

50-305

RESPONSE TO NUREG-0737 ITEM II.D.1

Docket # *50-305*

Control # *8403280048*

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

.1590	-2147.	3564.	4115.	-5731.	-3556.	-4136.	.0486	-.0025	-.0588	-.0460	.1078	-.0515	5327.
.1600	-2300.	4077.	4130.	-5576.	-3845.	-3871.	.0516	-.0028	-.0620	-.0526	.1169	-.0601	5259.
.1610	-2483.	4244.	4519.	-5431.	-4047.	-3742.	.0527	-.0028	-.0648	-.0589	.1229	-.0636	5216.
.1620	-1982.	3845.	3593.	-5520.	-3549.	-4066.	.0523	-.0026	-.0678	-.0641	.1099	-.0591	5204.
.1630	-1869.	3522.	3466.	-5137.	-3526.	-2982.	.0493	-.0023	-.0691	-.0705	.1095	-.0541	4984.
.1640	-1950.	3340.	3755.	-4491.	-3766.	-2622.	.0438	-.0019	-.0686	-.0761	.1160	-.0475	4644.
.1650	-1583.	2779.	3107.	-4221.	-3440.	-3720.	.0366	-.0013	-.0674	-.0772	.1069	-.0327	4445.
.1660	-1465.	1958.	2836.	-3994.	-3189.	-3934.	.0273	-.0006	-.0645	-.0751	.0996	-.0128	4347.
.1670	-1504.	1347.	2876.	-3541.	-3171.	-3871.	.0163	.0001	-.0598	-.0717	.0983	.0072	4132.
.1680	-1567.	832.	2995.	-3042.	-3176.	-3711.	.0044	.0008	-.0540	-.0666	.0974	.0277	3879.
.1690	-1242.	20.	2369.	-2773.	-2717.	-3853.	-.0074	.0015	-.0480	-.0594	.0839	.0515	3687.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.25.49.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	EL	DX	DY	DZ	RX	RY	RZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.1700	-1012.	-887.	1958.	-2364.	-2321.	-3903.	-.0188	.0023	-.0415	-.0529	.0719	.0737	3451.
.1710	-1231.	-1516.	2450.	-1632.	-2338.	-3544.	-.0296	.0030	-.0346	-.0480	.0711	.0904	3066.
.1720	-757.	-2028.	1618.	-1094.	-1723.	-3309.	-.0385	.0035	-.0288	-.0436	.0533	.1049	2621.
.1730	-249.	-2612.	765.	-446.	-1064.	-3000.	-.0457	.0040	-.0234	-.0409	.0343	.1157	2167.
.1740	45.	-3193.	430.	472.	-668.	-2436.	-.0513	.0044	-.0177	-.0402	.0223	.1211	1732.
.1750	533.	-3599.	-265.	1269.	-87.	-1867.	-.0553	.0046	-.0121	-.0384	.0053	.1232	1523.
.1760	909.	-3738.	-900.	1853.	533.	-1321.	-.0579	.0046	-.0060	-.0333	-.0128	.1229	1575.
.1770	1309.	-3696.	-1696.	2329.	1189.	-774.	-.0594	.0046	.0010	-.0255	-.0321	.1202	1838.
.1780	1446.	-3620.	-1913.	2895.	1536.	-79.	-.0599	.0044	.0096	-.0155	-.0432	.1144	2210.
.1790	1801.	-3595.	-2440.	3282.	2018.	440.	-.0594	.0041	.0192	-.0018	-.0583	.1081	2614.
.1800	2223.	-3476.	-3139.	3504.	2549.	896.	-.0580	.0038	.0299	.0153	-.0750	.1009	2983.
.1810	2088.	-3129.	-2893.	3809.	2604.	1536.	-.0563	.0033	.0421	.0347	-.0789	.0910	3278.
.1820	2217.	-2716.	-3173.	3917.	2857.	2044.	-.0538	.0028	.0541	.0559	-.0882	.0809	3546.
.1830	2424.	-2344.	-3541.	3957.	3121.	2493.	-.0505	.0022	.0658	.0770	-.0978	.0700	3790.
.1840	2461.	-1948.	-3590.	4093.	3166.	3033.	-.0467	.0016	.0769	.0961	-.1013	.0571	4043.
.1850	2411.	-1441.	-3588.	4175.	3150.	3567.	-.0422	.0010	.0863	.1129	-.1027	.0430	4267.
.1860	2226.	-815.	-3451.	4060.	3120.	4001.	-.0368	.0004	.0935	.1278	-.1034	.0282	4380.
.1870	2178.	-151.	-3623.	3745.	3245.	4276.	-.0303	-.0003	.0979	.1394	-.1077	.0128	4412.
.1880	1839.	461.	-3231.	3506.	3114.	4579.	-.0227	-.0010	.0995	.1456	-.1045	-.0047	4418.
.1890	1556.	923.	-2897.	3206.	3042.	4738.	-.0137	-.0016	.0979	.1462	-.1023	-.0232	4367.
.1900	1532.	1256.	-2971.	2788.	3187.	4704.	-.0033	-.0022	.0928	.1413	-.1053	-.0422	4266.
.1910	1269.	1524.	-2511.	2514.	3089.	4726.	.0080	-.0028	.0848	.1299	-.1012	-.0632	4166.
.1920	1082.	1655.	-2170.	2269.	3032.	4663.	.0197	-.0033	.0739	.1130	-.0977	-.0840	4049.
.1930	1048.	1650.	-2107.	1985.	3102.	4461.	.0312	-.0037	.0607	.0918	-.0971	-.1028	3899.
.1940	982.	1612.	-1954.	1792.	3080.	4281.	.0417	-.0040	.0461	.0674	-.0938	-.1199	3755.
.1950	861.	1551.	-1712.	1705.	2925.	4141.	.0502	-.0042	.0310	.0411	-.0867	-.1339	3606.
.1960	754.	1437.	-1603.	1560.	2767.	3898.	.0564	-.0042	.0163	.0158	-.0796	-.1426	3389.
.1970	568.	1352.	-1460.	1293.	2548.	3549.	.0599	-.0041	.0027	-.0061	-.0710	-.1452	3071.
.1980	246.	1349.	-1114.	975.	2157.	3174.	.0605	-.0039	-.0087	-.0236	-.0580	-.1426	2669.
.1990	-67.	1287.	-753.	640.	1651.	2736.	.0586	-.0035	-.0177	-.0365	-.0423	-.1347	2197.
.2000	-311.	1045.	-434.	275.	1070.	2180.	.0546	-.0031	-.0241	-.0447	-.0251	-.1218	1647.
.2010	-591.	729.	22.	-149.	363.	1540.	.0490	-.0026	-.0279	-.0477	-.0050	-.1051	1071.
.2020	-912.	498.	557.	-700.	-423.	832.	.0422	-.0021	-.0296	-.0454	.0169	-.0857	786.
.2030	-1219.	343.	1039.	-1396.	-1208.	40.	.0348	-.0017	-.0297	-.0388	.0386	-.0646	1245.
.2040	-1550.	185.	1585.	-2173.	-2020.	-798.	.0275	-.0012	-.0288	-.0297	.0607	-.0430	2071.
.2050	-1905.	54.	2201.	-3009.	-2831.	-1645.	.0207	-.0008	-.0276	-.0194	.0828	-.0225	2997.
.2060	-2219.	70.	2700.	-3927.	-3530.	-2479.	.0151	-.0006	-.0268	-.0089	.1019	-.0042	3932.
.2070	-2505.	262.	3087.	-4875.	-4101.	-3250.	.0110	-.0004	-.0268	.0006	.1176	.0104	4821.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

13.25.49.

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

.1970	568.	1352.	-1460.	1293.	2548.	3549.	.0599	-.0041	.0027	-.0061	-.0710	-.1452	3071.
.1980	246.	1349.	-1114.	975.	2157.	3174.	.0605	-.0039	-.0087	-.0236	-.0580	-.1426	2669.
.1990	-67.	1287.	-753.	640.	1651.	2736.	.0586	-.0035	-.0177	-.0365	-.0423	-.1347	2197.
.2000	-311.	1045.	-434.	275.	1070.	2180.	.0546	-.0031	-.0241	-.0447	-.0251	-.1218	1647.
.2010	-591.	729.	22.	-149.	363.	1540.	.0490	-.0026	-.0279	-.0477	-.0050	-.1051	1071.
.2020	-912.	428.	557.	-700.	-423.	232.	.0422	-.0021	-.0296	-.0454	.0169	-.0857	786.
.2030	-1219.	343.	1039.	-1396.	-1208.	40.	.0348	-.0017	-.0297	-.0388	.0386	-.0646	1245.
.2040	-1550.	185.	1585.	-2173.	-2020.	-798.	.0275	-.0012	-.0288	-.0297	.0607	-.0430	2071.
.2050	-1905.	54.	2201.	-3009.	-2631.	-1645.	.0207	-.0008	-.0276	-.0194	.0828	-.0225	2997.
.2060	-2219.	70.	2700.	-3927.	-3530.	-2479.	.0151	-.0006	-.0268	-.0089	.1019	-.0042	3932.
.2070	-2509.	262.	3087.	-4875.	-4101.	-2250.	.0110	-.0004	-.0268	.0006	.1176	.0104	4821.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.25.49.

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	2	MEMBER	1	SEQUENCE	801	LOCATION	BEG	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2080	-2792.	515.	3498.	-5748.	-4582.	-3920.		.0087	-.0003	-.0278	.0077	.1311	.0207	5615.	
.2090	-2972.	718.	3817.	-6494.	-4905.	-4494.		.0086	-.0004	-.0298	.0116	.1404	.0264	6266.	
.2100	-2968.	888.	3896.	-7062.	-5026.	-4938.		.0104	-.0005	-.0328	.0120	.1443	.0272	6724.	
.2110	-2872.	1078.	3882.	-7389.	-5031.	-5183.		.0137	-.0006	-.0361	.0094	.1451	.0235	6965.	
.2120	-2727.	1246.	3830.	-7511.	-4931.	-5263.		.0179	-.0008	-.0393	.0049	.1429	.0165	7019.	
.2130	-2481.	1350.	3606.	-7496.	-4669.	-5245.		.0223	-.0011	-.0420	-.0000	.1362	.0084	6924.	
.2140	-2192.	1448.	3274.	-7311.	-4326.	-5079.		.0260	-.0013	-.0433	-.0043	.1270	.0000	6671.	
.2150	-1957.	1532.	2990.	-6943.	-4003.	-4730.		.0284	-.0014	-.0428	-.0069	.1180	-.0078	6272.	
.2160	-1748.	1689.	2687.	-6497.	-3644.	-4301.		.0291	-.0015	-.0401	-.0063	.1076	-.0133	5798.	
.2170	-1524.	1724.	2286.	-6025.	-3211.	-3857.		.0280	-.0016	-.0351	-.0019	.0948	-.0156	5286.	
.2180	-1350.	1721.	1927.	-5445.	-2808.	-3326.		.0250	-.0016	-.0278	.0056	.0824	-.0154	4698.	
.2190	-1216.	1661.	1642.	-4722.	-2453.	-2696.		.0206	-.0015	-.0183	.0154	.0709	-.0135	4021.	
.2200	-1009.	1452.	1273.	-3913.	-2039.	-2054.		.0152	-.0013	-.0075	.0268	.0574	-.0097	3281.	
.2210	-730.	1082.	835.	-3003.	-1566.	-1399.		.0092	-.0011	.0042	.0384	.0422	-.0050	2470.	
.2220	-465.	654.	458.	-1948.	-1106.	-657.		.0032	-.0008	.0158	.0487	.0273	-.0008	1573.	
.2230	-185.	242.	47.	-808.	-600.	149.		-.0026	-.0006	.0267	.0566	.0113	.0022	686.	
.2240	163.	-155.	-504.	349.	18.	969.		-.0076	-.0004	.0359	.0615	-.0075	.0038	694.	
.2250	512.	-528.	-1065.	1548.	674.	1826.		-.0117	-.0001	.0431	.0622	-.0268	.0033	1677.	
.2260	815.	-831.	-1561.	2763.	1320.	2719.		-.0145	.0000	.0479	.0587	-.0455	.0001	2760.	
.2270	1121.	-1032.	-2099.	3869.	2017.	3561.		-.0159	.0001	.0503	.0519	-.0651	-.0052	3796.	
.2280	1424.	-1132.	-2666.	4816.	2743.	4307.		-.0157	.0002	.0504	.0425	-.0850	-.0124	4731.	
.2290	1677.	-1175.	-3118.	5636.	3392.	4964.		-.0141	.0002	.0486	.0310	-.1024	-.0216	5555.	
.2300	1905.	-1226.	-3459.	6295.	3943.	5478.		-.0112	.0001	.0455	.0188	-.1170	-.0317	6221.	
.2310	2130.	-1296.	-3739.	6699.	4421.	5772.		-.0073	-.0000	.0415	.0075	-.1293	-.0415	6664.	
.2320	2280.	-1324.	-3871.	6815.	4772.	5848.		-.0029	-.0002	.0373	-.0014	-.1382	-.0500	6855.	
.2330	2309.	-1276.	-3812.	6660.	4949.	5732.		.0014	-.0003	.0333	-.0070	-.1423	-.0566	6797.	
.2340	2266.	-1183.	-3650.	6246.	4982.	5421.		.0051	-.0005	.0300	-.0089	-.1426	-.0604	6508.	
.2350	2174.	-1078.	-3414.	5624.	4883.	4944.		.0077	-.0007	.0274	-.0073	-.1393	-.0606	6026.	
.2360	2009.	-940.	-3076.	4882.	4628.	4373.		.0090	-.0008	.0259	-.0027	-.1320	-.0576	5408.	
.2370	1800.	-747.	-2706.	4081.	4248.	3759.		.0088	-.0008	.0253	.0043	-.1214	-.0514	4710.	
.2380	1593.	-523.	-2377.	3265.	3795.	3123.		.0070	-.0008	.0255	.0129	-.1090	-.0423	3977.	
.2390	1392.	-318.	-2059.	2504.	3273.	2500.		.0038	-.0007	.0264	.0224	-.0948	-.0306	3249.	
.2400	1205.	-161.	-1745.	1857.	2691.	1922.		-.0007	-.0005	.0279	.0316	-.0791	-.0172	2557.	
.2410	1065.	-55.	-1495.	1338.	2088.	1398.		-.0061	-.0003	.0297	.0399	-.0629	-.0025	1919.	
.2420	956.	11.	-1284.	936.	1476.	929.		-.0121	.0000	.0313	.0470	-.0464	.0128	1334.	
.2430	835.	38.	-1047.	615.	853.	500.		-.0183	.0004	.0326	.0526	-.0295	.0283	785.	
.2440	697.	36.	-804.	332.	250.	82.		-.0245	.0007	.0332	.0565	-.0130	.0435	285.	
.2450	548.	21.	-567.	64.	-319.	-327.		-.0301	.0011	.0327	.0582	.0027	.0577	311.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.25.49.

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

.2350	2174.	-1078.	-3414.	5624.	4883.	4944.	.0077	-.0007	.0274	-.0073	-.1393	-.0606	6508.
.2360	2009.	-940.	-3076.	4882.	4628.	4373.	.0090	-.0008	.0259	-.0027	-.1320	-.0576	5408.
.2370	1860.	-747.	-2706.	4081.	4242.	3759.	.0088	-.0008	.0253	.0043	-.1214	-.0514	4710.
.2380	1593.	-523.	-2377.	3265.	3795.	3123.	.0070	-.0008	.0255	.0129	-.1090	-.0423	3977.
.2390	1392.	-318.	-2059.	2504.	3273.	2500.	.0038	-.0007	.0264	.0224	-.0948	-.0306	3249.
.2400	1205.	-161.	-1745.	1857.	2691.	1922.	-.0007	-.0005	.0279	.0316	-.0791	-.0172	2557.
.2410	1065.	-55.	-1495.	1338.	2088.	1398.	-.0061	-.0003	.0297	.0399	-.0629	-.0025	1919.
.2420	956.	11.	-1284.	936.	1476.	929.	-.0121	.0000	.0313	.0470	-.0464	.0128	1334.
.2430	835.	38.	-1047.	615.	853.	500.	-.0183	.0004	.0326	.0526	-.0295	.0283	785.
.2440	697.	36.	-804.	332.	250.	82.	-.0245	.0007	.0332	.0565	-.0130	.0435	285.
.2450	548.	21.	-567.	64.	-319.	-327.	-.0301	.0011	.0327	.0582	.0027	.0577	311.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.25.49.

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	2	MEMBER	1	SEQUENCE	801	LOCATION	BEG	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2460	370.	-7.	-286.	-183.	-871.	-717.	-.0348	.0014	.0307	.0571	.0182	.0700	771.		
.2470	166.	-67.	39.	-425.	-1394.	-1102.	-.0380	.0017	.0271	.0530	.0332	.0797	1231.		
.2480	-47.	-151.	363.	-698.	-1847.	-1507.	-.0396	.0020	.0217	.0458	.0467	.0866	1674.		
.2490	-284.	-219.	709.	-1012.	-2229.	-1919.	-.0392	.0021	.0143	.0355	.0586	.0900	2097.		
.2500	-553.	-267.	1114.	-1347.	-2549.	-2319.	-.0367	.0022	.0050	.0220	.0692	.0896	2494.		
.2510	-806.	-327.	1508.	-1680.	-2777.	-2702.	-.0322	.0022	-.0061	.0052	.0776	.0852	2847.		
.2520	-1014.	-406.	1847.	-1973.	-2906.	-3046.	-.0257	.0021	-.0186	-.0146	.0834	.0769	3134.		
.2530	-1207.	-460.	2179.	-2209.	-2961.	-3313.	-.0176	.0019	-.0322	-.0367	.0875	.0650	3344.		
.2540	-1391.	-456.	2493.	-2410.	-2930.	-3507.	-.0084	.0017	-.0462	-.0601	.0893	.0502	3483.		
.2550	-1531.	-395.	2704.	-2504.	-2792.	-3638.	.0016	.0014	-.0601	-.0834	.0881	.0336	3548.		
.2560	-1622.	-286.	2822.	-2669.	-2590.	-3662.	.0116	.0010	-.0731	-.1060	.0851	.0156	3518.		
.2570	-1674.	-144.	2901.	-2631.	-2381.	-3555.	.0212	.0007	-.0845	-.1267	.0814	-.0028	3385.		
.2580	-1671.	10.	2895.	-2527.	-2144.	-3371.	.0298	.0003	-.0934	-.1438	.0766	-.0203	3184.		
.2590	-1619.	190.	2780.	-2398.	-1876.	-3148.	.0369	.0000	-.0993	-.1555	.0704	-.0354	2952.		
.2600	-1565.	421.	2648.	-2243.	-1649.	-2865.	.0421	-.0003	-.1017	-.1611	.0546	-.0478	2692.		
.2610	-1515.	667.	2538.	-2055.	-1492.	-2534.	.0451	-.0006	-.1002	-.1599	.0599	-.0569	2418.		
.2620	-1435.	870.	2394.	-1876.	-1369.	-2216.	.0460	-.0008	-.0948	-.1517	.0555	-.0619	2164.		
.2630	-1352.	1040.	2250.	-1721.	-1286.	-1920.	.0447	-.0010	-.0858	-.1369	.0514	-.0628	1942.		
.2640	-1307.	1227.	2170.	-1576.	-1270.	-1618.	.0416	-.0011	-.0738	-.1164	.0487	-.0603	1747.		
.2650	-1273.	1423.	2102.	-1445.	-1277.	-1323.	.0369	-.0012	-.0597	-.0920	.0461	-.0550	1576.		
.2660	-1206.	1579.	1979.	-1314.	-1257.	-1048.	.0312	-.0012	-.0444	-.0655	.0427	-.0477	1415.		
.2670	-1115.	1684.	1839.	-1126.	-1215.	-759.	.0250	-.0012	-.0290	-.0395	.0386	-.0396	1228.		
.2680	-994.	1755.	1680.	-856.	-1137.	-433.	.0189	-.0012	-.0146	-.0160	.0336	-.0319	1003.		
.2690	-814.	1790.	1428.	-526.	-966.	-93.	.0133	-.0011	-.0019	.0036	.0265	-.0252	744.		
.2700	-581.	1783.	1083.	-140.	-690.	254.	.0085	-.0011	.0082	.0180	.0170	-.0199	505.		
.2710	-321.	1732.	705.	317.	-338.	619.	.0046	-.0010	.0155	.0266	.0060	-.0163	521.		
.2720	-26.	1624.	287.	825.	92.	981.	.0017	-.0008	.0199	.0294	-.0366	-.0144	866.		
.2730	310.	1434.	-183.	1348.	606.	1303.	-.0003	-.0007	.0217	.0272	-.0210	-.0134	1328.		
.2740	648.	1168.	-648.	1877.	1160.	1580.	-.0019	-.0005	.0213	.0209	-.0361	-.0129	1829.		
.2750	976.	843.	-1090.	2411.	1715.	1818.	-.0033	-.0003	.0194	.0118	-.0509	-.0121	2341.		
.2760	1308.	455.	-1531.	2937.	2257.	2007.	-.0051	.0000	.0167	.0011	-.0652	-.0102	2839.		
.2770	1630.	-14.	-1940.	3453.	2752.	2141.	-.0075	.0004	.0138	-.0097	-.0781	-.0064	3308.		
.2780	1911.	-550.	-2275.	3957.	3157.	2229.	-.0111	.0008	.0116	-.0193	-.0888	-.0000	3728.		
.2790	2141.	-1096.	-2553.	4426.	3465.	2276.	-.0160	.0013	.0104	-.0267	-.0969	.0093	4087.		
.2800	2312.	-1604.	-2781.	4840.	3669.	2289.	-.0225	.0018	.0106	-.0311	-.1025	.0215	4375.		
.2810	2408.	-2072.	-2922.	5201.	3751.	2275.	-.0303	.0024	.0122	-.0322	-.1050	.0363	4586.		
.2820	2440.	-2516.	-2977.	5510.	3717.	2232.	-.0391	.0029	.0152	-.0303	-.1046	.0532	4726.		
.2830	2430.	-2914.	-2981.	5757.	3590.	2160.	-.0483	.0035	.0191	-.0261	-.1018	.0711	4799.		

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INTERNAL FORCES IN THE PIPING
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.2730	310.	1434.	-183.	1348.	606.	1303.	-.0003	-.0007	.0217	.0272	-.0210	-.0134	1328.
.2740	648.	1168.	-648.	1877.	1160.	1580.	-.0019	-.0005	.0213	.0209	-.0361	-.0129	1829.
.2750	976.	843.	-1090.	2411.	1715.	1818.	-.0033	-.0003	.0194	.0118	-.0509	-.0121	2341.
.2760	1308.	455.	-1531.	2937.	2257.	2007.	-.0051	.0000	.0167	.0011	-.0552	-.0102	2839.
.2770	1630.	-14.	-1940.	3453.	2752.	2141.	-.0075	.0004	.0138	-.0097	-.0781	-.0064	3308.
.2780	1911.	-550.	-2275.	3957.	3157.	2229.	-.0111	.0002	.0116	-.0193	-.0388	-.0000	3728.
.2790	2141.	-1096.	-2553.	4426.	3465.	2276.	-.0160	.0013	.0104	-.0267	-.0969	.0093	4087.
.2800	2312.	-1604.	-2781.	4840.	3669.	2289.	-.0225	.0018	.0106	-.0311	-.1025	.0215	4375.
.2810	2408.	-2072.	-2922.	5201.	3751.	2275.	-.0303	.0024	.0122	-.0322	-.1050	.0363	4586.
.2820	2440.	-2516.	-2977.	5510.	3717.	2232.	-.0391	.0029	.0152	-.0303	-.1046	.0532	4726.
.2830	2430.	-2914.	-2981.	5757.	3590.	2160.	-.0483	.0035	.0191	-.0261	-.1018	.0711	4799.

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ENGLISH UNITS

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

SECTION	2	MEMBER	1	SEQUENCE	801	LOCATION	BEG	TYPE	EL					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	FX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2840	2378.	-3224.	-2936.	5936.	3381.	2071.	-.0573	.0040	.0235	-.0203	-.0968	.0887	4812.	
.2850	2293.	-3443.	-2838.	6042.	3105.	1967.	-.0655	.0045	.0277	-.0139	-.0900	.1047	4767.	
.2860	2202.	-3598.	-2715.	6063.	2791.	1829.	-.0721	.0049	.0311	-.0081	-.0820	.1181	4665.	
.2870	2113.	-3688.	-2572.	5986.	2457.	1652.	-.0766	.0051	.0332	-.0036	-.0732	.1280	4502.	
.2880	2005.	-3675.	-2388.	5794.	2105.	1440.	-.0786	.0052	.0335	-.0010	-.0637	.1336	4267.	
.2890	1869.	-3531.	-2169.	5455.	1751.	1184.	-.0779	.0052	.0319	-.0005	-.0537	.1347	3943.	
.2900	1707.	-3271.	-1923.	4951.	1410.	867.	-.0746	.0050	.0281	-.0019	-.0436	.1314	3518.	
.2910	1509.	-2917.	-1622.	4293.	1072.	492.	-.0687	.0046	.0225	-.0052	-.0333	.1240	3001.	
.2920	1268.	-2476.	-1259.	3501.	730.	70.	-.0607	.0042	.0153	-.0099	-.0226	.1130	2411.	
.2930	1002.	-1958.	-862.	2594.	395.	-391.	-.0508	.0036	.0069	-.0156	-.0118	.0991	1788.	
.2940	718.	-1393.	-439.	1610.	61.	-877.	-.0397	.0030	-.0021	-.0216	-.0010	.0831	1237.	
.2950	415.	-821.	29.	598.	-285.	-1368.	-.0280	.0023	-.0113	-.0275	.0102	.0659	1025.	
.2960	102.	-267.	518.	-410.	-637.	-1852.	-.0162	.0016	-.0200	-.0328	.0215	.0485	1349.	
.2970	-208.	271.	996.	-1384.	-983.	-2309.	-.0049	.0009	-.0280	-.0370	.0324	.0318	1932.	
.2980	-519.	783.	1464.	-2281.	-1333.	-2711.	.0054	.0003	-.0348	-.0399	.0433	.0164	2552.	
.2990	-831.	1244.	1923.	-3072.	-1684.	-3048.	.0142	-.0002	-.0402	-.0414	.0539	.0030	3130.	
.3000	-1131.	1638.	2341.	-3751.	-2013.	-3322.	.0215	-.0007	-.0443	-.0415	.0536	-.0079	3639.	
.3010	-1412.	1972.	2701.	-4305.	-2306.	-3524.	.0269	-.0011	-.0470	-.0406	.0722	-.0163	4059.	
.3020	-1670.	2242.	3010.	-4711.	-2564.	-3639.	.0307	-.0014	-.0485	-.0390	.0795	-.0225	4369.	
.3030	-1884.	2415.	3250.	-4955.	-2773.	-3673.	.0330	-.0016	-.0491	-.0373	.0853	-.0266	4558.	
.3040	-2032.	2469.	3395.	-5044.	-2909.	-3643.	.0341	-.0017	-.0489	-.0361	.0890	-.0290	4630.	
.3050	-2114.	2419.	3452.	-4983.	-2970.	-3546.	.0342	-.0017	-.0484	-.0357	.0906	-.0302	4583.	
.3060	-2135.	2286.	3434.	-4784.	-2959.	-3385.	.0336	-.0016	-.0476	-.0364	.0901	-.0305	4425.	
.3070	-2090.	2068.	3328.	-4473.	-2865.	-3176.	.0324	-.0015	-.0468	-.0381	.0874	-.0302	4172.	
.3080	-1985.	1777.	3138.	-4074.	-2690.	-2935.	.0309	-.0014	-.0460	-.0409	.0824	-.0294	3340.	
.3090	-1835.	1447.	2886.	-3607.	-2450.	-2659.	.0290	-.0012	-.0452	-.0445	.0757	-.0282	3443.	
.3100	-1653.	1107.	2584.	-3098.	-2157.	-2355.	.0267	-.0010	-.0444	-.0482	.0675	-.0267	2999.	
.3110	-1442.	761.	2230.	-2576.	-1817.	-2040.	.0242	-.0007	-.0432	-.0516	.0580	-.0247	2531.	
.3120	-1213.	418.	1844.	-2058.	-1447.	-1725.	.0212	-.0005	-.0414	-.0539	.0475	-.0221	2056.	
.3130	-973.	93.	1443.	-1554.	-1070.	-1409.	.0179	-.0003	-.0388	-.0546	.0367	-.0188	1587.	
.3140	-722.	-206.	1032.	-1073.	-697.	-1096.	.0142	-.0000	-.0351	-.0530	.0259	-.0147	1136.	
.3150	-463.	-492.	619.	-625.	-341.	-799.	.0100	.0002	-.0302	-.0487	.0152	-.0097	721.	
.3160	-204.	-761.	223.	-217.	-15.	-520.	.0054	.0004	-.0237	-.0414	.0050	-.0038	380.	
.3170	44.	-996.	-151.	144.	273.	-257.	.0004	.0006	-.0158	-.0310	-.0044	.0031	271.	
.3180	277.	-1180.	-501.	454.	522.	-7.	-.0051	.0007	-.0066	-.0175	-.0129	.0106	466.	
.3190	492.	-1318.	-825.	716.	730.	232.	-.0108	.0009	.0038	-.0015	-.0206	.0187	707.	
.3200	685.	-1415.	-1121.	942.	898.	466.	-.0166	.0010	.0151	.0164	-.0273	.0270	932.	
.3210	861.	-1464.	-1396.	1136.	1034.	702.	-.0223	.0011	.0267	.0355	-.0332	.0350	1138.	

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

.3100	-1652.	1107.	584.	-3098.	-2157.	-2355.	.0267	-.0010	-.0444	-.0482	.0675	-.0267	2999.
.3110	-1442.	761.	2230.	-2576.	-1817.	-2040.	.0242	-.0007	-.0432	-.0516	.0580	-.0247	2531.
.3120	-1213.	418.	1844.	-2058.	-1447.	-1725.	.0212	-.0005	-.0414	-.0539	.0475	-.0221	2056.
.3130	-973.	93.	1443.	-1554.	-1070.	-1409.	.0179	-.0003	-.0388	-.0546	.0367	-.0188	1587.
.3140	-722.	-206.	1032.	-1073.	-697.	-1096.	.0142	-.0000	-.0351	-.0530	.0259	-.0147	1136.
.3150	-463.	-492.	619.	-625.	-341.	-799.	.0100	.0002	-.0302	-.0487	.0152	-.0097	721.
.3160	-204.	-761.	223.	-217.	-15.	-520.	.0054	.0004	-.0237	-.0414	.0050	-.0038	380.
.3170	44.	-996.	-151.	144.	273.	-257.	.0004	.0006	-.0158	-.0310	-.0044	.0031	271.
.3180	277.	-1180.	-501.	454.	522.	-7.	-.0051	.0007	-.0066	-.0175	-.0129	.0106	466.
.3190	492.	-1318.	-825.	716.	730.	232.	-.0108	.0009	.0038	-.0015	-.0206	.0187	707.
.3200	685.	-1415.	-1121.	942.	898.	466.	-.0166	.0010	.0151	.0164	-.0273	.0270	932.
.3210	861.	-1464.	-1396.	1136.	1034.	702.	-.0223	.0011	.0267	.0355	-.0332	.0350	1138.

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

SECTION	2	MEMBER	1	SEQUENCE	801	LOCATION	BEG	TYPE	EL					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3220	1018.	-1458.	-1655.	1302.	1144.	943.	-.0277	.0011	.0383	.0547	-.0385	.0423	1330.	
.3230	1155.	-1407.	-1896.	1444.	1237.	1186.	-.0324	.0011	.0494	.0734	-.0431	.0484	1510.	
.3240	1278.	-1330.	-2119.	1567.	1319.	1428.	-.0363	.0011	.0595	.0906	-.0473	.0528	1683.	
.3250	1395.	-1239.	-2328.	1678.	1394.	1666.	-.0390	.0011	.0683	.1055	-.0510	.0553	1850.	
.3260	1497.	-1141.	-2511.	1771.	1461.	1895.	-.0405	.0010	.0755	.1177	-.0542	.0556	2006.	
.3270	1576.	-1036.	-2660.	1831.	1524.	2101.	-.0407	.0008	.0808	.1268	-.0570	.0538	2141.	
.3280	1628.	-926.	-2775.	1848.	1584.	2275.	-.0396	.0006	.0842	.1329	-.0593	.0498	2246.	
.3290	1648.	-815.	-2844.	1820.	1635.	2414.	-.0372	.0004	.0856	.1358	-.0610	.0439	2317.	
.3300	1628.	-711.	-2855.	1750.	1668.	2518.	-.0336	.0002	.0851	.1357	-.0618	.0362	2353.	
.3310	1569.	-613.	-2818.	1635.	1684.	2582.	-.0290	-.0001	.0828	.1329	-.0619	.0272	2352.	
.3320	1473.	-515.	-2736.	1476.	1683.	2610.	-.0236	-.0003	.0790	.1276	-.0611	.0170	2318.	
.3330	1336.	-413.	-2600.	1287.	1654.	2610.	-.0176	-.0006	.0738	.1204	-.0594	.0058	2256.	
.3340	1166.	-319.	-2419.	1079.	1597.	2586.	-.0111	-.0009	.0676	.1114	-.0567	-.0059	2174.	
.3350	979.	-235.	-2209.	862.	1514.	2543.	-.0042	-.0012	.0606	.1010	-.0531	-.0180	2078.	
.3360	774.	-152.	-1970.	645.	1402.	2490.	.0028	-.0015	.0531	.0897	-.0486	-.0303	1975.	
.3370	548.	-57.	-1697.	426.	1257.	2430.	.0098	-.0018	.0453	.0779	-.0432	-.0425	1866.	
.3380	308.	53.	-1404.	195.	1087.	2357.	.0167	-.0021	.0373	.0660	-.0371	-.0545	1755.	
.3390	60.	181.	-1100.	-50.	895.	2270.	.0235	-.0023	.0294	.0543	-.0303	-.0661	1645.	
.3400	-195.	331.	-778.	-308.	673.	2173.	.0300	-.0026	.0217	.0432	-.0228	-.0773	1547.	
.3410	-454.	506.	-445.	-590.	428.	2058.	.0364	-.0029	.0142	.0327	-.0147	-.0878	1472.	
.3420	-706.	706.	-119.	-909.	169.	1915.	.0424	-.0031	.0071	.0234	-.0063	-.0977	1433.	
.3430	-951.	929.	203.	-1268.	-104.	1742.	.0482	-.0034	.0005	.0152	.0024	-.1067	1454.	
.3440	-1186.	1170.	524.	-1662.	-394.	1541.	.0536	-.0037	-.0056	.0084	.0115	-.1149	1551.	
.3450	-1402.	1419.	830.	-2093.	-693.	1306.	.0586	-.0039	-.0111	.0030	.0207	-.1220	1727.	
.3460	-1595.	1671.	1115.	-2558.	-994.	1036.	.0632	-.0042	-.0158	-.0006	.0298	-.1279	1977.	
.3470	-1773.	1923.	1389.	-3048.	-1300.	741.	.0671	-.0044	-.0198	-.0026	.0389	-.1324	2288.	
.3480	-1937.	2172.	1652.	-3550.	-1605.	426.	.0702	-.0046	-.0228	-.0028	.0479	-.1354	2642.	
.3490	-2078.	2408.	1886.	-4051.	-1898.	98.	.0725	-.0047	-.0248	-.0013	.0563	-.1366	3016.	
.3500	-2195.	2623.	2088.	-4524.	-2175.	-226.	.0738	-.0049	-.0258	.0017	.0641	-.1361	3387.	
.3510	-2287.	2809.	2264.	-4940.	-2434.	-527.	.0740	-.0049	-.0259	.0059	.0712	-.1338	3729.	
.3520	-2350.	2954.	2400.	-5282.	-2661.	-797.	.0731	-.0049	-.0250	.0111	.0772	-.1297	4023.	
.3530	-2375.	3052.	2481.	-5536.	-2844.	-1027.	.0711	-.0049	-.0232	.0168	.0819	-.1240	4252.	
.3540	-2365.	3102.	2510.	-5678.	-2980.	-1201.	.0681	-.0048	-.0207	.0227	.0852	-.1168	4398.	
.3550	-2316.	3093.	2487.	-5696.	-3065.	-1311.	.0641	-.0046	-.0177	.0284	.0870	-.1084	4449.	
.3560	-2225.	3015.	2406.	-5591.	-3087.	-1362.	.0592	-.0043	-.0143	.0334	.0869	-.0990	4401.	
.3570	-2096.	2869.	2268.	-5369.	-3042.	-1356.	.0536	-.0040	-.0106	.0376	.0851	-.0888	4259.	
.3580	-1938.	2667.	2086.	-5037.	-2933.	-1292.	.0475	-.0037	-.0069	.0408	.0814	-.0780	4024.	
.3590	-1752.	2413.	1860.	-4606.	-2760.	-1176.	.0410	-.0033	-.0033	.0428	.0760	-.0670	3705.	

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

.3480	-1937.	2172.	1887.	-4550.	-1685.	428.	.0702	-.0048	-.0228	-.0028	.0479	-.1354	2642.
.3490	-2078.	2408.	1886.	-4051.	-1898.	98.	.0725	-.0047	-.0248	-.0013	.0563	-.1366	3016.
.3500	-2195.	2623.	2088.	-4524.	-2175.	-226.	.0738	-.0049	-.0258	.0017	.0541	-.1361	3387.
.3510	-2287.	2809.	2264.	-4940.	-2434.	-527.	.0740	-.0049	-.0259	.0059	.0712	-.1338	3729.
.3520	-2350.	2954.	2400.	-5282.	-2661.	-797.	.0731	-.0049	-.0250	.0111	.0772	-.1297	4023.
.3530	-2375.	3052.	2481.	-5576.	-2844.	-1027.	.0711	-.0049	-.0232	.0168	.0819	-.1240	4252.
.3540	-2365.	3102.	2510.	-5678.	-2980.	-1201.	.0681	-.0048	-.0207	.0227	.0852	-.1168	4398.
.3550	-2316.	3093.	2487.	-5696.	-3065.	-1311.	.0641	-.0046	-.0177	.0284	.0870	-.1084	4449.
.3560	-2225.	3015.	2406.	-5591.	-3087.	-1362.	.0592	-.0043	-.0143	.0334	.0869	-.0990	4401.
.3570	-2096.	2869.	2268.	-5369.	-3042.	-1356.	.0536	-.0040	-.0106	.0376	.0851	-.0888	4259.
.3580	-1938.	2667.	2086.	-5037.	-2933.	-1292.	.0475	-.0037	-.0069	.0408	.0814	-.0780	4024.
.3590	-1752.	2413.	1860.	-4606.	-2760.	-1176.	.0410	-.0033	-.0033	.0428	.0760	-.0670	3705.

