

50-305

RESPONSE TO NUREG-0737 ITEM II.D.1

Docket # *50-305*

Control # *8403280048*

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

.1570	1064.	-37.	-649.	-723.	1064.	-175.	-810.	.012	.0617	.0416	-.0661	.0260	-.0305	4107.
.1580	866.	62.	-844.	-771.	-171.	-706.	-.0095	.0654	.0375	-.0631	.0511	-.0124	3953.	
.1590	800.	320.	-893.	-724.	-210.	-637.	-.0204	.0667	.0322	-.0515	.0706	-.0001	3685.	
.1600	771.	535.	-798.	-611.	-304.	-521.	-.0304	.0644	.0270	-.0359	.0790	.0087	3206.	
.1610	657.	647.	-514.	-396.	-399.	-344.	-.0388	.0593	.0228	-.0138	.0787	.0186	2459.	
.1620	544.	889.	-93.	-94.	-470.	-199.	-.0454	.0534	.0196	.0173	.0770	.0305	1937.	
.1630	358.	1067.	291.	179.	-506.	-9.	-.0492	.0463	.0179	.0451	.0725	.0459	2004.	
.1640	184.	1247.	542.	353.	-528.	206.	-.0503	.0380	.0170	.0648	.0667	.0629	2493.	
.1650	7.	1456.	717.	479.	-512.	413.	-.0498	.0292	.0163	.0807	.0632	.0799	3038.	
.1660	-350.	1447.	866.	591.	-433.	681.	-.0482	.0196	.0154	.0927	.0604	.0970	3734.	
.1670	-675.	1436.	957.	659.	-373.	919.	-.0468	.0103	.0135	.1018	.0583	.1092	4446.	

ADLPIPE PAGE 1966

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.05.

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

SECTION	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1680	-857.	1426.	997.	668.	-356.	1096.	-.0456	.0014	.0105	.1067	.0536	.1134	4971.	
.1690	-900.	1420.	1033.	659.	-362.	1167.	-.0450	-.0061	.0065	.1112	.0486	.1098	5183.	
.1700	-959.	1274.	1058.	643.	-355.	1183.	-.0449	-.0116	.0021	.1139	.0446	.1021	5196.	
.1710	-1044.	972.	1013.	566.	-332.	1187.	-.0446	-.0155	-.0018	.1096	.0399	.0915	5064.	
.1720	-866.	918.	854.	399.	-347.	1052.	-.0448	-.0169	-.0049	.1011	.0389	.0747	4396.	
.1730	-668.	759.	610.	176.	-349.	882.	-.0448	-.0166	-.0066	.0857	.0410	.0546	3603.	
.1740	-569.	400.	332.	-55.	-318.	712.	-.0447	-.0147	-.0068	.0662	.0465	.0330	2917.	
.1750	-422.	96.	55.	-283.	-285.	496.	-.0444	-.0109	-.0055	.0466	.0532	.0092	2384.	
.1760	-241.	-189.	-197.	-515.	-252.	286.	-.0432	-.0057	-.0026	.0265	.0547	-.0148	2392.	
.1770	-32.	-421.	-394.	-713.	-221.	50.	-.0413	.0010	.0012	.0109	.0518	-.0375	2792.	
.1780	62.	-785.	-497.	-839.	-149.	-161.	-.0383	.0087	.0056	.0009	.0437	-.0561	3237.	
.1790	168.	-1061.	-522.	-906.	-62.	-383.	-.0346	.0174	.0105	-.0025	.0322	-.0718	3679.	
.1800	294.	-1203.	-512.	-948.	11.	-579.	-.0306	.0261	.0156	-.0032	.0180	-.0836	4146.	
.1810	249.	-1468.	-479.	-962.	104.	-653.	-.0261	.0336	.0211	-.0049	.0022	-.0889	4359.	
.1820	164.	-1629.	-421.	-927.	204.	-716.	-.0224	.0406	.0261	-.0024	-.0083	-.0893	4437.	
.1830	56.	-1717.	-367.	-865.	310.	-751.	-.0194	.0465	.0306	.0017	-.0148	-.0852	4430.	
.1840	-43.	-1724.	-335.	-804.	394.	-742.	-.0173	.0506	.0340	.0048	-.0205	-.0772	4339.	
.1850	-136.	-1660.	-282.	-715.	455.	-699.	-.0163	.0527	.0359	.0093	-.0257	-.0660	4102.	
.1860	-279.	-1619.	-163.	-567.	515.	-621.	-.0167	.0530	.0358	.0182	-.0307	-.0527	3682.	
.1870	-344.	-1440.	-13.	-384.	537.	-572.	-.0191	.0520	.0332	.0327	-.0337	-.0404	3262.	
.1880	-385.	-1238.	114.	-216.	525.	-489.	-.0228	.0489	.0287	.0469	-.0372	-.0291	2796.	
.1890	-401.	-984.	203.	-73.	494.	-382.	-.0275	.0440	.0227	.0602	-.0389	-.0190	2347.	
.1900	-425.	-687.	240.	48.	472.	-268.	-.0330	.0378	.0161	.0726	-.0354	-.0094	2034.	
.1910	-514.	-484.	186.	115.	472.	-113.	-.0381	.0304	.0099	.0798	-.0282	.0006	1864.	
.1920	-505.	-206.	38.	108.	461.	9.	-.0428	.0224	.0049	.0823	-.0180	.0089	1768.	
.1930	-389.	124.	-137.	62.	436.	83.	-.0469	.0142	.0015	.0828	-.0070	.0143	1674.	
.1940	-250.	389.	-257.	31.	403.	125.	-.0507	.0062	-.0001	.0842	.0031	.0161	1578.	
.1950	-60.	595.	-292.	32.	341.	122.	-.0544	-.0015	-.0004	.0878	.0106	.0121	1356.	
.1960	253.	804.	-255.	48.	232.	60.	-.0583	-.0087	.0000	.0931	.0148	.0005	911.	
.1970	622.	968.	-181.	62.	93.	-37.	-.0623	-.0149	.0005	.0988	.0174	-.0162	439.	
.1980	908.	1036.	-114.	66.	-44.	-126.	-.0659	-.0197	.0004	.1031	.0222	-.0325	555.	
.1990	1041.	1053.	-113.	30.	-159.	-178.	-.0687	-.0226	-.0005	.1038	.0318	-.0441	897.	
.2000	1079.	1061.	-219.	-78.	-244.	-170.	-.0702	-.0238	-.0019	.0981	.0460	-.0489	1146.	
.2010	938.	1010.	-419.	-244.	-292.	-88.	-.0697	-.0232	-.0035	.0861	.0640	-.0468	1457.	
.2020	640.	871.	-627.	-408.	-307.	44.	-.0675	-.0211	-.0049	.0724	.0843	-.0394	1914.	
.2030	256.	682.	-743.	-516.	-313.	195.	-.0636	-.0174	-.0057	.0618	.1032	-.0296	2368.	
.2040	-139.	475.	-697.	-538.	-338.	354.	-.0583	-.0127	-.0054	.0564	.1155	-.0201	2715.	
.2050	-509.	246.	-467.	-460.	-388.	502.	-.0516	-.0074	-.0040	.0576	.1188	-.0123	2926.	

ADLPIPE PAGE 1967

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.05.

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

.1940	-250.	389.	-57.	31.	403.	125.	-.0007	.0062	-.0001	.0842	.0031	.0161	1578.
.1950	-60.	595.	-292.	32.	341.	122.	-.0544	-.0015	-.0004	.0878	.0106	.0121	1356.
.1960	253.	804.	-255.	48.	232.	60.	-.0583	-.0087	.0000	.0931	.0148	.0005	911.
.1970	622.	968.	-181.	62.	93.	-37.	-.0623	-.0149	.0005	.0988	.0174	-.0162	439.
.1980	908.	1036.	-114.	66.	-44.	-126.	-.0659	-.0197	.0004	.1031	.0222	-.0325	555.
.1990	1061.	1053.	-113.	30.	-159.	-178.	-.0687	-.0226	-.0005	.1036	.0318	-.0441	897.
.2000	1079.	1061.	-219.	-78.	-244.	-170.	-.0702	-.0238	-.0019	.0981	.0460	-.0489	1146.
.2010	938.	1010.	-419.	-244.	-292.	-88.	-.0697	-.0232	-.0035	.0861	.0640	-.0468	1457.
.2020	640.	871.	-627.	-408.	-307.	44.	-.0675	-.0211	-.0049	.0724	.0843	-.0394	1914.
.2030	256.	682.	-743.	-516.	-313.	195.	-.0636	-.0174	-.0057	.0618	.1032	-.0296	2368.
.2040	-139.	475.	-697.	-538.	-338.	354.	-.0583	-.0127	-.0054	.0564	.1155	-.0201	2715.
.2050	-509.	246.	-467.	-460.	-388.	502.	-.0516	-.0074	-.0040	.0576	.1188	-.0123	2926.

ADLPIPE PAGE 1967

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.05.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL							
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS			
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)			
.2060	-847.	-9.	-78.	-286.	-444.	614.	-.0442	-.0014	-.0018	.0663	.1143	-.0062	3025.			
.2070	-1155.	-274.	391.	-58.	-490.	694.	-.0365	.0050	.0009	.0798	.1048	-.0009	3178.			
.2080	-1437.	-519.	825.	156.	-521.	765.	-.0290	.0113	.0038	.0922	.0931	.0048	3503.			
.2090	-1697.	-717.	1133.	305.	-531.	837.	-.0224	.0172	.0063	.0995	.0835	.0112	3872.			
.2100	-1939.	-874.	1270.	374.	-509.	896.	-.0172	.0227	.0083	.1007	.0900	.0180	4094.			
.2110	-2150.	-1015.	1228.	361.	-454.	932.	-.0136	.0276	.0097	.0956	.0828	.0241	4100.			
.2120	-2275.	-1114.	1043.	274.	-386.	933.	-.0118	.0316	.0107	.0852	.0886	.0281	3907.			
.2130	-2262.	-1136.	793.	151.	-325.	877.	-.0114	.0346	.0117	.0730	.0938	.0287	3535.			
.2140	-2106.	-1108.	576.	49.	-278.	746.	-.0123	.0366	.0128	.0632	.0956	.0248	2977.			
.2150	-1809.	-1069.	440.	-3.	-252.	539.	-.0143	.0374	.0140	.0578	.0921	.0157	2220.			
.2160	-1363.	-1006.	382.	-14.	-255.	264.	-.0168	.0371	.0153	.0560	.0830	.0011	1369.			
.2170	-815.	-897.	363.	-4.	-276.	-46.	-.0197	.0356	.0164	.0561	.0702	-.0171	1046.			
.2180	-285.	-778.	341.	8.	-291.	-335.	-.0224	.0331	.0171	.0558	.0573	-.0351	1656.			
.2190	131.	-678.	267.	-1.	-277.	-556.	-.0246	.0299	.0171	.0523	.0471	-.0495	2321.			
.2200	425.	-575.	102.	-56.	-233.	-700.	-.0257	.0260	.0163	.0437	.0408	-.0584	2761.			
.2210	607.	-463.	-144.	-153.	-160.	-768.	-.0254	.0217	.0144	.0307	.0379	-.0617	2985.			
.2220	664.	-369.	-406.	-255.	-66.	-765.	-.0236	.0172	.0118	.0160	.0363	-.0597	3023.			
.2230	612.	-306.	-600.	-316.	35.	-704.	-.0204	.0127	.0086	.0034	.0333	-.0543	2884.			
.2240	512.	-256.	-663.	-307.	118.	-608.	-.0161	.0081	.0052	-.0049	.0259	-.0481	2580.			
.2250	409.	-224.	-579.	-220.	169.	-498.	-.0111	.0036	.0018	-.0085	.0130	-.0433	2129.			
.2260	306.	-224.	-366.	-63.	193.	-389.	-.0055	-.0006	-.0015	-.0079	-.0040	-.0402	1638.			
.2270	190.	-245.	-86.	134.	204.	-283.	.0003	-.0041	-.0047	-.0054	-.0224	-.0374	1395.			
.2280	56.	-262.	176.	318.	216.	-172.	.0060	-.0067	-.0078	-.0048	-.0399	-.0333	1572.			
.2290	-92.	-263.	336.	443.	240.	-54.	.0113	-.0085	-.0107	-.0094	-.0542	-.0270	1891.			
.2300	-247.	-255.	361.	493.	282.	57.	.0157	-.0093	-.0134	-.0200	-.0632	-.0194	2131.			
.2310	-388.	-247.	263.	477.	339.	145.	.0190	-.0092	-.0158	-.0356	-.0668	-.0119	2251.			
.2320	-478.	-235.	84.	415.	392.	199.	.0207	-.0084	-.0176	-.0541	-.0670	-.0064	2255.			
.2330	-468.	-196.	-121.	330.	423.	199.	.0209	-.0070	-.0181	-.0732	-.0663	-.0047	2138.			
.2340	-334.	-125.	-304.	253.	429.	129.	.0197	-.0050	-.0171	-.0900	-.0664	-.0079	1922.			
.2350	-89.	-48.	-433.	201.	416.	-10.	.0176	-.0024	-.0142	-.1032	-.0681	-.0155	1724.			
.2360	246.	25.	-512.	171.	388.	-200.	.0150	.0005	-.0092	-.1133	-.0718	-.0262	1751.			
.2370	638.	122.	-557.	153.	348.	-419.	.0124	.0037	-.0025	-.1208	-.0760	-.0381	2112.			
.2380	1031.	248.	-589.	139.	306.	-636.	.0098	.0072	.0054	-.1261	-.0786	-.0489	2683.			
.2390	1362.	371.	-622.	124.	271.	-819.	.0076	.0107	.0138	-.1299	-.0781	-.0567	3253.			
.2400	1601.	473.	-666.	104.	248.	-949.	.0059	.0140	.0220	-.1326	-.0743	-.0608	3683.			
.2410	1752.	565.	-714.	81.	230.	-1024.	.0045	.0170	.0292	-.1338	-.0575	-.0611	3929.			
.2420	1810.	651.	-738.	72.	213.	-1044.	.0037	.0197	.0349	-.1321	-.0589	-.0574	3985.			
.2430	1773.	726.	-706.	93.	192.	-1012.	.0031	.0222	.0388	-.1261	-.0496	-.0497	3860.			

ADLPIPE PAGE 1968

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.06.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL							
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)			

.2750	143.	203.	-57.	278.	353.	141.	.0650	-.0323	-.0251	-.0684	-.0899	.0444	1760.
.2760	80.	347.	11.	363.	400.	130.	.0621	-.0310	-.0239	-.0578	-.0894	.0520	2126.
.2770	69.	450.	32.	415.	444.	192.	.0586	-.0294	-.0227	-.0484	-.0872	.0590	2377.
.2780	98.	565.	17.	435.	482.	183.	.0546	-.0278	-.0214	-.0403	-.0839	.0634	2517.
.2790	151.	644.	-18.	432.	513.	156.	.0500	-.0264	-.0200	-.0335	-.0800	.0658	2573.
.2800	245.	696.	-67.	414.	536.	98.	.0450	-.0251	-.0185	-.0276	-.0758	.0651	2554.
.2810	415.	763.	-129.	378.	546.	-1.	.0396	-.0236	-.0170	-.0225	-.0719	.0601	2479.

ADLPIPE PAGE 1969

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.06.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL							
TIME	FX	FY	FZ	MX	MY	MZ										STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(PSI)
.2820	647.	845.	-194.	329.	536.	-132.	.0338	-.0222	-.0157	-.0178	-.0688	.0515	2400.			
.2830	885.	894.	-250.	274.	509.	-269.	.0280	-.0211	-.0148	-.0134	-.0660	.0413	2379.			
.2840	1089.	889.	-300.	214.	472.	-395.	.0223	-.0202	-.0146	-.0091	-.0629	.0305	2433.			
.2850	1265.	866.	-367.	139.	433.	-508.	.0171	-.0194	-.0151	-.0057	-.0588	.0194	2544.			
.2860	1404.	846.	-463.	40.	392.	-598.	.0127	-.0184	-.0165	-.0037	-.0536	.0088	2672.			
.2870	1457.	797.	-572.	-73.	353.	-642.	.0095	-.0174	-.0186	-.0030	-.0472	.0008	2749.			
.2880	1388.	695.	-661.	-178.	322.	-627.	.0077	-.0162	-.0210	-.0025	-.0402	-.0037	2714.			
.2890	1221.	562.	-712.	-265.	298.	-561.	.0075	-.0149	-.0235	-.0016	-.0336	-.0052	2570.			
.2900	1002.	420.	-715.	-330.	271.	-463.	.0091	-.0134	-.0260	.0003	-.0287	-.0051	2350.			
.2910	739.	250.	-652.	-361.	240.	-339.	.0123	-.0118	-.0282	.0038	-.0264	-.0039	2053.			
.2920	421.	44.	-509.	-348.	209.	-190.	.0168	-.0100	-.0301	.0100	-.0267	-.0012	1673.			
.2930	69.	-171.	-303.	-302.	176.	-24.	.0222	-.0082	-.0317	.0182	-.0290	.0028	1307.			
.2940	-285.	-377.	-80.	-248.	139.	147.	.0281	-.0063	-.0330	.0267	-.0323	.0074	1195.			
.2950	-627.	-585.	117.	-208.	105.	313.	.0340	-.0045	-.0341	.0338	-.0348	.0122	1455.			
.2960	-957.	-790.	261.	-191.	81.	465.	.0395	-.0024	-.0351	.0385	-.0349	.0173	1900.			
.2970	-1248.	-957.	334.	-209.	65.	597.	.0440	-.0003	-.0357	.0403	-.0318	.0226	2373.			
.2980	-1481.	-1069.	332.	-267.	50.	702.	.0472	.0017	-.0360	.0389	-.0262	.0275	2808.			
.2990	-1632.	-1149.	269.	-354.	34.	768.	.0490	.0033	-.0357	.0350	-.0187	.0311	3160.			
.3000	-1690.	-1212.	170.	-452.	17.	783.	.0492	.0047	-.0348	.0303	-.0102	.0323	3374.			
.3010	-1643.	-1230.	59.	-546.	-5.	742.	.0478	.0057	-.0333	.0262	-.0017	.0307	3440.			
.3020	-1493.	-1180.	-47.	-633.	-39.	657.	.0450	.0063	-.0310	.0235	.0056	.0271	3410.			
.3030	-1274.	-1084.	-137.	-706.	-80.	547.	.0412	.0065	-.0279	.0223	.0116	.0227	3348.			
.3040	-1023.	-971.	-215.	-760.	-118.	424.	.0365	.0062	-.0241	.0227	.0171	.0183	3279.			
.3050	-759.	-835.	-296.	-801.	-146.	296.	.0313	.0056	-.0199	.0240	.0231	.0148	3235.			
.3060	-495.	-651.	-386.	-836.	-166.	180.	.0259	.0047	-.0153	.0255	.0295	.0129	3251.			
.3070	-265.	-430.	-473.	-859.	-180.	96.	.0204	.0035	-.0105	.0273	.0362	.0140	3295.			
.3080	-107.	-213.	-536.	-856.	-183.	55.	.0150	.0019	-.0058	.0302	.0429	.0185	3273.			
.3090	-13.	-11.	-562.	-819.	-177.	50.	.0098	-.0001	-.0013	.0347	.0489	.0254	3133.			
.3100	48.	190.	-546.	-749.	-169.	69.	.0048	-.0023	.0028	.0410	.0531	.0333	2878.			
.3110	77.	391.	-477.	-646.	-166.	111.	.0002	-.0045	.0063	.0490	.0549	.0418	2525.			
.3120	50.	571.	-350.	-508.	-164.	180.	-.0039	-.0066	.0094	.0590	.0544	.0516	2103.			
.3130	-34.	722.	-178.	-344.	-159.	270.	-.0076	-.0084	.0119	.0700	.0523	.0623	1738.			
.3140	-143.	847.	3.	-178.	-151.	369.	-.0108	-.0100	.0139	.0802	.0490	.0726	1630.			
.3150	-261.	938.	166.	-29.	-140.	467.	-.0135	-.0113	.0155	.0880	.0451	.0818	1822.			
.3160	-395.	984.	304.	98.	-123.	560.	-.0158	-.0122	.0167	.0934	.0412	.0896	2170.			
.3170	-537.	993.	417.	201.	-100.	640.	-.0179	-.0126	.0175	.0964	.0374	.0956	2534.			
.3180	-654.	976.	499.	272.	-79.	697.	-.0198	-.0127	.0179	.0972	.0332	.0987	2809.			
.3190	-719.	923.	546.	306.	-64.	716.	-.0216	-.0125	.0179	.0954	.0282	.0975	2917.			

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION 51 MEMBER 1 SEQUENCE 824 LOCATION END TYPE EL

.3100	48.	190.	-46.	-749.	-169.	69.	.0048	-.0023	.0028	.0410	.0531	.0333	2878.
.3110	77.	391.	-477.	-646.	-166.	111.	.0002	-.0045	.0063	.0490	.0549	.0418	2525.
.3120	50.	571.	-350.	-508.	-164.	180.	-.0039	-.0066	.0094	.0590	.0544	.0516	2103.
.3130	-34.	722.	-178.	-344.	-159.	270.	-.0076	-.0084	.0119	.0700	.0523	.0623	1738.
.3140	-143.	847.	3.	-178.	-151.	369.	-.0108	-.0100	.0139	.0802	.0490	.0726	1630.
.3150	-261.	938.	166.	-29.	-140.	467.	-.0135	-.0113	.0155	.0880	.0451	.0818	1822.
.3160	-395.	984.	304.	98.	-123.	560.	-.0158	-.0122	.0167	.0934	.0412	.0896	2170.
.3170	-537.	993.	417.	201.	-100.	640.	-.0179	-.0126	.0175	.0964	.0374	.0956	2534.
.3180	-654.	976.	499.	272.	-79.	697.	-.0198	-.0127	.0179	.0972	.0332	.0987	2809.
.3190	-719.	923.	546.	306.	-64.	716.	-.0216	-.0125	.0179	.0954	.0282	.0975	2917.

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ADLPIPE STRESS ANALYSIS

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3200	-730.	823.	561.	307.	-52.	691.	-.0234	-.0119	.0177	.0916	.0226	.0914	2829.		
.3210	-688.	695.	550.	281.	-42.	622.	-.0252	-.0110	.0174	.0863	.0167	.0809	2552.		
.3220	-591.	565.	508.	222.	-30.	517.	-.0270	-.0098	.0171	.0794	.0107	.0667	2104.		
.3230	-447.	426.	431.	129.	-41.	385.	-.0288	-.0087	.0170	.0704	.0053	.0496	1523.		
.3240	-275.	260.	321.	10.	-42.	233.	-.0303	-.0078	.0170	.0595	.0011	.0303	884.		
.3250	-89.	76.	182.	-126.	-40.	68.	-.0315	-.0071	.0172	.0475	-.0013	.0095	553.		
.3260	102.	-97.	29.	-271.	-38.	-96.	-.0322	-.0068	.0174	.0352	-.0025	-.0114	1081.		
.3270	280.	-249.	-118.	-414.	-40.	-242.	-.0325	-.0069	.0176	.0237	-.0031	-.0308	1795.		
.3280	425.	-393.	-239.	-537.	-43.	-363.	-.0322	-.0075	.0177	.0141	-.0032	-.0479	2425.		
.3290	527.	-535.	-324.	-629.	-44.	-457.	-.0314	-.0087	.0175	.0074	-.0029	-.0624	2909.		
.3300	594.	-653.	-376.	-690.	-44.	-521.	-.0300	-.0105	.0171	.0033	-.0026	-.0740	3232.		
.3310	621.	-732.	-393.	-720.	-46.	-546.	-.0280	-.0128	.0165	.0016	-.0021	-.0818	3376.		
.3320	586.	-782.	-372.	-714.	-45.	-525.	-.0256	-.0157	.0159	.0025	-.0012	-.0848	3313.		
.3330	486.	-818.	-318.	-673.	-39.	-461.	-.0228	-.0192	.0152	.0056	.0006	-.0831	3050.		
.3340	347.	-828.	-245.	-605.	-28.	-366.	-.0197	-.0232	.0146	.0102	.0032	-.0777	2643.		
.3350	195.	-802.	-157.	-517.	-19.	-251.	-.0165	-.0275	.0140	.0160	.0062	-.0695	2145.		
.3360	25.	-750.	-49.	-406.	-12.	-119.	-.0134	-.0319	.0133	.0231	.0094	-.0588	1579.		
.3370	-162.	-684.	83.	-273.	-7.	23.	-.0105	-.0364	.0126	.0318	.0127	-.0461	1022.		
.3380	-342.	-597.	227.	-128.	-8.	163.	-.0079	-.0406	.0117	.0414	.0157	-.0327	774.		
.3390	-487.	-491.	362.	14.	-15.	288.	-.0057	-.0445	.0106	.0507	.0187	-.0199	1076.		
.3400	-602.	-383.	475.	144.	-26.	393.	-.0040	-.0480	.0094	.0589	.0218	-.0082	1566.		
.3410	-697.	-285.	559.	257.	-37.	481.	-.0028	-.0511	.0082	.0653	.0258	.0024	2039.		
.3420	-764.	-186.	605.	343.	-49.	546.	-.0021	-.0536	.0069	.0693	.0305	.0114	2414.		
.3430	-786.	-83.	603.	394.	-63.	583.	-.0018	-.0555	.0058	.0703	.0359	.0181	2638.		
.3440	-760.	4.	557.	411.	-79.	588.	-.0019	-.0567	.0049	.0683	.0415	.0219	2696.		
.3450	-696.	62.	485.	406.	-95.	561.	-.0022	-.0574	.0042	.0641	.0471	.0223	2608.		
.3460	-594.	105.	400.	383.	-115.	503.	-.0028	-.0574	.0037	.0584	.0522	.0197	2400.		
.3470	-454.	145.	309.	344.	-143.	422.	-.0036	-.0569	.0034	.0516	.0562	.0142	2103.		
.3480	-290.	169.	217.	294.	-175.	325.	-.0044	-.0561	.0033	.0439	.0591	.0063	1763.		
.3490	-129.	158.	128.	240.	-.205.	221.	-.0051	-.0549	.0032	.0357	.0613	-.0032	1438.		
.3500	14.	118.	38.	181.	-229.	122.	-.0056	-.0535	.0031	.0269	.0531	-.0133	1180.		
.3510	126.	71.	-53.	116.	-247.	41.	-.0056	-.0520	.0029	.0178	.0645	-.0229	1032.		
.3520	191.	21.	-136.	53.	-259.	-13.	-.0052	-.0503	.0025	.0089	.0656	-.0309	989.		
.3530	195.	-46.	-200.	1.	-261.	-36.	-.0044	-.0486	.0018	.0012	.0563	-.0369	983.		
.3540	143.	-132.	-236.	-33.	-253.	-29.	-.0030	-.0468	.0009	-.0049	.0563	-.0409	960.		
.3550	53.	-219.	-237.	-45.	-241.	3.	-.0011	-.0451	-.0003	-.0086	.0651	-.0433	917.		
.3560	-67.	-294.	-195.	-31.	-229.	56.	.0010	-.0434	-.0017	-.0096	.0623	-.0440	886.		
.3570	-216.	-364.	-108.	13.	-214.	127.	.0032	-.0419	-.0033	-.0076	.0582	-.0430	932.		

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ADLPIPE STRESS ANALYSIS

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL						
---------	----	--------	---	----------	-----	----------	-----	------	----	--	--	--	--	--	--

.3490	-129.	158.	128.	240.	-205.	221.	-.051	-.0549	.0032	.0357	.0513	-.0032	1438.
.3500	14.	118.	38.	181.	-229.	122.	-.056	-.0535	.0031	.0269	.0531	-.0133	1180.
.3510	126.	71.	-53.	116.	-247.	41.	-.0056	-.0520	.0029	.0178	.0545	-.0229	1032.
.3520	191.	21.	-136.	53.	-259.	-13.	-.0052	-.0503	.0025	.0089	.0556	-.0309	989.
.3530	195.	-46.	-200.	1.	-261.	-36.	-.0044	-.0486	.0018	.0012	.0563	-.0369	983.
.3540	143.	-132.	-236.	-33.	-253.	-29.	-.0030	-.0468	.0009	-.0049	.0563	-.0409	960.
.3550	53.	-219.	-237.	-45.	-241.	3.	-.0011	-.0451	-.0003	-.0086	.0551	-.0433	917.
.3560	-67.	-294.	-195.	-31.	-229.	56.	.0010	-.0434	-.0017	-.0096	.0523	-.0440	886.
.3570	-216.	-364.	-108.	13.	-214.	127.	.0032	-.0419	-.0033	-.0076	.0582	-.0430	932.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3580	-382.	-432.	11.	81.	-197.	210.	.0054	-.0405	-.0050	-.0032	.0532	-.0408	1117.		
.3590	-545.	-489.	139.	159.	-177.	294.	.0073	-.0391	-.0067	.0025	.0477	-.0381	1412.		
.3600	-688.	-526.	255.	236.	-153.	372.	.0088	-.0378	-.0083	.0086	.0420	-.0352	1740.		
.3610	-813.	-542.	348.	306.	-121.	439.	.0097	-.0365	-.0097	.0145	.0368	-.0322	2049.		
.3620	-909.	-536.	409.	362.	-82.	490.	.0099	-.0350	-.0109	.0198	.0319	-.0293	2295.		
.3630	-954.	-505.	432.	399.	-38.	514.	.0095	-.0334	-.0116	.0239	.0273	-.0275	2433.		
.3640	-932.	-457.	419.	417.	9.	500.	.0083	-.0316	-.0117	.0267	.0224	-.0276	2431.		
.3650	-838.	-400.	380.	422.	57.	444.	.0064	-.0296	-.0112	.0284	.0162	-.0301	2297.		
.3660	-674.	-330.	326.	418.	102.	345.	.0039	-.0273	-.0100	.0293	.0108	-.0349	2060.		
.3670	-441.	-240.	264.	407.	141.	206.	.0008	-.0248	-.0082	.0292	.0038	-.0418	1781.		
.3680	-149.	-140.	190.	385.	173.	33.	-.0028	-.0220	-.0060	.0280	-.0037	-.0508	1581.		
.3690	178.	-49.	102.	354.	200.	-164.	-.0065	-.0190	-.0035	.0253	-.0112	-.0610	1637.		
.3700	515.	29.	-1.	312.	225.	-372.	-.0104	-.0158	-.0011	.0211	-.0179	-.0716	1998.		
.3710	838.	110.	-122.	257.	247.	-575.	-.0141	-.0124	-.0010	.0153	-.0236	-.0816	2524.		
.3720	1127.	194.	-256.	190.	265.	-757.	-.0176	-.0090	.0026	.0083	-.0281	-.0899	3078.		
.3730	1360.	263.	-392.	119.	281.	-908.	-.0204	-.0057	.0036	.0004	-.0314	-.0960	3577.		
.3740	1523.	300.	-515.	53.	297.	-1022.	-.0225	-.0028	.0040	-.0077	-.0336	-.0998	3977.		
.3750	1613.	313.	-611.	-1.	308.	-1094.	-.0236	-.0002	.0039	-.0153	-.0355	-.1011	4244.		
.3760	1647.	324.	-666.	-36.	312.	-1124.	-.0235	.0018	.0034	-.0218	-.0374	-.0999	4356.		
.3770	1609.	331.	-669.	-46.	308.	-1108.	-.0223	.0033	.0026	-.0265	-.0399	-.0960	4296.		
.3780	1502.	320.	-618.	-29.	299.	-1049.	-.0200	.0039	.0016	-.0292	-.0429	-.0895	4072.		
.3790	1341.	286.	-525.	8.	286.	-952.	-.0166	.0037	.0006	-.0304	-.0462	-.0812	3712.		
.3800	1142.	244.	-406.	57.	269.	-827.	-.0124	.0027	-.0005	-.0305	-.0496	-.0713	3253.		
.3810	915.	206.	-274.	111.	248.	-678.	-.0076	.0009	-.0016	-.0300	-.0526	-.0601	2725.		
.3820	667.	173.	-144.	160.	225.	-511.	-.0027	-.0014	-.0026	-.0292	-.0546	-.0480	2169.		
.3830	418.	146.	-31.	199.	201.	-340.	.0020	-.0043	-.0036	-.0288	-.0553	-.0356	1650.		
.3840	194.	126.	55.	220.	174.	-179.	.0063	-.0076	-.0043	-.0291	-.0546	-.0240	1242.		
.3850	15.	115.	111.	224.	143.	-40.	.0098	-.0112	-.0048	-.0303	-.0527	-.0140	1002.		
.3860	-112.	126.	140.	212.	105.	69.	.0123	-.0148	-.0050	-.0319	-.0496	-.0057	920.		
.3870	-176.	161.	149.	187.	60.	144.	.0137	-.0185	-.0049	-.0335	-.0455	.0005	911.		
.3880	-176.	204.	141.	152.	8.	183.	.0140	-.0221	-.0043	-.0351	-.0408	.0046	890.		
.3890	-119.	237.	119.	109.	-50.	185.	.0131	-.0255	-.0033	-.0367	-.0354	.0063	823.		
.3900	-15.	266.	83.	59.	-110.	154.	.0113	-.0283	-.0020	-.0379	-.0293	.0062	740.		
.3910	122.	314.	39.	5.	-170.	96.	.0085	-.0300	-.0005	-.0386	-.0225	.0050	731.		
.3920	272.	382.	-9.	-51.	-229.	25.	.0050	-.0307	.0011	-.0385	-.0153	.0038	881.		
.3930	411.	440.	-57.	-106.	-283.	-49.	.0011	-.0303	.0027	-.0378	-.0079	.0030	1145.		
.3940	525.	468.	-96.	-153.	-329.	-123.	-.0032	-.0289	.0043	-.0361	-.0004	.0028	1432.		
.3950	613.	477.	-119.	-187.	-366.	-192.	-.0075	-.0264	.0056	-.0332	.0070	.0032	1696.		

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL
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.3870	-176.	161.	149.	187.	60.	144.	.0137	-.0185	-.0049	-.0335	-.0455	.0005	911.
.3880	-176.	204.	141.	152.	3.	183.	.0140	-.0221	-.0043	-.0351	-.0408	.0046	890.
.3890	-119.	237.	119.	109.	-50.	185.	.0131	-.0255	-.0033	-.0367	-.0354	.0063	823.
.3900	-15.	266.	83.	59.	-110.	154.	.0113	-.0283	-.0020	-.0379	-.0293	.0062	740.
.3910	122.	314.	39.	5.	-170.	96.	.0085	-.0300	-.0005	-.0386	-.0225	.0050	731.
.3920	272.	382.	-9.	-51.	-229.	25.	.0050	-.0307	.0011	-.0385	-.0153	.0038	881.
.3930	411.	440.	-57.	-106.	-283.	-49.	.0011	-.0303	.0027	-.0378	-.0379	.0030	1145.
.3940	525.	468.	-96.	-153.	-329.	-123.	-.0032	-.0289	.0043	-.0361	-.0004	.0028	1432.
.3950	613.	477.	-119.	-187.	-366.	-192.	-.0075	-.0264	.0056	-.0332	.0070	.0032	1696.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3960	667.	482.	-117.	-205.	-399.	-250.	-.0119	-.0229	.0067	-.0288	.0136	.0046	1916.		
.3970	676.	478.	-81.	-202.	-428.	-288.	-.0160	-.0186	.0075	-.0227	.0193	.0075	2066.		
.3980	630.	445.	-9.	-175.	-449.	-304.	-.0198	-.0135	.0081	-.0150	.0239	.0117	2128.		
.3990	537.	380.	92.	-129.	-461.	-303.	-.0231	-.0077	.0083	-.0062	.0275	.0170	2114.		
.4000	410.	302.	207.	-72.	-464.	-286.	-.0258	-.0015	.0083	.0030	.0300	.0230	2054.		

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)		
.1350	1489.	227.	704.	847.	115.	-1123.	-.0093	.0367	.0041	-.0945	-.1109	-.0072	5270.		

