

50-305

RESPONSE TO NUREG-0737 ITEM II.D.1

Docket # *50-305*

Control # *8403280048*

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

.0810	-4177.	-4994.	194.	366.	-200.	-199.	-.0687	-.0615	.0019	-.0266	-.0449	.1019	216.
.0820	-5857.	-3330.	-3822.	244.	-277.	-133.	-.0726	-.0448	.0102	-.0154	-.0541	.0942	184.
.0830	-5900.	-1411.	-3212.	103.	-204.	-56.	-.0733	-.0263	.0204	-.0020	-.0635	.0780	153.
.0840	-4367.	471.	-1072.	-75.	-077.	19.	-.0768	-.0070	.0323	.0136	-.0744	.0542	129.
.0850	-2265.	2409.	1750.	-176.	-235.	96.	-.0660	.0119	.0445	.0302	-.0824	.0252	145.
.0860	-495.	3925.	4404.	-207.	-214.	156.	-.0601	.0293	.0556	.0454	-.0854	-.0055	183.
.0870	907.	4554.	6274.	-333.	-183.	181.	-.0541	.0444	.0641	.0568	-.0848	-.0342	197.
.0880	1238.	4367.	5991.	-320.	-148.	174.	-.0487	.0568	.0689	.0618	-.0792	-.0579	184.
.0890	209.	3373.	4099.	-247.	-148.	134.	-.0441	.0666	.0705	.0601	-.0667	-.0752	149.
.0900	-1178.	1798.	2571.	-102.	-189.	72.	-.0397	.0744	.0697	.0549	-.0499	-.0869	113.
.0910	-2044.	797.	2165.	-58.	-236.	32.	-.0347	.0812	.0674	.0498	-.0341	-.0959	115.

ADLPIPE PAGE 920 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.52.

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	20	MEMBER	1	SEQUENCE	37	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0920	-2401.	1316.	2253.	-96.	-265.	52.		-.0283	.0874	.0639	.0459	-.0229	-.1052	135.	
.0930	-2177.	2815.	2829.	-206.	-272.	112.		-.0205	.0928	.0593	.0421	-.0175	-.1153	168.	
.0940	-1236.	4273.	4106.	-313.	-254.	170.		-.0114	.0964	.0533	.0373	-.0185	-.1246	205.	
.0950	-46.	5356.	5357.	-392.	-217.	213.		-.0014	.0975	.0452	.0300	-.0244	-.1314	232.	
.0960	828.	5890.	5908.	-431.	-175.	234.		.0087	.0954	.0343	.0186	-.0329	-.1356	244.	
.0970	1288.	5575.	5817.	-408.	-137.	222.		.0184	.0900	.0204	.0026	-.0425	-.1370	227.	
.0980	1280.	4586.	4836.	-336.	-99.	183.		.0274	.0813	.0035	-.0172	-.0526	-.1342	185.	
.0990	895.	3281.	2653.	-240.	-40.	131.		.0358	.0701	-.0158	-.0407	-.0645	-.1264	129.	
.1000	769.	1686.	-27.	-123.	57.	67.		.0437	570	-.0363	-.0679	-.0799	-.1150	71.	
.1010	1417.	87.	-2313.	-6.	196.	3.		.0511	.0451	-.0566	-.0975	-.0992	-.1016	92.	
.1020	2596.	-785.	-4152.	57.	355.	-31.		.0576	.0291	-.0754	-.1261	-.1194	-.0855	169.	
.1030	3908.	-827.	-5486.	61.	504.	-33.		.0625	.0157	-.0919	-.1507	-.1361	-.0653	239.	
.1040	5215.	-790.	-5926.	58.	618.	-31.		.0651	.0028	-.1051	-.1709	-.1454	-.0408	291.	
.1050	6030.	-1210.	-5792.	89.	672.	-48.		.0644	-.0094	-.1150	-.1876	-.1439	-.0123	318.	
.1060	5705.	-2195.	-5902.	161.	652.	-87.		.0601	-.0208	-.1215	-.2009	-.1291	.0201	318.	
.1070	4494.	-3806.	-5998.	279.	568.	-151.		.0526	-.0308	-.1247	-.2094	-.1022	.0549	305.	
.1080	2176.	-5232.	-6249.	383.	408.	-208.		.0419	-.0382	-.1254	-.2123	-.0616	.0894	280.	
.1090	-2332.	-5280.	-8063.	386.	150.	-210.		.0280	-.0422	-.1261	-.2122	-.0019	.1231	218.	
.1100	-5153.	-6502.	-9332.	476.	-6.	-259.		.0150	-.0427	-.1237	-.2115	.0495	.1484	254.	
.1110	-6466.	-7693.	-9217.	563.	-106.	-306.		.0047	-.0393	-.1171	-.2065	.0924	.1619	304.	
.1120	-6452.	-7213.	-6845.	528.	-200.	-287.		-.0023	-.0312	-.1063	-.1916	.1294	.1625	297.	
.1130	-4873.	-5596.	-3221.	410.	-229.	-223.		-.0059	-.0189	-.0932	-.1679	.1559	.1521	243.	
.1140	-2740.	-3148.	-394.	230.	-185.	-125.		-.0071	-.0033	-.0790	-.1412	.1725	.1338	150.	
.1150	-1155.	-168.	1633.	12.	-150.	-7.		-.0070	.0139	-.0653	-.1155	.1862	.1125	70.	
.1160	-210.	1666.	3362.	-122.	-149.	66.		-.0066	.0312	-.0534	-.0937	.1972	.0947	95.	
.1170	-522.	1556.	2911.	-114.	-154.	62.		-.0061	.0474	-.0437	-.0782	.2030	.0826	94.	
.1180	11.	1052.	1725.	-77.	-68.	42.		-.0048	.0625	-.0352	-.0640	.1915	.0691	52.	
.1190	-23.	2046.	136.	-150.	-7.	81.		-.0027	.0768	-.0266	-.0467	.1724	.0521	80.	
.1200	-22.	3353.	296.	-245.	-13.	133.		-.0001	.0897	-.0171	-.0246	.1501	.0353	131.	
.1210	1680.	3852.	3095.	-282.	-0.	153.		.0022	.1008	-.0087	-.0024	.1197	.0217	150.	
.1220	2420.	3589.	4195.	-263.	10.	143.		.0034	.1094	-.0022	.0083	.0883	.0100	140.	
.1230	2972.	3057.	4879.	-224.	23.	122.		.0033	.1159	.0019	.0071	.0554	-.0024	120.	
.1240	3126.	2643.	5648.	-193.	4.	109.		.0010	.1205	.0037	-.0002	.0262	-.0125	103.	
.1250	2840.	3038.	5475.	-222.	-10.	121.		-.0011	.1232	.0033	-.0097	-.0002	-.0211	119.	
.1260	3283.	4426.	5057.	-324.	39.	176.		-.0051	.1241	.0007	-.0228	-.0292	-.0338	174.	
.1270	2050.	5664.	3309.	-415.	10.	225.		-.0109	.1222	-.0041	-.0447	-.0467	-.0470	221.	
.1280	667.	5248.	2406.	-314.	-47.	209.		-.0182	.1172	-.0114	-.0729	-.0552	-.0530	206.	
.1290	-864.	3199.	934.	-274.	-100.	127.		-.0261	.1094	-.0204	-.1052	-.0590	-.0500	133.	

ADLPIPE PAGE 921 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.52.

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

.1190	-23.	2046.	136.	-150.	-7.	31.	-.0027	.0768	-.0266	-.0467	.1724	.0521	80.
.1200	-22.	3352.	296.	-245.	-17.	133.	-.0001	.0897	-.0171	-.0246	.1501	.0353	131.
.1210	1680.	3852.	2095.	-282.	-6.	153.	.0022	.1008	-.0087	-.0024	.1197	.0217	150.
.1220	2420.	3589.	4195.	-267.	10.	143.	.0074	.1094	-.0022	.0083	.0883	.0100	140.
.1230	2972.	2057.	4879.	-224.	23.	122.	.0032	.1159	.0019	.0071	.0554	-.0024	120.
.1240	3126.	2643.	5646.	-193.	4.	105.	.0018	.1205	.0037	-.0002	.0262	-.0125	103.
.1250	2840.	3038.	5475.	-222.	-10.	121.	-.0011	.1232	.0033	-.0097	-.0002	-.0211	119.
.1260	3283.	4426.	5057.	-304.	39.	176.	-.0051	.1241	.0007	-.0228	-.0292	-.0338	174.
.1270	2050.	5664.	3309.	-415.	18.	225.	-.0109	.1222	-.0041	-.0447	-.0467	-.0470	221.
.1280	667.	5248.	2406.	-374.	-47.	209.	-.0182	.1172	-.0114	-.0729	-.0552	-.0530	206.
.1290	-864.	3199.	924.	-274.	-100.	127.	-.0261	.1094	-.0204	-.1052	-.0590	-.0500	133.

ADLPIPE PAGE 921

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.52.

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	VA									
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.1300	-2524.	972.	-1641.	-71.	-119.	39.	-.0324	.0997	.0295	-.1392	-.0518	-.0458	68.		
.1310	-2277.	-435.	-2295.	32.	-75.	-17.	-.0390	.0897	-.0375	-.1677	-.0712	-.0457	39.		
.1320	-1942.	-631.	-2572.	46.	-40.	-25.	-.0430	.0799	-.0434	-.1872	-.0809	-.0428	31.		
.1330	-854.	-208.	-2249.	15.	27.	-8.	-.0458	.0706	-.0477	-.1973	-.0939	-.0332	15.		
.1340	371.	-659.	-1860.	48.	101.	-26.	-.0481	.0615	-.0507	-.2051	-.1068	-.0188	54.		
.1350	1017.	-2368.	-1512.	173.	135.	-94.	-.0506	.0528	-.0523	-.2132	-.1145	-.0008	112.		
.1360	1546.	-3904.	-878.	286.	148.	-155.	-.0538	.0456	-.0533	-.2155	-.1197	.0226	168.		
.1370	257.	-4186.	-2294.	306.	110.	-167.	-.0578	.0407	-.0533	-.2105	-.1185	.0504	171.		
.1380	-792.	-3700.	-3531.	271.	83.	-147.	-.0617	.0382	-.0519	-.1991	-.1191	.0732	150.		
.1390	-1460.	-3211.	-4277.	235.	63.	-128.	-.0650	.0378	-.0483	-.1846	-.1219	.0869	129.		
.1400	-1925.	-2875.	-4738.	210.	48.	-114.	-.0672	.0393	-.0416	-.1660	-.1257	.0946	114.		
.1410	-885.	-2583.	-3215.	189.	63.	-103.	-.0682	.0424	-.0324	-.1409	-.1334	.0965	105.		
.1420	-121.	-2055.	-1252.	150.	41.	-82.	-.0686	.0470	-.0211	-.1133	-.1373	.0898	83.		
.1430	688.	-645.	1155.	47.	4.	-26.	-.0689	.0527	-.0090	-.0846	-.1383	.0739	25.		
.1440	703.	1459.	2421.	-107.	-45.	58.	-.0695	.0586	.0027	-.0569	-.1335	.0562	61.		
.1450	-184.	2964.	2270.	-217.	-104.	118.	-.0704	.0635	.0133	-.0335	-.1218	.0422	126.		
.1460	-757.	3258.	2200.	-239.	-143.	130.	-.0713	.0665	.0227	-.0161	-.1078	.0294	144.		
.1470	-2339.	3157.	951.	-231.	-209.	126.	-.0716	.0676	.0311	-.0043	-.0870	.0170	157.		
.1480	-3018.	3255.	651.	-238.	-247.	130.	-.0706	.0669	.0389	.0094	-.0665	.0061	172.		
.1490	-2776.	3482.	1576.	-255.	-266.	139.	-.0678	.0643	.0463	.0270	-.0460	-.0013	184.		
.1500	-2195.	3508.	2979.	-257.	-278.	140.	-.0635	.0598	.0530	.0445	-.0243	-.0066	189.		
.1510	-385.	2991.	5010.	-219.	-228.	119.	-.0580	.0532	.0578	.0590	-.0071	-.0105	158.		
.1520	982.	1971.	5854.	-144.	-161.	78.	-.0524	.0449	.0600	.0689	.0113	-.0080	108.		
.1530	2252.	943.	6300.	-69.	-86.	38.	-.0473	.0355	.0587	.0759	.0307	.0021	55.		
.1540	2185.	529.	5435.	-39.	-56.	21.	-.0436	.0254	.0542	.0794	.0561	.0178	34.		
.1550	938.	482.	3380.	-35.	-66.	19.	-.0409	.0150	.0471	.0788	.0863	.0370	36.		
.1560	371.	135.	2108.	-10.	-57.	5.	-.0387	.0042	.0381	.0761	.1127	.0586	27.		
.1570	-1175.	-483.	301.	35.	-98.	-19.	-.0365	-.0066	.0284	.0700	.1404	.0825	50.		
.1580	-2283.	-1084.	-533.	79.	-146.	-43.	-.0334	-.0171	.0187	.0627	.1623	.1037	80.		
.1590	-1985.	-1326.	-204.	97.	-137.	-53.	-.0289	-.0270	.0093	.0559	.1711	.1180	83.		
.1600	-1990.	-960.	-996.	70.	-106.	-38.	-.0229	-.0361	.0002	.0482	.1708	.1259	62.		
.1610	-2155.	-954.	-1736.	41.	-89.	-22.	-.0158	-.0446	-.0081	.0406	.1653	.1291	47.		
.1620	-1001.	-727.	-477.	52.	-58.	-29.	-.0076	-.0526	-.0160	.0332	.1524	.1281	39.		
.1630	-917.	-1633.	-679.	120.	-40.	-65.	.0010	-.0601	-.0238	.0212	.1379	.1241	66.		
.1640	-1285.	-2917.	-2024.	213.	-14.	-116.	.0101	-.0666	-.0313	.0067	.1193	.1163	114.		
.1650	-609.	-3951.	-2290.	289.	47.	-157.	.0199	-.0713	-.0378	-.0053	.0940	.1038	156.		
.1660	-295.	-4282.	-3305.	313.	110.	-170.	.0301	-.0738	-.0428	-.0147	.0668	.0879	175.		
.1670	605.	-4129.	-4537.	302.	231.	-164.	.0405	-.0738	-.0459	-.0213	.0330	.0681	194.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.52.

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

.1570	-1175.	-483.	-301.	35.	-98.	-19.	-.0365	-.0066	.0284	.0700	.1404	.0825	50.
.1580	-2283.	-1084.	-533.	79.	-146.	-43.	-.0334	-.0171	.0187	.0627	.1623	.1037	80.
.1590	-1985.	-1326.	-204.	97.	-137.	-53.	-.0289	-.0270	.0093	.0559	.1711	.1180	83.
.1600	-1990.	-960.	-996.	70.	-106.	-38.	-.0229	-.0261	.0002	.0482	.1708	.1259	62.
.1610	-2155.	-504.	-1736.	41.	-89.	-22.	-.0158	-.0446	-.0081	.0406	.1653	.1291	47.
.1620	-1001.	-727.	-477.	52.	-56.	-29.	-.0076	-.0526	-.0160	.0332	.1524	.1281	39.
.1630	-917.	-1673.	-679.	120.	-40.	-65.	-.0010	-.0601	-.0238	.0212	.1379	.1241	66.
.1640	-1285.	-2917.	-1024.	213.	-14.	-116.	.0101	-.0666	-.0313	.0067	.1193	.1163	114.
.1650	-609.	-3951.	-2290.	289.	47.	-157.	.0199	-.0713	-.0378	-.0053	.0940	.1038	156.
.1660	-255.	-4262.	-3305.	312.	110.	-170.	.0201	-.0738	-.0426	-.0147	.0668	.0879	175.
.1670	688.	-4129.	-4527.	302.	221.	-164.	.0409	-.0738	-.0459	-.0213	.0330	.0681	194.

ADLPIPE PAGE 922

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.52.

S/RV PIPING KEWAUNEE CKW00F 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	20	MEMBER	1	SEQUENCE	27	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ				DZ	FX	FY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1680	2241.	-3914.	-5261.	287.	373.	-156.	.0505	-.0714	-.0461	-.0241	-.0029	.0458	232.		
.1690	4855.	-3576.	-4047.	262.	516.	-142.	.0592	-.0668	-.0434	-.0203	-.0383	.0234	279.		
.1700	6905.	-2861.	-2861.	209.	619.	-114.	.0650	-.0602	-.0383	-.0111	-.0675	.0049	311.		
.1710	6849.	-1963.	-3338.	144.	634.	-78.	.0669	-.0521	-.0311	.0013	-.0835	-.0074	307.		
.1720	7429.	-1072.	-1926.	78.	620.	-43.	.0648	-.0429	-.0221	.0194	-.0926	-.0153	294.		
.1730	6828.	-166.	-683.	12.	527.	-7.	.0586	-.0333	-.0115	.0400	-.0890	-.0170	247.		
.1740	4695.	505.	-801.	-37.	376.	20.	.0487	-.0238	-.0003	.0597	-.0752	-.0124	177.		
.1750	2546.	844.	-867.	-62.	221.	34.	.0362	-.0147	.0114	.0783	-.0581	-.0049	109.		
.1760	268.	1301.	-826.	-95.	52.	52.	.0226	-.0062	.0228	.0956	-.0376	.0017	56.		
.1770	-980.	1987.	248.	-145.	-82.	79.	.0089	.0015	.0366	.1121	-.0199	.0046	87.		
.1780	-2236.	2428.	991.	-178.	-203.	97.	-.0038	.0080	.0495	.1253	-.0033	.0042	134.		
.1790	-2402.	2548.	2572.	-187.	-278.	101.	-.0152	.0130	.0619	.1350	.0077	-.0014	164.		
.1800	-1703.	2739.	4475.	-201.	-302.	109.	-.0249	.0166	.0727	.1397	.0124	-.0128	178.		
.1810	-2158.	2800.	4283.	-205.	-328.	111.	-.0335	.0184	.0814	.1370	.0170	-.0270	189.		
.1820	-2040.	2316.	4146.	-170.	-314.	92.	-.0407	.0186	.0876	.1304	.0162	-.0428	173.		
.1830	-1921.	1726.	3884.	-126.	-295.	69.	-.0466	.0174	.0919	.1214	.0134	-.0593	154.		
.1840	-2036.	1471.	3226.	-108.	-277.	59.	-.0511	.0153	.0941	.1110	.0082	-.0762	142.		
.1850	-2116.	1181.	2543.	-86.	-256.	47.	-.0544	.0122	.0946	.1001	-.0007	-.0911	129.		
.1860	-2315.	654.	2013.	-46.	-250.	28.	-.0564	.0085	.0940	.0905	-.0110	-.1014	120.		
.1870	-1445.	349.	2769.	-26.	-216.	14.	-.0569	.0045	.0923	.0847	-.0266	-.1074	102.		
.1080	-915.	437.	2960.	-32.	-185.	17.	-.0564	.0001	.0893	.0803	-.0431	-.1082	88.		
.1890	-480.	632.	2975.	-46.	-153.	25.	-.0552	-.0046	.0853	.0774	-.0501	-.1027	76.		
.1900	209.	946.	3522.	-69.	-125.	38.	-.0537	-.0097	.0798	.0770	-.0756	-.0902	69.		
.1910	-172.	1401.	3089.	-103.	-136.	56.	-.0522	-.0155	.0727	.0768	-.0537	-.0702	84.		
.1920	-944.	1447.	2148.	-106.	-155.	58.	-.0505	-.0220	.0642	.0752	-.0864	-.0454	92.		
.1930	-1930.	931.	1004.	-68.	-181.	37.	-.0483	-.0295	.0548	.0719	-.0832	-.0185	92.		
.1940	-2991.	402.	-59.	-29.	-217.	16.	-.0450	-.0374	.0453	.0684	-.0743	.0077	103.		
.1950	-3683.	7.	-736.	-1.	-240.	0.	-.0399	-.0455	.0360	.0656	-.0516	.0297	113.		
.1960	-3726.	-473.	-1103.	35.	-229.	-19.	-.0327	-.0535	.0275	.0624	-.0479	.0447	109.		
.1970	-3239.	-902.	-1414.	66.	-181.	-36.	-.0235	-.0412	.0198	.0581	-.0340	.0513	92.		
.1980	-2331.	-1220.	-1546.	69.	-109.	-49.	-.0124	-.0683	.0130	.0530	-.0194	.0503	70.		
.1990	-1049.	-1784.	-1280.	131.	-26.	-71.	-.0000	-.0747	.0073	.0476	-.0041	.0435	71.		
.2000	202.	-2533.	-867.	125.	35.	-101.	.0129	-.0800	.0025	.0471	.0121	.0321	102.		
.2010	1246.	-2893.	-735.	212.	120.	-115.	.0256	-.0838	-.0017	.0377	.0297	.0174	126.		
.2020	1745.	-2795.	-982.	205.	167.	-111.	.0376	-.0860	-.0052	.0352	.0477	.0022	134.		
.2030	1870.	-2709.	-1507.	198.	197.	-108.	.0487	-.0865	-.0080	.0349	.0642	-.0112	140.		
.2040	1738.	-2712.	-2085.	199.	210.	-108.	.0588	-.0856	-.0099	.0371	.0778	-.0223	145.		
.2050	1630.	-2524.	-2035.	115.	208.	-100.	.0680	-.0832	-.0105	.0431	.0873	-.0316	139.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.52.

S/RV PIPING KEWAUNEE CKW00F 2 RUP DISK  
2 SAFETY COLD FRW24F--2 PSV

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

.1750	-3683.	7.	776.	-1.	-240.	0.	-.0399	-.0455	.0360	.0656	-.0516	.0297	113.
.1960	-3726.	-473.	-1103.	35.	-229.	-19.	-.0327	-.0535	.0275	.0624	-.0479	.0447	109.
.1970	-3239.	-902.	-1414.	66.	-181.	-36.	-.0225	-.0612	.0198	.0581	-.0340	.0513	92.
.1980	-2731.	-1220.	-1547.	89.	-100.	-49.	-.0124	-.0687	.0130	.0530	-.0194	.0503	70.
.1990	-1049.	-1784.	-1280.	131.	-28.	-71.	-.0000	-.0747	.0073	.0476	-.0041	.0435	71.
.2000	202.	-2533.	-867.	155.	19.	-101.	.0129	-.0100	.0025	.0421	.0121	.0321	102.
.2010	1246.	-2893.	-735.	212.	120.	-115.	.0256	-.0838	-.0017	.0377	.0297	.0174	126.
.2020	1745.	-2795.	-982.	205.	167.	-111.	.0376	-.0860	-.0052	.0352	.0477	.0022	134.
.2030	1870.	-2709.	-1507.	198.	197.	-108.	.0487	-.0865	-.0080	.0349	.0542	-.0112	140.
.2040	1738.	-2712.	-2085.	195.	210.	-108.	.0588	-.0856	-.0099	.0371	.0778	-.0223	145.
.2050	1630.	-2524.	-2235.	185.	208.	-100.	.0680	-.0830	-.0105	.0431	.0873	-.0316	139.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.52.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA									
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	1738.	-2108.	-1747.	154.	197.	-84.	.0763	-.0793	-.0099	.0539	.0919	-.0386	124.		
.2070	1922.	-1538.	-961.	113.	179.	-61.	.0838	-.0743	-.0083	.0686	.0918	-.0429	103.		
.2080	2030.	-822.	-185.	60.	156.	-33.	.0902	-.0684	-.0061	.0849	.0880	-.0454	80.		
.2090	2151.	-199.	592.	15.	134.	-8.	.0955	-.0622	-.0039	.1003	.0812	-.0469	63.		
.2100	2301.	64.	1190.	-5.	121.	3.	.0996	-.0560	-.0020	.1127	.0721	-.0476	57.		
.2110	2231.	219.	1157.	-16.	117.	9.	.1024	-.0499	-.0007	.1212	.0524	-.0482	56.		
.2120	1969.	663.	546.	-49.	122.	26.	.1040	-.0440	-.0001	.1259	.0530	-.0508	63.		
.2130	1838.	1268.	-124.	-93.	140.	50.	.1044	-.0386	.0002	.1269	.0438	-.0565	82.		
.2140	1982.	1670.	-593.	-122.	169.	66.	.1038	-.0339	.0006	.1239	.0349	-.0650	102.		
.2150	2378.	1817.	-751.	-133.	204.	72.	.1019	-.0303	.0012	.1175	.0265	-.0751	119.		
.2160	2996.	1825.	-582.	-124.	242.	73.	.0987	-.0277	.0022	.1085	.0191	-.0862	134.		
.2170	3685.	1707.	-295.	-125.	281.	68.	.0936	-.0261	.0034	.0973	.0127	-.0967	148.		
.2180	4122.	1510.	-190.	-111.	309.	60.	.0865	-.0256	.0048	.0850	.0083	-.1042	156.		
.2190	4144.	1271.	-211.	-93.	312.	51.	.0771	-.0259	.0063	.0724	.0067	-.1063	154.		
.2200	3777.	846.	-193.	-62.	284.	34.	.0654	-.0269	.0080	.0600	.0078	-.1019	137.		
.2210	2977.	145.	-272.	-11.	229.	6.	.0516	-.0285	.0099	.0480	.0108	-.0905	107.		
.2220	1758.	-608.	-485.	44.	148.	-24.	.0363	-.0301	.0119	.0374	.0150	-.0729	73.		
.2230	405.	-1136.	-477.	83.	49.	-45.	.0202	-.0314	.0143	.0297	.0192	-.0504	50.		
.2240	-821.	-1384.	-122.	101.	-55.	-55.	.0040	-.0320	.0169	.0252	.0215	-.0254	60.		
.2250	-1873.	-1419.	274.	104.	-148.	-56.	-.0116	-.0317	.0195	.0226	.0204	-.0005	89.		
.2260	-2677.	-1339.	589.	98.	-219.	-53.	-.0260	-.0307	.0219	.0212	.0153	.0224	115.		
.2270	-3139.	-1268.	963.	93.	-268.	-50.	-.0387	-.0288	.0240	.0202	.0065	.0419	135.		
.2280	-3376.	-1247.	1278.	91.	-298.	-50.	-.0496	-.0262	.0256	.0189	-.0048	.0565	148.		
.2290	-3550.	-1180.	1293.	86.	-311.	-47.	-.0584	-.0229	.0264	.0166	-.0178	.0653	153.		
.2300	-3626.	-1023.	1065.	75.	-308.	-41.	-.0652	-.0189	.0265	.0127	-.0318	.0677	150.		
.2310	-3566.	-856.	720.	63.	-290.	-34.	-.0699	-.0144	.0260	.0071	-.0461	.0643	140.		
.2320	-3436.	-718.	261.	53.	-267.	-29.	-.0726	-.0093	.0252	-.0004	-.0598	.0558	126.		
.2330	-3186.	-527.	-196.	39.	-225.	-21.	-.0734	-.0039	.0243	-.0090	-.0725	.0430	108.		
.2340	-2706.	-197.	-351.	14.	-184.	-8.	-.0725	.0018	.0235	-.0175	-.0836	.0270	87.		
.2350	-2095.	243.	-149.	-18.	-147.	10.	-.0701	.0076	.0228	-.0250	-.0919	.0094	70.		
.2360	-1534.	660.	289.	-48.	-124.	26.	-.0666	.0133	.0223	-.0314	-.0964	-.0077	63.		
.2370	-1050.	878.	500.	-84.	-113.	35.	-.0624	.0185	.0216	-.0368	-.0965	-.0225	63.		
.2380	-693.	808.	1492.	-59.	-110.	32.	-.0576	.0233	.0205	-.0414	-.0923	-.0340	60.		
.2390	-618.	523.	1740.	-36.	-114.	21.	-.0526	.0276	.0185	-.0457	-.0839	-.0411	57.		
.2400	-802.	205.	1597.	-15.	-122.	8.	-.0473	.0315	.0156	-.0494	-.0719	-.0441	58.		
.2410	-1008.	-11.	1338.	1.	-127.	-0.	-.0415	.0353	.0118	-.0521	-.0577	-.0434	60.		
.2420	-1691.	-95.	1115.	7.	-124.	-4.	-.0353	.0391	.0073	-.0539	-.0425	-.0400	58.		
.2430	-1636.	-54.	920.	4.	-112.	-0.	-.0285	.0429	.0023	-.0552	-.0272	-.0347	53.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.52.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

.2330	-3186.	-527.	-196.	39.	-225.	-21.	-.0734	-.0039	.0243	-.0090	-.0725	.0430	108.
.2340	-2706.	-197.	-351.	14.	-184.	-8.	-.0725	.0018	.0235	-.0175	-.0836	.0270	87.
.2350	-2095.	243.	-149.	-18.	-147.	10.	-.0701	.0076	.0228	-.0250	-.0919	.0094	70.
.2360	-1534.	660.	289.	-48.	-124.	26.	-.0666	.0133	.0223	-.0314	-.0964	-.0077	63.
.2370	-1050.	878.	900.	-64.	-117.	35.	-.0624	.0185	.0216	-.0368	-.0965	-.0225	63.
.2380	-693.	808.	1493.	-59.	-110.	32.	-.0576	.0233	.0205	-.0414	-.0923	-.0340	60.
.2390	-618.	523.	1740.	-30.	-114.	21.	-.0526	.0276	.0185	-.0457	-.0839	-.0411	57.
.2400	-802.	209.	1597.	-15.	-122.	8.	-.0473	.0315	.0158	-.0494	-.0719	-.0441	58.
.2410	-1008.	-11.	1338.	1.	-127.	-0.	-.0415	.0353	.0118	-.0521	-.0577	-.0434	60.
.2420	-1091.	-95.	1115.	7.	-124.	-4.	-.0353	.0391	.0073	-.0539	-.0425	-.0400	58.
.2430	-1036.	-54.	920.	4.	-112.	-2.	-.0285	.0429	.0023	-.0552	-.0272	-.0347	53.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.52.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA	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)
.2440	-800.	136.	796.	-10.	-90.	5.	-.0211	-.0468	-.0033	-.0560	-.0128	-.0282	43.
.2450	-393.	491.	770.	-36.	-59.	20.	-.0133	.0505	-.0093	-.0567	.0001	-.0213	34.
.2460	49.	940.	751.	-69.	-26.	37.	-.0052	.0539	-.0157	-.0576	.0116	-.0145	39.
.2470	430.	1330.	735.	-97.	2.	53.	.0028	.0567	-.0225	-.0591	.0215	-.0081	52.
.2480	748.	1544.	718.	-113.	26.	61.	.0105	.0588	-.0296	-.0618	.0296	-.0022	62.
.2490	934.	1548.	493.	-113.	49.	62.	.0178	.0600	-.0371	-.0661	.0353	.0031	65.
.2500	942.	1338.	-26.	-98.	70.	53.	.0246	.0603	-.0448	-.0727	.0386	.0077	62.
.2510	947.	960.	-546.	-70.	91.	38.	.0309	.0598	-.0525	-.0809	.0393	.0113	57.
.2520	1138.	561.	-832.	-41.	116.	22.	.0366	.0589	-.0600	-.0902	.0370	.0139	59.
.2530	1486.	288.	-1058.	-21.	151.	11.	.0416	.0576	-.0670	-.1002	.0318	.0156	72.
.2540	1918.	151.	-1371.	-11.	195.	6.	.0458	.0562	-.0734	-.1110	.0243	.0168	92.
.2550	2459.	66.	-1601.	-5.	244.	3.	.0488	.0548	-.0792	-.1220	.0154	.0182	114.
.2560	3052.	-35.	-1639.	3.	289.	-1.	.0503	.0534	-.0842	-.1326	.0066	.0207	135.
.2570	3508.	-181.	-1661.	13.	323.	-7.	.0500	.0520	-.0882	-.1424	-.0008	.0249	151.
.2580	3694.	-353.	-1803.	26.	342.	-14.	.0477	.0507	-.0914	-.1510	-.0060	.0309	161.
.2590	3583.	-533.	-2026.	39.	343.	-21.	.0432	.0497	-.0934	-.1581	-.0084	.0387	162.
.2600	3168.	-776.	-2264.	57.	322.	-31.	.0368	.0490	-.0944	-.1636	-.0075	.0484	154.
.2610	2537.	-1126.	-2377.	82.	280.	-45.	.0285	.0488	-.0940	-.1676	-.0038	.0593	139.
.2620	1851.	-1470.	-2224.	108.	224.	-59.	.0189	.0493	-.0923	-.1702	.0019	.0702	120.
.2630	1160.	-1599.	-1887.	117.	160.	-64.	.0082	.0507	-.0893	-.1716	.0087	.0799	98.
.2640	451.	-1436.	-1505.	105.	93.	-57.	-.0030	.0529	-.0853	-.1719	.0159	.0877	71.
.2650	-204.	-1082.	-1035.	79.	26.	-43.	-.0144	.0560	-.0804	-.1717	.0230	.0929	44.
.2660	-753.	-670.	-477.	49.	-36.	-27.	-.0255	.0597	-.0750	-.1716	.0292	.0951	31.
.2670	-1282.	-295.	-50.	22.	-92.	-12.	-.0352	.0637	-.0693	-.1721	.0343	.0942	45.
.2680	-1843.	-24.	99.	2.	-139.	-1.	-.0460	.0679	-.0637	-.1733	.0378	.0903	65.
.2690	-2347.	138.	104.	-10.	-176.	5.	-.0547	.0721	-.0580	-.1746	.0392	.0837	83.
.2700	-2693.	227.	113.	-17.	-202.	9.	-.0620	.0763	-.0525	-.1755	.0381	.0746	95.
.2710	-2837.	254.	135.	-19.	-213.	10.	-.0677	.0803	-.0471	-.1757	.0338	.0635	100.
.2720	-2726.	235.	211.	-17.	-208.	9.	-.0718	.0842	-.0418	-.1749	.0259	.0515	98.
.2730	-2346.	270.	416.	-20.	-188.	11.	-.0742	.0880	-.0366	-.1728	.0145	.0395	89.
.2740	-1826.	463.	709.	-34.	-162.	18.	-.0753	.0916	-.0317	-.1690	.0007	.0286	78.
.2750	-1305.	771.	1008.	-56.	-136.	31.	-.0754	.0949	-.0272	-.1637	-.0145	.0199	70.
.2760	-875.	1085.	1260.	-79.	-114.	43.	-.0747	.0977	-.0230	-.1573	-.0301	.0144	68.
.2770	-642.	1352.	1371.	-99.	-102.	54.	-.0736	.0999	-.0202	-.1501	-.0448	.0125	71.
.2780	-655.	1547.	1293.	-113.	-99.	62.	-.0722	.1013	-.0178	-.1425	-.0582	.0139	76.
.2790	-821.	1636.	1124.	-120.	-105.	65.	-.0703	.1018	-.0161	-.1344	-.0697	.0180	81.
.2800	-1007.	1675.	974.	-120.	-112.	65.	-.0681	.1013	-.0150	-.1259	-.0796	.0236	83.
.2810	-1147.	1597.	831.	-117.	-117.	64.	-.0653	.1000	-.0145	-.1174	-.0876	.0295	83.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.52.

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

CONDITION 24

LOADS

SHOCK

.2710	-2837.	254.	135.	-19.	-213.	10.	-.0677	.0803	-.0471	-.1757	.0338	.0746	95.
.2720	-2726.	235.	211.	-17.	-208.	9.	-.0718	.0842	-.0418	-.1749	.0259	.0515	98.
.2730	-2346.	270.	416.	-20.	-188.	11.	-.0742	.0880	-.0366	-.1728	.0145	.0395	89.
.2740	-1626.	463.	709.	-34.	-162.	18.	-.0753	.0916	-.0317	-.1690	.0207	.0286	78.
.2750	-1305.	771.	1008.	-56.	-136.	31.	-.0754	.0949	-.0272	-.1637	-.0145	.0199	70.
.2760	-.875.	1025.	1260.	-79.	-114.	43.	-.0747	.0977	-.0233	-.1573	-.0301	.0144	68.
.2770	-.642.	1352.	1371.	-99.	-102.	54.	-.0736	.0999	-.0202	-.1501	-.0448	.0125	71.
.2780	-.655.	1547.	1293.	-113.	-99.	62.	-.0722	.1013	-.0178	-.1425	-.0582	.0139	76.
.2790	-.821.	1636.	1124.	-120.	-105.	65.	-.0703	.1018	-.0161	-.1344	-.0697	.0180	81.
.2800	-1007.	1675.	974.	-126.	-112.	65.	-.0681	.1017	-.0150	-.1259	-.0796	.0236	83.
.2810	-1143.	1597.	831.	-117.	-117.	64.	-.0653	.1000	-.0145	-.1174	-.0876	.0295	83.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.52.

