

50-305

RESPONSE TO NUREG-0737 ITEM II.D.1

Docket # *50-305*

Control # *8403280048*

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

.2750	143.	283.	-57.	278.	353.	141.	.0650	-.0323	-.0251	-.0684	-.0899	.0444	1760.
.2760	80.	347.	11.	363.	400.	180.	.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

8/31/02.

18.29.06.

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

CONDITION 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									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(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	-953.	-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.	-30.	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.		

ADLPIPE PAGE 1970

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/31/02.

18.29.06.

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

CONDITION 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

.3100	48.	190.	548.	-749.	-169.	89.	.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.

ADLPIPE PAGE 1970

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/31/02. 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)		
.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.	88.	-.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	.0631	-.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	.0663	-.0369	983.		
.3540	143.	-132.	-236.	-33.	-253.	-29.	-.0030	-.0468	.0009	-.0049	.0663	-.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.		

ADLPIPE PAGE 1971

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/31/02. 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						
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.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.

ADLPIPE PAGE 1971

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)		
.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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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
---------	----	--------	---	----------	-----	----------	-----	------	----

.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	-.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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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.			

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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							
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.0100	137.	12.	13.	13.	-17.	-34.	-95.	-.0043	.0002	-.0032	-.0025	-.0028	-.0070	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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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)		
.0200	-150.	22.	-158.	-30.	-205.	107.	-.0123	-.0033	-.0100	-.0097	.0423	.0073	871.		
.0210	-423.	-110.	-40.	-22.	-194.	227.	-.0063	-.0029	-.0061	-.0001	.0480	.0201	1119.		
.0220	-595.	-122.	138.	4.	-226.	298.	.0002	-.0020	-.0010	.0146	.0550	.0286	1396.		
.0230	-700.	-76.	371.	54.	-285.	339.	.0068	-.0012	.0050	.0316	.0616	.0337	1667.		
.0240	-846.	-102.	617.	125.	-332.	403.	.0132	-.0015	.0108	.0459	.0645	.0391	2002.		
.0250	-1067.	-289.	817.	188.	-321.	504.	.0196	-.0027	.0157	.0543	.0622	.0459	2340.		
.0260	-1226.	-492.	909.	201.	-265.	575.	.0254	-.0030	.0188	.0589	.0576	.0499	2482.		
.0270	-1200.	-388.	859.	160.	-239.	540.	.0292	-.0011	.0194	.0633	.0564	.0478	2282.		
.0280	-1262.	-259.	714.	101.	-205.	528.	.0316	.0010	.0184	.0608	.0551	.0502	2147.		
.0290	-1556.	-506.	520.	31.	-72.	635.	.0343	.0014	.0180	.0451	.0490	.0613	2388.		
.0300	-1537.	-568.	225.	-81.	78.	612.	.0362	.0028	.0186	.0266	.0447	.0594	2324.		
.0310	-1160.	-353.	-150.	-223.	165.	417.	.0363	.0056	.0203	.0094	.0427	.0422	1867.		
.0320	-776.	-293.	-360.	-314.	222.	235.	.0350	.0075	.0239	-.0064	.0344	.0229	1681.		
.0330	-349.	-306.	-344.	-305.	248.	79.	.0319	.0077	.0286	-.0144	.0181	-.0009	1497.		
.0340	284.	-172.	-212.	-233.	205.	-157.	.0264	.0077	.0318	-.0143	-.0013	-.0373	1298.		
.0350	924.	-127.	-160.	-163.	153.	-415.	.0194	.0078	.0315	-.0146	-.0232	-.0766	1760.		
.0360	1384.	-207.	-182.	-128.	175.	-600.	.0118	.0083	.0278	-.0177	-.0464	-.1050	2383.		
.0370	1722.	-19.	-290.	-140.	225.	-735.	.0030	.0102	.0204	-.0207	-.0528	-.1198	2918.		
.0380	1841.	382.	-571.	-197.	234.	-802.	-.0067	.0127	.0098	-.0293	-.0653	-.1195	3205.		
.0390	1536.	428.	-980.	-269.	293.	-697.	-.0146	.0133	-.0012	-.0519	-.0582	-.1012	2994.		
.0400	1052.	82.	-1348.	-327.	479.	-487.	-.0185	.0120	-.0094	-.0819	-.0506	-.0735	2829.		
.0410	890.	125.	-1623.	-371.	622.	-424.	-.0204	.0122	-.0142	-.0995	-.0424	-.0539	3132.		
.0420	874.	452.	-1649.	-344.	621.	-445.	-.0217	.0136	-.0156	-.0970	-.0414	-.0373	3129.		
.0430	718.	565.	-1258.	-203.	565.	-370.	-.0216	.0135	-.0124	-.0731	-.0534	-.0204	2634.		
.0440	696.	514.	-486.	63.	497.	-290.	-.0206	.0114	-.0066	-.0304	-.0760	-.0183	2160.		
.0450	943.	489.	251.	335.	349.	-331.	-.0199	.0089	-.0017	.0167	-.0974	-.0354	2190.		
.0460	1124.	450.	696.	510.	182.	-389.	-.0202	.0067	.0009	.0521	-.1107	-.0502	2490.		
.0470	987.	415.	933.	578.	152.	-308.	-.0205	.0044	.0021	.0692	-.1160	-.0419	2510.		
.0480	656.	514.	910.	528.	224.	-139.	-.0212	.0023	.0017	.0654	-.1084	-.0149	2204.		
.0490	307.	638.	466.	344.	250.	-7.	-.0228	.0010	-.0015	.0401	-.0814	.0129	1587.		
.0500	-8.	564.	-170.	107.	248.	84.	-.0244	-.0003	-.0056	.0050	-.0428	.0323	1057.		
.0510	-218.	446.	-595.	-78.	267.	166.	-.0254	-.0023	-.0072	-.0209	-.0068	.0422	1211.		
.0520	-294.	458.	-716.	-192.	212.	226.	-.0263	-.0044	-.0053	-.0291	.0179	.0446	1359.		
.0530	-232.	482.	-601.	-238.	26.	225.	-.0268	-.0063	-.0008	-.0210	.0298	.0374	1227.		
.0540	56.	435.	-231.	-192.	-185.	128.	-.0261	-.0079	.0061	.0026	.0308	.0148	1105.		
.0550	511.	355.	298.	-77.	-357.	-33.	-.0240	-.0091	.0140	.0340	.0260	-.0185	1368.		
.0560	824.	223.	716.	12.	-529.	-146.	-.0218	-.0100	.0204	.0576	.0228	-.0442	2051.		
.0570	808.	101.	889.	10.	-684.	-143.	-.0203	-.0101	.0239	.0675	.0281	-.0505	2607.		

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DIS/ADLPIPE

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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

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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				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	-1410.	-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.		

ADLPIPE PAGE 1976

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
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.1250	255.	203.	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	.0702	.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	-.0568	.0470	2995.
.1330	589.	-5.	845.	727.	203.	-602.	.0024	.0548	.0084	-.0494	-.0988	.0047	3605.

ADLPIPE PAGE 1976 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									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)									(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	.0597	-.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	.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.		

ADLPIPE PAGE 1977 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						
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.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.

ADLPIPE PAGE 1977 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	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ			DY	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)			(IN)					
.1720	-866.	918.	854.	219.	-334.	855.	-.0489	-.0158	-.0006	.1170	.0357	.1160	3525.	
.1730	-668.	759.	610.	46.	-340.	729.	-.0480	-.0158	-.0032	.0929	.0384	.0893	3009.	
.1740	-569.	400.	332.	-125.	-317.	590.	-.0468	-.0141	-.0044	.0644	.0449	.0608	2542.	
.1750	-422.	96.	55.	-296.	-291.	412.	-.0454	-.0106	-.0042	.0359	.0525	.0283	2183.	
.1760	-241.	-189.	-197.	-474.	-263.	246.	-.0431	-.0057	-.0023	.0067	.0550	-.0041	2222.	
.1770	-32.	-421.	-394.	-630.	-235.	58.	-.0400	.0007	.0006	-.0169	.0528	-.0362	2518.	
.1780	62.	-785.	-497.	-730.	-164.	-123.	-.0360	.0082	.0046	-.0323	.0456	-.0633	2829.	
.1790	168.	-1061.	-522.	-787.	-77.	-315.	-.0315	.0168	.0093	-.0390	.0350	-.0878	3177.	
.1800	294.	-1203.	-512.	-828.	-1.	-482.	-.0267	.0254	.0145	-.0420	.0214	-.1075	3577.	
.1810	249.	-1468.	-479.	-844.	92.	-557.	-.0219	.0328	.0199	-.0449	.0067	-.1157	3790.	
.1820	164.	-1629.	-421.	-816.	193.	-630.	-.0181	.0398	.0252	-.0416	-.0029	-.1188	3916.	
.1830	56.	-1717.	-367.	-763.	299.	-683.	-.0153	.0457	.0299	-.0356	-.0086	-.1162	3983.	
.1840	-43.	-1724.	-335.	-708.	382.	-692.	-.0134	.0499	.0335	-.0305	-.0135	-.1079	3963.	
.1850	-136.	-1660.	-282.	-631.	443.	-669.	-.0129	.0521	.0357	-.0226	-.0183	-.0951	3812.	
.1860	-279.	-1619.	-163.	-507.	505.	-620.	-.0140	.0526	.0361	-.0081	-.0231	-.0787	3534.	
.1870	-344.	-1440.	-13.	-355.	531.	-590.	-.0169	.0517	.0343	.0135	-.0266	-.0644	3245.	
.1880	-385.	-1238.	114.	-215.	521.	-521.	-.0211	.0488	.0305	.0344	-.0309	-.0497	2867.	
.1890	-401.	-984.	203.	-94.	494.	-425.	-.0263	.0440	.0252	.0537	-.0334	-.0352	2458.	
.1900	-425.	-687.	240.	15.	472.	-326.	-.0323	.0380	.0192	.0713	-.0304	-.0209	2143.	
.1910	-514.	-484.	186.	88.	469.	-195.	-.0380	.0307	.0133	.0815	-.0232	-.0046	1926.	
.1920	-505.	-206.	38.	104.	453.	-81.	-.0431	.0227	.0083	.0844	-.0129	.0088	1762.	
.1930	-389.	124.	-137.	86.	425.	4.	-.0476	.0146	.0049	.0837	-.0017	.0175	1617.	
.1940	-250.	389.	-257.	73.	390.	64.	-.0515	.0066	.0032	.0843	.0082	.0215	1499.	
.1950	-60.	595.	-292.	78.	330.	91.	-.0551	-.0011	.0030	.0883	.0149	.0177	1309.	
.1960	253.	804.	-255.	82.	228.	81.	-.0585	-.0083	.0036	.0946	.0176	.0042	954.	
.1970	622.	968.	-181.	79.	98.	50.	-.0616	-.0146	.0044	.1012	.0183	-.0158	506.	
.1980	908.	1036.	-114.	69.	-31.	13.	-.0645	-.0195	.0044	.1061	.0212	-.0354	288.	
.1990	1061.	1053.	-113.	33.	-143.	-10.	-.0668	-.0225	.0035	.1058	.0294	-.0490	549.	
.2000	1079.	1061.	-219.	-55.	-232.	1.	-.0681	-.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	-1697.	-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
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.2000	1077.	1081.	-277.	-55.	-232.	1.	-.0681	-.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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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 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	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2100	-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	-.0622	-.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 UNITSINTERNAL 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	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2480	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
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.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.	443.	-295.	.0170	-.0193	-.0149	-.0014	-.0554	.0027	2115.

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S/RV PIPING KEWAUNEE GKWOBF 2 RUP DISK
2 SAFETY COLD FKM24F--2 PSV

CONDITION 24

LOADS
SHOCK
PRESSURE

ENGLISH UNITS

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

SECTION	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)		
.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.	50.	.0196	.0037	-.0105	-.0067	.0385	.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.	924.	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 FKM24F--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

.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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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.06.

S/RV PIPING KEWAUNEE GKM08F 2 RUP DISK
2 SAFETY COLD FKU24F--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	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ			DY	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.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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83/12/02. 18.29.07.

S/RV PIPING KEWAUNEE GKM08F 2 RUP DISK
2 SAFETY COLD FKU24F--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.	79.	-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	.0631	-.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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INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	51	MEMBER	2	SEQUENCE	72	LOCATION	END	TYPE	EL						STRESS
TIME	FX	FY	FZ	MX	MY	MZ									(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.	337.	.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.	-103.	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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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 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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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	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	.0015	-.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	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	.0616	.0337	1667.		

