

50-305

RESPONSE TO NUREG-0737 ITEM II.D.1

Docket # *50-305*

Control # *8403280048*

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

.1020	-830.	-723.	-174.	-291.	277.	9.	-.0199	.0445	-.0324	-.0638	.0338	.0248	161.
.1030	-1130.	-786.	-174.	-105.	209.	268.	-.0200	.0480	-.0429	-.0689	.0326	.0195	143.
.1040	-1306.	-794.	200.	284.	26.	463.	-.0181	.0504	-.0528	-.0683	.0231	.0130	218.
.1050	-1397.	-795.	621.	709.	-169.	599.	-.0137	.0515	-.0604	-.0632	.0089	.0068	379.
.1060	-1488.	-827.	915.	992.	-275.	741.	-.0060	.0511	-.0642	-.0565	-.0053	.0011	509.
.1070	-1570.	-791.	1032.	1091.	-270.	924.	.0018	.0491	-.0632	-.0503	-.0153	-.0039	584.
.1080	-1609.	-747.	1010.	1011.	-174.	1115.	.0109	.0453	-.0577	-.0461	-.0206	-.0090	608.
.1090	-1568.	-787.	861.	762.	-30.	1219.	.0192	.0404	-.0491	-.0424	-.0211	-.0139	577.
.1100	-1339.	-359.	545.	507.	32.	1210.	.0246	.0357	-.0400	-.0363	-.0080	-.0157	527.
.1110	-964.	31.	338.	357.	-18.	1061.	.0269	.0299	-.0318	-.0323	.0055	-.0195	449.
.1120	-533.	-3.	317.	285.	-150.	761.	.0266	.0220	-.0256	-.0311	.0110	-.0258	332.
.1130	-74.	-31.	222.	194.	-302.	374.	.0242	.0144	-.0227	-.0251	.0156	-.0288	208.

ADLPIPE PAGE 1921

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.03.

S/RV PIPING KEWAUNEE GKW08F 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	50	MEMBER	1	SEQUENCE	70	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)		
.1140	410.	291.	-48.	50.	-407.	14.	.0205	.0092	-.0224	-.0127	.0229	-.0276	165.		
.1150	830.	699.	-367.	-154.	-426.	-232.	.0171	.0060	-.0219	-.0011	.0297	-.0264	204.		
.1160	1070.	888.	-737.	-482.	-335.	-336.	.0153	.0037	-.0189	.0040	.0382	-.0246	271.		
.1170	1050.	861.	-1209.	-942.	-116.	-311.	.0155	.0031	-.0124	.0032	.0504	-.0210	401.		
.1180	991.	1138.	-1675.	-1308.	138.	-212.	.0177	.0050	-.0030	-.0001	.0650	-.0140	535.		
.1190	915.	1220.	-1828.	-1466.	364.	-83.	.0222	.0078	.0088	-.0099	.0638	-.0097	607.		
.1200	814.	924.	-1623.	-1377.	460.	-22.	.0281	.0107	.0205	-.0231	.0460	-.0050	583.		
.1210	802.	820.	-1189.	-948.	340.	-111.	.0337	.0155	.0290	-.0300	.0266	.0068	407.		
.1220	819.	791.	-510.	-227.	76.	-254.	.0377	.0229	.0338	-.0335	.0038	.0174	140.		
.1230	845.	839.	272.	602.	-259.	-355.	.0398	.0315	.0355	-.0377	-.0191	.0233	299.		
.1240	689.	636.	880.	1200.	-489.	-334.	.0405	.0394	.0354	-.0461	-.0386	.0261	537.		
.1250	274.	282.	1098.	1402.	-461.	-156.	.0406	.0468	.0344	-.0565	-.0484	.0307	596.		
.1260	-214.	254.	911.	1289.	-175.	158.	.0406	.0543	.0332	-.0671	-.0469	.0404	526.		
.1270	-704.	139.	516.	885.	287.	550.	.0413	.0604	.0329	-.0832	-.0475	.0501	434.		
.1280	-1032.	37.	42.	386.	699.	821.	.0414	.0644	.0326	-.1001	-.0465	.0638	459.		
.1290	-1169.	-51.	-285.	68.	921.	847.	.0395	.0667	.0309	-.1124	-.0431	.0797	503.		
.1300	-1061.	-65.	-274.	120.	893.	630.	.0344	.0675	.0277	-.1201	-.0439	.0902	441.		
.1310	-613.	161.	25.	501.	580.	196.	.0259	.0664	.0235	-.1256	-.0507	.0927	317.		
.1320	-31.	116.	474.	937.	134.	-373.	.0156	.0618	.0192	-.1332	-.0567	.0864	408.		
.1330	554.	18.	844.	1300.	-271.	-985.	.0051	.0550	.0152	-.1394	-.0803	.0796	663.		
.1340	1046.	66.	959.	1453.	-477.	-1472.	-.0036	.0473	.0117	-.1436	-.0378	.0752	852.		
.1350	1429.	277.	713.	1246.	-451.	-1726.	-.0095	.0386	.0090	-.1473	-.0902	.0731	873.		
.1360	1673.	605.	141.	713.	-256.	-1752.	-.0127	.0282	.0066	-.1491	-.0855	.0734	766.		
.1370	1596.	598.	-502.	40.	93.	-1563.	-.0139	.0166	.0041	-.1505	-.0800	.0686	628.		
.1380	1361.	569.	-1020.	-476.	443.	-1270.	-.0140	.0052	.0006	-.1496	-.0742	.0576	573.		
.1390	1203.	560.	-1271.	-730.	619.	-1015.	-.0131	-.0053	-.0039	-.1472	-.0739	.0411	560.		
.1400	1193.	492.	-1187.	-694.	537.	-888.	-.0104	-.0148	-.0092	-.1426	-.0803	.0248	501.		
.1410	1222.	532.	-813.	-327.	267.	-843.	-.0056	-.0224	-.0149	-.1333	-.0869	.0150	378.		
.1420	1092.	419.	-247.	203.	3.	-732.	.0015	-.0276	-.0196	-.1242	-.0984	.0066	305.		
.1430	926.	320.	268.	653.	-198.	-555.	.0104	-.0309	-.0223	-.1167	-.1107	-.0011	353.		
.1440	739.	151.	549.	813.	-284.	-346.	.0202	-.0325	-.0226	-.1103	-.1185	-.0076	372.		
.1450	398.	-104.	548.	683.	-193.	-73.	.0298	-.0319	-.0209	-.1031	-.1160	-.0121	286.		
.1460	-69.	-214.	321.	390.	48.	280.	.0382	-.0284	-.0176	-.0943	-.1029	-.0145	194.		
.1470	-511.	-403.	4.	-48.	357.	625.	.0450	-.0228	-.0126	-.0874	-.0916	-.0184	290.		
.1480	-707.	-486.	-349.	-525.	586.	782.	.0498	-.0155	-.0065	-.0792	-.0820	-.0189	445.		
.1490	-746.	-601.	-596.	-881.	713.	714.	.0523	-.0067	.0001	-.0692	-.0751	-.0153	537.		
.1500	-685.	-776.	-601.	-986.	719.	475.	.0521	.0036	.0074	-.0591	-.0722	-.0106	526.		
.1510	-360.	-679.	-411.	-843.	517.	73.	.0489	.0147	.0153	-.0494	-.0581	-.0047	398.		

ADLPIPE PAGE 1922

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.03.

S/RV PIPING KEWAUNEE GKW08F 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

.1400	1197.	492.	1187.	-694.	537.	-888.	-.0104	-.0148	-.0092	-.1426	-.0803	.0248	501.
.1410	1222.	532.	-813.	-327.	267.	-843.	-.0056	-.0224	-.0149	-.1333	-.0869	.0150	378.
.1420	1092.	419.	-247.	203.	3.	-732.	.0015	-.0276	-.0196	-.1242	-.0984	.0066	305.
.1430	928.	320.	268.	653.	-198.	-555.	.0104	-.0309	-.0223	-.1167	-.1107	-.0011	353.
.1440	739.	151.	549.	813.	-284.	-346.	.0202	-.0325	-.0226	-.1103	-.1185	-.0076	372.
.1450	398.	-104.	548.	683.	-193.	-73.	.0298	-.0319	-.0209	-.1031	-.1160	-.0121	286.
.1460	-69.	-214.	321.	390.	48.	280.	.0382	-.0284	-.0176	-.0943	-.1029	-.0145	194.
.1470	-511.	-403.	4.	-48.	357.	625.	.0450	-.0228	-.0126	-.0874	-.0916	-.0184	290.
.1480	-707.	-486.	-349.	-525.	586.	782.	.0498	-.0155	-.0065	-.0792	-.0820	-.0189	445.
.1490	-746.	-601.	-596.	-881.	713.	714.	.0523	-.0067	.0001	-.0692	-.0751	-.0153	537.
.1500	-685.	-776.	-601.	-986.	719.	475.	.0521	.0036	.0074	-.0591	-.0722	-.0106	526.
.1510	-360.	-679.	-411.	-843.	517.	73.	.0489	.0147	.0153	-.0494	-.0681	-.0047	398.

ADLPIPE PAGE 1922

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.03.

S/RV PIPING KEWAUNEE GK'08F 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	50	MEMBER	1	SEQUENCE	70	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)	
.1520	135.	-584.	-145.	-646.	176.	-437.		.0432	.0252	.0239	-.0427	-.0627	-.0004	321.	
.1530	590.	-536.	60.	-480.	-146.	-948.		.0356	.0348	.0322	-.0380	-.0508	.0035	430.	
.1540	842.	-644.	158.	-417.	-301.	-1322.		.0273	.0434	.0397	-.0349	-.0354	.0062	569.	
.1550	994.	-649.	69.	-521.	-314.	-1509.		.0191	.0511	.0452	-.0310	-.0174	.0113	653.	
.1560	1138.	-259.	-248.	-756.	-281.	-1521.		.0111	.0576	.0477	-.0235	.0073	.0232	691.	
.1570	1070.	-24.	-586.	-1026.	-167.	-1343.		.0032	.0621	.0475	-.0165	.0304	.0348	681.	
.1580	877.	138.	-802.	-1142.	-43.	-1084.		-.0051	.0646	.0448	-.0095	.0521	.0435	632.	
.1590	778.	437.	-890.	-1072.	-33.	-863.		-.0142	.0647	.0402	-.0017	.0727	.0490	552.	
.1600	728.	622.	-818.	-881.	-148.	-654.		-.0233	.0617	.0349	.0043	.0862	.0491	444.	
.1610	609.	675.	-535.	-515.	-326.	-394.		-.0313	.0561	.0298	.0091	.0929	.0459	291.	
.1620	461.	928.	-130.	38.	-523.	-89.		-.0373	.0492	.0251	.0162	.0991	.0453	213.	
.1630	277.	1110.	258.	535.	-668.	259.		-.0405	.0411	.0216	.0226	.0999	.0450	359.	
.1640	132.	1273.	527.	871.	-759.	613.		-.0410	.0318	.0192	.0279	.0969	.0453	525.	
.1650	-27.	1481.	717.	1130.	-730.	979.		-.0400	.0220	.0172	.0334	.0934	.0458	676.	
.1660	-347.	1448.	891.	1316.	-696.	1398.		-.0382	.0119	.0152	.0373	.0866	.0418	820.	
.1670	-660.	1425.	986.	1426.	-608.	1782.		-.0368	.0024	.0122	.0414	.0806	.0354	948.	
.1680	-836.	1389.	1025.	1447.	-569.	2034.		-.0363	-.0063	.0083	.0451	.0738	.0267	1027.	
.1690	-893.	1375.	1040.	1446.	-571.	2126.		-.0366	-.0134	.0035	.0496	.0686	.0183	1057.	
.1700	-967.	1233.	1037.	1404.	-551.	2121.		-.0375	-.0185	-.0016	.0535	.0539	.0099	1044.	
.1710	-1029.	904.	985.	1237.	-496.	2037.		-.0385	-.0215	-.0059	.0556	.0567	.0004	977.	
.1720	-869.	873.	807.	980.	-479.	1807.		-.0398	-.0221	-.0090	.0589	.0549	-.0052	847.	
.1730	-677.	719.	558.	605.	-426.	1485.		-.0410	-.0207	-.0101	.0602	.0547	-.0109	666.	
.1740	-577.	352.	284.	166.	-311.	1128.		-.0421	-.0174	-.0091	.0591	.0558	-.0179	474.	
.1750	-449.	66.	9.	-256.	-202.	737.		-.0431	-.0122	-.0065	.0578	.0586	-.0242	324.	
.1760	-268.	-223.	-220.	-662.	-118.	330.		-.0434	-.0056	-.0027	.0558	.0564	-.0308	301.	
.1770	-67.	-445.	-407.	-998.	-57.	-90.		-.0428	.0021	.0014	.0556	.0508	-.0346	403.	
.1780	39.	-805.	-503.	-1246.	32.	-486.		-.0412	.0107	.0054	.0568	.0390	-.0367	537.	
.1790	147.	-1050.	-532.	-1378.	107.	-856.		-.0387	.0198	.0091	.0601	.0245	-.0359	653.	
.1800	270.	-1158.	-527.	-1441.	152.	-1157.		-.0357	.0286	.0128	.0637	.0083	-.0336	744.	
.1810	260.	-1446.	-471.	-1490.	230.	-1327.		-.0322	.0363	.0168	.0646	-.0112	-.0333	806.	
.1820	178.	-1594.	-407.	-1455.	324.	-1407.		-.0289	.0431	.0206	.0663	-.0252	-.0303	823.	
.1830	68.	-1656.	-346.	-1379.	429.	-1415.		-.0258	.0485	.0241	.0678	-.0356	-.0254	811.	
.1840	-21.	-1657.	-298.	-1298.	515.	-1362.		-.0233	.0520	.0268	.0677	-.0445	-.0196	783.	
.1850	-103.	-1599.	-226.	-1166.	569.	-1255.		-.0217	.0534	.0280	.0668	-.0517	-.0130	724.	
.1860	-227.	-1574.	-91.	-949.	606.	-1103.		-.0214	.0529	.0271	.0661	-.0578	-.0071	632.	
.1870	-309.	-1374.	42.	-658.	592.	-943.		-.0230	.0509	.0237	.0677	-.0594	-.0005	519.	
.1880	-358.	-1178.	150.	-394.	546.	-763.		-.0260	.0470	.0183	.0697	-.0504	.0034	408.	
.1890	-386.	-940.	216.	-166.	494.	-552.		-.0302	.0414	.0116	.0723	-.0594	.0046	305.	

ADLPIPE PAGE 1923

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.03.

S/RV PIPING KEWAUNEE GK'08F 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

.1780	39.	-805.	-503.	-1246.	32.	-486.	-.0412	.0107	.0054	.0568	.0390	-.0367	537.
.1790	147.	-1050.	-532.	-1378.	107.	-856.	-.0387	.0198	.0091	.0601	.0245	-.0359	653.
.1800	270.	-1158.	-527.	-1441.	152.	-1157.	-.0357	.0286	.0128	.0637	.0083	-.0336	744.
.1810	260.	-1446.	-471.	-1490.	230.	-1327.	-.0322	.0363	.0168	.0646	-.0112	-.0333	806.
.1820	178.	-1594.	-467.	-1455.	324.	-1407.	-.0289	.0431	.0206	.0663	-.0252	-.0303	823.
.1830	68.	-1656.	-346.	-1379.	429.	-1415.	-.0258	.0485	.0241	.0678	-.0356	-.0254	811.
.1840	-21.	-1657.	-298.	-1298.	515.	-1362.	-.0233	.0520	.0268	.0677	-.0445	-.0196	783.
.1850	-103.	-1599.	-226.	-1166.	569.	-1255.	-.0217	.0534	.0280	.0668	-.0517	-.0130	724.
.1860	-227.	-1574.	-91.	-949.	606.	-1103.	-.0214	.0529	.0271	.0661	-.0578	-.0071	632.
.1870	-309.	-1374.	42.	-658.	592.	-943.	-.0230	.0509	.0237	.0677	-.0594	-.0005	519.
.1880	-358.	-1178.	150.	-394.	546.	-763.	-.0260	.0470	.0183	.0697	-.0504	.0034	408.
.1890	-386.	-940.	216.	-166.	494.	-552.	-.0302	.0414	.0116	.0723	-.0594	.0046	305.

ADLPIPE PAGE 1923

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.03.

S/RV PIPING KEAUNEE 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	50	MEMBER	1	SEQUENCE	70	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)		
.1900	-439.	-641.	219.	23.	476.	-305.	-.0350	.0346	.0047	.0758	-.0542	.0046	227.		
.1910	-532.	-458.	146.	97.	522.	-34.	-.0396	.0268	-.0014	.0784	-.0480	.0025	213.		
.1920	-523.	-195.	-15.	68.	568.	185.	-.0435	.0185	-.0059	.0814	-.0391	.0014	241.		
.1930	-400.	128.	-189.	5.	585.	323.	-.0470	.0100	-.0086	.0847	-.0286	.0015	268.		
.1940	-248.	386.	-296.	-27.	562.	391.	-.0503	.0018	-.0096	.0876	-.0179	.0008	275.		
.1950	-51.	586.	-315.	5.	468.	371.	-.0540	-.0058	-.0095	.0900	-.0070	-.0021	240.		
.1960	255.	786.	-261.	84.	278.	236.	-.0584	-.0125	-.0088	.0924	.0039	-.0074	150.		
.1970	610.	937.	-172.	172.	33.	23.	-.0631	-.0180	-.0081	.0947	.0153	-.0146	71.		
.1980	878.	994.	-102.	221.	-186.	-176.	-.0675	-.0221	-.0078	.0967	.0282	-.0222	136.		
.1990	1009.	1013.	-109.	187.	-327.	-288.	-.0707	-.0244	-.0077	.0984	.0432	-.0284	190.		
.2000	1014.	1025.	-226.	27.	-371.	-280.	-.0719	-.0251	-.0077	.0991	.0593	-.0328	187.		
.2010	876.	972.	-431.	-249.	-313.	-151.	-.0708	-.0243	-.0073	.0983	.0753	-.0360	172.		
.2020	587.	837.	-648.	-545.	-187.	71.	-.0676	-.0219	-.0066	.0963	.0912	-.0383	233.		
.2030	209.	663.	-772.	-748.	-69.	339.	-.0627	-.0181	-.0054	.0932	.1061	-.0403	331.		
.2040	-177.	464.	-725.	-789.	-32.	610.	-.0565	-.0133	-.0036	.0885	.1173	-.0432	400.		
.2050	-534.	234.	-486.	-644.	-98.	846.	-.0496	-.0079	-.0016	.0826	.1230	-.0468	428.		
.2060	-860.	-14.	-90.	-330.	-235.	1024.	-.0421	-.0019	.0005	.0771	.1237	-.0497	442.		
.2070	-1157.	-265.	382.	74.	-398.	1153.	-.0346	.0044	.0023	.0727	.1202	-.0513	490.		
.2080	-1421.	-503.	823.	450.	-540.	1264.	-.0272	.0105	.0042	.0685	.1137	-.0518	580.		
.2090	-1662.	-701.	1138.	710.	-618.	1382.	-.0206	.0163	.0060	.0643	.1069	-.0516	671.		
.2100	-1896.	-852.	1276.	815.	-599.	1497.	-.0152	.0217	.0079	.0607	.1028	-.0503	725.		
.2110	-2107.	-984.	1229.	753.	-484.	1585.	-.0112	.0265	.0097	.0577	.1018	-.0479	730.		
.2120	-2233.	-1082.	1040.	554.	-319.	1609.	-.0088	.0304	.0116	.0554	.1020	-.0447	695.		
.2130	-2223.	-1104.	791.	306.	-165.	1539.	-.0081	.0333	.0133	.0538	.1018	-.0403	633.		
.2140	-2074.	-1071.	574.	105.	-67.	1347.	-.0088	.0353	.0149	.0530	.1003	-.0345	543.		
.2150	-1787.	-1030.	441.	-3.	-51.	1014.	-.0109	.0361	.0161	.0528	.0965	-.0279	407.		
.2160	-1352.	-969.	386.	-28.	-122.	550.	-.0140	.0359	.0168	.0528	.0902	-.0211	226.		
.2170	-818.	-863.	372.	-4.	-248.	20.	-.0178	.0346	.0172	.0529	.0822	-.0150	100.		
.2180	-306.	-747.	355.	23.	-362.	-476.	-.0215	.0324	.0171	.0525	.0735	-.0104	240.		
.2190	95.	-652.	284.	-2.	-405.	-858.	-.0245	.0294	.0166	.0508	.0648	-.0074	381.		
.2200	378.	-556.	121.	-116.	-357.	-1103.	-.0262	.0259	.0156	.0477	.0568	-.0051	468.		
.2210	557.	-449.	-126.	-310.	-228.	-1218.	-.0261	.0219	.0142	.0434	.0490	-.0031	512.		
.2220	620.	-360.	-391.	-522.	-46.	-1210.	-.0244	.0177	.0121	.0381	.0406	-.0015	529.		
.2230	578.	-298.	-589.	-665.	139.	-1103.	-.0213	.0133	.0093	.0317	.0306	-.0012	520.		
.2240	489.	-252.	-659.	-679.	267.	-944.	-.0173	.0090	.0059	.0238	.0182	-.0029	479.		
.2250	395.	-228.	-578.	-547.	306.	-778.	-.0129	.0049	.0021	.0145	.0036	-.0068	401.		
.2260	298.	-237.	-369.	-289.	270.	-623.	-.0083	.0012	-.0020	.0036	-.0123	-.0121	296.		
.2270	186.	-262.	-93.	37.	200.	-472.	-.0035	-.0017	-.0060	-.0083	-.0283	-.0177	206.		

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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

.2170	-818.	-863.	372.	-4.	-248.	20.	-.1178	.0346	.0172	.0529	.0822	-.0150	100.
.2180	-306.	-747.	355.	23.	-362.	-476.	-.215	.0324	.0171	.0525	.0735	-.0104	240.
.2190	95.	-652.	284.	-2.	-405.	-858.	-.0245	.0294	.0166	.0508	.0548	-.0074	381.
.2200	378.	-556.	121.	-116.	-357.	-1103.	-.0262	.0259	.0156	.0477	.0568	-.0051	468.
.2210	557.	-449.	-126.	-310.	-228.	-1218.	-.0261	.0219	.0142	.0434	.0490	-.0031	512.
.2220	620.	-360.	-391.	-522.	-46.	-1210.	-.0244	.0177	.0121	.0381	.0406	-.0015	529.
.2230	578.	-298.	-589.	-665.	139.	-1103.	-.0213	.0133	.0093	.0317	.0306	-.0012	520.
.2240	489.	-252.	-659.	-679.	267.	-944.	-.0173	.0090	.0059	.0238	.0182	-.0029	479.
.2250	395.	-228.	-578.	-547.	306.	-778.	-.0129	.0049	.0021	.0145	.0036	-.0068	401.
.2260	298.	-237.	-369.	-289.	270.	-623.	-.0083	.0012	-.0020	.0036	-.0123	-.0121	296.
.2270	186.	-262.	-93.	37.	200.	-472.	-.0035	-.0017	-.0060	-.0083	-.0283	-.0177	206.

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LOADS

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ENGLISH UNITS

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

SECTION	50	MEMBER	1	SEQUENCE	70	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	60.	-281.	164.	343.	140.	-305.	.0014	-.0039	-.0096	-.0213	-.0437	-.0224	193.		
.2290	-76.	-287.	324.	544.	132.	-121.	.0061	-.0052	-.0126	-.0350	-.0578	-.0256	230.		
.2300	-216.	-278.	346.	607.	196.	64.	.0104	-.0056	-.0149	-.0487	-.0592	-.0269	257.		
.2310	-348.	-265.	239.	543.	320.	222.	.0137	-.0051	-.0163	-.0620	-.0772	-.0266	268.		
.2320	-433.	-251.	50.	394.	461.	322.	.0156	-.0039	-.0167	-.0747	-.0822	-.0256	275.		
.2330	-426.	-212.	-165.	215.	571.	334.	.0159	-.0020	-.0158	-.0865	-.0852	-.0240	279.		
.2340	-305.	-137.	-355.	61.	623.	231.	.0147	.0006	-.0135	-.0969	-.0568	-.0217	268.		
.2350	-74.	-56.	-489.	-38.	612.	8.	.0124	.0036	-.0096	-.1057	-.0877	-.0184	246.		
.2360	248.	18.	-562.	-89.	545.	-313.	.0095	.0069	-.0039	-.1133	-.0886	-.0141	255.		
.2370	633.	116.	-593.	-104.	439.	-682.	.0066	.0104	.0033	-.1194	-.0888	-.0087	328.		
.2380	1020.	249.	-607.	-101.	324.	-1037.	.0040	.0141	.0116	-.1238	-.0372	-.0024	438.		
.2390	1346.	380.	-620.	-99.	229.	-1331.	.0019	.0176	.0206	-.1267	-.0833	.0040	543.		
.2400	1585.	483.	-643.	-113.	167.	-1538.	.0006	.0207	.0293	-.1280	-.0772	.0100	622.		
.2410	1737.	574.	-672.	-134.	131.	-1652.	-.0001	.0235	.0372	-.1277	-.0692	.0154	667.		
.2420	1797.	659.	-685.	-134.	108.	-1667.	-.0001	.0257	.0434	-.1256	-.0597	.0205	673.		
.2430	1763.	737.	-648.	-79.	80.	-1590.	.0004	.0275	.0476	-.1219	-.0493	.0254	640.		
.2440	1656.	814.	-548.	43.	30.	-1436.	.0014	.0287	.0496	-.1165	-.0383	.0301	577.		
.2450	1496.	883.	-389.	225.	-46.	-1229.	.0026	.0292	.0495	-.1100	-.0272	.0341	502.		
.2460	1284.	912.	-181.	448.	-137.	-978.	.0041	.0289	.0477	-.1032	-.0163	.0368	435.		
.2470	1026.	894.	56.	688.	-227.	-696.	.0059	.0278	.0444	-.0968	-.0062	.0383	403.		
.2480	745.	871.	293.	923.	-308.	-393.	.0080	.0261	.0400	-.0908	.0035	.0396	421.		
.2490	459.	866.	499.	1124.	-376.	-80.	.0104	.0237	.0347	-.0849	.0127	.0409	477.		
.2500	169.	843.	672.	1279.	-420.	233.	.0131	.0208	.0285	-.0795	.0204	.0416	548.		
.2510	-125.	774.	812.	1387.	-440.	528.	.0159	.0174	.0216	-.0748	.0261	.0411	621.		
.2520	-396.	676.	916.	1449.	-443.	785.	.0189	.0137	.0142	-.0707	.0294	.0393	685.		
.2530	-616.	575.	983.	1467.	-442.	986.	.0219	.0099	.0065	-.0670	.0303	.0368	731.		
.2540	-774.	476.	1025.	1451.	-444.	1120.	.0250	.0061	-.0012	-.0638	.0290	.0339	757.		
.2550	-874.	367.	1043.	1402.	-446.	1186.	.0283	.0024	-.0083	-.0615	.0258	.0307	758.		
.2560	-918.	243.	1028.	1312.	-443.	1183.	.0316	-.0011	-.0147	-.0606	.0214	.0271	731.		
.2570	-901.	106.	974.	1174.	-432.	1113.	.0350	-.0043	-.0198	-.0613	.0158	.0228	672.		
.2580	-827.	-17.	877.	991.	-412.	939.	.0384	-.0072	-.0238	-.0631	.0097	.0184	586.		
.2590	-708.	-106.	739.	775.	-381.	827.	.0416	-.0098	-.0267	-.0654	.0034	.0141	480.		
.2600	-556.	-189.	575.	537.	-342.	633.	.0447	-.0123	-.0287	-.0684	-.0033	.0100	360.		
.2610	-375.	-282.	398.	289.	-300.	410.	.0475	-.0148	-.0298	-.0720	-.0105	.0062	234.		
.2620	-171.	-359.	214.	48.	-258.	169.	.0501	-.0172	-.0304	-.0758	-.0181	.0028	125.		
.2630	38.	-401.	35.	-168.	-216.	-65.	.0524	-.0195	-.0306	-.0795	-.0260	.0002	113.		
.2640	228.	-420.	-122.	-346.	-174.	-269.	.0545	-.0217	-.0306	-.0829	-.0342	-.0013	189.		
.2650	386.	-419.	-254.	-483.	-131.	-429.	.0565	-.0238	-.0304	-.0862	-.0425	-.0019	264.		

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CONDITION 24

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ENGLISH UNITS

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

.2550	-874.	367.	1043.	1402.	-446.	1186.	.283	.0024	-.0083	-.0615	.0258	.0307	758.
.2560	-918.	243.	1028.	1312.	-443.	1183.	.316	-.0011	-.0147	-.0606	.0214	.0271	731.
.2570	-901.	106.	974.	1174.	-432.	1113.	.0350	-.0043	-.0198	-.0613	.0158	.0228	672.
.2580	-827.	-17.	877.	991.	-412.	939.	.0384	-.0072	-.0238	-.0631	.0097	.0184	586.
.2590	-708.	-106.	739.	775.	-381.	827.	.0416	-.0098	-.0267	-.0654	.0034	.0141	480.
.2600	-556.	-189.	575.	537.	-342.	633.	.0447	-.0123	-.0287	-.0684	-.0033	.0100	360.
.2610	-375.	-282.	398.	289.	-300.	410.	.0475	-.0148	-.0298	-.0720	-.0105	.0062	234.
.2620	-171.	-359.	214.	48.	-258.	169.	.0501	-.0172	-.0304	-.0758	-.0181	.0028	125.
.2630	38.	-401.	35.	-168.	-216.	-65.	.0524	-.0195	-.0306	-.0795	-.0260	.0002	113.
.2640	228.	-420.	-122.	-346.	-174.	-269.	.0545	-.0217	-.0306	-.0829	-.0342	-.0013	189.
.2650	386.	-419.	-254.	-483.	-131.	-429.	.0565	-.0238	-.0304	-.0862	-.0425	-.0019	264.

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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	50	MEMBER	1	SEQUENCE	70	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)		
.2660	509.	-403.	-364.	-580.	-83.	-543.	.0584	-.0258	-.0300	-.0892	-.0507	-.0014	321.		
.2670	592.	-373.	-450.	-637.	-26.	-611.	.0602	-.0276	-.0295	-.0917	-.0586	-.0001	354.		
.2680	631.	-319.	-510.	-650.	38.	-621.	.0620	-.0293	-.0290	-.0933	-.0562	.0022	361.		
.2690	621.	-250.	-535.	-618.	105.	-571.	.0637	-.0308	-.0284	-.0939	-.0736	.0054	340.		
.2700	565.	-193.	-516.	-538.	169.	-476.	.0652	-.0321	-.0278	-.0938	-.0808	.0093	296.		
.2710	483.	-145.	-457.	-414.	226.	-358.	.0664	-.0329	-.0272	-.0931	-.0876	.0137	238.		
.2720	401.	-56.	-373.	-251.	270.	-229.	.0669	-.0330	-.0267	-.0914	-.0933	.0183	174.		
.2730	329.	88.	-273.	-60.	297.	-92.	.0668	-.0326	-.0261	-.0889	-.0976	.0232	127.		
.2740	251.	210.	-160.	136.	317.	46.	.0659	-.0322	-.0256	-.0857	-.1010	.0279	140.		
.2750	166.	272.	-53.	308.	341.	168.	.0644	-.0318	-.0251	-.0818	-.1032	.0324	196.		
.2760	102.	332.	13.	438.	375.	261.	.0622	-.0312	-.0247	-.0767	-.1038	.0367	254.		
.2770	88.	443.	29.	521.	415.	321.	.0593	-.0304	-.0241	-.0704	-.1030	.0409	297.		
.2780	115.	566.	12.	558.	454.	344.	.0557	-.0295	-.0235	-.0633	-.1011	.0450	320.		
.2790	168.	642.	-21.	555.	487.	321.	.0517	-.0287	-.0225	-.0559	-.0985	.0490	323.		
.2800	262.	687.	-68.	523.	509.	235.	.0470	-.0279	-.0215	-.0482	-.0952	.0505	308.		
.2810	428.	760.	-125.	473.	506.	81.	.0417	-.0267	-.0204	-.0402	-.0913	.0551	280.		
.2820	655.	851.	-182.	414.	472.	-126.	.0359	-.0255	-.0194	-.0320	-.0871	.0566	257.		
.2830	885.	900.	-231.	344.	416.	-357.	.0298	-.0244	-.0189	-.0238	-.0824	.0573	260.		
.2840	1079.	836.	-278.	258.	357.	-584.	.0238	-.0236	-.0190	-.0155	-.0772	.0570	294.		
.2850	1243.	859.	-345.	145.	309.	-788.	.0182	-.0226	-.0199	-.0069	-.0713	.0553	345.		
.2860	1371.	841.	-445.	-6.	278.	-949.	.0134	-.0215	-.0214	.0017	-.0550	.0525	397.		
.2870	1416.	794.	-560.	-183.	273.	-1034.	.0099	-.0203	-.0234	.0100	-.0584	.0486	435.		
.2880	1341.	689.	-657.	-355.	293.	-1023.	.0080	-.0189	-.0258	.0176	-.0521	.0437	450.		
.2890	1174.	554.	-713.	-496.	324.	-927.	.0077	-.0175	-.0282	.0241	-.0468	.0377	441.		
.2900	958.	414.	-718.	-592.	344.	-777.	.0090	-.0158	-.0307	.0297	-.0428	.0306	415.		
.2910	701.	246.	-657.	-627.	343.	-591.	.0119	-.0139	-.0332	.0343	-.0407	.0228	372.		
.2920	394.	40.	-514.	-588.	321.	-370.	.0160	-.0120	-.0356	.0382	-.0405	.0145	307.		
.2930	54.	-175.	-309.	-486.	280.	-118.	.0210	-.0100	-.0379	.0415	-.0417	.0060	230.		
.2940	-288.	-381.	-86.	-367.	230.	142.	.0265	-.0080	-.0399	.0444	-.0436	-.0022	183.		
.2950	-615.	-591.	110.	-274.	190.	389.	.0321	-.0060	-.0417	.0470	-.0450	-.0098	206.		
.2960	-928.	-797.	251.	-232.	177.	617.	.0374	-.0039	-.0430	.0492	-.0449	-.0161	274.		
.2970	-1213.	-958.	320.	-249.	194.	827.	.0420	-.0017	-.0436	.0514	-.0427	-.0208	355.		
.2980	-1439.	-1063.	315.	-330.	227.	1003.	.0454	.0003	-.0436	.0533	-.0385	-.0237	433.		
.2990	-1585.	-1143.	252.	-465.	265.	1111.	.0476	.0019	-.0427	.0550	-.0326	-.0250	495.		
.3000	-1643.	-1209.	152.	-624.	298.	1129.	.0482	.0032	-.0411	.0570	-.0254	-.0245	531.		
.3010	-1600.	-1224.	40.	-776.	309.	1060.	.0472	.0041	-.0389	.0595	-.0173	-.0225	542.		
.3020	-1459.	-1170.	-66.	-903.	286.	926.	.0449	.0047	-.0360	.0627	-.0091	-.0192	532.		
.3030	-1248.	-1075.	-153.	-999.	234.	749.	.0414	.0046	-.0325	.0663	-.0012	-.0146	510.		

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S/RV PIPING KEWAUNEE GKW08F 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

.2930	54.	-175.	107.	-486.	280.	-118.	.210	-.0100	-.0379	.0415	-.0417	.0060	230.
.2940	-288.	-381.	-86.	-367.	230.	142.	.265	-.0080	-.0399	.0444	-.0436	-.0022	183.
.2950	-615.	-591.	110.	-274.	190.	389.	.321	-.0060	-.0417	.0470	-.0450	-.0098	206.
.2960	-928.	-797.	251.	-232.	177.	617.	.0374	-.0039	-.0430	.0492	-.0449	-.0161	274.
.2970	-1213.	-958.	320.	-249.	194.	827.	.0420	-.0017	-.0436	.0514	-.0427	-.0208	355.
.2980	-1439.	-1063.	315.	-330.	227.	1003.	.0454	.0003	-.0436	.0533	-.0385	-.0237	433.
.2990	-1585.	-1143.	252.	-465.	265.	1111.	.0476	.0019	-.0427	.0550	-.0326	-.0250	495.
.3000	-1643.	-1209.	152.	-624.	298.	1129.	.0482	.0032	-.0411	.0570	-.0254	-.0245	531.
.3010	-1600.	-1224.	40.	-776.	309.	1060.	.0472	.0041	-.0389	.0595	-.0173	-.0225	542.
.3020	-1459.	-1170.	-66.	-903.	286.	926.	.0449	.0047	-.0360	.0627	-.0091	-.0192	532.
.3030	-1248.	-1075.	-153.	-999.	234.	749.	.0414	.0046	-.0325	.0663	-.0012	-.0146	510.

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LOADS

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PRESSURE

ENGLISH UNITS

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

SECTION	50	MEMBER	1	SEQUENCE	70	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	-1007.	-967.	-228.	-1068.	175.	548.		.0372	.0040	-.0285	.0702	.0065	-.0090	487.	
.3050	-751.	-832.	-305.	-1119.	123.	346.		.0326	.0030	-.0240	.0743	.0144	-.0026	473.	
.3060	-492.	-643.	-391.	-1157.	82.	175.		.0278	.0016	-.0191	.0782	.0224	.0045	471.	
.3070	-267.	-421.	-471.	-1174.	54.	65.		.0231	-.0002	-.0141	.0816	.0302	.0119	472.	
.3080	-111.	-208.	-527.	-1156.	40.	29.		.0186	-.0025	-.0091	.0843	.0375	.0192	464.	
.3090	-18.	-10.	-548.	-1089.	36.	54.		.0144	-.0052	-.0044	.0862	.0438	.0259	438.	
.3100	41.	187.	-528.	-969.	24.	119.		.0103	-.0080	-.0003	.0875	.0487	.0316	392.	
.3110	69.	384.	-458.	-792.	-5.	222.		.0065	-.0109	.0031	.0881	.0517	.0362	330.	
.3120	40.	560.	-332.	-556.	-45.	372.		.0030	-.0136	.0057	.0878	.0530	.0397	269.	
.3130	-45.	709.	-164.	-280.	-87.	560.		-.0002	-.0160	.0078	.0867	.0527	.0423	253.	
.3140	-153.	833.	16.	-1.	-125.	758.		-.0029	-.0181	.0093	.0847	.0511	.0439	308.	
.3150	-269.	922.	178.	245.	-151.	946.		-.0053	-.0197	.0105	.0817	.0484	.0446	397.	
.3160	-398.	965.	315.	448.	-159.	1119.		-.0074	-.0208	.0114	.0779	.0450	.0445	488.	
.3170	-536.	974.	428.	608.	-151.	1271.		-.0094	-.0214	.0120	.0738	.0411	.0435	569.	
.3180	-650.	959.	509.	715.	-137.	1377.		-.0115	-.0213	.0122	.0696	.0365	.0416	625.	
.3190	-713.	905.	554.	760.	-126.	1407.		-.0137	-.0207	.0122	.0657	.0312	.0386	644.	
.3200	-722.	804.	566.	747.	-117.	1348.		-.0163	-.0196	.0119	.0622	.0253	.0347	620.	
.3210	-681.	681.	550.	688.	-110.	1212.		-.0191	-.0179	.0115	.0594	.0191	.0298	561.	
.3220	-588.	558.	504.	582.	-108.	1014.		-.0222	-.0159	.0111	.0572	.0131	.0242	471.	
.3230	-449.	423.	427.	424.	-110.	762.		-.0253	-.0138	.0110	.0553	.0075	.0180	353.	
.3240	-280.	258.	317.	217.	-105.	465.		-.0282	-.0117	.0113	.0536	.0029	.0114	210.	
.3250	-97.	76.	182.	-22.	-89.	142.		-.0308	-.0099	.0118	.0521	-.0004	.0044	68.	
.3260	90.	-91.	32.	-275.	-69.	-177.		-.0330	-.0083	.0125	.0510	-.0026	-.0026	134.	
.3270	267.	-240.	-110.	-518.	-53.	-465.		-.0346	-.0073	.0132	.0503	-.0041	-.0096	280.	
.3280	410.	-386.	-227.	-728.	-41.	-711.		-.0355	-.0070	.0136	.0500	-.0050	-.0164	409.	
.3290	513.	-528.	-312.	-891.	-31.	-909.		-.0357	-.0073	.0137	.0503	-.0053	-.0227	511.	
.3300	580.	-644.	-366.	-1002.	-25.	-1049.		-.0351	-.0083	.0134	.0509	-.0053	-.0286	582.	
.3310	608.	-721.	-386.	-1057.	-24.	-1117.		-.0338	-.0101	.0129	.0516	-.0050	-.0339	617.	
.3320	576.	-773.	-367.	-1052.	-25.	-1099.		-.0317	-.0127	.0123	.0521	-.0042	-.0382	611.	
.3330	479.	-813.	-315.	-994.	-18.	-1003.		-.0290	-.0162	.0117	.0522	-.0026	-.0415	567.	
.3340	345.	-828.	-241.	-893.	-8.	-847.		-.0257	-.0202	.0110	.0519	-.0003	-.0437	494.	
.3350	198.	-806.	-152.	-757.	-2.	-651.		-.0221	-.0248	.0105	.0513	.0027	-.0447	401.	
.3360	34.	-760.	-42.	-583.	-2.	-471.		-.0184	-.0296	.0098	.0503	.0061	-.0448	289.	
.3370	-149.	-699.	92.	-372.	-10.	-166.		-.0147	-.0345	.0091	.0492	.0100	-.0438	164.	
.3380	-325.	-617.	236.	-141.	-28.	92.		-.0113	-.0393	.0082	.0481	.0141	-.0419	68.	
.3390	-469.	-513.	369.	87.	-56.	325.		-.0083	-.0438	.0071	.0470	.0185	-.0395	137.	
.3400	-582.	-409.	479.	293.	-86.	526.		-.0057	-.0480	.0060	.0455	.0233	-.0366	244.	
.3410	-678.	-314.	560.	465.	-109.	696.		-.0036	-.0515	.0049	.0437	.0286	-.0335	339.	

