

50-305

RESPONSE TO NUREG-0737 ITEM II.D.1

Docket # *50-305*

Control # *8403280048*

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

.1370	5871.	3068.	-4487.	-979.	-6734.	1501.	.0054	.0462	.1921	-.1805	-.0492	-.0159	9426.
.1380	5301.	2943.	-4353.	-150.	-6949.	1823.	.0065	.0510	.2013	-.1928	-.0517	-.0183	10150.
.1390	4845.	2468.	-4189.	407.	-6893.	1937.	.0053	.0555	.2066	-.1958	-.0540	-.0179	10130.
.1400	6248.	2893.	-4586.	687.	-6579.	2277.	.0010	.0612	.2086	-.1898	-.0575	-.0247	9882.
.1410	6018.	3982.	-4002.	839.	-6250.	2770.	-.0074	.0670	.2074	-.1775	-.0538	-.0377	9729.
.1420	6719.	4107.	-3718.	972.	-5599.	2887.	-.0171	.0703	.2012	-.1605	-.0507	-.0448	8994.
.1430	6374.	3417.	-3034.	1000.	-4746.	2663.	-.0275	.0718	.1898	-.1382	-.0463	-.0451	7816.
.1440	6162.	3498.	-2547.	1064.	-3735.	2642.	-.0383	.0743	.1734	-.1108	-.0441	-.0497	6635.
.1450	6105.	4221.	-2340.	1056.	-2605.	2782.	-.0489	.0775	.1525	-.0821	-.0447	-.0578	5585.
.1460	4474.	4145.	-1502.	934.	-1471.	2583.	-.0591	.0792	.1277	-.0565	-.0429	-.0579	4401.
.1470	4809.	3284.	-1627.	852.	-123.	2092.	-.0672	.0795	.0993	-.0353	-.0457	-.0497	3195.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.30.

S/RV PIPING KEMAUNEE GKWO3F 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	12	MEMBER	3	SEQUENCE	843	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)		
.1480	3624.	2799.	-994.	992.	1089.	1725.	-.0749	.0802	.0694	-.0166	-.0424	-.0406	3204.		
.1490	1781.	2553.	91.	1327.	2158.	1443.	-.0818	.0815	.0390	.0004	-.0335	-.0299	4118.		
.1500	1484.	1724.	633.	1665.	3186.	947.	-.0867	.0823	.0089	.0144	-.0245	-.0117	5251.		
.1510	257.	725.	1644.	1898.	3925.	349.	-.0905	.0828	-.0197	.0243	-.0102	.0107	6177.		
.1520	-85.	301.	2190.	2066.	4461.	-77.	-.0920	.0839	-.0471	.0301	.0033	.0301	6944.		
.1530	-1786.	44.	3124.	2203.	4683.	-466.	-.0913	.0851	-.0729	.0329	.0190	.0488	7340.		
.1540	-2476.	-732.	3306.	2296.	4820.	-1050.	-.0869	.0855	-.0979	.0341	.0293	.0713	7686.		
.1550	-2405.	-1536.	2854.	2326.	4874.	-1660.	-.0792	.0857	-.1216	.0348	.0345	.0939	7980.		
.1560	-5082.	-1710.	3441.	2277.	4583.	-2061.	-.0704	.0867	-.1425	.0347	.0444	.1111	7792.		
.1570	-5462.	-1835.	2999.	2103.	4301.	-2400.	-.0598	.0876	-.1604	.0332	.0491	.1259	7565.		
.1580	-5552.	-2446.	2527.	1788.	3924.	-2857.	-.0490	.0879	-.1742	.0311	.0542	.1429	7306.		
.1590	-7218.	-2384.	2910.	1449.	3307.	-3192.	-.0396	.0886	-.1831	.0303	.0645	.1582	6807.		
.1600	-6821.	-2735.	2563.	1215.	2699.	-3215.	-.0314	.0905	-.1873	.0308	.0715	.1681	6174.		
.1610	-5079.	-2814.	1756.	1059.	2221.	-3210.	-.0235	.0922	-.1883	.0304	.0749	.1783	5713.		
.1620	-6343.	-3419.	2314.	969.	1709.	-3322.	-.0165	.0928	-.1868	.0271	.0822	.1907	5451.		
.1630	-5952.	-3769.	2170.	1030.	1433.	-3265.	-.0094	.0930	-.1836	.0203	.0829	.1983	5243.		
.1640	-4936.	-3861.	1785.	1223.	1298.	-3050.	-.0029	.0928	-.1782	.0118	.0799	.2010	4991.		
.1650	-5605.	-4332.	2215.	1429.	1151.	-2933.	.0023	.0915	-.1700	.0044	.0791	.2043	4886.		
.1660	-4341.	-4801.	1925.	1616.	1147.	-2789.	.0067	.0894	-.1589	.0003	.0740	.2046	4833.		
.1670	-3510.	-4573.	1967.	1773.	1036.	-2408.	.0091	.0871	-.1442	-.0003	.0714	.1965	4470.		
.1680	-2681.	-4165.	2117.	1791.	801.	-1983.	.0104	.0835	-.1265	.0016	.0704	.1837	3974.		
.1690	-3171.	-4138.	2899.	1612.	610.	-1738.	.0107	.0777	-.1063	.0059	.0733	.1706	3458.		
.1700	-2823.	-3930.	3279.	1323.	313.	-1485.	.0108	.0706	-.0841	.0137	.0742	.1530	2844.		
.1710	249.	-3105.	2283.	979.	153.	-1071.	.0120	.0631	-.0613	.0258	.0670	.1285	2061.		
.1720	-509.	-2139.	2669.	571.	-230.	-694.	.0132	.0546	-.0383	.0403	.0549	.1021	1310.		
.1730	-772.	-1477.	2532.	168.	-581.	-472.	.0155	.0442	-.0158	.0534	.0583	.0766	1083.		
.1740	395.	-973.	1527.	-148.	-915.	-331.	.0184	.0322	.0065	.0638	.0461	.0509	1391.		
.1750	434.	-404.	852.	-413.	-1382.	-203.	.0205	.0198	.0290	.0734	.0352	.0249	2057.		
.1760	1219.	345.	-217.	-665.	-1800.	-38.	.0223	.0079	.0508	.0837	.0225	-.0006	2711.		
.1770	1039.	1279.	-803.	-825.	-2286.	179.	.0225	-.0035	.0723	.0934	.0130	-.0253	3442.		
.1780	2184.	1984.	-1845.	-816.	-2649.	353.	.0214	-.0154	.0925	.0998	.0023	-.0471	3947.		
.1790	2195.	2171.	-2268.	-686.	-2980.	385.	.0185	-.0279	.1110	.1019	-.0047	-.0637	4354.		
.1800	1394.	2247.	-2229.	-534.	-3229.	396.	.0137	-.0400	.1273	.1019	-.0095	-.0772	4657.		
.1810	3393.	2686.	-3319.	-420.	-3134.	548.	.0084	-.0506	.1402	.1015	-.0213	-.0909	4533.		
.1820	3599.	3314.	-3551.	-348.	-2959.	769.	.0016	-.0600	.1498	.1005	-.0301	-.1038	4346.		
.1830	3553.	3667.	-3611.	-258.	-2596.	928.	-.0059	-.0692	.1555	.0969	-.0392	-.1135	3912.		
.1840	4004.	3683.	-3780.	-111.	-2060.	1008.	-.0138	-.0783	.1580	.0904	-.0491	-.1202	3242.		
.1850	4247.	3626.	-3689.	27.	-1451.	1077.	-.0222	-.0864	.1579	.0835	-.0570	-.1253	2552.		

ADLPIPE PAGE 607

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.30.

S/RV PIPING KEMAUNEE GKWO3F 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

.1750	434.	-404.	852.	-413.	-1382.	-203.	.0205	.0198	.0290	.0734	.0352	-.0249	2057.
.1760	1219.	345.	-217.	-665.	-1800.	-38.	.0223	.0079	.0508	.0837	.0225	-.0006	2711.
.1770	1039.	1279.	-803.	-825.	-2286.	179.	.0225	-.0035	.0723	.0934	.0130	-.0253	3442.
.1780	2184.	1904.	-1845.	-816.	-2649.	353.	.0214	-.0154	.0925	.0998	.0023	-.0471	3947.
.1790	2195.	2171.	-2268.	-686.	-2920.	385.	.0185	-.0279	.1110	.1019	-.0047	-.0637	4354.
.1800	1394.	2247.	-2229.	-534.	-3229.	396.	.0137	-.0400	.1273	.1019	-.0095	-.0772	4657.
.1810	3393.	2686.	-3319.	-420.	-3134.	548.	.0084	-.0506	.1402	.1015	-.0213	-.0909	4533.
.1820	3599.	3314.	-3551.	-348.	-2959.	769.	.0016	-.0600	.1498	.1005	-.0301	-.1038	4346.
.1830	3553.	3667.	-3611.	-258.	-2596.	928.	-.0059	-.0692	.1555	.0969	-.0392	-.1135	3912.
.1840	4004.	3683.	-3780.	-111.	-2060.	1008.	-.0138	-.0787	.1580	.0904	-.0491	-.1202	3242.
.1850	4247.	3626.	-3689.	27.	-1451.	1077.	-.0222	-.0864	.1579	.0835	-.0570	-.1253	2552.

ADLPIPE PAGE 607 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.30.

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	12	MEMBER	3	SEQUENCE	843	LOCATION	END	TYPE	EL						
TIME (SEC)	FX (LL)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.1860	5169.	3817.	-3721.	65.	-761.	1235.	-.0304	-.0925	.1557	.0783	-.0641	-.1310	2051.		
.1870	4749.	4378.	-3033.	31.	-219.	1519.	-.0388	-.0961	.1525	.0746	-.0655	-.1383	2168.		
.1880	5585.	4904.	-2834.	45.	287.	1819.	-.0463	-.0983	.1483	.0706	-.0673	-.1448	2603.		
.1890	6012.	4938.	-2483.	173.	658.	1982.	-.0522	-.0997	.1431	.0648	-.0668	-.1474	2959.		
.1900	4913.	4714.	-1573.	396.	835.	2075.	-.0564	-.0999	.1368	.0579	-.0626	-.1471	3208.		
.1910	5174.	4744.	-1439.	675.	1010.	2276.	-.0573	-.0976	.1289	.0510	-.0623	-.1476	3644.		
.1920	4983.	4922.	-1305.	985.	1084.	2536.	-.0554	-.0933	.1194	.0440	-.0623	-.1473	4136.		
.1930	4318.	4735.	-1135.	1336.	1090.	2693.	-.0506	-.0882	.1083	.0354	-.0622	-.1429	4516.		
.1940	3905.	4108.	-1175.	1741.	1072.	2737.	-.0433	-.0830	.0957	.0244	-.0624	-.1341	4826.		
.1950	3350.	3342.	-1172.	2147.	1004.	2759.	-.0340	-.0772	.0821	.0132	-.0608	-.1227	5137.		
.1960	2277.	2627.	-908.	2458.	862.	2797.	-.0236	-.0708	.0680	.0044	-.0560	-.1093	5398.		
.1970	1479.	1957.	-704.	2608.	694.	2833.	-.0124	-.0639	.0533	-.0012	-.0494	-.0944	5526.		
.1980	1235.	1240.	-663.	2590.	531.	2817.	-.0008	-.0574	.0387	-.0047	-.0418	-.0781	5458.		
.1990	605.	408.	-385.	2435.	364.	2701.	.0109	-.0518	.0233	-.0066	-.0315	-.0605	5162.		
.2000	-671.	-483.	191.	2183.	219.	2481.	.0226	-.0474	.0071	-.0061	-.0192	-.0422	4679.		
.2010	-1845.	-1294.	682.	1870.	145.	2192.	.0341	-.0440	-.0099	-.0021	-.0074	-.0244	4075.		
.2020	-2780.	-1968.	1032.	1507.	130.	1834.	.0448	-.0415	-.0271	.0058	.0031	-.0079	3358.		
.2030	-3789.	-2531.	1420.	1096.	142.	1390.	.0542	-.0401	-.0440	.0170	.0134	.0072	2509.		
.2040	-4630.	-2992.	1775.	652.	191.	865.	.0619	-.0400	-.0601	.0305	.0237	.0207	1554.		
.2050	-5197.	-3369.	2075.	207.	279.	274.	.0676	-.0412	-.0749	.0463	.0339	.0326	624.		
.2060	-5744.	-3678.	2450.	-200.	381.	-376.	.0711	-.0434	-.0881	.0648	.0448	.0433	807.		
.2070	-6042.	-3888.	2795.	-558.	496.	-1052.	.0726	-.0463	-.0992	.0862	.0555	.0524	1822.		
.2080	-5674.	-3978.	2874.	-898.	646.	-1721.	.0724	-.0498	-.1084	.1094	.0644	.0598	2891.		
.2090	-5052.	-3998.	2809.	-1266.	814.	-2377.	.0710	-.0538	-.1155	.1327	.0716	.0655	3974.		
.2100	-4723.	-3985.	2810.	-1663.	952.	-3008.	.0687	-.0581	-.1206	.1545	.0778	.0697	5038.		
.2110	-4257.	-3925.	2671.	-2054.	1059.	-3580.	.0659	-.0625	-.1235	.1741	.0816	.0721	6018.		
.2120	-3389.	-3821.	2277.	-2414.	1133.	-4056.	.0631	-.0665	-.1239	.1911	.0828	.0731	6856.		
.2130	-2644.	-3658.	1898.	-2737.	1134.	-4409.	.0603	-.0699	-.1217	.2045	.0829	.0726	7503.		
.2140	-2238.	-3393.	1697.	-3007.	1031.	-4605.	.0575	-.0725	-.1166	.2127	.0836	.0703	7903.		
.2150	-1855.	-3076.	1565.	-3197.	821.	-4642.	.0547	-.0742	-.1083	.2140	.0845	.0664	8045.		
.2160	-1458.	-2822.	1460.	-3283.	510.	-4545.	.0519	-.0751	-.0970	.2082	.0849	.0617	7952.		
.2170	-1309.	-2561.	1447.	-3233.	107.	-4292.	.0491	-.0747	-.0830	.1960	.0846	.0559	7591.		
.2180	-1332.	-2143.	1455.	-3016.	-348.	-3840.	.0463	-.0728	-.0669	.1780	.0823	.0480	6914.		
.2190	-1426.	-1654.	1411.	-2629.	-796.	-3232.	.0435	-.0697	-.0495	.1546	.0771	.0381	5991.		
.2200	-1702.	-1303.	1342.	-2102.	-1187.	-2558.	.0407	-.0659	-.0313	.1261	.0685	.0275	4967.		
.2210	-1963.	-1043.	1173.	-1475.	-1473.	-1828.	.0374	-.0615	-.0129	.0944	.0560	.0158	3915.		
.2220	-1862.	-657.	788.	-792.	-1609.	-1000.	.0335	-.0562	.0051	.0623	.0393	.0018	2899.		
.2230	-1538.	-129.	293.	-99.	-1586.	-98.	.0288	-.0501	.0225	.0319	.0196	-.0145	2248.		

ADLPIPE PAGE 608 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.30.

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

.2130	-2644.	-7658.	1898.	-2737.	1134.	-4409.	.603	-.0699	-.1217	.2045	.0829	.0726	7503.
.2140	-2238.	-3393.	1697.	-3007.	1031.	-4605.	.575	-.0725	-.1166	.2127	.0836	.0703	7903.
.2150	-1855.	-3076.	1565.	-3197.	821.	-4642.	.547	-.0742	-.1083	.2140	.0845	.0664	8045.
.2160	-1452.	-2822.	1468.	-3283.	510.	-4545.	.519	-.0751	-.0979	.2082	.0849	.0617	7952.
.2170	-1305.	-2561.	1447.	-3283.	107.	-4292.	.491	-.0747	-.0830	.1960	.0846	.0559	7591.
.2180	-1132.	-2143.	1455.	-3016.	-748.	-3840.	.463	-.0728	-.0669	.1780	.0823	.0480	6914.
.2190	-1426.	-1654.	1411.	-2629.	-796.	-3232.	.435	-.0697	-.0495	.1546	.0771	.0381	5991.
.2200	-1702.	-1303.	1342.	-2102.	-1187.	-2558.	.407	-.0659	-.0313	.1261	.0685	.0275	4967.
.2210	-1963.	-1043.	1173.	-1475.	-1473.	-1828.	.374	-.0615	-.0129	.0944	.0560	.0158	3915.
.2220	-1762.	-657.	789.	-792.	-1609.	-1000.	.335	-.0562	.0051	.0623	.0393	.0018	2899.
.2230	-1533.	-129.	293.	-99.	-1586.	-98.	.288	-.0501	.0225	.0319	.0196	-.0145	2248.

ADLPIPE PAGE 608

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.30.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	12	MEMBER	3	SEQUENCE	843	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	-1188.	382.	-181.	568.	-1422.	798.	.0229	-.0440	.0389	.0046	-.0015	-.0315	2439.	
.2250	-566.	813.	-704.	1180.	-1142.	1642.	.0158	-.0382	.0544	-.0193	-.0232	-.0487	3281.	
.2260	456.	1231.	-1305.	1689.	-730.	2428.	.0075	-.0328	.0689	-.0389	-.0447	-.0659	4320.	
.2270	1600.	1703.	-1256.	2052.	-379.	3144.	-.0015	-.0278	.0822	-.0533	-.0644	-.0828	5330.	
.2280	2713.	2249.	-2306.	2284.	24.	3776.	-.0108	-.0232	.0940	-.0624	-.0814	-.0987	6234.	
.2290	3786.	2789.	-2671.	2441.	388.	4287.	-.0197	-.0194	.1042	-.0673	-.0951	-.1128	6990.	
.2300	4606.	3159.	-2877.	2560.	658.	4614.	-.0281	-.0168	.1128	-.0695	-.1047	-.1236	7511.	
.2310	5065.	3321.	-2881.	2629.	796.	4738.	-.0354	-.0154	.1200	-.0698	-.1093	-.1305	7735.	
.2320	5371.	3459.	-2766.	2621.	794.	4715.	-.0416	-.0146	.1257	-.0682	-.1091	-.1343	7702.	
.2330	5539.	3710.	-2544.	2534.	649.	4598.	-.0464	-.0142	.1301	-.0648	-.1043	-.1358	7472.	
.2340	5373.	3938.	-2147.	2395.	371.	4360.	-.0498	-.0143	.1329	-.0604	-.0949	-.1342	7045.	
.2350	4978.	3936.	-1652.	2229.	3.	3958.	-.0518	-.0153	.1338	-.0560	-.0821	-.1284	6416.	
.2360	4566.	3725.	-1188.	2020.	-395.	3418.	-.0521	-.0169	.1325	-.0519	-.0678	-.1190	5636.	
.2370	4043.	3496.	-763.	1713.	-777.	2819.	-.0509	-.0186	.1286	-.0474	-.0532	-.1074	4786.	
.2380	3386.	3340.	-417.	1274.	-1104.	2209.	-.0481	-.0199	.1218	-.0420	-.0399	-.0949	3925.	
.2390	2870.	3154.	-296.	722.	-1332.	1581.	-.0439	-.0209	.1122	-.0360	-.0295	-.0814	3094.	
.2400	2548.	2816.	-410.	99.	-1441.	919.	-.0385	-.0215	.0998	-.0299	-.0224	-.0666	2418.	
.2410	2167.	2352.	-607.	-566.	-1437.	249.	-.0323	-.0216	.0851	-.0237	-.0179	-.0514	2210.	
.2420	1751.	1930.	-839.	-1253.	-1326.	-364.	-.0256	-.0205	.0684	-.0172	-.0153	-.0369	2628.	
.2430	1553.	1595.	-1152.	-1930.	-1121.	-887.	-.0187	-.0178	.0505	-.0105	-.0143	-.0238	3393.	
.2440	1546.	1276.	-1492.	-2541.	-862.	-1333.	-.0117	-.0137	.0320	-.0045	-.0141	-.0117	4232.	
.2450	1521.	891.	-1745.	-3015.	-590.	-1718.	-.0049	-.0081	.0134	-.0004	-.0135	.0001	4972.	
.2460	1363.	439.	-1854.	-3302.	-338.	-2032.	.0019	-.0012	-.0050	.0009	-.0117	.0118	5497.	
.2470	991.	-48.	-1769.	-3384.	-134.	-2264.	.0084	.0071	-.0226	-.0008	-.0082	.0233	5754.	
.2480	369.	-553.	-1465.	-3275.	-11.	-2414.	.0146	.0166	-.0390	-.0055	-.0026	.0348	5747.	
.2490	-303.	-1076.	-1044.	-3001.	20.	-2488.	.0203	.0271	-.0539	-.0129	.0048	.0463	5506.	
.2500	-901.	-1613.	-571.	-2601.	-30.	-2495.	.0253	.0382	-.0671	-.0229	.0134	.0577	5091.	
.2510	-1699.	-2152.	65.	-2125.	-150.	-2445.	.0294	.0496	-.0787	-.0347	.0237	.0689	4580.	
.2520	-2822.	-2660.	910.	-1615.	-324.	-2345.	.0325	.0609	-.0886	-.0479	.0355	.0794	4047.	
.2530	-3868.	-3121.	1765.	-1115.	-509.	-2203.	.0341	.0718	-.0969	-.0614	.0473	.0888	3560.	
.2540	-4498.	-3522.	2450.	-677.	-652.	-2033.	.0343	.0820	-.1038	-.0746	.0572	.0968	3164.	
.2550	-4843.	-3799.	2987.	-347.	-715.	-1835.	.0330	.0913	-.1096	-.0868	.0647	.1031	2825.	
.2560	-5085.	-3885.	3420.	-130.	-668.	-1599.	.0304	.0946	-.1147	-.0984	.0691	.1070	2455.	
.2570	-5150.	-3354.	3674.	10.	-491.	-1352.	.0267	.1063	-.1192	-.1097	.0696	.1089	2032.	
.2580	-4955.	-3856.	3685.	102.	-183.	-1150.	.0219	.1112	-.1233	-.1211	.0657	.1099	1650.	
.2590	-4526.	-3862.	3461.	154.	237.	-989.	.0164	.1144	-.1268	-.1320	.0576	.1100	1453.	
.2600	-3918.	-3678.	3052.	168.	732.	-815.	.0104	.1162	-.1294	-.1420	.0461	.1080	1566.	
.2610	-3310.	-3325.	2574.	157.	1252.	-624.	.0039	.1169	-.1309	-.1513	.0328	.1037	1988.	

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

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

.2510	-1697.	-2152.	65.	-2125.	-150.	-2445.	.0294	.0496	-.0787	-.0347	.0237	.0689	4580.
.2520	-2822.	-2660.	910.	-1615.	-324.	-2345.	.0325	.0609	-.0886	-.0479	.0355	.0794	4047.
.2530	-3868.	-3121.	1765.	-1115.	-509.	-2203.	.0341	.0718	-.0969	-.0614	.0473	.0888	3560.
.2540	-4492.	-1522.	2450.	-677.	-652.	-2033.	.0343	.0820	-.1038	-.0746	.0572	.0968	3164.
.2550	-4847.	-3799.	2927.	-347.	-715.	-1835.	.0330	.0917	-.1096	-.0868	.0647	.1031	2825.
.2560	-5085.	-3885.	3420.	-130.	-668.	-1599.	.0304	.0996	-.1147	-.0984	.0691	.1070	2455.
.2570	-5150.	-3354.	3674.	10.	-491.	-1352.	.0267	.1063	-.1192	-.1097	.0696	.1089	2032.
.2580	-4955.	-3856.	3685.	102.	-183.	-1150.	.0219	.1112	-.1233	-.1211	.0557	.1099	1650.
.2590	-4526.	-3862.	3461.	154.	237.	-989.	.0164	.1144	-.1268	-.1320	.0576	.1100	1453.
.2600	-3912.	-3678.	3052.	168.	732.	-815.	.0104	.1162	-.1294	-.1420	.0461	.1080	1566.
.2610	-3310.	-3325.	2574.	157.	1252.	-624.	.0039	.1169	-.1309	-.1513	.0328	.1037	1988.

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

SECTION	12	MEMBER	3	SEQUENCE	843	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)	
.2620	-2867.	-2974.	2135.	146.	1737.	-479.	-.0028	.1162	-.1308	-.1601	.0194	.0985	2553.	
.2630	-2488.	-2717.	1722.	156.	2139.	-402.	-.0096	.1140	-.1288	-.1682	.0067	.0928	3082.	
.2640	-2076.	-2408.	1326.	181.	2426.	-342.	-.0164	.1110	-.1245	-.1745	-.0047	.0858	3470.	
.2650	-1808.	-1938.	1032.	188.	2578.	-259.	-.0230	.1075	-.1179	-.1784	-.0138	.0770	3669.	
.2660	-1790.	-1385.	882.	161.	2591.	-172.	-.0291	.1036	-.1092	-.1801	-.0204	.0672	3675.	
.2670	-1823.	-901.	779.	110.	2483.	-120.	-.0347	.0991	-.0986	-.1806	-.0252	.0575	3515.	
.2680	-1778.	-535.	657.	44.	2281.	-109.	-.0397	.0940	-.0864	-.1802	-.0286	.0482	3226.	
.2690	-1727.	-200.	543.	-50.	2013.	-104.	-.0441	.0887	-.0728	-.1784	-.0311	.0393	2848.	
.2700	-1631.	212.	427.	-180.	1711.	-67.	-.0478	.0838	-.0581	-.1750	-.0328	.0302	2431.	
.2710	-1335.	677.	257.	-331.	1396.	1.	-.0509	.0792	-.0425	-.1707	-.0343	.0210	2027.	
.2720	-808.	1063.	27.	-477.	1079.	63.	-.0537	.0749	-.0261	-.1663	-.0356	.0123	1669.	
.2730	-97.	1348.	-248.	-603.	766.	112.	-.0561	.0710	-.0093	-.1621	-.0368	.0043	1386.	
.2740	814.	1662.	-595.	-697.	472.	195.	-.0579	.0678	.0076	-.1579	-.0385	-.0037	1221.	
.2750	1784.	2074.	-976.	-750.	197.	336.	-.0589	.0657	.0242	-.1536	-.0407	-.0122	1194.	
.2760	2633.	2471.	-1334.	-746.	-69.	500.	-.0590	.0645	.0399	-.1500	-.0432	-.0204	1272.	
.2770	3389.	2720.	-1689.	-675.	-330.	647.	-.0582	.0638	.0546	-.1477	-.0461	-.0277	1401.	
.2780	4057.	2855.	-2038.	-549.	-590.	789.	-.0564	.0638	.0679	-.1462	-.0490	-.0341	1594.	
.2790	4466.	2993.	-2287.	-393.	-860.	964.	-.0537	.0646	.0795	-.1447	-.0514	-.0398	1907.	
.2800	4568.	3150.	-2387.	-228.	-1143.	1170.	-.0502	.0662	.0893	-.1426	-.0524	-.0448	2332.	
.2810	4521.	3226.	-2390.	-65.	-1477.	1369.	-.0463	.0683	.0972	-.1399	-.0522	-.0484	2795.	
.2820	4381.	3159.	-2311.	91.	-1700.	1532.	-.0471	.0706	.1030	-.1368	-.0506	-.0501	3236.	
.2830	4084.	3002.	-2126.	220.	-1943.	1664.	-.0376	.0730	.1063	-.1327	-.0478	-.0498	3627.	
.2840	3688.	2837.	-1825.	305.	-2129.	1773.	-.0331	.0754	.1071	-.1278	-.0441	-.0479	3937.	
.2850	3304.	2656.	-1660.	350.	-2234.	1841.	-.0285	.0777	.1050	-.1219	-.0403	-.0443	4119.	
.2860	2937.	2391.	-1476.	374.	-2255.	1833.	-.0240	.0795	.1001	-.1154	-.0367	-.0384	4139.	
.2870	2575.	2028.	-1340.	388.	-2198.	1736.	-.0198	.0807	.0926	-.1086	-.0333	-.0301	3994.	
.2880	2265.	1624.	-1262.	389.	-2073.	1561.	-.0158	.0811	.0828	-.1015	-.0300	-.0198	3707.	
.2890	1995.	1257.	-1218.	366.	-1901.	1322.	-.0125	.0809	.0710	-.0939	-.0263	-.0079	3311.	
.2900	1729.	881.	-1171.	318.	-1708.	1025.	-.0099	.0801	.0578	-.0856	-.0216	.0052	2849.	
.2910	1496.	523.	-1121.	258.	-1510.	671.	-.0081	.0785	.0436	-.0766	-.0159	.0194	2362.	
.2920	1284.	175.	-1051.	190.	-1316.	264.	-.0071	.0762	.0287	-.0670	-.0089	.0343	1914.	
.2930	975.	-175.	-906.	111.	-1125.	-179.	-.0070	.0732	.0132	-.0566	-.0006	.0495	1617.	
.2940	526.	-471.	-674.	18.	-922.	-630.	-.0074	.0699	-.0026	-.0453	.0086	.0640	1589.	
.2950	56.	-707.	-398.	-83.	-719.	-1066.	-.0085	.0663	-.0185	-.0331	.0182	.0774	1821.	
.2960	-430.	-924.	-94.	-179.	-474.	-1485.	-.0100	.0626	-.0345	-.0203	.0277	.0895	2216.	
.2970	-963.	-1141.	264.	-254.	-186.	-1871.	-.0119	.0589	-.0502	-.0071	.0367	.0999	2680.	
.2980	-1526.	-1328.	776.	-294.	150.	-2196.	-.0141	.0553	-.0653	.0064	.0451	.1085	3137.	
.2990	-2046.	-1478.	1115.	-289.	535.	-2441.	-.0166	.0522	-.0796	.0198	.0525	.1150	3554.	

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

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INTERNAL FORCES IN THE PIPING
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.2890	1995.	1237.	-1218.	366.	-1901.	1322.	-.0125	.0809	.0710	-.0939	-.0263	-.0079	3707.
.2900	1729.	801.	-1171.	313.	-1708.	1025.	-.0099	.0801	.0578	-.0856	-.0216	.0052	2849.
.2910	1496.	532.	-1121.	258.	-1510.	671.	-.0081	.0785	.0436	-.0766	-.0159	.0194	2362.
.2920	1284.	175.	-1051.	190.	-1316.	264.	-.0071	.0762	.0287	-.0670	-.0089	.0343	1914.
.2930	975.	-175.	-906.	111.	-1125.	-179.	-.0070	.0732	.0132	-.0566	-.0006	.0495	1617.
.2940	536.	-471.	-874.	18.	-932.	-630.	-.0074	.0699	-.0026	-.0453	.0086	.0640	1589.
.2950	56.	-707.	-798.	-83.	-719.	-1066.	-.0085	.0663	-.0185	-.0331	.0182	.0774	1821.
.2960	-430.	-924.	-94.	-179.	-474.	-1435.	-.0100	.0626	-.0345	-.0203	.0277	.0895	2216.
.2970	-963.	-1141.	264.	-254.	-186.	-1871.	-.0119	.0589	-.0502	-.0071	.0367	.0999	2680.
.2980	-1526.	-1328.	776.	-294.	150.	-2196.	-.0141	.0553	-.0653	.0064	.0451	.1085	3137.
.2990	-2046.	-1478.	1110.	-209.	535.	-2441.	-.0166	.0522	-.0796	.0198	.0525	.1150	3554.

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

SECTION	12	MEMBER	3	SEQUENCE	843	LOCATION	END	TYPE	EL						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)			DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.3000	-2477.	-1628.	1557.	-233.	960.	-2608.	-.0191	.0493	-.0926	.0326	.0586	.1196	.1196	3939.	
.3010	-2786.	-1790.	1070.	-118.	1410.	-2696.	-.0215	.0469	-.1040	.0444	.0633	.1224	.1224	4300.	
.3020	-2975.	-1936.	2328.	61.	1866.	-2693.	-.0235	.0449	-.1136	.0549	.0561	.1232	.1232	4629.	
.3030	-3103.	-2057.	2622.	307.	2303.	-2603.	-.0249	.0433	-.1210	.0637	.0572	.1223	.1223	4928.	
.3040	-3207.	-2181.	2839.	613.	2690.	-2445.	-.0255	.0419	-.1261	.0708	.0664	.1197	.1197	5207.	
.3050	-3250.	-2307.	2941.	958.	3001.	-2233.	-.0249	.0405	-.1287	.0760	.0639	.1156	.1156	5454.	
.3060	-3229.	-2396.	2919.	1317.	3206.	-1970.	-.0233	.0391	-.1284	.0794	.0600	.1100	.1100	5631.	
.3070	-3207.	-2417.	2809.	1660.	3282.	-1662.	-.0205	.0375	-.1254	.0814	.0553	.1028	.1028	5701.	
.3080	-3211.	-2378.	2640.	1967.	3218.	-1327.	-.0168	.0355	-.1194	.0825	.0504	.0945	.0945	5647.	
.3090	-3202.	-2306.	2420.	2221.	3012.	-985.	-.0124	.0328	-.1106	.0826	.0458	.0855	.0855	5466.	
.3100	-3163.	-2207.	2170.	2403.	2677.	-651.	-.0076	.0292	-.0992	.0822	.0419	.0761	.0761	5164.	
.3110	-3098.	-2059.	1914.	2499.	2236.	-332.	-.0025	.0247	-.0856	.0817	.0387	.0664	.0664	4760.	
.3120	-2976.	-1838.	1655.	2506.	1727.	-29.	.0025	.0192	-.0701	.0816	.0361	.0564	.0564	4298.	
.3130	-2773.	-1562.	1392.	2434.	1185.	246.	.0072	.0128	-.0533	.0819	.0339	.0463	.0463	3840.	
.3140	-2500.	-1272.	1136.	2303.	646.	473.	.0115	.0052	-.0358	.0829	.0319	.0363	.0363	3444.	
.3150	-2133.	-988.	881.	2126.	142.	643.	.0151	-.0035	-.0180	.0847	.0297	.0265	.0265	3144.	
.3160	-1658.	-683.	622.	1913.	-303.	766.	.0178	-.0130	-.0003	.0876	.0271	.0168	.0168	2942.	
.3170	-1090.	-334.	366.	1672.	-678.	851.	.0197	-.0232	.0170	.0918	.0240	.0068	.0068	2817.	
.3180	-436.	33.	112.	1414.	-979.	896.	.0207	-.0339	.0337	.0975	.0206	-.0031	-.0031	2739.	
.3190	288.	375.	-140.	1151.	-1211.	895.	.0209	-.0452	.0494	.1043	.0168	-.0129	-.0129	2677.	
.3200	1046.	679.	-391.	888.	-1382.	853.	.0204	-.0567	.0642	.1122	.0128	-.0223	-.0223	2614.	
.3210	1768.	971.	-627.	622.	-1509.	785.	.0194	-.0684	.0778	.1209	.0087	-.0317	-.0317	2558.	
.3220	2430.	1271.	-861.	349.	-1604.	707.	.0182	-.0798	.0901	.1304	.0045	-.0411	-.0411	2524.	
.3230	3052.	1558.	-1119.	68.	-1678.	621.	.0171	-.0910	.1011	.1400	.0001	-.0502	-.0502	2529.	
.3240	3596.	1810.	-1398.	-214.	-1743.	528.	.0162	-.1018	.1106	.1492	-.0044	-.0590	-.0590	2590.	
.3250	3987.	2030.	-1666.	-493.	-1808.	437.	.0157	-.1119	.1187	.1574	-.0088	-.0676	-.0676	2719.	
.3260	4240.	2237.	-1921.	-762.	-1876.	361.	.0156	-.1212	.1253	.1643	-.0130	-.0758	-.0758	2905.	
.3270	4398.	2434.	-2165.	-1010.	-1942.	312.	.0162	-.1295	.1304	.1694	-.0167	-.0837	-.0837	3123.	
.3280	4459.	2608.	-2374.	-1226.	-2004.	293.	.0172	-.1365	.1340	.1725	-.0199	-.0910	-.0910	3344.	
.3290	4429.	2740.	-2528.	-1393.	-2057.	306.	.0186	-.1424	.1361	.1731	-.0223	-.0975	-.0975	3535.	
.3300	4327.	2818.	-2615.	-1497.	-2089.	353.	.0204	-.1469	.1368	.1710	-.0238	-.1031	-.1031	3665.	
.3310	4138.	2843.	-2619.	-1531.	-2091.	436.	.0224	-.1500	.1358	.1664	-.0245	-.1076	-.1076	3712.	
.3320	3876.	2814.	-2540.	-1486.	-2054.	558.	.0246	-.1516	.1331	.1597	-.0244	-.1110	-.1110	3666.	
.3330	3590.	2720.	-2406.	-1363.	-1969.	712.	.0269	-.1519	.1288	.1511	-.0240	-.1132	-.1132	3529.	
.3340	3276.	2550.	-2218.	-1170.	-1831.	888.	.0294	-.1508	.1228	.1411	-.0234	-.1144	-.1144	3316.	
.3350	2871.	2312.	-1956.	-923.	-1645.	1077.	.0318	-.1487	.1150	.1302	-.0224	-.1146	-.1146	3068.	
.3360	2382.	2026.	-1630.	-677.	-1416.	1276.	.0342	-.1455	.1057	.1192	-.0212	-.1140	-.1140	2839.	
.3370	1875.	1702.	-1276.	-332.	-1153.	1473.	.0365	-.1414	.0949	.1088	-.0198	-.1127	-.1127	2684.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

03/12/02.