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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						
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.0150	-568.	-189.	123.	7.	176.	222.	-0.153	-0.0010	-0.0090	-0.0117	.0113	-0.0243	1058.
.0160	-583.	-210.	162.	10.	210.	215.	-0.178	-0.0019	-0.0106	-0.0151	.0177	-0.0257	1123.
.0170	-522.	-214.	195.	14.	231.	179.	-0.191	-0.0026	-0.0120	-0.0176	.0243	-0.0232	1093.
.0180	-374.	-190.	211.	21.	234.	110.	-0.188	-0.0031	-0.0126	-0.0181	.0305	-0.0162	969.
.0190	-150.	-137.	197.	27.	224.	13.	-0.166	-0.0033	-0.0121	-0.0156	.0366	-0.0056	844.
.0200	136.	-36.	141.	30.	205.	-107.	-0.123	-0.0033	-0.0100	-0.0097	.0423	.0073	871.
.0210	431.	86.	32.	22.	194.	-227.	-0.063	-0.0029	-0.0061	-0.0001	.0480	.0201	1119.
.0220	610.	113.	-138.	-4.	226.	-298.	.0002	-0.0020	-0.0010	.0146	.0550	.0286	1396.
.0230	711.	90.	-361.	-54.	285.	-339.	.0068	-0.0012	.0050	.0316	.0516	.0337	1667.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.07.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FKN24F--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					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	-0.0015	.0108	.0459	.0645	.0391		2002.
.0250	1077.	285.	-781.	-188.	321.	-504.	.0196	-0.0027	.0157	.0543	.0622	.0459		2340.
.0260	1257.	464.	-861.	-201.	265.	-575.	.0254	-0.0030	.0188	.0589	.0576	.0499		2482.
.0270	1220.	397.	-829.	-160.	239.	-540.	.0292	-0.0011	.0194	.0630	.0564	-0.478		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	-0.0064	.0344	.0229		1681.
.0330	379.	321.	364.	305.	-248.	-79.	.0319	.0077	.0286	-0.0144	.0181	-0.0009		1497.
.0340	-268.	179.	262.	233.	-205.	157.	.0264	.0077	.0318	-0.0143	-0.0013	-0.0373		1298.
.0350	-921.	129.	210.	163.	-153.	415.	.0194	.0078	.0315	-0.0146	-0.0232	-0.0766		1760.
.0360	-1366.	185.	237.	128.	-175.	600.	.0118	.0083	.0278	-0.0177	-0.0464	-0.1050		2383.
.0370	-1705.	7.	342.	140.	-225.	735.	.0030	.0102	.0204	-0.0207	-0.0628	-0.1198		2918.
.0380	-1874.	-348.	577.	197.	-234.	802.	-0.0067	.0127	.0098	-0.0293	-0.0653	-0.1195		3205.
.0390	-1602.	-397.	931.	269.	-293.	697.	-0.0146	.0133	-0.0012	-0.0519	-0.0582	-0.1012		2994.
.0400	-1076.	-122.	1296.	327.	-479.	487.	-0.0185	.0120	-0.0094	-0.0819	-0.0506	-0.0735		2829.
.0410	-890.	-164.	1570.	371.	-622.	424.	-0.0204	.0122	-0.0142	-0.0995	-0.0424	-0.0539		3132.
.0420	-888.	-434.	1582.	344.	-621.	445.	-0.0217	.0136	-0.0156	-0.0970	-0.0414	-0.0373		3129.
.0430	-731.	-537.	1213.	203.	-565.	370.	-0.0216	.0135	-0.0124	-0.0731	-0.0534	-0.0204		2634.
.0440	-681.	-517.	505.	-63.	-497.	290.	-0.0206	.0114	-0.0066	-0.0304	-0.0760	-0.0183		2160.
.0450	-921.	-502.	-208.	-335.	-349.	331.	-0.0199	.0089	-0.0017	.0167	-0.0974	-0.0354		2190.
.0460	-1121.	-452.	-679.	-510.	-182.	389.	-0.0202	.0067	.0009	.0521	-0.1107	-0.0502		2490.
.0470	-978.	-423.	-908.	-578.	-152.	308.	-0.0205	.0044	.0021	.0692	-0.1160	-0.0419		2510.
.0480	-635.	-531.	-858.	-528.	-224.	139.	-0.0212	.0023	.0017	.0654	-0.1084	-0.0149		2204.
.0490	-302.	-639.	-445.	-344.	-250.	7.	-0.0228	.0010	-0.0015	.0401	-0.0814	.0129		1587.
.0500	-1.	-555.	131.	-107.	-248.	-84.	-0.0244	-0.0003	-0.0056	.0050	-0.0428	.0323		1057.
.0510	219.	-443.	544.	78.	-267.	-166.	-0.0254	-0.0023	-0.0072	-0.0209	-0.0068	.0422		1211.
.0520	294.	-462.	677.	192.	-212.	-226.	-0.0263	-0.0044	-0.0053	-0.0291	.0179	.0446		1359.
.0530	212.	-488.	563.	238.	-26.	-225.	-0.0268	-0.0063	-0.0008	-0.0210	.0298	.0374		1227.
.0540	-79.	-440.	211.	192.	185.	-128.	-0.0261	-0.0079	.0061	.0026	.0308	.0148		1105.
.0550	-512.	-359.	-275.	77.	357.	33.	-0.0240	-0.0091	.0140	.0340	.0260	-0.0185		1368.
.0560	-810.	-233.	-671.	-12.	529.	146.	-0.0218	-0.0100	.0204	.0576	.0228	-0.0442		2051.
.0570	-804.	-119.	-849.	-10.	684.	143.	-0.0203	-0.0101	.0239	.0675	.0281	-0.0505		2607.
.0580	-555.	-102.	-806.	71.	729.	47.	-0.0190	-0.0090	.0249	.0658	.0456	-0.0410		2738.
.0590	-99.	-35.	-530.	212.	668.	-118.	-0.0167	-0.0074	.0234	.0498	.0736	-0.0214		2653.
.0600	523.	219.	-91.	397.	589.	-328.	-0.0129	-0.0055	.0204	.0214	.1060	.0054		2921.
.0610	1136.	489.	256.	549.	518.	-522.	-0.0076	-0.0028	.0182	-0.0015	.1334	.0347		3424.

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18.29.07.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FKN24F--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.	-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.	-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.	-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 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)	
.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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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

.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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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	72	LOCATION	BEG	TYPE	RU	RU	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)			
.1000	127.	612.	-57.	-173.	22.	407.	-.0178	.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.	-162.	-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	-879.	-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.	.0318	.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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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
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.1290	1253.	123.	201.	-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	2905.
.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	.0077	-.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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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					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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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					STRESS
---------	----	--------	---	----------	----	----------	-----	------	----	--	--	--	--	--------

.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

.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.	

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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

.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.

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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)	
.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.	-546.	-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

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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

.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.	

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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

.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.

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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)	
.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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CONDITION 24

LOADS

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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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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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LOADS
SHOCK
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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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CONDITION 24

LOADS

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ENGLISH UNITS

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

MAXIMUM VALUE OF STRESS OCCURS AT

TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.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.	78.	.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.
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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						
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.	-51.	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.		

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

.0620	-1588.	-564.	-790.	-477.	-452.	12.	-0009	.0015	.0182	-.0112	.1375	.0661	2453.
.0630	-1887.	-578.	-12.	-515.	-434.	-48.	-.0014	.0065	.0236	.0090	.1342	.0849	2522.
.0640	-1996.	-706.	496.	-552.	-424.	-92.	.0054	.0105	.0217	.0428	.1125	.0871	2763.
.0650	-1851.	-884.	1163.	-572.	-559.	-114.	.0127	.0133	.0405	.0859	.0806	.0713	3015.
.0660	-1603.	-1024.	1806.	-565.	-623.	-133.	.0183	.0157	.0468	.1281	.0492	.0488	3178.
.0670	-1497.	-1112.	2468.	-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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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	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	FX	RY	RZ	STRESS			
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	FX	RY	RZ	STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.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	.0229	.0446	915.
.0740	-557.	-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	-.0096	-.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	-.0185	-.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.	11.	389.	73.	.0201	-.0059	.0143	.0720	-.0574	-.0260	1686.
.0900	-60.	89.	91.	22.	514.	3.	.0229	-.0013	.0194	.0553	-.0385	.0003	2062.
.0910	-457.	-48.	-176.	197.	632.	-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.	-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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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

.0770	-1443.	-258.	284.	-240.	226.	921.	-0081	-0011	-0147	.0487	-0327	-0373	3650.
.0780	-1707.	-412.	-301.	-309.	170.	1057.	-0088	-0052	-0162	.0510	-0543	-0389	4171.
.0790	-1739.	-570.	-2.	-154.	31.	1026.	-0093	-0088	-0190	.0480	-0543	-0369	3876.
.0800	-1667.	-751.	573.	191.	-189.	916.	-0101	-0122	-0225	.0393	-0609	-0328	3563.
.0810	-1429.	-783.	1260.	614.	-419.	718.	-0108	-0155	-0255	.0249	-0496	-0284	3859.
.0820	-1108.	-703.	1773.	928.	-614.	489.	-0109	-0182	-0270	.0107	-0381	-0244	4538.
.0830	-957.	-749.	1931.	1010.	-693.	375.	-0105	-0193	-0268	.0049	-0297	-0197	4784.
.0840	-1006.	-870.	1748.	860.	-624.	407.	-0094	-0189	-0250	.0077	-0277	-0156	4272.
.0850	-1069.	-808.	1295.	552.	-483.	480.	-0068	-0179	-0216	.0146	-0353	-0154	3272.
.0860	-1081.	-607.	669.	127.	-358.	537.	-0027	-0163	-0167	.0245	-0498	-0194	2455.
.0870	-1044.	-476.	87.	-256.	-271.	553.	.0024	-0137	-0110	.0363	-0528	-0227	2492.

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ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GK02F 2 RUP DISK
2 SAFETY COLD FKM24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	51	MEMBER	1	SEQUENCE	71	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)	
.0880	-845.	-395.	-232.	-448.	-244.	455.	.0084	-0101	-0047	.0446	-0593	-0218	2551.	
.0890	-434.	-252.	-266.	-431.	-325.	218.	.0151	-0061	.0024	.0454	-0692	-0171	2172.	
.0900	41.	-88.	-106.	-282.	-503.	-53.	.0219	-0018	.0100	.0402	-0629	-0099	2162.	
.0910	425.	43.	159.	-68.	-682.	-251.	.0272	.0027	.0173	.0313	-0521	-0009	2724.	
.0920	656.	153.	374.	107.	-769.	-341.	.0299	.0072	.0233	.0216	-0419	.0070	3166.	
.0930	685.	226.	337.	109.	-736.	-304.	.0292	.0112	.0274	.0154	-0360	.0097	3002.	
.0940	506.	271.	21.	-91.	-584.	-131.	.0248	.0149	.0286	.0144	-0340	.0058	2262.	
.0950	207.	361.	-395.	-369.	-347.	134.	.0174	.0181	.0264	.0150	-0334	-0023	1945.	
.0960	-109.	481.	-730.	-597.	-91.	415.	.0087	.0211	.0212	.0139	-0322	-0102	2734.	
.0970	-341.	535.	-889.	-706.	77.	626.	.0001	.0244	.0137	.0092	-0278	-0130	3532.	
.0980	-364.	532.	-797.	-646.	130.	691.	-0074	.0282	.0046	-0011	-0179	-0082	3563.	
.0990	-155.	554.	-462.	-423.	94.	600.	-0134	.0322	-0057	-0182	-0028	.0021	2763.	
.1000	156.	604.	-46.	-147.	17.	430.	-0150	.0362	-0166	-0385	.0144	.0133	1698.	
.1010	467.	664.	248.	41.	-48.	246.	-0211	.0401	-0279	-0562	.0293	.0211	949.	
.1020	779.	747.	313.	70.	-52.	56.	-0229	.0438	-0392	-0673	.0371	.0243	389.	
.1030	1055.	819.	118.	-72.	14.	-127.	-0228	.0470	-0498	-0693	.0345	.0234	547.	
.1040	1224.	836.	-285.	-342.	118.	-267.	-0202	.0493	-0586	-0620	.0224	.0201	1678.	
.1050	1323.	843.	-729.	-631.	208.	-374.	-0149	.0504	-0646	-0496	.0057	.0161	2846.	
.1060	1442.	880.	-1038.	-825.	245.	-495.	-0073	.0501	-0668	-0380	-0097	.0129	3706.	
.1070	1557.	849.	-1146.	-880.	219.	-643.	.0019	.0482	-0647	-0303	-0194	.0112	4148.	
.1080	1646.	782.	-1075.	-800.	135.	-808.	.0114	.0443	-0587	-0278	-0231	.0097	4275.	
.1090	1673.	765.	-851.	-605.	28.	-936.	.0199	.0392	-0501	-0288	-0215	.0073	4164.	
.1100	1418.	405.	-524.	-387.	19.	-880.	.0250	.0345	-0416	-0277	-0082	.0050	3590.	
.1110	1016.	54.	-296.	-243.	71.	-741.	.0272	.0285	-0340	-0270	.0040	-0015	2923.	
.1120	605.	-7.	-225.	-184.	142.	-590.	.0275	.0201	-0280	-0271	.0073	-0122	2367.	
.1130	134.	-58.	-140.	-127.	250.	-360.	.0255	.0122	-0250	-0227	.0092	-0211	1702.	
.1140	-408.	-348.	54.	-20.	358.	-63.	.0218	.0072	-0243	-0129	.0143	-0264	1359.	
.1150	-873.	-712.	318.	143.	401.	160.	.0183	.0042	-0236	-0052	.0202	-0296	1697.	
.1160	-1116.	-924.	666.	381.	379.	242.	.0161	.0021	-0210	-0060	.0294	-0295	2201.	
.1170	-1103.	-935.	1123.	684.	298.	216.	.0156	.0015	-0159	-0148	.0440	-0251	2900.	
.1180	-1092.	-1140.	1569.	943.	184.	215.	.0167	.0036	-0080	-0246	.0519	-0170	3675.	
.1190	-966.	-1205.	1788.	1064.	14.	134.	.0207	.0064	.0029	-0371	.0646	-0106	4005.	
.1200	-798.	-994.	1686.	906.	-125.	21.	.0269	.0092	.0148	-0484	.0496	-0044	3748.	
.1210	-770.	-895.	1273.	691.	-127.	84.	.0323	.0146	.0244	-0473	.0299	.0055	2642.	
.1220	-783.	-811.	585.	185.	-58.	214.	.0366	.0226	.0311	-0375	.0051	.0128	1077.	
.1230	-813.	-797.	-205.	-386.	50.	320.	.0392	.0317	.0348	-0269	-0209	.0161	1882.	
.1240	-656.	-613.	-821.	-818.	134.	293.	.0404	.0397	.0359	-0244	-0426	.0189	3283.	
.1250	-255.	-293.	-1069.	-1005.	107.	148.	.0404	.0472	.0348	-0306	-0515	.0265	3813.	