SECTION	51	MEMBER	2	SEQUENCE	72	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.		
.0010	-0.	-0.	0.	-0.	0.	0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	0.		
.0020	-0.	-1.	0.	0.	0.	0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	1.		
.0030	1.	-1.	1.	0.	0.	-0.	-.0000	-.0000	-.0000	-.0000	-.0001	.0000	2.		
.0040	3.	-1.	3.	1.	0.	-1.	-.0000	.0000	-.0000	-.0000	-.0002	-.0000	7.		
.0050	9.	-0.	6.	3.	-0.	-4.	-.0001	.0000	-.0001	-.0000	-.0004	-.0001	19.		
.0060	20.	3.	10.	5.	-2.	-9.	-.0002	.0000	-.0002	.0000	-.0008	-.0004	41.		
.0070	35.	6.	14.	8.	-4.	-16.	-.0005	.0000	-.0005	-.0001	-.0013	-.0008	70.		
.0080	54.	5.	18.	12.	-5.	-25.	-.0009	-.0000	-.0009	-.0004	-.0020	-.0013	104.		
.0090	85.	5.	18.	14.	-0.	-38.	-.0016	-.0000	-.0014	-.0010	-.0028	-.0023	155.		
.0100	137.	16.	13.	15.	-17.	-61.	-.0027	.0001	-.0022	-.0017	-.0032	-.0041	244.		
.0110	214.	40.	2.	13.	-34.	-95.	-.0043	.0002	-.0032	-.0025	-.0028	-.0070	379.		
.0120	310.	78.	-17.	8.	-61.	-135.	-.0064	.0003	-.0044	-.0037	-.0014	-.0108	554.		
.0130	413.	123.	-45.	2.	-96.	-176.	-.0092	.0001	-.0058	-.0056	.0015	-.0156	746.		
.0140	503.	164.	-80.	-3.	-136.	-207.	-.0123	-.0003	-.0073	-.0083	.0058	-.0205	924.		
.0150	560.	193.	-123.	-7.	-176.	-222.	-.0153	-.0010	-.0090	-.0117	.0113	-.0243	1058.		
.0160	563.	212.	-168.	-10.	-210.	-215.	-.0178	-.0019	-.0106	-.0151	.0177	-.0257	1123.		
.0170	493.	215.	-208.	-14.	-231.	-179.	-.0191	-.0026	-.0120	-.0176	.0243	-.0232	1093.		
.0180	342.	188.	-230.	-21.	-234.	-110.	-.0188	-.0031	-.0126	-.0181	.0305	-.0162	969.		
.0190	121.	131.	-219.	-27.	-224.	-13.	-.0166	-.0033	-.0121	-.0156	.0366	-.0056	844.		

ADLPIPE PAGE 1973

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.06.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	51	MEMBER	2	SEQUENCE	72	LOCATION	END	TYPE	EL						
---------	----	--------	---	----------	----	----------	-----	------	----	--	--	--	--	--	--

.0100	137.	12.	13.	13.	-17.	-81.	-.0027	.0001	-.0022	-.0017	-.0032	-.0041	244.
.0110	214.	40.	2.	13.	-34.	-95.	-.0043	.0002	-.0032	-.0025	-.0028	-.0070	379.
.0120	310.	78.	-17.	0.	-61.	-135.	-.0064	.0003	-.0044	-.0037	-.0014	-.0108	554.
.0130	413.	123.	-45.	2.	-96.	-176.	-.0092	.0001	-.0058	-.0056	.0015	-.0156	746.
.0140	503.	164.	-80.	-3.	-136.	-207.	-.0123	-.0003	-.0073	-.0083	.0058	-.0205	924.
.0150	560.	193.	-123.	-7.	-176.	-222.	-.0153	-.0010	-.0090	-.0117	.0113	-.0243	1058.
.0160	563.	212.	-168.	-10.	-210.	-215.	-.0178	-.0019	-.0106	-.0151	.0177	-.0257	1123.
.0170	493.	215.	-208.	-14.	-231.	-179.	-.0191	-.0026	-.0120	-.0176	.0243	-.0232	1093.
.0180	342.	188.	-230.	-21.	-234.	-110.	-.0188	-.0031	-.0126	-.0181	.0305	-.0162	969.
.0190	121.	131.	-219.	-27.	-224.	-13.	-.0166	-.0033	-.0121	-.0156	.0366	-.0056	844.

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ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.06.

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

CONDITION 24

LOADS
SHOCK
PRESSURE

ENGLISH UNITS

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

SECTION	51	MEMBER	2	SEQUENCE	72	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(DEG)	(PSI)	
.0200	-150.	22.	-158.	-30.	-205.	107.	-.0123	-.0033	-.0100	-.0097	.0423	.0073	.0073	871.	
.0210	-423.	-110.	-40.	-22.	-194.	227.	-.0063	-.0029	-.0061	-.0001	.0480	.0201	.0201	1119.	
.0220	-595.	-122.	138.	4.	-226.	298.	.0002	-.0020	-.0010	.0146	.0550	.0286	.0286	1396.	
.0230	-700.	-76.	371.	54.	-285.	339.	.0068	-.0012	.0050	.0316	.0616	.0337	.0337	1667.	
.0240	-846.	-102.	617.	125.	-332.	403.	.0132	-.0015	.0108	.0459	.0645	.0391	.0391	2002.	
.0250	-1067.	-289.	817.	188.	-321.	504.	.0196	-.0027	.0157	.0543	.0622	.0459	.0459	2340.	
.0260	-1226.	-492.	909.	201.	-265.	575.	.0254	-.0030	.0188	.0589	.0576	.0499	.0499	2482.	
.0270	-1200.	-388.	859.	160.	-239.	540.	.0292	-.0011	.0194	.0633	.0564	.0478	.0478	2282.	
.0280	-1262.	-259.	714.	101.	-205.	528.	.0316	.0010	.0184	.0608	.0551	.0502	.0502	2147.	
.0290	-1556.	-506.	520.	31.	-72.	635.	.0343	.0014	.0180	.0451	.0490	.0613	.0613	2388.	
.0300	-1537.	-568.	225.	-81.	78.	612.	.0362	.0028	.0186	.0266	.0447	.0594	.0594	2324.	
.0310	-1160.	-353.	-150.	-223.	165.	417.	.0363	.0056	.0203	.0094	.0427	.0422	.0422	1867.	
.0320	-776.	-293.	-360.	-314.	222.	235.	.0350	.0075	.0239	-.0064	.0344	.0229	.0229	1681.	
.0330	-349.	-306.	-344.	-305.	248.	79.	.0319	.0077	.0286	-.0144	.0181	-.0009	-.0009	1497.	
.0340	284.	-172.	-212.	-233.	205.	-157.	.0264	.0077	.0318	-.0143	-.0013	-.0373	-.0373	1298.	
.0350	924.	-127.	-160.	-163.	153.	-415.	.0194	.0078	.0315	-.0146	-.0232	-.0766	-.0766	1760.	
.0360	1384.	-207.	-182.	-128.	175.	-600.	.0118	.0083	.0278	-.0177	-.0464	-.1050	-.1050	2383.	
.0370	1722.	-19.	-290.	-140.	225.	-735.	.0030	.0102	.0204	-.0207	-.0528	-.1198	-.1198	2918.	
.0380	1841.	382.	-571.	-197.	234.	-802.	-.0067	.0127	.0098	-.0293	-.0653	-.1195	-.1195	3205.	
.0390	1536.	428.	-980.	-269.	293.	-697.	-.0146	.0133	-.0012	-.0519	-.0582	-.1012	-.1012	2994.	
.0400	1052.	82.	-1348.	-327.	479.	-487.	-.0185	.0120	-.0094	-.0819	-.0506	-.0735	-.0735	2829.	
.0410	890.	125.	-1623.	-371.	622.	-424.	-.0204	.0122	-.0142	-.0995	-.0424	-.0539	-.0539	3132.	
.0420	874.	452.	-1649.	-344.	621.	-445.	-.0217	.0136	-.0156	-.0970	-.0414	-.0373	-.0373	3129.	
.0430	718.	565.	-1258.	-203.	565.	-370.	-.0216	.0135	-.0124	-.0731	-.0534	-.0204	-.0204	2634.	
.0440	696.	514.	-486.	63.	497.	-290.	-.0206	.0114	-.0066	-.0304	-.0760	-.0183	-.0183	2160.	
.0450	943.	489.	251.	335.	349.	-331.	-.0199	.0089	-.0017	.0167	-.0974	-.0354	-.0354	2190.	
.0460	1124.	450.	696.	510.	182.	-389.	-.0202	.0067	.0009	.0521	-.1107	-.0502	-.0502	2490.	
.0470	987.	415.	933.	578.	152.	-308.	-.0205	.0044	.0021	.0692	-.1160	-.0419	-.0419	2510.	
.0480	656.	514.	910.	528.	224.	-139.	-.0212	.0023	.0017	.0654	-.1084	-.0149	-.0149	2204.	
.0490	307.	638.	466.	344.	250.	-7.	-.0228	.0010	-.0015	.0401	-.0814	.0129	.0129	1587.	
.0500	-8.	564.	-170.	107.	248.	84.	-.0244	-.0003	-.0056	.0050	-.0428	.0323	.0323	1057.	
.0510	-218.	446.	-595.	-78.	267.	166.	-.0254	-.0023	-.0072	-.0209	-.0068	.0422	.0422	1211.	
.0520	-294.	458.	-716.	-192.	212.	226.	-.0263	-.0044	-.0053	-.0291	.0179	.0446	.0446	1359.	
.0530	-232.	482.	-601.	-238.	26.	225.	-.0268	-.0063	-.0008	-.0210	.0298	.0374	.0374	1227.	
.0540	56.	435.	-231.	-192.	-185.	128.	-.0261	-.0079	.0061	.0026	.0308	.0148	.0148	1105.	
.0550	511.	355.	298.	-77.	-357.	-33.	-.0240	-.0091	.0140	.0340	.0260	-.0185	-.0185	1368.	
.0560	824.	223.	716.	12.	-529.	-146.	-.0218	-.0100	.0204	.0576	.0228	-.0442	-.0442	2051.	
.0570	808.	101.	889.	10.	-684.	-143.	-.0203	-.0101	.0239	.0675	.0281	-.0505	-.0505	2607.	

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83/12/02.

18.29.06.

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

CONDITION 24

LOADS
SHOCK
PRESSURE

ENGLISH UNITS

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

SECTION 51 MEMBER 2 SEQUENCE 72 LOCATION END TYPE EL

.0870	1044.	476.	-87.	254.	333.	-246.	.0066	-.0141	-.0062	.0480	-.0617	-.0545	1813.
.0880	845.	395.	232.	338.	333.	-207.	.0123	-.0102	.0015	.0680	-.0707	-.0466	1932.
.0890	434.	252.	266.	319.	389.	-97.	.0178	-.0059	.0085	.0674	-.0660	-.0258	1914.
.0900	-41.	88.	106.	238.	514.	27.	.0229	-.0014	.0149	.0515	-.0500	.0001	2118.
.0910	-425.	-43.	-159.	127.	632.	106.	.0267	.0034	.0204	.0280	-.0293	.0221	2438.
.0920	-656.	-153.	-374.	35.	675.	128.	.0284	.0079	.0248	.0069	-.0134	.0350	2569.
.0930	-685.	-226.	-337.	26.	645.	91.	.0275	.0119	.0283	.0008	-.0089	.0344	2434.
.0940	-506.	-271.	-21.	117.	546.	-13.	.0240	.0154	.0301	.0128	-.0157	.0181	2087.
.0950	-207.	-361.	395.	254.	379.	-161.	.0182	.0183	.0291	.0328	-.0287	-.0088	1807.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.06.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	51	MEMBER	2	SEQUENCE	72	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ				DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)			(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0960	109.	-481.	730.	372.	193.	-314.	.0111	.0209	.0247	.0484	-.0408	-.0366	1956.		
.0970	341.	-535.	889.	429.	61.	-436.	.0034	.0239	.0173	.0523	-.0451	-.0549	2295.		
.0980	364.	-532.	797.	401.	-2.	-493.	-.0044	.0276	.0070	.0393	-.0369	-.0563	2374.		
.0990	155.	-554.	462.	298.	-24.	-474.	-.0116	.0317	-.0056	.0095	-.0176	-.0420	2092.		
.1000	-156.	-604.	46.	173.	-22.	-407.	-.0178	.0357	-.0194	-.0267	.0065	-.0211	1654.		
.1010	-467.	-664.	-248.	93.	-17.	-326.	-.0224	.0396	-.0330	-.0550	.0268	-.0020	1267.		
.1020	-779.	-747.	-313.	93.	-42.	-236.	-.0251	.0434	-.0453	-.0661	.0361	.0134	959.		
.1030	-1055.	-819.	-118.	171.	-103.	-141.	-.0254	.0467	-.0555	-.0571	.0306	.0249	912.		
.1040	-1224.	-836.	285.	300.	-167.	-58.	-.0229	.0493	-.0625	-.0317	.0128	.0317	1299.		
.1050	-1323.	-843.	729.	432.	-207.	14.	-.0174	.0507	-.0661	-.0007	-.0095	.0362	1789.		
.1060	-1442.	-880.	1038.	519.	-212.	99.	-.0097	.0507	-.0663	.0231	-.0274	.0428	2126.		
.1070	-1557.	-849.	1146.	534.	-181.	201.	-.0008	.0489	-.0633	.0337	-.0355	.0524	2234.		
.1080	-1646.	-782.	1075.	475.	-112.	327.	.0083	.0452	-.0573	.0300	-.0337	.0638	2192.		
.1090	-1673.	-765.	851.	358.	-35.	443.	.0165	.0400	-.0495	.0154	-.0245	.0720	2132.		
.1100	-1418.	-405.	524.	230.	-51.	431.	.0218	.0352	-.0421	.0021	-.0083	.0649	1833.		
.1110	-1016.	-54.	296.	142.	-103.	389.	.0249	.0288	-.0351	-.0065	.0034	.0484	1592.		
.1120	-605.	7.	225.	104.	-155.	376.	.0264	.0199	-.0294	-.0101	.0045	.0294	1566.		
.1130	-134.	58.	140.	73.	-241.	305.	.0258	.0117	-.0261	-.0084	.0022	.0057	1477.		
.1140	408.	348.	-54.	15.	-336.	163.	.0236	.0064	-.0251	-.0049	.0031	-.0209	1396.		
.1150	873.	712.	-318.	-81.	-381.	57.	.0211	.0032	-.0245	-.0082	.0083	-.0406	1468.		
.1160	1116.	924.	-666.	-210.	-387.	34.	.0190	.0009	-.0230	-.0244	.0208	-.0466	1648.		
.1170	1103.	935.	-1123.	-352.	-365.	53.	.0179	.0001	-.0199	-.0519	.0419	-.0411	1905.		
.1180	1092.	1140.	-1569.	-468.	-309.	24.	.0181	.0023	-.0142	-.0784	.0665	-.0349	2096.		
.1190	986.	1205.	-1788.	-517.	-175.	60.	.0213	.0051	-.0048	-.1003	.0769	-.0226	2048.		
.1200	798.	994.	-1686.	-469.	-36.	133.	.0267	.0080	.0067	-.1088	.0665	-.0060	1826.		
.1210	770.	895.	-1273.	-304.	17.	73.	.0318	.0138	.0179	-.0896	.0424	.0005	1167.		
.1220	783.	811.	-585.	-35.	37.	-41.	.0364	.0222	.0275	-.0490	.0076	-.0006	245.		
.1230	813.	797.	205.	258.	32.	-135.	.0394	.0317	.0345	-.0034	-.0302	-.0039	1093.		
.1240	656.	613.	821.	485.	17.	-139.	.0406	.0401	.0378	.0267	-.0600	.0018	1886.		
.1250	255.	293.	1069.	607.	48.	-96.	.0396	.0478	.0371	.0333	-.0699	.0197	2300.		
.1260	-189.	200.	928.	614.	156.	-76.	.0368	.0561	.0335	.0178	-.0577	.0437	2381.		
.1270	-715.	70.	511.	512.	340.	22.	.0340	.0625	.0286	-.0224	-.0377	.0775	2297.		
.1280	-1088.	-12.	13.	363.	477.	95.	.0306	.0669	.0231	-.0695	-.0181	.1082	2267.		
.1290	-1239.	-96.	-302.	281.	535.	59.	.0261	.0697	.0177	-.0998	-.0060	.1236	2267.		
.1300	-1125.	-143.	-271.	324.	539.	-72.	.0206	.0708	.0138	-.1032	-.0094	.1168	2361.		
.1310	-630.	28.	47.	449.	455.	-274.	.0144	.0692	.0114	-.0865	-.0312	.0865	2596.		
.1320	-29.	36.	479.	594.	324.	-431.	.0084	.0632	.0100	-.0669	-.0668	.0470	2995.		
.1330	589.	-5.	845.	727.	203.	-602.	.0024	.0548	.0084	-.0494	-.0988	.0047	3605.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.06.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION 51 MEMBER 2 SEQUENCE 72 LOCATION END TYPE FL

.1250	255.	243.	1069.	607.	48.	-96.	.0396	.0478	.0371	.0333	-.0699	.0197	2300.
.1260	-189.	200.	928.	614.	156.	-76.	.0368	.0561	.0335	.0178	-.0577	.0437	2381.
.1270	-715.	70.	511.	512.	340.	22.	.0340	.0625	.0286	-.0224	-.0377	.0775	2297.
.1280	-1088.	-12.	13.	363.	477.	95.	.0306	.0669	.0231	-.0695	-.0181	.1082	2267.
.1290	-1239.	-96.	-302.	281.	535.	59.	.0261	.0697	.0177	-.0998	-.0060	.1236	2267.
.1300	-1125.	-143.	-271.	324.	539.	-72.	.0206	.0703	.0138	-.1032	-.0094	.1168	2361.
.1310	-630.	38.	47.	449.	455.	-274.	.0144	.0692	.0114	-.0865	-.0312	.0865	2596.
.1320	-29.	36.	479.	594.	324.	-431.	.0084	.0632	.0100	-.0669	-.0668	.0470	2995.
.1330	589.	-5.	845.	727.	203.	-602.	.0024	.0548	.0084	-.0494	-.0988	.0047	3605.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.06.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	51	MEMBER	2	SEQUENCE	72	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1340	1109.	37.	962.	791.	157.	-766.	-.0031	.0459	.0059	-.0439	-.1158	-.0306	4153.		
.1350	1489.	227.	704.	709.	166.	-846.	-.0075	.0362	.0019	-.0623	-.1165	-.0499	4166.		
.1360	1738.	546.	131.	490.	179.	-840.	-.0108	.0253	-.0038	-.1000	-.1025	-.0537	3691.		
.1370	1641.	590.	-518.	252.	244.	-714.	-.0128	.0129	-.0103	-.1428	-.0806	-.0428	2969.		
.1380	1415.	575.	-1024.	88.	331.	-567.	-.0133	.0007	-.0169	-.1726	-.0588	-.0324	2471.		
.1390	1266.	578.	-1266.	1.	369.	-413.	-.0113	-.0109	-.0224	-.1853	-.0500	-.0286	2069.		
.1400	1247.	557.	-1179.	-9.	319.	-274.	-.0067	-.0214	-.0262	-.1783	-.0586	-.0302	1571.		
.1410	1297.	593.	-772.	85.	216.	-218.	-.0003	-.0289	-.0280	-.1469	-.0769	-.0353	1187.		
.1420	1153.	464.	-188.	252.	157.	-151.	.0082	-.0338	-.0278	-.1050	-.0995	-.0335	1244.		
.1430	953.	351.	320.	380.	129.	-55.	.0180	-.0367	-.0262	-.0709	-.1192	-.0263	1512.		
.1440	719.	210.	579.	393.	110.	76.	.0281	-.0380	-.0241	-.0562	-.1287	-.0140	1551.		
.1450	349.	-18.	572.	321.	121.	211.	.0368	-.0372	-.0223	-.0572	-.1210	.0032	1502.		
.1460	-99.	-170.	370.	201.	169.	306.	.0431	-.0331	-.0205	-.0668	-.0973	.0215	1504.		
.1470	-559.	-364.	44.	22.	246.	425.	.0482	-.0273	-.0177	-.0880	-.0713	.0405	1834.		
.1480	-768.	-441.	-317.	-194.	284.	477.	.0518	-.0199	-.0137	-.1120	-.0503	.0497	2195.		
.1490	-811.	-559.	-561.	-359.	300.	429.	.0536	-.0108	-.0080	-.1261	-.0372	.0476	2370.		
.1500	-764.	-753.	-571.	-419.	316.	301.	.0537	-.0001	-.0000	-.1240	-.0338	.0355	2259.		
.1510	-425.	-711.	-392.	-418.	265.	90.	.0515	.0114	.0097	-.1094	-.0386	.0101	1878.		
.1520	80.	-620.	-158.	-410.	141.	-120.	.0475	.0218	.0199	-.0944	-.0479	-.0217	1680.		
.1530	569.	-569.	26.	-387.	5.	-332.	.0414	.0312	.0290	-.0811	-.0510	-.0538	1902.		
.1540	834.	-667.	99.	-357.	-56.	-487.	.0337	.0397	.0361	-.0734	-.0434	-.0760	2265.		
.1550	976.	-667.	-20.	-390.	-76.	-573.	.0248	.0476	.0402	-.0758	-.0264	-.0843	2604.		
.1560	1142.	-318.	-324.	-499.	-138.	-636.	.0144	.0552	.0406	-.0849	-.0015	-.0812	3061.		
.1570	1064.	-87.	-649.	-598.	-178.	-604.	.0032	.0610	.0381	-.0943	.0253	-.0629	3240.		
.1580	866.	62.	-844.	-611.	-184.	-542.	-.0084	.0650	.0339	-.0926	.0508	-.0412	3124.		
.1590	800.	326.	-893.	-559.	-225.	-495.	-.0200	.0664	.0290	-.0786	.0697	-.0264	2912.		
.1600	771.	535.	-798.	-468.	-317.	-392.	-.0305	.0642	.0244	-.0580	.0767	-.0130	2567.		
.1610	657.	647.	-514.	-310.	-404.	-240.	-.0394	.0593	.0213	-.0272	.0747	.0040	2100.		
.1620	544.	889.	-93.	-92.	-463.	-125.	-.0467	.0537	.0198	.0156	.0711	.0216	1823.		
.1630	358.	1067.	291.	103.	-490.	23.	-.0512	.0469	.0194	.0538	.0653	.0445	1871.		
.1640	184.	1247.	542.	227.	-507.	199.	-.0532	.0388	.0195	.0802	.0591	.0702	2202.		
.1650	7.	1456.	717.	315.	-488.	366.	-.0536	.0301	.0197	.1008	.0557	.0956	2563.		
.1660	-350.	1447.	866.	399.	-410.	566.	-.0529	.0208	.0194	.1168	.0541	.1234	3004.		
.1670	-675.	1436.	957.	450.	-354.	742.	-.0522	.0116	.0179	.1282	.0530	.1450	3498.		
.1680	-857.	1426.	997.	451.	-338.	884.	-.0514	.0028	.0152	.1335	.0490	.1563	3915.		
.1690	-900.	1420.	1033.	435.	-343.	948.	-.0507	-.0046	.0114	.1375	.0442	.1558	4099.		
.1700	-959.	1274.	1058.	417.	-337.	956.	-.0503	-.0102	.0071	.1394	.0404	.1486	4093.		
.1710	-1044.	972.	1013.	354.	-317.	955.	-.0495	-.0142	.0030	.1321	.0363	.1382	3983.		

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION 51 MEMBER 2 SEQUENCE 72 LOCATION END TYPE EL

.1630	358.	1067.	291.	103.	-490.	23.	-.0512	.0469	.0194	.0538	.0553	.0445	1871.
.1640	184.	1247.	542.	227.	-507.	199.	-.0532	.0388	.0195	.0802	.0591	.0702	2202.
.1650	7.	1456.	717.	315.	-488.	366.	-.0536	.0301	.0197	.1008	.0557	.0956	2563.
.1660	-350.	1447.	866.	399.	-410.	566.	-.0529	.0208	.0194	.1168	.0541	.1234	3004.
.1670	-675.	1436.	957.	450.	-354.	742.	-.0522	.0116	.0179	.1282	.0530	.1450	3498.
.1680	-857.	1426.	997.	451.	-338.	884.	-.0514	.0028	.0152	.1335	.0490	.1563	3915.
.1690	-900.	1420.	1033.	435.	-343.	948.	-.0507	-.0046	.0114	.1375	.0442	.1558	4099.
.1700	-959.	1274.	1058.	417.	-337.	956.	-.0503	-.0102	.0071	.1394	.0404	.1486	4093.
.1710	-1044.	972.	1013.	354.	-317.	955.	-.0495	-.0142	.0030	.1321	.0363	.1382	3983.

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

SECTION	51	MEMBER	2	SEQUENCE	72	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)			(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.1720	-866.	918.	854.	219.	-334.	855.	-.0489	-.0158	-.0006	.1170	.0357	.1160	.0357	.1160	3525.
.1730	-668.	759.	610.	46.	-340.	729.	-.0480	-.0158	-.0032	.0929	.0384	.0893	.0384	.0893	3009.
.1740	-569.	400.	332.	-125.	-317.	590.	-.0468	-.0141	-.0044	.0644	.0449	.0608	.0449	.0608	2542.
.1750	-422.	96.	55.	-296.	-291.	412.	-.0454	-.0106	-.0042	.0359	.0525	.0283	.0525	.0283	2183.
.1760	-241.	-189.	-197.	-474.	-263.	246.	-.0431	-.0057	-.0023	.0067	.0550	-.0041	.0550	-.0041	2222.
.1770	-32.	-421.	-394.	-630.	-235.	58.	-.0400	.0007	.0006	-.0169	.0528	-.0362	.0528	-.0362	2518.
.1780	62.	-785.	-497.	-730.	-164.	-123.	-.0360	.0082	.0046	-.0323	.0456	-.0633	.0456	-.0633	2829.
.1790	168.	-1061.	-522.	-787.	-77.	-315.	-.0315	.0168	.0093	-.0390	.0350	-.0878	.0350	-.0878	3177.
.1800	294.	-1203.	-512.	-828.	-1.	-482.	-.0267	.0254	.0145	-.0420	.0214	-.1075	.0214	-.1075	3577.
.1810	249.	-1468.	-479.	-844.	92.	-557.	-.0219	.0328	.0199	-.0449	.0067	-.1157	.0067	-.1157	3790.
.1820	164.	-1629.	-421.	-816.	193.	-630.	-.0181	.0398	.0252	-.0416	-.0029	-.1188	-.0029	-.1188	3916.
.1830	56.	-1717.	-367.	-763.	299.	-683.	-.0153	.0457	.0299	-.0356	-.0086	-.1162	-.0086	-.1162	3983.
.1840	-43.	-1724.	-335.	-708.	382.	-692.	-.0134	.0499	.0335	-.0305	-.0135	-.1079	-.0135	-.1079	3963.
.1850	-136.	-1660.	-282.	-631.	443.	-669.	-.0129	.0521	.0357	-.0226	-.0183	-.0951	-.0183	-.0951	3812.
.1860	-279.	-1619.	-163.	-507.	505.	-620.	-.0140	.0526	.0361	-.0081	-.0231	-.0787	-.0231	-.0787	3534.
.1870	-344.	-1440.	-13.	-355.	531.	-590.	-.0169	.0517	.0343	.0135	-.0266	-.0644	.0135	-.0266	3245.
.1880	-385.	-1238.	114.	-215.	521.	-521.	-.0211	.0488	.0305	.0344	-.0309	-.0497	.0344	-.0309	2867.
.1890	-401.	-984.	203.	-94.	494.	-425.	-.0263	.0440	.0252	.0537	-.0334	-.0352	.0537	-.0334	2458.
.1900	-425.	-687.	240.	15.	472.	-326.	-.0323	.0380	.0192	.0713	-.0304	-.0209	.0713	-.0304	2143.
.1910	-514.	-484.	186.	88.	469.	-195.	-.0380	.0307	.0133	.0815	-.0232	-.0046	.0815	-.0232	1926.
.1920	-505.	-206.	38.	104.	453.	-81.	-.0431	.0227	.0083	.0844	-.0129	.0088	.0844	-.0129	1762.
.1930	-389.	124.	-137.	86.	425.	4.	-.0476	.0146	.0049	.0837	-.0017	.0175	.0837	-.0017	1617.
.1940	-250.	389.	-257.	73.	390.	64.	-.0515	.0066	.0032	.0843	.0082	.0215	.0843	.0082	1499.
.1950	-60.	595.	-292.	78.	330.	91.	-.0551	-.0011	.0030	.0883	.0149	.0177	.0883	.0149	1309.
.1960	253.	804.	-255.	82.	228.	81.	-.0585	-.0083	.0036	.0946	.0176	.0042	.0946	.0176	954.
.1970	622.	968.	-181.	79.	98.	50.	-.0616	-.0146	.0044	.1012	.0183	-.0158	.1012	.0183	506.
.1980	908.	1036.	-114.	69.	-31.	13.	-.0645	-.0195	.0044	.1061	.0212	-.0354	.1061	.0212	288.
.1990	1061.	1053.	-113.	33.	-143.	-10.	-.0668	-.0225	.0035	.1058	.0294	-.0490	.1058	.0294	549.
.2000	1079.	1061.	-219.	-55.	-232.	1.	-.0681	-.0237	.0017	.0963	.0431	-.0537	.0963	.0431	888.
.2010	938.	1010.	-419.	-182.	-289.	57.	-.0679	-.0233	-.0007	.0783	.0614	-.0488	.0783	.0614	1293.
.2020	640.	871.	-627.	-304.	-316.	137.	-.0662	-.0211	-.0029	.0586	.0826	-.0368	.0586	.0826	1716.
.2030	256.	682.	-743.	-386.	-333.	222.	-.0630	-.0173	-.0044	.0440	.1023	-.0218	.0440	.1023	2076.
.2040	-139.	475.	-697.	-413.	-364.	311.	-.0582	-.0126	-.0044	.0378	.1148	-.0069	.0378	.1148	2362.
.2050	-509.	246.	-467.	-375.	-413.	396.	-.0520	-.0072	-.0029	.0420	.1174	.0061	.0420	.1174	2555.
.2060	-847.	-9.	-78.	-271.	-462.	453.	-.0450	-.0011	-.0001	.0571	.1118	.0160	.0571	.1118	2619.
.2070	-1155.	-274.	-391.	-127.	-498.	482.	-.0376	.0053	.0035	.0790	.1008	.0238	.0790	.1008	2630.
.2080	-1437.	-519.	825.	7.	-519.	508.	-.0303	.0117	.0071	.0991	.0879	.0317	.0991	.0879	2711.
.2090	-1697.	-717.	1133.	101.	-524.	537.	-.0240	.0178	.0102	.1118	.0777	.0405	.1118	.0777	2825.

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18.29.06.

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

SECTION 51 MEMBER 2 SEQUENCE 72 LOCATION END TYPE EL

.2000	1077.	1081.	-277.	-55.	-232.	1.	-0.681	-0.0237	.0017	.0963	.0431	-.0537	888.
.2010	938.	1010.	-419.	-182.	-289.	57.	-.0679	-.0233	-.0007	.0783	.0614	-.0488	1293.
.2020	640.	871.	-627.	-304.	-316.	137.	-.0662	-.0211	-.0029	.0586	.0826	-.0368	1716.
.2030	256.	682.	-743.	-386.	-333.	222.	-.0630	-.0173	-.0044	.0440	.1023	-.0218	2076.
.2040	-139.	475.	-697.	-413.	-364.	311.	-.0582	-.0126	-.0044	.0378	.1148	-.0069	2362.
.2050	-509.	246.	-467.	-375.	-413.	396.	-.0520	-.0072	-.0029	.0420	.1174	.0061	2555.
.2060	-847.	-9.	-78.	-271.	-462.	453.	-.0450	-.0011	-.0001	.0571	.1118	.0160	2619.
.2070	-1155.	-274.	391.	-127.	-498.	482.	-.0376	.0053	.0035	.0790	.1008	.0238	2630.
.2080	-1437.	-519.	825.	7.	-519.	508.	-.0303	.0117	.0071	.0991	.0879	.0317	2711.
.2090	-1677.	-717.	1133.	101.	-524.	537.	-.0240	.0178	.0102	.1118	.0777	.0405	2825.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	51	MEMBER	2	SEQUENCE	72	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)			(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.2100	-1039.	-874.	1270.	147.	-502.	555.	-.0191	.0234	.0123	.1155	.0743	.0492	2845.		
.2110	-2150.	-1015.	1228.	145.	-452.	555.	-.0159	.0283	.0135	.1099	.0778	.0563	2727.		
.2120	-2275.	-1114.	1043.	95.	-393.	535.	-.0142	.0322	.0139	.0961	.0849	.0600	2503.		
.2130	-2262.	-1136.	793.	20.	-339.	482.	-.0138	.0352	.0142	.0792	.0912	.0583	2201.		
.2140	-2106.	-1108.	576.	-41.	-297.	380.	-.0145	.0371	.0148	.0656	.0937	.0493	1807.		
.2150	-1809.	-1069.	440.	-68.	-270.	228.	-.0159	.0378	.0157	.0581	.0902	.0322	1345.		
.2160	-1363.	-1006.	382.	-68.	-267.	37.	-.0175	.0373	.0170	.0559	.0804	.0073	1037.		
.2170	-815.	-897.	363.	-57.	-279.	-172.	-.0193	.0357	.0183	.0564	.0666	-.0225	1241.		
.2180	-285.	-778.	341.	-43.	-285.	-363.	-.0209	.0331	.0191	.0565	.0527	-.0513	1730.		
.2190	131.	-678.	267.	-40.	-266.	-509.	-.0223	.0296	.0190	.0526	.0421	-.0737	2148.		
.2200	425.	-575.	102.	-65.	-221.	-599.	-.0228	.0256	.0177	.0420	.0363	-.0878	2397.		
.2210	607.	-463.	-144.	-117.	-154.	-637.	-.0223	.0213	.0153	.0252	.0345	-.0933	2485.		
.2220	664.	-369.	-406.	-171.	-67.	-626.	-.0206	.0167	.0119	.0067	.0346	-.0909	2436.		
.2230	612.	-306.	-600.	-196.	27.	-577.	-.0177	.0122	.0082	-.0083	.0332	-.0827	2276.		
.2240	512.	-256.	-663.	-176.	106.	-501.	-.0137	.0076	.0045	-.0164	.0270	-.0725	2021.		
.2250	409.	-224.	-579.	-106.	157.	-412.	-.0089	.0031	.0011	-.0168	.0146	-.0631	1694.		
.2260	306.	-224.	-366.	11.	186.	-323.	-.0035	-.0010	-.0019	-.0103	-.0025	-.0554	1393.		
.2270	190.	-245.	-86.	155.	204.	-239.	.0021	-.0044	-.0047	-.0004	-.0214	-.0482	1308.		
.2280	56.	-262.	176.	289.	223.	-152.	.0076	-.0070	-.0074	-.0071	-.0393	-.0395	1477.		
.2290	-92.	-263.	336.	383.	249.	-63.	.0126	-.0087	-.0103	.0071	-.0535	-.0285	1723.		
.2300	-247.	-255.	361.	428.	290.	19.	.0167	-.0095	-.0133	-.0016	-.0520	-.0164	1932.		
.2310	-388.	-247.	263.	431.	341.	79.	.0195	-.0094	-.0164	-.0176	-.0647	-.0055	2073.		
.2320	-478.	-235.	84.	403.	386.	115.	.0209	-.0086	-.0189	-.0384	-.0638	.0021	2126.		
.2330	-468.	-196.	-121.	357.	411.	116.	.0211	-.0073	-.0204	-.0604	-.0624	.0038	2077.		
.2340	-334.	-125.	-304.	313.	413.	69.	.0201	-.0053	-.0201	-.0799	-.0522	-.0020	1953.		
.2350	-89.	-48.	-433.	284.	400.	-26.	.0184	-.0029	-.0178	-.0949	-.0643	-.0149	1834.		
.2360	246.	25.	-512.	269.	375.	-154.	.0165	-.0002	-.0132	-.1060	-.0686	-.0328	1816.		
.2370	638.	122.	-557.	258.	341.	-301.	.0146	.0029	-.0068	-.1141	-.0738	-.0529	1951.		
.2380	1031.	248.	-589.	247.	305.	-446.	.0127	.0063	.0009	-.1199	-.0774	-.0719	2219.		
.2390	1362.	371.	-622.	236.	275.	-571.	.0110	.0097	.0091	-.1242	-.0777	-.0867	2525.		
.2400	1601.	473.	-666.	222.	255.	-659.	.0095	.0130	.0172	-.1276	-.0744	-.0958	2764.		
.2410	1752.	565.	-714.	207.	238.	-708.	.0083	.0160	.0243	-.1295	-.0680	-.0990	2893.		
.2420	1810.	551.	-738.	201.	221.	-719.	.0072	.0187	.0300	-.1281	-.0596	-.0960	2907.		
.2430	1773.	726.	-706.	215.	200.	-697.	.0063	.0213	.0341	-.1213	-.0506	-.0872	2824.		
.2440	1663.	798.	-604.	252.	168.	-648.	.0056	.0235	.0365	-.1083	-.0421	-.0738	2671.		
.2450	1504.	861.	-437.	309.	123.	-576.	.0049	.0251	.0373	-.0903	-.0346	-.0573	2482.		
.2460	1293.	891.	-221.	382.	71.	-480.	.0046	.0260	.0365	-.0691	-.0282	-.0386	2305.		
.2470	1033.	879.	22.	463.	22.	-366.	.0045	.0261	.0345	-.0467	-.0223	-.0180	2206.		