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

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ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	EL	DX	DY	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)							
.3600	-1536.	2102.	1591.	-4087.	-2522.	-1016.	.0343	-.0029	.0001	.0434	.0589	-.0560	3309.
.3610	-1298.	1738.	1292.	-3492.	-2229.	-819.	.0276	-.0024	.0032	.0427	.0503	-.0452	2847.
.3620	-1045.	1338.	972.	-2840.	-1889.	-589.	.0210	-.0019	.0059	.0406	.0505	-.0348	2333.
.3630	-782.	924.	635.	-2151.	-1508.	-335.	.0145	-.0015	.0082	.0376	.0396	-.0251	1785.
.3640	-518.	504.	289.	-1445.	-1095.	-65.	.0085	-.0010	.0102	.0336	.0280	-.0161	1223.
.3650	-259.	87.	-50.	-735.	-666.	214.	.0028	-.0006	.0118	.0290	.0160	-.0080	684.
.3660	-9.	-311.	-377.	-39.	-230.	497.	-.0023	-.0002	.0131	.0241	.0038	-.0008	370.
.3670	226.	-674.	-687.	624.	204.	775.	-.0069	.0002	.0143	.0192	-.0083	.0054	685.
.3680	442.	-989.	-973.	1240.	626.	1043.	-.0110	.0005	.0153	.0145	-.0200	.0106	1171.
.3690	639.	-1255.	-1231.	1805.	1028.	1298.	-.0143	.0008	.0162	.0102	-.0312	.0146	1651.
.3700	823.	-1469.	-1464.	2315.	1403.	1535.	-.0170	.0010	.0171	.0065	-.0416	.0176	2098.
.3710	994.	-1631.	-1670.	2770.	1743.	1754.	-.0191	.0012	.0180	.0034	-.0511	.0195	2503.
.3720	1151.	-1738.	-1848.	3165.	2043.	1952.	-.0206	.0013	.0190	.0011	-.0595	.0204	2860.
.3730	1294.	-1786.	-2000.	3497.	2300.	2126.	-.0215	.0014	.0200	-.0005	-.0667	.0205	3164.
.3740	1419.	-1774.	-2126.	3765.	2510.	2274.	-.0220	.0014	.0210	-.0012	-.0727	.0200	3413.
.3750	1524.	-1706.	-2218.	3970.	2666.	2393.	-.0221	.0014	.0221	-.0012	-.0772	.0191	3604.
.3760	1606.	-1591.	-2276.	4109.	2767.	2479.	-.0220	.0014	.0232	-.0005	-.0802	.0181	3734.
.3770	1663.	-1434.	-2298.	4180.	2811.	2524.	-.0218	.0013	.0243	.0008	-.0817	.0171	3798.
.3780	1689.	-1238.	-2279.	4182.	2797.	2526.	-.0216	.0012	.0252	.0025	-.0815	.0165	3795.
.3790	1683.	-1017.	-2215.	4115.	2725.	2478.	-.0213	.0012	.0258	.0046	-.0796	.0162	3723.
.3800	1647.	-787.	-2106.	3981.	2596.	2374.	-.0210	.0011	.0261	.0066	-.0762	.0165	3581.
.3810	1582.	-563.	-1950.	3780.	2414.	2208.	-.0208	.0010	.0258	.0083	-.0711	.0175	3370.
.3820	1484.	-351.	-1744.	3513.	2185.	1977.	-.0206	.0010	.0249	.0094	-.0647	.0191	3090.
.3830	1353.	-154.	-1491.	3179.	1916.	1681.	-.0203	.0010	.0231	.0096	-.0570	.0213	2746.
.3840	1193.	19.	-1201.	2784.	1621.	1320.	-.0200	.0010	.0203	.0087	-.0483	.0241	2347.
.3850	1011.	157.	-877.	2345.	1306.	903.	-.0195	.0010	.0165	.0063	-.0390	.0272	1909.
.3860	814.	253.	-529.	1879.	982.	441.	-.0190	.0010	.0115	.0020	-.0291	.0306	1460.
.3870	611.	304.	-173.	1403.	664.	-55.	-.0182	.0011	.0055	-.0042	-.0192	.0341	1047.
.3880	412.	313.	175.	938.	364.	-566.	-.0174	.0012	-.0016	-.0124	-.0096	.0376	778.
.3890	226.	280.	505.	510.	86.	-1073.	-.0164	.0013	-.0095	-.0226	-.0004	.0409	803.
.3900	63.	198.	805.	142.	-163.	-1559.	-.0155	.0015	-.0181	-.0345	.0081	.0441	1061.
.3910	-70.	69.	1065.	-152.	-381.	-2009.	-.0147	.0017	-.0270	-.0478	.0157	.0473	1382.
.3920	-175.	-90.	1282.	-366.	-567.	-2413.	-.0141	.0019	-.0359	-.0619	.0226	.0505	1689.
.3930	-257.	-265.	1457.	-502.	-726.	-2760.	-.0140	.0021	-.0443	-.0760	.0286	.0539	1953.
.3940	-318.	-448.	1591.	-566.	-862.	-3050.	-.0144	.0024	-.0520	-.0895	.0338	.0577	2170.
.3950	-360.	-636.	1690.	-566.	-983.	-3284.	-.0153	.0026	-.0586	-.1016	.0384	.0621	2342.
.3960	-388.	-823.	1764.	-516.	-1097.	-3466.	-.0170	.0029	-.0638	-.1117	.0426	.0671	2475.
.3970	-410.	-995.	1819.	-440.	-1207.	-3605.	-.0192	.0032	-.0675	-.1193	.0463	.0728	2580.

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

.3870	611.	304.	-173.	1403.	664.	-55.	-.0182	.0011	.0055	-.0042	-.0192	.0341	1047.
.3880	412.	313.	175.	938.	364.	-566.	-.0174	.0012	-.0016	-.0124	-.0096	.0376	778.
.3890	226.	280.	505.	510.	86.	-1073.	-.0164	.0013	-.0095	-.0226	-.0004	.0409	803.
.3900	67.	198.	805.	142.	-167.	-1559.	-.0155	.0015	-.0181	-.0345	.0081	.0441	1061.
.3910	-70.	69.	1065.	-152.	-281.	-2009.	-.0147	.0017	-.0270	-.0478	.0157	.0473	1382.
.3920	-175.	-90.	1262.	-366.	-567.	-2413.	-.0141	.0019	-.0359	-.0619	.0226	.0505	1689.
.3930	-257.	-265.	1457.	-502.	-726.	-2760.	-.0140	.0021	-.0443	-.0760	.0286	.0539	1953.
.3940	-318.	-448.	1591.	-566.	-862.	-3050.	-.0144	.0024	-.0520	-.0895	.0338	.0577	2170.
.3950	-360.	-636.	1690.	-566.	-983.	-3284.	-.0153	.0026	-.0586	-.1016	.0384	.0621	2342.
.3960	-388.	-823.	1764.	-516.	-1097.	-3466.	-.0170	.0029	-.0638	-.1117	.0426	.0671	2475.
.3970	-410.	-995.	1819.	-440.	-1207.	-3605.	-.0192	.0032	-.0675	-.1193	.0463	.0728	2580.

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SECTION	2	MEMBER	1	SEQUENCE	801	LOCATION	BEG	TYPE	EL					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3980	-429.	-1140.	1859.	-358.	-1315.	-3710.	-.0219	.0034	-.0695	-.1239	.0497	.0789	2664.	
.3990	-445.	-1257.	1887.	-285.	-1423.	-3788.	-.0250	.0036	-.0700	-.1255	.0527	.0854	2734.	
.4000	-456.	-1350.	1910.	-226.	-1531.	-3842.	-.0282	.0038	-.0689	-.1243	.0555	.0918	2792.	

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)
.0680	4817.	556.	-6959.	11549.	7672.	10127.	-.0157	.0020	-.0627	.0004	.2232	.1270	11573.

SECTION	2	MEMBER	1	SEQUENCE	17	LOCATION	END	TYPE	EL					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	-1.	0.	-1.	0.	0.	-1.	.0000	-.0000	.0000	.0000	.0000	-.0000	1.	
.0020	-6.	-1.	-6.	1.	2.	-5.	.0000	-.0000	.0000	.0000	.0001	-.0001	4.	
.0030	-10.	-13.	-5.	-0.	8.	-10.	.0000	-.0000	-.0000	.0001	.0003	-.0002	8.	
.0040	-5.	-53.	2.	-5.	19.	-12.	.0000	-.0001	.0000	.0002	.0006	-.0005	16.	
.0050	3.	-122.	8.	-8.	37.	-13.	.0001	-.0001	.0000	.0005	.0012	-.0009	27.	
.0060	3.	-205.	8.	-0.	62.	-10.	.0003	-.0002	.0001	.0011	.0020	-.0016	42.	
.0070	-2.	-298.	10.	20.	98.	0.	.0006	-.0004	.0003	.0020	.0031	-.0024	67.	
.0080	-8.	-438.	35.	44.	152.	23.	.0011	-.0005	.0004	.0032	.0046	-.0035	108.	
.0090	-23.	-660.	118.	52.	239.	53.	.0018	-.0008	.0007	.0048	.0067	-.0053	169.	
.0100	-45.	-939.	219.	41.	373.	83.	.0028	-.0012	.0010	.0065	.0100	-.0077	259.	
.0110	-56.	-1199.	276.	54.	540.	133.	.0041	-.0016	.0015	.0088	.0149	-.0103	376.	
.0120	-61.	-1405.	283.	139.	720.	238.	.0057	-.0020	.0022	.0120	.0205	-.0124	520.	
.0130	-65.	-1571.	239.	297.	915.	394.	.0075	-.0025	.0030	.0162	.0269	-.0138	701.	
.0140	-59.	-1704.	133.	503.	1138.	578.	.0093	-.0029	.0036	.0208	.0349	-.0149	925.	
.0150	-36.	-1796.	-8.	760.	1380.	791.	.0110	-.0032	.0040	.0253	.0438	-.0151	1188.	
.0160	-24.	-1898.	-89.	1076.	1624.	1044.	.0124	-.0035	.0037	.0297	.0522	-.0145	1490.	
.0170	74.	-2111.	-209.	1427.	1869.	1328.	.0137	-.0037	.0027	.0336	.0617	-.0136	1820.	
.0180	407.	-2462.	-553.	1824.	2089.	1665.	.0148	-.0039	.0007	.0368	.0739	-.0128	2180.	
.0190	903.	-2845.	-1048.	2324.	2274.	2099.	.0162	-.0041	-.0023	.0396	.0855	-.0114	2589.	
.0200	1416.	-3085.	-1630.	2885.	2258.	2578.	.0182	-.0042	-.0061	.0410	.0947	-.0099	3019.	
.0210	1668.	-3003.	-2051.	3209.	2322.	2865.	.0210	-.0041	-.0108	.0367	.1024	-.0106	3295.	

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.0110	-56.	-1199.	276.	54.	540.	133.	.0041	-.0016	.0015	.0088	.0149	-.0103	376.
.0120	-61.	-1405.	283.	139.	720.	238.	.0057	-.0020	.0022	.0120	.0205	-.0124	520.
.0130	-65.	-1571.	239.	297.	915.	394.	.0075	-.0025	.0030	.0162	.0269	-.0138	701.
.0140	-59.	-1704.	133.	503.	1130.	578.	.0093	-.0029	.0036	.0208	.0349	-.0149	925.
.0150	-36.	-1796.	-8.	760.	1380.	791.	.0110	-.0032	.0040	.0253	.0438	-.0151	1188.
.0160	-24.	-1898.	-59.	1076.	1624.	1044.	.0124	-.0035	.0037	.0297	.0522	-.0145	1490.
.0170	74.	-2111.	-209.	1427.	1869.	1328.	.0137	-.0037	.0027	.0336	.0617	-.0136	1820.
.0180	407.	-2462.	-553.	1824.	2089.	1665.	.0148	-.0039	.0007	.0368	.0739	-.0128	2180.
.0190	903.	-2845.	-1048.	2324.	2224.	2099.	.0162	-.0041	-.0023	.0396	.0855	-.0114	2589.
.0200	1416.	-3085.	-1430.	2885.	2258.	2578.	.0182	-.0042	-.0061	.0410	.0947	-.0099	3019.
.0210	1668.	-3003.	-2051.	3209.	2322.	2865.	.0210	-.0041	-.0108	.0367	.1024	-.0106	3295.

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	EL	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
2	1	17					.0220	1606.	-2464.	-2234.	3059.	2539.	2792.	.0245	-.0037	-.0164	.0237	.1119	-.0143	3274.
							.0230	1381.	-1442.	-2333.	2849.	2689.	2635.	.0274	-.0028	-.0223	.0076	.1176	-.0159	3182.
							.0240	688.	-210.	-1837.	2912.	2617.	2586.	.0284	-.0016	-.0280	-.0056	.1075	-.0120	3163.
							.0250	353.	756.	-1630.	2934.	2507.	2478.	.0269	-.0002	-.0339	-.0189	.1010	-.0062	3091.
							.0260	1352.	1188.	-2749.	2896.	2344.	2403.	.0228	.0013	-.0403	-.0323	.1129	.0011	2989.
							.0270	2236.	1248.	-3279.	3284.	1837.	2662.	.0163	.0028	-.0460	-.0380	.1067	.0144	3107.
							.0280	1826.	1453.	-2283.	3744.	1178.	2802.	.0091	.0042	-.0506	-.0413	.0739	.0283	3250.
							.0290	1701.	2114.	-2121.	3176.	966.	2081.	.0036	.0057	-.0553	-.0585	.0668	.0308	2641.
							.0300	1931.	2867.	-1976.	1980.	969.	1080.	-.0002	.0072	-.0590	-.0823	.0697	.0276	1655.
							.0310	1482.	3026.	-879.	1519.	558.	581.	-.0026	.0075	-.0598	-.0900	.0447	.0253	1159.
							.0320	1463.	2706.	-850.	1829.	-202.	494.	-.0027	.0067	-.0576	-.0821	.0184	.0209	1284.
							.0330	1961.	2554.	-1368.	1863.	-775.	297.	.0005	.0055	-.0533	-.0750	.0062	.0104	1375.
							.0340	1844.	2572.	-900.	1445.	-1092.	-142.	.0069	.0038	-.0470	-.0698	-.0098	-.0070	1225.
							.0350	1343.	2417.	-676.	1266.	-1491.	-615.	.0160	.0011	-.0383	-.0572	-.0294	-.0307	1382.
							.0360	1315.	2172.	-1396.	1572.	-2144.	-824.	.0268	-.0021	-.0280	-.0360	-.0473	-.0549	1876.
							.0370	1316.	1711.	-1192.	1789.	-2843.	-825.	.0377	-.0053	-.0168	-.0140	-.0749	-.0775	2331.
							.0380	871.	570.	-87.	1345.	-3273.	-1215.	.0487	-.0091	-.0054	.0035	-.1032	-.1077	2522.
							.0390	556.	-733.	-109.	567.	-3572.	-2107.	.0592	-.0131	.0066	.0186	-.1157	-.1446	2822.
							.0400	297.	-1222.	-144.	89.	-4187.	-2750.	.0673	-.0162	.0200	.0359	-.1392	-.1705	3377.
							.0410	-746.	-1609.	1971.	-864.	-4731.	-3374.	.0717	-.0185	.0348	.0496	-.1838	-.1883	3960.
							.0420	-1712.	-2898.	3561.	-3061.	-4604.	-4912.	.0732	-.0211	.0504	.0537	-.1989	-.2164	4985.
							.0430	-2204.	-3877.	3544.	-5319.	-4329.	-6698.	.0707	-.0231	.0681	.0594	-.1921	-.2395	6462.
							.0440	-3321.	-3420.	5034.	-6665.	-4461.	-7609.	.0618	-.0231	.0891	.0759	-.2183	-.2332	7452.
							.0450	-4572.	-2980.	7218.	-8243.	-4255.	-8448.	.0474	-.0222	.1114	.0927	-.2402	-.2158	8457.
							.0460	-4737.	-3541.	6979.	-10424.	-3289.	-9890.	.0294	-.0216	.1331	.1057	-.2072	-.2046	9936.
							.0470	-4489.	-3546.	5995.	-11358.	-2555.	-10497.	.0069	-.0198	.1542	.1304	-.1746	-.1730	10566.
							.0480	-4687.	-2515.	6846.	-10619.	-2398.	-9580.	-.0193	-.0163	.1729	.1676	-.1827	-.1103	9775.
							.0490	-4386.	-2227.	7097.	-10145.	-1758.	-8740.	-.0449	-.0127	.1854	.1944	-.1648	-.0527	9103.
							.0500	-3279.	-2561.	5025.	-10155.	-505.	-8502.	-.0668	-.0097	.1894	.2039	-.0983	-.0122	8934.
							.0510	-2797.	-1378.	3828.	-8843.	207.	-7325.	-.0852	-.0052	.1855	.2101	-.0523	.0418	7741.
							.0520	-2887.	748.	4366.	-6472.	356.	-5113.	-.0993	.0002	.1726	.2102	-.0645	.1065	5565.
							.0530	-2107.	1367.	3420.	-4916.	931.	-3465.	-.1065	.0044	.1491	.1879	-.0305	.1450	4102.
							.0540	-1057.	1286.	1296.	-3796.	1674.	-2305.	-.1069	.0077	.1165	.1475	.0235	.1620	3199.
							.0550	-1092.	2972.	946.	-1671.	1678.	-406.	-.1029	.0122	.0781	.1025	.0298	.1896	1619.
							.0560	-1211.	5296.	1126.	616.	1376.	1691.	-.0953	.0171	.0353	.0489	.0210	.2166	1527.
							.0570	-312.	5611.	-407.	1769.	1524.	2907.	-.0841	.0201	-.0109	-.0166	.0512	.2161	2513.
							.0580	409.	4884.	-1641.	2691.	1632.	3915.	-.0716	.0220	-.0563	-.0798	.0768	.2055	3386.
							.0590	230.	5499.	-1108.	4209.	1285.	5376.	-.0600	.0247	-.0971	-.1331	.0641	.2086	4683.

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18.25.49.

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

.0490	-4386.	-2227.	7097.	-10145.	-1758.	-8740.	-.0449	-.0127	.1854	.1944	-.1648	-.0527	9103.
.0500	-3279.	-2561.	5025.	-10155.	-505.	-8502.	-.0668	-.0097	.1894	.2039	-.0983	-.0122	8934.
.0510	-2797.	-1378.	3828.	-8843.	207.	-7325.	-.0852	-.0052	.1855	.2101	-.0523	.0418	7741.
.0520	-2887.	748.	4366.	-6472.	756.	-5113.	-.0993	.0002	.1726	.2102	-.0645	.1065	5565.
.0530	-2107.	1367.	3420.	-4916.	931.	-2465.	-.1065	.0044	.1491	.1879	-.0305	.1450	4102.
.0540	-1057.	1286.	1296.	-3796.	1674.	-2305.	-.1069	.0077	.1165	.1475	.0235	.1620	3199.
.0550	-1092.	2972.	946.	-1671.	1678.	-406.	-.1029	.0122	.0781	.1025	.0298	.1896	1619.
.0560	-1211.	5296.	1120.	616.	1376.	1691.	-.0953	.0171	.0353	.0489	.0210	.2166	1527.
.0570	-312.	5611.	-407.	1769.	1524.	2907.	-.0841	.0201	-.0109	-.0166	.0512	.2161	2513.
.0580	409.	4884.	-1641.	2691.	1632.	3915.	-.0716	.0220	-.0563	-.0798	.0768	.2055	3386.
.0590	230.	5499.	-1108.	4209.	1285.	5376.	-.0600	.0247	-.0971	-.1331	.0541	.2086	4683.

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
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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	END	TYPE	EL	DX	DY	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)							
.0600	344.	6616.	-1156.	5261.	1194.	6379.	-.0488	.0272	-.1320	-.1836	.0665	.2089	5631.
.0610	1087.	6249.	-2526.	5480.	1668.	6609.	-.0385	.0279	-.1590	-.2247	.1035	.1934	5895.
.0620	1426.	5080.	-2901.	6135.	2031.	7169.	-.0311	.0273	-.1752	-.2390	.1230	.1828	6506.
.0630	1542.	4636.	-2461.	7518.	2166.	8271.	-.0266	.0267	-.1798	-.2271	.1229	.1873	7674.
.0640	2291.	4430.	-3387.	8596.	2681.	8948.	-.0232	.0254	-.1739	-.2018	.1502	.1889	8557.
.0650	3139.	3532.	-4954.	9352.	3504.	9198.	-.0202	.0226	-.1586	-.1614	.1930	.1521	9152.
.0660	3463.	2414.	-5412.	10579.	4033.	9807.	-.0181	.0189	-.1351	-.1005	.2107	.1799	10096.
.0670	3961.	1575.	-5778.	11972.	4309.	10552.	-.0153	.0150	-.1067	-.0305	.2189	.1792	11142.
.0680	4817.	556.	-6959.	12680.	4679.	10671.	-.0100	.0103	-.0768	.0337	.2406	.1649	11608.
.0690	5072.	-812.	-7482.	12701.	4968.	10206.	-.0016	.0048	-.0481	.0888	.2515	.1361	11481.
.0700	4650.	-2008.	-6800.	12243.	4931.	9434.	.0098	-.0007	-.0227	.1314	.2379	.0992	10936.
.0710	4341.	-2973.	-6170.	11047.	4722.	8141.	.0247	-.0059	-.0027	.1542	.2218	.0507	9782.
.0720	4052.	-4186.	-5685.	9192.	4374.	6321.	.0426	-.0114	.0112	.1590	.2047	-.0110	8077.
.0730	3374.	-5664.	-4547.	7260.	3640.	4459.	.0622	-.0168	.0195	.1536	.1677	-.0778	6245.
.0740	2691.	-6952.	-3169.	5345.	2558.	2697.	.0827	-.0216	.0226	.1383	.1177	-.1440	4388.
.0750	2176.	-7832.	-2114.	3088.	1480.	731.	.1038	-.0258	.0212	.1092	.0730	-.2115	2360.
.0760	1372.	-8302.	-1034.	650.	499.	-1404.	.1240	-.0292	.0168	.0715	.0305	-.2776	1096.
.0770	406.	-8309.	83.	-1362.	-568.	-3231.	.1416	-.0318	.0112	.0353	-.0168	-.3326	2394.
.0780	-141.	-7992.	818.	-2737.	-1738.	-4482.	.1545	-.0333	.0057	.0054	-.0526	-.3711	3729.
.0790	-450.	-7635.	1416.	-3791.	-2767.	-5375.	.1619	-.0339	.0010	-.0188	-.1017	-.3948	4810.
.0800	-993.	-7065.	2128.	-4767.	-3454.	-6214.	.1629	-.0335	-.0018	-.0389	-.1322	-.4054	5769.
.0810	-1489.	-5815.	2494.	-5486.	-3874.	-6910.	.1568	-.0318	-.0020	-.0534	-.1512	-.3984	6495.
.0820	-1580.	-4165.	2532.	-5677.	-4225.	-7127.	.1430	-.0286	.0009	-.0576	-.1639	-.3700	6770.
.0830	-1487.	-3009.	2769.	-5475.	-4505.	-6889.	.1217	-.0249	.0069	-.0496	-.1761	-.3251	6664.
.0840	-1364.	-2334.	2945.	-5279.	-4550.	-6603.	.0946	-.0209	.0155	-.0352	-.1799	-.2718	6471.
.0850	-1178.	-1095.	2704.	-5205.	-4375.	-6431.	.0637	-.0159	.0258	-.0211	-.1725	-.2104	6308.
.0860	-1182.	925.	2673.	-5162.	-4132.	-6226.	.0307	-.0100	.0373	-.0083	-.1561	-.1405	6122.
.0870	-1461.	2638.	3100.	-5289.	-3801.	-6041.	-.0029	-.0042	.0489	.0038	-.1523	-.0710	5988.
.0880	-1652.	3584.	3275.	-5670.	-3319.	-6010.	-.0351	.0009	.0593	.0137	-.1501	-.0094	6002.
.0890	-1729.	4594.	3249.	-5988.	-2844.	-5925.	-.0647	.0059	.0680	.0211	-.1354	.0489	5993.
.0900	-2056.	5963.	3722.	-6063.	-2464.	-5628.	-.0908	.0108	.0746	.0267	-.1300	.1057	5818.
.0910	-2487.	6811.	4297.	-6172.	-1983.	-5368.	-.1121	.0148	.0788	.0297	-.1223	.1515	5674.
.0920	-2605.	6828.	4285.	-6282.	-1367.	-5160.	-.1280	.0174	.0803	.0317	-.1024	.1832	5557.
.0930	-2528.	6744.	4166.	-5819.	-911.	-4537.	-.1386	.0193	.0802	.0380	-.0363	.2104	5011.
.0940	-2468.	6724.	4278.	-4678.	-687.	-3410.	-.1439	.0205	.0790	.0503	-.0812	.2349	3929.
.0950	-2262.	6183.	3969.	-3459.	-405.	-2291.	-.1432	.0204	.0766	.0637	-.0595	.2464	2810.
.0960	-1970.	5306.	3224.	-2455.	25.	-1397.	-.1368	.0192	.0732	.0742	-.0478	.2435	1904.
.0970	-1938.	4876.	2815.	-1415.	392.	-497.	-.1259	.0177	.0695	.0828	-.0331	.2353	1045.

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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

.0870	-1461.	2638.	3100.	-5289.	-3801.	-6041.	-.0029	-.0042	.0489	.0038	-.1523	-.0710	5988.
.0880	-1692.	3584.	3275.	-5670.	-3319.	-6010.	-.0351	.0009	.0593	.0137	-.1501	-.0094	6002.
.0890	-1729.	4594.	3249.	-5998.	-2844.	-5925.	-.0647	.0059	.0680	.0211	-.1354	.0489	5993.
.0900	-2056.	5963.	3722.	-6063.	-2464.	-5628.	-.0908	.0108	.0746	.0267	-.1300	.1057	5818.
.0910	-2467.	6811.	4297.	-6172.	-1983.	-5368.	-.1121	.0148	.0788	.0297	-.1223	.1515	5674.
.0920	-2605.	6828.	4283.	-6202.	-1767.	-5160.	-.1220	.0174	.0803	.0317	-.1024	.1832	5557.
.0930	-2528.	6744.	4166.	-5819.	-911.	-4537.	-.1386	.0193	.0802	.0380	-.0363	.2104	5011.
.0940	-2468.	6724.	4278.	-4678.	-687.	-3410.	-.1439	.0205	.0790	.0503	-.0812	.2349	3929.
.0950	-2262.	6183.	3969.	-3459.	-405.	-2291.	-.1432	.0204	.0766	.0637	-.0595	.2464	2810.
.0960	-1970.	5306.	3224.	-2455.	25.	-1397.	-.1368	.0192	.0732	.0742	-.0478	.2435	1904.
.0970	-1938.	4876.	2815.	-1415.	392.	-497.	-.1259	.0177	.0695	.0828	-.0331	.2353	1045.

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S/RV PIPING KEWAUNEE GKNORF 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	MEMBER	SEQUENCE	LOCATION	END	TYPE	EL								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)		
.0980	-2035.	4710.	2584.	-340.	658.	391.	-.1118	.0158	.0656	.0905	-.0241	.2225	564.	
.0990	-1863.	3956.	1917.	485.	946.	1043.	-.0955	.0132	.0611	.0962	-.0083	.2000	1004.	
.1000	-1538.	2659.	1244.	1063.	1203.	1522.	-.0787	.0100	.0561	.0999	.0080	.1713	1491.	
.1010	-1344.	1545.	1051.	1517.	1338.	1921.	-.0622	.0071	.0507	.1007	.0155	.1430	1880.	
.1020	-1130.	689.	792.	1455.	1710.	2051.	-.0463	.0046	.0446	.0961	.0236	.1134	2050.	
.1030	-728.	-375.	204.	1595.	1600.	1892.	-.0311	.0020	.0377	.0869	.0375	.0801	1986.	
.1040	-327.	-1661.	-88.	1409.	1642.	1737.	-.0169	-.0006	.0299	.0763	.0456	.0473	1870.	
.1050	-22.	-2720.	-62.	1230.	1576.	1631.	-.0034	-.0027	.0215	.0635	.0468	.0174	1739.	
.1060	276.	-3278.	-370.	892.	1564.	1328.	.0102	-.0045	.0120	.0453	.0531	-.0128	1508.	
.1070	438.	-3388.	-808.	447.	1622.	878.	.0238	-.0059	.0016	.0226	.0624	-.0426	1279.	
.1080	484.	-3279.	-955.	190.	1598.	614.	.0368	-.0068	-.0097	-.0000	.0655	-.0679	1161.	
.1090	621.	-3223.	-996.	154.	1504.	582.	.0487	-.0076	-.0218	-.0214	.0657	-.0886	1092.	
.1100	676.	-3275.	-1073.	-97.	1662.	350.	.0597	-.0082	-.0350	-.0461	.0747	-.1104	1147.	
.1110	1062.	-3025.	-1858.	-29.	1807.	247.	.0690	-.0084	-.0487	-.0690	.0912	-.1268	1229.	
.1120	1687.	-2618.	-2631.	876.	1597.	803.	.0762	-.0081	-.0622	-.0824	.0759	-.1306	1342.	
.1130	2312.	-2841.	-2953.	1985.	1330.	1635.	.0816	-.0079	-.0759	-.0912	.0944	-.1310	1952.	
.1140	3060.	-3536.	-3679.	2652.	1353.	2121.	.0870	-.0080	-.0900	-.1040	.1078	-.1377	2464.	
.1150	3693.	-3527.	-4660.	3313.	1385.	2514.	.0925	-.0077	-.1037	-.1189	.1229	-.1425	2954.	
.1160	3762.	-2729.	-4779.	4322.	1159.	3207.	.0978	-.0069	-.1161	-.1306	.1174	-.1388	3711.	
.1170	3819.	-2388.	-4885.	5078.	995.	3779.	.1030	-.0064	-.1274	-.1418	.1140	-.1388	4319.	
.1180	3898.	-2699.	-5171.	5343.	1055.	3997.	.1080	-.0065	-.1372	-.1539	.1203	-.1458	4553.	
.1190	4261.	-2540.	-6066.	5920.	904.	4365.	.1117	-.0064	-.1445	-.1602	.1259	-.1469	4995.	
.1200	4316.	-1848.	-6204.	6992.	377.	5151.	.1129	-.0056	-.1484	-.1571	.1087	-.1361	5859.	
.1210	3756.	-1822.	-5088.	7492.	17.	5651.	.1118	-.0053	-.1490	-.1526	.0826	-.1274	6325.	
.1220	3810.	-2432.	-5417.	6984.	130.	5286.	.1089	-.0056	-.1467	-.1526	.0901	-.1300	5904.	
.1230	3592.	-2246.	-5403.	6658.	49.	4999.	.1027	-.0051	-.1394	-.1453	.0852	-.1221	5612.	
.1240	2909.	-1470.	-4270.	6829.	-438.	5163.	.0922	-.0040	-.1265	-.1251	.0522	-.0985	5778.	
.1250	2483.	-1633.	-3456.	6293.	-662.	4868.	.0787	-.0035	-.1092	-.1024	.0326	-.0800	5381.	
.1260	2024.	-2303.	-2852.	4824.	-487.	3876.	.0627	-.0034	-.0876	-.0815	.0289	-.0682	4184.	
.1270	1423.	-1743.	-2343.	3505.	-489.	2898.	.0438	-.0023	-.0614	-.0559	.0181	-.0456	3083.	
.1280	135.	-325.	-577.	2393.	-715.	2136.	.0218	-.0004	-.0314	-.0246	-.0166	-.0106	2215.	
.1290	-769.	67.	587.	480.	-557.	815.	-.0017	.0008	-.0000	.0034	-.0297	.0152	740.	
.1300	-1108.	-279.	790.	-1865.	-166.	-858.	-.0262	.0016	.0316	.0293	-.0223	.0344	1388.	
.1310	-2106.	334.	2334.	-3488.	-168.	-1960.	-.0521	.0034	.0632	.0604	-.0452	.0679	2699.	
.1320	-2889.	1498.	3583.	-4727.	-326.	-2828.	-.0775	.0057	.0926	.0901	-.0696	.1060	3719.	
.1330	-3141.	1702.	3991.	-6366.	-199.	-3993.	-.1004	.0072	.1176	.1112	-.0722	.1313	5067.	
.1340	-3180.	1338.	4148.	-7879.	-89.	-5046.	-.1199	.0082	.1372	.1270	-.0710	.1493	6307.	
.1350	-3574.	1819.	4960.	-8591.	-378.	-5496.	-.1353	.0098	.1513	.1397	-.0916	.1721	6879.	

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.1630	1869.	-3522.	-3466.	4937.	2142.	5280.	.0558	-.0026	-.0782	-.0573	.1182	-.0369	5082.
.1640	1950.	-3340.	-3755.	4369.	2282.	4879.	.0505	-.0016	-.0784	-.0654	.1270	-.0319	4675.
.1650	1583.	-2779.	-3107.	4117.	2218.	4760.	.0423	.0000	-.0766	-.0675	.1169	-.0164	4498.
.1660	1465.	-1958.	-2836.	4016.	2069.	4718.	.0320	.0020	-.0731	-.0662	.1084	.0045	4403.
.1670	1504.	-1347.	-2876.	3692.	2032.	4483.	.0204	.0038	-.0683	-.0644	.1075	.0243	4147.
.1680	1567.	-.872.	-2995.	3313.	1990.	4183.	.0078	.0056	-.0623	-.0610	.1073	.0442	3839.
.1690	1242.	-.20.	-2369.	3116.	1779.	4040.	-.0053	.0076	-.0552	-.0546	.0918	.0687	3642.
.1700	1012.	.887.	-1958.	2829.	1548.	3794.	-.0180	.0096	-.0478	-.0492	.0783	.0913	3356.
.1710	1231.	.1516.	-2450.	2295.	1378.	3283.	-.0293	.0111	-.0407	-.0466	.0781	.1065	2856.
.1720	757.	.2028.	-1618.	1738.	1101.	2830.	-.0395	.0124	-.0337	-.0437	.0583	.1202	2358.
.1730	249.	.2612.	-765.	1023.	792.	2277.	-.0479	.0135	-.0269	-.0429	.0373	.1299	1782.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.25.49.

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	EL								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.1740	-45.	3193.	-430.	232.	551.	1501.	-.0542	.0142	-.0205	-.0450	.0248	.1330	1089.	
.1750	-533.	3599.	265.	-585.	271.	742.	-.0590	.0145	-.0137	-.0454	.0065	.1328	662.	
.1760	-909.	3738.	900.	-1234.	-89.	100.	-.0625	.0143	-.0062	-.0417	-.0136	.1303	836.	
.1770	-1309.	3696.	1696.	-1835.	-433.	-493.	-.0647	.0136	.0022	-.0349	-.0350	.1255	1314.	
.1780	-1446.	3620.	1913.	-2448.	-689.	-1166.	-.0655	.0126	.0118	-.0262	-.0469	.1168	1886.	
.1790	-1801.	3595.	2440.	-2917.	-946.	-1750.	-.0655	.0113	.0229	-.0133	-.0634	.1081	2380.	
.1800	-2223.	3476.	3139.	-3265.	-1190.	-2233.	-.0646	.0098	.0352	.0038	-.0819	.0989	2784.	
.1810	-2088.	3129.	2893.	-3604.	-1343.	-2752.	-.0627	.0078	.0482	.0227	-.0856	.0860	3188.	
.1820	-2217.	2716.	3173.	-3836.	-1488.	-3158.	-.0603	.0056	.0615	.0441	-.0957	.0735	3496.	
.1830	-2424.	2344.	3541.	-4005.	-1603.	-3530.	-.0571	.0034	.0745	.0657	-.1060	.0605	3757.	
.1840	-2461.	1948.	3590.	-4228.	-1627.	-3960.	-.0529	.0011	.0863	.0848	-.1091	.0449	4056.	
.1850	-2411.	1441.	3588.	-4411.	-1621.	-4339.	-.0480	-.0012	.0963	.1017	-.1100	.0282	4311.	
.1860	-2226.	815.	3451.	-4402.	-1669.	-4564.	-.0422	-.0036	.1040	.1175	-.1105	.0113	4419.	
.1870	-2178.	151.	3623.	-4245.	-1754.	-4639.	-.0354	-.0058	.1090	.1307	-.1156	-.0055	4400.	
.1880	-1839.	-461.	3231.	-4071.	-1805.	-4714.	-.0271	-.0079	.1107	.1382	-.1122	-.0246	4371.	
.1890	-1556.	-923.	2897.	-3816.	-1886.	-4697.	-.0173	-.0098	.1090	.1402	-.1103	-.0440	4273.	
.1900	-1532.	-1256.	2971.	-3476.	-2015.	-4563.	-.0064	-.0115	.1039	.1372	-.1147	-.0631	4098.	
.1910	-1269.	-1524.	2511.	-3188.	-2103.	-4469.	.0056	-.0129	.0953	.1271	-.1110	-.0844	3963.	
.1920	-1082.	-1655.	2170.	-2919.	-2183.	-4340.	.0181	-.0140	.0838	.1113	-.1079	-.1050	3820.	
.1930	-1048.	-1650.	2107.	-2625.	-2279.	-4134.	.0302	-.0146	.0699	.0913	-.1084	-.1230	3641.	
.1940	-982.	-1612.	1954.	-2402.	-2314.	-3956.	.0413	-.0149	.0543	.0675	-.1055	-.1394	3488.	
.1950	-861.	-1551.	1712.	-2268.	-2254.	-3816.	.0506	-.0148	.0380	.0414	-.0980	-.1528	3356.	
.1960	-754.	-1437.	1603.	-2083.	-2149.	-3590.	.0574	-.0142	.0220	.0163	-.0904	-.1604	3151.	
.1970	-568.	-1352.	1460.	-1779.	-2009.	-3238.	.0613	-.0133	.0073	-.0050	-.0812	-.1615	2835.	
.1980	-246.	-1349.	1114.	-1410.	-1783.	-2818.	.0624	-.0122	-.0056	-.0219	-.0669	-.1573	2440.	
.1990	67.	-1287.	753.	-1009.	-1445.	-2352.	.0609	-.0108	-.0160	-.0343	-.0493	-.1476	1981.	
.2000	311.	-1045.	434.	-548.	-1007.	-1830.	.0573	-.0091	-.0238	-.0420	-.0298	-.1325	1456.	
.2010	591.	-729.	-22.	6.	-488.	-1241.	.0521	-.0074	-.0290	-.0445	-.0067	-.1133	899.	
.2020	912.	-498.	-557.	681.	78.	-553.	.0457	-.0058	-.0321	-.0412	.0183	-.0913	594.	
.2030	1219.	-343.	-1039.	1480.	661.	238.	.0386	-.0042	-.0334	-.0332	.0428	-.0672	1104.	
.2040	1550.	-185.	-1585.	2368.	1248.	1079.	.0316	-.0028	-.0337	-.0223	.0679	-.0425	1945.	
.2050	1905.	-54.	-2201.	3320.	1808.	1940.	.0252	-.0015	-.0336	-.0100	.0927	-.0188	2864.	
.2060	2219.	-70.	-2700.	4309.	2298.	2824.	.0198	-.0005	-.0337	.0030	.1138	.0026	3803.	
.2070	2505.	-262.	-3087.	5274.	2700.	3694.	.0159	.0002	-.0344	.0151	.1309	.0203	4706.	
.2080	2792.	-515.	-3498.	6157.	3003.	4478.	.0140	.0006	-.0360	.0247	.1453	.0331	5511.	
.2090	2972.	-718.	-3817.	6909.	3197.	5138.	.0140	.0007	-.0385	.0309	.1549	.0410	6191.	
.2100	2968.	-888.	-3896.	7454.	3296.	5631.	.0159	.0007	-.0416	.0331	.1585	.0437	6677.	
.2110	2872.	-1078.	-3882.	7741.	3325.	5918.	.0194	.0004	-.0450	.0315	.1588	.0410	6940.	

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.25.50.

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

.2010	591.	-729.	-22.	6.	-488.	-1241.	.0521	-.0074	-.0290	-.0445	-.0067	-.1133	899.
.2020	912.	-498.	-557.	681.	912.	-553.	.0457	-.0058	-.0321	-.0412	.0183	-.0913	594.
.2030	1219.	-343.	-1039.	1410.	661.	238.	.0386	-.0042	-.0334	-.0332	.0428	-.0672	1104.
.2040	1550.	-185.	-1585.	2368.	1248.	1079.	.0316	-.0028	-.0337	-.0223	.0679	-.0425	1945.
.2050	1905.	-54.	-2201.	3320.	1808.	1940.	.0252	-.0015	-.0336	-.0100	.0927	-.0188	2864.
.2060	2219.	-70.	-2700.	4309.	2298.	2824.	.0198	-.0005	-.0327	.0030	.1138	.0026	3803.
.2070	2505.	-262.	-3087.	5274.	2700.	3694.	.0159	.0002	-.0344	.0151	.1309	.0203	4706.
.2080	2792.	-515.	-3498.	6157.	3003.	4478.	.0140	.0006	-.0360	.0247	.1453	.0331	5516.
.2090	2972.	-718.	-3817.	6909.	3197.	5138.	.0140	.0007	-.0385	.0309	.1549	.0410	6191.
.2100	2965.	-808.	-3896.	7454.	3296.	5631.	.0159	.0007	-.0416	.0331	.1585	.0437	6677.
.2110	2372.	-1078.	-3682.	7741.	3225.	5918.	.0194	.0004	-.0450	.0315	.1588	.0410	6940.

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ADLPIPE STRESS ANALYSIS

83/12/02.

