

50-305

RESPONSE TO NUREG-0737 ITEM II.D.1

Docket # *50-305*

Control # *8403280048*

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

.1270	-4058.	-860.	-777.	1226.	-3126.	-2148.	-.0067	.0146	-.0534	-.0257	-.0954	.1050	1868.
.1280	-2696.	-906.	-1225.	739.	188.	-1343.	-.0248	.0160	-.0196	-.0033	-.0432	.1106	724.
.1290	-2144.	-389.	-422.	341.	2183.	-1150.	-.0416	.0178	.0137	.0225	.0115	.1123	1168.
.1300	-1960.	654.	1633.	-256.	3089.	-1340.	-.0567	.0197	.0456	.0477	.0599	.1080	1582.
.1310	-762.	862.	1508.	-821.	5160.	-878.	-.0699	.0212	.0762	.0595	.1027	.0959	2483.
.1320	870.	793.	950.	-1791.	7206.	-35.	-.0809	.0226	.1045	.0632	.1311	.0780	3480.
.1330	1560.	1192.	2098.	-2702.	7655.	177.	-.0895	.0241	.1295	.0720	.1496	.0591	3805.
.1340	2154.	1906.	3837.	-3943.	7833.	248.	-.0959	.0256	.1518	.0806	.1621	.0394	4111.
.1350	3658.	2258.	4260.	-5641.	9368.	971.	-.1004	.0269	.1719	.0810	.1725	.0180	5145.
.1360	4895.	2394.	4466.	-6759.	10927.	1638.	-.1030	.0283	.1890	.0835	.1841	-.0017	6070.
.1370	5178.	3220.	6473.	-7378.	10964.	1683.	-.1038	.0304	.2020	.0939	.1882	-.0192	6243.

ADLPIPE PAGE 334 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.01.

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	6	MEMBER	1	SEQUENCE	25	LOCATION	END	TYPE	VA						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.1380	5587.	3965.	7853.	-7616.	11272.	1788.	-.1029	.0325	.2111	.1006	.1883	-.0350	6430.		
.1390	6626.	4262.	7894.	-8210.	12446.	2400.	-.1006	.0344	.2162	.0953	.1781	-.0505	7077.		
.1400	7105.	4593.	8513.	-8909.	12686.	2721.	-.0968	.0362	.2162	.0866	.1524	-.0646	7376.		
.1410	6648.	4864.	9436.	-8669.	11763.	2369.	-.0919	.0383	.2108	.0790	.1194	-.0762	6937.		
.1420	6414.	4909.	9474.	-8058.	10923.	2162.	-.0859	.0402	.2008	.0643	.0805	-.0864	6441.		
.1430	6446.	4461.	8258.	-7186.	10558.	2283.	-.0791	.0418	.1869	.0426	.0431	-.0937	6080.		
.1440	5855.	4114.	7622.	-6187.	9384.	2078.	-.0715	.0434	.1689	.0227	.0069	-.0964	5357.		
.1450	4819.	3965.	7429.	-5025.	7539.	1485.	-.0634	.0449	.1473	.0051	-.0271	-.0946	4303.		
.1460	4153.	3436.	5967.	-3588.	6252.	1077.	-.0548	.0461	.1232	-.0163	-.0549	-.0884	3416.		
.1470	3755.	2914.	4335.	-2511.	4954.	923.	-.0461	.0470	.0966	-.0394	-.0819	-.0776	2638.		
.1480	2784.	2477.	3228.	-1245.	2926.	421.	-.0372	.0477	.0678	-.0567	-.1030	-.0604	1503.		
.1490	1604.	2099.	2341.	-102.	574.	-260.	-.0286	.0480	.0375	-.0713	-.1209	-.0383	299.		
.1500	921.	1575.	991.	357.	-1341.	-566.	-.0206	.0478	.0066	-.0902	-.1404	-.0128	702.		
.1510	276.	791.	-686.	650.	-3030.	-738.	-.0135	.0471	-.0241	-.1097	-.1566	.0169	1493.		
.1520	-826.	257.	-1484.	882.	-5174.	-1185.	-.0075	.0463	-.0543	-.1242	-.1688	.0498	2522.		
.1530	-2100.	-341.	-2343.	1425.	-6995.	-1741.	-.0031	.0455	-.0826	-.1353	-.1703	.0845	3443.		
.1540	-2938.	-1040.	-3605.	1758.	-7866.	-1879.	-.0003	.0448	-.1082	-.1483	-.1631	.1194	3878.		
.1550	-3640.	-1638.	-4690.	1996.	-8177.	-1783.	.0010	.0442	-.1306	-.1604	-.1462	.1543	4032.		
.1560	-4758.	-2169.	-5489.	2920.	-8390.	-1977.	.0010	.0441	-.1498	-.1668	-.1169	.1886	4265.		
.1570	-5763.	-2427.	-5842.	3761.	-8496.	-2167.	-.0000	.0445	-.1658	-.1722	-.0883	.2183	4471.		
.1580	-6245.	-2861.	-6762.	4473.	-7909.	-2027.	-.0016	.0453	-.1784	-.1811	-.0617	.2426	4363.		
.1590	-6621.	-3338.	-7708.	5211.	-7220.	-1855.	-.0033	.0465	-.1878	-.1896	-.0376	.2621	4262.		
.1600	-7094.	-3296.	-7435.	5522.	-7254.	-1879.	-.0048	.0482	-.1943	-.1943	-.0240	.2757	4362.		
.1610	-7085.	-3157.	-7137.	5405.	-7033.	-1696.	-.0059	.0503	-.1973	-.1984	-.0157	.2825	4232.		
.1620	-6611.	-2438.	-7824.	5526.	-5957.	-1252.	-.0064	.0526	-.1964	-.2002	-.0006	.2843	3852.		
.1630	-6322.	-3275.	-7389.	5545.	-5507.	-1029.	-.0063	.0554	-.1924	-.1928	.0135	.2813	3694.		
.1640	-6098.	-2748.	-6196.	5515.	-5506.	-1027.	-.0054	.0585	-.1855	-.1777	.0259	.2734	3684.		
.1650	-5285.	-2501.	-5882.	5351.	-4801.	-763.	-.0040	.0614	-.1754	-.1625	.0380	.2604	3388.		
.1660	-4110.	-2160.	-5408.	4548.	-4090.	-331.	-.0020	.0642	-.1629	-.1470	.0414	.2425	2871.		
.1670	-3289.	-1589.	-4237.	3801.	-4086.	-275.	.0003	.0668	-.1486	-.1260	.0391	.2213	2619.		
.1680	-2485.	-898.	-2960.	3169.	-4270.	-397.	.0025	.0691	-.1325	-.1027	.0327	.1969	2499.		
.1690	-1406.	-536.	-2556.	2765.	-3901.	-388.	.0043	.0708	-.1145	-.0810	.0263	.1702	2248.		
.1700	-433.	-157.	-1972.	2308.	-3588.	-416.	.0053	.0717	-.0948	-.0584	.0176	.1424	2009.		
.1710	358.	640.	-500.	1501.	-3506.	-543.	.0052	.0718	-.0736	-.0335	.0079	.1145	1805.		
.1720	1128.	1104.	129.	1233.	-2564.	-618.	.0039	.0708	-.0505	-.0075	.0121	.0888	1364.		
.1730	1836.	1461.	641.	1089.	-1273.	-567.	.0013	.0685	-.0261	.0191	.0222	.0650	829.		
.1740	2208.	1863.	1571.	1047.	-223.	-602.	-.0025	.0651	-.0015	.0476	.0327	.0431	575.		
.1750	2464.	2134.	2260.	1112.	1027.	-663.	-.0072	.0603	.0232	.0753	.0454	.0236	774.		

ADLPIPE PAGE 335 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.01.

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



.2020	1408.	-593.	-1308.	1598.	-2111.	1119.	.0679	-.0329	-.0493	-.0345	-.0358	-.1170	1291.
.2030	1318.	-614.	-1308.	1598.	-3010.	1119.	.0679	-.0329	-.0493	-.0345	-.0358	-.1170	1291.
.2040	1064.	-677.	-1804.	2248.	-3927.	624.	.0719	-.0235	-.0653	-.0134	-.0073	-.0969	2140.
.2050	649.	-776.	-2250.	2860.	-4815.	57.	.0742	-.0147	-.0802	.0022	.0053	-.0650	2625.
.2060	110.	-947.	-2708.	3427.	-5565.	-512.	.0747	-.0066	-.0935	.0194	.0166	-.0294	3072.
.2070	-534.	-1174.	-3108.	3896.	-6156.	-1031.	.0733	.0006	-.1049	.0369	.0263	.0088	3448.
.2080	-1246.	-1389.	-3387.	4265.	-6562.	-1488.	.0700	.0067	-.1142	.0537	.0341	.0477	3734.
.2090	-1973.	-1596.	-3676.	4685.	-6667.	-1883.	.0651	.0118	-.1210	.0694	.0423	.0857	3919.
.2100	-2727.	-1813.	-4015.	5288.	-6469.	-2227.	.0587	.0158	-.1252	.0837	.0527	.1215	4052.
.2110	-3492.	-1978.	-4234.	5971.	-6096.	-2512.	.0514	.0187	-.1267	.0962	.0539	.1536	4168.
.2120	-4141.	-2072.	-4354.	6557.	-5527.	-2682.	.0435	.0205	-.1255	.1057	.0745	.1804	4211.
.2130	-4599.	-2153.	-4510.	6997.	-4716.	-2719.	.0356	.0211	-.1218	.1118	.0845	.2005	4154.

ADLPIPE PAGE 336

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.01.

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

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.2140	-4950.	-2221.	-4582.	7295.	-3874.	-2692.	.0280	.0205	-.1158	.1154	.0929	.2133	4071.	
.2150	-5217.	-2245.	-4435.	7401.	-3203.	-2645.	.0212	.0187	-.1078	.1171	.0976	.2180	3977.	
.2160	-5257.	-2249.	-4213.	7208.	-2611.	-2524.	.0155	.0157	-.0978	.1161	.0975	.2140	3783.	
.2170	-5015.	-2234.	-3958.	6636.	-2031.	-2300.	.0112	.0118	-.0859	.1127	.0932	.2015	3426.	
.2180	-4590.	-2117.	-3447.	5683.	-1594.	-2026.	.0083	.0069	-.0722	.1081	.0857	.1811	2924.	
.2190	-3999.	-1864.	-2681.	4470.	-1292.	-1722.	.0067	.0014	-.0569	.1031	.0762	.1535	2325.	
.2200	-3169.	-1532.	-1916.	3160.	-947.	-1358.	.0062	-.0047	-.0400	.0971	.0660	.1193	1672.	
.2210	-2154.	-1135.	-1156.	1815.	-553.	-942.	.0066	-.0110	-.0219	.0899	.0552	.0794	993.	
.2220	-1074.	-640.	-247.	425.	-195.	-507.	.0075	-.0174	-.0028	.0816	.0436	.0353	323.	
.2230	56.	-101.	676.	-935.	221.	-39.	.0085	-.0238	.0167	.0715	.0317	-.0115	451.	
.2240	1217.	387.	1406.	-2115.	771.	470.	.0094	-.0300	.0363	.0590	.0196	-.0598	1078.	
.2250	2279.	797.	2002.	-3016.	1313.	964.	.0099	-.0359	.0553	.0447	.0062	-.1078	1606.	
.2260	3163.	1126.	2528.	-3649.	1778.	1405.	.0098	-.0413	.0732	.0291	-.0090	-.1536	2013.	
.2270	3920.	1361.	2881.	-4093.	2302.	1821.	.0090	-.0462	.0896	.0126	-.0249	-.1953	2360.	
.2280	4550.	1526.	3089.	-4414.	2915.	2216.	.0073	-.0503	.1043	-.0039	-.0401	-.2309	2688.	
.2290	4964.	1659.	3301.	-4592.	3478.	2537.	.0050	-.0537	.1167	-.0181	-.0540	-.2588	2949.	
.2300	5150.	1753.	3493.	-4579.	3946.	2752.	.0020	-.0562	.1267	-.0288	-.0659	-.2777	3112.	
.2310	5182.	1801.	3594.	-4461.	4368.	2872.	-.0015	-.0576	.1340	-.0355	-.0760	-.2869	3221.	
.2320	5078.	1846.	3720.	-4436.	4695.	2900.	-.0053	-.0582	.1385	-.0381	-.0850	-.2863	3318.	
.2330	4810.	1897.	3963.	-4594.	4857.	2827.	-.0094	-.0578	.1403	-.0363	-.0778	-.2760	3402.	
.2340	4403.	1905.	4208.	-4831.	4878.	2656.	-.0135	-.0564	.1394	-.0303	-.0986	-.2569	3450.	
.2350	3898.	1839.	4354.	-5019.	4780.	2405.	-.0176	-.0540	.1360	-.0205	-.1015	-.2303	3438.	
.2360	3300.	1713.	4422.	-5113.	4559.	2088.	-.0216	-.0505	.1304	-.0078	-.1006	-.1979	3356.	
.2370	2629.	1538.	4406.	-5108.	4275.	1723.	-.0254	-.0461	.1229	.0070	-.0947	-.1611	3224.	
.2380	1940.	1323.	4249.	-4975.	4011.	1331.	-.0289	-.0406	.1139	.0224	-.0831	-.1220	3059.	
.2390	1276.	1088.	3932.	-4648.	3764.	926.	-.0321	-.0343	.1037	.0371	-.0665	-.0824	2837.	
.2400	654.	838.	3443.	-4051.	3512.	523.	-.0347	-.0270	.0924	.0503	-.0456	-.0439	2524.	
.2410	80.	574.	2779.	-3171.	3257.	123.	-.0366	-.0191	.0802	.0613	-.0211	-.0077	2131.	
.2420	-429.	331.	2014.	-2127.	2987.	-273.	-.0377	-.0106	.0672	.0693	.0053	.0251	1723.	
.2430	-844.	131.	1232.	-1083.	2671.	-645.	-.0377	-.0019	.0535	.0736	.0309	.0538	1384.	
.2440	-1147.	-47.	447.	-116.	2301.	-967.	-.0366	.0070	.0391	.0739	.0537	.0780	1171.	
.2450	-1352.	-209.	-311.	765.	1861.	-1234.	-.0343	.0156	.0240	.0705	.0728	.0978	1106.	
.2460	-1489.	-329.	-963.	1536.	1330.	-1459.	-.0307	.0239	.0084	.0641	.0881	.1132	1172.	
.2470	-1565.	-409.	-1476.	2140.	736.	-1628.	-.0260	.0317	-.0076	.0550	.0990	.1246	1306.	
.2480	-1576.	-467.	-1861.	2528.	108.	-1723.	-.0203	.0388	-.0238	.0432	.1050	.1323	1435.	
.2490	-1525.	-492.	-2088.	2685.	-565.	-1745.	-.0138	.0450	-.0401	.0285	.1048	.1364	1524.	
.2500	-1420.	-468.	-2162.	2643.	-1270.	-1702.	-.0067	.0504	-.0561	.0111	.0986	.1373	1589.	
.2510	-1290.	-427.	-2168.	2513.	-1944.	-1604.	.0007	.0548	-.0717	-.0086	.0881	.1352	1668.	

ADLPIPE PAGE 337

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.01.

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

.2400	654.	338.	2443.	-4051.	3512.	523.	-.0347	-.0270	.0924	.0503	-.0456	-.0439	2524.
.2410	80.	574.	2779.	-3171.	3257.	123.	-.0366	-.0191	.0802	.0613	-.0211	-.0077	2131.
.2420	-429.	331.	2014.	-2127.	2987.	-273.	-.0377	-.0106	.0672	.0693	.0053	.0251	1723.
.2430	-844.	131.	1232.	-1083.	2671.	-645.	-.0377	-.0019	.0535	.0736	.0309	.0538	1384.
.2440	-1147.	-47.	447.	-116.	2301.	-967.	-.0366	.0070	.0391	.0739	.0537	.0780	1171.
.2450	-1352.	-209.	-311.	765.	1861.	-1234.	-.0343	.0156	.0240	.0705	.0728	.0978	1106.
.2460	-1489.	-329.	-967.	1536.	1730.	-1459.	-.0307	.0239	.0084	.0641	.0881	.1132	1172.
.2470	-1565.	-409.	-1476.	2140.	736.	-1628.	-.0260	.0317	-.0076	.0550	.0990	.1246	1306.
.2480	-1576.	-467.	-1861.	2528.	108.	-1723.	-.0203	.0388	-.0238	.0432	.1050	.1323	1435.
.2490	-1525.	-492.	-2088.	2685.	-565.	-1745.	-.0138	.0450	-.0401	.0285	.1048	.1364	1524.
.2500	-1420.	-462.	-2162.	2643.	-1270.	-1702.	-.0067	.0504	-.0561	.0111	.0986	.1373	1589.
.2510	-1290.	-427.	-2168.	2513.	-1944.	-1604.	.0007	.0548	-.0717	-.0086	.0881	.1352	1668.

ADLPIPE PAGE 337

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.01.

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	6	MEMBER	1	SEQUENCE	25	LOCATION	END	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2520	-1191.	-399.	-2145.	2400.	-2585.	-1477.	.0079	.0583	-.0866	-.0299	.0743	.1308	1792.	
.2530	-1136.	-373.	-2069.	2313.	-3221.	-1340.	.0148	.0608	-.1003	-.0527	.0570	.1241	1961.	
.2540	-1079.	-358.	-1999.	2209.	-3785.	-1166.	.0210	.0624	-.1127	-.0769	.0365	.1156	2125.	
.2550	-1012.	-384.	-2008.	2101.	-4188.	-944.	.0262	.0629	-.1232	-.1018	.0151	.1059	2240.	
.2560	-1009.	-443.	-2047.	2064.	-4459.	-724.	.0303	.0624	-.1317	-.1257	-.0045	.0958	2327.	
.2570	-1099.	-516.	-2079.	2154.	-4651.	-542.	.0332	.0610	-.1380	-.1469	-.0212	.0857	2416.	
.2580	-1205.	-627.	-2194.	2327.	-4712.	-361.	.0349	.0588	-.1420	-.1653	-.0346	.0762	2469.	
.2590	-1277.	-777.	-2401.	2468.	-4619.	-157.	.0354	.0558	-.1436	-.1806	-.0446	.0677	2455.	
.2600	-1359.	-904.	-2552.	2486.	-4476.	20.	.0348	.0521	-.1430	-.1921	-.0514	.0605	2399.	
.2610	-1471.	-992.	-2622.	2391.	-4349.	128.	.0333	.0478	-.1404	-.1993	-.0552	.0549	2326.	
.2620	-1567.	-1085.	-2728.	2229.	-4227.	179.	.0310	.0430	-.1359	-.2027	-.0571	.0506	2241.	
.2630	-1634.	-1184.	-2859.	1983.	-4158.	184.	.0279	.0379	-.1300	-.2029	-.0586	.0475	2160.	
.2640	-1692.	-1242.	-2901.	1586.	-4186.	129.	.0243	.0327	-.1227	-.2003	-.0605	.0454	2099.	
.2650	-1728.	-1257.	-2869.	1030.	-4233.	34.	.0201	.0274	-.1141	-.1957	-.0624	.0441	2041.	
.2660	-1734.	-1260.	-2835.	408.	-4216.	-76.	.0153	.0224	-.1043	-.1896	-.0637	.0433	1985.	
.2670	-1739.	-1255.	-2775.	-149.	-4151.	-202.	.0099	.0176	-.0933	-.1819	-.0643	.0425	1949.	
.2680	-1748.	-1231.	-2666.	-582.	-4011.	-327.	.0040	.0134	-.0812	-.1729	-.0641	.0416	1905.	
.2690	-1726.	-1192.	-2530.	-930.	-3680.	-408.	-.0025	.0097	-.0679	-.1632	-.0624	.0404	1789.	
.2700	-1665.	-1126.	-2328.	-1255.	-3122.	-422.	-.0093	.0067	-.0535	-.1529	-.0590	.0387	1589.	
.2710	-1587.	-1017.	-1996.	-1541.	-2399.	-389.	-.0165	.0045	-.0382	-.1420	-.0549	.0365	1349.	
.2720	-1481.	-874.	-1570.	-1743.	-1550.	-320.	-.0237	.0030	-.0222	-.1303	-.0508	.0333	1103.	
.2730	-1311.	-703.	-1084.	-1899.	-574.	-209.	-.0307	.0024	-.0057	-.1181	-.0471	.0291	935.	
.2740	-1064.	-467.	-472.	-2124.	495.	-50.	-.0373	.0025	.0109	-.1054	-.0435	.0239	1023.	
.2750	-747.	-151.	289.	-2451.	1605.	136.	-.0432	.0034	.0275	-.0921	-.0395	.0178	1374.	
.2760	-361.	222.	1117.	-2803.	2708.	328.	-.0482	.0051	.0435	-.0783	-.0347	.0107	1833.	
.2770	99.	623.	1940.	-3125.	3733.	507.	-.0522	.0074	.0585	-.0643	-.0295	.0024	2294.	
.2780	620.	1045.	2744.	-3439.	4612.	667.	-.0549	.0104	.0721	-.0508	-.0241	-.0071	2714.	
.2790	1189.	1471.	3499.	-3782.	5317.	801.	-.0564	.0139	.0840	-.0384	-.0186	-.0175	3081.	
.2800	1789.	1880.	4154.	-4137.	5814.	902.	-.0566	.0179	.0937	-.0279	-.0134	-.0285	3371.	
.2810	2396.	2247.	4663.	-4441.	6060.	957.	-.0557	.0221	.1010	-.0198	-.0092	-.0399	3549.	
.2820	2981.	2545.	4987.	-4636.	6056.	967.	-.0539	.0266	.1057	-.0142	-.0061	-.0510	3603.	
.2830	3517.	2770.	5118.	-4709.	5857.	940.	-.0514	.0312	.1079	-.0110	-.0033	-.0609	3550.	
.2840	3976.	2937.	5098.	-4684.	5526.	888.	-.0485	.0357	.1076	-.0099	.0000	-.0685	3420.	
.2850	4332.	3051.	4951.	-4554.	5122.	821.	-.0455	.0401	.1049	-.0104	.0046	-.0729	3235.	
.2860	4561.	3094.	4670.	-4282.	4704.	745.	-.0426	.0442	.1001	-.0118	.0107	-.0733	3001.	
.2870	4632.	3057.	4279.	-3865.	4298.	666.	-.0400	.0479	.0932	-.0135	.0183	-.0689	2727.	
.2880	4525.	2953.	3837.	-3358.	3912.	583.	-.0378	.0512	.0844	-.0151	.0268	-.0593	2432.	
.2890	4243.	2779.	3364.	-2821.	3559.	502.	-.0361	.0538	.0738	-.0167	.0353	-.0445	2141.	

ADLPIPE PAGE 338

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.01.

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

.2790	1189.	1471.	2499.	-3782.	5317.	801.	-.0564	.0139	.0840	-.0384	-.0186	-.0175	3081.
.2800	1789.	1880.	4154.	-4137.	5814.	902.	-.0566	.0179	.0937	-.0274	-.0134	-.0285	3371.
.2810	2396.	2247.	4663.	-4441.	6060.	957.	-.0557	.0221	.1010	-.0198	-.0092	-.0399	3549.
.2820	2981.	2545.	4987.	-4636.	6056.	967.	-.0539	.0266	.1057	-.0142	-.0061	-.0510	3603.
.2830	3517.	2770.	5118.	-4709.	5857.	940.	-.0514	.0312	.1079	-.0110	-.0033	-.0609	3550.
.2840	3976.	2937.	5091.	-4684.	5526.	888.	-.0485	.0357	.1076	-.0099	.0000	-.0685	3420.
.2850	4332.	3051.	4951.	-4554.	5122.	821.	-.0455	.0401	.1049	-.0104	.0046	-.0729	3235.
.2860	4561.	3094.	4670.	-4282.	4704.	745.	-.0426	.0442	.1001	-.0118	.0107	-.0733	3001.
.2870	4632.	3057.	4279.	-3865.	4298.	666.	-.0400	.0479	.0932	-.0135	.0183	-.0689	2727.
.2880	4525.	2953.	3837.	-3358.	3912.	583.	-.0378	.0512	.0844	-.0151	.0268	-.0593	2432.
.2890	4243.	2779.	3364.	-2821.	3559.	502.	-.0361	.0538	.0738	-.0167	.0353	-.0445	2141.

ADLPIPE PAGE 338 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.01.

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	6	MEMBER	1	SEQUENCE	25	LOCATION	END	TYPE	VA						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.2900	3790.	2529.	2859.	-2280.	3227.	415.	-.0349	.0557	.0615	-.0182	.0426	-.0247	1862.		
.2910	3169.	2205.	2340.	-1741.	2871.	313.	-.0341	.0570	.0476	-.0197	.0478	-.0007	1580.		
.2920	2405.	1822.	1812.	-1199.	2465.	192.	-.0335	.0576	.0324	-.0212	.0505	.0268	1288.		
.2930	1536.	1394.	1254.	-652.	2016.	51.	-.0329	.0575	.0162	-.0231	.0509	.0564	993.		
.2940	595.	944.	674.	-101.	1514.	-116.	-.0323	.0569	-.0009	-.0255	.0493	.0870	713.		
.2950	-381.	491.	87.	445.	934.	-311.	-.0313	.0558	-.0184	-.0285	.0456	.1171	506.		
.2960	-1338.	43.	-530.	994.	283.	-521.	-.0299	.0543	-.0361	-.0325	.0400	.1453	542.		
.2970	-2231.	-392.	-1192.	1552.	-429.	-736.	-.0279	.0525	-.0534	-.0377	.0329	.1703	830.		
.2980	-3040.	-797.	-1863.	2104.	-1215.	-955.	-.0253	.0504	-.0701	-.0441	.0245	.1910	1223.		
.2990	-3726.	-1166.	-2517.	2620.	-2067.	-1164.	-.0220	.0480	-.0856	-.0516	.0148	.2065	1656.		
.3000	-4280.	-1503.	-3166.	3079.	-2945.	-1340.	-.0180	.0456	-.0997	-.0603	.0039	.2161	2093.		
.3010	-4649.	-1793.	-3781.	3465.	-3812.	-1474.	-.0134	.0430	-.1120	-.0697	-.0078	.2197	2511.		
.3020	-4851.	-2012.	-4303.	3765.	-4640.	-1563.	-.0083	.0404	-.1220	-.0793	-.0195	.2174	2894.		
.3030	-4888.	-2153.	-4705.	3973.	-5369.	-1598.	-.0029	.0377	-.1295	-.0882	-.0301	.2096	3218.		
.3040	-4757.	-2218.	-4989.	4095.	-5936.	-1569.	.0026	.0352	-.1342	-.0959	-.0390	.1969	3458.		
.3050	-4478.	-2195.	-5129.	4137.	-6319.	-1484.	.0079	.0326	-.1360	-.1019	-.0457	.1802	3607.		
.3060	-4080.	-2082.	-5096.	4091.	-6510.	-1354.	.0129	.0302	-.1349	-.1056	-.0503	.1602	3658.		
.3070	-3586.	-1896.	-4906.	3950.	-6485.	-1182.	.0174	.0278	-.1309	-.1069	-.0526	.1380	3601.		
.3080	-3023.	-1660.	-4583.	3729.	-6250.	-972.	.0212	.0255	-.1243	-.1054	-.0529	.1144	3441.		
.3090	-2429.	-1388.	-4137.	3458.	-5848.	-745.	.0242	.0232	-.1152	-.1011	-.0515	.0905	3203.		
.3100	-1831.	-1098.	-3594.	3155.	-5309.	-515.	.0262	.0208	-.1040	-.0938	-.0490	.0667	2904.		
.3110	-1245.	-808.	-2987.	2812.	-4646.	-285.	.0273	.0185	-.0909	-.0837	-.0454	.0445	2548.		
.3120	-686.	-525.	-2333.	2425.	-3880.	-63.	.0273	.0160	-.0763	-.0707	-.0407	.0240	2144.		
.3130	-171.	-246.	-1643.	2014.	-3051.	138.	.0262	.0134	-.0604	-.0549	-.0348	.0058	1714.		
.3140	290.	21.	-948.	1612.	-2189.	309.	.0242	.0107	-.0435	-.0364	-.0277	-.0096	1282.		
.3150	700.	271.	-279.	1223.	-1313.	448.	.0214	.0078	-.0261	-.0155	-.0195	-.0221	867.		
.3160	1053.	504.	360.	833.	-452.	552.	.0177	.0047	-.0083	.0073	-.0105	-.0318	514.		
.3170	1346.	721.	961.	437.	369.	615.	.0134	.0015	.0096	.0315	-.0009	-.0386	394.		
.3180	1585.	914.	1502.	45.	1132.	643.	.0086	-.0021	.0271	.0563	.0088	-.0431	610.		
.3190	1770.	1068.	1960.	-317.	1821.	641.	.0035	-.0058	.0441	.0812	.0183	-.0455	917.		
.3200	1897.	1179.	2324.	-629.	2431.	611.	-.0017	-.0098	.0603	.1055	.0276	-.0463	1211.		
.3210	1964.	1246.	2600.	-882.	2968.	555.	-.0070	-.0139	.0755	.1289	.0365	-.0461	1474.		
.3220	1980.	1275.	2794.	-1081.	3446.	483.	-.0121	-.0183	.0895	.1506	.0453	-.0452	1708.		
.3230	1959.	1270.	2914.	-1229.	3881.	411.	-.0169	-.0227	.1022	.1704	.0536	-.0441	1917.		
.3240	1908.	1234.	2964.	-1311.	4281.	343.	-.0211	-.0273	.1136	.1880	.0515	-.0433	2104.		
.3250	1823.	1177.	2965.	-1315.	4642.	272.	-.0247	-.0319	.1233	.2034	.0590	-.0430	2264.		
.3260	1716.	1110.	2944.	-1272.	4963.	207.	-.0274	-.0366	.1314	.2165	.0758	-.0436	2403.		
.3270	1610.	1040.	2910.	-1229.	5244.	162.	-.0290	-.0412	.1378	.2268	.0913	-.0454	2525.		

ADLPIPE PAGE 339 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.01.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.3170	1346.	721.	901.	437.	769.	615.	.0134	-.0015	.0096	.0315	-.0009	-.0388	394.
.3180	1525.	914.	1502.	45.	1132.	643.	.0086	-.0021	.0271	.0563	.0088	-.0431	610.
.3190	1770.	1068.	1960.	-317.	1821.	641.	.0035	-.0058	.0441	.0812	.0183	-.0455	917.
.3200	1897.	1175.	2324.	-629.	2431.	611.	-.0017	-.0098	.0603	.1055	.0276	-.0463	1211.
.3210	1964.	1246.	2600.	-822.	2968.	555.	-.0070	-.0139	.0755	.1289	.0365	-.0461	1474.
.3220	1960.	1275.	2794.	-1081.	3446.	483.	-.0121	-.0183	.0895	.1506	.0453	-.0452	1708.
.3230	1959.	1270.	2914.	-1229.	3881.	411.	-.0169	-.0227	.1022	.1704	.0536	-.0441	1917.
.3240	1908.	1234.	2964.	-1311.	4281.	343.	-.0211	-.0273	.1136	.1880	.0515	-.0433	2104.
.3250	1823.	1177.	2965.	-1315.	4642.	272.	-.0247	-.0319	.1233	.2034	.0590	-.0430	2264.
.3260	1716.	1110.	2944.	-1272.	4963.	207.	-.0274	-.0366	.1314	.2165	.0758	-.0436	2403.
.3270	1610.	1040.	2910.	-1229.	5244.	162.	-.0290	-.0412	.1378	.2268	.0813	-.0454	2525.