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION 51 MEMBER 2 SEQUENCE 72 LOCATION END TYPE EL

.2390	1362.	371.	-622.	236.	275.	-571.	.0110	.0097	.0091	-.1242	-.0777	-.0867	2525.
.2400	1601.	473.	-666.	222.	255.	-659.	.0095	.0130	.0172	-.1276	-.0744	-.0958	2764.
.2410	1752.	565.	-714.	207.	238.	-708.	.0033	.0160	.0243	-.1295	-.0680	-.0990	2893.
.2420	1810.	651.	-738.	201.	221.	-719.	.0072	.0187	.0300	-.1281	-.0596	-.0960	2907.
.2430	1773.	726.	-706.	215.	200.	-697.	.0063	.0213	.0341	-.1213	-.0506	-.0872	2824.
.2440	1663.	798.	-604.	252.	168.	-648.	.0056	.0235	.0365	-.1083	-.0421	-.0738	2671.
.2450	1504.	861.	-437.	309.	123.	-576.	.0049	.0251	.0373	-.0903	-.0346	-.0573	2482.
.2460	1293.	891.	-221.	382.	71.	-480.	.0046	.0260	.0365	-.0691	-.0282	-.0386	2305.
.2470	1033.	879.	22.	463.	22.	-366.	.0045	.0261	.0345	-.0467	-.0223	-.0180	2206.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	51	MEMBER	2	SEQUENCE	72	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)									(PSI)
.2480	751.	859.	263.	541.	-24.	-244.	.0047	.0254	.0313	-.0253	-.0164	.0035	2219.		
.2490	467.	853.	474.	603.	-70.	-121.	.0052	.0242	.0270	-.0064	-.0103	.0254	2310.		
.2500	176.	830.	651.	645.	-108.	4.	.0061	.0222	.0216	.0090	-.0045	.0469	2441.		
.2510	-120.	766.	794.	672.	-135.	128.	.0074	.0196	.0155	.0209	.0004	.0669	2602.		
.2520	-392.	675.	905.	682.	-156.	241.	.0093	.0164	.0087	.0293	.0038	.0835	2763.		
.2530	-612.	580.	983.	674.	-175.	333.	.0117	.0129	.0015	.0345	.0051	.0957	2882.		
.2540	-770.	484.	1035.	648.	-193.	402.	.0146	.0092	-.0056	.0365	.0041	.1032	2936.		
.2550	-871.	377.	1062.	608.	-209.	444.	.0181	.0054	-.0124	.0354	.0014	.1059	2915.		
.2560	-917.	256.	1053.	553.	-222.	461.	.0221	.0016	-.0186	.0301	-.0023	.1038	2812.		
.2570	-906.	124.	1000.	481.	-230.	457.	.0266	-.0022	-.0240	.0201	-.0066	.0972	2621.		
.2580	-836.	5.	900.	392.	-233.	431.	.0313	-.0060	-.0285	.0060	-.0111	.0866	2344.		
.2590	-719.	-89.	760.	291.	-233.	386.	.0361	-.0095	-.0322	-.0111	-.0152	.0731	2002.		
.2600	-569.	-173.	591.	184.	-228.	329.	.0408	-.0130	-.0350	-.0301	-.0194	.0576	1643.		
.2610	-391.	-260.	408.	78.	-219.	264.	.0453	-.0166	-.0372	-.0501	-.0241	.0409	1313.		
.2620	-189.	-332.	220.	-20.	-208.	191.	.0497	-.0201	-.0388	-.0697	-.0293	.0233	1059.		
.2630	21.	-375.	38.	-105.	-194.	117.	.0536	-.0234	-.0399	-.0875	-.0348	.0065	930.		
.2640	213.	-394.	-121.	-172.	-175.	49.	.0572	-.0264	-.0404	-.1027	-.0408	-.0077	933.		
.2650	372.	-392.	-255.	-219.	-151.	-3.	.0603	-.0291	-.0406	-.1149	-.0470	-.0182	993.		
.2660	496.	-374.	-365.	-246.	-120.	-42.	.0629	-.0315	-.0404	-.1241	-.0529	-.0248	1032.		
.2670	580.	-345.	-451.	-251.	-80.	-65.	.0652	-.0335	-.0400	-.1299	-.0582	-.0276	1011.		
.2680	619.	-294.	-511.	-236.	-32.	-71.	.0671	-.0350	-.0392	-.1321	-.0529	-.0261	926.		
.2690	608.	-227.	-535.	-202.	22.	-56.	.0684	-.0361	-.0381	-.1304	-.0673	-.0198	787.		
.2700	548.	-165.	-517.	-148.	82.	-24.	.0692	-.0368	-.0366	-.1248	-.0716	-.0096	636.		
.2710	460.	-111.	-460.	-74.	144.	16.	.0695	-.0369	-.0349	-.1156	-.0758	.0027	608.		
.2720	376.	-27.	-376.	13.	204.	53.	.0691	-.0362	-.0330	-.1033	-.0796	.0153	787.		
.2730	305.	98.	-275.	105.	256.	85.	.0679	-.0349	-.0310	-.0888	-.0828	.0275	1082.		
.2740	229.	213.	-162.	198.	305.	121.	.0660	-.0335	-.0290	-.0733	-.0853	.0400	1431.		
.2750	143.	283.	-57.	284.	354.	159.	.0634	-.0322	-.0270	-.0581	-.0865	.0523	1795.		
.2760	80.	347.	11.	355.	402.	184.	.0601	-.0308	-.0253	-.0444	-.0858	.0622	2115.		
.2770	69.	450.	32.	400.	446.	190.	.0564	-.0291	-.0237	-.0331	-.0832	.0690	2347.		
.2780	98.	565.	17.	421.	484.	183.	.0521	-.0275	-.0221	-.0244	-.0796	.0731	2491.		
.2790	151.	644.	-18.	424.	516.	163.	.0475	-.0260	-.0205	-.0177	-.0753	.0746	2566.		
.2800	245.	696.	-67.	414.	538.	122.	.0425	-.0247	-.0188	-.0126	-.0709	.0717	2576.		
.2810	415.	763.	-129.	389.	549.	52.	.0374	-.0232	-.0172	-.0089	-.0670	.0630	2520.		
.2820	647.	845.	-194.	351.	541.	-36.	.0322	-.0219	-.0157	-.0062	-.0641	.0494	2413.		
.2830	885.	894.	-250.	306.	516.	-129.	.0269	-.0208	-.0147	-.0039	-.0617	.0339	2292.		
.2840	1089.	889.	-300.	255.	482.	-216.	.0217	-.0201	-.0144	-.0019	-.0591	.0182	2190.		
.2850	1265.	866.	-367.	193.	443.	-295.	.0170	-.0193	-.0149	-.0014	-.0554	.0027	2115.		

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION 51 MEMBER 2 SEQUENCE 72 LOCATION END TYPE EL

.2770	69.	450.	32.	400.	446.	190.	.0564	-.0291	-.0237	-.0331	-.0832	.0690	2347.
.2780	98.	565.	17.	421.	484.	183.	.0521	-.0275	-.0221	-.0244	-.0796	.0731	2491.
.2790	151.	644.	-18.	424.	516.	163.	.0475	-.0260	-.0205	-.0177	-.0753	.0746	2566.
.2800	245.	696.	-67.	414.	538.	122.	.0425	-.0247	-.0188	-.0126	-.0709	.0717	2576.
.2810	415.	763.	-129.	399.	549.	52.	.0374	-.0232	-.0172	-.0089	-.0670	.0630	2520.
.2820	647.	845.	-194.	351.	541.	-36.	.0322	-.0219	-.0157	-.0062	-.0641	.0494	2413.
.2830	885.	894.	-250.	306.	516.	-129.	.0269	-.0208	-.0147	-.0039	-.0617	.0339	2292.
.2840	1089.	889.	-300.	255.	482.	-216.	.0217	-.0201	-.0144	-.0019	-.0591	.0182	2190.
.2850	1265.	866.	-367.	193.	447.	-295.	.0170	-.0193	-.0149	-.0014	-.0554	.0027	2115.

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	51	MEMBER	2	SEQUENCE	72	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ									
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2860	1404.	846.	-463.	113.	402.	-357.	.0131	-.0185	-.0164	-.0031	-.0504	-.0114	2051.		
.2870	1457.	797.	-572.	22.	360.	-390.	.0103	-.0175	-.0185	-.0066	-.0441	-.0213	1984.		
.2880	1388.	695.	-661.	-64.	325.	-385.	.0086	-.0164	-.0211	-.0101	-.0369	-.0255	1896.		
.2890	1221.	562.	-712.	-139.	296.	-346.	.0085	-.0151	-.0237	-.0125	-.0301	-.0248	1778.		
.2900	1002.	420.	-715.	-201.	265.	-285.	.0099	-.0136	-.0262	-.0131	-.0250	-.0212	1635.		
.2910	739.	250.	-652.	-240.	232.	-206.	.0129	-.0119	-.0283	-.0108	-.0226	-.0156	1464.		
.2920	421.	44.	-509.	-251.	199.	-111.	.0171	-.0101	-.0299	-.0043	-.0229	-.0075	1267.		
.2930	69.	-171.	-303.	-241.	167.	-5.	.0222	-.0082	-.0310	.0055	-.0254	.0025	1093.		
.2940	-285.	-377.	-80.	-226.	131.	105.	.0278	-.0062	-.0319	.0158	-.0288	.0133	1051.		
.2950	-627.	-585.	117.	-219.	98.	212.	.0333	-.0042	-.0327	.0242	-.0315	.0242	1196.		
.2960	-953.	-790.	261.	-227.	72.	309.	.0384	-.0021	-.0334	.0294	-.0315	.0347	1455.		
.2970	-1248.	-957.	334.	-256.	54.	390.	.0426	.0000	-.0341	.0304	-.0283	.0447	1752.		
.2980	-1481.	-1069.	332.	-311.	35.	454.	.0454	.0021	-.0344	.0267	-.0222	.0534	2058.		
.2990	-1632.	-1149.	269.	-384.	13.	494.	.0470	.0037	-.0345	.0195	-.0144	.0593	2338.		
.3000	-1690.	-1212.	170.	-462.	-8.	500.	.0471	.0050	-.0339	.0111	-.0056	.0608	2542.		
.3010	-1643.	-1230.	59.	-535.	-33.	469.	.0458	.0060	-.0327	.0034	.0029	.0575	2659.		
.3020	-1493.	-1180.	-47.	-603.	-67.	411.	.0432	.0066	-.0306	-.0025	.0100	.0505	2735.		
.3030	-1274.	-1084.	-137.	-660.	-108.	340.	.0397	.0067	-.0277	-.0063	.0156	.0419	2800.		
.3040	-1023.	-971.	-215.	-702.	-144.	260.	.0353	.0064	-.0240	-.0079	.0206	.0329	2845.		
.3050	-759.	-835.	-296.	-729.	-170.	179.	.0304	.0058	-.0198	-.0081	.0261	.0245	2874.		
.3060	-495.	-651.	-386.	-750.	-188.	107.	.0251	.0049	-.0153	-.0078	.0321	.0183	2914.		
.3070	-265.	-430.	-473.	-760.	-200.	60.	.0196	.0037	-.0105	-.0067	.0305	.0164	2944.		
.3080	-107.	-213.	-536.	-749.	-203.	42.	.0141	.0020	-.0057	-.0035	.0451	.0196	2902.		
.3090	-13.	-11.	-562.	-711.	-196.	48.	.0085	.0001	-.0010	.0026	.0509	.0265	2759.		
.3100	48.	190.	-546.	-648.	-187.	71.	.0032	-.0019	.0033	.0116	.0550	.0353	2532.		
.3110	77.	391.	-477.	-562.	-180.	112.	-.0017	-.0040	.0073	.0238	.0564	.0457	2244.		
.3120	50.	571.	-350.	-452.	-175.	170.	-.0063	-.0060	.0109	.0391	.0555	.0584	1916.		
.3130	-34.	722.	-178.	-323.	-165.	240.	-.0106	-.0077	.0140	.0564	.0528	.0727	1624.		
.3140	-143.	847.	3.	-194.	-153.	313.	-.0143	-.0091	.0167	.0730	.0491	.0869	1491.		
.3150	-261.	938.	166.	-78.	-139.	385.	-.0174	-.0103	.0188	.0867	.0449	.1000	1557.		
.3160	-395.	984.	304.	22.	-120.	451.	-.0201	-.0111	.0203	.0969	.0408	.1115	1744.		
.3170	-537.	993.	417.	104.	-96.	505.	-.0225	-.0115	.0213	.1039	.0370	.1206	1956.		
.3180	-654.	976.	499.	159.	-75.	539.	-.0245	-.0115	.0218	.1073	.0328	.1258	2117.		
.3190	-719.	923.	546.	184.	-59.	548.	-.0263	-.0113	.0219	.1067	.0279	.1253	2169.		
.3200	-730.	823.	561.	185.	-47.	524.	-.0278	-.0108	.0216	.1029	.0224	.1182	2081.		
.3210	-688.	695.	550.	163.	-36.	467.	-.0291	-.0100	.0210	.0965	.0166	.1050	1851.		
.3220	-591.	565.	508.	114.	-32.	385.	-.0303	-.0089	.0205	.0871	.0107	.0866	1503.		
.3230	-447.	426.	431.	39.	-34.	285.	-.0312	-.0080	.0199	.0744	.0053	.0644	1082.		

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION 51 MEMBER 2 SEQUENCE 72 LOCATION END TYPE EL

.3140	-121.	847.	194.	-194.	-78.	-139.	385.	-.0174	-.0103	.0188	.0867	.0449	.0869	1491.
.3150	-261.	938.	166.	-78.	-139.	-120.	451.	-.0201	-.0111	.0203	.0969	.0408	.1115	1744.
.3160	-395.	984.	304.	22.	-120.	-96.	505.	-.0225	-.0115	.0213	.1039	.0370	.1206	1956.
.3170	-537.	993.	417.	104.	-96.	-75.	539.	-.0245	-.0115	.0218	.1073	.0328	.1258	2117.
.3180	-654.	976.	499.	159.	-75.	-59.	548.	-.0263	-.0113	.0219	.1067	.0279	.1253	2169.
.3190	-719.	923.	546.	184.	-59.	-47.	524.	-.0278	-.0108	.0216	.1029	.0224	.1182	2081.
.3200	-730.	823.	561.	185.	-47.	-36.	467.	-.0291	-.0100	.0210	.0965	.0166	.1050	1851.
.3210	-688.	695.	550.	163.	-36.	-32.	385.	-.0303	-.0089	.0205	.0871	.0107	.0866	1503.
.3220	-591.	565.	508.	114.	-32.	-34.	285.	-.0312	-.0080	.0199	.0744	.0053	.0644	1082.
.3230	-447.	426.	431.	39.	-34.									

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CONDITION 24

LOADS
SHOCK
PRESSURE

ENGLISH UNITS

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

SECTION	51	MEMBER	2	SEQUENCE	72	LOCATION	END	TYPE	EL	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)		
.3240	-275.	260.	321.	-56.	-37.	171.	-.0317	-.0073	.0194	.0588	.0013	.0390	687.	
.3250	-89.	76.	182.	-162.	-35.	48.	-.0319	-.0069	.0190	.0415	-.0009	.0118	644.	
.3260	102.	-97.	29.	-275.	-35.	-73.	-.0317	-.0067	.0186	.0235	-.0017	-.0154	1069.	
.3270	280.	-249.	-118.	-386.	-39.	-180.	-.0310	-.0071	.0182	.0064	-.0020	-.0405	1599.	
.3280	425.	-393.	-239.	-484.	-44.	-269.	-.0299	-.0079	.0178	-.0020	-.0019	-.0624	2073.	
.3290	527.	-535.	-324.	-557.	-45.	-339.	-.0284	-.0093	.0172	-.0184	-.0014	-.0805	2441.	
.3300	594.	-653.	-376.	-606.	-46.	-386.	-.0264	-.0111	.0166	-.0249	-.0009	-.0946	2687.	
.3310	621.	-732.	-393.	-631.	-48.	-403.	-.0241	-.0135	.0159	-.0277	-.0004	-.1033	2800.	
.3320	586.	-782.	-372.	-629.	-47.	-387.	-.0216	-.0164	.0153	-.0266	.0005	-.1054	2761.	
.3330	486.	-818.	-318.	-597.	-41.	-341.	-.0190	-.0199	.0148	-.0220	.0024	-.1013	2572.	
.3340	347.	-828.	-245.	-543.	-30.	-272.	-.0162	-.0238	.0144	-.0147	.0050	-.0922	2271.	
.3350	195.	-802.	-177.	-472.	-21.	-187.	-.0135	-.0280	.0141	-.0054	.0081	-.0795	1896.	
.3360	25.	-750.	-49.	-383.	-13.	-89.	-.0110	-.0323	.0138	.0061	.0112	-.0636	1468.	
.3370	-162.	-684.	83.	-276.	-8.	15.	-.0087	-.0366	.0135	.0201	.0142	-.0453	1033.	
.3380	-342.	-597.	227.	-160.	-6.	118.	-.0068	-.0406	.0132	.0354	.0169	-.0265	743.	
.3390	-487.	-491.	362.	-46.	-11.	211.	-.0053	-.0444	.0126	.0504	.0193	-.0088	807.	
.3400	-602.	-383.	475.	60.	-21.	291.	-.0042	-.0478	.0118	.0638	.0220	.0071	1112.	
.3410	-697.	-285.	559.	155.	-31.	357.	-.0035	-.0508	.0109	.0748	.0254	.0211	1457.	
.3420	-764.	-186.	605.	231.	-42.	406.	-.0032	-.0531	.0098	.0824	.0298	.0327	1751.	
.3430	-786.	-83.	603.	280.	-57.	436.	-.0033	-.0550	.0088	.0856	.0347	.0409	1945.	
.3440	-760.	4.	557.	305.	-74.	443.	-.0035	-.0562	.0078	.0847	.0401	.0448	2025.	
.3450	-696.	62.	485.	312.	-91.	425.	-.0039	-.0569	.0068	.0806	.0454	.0442	1998.	
.3460	-594.	105.	400.	305.	-113.	386.	-.0043	-.0570	.0061	.0743	.0502	.0393	1884.	
.3470	-454.	145.	309.	282.	-141.	331.	-.0048	-.0566	.0055	.0662	.0530	.0307	1707.	
.3480	-290.	169.	217.	250.	-173.	264.	-.0052	-.0558	.0050	.0569	.0562	.0190	1503.	
.3490	-129.	158.	128.	212.	-203.	191.	-.0054	-.0547	.0045	.0467	.0580	.0055	1308.	
.3500	14.	118.	38.	171.	-227.	121.	-.0054	-.0535	.0040	.0359	.0596	-.0085	1154.	
.3510	126.	71.	-53.	125.	-247.	62.	-.0050	-.0521	.0033	.0244	.0609	-.0213	1060.	
.3520	191.	21.	-136.	79.	-260.	23.	-.0042	-.0505	.0024	.0132	.0620	-.0314	1019.	
.3530	195.	-46.	-200.	40.	-264.	3.	-.0031	-.0488	.0014	.0035	.0528	-.0384	997.	
.3540	143.	-132.	-236.	14.	-259.	3.	-.0015	-.0471	.0002	-.0038	.0631	-.0423	967.	
.3550	53.	-219.	-237.	4.	-248.	20.	.0004	-.0455	-.0011	-.0081	.0621	-.0435	930.	
.3560	-67.	-294.	-195.	12.	-236.	53.	.0025	-.0438	-.0026	-.0087	.0596	-.0422	905.	
.3570	-216.	-364.	-108.	40.	-222.	98.	.0046	-.0422	-.0040	-.0051	.0557	-.0386	918.	
.3580	-382.	-432.	11.	86.	-204.	151.	.0066	-.0407	-.0054	.0017	.0508	-.0333	1001.	
.3590	-545.	-489.	139.	141.	-183.	206.	.0084	-.0394	-.0067	.0102	.0453	-.0273	1155.	
.3600	-688.	-526.	255.	197.	-157.	258.	.0097	-.0380	-.0080	.0191	.0398	-.0214	1344.	
.3610	-813.	-542.	348.	249.	-124.	302.	.0104	-.0366	-.0091	.0275	.0348	-.0157	1533.	

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS
SHOCK
PRESSURE

ENGLISH UNITS

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

SECTION 51 MEMBER 2 SEQUENCE 72 LOCATION END TYPE EL

.3520	191.	-21.	-138.	19.	-280.	25.	-.0042	-.0505	.0024	.0132	.0520	-.0314	1019.
.3530	195.	-46.	-200.	40.	-264.	3.	-.0031	-.0488	.0014	.0035	.0528	-.0384	997.
.3540	143.	-132.	-236.	14.	-259.	3.	-.0015	-.0471	.0002	-.0038	.0531	-.0423	967.
.3550	53.	-219.	-237.	4.	-248.	20.	.0004	-.0455	-.0011	-.0081	.0521	-.0435	930.
.3560	-67.	-294.	-195.	12.	-236.	53.	.0025	-.0438	-.0026	-.0087	.0596	-.0422	905.
.3570	-216.	-364.	-108.	40.	-222.	98.	.0046	-.0422	-.0040	-.0051	.0557	-.0386	918.
.3580	-382.	-432.	11.	86.	-204.	151.	.0066	-.0407	-.0054	.0017	.0508	-.0333	1001.
.3590	-545.	-489.	139.	141.	-183.	206.	.0084	-.0394	-.0067	.0102	.0453	-.0273	1155.
.3600	-688.	-526.	255.	197.	-157.	258.	.0097	-.0380	-.0080	.0191	.0398	-.0214	1344.
.3610	-813.	-542.	348.	249.	-124.	302.	.0104	-.0366	-.0091	.0275	.0348	-.0157	1533.

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CONDITION 24

LOADS
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ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	EL							STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	
.3620	-909.	-536.	409.	293.	-85.	334.	.0105	-.0350	-.0099	.0348	.0303	-.0109	1690.
.3630	-954.	-505.	432.	325.	-41.	343.	.0099	-.0334	-.0104	.0403	.0261	-.0081	1785.
.3640	-932.	-457.	419.	345.	6.	357.	.0088	-.0316	-.0104	.0436	.0216	-.0086	1802.
.3650	-838.	-400.	380.	357.	54.	297.	.0071	-.0296	-.0098	.0453	.0166	-.0131	1744.
.3660	-674.	-330.	326.	362.	101.	227.	.0048	-.0274	-.0086	.0459	.0108	-.0215	1639.
.3670	-441.	-240.	264.	361.	142.	129.	.0022	-.0249	-.0067	.0453	.0040	-.0336	1525.
.3680	-149.	-140.	190.	351.	176.	9.	-.0008	-.0222	-.0045	.0430	-.0035	-.0490	1468.
.3690	178.	-49.	102.	335.	206.	-129.	-.0039	-.0193	-.0021	.0390	-.0110	-.0666	1546.
.3700	515.	29.	-1.	312.	234.	-275.	-.0071	-.0163	.0001	.0331	-.0177	-.0851	1780.
.3710	838.	110.	-122.	278.	258.	-418.	-.0102	-.0130	.0020	.0252	-.0234	-.1027	2107.
.3720	1127.	194.	-256.	235.	277.	-548.	-.0131	-.0097	.0033	.0155	-.0278	-.1180	2455.
.3730	1360.	263.	-392.	189.	293.	-657.	-.0156	-.0065	.0039	.0049	-.0310	-.1299	2776.
.3740	1523.	300.	-515.	146.	307.	-740.	-.0173	-.0036	.0039	-.0057	-.0330	-.1380	3041.
.3750	1618.	313.	-611.	110.	317.	-795.	-.0183	-.0011	.0034	-.0154	-.0347	-.1422	3223.
.3760	1647.	324.	-666.	86.	320.	-819.	-.0183	.0009	.0026	-.0232	-.0365	-.1422	3299.
.3770	1609.	331.	-669.	76.	315.	-811.	-.0172	.0024	.0016	-.0283	-.0389	-.1377	3261.
.3780	1502.	320.	-618.	83.	306.	-772.	-.0152	.0031	.0006	-.0304	-.0419	-.1291	3115.
.3790	1341.	286.	-525.	103.	293.	-705.	-.0122	.0029	-.0004	-.0302	-.0453	-.1171	2877.
.3800	1142.	244.	-406.	131.	276.	-617.	-.0085	.0020	-.0014	-.0285	-.0488	-.1025	2568.
.3810	915.	206.	-274.	159.	256.	-509.	-.0044	.0003	-.0024	-.0260	-.0519	-.0857	2209.
.3820	667.	173.	-144.	185.	233.	-389.	-.0001	-.0019	-.0033	-.0234	-.0540	-.0672	1828.
.3830	418.	146.	-31.	202.	207.	-265.	.0040	-.0047	-.0042	-.0215	-.0547	-.0483	1465.
.3840	194.	126.	55.	208.	179.	-146.	.0076	-.0079	-.0049	-.0210	-.0541	-.0306	1159.
.3850	15.	115.	111.	201.	146.	-41.	.0106	-.0114	-.0055	-.0219	-.0522	-.0152	940.
.3860	-112.	126.	140.	183.	108.	44.	.0127	-.0149	-.0058	-.0239	-.0492	-.0028	809.
.3870	-176.	161.	149.	156.	62.	105.	.0137	-.0185	-.0057	-.0263	-.0453	.0064	740.
.3880	-176.	204.	141.	122.	9.	142.	.0138	-.0221	-.0052	-.0291	-.0410	.0119	700.
.3890	-119.	237.	119.	82.	-48.	155.	.0128	-.0255	-.0044	-.0322	-.0360	.0137	677.
.3900	-15.	266.	83.	38.	-108.	142.	.0110	-.0283	-.0033	-.0352	-.0305	.0124	680.
.3910	122.	314.	39.	-8.	-167.	109.	.0083	-.0301	-.0019	-.0377	-.0243	.0090	745.
.3920	272.	382.	-9.	-56.	-224.	65.	.0050	-.0308	-.0004	-.0396	-.0178	.0049	897.
.3930	411.	440.	-57.	-103.	-278.	14.	.0011	-.0305	.0012	-.0409	-.0110	.0012	1108.
.3940	525.	468.	-96.	-144.	-323.	-38.	-.0031	-.0291	.0027	-.0409	-.0039	-.0020	1327.
.3950	613.	477.	-119.	-173.	-359.	-91.	-.0074	-.0266	.0041	-.0392	.0029	-.0044	1527.
.3960	667.	482.	-117.	-191.	-391.	-138.	-.0118	-.0231	.0053	-.0354	.0091	-.0055	1704.
.3970	676.	478.	-81.	-195.	-418.	-175.	-.0160	-.0186	.0064	-.0292	.0142	-.0043	1841.
.3980	630.	445.	-9.	-182.	-438.	-199.	-.0200	-.0135	.0072	-.0205	.0184	-.0010	1919.
.3990	537.	380.	92.	-154.	-448.	-213.	-.0235	-.0077	.0078	-.0101	.0217	.0040	1938.

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS
SHOCK
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ENGLISH UNITS

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

SECTION 51 MEMBER 2 SEQUENCE 72 LOCATION END TYPE EL

.3910	122.	314.	39.	-8.	-167.	109.	.0083	-.0301	-.0019	-.0377	-.0243	.0090	745.
.3920	272.	382.	-9.	-56.	-224.	65.	.0050	-.0308	-.0004	-.0396	-.0178	.0049	897.
.3930	411.	440.	-57.	-103.	-278.	14.	.0011	-.0305	.0012	-.0409	-.0110	.0012	1108.
.3940	525.	468.	-96.	-144.	-323.	-38.	-.0031	-.0291	.0027	-.0409	-.0039	-.0020	1327.
.3950	613.	477.	-119.	-173.	-359.	-91.	-.0074	-.0266	.0041	-.0392	.0029	-.0044	1527.
.3960	667.	482.	-117.	-191.	-391.	-138.	-.0118	-.0231	.0053	-.0354	.0091	-.0055	1704.
.3970	676.	478.	-81.	-195.	-418.	-175.	-.0160	-.0186	.0064	-.0292	.0142	-.0043	1841.
.3980	630.	445.	-9.	-182.	-438.	-199.	-.0200	-.0135	-.0072	-.0205	.0184	-.0010	1919.
.3990	537.	380.	92.	-154.	-448.	-213.	-.0235	-.0077	.0078	-.0101	.0217	.0040	1938.

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

SECTION	51	MEMBER	2	SEQUENCE	72	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.4000	410.	302.	207.	-117.	-450.	-218.	-.0265	-.0013	.0082	.0012	.0239	.0103	1916.		

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)
.1350	1489.	227.	704.	709.	166.	-846.	-.0075	.0362	.0019	-.0623	-.1165	-.0499	4166.

SECTION	52	MEMBER	1	SEQUENCE	72	LOCATION	BEG	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.		
.0010	0.	0.	0.	0.	-0.	-0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	0.		
.0020	0.	0.	-0.	-0.	-0.	-0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	1.		
.0030	-0.	1.	-1.	-0.	-0.	0.	-.0000	-.0000	-.0000	-.0000	-.0001	.0000	2.		
.0040	-2.	1.	-2.	-1.	-0.	1.	-.0000	.0000	-.0000	-.0000	-.0002	-.0000	7.		
.0050	-8.	0.	-5.	-3.	0.	4.	-.0001	.0000	-.0001	-.0000	-.0004	-.0001	19.		
.0060	-18.	-3.	-8.	-5.	2.	9.	-.0002	.0000	-.0002	.0000	-.0008	-.0004	41.		
.0070	-32.	-6.	-12.	-8.	4.	16.	-.0005	.0000	-.0005	-.0001	-.0013	-.0008	70.		
.0080	-49.	-6.	-14.	-12.	5.	25.	-.0009	-.0000	-.0009	-.0004	-.0020	-.0013	104.		
.0090	-77.	-8.	-13.	-14.	8.	38.	-.0016	-.0000	-.0014	-.0010	-.0028	-.0023	155.		
.0100	-127.	-19.	-7.	-15.	17.	61.	-.0027	.0001	-.0022	-.0017	-.0032	-.0041	244.		
.0110	-202.	-41.	4.	-13.	34.	95.	-.0043	.0002	-.0032	-.0025	-.0028	-.0070	379.		
.0120	-298.	-77.	23.	-8.	61.	135.	-.0064	.0003	-.0044	-.0037	-.0014	-.0108	554.		
.0130	-405.	-119.	50.	-2.	96.	176.	-.0092	.0001	-.0058	-.0056	.0015	-.0156	746.		
.0140	-502.	-159.	84.	3.	136.	207.	-.0123	-.0003	-.0073	-.0083	.0058	-.0205	924.		
.0150	-568.	-189.	123.	7.	176.	222.	-.0153	-.0010	-.0090	-.0117	.0113	-.0243	1058.		
.0160	-583.	-210.	162.	10.	210.	215.	-.0178	-.0019	-.0106	-.0151	.0177	-.0257	1123.		
.0170	-522.	-214.	195.	14.	231.	179.	-.0191	-.0026	-.0120	-.0176	.0243	-.0232	1093.		
.0180	-374.	-190.	211.	21.	234.	110.	-.0188	-.0031	-.0126	-.0181	.0305	-.0162	969.		
.0190	-150.	-137.	197.	27.	224.	13.	-.0166	-.0033	-.0121	-.0156	.0366	-.0056	844.		
.0200	136.	-36.	141.	30.	205.	-107.	-.0123	-.0033	-.0100	-.0097	.0423	.0073	871.		
.0210	431.	86.	32.	22.	194.	-227.	-.0063	-.0029	-.0061	-.0001	.0480	.0201	1119.		
.0220	610.	113.	-138.	-4.	226.	-298.	.0002	-.0020	-.0010	.0146	.0550	.0286	1396.		
.0230	711.	90.	-361.	-54.	285.	-339.	.0068	-.0012	.0050	.0316	.0616	.0337	1667.		

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CONDITION 24
LOADS
SHOCK
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ENGLISH UNITS

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

SECTION	52	MEMBER	1	SEQUENCE	72	LOCATION	BEG	TYPE	RU
---------	----	--------	---	----------	----	----------	-----	------	----

.0150	-568.	-189.	123.	7.	176.	222.	-.0153	-.0010	-.0090	-.0117	.0113	-.0243	1058.
.0160	-583.	-210.	162.	10.	210.	215.	-.0178	-.0019	-.0106	-.0151	.0177	-.0257	1123.
.0170	-522.	-214.	195.	14.	231.	179.	-.0191	-.0026	-.0120	-.0176	.0243	-.0232	1093.
.0180	-374.	-190.	211.	21.	234.	110.	-.0198	-.0031	-.0126	-.0181	.0305	-.0162	969.
.0190	-150.	-137.	197.	27.	224.	13.	-.0166	-.0033	-.0121	-.0156	.0366	-.0056	844.
.0200	134.	-36.	141.	30.	205.	-107.	-.0123	-.0033	-.0100	-.0097	.0423	.0073	871.
.0210	431.	86.	32.	22.	194.	-227.	-.0063	-.0029	-.0061	-.0001	.0480	.0201	1119.
.0220	610.	113.	-138.	-4.	226.	-298.	.0002	-.0020	-.0010	.0146	.0550	.0286	1396.
.0230	711.	90.	-361.	-54.	285.	-339.	.0068	-.0012	.0050	.0316	.0516	.0337	1667.