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	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	FX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.2820	-1166.	1540.	694.	-113.	-113.	61.	-.0620	.0977	-.0143	-.1093	-.0938	.0349	80.	
.2830	-1012.	1462.	831.	-107.	-99.	58.	-.0580	.0945	-.0146	-.1021	-.0981	.0390	74.	
.2840	-713.	1373.	635.	-101.	-77.	55.	-.0536	.0906	-.0152	-.0958	-.0997	.0414	65.	
.2850	-369.	1279.	582.	-94.	-50.	51.	-.0488	.0859	-.0160	-.0907	-.0983	.0423	55.	
.2860	-53.	1182.	376.	-87.	-19.	47.	-.0438	.0805	-.0172	-.0871	-.0938	.0419	47.	
.2870	211.	1105.	30.	-81.	14.	44.	-.0390	.0744	-.0185	-.0844	-.0864	.0404	44.	
.2880	416.	1023.	-383.	-75.	46.	41.	-.0343	.0677	-.0198	-.0822	-.0765	.0381	45.	
.2890	577.	860.	-778.	-63.	73.	34.	-.0299	.0605	-.0208	-.0798	-.0648	.0357	48.	
.2900	720.	606.	-1082.	-44.	96.	24.	-.0258	.0528	-.0213	-.0766	-.0520	.0334	51.	
.2910	837.	340.	-1256.	-25.	111.	14.	-.0222	.0449	-.0212	-.0720	-.0389	.0317	54.	
.2920	894.	99.	-1271.	-7.	116.	4.	-.0190	.0368	-.0203	-.0657	-.0256	.0308	55.	
.2930	864.	-154.	-1113.	11.	108.	-6.	-.0164	.0287	-.0188	-.0576	-.0124	.0311	51.	
.2940	716.	-408.	-834.	30.	86.	-16.	-.0142	.0207	-.0166	-.0479	.0006	.0326	43.	
.2950	423.	-601.	-549.	44.	53.	-24.	-.0124	.0131	-.0140	-.0370	.0133	.0352	34.	
.2960	5.	-716.	-338.	52.	14.	-29.	-.0108	.0057	-.0111	-.0254	.0253	.0383	29.	
.2970	-447.	-767.	-194.	56.	-25.	-31.	-.0092	-.0012	-.0080	-.0132	.0360	.0413	32.	
.2980	-822.	-735.	-72.	54.	-57.	-29.	-.0073	-.0076	-.0049	-.0007	.0451	.0434	39.	
.2990	-1019.	-626.	53.	46.	-77.	-25.	-.0049	-.0136	-.0017	.0120	.0520	.0439	43.	
.3000	-976.	-518.	173.	38.	-78.	-21.	-.0019	-.0192	.0014	.0245	.0565	.0426	42.	
.3010	-687.	-465.	267.	34.	-61.	-19.	.0017	-.0245	.0044	.0365	.0586	.0396	34.	
.3020	-207.	-441.	327.	32.	-28.	-18.	.0056	-.0295	.0072	.0479	.0591	.0353	22.	
.3030	375.	-409.	346.	30.	14.	-16.	.0096	-.0343	.0099	.0588	.0586	.0304	17.	
.3040	942.	-373.	291.	27.	57.	-15.	.0134	-.0388	.0123	.0691	.0579	.0258	31.	
.3050	1379.	-345.	123.	25.	96.	-14.	.0166	-.0432	.0146	.0785	.0576	.0223	47.	
.3060	1621.	-319.	-137.	23.	124.	-13.	.0191	-.0474	.0168	.0874	.0583	.0207	59.	
.3070	1658.	-286.	-389.	21.	137.	-11.	.0205	-.0514	.0191	.0958	.0599	.0212	65.	
.3080	1509.	-239.	-566.	18.	133.	-10.	.0211	-.0552	.0217	.1040	.0622	.0235	63.	
.3090	1213.	-187.	-605.	14.	113.	-7.	.0208	-.0590	.0245	.1123	.0648	.0273	53.	
.3100	832.	-173.	-498.	13.	81.	-7.	.0199	-.0626	.0277	.1204	.0670	.0319	38.	
.3110	423.	-238.	-246.	17.	41.	-9.	.0185	-.0661	.0312	.1282	.0683	.0365	21.	
.3120	23.	-376.	95.	28.	-2.	-15.	.0169	-.0695	.0347	.1353	.0682	.0402	15.	
.3130	-738.	-556.	440.	41.	-42.	-22.	.0154	-.0726	.0381	.1413	.0662	.0421	29.	
.3140	-625.	-751.	711.	55.	-74.	-30.	.0141	-.0758	.0413	.1458	.0621	.0417	45.	
.3150	-816.	-923.	843.	68.	-93.	-37.	.0132	-.0778	.0440	.1486	.0554	.0384	57.	
.3160	-882.	-1037.	614.	76.	-97.	-41.	.0129	-.0797	.0463	.1495	.0462	.0319	61.	
.3170	-794.	-1079.	648.	79.	-84.	-43.	.0130	-.0810	.0480	.1487	.0345	.0225	58.	
.3180	-555.	-1045.	392.	76.	-56.	-42.	.0136	-.0816	.0494	.1465	.0207	.0105	49.	
.3190	-197.	-976.	127.	69.	-19.	-37.	.0146	-.0817	.0506	.1425	.0054	-.0034	38.	

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S/RV PIPING KEWAUNEE FKW08F 2 RUP DISK  
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

.3090	1213.	-187.	-605.	14.	113.	-7.	.0208	-.0590	.0245	.1123	.0648	.0273	53.
.3100	832.	-173.	-498.	13.	81.	-7.	.0199	-.0626	.0277	.1204	.0670	.0319	38.
.3110	423.	-238.	-246.	17.	41.	-9.	.0185	-.0661	.0312	.1282	.0583	.0365	21.
.3120	23.	-376.	95.	28.	-2.	-15.	.0169	-.0695	.0347	.1353	.0582	.0402	15.
.3130	-138.	-556.	440.	41.	-42.	-22.	.0154	-.0726	.0381	.1413	.0662	.0421	29.
.3140	-625.	-751.	711.	55.	-74.	-30.	.0141	-.0755	.0413	.1456	.0521	.0417	45.
.3150	-816.	-923.	843.	68.	-93.	-37.	.0132	-.0778	.0440	.1486	.0554	.0384	57.
.3160	-882.	-1037.	814.	78.	-97.	-41.	.0129	-.0797	.0463	.1495	.0462	.0319	61.
.3170	-794.	-1079.	648.	79.	-84.	-43.	.0130	-.0810	.0480	.1487	.0345	.0225	58.
.3180	-555.	-1045.	396.	76.	-56.	-42.	.0136	-.0816	.0494	.1465	.0207	.0105	49.
.3190	-197.	-936.	127.	69.	-19.	-37.	.0146	-.0817	.0506	.1435	.0054	-.0034	38.

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ADLPIPE STRESS ANALYSIS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA									
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3200	236.	-779.	-89.	57.	21.	-31.	.0156	-.0812	.0516	.1403	-.0104	-.0185	32.		
.3210	662.	-611.	-217.	45.	57.	-24.	.0165	-.0804	.0528	.1372	-.0258	-.0335	36.		
.3220	988.	-465.	-266.	34.	83.	-19.	.0169	-.0792	.0541	.1347	-.0397	-.0476	43.		
.3230	1124.	-340.	-267.	25.	93.	-14.	.0168	-.0777	.0555	.1330	-.0510	-.0599	46.		
.3240	1031.	-234.	-238.	17.	85.	-9.	.0160	-.0761	.0571	.1321	-.0592	-.0698	41.		
.3250	733.	-154.	-174.	11.	61.	-6.	.0146	-.0743	.0589	.1320	-.0640	-.0773	29.		
.3260	269.	-68.	-80.	5.	23.	-3.	.0127	-.0725	.0608	.1326	-.0654	-.0822	11.		
.3270	-284.	61.	45.	-4.	-23.	2.	.0107	-.0707	.0627	.1339	-.0638	-.0853	11.		
.3280	-816.	223.	213.	-16.	-68.	9.	.0089	-.0689	.0646	.1356	-.0600	-.0869	33.		
.3290	-1234.	387.	429.	-28.	-107.	15.	.0075	-.0673	.0664	.1375	-.0546	-.0876	53.		
.3300	-1486.	526.	682.	-39.	-136.	21.	.0068	-.0659	.0679	.1392	-.0482	-.0879	67.		
.3310	-1546.	626.	959.	-46.	-151.	25.	.0069	-.0648	.0691	.1407	-.0415	-.0881	75.		
.3320	-1440.	673.	1209.	-49.	-154.	27.	.0079	-.0640	.0696	.1417	-.0346	-.0883	77.		
.3330	-1233.	657.	1370.	-48.	-145.	26.	.0097	-.0637	.0695	.1420	-.0277	-.0883	73.		
.3340	-986.	560.	1434.	-41.	-129.	22.	.0122	-.0637	.0686	.1416	-.0209	-.0879	64.		
.3350	-726.	388.	1446.	-28.	-111.	15.	.0152	-.0641	.0669	.1403	-.0141	-.0868	54.		
.3360	-486.	191.	1421.	-14.	-92.	8.	.0186	-.0646	.0644	.1383	-.0075	-.0848	44.		
.3370	-298.	33.	1353.	-2.	-76.	1.	.0223	-.0653	.0611	.1357	-.0013	-.0820	35.		
.3380	-160.	-55.	1263.	4.	-62.	-2.	.0261	-.0660	.0571	.1324	.0045	-.0783	29.		
.3390	-52.	-81.	1179.	6.	-51.	-3.	.0300	-.0667	.0523	.1285	.0096	-.0738	24.		
.3400	33.	-69.	1099.	5.	-41.	-3.	.0339	-.0674	.0469	.1239	.0139	-.0686	20.		
.3410	88.	-42.	994.	3.	-33.	-2.	.0377	-.0680	.0409	.1185	.0174	-.0630	16.		
.3420	108.	-18.	825.	1.	-25.	-1.	.0416	-.0686	.0344	.1122	.0204	-.0572	12.		
.3430	88.	-8.	562.	1.	-16.	-0.	.0453	-.0691	.0274	.1050	.0229	-.0516	7.		
.3440	41.	-34.	216.	2.	-6.	-1.	.0490	-.0697	.0201	.0960	.0251	-.0464	3.		
.3450	4.	-126.	-160.	9.	7.	-5.	.0527	-.0703	.0128	.0878	.0271	-.0419	6.		
.3460	15.	-283.	-527.	21.	22.	-11.	.0563	-.0707	.0056	.0781	.0289	-.0385	15.		
.3470	92.	-465.	-871.	34.	41.	-19.	.0599	-.0710	-.0012	.0680	.0306	-.0363	27.		
.3480	250.	-639.	-1159.	47.	64.	-25.	.0634	-.0710	-.0075	.0576	.0321	-.0355	39.		
.3490	499.	-805.	-1345.	59.	90.	-32.	.0668	-.0705	-.0132	.0473	.0335	-.0360	53.		
.3500	813.	-975.	-1418.	71.	116.	-39.	.0698	-.0696	-.0180	.0373	.0349	-.0377	66.		
.3510	1134.	-1143.	-1471.	84.	140.	-46.	.0724	-.0682	-.0221	.0277	.0363	-.0402	79.		
.3520	1405.	-1297.	-1473.	95.	159.	-52.	.0743	-.0660	-.0253	.0187	.0381	-.0432	90.		
.3530	1581.	-1424.	-1409.	104.	172.	-57.	.0754	-.0631	-.0277	.0107	.0402	-.0465	98.		
.3540	1638.	-1511.	-1383.	111.	175.	-60.	.0755	-.0594	-.0293	.0037	.0426	-.0497	101.		
.3550	1582.	-1540.	-1332.	113.	169.	-61.	.0748	-.0548	-.0301	-.0020	.0452	-.0526	99.		
.3560	1442.	-1483.	-1240.	109.	155.	-59.	.0731	-.0494	-.0302	-.0064	.0474	-.0552	93.		
.3570	1249.	-1317.	-1109.	96.	136.	-52.	.0707	-.0431	-.0296	-.0094	.0489	-.0575	82.		

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ADLPIPE STRESS ANALYSIS

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



.3470	92.	-465.	-871.	34.	41.	-19.	.599	-.0710	-.0012	.0680	.0306	-.0363	27.
.3480	250.	-639.	-1159.	47.	64.	-25.	.634	-.0710	-.0075	.0576	.0321	-.0355	39.
.3490	499.	-805.	-1343.	59.	90.	-32.	.668	-.0705	-.0132	.0473	.0335	-.0360	53.
.3500	813.	-975.	-1418.	71.	116.	-39.	.698	-.0696	-.0180	.0373	.0349	-.0377	66.
.3510	1134.	-1143.	-1431.	84.	140.	-46.	.724	-.0682	-.0221	.0277	.0363	-.0402	79.
.3520	1405.	-1297.	-1423.	95.	159.	-52.	.743	-.0660	-.0253	.0187	.0381	-.0432	90.
.3530	1581.	-1424.	-1409.	104.	172.	-57.	.754	-.0631	-.0277	.0107	.0402	-.0465	98.
.3540	1638.	-1511.	-1383.	111.	175.	-60.	.755	-.0594	-.0293	.0037	.0426	-.0497	101.
.3550	1582.	-1540.	-1332.	113.	169.	-61.	.748	-.0548	-.0301	-.0020	.0452	-.0526	99.
.3560	1442.	-1483.	-1240.	109.	155.	-59.	.731	-.0494	-.0302	-.0064	.0474	-.0552	93.
.3570	1249.	-1317.	-1109.	96.	136.	-52.	.707	-.0431	-.0296	-.0094	.0489	-.0575	82.

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ADLPIPE STRESS ANALYSIS

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18.26.53.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	20	MEMBER	1	SEQUENCE	37	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3580	1037.	-1038.	-936.	76.	113.	-41.	.0676	-.0361	-.0284	-.0112	.0492	-.0592	67.		
.3590	844.	-668.	-716.	49.	90.	-27.	.0640	-.0285	-.0268	-.0119	.0480	-.0605	50.		
.3600	690.	-242.	-470.	18.	69.	-10.	.0599	-.0206	-.0247	-.0118	.0450	-.0612	34.		
.3610	570.	202.	-246.	-15.	52.	8.	.0554	-.0126	-.0224	-.0113	.0402	-.0613	25.		
.3620	480.	615.	-75.	-45.	38.	24.	.0507	-.0047	-.0200	-.0108	.0336	-.0605	30.		
.3630	427.	947.	46.	-69.	29.	38.	.0458	.0027	-.0176	-.0105	.0252	-.0590	39.		
.3640	412.	1169.	132.	-86.	25.	47.	.0408	.0096	-.0153	-.0108	.0154	-.0566	47.		
.3650	436.	1285.	192.	-94.	24.	51.	.0352	.0158	-.0131	-.0116	.0045	-.0534	51.		
.3660	498.	1313.	242.	-96.	27.	52.	.0296	.0212	-.0110	-.0132	-.0072	-.0496	53.		
.3670	586.	1276.	292.	-93.	31.	51.	.0238	.0259	-.0090	-.0156	-.0191	-.0452	52.		
.3680	672.	1196.	345.	-88.	35.	48.	.0176	.0298	-.0072	-.0187	-.0306	-.0402	50.		
.3690	727.	1087.	401.	-80.	37.	43.	.0110	.0330	-.0056	-.0226	-.0410	-.0347	46.		
.3700	722.	954.	447.	-70.	35.	38.	.0040	.0357	-.0042	-.0272	-.0498	-.0288	41.		
.3710	630.	807.	459.	-59.	28.	32.	-.0034	.0377	-.0031	-.0325	-.0566	-.0223	34.		
.3720	438.	662.	423.	-48.	15.	26.	-.0111	.0393	-.0022	-.0381	-.0610	-.0156	27.		
.3730	159.	527.	355.	-39.	-2.	21.	-.0191	.0406	-.0016	-.0440	-.0631	-.0086	21.		
.3740	-174.	403.	277.	-30.	-24.	16.	-.0272	.0415	-.0011	-.0498	-.0630	-.0016	19.		
.3750	-528.	294.	205.	-22.	-47.	12.	-.0352	.0423	-.0007	-.0553	-.0609	-.0054	25.		
.3760	-873.	111.	151.	-15.	-70.	8.	-.0420	.0429	-.0005	-.0604	-.0574	.0122	34.		
.3770	-1189.	171.	125.	-12.	-92.	7.	-.0500	.0434	-.0003	-.0649	-.0526	.0187	44.		
.3780	-1466.	177.	126.	-13.	-112.	7.	-.0564	.0438	-.0002	-.0685	-.0469	.0248	53.		
.3790	-1707.	209.	147.	-15.	-131.	8.	-.0620	.0441	-.0002	-.0714	-.0406	.0306	62.		
.3800	-1909.	231.	176.	-17.	-147.	9.	-.0667	.0444	-.0002	-.0735	-.0340	.0361	69.		
.3810	-2069.	229.	200.	-17.	-159.	9.	-.0702	.0445	-.0004	-.0750	-.0273	.0413	75.		
.3820	-2181.	215.	214.	-16.	-168.	9.	-.0725	.0445	-.0006	-.0758	-.0210	.0460	79.		
.3830	-2230.	199.	232.	-15.	-173.	8.	-.0736	.0444	-.0010	-.0759	-.0151	.0502	81.		
.3840	-2197.	179.	279.	-13.	-172.	7.	-.0735	.0443	-.0015	-.0753	-.0098	.0538	81.		
.3850	-2066.	150.	370.	-11.	-166.	6.	-.0721	.0440	-.0022	-.0741	-.0054	.0568	78.		
.3860	-1841.	113.	497.	-8.	-155.	4.	-.0696	.0437	-.0031	-.0724	-.0017	.0592	73.		
.3870	-1543.	79.	636.	-6.	-138.	3.	-.0660	.0433	-.0043	-.0703	.0014	.0612	65.		
.3880	-1204.	66.	752.	-5.	-118.	3.	-.0618	.0429	-.0059	-.0681	.0039	.0629	55.		
.3890	-855.	76.	809.	-6.	-95.	3.	-.0566	.0424	-.0079	-.0657	.0062	.0647	45.		
.3900	-515.	95.	779.	-7.	-69.	4.	-.0511	.0419	-.0103	-.0636	.0083	.0667	32.		
.3910	-198.	114.	647.	-8.	-40.	5.	-.0453	.0414	-.0132	-.0617	.0103	.0684	19.		
.3920	93.	143.	423.	-10.	-10.	6.	-.0395	.0408	-.0164	-.0600	.0122	.0721	7.		
.3930	365.	188.	146.	-14.	21.	7.	-.0338	.0400	-.0198	-.0585	.0140	.0754	12.		
.3940	630.	220.	-134.	-16.	51.	8.	-.0283	.0392	-.0232	-.0571	.0156	.0792	26.		
.3950	890.	208.	-284.	-15.	91.	8.	-.0232	.0383	-.0266	-.0558	.0171	.0834	39.		

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ADLPIPE STRESS ANALYSIS

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18.26.53.

.3850	-2066.	150.	376.	-11.	-166.	6.	-.721	.0440	-.0022	-.0741	-.0054	.0568	81.
.3860	-1841.	113.	497.	-8.	-155.	4.	-.696	.0437	-.0031	-.0724	-.0017	.0592	73.
.3870	-1543.	79.	636.	-6.	-138.	3.	-.660	.0433	-.0043	-.0703	.0014	.0612	65.
.3880	-1204.	66.	752.	-5.	-118.	3.	-.616	.0429	-.0059	-.0681	.0039	.0629	55.
.3890	-855.	76.	809.	-6.	-95.	3.	-.566	.0424	-.0079	-.0657	.0062	.0647	45.
.3900	-515.	95.	779.	-7.	-69.	4.	-.511	.0419	-.0103	-.0636	.0083	.0667	32.
.3910	-198.	114.	647.	-8.	-40.	5.	-.453	.0414	-.0132	-.0617	.0103	.0691	19.
.3920	97.	143.	423.	-10.	-10.	6.	-.395	.0408	-.0164	-.0600	.0122	.0721	7.
.3930	365.	188.	146.	-14.	21.	7.	-.338	.0400	-.0198	-.0585	.0140	.0754	12.
.3940	630.	220.	-134.	-16.	51.	9.	-.283	.0392	-.0232	-.0571	.0156	.0792	26.
.3950	893.	208.	-284.	-15.	81.	8.	-.232	.0383	-.0266	-.0558	.0171	.0834	39.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.53.

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	20	MEMBER	1	SEQUENCE	37	LOCATION	END	TYPE	VA					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.3960	1140.	150.	-599.	-11.	107.	6.	-.0187	.0372	-.0297	-.0546	.0184	.0877	51.	
.3970	1346.	72.	-782.	-5.	130.	3.	-.0148	.0361	-.0325	-.0536	.0197	.0921	61.	
.3980	1486.	-13.	-935.	1.	146.	-1.	-.0117	.0349	-.0348	-.0526	.0210	.0962	68.	
.3990	1550.	-109.	-1052.	8.	155.	-4.	-.0094	.0338	-.0365	-.0517	.0226	.0998	73.	
.4000	1543.	-219.	-1128.	16.	158.	-9.	-.0081	.0327	-.0377	-.0512	.0241	.1026	74.	

MAXIMUM VALUE OF STRESS OCCURS AT

TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.0280	10855.	2954.	-4274.	-216.	965.	118.	.1238	.0586	-.0316	.0157	-.0268	-.0916	467.

SECTION	20	MEMBER	2	SEQUENCE	808	LOCATION	DIS	TYPE	VA					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	0.	0.	0.	0.	0.	0.	-.0000	.0000	-.0000	-.0000	.0000	.0000	0.	
.0020	0.	0.	0.	0.	0.	0.	-.0001	.0000	-.0002	-.0002	.0002	.0001	0.	
.0030	0.	0.	0.	0.	0.	0.	-.0003	.0000	-.0005	-.0007	.0007	.0005	0.	
.0040	0.	0.	0.	0.	0.	0.	-.0006	.0000	-.0012	-.0018	.0014	.0013	0.	
.0050	0.	0.	0.	0.	0.	0.	-.0011	-.0000	-.0022	-.0035	.0023	.0024	0.	
.0060	0.	0.	0.	0.	0.	0.	-.0017	-.0001	-.0035	-.0059	.0033	.0038	0.	
.0070	0.	0.	0.	0.	0.	0.	-.0025	-.0001	-.0054	-.0091	.0047	.0057	0.	
.0080	0.	0.	0.	0.	0.	0.	-.0037	-.0002	-.0082	-.0136	.0076	.0085	0.	
.0090	0.	0.	0.	0.	0.	0.	-.0051	-.0004	-.0120	-.0198	.0128	.0126	0.	
.0100	0.	0.	0.	0.	0.	0.	-.0066	-.0007	-.0168	-.0281	.0203	.0179	0.	
.0110	0.	0.	0.	0.	0.	0.	-.0077	-.0012	-.0224	-.0382	.0296	.0239	0.	
.0120	0.	0.	0.	0.	0.	0.	-.0088	-.0017	-.0286	-.0496	.0397	.0295	0.	
.0130	0.	0.	0.	0.	0.	0.	-.0069	-.0022	-.0352	-.0614	.0487	.0336	0.	
.0140	0.	0.	0.	0.	0.	0.	-.0038	-.0026	-.0414	-.0726	.0550	.0350	0.	
.0150	0.	0.	0.	0.	0.	0.	.0016	-.0030	-.0466	-.0821	.0571	.0328	0.	
.0160	0.	0.	0.	0.	0.	0.	.0095	-.0030	-.0500	-.0884	.0549	.0263	0.	
.0170	0.	0.	0.	0.	0.	0.	.0198	-.0026	-.0514	-.0905	.0499	.0160	0.	
.0180	0.	0.	0.	0.	0.	0.	.0315	-.0013	-.0509	-.0881	.0449	.0036	0.	
.0190	0.	0.	0.	0.	0.	0.	.0438	.0012	-.0494	-.0822	.0431	-.0088	0.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.53.

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

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

.0090	0.	0.	0.	0.	0.	0.	0.	-.0051	-.0004	-.0120	-.0198	.0128	.0126	0.
.0100	0.	0.	0.	0.	0.	0.	0.	-.0066	-.0007	-.0168	-.0281	.0203	.0179	0.
.0110	0.	0.	0.	0.	0.	0.	0.	-.0077	-.0012	-.0224	-.0382	.0296	.0239	0.
.0120	0.	0.	0.	0.	0.	0.	0.	-.0080	-.0017	-.0286	-.0496	.0397	.0295	0.
.0130	0.	0.	0.	0.	0.	0.	0.	-.0069	-.0022	-.0352	-.0614	.0487	.0336	0.
.0140	0.	0.	0.	0.	0.	0.	0.	-.0038	-.0026	-.0414	-.0726	.0550	.0350	0.
.0150	0.	0.	0.	0.	0.	0.	0.	.0016	-.0030	-.0466	-.0821	.0571	.0328	0.
.0160	0.	0.	0.	0.	0.	0.	0.	.0095	-.0030	-.0500	-.0884	.0549	.0263	0.
.0170	0.	0.	0.	0.	0.	0.	0.	.0198	-.0026	-.0514	-.0905	.0499	.0160	0.
.0180	0.	0.	0.	0.	0.	0.	0.	.0315	-.0013	-.0509	-.0881	.0449	.0036	0.
.0190	0.	0.	0.	0.	0.	0.	0.	.0438	.0012	-.0494	-.0822	.0431	-.0088	0.

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

SECTION	20	MEMBER	2	SEQUENCE	208	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ				DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)				(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0200	0.	0.	0.	0.	0.	0.			.0549	.0052	-.0490	-.0759	.0502	-.0178	0.
.0210	0.	0.	0.	0.	0.	0.			.0645	.0106	-.0507	-.0719	.0690	-.0212	0.
.0220	0.	0.	0.	0.	0.	0.			.0736	.0168	-.0528	-.0698	.0869	-.0222	0.
.0230	0.	0.	0.	0.	0.	0.			.0834	.0238	-.0539	-.0658	.0947	-.0261	0.
.0240	0.	0.	0.	0.	0.	0.			.0943	.0316	-.0527	-.0546	.0882	-.0378	0.
.0250	0.	0.	0.	0.	0.	0.			.1053	.0398	-.0492	-.0360	.0720	-.0542	0.
.0260	0.	0.	0.	0.	0.	0.			.1146	.0477	-.0451	-.0153	.0498	-.0680	0.
.0270	0.	0.	0.	0.	0.	0.			.1211	.0538	-.0397	.0020	.0131	-.0800	0.
.0280	0.	0.	0.	0.	0.	0.			.1235	.0577	-.0314	.0156	-.0267	-.0916	0.
.0290	0.	0.	0.	0.	0.	0.			.1199	.0598	-.0208	.0305	-.0476	-.0956	0.
.0300	0.	0.	0.	0.	0.	0.			.1092	.0614	-.0099	.0507	-.0563	-.0889	0.
.0310	0.	0.	0.	0.	0.	0.			.0918	.0623	.0007	.0685	-.0593	-.0786	0.
.0320	0.	0.	0.	0.	0.	0.			.0693	.0617	.0113	.0751	-.0542	-.0692	0.
.0330	0.	0.	0.	0.	0.	0.			.0442	.0588	.0234	.0765	-.0458	-.0592	0.
.0340	0.	0.	0.	0.	0.	0.			.0188	.0537	.0375	.0809	-.0425	-.0495	0.
.0350	0.	0.	0.	0.	0.	0.			-.0064	.0473	.0511	.0851	-.0424	-.0474	0.
.0360	0.	0.	0.	0.	0.	0.			-.0309	.0397	.0623	.0845	-.0410	-.0555	0.
.0370	0.	0.	0.	0.	0.	0.			-.0537	.0298	.0711	.0806	-.0410	-.0653	0.
.0380	0.	0.	0.	0.	0.	0.			-.0742	.0170	.0776	.0715	-.0464	-.0684	0.
.0390	0.	0.	0.	0.	0.	0.			-.0929	.0023	.0813	.0522	-.0530	-.0662	0.
.0400	0.	0.	0.	0.	0.	0.			-.1107	-.0124	.0813	.0300	-.0468	-.0602	0.
.0410	0.	0.	0.	0.	0.	0.			-.1271	-.0263	.0780	.0153	-.0352	-.0480	0.
.0420	0.	0.	0.	0.	0.	0.			-.1415	-.0395	.0723	.0057	-.0197	-.0259	0.
.0430	0.	0.	0.	0.	0.	0.			-.1531	-.0525	.0650	-.0076	.0067	.0054	0.
.0440	0.	0.	0.	0.	0.	0.			-.1601	-.0658	.0578	-.0217	.0329	.0405	0.
.0450	0.	0.	0.	0.	0.	0.			-.1607	-.0785	.0520	-.0294	.0441	.0737	0.
.0460	0.	0.	0.	0.	0.	0.			-.1546	-.0896	.0475	-.0270	.0397	.0982	0.
.0470	0.	0.	0.	0.	0.	0.			-.1421	-.0985	.0446	-.0137	.0284	.1097	0.
.0480	0.	0.	0.	0.	0.	0.			-.1237	-.1056	.0434	.0071	.0116	.1118	0.
.0490	0.	0.	0.	0.	0.	0.			-.1010	-.1107	.0423	.0260	-.0119	.1099	0.
.0500	0.	0.	0.	0.	0.	0.			-.0758	-.1130	.0397	.0380	-.0351	.1029	0.
.0510	0.	0.	0.	0.	0.	0.			-.0491	-.1115	.0359	.0482	-.0498	.0878	0.
.0520	0.	0.	0.	0.	0.	0.			-.0215	-.1057	.0321	.0645	-.0557	.0661	0.
.0530	0.	0.	0.	0.	0.	0.			.0070	-.0963	.0288	.0872	-.0578	.0403	0.
.0540	0.	0.	0.	0.	0.	0.			.0362	-.0848	.0270	.1109	-.0614	.0083	0.
.0550	0.	0.	0.	0.	0.	0.			.0658	-.0732	.0276	.1335	-.0684	-.0300	0.
.0560	0.	0.	0.	0.	0.	0.			.0945	-.0621	.0299	.1575	-.0765	-.0679	0.
.0570	0.	0.	0.	0.	0.	0.			.1204	-.0519	.0322	.1841	-.0832	-.1002	0.

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ADLPIPE STRESS ANALYSIS

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18.26.53.

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

CONDITION 24  
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ENGLISH UNITS

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

.0470	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.0480	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.0490	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.0500	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.0510	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.0520	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.0530	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.0540	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.0550	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.0560	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.0570	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

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

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

SECTION	20	MEMBER	2	SEQUENCE	808	LOCATION	DIS	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0580	0.	0.	0.	0.	0.	0.	.1419	-.0430	.0338	.2101	-.0859	-.1273	0.	
.0590	0.	0.	0.	0.	0.	0.	.1577	-.0361	.0344	.2303	-.0801	-.1476	0.	
.0600	0.	0.	0.	0.	0.	0.	.1671	-.0316	.0338	.2414	-.0636	-.1544	0.	
.0610	0.	0.	0.	0.	0.	0.	.1701	-.0293	.0324	.2452	-.0363	-.1458	0.	
.0620	0.	0.	0.	0.	0.	0.	.1678	-.0286	.0309	.2450	-.0010	-.1300	0.	
.0630	0.	0.	0.	0.	0.	0.	.1611	-.0289	.0293	.2421	.0391	-.1143	0.	
.0640	0.	0.	0.	0.	0.	0.	.1512	-.0305	.0279	.2371	.0773	-.0990	0.	
.0650	0.	0.	0.	0.	0.	0.	.1397	-.0343	.0272	.2294	.1067	-.0835	0.	
.0660	0.	0.	0.	0.	0.	0.	.1271	-.0410	.0267	.2159	.1263	-.0708	0.	
.0670	0.	0.	0.	0.	0.	0.	.1131	-.0502	.0251	.1941	.1404	-.0612	0.	
.0680	0.	0.	0.	0.	0.	0.	.0977	-.0611	.0214	.1669	.1515	-.0507	0.	
.0690	0.	0.	0.	0.	0.	0.	.0810	-.0728	.0161	.1380	.1601	-.0371	0.	
.0700	0.	0.	0.	0.	0.	0.	.0636	-.0841	.0096	.1066	.1678	-.0222	0.	
.0710	0.	0.	0.	0.	0.	0.	.0460	-.0941	.0023	.0709	.1725	-.0066	0.	
.0720	0.	0.	0.	0.	0.	0.	.0291	-.1018	-.0052	.0344	.1680	.0104	0.	
.0730	0.	0.	0.	0.	0.	0.	.0136	-.1065	-.0117	.0033	.1530	.0277	0.	
.0740	0.	0.	0.	0.	0.	0.	-.0003	-.1080	-.0161	-.0194	.1312	.0419	0.	
.0750	0.	0.	0.	0.	0.	0.	-.0125	-.1068	-.0179	-.0336	.1033	.0524	0.	
.0760	0.	0.	0.	0.	0.	0.	-.0234	-.1037	-.0173	-.0398	.0694	.0620	0.	
.0770	0.	0.	0.	0.	0.	0.	-.0337	-.0992	-.0151	-.0412	.0355	.0730	0.	
.0780	0.	0.	0.	0.	0.	0.	-.0440	-.0931	-.0123	-.0414	.0080	.0847	0.	
.0790	0.	0.	0.	0.	0.	0.	-.0539	-.0849	-.0089	-.0403	-.0134	.0951	0.	
.0800	0.	0.	0.	0.	0.	0.	-.0626	-.0741	-.0041	-.0355	-.0315	.1017	0.	
.0810	0.	0.	0.	0.	0.	0.	-.0694	-.0603	.0023	-.0266	-.0450	.1019	0.	
.0820	0.	0.	0.	0.	0.	0.	-.0735	-.0438	.0106	-.0153	-.0541	.0942	0.	
.0830	0.	0.	0.	0.	0.	0.	-.0743	-.0256	.0210	-.0020	-.0635	.0780	0.	
.0840	0.	0.	0.	0.	0.	0.	-.0719	-.0068	.0329	.0136	-.0745	.0542	0.	
.0850	0.	0.	0.	0.	0.	0.	-.0673	.0117	.0452	.0302	-.0825	.0252	0.	
.0860	0.	0.	0.	0.	0.	0.	-.0614	.0286	.0563	.0454	-.0855	-.0055	0.	
.0870	0.	0.	0.	0.	0.	0.	-.0554	.0433	.0648	.0567	-.0848	-.0341	0.	
.0880	0.	0.	0.	0.	0.	0.	-.0499	.0554	.0696	.0617	-.0793	-.0578	0.	
.0890	0.	0.	0.	0.	0.	0.	-.0451	.0651	.0711	.0601	-.0667	-.0752	0.	
.0900	0.	0.	0.	0.	0.	0.	-.0405	.0729	.0701	.0549	-.0499	-.0869	0.	
.0910	0.	0.	0.	0.	0.	0.	-.0352	.0796	.0677	.0498	-.0341	-.0959	0.	
.0920	0.	0.	0.	0.	0.	0.	-.0287	.0859	.0641	.0459	-.0229	-.1052	0.	
.0930	0.	0.	0.	0.	0.	0.	-.0208	.0912	.0595	.0421	-.0176	-.1153	0.	
.0940	0.	0.	0.	0.	0.	0.	-.0117	.0948	.0535	.0373	-.0186	-.1246	0.	
.0950	0.	0.	0.	0.	0.	0.	-.0018	.0960	.0454	.0300	-.0244	-.1313	0.	

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

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



.1230	0.	0.	0.	0.	0.	0.	0.	.0042	.1158	.0014	.0071	.0554	-.0023	0.
.1240	0.	0.	0.	0.	0.	0.	0.	.0022	.1204	.0035	-.0003	.0262	-.0125	0.
.1250	0.	0.	0.	0.	0.	0.	0.	-.0011	.1232	.0033	-.0098	-.0002	-.0211	0.
.1260	0.	0.	0.	0.	0.	0.	0.	-.0056	.1242	.0009	-.0228	-.0291	-.0338	0.
.1270	0.	0.	0.	0.	0.	0.	0.	-.0116	.1226	-.0038	-.0447	-.0467	-.0470	0.
.1280	0.	0.	0.	0.	0.	0.	0.	-.0190	.1180	-.0110	-.0729	-.0552	-.0529	0.
.1290	0.	0.	0.	0.	0.	0.	0.	-.0270	.1106	-.0199	-.1053	-.0591	-.0500	0.
.1300	0.	0.	0.	0.	0.	0.	0.	-.0343	.1015	-.0290	-.1392	-.0618	-.0458	0.
.1310	0.	0.	0.	0.	0.	0.	0.	-.0401	.0919	-.0369	-.1677	-.0712	-.0457	0.
.1320	0.	0.	0.	0.	0.	0.	0.	-.0442	.0824	-.0427	-.1872	-.0509	-.0428	0.
.1330	0.	0.	0.	0.	0.	0.	0.	-.0472	.0733	-.0469	-.1973	-.0939	-.0332	0.

ADLPIPE PAGE 932 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.53.

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	DIS	TYPE	VA	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(PSI)
.1340	0.	0.	0.	0.	0.	0.	0.
.1350	0.	0.	0.	0.	0.	0.	0.
.1360	0.	0.	0.	0.	0.	0.	0.
.1370	0.	0.	0.	0.	0.	0.	0.
.1380	0.	0.	0.	0.	0.	0.	0.
.1390	0.	0.	0.	0.	0.	0.	0.
.1400	0.	0.	0.	0.	0.	0.	0.
.1410	0.	0.	0.	0.	0.	0.	0.
.1420	0.	0.	0.	0.	0.	0.	0.
.1430	0.	0.	0.	0.	0.	0.	0.
.1440	0.	0.	0.	0.	0.	0.	0.
.1450	0.	0.	0.	0.	0.	0.	0.
.1460	0.	0.	0.	0.	0.	0.	0.
.1470	0.	0.	0.	0.	0.	0.	0.
.1480	0.	0.	0.	0.	0.	0.	0.
.1490	0.	0.	0.	0.	0.	0.	0.
.1500	0.	0.	0.	0.	0.	0.	0.
.1510	0.	0.	0.	0.	0.	0.	0.
.1520	0.	0.	0.	0.	0.	0.	0.
.1530	0.	0.	0.	0.	0.	0.	0.
.1540	0.	0.	0.	0.	0.	0.	0.
.1550	0.	0.	0.	0.	0.	0.	0.
.1560	0.	0.	0.	0.	0.	0.	0.
.1570	0.	0.	0.	0.	0.	0.	0.
.1580	0.	0.	0.	0.	0.	0.	0.
.1590	0.	0.	0.	0.	0.	0.	0.
.1600	0.	0.	0.	0.	0.	0.	0.
.1610	0.	0.	0.	0.	0.	0.	0.
.1620	0.	0.	0.	0.	0.	0.	0.
.1630	0.	0.	0.	0.	0.	0.	0.
.1640	0.	0.	0.	0.	0.	0.	0.
.1650	0.	0.	0.	0.	0.	0.	0.
.1660	0.	0.	0.	0.	0.	0.	0.
.1670	0.	0.	0.	0.	0.	0.	0.
.1680	0.	0.	0.	0.	0.	0.	0.
.1690	0.	0.	0.	0.	0.	0.	0.
.1700	0.	0.	0.	0.	0.	0.	0.
.1710	0.	0.	0.	0.	0.	0.	0.

