	0.	0.	0.	-.0647	.0109	-.0001	.1454	.0365	-.0948	0.
.1750	0.	0.	0.	0.	0.	0.	0.	-.0585	.0166	-.0066	.1606	.0327	-.0786	0.

ADLPIPE PAGE 2336

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02. 18.29.28.

S/RV PIPING KEWAUNEE GKWDF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	59	MEMBER	1	SEQUENCE	84	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1760	0.	0.	0.	0.	0.	0.	-.0518	.0215	-.0127	.1691	.0307	-.0588	0.		
.1770	0.	0.	0.	0.	0.	0.	-.0450	.0254	-.0183	.1701	.0301	-.0355	0.		
.1780	0.	0.	0.	0.	0.	0.	-.0385	.0277	-.0229	.1626	.0297	-.0115	0.		
.1790	0.	0.	0.	0.	0.	0.	-.0324	.0285	-.0264	.1479	.0291	.0142	0.		
.1800	0.	0.	0.	0.	0.	0.	-.0268	.0278	-.0289	.1260	.0291	.0419	0.		
.1810	0.	0.	0.	0.	0.	0.	-.0227	.0253	-.0299	.0961	.0292	.0672	0.		
.1820	0.	0.	0.	0.	0.	0.	-.0201	.0211	-.0299	.0617	.0276	.0882	0.		
.1830	0.	0.	0.	0.	0.	0.	-.0190	.0155	-.0291	.0244	.0246	.1058	0.		
.1840	0.	0.	0.	0.	0.	0.	-.0190	.0089	-.0277	-.0145	.0221	.1215	0.		
.1850	0.	0.	0.	0.	0.	0.	-.0205	.0014	-.0256	-.0547	.0197	.1331	0.		
.1860	0.	0.	0.	0.	0.	0.	-.0236	-.0067	-.0228	-.0951	.0163	.1374	0.		
.1870	0.	0.	0.	0.	0.	0.	-.0275	-.0150	-.0196	-.1329	.0117	.1367	0.		
.1880	0.	0.	0.	0.	0.	0.	-.0319	-.0228	-.0162	-.1670	.0066	.1324	0.		
.1890	0.	0.	0.	0.	0.	0.	-.0366	-.0300	-.0127	-.1957	.0002	.1235	0.		
.1900	0.	0.	0.	0.	0.	0.	-.0418	-.0363	-.0094	-.2175	-.0082	.1086	0.		
.1910	0.	0.	0.	0.	0.	0.	-.0469	-.0414	-.0065	-.2312	-.0175	.0889	0.		
.1920	0.	0.	0.	0.	0.	0.	-.0514	-.0449	-.0045	-.2350	-.0261	.0679	0.		
.1930	0.	0.	0.	0.	0.	0.	-.0554	-.0468	-.0032	-.2298	-.0330	.0447	0.		
.1940	0.	0.	0.	0.	0.	0.	-.0594	-.0474	-.0022	-.2182	-.0371	.0168	0.		
.1950	0.	0.	0.	0.	0.	0.	-.0631	-.0469	-.0015	-.2007	-.0378	-.0139	0.		
.1960	0.	0.	0.	0.	0.	0.	-.0658	-.0450	-.0013	-.1766	-.0351	-.0437	0.		
.1970	0.	0.	0.	0.	0.	0.	-.0676	-.0420	-.0014	-.1460	-.0303	-.0715	0.		
.1980	0.	0.	0.	0.	0.	0.	-.0686	-.0384	-.0018	-.1098	-.0249	-.0982	0.		
.1990	0.	0.	0.	0.	0.	0.	-.0691	-.0343	-.0022	-.0685	-.0199	-.1230	0.		
.2000	0.	0.	0.	0.	0.	0.	-.0687	-.0301	-.0030	-.0222	-.0156	-.1435	0.		
.2010	0.	0.	0.	0.	0.	0.	-.0675	-.0258	-.0041	.0277	-.0115	-.1587	0.		
.2020	0.	0.	0.	0.	0.	0.	-.0659	-.0220	-.0053	.0783	-.0071	-.1690	0.		
.2030	0.	0.	0.	0.	0.	0.	-.0638	-.0188	-.0064	.1258	-.0007	-.1744	0.		
.2040	0.	0.	0.	0.	0.	0.	-.0615	-.0165	-.0069	.1665	.0093	-.1735	0.		
.2050	0.	0.	0.	0.	0.	0.	-.0587	-.0152	-.0067	.1981	.0229	-.1666	0.		
.2060	0.	0.	0.	0.	0.	0.	-.0557	-.0149	-.0058	.2196	.0379	-.1549	0.		
.2070	0.	0.	0.	0.	0.	0.	-.0524	-.0157	-.0043	.2309	.0522	-.1393	0.		
.2080	0.	0.	0.	0.	0.	0.	-.0489	-.0173	-.0022	.2323	.0645	-.1199	0.		
.2090	0.	0.	0.	0.	0.	0.	-.0451	-.0197	.0002	.2249	.0731	-.0974	0.		
.2100	0.	0.	0.	0.	0.	0.	-.0412	-.0227	.0026	.2101	.0761	-.0740	0.		
.2110	0.	0.	0.	0.	0.	0.	-.0372	-.0261	.0048	.1889	.0734	-.0506	0.		
.2120	0.	0.	0.	0.	0.	0.	-.0332	-.0296	.0067	.1615	.0661	-.0274	0.		
.2130	0.	0.	0.	0.	0.	0.	-.0293	-.0332	.0084	.1275	.0559	-.0048	0.		

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S/RV PIPING KEWAUNEE GKWDF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

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ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.2020	0.	0.	0.	0.	0.	0.	0.	-.0659	-.0220	-.0053	.0783	-.0071	-.1690	0.
.2030	0.	0.	0.	0.	0.	0.	0.	-.0638	-.0188	-.0064	.1258	-.0007	-.1744	0.
.2040	0.	0.	0.	0.	0.	0.	0.	-.0615	-.0165	-.0069	.1665	.0093	-.1735	0.
.2050	0.	0.	0.	0.	0.	0.	0.	-.0587	-.0152	-.0067	.1981	.0229	-.1666	0.
.2060	0.	0.	0.	0.	0.	0.	0.	-.0557	-.0149	-.0058	.2196	.0379	-.1549	0.
.2070	0.	0.	0.	0.	0.	0.	0.	-.0524	-.0157	-.0043	.2309	.0522	-.1393	0.
.2080	0.	0.	0.	0.	0.	0.	0.	-.0489	-.0173	-.0022	.2323	.0645	-.1199	0.
.2090	0.	0.	0.	0.	0.	0.	0.	-.0451	-.0197	.0002	.2249	.0731	-.0974	0.
.2100	0.	0.	0.	0.	0.	0.	0.	-.0412	-.0227	.0026	.2101	.0761	-.0740	0.
.2110	0.	0.	0.	0.	0.	0.	0.	-.0372	-.0261	.0048	.1889	.0734	-.0506	0.
.2120	0.	0.	0.	0.	0.	0.	0.	-.0332	-.0296	.0067	.1615	.0661	-.0274	0.
.2130	0.	0.	0.	0.	0.	0.	0.	-.0293	-.0332	.0084	.1275	.0559	-.0048	0.

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2 SAFETY COLD FKW24F--2 PSV

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INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	VA	DX	DY	DZ	RX	RY	RZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	FX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.2140	0.	0.	0.	0.	0.	0.	-.0255	-.0366	.0101	.0867	.0439	.0158	0.
.2150	0.	0.	0.	0.	0.	0.	-.0219	-.0396	.0119	.0402	.0309	.0346	0.
.2160	0.	0.	0.	0.	0.	0.	-.0181	-.0421	.0135	-.0093	.0175	.0528	0.
.2170	0.	0.	0.	0.	0.	0.	-.0141	-.0437	.0148	-.0591	.0028	.0704	0.
.2180	0.	0.	0.	0.	0.	0.	-.0104	-.0445	.0157	-.1068	-.0131	.0854	0.
.2190	0.	0.	0.	0.	0.	0.	-.0070	-.0447	.0163	-.1494	-.0309	.0971	0.
.2200	0.	0.	0.	0.	0.	0.	-.0037	-.0438	.0161	-.1837	-.0500	.1066	0.
.2210	0.	0.	0.	0.	0.	0.	-.0004	-.0420	.0151	-.2077	-.0694	.1152	0.
.2220	0.	0.	0.	0.	0.	0.	.0029	-.0392	.0135	-.2218	-.0874	.1221	0.
.2230	0.	0.	0.	0.	0.	0.	.0059	-.0358	.0116	-.2273	-.1023	.1262	0.
.2240	0.	0.	0.	0.	0.	0.	.0087	-.0318	.0097	-.2253	-.1122	.1278	0.
.2250	0.	0.	0.	0.	0.	0.	.0114	-.0273	.0080	-.2161	-.1164	.1274	0.
.2260	0.	0.	0.	0.	0.	0.	.0143	-.0225	.0063	-.2000	-.1154	.1244	0.
.2270	0.	0.	0.	0.	0.	0.	.0170	-.0174	.0049	-.1772	-.1099	.1181	0.
.2280	0.	0.	0.	0.	0.	0.	.0197	-.0123	.0036	-.1479	-.1005	.1088	0.
.2290	0.	0.	0.	0.	0.	0.	.0224	-.0072	.0023	-.1120	-.0885	.0966	0.
.2300	0.	0.	0.	0.	0.	0.	.0251	-.0021	.0008	-.0701	-.0744	.0813	0.
.2310	0.	0.	0.	0.	0.	0.	.0276	.0026	-.0006	-.0243	-.0592	.0625	0.
.2320	0.	0.	0.	0.	0.	0.	.0299	.0068	-.0019	.0226	-.0422	.0406	0.
.2330	0.	0.	0.	0.	0.	0.	.0319	.0104	-.0027	.0673	-.0229	.0164	0.
.2340	0.	0.	0.	0.	0.	0.	.0334	.0133	-.0028	.1074	-.0016	-.0090	0.
.2350	0.	0.	0.	0.	0.	0.	.0347	.0155	-.0023	.1414	.0212	-.0348	0.
.2360	0.	0.	0.	0.	0.	0.	.0355	.0169	-.0012	.1683	.0446	-.0596	0.
.2370	0.	0.	0.	0.	0.	0.	.0359	.0175	.0005	.1879	.0676	-.0824	0.
.2380	0.	0.	0.	0.	0.	0.	.0356	.0172	.0026	.2002	.0889	-.1026	0.
.2390	0.	0.	0.	0.	0.	0.	.0345	.0162	.0050	.2054	.1071	-.1202	0.
.2400	0.	0.	0.	0.	0.	0.	.0327	.0145	.0074	.2046	.1214	-.1339	0.
.2410	0.	0.	0.	0.	0.	0.	.0304	.0123	.0098	.1983	.1310	-.1424	0.
.2420	0.	0.	0.	0.	0.	0.	.0275	.0096	.0121	.1864	.1360	-.1458	0.
.2430	0.	0.	0.	0.	0.	0.	.0242	.0065	.0145	.1684	.1364	-.1443	0.
.2440	0.	0.	0.	0.	0.	0.	.0204	.0032	.0170	.1449	.1324	-.1383	0.
.2450	0.	0.	0.	0.	0.	0.	.0165	-.0001	.0194	.1169	.1244	-.1277	0.
.2460	0.	0.	0.	0.	0.	0.	.0127	-.0033	.0214	.0858	.1125	-.1133	0.
.2470	0.	0.	0.	0.	0.	0.	.0090	-.0062	.0230	.0530	.0973	-.0960	0.
.2480	0.	0.	0.	0.	0.	0.	.0056	-.0087	.0241	.0200	.0794	-.0763	0.
.2490	0.	0.	0.	0.	0.	0.	.0028	-.0105	.0243	-.0117	.0596	-.0548	0.
.2500	0.	0.	0.	0.	0.	0.	.0008	-.0115	.0238	-.0411	.0385	-.0327	0.
.2510	0.	0.	0.	0.	0.	0.	-.0003	-.0118	.0226	-.0672	.0166	-.0110	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/3/12/02.

18.29.28.

S/RV PIPING KEWAUNEE GKWOEF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

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ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.2400	0.	0.	0.	0.	0.	0.	0.	.0327	.0145	.0074	.2046	.1214	-.1359	0.
.2410	0.	0.	0.	0.	0.	0.	0.	.0304	.0123	.0098	.1983	.1310	-.1424	0.
.2420	0.	0.	0.	0.	0.	0.	0.	.0275	.0096	.0121	.1864	.1360	-.1458	0.
.2430	0.	0.	0.	0.	0.	0.	0.	.0242	.0065	.0145	.1684	.1364	-.1443	0.
.2440	0.	0.	0.	0.	0.	0.	0.	.0204	.0032	.0170	.1449	.1324	-.1383	0.
.2450	0.	0.	0.	0.	0.	0.	0.	.0165	-.0001	.0194	.1169	.1244	-.1277	0.
.2460	0.	0.	0.	0.	0.	0.	0.	.0127	-.0033	.0214	.0858	.1125	-.1153	0.
.2470	0.	0.	0.	0.	0.	0.	0.	.0090	-.0062	.0230	.0530	.0973	-.0960	0.
.2480	0.	0.	0.	0.	0.	0.	0.	.0056	-.0087	.0241	.0200	.0794	-.0763	0.
.2490	0.	0.	0.	0.	0.	0.	0.	.0028	-.0105	.0243	-.0117	.0596	-.0548	0.
.2500	0.	0.	0.	0.	0.	0.	0.	.0008	-.0115	.0238	-.0411	.0385	-.0327	0.
.2510	0.	0.	0.	0.	0.	0.	0.	-.0003	-.0118	.0276	-.0672	.0166	-.0110	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

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ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.2520	0.	0.	0.	0.	0.	0.	-.0002	-.0113	.0205	-.0891	-.0052	.0101	0.	
.2530	0.	0.	0.	0.	0.	0.	.0012	-.0098	.0178	-.1065	-.0260	.0307	0.	
.2540	0.	0.	0.	0.	0.	0.	.0040	-.0074	.0145	-.1195	-.0447	.0498	0.	
.2550	0.	0.	0.	0.	0.	0.	.0081	-.0044	.0108	-.1278	-.0609	.0665	0.	
.2560	0.	0.	0.	0.	0.	0.	.0132	-.0007	.0067	-.1310	-.0742	.0805	0.	
.2570	0.	0.	0.	0.	0.	0.	.0194	.0035	.0021	-.1287	-.0841	.0913	0.	
.2580	0.	0.	0.	0.	0.	0.	.0264	.0080	-.0026	-.1213	-.0903	.0988	0.	
.2590	0.	0.	0.	0.	0.	0.	.0338	.0126	-.0075	-.1098	-.0927	.1025	0.	
.2600	0.	0.	0.	0.	0.	0.	.0413	.0172	-.0121	-.0950	-.0913	.1026	0.	
.2610	0.	0.	0.	0.	0.	0.	.0489	.0217	-.0165	-.0776	-.0865	.0998	0.	
.2620	0.	0.	0.	0.	0.	0.	.0562	.0259	-.0204	-.0582	-.0789	.0945	0.	
.2630	0.	0.	0.	0.	0.	0.	.0631	.0296	-.0237	-.0380	-.0690	.0870	0.	
.2640	0.	0.	0.	0.	0.	0.	.0691	.0329	-.0262	-.0184	-.0571	.0773	0.	
.2650	0.	0.	0.	0.	0.	0.	.0740	.0355	-.0279	.0002	-.0438	.0661	0.	
.2660	0.	0.	0.	0.	0.	0.	.0777	.0377	-.0290	.0178	-.0298	.0544	0.	
.2670	0.	0.	0.	0.	0.	0.	.0803	.0394	-.0294	.0343	-.0158	.0428	0.	
.2680	0.	0.	0.	0.	0.	0.	.0815	.0407	-.0293	.0489	-.0023	.0315	0.	
.2690	0.	0.	0.	0.	0.	0.	.0812	.0417	-.0286	.0607	.0104	.0205	0.	
.2700	0.	0.	0.	0.	0.	0.	.0795	.0423	-.0273	.0692	.0217	.0099	0.	
.2710	0.	0.	0.	0.	0.	0.	.0767	.0427	-.0255	.0748	.0309	.0005	0.	
.2720	0.	0.	0.	0.	0.	0.	.0731	.0432	-.0234	.0778	.0377	-.0070	0.	
.2730	0.	0.	0.	0.	0.	0.	.0687	.0438	-.0211	.0779	.0419	-.0128	0.	
.2740	0.	0.	0.	0.	0.	0.	.0635	.0444	-.0184	.0748	.0438	-.0180	0.	
.2750	0.	0.	0.	0.	0.	0.	.0578	.0451	-.0157	.0697	.0430	-.0226	0.	
.2760	0.	0.	0.	0.	0.	0.	.0520	.0460	-.0132	.0639	.0397	-.0262	0.	
.2770	0.	0.	0.	0.	0.	0.	.0463	.0473	-.0111	.0581	.0342	-.0284	0.	
.2780	0.	0.	0.	0.	0.	0.	.0408	.0487	-.0092	.0517	.0275	-.0300	0.	
.2790	0.	0.	0.	0.	0.	0.	.0355	.0502	-.0075	.0444	.0203	-.0319	0.	
.2800	0.	0.	0.	0.	0.	0.	.0308	.0517	-.0059	.0370	.0128	-.0336	0.	
.2810	0.	0.	0.	0.	0.	0.	.0268	.0532	-.0047	.0307	.0054	-.0342	0.	
.2820	0.	0.	0.	0.	0.	0.	.0237	.0547	-.0036	.0251	-.0012	-.0339	0.	
.2830	0.	0.	0.	0.	0.	0.	.0212	.0558	-.0025	.0198	-.0064	-.0338	0.	
.2840	0.	0.	0.	0.	0.	0.	.0193	.0564	-.0016	.0155	-.0104	-.0340	0.	
.2850	0.	0.	0.	0.	0.	0.	.0182	.0567	-.0009	.0141	-.0133	-.0331	0.	
.2860	0.	0.	0.	0.	0.	0.	.0181	.0560	-.0007	.0163	-.0154	-.0301	0.	
.2870	0.	0.	0.	0.	0.	0.	.0187	.0564	-.0008	.0211	-.0162	-.0256	0.	
.2880	0.	0.	0.	0.	0.	0.	.0196	.0554	-.0010	.0274	-.0158	-.0207	0.	
.2890	0.	0.	0.	0.	0.	0.	.0211	.0539	-.0012	.0351	-.0141	-.0145	0.	

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2 SAFETY COLD FKW24F--2 PSV

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FORCES AND MOMENTS ACT ON THE PIPING

.2790	0.	0.	0.	0.	0.	0.	0.	.0355	.0502	-.0075	.0444	.0203	-.0319	0.
.2800	0.	0.	0.	0.	0.	0.	0.	.0308	.0517	-.0059	.0370	.0128	-.0336	0.
.2810	0.	0.	0.	0.	0.	0.	0.	.0268	.0532	-.0047	.0307	.0054	-.0342	0.
.2820	0.	0.	0.	0.	0.	0.	0.	.0237	.0547	-.0036	.0251	-.0012	-.0339	0.
.2830	0.	0.	0.	0.	0.	0.	0.	.0212	.0558	-.0025	.0198	-.0064	-.0338	0.
.2840	0.	0.	0.	0.	0.	0.	0.	.0193	.0564	-.0016	.0155	-.0104	-.0340	0.
.2850	0.	0.	0.	0.	0.	0.	0.	.0182	.0567	-.0009	.0141	-.0133	-.0331	0.
.2860	0.	0.	0.	0.	0.	0.	0.	.0181	.0568	-.0007	.0163	-.0154	-.0301	0.
.2870	0.	0.	0.	0.	0.	0.	0.	.0187	.0564	-.0008	.0211	-.0162	-.0256	0.
.2880	0.	0.	0.	0.	0.	0.	0.	.0196	.0554	-.0010	.0274	-.0158	-.0207	0.
.2890	0.	0.	0.	0.	0.	0.	0.	.0211	.0539	-.0012	.0351	-.0141	-.0145	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02. 18.29.28.