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CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	52	MEMBER	1	SEQUENCE	72	LOCATION	BEG	TYPE	RU					STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ		(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)		
.0240	849.	122.	-596.	-125.	332.	-403.	.0132	-.0015	.0108	.0459	.0645	.0391		2002.
.0250	1077.	285.	-781.	-188.	321.	-504.	.0196	-.0027	.0157	.0543	.0622	.0459		2340.
.0260	1257.	464.	-861.	-201.	265.	-575.	.0254	-.0030	.0188	.0589	.0576	.0499		2482.
.0270	1220.	397.	-829.	-160.	239.	-540.	.0292	-.0011	.0194	.0630	.0564	-.0478		2282.
.0280	1252.	303.	-718.	-101.	205.	-528.	.0316	.0010	.0184	.0608	.0551	.0502		2147.
.0290	1558.	506.	-534.	-31.	72.	-635.	.0343	.0014	.0180	.0451	.0490	.0613		2388.
.0300	1554.	557.	-244.	81.	-78.	-612.	.0362	.0028	.0186	.0266	.0447	.0594		2324.
.0310	1166.	388.	112.	223.	-165.	-417.	.0363	.0056	.0203	.0094	.0427	.0422		1867.
.0320	790.	337.	352.	314.	-222.	-235.	.0350	.0075	.0239	-.0064	.0344	.0229		1681.
.0330	379.	321.	364.	305.	-248.	-79.	.0319	.0077	.0286	-.0144	.0181	-.0009		1497.
.0340	-268.	179.	262.	233.	-205.	157.	.0264	.0077	.0318	-.0143	-.0013	-.0373		1298.
.0350	-921.	129.	210.	163.	-153.	415.	.0194	.0078	.0315	-.0146	-.0232	-.0766		1760.
.0360	-1366.	185.	237.	128.	-175.	600.	.0118	.0083	.0278	-.0177	-.0464	-.1050		2383.
.0370	-1705.	7.	342.	140.	-225.	735.	.0030	.0102	.0204	-.0207	-.0628	-.1198		2918.
.0380	-1874.	-348.	577.	197.	-234.	802.	-.0067	.0127	.0098	-.0293	-.0653	-.1195		3205.
.0390	-1602.	-397.	931.	269.	-293.	697.	-.0146	.0133	-.0012	-.0519	-.0582	-.1012		2994.
.0400	-1076.	-122.	1296.	327.	-479.	487.	-.0185	.0120	-.0094	-.0819	-.0506	-.0735		2829.
.0410	-890.	-164.	1570.	371.	-622.	424.	-.0204	.0122	-.0142	-.0995	-.0424	-.0539		3132.
.0420	-888.	-434.	1582.	344.	-621.	445.	-.0217	.0136	-.0156	-.0970	-.0414	-.0373		3129.
.0430	-731.	-537.	1213.	203.	-565.	370.	-.0216	.0135	-.0124	-.0731	-.0534	-.0204		2634.
.0440	-681.	-517.	505.	-63.	-497.	290.	-.0206	.0114	-.0066	-.0304	-.0760	-.0183		2160.
.0450	-921.	-502.	-208.	-335.	-349.	331.	-.0199	.0089	-.0017	.0167	-.0974	-.0354		2190.
.0460	-1121.	-452.	-679.	-510.	-182.	389.	-.0202	.0067	.0009	.0521	-.1107	-.0502		2490.
.0470	-978.	-423.	-908.	-578.	-152.	308.	-.0205	.0044	.0021	.0692	-.1160	-.0419		2510.
.0480	-635.	-531.	-858.	-528.	-224.	139.	-.0212	.0023	.0017	.0654	-.1084	-.0149		2204.
.0490	-302.	-639.	-445.	-344.	-250.	7.	-.0228	.0010	-.0015	.0401	-.0814	.0129		1587.
.0500	-1.	-555.	131.	-107.	-248.	-84.	-.0244	-.0003	-.0056	.0050	-.0428	.0323		1057.
.0510	219.	-443.	544.	78.	-267.	-166.	-.0254	-.0023	-.0072	-.0209	-.0068	.0422		1211.
.0520	294.	-462.	677.	192.	-212.	-226.	-.0263	-.0044	-.0053	-.0291	.0179	.0446		1359.
.0530	212.	-488.	563.	238.	-26.	-225.	-.0268	-.0063	-.0008	-.0210	.0298	.0374		1227.
.0540	-79.	-440.	211.	192.	185.	-128.	-.0261	-.0079	.0061	.0026	.0308	.0148		1105.
.0550	-512.	-359.	-275.	77.	357.	33.	-.0240	-.0091	.0140	.0340	.0260	-.0185		1368.
.0560	-810.	-233.	-671.	-12.	529.	146.	-.0218	-.0100	.0204	.0576	.0228	-.0442		2051.
.0570	-804.	-119.	-849.	-10.	684.	143.	-.0203	-.0101	.0239	.0675	.0281	-.0505		2607.
.0580	-555.	-102.	-806.	71.	729.	47.	-.0190	-.0090	.0249	.0658	.0456	-.0410		2738.
.0590	-99.	-35.	-530.	212.	668.	-118.	-.0167	-.0074	.0234	.0498	.0736	-.0214		2653.
.0600	523.	219.	-91.	397.	589.	-328.	-.0129	-.0055	.0204	.0214	.1060	.0054		2921.
.0610	1136.	489.	256.	549.	518.	-522.	-.0076	-.0028	.0182	-.0015	.1334	.0347		3424.

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S/RV PIPING KEWAUNEE GKM08F 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 52 MEMBER 1 SEQUENCE 72 LOCATION BEG TYPE RU

.0520	294.	-462.	677.	192.	-212.	-226.	-.0263	-.0044	-.0053	-.0291	.0179	.0446	1359.
.0530	212.	-438.	563.	238.	-26.	-225.	-.0268	-.0063	-.0008	-.0210	.0298	.0374	1227.
.0540	-79.	-440.	211.	192.	185.	-128.	-.0261	-.0079	.0061	.0026	.0308	.0148	1105.
.0550	-512.	-359.	-275.	77.	357.	33.	-.0240	-.0091	.0140	.0340	.0260	-.0185	1368.
.0560	-810.	-273.	-671.	-12.	529.	146.	-.0218	-.0100	.0204	.0576	.0228	-.0442	2051.
.0570	-804.	-119.	-849.	-10.	684.	143.	-.0203	-.0101	.0239	.0675	.0281	-.0505	2607.
.0580	-555.	-102.	-306.	71.	729.	47.	-.0190	-.0090	.0249	.0658	.0456	-.0410	2738.
.0590	-99.	-35.	-530.	212.	668.	-118.	-.0167	-.0074	.0234	.0498	.0736	-.0214	2653.
.0600	523.	219.	-91.	397.	589.	-328.	-.0129	-.0055	.0204	.0214	.1060	.0054	2921.
.0610	1136.	489.	256.	549.	518.	-522.	-.0076	-.0028	.0182	-.0015	.1334	.0347	3424.

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S/RV PIPING KEWAUNEE GK008F 2 RUP DISK
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CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	52	MEMBER	1	SEQUENCE	72	LOCATION	BEG	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0620	1588.	564.	290.	592.	452.	-643.	-.0011	.0015	.0189	-.0021	.1476	.0609	3673.		
.0630	1887.	578.	12.	520.	434.	-701.	.0060	.0065	.0225	.0179	.1438	.0793	3639.		
.0640	1996.	706.	-496.	355.	484.	-700.	.0131	.0106	.0277	.0505	.1233	.0826	3443.		
.0650	1851.	884.	-1163.	110.	559.	-621.	.0191	.0134	.0327	.0917	.0931	.0675	3145.		
.0660	1608.	1024.	-1806.	-153.	623.	-506.	.0227	.0158	.0354	.1317	.0630	.0456	3049.		
.0670	1497.	1112.	-2168.	-319.	663.	-436.	.0234	.0183	.0337	.1545	.0414	.0334	3192.		
.0680	1480.	1059.	-2103.	-315.	645.	-410.	.0214	.0211	.0272	.1528	.0340	.0340	3085.		
.0690	1476.	876.	-1621.	-162.	539.	-390.	.0175	.0237	.0168	.1278	.0430	.0414	2555.		
.0700	1587.	789.	-847.	67.	363.	-402.	.0128	.0148	.0044	.0835	.0633	.0535	2040.		
.0710	1733.	812.	-13.	301.	183.	-442.	.0080	.0239	-.0073	.0324	.0844	.0648	2111.		
.0720	1603.	667.	614.	473.	69.	-413.	.0034	.0218	-.0157	-.0054	.0969	.0631	2359.		
.0730	1120.	348.	887.	527.	43.	-278.	-.0006	.0189	-.0195	-.0188	.0939	.0437	2230.		
.0740	533.	151.	808.	438.	61.	-107.	-.0030	.0145	-.0191	-.0114	.0714	.0124	1699.		
.0750	-102.	88.	471.	245.	78.	73.	-.0033	.0088	-.0157	.0104	.0326	-.0267	997.		
.0760	-830.	-57.	50.	32.	89.	276.	-.0025	.0030	-.0117	.0390	-.0117	-.0680	1089.		
.0770	-1435.	-267.	-240.	-121.	88.	444.	-.0017	-.0020	-.0094	.0616	-.0493	-.0983	1749.		
.0780	-1697.	-418.	-258.	-174.	32.	506.	-.0016	-.0062	-.0100	.0671	-.0717	-.1082	2002.		
.0790	-1726.	-571.	32.	-114.	-91.	485.	-.0023	-.0099	-.0134	.0529	-.0743	-.1034	1890.		
.0800	-1661.	-746.	583.	41.	-231.	423.	-.0038	-.0133	-.0190	.0211	-.0586	-.0919	1808.		
.0810	-1437.	-789.	1231.	224.	-357.	314.	-.0057	-.0168	-.0249	-.0200	-.0333	-.0743	1960.		
.0820	-1127.	-728.	1722.	351.	-463.	188.	-.0072	-.0195	-.0289	-.0534	-.0101	-.0543	2279.		
.0830	-970.	-773.	1883.	380.	-512.	134.	-.0077	-.0205	-.0296	-.0644	.0026	-.0421	2431.		
.0840	-1039.	-875.	1706.	311.	-470.	163.	-.0068	-.0199	-.0272	-.0524	.0002	-.0408	2189.		
.0850	-1100.	-812.	1259.	150.	-391.	206.	-.0038	-.0187	-.0220	-.0247	-.0167	-.0453	1742.		
.0860	-1094.	-624.	655.	-67.	-347.	233.	.0010	-.0170	-.0145	.0124	-.0410	-.0514	1580.		
.0870	-1044.	-491.	97.	-254.	-333.	246.	.0066	-.0141	-.0062	.0480	-.0617	-.0545	1813.		
.0880	-845.	-398.	-221.	-330.	-333.	207.	.0123	-.0102	.0015	.0680	-.0707	-.0456	1932.		
.0890	-429.	-253.	-258.	-319.	-389.	97.	.0178	-.0059	.0085	.0674	-.0660	-.0258	1914.		
.0900	60.	-89.	-91.	-238.	-514.	-27.	.0229	-.0014	.0149	.0515	-.0500	.0001	2118.		
.0910	457.	48.	176.	-127.	-632.	-106.	.0267	.0034	.0204	.0280	-.0293	.0221	2438.		
.0920	693.	165.	385.	-35.	-675.	-128.	.0284	.0079	.0248	.0069	-.0134	.0350	2569.		
.0930	723.	239.	357.	-26.	-645.	-91.	.0275	.0119	.0283	.0008	-.0089	.0344	2434.		
.0940	538.	286.	61.	-117.	-546.	13.	.0240	.0154	.0301	.0128	-.0157	.0181	2087.		
.0950	225.	371.	-347.	-254.	-379.	161.	.0182	.0183	.0291	.0328	-.0287	-.0088	1807.		
.0960	-104.	481.	-690.	-372.	-193.	314.	.0111	.0209	.0247	.0484	-.0408	-.0366	1956.		
.0970	-344.	530.	-853.	-429.	-61.	436.	.0034	.0239	.0173	.0523	-.0451	-.0549	2295.		
.0980	-376.	534.	-768.	-401.	2.	493.	-.0044	.0276	.0070	.0393	-.0369	-.0563	2374.		
.0990	-177.	561.	-451.	-298.	24.	474.	-.0116	.0317	-.0056	.0095	-.0176	-.0420	2092.		

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

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PRESSURE

ENGLISH UNITS

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

.0910	457.	48.	176.	-127.	-632.	-106.	.0267	.0034	.0204	.0280	-.0293	.0221	2438.
.0920	693.	165.	385.	-35.	-675.	-128.	.0284	.0079	.0248	.0069	-.0134	.0350	2569.
.0930	723.	239.	357.	-26.	-645.	-91.	.0275	.0119	.0283	.0008	-.0089	.0344	2434.
.0940	538.	286.	61.	-117.	-546.	13.	.0249	.0154	.0301	.0128	-.0157	.0181	2087.
.0950	225.	371.	-347.	-254.	-379.	161.	.0182	.0183	.0291	.0328	-.0287	-.0088	1807.
.0960	-104.	481.	-690.	-372.	-193.	314.	.0111	.0209	.0247	.0484	-.0408	-.0366	1956.
.0970	-344.	530.	-853.	-429.	-61.	436.	.0034	.0239	.0173	.0523	-.0451	-.0549	2295.
.0980	-376.	534.	-768.	-401.	2.	493.	-.0044	.0276	.0070	.0393	-.0369	-.0563	2374.
.0990	-177.	561.	-451.	-298.	24.	474.	-.0116	.0317	-.0056	.0095	-.0176	-.0420	2092.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	52	MEMBER	1	SEQUENCE	72	LOCATION	BEG	TYPE	RU							
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1000	127.	612.	-57.	-173.	22.	407.		-.0173	.0357	-.0194	-.0267	.0065	-.0211	1654.		
.1010	435.	673.	224.	-93.	17.	326.		-.0224	.0396	-.0330	-.0550	.0268	-.0020	1267.		
.1020	740.	759.	273.	-93.	42.	236.		-.0251	.0434	-.0453	-.0661	.0361	.0134	959.		
.1030	1007.	836.	64.	-171.	103.	141.		-.0254	.0467	-.0555	-.0571	.0306	.0249	912.		
.1040	1175.	858.	-341.	-300.	167.	58.		-.0229	.0493	-.0625	-.0317	.0128	.0317	1299.		
.1050	1286.	870.	-783.	-432.	207.	-14.		-.0174	.0507	-.0661	-.0007	-.0095	.0362	1789.		
.1060	1421.	910.	-1091.	-519.	212.	-99.		-.0097	.0507	-.0663	.0231	-.0274	.0428	2126.		
.1070	1554.	883.	-1193.	-534.	181.	-201.		-.0008	.0489	-.0633	.0337	-.0355	.0524	2234.		
.1080	1665.	802.	-1098.	-475.	112.	-327.		.0083	.0452	-.0573	.0300	-.0337	.0638	2192.		
.1090	1721.	755.	-843.	-358.	35.	-443.		.0165	.0400	-.0495	.0154	-.0245	.0720	2132.		
.1100	1451.	432.	-517.	-230.	51.	-431.		.0218	.0352	-.0421	.0021	-.0083	.0649	1833.		
.1110	1038.	102.	-280.	-142.	103.	-389.		.0249	.0288	-.0351	-.0065	.0034	.0484	1592.		
.1120	641.	-13.	-182.	-104.	155.	-376.		.0264	.0199	-.0294	-.0101	.0045	.0294	1566.		
.1130	166.	-109.	-100.	-73.	241.	-305.		.0258	.0117	-.0261	-.0084	.0022	.0057	1477.		
.1140	-401.	-380.	62.	-15.	336.	-163.		.0236	.0064	-.0251	-.0049	.0031	-.0209	1396.		
.1150	-877.	-720.	306.	81.	381.	-57.		.0211	.0032	-.0245	-.0082	.0083	-.0406	1468.		
.1160	-1128.	-944.	644.	210.	387.	-34.		.0190	.0009	-.0230	-.0244	.0208	-.0466	1648.		
.1170	-1127.	-976.	1079.	352.	365.	-53.		.0179	.0001	-.0199	-.0519	.0419	-.0411	1905.		
.1180	-1147.	-1141.	1505.	468.	309.	-24.		.0181	.0023	-.0142	-.0784	.0665	-.0349	2096.		
.1190	-1026.	-1198.	1748.	517.	175.	-60.		.0213	.0051	-.0048	-.1003	.0769	-.0226	2048.		
.1200	-795.	-1036.	1690.	469.	36.	-133.		.0267	.0080	.0067	-.1088	.0665	-.0060	1826.		
.1210	-761.	-938.	1294.	304.	-17.	-73.		.0316	.0138	.0179	-.0896	.0424	.0005	1167.		
.1220	-767.	-821.	620.	35.	-37.	41.		.0364	.0222	.0275	-.0490	.0076	-.0006	245.		
.1230	-788.	-772.	-151.	-258.	-32.	135.		.0394	.0317	.0345	-.0034	-.0302	-.0039	1093.		
.1240	-623.	-601.	-761.	-485.	-17.	139.		.0406	.0401	.0378	.0267	-.0500	.0018	1886.		
.1250	-231.	-299.	-1026.	-607.	-48.	96.		.0396	.0478	.0371	.0333	-.0699	.0197	2300.		
.1260	185.	-169.	-910.	-614.	-156.	76.		.0368	.0561	.0335	.0178	-.0577	.0437	2381.		
.1270	720.	-31.	-500.	-512.	-340.	-22.		.0340	.0625	.0286	-.0224	-.0377	.0775	2297.		
.1280	1107.	40.	-14.	-363.	-477.	-95.		.0306	.0669	.0231	-.0695	-.0181	.1082	2267.		
.1290	1253.	123.	281.	-281.	-535.	-59.		.0261	.0697	.0177	-.0998	-.0060	.1236	2267.		
.1300	1133.	191.	245.	-324.	-539.	72.		.0206	.0708	.0138	-.1032	-.0094	.1168	2361.		
.1310	624.	50.	-65.	-449.	-455.	274.		.0144	.0692	.0114	-.0865	-.0312	.0865	2596.		
.1320	27.	9.	-480.	-594.	-324.	431.		.0084	.0632	.0100	-.0669	-.0668	.0470	2995.		
.1330	-597.	17.	-831.	-727.	-203.	602.		.0024	.0548	.0084	-.0494	-.0988	.0047	3605.		
.1340	-1127.	-23.	-938.	-791.	-157.	766.		-.0031	.0459	.0059	-.0439	-.1158	-.0306	4153.		
.1350	-1505.	-201.	-677.	-709.	-166.	846.		-.0075	.0362	.0019	-.0623	-.1165	-.0499	4166.		
.1360	-1760.	-515.	-117.	-490.	-179.	840.		-.0108	.0253	-.0038	-.1000	-.1025	-.0537	3691.		
.1370	-1666.	-586.	517.	-252.	-244.	714.		-.0128	.0129	-.0103	-.1428	-.0806	-.0428	2969.		

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION 52 MEMBER 1 SEQUENCE 72 LOCATION BEG TYPE RU

.1290	1253.	123.	281.	-281.	-535.	-59.	.0261	.0697	.0177	-.0998	-.0060	.1236	2267.
.1300	1133.	191.	245.	-324.	-539.	72.	.0206	.0708	.0138	-.1032	-.0094	.1168	2361.
.1310	624.	50.	-65.	-449.	-455.	274.	.0144	.0692	.0114	-.0865	-.0312	.0865	2596.
.1320	27.	9.	-480.	-594.	-324.	431.	.0084	.0632	.0100	-.0669	-.0668	.0470	2995.
.1330	-597.	17.	-831.	-727.	-203.	602.	.0024	.0548	.0084	-.0494	-.0988	.0047	3605.
.1340	-1127.	-23.	-938.	-791.	-157.	766.	-.0031	.0459	.0059	-.0439	-.1158	-.0306	4153.
.1350	-1505.	-201.	-677.	-709.	-166.	846.	-.0075	.0362	.0017	-.0623	-.1165	-.0499	4166.
.1360	-1760.	-515.	-117.	-490.	-179.	840.	-.0108	.0253	-.0038	-.1000	-.1025	-.0537	3691.
.1370	-1666.	-586.	517.	-252.	-244.	714.	-.0128	.0129	-.0103	-.1428	-.0906	-.0428	2969.

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CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	52	MEMBER	1	SEQUENCE	72	LOCATION	BEG	TYPE	RU						STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ			(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)			
.1380	-1455.	-578.	1008.	-88.	-331.	567.	-.0133	.0007	-.0169	-.1726	-.0588	-.0324			2471.
.1390	-1310.	-589.	1240.	-1.	-369.	413.	-.0113	-.0109	-.0224	-.1853	-.0500	-.0286			2069.
.1400	-1277.	-597.	1149.	9.	-319.	274.	-.0067	-.0214	-.0262	-.1783	-.0586	-.0302			1571.
.1410	-1331.	-630.	737.	-85.	-216.	218.	-.0003	-.0289	-.0280	-.1469	-.0769	-.0353			1187.
.1420	-1181.	-489.	163.	-252.	-157.	151.	.0082	-.0338	-.0278	-.1050	-.0995	-.0335			1244.
.1430	-961.	-366.	-328.	-380.	-129.	55.	.0180	-.0367	-.0262	-.0709	-.1192	-.0263			1512.
.1440	-698.	-241.	-575.	-393.	-110.	-76.	.0281	-.0380	-.0241	-.0562	-.1287	-.0140			1551.
.1450	-316.	-29.	-572.	-321.	-121.	-211.	.0368	-.0372	-.0223	-.0572	-.1210	.0032			1502.
.1460	116.	148.	-385.	-201.	-169.	-306.	.0431	-.0331	-.0205	-.0668	-.0973	.0215			1504.
.1470	577.	345.	-65.	-22.	-246.	-425.	.0482	-.0273	-.0177	-.0880	-.0713	.0405			1834.
.1480	792.	417.	289.	194.	-284.	-477.	.0518	-.0199	-.0137	-.1120	-.0503	.0497			2195.
.1490	837.	535.	524.	359.	-300.	-429.	.0536	-.0108	-.0080	-.1261	-.0372	.0476			2370.
.1500	794.	741.	540.	419.	-316.	-301.	.0537	-.0001	-.0000	-.1240	-.0338	.0355			2259.
.1510	453.	731.	380.	418.	-265.	-90.	.0515	.0114	.0097	-.1094	-.0386	.0101			1878.
.1520	-49.	641.	171.	410.	-141.	120.	.0475	.0218	.0199	-.0944	-.0479	-.0217			1680.
.1530	-548.	587.	1.	387.	-5.	332.	.0414	.0312	.0290	-.0811	-.0510	-.0538			1902.
.1540	-817.	678.	-55.	357.	56.	487.	.0337	.0397	.0361	-.0734	-.0434	-.0760			2265.
.1550	-953.	673.	76.	390.	76.	573.	.0248	.0476	.0402	-.0758	-.0264	-.0843			2604.
.1560	-1131.	347.	368.	499.	138.	636.	.0144	.0552	.0406	-.0849	-.0015	-.0812			3061.
.1570	-1059.	120.	674.	598.	178.	604.	.0032	.0610	.0381	-.0943	.0253	-.0629			3240.
.1580	-869.	-20.	854.	611.	184.	542.	-.0084	.0650	.0339	-.0926	.0508	-.0412			3124.
.1590	-819.	-263.	886.	559.	225.	495.	-.0200	.0664	.0290	-.0786	.0697	-.0264			2912.
.1600	-795.	-489.	775.	468.	317.	392.	-.0305	.0642	.0244	-.0580	.0767	-.0130			2567.
.1610	-681.	-635.	489.	310.	404.	240.	-.0394	.0593	.0213	-.0272	.0747	.0040			2100.
.1620	-586.	-868.	75.	92.	463.	125.	-.0467	.0537	.0198	.0156	.0711	.0216			1823.
.1630	-401.	-1043.	-299.	-103.	490.	-23.	-.0512	.0469	.0194	.0538	.0653	.0445			1871.
.1640	-211.	-1233.	-545.	-227.	507.	-199.	-.0532	.0388	.0195	.0802	.0591	.0702			2202.
.1650	-25.	-1441.	-713.	-315.	488.	-366.	-.0536	.0301	.0197	.1008	.0557	.0956			2563.
.1660	346.	-1444.	-849.	-399.	410.	-566.	-.0529	.0208	.0194	.1168	.0541	.1234			3004.
.1670	672.	-1437.	-938.	-450.	354.	-742.	-.0522	.0116	.0179	.1282	.0530	.1450			3498.
.1680	858.	-1443.	-982.	-451.	338.	-884.	-.0514	.0028	.0152	.1335	.0490	.1563			3915.
.1690	899.	-1442.	-1026.	-435.	343.	-948.	-.0507	-.0046	.0114	.1375	.0442	.1558			4099.
.1700	951.	-1294.	-1062.	-417.	337.	-956.	-.0503	-.0102	.0071	.1394	.0404	.1486			4093.
.1710	1044.	-1007.	-1021.	-354.	317.	-955.	-.0495	-.0142	.0030	.1321	.0363	.1382			3983.
.1720	860.	-939.	-871.	-219.	334.	-855.	-.0489	-.0158	-.0006	.1170	.0357	.1160			3525.
.1730	663.	-779.	-632.	-46.	340.	-729.	-.0480	-.0158	-.0032	.0929	.0384	.0893			3009.
.1740	563.	-425.	-357.	125.	317.	-590.	-.0468	-.0141	-.0044	.0644	.0449	.0608			2542.
.1750	406.	-112.	-81.	296.	291.	-412.	-.0454	-.0106	-.0042	.0359	.0525	.0283			2183.

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ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.07.

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 52 MEMBER 1 SEQUENCE 72 LOCATION BEG TYPE RU

.1670	672.	-1437.	-938.	-450.	354.	-742.	-0522	.0116	.0179	.1282	.0530	.1450	3498.
.1680	858.	-1443.	-982.	-451.	338.	-884.	-0514	.0028	.0152	.1335	.0490	.1563	3915.
.1690	899.	-1442.	-1026.	-435.	343.	-948.	-0507	-.0046	.0114	.1375	.0442	.1558	4099.
.1700	951.	-1294.	-1062.	-417.	337.	-956.	-0503	-.0102	.0071	.1394	.0404	.1486	4093.
.1710	1044.	-1007.	-1021.	-354.	317.	-955.	-0495	-.0142	.0030	.1321	.0363	.1382	3983.
.1720	860.	-939.	-871.	-219.	334.	-855.	-0489	-.0158	-.0006	.1170	.0357	.1160	3525.
.1730	663.	-779.	-632.	-46.	340.	-729.	-0480	-.0158	-.0032	.0929	.0384	.0893	3009.
.1740	563.	-425.	-357.	125.	317.	-590.	-0468	-.0141	-.0044	.0644	.0449	.0608	2542.
.1750	406.	-112.	-81.	296.	291.	-412.	-0454	-.0106	-.0042	.0359	.0525	.0283	2183.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	52	MEMBER	1	SEQUENCE	72	LOCATION	BEG	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1760	226.	169.	178.	474.	263.	-246.	-.0431	-.0057	-.0023	.0067	.0550	-.0041	2222.		
.1770	16.	406.	377.	630.	235.	-58.	-.0400	.0007	.0006	-.0169	.0528	-.0362	2518.		
.1780	-73.	772.	484.	730.	164.	123.	-.0360	.0082	.0046	-.0323	.0456	-.0633	2829.		
.1790	-175.	1066.	512.	787.	77.	315.	-.0315	.0168	.0093	-.0390	.0350	-.0878	3177.		
.1800	-299.	1227.	505.	828.	1.	482.	-.0267	.0254	.0145	-.0420	.0214	-.1075	3577.		
.1810	-236.	1477.	480.	844.	-92.	557.	-.0219	.0328	.0199	-.0449	.0067	-.1157	3790.		
.1820	-150.	1647.	429.	816.	-193.	630.	-.0181	.0398	.0252	-.0416	-.0029	-.1188	3916.		
.1830	-44.	1749.	380.	763.	-299.	683.	-.0153	.0457	.0299	-.0356	-.0086	-.1162	3983.		
.1840	60.	1760.	355.	708.	-382.	692.	-.0134	.0499	.0335	-.0305	-.0135	-.1079	3963.		
.1850	158.	1691.	307.	631.	-443.	669.	-.0129	.0521	.0357	-.0226	-.0183	-.0951	3912.		
.1860	306.	1643.	195.	507.	-505.	620.	-.0140	.0526	.0361	-.0081	-.0231	-.0787	3534.		
.1870	363.	1476.	43.	355.	-531.	590.	-.0169	.0517	.0343	.0135	-.0266	-.0644	3245.		
.1880	400.	1272.	-93.	215.	-521.	521.	-.0211	.0488	.0305	.0344	-.0309	-.0497	2867.		
.1890	411.	1008.	-193.	94.	-494.	425.	-.0263	.0440	.0252	.0537	-.0334	-.0352	2458.		
.1900	419.	713.	-243.	-15.	-472.	326.	-.0323	.0380	.0192	.0713	-.0304	-.0209	2143.		
.1910	503.	499.	-201.	-88.	-469.	195.	-.0380	.0307	.0133	.0815	-.0232	-.0046	1926.		
.1920	492.	214.	-64.	-104.	-453.	81.	-.0431	.0227	.0083	.0844	-.0129	.0088	1762.		
.1930	380.	-121.	107.	-86.	-425.	-4.	-.0476	.0146	.0049	.0837	-.0017	.0175	1617.		
.1940	244.	-389.	232.	-73.	-390.	-64.	-.0515	.0066	.0032	.0843	.0082	.0215	1499.		
.1950	54.	-598.	276.	-78.	-330.	-91.	-.0551	-.0011	.0030	.0883	.0149	.0177	1309.		
.1960	-259.	-811.	251.	-82.	-228.	-81.	-.0585	-.0083	.0036	.0946	.0176	.0042	954.		
.1970	-628.	-985.	188.	-79.	-98.	-50.	-.0616	-.0146	.0044	.1012	.0183	-.0158	506.		
.1980	-918.	-1060.	127.	-69.	31.	-13.	-.0645	-.0195	.0044	.1061	.0212	-.0354	288.		
.1990	-1080.	-1076.	124.	-33.	143.	10.	-.0668	-.0225	.0035	.1058	.0294	-.0490	549.		
.2000	-1105.	-1081.	225.	55.	232.	-1.	-.0681	-.0237	.0017	.0963	.0431	-.0537	888.		
.2010	-964.	-1032.	415.	182.	289.	-57.	-.0679	-.0233	-.0007	.0783	.0614	-.0488	1293.		
.2020	-666.	-891.	612.	304.	316.	-137.	-.0662	-.0211	-.0029	.0586	.0826	-.0368	1716.		
.2030	-283.	-694.	718.	386.	333.	-222.	-.0630	-.0173	-.0044	.0440	.1023	-.0218	2076.		
.2040	114.	-481.	669.	413.	364.	-311.	-.0582	-.0126	-.0044	.0378	.1148	-.0069	2362.		
.2050	491.	-252.	443.	375.	413.	-396.	-.0520	-.0072	-.0029	.0420	.1174	.0061	2555.		
.2060	838.	6.	62.	271.	462.	-453.	-.0450	-.0011	-.0001	.0571	.1118	.0160	2619.		
.2070	1154.	279.	-396.	127.	498.	-482.	-.0376	.0053	.0035	.0790	.1008	.0238	2630.		
.2080	1447.	528.	-820.	-7.	519.	-508.	-.0303	.0117	.0071	.0991	.0879	.0317	2711.		
.2090	1717.	726.	-1120.	-101.	524.	-537.	-.0240	.0178	.0102	.1118	.0777	.0405	2825.		
.2100	1963.	887.	-1256.	-147.	502.	-555.	-.0191	.0234	.0123	.1155	.0743	.0492	2845.		
.2110	2171.	1033.	-1220.	-145.	452.	-555.	-.0159	.0283	.0135	.1099	.0778	.0563	2727.		
.2120	2294.	1134.	-1042.	-95.	393.	-535.	-.0142	.0322	.0139	.0961	.0849	.0600	2503.		
.2130	2277.	1155.	-799.	-20.	339.	-482.	-.0138	.0352	.0142	.0792	.0912	.0583	2201.		

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	52	MEMBER	1	SEQUENCE	72	LOCATION	BEG	TYPE	RU						
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.2050	491.	-252.	443.	375.	413.	-396.	-1520	-.0072	-.0029	.0420	.1174	.0061	2555.
.2060	838.	6.	67.	271.	462.	-453.	-.0450	-.0011	-.0001	.0571	.1118	.0160	2619.
.2070	1154.	279.	-396.	127.	498.	-482.	-.0376	.0053	.0035	.0790	.1008	.0238	2630.
.2080	1447.	528.	-820.	-7.	519.	-508.	-.0303	.0117	.0071	.0991	.0879	.0317	2711.
.2090	1717.	726.	-1120.	-101.	524.	-537.	-.0240	.0178	.0102	.1118	.0777	.0405	2825.
.2100	1963.	887.	-1256.	-147.	502.	-555.	-.0191	.0234	.0123	.1155	.0743	.0492	2845.
.2110	2171.	1033.	-1220.	-145.	452.	-555.	-.0159	.0283	.0135	.1099	.0778	.0563	2727.
.2120	2294.	1134.	-1042.	-95.	393.	-535.	-.0142	.0322	.0139	.0961	.0849	.0600	2503.
.2130	2277.	1155.	-799.	-20.	339.	-482.	-.0138	.0352	.0142	.0792	.0912	.0583	2201.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	S2	MEMBER	1	SEQUENCE	72	LOCATION	BEG	TYPE	PU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2140	2115.	1129.	-584.	41.	297.	-380.	-.0145	.0371	.0148	.0656	.0937	.0493	1807.	
.2150	1812.	1092.	-447.	68.	270.	-228.	-.0159	.0378	.0157	.0581	.0902	.0322	1345.	
.2160	1363.	1028.	-383.	68.	267.	-37.	-.0175	.0373	.0170	.0559	.0804	.0073	1037.	
.2170	813.	916.	-358.	57.	279.	172.	-.0193	.0357	.0183	.0564	.0666	-.0225	1241.	
.2180	279.	794.	-330.	43.	285.	363.	-.0209	.0331	.0191	.0565	.0527	-.0513	1730.	
.2190	-144.	691.	-250.	40.	266.	509.	-.0223	.0296	.0190	.0526	.0421	-.0737	2148.	
.2200	-443.	585.	-85.	65.	221.	599.	-.0228	.0256	.0177	.0420	.0363	-.0878	2397.	
.2210	-627.	469.	157.	117.	154.	637.	-.0223	.0213	.0153	.0252	.0345	-.0933	2485.	
.2220	-683.	373.	412.	171.	67.	626.	-.0206	.0167	.0119	.0067	.0346	-.0909	2436.	
.2230	-630.	310.	598.	196.	-27.	577.	-.0177	.0122	.0082	-.0083	.0332	-.0827	2276.	
.2240	-528.	259.	658.	176.	-106.	501.	-.0137	.0076	.0045	-.0164	.0270	-.0725	2021.	
.2250	-420.	222.	572.	106.	-157.	412.	-.0089	.0031	.0011	-.0168	.0146	-.0631	1694.	
.2260	-311.	216.	361.	-11.	-186.	323.	-.0035	-.0010	-.0019	-.0103	-.0025	-.0554	1393.	
.2270	-190.	235.	84.	-155.	-204.	239.	.0021	-.0044	-.0047	-.0004	-.0214	-.0482	1308.	
.2280	-51.	251.	-174.	-289.	-223.	152.	.0076	-.0070	-.0074	.0071	-.0393	-.0395	1477.	
.2290	104.	251.	-334.	-383.	-249.	63.	.0126	-.0087	-.0103	.0071	-.0535	-.0285	1723.	
.2300	265.	243.	-362.	-428.	-220.	-19.	.0167	-.0095	-.0133	-.0016	-.0620	-.0164	1932.	
.2310	408.	239.	-271.	-431.	-341.	-79.	.0195	-.0094	-.0164	-.0176	-.0647	-.0055	2073.	
.2320	497.	228.	-102.	-403.	-386.	-115.	.0209	-.0086	-.0189	-.0384	-.0638	.0021	2126.	
.2330	485.	189.	95.	-357.	-411.	-116.	.0211	-.0073	-.0204	-.0604	-.0624	.0038	2077.	
.2340	345.	118.	270.	-313.	-413.	-69.	.0201	-.0053	-.0201	-.0799	-.0622	-.0020	1953.	
.2350	92.	44.	399.	-284.	-400.	26.	.0184	-.0029	-.0178	-.0949	-.0643	-.0149	1834.	
.2360	-246.	-29.	481.	-269.	-375.	154.	.0165	-.0002	-.0132	-.1060	-.0686	-.0328	1816.	
.2370	-639.	-126.	535.	-258.	-341.	301.	.0146	.0029	-.0068	-.1141	-.0738	-.0529	1951.	
.2380	-1034.	-249.	579.	-247.	-305.	446.	.0127	.0063	.0009	-.1199	-.0774	-.0719	2219.	
.2390	-1365.	-368.	624.	-236.	-275.	571.	.0110	.0097	.0091	-.1242	-.0777	-.0867	2525.	
.2400	-1605.	-469.	678.	-222.	-255.	659.	.0095	.0130	.0172	-.1276	-.0744	-.0958	2764.	
.2410	-1755.	-562.	734.	-207.	-238.	708.	.0083	.0160	.0243	-.1295	-.0680	-.0990	2893.	
.2420	-1812.	-649.	762.	-201.	-221.	719.	.0072	.0197	.0300	-.1281	-.0596	-.0960	2907.	
.2430	-1774.	-722.	731.	-215.	-200.	697.	.0063	.0213	.0341	-.1213	-.0506	-.0872	2824.	
.2440	-1666.	-790.	629.	-252.	-168.	648.	.0056	.0235	.0365	-.1083	-.0421	-.0738	2671.	
.2450	-1507.	-850.	459.	-309.	-123.	576.	.0049	.0251	.0373	-.0903	-.0346	-.0573	2482.	
.2460	-1297.	-879.	241.	-382.	-71.	480.	.0046	.0260	.0365	-.0691	-.0282	-.0386	2305.	
.2470	-1037.	-871.	-3.	-463.	-22.	366.	.0045	.0261	.0345	-.0467	-.0223	-.0180	2206.	
.2480	-755.	-853.	-245.	-541.	24.	244.	.0047	.0254	.0313	-.0253	-.0164	.0035	2219.	
.2490	-472.	-845.	-458.	-603.	70.	121.	.0052	.0242	.0270	-.0064	-.0103	.0254	2310.	
.2500	-181.	-822.	-636.	-645.	108.	-4.	.0061	.0222	.0216	.0090	-.0045	.0469	2441.	
.2510	114.	-781.	-783.	-672.	135.	-128.	.0074	.0196	.0155	.0209	.0004	.0669	2602.	