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

CONDITION 24  
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INTERNAL FORCES IN THE PIPING  
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.1600	0.	0.	0.	0.	0.	0.	0.	0.	-.0203	-.0358	-.0012	.0482	.1708	.1259	0.
.1610	0.	0.	0.	0.	0.	0.	0.	0.	-.0132	-.0441	-.0095	.0406	.1653	.1291	0.
.1620	0.	0.	0.	0.	0.	0.	0.	0.	-.0053	-.0520	-.0173	.0333	.1524	.1281	0.
.1630	0.	0.	0.	0.	0.	0.	0.	0.	.0031	-.0594	-.0250	.0214	.1379	.1241	0.
.1640	0.	0.	0.	0.	0.	0.	0.	0.	.0120	-.0658	-.0323	.0067	.1193	.1162	0.
.1650	0.	0.	0.	0.	0.	0.	0.	0.	.0214	-.0704	-.0386	-.0053	.0940	.1038	0.
.1660	0.	0.	0.	0.	0.	0.	0.	0.	.0312	-.0729	-.0434	-.0147	.0668	.0879	0.
.1670	0.	0.	0.	0.	0.	0.	0.	0.	.0410	-.0729	-.0462	-.0212	.0330	.0681	0.
.1680	0.	0.	0.	0.	0.	0.	0.	0.	.0505	-.0707	-.0461	-.0240	-.0029	.0457	0.
.1690	0.	0.	0.	0.	0.	0.	0.	0.	.0586	-.0663	-.0431	-.0203	-.0383	.0234	0.
.1700	0.	0.	0.	0.	0.	0.	0.	0.	.0640	-.0600	-.0378	-.0111	-.0574	.0049	0.
.1710	0.	0.	0.	0.	0.	0.	0.	0.	.0656	-.0522	-.0304	.0013	-.0834	-.0074	0.

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

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

SECTION	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	VA	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(PSI)
.1720	0.	0.	0.	0.	0.	0.	0.
.1730	0.	0.	0.	0.	0.	0.	0.
.1740	0.	0.	0.	0.	0.	0.	0.
.1750	0.	0.	0.	0.	0.	0.	0.
.1760	0.	0.	0.	0.	0.	0.	0.
.1770	0.	0.	0.	0.	0.	0.	0.
.1780	0.	0.	0.	0.	0.	0.	0.
.1790	0.	0.	0.	0.	0.	0.	0.
.1800	0.	0.	0.	0.	0.	0.	0.
.1810	0.	0.	0.	0.	0.	0.	0.
.1820	0.	0.	0.	0.	0.	0.	0.
.1830	0.	0.	0.	0.	0.	0.	0.
.1840	0.	0.	0.	0.	0.	0.	0.
.1850	0.	0.	0.	0.	0.	0.	0.
.1860	0.	0.	0.	0.	0.	0.	0.
.1870	0.	0.	0.	0.	0.	0.	0.
.1880	0.	0.	0.	0.	0.	0.	0.
.1890	0.	0.	0.	0.	0.	0.	0.
.1900	0.	0.	0.	0.	0.	0.	0.
.1910	0.	0.	0.	0.	0.	0.	0.
.1920	0.	0.	0.	0.	0.	0.	0.
.1930	0.	0.	0.	0.	0.	0.	0.
.1940	0.	0.	0.	0.	0.	0.	0.
.1950	0.	0.	0.	0.	0.	0.	0.
.1960	0.	0.	0.	0.	0.	0.	0.
.1970	0.	0.	0.	0.	0.	0.	0.
.1980	0.	0.	0.	0.	0.	0.	0.
.1990	0.	0.	0.	0.	0.	0.	0.
.2000	0.	0.	0.	0.	0.	0.	0.
.2010	0.	0.	0.	0.	0.	0.	0.
.2020	0.	0.	0.	0.	0.	0.	0.
.2030	0.	0.	0.	0.	0.	0.	0.
.2040	0.	0.	0.	0.	0.	0.	0.
.2050	0.	0.	0.	0.	0.	0.	0.
.2060	0.	0.	0.	0.	0.	0.	0.
.2070	0.	0.	0.	0.	0.	0.	0.
.2080	0.	0.	0.	0.	0.	0.	0.
.2090	0.	0.	0.	0.	0.	0.	0.

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DIS/ADLPIPE ADLPIPE STRESS ANALYSIS  
 S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK  
 2 SAFETY COLD FKW24F--2 PSV

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INTERNAL FORCES IN THE PIPING  
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.1980	0.	0.	0.	0.	0.	0.	0.	0.	-.0127	-.0688	.0132	.0531	-.0194	.0503	0.
.1990	0.	0.	0.	0.	0.	0.	0.	0.	-.0001	-.0751	.0073	.0476	-.0041	.0435	0.
.2000	0.	0.	0.	0.	0.	0.	0.	0.	.0131	-.0804	.0024	.0421	.0121	.0320	0.
.2010	0.	0.	0.	0.	0.	0.	0.	0.	.0261	-.0842	-.0019	.0377	.0297	.0174	0.
.2020	0.	0.	0.	0.	0.	0.	0.	0.	.0384	-.0865	-.0056	.0353	.0477	.0021	0.
.2030	0.	0.	0.	0.	0.	0.	0.	0.	.0497	-.0872	-.0086	.0350	.0642	-.0112	0.
.2040	0.	0.	0.	0.	0.	0.	0.	0.	.0600	-.0864	-.0106	.0371	.0778	-.0223	0.
.2050	0.	0.	0.	0.	0.	0.	0.	0.	.0694	-.0841	-.0113	.0432	.0873	-.0316	0.
.2060	0.	0.	0.	0.	0.	0.	0.	0.	.0778	-.0805	-.0107	.0539	.0919	-.0386	0.
.2070	0.	0.	0.	0.	0.	0.	0.	0.	.0852	-.0757	-.0090	.0686	.0918	-.0429	0.
.2080	0.	0.	0.	0.	0.	0.	0.	0.	.0916	-.0701	-.0068	.0849	.0880	-.0454	0.
.2090	0.	0.	0.	0.	0.	0.	0.	0.	.0968	-.0641	-.0045	.1003	.0812	-.0469	0.

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

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

SECTION	20	MEMBER	2	SEQUENCE	808	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2100	0.	0.	0.	0.	0.	0.	.1007	-.0581	-.0026	.1127	.0722	-.0476	0.		
.2110	0.	0.	0.	0.	0.	0.	.1034	-.0521	-.0012	.1212	.0625	-.0482	0.		
.2120	0.	0.	0.	0.	0.	0.	.1048	-.0463	-.0005	.1259	.0531	-.0508	0.		
.2130	0.	0.	0.	0.	0.	0.	.1051	-.0410	-.0001	.1268	.0439	-.0565	0.		
.2140	0.	0.	0.	0.	0.	0.	.1043	-.0363	.0003	.1239	.0349	-.0650	0.		
.2150	0.	0.	0.	0.	0.	0.	.1023	-.0327	.0010	.1175	.0266	-.0751	0.		
.2160	0.	0.	0.	0.	0.	0.	.0990	-.0300	.0020	.1084	.0191	-.0862	0.		
.2170	0.	0.	0.	0.	0.	0.	.0939	-.0284	.0033	.0973	.0127	-.0967	0.		
.2180	0.	0.	0.	0.	0.	0.	.0867	-.0277	.0047	.0850	.0083	-.1042	0.		
.2190	0.	0.	0.	0.	0.	0.	.0773	-.0279	.0063	.0724	.0068	-.1063	0.		
.2200	0.	0.	0.	0.	0.	0.	.0655	-.0287	.0079	.0600	.0079	-.1019	0.		
.2210	0.	0.	0.	0.	0.	0.	.0518	-.0300	.0098	.0480	.0108	-.0905	0.		
.2220	0.	0.	0.	0.	0.	0.	.0366	-.0313	.0118	.0374	.0150	-.0729	0.		
.2230	0.	0.	0.	0.	0.	0.	.0205	-.0323	.0141	.0298	.0192	-.0504	0.		
.2240	0.	0.	0.	0.	0.	0.	.0043	-.0326	.0167	.0252	.0215	-.0254	0.		
.2250	0.	0.	0.	0.	0.	0.	-.0113	-.0321	.0193	.0227	.0203	-.0005	0.		
.2260	0.	0.	0.	0.	0.	0.	-.0258	-.0308	.0218	.0212	.0152	.0224	0.		
.2270	0.	0.	0.	0.	0.	0.	-.0386	-.0288	.0240	.0202	.0065	.0419	0.		
.2280	0.	0.	0.	0.	0.	0.	-.0497	-.0261	.0256	.0189	-.0049	.0565	0.		
.2290	0.	0.	0.	0.	0.	0.	-.0587	-.0226	.0265	.0166	-.0178	.0653	0.		
.2300	0.	0.	0.	0.	0.	0.	-.0657	-.0186	.0268	.0128	-.0318	.0677	0.		
.2310	0.	0.	0.	0.	0.	0.	-.0707	-.0139	.0264	.0071	-.0461	.0643	0.		
.2320	0.	0.	0.	0.	0.	0.	-.0736	-.0089	.0257	-.0003	-.0598	.0558	0.		
.2330	0.	0.	0.	0.	0.	0.	-.0746	-.0034	.0249	-.0090	-.0725	.0430	0.		
.2340	0.	0.	0.	0.	0.	0.	-.0738	.0023	.0242	-.0175	-.0836	.0270	0.		
.2350	0.	0.	0.	0.	0.	0.	-.0715	.0081	.0236	-.0250	-.0919	.0094	0.		
.2360	0.	0.	0.	0.	0.	0.	-.0681	.0137	.0231	-.0314	-.0964	-.0077	0.		
.2370	0.	0.	0.	0.	0.	0.	-.0638	.0189	.0225	-.0368	-.0965	-.0225	0.		
.2380	0.	0.	0.	0.	0.	0.	-.0590	.0237	.0212	-.0414	-.0923	-.0339	0.		
.2390	0.	0.	0.	0.	0.	0.	-.0539	.0279	.0192	-.0457	-.0839	-.0411	0.		
.2400	0.	0.	0.	0.	0.	0.	-.0484	.0319	.0162	-.0494	-.0719	-.0441	0.		
.2410	0.	0.	0.	0.	0.	0.	-.0424	.0358	.0123	-.0521	-.0577	-.0434	0.		
.2420	0.	0.	0.	0.	0.	0.	-.0359	.0396	.0077	-.0539	-.0425	-.0400	0.		
.2430	0.	0.	0.	0.	0.	0.	-.0289	.0435	.0025	-.0552	-.0272	-.0347	0.		
.2440	0.	0.	0.	0.	0.	0.	-.0213	.0474	-.0032	-.0560	-.0128	-.0282	0.		
.2450	0.	0.	0.	0.	0.	0.	-.0133	.0512	-.0093	-.0567	.0001	-.0213	0.		
.2460	0.	0.	0.	0.	0.	0.	-.0051	.0547	-.0158	-.0576	.0116	-.0145	0.		
.2470	0.	0.	0.	0.	0.	0.	.0031	.0576	-.0227	-.0591	.0215	-.0081	0.		

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18.26.53.

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



.2370	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.2380	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.2390	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.2400	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.2410	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.2420	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.2430	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.2440	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.2450	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.2460	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.2470	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

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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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PRESSURE

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

SECTION	20	MEMBER	2	SEQUENCE	808	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2480	0.	0.	0.	0.	0.	0.	.0110	.0597	-.0299	-.0618	.0296	-.0022	0.		
.2490	0.	0.	0.	0.	0.	0.	.0184	.0610	-.0374	-.0662	.0353	.0031	0.		
.2500	0.	0.	0.	0.	0.	0.	.0252	.0615	-.0452	-.0727	.0386	.0077	0.		
.2510	0.	0.	0.	0.	0.	0.	.0315	.0612	-.0529	-.0809	.0393	.0113	0.		
.2520	0.	0.	0.	0.	0.	0.	.0372	.0604	-.0603	-.0902	.0370	.0139	0.		
.2530	0.	0.	0.	0.	0.	0.	.0421	.0593	-.0672	-.1002	.0319	.0156	0.		
.2540	0.	0.	0.	0.	0.	0.	.0462	.0581	-.0736	-.1110	.0243	.0168	0.		
.2550	0.	0.	0.	0.	0.	0.	.0490	.0568	-.0793	-.1220	.0155	.0182	0.		
.2560	0.	0.	0.	0.	0.	0.	.0504	.0556	-.0842	-.1326	.0067	.0207	0.		
.2570	0.	0.	0.	0.	0.	0.	.0500	.0544	-.0883	-.1424	-.0008	.0249	0.		
.2580	0.	0.	0.	0.	0.	0.	.0476	.0533	-.0913	-.1510	-.0060	.0309	0.		
.2590	0.	0.	0.	0.	0.	0.	.0431	.0524	-.0934	-.1581	-.0083	.0387	0.		
.2600	0.	0.	0.	0.	0.	0.	.0367	.0519	-.0943	-.1636	-.0075	.0484	0.		
.2610	0.	0.	0.	0.	0.	0.	.0285	.0519	-.0940	-.1676	-.0037	.0593	0.		
.2620	0.	0.	0.	0.	0.	0.	.0189	.0525	-.0923	-.1702	.0020	.0701	0.		
.2630	0.	0.	0.	0.	0.	0.	.0084	.0539	-.0894	-.1716	.0087	.0799	0.		
.2640	0.	0.	0.	0.	0.	0.	-.0027	.0563	-.0854	-.1719	.0159	.0877	0.		
.2650	0.	0.	0.	0.	0.	0.	-.0140	.0594	-.0806	-.1717	.0230	.0929	0.		
.2660	0.	0.	0.	0.	0.	0.	-.0251	.0631	-.0753	-.1716	.0292	.0951	0.		
.2670	0.	0.	0.	0.	0.	0.	-.0357	.0671	-.0696	-.1721	.0343	.0942	0.		
.2680	0.	0.	0.	0.	0.	0.	-.0455	.0713	-.0640	-.1733	.0376	.0903	0.		
.2690	0.	0.	0.	0.	0.	0.	-.0542	.0755	-.0584	-.1746	.0392	.0837	0.		
.2700	0.	0.	0.	0.	0.	0.	-.0615	.0796	-.0528	-.1755	.0381	.0746	0.		
.2710	0.	0.	0.	0.	0.	0.	-.0672	.0836	-.0473	-.1757	.0338	.0635	0.		
.2720	0.	0.	0.	0.	0.	0.	-.0714	.0874	-.0420	-.1749	.0259	.0515	0.		
.2730	0.	0.	0.	0.	0.	0.	-.0740	.0910	-.0367	-.1728	.0145	.0395	0.		
.2740	0.	0.	0.	0.	0.	0.	-.0753	.0944	-.0317	-.1690	.0006	.0286	0.		
.2750	0.	0.	0.	0.	0.	0.	-.0756	.0976	-.0271	-.1638	-.0146	.0199	0.		
.2760	0.	0.	0.	0.	0.	0.	-.0752	.1003	-.0231	-.1573	-.0301	.0144	0.		
.2770	0.	0.	0.	0.	0.	0.	-.0743	.1023	-.0198	-.1501	-.0449	.0125	0.		
.2780	0.	0.	0.	0.	0.	0.	-.0731	.1036	-.0173	-.1425	-.0582	.0140	0.		
.2790	0.	0.	0.	0.	0.	0.	-.0714	.1040	-.0155	-.1344	-.0698	.0180	0.		
.2800	0.	0.	0.	0.	0.	0.	-.0693	.1035	-.0143	-.1259	-.0796	.0236	0.		
.2810	0.	0.	0.	0.	0.	0.	-.0667	.1020	-.0137	-.1174	-.0876	.0296	0.		
.2820	0.	0.	0.	0.	0.	0.	-.0634	.0997	-.0136	-.1094	-.0939	.0349	0.		
.2830	0.	0.	0.	0.	0.	0.	-.0595	.0965	-.0138	-.1021	-.0981	.0390	0.		
.2840	0.	0.	0.	0.	0.	0.	-.0551	.0924	-.0143	-.0958	-.0997	.0414	0.		
.2850	0.	0.	0.	0.	0.	0.	-.0503	.0876	-.0152	-.0908	-.0983	.0423	0.		

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18.26.53.

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

CONDITION 24

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ENGLISH UNITS

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

.2750	0.	0.	0.	0.	0.	0.	0.	-.0756	.0976	-.0271	-.1638	-.0146	.0286	0.
.2760	0.	0.	0.	0.	0.	0.	0.	-.0752	.1003	-.0231	-.1573	-.0301	.0144	0.
.2770	0.	0.	0.	0.	0.	0.	0.	-.0743	.1023	-.0198	-.1501	-.0449	.0125	0.
.2780	0.	0.	0.	0.	0.	0.	0.	-.0731	.1036	-.0173	-.1425	-.0502	.0140	0.
.2790	0.	0.	0.	0.	0.	0.	0.	-.0714	.1040	-.0155	-.1344	-.0598	.0180	0.
.2800	0.	0.	0.	0.	0.	0.	0.	-.0693	.1035	-.0143	-.1259	-.0796	.0236	0.
.2810	0.	0.	0.	0.	0.	0.	0.	-.0667	.1020	-.0137	-.1174	-.0876	.0296	0.
.2820	0.	0.	0.	0.	0.	0.	0.	-.0634	.0997	-.0136	-.1094	-.0939	.0349	0.
.2830	0.	0.	0.	0.	0.	0.	0.	-.0595	.0965	-.0138	-.1021	-.0981	.0390	0.
.2840	0.	0.	0.	0.	0.	0.	0.	-.0551	.0924	-.0143	-.0958	-.0997	.0414	0.
.2850	0.	0.	0.	0.	0.	0.	0.	-.0503	.0876	-.0152	-.0908	-.0983	.0423	0.

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ENGLISH UNITS

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

SECTION	20	MEMBER	2	SEQUENCE	808	LOCATION	DIS	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2860	0.	0.	0.	0.	0.	0.	-.0453	.0822	-.0164	-.0871	-.0938	.0419	0.	
.2870	0.	0.	0.	0.	0.	0.	-.0403	.0760	-.0178	-.0844	-.0864	.0404	0.	
.2880	0.	0.	0.	0.	0.	0.	-.0354	.0693	-.0191	-.0822	-.0765	.0381	0.	
.2890	0.	0.	0.	0.	0.	0.	-.0308	.0620	-.0202	-.0798	-.0548	.0357	0.	
.2900	0.	0.	0.	0.	0.	0.	-.0266	.0543	-.0208	-.0766	-.0520	.0334	0.	
.2910	0.	0.	0.	0.	0.	0.	-.0227	.0462	-.0208	-.0720	-.0389	.0317	0.	
.2920	0.	0.	0.	0.	0.	0.	-.0194	.0381	-.0201	-.0657	-.0256	.0308	0.	
.2930	0.	0.	0.	0.	0.	0.	-.0165	.0298	-.0187	-.0576	-.0124	.0311	0.	
.2940	0.	0.	0.	0.	0.	0.	-.0142	.0217	-.0167	-.0479	.0007	.0326	0.	
.2950	0.	0.	0.	0.	0.	0.	-.0122	.0139	-.0141	-.0370	.0133	.0352	0.	
.2960	0.	0.	0.	0.	0.	0.	-.0104	.0064	-.0113	-.0254	.0253	.0383	0.	
.2970	0.	0.	0.	0.	0.	0.	-.0086	-.0006	-.0083	-.0132	.0360	.0413	0.	
.2980	0.	0.	0.	0.	0.	0.	-.0066	-.0072	-.0053	-.0007	.0451	.0434	0.	
.2990	0.	0.	0.	0.	0.	0.	-.0041	-.0134	-.0021	.0120	.0520	.0439	0.	
.3000	0.	0.	0.	0.	0.	0.	-.0010	-.0192	.0009	.0245	.0564	.0426	0.	
.3010	0.	0.	0.	0.	0.	0.	.0026	-.0247	.0039	.0365	.0586	.0396	0.	
.3020	0.	0.	0.	0.	0.	0.	.0065	-.0300	.0067	.0479	.0591	.0353	0.	
.3030	0.	0.	0.	0.	0.	0.	.0105	-.0349	.0094	.0588	.0586	.0304	0.	
.3040	0.	0.	0.	0.	0.	0.	.0143	-.0397	.0118	.0691	.0579	.0258	0.	
.3050	0.	0.	0.	0.	0.	0.	.0175	-.0442	.0141	.0785	.0576	.0223	0.	
.3060	0.	0.	0.	0.	0.	0.	.0200	-.0485	.0163	.0874	.0583	.0207	0.	
.3070	0.	0.	0.	0.	0.	0.	.0215	-.0527	.0186	.0958	.0599	.0212	0.	
.3080	0.	0.	0.	0.	0.	0.	.0221	-.0566	.0212	.1040	.0622	.0235	0.	
.3090	0.	0.	0.	0.	0.	0.	.0218	-.0605	.0240	.1123	.0548	.0273	0.	
.3100	0.	0.	0.	0.	0.	0.	.0209	-.0642	.0272	.1204	.0570	.0319	0.	
.3110	0.	0.	0.	0.	0.	0.	.0195	-.0678	.0306	.1282	.0583	.0365	0.	
.3120	0.	0.	0.	0.	0.	0.	.0180	-.0712	.0341	.1353	.0582	.0402	0.	
.3130	0.	0.	0.	0.	0.	0.	.0164	-.0745	.0376	.1413	.0562	.0421	0.	
.3140	0.	0.	0.	0.	0.	0.	.0151	-.0773	.0408	.1458	.0520	.0417	0.	
.3150	0.	0.	0.	0.	0.	0.	.0141	-.0798	.0436	.1486	.0554	.0384	0.	
.3160	0.	0.	0.	0.	0.	0.	.0136	-.0817	.0459	.1495	.0462	.0319	0.	
.3170	0.	0.	0.	0.	0.	0.	.0135	-.0831	.0477	.1487	.0345	.0225	0.	
.3180	0.	0.	0.	0.	0.	0.	.0139	-.0838	.0492	.1465	.0207	.0105	0.	
.3190	0.	0.	0.	0.	0.	0.	.0146	-.0839	.0505	.1436	.0054	-.0034	0.	
.3200	0.	0.	0.	0.	0.	0.	.0154	-.0836	.0517	.1403	-.0104	-.0185	0.	
.3210	0.	0.	0.	0.	0.	0.	.0161	-.0828	.0530	.1372	-.0258	-.0335	0.	
.3220	0.	0.	0.	0.	0.	0.	.0163	-.0816	.0544	.1347	-.0396	-.0476	0.	
.3230	0.	0.	0.	0.	0.	0.	.0160	-.0802	.0559	.1330	-.0510	-.0599	0.	

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

CONDITION 24

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ENGLISH UNITS

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

.3130	0.	0.	0.	0.	0.	0.	0.	.0164	-.0745	.0376	.1413	.0562	.0421	0.
.3140	0.	0.	0.	0.	0.	0.	0.	.0151	-.0773	.0408	.1458	.0520	.0417	0.
.3150	0.	0.	0.	0.	0.	0.	0.	.0141	-.0798	.0436	.1486	.0554	.0384	0.
.3160	0.	0.	0.	0.	0.	0.	0.	.0136	-.0817	.0459	.1495	.0462	.0319	0.
.3170	0.	0.	0.	0.	0.	0.	0.	.0135	-.0831	.0477	.1487	.0345	.0225	0.
.3180	0.	0.	0.	0.	0.	0.	0.	.0139	-.0838	.0492	.1465	.0207	.0105	0.
.3190	0.	0.	0.	0.	0.	0.	0.	.0146	-.0839	.0505	.1436	.0054	-.0034	0.
.3200	0.	0.	0.	0.	0.	0.	0.	.0154	-.0836	.0517	.1403	-.0104	-.0185	0.
.3210	0.	0.	0.	0.	0.	0.	0.	.0161	-.0828	.0530	.1372	-.0258	-.0335	0.
.3220	0.	0.	0.	0.	0.	0.	0.	.0163	-.0816	.0544	.1347	-.0396	-.0476	0.
.3230	0.	0.	0.	0.	0.	0.	0.	.0160	-.0802	.0559	.1330	-.0510	-.0599	0.

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

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ENGLISH UNITS

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

SECTION	20	MEMBER	2	SEQUENCE	808	LOCATION	DIS	TYPE	VA					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.3240	0.	0.	0.	0.	0.	0.	.0151	-.0787	.0576	.1321	-.0592	-.0698	0.	
.3250	0.	0.	0.	0.	0.	0.	.0136	-.0770	.0594	.1320	-.0640	-.0773	0.	
.3260	0.	0.	0.	0.	0.	0.	.0117	-.0752	.0613	.1326	-.0654	-.0822	0.	
.3270	0.	0.	0.	0.	0.	0.	.0097	-.0734	.0632	.1339	-.0638	-.0853	0.	
.3280	0.	0.	0.	0.	0.	0.	.0080	-.0717	.0651	.1356	-.0600	-.0869	0.	
.3290	0.	0.	0.	0.	0.	0.	.0066	-.0701	.0669	.1375	-.0546	-.0876	0.	
.3300	0.	0.	0.	0.	0.	0.	.0060	-.0687	.0683	.1392	-.0483	-.0879	0.	
.3310	0.	0.	0.	0.	0.	0.	.0063	-.0677	.0694	.1407	-.0415	-.0881	0.	
.3320	0.	0.	0.	0.	0.	0.	.0074	-.0669	.0699	.1417	-.0346	-.0883	0.	
.3330	0.	0.	0.	0.	0.	0.	.0093	-.0666	.0698	.1420	-.0278	-.0883	0.	
.3340	0.	0.	0.	0.	0.	0.	.0119	-.0666	.0688	.1416	-.0209	-.0879	0.	
.3350	0.	0.	0.	0.	0.	0.	.0150	-.0669	.0670	.1403	-.0141	-.0868	0.	
.3360	0.	0.	0.	0.	0.	0.	.0185	-.0675	.0645	.1383	-.0076	-.0848	0.	
.3370	0.	0.	0.	0.	0.	0.	.0222	-.0681	.0611	.1357	-.0013	-.0820	0.	
.3380	0.	0.	0.	0.	0.	0.	.0261	-.0687	.0570	.1324	.0045	-.0783	0.	
.3390	0.	0.	0.	0.	0.	0.	.0301	-.0693	.0522	.1285	.0096	-.0738	0.	
.3400	0.	0.	0.	0.	0.	0.	.0341	-.0698	.0468	.1239	.0139	-.0686	0.	
.3410	0.	0.	0.	0.	0.	0.	.0380	-.0703	.0407	.1185	.0174	-.0630	0.	
.3420	0.	0.	0.	0.	0.	0.	.0419	-.0708	.0342	.1122	.0204	-.0572	0.	
.3430	0.	0.	0.	0.	0.	0.	.0457	-.0712	.0272	.1050	.0229	-.0516	0.	
.3440	0.	0.	0.	0.	0.	0.	.0494	-.0716	.0199	.0968	.0251	-.0464	0.	
.3450	0.	0.	0.	0.	0.	0.	.0531	-.0720	.0126	.0878	.0271	-.0419	0.	
.3460	0.	0.	0.	0.	0.	0.	.0568	-.0722	.0054	.0781	.0289	-.0385	0.	
.3470	0.	0.	0.	0.	0.	0.	.0604	-.0723	-.0015	.0680	.0306	-.0363	0.	
.3480	0.	0.	0.	0.	0.	0.	.0639	-.0721	-.0078	.0576	.0321	-.0355	0.	
.3490	0.	0.	0.	0.	0.	0.	.0673	-.0716	-.0134	.0473	.0335	-.0360	0.	
.3500	0.	0.	0.	0.	0.	0.	.0704	-.0705	-.0183	.0373	.0349	-.0377	0.	
.3510	0.	0.	0.	0.	0.	0.	.0730	-.0689	-.0224	.0277	.0364	-.0402	0.	
.3520	0.	0.	0.	0.	0.	0.	.0749	-.0667	-.0256	.0187	.0381	-.0432	0.	
.3530	0.	0.	0.	0.	0.	0.	.0760	-.0637	-.0280	.0107	.0402	-.0465	0.	
.3540	0.	0.	0.	0.	0.	0.	.0762	-.0599	-.0297	.0037	.0427	-.0497	0.	
.3550	0.	0.	0.	0.	0.	0.	.0755	-.0552	-.0305	-.0020	.0452	-.0526	0.	
.3560	0.	0.	0.	0.	0.	0.	.0739	-.0497	-.0306	-.0064	.0474	-.0552	0.	
.3570	0.	0.	0.	0.	0.	0.	.0715	-.0434	-.0300	-.0094	.0489	-.0575	0.	
.3580	0.	0.	0.	0.	0.	0.	.0684	-.0364	-.0289	-.0112	.0492	-.0593	0.	
.3590	0.	0.	0.	0.	0.	0.	.0647	-.0288	-.0272	-.0118	.0480	-.0605	0.	
.3600	0.	0.	0.	0.	0.	0.	.0606	-.0209	-.0251	-.0118	.0450	-.0612	0.	
.3610	0.	0.	0.	0.	0.	0.	.0560	-.0129	-.0228	-.0113	.0402	-.0613	0.	

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

CONDITION 24

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

.3510	0.	0.	0.	0.	0.	0.	0.	.0730	-.0689	-.0224	.0277	.0364	-.0402	0.
.3520	0.	0.	0.	0.	0.	0.	0.	.0749	-.0667	-.0256	.0187	.0381	-.0432	0.
.3530	0.	0.	0.	0.	0.	0.	0.	.0760	-.0637	-.0280	-.0107	.0402	-.0465	0.
.3540	0.	0.	0.	0.	0.	0.	0.	.0762	-.0599	-.0297	.0037	.0427	-.0497	0.
.3550	0.	0.	0.	0.	0.	0.	0.	.0755	-.0552	-.0305	-.0020	.0452	-.0526	0.
.3560	0.	0.	0.	0.	0.	0.	0.	.0739	-.0497	-.0306	-.0064	.0474	-.0552	0.
.3570	0.	0.	0.	0.	0.	0.	0.	.0715	-.0434	-.0300	-.0094	.0489	-.0575	0.
.3580	0.	0.	0.	0.	0.	0.	0.	.0684	-.0364	-.0289	-.0112	.0492	-.0593	0.
.3590	0.	0.	0.	0.	0.	0.	0.	.0647	-.0288	-.0272	-.0118	.0480	-.0605	0.
.3600	0.	0.	0.	0.	0.	0.	0.	.0606	-.0209	-.0251	-.0118	.0450	-.0612	0.
.3610	0.	0.	0.	0.	0.	0.	0.	.0560	-.0129	-.0228	-.0113	.0402	-.0613	0.

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ENGLISH UNITS

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

SECTION	20	MEMBER	2	SEQUENCE	808	LOCATION	DIS	TYPE	VA	VB	VC	VD	VE	VF	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)			
.3620	0.	0.	0.	0.	0.	0.	.0512	-.0051	-.0203	-.0108	.0336	-.0605	0.		0.
.3630	0.	0.	0.	0.	0.	0.	.0461	.0024	-.0179	-.0106	.0252	-.0590	0.		0.
.3640	0.	0.	0.	0.	0.	0.	.0408	.0093	-.0154	-.0108	.0154	-.0566	0.		0.
.3650	0.	0.	0.	0.	0.	0.	.0353	.0155	-.0131	-.0116	.0045	-.0534	0.		0.
.3660	0.	0.	0.	0.	0.	0.	.0295	.0210	-.0109	-.0132	-.0072	-.0496	0.		0.
.3670	0.	0.	0.	0.	0.	0.	.0235	.0257	-.0088	-.0156	-.0191	-.0451	0.		0.
.3680	0.	0.	0.	0.	0.	0.	.0171	.0298	-.0069	-.0187	-.0305	-.0402	0.		0.
.3690	0.	0.	0.	0.	0.	0.	.0104	.0331	-.0053	-.0226	-.0410	-.0347	0.		0.
.3700	0.	0.	0.	0.	0.	0.	.0033	.0358	-.0038	-.0272	-.0498	-.0288	0.		0.
.3710	0.	0.	0.	0.	0.	0.	-.0042	.0380	-.0026	-.0325	-.0566	-.0223	0.		0.
.3720	0.	0.	0.	0.	0.	0.	-.0121	.0398	-.0017	-.0381	-.0610	-.0156	0.		0.
.3730	0.	0.	0.	0.	0.	0.	-.0201	.0412	-.0010	-.0440	-.0631	-.0086	0.		0.
.3740	0.	0.	0.	0.	0.	0.	-.0282	.0423	-.0005	-.0498	-.0630	-.0016	0.		0.
.3750	0.	0.	0.	0.	0.	0.	-.0361	.0432	-.0002	-.0553	-.0609	.0054	0.		0.
.3760	0.	0.	0.	0.	0.	0.	-.0437	.0439	.0000	-.0604	-.0574	.0122	0.		0.
.3770	0.	0.	0.	0.	0.	0.	-.0508	.0445	.0001	-.0649	-.0526	.0187	0.		0.
.3780	0.	0.	0.	0.	0.	0.	-.0572	.0451	.0002	-.0685	-.0469	.0248	0.		0.
.3790	0.	0.	0.	0.	0.	0.	-.0627	.0455	.0002	-.0714	-.0406	.0306	0.		0.
.3800	0.	0.	0.	0.	0.	0.	-.0672	.0458	.0001	-.0735	-.0340	.0361	0.		0.
.3810	0.	0.	0.	0.	0.	0.	-.0706	.0460	-.0001	-.0750	-.0274	.0413	0.		0.
.3820	0.	0.	0.	0.	0.	0.	-.0729	.0461	-.0004	-.0758	-.0210	.0460	0.		0.
.3830	0.	0.	0.	0.	0.	0.	-.0739	.0460	-.0009	-.0759	-.0151	.0502	0.		0.
.3840	0.	0.	0.	0.	0.	0.	-.0736	.0459	-.0014	-.0753	-.0099	.0538	0.		0.
.3850	0.	0.	0.	0.	0.	0.	-.0722	.0456	-.0022	-.0741	-.0054	.0568	0.		0.
.3860	0.	0.	0.	0.	0.	0.	-.0696	.0453	-.0031	-.0724	-.0017	.0592	0.		0.
.3870	0.	0.	0.	0.	0.	0.	-.0660	.0449	-.0043	-.0703	.0014	.0612	0.		0.
.3880	0.	0.	0.	0.	0.	0.	-.0615	.0444	-.0059	-.0681	.0039	.0629	0.		0.
.3890	0.	0.	0.	0.	0.	0.	-.0565	.0440	-.0079	-.0657	.0062	.0647	0.		0.
.3900	0.	0.	0.	0.	0.	0.	-.0509	.0435	-.0104	-.0636	.0083	.0667	0.		0.
.3910	0.	0.	0.	0.	0.	0.	-.0452	.0429	-.0133	-.0617	.0103	.0691	0.		0.
.3920	0.	0.	0.	0.	0.	0.	-.0393	.0423	-.0165	-.0600	.0122	.0721	0.		0.
.3930	0.	0.	0.	0.	0.	0.	-.0336	.0416	-.0199	-.0585	.0140	.0754	0.		0.
.3940	0.	0.	0.	0.	0.	0.	-.0281	.0408	-.0234	-.0571	.0156	.0792	0.		0.
.3950	0.	0.	0.	0.	0.	0.	-.0230	.0398	-.0267	-.0558	.0171	.0834	0.		0.
.3960	0.	0.	0.	0.	0.	0.	-.0184	.0388	-.0299	-.0546	.0184	.0877	0.		0.
.3970	0.	0.	0.	0.	0.	0.	-.0145	.0377	-.0327	-.0536	.0197	.0921	0.		0.
.3980	0.	0.	0.	0.	0.	0.	-.0114	.0366	-.0350	-.0526	.0211	.0962	0.		0.
.3990	0.	0.	0.	0.	0.	0.	-.0091	.0354	-.0367	-.0517	.0226	.0998	0.		0.

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INTERNAL FORCES IN THE PIPING  
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.3890	0.	0.	0.	0.	0.	0.	0.	0.	-.0615	.0444	-.0059	-.0681	.0039	.0629	0.
.3900	0.	0.	0.	0.	0.	0.	0.	0.	-.0565	.0440	-.0079	-.0657	.0062	.0647	0.
.3910	0.	0.	0.	0.	0.	0.	0.	0.	-.0509	.0435	-.0104	-.0636	.0083	.0667	0.
.3920	0.	0.	0.	0.	0.	0.	0.	0.	-.0452	.0429	-.0133	-.0617	.0103	.0691	0.
.3930	0.	0.	0.	0.	0.	0.	0.	0.	-.0393	.0423	-.0165	-.0600	.0122	.0721	0.
.3940	0.	0.	0.	0.	0.	0.	0.	0.	-.0336	.0416	-.0199	-.0585	.0140	.0754	0.
.3950	0.	0.	0.	0.	0.	0.	0.	0.	-.0281	.0408	-.0234	-.0571	.0156	.0792	0.
.3960	0.	0.	0.	0.	0.	0.	0.	0.	-.0230	.0398	-.0267	-.0558	.0171	.0834	0.
.3970	0.	0.	0.	0.	0.	0.	0.	0.	-.0184	.0388	-.0299	-.0546	.0184	.0877	0.
.3980	0.	0.	0.	0.	0.	0.	0.	0.	-.0145	.0377	-.0327	-.0536	.0197	.0921	0.
.3990	0.	0.	0.	0.	0.	0.	0.	0.	-.0114	.0366	-.0350	-.0526	.0211	.0962	0.
.3990	0.	0.	0.	0.	0.	0.	0.	0.	-.0091	.0354	-.0367	-.0517	.0226	.0998	0.

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INTERNAL FORCES IN THE PIPING  
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SECTION	20	MEMBER	2	SEQUENCE	808	LOCATION	DIS	TYPE	VA	DX	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ			DY	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)			(IN)						
.4000	0.	0.	0.	0.	0.	0.	0.		.0344	-.0077	-.0379	-.0512	.0242	.1026	0.