ADLPIPE PAGE 339

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.01.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	6	MEMBER	1	SEQUENCE	25	LOCATION	END	TYPE	VA						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)		DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.3280	1515.	970.	2896.	-1205.	5469.	142.		-.0295	-.0458	.1423	.2344	.0849	-.0486	2625.	
.3290	1434.	900.	2889.	-1202.	5609.	141.		-.0287	-.0503	.1449	.2392	.0863	-.0535	2689.	
.3300	1371.	832.	2901.	-1224.	5648.	160.		-.0266	-.0547	.1455	.2412	.0851	-.0601	2709.	
.3310	1337.	764.	2922.	-1284.	5583.	208.		-.0231	-.0589	.1441	.2401	.0814	-.0686	2686.	
.3320	1339.	657.	2945.	-1382.	5411.	282.		-.0183	-.0630	.1407	.2359	.0753	-.0789	2621.	
.3330	1378.	635.	2963.	-1504.	5124.	383.		-.0122	-.0668	.1355	.2287	.0670	-.0910	2509.	
.3340	1447.	572.	2950.	-1617.	4728.	507.		-.0051	-.0703	.1283	.2183	.0568	-.1046	2354.	
.3350	1537.	501.	2878.	-1683.	4235.	633.		.0030	-.0735	.1195	.2051	.0454	-.1193	2156.	
.3360	1630.	421.	2742.	-1688.	3643.	761.		.0117	-.0764	.1091	.1892	.0332	-.1348	1915.	
.3370	1721.	331.	2535.	-1631.	2962.	882.		.0209	-.0788	.0972	.1709	.0202	-.1504	1638.	
.3380	1801.	221.	2239.	-1506.	2215.	993.		.0303	-.0809	.0841	.1506	.0067	-.1656	1339.	
.3390	1847.	84.	1855.	-1306.	1419.	1081.		.0395	-.0825	.0700	.1290	-.0068	-.1794	1036.	
.3400	1835.	-77.	1407.	-1028.	583.	1134.		.0484	-.0838	.0552	.1070	-.0197	-.1912	768.	
.3410	1759.	-262.	907.	-685.	-257.	1154.		.0567	-.0846	.0399	.0855	-.0315	-.2001	640.	
.3420	1622.	-474.	363.	-300.	-1062.	1149.		.0642	-.0851	.0246	.0653	-.0417	-.2053	747.	
.3430	1416.	-702.	-189.	103.	-1808.	1118.		.0706	-.0851	.0094	.0473	-.0496	-.2064	997.	
.3440	1136.	-938.	-716.	508.	-2481.	1060.		.0758	-.0848	-.0054	.0323	-.0549	-.2029	1286.	
.3450	788.	-1180.	-1213.	908.	-3058.	978.		.0798	-.0841	-.0194	.0207	-.0571	-.1948	1563.	
.3460	385.	-1426.	-1676.	1290.	-3533.	875.		.0826	-.0831	-.0325	.0128	-.0565	-.1822	1810.	
.3470	-63.	-1667.	-2079.	1632.	-3921.	753.		.0841	-.0817	-.0445	.0084	-.0536	-.1656	2021.	
.3480	-538.	-1896.	-2419.	1918.	-4226.	613.		.0844	-.0800	-.0553	.0071	-.0487	-.1457	2194.	
.3490	-1019.	-2113.	-2711.	2151.	-4448.	464.		.0837	-.0780	-.0647	.0085	-.0421	-.1235	2326.	
.3500	-1495.	-2314.	-2959.	2350.	-4600.	301.		.0820	-.0756	-.0726	.0121	-.0343	-.0999	2425.	
.3510	-1951.	-2489.	-3157.	2525.	-4698.	124.		.0795	-.0729	-.0790	.0172	-.0257	-.0761	2500.	
.3520	-2360.	-2636.	-3317.	2676.	-4735.	-54.		.0763	-.0700	-.0837	.0233	-.0165	-.0531	2549.	
.3530	-2697.	-2747.	-3444.	2796.	-4695.	-222.		.0726	-.0667	-.0866	.0298	-.0070	-.0318	2563.	
.3540	-2956.	-2812.	-3521.	2886.	-4585.	-378.		.0686	-.0633	-.0876	.0364	.0026	-.0131	2545.	
.3550	-3130.	-2826.	-3540.	2956.	-4412.	-520.		.0642	-.0596	-.0867	.0427	.0121	.0024	2501.	
.3560	-3203.	-2788.	-3507.	3000.	-4169.	-639.		.0597	-.0559	-.0839	.0486	.0211	.0141	2426.	
.3570	-3165.	-2698.	-3412.	2995.	-3855.	-725.		.0551	-.0520	-.0792	.0538	.0291	.0218	2313.	
.3580	-3019.	-2546.	-3233.	2915.	-3479.	-775.		.0505	-.0482	-.0727	.0583	.0360	.0253	2158.	
.3590	-2769.	-2334.	-2965.	2759.	-3044.	-789.		.0461	-.0443	-.0645	.0619	.0414	.0248	1960.	
.3600	-2423.	-2072.	-2622.	2538.	-2554.	-765.		.0417	-.0406	-.0548	.0649	.0454	.0205	1725.	
.3610	-1994.	-1769.	-2209.	2262.	-2024.	-706.		.0376	-.0370	-.0438	.0672	.0479	.0128	1461.	
.3620	-1499.	-1429.	-1730.	1929.	-1468.	-612.		.0336	-.0335	-.0319	.0686	.0488	.0021	1172.	
.3630	-951.	-1063.	-1198.	1530.	-895.	-489.		.0298	-.0303	-.0193	.0692	.0480	-.0108	865.	
.3640	-373.	-686.	-633.	1096.	-319.	-342.		.0261	-.0273	-.0063	.0689	.0456	-.0255	558.	
.3650	210.	-311.	-51.	623.	236.	-181.		.0226	-.0245	.0068	.0676	.0416	-.0412	324.	

ADLPIPE PAGE 340

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.01.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.3540	-2954.	-2012.	-3540.	2886.	-4585.	-378.	.0686	-.0633	-.0876	.0364	.0026	-.0131	2545.
.3550	-3130.	-2828.	-3540.	2956.	-4412.	-520.	.0642	-.0596	-.0867	.0427	.0121	.0024	2501.
.3560	-3203.	-2788.	-3507.	3000.	-4169.	-639.	.0597	-.0559	-.0839	.0486	.0211	.0141	2426.
.3570	-3165.	-2698.	-3412.	2995.	-3855.	-725.	.0551	-.0520	-.0792	.0538	.0291	.0218	2313.
.3580	-3019.	-2546.	-3233.	2915.	-3479.	-775.	.0505	-.0482	-.0727	.0583	.0360	.0253	2158.
.3590	-2769.	-2374.	-2965.	2759.	-3044.	-799.	.0461	-.0443	-.0645	.0619	.0414	.0248	1960.
.3600	-2423.	-2072.	-2622.	2578.	-2554.	-765.	.0417	-.0406	-.0548	.0649	.0454	.0205	1725.
.3610	-1994.	-1769.	-2209.	2262.	-2024.	-706.	.0376	-.0370	-.0438	.0672	.0479	.0128	1461.
.3620	-1499.	-1429.	-1730.	1929.	-1468.	-612.	.0336	-.0335	-.0319	.0686	.0488	.0021	1172.
.3630	-951.	-1063.	-1198.	1538.	-895.	-489.	.0298	-.0303	-.0193	.0692	.0480	-.0108	865.
.3640	-373.	-686.	-633.	1096.	-319.	-342.	.0261	-.0273	-.0063	.0689	.0456	-.0255	558.
.3650	210.	-311.	-51.	673.	236.	-181.	.0226	-.0245	.0068	.0676	.0416	-.0412	324.

ADLPIPE PAGE 340

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.01.

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	G	MEMBER	1	SEQUENCE	25	LOCATION	END	TYPE	VA					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.3660	778.	49.	526.	136.	752.	-16.	.0191	-.0220	.0195	.0653	.0360	-.0571	358.	
.3670	1313.	385.	1086.	-366.	1224.	149.	.0156	-.0198	.0317	.0619	.0289	-.0726	603.	
.3680	1803.	694.	1619.	-888.	1655.	312.	.0121	-.0178	.0431	.0574	.0209	-.0870	892.	
.3690	2231.	970.	2117.	-1418.	2045.	467.	.0084	-.0161	.0535	.0520	.0124	-.0996	1187.	
.3700	2582.	1208.	2561.	-1924.	2398.	610.	.0046	-.0146	.0628	.0459	.0040	-.1098	1469.	
.3710	2850.	1405.	2939.	-2384.	2717.	736.	.0006	-.0132	.0708	.0392	-.0036	-.1172	1729.	
.3720	3032.	1559.	3244.	-2795.	3008.	849.	-.0037	-.0120	.0774	.0320	-.0103	-.1215	1965.	
.3730	3127.	1670.	3469.	-3154.	3273.	948.	-.0082	-.0108	.0825	.0243	-.0155	-.1224	2176.	
.3740	3134.	1735.	3606.	-3446.	3505.	1029.	-.0129	-.0095	.0861	.0162	-.0194	-.1200	2353.	
.3750	3054.	1752.	3643.	-3649.	3686.	1086.	-.0178	-.0082	.0881	.0077	-.0220	-.1142	2483.	
.3760	2892.	1719.	3573.	-3751.	3804.	1116.	-.0227	-.0066	.0883	-.0012	-.0235	-.1054	2558.	
.3770	2658.	1639.	3397.	-3757.	3853.	1117.	-.0275	-.0047	.0869	-.0105	-.0242	-.0937	2576.	
.3780	2362.	1521.	3130.	-3676.	3824.	1086.	-.0321	-.0025	.0837	-.0200	-.0241	-.0794	2538.	
.3790	2014.	1373.	2780.	-3510.	3710.	1024.	-.0364	.0002	.0787	-.0298	-.0235	-.0629	2441.	
.3800	1626.	1199.	2356.	-3255.	3507.	927.	-.0403	.0034	.0722	-.0395	-.0227	-.0445	2284.	
.3810	1208.	1008.	1881.	-2924.	3212.	795.	-.0436	.0071	.0641	-.0490	-.0219	-.0247	2069.	
.3820	775.	813.	1386.	-2552.	2833.	633.	-.0464	.0114	.0546	-.0582	-.0213	-.0037	1811.	
.3830	343.	623.	899.	-2174.	2383.	452.	-.0484	.0162	.0439	-.0669	-.0211	.0179	1526.	
.3840	-73.	446.	439.	-1809.	1878.	260.	-.0497	.0216	.0322	-.0752	-.0216	.0398	1228.	
.3850	-466.	288.	26.	-1460.	1333.	61.	-.0503	.0275	.0197	-.0829	-.0226	.0615	927.	
.3860	-828.	154.	-326.	-1133.	768.	-137.	-.0502	.0338	.0068	-.0900	-.0241	.0826	645.	
.3870	-1144.	51.	-609.	-841.	216.	-321.	-.0495	.0405	-.0064	-.0967	-.0257	.1026	434.	
.3880	-1401.	-16.	-823.	-586.	-294.	-480.	-.0482	.0476	-.0194	-.1030	-.0271	.1212	381.	
.3890	-1598.	-46.	-972.	-349.	-747.	-608.	-.0465	.0549	-.0321	-.1092	-.0279	.1381	480.	
.3900	-1737.	-44.	-1076.	-100.	-1134.	-708.	-.0444	.0623	-.0442	-.1154	-.0279	.1528	628.	
.3910	-1816.	-16.	-1155.	175.	-1449.	-781.	-.0421	.0698	-.0556	-.1216	-.0268	.1651	776.	
.3920	-1837.	35.	-1218.	467.	-1697.	-826.	-.0397	.0773	-.0662	-.1282	-.0248	.1751	911.	
.3930	-1802.	104.	-1277.	766.	-1888.	-845.	-.0372	.0845	-.0757	-.1351	-.0221	.1826	1033.	
.3940	-1720.	179.	-1350.	1078.	-2038.	-842.	-.0347	.0914	-.0843	-.1423	-.0188	.1878	1150.	
.3950	-1606.	252.	-1448.	1412.	-2170.	-834.	-.0323	.0979	-.0918	-.1493	-.0152	.1911	1275.	
.3960	-1473.	319.	-1566.	1751.	-2297.	-828.	-.0302	.1038	-.0981	-.1560	-.0113	.1929	1408.	
.3970	-1329.	381.	-1691.	2055.	-2421.	-826.	-.0283	.1090	-.1033	-.1618	-.0075	.1937	1538.	
.3980	-1180.	436.	-1813.	2295.	-2536.	-825.	-.0268	.1135	-.1074	-.1664	-.0037	.1941	1649.	
.3990	-1044.	485.	-1923.	2472.	-2642.	-834.	-.0257	.1170	-.1102	-.1693	.0002	.1944	1740.	
.4000	-939.	524.	-2010.	2592.	-2741.	-863.	-.0251	.1196	-.1118	-.1701	.0040	.1952	1813.	

ADLPIPE PAGE 341

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.01.

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



.3930	-1802.	104.	-1277.	766.	-1888.	-845.	-.0372	.0845	-.0757	-.1351	-.0221	.1826	1033.
.3940	-1720.	179.	-1350.	1078.	-2038.	-842.	-.0347	.0914	-.0843	-.1423	-.0188	.1878	1150.
.3950	-1606.	252.	-1448.	1412.	-2170.	-834.	-.0323	.0979	-.0918	-.1493	-.0152	.1911	1275.
.3960	-1473.	319.	-1566.	1751.	-2297.	-828.	-.0302	.1038	-.0981	-.1560	-.0113	.1929	1408.
.3970	-1329.	381.	-1691.	2055.	-2421.	-826.	-.0283	.1090	-.1033	-.1618	-.0075	.1937	1538.
.3980	-1180.	436.	-1813.	2295.	-2536.	-825.	-.0268	.1135	-.1074	-.1664	-.0037	.1941	1649.
.3990	-1044.	485.	-1923.	2472.	-2642.	-834.	-.0257	.1170	-.1102	-.1693	.0002	.1944	1740.
.4000	-939.	524.	-2010.	2592.	-2741.	-863.	-.0251	.1196	-.1118	-.1701	.0040	.1952	1813.

ADLPIPE PAGE 341

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.01.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

MAXIMUM VALUE OF STRESS OCCURS AT

TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.0660	-3614.	-576.	-4227.	13047.	-8060.	-5425.	.0594	.1144	-.1692	.1902	.0830	.2604	7623.

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	VA	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
7	1	25					0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
							.0010	-0.	-6.	2.	1.	-0.	-0.	-.0000	.0000	-.0000	-.0000	.0000	.0000	.0000	1.
							.0020	2.	-32.	10.	6.	-0.	-2.	-.0001	.0000	-.0001	-.0000	.0002	.0001	.0001	3.
							.0030	17.	-48.	21.	12.	0.	-9.	-.0002	.0000	-.0004	-.0003	.0006	.0005	.0005	7.
							.0040	53.	-39.	35.	17.	2.	-23.	-.0004	-.0000	-.0008	-.0008	.0014	.0015	.0015	13.
							.0050	102.	-34.	65.	28.	5.	-42.	-.0007	-.0000	-.0016	-.0016	.0024	.0030	.0030	24.
							.0060	158.	-58.	117.	50.	7.	-65.	-.0012	.0000	-.0028	-.0028	.0036	.0053	.0053	39.
							.0070	235.	-82.	189.	81.	10.	-96.	-.0018	.0000	-.0046	-.0047	.0054	.0088	.0088	59.
							.0080	360.	-55.	219.	91.	18.	-145.	-.0028	.0001	-.0071	-.0072	.0090	.0142	.0142	80.
							.0090	544.	56.	37.	11.	38.	-213.	-.0040	.0002	-.0106	-.0103	.0160	.0222	.0222	102.
							.0100	793.	192.	-320.	-141.	71.	-306.	-.0053	.0004	-.0152	-.0134	.0265	.0327	.0327	161.
							.0110	1091.	296.	-592.	-256.	103.	-420.	-.0066	.0007	-.0207	-.0168	.0385	.0452	.0452	236.
							.0120	1382.	366.	-647.	-283.	127.	-532.	-.0076	.0012	-.0270	-.0204	.0507	.0589	.0589	289.
							.0130	1609.	375.	-610.	-269.	142.	-622.	-.0081	.0019	-.0341	-.0236	.0624	.0729	.0729	324.
							.0140	1746.	300.	-616.	-266.	152.	-679.	-.0080	.0027	-.0417	-.0258	.0730	.0869	.0869	349.
							.0150	1785.	183.	-627.	-262.	156.	-699.	-.0073	.0036	-.0500	-.0272	.0817	.1003	.1003	357.
							.0160	1708.	79.	-708.	-286.	153.	-673.	-.0059	.0046	-.0590	-.0285	.0888	.1131	.1131	350.
							.0170	1614.	20.	-591.	-235.	142.	-638.	-.0042	.0056	-.0688	-.0306	.0936	.1254	.1254	326.
							.0180	1655.	78.	392.	149.	106.	-652.	-.0020	.0066	-.0791	-.0350	.0935	.1370	.1370	317.
							.0190	1827.	304.	2331.	900.	41.	-711.	.0007	.0076	-.0892	-.0420	.0898	.1469	.1469	538.
							.0200	2133.	565.	4682.	1812.	-30.	-822.	.0041	.0086	-.0975	-.0492	.0890	.1533	.1533	932.
							.0210	2518.	652.	5440.	2105.	-32.	-971.	.0084	.0100	-.1030	-.0499	.1039	.1561	.1561	1087.
							.0220	2804.	322.	3960.	1544.	48.	-1097.	.0141	.0117	-.1054	-.0395	.1286	.1535	.1535	888.
							.0230	2711.	-434.	2433.	995.	102.	-1090.	.0216	.0135	-.1042	-.0244	.1448	.1405	.1405	693.
							.0240	1719.	-1314.	16.	103.	125.	-733.	.0306	.0149	-.1002	-.0089	.1541	.1147	.1147	352.
							.0250	555.	-1871.	-2034.	-668.	122.	-294.	.0407	.0155	-.0948	.0051	.1511	.0804	.0804	347.
							.0260	89.	-1925.	716.	424.	-22.	-112.	.0520	.0148	-.0882	.0112	.1129	.0395	.0395	206.
							.0270	-886.	-1758.	5484.	2299.	-283.	281.	.0638	.0129	-.0791	.0099	.0492	-.0121	.1094.	1094.
							.0280	-2977.	-1937.	5450.	2299.	-435.	1101.	.0745	.0102	-.0669	.0144	.0052	-.0719	.1212.	1212.
							.0290	-4357.	-2484.	2018.	981.	-399.	1625.	.0838	.0067	-.0530	.0325	-.0128	-.1277	.909.	909.
							.0300	-4951.	-2428.	-1087.	-253.	-319.	1863.	.0918	.0018	-.0380	.0524	-.0305	-.1744	.894.	894.
							.0310	-6119.	-2844.	-2209.	-666.	-360.	2309.	.0968	-.0045	-.0232	.0608	-.0591	-.2201	.1139.	1139.
							.0320	-7055.	-3512.	542.	472.	-538.	2653.	.0988	-.0125	-.0088	.0560	-.1078	-.2630	.1288.	1288.

.0330	-7109.	-2436.	2058.	993.	-602.	2717.	.0980	-.0223	.0053	.0510	-.1524	-.2903	1385.
-------	--------	--------	-------	------	-------	-------	-------	--------	-------	-------	--------	--------	-------

.0180	1655.	78.	392.	149.	106.	-652.	-.0020	.0066	-.0791	-.0350	.0935	.1370	317.
.0190	1827.	304.	2331.	900.	41.	-711.	.0007	.0076	-.0892	-.0470	.0898	.1469	538.
.0200	2137.	562.	4682.	1612.	-30.	-822.	.0041	.0086	-.0975	-.0492	.0890	.1533	932.
.0210	2518.	652.	5440.	2105.	-32.	-971.	.0084	.0100	-.1030	-.0499	.1039	.1561	1087.
.0220	2804.	322.	3960.	1544.	48.	-1077.	.0141	.0117	-.1054	-.0395	.1286	.1535	888.
.0230	2711.	-474.	2422.	925.	102.	-1090.	.0216	.0135	-.1042	-.0244	.1448	.1405	693.
.0240	1719.	-1314.	16.	103.	125.	-733.	.0306	.0149	-.1002	-.0089	.1541	.1147	352.
.0250	555.	-1871.	-2034.	-668.	122.	-294.	.0407	.0155	-.0948	.0051	.1511	.0804	347.
.0260	89.	-1925.	710.	474.	-22.	-112.	.0520	.0148	-.0882	.0112	.1129	.0395	206.
.0270	-886.	-1758.	5484.	2299.	-283.	281.	.0638	.0129	-.0791	.0099	.0492	-.0121	1094.
.0280	-2977.	-1917.	5450.	2299.	-435.	1101.	.0745	.0102	-.0669	.0144	.0052	-.0719	1212.
.0290	-4357.	-2404.	2012.	981.	-302.	1625.	.0822	.0067	-.0530	.0325	-.0128	-.1277	909.
.0300	-4951.	-2428.	-1087.	-253.	-319.	1863.	.0918	.0017	-.0380	.0524	-.0305	-.1744	894.
.0310	-6119.	-2844.	-2209.	-666.	-360.	2309.	.0968	-.0045	-.0232	.0608	-.0591	-.2201	1139.
.0320	-7055.	-3512.	542.	472.	-538.	2653.	.0988	-.0125	-.0088	.0560	-.1078	-.2630	1288.

.0330 -7109. -2436. 2058. 993. -602. 2717. .0980 -.0223 .0053 .0510 -.1524 -.2903 1385.

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	7	MEMBER	1	SEQUENCE	25	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0340	-7147.	-776.	-322.	-71.	-510.	2798.	.0941	-.0333	.0193	.0540	-.1301	-.3021	1333.		
.0350	-7474.	-1433.	-783.	-205.	-516.	2901.	.0866	-.0448	.0330	.0583	-.2136	-.3093	1384.		
.0360	-7253.	-2647.	3259.	1484.	-661.	2766.	.0756	-.0573	.0473	.0543	-.2599	-.3103	1503.		
.0370	-6225.	-819.	5157.	2101.	-661.	2431.	.0618	-.0711	.0636	.0467	-.2889	-.2960	1537.		
.0380	-4839.	2095.	1762.	544.	-424.	1999.	.0450	-.0850	.0815	.0482	-.2893	-.2708	991.		
.0390	-3150.	2499.	-306.	-304.	-218.	1346.	.0255	-.0977	.0998	.0540	-.2868	-.2473	655.		
.0400	1032.	2563.	1815.	531.	-148.	510.	.0042	-.1091	.1193	.0474	-.2781	-.2251	352.		
.0410	1120.	4713.	429.	-175.	65.	-256.	-.0175	-.1189	.1399	.0378	-.2359	-.1965	148.		
.0420	3508.	6108.	-5306.	-2547.	468.	-1145.	-.0385	-.1257	.1592	.0403	-.1691	-.1672	1327.		
.0430	5969.	5784.	-8491.	-3784.	775.	-2132.	-.0581	-.1292	.1761	.0390	-.1032	-.1472	2068.		
.0440	7456.	6519.	-9055.	-4061.	906.	-2692.	-.0749	-.1296	.1900	.0191	-.0368	-.1341	2322.		
.0450	8054.	7162.	-10354.	-4622.	1002.	-2903.	-.0874	-.1263	.1987	.0005	.0279	-.1219	2601.		
.0460	8292.	5169.	-11021.	-4740.	1046.	-3076.	-.0953	-.1190	.2003	-.0038	.0706	-.1135	2693.		
.0470	7717.	3522.	-8479.	-3614.	902.	-2914.	-.0987	-.1089	.1968	-.0156	.0890	-.1114	2216.		
.0480	6128.	4967.	-5001.	-2343.	648.	-2228.	-.0977	-.0969	.1896	-.0391	.1003	-.1077	1545.		
.0490	4517.	5602.	-3293.	-1714.	462.	-1565.	-.0925	-.0819	.1780	-.0418	.1093	-.0962	1109.		
.0500	3294.	2855.	-2079.	-1032.	324.	-1190.	-.0843	-.0638	.1623	-.0153	.1119	-.0810	754.		
.0510	1815.	1025.	-488.	-268.	152.	-678.	-.0743	-.0442	.1456	.0122	.1178	-.0638	349.		
.0520	389.	2225.	-308.	-285.	41.	-65.	-.0629	-.0240	.1290	.0359	.1343	-.0386	138.		
.0530	-116.	2374.	-2159.	-1028.	77.	141.	-.0505	-.0025	.1107	.0771	.1512	-.0050	488.		
.0540	-295.	112.	-4091.	-1627.	141.	121.	-.0380	.0201	.0903	.1281	.1611	.0284	768.		
.0550	-947.	-1244.	-4304.	-1613.	102.	325.	-.0262	.0424	.0693	.1618	.1653	.0570	772.		
.0560	-1327.	-1457.	-3165.	-1146.	29.	467.	-.0149	.0638	.0472	.1812	.1612	.0843	580.		
.0570	-977.	-2982.	-2356.	-714.	22.	268.	-.0042	.0841	.0232	.2028	.1481	.1112	358.		
.0580	-853.	-4828.	-2165.	-503.	24.	146.	.0055	.1025	-.0014	.2167	.1367	.1336	246.		
.0590	-1165.	-5199.	-1035.	-29.	-44.	254.	.0141	.1179	-.0255	.2125	.1315	.1512	122.		
.0600	-1011.	-5947.	1116.	877.	-118.	164.	.0221	.1302	-.0498	.2073	.1262	.1677	422.		
.0610	-506.	-8157.	2357.	1530.	-131.	-124.	.0294	.1391	-.0742	.2113	.1222	.1843	722.		
.0620	-537.	-9122.	2213.	1543.	-127.	-150.	.0363	.1434	-.0968	.2100	.1251	.2003	729.		
.0630	-811.	-7860.	2622.	1613.	-164.	8.	.0428	.1424	-.1173	.1990	.1273	.2169	760.		
.0640	-786.	-7152.	4016.	2113.	-217.	27.	.0491	.1372	-.1367	.1939	.1183	.2340	996.		
.0650	-1104.	-7847.	4801.	2475.	-272.	125.	.0547	.1200	-.1546	.1963	.1019	.2490	1168.		
.0660	-2071.	-7533.	5133.	2583.	-356.	520.	.0594	.1144	-.1692	.1902	.0830	.2604	1246.		
.0670	-2727.	-5543.	6446.	2957.	-456.	859.	.0627	.0967	-.1798	.1723	.0575	.2688	1459.		
.0680	-2708.	-3719.	7740.	3336.	-506.	924.	.0642	.0760	-.1866	.1527	.0299	.2725	1639.		
.0690	-2700.	-2677.	7214.	3051.	-485.	962.	.0633	.0534	-.1889	.1309	.0145	.2681	1516.		
.0700	-2639.	-1548.	5790.	2408.	-424.	983.	.0599	.0293	-.1863	.0993	.0135	.2551	1235.		
.0710	-1864.	-235.	4853.	1938.	-320.	728.	.0545	.0045	-.1795	.0583	.0154	.2339	983.		

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

.0610	-506.	-8157.	2357.	1530.	-131.	-124.	.0294	.1391	-.0742	.2113	.1222	.1843	722.
.0620	-537.	-9122.	2213.	1543.	-127.	-150.	.0363	.1434	-.0968	.2100	.1251	.2003	729.
.0630	-811.	-7860.	2622.	1613.	-164.	8.	.0428	.1424	-.1173	.1990	.1273	.2169	760.
.0640	-786.	-7152.	4010.	2112.	-217.	27.	.0491	.1372	-.1367	.1939	.1183	.2340	996.
.0650	-1104.	-7847.	4801.	2475.	-272.	125.	.0547	.1280	-.1546	.1963	.1019	.2490	1168.
.0660	-2071.	-7533.	5133.	2953.	-356.	520.	.0594	.1144	-.1692	.1902	.0930	.2604	1246.
.0670	-2727.	-5543.	6446.	2957.	-456.	859.	.0627	.0967	-.1798	.1723	.0575	.2688	1459.
.0680	-2708.	-3719.	7740.	3336.	-506.	924.	.0642	.0760	-.1866	.1527	.0299	.2725	1639.
.0690	-2700.	-2677.	7214.	3051.	-485.	962.	.0633	.0534	-.1889	.1309	.0145	.2681	1516.
.0700	-2639.	-1548.	5790.	2401.	-424.	983.	.0599	.0293	-.1863	.0993	.0135	.2551	1235.
.0710	-1864.	-275.	4853.	1938.	-330.	728.	.0545	.0045	-.1795	.0583	.0154	.2339	983.

ADLPIPE PAGE 343 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.01.  
 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	7	MEMBER	1	SEQUENCE	25	LOCATION	BEG	TYPE	VA							
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS			
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)			
.0720	-65.	897.	3908.	1481.	-204.	295.	.0475	-.0204	-.1695	.0100	.0121	.2027	714.			
.0730	366.	2145.	3341.	1165.	-106.	-60.	.0393	-.0447	-.1563	-.0493	.0004	.1602	549.			
.0740	1336.	3636.	4379.	1467.	-76.	-384.	.0309	-.0678	-.1403	-.1180	-.0208	.1098	712.			
.0750	2314.	4662.	5678.	1906.	-57.	-730.	.0230	-.0885	-.1222	-.1829	-.0459	.0555	957.			
.0760	2849.	4797.	5397.	1785.	-6.	-937.	.0162	-.1064	-.1022	-.2351	-.0693	-.0019	945.			
.0770	2945.	4740.	4995.	1630.	17.	-977.	.0108	-.1213	-.0801	-.2774	-.0962	-.0611	891.			
.0780	3025.	5342.	6013.	1989.	-18.	-985.	.0074	-.1332	-.0559	-.3113	-.1292	-.1178	1040.			
.0790	2959.	6257.	6249.	2015.	-32.	-922.	.0061	-.1419	-.0300	-.3275	-.1568	-.1688	1039.			
.0800	2403.	6432.	3782.	1026.	25.	-695.	.0065	-.1466	-.0030	-.3175	-.1700	-.2144	581.			
.0810	1606.	5865.	887.	-78.	82.	-402.	.0085	-.1475	.0241	-.2871	-.1770	-.2557	196.			
.0820	823.	5641.	-293.	-529.	72.	-101.	.0118	-.1449	.0510	-.2481	-.1872	-.2918	255.			
.0830	-163.	6000.	-1120.	-882.	33.	303.	.0159	-.1392	.0771	-.2037	-.1974	-.3222	438.			
.0840	-1371.	5986.	-2660.	-1491.	6.	781.	.0201	-.1300	.1018	-.1512	-.2029	-.3478	789.			
.0850	-2502.	5220.	-3640.	-1823.	-38.	1198.	.0238	-.1175	.1244	-.0938	-.2025	-.3690	1022.			
.0860	-3569.	4141.	-3777.	-1798.	-111.	1577.	.0263	-.1023	.1452	-.0375	-.1924	-.3842	1122.			
.0870	-4640.	2694.	-4330.	-1911.	-167.	1944.	.0272	-.0849	.1638	.0179	-.1698	-.3917	1280.			
.0880	-5348.	828.	-5281.	-2151.	-181.	2150.	.0260	-.0663	.1799	.0733	-.1382	-.3904	1428.			
.0890	-5441.	-588.	-5806.	-2255.	-167.	2130.	.0227	-.0475	.1933	.1241	-.0994	-.3787	1456.			
.0900	-5131.	-1310.	-6378.	-2429.	-123.	1987.	.0171	-.0293	.2039	.1701	-.0511	-.3556	1472.			
.0910	-4606.	-2467.	-7580.	-2820.	-35.	1725.	.0096	-.0121	.2107	.2175	.0030	-.3204	1549.			
.0920	-3666.	-4127.	-8597.	-3101.	74.	1287.	.0007	.0035	.2130	.2655	.0529	-.2737	1574.			
.0930	-2408.	-4689.	-8620.	-3068.	167.	766.	-.0092	.0165	.2112	.3042	.0931	-.2170	1484.			
.0940	-1050.	-3886.	-8042.	-2899.	243.	261.	-.0195	.0267	.2054	.3312	.1240	-.1526	1369.			
.0950	383.	-3346.	-7542.	-2740.	328.	-285.	-.0298	.0345	.1954	.3535	.1487	-.0831	1300.			
.0960	1841.	-3600.	-7309.	-2629.	426.	-872.	-.0396	.0404	.1813	.3724	.1714	-.0117	1313.			
.0970	3142.	-3614.	-7219.	-2593.	517.	-1388.	-.0483	.0440	.1641	.3804	.1946	.0579	1399.			
.0980	4284.	-3165.	-6996.	-2537.	592.	-1822.	-.0557	.0455	.1440	.3743	.2141	.1213	1490.			
.0990	5341.	-2820.	-6417.	-2333.	646.	-2226.	-.0612	.0451	.1211	.3552	.2244	.1749	1541.			
.1000	6149.	-2377.	-5433.	-1976.	666.	-2528.	-.0646	.0431	.0959	.3217	.2254	.2165	1536.			
.1010	6541.	-1634.	-3901.	-1424.	634.	-2654.	-.0654	.0396	.0690	.2732	.2186	.2442	1443.			
.1020	6617.	-1236.	-1734.	-596.	553.	-2668.	-.0638	.0352	.0409	.2148	.2025	.2564	1307.			
.1030	6457.	-1206.	589.	321.	449.	-2603.	-.0595	.0302	.0126	.1501	.1786	.2543	1247.			
.1040	5979.	-614.	2406.	997.	342.	-2391.	-.0525	.0245	-.0147	.0792	.1522	.2408	1225.			
.1050	5237.	452.	3717.	1438.	235.	-2055.	-.0431	.0187	-.0403	.0058	.1265	.2179	1180.			
.1060	4370.	833.	4689.	1795.	133.	-1696.	-.0315	.0132	-.0641	-.0618	.1017	.1869	1159.			
.1070	3295.	513.	4763.	1848.	52.	-1284.	-.0180	.0084	-.0860	-.1198	.0801	.1504	1055.			
.1080	2072.	569.	4110.	1585.	-12.	-797.	-.0031	.0040	-.1056	-.1719	.0637	.1121	832.			
.1090	1017.	1306.	3039.	1107.	-46.	-351.	.0129	.0000	-.1228	-.2177	.0566	.0746	545.			

ADLPIPE PAGE 344 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.01.  
 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

.0990	5741.	-2820.	6417.	-2333.	646.	-2226.	-.0612	.0451	.1211	.3552	.2244	.1749	1541.
.1000	6149.	-2377.	-5432.	-1976.	666.	-2528.	-.0646	.0431	.0959	.3217	.2254	.2165	1536.
.1010	6541.	-1634.	-3901.	-1424.	634.	-2654.	-.0654	.0396	.0690	.2732	.2186	.2442	1443.
.1020	6617.	-1236.	-1734.	-596.	553.	-2668.	-.0638	.0352	.0409	.2148	.2025	.2564	1307.
.1030	6457.	-1206.	589.	321.	449.	-2603.	-.0595	.0302	.0126	.1501	.1786	.2543	1247.
.1040	5979.	-614.	2406.	997.	342.	-2391.	-.0525	.0245	-.0147	.0792	.1522	.2408	1225.
.1050	5237.	452.	3717.	1438.	235.	-2055.	-.0431	.0187	-.0403	.0058	.1265	.2179	1180.
.1060	4370.	833.	4689.	1795.	133.	-1696.	-.0315	.0132	-.0641	-.0618	.1017	.1869	1159.
.1070	3295.	513.	4767.	1848.	52.	-1284.	-.0180	.0084	-.0860	-.1198	.0801	.1504	1055.
.1080	2072.	569.	4110.	1585.	-12.	-777.	-.0031	.0040	-.1056	-.1719	.0637	.1121	832.
.1090	1017.	1306.	3039.	1107.	-46.	-351.	.0129	.0000	-.1228	-.2177	.0566	.0746	545.

ADLPIPE PAGE 344

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.01.