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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

.3310	608.	-721.	-386.	-1057.	-24.	-1117.	-.0238	-.0101	.0129	.0516	-.0050	-.0339	617.
.3320	576.	-773.	-367.	-1052.	-25.	-1099.	-.0317	-.0127	.0123	.0521	-.0042	-.0382	611.
.3330	479.	-813.	-315.	-994.	-18.	-1003.	-.0290	-.0162	.0117	.0522	-.0026	-.0415	567.
.3340	345.	-828.	-241.	-893.	-8.	-847.	-.0257	-.0202	.0110	.0519	-.0003	-.043	494.
.3350	198.	-806.	-152.	-757.	-2.	-651.	-.0221	-.0248	.0105	.0513	.0027	-.0447	401.
.3360	34.	-760.	-42.	-583.	-2.	-421.	-.0184	-.0296	.0098	.0503	.0061	-.0448	289.
.3370	-149.	-699.	92.	-372.	-10.	-166.	-.0147	-.0345	.0091	.0492	.0100	-.0438	164.
.3380	-325.	-617.	236.	-141.	-28.	92.	-.0113	-.0393	.0082	.0481	.0141	-.0419	68.
.3390	-469.	-513.	369.	87.	-56.	325.	-.0083	-.0438	.0071	.0470	.0185	-.0395	137.
.3400	-582.	-409.	479.	293.	-86.	526.	-.0057	-.0480	.0060	.0455	.0233	-.0366	244.
.3410	-678.	-314.	560.	465.	-109.	696.	-.0036	-.0515	.0049	.0437	.0286	-.0335	339.

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LOADS

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ENGLISH UNITS

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

SECTION	50	MEMBER	1	SEQUENCE	70	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)		
.3420	-746.	-216.	603.	593.	-123.	832.	-.0021	-.0545	.0041	.0416	.0345	-.0300	413.		
.3430	-768.	-114.	599.	663.	-131.	918.	-.0010	-.0567	.0036	.0390	.0407	-.0266	458.		
.3440	-744.	-28.	554.	676.	-135.	944.	-.0004	-.0581	.0034	.0359	.0470	-.0235	469.		
.3450	-680.	30.	482.	648.	-137.	907.	-.0003	-.0588	.0036	.0325	.0532	-.0209	451.		
.3460	-581.	76.	398.	593.	-146.	818.	-.0007	-.0587	.0041	.0288	.0590	-.0190	410.		
.3470	-444.	120.	309.	520.	-168.	687.	-.0015	-.0579	.0047	.0249	.0642	-.0180	352.		
.3480	-286.	148.	220.	432.	-200.	522.	-.0024	-.0565	.0055	.0210	.0685	-.0179	284.		
.3490	-129.	138.	133.	333.	-228.	338.	-.0035	-.0548	.0063	.0169	.0720	-.0189	211.		
.3500	9.	100.	45.	223.	-247.	156.	-.0043	-.0528	.0070	.0127	.0747	-.0208	148.		
.3510	118.	55.	-43.	106.	-255.	5.	-.0049	-.0506	.0075	.0084	.0766	-.0235	111.		
.3520	181.	7.	-124.	-7.	-249.	-98.	-.0050	-.0482	.0078	.0044	.0775	-.0269	107.		
.3530	185.	-58.	-186.	-103.	-228.	-148.	-.0046	-.0459	.0077	.0006	.0775	-.0308	117.		
.3540	135.	-143.	-222.	-172.	-196.	-149.	-.0037	-.0436	.0072	-.0027	.0763	-.0352	120.		
.3550	49.	-229.	-224.	-203.	-166.	-107.	-.0023	-.0414	.0062	-.0054	.0739	-.0399	114.		
.3560	-66.	-303.	-183.	-183.	-145.	-26.	-.0006	-.0394	.0047	-.0074	.0702	-.0448	94.		
.3570	-209.	-372.	-98.	-112.	-133.	90.	.0012	-.0376	.0028	-.0087	.0656	-.0496	79.		
.3580	-371.	-440.	18.	-2.	-127.	226.	.0029	-.0361	.0005	-.0093	.0603	-.0541	104.		
.3590	-528.	-500.	143.	125.	-122.	364.	.0044	-.0347	-.0019	-.0093	.0545	-.0582	162.		
.3600	-667.	-540.	255.	250.	-111.	495.	.0056	-.0334	-.0043	-.0088	.0484	-.0618	227.		
.3610	-789.	-558.	344.	359.	-89.	616.	.0062	-.0321	-.0065	-.0077	.0422	-.0645	288.		
.3620	-883.	-552.	401.	445.	-52.	715.	.0062	-.0307	-.0084	-.0061	.0360	-.0663	339.		
.3630	-928.	-521.	420.	498.	-6.	772.	.0055	-.0292	-.0099	-.0040	.0297	-.0670	369.		
.3640	-905.	-475.	404.	519.	42.	765.	.0041	-.0275	-.0108	-.0017	.0230	-.0667	371.		
.3650	-813.	-420.	364.	516.	86.	685.	.0019	-.0257	-.0110	.0006	.0159	-.0653	346.		
.3660	-651.	-350.	312.	501.	118.	534.	-.0010	-.0235	-.0105	.0027	.0085	-.0630	298.		
.3670	-423.	-258.	253.	479.	132.	318.	-.0045	-.0210	-.0094	.0045	.0009	-.0597	237.		
.3680	-136.	-157.	185.	444.	131.	43.	-.0085	-.0182	-.0078	.0058	-.0067	-.0555	187.		
.3690	186.	-66.	105.	392.	123.	-277.	-.0127	-.0152	-.0059	.0064	-.0139	-.0508	199.		
.3700	516.	14.	8.	318.	117.	-615.	-.0170	-.0119	-.0038	.0063	-.0205	-.0455	282.		
.3710	833.	99.	-107.	223.	117.	-941.	-.0211	-.0085	-.0019	.0056	-.0261	-.0400	391.		
.3720	1114.	190.	-238.	111.	127.	-1227.	-.0247	-.0050	-.0003	.0043	-.0310	-.0344	497.		
.3730	1340.	265.	-373.	-11.	148.	-1461.	-.0277	-.0016	.0009	.0024	-.0349	-.0291	589.		
.3740	1498.	304.	-497.	-129.	178.	-1637.	-.0297	.0013	.0016	-.0002	-.0381	-.0242	663.		
.3750	1589.	320.	-596.	-227.	207.	-1748.	-.0307	.0039	.0018	-.0034	-.0409	-.0201	712.		
.3760	1616.	335.	-655.	-287.	227.	-1786.	-.0305	.0059	.0015	-.0072	-.0436	-.0167	732.		
.3770	1577.	348.	-660.	-297.	233.	-1747.	-.0291	.0073	.0010	-.0113	-.0462	-.0142	717.		
.3780	1473.	340.	-612.	-258.	227.	-1640.	-.0265	.0079	.0002	-.0158	-.0490	-.0125	673.		
.3790	1317.	305.	-522.	-184.	212.	-1481.	-.0228	.0075	-.0008	-.0205	-.0519	-.0115	605.		

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

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ENGLISH UNITS

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

.3700	516.	14.	8.	318.	117.	-615.	-.0170	-.0119	-.0038	.0063	-.0205	-.0455	282.
.3710	833.	99.	-107.	223.	117.	-941.	-.0211	-.0085	-.0019	.0056	-.0261	-.0400	391.
.3720	1114.	190.	-238.	111.	127.	-1227.	-.0247	-.0050	-.0003	.0043	-.0310	-.0344	497.
.3730	1340.	265.	-373.	-11.	148.	-1461.	-.0277	-.0016	.0009	.0024	-.0349	-.0291	589.
.3740	1498.	304.	-497.	-129.	178.	-1637.	-.0297	.0013	.0016	-.0002	-.0381	-.0242	663.
.3750	1589.	320.	-596.	-227.	207.	-1748.	-.0307	.0039	.0018	-.0034	-.0409	-.0201	712.
.3760	1616.	335.	-655.	-287.	227.	-1786.	-.0305	.0059	.0015	-.0072	-.0436	-.0167	732.
.3770	1577.	348.	-660.	-297.	233.	-1747.	-.0291	.0073	.0010	-.0113	-.0462	-.0142	717.
.3780	1473.	340.	-612.	-258.	227.	-1640.	-.0265	.0079	.0002	-.0158	-.0490	-.0125	673.
.3790	1317.	305.	-522.	-184.	212.	-1481.	-.0228	.0075	-.0008	-.0205	-.0519	-.0115	605.

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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	50	MEMBER	1	SEQUENCE	70	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)	
.3800	1127.	262.	-405.	-86.	190.	-1278.	-.0183	.0064	-.0019	-.0251	-.0546	-.0113	519.	
.3810	909.	221.	-274.	22.	165.	-1037.	-.0132	.0044	-.0029	-.0296	-.0569	-.0116	421.	
.3820	671.	186.	-146.	127.	143.	-767.	-.0079	.0019	-.0039	-.0337	-.0584	-.0122	317.	
.3830	431.	157.	-36.	214.	126.	-488.	-.0027	-.0012	-.0047	-.0374	-.0587	-.0128	220.	
.3840	215.	132.	47.	271.	112.	-230.	.0021	-.0047	-.0052	-.0406	-.0578	-.0133	150.	
.3850	43.	117.	101.	299.	96.	-12.	.0061	-.0084	-.0053	-.0432	-.0556	-.0135	126.	
.3860	-79.	126.	129.	302.	73.	161.	.0091	-.0122	-.0051	-.0452	-.0518	-.0132	140.	
.3870	-143.	161.	136.	289.	38.	280.	.0110	-.0161	-.0044	-.0463	-.0466	-.0122	162.	
.3880	-144.	199.	130.	258.	-11.	334.	.0118	-.0199	-.0032	-.0467	-.0402	-.0105	170.	
.3890	-89.	220.	110.	210.	-73.	218.	.0115	-.0234	-.0017	-.0462	-.0327	-.0079	156.	
.3900	11.	239.	76.	148.	-141.	245.	.0101	-.0264	.0001	-.0448	-.0241	-.0047	128.	
.3910	142.	284.	35.	83.	-212.	141.	.0079	-.0284	.0022	-.0425	-.0147	-.0007	107.	
.3920	286.	354.	-10.	18.	-283.	26.	.0050	-.0294	.0043	-.0393	-.0049	.0040	114.	
.3930	419.	414.	-54.	-47.	-348.	-92.	.0018	-.0294	.0064	-.0354	.0049	.0094	146.	
.3940	528.	440.	-91.	-106.	-403.	-209.	-.0018	-.0285	.0083	-.0309	.0146	.0153	187.	
.3950	611.	449.	-112.	-149.	-449.	-316.	-.0054	-.0265	.0099	-.0260	.0237	.0212	228.	
.3960	662.	459.	-108.	-163.	-493.	-395.	-.0090	-.0236	.0111	-.0208	.0322	.0269	262.	
.3970	665.	460.	-72.	-143.	-537.	-436.	-.0124	-.0198	.0119	-.0154	.0396	.0324	283.	
.3980	615.	429.	-0.	-88.	-575.	-440.	-.0154	-.0154	.0122	-.0100	.0459	.0374	293.	
.3990	519.	366.	99.	-6.	-605.	-417.	-.0180	-.0103	.0121	-.0049	.0508	.0420	295.	
.4000	392.	293.	213.	91.	-626.	-367.	-.0200	-.0047	.0116	-.0000	.0544	.0460	294.	

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)
.1690	-893.	1375.	1040.	1446.	-571.	2126.	-.0366	-.0134	.0035	.0496	.0686	.0183	1057.

SECTION	50	MEMBER	2	SEQUENCE	700	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)	
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.	-1.	1.	0.	0.	-0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	0.	
.0030	1.	-1.	2.	1.	-0.	-1.	-.0000	-.0000	-.0000	-.0001	-.0001	.0001	1.	

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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	50	MEMBER	2	SEQUENCE	700	LOCATION	END	TYPE	RU	DZ	RX	RY	RZ	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)		
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.	-1.	1.	0.	0.	-0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	.0000	0.
.0030	1.	-1.	2.	1.	-0.	-1.	-.0000	-.0000	-.0000	-.0001	-.0001	.0001	.0001	1.

ADLPIPE PAGE 1929 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.03.

S/RV PIPING KEWAUNEE GKWO8F 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	50	MEMBER	2	SEQUENCE	700	LOCATION	END	TYPE	RU	DZ	RX	RY	RZ	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)		
.0040	5.	-2.	4.	3.	-2.	-5.	-.0000	-.0000	-.0000	-.0002	-.0001	.0002	.0002	2.
.0050	12.	-1.	8.	8.	-6.	-12.	-.0001	-.0000	-.0001	-.0004	-.0002	.0005	.0005	6.
.0060	24.	3.	13.	14.	-12.	-23.	-.0002	-.0000	-.0002	-.0008	-.0002	.0011	.0011	12.
.0070	41.	6.	19.	21.	-20.	-39.	-.0005	-.0000	-.0004	-.0013	-.0004	.0019	.0019	20.
.0080	63.	2.	25.	26.	-28.	-63.	-.0009	-.0001	-.0008	-.0020	-.0008	.0027	.0027	30.
.0090	100.	0.	27.	30.	-39.	-100.	-.0016	-.0001	-.0013	-.0029	-.0010	.0040	.0040	45.
.0100	157.	10.	23.	30.	-59.	-156.	-.0026	-.0001	-.0019	-.0036	-.0004	.0061	.0061	68.
.0110	238.	37.	12.	26.	-89.	-231.	-.0040	-.0000	-.0027	-.0042	.0015	.0088	.0088	100.
.0120	334.	80.	-8.	17.	-129.	-320.	-.0061	-.0000	-.0035	-.0049	.0051	.0117	.0117	139.
.0130	429.	129.	-38.	3.	-174.	-407.	-.0087	-.0001	-.0043	-.0060	.0105	.0139	.0139	178.
.0140	504.	172.	-76.	-18.	-216.	-478.	-.0118	-.0004	-.0050	-.0079	.0175	.0147	.0147	211.
.0150	541.	199.	-123.	-46.	-247.	-513.	-.0148	-.0009	-.0056	-.0105	.0252	.0140	.0140	229.
.0160	522.	217.	-176.	-78.	-258.	-494.	-.0172	-.0014	-.0061	-.0131	.0329	.0121	.0121	226.
.0170	434.	217.	-227.	-113.	-241.	-405.	-.0183	-.0019	-.0066	-.0146	.0393	.0091	.0091	194.
.0180	278.	185.	-258.	-144.	-198.	-244.	-.0176	-.0023	-.0067	-.0141	.0438	.0050	.0050	139.
.0190	68.	122.	-251.	-158.	-144.	-27.	-.0148	-.0026	-.0063	-.0112	.0471	-.0001	-.0001	86.
.0200	-173.	-2.	-180.	-143.	-97.	218.	-.0100	-.0027	-.0046	-.0064	.0498	-.0063	-.0063	111.
.0210	-403.	-149.	-41.	-80.	-86.	450.	-.0036	-.0025	-.0015	-.0005	.0537	-.0124	-.0124	187.
.0220	-562.	-138.	145.	70.	-156.	635.	.0036	-.0021	.0029	.0061	.0633	-.0159	-.0159	264.
.0230	-676.	-52.	386.	296.	-289.	780.	.0109	-.0017	.0082	.0104	.0757	-.0183	-.0183	354.
.0240	-836.	-68.	649.	535.	-407.	939.	.0175	-.0020	.0136	.0101	.0837	-.0234	-.0234	463.
.0250	-1046.	-297.	880.	695.	-440.	1097.	.0235	-.0027	.0179	.0075	.0819	-.0320	-.0320	550.
.0260	-1171.	-540.	994.	726.	-398.	1170.	.0286	-.0028	.0199	.0099	.0740	-.0382	-.0382	575.
.0270	-1174.	-374.	898.	669.	-339.	1186.	.0324	-.0014	.0191	.0199	.0702	-.0371	-.0371	563.
.0280	-1288.	-186.	681.	526.	-203.	1303.	.0349	.0003	.0174	.0273	.0639	-.0367	-.0367	570.
.0290	-1540.	-508.	484.	258.	79.	1472.	.0371	.0012	.0169	.0267	.0443	-.0430	-.0430	600.
.0300	-1497.	-591.	186.	-72.	334.	1398.	.0383	.0027	.0173	.0302	.0267	-.0419	-.0419	577.
.0310	-1145.	-295.	-225.	-418.	505.	1067.	.0380	.0051	.0189	.0383	.0172	-.0306	-.0306	502.
.0320	-739.	-220.	-424.	-639.	558.	648.	.0357	.0069	.0225	.0392	.0056	-.0208	-.0208	428.
.0330	-276.	-284.	-300.	-588.	444.	171.	.0305	.0079	.0271	.0305	-.0074	-.0164	-.0164	304.
.0340	319.	-162.	-123.	-384.	198.	-428.	.0224	.0089	.0299	.0195	-.0158	-.0121	-.0121	244.
.0350	914.	-120.	-68.	-269.	-12.	-1087.	.0125	.0100	.0291	.0110	-.0268	-.0072	-.0072	449.
.0360	1391.	-236.	-79.	-269.	-89.	-1631.	.0023	.0112	.0241	.0068	-.0466	-.0030	-.0030	664.
.0370	1721.	-34.	-214.	-318.	-62.	-1911.	-.0077	.0130	.0154	.0084	-.0540	.0036	.0036	778.
.0380	1754.	443.	-598.	-496.	79.	-1844.	-.0169	.0148	.0048	.0114	-.0702	.0103	.0103	767.
.0390	1409.	481.	-1083.	-861.	401.	-1503.	-.0236	.0156	-.0042	.0072	-.0752	.0086	.0086	713.
.0400	1011.	19.	-1418.	-1252.	825.	-1169.	-.0265	.0150	-.0098	-.0035	-.0878	.0035	.0035	763.
.0410	890.	66.	-1680.	-1467.	1108.	-991.	-.0266	.0146	-.0131	-.0079	-.0930	.0108	.0108	838.

ADLPIPE PAGE 1930 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.03.

S/RV PIPING KEWAUNEE GKWO8F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

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

.0310	-1145.	-295.	-225.	-418.	505.	1067.	.0380	.0051	.0189	.0383	.0172	-.0306	502.
.0320	-739.	-220.	-424.	-639.	558.	648.	.0357	.0069	.0225	.0392	.0056	-.0208	428.
.0330	-276.	-284.	-300.	-588.	444.	171.	.0305	.0079	.0271	.0305	-.0074	-.0164	304.
.0340	319.	-162.	-123.	-384.	198.	-428.	.0224	.0089	.0299	.0195	-.0158	-.0121	244.
.0350	914.	-120.	-68.	-269.	-12.	-1087.	.0125	.0100	.0291	.0110	-.0268	-.0072	449.
.0360	1391.	-236.	-79.	-269.	-89.	-1631.	.0073	.0112	.0241	.0068	-.0466	-.0030	664.
.0370	1721.	-34.	-214.	-318.	-62.	-1911.	-.0077	.0130	.0154	.0084	-.0540	.0036	778.
.0380	1754.	443.	-598.	-496.	79.	-1844.	-.0169	.0148	.0048	.0114	-.0702	.0103	767.
.0390	1409.	481.	-1083.	-861.	401.	-1503.	-.0236	.0156	-.0042	.0072	-.0752	.0086	713.
.0400	1011.	19.	-1418.	-1252.	825.	-1169.	-.0265	.0150	-.0098	-.0035	-.0878	.0035	763.
.0410	890.	66.	-1680.	-1467.	1108.	-991.	-.0266	.0146	-.0131	-.0079	-.0930	.0108	838.

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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	50	MEMBER	2	SEQUENCE	700	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)	
.0420	860.	485.	-1727.	-1378.	1129.	-835.	-.0254	.0144	-.0144	-.0090	-.0918	.0259	790.	
.0430	735.	609.	-1300.	-933.	922.	-616.	-.0242	.0134	-.0134	-.0117	-.0954	.0295	584.	
.0440	758.	501.	-442.	-139.	519.	-573.	-.0243	.0114	-.0111	-.0173	-.1017	.0224	315.	
.0450	973.	466.	310.	630.	14.	-783.	-.0258	.0091	-.0099	-.0191	-.1002	.0162	403.	
.0460	1095.	454.	703.	1084.	-353.	-952.	-.0273	.0069	-.0101	-.0152	-.0948	.0130	596.	
.0470	968.	405.	943.	1302.	-453.	-801.	-.0275	.0042	-.0105	-.0118	-.0962	.0094	640.	
.0480	681.	482.	958.	1269.	-315.	-388.	-.0265	.0015	-.0107	-.0102	-.0971	.0083	547.	
.0490	325.	629.	475.	803.	-16.	40.	-.0249	-.0006	-.0109	-.0059	-.0829	.0122	323.	
.0500	-3.	577.	-223.	103.	334.	324.	-.0235	-.0023	-.0103	-.0005	-.0580	.0153	191.	
.0510	-199.	452.	-653.	-399.	575.	493.	-.0227	-.0040	-.0079	.0040	-.0329	.0128	343.	
.0520	-278.	454.	-755.	-586.	581.	607.	-.0227	-.0060	-.0039	.0092	-.0091	.0076	411.	
.0530	-241.	470.	-637.	-550.	338.	580.	-.0231	-.0079	.0011	.0160	.0143	.0037	348.	
.0540	36.	420.	-249.	-259.	-95.	271.	-.0235	-.0093	.0069	.0226	.0348	.0011	155.	
.0550	498.	349.	326.	212.	-600.	-230.	-.0234	-.0101	.0130	.0268	.0518	-.0014	271.	
.0560	815.	210.	773.	562.	-1023.	-612.	-.0228	-.0104	.0183	.0290	.0675	-.0045	529.	
.0570	789.	72.	943.	646.	-1243.	-649.	-.0216	-.0103	.0220	.0327	.0833	-.0092	620.	
.0580	498.	76.	884.	531.	-1202.	-365.	-.0193	-.0093	.0239	.0392	.0990	-.0163	547.	
.0590	15.	36.	580.	180.	-912.	102.	-.0156	-.0075	.0247	.0455	.1137	-.0261	375.	
.0600	-604.	-249.	64.	-403.	-486.	617.	-.0098	-.0055	.0251	.0499	.1276	-.0356	354.	
.0610	-1188.	-558.	-346.	-890.	-117.	1089.	-.0020	-.0029	.0257	.0541	.1388	-.0402	566.	
.0620	-1608.	-590.	-380.	-964.	58.	1486.	.0068	.0005	.0268	.0594	.1445	-.0386	711.	
.0630	-1870.	-529.	-64.	-675.	9.	1751.	.0154	.0043	.0283	.0640	.1420	-.0349	753.	
.0640	-1931.	-648.	499.	-168.	-253.	1753.	.0221	.0076	.0299	.0658	.1325	-.0332	714.	
.0650	-1746.	-865.	1246.	519.	-670.	1469.	.0261	.0104	.0307	.0639	.1201	-.0342	680.	
.0660	-1505.	-1026.	1956.	1215.	-1077.	1122.	.0271	.0132	.0293	.0597	.1082	-.0365	792.	
.0670	-1413.	-1120.	2333.	1613.	-1293.	946.	.0261	.0160	.0251	.0561	.0970	-.0380	912.	
.0680	-1418.	-1053.	2234.	1565.	-1237.	945.	.0240	.0185	.0180	.0569	.0878	-.0352	886.	
.0690	-1446.	-816.	1681.	1104.	-904.	1031.	.0214	.0206	.0090	.0616	.0826	-.0280	707.	
.0700	-1574.	-702.	811.	330.	-349.	1173.	.0184	.0215	.0000	.0642	.0790	-.0217	509.	
.0710	-1713.	-765.	-99.	-518.	234.	1290.	.0148	.0209	-.0075	.0625	.0750	-.0185	566.	
.0720	-1588.	-640.	-758.	-1103.	590.	1228.	.0105	.0192	-.0128	.0605	.0720	-.0149	703.	
.0730	-1160.	-284.	-1031.	-1262.	630.	934.	.0054	.0167	-.0160	.0590	.0675	-.0107	679.	
.0740	-603.	-84.	-911.	-1056.	440.	461.	.0001	.0131	-.0172	.0545	.0536	-.0105	495.	
.0750	54.	-78.	-490.	-592.	109.	-153.	-.0046	.0086	-.0173	.0474	.0288	-.0141	249.	
.0760	807.	30.	12.	-29.	-272.	-815.	-.0085	.0037	-.0179	.0426	.0002	-.0160	345.	
.0770	1417.	246.	329.	383.	-537.	-1308.	-.0112	-.0008	-.0197	.0415	-.0265	-.0148	588.	
.0780	1697.	404.	336.	479.	-546.	-1489.	-.0127	-.0050	-.0227	.0418	-.0488	-.0130	665.	
.0790	1745.	566.	22.	249.	-306.	-1428.	-.0134	-.0087	-.0260	.0425	-.0627	-.0119	595.	

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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

.0680	-1418.	-1053.	234.	1565.	-1227.	945.	.0240	.0185	.0180	.0569	.0878	-.0352	886.
.0690	-1446.	-816.	1681.	1104.	-904.	1031.	.0214	.0206	.0090	.0616	.0826	-.0280	707.
.0700	-1574.	-702.	811.	330.	-349.	1173.	.0184	.0215	.0000	.0642	.0790	-.0217	509.
.0710	-1713.	-765.	-99.	-518.	234.	1290.	.0148	.0209	-.0075	.0625	.0750	-.0185	566.
.0720	-1588.	-640.	-758.	-1103.	590.	1228.	.0105	.0192	-.0128	.0605	.0720	-.0149	703.
.0730	-1160.	-284.	-1031.	-1262.	630.	934.	.0054	.0167	-.0160	.0590	.0675	-.0107	679.
.0740	-603.	-84.	-911.	-1056.	440.	461.	.0001	.0131	-.0172	.0545	.0536	-.0105	495.
.0750	54.	-78.	-490.	-592.	109.	-153.	-.0046	.0086	-.0173	.0474	.0288	-.0141	249.
.0760	807.	30.	12.	-29.	-272.	-815.	-.0085	.0037	-.0179	.0426	.0002	-.0160	345.
.0770	1417.	246.	329.	383.	-537.	-1308.	-.0112	-.0008	-.0197	.0415	-.0265	-.0148	588.
.0780	1697.	404.	336.	479.	-546.	-1489.	-.0127	-.0050	-.0227	.0418	-.0488	-.0130	665.
.0790	1745.	566.	22.	240.	-306.	-1428.	-.0134	-.0087	-.0260	.0425	-.0627	-.0119	595.

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DIS/ADLPIPE

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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	50	MEMBER	2	SEQUENCE	700	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0800	1663.	757.	-585.	-263.	99.	-1237.	-.0139	-.0121	-.0290	.0426	-.0650	-.0109	509.		
.0810	1410.	773.	-1304.	-915.	571.	-954.	-.0141	-.0152	-.0306	.0394	-.0500	-.0117	578.		
.0820	1093.	660.	-1822.	-1414.	962.	-654.	-.0137	-.0177	-.0307	.0337	-.0537	-.0131	735.		
.0830	937.	709.	-1971.	-1537.	1108.	-477.	-.0128	-.0188	-.0297	.0301	-.0474	-.0113	784.		
.0840	963.	859.	-1793.	-1314.	984.	-474.	-.0113	-.0187	-.0279	.0291	-.0437	-.0068	686.		
.0850	1022.	799.	-1339.	-861.	705.	-583.	-.0089	-.0179	-.0252	.0279	-.0477	-.0047	504.		
.0860	1052.	577.	-693.	-262.	392.	-712.	-.0055	-.0163	-.0216	.0271	-.0587	-.0064	343.		
.0870	1020.	451.	-100.	293.	143.	-754.	-.0009	-.0138	-.0171	.0290	-.0691	-.0088	330.		
.0880	818.	388.	211.	575.	58.	-609.	.0048	-.0104	-.0117	.0323	-.0748	-.0101	337.		
.0890	428.	247.	247.	549.	189.	-286.	.0117	-.0066	-.0047	.0337	-.0766	-.0110	260.		
.0900	-5.	83.	113.	331.	472.	78.	.0190	-.0024	.0034	.0323	-.0746	-.0101	233.		
.0910	-355.	-35.	-127.	22.	773.	355.	.0251	.0019	.0118	.0288	-.0683	-.0060	341.		
.0920	-565.	-135.	-325.	-233.	948.	485.	.0287	.0062	.0190	.0237	-.0603	-.0004	437.		
.0930	-587.	-205.	-265.	-225.	901.	435.	.0283	.0103	.0238	.0174	-.0536	.0031	412.		
.0940	-428.	-248.	69.	75.	631.	199.	.0238	.0142	.0253	.0112	-.0477	.0034	267.		
.0950	-172.	-343.	475.	469.	234.	-176.	.0162	.0178	.0234	.0049	-.0413	.0018	222.		
.0960	100.	-479.	784.	776.	-146.	-582.	.0072	.0212	.0185	-.0018	-.0341	.0008	394.		
.0970	302.	-538.	922.	920.	-385.	-875.	-.0013	.0248	.0118	-.0090	-.0257	.0030	532.		
.0980	312.	-527.	816.	828.	-409.	-940.	-.0082	.0286	.0039	-.0176	-.0149	.0089	529.		
.0990	104.	-541.	467.	490.	-243.	-787.	-.0130	.0325	-.0044	-.0286	-.0012	.0166	385.		
.1000	-200.	-590.	44.	71.	1.	-533.	-.0163	.0365	-.0130	-.0415	.0136	.0232	216.		
.1010	-513.	-648.	-256.	-223.	199.	-265.	-.0186	.0406	-.0223	-.0540	.0265	.0263	160.		
.1020	-838.	-723.	-339.	-291.	277.	9.	-.0199	.0445	-.0324	-.0638	.0338	.0248	161.		
.1030	-1130.	-786.	-174.	-105.	209.	268.	-.0200	.0480	-.0429	-.0689	.0326	.0195	143.		
.1040	-1306.	-794.	200.	284.	26.	463.	-.0181	.0504	-.0528	-.0683	.0231	.0130	218.		
.1050	-1397.	-795.	621.	709.	-169.	599.	-.0137	.0515	-.0604	-.0632	.0089	.0068	379.		
.1060	-1488.	-827.	915.	992.	-275.	741.	-.0068	.0511	-.0642	-.0565	-.0053	.0011	509.		
.1070	-1570.	-791.	1032.	1090.	-270.	924.	.0018	.0491	-.0632	-.0503	-.0153	-.0039	584.		
.1080	-1609.	-747.	1010.	1011.	-174.	1115.	.0109	.0453	-.0577	-.0461	-.0206	-.0090	608.		
.1090	-1568.	-787.	861.	762.	-30.	1219.	.0192	.0404	-.0491	-.0424	-.0211	-.0139	577.		
.1100	-1339.	-359.	545.	507.	32.	1210.	.0246	.0357	-.0400	-.0363	-.0080	-.0157	527.		
.1110	-964.	31.	338.	357.	-18.	1061.	.0269	.0299	-.0318	-.0323	.0055	-.0195	449.		
.1120	-533.	-3.	317.	285.	-150.	761.	.0266	.0220	-.0256	-.0311	.0110	-.0258	332.		
.1130	-74.	-31.	222.	194.	-302.	374.	.0242	.0144	-.0227	-.0251	.0156	-.0288	208.		
.1140	410.	291.	-48.	50.	-407.	14.	.0205	.0092	-.0224	-.0127	.0229	-.0276	165.		
.1150	839.	699.	-367.	-154.	-426.	-232.	.0171	.0060	-.0219	-.0011	.0297	-.0264	204.		
.1160	1070.	888.	-737.	-482.	-335.	-336.	.0153	.0037	-.0189	.0040	.0382	-.0246	271.		
.1170	1050.	861.	-1209.	-942.	-116.	-311.	.0155	.0031	-.0124	.0032	.0504	-.0210	401.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.29.03.

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

.1070	-1570.	-791.	1032.	1090.	-270.	924.	.0018	.0491	-.0632	-.0503	-.0153	-.0039	584.
.1080	-1609.	-747.	1010.	1011.	-174.	1115.	.0109	.0453	-.0577	-.0461	-.0206	-.0090	608.
.1090	-1568.	-787.	861.	762.	-30.	1219.	.0192	.0404	-.0491	-.0424	-.0211	-.0139	577.
.1100	-1339.	-359.	545.	507.	32.	1210.	.0246	.0357	-.0400	-.0363	-.0080	-.0157	527.
.1110	-964.	31.	338.	357.	-18.	1061.	.0269	.0299	-.0318	-.0323	.0055	-.0195	449.
.1120	-533.	-3.	317.	285.	-150.	761.	.0266	.0220	-.0256	-.0311	.0110	-.0258	332.
.1130	-74.	-31.	222.	194.	-302.	374.	.0242	.0144	-.0227	-.0251	.0156	-.0288	208.
.1140	410.	291.	-48.	50.	-407.	14.	.0205	.0092	-.0224	-.0127	.0229	-.0276	165.
.1150	839.	699.	-367.	-154.	-426.	-232.	.0171	.0060	-.0219	-.0011	.0297	-.0264	204.
.1160	1070.	888.	-737.	-482.	-335.	-336.	.0153	.0037	-.0189	.0040	.0382	-.0246	271.
.1170	1050.	861.	-1209.	-942.	-116.	-311.	.0155	.0031	-.0124	.0032	.0504	-.0210	401.

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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	50	MEMBER	2	SEQUENCE	700	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ				DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1180	991.	1138.	-1675.	-1308.	138.	-212.	.0177	.0050	-.0030	-.0001	.0650	-.0140	535.		
.1190	915.	1220.	-1828.	-1466.	364.	-83.	.0222	.0078	.0088	-.0099	.0638	-.0097	607.		
.1200	814.	924.	-1623.	-1377.	460.	-22.	.0281	.0107	.0205	-.0231	.0460	-.0050	583.		
.1210	802.	820.	-1189.	-948.	340.	-111.	.0337	.0155	.0290	-.0300	.0266	.0068	407.		
.1220	819.	791.	-510.	-227.	76.	-254.	.0377	.0229	.0338	-.0335	.0038	.0174	140.		
.1230	845.	839.	272.	602.	-258.	-355.	.0398	.0315	.0355	-.0377	-.0191	.0233	299.		
.1240	689.	636.	880.	1200.	-489.	-334.	.0405	.0394	.0354	-.0461	-.0386	.0261	537.		
.1250	274.	282.	1098.	1402.	-460.	-156.	.0406	.0468	.0344	-.0565	-.0484	.0307	596.		
.1260	-214.	254.	911.	1289.	-175.	158.	.0406	.0543	.0332	-.0671	-.0469	.0404	526.		
.1270	-704.	139.	516.	885.	287.	550.	.0413	.0604	.0329	-.0832	-.0475	.0501	434.		
.1280	-1032.	37.	42.	386.	698.	821.	.0414	.0644	.0326	-.1001	-.0465	.0638	459.		
.1290	-1169.	-51.	-285.	68.	921.	847.	.0395	.0667	.0309	-.1124	-.0431	.0797	503.		
.1300	-1061.	-65.	-274.	120.	893.	630.	.0344	.0675	.0277	-.1201	-.0439	.0902	441.		
.1310	-613.	161.	25.	501.	580.	196.	.0259	.0664	.0235	-.1256	-.0507	.0927	317.		
.1320	-31.	116.	474.	937.	134.	-373.	.0156	.0618	.0192	-.1332	-.0667	.0864	408.		
.1330	554.	18.	844.	1300.	-271.	-985.	.0051	.0550	.0152	-.1394	-.0803	.0796	663.		
.1340	1046.	66.	959.	1453.	-476.	-1472.	-.0036	.0473	.0117	-.1436	-.0878	.0752	852.		
.1350	1429.	277.	713.	1246.	-450.	-1725.	-.0095	.0386	.0090	-.1473	-.0902	.0731	873.		
.1360	1673.	605.	141.	713.	-256.	-1752.	-.0127	.0282	.0066	-.1491	-.0855	.0734	766.		
.1370	1596.	598.	-502.	40.	93.	-1563.	-.0139	.0166	.0041	-.1505	-.0800	.0686	628.		
.1380	1361.	569.	-1020.	-475.	443.	-1270.	-.0140	.0052	.0006	-.1496	-.0742	.0576	573.		
.1390	1203.	560.	-1271.	-730.	619.	-1015.	-.0131	-.0053	-.0039	-.1472	-.0739	.0411	560.		
.1400	1193.	492.	-1187.	-694.	537.	-888.	-.0104	-.0148	-.0092	-.1426	-.0803	.0248	501.		
.1410	1222.	532.	-813.	-327.	267.	-843.	-.0056	-.0224	-.0149	-.1333	-.0869	.0150	378.		
.1420	1092.	419.	-247.	203.	3.	-732.	.0015	-.0277	-.0196	-.1242	-.0984	.0066	305.		
.1430	926.	320.	268.	653.	-198.	-555.	.0104	-.0309	-.0223	-.1167	-.1107	-.0011	353.		
.1440	739.	151.	549.	813.	-284.	-346.	.0202	-.0325	-.0226	-.1103	-.1185	-.0076	372.		
.1450	398.	-104.	548.	683.	-193.	-73.	.0298	-.0319	-.0209	-.1031	-.1160	-.0121	286.		
.1460	-69.	-214.	321.	390.	48.	280.	.0382	-.0284	-.0176	-.0943	-.1029	-.0145	194.		
.1470	-511.	-403.	4.	-48.	357.	625.	.0450	-.0228	-.0126	-.0874	-.0916	-.0184	290.		
.1480	-707.	-486.	-349.	-524.	586.	782.	.0498	-.0155	-.0065	-.0792	-.0820	-.0189	445.		
.1490	-746.	-601.	-596.	-881.	713.	714.	.0523	-.0067	.0001	-.0692	-.0751	-.0153	537.		
.1500	-685.	-776.	-601.	-986.	719.	475.	.0521	.0036	.0074	-.0591	-.0722	-.0106	525.		
.1510	-360.	-679.	-411.	-843.	517.	73.	.0489	.0147	.0153	-.0494	-.0681	-.0047	398.		
.1520	135.	-584.	-145.	-646.	176.	-437.	.0432	.0252	.0239	-.0427	-.0627	-.0004	321.		
.1530	590.	-536.	60.	-480.	-146.	-948.	.0356	.0348	.0322	-.0380	-.0508	.0035	430.		
.1540	842.	-644.	158.	-417.	-301.	-1321.	.0273	.0434	.0397	-.0349	-.0354	.0062	569.		
.1550	994.	-649.	69.	-521.	-314.	-1509.	.0191	.0511	.0452	-.0310	-.0174	.0113	653.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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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

.1450	398.	-104.	548.	683.	-193.	-73.	548.	.0298	-.0319	-.0209	-.1031	-.1160	-.0121	286.
.1460	-69.	-214.	321.	390.	48.	280.	321.	.0382	-.0284	-.0176	-.0943	-.1029	-.0145	194.
.1470	-511.	-403.	4.	-48.	357.	625.	4.	.0450	-.0228	-.0126	-.0874	-.0916	-.0184	290.
.1480	-707.	-486.	-349.	-524.	586.	782.	-349.	.0498	-.0155	-.0065	-.0792	-.0820	-.0189	445.
.1490	-746.	-601.	-596.	-881.	713.	714.	-596.	.0523	-.0067	.0001	-.0692	-.0751	-.0153	537.
.1500	-685.	-776.	-601.	-986.	719.	475.	-601.	.0521	.0036	.0074	-.0591	-.0722	-.0106	525.
.1510	-360.	-679.	-411.	-843.	517.	73.	-411.	.0489	.0147	.0153	-.0494	-.0681	-.0047	398.
.1520	135.	-584.	-145.	-646.	176.	-437.	-145.	.0432	.0252	.0239	-.0427	-.0627	-.0004	321.
.1530	590.	-536.	60.	-480.	-146.	-948.	60.	.0356	.0348	.0322	-.0380	-.0508	.0035	430.
.1540	842.	-644.	158.	-417.	-301.	-1321.	158.	.0273	.0434	.0397	-.0349	-.0354	.0062	569.
.1550	994.	-649.	69.	-521.	-314.	-1509.	69.	.0191	.0511	.0452	-.0310	-.0174	.0113	653.