MAXIMUM VALUE OF DISCONTINUITY FORCE OCCURS AT

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

SECTION	20	MEMBER	2	SEQUENCE	808	LOCATION	END	TYPE	VA	DX	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ			DY	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)			(IN)						
0.0000	0.	0.	0.	0.	0.	0.	0.		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
.0010	-7.	9.	-10.	0.	0.	0.	0.		-.0000	.0000	-.0000	-.0000	.0000	.0000	0.
.0020	-51.	54.	-71.	0.	-0.	0.	0.		-.0001	.0000	-.0002	-.0002	.0002	.0001	0.
.0030	-151.	120.	-206.	0.	-0.	0.	0.		-.0003	.0000	-.0005	-.0007	.0007	.0005	0.
.0040	-304.	177.	-405.	0.	0.	0.	0.		-.0006	.0000	-.0012	-.0018	.0014	.0013	0.
.0050	-486.	217.	-639.	0.	0.	-0.	0.		-.0011	-.0000	-.0022	-.0035	.0023	.0024	0.
.0060	-680.	264.	-897.	0.	0.	0.	0.		-.0017	-.0001	-.0035	-.0059	.0033	.0038	0.
.0070	-936.	376.	-1213.	0.	-0.	-0.	0.		-.0025	-.0001	-.0054	-.0091	.0047	.0057	0.
.0080	-1369.	591.	-1631.	0.	-0.	-0.	0.		-.0037	-.0002	-.0082	-.0136	.0076	.0085	0.
.0090	-1996.	772.	-2061.	0.	0.	-0.	0.		-.0051	-.0004	-.0120	-.0198	.0128	.0126	0.
.0100	-2778.	788.	-2457.	0.	-0.	-0.	0.		-.0066	-.0007	-.0168	-.0281	.0203	.0179	0.
.0110	-3660.	664.	-2856.	0.	0.	-0.	0.		-.0077	-.0012	-.0224	-.0382	.0296	.0239	0.
.0120	-4494.	501.	-3240.	0.	-0.	-0.	0.		-.0080	-.0017	-.0286	-.0496	.0397	.0295	0.
.0130	-5027.	339.	-3458.	-0.	0.	-0.	0.		-.0069	-.0022	-.0352	-.0614	.0487	.0336	0.
.0140	-4937.	66.	-186.	-0.	0.	-0.	0.		-.0038	-.0026	-.0414	-.0726	.0550	.0350	0.
.0150	-3978.	-460.	-2120.	0.	0.	-0.	0.		.0016	-.0030	-.0466	-.0821	.0571	.0328	0.
.0160	-2081.	-1313.	-81.	-0.	0.	-0.	0.		.0095	-.0030	-.0500	-.0884	.0549	.0263	0.
.0170	315.	-2275.	2433.	0.	0.	-0.	0.		.0198	-.0026	-.0514	-.0905	.0499	.0160	0.
.0180	2395.	-2933.	4337.	-0.	0.	-0.	0.		.0315	-.0013	-.0509	-.0881	.0449	.0036	0.
.0190	3450.	-3002.	4793.	-0.	0.	-0.	0.		.0438	.0012	-.0494	-.0822	.0431	-.0088	0.
.0200	2542.	-2201.	2893.	0.	0.	-0.	0.		.0549	.0052	-.0490	-.0759	.0502	-.0178	0.
.0210	-154.	-1261.	-637.	0.	0.	0.	0.		.0645	.0106	-.0507	-.0719	.0590	-.0212	0.
.0220	-2452.	-1192.	-4013.	0.	-0.	0.	0.		.0736	.0168	-.0528	-.0698	.0869	-.0222	0.
.0230	-3141.	-1128.	-6278.	0.	0.	0.	0.		.0834	.0238	-.0539	-.0658	.0947	-.0261	0.

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK  
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.0130	-5027.	339.	-3458.	-0.	0.	-0.	-0.069	-0.0027	-0.0352	-0.0614	.0487	.0336	0.
.0140	-4937.	66.	-3186.	-0.	0.	-0.	-0.0038	-0.0026	-0.0414	-0.0726	.0550	.0350	0.
.0150	-3978.	-460.	-2120.	0.	0.	-0.	.0016	-0.0030	-0.0466	-0.0821	.0571	.0328	0.
.0160	-2021.	-1313.	-11.	-0.	0.	-0.	.0095	-0.0030	-0.0500	-0.0884	.0549	.0263	0.
.0170	315.	-2275.	2437.	0.	0.	-0.	.0198	-0.0026	-0.0514	-0.0905	.0499	.0160	0.
.0180	2395.	-2933.	4337.	-0.	0.	-0.	.0315	-0.0013	-0.0509	-0.0881	.0449	.0036	0.
.0190	3450.	-3002.	4793.	-0.	0.	-0.	.0438	.0012	-0.0494	-0.0822	.0431	-0.0088	0.
.0200	2542.	-2201.	2893.	0.	0.	-0.	.0549	.0052	-0.0490	-0.0759	.0502	-0.0178	0.
.0210	-154.	-1261.	-637.	0.	0.	0.	.0645	.0106	-0.0507	-0.0719	.0590	-0.0212	0.
.0220	-2452.	-1192.	-4013.	0.	-0.	0.	.0736	.0168	-0.0528	-0.0698	.0869	-0.0222	0.
.0230	-3141.	-1128.	-6278.	0.	0.	0.	.0834	.0238	-0.0539	-0.0658	.0947	-0.0261	0.

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ENGLISH UNITS

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

SECTION	20	MEMBER	2	SEQUENCE	808	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0240	-1144.	-642.	-5484.	-0.	-0.	0.		.0943	.0316	-0.0527	-0.0546	.0882	-0.0378	0.	
.0250	1961.	726.	-3537.	0.	-0.	0.		.1053	.0398	-0.0492	-0.0360	.0720	-0.0542	0.	
.0260	3753.	3266.	-4692.	0.	-0.	0.		.1146	.0477	-0.0451	-0.0153	.0498	-0.0680	0.	
.0270	6435.	4571.	-6550.	0.	-0.	0.		.1211	.0538	-0.0397	.0020	.0131	-0.0800	0.	
.0280	10855.	2954.	-4274.	0.	0.	0.		.1235	.0577	-0.0314	.0156	-0.0267	-0.0916	0.	
.0290	13177.	678.	-168.	-0.	0.	0.		.1199	.0598	-0.0208	.0305	-0.0476	-0.0956	0.	
.0300	13094.	636.	2605.	0.	-0.	0.		.1092	.0614	-0.0099	.0507	-0.0563	-0.0889	0.	
.0310	10960.	2163.	2595.	0.	-0.	0.		.0918	.0623	.0007	.0685	-0.0593	-0.0786	0.	
.0320	5900.	3872.	-1094.	-0.	-0.	0.		.0693	.0617	.0113	.0751	-0.0542	-0.0692	0.	
.0330	1514.	3797.	-2363.	0.	-0.	0.		.0442	.0588	.0234	.0765	-0.0458	-0.0592	0.	
.0340	459.	2053.	1771.	0.	0.	-0.		.0188	.0537	.0375	.0809	-0.0425	-0.0495	0.	
.0350	-328.	1764.	5187.	0.	0.	-0.		-0.0064	.0473	.0511	.0851	-0.0424	-0.0474	0.	
.0360	-2763.	3997.	4504.	-0.	-0.	0.		-0.0309	.0397	.0623	.0845	-0.0410	-0.0555	0.	
.0370	-3720.	5423.	4688.	-0.	-0.	0.		-0.0537	.0298	.0711	.0806	-0.0410	-0.0653	0.	
.0380	-1913.	3418.	7491.	-0.	-0.	0.		-0.0742	.0170	.0776	.0715	-0.0464	-0.0684	0.	
.0390	-827.	-90.	7926.	-0.	0.	-0.		-0.0929	.0023	.0813	.0522	-0.0530	-0.0662	0.	
.0400	-2528.	-1557.	5480.	-0.	-0.	-0.		-0.1107	-0.0124	.0813	.0300	-0.0468	-0.0602	0.	
.0410	-3672.	-1040.	4139.	-0.	0.	-0.		-0.1271	-0.0263	.0780	.0153	-0.0352	-0.0480	0.	
.0420	-4922.	16.	2703.	-0.	0.	-0.		-0.1415	-0.0395	.0723	.0057	-0.0197	-0.0259	0.	
.0430	-8842.	830.	-1777.	-0.	0.	-0.		-0.1531	-0.0525	.0650	-0.0076	.0067	.0054	0.	
.0440	-12067.	-277.	-3916.	-0.	-0.	-0.		-0.1601	-0.0658	.0578	-0.0217	.0329	.0405	0.	
.0450	-12521.	-2760.	-3257.	-0.	0.	-0.		-0.1607	-0.0785	.0520	-0.0294	.0441	.0737	0.	
.0460	-12062.	-3693.	-3971.	-0.	0.	-0.		-0.1546	-0.0896	.0475	-0.0270	.0397	.0982	0.	
.0470	-11255.	-2857.	-4409.	-0.	-0.	0.		-0.1421	-0.0985	.0446	-0.0137	.0284	.1097	0.	
.0480	-8597.	-2964.	-1194.	-0.	0.	-0.		-0.1237	-0.1056	.0434	.0071	.0116	.1118	0.	
.0490	-5103.	-4779.	1893.	0.	0.	-0.		-0.1010	-0.1107	.0423	.0260	-0.0119	.1099	0.	
.0500	-3144.	-6738.	1225.	-0.	0.	-0.		-0.0758	-0.1130	.0397	.0380	-0.0351	.1029	0.	
.0510	-2429.	-7646.	-505.	-0.	0.	-0.		-0.0491	-0.1115	.0359	.0482	-0.0498	.0878	0.	
.0520	-1926.	-6744.	-1279.	0.	-0.	-0.		-0.0215	-0.1057	.0321	.0645	-0.0557	.0661	0.	
.0530	-1896.	-3758.	-3076.	-0.	-0.	-0.		.0070	-0.0963	.0288	.0872	-0.0578	.0403	0.	
.0540	-1438.	-457.	-4921.	-0.	-0.	-0.		.0362	-0.0848	.0270	.1109	-0.0514	.0083	0.	
.0550	996.	1032.	-3532.	-0.	-0.	0.		.0658	-0.0732	.0276	.1335	-0.0684	-0.0300	0.	
.0560	4495.	1316.	-418.	-0.	-0.	0.		.0945	-0.0621	.0299	.1575	-0.0765	-0.0679	0.	
.0570	7406.	2153.	1054.	-0.	-0.	0.		.1204	-0.0519	.0322	.1841	-0.0832	-0.1002	0.	
.0580	9814.	3462.	1616.	-0.	0.	0.		.1419	-0.0430	.0338	.2101	-0.0859	-0.1273	0.	
.0590	11513.	4186.	2400.	0.	0.	-0.		.1577	-0.0361	.0344	.2303	-0.0801	-0.1476	0.	
.0600	11439.	3930.	1882.	0.	-0.	0.		.1671	-0.0316	.0338	.2414	-0.0636	-0.1544	0.	
.0610	9863.	2823.	426.	-0.	-0.	0.		.1701	-0.0293	.0324	.2452	-0.0363	-0.1458	0.	

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

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.0510	-2429.	-7646.	-505.	-0.	-0.	-0.	-0.491	-1.115	.0359	.0482	-.0498	.0878	0.
.0520	-1926.	-6744.	-1279.	0.	-0.	-0.	-.0215	-.1057	.0321	.0645	-.0557	.0661	0.
.0530	-1896.	-3758.	-3076.	-0.	-0.	-0.	.0070	-.0963	.0288	.0872	-.0578	.0403	0.
.0540	-1438.	-457.	-4921.	-0.	-0.	-0.	.0362	-.0848	.0270	.1109	-.0514	.0083	0.
.0550	996.	1032.	-3532.	-0.	-0.	0.	.0658	-.0732	.0276	.1335	-.0684	-.0300	0.
.0560	4495.	1316.	-418.	-0.	-0.	0.	.0945	-.0621	.0299	.1575	-.0765	-.0679	0.
.0570	7406.	2153.	1054.	-0.	-0.	0.	.1204	-.0519	.0322	.1841	-.0832	-.1002	0.
.0580	9814.	3462.	1616.	-0.	0.	0.	.1419	-.0430	.0338	.2101	-.0859	-.1273	0.
.0590	11513.	4186.	2400.	0.	0.	-0.	.1577	-.0361	.0344	.2303	-.0801	-.1476	0.
.0600	11439.	3930.	1882.	0.	-0.	0.	.1671	-.0316	.0338	.2414	-.0536	-.1544	0.
.0610	9863.	2823.	426.	-0.	-0.	0.	.1701	-.0293	.0324	.2452	-.0363	-.1458	0.

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INTERNAL FORCES IN THE PIPING  
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SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA	DX	DY	DZ	RX	RY	RZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.0620	8141.	1642.	259.	0.	-0.	0.	.1678	-.0286	.0309	.2450	-.0010	-.1300	0.
.0630	6109.	1930.	555.	0.	-0.	-0.	.1611	-.0289	.0293	.2421	.0391	-.1143	0.
.0640	3616.	3808.	-193.	-0.	-0.	0.	.1512	-.0305	.0279	.2371	.0773	-.0990	0.
.0650	2315.	5171.	140.	0.	-0.	0.	.1397	-.0343	.0272	.2294	.1067	-.0835	0.
.0660	2800.	4643.	2647.	-0.	-0.	0.	.1271	-.0410	.0267	.2159	.1263	-.0708	0.
.0670	3149.	3106.	4196.	0.	0.	-0.	.1131	-.0502	.0251	.1941	.1404	-.0612	0.
.0680	2337.	1524.	3097.	-0.	0.	0.	.0977	-.0611	.0214	.1669	.1515	-.0507	0.
.0690	1356.	-228.	1752.	0.	0.	0.	.0810	-.0728	.0161	.1380	.1601	-.0371	0.
.0700	329.	-2120.	1242.	-0.	-0.	0.	.0636	-.0841	.0096	.1066	.1578	-.0222	0.
.0710	-1291.	-3804.	-74.	0.	0.	-0.	.0460	-.0941	.0023	.0709	.1725	-.0066	0.
.0720	-2664.	-5149.	-2306.	-0.	-0.	0.	.0291	-.1018	-.0052	.0344	.1680	.0104	0.
.0730	-3008.	-5660.	-3987.	-0.	-0.	0.	.0136	-.1065	-.0117	.0033	.1530	.0277	0.
.0740	-2886.	-4790.	-4704.	0.	-0.	-0.	-.0003	-.1080	-.0161	-.0194	.1312	.0419	0.
.0750	-2290.	-3324.	-4259.	0.	0.	-0.	-.0125	-.1068	-.0179	-.0336	.1033	.0524	0.
.0760	-809.	-2611.	-2382.	-0.	-0.	0.	-.0234	-.1037	-.0173	-.0398	.0694	.0620	0.
.0770	380.	-2900.	-564.	-0.	0.	-0.	-.0337	-.0992	-.0151	-.0412	.0355	.0730	0.
.0780	-206.	-3715.	-687.	0.	0.	-0.	-.0440	-.0931	-.0123	-.0414	.0080	.0847	0.
.0790	-1899.	-4772.	-2055.	-0.	0.	-0.	-.0539	-.0849	-.0089	-.0403	-.0134	.0951	0.
.0800	-3295.	-5498.	-2927.	0.	0.	-0.	-.0626	-.0741	-.0041	-.0355	-.0315	.1017	0.
.0810	-4578.	-4994.	-3394.	-0.	0.	-0.	-.0694	-.0603	.0023	-.0266	-.0450	.1019	0.
.0820	-5857.	-3333.	-3822.	-0.	0.	0.	-.0735	-.0438	.0106	-.0153	-.0541	.0942	0.
.0830	-5900.	-1411.	-3212.	0.	-0.	0.	-.0743	-.0256	.0210	-.0020	-.0635	.0780	0.
.0840	-4307.	471.	-1072.	-0.	0.	-0.	-.0719	-.0068	.0329	.0136	-.0745	.0542	0.
.0850	-2265.	2409.	1750.	0.	0.	-0.	-.0673	.0117	.0452	.0302	-.0325	.0252	0.
.0860	-490.	3925.	4484.	-0.	-0.	0.	-.0614	.0286	.0563	.0454	-.0855	-.0055	0.
.0870	907.	4554.	6274.	-0.	0.	0.	-.0554	.0433	.0648	.0567	-.0848	-.0341	0.
.0880	1238.	4367.	5991.	-0.	0.	-0.	-.0499	.0554	.0696	.0617	-.0793	-.0578	0.
.0890	208.	3373.	4099.	0.	-0.	-0.	-.0451	.0651	.0711	.0601	-.0667	-.0752	0.
.0900	-1178.	1798.	2571.	0.	-0.	-0.	-.0405	.0729	.0701	.0549	-.0499	-.0869	0.
.0910	-2046.	797.	2165.	-0.	0.	0.	-.0352	.0796	.0677	.0498	-.0341	-.0959	0.
.0920	-2401.	1316.	2253.	-0.	-0.	0.	-.0287	.0859	.0641	.0459	-.0229	-.1052	0.
.0930	-2177.	2815.	2829.	0.	-0.	-0.	-.0208	.0912	.0595	.0421	-.0176	-.1153	0.
.0940	-1236.	4273.	4106.	0.	-0.	-0.	-.0117	.0948	.0535	.0373	-.0186	-.1246	0.
.0950	-46.	5356.	5357.	0.	-0.	-0.	-.0018	.0960	.0454	.0300	-.0244	-.1313	0.
.0960	828.	5890.	5908.	0.	0.	-0.	.0082	.0940	.0346	.0185	-.0330	-.1356	0.
.0970	1288.	5575.	5817.	0.	0.	0.	.0177	.0888	.0207	.0026	-.0425	-.1370	0.
.0980	1280.	4586.	4836.	0.	-0.	-0.	.0266	.0805	.0039	-.0172	-.0526	-.1342	0.
.0990	895.	3281.	2653.	-0.	0.	0.	.0348	.0697	-.0152	-.0407	-.0645	-.1264	0.

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2 SAFETY COLD FKW24F--2 PSV

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.0890	208.	3373.	4099.	0.	-0.	-0.	-0.	-.0451	.0651	.0711	.0601	-.0607	-.0752	0.
.0900	-1178.	1798.	2571.	0.	-0.	-0.	-0.	-.0405	.0729	.0701	.0549	-.0499	-.0869	0.
.0910	-2046.	797.	2165.	-0.	0.	0.	0.	-.0352	.0796	.0677	.0498	-.0341	-.0959	0.
.0920	-7401.	1316.	2253.	-0.	-0.	0.	0.	-.0287	.0859	.0641	.0459	-.0229	-.1052	0.
.0930	-2177.	2815.	2829.	0.	-0.	-0.	-0.	-.0208	.0912	.0595	.0421	-.0176	-.1153	0.
.0940	-1236.	4273.	4106.	0.	-0.	-0.	-0.	-.0117	.0948	.0535	.0373	-.0186	-.1246	0.
.0950	-46.	5356.	5357.	0.	-0.	-0.	-0.	-.0018	.0960	.0454	.0300	-.0244	-.1313	0.
.0960	828.	5890.	5908.	0.	0.	-0.	-0.	.0082	.0940	.0346	.0185	-.0330	-.1356	0.
.0970	1288.	5575.	5817.	0.	0.	0.	0.	.0177	.0888	.0207	.0026	-.0425	-.1370	0.
.0980	1280.	4586.	4836.	0.	-0.	-0.	-0.	.0266	.0805	.0039	-.0172	-.0526	-.1342	0.
.0990	895.	3281.	2653.	-0.	0.	0.	0.	.0348	.0697	-.0152	-.0407	-.0645	-.1264	0.

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SECTION	20	MEMBER	2	SEQUENCE	808	LOCATION	END	TYPE	VA	VA	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	(DEG)	(DEG)	(DEG)	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)				
.1000	769.	1686.	-27.	-0.	0.	0.		.0425	.0571	-.0356	-.0680	-.0799	-.1150	0.
.1010	1417.	87.	-2313.	0.	-0.	-0.		.0496	.0437	-.0558	-.0975	-.0992	-.1016	0.
.1020	2596.	-785.	-4152.	0.	-0.	0.		.0558	.0303	-.0745	-.1261	-.1194	-.0855	0.
.1030	3908.	-827.	-5486.	0.	-0.	0.		.0605	.0174	-.0908	-.1507	-.1360	-.0653	0.
.1040	5215.	-790.	-5926.	-0.	0.	-0.		.0629	.0051	-.1039	-.1709	-.1453	-.0408	0.
.1050	6030.	-1210.	-5792.	-0.	0.	0.		.0622	-.0066	-.1138	-.1875	-.1438	-.0123	0.
.1060	5705.	-2195.	-5902.	-0.	0.	-0.		.0582	-.0176	-.1205	-.2008	-.1290	.0201	0.
.1070	4494.	-3806.	-5998.	-0.	0.	0.		.0510	-.0271	-.1239	-.2093	-.1022	.0549	0.
.1080	2176.	-5232.	-6249.	0.	-0.	0.		.0410	-.0343	-.1249	-.2122	-.0615	.0893	0.
.1090	-2332.	-5280.	-8063.	0.	-0.	0.		.0280	-.0380	-.1261	-.2122	-.0019	.1231	0.
.1100	-5153.	-6502.	-9332.	-0.	0.	0.		.0157	-.0383	-.1241	-.2114	.0495	.1484	0.
.1110	-6466.	-7693.	-9217.	0.	0.	-0.		.0061	-.0348	-.1179	-.2064	.0924	.1618	0.
.1120	-6452.	-7213.	-6845.	0.	-0.	0.		-.0003	-.0270	-.1076	-.1915	.1294	.1625	0.
.1130	-4873.	-5596.	-3221.	0.	0.	0.		-.0035	-.0151	-.0945	-.1678	.1558	.1521	0.
.1140	-2740.	-3148.	-394.	0.	0.	-0.		-.0044	-.0001	-.0804	-.1412	.1725	.1337	0.
.1150	-1155.	-168.	1633.	0.	0.	-0.		-.0041	.0166	-.0668	-.1155	.1861	.1125	0.
.1160	-210.	1666.	3362.	-0.	0.	0.		-.0036	.0334	-.0550	-.0938	.1972	.0947	0.
.1170	-522.	1556.	2911.	0.	0.	0.		-.0030	.0493	-.0453	-.0782	.2030	.0826	0.
.1180	11.	1052.	1725.	0.	-0.	-0.		-.0018	.0641	-.0368	-.0640	.1915	.0692	0.
.1190	-23.	2046.	136.	0.	-0.	-0.		-.0001	.0780	-.0280	-.0467	.1724	.0521	0.
.1200	-22.	3353.	296.	0.	-0.	-0.		.0022	.0904	-.0184	-.0246	.1501	.0353	0.
.1210	1680.	3852.	3095.	-0.	-0.	0.		.0040	.1010	-.0097	-.0025	.1197	.0218	0.
.1220	2420.	3589.	4195.	0.	0.	0.		.0048	.1094	-.0029	.0083	.0883	.0100	0.
.1230	2972.	3057.	4879.	-0.	0.	0.		.0042	.1158	.0014	.0071	.0554	-.0023	0.
.1240	3126.	2643.	5646.	0.	0.	0.		.0022	.1204	.0035	-.0003	.0262	-.0125	0.
.1250	2840.	3038.	5475.	-0.	-0.	0.		-.0011	.1232	.0033	-.0098	-.0002	-.0211	0.
.1260	3283.	4426.	5057.	0.	-0.	-0.		-.0056	.1242	.0009	-.0228	-.0291	-.0338	0.
.1270	2050.	5664.	3309.	0.	0.	0.		-.0116	.1226	-.0038	-.0447	-.0467	-.0470	0.
.1280	667.	5248.	2406.	0.	-0.	-0.		-.0190	.1180	-.0110	-.0729	-.0552	-.0529	0.
.1290	-864.	3199.	934.	-0.	0.	0.		-.0270	.1106	-.0199	-.1053	-.0591	-.0500	0.
.1300	-2524.	972.	-1641.	0.	-0.	-0.		-.0343	.1015	-.0290	-.1392	-.0618	-.0458	0.
.1310	-2277.	-435.	-2295.	0.	-0.	0.		-.0401	.0919	-.0369	-.1677	-.0712	-.0457	0.
.1320	-1942.	-631.	-2572.	0.	0.	-0.		-.0442	.0824	-.0427	-.1872	-.0809	-.0428	0.
.1330	-854.	-208.	-2249.	-0.	0.	-0.		-.0472	.0733	-.0469	-.1973	-.0939	-.0332	0.
.1340	371.	-659.	-1860.	-0.	-0.	0.		-.0497	.0645	-.0498	-.2051	-.1068	-.0188	0.
.1350	1017.	-2368.	-1512.	0.	0.	-0.		-.0524	.0561	-.0514	-.2131	-.1145	-.0008	0.
.1360	1546.	-3904.	-878.	0.	-0.	-0.		-.0557	.0491	-.0523	-.2155	-.1196	.0226	0.
.1370	257.	-4186.	-2294.	-0.	0.	-0.		-.0596	.0443	-.0523	-.2104	-.1184	.0503	0.

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.1270	2050.	5664.	3309.	0.	0.	0.	-.0116	.1226	-.0038	-.0447	-.0467	-.0470	0.
.1280	667.	5248.	2406.	0.	-0.	-0.	-.0190	.1180	-.0110	-.0729	-.0552	-.0529	0.
.1290	-864.	3199.	934.	-0.	0.	0.	-.0270	.1106	-.0199	-.1053	-.0591	-.0500	0.
.1300	-2524.	972.	-1641.	0.	-0.	-0.	-.0343	.1015	-.0290	-.1392	-.0618	-.0458	0.
.1310	-2277.	-435.	-2295.	0.	-0.	0.	-.0401	.0919	-.0369	-.1677	-.0712	-.0457	0.
.1320	-1942.	-631.	-2572.	0.	0.	-0.	-.0442	.0824	-.0427	-.1872	-.0809	-.0428	0.
.1330	-854.	-208.	-2249.	-0.	0.	-0.	-.0472	.0733	-.0469	-.1973	-.0939	-.0332	0.
.1340	371.	-659.	-1860.	-0.	-0.	0.	-.0497	.0645	-.0498	-.2051	-.1068	-.0188	0.
.1350	1017.	-2368.	-1512.	0.	0.	-0.	-.0524	.0561	-.0514	-.2131	-.1145	-.0008	0.
.1360	1546.	-3904.	-878.	0.	-0.	-0.	-.0557	.0491	-.0523	-.2155	-.1196	.0226	0.
.1370	257.	-4186.	-2294.	-0.	0.	-0.	-.0596	.0443	-.0523	-.2104	-.1184	.0503	0.

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CONDITION 24

LOADS

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

SECTION	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)
20	.1380	-792.	-3700.	-3531.	0.	0.	-0.	-.0636	.0418	-.0510	-.1991	-.1191	.0732	0.
	.1390	-1460.	-3211.	-4277.	-0.	0.	-0.	-.0669	.0413	-.0473	-.1846	-.1219	.0869	0.
	.1400	-1925.	-2875.	-4738.	0.	0.	-0.	-.0691	.0426	-.0406	-.1660	-.1257	.0946	0.
	.1410	-885.	-2583.	-3215.	-0.	-0.	0.	-.0703	.0454	-.0313	-.1409	-.1334	.0965	0.
	.1420	-121.	-2055.	-1252.	-0.	0.	-0.	-.0707	.0495	-.0199	-.1132	-.1373	.0898	0.
	.1430	688.	-645.	1155.	-0.	0.	-0.	-.0710	.0546	-.0078	-.0846	-.1383	.0739	0.
	.1440	703.	1459.	2421.	0.	0.	-0.	-.0716	.0600	.0038	-.0569	-.1335	.0562	0.
	.1450	-184.	2964.	2270.	-0.	-0.	0.	-.0723	.0644	.0144	-.0335	-.1218	.0422	0.
	.1460	-757.	3258.	2200.	0.	0.	-0.	-.0729	.0670	.0236	-.0162	-.1078	.0294	0.
	.1470	-2339.	3157.	951.	-0.	0.	0.	-.0729	.0678	.0319	-.0043	-.0870	.0170	0.
	.1480	-3018.	3255.	651.	0.	0.	-0.	-.0716	.0668	.0395	.0094	-.0666	.0061	0.
	.1490	-2776.	3482.	1576.	0.	0.	-0.	-.0686	.0639	.0467	.0269	-.0461	-.0013	0.
	.1500	-2195.	3508.	2939.	-0.	0.	0.	-.0639	.0591	.0532	.0444	-.0243	-.0066	0.
	.1510	-385.	2991.	5010.	0.	0.	-0.	-.0582	.0523	.0579	.0590	-.0071	-.0105	0.
	.1520	982.	1971.	5854.	-0.	0.	0.	-.0522	.0438	.0599	.0688	.0113	-.0080	0.
	.1530	2252.	943.	6300.	-0.	0.	-0.	-.0469	.0344	.0585	.0759	.0306	.0021	0.
	.1540	2185.	529.	5435.	0.	-0.	-0.	-.0427	.0244	.0537	.0794	.0561	.0178	0.
	.1550	938.	482.	3380.	0.	0.	-0.	-.0396	.0141	.0464	.0788	.0863	.0370	0.
	.1560	371.	135.	2108.	-0.	-0.	0.	-.0370	.0036	.0372	.0761	.1127	.0586	0.
	.1570	-1175.	-483.	301.	0.	-0.	-0.	-.0343	-.0070	.0273	.0700	.1404	.0825	0.
	.1580	-2283.	-1084.	-533.	-0.	-0.	0.	-.0309	-.0172	.0174	.0628	.1623	.1037	0.
	.1590	-1985.	-1326.	-204.	0.	-0.	0.	-.0263	-.0269	.0079	.0559	.1710	.1180	0.
	.1600	-1990.	-960.	-996.	0.	-0.	-0.	-.0203	-.0358	-.0012	.0482	.1708	.1259	0.
	.1610	-2155.	-554.	-1736.	0.	-0.	-0.	-.0132	-.0441	-.0095	.0406	.1653	.1291	0.
	.1620	-1001.	-727.	-437.	0.	-0.	-0.	-.0053	-.0520	-.0173	.0333	.1524	.1281	0.
	.1630	-917.	-1633.	-679.	-0.	0.	0.	.0031	-.0594	-.0250	.0214	.1379	.1241	0.
	.1640	-1285.	-2917.	-2024.	-0.	0.	0.	.0120	-.0658	-.0323	.0067	.1193	.1162	0.
	.1650	-609.	-3951.	-2290.	0.	0.	0.	.0214	-.0704	-.0386	-.0053	.0940	.1038	0.
	.1660	-295.	-4282.	-3305.	-0.	-0.	0.	.0312	-.0729	-.0434	-.0147	.0668	.0879	0.
	.1670	688.	-4129.	-4537.	0.	-0.	0.	.0410	-.0729	-.0462	-.0212	.0330	.0681	0.
	.1680	2241.	-3914.	-5261.	-0.	0.	-0.	.0505	-.0707	-.0461	-.0240	-.0029	.0457	0.
	.1690	4855.	-3576.	-4047.	-0.	-0.	0.	.0586	-.0663	-.0431	-.0203	-.0383	.0234	0.
	.1700	6905.	-2861.	-2861.	0.	-0.	0.	.0640	-.0600	-.0378	-.0111	-.0674	.0049	0.
	.1710	6849.	-1963.	-3338.	0.	-0.	0.	.0656	-.0522	-.0304	.0013	-.0834	-.0074	0.
	.1720	7429.	-1072.	-1926.	0.	0.	-0.	.0634	-.0434	-.0213	.0194	-.0925	-.0153	0.
	.1730	6828.	-166.	-683.	0.	0.	-0.	.0573	-.0341	-.0108	.0400	-.0889	-.0170	0.
	.1740	4695.	505.	-801.	-0.	-0.	0.	.0476	-.0248	.0003	.0597	-.0751	-.0124	0.
	.1750	2546.	844.	-867.	-0.	-0.	0.	.0354	-.0159	.0118	.0783	-.0581	-.0049	0.

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2 SAFETY COLD FKW24F--2 PSV

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.1650	-609.	-3951.	-2290.	0.	0.	0.	.0214	-.0704	-.0386	-.0053	.0940	.1038	0.
.1660	-295.	-4282.	-3305.	-0.	-0.	0.	.0312	-.0729	-.0434	-.0147	.0668	.0879	0.
.1670	688.	-4129.	-4537.	0.	-0.	0.	.0410	-.0729	-.0462	-.0212	.0330	.0681	0.
.1680	2241.	-3914.	-5261.	-0.	0.	-0.	.0505	-.0707	-.0461	-.0240	-.0029	.0457	0.
.1690	4855.	-3576.	-4047.	-0.	-0.	0.	.0586	-.0663	-.0431	-.0203	-.0383	.0234	0.
.1700	6905.	-2861.	-2861.	0.	-0.	0.	.0640	-.0600	-.0378	-.0111	-.0574	.0049	0.
.1710	6849.	-1963.	-3338.	0.	-0.	0.	.0656	-.0522	-.0304	.0013	-.0834	-.0074	0.
.1720	7429.	-1072.	-1926.	0.	0.	-0.	.0674	-.0434	-.0213	.0194	-.0925	-.0153	0.
.1730	6828.	-166.	-683.	0.	0.	-0.	.0573	-.0341	-.0108	.0400	-.0889	-.0170	0.
.1740	4695.	505.	-801.	-0.	-0.	0.	.0476	-.0248	.0003	.0597	-.0751	-.0124	0.
.1750	2546.	844.	-867.	-0.	-0.	0.	.0354	-.0159	.0118	.0783	-.0581	-.0049	0.

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INTERNAL FORCES IN THE PIPING  
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SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA							STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	(PSI)
.1760	268.	1301.	-826.	-0.	0.	-0.	.0220	-.0076	.0241	.0956	-.0376	.0017	0.
.1770	-980.	1987.	248.	-0.	0.	0.	.0086	-.0001	.0367	.1121	-.0199	.0047	0.
.1780	-2236.	2428.	991.	-0.	0.	-0.	-.0039	.0061	.0496	.1253	-.0033	.0042	0.
.1790	-2402.	2548.	2572.	-0.	-0.	0.	-.0151	.0110	.0619	.1349	.0076	-.0014	0.
.1800	-1703.	2739.	4475.	-0.	-0.	0.	-.0248	.0143	.0726	.1396	.0124	-.0128	0.
.1810	-2158.	2800.	4283.	-0.	-0.	0.	-.0333	.0161	.0813	.1370	.0170	-.0270	0.
.1820	-2040.	2316.	4146.	-0.	0.	-0.	-.0405	.0163	.0875	.1304	.0162	-.0428	0.
.1830	-1921.	1720.	3884.	-0.	0.	0.	-.0464	.0151	.0918	.1214	.0133	-.0593	0.
.1840	-2036.	1471.	3226.	-0.	-0.	-0.	-.0510	.0129	.0941	.1110	.0081	-.0762	0.
.1850	-2116.	1181.	2543.	-0.	0.	-0.	-.0545	.0100	.0947	.1001	-.0007	-.0911	0.
.1860	-2315.	654.	2013.	-0.	0.	-0.	-.0566	.0063	.0941	.0905	-.0110	-.1014	0.
.1870	-1445.	349.	2769.	-0.	0.	-0.	-.0573	.0023	.0925	.0847	-.0266	-.1074	0.
.1880	-915.	437.	2960.	-0.	-0.	0.	-.0571	-.0020	.0898	.0803	-.0432	-.1082	0.
.1890	-480.	632.	2975.	-0.	0.	-0.	-.0561	-.0066	.0858	.0774	-.0601	-.1027	0.
.1900	209.	946.	3522.	-0.	0.	-0.	-.0549	-.0116	.0804	.0770	-.0757	-.0902	0.
.1910	-172.	1401.	3089.	-0.	0.	-0.	-.0535	-.0172	.0734	.0767	-.0837	-.0702	0.
.1920	-944.	1447.	2148.	-0.	0.	-0.	-.0519	-.0236	.0649	.0752	-.0865	-.0454	0.
.1930	-1930.	931.	1004.	-0.	0.	-0.	-.0496	-.0307	.0555	.0719	-.0834	-.0185	0.
.1940	-2991.	402.	-59.	0.	-0.	-0.	-.0462	-.0384	.0459	.0684	-.0743	.0077	0.
.1950	-3683.	7.	-736.	0.	-0.	-0.	-.0409	-.0463	.0366	.0656	-.0616	.0297	0.
.1960	-3726.	-473.	-1103.	-0.	0.	0.	-.0335	-.0541	.0279	.0624	-.0479	.0447	0.
.1970	-3239.	-902.	-1414.	0.	0.	-0.	-.0240	-.0617	.0201	.0581	-.0340	.0513	0.
.1980	-2331.	-1220.	-1546.	0.	-0.	-0.	-.0127	-.0688	.0132	.0531	-.0194	.0503	0.
.1990	-1049.	-1784.	-1280.	0.	0.	-0.	-.0001	-.0751	.0073	.0476	-.0041	.0435	0.
.2000	282.	-2533.	-867.	0.	-0.	0.	.0131	-.0804	.0024	.0421	.0121	.0320	0.
.2010	1246.	-2893.	-735.	-0.	-0.	0.	.0261	-.0842	-.0019	.0377	.0297	.0174	0.
.2020	1745.	-2795.	-982.	0.	-0.	-0.	.0384	-.0865	-.0056	.0353	.0477	.0021	0.
.2030	1870.	-2709.	-1507.	0.	-0.	0.	.0497	-.0872	-.0086	.0350	.0642	-.0112	0.
.2040	1738.	-2712.	-2085.	-0.	-0.	0.	.0600	-.0864	-.0106	.0371	.0778	-.0223	0.
.2050	1630.	-2524.	-2235.	-0.	0.	0.	.0694	-.0841	-.0113	.0432	.0873	-.0316	0.
.2060	1738.	-2108.	-1747.	0.	-0.	0.	.0778	-.0805	-.0107	.0539	.0919	-.0386	0.
.2070	1922.	-1538.	-961.	0.	-0.	0.	.0852	-.0757	-.0090	.0686	.0918	-.0429	0.
.2080	2030.	-822.	-185.	-0.	-0.	0.	.0916	-.0701	-.0068	.0849	.0880	-.0454	0.
.2090	2151.	-199.	592.	-0.	-0.	0.	.0968	-.0641	-.0045	.1003	.0812	-.0469	0.
.2100	2301.	64.	1190.	-0.	-0.	0.	.1007	-.0581	-.0026	.1127	.0722	-.0476	0.
.2110	2231.	219.	1157.	-0.	-0.	0.	.1034	-.0521	-.0012	.1212	.0625	-.0482	0.
.2120	1969.	663.	546.	0.	0.	-0.	.1048	-.0463	-.0005	.1259	.0531	-.0508	0.
.2130	1838.	1268.	-134.	0.	0.	-0.	.1051	-.0410	-.0001	.1268	.0439	-.0565	0.