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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 EL									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)		
.2120	2727.	-1246.	-3850.	7822.	3269.	6025.	.0236	-.0001	-.0482	.0274	.1560	.0345	7010.	
.2130	2481.	-1350.	-3606.	7753.	3122.	6001.	.0279	-.0006	-.0505	.0226	.1480	.0265	6935.	
.2140	2192.	-1448.	-3274.	7500.	2933.	5821.	.0315	-.0011	-.0514	.0179	.1375	.0177	6698.	
.2150	1957.	-1582.	-2990.	7063.	2740.	5476.	.0337	-.0017	-.0504	.0143	.1276	.0086	6301.	
.2160	1748.	-1689.	-2687.	6551.	2511.	5049.	.0342	-.0022	-.0470	.0136	.1162	.0015	5826.	
.2170	1524.	-1724.	-2286.	6014.	2240.	4582.	.0325	-.0026	-.0410	.0167	.1021	-.0024	5315.	
.2180	1350.	-1721.	-1927.	5381.	1977.	4024.	.0291	-.0029	-.0326	.0227	.0886	-.0042	4721.	
.2190	1216.	-1661.	-1642.	4629.	1731.	3357.	.0241	-.0031	-.0222	.0304	.0765	-.0047	4027.	
.2200	1009.	-1452.	-1273.	3807.	1466.	2624.	.0180	-.0032	-.0102	.0395	.0524	-.0035	3270.	
.2210	730.	-1082.	-835.	2908.	1177.	1821.	.0113	-.0032	.0027	.0484	.0463	-.0013	2445.	
.2220	465.	-654.	-458.	1883.	879.	916.	.0044	-.0031	.0156	.0554	.0308	-.0001	1531.	
.2230	185.	-242.	-47.	767.	549.	-52.	-.0021	-.0030	.0277	.0599	.0142	-.0002	637.	
.2240	-163.	155.	504.	-392.	161.	-1038.	-.0080	-.0029	.0382	.0613	-.0058	-.0017	756.	
.2250	-512.	528.	1065.	-1598.	-261.	-2055.	-.0128	-.0027	.0466	.0585	-.0265	-.0055	1763.	
.2260	-815.	831.	1561.	-2824.	-702.	-3080.	-.0164	-.0026	.0525	.0513	-.0465	-.0119	2856.	
.2270	-1121.	1032.	2099.	-3969.	-1181.	-4025.	-.0184	-.0025	.0559	.0413	-.0678	-.0203	3893.	
.2280	-1424.	1132.	2666.	-4979.	-1682.	-4845.	-.0189	-.0025	.0570	.0292	-.0899	-.0301	4818.	
.2290	-1677.	1175.	3118.	-5857.	-2147.	-5552.	-.0178	-.0027	.0559	.0155	-.1094	-.0415	5629.	
.2300	-1905.	1226.	3459.	-6555.	-2554.	-6114.	-.0152	-.0028	.0534	.0014	-.1258	-.0534	6282.	
.2310	-2130.	1296.	3739.	-6986.	-2906.	-6461.	-.0115	-.0031	.0499	-.0108	-.1401	-.0641	6707.	
.2320	-2280.	1324.	3871.	-7116.	-3188.	-6567.	-.0073	-.0034	.0460	-.0198	-.1508	-.0727	6871.	
.2330	-2309.	1276.	3812.	-6962.	-3376.	-6441.	-.0031	-.0037	.0422	-.0246	-.1564	-.0787	6786.	
.2340	-2266.	1183.	3650.	-6543.	-3465.	-6097.	.0007	-.0040	.0388	-.0250	-.1578	-.0811	6465.	
.2350	-2174.	1078.	3414.	-5908.	-3453.	-5576.	.0035	-.0043	.0362	-.0213	-.1554	-.0795	5950.	
.2360	-2009.	940.	3076.	-5144.	-3330.	-4941.	.0050	-.0044	.0343	-.0143	-.1482	-.0742	5306.	
.2370	-1800.	747.	2706.	-4327.	-3100.	-4240.	.0050	-.0043	.0333	-.0049	-.1371	-.0657	4587.	
.2380	-1593.	523.	2377.	-3508.	-2783.	-3509.	.0034	-.0041	.0330	.0061	-.1237	-.0541	3835.	
.2390	-1392.	318.	2059.	-2742.	-2394.	-2797.	.0005	-.0037	.0334	.0176	-.1080	-.0400	3094.	
.2400	-1205.	161.	1745.	-2080.	-1941.	-2146.	-.0037	-.0030	.0341	.0283	-.0902	-.0244	2402.	
.2410	-1065.	55.	1495.	-1546.	-1439.	-1570.	-.0088	-.0022	.0350	.0376	-.0714	-.0077	1774.	
.2420	-956.	-11.	1284.	-1126.	-910.	-1066.	-.0145	-.0012	.0358	.0452	-.0521	.0095	1212.	
.2430	-835.	-38.	1047.	-776.	-381.	-611.	-.0205	-.0001	.0362	.0510	-.0322	.0266	714.	
.2440	-697.	-36.	804.	-457.	124.	-174.	-.0264	.0011	.0358	.0549	-.0129	.0435	340.	
.2450	-548.	-21.	567.	-151.	594.	253.	-.0318	.0023	.0342	.0566	.0056	.0593	447.	
.2460	-370.	7.	286.	142.	1029.	661.	-.0361	.0034	.0312	.0557	.0237	.0731	830.	
.2470	-166.	67.	-39.	444.	1416.	1058.	-.0390	.0045	.0265	.0517	.0410	.0844	1228.	
.2480	47.	151.	-363.	782.	1732.	1470.	-.0402	.0055	.0199	.0448	.0563	.0930	1619.	
.2490	284.	219.	-709.	1160.	1966.	1897.	-.0393	.0064	.0114	.0350	.0694	.0981	2000.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.25.50.

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

.2390	-1392.	318.	2059.	-2742.	-2394.	-2797.	.0005	-.0037	.0334	.0176	-.1080	-.0400	3094.
.2400	-1205.	161.	1745.	-2080.	-1941.	-2146.	-.0037	-.0030	.0341	.0283	-.0902	-.0244	2402.
.2410	-1065.	55.	1495.	-1546.	-1439.	-1570.	-.0088	-.0022	.0350	.0376	-.0714	-.0077	1774.
.2420	-956.	-11.	1284.	-1126.	-910.	-1066.	-.0145	-.0012	.0358	.0452	-.0521	.0095	1212.
.2430	-835.	-38.	1047.	-776.	-381.	-611.	-.0205	-.0001	.0362	.0510	-.0322	.0266	714.
.2440	-697.	-36.	804.	-457.	124.	-174.	-.0264	.0011	.0358	.0549	-.0129	.0435	340.
.2450	-548.	-21.	567.	-151.	594.	253.	-.0318	.0023	.0342	.0566	.0056	.0593	447.
.2460	-370.	7.	286.	142.	1029.	661.	-.0361	.0034	.0312	.0557	.0237	.0731	830.
.2470	-166.	67.	-39.	444.	1416.	1058.	-.0390	.0045	.0265	.0517	.0410	.0844	1228.
.2480	47.	151.	-363.	782.	1732.	1470.	-.0402	.0055	.0199	.0448	.0563	.0930	1619.
.2490	284.	219.	-709.	1160.	1966.	1897.	-.0393	.0064	.0114	.0350	.0694	.0981	2000.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.25.50.

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	EL								
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2500	553.	267.	-1114.	1564.	2114.	2322.	-.0364	.0070	.0010	.0223	.0807	.0994	2365.	
.2510	806.	327.	-1508.	1966.	2177.	2725.	-.0314	.0075	-.0111	.0065	.0893	.0966	2699.	
.2520	1014.	406.	-1847.	2325.	2164.	3076.	-.0244	.0078	-.0246	-.0124	.0949	.0899	2981.	
.2530	1207.	460.	-2179.	2620.	2084.	3356.	-.0158	.0079	-.0391	-.0338	.0983	.0792	3195.	
.2540	1391.	456.	-2493.	2867.	1926.	3578.	-.0060	.0077	-.0539	-.0562	.0991	.0654	3352.	
.2550	1531.	395.	-2704.	3059.	1697.	3747.	.0043	.0074	-.0684	-.0788	.0964	.0495	3455.	
.2560	1622.	286.	-2822.	3140.	1443.	3816.	.0148	.0069	-.0819	-.1008	.0917	.0318	3470.	
.2570	1674.	144.	-2901.	3084.	1200.	3758.	.0247	.0063	-.0936	-.1213	.0867	.0131	3375.	
.2580	1671.	-10.	-2895.	2945.	966.	3618.	.0336	.0055	-.1027	-.1384	.0306	-.0049	3211.	
.2590	1619.	-190.	-2780.	2767.	742.	3440.	.0409	.0047	-.1086	-.1503	.0731	-.0208	3018.	
.2600	1565.	-421.	-2648.	2546.	564.	3216.	.0463	.0039	-.1107	-.1561	.0664	-.0343	2791.	
.2610	1515.	-667.	-2538.	2292.	449.	2950.	.0494	.0029	-.1089	-.1552	.0514	-.0447	2536.	
.2620	1435.	-870.	-2394.	2052.	384.	2679.	.0503	.0020	-.1029	-.1474	.0568	-.0511	2289.	
.2630	1352.	-1040.	-2250.	1842.	360.	2420.	.0489	.0011	-.0933	-.1329	.0529	-.0533	2064.	
.2640	1307.	-1227.	-2170.	1647.	376.	2166.	.0455	.0002	-.0805	-.1129	.0506	-.0523	1852.	
.2650	1273.	-1423.	-2102.	1467.	410.	1923.	.0406	-.0006	-.0655	-.0887	.0486	-.0484	1653.	
.2660	1206.	-1579.	-1979.	1286.	439.	1684.	.0346	-.0014	-.0492	-.0625	.0455	-.0424	1459.	
.2670	1115.	-1684.	-1839.	1057.	456.	1412.	.0280	-.0020	-.0328	-.0370	.0418	-.0357	1228.	
.2680	994.	-1755.	-1680.	750.	449.	1089.	.0215	-.0026	-.0173	-.0143	.0372	-.0294	941.	
.2690	814.	-1790.	-1428.	376.	387.	733.	.0154	-.0029	-.0036	.0043	.0300	-.0241	613.	
.2700	581.	-1783.	-1083.	-60.	258.	350.	.0100	-.0032	.0075	.0176	.0200	-.0202	296.	
.2710	321.	-1732.	-705.	-562.	69.	-68.	.0055	-.0032	.0158	.0249	.0081	-.0180	384.	
.2720	26.	-1624.	-287.	-1109.	-181.	-505.	.0020	-.0031	.0212	.0263	-.0058	-.0173	830.	
.2730	-310.	-1434.	183.	-1663.	-491.	-931.	-.0008	-.0028	.0238	.0226	-.0219	-.0174	1326.	
.2740	-648.	-1168.	648.	-2207.	-841.	-1335.	-.0030	-.0023	.0242	.0148	-.0390	-.0176	1829.	
.2750	-976.	-843.	1090.	-2740.	-1202.	-1716.	-.0052	-.0016	.0230	.0041	-.0559	-.0174	2325.	
.2760	-1308.	-455.	1531.	-3252.	-1549.	-2066.	-.0076	-.0007	.0209	-.0081	-.0722	-.0158	2799.	
.2770	-1630.	14.	1940.	-3734.	-1860.	-2384.	-.0108	.0004	.0186	-.0204	-.0871	-.0122	3239.	
.2780	-1911.	550.	2275.	-4180.	-2112.	-2668.	-.0151	.0017	.0167	-.0317	-.0991	-.0059	3633.	
.2790	-2141.	1096.	2553.	-4579.	-2292.	-2908.	-.0207	.0032	.0158	-.0406	-.1082	.0035	3969.	
.2800	-2312.	1604.	2781.	-4925.	-2395.	-3094.	-.0278	.0047	.0162	-.0465	-.1142	.0159	4240.	
.2810	-2408.	2072.	2922.	-5213.	-2417.	-3230.	-.0362	.0063	.0179	-.0490	-.1166	.0310	4443.	
.2820	-2440.	2516.	2977.	-5441.	-2360.	-3321.	-.0455	.0079	.0209	-.0484	-.1156	.0482	4581.	
.2830	-2430.	2914.	2981.	-5608.	-2235.	-3363.	-.0551	.0095	.0247	-.0454	-.1117	.0664	4658.	
.2840	-2378.	3224.	2936.	-5718.	-2049.	-3358.	-.0645	.0109	.0289	-.0406	-.1054	.0844	4678.	
.2850	-2293.	3443.	2838.	-5766.	-1818.	-3304.	-.0728	.0121	.0328	-.0351	-.0969	.1008	4644.	
.2860	-2202.	3598.	2715.	-5737.	-1559.	-3198.	-.0794	.0131	.0358	-.0298	-.0872	.1148	4550.	
.2870	-2113.	3688.	2572.	-5622.	-1285.	-3034.	-.0838	.0137	.0375	-.0255	-.0767	.1253	4392.	

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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

.2770	-1630.	14.	1940.	-3734.	-1860.	-2384.	-.0108	.0004	.0186	-.0204	-.0871	-.0122	2799.
.2780	-1911.	550.	2275.	-4180.	-2112.	-2668.	-.0151	.0017	.0167	-.0317	-.0991	-.0059	3633.
.2790	-2141.	1096.	2553.	-4579.	-2292.	-2908.	-.0207	.0032	.0158	-.0406	-.1082	.0035	3969.
.2800	-2312.	1604.	2781.	-4925.	-2395.	-3094.	-.0278	.0047	.0162	-.0465	-.1142	.0159	4240.
.2810	-2408.	2072.	2923.	-5213.	-2417.	-3230.	-.0362	.0063	.0179	-.0490	-.1166	.0310	4443.
.2820	-2440.	2516.	2977.	-5441.	-2460.	-3321.	-.0455	.0079	.0209	-.0484	-.1156	.0482	4581.
.2830	-2430.	2914.	2981.	-5608.	-2235.	-3363.	-.0551	.0095	.0247	-.0454	-.1117	.0664	4658.
.2840	-2378.	3224.	2936.	-5718.	-2049.	-3358.	-.0645	.0109	.0289	-.0406	-.1054	.0844	4678.
.2850	-2293.	3443.	2836.	-5766.	-1818.	-3304.	-.0728	.0121	.0328	-.0351	-.0969	.1008	4644.
.2860	-2202.	3598.	2715.	-5737.	-1559.	-3198.	-.0794	.0131	.0358	-.0298	-.0872	.1148	4550.
.2870	-2113.	3698.	2572.	-5622.	-1285.	-3074.	-.0838	.0137	.0375	-.0255	-.0767	.1253	4392.

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S/RV PIPING KEWAUNEE GKW09F 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	EL	DX	DY	DZ	RX	RY	RZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.2880	-2005.	3675.	2388.	-5406.	-1008.	-2803.	-.0855	.0141	.0373	-.0227	-.0555	.1316	4160.
.2890	-1869.	3531.	2169.	-5063.	-745.	-2485.	-.0844	.0141	.0350	-.0213	-.0541	.1337	3835.
.2900	-1707.	3271.	1923.	-4575.	-508.	-2069.	-.0806	.0137	.0306	-.0213	-.0431	.1315	3401.
.2910	-1509.	2917.	1622.	-3944.	-297.	-1562.	-.0740	.0131	.0242	-.0225	-.0321	.1255	2866.
.2920	-1268.	2476.	1259.	-3188.	-109.	-976.	-.0652	.0121	.0162	-.0247	-.0210	.1160	2248.
.2930	-1002.	1958.	862.	-2327.	57.	-325.	-.0545	.0109	.0070	-.0273	-.0100	.1037	1584.
.2940	-718.	1393.	439.	-1395.	211.	367.	-.0424	.0094	-.0028	-.0300	.0008	.0894	982.
.2950	-415.	821.	-29.	-429.	360.	1068.	-.0297	.0079	-.0128	-.0325	.0119	.0739	813.
.2960	-102.	267.	-518.	540.	506.	1759.	-.0169	.0063	-.0224	-.0342	.0232	.0582	1287.
.2970	208.	-271.	-996.	1475.	652.	2418.	-.0046	.0047	-.0312	-.0350	.0342	.0431	1959.
.2980	519.	-783.	-1464.	2338.	803.	3015.	.0066	.0032	-.0387	-.0348	.0452	.0290	2628.
.2990	831.	-1244.	-1923.	3104.	958.	3531.	.0164	.0019	-.0448	-.0336	.0562	.0167	3234.
.3000	1131.	-1638.	-2341.	3765.	1105.	3964.	.0244	.0007	-.0495	-.0314	.0564	.0065	3759.
.3010	1412.	-1972.	-2701.	4305.	1236.	4304.	.0305	-.0003	-.0527	-.0285	.0754	-.0014	4187.
.3020	1670.	-2242.	-3010.	4701.	1353.	4535.	.0348	-.0011	-.0547	-.0255	.0834	-.0073	4496.
.3030	1884.	-2415.	-3250.	4946.	1449.	4652.	.0375	-.0016	-.0555	-.0230	.0898	-.0115	4680.
.3040	2032.	-2469.	-3395.	5045.	1513.	4659.	.0389	-.0020	-.0556	-.0214	.0941	-.0142	4740.
.3050	2114.	-2419.	-3452.	5002.	1541.	4560.	.0391	-.0021	-.0552	-.0211	.0961	-.0159	4679.
.3060	2135.	-2286.	-3434.	4828.	1531.	4362.	.0385	-.0020	-.0544	-.0224	.0959	-.0170	4505.
.3070	2090.	-2068.	-3328.	4544.	1477.	4084.	.0372	-.0018	-.0535	-.0251	.0932	-.0176	4237.
.3080	1985.	-1777.	-3138.	4176.	1378.	3743.	.0354	-.0014	-.0525	-.0291	.0881	-.0178	3892.
.3090	1835.	-1447.	-2886.	3739.	1242.	3349.	.0332	-.0010	-.0514	-.0340	.0809	-.0177	3485.
.3100	1653.	-1107.	-2584.	3254.	1073.	2919.	.0305	-.0005	-.0501	-.0393	.0721	-.0174	3034.
.3110	1442.	-761.	-2230.	2750.	878.	2473.	.0275	-.0000	-.0484	-.0442	.0518	-.0166	2562.
.3120	1213.	-418.	-1844.	2244.	667.	2024.	.0240	.0005	-.0461	-.0480	.0503	-.0152	2086.
.3130	973.	-93.	-1443.	1746.	454.	1578.	.0201	.0010	-.0428	-.0501	.0385	-.0131	1616.
.3140	722.	206.	-1032.	1265.	252.	1142.	.0158	.0014	-.0384	-.0499	.0266	-.0102	1161.
.3150	463.	492.	-619.	815.	68.	724.	.0110	.0017	-.0326	-.0468	.0150	-.0064	736.
.3160	204.	761.	-223.	403.	-91.	329.	.0057	.0020	-.0253	-.0407	.0041	-.0016	356.
.3170	-44.	996.	151.	34.	-221.	-39.	.0000	.0022	-.0165	-.0312	-.0060	.0041	153.
.3180	-277.	1180.	501.	-290.	-320.	-377.	-.0060	.0022	-.0062	-.0186	-.0150	.0106	386.
.3190	-492.	1318.	825.	-572.	-391.	-688.	-.0123	.0022	.0051	-.0032	-.0231	.0176	658.
.3200	-685.	1415.	1121.	-821.	-435.	-978.	-.0187	.0020	.0174	.0141	-.0300	.0248	909.
.3210	-861.	1464.	1396.	-1046.	-455.	-1254.	-.0249	.0018	.0299	.0327	-.0360	.0316	1143.
.3220	-1018.	1458.	1655.	-1252.	-458.	-1516.	-.0307	.0014	.0425	.0516	-.0412	.0377	1361.
.3230	-1155.	1407.	1896.	-1439.	-454.	-1764.	-.0358	.0010	.0544	.0699	-.0457	.0426	1565.
.3240	-1278.	1330.	2119.	-1610.	-446.	-2002.	-.0400	.0005	.0653	.0869	-.0497	.0459	1758.
.3250	-1395.	1239.	2328.	-1770.	-436.	-2231.	-.0430	-.0001	.0748	.1016	-.0533	.0472	1942.

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S/RV PIPING KEWAUNEE GKW09F 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

.3140	722.	206.	-122.	1265.	252.	1142.	.0158	.0014	-.0384	-.0499	.0266	-.0102	1161.
.3150	463.	492.	-619.	815.	68.	724.	.0110	.0017	-.0326	-.0468	.0150	-.0064	736.
.3160	204.	761.	-223.	403.	-91.	329.	.0057	.0020	-.0253	-.0407	.0041	-.0016	356.
.3170	-44.	996.	151.	34.	-221.	-39.	.0000	.0022	-.0165	-.0312	-.0060	.0041	153.
.3180	-277.	1180.	501.	-290.	-320.	-377.	-.0060	.0022	-.0062	-.0186	-.0150	.0106	386.
.3190	-492.	1318.	825.	-572.	-391.	-688.	-.0123	.0022	.0051	-.0032	-.0231	.0176	658.
.3200	-685.	1415.	1121.	-821.	-435.	-972.	-.0187	.0020	.0174	.0141	-.0300	.0248	909.
.3210	-861.	1464.	1396.	-1046.	-455.	-1254.	-.0249	.0018	.0299	.0327	-.0360	.0316	1143.
.3220	-1018.	1458.	1655.	-1252.	-458.	-1516.	-.0307	.0014	.0425	.0516	-.0412	.0377	1361.
.3230	-1155.	1407.	1896.	-1439.	-454.	-1764.	-.0358	.0010	.0544	.0699	-.0457	.0426	1565.
.3240	-1278.	1330.	2119.	-1610.	-446.	-2002.	-.0400	.0005	.0653	.0869	-.0497	.0459	1758.
.3250	-1395.	1239.	2328.	-1770.	-436.	-2231.	-.0430	-.0001	.0748	.1016	-.0533	.0472	1942.

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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

SECTION	2	MEMBER	1	SEQUENCE	17	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3260	-1497.	1141.	2511.	-1909.	-430.	-2446.	-.0446	-.0007	.0826	.1136	-.0564	.0464	2112.		
.3270	-1576.	1036.	2660.	-2012.	-433.	-2633.	-.0449	-.0014	.0884	.1227	-.0592	.0435	2253.		
.3280	-1628.	926.	2775.	-2068.	-450.	-2783.	-.0437	-.0021	.0921	.1289	-.0616	.0386	2356.		
.3290	-1648.	815.	2844.	-2073.	-477.	-2893.	-.0412	-.0029	.0937	.1322	-.0634	.0320	2420.		
.3300	-1628.	711.	2855.	-2025.	-510.	-2963.	-.0374	-.0036	.0932	.1325	-.0644	.0237	2444.		
.3310	-1569.	613.	2818.	-1924.	-549.	-2990.	-.0325	-.0043	.0909	.1304	-.0648	.0142	2425.		
.3320	-1473.	515.	2736.	-1773.	-591.	-2975.	-.0268	-.0050	.0869	.1259	-.0643	.0037	2362.		
.3330	-1336.	413.	2600.	-1584.	-629.	-2926.	-.0203	-.0057	.0814	.1195	-.0628	-.0076	2282.		
.3340	-1166.	319.	2419.	-1369.	-659.	-2850.	-.0133	-.0064	.0748	.1114	-.0603	-.0194	2177.		
.3350	-979.	235.	2209.	-1138.	-675.	-2755.	-.0059	-.0070	.0672	.1020	-.0569	-.0315	2060.		
.3360	-774.	152.	1970.	-903.	-673.	-2648.	.0016	-.0076	.0591	.0916	-.0524	-.0437	1940.		
.3370	-548.	57.	1697.	-663.	-653.	-2527.	.0093	-.0082	.0505	.0806	-.0467	-.0559	1815.		
.3380	-308.	-53.	1404.	-412.	-617.	-2387.	.0169	-.0087	.0418	.0696	-.0403	-.0678	1685.		
.3390	-60.	-181.	1100.	-148.	-563.	-2226.	.0243	-.0092	.0331	.0588	-.0332	-.0791	1551.		
.3400	195.	-331.	778.	128.	-486.	-2048.	.0315	-.0097	.0245	.0484	-.0251	-.0900	1421.		
.3410	454.	-506.	445.	423.	-389.	-1845.	.0386	-.0102	.0162	.0389	-.0164	-.1002	1302.		
.3420	706.	-706.	119.	750.	-277.	-1606.	.0453	-.0107	.0083	.0306	-.0073	-.1096	1209.		
.3430	951.	-929.	-203.	1111.	-146.	-1333.	.0517	-.0112	.0009	.0235	.0021	-.1181	1174.		
.3440	1186.	-1170.	-524.	1504.	4.	-1027.	.0578	-.0117	-.0060	.0179	.0119	-.1256	1227.		
.3450	1402.	-1419.	-830.	1929.	170.	-688.	.0635	-.0122	-.0122	.0139	.0219	-.1319	1385.		
.3460	1595.	-1671.	-1115.	2386.	349.	-317.	.0686	-.0126	-.0177	.0116	.0318	-.1368	1639.		
.3470	1773.	-1923.	-1389.	2865.	539.	78.	.0730	-.0131	-.0222	.0111	.0417	-.1403	1966.		
.3480	1937.	-2172.	-1652.	3355.	736.	490.	.0767	-.0135	-.0258	.0124	.0514	-.1421	2339.		
.3490	2078.	-2408.	-1886.	3843.	932.	907.	.0794	-.0138	-.0283	.0154	.0605	-.1421	2735.		
.3500	2195.	-2623.	-2088.	4302.	1127.	1310.	.0810	-.0140	-.0297	.0198	.0690	-.1403	3125.		
.3510	2287.	-2809.	-2264.	4707.	1316.	1679.	.0814	-.0141	-.0301	.0251	.0768	-.1369	3483.		
.3520	2350.	-2954.	-2400.	5040.	1491.	2000.	.0807	-.0141	-.0294	.0312	.0835	-.1318	3791.		
.3530	2375.	-3052.	-2481.	5285.	1645.	2263.	.0787	-.0139	-.0278	.0375	.0888	-.1251	4031.		
.3540	2365.	-3102.	-2510.	5423.	1775.	2450.	.0756	-.0136	-.0253	.0436	.0926	-.1172	4185.		
.3550	2316.	-3093.	-2487.	5439.	1875.	2550.	.0714	-.0131	-.0222	.0491	.0949	-.1083	4242.		
.3560	2225.	-3015.	-2406.	5337.	1940.	2565.	.0662	-.0125	-.0187	.0535	.0953	-.0985	4200.		
.3570	2096.	-2869.	-2268.	5125.	1961.	2497.	.0603	-.0117	-.0148	.0568	.0936	-.0881	4063.		
.3580	1938.	-2667.	-2086.	4807.	1937.	2352.	.0537	-.0108	-.0108	.0586	.0900	-.0774	3836.		
.3590	1752.	-2413.	-1860.	4397.	1867.	2134.	.0466	-.0097	-.0068	.0590	.0844	-.0665	3524.		
.3600	1536.	-2102.	-1591.	3898.	1751.	1852.	.0392	-.0086	-.0029	.0577	.0769	-.0558	3139.		
.3610	1298.	-1738.	-1292.	3332.	1593.	1514.	.0318	-.0074	.0007	.0549	.0578	-.0455	2691.		
.3620	1045.	-1338.	-972.	2713.	1396.	1131.	.0244	-.0061	.0040	.0507	.0572	-.0357	2194.		
.3630	782.	-924.	-635.	2059.	1166.	718.	.0172	-.0049	.0069	.0452	.0454	-.0266	1666.		

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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

.3530	2375.	-3052.	-2481.	5285.	1645.	2263.	.0787	-.0139	-.0278	.0375	.0888	-.1251	4031.
.3540	2365.	-3102.	-2510.	5423.	1775.	2450.	.0756	-.0136	-.0253	.0436	.0926	-.1172	4185.
.3550	2316.	-3093.	-2487.	5439.	1875.	2550.	.0714	-.0131	-.0222	.0491	.0949	-.1083	4242.
.3560	2225.	-3015.	-2404.	5337.	1940.	2565.	.0662	-.0125	-.0187	.0535	.0953	-.0985	4200.
.3570	2096.	-2869.	-2268.	5125.	1961.	2497.	.0603	-.0117	-.0148	.0568	.0936	-.0881	4063.
.3580	1938.	-2667.	-2086.	4807.	1937.	2352.	.0537	-.0108	-.0108	.0586	.0900	-.0774	3836.
.3590	1752.	-2413.	-1860.	4393.	1867.	2134.	.0466	-.0097	-.0068	.0590	.0844	-.0665	3524.
.3600	1536.	-2102.	-1591.	3898.	1751.	1852.	.0392	-.0086	-.0029	.0577	.0769	-.0558	3139.
.3610	1298.	-1738.	-1292.	3322.	1593.	1514.	.0318	-.0074	.0007	.0549	.0678	-.0455	2691.
.3620	1045.	-1338.	-972.	2713.	1296.	1131.	.0244	-.0061	.0040	.0507	.0572	-.0357	2194.
.3630	782.	-924.	-635.	2059.	1166.	718.	.0172	-.0049	.0069	.0452	.0454	-.0266	1666.

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

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

SECTION	2	MEMBER	1	SEQUENCE	17	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	HX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3640	518.	-504.	-289.	1386.	907.	288.		.0103	-.0036	.0094	.0389	.0327	-.0182	1133.	
.3650	259.	-87.	50.	710.	629.	-151.		.0039	-.0024	.0116	.0320	.0195	-.0108	647.	
.3660	9.	311.	377.	46.	338.	-586.		-.0021	-.0013	.0136	.0249	.0060	-.0043	457.	
.3670	-226.	674.	687.	-589.	41.	-1004.		-.0074	-.0003	.0154	.0178	-.0074	.0011	785.	
.3680	-442.	989.	973.	-1184.	-255.	-1396.		-.0121	.0006	.0170	.0112	-.0205	.0056	1246.	
.3690	-639.	1255.	1231.	-1733.	-542.	-1756.		-.0161	.0013	.0185	.0052	-.0330	.0090	1703.	
.3700	-823.	1469.	1464.	-2234.	-812.	-2083.		-.0194	.0019	.0199	-.0001	-.0446	.0114	2130.	
.3710	-994.	1631.	1670.	-2686.	-1057.	-2374.		-.0219	.0023	.0213	-.0046	-.0553	.0128	2519.	
.3720	-1151.	1738.	1848.	-3086.	-1274.	-2627.		-.0238	.0026	.0227	-.0082	-.0547	.0132	2863.	
.3730	-1294.	1786.	2000.	-3431.	-1458.	-2835.		-.0251	.0028	.0242	-.0108	-.0729	.0129	3157.	
.3740	-1419.	1774.	2126.	-3720.	-1606.	-2998.		-.0258	.0028	.0256	-.0124	-.0795	.0121	3397.	
.3750	-1524.	1706.	2218.	-3952.	-1714.	-3113.		-.0261	.0028	.0270	-.0131	-.0846	.0109	3582.	
.3760	-1606.	1591.	2276.	-4123.	-1782.	-3177.		-.0262	.0026	.0283	-.0129	-.0879	.0098	3708.	
.3770	-1663.	1434.	2298.	-4229.	-1809.	-3185.		-.0260	.0024	.0295	-.0119	-.0894	.0088	3771.	
.3780	-1689.	1238.	2279.	-4267.	-1795.	-3133.		-.0257	.0023	.0304	-.0103	-.0891	.0083	3768.	
.3790	-1683.	1017.	2215.	-4235.	-1742.	-3020.		-.0253	.0021	.0310	-.0083	-.0870	.0084	3698.	
.3800	-1647.	787.	2106.	-4131.	-1652.	-2844.		-.0249	.0019	.0311	-.0060	-.0831	.0093	3559.	
.3810	-1582.	563.	1950.	-3952.	-1529.	-2603.		-.0245	.0019	.0306	-.0039	-.0774	.0110	3352.	
.3820	-1484.	351.	1744.	-3697.	-1379.	-2297.		-.0240	.0019	.0292	-.0022	-.0703	.0136	3078.	
.3830	-1353.	154.	1491.	-3366.	-1211.	-1924.		-.0235	.0020	.0269	-.0012	-.0618	.0172	2738.	
.3840	-1193.	-19.	1201.	-2964.	-1032.	-1489.		-.0229	.0022	.0236	-.0011	-.0524	.0214	2341.	
.3850	-1011.	-157.	877.	-2505.	-847.	-1005.		-.0221	.0025	.0191	-.0025	-.0423	.0264	1907.	
.3860	-814.	-253.	529.	-2008.	-665.	-486.		-.0212	.0030	.0134	-.0055	-.0318	.0317	1463.	
.3870	-611.	-304.	173.	-1490.	-491.	54.		-.0202	.0036	.0065	-.0105	-.0213	.0373	1058.	
.3880	-412.	-313.	-175.	-975.	-332.	597.		-.0190	.0043	-.0014	-.0175	-.0112	.0430	803.	
.3890	-226.	-280.	-505.	-492.	-198.	1122.		-.0178	.0051	-.0102	-.0266	-.0016	.0485	835.	
.3900	-63.	-198.	-805.	-63.	-58.	1607.		-.0166	.0060	-.0197	-.0377	.0072	.0539	1085.	
.3910	70.	-69.	-1065.	294.	57.	2040.		-.0156	.0070	-.0295	-.0504	.0153	.0590	1390.	
.3920	175.	90.	-1282.	572.	159.	2412.		-.0148	.0081	-.0392	-.0641	.0224	.0640	1674.	
.3930	257.	265.	-1457.	769.	250.	2721.		-.0145	.0092	-.0485	-.0782	.0288	.0691	1913.	
.3940	318.	448.	-1591.	889.	335.	2957.		-.0142	.0103	-.0569	-.0918	.0344	.0743	2100.	
.3950	360.	636.	-1690.	941.	419.	3152.		-.0158	.0114	-.0642	-.1043	.0395	.0799	2235.	
.3960	388.	823.	-1764.	940.	506.	3283.		-.0174	.0124	-.0700	-.1149	.0442	.0858	2327.	
.3970	410.	995.	-1819.	906.	596.	3375.		-.0176	.0134	-.0742	-.1230	.0485	.0922	2390.	
.3980	429.	1140.	-1859.	860.	689.	3441.		-.0224	.0143	-.0766	-.1283	.0526	.0989	2435.	
.3990	445.	1257.	-1887.	814.	785.	3487.		-.0255	.0150	-.0773	-.1304	.0563	.1058	2471.	
.4000	456.	1350.	-1910.	772.	883.	3516.		-.0287	.0156	-.0764	-.1296	.0598	.1124	2499.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.25.50.

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

.3910	70.	-69.	-1065.	294.	57.	2040.	-.0156	.0070	-.0295	-.0504	.0153	.0590	1390.
.3920	175.	90.	-1282.	572.	159.	2412.	-.0148	.0081	-.0392	-.0641	.0224	.0640	1674.
.3930	257.	265.	-1457.	769.	250.	2721.	-.0145	.0092	-.0485	-.0782	.0288	.0691	1913.
.3940	318.	448.	-1591.	869.	335.	2967.	-.0142	.0103	-.0569	-.0918	.0344	.0743	2100.
.3950	360.	636.	-1690.	941.	419.	3152.	-.0158	.0114	-.0642	-.1043	.0395	.0799	2235.
.3960	388.	823.	-1764.	940.	506.	3283.	-.0174	.0124	-.0700	-.1149	.0442	.0858	2327.
.3970	410.	995.	-1819.	906.	596.	3375.	-.0196	.0134	-.0742	-.1230	.0485	.0922	2390.
.3980	429.	1140.	-1859.	860.	689.	3441.	-.0224	.0143	-.0766	-.1283	.0526	.0989	2435.
.3990	445.	1257.	-1887.	814.	785.	3487.	-.0255	.0150	-.0773	-.1304	.0563	.1058	2471.
.4000	456.	1350.	-1910.	777.	883.	3516.	-.0287	.0156	-.0764	-.1296	.0598	.1124	2499.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.25.50.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

MAXIMUM VALUE OF 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)
.0680	4817.	556.	-6959.	12680.	4679.	10671.	-.0100	.0103	-.0768	.0337	.2406	.1649	11608.

SECTION	Z	MEMBER	2	SEQUENCE	002	LOCATION	END	TYPE	EL	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
0.0000		0.		0.		0.		0.0000		0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
.0010		-1.		0.		-1.		0.0000		-0.0000	-1.	0.	-1.	0.	-0.	-1.	0.0000	-0.0000	-0.0000	0.0000	0.0000	-0.0000	-0.0000	0.
.0020		-6.		-1.		-6.		0.0000		-0.0000	-6.	-1.	-6.	-0.	1.	-3.	0.0000	-0.0000	-0.0000	0.0000	0.0001	-0.0001	-0.0001	2.
.0030		-10.		-13.		-5.		0.0000		-0.0000	-10.	-13.	-5.	-5.	8.	-2.	0.0000	-0.0000	-0.0000	0.0001	0.0003	-0.0002	-0.0002	7.
.0040		-5.		-55.		2.		0.0001		-0.0001	-5.	-55.	2.	-21.	22.	12.	0.0001	-0.0001	-0.0001	0.0001	0.0007	-0.0004	-0.0004	22.
.0050		3.		-122.		8.		0.0002		-0.0002	3.	-122.	8.	-43.	39.	40.	0.0002	-0.0002	-0.0001	0.0003	0.0015	-0.0008	-0.0008	48.
.0060		3.		-205.		8.		0.0004		-0.0004	3.	-205.	8.	-60.	65.	79.	0.0004	-0.0004	-0.0001	0.0009	0.0025	-0.0013	-0.0013	80.
.0070		-2.		-298.		10.		0.0007		-0.0007	-2.	-298.	10.	-68.	103.	131.	0.0007	-0.0007	-0.0002	0.0018	0.0038	-0.0018	-0.0018	121.
.0080		-8.		-438.		35.		0.0013		-0.0011	-8.	-438.	35.	-81.	169.	216.	0.0013	-0.0011	-0.0002	0.0031	0.0058	-0.0026	-0.0026	193.
.0090		-23.		-660.		118.		0.0021		-0.0016	-23.	-660.	118.	-121.	298.	346.	0.0021	-0.0016	-0.0002	0.0045	0.0086	-0.0037	-0.0037	318.
.0100		-45.		-939.		219.		0.0032		-0.0023	-45.	-939.	219.	-193.	482.	502.	0.0032	-0.0023	-0.0003	0.0060	0.0130	-0.0054	-0.0054	487.
.0110		-56.		-1199.		276.		0.0048		-0.0031	-56.	-1199.	276.	-247.	677.	669.	0.0048	-0.0031	-0.0004	0.0081	0.0191	-0.0072	-0.0072	663.
.0120		-61.		-1405.		283.		0.0067		-0.0039	-61.	-1405.	283.	-223.	862.	864.	0.0067	-0.0039	-0.0004	0.0117	0.0261	-0.0082	-0.0082	836.
.0130		-65.		-1571.		239.		0.0089		-0.0047	-65.	-1571.	239.	-124.	1039.	1094.	0.0089	-0.0047	-0.0005	0.0165	0.0340	-0.0084	-0.0084	1021.
.0140		-59.		-1704.		133.		0.0112		-0.0055	-59.	-1704.	133.	18.	1214.	1334.	0.0112	-0.0055	-0.0009	0.0220	0.0435	-0.0082	-0.0082	1216.
.0150		-36.		-1796.		-8.		0.0135		-0.0061	-36.	-1796.	-8.	217.	1387.	1582.	0.0135	-0.0061	-0.0018	0.0277	0.0542	-0.0071	-0.0071	1426.
.0160		-24.		-1898.		-89.		0.0157		-0.0066	-24.	-1898.	-89.	484.	1592.	1878.	0.0157	-0.0066	-0.0031	0.0336	0.0645	-0.0048	-0.0048	1691.
.0170		74.		-2111.		-209.		0.0176		-0.0070	74.	-2111.	-209.	745.	1755.	2234.	0.0176	-0.0070	-0.0053	0.0390	0.0758	-0.0021	-0.0021	1980.
.0180		407.		-2462.		-553.		0.0197		-0.0073	407.	-2462.	-553.	960.	1725.	2650.	0.0197	-0.0073	-0.0088	0.0435	0.0890	0.0009	0.0009	2228.
.0190		903.		-2845.		-1048.		0.0220		-0.0076	903.	-2845.	-1048.	1236.	1494.	3142.	0.0220	-0.0076	-0.0130	0.0479	0.1009	0.0049	0.0049	2489.
.0200		1416.		-3085.		-1630.		0.0248		-0.0076	1416.	-3085.	-1630.	1597.	1120.	3613.	0.0248	-0.0076	-0.0178	0.0512	0.1095	0.0089	0.0089	2768.
.0210		1668.		-3003.		-2051.		0.0281		-0.0073	1668.	-3003.	-2051.	1854.	924.	3809.	0.0281	-0.0073	-0.0232	0.0482	0.1171	0.0094	0.0094	2922.
.0220		1606.		-2464.		-2234.		0.0321		-0.0063	1606.	-2464.	-2234.	1825.	1080.	3514.	0.0321	-0.0063	-0.0291	0.0352	0.1277	0.0046	0.0046	2767.
.0230		1381.		-1442.		-2333.		0.0353		-0.0046	1381.	-1442.	-2333.	1902.	1254.	2961.	0.0353	-0.0046	-0.0348	0.0193	0.1343	0.0008	0.0008	2518.
.0240		688.		-210.		-1837.		0.0357		-0.0022	688.	-210.	-1837.	2445.	1609.	2527.	0.0357	-0.0022	-0.0389	0.0083	0.1252	0.0026	0.0026	2606.
.0250		353.		756.		-1630.		0.0340		0.0006	353.	756.	-1630.	2804.	1689.	2070.	0.0340	0.0006	-0.0437	-0.0036	0.1187	0.0062	0.0062	2610.
.0260		1352.		1188.		-2749.		0.0310		0.0036	1352.	1188.	-2749.	2650.	737.	1588.	0.0310	0.0036	-0.0505	-0.0175	0.1266	0.0115	0.0115	2141.
.0270		2236.		1248.		-3279.		0.0246		0.0067	2236.	1248.	-3279.	2940.	-268.	1626.	0.0246	0.0067	-0.0552	-0.0222	0.1156	0.0252	0.0252	2272.
.0280		1826.		1453.		-2283.		0.0159		0.0095	1826.	1453.	-2283.	3680.	-369.	1767.	0.0159	0.0095	-0.0566	-0.0226	0.0808	0.0390	0.0390	2763.
.0290		1701.		2114.		-2121.		0.0099		0.0122	1701.	2114.	-2121.	3347.	-472.	785.	0.0099	0.0122	-0.0596	-0.0415	0.0718	0.0364	0.0364	2339.
.0300		1931.		2867.		-1976.		0.0059		0.0149	1931.	2867.	-1976.	2410.	-476.	-595.	0.0059	0.0149	-0.0624	-0.0698	0.0732	0.0267	0.0267	1704.
.0310		1482.		3026.		-879.		0.0015		0.0154	1482.	3026.	-879.	2238.	-273.	-1064.	0.0015	0.0154	-0.0602	-0.0789	0.0470	0.0216	0.0216	1680.
.0320		1463.		2706.		-850.		-0.0005		0.0136	1463.	2706.	-850.	2458.	-1014.	-1008.	-0.0005	0.0136	-0.0558	-0.0702	0.0158	0.0163	0.0163	1917.
.0330		1961.		2554.		-1768.		0.0012		0.0109	1961.	2554.	-1768.	2333.	-1963.	-1248.	0.0012	0.0109	-0.0506	-0.0636	-0.0317	0.0041	0.0041	2220.