ADLPIPE PAGE 1990

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.07.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.2430	-1774.	-722.	731.	-215.	-200.	697.	.0063	.0213	.0341	-.1213	-.0506	-.0872	2824.
.2440	-1666.	-790.	629.	-252.	-168.	648.	.0056	.0235	.0365	-.1083	-.0421	-.0738	2671.
.2450	-1507.	-850.	459.	-309.	-123.	576.	.0049	.0251	.0373	-.0903	-.0346	-.0573	2482.
.2460	-1297.	-879.	241.	-382.	-71.	480.	.0046	.0260	.0365	-.0691	-.0282	-.0386	2305.
.2470	-1037.	-871.	-3.	-463.	-22.	366.	.0045	.0261	.0345	-.0467	-.0223	-.0180	2206.
.2480	-755.	-853.	-245.	-541.	24.	244.	.0047	.0254	.0313	-.0253	-.0164	.0035	2219.
.2490	-472.	-845.	-458.	-603.	70.	121.	.0052	.0242	.0270	-.0064	-.0103	.0254	2310.
.2500	-181.	-822.	-636.	-645.	108.	-4.	.0061	.0222	.0216	.0090	-.0045	.0469	2441.
.2510	114.	-761.	-783.	-672.	135.	-128.	.0074	.0196	.0155	.0209	.0004	.0669	2602.

ADLPIPE PAGE 1990

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.07.

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	52	MEMBER	1	SEQUENCE	72	LOCATION	BEG	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2520	385.	-673.	-897.	-682.	156.	-241.		.0093	.0164	.0087	.0293	.0038	.0835	2763.	
.2530	605.	-581.	-961.	-674.	175.	-333.		.0117	.0129	.0015	.0345	.0051	.0957	2882.	
.2540	764.	-486.	-1038.	-648.	193.	-402.		.0146	.0092	-.0056	.0365	.0011	.1032	2936.	
.2550	866.	-381.	-1069.	-608.	209.	-444.		.0181	.0054	-.0124	.0354	.0014	.1059	2915.	
.2560	913.	-262.	-1063.	-553.	222.	-461.		.0221	.0016	-.0186	.0301	-.0023	.1038	2812.	
.2570	904.	-133.	-1011.	-481.	230.	-457.		.0266	-.0022	-.0240	.0201	-.0066	.0972	2621.	
.2580	839.	-15.	-910.	-392.	233.	-431.		.0313	-.0060	-.0285	.0060	-.0111	.0866	2344.	
.2590	724.	80.	-769.	-291.	233.	-386.		.0361	-.0095	-.0322	-.0111	-.0152	.0731	2002.	
.2600	575.	165.	-599.	-184.	228.	-329.		.0408	-.0130	-.0350	-.0301	-.0194	.0576	1643.	
.2610	399.	248.	-414.	-78.	219.	-264.		.0453	-.0166	-.0372	-.0501	-.0241	.0409	1313.	
.2620	199.	316.	-224.	20.	208.	-191.		.0497	-.0201	-.0388	-.0697	-.0293	.0233	1059.	
.2630	-10.	359.	-42.	105.	194.	-117.		.0536	-.0234	-.0399	-.0875	-.0348	.0065	930.	
.2640	-201.	378.	118.	172.	175.	-49.		.0572	-.0264	-.0404	-.1027	-.0408	-.0077	933.	
.2650	-361.	375.	253.	219.	151.	3.		.0603	-.0291	-.0406	-.1149	-.0470	-.0182	993.	
.2660	-486.	357.	363.	246.	120.	42.		.0629	-.0315	-.0404	-.1241	-.0529	-.0248	1032.	
.2670	-569.	327.	449.	251.	80.	65.		.0652	-.0335	-.0400	-.1299	-.0582	-.0276	1011.	
.2680	-608.	279.	508.	236.	32.	71.		.0671	-.0350	-.0392	-.1321	-.0629	-.0261	926.	
.2690	-597.	212.	532.	202.	-22.	56.		.0684	-.0361	-.0381	-.1304	-.0673	-.0198	787.	
.2700	-537.	148.	515.	148.	-82.	24.		.0692	-.0368	-.0366	-.1248	-.0716	-.0096	636.	
.2710	-447.	91.	459.	74.	-144.	-16.		.0695	-.0369	-.0349	-.1156	-.0758	.0027	608.	
.2720	-362.	11.	376.	-13.	-204.	-53.		.0691	-.0362	-.0330	-.1033	-.0796	.0153	797.	
.2730	-292.	-105.	275.	-105.	-256.	-85.		.0679	-.0349	-.0310	-.0888	-.0828	.0275	1082.	
.2740	-217.	-215.	164.	-198.	-305.	-121.		.0660	-.0335	-.0290	-.0733	-.0853	.0400	1431.	
.2750	-132.	-288.	61.	-284.	-354.	-159.		.0634	-.0322	-.0270	-.0581	-.0865	.0523	1795.	
.2760	-70.	-355.	-8.	-355.	-402.	-184.		.0601	-.0308	-.0253	-.0444	-.0858	.0522	2115.	
.2770	-60.	-452.	-31.	-400.	-446.	-190.		.0564	-.0291	-.0237	-.0331	-.0832	.0690	2347.	
.2780	-91.	-563.	-17.	-421.	-484.	-183.		.0521	-.0275	-.0221	-.0244	-.0796	.0731	2491.	
.2790	-145.	-645.	17.	-424.	-516.	-163.		.0475	-.0260	-.0205	-.0177	-.0753	.0746	2566.	
.2800	-241.	-699.	68.	-414.	-538.	-122.		.0425	-.0247	-.0188	-.0126	-.0709	.0717	2576.	
.2810	-412.	-764.	132.	-389.	-540.	-52.		.0374	-.0232	-.0172	-.0089	-.0670	.0630	2520.	
.2820	-645.	-842.	201.	-351.	-541.	36.		.0322	-.0219	-.0157	-.0062	-.0641	.0494	2413.	
.2830	-886.	-890.	260.	-306.	-516.	129.		.0269	-.0208	-.0147	-.0039	-.0617	.0339	2292.	
.2840	-1096.	-890.	314.	-255.	-482.	216.		.0217	-.0201	-.0144	-.0019	-.0591	.0182	2190.	
.2850	-1276.	-870.	381.	-193.	-443.	295.		.0170	-.0193	-.0149	-.0014	-.0554	.0027	2115.	
.2860	-1419.	-849.	475.	-113.	-402.	357.		.0131	-.0185	-.0164	-.0031	-.0504	-.0114	2051.	
.2870	-1475.	-799.	579.	-22.	-360.	390.		.0103	-.0175	-.0185	-.0066	-.0441	-.0213	1984.	
.2880	-1410.	-699.	663.	64.	-325.	385.		.0086	-.0164	-.0211	-.0101	-.0369	-.0255	1896.	
.2890	-1246.	-567.	710.	139.	-296.	346.		.0085	-.0151	-.0237	-.0125	-.0301	-.0248	1778.	

ADLPIPE PAGE 1991

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.07.

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

.2300	-241.	-699.	68.	-414.	-538.	-122.	.0425	-.0247	-.0188	-.0126	-.0709	.0717	2576.
.2810	-412.	-764.	132.	-389.	-549.	-52.	.0374	-.0232	-.0172	-.0089	-.0670	.0630	2520.
.2820	-645.	-842.	201.	-351.	-541.	36.	.0322	-.0219	-.0157	-.0062	-.0641	.0494	2413.
.2830	-886.	-890.	260.	-306.	-516.	129.	.0269	-.0208	-.0147	-.0039	-.0617	.0339	2292.
.2840	-1096.	-890.	314.	-255.	-482.	216.	.0217	-.0201	-.0144	-.0019	-.0591	.0182	2190.
.2850	-1276.	-870.	381.	-193.	-443.	295.	.0170	-.0193	-.0149	-.0014	-.0554	.0027	2115.
.2860	-1419.	-849.	475.	-113.	-402.	357.	.0131	-.0185	-.0164	-.0031	-.0504	-.0114	2051.
.2870	-1475.	-799.	579.	-22.	-360.	390.	.0103	-.0175	-.0185	-.0066	-.0441	-.0213	1984.
.2880	-1410.	-699.	663.	64.	-325.	385.	.0086	-.0164	-.0211	-.0101	-.0369	-.0255	1896.
.2890	-1246.	-567.	710.	139.	-296.	346.	.0085	-.0151	-.0237	-.0125	-.0301	-.0248	1778.

ADLPIPE PAGE 1991 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.07.
 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	52	MEMBER	1	SEQUENCE	72	LOCATION	BEG	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2900	-1026.	-424.	710.	201.	-265.	285.	.0099	-.0136	-.0262	-.0131	-.0250	-.0212	1635.	
.2910	-758.	-253.	645.	240.	-232.	206.	.0129	-.0119	-.0283	-.0108	-.0226	-.0156	1464.	
.2920	-435.	-47.	503.	251.	-199.	111.	.0171	-.0101	-.0299	-.0043	-.0229	-.0075	1267.	
.2930	-76.	169.	300.	241.	-167.	5.	.0222	-.0082	-.0310	.0055	-.0254	.0025	1093.	
.2940	284.	375.	79.	226.	-131.	-105.	.0278	-.0062	-.0319	.0158	-.0288	.0133	1051.	
.2950	634.	581.	-117.	219.	-98.	-212.	.0333	-.0042	-.0327	.0242	-.0315	.0242	1196.	
.2960	968.	786.	-262.	227.	-72.	-309.	.0384	-.0021	-.0334	.0294	-.0315	.0347	1455.	
.2970	1267.	957.	-337.	256.	-54.	-390.	.0426	.0000	-.0341	.0304	-.0283	.0447	1752.	
.2980	1502.	1073.	-337.	311.	-35.	-454.	.0454	.0021	-.0344	.0267	-.0222	.0534	2058.	
.2990	1654.	1153.	-276.	384.	-13.	-494.	.0470	.0037	-.0345	.0195	-.0144	.0593	2338.	
.3000	1712.	1214.	-180.	462.	8.	-500.	.0471	.0050	-.0339	.0111	-.0056	.0608	2542.	
.3010	1663.	1234.	-71.	535.	33.	-469.	.0458	.0060	-.0327	.0034	.0029	.0575	2659.	
.3020	1511.	1186.	34.	603.	67.	-411.	.0432	.0066	-.0306	-.0025	.0100	.0505	2735.	
.3030	1287.	1088.	126.	660.	108.	-340.	.0397	.0067	-.0277	-.0063	.0156	.0419	2800.	
.3040	1033.	973.	207.	707.	144.	-260.	.0353	.0064	-.0240	-.0079	.0206	.0329	2845.	
.3050	766.	836.	290.	729.	170.	-179.	.0304	.0058	-.0198	-.0081	.0261	.0245	2874.	
.3060	500.	653.	387.	750.	188.	-107.	.0251	.0049	-.0153	-.0078	.0321	.0183	2914.	
.3070	269.	434.	473.	760.	200.	-60.	.0196	.0037	-.0105	-.0067	.0385	.0164	2944.	
.3080	108.	215.	539.	749.	203.	-42.	.0141	.0020	-.0057	-.0035	.0451	.0196	2902.	
.3090	11.	11.	568.	711.	196.	-48.	.0085	.0001	-.0010	.0026	.0509	.0265	2759.	
.3100	-51.	-193.	552.	648.	187.	-71.	.0032	-.0019	.0033	.0116	.0550	.0353	2532.	
.3110	-81.	-396.	484.	582.	180.	-112.	-.0017	-.0040	.0073	.0238	.0564	.0457	2244.	
.3120	-54.	-578.	357.	452.	175.	-170.	-.0063	-.0060	.0109	.0391	.0555	.0584	1916.	
.3130	27.	-729.	187.	323.	165.	-240.	-.0106	-.0077	.0140	.0564	.0528	.0727	1624.	
.3140	135.	-854.	6.	194.	153.	-313.	-.0143	-.0091	.0167	.0730	.0491	.0869	1491.	
.3150	255.	-947.	-157.	78.	139.	-385.	-.0174	-.0103	.0188	.0867	.0449	.1000	1557.	
.3160	391.	-993.	-295.	-22.	120.	-451.	-.0201	-.0111	.0203	.0969	.0408	.1115	1744.	
.3170	534.	-1001.	-408.	-104.	94.	-505.	-.0225	-.0115	.0213	.1039	.0370	.1206	1956.	
.3180	651.	-983.	-491.	-159.	7.	-539.	-.0245	-.0115	.0218	.1073	.0328	.1258	2117.	
.3190	717.	-931.	-539.	-184.	59.	-548.	-.0263	-.0113	.0219	.1067	.0279	.1253	2169.	
.3200	728.	-832.	-556.	-185.	47.	-524.	-.0278	-.0108	.0216	.1029	.0224	.1182	2081.	
.3210	686.	-702.	-547.	-163.	36.	-467.	-.0291	-.0100	.0210	.0965	.0166	.1050	1851.	
.3220	588.	-567.	-507.	-114.	32.	-385.	-.0303	-.0089	.0205	.0871	.0107	.0866	1503.	
.3230	444.	-426.	-431.	-39.	34.	-285.	-.0312	-.0080	.0199	.0744	.0053	.0644	1082.	
.3240	271.	-260.	-320.	56.	37.	-171.	-.0317	-.0073	.0194	.0588	.0013	.0390	687.	
.3250	85.	-75.	-181.	162.	35.	-48.	-.0319	-.0069	.0190	.0415	-.0009	.0118	644.	
.3260	-106.	100.	-28.	275.	35.	73.	-.0317	-.0067	.0186	.0235	-.0017	-.0154	1069.	
.3270	-285.	252.	120.	386.	39.	180.	-.0310	-.0071	.0182	.0064	-.0020	-.0405	1599.	

ADLPIPE PAGE 1992 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.07.
 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

.3180	651.	-983.	-491.	-159.	75.	-539.	-0.245	-0.115	.0218	.1073	.0328	.1258	2117.
.3190	717.	-931.	-539.	-184.	59.	-548.	-0.263	-0.113	.0219	.1067	.0279	.1253	2169.
.3200	728.	-832.	-556.	-185.	47.	-524.	-0.278	-0.108	.0216	.1029	.0224	.1182	2081.
.3210	686.	-702.	-547.	-163.	36.	-467.	-0.291	-0.100	.0210	.0965	.0166	.1050	1851.
.3220	588.	-567.	-507.	-114.	32.	-395.	-0.303	-0.089	.0205	.0871	.0107	.0866	1503.
.3230	444.	-426.	-431.	-39.	34.	-285.	-0.312	-0.080	.0199	.0744	.0053	.0644	1082.
.3240	271.	-260.	-320.	56.	37.	-171.	-0.317	-0.073	.0194	.0588	.0013	.0390	687.
.3250	85.	-75.	-181.	162.	35.	-48.	-0.319	-0.069	.0190	.0415	-0.009	.0118	644.
.3260	-106.	100.	-28.	275.	35.	73.	-0.317	-0.067	.0186	.0235	-0.017	-0.0154	1069.
.3270	-285.	252.	120.	386.	39.	180.	-0.310	-0.071	.0182	.0064	-0.020	-0.0405	1599.

ADLPIPE PAGE 1992 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.07.
 S/RV PIPING KEWAUNEE GKWB2F 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	52	MEMBER	1	SEQUENCE	72	LOCATION	BEG	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.3280	-429.	396.	242.	484.	44.	269.		-0.0299	-0.0079	.0178	-0.0080	-0.0019	-0.0624	2073.
.3290	-532.	538.	328.	557.	45.	339.		-0.0284	-0.0093	.0172	-0.0184	-0.0014	-0.0805	2441.
.3300	-598.	657.	378.	606.	46.	386.		-0.0264	-0.0111	.0166	-0.0249	-0.0009	-0.0946	2687.
.3310	-622.	736.	394.	631.	48.	403.		-0.0241	-0.0135	.0159	-0.0277	-0.0004	-0.1033	2800.
.3320	-586.	785.	373.	629.	47.	387.		-0.0216	-0.0164	.0153	-0.0266	.0005	-0.1054	2761.
.3330	-485.	819.	319.	597.	41.	341.		-0.0190	-0.0199	.0148	-0.0220	.0024	-0.1013	2572.
.3340	-345.	827.	246.	543.	30.	272.		-0.0162	-0.0238	.0144	-0.0147	.0050	-0.0922	2271.
.3350	-190.	798.	159.	472.	21.	187.		-0.0135	-0.0280	.0141	-0.0054	.0081	-0.0795	1896.
.3360	-18.	743.	51.	383.	13.	89.		-0.0110	-0.0322	.0138	.0061	.0112	-0.0636	1468.
.3370	170.	674.	-80.	276.	8.	-15.		-0.0087	-0.0366	.0135	.0201	.0142	-0.0453	1033.
.3380	350.	587.	-222.	160.	6.	-118.		-0.0068	-0.0406	.0132	.0354	.0169	-0.0265	743.
.3390	496.	479.	-356.	46.	11.	-211.		-0.0053	-0.0444	.0126	.0504	.0193	-0.0088	307.
.3400	611.	370.	-470.	-60.	21.	-291.		-0.0042	-0.0478	.0118	.0638	.0220	.0071	1112.
.3410	706.	270.	-555.	-155.	31.	-357.		-0.0035	-0.0508	.0109	.0748	.0254	.0211	1457.
.3420	772.	171.	-602.	-231.	42.	-406.		-0.0032	-0.0531	.0098	.0824	.0298	.0327	1751.
.3430	792.	68.	-601.	-280.	57.	-436.		-0.0033	-0.0550	.0088	.0856	.0347	.0409	1945.
.3440	766.	-20.	-557.	-305.	74.	-443.		-0.0035	-0.0562	.0078	.0847	.0401	.0448	2025.
.3450	701.	-78.	-485.	-312.	91.	-425.		-0.0039	-0.0569	.0068	.0806	.0454	.0442	1998.
.3460	597.	-120.	-400.	-305.	113.	-386.		-0.0043	-0.0570	.0061	.0743	.0502	.0393	1884.
.3470	455.	-158.	-308.	-282.	141.	-331.		-0.0048	-0.0566	.0055	.0662	.0538	.0307	1707.
.3480	290.	-181.	-215.	-250.	173.	-264.		-0.0052	-0.0558	.0050	.0569	.0562	.0190	1503.
.3490	128.	-168.	-124.	-212.	203.	-191.		-0.0054	-0.0547	.0045	.0467	.0580	.0055	1308.
.3500	-16.	-128.	-33.	-171.	227.	-121.		-0.0054	-0.0535	.0040	.0359	.0596	-0.0085	1154.
.3510	-128.	-80.	58.	-125.	247.	-62.		-0.0050	-0.0521	.0033	.0244	.0509	-0.0213	1060.
.3520	-194.	-30.	142.	-79.	260.	-23.		-0.0042	-0.0505	.0024	.0132	.0520	-0.0314	1019.
.3530	-198.	38.	206.	-40.	264.	-3.		-0.0031	-0.0488	.0014	.0035	.0528	-0.0384	997.
.3540	-145.	125.	241.	-14.	259.	-3.		-0.0015	-0.0471	.0002	-0.0038	.0531	-0.0423	967.
.3550	-53.	212.	241.	-4.	248.	-20.		.0004	-0.0455	-0.0011	-0.0081	.0521	-0.0435	930.
.3560	69.	238.	198.	-12.	236.	-53.		.0025	-0.0438	-0.0026	-0.0087	.0596	-0.0422	905.
.3570	220.	359.	111.	-40.	222.	-98.		.0046	-0.0422	-0.0040	-0.0051	.0557	-0.0386	918.
.3580	389.	427.	-9.	-86.	204.	-151.		.0066	-0.0407	-0.0054	.0017	.0508	-0.0333	1001.
.3590	553.	483.	-137.	-141.	183.	-206.		.0084	-0.0394	-0.0067	.0102	.0453	-0.0273	1155.
.3600	700.	518.	-255.	-197.	157.	-256.		.0097	-0.0380	-0.0080	.0191	.0398	-0.0214	1344.
.3610	825.	534.	-349.	-249.	124.	-302.		.0104	-0.0366	-0.0091	.0275	.0348	-0.0157	1533.
.3620	921.	527.	-412.	-293.	81.	-334.		.0105	-0.0350	-0.0099	.0348	.0303	-0.0109	1690.
.3630	966.	497.	-437.	-325.	41.	-346.		.0099	-0.0334	-0.0104	.0403	.0261	-0.0081	1785.
.3640	943.	448.	-425.	-345.	-6.	-337.		.0088	-0.0316	-0.0104	.0436	.0216	-0.0086	1802.
.3650	849.	390.	-387.	-357.	-54.	-297.		.0071	-0.0296	-0.0098	.0453	.0166	-0.0131	1744.

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 S/RV PIPING KEWAUNEE GKWB2F 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

.3570	220.	359.	111.	-40.	222.	-98.	.046	-.0422	-.0040	-.0051	.0557	-.0386	918.
.3580	399.	427.	-9.	-86.	204.	-151.	.066	-.0407	-.0054	.0017	.0508	-.0333	1001.
.3590	593.	483.	-137.	-141.	183.	-206.	.0084	-.0394	-.0067	.0102	.0453	-.0273	1155.
.3600	700.	518.	-255.	-197.	157.	-258.	.0097	-.0380	-.0080	.0191	.0398	-.0214	1344.
.3610	825.	514.	-349.	-249.	124.	-302.	.0104	-.0366	-.0091	.0275	.0348	-.0157	1533.
.3620	921.	537.	-412.	-293.	85.	-334.	.0105	-.0350	-.0099	.0248	.0303	-.0109	1690.
.3630	966.	497.	-437.	-325.	41.	-348.	.0099	-.0334	-.0104	.0403	.0261	-.0081	1785.
.3640	943.	448.	-425.	-345.	-6.	-337.	.0088	-.0316	-.0104	.0436	.0216	-.0086	1802.
.3650	849.	390.	-387.	-357.	-54.	-297.	.0071	-.0296	-.0098	.0453	.0166	-.0131	1744.

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
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CONDITION 24

LOADS
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ENGLISH UNITS

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

SECTION	52	MEMBER	1	SEQUENCE	72	LOCATION	BEG	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3660	684.	320.	-333.	-362.	-101.	-227.	.0048	-.0274	-.0086	.0459	.0103	-.0215	1639.	
.3670	449.	231.	-268.	-361.	-142.	-129.	.0022	-.0249	-.0067	.0452	.0060	-.0336	1525.	
.3680	154.	132.	-190.	-351.	-176.	-9.	-.0008	-.0222	-.0045	.0430	-.0035	-.0490	1468.	
.3690	-175.	41.	-99.	-335.	-206.	129.	-.0039	-.0193	-.0021	.0390	-.0110	-.0666	1546.	
.3700	-513.	-38.	9.	-312.	-234.	275.	-.0071	-.0163	.0001	.0331	-.0177	-.0851	1780.	
.3710	-839.	-116.	133.	-278.	-258.	418.	-.0102	-.0130	.0020	.0252	-.0234	-.1027	2107.	
.3720	-1132.	-197.	268.	-235.	-277.	548.	-.0131	-.0097	.0033	.0155	-.0278	-.1180	2455.	
.3730	-1368.	-263.	404.	-189.	-293.	657.	-.0156	-.0065	.0039	.0049	-.0310	-.1299	2776.	
.3740	-1534.	-298.	525.	-146.	-307.	740.	-.0173	-.0036	.0039	-.0057	-.0330	-.1360	3041.	
.3750	-1631.	-311.	610.	-110.	-317.	795.	-.0183	-.0011	.0034	-.0154	-.0347	-.1422	3223.	
.3760	-1661.	-320.	671.	-86.	-320.	819.	-.0183	.0009	.0026	-.0232	-.0365	-.1422	3299.	
.3770	-1623.	-324.	671.	-76.	-315.	811.	-.0172	.0024	.0016	-.0283	-.0389	-.1377	3261.	
.3780	-1516.	-310.	619.	-83.	-306.	772.	-.0152	.0031	.0006	-.0304	-.0419	-.1291	3115.	
.3790	-1352.	-279.	526.	-103.	-297.	705.	-.0122	.0029	-.0004	-.0302	-.0453	-.1171	2877.	
.3800	-1149.	-235.	406.	-131.	-276.	617.	-.0085	.0020	-.0014	-.0285	-.0488	-.1025	2568.	
.3810	-917.	-198.	274.	-159.	-256.	509.	-.0044	.0003	-.0024	-.0260	-.0519	-.0857	2209.	
.3820	-665.	-166.	144.	-185.	-233.	389.	-.0001	-.0019	-.0035	-.0234	-.0540	-.0672	1828.	
.3830	-412.	-140.	30.	-202.	-207.	265.	.0040	-.0047	-.0042	-.0215	-.0547	-.0483	1465.	
.3840	-184.	-122.	-58.	-208.	-179.	146.	.0076	-.0079	-.0049	-.0210	-.0541	-.0306	1159.	
.3850	-1.	-114.	-115.	-201.	-146.	41.	.0106	-.0114	-.0055	-.0219	-.0522	-.0152	940.	
.3860	127.	-126.	-145.	-183.	-107.	-44.	.0127	-.0149	-.0058	-.0239	-.0492	-.0028	809.	
.3870	192.	-161.	-155.	-156.	-62.	-105.	.0137	-.0185	-.0057	-.0263	-.0453	.0064	740.	
.3880	191.	-206.	-147.	-122.	-9.	-142.	.0138	-.0221	-.0052	-.0291	-.0410	.0119	700.	
.3890	133.	-245.	-124.	-82.	48.	-155.	.0128	-.0255	-.0044	-.0322	-.0360	.0137	677.	
.3900	28.	-280.	-88.	-38.	108.	-142.	.0110	-.0283	-.0033	-.0352	-.0305	.0124	680.	
.3910	-111.	-331.	-42.	8.	167.	-109.	.0083	-.0301	-.0019	-.0377	-.0243	.0100	745.	
.3920	-264.	-398.	8.	56.	224.	-65.	.0050	-.0308	-.0004	-.0396	-.0178	.0049	897.	
.3930	-406.	-455.	57.	103.	278.	-14.	.0011	-.0305	.0012	-.0409	-.0110	.0012	1108.	
.3940	-523.	-484.	97.	144.	323.	38.	-.0031	-.0291	.0027	-.0409	-.0039	-.0020	1327.	
.3950	-612.	-492.	121.	173.	359.	91.	-.0074	-.0266	.0041	-.0392	.0029	-.0044	1527.	
.3960	-669.	-495.	119.	191.	391.	138.	-.0118	-.0231	.0053	-.0354	.0091	-.0055	1704.	
.3970	-680.	-488.	83.	195.	418.	175.	-.0160	-.0186	.0064	-.0292	.0142	-.0043	1841.	
.3980	-637.	-454.	12.	182.	438.	199.	-.0200	-.0135	.0072	-.0205	.0184	-.0010	1919.	
.3990	-546.	-388.	-83.	154.	448.	213.	-.0235	-.0077	.0078	-.0101	.0217	.0040	1938.	
.4000	-420.	-307.	-205.	117.	450.	218.	-.0265	-.0013	.0082	.0012	.0239	.0103	1916.	

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

.3950	-612.	-492.	121.	173.	359.	91.	-.0074	-.0266	.0041	-.0392	.0029	-.0044	1527.
.3960	-669.	-495.	119.	191.	391.	138.	-.0118	-.0231	.0053	-.0354	.0091	-.0055	1704.
.3970	-680.	-488.	83.	195.	418.	175.	-.0160	-.0186	.0064	-.0292	.0142	-.0043	1841.
.3980	-637.	-454.	12.	182.	438.	199.	-.0200	-.0135	.0072	-.0205	.0184	-.0010	1919.
.3990	-546.	-388.	-88.	154.	448.	213.	-.0235	-.0077	.0078	-.0101	.0217	.0040	1938.
.4000	-420.	-307.	-205.	117.	450.	218.	-.0265	-.0013	.0082	.0012	.0239	.0103	1916.

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

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

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)
.1350	1505.	201.	677.	709.	166.	-846.	-.0075	.0362	.0019	-.0623	-.1165	-.0499	4166.

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	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)
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.	.0000	-.0000	.0000	-.0000	-.0000	.0000	1.
.0030	0.	-1.	1.	0.	0.	-0.	-.0000	-.0000	-.0000	-.0000	-.0001	.0000	2.
.0040	2.	-1.	2.	0.	0.	-0.	-.0000	.0000	-.0000	-.0000	-.0002	-.0000	3.
.0050	8.	-0.	5.	1.	-0.	-1.	-.0001	.0000	-.0001	.0000	-.0004	-.0002	6.
.0060	19.	3.	8.	2.	-2.	-2.	-.0002	.0000	-.0002	.0001	-.0008	-.0005	14.
.0070	32.	6.	12.	4.	-4.	-4.	-.0004	.0000	-.0005	.0000	-.0014	-.0010	24.
.0080	49.	6.	14.	6.	-5.	-5.	-.0008	-.0000	-.0009	-.0003	-.0021	-.0016	36.
.0090	77.	8.	13.	9.	-8.	-7.	-.0014	-.0000	-.0015	-.0008	-.0030	-.0027	53.
.0100	127.	19.	7.	12.	-17.	-11.	-.0023	.0001	-.0023	-.0014	-.0036	-.0047	87.
.0110	202.	41.	-4.	15.	-34.	-15.	-.0036	.0002	-.0034	-.0023	-.0036	-.0079	148.
.0120	298.	77.	-23.	17.	-61.	-17.	-.0054	.0003	-.0047	-.0035	-.0027	-.0121	244.
.0130	405.	119.	-50.	22.	-96.	-15.	-.0077	.0001	-.0062	-.0054	-.0007	-.0172	371.
.0140	502.	159.	-84.	30.	-136.	-8.	-.0103	-.0003	-.0080	-.0081	.0028	-.0223	520.
.0150	568.	189.	-123.	42.	-176.	4.	-.0130	-.0010	-.0100	-.0114	.0074	-.0262	675.
.0160	583.	210.	-162.	54.	-210.	16.	-.0154	-.0019	-.0119	-.0147	.0130	-.0274	812.
.0170	522.	214.	-195.	63.	-231.	28.	-.0170	-.0026	-.0135	-.0172	.0191	-.0245	900.
.0180	374.	190.	-211.	63.	-234.	38.	-.0173	-.0031	-.0142	-.0178	.0253	-.0168	916.
.0190	150.	137.	-197.	51.	-224.	46.	-.0161	-.0033	-.0135	-.0154	.0316	-.0053	874.
.0200	-136.	36.	-141.	26.	-205.	53.	-.0130	-.0033	-.0109	-.0098	.0377	.0086	798.
.0210	-431.	-86.	-32.	-10.	-194.	56.	-.0083	-.0029	-.0062	-.0004	.0436	.0225	756.
.0220	-610.	-113.	138.	-51.	-226.	58.	-.0035	-.0020	.0003	.0142	.0500	.0316	888.
.0230	-711.	-90.	361.	-89.	-285.	57.	.0036	-.0012	.0077	.0313	.0552	.0371	1135.
.0240	-849.	-122.	596.	-112.	-332.	66.	.0095	-.0015	.0149	.0460	.0571	.0431	1329.
.0250	-1077.	-205.	731.	-122.	-321.	77.	.0157	-.0027	.0205	.0549	.0550	.0508	1314.
.0260	-1257.	-464.	861.	-140.	-265.	76.	.0206	-.0030	.0240	.0594	.0517	.0555	1156.
.0270	-1220.	-397.	829.	-169.	-239.	55.	.0246	-.0011	.0249	.0632	.0510	.0529	1111.
.0280	-1252.	-303.	716.	-185.	-205.	31.	.0268	.0010	.0237	.0601	.0500	.0550	1035.
.0290	-1558.	-506.	534.	-181.	-72.	16.	.0284	.0014	.0219	.0438	.0474	.0668	728.
.0300	-1554.	-557.	244.	-178.	78.	-5.	.0305	.0027	.0208	.0244	.0464	.0447	727.
.0310	-1166.	-388.	-112.	-178.	165.	-46.	.0322	.0056	.0209	.0059	.0464	.0453	921.
.0320	-790.	-337.	-352.	-174.	222.	-79.	.0327	.0074	.0231	-.0105	.0394	.0242	1092.

.0330	-379.	-321.	-364.	-160.	240.	-72.	.0318	.0077	.0271	-.0184	.0236	-.0009	1135.
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.0200	-136.	36.	-141.	26.	-205.	53.	-.0130	-.0033	-.0109	-.0098	.0377	.0086	798.
.0210	-431.	-86.	-32.	-10.	-194.	56.	-.0083	-.0029	-.0062	-.0004	.0436	.0225	756.
.0220	-610.	-113.	138.	-51.	-226.	56.	-.0025	-.0020	.0003	.0142	.0500	.0316	888.
.0230	-711.	-90.	361.	-89.	-285.	57.	.0036	-.0012	.0077	.0313	.0552	.0371	1135.
.0240	-849.	-122.	596.	-112.	-332.	66.	.0095	-.0015	.0149	.0460	.0571	.0431	1329.
.0250	-1077.	-285.	781.	-122.	-421.	77.	.0152	-.0027	.0205	.0549	.0550	.0508	1314.
.0260	-1257.	-464.	861.	-140.	-265.	76.	.0206	-.0030	.0240	.0594	.0517	.0555	1156.
.0270	-1220.	-397.	829.	-169.	-239.	55.	.0246	-.0011	.0249	.0632	.0510	.0529	1111.
.0280	-1252.	-303.	718.	-185.	-205.	31.	.0268	.0010	.0237	.0601	.0506	.0550	1035.
.0290	-1558.	-506.	534.	-181.	-72.	16.	.0284	.0014	.0219	.0438	.0474	.0668	728.
.0300	-1554.	-557.	244.	-178.	78.	-5.	.0305	.0027	.0208	.0241	.0464	.0647	727.
.0310	-1166.	-388.	-112.	-170.	165.	-46.	.0322	.0056	.0209	.0059	.0464	.0453	921.
.0320	-790.	-337.	-352.	-174.	222.	-79.	.0327	.0074	.0231	-.0105	.0394	.0242	1092.

.0330 -379. -321. -364. -160. 248. -72. .0318 .0077 .0271 -.0184 .0236 -.0009 1135.