18.26.30.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

.3270	4398.	2434.	-2165.	-1010.	-1942.	312.	.0162	-.1295	.1304	.1694	-.0130	-.0758	2905.
.3280	4459.	2608.	-2374.	-1226.	-2004.	293.	.0172	-.1365	.1340	.1725	-.0199	-.0910	3344.
.3290	4429.	2740.	-2528.	-1393.	-2057.	306.	.0186	-.1424	.1361	.1731	-.0223	-.0975	3535.
.3300	4327.	2818.	-2615.	-1497.	-2089.	353.	.0204	-.1469	.1368	.1710	-.0238	-.1031	3665.
.3310	4138.	2843.	-2619.	-1531.	-2091.	436.	.0224	-.1500	.1358	.1664	-.0245	-.1076	3712.
.3320	3876.	2814.	-2540.	-1486.	-2054.	558.	.0246	-.1516	.1331	.1597	-.0244	-.1110	3666.
.3330	3590.	2720.	-2406.	-1363.	-1969.	712.	.0269	-.1519	.1288	.1511	-.0240	-.1132	3529.
.3340	3276.	2550.	-2218.	-1170.	-1831.	888.	.0294	-.1500	.1228	.1411	-.0234	-.1144	3316.
.3350	2871.	2312.	-1956.	-923.	-1645.	1077.	.0318	-.1487	.1150	.1302	-.0224	-.1146	3068.
.3360	2382.	2026.	-1630.	-677.	-1416.	1276.	.0342	-.1455	.1057	.1192	-.0212	-.1140	2839.
.3370	1875.	1702.	-1276.	-332.	-1153.	1473.	.0365	-.1414	.0949	.1088	-.0198	-.1127	2684.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.30.

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	12	MEMBER	3	SEQUENCE	843	LOCATION	END	TYPE	EL						
TIME	FY	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)		(PSI)
.3380	1355.	1347.	-904.	-31.	-868.	1656.		.0386	-.1368	.0829	.0994	-.0183	-.1109		2641.
.3390	798.	982.	-510.	244.	-573.	1815.		.0405	-.1317	.0699	.0912	-.0166	-.1085		2710.
.3400	221.	627.	-111.	476.	-276.	1943.		.0421	-.1265	.0562	.0844	-.0147	-.1056		2852.
.3410	-344.	280.	269.	653.	18.	2027.		.0436	-.1214	.0419	.0788	-.0128	-.1020		3007.
.3420	-870.	-64.	608.	769.	307.	2054.		.0448	-.1165	.0272	.0741	-.0110	-.0976		3128.
.3430	-1329.	-388.	885.	823.	589.	2023.		.0459	-.1122	.0124	.0703	-.0095	-.0922		3196.
.3440	-1710.	-682.	1095.	815.	863.	1935.		.0470	-.1083	-.0024	.0668	-.0082	-.0858		3206.
.3450	-2032.	-957.	1253.	744.	1124.	1783.		.0480	-.1052	-.0169	.0634	-.0070	-.0784		3157.
.3460	-2295.	-1225.	1368.	614.	1361.	1569.		.0490	-.1028	-.0307	.0598	-.0057	-.0699		3059.
.3470	-2465.	-1476.	1434.	431.	1514.	1301.		.0500	-.1010	-.0436	.0562	-.0040	-.0604		2937.
.3480	-2552.	-1696.	1466.	200.	1768.	995.		.0510	-.0998	-.0552	.0527	-.0018	-.0504		2818.
.3490	-2617.	-1886.	1495.	-74.	1808.	660.		.0520	-.0990	-.0653	.0493	.0013	-.0400		2721.
.3500	-2700.	-2054.	1539.	-383.	1825.	307.		.0531	-.0985	-.0736	.0463	.0053	-.0296		2669.
.3510	-2791.	-2202.	1586.	-713.	1764.	-51.		.0542	-.0983	-.0801	.0436	.0100	-.0196		2688.
.3520	-2893.	-2329.	1629.	-1053.	1627.	-400.		.0554	-.0981	-.0845	.0416	.0151	-.0105		2795.
.3530	-3014.	-2423.	1662.	-1388.	1425.	-725.		.0565	-.0977	-.0869	.0403	.0202	-.0025		2991.
.3540	-3147.	-2468.	1679.	-1702.	1176.	-1009.		.0576	-.0970	-.0874	.0397	.0250	.0038		3251.
.3550	-3275.	-2471.	1673.	-1979.	897.	-1245.		.0584	-.0958	-.0859	.0396	.0291	.0082		3538.
.3560	-3366.	-2448.	1634.	-2204.	611.	-1429.		.0590	-.0942	-.0827	.0397	.0320	.0106		3810.
.3570	-3360.	-2390.	1542.	-2368.	340.	-1554.		.0591	-.0919	-.0778	.0399	.0335	.0110		4030.
.3580	-3220.	-2270.	1390.	-2467.	100.	-1607.		.0586	-.0889	-.0714	.0400	.0333	.0092		4161.
.3590	-2962.	-2085.	1189.	-2499.	-94.	-1586.		.0575	-.0852	-.0636	.0397	.0313	.0055		4182.
.3600	-2603.	-1861.	950.	-2463.	-238.	-1498.		.0558	-.0809	-.0546	.0384	.0277	.0001		4087.
.3610	-2138.	-1622.	673.	-2365.	-333.	-1355.		.0533	-.0760	-.0447	.0360	.0226	-.0065		3878.
.3620	-1586.	-1365.	369.	-2215.	-385.	-1158.		.0503	-.0706	-.0339	.0322	.0162	-.0140		3572.
.3630	-997.	-1076.	63.	-2030.	-410.	-909.		.0467	-.0648	-.0225	.0270	.0090	-.0220		3195.
.3640	-412.	-760.	-220.	-1825.	-424.	-619.		.0425	-.0585	-.0106	.0206	.0017	-.0302		2787.
.3650	141.	-439.	-464.	-1609.	-444.	-302.		.0380	-.0520	.0016	.0129	-.0055	-.0381		2395.
.3660	632.	-130.	-655.	-1388.	-487.	27.		.0331	-.0454	.0141	.0040	-.0120	-.0456		2078.
.3670	1045.	174.	-789.	-1170.	-562.	358.		.0279	-.0386	.0264	-.0057	-.0175	-.0523		1902.
.3680	1383.	489.	-876.	-960.	-670.	686.		.0225	-.0317	.0384	-.0159	-.0221	-.0582		1917.
.3690	1641.	813.	-925.	-759.	-805.	1000.		.0170	-.0248	.0498	-.0262	-.0257	-.0632		2106.
.3700	1812.	1120.	-947.	-562.	-955.	1283.		.0114	-.0179	.0603	-.0365	-.0287	-.0670		2394.
.3710	1921.	1389.	-966.	-362.	-1106.	1521.		.0058	-.0112	.0694	-.0467	-.0312	-.0695		2705.
.3720	2002.	1622.	-1006.	-161.	-1237.	1710.		.0001	-.0046	.0770	-.0564	-.0337	-.0707		2989.
.3730	2071.	1835.	-1074.	38.	-1331.	1851.		-.0055	.0019	.0827	-.0653	-.0362	-.0705		3220.
.3740	2140.	2025.	-1170.	229.	-1375.	1941.		-.0112	.0083	.0865	-.0730	-.0389	-.0691		3376.
.3750	2234.	2172.	-1296.	407.	-1359.	1975.		-.0170	.0146	.0882	-.0795	-.0417	-.0662		3435.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.30.

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

.3650	141.	-435.	-404.	-1609.	-444.	-302.	.380	-.0520	.0016	.0129	-.0055	-.0381	2395.
.3660	632.	-130.	-655.	-1388.	-487.	27.	.331	-.0454	.0141	.0040	-.0120	-.0456	2078.
.3670	1045.	174.	-789.	-1170.	-562.	358.	.0279	-.0786	.0264	-.0057	-.0175	-.0523	1902.
.3680	1317.	489.	-176.	-960.	-670.	686.	.0225	-.0317	.0384	-.0159	-.0221	-.0582	1917.
.3690	1641.	812.	-925.	-759.	-805.	1000.	.0170	-.0248	.0498	-.0262	-.0257	-.0632	2106.
.3700	1812.	1120.	-947.	-561.	-555.	1283.	.0114	-.0179	.0603	-.0365	-.0287	-.0670	2394.
.3710	1921.	1389.	-966.	-362.	-1106.	1521.	.0058	-.0112	.0694	-.0467	-.0312	-.0695	2705.
.3720	2002.	1622.	-1006.	-131.	-1237.	1710.	.0001	-.0046	.0770	-.0564	-.0337	-.0707	2989.
.3730	2071.	1835.	-1074.	38.	-1331.	1851.	-.0055	.0019	.0827	-.0653	-.0362	-.0705	3220.
.3740	2140.	2025.	-1170.	229.	-1375.	1941.	-.0112	.0083	.0865	-.0730	-.0389	-.0691	3376.
.3750	2234.	2172.	-1296.	407.	-1359.	1975.	-.0170	.0146	.0882	-.0795	-.0417	-.0662	3435.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.30.

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	12	MEMBER	3	SEQUENCE	843	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)	FX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.3760	2361.	2265.	-1443.	564.	-1280.	1950.	-.0228	.0200	.0878	-.0848	-.0445	-.0619	3389.	
.3770	2504.	2319.	-1593.	691.	-1138.	1673.	-.0286	.0266	.0854	-.0885	-.0470	-.0563	3247.	
.3780	2645.	2350.	-1731.	782.	-941.	1755.	-.0343	.0325	.0810	-.0907	-.0491	-.0495	3022.	
.3790	2768.	2350.	-1842.	831.	-699.	1597.	-.0398	.0383	.0747	-.0915	-.0505	-.0416	2728.	
.3800	2838.	2300.	-1904.	837.	-429.	1399.	-.0450	.0441	.0669	-.0914	-.0509	-.0324	2381.	
.3810	2829.	2199.	-1901.	804.	-150.	1167.	-.0497	.0499	.0578	-.0905	-.0499	-.0221	2012.	
.3820	2733.	2066.	-1826.	739.	120.	913.	-.0539	.0558	.0476	-.0891	-.0475	-.0109	1668.	
.3830	2550.	1912.	-1678.	654.	367.	650.	-.0573	.0618	.0367	-.0873	-.0435	.0012	1401.	
.3840	2278.	1733.	-1453.	561.	578.	381.	-.0600	.0681	.0254	-.0855	-.0380	.0139	1258.	
.3850	1927.	1518.	-1158.	474.	743.	110.	-.0619	.0746	.0138	-.0839	-.0309	.0271	1255.	
.3860	1518.	1267.	-812.	405.	862.	-155.	-.0629	.0813	.0023	-.0827	-.0225	.0407	1363.	
.3870	1076.	994.	-439.	362.	935.	-408.	-.0629	.0884	-.0091	-.0818	-.0134	.0543	1528.	
.3880	621.	710.	-64.	351.	968.	-638.	-.0621	.0959	-.0202	-.0813	-.0039	.0678	1711.	
.3890	170.	411.	289.	375.	969.	-844.	-.0604	.1036	-.0310	-.0809	.0054	.0809	1891.	
.3900	-272.	83.	605.	432.	945.	-1030.	-.0579	.1114	-.0413	-.0807	.0142	.0935	2067.	
.3910	-698.	-266.	875.	516.	904.	-1193.	-.0548	.1194	-.0511	-.0805	.0222	.1053	2236.	
.3920	-1088.	-611.	1092.	620.	851.	-1325.	-.0511	.1273	-.0603	-.0799	.0292	.1161	2391.	
.3930	-1426.	-938.	1253.	733.	794.	-1425.	-.0472	.1352	-.0689	-.0788	.0352	.1258	2526.	
.3940	-1720.	-1257.	1373.	848.	735.	-1500.	-.0431	.1427	-.0767	-.0772	.0402	.1345	2646.	
.3950	-1986.	-1578.	1467.	957.	679.	-1557.	-.0391	.1496	-.0836	-.0753	.0443	.1422	2754.	
.3960	-2220.	-1884.	1541.	1052.	627.	-1600.	-.0354	.1558	-.0896	-.0732	.0477	.1489	2847.	
.3970	-2408.	-2149.	1592.	1131.	584.	-1628.	-.0320	.1612	-.0947	-.0709	.0503	.1545	2919.	
.3980	-2550.	-2361.	1623.	1193.	553.	-1645.	-.0291	.1656	-.0988	-.0685	.0521	.1590	2975.	
.3990	-2662.	-2526.	1641.	1239.	534.	-1661.	-.0268	.1688	-.1019	-.0662	.0532	.1625	3023.	
.4000	-2755.	-2649.	1654.	1270.	525.	-1685.	-.0251	.1708	-.1038	-.0642	.0538	.1649	3071.	

MAXIMUM VALUE OF STRESS OCCURS AT

TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	HX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	FX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.0840	2359.	4093.	-221.	7233.	432.	6042.	-.0521	-.0156	.1140	-.1560	-.0726	-.1682	13326.

SECTION	13	MEMBER	1	SEQUENCE	843	LOCATION	BEG	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)	FX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.31.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.0840	2359.	4093.	-221.	7233.	432.	6042.	-.0521	-.0156	.1140	-.1500	-.0726	-.1682	13326.

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	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)	STRESS (PSI)
13	1	843											

ADLPIPE PAGE 613 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.31.

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	STRESS						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
.0010	-1.	0.	2.	-1.	1.	0.	.0000	-.0000	-.0000	.0000	-.0000	-.0000	1.
.0020	5.	3.	9.	-4.	4.	3.	.0000	-.0000	-.0001	.0000	-.0001	.0000	9.
.0030	48.	4.	9.	-3.	16.	14.	.0001	-.0000	-.0004	.0001	-.0001	.0002	30.
.0040	140.	4.	-6.	11.	35.	34.	.0002	-.0000	-.0009	.0003	-.0001	.0005	71.
.0050	267.	1.	-31.	41.	65.	61.	.0003	.0000	-.0017	.0006	.0001	.0009	139.
.0060	445.	-2.	-74.	86.	109.	95.	.0003	.0001	-.0028	.0009	.0006	.0016	238.
.0070	723.	1.	-155.	141.	170.	154.	.0003	.0003	-.0044	.0013	.0014	.0029	380.
.0080	1217.	23.	-323.	210.	248.	250.	.0006	.0006	-.0071	.0018	.0025	.0051	579.
.0090	2131.	75.	-683.	310.	350.	382.	.0016	.0010	-.0111	.0022	.0044	.0084	853.
.0100	3341.	158.	-1170.	451.	480.	544.	.0033	.0016	-.0163	.0018	.0070	.0125	1206.
.0110	4456.	275.	-1579.	624.	632.	745.	.0060	.0023	-.0227	.0003	.0098	.0180	1638.
.0120	5285.	438.	-1820.	808.	803.	982.	.0095	.0031	-.0296	-.0026	.0127	.0251	2125.
.0130	5953.	662.	-1988.	979.	990.	1217.	.0137	.0041	-.0369	-.0068	.0164	.0332	2618.
.0140	6668.	940.	-2249.	1131.	1224.	1421.	.0182	.0054	-.0441	-.0126	.0223	.0418	3093.
.0150	7523.	1247.	-2705.	1274.	1480.	1609.	.0228	.0067	-.0509	-.0205	.0318	.0511	3574.
.0160	8737.	1575.	-3510.	1411.	1752.	1796.	.0272	.0080	-.0574	-.0297	.0457	.0615	4065.
.0170	9832.	1941.	-4399.	1527.	1984.	1980.	.0313	.0093	-.0641	-.0390	.0623	.0726	4508.
.0180	9668.	2346.	-4685.	1613.	2104.	2183.	.0356	.0108	-.0709	-.0465	.0771	.0842	4851.
.0190	7910.	2787.	-4051.	1665.	2080.	2414.	.0407	.0125	-.0779	-.0511	.0862	.0956	5079.
.0200	4691.	3293.	-2395.	1642.	1832.	2650.	.0483	.0143	-.0863	-.0530	.0841	.1048	5107.
.0210	2104.	3864.	-785.	1514.	1373.	2801.	.0596	.0159	-.0971	-.0547	.0724	.1087	4897.
.0220	1136.	4287.	165.	1299.	946.	2841.	.0718	.0164	-.1069	-.0597	.0596	.1056	4611.
.0230	-64.	4453.	1276.	1028.	576.	2877.	.0823	.0150	-.1120	-.0666	.0454	.0988	4392.
.0240	980.	4530.	946.	710.	288.	2716.	.0897	.0127	-.1128	-.0699	.0379	.0864	3986.
.0250	2239.	4669.	225.	350.	-35.	2246.	.0938	.0104	-.1100	-.0645	.0326	.0672	3211.
.0260	-3170.	4690.	3080.	61.	-553.	1772.	.0936	.0069	-.1018	-.0506	.0127	.0467	2623.
.0270	-10639.	4328.	7123.	72.	-792.	1308.	.0871	.0017	-.0873	-.0338	-.0104	.0240	2321.
.0280	-10504.	3792.	6767.	412.	-1405.	453.	.0775	-.0041	-.0729	-.0186	-.0189	-.0088	2165.
.0290	-6176.	3282.	3716.	751.	-2178.	-617.	.0687	-.0114	-.0622	-.0066	-.0247	-.0476	3368.
.0300	-2461.	2535.	1172.	773.	-2918.	-1127.	.0575	-.0232	-.0507	.0043	-.0345	-.0764	4551.
.0310	-384.	1590.	-185.	649.	-3477.	-1197.	.0434	-.0377	-.0376	.0185	-.0475	-.0966	5274.
.0320	-3101.	613.	1016.	928.	-4096.	-1555.	.0284	-.0490	-.0222	.0404	-.0596	-.1220	6325.
.0330	-4022.	-449.	1021.	1791.	-4411.	-2482.	.0124	-.0551	-.0041	.0655	-.0799	-.1574	7584.
.0340	950.	-1772.	-2247.	2563.	-4062.	-3353.	-.0057	-.0613	.0161	.0813	-.0554	-.1897	8273.
.0350	3945.	-3080.	-4338.	2468.	-3447.	-3454.	-.0246	-.0725	.0391	.0818	-.0496	-.2023	7724.
.0360	713.	-4165.	-2041.	1681.	-2957.	-2962.	-.0419	-.0855	.0633	.0761	-.0498	-.1964	6371.
.0370	-1129.	-4845.	-1832.	956.	-2344.	-2872.	-.0574	-.0922	.0868	.0742	-.0494	-.1921	5407.

ADLPIPE PAGE 614 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.31.

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

.0270	-10639.	4328.	-1123.	72.	-792.	1308.	1871	.0017	-.0873	-.0330	-.0104	.0240	2321.
.0280	-10504.	3792.	6767.	412.	-1405.	453.	.0775	-.0041	-.0729	-.0186	-.0189	-.0088	2165.
.0290	-6176.	3282.	3716.	751.	-2178.	-617.	.0687	-.0114	-.0622	-.0066	-.0247	-.0476	3368.
.0300	-2461.	2535.	1172.	773.	-2912.	-1127.	.0575	-.0237	-.0507	.0043	-.0345	-.0784	4551.
.0310	-384.	1590.	-185.	649.	-3477.	-1197.	.0434	-.0377	-.0376	.0185	-.0475	-.0966	5274.
.0320	-3101.	613.	1016.	920.	-4096.	-1555.	.0284	-.0490	-.0222	.0404	-.0596	-.1220	6325.
.0330	-4022.	-449.	1021.	1791.	-4411.	-2482.	.0124	-.0551	-.0044	.0655	-.0799	-.1574	7584.
.0340	950.	-1732.	-2247.	2563.	-4062.	-3353.	-.0057	-.0613	.0161	.0813	-.0654	-.1897	8273.
.0350	3945.	-3080.	-4338.	2468.	-3447.	-3454.	-.0246	-.0725	.0391	.0818	-.0496	-.2023	7724.
.0360	717.	-4165.	-2041.	1681.	-2957.	-2962.	-.0419	-.0855	.0633	.0761	-.1498	-.1964	6371.
.0370	-1129.	-4845.	-1832.	956.	-2744.	-2872.	-.0574	-.0522	.0868	.0742	-.0454	-.1921	5407.

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ADLPIPE STRESS ANALYSIS

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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

SECTION	13	MEMBER	1	SEQUENCE	843	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	1525.	-5303.	-3040.	486.	-1479.	-3679.	-.0726	-.0912	.1086	.0699	-.0393	-.2032	5543.		
.0390	1103.	-5882.	-2507.	-144.	-864.	-4346.	-.0867	-.0907	.1288	.0502	-.0397	-.2107	6262.		
.0400	-4043.	-6554.	606.	-1162.	-900.	-3689.	-.0958	-.0960	.1437	.0190	-.0629	-.1889	5609.		
.0410	-5477.	-6915.	2030.	-2418.	-967.	-2766.	-.1010	-.1000	.1528	-.0069	-.0860	-.1588	5366.		
.0420	-5056.	-6677.	2553.	-3558.	-1028.	-3128.	-.1031	-.0950	.1571	-.0202	-.1067	-.1542	6847.		
.0430	-8761.	-6230.	5341.	-4124.	-1491.	-3900.	-.0998	-.0865	.1566	-.0292	-.1411	-.1581	8290.		
.0440	-11002.	-6210.	7176.	-3958.	-1955.	-3537.	-.0922	-.0824	.1535	-.0427	-.1695	-.1382	7990.		
.0450	-9551.	-6346.	6974.	-3544.	-1821.	-2795.	-.0840	-.0803	.1511	-.0571	-.1754	-.1097	6874.		
.0460	-9744.	-5992.	7651.	-3306.	-1182.	-2962.	-.0760	-.0737	.1509	-.0616	-.1690	-.0580	6488.		
.0470	-11538.	-5209.	8854.	-2985.	-435.	-3348.	-.0658	-.0640	.1515	-.0520	-.1565	-.0873	6366.		
.0480	-9949.	-4455.	7833.	-2363.	487.	-3105.	-.0531	-.0549	.1516	-.0356	-.1287	-.0618	5554.		
.0490	-6717.	-3793.	5944.	-1847.	1715.	-2901.	-.0398	-.0460	.1508	-.0244	-.0893	-.0408	5428.		
.0500	-5845.	-3131.	5422.	-1744.	2890.	-2951.	-.0253	-.0379	.1476	-.0226	-.0533	-.0310	6333.		
.0510	-4657.	-2498.	4646.	-1820.	3679.	-2372.	-.0077	-.0323	.1395	-.0208	-.0240	-.0114	6697.		
.0520	-1247.	-1713.	2535.	-1947.	4121.	-1413.	.0120	-.0266	.1265	-.0077	.0028	.0148	6739.		
.0530	642.	-530.	1138.	-2307.	4323.	-1163.	.0307	-.0175	.1107	.0162	.0253	.0230	7114.		
.0540	408.	532.	680.	-2743.	4306.	-1072.	.0472	-.0097	.0935	.0422	.0451	.0237	7369.		
.0550	1034.	1183.	-526.	-2763.	4117.	57.	.0615	-.0086	.0751	.0680	.0680	.0434	7004.		
.0560	1287.	1682.	-1625.	-2250.	3861.	1454.	.0733	-.0096	.0566	.1021	.0914	.0680	6638.		
.0570	-518.	2558.	-1376.	-1456.	3662.	1810.	.0820	-.0066	.0383	.1512	.1112	.0711	6125.		
.0580	-1210.	3636.	-1346.	-479.	3546.	1845.	.0891	-.0035	.0189	.2092	.1292	.0684	5686.		
.0590	479.	4419.	-2272.	691.	3406.	2766.	.0959	-.0066	-.0027	.2627	.1448	.0840	6274.		
.0600	1422.	4858.	-2524.	1930.	3205.	3983.	.1016	-.0138	-.0254	.3041	.1536	.1034	7718.		
.0610	1489.	5190.	-2147.	3176.	2956.	4540.	.1054	-.0196	-.0486	.3364	.1576	.1066	8870.		
.0620	3587.	5462.	-2838.	4430.	2616.	4780.	.1080	-.0234	-.0727	.3641	.1505	.1042	9920.		
.0630	6195.	5629.	-3846.	5409.	2092.	5199.	.1092	-.0276	-.0966	.3937	.1585	.1082	11002.		
.0640	6628.	5655.	-3778.	5742.	1469.	5523.	.1068	-.0327	-.1181	.3862	.1512	.1123	11442.		
.0650	7123.	5421.	-3975.	5547.	901.	5663.	.0997	-.0386	-.1359	.3678	.1474	.1146	11269.		
.0660	9220.	4929.	-5288.	5260.	311.	5858.	.0890	-.0443	-.1506	.3351	.1469	.1219	11129.		
.0670	9656.	4476.	-5801.	4952.	-487.	5814.	.0784	-.0471	-.1624	.2967	.1381	.1289	10809.		
.0680	7600.	4275.	-4875.	4323.	-1431.	5192.	.0624	-.0464	-.1717	.2544	.1187	.1271	9755.		
.0690	6750.	4133.	-4499.	3269.	-2368.	4513.	.0479	-.0459	-.1795	.2044	.0973	.1251	8552.		
.0700	7760.	3811.	-5137.	2038.	-3340.	4317.	.0344	-.0482	-.1857	.1467	.0750	.1321	8229.		
.0710	7851.	3378.	-5268.	928.	-4310.	4130.	.0219	-.0499	-.1887	.0899	.0485	.1370	8533.		
.0720	6562.	2972.	-4522.	83.	-5006.	3302.	.0090	-.0471	-.1860	.0434	.0224	.1257	8471.		
.0730	4716.	2554.	-3387.	-520.	-5320.	2094.	-.0045	-.0408	-.1768	.0097	.0010	.1038	8109.		
.0740	2083.	2038.	-1918.	-1057.	-5380.	1103.	-.0171	-.0348	-.1615	-.0163	-.0168	.0844	7899.		
.0750	16.	1461.	-870.	-1732.	-5135.	316.	-.0285	-.0303	-.1408	-.0401	-.0272	.0672	7668.		

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

INTERNAL FORCES IN THE PIPING

.0650	7113.	5421.	-5275.	5547.	901.	5663.	.0997	-.0726	-.1359	.2670	.1474	.1140	11269.
.0660	9220.	4929.	-5282.	5260.	711.	5858.	.0890	-.0443	-.1506	.3351	.1469	.1219	11129.
.0670	9656.	4476.	-5801.	4952.	-487.	5014.	.0764	-.0471	-.1624	.2967	.1381	.1289	10809.
.0680	7600.	4275.	-4875.	4323.	-1431.	5192.	.0624	-.0464	-.1717	.2544	.1187	.1271	9755.
.0690	6750.	4173.	-4499.	3269.	-2368.	4513.	.0479	-.0459	-.1795	.2044	.0973	.1251	8552.
.0700	7760.	3811.	-5137.	2038.	-2340.	4317.	.0744	-.0482	-.1857	.1467	.0750	.1321	8229.
.0710	7851.	3378.	-5268.	928.	-4310.	4130.	.0219	-.0499	-.1887	.0899	.0485	.1370	8533.
.0720	6562.	2972.	-4522.	23.	-5006.	3302.	.0090	-.0471	-.1860	.0434	.0224	.1257	8471.
.0730	4716.	2554.	-3387.	-520.	-5320.	2094.	-.0045	-.0408	-.1768	.0097	.0010	.1038	8109.
.0740	2083.	2038.	-1918.	-1057.	-5380.	1103.	-.0171	-.0748	-.1615	-.0163	-.0168	.0844	7899.
.0750	16.	1461.	-870.	-1732.	-5139.	316.	-.0289	-.0703	-.1408	-.0401	-.0272	.0672	7668.

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ADLPIPE STRESS ANALYSIS

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	13	MEMBER	1	SEQUENCE	843	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	80.	908.	-952.	-2561.	-4488.	-585.	-.0392	-.0260	-.1153	-.0628	-.0268	.0458	7345.		
.0770	202.	410.	-967.	-3372.	-3651.	-1588.	-.0482	-.0211	-.0862	-.0824	-.0247	.0206	7369.		
.0780	-1713.	-31.	218.	-4071.	-2904.	-2519.	-.0542	-.0157	-.0551	-.0979	-.0304	-.0044	7909.		
.0790	-3212.	-419.	1287.	-4799.	-2215.	-3411.	-.0573	-.0108	-.0239	-.1120	-.0390	-.0308	8885.		
.0800	-1941.	-822.	914.	-5725.	-1494.	-4271.	-.0586	-.0079	.0063	-.1290	-.0432	-.0598	10307.		
.0810	-350.	-1352.	253.	-6739.	-931.	-4849.	-.0583	-.0084	.0352	-.1484	-.0480	-.0866	11800.		
.0820	-714.	-2031.	462.	-7471.	-661.	-5083.	-.0565	-.0114	.0628	-.1630	-.0577	-.1091	12798.		
.0830	-1891.	-2730.	878.	-7633.	-530.	-5405.	-.0543	-.0140	.0893	-.1655	-.0671	-.1350	13232.		
.0840	-2717.	-3337.	1026.	-7233.	-432.	-6042.	-.0521	-.0156	.1140	-.1560	-.0726	-.1652	13326.		
.0850	-3892.	-3906.	1286.	-6426.	-445.	-6482.	-.0488	-.0199	.1358	-.1401	-.0780	-.1072	12907.		
.0860	-4720.	-4495.	1460.	-5309.	-512.	-6253.	-.0435	-.0291	.1538	-.1210	-.0842	-.2111	11609.		
.0870	-4516.	-4951.	1437.	-3884.	-465.	-5732.	-.0366	-.0405	.1681	-.0962	-.0899	-.2172	9802.		
.0880	-4654.	-5094.	2028.	-2119.	-315.	-5457.	-.0279	-.0500	.1788	-.0624	-.0986	-.2261	8281.		
.0890	-5533.	-5006.	3294.	-93.	-142.	-5222.	-.0170	-.0579	.1855	-.0228	-.1109	-.2340	7380.		
.0900	-5463.	-4892.	4142.	1886.	134.	-4570.	-.0044	-.0668	.1885	.0150	-.1200	-.2319	6985.		
.0910	-4345.	-4784.	4397.	3444.	622.	-3567.	.0082	-.0769	.1889	.0458	-.1210	-.2216	7058.		
.0920	-3849.	-4601.	4845.	4512.	1283.	-2506.	.0198	-.0861	.1878	.0714	-.1156	-.2083	7511.		
.0930	-4188.	-4345.	5498.	5326.	2038.	-1457.	.0300	-.0922	.1856	.0956	-.1048	-.1919	8313.		
.0940	-4602.	-4052.	5915.	6016.	2865.	-492.	.0384	-.0947	.1821	.1177	-.0877	-.1731	9438.		
.0950	-5108.	-3729.	6138.	6438.	3721.	316.	.0452	-.0944	.1763	.1318	-.0658	-.1537	10513.		
.0960	-5302.	-3404.	5996.	6463.	4521.	1204.	.0506	-.0936	.1672	.1337	-.0413	-.1290	11269.		
.0970	-4347.	-3089.	5068.	6193.	5196.	2344.	.0553	-.0928	.1541	.1256	-.0156	-.0945	11888.		
.0980	-3020.	-2685.	3797.	5836.	5692.	3347.	.0587	-.0893	.1375	.1140	.0088	-.0585	12448.		
.0990	-2499.	-2136.	2851.	5539.	5996.	3802.	.0602	-.0809	.1183	.1026	.0296	-.0303	12719.		
.1000	-2132.	-1575.	1915.	5328.	6139.	3951.	.0594	-.0694	.0972	.0895	.0484	-.0060	12767.		
.1010	-1188.	-1136.	640.	5107.	6138.	4187.	.0563	-.0573	.0745	.0712	.0666	.0217	12736.		
.1020	-560.	-738.	-450.	4751.	5942.	4368.	.0511	-.0446	.0508	.0476	.0814	.0492	12392.		
.1030	-675.	-207.	-1075.	4267.	5494.	4181.	.0444	-.0292	.0261	.0227	.0902	.0701	11464.		
.1040	-603.	507.	-1653.	3732.	4778.	3679.	.0371	-.0110	.0003	-.0013	.0926	.0859	10016.		
.1050	-314.	1339.	-2115.	3097.	3783.	3078.	.0303	.0084	-.0267	-.0274	.0870	.1003	8161.		
.1060	-542.	2206.	-2013.	2215.	2535.	2468.	.0244	.0271	-.0546	-.0602	.0720	.1134	5896.		
.1070	-368.	3047.	-1841.	1075.	1168.	1892.	.0194	.0443	-.0826	-.0990	.0516	.1251	3488.		
.1080	465.	3913.	-1837.	-185.	-288.	1386.	.0165	.0604	-.1108	-.1372	.0257	.1361	2016.		
.1090	1091.	4922.	-1152.	-1468.	-1868.	552.	.0180	.0761	-.1402	-.1690	-.0102	.1430	3565.		
.1100	3776.	5657.	-1570.	-2618.	-2963.	20.	.0178	.0910	-.1650	-.1978	-.0329	.1372	5585.		
.1110	4891.	5944.	-1451.	-3455.	-3797.	-619.	.0160	.1023	-.1839	-.2240	-.0471	.1287	7304.		
.1120	4158.	5906.	-791.	-3901.	-4500.	-764.	.0137	.1094	-.1973	-.2408	-.0552	.1260	8482.		
.1130	4700.	5827.	-1077.	-4091.	-4854.	-988.	.0103	.1153	-.2060	-.2412	-.0506	.1174	9075.		

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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

.1030	-675.	-207.	1075.	4267.	5494.	4181.	.0444	-.0292	.0261	.0227	.0902	.0701	11464.
.1040	-603.	507.	-1653.	3722.	4778.	3679.	.0371	-.0110	.0003	-.0013	.0926	.0859	10016.
.1050	-314.	1339.	-2115.	3097.	3783.	3078.	.0303	.0084	-.0267	-.0274	.0870	.1003	8161.
.1060	-542.	2206.	-2013.	2215.	2535.	2468.	.0244	.0271	-.0546	-.0602	.0720	.1134	5896.
.1070	-768.	3047.	-1841.	1075.	1168.	1892.	.0194	.0443	-.0826	-.0990	.0516	.1251	3488.
.1080	465.	3913.	-1737.	-185.	-288.	1386.	.0165	.0604	-.1108	-.1372	.0257	.1361	2016.
.1090	1091.	4922.	-1152.	-1468.	-1268.	852.	.0180	.0761	-.1402	-.1690	-.0102	.1430	3565.
.1100	3776.	5657.	-1570.	-2618.	-2963.	20.	.0178	.0910	-.1650	-.1978	-.0329	.1372	5585.
.1110	4891.	5944.	-1451.	-3455.	-3797.	-619.	.0160	.1023	-.1839	-.2240	-.0471	.1287	7304.
.1120	4158.	5906.	-791.	-3901.	-4500.	-764.	.0137	.1094	-.1973	-.2408	-.0552	.1260	8482.
.1130	4700.	5827.	-1077.	-4091.	-4854.	-988.	.0103	.1153	-.2060	-.2412	-.0506	.1174	9075.