.0180	407.	-2462.	-553.	960.	1725.	2650.	.0197	-.0073	-.0088	.0435	.0390	.0009	2228.
.0190	903.	-2845.	-1048.	1236.	1494.	3142.	.0220	-.0076	-.0130	.0479	.1009	.0049	2489.
.0200	1416.	-3085.	-1630.	1597.	1120.	3613.	.0248	-.0076	-.0178	.0512	.1095	.0089	2768.
.0210	1668.	-3003.	-2051.	1854.	924.	3809.	.0281	-.0073	-.0232	.0482	.1171	.0094	2922.
.0220	1606.	-2464.	-2234.	1825.	1080.	3514.	.0321	-.0063	-.0291	.0352	.1277	.0046	2767.
.0230	1761.	-1442.	-2333.	1902.	1254.	2961.	.0353	-.0046	-.0348	.0193	.1343	.0008	2518.
.0240	688.	-210.	-1837.	2445.	1609.	2527.	.0357	-.0022	-.0389	.0083	.1252	.0026	2606.
.0250	353.	756.	-1630.	2804.	1689.	2070.	.0340	.0006	-.0437	-.0036	.1187	.0062	2610.
.0260	1352.	1188.	-2749.	2650.	737.	1588.	.0310	.0036	-.0505	-.0175	.1266	.0115	2141.
.0270	2236.	1248.	-3279.	2940.	-268.	1626.	.0246	.0067	-.0552	-.0222	.1156	.0252	2272.
.0280	1826.	1453.	-2283.	3680.	-369.	1767.	.0159	.0095	-.0566	-.0226	.0808	.0390	2763.
.0290	1701.	2114.	-2121.	3347.	-472.	785.	.0099	.0122	-.0596	-.0415	.0718	.0364	2339.
.0300	1931.	2867.	-1976.	2410.	-476.	-595.	.0059	.0149	-.0624	-.0698	.0732	.0267	1704.
.0310	1482.	3026.	-879.	2238.	-273.	-1064.	.0015	.0154	-.0602	-.0789	.0470	.0216	1680.
.0320	1463.	2706.	-850.	2458.	-1014.	-1008.	-.0005	.0136	-.0558	-.0702	.0158	.0163	1917.

.0330 1961. 2554. -1368. 2333. -1963. -1248. .0012 .0109 -.0506 -.0636 -.0017 .0041 2220.

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	2	MEMBER	2	SEQUENCE	802	LOCATION	END	TYPE	EL						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)		DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.0340	1844.	2572.	-900.	2022.	-2041.	-1669.		.0056	.0073	-.0429	-.0602	-.0195	-.0157	2240.	
.0350	1343.	2417.	-676.	1846.	-2191.	-1965.		.0123	.0015	-.0328	-.0483	-.0413	-.0419	2342.	
.0360	1315.	2172.	-1396.	1920.	-3149.	-2060.		.0206	-.0054	-.0217	-.0265	-.0646	-.0678	2848.	
.0370	1316.	1711.	-1192.	2043.	-3760.	-1860.		.0286	-.0121	-.0088	-.0042	-.0964	-.0903	3145.	
.0380	871.	570.	-87.	1497.	-3573.	-1655.		.0362	-.0198	.0046	.0104	-.1260	-.1204	2840.	
.0390	556.	-733.	-109.	323.	-3788.	-1909.		.0440	-.0283	.0174	.0204	-.1413	-.1601	2867.	
.0400	297.	-1222.	-144.	-311.	-4340.	-2282.		.0492	-.0350	.0324	.0347	-.1594	-.1889	3312.	
.0410	-746.	-1609.	1971.	-916.	-3647.	-2508.		.0497	-.0397	.0510	.0444	-.2143	-.2085	3046.	
.0420	-1712.	-2898.	3561.	-3152.	-2534.	-3271.		.0487	-.0452	.0682	.0378	-.2276	-.2411	3506.	
.0430	-2204.	-3877.	3544.	-5709.	-2119.	-4522.		.0453	-.0498	.0854	.0319	-.2212	-.2710	5113.	
.0440	-3321.	-3420.	5034.	-6590.	-1263.	-5387.		.0348	-.0503	.1082	.0435	-.2463	-.2691	5800.	
.0450	-4572.	-2980.	7218.	-7556.	272.	-6143.		.0197	-.0487	.1321	.0547	-.2637	-.2550	6567.	
.0460	-4737.	-3541.	6979.	-9958.	1184.	-7305.		.0042	-.0479	.1503	.0570	-.2269	-.2491	8363.	
.0470	-4489.	-3546.	5995.	-11110.	1414.	-7964.		-.0746	-.0448	.1671	.0771	-.1923	-.2202	9263.	
.0480	-4687.	-2515.	6846.	-9874.	2002.	-7453.		-.0383	-.0377	.1847	.1193	-.1967	-.1539	8447.	
.0490	-4386.	-2227.	7097.	-9258.	2661.	-6805.		-.0598	-.0304	.1941	.1488	-.1735	-.0916	7949.	
.0500	-3279.	-2561.	5025.	-9824.	2676.	-6664.		-.0752	-.0242	.1911	.1570	-.1030	-.0491	8202.	
.0510	-2797.	-1378.	3828.	-8418.	2721.	-6109.		-.0885	-.0151	.1831	.1703	-.0529	.0089	7247.	
.0520	-2887.	748.	4366.	-5287.	3131.	-4806.		-.0994	-.0035	.1700	.1841	-.0600	.0819	5258.	
.0530	-2107.	1367.	3420.	-3753.	3059.	-3599.		-.1023	.0058	.1439	.1691	-.0224	.1280	4066.	
.0540	-1057.	1236.	1296.	-3124.	2558.	-2634.		-.0980	.0133	.1077	.1327	.0337	.1509	3249.	
.0550	-1092.	2972.	946.	-567.	2420.	-1463.		-.0921	.0233	.0705	.0991	.0422	.1856	1944.	
.0560	-1211.	5296.	1126.	2460.	2233.	-353.		-.0835	.0343	.0306	.0585	.0348	.2196	2252.	
.0570	-312.	5611.	-407.	3371.	1440.	527.		-.0701	.0416	-.0156	-.0026	.0642	.2245	2496.	
.0580	409.	4884.	-1641.	3803.	797.	1695.		-.0563	.0466	-.0607	-.0634	.0891	.2201	2857.	
.0590	230.	5499.	-1108.	5623.	732.	2926.		-.0451	.0530	-.0981	-.1091	.0770	.2298	4301.	
.0600	344.	6616.	-1156.	7002.	586.	3416.		-.0336	.0589	-.1309	-.1536	.0800	.2335	5266.	
.0610	1087.	6249.	-2526.	6809.	238.	3644.		-.0215	.0608	-.1597	-.1948	.1175	.2195	5208.	
.0620	1426.	5080.	-2901.	7029.	336.	4639.		-.0131	.0601	-.1773	-.2074	.1394	.2137	5681.	
.0630	1542.	4636.	-2461.	8375.	627.	5909.		-.0082	.0592	-.1826	-.1892	.1425	.2245	6922.	
.0640	2291.	4430.	-3387.	9188.	513.	6512.		-.0028	.0565	-.1808	-.1592	.1722	.2294	7599.	
.0650	3139.	7532.	-4954.	9328.	396.	6967.		.0028	.0504	-.1717	-.1163	.2179	.2246	7852.	
.0660	3463.	2414.	-5412.	10110.	627.	7993.		.0063	.0425	-.1531	-.0504	.2394	.2268	8701.	
.0670	3961.	1575.	-5778.	11178.	594.	8994.		.0097	.0340	-.1289	.0254	.2499	.2306	9679.	
.0680	4817.	556.	-6959.	11319.	191.	9370.		.0159	.0238	-.1043	-.0918	.2719	.2175	9905.	
.0690	5072.	-812.	-7482.	10812.	174.	9446.		.0236	.0121	-.0792	.1458	.2834	.1880	9678.	
.0700	4650.	-2008.	-6800.	10144.	562.	9289.		.0324	.0004	-.0544	.1858	.2703	.1489	9279.	
.0710	4341.	-2973.	-6170.	8795.	721.	8484.		.0437	-.0110	-.0336	.2026	.2524	.0951	8251.	

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
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.0610	1087.	6249.	-2526.	6809.	238.	3644.	-.0215	.0608	-.1597	-.1948	.1175	.2195	5208.
.0620	1426.	5080.	-2901.	7029.	336.	4639.	-.0131	.0601	-.1773	-.2074	.1394	.2137	5681.
.0630	1542.	4636.	-2461.	8375.	627.	5909.	-.0082	.0592	-.1826	-.1892	.1425	.2245	6922.
.0640	2291.	4430.	-3387.	9188.	517.	6512.	-.0028	.0565	-.1808	-.1592	.1722	.2294	7599.
.0650	3139.	3532.	-4954.	9328.	396.	6957.	.0028	.0504	-.1717	-.1163	.2179	.2246	7852.
.0660	3463.	2414.	-5412.	10118.	627.	7593.	.0063	.0425	-.1531	-.0504	.2394	.2268	8701.
.0670	3961.	1575.	-5778.	11178.	594.	8994.	.0097	.0340	-.1289	.0254	.2499	.2306	9679.
.0680	4817.	556.	-6959.	11319.	191.	9370.	.0159	.0238	-.1043	-.0918	.2719	.2175	9905.
.0690	5072.	-812.	-7482.	10812.	174.	9446.	.0236	.0121	-.0792	.1458	.2834	.1880	9678.
.0700	4650.	-2008.	-6800.	10144.	562.	9289.	.0324	.0064	-.0544	.1858	.2703	.1489	9279.
.0710	4341.	-2973.	-6170.	8795.	721.	8484.	.0437	-.0110	-.0336	.2026	.2524	.0951	8251.

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2 SAFETY COLD FKW24F--2 PSV

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

SECTION	MEMBR	SEQUENCE	LOCATION	END	TYPE	DL	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)						
.0720	4052.	-4186.	-5685.	6682.	672.	7258.	.0572	-.0225	-.0179	.1977	.2316	.0258	6665.						
.0730	5374.	-5664.	-4547.	4554.	638.	6189.	.0710	-.0339	-.0054	.1822	.1896	-.0482	5197.						
.0740	2691.	-6952.	-3169.	2553.	344.	5139.	.0848	-.0440	.0037	.1567	.1328	-.1215	3876.						
.0750	2176.	-7832.	-2114.	263.	-98.	3670.	.0993	-.0526	.0085	.1162	.0802	-.1979	2481.						
.0760	1372.	-8302.	-1034.	-2080.	-366.	1917.	.1132	-.0599	.0105	.0667	.0304	-.2742	1922.						
.0770	406.	-8309.	83.	-3848.	-654.	305.	.1246	-.0653	.0116	.0213	-.0238	-.3386	2639.						
.0780	-141.	-7992.	818.	-4967.	-1738.	-964.	.1324	-.0686	.0122	-.0149	-.0775	-.3844	3528.						
.0790	-450.	-7635.	1416.	-5781.	-2013.	-1944.	.1358	-.0699	.0128	-.0439	-.1236	-.4136	4330.						
.0800	-993.	-7065.	2128.	-6429.	-2226.	-2913.	.1340	-.0692	.0141	-.0679	-.1582	-.4295	4989.						
.0810	-1489.	-5815.	2494.	-6691.	-2337.	-4045.	.1268	-.0659	.0166	-.0842	-.1799	-.4281	5501.						
.0820	-1580.	-4165.	2532.	-6376.	-2644.	-4963.	.1133	-.0599	.0210	-.0875	-.1952	-.4038	5730.						
.0830	-1487.	-3009.	2769.	-5774.	-2849.	-5250.	.0933	-.0525	.0278	-.0774	-.2086	-.3598	5599.						
.0840	-1364.	-2334.	2945.	-5336.	-2854.	-5235.	.0685	-.0445	.0360	-.0614	-.2123	-.3061	5415.						
.0850	-1178.	-1095.	2704.	-4941.	-2840.	-5695.	.0410	-.0347	.0449	-.0457	-.2041	-.2458	5430.						
.0860	-1187.	925.	2673.	-4296.	-2609.	-6370.	.0116	-.0231	.0552	-.0304	-.1960	-.1778	5469.						
.0870	-1461.	2638.	3100.	-3812.	-2008.	-6871.	-.0185	-.0116	.0657	-.0167	-.1890	-.1095	5467.						
.0880	-1757.	3584.	3275.	-3871.	-1392.	-7211.	-.0470	-.0014	.0745	-.0073	-.1733	-.0484	5596.						
.0890	-1727.	4594.	3249.	-3890.	-905.	-7550.	-.0729	.0086	.0814	-.0002	-.1556	.0074	5757.						
.0900	-2056.	5963.	3722.	-3447.	-220.	-7778.	-.0959	.0185	.0872	.0068	-.1464	.0664	5736.						
.0910	-2487.	6811.	4297.	-3175.	641.	-7794.	-.1145	.0266	.0903	.0107	-.1340	.1132	5689.						
.0920	-2605.	6828.	4285.	-3283.	1288.	-7557.	-.1275	.0321	.0898	.0124	-.1098	.1467	5627.						
.0930	-2528.	6744.	4166.	-2871.	1669.	-6924.	-.1356	.0361	.0877	.0207	-.0903	.1778	5176.						
.0940	-2468.	6724.	4278.	-1711.	1923.	-5802.	-.1392	.0389	.0851	.0384	-.0820	.2084	4278.						
.0950	-2262.	6183.	3969.	-723.	2009.	-4492.	-.1369	.0391	.0808	.0566	-.0675	.2267	3352.						
.0960	-1970.	5306.	3224.	-147.	3025.	-3279.	-.1290	.0370	.0746	.0705	-.0432	.2299	2600.						
.0970	-1938.	4876.	2815.	673.	2204.	-2199.	-.1173	.0342	.0689	.0835	-.0253	.2271	2147.						
.0980	-2035.	4710.	2584.	1648.	2399.	-1217.	-.1029	.0307	.0635	.0960	-.0134	.2194	2126.						
.0990	-1863.	3956.	1917.	2097.	2345.	-274.	-.0866	.0257	.0571	.1045	.0041	.2014	2129.						
.1000	-1538.	2659.	1244.	2138.	2209.	700.	-.0698	.0197	.0502	.1092	.0214	.1772	2125.						
.1010	-1344.	1545.	1051.	2214.	2202.	1542.	-.0540	.0142	.0440	.1106	.0299	.1528	2347.						
.1020	-1130.	689.	792.	2092.	2141.	1998.	-.0389	.0091	.0373	.1059	.0384	.1251	2426.						
.1030	-728.	-375.	204.	1527.	1908.	2216.	-.0244	.0040	.0295	.0947	.0517	.0925	2223.						
.1040	-327.	-1661.	-88.	389.	1702.	2533.	-.0112	-.0009	.0215	.0815	.0590	.0608	2142.						
.1050	-22.	-2720.	-62.	396.	1555.	2822.	.0010	-.0050	.0136	.0665	.0592	.0320	2189.						
.1060	276.	-3278.	-370.	-177.	1320.	2697.	.0136	-.0084	.0045	.0459	.0542	.0010	2028.						
.1070	438.	-3388.	-808.	-752.	1137.	2259.	.0264	-.0111	-.0057	.0209	.0724	-.0312	1779.						
.1080	484.	-3279.	-955.	-1008.	1036.	1939.	.0384	-.0130	-.0162	-.0029	.0747	-.0581	1630.						
.1090	621.	-3223.	-996.	-1037.	882.	1852.	.0493	-.0143	-.0274	-.0245	.0740	-.0792	1550.						

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2 SAFETY COLD FKW24F--2 PSV

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.0990	-1863.	3956.	1917.	2099.	2345.	-274.	-0866	.0257	.0571	.1045	.0041	.2014	2129.
.1000	-1538.	2659.	1244.	2138.	2209.	700.	-0698	.0197	.0502	.1092	.0214	.1772	2125.
.1010	-1344.	1545.	1051.	2214.	2202.	1542.	-0540	.0142	.0440	.1106	.0299	.1528	2347.
.1020	-1130.	689.	792.	2092.	2141.	1998.	-0389	.0091	.0373	.1059	.0384	.1251	2426.
.1030	-728.	-375.	204.	1527.	1908.	2216.	-0244	.0040	.0295	.0947	.0517	.0925	2223.
.1040	-327.	-1661.	-88.	889.	1702.	2533.	-0112	-0009	.0215	.0815	.0590	.0608	2142.
.1050	-22.	-2720.	-62.	396.	1555.	2822.	.0010	-0050	.0136	.0665	.0592	.0320	2189.
.1060	276.	-3278.	-370.	-177.	1320.	2697.	.0136	-0084	.0045	.0459	.0542	.0010	2028.
.1070	438.	-3388.	-808.	-752.	1137.	2259.	.0264	-0111	-0057	.0209	.0724	-0312	1779.
.1080	484.	-3279.	-955.	-1000.	1036.	1939.	.0384	-0130	-0162	-0029	.0747	-0581	1630.
.1090	621.	-3223.	-996.	-1037.	882.	1852.	.0493	-0143	-0274	-0245	.0740	-0792	1550.

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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	MEMBER	SEQUENCE	LOCATION	END	TYPE	EL	DX	DY	DZ	RX	RY	RZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.1100	676.	-3275.	-1073.	-1320.	990.	1631.	.0598	-0153	-0402	-0504	.0836	-1021	1564.
.1110	1062.	-3025.	-1858.	-1349.	676.	1334.	.0695	-0156	-0545	-0728	.0994	-1199	1357.
.1120	1687.	-2618.	-2631.	-491.	-59.	1575.	.0768	-0148	-0679	-0821	.1018	-1224	1113.
.1130	2312.	-2841.	-2953.	480.	-656.	2367.	.0823	-0141	-0812	-0864	.0986	-1189	1687.
.1140	3060.	-3536.	-3679.	778.	-1175.	2991.	.0883	-0140	-0960	-0974	.1110	-1225	2229.
.1150	3693.	-3527.	-4660.	1226.	-1761.	3241.	.0946	-0133	-1106	-1097	.1249	-1259	2620.
.1160	3762.	-2729.	-4779.	2450.	-2060.	3572.	.0998	-0113	-1220	-1158	.1188	-1205	3233.
.1170	3819.	-2388.	-4885.	3285.	-2288.	3982.	.1049	-0101	-1326	-1232	.1149	-1184	3806.
.1180	3898.	-2699.	-5171.	3393.	-2377.	4319.	.1100	-0101	-1425	-1347	.1215	-1238	4034.
.1190	4261.	-2540.	-6066.	3821.	-3027.	4538.	.1140	-0096	-1501	-1387	.1249	-1238	4489.
.1200	4316.	-1848.	-6204.	5072.	-3631.	5009.	.1147	-0081	-1526	-1302	.1051	-1106	5393.
.1210	3756.	-1822.	-5088.	5825.	-3335.	5621.	.1123	-0072	-1510	-1229	.0797	-0991	5901.
.1220	3810.	-2432.	-5417.	5061.	-3382.	5510.	.1098	-0077	-1493	-1262	.0868	-1025	5574.
.1230	3592.	-2246.	-5403.	4794.	-3392.	5190.	.1035	-0070	-1418	-1203	.0812	-0962	5283.
.1240	2909.	-1470.	-4270.	5448.	-3178.	5165.	.0919	-0050	-1267	-0980	.0476	-0728	5495.
.1250	2483.	-1633.	-3456.	5041.	-2919.	5035.	.0779	-0042	-1084	-0776	.0277	-0552	5190.
.1260	2024.	-2303.	-2852.	3504.	-2342.	4436.	.0620	-0044	-0872	-0640	.0249	-0465	4124.
.1270	1423.	-1743.	-2343.	2465.	-1941.	3346.	.0433	-0028	-0610	-0437	.0140	-0292	3092.
.1280	135.	-325.	-577.	2168.	-1008.	2249.	.0205	.0003	-0290	-0150	-0194	.0006	2212.
.1290	-769.	67.	587.	629.	-69.	955.	-0029	.0021	.0027	.0052	-0309	.0200	772.
.1300	-1108.	-279.	790.	-1775.	513.	-493.	-0263	.0030	.0327	.0200	-0229	.0321	1289.
.1310	-2106.	334.	2334.	-2874.	1465.	-1643.	-0523	.0059	.0653	.0451	-0442	.0601	2446.
.1320	-2889.	1498.	3583.	-3489.	2109.	-2847.	-0777	.0098	.0959	.0710	-0683	.0925	3351.
.1330	-3141.	1702.	3991.	-4976.	2489.	-4046.	-0998	.0123	.1203	.0849	-0711	.1121	4637.
.1340	-3180.	1338.	4148.	-6564.	2679.	-4931.	-1185	.0140	.1394	.0932	-0707	.1257	5821.
.1350	-3574.	1819.	4960.	-6953.	2863.	-5505.	-1344	.0169	.1550	.1033	-0923	.1457	6281.
.1360	-4288.	2902.	6117.	-6927.	3255.	-6168.	-1453	.0203	.1651	.1036	-1187	.1606	6626.
.1370	-4322.	3469.	5741.	-7809.	3072.	-7158.	-1488	.0221	.1654	.0846	-1169	.1552	7434.
.1380	-4547.	3763.	5816.	-8312.	2981.	-7659.	-1483	.0235	.1605	.0616	-1249	.1465	7879.
.1390	-4926.	4424.	6416.	-7799.	2797.	-7657.	-1450	.0255	.1519	.0416	-1517	.1436	7605.
.1400	-4818.	5036.	6151.	-7377.	2147.	-7724.	-1374	.0271	.1371	.0142	-1665	.1337	7343.
.1410	-4647.	5085.	5769.	-7288.	1615.	-7670.	-1268	.0278	.1177	-0205	-1717	.1154	7214.
.1420	-4325.	4897.	5309.	-6946.	926.	-7284.	-1147	.0281	.0961	-0528	-1785	.0981	6813.
.1430	-4117.	4859.	5328.	-6067.	396.	-6595.	-1023	.0287	.0745	-0798	-1933	.0864	6046.
.1440	-3663.	4675.	4733.	-5516.	-229.	-6064.	-0882	.0287	.0516	-1083	-1914	.0702	5528.
.1450	-3013.	4206.	3700.	-5222.	-853.	-5544.	-0734	.0278	.0289	-1341	-1760	.0511	5115.
.1460	-2782.	3793.	3516.	-4318.	-1025.	-4585.	-0599	.0268	.0103	-1467	-1714	.0411	4301.
.1470	-2219.	3472.	2766.	-3295.	-1456.	-3599.	-0466	.0255	-0059	-1500	-1583	.0352	3432.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.25.50.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

.1370	-4322.	3469.	5741.	-7809.	3072.	-7158.	-1488.	.0221	.1654	.0846	-.1169	.1552	7434.
.1380	-4547.	3763.	5816.	-8312.	2981.	-7659.	-1483.	.0235	.1605	.0616	-.1249	.1465	7879.
.1390	-4926.	4424.	6416.	-7799.	2797.	-7657.	-1450.	.0255	.1519	.0416	-.1517	.1436	7605.
.1400	-4818.	5036.	6151.	-7377.	2147.	-7724.	-1374.	.0271	.1371	.0142	-.1665	.1337	7343.
.1410	-4643.	5085.	5769.	-7288.	1615.	-7670.	-1268.	.0270	.1177	-.0205	-.1717	.1154	7214.
.1420	-4325.	4897.	5309.	-6946.	926.	-7284.	-1147.	.0281	.0961	-.0528	-.1785	.0981	6813.
.1430	-4147.	4859.	5328.	-6067.	796.	-6595.	-1023.	.0287	.0745	-.0798	-.1933	.0864	6046.
.1440	-3663.	4675.	4733.	-5516.	-229.	-6064.	-.0882.	.0287	.0516	-.1083	-.1914	.0702	5528.
.1450	-3013.	4206.	3700.	-5222.	-853.	-5544.	-.0734.	.0278	.0289	-.1341	-.1760	.0511	5165.
.1460	-2782.	3793.	3516.	-4318.	-1025.	-4585.	-.0599.	.0268	.0103	-.1467	-.1714	.0411	4301.
.1470	-2219.	3472.	2766.	-3295.	-1456.	-3599.	-.0466.	.0255	-.0059	-.1500	-.1583	.0352	3432.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.25.50.

S/RV PIPING KEWAUNEE GKWOBF 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	EL							STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	HX (DEG)	RY (DEG)	RZ (DEG)	(PSI)
.1480	-1608.	3029.	1789.	-2533.	-1697.	-2721.	-.0335	.0236	-.0199	-.1491	-.1318	.0280	2755.
.1490	-1010.	2489.	739.	-1778.	-1803.	-1797.	-.0212	.0210	-.0311	-.1406	-.0788	.0230	2093.
.1500	-320.	1955.	-308.	-640.	-2021.	-601.	-.0104	.0184	-.0391	-.1199	-.0697	.0257	1485.
.1510	257.	1246.	-927.	645.	-2028.	839.	-.0012	.0156	-.0443	-.0924	-.0451	.0330	1542.
.1520	1100.	270.	-2132.	1393.	-2185.	2046.	.0084	.0121	-.0496	-.0680	-.0075	.0316	2225.
.1530	1638.	-577.	-2956.	2078.	-2059.	3114.	.0174	.0088	-.0538	-.0456	.0268	.0347	2880.
.1540	2049.	-1158.	-3544.	2891.	-1943.	4106.	.0259	.0059	-.0572	-.0243	.0526	.0360	3629.
.1550	2450.	-1856.	-4060.	3407.	-1841.	4988.	.0344	.0030	-.0610	-.0092	.0762	.0337	4257.
.1560	2429.	-2731.	-3948.	3505.	-1274.	5713.	.0425	.0000	-.0651	-.0033	.0960	.0254	4599.
.1570	2556.	-3290.	-4362.	3344.	-1031.	6016.	.0508	-.0024	-.0702	-.0047	.1187	.0131	4691.
.1580	2459.	-3371.	-4358.	3516.	-773.	6251.	.0575	-.0038	-.0743	-.0067	.1277	.0056	4862.
.1590	2147.	-3564.	-3815.	3661.	-317.	6571.	.0622	-.0046	-.0778	-.0105	.1278	.0004	5075.
.1600	2300.	-4077.	-4130.	3225.	-313.	6667.	.0661	-.0055	-.0825	-.0197	.1392	-.0088	4997.
.1610	2483.	-4244.	-4519.	2968.	-486.	6646.	.0680	-.0055	-.0863	-.0276	.1457	-.0128	4917.
.1620	1982.	-3845.	-3593.	3325.	-50.	6717.	.0661	-.0038	-.0860	-.0315	.1316	-.0062	5052.
.1630	1869.	-3522.	-3466.	3114.	67.	6406.	.0631	-.0019	-.0879	-.0406	.1320	-.0027	4801.
.1640	1950.	-3340.	-3755.	2538.	56.	5908.	.0585	.0001	-.0885	-.0513	.1405	.0001	4374.
.1650	1583.	-2779.	-3107.	2597.	385.	5625.	.0504	.0033	-.0857	-.0537	.1312	.0144	4184.
.1660	1465.	-1958.	-2836.	2802.	390.	5250.	.0405	.0071	-.0814	-.0518	.1221	.0338	4020.
.1670	1504.	-1347.	-2870.	2654.	324.	4740.	.0297	.0107	-.0765	-.0509	.1205	.0513	3668.
.1680	1567.	-832.	-2995.	2404.	211.	4202.	.0179	.0141	-.0706	-.0488	.1192	.0688	3266.
.1690	1242.	-20.	-2369.	2589.	371.	3776.	.0048	.0179	-.0622	-.0421	.1034	.0914	3096.
.1700	1012.	887.	-1958.	2666.	388.	3184.	-.0078	.0217	-.0537	-.0369	.0889	.1112	2812.
.1710	1231.	1516.	-2450.	2214.	-61.	2351.	-.0185	.0244	-.0466	-.0365	.0858	.1224	2178.
.1720	757.	2028.	-1618.	1994.	166.	1779.	-.0295	.0267	-.0377	-.0352	.0653	.1332	1805.
.1730	249.	2612.	-765.	1703.	383.	1083.	-.0390	.0286	-.0288	-.0363	.0432	.1392	1384.
.1740	-45.	3193.	-430.	1100.	377.	118.	-.0462	.0297	-.0209	-.0416	.0289	.1374	788.
.1750	-533.	3599.	265.	558.	547.	-712.	-.0523	.0299	-.0122	-.0449	.0093	.1328	713.
.1760	-909.	3738.	900.	91.	578.	-1331.	-.0574	.0292	-.0028	-.0438	-.0127	.1267	980.
.1770	-1309.	3696.	1696.	-348.	702.	-1818.	-.0614	.0276	.0075	-.0395	-.0355	.1189	1334.
.1780	-1444.	3620.	1913.	-936.	582.	-2428.	-.0636	.0252	.0180	-.0336	-.0495	.1067	1797.
.1790	-1801.	3595.	2440.	-1297.	662.	-2923.	-.0651	.0222	.0301	-.0224	-.0673	.0949	2201.
.1800	-2223.	3476.	3139.	-1528.	850.	-2261.	-.0660	.0186	.0436	-.0065	-.0863	.0833	2494.
.1810	-2088.	3129.	2893.	-2025.	548.	-3658.	-.0651	.0142	.0560	.0104	-.0922	-.0679	2843.
.1820	-2217.	2716.	3173.	-2321.	564.	-3856.	-.0639	.0094	.0694	.0306	-.1031	.0537	3057.
.1830	-2424.	2344.	3541.	-2520.	672.	-4020.	-.0621	.0046	.0824	.0514	-.1137	.0392	3230.
.1840	-2461.	1948.	3590.	-2852.	681.	-4270.	-.0589	-.0004	.0937	.0652	-.1172	.0218	3491.
.1850	-2411.	1441.	3588.	-3188.	671.	-4438.	-.0549	-.0054	.1030	.0850	-.1185	.0030	3711.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.25.50.

S/RV PIPING KEWAUNEE GKWOBF 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

.1750	-527.	3599.	265.	558.	547.	-712.	-.0523	.0299	-.0122	-.0449	.0093	.1328	713.
.1760	-909.	3738.	900.	91.	570.	-1331.	-.0574	.0292	-.0028	-.0438	-.0127	.1267	980.
.1770	-1309.	3696.	1696.	-348.	702.	-1818.	-.0614	.0276	.0075	-.0395	-.0355	.1189	1334.
.1780	-1444.	3620.	1917.	-936.	582.	-2428.	-.0636	.0252	.0180	-.0336	-.0495	.1067	1797.
.1790	-1801.	3555.	2440.	-1297.	662.	-2923.	-.0651	.0222	.0301	-.0224	-.0673	.0949	2201.
.1800	-2223.	3476.	3139.	-1528.	850.	-3261.	-.0660	.0186	.0436	-.0065	-.0863	.0833	2494.
.1810	-2048.	3129.	2893.	-2025.	548.	-3658.	-.0651	.0142	.0560	.0104	-.0922	.0679	2843.
.1820	-2217.	2716.	3173.	-2321.	564.	-3856.	-.0639	.0094	.0694	.0306	-.1031	.0537	3057.
.1830	-2424.	2344.	3541.	-2520.	672.	-4020.	-.0621	.0046	.0824	.0514	-.1137	.0392	3230.
.1840	-2461.	1948.	3590.	-2812.	601.	-4270.	-.0589	-.0004	.0937	.0692	-.1172	.0218	3491.
.1850	-2411.	1441.	3582.	-3182.	671.	-4438.	-.0549	-.0054	.1030	.0850	-.1185	.0036	3711.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.25.50.

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	EL								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)	
.1860	-2226.	815.	3451.	-3398.	508.	-4430.	-.0499	-.0104	.1101	.1003	-.1199	-.0139	3779.	
.1870	-2178.	151.	3623.	-3404.	483.	-4226.	-.0442	-.0151	.1150	.1137	-.1253	-.0303	3672.	
.1880	-1839.	-461.	3231.	-3501.	159.	-4109.	-.0366	-.0195	.1160	.1212	-.1231	-.0493	3640.	
.1890	-1556.	-923.	2897.	-3457.	-153.	-3953.	-.0277	-.0234	.1140	.1238	-.1224	-.0684	3541.	
.1900	-1532.	-1256.	2971.	-3202.	-257.	-3678.	-.0179	-.0266	.1094	.1220	-.1273	-.0865	3292.	
.1910	-1269.	-1524.	2511.	-3096.	-625.	-3525.	-.0066	-.0294	.1009	.1128	-.1248	-.1073	3190.	
.1920	-1082.	-1655.	2170.	-2942.	-910.	-3380.	.0052	-.0313	.0898	.0978	-.1227	-.1273	3082.	
.1930	-1048.	-1650.	2107.	-2659.	-1044.	-3184.	.0164	-.0324	.0768	.0791	-.1237	-.1445	2883.	
.1940	-982.	-1612.	1954.	-2459.	-1165.	-3038.	.0270	-.0327	.0621	.0563	-.1211	-.1601	2749.	
.1950	-861.	-1551.	1712.	-2359.	-1248.	-2950.	.0362	-.0321	.0462	.0307	-.1135	-.1729	2681.	
.1960	-754.	-1437.	1603.	-2164.	-1222.	-2798.	.0432	-.0306	.0306	.0066	-.1052	-.1795	2522.	
.1970	-568.	-1352.	1460.	-1866.	-1201.	-2524.	.0477	-.0284	.0159	-.0134	-.0950	-.1788	2265.	
.1980	-246.	-1349.	1114.	-1572.	-1223.	-2175.	.0500	-.0258	.0024	-.0288	-.0796	-.1724	1988.	
.1990	67.	-1287.	753.	-1232.	-1137.	-1805.	.0503	-.0227	-.0093	-.0394	-.0501	-.1604	1660.	
.2000	311.	-1045.	434.	-768.	-911.	-1443.	.0488	-.0191	-.0187	-.0447	-.0377	-.1427	1261.	
.2010	591.	-729.	-22.	-219.	-676.	-1053.	.0461	-.0154	-.0262	-.0443	-.0113	-.1208	856.	
.2020	912.	-498.	-557.	409.	-440.	-537.	.0425	-.0118	-.0320	-.0377	.0172	-.0954	543.	
.2030	1219.	-343.	-1039.	1148.	-160.	120.	.0384	-.0085	-.0363	-.0259	.0456	-.0672	785.	
.2040	1550.	-185.	-1585.	1964.	89.	819.	.0344	-.0054	-.0398	-.0107	.0746	-.0383	1436.	
.2050	1905.	-54.	-2201.	2821.	273.	1545.	.0309	-.0027	-.0429	.0061	.1030	-.0103	2175.	
.2060	2219.	-70.	-2700.	3695.	452.	2367.	.0282	-.0005	-.0458	.0237	.1276	.0157	2973.	
.2070	2505.	-262.	-3087.	4517.	598.	3257.	.0265	.0011	-.0490	.0400	.1478	.0382	3775.	
.2080	2792.	-515.	-3498.	5233.	635.	4090.	.0262	.0021	-.0526	.0533	.1644	.0556	4497.	
.2090	2972.	-718.	-3817.	5854.	636.	4798.	.0274	.0026	-.0564	.0626	.1756	.0672	5120.	
.2100	2968.	-888.	-3896.	6330.	701.	5367.	.0298	.0027	-.0600	.0671	.1804	.0728	5614.	
.2110	2872.	-1078.	-3882.	6563.	765.	5757.	.0332	.0023	-.0635	.0666	.1814	.0720	5907.	
.2120	2727.	-1246.	-3630.	6605.	776.	5970.	.0370	.0015	-.0662	.0626	.1786	.0665	6024.	
.2130	2481.	-1350.	-3606.	6554.	800.	6046.	.0403	.0006	-.0675	.0574	.1701	.0587	6034.	
.2140	2192.	-1448.	-3274.	6344.	844.	5971.	.0428	-.0005	-.0671	.0515	.1589	.0492	5900.	
.2150	1957.	-1582.	-2990.	5929.	845.	5737.	.0439	-.0017	-.0649	.0457	.1478	.0386	5590.	
.2160	1748.	-1689.	-2687.	5452.	812.	5402.	.0431	-.0028	-.0602	.0426	.1350	.0296	5202.	
.2170	1524.	-1724.	-2286.	4992.	783.	4999.	.0403	-.0038	-.0529	.0433	.1192	.0234	4791.	
.2180	1350.	-1721.	-1927.	4439.	729.	4478.	.0357	-.0046	-.0434	.0464	.1039	.0186	4278.	
.2190	1216.	-1661.	-1642.	3767.	648.	3815.	.0297	-.0055	-.0320	.0507	.0898	.0145	3640.	
.2200	1009.	-1452.	-1273.	3090.	607.	3036.	.0226	-.0061	-.0188	.0563	.0736	.0117	2949.	
.2210	730.	-1082.	-835.	2398.	592.	2132.	.0147	-.0065	-.0046	.0616	.0555	.0091	2199.	
.2220	465.	-654.	-458.	1585.	539.	1099.	.0068	-.0068	.0096	.0645	.0375	.0050	1350.	
.2230	185.	-242.	-47.	683.	473.	13.	-.0011	-.0070	.0233	.0644	.0182	-.0008	560.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.25.50.

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	2727.	-1246.	-330.	6605.	776.	5970.	.0770	.0015	-.0662	.0626	.1786	.0665	6024.
.2130	2481.	-1350.	-3606.	6554.	800.	6046.	.0403	.0006	-.0675	.0574	.1701	.0587	6034.
.2140	2192.	-1448.	-3274.	6344.	344.	5971.	.0428	-.0005	-.0671	.0515	.1589	.0492	5900.
.2150	1957.	-1582.	-2990.	5920.	845.	5737.	.0439	-.0017	-.0649	.0457	.1478	.0386	5590.
.2160	1748.	-1689.	-2687.	5452.	212.	5402.	.0431	-.0028	-.0602	.0426	.1350	.0296	5202.
.2170	1524.	-1724.	-2286.	4992.	782.	4999.	.0403	-.0038	-.0529	.0433	.1192	.0234	4791.
.2180	1350.	-1721.	-1927.	4439.	720.	4478.	.0357	-.0046	-.0434	.0464	.1039	.0186	4278.
.2190	1216.	-1661.	-1642.	3767.	648.	3815.	.0297	-.0055	-.0320	.0507	.0898	.0145	3640.
.2200	1009.	-1452.	-1273.	3090.	607.	3036.	.0226	-.0061	-.0188	.0563	.0736	.0117	2949.
.2210	730.	-1082.	-835.	2398.	592.	2132.	.0147	-.0065	-.0046	.0616	.0555	.0071	2199.
.2220	465.	-654.	-458.	1585.	539.	1099.	.0068	-.0068	.0096	.0645	.0375	.0050	1350.
.2230	185.	-242.	-47.	683.	473.	13.	-.0011	-.0070	.0233	.0644	.0182	-.0008	560.

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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	EL	TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS
							(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.2240	2	802						-163.	155.	504.	-234.	430.	-1070.	-.0086	-.0071	.0359	.0610	-.0046	-.0080	793.
.2250	2	802						-512.	528.	1065.	-1205.	358.	-2173.	-.0152	-.0072	.0467	.0530	-.0284	-.0176	1692.
.2260	2	802						-815.	831.	1561.	-2231.	224.	-3264.	-.0206	-.0073	.0551	.0406	-.0518	-.0298	2669.
.2270	2	802						-1121.	1032.	2099.	-3197.	72.	-4229.	-.0247	-.0074	.0613	.0254	-.0766	-.0433	3574.
.2280	2	802						-1424.	1132.	2666.	-4052.	-89.	-5026.	-.0273	-.0076	.0653	.0088	-.1021	-.0576	4352.
.2290	2	802						-1677.	1175.	3118.	-4818.	-281.	-5696.	-.0282	-.0079	.0670	-.0091	-.1249	-.0726	5032.
.2300	2	802						-1905.	1226.	3459.	-5426.	-470.	-6230.	-.0274	-.0083	.0668	-.0264	-.1441	-.0875	5578.
.2310	2	802						-2130.	1296.	3739.	-5774.	-632.	-6559.	-.0253	-.0087	.0654	-.0407	-.1506	-.1001	5905.
.2320	2	802						-2280.	1324.	3871.	-5867.	-812.	-6644.	-.0222	-.0093	.0630	-.0503	-.1730	-.1094	5999.
.2330	2	802						-2309.	1276.	3812.	-5740.	-1017.	-6490.	-.0186	-.0098	.0600	-.0546	-.1797	-.1147	5880.
.2340	2	802						-2266.	1183.	3650.	-5385.	-1190.	-6116.	-.0150	-.0103	.0567	-.0534	-.1815	-.1153	5551.
.2350	2	802						-2174.	1078.	3414.	-4833.	-1308.	-5569.	-.0119	-.0106	.0536	-.0470	-.1787	-.1109	5048.
.2360	2	802						-2009.	940.	3076.	-4185.	-1382.	-4909.	-.0095	-.0106	.0506	-.0367	-.1704	-.1022	4447.
.2370	2	802						-1800.	747.	2706.	-3507.	-1377.	-4170.	-.0083	-.0104	.0479	-.0239	-.1576	-.0898	3788.
.2380	2	802						-1593.	523.	2377.	-2828.	-1266.	-3387.	-.0082	-.0097	.0456	-.0094	-.1417	-.0740	3094.
.2390	2	802						-1392.	318.	2059.	-2194.	-1076.	-2630.	-.0093	-.0087	.0437	.0054	-.1231	-.0558	2420.
.2400	2	802						-1205.	161.	1745.	-1648.	-817.	-1951.	-.0114	-.0073	.0421	.0190	-.1020	-.0363	1807.
.2410	2	802						-1065.	55.	1495.	-1201.	-466.	-1360.	-.0143	-.0054	.0406	.0308	-.0797	-.0162	1263.
.2420	2	802						-956.	-11.	1284.	-847.	-62.	-851.	-.0178	-.0033	.0390	.0403	-.0566	.0041	811.
.2430	2	802						-835.	-38.	1047.	-558.	328.	-411.	-.0216	-.0009	.0371	.0477	-.0332	.0240	517.
.2440	2	802						-697.	-36.	804.	-291.	685.	-5.	-.0253	.0016	.0345	.0532	-.0105	.0435	502.
.2450	2	802						-548.	-21.	567.	-33.	1007.	383.	-.0285	.0042	.0310	.0564	.0111	.0619	726.
.2460	2	802						-370.	7.	286.	207.	1266.	739.	-.0309	.0068	.0262	.0567	.0319	.0781	998.
.2470	2	802						-166.	67.	-39.	455.	1449.	1066.	-.0320	.0092	.0199	.0541	.0516	.0916	1250.
.2480	2	802						47.	151.	-363.	747.	1559.	1394.	-.0316	.0115	.0120	.0487	.0588	.1023	1497.
.2490	2	802						284.	219.	-709.	1070.	1571.	1739.	-.0296	.0135	.0026	.0406	.0832	.1096	1737.
.2500	2	802						553.	267.	-1114.	1400.	1461.	2085.	-.0258	.0151	-.0084	.0296	.0952	.1129	1958.
.2510	2	802						806.	327.	-1508.	1734.	1275.	2405.	-.0203	.0164	-.0206	.0154	.1038	.1121	2175.
.2520	2	802						1014.	406.	-1847.	2042.	1053.	2676.	-.0132	.0173	-.0338	-.0021	.1090	.1069	2377.
.2530	2	802						1207.	460.	-2179.	2280.	769.	2890.	-.0048	.0177	-.0477	-.0223	.1116	.0974	2535.
.2540	2	802						1391.	456.	-2493.	2457.	419.	3074.	.0044	.0177	-.0615	-.0440	.1109	.0845	2668.
.2550	2	802						1531.	395.	-2704.	2584.	56.	3238.	.0138	.0174	-.0747	-.0661	.1064	.0694	2793.
.2560	2	802						1622.	286.	-2822.	2606.	-277.	3335.	.0231	.0167	-.0867	-.0881	.0998	.0521	2859.
.2570	2	802						1674.	144.	-2901.	2490.	-570.	3328.	.0318	.0156	-.0969	-.1093	.0929	.0331	2828.
.2580	2	802						1671.	-10.	-2895.	2305.	-801.	3255.	.0395	.0143	-.1046	-.1274	.0851	.0145	2743.
.2590	2	802						1619.	-190.	-2780.	2099.	-958.	3167.	.0455	.0128	-.1091	-.1404	.0761	-.0022	2642.
.2600	2	802						1565.	-421.	-2648.	1837.	-1063.	3056.	.0497	.0110	-.1103	-.1475	.0682	-.0166	2508.
.2610	2	802						1515.	-667.	-2538.	1533.	-1115.	2908.	.0519	.0091	-.1079	-.1481	.0622	-.0280	2340.