S/RV PIPING KEWAUNEE GKW02F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	59	MEMBER	1	SEQUENCE	04	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2900	0.	0.	0.	0.	0.	0.		.0232	.0522	-.0017	.0441	-.0114	-.0058	0.	
.2910	0.	0.	0.	0.	0.	0.		.0258	.0503	-.0024	.0535	-.0076	.0052	0.	
.2920	0.	0.	0.	0.	0.	0.		.0287	.0480	-.0031	.0619	-.0032	.0170	0.	
.2930	0.	0.	0.	0.	0.	0.		.0315	.0455	-.0038	.0684	.0014	.0289	0.	
.2940	0.	0.	0.	0.	0.	0.		.0343	.0430	-.0046	.0736	.0054	.0414	0.	
.2950	0.	0.	0.	0.	0.	0.		.0371	.0405	-.0058	.0778	.0074	.0541	0.	
.2960	0.	0.	0.	0.	0.	0.		.0396	.0380	-.0072	.0806	.0067	.0656	0.	
.2970	0.	0.	0.	0.	0.	0.		.0417	.0355	-.0087	.0810	.0029	.0752	0.	
.2980	0.	0.	0.	0.	0.	0.		.0431	.0330	-.0102	.0781	-.0037	.0828	0.	
.2990	0.	0.	0.	0.	0.	0.		.0439	.0306	-.0116	.0715	-.0128	.0883	0.	
.3000	0.	0.	0.	0.	0.	0.		.0441	.0281	-.0129	.0613	-.0245	.0914	0.	
.3010	0.	0.	0.	0.	0.	0.		.0434	.0255	-.0139	.0471	-.0377	.0922	0.	
.3020	0.	0.	0.	0.	0.	0.		.0419	.0227	-.0144	.0285	-.0514	.0908	0.	
.3030	0.	0.	0.	0.	0.	0.		.0392	.0196	-.0144	.0057	-.0648	.0871	0.	
.3040	0.	0.	0.	0.	0.	0.		.0356	.0161	-.0139	-.0199	-.0778	.0812	0.	
.3050	0.	0.	0.	0.	0.	0.		.0311	.0123	-.0130	-.0464	-.0903	.0740	0.	
.3060	0.	0.	0.	0.	0.	0.		.0258	.0082	-.0117	-.0728	-.1017	.0660	0.	
.3070	0.	0.	0.	0.	0.	0.		.0196	.0035	-.0098	-.0990	-.1111	.0571	0.	
.3080	0.	0.	0.	0.	0.	0.		.0125	-.0016	-.0075	-.1245	-.1180	.0466	0.	
.3090	0.	0.	0.	0.	0.	0.		.0048	-.0070	-.0043	-.1477	-.1222	.0354	0.	
.3100	0.	0.	0.	0.	0.	0.		-.0030	-.0127	-.0011	-.1672	-.1231	.0249	0.	
.3110	0.	0.	0.	0.	0.	0.		-.0109	-.0183	.0025	-.1826	-.1202	.0151	0.	
.3120	0.	0.	0.	0.	0.	0.		-.0188	-.0239	.0062	-.1940	-.1132	.0052	0.	
.3130	0.	0.	0.	0.	0.	0.		-.0266	-.0294	.0100	-.2006	-.1025	-.0050	0.	
.3140	0.	0.	0.	0.	0.	0.		-.0337	-.0342	.0136	-.2009	-.0887	-.0143	0.	
.3150	0.	0.	0.	0.	0.	0.		-.0399	-.0383	.0166	-.1942	-.0726	-.0222	0.	
.3160	0.	0.	0.	0.	0.	0.		-.0452	-.0416	.0190	-.1809	-.0547	-.0293	0.	
.3170	0.	0.	0.	0.	0.	0.		-.0494	-.0438	.0209	-.1623	-.0356	-.0363	0.	
.3180	0.	0.	0.	0.	0.	0.		-.0524	-.0450	.0221	-.1388	-.0157	-.0423	0.	
.3190	0.	0.	0.	0.	0.	0.		-.0541	-.0450	.0224	-.1107	.0043	-.0469	0.	
.3200	0.	0.	0.	0.	0.	0.		-.0543	-.0438	.0219	-.0790	.0236	-.0501	0.	
.3210	0.	0.	0.	0.	0.	0.		-.0534	-.0415	.0207	-.0453	.0416	-.0524	0.	
.3220	0.	0.	0.	0.	0.	0.		-.0514	-.0383	.0188	-.0111	.0581	-.0536	0.	
.3230	0.	0.	0.	0.	0.	0.		-.0486	-.0343	.0162	.0224	.0727	-.0535	0.	
.3240	0.	0.	0.	0.	0.	0.		-.0450	-.0298	.0131	.0546	.0845	-.0521	0.	
.3250	0.	0.	0.	0.	0.	0.		-.0409	-.0250	.0095	.0845	.0930	-.0492	0.	
.3260	0.	0.	0.	0.	0.	0.		-.0365	-.0201	.0056	.1105	.0983	-.0445	0.	
.3270	0.	0.	0.	0.	0.	0.		-.0321	-.0156	.0018	.1309	.1007	-.0383	0.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02. 18.29.28.

S/RV PIPING KEWAUNEE GKW02F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.3170	0.	0.	0.	0.	0.	0.	0.	-.0494	-.0438	.0209	-.1623	-.0356	-.0363	0.
.3180	0.	0.	0.	0.	0.	0.	0.	-.0524	-.0450	.0221	-.1388	-.0157	-.0423	0.
.3190	0.	0.	0.	0.	0.	0.	0.	-.0541	-.0450	.0224	-.1107	.0043	-.0469	0.
.3200	0.	0.	0.	0.	0.	0.	0.	-.0543	-.0438	.0219	-.0790	.0236	-.0501	0.
.3210	0.	0.	0.	0.	0.	0.	0.	-.0534	-.0415	.0207	-.0453	.0416	-.0524	0.
.3220	0.	0.	0.	0.	0.	0.	0.	-.0514	-.0383	.0188	-.0111	.0581	-.0536	0.
.3230	0.	0.	0.	0.	0.	0.	0.	-.0486	-.0343	.0162	.0224	.0727	-.0535	0.
.3240	0.	0.	0.	0.	0.	0.	0.	-.0450	-.0298	.0131	.0546	.0845	-.0521	0.
.3250	0.	0.	0.	0.	0.	0.	0.	-.0409	-.0250	.0095	.0845	.0930	-.0492	0.
.3260	0.	0.	0.	0.	0.	0.	0.	-.0365	-.0201	.0056	.1105	.0983	-.0445	0.
.3270	0.	0.	0.	0.	0.	0.	0.	-.0321	-.0156	.0018	.1309	.1007	-.0383	0.

ADLPIPE PAGE 2740

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/3/12/02.

18.29.28.

S/RV PIPING KEWAUNEE CKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	59	MEMBER	1	SEQUENCE	04	LOCATION	DIS	TYPE	VA					
TIME	FX	FY	FZ	Mx	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.3280	0.	0.	0.	0.	0.	0.	0.	-.0279	-.0116	-.0017	.1448	.1002	-.0307	0.
.3290	0.	0.	0.	0.	0.	0.	0.	-.0241	-.0084	-.0050	.1522	.0967	-.0217	0.
.3300	0.	0.	0.	0.	0.	0.	0.	-.0207	-.0061	-.0078	.1530	.0906	-.0109	0.
.3310	0.	0.	0.	0.	0.	0.	0.	-.0180	-.0049	-.0102	.1468	.0824	.0013	0.
.3320	0.	0.	0.	0.	0.	0.	0.	-.0162	-.0049	-.0118	.1333	.0726	.0136	0.
.3330	0.	0.	0.	0.	0.	0.	0.	-.0152	-.0062	-.0127	.1133	.0614	.0256	0.
.3340	0.	0.	0.	0.	0.	0.	0.	-.0150	-.0086	-.0130	.0882	.0490	.0374	0.
.3350	0.	0.	0.	0.	0.	0.	0.	-.0153	-.0119	-.0127	.0594	.0361	.0492	0.
.3360	0.	0.	0.	0.	0.	0.	0.	-.0162	-.0161	-.0119	.0272	.0231	.0599	0.
.3370	0.	0.	0.	0.	0.	0.	0.	-.0177	-.0210	-.0105	-.0073	.0107	.0685	0.
.3380	0.	0.	0.	0.	0.	0.	0.	-.0194	-.0262	-.0088	-.0422	-.0009	.0751	0.
.3390	0.	0.	0.	0.	0.	0.	0.	-.0210	-.0315	-.0070	-.0754	-.0116	.0801	0.
.3400	0.	0.	0.	0.	0.	0.	0.	-.0225	-.0366	-.0052	-.1053	-.0212	.0830	0.
.3410	0.	0.	0.	0.	0.	0.	0.	-.0237	-.0413	-.0035	-.1309	-.0294	.0830	0.
.3420	0.	0.	0.	0.	0.	0.	0.	-.0247	-.0454	-.0020	-.1511	-.0361	.0801	0.
.3430	0.	0.	0.	0.	0.	0.	0.	-.0251	-.0485	-.0010	-.1648	-.0409	.0747	0.
.3440	0.	0.	0.	0.	0.	0.	0.	-.0249	-.0507	-.0004	-.1709	-.0439	.0672	0.
.3450	0.	0.	0.	0.	0.	0.	0.	-.0241	-.0517	-.0004	-.1696	-.0450	.0575	0.
.3460	0.	0.	0.	0.	0.	0.	0.	-.0228	-.0516	-.0007	-.1612	-.0439	.0457	0.
.3470	0.	0.	0.	0.	0.	0.	0.	-.0211	-.0505	-.0015	-.1463	-.0405	.0325	0.
.3480	0.	0.	0.	0.	0.	0.	0.	-.0189	-.0484	-.0026	-.1251	-.0350	.0184	0.
.3490	0.	0.	0.	0.	0.	0.	0.	-.0164	-.0453	-.0040	-.0982	-.0279	.0038	0.
.3500	0.	0.	0.	0.	0.	0.	0.	-.0137	-.0416	-.0057	-.0662	-.0197	-.0107	0.
.3510	0.	0.	0.	0.	0.	0.	0.	-.0109	-.0373	-.0076	-.0305	-.0105	-.0243	0.
.3520	0.	0.	0.	0.	0.	0.	0.	-.0082	-.0327	-.0095	.0075	-.0006	-.0369	0.
.3530	0.	0.	0.	0.	0.	0.	0.	-.0058	-.0280	-.0115	.0463	.0097	-.0481	0.
.3540	0.	0.	0.	0.	0.	0.	0.	-.0036	-.0234	-.0131	.0847	.0198	-.0573	0.
.3550	0.	0.	0.	0.	0.	0.	0.	-.0017	-.0191	-.0147	.1213	.0298	-.0639	0.
.3560	0.	0.	0.	0.	0.	0.	0.	-.0002	-.0151	-.0159	.1542	.0395	-.0680	0.
.3570	0.	0.	0.	0.	0.	0.	0.	.0008	-.0118	-.0167	.1819	.0485	-.0700	0.
.3580	0.	0.	0.	0.	0.	0.	0.	.0014	-.0093	-.0171	.2036	.0565	-.0699	0.
.3590	0.	0.	0.	0.	0.	0.	0.	.0017	-.0074	-.0171	.2192	.0629	-.0676	0.
.3600	0.	0.	0.	0.	0.	0.	0.	.0017	-.0062	-.0161	.2284	.0674	-.0631	0.
.3610	0.	0.	0.	0.	0.	0.	0.	.0014	-.0057	-.0163	.2306	.0698	-.0572	0.
.3620	0.	0.	0.	0.	0.	0.	0.	.0009	-.0060	-.0154	.2257	.0702	-.0503	0.
.3630	0.	0.	0.	0.	0.	0.	0.	.0004	-.0070	-.0144	.2142	.0686	-.0425	0.
.3640	0.	0.	0.	0.	0.	0.	0.	-.0000	-.0084	-.0132	.1967	.0652	-.0337	0.
.3650	0.	0.	0.	0.	0.	0.	0.	-.0003	-.0103	-.0119	.1737	.0602	-.0244	0.

ADLPIPE PAGE 2741

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/3/12/02.

18.29.28.

S/RV PIPING KEWAUNEE CKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.3550	0.	0.	0.	0.	0.	0.	0.	-.0017	-.0191	-.0147	.1213	.0298	-.0639	0.
.3560	0.	0.	0.	0.	0.	0.	0.	-.0002	-.0151	-.0159	.1542	.0395	-.0680	0.
.3570	0.	0.	0.	0.	0.	0.	0.	.0008	-.0118	-.0167	.1819	.0485	-.0700	0.
.3580	0.	0.	0.	0.	0.	0.	0.	.0014	-.0093	-.0171	.2036	.0565	-.0699	0.
.3590	0.	0.	0.	0.	0.	0.	0.	.0017	-.0074	-.0171	.2192	.0629	-.0676	0.
.3600	0.	0.	0.	0.	0.	0.	0.	.0017	-.0062	-.0169	.2284	.0674	-.0631	0.
.3610	0.	0.	0.	0.	0.	0.	0.	.0014	-.0057	-.0163	.2306	.0698	-.0572	0.
.3620	0.	0.	0.	0.	0.	0.	0.	.0009	-.0060	-.0154	.2257	.0702	-.0503	0.
.3630	0.	0.	0.	0.	0.	0.	0.	.0004	-.0070	-.0144	.2142	.0686	-.0425	0.
.3640	0.	0.	0.	0.	0.	0.	0.	-.0000	-.0084	-.0132	.1967	.0652	-.0337	0.
.3650	0.	0.	0.	0.	0.	0.	0.	-.0003	-.0103	-.0119	.1737	.0602	-.0244	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/3/12/02. 18.29.28.

S/RV PIPING KEWAUNEE CKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	59	MEMBER	1	SEQUENCE	04	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3660	0.	0.	0.	0.	0.	0.	-.0004	-.0125	-.0105	.1458	.0542	-.0152	0.		
.3670	0.	0.	0.	0.	0.	0.	-.0003	-.0150	-.0091	.1140	.0477	-.0063	0.		
.3680	0.	0.	0.	0.	0.	0.	.0001	-.0177	-.0076	.0797	.0406	.0025	0.		
.3690	0.	0.	0.	0.	0.	0.	.0008	-.0205	-.0065	.0448	.0332	.0108	0.		
.3700	0.	0.	0.	0.	0.	0.	.0018	-.0233	-.0052	.0108	.0254	.0185	0.		
.3710	0.	0.	0.	0.	0.	0.	.0030	-.0260	-.0043	-.0212	.0175	.0255	0.		
.3720	0.	0.	0.	0.	0.	0.	.0043	-.0286	-.0036	-.0501	.0100	.0317	0.		
.3730	0.	0.	0.	0.	0.	0.	.0058	-.0311	-.0030	-.0750	.0029	.0370	0.		
.3740	0.	0.	0.	0.	0.	0.	.0073	-.0334	-.0027	-.0948	-.0035	.0415	0.		
.3750	0.	0.	0.	0.	0.	0.	.0090	-.0355	-.0026	-.1093	-.0088	.0452	0.		
.3760	0.	0.	0.	0.	0.	0.	.0107	-.0373	-.0026	-.1185	-.0126	.0482	0.		
.3770	0.	0.	0.	0.	0.	0.	.0122	-.0389	-.0026	-.1229	-.0144	.0502	0.		
.3780	0.	0.	0.	0.	0.	0.	.0135	-.0403	-.0027	-.1225	-.0144	.0509	0.		
.3790	0.	0.	0.	0.	0.	0.	.0148	-.0415	-.0029	-.1173	-.0129	.0506	0.		
.3800	0.	0.	0.	0.	0.	0.	.0159	-.0423	-.0031	-.1076	-.0101	.0494	0.		
.3810	0.	0.	0.	0.	0.	0.	.0168	-.0430	-.0034	-.0944	-.0065	.0470	0.		
.3820	0.	0.	0.	0.	0.	0.	.0175	-.0434	-.0037	-.0787	-.0020	.0431	0.		
.3830	0.	0.	0.	0.	0.	0.	.0179	-.0437	-.0039	-.0612	.0024	.0377	0.		
.3840	0.	0.	0.	0.	0.	0.	.0181	-.0438	-.0040	-.0426	.0065	.0312	0.		
.3850	0.	0.	0.	0.	0.	0.	.0181	-.0437	-.0041	-.0239	.0101	.0238	0.		
.3860	0.	0.	0.	0.	0.	0.	.0179	-.0437	-.0041	-.0065	.0131	.0154	0.		
.3870	0.	0.	0.	0.	0.	0.	.0173	-.0437	-.0037	.0084	.0156	.0062	0.		
.3880	0.	0.	0.	0.	0.	0.	.0163	-.0438	-.0031	.0202	.0174	-.0034	0.		
.3890	0.	0.	0.	0.	0.	0.	.0151	-.0440	-.0023	.0288	.0182	-.0126	0.		
.3900	0.	0.	0.	0.	0.	0.	.0136	-.0444	-.0012	.0339	.0180	-.0209	0.		
.3910	0.	0.	0.	0.	0.	0.	.0119	-.0450	.0001	.0352	.0168	-.0280	0.		
.3920	0.	0.	0.	0.	0.	0.	.0098	-.0459	.0018	.0323	.0147	-.0335	0.		
.3930	0.	0.	0.	0.	0.	0.	.0073	-.0472	.0039	.0255	.0118	-.0370	0.		
.3940	0.	0.	0.	0.	0.	0.	.0047	-.0487	.0061	.0155	.0078	-.0383	0.		
.3950	0.	0.	0.	0.	0.	0.	.0019	-.0504	.0086	.0029	.0031	-.0370	0.		
.3960	0.	0.	0.	0.	0.	0.	-.0011	-.0523	.0112	-.0122	-.0019	-.0331	0.		
.3970	0.	0.	0.	0.	0.	0.	-.0042	-.0545	.0141	-.0297	-.0067	-.0272	0.		
.3980	0.	0.	0.	0.	0.	0.	-.0075	-.0567	.0171	-.0485	-.0114	-.0195	0.		
.3990	0.	0.	0.	0.	0.	0.	-.0107	-.0589	.0200	-.0674	-.0159	-.0102	0.		
.4000	0.	0.	0.	0.	0.	0.	-.0137	-.0609	.0227	-.0854	-.0202	.0008	0.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/3/12/02. 18.29.28.

S/RV PIPING KEWAUNEE CKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.3920	0.	0.	0.	0.	0.	0.	0.	.0098	-.0459	.0018	.0323	.0147	-.0335	0.
.3930	0.	0.	0.	0.	0.	0.	0.	.0073	-.0472	.0039	.0255	.0118	-.0370	0.
.3940	0.	0.	0.	0.	0.	0.	0.	.0047	-.0487	.0061	.0155	.0078	-.0383	0.
.3950	0.	0.	0.	0.	0.	0.	0.	.0019	-.0504	.0086	.0029	.0031	-.0370	0.
.3960	0.	0.	0.	0.	0.	0.	0.	-.0011	-.0523	.0112	-.0122	-.0019	-.0331	0.
.3970	0.	0.	0.	0.	0.	0.	0.	-.0042	-.0545	.0141	-.0297	-.0067	-.0272	0.
.3980	0.	0.	0.	0.	0.	0.	0.	-.0075	-.0567	.0171	-.0485	-.0114	-.0195	0.
.3990	0.	0.	0.	0.	0.	0.	0.	-.0107	-.0589	.0200	-.0674	-.0159	-.0102	0.
.4000	0.	0.	0.	0.	0.	0.	0.	-.0137	-.0609	.0227	-.0854	-.0202	.0008	0.

ADLPIPE PAGE 2342

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.28.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