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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

SECTION	13	MEMBER	1	SEQUENCE	843	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	6332.	5800.	-2043.	-4152.	-4898.	-1604.	.0061	.1209	-.2112	-.2281	-.0363	.0954	9348.	
.1150	7456.	5576.	-2859.	-3979.	-4918.	-1913.	.0029	.1221	-.2147	-.2108	-.0220	.0745	9335.	
.1160	9015.	4981.	-4003.	-3458.	-4937.	-1463.	.0004	.1169	-.2166	-.1939	-.0081	.0651	8761.	
.1170	10199.	4282.	-4960.	-2695.	-4925.	-934.	-.0022	.1096	-.2165	-.1734	.0042	.0546	8039.	
.1180	12156.	3666.	-6335.	-1868.	-4653.	-911.	-.0079	.1037	-.2119	-.1453	.0218	.0330	7198.	
.1190	10910.	3188.	-6280.	-1101.	-4596.	-836.	-.0148	.0972	-.2035	-.1117	.0315	.0147	6779.	
.1200	8556.	2723.	-5927.	-491.	-4736.	-219.	-.0220	.0875	-.1924	-.0788	.0370	.0108	6732.	
.1210	9448.	2234.	-7205.	-141.	-4621.	464.	-.0304	.0765	-.1789	-.0522	.0491	.0094	6563.	
.1220	7990.	1756.	-7066.	67.	-4566.	773.	-.0382	.0661	-.1633	-.0345	.0527	-.0003	6542.	
.1230	5718.	1133.	-6278.	416.	-4518.	1169.	-.0450	.0559	-.1453	-.0228	.0490	-.0071	6618.	
.1240	3199.	452.	-5135.	913.	-4450.	1768.	-.0499	.0463	-.1251	-.0124	.0388	-.0067	6885.	
.1250	358.	-65.	-3485.	1250.	-4183.	1956.	-.0535	.0396	-.1023	-.0030	.0254	-.0117	6757.	
.1260	-670.	-505.	-2434.	1316.	-3526.	1788.	-.0564	.0345	-.0770	.0012	.0155	-.0217	5886.	
.1270	-2914.	-1000.	-643.	1366.	-2985.	2002.	-.0550	.0279	-.0518	-.0029	-.0030	-.0209	5431.	
.1280	-3248.	-1580.	274.	1636.	-2290.	222.	-.0502	.0216	-.0267	-.0129	-.0202	-.0128	5245.	
.1290	-3599.	-2027.	1332.	2080.	-1346.	2188.	-.0437	.0197	-.0006	-.0257	-.0351	-.0165	4650.	
.1300	-5184.	-2310.	3197.	2544.	-286.	1460.	-.0358	.0210	.0264	-.0409	-.0499	-.0265	4162.	
.1310	-4268.	-2622.	3557.	2868.	1002.	1168.	-.0281	.0213	.0545	-.0595	-.0544	-.0236	4598.	
.1320	-4444.	-2847.	4213.	2808.	2249.	1110.	-.0204	.0212	.0832	-.0804	-.0564	-.0127	5402.	
.1330	-4816.	-2909.	4819.	2640.	3596.	590.	-.0145	.0242	.1120	-.1012	-.0525	-.0106	6356.	
.1340	-5361.	-2898.	5360.	2382.	4802.	-195.	-.0091	.0300	.1386	-.1213	-.0478	-.0148	7576.	
.1350	-5708.	-2927.	5705.	2178.	5654.	-678.	-.0031	.0358	.1608	-.1415	-.0467	-.0140	8612.	
.1360	-4639.	-2957.	5300.	1755.	6357.	-1018.	.0017	.0410	.1786	-.1620	-.0447	-.0122	9426.	
.1370	-5524.	-2867.	5927.	979.	6734.	-1501.	.0054	.0462	.1921	-.1805	-.0492	-.0159	9843.	
.1380	-4885.	-2820.	5707.	150.	6949.	-1823.	.0065	.0510	.2013	-.1928	-.0517	-.0183	10150.	
.1390	-4025.	-2876.	5212.	-407.	6897.	-1937.	.0053	.0555	.2066	-.1958	-.0540	-.0179	10130.	
.1400	-5251.	-2978.	5640.	-607.	6579.	-2277.	.0010	.0612	.2086	-.1898	-.0575	-.0247	9882.	
.1410	-5816.	-3185.	5579.	-839.	6250.	-2770.	-.0074	.0670	.2074	-.1775	-.0538	-.0377	9729.	
.1420	-6843.	-3479.	5526.	-932.	5599.	-2887.	-.0171	.0703	.2012	-.1605	-.0507	-.0448	8994.	
.1430	-6423.	-3745.	4622.	-1000.	4746.	-2663.	-.0275	.0718	.1898	-.1382	-.0463	-.0451	7816.	
.1440	-6206.	-3800.	3927.	-1004.	3735.	-2642.	-.0383	.0743	.1734	-.1108	-.0441	-.0497	6635.	
.1450	-6508.	-3710.	3663.	-1056.	2605.	-2782.	-.0489	.0775	.1525	-.0821	-.0447	-.0578	5585.	
.1460	-5162.	-3649.	2649.	-934.	1471.	-2583.	-.0591	.0792	.1277	-.0565	-.0429	-.0579	4401.	
.1470	-5135.	-3458.	2285.	-852.	123.	-2092.	-.0672	.0795	.0993	-.0353	-.0457	-.0497	3195.	
.1480	-3931.	-3011.	1246.	-992.	-1089.	-1725.	-.0749	.0802	.0694	-.0166	-.0424	-.0406	3204.	
.1490	-2336.	-2342.	-103.	-1327.	-2158.	-1443.	-.0818	.0815	.0390	.0004	-.0335	-.0299	4118.	
.1500	-1944.	-1624.	-916.	-1685.	-3186.	-947.	-.0867	.0823	.0089	.0144	-.0245	-.0117	5251.	
.1510	-869.	-976.	-2014.	-1898.	-3923.	-349.	-.0905	.0828	-.0197	.0243	-.0102	.0107	6177.	

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2 SAFETY COLD FKW24F--2 PSVCONDITION 24
LOADS
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PRESSURE

.1410	-5336.	-3175.	5926.	-879.	6250.	-2770.	-1074.	.0670	.2074	-.1775	-.0538	-.0377	9729.
.1420	-6347.	-3475.	5926.	-972.	5599.	-2887.	-1071.	.0700	.2012	-.1605	-.0507	-.0448	8994.
.1430	-6423.	-3745.	4222.	-1000.	4746.	-2663.	-.0275	.0718	.1898	-.1322	-.0463	-.0451	7816.
.1440	-6206.	-3800.	3927.	-1064.	3735.	-2642.	-.0380	.0743	.1734	-.1102	-.0441	-.0497	6635.
.1450	-6108.	-3710.	3667.	-1056.	2605.	-2702.	-.0489	.0771	.1525	-.0921	-.0447	-.0578	5585.
.1460	-5167.	-3649.	2649.	-974.	1471.	-2553.	-.0591	.0792	.1277	-.0565	-.0429	-.0579	4401.
.1470	-5135.	-3458.	2285.	-852.	123.	-2092.	-.0672	.0795	.0993	-.0353	-.0457	-.0497	3195.
.1480	-3931.	-3011.	1246.	-992.	-1089.	-1725.	-.0749	.0802	.0694	-.0166	-.0424	-.0406	3204.
.1490	-2336.	-2342.	-103.	-1327.	-2158.	-1443.	-.0818	.0815	.0390	.0004	-.0335	-.0299	4118.
.1500	-1944.	-1624.	-116.	-1661.	-3166.	-947.	-.0867	.0823	.0089	.0144	-.0245	-.0117	5251.
.1510	-869.	-976.	-1014.	-1898.	-3925.	-249.	-.0905	.0828	-.0197	.0243	-.0102	.0107	6177.

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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	13	MEMBER	1	SEQUENCE	843	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)		
.1520	-730.	-327.	-2452.	-2066.	-4461.	77.	-.0920	.0839	-.0471	.0301	.0033	.0301	6944.		
.1530	572.	256.	-3251.	-2203.	-4683.	466.	-.0913	.0851	-.0729	.0329	.0190	.0488	7340.		
.1540	1454.	773.	-3594.	-2296.	-4820.	1050.	-.0869	.0855	-.0979	.0341	.0293	.0713	7686.		
.1550	1938.	1277.	-3485.	-2326.	-4874.	1660.	-.0792	.0857	-.1216	.0348	.0345	.0939	7980.		
.1560	4507.	1722.	-4250.	-2277.	-4583.	2061.	-.0704	.0867	-.1425	.0347	.0444	.1111	7792.		
.1570	5167.	2088.	-4008.	-2103.	-4301.	2400.	-.0598	.0876	-.1604	.0332	.0491	.1259	7565.		
.1580	5706.	2307.	-3767.	-1788.	-3924.	2857.	-.0490	.0879	-.1742	.0311	.0542	.1429	7306.		
.1590	7350.	2492.	-4144.	-1449.	-3307.	3192.	-.0396	.0886	-.1831	.0303	.0545	.1582	6807.		
.1600	6914.	2800.	-3520.	-1215.	-2699.	3215.	-.0314	.0905	-.1873	.0308	.0715	.1681	6174.		
.1610	5357.	3160.	-2482.	-1059.	-2221.	3210.	-.0235	.0922	-.1883	.0304	.0749	.1783	5713.		
.1620	6455.	3466.	-2966.	-969.	-1709.	3322.	-.0165	.0928	-.1868	.0271	.0822	.1907	5451.		
.1630	6116.	3836.	-2826.	-1030.	-1433.	3265.	-.0094	.0930	-.1836	.0203	.0829	.1983	5243.		
.1640	5169.	4241.	-2472.	-1223.	-1298.	3050.	-.0029	.0928	-.1782	.0118	.0799	.2010	4991.		
.1650	5757.	4554.	-3036.	-1429.	-1151.	2933.	.0023	.0915	-.1700	.0044	.0791	.2043	4886.		
.1660	4790.	4802.	-2912.	-1616.	-1147.	2789.	.0067	.0894	-.1589	.0003	.0740	.2046	4833.		
.1670	3893.	4940.	-2860.	-1773.	-1036.	2408.	.0091	.0871	-.1442	-.0003	.0714	.1965	4470.		
.1680	2387.	4882.	-2806.	-1791.	-881.	1983.	.0104	.0835	-.1265	.0016	.0704	.1837	3974.		
.1690	3017.	4530.	-3358.	-1612.	-610.	1738.	.0107	.0777	-.1063	.0059	.0733	.1706	3458.		
.1700	2400.	3990.	-3435.	-1323.	-313.	1485.	.0108	.0706	-.0841	.0137	.0742	.1530	2844.		
.1710	-420.	3420.	-2219.	-979.	-153.	1071.	.0120	.0631	-.0613	.0258	.0670	.1285	2061.		
.1720	151.	2737.	-2514.	-571.	230.	694.	.0132	.0546	-.0383	.0403	.0649	.1021	1310.		
.1730	492.	1966.	-2431.	-168.	581.	472.	.0155	.0442	-.0158	.0534	.0583	.0766	1083.		
.1740	-423.	1126.	-1420.	148.	915.	331.	.0184	.0322	.0065	.0638	.0461	.0509	1391.		
.1750	-436.	265.	-662.	413.	1382.	203.	.0205	.0198	.0290	.0734	.0352	.0249	2057.		
.1760	-938.	-491.	424.	665.	1800.	38.	.0223	.0079	.0508	.0837	.0225	-.0006	2711.		
.1770	-718.	-1146.	1143.	825.	2286.	-179.	.0225	-.0035	.0723	.0934	.0130	-.0253	3442.		
.1780	-1745.	-1706.	2408.	816.	2649.	-353.	.0214	-.0154	.0925	.0998	.0023	-.0471	3947.		
.1790	-1894.	-2241.	3075.	686.	2980.	-385.	.0185	-.0279	.1110	.1019	-.0047	-.0637	4354.		
.1800	-1359.	-2717.	3240.	574.	3229.	-396.	.0137	-.0400	.1273	.1019	-.0095	-.0772	4657.		
.1810	-3118.	-3048.	4422.	420.	3134.	-548.	.0084	-.0506	.1402	.1015	-.0213	-.0909	4533.		
.1820	-3440.	-3341.	4706.	348.	2959.	-769.	.0016	-.0600	.1498	.1005	-.0301	-.1038	4346.		
.1830	-3557.	-3628.	4694.	250.	2596.	-928.	-.0059	-.0692	.1555	.0969	-.0392	-.1135	3912.		
.1840	-4086.	-3923.	4699.	111.	2060.	-1008.	-.0138	-.0783	.1580	.0904	-.0491	-.1202	3242.		
.1850	-4405.	-4232.	4394.	-27.	1451.	-1077.	-.0222	-.0864	.1579	.0835	-.0570	-.1253	2552.		
.1860	-5242.	-4525.	4173.	-65.	761.	-1235.	-.0304	-.0925	.1557	.0783	-.0641	-.1310	2051.		
.1870	-5117.	-4818.	3402.	-31.	219.	-1519.	-.0388	-.0961	.1525	.0746	-.0555	-.1383	2168.		
.1880	-6145.	-5066.	3259.	-45.	-287.	-1819.	-.0463	-.0983	.1483	.0706	-.0673	-.1448	2603.		
.1890	-6759.	-5286.	2997.	-173.	-658.	-1982.	-.0522	-.0997	.1431	.0648	-.0568	-.1474	2959.		

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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

.1790	-1894.	-2241.	175.	686.	2980.	-385.	.185	-.0279	.1110	.1019	-.0047	-.0637	4354.
.1800	-1759.	-2717.	3240.	534.	3229.	-376.	.127	-.0400	.1273	.1019	-.0095	-.0772	4657.
.1810	-3118.	-3048.	4422.	420.	3134.	-548.	.0084	-.0506	.1402	.1015	-.0213	-.0909	4533.
.1820	-3440.	-3241.	4706.	348.	2959.	-769.	.0016	-.0600	.1498	.1005	-.0301	-.1038	4346.
.1830	-2557.	-3628.	4694.	250.	2596.	-928.	-.0059	-.0692	.1555	.0969	-.0392	-.1135	3912.
.1840	-4086.	-3923.	4699.	111.	2060.	-1008.	-.0138	-.0783	.1580	.0904	-.0491	-.1202	3242.
.1850	-4405.	-4232.	4394.	-27.	1451.	-1077.	-.0222	-.0864	.1579	.0835	-.0570	-.1253	2552.
.1860	-5242.	-4525.	4173.	-65.	761.	-1235.	-.0304	-.0925	.1557	.0783	-.0641	-.1310	2051.
.1870	-5117.	-4818.	3402.	-31.	219.	-1519.	-.0388	-.0961	.1525	.0746	-.0555	-.1383	2168.
.1880	-6145.	-5066.	3259.	-40.	-287.	-1819.	-.0463	-.0983	.1483	.0786	-.0673	-.1448	2603.
.1890	-6759.	-5286.	2997.	-173.	-650.	-1982.	-.0522	-.0997	.1431	.0648	-.0568	-.1474	2959.

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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	13	MEMBER	1	SEQUENCE	843	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)		
.1900	-5950.	-5436.	2150.	-396.	-835.	-2075.	-.0564	-.0999	.1368	.0579	-.0626	-.1471	3208.		
.1910	-6142.	-5389.	2013.	-675.	-1010.	-2276.	-.0573	-.0976	.1289	.0510	-.0623	-.1476	3644.		
.1920	-5889.	-5154.	1865.	-985.	-1084.	-2536.	-.0554	-.0933	.1194	.0440	-.0623	-.1473	4136.		
.1930	-5140.	-4772.	1623.	-1336.	-1090.	-2693.	-.0506	-.0882	.1083	.0354	-.0622	-.1429	4516.		
.1940	-4533.	-4255.	1546.	-1741.	-1072.	-2737.	-.0433	-.0830	.0957	.0244	-.0624	-.1341	4826.		
.1950	-3781.	-3591.	1426.	-2147.	-1004.	-2759.	-.0340	-.0772	.0821	.0132	-.0508	-.1227	5137.		
.1960	-2592.	-2783.	1082.	-2458.	-862.	-2797.	-.0236	-.0708	.0680	.0044	-.0560	-.1093	5398.		
.1970	-1697.	-1881.	875.	-2608.	-694.	-2833.	-.0124	-.0639	.0535	-.0012	-.0494	-.0944	5526.		
.1980	-1367.	-964.	922.	-2590.	-531.	-2817.	-.0008	-.0574	.0387	-.0047	-.0418	-.0781	5458.		
.1990	-721.	-86.	738.	-2435.	-364.	-2701.	.0109	-.0518	.0233	-.0066	-.0315	-.0605	5162.		
.2000	586.	749.	146.	-2183.	-219.	-2481.	.0226	-.0474	.0071	-.0061	-.0192	-.0422	4679.		
.2010	1921.	1555.	-487.	-1870.	-145.	-2192.	.0341	-.0440	-.0099	-.0021	-.0074	-.0244	4075.		
.2020	3055.	2291.	-1014.	-1507.	-130.	-1834.	.0448	-.0415	-.0271	.0058	.0031	-.0079	3358.		
.2030	4181.	2896.	-1550.	-1096.	-142.	-1390.	.0542	-.0401	-.0440	.0170	.0134	.0072	2509.		
.2040	5113.	3353.	-2043.	-652.	-191.	-865.	.0619	-.0400	-.0601	.0305	.0237	.0207	1554.		
.2050	5768.	3678.	-2486.	-207.	-279.	-274.	.0676	-.0412	-.0749	.0463	.0339	.0326	624.		
.2060	6296.	3897.	-2959.	200.	-381.	376.	.0711	-.0434	-.0881	.0648	.0448	.0433	807.		
.2070	6464.	4039.	-3320.	558.	-496.	1052.	.0726	-.0463	-.0992	.0862	.0555	.0524	1822.		
.2080	5993.	4117.	-3395.	898.	-646.	1721.	.0724	-.0498	-.1084	.1094	.0544	.0598	2891.		
.2090	5318.	4110.	-3378.	1266.	-814.	2377.	.0710	-.0538	-.1155	.1327	.0716	.0655	3974.		
.2100	4888.	4004.	-3453.	1663.	-952.	3008.	.0687	-.0581	-.1206	.1545	.0778	.0697	5038.		
.2110	4306.	3831.	-3373.	2054.	-1059.	3580.	.0659	-.0625	-.1235	.1741	.0816	.0721	6018.		
.2120	3402.	3629.	-3048.	2414.	-1133.	4056.	.0631	-.0665	-.1239	.1911	.0828	.0731	6856.		
.2130	2684.	3403.	-2773.	2737.	-1134.	4409.	.0603	-.0699	-.1217	.2045	.0829	.0726	7503.		
.2140	2300.	3137.	-2654.	3007.	-1031.	4605.	.0575	-.0725	-.1166	.2127	.0836	.0703	7903.		
.2150	1917.	2819.	-2512.	3197.	-821.	4642.	.0547	-.0742	-.1083	.2140	.0845	.0664	8045.		
.2160	1508.	2461.	-2300.	3283.	-510.	4545.	.0519	-.0751	-.0970	.2082	.0849	.0617	7952.		
.2170	1327.	2098.	-2111.	3233.	-107.	4292.	.0491	-.0747	-.0830	.1960	.0846	.0559	7591.		
.2180	1328.	1765.	-1898.	3016.	348.	3840.	.0463	-.0728	-.0669	.1780	.0823	.0480	6914.		
.2190	1453.	1448.	-1638.	2629.	796.	3232.	.0435	-.0697	-.0495	.1546	.0771	.0381	5991.		
.2200	1797.	1115.	-1402.	2102.	1187.	2558.	.0407	-.0659	-.0313	.1261	.0685	.0275	4967.		
.2210	2128.	763.	-1098.	1475.	1473.	1828.	.0374	-.0615	-.0129	.0944	.0560	.0158	3915.		
.2220	2102.	415.	-599.	792.	1609.	1000.	.0335	-.0562	.0051	.0623	.0393	.0018	2899.		
.2230	1854.	71.	-39.	99.	1586.	98.	.0288	-.0501	.0225	.0319	.0196	-.0145	2248.		
.2240	1550.	-293.	444.	-568.	1422.	-798.	.0229	-.0440	.0389	.0046	-.0015	-.0315	2439.		
.2250	908.	-696.	982.	-1180.	1142.	-1642.	.0158	-.0382	.0544	-.0193	-.0232	-.0487	3281.		
.2260	-219.	-1138.	1648.	-1689.	780.	-2428.	.0075	-.0328	.0689	-.0389	-.0447	-.0659	4320.		
.2270	-1527.	-1601.	2277.	-2052.	379.	-3144.	-.0015	-.0278	.0822	-.0533	-.0644	-.0828	5330.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.31.

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

.2170	1327.	2098.	2111.	3233.	-107.	4292.	.491	-.0747	-.0830	.1960	.0346	.0559	7591.
.2180	1328.	1765.	-1898.	3016.	348.	3840.	.463	-.0728	-.0669	.1780	.0823	.0480	6914.
.2190	1453.	1448.	-1638.	2629.	796.	3232.	.0435	-.0697	-.0495	.1546	.0771	.0381	5991.
.2200	1757.	1115.	-1401.	2102.	1187.	2558.	.0407	-.0659	-.0313	.1261	.0585	.0275	4967.
.2210	2128.	763.	-1098.	1475.	1473.	1820.	.0374	-.0615	-.0129	.0944	.0560	.0158	3915.
.2220	2107.	415.	-599.	792.	1609.	1000.	.0335	-.0562	.0051	.0623	.0393	.0018	2899.
.2230	1854.	71.	-29.	99.	1586.	98.	.0288	-.0501	.0225	.0319	.0196	-.0145	2248.
.2240	1550.	-293.	444.	-568.	1422.	-798.	.0229	-.0440	.0389	.0046	-.0015	-.0315	2439.
.2250	908.	-696.	982.	-1180.	1142.	-1642.	.0158	-.0382	.0544	-.0193	-.0232	-.0487	3281.
.2260	-219.	-1128.	1642.	-1659.	780.	-2428.	.0075	-.0328	.0689	-.0389	-.0447	-.0659	4320.
.2270	-1527.	-1601.	2277.	-2052.	379.	-3144.	-.0015	-.0278	.0822	-.0533	-.0644	-.0828	5330.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKWOBF 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	13	MEMBER	1	SEQUENCE	843	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	-2791.	-2044.	2766.	-2284.	-24.	-3776.	-.0108	-.0232	.0940	-.0624	-.0314	-.0987	6234.		
.2290	-3970.	-2442.	3129.	-2441.	-388.	-4287.	-.0197	-.0194	.1042	-.0673	-.0951	-.1128	6990.		
.2300	-4876.	-2799.	3309.	-2560.	-658.	-4614.	-.0281	-.0168	.1128	-.0695	-.1047	-.1236	7511.		
.2310	-5409.	-3121.	3283.	-2629.	-796.	-4738.	-.0354	-.0154	.1200	-.0698	-.1093	-.1305	7735.		
.2320	-5749.	-3386.	3163.	-2621.	-794.	-4715.	-.0416	-.0146	.1257	-.0682	-.1091	-.1343	7702.		
.2330	-5929.	-3571.	2985.	-2534.	-649.	-4598.	-.0464	-.0142	.1301	-.0648	-.1043	-.1358	7472.		
.2340	-5798.	-3680.	2679.	-2395.	-371.	-4360.	-.0498	-.0143	.1329	-.0604	-.0949	-.1342	7045.		
.2350	-5441.	-3724.	2296.	-2229.	-3.	-3958.	-.0518	-.0153	.1338	-.0560	-.0821	-.1284	6416.		
.2360	-5029.	-3701.	1936.	-2020.	395.	-3418.	-.0521	-.0169	.1325	-.0519	-.0678	-.1190	5636.		
.2370	-4481.	-3606.	1582.	-1713.	777.	-2819.	-.0509	-.0186	.1286	-.0474	-.0532	-.1074	4786.		
.2380	-3791.	-3441.	1259.	-1274.	1104.	-2209.	-.0481	-.0199	.1218	-.0420	-.0399	-.0949	3925.		
.2390	-3213.	-3223.	1108.	-722.	1332.	-1581.	-.0439	-.0209	.1122	-.0360	-.0295	-.0814	3094.		
.2400	-2795.	-2971.	1136.	-99.	1441.	-919.	-.0385	-.0215	.0998	-.0299	-.0224	-.0666	2418.		
.2410	-2322.	-2692.	1190.	566.	1437.	-249.	-.0323	-.0216	.0851	-.0237	-.0179	-.0514	2210.		
.2420	-1827.	-2383.	1234.	1253.	1326.	364.	-.0256	-.0205	.0684	-.0172	-.0153	-.0369	2628.		
.2430	-1558.	-2044.	1358.	1930.	1121.	887.	-.0187	-.0178	.0505	-.0105	-.0143	-.0238	3393.		
.2440	-1520.	-1679.	1551.	2541.	862.	1333.	-.0117	-.0137	.0320	-.0045	-.0141	-.0117	4232.		
.2450	-1504.	-1281.	1692.	3015.	590.	1718.	-.0049	-.0081	.0134	-.0004	-.0135	.0001	4972.		
.2460	-1336.	-832.	1686.	3302.	338.	2032.	.0019	-.0012	-.0050	.0009	-.0117	.0118	5497.		
.2470	-901.	-319.	1460.	3384.	134.	2264.	.0084	.0071	-.0226	-.0008	-.0082	.0233	5754.		
.2480	-213.	252.	1036.	3275.	11.	2414.	.0146	.0166	-.0390	-.0055	-.0026	.0348	5747.		
.2490	498.	870.	565.	3001.	-20.	2488.	.0203	.0271	-.0539	-.0129	.0048	.0463	5506.		
.2500	1155.	1516.	91.	2601.	30.	2495.	.0253	.0382	-.0671	-.0229	.0134	.0577	5091.		
.2510	2050.	2161.	-554.	2125.	150.	2445.	.0294	.0496	-.0787	-.0347	.0237	.0689	4580.		
.2520	3263.	2771.	-1411.	1615.	324.	2345.	.0325	.0609	-.0886	-.0479	.0355	.0794	4047.		
.2530	4352.	3315.	-2229.	1115.	509.	2203.	.0341	.0718	-.0969	-.0614	.0473	.0888	3560.		
.2540	4982.	3764.	-2816.	677.	652.	2033.	.0343	.0820	-.1038	-.0746	.0572	.0968	3164.		
.2550	5295.	4099.	-3242.	347.	715.	1835.	.0330	.0913	-.1096	-.0868	.0647	.1031	2825.		
.2560	5486.	4311.	-3602.	130.	668.	1599.	.0304	.0996	-.1147	-.0984	.0691	.1070	2455.		
.2570	5489.	4403.	-3836.	-10.	491.	1352.	.0267	.1063	-.1192	-.1097	.0696	.1089	2032.		
.2580	5230.	4375.	-3874.	-102.	183.	1150.	.0219	.1112	-.1233	-.1211	.0657	.1099	1650.		
.2590	4735.	4246.	-3713.	-154.	-237.	989.	.0164	.1144	-.1268	-.1320	.0576	.1100	1453.		
.2600	4069.	4045.	-3393.	-168.	-732.	815.	.0104	.1162	-.1294	-.1420	.0461	.1080	1566.		
.2610	3419.	3779.	-3030.	-157.	-1252.	624.	.0039	.1169	-.1309	-.1513	.0328	.1037	1988.		
.2620	2935.	3432.	-2710.	-146.	-1737.	479.	-.0028	.1162	-.1308	-.1601	.0194	.0985	2553.		
.2630	2500.	3012.	-2370.	-156.	-2139.	402.	-.0096	.1140	-.1288	-.1682	.0067	.0928	3082.		
.2640	2025.	2555.	-1975.	-181.	-2426.	342.	-.0164	.1110	-.1245	-.1745	-.0047	.0858	3470.		
.2650	1702.	2087.	-1644.	-188.	-2578.	259.	-.0230	.1075	-.1179	-.1784	-.0138	.0770	3669.		

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DIS/ADLPIPE

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S/RV PIPING KEWAUNEE GKWOBF 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

.2550	5295.	4099.	-3242.	347.	715.	1835.	.330	.0913	-.1096	-.0868	.0647	.1031	2825.
.2560	5486.	4311.	-3602.	130.	668.	1599.	.304	.0996	-.1147	-.0984	.0691	.1070	2455.
.2570	5489.	4403.	-3836.	-10.	491.	1352.	.0267	.1063	-.1192	-.1097	.0596	.1089	2032.
.2580	5230.	4375.	-3274.	-102.	183.	1150.	.0219	.1112	-.1233	-.1211	.0657	.1099	1650.
.2590	4735.	4246.	-3717.	-154.	-227.	989.	.0164	.1144	-.1268	-.1320	.0576	.1100	1453.
.2600	4069.	4045.	-3393.	-168.	-732.	815.	.0104	.1162	-.1294	-.1420	.0461	.1080	1566.
.2610	3419.	3775.	-3030.	-157.	-1252.	624.	.0039	.1169	-.1309	-.1513	.0328	.1037	1988.
.2620	2935.	3432.	-2710.	-146.	-1737.	479.	-.0028	.1162	-.1308	-.1601	.0194	.0985	2553.
.2630	2500.	3012.	-2370.	-156.	-2139.	402.	-.0096	.1140	-.1288	-.1682	.0067	.0928	3082.
.2640	2025.	2555.	-1975.	-181.	-2426.	342.	-.0164	.1110	-.1245	-.1745	-.0047	.0858	3470.
.2650	1702.	2087.	-1644.	-188.	-2578.	259.	-.0230	.1075	-.1179	-.1784	-.0138	.0770	3669.

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ADLPIPE STRESS ANALYSIS

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

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

SECTION	13	MEMBER	1	SEQUENCE	843	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)	
.2660	1644.	1608.	-1444.	-161.	-2591.	172.	-.0291	.1036	-.1092	-.1801	-.0204	.0672	3675.	
.2670	1654.	1112.	-1270.	-110.	-2483.	120.	-.0347	.0991	-.0986	-.1806	-.0252	.0575	3515.	
.2680	1596.	612.	-1058.	-44.	-2281.	109.	-.0397	.0940	-.0864	-.1802	-.0286	.0482	3226.	
.2690	1549.	135.	-868.	50.	-2013.	104.	-.0441	.0887	-.0728	-.1784	-.0311	.0393	2848.	
.2700	1487.	-303.	-708.	180.	-1711.	67.	-.0478	.0838	-.0581	-.1750	-.0328	.0302	2431.	
.2710	1227.	-717.	-494.	331.	-1396.	-1.	-.0509	.0792	-.0425	-.1707	-.0343	.0210	2027.	
.2720	695.	-1139.	-184.	477.	-1079.	-63.	-.0537	.0749	-.0261	-.1663	-.0356	.0123	1669.	
.2730	-69.	-1569.	208.	603.	-766.	-112.	-.0561	.0710	-.0093	-.1621	-.0368	.0043	1386.	
.2740	-1030.	-1968.	680.	697.	-472.	-195.	-.0579	.0678	.0076	-.1579	-.0385	-.0037	1221.	
.2750	-2030.	-2314.	1174.	750.	-197.	-336.	-.0589	.0657	.0242	-.1536	-.0407	-.0122	1194.	
.2760	-2906.	-2620.	1629.	746.	69.	-500.	-.0590	.0645	.0399	-.1500	-.0432	-.0204	1272.	
.2770	-3671.	-2893.	2069.	675.	330.	-647.	-.0582	.0638	.0546	-.1477	-.0461	-.0277	1401.	
.2780	-4313.	-3111.	2487.	549.	590.	-789.	-.0564	.0638	.0679	-.1462	-.0490	-.0341	1594.	
.2790	-4672.	-3243.	2787.	393.	860.	-964.	-.0537	.0646	.0795	-.1447	-.0514	-.0398	1907.	
.2800	-4716.	-3290.	2933.	228.	1143.	-1170.	-.0502	.0662	.0893	-.1426	-.0524	-.0448	2332.	
.2810	-4611.	-3270.	2992.	65.	1427.	-1369.	-.0463	.0683	.0972	-.1399	-.0522	-.0484	2795.	
.2820	-4432.	-3190.	2992.	-91.	1700.	-1532.	-.0421	.0706	.1030	-.1368	-.0506	-.0501	3236.	
.2830	-4121.	-3038.	2890.	-220.	1943.	-1664.	-.0376	.0730	.1063	-.1329	-.0478	-.0498	3627.	
.2840	-3710.	-2811.	2701.	-305.	2129.	-1773.	-.0331	.0754	.1071	-.1278	-.0441	-.0479	3937.	
.2850	-3291.	-2523.	2482.	-350.	2234.	-1841.	-.0285	.0777	.1050	-.1219	-.0403	-.0443	4119.	
.2860	-2879.	-2191.	2258.	-374.	2255.	-1833.	-.0240	.0795	.1001	-.1154	-.0367	-.0384	4139.	
.2870	-2475.	-1825.	2038.	-388.	2198.	-1736.	-.0198	.0807	.0926	-.1086	-.0333	-.0301	3994.	
.2880	-2113.	-1437.	1842.	-389.	2073.	-1561.	-.0158	.0811	.0828	-.1015	-.0300	-.0198	3707.	
.2890	-1787.	-1045.	1662.	-366.	1901.	-1322.	-.0125	.0809	.0710	-.0939	-.0263	-.0079	3311.	
.2900	-1488.	-666.	1492.	-318.	1708.	-1025.	-.0099	.0801	.0578	-.0856	-.0216	.0052	2849.	
.2910	-1255.	-310.	1353.	-258.	1510.	-671.	-.0081	.0785	.0436	-.0766	-.0159	.0194	2362.	
.2920	-1061.	13.	1224.	-190.	1316.	-264.	-.0071	.0762	.0287	-.0670	-.0089	.0343	1914.	
.2930	-779.	298.	1032.	-111.	1125.	179.	-.0070	.0732	.0132	-.0566	-.0006	.0495	1617.	
.2940	-369.	546.	750.	-18.	932.	630.	-.0074	.0699	-.0026	-.0453	.0086	.0640	1589.	
.2950	84.	761.	420.	83.	719.	1066.	-.0085	.0663	-.0185	-.0331	.0182	.0774	1821.	
.2960	548.	942.	51.	179.	474.	1485.	-.0100	.0626	-.0345	-.0203	.0277	.0895	2216.	
.2970	1059.	1094.	-389.	254.	186.	1871.	-.0119	.0589	-.0502	-.0071	.0367	.0999	2680.	
.2980	1596.	1235.	-904.	294.	-150.	2196.	-.0141	.0553	-.0653	.0064	.0451	.1085	3137.	
.2990	2083.	1377.	-1453.	289.	-535.	2441.	-.0166	.0522	-.0796	.0198	.0525	.1150	3554.	
.3000	2459.	1522.	-1997.	233.	-960.	2608.	-.0191	.0493	-.0926	.0326	.0586	.1196	3939.	
.3010	2692.	1668.	-2493.	118.	-1410.	2696.	-.0215	.0469	-.1040	.0444	.0533	.1224	4300.	
.3020	2797.	1824.	-2920.	-61.	-1866.	2693.	-.0235	.0449	-.1136	.0549	.0661	.1232	4629.	
.3030	2851.	1996.	-3283.	-307.	-2303.	2603.	-.0249	.0433	-.1210	.0637	.0672	.1223	4928.	

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

.2930	-779.	298.	1032.	-111.	1125.	179.	-0070	.0732	.0132	-.0566	-.0006	.0495	1617.
.2940	-369.	546.	750.	-12.	932.	630.	-.0074	.0699	-.0026	-.0453	.0086	.0640	1589.
.2950	84.	761.	420.	83.	719.	1066.	-.0085	.0663	-.0185	-.0331	.0182	.0774	1821.
.2960	549.	942.	51.	179.	474.	1485.	-.0100	.0626	-.0345	-.0203	.0277	.0895	2216.
.2970	1059.	1094.	-289.	254.	176.	1871.	-.0119	.0589	-.0502	-.0071	.0367	.0999	2680.
.2980	1596.	1235.	-904.	294.	-150.	2196.	-.0141	.0553	-.0653	.0064	.0451	.1085	3137.
.2990	2083.	1377.	-1453.	289.	-535.	2441.	-.0166	.0522	-.0796	.0198	.0525	.1150	3554.
.3000	2459.	1522.	-1997.	233.	-960.	2608.	-.0191	.0493	-.0926	.0326	.0586	.1196	3939.
.3010	2892.	1668.	-2493.	118.	-1410.	2696.	-.0215	.0469	-.1040	.0444	.0533	.1224	4300.
.3020	2757.	1824.	-2920.	-61.	-1866.	2693.	-.0229	.0449	-.1136	.0549	.0561	.1232	4629.
.3030	2851.	1996.	-3283.	-307.	-2303.	2603.	-.0249	.0433	-.1210	.0637	.0672	.1223	4928.

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

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

SECTION	13	MEMBER	1	SEQUENCE	043	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	2905.	2169.	-3571.	-613.	-2690.	2445.	-.0255	.0419	-.1261	.0708	.0564	.1197	5207.		
.3050	2927.	2324.	-3733.	-958.	-3001.	2233.	-.0249	.0405	-.1287	.0760	.0639	.1156	5454.		
.3060	2912.	2447.	-3749.	-1317.	-3206.	1970.	-.0233	.0391	-.1284	.0794	.0500	.1100	5631.		
.3070	2926.	2535.	-3653.	-1660.	-3282.	1662.	-.0205	.0375	-.1254	.0814	.0553	.1028	5701.		
.3080	2991.	2578.	-3471.	-1967.	-3218.	1327.	-.0168	.0355	-.1194	.0825	.0504	.0945	5647.		
.3090	3059.	2564.	-3200.	-2221.	-3012.	985.	-.0124	.0328	-.1106	.0826	.0458	.0855	5466.		
.3100	3096.	2484.	-2853.	-2403.	-2677.	651.	-.0076	.0292	-.0992	.0822	.0419	.0761	5164.		
.3110	3101.	2341.	-2465.	-2499.	-2236.	332.	-.0025	.0247	-.0856	.0817	.0387	.0664	4760.		
.3120	3049.	2143.	-2058.	-2506.	-1727.	29.	.0025	.0192	-.0701	.0816	.0361	.0564	4298.		
.3130	2911.	1893.	-1645.	-2434.	-1185.	-246.	.0072	.0128	-.0533	.0819	.0339	.0463	3840.		
.3140	2688.	1596.	-1250.	-2303.	-646.	-473.	.0115	.0052	-.0358	.0829	.0319	.0363	3444.		
.3150	2361.	1259.	-876.	-2126.	-142.	-643.	.0151	-.0035	-.0180	.0847	.0297	.0265	3144.		
.3160	1915.	895.	-525.	-1913.	303.	-766.	.0178	-.0130	-.0003	.0876	.0271	.0168	2942.		
.3170	1354.	514.	-197.	-1672.	678.	-851.	.0197	-.0232	.0170	.0918	.0240	.0068	2817.		
.3180	681.	128.	115.	-1414.	979.	-896.	.0207	-.0339	.0337	.0975	.0206	-.0031	2739.		
.3190	-85.	-256.	417.	-1151.	1211.	-895.	.0209	-.0452	.0494	.1043	.0168	-.0129	2677.		
.3200	-901.	-632.	708.	-888.	1382.	-853.	.0204	-.0567	.0642	.1122	.0128	-.0223	2614.		
.3210	-1693.	-994.	977.	-622.	1509.	-785.	.0194	-.0684	.0778	.1209	.0087	-.0317	2558.		
.3220	-2431.	-1337.	1239.	-349.	1604.	-707.	.0182	-.0798	.0901	.1304	.0045	-.0411	2524.		
.3230	-3117.	-1658.	1520.	-68.	1678.	-621.	.0171	-.0910	.1011	.1400	.0001	-.0502	2529.		
.3240	-3708.	-1961.	1816.	214.	1743.	-528.	.0162	-.1018	.1106	.1492	-.0044	-.0590	2590.		
.3250	-4132.	-2250.	2093.	493.	1808.	-437.	.0157	-.1119	.1187	.1574	-.0088	-.0676	2719.		
.3260	-4395.	-2517.	2347.	762.	1876.	-361.	.0156	-.1212	.1253	.1643	-.0130	-.0758	2905.		
.3270	-4538.	-2754.	2587.	1010.	1942.	-312.	.0162	-.1295	.1304	.1694	-.0167	-.0837	3123.		
.3280	-4577.	-2952.	2800.	1226.	2004.	-293.	.0172	-.1365	.1340	.1725	-.0199	-.0910	3344.		
.3290	-4527.	-3108.	2967.	1393.	2057.	-306.	.0186	-.1424	.1361	.1731	-.0223	-.0975	3535.		
.3300	-4403.	-3211.	3074.	1497.	2089.	-353.	.0204	-.1469	.1368	.1710	-.0238	-.1031	3665.		
.3310	-4193.	-3249.	3097.	1531.	2091.	-436.	.0224	-.1500	.1358	.1664	-.0245	-.1076	3712.		
.3320	-3916.	-3206.	3036.	1486.	2054.	-558.	.0246	-.1516	.1331	.1597	-.0244	-.1110	3666.		
.3330	-3617.	-3080.	2913.	1363.	1969.	-712.	.0269	-.1519	.1288	.1511	-.0240	-.1132	3529.		
.3340	-3286.	-2877.	2722.	1170.	1831.	-888.	.0294	-.1508	.1228	.1411	-.0234	-.1144	3316.		
.3350	-2862.	-2602.	2432.	923.	1645.	-1077.	.0318	-.1487	.1150	.1302	-.0224	-.1146	3068.		
.3360	-2355.	-2265.	2058.	637.	1416.	-1276.	.0342	-.1455	.1057	.1192	-.0212	-.1140	2839.		
.3370	-1827.	-1878.	1644.	332.	1153.	-1473.	.0365	-.1414	.0949	.1088	-.0198	-.1127	2684.		
.3380	-1290.	-1459.	1208.	31.	868.	-1656.	.0386	-.1368	.0829	.0994	-.0183	-.1109	2641.		
.3390	-728.	-1027.	753.	-244.	573.	-1815.	.0405	-.1317	.0699	.0912	-.0166	-.1085	2710.		
.3400	-155.	-598.	295.	-476.	276.	-1943.	.0421	-.1265	.0562	.0844	-.0147	-.1056	2852.		
.3410	399.	-186.	-143.	-653.	-18.	-2027.	.0436	-.1214	.0419	.0788	-.0128	-.1020	3007.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.26.31.