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ADLPIPE STRESS ANALYSIS

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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	50	MEMBER	2	SEQUENCE	700	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)		
.1560	1138.	-259.	-248.	-756.	-281.	-1521.	.0111	.0576	.0477	-.0235	.0073	.0232	691.		
.1570	1070.	-24.	-586.	-1025.	-167.	-1343.	.0032	.0621	.0475	-.0165	.0304	.0348	681.		
.1580	877.	138.	-802.	-1142.	-43.	-1083.	-.0051	.0646	.0448	-.0095	.0521	.0435	632.		
.1590	778.	437.	-890.	-1071.	-33.	-863.	-.0142	.0647	.0402	-.0017	.0727	.0490	552.		
.1600	728.	622.	-818.	-881.	-148.	-654.	-.0233	.0617	.0349	.0043	.0862	.0491	444.		
.1610	609.	675.	-535.	-515.	-326.	-394.	-.0313	.0561	.0298	.0091	.0929	.0459	291.		
.1620	461.	928.	-130.	38.	-523.	-89.	-.0373	.0492	.0251	.0162	.0991	.0453	213.		
.1630	277.	1110.	258.	535.	-668.	259.	-.0405	.0411	.0216	.0226	.0999	.0450	359.		
.1640	132.	1273.	527.	871.	-759.	612.	-.0410	.0318	.0192	.0279	.0969	.0453	525.		
.1650	-27.	1481.	717.	1129.	-780.	979.	-.0400	.0220	.0172	.0334	.0934	.0458	676.		
.1660	-347.	1448.	891.	1316.	-696.	1398.	-.0382	.0119	.0152	.0373	.0866	.0418	819.		
.1670	-660.	1425.	986.	1425.	-608.	1782.	-.0368	.0024	.0122	.0414	.0806	.0354	948.		
.1680	-836.	1389.	1025.	1447.	-569.	2033.	-.0363	-.0063	.0083	.0451	.0738	.0267	1027.		
.1690	-893.	1375.	1040.	1446.	-571.	2126.	-.0366	-.0134	.0035	.0496	.0686	.0183	1057.		
.1700	-967.	1233.	1037.	1404.	-551.	2120.	-.0375	-.0185	-.0016	.0535	.0639	.0099	1044.		
.1710	-1029.	904.	985.	1237.	-496.	2037.	-.0385	-.0215	-.0059	.0556	.0567	.0004	977.		
.1720	-869.	873.	807.	980.	-479.	1807.	-.0398	-.0221	-.0090	.0589	.0549	-.0052	847.		
.1730	-677.	719.	558.	605.	-426.	1485.	-.0410	-.0207	-.0101	.0602	.0547	-.0109	666.		
.1740	-577.	352.	284.	165.	-312.	1128.	-.0421	-.0174	-.0091	.0591	.0558	-.0179	474.		
.1750	-449.	66.	9.	-256.	-202.	737.	-.0431	-.0122	-.0065	.0578	.0586	-.0242	324.		
.1760	-268.	-223.	-220.	-662.	-118.	330.	-.0434	-.0056	-.0027	.0558	.0564	-.0308	301.		
.1770	-67.	-445.	-407.	-998.	-57.	-90.	-.0428	.0021	.0014	.0556	.0508	-.0346	403.		
.1780	39.	-805.	-503.	-1246.	32.	-486.	-.0412	.0107	.0054	.0568	.0390	-.0367	537.		
.1790	147.	-1050.	-532.	-1378.	107.	-856.	-.0387	.0198	.0091	.0601	.0245	-.0359	653.		
.1800	270.	-1158.	-527.	-1441.	152.	-1156.	-.0357	.0286	.0128	.0637	.0083	-.0336	744.		
.1810	260.	-1446.	-471.	-1490.	230.	-1327.	-.0322	.0363	.0168	.0646	-.0112	-.0333	806.		
.1820	178.	-1594.	-407.	-1455.	324.	-1406.	-.0289	.0431	.0206	.0663	-.0252	-.0303	822.		
.1830	68.	-1656.	-346.	-1379.	429.	-1415.	-.0258	.0485	.0241	.0678	-.0356	-.0254	811.		
.1840	-21.	-1657.	-298.	-1298.	515.	-1361.	-.0233	.0520	.0268	.0677	-.0445	-.0196	783.		
.1850	-103.	-1599.	-226.	-1166.	569.	-1254.	-.0217	.0534	.0280	.0668	-.0517	-.0130	724.		
.1860	-227.	-1574.	-91.	-949.	606.	-1102.	-.0214	.0529	.0271	.0661	-.0578	-.0071	632.		
.1870	-309.	-1374.	42.	-658.	592.	-943.	-.0230	.0509	.0237	.0677	-.0594	-.0005	519.		
.1880	-358.	-1178.	150.	-394.	546.	-763.	-.0260	.0470	.0183	.0697	-.0604	.0034	408.		
.1890	-386.	-940.	216.	-166.	494.	-552.	-.0302	.0414	.0116	.0723	-.0594	.0046	305.		
.1900	-439.	-641.	219.	24.	476.	-305.	-.0350	.0346	.0047	.0758	-.0542	.0046	227.		
.1910	-532.	-458.	146.	97.	522.	-34.	-.0396	.0268	-.0014	.0784	-.0480	.0025	213.		
.1920	-523.	-195.	-15.	68.	568.	185.	-.0435	.0185	-.0059	.0814	-.0391	.0014	241.		
.1930	-400.	128.	-189.	5.	584.	323.	-.0470	.0100	-.0086	.0847	-.0286	.0015	268.		

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83/12/02. 18.29.04.

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

.1820	178.	-1594.	-407.	-1455.	324.	-1406.	-.0289	.0431	.0206	.0663	-.0252	-.0303	822.
.1830	68.	-1656.	-346.	-1379.	429.	-1415.	-.0258	.0485	.0241	.0678	-.0356	-.0254	811.
.1840	-21.	-1657.	-298.	-1298.	515.	-1361.	-.0233	.0520	.0268	.0677	-.0445	-.0196	783.
.1850	-103.	-1599.	-226.	-1166.	569.	-1254.	-.0217	.0534	.0280	.0668	-.0517	-.0130	724.
.1860	-227.	-1574.	-91.	-949.	606.	-1102.	-.0214	.0529	.0271	.0661	-.0578	-.0071	632.
.1870	-309.	-1374.	42.	-658.	592.	-943.	-.0230	.0509	.0237	.0677	-.0594	-.0005	519.
.1880	-358.	-1178.	150.	-394.	546.	-763.	-.0260	.0470	.0183	.0697	-.0504	.0034	408.
.1890	-386.	-940.	216.	-166.	494.	-552.	-.0302	.0414	.0116	.0723	-.0594	.0046	305.
.1900	-439.	-641.	219.	24.	476.	-305.	-.0350	.0346	.0047	.0758	-.0542	.0046	227.
.1910	-532.	-458.	146.	97.	522.	-34.	-.0396	.0268	-.0014	.0784	-.0480	.0025	213.
.1920	-523.	-195.	-15.	68.	568.	185.	-.0435	.0185	-.0059	.0814	-.0391	.0014	241.
.1930	-400.	128.	-189.	5.	584.	323.	-.0470	.0100	-.0086	.0847	-.0286	.0015	268.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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

CONDITION 24

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SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	50	MEMBER	2	SEQUENCE	700	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)		
.1940	-248.	386.	-296.	-27.	562.	391.	-.0503	.0018	-.0096	.0876	-.0179	.0008	275.		
.1950	-51.	586.	-315.	5.	468.	371.	-.0540	-.0058	-.0095	.0900	-.0070	-.0021	240.		
.1960	255.	786.	-261.	84.	278.	236.	-.0584	-.0125	-.0088	.0924	.0039	-.0074	150.		
.1970	610.	937.	-172.	172.	33.	23.	-.0631	-.0180	-.0081	.0947	.0153	-.0146	71.		
.1980	878.	994.	-102.	221.	-186.	-176.	-.0675	-.0221	-.0077	.0967	.0282	-.0222	136.		
.1990	1009.	1013.	-109.	187.	-327.	-288.	-.0707	-.0244	-.0077	.0984	.0432	-.0284	190.		
.2000	1014.	1025.	-226.	27.	-371.	-280.	-.0719	-.0251	-.0077	.0991	.0593	-.0328	187.		
.2010	876.	972.	-431.	-249.	-313.	-151.	-.0708	-.0243	-.0073	.0983	.0753	-.0360	172.		
.2020	587.	837.	-648.	-545.	-187.	71.	-.0676	-.0219	-.0066	.0963	.0912	-.0383	233.		
.2030	209.	663.	-772.	-748.	-69.	339.	-.0627	-.0181	-.0054	.0932	.1061	-.0403	331.		
.2040	-177.	464.	-725.	-789.	-32.	610.	-.0565	-.0133	-.0036	.0885	.1173	-.0432	400.		
.2050	-534.	234.	-486.	-644.	-98.	846.	-.0496	-.0079	-.0016	.0826	.1230	-.0468	428.		
.2060	-860.	-14.	-90.	-330.	-235.	1024.	-.0421	-.0019	.0005	.0771	.1237	-.0497	442.		
.2070	-1157.	-265.	382.	74.	-398.	1153.	-.0346	.0044	.0023	.0727	.1202	-.0513	490.		
.2080	-1421.	-503.	823.	450.	-540.	1264.	-.0272	.0105	.0042	.0685	.1137	-.0518	580.		
.2090	-1662.	-701.	1138.	710.	-618.	1381.	-.0206	.0163	.0060	.0643	.1069	-.0516	671.		
.2100	-1896.	-852.	1276.	815.	-599.	1497.	-.0152	.0217	.0079	.0607	.1028	-.0503	725.		
.2110	-2107.	-984.	1229.	753.	-484.	1585.	-.0112	.0265	.0097	.0577	.1018	-.0479	730.		
.2120	-2233.	-1082.	1040.	554.	-319.	1609.	-.0088	.0304	.0116	.0554	.1020	-.0447	695.		
.2130	-2223.	-1104.	791.	306.	-165.	1539.	-.0081	.0333	.0133	.0538	.1018	-.0403	633.		
.2140	-2074.	-1071.	574.	106.	-67.	1347.	-.0086	.0353	.0149	.0530	.1003	-.0345	543.		
.2150	-1787.	-1030.	441.	-3.	-51.	1014.	-.0109	.0361	.0161	.0528	.0965	-.0279	407.		
.2160	-1352.	-969.	386.	-28.	-122.	550.	-.0140	.0359	.0168	.0528	.0902	-.0211	226.		
.2170	-818.	-863.	372.	-4.	-248.	20.	-.0178	.0346	.0172	.0529	.0822	-.0150	100.		
.2180	-306.	-747.	355.	23.	-362.	-476.	-.0215	.0324	.0171	.0525	.0735	-.0104	240.		
.2190	95.	-652.	284.	-2.	-405.	-858.	-.0245	.0294	.0166	.0508	.0648	-.0074	380.		
.2200	378.	-556.	121.	-116.	-357.	-1103.	-.0262	.0259	.0156	.0477	.0568	-.0051	468.		
.2210	557.	-449.	-126.	-310.	-228.	-1218.	-.0261	.0219	.0142	.0434	.0490	-.0031	512.		
.2220	620.	-360.	-391.	-522.	-46.	-1210.	-.0244	.0177	.0121	.0381	.0406	-.0015	529.		
.2230	578.	-298.	-589.	-665.	139.	-1103.	-.0213	.0133	.0093	.0317	.0306	-.0012	520.		
.2240	489.	-252.	-659.	-679.	267.	-944.	-.0173	.0090	.0059	.0238	.0182	-.0029	479.		
.2250	395.	-228.	-578.	-547.	306.	-778.	-.0129	.0049	.0021	.0145	.0036	-.0068	401.		
.2260	298.	-237.	-569.	-289.	270.	-623.	-.0083	.0012	-.0020	.0036	-.0123	-.0121	296.		
.2270	186.	-262.	-93.	37.	200.	-471.	-.0035	-.0017	-.0060	-.0083	-.0283	-.0177	206.		
.2280	60.	-281.	164.	343.	140.	-305.	.0014	-.0039	-.0096	-.0213	-.0437	-.0224	193.		
.2290	-76.	-287.	324.	544.	132.	-121.	.0061	-.0052	-.0126	-.0350	-.0578	-.0256	230.		
.2300	-216.	-278.	346.	607.	196.	84.	.0104	-.0056	-.0149	-.0487	-.0692	-.0269	257.		
.2310	-348.	-265.	239.	543.	320.	222.	.0137	-.0051	-.0163	-.0620	-.0772	-.0266	268.		

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.2210	557.	-449.	126.	-310.	-228.	-1218.	-.0261	.0219	.0142	.0434	.0490	-.0031	468.
.2220	620.	-360.	-391.	-522.	-46.	-1210.	-.0244	.0177	.0121	.0381	.0406	-.0015	529.
.2230	578.	-298.	-589.	-665.	129.	-1103.	-.0213	.0133	.0093	.0317	.0306	-.0012	520.
.2240	489.	-252.	-659.	-679.	267.	-944.	-.0173	.0090	.0059	.0238	.0182	-.0029	479.
.2250	395.	-228.	-570.	-547.	306.	-778.	-.0129	.0049	.0021	.0145	.0036	-.0068	401.
.2260	298.	-237.	-369.	-289.	270.	-623.	-.0083	.0012	-.0020	.0036	-.0123	-.0121	296.
.2270	186.	-262.	-93.	37.	200.	-471.	-.0035	-.0017	-.0060	-.0083	-.0283	-.0177	206.
.2280	60.	-281.	164.	343.	140.	-305.	.0014	-.0039	-.0096	-.0213	-.0437	-.0224	193.
.2290	-76.	-287.	324.	544.	132.	-121.	.0061	-.0052	-.0126	-.0350	-.0578	-.0256	230.
.2300	-216.	-278.	346.	607.	196.	64.	.0104	-.0056	-.0149	-.0487	-.0392	-.0269	257.
.2310	-348.	-265.	239.	543.	320.	222.	.0137	-.0051	-.0163	-.0620	-.0772	-.0266	268.

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ENGLISH UNITS

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

SECTION	50	MEMBER	2	SEQUENCE	700	LOCATION	END	TYPE	RU								
TIME	FX	FY	FZ	HX	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)				
.2320	-433.	-251.	50.	394.	461.	322.	.0156	-.0039	-.0167	-.0747	-.0822	-.0256	275.				
.2330	-426.	-212.	-165.	215.	571.	334.	.0159	-.0020	-.0158	-.0865	-.0852	-.0240	279.				
.2340	-305.	-137.	-355.	62.	623.	231.	.0147	.0006	-.0135	-.0969	-.0868	-.0217	268.				
.2350	-74.	-56.	-489.	-38.	612.	8.	.0124	.0036	-.0096	-.1057	-.0877	-.0184	246.				
.2360	248.	18.	-562.	-89.	545.	-313.	.0095	.0069	-.0039	-.1133	-.0886	-.0141	255.				
.2370	633.	116.	-593.	-104.	439.	-682.	.0066	.0104	.0033	-.1194	-.0888	-.0087	328.				
.2380	1020.	249.	-607.	-101.	324.	-1037.	.0040	.0141	.0116	-.1238	-.0872	-.0024	438.				
.2390	1346.	380.	-620.	-99.	229.	-1330.	.0019	.0176	.0206	-.1267	-.0833	.0040	543.				
.2400	1585.	483.	-643.	-113.	167.	-1538.	.0006	.0207	.0293	-.1280	-.0772	.0100	622.				
.2410	1737.	574.	-672.	-134.	131.	-1651.	-.0001	.0235	.0372	-.1277	-.0692	.0154	667.				
.2420	1797.	659.	-685.	-134.	108.	-1667.	-.0001	.0257	.0434	-.1256	-.0597	.0205	673.				
.2430	1763.	737.	-648.	-79.	80.	-1590.	.0004	.0275	.0476	-.1219	-.0493	.0254	639.				
.2440	1656.	814.	-548.	43.	31.	-1436.	.0014	.0287	.0496	-.1165	-.0383	.0301	577.				
.2450	1496.	883.	-389.	225.	-46.	-1229.	.0026	.0292	.0495	-.1100	-.0272	.0341	502.				
.2460	1284.	912.	-181.	447.	-137.	-978.	.0041	.0289	.0477	-.1032	-.0163	.0368	435.				
.2470	1026.	894.	56.	688.	-226.	-696.	.0059	.0278	.0444	-.0968	-.0062	.0383	403.				
.2480	745.	871.	293.	923.	-308.	-393.	.0080	.0261	.0400	-.0908	.0035	.0396	421.				
.2490	459.	866.	499.	1124.	-376.	-80.	.0104	.0237	.0347	-.0849	.0127	.0409	477.				
.2500	169.	843.	672.	1279.	-420.	233.	.0131	.0208	.0285	-.0795	.0204	.0416	548.				
.2510	-125.	774.	812.	1387.	-440.	528.	.0159	.0174	.0216	-.0748	.0261	.0411	621.				
.2520	-396.	676.	916.	1448.	-443.	785.	.0189	.0137	.0142	-.0707	.0294	.0393	685.				
.2530	-616.	575.	983.	1467.	-442.	986.	.0219	.0099	.0065	-.0670	.0303	.0368	731.				
.2540	-774.	476.	1025.	1451.	-444.	1120.	.0250	.0061	-.0012	-.0638	.0290	.0339	757.				
.2550	-874.	367.	1043.	1402.	-446.	1186.	.0283	.0024	-.0083	-.0615	.0258	.0307	758.				
.2560	-918.	243.	1028.	1312.	-443.	1183.	.0316	-.0011	-.0147	-.0606	.0214	.0271	731.				
.2570	-901.	106.	974.	1173.	-432.	1113.	.0350	-.0043	-.0198	-.0613	.0158	.0228	672.				
.2580	-827.	-17.	877.	991.	-412.	989.	.0384	-.0072	-.0238	-.0631	.0097	.0184	586.				
.2590	-708.	-106.	739.	775.	-381.	827.	.0416	-.0098	-.0267	-.0654	.0034	.0141	480.				
.2600	-556.	-189.	575.	537.	-342.	633.	.0447	-.0123	-.0287	-.0684	-.0033	.0100	360.				
.2610	-375.	-282.	398.	289.	-300.	410.	.0475	-.0148	-.0298	-.0720	-.0105	.0062	234.				
.2620	-171.	-359.	214.	48.	-258.	169.	.0501	-.0172	-.0304	-.0758	-.0181	.0028	125.				
.2630	38.	-401.	35.	-168.	-216.	-65.	.0524	-.0195	-.0306	-.0795	-.0260	.0002	113.				
.2640	228.	-420.	-122.	-346.	-174.	-234.	.0545	-.0217	-.0306	-.0829	-.0342	-.0013	189.				
.2650	386.	-419.	-254.	-483.	-131.	-429.	.0565	-.0238	-.0304	-.0862	-.0425	-.0019	264.				
.2660	509.	-403.	-364.	-580.	-83.	-543.	.0584	-.0258	-.0300	-.0892	-.0507	-.0014	321.				
.2670	592.	-373.	-450.	-676.	-26.	-611.	.0602	-.0276	-.0295	-.0917	-.0586	-.0001	354.				
.2680	631.	-319.	-510.	-650.	38.	-621.	.0620	-.0293	-.0290	-.0933	-.0662	.0022	361.				
.2690	621.	-250.	-535.	-618.	105.	-571.	.0637	-.0308	-.0284	-.0939	-.0736	.0054	340.				

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.2590	-708.	-106.	739.	775.	-381.	327.	.0416	-.0098	-.0267	-.0654	.0034	.0141	480.
.2600	-556.	-189.	575.	577.	-342.	633.	.0447	-.0123	-.0287	-.0684	-.0033	.0100	360.
.2610	-375.	-282.	398.	289.	-300.	410.	.0475	-.0148	-.0298	-.0720	-.0105	.0062	234.
.2620	-171.	-359.	214.	48.	-258.	169.	.0501	-.0172	-.0304	-.0758	-.0181	.0028	125.
.2630	38.	-401.	35.	-168.	-216.	-65.	.0524	-.0195	-.0306	-.0795	-.0260	.0002	113.
.2640	228.	-420.	-122.	-346.	-174.	-269.	.0545	-.0217	-.0306	-.0829	-.0342	-.0013	189.
.2650	386.	-419.	-254.	-483.	-131.	-429.	.0565	-.0238	-.0304	-.0862	-.0425	-.0019	264.
.2660	509.	-403.	-364.	-580.	-83.	-543.	.0584	-.0258	-.0300	-.0892	-.0507	-.0014	321.
.2670	592.	-373.	-450.	-636.	-26.	-611.	.0602	-.0276	-.0295	-.0917	-.0586	-.0001	354.
.2680	631.	-319.	-510.	-650.	38.	-621.	.0620	-.0293	-.0290	-.0933	-.0662	.0022	361.
.2690	621.	-250.	-535.	-618.	105.	-571.	.0637	-.0308	-.0284	-.0939	-.0736	.0054	340.

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

SECTION	50	MEMBER	2	SEQUENCE	700	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)		
.2700	565.	-193.	-516.	-538.	169.	-476.	.0652	-.0321	-.0278	-.0938	-.0808	.0093	296.		
.2710	483.	-145.	-457.	-414.	226.	-357.	.0664	-.0329	-.0272	-.0931	-.0876	.0137	237.		
.2720	401.	-56.	-373.	-251.	270.	-229.	.0669	-.0330	-.0267	-.0914	-.0933	.0183	174.		
.2730	329.	88.	-273.	-60.	297.	-91.	.0668	-.0326	-.0261	-.0889	-.0976	.0232	127.		
.2740	251.	210.	-160.	136.	317.	46.	.0659	-.0322	-.0256	-.0857	-.1010	.0279	140.		
.2750	166.	272.	-53.	308.	341.	168.	.0644	-.0318	-.0251	-.0818	-.1032	.0324	196.		
.2760	102.	332.	13.	438.	375.	261.	.0622	-.0312	-.0247	-.0767	-.1038	.0367	254.		
.2770	88.	443.	29.	520.	415.	321.	.0593	-.0304	-.0241	-.0704	-.1030	.0409	297.		
.2780	115.	566.	12.	558.	454.	344.	.0557	-.0295	-.0235	-.0633	-.1011	.0450	320.		
.2790	168.	642.	-21.	555.	487.	321.	.0517	-.0287	-.0225	-.0559	-.0985	.0490	323.		
.2800	262.	687.	-68.	523.	509.	235.	.0470	-.0279	-.0215	-.0482	-.0952	.0525	308.		
.2810	428.	760.	-125.	473.	506.	81.	.0417	-.0267	-.0204	-.0402	-.0913	.0551	280.		
.2820	655.	851.	-182.	414.	472.	-126.	.0359	-.0255	-.0194	-.0320	-.0871	.0566	257.		
.2830	885.	900.	-231.	344.	416.	-357.	.0298	-.0244	-.0189	-.0238	-.0824	.0573	260.		
.2840	1079.	886.	-278.	258.	357.	-584.	.0238	-.0236	-.0190	-.0155	-.0772	.0570	294.		
.2850	1243.	859.	-345.	145.	309.	-788.	.0182	-.0226	-.0199	-.0069	-.0713	.0553	345.		
.2860	1371.	841.	-445.	-6.	278.	-949.	.0134	-.0215	-.0214	.0017	-.0650	.0525	397.		
.2870	1416.	794.	-560.	-183.	273.	-1034.	.0099	-.0203	-.0234	.0100	-.0584	.0486	435.		
.2880	1341.	689.	-657.	-355.	293.	-1023.	.0080	-.0189	-.0258	.0176	-.0521	.0437	450.		
.2890	1174.	554.	-713.	-496.	324.	-927.	.0077	-.0175	-.0282	.0241	-.0468	.0377	441.		
.2900	958.	414.	-718.	-592.	344.	-777.	.0090	-.0158	-.0307	.0297	-.0428	.0306	415.		
.2910	701.	246.	-657.	-627.	343.	-591.	.0119	-.0139	-.0332	.0343	-.0407	.0228	372.		
.2920	394.	40.	-514.	-588.	321.	-370.	.0160	-.0120	-.0356	.0382	-.0405	.0145	307.		
.2930	54.	-175.	-309.	-486.	280.	-118.	.0210	-.0100	-.0379	.0415	-.0417	.0060	230.		
.2940	-288.	-381.	-86.	-367.	230.	142.	.0265	-.0080	-.0399	.0444	-.0436	-.0022	183.		
.2950	-615.	-591.	110.	-274.	190.	389.	.0321	-.0060	-.0417	.0470	-.0450	-.0098	206.		
.2960	-928.	-797.	251.	-232.	177.	617.	.0374	-.0039	-.0430	.0492	-.0449	-.0161	274.		
.2970	-1213.	-958.	320.	-249.	194.	827.	.0420	-.0017	-.0436	.0514	-.0427	-.0208	355.		
.2980	-1439.	-1063.	315.	-330.	227.	1002.	.0454	.0003	-.0436	.0533	-.0385	-.0237	433.		
.2990	-1585.	-1143.	252.	-464.	265.	1110.	.0476	.0019	-.0427	.0550	-.0326	-.0250	495.		
.3000	-1643.	-1209.	152.	-623.	298.	1129.	.0482	.0032	-.0411	.0570	-.0254	-.0245	531.		
.3010	-1600.	-1224.	40.	-776.	309.	1060.	.0472	.0041	-.0389	.0595	-.0173	-.0225	542.		
.3020	-1459.	-1170.	-66.	-903.	286.	926.	.0449	.0047	-.0360	.0627	-.0091	-.0192	532.		
.3030	-1248.	-1075.	-153.	-999.	234.	749.	.0414	.0046	-.0325	.0663	-.0012	-.0146	510.		
.3040	-1007.	-967.	-228.	-1068.	175.	548.	.0372	.0040	-.0285	.0702	.0065	-.0090	487.		
.3050	-751.	-832.	-305.	-1119.	123.	346.	.0326	.0030	-.0240	.0743	.0144	-.0026	472.		
.3060	-492.	-643.	-391.	-1157.	82.	175.	.0278	.0016	-.0191	.0782	.0224	.0045	471.		
.3070	-267.	-421.	-471.	-1174.	53.	65.	.0231	-.0002	-.0141	.0816	.0302	.0119	472.		

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INTERNAL FORCES IN THE PIPING
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.2970	-1213.	-958.	320.	-249.	194.	827.	.0420	-.0017	-.0436	.0514	-.0427	-.0208	355.
.2980	-1439.	-1063.	315.	-330.	227.	1002.	.0454	.0003	-.0436	.0533	-.0385	-.0237	433.
.2990	-1585.	-1143.	252.	-464.	265.	1110.	.0476	.0019	-.0427	.0550	-.0326	-.0250	495.
.3000	-1643.	-1209.	152.	-623.	298.	1129.	.0482	.0032	-.0411	.0570	-.0254	-.0245	531.
.3010	-1600.	-1224.	40.	-776.	309.	1060.	.0472	.0041	-.0389	.0595	-.0173	-.0225	542.
.3020	-1459.	-1170.	-66.	-903.	286.	926.	.0449	.0047	-.0360	.0627	-.0091	-.0192	532.
.3030	-1248.	-1075.	-153.	-999.	234.	749.	.0414	.0046	-.0325	.0663	-.0012	-.0146	510.
.3040	-1007.	-967.	-228.	-1068.	175.	548.	.0372	.0040	-.0285	.0702	.0065	-.0090	487.
.3050	-751.	-832.	-305.	-1119.	123.	346.	.0326	.0030	-.0240	.0743	.0144	-.0026	472.
.3060	-492.	-643.	-391.	-1157.	82.	175.	.0278	.0016	-.0191	.0782	.0224	.0045	471.
.3070	-267.	-421.	-471.	-1174.	53.	65.	.0231	-.0002	-.0141	.0816	.0302	.0119	472.

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DIS/ADLPIPE

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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	50	MEMBER	2	SEQUENCE	700	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)		
.3080	-111.	-208.	-527.	-1155.	40.	29.	.0186	-.0025	-.0091	.0843	.0375	.0192	464.		
.3090	-18.	-10.	-548.	-1089.	36.	54.	.0144	-.0052	-.0044	.0862	.0438	.0259	438.		
.3100	41.	187.	-528.	-969.	24.	119.	.0103	-.0080	-.0003	.0875	.0487	.0316	392.		
.3110	69.	384.	-458.	-792.	-5.	222.	.0065	-.0109	.0031	.0881	.0517	.0362	330.		
.3120	40.	560.	-332.	-556.	-45.	372.	.0030	-.0136	.0057	.0878	.0530	.0397	269.		
.3130	-45.	709.	-164.	-280.	-87.	560.	-.0002	-.0160	.0078	.0867	.0527	.0423	253.		
.3140	-153.	833.	16.	-1.	-125.	758.	-.0029	-.0181	.0093	.0847	.0511	.0439	308.		
.3150	-269.	922.	178.	245.	-151.	946.	-.0053	-.0197	.0105	.0817	.0484	.0446	397.		
.3160	-398.	965.	315.	448.	-159.	1119.	-.0074	-.0208	.0114	.0779	.0450	.0445	488.		
.3170	-536.	974.	428.	608.	-151.	1271.	-.0094	-.0213	.0120	.0738	.0411	.0435	569.		
.3180	-650.	959.	509.	715.	-137.	1377.	-.0115	-.0213	.0122	.0696	.0365	.0416	625.		
.3190	-713.	905.	554.	759.	-127.	1407.	-.0137	-.0207	.0122	.0657	.0312	.0386	644.		
.3200	-722.	804.	566.	747.	-117.	1348.	-.0163	-.0196	.0119	.0622	.0253	.0347	620.		
.3210	-681.	681.	550.	688.	-110.	1212.	-.0191	-.0179	.0115	.0594	.0191	.0298	561.		
.3220	-588.	558.	504.	582.	-109.	1014.	-.0222	-.0159	.0111	.0572	.0131	.0242	471.		
.3230	-449.	423.	427.	424.	-110.	762.	-.0253	-.0138	.0110	.0553	.0075	.0180	353.		
.3240	-280.	258.	317.	217.	-105.	465.	-.0282	-.0117	.0113	.0536	.0029	.0114	210.		
.3250	-97.	76.	182.	-22.	-89.	142.	-.0308	-.0099	.0118	.0521	-.0004	.0044	68.		
.3260	90.	-91.	32.	-275.	-69.	-177.	-.0330	-.0083	.0125	.0510	-.0026	-.0026	134.		
.3270	267.	-240.	-110.	-518.	-53.	-465.	-.0346	-.0073	.0132	.0503	-.0041	-.0097	280.		
.3280	410.	-386.	-227.	-728.	-41.	-711.	-.0355	-.0070	.0136	.0500	-.0050	-.0164	409.		
.3290	513.	-528.	-312.	-891.	-31.	-909.	-.0357	-.0073	.0137	.0503	-.0053	-.0227	511.		
.3300	580.	-644.	-366.	-1002.	-25.	-1049.	-.0351	-.0083	.0134	.0509	-.0053	-.0286	582.		
.3310	608.	-721.	-386.	-1056.	-24.	-1117.	-.0338	-.0101	.0129	.0516	-.0050	-.0339	617.		
.3320	576.	-773.	-367.	-1052.	-25.	-1099.	-.0317	-.0127	.0123	.0521	-.0042	-.0382	611.		
.3330	479.	-813.	-315.	-994.	-18.	-1003.	-.0290	-.0162	.0117	.0522	-.0026	-.0415	566.		
.3340	345.	-828.	-241.	-893.	-8.	-847.	-.0257	-.0202	.0110	.0519	-.0003	-.0437	494.		
.3350	198.	-806.	-152.	-756.	-2.	-651.	-.0221	-.0248	.0105	.0513	.0027	-.0447	401.		
.3360	34.	-760.	-42.	-583.	-2.	-421.	-.0184	-.0296	.0098	.0503	.0061	-.0448	288.		
.3370	-149.	-699.	92.	-372.	-10.	-165.	-.0147	-.0345	.0091	.0492	.0100	-.0438	164.		
.3380	-325.	-617.	236.	-141.	-28.	92.	-.0113	-.0393	.0082	.0481	.0141	-.0419	68.		
.3390	-469.	-513.	369.	87.	-56.	325.	-.0083	-.0438	.0071	.0470	.0185	-.0395	137.		
.3400	-582.	-409.	479.	293.	-86.	526.	-.0057	-.0480	.0060	.0455	.0233	-.0366	244.		
.3410	-678.	-314.	560.	465.	-109.	696.	-.0036	-.0515	.0049	.0437	.0286	-.0335	339.		
.3420	-746.	-216.	603.	592.	-123.	832.	-.0021	-.0545	.0041	.0416	.0345	-.0300	413.		
.3430	-768.	-114.	599.	663.	-131.	918.	-.0010	-.0567	.0036	.0390	.0407	-.0266	458.		
.3440	-744.	-28.	554.	676.	-135.	944.	-.0004	-.0581	.0034	.0359	.0470	-.0235	469.		
.3450	-680.	30.	482.	648.	-137.	907.	-.0003	-.0588	.0036	.0325	.0532	-.0209	451.		

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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

.3350	198.	-806.	-152.	-756.	-2.	-651.	-221.	-0248	.0105	.0513	.0027	-.0447	401.
.3360	34.	-760.	-42.	-583.	-2.	-421.	-.0184	-.0296	.0098	.0503	.0061	-.0448	288.
.3370	-149.	-699.	92.	-372.	-10.	-165.	-.0147	-.0345	.0091	.0492	.0100	-.0438	164.
.3380	-325.	-617.	236.	-141.	-28.	92.	-.0113	-.0393	.0082	.0481	.0141	-.0419	68.
.3390	-469.	-513.	369.	87.	-56.	325.	-.0083	-.0438	.0071	.0470	.0185	-.0395	137.
.3400	-582.	-409.	479.	293.	-86.	526.	-.0057	-.0480	.0060	.0455	.0233	-.0366	244.
.3410	-678.	-314.	560.	465.	-109.	696.	-.0036	-.0515	.0049	.0437	.0286	-.0335	339.
.3420	-744.	-216.	603.	592.	-123.	832.	-.0021	-.0545	.0041	.0416	.0345	-.0300	413.
.3430	-768.	-114.	599.	663.	-131.	918.	-.0010	-.0567	.0036	.0390	.0407	-.0266	458.
.3440	-744.	-28.	554.	676.	-135.	944.	-.0004	-.0581	.0034	.0359	.0470	-.0235	469.
.3450	-680.	30.	482.	648.	-137.	907.	-.0003	-.0588	.0036	.0325	.0532	-.0209	451.

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
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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

SECTION	50	MEMBER	2	SEQUENCE	700	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)		
.3460	-581.	76.	398.	593.	-146.	818.	-.0007	-.0587	.0041	.0288	.0590	-.0190	410.		
.3470	-444.	120.	309.	520.	-168.	687.	-.0015	-.0579	.0047	.0249	.0642	-.0180	352.		
.3480	-286.	148.	220.	432.	-200.	522.	-.0024	-.0565	.0055	.0210	.0685	-.0179	283.		
.3490	-129.	138.	133.	333.	-228.	338.	-.0035	-.0548	.0063	.0169	.0720	-.0189	211.		
.3500	9.	100.	45.	223.	-247.	156.	-.0043	-.0528	.0070	.0127	.0747	-.0208	148.		
.3510	118.	55.	-43.	106.	-255.	5.	-.0049	-.0506	.0075	.0084	.0766	-.0235	111.		
.3520	181.	7.	-124.	-7.	-249.	-98.	-.0050	-.0482	.0078	.0044	.0775	-.0269	107.		
.3530	185.	-58.	-186.	-103.	-228.	-148.	-.0046	-.0459	.0077	.0006	.0775	-.0308	116.		
.3540	135.	-143.	-222.	-172.	-196.	-149.	-.0037	-.0436	.0072	-.0027	.0763	-.0352	120.		
.3550	49.	-229.	-224.	-203.	-166.	-107.	-.0023	-.0414	.0062	-.0054	.0739	-.0399	113.		
.3560	-66.	-303.	-183.	-183.	-145.	-26.	-.0006	-.0394	.0047	-.0074	.0702	-.0448	94.		
.3570	-209.	-372.	-98.	-112.	-133.	90.	.0012	-.0376	.0028	-.0087	.0656	-.0496	79.		
.3580	-371.	-440.	18.	-2.	-127.	226.	.0029	-.0361	.0005	-.0093	.0603	-.0541	104.		
.3590	-528.	-500.	143.	125.	-122.	364.	.0044	-.0347	-.0019	-.0093	.0545	-.0582	162.		
.3600	-667.	-540.	255.	250.	-111.	495.	.0056	-.0334	-.0043	-.0088	.0484	-.0618	227.		
.3610	-789.	-558.	344.	359.	-89.	616.	.0062	-.0321	-.0065	-.0077	.0422	-.0645	288.		
.3620	-883.	-552.	401.	445.	-52.	715.	.0062	-.0307	-.0084	-.0061	.0360	-.0663	339.		
.3630	-928.	-521.	420.	498.	-6.	772.	.0055	-.0292	-.0099	-.0040	.0297	-.0670	369.		
.3640	-905.	-475.	404.	519.	42.	765.	.0041	-.0275	-.0108	-.0017	.0230	-.0667	371.		
.3650	-813.	-420.	364.	516.	86.	685.	.0019	-.0257	-.0110	.0006	.0159	-.0653	346.		
.3660	-651.	-350.	312.	501.	118.	534.	-.0010	-.0235	-.0105	.0027	.0085	-.0630	298.		
.3670	-423.	-258.	253.	479.	132.	318.	-.0045	-.0210	-.0094	.0045	.0009	-.0597	237.		
.3680	-136.	-157.	185.	444.	131.	43.	-.0085	-.0182	-.0078	.0058	-.0067	-.0555	187.		
.3690	186.	-66.	105.	392.	123.	-277.	-.0127	-.0152	-.0059	.0064	-.0139	-.0508	199.		
.3700	516.	14.	8.	318.	117.	-615.	-.0170	-.0119	-.0038	.0063	-.0205	-.0455	282.		
.3710	833.	99.	-107.	223.	117.	-941.	-.0211	-.0085	-.0019	.0056	-.0261	-.0400	391.		
.3720	1114.	190.	-238.	111.	127.	-1227.	-.0247	-.0050	-.0003	.0043	-.0310	-.0344	497.		
.3730	1340.	265.	-373.	-11.	148.	-1461.	-.0277	-.0016	-.0009	.0024	-.0349	-.0291	589.		
.3740	1498.	304.	-497.	-129.	178.	-1637.	-.0297	.0013	.0016	-.0002	-.0381	-.0242	663.		
.3750	1589.	320.	-596.	-227.	207.	-1748.	-.0307	.0039	.0018	-.0034	-.0409	-.0201	712.		
.3760	1616.	335.	-655.	-287.	227.	-1786.	-.0305	.0059	.0016	-.0072	-.0436	-.0167	732.		
.3770	1577.	348.	-660.	-297.	234.	-1747.	-.0291	.0073	.0010	-.0113	-.0462	-.0142	717.		
.3780	1473.	340.	-612.	-258.	227.	-1640.	-.0265	.0079	.0002	-.0158	-.0490	-.0125	673.		
.3790	1317.	305.	-522.	-184.	212.	-1401.	-.0228	.0075	-.0008	-.0205	-.0519	-.0115	605.		
.3800	1127.	262.	-405.	-86.	190.	-1278.	-.0183	.0064	-.0019	-.0251	-.0546	-.0113	519.		
.3810	909.	221.	-274.	22.	165.	-1037.	-.0132	.0044	-.0029	-.0296	-.0569	-.0116	421.		
.3820	671.	186.	-146.	127.	143.	-767.	-.0079	.0019	-.0039	-.0337	-.0584	-.0122	317.		
.3830	431.	157.	-36.	214.	126.	-488.	-.0027	-.0012	-.0047	-.0374	-.0587	-.0128	220.		