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

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.2020	1745.	-2795.	-982.	0.	-0.	-0.	.0384	-.0865	-.0056	.0353	.0477	-.0021	0.
.2030	1870.	-2709.	-1507.	0.	-0.	-0.	.0497	-.0872	-.0086	.0350	.0542	-.0112	0.
.2040	1738.	-2712.	-2085.	-0.	-0.	-0.	.0600	-.0864	-.0106	.0371	.0778	-.0223	0.
.2050	1630.	-2524.	-2235.	-0.	-0.	-0.	.0694	-.0841	-.0113	.0432	.0873	-.0316	0.
.2060	1738.	-2108.	-1747.	0.	-0.	-0.	.0778	-.0805	-.0107	.0539	.0919	-.0386	0.
.2070	1922.	-1538.	-961.	0.	-0.	-0.	.0852	-.0757	-.0090	.0686	.0918	-.0429	0.
.2080	2030.	-822.	-185.	-0.	-0.	-0.	.0916	-.0701	-.0068	.0849	.0880	-.0454	0.
.2090	2151.	-199.	592.	-0.	-0.	-0.	.0968	-.0641	-.0045	.1003	.0812	-.0469	0.
.2100	2301.	64.	1190.	-0.	-0.	-0.	.1007	-.0581	-.0026	.1127	.0722	-.0476	0.
.2110	2231.	219.	1157.	-0.	-0.	-0.	.1034	-.0521	-.0012	.1212	.0625	-.0482	0.
.2120	1969.	663.	546.	0.	-0.	-0.	.1048	-.0463	-.0005	.1259	.0531	-.0508	0.
.2130	1838.	1268.	-134.	0.	-0.	-0.	.1051	-.0410	-.0001	.1268	.0439	-.0565	0.

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INTERNAL FORCES IN THE PIPING  
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SECTION	20	MEMBER	2	SEQUENCE	808	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2140	1982.	1670.	-593.	-0.	-0.	0.	.1043	-.0363	.0003	.1239	.0349	-.0650	0.		
.2150	2378.	1817.	-751.	0.	-0.	0.	.1023	-.0327	.0010	.1175	.0266	-.0751	0.		
.2160	2996.	1825.	-582.	-0.	-0.	0.	.0990	-.0300	.0020	.1084	.0191	-.0862	0.		
.2170	3685.	1707.	-295.	0.	-0.	0.	.0939	-.0284	.0033	.0973	.0127	-.0967	0.		
.2180	4122.	1510.	-190.	0.	0.	-0.	.0867	-.0277	.0047	.0850	.0083	-.1042	0.		
.2190	4144.	1271.	-211.	-0.	-0.	0.	.0773	-.0279	.0063	.0724	.0068	-.1063	0.		
.2200	3777.	846.	-193.	-0.	0.	-0.	.0655	-.0287	.0079	.0600	.0079	-.1019	0.		
.2210	2977.	145.	-272.	-0.	-0.	0.	.0518	-.0300	.0098	.0480	.0108	-.0905	0.		
.2220	1758.	-608.	-485.	-0.	-0.	0.	.0366	-.0313	.0118	.0374	.0150	-.0729	0.		
.2230	405.	-1136.	-477.	-0.	-0.	0.	.0205	-.0323	.0141	.0298	.0192	-.0504	0.		
.2240	-821.	-1384.	-122.	-0.	-0.	0.	.0043	-.0326	.0167	.0252	.0215	-.0254	0.		
.2250	-1873.	-1419.	274.	-0.	0.	-0.	-.0113	-.0321	.0193	.0227	.0203	-.0005	0.		
.2260	-2677.	-1339.	589.	-0.	0.	-0.	-.0258	-.0308	.0218	.0212	.0152	.0224	0.		
.2270	-3139.	-1268.	963.	-0.	-0.	0.	-.0386	-.0288	.0240	.0202	.0065	.0419	0.		
.2280	-3376.	-1247.	1278.	0.	0.	-0.	-.0497	-.0261	.0256	.0189	-.0049	.0565	0.		
.2290	-3550.	-1180.	1293.	-0.	0.	-0.	-.0587	-.0226	.0265	.0166	-.0178	.0653	0.		
.2300	-3626.	-1023.	1065.	-0.	0.	-0.	-.0657	-.0186	.0268	.0128	-.0318	.0677	0.		
.2310	-3566.	-856.	728.	-0.	0.	-0.	-.0707	-.0139	.0264	.0071	-.0461	.0643	0.		
.2320	-3436.	-718.	261.	-0.	0.	-0.	-.0736	-.0089	.0257	-.0003	-.0598	.0558	0.		
.2330	-3186.	-527.	-196.	-0.	0.	-0.	-.0746	-.0034	.0249	-.0090	-.0725	.0430	0.		
.2340	-2706.	-197.	-351.	-0.	0.	-0.	-.0738	.0023	.0242	-.0175	-.0836	.0270	0.		
.2350	-2095.	243.	-149.	-0.	0.	-0.	-.0715	.0081	.0236	-.0250	-.0919	.0094	0.		
.2360	-1534.	660.	289.	-0.	0.	-0.	-.0681	.0137	.0231	-.0314	-.0964	-.0077	0.		
.2370	-1050.	878.	900.	-0.	0.	-0.	-.0638	.0189	.0225	-.0368	-.0965	-.0225	0.		
.2380	-693.	808.	1493.	0.	0.	-0.	-.0590	.0237	.0212	-.0414	-.0923	-.0339	0.		
.2390	-618.	523.	1740.	0.	0.	-0.	-.0539	.0279	.0192	-.0457	-.0839	-.0411	0.		
.2400	-802.	205.	1597.	-0.	0.	-0.	-.0484	.0319	.0162	-.0494	-.0719	-.0441	0.		
.2410	-1008.	-11.	1338.	-0.	0.	-0.	-.0424	.0358	.0123	-.0521	-.0577	-.0434	0.		
.2420	-1091.	-95.	1115.	0.	0.	-0.	-.0359	.0396	.0077	-.0539	-.0425	-.0400	0.		
.2430	-1036.	-54.	920.	0.	0.	-0.	-.0289	.0435	.0025	-.0552	-.0272	-.0347	0.		
.2440	-800.	136.	796.	-0.	0.	-0.	-.0213	.0474	-.0032	-.0560	-.0128	-.0282	0.		
.2450	-393.	491.	770.	-0.	0.	-0.	-.0133	.0512	-.0093	-.0567	.0001	-.0215	0.		
.2460	49.	940.	751.	0.	0.	-0.	-.0051	.0547	-.0158	-.0576	.0116	-.0145	0.		
.2470	430.	1330.	735.	-0.	-0.	0.	.0031	.0576	-.0227	-.0591	.0215	-.0081	0.		
.2480	748.	1544.	718.	0.	0.	-0.	.0110	.0597	-.0299	-.0618	.0296	-.0022	0.		
.2490	934.	1548.	493.	-0.	-0.	0.	.0184	.0610	-.0374	-.0662	.0353	.0031	0.		
.2500	942.	1338.	-26.	0.	-0.	0.	.0252	.0615	-.0452	-.0727	.0386	.0077	0.		
.2510	947.	960.	-546.	0.	-0.	0.	.0315	.0612	-.0529	-.0809	.0393	.0113	0.		

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INTERNAL FORCES IN THE PIPING  
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.2410	-1008.	-11.	1138.	-0.	0.	-0.	-0.0424	.0358	.0123	-.0521	-.0577	-.0434	0.
.2420	-1091.	-95.	1115.	0.	0.	-0.	-.0359	.0296	.0077	-.0539	-.0425	-.0400	0.
.2430	-1036.	-54.	920.	0.	0.	-0.	-.0289	.0435	.0025	-.0552	-.0272	-.0347	0.
.2440	-800.	136.	796.	-0.	0.	-0.	-.0213	.0474	-.0032	-.0560	-.0128	-.0282	0.
.2450	-393.	491.	770.	-0.	0.	0.	-.0133	.0512	-.0093	-.0567	.0001	-.0213	0.
.2460	49.	940.	751.	0.	0.	-0.	-.0051	.0547	-.0158	-.0576	.0116	-.0145	0.
.2470	430.	1330.	735.	-0.	-0.	0.	.0031	.0576	-.0227	-.0591	.0215	-.0081	0.
.2480	748.	1544.	718.	0.	0.	-0.	.0110	.0597	-.0299	-.0618	.0296	-.0022	0.
.2490	934.	1548.	493.	-0.	-0.	0.	.0184	.0610	-.0374	-.0662	.0353	.0031	0.
.2500	942.	1338.	-26.	0.	-0.	0.	.0252	.0615	-.0452	-.0727	.0386	.0077	0.
.2510	947.	960.	-546.	0.	-0.	0.	.0315	.0612	-.0529	-.0809	.0393	.0113	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.26.54.

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	20	MEMBER	2	SEQUENCE	808	LOCATION	END	TYPE	VA						
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)		
.2520	1138.	561.	-832.	0.	-0.	0.	.0372	.0604	-.0603	-.0902	.0370	.0139	0.		
.2530	1406.	288.	-1058.	0.	0.	-0.	.0421	.0593	-.0672	-.1002	.0319	.0156	0.		
.2540	1918.	151.	-1371.	0.	-0.	0.	.0462	.0581	-.0736	-.1110	.0243	.0168	0.		
.2550	2459.	66.	-1601.	0.	0.	-0.	.0490	.0568	-.0793	-.1220	.0155	.0182	0.		
.2560	3052.	-35.	-1639.	0.	-0.	0.	.0504	.0556	-.0842	-.1326	.0067	.0207	0.		
.2570	3508.	-181.	-1661.	0.	-0.	0.	.0500	.0544	-.0883	-.1424	-.0008	.0249	0.		
.2580	3694.	-353.	-1803.	0.	-0.	-0.	.0476	.0533	-.0913	-.1510	-.0060	.0309	0.		
.2590	3583.	-533.	-2026.	-0.	0.	0.	.0431	.0524	-.0934	-.1581	-.0083	.0387	0.		
.2600	3168.	-776.	-2264.	-0.	0.	0.	.0367	.0519	-.0943	-.1636	-.0075	.0484	0.		
.2610	2537.	-1126.	-2377.	-0.	-0.	0.	.0285	.0519	-.0940	-.1676	-.0037	.0593	0.		
.2620	1851.	-1470.	-2224.	0.	-0.	-0.	.0189	.0525	-.0923	-.1702	.0020	.0701	0.		
.2630	1160.	-1599.	-1887.	0.	0.	0.	.0084	.0539	-.0894	-.1716	.0087	.0799	0.		
.2640	451.	-1436.	-1505.	-0.	0.	0.	-.0027	.0563	-.0854	-.1719	.0159	.0877	0.		
.2650	-204.	-1082.	-1035.	-0.	0.	-0.	-.0140	.0594	-.0806	-.1717	.0230	.0929	0.		
.2660	-753.	-670.	-477.	-0.	0.	0.	-.0251	.0631	-.0753	-.1716	.0292	.0951	0.		
.2670	-1282.	-295.	-50.	0.	0.	-0.	-.0357	.0671	-.0696	-.1721	.0343	.0942	0.		
.2680	-1843.	-24.	99.	0.	0.	-0.	-.0455	.0713	-.0640	-.1733	.0378	.0903	0.		
.2690	-2347.	138.	104.	0.	-0.	-0.	-.0542	.0755	-.0584	-.1746	.0392	.0837	0.		
.2700	-2693.	227.	113.	-0.	0.	0.	-.0615	.0796	-.0528	-.1755	.0381	.0746	0.		
.2710	-2837.	254.	135.	0.	-0.	0.	-.0672	.0836	-.0473	-.1757	.0338	.0635	0.		
.2720	-2726.	235.	211.	-0.	0.	-0.	-.0714	.0874	-.0420	-.1749	.0259	.0515	0.		
.2730	-2346.	270.	416.	0.	-0.	0.	-.0740	.0910	-.0367	-.1728	.0145	.0395	0.		
.2740	-1826.	463.	709.	0.	0.	-0.	-.0753	.0944	-.0317	-.1690	.0006	.0286	0.		
.2750	-1305.	771.	1008.	-0.	0.	0.	-.0756	.0976	-.0271	-.1638	-.0146	.0199	0.		
.2760	-875.	1085.	1260.	-0.	0.	-0.	-.0752	.1003	-.0231	-.1573	-.0301	.0144	0.		
.2770	-642.	1352.	1371.	-0.	0.	-0.	-.0743	.1023	-.0198	-.1501	-.0449	.0125	0.		
.2780	-655.	1547.	1293.	0.	0.	-0.	-.0731	.1036	-.0173	-.1425	-.0582	.0140	0.		
.2790	-821.	1636.	1124.	-0.	-0.	0.	-.0714	.1040	-.0155	-.1344	-.0698	.0180	0.		
.2800	-1007.	1635.	974.	-0.	-0.	0.	-.0693	.1035	-.0143	-.1259	-.0796	.0236	0.		
.2810	-1143.	1597.	831.	-0.	-0.	0.	-.0667	.1020	-.0137	-.1174	-.0876	.0296	0.		
.2820	-1166.	1540.	694.	0.	0.	-0.	-.0634	.0997	-.0136	-.1094	-.0939	.0349	0.		
.2830	-1012.	1462.	631.	-0.	0.	-0.	-.0595	.0965	-.0138	-.1021	-.0981	.0390	0.		
.2840	-713.	1373.	635.	0.	0.	-0.	-.0551	.0924	-.0143	-.0958	-.0997	.0414	0.		
.2850	-369.	1279.	582.	-0.	0.	0.	-.0503	.0876	-.0152	-.0908	-.0983	.0423	0.		
.2860	-53.	1182.	376.	0.	0.	-0.	-.0453	.0822	-.0164	-.0871	-.0938	.0419	0.		
.2870	211.	1105.	30.	0.	0.	-0.	-.0403	.0760	-.0178	-.0844	-.0864	.0404	0.		
.2880	416.	1023.	-383.	0.	-0.	-0.	-.0354	.0693	-.0191	-.0822	-.0765	.0381	0.		
.2890	577.	860.	-778.	0.	-0.	-0.	-.0308	.0620	-.0202	-.0798	-.0648	.0357	0.		

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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  
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ENGLISH UNITS

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

.2790	-821.	1636.	1124.	-0.	-0.	0.	-.0714	.1040	-.0155	-.1344	-.0698	.0180	0.
.2800	-1007.	1635.	974.	-0.	-0.	0.	-.0693	.1035	-.0143	-.1259	-.0796	.0236	0.
.2810	-1143.	1597.	831.	-0.	-0.	0.	-.0667	.1020	-.0137	-.1174	-.0876	.0296	0.
.2820	-1166.	1540.	694.	0.	0.	-0.	-.0634	.0997	-.0136	-.1094	-.0939	.0349	0.
.2830	-1012.	1462.	631.	0.	0.	-0.	-.0595	.0965	-.0138	-.1021	-.0981	.0390	0.
.2840	-713.	1371.	635.	-0.	0.	-0.	-.0551	.0924	-.0143	-.0958	-.0997	.0414	0.
.2850	-369.	1279.	582.	-0.	0.	0.	-.0503	.0876	-.0152	-.0908	-.0983	.0423	0.
.2860	-53.	1182.	376.	0.	0.	-0.	-.0453	.0822	-.0164	-.0871	-.0936	.0419	0.
.2870	211.	1105.	30.	0.	0.	-0.	-.0403	.0760	-.0178	-.0844	-.0864	.0404	0.
.2880	416.	1023.	-383.	0.	-0.	-0.	-.0354	.0693	-.0191	-.0822	-.0765	.0381	0.
.2890	577.	860.	-778.	0.	-0.	-0.	-.0308	.0620	-.0202	-.0798	-.0648	.0357	0.

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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	20	MEMBER	2	SEQUENCE	808	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2900	720.	606.	-1082.	0.	0.	-0.	-.0266	.0543	-.0208	-.0766	-.0520	.0334	0.		
.2910	837.	340.	-1256.	0.	0.	-0.	-.0227	.0462	-.0208	-.0720	-.0389	.0317	0.		
.2920	894.	99.	-1271.	-0.	-0.	0.	-.0194	.0381	-.0201	-.0657	-.0256	.0308	0.		
.2930	864.	-154.	-1113.	-0.	-0.	0.	-.0165	.0298	-.0187	-.0576	-.0124	.0311	0.		
.2940	716.	-408.	-834.	-0.	0.	0.	-.0142	.0217	-.0167	-.0479	.0007	.0326	0.		
.2950	423.	-601.	-549.	-0.	0.	-0.	-.0122	.0139	-.0141	-.0370	.0133	.0352	0.		
.2960	5.	-716.	-338.	0.	0.	-0.	-.0104	.0064	-.0113	-.0254	.0253	.0383	0.		
.2970	-447.	-767.	-194.	-0.	-0.	0.	-.0086	-.0006	-.0083	-.0132	.0360	.0413	0.		
.2980	-822.	-735.	-72.	0.	0.	-0.	-.0066	-.0072	-.0053	-.0007	.0451	.0434	0.		
.2990	-1019.	-626.	53.	0.	0.	-0.	-.0041	-.0134	-.0021	-.0120	.0520	.0439	0.		
.3000	-976.	-518.	173.	0.	-0.	0.	-.0010	-.0192	.0009	.0245	.0564	.0426	0.		
.3010	-687.	-465.	267.	0.	-0.	0.	.0026	-.0247	.0039	.0365	.0586	.0396	0.		
.3020	-207.	-441.	327.	0.	-0.	-0.	.0065	-.0300	.0067	.0479	.0591	.0353	0.		
.3030	375.	-409.	346.	0.	0.	-0.	.0105	-.0349	.0094	.0588	.0586	.0304	0.		
.3040	942.	-373.	291.	0.	0.	-0.	.0143	-.0397	.0118	.0691	.0579	.0258	0.		
.3050	1379.	-345.	123.	-0.	-0.	0.	.0175	-.0442	.0141	.0785	.0576	.0223	0.		
.3060	1621.	-319.	-133.	0.	-0.	-0.	.0200	-.0485	.0163	.0874	.0583	.0207	0.		
.3070	1658.	-286.	-388.	-0.	0.	0.	.0215	-.0527	.0186	.0958	.0599	.0212	0.		
.3080	1509.	-239.	-560.	-0.	0.	0.	.0221	-.0566	.0212	.1040	.0622	.0235	0.		
.3090	1213.	-187.	-605.	-0.	-0.	0.	.0218	-.0605	.0240	.1123	.0648	.0273	0.		
.3100	832.	-173.	-498.	-0.	-0.	0.	.0209	-.0642	.0272	.1204	.0670	.0319	0.		
.3110	423.	-238.	-246.	-0.	-0.	0.	.0195	-.0678	.0306	.1282	.0683	.0365	0.		
.3120	23.	-376.	95.	-0.	-0.	0.	.0180	-.0712	.0341	.1353	.0682	.0402	0.		
.3130	-338.	-556.	440.	0.	-0.	-0.	.0164	-.0745	.0376	.1413	.0662	.0421	0.		
.3140	-625.	-751.	711.	0.	-0.	-0.	.0151	-.0773	.0408	.1458	.0520	.0417	0.		
.3150	-816.	-923.	843.	0.	-0.	-0.	.0141	-.0798	.0436	.1486	.0554	.0384	0.		
.3160	-882.	-1037.	814.	-0.	-0.	0.	.0136	-.0817	.0459	.1495	.0462	.0319	0.		
.3170	-794.	-1079.	648.	-0.	-0.	0.	.0135	-.0831	.0477	.1487	.0345	.0225	0.		
.3180	-555.	-1049.	396.	-0.	-0.	-0.	.0139	-.0838	.0492	.1465	.0207	.0105	0.		
.3190	-193.	-939.	128.	0.	-0.	-0.	.0146	-.0839	.0505	.1436	.0054	-.0034	0.		
.3200	236.	-779.	-89.	0.	-0.	-0.	.0154	-.0836	.0517	.1403	-.0104	-.0185	0.		
.3210	662.	-611.	-217.	0.	-0.	-0.	.0161	-.0828	.0530	.1372	-.0258	-.0335	0.		
.3220	988.	-465.	-266.	-0.	0.	-0.	.0163	-.0816	.0544	.1347	-.0396	-.0476	0.		
.3230	1124.	-340.	-267.	-0.	0.	0.	.0160	-.0802	.0559	.1330	-.0510	-.0599	0.		
.3240	1031.	-234.	-238.	0.	-0.	-0.	.0151	-.0787	.0576	.1321	-.0592	-.0698	0.		
.3250	733.	-154.	-174.	-0.	-0.	0.	.0136	-.0770	.0594	.1320	-.0640	-.0773	0.		
.3260	269.	-68.	-80.	0.	-0.	-0.	.0117	-.0752	.0613	.1326	-.0654	-.0822	0.		
.3270	-284.	61.	45.	-0.	-0.	-0.	.0097	-.0734	.0632	.1339	-.0638	-.0853	0.		

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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

.3170	-794.	-1079.	648.	-0.	-0.	0.	.0135	-.0831	.0477	.1487	.0345	.0225	0.
.3180	-555.	-1045.	396.	-0.	-0.	-0.	.0139	-.0838	.0492	.1465	.0207	.0105	0.
.3190	-193.	-939.	128.	0.	-0.	-0.	.0146	-.0839	.0505	.1436	.0054	-.0034	0.
.3200	236.	-779.	-89.	0.	-0.	-0.	.0154	-.0836	.0517	.1403	-.0104	-.0185	0.
.3210	662.	-611.	-217.	0.	-0.	-0.	.0161	-.0828	.0530	.1372	-.0258	-.0335	0.
.3220	988.	-465.	-266.	-0.	0.	-0.	.0163	-.0816	.0544	.1347	-.0396	-.0476	0.
.3230	1124.	-340.	-267.	-0.	0.	0.	.0160	-.0802	.0559	.1330	-.0510	-.0599	0.
.3240	1031.	-234.	-238.	0.	-0.	-0.	.0151	-.0787	.0576	.1321	-.0592	-.0698	0.
.3250	733.	-154.	-174.	-0.	-0.	0.	.0136	-.0770	.0594	.1320	-.0540	-.0773	0.
.3260	269.	-68.	-80.	0.	-0.	-0.	.0117	-.0752	.0613	.1326	-.0654	-.0822	0.
.3270	-284.	61.	45.	-0.	-0.	-0.	.0097	-.0734	.0632	.1339	-.0638	-.0853	0.

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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	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA	VA	VA	VA	VA	VA	VA	VA	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ		(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)		
.3280	-816.	223.	213.	-0.	-0.	0.	.0080	-.0717	.0651	.1356	-.0600	-.0869	0.	
.3290	-1234.	387.	429.	0.	-0.	-0.	.0066	-.0701	.0669	.1375	-.0546	-.0876	0.	
.3300	-1486.	526.	632.	-0.	-0.	0.	.0060	-.0687	.0683	.1392	-.0483	-.0879	0.	
.3310	-1546.	626.	959.	-0.	0.	0.	.0063	-.0677	.0694	.1407	-.0415	-.0881	0.	
.3320	-1440.	673.	1209.	-0.	-0.	0.	.0074	-.0669	.0699	.1417	-.0346	-.0883	0.	
.3330	-1233.	657.	1370.	0.	-0.	-0.	.0093	-.0666	.0698	.1420	-.0278	-.0883	0.	
.3340	-986.	560.	1434.	-0.	0.	0.	.0119	-.0666	.0688	.1416	-.0209	-.0879	0.	
.3350	-726.	388.	1446.	0.	-0.	-0.	.0150	-.0669	.0670	.1403	-.0141	-.0868	0.	
.3360	-486.	191.	1421.	-0.	0.	-0.	.0185	-.0675	.0645	.1383	-.0076	-.0848	0.	
.3370	-298.	33.	1353.	0.	-0.	-0.	.0222	-.0681	.0611	.1357	-.0013	-.0820	0.	
.3380	-160.	-55.	1263.	0.	-0.	-0.	.0261	-.0687	.0570	.1324	.0045	-.0783	0.	
.3390	-52.	-81.	1179.	-0.	-0.	0.	.0301	-.0693	.0522	.1285	.0096	-.0738	0.	
.3400	33.	-69.	1099.	0.	-0.	-0.	.0341	-.0698	.0468	.1239	.0139	-.0686	0.	
.3410	88.	-42.	994.	0.	-0.	-0.	.0380	-.0703	.0407	.1185	.0174	-.0630	0.	
.3420	108.	-18.	825.	-0.	0.	0.	.0419	-.0708	.0342	.1122	.0204	-.0572	0.	
.3430	88.	-8.	562.	-0.	-0.	0.	.0457	-.0712	.0272	.1050	.0229	-.0516	0.	
.3440	41.	-34.	216.	-0.	-0.	0.	.0494	-.0716	.0199	.0968	.0251	-.0464	0.	
.3450	4.	-126.	-160.	0.	-0.	-0.	.0531	-.0720	.0126	.0878	.0271	-.0419	0.	
.3460	15.	-283.	-527.	-0.	-0.	0.	.0568	-.0722	.0054	.0781	.0289	-.0385	0.	
.3470	92.	-465.	-871.	-0.	-0.	0.	.0604	-.0723	-.0015	.0680	.0306	-.0363	0.	
.3480	250.	-639.	-1159.	-0.	-0.	0.	.0639	-.0721	-.0078	.0576	.0321	-.0355	0.	
.3490	499.	-805.	-1343.	-0.	0.	-0.	.0673	-.0716	-.0134	.0473	.0335	-.0360	0.	
.3500	813.	-975.	-1418.	-0.	-0.	0.	.0704	-.0705	-.0183	.0373	.0349	-.0377	0.	
.3510	1134.	-1143.	-1431.	0.	-0.	0.	.0730	-.0689	-.0224	.0277	.0364	-.0402	0.	
.3520	1405.	-1297.	-1423.	0.	0.	-0.	.0749	-.0667	-.0256	.0187	.0381	-.0432	0.	
.3530	1581.	-1424.	-1409.	-0.	-0.	0.	.0760	-.0637	-.0280	.0107	.0402	-.0465	0.	
.3540	1638.	-1511.	-1383.	0.	-0.	0.	.0762	-.0599	-.0297	.0037	.0427	-.0497	0.	
.3550	1582.	-1540.	-1332.	0.	-0.	0.	.0755	-.0552	-.0305	-.0020	.0452	-.0526	0.	
.3560	1442.	-1483.	-1240.	0.	-0.	0.	.0739	-.0497	-.0306	-.0064	.0474	-.0552	0.	
.3570	1249.	-1317.	-1109.	-0.	-0.	0.	.0715	-.0434	-.0300	-.0094	.0489	-.0575	0.	
.3580	1037.	-1038.	-936.	0.	-0.	0.	.0684	-.0364	-.0289	-.0112	.0492	-.0593	0.	
.3590	844.	-668.	-716.	0.	0.	-0.	.0647	-.0288	-.0272	-.0118	.0480	-.0605	0.	
.3600	690.	-242.	-470.	0.	-0.	0.	.0606	-.0209	-.0251	-.0118	.0450	-.0612	0.	
.3610	570.	202.	-246.	0.	0.	0.	.0560	-.0129	-.0228	-.0113	.0402	-.0613	0.	
.3620	480.	615.	-75.	0.	-0.	0.	.0512	-.0051	-.0203	-.0108	.0336	-.0605	0.	
.3630	427.	947.	46.	-0.	-0.	0.	.0461	.0024	-.0179	-.0106	.0252	-.0590	0.	
.3640	412.	1169.	132.	0.	-0.	0.	.0408	.0093	-.0154	-.0108	.0154	-.0566	0.	
.3650	436.	1285.	192.	-0.	0.	-0.	.0353	.0155	-.0131	-.0116	.0045	-.0534	0.	

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.3540	1638.	-1511.	-1383.	0.	-0.	0.	.0762	-.0599	-.0297	.0037	.0427	-.0497	0.
.3550	1582.	-1540.	-1332.	0.	-0.	0.	.0755	-.0552	-.0305	-.0020	.0452	-.0526	0.
.3560	1442.	-1483.	-1240.	0.	-0.	0.	.0739	-.0497	-.0306	-.0064	.0474	-.0552	0.
.3570	1249.	-1317.	-1109.	-0.	-0.	0.	.0715	-.0434	-.0300	-.0094	.0489	-.0575	0.
.3580	1037.	-1038.	-936.	0.	-0.	0.	.0684	-.0364	-.0289	-.0112	.0492	-.0593	0.
.3590	844.	-668.	-716.	0.	0.	-0.	.0647	-.0288	-.0272	-.0118	.0480	-.0605	0.
.3600	690.	-242.	-470.	0.	-0.	0.	.0606	-.0209	-.0251	-.0118	.0450	-.0612	0.
.3610	570.	202.	-246.	0.	0.	0.	.0560	-.0129	-.0228	-.0113	.0402	-.0613	0.
.3620	480.	615.	-75.	0.	-0.	0.	.0512	-.0051	-.0203	-.0108	.0336	-.0605	0.
.3630	427.	947.	46.	-0.	-0.	0.	.0461	.0024	-.0179	-.0106	.0252	-.0590	0.
.3640	412.	1169.	132.	0.	-0.	0.	.0408	.0093	-.0154	-.0108	.0154	-.0566	0.
.3650	436.	1285.	192.	-0.	0.	-0.	.0353	.0155	-.0131	-.0116	.0045	-.0534	0.

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SECTION	20	MEMBER	2	SEQUENCE	208	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3660	498.	1313.	242.	0.	-0.	0.	.0295	.0210	-.0109	-.0132	-.0072	-.0496	0.		
.3670	586.	1276.	292.	-0.	-0.	0.	.0235	.0257	-.0088	-.0156	-.0191	-.0451	0.		
.3680	672.	1196.	345.	0.	-0.	0.	.0171	.0298	-.0069	-.0187	-.0305	-.0402	0.		
.3690	727.	1087.	401.	-0.	-0.	0.	.0104	.0331	-.0053	-.0226	-.0410	-.0347	0.		
.3700	722.	954.	447.	0.	0.	-0.	.0033	.0358	-.0038	-.0272	-.0498	-.0288	0.		
.3710	630.	807.	459.	0.	-0.	-0.	-.0042	.0380	-.0026	-.0325	-.0566	-.0223	0.		
.3720	438.	662.	423.	0.	0.	-0.	-.0121	.0398	-.0017	-.0381	-.0610	-.0156	0.		
.3730	159.	527.	355.	-0.	-0.	-0.	-.0201	.0412	-.0010	-.0440	-.0631	-.0086	0.		
.3740	-174.	403.	277.	-0.	0.	-0.	-.0282	.0423	-.0005	-.0498	-.0630	-.0016	0.		
.3750	-528.	294.	205.	-0.	0.	0.	-.0361	.0432	-.0002	-.0553	-.0609	.0054	0.		
.3760	-873.	211.	151.	-0.	-0.	0.	-.0437	.0439	.0000	-.0604	-.0574	.0122	0.		
.3770	-1189.	171.	125.	-0.	0.	-0.	-.0508	.0445	.0001	-.0649	-.0526	.0187	0.		
.3780	-1466.	177.	126.	-0.	0.	-0.	-.0572	.0451	.0002	-.0685	-.0469	.0248	0.		
.3790	-1707.	209.	147.	0.	0.	-0.	-.0627	.0455	.0002	-.0714	-.0406	.0306	0.		
.3800	-1909.	231.	176.	0.	0.	-0.	-.0672	.0458	.0001	-.0735	-.0340	.0361	0.		
.3810	-2069.	229.	200.	-0.	0.	-0.	-.0706	.0460	-.0001	-.0750	-.0274	.0413	0.		
.3820	-2181.	215.	214.	0.	0.	-0.	-.0729	.0461	-.0004	-.0758	-.0210	.0460	0.		
.3830	-2230.	199.	232.	0.	0.	-0.	-.0739	.0460	-.0009	-.0759	-.0151	.0502	0.		
.3840	-2197.	179.	279.	-0.	-0.	0.	-.0736	.0459	-.0014	-.0753	-.0099	.0538	0.		
.3850	-2066.	150.	370.	0.	0.	-0.	-.0722	.0456	-.0022	-.0741	-.0054	.0568	0.		
.3860	-1841.	113.	497.	-0.	0.	-0.	-.0696	.0453	-.0031	-.0724	-.0017	.0592	0.		
.3870	-1543.	79.	636.	0.	0.	-0.	-.0660	.0449	-.0043	-.0703	.0014	.0612	0.		
.3880	-1204.	66.	752.	0.	0.	-0.	-.0615	.0444	-.0059	-.0681	.0039	.0629	0.		
.3890	-855.	76.	809.	0.	0.	-0.	-.0565	.0440	-.0079	-.0657	.0062	.0647	0.		
.3900	-515.	95.	779.	-0.	0.	0.	-.0509	.0435	-.0104	-.0636	.0083	.0667	0.		
.3910	-198.	114.	647.	0.	0.	-0.	-.0452	.0429	-.0133	-.0617	.0103	.0691	0.		
.3920	93.	143.	423.	0.	0.	-0.	-.0393	.0423	-.0165	-.0600	.0122	.0721	0.		
.3930	365.	188.	146.	-0.	-0.	0.	-.0376	.0416	-.0199	-.0585	.0140	.0754	0.		
.3940	630.	220.	-134.	0.	-0.	0.	-.0281	.0408	-.0234	-.0571	.0156	.0792	0.		
.3950	893.	208.	-384.	0.	0.	-0.	-.0230	.0398	-.0267	-.0558	.0171	.0834	0.		
.3960	1140.	150.	-599.	0.	0.	-0.	-.0184	.0388	-.0299	-.0546	.0184	.0877	0.		
.3970	1346.	72.	-782.	0.	0.	-0.	-.0145	.0377	-.0327	-.0536	.0197	.0921	0.		
.3980	1486.	-13.	-935.	0.	0.	-0.	-.0114	.0366	-.0350	-.0526	.0211	.0962	0.		
.3990	1550.	-109.	-1052.	0.	0.	0.	-.0091	.0354	-.0367	-.0517	.0226	.0998	0.		
.4000	1543.	-219.	-1128.	0.	0.	0.	-.0077	.0344	-.0379	-.0512	.0242	.1026	0.		

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.3930	365.	138.	-146.	-0.	-0.	0.	-.0336	.0416	-.0199	-.0585	.0140	.0754	0.
.3940	630.	220.	-134.	0.	-0.	0.	-.0281	.0408	-.0234	-.0571	.0156	.0792	0.
.3950	893.	208.	-384.	0.	0.	-0.	-.0270	.0398	-.0267	-.0558	.0171	.0834	0.
.3960	1140.	150.	-599.	0.	0.	-0.	-.0184	.0388	-.0299	-.0546	.0184	.0877	0.
.3970	1246.	72.	-732.	0.	0.	-0.	-.0145	.0377	-.0327	-.0536	.0197	.0921	0.
.3980	1486.	-13.	-935.	0.	0.	-0.	-.0114	.0366	-.0350	-.0526	.0211	.0962	0.
.3990	1550.	-109.	-1052.	0.	0.	0.	-.0091	.0354	-.0367	-.0517	.0226	.0998	0.
.4000	1543.	-219.	-1128.	0.	0.	0.	-.0077	.0344	-.0379	-.0512	.0242	.1026	0.

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MAXIMUM VALUE OF STRESS OCCURS AT

TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.0450	-12521.	-2760.	-3257.	-0.	0.	-0.	-.1607	-.0785	.0520	-.0294	.0441	.0737	0.