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

.3310	-4193.	-3249.	3097.	1531.	2091.	-436.	.0224	-.1570	.1358	.1664	-.0245	-.1076	3712.
.3320	-3916.	-3206.	3036.	1486.	2054.	-558.	.0246	-.1516	.1331	.1597	-.0244	-.1110	3666.
.3330	-3617.	-3080.	2913.	1363.	1969.	-712.	.0269	-.1519	.1288	.1511	-.0240	-.1132	3529.
.3340	-3286.	-2877.	2722.	1170.	1831.	-888.	.0294	-.1508	.1228	.1411	-.0234	-.1144	3316.
.3350	-2862.	-2602.	2432.	921.	1645.	-1077.	.0318	-.1487	.1150	.1302	-.0224	-.1146	3068.
.3360	-2355.	-2265.	2058.	677.	1416.	-1276.	.0342	-.1455	.1057	.1192	-.0212	-.1140	2839.
.3370	-1827.	-1878.	1644.	332.	1153.	-1473.	.0365	-.1414	.0949	.1088	-.0198	-.1127	2684.
.3380	-1290.	-1459.	1208.	31.	868.	-1656.	.0386	-.1368	.0829	.0994	-.0183	-.1109	2641.
.3390	-728.	-1027.	753.	-244.	573.	-1815.	.0405	-.1317	.0699	.0912	-.0166	-.1085	2710.
.3400	-155.	-598.	295.	-476.	276.	-1943.	.0421	-.1265	.0562	.0844	-.0147	-.1056	2852.
.3410	399.	-186.	-143.	-653.	-18.	-2027.	.0436	-.1214	.0419	.0788	-.0128	-.1020	3007.

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ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

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

SECTION	MEMBER	SEQUENCE	LOCATION	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)	
.3420	910.	202.	-539.	-769.	-307.	-2054.	.0448	-.1165	.0272	.0741	-.0110	-.0976	3128.
.3430	1350.	561.	-878.	-823.	-589.	-2023.	.0459	-.1122	.0124	.0703	-.0095	-.0922	3196.
.3440	1716.	889.	-1161.	-815.	-863.	-1935.	.0470	-.1083	-.0024	.0668	-.0082	-.0858	3206.
.3450	2033.	1182.	-1403.	-744.	-1124.	-1783.	.0480	-.1052	-.0169	.0634	-.0070	-.0784	3157.
.3460	2295.	1436.	-1622.	-614.	-1361.	-1569.	.0490	-.1028	-.0307	.0598	-.0057	-.0699	3059.
.3470	2461.	1656.	-1782.	-431.	-1564.	-1301.	.0500	-.1010	-.0436	.0562	-.0040	-.0604	2937.
.3480	2542.	1845.	-1894.	-200.	-1718.	-995.	.0510	-.0998	-.0552	.0527	-.0018	-.0504	2818.
.3490	2606.	2006.	-1990.	74.	-1808.	-660.	.0520	-.0990	-.0653	.0493	.0013	-.0400	2721.
.3500	2688.	2136.	-2084.	383.	-1825.	-307.	.0531	-.0985	-.0736	.0463	.0053	-.0296	2669.
.3510	2781.	2235.	-2159.	713.	-1764.	51.	.0542	-.0983	-.0801	.0436	.0100	-.0196	2688.
.3520	2890.	2305.	-2206.	1053.	-1627.	400.	.0554	-.0981	-.0845	.0416	.0151	-.0105	2795.
.3530	3030.	2349.	-2229.	1388.	-1425.	725.	.0565	-.0977	-.0869	.0403	.0202	-.0025	2991.
.3540	3195.	2365.	-2228.	1702.	-1176.	1009.	.0576	-.0970	-.0874	.0397	.0250	.0038	3251.
.3550	3363.	2349.	-2199.	1979.	-897.	1245.	.0584	-.0958	-.0859	.0396	.0291	.0082	3538.
.3560	3493.	2295.	-2129.	2204.	-611.	1429.	.0590	-.0942	-.0827	.0397	.0320	.0106	3810.
.3570	3520.	2202.	-1997.	2368.	-340.	1554.	.0591	-.0919	-.0778	.0399	.0335	.0110	4030.
.3580	3403.	2074.	-1795.	2467.	-100.	1607.	.0586	-.0889	-.0714	.0400	.0333	.0092	4161.
.3590	3156.	1912.	-1541.	2499.	94.	1586.	.0575	-.0852	-.0636	.0397	.0313	.0055	4182.
.3600	2796.	1716.	-1251.	2463.	238.	1498.	.0558	-.0809	-.0546	.0384	.0277	.0001	4087.
.3610	2322.	1489.	-925.	2365.	333.	1355.	.0533	-.0760	-.0447	.0360	.0226	-.0065	3878.
.3620	1754.	1239.	-574.	2215.	385.	1158.	.0503	-.0706	-.0339	.0322	.0162	-.0140	3572.
.3630	1144.	973.	-224.	2030.	410.	909.	.0467	-.0648	-.0225	.0270	.0090	-.0220	3195.
.3640	541.	695.	103.	1825.	424.	619.	.0425	-.0585	-.0106	.0206	.0017	-.0302	2787.
.3650	-30.	407.	395.	1609.	444.	302.	.0380	-.0520	.0016	.0129	-.0055	-.0381	2395.
.3660	-542.	109.	648.	1388.	487.	-27.	.0331	-.0454	.0141	.0040	-.0120	-.0456	2078.
.3670	-980.	-195.	860.	1170.	562.	-358.	.0279	-.0386	.0264	-.0057	-.0175	-.0523	1902.
.3680	-1341.	-496.	1038.	960.	670.	-686.	.0225	-.0317	.0384	-.0159	-.0221	-.0582	1917.
.3690	-1615.	-790.	1184.	759.	805.	-1000.	.0170	-.0248	.0498	-.0262	-.0257	-.0632	2106.
.3700	-1798.	-1073.	1302.	562.	955.	-1283.	.0114	-.0179	.0603	-.0365	-.0287	-.0670	2394.
.3710	-1913.	-1342.	1409.	362.	1106.	-1521.	.0058	-.0112	.0694	-.0467	-.0312	-.0695	2705.
.3720	-1993.	-1585.	1521.	161.	1237.	-1710.	.0001	-.0046	.0770	-.0564	-.0337	-.0707	2989.
.3730	-2054.	-1796.	1640.	-38.	1331.	-1851.	-.0055	.0019	.0827	-.0653	-.0362	-.0705	3220.
.3740	-2117.	-1970.	1765.	-229.	1375.	-1941.	-.0112	.0083	.0865	-.0730	-.0389	-.0691	3376.
.3750	-2213.	-2112.	1901.	-407.	1359.	-1975.	-.0170	.0146	.0882	-.0795	-.0417	-.0662	3435.
.3760	-2353.	-2222.	2042.	-564.	1280.	-1950.	-.0228	.0206	.0878	-.0848	-.0445	-.0619	3389.
.3770	-2521.	-2297.	2169.	-691.	1138.	-1873.	-.0286	.0266	.0854	-.0885	-.0470	-.0563	3247.
.3780	-2696.	-2331.	2266.	-782.	941.	-1755.	-.0343	.0325	.0810	-.0907	-.0491	-.0495	3022.
.3790	-2856.	-2327.	2317.	-831.	699.	-1597.	-.0398	.0383	.0747	-.0915	-.0505	-.0416	2728.

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DIS/ADLPIPE

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

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

.3690	-1615.	-790.	124.	759.	805.	-1000.	.0170	-.0248	.0498	-.0262	-.0257	-.0632	2106.
.3700	-1798.	-1073.	1302.	562.	955.	-1283.	.0114	-.0179	.0603	-.0365	-.0287	-.0670	2394.
.3710	-1913.	-1342.	1409.	362.	1106.	-1521.	.0058	-.0112	.0694	-.0467	-.0312	-.0695	2705.
.3720	-1993.	-1585.	1521.	161.	1237.	-1710.	.0001	-.0046	.0770	-.0564	-.0337	-.0707	2989.
.3730	-2054.	-1796.	1640.	-38.	1331.	-1851.	-.0055	.0019	.0827	-.0653	-.0362	-.0705	3220.
.3740	-2117.	-1970.	1765.	-229.	1375.	-1941.	-.0112	.0083	.0865	-.0730	-.0389	-.0691	3376.
.3750	-2213.	-2112.	1901.	-407.	1359.	-1975.	-.0170	.0146	.0882	-.0795	-.0417	-.0662	3435.
.3760	-2353.	-2222.	2042.	-564.	1280.	-1950.	-.0228	.0206	.0878	-.0848	-.0445	-.0619	3389.
.3770	-2521.	-2297.	2169.	-691.	1138.	-1873.	-.0286	.0266	.0854	-.0885	-.0470	-.0563	3247.
.3780	-2696.	-2331.	2266.	-782.	941.	-1755.	-.0343	.0325	.0810	-.0907	-.0491	-.0495	3022.
.3790	-2856.	-2327.	2317.	-831.	699.	-1597.	-.0398	.0383	.0747	-.0915	-.0505	-.0416	2728.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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

CONDITION 24

LOADS

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PRESSURE

ENGLISH UNITS

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

SECTION	13	MEMBER	1	SEQUENCE	843	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)		
.3800	-2963.	-2290.	2306.	-837.	429.	-1399.	-.0450	.0441	.0669	-.0914	-.0509	-.0324	2381.		
.3810	-2991.	-2221.	2220.	-804.	150.	-1167.	-.0497	.0499	.0578	-.0905	-.0499	-.0221	2012.		
.3820	-2927.	-2118.	2060.	-739.	-120.	-913.	-.0539	.0558	.0476	-.0891	-.0475	-.0109	1668.		
.3830	-2770.	-1978.	1827.	-654.	-367.	-650.	-.0573	.0618	.0367	-.0873	-.0435	.0012	1401.		
.3840	-2516.	-1803.	1526.	-561.	-578.	-381.	-.0600	.0681	.0254	-.0855	-.0380	.0139	1258.		
.3850	-2178.	-1597.	1169.	-474.	-743.	-110.	-.0619	.0746	.0138	-.0837	-.0309	.0271	1255.		
.3860	-1780.	-1364.	777.	-405.	-862.	155.	-.0629	.0813	.0023	-.0827	-.0225	.0407	1363.		
.3870	-1341.	-1099.	372.	-362.	-935.	408.	-.0629	.0884	-.0091	-.0818	-.0134	.0543	1528.		
.3880	-878.	-799.	-26.	-351.	-968.	638.	-.0621	.0959	-.0202	-.0813	-.0039	.0678	1711.		
.3890	-404.	-468.	-399.	-375.	-969.	844.	-.0604	.1036	-.0310	-.0809	.0054	.0809	1891.		
.3900	72.	-115.	-738.	-432.	-945.	1030.	-.0579	.1114	-.0413	-.0807	.0142	.0935	2067.		
.3910	544.	251.	-1034.	-516.	-904.	1193.	-.0548	.1194	-.0511	-.0805	.0222	.1053	2236.		
.3920	987.	630.	-1277.	-620.	-851.	1325.	-.0511	.1273	-.0603	-.0799	.0292	.1161	2391.		
.3930	1382.	1019.	-1465.	-735.	-794.	1425.	-.0472	.1352	-.0689	-.0788	.0352	.1258	2526.		
.3940	1733.	1406.	-1610.	-848.	-735.	1500.	-.0431	.1427	-.0767	-.0772	.0402	.1345	2646.		
.3950	2049.	1775.	-1724.	-957.	-679.	1557.	-.0391	.1496	-.0836	-.0753	.0443	.1422	2754.		
.3960	2321.	2115.	-1812.	-1052.	-627.	1600.	-.0354	.1558	-.0896	-.0732	.0477	.1489	2847.		
.3970	2538.	2421.	-1872.	-1131.	-584.	1628.	-.0320	.1612	-.0947	-.0709	.0503	.1545	2919.		
.3980	2706.	2685.	-1913.	-1193.	-553.	1645.	-.0291	.1656	-.0988	-.0685	.0521	.1590	2975.		
.3990	2840.	2894.	-1946.	-1239.	-534.	1661.	-.0268	.1688	-.1019	-.0662	.0532	.1625	3023.		
.4000	2954.	3034.	-1981.	-1270.	-525.	1685.	-.0251	.1708	-.1038	-.0642	.0538	.1649	3071.		

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)
.0840	2717.	3337.	-1026.	7233.	432.	6042.	-.0521	-.0156	.1140	-.1560	-.0726	-.1682	13326.

SECTION	13	MEMBER	1	SEQUENCE	234	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.	-2.	1.	-0.	-0.	.0000	-.0000	-.0000	.0000	-.0000	-.0000	1.		
.0020	-5.	-3.	-9.	4.	-2.	-3.	.0000	-.0000	-.0001	.0000	-.0001	-.0000	7.		
.0030	-48.	-4.	-9.	3.	-9.	-15.	.0001	-.0000	-.0004	.0001	-.0004	-.0001	25.		

ADLPIPE PAGE 624

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.31.

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

.0840 2717. 3337. 1026. 7233. 432. 6042. -.521 -.0156 .1140 -.1560 -.0726 -.1682 13326.

SECTION	13	MEMBER	1	SEQUENCE	234	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.	-2.	1.	-0.	-0.		.0000	-.0000	-.0000	.0000	-.0000	-.0000	1.	
.0020	-5.	-3.	-9.	4.	-2.	-3.		.0000	-.0000	-.0001	.0000	-.0001	-.0000	7.	
.0030	-48.	-4.	-9.	3.	-0.	-15.		.0001	-.0000	-.0004	.0001	-.0004	-.0001	25.	

ADLPIPE PAGE 624 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.31.
 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	13	MEMBER	1	SEQUENCE	234	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	-140.	-4.	6.	-11.	-25.	-36.		.0002	-.0001	-.0009	.0001	-.0008	-.0002	63.	
.0050	-267.	-1.	31.	-41.	-51.	-61.		.0002	-.0000	-.0017	.0001	-.0012	-.0004	126.	
.0060	-445.	2.	74.	-86.	-91.	-95.		.0003	.0001	-.0028	-.0000	-.0017	-.0007	222.	
.0070	-723.	-1.	155.	-141.	-151.	-154.		.0003	.0002	-.0045	-.0002	-.0022	-.0008	363.	
.0080	-1217.	-23.	323.	-212.	-232.	-257.		.0006	.0004	-.0071	-.0006	-.0029	-.0009	574.	
.0090	-2131.	-75.	683.	-317.	-356.	-403.		.0015	.0007	-.0110	-.0016	-.0036	-.0009	881.	
.0100	-3341.	-158.	1170.	-464.	-517.	-588.		.0033	.0012	-.0162	-.0036	-.0044	-.0008	1286.	
.0110	-4456.	-275.	1579.	-648.	-687.	-822.		.0059	.0018	-.0224	-.0072	-.0053	-.0004	1768.	
.0120	-5285.	-438.	1820.	-846.	-853.	-1105.		.0094	.0024	-.0294	-.0125	-.0062	.0006	2305.	
.0130	-5953.	-662.	1988.	-1036.	-1037.	-1403.		.0136	.0032	-.0365	-.0190	-.0067	.0026	2865.	
.0140	-6668.	-940.	2249.	-1213.	-1274.	-1684.		.0182	.0042	-.0435	-.0270	-.0058	.0056	3439.	
.0150	-7523.	-1247.	2705.	-1383.	-1584.	-1958.		.0228	.0052	-.0499	-.0369	-.0026	.0097	4057.	
.0160	-8737.	-1575.	3510.	-1547.	-1975.	-2236.		.0273	.0062	-.0558	-.0482	.0039	.0148	4747.	
.0170	-9832.	-1941.	4399.	-1695.	-2360.	-2523.		.0317	.0071	-.0616	-.0594	.0136	.0206	5436.	
.0180	-9668.	-2346.	4685.	-1817.	-2575.	-2839.		.0362	.0082	-.0675	-.0688	.0248	.0266	5991.	
.0190	-7910.	-2787.	4051.	-1907.	-2526.	-3194.		.0416	.0095	-.0740	-.0753	.0351	.0319	6351.	
.0200	-4691.	-3293.	2395.	-1928.	-2094.	-3570.		.0493	.0109	-.0824	-.0787	.0410	.0352	6450.	
.0210	-2104.	-3864.	785.	-1849.	-1410.	-3881.		.0606	.0123	-.0937	-.0809	.0422	.0350	6391.	
.0220	-1136.	-4287.	-165.	-1671.	-801.	-4040.		.0726	.0131	-.1040	-.0852	.0407	.0309	6278.	
.0230	64.	-4453.	-1276.	-1415.	-225.	-4122.		.0830	.0121	-.1098	-.0909	.0369	.0241	6164.	
.0240	-980.	-4530.	-946.	-1103.	62.	-3983.		.0903	.0104	-.1108	-.0917	.0353	.0162	5638.	
.0250	-2239.	-4669.	-225.	-755.	292.	-3551.		.0943	.0089	-.1081	-.0820	.0357	.0076	5145.	
.0260	3170.	-4690.	-3080.	-469.	1139.	-3084.		.0941	.0060	-.1009	-.0642	.0316	-.0023	4690.	
.0270	10639.	-4328.	-7123.	-448.	2060.	-2518.		.0875	.0015	-.0876	-.0449	.0247	-.0148	4639.	
.0280	10504.	-3792.	-6767.	-741.	2386.	-1513.		.0778	-.0031	-.0733	-.0271	.0241	-.0307	4125.	
.0290	6176.	-3282.	-3716.	-1036.	2681.	-301.		.0689	-.0089	-.0624	-.0115	.0288	-.0486	4082.	
.0300	2461.	-2535.	-1172.	-993.	3032.	419.		.0577	-.0196	-.0510	.0024	.0297	-.0653	4545.	
.0310	384.	-1590.	185.	-787.	3392.	752.		.0434	-.0331	-.0383	.0187	.0261	-.0808	5032.	
.0320	3101.	-613.	-1016.	-981.	4111.	1383.		.0282	-.0434	-.0238	.0416	.0189	-.0975	6281.	
.0330	4022.	449.	-1021.	-1752.	4348.	2607.		.0121	-.0483	-.0063	.0672	.0147	-.1157	7576.	
.0340	-950.	1732.	2247.	-2412.	3516.	3837.		-.0060	-.0532	.0148	.0839	.0154	-.1307	8102.	
.0350	-3945.	3080.	4338.	-2201.	2577.	4315.		-.0248	-.0638	.0385	.0868	.0138	-.1369	7749.	
.0360	-713.	4165.	2841.	-1319.	2225.	4127.		-.0421	-.0767	.0624	.0845	.0054	-.1338	6879.	
.0370	1129.	4845.	1832.	-535.	1734.	4226.		-.0577	-.0836	.0854	.0872	-.0057	-.1259	6497.	
.0380	-1525.	5303.	3040.	-25.	761.	5162.		-.0730	-.0825	.1074	.0899	-.0158	-.1175	7370.	
.0390	-1103.	5882.	2507.	654.	258.	5991.		-.0873	-.0817	.1271	.0778	-.0280	-.1072	8520.	
.0400	4043.	6554.	-606.	1731.	718.	5521.		-.0966	-.0874	.1406	.0502	-.0448	-.0915	8236.	
.0410	5477.	6915.	-2030.	3018.	1060.	4699.		-.1022	-.0923	.1483	.0277	-.0631	-.0725	8030.	

ADLPIPE PAGE 625 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.31.
 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

.0310	384.	-1590.	185.	-787.	3392.	752.	0434	-.0331	-.0303	.0187	.0261	-.0888	5032.
.0320	3101.	-613.	-1016.	-981.	4111.	1383.	0282	-.0434	-.0238	.0416	.0189	-.0975	6281.
.0330	4022.	449.	-1021.	-1752.	4348.	2607.	.0121	-.0483	-.0063	.0672	.0147	-.1157	7576.
.0340	-950.	1732.	2247.	-2412.	3516.	3837.	-.0060	-.0532	.0145	.0839	.0154	-.1307	8102.
.0350	-3945.	3080.	4737.	-2201.	2577.	4315.	-.0248	-.0638	.0325	.0868	.0138	-.1369	7749.
.0360	-713.	4165.	2841.	-1319.	2225.	4127.	-.0421	-.0767	.0624	.0845	.0054	-.1338	6279.
.0370	1129.	4845.	1832.	-135.	1734.	4226.	-.0577	-.0836	.0054	.0872	-.0057	-.1259	6497.
.0380	-1525.	5303.	3040.	-25.	761.	5162.	-.0730	-.0825	.1074	.0899	-.0158	-.1175	7370.
.0390	-1103.	5882.	2507.	654.	258.	5991.	-.0873	-.0817	.1271	.0778	-.0280	-.1072	8520.
.0400	4043.	6554.	-600.	1731.	718.	5521.	-.0966	-.0874	.1406	.0502	-.0448	-.0915	8236.
.0410	5477.	6915.	-2030.	3018.	1060.	4699.	-.1022	-.0923	.1483	.0277	-.0531	-.0725	8030.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.31.

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	13	MEMBER	1	SEQUENCE	234	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	5056.	6677.	-2553.	4137.	1303.	4995.	-.1047	-.0878	.1514	.0225	-.0806	-.0562	9344.		
.0430	8761.	6230.	-5341.	4665.	2224.	5642.	-.1018	-.0794	.1491	.0201	-.0992	-.0435	10808.		
.0440	11002.	6210.	-7176.	4497.	3007.	5273.	-.0945	-.0760	.1446	.0039	-.1138	-.0315	10671.		
.0450	9551.	6346.	-6974.	4095.	2942.	4569.	-.0865	-.0748	.1417	-.0163	-.1222	-.0192	9611.		
.0460	9744.	5992.	-7651.	3826.	2475.	4637.	-.0786	-.0689	.1415	-.0218	-.1275	-.0064	9183.		
.0470	11538.	5209.	-8854.	3437.	1909.	4805.	-.0682	-.0603	.1423	-.0131	-.1286	.0081	8769.		
.0480	9949.	4455.	-7833.	2750.	839.	4350.	-.0553	-.0527	.1434	-.0023	-.1225	.0237	7366.		
.0490	6717.	3793.	-5944.	2176.	-636.	3962.	-.0416	-.0451	.1443	.0042	-.1128	.0363	6447.		
.0500	5845.	3131.	-5422.	2016.	-1881.	3827.	-.0268	-.0376	.1425	.0049	-.1029	.0446	6662.		
.0510	4657.	2498.	-4646.	2037.	-2784.	3071.	-.0089	-.0329	.1357	.0038	-.0919	.0513	6524.		
.0520	1247.	1713.	-2535.	2095.	-3520.	1892.	.0111	-.0284	.1240	.0123	-.0786	.0569	6373.		
.0530	-642.	580.	-1138.	2358.	-3949.	1325.	.0301	-.0202	.1095	.0360	-.0533	.0585	6761.		
.0540	-408.	-532.	-680.	2697.	-4081.	923.	.0470	-.0131	.0934	.0630	-.0446	.0563	7031.		
.0550	-1034.	-1183.	526.	2660.	-4175.	-388.	.0618	-.0129	.0766	.0828	-.0210	.0519	7013.		
.0560	-1287.	-1682.	1625.	2104.	-4204.	-1924.	.0740	-.0150	.0596	.1068	.0048	.0451	7175.		
.0570	518.	-2558.	1376.	1234.	-4092.	-2525.	.0832	-.0128	.0427	.1486	.0282	.0349	7012.		
.0580	1210.	-3636.	1346.	163.	-4027.	-2862.	.0907	-.0104	.0244	.1996	.0483	.0237	6982.		
.0590	-479.	-4419.	2272.	-1075.	-4000.	-4001.	.0977	-.0147	.0038	.2409	.0553	.0133	8134.		
.0600	-1422.	-4858.	2524.	-2351.	-3787.	-5341.	.1036	-.0229	-.0182	.2688	.0784	.0015	9827.		
.0610	-1489.	-5190.	2147.	-3627.	-3427.	-5991.	.1075	-.0289	-.0411	.2908	.0889	-.0131	11013.		
.0620	-3587.	-5462.	2838.	-4904.	-3099.	-6307.	.1102	-.0327	-.0648	.3096	.0984	-.0270	12104.		
.0630	-6195.	-5629.	3846.	-5898.	-2630.	-6773.	.1114	-.0370	-.0885	.3212	.1065	-.0364	13218.		
.0640	-6628.	-5655.	3778.	-6232.	-1950.	-7104.	.1091	-.0422	-.1100	.3202	.1131	-.0403	13630.		
.0650	-7123.	-5421.	3975.	-6018.	-1394.	-7179.	.1020	-.0479	-.1277	.3026	.1212	-.0391	13377.		
.0660	-9220.	-4929.	5288.	-5688.	-989.	-7236.	.0914	-.0533	-.1420	.2711	.1308	-.0329	13075.		
.0670	-9656.	-4476.	5801.	-5341.	-297.	-7065.	.0788	-.0558	-.1538	.2352	.1378	-.0222	12517.		
.0680	-7600.	-4275.	4875.	-4695.	727.	-6388.	.0647	-.0547	-.1638	.1998	.1400	-.0082	11244.		
.0690	-6750.	-4133.	4499.	-3627.	1696.	-5668.	.0501	-.0538	-.1722	.1594	.1392	.0085	9802.		
.0700	-7760.	-3811.	5137.	-2369.	2577.	-5382.	.0364	-.0558	-.1791	.1103	.1364	.0262	9069.		
.0710	-7851.	-3378.	5268.	-1222.	3518.	-5075.	.0236	-.0570	-.1830	.0613	.1304	.0413	8891.		
.0720	-6562.	-2972.	4522.	-341.	4311.	-4133.	.0104	-.0533	-.1815	.0242	.1206	.0515	8450.		
.0730	-4716.	-2554.	3387.	298.	4783.	-2808.	-.0033	-.0460	-.1734	.0002	.1080	.0575	7845.		
.0740	-2083.	-2038.	1918.	880.	5024.	-1673.	-.0162	-.0390	-.1591	-.0174	.0940	.0617	7582.		
.0750	-16.	-1461.	870.	1605.	4894.	-724.	-.0278	-.0337	-.1391	-.0329	.0801	.0649	7346.		
.0760	-80.	-908.	952.	2482.	4229.	332.	-.0386	-.0284	-.1140	-.0458	.0564	.0668	6942.		
.0770	-202.	-410.	967.	3336.	3398.	1473.	-.0478	-.0224	-.0853	-.0554	.0506	.0667	7041.		
.0780	1713.	31.	-218.	4074.	2816.	2527.	-.0540	-.0160	-.0551	-.0618	.0312	.0646	7854.		
.0790	3212.	419.	-1287.	4835.	2296.	3528.	-.0574	-.0099	-.0248	-.0670	.0100	.0604	9055.		

ADLPIPE PAGE 626

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.31.

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

.0690	-6750.	-4133.	4499.	-3627.	1696.	-5668.	.001	-.0538	-.1722	.1594	.1392	-.0085	9802.
.0700	-7760.	-3811.	5137.	-2369.	2577.	-5382.	.0364	-.0558	-.1791	.1103	.1364	.0262	9069.
.0710	-7851.	-3378.	5260.	-1222.	3518.	-5075.	.0236	-.0570	-.1830	.0613	.1304	.0413	8891.
.0720	-6562.	-2972.	4522.	-341.	4311.	-4133.	.0104	-.0533	-.1815	.0242	.1206	.0515	8450.
.0730	-4716.	-2554.	3307.	298.	4783.	-2808.	-.0072	-.0460	-.1724	.0002	.1080	.0575	7845.
.0740	-2087.	-2078.	1918.	880.	5024.	-1673.	-.0162	-.0390	-.1591	-.0174	.0940	.0617	7582.
.0750	-16.	-1461.	870.	1605.	4894.	-724.	-.0278	-.0337	-.1391	-.0329	.0801	.0649	7346.
.0760	-80.	-908.	952.	2482.	4229.	332.	-.0386	-.0284	-.1140	-.0458	.0564	.0668	6942.
.0770	-262.	-410.	967.	3336.	3398.	1473.	-.0478	-.0224	-.0853	-.0554	.0506	.0667	7041.
.0780	1713.	31.	-216.	4074.	2816.	2527.	-.0540	-.0160	-.0551	-.0618	.0312	.0646	7854.
.0790	3212.	419.	-1287.	4875.	2296.	3528.	-.0574	-.0099	-.0248	-.0670	.0100	.0604	9055.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.31.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	13	MEMBER	1	SEQUENCE	234	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	1941.	822.	-914.	5797.	1582.	4501.		-.0590	-.0056	.0047	-.0741	-.0099	.0540	10604.	
.0810	350.	1352.	-253.	6857.	972.	5227.		-.0589	-.0047	.0329	-.0842	-.0275	.0449	12255.	
.0820	774.	2031.	-462.	7647.	723.	5651.		-.0574	-.0064	.0598	-.0927	-.0428	.0324	13469.	
.0830	1891.	2730.	-878.	7870.	611.	6168.		-.0554	-.0076	.0857	-.0920	-.0545	.0157	14150.	
.0840	2717.	3337.	-1026.	7522.	483.	6975.		-.0533	-.0078	.1100	-.0811	-.0622	-.0051	14506.	
.0850	3892.	3906.	-1286.	6765.	467.	7574.		-.0500	-.0107	.1315	-.0673	-.0574	-.0275	14359.	
.0860	4720.	4495.	-1460.	5699.	511.	7510.		-.0448	-.0191	.1492	-.0553	-.0722	-.0496	13336.	
.0870	4316.	4951.	-1437.	4314.	475.	7116.		-.0380	-.0299	.1632	-.0409	-.0789	-.0713	11774.	
.0880	4654.	5054.	-2028.	2562.	478.	6881.		-.0295	-.0391	.1731	-.0188	-.0891	-.0936	10393.	
.0890	5533.	5006.	-3294.	527.	583.	6622.		-.0188	-.0467	.1790	.0077	-.1019	-.1160	9419.	
.0900	5463.	4892.	-4142.	-1462.	550.	5937.		-.0065	-.0557	.1812	.0306	-.1142	-.1365	8672.	
.0910	4345.	4784.	-4397.	-3029.	230.	4905.		.0059	-.0661	.1813	.0473	-.1241	-.1537	8149.	
.0920	3849.	4601.	-4845.	-4112.	-262.	3792.		.0174	-.0757	.1801	.0613	-.1311	-.1669	7910.	
.0930	4188.	4345.	-5498.	-4949.	-864.	2672.		.0277	-.0825	.1780	.0755	-.1347	-.1757	8037.	
.0940	4602.	4052.	-5915.	-5665.	-1611.	1625.		.0363	-.0857	.1749	.0886	-.1344	-.1800	8630.	
.0950	5108.	3729.	-6138.	-6115.	-2448.	726.		.0432	-.0863	.1699	.0961	-.1304	-.1796	9360.	
.0960	5302.	3404.	-5996.	-6167.	-3304.	-252.		.0490	-.0864	.1618	.0933	-.1236	-.1734	9889.	
.0970	4347.	3089.	-5068.	-5925.	-4156.	-1480.		.0539	-.0868	.1498	.0811	-.1145	-.1610	10434.	
.0980	3020.	2685.	-3797.	-5603.	-4893.	-2597.		.0576	-.0847	.1343	.0664	-.1037	-.1443	11129.	
.0990	2499.	2136.	-2851.	-5353.	-5415.	-3205.		.0594	-.0776	.1162	.0540	-.0919	-.1253	11669.	
.1000	2132.	1575.	-1915.	-5191.	-5789.	-3511.		.0589	-.0672	.0961	.0409	-.0787	-.1045	12051.	
.1010	1188.	1136.	-640.	-5008.	-6062.	-3870.		.0561	-.0563	.0746	.0223	-.0637	-.0817	12379.	
.1020	560.	738.	450.	-4687.	-6117.	-4162.		.0512	-.0448	.0519	-.0004	-.0476	-.0573	12371.	
.1030	675.	207.	1075.	-4249.	-5853.	-4124.		.0448	-.0304	.0281	-.0221	-.0312	-.0319	11760.	
.1040	603.	-507.	1653.	-3776.	-5292.	-3821.		.0377	-.0131	.0029	-.0413	-.0151	-.0058	10651.	
.1050	314.	-1339.	2115.	-3214.	-4401.	-3453.		.0310	.0054	-.0238	-.0617	-.0006	.0210	9112.	
.1060	542.	-2206.	2013.	-2406.	-3145.	-3084.		.0251	.0233	-.0519	-.0873	.0112	.0478	7090.	
.1070	368.	-3047.	1841.	-1339.	-1715.	-2744.		.0201	.0399	-.0802	-.1175	.0207	.0738	4946.	
.1080	-465.	-3913.	1737.	-155.	-157.	-2480.		.0170	.0556	-.1090	-.1467	.0269	.0982	3516.	
.1090	-1091.	-4922.	1152.	1041.	1640.	-2228.		.0182	.0708	-.1396	-.1695	.0271	.1188	4175.	
.1100	-3776.	-5657.	1570.	2127.	2852.	-1601.		.0178	.0858	-.1651	-.1883	.0285	.1327	5511.	
.1110	-4891.	-5944.	1451.	2939.	3816.	-1043.		.0159	.0975	-.1843	-.2068	.0334	.1399	6961.	
.1120	-4158.	-5906.	791.	3389.	4640.	-887.		.0136	.1049	-.1978	-.2202	.0417	.1422	8212.	
.1130	-4700.	-5827.	1077.	3586.	4961.	-641.		.0104	.1112	-.2060	-.2184	.0535	.1392	8693.	
.1140	-6332.	-5800.	2043.	3649.	4876.	-18.		.0064	.1174	-.2103	-.2019	.0569	.1298	8602.	
.1150	-7456.	-5576.	2859.	3495.	4766.	354.		.0034	.1193	-.2129	-.1840	.0800	.1148	8362.	
.1160	-8015.	-4981.	4003.	3026.	4600.	70.		.0012	.1148	-.2140	-.1717	.0920	.0958	7777.	
.1170	-10199.	-4282.	4960.	2323.	4423.	-263.		-.0012	.1083	-.2131	-.1575	.1020	.0732	7067.	

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.1070	368.	-1047.	1841.	-1339.	-1710.	-2744.	101	.0399	-.0802	-.1175	.0207	.0738	4946.
.1080	-465.	-3913.	1737.	-155.	-157.	-2480.	.170	.0556	-.1090	-.1467	.0269	.0982	3516.
.1090	-1091.	-4922.	1152.	1041.	1640.	-2228.	.0182	.0708	-.1396	-.1695	.0271	.1188	4175.
.1100	-3776.	-5657.	1570.	2127.	2852.	-1601.	.0178	.0858	-.1651	-.1883	.0285	.1327	5511.
.1110	-4891.	-5944.	1451.	2979.	3816.	-1042.	.0159	.0975	-.1843	-.2068	.0334	.1399	6961.
.1120	-4158.	-5906.	791.	3389.	4640.	-287.	.0136	.1049	-.1978	-.2202	.0417	.1422	8212.
.1130	-4700.	-5827.	1077.	3586.	4961.	-641.	.0104	.1112	-.2060	-.2184	.0535	.1392	8693.
.1140	-6332.	-5800.	2043.	3649.	4876.	-18.	.0064	.1174	-.2103	-.2019	.0669	.1298	8602.
.1150	-7456.	-5576.	2859.	3495.	4766.	354.	.0034	.1193	-.2129	-.1840	.0800	.1148	8362.
.1160	-9015.	-4981.	4003.	3026.	4600.	70.	.0012	.1148	-.2140	-.1717	.0920	.0958	7777.
.1170	-10199.	-4282.	4960.	2323.	4423.	-263.	-.0012	.1083	-.2131	-.1575	.1020	.0732	7067.