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18.29.04.

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

.3720	1114.	190.	-238.	-11.	127.	-1227.	-.0227	-.0050	-.0003	.0043	-.0310	-.0344	497.
.3730	1340.	265.	-373.	-11.	148.	-1461.	-.0277	-.0016	.0009	.0024	-.0349	-.0291	589.
.3740	1498.	304.	-497.	-129.	178.	-1637.	-.0297	.0013	.0016	-.0002	-.0381	-.0242	663.
.3750	1589.	320.	-596.	-227.	207.	-1748.	-.0307	.0039	.0018	-.0034	-.0409	-.0201	712.
.3760	1616.	335.	-655.	-287.	227.	-1786.	-.0305	.0059	.0016	-.0072	-.0436	-.0167	732.
.3770	1577.	348.	-660.	-297.	234.	-1747.	-.0291	.0073	.0010	-.0113	-.0462	-.0142	717.
.3780	1473.	340.	-612.	-258.	227.	-1640.	-.0265	.0079	.0002	-.0158	-.0490	-.0125	673.
.3790	1317.	305.	-522.	-184.	212.	-1481.	-.0228	.0075	-.0008	-.0205	-.0519	-.0115	605.
.3800	1127.	262.	-405.	-86.	190.	-1278.	-.0183	.0064	-.0019	-.0251	-.0546	-.0113	519.
.3810	909.	221.	-274.	22.	165.	-1037.	-.0132	.0044	-.0029	-.0296	-.0569	-.0116	421.
.3820	671.	186.	-146.	127.	143.	-767.	-.0079	.0019	-.0039	-.0337	-.0584	-.0122	317.
.3830	431.	157.	-36.	214.	126.	-488.	-.0027	-.0012	-.0047	-.0374	-.0587	-.0128	220.

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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	50	MEMBER	2	SEQUENCE	700	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)	
.3840	215.	132.	47.	271.	112.	-230.		.0021	-.0047	-.0052	-.0406	-.0578	-.0133	150.	
.3850	43.	117.	101.	299.	96.	-12.		.0061	-.0084	-.0053	-.0432	-.0556	-.0135	126.	
.3860	-79.	126.	129.	302.	73.	161.		.0091	-.0122	-.0051	-.0452	-.0518	-.0132	140.	
.3870	-143.	161.	136.	289.	38.	280.		.0110	-.0161	-.0044	-.0463	-.0466	-.0122	162.	
.3880	-144.	199.	130.	258.	-11.	334.		.0118	-.0199	-.0032	-.0467	-.0402	-.0105	170.	
.3890	-89.	220.	110.	210.	-73.	318.		.0115	-.0234	-.0017	-.0462	-.0327	-.0079	156.	
.3900	11.	239.	76.	148.	-141.	245.		.0101	-.0264	.0001	-.0448	-.0241	-.0047	128.	
.3910	142.	284.	35.	83.	-212.	141.		.0079	-.0284	.0022	-.0425	-.0147	-.0007	107.	
.3920	286.	354.	-10.	18.	-283.	26.		.0050	-.0294	.0043	-.0393	-.0049	.0040	114.	
.3930	419.	414.	-54.	-47.	-348.	-92.		.0018	-.0294	.0064	-.0354	.0049	.0094	146.	
.3940	528.	440.	-91.	-106.	-403.	-209.		-.0018	-.0285	.0083	-.0309	.0146	.0153	187.	
.3950	611.	449.	-112.	-149.	-449.	-316.		-.0054	-.0265	.0099	-.0260	.0237	.0212	228.	
.3960	662.	459.	-108.	-163.	-493.	-395.		-.0090	-.0236	.0111	-.0208	.0322	.0269	262.	
.3970	665.	460.	-72.	-143.	-537.	-436.		-.0124	-.0198	.0119	-.0154	.0396	.0324	283.	
.3980	615.	429.	-0.	-88.	-575.	-440.		-.0154	-.0154	.0122	-.0100	.0459	.0374	293.	
.3990	519.	366.	99.	-6.	-605.	-417.		-.0180	-.0103	.0121	-.0049	.0508	.0420	295.	
.4000	392.	293.	213.	91.	-626.	-367.		-.0200	-.0047	.0116	-.0000	.0544	.0460	294.	

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)
.1690	-893.	1375.	1040.	1446.	-571.	2126.	-.0366	-.0134	.0035	.0496	.0586	.0183	1057.

SECTION	50	MEMBER	3	SEQUENCE	71	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)	
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.	-1.	1.	0.	0.	0.		.0000	-.0000	.0000	-.0000	-.0000	.0000	1.	
.0030	1.	-1.	2.	1.	0.	-1.		-.0000	-.0000	-.0000	-.0000	-.0001	.0000	3.	
.0040	5.	-2.	4.	2.	-0.	-3.		-.0000	.0000	-.0000	-.0001	-.0001	.0001	13.	
.0050	12.	-1.	8.	5.	-2.	-7.		-.0001	.0000	-.0001	-.0003	-.0002	.0004	34.	
.0060	24.	3.	13.	9.	-5.	-16.		-.0003	.0000	-.0002	-.0005	-.0004	.0007	71.	
.0070	41.	6.	19.	14.	-8.	-28.		-.0005	.0000	-.0005	-.0009	-.0006	.0012	120.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.04.

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

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.	-1.	1.	0.	0.	0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	1.
.0030	1.	-1.	2.	1.	0.	-1.	-.0000	-.0000	-.0000	-.0000	-.0001	.0000	3.
.0040	5.	-2.	4.	2.	-0.	-3.	-.0000	.0000	-.0000	-.0001	-.0001	.0001	13.
.0050	12.	-1.	8.	5.	-2.	-7.	-.0001	.0000	-.0001	-.0003	-.0002	.0004	34.
.0060	24.	3.	13.	9.	-5.	-16.	-.0003	.0000	-.0002	-.0005	-.0004	.0007	71.
.0070	41.	6.	19.	14.	-8.	-28.	-.0005	.0000	-.0005	-.0009	-.0006	.0012	120.

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ADLPIPE STRESS ANALYSIS

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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	END	TYPE	RU	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)
50	3	71					.0080	63.	2.	25.	18.	-11.	-43.	-.0010	.0000	-.0008	-.0015	-.0011	.0017	180.
							.0090	100.	0.	27.	21.	-16.	-67.	-.0017	.0000	-.0014	-.0023	-.0014	.0023	271.
							.0100	157.	10.	23.	21.	-28.	-108.	-.0028	.0001	-.0021	-.0030	-.0011	.0034	423.
							.0110	238.	37.	12.	16.	-49.	-165.	-.0045	.0002	-.0030	-.0037	.0003	.0049	647.
							.0120	334.	80.	-8.	8.	-80.	-235.	-.0068	.0003	-.0040	-.0045	.0032	.0062	927.
							.0130	429.	129.	-38.	-5.	-119.	-306.	-.0096	.0003	-.0052	-.0059	.0077	.0069	1224.
							.0140	504.	172.	-76.	-20.	-161.	-364.	-.0129	-.0001	-.0064	-.0083	.0137	.0065	1486.
							.0150	541.	199.	-123.	-37.	-199.	-395.	-.0161	-.0007	-.0077	-.0114	.0207	.0052	1658.
							.0160	522.	217.	-176.	-54.	-228.	-387.	-.0186	-.0014	-.0088	-.0146	.0278	.0036	1689.
							.0170	434.	217.	-227.	-73.	-239.	-326.	-.0197	-.0021	-.0098	-.0168	.0341	.0021	1533.
							.0180	278.	185.	-258.	-89.	-228.	-207.	-.0191	-.0027	-.0103	-.0169	.0390	.0009	1198.
							.0190	68.	122.	-251.	-96.	-204.	-39.	-.0163	-.0030	-.0099	-.0144	.0429	-.0004	855.
							.0200	-173.	-2.	-180.	-84.	-175.	163.	-.0114	-.0032	-.0081	-.0095	.0462	-.0021	945.
							.0210	-403.	-149.	-41.	-44.	-160.	362.	-.0048	-.0031	-.0047	-.0027	.0502	-.0039	1488.
							.0220	-562.	-138.	145.	44.	-202.	493.	.0022	-.0024	-.0003	.0062	.0586	-.0042	1995.
							.0230	-676.	-52.	386.	180.	-284.	577.	.0092	-.0019	.0048	.0141	.0588	-.0044	2493.
							.0240	-836.	-68.	649.	336.	-352.	688.	.0158	-.0023	.0100	.0177	.0751	-.0069	3147.
							.0250	-1046.	-297.	880.	457.	-352.	844.	.0223	-.0035	.0144	.0179	.0731	-.0124	3817.
							.0260	-1171.	-540.	994.	488.	-297.	946.	.0281	-.0038	.0170	.0211	.0662	-.0170	4124.
							.0270	-1174.	-374.	898.	437.	-265.	914.	.0318	-.0021	.0171	.0300	.0634	-.0160	3909.
							.0280	-1288.	-186.	681.	335.	-208.	941.	.0344	-.0000	.0160	.0348	.0588	-.0141	3809.
							.0290	-1540.	-508.	484.	180.	-30.	1120.	.0374	.0005	.0162	.0300	.0435	-.0169	4236.
							.0300	-1497.	-591.	186.	-41.	156.	1083.	.0390	.0020	.0175	.0280	.0303	-.0169	4086.
							.0310	-1145.	-295.	-225.	-300.	265.	781.	.0385	.0050	.0198	.0303	.0237	-.0119	3277.
							.0320	-739.	-220.	-424.	-468.	325.	472.	.0362	.0071	.0240	.0275	.0134	-.0093	2762.
							.0330	-276.	-284.	-300.	-448.	317.	163.	.0316	.0078	.0289	.0199	-.0003	-.0129	2136.
							.0340	319.	-162.	-123.	-320.	212.	-280.	.0240	.0084	.0318	.0128	-.0115	-.0191	1773.
							.0350	914.	-120.	-68.	-228.	109.	-758.	.0147	.0091	.0313	.0069	-.0250	-.0257	2983.
							.0360	1391.	-236.	-79.	-207.	102.	-1116.	.0053	.0101	.0272	.0033	-.0451	-.0307	4254.
							.0370	1721.	-34.	-214.	-244.	142.	-1347.	-.0044	.0121	.0196	.0043	-.0615	-.0293	5137.
							.0380	1754.	443.	-598.	-372.	179.	-1404.	-.0139	.0145	.0093	.0042	-.0561	-.0225	5462.
							.0390	1409.	481.	-1083.	-586.	311.	-1185.	-.0207	.0151	-.0002	-.0061	-.0671	-.0183	5068.
							.0400	1011.	19.	-1418.	-798.	579.	-849.	-.0233	.0139	-.0064	-.0230	-.0732	-.0167	4857.
							.0410	890.	66.	-1680.	-936.	769.	-722.	-.0239	.0139	-.0100	-.0308	-.0737	-.0065	5265.
							.0420	860.	485.	-1727.	-896.	773.	-695.	-.0239	.0147	-.0114	-.0306	-.0721	.0104	5123.
							.0430	735.	609.	-1300.	-608.	677.	-552.	-.0230	.0141	-.0098	-.0258	-.0783	.0174	3973.
							.0440	758.	501.	-442.	-74.	511.	-470.	-.0223	.0118	-.0067	-.0177	-.0596	.0112	2606.
							.0450	973.	466.	310.	458.	251.	-602.	-.0230	.0092	-.0047	-.0059	-.0948	.0012	2975.

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ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKW08F 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

.0350	914.	-120.	-68.	-228.	109.	-758.	.0147	.0091	.0313	.0069	-.0250	-.0257	2983.
.0360	1391.	-236.	-79.	-207.	102.	-1116.	.0053	.0101	.0272	.0033	-.0451	-.0307	4254.
.0370	1721.	-34.	-214.	-244.	142.	-1347.	-.0044	.0121	.0196	.0043	-.0515	-.0293	5137.
.0380	1754.	443.	-598.	-372.	179.	-1404.	-.0139	.0145	.0093	.0042	-.0561	-.0225	5462.
.0390	1409.	481.	-1083.	-586.	311.	-1185.	-.0207	.0151	-.0002	-.0061	-.0671	-.0183	5068.
.0400	1011.	19.	-1418.	-798.	579.	-849.	-.0233	.0139	-.0064	-.0230	-.0732	-.0167	4857.
.0410	890.	66.	-1680.	-936.	769.	-722.	-.0239	.0139	-.0100	-.0308	-.0737	-.0065	5265.
.0420	860.	485.	-1727.	-896.	773.	-695.	-.0239	.0147	-.0114	-.0306	-.0721	.0104	5123.
.0430	735.	609.	-1300.	-608.	677.	-552.	-.0230	.0141	-.0098	-.0258	-.0783	.0174	3973.
.0440	758.	501.	-442.	-74.	511.	-470.	-.0223	.0118	-.0067	-.0177	-.0896	.0112	2606.
.0450	973.	466.	310.	458.	251.	-602.	-.0230	.0092	-.0047	-.0059	-.0948	.0012	2975.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKW08F 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	50	MEMBER	3	SEQUENCE	71	LOCATION	END	TYPE	RU					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	PX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.0460	1095.	454.	703.	788.	14.	-722.	-.0242	.0070	-.0044	.0060	-.0950	-.0050	4006.	
.0470	968.	405.	943.	936.	-37.	-604.	-.0242	.0044	-.0042	.0131	-.0979	-.0060	4161.	
.0480	681.	482.	958.	886.	61.	-305.	-.0234	.0019	-.0044	.0136	-.0967	.0001	3505.	
.0490	325.	629.	475.	553.	169.	-33.	-.0231	.0003	-.0057	.0092	-.0795	.0113	2161.	
.0500	-3.	577.	-223.	86.	271.	159.	-.0231	-.0011	-.0070	.0021	-.0513	.0197	1216.	
.0510	-199.	452.	-653.	-258.	359.	300.	-.0231	-.0029	-.0064	-.0025	-.0237	.0206	1995.	
.0520	-278.	454.	-755.	-413.	324.	389.	-.0236	-.0050	-.0036	-.0012	-.0008	.0178	2440.	
.0530	-241.	470.	-637.	-417.	120.	369.	-.0244	-.0069	.0006	.0054	.0175	.0136	2127.	
.0540	36.	420.	-249.	-244.	-159.	164.	-.0249	-.0084	.0062	.0165	.0310	.0060	1247.	
.0550	498.	349.	326.	53.	-431.	-168.	-.0246	-.0093	.0123	.0286	.0408	-.0049	1738.	
.0560	815.	210.	773.	281.	-679.	-408.	-.0238	-.0099	.0174	.0367	.0500	-.0142	3138.	
.0570	789.	72.	943.	331.	-855.	-415.	-.0227	-.0100	.0206	.0414	.0516	-.0191	3756.	
.0580	498.	76.	884.	234.	-875.	-226.	-.0207	-.0090	.0219	.0453	.0769	-.0214	3485.	
.0590	15.	36.	580.	-12.	-745.	97.	-.0172	-.0075	.0218	.0451	.0951	-.0230	2805.	
.0600	-604.	-249.	64.	-385.	-561.	493.	-.0118	-.0057	.0210	.0392	.1139	-.0231	3136.	
.0610	-1188.	-558.	-346.	-692.	-398.	864.	-.0046	-.0032	.0205	.0348	.1296	-.0190	4392.	
.0620	-1608.	-590.	-380.	-751.	-297.	1135.	.0035	.0007	.0214	.0386	.1377	-.0107	5200.	
.0630	-1870.	-529.	-64.	-573.	-297.	1298.	.0117	.0051	.0237	.0480	.1350	-.0029	5411.	
.0640	-1931.	-648.	499.	-229.	-409.	1314.	.0188	.0088	.0266	.0586	.1223	-.0013	5209.	
.0650	-1746.	-865.	1246.	250.	-585.	1151.	.0236	.0115	.0287	.0691	.1051	-.0071	4910.	
.0660	-1505.	-1026.	1956.	742.	-754.	927.	.0256	.0140	.0287	.0776	.0886	-.0156	5253.	
.0670	-1413.	-1120.	2333.	1034.	-849.	808.	.0253	.0166	.0253	.0813	.0749	-.0203	5834.	
.0680	-1418.	-1053.	2234.	1007.	-822.	787.	.0233	.0194	.0188	.0814	.0667	-.0177	5671.	
.0690	-1446.	-816.	1681.	688.	-650.	797.	.0201	.0219	.0098	.0781	.0561	-.0094	4619.	
.0700	-1574.	-702.	811.	177.	-361.	865.	.0164	.0231	.0002	.0676	.0702	-.0008	3560.	
.0710	-1713.	-765.	-99.	-369.	-57.	954.	.0125	.0224	-.0083	.0516	.0743	.0048	3825.	
.0720	-1588.	-640.	-758.	-760.	131.	897.	.0079	.0206	-.0143	.0396	.0763	.0074	4418.	
.0730	-1160.	-284.	-1031.	-886.	160.	641.	.0029	.0181	-.0174	.0355	.0726	.0061	4127.	
.0740	-603.	-84.	-911.	-750.	89.	291.	-.0015	.0142	-.0178	.0348	.0567	-.0021	3020.	
.0750	54.	-78.	-490.	-422.	-21.	-113.	-.0046	.0090	-.0164	.0365	.0287	-.0162	1633.	
.0760	807.	30.	12.	-38.	-144.	-563.	-.0067	.0036	-.0149	.0422	-.0037	-.0297	2175.	
.0770	1417.	246.	329.	240.	-226.	-921.	-.0081	-.0011	-.0147	.0487	-.0327	-.0373	3650.	
.0780	1697.	404.	336.	309.	-190.	-1057.	-.0088	-.0052	-.0162	.0510	-.0543	-.0389	4171.	
.0790	1745.	566.	22.	154.	-31.	-1026.	-.0093	-.0088	-.0190	.0480	-.0543	-.0369	3876.	
.0800	1663.	757.	-585.	-191.	189.	-916.	-.0101	-.0122	-.0225	.0393	-.0509	-.0328	3563.	
.0810	1410.	773.	-1304.	-614.	419.	-718.	-.0108	-.0155	-.0255	.0249	-.0496	-.0284	3859.	
.0820	1093.	660.	-1822.	-928.	614.	-489.	-.0109	-.0182	-.0270	.0107	-.0381	-.0244	4538.	
.0830	937.	709.	-1971.	-1010.	693.	-375.	-.0105	-.0193	-.0268	.0049	-.0297	-.0197	4784.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.04.

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

.0720	-1160.	-284.	1031.	-886.	160.	641.	.0029	.0181	-.0174	.0355	.0726	.0061	4127.
.0740	-603.	-84.	-911.	-750.	89.	291.	-.0015	.0142	-.0178	.0348	.0567	-.0021	3020.
.0750	54.	-78.	-490.	-422.	-21.	-113.	-.0046	.0090	-.0164	.0365	.0287	-.0162	1623.
.0760	807.	30.	12.	-78.	-144.	-563.	-.0067	.0036	-.0149	.0422	-.0037	-.0207	2175.
.0770	1417.	246.	329.	240.	-226.	-921.	-.0081	-.0011	-.0147	.0487	-.0327	-.0373	3650.
.0780	1697.	404.	336.	309.	-190.	-1057.	-.0088	-.0052	-.0162	.0510	-.0543	-.0389	4171.
.0790	1745.	566.	22.	154.	-31.	-1026.	-.0093	-.0088	-.0190	.0480	-.0643	-.0369	3876.
.0800	1663.	757.	-585.	-191.	189.	-916.	-.0101	-.0122	-.0225	.0393	-.0609	-.0328	3563.
.0810	1410.	773.	-1304.	-614.	419.	-718.	-.0108	-.0155	-.0255	.0249	-.0496	-.0284	3859.
.0820	1093.	660.	-1822.	-928.	614.	-489.	-.0109	-.0182	-.0270	.0107	-.0381	-.0244	4538.
.0830	937.	709.	-1971.	-1010.	693.	-375.	-.0105	-.0193	-.0268	.0049	-.0297	-.0197	4784.

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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	50	MEMBER	3	SEQUENCE	71	LOCATION	END	TYPE	FU						
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)	
.0840	963.	859.	-1793.	-868.	624.	-407.		-.0094	-.0189	-.0250	.0077	-.0277	-.0156	4272.	
.0850	1022.	799.	-1339.	-552.	483.	-480.		-.0068	-.0179	-.0216	.0146	-.0353	-.0154	3272.	
.0860	1052.	577.	-693.	-127.	358.	-537.		-.0027	-.0163	-.0167	.0245	-.0498	-.0194	2455.	
.0870	1020.	451.	-100.	256.	271.	-553.		.0024	-.0137	-.0110	.0363	-.0528	-.0227	2492.	
.0880	818.	388.	211.	448.	244.	-455.		.0084	-.0101	-.0047	.0446	-.0593	-.0218	2551.	
.0890	428.	247.	247.	431.	325.	-218.		.0151	-.0061	.0024	.0454	-.0592	-.0171	2172.	
.0900	-5.	83.	113.	282.	503.	53.		.0219	-.0018	.0100	.0402	-.0529	-.0099	2162.	
.0910	-355.	-35.	-127.	68.	682.	251.		.0272	.0027	.0173	.0313	-.0521	-.0009	2724.	
.0920	-565.	-135.	-325.	-107.	769.	341.		.0299	.0072	.0233	.0216	-.0419	.0070	3166.	
.0930	-587.	-205.	-265.	-109.	736.	304.		.0292	.0112	.0274	.0154	-.0360	.0097	3002.	
.0940	-428.	-248.	69.	91.	584.	131.		.0248	.0149	.0286	.0144	-.0340	.0058	2262.	
.0950	-172.	-343.	475.	369.	343.	-134.		.0174	.0181	.0264	.0150	-.0334	-.0023	1945.	
.0960	100.	-479.	784.	597.	91.	-415.		.0087	.0211	.0212	.0139	-.0322	-.0102	2734.	
.0970	302.	-538.	922.	706.	-77.	-626.		.0001	.0244	.0137	.0092	-.0278	-.0130	3532.	
.0980	312.	-527.	816.	646.	-130.	-691.		-.0074	.0282	.0046	-.0011	-.0179	-.0082	3563.	
.0990	104.	-541.	467.	423.	-94.	-600.		-.0134	.0322	-.0057	-.0182	-.0028	.0021	2763.	
.1000	-200.	-590.	44.	147.	-17.	-430.		-.0180	.0362	-.0166	-.0385	.0144	.0133	1698.	
.1010	-513.	-648.	-256.	-41.	48.	-246.		-.0211	.0401	-.0279	-.0562	.0293	.0211	949.	
.1020	-838.	-723.	-339.	-70.	52.	-56.		-.0229	.0438	-.0392	-.0673	.0371	.0243	389.	
.1030	-1130.	-786.	-174.	72.	-14.	127.		-.0228	.0470	-.0498	-.0693	.0345	.0234	547.	
.1040	-1306.	-794.	200.	342.	-118.	267.		-.0202	.0493	-.0586	-.0620	.0224	.0201	1678.	
.1050	-1397.	-795.	621.	631.	-208.	374.		-.0149	.0504	-.0646	-.0496	.0057	.0161	2846.	
.1060	-1488.	-827.	915.	825.	-245.	495.		-.0073	.0501	-.0668	-.0380	-.0097	.0129	3706.	
.1070	-1570.	-791.	1032.	880.	-219.	643.		.0019	.0482	-.0647	-.0303	-.0194	.0112	4148.	
.1080	-1609.	-747.	1010.	800.	-135.	808.		.0114	.0443	-.0587	-.0278	-.0231	.0097	4275.	
.1090	-1568.	-787.	861.	605.	-28.	936.		.0199	.0392	-.0501	-.0288	-.0215	.0073	4164.	
.1100	-1339.	-359.	545.	387.	-19.	880.		.0250	.0345	-.0416	-.0277	-.0082	.0050	3590.	
.1110	-944.	31.	338.	243.	-71.	741.		.0272	.0285	-.0340	-.0270	.0040	-.0015	2923.	
.1120	-533.	-3.	317.	184.	-142.	590.		.0275	.0201	-.0280	-.0271	.0073	-.0122	2367.	
.1130	-74.	-31.	222.	127.	-250.	360.		.0255	.0122	-.0250	-.0227	.0092	-.0211	1702.	
.1140	410.	291.	-48.	20.	-358.	63.		.0218	.0072	-.0243	-.0129	.0143	-.0264	1359.	
.1150	839.	699.	-367.	-143.	-401.	-160.		.0183	.0042	-.0236	-.0052	.0202	-.0296	1697.	
.1160	1070.	888.	-737.	-381.	-379.	-242.		.0161	.0021	-.0210	-.0060	.0294	-.0295	2201.	
.1170	1050.	861.	-1209.	-684.	-298.	-216.		.0156	.0015	-.0159	-.0148	.0440	-.0251	2900.	
.1180	991.	1138.	-1675.	-943.	-184.	-215.		.0167	.0036	-.0080	-.0246	.0619	-.0170	3675.	
.1190	915.	1220.	-1828.	-1064.	-14.	-134.		.0207	.0064	.0029	-.0371	.0546	-.0106	4005.	
.1200	814.	924.	-1623.	-996.	125.	-21.		.0269	.0092	.0148	-.0484	.0496	-.0044	3748.	
.1210	802.	820.	-1189.	-691.	-127.	-84.		.0323	.0146	.0244	-.0473	.0299	.0055	2642.	

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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

.1110	-964.	31.	338.	243.	-71.	31.	741.	.0272	.0285	-.0340	-.0270	.0040	-.0015	2923.
.1120	-533.	-3.	317.	184.	-142.	590.	.0275	.0201	-.0280	-.0271	.0073	-.0122	2367.	
.1130	-74.	-31.	222.	127.	-250.	360.	.0255	.0122	-.0250	-.0227	.0092	-.0211	1702.	
.1140	410.	291.	-48.	20.	-358.	63.	.0218	.0072	-.0243	-.0129	.0143	-.0264	1359.	
.1150	839.	699.	-367.	-143.	-401.	-160.	.0183	.0042	-.0236	-.0052	.0202	-.0296	1697.	
.1160	1070.	888.	-737.	-381.	-379.	-242.	.0161	.0021	-.0210	-.0060	.0294	-.0295	2201.	
.1170	1050.	861.	-1209.	-684.	-298.	-216.	.0156	.0015	-.0159	-.0148	.0440	-.0251	2900.	
.1180	991.	1138.	-1675.	-943.	-184.	-215.	.0167	.0036	-.0080	-.0246	.0619	-.0170	3675.	
.1190	915.	1220.	-1828.	-1064.	-14.	-134.	.0207	.0064	.0029	-.0371	.0546	-.0106	4005.	
.1200	814.	924.	-1625.	-996.	125.	-21.	.0269	.0092	.0148	-.0484	.0496	-.0044	3748.	
.1210	802.	820.	-1189.	-691.	127.	-84.	.0323	.0146	.0244	-.0473	.0299	.0055	2642.	

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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

SECTION	50	MEMBER	3	SEQUENCE	71	LOCATION	END	TYPE	RU						
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)	
.1220	819.	791.	-510.	-185.	58.	-214.		.0366	.0226	.0311	-.0375	.0051	.0128	1077.	
.1230	845.	339.	272.	386.	-52.	-320.		.0392	.0317	.0348	-.0269	-.0209	.0161	1882.	
.1240	609.	636.	880.	818.	-134.	-293.		.0404	.0397	.0359	-.0244	-.0426	.0189	3283.	
.1250	274.	282.	1098.	1005.	-107.	-148.		.0404	.0472	.0348	-.0306	-.0515	.0265	3813.	
.1260	-214.	254.	911.	956.	50.	17.		.0394	.0551	.0326	-.0427	-.0455	.0409	3574.	
.1270	-754.	139.	516.	698.	324.	284.		.0389	.0614	.0306	-.0656	-.0391	.0571	3062.	
.1280	-1032.	37.	42.	367.	552.	478.		.0377	.0656	.0284	-.0910	-.0323	.0756	3049.	
.1290	-1169.	-51.	-285.	167.	661.	485.		.0345	.0683	.0253	-.1086	-.0258	.0920	3122.	
.1300	-1061.	-65.	-274.	218.	652.	307.		.0289	.0695	.0217	-.1150	-.0266	.0984	2810.	
.1310	-613.	161.	25.	468.	493.	-47.		.0209	.0681	.0180	-.1137	-.0374	.0928	2543.	
.1320	-31.	116.	474.	766.	264.	-416.		.0121	.0627	.0148	-.1135	-.0594	.0770	3401.	
.1330	554.	18.	844.	1025.	53.	-811.		.0032	.0551	.0117	-.1130	-.0765	.0600	4885.	
.1340	1046.	66.	959.	1134.	-44.	-1154.		-.0046	.0468	.0086	-.1142	-.0885	.0473	6040.	
.1350	1429.	277.	713.	973.	-29.	-1343.		-.0100	.0375	.0057	-.1216	-.0906	.0408	6194.	
.1360	1673.	605.	141.	575.	41.	-1384.		-.0135	.0270	.0023	-.1333	-.0840	.0408	5596.	
.1370	1596.	598.	-502.	110.	196.	-1218.		-.0148	.0149	-.0014	-.1468	-.0746	.0400	4623.	
.1380	1361.	569.	-1020.	-234.	364.	-993.		-.0147	.0029	-.0058	-.1549	-.0543	.0344	4043.	
.1390	1203.	560.	-1271.	-406.	444.	-786.		-.0129	-.0084	-.0105	-.1572	-.0621	.0227	3696.	
.1400	1193.	492.	-1187.	-388.	384.	-643.		-.0090	-.0187	-.0150	-.1523	-.0702	.0093	3148.	
.1410	1222.	532.	-813.	-147.	224.	-600.		-.0033	-.0264	-.0193	-.1369	-.0809	.0003	2453.	
.1420	1092.	419.	-247.	218.	101.	-499.		.0048	-.0316	-.0220	-.1187	-.0958	-.0062	2066.	
.1430	926.	320.	268.	518.	21.	-347.		.0146	-.0348	-.0230	-.1035	-.1106	-.0109	2328.	
.1440	739.	151.	549.	613.	-15.	-151.		.0250	-.0365	-.0222	-.0947	-.1197	-.0133	2356.	
.1450	398.	-104.	548.	522.	23.	85.		.0346	-.0358	-.0203	-.0901	-.1164	-.0126	1975.	
.1460	-69.	-214.	321.	320.	128.	319.		.0423	-.0320	-.0176	-.0866	-.1004	-.0089	1752.	
.1470	-511.	-403.	4.	12.	279.	575.		.0486	-.0263	-.0133	-.0877	-.0853	-.0066	2387.	
.1480	-707.	-486.	-349.	-337.	378.	692.		.0529	-.0189	-.0078	-.0884	-.0732	-.0041	3201.	
.1490	-746.	-601.	-596.	-596.	429.	644.		.0549	-.0098	-.0013	-.0848	-.0650	-.0014	3646.	
.1500	-685.	-776.	-601.	-673.	443.	474.		.0545	.0010	.0065	-.0764	-.0619	-.0007	3491.	
.1510	-360.	-679.	-411.	-606.	345.	149.		.0512	.0125	.0156	-.0643	-.0504	-.0022	2662.	
.1520	135.	-584.	-145.	-509.	156.	-228.		.0455	.0232	.0241	-.0546	-.0600	-.0067	2164.	
.1530	590.	-536.	60.	-417.	-38.	-606.		.0378	.0329	.0324	-.0471	-.0529	-.0117	2750.	
.1540	842.	-644.	158.	-369.	-127.	-868.		.0291	.0417	.0393	-.0428	-.0398	-.0153	3552.	
.1550	994.	-649.	69.	-443.	-142.	-1004.		.0202	.0496	.0440	-.0407	-.0220	-.0134	4133.	
.1560	1139.	-259.	-248.	-636.	-176.	-1081.		.0105	.0570	.0453	-.0378	.0022	-.0021	4727.	
.1570	1070.	-24.	-586.	-833.	-169.	-991.		.0010	.0624	.0440	-.0359	.0259	.0125	4874.	
.1580	877.	138.	-802.	-905.	-136.	-840.		-.0088	.0658	.0403	-.0310	.0488	.0253	4636.	
.1590	778.	437.	-890.	-852.	-166.	-736.		-.0192	.0667	.0350	-.0221	.0690	.0341	4249.	

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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

.1500	-685.	-776.	-801.	-673.	443.	474.	.545	.0010	.0065	-.0764	-.0619	-.0007	3491.
.1510	-360.	-679.	-411.	-606.	349.	149.	.512	.0125	.0150	-.0643	-.0504	-.0022	2662.
.1520	135.	-584.	-145.	-509.	156.	-228.	.0455	.0232	.0241	-.0546	-.0600	-.0067	2164.
.1530	590.	-536.	60.	-417.	-38.	-606.	.0378	.0329	.0324	-.0471	-.0529	-.0117	2750.
.1540	842.	-644.	158.	-369.	-127.	-868.	.0291	.0417	.0393	-.0428	-.0398	-.0153	3552.
.1550	994.	-649.	69.	-443.	-142.	-1004.	.0202	.0496	.0440	-.0407	-.0220	-.0134	4133.
.1560	1138.	-259.	-248.	-636.	-176.	-1081.	.0105	.0570	.0453	-.0378	.0022	-.0021	4727.
.1570	1070.	-24.	-586.	-833.	-169.	-991.	.0010	.0624	.0440	-.0359	.0259	.0125	4874.
.1580	877.	138.	-802.	-905.	-136.	-840.	-.0068	.0658	.0403	-.0310	.0488	.0253	4636.
.1590	778.	437.	-890.	-852.	-166.	-736.	-.0192	.0667	.0350	-.0221	.0690	.0341	4249.

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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	50	MEMBER	3	SEQUENCE	71	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)		
.1600	728.	622.	-818.	-713.	-268.	-596.	-.0289	.0641	.0295	-.0129	.0803	.0376	3609.		
.1610	609.	675.	-535.	-446.	-304.	-388.	-.0370	.0588	.0247	-.0019	.0842	.0390	2632.		
.1620	461.	928.	-130.	-63.	-489.	-203.	-.0433	.0525	.0207	.0148	.0878	.0431	1991.		
.1630	277.	1110.	258.	281.	-552.	34.	-.0467	.0449	.0181	.0298	.0869	.0484	2317.		
.1640	132.	1273.	527.	506.	-589.	295.	-.0474	.0362	.0165	.0407	.0828	.0546	3100.		
.1650	-27.	1481.	717.	671.	-581.	550.	-.0465	.0269	.0153	.0504	.0792	.0612	3898.		
.1660	-347.	1448.	891.	806.	-497.	876.	-.0446	.0171	.0140	.0577	.0742	.0645	4816.		
.1670	-660.	1425.	986.	898.	-430.	1165.	-.0429	.0076	.0118	.0636	.0698	.0647	5701.		
.1680	-836.	1389.	1025.	903.	-407.	1371.	-.0418	-.0014	.0085	.0676	.0634	.0606	6313.		
.1690	-893.	1375.	1040.	900.	-414.	1449.	-.0415	-.0088	.0043	.0718	.0580	.0539	6550.		
.1700	-967.	1233.	1037.	880.	-406.	1459.	-.0417	-.0142	-.0003	.0752	.0535	.0456	6540.		
.1710	-1029.	904.	985.	780.	-375.	1449.	-.0417	-.0179	-.0042	.0745	.0470	.0353	6301.		
.1720	-869.	873.	807.	586.	-384.	1280.	-.0424	-.0189	-.0072	.0731	.0450	.0259	5445.		
.1730	-677.	719.	558.	314.	-372.	1063.	-.0430	-.0182	-.0085	.0677	.0450	.0150	4366.		
.1740	-577.	352.	284.	20.	-320.	842.	-.0435	-.0158	-.0081	.0591	.0475	.0025	3364.		
.1750	-449.	66.	9.	-270.	-269.	574.	-.0438	-.0114	-.0061	.0506	.0516	-.0102	2570.		
.1760	-268.	-223.	-220.	-557.	-221.	307.	-.0433	-.0057	-.0027	.0416	.0505	-.0233	2512.		
.1770	-67.	-445.	-407.	-798.	-182.	15.	-.0420	.0014	.0014	.0356	.0458	-.0341	3057.		
.1780	39.	-805.	-503.	-960.	-105.	-246.	-.0396	.0096	.0059	.0329	.0358	-.0427	3721.		
.1790	147.	-1050.	-532.	-1045.	-21.	-511.	-.0364	.0185	.0106	.0345	.0233	-.0484	4345.		
.1800	270.	-1158.	-527.	-1093.	44.	-741.	-.0329	.0274	.0154	.0373	.0086	-.0515	4933.		
.1810	260.	-1446.	-471.	-1116.	136.	-834.	-.0287	.0349	.0206	.0378	-.0089	-.0539	5225.		
.1820	178.	-1594.	-407.	-1079.	236.	-898.	-.0251	.0419	.0253	.0406	-.0206	-.0526	5314.		
.1830	68.	-1656.	-346.	-1013.	342.	-924.	-.0221	.0477	.0295	.0439	-.0284	-.0483	5275.		
.1840	-21.	-1657.	-298.	-947.	428.	-899.	-.0197	.0516	.0327	.0457	-.0351	-.0419	5130.		
.1850	-103.	-1599.	-226.	-847.	489.	-835.	-.0184	.0535	.0344	.0474	-.0408	-.0338	4800.		
.1860	-227.	-1574.	-91.	-677.	545.	-730.	-.0185	.0535	.0340	.0508	-.0456	-.0256	4239.		
.1870	-309.	-1374.	42.	-460.	556.	-653.	-.0205	.0521	.0310	.0579	-.0467	-.0169	3635.		
.1880	-358.	-1178.	150.	-262.	534.	-544.	-.0239	.0487	.0260	.0648	-.0481	-.0103	3009.		
.1890	-386.	-940.	216.	-91.	496.	-410.	-.0284	.0436	.0196	.0714	-.0478	-.0057	2426.		
.1900	-439.	-641.	219.	51.	471.	-264.	-.0336	.0371	.0128	.0782	-.0430	-.0020	2026.		
.1910	-532.	-458.	146.	120.	481.	-76.	-.0384	.0295	.0065	.0821	-.0363	.0005	1873.		
.1920	-523.	-195.	-15.	103.	484.	71.	-.0427	.0213	.0016	.0845	-.0271	.0032	1865.		
.1930	-400.	128.	-189.	46.	470.	158.	-.0466	.0131	-.0015	.0864	-.0169	.0057	1857.		
.1940	-248.	386.	-296.	10.	440.	202.	-.0502	.0050	-.0030	.0883	-.0070	.0062	1809.		
.1950	-51.	586.	-315.	16.	371.	189.	-.0540	-.0027	-.0033	.0910	.0021	.0030	1557.		
.1960	255.	786.	-261.	48.	243.	95.	-.0583	-.0097	-.0029	.0943	.0098	-.0045	991.		
.1970	610.	937.	-172.	83.	78.	-46.	-.0626	-.0157	-.0025	.0976	.0169	-.0151	457.		