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

.1150	-873.	-712.	318.	143.	401.	160.	.0183	.0042	-.0236	-.0052	.0202	-.0296	1697.
.1160	-1116.	-924.	666.	381.	379.	242.	.0161	.0021	-.0210	-.0060	.0294	-.0295	2201.
.1170	-1107.	-935.	1123.	684.	298.	216.	.0156	.0015	-.0159	-.0148	.0440	-.0251	2900.
.1180	-1092.	-1140.	1569.	943.	184.	215.	.0167	.0036	-.0080	-.0246	.0519	-.0170	3675.
.1190	-986.	-1205.	1788.	1064.	14.	134.	.0207	.0064	.0029	-.0371	.0646	-.0106	4005.
.1200	-798.	-994.	1686.	996.	-125.	21.	.0269	.0092	.0148	-.0484	.0496	-.0044	3748.
.1210	-770.	-895.	1273.	691.	-127.	4.	.0323	.0146	.0244	-.0473	.0299	.0055	2642.
.1220	-783.	-811.	585.	185.	-58.	214.	.0366	.0226	.0311	-.0375	.0051	.0128	1077.
.1230	-813.	-797.	-205.	-386.	52.	320.	.0392	.0317	.0348	-.0269	-.0209	.0161	1882.
.1240	-656.	-613.	-821.	-818.	134.	293.	.0404	.0397	.0359	-.0244	-.0426	.0189	3283.
.1250	-255.	-293.	-1069.	-1005.	107.	148.	.0404	.0472	.0348	-.0306	-.0515	.0265	3813.

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

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	EL	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS
TIME (SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)						
.1260	189.	-200.	-928.	-956.	-50.	-17.	.0394	.0551	.0326	-.0427	-.0455	.0409	3574.						
.1270	715.	-70.	-511.	-698.	-324.	-284.	.0389	.0614	.0306	-.0656	-.0391	.0571	3062.						
.1280	1088.	12.	-13.	-367.	-552.	-478.	.0377	.0656	.0284	-.0910	-.0323	.0756	3049.						
.1290	1239.	96.	302.	-167.	-661.	-485.	.0345	.0683	.0253	-.1086	-.0258	.0920	3122.						
.1300	1125.	143.	271.	-218.	-652.	-307.	.0289	.0695	.0217	-.1150	-.0266	.0984	2810.						
.1310	630.	-28.	-47.	-468.	-493.	47.	.0209	.0681	.0180	-.1137	-.0374	.0928	2543.						
.1320	29.	-36.	-479.	-766.	-264.	416.	.0121	.0627	.0148	-.1135	-.0594	.0770	3401.						
.1330	-589.	5.	-845.	-1025.	-53.	811.	.0032	.0551	.0117	-.1130	-.0785	.0600	4885.						
.1340	-1109.	-37.	-962.	-1134.	44.	1154.	-.0046	.0468	.0086	-.1142	-.0885	.0473	6040.						
.1350	-1489.	-227.	-704.	-973.	29.	1343.	-.0100	.0375	.0057	-.1216	-.0906	.0408	6194.						
.1360	-1738.	-546.	-131.	-575.	-41.	1384.	-.0135	.0270	.0023	-.1333	-.0840	.0408	5596.						
.1370	-1641.	-590.	518.	-110.	-196.	1218.	-.0148	.0149	-.0014	-.1468	-.0746	.0400	4623.						
.1380	-1415.	-575.	1024.	234.	-364.	993.	-.0147	.0029	-.0058	-.1549	-.0543	.0344	4043.						
.1390	-1266.	-578.	1266.	406.	-444.	786.	-.0129	-.0084	-.0105	-.1572	-.0621	.0227	3696.						
.1400	-1247.	-557.	1179.	388.	-384.	643.	-.0090	-.0187	-.0150	-.1523	-.0702	.0093	3148.						
.1410	-1297.	-593.	772.	147.	-224.	600.	-.0033	-.0264	-.0193	-.1369	-.0809	.0003	2453.						
.1420	-1153.	-464.	188.	-218.	-101.	499.	.0048	-.0316	-.0220	-.1187	-.0958	-.0062	2066.						
.1430	-953.	-351.	-320.	-518.	-21.	347.	.0146	-.0348	-.0230	-.1035	-.1106	-.0109	2328.						
.1440	-719.	-210.	-579.	-613.	15.	151.	.0250	-.0365	-.0222	-.0947	-.1197	-.0133	2356.						
.1450	-349.	18.	-572.	-522.	-23.	-85.	.0346	-.0358	-.0203	-.0901	-.1164	-.0126	1975.						
.1460	99.	170.	-370.	-320.	-128.	-319.	.0423	-.0320	-.0176	-.0866	-.1004	-.0089	1752.						
.1470	559.	364.	-44.	-12.	-279.	-575.	.0486	-.0263	-.0133	-.0877	-.0853	-.0066	2387.						
.1480	768.	441.	317.	337.	-378.	-692.	.0529	-.0189	-.0078	-.0884	-.0732	-.0041	3201.						
.1490	811.	559.	561.	596.	-429.	-644.	.0549	-.0098	-.0013	-.0848	-.0650	-.0014	3646.						
.1500	764.	753.	571.	673.	-443.	-474.	.0545	.0010	.0065	-.0764	-.0519	-.0007	3491.						
.1510	425.	711.	392.	606.	-345.	-149.	.0512	.0125	.0150	-.0643	-.0604	-.0022	2662.						
.1520	-80.	620.	158.	509.	-156.	228.	.0455	.0232	.0241	-.0546	-.0600	-.0067	2164.						
.1530	-589.	569.	-26.	417.	38.	606.	.0378	.0329	.0324	-.0471	-.0529	-.0117	2750.						
.1540	-834.	667.	-99.	369.	127.	868.	.0291	.0417	.0393	-.0428	-.0398	-.0153	3552.						
.1550	-976.	667.	20.	443.	142.	1004.	.0202	.0496	.0440	-.0407	-.0220	-.0134	4133.						
.1560	-1142.	318.	324.	636.	176.	1081.	.0105	.0570	.0453	-.0378	.0022	-.0021	4727.						
.1570	-1064.	87.	649.	833.	169.	991.	.0010	.0624	.0440	-.0359	.0259	.0125	4874.						
.1580	-866.	-62.	844.	905.	136.	840.	-.0088	.0658	.0403	-.0310	.0488	.0253	4636.						
.1590	-800.	-326.	893.	852.	166.	736.	-.0192	.0667	.0350	-.0221	.0690	.0341	4249.						
.1600	-771.	-535.	798.	713.	268.	596.	-.0289	.0641	.0295	-.0129	.0803	.0376	3609.						
.1610	-657.	-647.	514.	446.	384.	388.	-.0370	.0588	.0247	-.0019	.0842	.0390	2632.						
.1620	-544.	-889.	93.	63.	489.	203.	-.0433	.0525	.0207	.0148	.0878	.0431	1991.						
.1630	-358.	-1067.	-291.	-281.	552.	-34.	-.0467	.0449	.0181	.0298	.0869	.0484	2317.						

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2 SAFETY COLD FKW24F--2 PSV

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

.1550	-569.	569.	-20.	417.	38.	606.	0378	.0329	.0324	-.0471	-.0529	-.0117	2750.
.1540	-834.	667.	-99.	369.	127.	868.	.0291	.0417	.0393	-.0428	-.0398	-.0153	3552.
.1550	-976.	667.	20.	443.	142.	1004.	.0202	.0496	.0440	-.0407	-.0220	-.0134	4133.
.1560	-1142.	318.	324.	636.	176.	1081.	.0105	.0570	.0453	-.0378	.0022	-.0021	4727.
.1570	-1064.	87.	649.	833.	169.	991.	.0010	.0624	.0440	-.0359	.0259	.0125	4874.
.1580	-866.	-62.	844.	905.	136.	840.	-.0088	.0658	.0403	-.0310	.0488	.0253	4636.
.1590	-800.	-326.	893.	852.	166.	736.	-.0192	.0667	.0350	-.0221	.0590	.0341	4249.
.1600	-771.	-535.	798.	713.	268.	596.	-.0289	.0641	.0295	-.0129	.0803	.0376	3609.
.1610	-657.	-647.	514.	446.	384.	388.	-.0370	.0588	.0247	-.0019	.0842	.0390	2632.
.1620	-544.	-889.	93.	63.	489.	203.	-.0433	.0525	.0207	-.0148	.0878	.0431	1991.
.1630	-358.	-1067.	-291.	-281.	552.	-34.	-.0467	.0449	.0181	.0298	.0869	.0484	2317.

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

SECTION	51	MEMBER	1	SEQUENCE	71	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)	
.1640	-184.	-1247.	-542.	-506.	589.	-295.	-.0474	.0362	.0165	.0407	.0328	.0546	3100.	
.1650	-7.	-1456.	-717.	-671.	581.	-550.	-.0465	.0269	.0153	.0504	.0792	.0612	3898.	
.1660	350.	-1447.	-866.	-806.	497.	-876.	-.0446	.0171	.0140	.0577	.0742	.0645	4816.	
.1670	675.	-1436.	-957.	-888.	430.	-1165.	-.0429	.0076	.0118	.0636	.0698	.0647	5701.	
.1680	857.	-1426.	-997.	-903.	407.	-1371.	-.0418	-.0014	.0085	.0676	.0634	.0606	6313.	
.1690	900.	-1420.	-1033.	-900.	414.	-1449.	-.0415	-.0088	.0043	.0718	.0580	.0539	6550.	
.1700	959.	-1274.	-1058.	-880.	406.	-1459.	-.0417	-.0142	-.0003	.0752	.0535	.0456	6540.	
.1710	1044.	-972.	-1013.	-780.	375.	-1449.	-.0417	-.0179	-.0042	.0745	.0470	.0353	6301.	
.1720	866.	-918.	-854.	-586.	384.	-1280.	-.0424	-.0189	-.0072	.0731	.0450	.0259	5445.	
.1730	668.	-759.	-610.	-314.	372.	-1063.	-.0430	-.0182	-.0085	.0677	.0450	.0150	4366.	
.1740	569.	-400.	-332.	-20.	320.	-842.	-.0435	-.0158	-.0081	.0591	.0475	.0025	3364.	
.1750	422.	-96.	-55.	270.	269.	-574.	-.0438	-.0114	-.0061	.0506	.0516	-.0102	2570.	
.1760	241.	189.	197.	557.	221.	-307.	-.0433	-.0057	-.0027	.0416	.0505	-.0233	2512.	
.1770	32.	421.	394.	798.	182.	-15.	-.0420	.0014	.0014	.0356	.0458	-.0341	3057.	
.1780	-62.	785.	497.	960.	105.	246.	-.0396	.0096	.0059	.0329	.0358	-.0427	3721.	
.1790	-168.	1061.	522.	1045.	21.	511.	-.0364	.0185	.0106	.0345	.0233	-.0484	4345.	
.1800	-294.	1203.	512.	1093.	-44.	741.	-.0329	.0274	.0154	.0373	.0086	-.0515	4933.	
.1810	-249.	1468.	479.	1116.	-136.	834.	-.0287	.0349	.0206	.0378	-.0089	-.0539	5225.	
.1820	-164.	1629.	421.	1079.	-236.	898.	-.0251	.0419	.0253	.0406	-.0206	-.0526	5314.	
.1830	-56.	1717.	367.	1013.	-342.	924.	-.0221	.0477	.0295	.0439	-.0284	-.0483	5275.	
.1840	43.	1724.	335.	947.	-428.	899.	-.0197	.0516	.0327	.0457	-.0351	-.0419	5130.	
.1850	136.	1660.	282.	847.	-489.	835.	-.0184	.0535	.0344	.0474	-.0408	-.0338	4800.	
.1860	279.	1619.	163.	677.	-545.	730.	-.0185	.0535	.0340	.0508	-.0456	-.0256	4239.	
.1870	344.	1440.	13.	460.	-556.	653.	-.0205	.0521	.0310	.0579	-.0467	-.0169	3635.	
.1880	385.	1238.	-114.	262.	-534.	544.	-.0239	.0487	.0260	.0648	-.0481	-.0103	3009.	
.1890	401.	984.	-203.	91.	-496.	410.	-.0284	.0436	.0196	.0714	-.0478	-.0057	2426.	
.1900	425.	687.	-240.	-51.	-471.	264.	-.0336	.0371	.0128	.0782	-.0430	-.0020	2026.	
.1910	514.	484.	-186.	-120.	-481.	76.	-.0384	.0295	.0065	.0821	-.0363	.0005	1873.	
.1920	505.	206.	-38.	-103.	-484.	-71.	-.0427	.0213	.0016	.0845	-.0271	.0032	1865.	
.1930	389.	-124.	137.	-46.	-470.	-158.	-.0466	.0131	-.0015	.0864	-.0169	.0057	1857.	
.1940	250.	-389.	257.	-10.	-440.	-202.	-.0502	.0050	-.0030	.0883	-.0070	.0062	1809.	
.1950	60.	-595.	292.	-16.	-371.	-189.	-.0540	-.0027	-.0033	.0910	.0021	.0030	1557.	
.1960	-253.	-804.	255.	-48.	-243.	-95.	-.0583	-.0097	-.0029	.0943	.0098	-.0045	991.	
.1970	-622.	-968.	181.	-83.	-78.	46.	-.0626	-.0157	-.0025	.0976	.0169	-.0151	457.	
.1980	-908.	-1036.	114.	-101.	80.	174.	-.0667	-.0202	-.0026	.1001	.0258	-.0258	810.	
.1990	-1061.	-1053.	113.	-66.	203.	250.	-.0698	-.0230	-.0033	.1008	.0379	-.0336	1226.	
.2000	-1079.	-1061.	219.	58.	279.	244.	-.0712	-.0240	-.0042	.0983	.0523	-.0376	1399.	
.2010	-938.	-1010.	419.	259.	301.	144.	-.0705	-.0234	-.0052	.0921	.0679	-.0383	1577.	