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

SECTION	13	MEMBER	1	SEQUENCE	234	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ									
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1180	-12156.	-3666.	6335.	1550.	3936.	-114.	-.0067	.1034	-.2076	-.1337	.1109	.0490	5978.		
.1190	-10910.	-3188.	6280.	825.	3787.	-55.	-.0134	.0975	-.1987	-.1045	.1187	.0271	5475.		
.1200	-8556.	-2723.	5927.	254.	3821.	-543.	-.0204	.0880	-.1871	-.0777	.1265	.0095	5463.		
.1210	-9448.	-2234.	7205.	-53.	3427.	-1089.	-.0286	.0770	-.1729	-.0559	.1329	-.0056	5079.		
.1220	-7990.	-1756.	7066.	-219.	3284.	-1264.	-.0364	.0671	-.1571	-.0403	.1347	-.0210	4980.		
.1230	-5718.	-1133.	6278.	-514.	3259.	-1486.	-.0432	.0574	-.1394	-.0319	.1307	-.0355	5110.		
.1240	-3199.	-452.	5135.	-952.	3292.	-1895.	-.0482	.0482	-.1198	-.0267	.1207	-.0472	5531.		
.1250	-358.	65.	3485.	-1245.	3239.	-1938.	-.0521	.0417	-.0981	-.0196	.1045	-.0560	5614.		
.1260	670.	505.	2434.	-1272.	2788.	-1647.	-.0553	.0371	-.0738	-.0146	.0830	-.0617	4913.		
.1270	2914.	1000.	643.	-1279.	2552.	-1722.	-.0543	.0308	-.0501	-.0195	.0568	-.0639	4709.		
.1280	3248.	1580.	-274.	-1499.	2085.	-1980.	-.0499	.0245	-.0264	-.0324	.0273	-.0637	4580.		
.1290	3599.	2027.	-1382.	-1904.	1420.	-1602.	-.0439	.0230	-.0019	-.0461	-.0047	-.0631	4046.		
.1300	5184.	2310.	-3197.	-2343.	730.	-814.	-.0365	.0248	.0235	-.0605	-.0378	-.0606	3652.		
.1310	4268.	2622.	-3557.	-2641.	-378.	-435.	-.0292	.0251	.0506	-.0793	-.0681	-.0525	3818.		
.1320	4444.	2847.	-4213.	-2641.	-1456.	-314.	-.0219	.0248	.0783	-.0998	-.0950	-.0399	4283.		
.1330	4816.	2909.	-4819.	-2388.	-2666.	224.	-.0162	.0277	.1065	-.1166	-.1183	-.0263	5065.		
.1340	5361.	2898.	-5380.	-2130.	-3763.	1005.	-.0110	.0335	.1326	-.1314	-.1381	-.0138	6270.		
.1350	5708.	2927.	-5705.	-1924.	-4555.	1496.	-.0051	.0393	.1543	-.1481	-.1545	-.0024	7296.		
.1360	4639.	2957.	-5300.	-1498.	-5278.	1845.	-.0004	.0445	.1719	-.1644	-.1679	.0082	8176.		
.1370	5524.	2867.	-5927.	-730.	-5556.	2302.	.0030	.0499	.1848	-.1762	-.1793	.0174	8558.		
.1380	4885.	2820.	-5707.	95.	-5778.	2612.	.0041	.0546	.1938	-.1821	-.1866	.0252	8957.		
.1390	4025.	2876.	-5212.	657.	-5785.	2742.	.0028	.0590	.1990	-.1812	-.1886	.0307	9090.		
.1400	5251.	2978.	-5640.	946.	-5458.	3110.	-.0015	.0647	.2010	-.1718	-.1849	.0321	8973.		
.1410	5816.	3185.	-5579.	1115.	-5195.	3661.	-.0097	.0707	.2002	-.1561	-.1748	.0302	9114.		
.1420	6843.	3479.	-5526.	1234.	-4648.	3860.	-.0191	.0741	.1946	-.1377	-.1587	.0267	8709.		
.1430	6423.	3745.	-4622.	1326.	-4011.	3710.	-.0293	.0754	.1840	-.1158	-.1385	.0231	7942.		
.1440	6206.	3800.	-3923.	1394.	-3177.	3705.	-.0398	.0776	.1684	-.0880	-.1166	.0185	7169.		
.1450	6508.	3710.	-3663.	1378.	-2145.	3819.	-.0502	.0807	.1482	-.0588	-.0940	.0129	6486.		
.1460	5162.	3649.	-2649.	1251.	-1179.	3603.	-.0601	.0821	.1242	-.0350	-.0700	.0081	5639.		
.1470	5135.	3458.	-2285.	1152.	71.	3059.	-.0679	.0818	.0965	-.0168	-.0451	.0057	4618.		
.1480	3931.	3011.	-1246.	1253.	1096.	2567.	-.0753	.0818	.0676	.0006	-.0182	.0069	4321.		
.1490	2336.	2342.	103.	1531.	1926.	2098.	-.0818	.0823	.0385	.0176	.0106	.0117	4567.		
.1500	1944.	1624.	916.	1806.	2761.	1401.	-.0863	.0819	.0095	.0305	.0395	.0197	5063.		
.1510	869.	976.	2014.	1983.	3286.	621.	-.0897	.0812	-.0178	.0382	.0670	.0294	5492.		
.1520	730.	327.	2452.	2094.	3712.	14.	-.0908	.0813	-.0440	.0423	.0908	.0394	6020.		
.1530	-572.	-256.	3251.	2181.	3824.	-538.	-.0898	.0816	-.0688	.0434	.1097	.0493	6264.		
.1540	-1454.	-773.	3594.	2229.	3941.	-1266.	-.0852	.0809	-.0930	.0419	.1226	.0592	6641.		
.1550	-1938.	-1277.	3485.	2215.	4068.	-2017.	-.0774	.0802	-.1164	.0393	.1296	.0684	7136.		

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INTERNAL FORCES IN THE PIPING
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.1440	6206.	3800.	13.	1394.	-2177.	3705.	-.0398	.0776	.1684	-.0880	-.1166	.0185	7169.
.1450	6508.	3710.	-2663.	1378.	-2145.	3819.	-.0502	.0807	.1482	-.0588	-.0940	.0129	6486.
.1460	5162.	3649.	-2649.	1251.	-1179.	3603.	-.0601	.0821	.1242	-.0350	-.0700	.0081	5639.
.1470	5135.	3458.	-2285.	1152.	71.	3059.	-.0679	.0818	.0965	-.0168	-.0451	.0057	4618.
.1480	3931.	3011.	-1246.	1253.	1096.	2567.	-.0752	.0810	.0676	.0006	-.0182	.0069	4321.
.1490	2336.	2342.	103.	1531.	1926.	2098.	-.0818	.0823	.0385	.0176	.0106	.0117	4567.
.1500	1944.	1624.	916.	1806.	2761.	1401.	-.0863	.0819	.0095	.0305	.0395	.0197	5063.
.1510	869.	976.	2014.	1983.	3286.	621.	-.0897	.0812	-.0178	.0382	.0670	.0294	5492.
.1520	730.	327.	2452.	2094.	3712.	14.	-.0908	.0813	-.0440	.0423	.0908	.0394	6020.
.1530	-572.	-256.	2251.	2181.	3824.	-538.	-.0898	.0816	-.0688	.0434	.1097	.0493	6264.
.1540	-1454.	-773.	3594.	2229.	3941.	-1266.	-.0852	.0809	-.0930	.0419	.1226	.0592	6641.
.1550	-1638.	-1277.	3485.	2215.	4068.	-2017.	-.0774	.0802	-.1164	.0393	.1296	.0684	7136.

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INTERNAL FORCES IN THE PIPING
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SECTION	13	MEMBER	1	SEQUENCE	234	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)		
.1560	-4507.	-1722.	4250.	2127.	3786.	-2542.	-.0686	.0804	-.1369	.0366	.1328	.0762	7107.		
.1570	-5167.	-2088.	4008.	1922.	3629.	-2983.	-.0581	.0806	-.1547	.0321	.1327	.0825	7170.		
.1580	-5706.	-2307.	3767.	1588.	3366.	-3502.	-.0472	.0803	-.1685	.0258	.1309	.0884	7218.		
.1590	-7350.	-2492.	4144.	1233.	2786.	-3889.	-.0379	.0804	-.1772	.0211	.1280	.0949	6978.		
.1600	-6914.	-2800.	3520.	972.	2315.	-3998.	-.0296	.0818	-.1814	.0198	.1236	.1023	6669.		
.1610	-5357.	-3160.	2482.	785.	1992.	-4094.	-.0218	.0828	-.1825	.0182	.1188	.1108	6525.		
.1620	-6455.	-3466.	2966.	668.	1440.	-4291.	-.0148	.0828	-.1809	.0135	.1145	.1196	6462.		
.1630	-6116.	-3836.	2826.	697.	1173.	-4338.	-.0077	.0826	-.1778	.0070	.1095	.1276	6423.		
.1640	-5169.	-4241.	2472.	855.	1055.	-4236.	-.0013	.0823	-.1726	.0002	.1039	.1343	6283.		
.1650	-5757.	-4554.	3036.	1034.	802.	-4206.	.0038	.0808	-.1645	-.0058	.0987	.1399	6221.		
.1660	-4790.	-4802.	2912.	1200.	748.	-4132.	.0082	.0786	-.1538	-.0084	.0932	.1432	6169.		
.1670	-3893.	-4940.	2860.	1344.	575.	-3789.	.0106	.0765	-.1393	-.0063	.0877	.1430	5737.		
.1680	-2887.	-4882.	2806.	1367.	347.	-3348.	.0118	.0734	-.1218	-.0022	.0828	.1388	5132.		
.1690	-3017.	-4530.	3358.	1219.	-67.	-3005.	.0121	.0682	-.1015	.0025	.0783	.1307	4582.		
.1700	-2400.	-3990.	3435.	977.	-439.	-2601.	.0121	.0619	-.0794	.0104	.0721	.1183	3973.		
.1710	420.	-3420.	2219.	682.	-504.	-2027.	.0132	.0555	-.0572	.0230	.0632	.1020	3104.		
.1720	-151.	-2737.	2514.	333.	-920.	-1459.	.0143	.0481	-.0345	.0375	.0525	.0831	2481.		
.1730	-492.	-1966.	2431.	-3.	-1218.	-1022.	.0164	.0389	-.0126	.0501	.0388	.0624	2245.		
.1740	423.	-1126.	1420.	-246.	-1349.	-646.	.0190	.0282	.0088	.0602	.0218	.0403	2142.		
.1750	436.	-265.	662.	-436.	-1605.	-277.	.0208	.0172	.0302	.0698	.0033	.0181	2381.		
.1760	938.	491.	-424.	-622.	-1763.	100.	.0223	.0066	.0510	.0801	-.0155	-.0031	2644.		
.1770	718.	1146.	-1143.	-726.	-2029.	499.	.0222	-.0037	.0716	.0906	-.0330	-.0223	3124.		
.1780	1745.	1706.	-2408.	-668.	-2127.	830.	.0209	-.0144	.0909	.0984	-.0483	-.0391	3360.		
.1790	1894.	2241.	-3075.	-491.	-2285.	1011.	.0177	-.0260	.1088	.1020	-.0504	-.0528	3597.		
.1800	1359.	2717.	-3240.	-298.	-2441.	1155.	.0128	-.0374	.1246	.1034	-.0697	-.0640	3838.		
.1810	3118.	3048.	-4422.	-156.	-2168.	1400.	.0077	-.0472	.1368	.1048	-.0772	-.0732	3652.		
.1820	3440.	3341.	-4706.	-58.	-1942.	1703.	.0004	-.0560	.1460	.1056	-.0816	-.0805	3649.		
.1830	3557.	3628.	-4694.	57.	-1593.	1942.	-.0071	-.0646	.1514	.1035	-.0830	-.0859	3549.		
.1840	4086.	3923.	-4699.	229.	-1100.	2104.	-.0151	-.0732	.1536	.0986	-.0818	-.0894	3370.		
.1850	4405.	4232.	-4394.	394.	-605.	2260.	-.0235	-.0810	.1535	.0931	-.0779	-.0916	3352.		
.1860	5242.	4525.	-4173.	458.	-49.	2500.	-.0316	-.0867	.1513	.0892	-.0715	-.0931	3591.		
.1870	5117.	4818.	-3402.	449.	288.	2866.	-.0399	-.0901	.1484	.0870	-.0635	-.0941	4118.		
.1880	6145.	5066.	-3259.	485.	665.	3236.	-.0473	-.0920	.1444	.0847	-.0557	-.0939	4716.		
.1890	6759.	5286.	-2997.	632.	909.	3460.	-.0531	-.0933	.1396	.0807	-.0485	-.0920	5131.		
.1900	5950.	5436.	-2150.	868.	920.	3595.	-.0571	-.0933	.1336	.0757	-.0425	-.0885	5382.		
.1910	6142.	5389.	-2013.	1142.	1040.	3782.	-.0580	-.0911	.1258	.0713	-.0390	-.0838	5771.		
.1920	5889.	5154.	-1865.	1432.	1094.	3977.	-.0561	-.0869	.1164	.0672	-.0377	-.0776	6167.		
.1930	5140.	4772.	-1623.	1750.	1097.	4027.	-.0513	-.0821	.1053	.0610	-.0377	-.0695	6393.		

ADLPIPE PAGE 629 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.32.

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

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

.1830	3557.	7628.	-4694.	57.	-1593.	1942.	-.071	-.0646	.1514	.1035	-.0830	-.0859	3549.
.1840	4086.	7923.	-4699.	229.	-1700.	2104.	-.151	-.0732	.1536	.0986	-.0818	-.0894	3370.
.1850	4405.	4232.	-4394.	394.	-605.	2280.	-.0235	-.0810	.1535	.0931	-.0779	-.0916	3352.
.1860	5242.	4525.	-4173.	457.	-49.	2500.	-.0316	-.0867	.1513	.0892	-.0715	-.0931	3591.
.1870	5117.	4818.	-3402.	449.	288.	2866.	-.0399	-.0901	.1484	.0870	-.0635	-.0941	4118.
.1880	6145.	5066.	-3259.	485.	665.	3236.	-.0473	-.0920	.1444	.0847	-.0557	-.0939	4716.
.1890	6759.	5286.	-2997.	632.	909.	3460.	-.0531	-.0933	.1396	.0807	-.0485	-.0920	5131.
.1900	5950.	5436.	-2150.	868.	920.	3595.	-.0571	-.0933	.1336	.0757	-.0425	-.0885	5382.
.1910	6142.	5389.	-2013.	1142.	1040.	3782.	-.0580	-.0911	.1258	.0713	-.0390	-.0838	5771.
.1920	5889.	5154.	-1865.	1432.	1094.	3977.	-.0561	-.0869	.1164	.0672	-.0377	-.0776	6167.
.1930	5140.	4772.	-1623.	1750.	1097.	4027.	-.0513	-.0821	.1053	.0610	-.0377	-.0695	6393.

ADLPIPE PAGE 629 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.32.

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	13	MEMBER	1	SEQUENCE	234	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	4533.	4255.	-1546.	2110.	1111.	3927.	-.0440	-.0773	.0927	.0521	-.0380	-.0595	6490.	
.1950	3781.	3591.	-1426.	2458.	1074.	3763.	-.0348	-.0722	.0792	.0427	-.0378	-.0476	6527.	
.1960	2592.	2783.	-1082.	2699.	940.	3575.	-.0243	-.0665	.0652	.0351	-.0361	-.0344	6465.	
.1970	1697.	1881.	-875.	2771.	792.	3359.	-.0131	-.0605	.0510	.0295	-.0331	-.0207	6251.	
.1980	1367.	964.	-922.	2674.	670.	3087.	-.0014	-.0549	.0365	.0249	-.0286	-.0075	5846.	
.1990	721.	88.	-738.	2442.	508.	2725.	.0105	-.0503	.0216	.0207	-.0220	.0045	5219.	
.2000	-586.	-749.	-146.	2118.	311.	2272.	.0223	-.0468	.0060	.0178	-.0136	.0149	4410.	
.2010	-1921.	-1555.	487.	1735.	175.	1757.	.0339	-.0443	-.0102	.0177	-.0044	.0231	3497.	
.2020	-3055.	-2291.	1014.	1308.	112.	1194.	.0448	-.0427	-.0268	.0210	.0050	.0287	2506.	
.2030	-4181.	-2896.	1550.	845.	72.	580.	.0544	-.0421	-.0431	.0270	.0148	.0313	1451.	
.2040	-5113.	-3353.	2043.	361.	63.	-72.	.0622	-.0426	-.0585	.0350	.0252	.0310	528.	
.2050	-5768.	-3678.	2486.	-112.	84.	-755.	.0681	-.0443	-.0727	.0450	.0365	.0282	1084.	
.2060	-6296.	-3897.	2959.	-539.	100.	-1465.	.0719	-.0470	-.0851	.0578	.0486	.0235	2210.	
.2070	-6464.	-4039.	3320.	-909.	128.	-2182.	.0735	-.0504	-.0956	.0737	.0607	.0172	3343.	
.2080	-5993.	-4117.	3395.	-1256.	217.	-2872.	.0735	-.0543	-.1041	.0917	.0723	.0096	4439.	
.2090	-5318.	-4110.	3378.	-1623.	331.	-3526.	.0723	-.0586	-.1107	.1097	.0826	.0007	5502.	
.2100	-4888.	-4004.	3453.	-2011.	411.	-4128.	.0702	-.0630	-.1154	.1263	.0912	-.0092	6512.	
.2110	-4306.	-3831.	3373.	-2386.	490.	-4651.	.0676	-.0675	-.1179	.1410	.0972	-.0194	7416.	
.2120	-3402.	-3629.	3048.	-2729.	576.	-5071.	.0648	-.0715	-.1183	.1539	.1002	-.0289	8174.	
.2130	-2684.	-3403.	2773.	-3032.	592.	-5360.	.0620	-.0749	-.1161	.1639	.1007	-.0372	8739.	
.2140	-2300.	-3137.	2654.	-3279.	488.	-5482.	.0592	-.0773	-.1110	.1699	.0993	-.0439	9049.	
.2150	-1917.	-2819.	2512.	-3442.	285.	-5430.	.0564	-.0787	-.1028	.1702	.0958	-.0485	9090.	
.2160	-1508.	-2461.	2300.	-3497.	-2.	-5233.	.0535	-.0792	-.0916	.1647	.0899	-.0507	8890.	
.2170	-1327.	-2098.	2111.	-3415.	-368.	-4879.	.0506	-.0784	-.0779	.1543	.0814	-.0502	8428.	
.2180	-1328.	-1765.	1898.	-3169.	-764.	-4334.	.0477	-.0760	-.0622	.1402	.0701	-.0472	7659.	
.2190	-1453.	-1448.	1638.	-2755.	-1128.	-3637.	.0447	-.0724	-.0454	.1222	.0561	-.0423	6638.	
.2200	-1797.	-1115.	1402.	-2199.	-1423.	-2869.	.0416	-.0679	-.0279	.1004	.0401	-.0361	5487.	
.2210	-2128.	-763.	1098.	-1541.	-1595.	-2041.	.0380	-.0628	-.0105	.0763	.0227	-.0294	4257.	
.2220	-2102.	-415.	599.	-828.	-1594.	-1116.	.0338	-.0567	.0064	.0524	.0046	-.0229	2986.	
.2230	-1854.	-71.	39.	-105.	-1436.	-118.	.0287	-.0498	.0226	.0308	-.0131	-.0171	2040.	
.2240	-1550.	293.	-444.	594.	-1163.	880.	.0225	-.0428	.0379	.0120	-.0294	-.0123	2224.	
.2250	-908.	696.	-982.	1241.	-789.	1837.	.0151	-.0361	.0523	-.0038	-.0440	-.0087	3323.	
.2260	219.	1138.	-1648.	1787.	-339.	2746.	.0065	-.0299	.0657	-.0162	-.0565	-.0067	4653.	
.2270	1527.	1601.	-2277.	2191.	125.	3592.	-.0028	-.0242	.0781	-.0246	-.0667	-.0064	5945.	
.2280	2791.	2044.	-2766.	2462.	555.	4348.	-.0122	-.0189	.0891	-.0289	-.0745	-.0075	7101.	
.2290	3970.	2442.	-3129.	2653.	918.	4970.	-.0213	-.0145	.0987	-.0300	-.0802	-.0096	8062.	
.2300	4876.	2799.	-3309.	2803.	1160.	5397.	-.0297	-.0114	.1070	-.0296	-.0841	-.0123	8745.	
.2310	5409.	3121.	-3283.	2900.	1245.	5610.	-.0371	-.0097	.1140	-.0286	-.0862	-.0155	9092.	

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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

.2210	-1797.	-1115.	402.	-2199.	-1722.	-2869.	.416	-.0679	-.0279	.1004	.0401	-.0361	5487.
.2220	-2128.	-763.	1098.	-1541.	-1595.	-2041.	.380	-.0628	-.0105	.0763	.0227	-.0294	4257.
.2230	-2102.	-415.	599.	-828.	-1594.	-1116.	.0338	-.0567	.0064	.0524	.0046	-.0229	2986.
.2240	-1854.	-71.	39.	-105.	-1436.	-118.	.0287	-.0498	.0226	.0308	-.0131	-.0171	2040.
.2250	-1550.	293.	-444.	594.	-1163.	880.	.0225	-.0428	.0379	.0120	-.0294	-.0123	2224.
.2260	-908.	696.	-982.	1241.	-789.	1837.	.0151	-.0361	.0523	-.0038	-.0440	-.0087	3323.
.2270	219.	1138.	-1648.	1787.	-339.	2746.	.0065	-.0299	.0657	-.0162	-.0565	-.0067	4653.
.2280	1527.	1601.	-2277.	2191.	125.	3592.	-.0028	-.0242	.0781	-.0246	-.0667	-.0064	5945.
.2290	2791.	2044.	-2766.	2462.	555.	4348.	-.0122	-.0189	.0891	-.0289	-.0745	-.0075	7101.
.2300	3970.	2442.	-3129.	2653.	918.	4970.	-.0213	-.0145	.0987	-.0300	-.0802	-.0096	8062.
.2310	4876.	2799.	-3309.	2803.	1160.	5397.	-.0297	-.0114	.1070	-.0296	-.0841	-.0123	8745.
.2310	5409.	3121.	-3283.	2900.	1245.	5610.	-.0371	-.0097	.1140	-.0286	-.0862	-.0155	9092.

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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	13	MEMBER	1	SEQUENCE	234	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)		
.2320	5749.	3386.	-3163.	2915.	1180.	5662.	-.0432	-.0087	.1198	-.0269	-.0866	-.0190	9148.		
.2330	5929.	3571.	-2985.	2844.	969.	5596.	-.0480	-.0082	.1243	-.0243	-.0356	-.0227	8972.		
.2340	5798.	3680.	-2679.	2714.	616.	5389.	-.0513	-.0083	.1275	-.0218	-.0830	-.0261	8567.		
.2350	5441.	3724.	-2296.	2553.	172.	4999.	-.0531	-.0094	.1290	-.0202	-.0790	-.0289	7932.		
.2360	5029.	3701.	-1936.	2342.	-290.	4453.	-.0533	-.0113	.1282	-.0199	-.0740	-.0312	7118.		
.2370	4481.	3606.	-1582.	2026.	-723.	3827.	-.0519	-.0133	.1249	-.0201	-.0583	-.0332	6201.		
.2380	3791.	3441.	-1259.	1572.	-1081.	3171.	-.0489	-.0150	.1188	-.0204	-.0525	-.0352	5228.		
.2390	3213.	3223.	-1108.	1001.	-1302.	2483.	-.0446	-.0164	.1096	-.0209	-.0570	-.0373	4205.		
.2400	2795.	2971.	-1136.	357.	-1366.	1750.	-.0392	-.0175	.0976	-.0219	-.0518	-.0394	3176.		
.2410	2322.	2692.	-1190.	-333.	-1306.	1002.	-.0329	-.0181	.0831	-.0231	-.0467	-.0413	2372.		
.2420	1827.	2383.	-1234.	-1047.	-1139.	302.	-.0262	-.0174	.0667	-.0238	-.0413	-.0430	2227.		
.2430	1558.	2044.	-1358.	-1753.	-877.	-316.	-.0192	-.0153	.0489	-.0240	-.0353	-.0445	2804.		
.2440	1520.	1679.	-1551.	-2395.	-560.	-864.	-.0121	-.0115	.0306	-.0241	-.0289	-.0452	3682.		
.2450	1504.	1281.	-1692.	-2904.	-247.	-1360.	-.0052	-.0064	.0121	-.0251	-.0220	-.0443	4543.		
.2460	1336.	832.	-1686.	-3230.	17.	-1800.	.0016	.0000	-.0059	-.0274	-.0148	-.0415	5223.		
.2470	901.	319.	-1460.	-3356.	196.	-2175.	.0083	.0078	-.0232	-.0312	-.0073	-.0364	5656.		
.2480	213.	-252.	-1036.	-3297.	260.	-2485.	.0146	.0167	-.0392	-.0365	.0002	-.0291	5843.		
.2490	-498.	-870.	-565.	-3076.	221.	-2731.	.0204	.0266	-.0536	-.0434	.0073	-.0195	5819.		
.2500	-1155.	-1516.	-91.	-2733.	96.	-2918.	.0255	.0371	-.0664	-.0516	.0139	-.0082	5649.		
.2510	-2050.	-2161.	554.	-2312.	-127.	-3049.	.0298	.0480	-.0774	-.0611	.0203	.0043	5408.		
.2520	-3263.	-2771.	1411.	-1855.	-435.	-3119.	.0330	.0587	-.0867	-.0714	.0267	.0174	5163.		
.2530	-4352.	-3315.	2229.	-1402.	-754.	-3130.	.0348	.0691	-.0944	-.0819	.0328	.0304	4960.		
.2540	-4982.	-3764.	2816.	-1004.	-1007.	-3086.	.0351	.0789	-.1008	-.0921	.0383	.0425	4799.		
.2550	-5295.	-4099.	3242.	-703.	-1162.	-2981.	.0339	.0878	-.1062	-.1018	.0433	.0533	4627.		
.2560	-5486.	-4311.	3602.	-504.	-1199.	-2804.	.0314	.0958	-.1109	-.1112	.0478	.0623	4367.		
.2570	-5489.	-4403.	3836.	-372.	-1087.	-2583.	.0277	.1025	-.1153	-.1206	.0514	.0695	3994.		
.2580	-5230.	-4375.	3874.	-277.	-812.	-2373.	.0230	.1074	-.1194	-.1304	.0538	.0750	3564.		
.2590	-4735.	-4246.	3713.	-214.	-390.	-2177.	.0174	.1106	-.1232	-.1401	.0548	.0788	3138.		
.2600	-4069.	-4045.	3393.	-183.	136.	-1946.	.0113	.1127	-.1262	-.1491	.0544	.0809	2768.		
.2610	-3419.	-3779.	3030.	-171.	702.	-1680.	.0047	.1137	-.1281	-.1572	.0529	.0811	2584.		
.2620	-2935.	-3432.	2710.	-152.	1234.	-1438.	-.0021	.1134	-.1285	-.1651	.0505	.0797	2686.		
.2630	-2500.	-3012.	2370.	-105.	1693.	-1245.	-.0090	.1117	-.1270	-.1723	.0471	.0768	2972.		
.2640	-2025.	-2555.	1975.	-41.	2049.	-1057.	-.0160	.1091	-.1232	-.1777	.0427	.0724	3257.		
.2650	-1702.	-2087.	1644.	7.	2266.	-842.	-.0227	.1062	-.1171	-.1806	.0376	.0667	3414.		
.2660	-1644.	-1608.	1444.	22.	2330.	-622.	-.0289	.1029	-.1088	-.1816	.0318	.0599	3406.		
.2670	-1654.	-1112.	1270.	14.	2271.	-431.	-.0346	.0990	-.0985	-.1817	.0253	.0524	3266.		
.2680	-1596.	-612.	1058.	-9.	2124.	-280.	-.0398	.0944	-.0866	-.1811	.0181	.0445	3025.		
.2690	-1549.	-135.	868.	-62.	1905.	-142.	-.0442	.0897	-.0733	-.1794	.0105	.0366	2700.		

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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

.2590	-4735.	-4246.	2713.	-214.	-390.	-2177.	.1174	.1106	-.1232	-.1401	.0538	.0788	3138.
.2600	-4069.	-4045.	3393.	-183.	136.	-1946.	.1113	.1127	-.1262	-.1491	.0544	.0809	2768.
.2610	-3419.	-3779.	3030.	-171.	702.	-1680.	.0047	.1137	-.1281	-.1572	.0529	.0811	2584.
.2620	-2935.	-3432.	2710.	-152.	1234.	-1438.	-.0021	.1134	-.1285	-.1651	.0505	.0797	2686.
.2630	-2500.	-3012.	2370.	-105.	1692.	-1245.	-.0090	.1117	-.1270	-.1723	.0471	.0768	2972.
.2640	-2025.	-2555.	1975.	-41.	2049.	-1057.	-.0160	.1091	-.1232	-.1777	.0427	.0724	3257.
.2650	-1702.	-2087.	1644.	7.	2266.	-842.	-.0227	.1062	-.1171	-.1806	.0376	.0667	3414.
.2660	-1644.	-1608.	1444.	22.	2330.	-622.	-.0289	.1029	-.1088	-.1816	.0318	.0599	3406.
.2670	-1654.	-1112.	1270.	14.	2271.	-431.	-.0346	.0990	-.0985	-.1817	.0253	.0524	3266.
.2680	-1596.	-612.	1058.	-9.	2124.	-280.	-.0398	.0944	-.0866	-.1811	.0181	.0445	3025.
.2690	-1549.	-135.	868.	-62.	1905.	-142.	-.0442	.0897	-.0733	-.1794	.0105	.0366	2700.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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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	13	MEMBER	1	SEQUENCE	234	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)		
.2700	-1487.	303.	708.	-153.	1642.	18.	-.0480	.0853	-.0590	-.1761	.0027	.0289	2329.		
.2710	-1227.	717.	494.	-269.	1364.	202.	-.0513	.0812	-.0436	-.1719	-.0050	.0215	1985.		
.2720	-695.	1139.	184.	-379.	1088.	381.	-.0541	.0773	-.0276	-.1676	-.0125	.0146	1713.		
.2730	69.	1569.	-208.	-466.	818.	550.	-.0566	.0738	-.0110	-.1636	-.0199	.0082	1541.		
.2740	1030.	1968.	-680.	-526.	573.	745.	-.0584	.0710	.0056	-.1591	-.0271	.0026	1522.		
.2750	2030.	2314.	-1174.	-549.	349.	983.	-.0595	.0693	.0219	-.1541	-.0344	-.0023	1665.		
.2760	2906.	2620.	-1629.	-518.	134.	1232.	-.0598	.0684	.0373	-.1493	-.0418	-.0065	1898.		
.2770	3671.	2893.	-2069.	-424.	-70.	1455.	-.0590	.0680	.0516	-.1456	-.0495	-.0097	2144.		
.2780	4313.	3111.	-2487.	-279.	-269.	1659.	-.0573	.0682	.0646	-.1425	-.0572	-.0120	2407.		
.2790	4672.	3243.	-2787.	-111.	-486.	1871.	-.0547	.0692	.0759	-.1391	-.0647	-.0131	2734.		
.2800	4716.	3290.	-2933.	57.	-732.	2089.	-.0513	.0710	.0855	-.1350	-.0714	-.0132	3128.		
.2810	4611.	3270.	-2992.	219.	-991.	2283.	-.0475	.0731	.0932	-.1304	-.0770	-.0122	3529.		
.2820	4432.	3190.	-2992.	368.	-1248.	2424.	-.0433	.0752	.0989	-.1257	-.0811	-.0101	3887.		
.2830	4121.	3038.	-2890.	483.	-1493.	2514.	-.0389	.0774	.1022	-.1205	-.0836	-.0071	4185.		
.2840	3710.	2811.	-2701.	549.	-1696.	2559.	-.0343	.0795	.1031	-.1147	-.0841	-.0033	4405.		
.2850	3291.	2523.	-2482.	569.	-1826.	2546.	-.0297	.0814	.1012	-.1084	-.0830	.0011	4498.		
.2860	2879.	2191.	-2258.	564.	-1874.	2446.	-.0252	.0828	.0965	-.1022	-.0802	.0059	4424.		
.2870	2475.	1825.	-2038.	547.	-1843.	2247.	-.0208	.0834	.0892	-.0962	-.0759	.0113	4176.		
.2880	2113.	1437.	-1842.	514.	-1741.	1963.	-.0168	.0832	.0797	-.0903	-.0703	.0170	3777.		
.2890	1787.	1045.	-1662.	456.	-1592.	1614.	-.0134	.0823	.0682	-.0844	-.0632	.0229	3266.		
.2900	1488.	666.	-1492.	376.	-1420.	1211.	-.0106	.0807	.0554	-.0781	-.0547	.0288	2689.		
.2910	1255.	310.	-1353.	285.	-1241.	758.	-.0087	.0783	.0417	-.0716	-.0450	.0347	2093.		
.2920	1061.	-13.	-1224.	189.	-1065.	260.	-.0076	.0752	.0273	-.0646	-.0341	.0404	1572.		
.2930	779.	-298.	-1032.	85.	-905.	-263.	-.0072	.0714	.0124	-.0571	-.0222	.0456	1336.		
.2940	369.	-546.	-750.	-30.	-754.	-782.	-.0075	.0673	-.0027	-.0487	-.0093	.0501	1536.		
.2950	-84.	-761.	-420.	-149.	-595.	-1279.	-.0083	.0630	-.0179	-.0395	.0042	.0538	2004.		
.2960	-548.	-942.	-51.	-260.	-412.	-1748.	-.0096	.0587	-.0331	-.0294	.0181	.0566	2563.		
.2970	-1059.	-1094.	389.	-349.	-203.	-2177.	-.0113	.0543	-.0481	-.0186	.0323	.0587	3127.		
.2980	-1596.	-1235.	904.	-401.	36.	-2541.	-.0133	.0502	-.0626	-.0070	.0467	.0602	3634.		
.2990	-2083.	-1377.	1453.	-409.	309.	-2826.	-.0156	.0466	-.0761	.0051	.0610	.0614	4057.		
.3000	-2459.	-1522.	1997.	-365.	615.	-3034.	-.0179	.0433	-.0885	.0173	.0749	.0626	4403.		
.3010	-2692.	-1668.	2493.	-262.	947.	-3162.	-.0201	.0405	-.0994	.0292	.0878	.0638	4677.		
.3020	-2797.	-1824.	2920.	-97.	1292.	-3203.	-.0220	.0382	-.1084	.0406	.0992	.0651	4881.		
.3030	-2851.	-1996.	3283.	134.	1632.	-3161.	-.0233	.0364	-.1155	.0512	.1085	.0666	5029.		
.3040	-2905.	-2169.	3571.	424.	1944.	-3051.	-.0237	.0349	-.1204	.0606	.1152	.0681	5145.		
.3050	-2927.	-2324.	3733.	757.	2211.	-2883.	-.0231	.0335	-.1229	.0686	.1189	.0694	5241.		
.3060	-2912.	-2447.	3749.	1104.	2410.	-2654.	-.0215	.0321	-.1228	.0753	.1193	.0702	5299.		
.3070	-2926.	-2535.	3653.	1440.	2515.	-2371.	-.0188	.0306	-.1200	.0807	.1165	.0705	5289.		

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ADLPIPE STRESS ANALYSIS

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

CONDITION 24

LOADS

SHOCK

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ENGLISH UNITS

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

.2970	-1059.	-1094.	389.	-349.	-203.	-1077.	-0.113	.0543	-.0481	-.0186	.0323	.0587	3127.
.2980	-1596.	-1235.	904.	-401.	36.	-2541.	-.0133	.0502	-.0626	-.0070	.0467	.0602	3634.
.2990	-2083.	-1377.	1453.	-409.	309.	-2826.	-.0156	.0466	-.0761	.0051	.0610	.0614	4057.
.3000	-2459.	-1522.	1997.	-365.	619.	-3034.	-.0179	.0433	-.0885	.0173	.0749	.0626	4403.
.3010	-2692.	-1668.	2493.	-262.	947.	-3162.	-.0201	.0405	-.0994	.0292	.0878	.0638	4677.
.3020	-2797.	-1824.	2920.	-97.	1292.	-3203.	-.0220	.0382	-.1084	.0406	.0992	.0651	4881.
.3030	-2851.	-1996.	3283.	134.	1632.	-3161.	-.0233	.0364	-.1155	.0512	.1085	.0666	5029.
.3040	-2905.	-2169.	3571.	424.	1944.	-3051.	-.0237	.0349	-.1204	.0606	.1152	.0681	5145.
.3050	-2927.	-2324.	3733.	757.	2211.	-2883.	-.0231	.0335	-.1229	.0686	.1189	.0694	5241.
.3060	-2912.	-2447.	3749.	1104.	2410.	-2654.	-.0215	.0321	-.1228	.0753	.1193	.0702	5299.
.3070	-2926.	-2535.	3653.	1440.	2515.	-2371.	-.0188	.0306	-.1200	.0807	.1165	.0705	5289.