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.2510	553.	267.	-1508.	1734.	1275.	2405.	-.258	.0151	-.0084	.0296	.0952	.1129	1958.
.2520	1014.	406.	-1847.	2042.	1053.	2676.	-.0132	.0173	-.0338	-.0021	.1090	.1069	2377.
.2530	1207.	460.	-2179.	2280.	769.	2890.	-.0048	.0177	-.0477	-.0223	.1116	.0974	2535.
.2540	1391.	456.	-2493.	2457.	419.	3074.	.0044	.0177	-.0615	-.0440	.1109	.0845	2668.
.2550	1531.	395.	-2704.	2584.	56.	3238.	.0132	.0174	-.0747	-.0661	.1064	.0694	2793.
.2560	1622.	286.	-2822.	2606.	-277.	3335.	.0231	.0167	-.0867	-.0881	.0998	.0521	2859.
.2570	1674.	144.	-2901.	2490.	-570.	3328.	.0318	.0156	-.0969	-.1093	.0929	.0331	2828.
.2580	1671.	-10.	-2895.	2305.	-801.	3255.	.0395	.0143	-.1046	-.1274	.0851	.0145	2743.
.2590	1619.	-190.	-2780.	2099.	-958.	3167.	.0455	.0128	-.1091	-.1404	.0761	-.0022	2642.
.2600	1565.	-421.	-2648.	1837.	-1063.	3056.	.0497	.0110	-.1103	-.1475	.0582	-.0166	2508.
.2610	1515.	-667.	-2538.	1533.	-1115.	2908.	.0519	.0091	-.1079	-.1481	.0522	-.0280	2340.

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	EL								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.2620	1435.	-870.	-2394.	1264.	-1093.	2743.	.0522	.0070	-.1019	-.1415	.0572	-.0355	2165.	
.2630	1352.	-1040.	-2250.	1034.	-1029.	2577.	.0504	.0050	-.0925	-.1280	.0531	-.0388	1996.	
.2640	1307.	-1227.	-2170.	800.	-965.	2415.	.0469	.0029	-.0804	-.1088	.0508	-.0388	1834.	
.2650	1273.	-1423.	-2102.	576.	-890.	2264.	.0420	.0008	-.0662	-.0855	.0489	-.0360	1685.	
.2660	1206.	-1579.	-1979.	375.	-788.	2108.	.0360	-.0011	-.0508	-.0602	.0460	-.0310	1538.	
.2670	1115.	-1684.	-1839.	145.	-682.	1902.	.0295	-.0028	-.0352	-.0357	.0424	-.0255	1366.	
.2680	994.	-1755.	-1680.	-148.	-584.	1637.	.0229	-.0042	-.0203	-.0142	.0377	-.0208	1176.	
.2690	814.	-1790.	-1428.	-478.	-481.	1335.	.0165	-.0053	-.0068	.0028	.0302	-.0172	1009.	
.2700	581.	-1783.	-1083.	-835.	-389.	1000.	.0105	-.0060	.0048	.0142	.0196	-.0151	916.	
.2710	321.	-1732.	-705.	-1239.	-335.	617.	.0053	-.0064	.0140	.0193	.0066	-.0151	960.	
.2720	26.	-1624.	-287.	-1662.	-314.	198.	.0008	-.0063	.0208	.0184	-.0086	-.0167	1148.	
.2730	-310.	-1434.	183.	-2055.	-318.	-237.	-.0032	-.0058	.0253	.0124	-.0264	-.0191	1411.	
.2740	-648.	-1168.	648.	-2417.	-363.	-683.	-.0067	-.0048	.0278	.0024	-.0454	-.0217	1710.	
.2750	-976.	-843.	1090.	-2755.	-432.	-1133.	-.0101	-.0034	.0288	-.0104	-.0643	-.0239	2029.	
.2760	-1308.	-455.	1531.	-3053.	-487.	-1580.	-.0137	-.0016	.0290	-.0245	-.0826	-.0246	2340.	
.2770	-1630.	14.	1940.	-3304.	-522.	-2032.	-.0177	.0007	.0288	-.0386	-.0990	-.0232	2638.	
.2780	-1911.	550.	2275.	-3514.	-543.	-2488.	-.0226	.0033	.0287	-.0514	-.1125	-.0191	2925.	
.2790	-2141.	1096.	2153.	-3688.	-533.	-2916.	-.0285	.0062	.0292	-.0616	-.1226	-.0117	3189.	
.2800	-2312.	1604.	2781.	-3830.	-485.	-3286.	-.0354	.0092	.0305	-.0685	-.1291	-.0009	3417.	
.2810	-2408.	2072.	2922.	-3946.	-416.	-3606.	-.0433	.0124	.0326	-.0718	-.1316	.0130	3614.	
.2820	-2440.	2516.	2977.	-4028.	-326.	-3883.	-.0517	.0156	.0355	-.0719	-.1303	.0291	3778.	
.2830	-2430.	2914.	2981.	-4075.	-202.	-4101.	-.0603	.0186	.0388	-.0692	-.1258	.0467	3899.	
.2840	-2378.	3224.	2936.	-4101.	-51.	-4242.	-.0684	.0214	.0421	-.0645	-.1184	.0644	3977.	
.2850	-2293.	3443.	2838.	-4104.	111.	-4303.	-.0753	.0238	.0449	-.0590	-.1086	.0809	4009.	
.2860	-2202.	3598.	2715.	-4056.	289.	-4284.	-.0806	.0257	.0467	-.0533	-.0773	.0953	3981.	
.2870	-2113.	3688.	2572.	-3945.	475.	-4179.	-.0838	.0272	.0471	-.0484	-.0851	.1067	3887.	
.2880	-2005.	3675.	2388.	-3773.	639.	-3966.	-.0844	.0279	.0456	-.0445	-.0722	.1144	3715.	
.2890	-1969.	3531.	2169.	-3522.	765.	-3615.	-.0824	.0281	.0421	-.0417	-.0591	.1184	3441.	
.2900	-1707.	3271.	1923.	-3166.	846.	-3121.	-.0778	.0275	.0365	-.0398	-.0464	.1188	3050.	
.2910	-1509.	2917.	1622.	-2709.	866.	-2503.	-.0707	.0264	.0290	-.0385	-.0339	.1159	2553.	
.2920	-1268.	2476.	1259.	-2165.	822.	-1778.	-.0614	.0247	.0199	-.0377	-.0214	.1100	1968.	
.2930	-1002.	1958.	862.	-1547.	735.	-959.	-.0504	.0225	.0096	-.0370	-.0092	.1017	1324.	
.2940	-718.	1393.	439.	-879.	619.	-83.	-.0382	.0200	-.0013	-.0361	.0028	.0917	727.	
.2950	-415.	821.	-29.	-187.	473.	801.	-.0252	.0172	-.0125	-.0349	.0150	.0804	640.	
.2960	-102.	267.	-518.	506.	311.	1665.	-.0123	.0142	-.0232	-.0329	.0273	.0689	1192.	
.2970	208.	-271.	-996.	1175.	155.	2491.	.0002	.0113	-.0331	-.0300	.0393	.0577	1859.	
.2980	519.	-783.	-1464.	1781.	8.	3243.	.0116	.0085	-.0419	-.0265	.0512	.0472	2494.	
.2990	831.	-1244.	-1923.	2307.	-131.	3891.	.0216	.0059	-.0493	-.0223	.0631	.0379	3051.	

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.2890	-1869.	3531.	2169.	-7522.	765.	-3615.	-0824	.0281	.0421	-.0417	-.0591	.1184	3441.
.2900	-1707.	3271.	1923.	-3166.	846.	-3121.	-.0778	.0275	.0365	-.0398	-.0464	.1188	3050.
.2910	-1509.	2917.	1622.	-2709.	666.	-2503.	-.0707	.0264	.0290	-.0385	-.0339	.1159	2553.
.2920	-1268.	2476.	1259.	-2165.	822.	-1778.	-.0614	.0247	.0199	-.0377	-.0214	.1100	1968.
.2930	-1002.	1958.	862.	-1547.	735.	-959.	-.0504	.0225	.0096	-.0370	-.0092	.1017	1324.
.2940	-718.	1393.	439.	-879.	619.	-83.	-.0382	.0200	-.0013	-.0361	.0028	.0917	727.
.2950	-415.	821.	-29.	-187.	473.	801.	-.0252	.0172	-.0125	-.0349	.0150	.0804	640.
.2960	-102.	267.	-518.	506.	311.	1665.	-.0123	.0142	-.0232	-.0329	.0273	.0689	1192.
.2970	208.	-271.	-996.	1175.	155.	2491.	.0002	.0113	-.0331	-.0300	.0393	.0577	1859.
.2980	519.	-783.	-1464.	1781.	8.	3243.	.0116	.0085	-.0419	-.0265	.0512	.0472	2494.
.2990	831.	-1244.	-1923.	2307.	-131.	3891.	.0216	.0059	-.0493	-.0223	.0631	.0379	3051.

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INTERNAL FORCES IN THE PIPING
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SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	EL							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)
.3000	1131.	-1638.	-2341.	2757.	-258.	4430.	.0299	.0036	-.0552	-.0175	.0741	.0303	3521.
.3010	1412.	-1972.	-2701.	3117.	-368.	4854.	.0363	.0017	-.0595	-.0126	.0338	.0245	3896.
.3020	1670.	-2242.	-3010.	3364.	-463.	5147.	.0410	.0002	-.0624	-.0080	.0922	.0199	4156.
.3030	1884.	-2415.	-3250.	3504.	-537.	5292.	.0439	-.0009	-.0641	-.0046	.0989	.0163	4293.
.3040	2032.	-2469.	-3395.	3555.	-580.	5289.	.0454	-.0016	-.0647	-.0026	.1033	.0136	4313.
.3050	2114.	-2419.	-3452.	3515.	-602.	5151.	.0457	-.0019	-.0644	-.0024	.1052	.0112	4223.
.3060	2135.	-2286.	-3434.	3384.	-610.	4891.	.0450	-.0019	-.0635	-.0043	.1047	.0088	4030.
.3070	2090.	-2068.	-3328.	3190.	-605.	4527.	.0434	-.0016	-.0622	-.0080	.1015	.0064	3755.
.3080	1985.	-1777.	-3138.	2951.	-589.	4082.	.0412	-.0010	-.0604	-.0132	.0956	.0039	3418.
.3090	1835.	-1447.	-2886.	2669.	-571.	3577.	.0384	-.0003	-.0584	-.0197	.0876	.0014	3033.
.3100	1653.	-1107.	-2584.	2353.	-552.	3038.	.0351	.0005	-.0559	-.0267	.0777	-.0011	2617.
.3110	1442.	-761.	-2230.	2030.	-530.	2488.	.0313	.0014	-.0529	-.0334	.0661	-.0031	2194.
.3120	1213.	-418.	-1844.	1713.	-503.	1940.	.0270	.0023	-.0491	-.0390	.0535	-.0045	1777.
.3130	973.	-93.	-1443.	1401.	-469.	1405.	.0223	.0030	-.0445	-.0429	.0405	-.0052	1374.
.3140	722.	206.	-1032.	1101.	-416.	893.	.0172	.0037	-.0389	-.0444	.0276	-.0050	996.
.3150	463.	492.	-619.	827.	-342.	408.	.0118	.0042	-.0320	-.0429	.0150	-.0038	663.
.3160	204.	761.	-223.	584.	-250.	-48.	.0059	.0045	-.0238	-.0381	.0034	-.0014	429.
.3170	-44.	996.	151.	368.	-142.	-464.	-.0002	.0045	-.0144	-.0299	-.0072	.0021	410.
.3180	-277.	1180.	501.	176.	-18.	-831.	-.0067	.0043	-.0039	-.0183	-.0165	.0065	573.
.3190	-492.	1318.	825.	7.	117.	-1155.	-.0132	.0039	.0076	-.0038	-.0247	.0117	782.
.3200	-685.	1415.	1121.	-148.	261.	-1445.	-.0198	.0033	.0197	.0128	-.0316	.0173	995.
.3210	-861.	1464.	1396.	-298.	414.	-1703.	-.0261	.0025	.0321	.0306	-.0374	.0227	1199.
.3220	-1018.	1458.	1655.	-449.	571.	-1928.	-.0320	.0015	.0442	.0489	-.0424	.0274	1389.
.3230	-1155.	1407.	1896.	-598.	721.	-2125.	-.0372	.0003	.0558	.0666	-.0466	.0311	1565.
.3240	-1278.	1330.	2119.	-744.	864.	-2301.	-.0415	-.0010	.0663	.0829	-.0504	.0332	1731.
.3250	-1395.	1239.	2328.	-885.	1000.	-2466.	-.0447	-.0025	.0755	.0970	-.0537	.0335	1890.
.3260	-1497.	1141.	2511.	-1013.	1117.	-2615.	-.0467	-.0040	.0830	.1085	-.0566	.0317	2035.
.3270	-1576.	1036.	2660.	-1116.	1202.	-2739.	-.0472	-.0055	.0887	.1173	-.0592	.0279	2152.
.3280	-1628.	926.	2775.	-1179.	1251.	-2829.	-.0465	-.0071	.0923	.1233	-.0616	.0224	2231.
.3290	-1648.	815.	2844.	-1203.	1261.	-2886.	-.0444	-.0087	.0939	.1265	-.0636	.0152	2272.
.3300	-1628.	711.	2855.	-1184.	1226.	-2916.	-.0411	-.0103	.0936	.1271	-.0648	.0066	2277.
.3310	-1569.	613.	2818.	-1120.	1153.	-2913.	-.0367	-.0118	.0914	.1253	-.0655	-.0031	2243.
.3320	-1473.	515.	2736.	-1017.	1047.	-2876.	-.0314	-.0132	.0875	.1215	-.0654	-.0136	2174.
.3330	-1336.	413.	2600.	-889.	908.	-2813.	-.0254	-.0145	.0821	.1159	-.0644	-.0248	2080.
.3340	-1166.	319.	2419.	-741.	748.	-2733.	-.0188	-.0158	.0756	.1086	-.0623	-.0363	1974.
.3350	-979.	235.	2209.	-582.	584.	-2642.	-.0117	-.0169	.0682	.1001	-.0593	-.0481	1866.
.3360	-774.	152.	1970.	-425.	420.	-2544.	-.0044	-.0180	.0600	.0906	-.0551	-.0599	1761.
.3370	-548.	57.	1697.	-273.	253.	-2432.	.0031	-.0190	.0514	.0806	-.0498	-.0715	1658.

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18.25.50.

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

.3270	-1576.	1036.	2660.	-1116.	1202.	-2739.	-0472	-0055	.0887	.1173	-.0592	.0279	2152.
.3280	-1628.	926.	2775.	-1179.	1251.	-2629.	-0465	-0071	.0923	.1233	-.0616	.0224	2231.
.3290	-1648.	815.	2844.	-1203.	1261.	-2886.	-0444	-0087	.0939	.1265	-.0636	.0152	2272.
.3300	-1628.	711.	2855.	-1184.	1226.	-2716.	-0411	-0103	.0936	.1271	-.0548	.0066	2277.
.3310	-1569.	613.	2810.	-1120.	1153.	-2913.	-0367	-0118	.0914	.1253	-.0655	-.0031	2243.
.3320	-1473.	515.	2736.	-1017.	1047.	-2876.	-0314	-0132	.0875	.1215	-.0654	-.0136	2174.
.3330	-1336.	413.	2600.	-889.	908.	-2813.	-0254	-0145	.0821	.1159	-.0544	-.0248	2080.
.3340	-1166.	319.	2419.	-741.	748.	-2733.	-0188	-0158	.0756	.1086	-.0623	-.0363	1974.
.3350	-979.	235.	2209.	-582.	584.	-2642.	-0117	-0169	.0682	.1001	-.0593	-.0481	1866.
.3360	-774.	152.	1970.	-425.	420.	-2544.	-0044	-0180	.0600	.0906	-.0551	-.0599	1761.
.3370	-548.	57.	1697.	-273.	253.	-2432.	.0031	-0190	.0514	.0806	-.0498	-.0715	1658.

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
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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	END	TYPE	EL	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.3380	-308.	-53.	1404.	-119.	88.	-2296.	.0106	-.0199	.0426	.0704	-.0436	-.0827	1551.							
.3390	-60.	-181.	1100.	40.	-64.	-2134.	.0180	-.0208	.0336	.0606	-.0365	-.0933	1440.							
.3400	195.	-331.	778.	199.	-205.	-1947.	.0253	-.0217	.0247	.0513	-.0284	-.1032	1326.							
.3410	454.	-506.	445.	368.	-332.	-1723.	.0324	-.0225	.0160	.0428	-.0195	-.1123	1209.							
.3420	706.	-706.	119.	563.	-438.	-1453.	.0394	-.0233	.0075	.0356	-.0101	-.1203	1091.							
.3430	951.	-929.	-203.	787.	-521.	-1136.	.0461	-.0241	-.0006	.0299	-.0001	-.1272	995.							
.3440	1186.	-1170.	-524.	1036.	-582.	-777.	.0526	-.0250	-.0083	.0258	.0105	-.1328	957.							
.3450	1402.	-1419.	-830.	1319.	-615.	-376.	.0587	-.0258	-.0153	.0233	.0214	-.1371	1013.							
.3460	1595.	-1671.	-1115.	1637.	-618.	62.	.0643	-.0265	-.0217	.0228	.0324	-.1397	1180.							
.3470	1773.	-1923.	-1389.	1980.	-601.	528.	.0694	-.0272	-.0273	.0242	.0435	-.1408	1439.							
.3480	1937.	-2172.	-1652.	2338.	-569.	1012.	.0737	-.0278	-.0320	.0275	.0546	-.1401	1759.							
.3490	2078.	-2408.	-1886.	2703.	-517.	1501.	.0770	-.0283	-.0356	.0324	.0651	-.1376	2113.							
.3500	2195.	-2623.	-2088.	3053.	-446.	1973.	.0794	-.0286	-.0381	.0387	.0750	-.1333	2468.							
.3510	2287.	-2809.	-2264.	3363.	-362.	2402.	.0806	-.0287	-.0396	.0457	.0843	-.1276	2796.							
.3520	2350.	-2954.	-2400.	3622.	-264.	2773.	.0806	-.0286	-.0399	.0531	.0923	-.1205	3080.							
.3530	2375.	-3052.	-2481.	3820.	-153.	3073.	.0794	-.0282	-.0392	.0605	.0989	-.1122	3306.							
.3540	2365.	-3102.	-2510.	3936.	-33.	3284.	.0769	-.0275	-.0374	.0672	.1037	-.1030	3455.							
.3550	2316.	-3093.	-2487.	3960.	92.	3391.	.0733	-.0265	-.0348	.0727	.1068	-.0934	3515.							
.3560	2225.	-3015.	-2406.	3900.	220.	3391.	.0687	-.0253	-.0315	.0767	.1078	-.0835	3487.							
.3570	2096.	-2869.	-2268.	3762.	340.	3288.	.0631	-.0237	-.0275	.0791	.1064	-.0734	3375.							
.3580	1938.	-2667.	-2086.	3545.	442.	3089.	.0567	-.0219	-.0232	.0797	.1027	-.0635	3183.							
.3590	1752.	-2413.	-1860.	3258.	527.	2802.	.0497	-.0199	-.0186	.0784	.0968	-.0539	2918.							
.3600	1536.	-2102.	-1591.	2914.	594.	2432.	.0423	-.0176	-.0139	.0752	.0887	-.0449	2590.							
.3610	1298.	-1738.	-1292.	2525.	638.	1987.	.0346	-.0153	-.0092	.0701	.0785	-.0366	2208.							
.3620	1045.	-1338.	-972.	2096.	657.	1486.	.0269	-.0129	-.0046	.0634	.0667	-.0292	1788.							
.3630	782.	-924.	-635.	1641.	653.	950.	.0192	-.0104	-.0001	.0553	.0535	-.0226	1351.							
.3640	518.	-504.	-289.	1170.	625.	394.	.0118	-.0080	.0041	.0463	.0391	-.0170	933.							
.3650	259.	-87.	50.	695.	573.	-170.	.0047	-.0057	.0081	.0366	.0240	-.0123	618.							
.3660	9.	311.	377.	223.	500.	-723.	-.0020	-.0035	.0118	.0267	.0086	-.0085	612.							
.3670	-226.	674.	687.	-235.	410.	-1248.	-.0080	-.0015	.0153	.0170	-.0068	-.0056	900.							
.3680	-442.	989.	973.	-672.	303.	-1730.	-.0135	.0002	.0186	.0078	-.0219	-.0035	1268.							
.3690	-639.	1255.	1231.	-1084.	188.	-2163.	-.0183	.0017	.0217	-.0006	-.0363	-.0023	1636.							
.3700	-823.	1469.	1464.	-1470.	75.	-2543.	-.0223	.0028	.0247	-.0081	-.0498	-.0018	1981.							
.3710	-994.	1631.	1670.	-1828.	-29.	-2868.	-.0256	.0037	.0274	-.0147	-.0622	-.0021	2292.							
.3720	-1151.	1738.	1848.	-2157.	-121.	-3132.	-.0281	.0042	.0300	-.0201	-.0731	-.0030	2564.							
.3730	-1294.	1786.	2000.	-2453.	-196.	-3330.	-.0300	.0045	.0324	-.0244	-.0824	-.0043	2791.							
.3740	-1419.	1774.	2126.	-2718.	-251.	-3460.	-.0312	.0046	.0346	-.0275	-.0901	-.0059	2970.							
.3750	-1524.	1706.	2218.	-2950.	-287.	-3522.	-.0320	.0045	.0366	-.0294	-.0958	-.0074	3103.							

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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

.3640	518.	-504.	-289.	1170.	625.	394.	.1118	-.0080	.0041	.0463	.0391	-.0170	933.
.3650	259.	-87.	50.	695.	573.	-170.	.0047	-.0057	.0081	.0366	.0240	-.0123	618.
.3660	9.	311.	377.	223.	500.	-723.	-.0020	-.0035	.0118	.0267	.0086	-.0085	612.
.3670	-226.	674.	687.	-235.	410.	-1248.	-.0080	-.0015	.0153	.0170	-.0068	-.0056	900.
.3680	-442.	939.	973.	-672.	303.	-1730.	-.0135	.0002	.0186	.0078	-.0219	-.0035	1268.
.3690	-639.	1255.	1231.	-1084.	188.	-2163.	-.0183	.0017	.0217	-.0006	-.0363	-.0023	1636.
.3700	-823.	1469.	1464.	-1470.	75.	-2543.	-.0223	.0028	.0247	-.0081	-.0498	-.0018	1981.
.3710	-994.	1631.	1670.	-1828.	-29.	-2868.	-.0256	.0037	.0274	-.0147	-.0622	-.0021	2292.
.3720	-1151.	1738.	1848.	-2157.	-121.	-3132.	-.0281	.0042	.0300	-.0201	-.0731	-.0030	2564.
.3730	-1294.	1786.	2000.	-2453.	-196.	-3330.	-.0300	.0045	.0324	-.0244	-.0824	-.0043	2791.
.3740	-1419.	1774.	2126.	-2718.	-251.	-3460.	-.0312	.0046	.0346	-.0275	-.0901	-.0059	2970.
.3750	-1524.	1706.	2218.	-2950.	-287.	-3522.	-.0320	.0045	.0366	-.0294	-.0958	-.0074	3103.

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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	END	TYPE	EL	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
2	2	802					.3760	-1606.	1591.	2276.	-3143.	-305.	-3518.	-.0323	.0043	.0383	-.0303	-.0996	-.0085	3186.
							.3770	-1663.	1434.	2293.	-3292.	-305.	-3445.	-.0323	.0040	.0396	-.0301	-.1013	-.0091	3218.
							.3780	-1689.	1238.	2279.	-3393.	-292.	-3303.	-.0319	.0036	.0404	-.0289	-.1009	-.0089	3198.
							.3790	-1682.	1017.	2215.	-3442.	-268.	-3094.	-.0314	.0034	.0407	-.0271	-.0984	-.0077	3125.
							.3800	-1647.	787.	2106.	-3431.	-237.	-2825.	-.0307	.0032	.0403	-.0248	-.0939	-.0054	3000.
							.3810	-1582.	563.	1950.	-3354.	-202.	-2501.	-.0297	.0032	.0390	-.0222	-.0875	-.0019	2824.
							.3820	-1484.	351.	1744.	-3209.	-171.	-2124.	-.0286	.0033	.0369	-.0197	-.0794	.0027	2596.
							.3830	-1353.	154.	1491.	-2992.	-152.	-1694.	-.0272	.0037	.0337	-.0175	-.0699	.0086	2320.
							.3840	-1193.	-19.	1201.	-2706.	-148.	-1219.	-.0257	.0044	.0293	-.0160	-.0594	.0155	2003.
							.3850	-1011.	-157.	877.	-2360.	-160.	-715.	-.0239	.0053	.0238	-.0156	-.0481	.0232	1666.
							.3860	-814.	-253.	529.	-1967.	-189.	-197.	-.0220	.0065	.0172	-.0166	-.0364	.0315	1339.
							.3870	-611.	-304.	173.	-1543.	-232.	320.	-.0199	.0080	.0094	-.0195	-.0249	.0400	1074.
							.3880	-412.	-313.	-175.	-1108.	-284.	824.	-.0177	.0097	.0007	-.0244	-.0137	.0486	950.
							.3890	-226.	-280.	-505.	-687.	-340.	1293.	-.0155	.0117	-.0087	-.0315	-.0032	.0568	1013.
							.3900	-63.	-198.	-805.	-300.	-391.	1707.	-.0134	.0138	-.0186	-.0408	.0065	.0646	1198.
							.3910	70.	-69.	-1065.	39.	-429.	2055.	-.0115	.0161	-.0286	-.0519	.0152	.0719	1415.
							.3920	175.	90.	-1282.	317.	-453.	2334.	-.0099	.0186	-.0385	-.0644	.0231	.0788	1617.
							.3930	257.	265.	-1457.	529.	-463.	2549.	-.0089	.0211	-.047.	-.0775	.0300	.0853	1782.
							.3940	318.	448.	-1591.	674.	-455.	2701.	-.0086	.0236	-.0561	-.0906	.0361	.0917	1902.
							.3950	360.	636.	-1690.	761.	-427.	2795.	-.0089	.0261	-.0633	-.1027	.0417	.0981	1974.
							.3960	388.	823.	-1764.	800.	-381.	2839.	-.0099	.0284	-.0691	-.1133	.0469	.1046	2005.
							.3970	410.	995.	-1819.	806.	-322.	2851.	-.0115	.0305	-.0733	-.1215	.0518	.1113	2009.
							.3980	429.	1140.	-1859.	795.	-252.	2850.	-.0137	.0323	-.0759	-.1269	.0564	.1183	2001.
							.3990	445.	1257.	-1887.	778.	-173.	2841.	-.0162	.0338	-.0769	-.1291	.0607	.1254	1989.
							.4000	456.	1350.	-1910.	764.	-88.	2827.	-.0189	.0350	-.0763	-.1283	.0648	.1322	1975.

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)
.0680	4817.	556.	-6959.	11319.	191.	9370.	.0159	.0238	-.1043	.0918	.2719	.2175	9905.

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	EL	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
3	1	802																		

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

CONDITION 24
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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)
.0680	4817.	556.	-6959.	11319.	191.	9370.	.0159	.0238	-.1043	.0918	.2719	.2175	9905.

SECTION TIME (SEC)	3	MEMBER	1	SEQUENCE	802	LOCATION	BEG	TYPE	EL	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
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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 TIME (SEC)	3	MEMBER	1	SEQUENCE	802	LOCATION	BEG	TYPE	EL	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	0.0000	0.0000	0.
.0010	2.	-2.	1.	-0.	0.	1.	.0000	-.0000	-.0000	.0000	.0000	-.0000	.0000	-.0000	-.0000	0.
.0020	9.	-5.	5.	0.	-1.	3.	.0000	-.0000	-.0000	.0000	.0001	-.0001	.0000	.0001	-.0001	2.
.0030	11.	7.	4.	5.	-8.	2.	.0000	-.0000	-.0000	.0001	.0003	-.0002	.0001	.0003	-.0002	7.
.0040	0.	49.	-8.	21.	-22.	-12.	.0001	-.0001	-.0001	.0001	.0007	-.0004	.0001	.0007	-.0004	22.
.0050	-16.	112.	-19.	43.	-39.	-40.	.0002	-.0002	-.0001	.0003	.0015	-.0008	.0003	.0015	-.0008	48.
.0060	-28.	183.	-15.	60.	-65.	-79.	.0004	-.0004	-.0001	.0009	.0025	-.0013	.0009	.0025	-.0013	80.
.0070	-42.	276.	3.	68.	-103.	-131.	.0007	-.0007	-.0002	.0018	.0038	-.0018	.0018	.0038	-.0018	121.
.0080	-75.	427.	18.	81.	-169.	-216.	.0013	-.0011	-.0002	.0031	.0058	-.0026	.0031	.0058	-.0026	193.
.0090	-128.	660.	3.	121.	-298.	-346.	.0021	-.0016	-.0002	.0045	.0086	-.0037	.0045	.0086	-.0037	318.
.0100	-169.	939.	-38.	193.	-482.	-502.	.0032	-.0023	-.0003	.0060	.0130	-.0054	.0060	.0130	-.0054	487.
.0110	-186.	1207.	-53.	247.	-677.	-669.	.0048	-.0031	-.0004	.0081	.0191	-.0072	.0081	.0191	-.0072	663.
.0120	-203.	1434.	13.	223.	-862.	-864.	.0067	-.0039	-.0004	.0117	.0261	-.0082	.0117	.0261	-.0082	836.
.0130	-219.	1601.	158.	124.	-1039.	-1094.	.0089	-.0047	-.0005	.0165	.0340	-.0084	.0165	.0340	-.0084	1021.
.0140	-217.	1709.	349.	-18.	-1214.	-1334.	.0112	-.0055	-.0009	.0220	.0435	-.0082	.0220	.0435	-.0082	1216.
.0150	-236.	1790.	550.	-217.	-1387.	-1582.	.0135	-.0061	-.0018	.0277	.0542	-.0071	.0277	.0542	-.0071	1426.
.0160	-336.	1910.	850.	-484.	-1592.	-1878.	.0157	-.0066	-.0031	.0336	.0645	-.0048	.0336	.0645	-.0048	1691.
.0170	-530.	2130.	1095.	-745.	-1755.	-2234.	.0176	-.0070	-.0053	.0390	.0758	-.0021	.0390	.0758	-.0021	1980.
.0180	-827.	2471.	1283.	-960.	-1725.	-2650.	.0197	-.0073	-.0088	.0435	.0890	.0009	.0435	.0890	.0009	2228.
.0190	-1231.	2854.	1496.	-1236.	-1494.	-3142.	.0220	-.0076	-.0130	.0479	.1009	.0049	.0479	.1009	.0049	2489.
.0200	-1586.	3072.	1752.	-1597.	-1120.	-3613.	.0248	-.0076	-.0178	.0512	.1095	.0089	.0512	.1095	.0089	2768.
.0210	-1586.	2920.	1853.	-1854.	-924.	-3809.	.0281	-.0073	-.0232	.0482	.1171	.0094	.0482	.1171	.0094	2922.
.0220	-1090.	2336.	1635.	-1825.	-1080.	-3514.	.0321	-.0063	-.0291	.0352	.1277	.0046	.0352	.1277	.0046	2767.
.0230	-457.	1361.	1500.	-1902.	-1254.	-2961.	.0353	-.0046	-.0348	.0193	.1343	.0008	.0193	.1343	.0008	2518.
.0240	-34.	187.	1805.	-2445.	-1609.	-2527.	.0357	-.0022	-.0389	.0083	.1252	.0026	.0083	.1252	.0026	2606.
.0250	76.	-776.	1949.	-2804.	-1689.	-2070.	.0340	.0006	-.0437	-.0036	.1187	.0062	-.0036	.1187	.0062	2610.
.0260	-141.	-1181.	1637.	-2650.	-737.	-1588.	.0310	.0036	-.0505	-.0175	.1266	.0115	-.0175	.1266	.0115	2141.
.0270	-1140.	-1208.	1757.	-2940.	268.	-1626.	.0246	.0067	-.0552	-.0222	.1156	.0252	-.0222	.1156	.0252	2272.
.0280	-2149.	-1508.	2313.	-3680.	369.	-1767.	.0159	.0095	-.0566	-.0226	.0808	.0390	-.0226	.0808	.0390	2763.
.0290	-1985.	-2188.	1846.	-3347.	472.	-785.	.0099	.0122	-.0596	-.0415	.0718	.0364	-.0415	.0718	.0364	2339.
.0300	-1666.	-2464.	674.	-2410.	476.	595.	.0059	.0149	-.0624	-.0698	.0732	.0267	-.0698	.0732	.0267	1704.
.0310	-1999.	-2486.	427.	-2238.	273.	1064.	.0015	.0154	-.0602	-.0789	.0470	.0216	-.0789	.0470	.0216	1680.
.0320	-2432.	-2574.	849.	-2458.	1014.	1008.	-.0005	.0136	-.0558	-.0702	.0158	.0163	-.0702	.0158	.0163	1917.
.0330	-2560.	-2401.	793.	-2333.	1963.	1248.	.0012	.0109	-.0506	-.0636	-.0017	.0041	-.0636	-.0017	.0041	2220.
.0340	-2400.	-2055.	429.	-2022.	2041.	1669.	.0056	.0073	-.0429	-.0602	-.0195	-.0157	-.0602	-.0195	-.0157	2240.
.0350	-1824.	-2135.	529.	-1846.	2191.	1965.	.0123	.0015	-.0328	-.0483	-.0413	-.0419	-.0483	-.0413	-.0419	2342.
.0360	-1243.	-2253.	974.	-1920.	3149.	2060.	.0206	-.0054	-.0217	-.0265	-.0546	-.0678	-.0265	-.0546	-.0678	2848.
.0370	-1217.	-1489.	1022.	-2043.	3760.	1860.	.0286	-.0121	-.0088	-.0042	-.0964	-.0903	-.0042	-.0964	-.0903	3145.

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

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.0270	-1140.	-1208.	1757.	-2940.	268.	-1626.	.0246	.0067	-.0552	-.0222	.1156	.0252	2272.
.0280	-2149.	-1508.	2313.	-3680.	369.	-1767.	.0159	.0095	-.0566	-.0226	.0508	.0390	2763.
.0290	-1985.	-2188.	1846.	-3347.	472.	-785.	.0099	.0122	-.0596	-.0415	.0718	.0364	2339.
.0300	-1866.	-2464.	674.	-2410.	476.	595.	.0059	.0149	-.0624	-.0698	.0732	.0267	1704.
.0310	-1999.	-2486.	427.	-2238.	273.	1664.	.0015	.0154	-.0602	-.0789	.0470	.0216	1680.
.0320	-2432.	-2574.	849.	-2458.	1014.	1008.	-.0005	.0136	-.0558	-.0702	.0158	.0163	1917.
.0330	-2560.	-2401.	793.	-2333.	1963.	1248.	.0012	.0109	-.0506	-.0636	-.0017	.0041	2220.
.0340	-2400.	-2055.	429.	-2022.	2041.	1669.	.0056	.0073	-.0429	-.0602	-.0195	-.0157	2240.
.0350	-1824.	-2135.	529.	-1846.	2191.	1965.	.0123	.0015	-.0328	-.0483	-.0413	-.0419	2342.
.0360	-1243.	-2253.	974.	-1920.	3140.	2060.	.0206	-.0054	-.0217	-.0265	-.0546	-.0678	2848.
.0370	-1217.	-1489.	1022.	-2043.	3760.	1860.	.0286	-.0121	-.0088	-.0042	-.0964	-.0903	3145.

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

SECTION	3	MEMBER	1	SEQUENCE	802	LOCATION	BEG	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0380	-1005.	-309.	333.	-1497.	3573.	1655.	.0362	-.0198	.0046	.0104	-.1260	-.1204	2840.		
.0390	89.	258.	-546.	-323.	3788.	1909.	.0440	-.0283	.0174	.0204	-.1413	-.1601	2867.		
.0400	927.	716.	-977.	311.	4340.	2282.	.0492	-.0350	.0324	.0347	-.1594	-.1889	3312.		
.0410	1105.	1859.	-1699.	916.	3647.	2508.	.0497	-.0397	.0510	.0444	-.2143	-.2085	3046.		
.0420	2222.	2780.	-3536.	3152.	2534.	3271.	.0487	-.0452	.0682	.0378	-.2276	-.2411	3506.		
.0430	3983.	2843.	-5184.	5709.	2119.	4522.	.0453	-.0498	.0854	.0319	-.2212	-.2710	5113.		
.0440	4492.	2947.	-5473.	6590.	1263.	5387.	.0348	-.0503	.1082	.0435	-.2463	-.2691	5800.		
.0450	4536.	3284.	-5767.	7556.	-272.	6143.	.0197	-.0487	.1321	.0547	-.2637	-.2550	6567.		
.0460	5533.	3051.	-6752.	9958.	-1184.	7305.	.0042	-.0479	.1503	.0570	-.2269	-.2491	8363.		
.0470	5860.	2496.	-6607.	11110.	-1414.	7964.	-.0146	-.0448	.1671	.0771	-.1923	-.2202	9263.		
.0480	4249.	2512.	-4987.	9874.	-2002.	7453.	-.0383	-.0377	.1847	.1193	-.1967	-.1539	8447.		
.0490	2860.	2621.	-4086.	9258.	-2661.	6805.	-.0598	-.0304	.1941	.1488	-.1735	-.0916	7949.		
.0500	2938.	1846.	-4092.	9824.	-2676.	6664.	-.0752	-.0242	.1911	.1570	-.1030	-.0491	8202.		
.0510	2485.	651.	-2975.	8418.	-2721.	6109.	-.0885	-.0151	.1831	.1703	-.0529	.0089	7247.		
.0520	958.	-127.	-1210.	5287.	-3131.	4806.	-.0994	-.0035	.1700	.1841	-.0600	.0819	5258.		
.0530	391.	-837.	-922.	3753.	-3059.	3599.	-.1023	.0058	.1439	.1691	-.0224	.1280	4066.		
.0540	837.	-2004.	-1290.	3124.	-2558.	2634.	-.0980	.0133	.1077	.1327	.0337	.1509	3249.		
.0550	547.	-3306.	-389.	567.	-2420.	1463.	-.0921	.0233	.0705	.0991	.0422	.1856	1944.		
.0560	-71.	-4333.	662.	-2460.	-2233.	353.	-.0835	.0343	.0306	.0585	.0348	.2196	2252.		
.0570	178.	-5032.	272.	-3371.	-1440.	-527.	-.0701	.0416	-.0156	-.0026	.0642	.2245	2496.		
.0580	329.	-5356.	-265.	-3803.	-793.	-1695.	-.0563	.0466	-.0607	-.0634	.0891	.2201	2857.		
.0590	-373.	-5445.	242.	-5623.	-732.	-2926.	-.0451	.0530	-.0981	-.1091	.0770	.2298	4301.		
.0600	-637.	-5614.	519.	-7002.	-586.	-3416.	-.0336	.0589	-.1309	-.1536	.0800	.2335	5266.		
.0610	-178.	-5670.	-21.	-6809.	-238.	-3644.	-.0215	.0608	-.1597	-.1948	.1175	.2195	5208.		
.0620	-546.	-5124.	26.	-7029.	-336.	-4639.	-.0131	.0601	-.1773	-.2074	.1394	.2137	5681.		
.0630	-1780.	-4228.	1016.	-8375.	-627.	-5909.	-.0082	.0592	-.1826	-.1892	.1425	.2245	6922.		
.0640	-2393.	-3619.	1865.	-9188.	-513.	-6512.	-.0028	.0565	-.1808	-.1592	.1722	.2294	7599.		
.0650	-2543.	-3158.	2628.	-9328.	-396.	-6967.	.0028	.0504	-.1717	-.1163	.2179	.2246	7852.		
.0660	-3435.	-2304.	4094.	-10118.	-627.	-7993.	.0063	.0425	-.1531	-.0504	.2394	.2268	8701.		
.0670	-4653.	-1167.	5762.	-11178.	-594.	-8994.	.0097	.0340	-.1289	.0254	.2499	.2306	9679.		
.0680	-5162.	-157.	6784.	-11319.	-191.	-9370.	.0159	.0238	-.1043	.0918	.2719	.2175	9905.		
.0690	-5225.	800.	7374.	-10812.	-174.	-9446.	.0236	.0121	-.0792	.1458	.2834	.1880	9678.		
.0700	-5274.	1914.	7715.	-10144.	-562.	-9289.	.0324	.0004	-.0544	.1858	.2703	.1489	9279.		
.0710	-4899.	3073.	7335.	-8795.	-721.	-8484.	.0437	-.0110	-.0336	.2026	.2524	.0951	8251.		
.0720	-4061.	4190.	6306.	-6682.	-672.	-7258.	.0572	-.0225	-.0179	.1977	.2316	.0258	6665.		
.0730	-3389.	5389.	5259.	-4554.	-638.	-6189.	.0710	-.0339	-.0054	.1822	.1896	-.0482	5197.		
.0740	-2924.	6626.	4197.	-2553.	-364.	-5139.	.0848	-.0440	.0037	.1567	.1328	-.1215	3876.		
.0750	-2098.	7557.	2762.	-263.	98.	-3670.	.0993	-.0526	.0085	.1162	.0802	-.1979	2481.		