MAXIMUM VALUE OF DISCONTINUITY FORCE OCCURS AT

TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	FORCE (LB)
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA	DX	DY	DZ	RX	RY	RZ	STRESS (PSI)
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
.0010	-0.	-0.	0.	-0.	-0.	-0.	-.0000	-.0000	.0000	-.0000	-.0000	-.0000	0.
.0020	-0.	-0.	0.	-0.	-0.	-0.	-.0000	-.0000	.0000	-.0000	.0000	-.0000	0.
.0030	-0.	-0.	0.	0.	-0.	-0.	.0000	-.0000	.0000	-.0000	.0000	-.0000	0.
.0040	-0.	-0.	-0.	0.	-0.	-0.	.0000	-.0000	.0000	-.0000	.0000	.0000	1.
.0050	0.	0.	-0.	0.	-0.	-0.	-.0000	-.0000	.0000	-.0000	.0000	.0000	1.
.0060	1.	1.	-1.	0.	-0.	0.	-.0000	-.0000	.0000	-.0001	.0001	-.0000	1.
.0070	2.	1.	-1.	0.	1.	1.	-.0001	-.0000	.0000	-.0002	.0001	-.0001	3.
.0080	3.	1.	-2.	-0.	2.	2.	-.0001	-.0001	.0001	-.0003	.0001	-.0004	9.
.0090	5.	2.	-4.	-1.	5.	3.	-.0002	-.0001	.0001	-.0004	-.0000	-.0007	19.
.0100	13.	7.	-8.	-3.	11.	6.	-.0004	-.0002	.0002	-.0005	-.0002	-.0011	39.
.0110	24.	14.	-13.	-7.	20.	12.	-.0006	-.0003	.0003	-.0007	-.0005	-.0019	73.
.0120	36.	22.	-19.	-12.	34.	20.	-.0011	-.0005	.0005	-.0012	-.0009	-.0033	126.
.0130	48.	29.	-23.	-20.	53.	31.	-.0018	-.0008	.0008	-.0018	-.0015	-.0054	197.
.0140	59.	36.	-29.	-31.	76.	43.	-.0027	-.0011	.0012	-.0021	-.0025	-.0078	282.
.0150	70.	44.	-35.	-46.	101.	55.	-.0037	-.0015	.0015	-.0020	-.0037	-.0101	377.
.0160	81.	53.	-41.	-62.	127.	65.	-.0047	-.0019	.0018	-.0011	-.0052	-.0116	474.
.0170	89.	60.	-46.	-79.	151.	71.	-.0056	-.0022	.0019	.0007	-.0066	-.0120	560.
.0180	92.	59.	-47.	-92.	167.	70.	-.0063	-.0023	.0019	.0032	-.0079	-.0109	618.
.0190	88.	48.	-43.	-101.	170.	60.	-.0068	-.0023	.0017	.0064	-.0088	-.0082	627.
.0200	75.	24.	-32.	-100.	156.	38.	-.0069	-.0020	.0014	.0098	-.0090	-.0043	575.
.0210	53.	-7.	-14.	-88.	123.	8.	-.0067	-.0016	.0009	.0129	-.0080	.0007	461.
.0220	41.	-18.	4.	-63.	75.	-22.	-.0063	-.0010	.0004	.0153	-.0058	.0066	306.
.0230	18.	-30.	30.	-28.	15.	-50.	-.0059	-.0004	-.0001	.0161	-.0026	.0118	182.
.0240	-44.	-62.	68.	11.	-53.	-78.	-.0055	.0002	-.0005	.0153	.0011	.0152	289.
.0250	-120.	-120.	109.	43.	-125.	-113.	-.0046	.0009	-.0012	.0150	.0038	.0176	528.
.0260	-167.	-159.	124.	62.	-189.	-150.	-.0027	.0020	-.0025	.0174	.0042	.0214	758.
.0270	-129.	-109.	102.	74.	-229.	-160.	-.0001	.0035	-.0042	.0214	.0030	.0275	878.
.0280	-137.	-65.	102.	86.	-240.	-138.	.0022	.0048	-.0054	.0223	.0017	.0305	883.
.0290	-231.	-134.	145.	88.	-241.	-122.	.0041	.0056	-.0063	.0201	-.0005	.0276	866.
.0300	-225.	-139.	136.	78.	-248.	-122.	.0070	.0068	-.0079	.0214	-.0049	.0265	872.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.0180	92.	59.	-47.	-92.	167.	70.	-.0063	-.0023	.0019	.0052	-.0079	-.0109	560.
.0190	89.	48.	-47.	-101.	170.	60.	-.0068	-.0023	.0017	.0064	-.0088	-.0082	627.
.0200	75.	24.	-32.	-100.	156.	38.	-.0069	-.0020	.0014	.0098	-.0090	-.0043	575.
.0210	57.	-7.	-14.	-18.	127.	8.	-.0067	-.0016	.0009	.0129	-.0080	.0007	461.
.0220	41.	-18.	4.	-63.	75.	-22.	-.0063	-.0010	.0004	.0153	-.0058	.0066	306.
.0230	18.	-30.	30.	-28.	15.	-50.	-.0059	-.0004	-.0001	.0161	-.0026	.0118	182.
.0240	-44.	-62.	68.	11.	-53.	-78.	-.0055	.0002	-.0005	.0153	.0011	.0152	289.
.0250	-128.	-120.	109.	43.	-125.	-113.	-.0046	.0009	-.0012	.0150	.0038	.0176	528.
.0260	-167.	-159.	124.	62.	-189.	-150.	-.0027	.0020	-.0025	.0174	.0042	.0214	758.
.0270	-120.	-109.	102.	74.	-229.	-160.	-.0001	.0035	-.0042	.0214	.0030	.0275	878.
.0280	-137.	-65.	102.	86.	-240.	-138.	.0022	.0048	-.0054	.0223	.0017	.0305	883.
.0290	-231.	-134.	145.	88.	-241.	-122.	.0041	.0056	-.0063	.0201	-.0005	.0276	866.
.0300	-225.	-139.	136.	78.	-248.	-122.	.0070	.0068	-.0079	.0214	-.0049	.0265	872.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKW02F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA	STRESS						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(PSI)						
.0310	-113.	-19.	73.	80.	-263.	-106.	.0106	.0082	-.0097	.0227	-.0081	.0285	897.
.0320	-89.	20.	64.	111.	-276.	-68.	.0128	.0087	-.0101	.0148	-.0065	.0245	929.
.0330	-160.	-68.	124.	160.	-283.	-29.	.0132	.0080	-.0090	-.0017	-.0010	.0127	994.
.0340	-202.	-103.	159.	211.	-306.	0.	.0135	.0072	-.0079	-.0180	.0055	.0017	1131.
.0350	-161.	-52.	135.	246.	-343.	14.	.0144	.0065	-.0072	-.0295	.0107	-.0047	1284.
.0360	-111.	-31.	104.	249.	-342.	23.	.0150	.0054	-.0066	-.0379	.0130	-.0110	1290.
.0370	-51.	-14.	83.	219.	-259.	66.	.0144	.0038	-.0053	-.0449	.0125	-.0186	1051.
.0380	29.	80.	49.	165.	-108.	159.	.0128	.0019	-.0036	-.0499	.0100	-.0247	769.
.0390	87.	155.	0.	80.	60.	241.	.0109	-.0002	-.0021	-.0502	.0048	-.0297	795.
.0400	152.	142.	-45.	-35.	208.	254.	.0094	-.0021	-.0015	-.0431	-.0037	-.0334	1002.
.0410	323.	229.	-145.	-132.	320.	245.	.0084	-.0034	-.0015	-.0323	-.0104	-.0306	1292.
.0420	447.	361.	-212.	-154.	393.	268.	.0060	-.0049	.0003	-.0299	-.0075	-.0264	1523.
.0430	378.	302.	-156.	-113.	421.	279.	.0011	-.0073	.0038	-.0394	.0044	-.0296	1574.
.0440	249.	96.	-53.	-52.	381.	210.	-.0039	-.0098	.0072	-.0491	.0179	-.0361	1334.
.0450	252.	30.	-39.	11.	270.	93.	-.0070	-.0107	.0091	-.0495	.0297	-.0341	871.
.0460	316.	84.	-81.	64.	163.	-3.	-.0093	-.0108	.0101	-.0442	.0391	-.0271	532.
.0470	274.	2.	-55.	80.	154.	-55.	-.0129	-.0113	.0117	-.0399	.0436	-.0282	554.
.0480	184.	-145.	-1.	48.	240.	-64.	-.0172	-.0119	.0134	-.0335	.0420	-.0344	771.
.0490	208.	-106.	-47.	-19.	338.	-45.	-.0197	-.0112	.0135	-.0172	.0347	-.0335	1039.
.0500	311.	16.	-163.	-115.	401.	-52.	-.0203	-.0093	.0119	.0078	.0230	-.0276	1280.
.0510	347.	5.	-230.	-213.	442.	-92.	-.0211	-.0077	.0102	.0308	.0108	-.0269	1519.
.0520	266.	-76.	-224.	-255.	451.	-109.	-.0231	-.0068	.0100	.0423	.0060	-.0305	1611.
.0530	129.	-115.	-192.	-221.	394.	-99.	-.0254	-.0061	.0107	.0435	.0106	-.0319	1407.
.0540	15.	-167.	-162.	-160.	266.	-132.	-.0265	-.0052	.0111	.0431	.0179	-.0300	1026.
.0550	-40.	-249.	-144.	-107.	99.	-218.	-.0263	-.0041	.0107	.0453	.0232	-.0253	799.
.0560	-107.	-273.	-140.	-57.	-58.	-279.	-.0257	-.0032	.0103	.0463	.0280	-.0181	885.
.0570	-201.	-257.	-124.	-26.	-147.	-269.	-.0258	-.0031	.0106	.0438	.0311	-.0116	937.
.0580	-298.	-274.	-92.	-54.	-145.	-225.	-.0263	-.0037	.0109	.0428	.0275	-.0081	830.
.0590	-330.	-252.	-99.	-143.	-97.	-178.	-.0257	-.0043	.0101	.0484	.0166	-.0019	755.
.0600	-284.	-105.	-177.	-250.	-60.	-124.	-.0235	-.0046	.0081	.0589	.0037	.0121	868.
.0610	-230.	59.	-253.	-339.	-37.	-65.	-.0209	-.0050	.0061	.0662	-.0069	.0284	1055.
.0620	-244.	123.	-247.	-384.	-27.	-9.	-.0193	-.0064	.0054	.0634	-.0122	.0403	1170.
.0630	-322.	133.	-176.	-360.	-69.	39.	-.0184	-.0084	.0058	.0496	-.0101	.0495	1121.
.0640	-396.	158.	-97.	-275.	-194.	52.	-.0169	-.0103	.0063	.0302	-.0025	.0600	1037.
.0650	-424.	167.	-19.	-169.	-362.	17.	-.0144	-.0120	.0065	.0102	.0054	.0702	1218.
.0660	-429.	146.	79.	-67.	-502.	-20.	-.0119	-.0137	.0066	-.0101	.0108	.0767	1542.
.0670	-437.	144.	186.	18.	-560.	-1.	-.0097	-.0154	.0069	-.0310	.0127	.0790	1706.
.0680	-390.	193.	264.	59.	-521.	70.	-.0076	-.0167	.0067	-.0475	.0080	.0780	1609.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKW02F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.0580	-290.	-274.	-92.	-54.	-145.	-225.	-.0263	-.0037	.0109	.0428	.0275	-.0081	830.
.0590	-330.	-252.	-99.	-143.	-97.	-178.	-.0257	-.0043	.0101	.0484	.0166	-.0019	755.
.0600	-284.	-105.	-177.	-250.	-60.	-124.	-.0235	-.0046	.0081	.0589	.0037	.0121	868.
.0610	-230.	59.	-253.	-374.	-37.	-65.	-.0209	-.0050	.0061	.0662	-.0069	.0284	1055.
.0620	-244.	123.	-247.	-374.	-27.	-9.	-.0193	-.0064	.0054	.0634	-.0122	.0403	1170.
.0630	-322.	133.	-176.	-360.	-69.	39.	-.0184	-.0084	.0058	.0496	-.0101	.0495	1121.
.0640	-396.	158.	-97.	-275.	-194.	52.	-.0169	-.0103	.0063	.0302	-.0025	.0600	1037.
.0650	-424.	167.	-19.	-169.	-362.	17.	-.0144	-.0120	.0065	.0102	.0054	.0702	1218.
.0660	-429.	146.	79.	-67.	-502.	-20.	-.0119	-.0137	.0066	-.0101	.0108	.0767	1542.
.0670	-437.	144.	186.	18.	-560.	-1.	-.0097	-.0154	.0069	-.0310	.0127	.0790	1706.
.0680	-390.	123.	264.	59.	-521.	70.	-.0076	-.0167	.0067	-.0475	.0080	.0780	1609.

ADLPIPE PAGE 2344 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.29.
 S/RV PIPING KEWAUNEE CKW00F 2 RUP DISK
 2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
 LOADS
 SHOCK
 PRESSURE
 ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
 FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA	DX	DY	DZ	RX	RY	RZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	Mx (FT-LB)	My (FT-LB)	Mz (FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.0690	-266.	280.	292.	34.	-403.	154.	-.0048	-.0174	.0054	-.0546	-.0058	.0740	1316.
.0700	-111.	377.	289.	-34.	-251.	231.	-.0015	-.0173	.0030	-.0543	-.0255	.0669	1042.
.0710	24.	451.	287.	-95.	-103.	304.	.0017	-.0168	.0004	-.0530	-.0446	.0566	1017.
.0720	142.	493.	304.	-108.	14.	366.	.0044	-.0160	-.0016	-.0557	-.0577	.0437	1162.
.0730	229.	489.	357.	-51.	69.	405.	.0065	-.0149	-.0028	-.0644	-.0620	.0289	1258.
.0740	247.	409.	451.	74.	36.	394.	.0082	-.0135	-.0033	-.0777	-.0577	.0128	1224.
.0750	226.	262.	554.	234.	-74.	320.	.0101	-.0116	-.0037	-.0907	-.0482	-.0034	1227.
.0760	226.	115.	629.	394.	-208.	213.	.0121	-.0091	-.0044	-.0990	-.0372	-.0178	1502.
.0770	232.	5.	670.	525.	-300.	131.	.0138	-.0061	-.0050	-.1023	-.0267	-.0311	1883.
.0780	214.	-98.	685.	595.	-307.	97.	.0146	-.0030	-.0057	-.0994	-.0197	-.0453	2059.
.0790	221.	-177.	643.	578.	-228.	91.	.0150	.0003	-.0069	-.0861	-.0189	-.0597	1911.
.0800	287.	-174.	513.	484.	-99.	100.	.0155	.0040	-.0091	-.0616	-.0232	-.0713	1534.
.0810	345.	-131.	338.	352.	42.	119.	.0156	.0079	-.0113	-.0323	-.0281	-.0812	1136.
.0820	730.	-153.	188.	218.	174.	133.	.0146	.0113	-.0127	-.0050	-.0294	-.0924	940.
.0830	276.	-223.	65.	114.	269.	129.	.0126	.0143	-.0132	.0177	-.0244	-.1023	974.
.0840	223.	-264.	-59.	65.	292.	105.	.0108	.0173	-.0129	.0360	-.0114	-.1059	965.
.0850	150.	-308.	-172.	59.	242.	49.	.0091	.0204	-.0122	.0509	.0076	-.1037	771.
.0860	54.	-408.	-259.	61.	159.	-41.	.0076	.0232	-.0113	.0644	.0278	-.0990	533.
.0870	-26.	-497.	-343.	50.	89.	-127.	.0061	.0258	-.0104	.0783	.0462	-.0917	498.
.0880	-87.	-506.	-448.	18.	59.	-171.	.0046	.0282	-.0096	.0926	.0618	-.0810	553.
.0890	-135.	-486.	-558.	-51.	79.	-179.	.0031	.0303	-.0089	.1079	.0722	-.0695	616.
.0900	-163.	-469.	-667.	-162.	141.	-177.	.0018	.0321	-.0088	.1251	.0761	-.0583	846.
.0910	-146.	-399.	-787.	-280.	207.	-164.	.0010	.0337	-.0091	.1417	.0768	-.0450	1171.
.0920	-122.	-283.	-891.	-365.	248.	-137.	.0003	.0348	-.0090	.1521	.0785	-.0303	1406.
.0930	-130.	-218.	-925.	-405.	257.	-117.	-.0009	.0351	-.0082	.1529	.0821	-.0184	1503.
.0940	-185.	-224.	-984.	-404.	234.	-117.	-.0024	.0345	-.0066	.1450	.0862	-.0097	1464.
.0950	-213.	-214.	-814.	-370.	177.	-132.	-.0035	.0335	-.0049	.1327	.0894	-.0000	1311.
.0960	-192.	-157.	-742.	-329.	118.	-147.	-.0038	.0325	-.0037	.1197	.0886	.0118	1153.
.0970	-134.	-94.	-656.	-309.	107.	-148.	-.0037	.0312	-.0029	.1078	.0811	.0231	1090.
.0980	-60.	-24.	-554.	-317.	160.	-117.	-.0035	.0295	-.0024	.0971	.0666	.0329	1137.
.0990	32.	83.	-455.	-345.	254.	-58.	-.0030	.0277	-.0024	.0884	.0467	.0431	1315.
.1000	146.	208.	-367.	-382.	347.	-4.	-.0018	.0259	-.0032	.0822	.0232	.0541	1570.
.1010	259.	304.	-257.	-405.	406.	20.	.0000	.0242	-.0043	.0763	-.0011	.0649	1745.
.1020	329.	360.	-112.	-382.	407.	21.	.0021	.0223	-.0053	.0662	-.0218	.0748	1700.
.1030	346.	372.	74.	-299.	344.	5.	.0043	.0203	-.0058	.0503	-.0370	.0838	1385.
.1040	334.	341.	283.	-170.	224.	-35.	.0070	.0184	-.0060	.0309	-.0479	.0917	860.
.1050	317.	293.	486.	-20.	63.	-94.	.0105	.0167	-.0064	.0113	-.0569	.0985	349.
.1060	294.	255.	665.	129.	-111.	-147.	.0145	.0154	-.0071	-.0069	-.0654	.1027	683.

ADLPIPE PAGE 2345 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.29.
 S/RV PIPING KEWAUNEE CKW00F 2 RUP DISK
 2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
 LOADS
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INTERNAL FORCES IN THE PIPING
 FORCES AND MOMENTS ACT ON THE PIPING

.0960	-192.	-157.	-742.	-229.	118.	-147.	-.0028	.0325	-.0037	.1197	.0886	.0118	1153.
.0970	-134.	-94.	-656.	-309.	107.	-148.	-.0037	.0312	-.0029	.1078	.0811	.0231	1090.
.0980	-60.	-24.	-554.	-317.	160.	-117.	-.0035	.0295	-.0024	.0971	.0666	.0329	1137.
.0990	30.	83.	-455.	-345.	254.	-58.	-.0030	.0277	-.0024	.0884	.0467	.0431	1315.
.1000	146.	202.	-762.	-322.	347.	-4.	-.0018	.0259	-.0032	.0822	.0232	.0541	1570.
.1010	259.	304.	-257.	-405.	406.	20.	.0000	.0242	-.0043	.0763	-.0011	.0649	1745.
.1020	329.	360.	-112.	-322.	407.	21.	.0021	.0223	-.0053	.0662	-.0218	.0748	1700.
.1030	346.	372.	74.	-299.	344.	5.	.0043	.0203	-.0058	.0503	-.0370	.0838	1385.
.1040	334.	341.	283.	-170.	224.	-35.	.0070	.0184	-.0060	.0309	-.0479	.0917	860.
.1050	317.	293.	486.	-20.	63.	-74.	.0105	.0167	-.0064	.0113	-.0569	.0985	349.
.1060	294.	255.	665.	129.	-111.	-147.	.0145	.0154	-.0071	-.0069	-.0654	.1027	683.

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S/RV PIPING KEWAUNEE CKNW02F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

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PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	59	MEMBER	1	SEQUENCE	04	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1070	251.	220.	814.	255.	-268.	-174.	.0104	.0140	-.0079	-.0236	-.0744	.1019	1243.		
.1080	170.	166.	936.	349.	-393.	-168.	.0219	.0126	-.0086	-.0392	-.0837	.0938	1679.		
.1090	59.	111.	1017.	413.	-501.	-133.	.0251	.0112	-.0093	-.0533	-.0921	.0800	2015.		
.1100	-8.	159.	1025.	457.	-603.	-64.	.0283	.0100	-.0101	-.0649	-.0983	.0644	2309.		
.1110	-121.	166.	1013.	487.	-705.	9.	.0310	.0088	-.0104	-.0768	-.1012	.0433	2607.		
.1120	-311.	77.	1005.	506.	-806.	71.	.0328	.0071	-.0100	-.0902	-.1005	.0165	2902.		
.1130	-477.	32.	956.	514.	-893.	140.	.0346	.0058	-.0093	-.1010	-.0975	-.0093	3164.		
.1140	-550.	65.	851.	496.	-943.	218.	.0366	.0051	-.0086	-.1061	-.0943	-.0314	3308.		
.1150	-594.	82.	722.	443.	-932.	295.	.0382	.0045	-.0076	-.1067	-.0919	-.0526	3265.		
.1160	-643.	85.	581.	362.	-862.	382.	.0388	.0040	-.0061	-.1043	-.0891	-.0731	3072.		
.1170	-678.	110.	419.	257.	-757.	471.	.0388	.0037	-.0045	-.0977	-.0854	-.0906	2822.		
.1180	-646.	175.	225.	135.	-637.	536.	.0386	.0039	-.0032	-.0854	-.0807	-.1029	2567.		
.1190	-642.	168.	46.	26.	-537.	556.	.0377	.0043	-.0015	-.0727	-.0712	-.1117	2353.		
.1200	-685.	122.	-105.	-34.	-480.	542.	.0360	.0049	.0008	-.0634	-.0535	-.1153	2206.		
.1210	-686.	117.	-241.	-46.	-460.	501.	.0342	.0060	.0035	-.0554	-.0297	-.1113	2075.		
.1220	-677.	61.	-333.	-32.	-462.	412.	.0321	.0075	.0065	-.0476	-.0037	-.1035	1885.		
.1230	-649.	-18.	-403.	-14.	-456.	292.	.0297	.0092	.0094	-.0387	.0210	-.0934	1646.		
.1240	-616.	-76.	-465.	-12.	-409.	177.	.0270	.0111	.0123	-.0276	.0415	-.0822	1357.		
.1250	-553.	-111.	-522.	-59.	-283.	87.	.0241	.0133	.0145	-.0115	.0535	-.0717	918.		
.1260	-404.	-107.	-595.	-170.	-67.	18.	.0216	.0159	.0156	.0121	.0552	-.0611	558.		
.1270	-234.	-81.	-682.	-304.	-189.	-28.	.0196	.0190	.0158	.0384	.0518	-.0497	1093.		
.1280	-39.	20.	-786.	-416.	431.	-52.	.0180	.0225	.0156	.0627	.0484	-.0358	1829.		
.1290	125.	88.	-838.	-482.	622.	-86.	.0165	.0259	.0154	.0805	.0474	-.0241	2408.		
.1300	225.	38.	-807.	-491.	734.	-165.	.0149	.0289	.0157	.0893	.0492	-.0176	2733.		
.1310	311.	-26.	-728.	-427.	757.	-274.	.0136	.0317	.0162	.0894	.0552	-.0121	2771.		
.1320	365.	-91.	-627.	-301.	713.	-388.	.0129	.0344	.0171	.0816	.0643	-.0064	2633.		
.1330	431.	-168.	-501.	-167.	671.	-491.	.0129	.0369	.0178	.0712	.0703	-.0019	2579.		
.1340	530.	-251.	-370.	-70.	675.	-569.	.0135	.0391	.0179	.0631	.0688	.0010	2694.		
.1350	666.	-250.	-290.	-16.	723.	-598.	.0150	.0413	.0172	.0589	.0609	.0054	2853.		
.1360	813.	-140.	-271.	-4.	796.	-571.	.0169	.0434	.0157	.0578	.0484	.0111	2980.		
.1370	855.	-92.	-235.	-34.	873.	-526.	.0184	.0445	.0140	.0570	.0328	.0121	3102.		
.1380	830.	-101.	-181.	-85.	918.	-489.	.0199	.0451	.0119	.0568	.0162	.0112	3174.		
.1390	780.	-70.	-156.	-111.	880.	-463.	.0224	.0456	.0094	.0556	.0043	.0159	3044.		
.1400	729.	14.	-154.	-80.	752.	-440.	.0258	.0461	.0070	.0504	-.0001	.0277	2663.		
.1410	625.	65.	-114.	-12.	575.	-424.	.0292	.0462	.0053	.0402	.0002	.0407	2174.		
.1420	427.	-5.	-7.	65.	375.	-429.	.0320	.0455	.0042	.0265	.0014	.0499	1745.		
.1430	237.	-54.	76.	132.	164.	-443.	.0352	.0447	.0028	.0150	.0009	.0601	1490.		
.1440	104.	-8.	90.	172.	-35.	-439.	.0391	.0441	.0009	.0083	-.0024	.0733	1438.		