SECTION 21	MEMBER 1	SEQUENCE 36	LOCATION	BEG	TYPE	VA	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
							0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
							.0010	-3.	1.	-6.	7.	1.	-3.	-.0000	.0000	-.0000	-.0000	.0000	.0000	.0000	4.
							.0020	-25.	-5.	-46.	52.	7.	-24.	-.0001	.0000	-.0002	-.0002	.0002	.0001	.0001	27.
							.0030	-79.	-44.	-147.	155.	18.	-73.	-.0003	.0000	-.0005	-.0006	.0007	.0005	.0005	81.
							.0040	-165.	-118.	-306.	303.	34.	-141.	-.0005	-.0000	-.0010	-.0016	.0014	.0012	.0012	157.
							.0050	-273.	-206.	-508.	475.	54.	-219.	-.0009	-.0001	-.0019	-.0033	.0023	.0022	.0022	246.
							.0060	-413.	-305.	-771.	697.	73.	-325.	-.0014	-.0002	-.0030	-.0056	.0033	.0036	.0036	362.
							.0070	-618.	-438.	-1165.	1053.	105.	-497.	-.0021	-.0003	-.0046	-.0087	.0048	.0054	.0054	548.
							.0080	-922.	-635.	-1766.	1627.	172.	-757.	-.0030	-.0005	-.0070	-.0130	.0077	.0080	.0080	845.
							.0090	-1317.	-928.	-2553.	2366.	282.	-1057.	-.0042	-.0008	-.0102	-.0191	.0129	.0119	.0119	1221.
							.0100	-1724.	-1266.	-3387.	3079.	424.	-1295.	-.0053	-.0013	-.0142	-.0272	.0205	.0170	.0170	1578.
							.0110	-2062.	-1552.	-4141.	3620.	581.	-1409.	-.0060	-.0020	-.0189	-.0373	.0300	.0227	.0227	1841.
							.0120	-2316.	-1767.	-4794.	4013.	704.	-1439.	-.0060	-.0027	-.0241	-.0486	.0401	.0281	.0281	2025.
							.0130	-2486.	-1929.	-5341.	4310.	720.	-1444.	-.0046	-.0034	-.0296	-.0603	.0492	.0320	.0320	2157.
							.0140	-2479.	-1969.	-5621.	4353.	583.	-1367.	-.0016	-.0040	-.0348	-.0716	.0555	.0335	.0335	2155.
							.0150	-2157.	-1780.	-5417.	3882.	294.	-1091.	.0036	-.0045	-.0392	-.0815	.0575	.0316	.0316	1895.
							.0160	-1468.	-1351.	-4639.	2807.	-103.	-570.	.0110	-.0046	-.0422	-.0886	.0552	.0257	.0257	1343.
							.0170	-463.	-709.	-3302.	1204.	-565.	188.	.0203	-.0041	-.0435	-.0915	.0501	.0163	.0163	630.
							.0180	731.	121.	-1478.	-781.	-1068.	1146.	.0311	-.0026	-.0433	-.0897	.0449	.0045	.0045	820.
							.0190	1937.	1021.	573.	-2851.	-1516.	2211.	.0423	.0001	-.0424	-.0840	.0430	-.0076	-.0076	1834.
							.0200	2921.	1763.	2300.	-4474.	-1688.	3249.	.0526	.0043	-.0424	-.0770	.0501	-.0169	-.0169	2709.
							.0210	3545.	1878.	3348.	-5377.	-1470.	4196.	.0617	.0097	-.0441	-.0718	.0589	-.0212	-.0212	3270.
							.0220	3916.	1494.	4308.	-6247.	-1355.	5019.	.0705	.0159	-.0461	-.0688	.0870	-.0229	-.0229	3809.
							.0230	4374.	1640.	5603.	-7329.	-1511.	5639.	.0799	.0231	-.0474	-.0640	.0946	-.0270	-.0270	4391.
							.0240	4851.	2068.	6366.	-7384.	-1673.	5475.	.0899	.0311	-.0472	-.0531	.0879	-.0381	-.0381	4379.
							.0250	4942.	2275.	6278.	-5978.	-1989.	4333.	.0997	.0397	-.0455	-.0349	.0714	-.0536	-.0536	3583.
							.0260	4470.	2701.	6492.	-4697.	-3034.	2763.	.1080	.0479	-.0433	-.0134	.0488	-.0671	-.0671	2923.
							.0270	3879.	3153.	7501.	-4826.	-4529.	1224.	.1140	.0545	-.0395	.0046	.0115	-.0784	-.0784	3154.
							.0280	4236.	3366.	8591.	-6024.	-4733.	468.	.1159	.0586	-.0328	.0173	-.0287	-.0885	-.0885	3597.
							.0290	5114.	3783.	9680.	-7506.	-3704.	663.	.1122	.0610	-.0236	.0306	-.0497	-.0917	-.0917	3935.
							.0300	3938.	4157.	10239.	-7327.	-3798.	-245.	.1022	.0629	-.0146	.0500	-.0581	-.0849	-.0849	3869.
							.0310	1715.	3462.	9271.	-5029.	-3605.	-2204.	.0858	.0640	-.0055	.0680	-.0608	-.0754	-.0754	3078.
							.0320	1153.	2802.	7885.	-3121.	-1386.	-2885.	.0641	.0634	.0046	.0759	-.0552	-.0676	-.0676	2095.

.0330 1627. 3030. 7575. -2866. 925. -1960. .0399 .0604 .0168 .0777 -.0463 -.0590 1684.



.0170	-463.	-709.	1202.	1204.	-565.	188.	.0203	-.0041	-.0435	-.0915	.0501	.0163	630.
.0180	731.	121.	-1478.	-781.	-1068.	1146.	.0311	-.0026	-.0433	-.0897	.0449	.0045	820.
.0190	1937.	1021.	573.	-2851.	-1516.	2211.	.0423	.0001	-.0424	-.0840	.0430	-.0076	1834.
.0200	2921.	1763.	2300.	-4474.	-1688.	3249.	.0526	.0043	-.0424	-.0770	.0501	-.0169	2709.
.0210	3545.	1876.	3348.	-5377.	-1470.	4196.	.0617	.0097	-.0441	-.0718	.0589	-.0212	3270.
.0220	3916.	1494.	4306.	-6247.	-1355.	5019.	.0705	.0159	-.0461	-.0688	.0870	-.0229	3809.
.0230	4374.	1640.	5603.	-7329.	-1511.	5639.	.0799	.0231	-.0474	-.0640	.0946	-.0270	4391.
.0240	4851.	2068.	6366.	-7384.	-1673.	5475.	.0899	.0311	-.0472	-.0531	.0879	-.0381	4379.
.0250	4942.	2275.	6278.	-5978.	-1989.	4333.	.0997	.0397	-.0455	-.0349	.0714	-.0536	3583.
.0260	4470.	2701.	6492.	-4697.	-3034.	2763.	.1080	.0479	-.0433	-.0134	.0488	-.0671	2923.
.0270	3879.	3153.	7501.	-4826.	-4529.	1224.	.1140	.0545	-.0395	.0046	.0115	-.0784	3154.
.0280	4236.	3366.	8591.	-6024.	-4733.	468.	.1159	.0586	-.0328	.0173	-.0287	-.0885	3597.
.0290	5114.	3783.	9680.	-7506.	-3704.	663.	.1122	.0610	-.0236	.0306	-.0497	-.0917	3935.
.0300	3938.	4157.	10239.	-7327.	-3798.	-245.	.1022	.0629	-.0146	.0500	-.0581	-.0849	3869.
.0310	1715.	3462.	9271.	-5029.	-3605.	-2204.	.0858	.0640	-.0055	.0680	-.0608	-.0754	3079.
.0320	1153.	2802.	7885.	-3121.	-1386.	-2885.	.0641	.0634	.0046	.0759	-.0552	-.0676	2095.

.0330 1627. 3030. 7575. -2866. 925. -1960. .0399 .0604 .0168 .0777 -.0463 -.0590 1684.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK  
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CONDITION 24

LOADS

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INTERNAL FORCES IN THE PIPING  
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SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.0340	1123.	3276.	7835.	-2793.	1366.	-1157.	.0153	.0553	.0303	.0806	-.0424	-.0495	1555.	
.0350	302.	3013.	6981.	-1319.	1699.	-1193.	-.0097	.0490	.0435	.0837	-.0419	-.0476	1152.	
.0360	341.	2528.	4498.	1526.	3479.	-1623.	-.0348	.0414	.0548	.0836	-.0402	-.0566	1936.	
.0370	205.	1794.	1638.	4393.	4756.	-2114.	-.0584	.0315	.0639	.0799	-.0400	-.0668	3192.	
.0380	-566.	772.	-58.	5290.	4120.	-2026.	-.0790	.0186	.0710	.0696	-.0455	-.0692	3283.	
.0390	-400.	-65.	-587.	3655.	3564.	-768.	-.0975	.0037	.0763	.0498	-.0522	-.0664	2419.	
.0400	409.	-608.	-1804.	2511.	4416.	407.	-.1148	-.0115	.0782	.0281	-.0459	-.0609	2388.	
.0410	-671.	-1919.	-4852.	4586.	4695.	-594.	-.1304	-.0256	.0762	.0179	-.0343	-.0491	3088.	
.0420	-2919.	-3560.	-8346.	7921.	4113.	-2421.	-.1432	-.0392	.0715	.0049	-.0187	-.0274	4334.	
.0430	-3718.	-4023.	-10062.	8666.	4411.	-2599.	-.1524	-.0527	.0657	-.0070	.0079	.0027	4717.	
.0440	-3496.	-3899.	-10064.	6960.	5141.	-1717.	-.1567	-.0664	.0600	-.0205	.0345	.0369	4134.	
.0450	-3771.	-4110.	-9183.	4513.	4807.	-1256.	-.1547	-.0795	.0549	-.0287	.0458	.0701	3145.	
.0460	-4135.	-3861.	-7960.	2279.	3834.	-1267.	-.1466	-.0907	.0502	-.0263	.0413	.0947	2173.	
.0470	-3864.	-3015.	-7022.	884.	3361.	-1365.	-.1329	-.0995	.0461	-.0127	.0298	.1065	1750.	
.0480	-3603.	-2600.	-6179.	-73.	2708.	-1476.	-.1142	-.1063	.0430	.0071	.0129	.1094	1445.	
.0490	-3423.	-2411.	-4169.	-2464.	1120.	-895.	-.0915	-.1112	.0400	.0249	-.0109	.1087	1336.	
.0500	-2373.	-1806.	-1193.	-6324.	-193.	892.	-.0665	-.1132	.0362	.0368	-.0345	.1024	2994.	
.0510	-875.	-1526.	778.	-8760.	-393.	2709.	-.0410	-.1114	.0316	.0474	-.0495	.0876	4301.	
.0520	-318.	-1925.	1055.	-7945.	-623.	3330.	-.0150	-.1052	.0264	.0641	-.0556	.0660	4048.	
.0530	-525.	-1966.	912.	-5346.	-1655.	3232.	.0113	-.0952	.0212	.0877	-.0578	.0400	3029.	
.0540	-186.	-1396.	1093.	-2909.	-2507.	3287.	.0379	-.0832	.0174	.1123	-.0616	.0079	2369.	
.0550	993.	-941.	1439.	-1204.	-2596.	3540.	.0643	-.0709	.0161	.1347	-.0588	-.0298	2133.	
.0560	2144.	-461.	2171.	-244.	-2963.	3734.	.0899	-.0591	.0162	.1578	-.0773	-.0667	2237.	
.0570	2534.	290.	3056.	594.	-4239.	3452.	.1131	-.0483	.0162	.1840	-.0843	-.0981	2577.	
.0580	2300.	523.	2933.	2303.	-5305.	2252.	.1323	-.0388	.0156	.2101	-.0873	-.1246	2908.	
.0590	2062.	25.	1887.	4229.	-5237.	625.	.1462	-.0314	.0146	.2300	-.0817	-.1444	3168.	
.0600	1977.	-247.	1608.	4459.	-4902.	-363.	.1548	-.0267	.0132	.2413	-.0652	-.1512	3110.	
.0610	1720.	-1.	2428.	3156.	-5057.	-589.	.1582	-.0244	.0118	.2454	-.0379	-.1430	2807.	
.0620	1320.	124.	2752.	2552.	-4874.	-897.	.1567	-.0238	.0106	.2451	-.0023	-.1276	2612.	
.0630	1135.	181.	1875.	3585.	-3679.	-1621.	.1507	-.0243	.0096	.2422	.0382	-.1126	2524.	
.0640	947.	559.	778.	5123.	-2516.	-2440.	.1417	-.0261	.0089	.2377	.0767	-.0981	2909.	
.0650	448.	898.	153.	6040.	-2290.	-3021.	.1310	-.0301	.0090	.2300	.1063	-.0831	3342.	
.0660	263.	849.	-225.	5888.	-2161.	-2934.	.1191	-.0371	.0097	.2156	.1261	-.0702	3245.	
.0670	853.	563.	-646.	4668.	-1339.	-1933.	.1058	-.0468	.0100	.1932	.1403	-.0604	2449.	
.0680	1217.	-163.	-1298.	3115.	-611.	-662.	.0911	-.0582	.0087	.1662	.1514	-.0501	1519.	
.0690	550.	-1564.	-2354.	2025.	-542.	158.	.0754	-.0703	.0059	.1374	.1601	-.0367	985.	
.0700	-221.	-2990.	-3575.	1110.	-216.	902.	.0592	-.0823	.0021	.1060	.1679	-.0220	678.	
.0710	-305.	-3811.	-4472.	-187.	781.	2028.	.0429	-.0929	-.0022	.0704	.1727	-.0068	1022.	

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

.0600	1977.	-247.	1608.	4459.	-4702.	-363.	1548.	-.0267	.0132	.2413	-.0652	-.1512	3110.
.0610	1720.	-1.	2428.	3156.	-5057.	-589.	1582	-.0244	.0118	.2454	-.0379	-.1430	2807.
.0620	1320.	124.	2752.	2552.	-4874.	-897.	1567	-.0238	.0106	.2451	-.0023	-.1276	2612.
.0630	1135.	181.	1875.	3585.	-3679.	-1621.	1507	-.0243	.0096	.2422	.0382	-.1126	2524.
.0640	947.	559.	778.	5123.	-2516.	-2440.	1417	-.0261	.0089	.2377	.0767	-.0981	2909.
.0650	443.	878.	153.	6040.	-2290.	-3021.	1310	-.0301	.0090	.2300	.1063	-.0831	3342.
.0660	263.	849.	-225.	5888.	-2161.	-2934.	1191	-.0371	.0097	.2156	.1261	-.0702	3245.
.0670	853.	563.	-646.	4668.	-1339.	-1933.	1058	-.0468	.0100	.1932	.1403	-.0604	2449.
.0680	1217.	-163.	-1298.	3115.	-611.	-662.	911	-.0582	.0087	.1662	.1514	-.0501	1519.
.0690	550.	-1564.	-2354.	2025.	-542.	158.	754	-.0703	.0059	.1374	.1601	-.0367	985.
.0700	-221.	-2990.	-3575.	1110.	-216.	902.	652	-.0823	.0021	.1060	.1579	-.0220	678.
.0710	-305.	-3811.	-4472.	-187.	781.	2028.	6429	-.0929	-.0022	.0704	.1727	-.0068	1022.

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S/RV PIPING KEWAUNEE GKM08F 2 RUP DISK  
2 SAFETY COLD FKW24F--2 PSV

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	VA	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
21	1	36					.0720	-455.	-4220.	-4961.	-1372.	1421.	2937.	.0275	-.1013	-.0066	.0344	.1582	.0100	1659.
							.0730	-1165.	-4268.	-5298.	-1657.	1311.	3021.	.0136	-.1066	-.0105	.0038	.1531	.0272	1728.
							.0740	-1792.	-3679.	-5669.	-1040.	1320.	2502.	.0013	-.1085	-.0132	-.0186	.1312	.0413	1414.
							.0750	-2210.	-2861.	-6098.	1.	1640.	1603.	-.0097	-.1077	-.0141	-.0327	.1033	.0519	1075.
							.0760	-2984.	-2434.	-6367.	919.	1588.	399.	-.0193	-.1048	-.0133	-.0394	.0693	.0619	880.
							.0770	-3924.	-2325.	-6164.	973.	1254.	-559.	-.0282	-.1004	-.0114	-.0414	.0354	.0733	789.
							.0780	-4443.	-2438.	-5613.	36.	1332.	-821.	-.0371	-.0944	-.0088	-.0416	.0079	.0849	734.
							.0790	-4781.	-3051.	-5154.	-1036.	1712.	-806.	-.0457	-.0862	-.0055	-.0403	-.0133	.0949	1011.
							.0800	-5275.	-3868.	-4803.	-1529.	1866.	-1010.	-.0536	-.0754	-.0013	-.0353	-.0312	.1011	1226.
							.0810	-5419.	-4068.	-4174.	-1556.	1957.	-1201.	-.0600	-.0614	.0043	-.0262	-.0445	.1009	1300.
							.0820	-4788.	-3524.	-3134.	-1321.	2211.	-1130.	-.0646	-.0448	.0116	-.0146	-.0535	.0926	1318.
							.0830	-3640.	-2545.	-1704.	-866.	2251.	-951.	-.0666	-.0263	.0207	-.0012	-.0529	.0763	1215.
							.0840	-2104.	-993.	230.	-532.	1916.	-637.	-.0661	-.0070	.0312	.0140	-.0739	.0529	978.
							.0850	-166.	978.	2442.	-551.	1607.	-88.	-.0638	.0119	.0420	.0299	-.0820	.0243	797.
							.0860	1648.	2442.	4302.	-668.	1425.	371.	-.0606	.0293	.0517	.0445	-.0850	-.0059	758.
							.0870	2888.	3019.	5628.	-928.	1141.	575.	-.0570	.0444	.0591	.0554	-.0844	-.0342	740.
							.0880	3867.	3230.	6781.	-1877.	931.	959.	-.0536	.0568	.0636	.0605	-.0790	-.0577	1080.
							.0890	4833.	3252.	7843.	-3487.	1063.	1703.	-.0504	.0666	.0654	.0593	-.0664	-.0753	1886.
							.0900	5442.	2977.	8604.	-4933.	1280.	2284.	-.0469	.0744	.0651	.0543	-.0495	-.0874	2617.
							.0910	5589.	2949.	9073.	-5543.	1312.	2271.	-.0425	.0812	.0632	.0492	-.0336	-.0966	2874.
							.0920	5631.	3639.	9242.	-5079.	1337.	1706.	-.0370	.0874	.0600	.0453	-.0223	-.1060	2588.
							.0930	5650.	4600.	8933.	-3553.	1410.	743.	-.0300	.0927	.0557	.0416	-.0170	-.1162	1825.
							.0940	5457.	5409.	8309.	-1527.	1193.	-349.	-.0217	.0964	.0501	.0366	-.0180	-.1252	923.
							.0950	5081.	6103.	7645.	223.	613.	-1190.	-.0123	.0974	.0425	.0290	-.0240	-.1317	636.
							.0960	4560.	6258.	6553.	1669.	58.	-1740.	-.0026	.0954	.0326	.0175	-.0326	-.1357	1130.
							.0970	3692.	5218.	4484.	3254.	-309.	-2231.	.0070	.0899	.0199	.0015	-.0422	-.1370	1854.
							.0980	2412.	3325.	1741.	4823.	-809.	-2592.	.0162	.0813	.0047	-.0181	-.0524	-.1341	2594.
							.0990	971.	1347.	-991.	5887.	-1660.	-2620.	.0253	.0701	-.0125	-.0411	-.0544	-.1263	3118.
							.1000	-371.	-561.	-3541.	6485.	-2637.	-2477.	.0341	.0570	-.0306	-.0677	-.0800	-.1149	3480.
							.1010	-1467.	-2237.	-5836.	6860.	-3488.	-2449.	.0426	.0431	-.0484	-.0968	-.0996	-.1011	3785.
							.1020	-2290.	-3051.	-7452.	6959.	-4707.	-2562.	.0505	.0291	-.0649	-.1249	-.1201	-.0847	4019.
							.1030	-2972.	-2877.	-8218.	6775.	-5198.	-2767.	.0570	.0157	-.0792	-.1491	-.1371	-.0641	4207.
							.1040	-3566.	-2299.	-8398.	6336.	-5877.	-3016.	.0615	.0028	-.0907	-.1692	-.1466	-.0391	4289.
							.1050	-3872.	-1593.	-8037.	5228.	-5959.	-2988.	.0632	-.0094	-.0992	-.1859	-.1452	-.0104	3970.
							.1060	-3858.	-821.	-6999.	3028.	-5466.	-2381.	.0616	-.0208	-.1046	-.1993	-.1304	.0220	3133.
							.1070	-3907.	-444.	-5667.	244.	-4721.	-1440.	.0570	-.0307	-.1071	-.2080	-.1034	.0565	2316.
							.1080	-4194.	-662.	-4822.	-1989.	-3622.	-526.	.0492	-.0382	-.1075	-.2110	-.0624	.0903	1952.
							.1090	-4760.	-1381.	-5183.	-2641.	-1934.	158.	.0383	-.0421	-.1082	-.2104	-.0022	.1227	1536.

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24  
LOADS  
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INTERNAL FORCES IN THE PIPING  
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.0990	971.	1347.	-991.	5887.	-1660.	-2620.	.0253	.0701	-.0125	-.0411	-.0644	-.1263	3118.
.1000	-371.	-561.	-3541.	6485.	-2637.	-2477.	.0341	.0570	-.0306	-.0677	-.0800	-.1149	3480.
.1010	-1467.	-2237.	-5836.	6860.	-3488.	-2449.	.0426	.0431	-.0484	-.0968	-.0996	-.1011	3785.
.1020	-2290.	-3051.	-7452.	6959.	-4307.	-2562.	.0501	.0291	-.0649	-.1249	-.1201	-.0847	4019.
.1030	-2972.	-2877.	-8218.	6775.	-5198.	-2767.	.0570	.0157	-.0792	-.1491	-.1371	-.0641	4207.
.1040	-3566.	-2299.	-8398.	6336.	-5877.	-3016.	.0615	.0028	-.0907	-.1692	-.1466	-.0391	4289.
.1050	-3872.	-1593.	-8037.	5228.	-5959.	-2988.	.0632	-.0094	-.0992	-.1859	-.1452	-.0104	3970.
.1060	-3858.	-821.	-6999.	3028.	-5466.	-2381.	.0616	-.0208	-.1046	-.1993	-.1304	.0220	3133.
.1070	-3907.	-444.	-5667.	244.	-4721.	-1440.	.0570	-.0307	-.1071	-.2080	-.1034	.0565	2316.
.1080	-4194.	-662.	-4822.	-1989.	-3622.	-526.	.0492	-.0382	-.1075	-.2110	-.0624	.0903	1952.
.1090	-4760.	-1381.	-5183.	-2641.	-1934.	158.	.0383	-.0421	-.1082	-.2104	-.0022	.1227	1536.

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CONDITION 24

LOADS

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

SECTION	21	MEMBER	1	SEQUENCE	36	LOCATION	BEG	TYPE	VA							
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS			
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)			
.1100	-5189.	-3066.	-5723.	-3009.	-536.	710.	.0275	-.0427	-.1058	-.2094	.0495	.1472	1471.			
.1110	-4468.	-3716.	-5125.	-4236.	707.	1872.	.0183	-.0392	-.0996	-.2046	.0926	.1604	2196.			
.1120	-3021.	-2738.	-3765.	-5237.	1606.	3050.	.0114	-.0312	-.0903	-.1903	.1298	.1610	2938.			
.1130	-2043.	-2072.	-3125.	-4249.	1771.	3068.	.0069	-.0188	-.0791	-.1676	.1563	.1510	2592.			
.1140	-1221.	-1769.	-3131.	-1874.	1687.	2286.	.0041	-.0033	-.0672	-.1414	.1729	.1331	1595.			
.1150	223.	-491.	-2540.	-167.	1883.	1841.	.0024	.0139	-.0558	-.1160	.1865	.1122	1237.			
.1160	1552.	794.	-1335.	287.	1854.	1734.	.0013	.0311	-.0457	-.0946	.1975	.0945	1197.			
.1170	2245.	670.	-200.	-60.	1451.	1699.	.0008	.0473	-.0373	-.0789	.2033	.0824	1047.			
.1180	2545.	301.	720.	-453.	810.	1226.	.0010	.0625	-.0300	-.0644	.1916	.0691	721.			
.1190	3293.	934.	1634.	-685.	917.	686.	.0016	.0768	-.0227	-.0465	.1724	.0519	625.			
.1200	3419.	1491.	2385.	-307.	956.	-385.	.0028	.0897	-.0151	-.0243	.1501	.0351	504.			
.1210	2117.	1628.	2998.	583.	9.	-2253.	.0039	.1007	-.0086	-.0029	.1197	.0220	1091.			
.1220	1712.	2233.	4291.	81.	-68.	-3027.	.0042	.1094	-.0030	.0075	.0882	.0105	1419.			
.1230	2222.	3436.	5814.	-1062.	857.	-2999.	.0030	.1159	.0011	.0060	.0553	-.0017	1544.			
.1240	2199.	4219.	6822.	-1404.	1584.	-3058.	.0006	.1204	.0035	-.0016	.0262	-.0117	1743.			
.1250	1180.	4522.	7098.	-595.	1510.	-3469.	-.0029	.1232	.0039	-.0111	-.0002	-.0204	1795.			
.1260	75.	4917.	6428.	1141.	1521.	-4065.	-.0080	.1241	.0024	-.0238	-.0292	-.0331	2103.			
.1270	60.	4891.	4961.	2809.	2938.	-3790.	-.0148	.1222	-.0006	-.0450	-.0467	-.0467	2604.			
.1280	-364.	3938.	3237.	4104.	3793.	-3183.	-.0226	.1172	-.0055	-.0730	-.0551	-.0531	3014.			
.1290	-1104.	2694.	2248.	3884.	3400.	-1918.	-.0302	.1093	-.0117	-.1052	-.0588	-.0505	2581.			
.1300	-882.	1884.	1669.	2460.	3221.	-7.	-.0371	.0997	-.0180	-.1386	-.0615	-.0466	1899.			
.1310	-232.	1207.	462.	1817.	3334.	1099.	-.0427	.0897	-.0235	-.1671	-.0711	-.0463	1853.			
.1320	226.	612.	-747.	1808.	2851.	1386.	-.0465	.0799	-.0278	-.1864	-.0808	-.433	1710.			
.1330	49.	767.	-1064.	1467.	874.	1103.	-.0485	.0706	-.0313	-.1967	-.0940	-.0334	953.			
.1340	550.	1406.	-537.	-207.	-864.	1260.	-.0496	.0615	-.0336	-.2047	-.1070	-.0187	722.			
.1350	1972.	1882.	281.	-2862.	-1399.	1931.	-.0507	.0528	-.0346	-.2130	-.1148	-.0003	1746.			
.1360	2631.	2307.	1227.	-5258.	-2313.	2053.	-.0520	.0457	-.0354	-.2157	-.1199	.0233	2859.			
.1370	2413.	2622.	2195.	-7048.	-3650.	1766.	-.0536	.0407	-.0358	-.2102	-.1187	.0507	3810.			
.1380	1745.	2429.	2262.	-7428.	-4528.	846.	-.0556	.0382	-.0353	-.1984	-.1193	.0732	4096.			
.1390	1562.	1860.	1739.	-7106.	-4176.	29.	-.0577	.0378	-.0328	-.1837	-.1221	.0867	3863.			
.1400	1557.	1596.	1865.	-7101.	-3701.	-249.	-.0593	.0393	-.0277	-.1649	-.1258	.0942	3754.			
.1410	827.	1645.	2529.	-6813.	-4067.	-609.	-.0602	.0425	-.0206	-.1402	-.1335	.0964	3729.			
.1420	369.	1371.	2724.	-5698.	-3566.	-773.	-.0612	.0471	-.0116	-.1131	-.1373	.0899	3171.			
.1430	169.	973.	1970.	-3227.	-1994.	-1111.	-.0628	.0527	-.0020	-.0850	-.1383	.0741	1852.			
.1440	-222.	790.	1204.	-408.	-425.	-1396.	-.0649	.0586	.0073	-.0575	-.1334	.0563	710.			
.1450	-905.	589.	1092.	1619.	588.	-1308.	-.0669	.0634	.0160	-.0338	-.1216	.0419	1014.			
.1460	-1324.	353.	1357.	2647.	1657.	-864.	-.0688	.0665	.0240	-.0164	-.1075	.0290	1519.			
.1470	-640.	407.	1892.	2576.	3602.	268.	-.0701	.0676	.0314	-.0042	-.0866	.0161	2079.			

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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

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ENGLISH UNITS

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

.1370	2413.	2622.	2195.	-7048.	-3650.	1766.	-5536	.0407	-.0358	-.2102	-.1187	.0507	3810.
.1380	1745.	2429.	2262.	-7428.	-4528.	846.	-.556	.0382	-.0353	-.1984	-.1193	.0732	4096.
.1390	1562.	1860.	1739.	-7106.	-4176.	29.	-.0577	.0378	-.0328	-.1837	-.1221	.0867	3863.
.1400	1557.	1596.	1865.	-7101.	-3701.	-249.	-.0593	.0393	-.0277	-.1649	-.1258	.0942	3754.
.1410	827.	1645.	2529.	-6313.	-4067.	-609.	-.0602	.0425	-.0206	-.1402	-.1335	.0964	3729.
.1420	369.	1371.	2724.	-5698.	-3566.	-773.	-.0612	.0471	-.0116	-.1131	-.1373	.0899	3171.
.1430	169.	973.	1970.	-3227.	-1994.	-1111.	-.0628	.0527	-.0020	-.0850	-.1383	.0741	1852.
.1440	-222.	790.	1204.	-408.	-425.	-1396.	-.0649	.0586	.0073	-.0575	-.1334	.0563	710.
.1450	-905.	589.	1092.	1619.	588.	-1306.	-.0669	.0634	.0160	-.0338	-.1216	.0419	1014.
.1460	-1324.	353.	1357.	2647.	1657.	-664.	-.0688	.0665	.0240	-.0164	-.1075	.0290	1519.
.1470	-640.	407.	1892.	2576.	3602.	268.	-.0701	.0676	.0314	-.0042	-.0866	.0161	2079.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.54.

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	21	MEMBER	1	SEQUENCE	36	LOCATION	BEG	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1480	-190.	757.	2490.	2520.	4857.	940.	-.0700	.0669	.0381	.0096	-.0661	.0050	2602.	
.1490	-271.	1160.	3109.	2684.	5021.	978.	-.0679	.0643	.0440	.0269	-.0455	-.0024	2707.	
.1500	83.	1722.	3780.	2390.	5098.	1034.	-.0640	.0597	.0492	.0440	-.0237	-.0075	2683.	
.1510	877.	2468.	4428.	1466.	5108.	1085.	-.0589	.0532	.0528	.0579	-.0066	-.0108	2542.	
.1520	1715.	2905.	5013.	-5.	4799.	1247.	-.0531	.0449	.0541	.0673	.0117	-.0078	2324.	
.1530	1733.	2782.	5006.	-933.	3716.	867.	-.0472	.0355	.0522	.0741	.0308	.0027	1841.	
.1540	1512.	2282.	4150.	-1127.	2869.	276.	-.0422	.0254	.0474	.0778	.0562	.0184	1450.	
.1550	1324.	1504.	2617.	-845.	2595.	-284.	-.0379	.0150	.0404	.0779	.0865	.0373	1286.	
.1560	568.	521.	828.	-208.	2006.	-1100.	-.0338	.0042	.0317	.0754	.1128	.0587	1076.	
.1570	-53.	-394.	-584.	-12.	1553.	-1374.	-.0296	-.0066	.0226	.0698	.1406	.0821	972.	
.1580	-582.	-1018.	-1760.	177.	1213.	-1461.	-.0247	-.0171	.0135	.0628	.1526	.1031	894.	
.1590	-1249.	-1485.	-3041.	895.	848.	-1834.	-.0190	-.0270	.0047	.0558	.1713	.1175	1036.	
.1600	-1765.	-1924.	-4305.	1789.	720.	-2110.	-.0124	-.0361	-.0037	.0484	.1710	.1253	1340.	
.1610	-2214.	-2229.	-5201.	2457.	639.	-2103.	-.0050	-.0446	-.0114	.0410	.1655	.1285	1545.	
.1620	-2982.	-2339.	-5721.	2921.	200.	-2080.	.0030	-.0526	-.0188	.0333	.1525	.1278	1683.	
.1630	-3206.	-2607.	-5787.	2442.	217.	-1287.	.0113	-.0601	-.0256	.0214	.1380	.1239	1298.	
.1640	-3109.	-2998.	-5597.	1444.	434.	-120.	.0198	-.0666	-.0318	.0070	.1193	.1160	709.	
.1650	-3234.	-3142.	-5275.	680.	215.	741.	.0286	-.0713	-.0373	-.0051	.0939	.1039	482.	
.1660	-3146.	-3038.	-4754.	33.	-112.	1576.	.0375	-.0737	-.0414	-.0142	.0666	.0881	741.	
.1670	-2967.	-2860.	-4218.	-289.	-687.	2060.	.0462	-.0737	-.0440	-.0203	.0325	.0686	1027.	
.1680	-2356.	-2485.	-3406.	-733.	-1169.	2493.	.0543	-.0714	-.0439	-.0229	-.0037	.0467	1335.	
.1690	-1704.	-1661.	-2281.	-1170.	-1868.	2668.	.0610	-.0667	-.0415	-.0195	-.0394	.0251	1622.	
.1700	-1194.	-847.	-1215.	-1345.	-2654.	2600.	.0651	-.0601	-.0373	-.0105	-.0687	.0072	1852.	
.1710	-579.	-600.	-518.	-1239.	-2907.	2545.	.0660	-.0521	-.0311	.0021	-.0847	-.0052	1901.	
.1720	-493.	-522.	-290.	-430.	-3143.	1837.	.0633	-.0429	-.0236	.0199	-.0939	-.0129	1718.	
.1730	-341.	-362.	-16.	114.	-2932.	1241.	.0570	-.0333	-.0148	.0402	-.0900	-.0149	1493.	
.1740	-271.	-523.	257.	328.	-2506.	762.	.0475	-.0238	-.0052	.0600	-.0759	-.0110	1237.	
.1750	-485.	-997.	351.	673.	-2140.	28.	.0357	-.0147	.0049	.0787	-.0586	-.0042	1052.	
.1760	-302.	-1070.	630.	822.	-1407.	-527.	.0227	-.0062	.0159	.0960	-.0377	.0017	802.	
.1770	-16.	-524.	1154.	912.	-798.	-1142.	.0094	.0015	.0273	.1123	-.0197	.0042	780.	
.1780	483.	67.	1956.	648.	-234.	-1484.	-.0034	.0080	.0391	.1253	-.0029	.0034	767.	
.1790	995.	779.	2922.	248.	92.	-1756.	-.0152	.0130	.0506	.1345	.0082	-.0023	832.	
.1800	1719.	1895.	3982.	-293.	411.	-1806.	-.0260	.0165	.0610	.1386	.0130	-.0135	879.	
.1810	2872.	2814.	4990.	-1200.	1107.	-1174.	-.0357	.0184	.0699	.1361	.0177	-.0278	942.	
.1820	3478.	3119.	5592.	-1810.	1388.	-593.	-.0442	.0186	.0767	.1294	.0169	-.0435	1104.	
.1830	3883.	3228.	5985.	-2354.	1629.	159.	-.0514	.0174	.0817	.1204	.0140	-.0600	1344.	
.1840	4294.	3328.	6090.	-2717.	2116.	1021.	-.0574	.0153	.0848	.1102	.0087	-.0769	1623.	
.1850	4400.	2949.	5682.	-2569.	2624.	1677.	-.0619	.0122	.0862	.0995	-.0002	-.0918	1892.	

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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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PRESSURE

ENGLISH UNITS

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

.1740	-271.	-523.	357.	328.	-2506.	762.	.475	-.0238	-.0052	.0600	-.0759	-.0110	1237.
.1750	-485.	-997.	351.	673.	-2140.	28.	.357	-.0147	.0049	.0787	-.0586	-.0042	1052.
.1760	-302.	-1070.	630.	822.	-1407.	-527.	.0227	-.0062	.0159	.0960	-.0377	.0017	802.
.1770	-16.	-524.	1154.	912.	-798.	-1142.	.0094	.0015	.0273	.1123	-.0197	.0042	780.
.1780	483.	67.	1956.	648.	-234.	-1484.	-.0034	.0080	.0391	.1253	-.0029	.0034	767.
.1790	995.	779.	2922.	248.	92.	-1756.	-.0152	.0130	.0506	.1345	.0082	-.0023	832.
.1800	1719.	1895.	3982.	-293.	411.	-1806.	-.0260	.0165	.0610	.1386	.0130	-.0135	879.
.1810	2872.	2814.	4990.	-1200.	1107.	-1174.	-.0357	.0184	.0699	.1361	.0177	-.0278	942.
.1820	3478.	3119.	5592.	-1810.	1388.	-593.	-.0442	.0186	.0767	.1294	.0169	-.0435	1104.
.1830	3883.	3228.	5985.	-2354.	1629.	159.	-.0514	.0174	.0817	.1204	.0140	-.0600	1344.
.1840	4294.	3328.	6090.	-2717.	2116.	1021.	-.0574	.0153	.0848	.1102	.0087	-.0769	1683.
.1850	4405.	2949.	5682.	-2569.	2624.	1677.	-.0619	.0122	.0862	.0995	-.0002	-.0918	1892.