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

.0650	-2547.	-3158.	2628.	-9328.	-396.	-6967.	.0028	.0504	-.1717	-.1163	.2179	.2246	7599.
.0660	-3435.	-2304.	4094.	-10118.	-627.	-7993.	.0063	.0425	-.1531	-.0504	.2394	.2268	8701.
.0670	-4653.	-1167.	5762.	-11178.	-594.	-8994.	.0097	.0340	-.1289	.0254	.2499	.2306	9679.
.0680	-5162.	-157.	6784.	-11319.	-191.	-9370.	.0159	.0238	-.1043	.0918	.2719	.2175	9905.
.0690	-5225.	800.	7374.	-10812.	-174.	-9486.	.0236	.0121	-.0792	.1458	.2834	.1880	9678.
.0700	-5274.	1614.	7715.	-10144.	-562.	-9289.	.0324	.0004	-.0544	.1858	.2703	.1489	9279.
.0710	-4899.	3073.	7335.	-8795.	-721.	-8484.	.0437	-.0110	-.0336	.2026	.2524	.0951	8251.
.0720	-4061.	4190.	6306.	-6682.	-672.	-7258.	.0572	-.0225	-.0179	.1977	.2316	.0258	6665.
.0730	-3389.	5389.	5259.	-4554.	-638.	-6189.	.0710	-.0339	-.0054	.1822	.1896	-.0482	5197.
.0740	-2924.	6626.	4197.	-2553.	-364.	-5139.	.0848	-.0440	.0037	.1567	.1328	-.1215	3876.
.0750	-2098.	7557.	2762.	-263.	98.	-3670.	.0993	-.0526	.0085	.1162	.0802	-.1979	2481.

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

SECTION	3	MEMBER	1	SEQUENCE	802	LOCATION	BEG	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0760	-837.	7910.	1221.	2080.	366.	-1917.	.1132	-.0599	.0105	.0667	.0304	-.2742	1922.		
.0770	348.	7804.	60.	3848.	654.	-305.	.1246	-.0653	.0116	.0213	-.0238	-.3386	2639.		
.0780	1097.	7565.	-774.	4967.	1338.	964.	.1324	-.0686	.0122	-.0149	-.0775	-.3844	3528.		
.0790	1571.	7232.	-1570.	5781.	2013.	1944.	.1358	-.0699	.0128	-.0439	-.1236	-.4136	4330.		
.0800	2174.	6465.	-2344.	6429.	2226.	2913.	.1340	-.0692	.0141	-.0679	-.1582	-.4295	4989.		
.0810	2880.	5172.	-2895.	6691.	2337.	4045.	.1268	-.0659	.0166	-.0842	-.1799	-.4281	5501.		
.0820	3096.	3854.	-3095.	6376.	2644.	4963.	.1133	-.0599	.0210	-.0875	-.1952	-.4038	5730.		
.0830	2590.	2890.	-3078.	5774.	2849.	5270.	.0933	-.0525	.0278	-.0774	-.2086	-.3598	5599.		
.0840	1964.	1945.	-3076.	5336.	2854.	5285.	.0685	-.0445	.0360	-.0614	-.2123	-.3061	5415.		
.0850	1656.	611.	-3034.	4941.	2840.	5695.	.0410	-.0347	.0449	-.0457	-.2041	-.2458	5430.		
.0860	1410.	-925.	-2807.	4296.	2609.	6370.	.0116	-.0231	.0552	-.0304	-.1960	-.1778	5469.		
.0870	1132.	-2311.	-2651.	3812.	2008.	6871.	-.0185	-.0116	.0657	-.0167	-.1890	-.1095	5467.		
.0880	1089.	-3539.	-2838.	3871.	1392.	7211.	-.0470	-.0014	.0745	-.0073	-.1733	-.0484	5596.		
.0890	1166.	-4660.	-3081.	3890.	905.	7550.	-.0729	.0086	.0814	-.0002	-.1556	.0094	5757.		
.0900	1118.	-5563.	-3149.	3447.	220.	7778.	-.0959	.0185	.0872	.0068	-.1464	.0664	5736.		
.0910	1213.	-6194.	-3397.	3175.	-641.	7794.	-.1145	.0266	.0903	.0107	-.1340	.1132	5689.		
.0920	1546.	-6541.	-3923.	3283.	-1288.	7567.	-.1275	.0321	.0898	.0124	-.1098	.1467	5627.		
.0930	1567.	-6506.	-4132.	2871.	-1669.	6924.	-.1356	.0361	.0877	.0207	-.0903	.1778	5176.		
.0940	1149.	-6119.	-3818.	1711.	-1923.	5802.	-.1392	.0389	.0851	.0384	-.0820	.2084	4278.		
.0950	927.	-5624.	-3508.	723.	-2009.	4492.	-.1369	.0391	.0808	.0566	-.0675	.2267	3352.		
.0960	1129.	-5179.	-3355.	147.	-2025.	3279.	-.1290	.0370	.0746	.0705	-.0432	.2299	2600.		
.0970	1355.	-4756.	-2947.	-673.	-2204.	2199.	-.1173	.0342	.0689	.0835	-.0253	.2271	2147.		
.0980	1522.	-4307.	-2299.	-1648.	-2399.	1217.	-.1029	.0307	.0635	.0960	-.0134	.2194	2126.		
.0990	1755.	-3704.	-1815.	-2099.	-2345.	274.	-.0866	.0257	.0571	.1045	.0041	.2014	2129.		
.1000	1786.	-2784.	-1457.	-2138.	-2209.	-700.	-.0698	.0197	.0502	.1092	.0214	.1772	2125.		
.1010	1482.	-1660.	-969.	-2214.	-2202.	-1542.	-.0540	.0142	.0440	.1106	.0299	.1528	2347.		
.1020	1217.	-628.	-493.	-2092.	-2141.	-1998.	-.0389	.0091	.0373	.1059	.0384	.1251	2426.		
.1030	1049.	345.	-211.	-1527.	-1908.	-2216.	-.0244	.0040	.0295	.0947	.0517	.0925	2223.		
.1040	573.	1482.	38.	-889.	-1702.	-2533.	-.0112	-.0009	.0215	.0815	.0590	.0608	2142.		
.1050	-93.	2571.	355.	-396.	-1555.	-2822.	.0010	-.0050	.0136	.0665	.0592	.0320	2189.		
.1060	-356.	3140.	616.	177.	-1320.	-2697.	.0136	-.0084	.0045	.0459	.0642	.0010	2028.		
.1070	-253.	3210.	845.	752.	-1137.	-2259.	.0264	-.0111	-.0057	.0209	.0724	-.0312	1779.		
.1080	-310.	3186.	1177.	1008.	-1036.	-1939.	.0384	-.0130	-.0162	-.0029	.0747	-.0581	1630.		
.1090	-599.	3227.	1490.	1037.	-882.	-1852.	.0493	-.0143	-.0274	-.0245	.0740	-.0792	1550.		
.1100	-608.	3118.	1514.	1320.	-990.	-1631.	.0598	-.0153	-.0402	-.0504	.0836	-.1021	1564.		
.1110	-554.	2766.	1736.	1349.	-676.	-1334.	.0695	-.0156	-.0545	-.0728	.0994	-.1199	1357.		
.1120	-1259.	2668.	2581.	491.	59.	-1575.	.0768	-.0148	-.0679	-.0821	.1018	-.1224	1113.		
.1130	-2459.	3048.	3390.	-480.	656.	-2367.	.0823	-.0141	-.0812	-.0864	.0986	-.1189	1687.		

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CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.1030	1049.	341.	-211.	-1527.	-1908.	-7216.	-2244.	.0040	.0295	.0947	.0517	.0925	2223.
.1040	573.	1482.	38.	-889.	-1702.	-2533.	-.1112	-.0009	.0215	.0815	.0590	.0608	2142.
.1050	-93.	2571.	355.	-396.	-1255.	-2822.	.0010	-.0050	.0136	.0665	.0592	.0320	2189.
.1060	-356.	3140.	616.	177.	-1320.	-2697.	.0136	-.0084	.0045	.0459	.0542	.0010	2028.
.1070	-253.	3210.	845.	752.	-1137.	-2259.	.0264	-.0111	-.0057	.0209	.0724	-.0312	1779.
.1080	-310.	3186.	1177.	1008.	-1076.	-1939.	.0384	-.0130	-.0162	-.0029	.0747	-.0581	1630.
.1090	-599.	3227.	1490.	1037.	-882.	-1852.	.0493	-.0143	-.0274	-.0245	.0740	-.0792	1550.
.1100	-608.	3118.	1514.	1320.	-990.	-1631.	.0598	-.0153	-.0402	-.0504	.0836	-.1021	1564.
.1110	-554.	2766.	1736.	1349.	-676.	-1334.	.0695	-.0156	-.0545	-.0728	.0994	-.1199	1357.
.1120	-1259.	2668.	2581.	491.	59.	-1575.	.0768	-.0148	-.0679	-.0821	.1018	-.1224	1113.
.1130	-2459.	3048.	3390.	-480.	656.	-2367.	.0823	-.0141	-.0812	-.0864	.0986	-.1189	1687.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.25.51.

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	3	MEMBER	1	SEQUENCE	002	LOCATION	BEG	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1140	-3140.	3355.	3607.	-778.	1175.	-2991.		.0883	-.0140	-.0960	-.0974	.1110	-.1225	2229.	
.1150	-3355.	3203.	3869.	-1226.	1761.	-3241.		.0946	-.0133	-.1106	-.1097	.1249	-.1259	2620.	
.1160	-3765.	2925.	4598.	-2450.	2060.	-3572.		.0998	-.0113	-.1220	-.1158	.1188	-.1205	3233.	
.1170	-3967.	2730.	4966.	-3285.	2288.	-3982.		.1049	-.0101	-.1326	-.1232	.1149	-.1184	3806.	
.1180	-3721.	2571.	4738.	-3393.	2377.	-4319.		.1100	-.0101	-.1425	-.1347	.1215	-.1238	4034.	
.1190	-3389.	2211.	4739.	-3821.	3027.	-4538.		.1140	-.0096	-.1501	-.1387	.1249	-.1238	4489.	
.1200	-3598.	2011.	5261.	-5072.	3631.	-5009.		.1147	-.0081	-.1526	-.1302	.1051	-.1106	5393.	
.1210	-3870.	2223.	5274.	-5825.	3335.	-5621.		.1123	-.0072	-.1510	-.1229	.0797	-.0991	5901.	
.1220	-3037.	2135.	4208.	-5061.	3352.	-5510.		.1098	-.0077	-.1493	-.1262	.0568	-.1025	5534.	
.1230	-2301.	1861.	3532.	-4794.	3392.	-5190.		.1035	-.0070	-.1418	-.1203	.0812	-.0962	5283.	
.1240	-2351.	1797.	3562.	-5448.	3178.	-5165.		.0919	-.0050	-.1267	-.0980	.0476	-.0728	5495.	
.1250	-2151.	1911.	2936.	-5041.	2919.	-5035.		.0779	-.0042	-.1084	-.0776	.0277	-.0552	5190.	
.1260	-1338.	1868.	1639.	-3504.	2342.	-4436.		.0620	-.0044	-.0872	-.0640	.0249	-.0465	4124.	
.1270	-441.	1298.	890.	-2465.	1941.	-3346.		.0433	-.0028	-.0610	-.0437	.0140	-.0292	3092.	
.1280	-46.	701.	752.	-2168.	1008.	-2249.		.0205	.0003	-.0290	-.0150	-.0194	.0006	2212.	
.1290	743.	220.	-170.	-629.	69.	-955.		-.0029	.0021	.0027	.0052	-.0309	.0200	772.	
.1300	1829.	-255.	-1569.	1775.	-513.	493.		-.0263	.0030	.0327	.0200	-.0229	.0321	1289.	
.1310	2046.	-633.	-1997.	2874.	-1485.	1643.		-.0523	.0059	.0653	.0451	-.0442	.0601	2446.	
.1320	2057.	-1110.	-2057.	3489.	-2109.	2847.		-.0777	.0098	.0959	.0710	-.0583	.0925	3351.	
.1330	2407.	-1467.	-2776.	4976.	-2489.	4046.		-.0998	.0123	.1203	.0849	-.0711	.1121	4637.	
.1340	2698.	-1685.	-3628.	6564.	-2679.	4931.		-.1185	.0140	.1394	.0932	-.0707	.1257	5821.	
.1350	2522.	-1978.	-3759.	6953.	-2863.	5505.		-.1344	.0169	.1550	.1033	-.0923	.1457	6281.	
.1360	2508.	-2496.	-3784.	6927.	-3255.	6168.		-.1453	.0203	.1651	.1036	-.1187	.1606	6626.	
.1370	3401.	-3335.	-4529.	7809.	-3072.	7158.		-.1488	.0221	.1654	.0846	-.1169	.1552	7434.	
.1380	3987.	-3959.	-5087.	8312.	-2981.	7659.		-.1483	.0235	.1605	.0616	-.1249	.1465	7879.	
.1390	3937.	-4361.	-5000.	7799.	-2797.	7657.		-.1450	.0255	.1519	.0416	-.1517	.1436	7605.	
.1400	4083.	-4785.	-5010.	7377.	-2147.	7724.		-.1374	.0271	.1371	.0142	-.1565	.1337	7343.	
.1410	4322.	-5013.	-5264.	7288.	-1615.	7670.		-.1268	.0278	.1177	-.0205	-.1717	.1154	7214.	
.1420	4246.	-5000.	-5279.	6946.	-926.	7284.		-.1147	.0281	.0961	-.0528	-.1785	.0981	6813.	
.1430	3705.	-4715.	-4915.	6067.	-396.	6595.		-.1023	.0287	.0745	-.0798	-.1933	.0864	6046.	
.1440	3445.	-4451.	-4748.	5516.	229.	6064.		-.0882	.0287	.0516	-.1083	-.1914	.0702	5528.	
.1450	3381.	-4209.	-4649.	5222.	853.	5544.		-.0734	.0278	.0289	-.1341	-.1760	.0511	5165.	
.1460	2782.	-3735.	-4004.	4318.	1025.	4585.		-.0599	.0268	.0103	-.1467	-.1714	.0411	4301.	
.1470	2162.	-3294.	-3144.	3295.	1456.	3599.		-.0466	.0255	-.0059	-.1500	-.1583	.0352	3432.	
.1480	1768.	-2894.	-2389.	2533.	1697.	2721.		-.0335	.0236	-.0199	-.1491	-.1318	.0280	2755.	
.1490	1397.	-2488.	-1538.	1778.	1803.	1797.		-.0212	.0210	-.0311	-.1406	-.0988	.0230	2093.	
.1500	668.	-1918.	-322.	640.	2021.	601.		-.0104	.0184	-.0391	-.1199	-.0697	.0257	1485.	
.1510	-376.	-1065.	998.	-645.	2028.	-839.		-.0012	.0156	-.0443	-.0924	-.0451	.0330	1542.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.25.51.

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

.1410	4322.	-5013.	-5264.	7288.	-1615.	7670.	-1268.	.0278	.1177	-.0205	-.1717	.1154	7214.
.1420	4246.	-5000.	-5279.	6946.	-926.	7284.	-.1147	.0281	.0961	-.0528	-.1785	.0981	6813.
.1430	3705.	-4715.	-4915.	6067.	-396.	6595.	-.1023	.0287	.0745	-.0798	-.1933	.0864	6046.
.1440	3445.	-4451.	-4748.	5516.	229.	6064.	-.0882	.0287	.0516	-.1083	-.1914	.0702	5528.
.1450	2381.	-4209.	-4649.	5222.	857.	5544.	-.0734	.0278	.0289	-.1341	-.1760	.0511	5165.
.1460	2782.	-3735.	-4004.	4318.	1025.	4585.	-.0599	.0268	.0103	-.1467	-.1714	.0411	4301.
.1470	2162.	-3294.	-3144.	3295.	1456.	3599.	-.0466	.0255	-.0059	-.1500	-.1583	.0352	3432.
.1480	1768.	-2894.	-2389.	2523.	1697.	2721.	-.0335	.0236	-.0199	-.1491	-.1318	.0280	2755.
.1490	1397.	-2488.	-1538.	1778.	1803.	1797.	-.0212	.0210	-.0311	-.1406	-.0988	.0230	2093.
.1500	668.	-1918.	-722.	640.	2021.	601.	-.0104	.0184	-.0391	-.1199	-.0697	.0257	1485.
.1510	-376.	-1065.	998.	-645.	2028.	-839.	-.0012	.0156	-.0443	-.0924	-.0451	.0330	1542.

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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	3	MEMBER	1	SEQUENCE	802	LOCATION	BEG	TYPE	EL						
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	-1021.	-280.	1934.	-1393.	2185.	-2046.	.0084	.0121	-.0496	-.0680	-.0075	.0346	2225.		
.1530	-1516.	451.	2761.	-2078.	2059.	-3114.	.0174	.0088	-.0538	-.0456	.0268	.0347	2880.		
.1540	-2023.	1160.	3597.	-2891.	1943.	-4106.	.0259	.0059	-.0572	-.0243	.0526	.0360	3629.		
.1550	-2384.	1898.	4114.	-3407.	1841.	-4988.	.0344	.0030	-.0610	-.0092	.0762	.0337	4257.		
.1560	-2508.	2631.	4217.	-3505.	1274.	-5713.	.0425	.0000	-.0651	-.0033	.0960	.0254	4599.		
.1570	-2194.	3001.	4121.	-3344.	1031.	-6016.	.0508	-.0024	-.0702	-.0047	.1187	.0131	4691.		
.1580	-2039.	3271.	4218.	-3516.	773.	-6251.	.0575	-.0038	-.0743	-.0067	.1277	.0056	4862.		
.1590	-2083.	3645.	4249.	-3661.	317.	-6571.	.0622	-.0046	-.0778	-.0105	.1278	.0004	5075.		
.1600	-1807.	3839.	3902.	-3225.	313.	-6667.	.0661	-.0055	-.0825	-.0197	.1392	-.0088	4997.		
.1610	-1581.	3830.	3682.	-2968.	486.	-6646.	.0680	-.0055	-.0863	-.0276	.1457	-.0128	4917.		
.1620	-1799.	3831.	3793.	-3325.	60.	-6717.	.0661	-.0038	-.0868	-.0315	.1316	-.0062	5052.		
.1630	-1572.	3537.	3481.	-3114.	-67.	-6406.	.0631	-.0019	-.0879	-.0406	.1320	-.0027	4801.		
.1640	-1120.	3050.	2921.	-2538.	-56.	-5908.	.0585	.0001	-.0885	-.0513	.1405	.0001	4334.		
.1650	-1180.	2614.	2795.	-2597.	-385.	-5625.	.0504	.0033	-.0857	-.0537	.1312	.0144	4184.		
.1660	-1304.	2038.	2805.	-2802.	-390.	-5250.	.0405	.0071	-.0814	-.0518	.1221	.0338	4020.		
.1670	-1256.	1386.	2593.	-2654.	-324.	-4740.	.0297	.0107	-.0765	-.0509	.1205	.0513	3668.		
.1680	-1176.	686.	2354.	-2404.	-211.	-4202.	.0179	.0141	-.0706	-.0488	.1192	.0688	3266.		
.1690	-1401.	54.	2409.	-2589.	-371.	-3776.	.0048	.0179	-.0622	-.0421	.1034	.0914	3096.		
.1700	-1471.	-642.	2366.	-2666.	-388.	-3184.	-.0078	.0217	-.0537	-.0369	.0889	.1112	2812.		
.1710	-1100.	-1451.	1941.	-2214.	61.	-2351.	-.0185	.0244	-.0466	-.0365	.0858	.1224	2178.		
.1720	-1026.	-1954.	1560.	-1994.	-166.	-1779.	-.0295	.0267	-.0377	-.0352	.0653	.1332	1805.		
.1730	-802.	-2435.	1049.	-1703.	-383.	-1083.	-.0390	.0286	-.0288	-.0363	.0432	.1392	1384.		
.1740	-200.	-3000.	284.	-1100.	-377.	-118.	-.0462	.0297	-.0209	-.0416	.0289	.1374	788.		
.1750	317.	-3387.	-451.	-558.	-547.	712.	-.0523	.0299	-.0122	-.0449	.0093	.1328	713.		
.1760	672.	-3553.	-1106.	-91.	-578.	1331.	-.0574	.0292	-.0028	-.0438	-.0127	.1267	980.		
.1770	902.	-3500.	-1727.	348.	-702.	1818.	-.0614	.0276	.0075	-.0395	-.0355	.1189	1334.		
.1780	1334.	-3507.	-2352.	936.	-582.	2428.	-.0636	.0252	.0180	-.0336	-.0495	.1067	1797.		
.1790	1638.	-3455.	-2707.	1297.	-662.	2923.	-.0651	.0222	.0301	-.0224	-.0673	.0949	2201.		
.1800	1772.	-3261.	-2881.	1528.	-850.	3261.	-.0660	.0186	.0436	-.0065	-.0863	.0833	2494.		
.1810	2063.	-3067.	-3135.	2025.	-548.	3658.	-.0651	.0142	.0560	.0104	-.0922	.0679	2843.		
.1820	2110.	-2696.	-3198.	2321.	-564.	3856.	-.0639	.0094	.0694	.0306	-.1031	.0537	3057.		
.1830	2110.	-2307.	-3133.	2520.	-672.	4020.	-.0621	.0046	.0824	.0514	-.1137	.0392	3230.		
.1840	2213.	-1932.	-3127.	2852.	-681.	4270.	-.0589	-.0004	.0937	.0692	-.1172	.0218	3491.		
.1850	2228.	-1448.	-3120.	3188.	-671.	4438.	-.0549	-.0054	.1030	.0850	-.1185	.0036	3711.		
.1860	2081.	-874.	-3002.	3398.	-508.	4430.	-.0499	-.0104	.1101	.1003	-.1199	-.0139	3779.		
.1870	1734.	-203.	-2759.	3404.	-483.	4226.	-.0442	-.0151	.1150	.1137	-.1253	-.0303	3672.		
.1880	1560.	331.	-2591.	3501.	-159.	4109.	-.0366	-.0195	.1160	.1212	-.1231	-.0493	3640.		
.1890	1383.	779.	-2362.	3457.	153.	3953.	-.0277	-.0234	.1140	.1238	-.1224	-.0684	3541.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02 . 18.25.51.

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

.1790	1638.	-7455.	-2707.	1297.	-662.	2923.	-.0651	.0222	.0301	-.0224	-.0673	.0949	2201.
.1800	1772.	-3261.	-2081.	1528.	-850.	3261.	-.0660	.0186	.0436	-.0065	-.0863	.0833	2494.
.1810	2063.	-7067.	-3135.	2025.	-548.	3658.	-.0651	.0142	.0560	.0104	-.0922	.0679	2843.
.1820	2110.	-2696.	-3198.	2321.	-564.	3856.	-.0639	.0094	.0694	.0306	-.1031	.0537	3057.
.1830	2110.	-2307.	-3133.	2520.	-672.	4020.	-.0621	.0046	.0824	.0514	-.1137	.0392	3230.
.1840	2217.	-1932.	-3127.	2852.	-681.	4270.	-.0589	-.0004	.0937	.0692	-.1172	.0218	3491.
.1850	2228.	-1448.	-3120.	3188.	-671.	4438.	-.0549	-.0054	.1030	.0850	-.1185	.0036	3711.
.1860	2081.	-874.	-3002.	3398.	-508.	4430.	-.0499	-.0104	.1101	.1003	-.1199	-.0139	3779.
.1870	1734.	-203.	-2759.	3404.	-483.	4226.	-.0442	-.0151	.1150	.1137	-.1253	-.0303	3672.
.1880	1560.	331.	-2591.	3501.	-159.	4109.	-.0366	-.0195	.1160	.1212	-.1231	-.0493	3640.
.1890	1383.	779.	-2362.	3457.	153.	3953.	-.0277	-.0234	.1140	.1238	-.1224	-.0684	3541.

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DIS/ADLPIPE

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	3	MEMBER	1	SEQUENCE	802	LOCATION	BEG	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1900	1133.	1173.	-2048.	3202.	257.	3678.	-.0179	-.0266	.1094	.1220	-.1273	-.0865	3292.		
.1910	1150.	1346.	-1894.	3096.	625.	3525.	-.0066	-.0294	.1009	.1128	-.1248	-.1073	3190.		
.1920	1207.	1436.	-1805.	2942.	910.	3380.	.0052	-.0313	.0898	.0978	-.1227	-.1273	3082.		
.1930	1199.	1481.	-1700.	2659.	1044.	3184.	.0164	-.0324	.0768	.0791	-.1237	-.1445	2883.		
.1940	1263.	1431.	-1685.	2459.	1165.	3038.	.0270	-.0327	.0621	.0563	-.1211	-.1601	2749.		
.1950	1366.	1329.	-1767.	2359.	1248.	2950.	.0362	-.0321	.0462	.0307	-.1135	-.1729	2681.		
.1960	1305.	1270.	-1790.	2164.	1222.	2798.	.0432	-.0306	.0306	.0066	-.1052	-.1795	2522.		
.1970	1049.	1259.	-1691.	1866.	1201.	2524.	.0477	-.0284	.0159	-.0134	-.0950	-.1788	2265.		
.1980	710.	1235.	-1514.	1572.	1223.	2175.	.0500	-.0258	.0024	-.0288	-.0796	-.1724	1988.		
.1990	336.	1168.	-1246.	1232.	1137.	1805.	.0503	-.0227	-.0093	-.0394	-.0501	-.1604	1660.		
.2000	-40.	1008.	-852.	768.	911.	1443.	.0488	-.0191	-.0187	-.0447	-.0377	-.1427	1261.		
.2010	-388.	767.	-358.	219.	676.	1053.	.0461	-.0154	-.0262	-.0443	-.0113	-.1208	856.		
.2020	-776.	542.	216.	-409.	440.	537.	.0425	-.0118	-.0320	-.0377	.0172	-.0954	543.		
.2030	-1233.	389.	856.	-1148.	160.	-120.	.0384	-.0085	-.0363	-.0259	.0456	-.0672	785.		
.2040	-1664.	260.	1515.	-1964.	-89.	-819.	.0344	-.0054	-.0398	-.0107	.0746	-.0383	1436.		
.2050	-2041.	166.	2153.	-2821.	-273.	-1545.	.0309	-.0027	-.0429	.0061	.1030	-.0103	2175.		
.2060	-2442.	206.	2739.	-3695.	-452.	-2367.	.0282	-.0005	-.0458	.0237	.1276	.0157	2973.		
.2070	-2843.	392.	3214.	-4517.	-598.	-3257.	.0265	.0011	-.0490	.0400	.1478	.0382	3775.		
.2080	-3121.	618.	3555.	-5233.	-635.	-4090.	.0262	.0021	-.0526	.0533	.1544	.0556	4497.		
.2090	-3238.	819.	3779.	-5854.	-636.	-4798.	.0274	.0026	-.0564	.0626	.1756	.0672	5120.		
.2100	-3201.	1005.	3858.	-6330.	-701.	-5367.	.0298	.0027	-.0600	.0671	.1804	.0728	5614.		
.2110	-2984.	1165.	3746.	-6563.	-765.	-5757.	.0332	.0023	-.0635	.0666	.1814	.0720	5907.		
.2120	-2640.	1282.	3509.	-6605.	-776.	-5970.	.0370	.0015	-.0662	.0626	.1786	.0665	6024.		
.2130	-2281.	1384.	3234.	-6554.	-800.	-6046.	.0403	.0006	-.0675	.0574	.1701	.0587	6034.		
.2140	-1918.	1486.	2886.	-6344.	-844.	-5971.	.0428	-.0005	-.0671	.0515	.1589	.0492	5900.		
.2150	-1548.	1576.	2458.	-5929.	-845.	-5737.	.0439	-.0017	-.0649	.0457	.1478	.0386	5590.		
.2160	-1271.	1652.	2072.	-5452.	-812.	-5402.	.0431	-.0028	-.0602	.0426	.1350	.0296	5202.		
.2170	-1136.	1710.	1785.	-4992.	-783.	-4999.	.0403	-.0038	-.0529	.0433	.1192	.0234	4791.		
.2180	-1045.	1713.	1509.	-4439.	-729.	-4478.	.0357	-.0046	-.0434	.0464	.1039	.0186	4278.		
.2190	-934.	1616.	1223.	-3767.	-648.	-3815.	.0297	-.0055	-.0320	.0507	.0898	.0145	3640.		
.2200	-830.	1401.	1001.	-3090.	-607.	-3036.	.0226	-.0061	-.0188	.0563	.0736	.0117	2949.		
.2210	-698.	1065.	815.	-2398.	-592.	-2132.	.0147	-.0065	-.0046	.0616	.0555	.0091	2199.		
.2220	-483.	645.	564.	-1585.	-539.	-1099.	.0068	-.0068	.0096	.0645	.0375	.0050	1350.		
.2230	-239.	216.	244.	-683.	-473.	-13.	-.0011	-.0070	.0233	.0644	.0182	-.0008	560.		
.2240	-18.	-174.	-111.	234.	-430.	1070.	-.0086	-.0071	.0359	.0610	-.0046	-.0080	793.		
.2250	238.	-526.	-545.	1205.	-358.	2173.	-.0152	-.0072	.0467	.0530	-.0284	-.0176	1692.		
.2260	540.	-821.	-1071.	2231.	-224.	3264.	-.0206	-.0073	.0551	.0406	-.0518	-.0298	2669.		
.2270	805.	-1011.	-1616.	3197.	-72.	4229.	-.0247	-.0074	.0613	.0254	-.0766	-.0433	3574.		

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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

.2170	-1136.	1710.	1785.	-4992.	-783.	-4999.	.0403	-.0038	-.0529	.0433	.1192	.0234	4791.
.2180	-1045.	1713.	1509.	-4479.	-729.	-4478.	.0357	-.0046	-.0434	.0464	.1039	.0186	4278.
.2190	-934.	1616.	1223.	-3767.	-648.	-3815.	.0297	-.0055	-.0320	.0507	.0898	.0145	3640.
.2200	-830.	1401.	1001.	-3070.	-607.	-3076.	.0226	-.0061	-.0188	.0563	.0736	.0117	2949.
.2210	-698.	1065.	815.	-2398.	-592.	-2132.	.0147	-.0065	-.0048	.0616	.0555	.0091	2199.
.2220	-483.	645.	564.	-1585.	-539.	-1699.	.0068	-.0068	.0096	.0645	.0375	.0050	1350.
.2230	-239.	216.	244.	-683.	-473.	-13.	-.0011	-.0070	.0233	.0644	.0182	-.0008	560.
.2240	-12.	-174.	-111.	234.	-430.	1070.	-.0086	-.0071	.0359	.0610	-.0046	-.0080	793.
.2250	238.	-526.	-545.	1205.	-358.	2173.	-.0152	-.0072	.0467	.0530	-.0284	-.0176	1692.
.2260	540.	-821.	-1071.	2231.	-224.	3264.	-.0206	-.0073	.0551	.0406	-.0518	-.0298	2669.
.2270	805.	-1011.	-1616.	3197.	-72.	4229.	-.0247	-.0074	.0613	.0254	-.0766	-.0433	3574.

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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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CONDITION 24
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 ENGLISH UNITS

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

SECTION	3	MEMBER	1	SEQUENCE	802	LOCATION	BEG	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2280	1026.	-1101.	-2152.	4052.	89.	5026.	-.0273	-.0076	.0653	.0088	-.1021	-.0576	4352.		
.2290	1293.	-1155.	-2692.	4818.	281.	5696.	-.0282	-.0079	.0670	-.0091	-.1249	-.0726	5032.		
.2300	1612.	-1216.	-3179.	5426.	470.	6230.	-.0274	-.0083	.0668	-.0264	-.1441	-.0875	5578.		
.2310	1907.	-1274.	-3520.	5774.	632.	6559.	-.0253	-.0087	.0654	-.0407	-.1606	-.1001	5905.		
.2320	2143.	-1306.	-3707.	5867.	812.	6644.	-.0222	-.0093	.0630	-.0503	-.1730	-.1094	5999.		
.2330	2306.	-1292.	-3762.	5740.	1017.	6490.	-.0186	-.0098	.0600	-.0546	-.1797	-.1147	5880.		
.2340	2367.	-1229.	-3670.	5385.	1190.	6116.	-.0150	-.0103	.0567	-.0534	-.1815	-.1153	5551.		
.2350	2334.	-1132.	-3440.	4833.	1308.	5569.	-.0119	-.0106	.0536	-.0470	-.1787	-.1109	5048.		
.2360	2238.	-1004.	-3137.	4185.	1382.	4909.	-.0095	-.0106	.0506	-.0367	-.1704	-.1022	4447.		
.2370	2076.	-826.	-2808.	3507.	1377.	4170.	-.0083	-.0104	.0479	-.0239	-.1576	-.0898	3788.		
.2380	1853.	-612.	-2463.	2828.	1266.	3387.	-.0082	-.0097	.0456	-.0094	-.1417	-.0740	3094.		
.2390	1616.	-410.	-2116.	2194.	1076.	2630.	-.0093	-.0087	.0437	.0054	-.1231	-.0558	2420.		
.2400	1401.	-248.	-1789.	1648.	817.	1951.	-.0114	-.0073	.0421	.0190	-.1020	-.0363	1807.		
.2410	1205.	-125.	-1487.	1201.	466.	1360.	-.0143	-.0054	.0406	.0308	-.0797	-.0162	1263.		
.2420	1022.	-44.	-1204.	847.	62.	851.	-.0178	-.0033	.0390	.0403	-.0566	.0041	811.		
.2430	839.	-4.	-919.	558.	-328.	411.	-.0216	-.0009	.0371	.0477	-.0332	.0240	517.		
.2440	619.	16.	-611.	291.	-685.	5.	-.0253	.0016	.0345	.0532	-.0105	.0435	502.		
.2450	361.	27.	-283.	33.	-1007.	-383.	-.0285	.0042	.0310	.0564	.0111	.0619	726.		
.2460	103.	10.	44.	-207.	-1266.	-739.	-.0309	.0068	.0262	.0567	.0319	.0781	998.		
.2470	-145.	-37.	371.	-455.	-1449.	-1066.	-.0320	.0092	.0199	.0541	.0516	.0916	1250.		
.2480	-409.	-89.	714.	-747.	-1559.	-1394.	-.0316	.0115	.0120	.0487	.0588	.1023	1497.		
.2490	-685.	-137.	1065.	-1070.	-1571.	-1739.	-.0296	.0135	.0026	.0406	.0832	.1096	1737.		
.2500	-940.	-191.	1408.	-1400.	-1461.	-2085.	-.0258	.0151	-.0084	.0296	.0952	.1129	1958.		
.2510	-1156.	-251.	1731.	-1734.	-1275.	-2405.	-.0203	.0164	-.0206	.0154	.1038	.1121	2175.		
.2520	-1314.	-312.	2006.	-2042.	-1053.	-2676.	-.0132	.0173	-.0338	-.0021	.1090	.1069	2377.		
.2530	-1403.	-362.	2212.	-2280.	-769.	-2890.	-.0048	.0177	-.0477	-.0223	.1116	.0974	2535.		
.2540	-1459.	-372.	2363.	-2457.	-419.	-3074.	.0044	.0177	-.0615	-.0440	.1109	.0845	2668.		
.2550	-1514.	-316.	2460.	-2584.	-56.	-3238.	.0138	.0174	-.0747	-.0661	.1064	.0694	2793.		
.2560	-1519.	-210.	2459.	-2606.	277.	-3335.	.0231	.0167	-.0867	-.0881	.0998	.0521	2859.		
.2570	-1432.	-89.	2346.	-2490.	570.	-3328.	.0318	.0156	-.0969	-.1093	.0929	.0331	2828.		
.2580	-1312.	55.	2187.	-2305.	801.	-3255.	.0395	.0143	-.1046	-.1274	.0851	.0145	2743.		
.2590	-1222.	245.	2028.	-2099.	958.	-3167.	.0455	.0128	-.1091	-.1404	.0761	-.0022	2642.		
.2600	-1137.	464.	1856.	-1837.	1063.	-3056.	.0497	.0110	-.1103	-.1475	.0582	-.0166	2508.		
.2610	-1042.	676.	1697.	-1533.	1115.	-2908.	.0519	.0091	-.1079	-.1481	.0622	-.0280	2340.		
.2620	-978.	870.	1615.	-1264.	1093.	-2743.	.0522	.0070	-.1019	-.1415	.0572	-.0355	2165.		
.2630	-959.	1050.	1621.	-1034.	1029.	-2577.	.0504	.0050	-.0925	-.1280	.0531	-.0388	1996.		
.2640	-967.	1218.	1677.	-800.	965.	-2415.	.0469	.0029	-.0804	-.1088	.0508	-.0388	1834.		
.2650	-1007.	1381.	1771.	-576.	890.	-2264.	.0420	.0008	-.0662	-.0855	.0489	-.0360	1685.		

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

83/12/02. 18.25.51.