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CONDITION 24
LOADS
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INTERNAL FORCES IN THE PIPING
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.1910	514.	484.	-186.	-120.	-481.	76.	-0.384	.0295	.0065	.0821	-.0363	.0005	1873.
.1920	505.	206.	-38.	-103.	-484.	-71.	-.0427	.0213	.0016	.0845	-.0271	.0032	1865.
.1930	389.	-124.	137.	-46.	-470.	-158.	-.0466	.0131	-.0015	.0864	-.0169	.0057	1857.
.1940	250.	-389.	257.	-10.	-440.	-202.	-.0562	.0050	-.0030	.0883	-.0070	.0062	1809.
.1950	60.	-595.	292.	-16.	-371.	-189.	-.0540	-.0027	-.0033	.0910	.0021	.0030	1557.
.1960	-253.	-804.	255.	-48.	-243.	-95.	-.0583	-.0097	-.0029	.0947	.0098	-.0045	991.
.1970	-622.	-968.	181.	-83.	-78.	46.	-.0626	-.0157	-.0025	.0976	.0169	-.0151	457.
.1980	-908.	-1036.	114.	-101.	80.	174.	-.0667	-.0202	-.0026	.1001	.0258	-.0258	810.
.1990	-1061.	-1053.	113.	-66.	203.	250.	-.0698	-.0230	-.0033	.1008	.0379	-.0336	1226.
.2000	-1079.	-1061.	219.	58.	279.	244.	-.0712	-.0240	-.0042	.0983	.0523	-.0376	1399.
.2010	-938.	-1010.	419.	259.	301.	144.	-.0705	-.0234	-.0052	.0921	.0679	-.0383	1577.

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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	1	SEQUENCE	71	LOCATION	BEG	TYPE	EL						
TIME	FX	FY	FZ	HX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2020	-640.	-871.	627.	465.	280.	-23.	-.0679	-.0212	-.0058	.0845	.0345	-.0364	2029.		
.2030	-256.	-682.	743.	601.	255.	-219.	-.0636	-.0175	-.0059	.0776	.1003	-.0336	2572.		
.2040	139.	-475.	697.	627.	265.	-421.	-.0579	-.0129	-.0053	.0719	.1114	-.0316	2987.		
.2050	509.	-246.	467.	523.	318.	-607.	-.0510	-.0076	-.0038	.0684	.1158	-.0310	3220.		
.2060	847.	9.	78.	299.	393.	-751.	-.0435	-.0018	-.0018	.0683	.1145	-.0308	3355.		
.2070	1155.	274.	-391.	8.	468.	-855.	-.0358	.0044	.0004	.0710	.1091	-.0303	3638.		
.2080	1437.	519.	-825.	-263.	525.	-949.	-.0282	.0106	.0028	.0736	.1010	-.0290	4165.		
.2090	1697.	717.	-1133.	-451.	551.	-1044.	-.0215	.0164	.0050	.0741	.0934	-.0268	4719.		
.2100	1939.	874.	-1270.	-535.	529.	-1128.	-.0161	.0218	.0069	.0724	.0900	-.0236	5061.		
.2110	2150.	1015.	-1228.	-508.	460.	-1184.	-.0124	.0267	.0085	.0686	.0908	-.0199	5109.		
.2120	2275.	1114.	-1043.	-386.	368.	-1196.	-.0103	.0306	.0099	.0631	.0934	-.0162	4888.		
.2130	2262.	1136.	-793.	-221.	283.	-1135.	-.0098	.0337	.0113	.0573	.0955	-.0130	4445.		
.2140	2106.	1108.	-576.	-85.	224.	-982.	-.0108	.0358	.0126	.0532	.0956	-.0107	3774.		
.2150	1809.	1069.	-440.	-13.	201.	-730.	-.0130	.0368	.0139	.0515	.0924	-.0100	2827.		
.2160	1363.	1006.	-382.	4.	221.	-389.	-.0160	.0366	.0151	.0515	.0856	-.0113	1669.		
.2170	815.	897.	-363.	-9.	269.	-1.	-.0194	.0353	.0160	.0523	.0763	-.0145	1004.		
.2180	285.	778.	-341.	-23.	309.	362.	-.0227	.0331	.0165	.0526	.0665	-.0185	1780.		
.2190	-131.	678.	-267.	-7.	310.	642.	-.0253	.0301	.0164	.0508	.0578	-.0221	2662.		
.2200	-425.	575.	-102.	69.	264.	824.	-.0267	.0263	.0156	.0461	.0509	-.0242	3239.		
.2210	-607.	463.	144.	200.	178.	911.	-.0265	.0222	.0141	.0386	.0453	-.0241	3545.		
.2220	-664.	369.	406.	340.	61.	908.	-.0247	.0178	.0119	.0298	.0398	-.0225	3628.		
.2230	-612.	306.	600.	429.	-61.	833.	-.0214	.0133	.0090	.0211	.0328	-.0204	3504.		
.2240	-512.	256.	663.	428.	-155.	715.	-.0171	.0087	.0057	.0133	.0227	-.0194	3165.		
.2250	-409.	224.	579.	326.	-203.	586.	-.0121	.0042	.0022	.0064	.0092	-.0205	2615.		
.2260	-306.	224.	366.	134.	-212.	460.	-.0067	.0001	-.0014	.0003	-.0066	-.0232	1956.		
.2270	-190.	245.	86.	-108.	-202.	337.	-.0011	-.0033	-.0050	-.0057	-.0230	-.0263	1522.		
.2280	-56.	262.	-176.	-333.	-196.	206.	.0045	-.0060	-.0083	-.0131	-.0386	-.0283	1635.		
.2290	92.	263.	-336.	-484.	-212.	64.	.0097	-.0078	-.0112	-.0231	-.0524	-.0283	1987.		
.2300	247.	255.	-361.	-538.	-261.	-73.	.0143	-.0086	-.0137	-.0356	-.0526	-.0265	2249.		
.2310	388.	247.	-263.	-507.	-334.	-185.	.0177	-.0084	-.0157	-.0499	-.0687	-.0236	2369.		
.2320	478.	235.	-84.	-416.	-408.	-254.	.0196	-.0075	-.0169	-.0651	-.0718	-.0208	2374.		
.2330	468.	196.	121.	-300.	-459.	-257.	.0198	-.0059	-.0169	-.0799	-.0733	-.0190	2261.		
.2340	334.	125.	304.	-197.	-476.	-172.	.0185	-.0037	-.0153	-.0929	-.0743	-.0185	2026.		
.2350	89.	48.	433.	-128.	-462.	0.	.0162	-.0009	-.0120	-.1034	-.0754	-.0191	1789.		
.2360	-246.	-25.	512.	-89.	-424.	238.	.0134	.0022	-.0068	-.1117	-.0773	-.0204	1845.		
.2370	-638.	-122.	557.	-69.	-368.	510.	.0104	.0056	.0001	-.1180	-.0789	-.0214	2364.		
.2380	-1031.	-248.	589.	-56.	-309.	779.	.0077	.0092	.0081	-.1224	-.0788	-.0214	3136.		
.2390	-1362.	-371.	622.	-42.	-260.	1004.	.0053	.0129	.0167	-.1252	-.0761	-.0201	3876.		

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2 SAFETY COLD FKW24F--2 PSVCONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITSINTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.2280	-56.	262.	-176.	-333.	-176.	206.	.0045	-.0060	-.0083	-.0131	-.0386	-.0283	1635.
.2290	92.	263.	-336.	-484.	-212.	64.	.0097	-.0078	-.0112	-.0231	-.0524	-.0283	1987.
.2300	247.	255.	-361.	-538.	-261.	-73.	.0143	-.0086	-.0137	-.0356	-.0526	-.0265	2249.
.2310	388.	247.	-263.	-507.	-334.	-185.	.0177	-.0084	-.0157	-.0499	-.0687	-.0236	2369.
.2320	478.	235.	-84.	-416.	-408.	-254.	.0196	-.0075	-.0169	-.0651	-.0718	-.0208	2374.
.2330	468.	196.	121.	-300.	-459.	-257.	.0198	-.0059	-.0169	-.0799	-.0733	-.0190	2261.
.2340	334.	129.	304.	-197.	-476.	-172.	.0185	-.0037	-.0153	-.0929	-.0743	-.0185	2026.
.2350	89.	48.	433.	-128.	-462.	0.	.0162	-.0009	-.0120	-.1034	-.0754	-.0191	1789.
.2360	-246.	-25.	512.	-89.	-424.	238.	.0134	.0022	-.0068	-.1117	-.0773	-.0204	1845.
.2370	-638.	-122.	557.	-69.	-368.	510.	.0104	.0056	.0001	-.1180	-.0789	-.0214	2364.
.2380	-1031.	-248.	589.	-56.	-309.	779.	.0077	.0092	.0081	-.1224	-.0788	-.0214	3136.
.2390	-1362.	-371.	622.	-42.	-260.	1004.	.0053	.0129	.0167	-.1252	-.0761	-.0201	3876.

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2 SAFETY COLD FKM24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	51	MEMBER	1	SEQUENCE	71	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)		
.2400	-1601.	-473.	666.	-20.	-229.	1164.	.0035	.0162	.0250	-.1268	-.0709	-.0178	4429.		
.2410	-1752.	-565.	714.	6.	-208.	1254.	.0023	.0192	.0324	-.1270	-.0635	-.0143	4746.		
.2420	-1810.	-651.	738.	14.	-190.	1275.	.0017	.0218	.0383	-.1250	-.0545	-.0096	4813.		
.2430	-1773.	-726.	706.	-16.	-167.	1230.	.0015	.0241	.0422	-.1205	-.0446	-.0034	4635.		
.2440	-1663.	-798.	604.	-95.	-130.	1133.	.0017	.0259	.0440	-.1132	-.0345	.0038	4273.		
.2450	-1504.	-861.	437.	-215.	-74.	997.	.0022	.0270	.0439	-.1038	-.0247	.0112	3816.		
.2460	-1293.	-891.	221.	-366.	-9.	823.	.0030	.0274	.0421	-.0933	-.0155	.0181	3361.		
.2470	-1033.	-879.	-22.	-533.	53.	618.	.0042	.0268	.0389	-.0829	-.0068	.0244	3053.		
.2480	-751.	-859.	-263.	-694.	111.	399.	.0057	.0256	.0346	-.0730	.0014	.0308	3019.		
.2490	-467.	-853.	-474.	-830.	163.	177.	.0075	.0238	.0293	-.0640	.0093	.0374	3226.		
.2500	-176.	-830.	-651.	-933.	204.	-48.	.0096	.0214	.0231	-.0562	.0160	.0435	3570.		
.2510	120.	-766.	-794.	-1006.	229.	-269.	.0121	.0183	.0164	-.0499	.0210	.0482	3981.		
.2520	392.	-675.	-905.	-1050.	245.	-466.	.0148	.0148	.0091	-.0450	.0240	.0510	4383.		
.2530	612.	-580.	-983.	-1062.	259.	-624.	.0178	.0111	.0016	-.0411	.0245	.0522	4699.		
.2540	770.	-484.	-1035.	-1047.	273.	-736.	.0211	.0073	-.0058	-.0384	.0228	.0518	4887.		
.2550	871.	-377.	-1062.	-1009.	285.	-800.	.0246	.0035	-.0127	-.0371	.0193	.0500	4925.		
.2560	917.	-256.	-1053.	-943.	293.	-818.	.0284	-.0002	-.0187	-.0380	.0145	.0466	4788.		
.2570	906.	-124.	-1000.	-843.	295.	-793.	.0323	-.0038	-.0237	-.0412	.0089	.0415	4460.		
.2580	836.	-5.	-900.	-711.	291.	-728.	.0362	-.0071	-.0276	-.0463	.0028	.0353	3949.		
.2590	719.	89.	-760.	-553.	280.	-629.	.0401	-.0103	-.0305	-.0526	-.0034	.0286	3297.		
.2600	569.	173.	-591.	-381.	264.	-507.	.0438	-.0133	-.0325	-.0598	-.0097	.0215	2565.		
.2610	391.	260.	-408.	-204.	245.	-369.	.0472	-.0164	-.0336	-.0678	-.0166	.0142	1819.		
.2620	189.	332.	-220.	-34.	223.	-215.	.0504	-.0194	-.0343	-.0758	-.0238	.0070	1165.		
.2630	-21.	375.	-38.	118.	200.	-61.	.0533	-.0222	-.0345	-.0832	-.0311	.0007	895.		
.2640	-213.	394.	121.	242.	174.	76.	.0560	-.0248	-.0343	-.0897	-.0386	-.0042	1149.		
.2650	-372.	392.	255.	337.	144.	185.	.0584	-.0272	-.0340	-.0952	-.0462	-.0074	1532.		
.2660	-496.	374.	365.	401.	108.	265.	.0606	-.0294	-.0334	-.0997	-.0536	-.0089	1838.		
.2670	-580.	345.	451.	434.	62.	314.	.0626	-.0313	-.0327	-.1030	-.0604	-.0088	2014.		
.2680	-619.	294.	511.	437.	9.	327.	.0645	-.0328	-.0319	-.1046	-.0667	-.0068	2038.		
.2690	-608.	227.	535.	407.	-49.	300.	.0662	-.0341	-.0310	-.1045	-.0726	-.0029	1897.		
.2700	-548.	165.	517.	342.	-110.	239.	.0676	-.0350	-.0299	-.1027	-.0783	.0024	1611.		
.2710	-460.	111.	460.	244.	-171.	161.	.0685	-.0355	-.0288	-.0995	-.0836	.0085	1264.		
.2720	-376.	27.	376.	122.	-226.	84.	.0688	-.0351	-.0277	-.0947	-.0879	.0151	1008.		
.2730	-305.	-98.	275.	-15.	-270.	10.	.0684	-.0342	-.0266	-.0886	-.0912	.0218	1012.		
.2740	-229.	-213.	162.	-155.	-310.	-68.	.0672	-.0332	-.0255	-.0817	-.0936	.0284	1319.		
.2750	-143.	-283.	57.	-284.	-352.	-145.	.0653	-.0323	-.0245	-.0746	-.0948	.0347	1770.		
.2760	-80.	-347.	-11.	-383.	-395.	-200.	.0627	-.0312	-.0236	-.0670	-.0944	.0403	2185.		
.2770	-69.	-450.	-32.	-443.	-437.	-223.	.0595	-.0299	-.0227	-.0591	-.0924	.0452	2469.		