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CONDITION 24

LOADS

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ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.1330	431.	-168.	501.	-167.	671.	-491.	.0129	.0369	.0178	.0712	.0703	-.0019	2579.
.1340	530.	-251.	-370.	-70.	675.	-569.	.0135	.0391	.0179	.0631	.0688	.0010	2694.
.1350	666.	-250.	-290.	-12.	723.	-592.	.0150	.0413	.0172	.0589	.0609	.0054	2853.
.1360	811.	-140.	-271.	-4.	796.	-571.	.0169	.0434	.0157	.0578	.0484	.0111	2980.
.1370	951.	-92.	-235.	-74.	871.	-526.	.0184	.0445	.0140	.0570	.0328	.0121	3102.
.1380	1030.	-101.	-181.	-15.	915.	-489.	.0199	.0451	.0119	.0568	.0162	.0112	3174.
.1390	1101.	-70.	-156.	-111.	980.	-463.	.0224	.0456	.0094	.0556	.0043	.0159	3044.
.1400	1209.	14.	-154.	-70.	1052.	-440.	.0258	.0461	.0070	.0504	-.0001	.0277	2663.
.1410	1325.	65.	-114.	-12.	1135.	-424.	.0292	.0462	.0053	.0402	.0002	.0407	2174.
.1420	1427.	-5.	-7.	65.	1225.	-429.	.0320	.0455	.0042	.0265	.0014	.0499	1745.
.1430	1537.	-54.	76.	172.	1320.	-443.	.0352	.0447	.0028	.0150	.0009	.0601	1490.
.1440	1644.	-8.	90.	172.	1420.	-439.	.0391	.0441	.0009	.0083	-.0024	.0733	1438.

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2 SAFETY COLD FKW24F--2 PSV

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INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA	DZ	RX	RY	RZ	STRESS		
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	FX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	(PSI)
.1450	-9.	57.	86.	169.	-171.	-397.	.0427	.0432	-.0012	.0048	-.0096	.0842	1412.
.1460	-119.	103.	92.	126.	-231.	-313.	.0454	.0419	-.0032	.0026	-.0204	.0901	1245.
.1470	-231.	150.	82.	72.	-265.	-210.	.0475	.0402	-.0051	.0000	-.0308	.0936	1052.
.1480	-283.	276.	22.	35.	-320.	-109.	.0495	.0387	-.0069	-.0026	-.0387	.0983	1035.
.1490	-331.	369.	-15.	27.	-400.	-37.	.0508	.0367	-.0081	-.0087	-.0436	.0995	1224.
.1500	-422.	331.	28.	54.	-487.	2.	.0505	.0338	-.0079	-.0217	-.0450	.0934	1492.
.1510	-475.	287.	95.	128.	-576.	32.	.0491	.0304	-.0065	-.0404	-.0418	.0852	1797.
.1520	-474.	296.	146.	230.	-659.	67.	.0468	.0267	-.0041	-.0624	-.0348	.0777	2140.
.1530	-430.	311.	196.	336.	-700.	102.	.0435	.0224	-.0013	-.0830	-.0287	.0678	2383.
.1540	-391.	250.	264.	302.	-676.	125.	.0386	.0175	.0016	-.0995	-.0272	.0515	2391.
.1550	-316.	215.	294.	379.	-588.	159.	.0325	.0123	.0044	-.1103	-.0289	.0332	2182.
.1560	-171.	310.	251.	347.	-446.	231.	.0253	.0070	.0073	-.1161	-.0309	.0168	1856.
.1570	-66.	365.	218.	292.	-259.	315.	.0164	.0012	.0105	-.1204	-.0326	-.0028	1524.
.1580	18.	329.	216.	218.	-49.	371.	.0063	-.0049	.0140	-.1222	-.0346	-.0259	1319.
.1590	159.	321.	188.	158.	139.	392.	-.0039	-.0106	.0174	-.1205	-.0346	-.0460	1354.
.1600	311.	344.	144.	139.	280.	387.	-.0143	-.0158	.0209	-.1189	-.0296	-.0622	1514.
.1610	399.	273.	153.	152.	401.	352.	-.0254	-.0209	.0252	-.1196	-.0211	-.0804	1686.
.1620	455.	112.	210.	173.	510.	286.	-.0370	-.0255	.0295	-.1193	-.0121	-.1010	1875.
.1630	504.	-47.	248.	198.	609.	201.	-.0477	-.0290	.0330	-.1146	-.0024	-.1180	2041.
.1640	587.	-117.	215.	221.	665.	113.	-.0566	-.0307	.0350	-.1026	.0077	-.1275	2160.
.1650	656.	-180.	157.	222.	715.	26.	-.0644	-.0311	.0357	-.0845	.0164	-.1343	2278.
.1660	627.	-335.	129.	199.	762.	-59.	-.0715	-.0306	.0356	-.0636	.0235	-.1431	2406.
.1670	565.	-465.	81.	167.	786.	-135.	-.0770	-.0287	.0342	-.0394	.0300	-.1490	2478.
.1680	507.	-532.	-11.	137.	760.	-213.	-.0803	-.0252	.0315	-.0116	.0360	-.1491	2438.
.1690	441.	-591.	-109.	107.	704.	-299.	-.0816	-.0205	.0278	.0182	.0399	-.1461	2347.
.1700	321.	-701.	-170.	64.	635.	-382.	-.0813	-.0152	.0234	.0470	.0417	-.1427	2262.
.1710	162.	-816.	-218.	27.	554.	-445.	-.0795	-.0092	.0186	.0736	.0424	-.1370	2163.
.1720	66.	-812.	-315.	-13.	461.	-479.	-.0756	-.0024	.0128	.1005	.0418	-.1245	2023.
.1730	-39.	-780.	-419.	-64.	359.	-492.	-.0704	.0046	.0065	.1251	.0397	-.1093	1863.
.1740	-189.	-775.	-493.	-131.	255.	-487.	-.0647	.0109	-.0001	.1454	.0363	-.0948	1719.
.1750	-339.	-741.	-561.	-201.	147.	-461.	-.0585	.0166	-.0066	.1606	.0327	-.0786	1594.
.1760	-477.	-657.	-631.	-256.	26.	-415.	-.0518	.0215	-.0127	.1691	.0307	-.0588	1487.
.1770	-567.	-526.	-685.	-290.	-90.	-354.	-.0450	.0254	-.0183	.1701	.0301	-.0355	1423.
.1780	-650.	-429.	-687.	-304.	-211.	-293.	-.0385	.0277	-.0229	.1626	.0297	-.0115	1436.
.1790	-671.	-317.	-646.	-297.	-309.	-234.	-.0324	.0285	-.0264	.1479	.0291	.0142	1485.
.1800	-627.	-150.	-596.	-264.	-392.	-167.	-.0268	.0278	-.0289	.1260	.0291	.0419	1524.
.1810	-570.	-3.	-502.	-213.	-450.	-94.	-.0227	.0253	-.0299	.0961	.0292	.0672	1541.
.1820	-487.	127.	-269.	-165.	-465.	-18.	-.0201	.0211	-.0299	.0617	.0276	.0882	1502.

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CONDITION 24
LOADS
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INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.1720	66.	-812.	-215.	-13.	461.	-479.	-.756	-.0024	.0128	.1005	.0418	-.1245	2023.
.1730	-39.	-780.	-419.	-64.	359.	-492.	-.0704	.0046	.0065	.1251	.0397	-.1093	1863.
.1740	-180.	-775.	-497.	-171.	255.	-407.	-.0647	.0109	-.0001	.1454	.0363	-.0948	1719.
.1750	-338.	-741.	-561.	-201.	147.	-461.	-.0585	.0166	-.0066	.1606	.0327	-.0786	1594.
.1760	-472.	-657.	-631.	-216.	26.	-415.	-.0518	.0215	-.0127	.1691	.0307	-.0588	1487.
.1770	-567.	-526.	-685.	-206.	-98.	-354.	-.0450	.0254	-.0183	.1701	.0301	-.0355	1423.
.1780	-650.	-429.	-683.	-304.	-211.	-293.	-.0385	.0277	-.0229	.1626	.0297	-.0115	1436.
.1790	-671.	-317.	-646.	-297.	-309.	-234.	-.0324	.0285	-.0264	.1479	.0291	.0142	1485.
.1800	-622.	-150.	-596.	-264.	-392.	-167.	-.0268	.0278	-.0289	.1260	.0291	.0419	1524.
.1810	-576.	-3.	-502.	-213.	-450.	-94.	-.0227	.0253	-.0299	.0961	.0292	.0672	1541.
.1820	-407.	127.	-360.	-165.	-465.	-18.	-.0201	.0211	-.0299	.0617	.0276	.0882	1502.

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ADLPIPE STRESS ANALYSIS

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18.29.29.

S/RV PIPING KEWAUNEE GKLODF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
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INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	59	MEMBER	1	SEQUENCE	84	LOCATION	END	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1830	-350.	258.	-220.	-120.	-446.	62.	-.0190	.0155	-.0291	.0244	.0246	.1058	1418.	
.1840	-197.	432.	-82.	-68.	-407.	153.	-.0190	.0089	-.0277	-.0145	.0221	.1215	1338.	
.1850	-13.	606.	61.	-7.	-347.	245.	-.0205	.0014	-.0256	-.0547	.0197	.1331	1293.	
.1860	147.	702.	245.	57.	-265.	320.	-.0236	-.0067	-.0228	-.0951	.0163	.1374	1276.	
.1870	332.	774.	441.	129.	-172.	372.	-.0275	-.0150	-.0196	-.1329	.0117	.1367	1308.	
.1880	529.	835.	631.	218.	-82.	401.	-.0319	-.0228	-.0162	-.1670	.0066	.1324	1412.	
.1890	729.	862.	819.	315.	15.	407.	-.0366	-.0300	-.0127	-.1957	.0002	.1235	1567.	
.1900	911.	825.	1014.	405.	127.	392.	-.0418	-.0363	-.0094	-.2175	-.0082	.1086	1756.	
.1910	1057.	731.	1196.	486.	238.	357.	-.0469	-.0414	-.0065	-.2312	-.0175	.0889	1972.	
.1920	1201.	653.	1317.	560.	328.	310.	-.0514	-.0449	-.0045	-.2350	-.0261	.0679	2187.	
.1930	1310.	560.	1388.	625.	388.	247.	-.0554	-.0468	-.0032	-.2298	-.0330	.0447	2361.	
.1940	1320.	396.	1441.	681.	416.	169.	-.0594	-.0474	-.0022	-.2182	-.0371	.0168	2482.	
.1950	1267.	181.	1467.	730.	402.	77.	-.0631	-.0469	-.0015	-.2007	-.0378	-.0139	2548.	
.1960	1166.	-29.	1435.	771.	345.	-25.	-.0658	-.0450	-.0013	-.1766	-.0351	-.0437	2570.	
.1970	1035.	-228.	1345.	791.	259.	-171.	-.0676	-.0420	-.0014	-.1460	-.0303	-.0715	2564.	
.1980	858.	-438.	1217.	775.	172.	-227.	-.0686	-.0384	-.0018	-.1098	-.0249	-.0982	2512.	
.1990	647.	-640.	1044.	709.	102.	-299.	-.0691	-.0343	-.0022	-.0685	-.0199	-.1230	2361.	
.2000	411.	-787.	804.	588.	50.	-338.	-.0687	-.0301	-.0030	-.0222	-.0156	-.1435	2069.	
.2010	165.	-871.	499.	412.	11.	-345.	-.0675	-.0258	-.0041	.0277	-.0115	-.1587	1635.	
.2020	-102.	-918.	157.	191.	-20.	-322.	-.0659	-.0220	-.0053	.0783	-.0071	-.1690	1140.	
.2030	-389.	-935.	-201.	-54.	-53.	-274.	-.0638	-.0188	-.0064	.1258	-.0007	-.1744	863.	
.2040	-682.	-910.	-560.	-293.	-105.	-204.	-.0615	-.0165	-.0069	.1665	.0093	-.1735	1132.	
.2050	-969.	-850.	-900.	-507.	-182.	-125.	-.0587	-.0152	-.0067	.1981	.0229	-.1666	1683.	
.2060	-1234.	-791.	-1193.	-692.	-275.	-48.	-.0557	-.0149	-.0058	.2196	.0379	-.1549	2271.	
.2070	-1456.	-704.	-1427.	-847.	-366.	27.	-.0524	-.0157	-.0043	.2309	.0522	-.1393	2810.	
.2080	-1614.	-593.	-1607.	-971.	-440.	112.	-.0489	-.0173	-.0022	.2323	.0645	-.1199	3261.	
.2090	-1696.	-440.	-1734.	-1069.	-477.	213.	-.0451	-.0197	.0002	.2249	.0731	-.0974	3620.	
.2100	-1706.	-263.	-1799.	-1150.	-468.	329.	-.0412	-.0227	.0026	.2101	.0761	-.0740	3907.	
.2110	-1649.	-72.	-1801.	-1213.	-418.	451.	-.0372	-.0261	.0048	.1889	.0734	-.0506	4137.	
.2120	-1519.	138.	-1743.	-1244.	-348.	570.	-.0332	-.0296	.0067	.1615	.0661	-.0274	4295.	
.2130	-1342.	350.	-1617.	-1286.	-274.	677.	-.0293	-.0332	.0084	.1275	.0559	-.0048	4342.	
.2140	-1135.	526.	-1404.	-1149.	-207.	757.	-.0255	-.0366	.0101	.0867	.0439	.0158	4232.	
.2150	-902.	650.	-1102.	-1005.	-159.	799.	-.0219	-.0396	.0119	.0402	.0309	.0346	3936.	
.2160	-632.	743.	-738.	-798.	-135.	798.	-.0181	-.0421	.0135	-.0093	.0173	.0528	3459.	
.2170	-320.	812.	-329.	-543.	-131.	758.	-.0141	-.0437	.0148	-.0591	.0028	.0704	2864.	
.2180	-23.	834.	116.	-262.	-128.	687.	-.0104	-.0445	.0157	-.1068	-.0131	.0854	2271.	
.2190	265.	809.	575.	17.	-114.	595.	-.0070	-.0447	.0163	-.1494	-.0309	.0971	1844.	
.2200	547.	770.	1009.	276.	-89.	491.	-.0037	-.0438	.0161	-.1837	-.0500	.1066	1733.	

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DIG/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKLODF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.2100	-1706.	-263.	-1792.	-1150.	-460.	329.	-.0141	-.0227	.0026	.2101	.0761	-.0740	3907.
.2110	-1645.	-72.	-1701.	-1213.	-418.	451.	-.0372	-.0761	.0048	.1889	.0734	-.0506	4137.
.2120	-1510.	138.	-1743.	-1244.	-348.	570.	-.0332	-.0296	.0067	.1615	.0661	-.0274	4295.
.2130	-1347.	350.	-1617.	-1026.	-274.	677.	-.0293	-.0332	.0084	.1275	.0554	-.0048	4342.
.2140	-1135.	576.	-1404.	-1145.	-207.	757.	-.0255	-.0366	.0101	.0867	.0434	.0158	4232.
.2150	-902.	650.	-1102.	-1015.	-159.	799.	-.0219	-.0396	.0119	.0402	.0304	.0346	3936.
.2160	-632.	743.	-738.	-798.	-135.	798.	-.0181	-.0421	.0135	-.0093	.0173	.0528	3459.
.2170	-320.	812.	-329.	-543.	-131.	758.	-.0141	-.0437	.0148	-.0591	.0028	.0704	2864.
.2180	-27.	834.	116.	-262.	-128.	687.	-.0104	-.0445	.0157	-.1068	-.0131	.0854	2271.
.2190	261.	839.	575.	17.	-114.	595.	-.0070	-.0447	.0163	-.1494	-.0309	.0971	1844.
.2200	547.	770.	1008.	276.	-80.	491.	-.0027	-.0438	.0161	-.1837	-.0500	.1066	1733.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.2210	809.	737.	1383.	503.	-58.	379.	-.0004	-.0420	.0151	-.2077	-.0694	.1152	1924.	
.2220	1041.	691.	1700.	695.	-26.	263.	.0029	-.0392	.0135	-.2218	-.0874	.1221	2263.	
.2230	1213.	612.	1961.	855.	-1.	143.	.0059	-.0358	.0116	-.2273	-.1023	.1262	2638.	
.2240	1319.	508.	2158.	989.	1.	18.	.0087	-.0318	.0097	-.2253	-.1122	.1278	3008.	
.2250	1365.	388.	2279.	1096.	-27.	-112.	.0114	-.0273	.0080	-.2161	-.1164	.1274	3351.	
.2260	1349.	251.	2322.	1168.	-81.	-243.	.0143	-.0225	.0063	-.2000	-.1154	.1244	3637.	
.2270	1270.	100.	2283.	1194.	-144.	-359.	.0170	-.0174	.0049	-.1772	-.1099	.1181	3817.	
.2280	1133.	-38.	2149.	1162.	-201.	-443.	.0197	-.0123	.0036	-.1479	-.1005	.1088	3831.	
.2290	951.	-142.	1909.	1064.	-242.	-402.	.0224	-.0072	.0023	-.1120	-.0883	.0966	3628.	
.2300	731.	-208.	1570.	895.	-262.	-475.	.0251	-.0021	.0008	-.0701	-.0744	.0813	3183.	
.2310	473.	-247.	1140.	662.	-261.	-426.	.0276	.0026	-.0006	-.0243	-.0592	.0625	2522.	
.2320	184.	-261.	666.	385.	-249.	-339.	.0299	.0068	-.0019	.0226	-.0422	.0406	1735.	
.2330	-123.	-253.	151.	91.	-233.	-222.	.0319	.0104	-.0027	.0673	-.0229	.0164	1017.	
.2340	-432.	-234.	-368.	-201.	-220.	-89.	.0334	.0133	-.0028	.1074	-.0016	-.0090	945.	
.2350	-729.	-215.	-865.	-475.	-212.	48.	.0347	.0155	-.0023	.1414	.0212	-.0348	1588.	
.2360	-998.	-195.	-1323.	-717.	-210.	180.	.0355	.0169	-.0012	.1683	.0446	-.0596	2339.	
.2370	-1224.	-164.	-1732.	-924.	-210.	305.	.0359	.0175	.0005	.1879	.0676	-.0824	3028.	
.2380	-1403.	-126.	-2075.	-1094.	-200.	422.	.0356	.0172	.0026	.2002	.0889	-.1026	3620.	
.2390	-1533.	-90.	-2340.	-1230.	-173.	526.	.0345	.0162	.0050	.2054	.1071	-.1202	4105.	
.2400	-1601.	-50.	-2524.	-1331.	-120.	613.	.0327	.0145	.0074	.2046	.1214	-.1339	4474.	
.2410	-1594.	4.	-2626.	-1391.	-67.	676.	.0304	.0123	.0098	.1983	.1310	-.1424	4708.	
.2420	-1514.	61.	-2635.	-1403.	8.	709.	.0275	.0096	.0121	.1864	.1360	-.1458	4783.	
.2430	-1369.	101.	-2538.	-1363.	95.	709.	.0242	.0065	.0145	.1684	.1364	-.1443	4683.	
.2440	-1165.	125.	-2339.	-1268.	187.	671.	.0204	.0032	.0170	.1449	.1324	-.1383	4400.	
.2450	-905.	135.	-2049.	-1120.	275.	595.	.0165	-.0001	.0194	.1169	.1244	-.1277	3948.	
.2460	-607.	129.	-1682.	-929.	356.	484.	.0127	-.0033	.0214	.0858	.1125	-.1133	3365.	
.2470	-286.	105.	-1256.	-727.	429.	347.	.0090	-.0062	.0230	.0530	.0973	-.0960	2727.	
.2480	44.	76.	-794.	-465.	492.	196.	.0056	-.0087	.0241	.0200	.0794	-.0763	2146.	
.2490	370.	52.	-322.	-216.	543.	42.	.0028	-.0105	.0243	-.0117	.0596	-.0548	1783.	
.2500	670.	27.	145.	29.	577.	-111.	.0008	-.0115	.0238	-.0411	.0385	-.0327	1790.	
.2510	930.	-9.	597.	260.	589.	-262.	-.0003	-.0118	.0226	-.0672	.0166	-.0110	2116.	
.2520	1146.	-47.	1004.	473.	576.	-406.	-.0002	-.0113	.0205	-.0891	-.0052	.0101	2583.	
.2530	1316.	-77.	1361.	834.	536.	-536.	.0012	-.0090	.017	-.1065	-.0260	.0307	3061.	
.2540	1430.	-104.	1656.	1027.	472.	-643.	.0040	-.0074	.0145	-.1195	-.0447	.0498	3495.	
.2550	1479.	-129.	1880.	954.	386.	-723.	.0081	-.0044	.0108	-.1278	-.0609	.0665	3826.	
.2560	1457.	-146.	2019.	1027.	278.	-773.	.0132	-.0007	.0067	-.1310	-.0742	.0805	4023.	
.2570	1367.	-148.	2062.	1069.	150.	-789.	.0194	.0035	.0021	-.1287	-.0841	.0913	4067.	
.2580	1210.	-130.	2010.	1040.	10.	-767.	.0264	.0080	-.0026	-.1213	-.0903	.0988	3951.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.2470	-287.	100.	255.	-777.	429.	347.	.090	-.0062	.0230	.0530	.0973	-.0960	2727.
.2480	44.	76.	-794.	-465.	492.	196.	.056	-.0087	.0241	.0200	.0794	-.0763	2146.
.2490	370.	52.	-322.	-216.	543.	42.	.0028	-.0105	.0243	-.0117	.0596	-.0548	1783.
.2500	670.	27.	140.	29.	577.	-111.	.0008	-.0115	.0238	-.0411	.0385	-.0327	1700.
.2510	930.	-9.	597.	260.	580.	-262.	-.0003	-.0118	.0226	-.0672	.0166	-.0110	2116.
.2520	1146.	-47.	1004.	473.	576.	-406.	-.0002	-.0113	.0205	-.0891	-.0052	.0101	2583.
.2530	1316.	-77.	1261.	674.	536.	-536.	.0012	-.0099	.0178	-.1065	-.0260	.0307	3066.
.2540	1430.	-104.	1656.	827.	472.	-643.	.0040	-.0074	.0145	-.1195	-.0447	.0498	3495.
.2550	1478.	-129.	1880.	954.	386.	-723.	.0081	-.0044	.0108	-.1278	-.0609	.0665	3826.
.2560	1457.	-146.	2010.	1027.	279.	-773.	.0132	-.0007	.0067	-.1310	-.0742	.0805	4023.
.2570	1367.	-148.	2063.	1069.	150.	-709.	.0194	.0035	.0021	-.1287	-.0841	.0913	4067.
.2580	1210.	-130.	2010.	1040.	10.	-767.	.0264	.0080	-.0026	-.1213	-.0903	.0988	3951.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKW05F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.2590	997.	-96.	1868.	977.	-134.	-704.	.0338	.0126	-.0075	-.1098	-.0927	.1025	3685.	
.2600	730.	-47.	1647.	860.	-275.	-603.	.0413	.0172	-.0121	-.0950	-.0913	.1026	3304.	
.2610	431.	14.	1350.	707.	-410.	-475.	.0489	.0217	-.0165	-.0776	-.0865	.0998	2875.	
.2620	121.	88.	1017.	526.	-535.	-330.	.0562	.0259	-.0204	-.0582	-.0789	.0945	2492.	
.2630	-187.	166.	643.	327.	-643.	-174.	.0631	.0296	-.0237	-.0380	-.0690	.0870	2258.	
.2640	-480.	237.	260.	122.	-728.	-14.	.0691	.0329	-.0262	-.0184	-.0571	.0773	2245.	
.2650	-771.	302.	-118.	-80.	-785.	144.	.0740	.0355	-.0279	.0002	-.0438	.0661	2441.	
.2660	-1013.	364.	-481.	-274.	-816.	292.	.0777	.0377	-.0290	.0178	-.0298	.0544	2763.	
.2670	-1204.	421.	-816.	-450.	-810.	420.	.0803	.0394	-.0294	.0343	-.0158	.0428	3115.	
.2680	-1340.	467.	-1107.	-601.	-793.	524.	.0815	.0407	-.0293	.0489	-.0023	.0315	3420.	
.2690	-1421.	493.	-1336.	-716.	-739.	598.	.0812	.0417	-.0286	.0607	.0104	.0205	3620.	
.2700	-1444.	498.	-1490.	-786.	-786.	636.	.0795	.0423	-.0273	.0692	.0217	.0099	3672.	
.2710	-1399.	453.	-1564.	-808.	-560.	629.	.0767	.0427	-.0255	.0748	.0309	.0005	3551.	
.2720	-1275.	398.	-1560.	-779.	-444.	578.	.0731	.0432	-.0234	.0778	.0377	-.0070	3244.	
.2730	-1082.	325.	-1480.	-698.	-312.	488.	.0687	.0438	-.0211	.0779	.0419	-.0128	2760.	
.2740	-845.	220.	-1322.	-573.	-167.	365.	.0635	.0444	-.0184	.0748	.0438	-.0180	2127.	
.2750	-576.	87.	-1100.	-413.	-12.	215.	.0578	.0451	-.0157	.0697	.0430	-.0226	1415.	
.2760	-273.	-52.	-838.	-230.	143.	42.	.0520	.0460	-.0132	.0639	.0397	-.0262	834.	
.2770	55.	-184.	-558.	-34.	294.	-141.	.0463	.0473	-.0111	.0581	.0342	-.0284	998.	
.2780	381.	-312.	-265.	168.	440.	-323.	.0408	.0487	-.0092	.0517	.0275	-.0300	1737.	
.2790	680.	-447.	35.	370.	576.	-496.	.0355	.0502	-.0075	.0444	.0203	-.0319	2572.	
.2800	951.	-577.	322.	561.	696.	-656.	.0308	.0517	-.0059	.0370	.0128	-.0336	3374.	
.2810	1201.	-684.	574.	734.	791.	-802.	.0268	.0532	-.0047	.0307	.0054	-.0342	4090.	
.2820	1413.	-762.	780.	881.	861.	-923.	.0237	.0547	-.0036	.0251	-.0012	-.0339	4682.	
.2830	1561.	-825.	940.	994.	912.	-1008.	.0212	.0558	-.0025	.0198	-.0064	-.0338	5122.	
.2840	1635.	-873.	1047.	1062.	946.	-1053.	.0193	.0564	-.0016	.0155	-.0104	-.0340	5382.	
.2850	1654.	-883.	1080.	1076.	960.	-1058.	.0182	.0567	-.0009	.0141	-.0133	-.0331	5441.	
.2860	1627.	-837.	1026.	1034.	954.	-1023.	.0181	.0568	-.0007	.0163	-.0154	-.0301	5291.	
.2870	1539.	-753.	901.	928.	932.	-946.	.0187	.0564	-.0008	.0211	-.0162	-.0256	4947.	
.2880	1380.	-656.	726.	798.	897.	-831.	.0196	.0554	-.0010	.0274	-.0158	-.0207	4442.	
.2890	1164.	-545.	509.	622.	843.	-691.	.0211	.0539	-.0012	.0351	-.0141	-.0145	3819.	
.2900	920.	-407.	251.	427.	761.	-538.	.0232	.0522	-.0017	.0441	-.0114	-.0058	3118.	
.2910	654.	-254.	-27.	224.	649.	-381.	.0258	.0503	-.0024	.0535	-.0076	.0052	2389.	
.2920	360.	-115.	-299.	26.	515.	-225.	.0287	.0480	-.0031	.0619	-.0032	.0170	1712.	
.2930	46.	7.	-547.	-160.	365.	-75.	.0315	.0455	-.0038	.0684	.0014	.0289	1233.	
.2940	-262.	126.	-772.	-326.	202.	66.	.0343	.0430	-.0046	.0736	.0054	.0414	1183.	
.2950	-541.	243.	-969.	-470.	32.	190.	.0371	.0405	-.0058	.0778	.0074	.0541	1546.	
.2960	-790.	343.	-1121.	-590.	-133.	295.	.0396	.0380	-.0072	.0806	.0067	.0656	2047.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKW05F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