CONDITION 24
 LOADS
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 ENGLISH UNITS

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

.2540	-1459.	-372.	2460.	-2584.	-56.	-3238.	.044	.0177	-.0615	-.0440	.1109	.0845	2668.
.2550	-1514.	-316.	2460.	-2584.	-56.	-3238.	.138	.0174	-.0747	-.0661	.1064	.0694	2793.
.2560	-1519.	-210.	2459.	-2606.	277.	-3335.	.0231	.0167	-.0867	-.0881	.0798	.0521	2859.
.2570	-1432.	-89.	2346.	-2490.	570.	-3328.	.0318	.0156	-.0969	-.1093	.0929	.0331	2828.
.2580	-1312.	55.	2187.	-2305.	801.	-3255.	.0395	.0147	-.1046	-.1274	.0851	.0145	2743.
.2590	-1222.	245.	2028.	-2099.	958.	-3167.	.0455	.0128	-.1091	-.1404	.0761	-.0022	2642.
.2600	-1137.	464.	1856.	-1837.	1063.	-3056.	.0497	.0110	-.1103	-.1475	.0582	-.0166	2508.
.2610	-1042.	676.	1697.	-1533.	1115.	-2908.	.0519	.0091	-.1079	-.1481	.0622	-.0280	2340.
.2620	-978.	870.	1615.	-1264.	1093.	-2743.	.0522	.0070	-.1019	-.1415	.0572	-.0355	2165.
.2630	-959.	1050.	1621.	-1034.	1029.	-2577.	.0504	.0050	-.0925	-.1280	.0531	-.0388	1996.
.2640	-967.	1218.	1677.	-800.	965.	-2415.	.0469	.0029	-.0804	-.1088	.0508	-.0388	1834.
.2650	-1007.	1381.	1771.	-576.	890.	-2264.	.0420	.0008	-.0662	-.0855	.0489	-.0360	1685.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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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	BEG	TYPE	EL							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)	
.2660	-1066.	1526.	1885.	-375.	788.	-2108.	.0360	-.0011	-.0506	-.0602	.0460	-.0310	1538.
.2670	-1079.	1627.	1959.	-145.	682.	-1902.	.0295	-.0028	-.0352	-.0357	.0424	-.0255	1366.
.2680	-1016.	1680.	1943.	148.	584.	-1637.	.0229	-.0042	-.0203	-.0142	.0377	-.0208	1176.
.2690	-899.	1703.	1828.	478.	481.	-1335.	.0165	-.0053	-.0068	.0028	.0302	-.0172	1009.
.2700	-727.	1695.	1598.	835.	389.	-1000.	.0105	-.0060	.0048	.0142	.0196	-.0151	916.
.2710	-472.	1637.	1236.	1239.	335.	-617.	.0053	-.0064	.0140	.0193	.0066	-.0151	960.
.2720	-146.	1517.	772.	1662.	314.	-198.	.0008	-.0063	.0208	.0184	-.0086	-.0167	1148.
.2730	218.	1331.	253.	2055.	318.	237.	-.0032	-.0058	.0253	.0124	-.0264	-.0191	1411.
.2740	612.	1073.	-305.	2417.	363.	683.	-.0067	-.0048	.0278	.0024	-.0454	-.0217	1710.
.2750	1023.	749.	-888.	2755.	432.	1133.	-.0101	-.0034	.0288	-.0104	-.0543	-.0239	2029.
.2760	1425.	359.	-1454.	3053.	487.	1580.	-.0137	-.0016	.0290	-.0245	-.0826	-.0246	2340.
.2770	1805.	-102.	-1964.	3304.	522.	2032.	-.0177	.0007	.0288	-.0386	-.0990	-.0232	2638.
.2780	2143.	-618.	-2398.	3514.	543.	2488.	-.0226	.0033	.0287	-.0514	-.1125	-.0191	2925.
.2790	2395.	-1140.	-2739.	3688.	533.	2916.	-.0285	.0062	.0292	-.0616	-.1226	-.0117	3189.
.2800	2527.	-1630.	-2973.	3830.	485.	3286.	-.0354	.0092	.0305	-.0685	-.1291	-.0009	3417.
.2810	2552.	-2083.	-3093.	3946.	416.	3606.	-.0433	.0124	.0326	-.0718	-.1316	.0130	3614.
.2820	2488.	-2499.	-3095.	4028.	326.	3883.	-.0517	.0156	.0355	-.0719	-.1303	.0291	3778.
.2830	2346.	-2858.	-2996.	4075.	202.	4101.	-.0603	.0186	.0388	-.0692	-.1258	.0467	3899.
.2840	2151.	-3141.	-2834.	4101.	51.	4242.	-.0684	.0214	.0421	-.0645	-.1184	.0644	3977.
.2850	1938.	-3348.	-2633.	4104.	-111.	4303.	-.0753	.0238	.0449	-.0590	-.1086	.0809	4009.
.2860	1736.	-3486.	-2404.	4056.	-289.	4284.	-.0806	.0257	.0467	-.0533	-.0973	.0953	3981.
.2870	1563.	-3552.	-2164.	3945.	-475.	4179.	-.0838	.0272	.0471	-.0484	-.0851	.1067	3887.
.2880	1421.	-3526.	-1936.	3773.	-639.	3966.	-.0844	.0279	.0456	-.0445	-.0722	.1144	3715.
.2890	1289.	-3388.	-1717.	3522.	-765.	3615.	-.0824	.0281	.0421	-.0417	-.0591	.1184	3441.
.2900	1150.	-3136.	-1489.	3166.	-846.	3121.	-.0778	.0275	.0365	-.0398	-.0464	.1188	3050.
.2910	1010.	-2791.	-1246.	2709.	-866.	2503.	-.0707	.0264	.0290	-.0385	-.0339	.1159	2553.
.2920	868.	-2365.	-985.	2165.	-822.	1778.	-.0614	.0247	.0199	-.0377	-.0214	.1100	1968.
.2930	711.	-1870.	-698.	1547.	-735.	959.	-.0504	.0225	.0096	-.0370	-.0092	.1017	1324.
.2940	544.	-1334.	-382.	879.	-619.	83.	-.0382	.0200	-.0013	-.0361	.0028	.0917	727.
.2950	378.	-792.	-36.	187.	-473.	-801.	-.0252	.0172	-.0125	-.0349	.0150	.0804	640.
.2960	202.	-262.	344.	-506.	-311.	-1665.	-.0123	.0142	-.0232	-.0329	.0273	.0689	1192.
.2970	1.	252.	753.	-1175.	-155.	-2491.	.0002	.0113	-.0331	-.0300	.0393	.0577	1859.
.2980	-219.	736.	1170.	-1781.	-8.	-3243.	.0116	.0085	-.0419	-.0265	.0512	.0472	2494.
.2990	-457.	1173.	1584.	-2307.	131.	-3891.	.0216	.0059	-.0493	-.0223	.0531	.0379	3051.
.3000	-723.	1559.	1997.	-2757.	258.	-4430.	.0299	.0036	-.0552	-.0175	.0741	.0303	3521.
.3010	-1015.	1890.	2390.	-3117.	368.	-4854.	.0363	.0017	-.0595	-.0126	.0838	.0245	3896.
.3020	-1300.	2149.	2730.	-3364.	463.	-5147.	.0410	.0002	-.0624	-.0080	.0922	.0199	4156.
.3030	-1552.	2317.	3003.	-3504.	537.	-5292.	.0439	-.0009	-.0641	-.0046	.0989	.0163	4293.

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
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CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.2920	711.	-1870.	-698.	1547.	-735.	959.	-.0504	.0225	.0096	-.0370	-.0092	.1017	1324.
.2930	544.	-1334.	-382.	879.	-619.	83.	-.0382	.0200	-.0013	-.0361	.0028	.0917	727.
.2950	373.	-792.	-36.	187.	-473.	-801.	-.0252	.0172	-.0125	-.0349	.0150	.0804	640.
.2960	202.	-262.	344.	-506.	-311.	-1665.	-.0123	.0142	-.0232	-.0329	.0273	.0689	1192.
.2970	1.	252.	753.	-1175.	-155.	-2491.	.0002	.0113	-.0331	-.0300	.0393	.0577	1859.
.2980	-219.	736.	1170.	-1781.	-8.	-3243.	.0116	.0085	-.0419	-.0265	.0512	.0472	2494.
.2990	-457.	1173.	1584.	-2307.	131.	-3891.	.0216	.0059	-.0493	-.0223	.0531	.0379	3051.
.3000	-723.	1559.	1997.	-2757.	258.	-4430.	.0299	.0036	-.0552	-.0175	.0741	.0303	3521.
.3010	-1015.	1890.	2390.	-3117.	368.	-4854.	.0363	.0017	-.0595	-.0126	.0838	.0245	3896.
.3020	-1300.	2149.	2730.	-3364.	463.	-5147.	.0410	.0002	-.0624	-.0080	.0922	.0199	4156.
.3030	-1552.	2317.	3003.	-3504.	537.	-5292.	.0439	-.0009	-.0641	-.0046	.0989	.0163	4293.

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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	3	MEMBER	1	SEQUENCE	802	LOCATION	BEG	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3040	-1754.	2383.	3203.	-3555.	580.	-5289.		.0454	-.0016	-.0647	-.0026	.1033	.0136	4313.	
.3050	-1890.	2347.	3313.	-3515.	602.	-5151.		.0457	-.0019	-.0644	-.0024	.1052	.0112	4223.	
.3060	-1947.	2218.	3322.	-3384.	610.	-4891.		.0450	-.0019	-.0635	-.0043	.1047	.0088	4030.	
.3070	-1932.	2008.	3235.	-3190.	605.	-4527.		.0434	-.0016	-.0622	-.0080	.1015	.0064	3755.	
.3080	-1853.	1736.	3061.	-2951.	589.	-4082.		.0412	-.0010	-.0604	-.0132	.0956	.0039	3418.	
.3090	-1717.	1423.	2799.	-2669.	571.	-3577.		.0384	-.0003	-.0584	-.0197	.0876	.0014	3033.	
.3100	-1537.	1091.	2462.	-2353.	552.	-3038.		.0351	.0005	-.0559	-.0267	.0777	-.0011	2617.	
.3110	-1334.	758.	2073.	-2030.	530.	-2488.		.0313	.0014	-.0529	-.0334	.0661	-.0031	2194.	
.3120	-1113.	433.	1650.	-1713.	503.	-1940.		.0270	.0023	-.0491	-.0390	.0535	-.0045	1777.	
.3130	-876.	121.	1204.	-1401.	469.	-1405.		.0223	.0030	-.0445	-.0429	.0405	-.0052	1374.	
.3140	-628.	-174.	755.	-1101.	416.	-893.		.0172	.0037	-.0389	-.0444	.0276	-.0050	996.	
.3150	-376.	-453.	326.	-827.	342.	-408.		.0118	.0042	-.0320	-.0429	.0150	-.0038	663.	
.3160	-125.	-713.	-68.	-584.	250.	48.		.0059	.0045	-.0238	-.0381	.0034	-.0014	429.	
.3170	112.	-943.	-420.	-368.	142.	464.		-.0002	.0045	-.0144	-.0299	-.0072	.0021	410.	
.3180	321.	-1131.	-725.	-176.	18.	831.		-.0067	.0043	-.0039	-.0183	-.0165	.0065	573.	
.3190	500.	-1273.	-980.	-7.	-117.	1155.		-.0132	.0039	.0076	-.0038	-.0247	.0117	782.	
.3200	651.	-1371.	-1195.	148.	-119.	1445.		-.0198	.0033	.0197	.0128	-.0316	.0173	995.	
.3210	779.	-1421.	-1378.	298.	-414.	1703.		-.0261	.0025	.0321	.0306	-.0374	.0227	1199.	
.3220	881.	-1421.	-1542.	449.	-571.	1928.		-.0320	.0015	.0442	.0489	-.0424	.0274	1389.	
.3230	964.	-1379.	-1693.	598.	-721.	2125.		-.0372	.0003	.0558	.0666	-.0466	.0311	1565.	
.3240	1040.	-1307.	-1834.	744.	-864.	2301.		-.0415	-.0010	.0663	.0829	-.0504	.0332	1731.	
.3250	1119.	-1222.	-1973.	885.	-1000.	2466.		-.0447	-.0025	.0755	.0970	-.0537	.0335	1890.	
.3260	1204.	-1130.	-2107.	1013.	-1117.	2615.		-.0467	-.0040	.0830	.1085	-.0566	.0317	2035.	
.3270	1281.	-1031.	-2230.	1116.	-1202.	2739.		-.0472	-.0055	.0887	.1173	-.0592	.0279	2152.	
.3280	1338.	-927.	-2330.	1179.	-1251.	2829.		-.0465	-.0071	.0923	.1233	-.0616	.0224	2231.	
.3290	1374.	-823.	-2404.	1203.	-1261.	2886.		-.0444	-.0087	.0939	.1265	-.0636	.0152	2272.	
.3300	1387.	-726.	-2446.	1184.	-1226.	2916.		-.0411	-.0103	.0936	.1271	-.0648	.0066	2277.	
.3310	1365.	-631.	-2448.	1120.	-1153.	2913.		-.0367	-.0118	.0914	.1253	-.0655	-.0031	2243.	
.3320	1302.	-533.	-2409.	1017.	-1047.	2876.		-.0314	-.0132	.0875	.1215	-.0654	-.0136	2174.	
.3330	1201.	-437.	-2330.	889.	-908.	2813.		-.0254	-.0145	.0821	.1159	-.0644	-.0248	2080.	
.3340	1071.	-345.	-2210.	741.	-748.	2733.		-.0188	-.0158	.0756	.1086	-.0623	-.0363	1974.	
.3350	915.	-258.	-2051.	582.	-584.	2642.		-.0117	-.0169	.0682	.1001	-.0593	-.0481	1866.	
.3360	739.	-170.	-1860.	425.	-420.	2544.		-.0044	-.0180	.0600	.0906	-.0551	-.0599	1761.	
.3370	542.	-74.	-1638.	273.	-253.	2432.		.0031	-.0190	.0514	.0806	-.0498	-.0715	1658.	
.3380	320.	38.	-1383.	119.	-88.	2296.		.0106	-.0199	.0426	.0704	-.0436	-.0827	1551.	
.3390	80.	171.	-1102.	-40.	64.	2134.		.0180	-.0208	.0336	.0606	-.0365	-.0933	1440.	
.3400	-165.	324.	-808.	-199.	205.	1947.		.0253	-.0217	.0247	.0513	-.0284	-.1032	1326.	
.3410	-410.	500.	-506.	-368.	332.	1723.		.0324	-.0225	.0160	.0428	-.0195	-.1123	1209.	

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
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ENGLISH UNITS

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

.3300	1327.	-726.	-2446.	1184.	-1226.	2916.	-.0411	-.0103	.0936	.1271	-.0548	.0066	2277.
.3310	1365.	-631.	-2448.	1120.	-1153.	2913.	-.0367	-.0118	.0914	.1253	-.0655	-.0031	2243.
.3320	1302.	-533.	-2409.	1017.	-1047.	2876.	-.0314	-.0132	.0875	.1215	-.0554	-.0136	2174.
.3330	1201.	-437.	-2330.	889.	-908.	2813.	-.0254	-.0145	.0821	.1159	-.0544	-.0248	2080.
.3340	1071.	-345.	-2210.	741.	-748.	2733.	-.0188	-.0158	.0756	.1086	-.0623	-.0363	1974.
.3350	915.	-258.	-2051.	582.	-584.	2642.	-.0117	-.0169	.0682	.1001	-.0593	-.0481	1866.
.3360	739.	-170.	-1860.	425.	-420.	2544.	-.0044	-.0180	.0600	.0906	-.0551	-.0599	1761.
.3370	542.	-74.	-1638.	273.	-253.	2432.	.0031	-.0190	.0514	.0806	-.0498	-.0715	1658.
.3380	320.	38.	-1383.	119.	-88.	2296.	.0106	-.0199	.0426	.0704	-.0436	-.0827	1551.
.3390	80.	171.	-1102.	-40.	64.	2134.	.0180	-.0208	.0336	.0606	-.0365	-.0933	1440.
.3400	-165.	324.	-806.	-199.	205.	1947.	.0253	-.0217	.0247	.0513	-.0284	-.1032	1326.
.3410	-410.	500.	-506.	-368.	332.	1723.	.0224	-.0225	.0160	.0428	-.0195	-.1123	1209.

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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	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	EL								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.3420	-658.	703.	-197.	-563.	438.	1453.	.0394	-.0233	.0075	.0356	-.0101	-.1203	1091.	
.3430	-895.	927.	108.	-787.	521.	1136.	.0461	-.0241	-.0006	.0299	-.0001	-.1272	995.	
.3440	-1110.	1163.	399.	-1036.	582.	777.	.0526	-.0250	-.0083	.0258	.0105	-.1328	957.	
.3450	-1299.	1408.	676.	-1319.	615.	376.	.0587	-.0258	-.0153	.0233	.0214	-.1371	1013.	
.3460	-1467.	1655.	940.	-1637.	618.	-62.	.0643	-.0265	-.0217	.0228	.0324	-.1397	1180.	
.3470	-1611.	1901.	1188.	-1980.	601.	-528.	.0694	-.0272	-.0273	.0242	.0435	-.1408	1439.	
.3480	-1735.	2139.	1421.	-2338.	569.	-1012.	.0737	-.0278	-.0320	.0275	.0546	-.1401	1759.	
.3490	-1848.	2368.	1641.	-2703.	517.	-1501.	.0770	-.0283	-.0356	.0324	.0651	-.1376	2113.	
.3500	-1944.	2576.	1839.	-3053.	446.	-1973.	.0794	-.0286	-.0381	.0387	.0750	-.1333	2468.	
.3510	-2016.	2752.	2009.	-3363.	362.	-2402.	.0806	-.0287	-.0396	.0457	.0843	-.1276	2796.	
.3520	-2066.	2890.	2149.	-3622.	264.	-2773.	.0806	-.0286	-.0399	.0531	.0923	-.1205	3080.	
.3530	-2098.	2986.	2253.	-3820.	153.	-3073.	.0794	-.0282	-.0392	.0605	.0989	-.1122	3306.	
.3540	-2102.	3033.	2309.	-3936.	33.	-3284.	.0769	-.0275	-.0374	.0672	.1037	-.1030	3455.	
.3550	-2070.	3021.	2311.	-3960.	-92.	-3391.	.0733	-.0265	-.0348	.0727	.1068	-.0934	3515.	
.3560	-2004.	2945.	2262.	-3900.	-220.	-3391.	.0687	-.0253	-.0315	.0767	.1078	-.0835	3487.	
.3570	-1911.	2808.	2165.	-3762.	-340.	-3288.	.0631	-.0237	-.0275	.0791	.1064	-.0734	3375.	
.3580	-1790.	2613.	2017.	-3545.	-442.	-3089.	.0567	-.0219	-.0232	.0797	.1027	-.0635	3183.	
.3590	-1643.	2365.	1819.	-3258.	-527.	-2802.	.0497	-.0199	-.0186	.0784	.0968	-.0539	2918.	
.3600	-1469.	2063.	1580.	-2914.	-594.	-2432.	.0423	-.0176	-.0139	.0752	.0887	-.0449	2590.	
.3610	-1269.	1713.	1305.	-2525.	-638.	-1987.	.0346	-.0153	-.0092	.0701	.0785	-.0366	2208.	
.3620	-1047.	1328.	1000.	-2096.	-657.	-1486.	.0269	-.0129	-.0046	.0634	.0667	-.0292	1788.	
.3630	-817.	925.	672.	-1641.	-653.	-950.	.0192	-.0104	-.0001	.0553	.0535	-.0226	1351.	
.3640	-583.	517.	334.	-1170.	-625.	-394.	.0118	-.0080	.0041	.0463	.0391	-.0170	933.	
.3650	-349.	114.	-6.	-695.	-573.	170.	.0047	-.0057	.0081	.0366	.0240	-.0123	618.	
.3660	-119.	-272.	-336.	-223.	-500.	723.	-.0020	-.0035	.0118	.0267	.0086	-.0085	612.	
.3670	97.	-624.	-649.	235.	-410.	1248.	-.0080	-.0015	.0153	.0170	-.0068	-.0056	900.	
.3680	296.	-933.	-938.	672.	-303.	1730.	-.0135	.0002	.0186	.0078	-.0219	-.0035	1268.	
.3690	482.	-1194.	-1200.	1084.	-188.	2163.	-.0183	.0017	.0217	-.0006	-.0363	-.0023	1636.	
.3700	661.	-1407.	-1433.	1470.	-75.	2543.	-.0223	.0028	.0247	-.0081	-.0498	-.0018	1981.	
.3710	835.	-1570.	-1639.	1828.	29.	2868.	-.0256	.0037	.0274	-.0147	-.0522	-.0021	2292.	
.3720	1004.	-1681.	-1616.	2157.	121.	3132.	-.0281	.0042	.0300	-.0201	-.0731	-.0030	2564.	
.3730	1162.	-1736.	-1962.	2453.	196.	3330.	-.0300	.0045	.0324	-.0244	-.0824	-.0043	2791.	
.3740	1305.	-1734.	-2078.	2718.	251.	3460.	-.0312	.0046	.0346	-.0275	-.0901	-.0059	2970.	
.3750	1430.	-1679.	-2160.	2950.	287.	3522.	-.0320	.0045	.0366	-.0294	-.0958	-.0074	3103.	
.3760	1532.	-1576.	-2203.	3143.	305.	3518.	-.0323	.0043	.0383	-.0303	-.0996	-.0085	3186.	
.3770	1602.	-1430.	-2203.	3292.	305.	3445.	-.0323	.0040	.0396	-.0301	-.1013	-.0091	3218.	
.3780	1638.	-1248.	-2159.	3393.	292.	3303.	-.0319	.0036	.0404	-.0289	-.1009	-.0089	3198.	
.3790	1637.	-1040.	-2070.	3442.	268.	3094.	-.0314	.0034	.0407	-.0271	-.0984	-.0077	3125.	

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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

.3680	296.	-933.	938.	672.	-303.	1730.	-.0135	.0002	.0186	.0078	-.0219	-.0035	1268.
.3690	482.	-1194.	-1200.	1084.	-188.	2163.	-.0183	.0017	.0217	-.0006	-.0363	-.0023	1636.
.3700	661.	-1407.	-1433.	1470.	-75.	2543.	-.0223	.0028	.0247	-.0081	-.0498	-.0018	1981.
.3710	835.	-1570.	-1639.	1828.	29.	2868.	-.0256	.0037	.0274	-.0147	-.0522	-.0021	2292.
.3720	1004.	-1681.	-1816.	2157.	121.	3132.	-.0281	.0042	.0300	-.0201	-.0731	-.0030	2564.
.3730	1162.	-1736.	-1962.	2453.	196.	3330.	-.0300	.0045	.0324	-.0244	-.0824	-.0043	2791.
.3740	1305.	-1734.	-2070.	2718.	251.	3460.	-.0312	.0046	.0346	-.0275	-.0901	-.0059	2970.
.3750	1430.	-1679.	-2160.	2950.	287.	3522.	-.0320	.0045	.0366	-.0294	-.0958	-.0074	3103.
.3760	1532.	-1576.	-2203.	3143.	305.	3518.	-.0323	.0043	.0383	-.0303	-.0996	-.0085	3186.
.3770	1602.	-1430.	-2203.	3292.	305.	3445.	-.0323	.0040	.0396	-.0301	-.1013	-.0091	3218.
.3780	1638.	-1248.	-2159.	3393.	292.	3303.	-.0319	.0036	.0404	-.0289	-.1009	-.0089	3198.
.3790	1637.	-1040.	-2070.	3442.	268.	3094.	-.0314	.0034	.0407	-.0271	-.0984	-.0077	3125.

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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	3	MEMBER	1	SEQUENCE	802	LOCATION	BEG	TYPE	EL					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.3800	1603.	-821.	-1931.	3431.	237.	2825.	-.0307	.0032	.0403	-.0248	-.0939	-.0054	3000.	
.3810	1537.	-605.	-1745.	3354.	202.	2501.	-.0297	.0032	.0390	-.0222	-.0875	-.0019	2824.	
.3820	1439.	-400.	-1513.	3209.	171.	2124.	-.0286	.0033	.0369	-.0197	-.0794	.0027	2596.	
.3830	1307.	-209.	-1242.	2992.	152.	1694.	-.0272	.0037	.0337	-.0175	-.0699	.0086	2320.	
.3840	1145.	-41.	-938.	2706.	148.	1219.	-.0257	.0044	.0293	-.0160	-.0594	.0155	2003.	
.3850	963.	96.	-613.	2360.	160.	715.	-.0239	.0053	.0238	-.0156	-.0481	.0232	1666.	
.3860	775.	192.	-281.	1967.	189.	197.	-.0220	.0065	.0172	-.0166	-.0364	.0315	1339.	
.3870	585.	247.	46.	1543.	232.	-320.	-.0199	.0080	.0094	-.0195	-.0249	.0400	1074.	
.3880	403.	261.	352.	1108.	284.	-824.	-.0177	.0097	.0007	-.0244	-.0137	.0486	950.	
.3890	241.	232.	624.	687.	340.	-1293.	-.0155	.0117	-.0087	-.0315	-.0032	.0568	1013.	
.3900	109.	157.	853.	300.	391.	-1707.	-.0134	.0138	-.0186	-.0408	.0065	.0646	1198.	
.3910	10.	41.	1036.	-39.	429.	-2055.	-.0115	.0161	-.0286	-.0519	.0152	.0719	1415.	
.3920	-64.	-105.	1175.	-317.	453.	-2334.	-.0099	.0186	-.0385	-.0644	.0231	.0788	1617.	
.3930	-121.	-268.	1273.	-529.	463.	-2549.	-.0089	.0211	-.0477	-.0775	.0300	.0853	1782.	
.3940	-168.	-438.	1340.	-674.	455.	-2701.	-.0086	.0236	-.0561	-.0906	.0361	.0917	1902.	
.3950	-208.	-611.	1386.	-761.	427.	-2795.	-.0089	.0261	-.0633	-.1027	.0417	.0981	1974.	
.3960	-245.	-781.	1423.	-800.	381.	-2839.	-.0099	.0284	-.0691	-.1133	.0469	.1046	2005.	
.3970	-287.	-936.	1459.	-806.	322.	-2851.	-.0115	.0305	-.0733	-.1215	.0518	.1113	2009.	
.3980	-342.	-1068.	1502.	-795.	252.	-2850.	-.0137	.0323	-.0759	-.1269	.0564	.1183	2001.	
.3990	-402.	-1174.	1553.	-778.	173.	-2841.	-.0162	.0338	-.0769	-.1291	.0607	.1254	1989.	
.4000	-456.	-1260.	1611.	-764.	88.	-2827.	-.0189	.0350	-.0763	-.1283	.0648	.1322	1975.	

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)
.0680	5162.	157.	-6784.	11319.	191.	9370.	.0159	.0238	-.1043	.0918	.2719	.2175	9905.

SECTION	3	MEMBER	1	SEQUENCE	18	LOCATION	END	TYPE	EL					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	-2.	2.	-1.	-0.	0.	0.	-.0000	-.0000	-.0000	.0000	.0000	-.0000	0.	
.0020	-9.	5.	-5.	-2.	2.	1.	-.0000	-.0000	-.0000	.0000	.0001	-.0001	2.	
.0030	-11.	-7.	-4.	-8.	9.	5.	.0000	-.0001	-.0000	.0000	.0004	-.0002	9.	

ADLPIPE PAGE 189 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.25.51.

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

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SECTION	3	MEMBER	1	SEQUENCE	18	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
0.0000	0.	0.	0.	0.	0.	0.		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	-2.	2.	-1.	-0.	0.	0.		-.0000	-.0000	-.0000	.0000	.0000	-.0000	0.	
.0020	-9.	5.	-5.	-2.	2.	1.		-.0000	-.0000	-.0000	.0000	.0001	-.0001	2.	
.0030	-11.	-7.	-4.	-8.	9.	5.		.0000	-.0001	-.0000	.0000	.0004	-.0002	9.	

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2 SAFETY COLD FKW24F--2 PSV

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INTERNAL FORCES IN THE PIPING
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SECTION	3	MEMBER	1	SEQUENCE	18	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0040	-0.	-49.	8.	-23.	23.	21.		.0000	-.0001	-.0001	-.0000	.0008	-.0003	26.	
.0050	16.	-112.	19.	-47.	41.	52.		.0001	-.0003	-.0002	.0000	.0016	-.0004	55.	
.0060	28.	-183.	15.	-75.	64.	97.		.0003	-.0005	-.0003	.0004	.0028	-.0005	93.	
.0070	42.	-276.	-3.	-104.	97.	158.		.0007	-.0008	-.0005	.0012	.0043	-.0007	144.	
.0080	75.	-427.	-18.	-143.	157.	253.		.0012	-.0012	-.0007	.0023	.0066	-.0007	223.	
.0090	128.	-660.	-3.	-205.	282.	398.		.0020	-.0019	-.0010	.0034	.0100	-.0007	356.	
.0100	169.	-939.	38.	-290.	468.	582.		.0032	-.0026	-.0014	.0044	.0154	-.0010	540.	
.0110	186.	-1207.	53.	-370.	663.	788.		.0048	-.0035	-.0020	.0062	.0225	-.0013	738.	
.0120	203.	-1434.	-13.	-408.	834.	1016.		.0069	-.0045	-.0027	.0097	.0305	-.0006	928.	
.0130	219.	-1601.	-158.	-407.	984.	1268.		.0094	-.0054	-.0037	.0150	.0393	.0010	1116.	
.0140	217.	-1709.	-349.	-380.	1124.	1528.		.0121	-.0063	-.0051	.0210	.0498	.0031	1304.	
.0150	236.	-1790.	-580.	-314.	1253.	1781.		.0150	-.0070	-.0071	.0277	.0614	.0060	1483.	
.0160	336.	-1910.	-850.	-205.	1397.	2045.		.0178	-.0076	-.0097	.0350	.0728	.0103	1675.	
.0170	530.	-2130.	-1095.	-102.	1491.	2337.		.0205	-.0080	-.0130	.0416	.0851	.0154	1870.	
.0180	827.	-2471.	-1283.	-29.	1390.	2653.		.0235	-.0083	-.0176	.0470	.0983	.0211	2022.	
.0190	1231.	-2854.	-1496.	86.	1070.	3005.		.0267	-.0085	-.0228	.0523	.1092	.0279	2151.	
.0200	1586.	-3072.	-1752.	284.	605.	3327.		.0303	-.0084	-.0284	.0570	.1162	.0346	2237.	
.0210	1586.	-2920.	-1853.	506.	391.	3495.		.0340	-.0080	-.0338	.0556	.1231	.0362	2395.	
.0220	1090.	-2336.	-1635.	666.	648.	3358.		.0375	-.0069	-.0387	.0433	.1347	.0298	2349.	
.0230	457.	-1361.	-1500.	937.	926.	2964.		.0402	-.0049	-.0429	.0291	.1422	.0224	2186.	
.0240	84.	-187.	-1805.	1465.	1272.	2516.		.0405	-.0022	-.0458	.0223	.1350	.0209	2142.	
.0250	-76.	776.	-1949.	1867.	1346.	1970.		.0388	.0009	-.0492	.0135	.1289	.0206	2042.	
.0260	141.	1181.	-1637.	1929.	424.	1300.		.0362	.0045	-.0546	-.0013	.1319	.0212	1594.	
.0270	1140.	1208.	-1757.	2159.	-728.	803.		.0311	.0082	-.0584	-.0050	.1158	.0326	1628.	
.0280	2149.	1508.	-2313.	2642.	-1055.	355.		.0231	.0116	-.0586	-.0013	.0803	.0452	1932.	
.0290	1985.	2188.	-1846.	2642.	-1054.	-663.		.0161	.0146	-.0591	-.0210	.0704	.0353	1968.	
.0300	1666.	2464.	-674.	2361.	-805.	-1924.		.0104	.0176	-.0584	-.0532	.0713	.0164	2123.	
.0310	1999.	2486.	-427.	2322.	-599.	-2574.		.0047	.0182	-.0542	-.0627	.0456	.0074	2371.	
.0320	2432.	2574.	-849.	2329.	-1471.	-2763.		.0012	.0159	-.0495	-.0538	.0106	.0012	2630.	
.0330	2560.	2401.	-793.	2212.	-2426.	-3039.		.0010	.0126	-.0443	-.0488	-.0117	-.0133	3016.	
.0340	2400.	2055.	-429.	2051.	-2418.	-3313.		.0025	.0080	-.0361	-.0470	-.0301	-.0355	3091.	
.0350	1824.	2135.	-529.	1832.	-2514.	-3318.		.0055	.0010	-.0264	-.0365	-.0527	-.0628	3066.	
.0360	1243.	2253.	-974.	1685.	-3481.	-3127.		.0102	-.0075	-.0168	-.0157	-.0806	-.0890	3352.	
.0370	1217.	1489.	-1022.	1687.	-4096.	-2775.		.0149	-.0157	-.0052	.0064	-.1152	-.1097	3523.	
.0380	1005.	309.	-333.	1360.	-3759.	-2244.		.0185	-.0249	.0081	.0179	-.1436	-.1367	3090.	
.0390	-89.	-258.	546.	580.	-3678.	-1815.		.0214	-.0351	.0208	.0210	-.1599	-.1754	2792.	
.0400	-927.	-716.	977.	117.	-4048.	-1661.		.0224	-.0433	.0356	.0311	-.1907	-.2051	2950.	
.0410	-1105.	-1859.	1699.	-247.	-3202.	-1586.		.0196	-.0490	.0550	.0379	-.2323	-.2244	2414.	

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.0310	1995.	2486.	-427.	2322.	-599.	-2574.	2047.	.0176	-.0542	-.0627	.0456	.0074	2123.
.0320	2432.	2574.	-849.	2329.	-1471.	-2763.	.0012	.0159	-.0495	-.0538	.0106	.0012	2630.
.0330	2560.	2401.	-793.	2212.	-2426.	-3039.	.0010	.0126	-.0443	-.0488	-.0117	-.0133	3016.
.0340	2400.	2055.	-429.	2051.	-2418.	-3313.	.0025	.0080	-.0361	-.0470	-.0301	-.0355	3091.
.0350	1824.	2135.	-529.	1822.	-2514.	-3318.	.0055	.0010	-.0264	-.0365	-.0527	-.0628	3066.
.0360	1243.	2253.	-974.	1685.	-3481.	-3127.	.0102	-.0075	-.0168	-.0157	-.0806	-.0890	3352.
.0370	1277.	1489.	-1022.	1687.	-4096.	-2775.	.0149	-.0157	-.0052	.0064	-.1152	-.1097	3523.
.0380	1005.	309.	-333.	1360.	-3759.	-2244.	.0185	-.0249	.0081	.0179	-.1436	-.1367	3090.
.0390	-89.	-258.	546.	500.	-3678.	-1815.	.0214	-.0351	.0208	.0210	-.1599	-.1754	2792.
.0400	-927.	-716.	977.	117.	-4048.	-1661.	.0224	-.0433	.0256	.0311	-.1907	-.2051	2950.
.0410	-1105.	-1859.	1699.	-247.	-3202.	-1566.	.0196	-.0490	.0550	.0379	-.2323	-.2244	2414.

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

SECTION	3	MEMBER	1	SEQUENCE	18	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0420	-2222.	-2780.	3536.	-1624.	-1618.	-1591.	.0144	-.0555	.0743	.0197	-.2406	-.2583	1881.		
.0430	-3983.	-2843.	5184.	-3315.	-685.	-1896.	.0073	-.0610	.0929	-.0001	-.2330	-.2930	2615.		
.0440	-4492.	-2947.	5473.	-4056.	287.	-2472.	-.0039	-.0617	.1157	.0068	-.2547	-.2955	3207.		
.0450	-4536.	-3284.	5767.	-4908.	1881.	-3144.	-.0180	-.0600	.1392	.0130	-.2657	-.2853	4128.		
.0460	-5533.	-3051.	6752.	-6759.	3095.	-3819.	-.0323	-.0589	.1566	.0017	-.2259	-.2849	5633.		
.0470	-5860.	-2496.	6607.	-7918.	3340.	-4405.	-.0473	-.0553	.1703	.0143	-.1913	-.2602	6509.		
.0480	-4249.	-2512.	4987.	-7543.	3433.	-4745.	-.0634	-.0468	.1828	.0623	-.1936	-.1932	6437.		
.0490	-2860.	-2621.	4086.	-7418.	3756.	-4814.	-.0771	-.0379	.1876	.0946	-.1677	-.1285	6476.		
.0500	-2938.	-1846.	4092.	-7884.	3782.	-4773.	-.0859	-.0302	.1813	.0994	-.0974	-.0855	6715.		
.0510	-2485.	-651.	2975.	-4921.	3569.	-4673.	-.0914	-.0193	.1697	.1210	-.0566	-.0257	6122.		
.0520	-958.	127.	1210.	-4620.	3469.	-4320.	-.0936	-.0053	.1535	.1536	-.0505	.0524	4867.		
.0530	-391.	837.	922.	-3159.	3274.	-3542.	-.0898	.0062	.1271	.1487	-.0118	.1050	3887.		
.0540	-837.	2004.	1290.	-2189.	2895.	-2552.	-.0813	.0156	.0926	.1174	.0434	.1342	2991.		
.0550	-547.	3306.	389.	52.	2558.	-1770.	-.0708	.0278	.0577	.1002	.0531	.1748	2097.		
.0560	71.	4333.	-662.	2650.	2104.	-1174.	-.0583	.0410	.0214	.0788	.0468	.2138	2414.		
.0570	-178.	5032.	-272.	3855.	1414.	-287.	-.0433	.0501	-.0194	.0243	.0740	.2241	2775.		
.0580	-329.	5356.	265.	4612.	882.	901.	-.0289	.0566	-.0587	-.0332	.0972	.2276	3223.		
.0590	373.	5445.	-242.	6174.	641.	1744.	-.0164	.0646	-.0913	-.0675	.0863	.2442	4346.		
.0600	637.	5614.	-519.	7428.	412.	2063.	-.0042	.0718	-.1199	-.1032	.0896	.2502	5204.		
.0610	178.	5670.	21.	7527.	219.	2525.	.0073	.0742	-.1453	-.1450	.1260	.2386	5354.		
.0620	546.	5124.	-26.	7655.	263.	3423.	.0161	.0738	-.1624	-.1566	.1489	.2396	5655.		
.0630	1780.	4228.	-1016.	8364.	221.	4201.	.0229	.0728	-.1705	-.1316	.1539	.2578	6311.		
.0640	2393.	3619.	-1865.	8651.	-123.	4589.	.0299	.0694	-.1735	-.0982	.1831	.2660	6601.		
.0650	2543.	3158.	-2628.	8329.	-396.	5048.	.0363	.0620	-.1709	-.0562	.2280	.2646	6570.		
.0660	3435.	2304.	-4094.	8234.	-542.	5754.	.0411	.0526	-.1608	.0118	.2504	.2731	6781.		
.0670	4653.	1167.	-5762.	8268.	-1028.	6316.	.0457	.0422	-.1459	.0909	.2604	.2824	7047.		
.0680	5162.	157.	-6784.	7741.	-1680.	6604.	.0511	.0298	-.1295	.1553	.2799	.2716	6952.		
.0690	5225.	-800.	-7374.	6802.	-1811.	6820.	.0559	.0155	-.1107	.2041	.2905	.2435	6606.		
.0700	5274.	-1914.	-7715.	5814.	-1491.	6838.	.0600	.0013	-.0896	.2385	.2784	.2045	6133.		
.0710	4899.	-3073.	-7335.	4521.	-1216.	6442.	.0646	-.0125	-.0695	.2463	.2602	.1472	5368.		
.0720	4061.	-4190.	-6306.	2814.	-975.	5861.	.0694	-.0266	-.0515	.2283	.2378	.0722	4431.		
.0730	3389.	-5389.	-5259.	1092.	-735.	5365.	.0733	-.0403	-.0348	.1995	.1945	-.0066	3724.		
.0740	2924.	-6626.	-4197.	-500.	-759.	4786.	.0771	-.0526	-.0198	.1615	.1351	-.0851	3284.		
.0750	2098.	-7557.	-2762.	-2145.	-860.	3923.	.0811	-.0630	-.0075	.1072	.0790	-.1693	3069.		
.0760	837.	-7910.	-1221.	-3715.	-691.	2902.	.0845	-.0719	.0029	.0445	.0268	-.2549	3212.		
.0770	-348.	-7804.	-60.	-4854.	-621.	1900.	.0866	-.0786	.0119	-.0107	-.0297	-.3284	3539.		
.0780	-1097.	-7565.	774.	-5501.	-1062.	985.	.0873	-.0827	.0191	-.0532	-.0873	-.3821	3834.		
.0790	-1571.	-7232.	1570.	-5852.	-1533.	196.	.0857	-.0844	.0251	-.0865	-.1371	-.4178	4080.		

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.0690	5225.	-800.	-7374.	6802.	-1811.	6820.	.0559	.0155	-.1107	.2041	.2905	.2435	6606.
.0700	5274.	-1914.	-7715.	5814.	-1491.	6838.	.0600	.0013	-.0896	.2385	.2784	.2045	6133.
.0710	4899.	-3073.	-7335.	4521.	-1216.	6442.	.0646	-.0125	-.0695	.2463	.2602	.1472	5368.
.0720	4061.	-4190.	-6306.	2814.	-.975.	5861.	.0694	-.0266	-.0515	.2283	.2378	.0722	4431.
.0730	3389.	-5389.	-5259.	1092.	-735.	5365.	.0733	-.0403	-.0348	.1995	.1945	-.0066	3724.
.0740	2924.	-6626.	-4197.	-500.	-759.	4786.	.0771	-.0526	-.0198	.1615	.1351	-.0851	3284.
.0750	2098.	-7557.	-2762.	-2145.	-860.	3923.	.0811	-.0630	-.0075	.1072	.0790	-.1693	3069.
.0760	837.	-7910.	-1221.	-3715.	-691.	2902.	.0845	-.0719	.0029	.0445	.0268	-.2549	3212.
.0770	-348.	-7804.	-.60.	-4854.	-.621.	1900.	.0866	-.0786	.0119	-.0107	-.0297	-.3284	3539.
.0780	-1097.	-7565.	774.	-5501.	-1062.	935.	.0873	-.0827	.0191	-.0532	-.0873	-.3821	3834.
.0790	-1571.	-7232.	1570.	-5852.	-1533.	196.	.0857	-.0844	.0251	-.0865	-.1371	-.4178	4080.