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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	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.1860	4236.	2245.	5107.	-2238.	3009.	2251.	-.0647	.0085	.0864	.0900	-.0105	-.1021	2050.	
.1870	3675.	1933.	4608.	-1756.	2966.	2440.	-.0657	.0044	.0852	.0839	-.0262	-.1078	1979.	
.1880	3167.	1762.	4065.	-1264.	3103.	2442.	-.0653	.0001	.0827	.0795	-.0428	-.1085	1943.	
.1890	2344.	1222.	3136.	-352.	3239.	1897.	-.0637	-.0046	.0788	.0766	-.0598	-.1029	1767.	
.1900	1022.	667.	2045.	834.	3018.	820.	-.0612	-.0097	.0733	.0760	-.0754	-.0902	1517.	
.1910	-245.	352.	1114.	1624.	2819.	-129.	-.0580	-.0155	.0663	.0760	-.0835	-.0704	1526.	
.1920	-1558.	-217.	49.	2222.	2619.	-1103.	-.0543	-.0221	.0579	.0747	-.0861	-.0458	1690.	
.1930	-2772.	-1122.	-1103.	2585.	2469.	-1994.	-.0498	-.0295	.0488	.0717	-.0830	-.0191	1918.	
.1940	-3690.	-1741.	-1967.	2521.	2225.	-2591.	-.0443	-.0374	.0396	.0685	-.0739	.0068	1989.	
.1950	-4740.	-2064.	-2584.	2246.	1740.	-2949.	-.0373	-.0455	.0306	.0658	-.0511	.0286	1919.	
.1960	-4690.	-2524.	-3249.	2070.	1132.	-3164.	-.0289	-.0535	.0224	.0627	-.0474	.0436	1850.	
.1970	-4499.	-2845.	-3762.	1776.	559.	-3035.	-.0191	-.0612	.0150	.0584	-.0336	.0504	1668.	
.1980	-3763.	-2665.	-3774.	1048.	-82.	-2394.	-.0081	-.0683	.0087	.0534	-.0191	.0497	1225.	
.1990	-2799.	-2397.	-3469.	89.	-865.	-1406.	.0036	-.0747	.0034	.0478	-.0040	.0433	775.	
.2000	-1734.	-2340.	-3210.	-727.	-1540.	-269.	.0155	-.0799	-.0010	.0421	.0120	.0323	808.	
.2010	-556.	-2189.	-3032.	-1277.	-1904.	932.	.0270	-.0837	-.0047	.0376	.0294	.0179	1160.	
.2020	462.	-1952.	-2899.	-1511.	-2127.	2006.	.0378	-.0859	-.0081	.0352	.0473	.0029	1542.	
.2030	1078.	-2001.	-2858.	-1452.	-2351.	2790.	.0477	-.0865	-.0108	.0351	.0638	-.0105	1840.	
.2040	1481.	-2173.	-2790.	-1327.	-2401.	3343.	.0569	-.0856	-.0129	.0374	.0774	-.0216	2026.	
.2050	1797.	-2077.	-2571.	-1199.	-2209.	3635.	.0653	-.0831	-.0140	.0435	.0869	-.0310	2071.	
.2060	1756.	-1887.	-2338.	-785.	-2017.	3414.	.0731	-.0793	-.0143	.0542	.0915	-.0379	1894.	
.2070	1240.	-1837.	-2219.	28.	-1945.	2612.	.0802	-.0742	-.0139	.0687	.0915	-.0422	1526.	
.2080	574.	-1690.	-2079.	901.	-1821.	1533.	.0864	-.0684	-.0131	.0848	.0877	-.0448	1193.	
.2090	-15.	-1348.	-1800.	1528.	-1582.	450.	.0915	-.0622	-.0122	.1001	.0809	-.0463	1052.	
.2100	-638.	-1112.	-1480.	1960.	-1412.	-599.	.0956	-.0560	-.0114	.1123	.0719	-.0469	1166.	
.2110	-1297.	-1034.	-1232.	2361.	-1369.	-1570.	.0984	-.0499	-.0108	.1209	.0622	-.0475	1476.	
.2120	-1802.	-891.	-1124.	2854.	-1325.	-2376.	.0997	-.0440	-.0106	.1258	.0528	-.0502	1848.	
.2130	-2068.	-734.	-1213.	3492.	-1247.	-2961.	.0997	-.0386	-.0103	.1270	.0436	-.0561	2224.	
.2140	-2105.	-698.	-1392.	4101.	-1251.	-3231.	.0983	-.0339	-.0097	.1243	.0345	-.0645	2516.	
.2150	-1854.	-621.	-1432.	4394.	-1376.	-3067.	.0956	-.0303	-.0085	.1180	.0261	-.0745	2593.	
.2160	-1298.	-413.	-1326.	4344.	-1514.	-2516.	.0914	-.0277	-.0068	.1089	.0186	-.0854	2457.	
.2170	-584.	-295.	-1276.	4150.	-1584.	-1773.	.0855	-.0261	-.0046	.0976	.0121	-.0957	2241.	
.2180	120.	-352.	-1309.	3862.	-1610.	-959.	.0778	-.0256	-.0022	.0852	.0077	-.1030	2011.	
.2190	746.	-390.	-1253.	3328.	-1608.	-101.	.0682	-.0259	.0003	.0727	.0061	-.1051	1733.	
.2200	1273.	-392.	-1037.	2456.	-1511.	750.	.0568	-.0270	.0031	.0602	.0072	-.1008	1396.	
.2210	1687.	-454.	-705.	1286.	-1247.	1525.	.0440	-.0285	.0059	.0481	.0104	-.0897	1103.	
.2220	1948.	-478.	-267.	-34.	-866.	2139.	.0302	-.0301	.0088	.0375	.0147	-.0723	1082.	
.2230	1965.	-345.	224.	-1235.	-492.	2450.	.0160	-.0314	.0118	.0298	.0191	-.0502	1306.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.26.55.

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

.2120	-1802.	-891.	-124.	2854.	-1525.	-2376.	.0997	-.0440	-.0100	.1258	.0528	-.0502	1848.
.2130	-2068.	-734.	-1213.	3492.	-1247.	-2961.	.0983	-.0386	-.0103	.1270	.0436	-.0561	2224.
.2140	-2105.	-698.	-1392.	4101.	-1251.	-3231.	.0983	-.0339	-.0097	.1243	.0345	-.0645	2516.
.2150	-1854.	-621.	-1432.	4394.	-1376.	-3067.	.0956	-.0303	-.0085	.1180	.0261	-.0745	2593.
.2160	-1298.	-413.	-1326.	4344.	-1514.	-2516.	.0914	-.0277	-.0068	.1089	.0186	-.0854	2457.
.2170	-584.	-295.	-1276.	4150.	-1584.	-1773.	.0255	-.0261	-.0046	.0976	.0121	-.0957	2241.
.2180	120.	-352.	-1309.	3862.	-1610.	-959.	.0778	-.0256	-.0022	.0852	.0077	-.1030	2011.
.2190	746.	-390.	-1253.	3328.	-1608.	-101.	.0682	-.0259	.0003	.0727	.0061	-.1051	1733.
.2200	1273.	-392.	-1037.	2456.	-1511.	750.	.0568	-.0270	.0031	.0602	.0072	-.1008	1396.
.2210	1687.	-454.	-705.	1286.	-1247.	1525.	.0440	-.0285	.0059	.0481	.0104	-.0897	1103.
.2220	1948.	-478.	-267.	-34.	-866.	2139.	.0302	-.0301	.0088	.0375	.0147	-.0723	1082.
.2230	1965.	-345.	224.	-1235.	-492.	2450.	.0160	-.0314	.0118	.0298	.0191	-.0502	1306.

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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	21	MEMBER	1	SEQUENCE	36	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2240	1709.	-166.	616.	-2083.	-155.	2358.	.0019	-.0319	.0148	.0251	.0216	-.0256	1476.		
.2250	1287.	-47.	843.	-2591.	187.	1939.	-.0116	-.0317	.0176	.0224	.0207	-.0010	1519.		
.2260	795.	55.	967.	-2898.	496.	1355.	-.0240	-.0307	.0202	.0208	.0157	.0217	1517.		
.2270	226.	112.	983.	-3007.	688.	697.	-.0351	-.0288	.0223	.0198	.0070	.0410	1482.		
.2280	-414.	-3.	783.	-2812.	784.	13.	-.0448	-.0262	.0240	.0184	-.0042	.0556	1368.		
.2290	-1037.	-287.	329.	-2296.	872.	-630.	-.0529	-.0229	.0250	.0161	-.0172	.0643	1189.		
.2300	-1575.	-617.	-277.	-1560.	966.	-1172.	-.0595	-.0189	.0254	.0123	-.0312	.0667	1020.		
.2310	-1988.	-923.	-883.	-744.	1019.	-1551.	-.0645	-.0144	.0254	.0068	-.0455	.0632	937.		
.2320	-2205.	-1147.	-1361.	26.	1041.	-1705.	-.0679	-.0093	.0252	-.0005	-.0593	.0548	936.		
.2330	-2169.	-1175.	-1634.	701.	1070.	-1646.	-.0698	-.0039	.0250	-.0090	-.0720	.0421	977.		
.2340	-1924.	-956.	-1702.	1307.	1111.	-1472.	-.0702	.0018	.0249	-.0174	-.0832	.0262	1059.		
.2350	-1555.	-576.	-1595.	1841.	1159.	-1256.	-.0692	.0076	.0249	-.0250	-.0916	.0087	1177.		
.2360	-1114.	-124.	-1313.	2190.	1217.	-995.	-.0672	.0133	.0249	-.0314	-.0961	-.0082	1263.		
.2370	-627.	356.	-850.	2221.	1290.	-663.	-.0642	.0185	.0247	-.0369	-.0963	-.0229	1243.		
.2380	-121.	788.	-260.	1892.	1380.	-279.	-.0604	.0233	.0239	-.0418	-.0921	-.0342	1105.		
.2390	318.	1071.	348.	1297.	1475.	35.	-.0560	.0276	.0222	-.0462	-.0836	-.0414	921.		
.2400	629.	1205.	885.	615.	1528.	323.	-.0509	.0315	.0196	-.0498	-.0717	-.0443	787.		
.2410	807.	1280.	1318.	3.	1505.	371.	-.0451	.0353	.0161	-.0525	-.0574	-.0437	726.		
.2420	920.	1364.	1649.	-472.	1413.	257.	-.0386	.0391	.0118	-.0542	-.0422	-.0404	708.		
.2430	1010.	1477.	1894.	-793.	1247.	36.	-.0313	.0429	.0068	-.0555	-.0270	-.0350	693.		
.2440	1067.	1637.	2071.	-943.	977.	-273.	-.0234	.0468	.0013	-.0563	-.0126	-.0284	649.		
.2450	1083.	1832.	2152.	-894.	627.	-650.	-.0150	.0505	-.0046	-.0569	.0003	-.0214	596.		
.2460	1073.	1976.	2079.	-654.	267.	-1031.	-.0064	.0539	-.0110	-.0577	.0116	-.0146	586.		
.2470	1021.	1982.	1830.	-279.	-79.	-1347.	.0021	.0567	-.0176	-.0592	.0215	-.0081	645.		
.2480	902.	1849.	1459.	120.	-438.	-1545.	.0103	.0588	-.0245	-.0618	.0295	-.0021	755.		
.2490	756.	1602.	1035.	414.	-784.	-1579.	.0180	.0600	-.0316	-.0661	.0352	.0033	849.		
.2500	644.	1257.	597.	557.	-1060.	-1423.	.0252	.0603	-.0388	-.0725	.0385	.0079	872.		
.2510	562.	891.	193.	584.	-1297.	-1127.	.0318	.0598	-.0458	-.0806	.0391	.0115	851.		
.2520	487.	635.	-117.	551.	-1561.	-770.	.0377	.0589	-.0525	-.0898	.0368	.0142	856.		
.2530	441.	538.	-320.	495.	-1829.	-407.	.0429	.0576	-.0586	-.0998	.0315	.0160	908.		
.2540	448.	555.	-442.	428.	-2044.	-67.	.0471	.0562	-.0642	-.1105	.0239	.0174	979.		
.2550	478.	669.	-477.	321.	-2215.	243.	.0502	.0548	-.0690	-.1215	.0149	.0189	1055.		
.2560	475.	847.	-428.	142.	-2365.	519.	.0519	.0534	-.0731	-.1321	.0061	.0216	1136.		
.2570	397.	958.	-381.	-83.	-2444.	729.	.0519	.0520	-.0764	-.1419	-.0015	.0260	1196.		
.2580	222.	907.	-427.	-300.	-2388.	825.	.0501	.0507	-.0788	-.1505	-.0067	.0320	1192.		
.2590	-58.	724.	-561.	-508.	-2207.	802.	.0463	.0497	-.0803	-.1576	-.0091	.0398	1126.		
.2600	-418.	452.	-717.	-757.	-1941.	706.	.0407	.0490	-.0807	-.1630	-.0081	.0494	1031.		
.2610	-796.	127.	-851.	-1052.	-1604.	568.	.0334	.0488	-.0800	-.1670	-.0043	.0601	937.		

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.2500	644.	1257.	597.	557.	-1060.	-1423.	.0252	.0603	-.0388	-.0725	.0385	.0079	872.
.2510	562.	891.	193.	584.	-1297.	-1127.	.0318	.0598	-.0458	-.0806	.0391	.0115	851.
.2520	487.	635.	-117.	551.	-1561.	-770.	.0377	.0589	-.0525	-.0898	.0368	.0142	856.
.2530	441.	538.	-320.	495.	-1829.	-407.	.0429	.0576	-.0586	-.0998	.0315	.0160	908.
.2540	448.	555.	-442.	428.	-2044.	-67.	.0471	.0562	-.0642	-.1105	.0239	.0174	979.
.2550	478.	669.	-477.	321.	-2215.	243.	.0502	.0548	-.0690	-.1215	.0149	.0189	1055.
.2560	475.	847.	-428.	142.	-2765.	519.	.0519	.0534	-.0731	-.1321	.0061	.0216	1136.
.2570	397.	958.	-381.	-83.	-2444.	729.	.0519	.0520	-.0764	-.1419	-.0015	.0260	1196.
.2580	222.	907.	-427.	-300.	-2388.	825.	.0501	.0507	-.0788	-.1505	-.0067	.0320	1192.
.2590	-58.	724.	-561.	-508.	-2207.	802.	.0463	.0497	-.0803	-.1576	-.0091	.0398	1126.
.2600	-418.	452.	-717.	-757.	-1941.	706.	.0407	.0490	-.0807	-.1630	-.0081	.0494	1031.
.2610	-796.	127.	-851.	-1052.	-1604.	568.	.0334	.0488	-.0800	-.1670	-.0043	.0601	937.

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INTERNAL FORCES IN THE PIPING  
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SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	VA	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	DX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
21	1	36					.2620	-1123.	-145.	-943.	-1327.	-1191.	372.	.0246	.0493	-.0781	-.1697	.0015	.0708	854.
							.2630	-1368.	-265.	-995.	-1481.	-733.	91.	.0148	.0507	-.0750	-.1712	.0084	.0803	775.
							.2640	-1537.	-240.	-1039.	-1421.	-286.	-275.	.0043	.0529	-.0710	-.1716	.0157	.0879	692.
							.2650	-1618.	-105.	-1084.	-1161.	119.	-672.	-.0066	.0560	-.0661	-.1715	.0229	.0929	631.
							.2660	-1564.	135.	-1091.	-833.	496.	-1004.	-.0176	.0597	-.0608	-.1715	.0293	.0949	654.
							.2670	-1362.	418.	-1038.	-566.	854.	-1198.	-.0283	.0637	-.0551	-.1721	.0345	.0938	739.
							.2680	-1072.	631.	-957.	-381.	1166.	-1251.	-.0385	.0679	-.0493	-.1733	.0381	.0898	821.
							.2690	-747.	747.	-877.	-242.	1412.	-1192.	-.0477	.0721	-.0436	-.1746	.0396	.0830	873.
							.2700	-376.	830.	-770.	-158.	1603.	-1025.	-.0558	.0763	-.0380	-.1755	.0385	.0737	895.
							.2710	44.	908.	-584.	-167.	1738.	-762.	-.0624	.0803	-.0325	-.1757	.0342	.0626	893.
							.2720	476.	996.	-280.	-270.	1794.	-457.	-.0674	.0842	-.0273	-.1750	.0263	.0507	877.
							.2730	888.	1161.	156.	-425.	1775.	-174.	-.0709	.0880	-.0223	-.1729	.0149	.0388	859.
							.2740	1254.	1440.	691.	-574.	1725.	42.	-.0729	.0916	-.0177	-.1692	.0010	.0280	852.
							.2750	1522.	1768.	1274.	-690.	1663.	163.	-.0737	.0949	-.0137	-.1640	-.0143	.0194	847.
							.2760	1655.	2084.	1885.	-820.	1590.	199.	-.0735	.0977	-.0104	-.1576	-.0298	.0141	844.
							.2770	1672.	2376.	2516.	-1028.	1531.	191.	-.0726	.0999	-.0078	-.1504	-.0446	.0122	869.
							.2780	1586.	2594.	3100.	-1293.	1501.	149.	-.0710	.1013	-.0060	-.1427	-.0580	.0137	931.
							.2790	1385.	2677.	3554.	-1536.	1469.	54.	-.0688	.1018	-.0050	-.1345	-.0695	.0176	996.
							.2800	1106.	2655.	3864.	-1729.	1393.	-74.	-.0661	.1013	-.0046	-.1260	-.0793	.0232	1041.
							.2810	825.	2583.	4047.	-1876.	1264.	-200.	-.0629	.0999	-.0048	-.1175	-.0874	.0291	1064.
							.2820	587.	2464.	4098.	-1954.	1079.	-316.	-.0591	.0977	-.0053	-.1094	-.0936	.0345	1057.
							.2830	418.	2319.	4030.	-1954.	831.	-412.	-.0548	.0945	-.0062	-.1021	-.0979	.0386	1014.
							.2840	353.	2210.	3885.	-1920.	530.	-436.	-.0501	.0906	-.0073	-.0958	-.0996	.0411	956.
							.2850	399.	2136.	3677.	-1867.	201.	-364.	-.0453	.0859	-.0086	-.0908	-.0982	.0421	896.
							.2860	515.	2032.	3377.	-1758.	-130.	-232.	-.0404	.0805	-.0100	-.0871	-.0938	.0418	833.
							.2870	671.	1898.	2991.	-1596.	-436.	-71.	-.0356	.0744	-.0115	-.0843	-.0864	.0403	776.
							.2880	854.	1757.	2562.	-1443.	-694.	129.	-.0311	.0677	-.0129	-.0819	-.0766	.0382	753.
							.2890	1029.	1577.	2119.	-1337.	-897.	360.	-.0269	.0605	-.0141	-.0794	-.0649	.0358	773.
							.2900	1155.	1338.	1677.	-1267.	-1041.	576.	-.0230	.0528	-.0149	-.0762	-.0522	.0336	815.
							.2910	1218.	1087.	1265.	-1219.	-1102.	741.	-.0196	.0449	-.0152	-.0716	-.0391	.0320	845.
							.2920	1206.	848.	898.	-1189.	-1060.	842.	-.0165	.0368	-.0148	-.0653	-.0258	.0311	844.
							.2930	1095.	598.	581.	-1167.	-923.	876.	-.0138	.0287	-.0140	-.0573	-.0126	.0314	809.
							.2940	895.	356.	330.	-1149.	-701.	858.	-.0115	.0207	-.0126	-.0477	.0005	.0329	748.
							.2950	641.	167.	156.	-1125.	-396.	809.	-.0095	.0131	-.0109	-.0369	.0132	.0354	676.
							.2960	352.	15.	25.	-1059.	-30.	735.	-.0076	.0057	-.0090	-.0254	.0252	.0384	604.
							.2970	29.	-141.	-113.	-905.	346.	634.	-.0057	-.0011	-.0069	-.0132	.0361	.0412	543.
							.2980	-299.	-285.	-270.	-651.	686.	513.	-.0036	-.0076	-.0048	-.0007	.0452	.0432	504.
							.2990	-595.	-404.	-447.	-315.	956.	388.	-.0012	-.0136	-.0027	.0119	.0521	.0436	506.

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.2890	1029.	1577.	1119.	-1337.	-897.	380.	-.0269	.0605	-.0141	-.0794	-.0549	.0358	773.
.2900	1155.	1338.	1877.	-1267.	-1041.	576.	-.0230	.0528	-.0149	-.0762	-.0522	.0336	815.
.2910	1218.	1087.	1265.	-1219.	-1102.	741.	-.0196	.0449	-.0152	-.0716	-.0391	.0320	845.
.2920	1206.	848.	890.	-1189.	-1060.	842.	-.0165	.0360	-.0148	-.0657	-.0258	.0311	844.
.2930	1095.	598.	581.	-1167.	-927.	876.	-.0138	.0287	-.0140	-.0573	-.0126	.0314	809.
.2940	895.	356.	330.	-1149.	-701.	858.	-.0115	.0207	-.0126	-.0477	.0005	.0329	748.
.2950	641.	167.	156.	-1125.	-396.	809.	-.0095	.0131	-.0109	-.0369	.0132	.0354	676.
.2960	352.	15.	25.	-1059.	-30.	735.	-.0076	.0057	-.0090	-.0254	.0252	.0384	604.
.2970	29.	-141.	-113.	-905.	346.	634.	-.0057	-.0011	-.0069	-.0132	.0361	.0412	543.
.2980	-299.	-285.	-270.	-651.	686.	513.	-.0036	-.0076	-.0048	-.0007	.0452	.0432	504.
.2990	-595.	-404.	-447.	-315.	956.	398.	-.0012	-.0136	-.0027	.0119	.0521	.0436	506.

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.3000	-834.	-539.	-653.	65.	1135.	277.	.0017	-.0192	-.0006	.0244	.0566	.0424	548.	
.3010	-1011.	-710.	-885.	441.	1204.	198.	.0050	-.0245	.0014	.0363	.0588	.0394	608.	
.3020	-1128.	-897.	-1137.	798.	1167.	151.	.0086	-.0295	.0032	.0478	.0591	.0353	666.	
.3030	-1206.	-1098.	-1420.	1160.	1050.	110.	.0122	-.0343	.0050	.0587	.0585	.0305	735.	
.3040	-1261.	-1322.	-1731.	1522.	889.	64.	.0155	-.0388	.0066	.0689	.0577	.0261	827.	
.3050	-1289.	-1538.	-2018.	1821.	715.	35.	.0185	-.0432	.0081	.0785	.0574	.0228	917.	
.3060	-1292.	-1705.	-2230.	2009.	550.	35.	.0207	-.0474	.0096	.0874	.0580	.0212	976.	
.3070	-1282.	-1817.	-2355.	2096.	414.	43.	.0222	-.0514	.0112	.0959	.0596	.0217	1002.	
.3080	-1265.	-1877.	-2388.	2091.	323.	46.	.0230	-.0552	.0131	.1042	.0519	.0240	992.	
.3090	-1233.	-1871.	-2309.	1963.	273.	58.	.0230	-.0590	.0153	.1124	.0645	.0277	929.	
.3100	-1181.	-1818.	-2117.	1691.	247.	98.	.0225	-.0626	.0178	.1205	.0668	.0322	802.	
.3110	-1109.	-1758.	-1841.	1295.	236.	176.	.0215	-.0661	.0205	.1282	.0682	.0366	622.	
.3120	-1010.	-1705.	-1521.	817.	228.	296.	.0203	-.0695	.0235	.1352	.0682	.0402	421.	
.3130	-889.	-1670.	-1201.	311.	205.	456.	.0189	-.0726	.0264	.1411	.0663	.0421	276.	
.3140	-762.	-1670.	-929.	-152.	145.	631.	.0176	-.0754	.0292	.1455	.0622	.0415	312.	
.3150	-630.	-1703.	-737.	-513.	46.	802.	.0165	-.0778	.0317	.1483	.0556	.0382	447.	
.3160	-485.	-1735.	-626.	-741.	-93.	957.	.0155	-.0797	.0338	.1492	.0464	.0317	569.	
.3170	-334.	-1740.	-585.	-819.	-275.	1075.	.0149	-.0809	.0357	.1484	.0347	.0224	646.	
.3180	-199.	-1716.	-609.	-741.	-489.	1131.	.0145	-.0816	.0372	.1463	.0209	.0104	674.	
.3190	-91.	-1659.	-684.	-521.	-705.	1109.	.0143	-.0817	.0387	.1434	.0055	-.0034	663.	
.3200	-18.	-1566.	-789.	-194.	-891.	1011.	.0141	-.0812	.0400	.1402	-.0104	-.0184	638.	
.3210	-1.	-1462.	-912.	207.	-1023.	846.	.0137	-.0804	.0414	.1372	-.0259	-.0333	630.	
.3220	-54.	-1379.	-1047.	643.	-1080.	624.	.0129	-.0791	.0429	.1347	-.0398	-.0473	658.	
.3230	-173.	-1327.	-1183.	1077.	-1038.	367.	.0118	-.0777	.0445	.1330	-.0512	-.0595	722.	
.3240	-339.	-1304.	-1303.	1474.	-890.	99.	.0102	-.0761	.0462	.1321	-.0594	-.0695	808.	
.3250	-530.	-1311.	-1390.	1812.	-659.	-159.	.0081	-.0743	.0480	.1320	-.0641	-.0770	907.	
.3260	-712.	-1323.	-1427.	2081.	-373.	-386.	.0059	-.0725	.0498	.1326	-.0655	-.0822	1007.	
.3270	-849.	-1311.	-1400.	2268.	-67.	-569.	.0037	-.0707	.0516	.1339	-.0638	-.0854	1096.	
.3280	-906.	-1264.	-1294.	2352.	218.	-693.	.0017	-.0689	.0534	.1356	-.0598	-.0871	1154.	
.3290	-855.	-1178.	-1099.	2300.	443.	-736.	.0003	-.0673	.0550	.1374	-.0544	-.0880	1151.	
.3300	-685.	-1055.	-818.	2100.	581.	-682.	-.0004	-.0659	.0564	.1391	-.0480	-.0884	1070.	
.3310	-415.	-923.	-487.	1774.	616.	-546.	-.0003	-.0648	.0574	.1405	-.0412	-.0886	917.	
.3320	-79.	-812.	-149.	1355.	551.	-347.	.0007	-.0640	.0578	.1414	-.0343	-.0888	705.	
.3330	292.	-741.	164.	865.	409.	-95.	.0024	-.0637	.0577	.1417	-.0275	-.0887	450.	
.3340	666.	-719.	437.	331.	213.	197.	.0049	-.0637	.0568	.1412	-.0206	-.0882	206.	
.3350	1000.	-743.	647.	-191.	-13.	495.	.0080	-.0641	.0552	.1399	-.0139	-.0870	249.	
.3360	1259.	-797.	773.	-637.	-241.	760.	.0116	-.0646	.0529	.1379	-.0074	-.0850	478.	
.3370	1415.	-865.	794.	-942.	-444.	954.	.0155	-.0653	.0498	.1353	-.0011	-.0821	662.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.55.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

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PRESSURE

ENGLISH UNITS

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

.3270	-712.	-1323.	-1400.	2081.	-377.	-386.	.0059	-.0725	.0498	.1326	-.0555	-.0822	1007.
.3280	-849.	-1311.	-1400.	2268.	-67.	-569.	.0037	-.0707	.0516	.1339	-.0538	-.0854	1096.
.3280	-906.	-1264.	-1294.	2352.	218.	-693.	.0017	-.0689	.0534	.1356	-.0598	-.0871	1154.
.3290	-855.	-1178.	-1099.	2300.	443.	-736.	.0003	-.0673	.0550	.1374	-.0544	-.0880	1151.
.3300	-685.	-1055.	-818.	2100.	581.	-682.	-.0004	-.0659	.0564	.1391	-.0480	-.0884	1070.
.3310	-415.	-923.	-487.	1774.	616.	-546.	-.0003	-.0648	.0574	.1405	-.0412	-.0886	917.
.3320	-79.	-812.	-149.	1355.	551.	-347.	.0007	-.0640	.0578	.1414	-.0343	-.0888	705.
.3330	292.	-741.	164.	865.	409.	-95.	.0024	-.0637	.0577	.1417	-.0275	-.0887	450.
.3340	666.	-719.	437.	331.	213.	197.	.0049	-.0637	.0568	.1412	-.0206	-.0882	206.
.3350	1000.	-743.	647.	-191.	-13.	495.	.0080	-.0641	.0552	.1399	-.0139	-.0870	249.
.3360	1259.	-797.	773.	-637.	-241.	760.	.0116	-.0646	.0529	.1379	-.0074	-.0850	478.
.3370	1415.	-865.	794.	-942.	-444.	954.	.0155	-.0653	.0498	.1353	-.0011	-.0821	662.

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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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ENGLISH UNITS

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

SECTION	21	MEMBER	1	SEQUENCE	36	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3380	1445.	-941.	695.	-1060.	-610.	1046.	.0196	-.0660	.0460	.1320	.0046	-.0783	754.		
.3390	1341.	-1025.	482.	-985.	-737.	1029.	.0238	-.0667	.0416	.1282	.0097	-.0738	752.		
.3400	1117.	-1117.	169.	-751.	-818.	922.	.0282	-.0674	.0366	.1236	.0140	-.0685	676.		
.3410	785.	-1235.	-240.	-393.	-855.	742.	.0325	-.0680	.0310	.1182	.0175	-.0629	562.		
.3420	358.	-1405.	-744.	64.	-857.	505.	.0368	-.0686	.0250	.1119	.0204	-.0572	467.		
.3430	-137.	-1632.	-1321.	575.	-839.	237.	.0410	-.0691	.0187	.1048	.0229	-.0515	489.		
.3440	-648.	-1896.	-1924.	1072.	-809.	-22.	.0452	-.0697	.0121	.0967	.0251	-.0464	630.		
.3450	-1125.	-2173.	-2499.	1486.	-785.	-234.	.0492	-.0703	.0056	.0879	.0271	-.0419	795.		
.3460	-1524.	-2428.	-2994.	1768.	-784.	-380.	.0531	-.0707	-.0008	.0783	.0289	-.0385	924.		
.3470	-1811.	-2618.	-3769.	1904.	-820.	-455.	.0569	-.0710	-.0068	.0682	.0305	-.0363	995.		
.3480	-1961.	-2713.	-3603.	1898.	-896.	-466.	.0605	-.0709	-.0123	.0579	.0320	-.0354	1007.		
.3490	-1971.	-2703.	-3689.	1756.	-1011.	-416.	.0638	-.0705	-.0170	.0476	.0333	-.0358	969.		
.3500	-1846.	-2594.	-3626.	1482.	-1160.	-308.	.0667	-.0696	-.0211	.0376	.0346	-.0374	894.		
.3510	-1609.	-2405.	-3438.	1102.	-1326.	-153.	.0690	-.0682	-.0243	.0280	.0361	-.0398	811.		
.3520	-1298.	-2175.	-3172.	674.	-1485.	24.	.0707	-.0660	-.0268	.0190	.0378	-.0427	764.		
.3530	-953.	-1940.	-2878.	262.	-1616.	197.	.0715	-.0631	-.0285	.0109	.0399	-.0459	773.		
.3540	-610.	-1719.	-2588.	-85.	-1706.	350.	.0714	-.0594	-.0296	.0039	.0423	-.0491	817.		
.3550	-295.	-1522.	-2325.	-327.	-1747.	466.	.0704	-.0548	-.0299	-.0018	.0448	-.0520	861.		
.3560	-27.	-1352.	-2102.	-428.	-1735.	523.	.0685	-.0494	-.0296	-.0062	.0471	-.0547	873.		
.3570	189.	-1199.	-1920.	-373.	-1670.	511.	.0659	-.0431	-.0288	-.0092	.0486	-.0570	837.		
.3580	350.	-1048.	-1764.	-180.	-1566.	435.	.0627	-.0361	-.0275	-.0110	.0490	-.0589	766.		
.3590	458.	-891.	-1614.	116.	-1440.	303.	.0589	-.0285	-.0257	-.0117	.0478	-.0602	692.		
.3600	524.	-727.	-1448.	460.	-1300.	135.	.0548	-.0206	-.0237	-.0117	.0449	-.0610	649.		
.3610	564.	-554.	-1244.	783.	-1155.	-44.	.0503	-.0126	-.0215	-.0112	.0401	-.0611	654.		
.3620	588.	-374.	-980.	1019.	-1017.	-209.	.0457	-.0048	-.0191	-.0107	.0335	-.0604	682.		
.3630	607.	-191.	-643.	1113.	-900.	-333.	.0408	.0027	-.0168	-.0105	.0252	-.0589	689.		
.3640	637.	-1.	-227.	1037.	-805.	-399.	.0359	.0096	-.0144	-.0107	.0154	-.0565	643.		
.3650	689.	202.	260.	792.	-732.	-402.	.0308	.0158	-.0121	-.0115	.0044	-.0534	539.		
.3660	762.	418.	796.	409.	-680.	-351.	.0255	.0212	-.0099	-.0132	-.0072	-.0495	407.		
.3670	851.	544.	1347.	-65.	-646.	-257.	.0200	.0259	-.0077	-.0155	-.0191	-.0451	327.		
.3680	952.	878.	1880.	-579.	-616.	-129.	.0142	.0298	-.0057	-.0187	-.0306	-.0401	401.		
.3690	1055.	1107.	2360.	-1087.	-575.	20.	.0081	.0330	-.0038	-.0226	-.0410	-.0346	577.		
.3700	1143.	1310.	2753.	-1548.	-514.	173.	.0016	.0356	-.0020	-.0273	-.0499	-.0286	768.		
.3710	1200.	1468.	3029.	-1923.	-421.	314.	-.0052	.0377	-.0004	-.0325	-.0566	-.0222	934.		
.3720	1215.	1567.	3163.	-2182.	-288.	426.	-.0124	.0393	.0009	-.0382	-.0610	-.0155	1050.		
.3730	1177.	1601.	3145.	-2301.	-119.	491.	-.0198	.0406	.0021	-.0440	-.0631	-.0086	1104.		
.3740	1086.	1572.	2988.	-2283.	80.	500.	-.0273	.0415	.0030	-.0498	-.0629	-.0016	1096.		
.3750	952.	1494.	2718.	-2148.	299.	455.	-.0347	.0423	.0039	-.0554	-.0608	.0052	1039.		

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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

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ENGLISH UNITS

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

.3650	689.	202.	760.	792.	-732.	-402.	.0308	.0158	-.0121	-.0115	.0044	-.0534	539.
.3660	762.	418.	796.	409.	-680.	-351.	.0255	.0212	-.0099	-.0132	-.0072	-.0495	407.
.3670	851.	644.	1347.	-65.	-646.	-257.	.0200	.0259	-.0077	-.0155	-.0191	-.0451	327.
.3680	952.	873.	1880.	-570.	-616.	-129.	.0142	.0295	-.0057	-.0187	-.0306	-.0401	401.
.3690	1055.	1107.	2360.	-1087.	-575.	20.	.0091	.0330	-.0038	-.0226	-.0410	-.0346	577.
.3700	1147.	1310.	2753.	-1548.	-514.	173.	.0016	.0356	-.0020	-.0273	-.0499	-.0286	768.
.3710	1200.	1468.	3029.	-1923.	-421.	314.	-.0052	.0377	-.0004	-.0325	-.0566	-.0222	934.
.3720	1215.	1567.	3163.	-2182.	-288.	426.	-.0124	.0393	.0009	-.0382	-.0510	-.0155	1050.
.3730	1177.	1601.	3145.	-2301.	-119.	491.	-.0198	.0406	.0021	-.0440	-.0531	-.0086	1104.
.3740	1086.	1572.	2988.	-2283.	80.	500.	-.0273	.0415	.0030	-.0498	-.0529	-.0016	1096.
.3750	952.	1494.	2718.	-2148.	299.	455.	-.0347	.0423	.0039	-.0554	-.0508	.0052	1039.

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

ADLPIPE STRESS ANALYSIS

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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	21	MEMBER	1	SEQUENCE	36	LOCATION	BEG	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3760	785.	1382.	2362.	-1913.	532.	357.	-.0418	.0429	.0045	-.0604	-.0572	.0119	946.	
.3770	592.	1250.	1947.	-1591.	767.	205.	-.0484	.0434	.0051	-.0649	-.0524	.0183	833.	
.3780	385.	1117.	1511.	-1214.	994.	13.	-.0543	.0438	.0055	-.0685	-.0467	.0244	735.	
.3790	183.	997.	1099.	-844.	1208.	-189.	-.0594	.0441	.0057	-.0714	-.0403	.0301	696.	
.3800	6.	895.	756.	-541.	1405.	-368.	-.0636	.0444	.0059	-.0735	-.0337	.0355	726.	
.3810	-134.	812.	505.	-339.	1578.	-501.	-.0667	.0445	.0059	-.0751	-.0270	.0407	792.	
.3820	-232.	755.	354.	-241.	1722.	-579.	-.0686	.0445	.0057	-.0759	-.0206	.0454	859.	
.3830	-285.	723.	297.	-235.	1831.	-595.	-.0694	.0444	.0053	-.0760	-.0147	.0495	909.	
.3840	-295.	707.	324.	-307.	1901.	-552.	-.0689	.0443	.0047	-.0754	-.0095	.0531	939.	
.3850	-263.	707.	426.	-449.	1930.	-445.	-.0673	.0440	.0039	-.0742	-.0050	.0561	952.	
.3860	-193.	721.	584.	-639.	1918.	-282.	-.0646	.0437	.0028	-.0725	-.0014	.0586	957.	
.3870	-104.	733.	760.	-837.	1867.	-84.	-.0609	.0433	.0015	-.0705	.0017	.0607	960.	
.3880	-20.	728.	916.	-1000.	1779.	121.	-.0563	.0429	-.0003	-.0683	.0042	.0626	958.	
.3890	45.	705.	1027.	-1110.	1659.	315.	-.0512	.0424	-.0025	-.0660	.0064	.0644	947.	
.3900	85.	660.	1085.	-1166.	1510.	488.	-.0455	.0419	-.0051	-.0638	.0084	.0666	923.	
.3910	93.	592.	1079.	-1162.	1334.	625.	-.0396	.0414	-.0081	-.0619	.0104	.0691	879.	
.3920	61.	508.	1004.	-1087.	1121.	707.	-.0335	.0408	-.0114	-.0601	.0122	.0721	806.	
.3930	-10.	424.	870.	-953.	906.	723.	-.0276	.0400	-.0149	-.0585	.0139	.0755	703.	
.3940	-109.	349.	704.	-797.	666.	683.	-.0218	.0392	-.0185	-.0570	.0155	.0794	583.	
.3950	-219.	289.	538.	-663.	417.	606.	-.0164	.0383	-.0220	-.0556	.0169	.0836	464.	
.3960	-326.	249.	390.	-570.	171.	509.	-.0114	.0372	-.0252	-.0544	.0182	.0881	367.	
.3970	-429.	231.	260.	-508.	-58.	398.	-.0072	.0361	-.0280	-.0533	.0194	.0925	304.	
.3980	-524.	226.	145.	-467.	-256.	283.	-.0038	.0349	-.0304	-.0523	.0207	.0966	283.	
.3990	-603.	228.	48.	-449.	-410.	185.	-.0012	.0338	-.0322	-.0514	.0222	.1003	298.	
.4000	-651.	240.	-18.	-461.	-516.	125.	.0004	.0327	-.0334	-.0508	.0238	.1031	330.	

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)
.0430	3718.	4023.	10062.	-8666.	-4411.	2599.	-.1524	-.0527	.0657	-.0070	.0079	.0027	4717.

SECTION	21	MEMBER	1	SEQUENCE	38	LOCATION	DIS	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	

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

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.55.