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CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.2670	-580.	345.	451.	434.	62.	314.	.0626	-.0313	-.0327	-.1030	-.0604	-.0088	2014.
.2680	-619.	294.	511.	437.	9.	327.	.0645	-.0328	-.0319	-.1046	-.0667	-.0068	2038.
.2690	-608.	227.	525.	407.	-49.	300.	.0662	-.0341	-.0310	-.1045	-.0726	-.0029	1897.
.2700	-548.	161.	517.	342.	-110.	239.	.0676	-.0350	-.0299	-.1027	-.0783	.0024	1611.
.2710	-460.	111.	460.	244.	-171.	161.	.0685	-.0355	-.0288	-.0995	-.0836	.0085	1264.
.2720	-376.	27.	376.	122.	-226.	84.	.0688	-.0351	-.0277	-.0947	-.0879	.0151	1008.
.2730	-305.	-98.	275.	-15.	-270.	10.	.0684	-.0342	-.0266	-.0886	-.0912	.0218	1012.
.2740	-229.	-213.	162.	-155.	-310.	-68.	.0672	-.0332	-.0255	-.0817	-.0936	.0284	1319.
.2750	-143.	-283.	57.	-284.	-352.	-145.	.0653	-.0323	-.0245	-.0746	-.0948	.0347	1770.
.2760	-80.	-347.	-11.	-383.	-395.	-200.	.0627	-.0312	-.0236	-.0670	-.0944	.0403	2185.
.2770	-69.	-450.	-32.	-443.	-437.	-223.	.0595	-.0299	-.0227	-.0591	-.0924	.0452	2469.

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CONDITION 24

LOADS

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PRESSURE

ENGLISH UNITS

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

SECTION	51	MEMBER	1	SEQUENCE	71	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)		
.2780	-98.	-565.	-17.	-467.	-475.	-221.	.0556	-.0285	-.0216	-.0512	-.0896	.0495	2619.		
.2790	-151.	-644.	18.	-463.	-507.	-193.	.0512	-.0272	-.0204	-.0437	-.0363	.0529	2663.		
.2800	-245.	-696.	67.	-439.	-530.	-125.	.0462	-.0259	-.0190	-.0365	-.0324	.0548	2610.		
.2810	-415.	-763.	129.	-397.	-537.	-4.	.0407	-.0245	-.0176	-.0293	-.0785	.0546	2491.		
.2820	-647.	-845.	194.	-342.	-521.	156.	.0346	-.0230	-.0164	-.0223	-.0747	.0526	2398.		
.2830	-885.	-894.	250.	-280.	-487.	327.	.0287	-.0218	-.0156	-.0154	-.0709	.0493	2426.		
.2840	-1089.	-889.	300.	-211.	-444.	487.	.0228	-.0209	-.0155	-.0086	-.0667	.0452	2585.		
.2850	-1265.	-866.	367.	-124.	-402.	631.	.0173	-.0200	-.0162	-.0022	-.0619	.0402	2831.		
.2860	-1404.	-846.	463.	-8.	-363.	745.	.0127	-.0189	-.0176	.0036	-.0565	.0348	3094.		
.2870	-1457.	-797.	572.	124.	-332.	802.	.0093	-.0177	-.0196	.0086	-.0507	.0297	3275.		
.2880	-1388.	-695.	661.	249.	-314.	786.	.0074	-.0165	-.0219	.0128	-.0448	.0252	3293.		
.2890	-1221.	-562.	712.	352.	-302.	706.	.0073	-.0152	-.0244	.0167	-.0396	.0211	3153.		
.2900	-1002.	-420.	715.	424.	-287.	585.	.0088	-.0137	-.0269	.0202	-.0360	.0170	2903.		
.2910	-739.	-250.	652.	453.	-264.	435.	.0120	-.0120	-.0292	.0239	-.0345	.0126	2544.		
.2920	-421.	-44.	509.	428.	-236.	254.	.0165	-.0103	-.0313	.0281	-.0351	.0084	2057.		
.2930	-69.	171.	303.	360.	-201.	52.	.0219	-.0085	-.0331	.0329	-.0373	.0045	1551.		
.2940	285.	377.	80.	281.	-162.	-157.	.0279	-.0068	-.0348	.0376	-.0402	.0009	1344.		
.2950	627.	585.	-117.	219.	-126.	-359.	.0338	-.0049	-.0362	.0415	-.0426	-.0021	1637.		
.2960	953.	790.	-261.	190.	-105.	-544.	.0394	-.0030	-.0373	.0443	-.0431	-.0042	2187.		
.2970	1248.	957.	-334.	204.	-98.	-708.	.0440	-.0010	-.0379	.0458	-.0411	-.0051	2775.		
.2980	1481.	1069.	-332.	268.	-95.	-840.	.0474	.0010	-.0381	.0460	-.0369	-.0048	3311.		
.2990	1632.	1149.	-269.	370.	-93.	-923.	.0493	.0026	-.0375	.0451	-.0311	-.0040	3729.		
.3000	1640.	1212.	-170.	487.	-88.	-942.	.0496	.0040	-.0364	.0440	-.0239	-.0030	3971.		
.3010	1643.	1230.	-59.	601.	-74.	-891.	.0483	.0050	-.0346	.0437	-.0161	-.0020	4022.		
.3020	1493.	1180.	47.	702.	-43.	-787.	.0456	.0057	-.0321	.0444	-.0087	-.0009	3940.		
.3030	1274.	1084.	137.	784.	1.	-651.	.0417	.0059	-.0289	.0461	-.0019	.0006	3804.		
.3040	1023.	971.	215.	846.	45.	-497.	.0371	.0056	-.0251	.0487	.0048	.0027	3666.		
.3050	759.	835.	296.	892.	79.	-340.	.0319	.0050	-.0208	.0518	.0118	.0056	3577.		
.3060	495.	651.	386.	932.	104.	-198.	.0266	.0041	-.0161	.0550	.0192	.0096	3578.		
.3070	265.	430.	473.	958.	121.	-98.	.0212	.0028	-.0113	.0580	.0265	.0149	3622.		
.3080	107.	213.	536.	954.	126.	-52.	.0161	.0010	-.0065	.0609	.0337	.0214	3597.		
.3090	13.	11.	562.	911.	122.	-51.	.0111	-.0012	-.0020	.0641	.0401	.0282	3435.		
.3100	-48.	-190.	546.	828.	120.	-79.	.0065	-.0036	.0020	.0676	.0451	.0348	3136.		
.3110	-77.	-391.	477.	703.	124.	-136.	.0022	-.0060	.0054	.0713	.0481	.0408	2715.		
.3120	-50.	-571.	350.	535.	133.	-226.	-.0017	-.0083	.0081	.0752	.0492	.0466	2226.		
.3130	34.	-722.	178.	336.	140.	-344.	-.0051	-.0104	.0103	.0791	.0487	.0520	1871.		
.3140	143.	-847.	-3.	134.	144.	-473.	-.0081	-.0122	.0121	.0821	.0470	.0567	1911.		
.3150	261.	-938.	-166.	-46.	142.	-598.	-.0105	-.0137	.0134	.0836	.0444	.0604	2303.		

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2 SAFETY COLD FKM24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.3050	759.	835.	296.	892.	79.	-340.	.0319	.0050	-.0208	.0518	.0118	.0056	3577.
.3060	495.	651.	386.	932.	104.	-198.	.0266	.0041	-.0161	.0550	.0192	.0096	3578.
.3070	265.	430.	473.	958.	121.	-98.	.0212	.0028	-.0113	.0580	.0265	.0149	3622.
.3080	107.	213.	536.	954.	126.	-52.	.0161	.0010	-.0065	.0609	.0337	.0214	3597.
.3090	13.	11.	562.	911.	122.	-51.	.0111	-.0012	-.0020	.0641	.0401	.0282	3435.
.3100	-48.	-190.	546.	828.	120.	-79.	.0065	-.0036	.0020	.0676	.0451	.0348	3136.
.3110	-77.	-391.	477.	703.	124.	-136.	.0022	-.0060	.0054	.0713	.0481	.0408	2715.
.3120	-50.	-571.	350.	535.	133.	-226.	-.0017	-.0083	.0081	.0752	.0492	.0466	2226.
.3130	34.	-722.	178.	336.	140.	-344.	-.0051	-.0104	.0103	.0791	.0487	.0520	1871.
.3140	143.	-847.	-3.	134.	144.	-473.	-.0081	-.0122	.0121	.0821	.0470	.0567	1911.
.3150	261.	-938.	-166.	-46.	142.	-598.	-.0105	-.0137	.0134	.0836	.0444	.0604	2303.

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

CONDITION 24
LOADS
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ENGLISH UNITS