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SECTION	3	MEMBER	1	SEQUENCE	18	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0800	-2174.	-6465.	2344.	-5994.	-1531.	-592.		.0809	-.0837	.0307	-.1129	-.1730	-.4401	4189.	
.0810	-2880.	-5172.	2895.	-5802.	-1454.	-1583.		.0727	-.0800	.0359	-.1290	-.1954	-.4466	4171.	
.0820	-3096.	-3854.	3095.	-5216.	-1698.	-2624.		.0611	-.0731	.0411	-.1290	-.2121	-.4298	4099.	
.0830	-2590.	-2890.	3078.	-4502.	-1969.	-3354.		.0455	-.0643	.0470	-.1143	-.2265	-.3899	4010.	
.0840	-1964.	-1945.	3076.	-3947.	-2053.	-3892.		.0265	-.0546	.0534	-.0947	-.2302	-.3385	3985.	
.0850	-1656.	-.611.	3034.	-3408.	-2085.	-4706.		.0057	-.0431	.0601	-.0754	-.2220	-.2829	4161.	
.0860	-1410.	925.	2807.	-2692.	-1926.	-5789.		-.0162	-.0294	.0680	-.0548	-.2129	-.2216	4495.	
.0870	-1132.	2311.	2651.	-2118.	-1387.	-6689.		-.0387	-.0156	.0765	-.0365	-.2031	-.1584	4821.	
.0880	-1089.	3539.	2838.	-1924.	-.744.	-7273.		-.0601	-.0033	.0836	-.0259	-.1846	-.1005	5096.	
.0890	-1166.	4660.	3081.	-1674.	-.203.	-7773.		-.0792	.0086	.0889	-.0174	-.1645	-.0457	5361.	
.0900	-1118.	5563.	3149.	-1083.	489.	-8190.		-.0957	.0205	.0933	-.0060	-.1518	.0091	5578.	
.0910	-1213.	6194.	3397.	-.600.	1407.	-8270.		-.1087	.0302	.0954	.0013	-.1349	.0558	5669.	
.0920	-1546.	6541.	3923.	-385.	2190.	-7930.		-.1172	.0370	.0937	.0039	-.1070	.0917	5551.	
.0930	-1567.	6506.	4132.	133.	2611.	-7269.		-.1211	.0421	.0897	.0156	-.0848	.1274	5207.	
.0940	-1149.	6119.	3818.	1078.	2757.	-6298.		-.1205	.0456	.0844	.0404	-.0742	.1655	4691.	
.0950	-.927.	5624.	3508.	1840.	2758.	-5016.		-.1153	.0460	.0770	.0643	-.0580	.1929	4053.	
.0960	-1129.	5179.	3355.	2279.	2772.	-3617.		-.1059	.0437	.0682	.0813	-.0325	.2053	3434.	
.0970	-1355.	4756.	2947.	2830.	2906.	-2340.		-.0935	.0405	.0600	.0989	-.0126	.2109	3157.	
.0980	-1522.	4307.	2299.	3405.	3004.	-1188.		-.0794	.0364	.0524	.1165	.0011	.2107	3164.	
.0990	-1755.	3704.	1815.	3524.	2892.	-.13.		-.0641	.0305	.0442	.1266	.0190	.2003	3072.	
.1000	-1786.	2784.	1457.	3258.	2695.	1144.		-.0492	.0235	.0362	.1300	.0360	.1837	2953.	
.1010	-1482.	1660.	969.	2935.	2562.	2028.		-.0355	.0171	.0294	.1302	.0445	.1657	2960.	
.1020	-1217.	628.	493.	2432.	2382.	2530.		-.0231	.0112	.0230	.1229	.0524	.1417	2859.	
.1030	-1049.	-345.	211.	1596.	2077.	2834.		-.0117	.0051	.0162	.1064	.0540	.1112	2601.	
.1040	-573.	-1482.	-.38.	684.	1767.	3105.		-.0017	-.0006	.0097	.0874	.0695	.0819	2452.	
.1050	93.	-2571.	-355.	-114.	1479.	3238.		.0075	-.0053	.0036	.0676	.0683	.0549	2401.	
.1060	356.	-3140.	-616.	-896.	1164.	3076.		.0167	-.0094	-.0031	.0420	.0713	.0230	2298.	
.1070	253.	-3210.	-845.	-1601.	952.	2705.		.0259	-.0126	-.0106	.0125	.0778	-.0120	2214.	
.1080	310.	-3186.	-1177.	-2030.	784.	2350.		.0348	-.0149	-.0184	-.0137	.0790	-.0413	2159.	
.1090	599.	-3227.	-1490.	-2230.	538.	2118.		.0434	-.0165	-.0271	-.0362	.0771	-.0636	2105.	
.1100	608.	-3118.	-1514.	-2512.	641.	1872.		.0515	-.0177	-.0374	-.0638	.0869	-.0881	2155.	
.1110	554.	-2766.	-1736.	-2615.	293.	1540.		.0595	-.0181	-.0497	-.0869	.1009	-.1084	2055.	
.1120	1259.	-2668.	-2581.	-2193.	-.683.	1390.		.0666	-.0172	-.0625	-.0924	.0996	-.1111	1810.	
.1130	2459.	-3048.	-3390.	-1698.	-1575.	1614.		.0727	-.0162	-.0754	-.0924	.0937	-.1045	1903.	
.1140	3140.	-3355.	-3607.	-1554.	-2219.	1932.		.0789	-.0160	-.0896	-.1025	.1037	-.1050	2243.	
.1150	3355.	-3203.	-3869.	-1226.	-2879.	2041.		.0852	-.0150	-.1034	-.1126	.1149	-.1076	2518.	
.1160	3765.	-2925.	-4598.	-.354.	-3361.	2104.		.0909	-.0127	-.1145	-.1118	.1078	-.1013	2684.	
.1170	3967.	-2730.	-4966.	311.	-3681.	2371.		.0963	-.0113	-.1244	-.1143	.1034	-.0972	2959.	

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INTERNAL FORCES IN THE PIPING
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.1070	253.	-7210.	-845.	-1301.	952.	2705.	.0259	-.0126	-.0106	.0125	.0778	-.0120	2214.
.1080	310.	-3186.	-1177.	-2030.	784.	2350.	.0348	-.0149	-.0184	-.0137	.0790	-.0413	2159.
.1090	599.	-3227.	-1490.	-2230.	538.	2118.	.0434	-.0165	-.0271	-.0362	.0771	-.0636	2105.
.1100	608.	-3118.	-1514.	-2512.	641.	1872.	.0515	-.0177	-.0374	-.0638	.0869	-.0881	2155.
.1110	554.	-2766.	-1736.	-2615.	293.	1540.	.0595	-.0181	-.0497	-.0869	.1009	-.1084	2055.
.1120	1259.	-2668.	-2581.	-2193.	-683.	1390.	.0666	-.0172	-.0625	-.0924	.0996	-.1111	1810.
.1130	2459.	-3048.	-3390.	-1698.	-1575.	1614.	.0727	-.0162	-.0754	-.0924	.0937	-.1045	1903.
.1140	3140.	-3355.	-3607.	-1554.	-2219.	1932.	.0789	-.0160	-.0896	-.1025	.1037	-.1050	2243.
.1150	3355.	-3203.	-3869.	-1226.	-2879.	2041.	.0852	-.0150	-.1034	-.1126	.1149	-.1076	2518.
.1160	3765.	-2925.	-4598.	-354.	-3361.	2104.	.0909	-.0127	-.1145	-.1118	.1078	-.1013	2684.
.1170	3967.	-2730.	-4966.	311.	-3681.	2371.	.0963	-.0113	-.1244	-.1143	.1034	-.0972	2959.

ADLPIPE PAGE 192 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.25.51.
 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	3	MEMBER	1	SEQUENCE	18	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1180	3721.	-2571.	-4738.	559.	-3698.	2810.	.1011	-.0111	-.1333	-.1246	.1101	-.0999	3153.		
.1190	3389.	-2211.	-4739.	1032.	-4306.	3140.	.1052	-.0106	-.1407	-.1260	.1110	-.0986	3659.		
.1200	3598.	-2011.	-5261.	2031.	-5031.	3465.	.1070	-.0088	-.1438	-.1103	.0891	-.0832	4339.		
.1210	3870.	-2223.	-5274.	2751.	-4772.	3970.	.1055	-.0077	-.1424	-.0979	.0659	-.0677	4576.		
.1220	3033.	-2135.	-4208.	2562.	-4521.	4288.	.1027	-.0082	-.1402	-.1045	.0732	-.0702	4541.		
.1230	2301.	-1861.	-3532.	2688.	-4317.	4306.	.0968	-.0074	-.1331	-.0989	.0680	-.0651	4492.		
.1240	2351.	-1797.	-3562.	3335.	-4115.	4243.	.0870	-.0051	-.1194	-.0719	.0359	-.0420	4574.		
.1250	2151.	-1911.	-2936.	3246.	-3718.	4239.	.0744	-.0042	-.1025	-.0530	.0174	-.0246	4385.		
.1260	1338.	-1868.	-1639.	2401.	-2805.	4065.	.0592	-.0043	-.0822	-.0470	.0171	-.0180	3701.		
.1270	441.	-1298.	-890.	1831.	-2157.	3347.	.0417	-.0027	-.0574	-.0315	.0076	-.0068	2954.		
.1280	46.	-701.	-752.	1682.	-1149.	2351.	.0209	.0008	-.0273	-.0032	-.0219	.0160	2097.		
.1290	-743.	-220.	170.	692.	55.	1389.	-.0011	.0028	.0030	.0095	-.0297	.0282	1047.		
.1300	-1829.	255.	1569.	-911.	1025.	431.	-.0235	.0038	.0320	.0114	-.0202	.0325	969.		
.1310	-2046.	633.	1997.	-1736.	2102.	-672.	-.0474	.0070	.0630	.0309	-.0379	.0532	1893.		
.1320	-2057.	1110.	2057.	-2259.	2737.	-1956.	-.0703	.0114	.0917	.0538	-.0601	.0772	2732.		
.1330	-2407.	1467.	2776.	-3321.	3291.	-3034.	-.0907	.0143	.1153	.0596	-.0622	.0891	3757.		
.1340	-2698.	1685.	3628.	-4430.	3672.	-3805.	-.1083	.0163	.1341	.0589	-.0619	.0973	4650.		
.1350	-2522.	1978.	3759.	-4713.	3858.	-4524.	-.1227	.0197	.1496	.0670	-.0833	.1129	5114.		
.1360	-2508.	2496.	3784.	-4609.	4252.	-5289.	-.1329	.0236	.1605	.0684	-.1081	.1228	5529.		
.1370	-3401.	3335.	4529.	-4991.	4315.	-5957.	-.1375	.0257	.1633	.0453	-.1076	.1114	5991.		
.1380	-3987.	3959.	5087.	-5120.	4398.	-6260.	-.1383	.0274	.1614	.0203	-.1160	.0998	6205.		
.1390	-3937.	4361.	5000.	-4603.	4193.	-6358.	-.1361	.0297	.1559	.0037	-.1433	.0962	5998.		
.1400	-4083.	4785.	5010.	-4122.	3563.	-6424.	-.1300	.0317	.1446	-.0209	-.1609	.0852	5677.		
.1410	-4322.	5013.	5264.	-3870.	3106.	-6284.	-.1216	.0325	.1293	-.0548	-.1683	.0673	5397.		
.1420	-4246.	5000.	5279.	-3522.	2410.	-5936.	-.1115	.0331	.1115	-.0854	-.1779	.0522	4928.		
.1430	-3705.	4715.	4915.	-2872.	1747.	-5482.	-.1006	.0340	.0931	-.1077	-.1947	.0441	4335.		
.1440	-3445.	4451.	4748.	-2442.	1059.	-5042.	-.0881	.0341	.0731	-.1335	-.1953	.0309	3843.		
.1450	-3381.	4209.	4649.	-2231.	409.	-4512.	-.0748	.0332	.0528	-.1583	-.1825	.0152	3404.		
.1460	-2782.	3735.	4004.	-1728.	46.	-3785.	-.0619	.0322	.0350	-.1665	-.1782	.0110	2805.		
.1470	-2162.	3294.	3144.	-1217.	-618.	-3047.	-.0486	.0308	.0183	-.1652	-.1667	.0108	2251.		
.1480	-1768.	2894.	2389.	-905.	-1044.	-2307.	-.0352	.0285	.0029	-.1611	-.1409	.0092	1812.		
.1490	-1397.	2488.	1538.	-652.	-1350.	-1506.	-.0222	.0256	-.0108	-.1495	-.1082	.0101	1432.		
.1500	-668.	1918.	322.	-230.	-1879.	-594.	-.0099	.0226	-.0226	-.1240	-.0797	.0200	1338.		
.1510	376.	1065.	-998.	248.	-2255.	447.	.0015	.0193	-.0324	-.0910	-.0548	.0360	1559.		
.1520	1021.	280.	-1934.	402.	-2661.	1454.	.0127	.0153	-.0421	-.0640	-.0176	.0455	2062.		
.1530	1516.	-451.	-2761.	557.	-2747.	2391.	.0231	.0114	-.0504	-.0391	.0176	.0528	2483.		
.1540	2023.	-1160.	-3597.	839.	-2846.	3242.	.0329	.0080	-.0575	-.0143	.0444	.0607	2962.		
.1550	2384.	-1898.	-4114.	989.	-2882.	4067.	.0421	.0047	-.0641	.0029	.0688	.0645	3425.		

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CONDITION 24
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.1450	-2381.	4209.	2649.	-2231.	409.	-4512.	-1748.	.0332	.0528	-.1583	-.1825	.0152	3404.
.1460	-2782.	3735.	4004.	-1728.	46.	-3785.	-.0619	.0322	.0350	-.1665	-.1782	.0110	2805.
.1470	-2162.	3294.	3144.	-1217.	-618.	-3047.	-.0486	.0308	.0183	-.1652	-.1667	.0108	2251.
.1480	-1768.	2894.	2389.	-909.	-1044.	-2307.	-.0352	.0285	.0029	-.1611	-.1409	.0092	1812.
.1490	-1397.	2488.	1538.	-652.	-1350.	-1506.	-.0222	.0256	-.0108	-.1495	-.1082	.0101	1432.
.1500	-668.	1918.	722.	-230.	-1879.	-594.	-.0099	.0226	-.0226	-.1240	-.0797	.0200	1338.
.1510	376.	1065.	-998.	248.	-2255.	447.	.0015	.0193	-.0324	-.0910	-.0548	.0360	1559.
.1520	1021.	280.	-1934.	402.	-2661.	1454.	.0127	.0153	-.0421	-.0640	-.0176	.0455	2062.
.1530	1516.	-451.	-2761.	557.	-2747.	2391.	.0231	.0114	-.0504	-.0391	.0176	.0528	2483.
.1540	2023.	-1160.	-3597.	839.	-2646.	7242.	.0329	.0080	-.0575	-.0143	.0444	.0607	2962.
.1550	2384.	-1898.	-4114.	989.	-2882.	4067.	.0421	.0047	-.0641	.0029	.0688	.0645	3425.

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2 SAFETY COLD FKW24F--2 PSV

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INTERNAL FORCES IN THE PIPING
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SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	EL	DX	DY	DZ	RX	RY	RZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.1560	2508.	-2631.	-4217.	940.	-2349.	4858.	.0502	.0013	-.0696	.0090	.0917	.0621	3692.
.1570	2194.	-3001.	-4121.	785.	-2050.	5395.	.0578	-.0016	-.0754	.0066	.1158	.0530	3926.
.1580	2039.	-3271.	-4218.	871.	-1790.	5760.	.0640	-.0031	-.0798	.0056	.1263	.0478	4108.
.1590	2083.	-3645.	-4249.	953.	-1345.	6125.	.0683	-.0040	-.0829	.0028	.1289	.0453	4275.
.1600	1807.	-3839.	-3902.	677.	-1244.	6403.	.0716	-.0051	-.0868	-.0089	.1403	.0376	4420.
.1610	1581.	-3830.	-3682.	538.	-1349.	6500.	.0732	-.0049	-.0899	-.0183	.1460	.0338	4489.
.1620	1799.	-3831.	-3793.	836.	-970.	6456.	.0717	-.0029	-.0896	-.0197	.1342	.0407	4436.
.1630	1572.	-3537.	-3481.	826.	-759.	6211.	.0690	-.0006	-.0896	-.0293	.1352	.0422	4254.
.1640	1120.	-3050.	-2921.	608.	-612.	5866.	.0647	.0018	-.0892	-.0425	.1435	.0421	3996.
.1650	1180.	-2614.	-2795.	788.	-267.	5472.	.0579	.0055	-.0858	-.0436	.1357	.0540	3730.
.1660	1304.	-2038.	-2805.	1060.	-280.	4927.	.0497	.0100	-.0814	-.0399	.1265	.0700	3402.
.1670	1256.	-1386.	-2593.	1106.	-301.	4325.	.0406	.0142	-.0765	-.0392	.1244	.0834	3016.
.1680	1176.	-686.	-2354.	1070.	-361.	3702.	.0305	.0182	-.0707	-.0379	.1222	.0966	2609.
.1690	1401.	-54.	-2409.	1304.	-240.	3043.	.0193	.0227	-.0626	-.0294	.1070	.1152	2238.
.1700	1471.	642.	-2366.	1491.	-223.	2288.	.0083	.0270	-.0541	-.0230	.0923	.1301	1847.
.1710	1100.	1451.	-1941.	1366.	-550.	1506.	-.0017	.0301	-.0468	-.0245	.0867	.1352	1420.
.1720	1026.	1954.	-1560.	1411.	-244.	882.	-.0123	.0327	-.0371	-.0234	.0671	.1418	1133.
.1730	802.	2435.	-1049.	1450.	94.	217.	-.0219	.0349	-.0272	-.0250	.0459	.1431	991.
.1740	200.	3000.	-284.	1324.	301.	-531.	-.0301	.0360	-.0179	-.0324	.0314	.1352	983.
.1750	-317.	3387.	451.	1220.	668.	-1156.	-.0377	.0351	-.0079	-.0376	.0124	.1255	1219.
.1760	-672.	3553.	1106.	1121.	862.	-1616.	-.0442	.0351	.0024	-.0382	-.0095	.1157	1447.
.1770	-902.	3500.	1727.	1004.	1127.	-1972.	-.0499	.0331	.0133	-.0355	-.0318	.1051	1674.
.1780	-1334.	3507.	2352.	749.	1173.	-2354.	-.0541	.0300	.0239	-.0325	-.0465	.0894	1843.
.1790	-1638.	3455.	2707.	570.	1355.	-2679.	-.0576	.0263	.0356	-.0229	-.0541	.0748	2060.
.1800	-1772.	3261.	2881.	407.	1592.	-2911.	-.0604	.0218	.0481	-.0082	-.0824	.0614	2253.
.1810	-2063.	3067.	3135.	20.	1372.	-3118.	-.0615	.0163	.0592	.0055	-.0901	.0439	2297.
.1820	-2110.	2696.	3198.	-288.	1406.	-3224.	-.0623	.0105	.0708	.0235	-.1011	.0288	2379.
.1830	-2110.	2307.	3133.	-571.	1502.	-3318.	-.0624	.0046	.0820	.0427	-.1115	.0135	2485.
.1840	-2213.	1932.	3127.	-952.	1523.	-3445.	-.0614	-.0016	.0915	.0581	-.1154	-.0050	2619.
.1850	-2228.	1448.	3120.	-1353.	1513.	-3519.	-.0594	-.0077	.0993	.0713	-.1170	-.0239	2738.
.1860	-2081.	874.	3002.	-1697.	1310.	-3485.	-.0564	-.0137	.1048	.0844	-.1195	-.0411	2758.
.1870	-1734.	203.	2759.	-1915.	1199.	-3343.	-.0526	-.0194	.1084	.0969	-.1252	-.0561	2720.
.1880	-1560.	-331.	2591.	-2168.	822.	-3222.	-.0470	-.0247	.1086	.1027	-.1249	-.0744	2676.
.1890	-1383.	-779.	2362.	-2302.	447.	-3079.	-.0401	-.0294	.1063	.1047	-.1258	-.0925	2608.
.1900	-1133.	-1173.	2048.	-2263.	255.	-2865.	-.0324	-.0332	.1020	.1037	-.1311	-.1089	2467.
.1910	-1150.	-1346.	1894.	-2259.	-139.	-2672.	-.0233	-.0365	.0945	.0945	-.1304	-.1286	2360.
.1920	-1207.	-1436.	1805.	-2164.	-433.	-2480.	-.0137	-.0389	.0849	.0801	-.1295	-.1476	2238.
.1930	-1199.	-1481.	1700.	-1943.	-587.	-2281.	-.0043	-.0401	.0739	.0630	-.1308	-.1635	2058.

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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

.1830	-2110.	2307.	3133.	-571.	1502.	-3318.	-.0624	.0046	.0820	.0427	-.1115	.0135	2485.
.1840	-2213.	1932.	3127.	-952.	1523.	-3445.	-.0614	-.0016	.0915	.0581	-.1154	-.0050	2619.
.1850	-2228.	1448.	3120.	-1353.	1513.	-3519.	-.0594	-.0077	.0993	.0713	-.1170	-.0239	2738.
.1860	-2081.	874.	3002.	-1697.	1310.	-3485.	-.0564	-.0137	.1048	.0844	-.1195	-.0411	2758.
.1870	-1734.	203.	2759.	-1915.	1199.	-3343.	-.0526	-.0194	.1084	.0969	-.1252	-.0561	2720.
.1880	-1560.	-331.	2591.	-2168.	822.	-3222.	-.0470	-.0247	.1086	.1027	-.1249	-.0744	2676.
.1890	-1383.	-779.	2362.	-2302.	447.	-3079.	-.0401	-.0294	.1063	.1047	-.1258	-.0925	2608.
.1900	-1133.	-1173.	2048.	-2263.	255.	-2865.	-.0324	-.0332	.1020	.1037	-.1311	-.1089	2467.
.1910	-1150.	-1346.	1894.	-2259.	-139.	-2672.	-.0233	-.0365	.0945	.0945	-.1304	-.1286	2360.
.1920	-1207.	-1436.	1805.	-2164.	-433.	-2480.	-.0137	-.0389	.0849	.0801	-.1295	-.1476	2238.
.1930	-1199.	-1481.	1700.	-1943.	-587.	-2281.	-.0043	-.0401	.0739	.0630	-.1308	-.1635	2058.

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

SECTION	3	MEMBER	1	SEQUENCE	18	LOCATION	END	TYPE	EL					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1940	-1263.	-1431.	1685.	-1744.	-703.	-2109.	.0047	-.0404	.0616	.0414	-.1285	-.1781	1905.	
.1950	-1366.	-1329.	1767.	-1588.	-758.	-1986.	.0127	-.0396	.0482	.0167	-.1211	-.1903	1788.	
.1960	-1305.	-1270.	1790.	-1373.	-736.	-1876.	.0192	-.0378	.0349	-.0061	-.1124	-.1960	1644.	
.1970	-1049.	-1259.	1691.	-1126.	-764.	-1740.	.0242	-.0350	.0219	-.0242	-.1020	-.1939	1489.	
.1980	-710.	-1239.	1514.	-923.	-860.	-1575.	.0278	-.0317	.0094	-.0380	-.0866	-.1857	1360.	
.1990	-336.	-1168.	1246.	-717.	-870.	-1416.	.0300	-.0278	-.0019	-.0468	-.0565	-.1718	1220.	
.2000	40.	-1008.	852.	-442.	-762.	-1282.	.0313	-.0234	-.0119	-.0494	-.0429	-.1525	1048.	
.2010	388.	-767.	358.	-125.	-659.	-1120.	.0319	-.0189	-.0207	-.0459	-.0153	-.1287	880.	
.2020	776.	-542.	-216.	226.	-576.	-850.	.0322	-.0145	-.0286	-.0358	.0146	-.1005	709.	
.2030	1233.	-389.	-856.	645.	-469.	-464.	.0322	-.0104	-.0356	-.0199	.0447	-.0687	622.	
.2040	1664.	-260.	-1515.	1129.	-392.	-16.	.0325	-.0066	-.0422	-.0003	.0752	-.0358	805.	
.2050	2041.	-166.	-2153.	1658.	-371.	493.	.0332	-.0033	-.0487	.0213	.1050	-.0036	1192.	
.2060	2442.	-206.	-2739.	2217.	-348.	1109.	.0343	-.0005	-.0549	.0437	.1310	.0275	1687.	
.2070	2843.	-392.	-3214.	2764.	-338.	1821.	.0360	.0015	-.0610	.0646	.1525	.0556	2242.	
.2080	3121.	-618.	-3555.	3271.	-397.	2546.	.0385	.0028	-.0670	.0820	.1599	.0784	2807.	
.2090	3238.	-819.	-3779.	3747.	-452.	3229.	.0415	.0036	-.0725	.0948	.1818	.0949	3348.	
.2100	3201.	-1005.	-3858.	4159.	-396.	3851.	.0449	.0038	-.0770	.1023	.1876	.1047	3830.	
.2110	2984.	-1165.	-3746.	4431.	-284.	4385.	.0484	.0034	-.0806	.1034	.1895	.1072	4207.	
.2120	2640.	-1282.	-3509.	4583.	-188.	4802.	.0516	.0025	-.0828	.1001	.1872	.1039	4476.	
.2130	2281.	-1384.	-3234.	4666.	-69.	5086.	.0539	.0014	-.0831	.0950	.1792	.0974	4652.	
.2140	1918.	-1486.	-2886.	4626.	83.	5223.	.0550	.0002	-.0816	.0883	.1584	.0882	4704.	
.2150	1548.	-1576.	-2458.	4429.	208.	5201.	.0545	-.0013	-.0781	.0804	.1573	.0769	4607.	
.2160	1271.	-1652.	-2072.	4147.	279.	5026.	.0522	-.0027	-.0724	.0748	.1442	.0661	4396.	
.2170	1136.	-1710.	-1785.	3832.	319.	4706.	.0481	-.0039	-.0644	.0728	.1279	.0575	4096.	
.2180	1045.	-1713.	-1509.	3425.	326.	4234.	.0424	-.0051	-.0544	.0727	.1119	.0493	3677.	
.2190	934.	-1616.	-1223.	2916.	311.	3612.	.0353	-.0062	-.0426	.0731	.0967	.0408	3136.	
.2200	830.	-1401.	-1001.	2384.	322.	2849.	.0271	-.0071	-.0292	.0747	.0796	.0325	2514.	
.2210	698.	-1065.	-815.	1833.	358.	1955.	.0181	-.0077	-.0146	.0760	.0505	.0236	1822.	
.2220	483.	-645.	-564.	1206.	377.	960.	.0088	-.0083	.0003	.0742	.0414	.0123	1070.	
.2230	239.	-216.	-244.	527.	399.	-74.	-.0007	-.0088	.0151	.0689	.0207	-.0009	448.	
.2240	18.	174.	111.	-153.	448.	-1111.	-.0100	-.0091	.0293	.0603	-.0032	-.0155	814.	
.2250	-238.	526.	545.	-850.	486.	-2142.	-.0188	-.0094	.0423	.0469	-.0283	-.0325	1587.	
.2260	-540.	821.	1071.	-1560.	485.	-3125.	-.0266	-.0096	.0535	.0287	-.0533	-.0520	2377.	
.2270	-805.	1011.	1616.	-2214.	465.	-3986.	-.0333	-.0098	.0627	.0081	-.0796	-.0719	3089.	
.2280	-1026.	1101.	2152.	-2774.	428.	-4681.	-.0385	-.0101	.0698	-.0134	-.1066	-.0914	3679.	
.2290	-1293.	1155.	2692.	-3245.	367.	-5219.	-.0419	-.0106	.0747	-.0354	-.1307	-.1107	4150.	
.2300	-1612.	1216.	3179.	-3588.	306.	-5595.	-.0435	-.0111	.0775	-.0561	-.1511	-.1287	4485.	
.2310	-1907.	1274.	3520.	-3748.	242.	-5778.	-.0434	-.0116	.0784	-.0721	-.1585	-.1432	4645.	

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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

.2200	830.	-1401.	1001.	2304.	322.	2849.	.0271	-.0077	-.0292	.0747	.0796	.0325	2514.
.2210	698.	-1065.	-815.	1833.	358.	1955.	.0181	-.0077	-.0146	.0760	.0505	.0236	1822.
.2220	483.	-645.	-564.	1206.	377.	960.	.0058	-.0083	.0003	.0742	.0414	.0123	1070.
.2230	239.	-216.	-244.	527.	399.	-74.	-.0007	-.0088	.0151	.0689	.0207	-.0009	448.
.2240	18.	174.	111.	-153.	448.	-1111.	-.0100	-.0091	.0293	.0603	-.0032	-.0155	814.
.2250	-239.	526.	545.	-850.	486.	-2142.	-.0188	-.0094	.0423	.0469	-.0283	-.0325	1587.
.2260	-540.	821.	1071.	-1560.	485.	-3125.	-.0266	-.0096	.0535	.0287	-.0533	-.0520	2377.
.2270	-805.	1011.	1616.	-2214.	465.	-3986.	-.0333	-.0098	.0627	.0081	-.0796	-.0719	3089.
.2280	-1026.	1101.	2152.	-2774.	428.	-4681.	-.0385	-.0101	.0698	-.0134	-.1066	-.0914	3679.
.2290	-1293.	1155.	2692.	-3245.	367.	-5219.	-.0419	-.0106	.0747	-.0354	-.1307	-.1107	4150.
.2300	-1612.	1216.	3179.	-3588.	306.	-5595.	-.0435	-.0111	.0775	-.0561	-.1511	-.1287	4485.
.2310	-1907.	1274.	3520.	-3748.	242.	-5778.	-.0434	-.0116	.0784	-.0721	-.1585	-.1432	4645.

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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	3	MEMBER	1	SEQUENCE	18	LOCATION	END	TYPE	EL						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	HX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.2320	-2143.	1306.	3707.	-3737.	126.	-5743.	-.0417	-.0123	.0777	-.0821	-.1817	-.1527	4620.		
.2330	-2306.	1292.	3762.	-3583.	-49.	-5501.	-.0388	-.0130	.0753	-.0857	-.1890	-.1568	4425.		
.2340	-2367.	1229.	3670.	-3285.	-231.	-5082.	-.0352	-.0135	.0719	-.0824	-.1912	-.1547	4082.		
.2350	-2334.	1132.	3440.	-2867.	-395.	-4535.	-.0313	-.0138	.0677	-.0729	-.1884	-.1467	3627.		
.2360	-2238.	1004.	3137.	-2396.	-536.	-3904.	-.0276	-.0137	.0630	-.0591	-.1799	-.1336	3109.		
.2370	-2076.	826.	2808.	-1915.	-610.	-3218.	-.0242	-.0133	.0581	-.0424	-.1564	-.1162	2557.		
.2380	-1853.	612.	2463.	-1445.	-589.	-2515.	-.0217	-.0124	.0534	-.0241	-.1493	-.0952	1995.		
.2390	-1616.	410.	2116.	-1020.	-492.	-1847.	-.0199	-.0111	.0488	-.0058	-.1292	-.0719	1460.		
.2400	-1401.	248.	1789.	-668.	-318.	-1253.	-.0190	-.0092	.0446	.0110	-.1064	-.0478	981.		
.2410	-1205.	125.	1487.	-397.	-47.	-744.	-.0188	-.0069	.0408	.0253	-.0820	-.0237	569.		
.2420	-1022.	44.	1204.	-203.	283.	-317.	-.0192	-.0042	.0371	.0369	-.0568	.0001	318.		
.2430	-839.	4.	919.	-70.	599.	33.	-.0199	-.0013	.0332	.0460	-.0312	.0230	407.		
.2440	-619.	-16.	611.	31.	873.	326.	-.0207	.0019	.0290	.0529	-.0067	.0451	629.		
.2450	-361.	-27.	283.	114.	1103.	579.	-.0211	.0051	.0242	.0574	.0165	.0659	843.		
.2460	-103.	-10.	-44.	183.	1271.	796.	-.0210	.0083	.0184	.0589	.0386	.0842	1018.		
.2470	145.	37.	-371.	263.	1363.	982.	-.0199	.0113	.0115	.0575	.0592	.0995	1147.		
.2480	409.	89.	-714.	380.	1379.	1161.	-.0178	.0142	.0035	.0535	.0769	.1120	1242.		
.2490	685.	137.	-1065.	523.	1293.	1351.	-.0144	.0167	-.0057	.0469	.0915	.1212	1309.		
.2500	940.	191.	-1408.	677.	1089.	1552.	-.0098	.0187	-.0160	.0374	.1030	.1263	1357.		
.2510	1156.	251.	-1731.	847.	818.	1747.	-.0040	.0203	-.0271	.0247	.1109	.1271	1420.		
.2520	1314.	312.	-2006.	1017.	526.	1923.	.0028	.0215	-.0387	.0086	.1152	.1233	1508.		
.2530	1403.	362.	-2212.	1152.	194.	2081.	.0102	.0221	-.0505	-.0106	.1165	.1149	1609.		
.2540	1459.	372.	-2363.	1250.	-190.	2233.	.0180	.0222	-.0619	-.0317	.1142	.1030	1730.		
.2550	1514.	316.	-2460.	1319.	-578.	2378.	.0257	.0219	-.0725	-.0534	.1081	.0887	1874.		
.2560	1519.	210.	-2459.	1329.	-911.	2491.	.0329	.0211	-.0817	-.0756	.1000	.0719	2000.		
.2570	1432.	89.	-2346.	1258.	-1172.	2552.	.0393	.0199	-.0893	-.0977	.0917	.0531	2074.		
.2580	1312.	-55.	-2187.	1139.	-1360.	2570.	.0446	.0184	-.0945	-.1170	.0827	.0342	2105.		
.2590	1222.	-245.	-2028.	993.	-1477.	2564.	.0485	.0165	-.0972	-.1314	.0729	.0172	2104.		
.2600	1137.	-464.	-1856.	795.	-1541.	2537.	.0508	.0144	-.0971	-.1401	.0644	.0024	2071.		
.2610	1042.	-676.	-1697.	549.	-1551.	2477.	.0516	.0120	-.0943	-.1427	.0580	-.0097	2005.		
.2620	978.	-870.	-1615.	299.	-1507.	2382.	.0508	.0095	-.0887	-.1378	.0529	-.0179	1911.		
.2630	959.	-1050.	-1621.	44.	-1442.	2258.	.0485	.0070	-.0806	-.1260	.0488	-.0222	1806.		
.2640	967.	-1218.	-1677.	-241.	-1389.	2122.	.0449	.0044	-.0704	-.1085	.0465	-.0231	1717.		
.2650	1007.	-1381.	-1771.	-536.	-1336.	1980.	.0402	.0018	-.0587	-.0870	.0446	-.0212	1650.		
.2660	1066.	-1526.	-1885.	-815.	-1262.	1819.	.0346	-.0006	-.0460	-.0632	.0418	-.0172	1590.		
.2670	1079.	-1627.	-1959.	-1097.	-1171.	1624.	.0285	-.0027	-.0329	-.0403	.0384	-.0130	1539.		
.2680	1016.	-1680.	-1943.	-1389.	-1062.	1402.	.0222	-.0045	-.0201	-.0208	.0339	-.0099	1510.		
.2690	899.	-1703.	-1828.	-1660.	-924.	1166.	.0159	-.0059	-.0080	-.0057	.0266	-.0081	1502.		

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18.25.51.

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

.2590	1222.	-245.	-2028.	993.	-1477.	2564.	.0485	.0165	-.0972	-.1314	.0729	.0172	2104.
.2600	1137.	-464.	-1856.	795.	-1541.	2537.	.0508	.0144	-.0971	-.1401	.0644	.0024	2071.
.2610	1042.	-676.	-1697.	549.	-1551.	2477.	.0516	.0120	-.0943	-.1427	.0580	-.0097	2005.
.2620	978.	-870.	-1615.	299.	-1507.	2382.	.0508	.0095	-.0887	-.1378	.0529	-.0179	1911.
.2630	959.	-1050.	-1621.	44.	-1442.	2258.	.0485	.0070	-.0806	-.1260	.0488	-.0222	1806.
.2640	967.	-1218.	-1677.	-241.	-1389.	2122.	.0449	.0044	-.0704	-.1085	.0465	-.0231	1717.
.2650	1007.	-1381.	-1771.	-536.	-1336.	1980.	.0402	.0018	-.0587	-.0870	.0446	-.0212	1650.
.2660	1066.	-1526.	-1885.	-815.	-1262.	1819.	.0346	-.0006	-.0460	-.0632	.0418	-.0172	1590.
.2670	1079.	-1627.	-1959.	-1097.	-1171.	1624.	.0285	-.0027	-.0329	-.0403	.0384	-.0130	1539.
.2680	1016.	-1680.	-1943.	-1389.	-1062.	1402.	.0222	-.0045	-.0201	-.0208	.0339	-.0099	1510.
.2690	899.	-1703.	-1820.	-1660.	-924.	1166.	.0159	-.0059	-.0080	-.0057	.0266	-.0081	1502.

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CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	3	MEMBER	1	SEQUENCE	18	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)			(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.2700	727.	-1695.	-1598.	-1894.	-769.	921.	.0098	-.0069	.0029	.0039	.0161	-.0079			1511.
.2710	472.	-1637.	-1236.	-2099.	-617.	663.	.0041	-.0074	.0122	.0070	.0033	-.0100			1541.
.2720	146.	-1517.	-772.	-2261.	-472.	395.	-.0012	-.0073	.0198	.0042	-.0120	-.0140			1579.
.2730	-218.	-1331.	-253.	-2355.	-336.	119.	-.0061	-.0067	.0258	-.0033	-.0298	-.0189			1606.
.2740	-612.	-1073.	305.	-2389.	-231.	-164.	-.0106	-.0056	.0303	-.0145	-.0490	-.0241			1622.
.2750	-1023.	-749.	888.	-2378.	-144.	-455.	-.0149	-.0040	.0336	-.0283	-.0581	-.0289			1635.
.2760	-1425.	-359.	1454.	-2327.	-46.	-759.	-.0193	-.0018	.0362	-.0431	-.0865	-.0324			1650.
.2770	-1805.	102.	1964.	-2249.	58.	-1093.	-.0238	.0008	.0383	-.0576	-.1031	-.0339			1686.
.2780	-2143.	618.	2398.	-2165.	158.	-1463.	-.0288	.0039	.0402	-.0706	-.1166	-.0327			1765.
.2790	-2395.	1140.	2739.	-2094.	261.	-1852.	-.0343	.0073	.0423	-.0810	-.1267	-.0283			1892.
.2800	-2527.	1630.	2973.	-2050.	368.	-2240.	-.0404	.0110	.0446	-.0880	-.1331	-.0202			2062.
.2810	-2552.	2083.	3093.	-2046.	461.	-2629.	-.0469	.0147	.0473	-.0915	-.1354	-.0090			2267.
.2820	-2488.	2499.	3095.	-2075.	544.	-3015.	-.0536	.0185	.0501	-.0917	-.1339	.0048			2494.
.2830	-2346.	2858.	2996.	-2129.	633.	-3373.	-.0602	.0221	.0529	-.0891	-.1291	.0203			2722.
.2840	-2151.	3141.	2834.	-2207.	729.	-3669.	-.0662	.0255	.0555	-.0847	-.1213	.0365			2927.
.2850	-1938.	3348.	2633.	-2290.	829.	-3880.	-.0710	.0284	.0572	-.0792	-.1109	.0521			3088.
.2860	-1736.	3486.	2404.	-2346.	940.	-3993.	-.0744	.0307	.0580	-.0735	-.0990	.0663			3186.
.2870	-1563.	3552.	2164.	-2354.	1061.	-3992.	-.0759	.0324	.0572	-.0680	-.0860	.0781			3205.
.2880	-1421.	3526.	1936.	-2306.	1166.	-3849.	-.0752	.0334	.0547	-.0634	-.0723	.0871			3125.
.2890	-1289.	3388.	1717.	-2189.	1236.	-3544.	-.0723	.0336	.0503	-.0593	-.0584	.0934			2929.
.2900	-1150.	3136.	1489.	-1985.	1258.	-3078.	-.0671	.0331	.0438	-.0555	-.0450	.0973			2610.
.2910	-1010.	2791.	1246.	-1699.	1217.	-2472.	-.0597	.0318	.0355	-.0519	-.0319	.0987			2182.
.2920	-868.	2365.	985.	-1347.	1109.	-1745.	-.0504	.0299	.0257	-.0483	-.0191	.0979			1663.
.2930	-711.	1870.	698.	-944.	950.	-920.	-.0397	.0274	.0146	-.0445	-.0066	.0954			1095.
.2940	-544.	1334.	382.	-510.	756.	-36.	-.0279	.0245	.0029	-.0402	.0055	.0915			615.
.2950	-378.	792.	36.	-69.	526.	858.	-.0156	.0212	-.0091	-.0354	.0178	.0865			680.
.2960	-202.	262.	-344.	356.	274.	1725.	-.0032	.0178	-.0208	-.0300	.0300	.0809			1202.
.2970	-1.	-252.	-753.	744.	19.	2537.	.0087	.0144	-.0318	-.0240	.0418	.0754			1782.
.2980	219.	-736.	-1170.	1069.	-231.	3259.	.0195	.0111	-.0416	-.0176	.0536	.0700			2317.
.2990	457.	-1173.	-1584.	1320.	-475.	3861.	.0291	.0081	-.0501	-.0111	.0651	.0651			2769.
.3000	723.	-1559.	-1997.	1503.	-709.	4328.	.0371	.0054	-.0571	-.0045	.0758	.0610			3125.
.3010	1015.	-1890.	-2390.	1614.	-926.	4658.	.0433	.0032	-.0625	.0019	.0850	.0577			3381.
.3020	1300.	-2149.	-2730.	1647.	-1119.	4846.	.0477	.0014	-.0663	.0072	.0930	.0548			3531.
.3030	1552.	-2317.	-3003.	1622.	-1274.	4887.	.0506	.0000	-.0687	.0109	.0992	.0519			3575.
.3040	1754.	-2383.	-3203.	1559.	-1378.	4790.	.0519	-.0008	-.0697	.0128	.1032	.0488			3520.
.3050	1890.	-2347.	-3313.	1464.	-1437.	4573.	.0519	-.0012	-.0695	.0125	.1048	.0451			3378.
.3060	1947.	-2218.	-3322.	1345.	-1454.	4259.	.0507	-.0013	-.0683	.0099	.1040	.0407			3166.
.3070	1932.	-2008.	-3235.	1223.	-1431.	3866.	.0487	-.0010	-.0664	.0052	.1005	.0356			2898.

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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