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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)
.0430	3718.	4023.	10067.	-8666.	-4411.	2599.	-.1524	-.0527	.0657	-.0070	.0079	.0027	4717.

SECTION	21	MEMBER	1	SEQUENCE	38	LOCATION	DIS	TYPE	VA	DZ	RX	RY	RZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	

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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  
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ENGLISH UNITS

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

SECTION	21	MEMBER	1	SEQUENCE	38	LOCATION	DIS	TYPE	VA	DZ	RX	RY	RZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	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	0.0000	0.
.0010	0.	0.	0.	0.	0.	0.	-.0000	.0000	-.0000	-.0000	.0000	.0000	.0000	0.
.0020	0.	0.	0.	0.	0.	0.	-.0001	.0000	-.0001	-.0003	.0002	.0002	.0002	0.
.0030	0.	0.	0.	0.	0.	0.	-.0001	.0000	-.0003	-.0009	.0006	.0006	.0006	0.
.0040	0.	0.	0.	0.	0.	0.	-.0003	-.0000	-.0006	-.0022	.0012	.0014	.0014	0.
.0050	0.	0.	0.	0.	0.	0.	-.0004	-.0001	-.0011	-.0041	.0020	.0025	.0025	0.
.0060	0.	0.	0.	0.	0.	0.	-.0006	-.0002	-.0017	-.0068	.0030	.0041	.0041	0.
.0070	0.	0.	0.	0.	0.	0.	-.0009	-.0003	-.0025	-.0105	.0043	.0061	.0061	0.
.0080	0.	0.	0.	0.	0.	0.	-.0012	-.0005	-.0039	-.0159	.0069	.0092	.0092	0.
.0090	0.	0.	0.	0.	0.	0.	-.0015	-.0008	-.0057	-.0233	.0116	.0135	.0135	0.
.0100	0.	0.	0.	0.	0.	0.	-.0015	-.0013	-.0078	-.0327	.0185	.0188	.0188	0.
.0110	0.	0.	0.	0.	0.	0.	-.0011	-.0020	-.0103	-.0434	.0272	.0247	.0247	0.
.0120	0.	0.	0.	0.	0.	0.	.0000	-.0027	-.0132	-.0550	.0368	.0293	.0293	0.
.0130	0.	0.	0.	0.	0.	0.	.0021	-.0034	-.0162	-.0669	.0458	.0330	.0330	0.
.0140	0.	0.	0.	0.	0.	0.	.0054	-.0040	-.0193	-.0779	.0527	.0343	.0343	0.
.0150	0.	0.	0.	0.	0.	0.	.0101	-.0044	-.0219	-.0864	.0561	.0319	.0319	0.
.0160	0.	0.	0.	0.	0.	0.	.0162	-.0046	-.0239	-.0909	.0557	.0253	.0253	0.
.0170	0.	0.	0.	0.	0.	0.	.0234	-.0041	-.0252	-.0903	.0528	.0148	.0148	0.
.0180	0.	0.	0.	0.	0.	0.	.0316	-.0026	-.0260	-.0844	.0500	.0016	.0016	0.
.0190	0.	0.	0.	0.	0.	0.	.0400	.0001	-.0269	-.0746	.0501	-.0123	-.0123	0.
.0200	0.	0.	0.	0.	0.	0.	.0482	.0042	-.0288	-.0647	.0580	-.0237	-.0237	0.
.0210	0.	0.	0.	0.	0.	0.	.0560	.0096	-.0319	-.0580	.0759	-.0304	-.0304	0.
.0220	0.	0.	0.	0.	0.	0.	.0643	.0159	-.0348	-.0534	.0934	-.0344	-.0344	0.
.0230	0.	0.	0.	0.	0.	0.	.0726	.0230	-.0374	-.0469	.1017	-.0400	-.0400	0.
.0240	0.	0.	0.	0.	0.	0.	.0805	.0311	-.0393	-.0371	.0958	-.0497	-.0497	0.
.0250	0.	0.	0.	0.	0.	0.	.0876	.0397	-.0407	-.0239	.0808	-.0609	-.0609	0.
.0260	0.	0.	0.	0.	0.	0.	.0939	.0479	-.0422	-.0074	.0631	-.0695	-.0695	0.
.0270	0.	0.	0.	0.	0.	0.	.0982	.0544	-.0420	.0093	.0329	-.0762	-.0762	0.
.0280	0.	0.	0.	0.	0.	0.	.0984	.0585	-.0382	.0245	-.0064	-.0830	-.0830	0.
.0290	0.	0.	0.	0.	0.	0.	.0940	.0610	-.0322	.0414	-.0322	-.0854	-.0854	0.
.0300	0.	0.	0.	0.	0.	0.	.0856	.0628	-.0269	.0592	-.0402	-.0774	-.0774	0.
.0310	0.	0.	0.	0.	0.	0.	.0718	.0639	-.0206	.0705	-.0438	-.0645	-.0645	0.
.0320	0.	0.	0.	0.	0.	0.	.0519	.0633	-.0113	.0738	-.0487	-.0552	-.0552	0.
.0330	0.	0.	0.	0.	0.	0.	.0291	.0603	.0006	.0752	-.0506	-.0491	-.0491	0.
.0340	0.	0.	0.	0.	0.	0.	.0060	.0553	.0136	.0774	-.0489	-.0434	-.0434	0.
.0350	0.	0.	0.	0.	0.	0.	-.0186	.0489	.0267	.0766	-.0499	-.0428	-.0428	0.
.0360	0.	0.	0.	0.	0.	0.	-.0453	.0413	.0390	.0705	-.0566	-.0502	-.0502	0.
.0370	0.	0.	0.	0.	0.	0.	-.0707	.0311	.0498	.0612	-.0624	-.0588	-.0588	0.

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.55.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK  
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

.0270	0.	0.	0.	0.	0.	0.	0.	0.	.0982	.0544	-.0420	.0093	.0329	-.0762	0.
.0280	0.	0.	0.	0.	0.	0.	0.	0.	.0984	.0585	-.0382	.0245	-.0064	-.0830	0.
.0290	0.	0.	0.	0.	0.	0.	0.	0.	.0940	.0610	-.0322	.0414	-.0322	-.0854	0.
.0300	0.	0.	0.	0.	0.	0.	0.	0.	.0856	.0628	-.0269	.0592	-.0402	-.0774	0.
.0310	0.	0.	0.	0.	0.	0.	0.	0.	.0718	.0639	-.0206	.0705	-.0438	-.0645	0.
.0320	0.	0.	0.	0.	0.	0.	0.	0.	.0519	.0633	-.0113	.0738	-.0487	-.0552	0.
.0330	0.	0.	0.	0.	0.	0.	0.	0.	.0291	.0603	.0006	.0752	-.0506	-.0491	0.
.0340	0.	0.	0.	0.	0.	0.	0.	0.	.0060	.0557	.0136	.0774	-.0489	-.0434	0.
.0350	0.	0.	0.	0.	0.	0.	0.	0.	-.0186	.0489	.0267	.0766	-.0499	-.0428	0.
.0360	0.	0.	0.	0.	0.	0.	0.	0.	-.0453	.0413	.0390	.0705	-.0566	-.0502	0.
.0370	0.	0.	0.	0.	0.	0.	0.	0.	-.0707	.0315	.0498	.0612	-.0524	-.0588	0.

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

SECTION	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.0380	0.	0.	0.	0.	0.	0.	-.0919	.0186	.0592	.0505	-.0649	-.0628	0.	
.0390	0.	0.	0.	0.	0.	0.	-.1103	.0037	.0678	.0375	-.0690	-.0643	0.	
.0400	0.	0.	0.	0.	0.	0.	-.1269	-.0114	.0736	.0221	-.0567	-.0616	0.	
.0410	0.	0.	0.	0.	0.	0.	-.1398	-.0256	.0751	.0056	-.0564	-.0480	0.	
.0420	0.	0.	0.	0.	0.	0.	-.1477	-.0391	.0733	-.0097	-.0381	-.0236	0.	
.0430	0.	0.	0.	0.	0.	0.	-.1510	-.0526	.0700	-.0213	-.0129	.0058	0.	
.0440	0.	0.	0.	0.	0.	0.	-.1489	-.0664	.0664	-.0287	.0103	.0371	0.	
.0450	0.	0.	0.	0.	0.	0.	-.1406	-.0795	.0621	-.0295	.0232	.0682	0.	
.0460	0.	0.	0.	0.	0.	0.	-.1276	-.0907	.0561	-.0210	.0232	.0923	0.	
.0470	0.	0.	0.	0.	0.	0.	-.1116	-.0995	.0489	-.0039	.0139	.1048	0.	
.0480	0.	0.	0.	0.	0.	0.	-.0923	-.1063	.0415	.0178	.0001	.1086	0.	
.0490	0.	0.	0.	0.	0.	0.	-.0698	-.1111	.0341	.0409	-.0162	.1061	0.	
.0500	0.	0.	0.	0.	0.	0.	-.0466	-.1132	.0267	.0618	-.0336	.0952	0.	
.0510	0.	0.	0.	0.	0.	0.	-.0247	-.1113	.0192	.0778	-.0476	.0763	0.	
.0520	0.	0.	0.	0.	0.	0.	-.0033	-.1051	.0110	.0911	-.0526	.0534	0.	
.0530	0.	0.	0.	0.	0.	0.	.0180	-.0952	.0021	.1055	-.0500	.0274	0.	
.0540	0.	0.	0.	0.	0.	0.	.0383	-.0832	-.0056	.1210	-.0498	-.0043	0.	
.0550	0.	0.	0.	0.	0.	0.	.0573	-.0709	-.0108	.1367	-.0566	-.0409	0.	
.0560	0.	0.	0.	0.	0.	0.	.0755	-.0591	-.0149	.1550	-.0633	-.0766	0.	
.0570	0.	0.	0.	0.	0.	0.	.0927	-.0483	-.0196	.1767	-.0643	-.1063	0.	
.0580	0.	0.	0.	0.	0.	0.	.1070	-.0388	-.0247	.1967	-.0623	-.1288	0.	
.0590	0.	0.	0.	0.	0.	0.	.1177	-.0314	-.0291	.2115	-.0571	-.1432	0.	
.0600	0.	0.	0.	0.	0.	0.	.1252	-.0267	-.0326	.2224	-.0421	-.1465	0.	
.0610	0.	0.	0.	0.	0.	0.	.1304	-.0244	-.0352	.2299	-.0140	-.1379	0.	
.0620	0.	0.	0.	0.	0.	0.	.1320	-.0238	-.0366	.2311	.0207	-.1221	0.	
.0630	0.	0.	0.	0.	0.	0.	.1292	-.0243	-.0367	.2260	.0555	-.1046	0.	
.0640	0.	0.	0.	0.	0.	0.	.1233	-.0261	-.0359	.2178	.0886	-.0871	0.	
.0650	0.	0.	0.	0.	0.	0.	.1158	-.0302	-.0340	.2079	.1171	-.0714	0.	
.0660	0.	0.	0.	0.	0.	0.	.1064	-.0372	-.0305	.1947	.1363	-.0591	0.	
.0670	0.	0.	0.	0.	0.	0.	.0946	-.0468	-.0263	.1774	.1466	-.0520	0.	
.0680	0.	0.	0.	0.	0.	0.	.0815	-.0582	-.0228	.1571	.1543	-.0456	0.	
.0690	0.	0.	0.	0.	0.	0.	.0681	-.0703	-.0204	.1341	.1626	-.0364	0.	
.0700	0.	0.	0.	0.	0.	0.	.0545	-.0822	-.0183	.1080	.1689	-.0256	0.	
.0710	0.	0.	0.	0.	0.	0.	.0408	-.0928	-.0161	.0787	.1690	-.0147	0.	
.0720	0.	0.	0.	0.	0.	0.	.0284	-.1012	-.0139	.0478	.1615	-.0014	0.	
.0730	0.	0.	0.	0.	0.	0.	.0179	-.1065	-.0119	.0188	.1469	.0142	0.	
.0740	0.	0.	0.	0.	0.	0.	.0085	-.1085	-.0100	-.0052	.1250	.0292	0.	
.0750	0.	0.	0.	0.	0.	0.	-.0001	-.1076	-.0078	-.0223	.0955	.0424	0.	

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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

.0650	0.	0.	0.	0.	0.	0.	0.	0.	.158	-.0302	-.0340	.2079	.1171	-.0714	0.
.0660	0.	0.	0.	0.	0.	0.	0.	0.	.064	-.0372	-.0305	.1947	.1363	-.0591	0.
.0670	0.	0.	0.	0.	0.	0.	0.	0.	.0946	-.0468	-.0263	.1774	.1466	-.0520	0.
.0680	0.	0.	0.	0.	0.	0.	0.	0.	.0815	-.0582	-.0220	.1571	.1542	-.0456	0.
.0690	0.	0.	0.	0.	0.	0.	0.	0.	.0601	-.0703	-.0204	.1341	.1626	-.0364	0.
.0700	0.	0.	0.	0.	0.	0.	0.	0.	.0545	-.0822	-.0183	.1080	.1589	-.0256	0.
.0710	0.	0.	0.	0.	0.	0.	0.	0.	.0408	-.0928	-.0161	.0787	.1590	-.0147	0.
.0720	0.	0.	0.	0.	0.	0.	0.	0.	.0284	-.1012	-.0139	.0478	.1515	-.0014	0.
.0730	0.	0.	0.	0.	0.	0.	0.	0.	.0179	-.1065	-.0119	.0188	.1469	.0142	0.
.0740	0.	0.	0.	0.	0.	0.	0.	0.	.0085	-.1085	-.0100	-.0052	.1250	.0292	0.
.0750	0.	0.	0.	0.	0.	0.	0.	0.	-.0001	-.1076	-.0078	-.0223	.0955	.0424	0.

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

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.55.

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

SECTION	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	VA									
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.0760	0.	0.	0.	0.	0.	0.	-.0073	-.1048	-.0053	-.0319	.0518	.0554	0.		
.0770	0.	0.	0.	0.	0.	0.	-.0137	-.1004	-.0030	-.0344	.0295	.0686	0.		
.0780	0.	0.	0.	0.	0.	0.	-.0202	-.0943	-.0006	-.0322	.0017	.0803	0.		
.0790	0.	0.	0.	0.	0.	0.	-.0269	-.0862	.0019	-.0277	-.0214	.0897	0.		
.0800	0.	0.	0.	0.	0.	0.	-.0334	-.0753	.0050	-.0215	-.0400	.0958	0.		
.0810	0.	0.	0.	0.	0.	0.	-.0399	-.0614	.0088	-.0134	-.0537	.0960	0.		
.0820	0.	0.	0.	0.	0.	0.	-.0461	-.0447	.0139	-.0045	-.0639	.0886	0.		
.0830	0.	0.	0.	0.	0.	0.	-.0513	-.0262	.0206	.0048	-.0735	.0736	0.		
.0840	0.	0.	0.	0.	0.	0.	-.0555	-.0070	.0283	.0155	-.0829	.0516	0.		
.0850	0.	0.	0.	0.	0.	0.	-.0590	.0119	.0359	.0278	-.0895	.0244	0.		
.0860	0.	0.	0.	0.	0.	0.	-.0618	.0292	.0423	.0396	-.0917	-.0045	0.		
.0870	0.	0.	0.	0.	0.	0.	-.0638	.0443	.0480	.0492	-.0898	-.0313	0.		
.0880	0.	0.	0.	0.	0.	0.	-.0652	.0567	.0511	.0557	-.0833	-.0546	0.		
.0890	0.	0.	0.	0.	0.	0.	-.0657	.0665	.0526	.0586	-.0714	-.0733	0.		
.0900	0.	0.	0.	0.	0.	0.	-.0648	.0744	.0528	.0576	-.0555	-.0864	0.		
.0910	0.	0.	0.	0.	0.	0.	-.0622	.0811	.0517	.0539	-.0398	-.0953	0.		
.0920	0.	0.	0.	0.	0.	0.	-.0583	.0873	.0494	.0480	-.0286	-.1026	0.		
.0930	0.	0.	0.	0.	0.	0.	-.0530	.0927	.0464	.0393	-.0236	-.1093	0.		
.0940	0.	0.	0.	0.	0.	0.	-.0461	.0963	.0424	.0280	-.0236	-.1147	0.		
.0950	0.	0.	0.	0.	0.	0.	-.0376	.0973	.0370	.0152	-.0269	-.1187	0.		
.0960	0.	0.	0.	0.	0.	0.	-.0285	.0952	.0298	.0003	-.0329	-.1216	0.		
.0970	0.	0.	0.	0.	0.	0.	-.0191	.0898	.0208	-.0179	-.0407	-.1226	0.		
.0980	0.	0.	0.	0.	0.	0.	-.0091	.0812	.0100	-.0386	-.0496	-.1206	0.		
.0990	0.	0.	0.	0.	0.	0.	.0014	.0700	-.0024	-.0608	-.0566	-.1152	0.		
.1000	0.	0.	0.	0.	0.	0.	.0124	.0570	-.0151	-.0852	-.0676	-.1065	0.		
.1010	0.	0.	0.	0.	0.	0.	.0236	.0431	-.0270	-.1118	-.0831	-.0948	0.		
.1020	0.	0.	0.	0.	0.	0.	.0347	.0292	-.0377	-.1375	-.0998	-.0793	0.		
.1030	0.	0.	0.	0.	0.	0.	.0454	.0157	-.0476	-.1597	-.1126	-.0591	0.		
.1040	0.	0.	0.	0.	0.	0.	.0548	.0029	-.0554	-.1779	-.1189	-.0343	0.		
.1050	0.	0.	0.	0.	0.	0.	.0622	-.0094	-.0609	-.1912	-.1171	-.0061	0.		
.1060	0.	0.	0.	0.	0.	0.	.0668	-.0208	-.0645	-.1984	-.1047	.0241	0.		
.1070	0.	0.	0.	0.	0.	0.	.0685	-.0307	-.0663	-.1992	-.0811	.0551	0.		
.1080	0.	0.	0.	0.	0.	0.	.0671	-.0382	-.0669	-.1956	-.0453	.0851	0.		
.1090	0.	0.	0.	0.	0.	0.	.0623	-.0421	-.0679	-.1920	.0069	.1141	0.		
.1100	0.	0.	0.	0.	0.	0.	.0561	-.0426	-.0659	-.1887	.0520	.1358	0.		
.1110	0.	0.	0.	0.	0.	0.	.0491	-.0392	-.0610	-.1805	.0893	.1460	0.		
.1120	0.	0.	0.	0.	0.	0.	.0419	-.0311	-.0549	-.1650	.1222	.1448	0.		
.1130	0.	0.	0.	0.	0.	0.	.0354	-.0188	-.0478	-.1468	.1480	.1364	0.		

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

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.55.

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

.1030	0.	0.	0.	0.	0.	0.	0.	0.	0.454	.0157	-.0476	-.1597	-.1126	-.0591	0.
.1040	0.	0.	0.	0.	0.	0.	0.	0.	0.548	.0029	-.0554	-.1779	-.1189	-.0343	0.
.1050	0.	0.	0.	0.	0.	0.	0.	0.	0.622	-.0094	-.0609	-.1912	-.1171	-.0061	0.
.1060	0.	0.	0.	0.	0.	0.	0.	0.	0.668	-.0208	-.0645	-.1984	-.1047	.0241	0.
.1070	0.	0.	0.	0.	0.	0.	0.	0.	0.685	-.0307	-.0683	-.1992	-.0811	.0551	0.
.1080	0.	0.	0.	0.	0.	0.	0.	0.	0.671	-.0382	-.0669	-.1956	-.0453	.0851	0.
.1090	0.	0.	0.	0.	0.	0.	0.	0.	0.623	-.0421	-.0679	-.1920	.0069	.1141	0.
.1100	0.	0.	0.	0.	0.	0.	0.	0.	0.561	-.0426	-.0659	-.1887	.0520	.1358	0.
.1110	0.	0.	0.	0.	0.	0.	0.	0.	0.491	-.0392	-.0610	-.1805	.0893	.1460	0.
.1120	0.	0.	0.	0.	0.	0.	0.	0.	0.419	-.0311	-.0547	-.1650	.1222	.1448	0.
.1130	0.	0.	0.	0.	0.	0.	0.	0.	0.354	-.0188	-.0478	-.1468	.1480	.1364	0.

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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	21	MEMBER	1	SEQUENCE	38	LOCATION	DIS	TYPE	VA						
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)	(DEG)	(DEG)	(DEG)	(PSI)
.1140	0.	0.	0.	0.	0.	0.			.0294	-.0033	-.0402	-.1293	.1549	.1228	0.
.1150	0.	0.	0.	0.	0.	0.			.0238	.0139	-.0331	-.1111	.1776	.1059	0.
.1160	0.	0.	0.	0.	0.	0.			.0192	.0311	-.0270	-.0933	.1387	.0909	0.
.1170	0.	0.	0.	0.	0.	0.			.0164	.0473	-.0218	-.0784	.1965	.0800	0.
.1180	0.	0.	0.	0.	0.	0.			.0141	.0625	-.0175	-.0640	.1878	.0690	0.
.1190	0.	0.	0.	0.	0.	0.			.0116	.0768	-.0138	-.0468	.1581	.0550	0.
.1200	0.	0.	0.	0.	0.	0.			.0099	.0897	-.0104	-.0273	.1456	.0423	0.
.1210	0.	0.	0.	0.	0.	0.			.0091	.1007	-.0078	-.0101	.1197	.0338	0.
.1220	0.	0.	0.	0.	0.	0.			.0073	.1094	-.0044	-.0001	.0886	.0244	0.
.1230	0.	0.	0.	0.	0.	0.			.0038	.1158	-.0003	-.0001	.0513	.0130	0.
.1240	0.	0.	0.	0.	0.	0.			-.0005	.1204	.0034	-.0081	.0187	.0031	0.
.1250	0.	0.	0.	0.	0.	0.			-.0057	.1231	.0060	-.0210	-.0073	-.0058	0.
.1260	0.	0.	0.	0.	0.	0.			-.0131	.1240	.0075	-.0389	-.0364	-.0182	0.
.1270	0.	0.	0.	0.	0.	0.			-.0227	.1221	.0093	-.0636	-.0506	-.0329	0.
.1280	0.	0.	0.	0.	0.	0.			-.0319	.1171	.0103	-.0934	-.0730	-.0422	0.
.1290	0.	0.	0.	0.	0.	0.			-.0394	.1093	.0104	-.1231	-.0749	-.0454	0.
.1300	0.	0.	0.	0.	0.	0.			-.0463	.0997	.0102	-.1503	-.0767	-.0481	0.
.1310	0.	0.	0.	0.	0.	0.			-.0522	.0897	.0099	-.1744	-.0868	-.0507	0.
.1320	0.	0.	0.	0.	0.	0.			-.0555	.0799	.0095	-.1917	-.0942	-.0480	0.
.1330	0.	0.	0.	0.	0.	0.			-.0555	.0706	.0078	-.2002	-.0981	-.0374	0.
.1340	0.	0.	0.	0.	0.	0.			-.0538	.0615	.0065	-.2030	-.1029	-.0223	0.
.1350	0.	0.	0.	0.	0.	0.			-.0514	.0528	.0062	-.2031	-.1082	-.0040	0.
.1360	0.	0.	0.	0.	0.	0.			-.0481	.0456	.0051	-.1987	-.1090	.0203	0.
.1370	0.	0.	0.	0.	0.	0.			-.0443	.0407	.0030	-.1884	-.1015	.0484	0.
.1380	0.	0.	0.	0.	0.	0.			-.0415	.0381	.0010	-.1754	-.0980	.0731	0.
.1390	0.	0.	0.	0.	0.	0.			-.0407	.0378	.0008	-.1609	-.1024	.0893	0.
.1400	0.	0.	0.	0.	0.	0.			-.0407	.0393	.0022	-.1423	-.1083	.0977	0.
.1410	0.	0.	0.	0.	0.	0.			-.0410	.0424	.0045	-.1198	-.1143	.1000	0.
.1420	0.	0.	0.	0.	0.	0.			-.0432	.0470	.0086	-.0971	-.1205	.0933	0.
.1430	0.	0.	0.	0.	0.	0.			-.0478	.0527	.0136	-.0767	-.1289	.0784	0.
.1440	0.	0.	0.	0.	0.	0.			-.0533	.0586	.0185	-.0580	-.1314	.0610	0.
.1450	0.	0.	0.	0.	0.	0.			-.0583	.0634	.0232	-.0416	-.1244	.0451	0.
.1460	0.	0.	0.	0.	0.	0.			-.0628	.0665	.0281	-.0283	-.1153	.0299	0.
.1470	0.	0.	0.	0.	0.	0.			-.0670	.0676	.0332	-.0168	-.1036	.0140	0.
.1480	0.	0.	0.	0.	0.	0.			-.0693	.0669	.0371	-.0038	-.0890	.0013	0.
.1490	0.	0.	0.	0.	0.	0.			-.0687	.0643	.0397	.0119	-.0592	-.0064	0.
.1500	0.	0.	0.	0.	0.	0.			-.0659	.0597	.0415	.0289	-.0477	-.0111	0.
.1510	0.	0.	0.	0.	0.	0.			-.0614	.0532	.0420	.0450	-.0307	-.0132	0.

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.1410	0.	0.	0.	0.	0.	0.	0.	-.0410	.0424	.0045	-.1198	-.1143	.1000	0.
.1420	0.	0.	0.	0.	0.	0.	0.	-.0432	.0470	.0086	-.0971	-.1205	.0933	0.
.1430	0.	0.	0.	0.	0.	0.	0.	-.0478	.0527	.0136	-.0767	-.1289	.0784	0.
.1440	0.	0.	0.	0.	0.	0.	0.	-.0573	.0586	.0185	-.0580	-.1314	.0610	0.
.1450	0.	0.	0.	0.	0.	0.	0.	-.0583	.0634	.0232	-.0416	-.1244	.0451	0.
.1460	0.	0.	0.	0.	0.	0.	0.	-.0628	.0665	.0281	-.0283	-.1153	.0299	0.
.1470	0.	0.	0.	0.	0.	0.	0.	-.0670	.0676	.0332	-.0168	-.1036	.0140	0.
.1480	0.	0.	0.	0.	0.	0.	0.	-.0693	.0669	.0371	-.0038	-.0890	.0013	0.
.1490	0.	0.	0.	0.	0.	0.	0.	-.0687	.0643	.0397	.0119	-.0592	-.0064	0.
.1500	0.	0.	0.	0.	0.	0.	0.	-.0659	.0597	.0415	.0289	-.0477	-.0111	0.
.1510	0.	0.	0.	0.	0.	0.	0.	-.0614	.0532	.0420	.0450	-.0307	-.0132	0.

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SECTION	21	MEMBER	1	SEQUENCE	38	LOCATION	DIS	TYPE	VA					
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)	
.1520	0.	0.	0.	0.	0.	0.	-.0550	.0449	.0409	.0588	-.0110	-.0094	0.	
.1530	0.	0.	0.	0.	0.	0.	-.0470	.0354	.0374	.0690	.0133	.0025	0.	
.1540	0.	0.	0.	0.	0.	0.	-.0386	.0254	.0318	.0748	.0427	.0200	0.	
.1550	0.	0.	0.	0.	0.	0.	-.0304	.0149	.0249	.0765	.0742	.0405	0.	
.1560	0.	0.	0.	0.	0.	0.	-.0219	.0042	.0169	.0748	.1034	.0636	0.	
.1570	0.	0.	0.	0.	0.	0.	-.0130	-.0066	.0089	.0709	.1333	.0870	0.	
.1580	0.	0.	0.	0.	0.	0.	-.0040	-.0171	.0012	.0651	.1568	.1074	0.	
.1590	0.	0.	0.	0.	0.	0.	.0047	-.0269	-.0060	.0577	.1673	.1220	0.	
.1600	0.	0.	0.	0.	0.	0.	.0129	-.0360	-.0127	.0492	.1676	.1300	0.	
.1610	0.	0.	0.	0.	0.	0.	.0210	-.0445	-.0186	.0410	.1625	.1323	0.	
.1620	0.	0.	0.	0.	0.	0.	.0288	-.0525	-.0243	.0325	.1516	.1303	0.	
.1630	0.	0.	0.	0.	0.	0.	.0361	-.0600	-.0290	.0223	.1370	.1231	0.	
.1640	0.	0.	0.	0.	0.	0.	.0426	-.0665	-.0727	.0112	.1173	.1112	0.	
.1650	0.	0.	0.	0.	0.	0.	.0487	-.0712	-.0361	.0014	.0929	.0957	0.	
.1660	0.	0.	0.	0.	0.	0.	.0541	-.0737	-.0387	-.0063	.0671	.0770	0.	
.1670	0.	0.	0.	0.	0.	0.	.0588	-.0737	-.0401	-.0121	.0358	.0560	0.	
.1680	0.	0.	0.	0.	0.	0.	.0625	-.0713	-.0397	-.0145	.0018	.0336	0.	
.1690	0.	0.	0.	0.	0.	0.	.0649	-.0667	-.0381	-.0114	-.0306	.0125	0.	
.1700	0.	0.	0.	0.	0.	0.	.0656	-.0601	-.0357	-.0036	-.0562	-.0043	0.	
.1710	0.	0.	0.	0.	0.	0.	.0641	-.0521	-.0320	.0075	-.0710	-.0154	0.	
.1720	0.	0.	0.	0.	0.	0.	.0601	-.0429	-.0277	.0219	-.0791	-.0204	0.	
.1730	0.	0.	0.	0.	0.	0.	.0536	-.0333	-.0226	.0398	-.0762	-.0200	0.	
.1740	0.	0.	0.	0.	0.	0.	.0451	-.0238	-.0169	.0584	-.0641	-.0142	0.	
.1750	0.	0.	0.	0.	0.	0.	.0349	-.0147	-.0103	.0757	-.0485	-.0051	0.	
.1760	0.	0.	0.	0.	0.	0.	.0232	-.0062	-.0027	.0919	-.0310	.0031	0.	
.1770	0.	0.	0.	0.	0.	0.	.0106	.0015	.0056	.1070	-.0160	.0083	0.	
.1780	0.	0.	0.	0.	0.	0.	-.0022	.0080	.0147	.1196	-.0018	.0096	0.	
.1790	0.	0.	0.	0.	0.	0.	-.0150	.0130	.0244	.1286	.0078	.0057	0.	
.1800	0.	0.	0.	0.	0.	0.	-.0279	.0165	.0337	.1329	.0111	-.0040	0.	
.1810	0.	0.	0.	0.	0.	0.	-.0407	.0183	.0428	.1319	.0124	-.0187	0.	
.1820	0.	0.	0.	0.	0.	0.	-.0525	.0185	.0507	.1264	.0103	-.0355	0.	
.1830	0.	0.	0.	0.	0.	0.	-.0632	.0174	.0572	.1188	.0063	-.0540	0.	
.1840	0.	0.	0.	0.	0.	0.	-.0728	.0152	.0623	.1097	-.0012	-.0733	0.	
.1850	0.	0.	0.	0.	0.	0.	-.0805	.0122	.0659	.0991	-.0125	-.0904	0.	
.1860	0.	0.	0.	0.	0.	0.	-.0855	.0085	.0680	.0894	-.0246	-.1031	0.	
.1870	0.	0.	0.	0.	0.	0.	-.0877	.0044	.0681	.0824	-.0401	-.1104	0.	
.1880	0.	0.	0.	0.	0.	0.	-.0875	.0001	.0667	.0772	-.0574	-.1119	0.	
.1890	0.	0.	0.	0.	0.	0.	-.0846	-.0046	.0637	.0725	-.0750	-.1058	0.	

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.1790	0.	0.	0.	0.	0.	0.	0.	-.0150	.0130	.0244	.1286	.0078	.0057	0.
.1800	0.	0.	0.	0.	0.	0.	0.	-.0279	.0165	.0337	.1329	.0111	-.0040	0.
.1810	0.	0.	0.	0.	0.	0.	0.	-.0407	.0183	.0428	.1319	.0124	-.0187	0.
.1820	0.	0.	0.	0.	0.	0.	0.	-.0525	.0185	.0507	.1264	.0103	-.0355	0.
.1830	0.	0.	0.	0.	0.	0.	0.	-.0632	.0174	.0572	.1188	.0063	-.0540	0.
.1840	0.	0.	0.	0.	0.	0.	0.	-.0723	.0152	.0623	.1097	-.0012	-.0733	0.
.1850	0.	0.	0.	0.	0.	0.	0.	-.0805	.0122	.0659	.0991	-.0125	-.0904	0.
.1860	0.	0.	0.	0.	0.	0.	0.	-.0855	.0085	.0680	.0894	-.0246	-.1031	0.
.1870	0.	0.	0.	0.	0.	0.	0.	-.0877	.0044	.0681	.0824	-.0401	-.1104	0.
.1880	0.	0.	0.	0.	0.	0.	0.	-.0875	.0001	.0667	.0772	-.0574	-.1119	0.
.1890	0.	0.	0.	0.	0.	0.	0.	-.0846	-.0046	.0637	.0725	-.0750	-.1058	0.

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SECTION	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	VA								STRESS
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)	(PSI)	
.1900	0.	0.	0.	0.	0.	0.	-.0791	-.0097	.0587	.0695	-.0896	-.0914	0.	
.1910	0.	0.	0.	0.	0.	0.	-.0718	-.0155	.0519	.0682	-.0967	-.0703	0.	
.1920	0.	0.	0.	0.	0.	0.	-.0629	-.0220	.0440	.0665	-.0985	-.0445	0.	
.1930	0.	0.	0.	0.	0.	0.	-.0529	-.0294	.0357	.0642	-.0946	-.0166	0.	
.1940	0.	0.	0.	0.	0.	0.	-.0421	-.0374	.0270	.0627	-.0843	.0099	0.	
.1950	0.	0.	0.	0.	0.	0.	-.0307	-.0455	.0185	.0621	-.0593	.0319	0.	
.1960	0.	0.	0.	0.	0.	0.	-.0193	-.0535	.0107	.0607	-.0528	.0471	0.	
.1970	0.	0.	0.	0.	0.	0.	-.0082	-.0612	.0041	.0584	-.0362	.0537	0.	
.1980	0.	0.	0.	0.	0.	0.	.0024	-.0683	-.0015	.0560	-.0187	.0520	0.	
.1990	0.	0.	0.	0.	0.	0.	.0126	-.0746	-.0060	.0534	.0000	.0436	0.	
.2000	0.	0.	0.	0.	0.	0.	.0219	-.0799	-.0095	.0502	.0193	.0303	0.	
.2010	0.	0.	0.	0.	0.	0.	.0302	-.0837	-.0126	.0473	.0384	.0136	0.	
.2020	0.	0.	0.	0.	0.	0.	.0376	-.0859	-.0155	.0456	.0574	-.0036	0.	
.2030	0.	0.	0.	0.	0.	0.	.0447	-.0865	-.0183	.0452	.0749	-.0188	0.	
.2040	0.	0.	0.	0.	0.	0.	.0515	-.0856	-.0207	.0470	.0887	-.0312	0.	
.2050	0.	0.	0.	0.	0.	0.	.0580	-.0831	-.0230	.0522	.0973	-.0411	0.	
.2060	0.	0.	0.	0.	0.	0.	.0645	-.0792	-.0252	.0610	.1010	-.0473	0.	
.2070	0.	0.	0.	0.	0.	0.	.0710	-.0742	-.0274	.0724	.1006	-.0496	0.	
.2080	0.	0.	0.	0.	0.	0.	.0770	-.0684	-.0295	.0851	.0963	-.0494	0.	
.2090	0.	0.	0.	0.	0.	0.	.0823	-.0622	-.0313	.0976	.0884	-.0479	0.	
.2100	0.	0.	0.	0.	0.	0.	.0866	-.0559	-.0327	.1078	.0785	-.0458	0.	
.2110	0.	0.	0.	0.	0.	0.	.0896	-.0498	-.0337	.1145	.0587	-.0440	0.	
.2120	0.	0.	0.	0.	0.	0.	.0907	-.0440	-.0343	.1174	.0590	-.0447	0.	
.2130	0.	0.	0.	0.	0.	0.	.0897	-.0386	-.0340	.1164	.0494	-.0488	0.	
.2140	0.	0.	0.	0.	0.	0.	.0862	-.0339	-.0326	.1118	.0404	-.0563	0.	
.2150	0.	0.	0.	0.	0.	0.	.0820	-.0303	-.0301	.1045	.0326	-.0665	0.	
.2160	0.	0.	0.	0.	0.	0.	.0755	-.0277	-.0266	.0954	.0257	-.0785	0.	
.2170	0.	0.	0.	0.	0.	0.	.0673	-.0261	-.0224	.0848	.0196	-.0903	0.	
.2180	0.	0.	0.	0.	0.	0.	.0579	-.0256	-.0176	.0735	.0152	-.0994	0.	
.2190	0.	0.	0.	0.	0.	0.	.0476	-.0259	-.0128	.0627	.0137	-.1035	0.	
.2200	0.	0.	0.	0.	0.	0.	.0362	-.0269	-.0079	.0530	.0144	-.1013	0.	
.2210	0.	0.	0.	0.	0.	0.	.0259	-.0285	-.0031	.0446	.0162	-.0923	0.	
.2220	0.	0.	0.	0.	0.	0.	.0153	-.0301	.0015	.0380	.0188	-.0767	0.	
.2230	0.	0.	0.	0.	0.	0.	.0053	-.0314	.0055	.0339	.0214	-.0557	0.	
.2240	0.	0.	0.	0.	0.	0.	-.0040	-.0319	.0091	.0316	.0223	-.0312	0.	
.2250	0.	0.	0.	0.	0.	0.	-.0125	-.0317	.0123	.0304	.0198	-.0058	0.	
.2260	0.	0.	0.	0.	0.	0.	-.0203	-.0307	.0151	.0297	.0134	.0182	0.	
.2270	0.	0.	0.	0.	0.	0.	-.0273	-.0288	.0174	.0290	.0038	.0388	0.	

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