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CONDITION 24
LOADS
SHOCK
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ENGLISH UNITS

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

.1870	-309.	-1374.	42.	-460.	556.	-653.	-0205	.0521	.0310	.0579	-.0456	-.0256	4239.
.1880	-358.	-1178.	150.	-262.	534.	-544.	-.0239	.0487	.0260	.0648	-.0481	-.0103	3009.
.1890	-386.	-940.	216.	-91.	496.	-410.	-.0284	.0436	.0196	.0714	-.0478	-.0057	2426.
.1900	-439.	-641.	219.	51.	471.	-264.	-.0336	.0371	.0128	.0782	-.0430	-.0020	2026.
.1910	-532.	-458.	146.	120.	481.	-76.	-.0384	.0295	.0065	.0821	-.0363	.0005	1873.
.1920	-523.	-195.	-15.	103.	484.	71.	-.0427	.0213	.0016	.0845	-.0271	.0032	1865.
.1930	-400.	128.	-189.	46.	470.	158.	-.0466	.0131	-.0015	.0864	-.0169	.0057	1857.
.1940	-248.	386.	-296.	10.	440.	202.	-.0502	.0050	-.0030	.0883	-.0070	.0062	1809.
.1950	-51.	586.	-315.	16.	371.	189.	-.0540	-.0027	-.0033	.0910	.0021	.0030	1557.
.1960	255.	786.	-261.	48.	243.	95.	-.0583	-.0097	-.0029	.0943	.0098	-.0045	991.
.1970	610.	937.	-172.	83.	78.	-46.	-.0626	-.0157	-.0025	.0976	.0169	-.0151	457.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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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	50	MEMBER	3	SEQUENCE	71	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	PX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1980	878.	994.	-102.	101.	-80.	-174.	-.0667	-.0202	-.0026	.1001	.0258	-.0258	810.		
.1990	1009.	1013.	-109.	66.	-203.	-250.	-.0698	-.0230	-.0033	.1008	.0379	-.0336	1226.		
.2000	1014.	1025.	-226.	-58.	-279.	-244.	-.0712	-.0240	-.0042	.0983	.0523	-.0376	1399.		
.2010	876.	972.	-431.	-259.	-301.	-144.	-.0705	-.0234	-.0052	.0921	.0679	-.0383	1577.		
.2020	587.	837.	-648.	-465.	-280.	23.	-.0679	-.0212	-.0058	.0845	.0845	-.0364	2029.		
.2030	209.	663.	-772.	-601.	-255.	219.	-.0636	-.0175	-.0059	.0776	.1003	-.0336	2572.		
.2040	-177.	464.	-725.	-627.	-265.	421.	-.0579	-.0129	-.0053	.0719	.1114	-.0316	2987.		
.2050	-534.	234.	-486.	-523.	-318.	607.	-.0510	-.0076	-.0038	.0684	.1158	-.0310	3220.		
.2060	-860.	-14.	-90.	-299.	-393.	751.	-.0435	-.0018	-.0018	.0683	.1145	-.0308	3355.		
.2070	-1157.	-265.	382.	-8.	-468.	855.	-.0358	.0044	.0004	.0710	.1091	-.0303	3638.		
.2080	-1421.	-503.	823.	263.	-525.	949.	-.0282	.0106	.0028	.0736	.1010	-.0290	4165.		
.2090	-1662.	-701.	1138.	451.	-551.	1044.	-.0215	.0164	.0050	.0741	.0934	-.0268	4719.		
.2100	-1896.	-852.	1276.	535.	-529.	1128.	-.0161	.0218	.0069	.0724	.0900	-.0236	5061.		
.2110	-2107.	-984.	1229.	508.	-460.	1184.	-.0124	.0267	.0085	.0686	.0908	-.0199	5109.		
.2120	-2233.	-1082.	1040.	386.	-368.	1196.	-.0103	.0306	.0099	.0631	.0934	-.0162	4888.		
.2130	-2223.	-1104.	791.	221.	-283.	1135.	-.0098	.0337	.0113	.0573	.0955	-.0130	4445.		
.2140	-2074.	-1071.	574.	85.	-224.	982.	-.0108	.0358	.0126	.0532	.0956	-.0107	3774.		
.2150	-1787.	-1030.	441.	13.	-201.	730.	-.0130	.0368	.0139	.0515	.0924	-.0100	2827.		
.2160	-1352.	-969.	386.	-4.	-221.	389.	-.0160	.0366	.0151	.0515	.0856	-.0113	1669.		
.2170	-818.	-863.	372.	9.	-269.	1.	-.0194	.0353	.0160	.0523	.0763	-.0145	1004.		
.2180	-306.	-747.	355.	23.	-309.	-362.	-.0227	.0331	.0165	.0526	.0665	-.0185	1780.		
.2190	95.	-652.	284.	7.	-310.	-642.	-.0253	.0301	.0164	.0508	.0578	-.0221	2662.		
.2200	378.	-556.	121.	-69.	-264.	-824.	-.0267	.0263	.0156	.0461	.0509	-.0242	3239.		
.2210	557.	-449.	-126.	-200.	-178.	-911.	-.0265	.0222	.0141	.0386	.0453	-.0241	3545.		
.2220	620.	-360.	-391.	-340.	-61.	-908.	-.0247	.0178	.0119	.0298	.0398	-.0225	3628.		
.2230	578.	-298.	-589.	-429.	61.	-833.	-.0214	.0133	.0090	.0211	.0328	-.0204	3504.		
.2240	489.	-252.	-659.	-428.	155.	-715.	-.0171	.0087	.0057	.0133	.0227	-.0194	3165.		
.2250	395.	-228.	-578.	-326.	203.	-586.	-.0121	.0042	.0022	.0064	.0092	-.0205	2615.		
.2260	298.	-237.	-369.	-134.	212.	-460.	-.0067	.0001	-.0014	.0003	-.0066	-.0232	1956.		
.2270	186.	-262.	-93.	108.	202.	-337.	-.0011	-.0033	-.0050	-.0057	-.0230	-.0263	1522.		
.2280	60.	-281.	164.	333.	196.	-206.	.0045	-.0060	-.0083	-.0131	-.0386	-.0283	1635.		
.2290	-76.	-287.	324.	484.	212.	-64.	.0097	-.0078	-.0112	-.0231	-.0524	-.0283	1987.		
.2300	-216.	-278.	346.	538.	261.	73.	.0143	-.0086	-.0137	-.0356	-.0526	-.0265	2249.		
.2310	-348.	-265.	239.	507.	334.	185.	.0177	-.0084	-.0157	-.0499	-.0687	-.0236	2369.		
.2320	-433.	-251.	50.	416.	408.	254.	.0196	-.0075	-.0169	-.0651	-.0718	-.0208	2374.		
.2330	-426.	-212.	-165.	300.	459.	257.	.0198	-.0059	-.0169	-.0799	-.0733	-.0190	2261.		
.2340	-305.	-137.	-355.	197.	476.	172.	.0185	-.0037	-.0153	-.0929	-.0743	-.0185	2026.		
.2350	-74.	-56.	-489.	128.	462.	-0.	.0162	-.0009	-.0120	-.1034	-.0754	-.0191	1789.		

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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

.2250	395.	-228.	-578.	-326.	203.	-586.	-0.121	.0042	.0022	.0064	.0092	-.0205	2615.
.2260	298.	-237.	-369.	-174.	212.	-460.	-.0067	.0001	-.0014	.0003	-.0066	-.0232	1956.
.2270	186.	-262.	-93.	108.	202.	-337.	-.0011	-.0033	-.0050	-.0057	-.0230	-.0263	1522.
.2280	60.	-281.	164.	373.	198.	-206.	.0045	-.0060	-.0083	-.0131	-.0386	-.0283	1635.
.2290	-74.	-287.	324.	484.	212.	-64.	.0097	-.0078	-.0112	-.0231	-.0524	-.0283	1987.
.2300	-216.	-278.	346.	538.	261.	73.	.0143	-.0086	-.0137	-.0356	-.0626	-.0265	2249.
.2310	-348.	-265.	239.	507.	334.	185.	.0177	-.0084	-.0157	-.0499	-.0687	-.0236	2369.
.2320	-433.	-251.	50.	416.	408.	254.	.0196	-.0075	-.0169	-.0651	-.0718	-.0208	2374.
.2330	-426.	-212.	-165.	300.	459.	257.	.0198	-.0059	-.0169	-.0799	-.0733	-.0190	2261.
.2340	-305.	-177.	-355.	197.	476.	172.	.0185	-.0037	-.0153	-.0929	-.0743	-.0185	2026.
.2350	-74.	-56.	-489.	128.	462.	-0.	.0162	-.0009	-.0120	-.1034	-.0754	-.0191	1789.

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2 SAFETY COLD FKW24F--2 PSVCONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITSINTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	50	MEMBER	3	SEQUENCE	71	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LL)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2360	248.	18.	-562.	89.	424.	-238.	.0134	.0022	-.0068	-.1117	-.0773	-.0204	1845.		
.2370	633.	116.	-593.	69.	368.	-510.	.0104	.0056	.0001	-.1180	-.0789	-.0214	2364.		
.2380	1020.	249.	-607.	56.	309.	-779.	.0077	.0092	.0081	-.1224	-.0788	-.0214	3136.		
.2390	1346.	380.	-620.	42.	260.	-1004.	.0053	.0129	.0167	-.1252	-.0761	-.0201	3876.		
.2400	1585.	483.	-643.	20.	229.	-1164.	.0035	.0162	.0250	-.1268	-.0709	-.0178	4429.		
.2410	1737.	574.	-672.	-6.	208.	-1254.	.0023	.0192	.0324	-.1270	-.0635	-.0143	4746.		
.2420	1797.	659.	-685.	-14.	190.	-1275.	.0017	.0218	.0383	-.1250	-.0545	-.0096	4813.		
.2430	1763.	737.	-648.	16.	167.	-1230.	.0015	.0241	.0422	-.1205	-.0446	-.0034	4635.		
.2440	1656.	814.	-548.	95.	130.	-1133.	.0017	.0259	.0440	-.1132	-.0345	.0038	4273.		
.2450	1496.	883.	-389.	215.	74.	-997.	.0022	.0270	.0439	-.1038	-.0247	.0112	3816.		
.2460	1284.	912.	-181.	366.	9.	-823.	.0030	.0274	.0421	-.0933	-.0155	.0181	3361.		
.2470	1026.	894.	56.	533.	-53.	-618.	.0042	.0268	.0389	-.0829	-.0068	.0244	3053.		
.2480	745.	871.	293.	694.	-111.	-399.	.0057	.0256	.0346	-.0730	.0014	.0308	3019.		
.2490	459.	866.	499.	830.	-163.	-177.	.0075	.0238	.0293	-.0640	.0093	.0374	3226.		
.2500	169.	843.	672.	933.	-204.	48.	.0096	.0214	.0231	-.0562	.0160	.0435	3570.		
.2510	-125.	774.	812.	1006.	-229.	289.	.0121	.0183	.0164	-.0499	.0210	.0482	3981.		
.2520	-396.	676.	916.	1050.	-245.	466.	.0148	.0148	.0091	-.0450	.0240	.0510	4383.		
.2530	-616.	575.	983.	1062.	-259.	624.	.0178	.0111	.0016	-.0411	.0245	.0522	4699.		
.2540	-774.	476.	1025.	1047.	-273.	736.	.0211	.0073	-.0058	-.0384	.0228	.0518	4887.		
.2550	-874.	367.	1043.	1009.	-285.	800.	.0246	.0035	-.0127	-.0371	.0193	.0500	4925.		
.2560	-918.	243.	1028.	943.	-293.	818.	.0284	-.0002	-.0187	-.0380	.0145	.0466	4788.		
.2570	-901.	106.	974.	843.	-295.	793.	.0323	-.0033	-.0237	-.0412	.0089	.0415	4460.		
.2580	-827.	-17.	877.	711.	-291.	728.	.0362	-.0071	-.0276	-.0463	.0028	.0353	3949.		
.2590	-708.	-106.	739.	553.	-280.	629.	.0401	-.0103	-.0305	-.0526	-.0034	.0286	3297.		
.2600	-556.	-189.	575.	381.	-264.	507.	.0438	-.0133	-.0325	-.0598	-.0097	.0215	2565.		
.2610	-375.	-282.	398.	204.	-245.	369.	.0472	-.0164	-.0336	-.0678	-.0166	.0142	1819.		
.2620	-171.	-359.	214.	34.	-223.	215.	.0504	-.0194	-.0343	-.0758	-.0238	.0070	1165.		
.2630	38.	-401.	35.	-118.	-200.	61.	.0533	-.0222	-.0345	-.0832	-.0311	.0007	895.		
.2640	228.	-420.	-122.	-242.	-174.	-76.	.0560	-.0248	-.0343	-.0897	-.0386	-.0042	1149.		
.2650	386.	-419.	-254.	-337.	-144.	-185.	.0584	-.0272	-.0340	-.0952	-.0462	-.0074	1532.		
.2660	509.	-403.	-364.	-401.	-108.	-265.	.0606	-.0294	-.0334	-.0997	-.0536	-.0089	1838.		
.2670	592.	-373.	-450.	-434.	-62.	-314.	.0626	-.0313	-.0327	-.1030	-.0604	-.0088	2014.		
.2680	631.	-319.	-510.	-477.	-9.	-327.	.0645	-.0328	-.0319	-.1046	-.0667	-.0068	2038.		
.2690	621.	-250.	-535.	-407.	49.	-300.	.0662	-.0341	-.0310	-.1045	-.0726	-.0029	1897.		
.2700	565.	-193.	-516.	-342.	110.	-239.	.0676	-.0350	-.0299	-.1027	-.0783	.0024	1611.		
.2710	483.	-145.	-457.	-244.	171.	-161.	.0685	-.0355	-.0288	-.0995	-.0836	.0085	1264.		
.2720	401.	-56.	-373.	-122.	226.	-84.	.0688	-.0351	-.0277	-.0947	-.0879	.0151	1008.		
.2730	329.	18.	-273.	15.	270.	-10.	.0684	-.0342	-.0266	-.0886	-.0912	.0218	1012.		

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSVCONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITINTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.2630	38.	-401.	35.	-118.	-200.	61.	.0533	-.0222	-.0345	-.0832	-.0311	.0007	895.
.2640	228.	-420.	-122.	-242.	-174.	-76.	.0560	-.0248	-.0343	-.0897	-.0386	-.0042	1149.
.2650	386.	-419.	-254.	-337.	-144.	-189.	.0584	-.0272	-.0340	-.0952	-.0462	-.0074	1532.
.2660	509.	-403.	-364.	-401.	-108.	-265.	.0606	-.0294	-.0334	-.0997	-.0536	-.0089	1838.
.2670	592.	-373.	-450.	-434.	-62.	-314.	.0626	-.0313	-.0327	-.1030	-.0604	-.0088	2014.
.2680	631.	-319.	-510.	-477.	-9.	-327.	.0645	-.0328	-.0319	-.1046	-.0667	-.0068	2038.
.2690	621.	-250.	-535.	-407.	49.	-300.	.0662	-.0341	-.0310	-.1045	-.0726	-.0029	1897.
.2700	565.	-193.	-516.	-342.	110.	-239.	.0676	-.0350	-.0299	-.1027	-.0783	.0024	1611.
.2710	483.	-145.	-457.	-244.	171.	-161.	.0685	-.0355	-.0288	-.0995	-.0836	.0085	1264.
.2720	401.	-56.	-373.	-122.	226.	-84.	.0688	-.0351	-.0277	-.0947	-.0879	.0151	1008.
.2730	329.	88.	-273.	15.	270.	-10.	.0684	-.0342	-.0266	-.0886	-.0912	.0218	1012.

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DIS/ADLPIPE

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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	50	MEMBER	3	SEQUENCE	71	LOCATION	END	TYPE	RU						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	PX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.2740	251.	210.	-160.	155.	310.	68.	.0672	-.0332	-.0255	-.0817	-.0936	.0284	1319.		
.2750	166.	272.	-53.	284.	352.	145.	.0653	-.0323	-.0245	-.0746	-.0948	.0347	1770.		
.2760	102.	332.	13.	383.	395.	200.	.0627	-.0312	-.0236	-.0670	-.0944	.0403	2185.		
.2770	88.	443.	29.	443.	437.	223.	.0595	-.0299	-.0227	-.0591	-.0924	.0452	2469.		
.2780	115.	566.	12.	467.	475.	221.	.0556	-.0285	-.0216	-.0512	-.0896	.0495	2619.		
.2790	168.	642.	-21.	463.	507.	193.	.0512	-.0272	-.0204	-.0437	-.0863	.0529	2663.		
.2800	222.	687.	-68.	439.	530.	125.	.0462	-.0259	-.0190	-.0365	-.0824	.0548	2610.		
.2810	428.	760.	-125.	397.	537.	4.	.0407	-.0245	-.0176	-.0293	-.0785	.0546	2491.		
.2820	655.	851.	-182.	342.	521.	-156.	.0348	-.0230	-.0164	-.0223	-.0747	.0526	2398.		
.2830	885.	900.	-231.	280.	487.	-327.	.0287	-.0218	-.0156	-.0154	-.0709	.0493	2426.		
.2840	1079.	886.	-278.	211.	444.	-487.	.0228	-.0209	-.0155	-.0086	-.0667	.0452	2585.		
.2850	1243.	659.	-345.	124.	402.	-631.	.0173	-.0200	-.0162	-.0022	-.0619	.0402	2831.		
.2860	1371.	841.	-445.	8.	363.	-745.	.0127	-.0189	-.0176	.0036	-.0565	.0348	3094.		
.2870	1416.	794.	-560.	-124.	332.	-802.	.0093	-.0177	-.0196	.0086	-.0507	.0297	3275.		
.2880	1341.	689.	-657.	-249.	314.	-786.	.0074	-.0165	-.0219	.0128	-.0448	.0252	3293.		
.2890	1174.	554.	-713.	-352.	302.	-706.	.0073	-.0152	-.0244	.0167	-.0396	.0211	3153.		
.2900	958.	414.	-718.	-424.	287.	-585.	.0088	-.0137	-.0269	.0202	-.0360	.0170	2903.		
.2910	701.	246.	-657.	-453.	264.	-435.	.0120	-.0120	-.0292	.0239	-.0345	.0126	2544.		
.2920	394.	40.	-514.	-428.	236.	-254.	.0165	-.0103	-.0313	.0281	-.0351	.0084	2057.		
.2930	54.	-175.	-309.	-360.	201.	-52.	.0219	-.0085	-.0331	.0329	-.0373	.0045	1551.		
.2940	-288.	-381.	-86.	-281.	162.	157.	.0279	-.0068	-.0348	.0376	-.0402	.0009	1344.		
.2950	-615.	-591.	110.	-219.	126.	359.	.0338	-.0049	-.0362	.0415	-.0426	-.0021	1637.		
.2960	-928.	-797.	251.	-190.	105.	544.	.0394	-.0030	-.0373	.0443	-.0431	-.0042	2187.		
.2970	-1213.	-958.	320.	-204.	98.	708.	.0440	-.0010	-.0379	.0458	-.0411	-.0051	2775.		
.2980	-1439.	-1063.	315.	-268.	95.	840.	.0474	.0010	-.0381	.0460	-.0369	-.0048	3311.		
.2990	-1585.	-1143.	252.	-370.	93.	923.	.0493	.0016	-.0375	.0451	-.0311	-.0040	3729.		
.3000	-1643.	-1209.	152.	-487.	88.	942.	.0496	.0040	-.0364	.0440	-.0239	-.0030	3971.		
.3010	-1600.	-1224.	40.	-601.	74.	891.	.0483	.0050	-.0346	.0437	-.0161	-.0020	4022.		
.3020	-1459.	-1170.	-66.	-702.	43.	787.	.0456	.0057	-.0321	.0444	-.0087	-.0009	3940.		
.3030	-1248.	-1075.	-153.	-784.	-1.	651.	.0417	.0059	-.0289	.0461	-.0019	.0006	3804.		
.3040	-1007.	-967.	-228.	-846.	-45.	497.	.0371	.0056	-.0251	.0487	.0048	.0027	3666.		
.3050	-751.	-832.	-305.	-892.	-79.	340.	.0319	.0050	-.0208	.0518	.0118	.0056	3577.		
.3060	-492.	-643.	-391.	-932.	-104.	198.	.0266	.0041	-.0161	.0550	.0192	.0096	3578.		
.3070	-267.	-421.	-471.	-958.	-121.	98.	.0212	.0028	-.0113	.0580	.0265	.0149	3622.		
.3080	-111.	-208.	-527.	-954.	-126.	52.	.0161	.0010	-.0065	.0609	.0337	.0214	3597.		
.3090	-18.	-10.	-548.	-911.	-122.	51.	.0111	-.0012	-.0020	.0641	.0401	.0282	3435.		
.3100	41.	187.	-528.	-828.	-120.	79.	.0065	-.0026	.0020	.0676	.0451	.0348	3136.		
.3110	69.	384.	-458.	-703.	-124.	136.	.0022	-.0060	.0054	.0713	.0481	.0408	2715.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.04.

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

.3010	-1600.	-1224.	40.	-601.	74.	891.	.0483	.0050	-.0346	.0437	-.0161	-.0020	4022.
.3020	-1459.	-1170.	-66.	-702.	43.	787.	.0456	.0057	-.0321	.0444	-.0087	-.0009	3940.
.3030	-1248.	-1075.	-153.	-784.	-1.	651.	.0417	.0059	-.0289	.0461	-.0019	.0006	3804.
.3040	-1007.	-967.	-228.	-846.	-45.	497.	.0371	.0056	-.0251	.0487	.0048	.0027	3666.
.3050	-751.	-832.	-305.	-892.	-79.	340.	.0319	.0050	-.0208	.0518	.0118	.0056	3577.
.3060	-492.	-643.	-391.	-932.	-104.	198.	.0266	.0041	-.0161	.0550	.0192	.0096	3578.
.3070	-267.	-421.	-471.	-958.	-121.	98.	.0212	.0028	-.0113	.0580	.0265	.0149	3622.
.3080	-111.	-208.	-527.	-954.	-126.	52.	.0161	.0010	-.0065	.0609	.0337	.0214	3597.
.3090	-18.	-10.	-548.	-911.	-122.	51.	.0111	-.0012	-.0020	.0641	.0401	.0282	3435.
.3100	41.	187.	-528.	-828.	-120.	79.	.0065	-.0036	.0020	.0676	.0451	.0348	3136.
.3110	69.	384.	-458.	-703.	-124.	136.	.0022	-.0060	.0054	.0713	.0481	.0408	2715.

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ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKWC6F 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	50	MEMBER	3	SEQUENCE	71	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)	
.3120	40.	560.	-332.	-535.	-133.	226.	-.0017	-.0083	.0081	.0752	.0492	.0466	2226.	
.3130	-45.	709.	-164.	-336.	-140.	344.	-.0051	-.0104	.0103	.0791	.0487	.0520	1871.	
.3140	-153.	833.	16.	-134.	-144.	473.	-.0081	-.0122	.0121	.0821	.0470	.0567	1911.	
.3150	-269.	922.	178.	46.	-142.	598.	-.0105	-.0137	.0134	.0836	.0444	.0604	2303.	
.3160	-398.	965.	315.	198.	-131.	717.	-.0127	-.0147	.0144	.0835	.0413	.0630	2821.	
.3170	-536.	974.	428.	320.	-112.	822.	-.0146	-.0153	.0151	.0823	.0379	.0644	3320.	
.3180	-650.	959.	509.	403.	-93.	896.	-.0165	-.0154	.0154	.0802	.0338	.0642	3685.	
.3190	-713.	905.	554.	442.	-79.	921.	-.0184	-.0151	.0154	.0772	.0288	.0617	3824.	
.3200	-722.	804.	566.	441.	-68.	888.	-.0204	-.0144	.0152	.0736	.0231	.0568	3709.	
.3210	-681.	681.	550.	406.	-59.	800.	-.0227	-.0132	.0150	.0700	.0172	.0497	3355.	
.3220	-588.	558.	504.	334.	-56.	666.	-.0250	-.0117	.0147	.0660	.0112	.0408	2790.	
.3230	-449.	423.	427.	221.	-59.	498.	-.0273	-.0103	.0147	.0614	.0055	.0305	2046.	
.3240	-280.	258.	317.	75.	-59.	302.	-.0294	-.0089	.0150	.0561	.0008	.0191	1183.	
.3250	-97.	76.	182.	-92.	-53.	89.	-.0312	-.0078	.0154	-.0505	-.0023	.0070	518.	
.3260	90.	-91.	32.	-271.	-46.	-122.	-.0326	-.0070	.0160	.0451	-.0044	-.0053	1122.	
.3270	267.	-240.	-110.	-445.	-43.	-311.	-.0334	-.0067	.0165	.0400	-.0059	-.0169	2036.	
.3280	410.	-386.	-227.	-596.	-43.	-470.	-.0337	-.0070	.0168	.0361	-.0068	-.0275	2837.	
.3290	513.	-528.	-312.	-709.	-40.	-594.	-.0332	-.0079	.0168	.0336	-.0072	-.0369	3457.	
.3300	580.	-644.	-366.	-785.	-39.	-680.	-.0322	-.0094	.0165	.0323	-.0072	-.0451	3878.	
.3310	608.	-721.	-386.	-821.	-40.	-717.	-.0305	-.0116	.0159	.0320	-.0069	-.0514	4071.	
.3320	576.	-773.	-367.	-815.	-40.	-695.	-.0281	-.0145	.0153	.0326	-.0061	-.0553	4000.	
.3330	479.	-813.	-315.	-767.	-34.	-618.	-.0253	-.0180	.0146	.0338	-.0044	-.0569	3680.	
.3340	345.	-828.	-241.	-688.	-23.	-502.	-.0221	-.0221	.0139	.0354	-.0017	-.0564	3179.	
.3350	198.	-806.	-152.	-583.	-14.	-359.	-.0187	-.0265	.0132	.0371	.0015	-.0542	2558.	
.3360	34.	-760.	-42.	-453.	-9.	-195.	-.0152	-.0311	.0125	.0393	.0051	-.0504	1839.	
.3370	-149.	-699.	92.	-295.	-7.	-15.	-.0119	-.0358	.0116	.0420	.0090	-.0452	1101.	
.3380	-725.	-617.	236.	-122.	-11.	162.	-.0090	-.0403	.0105	.0450	.0131	-.0392	757.	
.3390	-469.	-513.	369.	47.	-24.	320.	-.0064	-.0445	.0093	.0479	.0173	-.0330	1210.	
.3400	-582.	-409.	479.	201.	-40.	454.	-.0043	-.0483	.0079	.0502	.0218	-.0269	1861.	
.3410	-678.	-314.	560.	333.	-54.	567.	-.0028	-.0515	.0066	.0515	.0269	-.0210	2461.	
.3420	-746.	-216.	603.	431.	-67.	652.	-.0017	-.0542	.0054	.0516	.0326	-.0154	2931.	
.3430	-768.	-114.	599.	487.	-80.	703.	-.0012	-.0562	.0044	.0503	.0386	-.0107	3207.	
.3440	-744.	-26.	554.	502.	-92.	712.	-.0010	-.0575	.0037	.0475	.0447	-.0072	3271.	
.3450	-680.	30.	482.	408.	-105.	679.	-.0013	-.0582	.0032	.0436	.0508	-.0053	3147.	
.3460	-581.	76.	393.	453.	-123.	616.	-.0019	-.0581	.0031	.0390	.0563	-.0050	2873.	
.3470	-444.	120.	309.	402.	-149.	510.	-.0028	-.0575	.0031	.0339	.0609	-.0062	2486.	
.3480	-286.	148.	220.	338.	-181.	388.	-.0038	-.0564	.0033	.0284	.0646	-.0089	2038.	
.3490	-129.	138.	133.	268.	-211.	257.	-.0047	-.0551	.0035	.0226	.0674	-.0129	1594.	

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S/RV PIPING KEWAUNEE GKWC6F 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

.3390	-469.	-513.	369.	47.	-24.	320.	-0.0064	-0.0445	.0093	.0479	.0173	-0.0330	1210.
.3400	-582.	-409.	479.	201.	-40.	454.	-0.0043	-0.0483	.0079	.0502	.0218	-0.0269	1861.
.3410	-678.	-314.	560.	333.	-54.	567.	-0.0028	-0.0515	.0066	.0515	.0269	-0.0210	2461.
.3420	-746.	-216.	607.	431.	-67.	652.	-0.0017	-0.0542	.0054	.0516	.0326	-0.0154	2931.
.3430	-768.	-114.	599.	487.	-80.	703.	-0.0012	-0.0562	.0044	.0503	.0386	-0.0107	3207.
.3440	-744.	-28.	554.	502.	-92.	712.	-0.0010	-0.0575	.0037	.0475	.0447	-0.0072	3271.
.3450	-680.	30.	482.	488.	-105.	679.	-0.0013	-0.0582	.0032	.0436	.0508	-0.0053	3147.
.3460	-581.	76.	398.	453.	-123.	610.	-0.0019	-0.0581	.0031	.0390	.0563	-0.0050	2873.
.3470	-444.	120.	309.	402.	-149.	510.	-0.0028	-0.0575	.0031	.0339	.0609	-0.0062	2486.
.3480	-286.	148.	220.	338.	-181.	388.	-0.0038	-0.0564	.0033	.0284	.0646	-0.0089	2038.
.3490	-129.	138.	133.	268.	-211.	257.	-0.0047	-0.0551	.0035	.0226	.0674	-0.0129	1594.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.04.

S/RV PIPING KEMAUNEE GKM08F 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	50	MEMBER	3	SEQUENCE	71	LOCATION	END	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	FX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3500	9.	100.	45.	193.	-233.	131.	-0.0054	-0.0534	.0037	.0164	.0596	-0.0178	1231.	
.3510	118.	55.	-43.	112.	-249.	27.	-0.0057	-0.0517	.0038	.0102	.0712	-0.0230	1023.	
.3520	181.	7.	-124.	32.	-256.	-42.	-0.0055	-0.0498	.0036	.0041	.0719	-0.0280	977.	
.3530	185.	-58.	-186.	-34.	-252.	-72.	-0.0048	-0.0479	.0032	-0.0014	.0720	-0.0326	986.	
.3540	135.	-143.	-222.	-78.	-238.	-65.	-0.0036	-0.0460	.0025	-0.0059	.0712	-0.0369	966.	
.3550	49.	-229.	-224.	-95.	-221.	-27.	-0.0018	-0.0442	.0014	-0.0091	.0692	-0.0408	905.	
.3560	-66.	-303.	-183.	-78.	-207.	39.	.0002	-0.0424	-0.0001	-0.0108	.0659	-0.0442	837.	
.3570	-209.	-372.	-98.	-23.	-193.	128.	.0024	-0.0409	-0.0018	-0.0108	.0616	-0.0470	868.	
.3580	-371.	-440.	18.	60.	-179.	231.	.0045	-0.0395	-0.0036	-0.0094	.0566	-0.0492	1112.	
.3590	-528.	-500.	143.	156.	-162.	335.	.0064	-0.0382	-0.0056	-0.0071	.0511	-0.0511	1509.	
.3600	-667.	-540.	255.	250.	-142.	433.	.0078	-0.0370	-0.0075	-0.0042	.0455	-0.0525	1941.	
.3610	-789.	-558.	344.	334.	-112.	520.	.0088	-0.0357	-0.0092	-0.0010	.0401	-0.0533	2344.	
.3620	-883.	-552.	401.	400.	-74.	587.	.0090	-0.0343	-0.0106	.0022	.0348	-0.0535	2666.	
.3630	-928.	-521.	420.	443.	-30.	621.	.0085	-0.0327	-0.0116	.0054	.0295	-0.0534	2848.	
.3640	-905.	-475.	404.	461.	17.	608.	.0073	-0.0309	-0.0119	.0083	.0239	-0.0533	2849.	
.3650	-813.	-420.	364.	463.	64.	542.	.0053	-0.0289	-0.0116	.0107	.0180	-0.0535	2671.	
.3660	-651.	-350.	312.	454.	106.	423.	.0026	-0.0266	-0.0106	.0129	.0116	-0.0540	2351.	
.3670	-423.	-258.	253.	437.	139.	255.	-0.0008	-0.0240	-0.0089	.0146	.0047	-0.0546	1958.	
.3680	-136.	-157.	185.	409.	162.	44.	-0.0046	-0.0211	-0.0068	.0155	-0.0023	-0.0554	1650.	
.3690	186.	-66.	105.	368.	181.	-198.	-0.0087	-0.0180	-0.0044	.0154	-0.0091	-0.0563	1700.	
.3700	516.	14.	8.	313.	198.	-453.	-0.0128	-0.0147	-0.0020	.0143	-0.0153	-0.0570	2185.	
.3710	833.	99.	-107.	243.	215.	-700.	-0.0169	-0.0112	.0001	.0122	-0.0206	-0.0572	2881.	
.3720	1114.	190.	-238.	158.	231.	-922.	-0.0205	-0.0076	.0018	.0091	-0.0250	-0.0567	3596.	
.3730	1340.	265.	-373.	69.	248.	-1104.	-0.0235	-0.0042	.0030	.0051	-0.0285	-0.0555	4232.	
.3740	1498.	304.	-497.	-18.	267.	-1240.	-0.0257	-0.0012	.0036	.0006	-0.0313	-0.0537	4737.	
.3750	1589.	320.	-596.	-84.	283.	-1327.	-0.0267	.0014	.0036	-0.0043	-0.0336	-0.0515	5075.	
.3760	1616.	335.	-655.	-127.	290.	-1360.	-0.0267	.0035	.0033	-0.0091	-0.0360	-0.0488	5213.	
.3770	1577.	348.	-660.	-137.	289.	-1337.	-0.0254	.0049	.0026	-0.0135	-0.0387	-0.0457	5133.	
.3780	1473.	340.	-612.	-113.	281.	-1262.	-0.0229	.0055	.0016	-0.0174	-0.0417	-0.0421	4844.	
.3790	1317.	305.	-522.	-62.	267.	-1143.	-0.0193	.0052	.0006	-0.0209	-0.0449	-0.0364	4386.	
.3800	1127.	262.	-405.	4.	248.	-989.	-0.0149	.0041	-0.0005	-0.0240	-0.0482	-0.0347	3806.	
.3810	909.	221.	-274.	77.	227.	-806.	-0.0099	.0022	-0.0016	-0.0268	-0.0510	-0.0307	3140.	
.3820	67.	186.	-146.	146.	205.	-603.	-0.0047	-0.0004	-0.0027	-0.0294	-0.0531	-0.0265	2438.	
.3830	431.	157.	-36.	201.	182.	-394.	.0004	-0.0034	-0.0036	-0.0319	-0.0541	-0.0223	1786.	
.3840	215.	132.	47.	236.	158.	-198.	.0050	-0.0069	-0.0043	-0.0344	-0.0538	-0.0182	1294.	
.3850	43.	117.	101.	248.	131.	-31.	.0088	-0.0105	-0.0048	-0.0369	-0.0523	-0.0145	1053.	
.3860	-79.	126.	129.	241.	98.	99.	.0115	-0.0143	-0.0048	-0.0392	-0.0494	-0.0110	1039.	
.3870	-143.	161.	136.	220.	55.	188.	.0131	-0.0180	-0.0045	-0.0409	-0.0455	-0.0078	1100.	

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.04.

S/RV PIPING KEMAUNEE GKM08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSVCONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

.3760	1618.	335.	-655.	-127.	290.	-1360.	-.267	.0035	.0033	-.0091	-.0360	-.0488	5213.
.3770	1577.	348.	-660.	-137.	289.	-1337.	-.254	.0049	.0026	-.0135	-.0387	-.0457	5133.
.3780	1473.	340.	-612.	-113.	281.	-1262.	-.229	.0055	.0016	-.0174	-.0417	-.0421	4844.
.3790	1317.	305.	-522.	-62.	267.	-1143.	-.0193	.0052	.0006	-.0209	-.0449	-.0384	4386.
.3800	1127.	262.	-405.	4.	248.	-989.	-.0149	.0041	-.0005	-.0240	-.0482	-.0347	3806.
.3810	907.	221.	-274.	77.	227.	-806.	-.0099	.0022	-.0016	-.0268	-.0510	-.0307	3140.
.3820	671.	186.	-146.	146.	205.	-603.	-.0047	-.0004	-.0027	-.0294	-.0531	-.0265	2438.
.3830	431.	157.	-36.	201.	182.	-394.	.0004	-.0034	-.0036	-.0319	-.0541	-.0223	1786.
.3840	215.	132.	47.	236.	158.	-198.	.0050	-.0069	-.0043	-.0344	-.0538	-.0182	1294.
.3850	43.	117.	101.	248.	131.	-31.	.0088	-.0105	-.0048	-.0369	-.0523	-.0145	1053.
.3860	-79.	127.	129.	241.	98.	99.	.0115	-.0143	-.0048	-.0392	-.0494	-.0110	1039.
.3870	-143.	101.	136.	220.	55.	188.	.0131	-.0180	-.0045	-.0409	-.0453	-.0078	1100.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.04.

S/RV PIPING KEWAUNEE GKW08F 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	50	MEMBER	3	SEQUENCE	71	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)		
.3880	-144.	199.	130.	126.	3.	231.	.0136	-.0217	-.0038	-.0421	-.0401	-.0050	1107.		
.3890	-89.	220.	110.	140.	-55.	227.	.0128	-.0251	-.0027	-.0428	-.0341	-.0025	1017.		
.3900	11.	239.	76.	86.	-117.	181.	.0111	-.0279	-.0013	-.0428	-.0270	-.0003	869.		
.3910	142.	234.	35.	28.	-180.	107.	.0084	-.0297	.0004	-.0419	-.0192	.0020	789.		
.3920	286.	354.	-10.	-33.	-242.	18.	.0050	-.0304	.0021	-.0402	-.0109	.0048	915.		
.3930	419.	414.	-54.	-93.	-299.	-74.	.0012	-.0301	.0039	-.0377	-.0025	.0083	1202.		
.3940	528.	440.	-91.	-145.	-347.	-164.	-.0029	-.0287	.0055	-.0344	.0060	.0121	1532.		
.3950	611.	449.	-112.	-182.	-387.	-246.	-.0072	-.0263	.0069	-.0304	.0142	.0162	1842.		
.3960	662.	459.	-108.	-199.	-422.	-312.	-.0113	-.0229	.0080	-.0255	.0218	.0206	2096.		
.3970	665.	460.	-72.	-190.	-455.	-352.	-.0153	-.0187	.0087	-.0199	.0285	.0252	2261.		
.3980	615.	429.	-0.	-154.	-481.	-364.	-.0189	-.0137	.0091	-.0136	.0342	.0301	2323.		
.3990	519.	366.	99.	-95.	-497.	-353.	-.0219	-.0082	.0091	-.0069	.0387	.0350	2305.		
.4000	392.	293.	213.	-23.	-505.	-324.	-.0244	-.0021	.0089	-.0003	.0421	.0397	2242.		

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)		
.1690	-893.	1375.	1040.	900.	-414.	1449.	-.0415	-.0088	.0043	.0718	.0580	.0539	6550.		

SECTION	51	MEMBER	1	SEQUENCE	71	LOCATION	BEG	TYPE	EL						
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.	1.	-0.	-0.	-0.	-0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	1.		
.0030	-1.	1.	-1.	-1.	-0.	1.	-.0000	-.0000	-.0000	-.0000	-.0001	.0000	3.		
.0040	-3.	1.	-3.	-2.	0.	3.	-.0000	.0000	-.0000	-.0001	-.0001	.0001	13.		
.0050	-9.	0.	-6.	-5.	2.	7.	-.0001	.0000	-.0001	-.0003	-.0002	.0004	34.		
.0060	-20.	-3.	-10.	-9.	5.	16.	-.0003	.0000	-.0002	-.0005	-.0004	.0007	71.		
.0070	-35.	-6.	-14.	-14.	8.	28.	-.0005	.0000	-.0005	-.0009	-.0006	.0012	120.		
.0080	-54.	-5.	-18.	-18.	11.	43.	-.0010	.0000	-.0008	-.0015	-.0011	.0017	180.		
.0090	-85.	-5.	-18.	-21.	16.	67.	-.0017	.0000	-.0014	-.0023	-.0014	.0023	271.		
.0100	-137.	-16.	-13.	-21.	28.	108.	-.0028	.0001	-.0021	-.0030	-.0011	.0034	423.		
.0110	-214.	-40.	-2.	-16.	49.	165.	-.0045	.0002	-.0030	-.0037	.0003	.0049	647.		

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ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.04.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSVCONDITION 24
LOADS
SHOCK
PRESSURE

.0010	0.	0.	-0.	0.	-0.	-0.	0.0000	-0.0000	0.0000	-0.0000	-0.0000	-0.0000	0.
.0020	0.	1.	-0.	-0.	-0.	-0.	0.0000	-0.0000	0.0000	-0.0000	-0.0000	0.0000	1.
.0030	-1.	1.	-1.	-1.	-0.	1.	-0.0000	-0.0000	-0.0000	-0.0000	-0.0001	0.0000	3.
.0040	-3.	1.	-3.	-2.	0.	3.	-0.0000	0.0000	-0.0000	-0.0001	-0.0001	0.0001	13.
.0050	-9.	0.	-6.	-5.	2.	7.	-0.0001	0.0000	-0.0001	-0.0003	-0.0002	0.0004	34.
.0060	-20.	-3.	-10.	-9.	5.	16.	-0.0003	0.0000	-0.0002	-0.0005	-0.0004	0.0007	71.
.0070	-35.	-6.	-14.	-14.	8.	28.	-0.0005	0.0000	-0.0005	-0.0009	-0.0006	0.0012	120.
.0080	-54.	-5.	-18.	-18.	11.	43.	-0.0010	0.0000	-0.0008	-0.0015	-0.0011	0.0017	180.
.0090	-85.	-5.	-18.	-21.	16.	67.	-0.0017	0.0000	-0.0014	-0.0023	-0.0014	0.0023	271.
.0100	-137.	-16.	-13.	-21.	28.	108.	-0.0028	0.0001	-0.0021	-0.0030	-0.0011	0.0034	423.
.0110	-214.	-40.	-2.	-16.	49.	165.	-0.0045	0.0002	-0.0030	-0.0037	0.0003	0.0049	647.