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ADLPIPE STRESS ANALYSIS

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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	13	MEMBER	1	SEQUENCE	234	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)		
.3080	-2991.	-2578.	3471.	1743.	2507.	-2047.	-.0152	.0288	-.1143	.0851	.1109	.0701	5193.		
.3090	-3059.	-2564.	3200.	1998.	2383.	-1701.	-.0110	.0264	-.1060	.0885	.1028	.0691	5007.		
.3100	-3096.	-2484.	2853.	2187.	2148.	-1346.	-.0063	.0231	-.0950	.0908	.0927	.0674	4729.		
.3110	-3101.	-2341.	2465.	2296.	1816.	-986.	-.0014	.0190	-.0818	.0925	.0813	.0648	4363.		
.3120	-3049.	-2143.	2058.	2320.	1416.	-628.	.0035	.0139	-.0668	.0940	.0690	.0614	3940.		
.3130	-2911.	-1893.	1645.	2270.	977.	-284.	.0081	.0079	-.0506	.0955	.0564	.0571	3514.		
.3140	-2688.	-1596.	1250.	2165.	530.	26.	.0121	.0008	-.0335	.0971	.0439	.0518	3148.		
.3150	-2361.	-1259.	876.	2017.	102.	291.	.0156	-.0074	-.0161	.0990	.0318	.0456	2882.		
.3160	-1915.	-895.	525.	1835.	-283.	516.	.0182	-.0164	.0011	.1016	.0204	.0383	2722.		
.3170	-1354.	-514.	197.	1627.	-615.	707.	.0200	-.0261	.0180	.1052	.0099	.0300	2652.		
.3180	-681.	-128.	-115.	1403.	-888.	860.	.0208	-.0363	.0342	.1099	.0005	.0209	2641.		
.3190	85.	256.	-417.	1173.	-1101.	966.	.0209	-.0470	.0496	.1156	-.0079	.0110	2651.		
.3200	901.	632.	-708.	942.	-1263.	1029.	.0203	-.0581	.0640	.1221	-.0153	.0005	2658.		
.3210	1693.	994.	-977.	708.	-1382.	1063.	.0193	-.0692	.0773	.1294	-.0218	-.0104	2658.		
.3220	2431.	1337.	-1239.	465.	-1468.	1081.	.0180	-.0802	.0893	.1372	-.0278	-.0216	2658.		
.3230	3117.	1658.	-1520.	212.	-1524.	1085.	.0168	-.0909	.1000	.1450	-.0335	-.0328	2659.		
.3240	3708.	1961.	-1816.	-44.	-1557.	1076.	.0158	-.1012	.1093	.1525	-.0389	-.0439	2674.		
.3250	4132.	2250.	-2093.	-298.	-1582.	1066.	.0152	-.1109	.1170	.1589	-.0442	-.0547	2727.		
.3260	4395.	2517.	-2347.	-543.	-1601.	1065.	.0151	-.1197	.1233	.1641	-.0492	-.0650	2822.		
.3270	4538.	2754.	-2587.	-771.	-1612.	1082.	.0155	-.1275	.1281	.1678	-.0537	-.0743	2951.		
.3280	4577.	2952.	-2800.	-970.	-1619.	1119.	.0165	-.1341	.1315	.1697	-.0576	-.0824	3099.		
.3290	4527.	3108.	-2967.	-1123.	-1620.	1175.	.0179	-.1396	.1335	.1695	-.0506	-.0890	3242.		
.3300	4403.	3211.	-3074.	-1219.	-1612.	1251.	.0196	-.1437	.1340	.1671	-.0623	-.0938	3357.		
.3310	4193.	3249.	-3097.	-1249.	-1589.	1345.	.0216	-.1465	.1329	.1628	-.0628	-.0967	3429.		
.3320	3916.	3206.	-3036.	-1208.	-1545.	1455.	.0238	-.1479	.1303	.1568	-.0620	-.0976	3448.		
.3330	3617.	3080.	-2913.	-1096.	-1468.	1573.	.0261	-.1480	.1261	.1496	-.0599	-.0966	3411.		
.3340	3266.	2877.	-2722.	-921.	-1355.	1692.	.0286	-.1469	.1202	.1413	-.0566	-.0940	3327.		
.3350	2862.	2602.	-2432.	-697.	-1213.	1805.	.0311	-.1447	.1126	.1326	-.0523	-.0901	3226.		
.3360	2355.	2265.	-2058.	-440.	-1045.	1909.	.0335	-.1415	.1035	.1239	-.0469	-.0852	3137.		
.3370	1827.	1878.	-1644.	-170.	-852.	1998.	.0359	-.1376	.0930	.1158	-.0408	-.0798	3078.		
.3380	1290.	1459.	-1208.	95.	-642.	2064.	.0381	-.1330	.0813	.1086	-.0341	-.0741	3055.		
.3390	728.	1027.	-753.	333.	-425.	2102.	.0401	-.1281	.0686	.1024	-.0271	-.0685	3065.		
.3400	155.	598.	-295.	528.	-207.	2110.	.0418	-.1231	.0551	.0971	-.0198	-.0633	3086.		
.3410	-399.	186.	143.	669.	13.	2078.	.0433	-.1182	.0411	.0924	-.0125	-.0584	3084.		
.3420	-910.	-202.	539.	751.	235.	1998.	.0447	-.1136	.0268	.0882	-.0054	-.0540	3033.		
.3430	-1350.	-561.	878.	774.	460.	1867.	.0459	-.1095	.0122	.0841	.0014	-.0500	2928.		
.3440	-1716.	-889.	1161.	738.	687.	1686.	.0470	-.1059	-.0023	.0798	.0079	-.0464	2775.		
.3450	-2033.	-1182.	1408.	642.	907.	1453.	.0481	-.1031	-.0166	.0750	.0142	-.0432	2583.		

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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

.3340	2862.	2602.	-2432.	-697.	-1213.	1805.	.0311	-.1447	.1126	.1326	-.0523	-.0901	3226.
.3350	2355.	2265.	-2058.	-440.	-1045.	1909.	.0335	-.1415	.1035	.1239	-.0469	-.0852	3137.
.3370	1827.	1878.	-1644.	-170.	-852.	1998.	.0359	-.1376	.0930	.1158	-.0408	-.0798	3078.
.3380	1290.	1459.	-1208.	95.	-642.	2064.	.0381	-.1320	.0813	.1086	-.0341	-.0741	3055.
.3390	728.	1027.	-757.	333.	-425.	2102.	.0401	-.1281	.0686	.1024	-.0271	-.0685	3065.
.3400	153.	598.	-295.	528.	-207.	2110.	.0418	-.1231	.0551	.0971	-.0198	-.0633	3086.
.3410	-399.	186.	143.	669.	13.	2078.	.0433	-.1182	.0411	.0924	-.0125	-.0584	3084.
.3420	-910.	-202.	539.	751.	235.	1998.	.0447	-.1136	.0268	.0882	-.0054	-.0540	3033.
.3430	-1350.	-561.	878.	774.	460.	1867.	.0459	-.1095	.0122	.0841	.0014	-.0500	2928.
.3440	-1716.	-889.	1161.	738.	687.	1686.	.0470	-.1059	-.0023	.0798	.0079	-.0464	2775.
.3450	-2033.	-1182.	1408.	642.	907.	1453.	.0481	-.1031	-.0166	.0750	.0142	-.0432	2583.

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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	13	MEMBER	1	SEQUENCE	234	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)	
.3460	-2295.	-1436.	1622.	490.	1107.	1167.		.0491	-.1009	-.0302	.0694	.0202	-.0402	2375.	
.3470	-2461.	-1656.	1782.	288.	1279.	838.		.0502	-.0995	-.0428	.0632	.0258	-.0376	2198.	
.3480	-2542.	-1845.	1894.	40.	1409.	479.		.0513	-.0985	-.0542	.0566	.0311	-.0352	2102.	
.3490	-2606.	-2006.	1990.	-248.	1478.	59.		.0524	-.0981	-.0641	.0499	.0358	-.0332	2121.	
.3500	-2688.	-2136.	2084.	-568.	1476.	-290.		.0536	-.0979	-.0721	.0433	.0399	-.0316	2270.	
.3510	-2781.	-2235.	2159.	-907.	1401.	-676.		.0548	-.0979	-.0783	.0369	.0432	-.0305	2544.	
.3520	-2890.	-2305.	2206.	-1253.	1261.	-1045.		.0560	-.0979	-.0825	.0311	.0453	-.0301	2912.	
.3530	-3030.	-2349.	2229.	-1592.	1065.	-1381.		.0571	-.0977	-.0848	.0262	.0462	-.0303	3335.	
.3540	-3195.	-2365.	2228.	-1908.	830.	-1670.		.0582	-.0971	-.0851	.0224	.0457	-.0311	3768.	
.3550	-3363.	-2349.	2199.	-2183.	575.	-1901.		.0591	-.0960	-.0836	.0195	.0441	-.0326	4169.	
.3560	-3493.	-2295.	2129.	-2404.	319.	-2071.		.0596	-.0944	-.0804	.0175	.0412	-.0347	4504.	
.3570	-3520.	-2202.	1997.	-2559.	87.	-2170.		.0597	-.0920	-.0756	.0163	.0373	-.0373	4741.	
.3580	-3403.	-2074.	1795.	-2647.	-106.	-2187.		.0592	-.0889	-.0693	.0157	.0324	-.0402	4852.	
.3590	-3156.	-1912.	1541.	-2665.	-251.	-2120.		.0580	-.0850	-.0618	.0154	.0269	-.0432	4823.	
.3600	-2796.	-1716.	1251.	-2612.	-345.	-1978.		.0561	-.0804	-.0531	.0150	.0208	-.0462	4654.	
.3610	-2322.	-1489.	925.	-2494.	-390.	-1771.		.0536	-.0751	-.0435	.0140	.0143	-.0488	4356.	
.3620	-1754.	-1239.	574.	-2322.	-393.	-1504.		.0504	-.0694	-.0332	.0123	.0075	-.0509	3948.	
.3630	-1144.	-973.	224.	-2115.	-373.	-1181.		.0467	-.0631	-.0222	.0097	.0004	-.0524	3462.	
.3640	-541.	-695.	-103.	-1886.	-348.	-813.		.0425	-.0565	-.0108	.0061	-.0067	-.0530	2942.	
.3650	30.	-407.	-395.	-1644.	-336.	-416.		.0378	-.0496	.0010	.0015	-.0138	-.0529	2442.	
.3660	542.	-109.	-648.	-1397.	-353.	-4.		.0328	-.0425	.0130	-.0042	-.0208	-.0519	2036.	
.3670	980.	195.	-860.	-1153.	-407.	412.		.0275	-.0354	.0250	-.0107	-.0276	-.0502	1822.	
.3680	1341.	496.	-1038.	-917.	-496.	824.		.0220	-.0283	.0367	-.0178	-.0342	-.0478	1878.	
.3690	1615.	790.	-1184.	-691.	-614.	1220.		.0164	-.0211	.0478	-.0251	-.0405	-.0447	2162.	
.3700	1798.	1073.	-1302.	-468.	-747.	1583.		.0107	-.0140	.0580	-.0327	-.0465	-.0412	2559.	
.3710	1913.	1342.	-1409.	-246.	-878.	1896.		.0050	-.0071	.0669	-.0403	-.0520	-.0373	2971.	
.3720	1993.	1585.	-1521.	-24.	-984.	2153.		-.0007	-.0004	.0742	-.0477	-.0570	-.0331	3344.	
.3730	2054.	1796.	-1640.	193.	-1051.	2353.		-.0064	.0062	.0797	-.0544	-.0612	-.0286	3650.	
.3740	2117.	1970.	-1765.	400.	-1065.	2492.		-.0122	.0126	.0833	-.0604	-.0645	-.0239	3870.	
.3750	2213.	2112.	-1901.	590.	-1020.	2566.		-.0180	.0187	.0848	-.0656	-.0666	-.0191	3988.	
.3760	2353.	2222.	-2042.	756.	-913.	2571.		-.0238	.0246	.0843	-.0699	-.0673	-.0143	3999.	
.3770	2521.	2297.	-2169.	891.	-750.	2516.		-.0296	.0303	.0818	-.0732	-.0666	-.0094	3916.	
.3780	2696.	2331.	-2266.	985.	-541.	2407.		-.0353	.0359	.0774	-.0753	-.0643	-.0044	3752.	
.3790	2856.	2327.	-2317.	1030.	-299.	2248.		-.0408	.0414	.0713	-.0766	-.0605	.0007	3520.	
.3800	2963.	2290.	-2306.	1036.	-42.	2039.		-.0459	.0468	.0636	-.0774	-.0552	.0058	3231.	
.3810	2991.	2221.	-2220.	997.	211.	1788.		-.0506	.0521	.0547	-.0779	-.0485	.0112	2906.	
.3820	2927.	2118.	-2060.	923.	442.	1506.		-.0546	.0574	.0449	-.0782	-.0408	.0169	2571.	
.3830	2770.	1978.	-1827.	825.	638.	1203.		-.0580	.0629	.0343	-.0783	-.0321	.0229	2249.	

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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

.3720	1993.	1585.	-1521.	-24.	-984.	2153.	-.0007	-.0004	.0742	-.0477	-.0570	-.0331	3344.
.3730	2054.	1796.	-1640.	193.	-1051.	2353.	-.0064	.0062	.0797	-.0544	-.0612	-.0286	3650.
.3740	2117.	1970.	-1765.	400.	-1065.	2492.	-.0122	.0126	.0833	-.0604	-.0545	-.0239	3870.
.3750	2213.	2112.	-1901.	590.	-1020.	2566.	-.0180	.0187	.0848	-.0656	-.0566	-.0191	3988.
.3760	2353.	2222.	-2042.	756.	-913.	2571.	-.0238	.0246	.0843	-.0699	-.0673	-.0143	3999.
.3770	2521.	2297.	-2169.	891.	-750.	2516.	-.0296	.0303	.0818	-.0732	-.0566	-.0094	3916.
.3780	2696.	2331.	-2266.	985.	-541.	2407.	-.0353	.0359	.0774	-.0753	-.0543	-.0044	3752.
.3790	2856.	2327.	-2317.	1033.	-299.	2248.	-.0408	.0414	.0713	-.0766	-.0505	.0007	3520.
.3800	2963.	2290.	-2306.	1036.	-42.	2039.	-.0459	.0468	.0636	-.0774	-.0552	.0058	3231.
.3810	2991.	2221.	-2220.	997.	211.	1758.	-.0506	.0521	.0547	-.0779	-.0485	.0112	2906.
.3820	2927.	2118.	-2060.	923.	442.	1506.	-.0546	.0574	.0449	-.0782	-.0408	.0169	2571.
.3830	2770.	1978.	-1827.	825.	638.	1203.	-.0580	.0629	.0343	-.0783	-.0321	.0229	2249.

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

SECTION	13	MEMBER	1	SEQUENCE	234	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)		
.3840	2516.	1803.	-1526.	717.	786.	885.	-.0605	.0686	.0234	-.0785	-.0228	.0293	1955.		
.3850	2178.	1597.	-1169.	612.	881.	557.	-.0622	.0745	.0124	-.0789	-.0130	.0362	1708.		
.3860	1780.	1364.	-777.	523.	925.	226.	-.0630	.0806	.0014	-.0796	-.0030	.0435	1534.		
.3870	1341.	1099.	-372.	457.	922.	-100.	-.0629	.0870	-.0093	-.0805	.0068	.0512	1461.		
.3880	878.	799.	26.	420.	885.	-414.	-.0619	.0938	-.0199	-.0814	.0161	.0592	1502.		
.3890	404.	468.	399.	415.	822.	-713.	-.0601	.1008	-.0300	-.0822	.0246	.0674	1646.		
.3900	-72.	115.	738.	442.	745.	-998.	-.0574	.1080	-.0398	-.0829	.0322	.0756	1866.		
.3910	-544.	-251.	1034.	494.	662.	-1263.	-.0542	.1153	-.0492	-.0833	.0387	.0835	2132.		
.3920	-987.	-630.	1277.	565.	579.	-1501.	-.0504	.1227	-.0581	-.0832	.0442	.0911	2409.		
.3930	-1382.	-1019.	1465.	645.	504.	-1710.	-.0464	.1299	-.0663	-.0823	.0487	.0982	2678.		
.3940	-1733.	-1406.	1610.	726.	436.	-1893.	-.0423	.1369	-.0738	-.0808	.0523	.1049	2929.		
.3950	-2049.	-1775.	1724.	803.	375.	-2054.	-.0382	.1434	-.0805	-.0789	.0551	.1109	3159.		
.3960	-2321.	-2115.	1812.	869.	322.	-2192.	-.0344	.1491	-.0864	-.0768	.0573	.1162	3361.		
.3970	-2538.	-2421.	1872.	921.	281.	-2305.	-.0310	.1541	-.0913	-.0745	.0589	.1207	3528.		
.3980	-2706.	-2685.	1913.	960.	253.	-2396.	-.0281	.1582	-.0953	-.0720	.0601	.1244	3663.		
.3990	-2840.	-2894.	1946.	988.	237.	-2470.	-.0258	.1612	-.0983	-.0697	.0608	.1271	3773.		
.4000	-2954.	-3034.	1981.	1007.	228.	-2533.	-.0240	.1629	-.1003	-.0679	.0611	.1289	3864.		

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)
.0840	2717.	3337.	-1026.	7522.	483.	6975.	-.0533	-.0078	.1100	-.0811	-.0522	-.0051	14506.

SECTION	13	MEMBER	2	SEQUENCE	400	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.		
.0010	1.	-0.	-2.	1.	-0.	-0.	.0000	-.0000	-.0000	.0000	-.0000	-.0000	1.		
.0020	-5.	-3.	-9.	4.	-2.	-4.	.0000	-.0000	-.0001	.0000	-.0001	-.0000	7.		
.0030	-48.	-4.	-9.	3.	-9.	-15.	.0001	-.0000	-.0004	.0001	-.0004	-.0001	25.		
.0040	-140.	-4.	6.	-11.	-25.	-36.	.0002	-.0001	-.0009	.0001	-.0008	-.0002	63.		
.0050	-267.	-1.	31.	-41.	-50.	-61.	.0002	-.0000	-.0017	.0001	-.0012	-.0004	126.		
.0060	-445.	2.	74.	-86.	-91.	-95.	.0003	.0001	-.0028	-.0000	-.0017	-.0007	221.		
.0070	-723.	-1.	155.	-141.	-150.	-154.	.0003	.0002	-.0045	-.0002	-.0022	-.0008	363.		

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TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	D (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	1.	-0.	-2.	1.	-0.	-0.	.0000	-0.0000	-0.0000	.0000	-0.0000	-0.0000	1.
.0020	-5.	-3.	-9.	4.	-2.	-4.	.0000	-0.0000	-0.0001	.0000	-0.0001	-0.0000	7.
.0030	-48.	-4.	-9.	3.	-9.	-15.	.0001	-0.0000	-0.0004	.0001	-0.0004	-0.0001	25.
.0040	-140.	-4.	6.	-11.	-25.	-36.	.0002	-0.0001	-0.0009	.0001	-0.0008	-0.0002	63.
.0050	-267.	-1.	31.	-41.	-50.	-61.	.0002	-0.0000	-0.0017	.0001	-0.0012	-0.0004	126.
.0060	-445.	2.	74.	-76.	-91.	-95.	.0003	.0001	-0.0028	-0.0000	-0.0017	-0.0007	221.
.0070	-727.	-1.	155.	-141.	-150.	-154.	.0003	.0002	-0.0045	-0.0002	-0.0022	-0.0008	363.

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INTERNAL FORCES IN THE PIPING
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SECTION	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
13	.0080	-1217.	-23.	323.	-212.	-232.	-257.	.0006	.0004	-0.0071	-0.0006	-0.0029	-0.0009	573.
	.0090	-2131.	-75.	683.	-317.	-355.	-403.	.0015	.0007	-0.0110	-0.0016	-0.0037	-0.0009	881.
	.0100	-3341.	-158.	1170.	-465.	-516.	-588.	.0033	.0012	-0.0162	-0.0036	-0.0045	-0.0008	1285.
	.0110	-4456.	-275.	1579.	-648.	-686.	-822.	.0059	.0018	-0.0225	-0.0072	-0.0053	-0.0004	1768.
	.0120	-5285.	-438.	1820.	-846.	-851.	-1106.	.0094	.0024	-0.0294	-0.0125	-0.0062	.0006	2305.
	.0130	-5953.	-662.	1988.	-1037.	-1035.	-1404.	.0136	.0032	-0.0365	-0.0190	-0.0067	.0026	2866.
	.0140	-6668.	-940.	2249.	-1214.	-1272.	-1685.	.0182	.0042	-0.0435	-0.0271	-0.0059	.0056	3440.
	.0150	-7523.	-1247.	2705.	-1384.	-1581.	-1959.	.0228	.0052	-0.0499	-0.0369	-0.0027	.0097	4058.
	.0160	-8737.	-1575.	3510.	-1549.	-1973.	-2239.	.0273	.0062	-0.0558	-0.0483	.0038	.0148	4749.
	.0170	-9832.	-1941.	4399.	-1697.	-2359.	-2526.	.0317	.0071	-0.0616	-0.0595	.0135	.0206	5438.
	.0180	-9668.	-2346.	4685.	-1819.	-2574.	-2842.	.0362	.0082	-0.0675	-0.0689	.0248	.0266	5994.
	.0190	-7910.	-2707.	4051.	-1909.	-2526.	-3198.	.0416	.0095	-0.0740	-0.0753	.0351	.0319	6357.
	.0200	-4691.	-3293.	2395.	-1931.	-2094.	-3575.	.0493	.0109	-0.0824	-0.0788	.0410	.0351	6457.
	.0210	-2104.	-3864.	785.	-1852.	-1410.	-3887.	.0606	.0123	-0.0937	-0.0810	.0422	.0349	6399.
	.0220	-1136.	-4287.	-165.	-1675.	-800.	-4046.	.0726	.0131	-0.1040	-0.0853	.0406	.0308	6288.
	.0230	64.	-4453.	-1276.	-1410.	-223.	-4129.	.0830	.0121	-0.1098	-0.0910	.0369	.0241	6175.
	.0240	-980.	-4530.	-946.	-1107.	64.	-3990.	.0903	.0104	-0.1108	-0.0917	.0353	.0161	5849.
	.0250	-2739.	-4669.	-225.	-759.	294.	-3558.	.0943	.0089	-0.1081	-0.0820	.0357	.0076	5156.
	.0260	3170.	-4690.	-3080.	-472.	1141.	-3091.	.0941	.0060	-0.1008	-0.0642	.0316	-0.0023	4701.
	.0270	10639.	-4328.	-7123.	-451.	2062.	-2525.	.0975	.0015	-0.0876	-0.0449	.0248	-0.0149	4649.
	.0280	10504.	-3792.	-6767.	-744.	2387.	-1519.	.0778	-0.0031	-0.0733	-0.0271	.0242	-0.0308	4133.
	.0290	6176.	-3282.	-3716.	-1038.	2681.	-306.	.0689	-0.0089	-0.0624	-0.0116	.0288	-0.0486	4084.
	.0300	2461.	-2535.	-1172.	-996.	3032.	415.	.0577	-0.0195	-0.0510	.0024	.0298	-0.0653	4545.
	.0310	384.	-1590.	185.	-788.	3291.	750.	.0434	-0.0331	-0.0383	.0187	.0261	-0.0807	5031.
	.0320	3101.	-613.	-1016.	-982.	4110.	1382.	.0282	-0.0434	-0.0237	.0416	.0190	-0.0975	6279.
	.0330	4022.	449.	-1021.	-1752.	4346.	2608.	.0121	-0.0483	-0.0063	.0671	.0148	-0.1156	7575.
	.0340	-950.	1732.	2247.	-2411.	3513.	3839.	-0.0060	-0.0532	.0148	.0838	.0155	-0.1306	8101.
	.0350	-3945.	3080.	4338.	-2199.	2573.	4319.	-0.0248	-0.0637	.0385	.0867	.0139	-0.1368	7751.
	.0360	-713.	4165.	2841.	-1316.	2221.	4133.	-0.0421	-0.0767	.0624	.0845	.0054	-0.1337	6883.
	.0370	1129.	4845.	1832.	-531.	1730.	4234.	-0.0577	-0.0836	.0854	.0871	-0.0056	-0.1258	6504.
	.0380	-1525.	5303.	3040.	-21.	758.	5170.	-0.0730	-0.0825	.1074	.0899	-0.0158	-0.1174	7380.
	.0390	-1103.	5882.	2507.	659.	256.	6000.	-0.0873	-0.0817	.1271	.0778	-0.0280	-0.1070	8533.
	.0400	4043.	6554.	-606.	1736.	716.	5531.	-0.0966	-0.0874	.1406	.0502	-0.0447	-0.0914	8251.
	.0410	5477.	6915.	-2030.	3024.	1058.	4710.	-0.1022	-0.0922	.1483	.0277	-0.0531	-0.0725	8046.
	.0420	5056.	6677.	-2553.	4143.	1302.	5005.	-0.1047	-0.0878	.1514	.0226	-0.0806	-0.0561	9359.
	.0430	8761.	6230.	-5341.	4670.	2225.	5651.	-0.1018	-0.0794	.1491	.0202	-0.0992	-0.0434	10822.
	.0440	11002.	6210.	-7176.	4502.	3009.	5283.	-0.0946	-0.0760	.1445	.0040	-0.1137	-0.0314	10685.
	.0450	9551.	6346.	-6974.	4100.	2944.	4579.	-0.0866	-0.0748	.1416	-0.0162	-0.1221	-0.0191	9626.

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CONDITION 24

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

.0350	-3945.	3080.	4338.	-2199.	2573.	4319.	-.0248	-.0637	.0385	.0867	.0139	-.1368	7751.
.0360	-713.	4165.	2841.	-1316.	2221.	4132.	-.0421	-.0767	.0624	.0845	.0054	-.1337	6883.
.0370	1129.	4845.	1832.	-531.	1730.	4234.	-.0577	-.0836	.0854	.0871	-.0056	-.1258	6504.
.0380	-1525.	5303.	3040.	-21.	758.	5170.	-.0730	-.0825	.1074	.0899	-.0158	-.1174	7380.
.0390	-1103.	5882.	2507.	659.	256.	6000.	-.0873	-.0817	.1271	.0778	-.0280	-.1070	8533.
.0400	4043.	6554.	-606.	1736.	716.	5531.	-.0966	-.0174	.1406	.0502	-.0447	-.0914	8251.
.0410	5477.	6915.	-2030.	3024.	1058.	4710.	-.1022	-.0922	.1483	.0277	-.0531	-.0725	8046.
.0420	5056.	6677.	-2553.	4143.	1302.	5005.	-.1047	-.0878	.1514	.0226	-.0806	-.0561	9359.
.0430	8761.	6230.	-5341.	4670.	2225.	5651.	-.1018	-.0794	.1491	.0202	-.0992	-.0434	10822.
.0440	11002.	6210.	-7176.	4502.	3009.	5283.	-.0946	-.0760	.1445	.0040	-.1137	-.0314	10685.
.0450	9551.	6346.	-6974.	4100.	2944.	4579.	-.0866	-.0748	.1416	-.0162	-.1221	-.0191	9626.

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

SECTION	13	MEMBER	2	SEQUENCE	400	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0460	9744.	5992.	-7651.	3831.	2479.	4646.	-.0786	-.0689	.1414	-.0218	-.1275	-.0064	9199.		
.0470	1.538.	5209.	-8854.	3442.	1912.	4813.	-.0682	-.0603	.1423	-.0130	-.1285	.0082	8783.		
.0480	9349.	4455.	-7833.	2754.	843.	4357.	-.0553	-.0527	.1434	-.0022	-.1225	.0237	7377.		
.0490	6717.	3793.	-5944.	2179.	-633.	3967.	-.0416	-.0451	.1442	.0042	-.1128	.0363	6456.		
.0500	5845.	3131.	-5422.	2019.	-1878.	3831.	-.0268	-.0377	.1425	.0050	-.1029	.0447	6667.		
.0510	4657.	2498.	-4646.	2039.	-2781.	3075.	-.0089	-.0329	.1356	.0038	-.0920	.0514	6526.		
.0520	1247.	1713.	-2535.	2097.	-3517.	1894.	.0111	-.0284	.1240	.0123	-.0786	.0569	6373.		
.0530	-642.	580.	-1138.	2358.	-3947.	1326.	.0301	-.0202	.1095	.0361	-.0634	.0586	6759.		
.0540	-408.	-532.	-680.	2696.	-4079.	922.	.0470	-.0131	.0934	.0630	-.0447	.0563	7029.		
.0550	-1034.	-1183.	526.	2659.	-4175.	-389.	.0618	-.0129	.0766	.0829	-.0211	.0519	7013.		
.0560	-1267.	-1682.	1625.	2102.	-4206.	-1927.	.0740	-.0151	.0596	.1068	.0047	.0450	7177.		
.0570	518.	-2558.	1376.	1232.	-4094.	-2529.	.0832	-.0128	.0427	.1487	.0281	.0348	7017.		
.0580	1210.	-3636.	1346.	160.	-4030.	-2867.	.0907	-.0105	.0244	.1996	.0483	.0237	6990.		
.0590	-479.	-4419.	2272.	-1078.	-4003.	-4008.	.0977	-.0147	.0038	.2409	.0652	.0132	8145.		
.0600	-1422.	-4858.	2524.	-2355.	-3790.	-5349.	.1036	-.0229	-.0182	.2687	.0783	.0014	9839.		
.0610	-1489.	-5190.	2147.	-3631.	-3429.	-5999.	.1076	-.0290	-.0410	.2907	.0888	-.0132	11025.		
.0620	-3587.	-5462.	2838.	-4909.	-3100.	-6316.	.1102	-.0328	-.0647	.3095	.0984	-.0272	12117.		
.0630	-6195.	-5629.	3846.	-5902.	-2630.	-6782.	.1114	-.0371	-.0885	.3211	.1065	-.0366	13231.		
.0640	-6628.	-5655.	3778.	-6237.	-1950.	-7113.	.1091	-.0423	-.1100	.3201	.1131	-.0405	13643.		
.0650	-7123.	-5421.	3975.	-6022.	-1394.	-7187.	.1020	-.0479	-.1277	.3025	.1212	-.0393	13390.		
.0660	-9220.	-4929.	5288.	-5692.	-990.	-7244.	.0914	-.0533	-.1420	.2710	.1308	-.0330	13087.		
.0670	-9656.	-4476.	5801.	-5345.	-298.	-7072.	.0788	-.0558	-.1538	.2351	.1378	-.0224	12528.		
.0680	-7600.	-4275.	4875.	-4698.	726.	-6394.	.0647	-.0547	-.1637	.1997	.1400	-.0083	11254.		
.0690	-6750.	-4133.	4499.	-3631.	1695.	-5674.	.0501	-.0539	-.1721	.1593	.1392	.0084	9812.		
.0700	-7760.	-3811.	5137.	-2372.	2576.	-5388.	.0364	-.0558	-.1791	.1102	.1365	.0261	9076.		
.0710	-7851.	-3378.	5268.	-1224.	3517.	-5080.	.0236	-.0571	-.1830	.0613	.1304	.0412	8896.		
.0720	-6562.	-2972.	4522.	-344.	4310.	-4138.	.0104	-.0533	-.1814	.0242	.1206	.0514	8453.		
.0730	-4716.	-2554.	3387.	296.	4782.	-2812.	-.0033	-.0460	-.1733	.0002	.1081	.0575	7846.		
.0740	-2083.	-2038.	1918.	878.	5023.	-1676.	-.0161	-.0391	-.1591	-.0174	.0941	.0616	7582.		
.0750	-16.	-1461.	870.	1604.	4892.	-727.	-.0278	-.0337	-.1391	-.0328	.0802	.0649	7344.		
.0760	-80.	-908.	952.	2481.	4227.	330.	-.0386	-.0284	-.1140	-.0458	.0565	.0668	6939.		
.0770	-202.	-410.	967.	3336.	3397.	1472.	-.0478	-.0224	-.0853	-.0553	.0507	.0667	7039.		
.0780	1713.	31.	-218.	4074.	2815.	2527.	-.0540	-.0160	-.0551	-.0617	.0312	.0647	7853.		
.0790	3212.	419.	-1287.	4836.	2295.	3528.	-.0574	-.0099	-.0248	-.0669	.0100	.0605	9056.		
.0800	1941.	822.	-914.	5797.	1581.	4502.	-.0590	-.0056	.0047	-.0740	-.0099	.0540	10606.		
.0810	350.	1352.	-253.	6858.	972.	5229.	-.0589	-.0047	.0329	-.0841	-.0275	.0450	12258.		
.0820	774.	2031.	-462.	7649.	723.	5654.	-.0574	-.0064	.0598	-.0925	-.0427	.0325	13474.		
.0830	1891.	2730.	-878.	7872.	611.	6172.	-.0554	-.0076	.0856	-.0918	-.0545	.0158	14156.		

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.0730	-4716.	-2554.	3387.	296.	4782.	-2812.	-.033	-.0460	-.1733	.0002	.1081	.0575	7846.
.0740	-2083.	-2038.	1918.	878.	5023.	-1676.	-.0161	-.0391	-.1591	-.0174	.0941	.0616	7582.
.0750	-16.	-1461.	870.	1604.	4892.	-727.	-.0278	-.0337	-.1391	-.0328	.0802	.0649	7344.
.0760	-80.	-908.	952.	2481.	4227.	330.	-.0386	-.0284	-.1140	-.0458	.0565	.0668	6939.
.0770	-202.	-410.	967.	7336.	3397.	1472.	-.0478	-.0224	-.0853	-.0552	.0507	.0667	7039.
.0780	1713.	31.	-218.	4074.	2815.	2527.	-.0540	-.0160	-.0551	-.0617	.0312	.0647	7853.
.0790	3212.	419.	-1287.	4836.	2295.	3528.	-.0574	-.0099	-.0248	-.0669	.0100	.0605	9056.
.0800	1941.	822.	-914.	5797.	1581.	4502.	-.0590	-.0056	.0047	-.0740	-.0099	.0540	10606.
.0810	350.	1352.	-253.	6858.	972.	5229.	-.0589	-.0047	.0329	-.0841	-.0275	.0450	12258.
.0820	774.	2031.	-462.	7649.	723.	5654.	-.0574	-.0064	.0598	-.0925	-.0427	.0325	13474.
.0830	1891.	2730.	-878.	7872.	611.	6172.	-.0554	-.0076	.0856	-.0918	-.0545	.0158	14156.