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

SECTION	51	MEMBER	1	SEQUENCE	71	LOCATION	DEG	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)		
.3160	395.	-984.	-304.	-198.	131.	-717.	-.0127	-.0147	.0144	.0835	.0413	.0630	2821.		
.3170	537.	-993.	-417.	-320.	112.	-822.	-.0146	-.0153	.0151	.0823	.0379	.0644	3320.		
.3180	654.	-976.	-499.	-403.	93.	-896.	-.0165	-.0154	.0154	.0802	.0338	.0642	3685.		
.3190	719.	-923.	-546.	-442.	79.	-921.	-.0184	-.0151	.0154	.0772	.0288	.0617	3824.		
.3200	730.	-823.	-561.	-441.	68.	-888.	-.0204	-.0144	.0152	.0736	.0231	.0568	3709.		
.3210	688.	-695.	-550.	-407.	59.	-800.	-.0227	-.0132	.0150	.0700	.0172	.0497	3355.		
.3220	591.	-565.	-508.	-334.	56.	-666.	-.0250	-.0117	.0147	.0660	.0112	.0408	2790.		
.3230	447.	-426.	-431.	-221.	59.	-498.	-.0273	-.0103	.0147	.0614	.0055	.0305	2046.		
.3240	275.	-260.	-321.	-75.	59.	-302.	-.0294	-.0089	.0150	.0561	.0008	.0191	1183.		
.3250	89.	-76.	-182.	92.	53.	-89.	-.0312	-.0078	.0154	.0505	-.0023	.0070	518.		
.3260	-102.	97.	-29.	271.	46.	122.	-.0326	-.0070	.0160	.0451	-.0044	-.0053	1122.		
.3270	-280.	249.	118.	445.	43.	311.	-.0334	-.0067	.0165	.0400	-.0059	-.0169	2036.		
.3280	-425.	393.	239.	596.	43.	470.	-.0337	-.0070	.0168	.0361	-.0068	-.0275	2837.		
.3290	-527.	535.	324.	709.	40.	594.	-.0332	-.0079	.0168	.0336	-.0072	-.0369	3457.		
.3300	-594.	653.	376.	785.	39.	680.	-.0322	-.0094	.0165	.0323	-.0072	-.0451	3878.		
.3310	-621.	732.	393.	821.	40.	717.	-.0305	-.0116	.0159	.0320	-.0069	-.0514	4071.		
.3320	-586.	782.	372.	815.	40.	695.	-.0281	-.0145	.0153	.0326	-.0061	-.0553	4000.		
.3330	-486.	818.	318.	767.	34.	618.	-.0253	-.0180	.0146	.0338	-.0044	-.0569	3680.		
.3340	-347.	828.	245.	688.	23.	502.	-.0221	-.0221	.0139	.0354	-.0017	-.0564	3179.		
.3350	-195.	802.	157.	583.	14.	359.	-.0187	-.0265	.0132	.0371	.0015	-.0542	2558.		
.3360	-25.	750.	49.	453.	9.	195.	-.0152	-.0311	.0125	.0393	.0051	-.0504	1839.		
.3370	162.	684.	-83.	295.	7.	15.	-.0119	-.0358	.0116	.0420	.0090	-.0452	1101.		
.3380	342.	597.	-227.	122.	11.	-162.	-.0090	-.0403	.0105	.0450	.0131	-.0392	757.		
.3390	487.	491.	-362.	-47.	24.	-320.	-.0064	-.0445	.0093	.0479	.0173	-.0330	1210.		
.3400	602.	383.	-475.	-201.	40.	-454.	-.0043	-.0483	.0079	.0502	.0218	-.0269	1861.		
.3410	697.	285.	-559.	-333.	54.	-567.	-.0028	-.0515	.0066	.0515	.0269	-.0210	2461.		
.3420	764.	186.	-605.	-431.	67.	-652.	-.0017	-.0542	.0054	.0516	.0326	-.0154	2931.		
.3430	786.	83.	-603.	-487.	80.	-703.	-.0012	-.0562	.0044	.0503	.0386	-.0107	3207.		
.3440	760.	-4.	-557.	-502.	92.	-712.	-.0010	-.0575	.0037	.0475	.0447	-.0072	3271.		
.3450	696.	-62.	-485.	-488.	105.	-679.	-.0013	-.0582	.0032	.0436	.0508	-.0053	3147.		
.3460	594.	-105.	-400.	-453.	123.	-610.	-.0019	-.0581	.0031	.0390	.0563	-.0050	2873.		
.3470	454.	-145.	-309.	-402.	149.	-510.	-.0028	-.0575	.0031	.0339	.0509	-.0062	2486.		
.3480	290.	-169.	-217.	-338.	181.	-388.	-.0038	-.0564	.0033	.0284	.0546	-.0089	2038.		
.3490	129.	-158.	-128.	-268.	211.	-257.	-.0047	-.0551	.0035	.0226	.0674	-.0129	1594.		
.3500	-14.	-118.	-38.	-193.	233.	-131.	-.0054	-.0534	.0037	.0164	.0596	-.0178	1231.		
.3510	-126.	-71.	53.	-112.	249.	-27.	-.0057	-.0517	.0038	.0102	.0712	-.0230	1023.		
.3520	-191.	-21.	136.	-32.	256.	42.	-.0055	-.0498	.0036	.0041	.0719	-.0280	977.		
.3530	-195.	46.	200.	34.	252.	72.	-.0048	-.0479	.0032	-.0014	.0720	-.0326	986.		

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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

.3430	786.	83.	-607.	-487.	80.	-703.	-0012	-0562	.0044	.0503	.0386	-0107	3207.
.3440	760.	-4.	-557.	-502.	92.	-712.	-0010	-0575	.0037	.0475	.0447	-0072	3271.
.3450	696.	-62.	-485.	-488.	105.	-679.	-0013	-0582	.0032	.0426	.0508	-0053	3147.
.3460	594.	-105.	-400.	-453.	123.	-610.	-0019	-0581	.0031	.0390	.0563	-0050	2873.
.3470	454.	-145.	-309.	-402.	142.	-510.	-0028	-0575	.0031	.0339	.0509	-0062	2486.
.3480	290.	-169.	-217.	-338.	181.	-388.	-0038	-0564	.0033	.0284	.0546	-0089	2038.
.3490	129.	-158.	-128.	-268.	211.	-257.	-0047	-0551	.0035	.0226	.0674	-0129	1594.
.3500	-14.	-118.	-38.	-193.	233.	-131.	-0054	-0534	.0037	.0164	.0696	-0178	1231.
.3510	-126.	-71.	53.	-112.	249.	-27.	-0057	-0517	.0038	.0102	.0712	-0230	1023.
.3520	-191.	-21.	136.	-32.	256.	42.	-0055	-0498	.0036	.0041	.0719	-0280	977.
.3530	-195.	46.	200.	34.	252.	72.	-0048	-0479	.0032	-0014	.0720	-0326	986.

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

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

SECTION	51	MEMBER	1	SEQUENCE	71	LOCATION	BEG	TYPE	EL	DX	DY	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)			
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)										
.3540	-143.	132.	236.	78.	238.	65.	-0036	-0460	.0025	-0059	.0712	-0369	966.			
.3550	-53.	219.	237.	95.	221.	27.	-0018	-0442	.0014	-0091	.0692	-0408	905.			
.3560	67.	294.	195.	78.	207.	-39.	.0002	-0424	-0001	-0108	.0659	-0442	837.			
.3570	216.	364.	108.	23.	193.	-128.	.0024	-0409	-0018	-0108	.0516	-0470	868.			
.3580	382.	432.	-11.	-60.	179.	-231.	.0045	-0395	-0036	-0094	.0566	-0492	1112.			
.3590	545.	489.	-139.	-156.	162.	-335.	.0064	-0382	-0056	-0071	.0511	-0511	1509.			
.3600	688.	526.	-255.	-250.	142.	-433.	.0078	-0370	-0075	-0042	.0455	-0525	1941.			
.3610	813.	542.	-348.	-334.	112.	-520.	.0088	-0357	-0092	-0010	.0401	-0533	2344.			
.3620	909.	536.	-409.	-400.	74.	-587.	.0090	-0343	-0106	.0022	.0348	-0535	2666.			
.3630	954.	505.	-432.	-443.	30.	-621.	.0085	-0327	-0116	.0054	.0295	-0534	2848.			
.3640	932.	457.	-419.	-461.	-17.	-608.	.0073	-0309	-0119	.0083	.0239	-0533	2849.			
.3650	838.	400.	-380.	-463.	-64.	-542.	.0053	-0289	-0116	.0107	.0180	-0535	2671.			
.3660	674.	330.	-326.	-454.	-106.	-423.	.0026	-0266	-0106	.0129	.0116	-0540	2351.			
.3670	441.	240.	-264.	-437.	-139.	-255.	-0008	-0240	-0089	.0146	.0047	-0546	1958.			
.3680	149.	140.	-190.	-409.	-162.	-44.	-0046	-0211	-0068	.0155	-0023	-0554	1650.			
.3690	-178.	49.	-102.	-368.	-181.	198.	-0087	-0180	-0044	.0154	-0091	-0563	1700.			
.3700	-515.	-29.	1.	-313.	-198.	453.	-0128	-0147	-0020	.0143	-0153	-0570	2185.			
.3710	-838.	-110.	122.	-243.	-215.	700.	-0169	-0112	.0001	.0122	-0206	-0572	2881.			
.3720	-1127.	-194.	256.	-158.	-231.	922.	-0205	-0076	.0018	.0091	-0250	-0567	3596.			
.3730	-1360.	-263.	392.	-69.	-248.	1104.	-0235	-0042	.0030	.0051	-0285	-0555	4232.			
.3740	-1523.	-300.	515.	16.	-267.	1240.	-0257	-0012	.0036	.0006	-0313	-0537	4737.			
.3750	-1618.	-313.	611.	84.	-283.	1327.	-0267	.0014	.0036	-0043	-0336	-0515	5075.			
.3760	-1647.	-324.	666.	127.	-290.	1360.	-0267	.0035	.0033	-0091	-0360	-0488	5213.			
.3770	-1609.	-331.	669.	137.	-289.	1337.	-0254	.0049	.0026	-0135	-0387	-0457	5133.			
.3780	-1502.	-320.	618.	113.	-281.	1262.	-0229	.0055	.0016	-0174	-0417	-0421	4844.			
.3790	-1341.	-286.	525.	62.	-267.	1143.	-0193	.0052	.0006	-0209	-0449	-0384	4386.			
.3800	-1142.	-244.	406.	-4.	-248.	989.	-0149	.0041	-0005	-0240	-0482	-0347	3806.			
.3810	-915.	-206.	274.	-77.	-227.	806.	-0099	.0022	-0016	-0268	-0510	-0307	3140.			
.3820	-667.	-173.	144.	-146.	-205.	603.	-0047	-0004	-0027	-0294	-0531	-0265	2438.			
.3830	-418.	-146.	31.	-201.	-182.	394.	.0004	-0034	-0036	-0319	-0541	-0223	1786.			
.3840	-194.	-126.	-55.	-236.	-158.	198.	.0050	-0069	-0043	-0344	-0538	-0182	1294.			
.3850	-15.	-115.	-111.	-248.	-131.	31.	.0088	-0105	-0048	-0369	-0523	-0145	1053.			
.3860	112.	-126.	-140.	-241.	-98.	-99.	.0115	-0143	-0048	-0392	-0494	-0110	1039.			
.3870	176.	-161.	-149.	-220.	-55.	-188.	.0131	-0180	-0045	-0409	-0453	-0078	1100.			
.3880	176.	-204.	-141.	-186.	-3.	-231.	.0136	-0217	-0038	-0421	-0401	-0050	1107.			
.3890	119.	-237.	-119.	-140.	55.	-227.	.0128	-0251	-0027	-0428	-0341	-0025	1017.			
.3900	15.	-266.	-83.	-86.	117.	-181.	.0111	-0279	-0013	-0428	-0270	-0003	869.			
.3910	-122.	-314.	-39.	-28.	180.	-107.	.0084	-0297	.0004	-0419	-0192	.0020	789.			

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

CONDITION 24
LOADS
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INTERNAL FORCES IN THE PIPING
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.3810	-915.	-206.	274.	-77.	-227.	806.	-.0099	.0022	-.0016	-.0268	-.0510	-.0307	3140.
.3820	-667.	-173.	144.	-146.	-205.	603.	-.0047	-.0004	-.0027	-.0294	-.0531	-.0265	2438.
.3830	-418.	-146.	31.	-201.	-182.	394.	.0004	-.0034	-.0036	-.0319	-.0541	-.0223	1786.
.3840	-194.	-126.	-55.	-236.	-158.	198.	.0050	-.0069	-.0043	-.0344	-.0538	-.0182	1294.
.3850	-15.	-115.	-111.	-248.	-131.	31.	.0088	-.0105	-.0048	-.0369	-.0523	-.0145	1053.
.3860	112.	-126.	-140.	-241.	-98.	-99.	.0115	-.0143	-.0048	-.0392	-.0494	-.0110	1039.
.3870	176.	-161.	-149.	-220.	-55.	-188.	.0131	-.0180	-.0045	-.0409	-.0453	-.0078	1100.
.3880	176.	-204.	-141.	-186.	-3.	-231.	.0136	-.0217	-.0038	-.0421	-.0401	-.0050	1107.
.3890	119.	-237.	-119.	-140.	53.	-227.	.0128	-.0251	-.0027	-.0428	-.0341	-.0025	1017.
.3900	15.	-266.	-83.	-86.	117.	-181.	.0111	-.0279	-.0013	-.0428	-.0270	-.0003	869.
.3910	-122.	-314.	-39.	-28.	180.	-107.	.0084	-.0297	.0004	-.0419	-.0192	.0020	789.

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

SECTION	51	MEMBER	1	SEQUENCE	71	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)		
.3920	-272.	-382.	9.	33.	242.	-18.	.0050	-.0304	.0021	-.0402	-.0109	.0048	915.		
.3930	-411.	-440.	57.	93.	299.	74.	.0012	-.0301	.0039	-.0377	-.0025	.0083	1202.		
.3940	-525.	-460.	96.	145.	347.	164.	-.0029	-.0287	.0055	-.0344	.0060	.0121	1532.		
.3950	-613.	-477.	119.	182.	387.	246.	-.0072	-.0263	.0069	-.0304	.0142	.0162	1842.		
.3960	-667.	-482.	117.	199.	422.	312.	-.0113	-.0229	.0080	-.0255	.0218	.0206	2096.		
.3970	-676.	-478.	81.	190.	455.	352.	-.0153	-.0187	.0087	-.0199	.0285	.0252	2261.		
.3980	-630.	-445.	9.	154.	481.	364.	-.0189	-.0137	.0091	-.0136	.0342	.0301	2323.		
.3990	-537.	-380.	-92.	95.	497.	353.	-.0219	-.0082	.0091	-.0069	.0387	.0350	2305.		
.4000	-410.	-302.	-207.	23.	505.	324.	-.0244	-.0021	.0089	-.0003	.0421	.0397	2242.		

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)		
.1690	-900.	1420.	1033.	900.	-414.	1449.	-.0415	-.0088	.0043	.0718	.0580	.0539	6550.		