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.04.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FKM24F--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	EL	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)
51	1	71					.0120	-310.	-78.	17.	-8.	80.	235.	-0.0068	0.0003	-0.0040	-0.0045	0.0332	0.0062	927.
							.0130	-413.	-123.	45.	5.	119.	306.	-0.0096	0.0003	-0.0052	-0.0059	0.0077	0.0069	1224.
							.0140	-503.	-164.	80.	20.	161.	364.	-0.0129	-0.0001	-0.0064	-0.0083	0.0137	0.0065	1486.
							.0150	-560.	-193.	123.	37.	199.	395.	-0.0161	-0.0007	-0.0077	-0.0114	0.0207	0.0052	1658.
							.0160	-563.	-212.	168.	54.	228.	387.	-0.0186	-0.0014	-0.0088	-0.0146	0.0278	0.0036	1689.
							.0170	-493.	-215.	208.	73.	239.	326.	-0.0197	-0.0021	-0.0098	-0.0168	0.0341	0.0021	1533.
							.0180	-342.	-188.	230.	89.	228.	207.	-0.0191	-0.0027	-0.0103	-0.0169	0.0390	0.0009	1198.
							.0190	-121.	-131.	219.	96.	204.	39.	-0.0163	-0.0030	-0.0099	-0.0144	0.0429	-0.0004	855.
							.0200	150.	-22.	158.	84.	175.	-163.	-0.0114	-0.0032	-0.0081	-0.0095	0.0462	-0.0021	945.
							.0210	423.	110.	40.	44.	160.	-362.	-0.0048	-0.0031	-0.0047	-0.0027	0.0502	-0.0039	1488.
							.0220	595.	122.	-138.	-44.	202.	-493.	0.0022	-0.0024	-0.0003	0.0062	0.0586	-0.0042	1995.
							.0230	700.	76.	-371.	-180.	284.	-577.	0.0092	-0.0019	0.0048	0.0141	0.0588	-0.0044	2493.
							.0240	846.	102.	-617.	-236.	352.	-628.	0.0158	-0.0023	0.0100	0.0177	0.0751	-0.0069	3147.
							.0250	1067.	289.	-817.	-457.	352.	-844.	0.0223	-0.0035	0.0144	0.0179	0.0731	-0.0124	3817.
							.0260	1226.	492.	-909.	-488.	297.	-946.	0.0281	-0.0038	0.0170	0.0211	0.0662	-0.0170	4124.
							.0270	1200.	388.	-859.	-437.	265.	-914.	0.0318	-0.0021	0.0171	0.0300	0.0534	-0.0160	3909.
							.0280	1262.	259.	-714.	-335.	208.	-941.	0.0344	-0.0000	0.0160	0.0348	0.0588	-0.0141	3809.
							.0290	1556.	506.	-520.	-180.	30.	-1120.	0.0374	0.0005	0.0162	0.0300	0.0435	-0.0169	4236.
							.0300	1537.	568.	-225.	41.	-156.	-1083.	0.0390	0.0020	0.0175	0.0280	0.0303	-0.0169	4086.
							.0310	1160.	353.	150.	300.	-265.	-781.	0.0385	0.0050	0.0198	0.0303	0.0237	-0.0119	3277.
							.0320	776.	293.	380.	468.	-325.	-472.	0.0362	0.0071	0.0240	0.0275	0.0134	-0.0093	2762.
							.0330	349.	306.	344.	448.	-317.	-163.	0.0316	0.0078	0.0289	0.0199	-0.0003	-0.0129	2136.
							.0340	-284.	172.	212.	320.	-212.	280.	0.0240	0.0084	0.0318	0.0128	-0.0115	-0.0191	1773.
							.0350	-924.	127.	160.	228.	-109.	758.	0.0147	0.0091	0.0313	0.0069	-0.0250	-0.0257	2983.
							.0360	-1284.	207.	182.	207.	-102.	1116.	0.0053	0.0101	0.0272	0.0033	-0.0451	-0.0307	4254.
							.0370	-1722.	19.	290.	244.	-142.	1347.	-0.0044	0.0121	0.0196	0.0043	-0.0615	-0.0293	5137.
							.0380	-1841.	-382.	571.	372.	-179.	1404.	-0.0139	0.0145	0.0093	0.0042	-0.0661	-0.0225	5462.
							.0390	-1536.	-428.	980.	566.	-311.	1185.	-0.0207	0.0151	-0.0002	-0.0061	-0.0571	-0.0183	5068.
							.0400	-1052.	-82.	1348.	798.	-579.	849.	-0.0233	0.0139	-0.0064	-0.0230	-0.0732	-0.0167	4857.
							.0410	-890.	-125.	1623.	936.	-769.	722.	-0.0239	0.0139	-0.0100	-0.0308	-0.0737	-0.0065	5265.
							.0420	-874.	-452.	1649.	896.	-773.	695.	-0.0239	0.0147	-0.0114	-0.0306	-0.0721	0.0104	5123.
							.0430	-718.	-565.	1258.	608.	-677.	552.	-0.0230	0.0141	-0.0098	-0.0258	-0.0783	0.0174	3973.
							.0440	-696.	-514.	486.	74.	-511.	470.	-0.0223	0.0118	-0.0067	-0.0177	-0.0896	0.0112	2606.
							.0450	-943.	-439.	-251.	-458.	-251.	602.	-0.0230	0.0092	-0.0047	-0.0059	-0.0948	0.0012	2975.
							.0460	-1124.	-450.	-696.	-788.	-14.	728.	-0.0242	0.0070	-0.0044	0.0060	-0.0950	-0.0050	4006.
							.0470	-987.	-415.	-933.	-936.	37.	604.	-0.0242	0.0044	-0.0042	0.0131	-0.0979	-0.0060	4161.
							.0480	-656.	-514.	-910.	-886.	-61.	305.	-0.0234	0.0019	-0.0044	0.0136	-0.0967	0.0001	3505.
							.0490	-307.	-638.	-466.	-553.	-169.	33.	-0.0231	0.0003	-0.0057	0.0092	-0.0795	0.0113	2161.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FKM24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE

.0390	-1536.	-428.	980.	586.	-311.	1185.	-.0207	.0151	-.0002	-.0061	-.0571	-.0183	5068.
.0400	-1052.	-82.	1348.	798.	-579.	849.	-.0233	.0139	-.0064	-.0230	-.0732	-.0167	4857.
.0410	-890.	-125.	1623.	936.	-769.	722.	-.0239	.0139	-.0100	-.0308	-.0737	-.0065	5265.
.0420	-874.	-452.	1649.	896.	-773.	695.	-.0239	.0147	-.0114	-.0306	-.0721	.0104	5123.
.0430	-718.	-565.	1258.	608.	-677.	552.	-.0230	.0141	-.0098	-.0258	-.0783	.0174	3973.
.0440	-696.	-514.	486.	74.	-511.	470.	-.0223	.0118	-.0067	-.0177	-.0896	.0112	2606.
.0450	-943.	-489.	-251.	-458.	-251.	602.	-.0230	.0092	-.0047	-.0059	-.0948	.0012	2975.
.0460	-1124.	-450.	-696.	-788.	-14.	728.	-.0242	.0070	-.0044	.0060	-.0950	-.0050	4006.
.0470	-987.	-415.	-933.	-936.	37.	604.	-.0242	.0044	-.0042	.0131	-.0979	-.0060	4161.
.0480	-656.	-514.	-910.	-886.	-61.	305.	-.0234	.0019	-.0044	.0136	-.0967	.0001	3505.
.0490	-307.	-638.	-466.	-553.	-169.	33.	-.0231	.0003	-.0057	.0092	-.0795	.0113	2161.

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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	51	MEMBER	1	SEQUENCE	71	LOCATION	BEG	TYPE	EL							
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)			
.0500	8.	-564.	170.	-86.	-271.	-159.	-.0231	-.0011	-.0070	.0021	-.0513	.0197	1216.			
.0510	218.	-446.	595.	258.	-359.	-300.	-.0231	-.0029	-.0064	-.0025	-.0237	.0206	1995.			
.0520	294.	-458.	716.	413.	-324.	-389.	-.0236	-.0050	-.0036	-.0012	-.0008	.0178	2440.			
.0530	232.	-482.	601.	417.	-120.	-369.	-.0244	-.0069	.0006	.0054	.0175	.0136	2127.			
.0540	-56.	-435.	231.	244.	159.	-164.	-.0249	-.0084	.0062	.0165	.0310	.0060	1247.			
.0550	-511.	-355.	-298.	-53.	431.	168.	-.0246	-.0093	.0123	.0286	.0408	-.0049	1738.			
.0560	-824.	-223.	-716.	-281.	679.	408.	-.0238	-.0099	.0174	.0367	.0500	-.0142	3138.			
.0570	-808.	-101.	-889.	-331.	855.	415.	-.0227	-.0100	.0206	.0414	.0616	-.0191	3756.			
.0580	-540.	-93.	-844.	-234.	875.	226.	-.0207	-.0090	.0219	.0453	.0769	-.0214	3485.			
.0590	-74.	-36.	-558.	12.	745.	-97.	-.0172	-.0075	.0218	.0451	.0951	-.0230	2805.			
.0600	549.	231.	-78.	385.	561.	-493.	-.0118	-.0057	.0210	.0392	.1139	-.0231	3136.			
.0610	1156.	516.	305.	692.	398.	-864.	-.0046	-.0032	.0205	.0348	.1296	-.0190	4392.			
.0620	1600.	574.	337.	751.	297.	-1135.	.0035	.0007	.0214	.0386	.1377	-.0107	5200.			
.0630	189.	558.	40.	573.	297.	-1298.	.0117	.0051	.0237	.0480	.1350	-.0029	5411.			
.0640	198.	682.	-491.	229.	409.	-1314.	.0188	.0088	.0266	.0586	.1223	-.0013	5209.			
.0650	1818.	876.	-1193.	-250.	585.	-1151.	.0236	.0115	.0287	.0691	.1051	-.0071	4910.			
.0660	1565.	1025.	-1871.	-742.	754.	-927.	.0256	.0140	.0287	.0776	.0886	-.0156	5253.			
.0670	1457.	1116.	-2242.	-1034.	849.	-808.	.0253	.0166	.0253	.0813	.0749	-.0203	5834.			
.0680	1451.	1057.	-2164.	-1007.	822.	-787.	.0233	.0194	.0188	.0814	.0667	-.0177	5671.			
.0690	1462.	854.	-1657.	-688.	650.	-797.	.0201	.0219	.0098	.0781	.0561	-.0094	4619.			
.0700	1583.	756.	-041.	-177.	361.	-865.	.0164	.0231	.0002	.0676	.0702	-.0008	3560.			
.0710	1737.	795.	36.	369.	57.	-954.	.0125	.0224	-.0083	.0516	.0743	.0048	3825.			
.0720	1609.	657.	683.	760.	-131.	-897.	.0079	.0206	-.0143	.0396	.0763	.0074	4418.			
.0730	1144.	324.	953.	886.	-160.	-641.	.0029	.0181	-.0174	.0355	.0726	.0061	4127.			
.0740	566.	126.	856.	750.	-89.	-291.	-.0015	.0142	-.0178	.0348	.0567	-.0021	3020.			
.0750	-82.	85.	484.	422.	21.	113.	-.0046	.0090	-.0164	.0365	.0287	-.0162	1633.			
.0760	-830.	-45.	25.	38.	144.	563.	-.0067	.0036	-.0149	.0422	-.0037	-.0297	2175.			
.0770	-1443.	-258.	-284.	-240.	226.	921.	-.0081	-.0011	-.0147	.0487	-.0327	-.0373	3650.			
.0780	-1707.	-412.	-301.	-309.	190.	1057.	-.0088	-.0052	-.0162	.0510	-.0543	-.0389	4171.			
.0790	-1739.	-570.	-2.	-154.	31.	1026.	-.0093	-.0088	-.0190	.0480	-.0543	-.0369	3876.			
.0800	-1667.	-751.	573.	191.	-189.	916.	-.0101	-.0122	-.0225	.0393	-.0609	-.0328	3563.			
.0810	-1429.	-783.	1260.	614.	-419.	718.	-.0108	-.0155	-.0255	.0249	-.0496	-.0284	3859.			
.0820	-1108.	-703.	1773.	928.	-614.	489.	-.0109	-.0182	-.0270	.0107	-.0381	-.0244	4538.			
.0830	-957.	-749.	1931.	1010.	-693.	375.	-.0105	-.0193	-.0268	.0049	-.0297	-.0197	4784.			
.0840	-1006.	-870.	1748.	868.	-624.	407.	-.0094	-.0189	-.0250	.0077	-.0277	-.0156	4272.			
.0850	-1069.	-808.	1295.	552.	-483.	480.	-.0068	-.0179	-.0216	.0146	-.0353	-.0154	3272.			
.0860	-1081.	-607.	669.	127.	-358.	537.	-.0027	-.0163	-.0167	.0245	-.0498	-.0194	2455.			
.0870	-1044.	-476.	87.	-256.	-271.	553.	.0024	-.0137	-.0110	.0363	-.0528	-.0227	2492.			

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

CONDITION 24

LOADS

SHOCK

PRESSURE

.0770	-1443.	-258.	-284.	-240.	226.	921.	-.081	-.0011	-.0147	.0487	-.0327	-.0373	3650.
.0780	-1707.	-412.	-301.	-309.	170.	1057.	-.088	-.0052	-.0162	.0510	-.0543	-.0389	4171.
.0790	-1739.	-570.	-2.	-154.	31.	1026.	-.093	-.0088	-.0190	.0480	-.0543	-.0369	3876.
.0800	-1667.	-751.	573.	191.	-189.	916.	-.0101	-.0122	-.0225	.0393	-.0609	-.0328	3563.
.0810	-1429.	-783.	1260.	614.	-419.	718.	-.0108	-.0155	-.0255	.0249	-.0496	-.0284	3859.
.0820	-1108.	-703.	1773.	928.	-614.	489.	-.0109	-.0182	-.0270	.0107	-.0381	-.0244	4538.
.0830	-957.	-749.	1931.	1010.	-693.	375.	-.0105	-.0193	-.0268	.0049	-.0297	-.0197	4784.
.0840	-1006.	-870.	1748.	860.	-624.	407.	-.0094	-.0189	-.0250	.0077	-.0277	-.0156	4272.
.0850	-1069.	-808.	1295.	552.	-483.	480.	-.0068	-.0179	-.0216	.0146	-.0353	-.0154	3272.
.0860	-1081.	-607.	669.	127.	-358.	537.	-.0027	-.0163	-.0167	.0245	-.0498	-.0194	2455.
.0870	-1044.	-476.	87.	-256.	-271.	553.	.0024	-.0137	-.0110	.0363	-.0528	-.0227	2492.

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S/RV PIPING KEWAUNEE GKW08F 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	51	MEMBER	1	SEQUENCE	71	LOCATION	BEG	TYPE	EL						
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)	
.0880	-845.	-395.	-232.	-448.	-244.	455.		.0084	-.0101	-.0047	.0446	-.0593	-.0218	2551.	
.0890	-434.	-252.	-266.	-431.	-325.	218.		.0151	-.0061	.0024	.0454	-.0692	-.0171	2172.	
.0900	41.	-88.	-106.	-282.	-503.	-53.		.0219	-.0018	.0100	.0402	-.0629	-.0099	2162.	
.0910	425.	43.	159.	-68.	-682.	-251.		.0272	.0027	.0173	.0313	-.0521	-.0009	2724.	
.0920	656.	153.	374.	107.	-769.	-341.		.0299	.0072	.0233	.0216	-.0419	.0070	3166.	
.0930	685.	226.	337.	109.	-736.	-304.		.0292	.0112	.0274	.0154	-.0360	.0097	3002.	
.0940	506.	271.	21.	-91.	-584.	-131.		.0248	.0149	.0286	.0144	-.0340	.0058	2262.	
.0950	207.	361.	-395.	-369.	-347.	134.		.0174	.0181	.0264	.0150	-.0334	-.0023	1945.	
.0960	-109.	481.	-730.	-597.	-91.	415.		.0087	.0211	.0212	.0139	-.0322	-.0102	2734.	
.0970	-341.	535.	-889.	-706.	77.	626.		.0001	.0244	.0137	.0092	-.0278	-.0130	3532.	
.0980	-364.	532.	-797.	-646.	130.	691.		-.0074	.0282	.0046	-.0011	-.0179	-.0082	3563.	
.0990	-155.	554.	-462.	-423.	94.	600.		-.0134	.0322	-.0057	-.0182	-.0028	.0021	2763.	
.1000	156.	604.	-46.	-147.	17.	430.		-.0180	.0362	-.0166	-.0385	.0144	.0133	1698.	
.1010	467.	664.	248.	41.	-48.	246.		-.0211	.0401	-.0279	-.0562	.0293	.0211	949.	
.1020	775.	747.	313.	70.	-52.	56.		-.0229	.0438	-.0392	-.0673	.0371	.0243	389.	
.1030	1055.	819.	118.	-72.	14.	-127.		-.0228	.0470	-.0498	-.0693	.0345	.0234	547.	
.1040	1224.	836.	-285.	-342.	118.	-267.		-.0202	.0493	-.0586	-.0620	.0224	.0201	1678.	
.1050	1323.	843.	-729.	-631.	208.	-374.		-.0149	.0504	-.0646	-.0496	.0057	.0161	2846.	
.1060	1442.	880.	-1038.	-825.	245.	-495.		-.0073	.0501	-.0668	-.0380	-.0097	.0129	3706.	
.1070	1557.	849.	-1146.	-880.	219.	-643.		.0019	.0482	-.0647	-.0303	-.0194	.0112	4148.	
.1080	1646.	782.	-1075.	-800.	135.	-808.		.0114	.0443	-.0587	-.0278	-.0231	.0097	4275.	
.1090	1673.	765.	-851.	-605.	28.	-936.		.0199	.0392	-.0501	-.0288	-.0215	.0073	4164.	
.1100	1418.	405.	-524.	-387.	19.	-880.		.0250	.0345	-.0416	-.0277	-.0082	.0050	3590.	
.1110	1016.	54.	-296.	-243.	71.	-741.		.0272	.0285	-.0340	-.0270	.0040	-.0015	2923.	
.1120	605.	-7.	-225.	-184.	142.	-590.		.0275	.0201	-.0280	-.0271	.0073	-.0122	2367.	
.1130	134.	-58.	-140.	-127.	250.	-360.		.0255	.0122	-.0250	-.0227	.0092	-.0211	1702.	
.1140	-408.	-348.	54.	-20.	358.	-63.		.0218	.0072	-.0243	-.0129	.0143	-.0264	1359.	
.1150	-873.	-712.	318.	143.	401.	160.		.0183	.0042	-.0236	-.0052	.0202	-.0296	1697.	
.1160	-1116.	-924.	666.	381.	379.	242.		.0161	.0021	-.0210	-.0060	.0294	-.0295	2201.	
.1170	-1103.	-935.	1123.	684.	298.	216.		.0156	.0015	-.0159	-.0148	.0440	-.0251	2900.	
.1180	-1092.	-1140.	1569.	943.	184.	215.		.0167	.0036	-.0080	-.0246	.0519	-.0170	3675.	
.1190	-966.	-1205.	1788.	1064.	14.	134.		.0207	.0064	.0029	-.0371	.0646	-.0106	4005.	
.1200	-798.	-994.	1686.	716.	-125.	21.		.0269	.0092	.0148	-.0484	.0496	-.0044	3748.	
.1210	-770.	-895.	1273.	691.	-127.	84.		.0323	.0146	.0244	-.0473	.0299	.0055	2642.	
.1220	-787.	-811.	585.	185.	-58.	214.		.0366	.0226	.0311	-.0375	.0051	.0128	1077.	
.1230	-813.	-797.	-205.	-380.	52.	320.		.0392	.0317	.0348	-.0269	-.0209	.0161	1882.	
.1240	-656.	-613.	-821.	-818.	134.	293.		.0404	.0397	.0359	-.0244	-.0426	.0189	3283.	
.1250	-255.	-293.	-1069.	-1005.	107.	148.		.0404	.0472	.0348	-.0306	-.0515	.0265	3813.	

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

.1150	-873.	-712.	318.	143.	401.	-712.	160.	.0183	.0042	-.0236	-.0052	.0202	-.0296	1697.
.1160	-1116.	-924.	666.	381.	379.	242.	.0161	.0021	-.0210	-.0060	.0294	-.0295	2201.	
.1170	-1103.	-935.	1123.	684.	298.	216.	.0156	.0015	-.0159	-.0148	.0440	-.0251	2900.	
.1180	-1092.	-1140.	1569.	943.	184.	219.	.0167	.0036	-.0080	-.0246	.0519	-.0170	3675.	
.1190	-986.	-1205.	1788.	1064.	14.	134.	.0207	.0064	.0029	-.0371	.0646	-.0106	4005.	
.1200	-798.	-994.	1686.	996.	-125.	21.	.0269	.0092	.0148	-.0484	.0496	-.0044	3748.	
.1210	-770.	-895.	1273.	691.	-127.	4.	.0323	.0146	.0244	-.0473	.0299	.0055	2642.	
.1220	-783.	-811.	585.	185.	-58.	214.	.0366	.0226	.0311	-.0375	.0051	.0128	1077.	
.1230	-813.	-797.	-205.	-386.	52.	320.	.0392	.0217	.0348	-.0269	-.0209	.0161	1882.	
.1240	-656.	-613.	-821.	-818.	134.	293.	.0404	.0397	.0359	-.0244	-.0426	.0189	3283.	
.1250	-255.	-293.	-1069.	-1005.	107.	148.	.0404	.0472	.0348	-.0306	-.0515	.0265	3813.	

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2 SAFETY COLD FKM24F--2 PSV

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	EL	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)
.1260	189.	-200.	-928.	-956.	-50.	-17.	.0394	.0551	.0326	-.0427	-.0455	.0409	3574.							
.1270	715.	-70.	-511.	-698.	-324.	-284.	.0389	.0614	.0306	-.0656	-.0391	.0571	3062.							
.1280	1088.	12.	-13.	-367.	-552.	-478.	.0377	.0656	.0284	-.0910	-.0323	.0756	3049.							
.1290	1239.	96.	302.	-167.	-661.	-485.	.0345	.0683	.0253	-.1086	-.0258	.0920	3122.							
.1300	1125.	143.	271.	-218.	-652.	-307.	.0289	.0695	.0217	-.1150	-.0266	.0984	2810.							
.1310	630.	-28.	-47.	-468.	-493.	47.	.0209	.0681	.0180	-.1137	-.0374	.0928	2543.							
.1320	29.	-36.	-479.	-766.	-264.	416.	.0121	.0627	.0148	-.1135	-.0594	.0770	3401.							
.1330	-589.	5.	-845.	-1025.	-53.	811.	.0032	.0551	.0117	-.1130	-.0785	.0600	4885.							
.1340	-1109.	-37.	-962.	-1134.	44.	1154.	-.0046	.0468	.0086	-.1142	-.0805	.0473	6040.							
.1350	-1489.	-227.	-704.	-973.	29.	1343.	-.0100	.0375	.0057	-.1216	-.0906	.0408	6194.							
.1360	-1738.	-546.	-131.	-575.	-41.	1384.	-.0135	.0270	.0023	-.1333	-.0840	.0408	5596.							
.1370	-1641.	-590.	518.	-110.	-196.	1218.	-.0148	.0149	-.0014	-.1468	-.0746	.0400	4623.							
.1380	-1415.	-575.	1024.	234.	-364.	993.	-.0147	.0029	-.0058	-.1549	-.0543	.0344	4043.							
.1390	-1266.	-578.	1266.	406.	-444.	786.	-.0129	-.0084	-.0105	-.1572	-.0621	.0227	3696.							
.1400	-1247.	-557.	1179.	388.	-384.	643.	-.0090	-.0187	-.0150	-.1523	-.0702	.0093	3148.							
.1410	-1297.	-593.	772.	147.	-224.	600.	-.0033	-.0264	-.0193	-.1369	-.0809	.0003	2453.							
.1420	-1153.	-464.	188.	-218.	-101.	499.	.0048	-.0316	-.0220	-.1187	-.0958	-.0062	2066.							
.1430	-953.	-351.	-320.	-518.	-21.	347.	.0146	-.0348	-.0230	-.1035	-.1106	-.0109	2328.							
.1440	-719.	-210.	-579.	-613.	15.	151.	.0250	-.0365	-.0222	-.0947	-.1197	-.0133	2356.							
.1450	-349.	18.	-572.	-522.	-23.	-85.	.0346	-.0358	-.0203	-.0901	-.1164	-.0126	1975.							
.1460	99.	170.	-370.	-320.	-128.	-319.	.0423	-.0320	-.0176	-.0866	-.1004	-.0089	1752.							
.1470	559.	364.	-44.	-12.	-279.	-575.	.0486	-.0263	-.0133	-.0877	-.0853	-.0066	2387.							
.1480	768.	441.	317.	337.	-378.	-692.	.0529	-.0189	-.0078	-.0884	-.0732	-.0041	3201.							
.1490	811.	559.	561.	596.	-429.	-644.	.0549	-.0098	-.0013	-.0848	-.0650	-.0014	3646.							
.1500	764.	753.	571.	673.	-443.	-474.	.0545	.0010	.0065	-.0764	-.0519	-.0007	3491.							
.1510	425.	711.	392.	606.	-345.	-149.	.0512	.0125	.0150	-.0643	-.0604	-.0022	2662.							
.1520	-80.	620.	158.	509.	-156.	228.	.0455	.0232	.0241	-.0546	-.0600	-.0067	2164.							
.1530	-569.	569.	-26.	417.	38.	606.	.0378	.0329	.0324	-.0471	-.0529	-.0117	2750.							
.1540	-834.	667.	-99.	369.	127.	868.	.0291	.0417	.0393	-.0428	-.0398	-.0153	3552.							
.1550	-976.	667.	20.	443.	142.	1004.	.0202	.0496	.0440	-.0407	-.0220	-.0134	4133.							
.1560	-1142.	318.	324.	636.	176.	1081.	.0105	.0570	.0453	-.0378	.0022	-.0021	4727.							
.1570	-1064.	87.	649.	833.	169.	991.	.0010	.0624	.0440	-.0359	.0259	.0125	4874.							
.1580	-866.	-62.	844.	905.	136.	840.	-.0088	.0658	.0403	-.0310	.0488	.0253	4636.							
.1590	-800.	-326.	893.	852.	166.	736.	-.0192	.0667	.0350	-.0221	.0690	.0341	4249.							
.1600	-771.	-535.	798.	713.	268.	596.	-.0289	.0641	.0295	-.0129	.0803	.0376	3609.							
.1610	-657.	-647.	514.	446.	384.	388.	-.0370	.0588	.0247	-.0019	.0842	.0390	2632.							
.1620	-544.	-889.	93.	63.	489.	203.	-.0433	.0525	.0207	.0148	.0878	.0431	1991.							
.1630	-358.	-1067.	-291.	-281.	552.	-34.	-.0467	.0449	.0181	.0298	.0869	.0484	2317.							

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2 SAFETY COLD FKM24F--2 PSV

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

.1540	-834.	667.	-99.	369.	127.	868.	.0291	.0417	.0393	-.0428	-.0398	-.0153	3552.
.1550	-976.	667.	20.	443.	142.	1004.	.0202	.0496	.0440	-.0407	-.0220	-.0134	4133.
.1560	-1142.	318.	324.	636.	176.	1081.	.0105	.0570	.0453	-.0378	.0022	-.0021	4727.
.1570	-1064.	87.	649.	833.	169.	991.	.0010	.0624	.0440	-.0359	.0259	.0125	4874.
.1580	-866.	-62.	844.	905.	136.	840.	-.0088	.0658	.0403	-.0310	.0488	.0253	4636.
.1590	-800.	-326.	893.	852.	166.	736.	-.0192	.0667	.0350	-.0221	.0590	.0341	4249.
.1600	-771.	-535.	798.	713.	268.	596.	-.0289	.0641	.0295	-.0129	.0803	.0376	3609.
.1610	-657.	-647.	514.	446.	384.	388.	-.0370	.0588	.0247	-.0019	.0842	.0390	2632.
.1620	-544.	-889.	93.	63.	489.	203.	-.0433	.0525	.0207	.0148	.0878	.0431	1991.
.1630	-358.	-1067.	-291.	-281.	552.	-34.	-.0467	.0449	.0181	.0298	.0869	.0484	2317.

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

SECTION	51	MEMBER	1	SEQUENCE	71	LOCATION	BEG	TYPE	EL						
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)		
.1640	-184.	-1247.	-542.	-506.	589.	-295.	-.0474	.0362	.0165	.0407	.0828	.0546	3100.		
.1650	-7.	-1456.	-717.	-671.	581.	-550.	-.0465	.0269	.0153	.0504	.0792	.0612	3898.		
.1660	350.	-1447.	-866.	-806.	497.	-876.	-.0446	.0171	.0140	.0577	.0742	.0645	4816.		
.1670	675.	-1436.	-957.	-888.	430.	-1165.	-.0429	.0076	.0118	.0636	.0698	.0647	5701.		
.1680	857.	-1426.	-997.	-903.	407.	-1371.	-.0418	-.0014	.0085	.0676	.0634	.0606	6313.		
.1690	900.	-1420.	-1033.	-900.	414.	-1449.	-.0415	-.0088	.0043	.0718	.0580	.0539	6550.		
.1700	959.	-1274.	-1058.	-880.	406.	-1459.	-.0417	-.0142	-.0003	.0752	.0535	.0456	6540.		
.1710	1044.	-972.	-1013.	-780.	375.	-1449.	-.0417	-.0179	-.0042	.0745	.0470	.0353	6301.		
.1720	866.	-918.	-854.	-586.	384.	-1280.	-.0424	-.0189	-.0072	.0731	.0450	.0259	5445.		
.1730	668.	-759.	-610.	-314.	372.	-1063.	-.0430	-.0182	-.0085	.0677	.0450	.0150	4366.		
.1740	569.	-400.	-332.	-20.	320.	-842.	-.0435	-.0158	-.0081	.0591	.0475	.0025	3364.		
.1750	422.	-96.	-55.	270.	229.	-574.	-.0438	-.0114	-.0061	.0506	.0516	-.0102	2570.		
.1760	241.	189.	197.	557.	261.	-307.	-.0433	-.0057	-.0027	.0416	.0505	-.0233	2512.		
.1770	32.	421.	394.	798.	182.	-15.	-.0420	.0014	.0014	.0356	.0458	-.0341	3057.		
.1780	-62.	785.	497.	960.	105.	246.	-.0396	.0096	.0059	.0329	.0358	-.0427	3721.		
.1790	-168.	1061.	522.	1045.	21.	511.	-.0364	.0185	.0106	.0345	.0233	-.0484	4345.		
.1800	-294.	1203.	512.	1093.	-44.	741.	-.0329	.0274	.0154	.0373	.0086	-.0515	4933.		
.1810	-249.	1468.	479.	1116.	-136.	834.	-.0287	.0349	.0206	.0378	-.0089	-.0539	5225.		
.1820	-164.	1629.	421.	1079.	-236.	898.	-.0251	.0419	.0253	.0406	-.0206	-.0526	5314.		
.1830	-56.	1717.	367.	1013.	-342.	924.	-.0221	.0477	.0295	.0439	-.0284	-.0483	5275.		
.1840	43.	1724.	335.	947.	-428.	899.	-.0197	.0516	.0327	.0457	-.0351	-.0419	5130.		
.1850	136.	1660.	282.	847.	-489.	835.	-.0184	.0535	.0344	.0474	-.0408	-.0338	4800.		
.1860	279.	1619.	163.	677.	-545.	730.	-.0185	.0535	.0340	.0508	-.0456	-.0256	4239.		
.1870	344.	1440.	13.	460.	-556.	653.	-.0205	.0521	.0310	.0579	-.0467	-.0169	3635.		
.1880	385.	1238.	-114.	262.	-534.	544.	-.0239	.0487	.0260	.0648	-.0481	-.0103	3009.		
.1890	401.	984.	-203.	91.	-496.	410.	-.0284	.0436	.0196	.0714	-.0478	-.0057	2426.		
.1900	425.	687.	-240.	-51.	-471.	264.	-.0336	.0371	.0128	.0782	-.0430	-.0020	2026.		
.1910	514.	484.	-186.	-120.	-481.	76.	-.0384	.0295	.0065	.0821	-.0363	.0005	1873.		
.1920	505.	206.	-38.	-103.	-484.	-71.	-.0427	.0213	.0016	.0845	-.0271	.0032	1865.		
.1930	389.	-124.	137.	-46.	-470.	-158.	-.0466	.0131	-.0015	.0864	-.0169	.0057	1857.		
.1940	250.	-389.	257.	-10.	-440.	-202.	-.0502	.0050	-.0030	.0883	-.0070	.0062	1809.		
.1950	60.	-595.	292.	-16.	-371.	-189.	-.0540	-.0027	-.0033	.0910	.0021	.0030	1557.		
.1960	-253.	-804.	255.	-48.	-243.	-95.	-.0583	-.0097	-.0029	.0943	.0098	-.0045	991.		
.1970	-622.	-968.	181.	-83.	-78.	46.	-.0626	-.0157	-.0025	.0976	.0169	-.0151	457.		
.1980	-908.	-1036.	114.	-101.	80.	174.	-.0667	-.0202	-.0026	.1001	.0258	-.0258	810.		
.1990	-1061.	-1053.	113.	-66.	203.	250.	-.0698	-.0230	-.0033	.1008	.0379	-.0336	1226.		
.2000	-1079.	-1061.	219.	58.	279.	244.	-.0712	-.0240	-.0042	.0983	.0523	-.0376	1399.		
.2010	-938.	-1010.	419.	259.	301.	144.	-.0705	-.0234	-.0052	.0921	.0679	-.0383	1577.		

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

.1910	514.	484.	186.	-120.	-481.	76.	-.0384	.0295	.0065	.0821	-.0363	.0005	1873.
.1920	505.	206.	-38.	-103.	-484.	-71.	-.0427	.0213	.0016	.0845	-.0271	.0032	1865.
.1930	389.	-124.	137.	-46.	-470.	-158.	-.0466	.0131	-.0015	.0864	-.0169	.0057	1857.
.1940	250.	-389.	257.	-10.	-440.	-202.	-.0502	.0050	-.0030	.0883	-.0070	.0062	1809.
.1950	60.	-595.	292.	-16.	-371.	-189.	-.0540	-.0027	-.0033	.0910	.0021	.0030	1557.
.1960	-253.	-804.	255.	-48.	-243.	-95.	-.0583	-.0097	-.0029	.0943	.0098	-.0045	991.
.1970	-622.	-968.	181.	-83.	-78.	46.	-.0626	-.0157	-.0025	.0976	.0169	-.0151	457.
.1980	-908.	-1036.	114.	-101.	80.	174.	-.0667	-.0202	-.0026	.1001	.0258	-.0258	810.
.1990	-1061.	-1053.	113.	-66.	203.	250.	-.0698	-.0230	-.0033	.1008	.0379	-.0336	1226.
.2000	-1079.	-1061.	219.	58.	279.	244.	-.0712	-.0240	-.0042	.0983	.0523	-.0376	1399.
.2010	-938.	-1010.	419.	259.	301.	144.	-.0705	-.0234	-.0052	.0921	.0679	-.0383	1577.

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSVCONDITION 24
LOADS
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ENGLISH UNITSINTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	51	MEMBER	1	SEQUENCE	71	LOCATION	BEG	TYPE	EL						
TIME	FX	FY	FZ	HX	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)		
.2020	-640.	-871.	627.	465.	280.	-23.	-.0679	-.0212	-.0058	.0845	.0345	-.0364	2029.		
.2030	-256.	-682.	743.	601.	255.	-219.	-.0636	-.0175	-.0059	.0776	.1003	-.0336	2572.		
.2040	139.	-475.	697.	627.	265.	-421.	-.0579	-.0129	-.0053	.0719	.1114	-.0316	2987.		
.2050	509.	-246.	467.	523.	318.	-607.	-.0510	-.0076	-.0038	.0684	.1158	-.0310	3220.		
.2060	847.	9.	78.	299.	393.	-751.	-.0435	-.0018	-.0018	.0683	.1145	-.0308	3355.		
.2070	1155.	274.	-391.	8.	468.	-855.	-.0358	.0044	.0004	.0710	.1091	-.0303	3638.		
.2080	1437.	519.	-825.	-263.	525.	-949.	-.0282	.0106	.0028	.0736	.1010	-.0290	4165.		
.2090	1697.	717.	-1133.	-451.	551.	-1044.	-.0215	.0164	.0050	.0741	.0934	-.0268	4719.		
.2100	1939.	874.	-1270.	-535.	529.	-1128.	-.0161	.0218	.0069	.0724	.0900	-.0236	5061.		
.2110	2150.	1015.	-1228.	-508.	460.	-1184.	-.0124	.0267	.0085	.0686	.0908	-.0199	5109.		
.2120	2275.	1114.	-1043.	-386.	368.	-1196.	-.0103	.0306	.0099	.0631	.0934	-.0162	4885.		
.2130	2262.	1136.	-793.	-221.	283.	-1135.	-.0098	.0337	.0113	.0573	.0955	-.0130	4445.		
.2140	2106.	1108.	-576.	-85.	224.	-982.	-.0108	.0358	.0126	.0532	.0956	-.0107	3774.		
.2150	1809.	1069.	-440.	-13.	201.	-730.	-.0130	.0368	.0139	.0515	.0924	-.0100	2827.		
.2160	1363.	1006.	-382.	4.	321.	-389.	-.0160	.0366	.0151	.0515	.0856	-.0113	1669.		
.2170	815.	897.	-363.	-9.	269.	-1.	-.0194	.0353	.0160	.0523	.0763	-.0145	1004.		
.2180	285.	778.	-341.	-23.	309.	362.	-.0227	.0331	.0165	.0526	.0665	-.0185	1780.		
.2190	-131.	678.	-267.	-7.	310.	642.	-.0253	.0301	.0164	.0508	.0578	-.0221	2662.		
.2200	-425.	575.	-102.	69.	264.	824.	-.0267	.0263	.0156	.0461	.0509	-.0242	3239.		
.2210	-607.	463.	144.	200.	178.	911.	-.0265	.0222	.0141	.0386	.0453	-.0241	3545.		
.2220	-664.	369.	406.	340.	61.	908.	-.0247	.0178	.0119	.0298	.0398	-.0225	3628.		
.2230	-612.	306.	600.	429.	-61.	833.	-.0214	.0133	.0090	.0211	.0328	-.0204	3504.		
.2240	-512.	256.	663.	428.	-155.	715.	-.0171	.0087	.0057	.0133	.0227	-.0194	3165.		
.2250	-409.	224.	579.	326.	-203.	586.	-.0121	.0042	.0022	.0064	.0092	-.0205	2615.		
.2260	-306.	224.	366.	134.	-212.	460.	-.0067	.0001	-.0014	.0003	-.0066	-.0232	1956.		
.2270	-190.	245.	86.	-108.	-202.	337.	-.0011	-.0033	-.0050	-.0057	-.0230	-.0263	1522.		
.2280	-56.	262.	-176.	-333.	-196.	206.	.0045	-.0060	-.0083	-.0131	-.0386	-.0283	1635.		
.2290	92.	263.	-336.	-484.	-212.	64.	.0097	-.0078	-.0112	-.0231	-.0524	-.0283	1987.		
.2300	247.	255.	-361.	-538.	-261.	-73.	.0143	-.0086	-.0137	-.0356	-.0526	-.0265	2249.		
.2310	388.	247.	-263.	-507.	-334.	-185.	.0177	-.0084	-.0157	-.0499	-.0687	-.0236	2369.		
.2320	478.	235.	-84.	-416.	-408.	-254.	.0196	-.0075	-.0169	-.0651	-.0718	-.0208	2374.		
.2330	468.	196.	121.	-300.	-459.	-257.	.0198	-.0059	-.0169	-.0799	-.0733	-.0190	2261.		
.2340	334.	125.	304.	-197.	-476.	-172.	.0185	-.0037	-.0153	-.0929	-.0743	-.0185	2026.		
.2350	89.	48.	433.	-128.	-462.	0.	.0162	-.0009	-.0120	-.1034	-.0754	-.0191	1789.		
.2360	-246.	-25.	512.	-89.	-424.	238.	.0134	.0022	-.0068	-.1117	-.0773	-.0204	1845.		
.2370	-638.	-122.	557.	-69.	-368.	510.	.0104	.0056	.0001	-.1180	-.0789	-.0214	2364.		
.2380	-1031.	-248.	589.	-56.	-309.	779.	.0077	.0092	.0081	-.1224	-.0788	-.0214	3136.		
.2390	-1362.	-371.	622.	-42.	-260.	1004.	.0053	.0129	.0167	-.1252	-.0761	-.0201	3876.		