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SECTION	13	MEMBER	2	SEQUENCE	400	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0840	2717.	3337.	-1026.	7525.	482.	6980.	-.0533	-.0077	.1100	-.0809	-.0622	-.0050	14514.		
.0850	3892.	3906.	-1286.	6768.	465.	7580.	-.0500	-.0107	.1314	-.0672	-.0574	-.0274	14368.		
.0860	4720.	4495.	-1460.	5703.	509.	7517.	-.0448	-.0191	.1492	-.0552	-.0722	-.0494	13347.		
.0870	4516.	4951.	-1437.	4318.	474.	7124.	-.0380	-.0299	.1631	-.0408	-.0789	-.0711	11786.		
.0880	4654.	5094.	-2028.	2566.	477.	6889.	-.0295	-.0390	.1731	-.0187	-.0891	-.0935	10406.		
.0890	5533.	5006.	-3294.	531.	583.	6630.	-.0188	-.0467	.1789	.0077	-.1019	-.1158	9430.		
.0900	5463.	4892.	-4142.	-1458.	552.	5945.	-.0065	-.0557	.1812	.0305	-.1142	-.1363	8681.		
.0910	4345.	4784.	-4397.	-3025.	233.	4912.	.0059	-.0661	.1812	.0472	-.1241	-.1536	8155.		
.0920	3849.	4601.	-4845.	-4109.	-258.	3799.	.0174	-.0757	.1800	.0612	-.1311	-.1668	7913.		
.0930	4188.	4345.	-5498.	-4945.	-860.	2678.	.0276	-.0825	.1779	.0754	-.1347	-.1756	8036.		
.0940	4602.	4052.	-5915.	-5661.	-1606.	1631.	.0363	-.0857	.1749	.0885	-.1344	-.1800	8626.		
.0950	5108.	3729.	-6138.	-6112.	-2442.	732.	.0432	-.0862	.1699	.0960	-.1305	-.1796	9354.		
.0960	5302.	3404.	-5996.	-6164.	-3300.	-247.	.0489	-.0864	.1617	.0931	-.1237	-.1734	9882.		
.0970	4347.	3089.	-5068.	-5922.	-4152.	-1476.	.0538	-.0868	.1498	.0810	-.1145	-.1610	10426.		
.0980	3020.	2685.	-3797.	-5601.	-4889.	-2592.	.0576	-.0847	.1343	.0663	-.1038	-.1443	11122.		
.0990	2499.	2136.	-2851.	-5351.	-5413.	-3202.	.0594	-.0775	.1162	.0539	-.0920	-.1253	11664.		
.1000	2132.	1575.	-1915.	-5190.	-5788.	-3509.	.0589	-.0671	.0961	.0408	-.0788	-.1046	12047.		
.1010	1128.	1136.	-640.	-5007.	-6062.	-3868.	.0561	-.0563	.0746	.0222	-.0638	-.0818	12378.		
.1020	560.	738.	450.	-4687.	-6118.	-4161.	.0512	-.0447	.0519	-.0005	-.0477	-.0573	12371.		
.1030	675.	207.	1075.	-4248.	-5855.	-4123.	.0447	-.0304	.0281	-.0222	-.0313	-.0320	11761.		
.1040	603.	-507.	1653.	-3777.	-5295.	-3821.	.0377	-.0131	.0029	-.0414	-.0152	-.0059	10655.		
.1050	314.	-1339.	2115.	-3215.	-4405.	-3455.	.0310	.0054	-.0238	-.0618	-.0007	.0209	9118.		
.1060	542.	-2206.	2013.	-2408.	-3149.	-3088.	.0251	.0233	-.0518	-.0874	.0112	.0477	7097.		
.1070	368.	-3047.	1841.	-1342.	-1718.	-2748.	.0201	.0399	-.0802	-.1175	.0207	.077	4955.		
.1080	-465.	-3913.	1737.	-158.	-159.	-2486.	.0170	.0555	-.1090	-.1467	.0269	.0982	3525.		
.1090	-1091.	-4922.	1152.	1037.	1640.	-2236.	.0182	.0708	-.1396	-.1695	.0271	.1187	4181.		
.1100	-3776.	-5657.	1570.	2122.	2853.	-1610.	.0178	.0858	-.1651	-.1882	.0286	.1326	5513.		
.1110	-4891.	-5944.	1451.	2934.	3818.	-1052.	.0159	.0975	-.1843	-.2068	.0334	.1399	6962.		
.1120	-4158.	-5906.	791.	3384.	4642.	-896.	.0137	.1049	-.1978	-.2202	.0418	.1422	8212.		
.1130	-4700.	-5827.	1077.	3581.	4963.	-650.	.0104	.1112	-.2059	-.2183	.0536	.1392	8693.		
.1140	-6332.	-5800.	2043.	3644.	4878.	-26.	.0065	.1174	-.2103	-.2018	.0670	.1297	8600.		
.1150	-7456.	-5576.	2859.	3490.	4768.	345.	.0034	.1193	-.2129	-.1839	.0801	.1148	8360.		
.1160	-9015.	-4981.	4003.	3022.	4601.	63.	.0012	.1148	-.2140	-.1716	.0921	.0958	7776.		
.1170	-10199.	-4282.	4960.	2320.	4424.	-270.	-.0012	.1083	-.2131	-.1574	.1020	.0732	7067.		
.1180	-12156.	-3666.	6335.	1547.	3937.	-120.	-.0067	.1034	-.2076	-.1337	.1110	.0490	5977.		
.1190	-10910.	-3188.	6280.	822.	3787.	-60.	-.0134	.0975	-.1986	-.1045	.1187	.0271	5474.		
.1200	-8556.	-2723.	5927.	252.	3819.	-547.	-.0204	.0880	-.1871	-.0777	.1266	.0095	5461.		
.1210	-9448.	-2234.	7205.	-55.	3424.	-1092.	-.0286	.0770	-.1729	-.0559	.1330	-.0056	5077.		

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.1110	-4551.	-5944.	1451.	2934.	3718.	-1052.	.0159	.0975	-.1843	-.2068	.0374	.1399	6962.
.1120	-4158.	-5906.	791.	3384.	4642.	-896.	.0137	.1049	-.1978	-.2202	.0418	.1422	8212.
.1130	-4700.	-5827.	1077.	3581.	4963.	-650.	.0104	.1112	-.2059	-.2183	.0536	.1392	8693.
.1140	-6332.	-5800.	2043.	3644.	4878.	-26.	.0065	.1174	-.2103	-.2018	.0670	.1297	8600.
.1150	-7456.	-5576.	2859.	3490.	4768.	345.	.0034	.1193	-.2129	-.1839	.0801	.1148	8360.
.1160	-9015.	-4981.	4003.	3022.	4601.	63.	.0012	.1148	-.2140	-.1716	.0921	.0958	7776.
.1170	-10199.	-4282.	4960.	2320.	4424.	-270.	-.0012	.1083	-.2131	-.1574	.1020	.0732	7067.
.1180	-12156.	-3666.	6335.	1547.	3937.	-120.	-.0067	.1034	-.2076	-.1337	.1110	.0490	5977.
.1190	-10910.	-3188.	6280.	822.	3787.	-60.	-.0124	.0975	-.1986	-.1045	.1187	.0271	5474.
.1200	-8556.	-2723.	5927.	252.	3819.	-547.	-.0204	.0880	-.1871	-.0777	.1266	.0095	5461.
.1210	-9448.	-2234.	7205.	-55.	3424.	-1092.	-.0286	.0770	-.1729	-.0559	.1330	-.0056	5077.

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INTERNAL FORCES IN THE PIPING
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SECTION	13	MEMBER	2	SEQUENCE	400	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	HX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1220	-7990.	-1756.	7066.	-221.	3280.	-1267.	-.0363	.0671	-.1571	-.0403	.1347	-.0210	4976.		
.1230	-5718.	-1133.	6278.	-515.	3254.	-1487.	-.0432	.0574	-.1393	-.0319	.1308	-.0355	5105.		
.1240	-3199.	-452.	5135.	-952.	3287.	-1895.	-.0482	.0482	-.1198	-.0267	.1208	-.0472	5525.		
.1250	-358.	65.	3485.	-1245.	3234.	-1938.	-.0521	.0418	-.0980	-.0196	.1046	-.0561	5608.		
.1260	670.	505.	2434.	-1271.	2784.	-1646.	-.0553	.0371	-.0738	-.0146	.0831	-.0617	4908.		
.1270	2914.	1000.	643.	-1279.	2549.	-1720.	-.0543	.0308	-.0501	-.0195	.0568	-.0639	4704.		
.1280	3248.	1580.	-274.	-1498.	2082.	-1978.	-.0499	.0245	-.0264	-.0325	.0273	-.0637	4575.		
.1290	3599.	2027.	-1382.	-1902.	1419.	-1599.	-.0439	.0230	-.0019	-.0462	-.0047	-.0632	4042.		
.1300	5184.	2310.	-3197.	-2341.	730.	-811.	-.0365	.0248	.0235	-.0605	-.0378	-.0606	3648.		
.1310	4268.	2622.	-3557.	-2638.	-376.	-431.	-.0292	.0252	.0506	-.0793	-.0681	-.0526	3813.		
.1320	4444.	2847.	-4213.	-2638.	-1454.	-309.	-.0219	.0248	.0783	-.0999	-.0950	-.0399	4277.		
.1330	4816.	2909.	-4819.	-2385.	-2663.	228.	-.0162	.0277	.1064	-.1167	-.1184	-.0262	5060.		
.1340	5361.	2898.	-5380.	-2128.	-3759.	1010.	-.0110	.0336	.1326	-.1315	-.1382	-.0138	6266.		
.1350	5708.	2927.	-5705.	-1921.	-4551.	1501.	-.0052	.0393	.1543	-.1482	-.1545	-.0023	7292.		
.1360	4639.	2957.	-5300.	-1496.	-5274.	1850.	-.0005	.0445	.1719	-.1645	-.1680	.0083	8172.		
.1370	5524.	2867.	-5927.	-728.	-5552.	2306.	.0030	.0499	.1847	-.1763	-.1794	.0175	8554.		
.1380	4885.	2820.	-5707.	97.	-5773.	2616.	.0041	.0546	.1937	-.1821	-.1867	.0253	8954.		
.1390	4025.	2876.	-5212.	659.	-5780.	2746.	.0028	.0590	.1989	-.1812	-.1887	.0307	9087.		
.1400	5251.	2978.	-5640.	948.	-5454.	3114.	-.0015	.0647	.2009	-.1718	-.1851	.0322	8972.		
.1410	5816.	3185.	-5579.	1118.	-5191.	3666.	-.0098	.0707	.2001	-.1561	-.1749	.0302	9114.		
.1420	6843.	3479.	-5526.	1237.	-4645.	3865.	-.0192	.0741	.1946	-.1377	-.1588	.0268	8712.		
.1430	6423.	3745.	-4622.	1329.	-4010.	3716.	-.0293	.0754	.1840	-.1157	-.1386	.0231	7947.		
.1440	6206.	3800.	-3923.	1397.	-3176.	3711.	-.0398	.0776	.1684	-.0880	-.1167	.0186	7176.		
.1450	6508.	3710.	-3663.	1381.	-2145.	3824.	-.0502	.0807	.1481	-.0588	-.0940	.0130	6493.		
.1460	5162.	3649.	-2649.	1254.	-1179.	3608.	-.0601	.0821	.1242	-.0350	-.0701	.0082	5647.		
.1470	5135.	3458.	-2285.	1155.	70.	3064.	-.0679	.0818	.0965	-.0167	-.0451	.0058	4626.		
.1480	3931.	3011.	-1246.	1256.	1095.	2571.	-.0753	.0818	.0676	.0006	-.0181	.0069	4327.		
.1490	2336.	2342.	103.	1532.	1924.	2102.	-.0818	.0823	.0385	.0176	.0106	.0118	4570.		
.1500	1944.	1624.	916.	1807.	2758.	1404.	-.0863	.0819	.0096	.0305	.0396	.0197	5062.		
.1510	869.	976.	2014.	1984.	3282.	623.	-.0897	.0812	-.0178	.0382	.0670	.0294	5488.		
.1520	730.	327.	2452.	2095.	3707.	15.	-.0908	.0813	-.0439	.0423	.0908	.0394	6014.		
.1530	-572.	-256.	3251.	2181.	3819.	-530.	-.0898	.0816	-.0687	.0435	.1098	.0493	6258.		
.1540	-1454.	-773.	3594.	2228.	3937.	-1267.	-.0852	.0809	-.0930	.0419	.1227	.0592	6636.		
.1550	-1938.	-1277.	3485.	2214.	4064.	-2019.	-.0774	.0801	-.1164	.0394	.1297	.0684	7132.		
.1560	-4507.	-1722.	4250.	2126.	3783.	-2545.	-.0686	.0803	-.1368	.0367	.1328	.0761	7106.		
.1570	-5167.	-2088.	4008.	1920.	3627.	-2987.	-.0580	.0806	-.1547	.0322	.1327	.0824	7169.		
.158	-5706.	-2307.	3767.	1586.	3365.	-3505.	-.0472	.0802	-.1685	.0258	.1309	.0883	7220.		
.1590	-7350.	-2492.	4144.	1230.	2786.	-3893.	-.0378	.0804	-.1772	.0212	.1281	.0948	6981.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.32.

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

.1450	2336.	2342.	103.	1532.	1924.	2102.	-.818	.0823	.0385	.0176	.0106	.0118	4570.
.1500	1944.	1624.	216.	1807.	2758.	1404.	-.0863	.0819	.0096	.0305	.0396	.0197	5062.
.1510	869.	976.	2014.	1984.	3282.	623.	-.0897	.0812	-.0178	.0382	.0570	.0294	5488.
.1520	730.	327.	2452.	2095.	3707.	15.	-.0908	.0813	-.0439	.0423	.0908	.0394	6014.
.1530	-572.	-256.	3251.	2181.	3819.	-530.	-.0898	.0816	-.0687	.0435	.1098	.0493	6258.
.1540	-1454.	-773.	3594.	2228.	3937.	-1267.	-.0852	.0809	-.0930	.0419	.1227	.0592	6636.
.1550	-1938.	-1277.	3485.	2214.	4064.	-2019.	-.0774	.0801	-.1164	.0394	.1297	.0684	7132.
.1560	-4507.	-1722.	4250.	2126.	3783.	-2545.	-.0686	.0803	-.1368	.0367	.1328	.0761	7106.
.1570	-5167.	-2088.	4008.	1920.	3627.	-2987.	-.0580	.0806	-.1547	.0322	.1327	.0824	7169.
.1580	-5706.	-2307.	3767.	1586.	3365.	-3505.	-.0472	.0802	-.1685	.0258	.1309	.0883	7220.
.1590	-7350.	-2492.	4144.	1230.	2786.	-3893.	-.0378	.0804	-.1772	.0212	.1281	.0948	6981.

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DIS/ADLPIPE

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

CONDITION 24

LOADS

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

SECTION	13	MEMBER	2	SEQUENCE	400	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1600	-6914.	-2800.	3520.	970.	2316.	-4003.	-.0296	.0817	-.1814	.0199	.1237	.1023	6674.		
.1610	-5357.	-3160.	2482.	782.	1993.	-4098.	-.0218	.0828	-.1824	.0182	.1188	.1107	6531.		
.1620	-6455.	-3466.	2966.	665.	1441.	-4296.	-.0148	.0828	-.1809	.0136	.1145	.1196	6469.		
.1630	-6116.	-3836.	2826.	694.	1174.	-4344.	-.0077	.0826	-.1778	.0070	.1095	.1275	6431.		
.1640	-5169.	-4241.	2472.	852.	1056.	-4242.	-.0012	.0822	-.1726	.0002	.1039	.1342	6291.		
.1650	-5757.	-4554.	3036.	1030.	802.	-4213.	.0038	.0807	-.1645	-.0057	.0987	.1398	6230.		
.1660	-4790.	-4802.	2912.	1196.	748.	-4139.	.0082	.0786	-.1537	-.0083	.0932	.1431	6177.		
.1670	-3893.	-4940.	2860.	1340.	573.	-3797.	.0106	.0765	-.1392	-.0063	.0877	.1429	5745.		
.1680	-2887.	-4882.	2806.	1363.	345.	-3356.	.0118	.0734	-.1217	-.0022	.0828	.1387	5139.		
.1690	-3017.	-4530.	3358.	1215.	-70.	-3012.	.0121	.0681	-.1015	.0025	.0783	.1306	4589.		
.1700	-2400.	-3990.	3435.	973.	-443.	-2607.	.0122	.0618	-.0794	.0104	.0721	.1183	3980.		
.1710	420.	-3420.	2219.	679.	-508.	-2032.	.0132	.0554	-.0571	.0230	.0632	.1019	3111.		
.1720	-151.	-2737.	2514.	331.	-923.	-1463.	.0143	.0480	-.0345	.0376	.0524	.0831	2488.		
.1730	-492.	-1966.	2431.	-4.	-1221.	-1025.	.0164	.0388	-.0126	.0501	.0388	.0624	2251.		
.1740	423.	-1126.	1420.	-247.	-1352.	-648.	.0190	.0282	.0088	.0602	.0218	.0403	2146.		
.1750	436.	-265.	662.	-436.	-1606.	-278.	.0208	.0172	.0302	.0698	.0033	.0181	2383.		
.1760	938.	491.	-424.	-622.	-1763.	100.	.0223	.0066	.0510	.0801	-.0155	-.0031	2644.		
.1770	718.	1146.	-1143.	-725.	-2028.	501.	.0222	-.0037	.0716	.0906	-.0330	-.0223	3123.		
.1780	1745.	1706.	-2408.	-667.	-2125.	832.	.0209	-.0144	.0909	.0984	-.0484	-.0390	3358.		
.1790	1894.	2241.	-3075.	-490.	-2282.	1015.	.0177	-.0260	.1088	.1020	-.0605	-.0528	3594.		
.1800	1359.	2717.	-3240.	-296.	-2437.	1159.	.0128	-.0374	.1245	.1034	-.0698	-.0639	3835.		
.1810	3118.	3048.	-4422.	-153.	-2164.	1405.	.0073	-.0472	.1368	.1048	-.0772	-.0731	3650.		
.1820	3440.	3341.	-4706.	-55.	-1938.	1708.	.0004	-.0560	.1459	.1056	-.0816	-.0804	3649.		
.1830	3557.	3628.	-4694.	60.	-1589.	1948.	-.0072	-.0646	.1514	.1035	-.0831	-.0858	3551.		
.1840	4086.	3923.	-4699.	233.	-1096.	2110.	-.0151	-.0732	.1536	.0986	-.0819	-.0893	3375.		
.1850	4405.	4232.	-4394.	398.	-602.	2267.	-.0235	-.0810	.1534	.0931	-.0779	-.0915	3360.		
.1860	5242.	4525.	-4173.	462.	-47.	2507.	-.0316	-.0867	.1513	.0892	-.0715	-.0931	3601.		
.1870	5117.	4818.	-3402.	453.	289.	2874.	-.0399	-.0900	.1484	.0870	-.0635	-.0940	4129.		
.1880	6145.	5066.	-3259.	489.	665.	3244.	-.0473	-.0919	.1444	.0847	-.0557	-.0939	4728.		
.1890	6759.	5286.	-2997.	637.	908.	3468.	-.0531	-.0932	.1395	.0807	-.0485	-.0919	5142.		
.1900	5950.	5436.	-2150.	872.	918.	3603.	-.0571	-.0933	.1336	.0757	-.0425	-.0884	5394.		
.1910	6142.	5389.	-2013.	1147.	1038.	3791.	-.0580	-.0911	.1258	.0713	-.0390	-.0837	5783.		
.1920	5889.	5154.	-1865.	1437.	1092.	3984.	-.0561	-.0869	.1164	.0672	-.0377	-.0775	6178.		
.1930	5140.	4772.	-1623.	1754.	1096.	4034.	-.0514	-.0821	.1053	.0610	-.0377	-.0695	6403.		
.1940	4533.	4255.	-1546.	2113.	1109.	3934.	-.0440	-.0773	.0927	.0521	-.0380	-.0594	6499.		
.1950	3781.	3591.	-1426.	2461.	1073.	3768.	-.0348	-.0722	.0791	.0427	-.0377	-.0476	6535.		
.1960	2592.	2783.	-1082.	2701.	940.	3579.	-.0243	-.0664	.0652	.0351	-.0361	-.0344	6471.		
.1970	1697.	1881.	-875.	2772.	792.	3361.	-.0131	-.0605	.0510	.0296	-.0331	-.0206	6255.		

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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

.1870	5117.	4818.	-3402.	453.	289.	2874.	-.0399	-.0900	.1484	.0870	-.0635	-.0940	4129.
.1880	6145.	5066.	-3259.	489.	665.	3244.	-.0473	-.0919	.1444	.0847	-.0557	-.0939	4728.
.1890	6759.	5286.	-2997.	637.	908.	3468.	-.0531	-.0932	.1395	.0807	-.0485	-.0919	5142.
.1900	5950.	5436.	-2150.	872.	918.	3603.	-.0571	-.0933	.1336	.0757	-.0425	-.0884	5394.
.1910	6142.	5309.	-2013.	1147.	1038.	3791.	-.0580	-.0911	.1258	.0713	-.0390	-.0837	5783.
.1920	5889.	5154.	-1865.	1437.	1092.	3984.	-.0561	-.0869	.1164	.0672	-.0377	-.0775	6178.
.1930	5140.	4772.	-1623.	1754.	1096.	4034.	-.0514	-.0821	.1053	.0610	-.0377	-.0695	6403.
.1940	4533.	4255.	-1546.	2113.	1109.	3934.	-.0440	-.0773	.0927	.0521	-.0380	-.0594	6499.
.1950	3781.	3591.	-1426.	2461.	1073.	3768.	-.0348	-.0722	.0791	.0427	-.0377	-.0476	6535.
.1960	2592.	2783.	-1082.	2701.	940.	3579.	-.0243	-.0664	.0652	.0351	-.0361	-.0344	6471.
.1970	1697.	1881.	-875.	2772.	792.	3361.	-.0131	-.0605	.0510	.0296	-.0331	-.0206	6255.

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

SECTION	13	MEMBER	2	SEQUENCE	400	LOCATION	END	TYPE	RU					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)		DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.1980	1367.	964.	-922.	2675.	671.	3008.		-.0014	-.0549	.0365	.0250	-.0286	-.0074	5848.
.1990	721.	88.	-738.	2443.	508.	2726.		.0105	-.0503	.0216	.0207	-.0220	.0046	5219.
.2000	-586.	-749.	-146.	2118.	311.	2271.		.0223	-.0468	.0060	.0178	-.0136	.0149	4408.
.2010	-1921.	-1555.	487.	1734.	176.	1755.		.0339	-.0443	-.0102	.0177	-.0344	.0231	3493.
.2020	-3055.	-2291.	1014.	1306.	113.	1190.		.0448	-.0427	-.0268	.0210	.0050	.0287	2501.
.2030	-4181.	-2896.	1550.	843.	73.	576.		.0544	-.0421	-.0431	.0271	.0148	.0313	1445.
.2040	-5113.	-3353.	2043.	359.	64.	-77.		.0622	-.0427	-.0585	.0350	.0252	.0310	526.
.2050	-5768.	-3678.	2486.	-115.	85.	-760.		.0681	-.0444	-.0727	.0450	.0365	.0282	1093.
.2060	-6296.	-3897.	2959.	-542.	100.	-1471.		.0719	-.0471	-.0851	.0578	.0486	.0235	2219.
.2070	-6464.	-4039.	3320.	-912.	129.	-2188.		.0736	-.0505	-.0956	.0737	.0607	.0172	3353.
.2080	-5993.	-4117.	3395.	-1259.	217.	-2879.		.0736	-.0543	-.1041	.0917	.0723	.0095	4449.
.2090	-5318.	-4110.	3378.	-1626.	330.	-3532.		.0723	-.0586	-.1107	.1097	.0826	.0006	5512.
.2100	-4888.	-4004.	3453.	-2014.	410.	-4134.		.0702	-.0631	-.1153	.1262	.0912	-.0093	6521.
.2110	-4306.	-3831.	3373.	-2390.	488.	-4657.		.0676	-.0675	-.1179	.1410	.0972	-.0195	7425.
.2120	-3402.	-3629.	3048.	-2732.	574.	-5076.		.0648	-.0716	-.1183	.1538	.1002	-.0290	8183.
.2130	-2684.	-3403.	2773.	-3035.	590.	-5365.		.0620	-.0749	-.1160	.1639	.1007	-.0373	8747.
.2140	-2300.	-3137.	2654.	-3281.	486.	-5487.		.0592	-.0773	-.1109	.1698	.0993	-.0440	9056.
.2150	-1917.	-2819.	2512.	-3444.	283.	-5434.		.0564	-.0787	-.1027	.1702	.0958	-.0486	9096.
.2160	-1508.	-2461.	2300.	-3499.	-4.	-5237.		.0535	-.0792	-.0916	.1646	.0899	-.0508	8896.
.2170	-1327.	-2098.	2111.	-3417.	-371.	-4882.		.0506	-.0784	-.0779	.1543	.0814	-.0503	8433.
.2180	-1328.	-1765.	1898.	-3170.	-766.	-4336.		.0477	-.0760	-.0622	.1401	.0700	-.0473	7664.
.2190	-1453.	-1448.	1638.	-2756.	-1129.	-3639.		.0447	-.0724	-.0453	.1222	.0561	-.0424	6642.
.2200	-1797.	-1115.	1402.	-2200.	-1423.	-2871.		.0416	-.0679	-.0279	.1004	.0401	-.0362	5490.
.2210	-2128.	-763.	1098.	-1541.	-1595.	-2042.		.0380	-.0628	-.0105	.0762	.0227	-.0294	4258.
.2220	-2102.	-415.	599.	-828.	-1593.	-1116.		.0338	-.0567	.0064	.0524	.0046	-.0229	2986.
.2230	-1854.	-71.	39.	-105.	-1434.	-118.		.0287	-.0498	.0226	.0308	-.0131	-.0171	2038.
.2240	-1550.	293.	-444.	594.	-1161.	880.		.0225	-.0428	.0379	.0120	-.0295	-.0123	2223.
.2250	-908.	696.	-982.	1241.	-786.	1838.		.0150	-.0361	.0523	-.0038	-.0440	-.0086	3324.
.2260	219.	1138.	-1648.	1788.	-336.	2748.		.0065	-.0299	.0657	-.0162	-.0565	-.0066	4655.
.2270	1527.	1601.	-2277.	2192.	127.	3594.		-.0028	-.0242	.0780	-.0246	-.0566	-.0063	5949.
.2280	2791.	2044.	-2766.	2463.	557.	4351.		-.0122	-.0189	.0891	-.0289	-.0745	-.0074	7106.
.2290	3970.	2442.	-3129.	2655.	920.	4974.		-.0213	-.0145	.0987	-.0300	-.0802	-.0095	8069.
.2300	4876.	2799.	-3309.	2805.	1161.	5401.		-.0297	-.0114	.1070	-.0295	-.0840	-.0122	8752.
.2310	5409.	3121.	-3283.	2902.	1245.	5615.		-.0371	-.0097	.1139	-.0285	-.0861	-.0154	9100.
.2320	5749.	3386.	-3163.	2918.	1180.	5667.		-.0432	-.0087	.1197	-.0268	-.0866	-.0189	9156.
.2330	5929.	3571.	-2985.	2847.	969.	5602.		-.0480	-.0082	.1243	-.0243	-.0856	-.0226	8980.
.2340	5798.	3680.	-2679.	2717.	616.	5394.		-.0513	-.0083	.1275	-.0217	-.0830	-.0260	8575.
.2350	5441.	3724.	-2296.	2556.	171.	5004.		-.0532	-.0094	.1289	-.0202	-.0790	-.0289	7941.

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ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.32.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

.2250	-908.	696.	-982.	1241.	-786.	1838.	.150	-.0361	.0523	-.0038	-.0440	-.0086	3324.
.2260	219.	1138.	-1648.	1788.	-336.	2748.	.065	-.0299	.0657	-.0162	-.0565	-.0066	4655.
.2270	1527.	1601.	-2277.	2192.	127.	3594.	-.0028	-.0242	.0780	-.0246	-.0566	-.0063	5949.
.2280	2791.	2044.	-2766.	2463.	557.	4351.	-.0122	-.0189	.0891	-.0289	-.0745	-.0074	7106.
.2290	3970.	2442.	-3129.	2655.	920.	4974.	-.0213	-.0145	.0987	-.0300	-.0802	-.0095	8069.
.2300	4876.	2799.	-3309.	2805.	1161.	5401.	-.0297	-.0114	.1070	-.0295	-.0840	-.0122	8752.
.2310	5409.	3121.	-3283.	2902.	1245.	5615.	-.0371	-.0097	.1139	-.0285	-.0861	-.0154	9100.
.2320	5749.	3386.	-3163.	2918.	1180.	5667.	-.0432	-.0087	.1197	-.0268	-.0866	-.0189	9156.
.2330	5929.	3571.	-2985.	2847.	969.	5602.	-.0480	-.0082	.1243	-.0243	-.0856	-.0226	8980.
.2340	5798.	3680.	-2679.	2717.	616.	5394.	-.0513	-.0083	.1275	-.0217	-.0830	-.0260	8575.
.2350	5441.	3724.	-2296.	2556.	171.	5004.	-.0532	-.0094	.1289	-.0202	-.0790	-.0289	7941.

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
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CONDITION 24

LOADS

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

SECTION	13	MEMBER	2	SEQUENCE	400	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2360	5029.	3701.	-1936.	2345.	-291.	4459.	-.0533	-.0112	.1282	-.0199	-.0740	-.0311	7127.		
.2370	4481.	3606.	-1582.	2029.	-725.	3832.	-.0519	-.0133	.1249	-.0201	-.0683	-.0331	6210.		
.2380	3791.	3441.	-1259.	1575.	-1082.	3176.	-.0490	-.0150	.1188	-.0204	-.0625	-.0352	5236.		
.2390	3213.	3223.	-1108.	1004.	-1303.	2488.	-.0446	-.0164	.1096	-.0209	-.0570	-.0373	4212.		
.2400	2795.	2971.	-1136.	359.	-1367.	1754.	-.0392	-.0175	.0976	-.0219	-.0519	-.0393	3182.		
.2410	2322.	2692.	-1190.	-330.	-1306.	1006.	-.0330	-.0180	.0831	-.0231	-.0467	-.0412	2375.		
.2420	1827.	2383.	-1234.	-1045.	-1139.	306.	-.0262	-.0174	.0667	-.0239	-.0413	-.0430	2225.		
.2430	1558.	2044.	-1358.	-1751.	-876.	-313.	-.0192	-.0152	.0489	-.0240	-.0354	-.0445	2801.		
.2440	1520.	1679.	-1551.	-2394.	-559.	-862.	-.0121	-.0115	.0306	-.0242	-.0289	-.0452	3679.		
.2450	1504.	1281.	-1692.	-2903.	-246.	-1358.	-.0052	-.0064	.0121	-.0252	-.0220	-.0444	4540.		
.2460	1336.	832.	-1686.	-3229.	19.	-1798.	.0016	.0000	-.0059	-.0275	-.0148	-.0416	5221.		
.2470	901.	319.	-1460.	-3356.	197.	-2174.	.0082	.0078	-.0232	-.0313	-.0073	-.0365	5655.		
.2480	213.	-252.	-1036.	-3297.	262.	-2485.	.0146	.0167	-.0392	-.0366	.0002	-.0291	5843.		
.2490	-498.	-870.	-565.	-3077.	223.	-2733.	.0204	.0266	-.0536	-.0434	.0073	-.0196	5821.		
.2500	-1155.	-1516.	-91.	-2734.	97.	-2921.	.0255	.0371	-.0663	-.0517	.0139	-.0083	5653.		
.2510	-2050.	-2161.	554.	-2314.	-126.	-3052.	.0298	.0480	-.0774	-.0612	.0203	.0043	5413.		
.2520	-3263.	-2771.	1411.	-1858.	-435.	-3124.	.0330	.0587	-.0867	-.0714	.0267	.0173	5170.		
.2530	-4352.	-3315.	2229.	-1405.	-754.	-3135.	.0348	.0691	-.0944	-.0819	.0327	.0303	4968.		
.2540	-4982.	-3764.	2816.	-1007.	-1007.	-3092.	.0351	.0789	-.1008	-.0921	.0383	.0425	4808.		
.2550	-5295.	-4099.	3242.	-706.	-1162.	-2987.	.0339	.0878	-.1061	-.1018	.0433	.0532	4637.		
.2560	-5486.	-4311.	3602.	-508.	-1200.	-2811.	.0314	.0958	-.1109	-.1112	.0478	.0622	4376.		
.2570	-5489.	-4403.	3836.	-376.	-1089.	-2590.	.0277	.1025	-.1153	-.1206	.0514	.0694	4004.		
.2580	-5230.	-4375.	3874.	-281.	-813.	-2380.	.0230	.1074	-.1194	-.1304	.0538	.0749	3574.		
.2590	-4735.	-4246.	3713.	-218.	-392.	-2183.	.0174	.1106	-.1231	-.1401	.0548	.0788	3148.		
.2600	-4069.	-4045.	3393.	-187.	135.	-1953.	.0113	.1127	-.1262	-.1491	.0544	.0809	2777.		
.2610	-3419.	-3779.	3030.	-174.	700.	-1686.	.0048	.1137	-.1281	-.1572	.0529	.0811	2590.		
.2620	-2935.	-3432.	2710.	-155.	1232.	-1444.	-.0021	.1134	-.1285	-.1651	.0505	.0797	2690.		
.2630	-2500.	-3012.	2370.	-108.	1692.	-1249.	-.0090	.1117	-.1269	-.1723	.0471	.0767	2974.		
.2640	-2025.	-2555.	1975.	-43.	2048.	-1061.	-.0160	.1091	-.1231	-.1777	.0428	.0724	3258.		
.2650	-1702.	-2087.	1644.	5.	2265.	-846.	-.0226	.1062	-.1170	-.1806	.0377	.0667	3415.		
.2660	-1644.	-1608.	1444.	21.	2329.	-624.	-.0289	.1029	-.1088	-.1816	.0319	.0599	3406.		
.2670	-1654.	-1112.	1270.	13.	2271.	-433.	-.0346	.0990	-.0985	-.1817	.0254	.0523	3265.		
.2680	-1596.	-612.	1058.	-10.	2123.	-281.	-.0397	.0945	-.0866	-.1811	.0181	.0445	3025.		
.2690	-1549.	-135.	868.	-62.	1905.	-142.	-.0442	.0898	-.0733	-.1794	.0105	.0366	2699.		
.2700	-1487.	303.	708.	-153.	1642.	18.	-.0480	.0853	-.0590	-.1761	.0027	.0289	2329.		
.2710	-1227.	717.	494.	-268.	1365.	203.	-.0513	.0812	-.0436	-.1719	-.0050	.0215	1985.		
.2720	-695.	1139.	184.	-378.	1088.	383.	-.0541	.0773	-.0276	-.1676	-.0125	.0146	1714.		
.2730	69.	1569.	-208.	-465.	818.	553.	-.0566	.0738	-.0110	-.1636	-.0198	.0083	1542.		

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

.2630	-2500.	-3012.	2370.	-108.	1692.	-1249.	-.0090	.1117	-.1269	-.1723	.0471	.0767	2974.
.2640	-2025.	-2555.	1975.	-43.	2048.	-1061.	-.0160	.1091	-.1231	-.1777	.0428	.0724	3258.
.2650	-1702.	-2087.	1644.	5.	2265.	-846.	-.0226	.1062	-.1170	-.1806	.0377	.0667	3415.
.2660	-1644.	-1608.	1444.	21.	2329.	-624.	-.0289	.1029	-.1088	-.1816	.0319	.0599	3406.
.2670	-1654.	-1112.	1270.	13.	2271.	-433.	-.0346	.0990	-.0985	-.1817	.0254	.0523	3265.
.2680	-1596.	-612.	1058.	-10.	2123.	-281.	-.0397	.0945	-.0866	-.1811	.0181	.0445	3025.
.2690	-1549.	-135.	868.	-62.	1905.	-142.	-.0442	.0898	-.0733	-.1794	.0105	.0366	2699.
.2700	-1487.	303.	708.	-153.	1642.	18.	-.0480	.0853	-.0590	-.1761	.0027	.0289	2329.
.2710	-1227.	717.	494.	-268.	1365.	203.	-.0513	.0812	-.0436	-.1719	-.0050	.0215	1985.
.2720	-695.	1139.	184.	-378.	1088.	383.	-.0541	.0773	-.0276	-.1676	-.0125	.0146	1714.
.2730	69.	1569.	-208.	-465.	818.	553.	-.0566	.0738	-.0110	-.1636	-.0198	.0083	1542.

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ENGLISH UNITS

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

SECTION	13	MEMBER	2	SEQUENCE	400	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2740	1030.	1968.	-680.	-525.	573.	748.		-.0584	.0710	.0056	-.1591	-.0271	.0026	1524.	
.2750	2030.	2314.	-1174.	-547.	350.	987.		-.0595	.0693	.0219	-.1541	-.0344	-.0023	1668.	
.2760	2906.	2620.	-1629.	-516.	134.	1236.		-.0598	.0684	.0373	-.1493	-.0418	-.0064	1902.	
.2770	3671.	2893.	-2069.	-422.	-70.	1460.		-.0590	.0680	.0516	-.1456	-.0495	-.0097	2149.	
.2780	4313.	3111.	-2487.	-277.	-269.	1664.		-.0573	.0683	.0645	-.1425	-.0572	-.0120	2413.	
.2790	4672.	3243.	-2787.	-109.	-486.	1875.		-.0547	.0692	.0759	-.1391	-.0647	-.0131	2741.	
.2800	4716.	3290.	-2933.	60.	-731.	2094.		-.0514	.0710	.0854	-.1350	-.0714	-.0131	3135.	
.2810	4611.	3270.	-2992.	222.	-990.	2288.		-.0475	.0731	.0932	-.1304	-.0770	-.0121	3536.	
.2820	4432.	3190.	-2992.	370.	-1247.	2429.		-.0433	.0753	.0988	-.1257	-.0812	-.0101	3892.	
.2830	4121.	3038.	-2890.	486.	-1492.	2518.		-.0389	.0774	.1022	-.1205	-.0836	-.0070	4191.	
.2840	3710.	2811.	-2701.	552.	-1695.	2563.		-.0343	.0795	.1031	-.1147	-.0842	-.0032	4410.	
.2850	3291.	2523.	-2482.	571.	-1825.	2550.		-.0297	.0815	.1011	-.1084	-.0830	.0011	4502.	
.2860	2879.	2191.	-2258.	566.	-1873.	2449.		-.0252	.0828	.0965	-.1022	-.0802	.0060	4427.	
.2870	2475.	1825.	-2038.	548.	-1842.	2249.		-.0208	.0834	.0892	-.0962	-.0760	.0113	4179.	
.2880	2113.	1437.	-1842.	515.	-1740.	1965.		-.0168	.0832	.0796	-.0903	-.0703	.0171	3779.	
.2890	1787.	1045.	-1662.	457.	-1591.	1616.		-.0134	.0823	.0682	-.0844	-.0632	.0229	3267.	
.2900	1488.	666.	-1492.	377.	-1419.	1212.		-.0106	.0807	.0554	-.0781	-.0547	.0289	2689.	
.2910	1255.	310.	-1353.	285.	-1240.	758.		-.0087	.0783	.0417	-.0716	-.0450	.0347	2092.	
.2920	1061.	-13.	-1224.	189.	-1064.	260.		-.0076	.0752	.0273	-.0646	-.0341	.0404	1571.	
.2930	779.	-298.	-1032.	85.	-904.	-263.		-.0072	.0714	.0124	-.0571	-.0222	.0456	1335.	
.2940	369.	-546.	-750.	-30.	-753.	-783.		-.0075	.0673	-.0027	-.0487	-.0093	.0501	1536.	
.2950	-84.	-761.	-420.	-150.	-594.	-1280.		-.0083	.0630	-.0179	-.0395	.0042	.0538	2005.	
.2960	-548.	-942.	-51.	-261.	-412.	-1749.		-.0096	.0586	-.0331	-.0294	.0181	.0566	2565.	
.2970	-1059.	-1094.	389.	-349.	-203.	-2178.		-.0113	.0543	-.0481	-.0186	.0323	.0586	3129.	
.2980	-1596.	-1235.	904.	-402.	36.	-2543.		-.0133	.0502	-.0625	-.0070	.0467	.0601	3637.	
.2990	-2083.	-1377.	1453.	-410.	309.	-2828.		-.0155	.0465	-.0761	.0051	.0610	.0614	4060.	
.3000	-2459.	-1522.	1997.	-366.	614.	-3036.		-.0179	.0433	-.0885	.0173	.0749	.0625	4406.	
.3010	-2692.	-1668.	2493.	-264.	945.	-3165.		-.0201	.0405	-.0993	.0292	.0878	.0637	4680.	
.3020	-2797.	-1824.	2920.	-98.	1290.	-3206.		-.0220	.0382	-.1084	.0406	.0992	.0650	4884.	
.3030	-2851.	-1996.	3283.	132.	1629.	-3184.		-.0232	.0364	-.1155	.0512	.1085	.0665	5031.	
.3040	-2905.	-2169.	3571.	423.	1941.	-3054.		-.0237	.0348	-.1204	.0606	.1152	.0680	5147.	
.3050	-2927.	-2324.	3733.	755.	2208.	-2886.		-.0231	.0334	-.1229	.0687	.1189	.0693	5242.	
.3060	-2912.	-2447.	3749.	1102.	2407.	-2658.		-.0215	.0320	-.1228	.0753	.1193	.0702	5299.	
.3070	-2926.	-2535.	3653.	1438.	2512.	-2375.		-.0188	.0306	-.1199	.0808	.1166	.0704	5288.	
.3080	-2991.	-2578.	3471.	1741.	2504.	-2051.		-.0152	.0287	-.1143	.0852	.1109	.0701	5192.	
.3090	-3059.	-2564.	3200.	1996.	2381.	-1705.		-.0110	.0263	-.1059	.0885	.1028	.0691	5006.	
.3100	-3096.	-2484.	2853.	2185.	2146.	-1350.		-.0062	.0231	-.0950	.0908	.0927	.0674	4728.	
.3110	-3101.	-2341.	2465.	2294.	1815.	-990.		-.0013	.0189	-.0818	.0926	.0813	.0648	4362.	