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	52	MEMBER	1	SEQUENCE	173	LOCATION	END	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0340	268.	-179.	-262.	-129.	205.	-51.	.0296	.0077	.0303	-.0174	.0032	-.0391	923.	
.0350	921.	-129.	-210.	-79.	153.	-49.	.0262	.0078	.0301	-.0167	-.0197	-.0806	668.	
.0360	1366.	-185.	-237.	-34.	175.	-58.	.0212	.0083	.0261	-.0191	-.0425	-.1107	701.	
.0370	1705.	-7.	-342.	-4.	225.	-58.	.0138	.0102	.0185	-.0219	-.0578	-.1266	866.	
.0380	1874.	348.	-577.	32.	234.	-58.	.0042	.0127	.0071	-.0307	-.0501	-.1269	909.	
.0390	1602.	397.	-511.	101.	293.	-61.	-.0054	.0134	-.0059	-.0533	-.0517	-.1077	1177.	
.0400	1076.	122.	-1296.	187.	479.	-60.	-.0118	.0120	-.0167	-.0831	-.0399	-.0782	1934.	
.0410	890.	164.	-1570.	252.	622.	-70.	-.0154	.0122	-.0231	-.1006	-.0286	-.0582	2520.	
.0420	888.	434.	-1582.	284.	621.	-92.	-.0181	.0136	-.0242	-.0975	-.0276	-.0419	2573.	
.0430	731.	537.	-1213.	279.	565.	-80.	-.0195	.0136	-.0189	-.0725	-.0408	-.0242	2373.	
.0440	681.	517.	-505.	263.	497.	-20.	-.0187	.0115	-.0092	-.0276	-.0649	-.0209	2100.	
.0450	921.	502.	208.	253.	349.	35.	-.0166	.0089	-.0000	.0218	-.0896	-.0380	1614.	
.0460	1121.	452.	679.	241.	182.	56.	-.0155	.0067	-.0057	.0585	-.1066	-.0531	1147.	
.0470	978.	423.	908.	217.	152.	80.	-.0166	.0044	.0085	.0760	-.1126	-.0438	1035.	
.0480	635.	531.	858.	188.	224.	113.	-.0197	.0023	.0077	.0715	-.1034	-.0152	1170.	
.0490	302.	639.	445.	167.	250.	113.	-.0238	.0010	.0022	.0445	-.0759	.0139	1200.	
.0500	1.	555.	-131.	159.	248.	85.	-.0272	-.0003	-.0051	.0072	-.0372	.0337	1145.	
.0510	-219.	443.	-544.	137.	267.	79.	-.0291	-.0022	-.0091	-.0204	-.0009	.0443	1161.	
.0520	-294.	462.	-677.	77.	212.	109.	-.0302	-.0044	-.0080	-.0301	.0226	.0475	935.	
.0530	-212.	488.	-563.	-15.	26.	141.	-.0302	-.0063	-.0028	-.0232	.0304	.0405	538.	
.0540	79.	440.	-211.	-109.	-185.	159.	-.0274	-.0075	.0061	.0000	.0267	.0173	997.	
.0550	512.	359.	275.	-186.	-357.	170.	-.0223	-.0091	.0168	.0317	.0180	-.0173	1630.	
.0560	810.	233.	671.	-255.	-529.	176.	-.0178	-.0099	.0253	.0556	.0110	-.0439	2290.	
.0570	804.	119.	849.	-328.	-684.	177.	-.0158	-.0101	.0297	.0647	.0128	-.0502	2906.	
.0580	555.	102.	806.	-391.	-729.	174.	-.0154	-.0090	.0305	.0618	.0293	-.0399	3154.	
.0590	99.	35.	530.	-423.	-668.	157.	-.0150	-.0074	.0275	.0444	.0587	-.0190	3009.	
.0600	-523.	-219.	91.	-433.	-589.	121.	-.0137	-.0056	.0219	.0143	.0928	.0092	2766.	
.0610	-1136.	-489.	-256.	-447.	-518.	71.	-.0111	-.0029	.0176	-.0100	.1219	.0398	2566.	
.0620	-1588.	-564.	-290.	-477.	-452.	12.	-.0069	.0015	.0182	-.0112	.1375	.0665	2453.	
.0630	-1887.	-578.	-12.	-515.	-434.	-48.	-.0014	.0065	.0236	.0090	.1342	.0849	2522.	
.0640	-1996.	-706.	496.	-552.	-484.	-92.	.0054	.0105	.0317	.0428	.1125	.0878	2763.	
.0650	-1851.	-884.	1163.	-572.	-559.	-114.	.0127	.0133	.0405	.0859	.0806	.0718	3015.	
.0660	-1603.	-1024.	1806.	-585.	-623.	-133.	.0183	.0157	.0468	.1281	.0492	.0488	3178.	
.0670	-1497.	-1112.	2168.	-542.	-663.	-158.	.0200	.0182	.0472	.1526	.0266	.0358	3250.	
.0680	-1480.	-1059.	2103.	-520.	-645.	-178.	.0179	.0211	.0406	.1510	.0197	.0359	3162.	
.0690	-1476.	-876.	1621.	-482.	-539.	-197.	.0135	.0236	.0279	.1251	.0310	.0430	2797.	
.0700	-1587.	-789.	847.	-404.	-363.	-228.	.0078	.0247	.0115	.0795	.0552	.0550	2199.	
.0710	-1738.	-812.	13.	-306.	-183.	-248.	.0020	.0238	-.0048	.0271	.0903	.0665	1622.	

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CONDITION 24
LOADS
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ENGLISH UNITS

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

.0630	-1887.	-378.	-12.	-515.	-434.	-48.	-0014	.0065	.0236	.0090	.1342	.0847	2522.
.0640	-1996.	-706.	496.	-552.	-424.	-92.	.0054	.0105	.0317	.0428	.1125	.0873	2763.
.0650	-1851.	-884.	1163.	-572.	-559.	-114.	.0127	.0133	.0405	.0859	.0806	.0713	3015.
.0660	-1603.	-1024.	1306.	-565.	-623.	-133.	.0183	.0157	.0468	.1281	.0492	.0488	3178.
.0670	-1497.	-1112.	2168.	-542.	-663.	-158.	.0200	.0182	.0472	.1526	.0266	.0358	3250.
.0680	-1430.	-1059.	2103.	-520.	-645.	-178.	.0179	.0211	.0406	.1510	.0197	.0359	3162.
.0690	-1476.	-876.	1621.	-482.	-539.	-197.	.0135	.0236	.0279	.1251	.0310	.0430	2797.
.0700	-1587.	-789.	847.	-404.	-363.	-228.	.0078	.0247	.0115	.0795	.0552	.0550	2199.
.0710	-1738.	-812.	13.	-306.	-183.	-248.	.0020	.0238	-.0048	.0271	.0803	.0665	1622.

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

SECTION	52	MEMBER	1	SEQUENCE	173	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0720	-1602.	-667.	-614.	-229.	-69.	-224.	-.0025	.0217	-.0166	-.0114	.0954	.0647	1223.		
.0730	-1120.	-348.	-887.	-175.	-43.	-167.	-.0047	.0188	-.0216	-.0248	.0729	.0446	915.		
.0740	-537.	-151.	-808.	-117.	-61.	-105.	-.0042	.0145	-.0205	-.0162	.0700	.0124	630.		
.0750	102.	-88.	-471.	-58.	-78.	-33.	-.0010	.0088	-.0151	.0078	.0309	-.0276	382.		
.0760	830.	57.	-50.	-12.	-89.	54.	.0035	.0030	-.0085	.0386	-.0137	-.0699	393.		
.0770	1435.	267.	240.	26.	-88.	126.	.0070	-.0020	-.0041	.0628	-.0513	-.1010	583.		
.0780	1697.	418.	258.	71.	-32.	167.	.0081	-.0062	-.0042	.0692	-.0724	-.1111	690.		
.0790	1726.	571.	-32.	127.	91.	201.	.0070	-.0090	-.0090	.0549	-.0723	-.1059	948.		
.0800	1661.	746.	-583.	191.	231.	236.	.0044	-.0133	-.0173	.0224	-.0534	-.0935	1425.		
.0810	1437.	789.	-1231.	265.	357.	257.	.0009	-.0167	-.0270	-.0196	-.0254	-.0748	1916.		
.0820	1123.	728.	-1722.	333.	463.	258.	-.0023	-.0194	-.0339	-.0536	.0002	-.0537	2337.		
.0830	978.	773.	-1887.	368.	512.	255.	-.0039	-.0204	-.0356	-.0645	.0140	-.0411	2537.		
.0840	1039.	875.	-1706.	366.	470.	249.	-.0030	-.0198	-.0321	-.0520	.0107	-.0401	2410.		
.0850	1100.	812.	-1259.	350.	391.	231.	.0003	-.0183	-.0244	-.0230	-.0080	-.0451	2139.		
.0860	1094.	624.	-655.	327.	347.	202.	.0057	-.0169	-.0136	.0158	-.0333	-.0517	1933.		
.0870	1044.	491.	-97.	292.	333.	169.	.0115	-.0141	-.0021	.0527	-.0543	-.0551	1771.		
.0880	845.	398.	221.	250.	333.	128.	.0165	-.0102	.0074	.0731	-.0633	-.0473	1627.		
.0890	429.	253.	258.	111.	389.	73.	.0201	-.0059	.0143	.0720	-.0574	-.0260	1686.		
.0900	-60.	89.	91.	112.	514.	3.	.0229	-.0013	.0194	.0553	-.0385	.0003	2062.		
.0910	-457.	-48.	-176.	197.	430.	-75.	.0247	.0034	.0228	.0307	-.0152	.0223	2486.		
.0920	-693.	-165.	-385.	188.	675.	-147.	.0252	.0079	.0254	.0088	.0017	.0349	2673.		
.0930	-723.	-239.	-357.	168.	645.	-196.	.0244	.0119	.0283	.0024	.0055	.0335	2593.		
.0940	-538.	-286.	-61.	141.	546.	-227.	.0224	.0154	.0313	.0151	-.0035	.0160	2270.		
.0950	-225.	-371.	347.	117.	379.	-250.	.0190	.0183	.0321	.0360	-.0202	-.0124	1751.		
.0960	104.	-481.	690.	99.	193.	-273.	.0144	.0209	.0292	.0525	-.0365	-.0416	1300.		
.0970	344.	-530.	853.	90.	61.	-300.	.0083	.0239	.0221	.0567	-.0437	-.0612	1189.		
.0980	376.	-534.	768.	97.	-2.	-344.	.0008	.0276	.0107	.0435	-.0370	-.0635	1334.		
.0990	177.	-561.	451.	119.	-24.	-403.	-.0078	.0316	-.0045	.0131	-.0181	-.0495	1573.		
.1000	-127.	-612.	57.	151.	-22.	-458.	-.0158	.0357	-.0215	-.0240	.0060	-.0286	1801.		
.1010	-435.	-673.	-224.	182.	-17.	-499.	-.0220	.0396	-.0375	-.0527	.0265	-.0091	1983.		
.1020	-740.	-759.	-273.	201.	-42.	-529.	-.0262	.0433	-.0508	-.0636	.0352	.0068	2120.		
.1030	-1007.	-836.	-64.	196.	-103.	-541.	-.0276	.0466	-.0601	-.0540	.0283	.0191	2181.		
.1040	-1175.	-858.	341.	164.	-167.	-525.	-.0257	.0492	-.0648	-.0277	.0091	.0267	2145.		
.1050	-1286.	-870.	783.	121.	-207.	-496.	-.0207	.0506	-.0657	.0040	-.0141	.0321	2057.		
.1060	-1421.	-910.	1091.	86.	-212.	-485.	-.0136	.0506	-.0638	.0283	-.0321	.0397	1936.		
.1070	-1554.	-883.	1193.	60.	-181.	-416.	-.0056	.0489	-.0599	.0388	-.0395	.0506	1706.		
.1080	-1665.	-802.	1098.	39.	-112.	-334.	.0024	.0451	-.0543	.0344	-.0362	.0638	1323.		
.1090	-1721.	-755.	843.	23.	-35.	-240.	.0099	.0399	-.0478	.0187	-.0253	.0738	910.		

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ENGLISH UNITS

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

.1010	-435.	-673.	-224.	182.	-17.	-499.	-.220	.0396	-.0375	-.0527	.0265	-.0091	1983.
.1020	-740.	-759.	-273.	201.	-42.	-529.	-.262	.0433	-.0508	-.0636	.0352	.0068	2120.
.1030	-1007.	-836.	-84.	196.	-103.	-541.	-.0276	.0466	-.0601	-.0540	.0283	.0191	2181.
.1040	-1175.	-858.	341.	164.	-167.	-525.	-.0257	.0492	-.0648	-.0277	.0091	.0267	2145.
.1050	-1286.	-870.	783.	121.	-207.	-496.	-.0207	.0506	-.0657	.0040	-.0141	.0321	2057.
.1060	-1421.	-910.	1091.	86.	-212.	-465.	-.0136	.0506	-.0638	.0283	-.0321	.0397	1936.
.1070	-1554.	-883.	1193.	60.	-181.	-416.	-.0056	.0489	-.0599	.0388	-.0395	.0506	1706.
.1080	-1665.	-802.	1098.	39.	-112.	-334.	.0024	.0451	-.0543	.0344	-.0362	.0638	1323.
.1090	-1721.	-755.	843.	23.	-35.	-240.	.0099	.0399	-.0478	.0187	-.0253	.0738	910.

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LOADS

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ENGLISH UNITS

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

SECTION	SZ	MEMBER	1	SEQUENCE	173	LOCATION	END	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1100	-1451.	-432.	517.	25.	-51.	-145.	.0158	.0351	-.0416	.0043	-.0094	.0673	582.	
.1110	-1038.	-102.	280.	31.	-103.	-23.	.0204	.0288	-.0355	-.0050	.0011	.0515	413.	
.1120	-641.	13.	180.	31.	-155.	121.	.0236	.0199	-.0301	-.0089	.0011	.0336	745.	
.1130	-166.	109.	100.	34.	-241.	239.	.0251	.0117	-.0268	-.0075	-.0032	.0104	1274.	
.1140	401.	380.	-62.	41.	-336.	322.	.0253	.0064	-.0256	-.0045	-.0044	-.0168	1744.	
.1150	879.	720.	-306.	41.	-381.	406.	.0246	.0032	-.0253	-.0085	-.0002	-.0366	2084.	
.1160	1128.	944.	-644.	46.	-387.	481.	.0231	.0009	-.0253	-.0258	.0122	-.0422	2312.	
.1170	1127.	976.	-1079.	76.	-365.	501.	.0215	.0002	-.0247	-.0543	.0338	-.0364	2332.	
.1180	1147.	1141.	-1505.	130.	-309.	480.	.0212	.0023	-.0213	-.0813	.0596	-.0306	2185.	
.1190	1026.	1198.	-1748.	178.	-175.	467.	.0233	.0051	-.0139	-.1032	.0731	-.0181	1976.	
.1200	795.	1036.	-1690.	202.	-36.	449.	.0272	.0081	-.0030	-.1111	.0657	-.0010	1843.	
.1210	761.	938.	-1294.	210.	17.	375.	.0319	.0138	.0099	-.0904	.0427	.0043	1606.	
.1220	767.	821.	-620.	211.	37.	263.	.0366	.0223	.0233	-.0475	.0084	.0013	1268.	
.1230	788.	772.	151.	198.	32.	177.	.0400	.0317	.0344	.0006	-.0294	-.0036	999.	
.1240	623.	601.	761.	183.	17.	108.	.0407	.0401	.0405	.0324	-.0596	.0016	796.	
.1250	231.	299.	1026.	199.	48.	-4.	.0381	.0479	.0405	.0402	-.0689	.0188	765.	
.1260	-185.	169.	910.	252.	156.	-149.	.0332	.0561	.0356	.0252	-.0542	.0418	1239.	
.1270	-720.	31.	500.	313.	340.	-264.	.0274	.0625	.0272	-.0153	-.0301	.0754	1988.	
.1280	-1107.	-40.	14.	357.	477.	-345.	.0213	.0669	.0175	-.0633	-.0075	.1061	2572.	
.1290	-1253.	-123.	-281.	392.	535.	-439.	.0155	.0697	.0096	-.0940	.0059	.1203	2969.	
.1300	-1133.	-191.	-245.	421.	539.	-522.	.0107	.0708	.0054	-.0968	.0026	.1117	3211.	
.1310	-624.	-50.	65.	423.	455.	-521.	.0073	.0691	.0045	-.0790	-.0210	.0797	3029.	
.1320	-27.	-9.	480.	404.	324.	-441.	.0048	.0632	.0049	-.0583	-.0596	.0395	2539.	
.1330	597.	-17.	831.	397.	203.	-365.	.0025	.0548	.0050	-.0397	-.0943	-.0036	2151.	
.1340	1127.	23.	938.	419.	157.	-319.	.0002	.0459	.0030	-.0336	-.1123	-.0399	2050.	
.1350	1505.	201.	677.	440.	166.	-248.	-.0024	.0362	-.0026	-.0525	-.1128	-.0593	1985.	
.1360	1760.	515.	117.	444.	179.	-141.	-.0054	.0253	-.0117	-.0920	-.0985	-.0621	1862.	
.1370	1666.	536.	-517.	457.	244.	-52.	-.0084	.0129	-.0221	-.1367	-.0752	-.0494	1945.	
.1380	1455.	578.	-1008.	488.	331.	11.	-.0099	.0007	-.0314	-.1676	-.0514	-.0372	2201.	
.1390	1310.	589.	-1240.	493.	369.	107.	-.0084	-.0109	-.0380	-.1810	-.0417	-.0312	2336.	
.1400	1277.	597.	-1149.	447.	319.	233.	-.0037	-.0213	-.0412	-.1746	-.0515	-.0306	2228.	
.1410	1331.	630.	-737.	378.	216.	311.	.0031	-.0289	-.0403	-.1429	-.0721	-.0345	1995.	
.1420	1181.	489.	-163.	317.	157.	319.	.0113	-.0338	-.0364	-.1001	-.0960	-.0320	1778.	
.1430	961.	366.	328.	250.	129.	326.	.0205	-.0367	-.0317	-.0655	-.1163	-.0239	1607.	
.1440	698.	241.	575.	165.	110.	354.	.0293	-.0380	-.0284	-.0514	-.1263	-.0103	1513.	
.1450	316.	29.	572.	93.	121.	336.	.0364	-.0372	-.0267	-.0536	-.1183	.0079	1378.	
.1460	-116.	-148.	385.	48.	169.	260.	.0411	-.0331	-.0258	-.0647	-.0935	.0264	1171.	
.1470	-577.	-345.	65.	-3.	246.	195.	.0444	-.0274	-.0250	-.0879	-.0658	.0458	1173.	

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FORCES AND MOMENTS ACT ON THE PIPING

SECTION SZ MEMBER 1 SEQUENCE 173 LOCATION END TYPE RU

.1390	1310.	589.	1240.	493.	369.	107.	-.0084	-.0109	-.0380	-.1810	-.0417	-.0312	2201.
.1400	1277.	597.	-1149.	447.	319.	233.	-.0037	-.0213	-.0412	-.1746	-.0515	-.0306	2228.
.1410	1331.	630.	-737.	378.	216.	311.	.0031	-.0289	-.0403	-.1429	-.0721	-.0345	1995.
.1420	1181.	489.	-163.	317.	157.	319.	.01	-.0338	-.0364	-.1001	-.0960	-.0320	1778.
.1430	961.	366.	328.	250.	129.	326.	.0178	-.0367	-.0317	-.0655	-.1163	-.0239	1607.
.1440	698.	241.	575.	165.	110.	354.	.0273	-.0380	-.0284	-.0514	-.1263	-.0103	1513.
.1450	316.	29.	572.	93.	121.	336.	.0364	-.0372	-.0267	-.0536	-.1183	.0079	1378.
.1460	-116.	-148.	385.	48.	169.	260.	.0411	-.0331	-.0258	-.0647	-.0935	.0264	1171.
.1470	-577.	-345.	65.	-3.	246.	195.	.0444	-.0274	-.0250	-.0879	-.0658	.0458	1173.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.08.

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	52	MEMBER	1	SEQUENCE	173	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1480	-792.	-417.	-289.	-79.	284.	163.	.0471	-.0200	-.0233	-.1144	-.0440	.0552	1256.		
.1490	-837.	-535.	-524.	-151.	300.	96.	.0492	-.0108	-.0189	-.1305	-.0305	.0521	1305.		
.1500	-794.	-741.	-540.	-204.	316.	-14.	.0503	-.0002	-.0108	-.1294	-.0267	.0380	1407.		
.1510	-453.	-731.	-380.	-267.	265.	-89.	.0506	.0113	.0002	-.1153	-.0327	.0101	1443.		
.1520	49.	-641.	-171.	-342.	141.	-101.	.0494	.0218	.0117	-.1009	-.0448	-.0235	1431.		
.1530	548.	-587.	-1.	-386.	5.	-114.	.0462	.0312	.0220	-.0877	-.0509	-.0576	1503.		
.1540	817.	-678.	55.	-379.	-56.	-163.	.0405	.0397	.0298	-.0797	-.0446	-.0816	1554.		
.1550	953.	-673.	-76.	-360.	-76.	-195.	.0324	.0476	.0336	-.0823	-.0281	-.0909	1554.		
.1560	1131.	-347.	-368.	-353.	-138.	-186.	.0218	.0552	.0331	-.0922	-.0046	-.0883	1577.		
.1570	1059.	-120.	-674.	-330.	-178.	-183.	.0090	.0610	.0297	-.1023	.0213	-.0696	1557.		
.1580	869.	20.	-854.	-271.	-134.	-197.	-.0044	.0650	.0256	-.1002	.0467	-.0475	1427.		
.1590	819.	263.	-886.	-207.	-225.	-170.	-.0173	.0664	.0218	-.0852	.0647	-.0322	1306.		
.1600	795.	489.	-775.	-160.	-317.	-76.	-.0290	.0642	.0191	-.0634	.0696	-.0170	1356.		
.1610	681.	635.	-489.	-115.	-404.	31.	-.0394	.0593	.0188	-.0309	.0657	.0022	1573.		
.1620	586.	868.	-75.	-62.	-463.	108.	-.0493	.0537	.0210	.0143	.0607	.0214	1790.		
.1630	401.	1043.	299.	-15.	-490.	182.	-.0549	.0469	.0240	.0546	.0544	.0463	1952.		
.1640	211.	1233.	545.	11.	-507.	283.	-.0591	.0389	.0265	.0823	.0478	.0743	2166.		
.1650	25.	1441.	713.	32.	-488.	375.	-.0618	.0702	.0284	.1038	.0448	.1020	2302.		
.1660	-346.	1444.	849.	62.	-410.	428.	-.0637	.0209	.0296	.1207	.0450	.1320	2227.		
.1670	-672.	1437.	938.	77.	-354.	475.	-.0649	.0117	.0291	.1328	.0451	.1554	2230.		
.1680	-858.	1443.	982.	61.	-338.	543.	-.0652	.0029	.0268	.1379	.0414	.1686	2400.		
.1690	-899.	1442.	1026.	28.	-343.	591.	-.0646	-.0046	.0234	.1414	.0366	.1690	2553.		
.1700	-951.	1294.	1062.	-5.	-337.	579.	-.0635	-.0102	.0192	.1429	.0329	.1618	2500.		
.1710	-1044.	1007.	1021.	-51.	-317.	541.	-.0619	-.0142	.0145	.1346	.0293	.1510	2348.		
.1720	-860.	939.	871.	-126.	-334.	514.	-.0594	-.0157	.0094	.1178	.0282	.1278	2337.		
.1730	-663.	779.	632.	-205.	-340.	466.	-.0561	-.0157	.0047	.0915	.0308	.0995	2287.		
.1740	-563.	425.	357.	-267.	-317.	366.	-.0524	-.0141	.0009	.0611	.0378	.0690	2064.		
.1750	-406.	112.	81.	-327.	-291.	251.	-.0482	-.0106	-.0014	.0306	.0460	.0340	1885.		
.1760	-226.	-169.	-178.	-403.	-263.	156.	-.0430	-.0057	-.0022	-.0008	.0492	-.0007	1889.		
.1770	-16.	-406.	-377.	-480.	-235.	52.	-.0371	.0007	-.0013	-.0264	.0475	-.0352	2004.		
.1780	73.	-772.	-484.	-537.	-164.	-94.	-.0306	.0082	.0013	-.0432	.0420	-.0651	2126.		
.1790	175.	-1066.	-512.	-583.	-77.	-246.	-.0239	.0167	.0054	-.0507	.0333	-.0926	2380.		
.1800	299.	-1227.	-505.	-627.	-1.	-364.	-.0174	.0753	.0103	-.0545	.0214	-.1148	2707.		
.1810	236.	-1477.	-480.	-653.	92.	-463.	-.0119	.0227	.0155	-.0578	.0087	-.1245	3009.		
.1820	150.	-1647.	-429.	-646.	193.	-570.	-.0078	.0397	.0211	-.0541	.0014	-.1290	3297.		
.1830	44.	-1749.	-380.	-612.	299.	-666.	-.0051	.0456	.0263	-.0474	-.0019	-.1278	3556.		
.1840	-60.	-1760.	-355.	-567.	382.	-716.	-.0040	.0498	.0304	-.0414	-.0050	-.1200	3697.		
.1850	-158.	-1691.	-307.	-509.	443.	-732.	-.0046	.0520	.0333	-.0324	-.0085	-.1071	3717.		

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ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.08.

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 52 MEMBER 1 SEQUENCE 173 LOCATION END TYPE RU

.1760	-226.	-169.	-178.	-403.	-265.	156.	-.0430	-.0057	-.0022	-.0008	.0492	-.0007	1889.
.1770	-16.	-406.	-377.	-480.	-235.	52.	-.0371	.0007	-.0013	-.0264	.0475	-.0352	2004.
.1780	73.	-772.	-484.	-537.	-184.	-94.	-.0306	.0082	.0013	-.0432	.0420	-.0651	2126.
.1790	175.	-1066.	-512.	-583.	-77.	-246.	-.0239	.0167	.0054	-.0507	.0333	-.0926	2380.
.1800	299.	-1227.	-505.	-627.	-1.	-364.	-.0174	.0253	.0103	-.0545	.0214	-.1148	2707.
.1810	236.	-1477.	-480.	-653.	92.	-463.	-.0119	.0327	.0155	-.0578	.0087	-.1245	3009.
.1820	150.	-1647.	-429.	-646.	193.	-570.	-.0078	.0397	.0211	-.0541	.0014	-.1290	3297.
.1830	44.	-1749.	-380.	-612.	299.	-666.	-.0051	.0456	.0263	-.0474	-.0019	-.1278	3556.
.1840	-60.	-1760.	-355.	-567.	382.	-716.	-.0040	.0498	.0304	-.0414	-.0050	-.1200	3697.
.1850	-158.	-1691.	-307.	-509.	443.	-732.	-.0046	.0520	.0333	-.0324	-.0085	-.1071	3717.

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S/RV PIPING KEWAUNEE GKN08F 2 RUP DISK
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CONDITION 24
LOADS
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INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	52	MEMBER	1	SEQUENCE	173	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1860	-306.	-1643.	-195.	-429.	505.	-742.	-.0070	.0525	.0351	-.0162	-.0118	-.0904	3713.		
.1870	-363.	-1476.	-43.	-338.	531.	-734.	-.0112	.0516	.0352	.0075	-.0148	-.0758	3609.		
.1880	-400.	-1272.	93.	-252.	521.	-680.	-.0167	.0487	.0332	.0304	-.0193	-.0601	3334.		
.1890	-411.	-1008.	193.	-170.	494.	-589.	-.0232	.0440	.0297	.0514	-.0224	-.0439	2938.		
.1900	-419.	-713.	243.	-82.	472.	-493.	-.0304	.0380	.0252	.0707	-.0199	-.0279	2566.		
.1910	-503.	-499.	201.	8.	469.	-395.	-.0376	.0307	.0202	.0823	-.0128	-.0096	2291.		
.1920	-492.	-214.	64.	79.	453.	-276.	-.0439	.0227	.0154	.0860	-.0028	.0057	2003.		
.1930	-380.	121.	-107.	128.	425.	-146.	-.0491	.0146	.0119	.0855	.0077	.0163	1744.		
.1940	-244.	389.	-232.	165.	390.	-33.	-.0534	.0066	.0102	.0863	.0169	.0217	1585.		
.1950	-54.	598.	-276.	187.	330.	70.	-.0567	-.0011	.0103	.0906	.0223	.0191	1439.		
.1960	259.	811.	-251.	181.	228.	185.	-.0588	-.0082	.0115	.0969	.0227	.0065	1287.		
.1970	628.	985.	-188.	154.	98.	299.	-.0602	-.0146	.0128	.1032	.0204	-.0128	1307.		
.1980	918.	1060.	-127.	120.	-31.	378.	-.0614	-.0194	.0133	.1077	.0205	-.0320	1485.		
.1990	1080.	1076.	-124.	82.	-143.	418.	-.0625	-.0225	.0123	.1068	.0262	-.0455	1679.		
.2000	1105.	1081.	-225.	34.	-232.	440.	-.0634	-.0237	.0096	.0961	.0379	-.0499	1861.		
.2010	964.	1032.	-415.	-17.	-289.	440.	-.0637	-.0232	.0056	.0766	.0549	-.0445	1967.		
.2020	666.	891.	-612.	-61.	-316.	401.	-.0631	-.0210	.0016	.0555	.0755	-.0322	1921.		
.2030	283.	694.	-718.	-101.	-333.	334.	-.0612	-.0173	-.0012	.0399	.0949	-.0171	1800.		
.2040	-114.	481.	-669.	-148.	-364.	266.	-.0579	-.0126	-.0017	.0330	.1067	-.0019	1771.		
.2050	-491.	252.	-443.	-200.	-413.	201.	-.0529	-.0072	.0002	.0370	.1082	.0112	1870.		
.2060	-838.	-6.	-62.	-246.	-462.	120.	-.0468	-.0011	.0044	.0527	.1015	.0209	2006.		
.2070	-1154.	-279.	396.	-285.	-498.	24.	-.0401	.0053	.0100	.0754	.0897	.0281	2143.		
.2080	-1447.	-528.	820.	-318.	-519.	-67.	-.0336	.0117	.0155	.0965	.0763	.0355	2288.		
.2090	-1717.	-726.	1120.	-344.	-524.	-145.	-.0281	.0177	.0198	.1097	.0660	.0439	2402.		
.2100	-1963.	-887.	1256.	-352.	-502.	-225.	-.0240	.0233	.0223	.1138	.0531	.0520	2435.		
.2110	-2171.	-1033.	1220.	-340.	-452.	-307.	-.0214	.0282	.0229	.1082	.0677	.0584	2403.		
.2120	-2294.	-1134.	1042.	-319.	-393.	-376.	-.0200	.0322	.0222	.0942	.0761	.0614	2352.		
.2130	-2277.	-1155.	799.	-297.	-339.	-423.	-.0195	.0351	.0210	.0769	.0836	.0588	2307.		
.2140	-2115.	-1129.	584.	-273.	-297.	-460.	-.0193	.0370	.0203	.0629	.0370	.0486	2283.		
.2150	-1812.	-1092.	447.	-245.	-270.	-491.	-.0191	.0377	.0206	.0555	.0841	.0300	2286.		
.2160	-1363.	-1028.	383.	-221.	-267.	-505.	-.0184	.0373	.0217	.0535	.0744	.0033	2285.		
.2170	-813.	-916.	358.	-199.	-279.	-495.	-.0174	.0356	.0230	.0542	.0603	-.0282	2246.		
.2180	-279.	-794.	330.	-174.	-285.	-474.	-.0165	.0330	.0238	.0546	.0463	-.0584	2163.		
.2190	144.	-691.	250.	-139.	-266.	-451.	-.0157	.0296	.0234	.0510	.0361	-.0820	2024.		
.2200	443.	-585.	85.	-99.	-221.	-423.	-.0150	.0256	.0212	.0406	.0313	-.0966	1820.		
.2210	627.	-469.	-157.	-55.	-154.	-388.	-.0140	.0212	.0172	.0238	.0311	-.1021	1571.		
.2220	683.	-373.	-412.	-7.	-67.	-355.	-.0124	.0167	.0123	.0052	.0331	-.0993	1349.		
.2230	630.	-310.	-598.	42.	27.	-327.	-.0103	.0122	.0072	-.0096	.0338	-.0905	1234.		

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S/RV PIPING KEWAUNEE GKN08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
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ENGLISH UNITS

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

.2150	-1812.	-1092.	447.	-245.	-270.	-491.	-0.191	.0377	.0206	.0555	.0841	.0300	2283.
.2160	-1363.	-1028.	383.	-221.	-267.	-505.	-0.184	.0373	.0217	.0535	.0744	.0033	2285.
.2170	-813.	-916.	358.	-199.	-279.	-495.	-0.174	.0356	.0230	.0542	.0503	-.0282	2246.
.2180	-279.	-794.	330.	-174.	-285.	-474.	-0.165	.0330	.0238	.0546	.0463	-.0584	2163.
.2190	144.	-691.	250.	-139.	-266.	-451.	-0.157	.0296	.0234	.0510	.0361	-.0820	2024.
.2200	443.	-585.	85.	-99.	-221.	-423.	-0.150	.0256	.0212	.0406	.0313	-.0966	1820.
.2210	627.	-469.	-157.	-55.	-154.	-388.	-0.140	.0212	.0172	.0238	.0311	-.1021	1571.
.2220	683.	-373.	-412.	-7.	-67.	-355.	-0.124	.0167	.0123	.0052	.0331	-.0993	1349.
.2230	630.	-310.	-598.	42.	27.	-327.	-0.103	.0122	.0072	-.0096	.0338	-.0905	1234.

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CONDITION 24

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FORCES AND MOMENTS ACT ON THE PIPING

SECTION	52	MEMBER	1	SEQUENCE	173	LOCATION	END	TYPE	RU					STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ		(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)		
.2240	528.	-259.	-658.	86.	106.	-292.	-.0072	.0076	.0029	-.0172	.0293	-.0793		1201.
.2250	420.	-222.	-572.	122.	157.	-246.	-.0033	.0031	-.0005	-.0166	.0181	-.0688		1180.
.2260	311.	-216.	-361.	155.	186.	-200.	.0014	-.0010	-.0029	-.0088	.0017	-.0599		1172.
.2270	190.	-235.	-84.	188.	204.	-163.	.0063	-.0044	-.0046	.0026	-.0169	-.0516		1203.
.2280	51.	-251.	174.	220.	223.	-132.	.0110	-.0070	-.0066	.0115	-.0344	-.0419		1268.
.2290	-104.	-251.	334.	251.	249.	-104.	.0150	-.0087	-.0093	.0126	-.0480	-.0299		1376.
.2300	-265.	-243.	362.	285.	290.	-87.	.0180	-.0095	-.0131	.0046	-.0555	-.0170		1551.
.2310	-408.	-239.	271.	324.	341.	-83.	.0198	-.0094	-.0175	-.0111	-.0571	-.0055		1781.
.2320	-497.	-228.	102.	362.	386.	-82.	.0206	-.0087	-.0218	-.0318	-.0552	.0024		1999.
.2330	-485.	-189.	-95.	395.	411.	-76.	.0206	-.0073	-.0252	-.0540	-.0532	.0042		2145.
.2340	-345.	-118.	-270.	420.	413.	-67.	.0201	-.0053	-.0266	-.0736	-.0530	-.0019		2215.
.2350	-92.	-44.	-399.	443.	400.	-62.	.0196	-.0029	-.0255	-.0887	-.0554	-.0156		2239.
.2360	246.	29.	-481.	460.	375.	-57.	.0194	-.0002	-.0219	-.0997	-.0503	-.0346		2225.
.2370	639.	126.	-535.	470.	341.	-47.	.0193	.0029	-.0162	-.1078	-.0661	-.0559		2176.
.2380	1034.	249.	-579.	477.	305.	-36.	.0192	.0063	-.0090	-.1137	-.0706	-.0761		2117.
.2390	1365.	368.	-624.	484.	275.	-29.	.0189	.0097	-.0011	-.1180	-.0716	-.0919		2082.
.2400	1605.	469.	-678.	492.	255.	-21.	.0183	.0130	.0066	-.1215	-.0687	-.1016		2070.
.2410	1755.	562.	-734.	499.	238.	-11.	.0174	.0160	.0135	-.1235	-.0527	-.1051		2063.
.2420	1812.	649.	-762.	503.	221.	0.	.0161	.0188	.0193	-.1221	-.0546	-.1022		2053.
.2430	1774.	722.	-731.	506.	200.	8.	.0144	.0213	.0240	-.1151	-.0461	-.0931		2031.
.2440	1666.	790.	-629.	502.	168.	14.	.0125	.0235	.0275	-.1019	-.0383	-.0792		1977.
.2450	1507.	850.	-459.	492.	123.	23.	.0104	.0252	.0299	-.0834	-.0319	-.0620		1894.
.2460	1297.	879.	-241.	477.	71.	35.	.0084	.0261	.0310	-.0617	-.0266	-.0424		1807.
.2470	1037.	871.	3.	462.	22.	46.	.0065	.0261	.0310	-.0388	-.0218	-.0208		1736.
.2480	755.	853.	245.	444.	-24.	55.	.0048	.0255	.0296	-.0168	-.0169	.0019		1674.
.2490	472.	845.	458.	421.	-70.	66.	.0033	.0242	.0270	.0024	-.0119	.0249		1611.
.2500	181.	822.	636.	392.	-108.	76.	.0022	.0223	.0230	.0179	-.0070	.0476		1545.
.2510	-114.	761.	783.	361.	-135.	83.	.0018	.0196	.0179	.0297	-.0026	.0687		1472.
.2520	-385.	673.	897.	326.	-156.	88.	.0021	.0164	.0118	.0380	.0003	.0863		1388.
.2530	-605.	581.	981.	285.	-175.	93.	.0033	.0129	.0051	.0427	.0012	.0994		1295.
.2540	-764.	486.	1038.	236.	-193.	98.	.0056	.0092	-.0019	.0441	-.0002	.1075		1196.
.2550	-866.	381.	1069.	183.	-209.	100.	.0088	.0054	-.0088	.0422	-.0032	.1105		1103.
.2560	-913.	262.	1063.	131.	-222.	98.	.0130	.0016	-.0155	.0360	-.0072	.1086		1029.
.2570	-904.	133.	1011.	80.	-230.	98.	.0180	-.0022	-.0217	.0250	-.0118	.1020		978.
.2580	-839.	15.	910.	30.	-233.	98.	.0236	-.0060	-.0275	.0096	-.0162	.0912		951.
.2590	-724.	-80.	769.	-15.	-233.	99.	.0296	-.0095	-.0327	-.0087	-.0204	.0773		945.
.2600	-575.	-165.	599.	-54.	-228.	100.	.0356	-.0131	-.0373	-.0289	-.0245	.0613		951.
.2610	-399.	-248.	414.	-86.	-219.	105.	.0417	-.0167	-.0412	-.0501	-.0290	.0440		964.