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	7	MEMBER	1	SEQUENCE	25	LOCATION	BEG	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1100	-218.	1491.	146.	-51.	-22.	146.	.0296	-.0031	-.1396	-.2478	.0475	.0389	73.	
.1110	-1470.	927.	-566.	-292.	-85.	619.	.0463	-.0053	-.1565	-.2722	.0205	.0029	323.	
.1120	-2824.	933.	2037.	738.	-288.	1155.	.0625	-.0072	-.1728	-.3016	-.0244	-.0319	656.	
.1130	-4269.	1662.	4237.	1555.	-481.	1756.	.0775	-.0084	-.1880	-.3271	-.0721	-.0602	1122.	
.1140	-5412.	1857.	4759.	1748.	-586.	2216.	.0906	-.0087	-.2020	-.3380	-.1145	-.0805	1351.	
.1150	-6206.	1422.	5723.	2161.	-682.	2513.	.1010	-.0078	-.2137	-.3407	-.1514	-.0951	1586.	
.1160	-6931.	1172.	7229.	2775.	-795.	2790.	.1083	-.0063	-.2220	-.3414	-.1792	-.1032	1881.	
.1170	-7245.	629.	8174.	3189.	-856.	2893.	.1123	-.0040	-.2269	-.3334	-.1986	-.1024	2057.	
.1180	-7267.	-204.	7097.	2824.	-814.	2858.	.1129	-.0013	-.2283	-.3126	-.2134	-.0926	1924.	
.1190	-6821.	-765.	8146.	3280.	-824.	2669.	.1099	.0012	-.2257	-.2926	-.2347	-.0787	2019.	
.1200	-6279.	-332.	10472.	4169.	-876.	2472.	.1033	.0033	-.2181	-.2767	-.2530	-.0606	2308.	
.1210	-5778.	264.	9308.	3665.	-793.	2298.	.0935	.0053	-.2058	-.2488	-.2502	-.0351	2061.	
.1220	-4439.	-764.	7599.	3064.	-627.	1727.	.0809	.0076	-.1897	-.2049	-.2396	-.0059	1674.	
.1230	-2992.	-1253.	6560.	2688.	-480.	1134.	.0658	.0094	-.1691	-.1637	-.2238	.0218	1386.	
.1240	-1730.	-192.	6443.	2564.	-383.	677.	.0487	.0105	-.1439	-.1334	-.2027	.0468	1256.	
.1250	-313.	527.	5465.	2125.	-240.	145.	.0306	.0115	-.1158	-.0996	-.1750	.0709	1004.	
.1260	963.	244.	2436.	946.	-26.	-372.	.0120	.0130	-.0856	-.0581	-.1371	.0923	477.	
.1270	2137.	-142.	1433.	578.	99.	-852.	-.0067	.0146	-.0534	-.0257	-.0954	.1050	485.	
.1280	2831.	445.	189.	42.	200.	-1103.	-.0248	.0160	-.0196	-.0033	-.0432	.1106	525.	
.1290	3621.	351.	-2129.	-868.	350.	-1419.	-.0416	.0178	.0137	.0225	.0115	.1123	797.	
.1300	4444.	-530.	-3899.	-1504.	480.	-1780.	-.0567	.0197	.0456	.0477	.0599	.1080	1115.	
.1310	4370.	-244.	-5166.	-2027.	525.	-1739.	-.0699	.0212	.0762	.0595	.1027	.0959	1276.	
.1320	4093.	209.	-4442.	-1774.	476.	-1612.	-.0809	.0226	.1045	.0632	.1311	.0780	1145.	
.1330	3870.	-69.	-4413.	-1741.	459.	-1534.	-.0895	.0241	.1295	.0720	.1496	.0591	1109.	
.1340	3614.	-381.	-4757.	-1855.	454.	-1446.	-.0959	.0256	.1518	.0806	.1621	.0394	1122.	
.1350	3179.	291.	-4658.	-1865.	418.	-1247.	-.1004	.0269	.1719	.0810	.1725	.0180	1069.	
.1360	2683.	1064.	-5851.	-2394.	429.	-1020.	-.1030	.0283	.1890	.0835	.1841	-.0017	1236.	
.1370	2690.	262.	-6947.	-2769.	473.	-1054.	-.1038	.0304	.2020	.0939	.1882	-.0192	1406.	
.1380	2404.	-332.	-8688.	-3414.	522.	-965.	-.1029	.0325	.2111	.1006	.1983	-.0350	1681.	
.1390	1907.	129.	-9477.	-3761.	517.	-750.	-.1006	.0344	.2162	.0953	.1781	-.0505	1813.	
.1400	1746.	367.	-9014.	-3595.	487.	-677.	-.0968	.0362	.2162	.0866	.1524	-.0646	1729.	
.1410	1537.	80.	-9249.	-3667.	481.	-605.	-.0919	.0383	.2108	.0790	.1194	-.0762	1756.	
.1420	1254.	-337.	-8193.	-3218.	418.	-510.	-.0859	.0402	.2008	.0643	.0805	-.0864	1539.	
.1430	767.	-98.	-7023.	-2773.	336.	-308.	-.0791	.0418	.1869	.0426	.0431	-.0937	1317.	
.1440	520.	-74.	-6128.	-2420.	282.	-209.	-.0715	.0434	.1689	.0227	.0069	-.0964	1146.	
.1450	394.	-474.	-5402.	-2103.	244.	-175.	-.0634	.0449	.1473	.0051	-.0271	-.0946	996.	
.1460	-137.	-382.	-5035.	-1965.	190.	39.	-.0548	.0461	.1232	-.0163	-.0549	-.0884	925.	
.1470	-531.	-407.	-3226.	-1247.	90.	194.	-.0461	.0470	.0966	-.0394	-.0819	-.0776	593.	

ADLPIPE PAGE 345

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.01.

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

.1370	2690.	262.	-947.	-2769.	473.	-1054.	-.1038	.0304	.2020	.0939	.1882	-.0192	1406.
.1380	2404.	-332.	-8688.	-7414.	522.	-965.	-.1029	.0325	.2111	.1006	.1383	-.0350	1681.
.1390	1907.	129.	-9477.	-3761.	517.	-750.	-.1006	.0344	.2162	.0953	.1781	-.0505	1813.
.1400	1746.	367.	-9014.	-7595.	487.	-677.	-.0968	.0362	.2162	.0866	.1524	-.0646	1729.
.1410	1537.	80.	-9249.	-7667.	481.	-605.	-.0919	.0383	.2108	.0790	.1194	-.0762	1756.
.1420	1254.	-337.	-8193.	-3210.	418.	-510.	-.0859	.0402	.2008	.0643	.0805	-.0864	1539.
.1430	767.	-98.	-7023.	-2773.	336.	-308.	-.0791	.0418	.1869	.0426	.0431	-.0937	1317.
.1440	520.	-74.	-6128.	-2420.	282.	-209.	-.0715	.0434	.1689	.0227	.0069	-.0964	1146.
.1450	394.	-474.	-5402.	-2103.	244.	-175.	-.0674	.0449	.1473	.0051	-.0271	-.0946	996.
.1460	-137.	-382.	-5035.	-1965.	190.	39.	-.0548	.0461	.1232	-.0163	-.0549	-.0884	925.
.1470	-531.	-407.	-3226.	-1247.	90.	194.	-.0461	.0470	.0966	-.0394	-.0819	-.0776	593.

ADLPIPE PAGE 345

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.01.

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	7	MEMBER	1	SEQUENCE	25	LOCATION	BEG	TYPE	VA						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.1480	-967.	-636.	-2497.	-942.	29.	357.	-.0372	.0477	.0678	-.0567	-.1030	-.0604	472.		
.1490	-1479.	-896.	-2130.	-777.	-24.	550.	-.0286	.0480	.0375	-.0713	-.1209	-.0383	446.		
.1500	-1978.	-771.	-289.	-58.	-133.	752.	-.0206	.0478	.0066	-.0902	-.1404	-.0128	359.		
.1510	-2526.	-187.	1484.	601.	-244.	992.	-.0135	.0471	-.0241	-.1097	-.1566	.0169	556.		
.1520	-2672.	-119.	3345.	1333.	-329.	1053.	-.0075	.0463	-.0543	-.1242	-.1588	.0498	811.		
.1530	-2715.	-49.	4193.	1663.	-366.	1073.	-.0031	.0455	-.0826	-.1353	-.1703	.0845	943.		
.1540	-2478.	290.	5475.	2146.	-399.	992.	-.0003	.0448	-.1082	-.1483	-.1631	.1194	1124.		
.1550	-1887.	661.	6616.	2570.	-401.	773.	.0010	.0442	-.1306	-.1604	-.1462	.1543	1272.		
.1560	-1296.	919.	5530.	2122.	-315.	549.	.0010	.0441	-.1498	-.1668	-.1169	.1886	1038.		
.1570	-374.	603.	5421.	2101.	-243.	172.	-.0000	.0445	-.1658	-.1722	-.0883	.2183	995.		
.1580	429.	602.	5872.	2280.	-202.	-146.	-.0016	.0453	-.1784	-.1811	-.0617	.2426	1075.		
.1590	915.	885.	5607.	2155.	-156.	-327.	-.0033	.0465	-.1878	-.1896	-.0376	.2621	1024.		
.1600	1492.	508.	6166.	2403.	-136.	-570.	-.0048	.0482	-.1943	-.1943	-.0240	.2757	1159.		
.1610	1942.	166.	7418.	2924.	-153.	-762.	-.0059	.0503	-.1973	-.1984	-.0157	.2825	1418.		
.1620	1844.	658.	6943.	2700.	-141.	-704.	-.0064	.0526	-.1964	-.2002	-.0006	.2843	1309.		
.1630	1928.	408.	6484.	2536.	-117.	-747.	-.0063	.0554	-.1924	-.1928	.0135	.2813	1240.		
.1640	1964.	-372.	5744.	2301.	-85.	-792.	-.0054	.0585	-.1855	-.1777	.0259	.2734	1141.		
.1650	1473.	-403.	4373.	1760.	-66.	-599.	-.0040	.0614	-.1754	-.1625	.0380	.2604	872.		
.1660	976.	-331.	4249.	1706.	-98.	-399.	-.0020	.0642	-.1629	-.1470	.0414	.2425	822.		
.1670	391.	-604.	3810.	1552.	-123.	-179.	.0003	.0668	-.1486	-.1260	.0391	.2213	734.		
.1680	-298.	-1143.	3527.	1480.	-162.	72.	.0025	.0691	-.1325	-.1027	.0327	.1969	698.		
.1690	-1233.	-1248.	3062.	1303.	-212.	439.	.0043	.0708	-.1145	-.0810	.0263	.1702	652.		
.1700	-1943.	-1442.	3090.	1329.	-265.	712.	.0053	.0717	-.0948	-.0584	.0176	.1424	717.		
.1710	-2093.	-2152.	4023.	1750.	-313.	743.	.0052	.0718	-.0736	-.0335	.0079	.1145	903.		
.1720	-2446.	-2115.	2561.	1168.	-281.	884.	.0039	.0708	-.0505	-.0075	.0121	.0888	699.		
.1730	-2456.	-2070.	1114.	592.	-224.	890.	.0013	.0685	-.0261	.0191	.0222	.0650	512.		
.1740	-2010.	-2477.	255.	282.	-157.	697.	-.0025	.0651	-.0015	.0476	.0327	.0431	360.		
.1750	-1562.	-2668.	-1184.	-273.	-67.	512.	-.0072	.0603	.0232	.0753	.0454	.0236	274.		
.1760	-995.	-2486.	-2150.	-669.	13.	295.	-.0126	.0539	.0474	.0987	.0561	.0061	343.		
.1770	-463.	-1911.	-3485.	-1239.	105.	107.	-.0182	.0461	.0703	.1197	.0652	-.0085	585.		
.1780	208.	-1718.	-3910.	-1422.	171.	-151.	-.0239	.0373	.0913	.1388	.0682	-.0217	675.		
.1790	605.	-1522.	-4542.	-1686.	225.	-300.	-.0293	.0274	.1102	.1545	.0697	-.0338	809.		
.1800	804.	-1117.	-5354.	-2037.	272.	-363.	-.0343	.0167	.1267	.1660	.0693	-.0446	978.		
.1810	1301.	-903.	-4769.	-1821.	285.	-551.	-.0385	.0054	.1406	.1731	.0616	-.0547	902.		
.1820	1539.	-279.	-5143.	-2015.	317.	-620.	-.0420	-.0065	.1519	.1762	.0562	-.0638	999.		
.1830	1676.	266.	-5596.	-2234.	345.	-653.	-.0446	-.0184	.1604	.1761	.0515	-.0730	1103.		
.1840	1863.	491.	-5677.	-2282.	362.	-718.	-.0462	-.0302	.1660	.1737	.0446	-.0821	1134.		
.1850	1999.	756.	-5652.	-2292.	371.	-761.	-.0467	-.0417	.1686	.1677	.0353	-.0910	1145.		

ADLPIPE PAGE 346

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.01.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

.1750	-1562.	-2668.	-1164.	-273.	-67.	512.	-0072	.0603	.0232	.0753	.0454	.0236	274.
.1760	-995.	-2486.	-2150.	-669.	13.	295.	-0126	.0539	.0474	.0987	.0561	.0061	343.
.1770	-463.	-1911.	-3485.	-1239.	105.	107.	-0182	.0461	.0703	.1197	.0652	-.0085	585.
.1780	208.	-1718.	-3910.	-1422.	171.	-151.	-0239	.0373	.0913	.1388	.0582	-.0217	675.
.1790	605.	-1522.	-4542.	-1686.	225.	-300.	-0293	.0274	.1102	.1545	.0597	-.0338	809.
.1800	864.	-1117.	-5354.	-2037.	272.	-363.	-0343	.0167	.1267	.1660	.0593	-.0446	978.
.1810	1301.	-903.	-4769.	-1821.	285.	-551.	-0385	.0054	.1406	.1731	.0516	-.0547	902.
.1820	1539.	-279.	-5143.	-2015.	317.	-620.	-0420	-.0065	.1519	.1762	.0562	-.0638	999.
.1830	1676.	266.	-5596.	-2234.	345.	-653.	-0446	-.0184	.1604	.1761	.0515	-.0730	1103.
.1840	1863.	491.	-5673.	-2282.	362.	-718.	-0462	-.0302	.1660	.1737	.0446	-.0821	1134.
.1850	1999.	756.	-5652.	-2292.	371.	-761.	-0467	-.0417	.1686	.1677	.0353	-.0910	1145.

ADLPIPE PAGE 346

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.01.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	7	MEMBER	1	SEQUENCE	25	LOCATION	BEG	TYPE	VA						
TIME	Fx	Fy	Fz	Mx	My	Mz	Dx	Dy	Dz	Rx	Ry	Rz	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1860	2107.	1176.	-5041.	-2081.	355.	-727.	-.0461	-.0528	.1684	.1565	.0213	-.1006	1056.		
.1870	1994.	1892.	-4871.	-2066.	340.	-714.	-.0443	-.0632	.1657	.1418	.0047	-.1103	1037.		
.1880	1991.	2267.	-3783.	-1663.	296.	-698.	-.0413	-.0725	.1603	.1251	-.0181	-.1202	857.		
.1890	1865.	2521.	-2620.	-1222.	241.	-638.	-.0372	-.0804	.1530	.1070	-.0415	-.1301	656.		
.1900	1513.	2845.	-2225.	-1089.	199.	-486.	-.0322	-.0870	.1442	.0882	-.0607	-.1395	567.		
.1910	1378.	2882.	-1480.	-797.	160.	-431.	-.0263	-.0918	.1341	.0703	-.0783	-.1485	431.		
.1920	1266.	3052.	-1302.	-739.	145.	-380.	-.0197	-.0950	.1232	.0532	-.0900	-.1563	395.		
.1930	1091.	3269.	-1493.	-630.	139.	-302.	-.0124	-.0965	.1115	.0366	-.0950	-.1634	419.		
.1940	923.	3134.	-1600.	-863.	131.	-240.	-.0047	-.0961	.0989	.0217	-.0954	-.1699	424.		
.1950	736.	2793.	-1782.	-910.	125.	-180.	.0036	-.0939	.0852	.0089	-.0921	-.1755	439.		
.1960	426.	2637.	-2044.	-1002.	113.	-64.	.0122	-.0902	.0705	-.0036	-.0863	-.1798	473.		
.1970	3.	2550.	-1797.	-898.	72.	100.	.0212	-.0850	.0548	-.0164	-.0315	-.1829	425.		
.1980	-491.	2237.	-917.	-527.	1.	284.	.0302	-.0784	.0380	-.0279	-.0779	-.1840	280.		
.1990	-1066.	1750.	-49.	-147.	-78.	500.	.0392	-.0706	.0206	-.0360	-.0721	-.1817	247.		
.2000	-1756.	1217.	502.	109.	-149.	744.	.0477	-.0618	.0020	-.0398	-.0620	-.1752	359.		
.2010	-2400.	618.	1019.	358.	-216.	974.	.0555	-.0524	-.0150	-.0392	-.0494	-.1638	497.		
.2020	-2975.	25.	1564.	617.	-280.	1178.	.0623	-.0426	-.0324	-.0345	-.0356	-.1470	637.		
.2030	-3458.	-454.	1997.	824.	-333.	1351.	.0679	-.0329	-.0493	-.0259	-.0212	-.1245	757.		
.2040	-3767.	-893.	2438.	1030.	-573.	1455.	.0719	-.0235	-.0653	-.0134	-.0073	-.0969	854.		
.2050	-3877.	-1318.	2924.	1254.	-400.	1482.	.0742	-.0147	-.0802	.0022	.0053	-.0650	929.		
.2060	-3810.	-1596.	3304.	1425.	-410.	1444.	.0747	-.0066	-.0935	.0194	.0166	-.0294	970.		
.2070	-3527.	-1707.	3658.	1573.	-404.	1328.	.0733	.0006	-.1049	.0369	.0263	.0088	983.		
.2080	-2982.	-1774.	4156.	1775.	-384.	1110.	.0700	.0067	-.1142	.0537	.0341	.0477	997.		
.2090	-2242.	-1834.	4542.	1932.	-345.	814.	.0651	.0118	-.1210	.0694	.0423	.0857	996.		
.2100	-1382.	-1890.	4494.	1917.	-280.	472.	.0587	.0158	-.1252	.0837	.0527	.1215	934.		
.2110	-396.	-2022.	4261.	1835.	-199.	76.	.0514	.0187	-.1267	.0962	.0639	.1536	865.		
.2120	649.	-2174.	4098.	1731.	-116.	-343.	.0435	.0205	-.1255	.1057	.0745	.1804	852.		
.2130	1612.	-2189.	3841.	1681.	-35.	-725.	.0356	.0211	-.1218	.1118	.0845	.2005	858.		
.2140	2437.	-2117.	3429.	1512.	42.	-1049.	.0280	.0205	-.1158	.1154	.0929	.2133	863.		
.2150	3101.	-2085.	3134.	1393.	102.	-1310.	.0212	.0187	-.1078	.1171	.0976	.2180	898.		
.2160	3507.	-2001.	3099.	1373.	133.	-1468.	.0155	.0157	-.0978	.1161	.0975	.2140	944.		
.2170	3597.	-1731.	3130.	1366.	139.	-1492.	.0112	.0118	-.0859	.1127	.0932	.2015	950.		
.2180	3431.	-1355.	3050.	1306.	130.	-1412.	.0083	.0069	-.0722	.1081	.0857	.1811	903.		
.2190	3045.	-993.	2796.	1179.	112.	-1445.	.0067	.0014	-.0569	.1031	.0762	.1535	805.		
.2200	2420.	-643.	2320.	965.	85.	-983.	.0062	-.0047	-.0400	.0971	.0560	.1193	647.		
.2210	1639.	-320.	1661.	681.	54.	-661.	.0066	-.0110	-.0219	.0899	.0552	.0794	446.		
.2220	837.	-46.	887.	355.	26.	-333.	.0075	-.0174	-.0028	.0816	.0436	.0353	228.		
.2230	47.	255.	-45.	-76.	5.	-9.	.0085	-.0238	.0167	.0715	.0317	-.0115	18.		

ADLPIPE PAGE 347

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.01.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

.2130	1612.	-2189.	3441.	1681.	-35.	-725.	.0356	.0211	-.1218	.1118	.0845	.2005	858.
.2140	2437.	-2117.	3429.	1512.	42.	-1049.	.0280	.0205	-.1158	.1154	.0929	.2133	863.
.2150	3101.	-2095.	3134.	1393.	102.	-1310.	.0212	.0187	-.1078	.1171	.0976	.2180	898.
.2160	3507.	-2001.	3099.	1373.	133.	-1468.	.0155	.0157	-.0978	.1161	.0975	.2140	944.
.2170	3597.	-1731.	3130.	1366.	139.	-1492.	.0112	.0118	-.0859	.1127	.0932	.2015	950.
.2180	3431.	-1355.	3050.	1306.	130.	-1412.	.0083	.0069	-.0722	.1081	.0857	.1811	903.
.2190	3045.	-993.	2796.	1179.	112.	-1245.	.0067	.0014	-.0569	.1031	.0762	.1535	805.
.2200	2420.	-643.	2320.	965.	85.	-983.	.0062	-.0047	-.0400	.0971	.0560	.1193	647.
.2210	1639.	-320.	1661.	681.	54.	-661.	.0066	-.0110	-.0219	.0899	.0552	.0794	446.
.2220	837.	-46.	887.	355.	26.	-333.	.0075	-.0174	-.0028	.0816	.0436	.0353	228.
.2230	47.	255.	-45.	-36.	5.	-9.	.0085	-.0238	.0167	.0715	.0317	-.0115	18.

ADLPIPE PAGE 347

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.01.

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	7	MEMBER	1	SEQUENCE	25	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2240	-726.	602.	-1085.	-473.	-10.	311.	.0094	-.0300	.0363	.0590	.0196	-.0598	266.		
.2250	-1390.	867.	-1982.	-848.	-23.	585.	.0099	-.0359	.0553	.0447	.0062	-.1078	483.		
.2260	-1882.	1019.	-2603.	-1105.	-34.	786.	.0098	-.0413	.0732	.0291	-.0090	-.1536	636.		
.2270	-2224.	1201.	-3060.	-1299.	-41.	928.	.0090	-.0462	.0896	.0126	-.0249	-.1953	748.		
.2280	-2411.	1454.	-3449.	-1472.	-39.	1012.	.0073	-.0503	.1043	-.0039	-.0401	-.2309	837.		
.2290	-2416.	1646.	-3782.	-1617.	-26.	1022.	.0050	-.0537	.1167	-.0181	-.0540	-.2588	897.		
.2300	-2285.	1712.	-4079.	-1740.	-5.	973.	.0020	-.0562	.1267	-.0288	-.0659	-.2777	934.		
.2310	-2084.	1706.	-4293.	-1824.	18.	893.	-.0015	-.0576	.1340	-.0355	-.0760	-.2869	952.		
.2320	-1808.	1700.	-4316.	-1833.	39.	783.	-.0053	-.0582	.1385	-.0381	-.0850	-.2863	934.		
.2330	-1453.	1742.	-4179.	-1782.	60.	644.	-.0094	-.0578	.1403	-.0363	-.0928	-.2760	888.		
.2340	-1074.	1827.	-3964.	-1703.	79.	498.	-.0135	-.0564	.1394	-.0303	-.0986	-.2569	832.		
.2350	-689.	1866.	-3612.	-1566.	93.	347.	-.0176	-.0540	.1360	-.0205	-.1015	-.2303	753.		
.2360	-268.	1818.	-3121.	-1368.	105.	179.	-.0216	-.0505	.1304	-.0078	-.1006	-.1979	649.		
.2370	190.	-1764.	-2702.	-1198.	121.	-5.	-.0254	-.0461	.1229	.0070	-.0947	-.1611	565.		
.2380	664.	-1738.	-2457.	-1100.	146.	-194.	-.0289	-.0406	.1139	.0224	-.0831	-.1220	528.		
.2390	1149.	-1639.	-2243.	-1008.	173.	-389.	-.0321	-.0343	.1027	.0371	-.0665	-.0824	513.		
.2400	1623.	-1396.	-2017.	-901.	199.	-587.	-.0347	-.0270	.0924	.0503	-.0456	-.0439	512.		
.2410	2036.	-1046.	-1928.	-840.	226.	-764.	-.0366	-.0191	.0802	.0613	-.0211	-.0077	543.		
.2420	2367.	-642.	-1965.	-825.	251.	-911.	-.0377	-.0106	.0672	.0693	.0053	.0251	588.		
.2430	2612.	225.	-1927.	-779.	268.	-1025.	-.0377	-.0019	.0535	.0736	.0309	.0538	616.		
.2440	2744.	-160.	-1726.	-672.	270.	-1092.	-.0366	.0070	.0391	.0739	.0537	.0780	614.		
.2450	2734.	-517.	-1432.	-529.	257.	-1102.	-.0343	.0156	.0240	.0705	.0728	.0978	586.		
.2460	2585.	-870.	-1128.	-383.	234.	-1058.	-.0307	.0239	.0084	.0641	.0881	.1132	538.		
.2470	2308.	-1174.	-858.	-254.	203.	-960.	-.0260	.0317	-.0076	.0550	.0990	.1246	475.		
.2480	1907.	-1370.	-593.	-135.	163.	-809.	-.0203	.0388	-.0238	.0432	.1050	.1323	392.		
.2490	1411.	-1493.	-184.	36.	111.	-618.	-.0138	.0450	-.0401	.0285	.1048	.1364	295.		
.2500	853.	-1596.	427.	286.	45.	-401.	-.0067	.0504	-.0561	.0111	.0986	.1373	232.		
.2510	247.	-1657.	1042.	534.	-23.	-164.	.0007	.0548	-.0717	-.0086	.0881	.1352	262.		
.2520	-376.	-1684.	1537.	732.	-89.	82.	.0079	.0583	-.0866	-.0299	.0743	.1308	347.		
.2530	-956.	-1793.	2098.	958.	-153.	309.	.0148	.0608	-.1003	-.0527	.0570	.1241	477.		
.2540	-1451.	-1793.	2873.	1268.	-221.	503.	.0210	.0624	-.1127	-.0769	.0365	.1156	648.		
.2550	-1840.	-1756.	3669.	1591.	-281.	658.	.0262	.0629	-.1232	-.1018	.0151	.1059	813.		
.2560	-2089.	-1659.	4209.	1787.	-320.	761.	.0303	.0624	-.1317	-.1257	-.0045	.0958	923.		
.2570	-2183.	-1601.	4463.	1884.	-337.	800.	.0332	.0610	-.1380	-.1469	-.0212	.0857	972.		
.2580	-2156.	-1549.	4545.	1912.	-339.	792.	.0349	.0588	-.1420	-.1653	-.0346	.0762	983.		
.2590	-2040.	-1412.	4482.	1877.	-328.	751.	.0354	.0558	-.1436	-.1806	-.0446	.0677	960.		
.2600	-1843.	-1197.	4224.	1759.	-303.	682.	.0348	.0521	-.1430	-.1921	-.0514	.0605	896.		
.2610	-1611.	-947.	3760.	1558.	-268.	600.	.0333	.0478	-.1404	-.1993	-.0552	.0549	792.		

ADLPIPE PAGE 348

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.01.

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



.2510	247.	-1657.	1042.	534.	-23.	-164.	.0007	.0548	-.0717	-.0086	.0881	.1352	262.
.2520	-376.	-1684.	1537.	732.	-89.	82.	.0079	.0583	-.0866	-.0299	.0743	.1308	347.
.2530	-956.	-1739.	2098.	958.	-153.	309.	.0148	.0608	-.1003	-.0527	.0570	.1241	477.
.2540	-1451.	-1793.	2877.	1268.	-221.	503.	.0210	.0624	-.1127	-.0769	.0365	.1156	648.
.2550	-1840.	-1756.	3669.	1581.	-281.	658.	.0262	.0629	-.1232	-.1018	.0151	.1059	813.
.2560	-2089.	-1659.	4209.	1787.	-320.	761.	.0303	.0624	-.1317	-.1257	-.0045	.0958	923.
.2570	-2183.	-1601.	4463.	1884.	-337.	800.	.0332	.0610	-.1380	-.1469	-.0212	.0857	972.
.2580	-2156.	-1549.	4545.	1912.	-339.	792.	.0349	.0588	-.1420	-.1653	-.0346	.0762	983.
.2590	-2040.	-1412.	4482.	1877.	-328.	751.	.0354	.0558	-.1436	-.1806	-.0446	.0677	960.
.2600	-1843.	-1197.	4224.	1759.	-303.	682.	.0348	.0521	-.1430	-.1921	-.0514	.0605	896.
.2610	-1611.	-947.	3760.	1558.	-268.	600.	.0333	.0478	-.1404	-.1993	-.0552	.0549	792.

ADLPIPE PAGE 348

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/31/02. 18.26.01.

S/RV PIPING KEWAUNEE GKW02F 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	7	MEMBER	1	SEQUENCE	25	LOCATION	BEG	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	PX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2620	-1414.	-673.	3222.	1325.	-232.	533.	.0310	.0430	-.1359	-.2027	-.0571	.0506	678.	
.2630	-1273.	-406.	2821.	1146.	-205.	488.	.0279	.0379	-.1300	-.2029	-.0586	.0475	592.	
.2640	-1171.	-151.	2615.	1046.	-190.	457.	.0243	.0327	-.1227	-.2003	-.0605	.0454	542.	
.2650	-1107.	161.	2474.	967.	-179.	445.	.0201	.0274	-.1141	-.1957	-.0524	.0441	506.	
.2660	-1072.	528.	2333.	885.	-171.	445.	.0153	.0224	-.1043	-.1896	-.0637	.0433	471.	
.2670	-1017.	815.	2267.	837.	-165.	435.	.0099	.0176	-.0933	-.1819	-.0643	.0425	449.	
.2680	-905.	967.	2262.	825.	-156.	397.	.0040	.0134	-.0812	-.1729	-.0541	.0416	435.	
.2690	-724.	1089.	2165.	777.	-139.	330.	-.0025	.0097	-.0679	-.1632	-.0524	.0404	401.	
.2700	-456.	1246.	1888.	656.	-108.	230.	-.0093	.0067	-.0535	-.1529	-.0590	.0387	330.	
.2710	-86.	1369.	1494.	491.	-66.	88.	-.0165	.0045	-.0382	-.1420	-.0549	.0365	236.	
.2720	350.	1397.	1057.	316.	-16.	-83.	-.0237	.0030	-.0222	-.1303	-.0508	.0333	153.	
.2730	810.	1361.	586.	132.	36.	-266.	-.0307	.0024	-.0057	-.1181	-.0471	.0291	140.	
.2740	1277.	1323.	44.	-79.	92.	-453.	-.0373	.0025	.0109	-.1054	-.0435	.0239	220.	
.2750	1719.	1307.	-661.	-357.	152.	-628.	-.0432	.0034	.0275	-.0921	-.0395	.0178	346.	
.2760	2076.	1271.	-1526.	-697.	213.	-771.	-.0482	.0051	.0435	-.0783	-.0347	.0107	497.	
.2770	2312.	1155.	-2397.	-1033.	265.	-869.	-.0522	.0074	.0585	-.0643	-.0295	.0024	645.	
.2780	2408.	975.	-3186.	-1333.	303.	-914.	-.0549	.0104	.0721	-.0508	-.0241	-.0071	770.	
.2790	2335.	813.	-3928.	-1614.	327.	-892.	-.0564	.0139	.0840	-.0384	-.0186	-.0175	878.	
.2800	2081.	685.	-4564.	-1857.	334.	-796.	-.0566	.0179	.0937	-.0279	-.0134	-.0285	960.	
.2810	1668.	527.	-4914.	-1984.	318.	-639.	-.0557	.0221	.1010	-.0198	-.0092	-.0399	988.	
.2820	1125.	311.	-4930.	-1974.	279.	-433.	-.0539	.0266	.1057	-.0142	-.0061	-.0510	956.	
.2830	497.	79.	-4736.	-1880.	225.	-193.	-.0514	.0312	.1079	-.0110	-.0033	-.0609	892.	
.2840	-145.	-139.	-4443.	-1748.	166.	52.	-.0485	.0357	.1076	-.0099	.0000	-.0685	823.	
.2850	-727.	-351.	-4098.	-1596.	110.	274.	-.0455	.0401	.1049	-.0104	.0046	-.0729	761.	
.2860	-1200.	-566.	-3758.	-1446.	62.	452.	-.0426	.0442	.1001	-.0118	.0107	-.0733	711.	
.2870	-1522.	-780.	-3475.	-1318.	27.	571.	-.0400	.0479	.0932	-.0135	.0183	-.0689	673.	
.2880	-1661.	-971.	-3247.	-1214.	8.	619.	-.0378	.0512	.0844	-.0151	.0268	-.0593	639.	
.2890	-1614.	-1096.	-3053.	-1128.	3.	595.	-.0361	.0538	.0738	-.0167	.0353	-.0445	598.	
.2900	-1401.	-1136.	-2845.	-1043.	11.	509.	-.0349	.0557	.0615	-.0182	.0426	-.0247	544.	
.2910	-1045.	-1121.	-2540.	-923.	25.	369.	-.0341	.0570	.0476	-.0197	.0478	-.0007	466.	
.2920	-583.	-1074.	-2109.	-756.	41.	188.	-.0335	.0576	.0324	-.0212	.0505	.0268	366.	
.2930	-66.	-990.	-1609.	-564.	59.	-13.	-.0329	.0575	.0162	-.0231	.0509	.0564	266.	
.2940	464.	-873.	-1083.	-365.	77.	-218.	-.0323	.0569	-.0009	-.0255	.0493	.0870	203.	
.2950	976.	-751.	-497.	-142.	91.	-416.	-.0313	.0558	-.0184	-.0285	.0456	.1171	210.	
.2960	1425.	-636.	-169.	113.	98.	-589.	-.0299	.0543	-.0361	-.0325	.0400	.1453	285.	
.2970	1769.	-529.	870.	383.	95.	-721.	-.0279	.0525	-.0534	-.0377	.0329	.1703	385.	
.2980	1984.	-435.	1570.	653.	87.	-803.	-.0253	.0504	-.0701	-.0441	.0245	.1910	487.	
.2990	2061.	-349.	2283.	929.	60.	-830.	-.0220	.0480	-.0856	-.0516	.0148	.2065	584.	

ADLPIPE PAGE 349

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/31/02. 18.26.01.