.2860	1627.	-837.	226.	1034.	954.	-1023.	.181	.0568	-.0007	.0163	-.0154	-.0301	5291.
.2870	1539.	-753.	201.	918.	932.	-946.	.187	.0564	-.0008	.0211	-.0162	-.0256	4947.
.2880	1380.	-656.	726.	798.	897.	-831.	.0196	.0554	-.0010	.0274	-.0158	-.0207	4442.
.2890	1164.	-549.	509.	622.	847.	-691.	.0211	.0539	-.0012	.0351	-.0141	-.0145	3819.
.2900	920.	-407.	251.	407.	761.	-538.	.0232	.0522	-.0017	.0441	-.0114	-.0058	3118.
.2910	654.	-254.	-27.	204.	649.	-381.	.0258	.0503	-.0024	.0535	-.0076	.0052	2389.
.2920	360.	-115.	-299.	26.	515.	-225.	.0287	.0480	-.0031	.0619	-.0032	.0170	1712.
.2930	46.	7.	-547.	-160.	365.	-75.	.0315	.0455	-.0038	.0684	.0014	.0289	1233.
.2940	-262.	126.	-772.	-326.	202.	66.	.0343	.0430	-.0046	.0736	.0054	.0414	1183.
.2950	-546.	243.	-969.	-479.	32.	100.	.0371	.0405	-.0058	.0778	.0074	.0541	1546.
.2960	-799.	343.	-1121.	-500.	-133.	295.	.0396	.0380	-.0072	.0806	.0067	.0656	2047.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.29.

S/RV PIPING KEWAUNEE CKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSVCONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITSINTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA	DX	DY	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)							
.2970	-1014.	421.	-1214.	-679.	-282.	382.	.0417	.0355	-.0087	.0810	.0029	.0752	2519.
.2980	-1182.	483.	-1244.	-726.	-413.	449.	.0431	.0330	-.0102	.0781	-.0037	.0828	2886.
.2990	-1293.	523.	-1200.	-729.	-527.	491.	.0439	.0306	-.0116	.0715	-.0128	.0883	3117.
.3000	-1343.	533.	-1100.	-684.	-627.	499.	.0441	.0281	-.0129	.0613	-.0245	.0914	3205.
.3010	-1332.	515.	-925.	-591.	-714.	473.	.0434	.0255	-.0139	.0471	-.0377	.0922	3166.
.3020	-1266.	475.	-690.	-451.	-785.	422.	.0419	.0227	-.0144	.0285	-.0514	.0908	3038.
.3030	-1157.	412.	-403.	-272.	-837.	351.	.0392	.0196	-.0144	.0057	-.0648	.0871	2882.
.3040	-1011.	328.	-79.	-68.	-867.	263.	.0356	.0161	-.0139	-.0199	-.0778	.0812	2764.
.3050	-823.	238.	261.	144.	-874.	161.	.0311	.0123	-.0130	-.0464	-.0903	.0740	2739.
.3060	-599.	158.	593.	354.	-856.	55.	.0258	.0082	-.0117	-.0728	-.1017	.0660	2823.
.3070	-360.	85.	909.	554.	-808.	-44.	.0196	.0035	-.0098	-.0990	-.1111	.0571	2984.
.3080	-127.	8.	1204.	732.	-732.	-134.	.0125	-.0016	-.0073	-.1245	-.1180	.0465	3175.
.3090	98.	-67.	1462.	881.	-634.	-214.	.0048	-.0070	-.0043	-.1477	-.1222	.0354	3364.
.3100	319.	-121.	1659.	995.	-525.	-285.	-.0030	-.0127	-.0011	-.1672	-.1231	.0249	3530.
.3110	520.	-152.	1789.	1070.	-411.	-341.	-.0109	-.0183	.0025	-.1826	-.1202	.0151	3639.
.3120	676.	-177.	1857.	1104.	-290.	-376.	-.0188	-.0239	.0062	-.1940	-.1132	.0052	3655.
.3130	778.	-200.	1859.	1091.	-165.	-389.	-.0266	-.0294	.0100	-.2006	-.1025	-.0050	3559.
.3140	837.	-203.	1781.	1029.	-44.	-383.	-.0337	-.0342	.0136	-.2009	-.0887	-.0143	3343.
.3150	860.	-178.	1621.	920.	67.	-359.	-.0399	-.0383	.0166	-.1942	-.0726	-.0222	3012.
.3160	836.	-143.	1394.	769.	169.	-318.	-.0452	-.0416	.0190	-.1809	-.0547	-.0293	2584.
.3170	761.	-111.	1119.	504.	264.	-262.	-.0494	-.0438	.0209	-.1623	-.0356	-.0363	2106.
.3180	645.	-75.	804.	376.	344.	-194.	-.0524	-.0450	.0221	-.1388	-.0157	-.0423	1659.
.3190	504.	-32.	455.	155.	402.	-124.	-.0541	-.0450	.0224	-.1107	.0043	-.0469	1363.
.3200	341.	8.	90.	-70.	434.	-59.	-.0543	-.0438	.0219	-.0790	.0236	-.0501	1349.
.3210	159.	35.	-270.	-209.	444.	-1.	-.0534	-.0415	.0207	-.0453	.0416	-.0524	1612.
.3220	-35.	53.	-613.	-494.	435.	53.	-.0514	-.0383	.0188	-.0111	.0581	-.0536	2009.
.3230	-231.	68.	-928.	-678.	408.	101.	-.0486	-.0343	.0162	.0224	.0727	-.0535	2425.
.3240	-416.	75.	-1205.	-836.	366.	137.	-.0450	-.0298	.0131	.0546	.0845	-.0521	2807.
.3250	-578.	74.	-1433.	-966.	312.	158.	-.0409	-.0250	.0095	.0845	.0930	-.0492	3126.
.3260	-710.	70.	-1604.	-1061.	252.	165.	-.0365	-.0201	.0056	.1105	.0983	-.0445	3354.
.3270	-811.	63.	-1707.	-1114.	189.	161.	-.0321	-.0156	.0018	.1309	.1007	-.0383	3472.
.3280	-876.	45.	-1737.	-1125.	128.	145.	-.0279	-.0116	-.0017	.1448	.1002	-.0307	3473.
.3290	-899.	20.	-1693.	-1097.	69.	115.	-.0241	-.0084	-.0050	.1522	.0967	-.0217	3360.
.3300	-867.	1.	-1587.	-1030.	15.	71.	-.0207	-.0061	-.0078	.1530	.0906	-.0109	3142.
.3310	-787.	-8.	-1423.	-929.	-31.	22.	-.0180	-.0049	-.0102	.1468	.0824	.0013	2827.
.3320	-674.	-17.	-1201.	-798.	-61.	-26.	-.0162	-.0049	-.0118	.1333	.0726	.0136	2435.
.3330	-532.	-31.	-930.	-646.	-75.	-72.	-.0152	-.0062	-.0127	.1133	.0614	.0256	1989.
.3340	-357.	-34.	-629.	-479.	-77.	-116.	-.0150	-.0086	-.0130	.0882	.0490	.0374	1516.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.29.

S/RV PIPING KEWAUNEE CKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSVCONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

INTERNAL FORCES IN THE PIPING

.3240	-416.	75.	-1205.	-826.	366.	137.	-.0450	-.0298	.0131	.0546	.0845	-.0521	2807.
.3250	-570.	74.	-1433.	-966.	312.	158.	-.0409	-.0250	.0095	.0845	.0930	-.0492	3126.
.3260	-710.	70.	-1604.	-1061.	252.	165.	-.0365	-.0201	.0056	.1105	.0983	-.0445	3354.
.3270	-811.	63.	-1707.	-1114.	189.	161.	-.0321	-.0156	.0018	.1309	.1007	-.0383	3472.
.3280	-976.	45.	-1737.	-1125.	129.	145.	-.0279	-.0116	-.0017	.1448	.1002	-.0307	3473.
.3290	-990.	20.	-1697.	-1097.	69.	115.	-.0241	-.0084	-.0050	.1522	.0967	-.0217	3360.
.3300	-867.	1.	-1587.	-1020.	15.	71.	-.0207	-.0061	-.0078	.1530	.0906	-.0109	3142.
.3310	-787.	-8.	-1423.	-929.	-31.	22.	-.0180	-.0049	-.0102	.1468	.0824	.0013	2827.
.3320	-674.	-17.	-1201.	-798.	-61.	-26.	-.0162	-.0049	-.0118	.1333	.0726	.0156	2435.
.3330	-532.	-31.	-930.	-646.	-75.	-72.	-.0152	-.0062	-.0127	.1133	.0614	.0256	1989.
.3340	-357.	-34.	-629.	-479.	-76.	-116.	-.0150	-.0086	-.0130	.0882	.0490	.0374	1516.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKW05F 2 RUP DISK
2 SAFETY COLD FRW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.3350	-150.	-19.	-346.	-302.	-60.	-155.	-.0153	-.0119	-.0127	.0594	.0361	.0492	1053.	
.3360	70.	2.	8.	-120.	-50.	-105.	-.0162	-.0161	-.0119	.0272	.0231	.0599	688.	
.3370	284.	16.	336.	60.	-22.	-204.	-.0177	-.0210	-.0105	-.0073	.0107	.0685	649.	
.3380	489.	30.	651.	233.	11.	-212.	-.0194	-.0262	-.0088	-.0422	-.0009	.0751	959.	
.3390	686.	54.	933.	391.	41.	-211.	-.0210	-.0315	-.0070	-.0754	-.0116	.0801	1359.	
.3400	861.	83.	1172.	528.	68.	-200.	-.0225	-.0366	-.0052	-.1053	-.0212	.0830	1731.	
.3410	998.	105.	1368.	638.	94.	-176.	-.0237	-.0413	-.0035	-.1309	-.0294	.0830	2033.	
.3420	1089.	120.	1511.	717.	116.	-138.	-.0247	-.0454	-.0020	-.1511	-.0361	.0801	2249.	
.3430	1137.	136.	1591.	764.	130.	-89.	-.0251	-.0485	-.0010	-.1648	-.0409	.0747	2372.	
.3440	1142.	152.	1605.	778.	131.	-32.	-.0249	-.0507	-.0004	-.1709	-.0439	.0672	2402.	
.3450	1099.	154.	1560.	760.	119.	27.	-.0241	-.0517	-.0004	-.1696	-.0450	.0575	2342.	
.3460	1006.	142.	1461.	715.	93.	87.	-.0228	-.0516	-.0007	-.1612	-.0439	.0457	2211.	
.3470	869.	120.	1311.	648.	54.	149.	-.0211	-.0505	-.0015	-.1463	-.0405	.0325	2029.	
.3480	697.	89.	1116.	560.	4.	207.	-.0189	-.0484	-.0026	-.1251	-.0350	.0184	1815.	
.3490	496.	44.	883.	451.	-53.	259.	-.0164	-.0453	-.0040	-.0982	-.0279	.0058	1590.	
.3500	276.	-8.	620.	325.	-115.	304.	-.0137	-.0416	-.0057	-.0662	-.0197	-.0107	1396.	
.3510	48.	-60.	335.	186.	-174.	343.	-.0109	-.0373	-.0076	-.0305	-.0105	-.0243	1299.	
.3520	-184.	-114.	40.	39.	-227.	377.	-.0082	-.0327	-.0095	.0075	-.0006	-.0369	1345.	
.3530	-411.	-171.	-251.	-111.	-271.	403.	-.0058	-.0280	-.0113	.0463	.0097	-.0481	1517.	
.3540	-621.	-229.	-530.	-258.	-307.	418.	-.0036	-.0234	-.0131	.0847	.0198	-.0573	1762.	
.3550	-800.	-279.	-788.	-394.	-279.	421.	-.0017	-.0191	-.0147	.1213	.0298	-.0639	2028.	
.3560	-946.	-322.	-1014.	-513.	-351.	414.	-.0002	-.0151	-.0159	.1542	.0395	-.0680	2272.	
.3570	-1059.	-366.	-1193.	-610.	-355.	397.	.0008	-.0118	-.0167	.1819	.0485	-.0700	2463.	
.3580	-1133.	-406.	-1321.	-683.	-344.	372.	.0014	-.0093	-.0171	.2036	.0565	-.0699	2587.	
.3590	-1159.	-434.	-1402.	-720.	-321.	340.	.0017	-.0074	-.0171	.2192	.0629	-.0676	2638.	
.3600	-1133.	-445.	-1435.	-753.	-285.	302.	.0017	-.0062	-.0169	.2284	.0674	-.0631	2616.	
.3610	-1064.	-445.	-1415.	-751.	-233.	263.	.0014	-.0057	-.0163	.2306	.0698	-.0572	2523.	
.3620	-957.	-438.	-1343.	-729.	-167.	226.	.0009	-.0060	-.0154	.2257	.0702	-.0503	2363.	
.3630	-811.	-417.	-1225.	-673.	-91.	190.	.0004	-.0070	-.0144	.2142	.0686	-.0425	2146.	
.3640	-630.	-382.	-1070.	-599.	-12.	154.	-.0000	-.0084	-.0132	.1967	.0652	-.0337	1881.	
.3650	-427.	-340.	-879.	-503.	64.	118.	-.0003	-.0103	-.0119	.1737	.0602	-.0244	1583.	
.3660	-207.	-296.	-657.	-387.	137.	83.	-.0004	-.0125	-.0105	.1458	.0542	-.0152	1275.	
.3670	21.	-249.	-415.	-257.	202.	53.	-.0003	-.0150	-.0091	.1140	.0477	-.0063	1008.	
.3680	243.	-196.	-165.	-119.	258.	28.	.0001	-.0177	-.0076	.0797	.0406	.0025	868.	
.3690	455.	-140.	81.	17.	302.	6.	.0008	-.0205	-.0063	.0448	.0332	.0108	921.	
.3700	649.	-81.	313.	144.	337.	-9.	.0018	-.0233	-.0052	.0108	.0254	.0185	1114.	
.3710	819.	-18.	520.	254.	364.	-14.	.0030	-.0260	-.0043	-.0212	.0175	.0255	1349.	
.3720	954.	49.	695.	342.	383.	-9.	.0043	-.0286	-.0036	-.0501	.0100	.0317	1562.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKW05F 2 RUP DISK
2 SAFETY COLD FRW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