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2 SAFETY COLD FKW24F--2 PSVCONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITSINTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.2280	-56.	262.	-178.	-333.	-176.	206.	.045	-.0060	-.0083	-.0131	-.0386	-.0283	1635.
.2290	92.	263.	-336.	-484.	-212.	64.	.097	-.0078	-.0112	-.0231	-.0524	-.0283	1987.
.2300	247.	255.	-361.	-538.	-261.	-73.	.043	-.0086	-.0137	-.0356	-.0626	-.0265	2249.
.2310	388.	247.	-263.	-507.	-334.	-185.	.0177	-.0084	-.0157	-.0499	-.0687	-.0236	2369.
.2320	478.	235.	-84.	-416.	-408.	-254.	.0196	-.0075	-.0169	-.0651	-.0718	-.0208	2374.
.2330	468.	196.	121.	-300.	-459.	-257.	.0198	-.0059	-.0169	-.0799	-.0733	-.0190	2261.
.2340	334.	125.	304.	-197.	-476.	-172.	.0185	-.0037	-.0153	-.0929	-.0743	-.0185	2026.
.2350	89.	48.	433.	-128.	-462.	0.	.0162	-.0009	-.0120	-.1034	-.0754	-.0191	1789.
.2360	-246.	-25.	512.	-89.	-424.	238.	.0134	.0022	-.0068	-.1117	-.0773	-.0204	1845.
.2370	-638.	-122.	557.	-69.	-368.	510.	.0104	.0056	.0001	-.1180	-.0789	-.0214	2364.
.2380	-1031.	-248.	589.	-56.	-309.	779.	.0077	.0092	.0081	-.1224	-.0788	-.0214	3136.
.2390	-1362.	-371.	622.	-42.	-260.	1004.	.0053	.0129	.0167	-.1252	-.0761	-.0201	3876.

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

2 SAFETY COLD FKM24F--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	EL								
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)	
.2400	-1601.	-473.	666.	-20.	-229.	1164.	.0035	.0162	.0250	-.1268	-.0709	-.0178	4429.	
.2410	-1752.	-565.	714.	6.	-208.	1254.	.0023	.0192	.0324	-.1270	-.0635	-.0143	4746.	
.2420	-1810.	-651.	738.	14.	-190.	1275.	.0017	.0218	.0383	-.1250	-.0545	-.0096	4813.	
.2430	-1773.	-726.	706.	-16.	-167.	1230.	.0015	.0241	.0422	-.1205	-.0446	-.0034	4635.	
.2440	-1663.	-798.	604.	-95.	-130.	1133.	.0017	.0259	.0440	-.1132	-.0345	.0038	4273.	
.2450	-1504.	-861.	437.	-215.	-74.	997.	.0022	.0270	.0439	-.1038	-.0247	.0112	3816.	
.2460	-1293.	-891.	221.	-366.	-9.	823.	.0030	.0274	.0421	-.0933	-.0155	.0181	3361.	
.2470	-1033.	-879.	-22.	-533.	53.	618.	.0042	.0268	.0389	-.0829	-.0068	.0244	3053.	
.2480	-751.	-859.	-263.	-694.	111.	399.	.0057	.0256	.0346	-.0730	.0014	.0308	3019.	
.2490	-467.	-853.	-474.	-830.	163.	177.	.0075	.0238	.0293	-.0640	.0093	.0374	3226.	
.2500	-176.	-830.	-651.	-933.	204.	-48.	.0096	.0214	.0231	-.0562	.0160	.0435	3570.	
.2510	120.	-766.	-794.	-1006.	229.	-269.	.0121	.0183	.0164	-.0499	.0210	.0482	3981.	
.2520	392.	-675.	-905.	-1050.	245.	-466.	.0148	.0148	.0091	-.0450	.0240	.0510	4383.	
.2530	612.	-580.	-983.	-1062.	259.	-624.	.0178	.0111	.0016	-.0411	.0245	.0522	4699.	
.2540	770.	-484.	-1035.	-1047.	273.	-736.	.0211	.0073	-.0058	-.0384	.0228	.0518	4887.	
.2550	871.	-377.	-1062.	-1009.	285.	-800.	.0246	.0035	-.0127	-.0371	.0193	.0500	4925.	
.2560	917.	-256.	-1053.	-943.	293.	-818.	.0284	-.0002	-.0187	-.0380	.0145	.0466	4788.	
.2570	906.	-124.	-1000.	-843.	295.	-793.	.0323	-.0038	-.0237	-.0412	.0089	.0415	4460.	
.2580	836.	-5.	-900.	-711.	291.	-726.	.0362	-.0071	-.0276	-.0463	.0028	.0353	3949.	
.2590	719.	89.	-760.	-553.	280.	-629.	.0401	-.0103	-.0305	-.0526	-.0034	.0286	3297.	
.2600	569.	173.	-591.	-381.	264.	-507.	.0438	-.0133	-.0325	-.0598	-.0097	.0215	2565.	
.2610	391.	260.	-408.	-204.	245.	-369.	.0472	-.0164	-.0336	-.0678	-.0166	.0142	1819.	
.2620	189.	332.	-220.	-34.	223.	-215.	.0504	-.0194	-.0343	-.0758	-.0238	.0070	1165.	
.2630	-21.	375.	-38.	118.	200.	-61.	.0533	-.0222	-.0345	-.0832	-.0311	.0007	895.	
.2640	-213.	394.	121.	242.	174.	76.	.0560	-.0248	-.0343	-.0897	-.0386	-.0042	1149.	
.2650	-372.	392.	255.	337.	144.	185.	.0584	-.0272	-.0340	-.0952	-.0462	-.0074	1532.	
.2660	-496.	374.	365.	401.	108.	265.	.0606	-.0294	-.0334	-.0997	-.0536	-.0089	1838.	
.2670	-580.	345.	451.	434.	62.	314.	.0626	-.0313	-.0327	-.1030	-.0604	-.0088	2014.	
.2680	-619.	294.	511.	437.	9.	327.	.0645	-.0328	-.0319	-.1046	-.0667	-.0068	2038.	
.2690	-608.	227.	535.	407.	-49.	300.	.0662	-.0341	-.0310	-.1045	-.0726	-.0029	1897.	
.2700	-548.	165.	517.	342.	-110.	239.	.0676	-.0350	-.0299	-.1027	-.0783	.0024	1611.	
.2710	-460.	111.	460.	244.	-171.	161.	.0685	-.0355	-.0288	-.0995	-.0836	.0085	1264.	
.2720	-376.	27.	376.	122.	-226.	84.	.0688	-.0351	-.0277	-.0947	-.0879	.0151	1008.	
.2730	-305.	-98.	275.	-15.	-270.	10.	.0684	-.0342	-.0266	-.0886	-.0912	.0218	1012.	
.2740	-229.	-213.	162.	-155.	-310.	-68.	.0672	-.0332	-.0255	-.0817	-.0936	.0284	1319.	
.2750	-143.	-283.	57.	-284.	-352.	-145.	.0653	-.0323	-.0245	-.0746	-.0948	.0347	1770.	
.2760	-80.	-347.	-11.	-363.	-395.	-200.	.0627	-.0312	-.0236	-.0670	-.0944	.0403	2185.	
.2770	-69.	-450.	-32.	-443.	-437.	-223.	.0595	-.0299	-.0227	-.0591	-.0924	.0452	2469.	

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LOADS

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

.2670	-580.	345.	451.	434.	62.	314.	.0626	-.0313	-.0327	-.1030	-.0604	-.0088	2014.
.2680	-619.	294.	511.	437.	9.	327.	.0645	-.0328	-.0319	-.1046	-.0667	-.0068	2038.
.2690	-608.	227.	535.	407.	-49.	300.	.0662	-.0341	-.0310	-.1045	-.0726	-.0029	1897.
.2700	-548.	161.	517.	342.	-110.	239.	.0676	-.0350	-.0299	-.1027	-.0783	.0024	1611.
.2710	-460.	111.	460.	244.	-171.	161.	.0685	-.0355	-.0288	-.0995	-.0836	.0085	1264.
.2720	-376.	27.	376.	122.	-226.	84.	.0688	-.0351	-.0277	-.0947	-.0879	.0151	1008.
.2730	-305.	-98.	275.	-15.	-270.	10.	.0684	-.0342	-.0266	-.0886	-.0912	.0218	1012.
.2740	-229.	-213.	162.	-155.	-310.	-68.	.0672	-.0332	-.0255	-.0817	-.0936	.0284	1319.
.2750	-143.	-283.	57.	-284.	-352.	-145.	.0653	-.0323	-.0245	-.0746	-.0948	.0347	1770.
.2760	-80.	-347.	-11.	-383.	-395.	-200.	.0627	-.0312	-.0236	-.0670	-.0944	.0403	2185.
.2770	-69.	-450.	-32.	-443.	-437.	-223.	.0595	-.0299	-.0227	-.0591	-.0924	.0452	2469.

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

SECTION	51	MEMBER	1	SEQUENCE	71	LOCATION	BEG	TYPE	EL						
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)		
.2780	-98.	-565.	-17.	-467.	-475.	-221.	.0556	-.0285	-.0216	-.0512	-.0896	.0495	2619.		
.2790	-151.	-644.	18.	-463.	-507.	-193.	.0512	-.0272	-.0204	-.0437	-.0363	.0529	2663.		
.2800	-245.	-696.	67.	-439.	-530.	-125.	.0462	-.0259	-.0190	-.0365	-.0324	.0548	2610.		
.2810	-415.	-763.	129.	-397.	-537.	-4.	.0407	-.0245	-.0176	-.0293	-.0785	.0546	2491.		
.2820	-647.	-845.	194.	-342.	-521.	156.	.0346	-.0230	-.0164	-.0223	-.0747	.0526	2398.		
.2830	-885.	-894.	250.	-280.	-487.	327.	.0287	-.0218	-.0156	-.0154	-.0709	.0493	2426.		
.2840	-1089.	-889.	300.	-211.	-444.	487.	.0228	-.0209	-.0155	-.0086	-.0667	.0452	2585.		
.2850	-1265.	-866.	367.	-124.	-402.	631.	.0173	-.0200	-.0162	-.0022	-.0619	.0402	2831.		
.2860	-1404.	-846.	463.	-8.	-363.	745.	.0127	-.0189	-.0176	.0036	-.0565	.0348	3094.		
.2870	-1457.	-797.	572.	124.	-332.	802.	.0093	-.0177	-.0196	.0086	-.0507	.0297	3275.		
.2880	-1388.	-695.	661.	249.	-314.	786.	.0074	-.0165	-.0219	.0128	-.0448	.0252	3293.		
.2890	-1221.	-562.	712.	352.	-302.	706.	.0073	-.0152	-.0244	.0167	-.0396	.0211	3153.		
.2900	-1002.	-420.	715.	424.	-287.	585.	.0088	-.0137	-.0269	.0202	-.0360	.0170	2903.		
.2910	-739.	-250.	652.	453.	-264.	435.	.0120	-.0120	-.0292	.0239	-.0345	.0126	2544.		
.2920	-421.	-44.	509.	428.	-236.	254.	.0165	-.0103	-.0313	.0281	-.0351	.0084	2057.		
.2930	-69.	171.	303.	360.	-201.	52.	.0219	-.0085	-.0331	.0329	-.0373	.0045	1551.		
.2940	285.	377.	80.	281.	-162.	-157.	.0279	-.0068	-.0348	.0376	-.0402	.0009	1344.		
.2950	627.	585.	-117.	219.	-126.	-359.	.0338	-.0049	-.0362	.0415	-.0426	-.0021	1637.		
.2960	953.	790.	-261.	190.	-105.	-544.	.0394	-.0030	-.0373	.0443	-.0431	-.0042	2187.		
.2970	1248.	957.	-334.	204.	-98.	-708.	.0440	-.0010	-.0379	.0458	-.0411	-.0051	2775.		
.2980	1481.	1069.	-332.	268.	-95.	-840.	.0474	.0010	-.0381	.0460	-.0369	-.0048	3311.		
.2990	1632.	1149.	-269.	370.	-93.	-923.	.0493	.0026	-.0375	.0451	-.0311	-.0040	3729.		
.3000	1690.	1212.	-170.	487.	-88.	-942.	.0496	.0040	-.0364	.0440	-.0239	-.0030	3971.		
.3010	1643.	1230.	-59.	601.	-74.	-891.	.0483	.0050	-.0346	.0437	-.0161	-.0020	4022.		
.3020	1493.	1180.	47.	702.	-43.	-787.	.0456	.0057	-.0321	.0444	-.0087	-.0009	3940.		
.3030	1274.	1084.	137.	784.	1.	-651.	.0417	.0059	-.0289	.0461	-.0019	.0006	3804.		
.3040	1023.	971.	215.	846.	45.	-497.	.0371	.0056	-.0251	.0487	.0048	.0027	3666.		
.3050	759.	835.	296.	892.	79.	-340.	.0319	.0050	-.0208	.0518	.0118	.0056	3577.		
.3060	495.	651.	386.	932.	104.	-198.	.0266	.0041	-.0161	.0550	.0192	.0096	3578.		
.3070	265.	430.	473.	958.	121.	-98.	.0212	.0028	-.0113	.0580	.0265	.0149	3622.		
.3080	107.	213.	536.	954.	126.	-52.	.0161	.0010	-.0065	.0609	.0337	.0214	3597.		
.3090	13.	11.	562.	911.	122.	-51.	.0111	-.0012	-.0020	.0641	.0401	.0282	3435.		
.3100	-48.	-190.	546.	828.	120.	-79.	.0065	-.0036	.0020	.0676	.0451	.0348	3136.		
.3110	-77.	-391.	477.	703.	124.	-136.	.0022	-.0060	.0054	.0713	.0481	.0408	2715.		
.3120	-50.	-571.	350.	535.	133.	-226.	-.0017	-.0083	.0081	.0752	.0492	.0466	2226.		
.3130	34.	-722.	178.	336.	140.	-344.	-.0051	-.0104	.0103	.0791	.0487	.0520	1871.		
.3140	143.	-847.	-3.	134.	144.	-473.	-.0081	-.0122	.0121	.0821	.0470	.0567	1911.		
.3150	261.	-938.	-166.	-46.	142.	-598.	-.0105	-.0137	.0134	.0836	.0444	.0604	2303.		

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.3050	759.	835.	296.	892.	79.	-340.	.0319	.0050	-.0208	.0518	.0118	.0056	3577.
.3060	495.	651.	326.	932.	104.	-198.	.0266	.0041	-.0161	.0550	.0192	.0096	3578.
.3070	265.	430.	473.	958.	121.	-98.	.0212	.0028	-.0113	.0580	.0265	.0149	3622.
.3080	107.	213.	536.	954.	126.	-52.	.0161	.0010	-.0065	.0609	.0337	.0214	3597.
.3090	13.	11.	562.	911.	122.	-51.	.0111	-.0012	-.0020	.0641	.0401	.0282	3435.
.3100	-48.	-190.	546.	828.	120.	-79.	.0065	-.0036	.0020	.0676	.0451	.0348	3136.
.3110	-77.	-391.	477.	703.	124.	-136.	.0022	-.0060	.0054	.0713	.0481	.0408	2715.
.3120	-50.	-571.	350.	535.	133.	-226.	-.0017	-.0083	.0081	.0752	.0492	.0466	2226.
.3130	34.	-722.	178.	336.	140.	-344.	-.0051	-.0104	.0103	.0791	.0487	.0520	1871.
.3140	143.	-847.	-3.	134.	144.	-473.	-.0081	-.0122	.0121	.0821	.0470	.0567	1911.
.3150	261.	-938.	-166.	-46.	142.	-598.	-.0105	-.0137	.0134	.0836	.0444	.0604	2303.

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INTERNAL FORCES IN THE PIPING
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SECTION	51	MEMBER	1	SEQUENCE	71	LOCATION	BEG	TYPE	EL						
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)		
.3160	395.	-984.	-304.	-198.	131.	-717.	-.0127	-.0147	.0144	.0835	.0413	.0630	2821.		
.3170	537.	-993.	-417.	-320.	112.	-822.	-.0146	-.0153	.0151	.0823	.0379	.0644	3320.		
.3180	654.	-976.	-499.	-403.	93.	-896.	-.0165	-.0154	.0154	.0802	.0338	.0642	3685.		
.3190	719.	-923.	-546.	-442.	79.	-921.	-.0184	-.0151	.0154	.0772	.0288	.0617	3824.		
.3200	730.	-823.	-561.	-441.	68.	-888.	-.0204	-.0144	.0152	.0736	.0231	.0568	3709.		
.3210	688.	-695.	-550.	-407.	59.	-800.	-.0227	-.0132	.0150	.0700	.0172	.0497	3355.		
.3220	591.	-565.	-508.	-334.	56.	-666.	-.0250	-.0117	.0147	.0660	.0112	.0408	2790.		
.3230	447.	-426.	-431.	-221.	59.	-498.	-.0273	-.0103	.0147	.0614	.0055	.0305	2046.		
.3240	275.	-260.	-321.	-75.	59.	-302.	-.0294	-.0089	.0150	.0561	.0008	.0191	1183.		
.3250	89.	-76.	-182.	92.	53.	-89.	-.0312	-.0078	.0154	.0505	-.0023	.0070	518.		
.3260	-102.	97.	-29.	271.	46.	122.	-.0326	-.0070	.0160	.0451	-.0044	-.0053	1122.		
.3270	-280.	249.	118.	445.	43.	311.	-.0334	-.0067	.0165	.0400	-.0059	-.0169	2036.		
.3280	-425.	393.	239.	596.	43.	470.	-.0337	-.0070	.0168	.0361	-.0068	-.0275	2837.		
.3290	-527.	535.	324.	709.	40.	594.	-.0332	-.0079	.0168	.0336	-.0072	-.0369	3457.		
.3300	-594.	653.	376.	785.	39.	680.	-.0322	-.0094	.0165	.0323	-.0072	-.0451	3878.		
.3310	-621.	732.	393.	821.	40.	717.	-.0305	-.0116	.0159	.0320	-.0069	-.0514	4071.		
.3320	-586.	782.	372.	815.	40.	695.	-.0281	-.0145	.0153	.0326	-.0061	-.0553	4000.		
.3330	-486.	818.	318.	767.	34.	618.	-.0253	-.0180	.0146	.0338	-.0044	-.0569	3680.		
.3340	-347.	828.	245.	688.	23.	502.	-.0221	-.0221	.0139	.0354	-.0017	-.0564	3179.		
.3350	-195.	802.	157.	583.	14.	359.	-.0187	-.0265	.0132	.0371	.0015	-.0542	2558.		
.3360	-25.	750.	49.	453.	9.	195.	-.0152	-.0311	.0125	.0393	.0051	-.0504	1839.		
.3370	162.	684.	-83.	295.	7.	15.	-.0119	-.0358	.0116	.0420	.0090	-.0452	1101.		
.3380	342.	597.	-227.	122.	11.	-162.	-.0090	-.0403	.0105	.0450	.0131	-.0392	757.		
.3390	487.	491.	-362.	-47.	24.	-320.	-.0064	-.0445	.0093	.0479	.0173	-.0330	1210.		
.3400	602.	383.	-475.	-201.	40.	-454.	-.0043	-.0483	.0079	.0502	.0218	-.0269	1861.		
.3410	697.	285.	-559.	-333.	54.	-567.	-.0028	-.0515	.0066	.0515	.0269	-.0210	2461.		
.3420	764.	186.	-605.	-431.	67.	-652.	-.0017	-.0542	.0054	.0516	.0326	-.0154	2931.		
.3430	786.	83.	-603.	-487.	80.	-703.	-.0012	-.0562	.0044	.0503	.0386	-.0107	3207.		
.3440	760.	-4.	-557.	-502.	92.	-712.	-.0010	-.0575	.0037	.0475	.0447	-.0072	3271.		
.3450	696.	-62.	-485.	-488.	105.	-679.	-.0013	-.0582	.0032	.0436	.0508	-.0053	3147.		
.3460	594.	-105.	-400.	-453.	123.	-610.	-.0019	-.0581	.0031	.0390	.0563	-.0050	2873.		
.3470	454.	-145.	-309.	-402.	149.	-510.	-.0028	-.0575	.0031	.0339	.0509	-.0062	2486.		
.3480	290.	-169.	-217.	-338.	181.	-388.	-.0038	-.0564	.0033	.0284	.0546	-.0089	2038.		
.3490	129.	-158.	-128.	-268.	211.	-257.	-.0047	-.0551	.0035	.0226	.0674	-.0129	1594.		
.3500	-14.	-118.	-38.	-193.	233.	-131.	-.0054	-.0534	.0037	.0164	.0596	-.0178	1231.		
.3510	-126.	-71.	53.	-112.	249.	-27.	-.0057	-.0517	.0038	.0102	.0712	-.0230	1023.		
.3520	-191.	-21.	136.	-32.	256.	42.	-.0055	-.0498	.0036	.0041	.0719	-.0280	977.		
.3530	-195.	46.	200.	34.	252.	72.	-.0048	-.0479	.0032	-.0014	.0720	-.0326	986.		

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.3430	788.	83.	-603.	-487.	80.	-703.	-.0012	-.0562	.0044	.0503	.0386	-.0107	3207.
.3440	760.	-4.	-557.	-502.	92.	-712.	-.0010	-.0575	.0037	.0475	.0447	-.0072	3271.
.3450	696.	-62.	-485.	-488.	105.	-679.	-.0013	-.0582	.0032	.0436	.0508	-.0053	3147.
.3460	594.	-105.	-400.	-453.	123.	-610.	-.0019	-.0581	.0031	.0390	.0563	-.0050	2873.
.3470	454.	-145.	-309.	-402.	149.	-510.	-.0028	-.0575	.0031	.0339	.0509	-.0062	2486.
.3480	290.	-169.	-217.	-338.	181.	-388.	-.0038	-.0564	.0033	.0284	.0546	-.0089	2038.
.3490	129.	-158.	-128.	-268.	211.	-257.	-.0047	-.0551	.0035	.0226	.0674	-.0129	1594.
.3500	-14.	-118.	-38.	-193.	233.	-131.	-.0054	-.0534	.0037	.0164	.0696	-.0178	1231.
.3510	-126.	-71.	53.	-112.	249.	-27.	-.0057	-.0517	.0038	.0102	.0712	-.0230	1023.
.3520	-191.	-21.	136.	-32.	256.	42.	-.0055	-.0498	.0036	.0041	.0719	-.0280	977.
.3530	-195.	46.	200.	34.	252.	72.	-.0048	-.0479	.0032	-.0014	.0720	-.0326	986.

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INTERNAL FORCES IN THE PIPING
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SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	EL	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)
.3540	51	1	71					-143.	132.	236.	78.	238.	65.	-.0036	-.0460	.0025	-.0059	.0712	-.0369	966.
.3550								-53.	219.	237.	95.	221.	27.	-.0018	-.0442	-.0014	-.0091	.0692	-.0408	905.
.3560								67.	294.	195.	78.	207.	-39.	.0002	-.0424	-.0001	-.0108	.0659	-.0442	837.
.3570								216.	364.	108.	23.	193.	-128.	.0024	-.0409	-.0018	-.0108	.0516	-.0470	868.
.3580								382.	432.	-11.	-60.	179.	-231.	.0045	-.0395	-.0036	-.0094	.0566	-.0492	1112.
.3590								545.	489.	-139.	-156.	162.	-335.	.0064	-.0382	-.0056	-.0071	.0511	-.0511	1509.
.3600								688.	526.	-255.	-250.	142.	-433.	.0078	-.0370	-.0075	-.0042	.0455	-.0525	1941.
.3610								813.	542.	-348.	-334.	112.	-520.	.0088	-.0357	-.0092	-.0010	.0401	-.0533	2344.
.3620								909.	536.	-409.	-400.	74.	-587.	.0090	-.0343	-.0106	.0022	.0348	-.0535	2666.
.3630								954.	505.	-432.	-443.	30.	-621.	.0085	-.0327	-.0116	.0054	.0295	-.0534	2848.
.3640								932.	457.	-419.	-461.	-17.	-608.	.0073	-.0309	-.0119	.0083	.0239	-.0533	2849.
.3650								838.	400.	-380.	-463.	-64.	-542.	.0053	-.0289	-.0116	.0107	.0180	-.0535	2671.
.3660								674.	330.	-326.	-454.	-106.	-423.	.0026	-.0266	-.0106	.0129	.0116	-.0540	2351.
.3670								441.	240.	-264.	-437.	-139.	-255.	-.0008	-.0240	-.0089	.0146	.0047	-.0546	1958.
.3680								149.	140.	-190.	-409.	-162.	-44.	-.0046	-.0211	-.0068	.0155	-.0023	-.0554	1650.
.3690								-178.	49.	-102.	-368.	-181.	198.	-.0087	-.0180	-.0044	.0154	-.0091	-.0563	1700.
.3700								-515.	-29.	1.	-313.	-198.	453.	-.0128	-.0147	-.0020	.0143	-.0153	-.0570	2185.
.3710								-838.	-110.	122.	-243.	-215.	700.	-.0169	-.0112	.0001	.0122	-.0206	-.0572	2881.
.3720								-1127.	-194.	256.	-158.	-231.	922.	-.0205	-.0076	.0018	.0091	-.0250	-.0567	3596.
.3730								-1360.	-263.	392.	-69.	-248.	1104.	-.0235	-.0042	.0030	.0051	-.0285	-.0555	4232.
.3740								-1523.	-300.	515.	16.	-267.	1240.	-.0257	-.0012	.0036	.0006	-.0313	-.0537	4737.
.3750								-1618.	-313.	611.	84.	-283.	1327.	-.0267	.0014	.0036	-.0043	-.0336	-.0515	5075.
.3760								-1647.	-324.	666.	127.	-290.	1360.	-.0267	.0035	.0033	-.0091	-.0360	-.0488	5213.
.3770								-1609.	-331.	669.	137.	-289.	1337.	-.0254	.0049	.0026	-.0135	-.0387	-.0457	5133.
.3780								-1502.	-320.	616.	113.	-281.	1262.	-.0229	.0055	.0016	-.0174	-.0417	-.0421	4844.
.3790								-1341.	-286.	525.	62.	-267.	1143.	-.0193	.0052	.0006	-.0209	-.0449	-.0384	4386.
.3800								-1142.	-244.	406.	-4.	-248.	989.	-.0149	.0041	-.0005	-.0240	-.0482	-.0347	3806.
.3810								-915.	-206.	274.	-77.	-227.	806.	-.0099	.0022	-.0016	-.0268	-.0510	-.0307	3140.
.3820								-667.	-173.	144.	-146.	-205.	603.	-.0047	-.0004	-.0027	-.0294	-.0531	-.0265	2438.
.3830								-418.	-146.	31.	-201.	-182.	394.	.0004	-.0034	-.0036	-.0319	-.0541	-.0223	1786.
.3840								-194.	-126.	-55.	-236.	-158.	198.	.0050	-.0069	-.0043	-.0344	-.0538	-.0182	1294.
.3850								-15.	-115.	-111.	-248.	-131.	31.	.0088	-.0105	-.0048	-.0369	-.0523	-.0145	1053.
.3860								112.	-126.	-140.	-241.	-98.	-99.	.0115	-.0143	-.0048	-.0392	-.0494	-.0110	1039.
.3870								176.	-161.	-149.	-220.	-55.	-188.	.0131	-.0180	-.0045	-.0409	-.0453	-.0078	1100.
.3880								176.	-204.	-141.	-186.	-3.	-231.	.0136	-.0217	-.0038	-.0421	-.0401	-.0050	1107.
.3890								119.	-237.	-119.	-140.	55.	-227.	.0128	-.0251	-.0027	-.0428	-.0341	-.0025	1017.
.3900								15.	-266.	-83.	-86.	117.	-181.	.0111	-.0279	-.0013	-.0428	-.0270	-.0003	869.
.3910								-122.	-314.	-39.	-28.	180.	-107.	.0084	-.0297	.0004	-.0419	-.0192	.0020	789.

ADLPIPE PAGE 1961

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.05.

S/RV PIPING KEWAUNEE GKMOBF 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

.3810	-915.	-206.	274.	-77.	-227.	806.	-.0099	.0022	-.0016	-.0268	-.0510	-.0307	3140.
.3820	-667.	-173.	144.	-146.	-205.	603.	-.0047	-.0004	-.0027	-.0294	-.0531	-.0265	2438.
.3830	-418.	-146.	31.	-201.	-182.	394.	.0004	-.0034	-.0036	-.0319	-.0541	-.0223	1786.
.3840	-194.	-126.	-55.	-236.	-158.	198.	.0050	-.0069	-.0043	-.0344	-.0538	-.0182	1294.
.3850	-15.	-115.	-111.	-248.	-131.	31.	.0088	-.0105	-.0048	-.0360	-.0523	-.0145	1053.
.3860	112.	-126.	-140.	-241.	-98.	-99.	.0115	-.0143	-.0048	-.0392	-.0494	-.0110	1039.
.3870	176.	-161.	-149.	-220.	-55.	-188.	.0131	-.0180	-.0045	-.0409	-.0453	-.0078	1100.
.3880	176.	-204.	-141.	-186.	-3.	-231.	.0136	-.0217	-.0038	-.0421	-.0401	-.0050	1107.
.3890	119.	-237.	-119.	-140.	55.	-227.	.0128	-.0251	-.0027	-.0428	-.0341	-.0025	1017.
.3900	15.	-266.	-83.	-86.	117.	-181.	.0111	-.0279	-.0013	-.0428	-.0270	-.0003	869.
.3910	-122.	-314.	-39.	-28.	180.	-107.	.0084	-.0297	.0004	-.0419	-.0192	.0020	789.

ADLPIPE PAGE 1961

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.05.

S/RV PIPING KEWAUNEE GKW08F 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	51	MEMBER	1	SEQUENCE	71	LOCATION	BEG	TYPE	EL						
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)		
.3920	-272.	-382.	9.	33.	242.	-18.	.0050	-.0304	.0021	-.0402	-.0109	.0048	915.		
.3930	-411.	-440.	57.	93.	299.	74.	.0012	-.0301	.0039	-.0377	-.0025	.0083	1202.		
.3940	-525.	-460.	96.	145.	347.	164.	-.0029	-.0287	.0055	-.0344	.0060	.0121	1532.		
.3950	-613.	-477.	119.	182.	387.	246.	-.0072	-.0263	.0069	-.0304	.0142	.0162	1842.		
.3960	-667.	-482.	117.	199.	422.	312.	-.0113	-.0229	.0080	-.0255	.0218	.0206	2096.		
.3970	-676.	-478.	81.	190.	455.	352.	-.0153	-.0187	.0087	-.0199	.0285	.0252	2261.		
.3980	-630.	-445.	9.	154.	481.	364.	-.0189	-.0137	.0091	-.0136	.0342	.0301	2323.		
.3990	-537.	-380.	-92.	95.	497.	353.	-.0219	-.0082	.0091	-.0069	.0387	.0350	2305.		
.4000	-410.	-302.	-207.	23.	505.	324.	-.0244	-.0021	.0089	-.0003	.0421	.0397	2242.		

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)		
.1690	-900.	1420.	1033.	900.	-414.	1449.	-.0415	-.0088	.0043	.0718	.0580	.0539	6550.		

SECTION	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL						
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.	-1.	0.	0.	0.	0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	1.		
.0030	1.	-1.	1.	0.	0.	-0.	-.0000	-.0000	-.0000	-.0000	-.0001	.0000	3.		
.0040	3.	-1.	3.	2.	0.	-2.	-.0000	.0000	-.0000	-.0001	-.0002	.0000	10.		
.0050	9.	-0.	6.	4.	-1.	-6.	-.0001	.0000	-.0001	-.0002	-.0004	.0001	27.		
.0060	20.	3.	10.	7.	-3.	-13.	-.0003	.0000	-.0002	-.0003	-.0007	.0001	57.		
.0070	35.	6.	14.	11.	-5.	-23.	-.0005	.0000	-.0005	-.0005	-.0011	.0001	97.		
.0080	54.	5.	18.	15.	-7.	-35.	-.0010	.0000	-.0009	-.0010	-.0018	.0000	144.		
.0090	85.	5.	18.	18.	-10.	-54.	-.0017	.0000	-.0014	-.0017	-.0024	-.0002	216.		
.0100	137.	16.	13.	18.	-20.	-87.	-.0028	.0001	-.0021	-.0024	-.0026	-.0008	340.		
.0110	214.	40.	2.	14.	-38.	-135.	-.0045	.0002	-.0031	-.0032	-.0020	-.0018	524.		
.0120	310.	78.	-17.	6.	-66.	-192.	-.0068	.0003	-.0042	-.0043	-.0000	-.0034	758.		
.0130	413.	123.	-45.	-4.	-102.	-250.	-.0097	.0002	-.0055	-.0059	.0034	-.0058	1009.		
.0140	503.	164.	-80.	-16.	-142.	-298.	-.0129	-.0002	-.0069	-.0085	.0083	-.0088	1233.		
.0150	560.	193.	-123.	-27.	-182.	-323.	-.0161	-.0009	-.0084	-.0117	.0144	-.0117	1386.		

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	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL						
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)		
.0160	563.	212.	-168.	-38.	-215.	-316.	-.0186	-.0017	-.0099	-.0150	.0211	-.0132	1433.		
.0170	493.	215.	-208.	-50.	-233.	-267.	-.0198	-.0024	-.0110	-.0173	.0277	-.0125	1334.		
.0180	342.	188.	-230.	-61.	-233.	-169.	-.0193	-.0030	-.0116	-.0175	.0337	-.0092	1099.		
.0190	121.	131.	-219.	-67.	-219.	-32.	-.0166	-.0032	-.0112	-.0148	.0392	-.0039	863.		
.0200	-150.	22.	-158.	-60.	-197.	136.	-.0119	-.0033	-.0093	-.0090	.0442	.0025	923.		
.0210	-423.	-110.	-40.	-32.	-185.	304.	-.0055	-.0030	-.0058	-.0002	.0494	.0089	1336.		
.0220	-595.	-122.	138.	28.	-219.	408.	.0014	-.0022	-.0011	.0124	.0569	.0136	1732.		
.0230	-700.	-76.	371.	124.	-285.	471.	.0081	-.0015	.0042	.0258	.0545	.0165	2105.		
.0240	-846.	-102.	617.	241.	-337.	561.	.0148	-.0018	.0096	.0357	.0683	.0185	2604.		
.0250	-1067.	-289.	817.	339.	-329.	699.	.0213	-.0031	.0141	.0406	.0660	.0198	3150.		
.0260	-1226.	-492.	909.	366.	-274.	793.	.0272	-.0034	.0170	.0445	.0606	.0200	3419.		
.0270	-1200.	-388.	859.	317.	-246.	756.	.0309	-.0016	.0173	.0510	.0588	.0195	3196.		
.0280	-1262.	-259.	714.	233.	-205.	761.	.0334	.0006	.0164	.0519	.0567	.0219	3068.		
.0290	-1556.	-506.	520.	122.	-61.	916.	.0365	.0010	.0166	.0408	.0479	.0268	3456.		
.0300	-1537.	-568.	225.	-48.	98.	887.	.0383	.0024	.0178	.0293	.0409	.0258	3338.		
.0310	-1160.	-353.	-150.	-258.	191.	627.	.0378	.0053	.0200	.0203	.0375	.0185	2628.		
.0320	-776.	-293.	-380.	-392.	248.	374.	.0358	.0073	.0241	.0100	.0285	.0088	2224.		
.0330	-349.	-306.	-344.	-376.	266.	135.	.0318	.0077	.0290	.0017	.0126	-.0063	1793.		
.0340	284.	-172.	-212.	-276.	207.	-217.	.0250	.0079	.0321	-.0020	-.0048	-.0295	1523.		
.0350	924.	-127.	-160.	-196.	141.	-596.	.0165	.0083	.0318	-.0056	-.0245	-.0545	2401.		
.0360	1384.	-207.	-182.	-167.	156.	-872.	.0078	.0090	.0280	-.0098	-.0471	-.0728	3365.		
.0370	1722.	-19.	-290.	-196.	203.	-1066.	-.0016	.0109	.0207	-.0115	-.0637	-.0803	4115.		
.0380	1841.	382.	-571.	-299.	220.	-1142.	-.0112	.0134	.0104	-.0165	-.0666	-.0767	4481.		
.0390	1536.	428.	-980.	-449.	297.	-976.	-.0184	.0141	.0003	-.0340	-.0615	-.0645	4162.		
.0400	1052.	82.	-1348.	-584.	505.	-686.	-.0213	.0127	-.0067	-.0590	-.0577	-.0486	3855.		
.0410	890.	123.	-1623.	-679.	660.	-590.	-.0224	.0129	-.0108	-.0728	-.0521	-.0329	4165.		
.0420	874.	452.	-1649.	-652.	661.	-597.	-.0231	.0141	-.0122	-.0714	-.0509	-.0156	4119.		
.0430	718.	565.	-1258.	-433.	595.	-489.	-.0224	.0138	-.0100	-.0557	-.0613	-.0026	3297.		
.0440	696.	514.	-486.	-21.	500.	-406.	-.0214	.0116	-.0059	-.0282	-.0812	-.0042	2407.		
.0450	943.	489.	251.	392.	324.	-495.	-.0215	.0090	-.0028	.0032	-.0983	-.0182	2650.		
.0460	1124.	450.	696.	652.	138.	-589.	-.0224	.0068	-.0016	.0282	-.1079	-.0293	3319.		
.0470	987.	415.	933.	764.	103.	-483.	-.0225	.0044	-.0010	.0411	-.1126	-.0251	3395.		
.0480	656.	514.	910.	712.	182.	-248.	-.0221	.0022	-.0013	.0398	-.1069	-.0073	2894.		
.0490	307.	638.	466.	444.	229.	-44.	-.0226	.0008	-.0035	.0245	-.0822	.0132	1873.		
.0500	-8.	564.	-170.	84.	254.	104.	-.0234	-.0006	-.0060	.0022	-.0457	.0274	1073.		
.0510	-218.	446.	-595.	-184.	291.	223.	-.0239	-.0025	-.0064	-.0137	-.0118	.0329	1531.		
.0520	-294.	458.	-716.	-320.	241.	298.	-.0246	-.0046	-.0042	-.0169	.0127	.0326	1864.		
.0530	-232.	482.	-601.	-344.	51.	286.	-.0254	-.0065	.0021	-.0083	.0269	.0263	1681.		

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

.0430	718.	565.	-1258.	-433.	595.	-489.	-.0224	.0138	-.0100	-.0557	-.0613	-.0026	3297.
.0440	696.	514.	-486.	-21.	500.	-406.	-.0214	.0116	-.0059	-.0282	-.0812	-.0042	2407.
.0450	943.	489.	251.	392.	324.	-495.	-.0215	.0090	-.0028	.0032	-.0783	-.0182	2650.
.0460	1124.	450.	696.	652.	138.	-589.	-.0224	.0068	-.0016	.0282	-.1079	-.0293	3319.
.0470	987.	415.	933.	764.	103.	-483.	-.0225	.0044	-.0010	.0411	-.1126	-.0251	3395.
.0480	656.	514.	910.	712.	182.	-248.	-.0221	.0022	-.0013	.0398	-.1069	-.0073	2894.
.0490	307.	638.	466.	444.	229.	-44.	-.0226	.0008	-.0035	.0245	-.0822	.0132	1873.
.0500	-8.	564.	-170.	84.	254.	104.	-.0234	-.0006	-.0060	.0022	-.0457	.0274	1073.
.0510	-218.	446.	-595.	-184.	291.	223.	-.0239	-.0025	-.0064	-.0137	-.0118	.0329	1531.
.0520	-294.	458.	-716.	-320.	241.	298.	-.0246	-.0046	-.0042	-.0169	.0127	.0326	1864.
.0530	-232.	482.	-601.	-344.	51.	286.	-.0254	-.0065	.0001	-.0083	.0269	.0263	1681.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.05.