S/RV PIPING KEWAUNEE GKW02F 2 RUP DISK  
2 SAFETY COLD FKW24F--2 PSVCONDITION 24  
LOADS

.2890	-1614.	-1096.	3053.	-1128.	3.	595.	-.361	.0538	.0738	-.0167	.0353	-.0445	598.
.2900	-1401.	-1126.	-2845.	-1043.	11.	509.	-.349	.0557	.0615	-.0182	.0426	-.0247	544.
.2910	-1045.	-1121.	-2540.	-923.	25.	369.	-.0341	.0570	.0476	-.0197	.0478	-.0007	466.
.2920	-583.	-1074.	-2109.	-756.	41.	188.	-.0335	.0576	.0324	-.0212	.0505	.0268	366.
.2930	-66.	-990.	-1609.	-564.	59.	-13.	-.0329	.0575	.0162	-.0231	.0509	.0564	266.
.2940	464.	-873.	-1083.	-265.	77.	-218.	-.0323	.0569	-.0009	-.0255	.0493	.0870	203.
.2950	976.	-751.	-497.	-142.	91.	-416.	-.0313	.0558	-.0184	-.0285	.0456	.1171	210.
.2960	1425.	-636.	169.	113.	98.	-589.	-.0299	.0543	-.0361	-.0325	.0400	.1453	285.
.2970	1769.	-529.	870.	383.	95.	-721.	-.0279	.0525	-.0534	-.0377	.0329	.1703	385.
.2980	1984.	-435.	1570.	653.	83.	-803.	-.0253	.0504	-.0701	-.0441	.0245	.1910	487.
.2990	2061.	-349.	2283.	929.	60.	-830.	-.0220	.0480	-.0856	-.0516	.0148	.2065	584.

ADLPIPE PAGE 349

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.01.

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	7	MEMBER	1	SEQUENCE	25	LOCATION	BEG	TYPE	VA					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.3000	1989.	-261.	3030.	1218.	25.	-798.	-.0180	.0456	-.0997	-.0603	.0039	.2161	682.	
.3010	1774.	-178.	3788.	1512.	-21.	-709.	-.0134	.0430	-.1120	-.0697	-.0078	.2197	783.	
.3020	1443.	-112.	4480.	1781.	-73.	-575.	-.0083	.0404	-.1220	-.0793	-.0195	.2174	878.	
.3030	1022.	-55.	5010.	1987.	-125.	-407.	-.0029	.0377	-.1295	-.0882	-.0301	.2096	952.	
.3040	540.	-3.	5337.	2113.	-173.	-214.	.0026	.0352	-.1342	-.0959	-.0390	.1969	998.	
.3050	34.	15.	5474.	2166.	-215.	-13.	.0079	.0326	-.1360	-.1019	-.0457	.1802	1020.	
.3060	-459.	-5.	5428.	2149.	-250.	181.	.0129	.0302	-.1349	-.1056	-.0503	.1602	1017.	
.3070	-917.	-27.	5191.	2056.	-274.	362.	.0174	.0278	-.1309	-.1069	-.0526	.1380	987.	
.3080	-1321.	-44.	4801.	1904.	-288.	521.	.0212	.0255	-.1243	-.1054	-.0529	.1144	935.	
.3090	-1653.	-83.	4335.	1722.	-294.	651.	.0242	.0232	-.1152	-.1011	-.0515	.0905	874.	
.3100	-1905.	-151.	3838.	1530.	-292.	748.	.0262	.0208	-.1040	-.0938	-.0490	.0669	810.	
.3110	-2069.	-212.	3322.	1330.	-284.	810.	.0273	.0185	-.0909	-.0837	-.0454	.0445	742.	
.3120	-2138.	-248.	2787.	1121.	-267.	836.	.0273	.0160	-.0763	-.0707	-.0407	.0240	667.	
.3130	-2114.	-280.	2227.	902.	-243.	825.	.0262	.0134	-.0604	-.0549	-.0348	.0058	584.	
.3140	-2007.	-320.	1634.	670.	-212.	782.	.0242	.0107	-.0435	-.0364	-.0277	-.0096	493.	
.3150	-1827.	-363.	1021.	431.	-174.	709.	.0214	.0078	-.0261	-.0155	-.0195	-.0221	397.	
.3160	-1583.	-393.	397.	186.	-132.	611.	.0177	.0047	-.0083	.0073	-.0105	-.0318	306.	
.3170	-1290.	-401.	-229.	-61.	-85.	495.	.0134	.0015	.0096	.0315	-.0009	-.0386	237.	
.3180	-964.	-388.	-821.	-297.	-38.	366.	.0086	-.0021	.0271	.0563	.0088	-.0431	222.	
.3190	-617.	-361.	-1330.	-503.	8.	230.	.0035	-.0058	.0441	.0812	.0183	-.0455	259.	
.3200	-256.	-327.	-1771.	-677.	52.	88.	-.0017	-.0098	.0603	.1055	.0276	-.0463	321.	
.3210	112.	-282.	-2150.	-830.	94.	-56.	-.0070	-.0139	.0755	.1289	.0365	-.0461	392.	
.3220	485.	-218.	-2484.	-967.	134.	-200.	-.0121	-.0183	.0895	.1506	.0453	-.0452	467.	
.3230	860.	-140.	-2750.	-1078.	172.	-346.	-.0169	-.0227	.1022	.1704	.0536	-.0441	537.	
.3240	1231.	-65.	-2968.	-1170.	208.	-490.	-.0211	-.0273	.1136	.1880	.0515	-.0433	602.	
.3250	1585.	-8.	-3190.	-1262.	243.	-628.	-.0247	-.0319	.1233	.2034	.0590	-.0430	670.	
.3260	1914.	39.	-3410.	-1355.	276.	-756.	-.0274	-.0366	.1314	.2165	.0758	-.0436	738.	
.3270	2203.	94.	-3617.	-1439.	305.	-868.	-.0290	-.0412	.1378	.2268	.0813	-.0454	800.	
.3280	2432.	163.	-3780.	-1508.	328.	-956.	-.0295	-.0458	.1423	.2344	.0849	-.0486	851.	
.3290	2585.	230.	-3892.	-1557.	344.	-1014.	-.0287	-.0503	.1449	.2392	.0863	-.0535	886.	
.3300	2648.	290.	-3945.	-1582.	351.	-1037.	-.0266	-.0547	.1455	.2412	.0851	-.0601	901.	
.3310	2610.	363.	-3944.	-1588.	348.	-1019.	-.0231	-.0589	.1441	.2401	.0814	-.0686	899.	
.3320	2463.	453.	-3892.	-1574.	335.	-957.	-.0183	-.0630	.1407	.2359	.0753	-.0789	877.	
.3330	2212.	543.	-3761.	-1529.	312.	-854.	-.0122	-.0668	.1355	.2287	.0670	-.0910	833.	
.3340	1864.	620.	-3556.	-1453.	278.	-713.	-.0051	-.0703	.1283	.2183	.0568	-.1046	769.	
.3350	1425.	689.	-3310.	-1360.	236.	-537.	.0030	-.0735	.1195	.2051	.0454	-.1193	694.	
.3360	913.	732.	-3017.	-1248.	187.	-332.	.0117	-.0764	.1091	.1892	.0332	-.1348	611.	
.3370	350.	755.	-2626.	-1095.	130.	-108.	.0209	-.0788	.0972	.1709	.0202	-.1504	519.	

ADLPIPE PAGE 350

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.01.

S/RV PIPING KEWAUNEE GKW02F 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

.3270	2203.	94.	-17.	-1439.	305.	-868.	-.0290	-.0412	.1378	.2268	.0813	-.0454	800.
.3280	2432.	163.	-3780.	-1508.	320.	-956.	-.0295	-.0458	.1423	.2344	.0849	-.0486	851.
.3290	2581.	230.	-3892.	-1557.	344.	-1014.	-.0287	-.0503	.1449	.2392	.0863	-.0535	886.
.3300	2648.	290.	-3940.	-1582.	351.	-1037.	-.0266	-.0547	.1455	.2417	.0851	-.0601	901.
.3310	2610.	363.	-3944.	-1588.	348.	-1019.	-.0231	-.0589	.1441	.2401	.0814	-.0686	899.
.3320	2463.	413.	-3892.	-1574.	335.	-957.	-.0183	-.0630	.1407	.2359	.0753	-.0789	877.
.3330	2212.	543.	-3761.	-1529.	312.	-854.	-.0122	-.0668	.1355	.2287	.0670	-.0910	833.
.3340	1864.	620.	-3556.	-1453.	278.	-713.	-.0051	-.0703	.1283	.2183	.0568	-.1046	769.
.3350	1425.	685.	-3310.	-1360.	236.	-537.	.0030	-.0735	.1195	.2051	.0454	-.1193	694.
.3360	913.	732.	-3017.	-1248.	187.	-332.	.0117	-.0764	.1091	.1892	.0332	-.1348	611.
.3370	350.	755.	-2626.	-1095.	130.	-108.	.0209	-.0788	.0972	.1709	.0202	-.1504	519.

ADLPIPE PAGE 350

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.01.

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	7	MEMBER	1	SEQUENCE	-25	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3380	-243.	766.	-2123.	-896.	67.	127.	.0303	-.0809	.0841	.1506	.0067	-.1656	425.		
.3390	-838.	766.	-1537.	-664.	-0.	362.	.0395	-.0825	.0700	.1290	-.0068	-.1794	355.		
.3400	-1402.	746.	-897.	-410.	-67.	585.	.0484	-.0838	.0552	.1070	-.0197	-.1912	336.		
.3410	-1904.	712.	-224.	-141.	-130.	782.	.0567	-.0846	.0399	.0855	-.0315	-.2001	377.		
.3420	-2319.	680.	449.	128.	-188.	945.	.0642	-.0851	.0246	.0653	-.0417	-.2053	455.		
.3430	-2621.	652.	1076.	378.	-235.	1063.	.0706	-.0851	.0094	.0473	-.0496	-.2064	540.		
.3440	-2792.	626.	1609.	591.	-268.	1130.	.0758	-.0848	-.0054	.0323	-.0549	-.2029	611.		
.3450	-2831.	604.	2018.	754.	-288.	1145.	.0798	-.0841	-.0194	.0207	-.0571	-.1948	656.		
.3460	-2746.	587.	2313.	873.	-293.	1110.	.0826	-.0831	-.0325	.0128	-.0565	-.1822	676.		
.3470	-2549.	568.	2536.	962.	-287.	1031.	.0841	-.0817	-.0445	.0084	-.0536	-.1656	675.		
.3480	-2260.	552.	2713.	1033.	-273.	917.	.0844	-.0800	-.0553	.0071	-.0487	-.1457	660.		
.3490	-1911.	546.	2850.	1088.	-253.	778.	.0837	-.0780	-.0647	.0085	-.0421	-.1235	638.		
.3500	-1527.	534.	2962.	1133.	-230.	626.	.0820	-.0756	-.0726	.0121	-.0343	-.0999	616.		
.3510	-1131.	495.	3074.	1181.	-205.	467.	.0795	-.0729	-.0790	.0172	-.0257	-.0761	603.		
.3520	-744.	438.	3195.	1233.	-182.	312.	.0763	-.0700	-.0837	.0233	-.0165	-.0531	602.		
.3530	-385.	377.	3304.	1280.	-160.	168.	.0726	-.0667	-.0866	.0298	-.0070	-.0318	610.		
.3540	-64.	308.	3370.	1311.	-139.	38.	.0686	-.0633	-.0876	.0364	.0026	-.0131	618.		
.3550	210.	218.	3372.	1318.	-119.	-74.	.0642	-.0596	-.0867	.0427	.0121	.0024	621.		
.3560	428.	115.	3307.	1301.	-100.	-165.	.0597	-.0559	-.0839	.0486	.0211	.0141	616.		
.3570	588.	11.	3184.	1259.	-84.	-232.	.0551	-.0520	-.0792	.0538	.0291	.0218	601.		
.3580	695.	-84.	2987.	1188.	-68.	-279.	.0505	-.0482	-.0727	.0583	.0360	.0253	573.		
.3590	748.	-164.	2688.	1076.	-52.	-303.	.0461	-.0443	-.0645	.0619	.0414	.0248	524.		
.3600	748.	-233.	2287.	922.	-36.	-305.	.0417	-.0406	-.0548	.0649	.0454	.0205	456.		
.3610	700.	-300.	1806.	737.	-21.	-289.	.0376	-.0370	-.0438	.0672	.0479	.0128	371.		
.3620	611.	-363.	1265.	527.	-6.	-256.	.0336	-.0335	-.0319	.0686	.0488	.0021	275.		
.3630	483.	-407.	676.	297.	8.	-207.	.0298	-.0303	-.0193	.0692	.0480	-.0108	170.		
.3640	322.	-429.	70.	59.	21.	-145.	.0261	-.0273	-.0063	.0689	.0456	-.0255	74.		
.3650	136.	-441.	-507.	-168.	30.	-72.	.0226	-.0245	.0068	.0676	.0416	-.0412	87.		
.3660	-68.	-447.	-1019.	-371.	36.	9.	.0191	-.0220	.0195	.0653	.0360	-.0571	175.		
.3670	-279.	-437.	-1447.	-541.	37.	93.	.0156	-.0198	.0317	.0619	.0289	-.0726	258.		
.3680	-460.	-398.	-1786.	-678.	36.	174.	.0121	-.0178	.0431	.0574	.0209	-.0870	328.		
.3690	-656.	-328.	-2056.	-790.	34.	246.	.0084	-.0161	.0535	.0520	.0124	-.0996	388.		
.3700	-792.	-241.	-2278.	-884.	33.	304.	.0046	-.0146	.0628	.0459	.0040	-.1098	438.		
.3710	-875.	-145.	-2468.	-966.	34.	340.	.0006	-.0132	.0708	.0392	-.0036	-.1172	480.		
.3720	-894.	-35.	-2634.	-1040.	39.	352.	-.0037	-.0120	.0774	.0320	-.0103	-.1215	515.		
.3730	-845.	100.	-2796.	-1114.	49.	338.	-.0082	-.0108	.0825	.0243	-.0155	-.1224	546.		
.3740	-731.	254.	-2952.	-1187.	64.	299.	-.0129	-.0095	.0861	.0162	-.0194	-.1200	574.		
.3750	-557.	407.	-3076.	-1247.	82.	237.	-.0178	-.0082	.0881	.0077	-.0220	-.1142	596.		

ADLPIPE PAGE 351

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.01.

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

.3650	136.	-441.	-507.	-168.	30.	-72.	.226	-.0245	.0068	.0676	.0416	-.0412	87.
.3660	-68.	-447.	-1019.	-371.	36.	9.	.191	-.0220	.0195	.0653	.0360	-.0571	175.
.3670	-279.	-437.	-1447.	-541.	37.	93.	.0156	-.0198	.0317	.0619	.0289	-.0726	258.
.3680	-480.	-398.	-1786.	-678.	36.	174.	.0121	-.0178	.0431	.0574	.0209	-.0870	328.
.3690	-654.	-328.	-2056.	-790.	34.	246.	.0084	-.0161	.0535	.0520	.0124	-.0996	388.
.3700	-792.	-241.	-2278.	-884.	33.	304.	.0046	-.0146	.0628	.0459	.0340	-.1098	438.
.3710	-875.	-145.	-2468.	-966.	34.	340.	.0006	-.0132	.0708	.0392	-.0036	-.1172	480.
.3720	-894.	-35.	-2634.	-1040.	39.	352.	-.0037	-.0120	.0774	.0320	-.0103	-.1215	515.
.3730	-845.	100.	-2796.	-1114.	49.	338.	-.0082	-.0108	.0825	.0243	-.0155	-.1224	546.
.3740	-731.	254.	-2952.	-1187.	64.	299.	-.0129	-.0095	.0861	.0162	-.0194	-.1200	574.
.3750	-557.	407.	-3076.	-1247.	82.	237.	-.0178	-.0082	.0861	.0077	-.0220	-.1142	596.

ADLPIPE PAGE 351

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.01.

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	7	MEMBER	1	SEQUENCE	25	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3760	-337.	550.	-3144.	-1285.	100.	155.	-.0227	-.0066	.0883	-.0012	-.0235	-.1054	608.		
.3770	-85.	685.	-3155.	-1299.	119.	61.	-.0275	-.0047	.0869	-.0105	-.0242	-.0937	612.		
.3780	183.	813.	-3107.	-1289.	137.	-40.	-.0321	-.0025	.0837	-.0200	-.0241	-.0794	608.		
.3790	451.	919.	-2989.	-1250.	152.	-142.	-.0364	.0002	.0787	-.0298	-.0235	-.0629	594.		
.3800	700.	988.	-2795.	-1178.	162.	-238.	-.0403	.0034	.0722	-.0395	-.0227	-.0445	569.		
.3810	915.	1012.	-2530.	-1075.	168.	-322.	-.0436	.0071	.0641	-.0490	-.0219	-.0247	532.		
.3820	1088.	1001.	-2198.	-943.	167.	-391.	-.0464	.0114	.0546	-.0582	-.0213	-.0037	485.		
.3830	1211.	968.	-1805.	-785.	161.	-441.	-.0484	.0162	.0439	-.0669	-.0211	.0179	429.		
.3840	1280.	914.	-1363.	-606.	148.	-470.	-.0497	.0216	.0322	-.0752	-.0216	.0398	366.		
.3850	1296.	832.	-886.	-412.	130.	-480.	-.0503	.0275	.0197	-.0829	-.0226	.0615	303.		
.3860	1265.	719.	-395.	-209.	108.	-472.	-.0502	.0338	.0068	-.0900	-.0241	.0826	247.		
.3870	1196.	591.	83.	-11.	84.	-450.	-.0495	.0405	-.0064	-.0967	-.0257	.1026	215.		
.3880	1096.	454.	517.	171.	60.	-416.	-.0482	.0476	-.0194	-.1030	-.0271	.1212	213.		
.3890	973.	301.	887.	329.	36.	-373.	-.0465	.0549	-.0321	-.1092	-.0279	.1381	234.		
.3900	834.	121.	1184.	460.	14.	-325.	-.0444	.0623	-.0442	-.1154	-.0279	.1528	264.		
.3910	680.	-86.	1409.	564.	-6.	-273.	-.0421	.0698	-.0556	-.1216	-.0268	.1651	294.		
.3920	513.	-306.	1576.	646.	-25.	-215.	-.0397	.0773	-.0662	-.1282	-.0248	.1751	320.		
.3930	333.	-527.	1711.	716.	-44.	-153.	-.0372	.0845	-.0757	-.1351	-.0221	.1826	344.		
.3940	136.	-748.	1835.	781.	-63.	-84.	-.0347	.0914	-.0843	-.1423	-.0188	.1878	369.		
.3950	-78.	-978.	1961.	848.	-84.	-8.	-.0323	.0979	-.0918	-.1493	-.0152	.1911	399.		
.3960	-303.	-1212.	2096.	918.	-106.	72.	-.0302	.1038	-.0981	-.1560	-.0113	.1929	434.		
.3970	-529.	-1472.	2236.	989.	-128.	153.	-.0283	.1090	-.1033	-.1618	-.0075	.1937	473.		
.3980	-745.	-1590.	2367.	1053.	-149.	231.	-.0268	.1135	-.1074	-.1664	-.0037	.1941	510.		
.3990	-937.	-1721.	2466.	1102.	-167.	302.	-.0257	.1170	-.1102	-.1693	.0002	.1944	541.		
.4000	-1091.	-1824.	2516.	1129.	-180.	359.	-.0251	.1196	-.1118	-.1701	.0040	.1952	562.		

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)		
.0460	-8292.	-5169.	11021.	4740.	-1046.	3076.	-.0953	-.1190	.2003	-.0038	.0706	-.1135	2693.		

SECTION	7	MEMBER	1	SEQUENCE	26	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		

ADLPIPE PAGE 352

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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)
.0460	-8292.	-5169.	11021.	4740.	-1040.	3076.	-.0953	-.1190	.2003	-.0038	.0706	-.1135	2693.

SECTION TIME (SEC)	7	MEMBER	1	SEQUENCE	26	LOCATION	DIS	TYPE	VA	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
--------------------	---	--------	---	----------	----	----------	-----	------	----	---------	----------	----------	----------	--------------

ADLPIPE PAGE 352 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.02.

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 TIME (SEC)	7	MEMBER	1	SEQUENCE	26	LOCATION	DIS	TYPE	VA	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
0.0000	0.	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
.0010	0.	0.	0.	0.	0.	0.	0.	-.0000	.0000	-.0000	-.0000	.0000	.0000	0.
.0020	0.	0.	0.	0.	0.	0.	0.	-.0001	.0000	-.0001	-.0001	.0002	.0001	0.
.0030	0.	0.	0.	0.	0.	0.	0.	-.0002	.0000	-.0004	-.0003	.0006	.0005	0.
.0040	0.	0.	0.	0.	0.	0.	0.	-.0005	-.0000	-.0009	-.0008	.0014	.0015	0.
.0050	0.	0.	0.	0.	0.	0.	0.	-.0009	-.0000	-.0017	-.0016	.0024	.0030	0.
.0060	0.	0.	0.	0.	0.	0.	0.	-.0016	.0000	-.0030	-.0029	.0036	.0053	0.
.0070	0.	0.	0.	0.	0.	0.	0.	-.0026	.0000	-.0050	-.0047	.0054	.0089	0.
.0080	0.	0.	0.	0.	0.	0.	0.	-.0040	.0001	-.0078	-.0073	.0090	.0143	0.
.0090	0.	0.	0.	0.	0.	0.	0.	-.0058	.0002	-.0115	-.0103	.0160	.0223	0.
.0100	0.	0.	0.	0.	0.	0.	0.	-.0081	.0004	-.0163	-.0133	.0263	.0329	0.
.0110	0.	0.	0.	0.	0.	0.	0.	-.0104	.0007	-.0220	-.0166	.0383	.0455	0.
.0120	0.	0.	0.	0.	0.	0.	0.	-.0126	.0012	-.0287	-.0202	.0505	.0593	0.
.0130	0.	0.	0.	0.	0.	0.	0.	-.0143	.0019	-.0360	-.0234	.0621	.0734	0.
.0140	0.	0.	0.	0.	0.	0.	0.	-.0153	.0027	-.0438	-.0256	.0727	.0874	0.
.0150	0.	0.	0.	0.	0.	0.	0.	-.0157	.0036	-.0522	-.0270	.0814	.1008	0.
.0160	0.	0.	0.	0.	0.	0.	0.	-.0154	.0046	-.0613	-.0283	.0885	.1136	0.
.0170	0.	0.	0.	0.	0.	0.	0.	-.0147	.0056	-.0713	-.0304	.0933	.1259	0.
.0180	0.	0.	0.	0.	0.	0.	0.	-.0134	.0066	-.0821	-.0351	.0933	.1375	0.
.0190	0.	0.	0.	0.	0.	0.	0.	-.0115	.0076	-.0928	-.0427	.0898	.1474	0.
.0200	0.	0.	0.	0.	0.	0.	0.	-.0087	.0086	-.1018	-.0506	.0891	.1540	0.
.0210	0.	0.	0.	0.	0.	0.	0.	-.0047	.0100	-.1074	-.0514	.1040	.1568	0.
.0220	0.	0.	0.	0.	0.	0.	0.	.0012	.0117	-.1089	-.0406	.1285	.1544	0.
.0230	0.	0.	0.	0.	0.	0.	0.	.0098	.0135	-.1063	-.0252	.1446	.1414	0.
.0240	0.	0.	0.	0.	0.	0.	0.	.0210	.0149	-.1009	-.0091	.1539	.1153	0.
.0250	0.	0.	0.	0.	0.	0.	0.	.0340	.0155	-.0943	.0055	.1508	.0807	0.
.0260	0.	0.	0.	0.	0.	0.	0.	.0487	.0148	-.0873	.0108	.1129	.0397	0.
.0270	0.	0.	0.	0.	0.	0.	0.	.0648	.0129	-.0786	.0080	.0497	-.0122	0.
.0280	0.	0.	0.	0.	0.	0.	0.	.0807	.0102	-.0660	.0126	.0061	-.0727	0.
.0290	0.	0.	0.	0.	0.	0.	0.	.0947	.0067	-.0504	.0317	-.0121	-.1288	0.
.0300	0.	0.	0.	0.	0.	0.	0.	.1065	.0018	-.0336	.0525	-.0298	-.1758	0.
.0310	0.	0.	0.	0.	0.	0.	0.	.1154	-.0045	-.0180	.0612	-.0584	-.2217	0.
.0320	0.	0.	0.	0.	0.	0.	0.	.1210	-.0124	-.0042	.0555	-.1067	-.2649	0.
.0330	0.	0.	0.	0.	0.	0.	0.	.1225	-.0223	.0094	.0501	-.1512	-.2923	0.
.0340	0.	0.	0.	0.	0.	0.	0.	.1196	-.0333	.0238	.0540	-.1791	-.3042	0.
.0350	0.	0.	0.	0.	0.	0.	0.	.1126	-.0448	.0379	.0584	-.2125	-.3114	0.
.0360	0.	0.	0.	0.	0.	0.	0.	.1018	-.0572	.0516	.0530	-.2586	-.3123	0.
.0370	0.	0.	0.	0.	0.	0.	0.	.0867	-.0711	.0671	.0451	-.2876	-.2978	0.

ADLPIPE PAGE 353 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.02.

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

.0270	0.	0.	0.	0.	0.	0.	0.	0.0648	.0129	-.0786	.0080	.0497	-.0122	0.
.0280	0.	0.	0.	0.	0.	0.	0.	.0807	.0102	-.0660	.0126	.0061	-.0727	0.
.0290	0.	0.	0.	0.	0.	0.	0.	.0947	.0067	-.0504	.0317	-.0121	-.1288	0.
.0300	0.	0.	0.	0.	0.	0.	0.	.1065	.0018	-.0336	.0525	-.0298	-.1758	0.
.0310	0.	0.	0.	0.	0.	0.	0.	.1154	-.0045	-.0180	.0612	-.0584	-.2217	0.
.0320	0.	0.	0.	0.	0.	0.	0.	.1210	-.0124	-.0042	.0555	-.1067	-.2649	0.
.0330	0.	0.	0.	0.	0.	0.	0.	.1225	-.0223	.0094	.0501	-.1512	-.2923	0.
.0340	0.	0.	0.	0.	0.	0.	0.	.1196	-.0333	.0238	.0540	-.1791	-.3042	0.
.0350	0.	0.	0.	0.	0.	0.	0.	.1126	-.0448	.0379	.0584	-.2125	-.3114	0.
.0360	0.	0.	0.	0.	0.	0.	0.	.1018	-.0572	.0516	.0530	-.2586	-.3123	0.
.0370	0.	0.	0.	0.	0.	0.	0.	.0867	-.0711	.0671	.0451	-.2876	-.2978	0.

ADLPIPE PAGE 353

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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	7	MEMBER	1	SEQUENCE	26	LOCATION	DIS	TYPE	VA						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.0380	0.	0.	0.	0.	0.	0.	.0678	-.0851	.0854	.0479	-.2885	-.2724	0.		
.0390	0.	0.	0.	0.	0.	0.	.0462	-.0978	.1043	.0544	-.2863	-.2484	0.		
.0400	0.	0.	0.	0.	0.	0.	.0229	-.1091	.1231	.0471	-.2778	-.2255	0.		
.0410	0.	0.	0.	0.	0.	0.	-.0012	-.1189	.1430	.0382	-.2361	-.1965	0.		
.0420	0.	0.	0.	0.	0.	0.	-.0249	-.1258	.1629	.0426	-.1700	-.1665	0.		
.0430	0.	0.	0.	0.	0.	0.	-.0463	-.1292	.1798	.0423	-.1048	-.1457	0.		
.0440	0.	0.	0.	0.	0.	0.	-.0642	-.1296	.1921	.0226	-.0386	-.1323	0.		
.0450	0.	0.	0.	0.	0.	0.	-.0778	-.1263	.1993	.0045	.0259	-.1199	0.		
.0460	0.	0.	0.	0.	0.	0.	-.0864	-.1190	.2007	.0001	.0586	-.1113	0.		
.0470	0.	0.	0.	0.	0.	0.	-.0899	-.1089	.1960	-.0126	.0872	-.1092	0.		
.0480	0.	0.	0.	0.	0.	0.	-.0891	-.0969	.1867	-.0370	.0991	-.1061	0.		
.0490	0.	0.	0.	0.	0.	0.	-.0848	-.0820	.1748	-.0402	.1084	-.0952	0.		
.0500	0.	0.	0.	0.	0.	0.	-.0778	-.0638	.1612	-.0144	.1112	-.0802	0.		
.0510	0.	0.	0.	0.	0.	0.	-.0692	-.0442	.1466	.0125	.1175	-.0633	0.		
.0520	0.	0.	0.	0.	0.	0.	-.0597	-.0240	.1320	.0363	.1342	-.0387	0.		
.0530	0.	0.	0.	0.	0.	0.	-.0500	-.0026	.1172	.0780	.1511	-.0051	0.		
.0540	0.	0.	0.	0.	0.	0.	-.0404	.0201	.1012	.1294	.1608	.0283	0.		
.0550	0.	0.	0.	0.	0.	0.	-.0309	.0424	.0830	.1630	.1651	.0568	0.		
.0560	0.	0.	0.	0.	0.	0.	-.0218	.0638	.0624	.1820	.1611	.0840	0.		
.0570	0.	0.	0.	0.	0.	0.	-.0134	.0841	.0402	.2032	.1481	.1111	0.		
.0580	0.	0.	0.	0.	0.	0.	-.0055	.1025	.0167	.2168	.1367	.1336	0.		
.0590	0.	0.	0.	0.	0.	0.	.0017	.1179	-.0078	.2123	.1316	.1511	0.		
.0600	0.	0.	0.	0.	0.	0.	.0082	.1303	-.0327	.2063	.1264	.1678	0.		
.0610	0.	0.	0.	0.	0.	0.	.0142	.1392	-.0568	.2097	.1224	.1847	0.		
.0620	0.	0.	0.	0.	0.	0.	.0197	.1434	-.0796	.2084	.1254	.2007	0.		
.0630	0.	0.	0.	0.	0.	0.	.0248	.1425	-.1010	.1973	.1277	.2171	0.		
.0640	0.	0.	0.	0.	0.	0.	.0297	.1372	-.1209	.1919	.1187	.2342	0.		
.0650	0.	0.	0.	0.	0.	0.	.0341	.1281	-.1386	.1940	.1025	.2491	0.		
.0660	0.	0.	0.	0.	0.	0.	.0379	.1145	-.1537	.1878	.0837	.2602	0.		
.0670	0.	0.	0.	0.	0.	0.	.0406	.0968	-.1659	.1697	.0584	.2683	0.		
.0680	0.	0.	0.	0.	0.	0.	.0417	.0761	-.1744	.1499	.0309	.2719	0.		
.0690	0.	0.	0.	0.	0.	0.	.0412	.0534	-.1785	.1284	.0155	.2675	0.		
.0700	0.	0.	0.	0.	0.	0.	.0389	.0293	-.1784	.0974	.0144	.2544	0.		
.0710	0.	0.	0.	0.	0.	0.	.0353	.0045	-.1750	.0568	.0161	.2334	0.		
.0720	0.	0.	0.	0.	0.	0.	.0307	-.0204	-.1688	.0089	.0125	.2024	0.		
.0730	0.	0.	0.	0.	0.	0.	.0260	-.0448	-.1605	-.0501	.0006	.1602	0.		
.0740	0.	0.	0.	0.	0.	0.	.0217	-.0678	-.1503	-.1189	-.0206	.1100	0.		
.0750	0.	0.	0.	0.	0.	0.	.0183	-.0886	-.1377	-.1841	-.0458	.0559	0.		

ADLPIPE PAGE 354

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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

.0650	0.	0.	0.	0.	0.	0.	0.	.0341	.1281	-.1386	.1940	.1025	.2491	0.
.0660	0.	0.	0.	0.	0.	0.	0.	.0379	.1145	-.1537	.1878	.0837	.2602	0.
.0670	0.	0.	0.	0.	0.	0.	0.	.0406	.0968	-.1659	.1697	.0584	.2683	0.
.0680	0.	0.	0.	0.	0.	0.	0.	.0417	.0761	-.1744	.1499	.0309	.2719	0.
.0690	0.	0.	0.	0.	0.	0.	0.	.0412	.0534	-.1785	.1284	.0155	.2675	0.
.0700	0.	0.	0.	0.	0.	0.	0.	.0389	.0293	-.1784	.0974	.0144	.2544	0.
.0710	0.	0.	0.	0.	0.	0.	0.	.0353	.0045	-.1750	.0568	.0161	.2334	0.
.0720	0.	0.	0.	0.	0.	0.	0.	.0307	-.0204	-.1688	.0089	.0125	.2024	0.
.0730	0.	0.	0.	0.	0.	0.	0.	.0260	-.0448	-.1605	-.0501	.0006	.1602	0.
.0740	0.	0.	0.	0.	0.	0.	0.	.0217	-.0678	-.1503	-.1189	-.0206	.1100	0.
.0750	0.	0.	0.	0.	0.	0.	0.	.0183	-.0886	-.1377	-.1841	-.0458	.0559	0.