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)		
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	3.		
.0040	3.	-1.	3.	0.	0.	-2.	-.0000	.0000	-.0000	-.0001	-.0002	.0000	10.		
.0050	9.	-0.	6.	4.	-1.	-6.	-.0001	.0000	-.0001	-.0002	-.0004	.0001	27.		
.0060	20.	3.	10.	7.	-3.	-13.	-.0003	.0000	-.0002	-.0003	-.0007	.0001	57.		
.0070	35.	6.	14.	11.	-5.	-23.	-.0005	.0000	-.0005	-.0005	-.0011	.0001	97.		
.0080	54.	5.	18.	15.	-7.	-35.	-.0010	.0000	-.0009	-.0010	-.0018	.0000	144.		
.0090	85.	5.	18.	18.	-10.	-54.	-.0017	.0000	-.0014	-.0017	-.0024	-.0002	216.		
.0100	137.	16.	13.	18.	-20.	-87.	-.0028	.0001	-.0021	-.0024	-.0026	-.0008	340.		
.0110	214.	40.	2.	14.	-38.	-135.	-.0045	.0002	-.0031	-.0032	-.0020	-.0018	524.		
.0120	310.	78.	-17.	6.	-66.	-192.	-.0068	.0003	-.0042	-.0043	-.0000	-.0034	758.		
.0130	413.	123.	-45.	-4.	-102.	-250.	-.0097	.0002	-.0055	-.0059	.0034	-.0058	1009.		
.0140	503.	164.	-80.	-16.	-142.	-298.	-.0129	-.0002	-.0069	-.0085	.0083	-.0088	1233.		
.0150	560.	193.	-123.	-27.	-182.	-323.	-.0161	-.0009	-.0084	-.0117	.0144	-.0117	1386.		

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

CONDITION 24
LOADS
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ENGLISH UNITS

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

SECTION	S1	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)		
.0160	583.	212.	-168.	-38.	-215.	-316.	-.0186	-.0017	-.0099	-.0150	.0211	-.0132	1433.		
.0170	493.	215.	-208.	-50.	-233.	-267.	-.0198	-.0024	-.0110	-.0173	.0277	-.0125	1334.		
.0180	342.	188.	-230.	-61.	-233.	-169.	-.0193	-.0030	-.0116	-.0175	.0337	-.0092	1099.		
.0190	121.	131.	-219.	-67.	-219.	-32.	-.0166	-.0032	-.0112	-.0148	.0392	-.0039	863.		
.0200	-150.	22.	-158.	-60.	-197.	136.	-.0119	-.0033	-.0093	-.0090	.0442	.0025	923.		
.0210	-423.	-110.	-40.	-32.	-185.	304.	-.0055	-.0030	-.0058	-.0002	.0494	.0089	1336.		
.0220	-595.	-122.	138.	28.	-219.	408.	.0014	-.0022	-.0011	.0124	.0569	.0136	1732.		
.0230	-700.	-76.	371.	124.	-285.	471.	.0081	-.0015	.0042	.0258	.0545	.0165	2105.		
.0240	-846.	-102.	617.	241.	-337.	561.	.0148	-.0018	.0096	.0357	.0683	.0185	2604.		
.0250	-1067.	-289.	817.	339.	-329.	699.	.0213	-.0031	.0141	.0406	.0660	.0198	3150.		
.0260	-1226.	-492.	909.	366.	-274.	793.	.0272	-.0034	.0170	.0445	.0606	.0200	3419.		
.0270	-1200.	-388.	859.	317.	-246.	756.	.0309	-.0016	.0173	.0510	.0588	.0195	3196.		
.0280	-1262.	-259.	714.	233.	-205.	761.	.0334	.0006	.0164	.0519	.0567	.0219	3068.		
.0290	-1556.	-506.	520.	122.	-61.	916.	.0365	.0010	.0166	.0408	.0479	.0268	3456.		
.0300	-1537.	-568.	225.	-48.	98.	887.	.0383	.0024	.0178	.0293	.0409	.0258	3338.		
.0310	-1160.	-353.	-150.	-258.	191.	627.	.0378	.0053	.0200	.0203	.0375	.0185	2628.		
.0320	-776.	-293.	-380.	-392.	248.	374.	.0358	.0073	.0241	.0100	.0285	.0088	2224.		
.0330	-349.	-306.	-344.	-376.	266.	135.	.0318	.0077	.0290	.0017	.0126	-.0063	1793.		
.0340	284.	-172.	-212.	-276.	207.	-217.	.0250	.0079	.0321	-.0020	-.0048	-.0295	1523.		
.0350	924.	-127.	-160.	-196.	141.	-596.	.0165	.0083	.0318	-.0056	-.0245	-.0545	2401.		
.0360	1384.	-207.	-182.	-167.	156.	-872.	.0078	.0090	.0280	-.0098	-.0471	-.0728	3365.		
.0370	1722.	-19.	-290.	-196.	203.	-1066.	-.0016	.0109	.0207	-.0115	-.0637	-.0803	4115.		
.0380	1841.	382.	-571.	-299.	220.	-1142.	-.0112	.0134	.0104	-.0165	-.0666	-.0767	4481.		
.0390	1536.	428.	-980.	-449.	297.	-976.	-.0184	.0141	.0003	-.0340	-.0615	-.0645	4162.		
.0400	1052.	82.	-1348.	-584.	505.	-686.	-.0213	.0127	-.0067	-.0590	-.0577	-.0486	3855.		
.0410	890.	125.	-1623.	-679.	660.	-590.	-.0224	.0129	-.0108	-.0728	-.0521	-.0329	4165.		
.0420	874.	452.	-1649.	-652.	661.	-597.	-.0231	.0141	-.0122	-.0714	-.0509	-.0156	4119.		
.0430	718.	565.	-1258.	-433.	595.	-489.	-.0224	.0138	-.0100	-.0557	-.0613	-.0026	3297.		
.0440	696.	514.	-486.	-21.	500.	-406.	-.0214	.0116	-.0059	-.0282	-.0812	-.0042	2407.		
.0450	943.	489.	251.	392.	324.	-495.	-.0215	.0090	-.0028	.0032	-.0983	-.0182	2650.		
.0460	1124.	450.	696.	652.	138.	-589.	-.0224	.0068	-.0016	.0282	-.1079	-.0293	3319.		
.0470	987.	415.	933.	764.	103.	-483.	-.0225	.0044	-.0010	.0411	-.1126	-.0251	3395.		
.0480	656.	514.	910.	712.	182.	-248.	-.0221	.0022	-.0013	.0398	-.1069	-.0073	2894.		
.0490	307.	638.	466.	444.	229.	-44.	-.0226	.0008	-.0035	.0245	-.0822	.0132	1873.		
.0500	-8.	564.	-170.	84.	254.	104.	-.0234	-.0006	-.0060	.0022	-.0457	.0274	1073.		
.0510	-218.	446.	-595.	-184.	291.	223.	-.0239	-.0025	-.0064	-.0137	-.0118	.0329	1531.		
.0520	-294.	458.	-716.	-320.	241.	298.	-.0246	-.0046	-.0042	-.0169	.0127	.0326	1864.		
.0530	-232.	482.	-601.	-344.	51.	286.	-.0254	-.0065	.0031	-.0083	.0269	.0263	1681.		

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

CONDITION 24
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.0430	718.	565.	-1258.	-433.	595.	-489.	-.0224	.0138	-.0100	-.0557	-.0613	-.0026	3297.
.0440	696.	514.	-486.	-21.	500.	-406.	-.0214	.0116	-.0059	-.0282	-.0812	-.0042	2407.
.0450	943.	489.	251.	392.	324.	-495.	-.0215	.0090	-.0028	.0032	-.0783	-.0182	2650.
.0460	1124.	450.	696.	652.	138.	-589.	-.0224	.0068	-.0016	.0282	-.1079	-.0293	3319.
.0470	987.	415.	933.	764.	103.	-483.	-.0225	.0044	-.0010	.0411	-.1126	-.0251	3395.
.0480	656.	514.	910.	712.	182.	-248.	-.0221	.0022	-.0013	.0398	-.1069	-.0073	2894.
.0490	307.	638.	466.	444.	229.	-44.	-.0226	.0008	-.0035	.0245	-.0822	.0132	1873.
.0500	-8.	564.	-170.	84.	254.	104.	-.0234	-.0006	-.0060	.0022	-.0457	.0274	1073.
.0510	-218.	446.	-595.	-184.	291.	223.	-.0239	-.0025	-.0064	-.0137	-.0118	.0329	1531.
.0520	-294.	458.	-716.	-320.	241.	298.	-.0246	-.0046	-.0042	-.0169	.0127	.0326	1864.
.0530	-232.	482.	-601.	-344.	51.	286.	-.0254	-.0065	.0001	-.0083	.0269	.0263	1681.

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2 SAFETY COLD FKM24F--2 PSV

CONDITION 24

LOADS

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ENGLISH UNITS

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

SECTION	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.0540	56.	435.	-231.	-229.	-178.	131.	-.0255	-.0080	.0060	.0107	.0315	.0099	1189.		
.0550	511.	355.	298.	-13.	-376.	-119.	-.0246	-.0091	.0127	.0340	.0307	-.0139	1473.		
.0560	824.	223.	716.	153.	-568.	-296.	-.0234	-.0099	.0182	.0513	.0310	-.0327	2459.		
.0570	808.	101.	889.	182.	-728.	-294.	-.0221	-.0100	.0215	.0596	.0384	-.0388	3008.		
.0580	540.	93.	844.	92.	-767.	-147.	-.0204	-.0090	.0225	.0613	.0556	-.0345	2934.		
.0590	74.	36.	558.	-105.	-688.	105.	-.0174	-.0074	.0218	.0529	.0810	-.0242	2627.		
.0600	-549.	-231.	78.	-386.	-582.	426.	-.0125	-.0056	.0200	.0349	.1101	-.0094	3053.		
.0610	-1156.	-516.	-305.	-616.	-486.	726.	-.0060	-.0030	.0188	.0205	.1346	.0088	3991.		
.0620	-1600.	-574.	-337.	-667.	-412.	930.	.0015	.0012	.0196	.0222	.1471	.0276	4540.		
.0630	-1892.	-558.	-40.	-537.	-399.	1044.	.0093	.0060	.0224	.0378	.1435	.0420	4630.		
.0640	-1986.	-682.	491.	-273.	-464.	1057.	.0165	.0099	.0262	.0608	.1249	.0450	4430.		
.0650	-1818.	-876.	1193.	102.	-566.	939.	.0218	.0127	.0295	.0881	.0979	.0342	4111.		
.0660	-1565.	-1025.	1871.	492.	-657.	771.	.0245	.0151	.0306	.1135	.0712	.0186	4204.		
.0670	-1457.	-1116.	2242.	728.	-711.	677.	.0246	.0176	.0280	.1274	.0516	.0100	4564.		
.0680	-1451.	-1057.	2164.	710.	-691.	652.	.0226	.0204	.0215	.1263	.0439	.0117	4428.		
.0690	-1462.	-854.	1657.	464.	-568.	641.	.0191	.0230	.0121	.1107	.0504	.0196	3635.		
.0700	-1583.	-756.	841.	80.	-363.	680.	.0150	.0242	.0014	.0807	.0663	.0303	2892.		
.0710	-1737.	-795.	-36.	-322.	-151.	748.	.0107	.0234	-.0082	.0444	.0829	.0389	3092.		
.0720	-1609.	-657.	-683.	-616.	-17.	699.	.0060	.0214	-.0151	.0175	.0926	.0388	3478.		
.0730	-1144.	-324.	-953.	-715.	10.	486.	.0013	.0186	-.0185	.0077	.0893	.0271	3228.		
.0740	-566.	-126.	-856.	-604.	-22.	211.	-.0023	.0144	-.0185	.0108	.0684	.0058	2391.		
.0750	82.	-85.	-484.	-339.	-63.	-92.	-.0042	.0089	-.0161	.0227	.0321	-.0226	1333.		
.0760	830.	45.	-25.	-36.	-104.	-433.	-.0051	.0032	-.0133	.0402	-.0095	-.0520	1668.		
.0770	1443.	258.	284.	180.	-124.	-711.	-.0056	-.0016	-.0121	.0549	-.0453	-.0723	2778.		
.0780	1707.	412.	301.	239.	-73.	-819.	-.0059	-.0058	-.0131	.0584	-.0577	-.0786	3197.		
.0790	1739.	570.	2.	125.	59.	-799.	-.0064	-.0094	-.0160	.0487	-.0725	-.0751	3025.		
.0800	1667.	751.	-573.	-137.	220.	-717.	-.0075	-.0129	-.0202	.0268	-.0602	-.0670	2847.		
.0810	1429.	783.	-1260.	-450.	373.	-561.	-.0087	-.0163	-.0245	-.0029	-.0386	-.0554	3025.		
.0820	1108.	703.	-1773.	-677.	502.	-376.	-.0094	-.0190	-.0270	-.0281	-.0184	-.0426	3446.		
.0830	957.	749.	-1931.	-736.	559.	-292.	-.0094	-.0200	-.0273	-.0369	-.0069	-.0336	3617.		
.0840	1006.	870.	-1748.	-630.	510.	-327.	-.0084	-.0195	-.0253	-.0290	-.0080	-.0308	3261.		
.0850	1069.	808.	-1295.	-383.	415.	-384.	-.0056	-.0183	-.0212	-.0105	-.0225	-.0330	2549.		
.0860	1081.	607.	-669.	-50.	350.	-419.	-.0011	-.0167	-.0152	.0143	-.0444	-.0378	2047.		
.0870	1044.	476.	-87.	246.	317.	-429.	.0043	-.0139	-.0084	.0393	-.0634	-.0405	2194.		
.0880	845.	395.	232.	390.	310.	-355.	.0102	-.0102	-.0015	.0543	-.0719	-.0353	2283.		
.0890	434.	252.	266.	375.	372.	-172.	.0166	-.0060	.0055	.0546	-.0685	-.0211	2074.		
.0900	-41.	88.	106.	260.	511.	38.	.0227	-.0015	.0126	.0435	-.0552	-.0031	2146.		
.0910	-425.	-43.	-159.	96.	645.	186.	.0274	.0032	.0191	.0265	-.0373	.0136	2531.		