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LOADS

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ENGLISH UNITS

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

.3010	-2692.	-1668.	2493.	-264.	945.	-3165.	-.0201	.0405	-.0993	.0292	.0878	.0637	4680.
.3020	-2797.	-1824.	2920.	-98.	1290.	-3206.	-.0220	.0387	-.1084	.0406	.0992	.0650	4884.
.3030	-2851.	-1996.	3283.	132.	1629.	-3164.	-.0232	.0364	-.1155	.0512	.1085	.0665	5031.
.3040	-2905.	-2169.	3571.	423.	1941.	-3054.	-.0237	.0348	-.1204	.0606	.1152	.0680	5147.
.3050	-2927.	-2324.	3733.	755.	2209.	-2886.	-.0231	.0334	-.1229	.0687	.1189	.0693	5242.
.3060	-2912.	-2447.	3749.	1102.	2407.	-2658.	-.0215	.0320	-.1228	.0753	.1193	.0702	5299.
.3070	-2926.	-2535.	3653.	1438.	2512.	-2375.	-.0188	.0306	-.1199	.0808	.1166	.0704	5288.
.3080	-2991.	-2578.	3471.	1741.	2504.	-2051.	-.0152	.0287	-.1143	.0852	.1109	.0701	5192.
.3090	-3059.	-2564.	3200.	1996.	2381.	-1705.	-.0110	.0263	-.1059	.0885	.1028	.0691	5006.
.3100	-3096.	-2484.	2853.	2185.	2146.	-1350.	-.0062	.0231	-.0950	.0908	.0927	.0674	4728.
.3110	-3101.	-2341.	2465.	2294.	1815.	-990.	-.0013	.0189	-.0818	.0926	.0813	.0648	4362.

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ENGLISH UNITS

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

SECTION	13	MEMBER	2	SEQUENCE	400	LOCATTON	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ				DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3120	-3049.	-2143.	2058.	2318.	1415.	-631.	.0035	.0139	-.0668	.0941	.0590	.0614	3938.		
.3130	-2911.	-1893.	1645.	2268.	977.	-287.	.0081	.0078	-.0505	.0956	.0564	.0571	3512.		
.3140	-2688.	-1596.	1250.	2163.	530.	24.	.0121	.0007	-.0335	.0971	.0439	.0518	3146.		
.3150	-2361.	-1259.	876.	2016.	103.	289.	.0156	-.0074	-.0161	.0990	.0318	.0456	2880.		
.3160	-1915.	-895.	525.	1835.	-282.	514.	.0182	-.0164	.0011	.1016	.0204	.0383	2721.		
.3170	-1354.	-514.	197.	1627.	-614.	706.	.0200	-.0261	.0180	.1052	.0099	.0300	2651.		
.3180	-681.	-128.	-115.	1402.	-887.	860.	.0208	-.0363	.0342	.1100	.0005	.0209	2640.		
.3190	85.	256.	-417.	1173.	-1101.	967.	.0209	-.0471	.0496	.1156	-.0079	.0110	2651.		
.3200	901.	632.	-708.	943.	-1262.	1030.	.0203	-.0581	.0640	.1221	-.0153	.0005	2659.		
.3210	1693.	994.	-977.	709.	-1382.	1065.	.0193	-.0693	.0773	.1294	-.0218	-.0104	2660.		
.3220	2431.	1337.	-1239.	466.	-1468.	1083.	.0180	-.0802	.0893	.1372	-.0278	-.0215	2660.		
.3230	3117.	1658.	-1520.	214.	-1524.	1087.	.0167	-.0909	.1000	.1450	-.0335	-.0328	2661.		
.3240	3708.	1961.	-1816.	-43.	-1557.	1079.	.0158	-.1012	.1092	.1525	-.0390	-.0439	2677.		
.3250	4132.	2250.	-2093.	-296.	-1582.	1069.	.0152	-.1109	.1170	.1589	-.0442	-.0547	2729.		
.3260	4395.	2517.	-2347.	-541.	-1601.	1069.	.0151	-.1197	.1233	.1641	-.0492	-.0649	2824.		
.3270	4538.	2754.	-2587.	-769.	-1612.	1086.	.0155	-.1275	.1281	.1678	-.0538	-.0743	2953.		
.3280	4577.	2952.	-2800.	-967.	-1618.	1123.	.0165	-.1342	.1315	.1697	-.0576	-.0824	3100.		
.3290	4527.	3108.	-2967.	-1120.	-1620.	1180.	.0179	-.1396	.1335	.1695	-.0606	-.0889	3243.		
.3300	4403.	3211.	-3074.	-1216.	-1611.	1255.	.0196	-.1437	.1340	.1671	-.0624	-.0938	3357.		
.3310	4193.	3249.	-3097.	-1246.	-1588.	1350.	.0216	-.1465	.1329	.1628	-.0629	-.0967	3430.		
.3320	3916.	3206.	-3036.	-1205.	-1543.	1459.	.0238	-.1479	.1303	.1568	-.0620	-.0976	3449.		
.3330	3617.	3080.	-2913.	-1093.	-1467.	1578.	.0261	-.1480	.1261	.1495	-.0599	-.0966	3412.		
.3340	3286.	2877.	-2722.	-918.	-1354.	1696.	.0286	-.1469	.1202	.1413	-.0567	-.0940	3329.		
.3350	2862.	2602.	-2432.	-695.	-1212.	1809.	.0311	-.1447	.1126	.1326	-.0523	-.0901	3228.		
.3360	2355.	2265.	-2058.	-438.	-1044.	1913.	.0335	-.1415	.1035	.1239	-.0469	-.0852	3139.		
.3370	1827.	1878.	-1644.	-168.	-851.	2001.	.0359	-.1375	.0929	.1158	-.0408	-.0797	3081.		
.3380	1290.	1459.	-1208.	96.	-641.	2066.	.0381	-.1330	.0812	.1086	-.0342	-.0741	3058.		
.3390	728.	1027.	-753.	334.	-425.	2103.	.0401	-.1281	.0686	.1024	-.0271	-.0685	3067.		
.3400	155.	598.	-295.	528.	-207.	2111.	.0418	-.1231	.0551	.0971	-.0198	-.0632	3088.		
.3410	-399.	186.	143.	669.	13.	2079.	.0433	-.1182	.0411	.0924	-.0125	-.0584	3085.		
.3420	-910.	-202.	539.	751.	235.	1997.	.0447	-.1136	.0268	.0882	-.0054	-.0540	3032.		
.3430	-1350.	-561.	878.	774.	460.	1866.	.0459	-.1095	.0122	.0841	.0014	-.0500	2926.		
.3440	-1716.	-889.	1161.	737.	687.	1685.	.0470	-.1059	-.0023	.0799	.0080	-.0464	2773.		
.3450	-2033.	-1182.	1408.	641.	906.	1451.	.0481	-.1031	-.0165	.0750	.0142	-.0432	2580.		
.3460	-2295.	-1436.	1622.	489.	1107.	1165.	.0491	-.1009	-.0302	.0694	.0202	-.0402	2372.		
.3470	-2461.	-1656.	1782.	286.	1279.	836.	.0502	-.0995	-.0428	.0632	.0258	-.0376	2195.		
.3480	-2542.	-1845.	1894.	38.	1408.	476.	.0513	-.0985	-.0542	.0566	.0311	-.0352	2100.		
.3490	-2606.	-2006.	1990.	-250.	1477.	96.	.0524	-.0981	-.0641	.0499	.0358	-.0332	2120.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.33.

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

.3390	728.	1027.	53.	334.	-425.	2103.	.0401	-1281	.0686	.1024	-.0271	-.0685	3067.
.3400	155.	592.	-295.	528.	-207.	2111.	.0418	-.1231	.0551	.0971	-.0198	-.0632	3088.
.3410	-399.	106.	147.	669.	13.	2079.	.0433	-.1182	.0411	.0924	-.0125	-.0584	3085.
.3420	-910.	-207.	535.	751.	235.	1997.	.0447	-.1136	.0268	.0882	-.0054	-.0540	3032.
.3430	-1350.	-561.	875.	774.	460.	1866.	.0459	-.1095	.0122	.0841	.0014	-.0500	2926.
.3440	-1716.	-829.	1161.	737.	87.	1685.	.0470	-.1059	-.0023	.0799	.0080	-.0464	2773.
.3450	-2033.	-1182.	1408.	641.	906.	1451.	.0481	-.1031	-.0165	.0750	.0142	-.0432	2580.
.3460	-2295.	-1436.	1622.	489.	1107.	1165.	.0491	-.1009	-.0302	.0694	.0202	-.0402	2372.
.3470	-2461.	-1656.	1782.	786.	1279.	836.	.0502	-.0995	-.0428	.0632	.0258	-.0376	2195.
.3480	-2542.	-1845.	1854.	38.	1408.	476.	.0513	-.0985	-.0542	.0566	.0311	-.0352	2100.
.3490	-2606.	-2006.	1990.	-250.	1477.	96.	.0524	-.0981	-.0641	.0499	.0358	-.0332	2120.

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DIS/ADLPIPE

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18.26.33.

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

CONDITION 24

LOADS

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PRESSURE

ENGLISH UNITS

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

SECTION	13	MEMBER	2	SEQUENCE	400	LOCATION	END	TYPE	RU					
TIME	FX	FY	FZ	HX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3500	-2688.	-2136.	2084.	-570.	1475.	-293.	.0536	-.0979	-.0721	.0433	.0400	-.0316	2271.	
.3510	-2781.	-2235.	2159.	-909.	1400.	-679.	.0548	-.0979	-.0783	.0369	.0432	-.0306	2546.	
.3520	-2890.	-2305.	2206.	-1255.	1260.	-1048.	.0560	-.0979	-.0825	.0311	.0453	-.0301	2916.	
.3530	-3030.	-2349.	2229.	-1593.	1064.	-1385.	.0571	-.0977	-.0847	.0262	.0462	-.0303	3340.	
.3540	-3195.	-2365.	2228.	-1909.	829.	-1674.	.0582	-.0971	-.0851	.0224	.0458	-.0311	3773.	
.3550	-3363.	-2349.	2199.	-2185.	574.	-1905.	.0591	-.0960	-.0836	.0195	.0441	-.0327	4174.	
.3560	-3493.	-2295.	2129.	-2405.	319.	-2074.	.0596	-.0944	-.0804	.0175	.0412	-.0348	4509.	
.3570	-3520.	-2202.	1997.	-2561.	87.	-2173.	.0597	-.0920	-.0756	.0162	.0373	-.0373	4746.	
.3580	-3403.	-2074.	1795.	-2649.	-106.	-2190.	.0592	-.0889	-.0693	.0156	.0324	-.0402	4857.	
.3590	-3156.	-1912.	1541.	-2666.	-251.	-2123.	.0580	-.0850	-.0618	.0153	.0269	-.0433	4827.	
.3600	-2796.	-1716.	1251.	-2614.	-345.	-1981.	.0561	-.0804	-.0531	.0149	.0208	-.0462	4658.	
.3610	-2322.	-1489.	925.	-2495.	-389.	-1773.	.0536	-.0751	-.0435	.0140	.0143	-.0488	4359.	
.3620	-1754.	-1239.	574.	-2323.	-393.	-1506.	.0504	-.0694	-.0332	.0123	.0075	-.0509	3950.	
.3630	-1144.	-973.	224.	-2116.	-373.	-1183.	.0467	-.0631	-.0222	.0097	.0004	-.0524	3464.	
.3640	-541.	-695.	-103.	-1886.	-347.	-814.	.0425	-.0565	-.0108	.0061	-.0067	-.0531	2943.	
.3650	30.	-407.	-395.	-1644.	-335.	-416.	.0378	-.0496	.0010	.0015	-.0138	-.0529	2442.	
.3660	542.	-109.	-648.	-1397.	-352.	-4.	.0328	-.0425	.0130	-.0043	-.0208	-.0519	2036.	
.3670	980.	195.	-860.	-1153.	-406.	412.	.0275	-.0354	.0250	-.0108	-.0276	-.0502	1822.	
.3680	1341.	496.	-1038.	-917.	-496.	825.	.0220	-.0282	.0367	-.0178	-.0342	-.0477	1878.	
.3690	1615.	790.	-1184.	-690.	-613.	1222.	.0164	-.0211	.0478	-.0251	-.0405	-.0447	2163.	
.3700	1798.	1073.	-1302.	-467.	-747.	1584.	.0107	-.0140	.0580	-.0327	-.0465	-.0412	2561.	
.3710	1913.	1342.	-1409.	-245.	-877.	1898.	.0050	-.0071	.0669	-.0403	-.0520	-.0373	2973.	
.3720	1993.	1585.	-1521.	-22.	-984.	2155.	-.0007	-.0003	.0742	-.0477	-.0570	-.0331	3347.	
.3730	2054.	1796.	-1640.	125.	-1050.	2356.	-.0064	.0062	.0797	-.0544	-.0612	-.0286	3653.	
.3740	2117.	1970.	-1765.	402.	-1064.	2495.	-.0122	.0126	.0833	-.0604	-.0645	-.0239	3874.	
.3750	2213.	2112.	-1901.	592.	-1019.	2569.	-.0180	.0187	.0848	-.0656	-.0666	-.0191	3992.	
.3760	2353.	2222.	-2042.	758.	-912.	2575.	-.0238	.0246	.0843	-.0699	-.0674	-.0142	4004.	
.3770	2521.	2297.	-2169.	893.	-749.	2519.	-.0297	.0304	.0818	-.0731	-.0666	-.0093	3920.	
.3780	2696.	2331.	-2266.	987.	-540.	2411.	-.0354	.0360	.0774	-.0753	-.0643	-.0044	3757.	
.3790	2856.	2327.	-2317.	1035.	-298.	2251.	-.0408	.0414	.0713	-.0766	-.0605	.0007	3525.	
.3800	2963.	2290.	-2306.	1038.	-41.	2043.	-.0460	.0468	.0636	-.0774	-.0552	.0059	3237.	
.3810	2991.	2221.	-2220.	999.	212.	1791.	-.0506	.0521	.0547	-.0779	-.0485	.0112	2912.	
.3820	2927.	2118.	-2060.	925.	443.	1509.	-.0546	.0575	.0449	-.0782	-.0408	.0169	2577.	
.3830	2770.	1978.	-1827.	827.	638.	1206.	-.0580	.0629	.0343	-.0783	-.0321	.0229	2253.	
.3840	2516.	1803.	-1526.	719.	786.	888.	-.0605	.0686	.0234	-.0785	-.0228	.0293	1958.	
.3850	2178.	1597.	-1169.	614.	681.	560.	-.0622	.0745	.0124	-.0789	-.0130	.0362	1710.	
.3860	1780.	1364.	-777.	524.	924.	228.	-.0630	.0806	.0014	-.0796	-.0030	.0435	1535.	
.3870	1341.	1099.	-372.	458.	922.	-99.	-.0629	.0870	-.0093	-.0805	.0068	.0512	1461.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.26.33.

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

.3770	2521.	2297.	-2169.	893.	-749.	2519.	-.0297	.0304	.0818	-.0731	-.0566	-.0093	3920.
.3780	2696.	2331.	-2266.	987.	-540.	2411.	-.0354	.0360	.0774	-.0753	-.0643	-.0044	3757.
.3790	2856.	2327.	-2317.	1035.	-298.	2251.	-.0408	.0414	.0713	-.0766	-.0505	.0007	3525.
.3800	2963.	2290.	-2306.	1038.	-41.	2043.	-.0460	.0468	.0636	-.0774	-.0552	.0059	3237.
.3810	2991.	2221.	-2220.	999.	212.	1791.	-.0506	.0521	.0547	-.0779	-.0485	.0112	2912.
.3820	2927.	2118.	-2060.	925.	443.	1509.	-.0546	.0575	.0449	-.0782	-.0408	.0169	2577.
.3830	2770.	1978.	-1817.	827.	638.	1206.	-.0580	.0629	.0343	-.0783	-.0321	.0229	2253.
.3840	2516.	1803.	-1526.	719.	786.	888.	-.0605	.0686	.0234	-.0785	-.0228	.0293	1958.
.3850	2178.	1597.	-1169.	614.	881.	560.	-.0622	.0745	.0124	-.0789	-.0130	.0362	1710.
.3860	1760.	1364.	-777.	524.	924.	228.	-.0630	.0806	.0014	-.0796	-.0030	.0435	1535.
.3870	1341.	1099.	-372.	458.	922.	-99.	-.0629	.0670	-.0093	-.0805	.0068	.0512	1461.

ADLPIPE PAGE 645 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.33.

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	13	MEMBER	2	SEQUENCE	400	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3880	878.	799.	26.	421.	884.	-413.	-.0619	.0938	-.0198	-.0814	.0161	.0592	1501.		
.3890	404.	468.	399.	416.	822.	-713.	-.0601	.1008	-.0300	-.0822	.0246	.0674	1644.		
.3900	-72.	115.	738.	442.	744.	-998.	-.0574	.1080	-.0398	-.0829	.0322	.0755	1866.		
.3910	-544.	-251.	1034.	494.	661.	-1263.	-.0542	.1153	-.0	-.0833	.0388	.0835	2131.		
.3920	-987.	-630.	1777.	565.	578.	-1502.	-.0504	.1227	-.0	-.0832	.0442	.0910	2410.		
.3930	-1382.	-1019.	1465.	644.	503.	-1712.	-.0464	.1299	-.0663	-.0823	.0487	.0982	2679.		
.3940	-1733.	-1406.	1610.	725.	435.	-1895.	-.0423	.1369	-.0738	-.0807	.0523	.1048	2931.		
.3950	-2049.	-1775.	1724.	801.	374.	-2056.	-.0382	.1433	-.0805	-.0789	.0551	.1108	3161.		
.3960	-2321.	-2115.	1812.	867.	321.	-2195.	-.0344	.1491	-.0864	-.0768	.0573	.1161	3364.		
.3970	-2538.	-2421.	1872.	919.	280.	-2308.	-.0310	.1541	-.0913	-.0744	.0589	.1206	3532.		
.3980	-2706.	-2685.	1913.	958.	252.	-2400.	-.0281	.1582	-.0953	-.0720	.0601	.1243	3667.		
.3990	-2840.	-2894.	1946.	986.	236.	-2475.	-.0257	.1611	-.0983	-.0697	.0608	.1271	3777.		
.4000	-2954.	-3034.	1981.	1005.	227.	-2538.	-.0240	.1629	-.1003	-.0678	.0511	.1288	3868.		

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)		
.0840	2717.	3337.	-1026.	7525.	482.	6980.	-.0533	-.0077	.1100	-.0809	-.0522	-.0050	14514.		

SECTION	13	MEMBER	3	SEQUENCE	401	LOCATION	END	TYPE	RE						
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.	-2.	1.	1.	-0.	.0000	-.0000	-.0000	.0000	-.0000	-.0000	0.		
.0020	-5.	-3.	-9.	3.	4.	-5.	.0000	-.0000	-.0001	.0000	-.0001	-.0000	3.		
.0030	-48.	-4.	-9.	1.	9.	-17.	.0001	-.0000	-.0005	.0001	-.0004	-.0001	8.		
.0040	-140.	-4.	6.	-12.	11.	-38.	.0001	-.0000	-.0010	.0001	-.0008	-.0003	16.		
.0050	-267.	-1.	31.	-42.	8.	-62.	.0002	.0000	-.0018	.0000	-.0012	-.0005	30.		
.0060	-445.	2.	74.	-85.	-5.	-94.	.0001	.0002	-.0030	-.0001	-.0017	-.0008	51.		
.0070	-723.	-1.	155.	-141.	-29.	-154.	.0001	.0004	-.0047	-.0004	-.0023	-.0010	85.		
.0080	-1217.	-23.	323.	-219.	-59.	-269.	.0004	.0006	-.0074	-.0009	-.0030	-.0012	141.		
.0090	-2131.	-75.	683.	-338.	-112.	-441.	.0012	.0009	-.0114	-.0020	-.0039	-.0013	227.		
.0100	-3341.	-158.	1170.	-508.	-186.	-669.	.0029	.0015	-.0167	-.0042	-.0048	-.0015	345.		
.0110	-4456.	-275.	1579.	-725.	-255.	-963.	.0055	.0023	-.0231	-.0081	-.0059	-.0014	494.		

ADLPIPE PAGE 646 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.33.

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

.0010	1.	-0.	-2.	1.	1.	-0.	.0000	-.0000	-.0000	.0000	-.0000	-.0000	0.
.0020	-5.	-3.	-9.	3.	4.	-5.	.0000	-.0000	-.0001	.0000	-.0001	-.0000	3.
.0030	-43.	-4.	-9.	1.	9.	-17.	.0001	-.0000	-.0005	.0001	-.0004	-.0001	8.
.0040	-140.	-4.	6.	-12.	11.	-38.	.0001	-.0000	-.0010	.0001	-.0008	-.0003	16.
.0050	-267.	-1.	21.	-42.	8.	-62.	.0002	.0000	-.0018	.0000	-.0012	-.0005	30.
.0060	-445.	2.	74.	-85.	-5.	-94.	.0001	.0002	-.0030	-.0001	-.0017	-.0008	51.
.0070	-723.	-1.	155.	-141.	-29.	-154.	.0001	.0004	-.0047	-.0004	-.0023	-.0010	85.
.0080	-1217.	-23.	323.	-219.	-59.	-269.	.0004	.0006	-.0074	-.0009	-.0030	-.0012	141.
.0090	-2131.	-75.	683.	-338.	-112.	-441.	.0012	.0009	-.0114	-.0020	-.0039	-.0013	227.
.0100	-3341.	-158.	1170.	-508.	-186.	-669.	.0029	.0015	-.0167	-.0042	-.0048	-.0015	345.
.0110	-4456.	-275.	1579.	-725.	-255.	-963.	.0055	.0023	-.0231	-.0081	-.0059	-.0014	494.

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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	13	MEMBER	3	SEQUENCE	401	LOCATION	END	TYPE	RE	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)										
.0120	-5285.	-438.	1820.	-968.	-313.	-1330.	.0089	.0031	-.0301	-.0136	-.0069	-.0007				672.
.0130	-5953.	-662.	1988.	-1221.	-397.	-1743.	.0130	.0041	-.0374	-.0204	-.0075	.0009				869.
.0140	-6668.	-940.	2249.	-1475.	-569.	-2167.	.0176	.0052	-.0442	-.0287	-.0069	.0035				1076.
.0150	-7523.	-1247.	2705.	-1731.	-874.	-2598.	.0224	.0064	-.0503	-.0388	-.0040	.0072				1301.
.0160	-8737.	-1575.	3510.	-1987.	-1341.	-3046.	.0273	.0074	-.0555	-.0503	.0020	.0119				1555.
.0170	-9832.	-1941.	4399.	-2237.	-1878.	-3521.	.0322	.0084	-.0602	-.0618	.0111	.0172				1836.
.0180	-9668.	-2346.	4685.	-2472.	-2285.	-4045.	.0374	.0094	-.0650	-.0713	.0220	.0228				2112.
.0190	-7910.	-2787.	4051.	-2685.	-2401.	-4626.	.0433	.0104	-.0703	-.0780	.0323	.0275				2353.
.0200	-4691.	-3293.	2395.	-2847.	-2016.	-5263.	.0515	.0116	-.0781	-.0814	.0387	.0302				2534.
.0210	-2104.	-3864.	785.	-2928.	-1226.	-5868.	.0629	.0132	-.0892	-.0836	.0407	.0294				2677.
.0220	-1136.	-4287.	-165.	-2868.	-399.	-6244.	.0749	.0146	-.0998	-.0877	.0400	.0250				2762.
.0230	64.	-4453.	-1276.	-2658.	413.	-6411.	.0851	.0147	-.1059	-.0930	.0370	.0180				2790.
.0240	-980.	-4530.	-946.	-2367.	822.	-6312.	.0923	.0139	-.1071	-.0934	.0358	.0102				2725.
.0250	-2239.	-4669.	-225.	-2058.	1033.	-5951.	.0963	.0126	-.1043	-.0833	.0365	.0020				2561.
.0260	3170.	-4690.	-3080.	-1778.	1837.	-5495.	.0960	.0097	-.0975	-.0652	.0333	-.0073				2432.
.0270	10639.	-4328.	-7123.	-1656.	2753.	-4743.	.0892	.0054	-.0850	-.0458	.0275	-.0191				2299.
.0280	10504.	-3792.	-6767.	-1799.	2933.	-3463.	.0795	.0015	-.0708	-.0285	.0272	-.0336				1959.
.0290	6176.	-3282.	-3716.	-1952.	2867.	-1988.	.0708	-.0033	-.0592	-.0135	.0320	-.0498				1604.
.0300	2461.	-2535.	-1172.	-1701.	2948.	-885.	.0596	-.0129	-.0476	.0006	.0331	-.0654				1411.
.0310	384.	-1590.	185.	-1230.	3196.	-65.	.0451	-.0257	-.0352	.0172	.0298	-.0802				1372.
.0320	3101.	-613.	-1016.	-1152.	3767.	1068.	.0295	-.0355	-.0214	.0400	.0234	-.0959				1638.
.0330	4022.	449.	-1021.	-1627.	3750.	2838.	.0132	-.0398	-.0044	.0644	.0193	-.1121				1997.
.0340	-950.	1732.	2247.	-1929.	2626.	4727.	-.0049	-.0441	.0169	.0802	.0189	-.1251				2304.
.0350	-3945.	3080.	4338.	-1341.	1447.	5898.	-.0239	-.0540	.0403	.0835	.0161	-.1304				2496.
.0360	-713.	4165.	2841.	-157.	963.	6268.	-.0416	-.0671	.0633	.0827	.0072	-.1273				2546.
.0370	1129.	4845.	1832.	817.	477.	6717.	-.0579	-.0749	.0851	.0866	-.0044	-.1192				2722.
.0380	-1525.	5303.	3040.	1455.	-377.	7888.	-.0738	-.0749	.1059	.0900	-.0156	-.1096				3222.
.0390	-1103.	5882.	2507.	7296.	-722.	9015.	-.0889	-.0745	.1243	.0787	-.0283	-.0982				3744.
.0400	4043.	6554.	-606.	3560.	-99.	8891.	-.0991	-.0802	.1359	.0529	-.0444	-.0831				3843.
.0410	5477.	6915.	-2030.	4948.	575.	8255.	-.1057	-.0858	.1416	.0323	-.0622	-.0652				3869.
.0420	5056.	6677.	-2553.	6001.	1204.	8427.	-.1093	-.0828	.1427	.0287	-.0792	-.0487				4189.
.0430	8761.	6230.	-5341.	6404.	2525.	8845.	-.1073	-.0758	.1384	.0268	-.0965	-.0354				4498.
.0440	11002.	6210.	-7176.	6230.	3625.	8466.	-.1009	-.0727	.1323	.0104	-.1100	-.0239				4462.
.0450	9551.	6346.	-6974.	5867.	3861.	7832.	-.0934	-.0715	.1284	-.0102	-.1183	-.0124				4221.
.0460	9744.	5992.	-7651.	5499.	3689.	7718.	-.0858	-.0668	.1276	-.0162	-.1240	.0004				4081.
.0470	11538.	5209.	-8854.	4891.	3240.	7483.	-.0755	-.0603	.1282	-.0081	-.1256	.0150				3816.
.0480	9949.	4455.	-7833.	3994.	2089.	6641.	-.0623	-.0550	.1300	.0017	-.1209	.0299				3221.
.0490	6717.	3793.	-5944.	3235.	545.	5912.	-.0482	-.0492	.1318	.0073	-.1129	.0419				2713.

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

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INTERNAL FORCES IN THE PIPING
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.0390	-1103.	5882.	2507.	2296.	-722.	9015.	-.0778	-.0749	.1243	.0787	-.0283	-.0982	3744.
.0400	4043.	6554.	-606.	3560.	-99.	8891.	-.0991	-.0802	.1359	.0529	-.0444	-.0831	3843.
.0410	5477.	6915.	-2020.	4948.	575.	8255.	-.1057	-.0858	.1416	.0323	-.0522	-.0652	3869.
.0420	5056.	6677.	-2553.	6001.	1204.	8427.	-.1093	-.0828	.1427	.0287	-.0792	-.0487	4180.
.0430	8761.	6270.	-5341.	6404.	2525.	8845.	-.1073	-.0758	.1384	.0268	-.0965	-.0354	4498.
.0440	11002.	6210.	-7176.	6200.	3625.	8466.	-.1009	-.0727	.1323	.0104	-.1100	-.0239	4462.
.0450	9551.	6346.	-6974.	5867.	3861.	7832.	-.0934	-.0715	.1284	-.0102	-.1183	-.0124	4221.
.0460	9744.	5992.	-7651.	5499.	3689.	7718.	-.0858	-.0668	.1276	-.0162	-.1240	.0004	4081.
.0470	11538.	5209.	-8854.	4891.	3240.	7483.	-.0755	-.0603	.1282	-.0081	-.1256	.0150	3816.
.0480	5949.	4455.	-7823.	3994.	2089.	6641.	-.0623	-.0550	.1300	.0017	-.1209	.0299	3221.
.0490	6717.	3793.	-5944.	3235.	545.	5912.	-.0462	-.0492	.1318	.0073	-.1129	.0419	2713.

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2 SAFETY COLD FKW24F--2 PSV

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INTERNAL FORCES IN THE PIPING
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SECTION	13	MEMBER	3	SEQUENCE	401	LOCATION	END	TYPE	RE					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0500	5845.	3131.	-5422.	2890.	-725.	5436.	-.0328	-.0427	.1311	.0077	-.1044	.0499	2488.	
.0510	4657.	2498.	-4646.	2734.	-1696.	4355.	-.0143	-.0387	.1254	.0066	-.0945	.0555	2173.	
.0520	1247.	1713.	-2535.	2573.	-2565.	2772.	.0063	-.0352	.1152	.0152	-.0821	.0594	1834.	
.0530	-642.	580.	-1138.	2519.	-3185.	1623.	.0262	-.0287	.1023	.0392	-.0674	.0600	1755.	
.0540	-408.	-532.	-680.	2548.	-3617.	649.	.0442	-.0230	.0883	.0666	-.0491	.0569	1795.	
.0550	-1034.	-1183.	526.	2330.	-4157.	-996.	.0604	-.0235	.0741	.0865	-.0258	.0507	1954.	
.0560	-1287.	-1682.	1625.	1634.	-4680.	-2789.	.0741	-.0262	.0600	.1098	-.0003	.0419	2283.	
.0570	518.	-2558.	1376.	520.	-4944.	-3841.	.0848	-.0254	.0456	.1503	.0231	.0308	2521.	
.0580	1210.	-3636.	1346.	-852.	-5056.	-4731.	.0935	-.0248	.0295	.1996	.0432	.0191	2800.	
.0590	-479.	-4419.	2272.	-2308.	-5034.	-6273.	.1015	-.0304	.0108	.2393	.0601	.0073	3358.	
.0600	-1422.	-4858.	2524.	-3707.	-4687.	-7839.	.1080	-.0388	-.0098	.2654	.0735	-.0061	3956.	
.0610	-1489.	-5190.	2147.	-5075.	-4115.	-8659.	.1126	-.0445	-.0316	.2857	.0845	-.0214	4353.	
.0620	-3587.	-5462.	2838.	-6429.	-3557.	-9115.	.1158	-.0479	-.0542	.3027	.0946	-.0356	4698.	
.0630	-6195.	-5629.	3846.	-7469.	-2878.	-9667.	.1174	-.0518	-.0771	.3130	.1034	-.0455	5036.	
.0640	-6628.	-5655.	3778.	-7811.	-2042.	-10011.	.1155	-.0565	-.0979	.3115	.1108	-.0498	5161.	
.0650	-7123.	-5421.	3975.	-7531.	-1449.	-9966.	.1089	-.0612	-.1147	.2943	.1196	-.0486	5046.	
.0660	-9220.	-4929.	5288.	-7064.	-1134.	-9770.	.0988	-.0654	-.1279	.2634	.1296	-.0424	4859.	
.0670	-9656.	-4476.	5801.	-6590.	-584.	-9367.	.0866	-.0670	-.1389	.2280	.1373	-.0314	4602.	
.0680	-7600.	-4275.	4875.	-5888.	342.	-8588.	.0728	-.0654	-.1485	.1935	.1406	-.0166	4180.	
.0690	-6750.	-4133.	4499.	-4781.	1267.	-7793.	.0581	-.0640	-.1569	.1544	.1409	.0009	3704.	
.0700	-7760.	-3811.	5137.	-3433.	2102.	-7342.	.0443	-.0650	-.1641	.1071	.1391	.0189	3360.	
.0710	-7851.	-3378.	5268.	-2164.	3001.	-6811.	.0312	-.0651	-.1686	.0598	.1341	.0343	3110.	
.0720	-6562.	-2972.	4522.	-1171.	3818.	-5661.	.0175	-.0603	-.1681	.0238	.1252	.0456	2780.	
.0730	-4716.	-2554.	3387.	-415.	4358.	-4121.	.0031	-.0523	-.1613	.0006	.1132	.0533	2413.	
.0740	-2083.	-2038.	1918.	311.	4620.	-2721.	-.0105	-.0448	-.1486	-.0162	.0995	.0589	2155.	
.0750	-16.	-1461.	870.	1197.	4451.	-1475.	-.0229	-.0389	-.1301	-.0307	.0855	.0634	1942.	
.0760	-80.	-908.	952.	2228.	3762.	-135.	-.0346	-.0331	-.1065	-.0425	.0710	.0666	1755.	
.0770	-202.	-410.	967.	3222.	2958.	1262.	-.0447	-.0266	-.0796	-.0510	.0543	.0679	1827.	
.0780	1713.	31.	-218.	4083.	2450.	2543.	-.0520	-.0196	-.0515	-.0565	.0342	.0672	2166.	
.0790	3212.	419.	-1287.	4952.	2061.	3743.	-.0567	-.0128	-.0236	-.0607	.0125	.0642	2625.	
.0800	1941.	872.	-914.	6026.	1510.	4924.	-.0595	-.0075	.0037	-.0664	-.0081	.0589	3181.	
.0810	350.	1352.	-253.	7234.	1004.	5921.	-.0605	-.0051	.0300	-.0751	-.0264	.0507	3773.	
.0820	774.	2031.	-462.	8214.	744.	6695.	-.0598	-.0049	.0553	-.0824	-.0419	.0388	4263.	
.0830	1891.	2730.	-878.	8632.	535.	7571.	-.0585	-.0043	.0798	-.0813	-.0538	.0229	4613.	
.0840	2717.	3337.	-1026.	8454.	252.	8691.	-.0568	-.0028	.1033	-.0710	-.0618	.0033	4866.	
.0850	3892.	3906.	-1286.	7855.	41.	9582.	-.0538	-.0041	.1242	-.0582	-.0671	-.0181	4972.	
.0860	4720.	4495.	-1460.	6954.	-56.	9821.	-.0488	-.0107	.1415	-.0477	-.0719	-.0399	4829.	
.0870	4516.	4951.	-1437.	5696.	-47.	9662.	-.0424	-.0200	.1547	-.0351	-.0786	-.0617	4501.	

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