.3610	-1064.	-445.	-415.	-711.	-231.	-445.	263.	.0014	-.0057	-.0163	.2306	.0698	-.0572	2523.
.3620	-957.	-438.	-1343.	-725.	-167.	226.	.0009	-.0060	-.0154	.2257	.0702	-.0503	2363.	
.3630	-911.	-417.	-1225.	-673.	-91.	190.	.0004	-.0070	-.0144	.2142	.0688	-.0425	2146.	
.3640	-630.	-382.	-1070.	-599.	-12.	154.	-.0000	-.0084	-.0132	.1967	.0652	-.0337	1881.	
.3650	-427.	-340.	-879.	-503.	64.	118.	-.0003	-.0103	-.0119	.1737	.0602	-.0244	1583.	
.3660	-207.	-206.	-657.	-317.	137.	83.	-.0004	-.0125	-.0105	.1458	.0542	-.0152	1275.	
.3670	2.	-249.	-415.	-257.	202.	52.	-.0003	-.0150	-.0091	.1140	.0477	-.0063	1008.	
.3680	243.	-196.	-165.	-119.	258.	28.	.0001	-.0177	-.0076	.0797	.0406	.0025	868.	
.3690	457.	-140.	81.	17.	302.	6.	.0008	-.0205	-.0063	.0448	.0332	.0108	921.	
.3700	649.	-81.	313.	144.	337.	-9.	.0018	-.0233	-.0052	.0108	.0254	.0185	1114.	
.3710	810.	-18.	520.	254.	364.	-14.	.0030	-.0260	-.0043	-.0212	.0175	.0255	1349.	
.3720	954.	49.	695.	342.	383.	-9.	.0043	-.0286	-.0036	-.0501	.0100	.0317	1562.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSVCONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITSINTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	59	MEMBER	1	SEQUENCE	84	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3730	1053.	116.	833.	405.	394.	6.	.0058	-.0311	-.0030	-.0750	.0029	.0370	1718.		
.3740	1111.	179.	928.	440.	394.	25.	.0073	-.0334	-.0027	-.0948	-.0035	.0415	1797.		
.3750	1122.	238.	978.	447.	379.	48.	.0090	-.0355	-.0026	-.1093	-.0088	.0452	1789.		
.3760	1104.	293.	983.	431.	349.	73.	.0107	-.0372	-.0026	-.1185	-.0126	.0482	1702.		
.3770	1032.	337.	949.	393.	305.	102.	.0122	-.0389	-.0026	-.1229	-.0144	.0502	1544.		
.3780	915.	367.	878.	335.	245.	130.	.0135	-.0403	-.0027	-.1225	-.0144	.0509	1323.		
.3790	762.	386.	770.	258.	171.	155.	.0148	-.0415	-.0029	-.1173	-.0129	.0506	1054.		
.3800	582.	399.	629.	167.	84.	178.	.0159	-.0423	-.0031	-.1076	-.0101	.0494	784.		
.3810	379.	402.	462.	63.	-8.	199.	.0168	-.0430	-.0034	-.0944	-.0063	.0470	636.		
.3820	150.	394.	282.	-48.	-101.	221.	.0175	-.0434	-.0037	-.0787	-.0020	.0431	755.		
.3830	-72.	377.	95.	-164.	-192.	242.	.0179	-.0437	-.0039	-.0612	.0024	.0377	1063.		
.3840	-296.	355.	-96.	-278.	-279.	259.	.0181	-.0438	-.0040	-.0426	.0065	.0312	1434.		
.3850	-506.	329.	-281.	-386.	-361.	272.	.0181	-.0437	-.0041	-.0239	.0101	.0238	1808.		
.3860	-699.	300.	-449.	-483.	-433.	281.	.0179	-.0437	-.0041	-.0065	.0131	.0154	2152.		
.3870	-872.	264.	-593.	-563.	-495.	289.	.0173	-.0437	-.0037	.0084	.0156	.0062	2444.		
.3880	-1017.	226.	-707.	-625.	-544.	292.	.0163	-.0438	-.0031	.0202	.0174	-.0034	2673.		
.3890	-1127.	190.	-791.	-667.	-582.	290.	.0151	-.0440	-.0023	.0288	.0182	-.0126	2834.		
.3900	-1196.	158.	-842.	-689.	-607.	282.	.0136	-.0444	-.0012	.0339	.0180	-.0209	2921.		
.3910	-1224.	131.	-858.	-691.	-614.	269.	.0119	-.0450	.0001	.0352	.0168	-.0280	2929.		
.3920	-1213.	111.	-837.	-674.	-600.	256.	.0098	-.0459	.0018	.0323	.0147	-.0335	2853.		
.3930	-1163.	100.	-781.	-639.	-568.	240.	.0073	-.0472	.0039	.0255	.0118	-.0370	2701.		
.3940	-1074.	96.	-696.	-591.	-518.	220.	.0047	-.0487	.0061	.0155	.0078	-.0383	2481.		
.3950	-947.	102.	-586.	-531.	-453.	196.	.0019	-.0504	.0086	.0029	.0031	-.0370	2206.		
.3960	-790.	120.	-457.	-462.	-375.	170.	-.0011	-.0523	.0112	-.0122	-.0019	-.0331	1883.		
.3970	-615.	145.	-310.	-384.	-286.	146.	-.0042	-.0545	.0141	-.0297	-.0067	-.0272	1525.		
.3980	-432.	172.	-150.	-303.	-189.	123.	-.0075	-.0567	.0171	-.0485	-.0114	-.0195	1150.		
.3990	-242.	202.	11.	-223.	-90.	99.	-.0107	-.0589	.0200	-.0674	-.0159	-.0102	790.		
.4000	-46.	242.	163.	-146.	7.	74.	-.0137	-.0609	.0227	-.0854	-.0202	.0008	498.		

MAXIMUM VALUE OF STRESS OCCURS AT

TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2850	1654.	-883.	1080.	1076.	960.	-1058.	.0182	.0567	-.0009	.0141	-.0133	-.0331	5441.		

SECTION	59	MEMBER	2	SEQUENCE	85	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSVCONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

.3990	-242.	202.	11.	-223.	-90.	99.	-.0107	-.0589	.0200	-.0674	-.0159	-.0102	790.
.4000	-46.	242.	163.	-146.	7.	74.	-.0137	-.0609	.0227	-.0854	-.0202	.0008	498.

MAXIMUM VALUE OF STRESS OCCURS AT

TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.2850	1654.	-883.	1080.	1076.	960.	-1058.	.0182	.0067	-.0009	.0141	-.0133	-.0331	5441.

SECTION	59	MEMBER	2	SEQUENCE	85	LOCATION	END	TYPE	RU	DZ	RX	RY	RZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/3/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	59	MEMBER	2	SEQUENCE	85	LOCATION	END	TYPE	RU	DZ	RX	RY	RZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
.0010	-0.	-0.	0.	-0.	-0.	-0.	-.0000	-.0000	.0000	-.0000	-.0000	-.0000	-.0000	0.
.0020	-0.	-0.	0.	-0.	-0.	-0.	-.0000	-.0000	.0000	-.0000	-.0000	-.0000	-.0000	0.
.0030	-0.	-0.	0.	-0.	-0.	-0.	-.0000	-.0000	.0000	-.0000	-.0000	-.0000	-.0000	0.
.0040	-0.	-0.	-0.	0.	-0.	-0.	.0000	-.0000	.0000	-.0000	.0000	.0000	.0000	1.
.0050	0.	0.	-0.	0.	-0.	-0.	-.0000	-.0000	.0000	-.0000	.0000	.0000	.0000	1.
.0060	1.	1.	-1.	0.	-0.	0.	-.0000	-.0000	.0000	-.0001	.0001	-.0000	-.0000	2.
.0070	2.	1.	-1.	0.	1.	1.	-.0001	-.0000	.0000	-.0002	.0001	-.0001	-.0001	5.
.0080	3.	1.	-2.	-0.	2.	2.	-.0001	-.0001	.0001	-.0003	.0001	-.0004	-.0004	12.
.0090	5.	2.	-4.	-1.	5.	3.	-.0002	-.0001	.0001	-.0004	-.0000	-.0007	-.0007	26.
.0100	13.	7.	-8.	-3.	11.	6.	-.0004	-.0002	.0002	-.0005	-.0002	-.0011	-.0011	54.
.0110	24.	14.	-13.	-7.	20.	12.	-.0006	-.0003	.0003	-.0007	-.0005	-.0019	-.0019	101.
.0120	36.	22.	-19.	-12.	34.	20.	-.0011	-.0005	.0005	-.0012	-.0009	-.0033	-.0033	173.
.0130	48.	29.	-23.	-20.	53.	31.	-.0018	-.0008	.0008	-.0018	-.0015	-.0054	-.0054	270.
.0140	59.	36.	-29.	-31.	76.	43.	-.0027	-.0011	.0012	-.0021	-.0025	-.0078	-.0078	387.
.0150	70.	44.	-35.	-46.	101.	55.	-.0037	-.0015	.0015	-.0020	-.0037	-.0101	-.0101	517.
.0160	81.	53.	-41.	-62.	127.	65.	-.0047	-.0019	.0018	-.0011	-.0052	-.0116	-.0116	650.
.0170	89.	60.	-46.	-79.	151.	71.	-.0056	-.0022	.0019	.0007	-.0066	-.0120	-.0120	769.
.0180	92.	59.	-47.	-92.	167.	70.	-.0063	-.0023	.0019	.0032	-.0079	-.0109	-.0109	847.
.0190	88.	48.	-43.	-101.	170.	60.	-.0068	-.0023	.0017	.0064	-.0088	-.0082	-.0082	861.
.0200	75.	24.	-32.	-100.	156.	38.	-.0069	-.0020	.0014	.0098	-.0090	-.0043	-.0043	789.
.0210	53.	-7.	-14.	-88.	123.	8.	-.0067	-.0016	.0009	.0129	-.0080	.0007	.0007	632.
.0220	41.	-18.	4.	-63.	75.	-22.	-.0063	-.0010	.0004	.0153	-.0058	.0066	.0066	419.
.0230	18.	-30.	30.	-28.	15.	-50.	-.0059	-.0004	-.0001	.0161	-.0026	.0118	.0118	249.
.0240	-44.	-62.	68.	11.	-53.	-78.	-.0055	.0002	-.0005	.0153	.0011	.0152	.0152	396.
.0250	-120.	-120.	109.	43.	-125.	-113.	-.0046	.0009	-.0012	.0150	.0038	.0176	.0176	724.
.0260	-167.	-159.	124.	62.	-189.	-150.	-.0027	.0020	-.0025	.0174	.0042	.0214	.0214	1039.
.0270	-129.	-109.	102.	74.	-229.	-160.	-.0001	.0035	-.0042	.0214	.0030	.0275	.0275	1205.
.0280	-133.	-65.	102.	86.	-240.	-138.	.0022	.0048	-.0054	.0223	.0017	.0305	.0305	1211.
.0290	-231.	-134.	145.	88.	-241.	-122.	.0041	.0056	-.0063	.0201	-.0005	.0276	.0276	1188.
.0300	-225.	-139.	136.	78.	-248.	-122.	.0070	.0068	-.0079	.0214	-.0049	.0265	.0265	1197.
.0310	-113.	-19.	73.	80.	-263.	-106.	.0106	.0082	-.0097	.0228	-.0081	.0285	.0285	1230.
.0320	-89.	20.	64.	111.	-276.	-68.	.0128	.0088	-.0101	.0149	-.0065	.0245	.0245	1275.
.0330	-169.	-68.	124.	160.	-283.	-29.	.0132	.0080	-.0090	-.0017	-.0010	.0127	.0127	1364.
.0340	-202.	-103.	159.	211.	-306.	1.	.0135	.0072	-.0079	-.0180	.0055	.0017	.0017	1551.
.0350	-161.	-52.	135.	246.	-343.	14.	.0144	.0065	-.0072	-.0295	.0106	-.0047	-.0047	1762.
.0360	-111.	-71.	104.	249.	-342.	23.	.0150	.0054	-.0066	-.0379	.0130	-.0110	-.0110	1769.
.0370	-51.	-14.	83.	219.	-259.	66.	.0144	.0038	-.0053	-.0449	.0125	-.0186	-.0186	1442.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/3/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

.0270	-129.	-109.	102.	74.	-229.	-160.	-.0001	.0035	-.0042	.0214	.0030	.0275	1039.
.0280	-133.	-65.	102.	86.	-240.	-138.	.0022	.0048	-.0054	.0223	.0017	.0305	1211.
.0290	-231.	-134.	149.	88.	-241.	-122.	.0041	.0056	-.0063	.0201	-.0005	.0276	1188.
.0300	-225.	-139.	136.	78.	-248.	-122.	.0070	.0068	-.0179	.0214	-.0049	.0265	1197.
.0310	-111.	-19.	73.	80.	-263.	-106.	.0106	.0082	-.0097	.0228	-.0081	.0285	1230.
.0320	-80.	20.	64.	111.	-276.	-68.	.0128	.0088	-.0101	.0149	-.0065	.0245	1275.
.0330	-169.	-68.	124.	160.	-283.	-29.	.0132	.0080	-.0090	-.0017	-.0010	.0127	1364.
.0340	-202.	-103.	159.	211.	-306.	1.	.0135	.0072	-.0079	-.0180	.0055	.0017	1551.
.0350	-161.	-52.	135.	246.	-343.	14.	.0144	.0065	-.0072	-.0295	.0106	-.0047	1762.
.0360	-111.	-31.	104.	249.	-342.	23.	.0150	.0054	-.0066	-.0379	.0130	-.0110	1769.
.0370	-51.	-14.	83.	219.	-259.	66.	.0144	.0038	-.0053	-.0449	.0125	-.0186	1442.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKWOBF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	59	MEMBER	2	SEQUENCE	85	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0380	29.	80.	49.	165.	-108.	159.		.0128	.0019	-.0036	-.0499	.0100	-.0247	1055.	
.0390	87.	155.	8.	80.	60.	241.		.0109	-.0002	-.0021	-.0502	.0048	-.0297	1091.	
.0400	152.	142.	-45.	-35.	208.	254.		.0094	-.0021	-.0015	-.0431	-.0037	-.0334	1375.	
.0410	323.	229.	-145.	-132.	320.	245.		.0084	-.0034	-.0013	-.0323	-.0104	-.0306	1772.	
.0420	447.	361.	-212.	-154.	393.	268.		.0060	-.0049	.0005	-.0299	-.0075	-.0264	2089.	
.0430	378.	302.	-156.	-113.	421.	279.		.0011	-.0073	.0038	-.0394	.0044	-.0296	2159.	
.0440	249.	96.	-53.	-52.	381.	210.		-.0039	-.0098	.0072	-.0491	.0179	-.0361	1830.	
.0450	252.	30.	-39.	11.	270.	57.		-.0070	-.0107	.0091	-.0495	.0297	-.0341	1195.	
.0460	316.	84.	-81.	64.	163.	-3.		-.0093	-.0108	.0101	-.0442	.0391	-.0271	730.	
.0470	274.	2.	-55.	80.	154.	-55.		-.0129	-.0113	.0117	-.0399	.0436	-.0282	760.	
.0480	184.	-145.	-1.	48.	240.	-64.		-.0172	-.0119	.0134	-.0335	.0420	-.0344	1057.	
.0490	200.	-106.	-47.	-19.	338.	-45.		-.0197	-.0112	.0135	-.0172	.0347	-.0335	1425.	
.0500	311.	16.	-163.	-115.	401.	-52.		-.0203	-.0093	.0119	.0078	.0230	-.0276	1756.	
.0510	347.	5.	-230.	-213.	442.	-92.		-.0211	-.0077	.0102	.0308	.0108	-.0269	2084.	
.0520	266.	-76.	-224.	-255.	451.	-109.		-.0231	-.0068	.0100	.0423	.0060	-.0305	2210.	
.0530	129.	-115.	-192.	-221.	394.	-99.		-.0254	-.0061	.0107	.0435	.0106	-.0319	1931.	
.0540	15.	-167.	-162.	-160.	266.	-132.		-.0265	-.0052	.0111	.0431	.0179	-.0300	1408.	
.0550	-49.	-249.	-144.	-107.	99.	-218.		-.0263	-.0041	.0107	.0453	.0232	-.0254	1096.	
.0560	-107.	-273.	-140.	-57.	-58.	-279.		-.0257	-.0032	.0103	.0463	.0280	-.0181	1214.	
.0570	-201.	-257.	-124.	-28.	-147.	-269.		-.0258	-.0031	.0106	.0438	.0311	-.0116	1286.	
.0580	-298.	-274.	-92.	-54.	-145.	-225.		-.0263	-.0037	.0109	.0428	.0275	-.0081	1139.	
.0590	-330.	-252.	-99.	-143.	-97.	-178.		-.0257	-.0043	.0101	.0484	.0166	-.0019	1035.	
.0600	-284.	-105.	-177.	-250.	-60.	-124.		-.0235	-.0046	.0081	.0589	.0037	.0121	1190.	
.0610	-230.	59.	-253.	-339.	-37.	-66.		-.0209	-.0050	.0061	.0662	-.0069	.0284	1448.	
.0620	-244.	123.	-247.	-384.	-27.	-9.		-.0193	-.0064	.0054	.0634	-.0122	.0403	1605.	
.0630	-322.	133.	-176.	-360.	-69.	39.		-.0184	-.0084	.0058	.0496	-.0101	.0495	1538.	
.0640	-396.	158.	-97.	-275.	-194.	52.		-.0169	-.0103	.0063	.0302	-.0025	.0600	1423.	
.0650	-424.	167.	-19.	-169.	-362.	17.		-.0144	-.0120	.0065	.0102	.0054	.0702	1671.	
.0660	-429.	146.	79.	-67.	-502.	-20.		-.0119	-.0137	.0066	-.0101	.0108	.0767	2116.	
.0670	-437.	144.	186.	18.	-560.	-1.		-.0097	-.0154	.0069	-.0310	.0127	.0790	2340.	
.0680	-390.	193.	264.	59.	-521.	70.		-.0076	-.0167	.0067	-.0475	.0080	.0780	2208.	
.0690	-266.	280.	292.	34.	-403.	154.		-.0048	-.0174	.0054	-.0546	-.0058	.0740	1806.	
.0700	-111.	377.	289.	-34.	-251.	231.		-.0015	-.0173	.0030	-.0543	-.0255	.0669	1430.	
.0710	24.	451.	287.	-95.	-103.	304.		.0017	-.0168	.0004	-.0530	-.0446	.0566	1395.	
.0720	142.	493.	304.	-108.	14.	366.		.0044	-.0160	-.0016	-.0557	-.0577	.0437	1595.	
.0730	229.	489.	357.	-51.	69.	404.		.0065	-.0149	-.0028	-.0644	-.0620	.0289	1725.	
.0740	247.	409.	451.	74.	36.	394.		.0082	-.0135	-.0033	-.0777	-.0577	.0128	1679.	
.0750	226.	262.	554.	234.	-74.	320.		.0101	-.0116	-.0037	-.0907	-.0482	-.0034	1683.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKWOBF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