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ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FKM24F--2 PSV

CONDITION 24

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

.0810	1429.	783.	-260.	-450.	373.	-561.	-.0087	-.0163	-.0245	-.0029	-.0386	-.0554	3025.
.0820	1108.	703.	-1773.	-677.	502.	-376.	-.0094	-.0190	-.0270	-.0281	-.0184	-.0426	3446.
.0830	957.	749.	-1931.	-736.	559.	-292.	-.0094	-.0200	-.0273	-.0369	-.0069	-.0336	3617.
.0840	1006.	870.	-1748.	-630.	510.	-327.	-.0084	-.0195	-.0253	-.0290	-.0080	-.0308	3261.
.0850	1069.	808.	-1295.	-383.	415.	-384.	-.0056	-.0183	-.0212	-.0105	-.0225	-.0330	2549.
.0860	1081.	607.	-669.	-50.	350.	-419.	-.0011	-.0167	-.0152	.0143	-.0444	-.0378	2047.
.0870	1044.	476.	-87.	246.	317.	-429.	.0043	-.0139	-.0084	.0393	-.0634	-.0405	2194.
.0880	845.	395.	232.	390.	310.	-355.	.0102	-.0102	-.0015	.0543	-.0719	-.0353	2283.
.0890	434.	252.	266.	375.	372.	-172.	.0166	-.0060	.0055	.0546	-.0585	-.0211	2074.
.0900	-41.	88.	106.	260.	511.	38.	.0227	-.0015	.0126	.0435	-.0552	-.0031	2146.
.0910	-425.	-43.	-159.	96.	645.	186.	.0274	.0032	.0191	.0265	-.0373	.0136	2531.

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

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.05.

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

SECTION	51	MEMBER	1	SEQUENCE	824	LOCATION	END	TYPE	EL					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.0920	-656.	-153.	-374.	-39.	700.	249.	.0296	.0077	.0244	.0106	-.0228	.0245	2776.	
.0930	-685.	-226.	-337.	-42.	669.	215.	.0288	.0117	.0282	.0046	-.0178	.0256	2627.	
.0940	-506.	-271.	-21.	108.	556.	75.	.0247	.0152	.0296	.0109	-.0222	.0149	2134.	
.0950	-207.	-361.	395.	323.	369.	-133.	.0179	.0182	.0277	.0224	-.0313	-.0038	1900.	
.0960	109.	-481.	730.	503.	167.	-351.	.0097	.0210	.0227	.0306	-.0396	-.0228	2374.	
.0970	341.	-535.	889.	587.	25.	-519.	.0014	.0241	.0152	.0307	-.0412	-.0343	2933.	
.0980	364.	-532.	797.	544.	-35.	-581.	-.0064	.0278	.0055	.0190	-.0323	-.0330	2974.	
.0990	155.	-554.	462.	377.	-42.	-522.	-.0130	.0319	-.0059	-.0051	-.0137	-.0202	2409.	
.1000	-156.	-604.	46.	171.	-21.	-398.	-.0182	.0359	-.0181	-.0341	.0089	-.0035	1618.	
.1010	-467.	-664.	-248.	33.	-0.	-259.	-.0220	.0398	-.0305	-.0577	.0281	.0108	974.	
.1020	-779.	-747.	-313.	19.	-18.	-112.	-.0241	.0435	-.0423	-.0687	.0372	.0210	428.	
.1030	-1055.	-819.	-118.	134.	-80.	34.	-.0241	.0467	-.0528	-.0644	.0327	.0272	595.	
.1040	-1224.	-836.	285.	339.	-154.	148.	-.0214	.0492	-.0609	-.0466	.0165	.0297	1496.	
.1050	-1323.	-843.	729.	556.	-207.	239.	-.0159	.0505	-.0658	-.0236	-.0045	.0306	2389.	
.1060	-1442.	-880.	1038.	702.	-221.	345.	-.0080	.0504	-.0670	-.0049	-.0219	.0329	3034.	
.1070	-1557.	-849.	1146.	738.	-191.	471.	.0011	.0485	-.0645	.0047	-.0306	.0373	3344.	
.1080	-1646.	-782.	1075.	666.	-118.	616.	.0106	.0447	-.0584	.0041	-.0305	.0426	3415.	
.1090	-1673.	-765.	851.	507.	-33.	738.	.0190	.0396	-.0501	-.0041	-.0235	.0453	3344.	
.1100	-1418.	-405.	524.	323.	-43.	689.	.0241	.0348	-.0420	-.0107	-.0079	.0398	2844.	
.1110	-1016.	-54.	296.	198.	-95.	581.	.0266	.0285	-.0347	-.0148	.0041	.0270	2319.	
.1120	-805.	7.	225.	147.	-152.	491.	.0273	.0198	-.0288	-.0167	.0059	.0105	1997.	
.1130	-134.	58.	140.	101.	-244.	332.	.0258	.0117	-.0257	-.0138	.0048	-.0077	1584.	
.1140	408.	348.	-54.	11.	-342.	96.	.0226	.0066	-.0249	-.0074	.0071	-.0256	1327.	
.1150	873.	712.	-318.	-129.	-386.	-86.	.0194	.0035	-.0241	-.0056	.0126	-.0385	1552.	
.1160	1116.	924.	-666.	-321.	-385.	-149.	.0172	.0013	-.0220	-.0148	.0244	-.0425	1951.	
.1170	1103.	935.	-1123.	-550.	-348.	-126.	.0163	.0006	-.0177	-.0341	.0440	-.0378	2475.	
.1180	1092.	1140.	-1569.	-747.	-277.	-147.	.0169	.0027	-.0108	-.0534	.0570	-.0306	3025.	
.1190	986.	1205.	-1788.	-837.	-133.	-89.	.0206	.0055	-.0006	-.0716	.0751	-.0206	3180.	
.1200	798.	994.	-1686.	-774.	6.	14.	.0265	.0084	.0112	-.0818	.0529	-.0085	2889.	
.1210	770.	895.	-1273.	-531.	46.	-45.	.0319	.0141	.0216	-.0712	.0395	.0003	1996.	
.1220	783.	811.	-585.	-132.	42.	-164.	.0363	.0224	.0295	-.0450	.0069	.0042	802.	
.1230	813.	797.	205.	311.	10.	-264.	.0392	.0317	.0346	-.0153	-.0282	.0049	1525.	
.1240	656.	613.	821.	653.	-22.	-245.	.0405	.0399	.0366	.0022	-.0561	.0101	2606.	
.1250	255.	293.	1069.	816.	8.	-135.	.0402	.0476	.0357	.0027	-.0659	.0242	3089.	
.1260	-189.	200.	928.	795.	129.	-33.	.0384	.0557	.0328	-.0119	-.0554	.0452	3009.	
.1270	-715.	70.	511.	611.	336.	162.	.0370	.0621	.0296	-.0450	-.0391	.0720	2672.	
.1280	-1088.	-12.	13.	365.	497.	302.	.0349	.0665	.0260	-.0828	-.0230	.0977	2564.	
.1290	-1239.	-96.	-302.	221.	568.	293.	.0310	.0693	.0219	-.1078	-.0123	.1139	2524.	

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2 SAFETY COLD FKW24F--2 PSV

ADLPIPE STRESS ANALYSIS

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CONDITION 24
LOADS
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INTERNAL FORCES IN THE PIPING
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.1190	926.	1205.	-1788.	-837.	-133.	-89.	.0206	.0055	-.0006	-.0716	.0751	-.0206	3180.
.1200	798.	994.	-1686.	-774.	6.	14.	.0265	.0084	.0112	-.0818	.0529	-.0085	2889.
.1210	770.	895.	-1273.	-531.	46.	-45.	.0319	.0141	.0216	-.0712	.0395	.0003	1996.
.1220	783.	811.	-585.	-132.	42.	-164.	.0363	.0224	.0295	-.0450	.0069	.0042	802.
.1230	813.	737.	205.	311.	10.	-264.	.0392	.0317	.0346	-.0153	-.0282	.0049	1525.
.1240	656.	613.	821.	653.	-22.	-245.	.0405	.0399	.0366	.0022	-.0561	.0101	2606.
.1250	255.	293.	1069.	816.	8.	-135.	.0402	.0476	.0357	.0027	-.0659	.0242	3089.
.1260	-189.	200.	928.	795.	129.	-33.	.0384	.0557	.0328	-.0119	-.0554	.0452	3009.
.1270	-715.	70.	511.	611.	336.	162.	.0370	.0621	.0296	-.0450	-.0391	.0720	2672.
.1280	-1088.	-12.	13.	365.	497.	302.	.0349	.0665	.0260	-.0828	-.0230	.0977	2564.
.1290	-1239.	-96.	-302.	221.	568.	293.	.0310	.0693	.0219	-.1078	-.0123	.1139	2524.

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

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

SECTION	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)		
.1300	-1125.	-143.	-271.	269.	568.	138.	.0253	.0704	.0181	-.1131	-.0150	.1135	2403.		
.1310	-630.	28.	47.	459.	465.	-152.	.0180	.0689	.0150	-.1035	-.0339	.0942	2503.		
.1320	-29.	36.	479.	687.	308.	-424.	.0104	.0631	.0126	-.0926	-.0660	.0646	3225.		
.1330	589.	-5.	845.	889.	164.	-715.	.0026	.0549	.0102	-.0829	-.0945	.0327	4302.		
.1340	1109.	37.	962.	976.	105.	-977.	-.0042	.0462	.0074	-.0809	-.1098	.0070	5170.		
.1350	1489.	227.	704.	847.	115.	-1123.	-.0093	.0367	.0041	-.0945	-.1109	-.0072	5270.		
.1360	1738.	546.	131.	525.	143.	-1154.	-.0128	.0259	-.0001	-.1203	-.0987	-.0101	4763.		
.1370	1641.	590.	-518.	164.	232.	-1008.	-.0143	.0136	-.0050	-.1498	-.0799	-.0053	3908.		
.1380	1415.	575.	-1024.	-98.	339.	-818.	-.0144	.0014	-.0103	-.1699	-.0611	-.0025	3326.		
.1390	1266.	578.	-1266.	-231.	389.	-636.	-.0124	-.0101	-.0152	-.1777	-.0539	-.0062	2913.		
.1400	1247.	557.	-1179.	-225.	336.	-494.	-.0080	-.0205	-.0194	-.1710	-.0624	-.0139	2383.		
.1410	1297.	593.	-772.	-52.	218.	-446.	-.0019	-.0281	-.0226	-.1460	-.0786	-.0210	1863.		
.1420	1153.	464.	-138.	225.	142.	-356.	.0065	-.0332	-.0241	-.1142	-.0992	-.0227	1658.		
.1430	953.	351.	320.	448.	101.	-226.	.0165	-.0362	-.0239	-.0881	-.1178	-.0206	1909.		
.1440	719.	210.	579.	508.	77.	-54.	.0269	-.0377	-.0225	-.0752	-.1273	-.0150	1929.		
.1450	349.	-18.	572.	430.	96.	143.	.0362	-.0369	-.0206	-.0730	-.1207	-.0052	1729.		
.1460	-99.	-170.	370.	268.	159.	319.	.0434	-.0329	-.0183	-.0764	-.0989	.0070	1665.		
.1470	-559.	-364.	44.	24.	255.	519.	.0492	-.0272	-.0147	-.0880	-.0758	.0187	2161.		
.1480	-768.	-441.	-317.	-263.	308.	609.	.0532	-.0198	-.0098	-.1009	-.0570	.0248	2731.		
.1490	-811.	-559.	-561.	-477.	334.	565.	.0550	-.0106	-.0035	-.1067	-.0452	.0247	3028.		
.1500	-764.	-753.	-571.	-541.	349.	422.	.0547	.0001	.0043	-.1017	-.0419	.0186	2876.		
.1510	-425.	-711.	-392.	-506.	286.	148.	.0517	.0117	.0134	-.0880	-.0451	.0041	2238.		
.1520	80.	-620.	-158.	-452.	145.	-156.	.0466	.0223	.0230	-.0749	-.0517	-.0158	1864.		
.1530	569.	-569.	26.	-392.	-6.	-459.	.0393	.0318	.0316	-.0640	-.0519	-.0361	2255.		
.1540	834.	-667.	99.	-351.	-74.	-669.	.0309	.0404	.0384	-.0580	-.0427	-.0501	2833.		
.1550	976.	-667.	-20.	-406.	-93.	-782.	.0218	.0483	.0427	-.0586	-.0254	-.0539	3909.		
.1560	1142.	-318.	-324.	-567.	-148.	-865.	.0116	.0559	.0436	-.0620	-.0003	-.0472	3300.		
.1570	1064.	-87.	-649.	-723.	-175.	-810.	.0012	.0617	.0416	-.0661	.0260	-.0305	4107.		
.1580	866.	62.	-844.	-771.	-171.	-706.	-.0095	.0654	.0375	-.0631	.0511	-.0124	3953.		
.1590	800.	326.	-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.		

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CONDITION 24
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