S/RV PIPING KEWAUNEE GKWOBF 2 RUP DISK
2 SAFETY COLD FKM24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL						
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)		
.0540	56.	435.	-231.	-229.	-178.	131.	-.0255	-.0080	.0060	.0107	.0315	.0099	1189.		
.0550	511.	355.	298.	-13.	-376.	-119.	-.0246	-.0091	.0127	.0340	.0307	-.0139	1473.		
.0560	824.	223.	716.	153.	-568.	-296.	-.0234	-.0099	.0182	.0513	.0310	-.0327	2459.		
.0570	808.	101.	889.	182.	-728.	-294.	-.0221	-.0100	.0215	.0596	.0384	-.0388	3008.		
.0580	540.	93.	844.	92.	-767.	-147.	-.0204	-.0090	.0225	.0613	.0556	-.0345	2934.		
.0590	74.	36.	558.	-105.	-688.	105.	-.0174	-.0074	.0218	.0529	.0810	-.0242	2627.		
.0600	-549.	-231.	78.	-386.	-582.	426.	-.0125	-.0056	.0200	.0349	.1101	-.0094	3053.		
.0610	-1156.	-516.	-305.	-616.	-486.	726.	-.0060	-.0030	.0188	.0205	.1346	.0088	3991.		
.0620	-1600.	-574.	-337.	-667.	-412.	930.	.0015	.0012	.0196	.0222	.1471	.0276	4540.		
.0630	-1892.	-558.	-40.	-537.	-399.	1044.	.0093	.0060	.0224	.0378	.1435	.0420	4630.		
.0640	-1986.	-682.	491.	-273.	-464.	1057.	.0165	.0099	.0262	.0608	.1249	.0450	4430.		
.0650	-1818.	-876.	1193.	102.	-566.	939.	.0218	.0127	.0295	.0881	.0979	.0342	4111.		
.0660	-1565.	-1025.	1871.	492.	-657.	771.	.0245	.0151	.0306	.1135	.0712	.0186	4204.		
.0670	-1457.	-1116.	2242.	728.	-711.	677.	.0246	.0176	.0280	.1274	.0516	.0100	4564.		
.0680	-1451.	-1057.	2164.	710.	-691.	652.	.0226	.0204	.0215	.1263	.0439	.0117	4428.		
.0690	-1462.	-854.	1657.	464.	-568.	641.	.0191	.0230	.0121	.1107	.0504	.0196	3635.		
.0700	-1583.	-756.	841.	80.	-363.	680.	.0150	.0242	.0014	.0807	.0663	.0303	2892.		
.0710	-1737.	-795.	-36.	-322.	-151.	748.	.0107	.0234	-.0082	.0444	.0829	.0389	3092.		
.0720	-1609.	-657.	-683.	-616.	-17.	699.	.0060	.0214	-.0151	.0175	.0926	.0388	3478.		
.0730	-1144.	-324.	-953.	-715.	10.	486.	.0013	.0186	-.0185	.0077	.0893	.0271	3228.		
.0740	-566.	-126.	-856.	-604.	-22.	211.	-.0023	.0144	-.0185	.0108	.0684	.0058	2391.		
.0750	82.	-85.	-484.	-339.	-63.	-92.	-.0042	.0089	-.0161	.0227	.0321	-.0226	1333.		
.0760	830.	45.	-25.	-36.	-104.	-433.	-.0051	.0032	-.0133	.0402	-.0095	-.0520	1668.		
.0770	1443.	258.	284.	180.	-124.	-711.	-.0056	-.0016	-.0121	.0549	-.0453	-.0723	2778.		
.0780	1707.	412.	301.	239.	-73.	-819.	-.0059	-.0058	-.0131	.0584	-.0577	-.0786	3197.		
.0790	1739.	570.	2.	125.	59.	-799.	-.0064	-.0094	-.0160	.0487	-.0725	-.0751	3025.		
.0800	1667.	751.	-573.	-137.	220.	-717.	-.0075	-.0129	-.0202	.0268	-.0602	-.0670	2847.		
.0810	1429.	783.	-1260.	-450.	373.	-561.	-.0087	-.0163	-.0245	-.0029	-.0386	-.0554	3025.		
.0820	1108.	703.	-1773.	-677.	502.	-376.	-.0094	-.0100	-.0270	-.0281	-.0184	-.0426	3446.		
.0830	957.	749.	-1931.	-736.	559.	-292.	-.0094	-.0200	-.0273	-.0369	-.0069	-.0336	3617.		
.0840	1006.	870.	-1748.	-630.	510.	-327.	-.0084	-.0195	-.0253	-.0290	-.0080	-.0308	3261.		
.0850	1069.	808.	-1295.	-383.	415.	-384.	-.0056	-.0183	-.0212	-.0105	-.0225	-.0330	2549.		
.0860	1081.	607.	-669.	-50.	350.	-419.	-.0011	-.0167	-.0152	.0143	-.0444	-.0378	2047.		
.0870	1044.	476.	-87.	246.	317.	-429.	.0043	-.0139	-.0084	.0393	-.0634	-.0405	2194.		
.0880	845.	395.	232.	390.	310.	-355.	.0102	-.0102	-.0015	.0543	-.0719	-.0353	2283.		
.0890	434.	252.	266.	375.	372.	-172.	.0166	-.0060	.0055	.0546	-.0685	-.0211	2074.		
.0900	-41.	88.	106.	260.	511.	38.	.0227	-.0015	.0126	.0435	-.0552	-.0031	2146.		
.0910	-425.	-43.	-159.	96.	645.	186.	.0274	.0032	.0191	.0265	-.0373	.0136	2531.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.05.

S/RV PIPING KEWAUNEE GKWOBF 2 RUP DISK
2 SAFETY COLD FKM24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.0810	1429.	783.	-1260.	-450.	373.	-561.	-.0087	-.0163	-.0245	-.0029	-.0386	-.0554	3025.
.0820	1108.	703.	-1773.	-677.	502.	-376.	-.0094	-.0190	-.0270	-.0281	-.0184	-.0426	3446.
.0830	957.	749.	-1931.	-736.	559.	-292.	-.0094	-.0200	-.0273	-.0369	-.0069	-.0336	3617.
.0840	1006.	870.	-1748.	-630.	510.	-327.	-.0084	-.0195	-.0253	-.0290	-.0080	-.0308	3261.
.0850	1069.	808.	-1295.	-383.	415.	-384.	-.0056	-.0183	-.0212	-.0105	-.0225	-.0330	2549.
.0860	1081.	607.	-669.	-50.	350.	-419.	-.0011	-.0167	-.0152	.0143	-.0444	-.0378	2047.
.0870	1044.	476.	-87.	246.	317.	-429.	.0043	-.0139	-.0084	.0393	-.0634	-.0405	2194.
.0880	845.	395.	232.	390.	310.	-355.	.0102	-.0102	-.0015	.0543	-.0719	-.0353	2283.
.0890	434.	252.	266.	375.	372.	-172.	.0166	-.0060	.0055	.0546	-.0585	-.0211	2074.
.0900	-41.	88.	106.	260.	511.	38.	.0227	-.0015	.0126	.0435	-.0552	-.0031	2146.
.0910	-425.	-43.	-159.	96.	645.	186.	.0274	.0032	.0191	.0265	-.0373	.0136	2531.

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ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKW08F 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	EL	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)
.0920	-656.	-153.	-374.	-39.	700.	249.	.0296	.0077	.0244	.0106	-.0228	.0245	2776.
.0930	-685.	-226.	-337.	-42.	669.	215.	.0288	.0117	.0282	.0046	-.0178	.0256	2627.
.0940	-506.	-271.	-21.	108.	556.	75.	.0247	.0152	.0296	.0109	-.0222	.0149	2134.
.0950	-207.	-361.	395.	323.	369.	-133.	.0179	.0182	.0277	.0224	-.0313	-.0038	1900.
.0960	109.	-481.	730.	503.	167.	-351.	.0097	.0210	.0227	.0306	-.0396	-.0228	2374.
.0970	341.	-535.	889.	589.	25.	-519.	.0014	.0241	.0152	.0307	-.0412	-.0343	2933.
.0980	364.	-532.	797.	544.	-35.	-581.	-.0064	.0278	.0055	.0190	-.0323	-.0330	2974.
.0990	155.	-554.	462.	377.	-42.	-522.	-.0130	.0319	-.0059	-.0051	-.0137	-.0202	2409.
.1000	-156.	-604.	46.	171.	-21.	-398.	-.0182	.0359	-.0181	-.0341	.0089	-.0035	1618.
.1010	-467.	-664.	-248.	33.	-0.	-259.	-.0220	.0398	-.0305	-.0577	.0281	.0108	974.
.1020	-779.	-747.	-313.	19.	-18.	-112.	-.0241	.0435	-.0423	-.0687	.0372	.0210	428.
.1030	-1055.	-819.	-118.	134.	-80.	34.	-.0241	.0467	-.0528	-.0644	.0327	.0272	595.
.1040	-1224.	-836.	285.	339.	-154.	148.	-.0214	.0492	-.0609	-.0466	.0165	.0297	1496.
.1050	-1323.	-843.	729.	556.	-207.	239.	-.0159	.0505	-.0658	-.0236	-.0045	.0306	2389.
.1060	-1442.	-880.	1038.	702.	-221.	345.	-.0080	.0504	-.0670	-.0049	-.0219	.0329	3034.
.1070	-1557.	-849.	1146.	738.	-191.	471.	.0011	.0485	-.0645	.0047	-.0306	.0373	3344.
.1080	-1646.	-782.	1075.	666.	-118.	616.	.0106	.0447	-.0584	.0041	-.0305	.0426	3415.
.1090	-1673.	-765.	851.	507.	-33.	738.	.0190	.0396	-.0501	-.0041	-.0235	.0453	3344.
.1100	-1418.	-405.	524.	323.	-43.	689.	.0241	.0348	-.0420	-.0107	-.0079	.0398	2844.
.1110	-1016.	-54.	296.	198.	-95.	581.	.0266	.0285	-.0347	-.0148	.0041	.0270	2319.
.1120	-805.	7.	225.	147.	-152.	491.	.0273	.0198	-.0288	-.0167	.0059	.0105	1997.
.1130	-134.	58.	140.	101.	-244.	332.	.0258	.0117	-.0257	-.0138	.0048	-.0077	1584.
.1140	408.	348.	-54.	11.	-342.	96.	.0226	.0066	-.0249	-.0074	.0071	-.0256	1327.
.1150	873.	712.	-318.	-129.	-386.	-86.	.0194	.0035	-.0241	-.0056	.0126	-.0385	1552.
.1160	1116.	924.	-666.	-321.	-385.	-149.	.0172	.0013	-.0220	-.0148	.0244	-.0425	1951.
.1170	1103.	935.	-1123.	-550.	-348.	-126.	.0163	.0006	-.0177	-.0341	.0440	-.0378	2475.
.1180	1092.	1140.	-1569.	-747.	-277.	-147.	.0169	.0027	-.0108	-.0534	.0570	-.0306	3025.
.1190	986.	1205.	-1788.	-837.	-133.	-89.	.0206	.0055	-.0006	-.0716	.0751	-.0206	3180.
.1200	798.	994.	-1686.	-774.	6.	14.	.0265	.0084	.0112	-.0818	.0629	-.0085	2889.
.1210	770.	895.	-1273.	-531.	46.	-45.	.0319	.0141	.0216	-.0712	.0395	.0003	1996.
.1220	783.	811.	-585.	-132.	42.	-164.	.0363	.0224	.0295	-.0450	.0069	.0042	802.
.1230	813.	797.	205.	311.	10.	-264.	.0392	.0317	.0346	-.0153	-.0282	.0049	1525.
.1240	656.	613.	821.	653.	-22.	-245.	.0405	.0399	.0366	.0022	-.0561	.0101	2606.
.1250	255.	293.	1069.	816.	8.	-135.	.0402	.0476	.0357	.0027	-.0659	.0242	3089.
.1260	-189.	200.	928.	795.	129.	-33.	.0384	.0557	.0328	-.0119	-.0554	.0452	3009.
.1270	-715.	70.	511.	611.	336.	162.	.0370	.0621	.0296	-.0450	-.0391	.0720	2672.
.1280	-1088.	-12.	13.	365.	497.	302.	.0349	.0665	.0260	-.0828	-.0230	.0977	2564.
.1290	-1239.	-96.	-302.	221.	568.	293.	.0310	.0693	.0219	-.1078	-.0123	.1139	2524.

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.05.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FRW24F--2 PSV

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

.1190	926.	1205.	-1788.	-837.	-133.	-89.	.0206	.0055	-.0006	-.0716	.0751	-.0206	3180.
.1200	798.	994.	-1686.	-774.	6.	14.	.0265	.0084	.0112	-.0818	.0529	-.0085	2889.
.1210	770.	895.	-1273.	-531.	46.	-45.	.0319	.0141	.0216	-.0712	.0395	.0003	1996.
.1220	783.	811.	-585.	-132.	42.	-164.	.0363	.0224	.0295	-.0450	.0069	.0042	802.
.1230	813.	797.	205.	311.	10.	-264.	.0392	.0317	.0346	-.0153	-.0282	.0049	1525.
.1240	656.	613.	821.	653.	-22.	-249.	.0405	.0399	.0366	.0022	-.0561	.0101	2606.
.1250	255.	293.	1069.	816.	8.	-135.	.0402	.0476	.0357	.0027	-.0559	.0242	3089.
.1260	-189.	200.	928.	795.	129.	-33.	.0384	.0557	.0328	-.0119	-.0554	.0452	3009.
.1270	-715.	70.	511.	611.	336.	162.	.0370	.0621	.0296	-.0450	-.0391	.0720	2672.
.1280	-1088.	-12.	13.	365.	497.	302.	.0349	.0665	.0260	-.0828	-.0230	.0977	2564.
.1290	-1239.	-96.	-302.	221.	568.	293.	.0310	.0693	.0219	-.1078	-.0123	.1139	2524.

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S/RV PIPING KEWAUNEE GKW08F 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	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL	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)										
.1300	-1125.	-143.	-271.	269.	568.	138.	.0253	.0704	.0181	-.1131	-.0150	.1135	2403.			
.1310	-630.	28.	47.	459.	465.	-152.	.0180	.0689	.0150	-.1035	-.0339	.0942	2503.			
.1320	-29.	36.	472.	687.	308.	-424.	.0104	.0631	.0126	-.0926	-.0560	.0646	3225.			
.1330	589.	-5.	845.	889.	164.	-715.	.0026	.0549	.0102	-.0829	-.0945	.0327	4302.			
.1340	1109.	37.	962.	976.	105.	-977.	-.0042	.0462	.0074	-.0209	-.1098	.0070	5170.			
.1350	1489.	227.	704.	847.	115.	-1123.	-.0093	.0367	.0041	-.0945	-.1109	-.0072	5270.			
.1360	1738.	546.	131.	525.	143.	-1154.	-.0128	.0259	-.0001	-.1203	-.0987	-.0101	4763.			
.1370	1641.	590.	-518.	164.	232.	-1008.	-.0143	.0136	-.0050	-.1498	-.0799	-.0053	3908.			
.1380	1415.	575.	-1024.	-98.	339.	-818.	-.0144	.0014	-.0103	-.1699	-.0511	-.0025	3326.			
.1390	1266.	578.	-1266.	-231.	389.	-636.	-.0124	-.0101	-.0152	-.1777	-.0539	-.0062	2913.			
.1400	1247.	557.	-1179.	-225.	336.	-494.	-.0080	-.0205	-.0194	-.1710	-.0624	-.0139	2383.			
.1410	1297.	533.	-772.	-52.	218.	-446.	-.0019	-.0281	-.0226	-.1460	-.0786	-.0210	1863.			
.1420	1153.	464.	-188.	225.	142.	-356.	.0065	-.0332	-.0241	-.1142	-.0992	-.0227	1658.			
.1430	953.	351.	320.	448.	101.	-226.	.0165	-.0362	-.0239	-.0881	-.1178	-.0206	1909.			
.1440	719.	210.	579.	508.	77.	-54.	.0269	-.0377	-.0225	-.0752	-.1273	-.0150	1929.			
.1450	349.	-18.	572.	430.	96.	143.	.0362	-.0369	-.0206	-.0730	-.1207	-.0052	1729.			
.1460	-99.	-170.	370.	268.	159.	319.	.0434	-.0329	-.0183	-.0764	-.0989	.0070	1665.			
.1470	-559.	-364.	44.	24.	255.	519.	.0492	-.0272	-.0147	-.0880	-.0758	.0187	2161.			
.1480	-768.	-441.	-317.	-263.	308.	609.	.0532	-.0198	-.0098	-.1009	-.0570	.0248	2731.			
.1490	-811.	-559.	-561.	-477.	334.	565.	.0550	-.0106	-.0035	-.1067	-.0452	.0247	3028.			
.1500	-764.	-753.	-571.	-541.	349.	422.	.0547	.0001	.0043	-.1017	-.0419	.0186	2876.			
.1510	-425.	-711.	-392.	-506.	286.	148.	.0517	.0117	.0134	-.0880	-.0451	.0041	2238.			
.1520	80.	-620.	-158.	-452.	145.	-156.	.0466	.0223	.0230	-.0749	-.0517	-.0158	1864.			
.1530	569.	-569.	26.	-392.	-6.	-459.	.0393	.0318	.0316	-.0640	-.0519	-.0361	2255.			
.1540	834.	-667.	99.	-351.	-74.	-669.	.0309	.0404	.0384	-.0580	-.0427	-.0501	2833.			
.1550	976.	-667.	-20.	-406.	-93.	-782.	.0218	.0483	.0427	-.0586	-.0254	-.0539	3309.			
.1560	1142.	-318.	-324.	-567.	-148.	-865.	.0116	.0559	.0436	-.0620	-.0003	-.0472	3900.			
.1570	1064.	-87.	-649.	-723.	-175.	-810.	.0012	.0617	.0416	-.0661	.0260	-.0305	4107.			
.1580	866.	62.	-844.	-771.	-171.	-706.	-.0095	.0654	.0375	-.0631	.0511	-.0124	3953.			
.1590	800.	326.	-893.	-724.	-210.	-637.	-.0204	.0667	.0322	-.0515	.0706	-.0001	3685.			
.1600	771.	535.	-798.	-611.	-304.	-521.	-.0304	.0644	.0270	-.0359	.0790	.0087	3206.			
.1610	657.	647.	-514.	-396.	-399.	-344.	-.0388	.0593	.0228	-.0138	.0787	.0186	2459.			
.1620	544.	889.	-93.	-94.	-470.	-199.	-.0454	.0534	.0196	.0173	.0770	.0305	1937.			
.1630	358.	1067.	291.	179.	-506.	-9.	-.0492	.0463	.0179	.0451	.0725	.0459	2004.			
.1640	184.	1247.	542.	353.	-528.	206.	-.0503	.0380	.0170	.0648	.0667	.0629	2493.			
.1650	7.	1456.	717.	479.	-512.	413.	-.0498	.0292	.0163	.0807	.0632	.0799	3038.			
.1660	-350.	1447.	866.	591.	-433.	681.	-.0482	.0196	.0154	.0927	.0604	.0970	3734.			
.1670	-675.	1436.	957.	659.	-373.	919.	-.0468	.0103	.0135	.1018	.0583	.1092	4446.			

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S/RV PIPING KEWAUNEE GKW08F 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

.1570	1064.	-37.	-649.	-723.	-175.	-810.	-.0012	.0617	.0416	-.0661	.0260	-.0305	4107.
.1580	866.	62.	-844.	-771.	-171.	-706.	-.0095	.0654	.0375	-.0631	.0511	-.0124	3953.
.1590	800.	320.	-893.	-724.	-210.	-637.	-.0204	.0667	.0322	-.0515	.0706	-.0001	3685.
.1600	771.	535.	-798.	-611.	-304.	-521.	-.0304	.0644	.0270	-.0359	.0790	.0087	3206.
.1610	657.	647.	-514.	-396.	-399.	-344.	-.0388	.0592	.0228	-.0138	.0787	.0186	2459.
.1620	544.	889.	-93.	-94.	-470.	-199.	-.0454	.0534	.0196	.0173	.0770	.0305	1937.
.1630	358.	1067.	291.	179.	-506.	-9.	-.0492	.0463	.0179	.0451	.0725	.0459	2004.
.1640	184.	1247.	542.	353.	-528.	206.	-.0503	.0380	.0170	.0648	.0667	.0629	2493.
.1650	7.	1456.	717.	479.	-512.	413.	-.0498	.0292	.0163	.0807	.0632	.0799	3038.
.1660	-350.	1447.	866.	591.	-433.	681.	-.0482	.0196	.0154	.0927	.0604	.0970	3734.
.1670	-675.	1436.	957.	659.	-373.	919.	-.0468	.0103	.0135	.1018	.0583	.1092	4446.

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.05.

S/RV PIPING KEWAUNEE GKW08F 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	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL					
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)	
.1680	-857.	1426.	997.	668.	-356.	1096.	-.0456	.0014	.0105	.1067	.0536	.1134	4971.	
.1690	-900.	1420.	1033.	659.	-362.	1167.	-.0450	-.0061	.0065	.1112	.0486	.1098	5183.	
.1700	-959.	1274.	1058.	643.	-355.	1183.	-.0449	-.0116	.0021	.1139	.0446	.1021	5196.	
.1710	-1044.	972.	1013.	566.	-332.	1187.	-.0446	-.0155	-.0018	.1096	.0399	.0915	5064.	
.1720	-866.	918.	854.	399.	-347.	1052.	-.0448	-.0169	-.0049	.1011	.0389	.0747	4396.	
.1730	-668.	759.	610.	176.	-349.	882.	-.0448	-.0166	-.0066	.0857	.0410	.0546	3603.	
.1740	-569.	400.	332.	-55.	-318.	712.	-.0447	-.0147	-.0068	.0662	.0465	.0330	2917.	
.1750	-422.	96.	55.	-283.	-285.	496.	-.0444	-.0109	-.0055	.0466	.0532	.0092	2384.	
.1760	-241.	-189.	-197.	-515.	-252.	286.	-.0432	-.0057	-.0026	.0265	.0547	-.0148	2392.	
.1770	-32.	-421.	-394.	-713.	-221.	50.	-.0413	.0010	.0012	.0109	.0518	-.0375	2792.	
.1780	62.	-785.	-497.	-839.	-149.	-161.	-.0383	.0087	.0056	.0009	.0437	-.0561	3237.	
.1790	168.	-1061.	-522.	-906.	-62.	-383.	-.0346	.0174	.0105	-.0025	.0322	-.0718	3679.	
.1800	294.	-1203.	-512.	-948.	11.	-579.	-.0306	.0261	.0156	-.0032	.0180	-.0836	4146.	
.1810	249.	-1468.	-479.	-962.	104.	-653.	-.0261	.0336	.0211	-.0049	.0022	-.0889	4359.	
.1820	164.	-1629.	-421.	-927.	204.	-716.	-.0224	.0406	.0261	-.0024	-.0083	-.0893	4437.	
.1830	56.	-1717.	-367.	-865.	310.	-751.	-.0194	.0465	.0306	.0017	-.0148	-.0852	4430.	
.1840	-43.	-1724.	-335.	-804.	394.	-742.	-.0173	.0506	.0340	.0048	-.0205	-.0772	4339.	
.1850	-136.	-1660.	-282.	-715.	455.	-699.	-.0163	.0527	.0359	.0093	-.0257	-.0660	4102.	
.1860	-279.	-1619.	-163.	-567.	515.	-621.	-.0167	.0530	.0358	.0182	-.0307	-.0527	3682.	
.1870	-344.	-1440.	-13.	-384.	537.	-572.	-.0191	.0520	.0332	.0327	-.0337	-.0404	3262.	
.1880	-385.	-1238.	114.	-216.	525.	-489.	-.0228	.0489	.0287	.0469	-.0372	-.0291	2796.	
.1890	-401.	-984.	203.	-73.	494.	-382.	-.0275	.0440	.0227	.0602	-.0389	-.0190	2347.	
.1900	-425.	-687.	240.	48.	472.	-268.	-.0330	.0378	.0161	.0726	-.0354	-.0094	2034.	
.1910	-514.	-484.	186.	115.	472.	-113.	-.0381	.0304	.0099	.0798	-.0282	.0006	1864.	
.1920	-505.	-206.	38.	108.	461.	9.	-.0428	.0224	.0049	.0823	-.0180	.0089	1768.	
.1930	-389.	124.	-137.	62.	436.	83.	-.0469	.0142	.0015	.0828	-.0070	.0143	1674.	
.1940	-250.	389.	-257.	31.	403.	125.	-.0507	.0062	-.0001	.0842	.0031	.0161	1578.	
.1950	-60.	595.	-292.	32.	341.	122.	-.0544	-.0015	-.0004	.0878	.0106	.0121	1356.	
.1960	253.	804.	-255.	48.	232.	60.	-.0583	-.0087	.0000	.0931	.0148	.0005	911.	
.1970	622.	968.	-181.	62.	93.	-37.	-.0623	-.0149	.0005	.0988	.0174	-.0162	439.	
.1980	908.	1036.	-114.	66.	-44.	-126.	-.0659	-.0197	.0004	.1031	.0222	-.0325	555.	
.1990	1061.	1053.	-113.	30.	-159.	-178.	-.0687	-.0226	-.0005	.1038	.0318	-.0441	897.	
.2000	1079.	1061.	-219.	-78.	-244.	-170.	-.0702	-.0238	-.0019	.0981	.0460	-.0489	1146.	
.2010	938.	1010.	-419.	-244.	-292.	-88.	-.0697	-.0232	-.0035	.0861	.0640	-.0468	1457.	
.2020	640.	871.	-627.	-408.	-307.	44.	-.0675	-.0211	-.0049	.0724	.0843	-.0394	1914.	
.2030	256.	682.	-743.	-516.	-313.	195.	-.0636	-.0174	-.0057	.0618	.1032	-.0296	2368.	
.2040	-139.	475.	-697.	-538.	-338.	354.	-.0583	-.0127	-.0054	.0564	.1155	-.0201	2715.	
.2050	-509.	246.	-467.	-460.	-388.	502.	-.0516	-.0074	-.0040	.0576	.1188	-.0123	2926.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.05.

S/RV PIPING KEWAUNEE GKW08F 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

.1940	-250.	589.	-57.	31.	403.	125.	-.007	.0062	-.0001	.0842	.0031	.0161	1578.
.1950	-60.	595.	-292.	32.	341.	122.	-.0544	-.0015	-.0004	.0878	.0106	.0121	1356.
.1960	253.	804.	-255.	48.	232.	60.	-.0583	-.0087	.0000	.0931	.0148	.0005	911.
.1970	622.	968.	-181.	62.	93.	-37.	-.0623	-.0149	.0005	.0988	.0174	-.0162	439.
.1980	908.	1036.	-114.	66.	-44.	-126.	-.0659	-.0197	.0004	.1031	.0222	-.0325	555.
.1990	1041.	1053.	-113.	30.	-159.	-178.	-.0687	-.0226	-.0005	.1036	.0318	-.0441	897.
.2000	1079.	1061.	-219.	-78.	-244.	-170.	-.0702	-.0238	-.0019	.0981	.0460	-.0489	1146.
.2010	938.	1010.	-419.	-244.	-292.	-88.	-.0697	-.0232	-.0035	.0861	.0640	-.0468	1457.
.2020	640.	871.	-627.	-408.	-307.	44.	-.0675	-.0211	-.0049	.0724	.0843	-.0394	1914.
.2030	256.	682.	-743.	-516.	-313.	195.	-.0636	-.0174	-.0057	.0618	.1032	-.0296	2368.
.2040	-139.	475.	-697.	-538.	-338.	354.	-.0583	-.0127	-.0054	.0564	.1155	-.0201	2715.
.2050	-509.	246.	-467.	-460.	-388.	502.	-.0516	-.0074	-.0040	.0576	.1188	-.0123	2926.

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ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.05.

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	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL							
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)			
.2060	-847.	-9.	-78.	-286.	-444.	614.	-.0442	-.0014	-.0018	.0663	.1143	-.0062	3025.			
.2070	-1155.	-274.	391.	-58.	-490.	694.	-.0365	.0050	.0009	.0798	.1048	-.0009	3178.			
.2080	-1437.	-519.	825.	156.	-521.	765.	-.0290	.0113	.0038	.0922	.0931	.0048	3503.			
.2090	-1697.	-717.	1133.	305.	-531.	837.	-.0224	.0172	.0063	.0995	.0835	.0112	3872.			
.2100	-1939.	-874.	1270.	374.	-509.	896.	-.0172	.0227	.0083	.1007	.0800	.0180	4094.			
.2110	-2150.	-1015.	1228.	361.	-454.	932.	-.0136	.0276	.0097	.0956	.0828	.0241	4100.			
.2120	-2275.	-1114.	1043.	274.	-386.	933.	-.0118	.0316	.0107	.0852	.0886	.0281	3907.			
.2130	-2262.	-1136.	793.	151.	-325.	877.	-.0114	.0346	.0117	.0730	.0938	.0287	3535.			
.2140	-2106.	-1108.	576.	49.	-278.	746.	-.0123	.0366	.0128	.0632	.0956	.0248	2977.			
.2150	-1809.	-1069.	440.	-3.	-252.	539.	-.0143	.0374	.0140	.0578	.0921	.0157	2220.			
.2160	-1363.	-1006.	382.	-14.	-255.	264.	-.0168	.0371	.0153	.0560	.0830	.0011	1369.			
.2170	-815.	-897.	363.	-4.	-276.	-46.	-.0197	.0356	.0164	.0561	.0702	-.0171	1046.			
.2180	-285.	-778.	341.	8.	-291.	-335.	-.0224	.0331	.0171	.0558	.0573	-.0351	1656.			
.2190	131.	-678.	267.	-1.	-277.	-556.	-.0246	.0299	.0171	.0523	.0471	-.0495	2321.			
.2200	425.	-575.	102.	-56.	-233.	-700.	-.0257	.0260	.0163	.0437	.0408	-.0584	2761.			
.2210	607.	-463.	-144.	-153.	-160.	-768.	-.0254	.0217	.0144	.0307	.0379	-.0617	2985.			
.2220	664.	-369.	-406.	-255.	-66.	-765.	-.0236	.0172	.0118	.0160	.0363	-.0597	3023.			
.2230	612.	-306.	-600.	-316.	35.	-704.	-.0204	.0127	.0086	.0034	.0333	-.0543	2884.			
.2240	512.	-256.	-663.	-307.	118.	-608.	-.0161	.0081	.0052	-.0049	.0259	-.0481	2580.			
.2250	409.	-224.	-579.	-220.	169.	-498.	-.0111	.0036	.0018	-.0085	.0130	-.0433	2129.			
.2260	306.	-224.	-366.	-63.	193.	-389.	-.0055	-.0006	-.0015	-.0079	-.0040	-.0402	1638.			
.2270	190.	-245.	-86.	134.	204.	-283.	.0003	-.0041	-.0047	-.0054	-.0224	-.0374	1395.			
.2280	56.	-262.	176.	318.	216.	-172.	.0060	-.0067	-.0078	-.0048	-.0399	-.0333	1572.			
.2290	-92.	-263.	336.	443.	240.	-54.	.0113	-.0085	-.0107	-.0094	-.0542	-.0270	1891.			
.2300	-247.	-255.	361.	493.	282.	57.	.0157	-.0093	-.0134	-.0200	-.0632	-.0194	2131.			
.2310	-388.	-247.	263.	477.	339.	145.	.0190	-.0092	-.0158	-.0356	-.0668	-.0119	2251.			
.2320	-478.	-235.	84.	415.	392.	199.	.0207	-.0084	-.0176	-.0541	-.0870	-.0064	2255.			
.2330	-468.	-196.	-121.	330.	423.	199.	.0209	-.0070	-.0181	-.0732	-.0663	-.0047	2138.			
.2340	-334.	-125.	-304.	253.	429.	129.	.0197	-.0050	-.0171	-.0900	-.0664	-.0079	1922.			
.2350	-89.	-48.	-433.	201.	416.	-10.	.0176	-.0024	-.0142	-.1032	-.0681	-.0155	1724.			
.2360	246.	25.	-512.	171.	388.	-200.	.0150	.0005	-.0092	-.1133	-.0718	-.0262	1751.			
.2370	638.	122.	-557.	153.	348.	-419.	.0124	.0037	-.0025	-.1208	-.0760	-.0381	2112.			
.2380	1031.	248.	-589.	139.	306.	-636.	.0098	.0072	.0054	-.1261	-.0786	-.0489	2683.			
.2390	1362.	371.	-622.	124.	271.	-819.	.0076	.0107	.0138	-.1299	-.0781	-.0567	3253.			
.2400	1601.	473.	-666.	104.	248.	-949.	.0059	.0140	.0220	-.1326	-.0743	-.0608	3683.			
.2410	1752.	565.	-714.	81.	230.	-1024.	.0045	.0170	.0292	-.1338	-.0575	-.0611	3929.			
.2420	1810.	651.	-738.	72.	213.	-1044.	.0037	.0197	.0349	-.1321	-.0589	-.0574	3985.			
.2430	1773.	726.	-706.	93.	192.	-1012.	.0031	.0222	.0388	-.1261	-.0496	-.0497	3860.			

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18.29.06.

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	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL							
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)			

.2330	-468.	-196.	-121.	330.	423.	199.	.0209	-.0070	-.0181	-.0732	-.0563	-.0047	2138.
.2340	-334.	-125.	-304.	253.	429.	129.	.0197	-.0050	-.0171	-.0900	-.0664	-.0079	1922.
.2350	-89.	-48.	-433.	201.	416.	-10.	.0176	-.0024	-.0142	-.1032	-.0681	-.0155	1724.
.2360	246.	25.	-512.	171.	388.	-200.	.0150	.0005	-.0092	-.1133	-.0718	-.0262	1751.
.2370	638.	122.	-557.	153.	348.	-419.	.0124	.0037	-.0025	-.1208	-.0760	-.0381	2112.
.2380	1031.	248.	-589.	139.	306.	-636.	.0098	.0072	.0054	-.1261	-.0786	-.0489	2683.
.2390	1362.	371.	-622.	124.	271.	-819.	.0076	.0107	.0138	-.1299	-.0781	-.0567	3253.
.2400	1601.	473.	-666.	104.	248.	-949.	.0059	.0140	.0220	-.1326	-.0743	-.0608	3683.
.2410	1752.	565.	-714.	81.	230.	-1024.	.0045	.0170	.0292	-.1338	-.0575	-.0611	3929.
.2420	1810.	651.	-738.	72.	213.	-1044.	.0037	.0197	.0349	-.1321	-.0589	-.0574	3985.
.2430	1773.	726.	-706.	93.	192.	-1012.	.0031	.0222	.0388	-.1261	-.0496	-.0497	3860.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.06.

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	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL	EL	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	(PSI)	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)			
.2440	1663.	798.	-604.	151.	158.	-939.	.0029	.0243	.0408	-.1155	-.0406	-.0389	3601.		
.2450	1504.	861.	-437.	241.	110.	-835.	.0029	.0258	.0409	-.1010	-.0324	-.0263	3269.		
.2460	1293.	891.	-221.	355.	55.	-698.	.0033	.0265	.0395	-.0842	-.0251	-.0126	2931.		
.2470	1033.	879.	22.	484.	3.	-534.	.0040	.0263	.0367	-.0668	-.0184	.0018	2690.		
.2480	751.	859.	263.	607.	-47.	-359.	.0050	.0255	.0327	-.0501	-.0117	.0168	2640.		
.2490	467.	853.	474.	709.	-94.	-182.	.0063	.0240	.0277	-.0351	-.0051	.0321	2755.		
.2500	176.	830.	651.	785.	-133.	-2.	.0080	.0219	.0218	-.0226	.0010	.0469	2971.		
.2510	-120.	766.	794.	838.	-160.	176.	.0100	.0191	.0152	-.0127	.0061	.0602	3251.		
.2520	-392.	675.	905.	868.	-179.	338.	.0125	.0158	.0081	-.0054	.0094	.0707	3540.		
.2530	-612.	580.	983.	872.	-197.	470.	.0153	.0122	.0007	-.0003	.0106	.0780	3771.		
.2540	-770.	484.	1035.	855.	-214.	565.	.0185	.0085	-.0065	.0025	.0095	.0819	3907.		
.2550	-871.	377.	1062.	818.	-229.	623.	.0221	.0047	-.0133	.0029	.0066	.0824	3932.		
.2560	-917.	256.	1053.	759.	-240.	645.	.0260	.0009	-.0194	-.0000	.0027	.0795	3825.		
.2570	-906.	124.	1000.	675.	-247.	634.	.0301	-.0028	-.0244	-.0067	-.0020	.0733	3577.		
.2580	-836.	5.	900.	564.	-248.	592.	.0344	-.0065	-.0285	-.0165	-.0068	.0643	3189.		
.2590	-719.	-89.	760.	434.	-245.	521.	.0387	-.0099	-.0316	-.0285	-.0115	.0534	2692.		
.2600	-569.	-173.	591.	294.	-237.	432.	.0428	-.0132	-.0338	-.0420	-.0163	.0412	2141.		
.2610	-391.	-260.	408.	151.	-226.	330.	.0467	-.0167	-.0353	-.0565	-.0215	.0282	1596.		
.2620	-189.	-332.	220.	16.	-212.	216.	.0503	-.0200	-.0362	-.0710	-.0272	.0148	1133.		
.2630	21.	-375.	38.	-104.	-195.	100.	.0537	-.0231	-.0367	-.0842	-.0333	.0022	907.		
.2640	213.	-394.	-121.	-202.	-174.	-4.	.0566	-.0259	-.0367	-.0956	-.0397	-.0081	997.		
.2650	372.	-392.	-255.	-275.	-149.	-88.	.0593	-.0285	-.0365	-.1050	-.0463	-.0156	1213.		
.2660	496.	-374.	-365.	-322.	-117.	-149.	.0617	-.0309	-.0360	-.1124	-.0527	-.0201	1395.		
.2670	580.	-345.	-451.	-343.	-75.	-187.	.0639	-.0328	-.0353	-.1174	-.0585	-.0216	1486.		
.2680	619.	-294.	-511.	-339.	-26.	-199.	.0658	-.0344	-.0345	-.1197	-.0637	-.0198	1470.		
.2690	608.	-227.	-535.	-308.	29.	-180.	.0673	-.0355	-.0334	-.1191	-.0687	-.0145	1338.		
.2700	548.	-165.	-517.	-249.	89.	-134.	.0685	-.0363	-.0322	-.1157	-.0736	-.0062	1109.		
.2710	460.	-111.	-460.	-164.	151.	-75.	.0692	-.0365	-.0308	-.1096	-.0782	.0037	879.		
.2720	376.	-27.	-376.	-60.	209.	-20.	.0693	-.0359	-.0294	-.1012	-.0324	.0140	816.		
.2730	305.	98.	-275.	54.	260.	30.	.0686	-.0347	-.0279	-.0909	-.0358	.0242	998.		
.2740	229.	213.	-162.	170.	307.	84.	.0671	-.0334	-.0265	-.0796	-.0385	.0345	1347.		
.2750	143.	283.	-57.	278.	353.	141.	.0650	-.0323	-.0251	-.0684	-.0899	.0444	1760.		
.2760	80.	347.	11.	363.	400.	130.	.0621	-.0310	-.0239	-.0578	-.0894	.0528	2126.		
.2770	69.	450.	32.	415.	444.	192.	.0586	-.0294	-.0227	-.0484	-.0872	.0590	2377.		
.2780	98.	565.	17.	435.	482.	183.	.0546	-.0278	-.0214	-.0403	-.0839	.0634	2517.		
.2790	151.	644.	-18.	432.	513.	156.	.0500	-.0264	-.0200	-.0335	-.0800	.0658	2573.		
.2800	245.	696.	-67.	414.	536.	98.	.0450	-.0251	-.0185	-.0276	-.0758	.0651	2554.		
.2810	415.	763.	-129.	378.	546.	-1.	.0396	-.0236	-.0170	-.0225	-.0719	.0601	2479.		

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.06.

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	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL	EL	DZ	RX	RY	RZ	STRESS
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