ADLPIPE PAGE 2001 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.08.

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	52	MEMBER	1	SEQUENCE	173	LOCATION	END	TYPE	RU
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.2530	-605.	581.	981.	285.	-175.	93.	.0333	.0129	.0051	.0427	.0012	.0994	1295.
.2540	-764.	436.	1030.	236.	-173.	78.	.056	.0092	-.0019	.0441	-.0002	.1075	1196.
.2550	-866.	381.	1069.	183.	-209.	100.	.0088	.0054	-.0088	.0422	-.0032	.1105	1103.
.2560	-913.	262.	1063.	131.	-222.	98.	.0130	.0016	-.0155	.0360	-.0072	.1086	1029.
.2570	-904.	133.	1011.	80.	-230.	98.	.0180	-.0022	-.0217	.0250	-.0118	.1020	978.
.2580	-839.	15.	910.	30.	-233.	98.	.0236	-.0060	-.0275	.0096	-.0162	.0912	951.
.2590	-724.	-80.	769.	-15.	-233.	99.	.0296	-.0095	-.0327	-.0087	-.0204	.0773	945.
.2600	-575.	-165.	599.	-54.	-228.	100.	.0356	-.0131	-.0373	-.0289	-.0245	.0613	951.
.2610	-399.	-248.	414.	-86.	-219.	105.	.0417	-.0167	-.0412	-.0501	-.0290	.0440	964.

ADLPIPE PAGE 2001

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.08.

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	S2	MEMBER	1	SEQUENCE	173	LOCATION	END	TYPE	RU						STRESS
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ		(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)		
.2620	-199.	-316.	224.	-109.	-208.	113.		.0475	-.0202	-.0446	-.0708	-.0339	.0259		973.
.2630	10.	-359.	42.	-122.	-194.	121.		.0530	-.0234	-.0472	-.0895	-.0392	.0085		965.
.2640	201.	-378.	-118.	-125.	-175.	129.		.0578	-.0264	-.0491	-.1052	-.0447	-.0062		936.
.2650	361.	-375.	-253.	-119.	-151.	140.		.0618	-.0291	-.0504	-.1178	-.0504	-.0170		887.
.2660	486.	-357.	-363.	-101.	-120.	151.		.0651	-.0315	-.0510	-.1271	-.0556	-.0239		814.
.2670	569.	-327.	-449.	-72.	-80.	161.		.0677	-.0335	-.0510	-.1327	-.0600	-.0268		724.
.2680	608.	-279.	-508.	-34.	-32.	171.		.0694	-.0350	-.0504	-.1345	-.0636	-.0252		661.
.2690	597.	-212.	-532.	9.	22.	181.		.0702	-.0362	-.0492	-.1321	-.0668	-.0188		680.
.2700	537.	-148.	-515.	57.	82.	189.		.0701	-.0369	-.0472	-.1256	-.0698	-.0082		798.
.2710	447.	-91.	-459.	108.	144.	194.		.0693	-.0369	-.0446	-.1153	-.0726	.0045		989.
.2720	362.	-11.	-376.	162.	204.	196.		.0678	-.0362	-.0416	-.1018	-.0750	.0174		1217.
.2730	292.	105.	-275.	214.	256.	201.		.0656	-.0349	-.0384	-.0861	-.0771	.0300		1455.
.2740	217.	215.	-164.	263.	305.	207.		.0626	-.0335	-.0350	-.0693	-.0785	.0429		1691.
.2750	132.	288.	-61.	308.	354.	211.		.0589	-.0322	-.0317	-.0530	-.0786	.0554		1922.
.2760	70.	355.	8.	351.	402.	211.		.0549	-.0307	-.0287	-.0383	-.0768	.0656		2144.
.2770	60.	452.	31.	388.	446.	214.		.0505	-.0291	-.0262	-.0263	-.0732	.0724		2347.
.2780	91.	563.	17.	414.	484.	219.		.0459	-.0274	-.0239	-.0172	-.0687	.0765		2516.
.2790	145.	645.	-17.	431.	516.	221.		.0412	-.0260	-.0217	-.0104	-.0638	.0779		2641.
.2800	241.	699.	-68.	441.	538.	218.		.0365	-.0246	-.0196	-.0053	-.0589	.0746		2722.
.2810	412.	764.	-132.	442.	549.	216.		.0322	-.0232	-.0177	-.0018	-.0548	.0653		2751.
.2820	645.	842.	-201.	431.	541.	220.		.0282	-.0218	-.0160	.0005	-.0520	.0510		2711.
.2830	886.	890.	-260.	409.	516.	223.		.0243	-.0208	-.0149	.0022	-.0502	.0347		2597.
.2840	1096.	890.	-314.	380.	482.	219.		.0206	-.0200	-.0144	.0035	-.0483	.0183		2432.
.2850	1276.	870.	-381.	344.	443.	212.		.0173	-.0193	-.0150	.0033	-.0455	.0020		2240.
.2860	1419.	849.	-475.	301.	402.	206.		.0146	-.0184	-.0167	.0004	-.0415	-.0127		2027.
.2870	1475.	799.	-579.	252.	360.	196.		.0126	-.0174	-.0192	-.0042	-.0361	-.0230		1797.
.2880	1410.	699.	-663.	199.	325.	175.		.0113	-.0163	-.0221	-.0089	-.0297	-.0273		1568.
.2890	1246.	567.	-710.	143.	296.	149.		.0110	-.0150	-.0250	-.0124	-.0235	-.0265		1347.
.2900	1026.	424.	-710.	81.	265.	123.		.0121	-.0135	-.0275	-.0141	-.0191	-.0226		1133.
.2910	758.	253.	-645.	16.	232.	96.		.0145	-.0119	-.0295	-.0127	-.0174	-.0165		939.
.2920	435.	47.	-503.	-52.	199.	62.		.0179	-.0101	-.0305	-.0069	-.0184	-.0080		803.
.2930	76.	-169.	-300.	-122.	167.	25.		.0220	-.0082	-.0308	.0024	-.0216	.0026		776.
.2940	-284.	-375.	-79.	-194.	131.	-8.		.0265	-.0062	-.0308	.0122	-.0259	.0142		877.
.2950	-634.	-581.	117.	-266.	98.	-39.		.0311	-.0043	-.0308	.0201	-.0293	.0257		1068.
.2960	-968.	-786.	262.	-331.	72.	-76.		.0351	-.0022	-.0311	.0246	-.0299	.0367		1296.
.2970	-1267.	-957.	337.	-390.	54.	-113.		.0383	-.0000	-.0316	.0248	-.0271	.0471		1528.
.2980	-1502.	-1073.	337.	-445.	35.	-142.		.0404	.0020	-.0324	.0203	-.0215	.0561		1747.
.2990	-1654.	-1153.	276.	-494.	13.	-162.		.0413	.0037	-.0330	.0120	-.0141	.0621		1942.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.08.

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 S2 MEMBER 1 SEQUENCE 173 LOCATION END TYPE RU

.2910	758.	253.	-45.	16.	232.	76.	.0145	-.0119	-.0295	-.0127	-.0174	-.0165	939.
.2920	435.	47.	-503.	-52.	199.	62.	.0179	-.0101	-.0305	-.0069	-.0184	-.0080	803.
.2930	76.	-169.	-300.	-122.	167.	25.	.0220	-.0082	-.0308	.0024	-.0216	.0026	776.
.2940	-284.	-375.	-79.	-194.	131.	-8.	.0265	-.0062	-.0308	.0122	-.0259	.0142	877.
.2950	-634.	-581.	117.	-266.	98.	-39.	.0311	-.0043	-.0308	.0201	-.0293	.0257	1068.
.2960	-768.	-786.	262.	-331.	72.	-76.	.0351	-.0022	-.0311	.0246	-.0299	.0367	1296.
.2970	-1267.	-957.	337.	-390.	54.	-113.	.0383	-.0000	-.0316	.0248	-.0271	.0471	1528.
.2980	-1502.	-1073.	337.	-445.	35.	-142.	.0404	.0020	-.0324	.0203	-.0215	.0561	1747.
.2990	-1654.	-1153.	276.	-494.	13.	-162.	.0413	.0037	-.0330	.0120	-.0141	.0621	1942.

ADLPIPE PAGE 2002

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

83/12/02. 18.29.08.

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	52	MEMBER	1	SEQUENCE	173	LOCATION	END	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.3000	-1712.	-1214.	180.	-533.	-8.	-180.		.0413	.0050	-.0333	.0025	-.0058	.0635	2102.
.3010	-1663.	-1234.	71.	-563.	-33.	-192.		.0403	.0060	-.0328	-.0060	.0022	.0598	2225.
.3020	-1511.	-1186.	-34.	-589.	-67.	-189.		.0384	.0066	-.0313	-.0127	.0085	.0524	2322.
.3030	-1287.	-1088.	-126.	-610.	-108.	-171.		.0357	.0067	-.0287	-.0172	.0132	.0433	2399.
.3040	-1033.	-973.	-207.	-619.	-144.	-150.		.0321	.0063	-.0252	-.0192	.0174	.0338	2438.
.3050	-766.	-836.	-290.	-614.	-170.	-125.		.0280	.0057	-.0211	-.0196	.0223	.0249	2424.
.3060	-500.	-653.	-383.	-598.	-188.	-91.		.0234	.0048	-.0165	-.0193	.0279	.0185	2364.
.3070	-269.	-434.	-473.	-572.	-200.	-47.		.0182	.0036	-.0117	-.0181	.0341	.0166	2270.
.3080	-108.	-215.	-539.	-535.	-203.	-1.		.0124	.0020	-.0056	-.0146	.0405	.0200	2136.
.3090	-11.	-11.	-568.	-486.	-196.	43.		.0063	.0001	-.0014	-.0077	.0466	.0272	1961.
.3100	51.	193.	-552.	-429.	-187.	92.		.0003	-.0019	.0037	.0024	.0508	.0367	1780.
.3110	81.	396.	-484.	-370.	-180.	145.		-.0056	-.0040	.0088	.0158	.0524	.0479	1629.
.3120	54.	578.	-357.	-310.	-175.	192.		-.0113	-.0059	.0137	.0326	.0516	.0615	1508.
.3130	-27.	729.	-187.	-249.	-165.	229.		-.0168	-.0076	.0185	.0515	.0491	.0767	1406.
.3140	-135.	854.	-6.	-192.	-153.	260.		-.0218	-.0091	.0226	.0697	.0457	.0918	1334.
.3150	-255.	947.	157.	-140.	-139.	284.		-.0261	-.0102	.0259	.0848	.0418	.1058	1292.
.3160	-391.	993.	295.	-95.	-120.	296.		-.0298	-.0110	.0284	.0963	.0381	.1179	1243.
.3170	-534.	1001.	408.	-58.	-96.	293.		-.0330	-.0114	.0301	.1043	.0349	.1275	1170.
.3180	-651.	983.	491.	-36.	-75.	281.		-.0355	-.0115	.0310	.1083	.0312	.1329	1094.
.3190	-717.	931.	539.	-29.	-59.	263.		-.0372	-.0113	.0310	.1080	.0266	.1322	1013.
.3200	-728.	832.	556.	-36.	-47.	234.		-.0382	-.0107	.0304	.1042	.0213	.1247	902.
.3210	-686.	702.	547.	-54.	-36.	194.		-.0383	-.0099	.0293	.0974	.0157	.1106	766.
.3220	-588.	567.	507.	-87.	-32.	151.		-.0379	-.0089	.0279	.0874	.0100	.0912	662.
.3230	-444.	426.	431.	-132.	-34.	109.		-.0368	-.0080	.0262	.0736	.0046	.0677	653.
.3240	-271.	260.	320.	-183.	-37.	64.		-.0351	-.0073	.0243	.0568	.0005	.0410	737.
.3250	-85.	75.	181.	-234.	-35.	14.		-.0329	-.0068	.0224	.0381	-.0017	.0124	885.
.3260	106.	-100.	28.	-286.	-35.	-31.		-.0303	-.0067	.0204	.0187	-.0025	-.0163	1081.
.3270	285.	-252.	-120.	-339.	-39.	-67.		-.0274	-.0071	.0184	.0002	-.0029	-.0426	1297.
.3280	429.	-396.	-242.	-388.	-44.	-98.		-.0244	-.0079	.0167	-.0154	-.0028	-.0655	1503.
.3290	532.	-538.	-320.	-427.	-45.	-127.		-.0213	-.0093	.0152	-.0268	-.0024	-.0845	1673.
.3300	598.	-657.	-378.	-456.	-46.	-148.		-.0182	-.0111	.0140	-.0340	-.0019	-.0992	1798.
.3310	622.	-736.	-394.	-475.	-48.	-156.		-.0151	-.0135	.0131	-.0372	-.0015	-.1081	1573.
.3320	586.	-785.	-373.	-481.	-47.	-154.		-.0125	-.0165	.0126	-.0361	-.0005	-.1101	1892.
.3330	485.	-819.	-319.	-471.	-41.	-148.		-.0102	-.0200	.0125	-.0311	.0015	-.1055	1849.
.3340	345.	-827.	-246.	-446.	-30.	-135.		-.0083	-.0239	.0128	-.0232	.0043	-.0957	1742.
.3350	190.	-798.	-159.	-409.	-21.	-112.		-.0067	-.0281	.0133	-.0130	.0076	-.0820	1584.
.3360	18.	-743.	-51.	-362.	-13.	-82.		-.0056	-.0324	.0141	-.0003	.0109	-.0651	1388.
.3370	-170.	-674.	80.	-308.	-8.	-52.		-.0050	-.0366	.0150	.0150	.0140	-.0456	1166.

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

83/12/02. 18.29.08.

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	52	MEMBER	1	SEQUENCE	173	LOCATION	END	TYPE	RU					
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.3290	532.	-538.	-328.	-427.	-45.	-127.	-0213	-0093	.0152	-0268	-0024	-0845	1673.
.3300	598.	-657.	-378.	-456.	-46.	-148.	-0182	-0111	.0140	-0340	-0019	-0992	1798.
.3310	622.	-736.	-394.	-475.	-48.	-156.	-0151	-0135	.0131	-0372	-0015	-1081	1873.
.3320	566.	-785.	-173.	-481.	-47.	-154.	-0125	-0165	.0126	-0361	-0005	-1101	1892.
.3330	485.	-819.	-319.	-471.	-1.	-148.	-0102	-0200	.0125	-0311	.0015	-1055	1849.
.3340	345.	-827.	-246.	-446.	-30.	-135.	-0083	-0239	.0128	-0232	.0043	-0957	1742.
.3350	190.	-798.	-159.	-409.	-21.	-112.	-0067	-0281	.0133	-0130	.0076	-0820	1584.
.3360	18.	-743.	-51.	-362.	-13.	-82.	-0056	-0324	.0141	-0003	.0109	-0651	1388.
.3370	-170.	-674.	80.	-308.	-8.	-52.	-0050	-0366	.0150	.0150	.0140	-0456	1166.

ADLPIPE PAGE 2003

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.08.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.3380	-350.	-587.	222.	-248.	-6.	-21.	-0048	-0407	.0160	.0319	.0167	-0256	931.	
.3390	-496.	-479.	356.	-188.	-11.	14.	-0048	-0444	.0168	.0484	.0191	-0068	704.	
.3400	-611.	-370.	470.	-126.	-21.	48.	-0051	-0478	.0173	.0632	.0215	.0100	511.	
.3410	-706.	-270.	555.	-65.	-31.	76.	-0057	-0508	.0173	.0755	.0248	.0248	393.	
.3420	-772.	-171.	602.	-8.	-42.	100.	-0064	-0532	.0170	.0843	.0288	.0370	405.	
.3430	-792.	-68.	601.	41.	-57.	121.	-0071	-0550	.0162	.0884	.0335	.0457	523.	
.3440	-766.	20.	557.	84.	-74.	139.	-0077	-0562	.0151	.0880	.0384	.0498	664.	
.3450	-701.	78.	485.	119.	-91.	147.	-0080	-0569	.0139	.0843	.0434	.0491	785.	
.3460	-597.	120.	400.	146.	-113.	149.	-0080	-0570	.0126	.0781	.0477	.0439	884.	
.3470	-455.	158.	308.	160.	-141.	150.	-0077	-0566	.0112	.0700	.0506	.0348	973.	
.3480	-290.	181.	215.	164.	-173.	148.	-0071	-0558	.0099	.0605	.0524	.0226	1050.	
.3490	-128.	168.	124.	163.	-203.	140.	-0060	-0547	.0086	.0500	.0535	.0083	1105.	
.3500	16.	128.	33.	158.	-227.	127.	-0047	-0535	.0071	.0387	.0545	-0064	1137.	
.3510	128.	80.	-58.	148.	-247.	113.	-0032	-0520	.0054	.0267	.0554	-0198	1156.	
.3520	194.	30.	-142.	135.	-260.	100.	-0016	-0505	.0036	.0150	.0562	-0304	1156.	
.3530	198.	-38.	-206.	122.	-264.	82.	.0002	-0488	.0017	.0049	.0569	-0377	1127.	
.3540	145.	-125.	-241.	110.	-259.	60.	.0020	-0472	-0002	-0028	.0573	-0417	1073.	
.3550	53.	-212.	-241.	100.	-248.	41.	.0040	-0455	-0019	-0072	.0566	-0430	1011.	
.3560	-69.	-288.	-198.	91.	-236.	26.	.0060	-0438	-0033	-0078	.0543	-0416	950.	
.3570	-220.	-359.	-111.	84.	-222.	11.	.0077	-0422	-0044	-0041	.0507	-0376	887.	
.3580	-389.	-427.	9.	83.	-204.	-3.	.0092	-0408	-0051	.0032	.0462	-0320	822.	
.3590	-553.	-483.	137.	87.	-183.	-14.	.0104	-0394	-0057	.0122	.0412	-0257	756.	
.3600	-700.	-518.	255.	96.	-157.	-20.	.0111	-0380	-0062	.0216	.0363	-0194	690.	
.3610	-825.	-534.	349.	110.	-124.	-26.	.0113	-0366	-0065	.0306	.0320	-0134	628.	
.3620	-921.	-527.	412.	129.	-85.	-31.	.0110	-0351	-0067	.0384	.0284	-0083	590.	
.3630	-966.	-497.	437.	152.	-41.	-35.	.0101	-0334	-0067	.0444	.0252	-0054	601.	
.3640	-943.	-448.	425.	176.	6.	-37.	.0090	-0316	-0064	.0481	.0218	-0060	673.	
.3650	-849.	-390.	387.	203.	54.	-40.	.0078	-0296	-0057	.0501	.0178	-0109	798.	
.3660	-684.	-320.	333.	230.	101.	-45.	.0063	-0274	-0044	.0510	.0130	-0199	951.	
.3670	-449.	-231.	268.	254.	142.	-49.	.0048	-0249	-0027	.0505	.0072	-0329	1102.	
.3680	-154.	-132.	190.	276.	176.	-53.	.0033	-0222	-0006	.0484	.0004	-0494	1238.	
.3690	175.	-41.	98.	296.	206.	-59.	.0018	-0193	.0014	.0444	-0064	-0683	1366.	
.3700	517.	38.	-9.	315.	234.	-71.	.0003	-0162	.0031	.0384	-0125	-0881	1489.	
.3710	839.	116.	-133.	331.	258.	-85.	-0012	-0130	.0042	.0304	-0177	-1070	1597.	
.3720	1132.	197.	-268.	342.	277.	-99.	-0027	-0097	.0047	.0205	-0217	-1235	1683.	
.3730	1368.	263.	-404.	349.	293.	-114.	-0040	-0065	.0044	.0095	-0244	-1365	1754.	
.3740	1534.	298.	-525.	354.	307.	-131.	-0050	-0036	.0034	-0015	-0262	-1455	1818.	
.3750	1631.	311.	-618.	356.	317.	-148.	-0056	-0011	.0021	-0114	-0276	-1503	1863.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION 52 MEMBER 1 SEQUENCE 173 LOCATION END TYPE RU

.3670	-449.	-231.	268.	254.	142.	-49.	.0048	-.0249	-.0027	.0505	.0072	-.0329	1102.
.3680	-154.	-132.	190.	276.	176.	-53.	.0033	-.0222	-.0006	.0484	.0004	-.0494	1238.
.3690	175.	-41.	98.	296.	206.	-59.	.0018	-.0193	.0014	.0444	-.0064	-.0683	1366.
.3700	513.	38.	-9.	315.	234.	-71.	.0003	-.0162	.0031	.0384	-.0125	-.0881	1489.
.3710	839.	116.	-133.	331.	258.	-85.	-.0012	-.0130	.0042	.0304	-.0177	-.1070	1597.
.3720	1132.	197.	-268.	342.	277.	-99.	-.0027	-.0097	.0047	.0205	-.0217	-.1235	1683.
.3730	1368.	263.	-404.	349.	293.	-114.	-.0040	-.0065	.0044	.0095	-.0244	-.1365	1754.
.3740	1534.	298.	-525.	354.	307.	-131.	-.0050	-.0036	.0034	-.0015	-.0262	-.1455	1818.
.3750	1631.	311.	-618.	356.	317.	-148.	-.0056	-.0011	.0021	-.0114	-.0276	-.1503	1863.

ADLPIPE PAGE 2004 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.08.
 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	52	MEMBER	1	SEQUENCE	173	LOCATION	END	TYPE	RU	DZ	RX	RY	RZ	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)	
.3760	1661.	320.	-671.	352.	320.	-160.	-.0055	.0009	.0006	-.0195	-.0294	-.1506	1373.	
.3770	1623.	324.	-671.	343.	315.	-107.	-.0049	.0024	-.0008	-.0247	-.0319	-.1461	1846.	
.3780	1516.	310.	-619.	329.	306.	-170.	-.0036	.0031	-.0020	-.0269	-.0351	-.1372	1793.	
.3790	1352.	275.	-526.	312.	293.	-169.	-.0017	.0029	-.0030	-.0267	-.0388	-.1246	1717.	
.3800	1149.	235.	-406.	292.	276.	-160.	.0007	.0020	-.0038	-.0249	-.0427	-.1092	1615.	
.3810	917.	198.	-274.	268.	256.	-145.	.0033	.0003	-.0045	-.0223	-.0462	-.0913	1485.	
.3820	665.	166.	-144.	242.	233.	-125.	.0059	-.0019	-.0052	-.0197	-.0488	-.0716	1337.	
.3830	412.	140.	-30.	214.	207.	-101.	.0083	-.0047	-.0058	-.0179	-.0501	-.0515	1174.	
.3840	184.	122.	58.	185.	179.	-73.	.0103	-.0079	-.0065	-.0176	-.0501	-.0325	998.	
.3850	1.	114.	115.	155.	146.	-41.	.0119	-.0114	-.0072	-.0189	-.0489	-.0159	811.	
.3860	-127.	126.	145.	125.	108.	-7.	.0128	-.0149	-.0076	-.0212	-.0468	-.0024	617.	
.3870	-192.	161.	155.	95.	62.	29.	.0131	-.0185	-.0078	-.0242	-.0440	.0075	436.	
.3880	-191.	206.	147.	63.	9.	66.	.0126	-.0221	-.0075	-.0275	-.0407	.0137	344.	
.3890	-133.	245.	124.	32.	-48.	102.	.0116	-.0255	-.0070	-.0312	-.0371	.0159	438.	
.3900	-28.	280.	88.	4.	-108.	131.	.0099	-.0283	-.0062	-.0348	-.0329	.0148	633.	
.3910	111.	331.	42.	-24.	-167.	154.	.0075	-.0301	-.0050	-.0380	-.0281	.0113	851.	
.3920	264.	398.	-8.	-53.	-224.	169.	.0046	-.0308	-.0037	-.0406	-.0228	.0069	1069.	
.3930	406.	455.	-57.	-81.	-278.	176.	.0011	-.0304	-.0023	-.0424	-.0172	.0028	1264.	
.3940	523.	484.	-97.	-105.	-323.	169.	-.0028	-.0290	-.0008	-.0430	-.0111	-.0009	1417.	
.3950	612.	492.	-121.	-125.	-359.	152.	-.0069	-.0265	.0007	-.0418	-.0051	-.0039	1529.	
.3960	669.	495.	-119.	-144.	-391.	127.	-.0111	-.0230	.0022	-.0383	.0004	-.0056	1625.	
.3970	680.	488.	-83.	-162.	-418.	95.	-.0154	-.0186	.0038	-.0323	.0049	-.0050	1711.	
.3980	637.	454.	-12.	-177.	-438.	54.	-.0197	-.0134	.0054	-.0236	.0087	-.0022	1775.	
.3990	546.	388.	88.	-189.	-448.	4.	-.0236	-.0077	.0069	-.0130	.0117	.0022	1815.	
.4000	420.	307.	205.	-198.	-450.	-51.	-.0271	-.0013	.0083	-.0015	.0139	.0080	1845.	

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)
.1850	-158.	-1691.	-307.	-509.	443.	-732.	-.0046	.0520	.0333	-.0324	-.0085	-.1071	3717.

SECTION	53	MEMBER	1	SEQUENCE	173	LOCATION	BEG	TYPE	EL	DZ	RX	RY	RZ	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)	

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

CONDITION 24
 LOADS
 SHOCK
 PRESSURE
 ENGLISH UNITS

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

SECTION	53	MEMBER	1	SEQUENCE	173	LOCATION	BEG	TYPE	EL
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(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.1850	-158.	-1691.	-307.	-509.	443.	-732.	-.0046	.0520	.0333	-.0324	-.0085	-.1071	3717.

SECTION	53	MEMBER	1	SEQUENCE	173	LOCATION	BEG	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		

ADLPIPE PAGE 2005 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.08.
 S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
 2 SAFETY COLD FKW24F--2 PSV

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

SECTION	53	MEMBER	1	SEQUENCE	173	LOCATION	BEG	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.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.	.0000	-.0000	.0000	-.0000	-.0000	.0000	1.		
.0030	0.	1.	-0.	-0.	-0.	0.	-.0000	-.0000	-.0000	-.0000	-.0001	.0000	2.		
.0040	-2.	0.	-1.	-0.	-0.	0.	-.0000	.0000	-.0000	-.0000	-.0002	-.0000	3.		
.0050	-6.	-0.	-3.	-1.	0.	1.	-.0001	.0000	-.0001	.0000	-.0004	-.0002	6.		
.0060	-16.	-3.	-6.	-2.	2.	2.	-.0002	.0000	-.0002	.0001	-.0008	-.0005	14.		
.0070	-29.	-6.	-9.	-4.	4.	4.	-.0004	.0000	-.0005	.0000	-.0014	-.0010	24.		
.0080	-45.	-7.	-10.	-6.	5.	5.	-.0008	-.0000	-.0009	-.0003	-.0021	-.0016	36.		
.0090	-72.	-11.	-8.	-9.	8.	7.	-.0014	-.0000	-.0015	-.0008	-.0030	-.0027	53.		
.0100	-119.	-22.	-2.	-12.	17.	11.	-.0023	.0001	-.0023	-.0014	-.0036	-.0047	87.		
.0110	-193.	-43.	9.	-15.	34.	15.	-.0036	.0002	-.0034	-.0023	-.0036	-.0079	148.		
.0120	-289.	-75.	28.	-17.	61.	17.	-.0054	.0003	-.0047	-.0035	-.0027	-.0121	244.		
.0130	-397.	-116.	55.	-22.	96.	15.	-.0077	.0001	-.0062	-.0054	-.0007	-.0172	371.		
.0140	-499.	-155.	88.	-30.	136.	8.	-.0103	-.0003	-.0080	-.0081	.0028	-.0223	520.		
.0150	-572.	-186.	124.	-42.	176.	-4.	-.0130	-.0010	-.0100	-.0114	.0074	-.0262	675.		
.0160	-595.	-208.	156.	-54.	216.	-16.	-.0154	-.0019	-.0119	-.0147	.0130	-.0274	812.		
.0170	-543.	-214.	181.	-63.	231.	-28.	-.0170	-.0026	-.0135	-.0172	.0191	-.0245	900.		
.0180	-400.	-193.	188.	-63.	234.	-38.	-.0173	-.0031	-.0142	-.0178	.0253	-.0168	916.		
.0190	-177.	-143.	169.	-51.	224.	-46.	-.0161	-.0033	-.0135	-.0154	.0316	-.0053	874.		
.0200	115.	-51.	112.	-26.	205.	-53.	-.0130	-.0033	-.0109	-.0098	.0377	.0086	798.		
.0210	420.	62.	9.	10.	194.	-56.	-.0083	-.0029	-.0062	-.0004	.0436	.0225	756.		
.0220	610.	103.	-148.	51.	226.	-56.	-.0025	-.0020	.0003	.0142	.0500	.0316	888.		
.0230	718.	104.	-351.	89.	285.	-57.	.0036	-.0012	.0077	.0313	.0552	.0371	1135.		
.0240	855.	143.	-567.	112.	332.	-66.	.0095	-.0015	.0149	.0460	.0571	.0431	1329.		
.0250	1085.	281.	-738.	122.	321.	-77.	.0152	-.0027	.0205	.0549	.0550	.0508	1314.		
.0260	1281.	436.	-810.	140.	265.	-76.	.0206	-.0030	.0240	.0594	.0517	.0555	1156.		
.0270	1252.	405.	-786.	169.	239.	-55.	.0246	-.0011	.0249	.0632	.0510	.0529	1111.		
.0280	1264.	348.	-701.	185.	205.	-31.	.0268	.0010	.0237	.0601	.0506	.0550	1035.		
.0290	1548.	507.	-539.	181.	72.	-16.	.0284	.0014	.0219	.0438	.0474	.0668	728.		
.0300	1555.	546.	-258.	178.	-78.	5.	.0305	.0027	.0208	.0244	.0464	.0647	727.		
.0310	1184.	423.	80.	178.	-165.	46.	.0322	.0056	.0209	.0059	.0464	.0453	921.		
.0320	810.	381.	319.	174.	-222.	79.	.0327	.0074	.0231	-.0105	.0394	.0242	1092.		
.0330	395.	335.	375.	160.	-248.	72.	.0318	.0077	.0271	-.0184	.0236	-.0009	1135.		
.0340	-251.	187.	318.	129.	-205.	51.	.0296	.0077	.0303	-.0174	.0032	-.0391	923.		
.0350	-899.	131.	268.	79.	-153.	49.	.0262	.0078	.0301	-.0167	-.0197	-.0806	668.		
.0360	-1329.	164.	292.	34.	-175.	58.	.0212	.0083	.0261	-.0191	-.0425	-.1107	701.		
.0370	-1667.	-5.	403.	4.	-225.	58.	.0138	.0102	.0185	-.0219	-.0578	-.1266	866.		

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 2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
 LOADS
 SHOCK
 PRESSURE
 ENGLISH UNITS

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

SECTION	53	MEMBER	1	SEQUENCE	173	LOCATION	BEG	TYPE	EL
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.0290	1548.	507.	339.	181.	72.	-16.	.284	.0014	.0219	.0438	.0474	.0668	728.
.0300	1555.	546.	-258.	178.	-78.	5.	.305	.0027	.0208	.0244	.0464	.0647	727.
.0310	1184.	423.	80.	178.	-165.	46.	.0322	.0056	.0209	.0059	.0464	.0453	921.
.0320	810.	381.	319.	174.	-222.	79.	.0327	.0074	.0231	-.0105	.0394	-.0242	1092.
.0330	395.	335.	375.	160.	-248.	72.	.0318	.0077	.0271	-.0184	.0236	-.0009	1135.
.0340	-251.	187.	318.	129.	-205.	51.	.0296	.0077	.0303	-.0174	.0032	-.0391	923.
.0350	-899.	131.	268.	79.	-153.	49.	.0262	.0078	.0301	-.0167	-.0197	-.0806	668.
.0360	-1329.	164.	292.	34.	-175.	58.	.0212	.0083	.0261	-.0191	-.0425	-.1107	701.
.0370	-1667.	-5.	403.	4.	-225.	56.	.0138	.0102	.0185	-.0219	-.0578	-.1266	866.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.08.

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	53	MEMBER	1	SEQUENCE	173	LOCATION	BEG	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0380	-1875.	-313.	605.	-32.	-234.	58.	.0042	.0127	.0071	-.0307	-.0501	-.1269	909.		
.0390	-1654.	-366.	893.	-101.	-293.	61.	-.0054	.0134	-.0059	-.0533	-.0517	-.1077	1177.		
.0400	-1123.	-162.	1223.	-187.	-479.	60.	-.0118	.0120	-.0167	-.0831	-.0399	-.0782	1934.		
.0410	-903.	-203.	1484.	-252.	-622.	70.	-.0154	.0122	-.0231	-.1006	-.0286	-.0582	2520.		
.0420	-902.	-417.	1482.	-284.	-621.	92.	-.0181	.0136	-.0242	-.0975	-.0276	-.0419	2573.		
.0430	-768.	-509.	1136.	-279.	-585.	80.	-.0195	.0136	-.0189	-.0725	-.0408	-.0242	2373.		
.0440	-702.	-521.	513.	-263.	-497.	20.	-.0187	.0115	-.0092	-.0276	-.0649	-.0209	2100.		
.0450	-903.	-515.	-151.	-253.	-349.	-35.	-.0166	.0089	-.0000	.0218	-.0896	-.0380	1614.		
.0460	-1085.	-453.	-639.	-241.	-182.	-56.	-.0155	.0067	.0057	.0585	-.1066	-.0531	1147.		
.0470	-946.	-432.	-856.	-217.	-152.	-80.	-.0166	.0044	.0085	.0760	-.1126	-.0438	1035.		
.0480	-616.	-547.	-774.	-188.	-224.	-113.	-.0197	.0023	.0077	.0715	-.1034	-.0152	1170.		
.0490	-312.	-639.	-409.	-167.	-250.	-113.	-.0238	.0010	.0022	.0445	-.0759	.0139	1200.		
.0500	-24.	-546.	78.	-159.	-248.	-85.	-.0272	-.0003	-.0051	.0072	-.0372	.0337	1145.		
.0510	209.	-441.	466.	-137.	-267.	-79.	-.0291	-.0022	-.0091	-.0204	-.0009	.0443	1161.		
.0520	281.	-465.	616.	-77.	-212.	-109.	-.0302	-.0044	-.0080	-.0301	.0226	.0475	935.		
.0530	168.	-493.	502.	15.	-26.	-141.	-.0302	-.0063	-.0028	-.0232	.0304	.0405	538.		
.0540	-120.	-446.	178.	109.	185.	-159.	-.0274	-.0079	.0061	.0000	.0267	.0173	997.		
.0550	-503.	-363.	-241.	186.	357.	-170.	-.0223	-.0091	.0168	.0317	.0180	-.0173	1630.		
.0560	-768.	-243.	-606.	255.	529.	-176.	-.0178	-.0099	.0253	.0556	.0110	-.0439	2290.		
.0570	-778.	-138.	-795.	328.	684.	-177.	-.0158	-.0101	.0297	.0647	.0128	-.0502	2906.		
.0580	-555.	-111.	-749.	391.	729.	-174.	-.0154	-.0090	.0305	.0618	.0293	-.0399	3154.		
.0590	-112.	-34.	-482.	423.	668.	-157.	-.0150	-.0074	.0275	.0444	.0587	-.0190	3009.		
.0600	500.	208.	-109.	433.	589.	-121.	-.0137	-.0056	.0219	.0143	.0928	.0092	2766.		
.0610	1112.	461.	175.	447.	518.	-71.	-.0111	-.0029	.0176	-.0100	.1219	.0398	2566.		
.0620	1567.	554.	213.	477.	452.	-12.	-.0069	.0015	.0182	-.0112	.1375	.0665	2453.		
.0630	1863.	598.	-33.	515.	434.	48.	-.0014	.0065	.0236	.0090	.1342	.0849	2522.		
.0640	1981.	730.	-514.	552.	484.	92.	.0054	.0105	.0317	.0428	.1125	.0878	2763.		
.0650	1874.	892.	-1133.	572.	559.	114.	.0127	.0133	.0405	.0859	.0806	.0718	3015.		
.0660	1668.	1023.	-1718.	565.	623.	133.	.0183	.0157	.0468	.1281	.0492	.0488	3178.		
.0670	1555.	1108.	-2059.	542.	663.	158.	.0200	.0182	.0472	.1526	.0266	.0358	3250.		
.0680	1517.	1061.	-2008.	520.	645.	178.	.0179	.0211	.0406	.1510	.0197	.0359	3162.		
.0690	1498.	899.	-1558.	482.	539.	197.	.0135	.0236	.0279	.1251	.0310	.0430	2797.		
.0700	1591.	821.	-843.	404.	363.	228.	.0078	.0247	.0115	.0795	.0552	.0550	2199.		
.0710	1719.	829.	-81.	306.	183.	248.	.0020	.0238	-.0048	.0271	.0303	.0665	1622.		
.0720	1570.	676.	510.	229.	69.	224.	-.0025	.0217	-.0166	-.0114	.0954	.0647	1223.		
.0730	1080.	372.	791.	175.	43.	167.	-.0047	.0188	-.0216	-.0248	.0929	.0446	915.		
.0740	489.	177.	739.	117.	61.	105.	-.0042	.0145	-.0205	-.0162	.0700	.0124	630.		
.0750	-127.	91.	447.	58.	78.	33.	-.0010	.0088	-.0151	.0078	.0309	-.0276	382.		