ADLPIPE PAGE 354

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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	7	MEMBER	1	SEQUENCE	26	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0760	0.	0.	0.	0.	0.	0.	.0162	-.1064	-.1220	-.2362	-.0593	-.0013	0.		
.0770	0.	0.	0.	0.	0.	0.	.0158	-.1213	-.1033	-.2784	-.0962	-.0605	0.		
.0780	0.	0.	0.	0.	0.	0.	.0170	-.1333	-.0820	-.3125	-.1292	-.1172	0.		
.0790	0.	0.	0.	0.	0.	0.	.0199	-.1419	-.0574	-.3287	-.1568	-.1683	0.		
.0800	0.	0.	0.	0.	0.	0.	.0242	-.1467	-.0295	-.3180	-.1700	-.2141	0.		
.0810	0.	0.	0.	0.	0.	0.	.0296	-.1475	.0003	-.2867	-.1772	-.2556	0.		
.0820	0.	0.	0.	0.	0.	0.	.0359	-.1450	.0305	-.2474	-.1873	-.2919	0.		
.0830	0.	0.	0.	0.	0.	0.	.0426	-.1392	.0604	-.2027	-.1975	-.3226	0.		
.0840	0.	0.	0.	0.	0.	0.	.0490	-.1300	.0894	-.1497	-.2029	-.3486	0.		
.0850	0.	0.	0.	0.	0.	0.	.0545	-.1175	.1169	-.0921	-.2024	-.3700	0.		
.0860	0.	0.	0.	0.	0.	0.	.0583	-.1023	.1423	-.0359	-.1922	-.3855	0.		
.0870	0.	0.	0.	0.	0.	0.	.0599	-.0849	.1655	.0196	-.1695	-.3933	0.		
.0880	0.	0.	0.	0.	0.	0.	.0587	-.0663	.1863	.0749	-.1378	-.3920	0.		
.0890	0.	0.	0.	0.	0.	0.	.0544	-.0475	.2040	.1258	-.0991	-.3803	0.		
.0900	0.	0.	0.	0.	0.	0.	.0469	-.0293	.2184	.1719	-.0509	-.3570	0.		
.0910	0.	0.	0.	0.	0.	0.	.0365	-.0121	.2291	.2195	.0030	-.3216	0.		
.0920	0.	0.	0.	0.	0.	0.	.0236	.0035	.2355	.2676	.0528	-.2746	0.		
.0930	0.	0.	0.	0.	0.	0.	.0090	.0165	.2369	.3063	.0927	-.2174	0.		
.0940	0.	0.	0.	0.	0.	0.	-.0068	.0267	.2333	.3332	.1235	-.1526	0.		
.0950	0.	0.	0.	0.	0.	0.	-.0230	.0346	.2251	.3554	.1481	-.0828	0.		
.0960	0.	0.	0.	0.	0.	0.	-.0387	.0404	.2126	.3742	.1706	-.0109	0.		
.0970	0.	0.	0.	0.	0.	0.	-.0533	.0440	.1961	.3822	.1936	.0591	0.		
.0980	0.	0.	0.	0.	0.	0.	-.0660	.0455	.1754	.3760	.2129	.1228	0.		
.0990	0.	0.	0.	0.	0.	0.	-.0761	.0451	.1509	.3568	.2231	.1767	0.		
.1000	0.	0.	0.	0.	0.	0.	-.0829	.0431	.1228	.3231	.2241	.2185	0.		
.1010	0.	0.	0.	0.	0.	0.	-.0861	.0396	.0918	.2742	.2173	.2462	0.		
.1020	0.	0.	0.	0.	0.	0.	-.0854	.0352	.0588	.2151	.2014	.2585	0.		
.1030	0.	0.	0.	0.	0.	0.	-.0810	.0302	.0250	.1498	.1777	.2564	0.		
.1040	0.	0.	0.	0.	0.	0.	-.0728	.0245	-.0083	.0784	.1516	.2427	0.		
.1050	0.	0.	0.	0.	0.	0.	-.0615	.0187	-.0400	.0047	.1261	.2195	0.		
.1060	0.	0.	0.	0.	0.	0.	-.0472	.0132	-.0695	-.0631	.1014	.1882	0.		
.1070	0.	0.	0.	0.	0.	0.	-.0307	.0084	-.0962	-.1212	.0800	.1514	0.		
.1080	0.	0.	0.	0.	0.	0.	-.0125	.0040	-.1201	-.1731	.0537	.1126	0.		
.1090	0.	0.	0.	0.	0.	0.	.0067	.0000	-.1410	-.2184	.0567	.0748	0.		
.1100	0.	0.	0.	0.	0.	0.	.0264	-.0031	-.1601	-.2477	.0476	.0387	0.		
.1110	0.	0.	0.	0.	0.	0.	.0462	-.0053	-.1790	-.2719	.0206	.0024	0.		
.1120	0.	0.	0.	0.	0.	0.	.0653	-.0072	-.1979	-.3021	-.0239	-.0328	0.		
.1130	0.	0.	0.	0.	0.	0.	.0827	-.0084	-.2153	-.3282	-.0711	-.0616	0.		

ADLPIPE PAGE 355

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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

.1030	0.	0.	0.	0.	0.	0.	0.	-.0810	.0302	.0250	.1498	.1777	.2564	0.
.1040	0.	0.	0.	0.	0.	0.	0.	-.0728	.0245	-.0083	.0784	.1516	.2427	0.
.1050	0.	0.	0.	0.	0.	0.	0.	-.0615	.0187	-.0400	.0047	.1261	.2195	0.
.1060	0.	0.	0.	0.	0.	0.	0.	-.0472	.0132	-.0695	-.0631	.1014	.1882	0.
.1070	0.	0.	0.	0.	0.	0.	0.	-.0307	.0084	-.0962	-.1212	.0800	.1514	0.
.1080	0.	0.	0.	0.	0.	0.	0.	-.0125	.0040	-.1201	-.1731	.0537	.1126	0.
.1090	0.	0.	0.	0.	0.	0.	0.	.0067	.0000	-.1410	-.2184	.0567	.0748	0.
.1100	0.	0.	0.	0.	0.	0.	0.	.0264	-.0031	-.1601	-.2477	.0476	.0387	0.
.1110	0.	0.	0.	0.	0.	0.	0.	.0462	-.0053	-.1790	-.2719	.0206	.0024	0.
.1120	0.	0.	0.	0.	0.	0.	0.	.0653	-.0072	-.1979	-.3021	-.0239	-.0328	0.
.1130	0.	0.	0.	0.	0.	0.	0.	.0827	-.0084	-.2153	-.3282	-.0711	-.0616	0.

ADLPIPE PAGE 355

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.02.

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	7	MEMBER	1	SEQUENCE	26	LOCATION	DIS	TYPE	VA						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)		DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.1140	0.	0.	0.	0.	0.	0.		.0976	-.0087	-.2303	-.3393	-.1133	-.0823	0.	
.1150	0.	0.	0.	0.	0.	0.		.1093	-.0078	-.2423	-.3422	-.1501	-.0970	0.	
.1160	0.	0.	0.	0.	0.	0.		.1173	-.0063	-.2507	-.3435	-.1777	-.1054	0.	
.1170	0.	0.	0.	0.	0.	0.		.1212	-.0040	-.2550	-.3358	-.1969	-.1016	0.	
.1180	0.	0.	0.	0.	0.	0.		.1210	-.0013	-.2547	-.3148	-.2118	-.0948	0.	
.1190	0.	0.	0.	0.	0.	0.		.1168	.0012	-.2504	-.2951	-.2331	-.0807	0.	
.1200	0.	0.	0.	0.	0.	0.		.1087	.0033	-.2417	-.2799	-.2513	-.0625	0.	
.1210	0.	0.	0.	0.	0.	0.		.0968	.0053	-.2270	-.2516	-.2487	-.0368	0.	
.1220	0.	0.	0.	0.	0.	0.		.0817	.0076	-.2072	-.2072	-.2383	-.0072	0.	
.1230	0.	0.	0.	0.	0.	0.		.0641	.0094	-.1831	-.1658	-.2228	.0210	0.	
.1240	0.	0.	0.	0.	0.	0.		.0449	.0105	-.1554	-.1354	-.2020	.0462	0.	
.1250	0.	0.	0.	0.	0.	0.		.0247	.0115	-.1243	-.1012	-.1745	.0708	0.	
.1260	0.	0.	0.	0.	0.	0.		.0043	.0130	-.0906	-.0588	-.1370	.0926	0.	
.1270	0.	0.	0.	0.	0.	0.		-.0155	.0146	-.0556	-.0261	-.0955	.1056	0.	
.1280	0.	0.	0.	0.	0.	0.		-.0342	.0160	-.0199	-.0033	-.0436	.1115	0.	
.1290	0.	0.	0.	0.	0.	0.		-.0511	.0178	.0157	.0232	.0108	.1134	0.	
.1300	0.	0.	0.	0.	0.	0.		-.0659	.0197	.0498	.0488	.0589	.1094	0.	
.1310	0.	0.	0.	0.	0.	0.		-.0781	.0212	.0815	.0611	.1016	.0973	0.	
.1320	0.	0.	0.	0.	0.	0.		-.0876	.0226	.1100	.0646	.1301	.0792	0.	
.1330	0.	0.	0.	0.	0.	0.		-.0946	.0241	.1357	.0734	.1487	.0603	0.	
.1340	0.	0.	0.	0.	0.	0.		-.0993	.0256	.1587	.0820	.1612	.0405	0.	
.1350	0.	0.	0.	0.	0.	0.		-.1021	.0269	.1789	.0825	.1717	.0190	0.	
.1360	0.	0.	0.	0.	0.	0.		-.1030	.0283	.1963	.0854	.1832	-.0010	0.	
.1370	0.	0.	0.	0.	0.	0.		-.1023	.0304	.2102	.0961	.1873	-.0184	0.	
.1380	0.	0.	0.	0.	0.	0.		-.1001	.0325	.2199	.1032	.1873	-.0342	0.	
.1390	0.	0.	0.	0.	0.	0.		-.0965	.0344	.2247	.0982	.1771	-.0499	0.	
.1400	0.	0.	0.	0.	0.	0.		-.0916	.0362	.2239	.0894	.1514	-.0641	0.	
.1410	0.	0.	0.	0.	0.	0.		-.0856	.0383	.2178	.0818	.1184	-.0757	0.	
.1420	0.	0.	0.	0.	0.	0.		-.0788	.0402	.2066	.0667	.0797	-.0860	0.	
.1430	0.	0.	0.	0.	0.	0.		-.0714	.0418	.1908	.0447	.0424	-.0934	0.	
.1440	0.	0.	0.	0.	0.	0.		-.0635	.0434	.1712	.0245	.0064	-.0962	0.	
.1450	0.	0.	0.	0.	0.	0.		-.0555	.0449	.1481	.0066	-.0276	-.0945	0.	
.1460	0.	0.	0.	0.	0.	0.		-.0475	.0461	.1221	-.0148	-.0552	-.0884	0.	
.1470	0.	0.	0.	0.	0.	0.		-.0396	.0470	.0935	-.0385	-.0521	-.0777	0.	
.1480	0.	0.	0.	0.	0.	0.		-.0321	.0477	.0632	-.0561	-.1030	-.0606	0.	
.1490	0.	0.	0.	0.	0.	0.		-.0253	.0480	.0317	-.0708	-.1208	-.0387	0.	
.1500	0.	0.	0.	0.	0.	0.		-.0194	.0478	-.0009	-.0902	-.1401	-.0133	0.	
.1510	0.	0.	0.	0.	0.	0.		-.0147	.0471	-.0333	-.1102	-.1561	.0162	0.	

ADLPIPE PAGE 356

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.02.

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

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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



.1410	0.	0.	0.	0.	0.	0.	0.	0.	-.0856	.0383	.2170	.0810	.1184	-.0757	0.
.1420	0.	0.	0.	0.	0.	0.	0.	0.	-.0788	.0402	.2066	.0667	.0797	-.0860	0.
.1430	0.	0.	0.	0.	0.	0.	0.	0.	-.0714	.0418	.1908	.0447	.0424	-.0934	0.
.1440	0.	0.	0.	0.	0.	0.	0.	0.	-.0635	.0434	.1712	.0245	.0064	-.0962	0.
.1450	0.	0.	0.	0.	0.	0.	0.	0.	-.0555	.0449	.1481	.0066	-.0276	-.0945	0.
.1460	0.	0.	0.	0.	0.	0.	0.	0.	-.0475	.0461	.1221	-.0148	-.0552	-.0884	0.
.1470	0.	0.	0.	0.	0.	0.	0.	0.	-.0396	.0470	.0935	-.0385	-.0821	-.0777	0.
.1480	0.	0.	0.	0.	0.	0.	0.	0.	-.0321	.0477	.0632	-.0561	-.1030	-.0606	0.
.1490	0.	0.	0.	0.	0.	0.	0.	0.	-.0253	.0480	.0317	-.0708	-.1208	-.0387	0.
.1500	0.	0.	0.	0.	0.	0.	0.	0.	-.0194	.0478	-.0009	-.0902	-.1401	-.0133	0.
.1510	0.	0.	0.	0.	0.	0.	0.	0.	-.0147	.0471	-.0333	-.1102	-.1561	.0162	0.

ADLPIPE PAGE 356

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.02.

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	7	MEMBER	1	SEQUENCE	26	LOCATION	DIS	TYPE	VA							
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)
.1520	0.	0.	0.	0.	0.	0.	0.	0.	-.0115	.0463	-.0648	-.1252	-.1581	.0490	0.	
.1530	0.	0.	0.	0.	0.	0.	0.	0.	-.0100	.0455	-.0941	-.1366	-.1696	.0837	0.	
.1540	0.	0.	0.	0.	0.	0.	0.	0.	-.0101	.0447	-.1208	-.1499	-.1623	.1186	0.	
.1550	0.	0.	0.	0.	0.	0.	0.	0.	-.0117	.0442	-.1442	-.1623	-.1454	.1537	0.	
.1560	0.	0.	0.	0.	0.	0.	0.	0.	-.0146	.0441	-.1639	-.1684	-.1163	.1882	0.	
.1570	0.	0.	0.	0.	0.	0.	0.	0.	-.0181	.0445	-.1804	-.1738	-.0878	.2182	0.	
.1580	0.	0.	0.	0.	0.	0.	0.	0.	-.0217	.0453	-.1938	-.1828	-.0513	.2426	0.	
.1590	0.	0.	0.	0.	0.	0.	0.	0.	-.0251	.0465	-.2038	-.1912	-.0373	.2623	0.	
.1600	0.	0.	0.	0.	0.	0.	0.	0.	-.0277	.0482	-.2107	-.1961	-.0237	.2762	0.	
.1610	0.	0.	0.	0.	0.	0.	0.	0.	-.0294	.0503	-.2142	-.2007	-.0154	.2831	0.	
.1620	0.	0.	0.	0.	0.	0.	0.	0.	-.0301	.0526	-.2134	-.2022	-.0003	.2848	0.	
.1630	0.	0.	0.	0.	0.	0.	0.	0.	-.0297	.0554	-.2088	-.1947	.0137	.2818	0.	
.1640	0.	0.	0.	0.	0.	0.	0.	0.	-.0282	.0585	-.2006	-.1795	.0261	.2740	0.	
.1650	0.	0.	0.	0.	0.	0.	0.	0.	-.0257	.0615	-.1891	-.1638	.0381	.2609	0.	
.1660	0.	0.	0.	0.	0.	0.	0.	0.	-.0222	.0642	-.1754	-.1483	.0416	.2428	0.	
.1670	0.	0.	0.	0.	0.	0.	0.	0.	-.0181	.0668	-.1593	-.1272	.0393	.2215	0.	
.1680	0.	0.	0.	0.	0.	0.	0.	0.	-.0138	.0691	-.1413	-.1039	.0330	.1969	0.	
.1690	0.	0.	0.	0.	0.	0.	0.	0.	-.0097	.0708	-.1214	-.0821	.0267	.1699	0.	
.1700	0.	0.	0.	0.	0.	0.	0.	0.	-.0064	.0717	-.0998	-.0595	.0181	.1419	0.	
.1710	0.	0.	0.	0.	0.	0.	0.	0.	-.0041	.0719	-.0766	-.0349	.0085	.1140	0.	
.1720	0.	0.	0.	0.	0.	0.	0.	0.	-.0033	.0708	-.0512	-.0085	.0127	.0882	0.	
.1730	0.	0.	0.	0.	0.	0.	0.	0.	-.0039	.0686	-.0246	.0185	.0227	.0644	0.	
.1740	0.	0.	0.	0.	0.	0.	0.	0.	-.0059	.0651	.0024	.0473	.0330	.0427	0.	
.1750	0.	0.	0.	0.	0.	0.	0.	0.	-.0091	.0603	.0295	.0754	.0455	.0233	0.	
.1760	0.	0.	0.	0.	0.	0.	0.	0.	-.0131	.0539	.0557	.0991	.0561	.0060	0.	
.1770	0.	0.	0.	0.	0.	0.	0.	0.	-.0175	.0461	.0804	.1205	.0650	-.0085	0.	
.1780	0.	0.	0.	0.	0.	0.	0.	0.	-.0221	.0373	.1030	.1398	.0679	-.0215	0.	
.1790	0.	0.	0.	0.	0.	0.	0.	0.	-.0265	.0275	.1233	.1557	.0693	-.0335	0.	
.1800	0.	0.	0.	0.	0.	0.	0.	0.	-.0306	.0167	.1408	.1675	.0688	-.0443	0.	
.1810	0.	0.	0.	0.	0.	0.	0.	0.	-.0340	.0054	.1552	.1744	.0611	-.0543	0.	
.1820	0.	0.	0.	0.	0.	0.	0.	0.	-.0368	-.0065	.1668	.1778	.0556	-.0633	0.	
.1830	0.	0.	0.	0.	0.	0.	0.	0.	-.0386	-.0184	.1754	.1778	.0508	-.0725	0.	
.1840	0.	0.	0.	0.	0.	0.	0.	0.	-.0395	-.0302	.1807	.1755	.0439	-.0815	0.	
.1850	0.	0.	0.	0.	0.	0.	0.	0.	-.0393	-.0417	.1828	.1695	.0345	-.0904	0.	
.1860	0.	0.	0.	0.	0.	0.	0.	0.	-.0379	-.0528	.1817	.1581	.0206	-.1000	0.	
.1870	0.	0.	0.	0.	0.	0.	0.	0.	-.0353	-.0632	.1777	.1434	.0040	-.1098	0.	
.1880	0.	0.	0.	0.	0.	0.	0.	0.	-.0314	-.0725	.1709	.1265	-.0187	-.1198	0.	
.1890	0.	0.	0.	0.	0.	0.	0.	0.	-.0265	-.0805	.1620	.1080	-.0420	-.1297	0.	

ADLPIPE PAGE 357

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.02.

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

.1780	0.	0.	0.	0.	0.	0.	0.	0.	.0221	.0373	.1030	.1398	.0879	-.0215	0.
.1790	0.	0.	0.	0.	0.	0.	0.	0.	-.0266	.0275	.1233	.1557	.0893	-.0335	0.
.1800	0.	0.	0.	0.	0.	0.	0.	0.	-.0306	.0167	.1408	.1675	.0688	-.0443	0.
.1810	0.	0.	0.	0.	0.	0.	0.	0.	-.0340	.0054	.1552	.1744	.0511	-.0543	0.
.1820	0.	0.	0.	0.	0.	0.	0.	0.	-.0368	-.0065	.1668	.1778	-.0556	-.0633	0.
.1830	0.	0.	0.	0.	0.	0.	0.	0.	-.0386	-.0184	.1754	.1778	.0508	-.0725	0.
.1840	0.	0.	0.	0.	0.	0.	0.	0.	-.0395	-.0302	.1807	.1755	.0439	-.0815	0.
.1850	0.	0.	0.	0.	0.	0.	0.	0.	-.0393	-.0417	.1828	.1695	.0345	-.0904	0.
.1860	0.	0.	0.	0.	0.	0.	0.	0.	-.0379	-.0528	.1817	.1581	.0206	-.1000	0.
.1870	0.	0.	0.	0.	0.	0.	0.	0.	-.0353	-.0632	.1777	.1434	.0040	-.1098	0.
.1880	0.	0.	0.	0.	0.	0.	0.	0.	-.0314	-.0725	.1709	.1265	-.0187	-.1198	0.
.1890	0.	0.	0.	0.	0.	0.	0.	0.	-.0265	-.0805	.1620	.1080	-.0420	-.1297	0.

ADLPIPE PAGE 357

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.02.

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	7	MEMBER	1	SEQUENCE	26	LOCATION	DIS	TYPE	VA						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.1900	0.	0.	0.	0.	0.	0.	-.0207	-.0870	.1516	.0892	-.0510	-.1393	0.		
.1910	0.	0.	0.	0.	0.	0.	-.0141	-.0918	.1401	.0711	-.0786	-.1483	0.		
.1920	0.	0.	0.	0.	0.	0.	-.0068	-.0951	.1277	.0539	-.0903	-.1561	0.		
.1930	0.	0.	0.	0.	0.	0.	.0010	-.0965	.1146	.0374	-.0752	-.1632	0.		
.1940	0.	0.	0.	0.	0.	0.	.0094	-.0961	.1008	.0225	-.0956	-.1698	0.		
.1950	0.	0.	0.	0.	0.	0.	.0181	-.0939	.0860	.0098	-.0923	-.1754	0.		
.1960	0.	0.	0.	0.	0.	0.	.0271	-.0902	.0703	-.0027	-.0866	-.1799	0.		
.1970	0.	0.	0.	0.	0.	0.	.0364	-.0850	.0535	-.0156	-.0816	-.1830	0.		
.1980	0.	0.	0.	0.	0.	0.	.0455	-.0784	.0358	-.0274	-.0779	-.1842	0.		
.1990	0.	0.	0.	0.	0.	0.	.0543	-.0706	.0176	-.0358	-.0719	-.1822	0.		
.2000	0.	0.	0.	0.	0.	0.	.0623	-.0618	-.0005	-.0398	-.0617	-.1758	0.		
.2010	0.	0.	0.	0.	0.	0.	.0692	-.0524	-.0183	-.0394	-.0490	-.1646	0.		
.2020	0.	0.	0.	0.	0.	0.	.0747	-.0426	-.0354	-.0350	-.0351	-.1479	0.		
.2030	0.	0.	0.	0.	0.	0.	.0784	-.0329	-.0516	-.0265	-.0205	-.1256	0.		
.2040	0.	0.	0.	0.	0.	0.	.0802	-.0235	-.0666	-.0142	-.0066	-.0980	0.		
.2050	0.	0.	0.	0.	0.	0.	.0798	-.0146	-.0802	.0012	.0061	-.0661	0.		
.2060	0.	0.	0.	0.	0.	0.	.0773	-.0066	-.0921	.0183	.0174	-.0304	0.		
.2070	0.	0.	0.	0.	0.	0.	.0727	.0006	-.1021	.0356	.0271	.0078	0.		
.2080	0.	0.	0.	0.	0.	0.	.0662	.0067	-.1100	.0523	.0349	.0469	0.		
.2090	0.	0.	0.	0.	0.	0.	.0581	.0118	-.1155	.0678	.0430	.0851	0.		
.2100	0.	0.	0.	0.	0.	0.	.0488	.0158	-.1185	.0821	.0532	.1212	0.		
.2110	0.	0.	0.	0.	0.	0.	.0387	.0188	-.1190	.0946	.0643	.1536	0.		
.2120	0.	0.	0.	0.	0.	0.	.0285	.0205	-.1170	.1042	.0747	.1807	0.		
.2130	0.	0.	0.	0.	0.	0.	.0188	.0211	-.1128	.1104	.0845	.2011	0.		
.2140	0.	0.	0.	0.	0.	0.	.0101	.0205	-.1065	.1141	.0928	.2141	0.		
.2150	0.	0.	0.	0.	0.	0.	.0029	.0187	-.0982	.1159	.0974	.2191	0.		
.2160	0.	0.	0.	0.	0.	0.	-.0024	.0158	-.0883	.1150	.0972	.2152	0.		
.2170	0.	0.	0.	0.	0.	0.	-.0057	.0118	-.0767	.1115	.0929	.2027	0.		
.2180	0.	0.	0.	0.	0.	0.	-.0069	.0069	-.0634	.1070	.0855	.1823	0.		
.2190	0.	0.	0.	0.	0.	0.	-.0062	.0014	-.0485	.1022	.0760	.1545	0.		
.2200	0.	0.	0.	0.	0.	0.	-.0038	-.0047	-.0321	.0963	.0658	.1201	0.		
.2210	0.	0.	0.	0.	0.	0.	-.0001	-.0110	-.0145	.0894	.0551	.0799	0.		
.2220	0.	0.	0.	0.	0.	0.	.0045	-.0174	.0039	.0814	.0435	.0356	0.		
.2230	0.	0.	0.	0.	0.	0.	.0095	-.0238	.0227	.0715	.0317	-.0115	0.		
.2240	0.	0.	0.	0.	0.	0.	.0144	-.0300	.0413	.0594	.0196	-.0601	0.		
.2250	0.	0.	0.	0.	0.	0.	.0189	-.0359	.0591	.0454	.0063	-.1082	0.		
.2260	0.	0.	0.	0.	0.	0.	.0227	-.0413	.0758	.0301	-.0089	-.1542	0.		
.2270	0.	0.	0.	0.	0.	0.	.0253	-.0462	.0909	.0136	-.0248	-.1960	0.		

ADLPIPE PAGE 358

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.02.

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

.2170	0.	0.	0.	0.	0.	0.	0.	-.0057	.0111	-.0767	.1115	.0929	.2027	0.
.2180	0.	0.	0.	0.	0.	0.	0.	-.0069	.0069	-.0634	.1070	.0855	.1823	0.
.2190	0.	0.	0.	0.	0.	0.	0.	-.0062	.0014	-.0485	.1022	.0760	.1545	0.
.2200	0.	0.	0.	0.	0.	0.	0.	-.0038	-.0047	-.0321	.0963	.0558	.1201	0.
.2210	0.	0.	0.	0.	0.	0.	0.	-.0001	-.0110	-.0145	.0894	.0551	.0799	0.
.2220	0.	0.	0.	0.	0.	0.	0.	.0045	-.0174	.0035	.0814	.0435	.0356	0.
.2230	0.	0.	0.	0.	0.	0.	0.	.0095	-.0238	.0227	.0715	.0317	-.0115	0.
.2240	0.	0.	0.	0.	0.	0.	0.	.0144	-.0300	.0413	.0594	.0196	-.0601	0.
.2250	0.	0.	0.	0.	0.	0.	0.	.0189	-.0359	.0591	.0454	.0263	-.1082	0.
.2260	0.	0.	0.	0.	0.	0.	0.	.0227	-.0413	.0751	.0301	-.0089	-.1542	0.
.2270	0.	0.	0.	0.	0.	0.	0.	.0253	-.0462	.0909	.0136	-.0248	-.1960	0.

ADLPIPE PAGE 358 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.02.

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	7	MEMBER	1	SEQUENCE	26	LOCATION	DIS	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2280	0.	0.	0.	0.	0.	0.	.0266	-.0504	.1042	-.0027	-.0400	-.2318	0.	
.2290	0.	0.	0.	0.	0.	0.	.0266	-.0537	.1154	-.0168	-.0539	-.2596	0.	
.2300	0.	0.	0.	0.	0.	0.	.0251	-.0562	.1245	-.0273	-.0659	-.2785	0.	
.2310	0.	0.	0.	0.	0.	0.	.0224	-.0577	.1313	-.0340	-.0760	-.2877	0.	
.2320	0.	0.	0.	0.	0.	0.	.0185	-.0582	.1357	-.0366	-.0850	-.2870	0.	
.2330	0.	0.	0.	0.	0.	0.	.0136	-.0578	.1376	-.0348	-.0929	-.2766	0.	
.2340	0.	0.	0.	0.	0.	0.	.0079	-.0564	.1371	-.0289	-.0987	-.2573	0.	
.2350	0.	0.	0.	0.	0.	0.	.0016	-.0540	.1345	-.0192	-.1017	-.2306	0.	
.2360	0.	0.	0.	0.	0.	0.	-.0052	-.0505	.1299	-.0066	-.1008	-.1981	0.	
.2370	0.	0.	0.	0.	0.	0.	-.0120	-.0461	.1237	.0080	-.0950	-.1612	0.	
.2380	0.	0.	0.	0.	0.	0.	-.0189	-.0406	.1159	.0233	-.0834	-.1219	0.	
.2390	0.	0.	0.	0.	0.	0.	-.0253	-.0343	.1069	.0380	-.0668	-.0821	0.	
.2400	0.	0.	0.	0.	0.	0.	-.0312	-.0271	.0967	.0511	-.0460	-.0435	0.	
.2410	0.	0.	0.	0.	0.	0.	-.0361	-.0191	.0854	.0620	-.0215	-.0072	0.	
.2420	0.	0.	0.	0.	0.	0.	-.0399	-.0106	.0731	.0700	.0048	.0258	0.	
.2430	0.	0.	0.	0.	0.	0.	-.0423	-.0019	.0597	.0743	.0304	.0546	0.	
.2440	0.	0.	0.	0.	0.	0.	-.0432	.0070	.0453	.0744	.0531	.0788	0.	
.2450	0.	0.	0.	0.	0.	0.	-.0425	.0156	.0299	.0708	.0723	.0986	0.	
.2460	0.	0.	0.	0.	0.	0.	-.0402	.0239	.0138	.0643	.0976	.1141	0.	
.2470	0.	0.	0.	0.	0.	0.	-.0365	.0317	-.0030	.0552	.0986	.1254	0.	
.2480	0.	0.	0.	0.	0.	0.	-.0314	.0388	-.0202	.0432	.1046	.1329	0.	
.2490	0.	0.	0.	0.	0.	0.	-.0251	.0450	-.0377	.0284	.1046	.1369	0.	
.2500	0.	0.	0.	0.	0.	0.	-.0181	.0504	-.0553	.0107	.0985	.1376	0.	
.2510	0.	0.	0.	0.	0.	0.	-.0106	.0549	-.0725	-.0091	.0881	.1354	0.	
.2520	0.	0.	0.	0.	0.	0.	-.0029	.0583	-.0891	-.0306	.0744	.1308	0.	
.2530	0.	0.	0.	0.	0.	0.	.0046	.0609	-.1048	-.0535	.0573	.1239	0.	
.2540	0.	0.	0.	0.	0.	0.	.0115	.0624	-.1192	-.0780	.0369	.1153	0.	
.2550	0.	0.	0.	0.	0.	0.	.0175	.0629	-.1319	-.1031	.0157	.1055	0.	
.2560	0.	0.	0.	0.	0.	0.	.0225	.0624	-.1424	-.1271	-.0039	.0952	0.	
.2570	0.	0.	0.	0.	0.	0.	.0263	.0611	-.1505	-.1424	-.0205	.0852	0.	
.2580	0.	0.	0.	0.	0.	0.	.0287	.0589	-.1560	-.1668	-.0339	.0757	0.	
.2590	0.	0.	0.	0.	0.	0.	.0299	.0558	-.1588	-.1822	-.0439	.0671	0.	
.2600	0.	0.	0.	0.	0.	0.	.0299	.0521	-.1592	-.1936	-.0508	.0601	0.	
.2610	0.	0.	0.	0.	0.	0.	.0288	.0478	-.1571	-.2006	-.0547	.0545	0.	
.2620	0.	0.	0.	0.	0.	0.	.0268	.0430	-.1529	-.2037	-.0567	.0502	0.	
.2630	0.	0.	0.	0.	0.	0.	.0241	.0379	-.1470	-.2038	-.0582	.0472	0.	
.2640	0.	0.	0.	0.	0.	0.	.0206	.0327	-.1394	-.2011	-.0501	.0451	0.	
.2650	0.	0.	0.	0.	0.	0.	.0165	.0274	-.1305	-.1965	-.0521	.0438	0.	

ADLPIPE PAGE 359 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.02.

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

.2540	0.	0.	0.	0.	0.	0.	0.	.115	.0624	-.1192	-.0780	.0369	.1153	0.
.2550	0.	0.	0.	0.	0.	0.	0.	.175	.0629	-.1319	-.1031	.0157	.1055	0.
.2560	0.	0.	0.	0.	0.	0.	0.	.225	.0624	-.1424	-.1271	-.0039	.0952	0.
.2570	0.	0.	0.	0.	0.	0.	0.	.0263	.0611	-.1505	-.1484	-.0205	.0852	0.
.2580	0.	0.	0.	0.	0.	0.	0.	.0287	.0589	-.1560	-.1668	-.0339	.0757	0.
.2590	0.	0.	0.	0.	0.	0.	0.	.0299	.0558	-.1588	-.1822	-.0439	.0671	0.
.2600	0.	0.	0.	0.	0.	0.	0.	.0299	.0521	-.1592	-.1936	-.0508	.0601	0.
.2610	0.	0.	0.	0.	0.	0.	0.	.0288	.0478	-.1571	-.2006	-.0547	.0545	0.
.2620	0.	0.	0.	0.	0.	0.	0.	.0268	.0430	-.1529	-.2037	-.0567	.0502	0.
.2630	0.	0.	0.	0.	0.	0.	0.	.0241	.0379	-.1470	-.2038	-.0582	.0472	0.
.2640	0.	0.	0.	0.	0.	0.	0.	.0206	.0327	-.1394	-.2011	-.0601	.0451	0.
.2650	0.	0.	0.	0.	0.	0.	0.	.0165	.0274	-.1305	-.1965	-.0621	.0438	0.