.0650	-424.	167.	-19.	-169.	-362.	17.	-.144	-.0120	.0065	-.0102	.0054	.0702	1671.
.0660	-429.	146.	70.	-67.	-502.	-20.	-.119	-.0137	.0066	-.0101	.0108	.0767	2116.
.0670	-433.	144.	186.	11.	-560.	-1.	-.0097	-.0154	.0069	-.0310	.0127	.0790	2340.
.0680	-491.	173.	264.	59.	-521.	70.	-.0076	-.0167	.0067	-.0475	.0080	.0780	2208.
.0690	-266.	200.	292.	74.	-407.	154.	-.0048	-.0174	.0054	-.0546	-.0058	.0740	1806.
.0700	-111.	377.	289.	-34.	-251.	231.	-.0015	-.0173	.0030	-.0543	-.0255	.0669	1430.
.0710	24.	451.	287.	-95.	-107.	304.	.0017	-.0168	.0004	-.0530	-.0446	.0566	1395.
.0720	142.	493.	304.	-108.	14.	366.	.0044	-.0160	-.0016	-.0557	-.0577	.0437	1595.
.0730	229.	409.	357.	-51.	69.	404.	.0065	-.0149	-.0028	-.0644	-.0620	.0289	1725.
.0740	247.	409.	451.	74.	36.	394.	.0082	-.0135	-.0033	-.0777	-.0577	.0128	1679.
.0750	226.	262.	554.	234.	-74.	320.	.0101	-.0116	-.0037	-.0907	-.0482	-.0034	1683.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/3/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKHOOF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	59	MEMBER	2	SEQUENCE	05	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0760	226.	115.	629.	394.	-208.	213.	.0121	-.0091	-.0044	-.0990	-.0372	-.0178	2060.		
.0770	232.	5.	670.	525.	-300.	131.	.0138	-.0061	-.0050	-.1023	-.0267	-.0311	2583.		
.0780	214.	-98.	685.	595.	-307.	97.	.0146	-.0030	-.0057	-.0993	-.0197	-.0453	2824.		
.0790	221.	-177.	643.	578.	-228.	91.	.0150	.0003	-.0069	-.0861	-.0189	-.0597	2622.		
.0800	287.	-174.	513.	484.	-99.	100.	.0155	.0040	-.0091	-.0616	-.0232	-.0713	2104.		
.0810	345.	-121.	338.	352.	42.	119.	.0156	.0079	-.0113	-.0323	-.0281	-.0812	1558.		
.0820	330.	-153.	180.	218.	174.	133.	.0146	.0113	-.0127	-.0050	-.0294	-.0924	1289.		
.0830	276.	-223.	65.	114.	269.	129.	.0126	.0143	-.0132	.0177	-.0244	-.1023	1336.		
.0840	223.	-264.	-59.	65.	292.	105.	.0108	.0173	-.0129	.0360	-.0114	-.1059	1325.		
.0850	150.	-308.	-172.	59.	242.	49.	.0091	.0204	-.0122	.0509	.0076	-.1037	1058.		
.0860	54.	-400.	-259.	61.	159.	-41.	.0076	.0232	-.0113	.0644	.0278	-.0990	732.		
.0870	-20.	-497.	-343.	50.	89.	-127.	.0061	.0258	-.0104	.0783	.0462	-.0917	683.		
.0880	-87.	-506.	-440.	18.	58.	-171.	.0046	.0282	-.0096	.0926	.0618	-.0810	759.		
.0890	-135.	-486.	-558.	-51.	79.	-179.	.0031	.0303	-.0089	.1079	.0722	-.0695	845.		
.0900	-167.	-469.	-667.	-162.	141.	-177.	.0018	.0321	-.0088	.1251	.0761	-.0583	1160.		
.0910	-146.	-399.	-787.	-280.	207.	-164.	.0010	.0337	-.0091	.1417	.0768	-.0450	1606.		
.0920	-122.	-283.	-891.	-365.	248.	-137.	.0003	.0348	-.0090	.1521	.0785	-.0303	1929.		
.0930	-138.	-218.	-925.	-405.	257.	-117.	-.0009	.0351	-.0082	.1528	.0821	-.0184	2062.		
.0940	-185.	-224.	-984.	-404.	234.	-117.	-.0024	.0345	-.0066	.1450	.0862	-.0097	2008.		
.0950	-213.	-214.	-914.	-370.	177.	-132.	-.0035	.0335	-.0049	.1327	.0894	-.0000	1799.		
.0960	-192.	-157.	-742.	-329.	118.	-147.	-.0038	.0325	-.0037	.1197	.0886	.0118	1582.		
.0970	-134.	-94.	-656.	-308.	106.	-148.	-.0037	.0312	-.0029	.1078	.0811	.0231	1495.		
.0980	-60.	-24.	-554.	-317.	160.	-117.	-.0035	.0295	-.0024	.0971	.0666	.0329	1560.		
.0990	32.	83.	-455.	-345.	254.	-58.	-.0030	.0277	-.0024	.0884	.0467	.0431	1805.		
.1000	146.	208.	-367.	-382.	347.	-4.	-.0018	.0259	-.0032	.0822	.0232	.0541	2154.		
.1010	259.	304.	-257.	-405.	406.	20.	.0000	.0242	-.0043	.0763	-.0011	.0649	2395.		
.1020	329.	360.	-112.	-382.	407.	21.	.0021	.0223	-.0053	.0662	-.0218	.0748	2332.		
.1030	346.	372.	74.	-299.	344.	5.	.0043	.0203	-.0058	.0503	-.0370	.0838	1901.		
.1040	334.	341.	283.	-170.	224.	-35.	.0070	.0184	-.0060	.0309	-.0479	.0917	1181.		
.1050	317.	293.	486.	-20.	63.	-94.	.0105	.0167	-.0064	.0113	-.0569	.0985	480.		
.1060	294.	255.	665.	129.	-111.	-147.	.0145	.0154	-.0071	-.0069	-.0654	.1027	937.		
.1070	251.	220.	814.	255.	-260.	-174.	.0184	.0140	-.0079	-.0236	-.0744	.1019	1704.		
.1080	170.	166.	936.	349.	-393.	-168.	.0219	.0126	-.0086	-.0392	-.0837	.0938	2304.		
.1090	59.	111.	1017.	413.	-501.	-133.	.0251	.0112	-.0093	-.0533	-.0921	.0800	2764.		
.1100	-8.	159.	1025.	457.	-603.	-64.	.0283	.0100	-.0101	-.0649	-.0983	.0644	3168.		
.1110	-121.	166.	1013.	487.	-705.	9.	.0310	.0088	-.0104	-.0768	-.1012	.0433	3577.		
.1120	-311.	77.	1055.	506.	-806.	71.	.0328	.0071	-.0100	-.0902	-.1005	.0165	3982.		
.1130	-473.	32.	956.	514.	-893.	140.	.0346	.0058	-.0093	-.1010	-.0975	-.0093	4341.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/3/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKHOOF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.1030	346.	372.	274.	-299.	344.	5.	.043	.0203	-.0058	.0503	-.0370	.0838	1901.
.1040	234.	341.	283.	-170.	224.	-35.	.070	.0184	-.0060	.0309	-.0479	.0917	1181.
.1050	317.	293.	486.	-20.	63.	-94.	.0109	.0167	-.0064	.0113	-.0569	.0985	480.
.1060	294.	255.	665.	129.	-111.	-147.	.0145	.0154	-.0071	-.0069	-.0654	.1027	937.
.1070	251.	220.	814.	255.	-265.	-174.	.0184	.0140	-.0079	-.0236	-.0744	.1019	1704.
.1080	170.	166.	936.	349.	-292.	-160.	.0219	.0126	-.0086	-.0392	-.0837	.0938	2304.
.1090	50.	111.	1017.	413.	-501.	-133.	.0251	.0112	-.0093	-.0533	-.0921	.0800	2764.
.1100	-0.	159.	1025.	457.	-603.	-64.	.0283	.0100	-.0101	-.0649	-.0983	.0644	3168.
.1110	-121.	166.	1013.	487.	-705.	9.	.0310	.0088	-.0104	-.0768	-.1012	.0433	3577.
.1120	-311.	77.	1005.	506.	-806.	71.	.0328	.0071	-.0100	-.0902	-.1005	.0165	3982.
.1130	-473.	32.	956.	514.	-893.	140.	.0346	.0058	-.0093	-.1010	-.0975	-.0093	4341.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKWOOF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	FX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.1140	59	2	59					-550.	65.	851.	406.	-943.	218.	.0366	.0051	-.0086	-.1061	-.0943	-.0314	4539.
.1150								-594.	82.	722.	443.	-932.	295.	.0382	.0045	-.0076	-.1067	-.0919	-.0526	4480.
.1160								-643.	85.	581.	362.	-862.	382.	.0388	.0040	-.0061	-.1043	-.0891	-.0731	4215.
.1170								-678.	110.	419.	257.	-757.	471.	.0388	.0037	-.0045	-.0977	-.0854	-.0906	3871.
.1180								-646.	175.	225.	135.	-637.	576.	.0386	.0039	-.0032	-.0854	-.0807	-.1029	3522.
.1190								-642.	168.	47.	26.	-537.	556.	.0377	.0043	-.0015	-.0727	-.0712	-.1117	3228.
.1200								-685.	122.	-105.	-34.	-480.	542.	.0360	.0049	.0008	-.0634	-.0535	-.1153	3026.
.1210								-686.	117.	-241.	-46.	-461.	501.	.0342	.0060	.0035	-.0554	-.0297	-.1113	2847.
.1220								-677.	61.	-333.	-32.	-462.	412.	.0321	.0075	.0065	-.0476	-.0037	-.1035	2587.
.1230								-649.	-18.	-403.	-14.	-456.	292.	.0297	.0092	.0094	-.0387	.0210	-.0934	2259.
.1240								-615.	-76.	-465.	-12.	-409.	177.	.0270	.0111	.0123	-.0276	.0415	-.0822	1862.
.1250								-553.	-111.	-522.	-59.	-283.	87.	.0241	.0133	.0145	-.0115	.0535	-.0717	1259.
.1260								-404.	-107.	-595.	-170.	-67.	18.	.0216	.0159	.0156	.0121	.0552	-.0611	765.
.1270								-234.	-81.	-682.	-304.	189.	-28.	.0196	.0190	.0158	.0384	.0518	-.0497	1500.
.1280								-39.	20.	-786.	-416.	431.	-52.	.0180	.0225	.0156	.0627	.0484	-.0358	2510.
.1290								125.	88.	-838.	-482.	622.	-86.	.0165	.0259	.0154	.0805	.0474	-.0241	3303.
.1300								225.	38.	-802.	-491.	734.	-165.	.0149	.0289	.0157	.0892	.0492	-.0176	3750.
.1310								311.	-26.	-728.	-427.	757.	-274.	.0136	.0317	.0162	.0894	.0552	-.0121	3802.
.1320								365.	-91.	-627.	-301.	713.	-388.	.0129	.0344	.0171	.0816	.0643	-.0064	3613.
.1330								431.	-168.	-501.	-167.	671.	-491.	.0129	.0369	.0178	.0712	.0703	-.0019	3538.
.1340								530.	-251.	-370.	-70.	675.	-569.	.0135	.0391	.0179	.0631	.0688	.0010	3696.
.1350								666.	-250.	-290.	-16.	723.	-597.	.0150	.0413	.0172	.0589	.0609	.0054	3915.
.1360								813.	-140.	-271.	-4.	796.	-571.	.0169	.0434	.0157	.0578	.0484	.0111	4089.
.1370								855.	-92.	-235.	-34.	873.	-526.	.0184	.0445	.0140	.0570	.0328	.0121	4255.
.1380								830.	-101.	-181.	-85.	918.	-489.	.0199	.0451	.0119	.0568	.0162	.0112	4354.
.1390								788.	-70.	-156.	-111.	880.	-463.	.0224	.0456	.0094	.0556	.0043	.0159	4176.
.1400								729.	14.	-154.	-80.	752.	-440.	.0258	.0462	.0070	.0504	-.0001	.0277	3653.
.1410								625.	65.	-114.	-12.	575.	-424.	.0292	.0462	.0053	.0402	.0002	.0407	2982.
.1420								427.	-5.	-7.	65.	375.	-429.	.0320	.0455	.0042	.0265	.0014	.0499	2395.
.1430								237.	-54.	76.	132.	164.	-443.	.0352	.0447	.0028	.0150	.0009	.0601	2044.
.1440								104.	-8.	90.	172.	-35.	-439.	.0391	.0441	.0009	.0083	-.0024	.0733	1972.
.1450								-9.	57.	86.	169.	-171.	-397.	.0427	.0432	-.0012	.0048	-.0096	.0842	1937.
.1460								-119.	103.	92.	126.	-231.	-313.	.0454	.0419	-.0032	.0026	-.0204	.0901	1707.
.1470								-231.	150.	82.	72.	-265.	-210.	.0475	.0402	-.0051	.0000	-.0308	.0936	1443.
.1480								-283.	276.	22.	35.	-320.	-109.	.0495	.0387	-.0069	-.0026	-.0387	.0983	1420.
.1490								-331.	368.	-15.	27.	-400.	-37.	.0508	.0367	-.0081	-.0087	-.0436	.0995	1680.
.1500								-422.	331.	28.	54.	-487.	2.	.0505	.0338	-.0079	-.0217	-.0450	.0934	2047.
.1510								-475.	287.	95.	128.	-576.	32.	.0491	.0304	-.0065	-.0404	-.0419	.0852	2466.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKWOOF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.1410	625.	65.	-154.	-12.	575.	-440.	.0253	.0462	.0070	.0504	-.0001	.0277	3653.
.1420	427.	-5.	-7.	65.	375.	-429.	.0320	.0455	.0042	.0265	.0014	.0499	2395.
.1430	237.	-54.	76.	172.	164.	-443.	.0352	.0447	.0028	.0150	.0009	.0601	2044.
.1440	104.	-8.	90.	172.	-35.	-439.	.0391	.0441	.0009	.0083	-.0024	.0733	1972.
.1450	-9.	57.	86.	169.	-171.	-397.	.0427	.0432	-.0012	.0048	-.0096	.0842	1937.
.1460	-119.	103.	92.	176.	-231.	-313.	.0454	.0419	-.0032	.0026	-.0204	.0901	1707.
.1470	-231.	150.	82.	72.	-265.	-210.	.0475	.0402	-.0051	.0000	-.0308	.0936	1443.
.1480	-283.	276.	22.	35.	-320.	-109.	.0495	.0387	-.0069	-.0026	-.0387	.0983	1420.
.1490	-371.	368.	-15.	77.	-400.	-37.	.0508	.0367	-.0081	-.0087	-.0436	.0995	1680.
.1500	-422.	331.	28.	54.	-487.	2.	.0505	.0338	-.0079	-.0217	-.0450	.0934	2047.
.1510	-475.	207.	95.	128.	-576.	32.	.0491	.0304	-.0065	-.0404	-.0419	.0852	2466.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02. 18.29.29.

S/RV PIPING KEWAUNEE CKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	DX	DY	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)							
.1520	-474.	296.	146.	238.	-659.	67.	.0468	.0267	-.0041	-.0624	-.0348	.0777	2935.
.1530	-430.	311.	196.	336.	-700.	102.	.0435	.0224	-.0013	-.0830	-.0287	.0678	3269.
.1540	-391.	250.	264.	382.	-676.	125.	.0386	.0175	.0016	-.0995	-.0272	.0515	3281.
.1550	-316.	215.	294.	379.	-588.	159.	.0325	.0123	.0044	-.1103	-.0289	.0332	2993.
.1560	-171.	310.	251.	347.	-446.	231.	.0253	.0070	.0073	-.1161	-.0310	.0168	2547.
.1570	-66.	365.	218.	292.	-259.	315.	.0164	.0012	.0105	-.1204	-.0326	-.0028	2091.
.1580	18.	329.	216.	218.	-49.	371.	.0063	-.0049	.0140	-.1222	-.0346	-.0259	1809.
.1590	159.	321.	188.	158.	139.	392.	-.0039	-.0106	.0174	-.1205	-.0346	-.0460	1857.
.1600	311.	344.	144.	139.	280.	387.	-.0143	-.0158	.0209	-.1189	-.0296	-.0622	2077.
.1610	399.	273.	153.	152.	401.	352.	-.0254	-.0209	.0252	-.1196	-.0211	-.0804	2314.
.1620	455.	112.	210.	173.	518.	286.	-.0370	-.0255	.0295	-.1193	-.0121	-.1010	2573.
.1630	504.	-47.	248.	198.	609.	201.	-.0477	-.0290	.0330	-.1146	-.0024	-.1180	2800.
.1640	587.	-117.	215.	221.	665.	113.	-.0566	-.0307	.0350	-.1026	.0078	-.1275	2964.
.1650	656.	-180.	157.	222.	715.	26.	-.0644	-.0311	.0357	-.0845	.0164	-.1343	3126.
.1660	627.	-335.	129.	199.	763.	-59.	-.0715	-.0306	.0356	-.0636	.0235	-.1431	3302.
.1670	565.	-465.	81.	167.	786.	-135.	-.0770	-.0287	.0342	-.0394	.0300	-.1490	3400.
.1680	507.	-532.	-11.	137.	760.	-213.	-.0803	-.0252	.0315	-.0116	.0360	-.1491	3345.
.1690	441.	-591.	-109.	103.	704.	-299.	-.0816	-.0205	.0278	.0182	.0399	-.1461	3219.
.1700	321.	-701.	-170.	64.	635.	-381.	-.0813	-.0152	.0234	.0470	.0417	-.1428	3103.
.1710	162.	-816.	-218.	27.	554.	-445.	-.0795	-.0092	.0186	.0736	.0424	-.1370	2968.
.1720	66.	-812.	-315.	-13.	461.	-479.	-.0756	-.0024	.0128	.1005	.0418	-.1245	2776.
.1730	-39.	-780.	-419.	-64.	359.	-492.	-.0704	.0046	.0065	.1251	.0397	-.1093	2556.
.1740	-189.	-775.	-493.	-131.	255.	-487.	-.0647	.0109	-.0001	.1454	.0363	-.0948	2358.
.1750	-339.	-741.	-561.	-201.	147.	-461.	-.0585	.0166	-.0066	.1606	.0327	-.0786	2187.
.1760	-472.	-657.	-631.	-256.	25.	-415.	-.0518	.0215	-.0127	.1691	.0307	-.0588	2039.
.1770	-567.	-526.	-685.	-290.	-98.	-354.	-.0450	.0254	-.0183	.1701	.0301	-.0355	1953.
.1780	-650.	-429.	-683.	-304.	-211.	-293.	-.0385	.0277	-.0229	.1626	.0297	-.0115	1970.
.1790	-671.	-317.	-646.	-297.	-309.	-234.	-.0324	.0285	-.0264	.1479	.0291	.0142	2038.
.1800	-622.	-150.	-596.	-264.	-392.	-167.	-.0268	.0278	-.0289	.1260	.0291	.0419	2092.
.1810	-570.	-3.	-502.	-213.	-450.	-94.	-.0227	.0253	-.0299	.0961	.0292	.0672	2114.
.1820	-483.	127.	-369.	-165.	-465.	-18.	-.0201	.0211	-.0299	.0617	.0276	.0882	2061.
.1830	-358.	258.	-220.	-120.	-446.	62.	-.0190	.0155	-.0291	.0244	.0246	.1058	1945.
.1840	-197.	432.	-83.	-68.	-407.	153.	-.0191	.0089	-.0277	-.0145	.0221	.1215	1836.
.1850	-13.	606.	61.	-7.	-347.	245.	-.0205	.0014	-.0256	-.0547	.0197	.1331	1774.
.1860	147.	702.	245.	57.	-265.	320.	-.0236	-.0067	-.0228	-.0951	.0163	.1374	1750.
.1870	332.	774.	441.	129.	-172.	372.	-.0275	-.0150	-.0196	-.1329	.0117	.1367	1794.
.1880	529.	835.	631.	218.	-82.	401.	-.0319	-.0228	-.0162	-.1670	.0066	.1324	1937.
.1890	729.	862.	819.	315.	15.	407.	-.0366	-.0300	-.0127	-.1957	.0002	.1235	2149.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02. 18.29.29.

S/RV PIPING KEWAUNEE CKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.1790	-671.	-317.	-646.	-297.	-309.	-234.	-.024	.0285	-.0264	.1479	.0291	.0142	2038.
.1800	-622.	-150.	-596.	-264.	-392.	-167.	-.0268	.0278	-.0289	.1260	.0291	.0419	2092.
.1810	-570.	-3.	-502.	-213.	-450.	-94.	-.0227	.0253	-.0299	.0961	.0292	.0672	2114.
.1820	-497.	127.	-260.	-165.	-465.	-18.	-.0201	.0211	-.0299	.0617	.0276	.0882	2061.
.1830	-350.	258.	-220.	-120.	-446.	62.	-.0190	.0155	-.0291	.0244	.0246	.1058	1945.
.1840	-197.	432.	-83.	-68.	-407.	153.	-.0191	.0089	-.0277	-.0145	.0221	.1215	1836.
.1850	-13.	606.	61.	-7.	-347.	245.	-.0205	.0014	-.0256	-.0547	.0197	.1331	1774.
.1860	147.	702.	245.	57.	-265.	320.	-.0236	-.0067	-.0228	-.0951	.0163	.1374	1750.
.1870	332.	774.	441.	129.	-172.	372.	-.0275	-.0150	-.0196	-.1329	.0117	.1367	1794.
.1880	520.	835.	631.	218.	-82.	401.	-.0319	-.0228	-.0162	-.1670	.0066	.1324	1937.
.1890	729.	862.	819.	315.	15.	407.	-.0366	-.0300	-.0127	-.1957	.0002	.1235	2149.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKWOEF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSVCONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITSINTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	DX	DY	DZ	RX	RY	RZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.1900	911.	825.	1014.	404.	127.	392.	-.0418	-.0363	-.0094	-.2175	-.0082	.1086	2408.
.1910	1057.	731.	1196.	486.	238.	357.	-.0469	-.0414	-.0065	-.2312	-.0175	.0889	2705.
.1920	1201.	652.	1317.	560.	328.	310.	-.0514	-.0449	-.0045	-.2350	-.0261	.0680	3000.
.1930	1310.	560.	1380.	625.	388.	247.	-.0554	-.0468	-.0032	-.2298	-.0330	.0447	3240.
.1940	1329.	396.	1441.	681.	416.	169.	-.0594	-.0474	-.0022	-.2182	-.0371	.0168	3405.
.1950	1267.	181.	1467.	730.	407.	77.	-.0631	-.0469	-.0015	-.2007	-.0378	-.0139	3495.
.1960	1166.	-29.	1435.	771.	345.	-25.	-.0658	-.0450	-.0015	-.1766	-.0351	-.0437	3526.
.1970	1035.	-228.	1345.	791.	259.	-131.	-.0676	-.0420	-.0014	-.1460	-.0303	-.0715	3518.
.1980	850.	-438.	1217.	775.	172.	-227.	-.0686	-.0384	-.0018	-.1098	-.0249	-.0982	3447.
.1990	647.	-640.	1044.	799.	102.	-299.	-.0691	-.0343	-.0022	-.0685	-.0199	-.1230	3240.
.2000	411.	-787.	804.	588.	50.	-338.	-.0687	-.0301	-.0030	-.0222	-.0156	-.1435	2938.
.2010	165.	-871.	499.	412.	11.	-345.	-.0675	-.0258	-.0041	.0277	-.0115	-.1587	2243.
.2020	-102.	-918.	157.	191.	-20.	-322.	-.0659	-.0220	-.0053	.0783	-.0071	-.1690	1565.
.2030	-389.	-935.	-201.	-54.	-53.	-274.	-.0638	-.0188	-.0064	.1258	-.0007	-.1744	1184.
.2040	-680.	-910.	-560.	-293.	-105.	-204.	-.0615	-.0166	-.0069	.1665	.0093	-.1735	1553.
.2050	-969.	-850.	-900.	-507.	-182.	-125.	-.0587	-.0152	-.0067	.1981	.0229	-.1666	2309.
.2060	-1234.	-781.	-1193.	-692.	-275.	-48.	-.0557	-.0149	-.0058	.2196	.0379	-.1549	3115.
.2070	-1454.	-704.	-1427.	-847.	-366.	27.	-.0524	-.0157	-.0043	.2309	.0522	-.1393	3855.
.2080	-1614.	-593.	-1607.	-971.	-440.	112.	-.0489	-.0173	-.0022	.2323	.0645	-.1199	4474.
.2090	-1698.	-440.	-1734.	-1069.	-477.	213.	-.0451	-.0197	.0002	.2249	.0731	-.0974	4967.
.2100	-1704.	-263.	-1799.	-1150.	-468.	329.	-.0412	-.0227	.0026	.2100	.0761	-.0740	5361.
.2110	-1645.	-72.	-1801.	-1213.	-419.	451.	-.0372	-.0261	.0048	.1889	.0734	-.0506	5676.
.2120	-1519.	138.	-1743.	-1244.	-348.	570.	-.0332	-.0296	.0067	.1615	.0661	-.0274	5893.
.2130	-1342.	350.	-1617.	-1226.	-274.	677.	-.0293	-.0332	.0084	.1275	.0559	-.0048	5957.
.2140	-1135.	526.	-1404.	-1149.	-207.	757.	-.0255	-.0366	.0101	.0867	.0439	.0158	5806.
.2150	-902.	650.	-1102.	-1005.	-159.	799.	-.0219	-.0396	.0119	.0402	.0309	.0346	5400.
.2160	-632.	743.	-738.	-798.	-136.	798.	-.0181	-.0421	.0135	-.0093	.0173	.0528	4745.
.2170	-328.	812.	-322.	-543.	-131.	758.	-.0141	-.0437	.0148	-.0591	.0028	.0704	3929.
.2180	-23.	834.	116.	-262.	-128.	687.	-.0104	-.0445	.0157	-.1068	-.0131	.0854	3116.
.2190	265.	809.	575.	17.	-114.	595.	-.0070	-.0447	.0163	-.1494	-.0309	.0971	2530.
.2200	542.	770.	1008.	276.	-89.	491.	-.0037	-.0438	.0161	-.1837	-.0500	.1066	2378.
.2210	809.	737.	1383.	503.	-58.	379.	-.0004	-.0420	.0151	-.2077	-.0694	.1152	2640.
.2220	1041.	691.	1700.	695.	-25.	263.	.0029	-.0392	.0135	-.2218	-.0874	.1221	3104.
.2230	1213.	612.	1961.	855.	-1.	143.	.0059	-.0358	.0116	-.2273	-.1023	.1262	3619.
.2240	1319.	508.	2158.	989.	2.	18.	.0087	-.0318	.0097	-.2253	-.1122	.1278	4126.
.2250	1765.	388.	2279.	1096.	-27.	-112.	.0115	-.0273	.0080	-.2161	-.1164	.1274	4597.
.2260	1349.	251.	2322.	1168.	-81.	-243.	.0143	-.0225	.0063	-.2000	-.1154	.1244	4990.
.2270	1270.	100.	2283.	1194.	-144.	-359.	.0170	-.0174	.0049	-.1772	-.1099	.1181	5237.