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.09.

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	53	MEMBER	1	SEQUENCE	173	LOCATION	BEG	TYPE	EL
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.0670	1555.	1108.	-059.	542.	663.	158.	.0200	.0182	.0472	.1526	.0266	.0358	3250.
.0680	1517.	1061.	-2008.	520.	645.	178.	.0179	.0211	.0406	.1510	.0197	.0359	3162.
.0690	1498.	899.	-1558.	482.	539.	197.	.0135	.0236	.0279	.1251	.0310	.0430	2797.
.0700	1591.	821.	-843.	404.	363.	228.	.0078	.0247	.0115	.0795	.0552	.0550	2199.
.0710	1719.	829.	-81.	306.	183.	248.	.0020	.0238	-.0048	.0271	.0303	.0665	1622.
.0720	1570.	676.	510.	229.	69.	224.	-.0025	.0217	-.0166	-.0114	.0954	.0647	1223.
.0730	1080.	372.	791.	175.	43.	167.	-.0047	.0188	-.0216	-.0248	.0929	.0446	915.
.0740	489.	177.	739.	117.	61.	105.	-.0042	.0145	-.0205	-.0162	.0700	.0124	630.
.0750	-127.	91.	447.	58.	78.	33.	-.0010	.0088	-.0151	.0078	.0309	-.0276	382.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	53	MEMBER	1	SEQUENCE	173	LOCATION	BEG	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0760	-816.	-69.	84.	12.	89.	-54.	.0035	.0030	-.0085	.0386	-.0137	-.0699	393.		
.0770	-1396.	-276.	-172.	-26.	88.	-126.	.0070	-.0020	-.0041	.0628	-.0513	-.1010	583.		
.0780	-1664.	-423.	-187.	-71.	32.	-167.	.0081	-.0062	-.0042	.0692	-.0724	-.1111	690.		
.0790	-1704.	-572.	92.	-127.	-91.	-201.	.0070	-.0098	-.0090	.0549	-.0723	-.1059	948.		
.0800	-1645.	-741.	608.	-191.	-231.	-236.	.0044	-.0133	-.0173	.0224	-.0534	-.0935	1425.		
.0810	-1438.	-794.	1193.	-265.	-357.	-257.	.0009	-.0167	-.0270	-.0196	-.0254	-.0748	1916.		
.0820	-1148.	-754.	1640.	-333.	-463.	-258.	-.0023	-.0194	-.0339	-.0536	.0002	-.0537	2337.		
.0830	-1016.	-796.	1803.	-368.	-512.	-255.	-.0039	-.0204	-.0356	-.0645	.0140	-.0411	2537.		
.0840	-1078.	-880.	1641.	-366.	-470.	-249.	-.0030	-.0198	-.0321	-.0520	.0107	-.0401	2410.		
.0850	-1133.	-817.	1209.	-350.	-391.	-231.	.0003	-.0186	-.0244	-.0230	-.0080	-.0451	2139.		
.0860	-1104.	-641.	643.	-327.	-347.	-202.	.0057	-.0169	-.0136	.0158	-.0333	-.0517	1933.		
.0870	-1029.	-506.	129.	-292.	-333.	-169.	.0115	-.0141	-.0021	.0527	-.0543	-.0551	1771.		
.0880	-824.	-402.	-179.	-250.	-333.	-128.	.0165	-.0102	.0074	.0731	-.0633	-.0473	1627.		
.0890	-417.	-255.	-229.	-217.	-389.	-73.	.0201	-.0059	.0143	.0720	-.0574	-.0260	1686.		
.0900	74.	-91.	-66.	-202.	-514.	-3.	.0229	-.0013	.0194	.0553	-.0385	.0003	2062.		
.0910	477.	54.	190.	-197.	-632.	75.	.0247	.0034	.0228	.0307	-.0152	.0223	2486.		
.0920	712.	176.	375.	-188.	-675.	147.	.0252	.0079	.0254	.0088	.0017	.0349	2673.		
.0930	740.	253.	350.	-168.	-645.	196.	.0244	.0119	.0283	.0024	.0055	.0335	2593.		
.0940	557.	301.	90.	-141.	-546.	227.	.0224	.0154	.0313	.0151	-.0035	.0160	2270.		
.0950	243.	382.	-293.	-117.	-379.	250.	.0190	.0183	.0321	.0360	-.0202	-.0124	1751.		
.0960	-86.	481.	-634.	-99.	-193.	273.	.0144	.0209	.0292	.0525	-.0365	-.0416	1300.		
.0970	-323.	526.	-794.	-90.	-61.	300.	.0083	.0239	.0221	.0567	-.0437	-.0612	1189.		
.0980	-363.	535.	-714.	-7.	2.	344.	.0008	.0276	.0107	.0435	-.0370	-.0635	1334.		
.0990	-189.	569.	-432.	-119.	24.	403.	-.0078	.0316	-.0045	.0131	-.0181	-.0495	1573.		
.1000	97.	620.	-79.	-151.	22.	458.	-.0158	.0357	-.0215	-.0240	.0060	-.0286	1801.		
.1010	400.	681.	174.	-182.	17.	499.	-.0220	.0396	-.0375	-.0527	.0265	-.0091	1983.		
.1020	696.	771.	204.	-201.	42.	529.	-.0262	.0433	-.0508	-.0636	.0352	.0068	2120.		
.1030	952.	853.	-15.	-196.	103.	541.	-.0276	.0466	-.0601	-.0540	.0283	.0191	2181.		
.1040	1123.	880.	-407.	-164.	167.	525.	-.0257	.0492	-.0648	-.0277	.0091	.0267	2145.		
.1050	1252.	897.	-827.	-121.	207.	496.	-.0207	.0506	-.0657	.0040	-.0141	.0321	2057.		
.1060	1405.	940.	-1127.	-86.	212.	465.	-.0136	.0506	-.0638	.0283	-.0321	.0397	1936.		
.1070	1552.	916.	-1222.	-60.	181.	416.	-.0056	.0489	-.0599	.0388	-.0395	.0506	1706.		
.1080	1677.	823.	-1108.	-39.	112.	334.	.0024	.0451	-.0543	.0344	-.0362	.0638	1323.		
.1090	1746.	744.	-837.	-23.	35.	240.	.0099	.0399	-.0478	.0187	-.0253	.0738	910.		
.1100	1472.	460.	-517.	-25.	51.	145.	.0158	.0351	-.0416	.0043	-.0094	.0673	582.		
.1110	1059.	151.	-272.	-31.	103.	23.	.0204	.0288	-.0355	-.0050	.0011	.0515	413.		
.1120	669.	-18.	-147.	-31.	155.	-121.	.0236	.0199	-.0301	-.0089	.0011	.0336	745.		
.1130	190.	-160.	-64.	-34.	241.	-239.	.0251	.0117	-.0268	-.0075	-.0032	.0104	1274.		

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ADLPIPE STRESS ANALYSIS

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18.29.09.

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	53	MEMBER	1	SEQUENCE	173	LOCATION	BEG	TYPE	EL						
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.1040	1127.	880.	-407.	-164.	167.	525.	-.0257	.0492	-.0648	-.0277	.0091	.0267	2145.
.1050	1252.	897.	-827.	-121.	207.	496.	-.0207	.0506	-.0657	.0040	-.0141	.0321	2057.
.1060	1405.	940.	-1127.	-86.	212.	465.	-.0136	.0506	-.0638	.0283	-.0321	.0397	1936.
.1070	1552.	916.	-1222.	-60.	181.	416.	-.0056	.0489	-.0599	.0388	-.0395	.0506	1706.
.1080	1677.	823.	-1108.	-39.	112.	334.	.0024	.0451	-.0543	.0344	-.0362	.0638	1323.
.1090	1746.	744.	-837.	-27.	35.	240.	.0099	.0399	-.0478	.0187	-.0253	.0738	910.
.1100	1472.	460.	-517.	-25.	51.	145.	.0158	.0351	-.0416	.0043	-.0094	.0673	582.
.1110	1059.	151.	-272.	-31.	103.	23.	.0204	.0288	-.0355	-.0050	.0011	.0515	413.
.1120	669.	-18.	-147.	-31.	155.	-121.	.0236	.0199	-.0301	-.0089	.0011	.0336	745.
.1130	190.	-160.	-64.	-34.	241.	-239.	.0251	.0117	-.0268	-.0075	-.0032	.0104	1274.

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

CONDITION 24

LOADS
SHOCK
PRESSURE

ENGLISH UNITS

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

SECTION	53	MEMBER	1	SEQUENCE	173	LOCATION	BEG	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1140	-387.	-412.	77.	-40.	336.	-322.	.0253	.0064	-.0256	-.0045	-.0044	-.0168	1744.		
.1150	-866.	-728.	312.	-41.	381.	-406.	.0246	.0032	-.0253	-.0085	-.0002	-.0366	2084.		
.1160	-1122.	-963.	638.	-46.	387.	-481.	.0231	.0009	-.0253	-.0258	.0122	-.0422	2312.		
.1170	-1149.	-1017.	1036.	-76.	365.	-501.	.0215	.0002	-.0247	-.0543	.0338	-.0364	2332.		
.1180	-1188.	-1142.	1436.	-130.	309.	-480.	.0212	.0023	-.0213	-.0813	.0596	-.0306	2185.		
.1190	-1057.	-1191.	1691.	-178.	175.	-467.	.0233	.0051	-.0139	-.1032	.0731	-.0181	1976.		
.1200	-808.	-1079.	1655.	-202.	36.	-449.	.0272	.0081	-.0030	-.1111	.0657	-.0010	1843.		
.1210	-763.	-981.	1282.	-210.	-17.	-375.	.0319	.0138	-.0099	-.0904	.0427	.0043	1606.		
.1220	-753.	-831.	647.	-211.	-37.	-263.	.0366	.0223	.0233	-.0475	.0084	.0013	1268.		
.1230	-746.	-747.	-74.	-198.	-32.	-177.	.0400	.0317	.0344	.0006	-.0294	-.0036	999.		
.1240	-572.	-588.	-668.	-183.	-17.	-108.	.0407	.0401	.0405	.0324	-.0596	.0016	796.		
.1250	-197.	-305.	-951.	-199.	-48.	4.	.0381	.0479	.0405	.0402	-.0689	.0188	765.		
.1260	198.	-137.	-856.	-252.	-156.	149.	.0332	.0561	.0356	.0252	-.0542	.0418	1239.		
.1270	725.	8.	-476.	-313.	-340.	264.	.0274	.0625	.0272	-.0153	-.0301	.0754	1988.		
.1280	1105.	67.	-38.	-357.	-477.	345.	.0213	.0669	.0175	-.0633	-.0075	.1061	2572.		
.1290	1238.	149.	220.	-392.	-535.	439.	.0155	.0697	.0096	-.0940	.0059	.1203	2969.		
.1300	1110.	238.	191.	-421.	-539.	522.	.0107	.0708	.0054	-.0968	.0026	.1117	3211.		
.1310	609.	128.	-86.	-423.	-455.	521.	.0073	.0691	.0045	-.0790	-.0210	.0797	3029.		
.1320	22.	54.	-476.	-404.	-324.	441.	.0048	.0632	.0049	-.0583	-.0596	.0395	2539.		
.1330	-596.	28.	-802.	-397.	-203.	365.	.0025	.0548	.0050	-.0397	-.0943	-.0036	2151.		
.1340	-1123.	-9.	-880.	-419.	-157.	319.	.0002	.0459	.0030	-.0336	-.1123	-.0399	2050.		
.1350	-1498.	-176.	-619.	-440.	-166.	248.	-.0024	.0362	-.0026	-.0525	-.1128	-.0593	1985.		
.1360	-1759.	-483.	-94.	-444.	-179.	141.	-.0054	.0253	-.0117	-.0920	-.0985	-.0621	1862.		
.1370	-1688.	-583.	499.	-457.	-244.	52.	-.0084	.0129	-.0221	-.1367	-.0752	-.0494	1945.		
.1380	-1503.	-581.	969.	-488.	-331.	-11.	-.0099	.0007	-.0314	-.1676	-.0514	-.0372	2201.		
.1390	-1361.	-599.	1187.	-493.	-369.	-107.	-.0084	-.0109	-.0380	-.1810	-.0417	-.0312	2336.		
.1400	-1313.	-637.	1084.	-447.	-319.	-233.	-.0037	-.0213	-.0412	-.1746	-.0515	-.0306	2228.		
.1410	-1354.	-666.	686.	-378.	-216.	-311.	.0031	-.0289	-.0403	-.1429	-.0721	-.0345	1995.		
.1420	-1199.	-514.	151.	-317.	-157.	-319.	.0113	-.0338	-.0364	-.1001	-.0960	-.0320	1778.		
.1430	-961.	-381.	-307.	-250.	-129.	-326.	.0205	-.0367	-.0317	-.0655	-.1163	-.0239	1607.		
.1440	-671.	-273.	-550.	-165.	-110.	-354.	.0293	-.0380	-.0284	-.0514	-.1263	-.0103	1513.		
.1450	-279.	-76.	-560.	-93.	-121.	-336.	.0364	-.0372	-.0267	-.0536	-.1183	.0079	1378.		
.1460	136.	126.	-383.	-48.	-169.	-260.	.0411	-.0331	-.0258	-.0647	-.0935	.0264	1171.		
.1470	584.	326.	-78.	3.	-246.	-195.	.0444	-.0274	-.0250	-.0879	-.0658	.0458	1173.		
.1480	901.	393.	248.	79.	-284.	-163.	.0471	-.0200	-.0233	-.1144	-.0440	.0552	1256.		
.1490	850.	512.	462.	151.	-300.	-96.	.0492	-.0108	-.0189	-.1305	-.0305	.0521	1305.		
.1500	807.	729.	491.	204.	-316.	14.	.0503	-.0002	-.0108	-.1294	-.0267	.0380	1407.		
.1510	471.	750.	369.	267.	-265.	89.	.0506	.0113	.0002	-.1153	-.0327	.0101	1443.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.09.

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 53 MEMBER 1 SEQUENCE 173 LOCATION BEG TYPE EL

.1810	-215.	1486.	473.	653.	-92.	463.	-.119	.0327	.0155	-.0578	.0087	-.1245	3009.
.1820	-129.	1664.	431.	646.	-193.	570.	-.078	.0397	.0211	-.0541	.0014	-.1290	3297.
.1830	-22.	1782.	397.	612.	-299.	666.	-.051	.0456	.0263	-.0474	-.0019	-.1278	3556.
.1840	85.	1795.	372.	567.	-382.	716.	-.040	.0498	.0304	-.0414	-.0050	-.1200	3697.
.1850	186.	1723.	322.	509.	-443.	732.	-.046	.0520	.0333	-.0324	-.0085	-.1071	3717.
.1860	332.	1667.	218.	429.	-505.	742.	-.070	.0525	.0351	-.0162	-.0118	-.0904	3713.
.1870	383.	1513.	75.	338.	-531.	734.	-.0112	.0516	.0352	.0075	-.0148	-.0758	3609.
.1880	415.	1305.	-69.	252.	-521.	680.	-.0167	.0487	.0332	.0304	-.0193	-.0601	3334.
.1890	421.	1033.	-181.	170.	-494.	589.	-.0232	.0440	.0297	.0514	-.0224	-.0439	2938.

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83/12/02.

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

CONDITION 24

LOADS
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ENGLISH UNITSINTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	53	MEMBER	1	SEQUENCE	173	LOCATION	BEG	TYPE	EL					STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ		(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)		
.1900	419.	739.	-236.	82.	-472.	493.	-.0304	.0380	.0252	.0707	-.0199	-.0279		2566.
.1910	489.	515.	-205.	-8.	-469.	395.	-.0376	.0307	.0202	.0823	-.0128	-.0096		2291.
.1920	474.	221.	-84.	-79.	-453.	276.	-.0439	.0227	.0154	.0860	-.0028	.0057		2003.
.1930	364.	-117.	75.	-128.	-425.	146.	-.0491	.0146	.0119	.0855	.0077	.0163		1744.
.1940	229.	-388.	201.	-165.	-390.	33.	-.0534	.0066	.0102	.0863	.0169	.0217		1585.
.1950	35.	-600.	256.	-187.	-330.	-70.	-.0567	-.0011	.0103	.0906	.0223	.0191		1439.
.1960	-274.	-818.	246.	-181.	-228.	-185.	-.0588	-.0082	.0115	.0969	.0227	.0065		1287.
.1970	-632.	-1002.	196.	-154.	-98.	-299.	-.0602	-.0146	.0128	.1032	.0204	-.0128		1307.
.1980	-918.	-1084.	146.	-120.	31.	-378.	-.0614	-.0194	.0133	.1077	.0205	-.0320		1485.
.1990	-1085.	-1099.	149.	-82.	143.	-418.	-.0625	-.0225	.0123	.1068	.0262	-.0455		1679.
.2000	-1116.	-1101.	243.	-34.	232.	-440.	-.0634	-.0237	.0096	.0961	.0379	-.0499		1861.
.2010	-979.	-1054.	414.	17.	289.	-440.	-.0637	-.0232	.0056	.0766	.0549	-.0445		1967.
.2020	-686.	-910.	589.	61.	316.	-401.	-.0631	-.0210	.0016	.0555	.0755	-.0322		1921.
.2030	-309.	-705.	682.	101.	333.	-334.	-.0612	-.0173	-.0012	.0399	.0949	-.0171		1800.
.2040	88.	-487.	627.	148.	364.	-266.	-.0579	-.0126	-.0017	.0330	.1067	-.0019		1771.
.2050	471.	-259.	403.	200.	413.	-201.	-.0529	-.0072	.0002	.0370	.1082	.0112		1870.
.2060	826.	3.	36.	246.	462.	-120.	-.0468	-.0011	.0044	.0527	.1015	.0209		2006.
.2070	1154.	284.	-399.	285.	498.	-24.	-.0401	.0053	.0100	.0754	.0897	.0281		2143.
.2080	1459.	537.	-804.	318.	519.	67.	-.0336	.0117	.0155	.0965	.0763	.0355		2288.
.2090	1738.	736.	-1096.	344.	524.	145.	-.0281	.0177	.0198	.1097	.0660	.0439		2402.
.2100	1985.	900.	-1230.	352.	502.	225.	-.0240	.0233	.0223	.1138	.0631	.0520		2435.
.2110	2189.	1051.	-1200.	340.	452.	307.	-.0214	.0282	.0229	.1082	.0677	.0584		2403.
.2120	2305.	1153.	-1036.	319.	393.	376.	-.0200	.0322	.0222	.0942	.0761	.0614		2352.
.2130	2283.	1174.	-810.	297.	339.	423.	-.0195	.0351	.0210	.0769	.0836	.0588		2307.
.2140	2114.	1150.	-602.	273.	297.	460.	-.0193	.0370	.0203	.0629	.0870	.0486		2283.
.2150	1805.	1115.	-462.	245.	270.	491.	-.0191	.0377	.0206	.0555	.0841	.0300		2286.
.2160	1357.	1049.	-390.	221.	267.	505.	-.0184	.0373	.0217	.0535	.0744	.0033		2285.
.2170	812.	935.	-354.	199.	279.	495.	-.0174	.0356	.0230	.0542	.0603	-.0282		2246.
.2180	282.	810.	-313.	174.	285.	474.	-.0165	.0330	.0238	.0546	.0463	-.0584		2163.
.2190	-144.	704.	-224.	139.	266.	451.	-.0157	.0296	.0234	.0510	.0361	-.0820		2024.
.2200	-449.	594.	-59.	99.	221.	423.	-.0150	.0256	.0212	.0406	.0313	-.0966		1820.
.2210	-635.	475.	172.	55.	154.	388.	-.0140	.0212	.0172	.0238	.0311	-.1021		1571.
.2220	-693.	377.	412.	7.	67.	355.	-.0124	.0167	.0123	.0052	.0331	-.0993		1349.
.2230	-644.	313.	587.	-42.	-27.	327.	-.0103	.0122	.0072	-.0096	.0338	-.0905		1234.
.2240	-543.	261.	641.	-86.	-106.	292.	-.0072	.0076	.0029	-.0172	.0293	-.0793		1201.
.2250	-432.	220.	555.	-122.	-157.	246.	-.0033	.0031	-.0005	-.0166	.0181	-.0688		1180.
.2260	-316.	209.	351.	-155.	-186.	200.	.0014	-.0010	-.0029	-.0088	.0017	-.0599		1172.
.2270	-187.	226.	84.	-188.	-204.	163.	.0063	-.0044	-.0046	.0026	-.0169	-.0516		1203.

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CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITSINTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION 53 MEMBER 1 SEQUENCE 173 LOCATION BEG TYPE EL

.2190	-144.	704.	-224.	139.	266.	451.	-.0157	.0296	.0234	.0510	.0361	-.0820	2024.
.2200	-449.	594.	-59.	94.	221.	423.	-.0150	.0256	.0212	.0406	.0313	-.0966	1820.
.2210	-635.	475.	172.	55.	154.	388.	-.0140	.0212	.0172	.0238	.0311	-.1021	1571.
.2220	-693.	377.	412.	7.	67.	355.	-.0124	.0167	.0123	.0052	.0331	-.0993	1349.
.2230	-644.	313.	587.	-42.	-27.	327.	-.0103	.0122	.0072	-.0096	.0338	-.0905	1234.
.2240	-543.	261.	641.	-86.	-106.	292.	-.0072	.0076	.0029	-.0172	.0293	-.0793	1201.
.2250	-432.	220.	555.	-122.	-157.	246.	-.0033	.0031	-.0005	-.0166	.0181	-.0688	1180.
.2260	-316.	209.	351.	-155.	-186.	200.	.0014	-.0010	-.0029	-.0088	.0017	-.0599	1172.
.2270	-187.	226.	84.	-188.	-204.	163.	.0063	-.0044	-.0046	.0026	-.0169	-.0516	1203.

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CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	53	MEMBER	1	SEQUENCE	173	LOCATION	BEG	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(PSI)
.2280	-42.	241.	-163.	-220.	-223.	132.	.0110	-.0070	-.0066	.0115	-.0344	-.0419			1268.
.2290	118.	239.	-319.	-251.	-249.	104.	.0150	-.0087	-.0093	.0126	-.0480	-.0299			1376.
.2300	282.	232.	-352.	-285.	-290.	87.	.0180	-.0095	-.0131	.0046	-.0555	-.0170			1551.
.2310	425.	230.	-272.	-324.	-341.	83.	.0198	-.0094	-.0175	-.0111	-.0571	-.0055			1781.
.2320	510.	221.	-117.	-362.	-386.	82.	.0206	-.0087	-.0218	-.0318	-.0552	.0024			1999.
.2330	491.	181.	65.	-395.	-411.	76.	.0206	-.0073	-.0252	-.0540	-.0532	.0042			2145.
.2340	345.	112.	231.	-420.	-413.	67.	.0201	-.0053	-.0266	-.0736	-.0530	-.0019			2215.
.2350	88.	41.	358.	-443.	-400.	62.	.0196	-.0029	-.0255	-.0887	-.0554	-.0156			2239.
.2360	-250.	-33.	446.	-460.	-375.	57.	.0194	-.0002	-.0219	-.0997	-.0503	-.0346			2225.
.2370	-639.	-130.	510.	-470.	-341.	47.	.0193	.0029	-.0162	-.1078	-.0661	-.0559			2176.
.2380	-1030.	-250.	566.	-477.	-305.	36.	.0192	.0063	-.0090	-.1137	-.0706	-.0761			2117.
.2390	-1361.	-365.	625.	-484.	-275.	29.	.0189	.0097	-.0011	-.1180	-.0716	-.0919			2082.
.2400	-1601.	-464.	689.	-492.	-255.	21.	.0183	.0130	.0066	-.1215	-.0687	-.1016			2070.
.2410	-1750.	-559.	749.	-499.	-238.	11.	.0174	.0160	.0135	-.1235	-.0627	-.1051			2063.
.2420	-1806.	-647.	778.	-503.	-221.	0.	.0161	.0188	.0193	-.1221	-.0546	-.1022			2053.
.2430	-1769.	-718.	748.	-506.	-200.	-8.	.0144	.0213	.0240	-.1151	-.0461	-.0931			2031.
.2440	-1664.	-782.	646.	-502.	-168.	-14.	.0125	.0235	.0275	-.1019	-.0383	-.0792			1977.
.2450	-1508.	-839.	478.	-492.	-123.	-23.	.0104	.0252	.0299	-.0834	-.0319	-.0620			1894.
.2460	-1298.	-868.	260.	-477.	-71.	-35.	.0084	.0261	.0310	-.0617	-.0266	-.0424			1807.
.2470	-1039.	-863.	17.	-462.	-22.	-46.	.0065	.0261	.0310	-.0388	-.0218	-.0208			1736.
.2480	-758.	-847.	-223.	-444.	24.	-55.	.0048	.0255	.0296	-.0168	-.0169	.0019			1674.
.2490	-477.	-837.	-437.	-421.	70.	-66.	.0033	.0242	.0270	.0024	-.0119	.0249			1611.
.2500	-190.	-813.	-618.	-392.	108.	-76.	.0022	.0223	.0230	.0179	-.0070	.0476			1545.
.2510	102.	-755.	-766.	-361.	135.	-83.	.0018	.0196	.0179	.0297	-.0026	.0687			1472.
.2520	371.	-672.	-885.	-326.	156.	-88.	.0021	.0164	.0118	.0380	.0003	.0863			1388.
.2530	590.	-582.	-975.	-285.	175.	-93.	.0033	.0129	.0051	.0427	.0012	.0994			1295.
.2540	749.	-489.	-1037.	-236.	193.	-98.	.0056	.0092	-.0019	.0441	-.0002	.1075			1196.
.2550	852.	-385.	-1070.	-183.	209.	-100.	.0088	.0054	-.0088	.0422	-.0032	.1105			1103.
.2560	900.	-267.	-1066.	-131.	222.	-98.	.0130	.0016	-.0155	.0360	-.0072	.1086			1029.
.2570	895.	-142.	-1015.	-80.	230.	-98.	.0180	-.0022	-.0217	.0250	-.0118	.1020			978.
.2580	834.	-26.	-916.	-30.	233.	-98.	.0236	-.0060	-.0275	.0096	-.0162	.0912			951.
.2590	723.	70.	-775.	15.	233.	-99.	.0296	-.0095	-.0327	-.0087	-.0204	.0773			945.
.2600	576.	156.	-605.	54.	228.	-100.	.0356	-.0131	-.0373	-.0289	-.0245	.0613			951.
.2610	402.	236.	-419.	86.	219.	-105.	.0417	-.0167	-.0412	-.0501	-.0290	.0440			964.
.2620	206.	301.	-230.	109.	208.	-113.	.0475	-.0202	-.0446	-.0708	-.0339	.0259			973.
.2630	1.	342.	-50.	122.	194.	-121.	.0520	-.0234	-.0472	-.0895	-.0392	.0085			965.
.2640	-188.	361.	111.	125.	175.	-129.	.0578	-.0264	-.0491	-.1052	-.0447	-.0062			936.
.2650	-349.	358.	246.	119.	151.	-140.	.0618	-.0291	-.0504	-.1178	-.0504	-.0170			887.

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CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	53	MEMBER	1	SEQUENCE	173	LOCATION	BEG	TYPE	EL
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.2570	895.	-142.	-1015.	-80.	230.	-98.	.0180	-.0022	-.0217	.0250	-.0118	.1020	978.
.2580	834.	-26.	-916.	-30.	233.	-98.	.0236	-.0060	-.0275	.0096	-.0162	.0912	951.
.2590	723.	70.	-775.	15.	233.	-99.	.0296	-.0095	-.0327	-.0087	-.0204	.0773	945.
.2600	576.	156.	-605.	54.	228.	-100.	.0356	-.0131	-.0373	-.0289	-.0245	.0613	951.
.2610	402.	236.	-419.	86.	219.	-105.	.0417	-.0167	-.0412	-.0501	-.0290	.0440	964.
.2620	206.	301.	-230.	109.	208.	-113.	.0475	-.0202	-.0446	-.0708	-.0339	.0259	973.
.2630	1.	342.	-50.	122.	194.	-121.	.0530	-.0234	-.0472	-.0895	-.0392	.0085	965.
.2640	-188.	361.	111.	125.	175.	-129.	.0578	-.0264	-.0491	-.1052	-.0447	-.0062	936.
.2650	-349.	358.	246.	119.	151.	-140.	.0618	-.0291	-.0504	-.1178	-.0504	-.0170	887.

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	53	MEMBER	1	SEQUENCE	173	LOCATION	BEG	TYPE	EL					STRESS
TIME	FX	FY	FZ	MX	MY	MZ			DY	DZ	RX	RY	RZ	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	
.2660	-473.	339.	357.	101.	120.	-151.		.0651	-.0315	-.0510	-.1271	-.0556	-.0239	814.
.2670	-556.	309.	442.	72.	80.	-161.		.0677	-.0335	-.0510	-.1327	-.0600	-.0268	724.
.2680	-593.	263.	500.	34.	32.	-171.		.0694	-.0350	-.0504	-.1345	-.0636	-.0252	661.
.2690	-582.	197.	523.	-9.	-22.	-181.		.0702	-.0362	-.0492	-.1321	-.0568	-.0188	680.
.2700	-525.	131.	507.	-57.	-82.	-189.		.0701	-.0369	-.0472	-.1256	-.0698	-.0082	798.
.2710	-436.	71.	453.	-108.	-144.	-194.		.0693	-.0369	-.0446	-.1153	-.0726	.0045	989.
.2720	-350.	-5.	372.	-162.	-204.	-196.		.0678	-.0362	-.0416	-.1018	-.0750	.0174	1217.
.2730	-279.	-111.	274.	-214.	-256.	-201.		.0656	-.0349	-.0384	-.0861	-.0771	.0300	1455.
.2740	-206.	-216.	167.	-263.	-305.	-207.		.0626	-.0335	-.0350	-.0693	-.0785	.0429	1691.
.2750	-125.	-294.	67.	-308.	-354.	-211.		.0589	-.0322	-.0317	-.0530	-.0786	.0554	1922.
.2760	-66.	-362.	-2.	-351.	-402.	-211.		.0549	-.0307	-.0287	-.0383	-.0768	.0656	2144.
.2770	-56.	-455.	-27.	-388.	-446.	-214.		.0505	-.0291	-.0262	-.0263	-.0732	.0724	2347.
.2780	-87.	-562.	-15.	-414.	-484.	-219.		.0459	-.0274	-.0239	-.0172	-.0687	.0765	2516.
.2790	-145.	-645.	19.	-431.	-516.	-221.		.0412	-.0260	-.0217	-.0104	-.0638	.0779	2641.
.2800	-246.	-702.	70.	-441.	-538.	-218.		.0365	-.0246	-.0196	-.0053	-.0589	.0746	2722.
.2810	-417.	-765.	137.	-442.	-549.	-216.		.0322	-.0232	-.0177	-.0018	-.0548	.0653	2751.
.2820	-646.	-838.	208.	-431.	-541.	-220.		.0282	-.0218	-.0160	.0005	-.0520	.0510	2711.
.2830	-888.	-888.	271.	-409.	-516.	-223.		.0243	-.0208	-.0149	.0022	-.0502	.0347	2597.
.2840	-1102.	-891.	329.	-380.	-482.	-219.		.0206	-.0200	-.0144	.0035	-.0483	.0183	2432.
.2850	-1286.	-873.	399.	-344.	-443.	-212.		.0173	-.0193	-.0150	.0033	-.0455	.0020	2240.
.2860	-1428.	-852.	489.	-301.	-402.	-206.		.0146	-.0184	-.0167	.0004	-.0415	-.0127	2027.
.2870	-1485.	-802.	585.	-252.	-360.	-196.		.0126	-.0174	-.0192	-.0042	-.0361	-.0230	1797.
.2880	-1425.	-703.	663.	-199.	-325.	-175.		.0113	-.0163	-.0221	-.0089	-.0297	-.0273	1568.
.2890	-1267.	-572.	706.	-143.	-296.	-149.		.0110	-.0150	-.0250	-.0124	-.0235	-.0265	1347.
.2900	-1047.	-428.	701.	-81.	-265.	-123.		.0121	-.0135	-.0275	-.0141	-.0191	-.0226	1133.
.2910	-774.	-257.	632.	-16.	-232.	-96.		.0145	-.0119	-.0295	-.0127	-.0174	-.0165	939.
.2920	-446.	-50.	491.	52.	-199.	-62.		.0179	-.0101	-.0305	-.0069	-.0184	-.0080	803.
.2930	-83.	167.	295.	122.	-167.	-25.		.0220	-.0082	-.0308	.0024	-.0216	.0026	776.
.2940	283.	374.	81.	194.	-131.	8.		.0265	-.0062	-.0308	.0122	-.0259	.0142	877.
.2950	640.	578.	-113.	266.	-98.	39.		.0311	-.0043	-.0308	.0201	-.0293	.0257	1068.
.2960	982.	783.	-257.	331.	-72.	76.		.0351	-.0022	-.0311	.0246	-.0299	.0367	1296.
.2970	1284.	957.	-333.	390.	-54.	113.		.0383	-.0000	-.0316	.0248	-.0271	.0471	1528.
.2980	1519.	1077.	-337.	445.	-35.	142.		.0404	.0020	-.0324	.0203	-.0215	.0561	1747.
.2990	1670.	1156.	-281.	494.	-13.	162.		.0413	.0037	-.0330	.0120	-.0141	.0621	1942.
.3000	1727.	1216.	-190.	533.	8.	180.		.0413	.0050	-.0333	.0025	-.0058	.0635	2102.
.3010	1678.	1237.	-85.	563.	33.	192.		.0403	.0060	-.0328	-.0060	.0022	.0598	2225.
.3020	1525.	1192.	19.	589.	67.	189.		.0384	.0066	-.0313	-.0127	.0085	.0524	2322.
.3030	1300.	1093.	113.	610.	108.	171.		.0357	.0067	-.0287	-.0172	.0132	.0433	2399.

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18.29.09.

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	53	MEMBER	1	SEQUENCE	173	LOCATION	BEG	TYPE	EL					STRESS
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