ADLPIPE PAGE 359

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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	7	MEMBER	1	SEQUENCE	26	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2660	0.	0.	0.	0.	0.	0.	.0118	.0224	-.1201	-.1902	-.0634	.0429	0.		
.2670	0.	0.	0.	0.	0.	0.	.0064	.0176	-.1085	-.1825	-.0640	.0422	0.		
.2680	0.	0.	0.	0.	0.	0.	.0006	.0134	-.0957	-.1735	-.0638	.0413	0.		
.2690	0.	0.	0.	0.	0.	0.	-.0058	.0097	-.0816	-.1637	-.0521	.0401	0.		
.2700	0.	0.	0.	0.	0.	0.	-.0125	.0067	-.0663	-.1534	-.0588	.0385	0.		
.2710	0.	0.	0.	0.	0.	0.	-.0195	.0045	-.0501	-.1423	-.0548	.0363	0.		
.2720	0.	0.	0.	0.	0.	0.	-.0264	.0030	-.0331	-.1304	-.0508	.0333	0.		
.2730	0.	0.	0.	0.	0.	0.	-.0332	.0024	-.0155	-.1181	-.0471	.0293	0.		
.2740	0.	0.	0.	0.	0.	0.	-.0394	.0025	-.0022	-.1053	-.0437	.0242	0.		
.2750	0.	0.	0.	0.	0.	0.	-.0448	.0034	.0199	-.0918	-.0398	.0183	0.		
.2760	0.	0.	0.	0.	0.	0.	-.0492	.0051	.0371	-.0777	-.0352	.0112	0.		
.2770	0.	0.	0.	0.	0.	0.	-.0525	.0074	.0533	-.0635	-.0300	.0030	0.		
.2780	0.	0.	0.	0.	0.	0.	-.0545	.0104	.0681	-.0497	-.0247	-.0064	0.		
.2790	0.	0.	0.	0.	0.	0.	-.0551	.0139	.0810	-.0371	-.0192	-.0168	0.		
.2800	0.	0.	0.	0.	0.	0.	-.0544	.0179	.0916	-.0265	-.0140	-.0279	0.		
.2810	0.	0.	0.	0.	0.	0.	-.0525	.0221	.0996	-.0182	-.0098	-.0394	0.		
.2820	0.	0.	0.	0.	0.	0.	-.0498	.0266	.1048	-.0127	-.0067	-.0506	0.		
.2830	0.	0.	0.	0.	0.	0.	-.0464	.0312	.1073	-.0096	-.0038	-.0607	0.		
.2840	0.	0.	0.	0.	0.	0.	-.0428	.0357	.1070	-.0086	-.0003	-.0685	0.		
.2850	0.	0.	0.	0.	0.	0.	-.0394	.0401	.1043	-.0092	.0044	-.0731	0.		
.2860	0.	0.	0.	0.	0.	0.	-.0364	.0442	.0993	-.0107	.0106	-.0736	0.		
.2870	0.	0.	0.	0.	0.	0.	-.0342	.0479	.0923	-.0125	.0183	-.0693	0.		
.2880	0.	0.	0.	0.	0.	0.	-.0328	.0512	.0833	-.0142	.0268	-.0598	0.		
.2890	0.	0.	0.	0.	0.	0.	-.0324	.0538	.0725	-.0159	.0353	-.0449	0.		
.2900	0.	0.	0.	0.	0.	0.	-.0328	.0557	.0601	-.0174	.0426	-.0251	0.		
.2910	0.	0.	0.	0.	0.	0.	-.0340	.0570	.0461	-.0190	.0478	-.0209	0.		
.2920	0.	0.	0.	0.	0.	0.	-.0356	.0576	.0308	-.0207	.0504	-.0066	0.		
.2930	0.	0.	0.	0.	0.	0.	-.0376	.0575	.0143	-.0227	.0508	.0565	0.		
.2940	0.	0.	0.	0.	0.	0.	-.0395	.0569	-.0030	-.0252	.0491	.0872	0.		
.2950	0.	0.	0.	0.	0.	0.	-.0411	.0558	-.0208	-.0284	.0454	.1175	0.		
.2960	0.	0.	0.	0.	0.	0.	-.0420	.0543	-.0388	-.0326	.0398	.1458	0.		
.2970	0.	0.	0.	0.	0.	0.	-.0422	.0525	-.0566	-.0381	.0327	.1709	0.		
.2980	0.	0.	0.	0.	0.	0.	-.0413	.0504	-.0738	-.0446	.0243	.1916	0.		
.2990	0.	0.	0.	0.	0.	0.	-.0392	.0480	-.0901	-.0524	.0147	.2071	0.		
.3000	0.	0.	0.	0.	0.	0.	-.0360	.0456	-.1049	-.0612	.0039	.2167	0.		
.3010	0.	0.	0.	0.	0.	0.	-.0317	.0430	-.1180	-.0709	-.0077	.2202	0.		
.3020	0.	0.	0.	0.	0.	0.	-.0264	.0404	-.1288	-.0806	-.0193	.2178	0.		
.3030	0.	0.	0.	0.	0.	0.	-.0203	.0377	-.1371	-.0897	-.0299	.2099	0.		

ADLPIPE PAGE 360

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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

.2930	0.	0.	0.	0.	0.	0.	0.	0.	-.0376	.0575	.0143	-.0227	.0508	.0565	0.
.2940	0.	0.	0.	0.	0.	0.	0.	0.	-.0395	.0569	-.0030	-.0252	.0491	.0872	0.
.2950	0.	0.	0.	0.	0.	0.	0.	0.	-.0411	.0558	-.0208	-.0284	.0454	.1175	0.
.2960	0.	0.	0.	0.	0.	0.	0.	0.	-.0420	.0543	-.0388	-.0326	.0398	.1458	0.
.2970	0.	0.	0.	0.	0.	0.	0.	0.	-.0422	.0525	-.0566	-.0381	.0327	.1709	0.
.2980	0.	0.	0.	0.	0.	0.	0.	0.	-.0413	.0504	-.0738	-.0446	.0243	.1916	0.
.2990	0.	0.	0.	0.	0.	0.	0.	0.	-.0392	.0480	-.0901	-.0524	.0147	.2071	0.
.3000	0.	0.	0.	0.	0.	0.	0.	0.	-.0360	.0456	-.1049	-.0612	.0039	.2167	0.
.3010	0.	0.	0.	0.	0.	0.	0.	0.	-.0317	.0430	-.1180	-.0709	-.0077	.2202	0.
.3020	0.	0.	0.	0.	0.	0.	0.	0.	-.0264	.0404	-.1288	-.0806	-.0193	.2178	0.
.3030	0.	0.	0.	0.	0.	0.	0.	0.	-.0203	.0377	-.1371	-.0897	-.0299	.2099	0.

ADLPIPE PAGE 360

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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	7	MEMBER	1	SEQUENCE	26	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3040	0.	0.	0.	0.	0.	0.		-.0138	.0352	-.1424	-.0975	-.0386	.1971	0.	
.3050	0.	0.	0.	0.	0.	0.		-.0070	.0326	-.1447	-.1035	-.0453	.1802	0.	
.3060	0.	0.	0.	0.	0.	0.		-.0003	.0302	-.1439	-.1073	-.0498	.1601	0.	
.3070	0.	0.	0.	0.	0.	0.		.0061	.0278	-.1401	-.1084	-.0521	.1377	0.	
.3080	0.	0.	0.	0.	0.	0.		.0118	.0255	-.1333	-.1069	-.0523	.1140	0.	
.3090	0.	0.	0.	0.	0.	0.		.0168	.0232	-.1239	-.1024	-.0510	.0900	0.	
.3100	0.	0.	0.	0.	0.	0.		.0208	.0208	-.1120	-.0950	-.0484	.0663	0.	
.3110	0.	0.	0.	0.	0.	0.		.0237	.0185	-.0981	-.0847	-.0448	.0439	0.	
.3120	0.	0.	0.	0.	0.	0.		.0254	.0160	-.0823	-.0716	-.0401	.0233	0.	
.3130	0.	0.	0.	0.	0.	0.		.0259	.0134	-.0651	-.0556	-.0343	.0052	0.	
.3140	0.	0.	0.	0.	0.	0.		.0251	.0107	-.0467	-.0370	-.0273	-.0102	0.	
.3150	0.	0.	0.	0.	0.	0.		.0233	.0078	-.0274	-.0159	-.0192	-.0227	0.	
.3160	0.	0.	0.	0.	0.	0.		.0204	.0048	-.0077	.0071	-.0102	-.0322	0.	
.3170	0.	0.	0.	0.	0.	0.		.0167	.0015	.0122	.0315	-.0007	-.0390	0.	
.3180	0.	0.	0.	0.	0.	0.		.0123	-.0021	.0318	.0565	.0089	-.0433	0.	
.3190	0.	0.	0.	0.	0.	0.		.0073	-.0058	.0509	.0816	.0183	-.0456	0.	
.3200	0.	0.	0.	0.	0.	0.		.0021	-.0098	.0691	.1060	.0275	-.0464	0.	
.3210	0.	0.	0.	0.	0.	0.		-.0032	-.0139	.0863	.1295	.0364	-.0460	0.	
.3220	0.	0.	0.	0.	0.	0.		-.0084	-.0183	.1021	.1513	.0450	-.0450	0.	
.3230	0.	0.	0.	0.	0.	0.		-.0133	-.0227	.1165	.1712	.0532	-.0438	0.	
.3240	0.	0.	0.	0.	0.	0.		-.0176	-.0273	.1293	.1889	.0511	-.0429	0.	
.3250	0.	0.	0.	0.	0.	0.		-.0212	-.0319	.1404	.2044	.0586	-.0425	0.	
.3260	0.	0.	0.	0.	0.	0.		-.0239	-.0366	.1496	.2175	.0753	-.0430	0.	
.3270	0.	0.	0.	0.	0.	0.		-.0254	-.0412	.1568	.2280	.0807	-.0447	0.	
.3280	0.	0.	0.	0.	0.	0.		-.0256	-.0458	.1620	.2356	.0843	-.0479	0.	
.3290	0.	0.	0.	0.	0.	0.		-.0245	-.0503	.1649	.2404	.0856	-.0527	0.	
.3300	0.	0.	0.	0.	0.	0.		-.0218	-.0547	.1657	.2424	.0844	-.0593	0.	
.3310	0.	0.	0.	0.	0.	0.		-.0176	-.0589	.1642	.2413	.0807	-.0678	0.	
.3320	0.	0.	0.	0.	0.	0.		-.0119	-.0630	.1605	.2372	.0747	-.0782	0.	
.3330	0.	0.	0.	0.	0.	0.		-.0048	-.0668	.1546	.2299	.0663	-.0903	0.	
.3340	0.	0.	0.	0.	0.	0.		.0035	-.0703	.1466	.2195	.0563	-.1040	0.	
.3350	0.	0.	0.	0.	0.	0.		.0128	-.0735	.1367	.2062	.0450	-.1189	0.	
.3360	0.	0.	0.	0.	0.	0.		.0228	-.0764	.1249	.1902	.0328	-.1346	0.	
.3370	0.	0.	0.	0.	0.	0.		.0334	-.0788	.1115	.1718	.0199	-.1504	0.	
.3380	0.	0.	0.	0.	0.	0.		.0440	-.0809	.0967	.1513	.0066	-.1657	0.	
.3390	0.	0.	0.	0.	0.	0.		.0545	-.0825	.0808	.1295	-.0068	-.1797	0.	
.3400	0.	0.	0.	0.	0.	0.		.0644	-.0838	.0641	.1074	-.0196	-.1917	0.	
.3410	0.	0.	0.	0.	0.	0.		.0734	-.0846	.0470	.0856	-.0313	-.2007	0.	

ADLPIPE PAGE 361

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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

.3310	0.	0.	0.	0.	0.	0.	0.	-.176	-.0589	.1642	.2413	.0807	-.0678	0.
.3320	0.	0.	0.	0.	0.	0.	0.	-.119	-.0630	.1605	.2372	.0747	-.0782	0.
.3330	0.	0.	0.	0.	0.	0.	0.	-.0048	-.0668	.1546	.2299	.0563	-.0903	0.
.3340	0.	0.	0.	0.	0.	0.	0.	.0035	-.0703	.1466	.2195	.0563	-.1040	0.
.3350	0.	0.	0.	0.	0.	0.	0.	.0128	-.0735	.1367	.2062	.0450	-.1189	0.
.3360	0.	0.	0.	0.	0.	0.	0.	.0228	-.0764	.1249	.1902	.0328	-.1346	0.
.3370	0.	0.	0.	0.	0.	0.	0.	.0334	-.0788	.1115	.1718	.0199	-.1504	0.
.3380	0.	0.	0.	0.	0.	0.	0.	.0440	-.0809	.0967	.1513	.0066	-.1657	0.
.3390	0.	0.	0.	0.	0.	0.	0.	.0545	-.0825	.0808	.1295	-.0068	-.1797	0.
.3400	0.	0.	0.	0.	0.	0.	0.	.0644	-.0838	.0641	.1074	-.0196	-.1917	0.
.3410	0.	0.	0.	0.	0.	0.	0.	.0734	-.0846	.0470	.0856	-.0313	-.2007	0.

ADLPIPE PAGE 361

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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	7	MEMBER	1	SEQUENCE	26	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3420	0.	0.	0.	0.	0.	0.	0.	.0213	-.0851	.0299	.0652	-.0413	-.2061	0.	
.3430	0.	0.	0.	0.	0.	0.	0.	.0878	-.0851	.0132	.0470	-.0492	-.2072	0.	
.3440	0.	0.	0.	0.	0.	0.	0.	.0928	-.0848	-.0028	.0319	-.0543	-.2038	0.	
.3450	0.	0.	0.	0.	0.	0.	0.	.0961	-.0842	-.0178	.0202	-.0566	-.1956	0.	
.3460	0.	0.	0.	0.	0.	0.	0.	.0978	-.0831	-.0316	.0122	-.0560	-.1830	0.	
.3470	0.	0.	0.	0.	0.	0.	0.	.0980	-.0817	-.0440	.0077	-.0530	-.1664	0.	
.3480	0.	0.	0.	0.	0.	0.	0.	.0966	-.0800	-.0549	.0063	-.0481	-.1464	0.	
.3490	0.	0.	0.	0.	0.	0.	0.	.0940	-.0780	-.0642	.0077	-.0416	-.1241	0.	
.3500	0.	0.	0.	0.	0.	0.	0.	.0904	-.0756	-.0718	.0112	-.0339	-.1004	0.	
.3510	0.	0.	0.	0.	0.	0.	0.	.0859	-.0729	-.0777	.0164	-.0253	-.0765	0.	
.3520	0.	0.	0.	0.	0.	0.	0.	.0808	-.0700	-.0819	.0224	-.0162	-.0533	0.	
.3530	0.	0.	0.	0.	0.	0.	0.	.0753	-.0667	-.0843	.0289	-.0067	-.0319	0.	
.3540	0.	0.	0.	0.	0.	0.	0.	.0696	-.0633	-.0847	.0354	.0029	-.0131	0.	
.3550	0.	0.	0.	0.	0.	0.	0.	.0640	-.0596	-.0833	.0417	.0123	.0024	0.	
.3560	0.	0.	0.	0.	0.	0.	0.	.0585	-.0559	-.0800	.0476	.0213	.0142	0.	
.3570	0.	0.	0.	0.	0.	0.	0.	.0532	-.0520	-.0749	.0528	.0293	.0219	0.	
.3580	0.	0.	0.	0.	0.	0.	0.	.0484	-.0482	-.0680	.0573	.0361	.0255	0.	
.3590	0.	0.	0.	0.	0.	0.	0.	.0440	-.0443	-.0595	.0611	.0415	.0250	0.	
.3600	0.	0.	0.	0.	0.	0.	0.	.0400	-.0406	-.0495	.0642	.0455	.0208	0.	
.3610	0.	0.	0.	0.	0.	0.	0.	.0365	-.0370	-.0384	.0666	.0479	.0130	0.	
.3620	0.	0.	0.	0.	0.	0.	0.	.0334	-.0335	-.0263	.0682	.0488	.0023	0.	
.3630	0.	0.	0.	0.	0.	0.	0.	.0307	-.0303	-.0136	.0690	.0480	-.0107	0.	
.3640	0.	0.	0.	0.	0.	0.	0.	.0282	-.0273	-.0006	.0688	.0456	-.0254	0.	
.3650	0.	0.	0.	0.	0.	0.	0.	.0260	-.0245	.0124	.0677	.0415	-.0411	0.	
.3660	0.	0.	0.	0.	0.	0.	0.	.0238	-.0220	.0250	.0655	.0359	-.0571	0.	
.3670	0.	0.	0.	0.	0.	0.	0.	.0217	-.0198	.0369	.0622	.0289	-.0727	0.	
.3680	0.	0.	0.	0.	0.	0.	0.	.0193	-.0178	.0480	.0579	.0208	-.0871	0.	
.3690	0.	0.	0.	0.	0.	0.	0.	.0167	-.0161	.0579	.0526	.0123	-.0998	0.	
.3700	0.	0.	0.	0.	0.	0.	0.	.0138	-.0146	.0667	.0465	.0040	-.1100	0.	
.3710	0.	0.	0.	0.	0.	0.	0.	.0103	-.0132	.0741	.0399	-.0037	-.1175	0.	
.3720	0.	0.	0.	0.	0.	0.	0.	.0064	-.0120	.0802	.0328	-.0103	-.1218	0.	
.3730	0.	0.	0.	0.	0.	0.	0.	.0020	-.0108	.0847	.0252	-.0156	-.1227	0.	
.3740	0.	0.	0.	0.	0.	0.	0.	-.0029	-.0095	.0876	.0171	-.0195	-.1202	0.	
.3750	0.	0.	0.	0.	0.	0.	0.	-.0083	-.0082	.0889	.0087	-.0222	-.1144	0.	
.3760	0.	0.	0.	0.	0.	0.	0.	-.0139	-.0066	.0884	-.0002	-.0237	-.1055	0.	
.3770	0.	0.	0.	0.	0.	0.	0.	-.0197	-.0047	.0862	-.0094	-.0244	-.0938	0.	
.3780	0.	0.	0.	0.	0.	0.	0.	-.0255	-.0025	.0822	-.0190	-.0244	-.0794	0.	
.3790	0.	0.	0.	0.	0.	0.	0.	-.0312	.0002	.0765	-.0287	-.0238	-.0628	0.	

ADLPIPE PAGE 362

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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

.3690	0.	0.	0.	0.	0.	0.	0.	.167	-.0161	.0579	.0526	.0123	-.0998	0.
.3700	0.	0.	0.	0.	0.	0.	0.	.138	-.0146	.0667	.0465	.0340	-.1100	0.
.3710	0.	0.	0.	0.	0.	0.	0.	.0103	-.0132	.0741	.0399	-.0037	-.1175	0.
.3720	0.	0.	0.	0.	0.	0.	0.	.0064	-.0120	.0802	.0328	-.0103	-.1218	0.
.3730	0.	0.	0.	0.	0.	0.	0.	.0020	-.0108	.0847	.0252	-.0156	-.1227	0.
.3740	0.	0.	0.	0.	0.	0.	0.	-.0029	-.0095	.0876	.0171	-.0195	-.1202	0.
.3750	0.	0.	0.	0.	0.	0.	0.	-.0083	-.0082	.0889	.0087	-.0222	-.1144	0.
.3760	0.	0.	0.	0.	0.	0.	0.	-.0139	-.0066	.0884	-.0002	-.0237	-.1055	0.
.3770	0.	0.	0.	0.	0.	0.	0.	-.0197	-.0047	.0862	-.0094	-.0244	-.0938	0.
.3780	0.	0.	0.	0.	0.	0.	0.	-.0255	-.0025	.0822	-.0190	-.0244	-.0794	0.
.3790	0.	0.	0.	0.	0.	0.	0.	-.0312	.0002	.0765	-.0287	-.0238	-.0628	0.

ADLPIPE PAGE 362

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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	7	MEMBER	1	SEQUENCE	26	LOCATION	DIS	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3800	0.	0.	0.	0.	0.	0.	-.0366	.0034	.0691	-.0385	-.0230	-.0444	0.	
.3810	0.	0.	0.	0.	0.	0.	-.0417	.0071	.0602	-.0481	-.0222	-.0245	0.	
.3820	0.	0.	0.	0.	0.	0.	-.0461	.0114	.0499	-.0574	-.0216	-.0035	0.	
.3830	0.	0.	0.	0.	0.	0.	-.0499	.0162	.0384	-.0663	-.0215	.0182	0.	
.3840	0.	0.	0.	0.	0.	0.	-.0531	.0216	.0260	-.0747	-.0219	.0401	0.	
.3850	0.	0.	0.	0.	0.	0.	-.0554	.0274	.0129	-.0825	-.0229	.0618	0.	
.3860	0.	0.	0.	0.	0.	0.	-.0571	.0338	-.0007	-.0898	-.0243	.0829	0.	
.3870	0.	0.	0.	0.	0.	0.	-.0580	.0405	-.0144	-.0966	-.0259	.1029	0.	
.3880	0.	0.	0.	0.	0.	0.	-.0583	.0476	-.0280	-.1032	-.0272	.1215	0.	
.3890	0.	0.	0.	0.	0.	0.	-.0580	.0549	-.0412	-.1095	-.0280	.1383	0.	
.3900	0.	0.	0.	0.	0.	0.	-.0571	.0623	-.0539	-.1157	-.0279	.1530	0.	
.3910	0.	0.	0.	0.	0.	0.	-.0558	.0698	-.0658	-.1221	-.0268	.1654	0.	
.3920	0.	0.	0.	0.	0.	0.	-.0542	.0773	-.0769	-.1287	-.0248	.1752	0.	
.3930	0.	0.	0.	0.	0.	0.	-.0523	.0845	-.0870	-.1357	-.0220	.1827	0.	
.3940	0.	0.	0.	0.	0.	0.	-.0503	.0914	-.0962	-.1429	-.0187	.1879	0.	
.3950	0.	0.	0.	0.	0.	0.	-.0482	.0979	-.1043	-.1500	-.0150	.1912	0.	
.3960	0.	0.	0.	0.	0.	0.	-.0462	.1038	-.1112	-.1568	-.0111	.1929	0.	
.3970	0.	0.	0.	0.	0.	0.	-.0443	.1091	-.1169	-.1627	-.0072	.1936	0.	
.3980	0.	0.	0.	0.	0.	0.	-.0428	.1135	-.1213	-.1673	-.0034	.1939	0.	
.3990	0.	0.	0.	0.	0.	0.	-.0418	.1170	-.1244	-.1702	.0005	.1943	0.	
.4000	0.	0.	0.	0.	0.	0.	-.0412	.1196	-.1261	-.1711	.0044	.1950	0.	

MAXIMUM VALUE OF DISCONTINUITY FORCE OCCURS AT

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

SECTION	7	MEMBER	1	SEQUENCE	26	LOCATION	END	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	0.	6.	-2.	-0.	0.	0.	-.0000	.0000	-.0000	-.0000	.0000	.0000	0.	
.0020	-2.	32.	-10.	-2.	0.	1.	-.0001	.0000	-.0001	-.0001	.0002	.0001	1.	
.0030	-17.	48.	-21.	-4.	-0.	2.	-.0002	.0000	-.0004	-.0003	.0006	.0005	2.	

ADLPIPE PAGE 363

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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	7	MEMBER	1	SEQUENCE	26	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.		
.0010	0.	6.	-2.	-0.	0.	0.	-.0000	.0000	-.0000	-.0000	.0000	.0000	0.		
.0020	-2.	32.	-10.	-2.	0.	1.	-.0001	.0000	-.0001	-.0001	.0002	.0001	1.		
.0030	-17.	48.	-21.	-4.	-0.	2.	-.0002	.0000	-.0004	-.0003	.0006	.0005	2.		

ADLPIPE PAGE 363

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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	7	MEMBER	1	SEQUENCE	26	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0040	-53.	39.	-35.	-3.	-2.	2.	-.0005	-.0000	-.0009	-.0008	.0014	.0015	2.		
.0050	-102.	34.	-65.	-2.	-5.	1.	-.0009	-.0000	-.0017	-.0016	.0024	.0030	3.		
.0060	-158.	58.	-117.	-4.	-7.	2.	-.0016	.0000	-.0030	-.0029	.0036	.0053	4.		
.0070	-235.	82.	-189.	-6.	-10.	3.	-.0026	.0000	-.0050	-.0047	.0054	.0089	6.		
.0080	-360.	55.	-219.	-4.	-18.	2.	-.0040	.0001	-.0078	-.0073	.0090	.0143	9.		
.0090	-544.	-56.	-37.	4.	-38.	-2.	-.0058	.0002	-.0115	-.0103	.0160	.0223	18.		
.0100	-793.	-192.	320.	14.	-71.	-8.	-.0081	.0004	-.0163	-.0133	.0263	.0329	34.		
.0110	-1091.	-296.	592.	22.	-103.	-12.	-.0104	.0007	-.0220	-.0166	.0383	.0455	50.		
.0120	-1382.	-366.	647.	27.	-127.	-15.	-.0126	.0012	-.0287	-.0202	.0505	.0593	61.		
.0130	-1609.	-375.	610.	27.	-142.	-15.	-.0143	.0019	-.0360	-.0234	.0621	.0734	68.		
.0140	-1746.	-300.	616.	22.	-152.	-12.	-.0153	.0027	-.0438	-.0256	.0727	.0874	72.		
.0150	-1785.	-183.	627.	13.	-156.	-7.	-.0157	.0036	-.0522	-.0270	.0814	.1008	73.		
.0160	-1708.	-79.	708.	6.	-153.	-3.	-.0154	.0046	-.0613	-.0283	.0885	.1136	72.		
.0170	-1614.	-20.	591.	1.	-142.	-1.	-.0147	.0056	-.0713	-.0304	.0933	.1259	66.		
.0180	-1655.	-78.	-392.	6.	-106.	-3.	-.0134	.0066	-.0821	-.0351	.0933	.1375	50.		
.0190	-1827.	-304.	-2331.	22.	-41.	-12.	-.0115	.0076	-.0928	-.0427	.0898	.1474	23.		
.0200	-2133.	-565.	-4682.	41.	30.	-23.	-.0087	.0086	-.1018	-.0506	.0891	.1540	26.		
.0210	-2518.	-652.	-5440.	48.	32.	-26.	-.0047	.0100	-.1074	-.0514	.1040	.1568	30.		
.0220	-2804.	-322.	-3960.	24.	-48.	-13.	.0012	.0117	-.1089	-.0406	.1285	.1544	26.		
.0230	-2711.	434.	-2433.	-32.	-102.	17.	.0098	.0135	-.1063	-.0252	.1446	.1414	51.		
.0240	-1719.	1314.	-16.	-96.	-125.	52.	.0210	.0149	-.1009	-.0091	.1539	.1153	78.		
.0250	-555.	1871.	2034.	-137.	-122.	74.	.0340	.0155	-.0943	.0055	.1508	.0807	93.		
.0260	-89.	1925.	-716.	-141.	22.	77.	.0487	.0148	-.0873	.0108	.1129	.0397	76.		
.0270	886.	1758.	-5484.	-129.	283.	70.	.0648	.0129	-.0786	.0080	.0497	-.0122	149.		
.0280	2977.	1937.	-5450.	-142.	435.	77.	.0807	.0102	-.0660	.0126	.0061	-.0727	217.		
.0290	4357.	2484.	-2018.	-182.	399.	99.	.0947	.0067	-.0504	.0317	-.0121	-.1288	211.		
.0300	4951.	2428.	1087.	-178.	319.	97.	.1065	.0018	-.0336	.0525	-.0298	-.1758	177.		
.0310	6119.	2844.	2209.	-208.	360.	113.	.1154	-.0045	-.0180	.0612	-.0584	-.2217	202.		
.0320	7055.	3512.	-542.	-257.	538.	140.	.1210	-.0124	-.0042	.0555	-.1067	-.2649	287.		
.0330	7109.	2436.	-2058.	-178.	602.	97.	.1225	-.0223	.0094	.0501	-.1512	-.2923	298.		
.0340	7147.	776.	322.	-57.	510.	31.	.1196	-.0333	.0238	.0540	-.1791	-.3042	241.		
.0350	7474.	1433.	783.	-105.	516.	57.	.1126	-.0448	.0379	.0584	-.2125	-.3114	248.		
.0360	7253.	2647.	-3259.	-194.	661.	105.	.1018	-.0572	.0516	.0530	-.2586	-.3123	326.		
.0370	6225.	819.	-5157.	-60.	661.	33.	.0867	-.0711	.0671	.0451	-.2876	-.2978	311.		
.0380	4839.	-2095.	-1762.	153.	424.	-83.	.0678	-.0851	.0854	.0479	-.2885	-.2724	215.		
.0390	3150.	-2499.	306.	183.	218.	-99.	.0462	-.0978	.1043	.0544	-.2863	-.2484	141.		
.0400	1032.	-2563.	-1815.	188.	148.	-102.	.0229	-.1091	.1231	.0471	-.2778	-.2255	122.		
.0410	-1120.	-4713.	-429.	345.	-65.	-188.	-.0012	-.1189	.1430	.0382	-.2361	-.1965	187.		

ADLPIPE PAGE 364

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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	6119.	2844.	2209.	-208.	360.	113.	.1154	-.0045	-.0180	.0612	-.0584	-.2217	202.
.0320	7055.	3512.	-542.	-257.	538.	140.	.1210	-.0124	-.0042	.0555	-.1067	-.2649	287.
.0330	7109.	2436.	-2058.	-178.	602.	97.	.1225	-.0223	.0094	.0501	-.1512	-.2923	298.
.0340	7147.	776.	322.	-57.	510.	31.	.1196	-.0333	.0238	.0540	-.1791	-.3042	241.
.0350	7474.	1433.	783.	-105.	516.	57.	.1126	-.0448	.0379	.0584	-.2125	-.3114	248.
.0360	7253.	2647.	-3259.	-194.	661.	105.	.1018	-.0572	.0516	.0530	-.2586	-.3123	326.
.0370	6225.	819.	-5157.	-60.	661.	33.	.0867	-.0711	.0671	.0451	-.2876	-.2978	311.
.0380	4839.	-2095.	-1762.	153.	424.	-83.	.0678	-.0851	.0854	.0479	-.2885	-.2724	215.
.0390	3150.	-2499.	306.	183.	218.	-99.	.0462	-.0978	.1043	.0544	-.2863	-.2484	141.
.0400	1032.	-2563.	-1815.	188.	148.	-102.	.0229	-.1091	.1231	.0471	-.2778	-.2255	122.
.0410	-1120.	-4713.	-429.	345.	-65.	-188.	-.0012	-.1189	.1430	.0382	-.2361	-.1965	187.

ADLPIPE PAGE 364 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.02.  
 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	7	MEMBER	1	SEQUENCE	26	LOCATION	END	TYPE	VA						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.0420	-3508.	-6108.	5306.	447.	-468.	-243.	-.0249	-.1258	.1629	.0426	-.1700	-.1665	324.		
.0430	-5969.	-5784.	8491.	423.	-775.	-230.	-.0463	-.1292	.1798	.0423	-.1048	-.1457	428.		
.0440	-7456.	-6519.	9055.	477.	-906.	-259.	-.0642	-.1296	.1921	.0226	-.0386	-.1323	495.		
.0450	-8054.	-7162.	10354.	524.	-1002.	-235.	-.0778	-.1263	.1993	.0045	.0259	-.1199	546.		
.0460	-8292.	-5169.	11021.	378.	-1046.	-206.	-.0864	-.1190	.2007	.0001	.0586	-.1113	530.		
.0470	-7717.	-3522.	8479.	258.	-902.	-140.	-.0899	-.1089	.1960	-.0126	.0872	-.1092	445.		
.0480	-6128.	-4967.	5001.	364.	-648.	-198.	-.0891	-.0969	.1867	-.0370	.0991	-.1061	360.		
.0490	-4517.	-5602.	3293.	410.	-462.	-223.	-.0848	-.0820	.1748	-.0402	.1084	-.0952	308.		
.0500	-3294.	-2855.	2079.	209.	-324.	-114.	-.0778	-.0638	.1612	-.0144	.1112	-.0802	188.		
.0510	-1815.	-1025.	488.	75.	-152.	-41.	-.0692	-.0442	.1466	.0125	.1175	-.0633	82.		
.0520	-389.	-2225.	308.	163.	-41.	-89.	-.0597	-.0240	.1320	.0363	.1342	-.0387	89.		
.0530	116.	-2374.	2159.	174.	-77.	-94.	-.0500	-.0026	.1172	.0780	.1511	-.0051	100.		
.0540	295.	-112.	4091.	8.	-141.	-4.	-.0404	.0201	.1012	.1294	.1608	.0283	66.		
.0550	947.	1244.	4304.	-91.	-102.	49.	-.0309	.0424	.0830	.1630	.1651	.0568	68.		
.0560	1327.	1457.	3165.	-107.	-29.	58.	-.0218	.0638	.0624	.1820	.1611	.0840	58.		
.0570	977.	2982.	2356.	-218.	-22.	119.	-.0134	.0841	.0402	.2032	.1481	.1111	117.		
.0580	853.	4828.	2165.	-353.	-24.	192.	-.0055	.1025	.0167	.2168	.1367	.1336	189.		
.0590	1165.	5199.	1035.	-381.	44.	207.	.0017	.1179	-.0078	.2123	.1316	.1511	204.		
.0600	1011.	5947.	-1116.	-435.	118.	237.	.0082	.1303	-.0327	.2063	.1264	.1678	239.		
.0610	506.	8157.	-2357.	-597.	131.	325.	.0142	.1392	-.0568	.2097	.1224	.1847	324.		
.0620	537.	9122.	-2213.	-668.	127.	363.	.0197	.1434	-.0796	.2084	.1254	.2007	361.		
.0630	811.	7860.	-2622.	-575.	164.	313.	.0248	.1425	-.1010	.1973	.1277	.2171	316.		
.0640	786.	7152.	-4016.	-524.	217.	285.	.0297	.1372	-.1209	.1919	.1187	.2342	297.		
.0650	1104.	7347.	-4801.	-574.	272.	312.	.0341	.1281	-.1386	.1940	.1025	.2491	332.		
.0660	2071.	7533.	-5133.	-551.	356.	300.	.0379	.1145	-.1537	.1878	.0837	.2602	338.		
.0670	2727.	5543.	-6446.	-406.	456.	221.	.0406	.0968	-.1659	.1697	.0584	.2683	304.		
.0680	2708.	3719.	-7740.	-272.	506.	148.	.0417	.0761	-.1744	.1499	.0309	.2719	278.		
.0690	2700.	2677.	-7214.	-196.	485.	107.	.0412	.0534	-.1785	.1284	.0155	.2675	250.		
.0700	2639.	1548.	-5798.	-113.	424.	62.	.0389	.0293	-.1784	.0974	.0144	.2544	208.		
.0710	1864.	235.	-4853.	-17.	330.	9.	.0353	.0045	-.1750	.0568	.0161	.2334	155.		
.0720	655.	-897.	-3908.	66.	204.	-36.	.0307	-.0204	-.1688	.0089	.0125	.2024	102.		
.0730	-366.	-2145.	-3341.	157.	106.	-85.	.0260	-.0448	-.1605	-.0501	.0006	.1602	97.		
.0740	-1336.	-3636.	-4379.	266.	76.	-145.	.0217	-.0678	-.1503	-.1189	-.0206	.1100	146.		
.0750	-2314.	-4662.	-5678.	341.	57.	-186.	.0183	-.0886	-.1377	-.1841	-.0458	.0559	184.		
.0760	-2849.	-4797.	-5397.	351.	6.	-191.	.0162	-.1064	-.1220	-.2362	-.0693	-.0013	187.		
.0770	-2945.	-4740.	-4995.	347.	-17.	-189.	.0158	-.1213	-.1033	-.2784	-.0962	-.0605	185.		
.0780	-3025.	-5342.	-6013.	391.	18.	-213.	.0170	-.1333	-.0820	-.3125	-.1292	-.1172	209.		
.0790	-2959.	-6257.	-6249.	458.	32.	-249.	.0199	-.1419	-.0574	-.3287	-.1568	-.1683	245.		

ADLPIPE PAGE 365 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.02.  
 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	2700.	2677.	-7214.	-196.	485.	107.	.0412	.0534	-.1785	.1284	.0155	.2675	250.
.0700	2639.	1548.	-5798.	-113.	424.	62.	.0389	.0293	-.1784	.0974	.0144	.2544	208.
.0710	1864.	235.	-4853.	-17.	330.	9.	.0353	.0045	-.1750	.0568	.0161	.2334	155.
.0720	655.	-897.	-3908.	66.	204.	-36.	.0307	-.0204	-.1628	.0089	.0125	.2024	102.
.0730	-366.	-2145.	-3341.	157.	106.	-85.	.0260	-.0448	-.1605	-.0501	.0006	.1602	97.
.0740	-1336.	-7676.	-4379.	266.	76.	-145.	.0217	-.0678	-.1503	-.1189	-.0206	.1100	146.
.0750	-2314.	-4662.	-5678.	341.	57.	-186.	.0183	-.0886	-.1377	-.1841	-.0458	.0559	184.
.0760	-2849.	-4797.	-5397.	351.	6.	-191.	.0162	-.1064	-.1220	-.2362	-.0693	-.0013	187.
.0770	-2945.	-4740.	-4995.	347.	-17.	-189.	.0158	-.1213	-.1033	-.2784	-.0962	-.0605	185.
.0780	-3025.	-5342.	-6013.	391.	18.	-213.	.0170	-.1333	-.0820	-.3125	-.1292	-.1172	209.
.0790	-2959.	-6257.	-6249.	458.	32.	-249.	.0199	-.1419	-.0574	-.3287	-.1568	-.1683	245.

ADLPIPE PAGE 365

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.02.

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	7	MEMBER	1	SEQUENCE	26	LOCATION	END	TYPE	VA					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.0800	-2403.	-6432.	-3782.	471.	-25.	-256.	.0242	-.1467	-.0295	-.3180	-.1700	-.2141	251.	
.0810	-1606.	-5865.	-887.	429.	-82.	-233.	.0296	-.1475	-.0003	-.2867	-.1772	-.2556	232.	
.0820	-823.	-5641.	293.	413.	-72.	-225.	.0359	-.1450	.0305	-.2474	-.1873	-.2919	223.	
.0830	163.	-6000.	1120.	439.	-33.	-239.	.0426	-.1392	.0604	-.2027	-.1975	-.3226	235.	
.0840	1371.	-5986.	2660.	438.	-6.	-238.	.0490	-.1300	.0894	-.1497	-.2029	-.3486	234.	
.0850	2502.	-5220.	3640.	382.	38.	-208.	.0545	-.1175	.1169	-.0921	-.2024	-.3700	205.	
.0860	3569.	-4141.	3777.	303.	111.	-165.	.0583	-.1023	.1423	-.0359	-.1922	-.3855	170.	
.0870	4640.	-2694.	4330.	197.	167.	-107.	.0599	-.0849	.1655	.0196	-.1695	-.3933	131.	
.0880	5248.	-828.	5281.	61.	181.	-33.	.0587	-.0663	.1863	.0749	-.1378	-.3920	91.	
.0890	5441.	588.	5806.	-43.	167.	23.	.0544	-.0475	.2040	.1258	-.0991	-.3803	82.	
.0900	5151.	1310.	6378.	-96.	123.	52.	.0469	-.0293	.2184	.1719	-.0509	-.3570	77.	
.0910	4606.	2467.	7580.	-181.	35.	98.	.0365	-.0121	.2291	.2195	.0030	-.3216	98.	
.0920	3666.	4127.	8597.	-302.	-74.	164.	.0236	.0035	.2355	.2676	.0528	-.2746	165.	
.0930	2408.	4689.	8620.	-343.	-167.	187.	.0090	.0165	.2369	.3063	.0927	-.2174	199.	
.0940	1050.	3886.	8042.	-284.	-243.	155.	-.0068	.0267	.2333	.3332	.1235	-.1526	190.	
.0950	-383.	3346.	7542.	-245.	-328.	133.	-.0230	.0346	.2251	.3554	.1481	-.0828	202.	
.0960	-1841.	3600.	7309.	-264.	-426.	143.	-.0387	.0404	.2126	.3742	.1706	-.0109	244.	
.0970	-3142.	3614.	7219.	-265.	-517.	144.	-.0533	.0440	.1961	.3822	.1936	.0591	281.	
.0980	-4284.	3165.	6996.	-232.	-592.	126.	-.0660	.0455	.1754	.3760	.2129	.1228	304.	
.0990	-5341.	2820.	6417.	-206.	-646.	112.	-.0761	.0451	.1509	.3568	.2231	.1767	322.	
.1000	-6149.	2377.	5433.	-174.	-666.	95.	-.0829	.0431	.1228	.3231	.2241	.2185	326.	
.1010	-6541.	1634.	3901.	-120.	-634.	65.	-.0861	.0396	.0918	.2742	.2173	.2462	304.	
.1020	-6617.	1236.	1734.	-91.	-553.	49.	-.0854	.0352	.0588	.2151	.2014	.2585	264.	
.1030	-6457.	1206.	-589.	-88.	-449.	48.	-.0810	.0302	.0250	.1498	.1777	.2564	216.	
.1040	-5979.	614.	-2406.	-45.	-342.	24.	-.0728	.0245	-.0083	.0784	.1516	.2427	162.	
.1050	-5237.	-452.	-3717.	33.	-235.	-18.	-.0615	.0187	-.0400	.0047	.1261	.2195	112.	
.1060	-4370.	-833.	-4689.	61.	-133.	-33.	-.0472	.0132	-.0695	-.0631	.1014	.1882	70.	
.1070	-3295.	-513.	-4763.	38.	-52.	-20.	-.0307	.0084	-.0962	-.1212	.0800	.1514	31.	
.1080	-2072.	-569.	-4110.	42.	12.	-23.	-.0125	.0040	-.1201	-.1731	.0637	.1126	23.	
.1090	-1017.	-1306.	-3039.	96.	46.	-52.	.0067	.0000	-.1410	-.2184	.0567	.0748	55.	
.1100	218.	-1491.	-146.	109.	22.	-59.	.0264	-.0031	-.1601	-.2477	.0476	.0387	59.	
.1110	1470.	-927.	566.	68.	85.	-37.	.0462	-.0053	-.1790	-.2719	.0206	.0024	54.	
.1120	2824.	-933.	-2037.	68.	288.	-37.	.0653	-.0072	-.1979	-.3021	-.0239	-.0328	140.	
.1130	4269.	-1662.	-4237.	122.	481.	-66.	.0827	-.0084	-.2153	-.3282	-.0711	-.0616	235.	
.1140	5412.	-1857.	-4759.	136.	586.	-74.	.0976	-.0087	-.2303	-.3393	-.1133	-.0823	284.	
.1150	6206.	-1422.	-5723.	104.	682.	-57.	.1093	-.0078	-.2423	-.3422	-.1501	-.0970	324.	
.1160	6931.	-1172.	-7229.	86.	795.	-47.	.1173	-.0063	-.2507	-.3435	-.1777	-.1054	375.	
.1170	7245.	-629.	-8174.	46.	856.	-25.	.1212	-.0040	-.2550	-.3358	-.1969	-.1046	402.	

ADLPIPE PAGE 366

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.02.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.1070	-3295.	-513.	4763.	38.	-52.	-20.	-.0307	.0084	-.0962	-.1212	.0800	.1514	31.
.1080	-2072.	-569.	-4110.	42.	12.	-23.	-.0125	.0040	-.1201	-.1731	.0637	.1126	23.
.1090	-1017.	-1306.	-3039.	96.	46.	-52.	.0067	.0000	-.1410	-.2184	.0567	.0748	55.
.1100	218.	-1491.	-146.	109.	22.	-59.	.0264	-.0031	-.1601	-.2477	.0476	.0387	59.
.1110	1470.	-927.	566.	68.	85.	-37.	.0462	-.0053	-.1790	-.2719	.0206	.0024	54.
.1120	2824.	-933.	-2037.	68.	288.	-37.	.0653	-.0072	-.1979	-.3021	-.0239	-.0328	140.
.1130	4269.	-1662.	-4237.	122.	481.	-66.	.0827	-.0084	-.2153	-.3282	-.0711	-.0616	235.
.1140	5412.	-1857.	-4759.	136.	586.	-74.	.0976	-.0087	-.2303	-.3393	-.1133	-.0823	284.
.1150	6206.	-1422.	-5723.	104.	682.	-57.	.1093	-.0078	-.2423	-.3422	-.1501	-.0970	324.
.1160	6931.	-1172.	-7229.	86.	795.	-47.	.1173	-.0063	-.2507	-.3435	-.1777	-.1054	375.
.1170	7245.	-629.	-8174.	46.	856.	-25.	.1212	-.0040	-.2550	-.3358	-.1969	-.1046	402.

ADLPIPE PAGE 366

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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	7	MEMBER	1	SEQUENCE	26	LOCATION	END	TYPE	VA					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.1180	7267.	204.	-7097.	-15.	814.	8.	.1210	-.0013	-.2547	-.3148	-.2118	-.0948	382.	
.1190	6821.	765.	-8146.	-56.	824.	30.	.1168	.0012	-.2504	-.2951	-.2331	-.0807	387.	
.1200	6279.	332.	-10472.	-24.	876.	13.	.1087	.0033	-.2417	-.2799	-.2513	-.0625	411.	
.1210	5778.	-264.	-9308.	19.	793.	-11.	.0968	.0053	-.2270	-.2516	-.2487	-.0368	372.	
.1220	4439.	764.	-7599.	-56.	627.	30.	.0817	.0076	-.2072	-.2073	-.2383	-.0072	296.	
.1230	2992.	1253.	-6560.	-92.	480.	50.	.0641	.0094	-.1831	-.1658	-.2228	.0210	230.	
.1240	1730.	192.	-6443.	-14.	383.	8.	.0449	.0105	-.1554	-.1354	-.2020	.0462	180.	
.1250	313.	-527.	-5465.	39.	240.	-21.	.0247	.0115	-.1243	-.1012	-.1745	.0708	115.	
.1260	-963.	-244.	-2436.	18.	26.	-10.	.0043	.0130	-.0906	-.0588	-.1370	.0926	16.	
.1270	-2137.	142.	-1433.	-10.	-99.	6.	-.0155	.0146	-.0556	-.0261	-.0955	.1056	47.	
.1280	-2831.	-445.	-189.	33.	-200.	-18.	-.0342	.0160	-.0199	-.0033	-.0436	.1115	95.	
.1290	-3621.	-351.	2129.	26.	-350.	-14.	-.0511	.0178	.0157	.0232	.0108	.1134	164.	
.1300	-4444.	530.	3899.	-39.	-480.	21.	-.0659	.0197	.0498	.0488	.0589	.1094	226.	
.1310	-4370.	244.	5166.	-18.	-525.	10.	-.0781	.0212	.0815	.0611	.1016	.0973	246.	
.1320	-4093.	-209.	4442.	15.	-476.	-8.	-.0876	.0226	.1100	.0646	.1301	.0792	223.	
.1330	-3870.	69.	4413.	-5.	-459.	3.	-.0946	.0241	.1357	.0734	.1487	.0603	215.	
.1340	-3614.	381.	4757.	-28.	-454.	15.	-.0993	.0256	.1587	.0820	.1612	.0405	213.	
.1350	-3179.	-291.	4658.	21.	-418.	-12.	-.1021	.0269	.1789	.0825	.1717	.0190	196.	
.1360	-2683.	-1064.	5851.	78.	-429.	-42.	-.1030	.0283	.1963	.0854	.1832	-.0010	205.	
.1370	-2690.	-262.	6947.	19.	-473.	-10.	-.1023	.0304	.2102	.0961	.1873	-.0184	222.	
.1380	-2404.	332.	8688.	-24.	-522.	13.	-.1001	.0325	.2199	.1032	.1873	-.0342	245.	
.1390	-1907.	-129.	9477.	9.	-517.	-5.	-.0965	.0344	.2247	.0982	.1771	-.0499	242.	
.1400	-1746.	-367.	9014.	27.	-487.	-15.	-.0916	.0362	.2239	.0894	.1514	-.0641	228.	
.1410	-1537.	-80.	9249.	6.	-481.	-3.	-.0856	.0383	.2178	.0818	.1184	-.0757	225.	
.1420	-1254.	337.	8193.	-25.	-418.	13.	-.0788	.0402	.2066	.0667	.0797	-.0860	196.	
.1430	-767.	98.	7023.	-7.	-336.	4.	-.0714	.0418	.1908	.0447	.0424	-.0934	157.	
.1440	-520.	74.	6128.	-5.	-282.	3.	-.0635	.0434	.1712	.0245	.0064	-.0962	132.	
.1450	-394.	474.	5402.	-35.	-244.	19.	-.0555	.0449	.1481	.0066	-.0276	-.0945	116.	
.1460	137.	382.	5035.	-28.	-190.	15.	-.0475	.0461	.1221	-.0148	-.0552	-.0884	90.	
.1470	531.	407.	3226.	-30.	-90.	16.	-.0396	.0470	.0935	-.0385	-.0821	-.0777	45.	
.1480	967.	636.	2497.	-47.	-29.	25.	-.0321	.0477	.0632	-.0561	-.1030	-.0606	28.	
.1490	1479.	896.	2130.	-66.	24.	36.	-.0253	.0480	.0317	-.0708	-.1208	-.0387	37.	
.1500	1978.	771.	289.	-56.	133.	31.	-.0194	.0478	-.0009	-.0902	-.1401	-.0133	69.	
.1510	2526.	187.	-1484.	-14.	244.	7.	-.0147	.0471	-.0333	-.1102	-.1561	.0162	115.	
.1520	2672.	119.	-3345.	-9.	329.	5.	-.0115	.0463	-.0648	-.1252	-.1581	.0490	154.	
.1530	2715.	49.	-4193.	-4.	366.	2.	-.0100	.0455	-.0941	-.1366	-.1696	.0837	171.	
.1540	2478.	-290.	-5475.	21.	399.	-12.	-.0101	.0447	-.1208	-.1499	-.1623	.1186	187.	
.1550	1887.	-661.	-6616.	48.	401.	-26.	-.0117	.0442	-.1442	-.1623	-.1454	.1537	190.	

ADLPIPE PAGE 367

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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

.1440	-524.	74.	2127.	-5.	-282.	3.	-.0635	.0434	.1712	.0245	.0064	-.0962	132.
.1450	-394.	474.	5402.	-35.	-244.	19.	-.0555	.0449	.1481	.0066	-.0276	-.0945	116.
.1460	137.	382.	5035.	-28.	-190.	15.	-.0475	.0461	.1221	-.0148	-.0552	-.0884	90.
.1470	531.	407.	3226.	-30.	-90.	16.	-.0396	.0470	.0935	-.0385	-.0321	-.0777	45.
.1480	967.	636.	2497.	-47.	-29.	25.	-.0321	.0477	.0632	-.0561	-.1030	-.0606	28.
.1490	1479.	896.	2130.	-66.	24.	36.	-.0253	.0480	.0317	-.0708	-.1208	-.0387	37.
.1500	1978.	771.	289.	-56.	133.	31.	-.0194	.0478	-.0009	-.0902	-.1401	-.0133	69.
.1510	2526.	187.	-1484.	-14.	244.	7.	-.0147	.0471	-.0333	-.1102	-.1561	.0162	115.
.1520	2672.	119.	-3345.	-9.	329.	5.	-.0115	.0463	-.0648	-.1252	-.1581	.0490	154.
.1530	2715.	49.	-4193.	-4.	366.	2.	-.0100	.0455	-.0941	-.1366	-.1596	.0837	171.
.1540	2478.	-290.	-5475.	21.	399.	-12.	-.0101	.0447	-.1208	-.1499	-.1523	.1186	187.
.1550	1867.	-661.	-6616.	48.	401.	-26.	-.0117	.0442	-.1442	-.1623	-.1454	.1537	190.

ADLPIPE PAGE 367

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.02.

S/RV PIPING KEWAUNEE GKWO&F 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	7	MEMBER	1	SEQUENCE	26	LOCATION	END	TYPE	VA	VB	VC	VD	VE	VF	VG	VH	VI	VJ	VK	VL	VM	VN	VO	VP	VQ	VR	VS	VT	VU	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS																	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)																	
.1560	1296.	-919.	-5530.	67.	315.	-37.	-.0146	.0441	-.1639	-.1684	-.1163	.1882	152.																	
.1570	374.	-603.	-5421.	44.	243.	-24.	-.0181	.0445	-.1804	-.1738	-.0878	.2182	116.																	
.1580	-429.	-602.	-5872.	44.	202.	-24.	-.0217	.0453	-.1938	-.1828	-.0513	.2426	98.																	
.1590	-915.	-885.	-5607.	65.	156.	-35.	-.0251	.0465	-.2038	-.1917	-.0373	.2623	81.																	
.1600	-1492.	-508.	-6166.	37.	136.	-20.	-.0277	.0482	-.2107	-.1967	-.0237	.2762	67.																	
.1610	-1942.	-166.	-7418.	12.	153.	-7.	-.0294	.0503	-.2142	-.2007	-.0154	.2831	72.																	
.1620	-1844.	-658.	-6943.	48.	141.	-26.	-.0301	.0526	-.2134	-.2022	-.0003	.2848	71.																	
.1630	-1928.	-408.	-6484.	30.	117.	-16.	-.0297	.0554	-.2088	-.1947	.0137	.2818	57.																	
.1640	-1964.	372.	-5744.	-27.	85.	15.	-.0282	.0585	-.2006	-.1795	.0261	.2740	42.																	
.1650	-1473.	403.	-4373.	-30.	66.	16.	-.0257	.0615	-.1891	-.1638	.0381	.2609	35.																	
.1660	-976.	331.	-4249.	-24.	98.	13.	-.0222	.0642	-.1754	-.1483	.0416	.2428	48.																	
.1670	-391.	604.	-3810.	-44.	123.	24.	-.0181	.0668	-.1593	-.1272	.0393	.2215	62.																	
.1680	298.	1143.	-3527.	-84.	162.	46.	-.0138	.0691	-.1413	-.1039	.0330	.1969	88.																	
.1690	1233.	1248.	-3062.	-91.	212.	50.	-.0097	.0708	-.1214	-.0821	.0267	.1699	111.																	
.1700	1943.	1442.	-3090.	-106.	265.	57.	-.0064	.0717	-.0998	-.0595	.0181	.1419	136.																	
.1710	2093.	2152.	-4023.	-158.	313.	86.	-.0041	.0719	-.0766	-.0349	.0085	.1140	169.																	
.1720	2446.	2115.	-2561.	-155.	281.	84.	-.0033	.0708	-.0512	-.0085	.0127	.0882	155.																	
.1730	2456.	2070.	-1114.	-152.	224.	82.	-.0039	.0686	-.0246	.0185	.0227	.0644	133.																	
.1740	2010.	2477.	-255.	-181.	157.	99.	-.0059	.0651	.0024	.0473	.0330	.0427	122.																	
.1750	1562.	2668.	1184.	-195.	67.	106.	-.0091	.0603	.0295	.0754	.0455	.0233	109.																	
.1760	995.	2486.	2150.	-182.	-13.	99.	-.0131	.0539	.0557	.0991	.0561	.0060	97.																	
.1770	463.	1911.	3485.	-140.	-195.	76.	-.0175	.0461	.0804	.1205	.0550	-.0085	89.																	
.1780	-208.	1718.	3910.	-126.	-171.	68.	-.0221	.0373	.1030	.1398	.0679	-.0215	104.																	
.1790	-605.	1522.	4542.	-111.	-225.	61.	-.0266	.0275	.1233	.1557	.0693	-.0335	121.																	
.1800	-804.	1117.	5354.	-82.	-372.	44.	-.0306	.0167	.1408	.1675	.0688	-.0443	135.																	
.1810	-1301.	903.	4769.	-66.	-285.	36.	-.0340	.0054	.1552	.1744	.0611	-.0543	138.																	
.1820	-1539.	279.	5143.	-20.	-317.	11.	-.0368	-.0065	.1668	.1778	.0556	-.0633	149.																	
.1830	-1676.	-266.	5596.	20.	-345.	-11.	-.0386	-.0184	.1754	.1778	.0508	-.0725	162.																	
.1840	-1863.	-491.	5673.	36.	-362.	-20.	-.0395	-.0302	.1807	.1755	.0439	-.0815	171.																	
.1850	-1999.	-756.	5652.	55.	-371.	-30.	-.0393	-.0417	.1828	.1695	.0345	-.0904	176.																	
.1860	-2107.	-1176.	5041.	86.	-355.	-47.	-.0379	-.0528	.1817	.1581	.0206	-.1000	173.																	
.1870	-1994.	-1892.	4871.	138.	-240.	-75.	-.0353	-.0632	.1777	.1434	.0040	-.1098	176.																	
.1880	-1991.	-2267.	3783.	166.	-296.	-90.	-.0314	-.0725	.1709	.1265	-.0187	-.1198	165.																	
.1890	-1865.	-2521.	2620.	185.	-241.	-100.	-.0265	-.0805	.1620	.1080	-.0420	-.1297	150.																	
.1900	-1513.	-2845.	2225.	208.	-199.	-113.	-.0207	-.0870	.1516	.0892	-.0610	-.1393	145.																	
.1910	-1378.	-2882.	1480.	211.	-160.	-115.	-.0141	-.0918	.1401	.0711	-.0786	-.1483	135.																	
.1920	-1266.	-3052.	1302.	223.	-145.	-121.	-.0068	-.0951	.1277	.0539	-.0703	-.1561	137.																	
.1930	-1091.	-3269.	1493.	239.	-139.	-130.	.0010	-.0965	.1146	.0374	-.0952	-.1632	143.																	

ADLPIPE PAGE 368

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.02.

S/RV PIPING KEWAUNEE GKWO&F 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

.1830	-1676.	-266.	596.	20.	-345.	-11.	-.386	-.0184	.1754	.1778	.0508	-.0725	162.
.1840	-1863.	-491.	5673.	36.	-362.	-20.	-.0395	-.0302	.1807	.1755	.0439	-.0815	171.
.1850	-1999.	-756.	5652.	55.	-371.	-30.	-.0393	-.0417	.1828	.1695	.0345	-.0904	176.
.1860	-2107.	-1176.	5041.	86.	-355.	-47.	-.0379	-.0528	.1817	.1581	.0206	-.1000	173.
.1870	-1994.	-1892.	4871.	138.	-340.	-75.	-.0353	-.0632	.1777	.1434	.0040	-.1098	176.
.1880	-1991.	-2267.	3783.	166.	-296.	-90.	-.0314	-.0725	.1709	.1265	-.0187	-.1198	165.
.1890	-1865.	-2521.	2620.	185.	-241.	-100.	-.0265	-.0805	.1620	.1080	-.0420	-.1297	150.
.1900	-1513.	-2845.	2225.	208.	-199.	-113.	-.0207	-.0870	.1516	.0892	-.0510	-.1393	145.
.1910	-1378.	-2882.	1480.	211.	-160.	-115.	-.0141	-.0918	.1401	.0711	-.0786	-.1483	135.
.1920	-1266.	-3052.	1302.	223.	-145.	-121.	-.0068	-.0951	.1277	.0539	-.0903	-.1561	137.
.1930	-1051.	-3269.	1493.	239.	-139.	-130.	.0010	-.0965	.1146	.0374	-.0952	-.1632	143.

ADLPIPE PAGE 368

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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	7	MEMBER	1	SEQUENCE	26	LOCATION	END	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1940	-923.	-3134.	1600.	229.	-131.	-125.	.0094	-.0961	.1008	.0225	-.0956	-.1698	137.	
.1950	-736.	-2793.	1782.	204.	-125.	-111.	.0181	-.0939	.0860	.0098	-.0923	-.1754	124.	
.1960	-426.	-2637.	2044.	193.	-113.	-105.	.0271	-.0902	.0703	-.0027	-.0866	-.1799	116.	
.1970	-3.	-2550.	1797.	187.	-72.	-102.	.0364	-.0850	.0535	-.0156	-.0816	-.1830	105.	
.1980	491.	-2237.	917.	164.	-1.	-89.	.0455	-.0784	.0358	-.0274	-.0779	-.1842	87.	
.1990	1086.	-1750.	49.	128.	78.	-70.	.0543	-.0706	.0176	-.0358	-.0719	-.1822	77.	
.2000	1756.	-1217.	-502.	89.	149.	-48.	.0623	-.0618	-.0005	-.0398	-.0617	-.1758	84.	
.2010	2400.	-618.	-1019.	45.	216.	-25.	.0692	-.0524	-.0183	-.0394	-.0490	-.1646	104.	
.2020	2975.	-25.	-1564.	2.	280.	-1.	.0747	-.0426	-.0354	-.0350	-.0351	-.1479	131.	
.2030	3458.	454.	-1997.	-33.	333.	18.	.0784	-.0329	-.0516	-.0265	-.0205	-.1256	157.	
.2040	3767.	893.	-2438.	-65.	373.	36.	.0802	-.0235	-.0666	-.0142	-.0066	-.0980	178.	
.2050	3877.	1318.	-2924.	-96.	400.	52.	.0798	-.0146	-.0802	.0012	.0061	-.0661	194.	
.2060	3810.	1596.	-3304.	-117.	410.	64.	.0773	-.0066	-.0921	.0183	.0174	-.0304	202.	
.2070	3527.	1707.	-3658.	-125.	404.	68.	.0727	.0006	-.1021	.0356	.0271	.0078	201.	
.2080	2982.	1774.	-4156.	-130.	384.	71.	.0662	.0067	-.1100	.0523	.0349	.0469	193.	
.2090	2242.	1834.	-4542.	-134.	345.	73.	.0581	.0118	-.1155	.0678	.0430	.0851	177.	
.2100	1382.	1890.	-4494.	-138.	280.	75.	.0488	.0158	-.1185	.0821	.0532	.1212	151.	
.2110	396.	2022.	-4261.	-148.	199.	80.	.0387	.0188	-.1190	.0946	.0543	.1536	122.	
.2120	-649.	2174.	-4098.	-159.	116.	87.	.0285	.0205	-.1170	.1042	.0747	.1807	101.	
.2130	-1612.	2189.	-3841.	-160.	35.	87.	.0188	.0211	-.1128	.1104	.0845	.2011	87.	
.2140	-2437.	2117.	-3429.	-155.	-42.	84.	.0101	.0205	-.1065	.1141	.0928	.2141	85.	
.2150	-3101.	2085.	-3134.	-153.	-102.	83.	.0029	.0187	-.0982	.1159	.0974	.2191	94.	
.2160	-3507.	2001.	-3099.	-146.	-133.	80.	-.0024	.0158	-.0883	.1150	.0972	.2152	100.	
.2170	-3597.	1731.	-3130.	-127.	-139.	69.	-.0057	.0118	-.0767	.1115	.0929	.2027	94.	
.2180	-3431.	1355.	-3050.	-99.	-130.	54.	-.0069	.0069	-.0634	.1070	.0855	.1823	81.	
.2190	-3045.	993.	-2796.	-73.	-112.	40.	-.0062	.0014	-.0485	.1022	.0760	.1545	65.	
.2200	-2420.	643.	-2320.	-47.	-85.	26.	-.0038	-.0047	-.0321	.0963	.0658	.1201	47.	
.2210	-1639.	320.	-1661.	-23.	-54.	13.	-.0001	-.0110	-.0145	.0894	.0551	.0799	28.	
.2220	-837.	46.	-887.	-3.	-26.	2.	.0045	-.0174	.0039	.0814	.0435	.0356	12.	
.2230	-47.	-255.	45.	19.	-5.	-10.	.0095	-.0238	.0227	.0715	.0317	-.0115	10.	
.2240	726.	-602.	1085.	44.	10.	-24.	.0144	-.0300	.0413	.0594	.0196	-.0601	24.	
.2250	1390.	-867.	1982.	63.	23.	-35.	.0189	-.0359	.0591	.0454	.0063	-.1082	36.	
.2260	1882.	-1019.	2603.	75.	34.	-41.	.0227	-.0413	.0758	.0301	-.0089	-.1542	43.	
.2270	2224.	-1201.	3060.	88.	41.	-48.	.0253	-.0462	.0909	.0136	-.0248	-.1960	51.	
.2280	2411.	-1454.	3449.	106.	39.	-58.	.0266	-.0504	.1042	-.0027	-.0400	-.2318	60.	
.2290	2416.	-1646.	3782.	121.	26.	-66.	.0266	-.0537	.1154	-.0168	-.0539	-.2596	65.	
.2300	2285.	-1712.	4079.	125.	5.	-68.	.0251	-.0562	.1245	-.0273	-.0659	-.2785	67.	
.2310	2084.	-1706.	4293.	125.	-18.	-68.	.0224	-.0577	.1313	-.0340	-.0760	-.2877	67.	

ADLPIPE PAGE 369

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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

.2210	-1639.	320.	-1661.	-23.	-54.	13.	-0.0001	-0.0110	-0.0145	.0894	.0551	.0799	28.
.2220	-837.	46.	-887.	-3.	-26.	4.	.0045	-0.0174	.0039	.0814	.0435	.0356	12.
.2230	-47.	-255.	45.	19.	-5.	-10.	.0095	-0.0238	.0227	.0715	.0317	-0.0115	10.
.2240	726.	-602.	1085.	44.	10.	-24.	.0144	-0.0300	.0413	.0594	.0196	-0.0601	24.
.2250	1390.	-867.	1982.	63.	23.	-35.	.0189	-0.0359	.0591	.0454	.0063	-0.1082	36.
.2260	1882.	-1019.	2603.	75.	34.	-41.	.0227	-0.0413	.0758	.0301	-0.0389	-0.1542	43.
.2270	2224.	-1201.	3060.	88.	41.	-48.	.0253	-0.0462	.0909	.0136	-0.0248	-0.1960	51.
.2280	2411.	-1454.	3449.	106.	39.	-58.	.0266	-0.0504	.1042	-0.0027	-0.0400	-0.2318	60.
.2290	2416.	-1646.	3782.	121.	26.	-66.	.0266	-0.0537	.1154	-0.0168	-0.0539	-0.2596	65.
.2300	2285.	-1712.	4079.	125.	5.	-68.	.0251	-0.0562	.1245	-0.0273	-0.0659	-0.2785	67.
.2310	2084.	-1706.	4293.	125.	-12.	-68.	.0224	-0.0577	.1313	-0.0340	-0.0760	-0.2877	67.

ADLPIPE PAGE 369

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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	7	MEMBER	1	SEQUENCE	26	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	HX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2320	1808.	-1700.	4316.	124.	-39.	-68.		.0185	-0.0582	.1357	-0.0366	-0.0850	-0.2870	69.	
.2330	1453.	-1742.	4179.	128.	-60.	-69.		.0136	-0.0578	.1376	-0.0348	-0.0729	-0.2766	74.	
.2340	1074.	-1827.	3964.	134.	-79.	-73.		.0079	-0.0564	.1371	-0.0289	-0.0987	-0.2573	80.	
.2350	689.	-1866.	3612.	137.	-93.	-74.		.0016	-0.0540	.1345	-0.0192	-0.1017	-0.2306	85.	
.2360	268.	-1818.	3121.	133.	-105.	-72.		-0.0052	-0.0505	.1299	-0.0066	-0.1008	-0.1981	86.	
.2370	-190.	-1764.	2702.	129.	-121.	-70.		-0.0120	-0.0461	.1237	.0080	-0.0950	-0.1612	89.	
.2380	-664.	-1738.	2457.	127.	-146.	-69.		-0.0189	-0.0406	.1159	.0233	-0.0834	-0.1219	96.	
.2390	-1149.	-1639.	2243.	120.	-173.	-65.		-0.0253	-0.0343	.1069	.0380	-0.0668	-0.0821	103.	
.2400	-1623.	-1396.	2017.	102.	-199.	-56.		-0.0312	-0.0271	.0967	.0511	-0.0460	-0.0435	108.	
.2410	-2036.	-1046.	1928.	77.	-226.	-42.		-0.0361	-0.0191	.0854	.0620	-0.0215	-0.0072	113.	
.2420	-2367.	-642.	1965.	47.	-251.	-26.		-0.0399	-0.0106	.0731	.0700	.0048	.0258	120.	
.2430	-2612.	-225.	1927.	16.	-268.	-9.		-0.0423	-0.0019	.0597	.0743	.0304	.0546	126.	
.2440	-2744.	160.	1726.	-12.	-270.	6.		-0.0432	.0070	.0453	.0744	.0531	.0788	126.	
.2450	-2734.	517.	1432.	-38.	-257.	21.		-0.0425	.0156	.0299	.0708	.0723	.0986	122.	
.2460	-2585.	870.	1128.	-64.	-234.	35.		-0.0402	.0239	.0138	.0643	.0876	.1141	115.	
.2470	-2308.	1174.	858.	-86.	-203.	47.		-0.0365	.0317	-0.0030	.0552	.0986	.1254	106.	
.2480	-1907.	1370.	593.	-100.	-163.	55.		-0.0314	.0388	-0.0202	.0432	.1046	.1329	93.	
.2490	-1411.	1493.	184.	-109.	-111.	59.		-0.0251	.0450	-0.0377	.0284	.1046	.1369	78.	
.2500	-853.	1596.	-427.	-117.	-45.	64.		-0.0181	.0504	-0.0553	.0107	.0985	.1376	66.	
.2510	-247.	1657.	-1042.	-121.	23.	66.		-0.0106	.0549	-0.0725	-0.0091	.0881	.1354	66.	
.2520	376.	1684.	-1537.	-123.	89.	67.		-0.0029	.0583	-0.0891	-0.0306	.0744	.1308	78.	
.2530	956.	1739.	-2098.	-127.	153.	69.		.0046	.0609	-0.1048	-0.0535	.0573	.1239	99.	
.2540	1451.	1793.	-2873.	-131.	221.	71.		.0115	.0624	-0.1192	-0.0780	.0369	.1153	125.	
.2550	1840.	1756.	-3669.	-129.	281.	70.		.0175	.0629	-0.1319	-0.1031	.0157	.1055	148.	
.2560	2089.	1659.	-4209.	-121.	320.	66.		.0225	.0624	-0.1424	-0.1271	-0.0039	.0952	164.	
.2570	2183.	1601.	-4463.	-117.	337.	64.		.0263	.0611	-0.1505	-0.1484	-0.0205	.0852	170.	
.2580	2156.	1549.	-4545.	-113.	339.	62.		.0287	.0589	-0.1560	-0.1668	-0.0339	.0757	170.	
.2590	2040.	1412.	-4482.	-103.	328.	56.		.0299	.0558	-0.1588	-0.1822	-0.0439	.0671	163.	
.2600	1843.	1197.	-4224.	-88.	303.	48.		.0299	.0521	-0.1592	-0.1936	-0.0508	.0601	150.	
.2610	1611.	947.	-3760.	-69.	268.	38.		.0288	.0478	-0.1571	-0.2006	-0.0547	.0545	131.	
.2620	1414.	673.	-3222.	-49.	232.	27.		.0268	.0430	-0.1529	-0.2037	-0.0567	.0502	112.	
.2630	1273.	406.	-2821.	-30.	205.	16.		.0241	.0379	-0.1470	-0.2038	-0.0582	.0472	98.	
.2640	1171.	151.	-2615.	-11.	190.	6.		.0206	.0327	-0.1394	-0.2011	-0.0601	.0451	89.	
.2650	1107.	-161.	-2474.	12.	179.	-6.		.0165	.0274	-0.1305	-0.1965	-0.0621	.0438	84.	
.2660	1072.	-528.	-2333.	39.	171.	-21.		.0118	.0224	-0.1201	-0.1902	-0.0634	.0429	83.	
.2670	1017.	-815.	-2267.	60.	165.	-32.		.0064	.0176	-0.1085	-0.1825	-0.0640	.0422	83.	
.2680	905.	-967.	-2262.	71.	156.	-38.		.0006	.0134	-0.0957	-0.1735	-0.0638	.0413	82.	
.2690	724.	-1089.	-2165.	80.	139.	-43.		-0.0058	.0097	-0.0816	-0.1637	-0.0621	.0401	78.	

ADLPIPE PAGE 370

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.02.

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	2040.	1412.	-4482.	-103.	328.	56.	.0299	.0558	-.1588	-.1822	-.0439	.0671	163.
.2600	1843.	1197.	-4224.	-88.	303.	48.	.0299	.0521	-.1592	-.1936	-.0508	.0601	150.
.2610	1611.	947.	-3760.	-69.	268.	38.	.0288	.0478	-.1571	-.2006	-.0547	.0545	131.
.2620	1414.	672.	-3222.	-49.	232.	27.	.0268	.0430	-.1529	-.2037	-.0567	.0502	112.
.2630	1273.	406.	-2821.	-30.	205.	16.	.0241	.0379	-.1470	-.2038	-.0582	.0472	98.
.2640	1171.	151.	-2615.	-11.	190.	6.	.0206	.0327	-.1394	-.2011	-.0501	.0451	89.
.2650	1107.	-161.	-2474.	12.	179.	-6.	.0165	.0274	-.1305	-.1965	-.0521	.0438	84.
.2660	1072.	-528.	-2333.	39.	171.	-21.	.0118	.0224	-.1201	-.1902	-.0534	.0429	83.
.2670	1017.	-815.	-2267.	60.	165.	-32.	.0064	.0176	-.1085	-.1825	-.0540	.0422	83.
.2680	905.	-967.	-2262.	71.	156.	-38.	.0006	.0134	-.0957	-.1735	-.0638	.0413	82.
.2690	724.	-1089.	-2165.	80.	139.	-43.	-.0058	.0097	-.0816	-.1637	-.0521	.0401	78.

ADLPIPE PAGE 370

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.02.

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	7	MEMBER	1	SEQUENCE	26	LOCATION	END	TYPE	VA							
TIME	FX	FY	FZ	MX	MY	MZ			DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)			
.2700	456.	-1246.	-1888.	91.	108.	-50.	-.0125	.0067	-.0663	-.1534	-.0588	.0385	70.			
.2710	86.	-1369.	-1494.	100.	66.	-54.	-.0195	.0045	-.0501	-.1423	-.0548	.0363	62.			
.2720	-350.	-1397.	-1057.	102.	16.	-56.	-.0264	.0030	-.0331	-.1304	-.0508	.0333	55.			
.2730	-810.	-1361.	-586.	100.	-36.	-54.	-.0332	.0024	-.0155	-.1181	-.0471	.0293	56.			
.2740	-1277.	-1323.	-44.	97.	-92.	-53.	-.0394	.0025	.0022	-.1053	-.0437	.0242	67.			
.2750	-1719.	-1307.	661.	96.	-152.	-52.	-.0448	.0034	.0199	-.0918	-.0398	.0183	88.			
.2760	-2076.	-1271.	1526.	93.	-213.	-51.	-.0492	.0051	.0371	-.0777	-.0352	.0112	111.			
.2770	-2312.	-1155.	2397.	85.	-265.	-46.	-.0525	.0074	.0533	-.0635	-.0300	.0030	132.			
.2780	-2408.	-975.	3186.	71.	-303.	-39.	-.0545	.0104	.0681	-.0497	-.0247	-.0064	147.			
.2790	-2335.	-813.	3928.	59.	-327.	-32.	-.0551	.0139	.0810	-.0371	-.0192	-.0168	157.			
.2800	-2081.	-685.	4564.	50.	-334.	-27.	-.0544	.0179	.0916	-.0265	-.0140	-.0279	159.			
.2810	-1668.	-527.	4914.	39.	-318.	-21.	-.0525	.0221	.0996	-.0182	-.0098	-.0394	150.			
.2820	-1125.	-311.	4930.	23.	-279.	-12.	-.0498	.0266	.1048	-.0127	-.0067	-.0506	131.			
.2830	-497.	-79.	4736.	6.	-225.	-3.	-.0464	.0312	.1073	-.0096	-.0038	-.0607	105.			
.2840	145.	139.	4443.	-10.	-166.	6.	-.0428	.0357	.1070	-.0086	-.0003	-.0685	78.			
.2850	727.	351.	4098.	-26.	-110.	14.	-.0394	.0401	.1043	-.0092	.0044	-.0731	53.			
.2860	1200.	566.	3758.	-41.	-62.	23.	-.0364	.0442	.0993	-.0107	.0106	-.0736	36.			
.2870	1522.	780.	3475.	-57.	-27.	31.	-.0342	.0479	.0923	-.0125	.0183	-.0693	33.			
.2880	1661.	971.	3247.	-71.	-8.	39.	-.0328	.0512	.0833	-.0142	.0268	-.0598	38.			
.2890	1614.	1096.	3053.	-80.	-3.	44.	-.0324	.0538	.0725	-.0159	.0353	-.0449	43.			
.2900	1401.	1136.	2845.	-83.	-11.	45.	-.0328	.0557	.0601	-.0174	.0426	-.0251	45.			
.2910	1045.	1121.	2540.	-82.	-25.	45.	-.0340	.0570	.0461	-.0190	.0476	-.0009	45.			
.2920	583.	1074.	2109.	-79.	-41.	43.	-.0356	.0576	.0718	-.0207	.0504	.0266	46.			
.2930	66.	990.	1609.	-72.	-59.	39.	-.0376	.0575	.0143	-.0227	.0508	.0565	48.			
.2940	-464.	873.	1083.	-64.	-77.	35.	-.0395	.0569	-.0030	-.0252	.0491	.0872	50.			
.2950	-976.	751.	497.	-55.	-91.	30.	-.0411	.0558	-.0208	-.0284	.0454	.1175	52.			
.2960	-1425.	636.	-169.	-47.	-98.	25.	-.0420	.0543	-.0388	-.0326	.0398	.1458	52.			
.2970	-1769.	529.	-870.	-39.	-95.	21.	-.0422	.0525	-.0566	-.0381	.0327	.1709	49.			
.2980	-1984.	435.	-1570.	-32.	-83.	17.	-.0413	.0504	-.0738	-.0446	.0243	.1916	42.			
.2990	-2061.	349.	-2283.	-26.	-60.	14.	-.0392	.0480	-.0901	-.0524	.0147	.2071	31.			
.3000	-1989.	261.	-3030.	-19.	-25.	10.	-.0360	.0456	-.1049	-.0612	.0039	.2167	16.			
.3010	-1774.	178.	-3788.	-13.	21.	7.	-.0317	.0430	-.1180	-.0709	-.0077	.2202	12.			
.3020	-1443.	112.	-4480.	-8.	73.	4.	-.0264	.0404	-.1288	-.0806	-.0193	.2178	34.			
.3030	-1022.	55.	-5010.	-4.	125.	2.	-.0203	.0377	-.1371	-.0897	-.0299	.2099	58.			
.3040	-540.	3.	-5337.	-0.	173.	0.	-.0138	.0352	-.1424	-.0975	-.0386	.1971	81.			
.3050	-34.	-15.	-5474.	1.	215.	-1.	-.0070	.0326	-.1447	-.1035	-.0453	.1802	101.			
.3060	459.	5.	-5428.	-0.	250.	0.	-.0003	.0302	-.1439	-.1073	-.0498	.1601	117.			
.3070	917.	27.	-5191.	-2.	274.	1.	.0061	.0278	-.1401	-.1084	-.0521	.1377	128.			

ADLPIPE PAGE 371

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.02.

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

.2970	-1769.	529.	-870.	-39.	-95.	21.	-.0422	.0525	-.0566	-.0381	.0327	.1709	49.
.2980	-1984.	435.	-1570.	-32.	-83.	17.	-.0413	.0504	-.0738	-.0446	.0243	.1916	42.
.2990	-2061.	349.	-2283.	-26.	-60.	14.	-.0392	.0480	-.0901	-.0524	.0147	.2071	31.
.3000	-1989.	261.	-3030.	-19.	-25.	10.	-.0360	.0456	-.1049	-.0612	.0039	.2167	16.
.3010	-1774.	178.	-3738.	-13.	21.	7.	-.0317	.0430	-.1180	-.0709	-.0077	.2202	12.
.3020	-1443.	112.	-4480.	-8.	73.	4.	-.0264	.0404	-.1288	-.0806	-.0193	.2178	34.
.3030	-1022.	55.	-5010.	-4.	125.	2.	-.0203	.0377	-.1371	-.0897	-.0299	.2099	58.
.3040	-540.	3.	-5337.	-0.	173.	0.	-.0138	.0352	-.1424	-.0975	-.0386	.1971	81.
.3050	-34.	-15.	-5474.	1.	215.	-1.	-.0070	.0326	-.1447	-.1035	-.0453	.1802	101.
.3060	459.	5.	-5408.	-0.	250.	0.	-.0003	.0302	-.1439	-.1073	-.0498	.1601	117.
.3070	917.	27.	-5191.	-2.	274.	1.	.0061	.0278	-.1401	-.1084	-.0521	.1377	128.

ADLPIPE PAGE 371

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.02.

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	7	MEMBER	1	SEQUENCE	26	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3080	1321.	44.	-4801.	-3.	288.	2.	.0118	.0255	-.1333	-.1069	-.0523	.1140	135.		
.3090	1653.	83.	-4335.	-6.	294.	3.	.0168	.0232	-.1239	-.1024	-.0510	.0900	138.		
.3100	1905.	151.	-3838.	-11.	292.	6.	.0208	.0208	-.1120	-.0950	-.0484	.0663	137.		
.3110	2069.	212.	-3322.	-15.	284.	8.	.0237	.0185	-.0981	-.0847	-.0448	.0439	133.		
.3120	2138.	248.	-2787.	-18.	267.	10.	.0254	.0160	-.0823	-.0716	-.0401	.0233	126.		
.3130	2114.	280.	-2227.	-20.	243.	11.	.0259	.0134	-.0651	-.0556	-.0343	.0052	115.		
.3140	2007.	320.	-1634.	-23.	212.	13.	.0251	.0107	-.0467	-.0370	-.0273	-.0102	100.		
.3150	1827.	363.	-1021.	-27.	174.	14.	.0233	.0078	-.0274	-.0159	-.0192	-.0227	83.		
.3160	1583.	393.	-.397.	-29.	132.	16.	.0204	.0048	-.0077	.0071	-.0102	-.0322	64.		
.3170	1290.	401.	229.	-29.	85.	16.	.0167	.0015	.0122	.0315	-.0007	-.0390	43.		
.3180	964.	388.	821.	-28.	38.	15.	.0123	-.0021	.0318	.0565	.0089	-.0433	23.		
.3190	617.	361.	1338.	-26.	-8.	14.	.0073	-.0058	.0509	.0816	.0183	-.0456	15.		
.3200	256.	327.	1771.	-24.	-52.	13.	.0021	-.0098	.0691	.1060	.0275	-.0464	27.		
.3210	-112.	282.	2150.	-21.	-94.	11.	-.0032	-.0139	.0863	.1295	.0364	-.0460	45.		
.3220	-485.	218.	2484.	-16.	-134.	9.	-.0084	-.0183	.1021	.1513	.0450	-.0450	64.		
.3230	-860.	140.	2750.	-10.	-172.	6.	-.0133	-.0227	.1165	.1712	.0532	-.0438	81.		
.3240	-1231.	65.	2968.	-5.	-208.	3.	-.0176	-.0273	.1293	.1889	.0611	-.0429	98.		
.3250	-1585.	8.	3190.	-1.	-243.	0.	-.0212	-.0319	.1404	.2044	.0686	-.0425	114.		
.3260	-1914.	-39.	3416.	3.	-276.	-2.	-.0239	-.0366	.1496	.2175	.0753	-.0430	129.		
.3270	-2203.	-94.	3617.	7.	-305.	-4.	-.0254	-.0412	.1568	.2280	.0807	-.0447	143.		
.3280	-2432.	-163.	3780.	12.	-328.	-6.	-.0256	-.0458	.1620	.2356	.0843	-.0479	154.		
.3290	-2585.	-230.	3892.	17.	-344.	-9.	-.0245	-.0503	.1649	.2404	.0856	-.0527	162.		
.3300	-2648.	-290.	3943.	21.	-351.	-12.	-.0218	-.0547	.1657	.2424	.0844	-.0593	165.		
.3310	-2610.	-363.	3944.	27.	-348.	-14.	-.0176	-.0589	.1642	.2413	.0807	-.0678	164.		
.3320	-2463.	-453.	3892.	33.	-335.	-18.	-.0119	-.0630	.1605	.2372	.0747	-.0782	158.		
.3330	-2212.	-543.	3761.	40.	-312.	-22.	-.0048	-.0668	.1546	.2299	.0663	-.0903	148.		
.3340	-1864.	-620.	3556.	45.	-278.	-25.	.0035	-.0703	.1466	.2195	.0563	-.1040	132.		
.3350	-1425.	-685.	3310.	50.	-236.	-27.	.0128	-.0735	.1367	.2062	.0450	-.1189	114.		
.3360	-913.	-732.	3017.	54.	-187.	-29.	.0228	-.0764	.1249	.1902	.0328	-.1346	92.		
.3370	-350.	-755.	2626.	55.	-130.	-30.	.0334	-.0788	.1115	.1718	.0199	-.1504	68.		
.3380	243.	-766.	2123.	56.	-67.	-30.	.0440	-.0809	.0967	.1513	.0066	-.1657	43.		
.3390	838.	-746.	1537.	56.	0.	-30.	.0545	-.0825	.0808	.1295	-.0068	-.1797	30.		
.3400	1402.	-746.	897.	55.	67.	-30.	.0644	-.0838	.0641	.1074	-.0196	-.1917	43.		
.3410	1904.	-712.	224.	52.	130.	-28.	.0734	-.0846	.0470	.0856	-.0313	-.2007	67.		
.3420	2319.	-680.	-449.	50.	188.	-27.	.0813	-.0851	.0299	.0652	-.0413	-.2061	92.		
.3430	2621.	-652.	-1076.	48.	235.	-26.	.0878	-.0851	.0132	.0470	-.0492	-.2072	113.		
.3440	2792.	-626.	-1609.	46.	268.	-25.	.0928	-.0848	-.0028	.0319	-.0543	-.2038	128.		
.3450	2831.	-604.	-2018.	44.	288.	-24.	.0961	-.0842	-.0178	.0202	-.0566	-.1956	137.		

ADLPIPE PAGE 372

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.03.

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

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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



.3340	-1425.	-685.	3310.	50.	-236.	-27.	.0128	-.0735	.1367	.2062	.0450	-.1189	132.
.3360	-913.	-732.	3017.	54.	-187.	-29.	.0228	-.0764	.1249	.1902	.0328	-.1346	92.
.3370	-350.	-755.	2626.	55.	-130.	-30.	.0334	-.0788	.1115	.1718	.0199	-.1504	68.
.3380	243.	-766.	2123.	56.	-67.	-30.	.0440	-.0809	.0967	.1513	.0066	-.1657	43.
.3390	838.	-766.	1537.	56.	0.	-30.	.0545	-.0825	.0808	.1295	-.0068	-.1797	30.
.3400	1402.	-746.	897.	55.	67.	-30.	.0644	-.0838	.0641	.1074	-.0196	-.1917	43.
.3410	1904.	-712.	224.	52.	130.	-28.	.0734	-.0846	.0470	.0856	-.0313	-.2007	67.
.3420	2319.	-680.	-449.	50.	188.	-27.	.0813	-.0851	.0299	.0652	-.0413	-.2061	92.
.3430	2621.	-652.	-1076.	48.	235.	-26.	.0878	-.0851	.0132	.0470	-.0492	-.2072	113.
.3440	2792.	-626.	-1609.	46.	260.	-25.	.0928	-.0848	-.0028	.0319	-.0543	-.2038	128.
.3450	2831.	-604.	-2018.	44.	288.	-24.	.0961	-.0842	-.0178	.0202	-.0566	-.1956	137.

ADLPIPE PAGE 372

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.03.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	7	MEMBER	1	SEQUENCE	26	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3460	2746.	-587.	-2313.	43.	293.	-23.	.0978	-.0831	-.0315	.0122	-.0560	-.1830	139.		
.3470	2549.	-568.	-2536.	42.	287.	-23.	.0980	-.0817	-.0440	.0077	-.0530	-.1664	137.		
.3480	2260.	-552.	-2713.	40.	273.	-22.	.0966	-.0800	-.0549	.0063	-.0481	-.1464	130.		
.3490	1911.	-546.	-2850.	40.	253.	-22.	.0940	-.0780	-.0642	.0077	-.0416	-.1241	121.		
.3500	1527.	-534.	-2962.	39.	230.	-21.	.0904	-.0756	-.0718	.0112	-.0339	-.1004	110.		
.3510	1131.	-495.	-3074.	36.	205.	-20.	.0859	-.0729	-.0777	.0164	-.0253	-.0765	98.		
.3520	744.	-438.	-3195.	32.	182.	-17.	.0808	-.0700	-.0819	.0224	-.0162	-.0533	87.		
.3530	385.	-377.	-3304.	28.	160.	-15.	.0753	-.0667	-.0843	.0289	-.0067	-.0319	76.		
.3540	64.	-308.	-3370.	23.	139.	-12.	.0696	-.0633	-.0847	.0354	.0029	-.0131	66.		
.3550	-210.	-218.	-3372.	16.	119.	-9.	.0640	-.0596	-.0833	.0417	.0123	.0024	56.		
.3560	-428.	-115.	-3307.	8.	100.	-5.	.0585	-.0559	-.0800	.0476	.0213	.0142	47.		
.3570	-588.	-11.	-3184.	1.	84.	-0.	.0532	-.0520	-.0749	.0528	.0293	.0219	39.		
.3580	-695.	84.	-2987.	-6.	68.	3.	.0484	-.0482	-.0680	.0573	.0361	.0255	32.		
.3590	-748.	164.	-2688.	-12.	52.	7.	.0440	-.0443	-.0595	.0611	.0415	.0250	25.		
.3600	-748.	233.	-2287.	-17.	36.	9.	.0400	-.0406	-.0495	.0642	.0455	.0208	19.		
.3610	-700.	300.	-1806.	-22.	21.	12.	.0365	-.0370	-.0384	.0666	.0479	.0130	15.		
.3620	-611.	363.	-1265.	-27.	6.	14.	.0334	-.0335	-.0263	.0682	.0488	.0023	14.		
.3630	-483.	407.	-676.	-30.	-8.	16.	.0307	-.0303	-.0136	.0690	.0480	-.0107	16.		
.3640	-322.	429.	-70.	-31.	-21.	17.	.0282	-.0273	-.0006	.0688	.0456	-.0254	19.		
.3650	-136.	441.	507.	-32.	-30.	18.	.0260	-.0245	.0124	.0677	.0415	-.0411	22.		
.3660	68.	447.	1019.	-33.	-36.	18.	.0238	-.0220	.0250	.0655	.0359	-.0571	24.		
.3670	279.	437.	1447.	-32.	-37.	17.	.0217	-.0198	.0369	.0622	.0289	-.0727	24.		
.3680	480.	398.	1786.	-29.	-36.	16.	.0193	-.0178	.0480	.0579	.0208	-.0871	23.		
.3690	656.	328.	2056.	-24.	-34.	13.	.0167	-.0161	.0579	.0526	.0123	-.0998	20.		
.3700	792.	241.	2278.	-18.	-33.	10.	.0138	-.0146	.0667	.0465	.0040	-.1100	18.		
.3710	875.	145.	2468.	-11.	-34.	6.	.0103	-.0132	.0741	.0399	-.0037	-.1175	17.		
.3720	894.	35.	2634.	-3.	-39.	1.	.0064	-.0120	.0802	.0328	-.0103	-.1218	19.		
.3730	845.	-100.	2796.	7.	-49.	-4.	.0020	-.0108	.0847	.0252	-.0156	-.1227	23.		
.3740	731.	-254.	2952.	19.	-64.	-10.	-.0029	-.0095	.0876	.0171	-.0195	-.1202	32.		
.3750	557.	-407.	3076.	30.	-82.	-16.	-.0083	-.0082	.0889	.0087	-.0222	-.1144	41.		
.3760	337.	-550.	3144.	40.	-100.	-22.	-.0139	-.0066	.0884	-.0002	-.0237	-.1055	52.		
.3770	85.	-685.	3155.	50.	-119.	-27.	-.0197	-.0047	.0862	-.0094	-.0244	-.0938	62.		
.3780	-183.	-813.	3107.	59.	-137.	-32.	-.0255	-.0025	.0822	-.0190	-.0244	-.0794	72.		
.3790	-451.	-919.	2989.	67.	-152.	-37.	-.0312	.0002	.0765	-.0287	-.0238	-.0628	80.		
.3800	-700.	-988.	2795.	72.	-162.	-39.	-.0366	.0034	.0691	-.0385	-.0230	-.0444	85.		
.3810	-915.	-1012.	2530.	74.	-168.	-40.	-.0417	.0071	.0602	-.0481	-.0222	-.0245	88.		
.3820	-1088.	-1001.	2198.	73.	-167.	-40.	-.0461	.0114	.0499	-.0574	-.0216	-.0035	88.		
.3830	-1211.	-968.	1805.	71.	-161.	-39.	-.0499	.0162	.0384	-.0663	-.0215	.0182	84.		

ADLPIPE PAGE 373

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.03.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.3730	845.	-100.	2796.	7.	-49.	-4.	.0020	-.0108	.0847	.0252	-.0156	-.1227	23.
.3740	731.	-254.	2952.	19.	-64.	-10.	-.0029	-.0095	.0876	.0171	-.0195	-.1202	32.
.3750	557.	-407.	3076.	30.	-82.	-16.	-.0083	-.0082	.0889	.0087	-.0222	-.1144	41.
.3760	337.	-550.	3144.	40.	-100.	-22.	-.0139	-.0066	.0884	-.0002	-.0237	-.1055	52.
.3770	85.	-685.	3155.	50.	-119.	-27.	-.0197	-.0047	.0862	-.0094	-.0244	-.0938	62.
.3780	-183.	-813.	3107.	59.	-137.	-32.	-.0255	-.0025	.0822	-.0190	-.0244	-.0794	72.
.3790	-451.	-919.	2989.	67.	-152.	-37.	-.0312	.0002	.0765	-.0287	-.0238	-.0628	80.
.3800	-700.	-988.	2795.	72.	-162.	-39.	-.0366	.0034	.0691	-.0385	-.0230	-.0444	85.
.3810	-915.	-1012.	2530.	74.	-168.	-40.	-.0417	.0071	.0602	-.0481	-.0222	-.0245	88.
.3820	-1088.	-1001.	2198.	73.	-167.	-40.	-.0461	.0114	.0499	-.0574	-.0216	-.0035	88.
.3830	-1211.	-968.	1805.	71.	-161.	-39.	-.0499	.0162	.0384	-.0663	-.0215	.0182	84.

ADLPIPE PAGE 373

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.03.

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

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

SECTION	7	MEMBER	1	SEQUENCE	26	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3840	-1280.	-914.	1363.	67.	-148.	-36.	-.0531	.0216	.0260	-.0747	-.0219	.0401	78.		
.3850	-1296.	-832.	886.	61.	-130.	-33.	-.0554	.0274	.0129	-.0825	-.0229	.0618	69.		
.3860	-1265.	-719.	395.	53.	-108.	-29.	-.0571	.0338	-.0007	-.0898	-.0243	.0829	58.		
.3870	-1196.	-591.	-83.	43.	-84.	-24.	-.0580	.0405	-.0144	-.0966	-.0259	.1029	46.		
.3880	-1096.	-454.	-517.	33.	-60.	-18.	-.0583	.0476	-.0280	-.1032	-.0272	.1215	33.		
.3890	-973.	-301.	-887.	22.	-36.	-12.	-.0580	.0549	-.0412	-.1095	-.0280	.1383	21.		
.3900	-834.	-121.	-1184.	9.	-14.	-5.	-.0571	.0623	-.0539	-.1157	-.0279	.1530	8.		
.3910	-680.	86.	-1409.	-6.	6.	3.	-.0558	.0698	-.0658	-.1221	-.0268	.1654	4.		
.3920	-513.	306.	-1576.	-22.	25.	12.	-.0542	.0773	-.0769	-.1287	-.0248	.1752	17.		
.3930	-333.	527.	-1711.	-39.	44.	21.	-.0523	.0845	-.0870	-.1357	-.0220	.1827	29.		
.3940	-136.	748.	-1835.	-55.	63.	30.	-.0503	.0914	-.0962	-.1429	-.0187	.1879	42.		
.3950	78.	978.	-1961.	-72.	84.	39.	-.0482	.0979	-.1043	-.1500	-.0150	.1912	55.		
.3960	303.	1212.	-2096.	-89.	106.	48.	-.0462	.1038	-.1117	-.1568	-.0111	.1929	68.		
.3970	529.	1422.	-2236.	-104.	128.	57.	-.0443	.1091	-.1169	-.1627	-.0072	.1936	82.		
.3980	745.	1590.	-2367.	-116.	149.	63.	-.0428	.1135	-.1213	-.1673	-.0034	.1939	93.		
.3990	937.	1721.	-2466.	-126.	167.	68.	-.0418	.1170	-.1244	-.1702	.0005	.1943	103.		
.4000	1091.	1824.	-2516.	-134.	180.	73.	-.0412	.1196	-.1261	-.1711	.0044	.1950	110.		

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)		
.0450	-8054.	-7162.	10354.	524.	-1002.	-285.	-.0778	-.1263	.1993	.0045	.0259	-.1199	546.		

SECTION	7	MEMBER	2	SEQUENCE	805	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.		
.0010	0.	0.	0.	0.	0.	0.	-.0000	.0000	-.0000	-.0000	.0000	.0000	0.		
.0020	0.	0.	0.	0.	0.	0.	-.0001	.0000	-.0001	-.0001	.0002	.0001	0.		
.0030	0.	0.	0.	0.	0.	0.	-.0002	.0000	-.0004	-.0003	.0006	.0005	0.		
.0040	0.	0.	0.	0.	0.	0.	-.0005	.0000	-.0009	-.0008	.0014	.0015	0.		
.0050	0.	0.	0.	0.	0.	0.	-.0009	.0000	-.0017	-.0016	.0024	.0030	0.		
.0060	0.	0.	0.	0.	0.	0.	-.0016	.0001	-.0031	-.0029	.0036	.0053	0.		
.0070	0.	0.	0.	0.	0.	0.	-.0025	.0002	-.0050	-.0047	.0054	.0089	0.		

ADLPIPE PAGE 374

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.03.

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

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
.0010	0.	0.	0.	0.	0.	0.	-.0000	.0000	-.0000	-.0000	.0000	.0000	0.
.0020	0.	0.	0.	0.	0.	0.	-.0001	.0000	-.0001	-.0001	.0002	.0001	0.
.0030	0.	0.	0.	0.	0.	0.	-.0002	.0000	-.0004	-.0003	.0006	.0005	0.
.0040	0.	0.	0.	0.	0.	0.	-.0005	.0000	-.0009	-.0008	.0014	.0015	0.
.0050	0.	0.	0.	0.	0.	0.	-.0009	.0000	-.0017	-.0016	.0024	.0030	0.
.0060	0.	0.	0.	0.	0.	0.	-.0016	.0001	-.0031	-.0029	.0036	.0053	0.
.0070	0.	0.	0.	0.	0.	0.	-.0025	.0002	-.0050	-.0047	.0054	.0089	0.

ADLPIPE PAGE 374

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.03.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	VA	DX	DY	DZ	RX	RY	RZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.0080	0.	0.	0.	0.	0.	0.	-.0038	.0003	-.0078	-.0073	.0090	.0143	0.
.0090	0.	0.	0.	0.	0.	0.	-.0056	.0005	-.0116	-.0103	.0160	.0223	0.
.0100	0.	0.	0.	0.	0.	0.	-.0077	.0009	-.0165	-.0133	.0263	.0329	0.
.0110	0.	0.	0.	0.	0.	0.	-.0098	.0014	-.0224	-.0166	.0383	.0455	0.
.0120	0.	0.	0.	0.	0.	0.	-.0118	.0020	-.0291	-.0202	.0505	.0593	0.
.0130	0.	0.	0.	0.	0.	0.	-.0133	.0028	-.0365	-.0234	.0621	.0734	0.
.0140	0.	0.	0.	0.	0.	0.	-.0142	.0038	-.0444	-.0256	.0727	.0874	0.
.0150	0.	0.	0.	0.	0.	0.	-.0144	.0049	-.0529	-.0270	.0814	.1008	0.
.0160	0.	0.	0.	0.	0.	0.	-.0141	.0060	-.0620	-.0283	.0885	.1136	0.
.0170	0.	0.	0.	0.	0.	0.	-.0133	.0071	-.0721	-.0304	.0933	.1259	0.
.0180	0.	0.	0.	0.	0.	0.	-.0120	.0083	-.0828	-.0351	.0933	.1375	0.
.0190	0.	0.	0.	0.	0.	0.	-.0102	.0094	-.0935	-.0427	.0898	.1474	0.
.0200	0.	0.	0.	0.	0.	0.	-.0074	.0107	-.1026	-.0506	.0891	.1540	0.
.0210	0.	0.	0.	0.	0.	0.	-.0031	.0121	-.1083	-.0514	.1040	.1568	0.
.0220	0.	0.	0.	0.	0.	0.	.0032	.0136	-.1099	-.0406	.1285	.1544	0.
.0230	0.	0.	0.	0.	0.	0.	.0120	.0151	-.1075	-.0252	.1445	.1414	0.
.0240	0.	0.	0.	0.	0.	0.	.0233	.0160	-.1022	-.0091	.1538	.1153	0.
.0250	0.	0.	0.	0.	0.	0.	.0363	.0161	-.0955	.0054	.1508	.0807	0.
.0260	0.	0.	0.	0.	0.	0.	.0504	.0150	-.0883	.0107	.1129	.0397	0.
.0270	0.	0.	0.	0.	0.	0.	.0656	.0127	-.0790	.0080	.0498	-.0122	0.
.0280	0.	0.	0.	0.	0.	0.	.0808	.0094	-.0661	.0125	.0061	-.0727	0.
.0290	0.	0.	0.	0.	0.	0.	.0945	.0051	-.0503	.0316	-.0120	-.1288	0.
.0300	0.	0.	0.	0.	0.	0.	.1061	-.0004	-.0333	.0525	-.0298	-.1758	0.
.0310	0.	0.	0.	0.	0.	0.	.1146	-.0072	-.0176	.0611	-.0583	-.2217	0.
.0320	0.	0.	0.	0.	0.	0.	.1195	-.0155	-.0034	.0554	-.1066	-.2649	0.
.0330	0.	0.	0.	0.	0.	0.	.1202	-.0255	.0107	.0501	-.1511	-.2923	0.
.0340	0.	0.	0.	0.	0.	0.	.1169	-.0366	.0253	.0540	-.1790	-.3042	0.
.0350	0.	0.	0.	0.	0.	0.	.1094	-.0483	.0396	.0584	-.2124	-.3114	0.
.0360	0.	0.	0.	0.	0.	0.	.0979	-.0606	.0537	.0530	-.2585	-.3123	0.
.0370	0.	0.	0.	0.	0.	0.	.0823	-.0742	.0695	.0450	-.2875	-.2978	0.
.0380	0.	0.	0.	0.	0.	0.	.0634	-.0881	.0878	.0480	-.2884	-.2724	0.
.0390	0.	0.	0.	0.	0.	0.	.0418	-.1007	.1067	.0545	-.2863	-.2484	0.
.0400	0.	0.	0.	0.	0.	0.	.0187	-.1118	.1254	.0471	-.2778	-.2255	0.
.0410	0.	0.	0.	0.	0.	0.	-.0048	-.1212	.1450	.0382	-.2361	-.1965	0.
.0420	0.	0.	0.	0.	0.	0.	-.0275	-.1279	.1643	.0427	-.1701	-.1665	0.
.0430	0.	0.	0.	0.	0.	0.	-.0480	-.1312	.1807	.0423	-.1049	-.1458	0.
.0440	0.	0.	0.	0.	0.	0.	-.0649	-.1311	.1925	.0227	-.0387	-.1323	0.
.0450	0.	0.	0.	0.	0.	0.	-.0775	-.1275	.1992	.0046	.0257	-.1199	0.

ADLPIPE PAGE 375

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.03.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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