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ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKWOEF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSVCONDITION 24
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.2170	-328.	812.	729.	-543.	-131.	758.	-0.141	-0.0437	.0148	-.0591	.0028	.0704	3929.
.2180	-27.	834.	116.	-262.	-128.	687.	-0.104	-0.0445	.0157	-.1068	-.0131	.0854	3116.
.2190	265.	809.	575.	17.	-114.	595.	-.0070	-.0447	.0163	-.1494	-.0309	.0971	2530.
.2200	542.	770.	1008.	276.	-89.	491.	-.0037	-.0438	.0161	-.1837	-.0500	.1066	2378.
.2210	809.	737.	1383.	503.	-58.	379.	-.0004	-.0420	.0151	-.2077	-.0694	.1152	2640.
.2220	1041.	691.	1700.	695.	-25.	263.	.0029	-.0392	.0135	-.2218	-.0874	.1221	3104.
.2230	1213.	612.	1961.	855.	-1.	143.	.0059	-.0358	.0116	-.2273	-.1023	.1262	3619.
.2240	1310.	508.	2158.	989.	2.	18.	.0087	-.0318	.0097	-.2253	-.1122	.1278	4126.
.2250	1365.	388.	2279.	1096.	-27.	-112.	.0115	-.0273	.0080	-.2161	-.1164	.1274	4597.
.2260	1749.	251.	2322.	1168.	-81.	-243.	.0143	-.0225	.0063	-.2000	-.1154	.1244	4990.
.2270	1270.	100.	2283.	1104.	-144.	-259.	.0170	-.0174	.0049	-.1772	-.1099	.1181	5237.

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ADLPIPE STRESS ANALYSIS

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18.29.29.

S/RV PIPING KEWAUNEE GKWOEF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

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ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	59	MEMBER	2	SEQUENCE	65	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2280	1133.	-38.	2149.	1162.	-201.	-443.	.0197	-.0123	.0036	-.1478	-.1005	.1088	5256.		
.2290	951.	-142.	1909.	1064.	-242.	-482.	.0224	-.0072	.0023	-.1120	-.0883	.0966	4977.		
.2300	731.	-208.	1570.	895.	-262.	-475.	.0251	-.0021	.0008	-.0701	-.0744	.0813	4366.		
.2310	473.	-247.	1148.	662.	-261.	-426.	.0276	.0026	-.0006	-.0242	-.0592	.0625	3461.		
.2320	184.	-261.	666.	385.	-249.	-339.	.0299	.0068	-.0019	.0226	-.0422	.0406	2380.		
.2330	-123.	-253.	151.	91.	-233.	-222.	.0319	.0104	-.0027	.0673	-.0229	.0164	1396.		
.2340	-432.	-234.	-368.	-201.	-220.	-89.	.0334	.0133	-.0028	.1074	-.0016	-.0090	1297.		
.2350	-729.	-215.	-865.	-475.	-212.	48.	.0347	.0155	-.0023	.1414	.0212	-.0348	2178.		
.2360	-998.	-195.	-1323.	-717.	-211.	180.	.0355	.0169	-.0012	.1683	.0446	-.0596	3210.		
.2370	-1224.	-164.	-1732.	-924.	-210.	305.	.0359	.0175	.0005	.1879	.0676	-.0823	4155.		
.2380	-1403.	-126.	-2075.	-1094.	-200.	422.	.0356	.0172	.0026	.2001	.0888	-.1026	4966.		
.2390	-1533.	-90.	-2340.	-1230.	-173.	526.	.0345	.0162	.0050	.2054	.1071	-.1202	5632.		
.2400	-1601.	-50.	-2524.	-1371.	-128.	613.	.0327	.0145	.0074	.2046	.1214	-.1338	6138.		
.2410	-1594.	4.	-2626.	-1391.	-67.	676.	.0303	.0123	.0098	.1983	.1310	-.1424	6459.		
.2420	-1514.	61.	-2635.	-1403.	8.	709.	.0275	.0096	.0121	.1864	.1360	-.1457	6563.		
.2430	-1369.	101.	-2538.	-1363.	95.	709.	.0242	.0065	.0145	.1684	.1364	-.1443	6425.		
.2440	-1165.	125.	-2339.	-1268.	187.	671.	.0204	.0032	.0170	.1449	.1324	-.1383	6037.		
.2450	-905.	135.	-2049.	-1120.	275.	595.	.0165	-.0001	.0194	.1169	.1244	-.1277	5416.		
.2460	-607.	129.	-1682.	-929.	356.	484.	.0127	-.0033	.0214	.0858	.1125	-.1133	4617.		
.2470	-286.	105.	-1256.	-707.	429.	347.	.0090	-.0062	.0230	.0530	.0973	-.0960	3741.		
.2480	44.	76.	-794.	-465.	492.	196.	.0056	-.0087	.0241	.0200	.0794	-.0763	2943.		
.2490	370.	52.	-322.	-216.	543.	42.	.0028	-.0105	.0243	-.0117	.0596	-.0548	2447.		
.2500	670.	27.	145.	29.	577.	-111.	.0008	-.0115	.0238	-.0411	.0385	-.0327	2456.		
.2510	930.	-9.	593.	260.	590.	-262.	-.0003	-.0118	.0226	-.0672	.0166	-.0110	2904.		
.2520	1146.	-47.	1004.	473.	576.	-406.	-.0002	-.0113	.0205	-.0891	-.0052	.0101	3545.		
.2530	1316.	-77.	1361.	664.	536.	-536.	.0012	-.0098	.0178	-.1065	-.0259	.0307	4206.		
.2540	1430.	-104.	1656.	827.	472.	-643.	.0040	-.0074	.0145	-.1195	-.0447	.0498	4796.		
.2550	1478.	-129.	1880.	954.	386.	-723.	.0081	-.0044	.0108	-.1278	-.0609	.0665	5249.		
.2560	1457.	-146.	2019.	1037.	278.	-773.	.0132	-.0007	.0067	-.1310	-.0742	.0805	5520.		
.2570	1367.	-148.	2063.	1069.	150.	-789.	.0194	.0035	.0021	-.1287	-.0841	.0913	5580.		
.2580	1212.	-130.	2010.	1048.	10.	-767.	.0264	.0080	-.0026	-.1213	-.0903	.0987	5421.		
.2590	997.	-96.	1868.	977.	-134.	-704.	.0338	.0126	-.0075	-.1098	-.0927	.1025	5056.		
.2600	730.	-47.	1647.	860.	-275.	-603.	.0413	.0172	-.0121	-.0950	-.0913	.1026	4533.		
.2610	431.	14.	1359.	707.	-409.	-475.	.0489	.0217	-.0165	-.0776	-.0865	.0998	3944.		
.2620	121.	88.	1017.	526.	-535.	-330.	.0562	.0259	-.0204	-.0582	-.0789	.0945	3418.		
.2630	-187.	166.	643.	327.	-643.	-174.	.0631	.0296	-.0237	-.0380	-.0690	.0870	3097.		
.2640	-489.	237.	260.	122.	-728.	-14.	.0691	.0329	-.0262	-.0184	-.0571	.0773	3080.		
.2650	-771.	302.	-118.	-80.	-785.	144.	.0740	.0355	-.0279	.0002	-.0438	.0661	3349.		

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ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKWOEF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

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ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.2560	1457.	-146.	2019.	1037.	278.	-773.	.0132	-.0007	.0067	-.1310	-.0742	.0805	5249.
.2570	1367.	-148.	2063.	1069.	150.	-789.	.0194	.0035	.0021	-.1287	-.0841	.0913	5580.
.2580	1212.	-130.	2010.	1048.	10.	-767.	.0264	.0080	-.0026	-.1213	-.0903	.0987	5421.
.2590	997.	-76.	1668.	977.	-134.	-704.	.0338	.0126	-.0075	-.1098	-.0927	.1025	5056.
.2600	730.	-47.	1647.	860.	-275.	-603.	.0413	.0172	-.0121	-.0950	-.0913	.1026	4533.
.2610	431.	14.	1359.	707.	-409.	-475.	.0489	.0217	-.0165	-.0776	-.0865	.0998	3944.
.2620	121.	88.	1017.	526.	-535.	-330.	.0562	.0259	-.0204	-.0582	-.0789	.0945	3418.
.2630	-187.	166.	643.	327.	-643.	-174.	.0631	.0296	-.0237	-.0380	-.0690	.0870	3097.
.2640	-489.	237.	260.	122.	-729.	-14.	.0691	.0329	-.0262	-.0184	-.0571	.0773	3080.
.2650	-771.	302.	-118.	-80.	-785.	144.	.0740	.0355	-.0279	.0002	-.0438	.0661	3349.

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ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKW02F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS
59	2	05					(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.2660	-1017.	364.	-481.	-274.	-816.	292.	.0777	.0377	-.0290	.0178	-.0298	.0544	3791.							
.2670	-1204.	421.	-816.	-450.	-819.	420.	.0803	.0394	-.0294	.0343	-.0158	.0428	4274.							
.2680	-1340.	467.	-1107.	-601.	-793.	523.	.0815	.0407	-.0293	.0489	-.0023	.0315	4692.							
.2690	-1421.	493.	-1336.	-716.	-739.	598.	.0812	.0417	-.0286	.0607	.0104	.0205	4966.							
.2700	-1444.	488.	-1490.	-786.	-660.	636.	.0795	.0423	-.0273	.0692	.0217	.0099	5039.							
.2710	-1399.	453.	-1564.	-808.	-560.	629.	.0767	.0427	-.0255	.0748	.0309	.0005	4872.							
.2720	-1275.	398.	-1560.	-779.	-444.	578.	.0731	.0432	-.0234	.0778	.0377	-.0070	4451.							
.2730	-1082.	325.	-1480.	-698.	-313.	488.	.0687	.0438	-.0211	.0779	.0419	-.0128	3786.							
.2740	-845.	220.	-1322.	-573.	-167.	365.	.0635	.0444	-.0184	.0748	.0438	-.0180	2918.							
.2750	-576.	87.	-1100.	-413.	-12.	215.	.0578	.0451	-.0157	.0697	.0430	-.0226	1942.							
.2760	-273.	-52.	-838.	-230.	143.	42.	.0520	.0460	-.0132	.0639	.0397	-.0262	1144.							
.2770	55.	-184.	-558.	-34.	294.	-141.	.0463	.0473	-.0111	.0581	.0342	-.0284	1369.							
.2780	381.	-312.	-265.	168.	440.	-323.	.0408	.0487	-.0092	.0517	.0275	-.0300	2384.							
.2790	680.	-447.	35.	370.	576.	-496.	.0355	.0502	-.0075	.0444	.0203	-.0319	3528.							
.2800	951.	-577.	322.	561.	696.	-656.	.0308	.0517	-.0059	.0370	.0128	-.0336	4629.							
.2810	1201.	-684.	574.	734.	791.	-802.	.0268	.0532	-.0047	.0307	.0054	-.0342	5611.							
.2820	1413.	-762.	780.	881.	861.	-923.	.0237	.0547	-.0036	.0251	-.0012	-.0339	6424.							
.2830	1561.	-825.	940.	994.	912.	-1008.	.0212	.0558	-.0025	.0198	-.0064	-.0338	7028.							
.2840	1635.	-873.	1047.	1062.	946.	-1053.	.0193	.0564	-.0016	.0155	-.0104	-.0340	7385.							
.2850	1654.	-883.	1080.	1076.	961.	-1058.	.0182	.0567	-.0009	.0141	-.0133	-.0331	7466.							
.2860	1627.	-837.	1026.	1034.	955.	-1023.	.0181	.0568	-.0007	.0163	-.0154	-.0301	7260.							
.2870	1539.	-753.	901.	938.	932.	-946.	.0187	.0564	-.0008	.0211	-.0162	-.0256	6787.							
.2880	1380.	-656.	726.	798.	897.	-831.	.0196	.0554	-.0010	.0275	-.0158	-.0207	6095.							
.2890	1164.	-545.	509.	622.	844.	-691.	.0211	.0539	-.0012	.0351	-.0141	-.0145	5240.							
.2900	920.	-407.	251.	427.	761.	-538.	.0232	.0522	-.0017	.0441	-.0114	-.0058	4277.							
.2910	654.	-254.	-27.	224.	649.	-381.	.0258	.0503	-.0024	.0535	-.0076	.0052	3277.							
.2920	360.	-115.	-299.	26.	515.	-225.	.0287	.0480	-.0031	.0619	-.0032	.0170	2348.							
.2930	46.	7.	-547.	-160.	365.	-75.	.0315	.0455	-.0038	.0684	.0014	.0289	1691.							
.2940	-262.	126.	-772.	-326.	202.	66.	.0343	.0430	-.0046	.0736	.0054	.0414	1622.							
.2950	-546.	243.	-969.	-470.	32.	190.	.0371	.0405	-.0058	.0778	.0074	.0541	2121.							
.2960	-799.	343.	-1121.	-590.	-133.	295.	.0396	.0380	-.0072	.0806	.0067	.0656	2809.							
.2970	-1014.	421.	-1214.	-679.	-282.	382.	.0417	.0355	-.0087	.0810	.0029	.0752	3456.							
.2980	-1182.	483.	-1244.	-726.	-413.	449.	.0431	.0330	-.0102	.0781	-.0037	.0828	3960.							
.2990	-1293.	523.	-1208.	-729.	-528.	491.	.0439	.0306	-.0116	.0715	-.0129	.0883	4277.							
.3000	-1347.	533.	-1100.	-684.	-628.	499.	.0441	.0281	-.0129	.0613	-.0245	.0914	4398.							
.3010	-1332.	515.	-925.	-591.	-714.	473.	.0434	.0255	-.0139	.0471	-.0377	.0922	4344.							
.3020	-1266.	475.	-690.	-451.	-785.	422.	.0419	.0227	-.0144	.0285	-.0514	.0908	4169.							
.3030	-1157.	412.	-403.	-272.	-837.	351.	.0392	.0196	-.0144	.0057	-.0648	.0871	3955.							

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKW02F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.2930	46.	7.	-547.	-160.	365.	-75.	.315	.0455	-.0038	.0684	.0014	.0289	1691.
.2940	-262.	126.	-772.	-326.	202.	66.	.0343	.0430	-.0046	.0736	.0054	.0414	1622.
.2950	-246.	243.	-969.	-476.	32.	190.	.0371	.0405	-.0058	.0778	.0074	.0541	2121.
.2960	-799.	343.	-1121.	-596.	-137.	295.	.0396	.0380	-.0072	.0806	.0067	.0656	2809.
.2970	-1014.	421.	-1214.	-679.	-282.	382.	.0417	.0355	-.0087	.0810	.0029	.0752	3456.
.2980	-1182.	483.	-1244.	-736.	-417.	449.	.0431	.0330	-.0102	.0781	-.0037	.0828	3960.
.2990	-1293.	523.	-1208.	-729.	-528.	491.	.0439	.0306	-.0116	.0715	-.0129	.0883	4277.
.3000	-1343.	533.	-1100.	-684.	-628.	499.	.0441	.0281	-.0129	.0613	-.0245	.0914	4398.
.3010	-1332.	515.	-925.	-591.	-714.	473.	.0434	.0255	-.0139	.0471	-.0377	.0922	4344.
.3020	-1266.	475.	-690.	-451.	-785.	422.	.0419	.0227	-.0144	.0285	-.0514	.0908	4169.
.3030	-1157.	412.	-403.	-272.	-837.	351.	.0392	.0196	-.0144	.0057	-.0648	.0871	3955.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.29.

S/RV PIPING KEWAUNEE GKWOOF 2 RUP DISK
2 SAFETY COLD FKWD4F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	59	MEMBER	2	SEQUENCE	85	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3040	-1011.	328.	-78.	-68.	-867.	263.	.0356	.0161	-.0139	-.0199	-.0778	.0812	3793.		
.3050	-823.	238.	261.	144.	-874.	161.	.0311	.0123	-.0130	-.0464	-.0903	.0740	3758.		
.3060	-599.	158.	593.	354.	-856.	55.	.0258	.0082	-.0117	-.0728	-.1017	.0660	3873.		
.3070	-360.	85.	909.	554.	-808.	-44.	.0196	.0035	-.0098	-.0990	-.1111	.0571	4094.		
.3080	-127.	8.	1204.	732.	-731.	-134.	.0125	-.0016	-.0075	-.1244	-.1180	.0466	4355.		
.3090	98.	-67.	1462.	821.	-637.	-214.	.0048	-.0070	-.0043	-.1477	-.1222	.0354	4615.		
.3100	319.	-121.	1659.	995.	-525.	-285.	-.0030	-.0127	-.0011	-.1671	-.1231	.0249	4842.		
.3110	520.	-152.	1789.	1070.	-411.	-341.	-.0109	-.0183	.0025	-.1826	-.1202	.0151	4992.		
.3120	674.	-177.	1857.	1104.	-290.	-376.	-.0188	-.0239	.0062	-.1940	-.1132	.0052	5015.		
.3130	778.	-200.	1859.	1091.	-165.	-389.	-.0266	-.0294	.0101	-.2006	-.1025	-.0050	4882.		
.3140	837.	-203.	1781.	1029.	-44.	-383.	-.0337	-.0343	.0136	-.2009	-.0887	-.0143	4587.		
.3150	860.	-178.	1621.	920.	67.	-359.	-.0399	-.0383	.0166	-.1942	-.0726	-.0222	4133.		
.3160	836.	-143.	1394.	769.	170.	-318.	-.0452	-.0416	.0190	-.1809	-.0547	-.0293	3545.		
.3170	761.	-111.	1119.	584.	264.	-262.	-.0494	-.0439	.0209	-.1623	-.0356	-.0363	2889.		
.3180	645.	-75.	804.	376.	345.	-194.	-.0524	-.0450	.0221	-.1388	-.0157	-.0423	2277.		
.3190	504.	-32.	455.	155.	402.	-124.	-.0541	-.0450	.0224	-.1107	.0043	-.0469	1871.		
.3200	341.	8.	90.	-70.	434.	-59.	-.0543	-.0438	.0219	-.0790	.0236	-.0501	1850.		
.3210	159.	35.	-270.	-289.	444.	-1.	-.0534	-.0415	.0207	-.0453	.0416	-.0524	2211.		
.3220	-35.	53.	-613.	-494.	435.	53.	-.0514	-.0383	.0188	-.0111	.0581	-.0536	2756.		
.3230	-231.	68.	-928.	-678.	408.	101.	-.0486	-.0343	.0162	.0224	.0727	-.0535	3327.		
.3240	-416.	75.	-1205.	-836.	366.	137.	-.0450	-.0298	.0131	.0546	.0845	-.0521	3851.		
.3250	-578.	74.	-1433.	-966.	312.	158.	-.0409	-.0250	.0095	.0845	.0930	-.0492	4289.		
.3260	-710.	70.	-1604.	-1061.	252.	165.	-.0365	-.0201	.0056	.1105	.0983	-.0445	4602.		
.3270	-811.	63.	-1707.	-1114.	189.	161.	-.0321	-.0156	.0018	.1309	.1007	-.0383	4763.		
.3280	-876.	45.	-1737.	-1125.	128.	145.	-.0279	-.0116	-.0017	.1448	.1002	-.0307	4765.		
.3290	-898.	20.	-1693.	-1097.	69.	115.	-.0241	-.0084	-.0050	.1522	.0967	-.0217	4610.		
.3300	-867.	1.	-1587.	-1030.	15.	71.	-.0208	-.0061	-.0078	.1530	.0906	-.0109	4310.		
.3310	-787.	-8.	-1423.	-929.	-31.	22.	-.0180	-.0049	-.0102	.1468	.0824	.0013	3879.		
.3320	-674.	-17.	-1201.	-798.	-61.	-26.	-.0162	-.0049	-.0118	.1333	.0726	.0136	3341.		
.3330	-532.	-31.	-930.	-646.	-75.	-72.	-.0152	-.0062	-.0127	.1133	.0614	.0256	2729.		
.3340	-357.	-34.	-629.	-479.	-76.	-116.	-.0150	-.0086	-.0130	.0882	.0490	.0374	2080.		
.3350	-150.	-19.	-316.	-302.	-68.	-155.	-.0153	-.0119	-.0127	.0594	.0361	.0492	1444.		
.3360	70.	2.	8.	-120.	-50.	-185.	-.0162	-.0161	-.0119	.0272	.0231	.0599	944.		
.3370	284.	16.	336.	60.	-22.	-204.	-.0177	-.0210	-.0105	-.0073	.0107	.0685	891.		
.3380	489.	30.	651.	233.	11.	-212.	-.0194	-.0262	-.0088	-.0422	-.0009	.0751	1315.		
.3390	686.	54.	933.	391.	41.	-211.	-.0210	-.0315	-.0070	-.0754	-.0116	.0801	1864.		
.3400	861.	83.	1172.	528.	68.	-200.	-.0225	-.0366	-.0052	-.1053	-.0212	.0830	2375.		
.3410	998.	105.	1368.	638.	94.	-176.	-.0237	-.0413	-.0035	-.1309	-.0294	.0830	2789.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.30.

S/RV PIPING KEWAUNEE GKWOOF 2 RUP DISK
2 SAFETY COLD FKWD4F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING