

50-305

RESPONSE TO NUREG-0737 ITEM II.D.1

Docket # *50-305*

Control # *8403280048*

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

.0490	328.	625.	366.	-265.	624.	-149.	-.0228	.0089	.0137	.0329	-.0246	.0359	2591.
.0500	49.	538.	-31.	?	219.	-261.	-.0297	.0071	-.0006	.0161	-.0138	.0411	1273.
.0510	-190.	444.	-379.	212.	-93.	-317.	-.0346	.0044	-.0110	.0029	.0037	.0439	1466.
.0520	-250.	465.	-534.	219.	-273.	-338.	-.0374	.0019	-.0136	-.0064	.0152	.0458	1816.
.0530	-111.	489.	-429.	60.	-342.	-267.	-.0368	-.0007	-.0081	-.0094	.0120	.0428	1635.
.0540	166.	444.	-141.	-179.	-246.	-75.	-.0313	-.0036	.0037	-.0029	.0067	.0314	1169.
.0550	490.	367.	210.	-437.	-26.	182.	-.0223	-.0068	.0180	.0098	.0068	.0147	1768.
.0560	713.	258.	536.	-646.	123.	396.	-.0146	-.0095	.0297	.0179	.0028	.0002	2867.
.0570	731.	159.	725.	-777.	98.	470.	-.0115	-.0107	.0352	.0158	-.0031	-.0085	3409.

ADLPIPE PAGE 2061

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.12.

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	54	MEMBER	2	SEQUENCE	826	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)			
.0580	536.	119.	677.	-806.	-55.	376.	-.0128	-.0101	.0333	.0065	.0031	-.0129	3326.			
.0590	114.	30.	429.	-676.	-321.	192.	-.0160	-.0089	.0256	-.0079	.0192	-.0151	2884.			
.0600	-485.	-197.	131.	-414.	-690.	5.	-.0189	-.0078	.0134	-.0263	.0327	-.0160	3003.			
.0610	-1086.	-434.	-82.	-198.	-1007.	-188.	-.0203	-.0055	.0037	-.0437	.0438	-.0175	3896.			
.0620	-1535.	-543.	-117.	-173.	-1128.	-409.	-.0193	-.0010	.0018	-.0533	.0553	-.0232	4527.			
.0630	-1822.	-617.	98.	-315.	-1060.	-581.	-.0151	.0044	.0089	-.0539	.0579	-.0336	4665.			
.0640	-1947.	-753.	547.	-545.	-843.	-597.	-.0069	.0085	.0222	-.0458	.0484	-.0468	4360.			
.0650	-1884.	-901.	1112.	-818.	-488.	-461.	.0039	.0109	.0382	-.0285	.0364	-.0620	3952.			
.0660	-1727.	-1021.	1628.	-1058.	-115.	-293.	.0136	.0128	.0517	-.0066	.0260	-.0779	4120.			
.0670	-1622.	-1102.	1936.	-1175.	103.	-207.	.0181	.0149	.0572	.0084	.0143	-.0889	4472.			
.0680	-1563.	-1064.	1894.	-1144.	105.	-237.	.0167	.0177	.0515	.0105	.0070	-.0902	4377.			
.0690	-1526.	-919.	1479.	-937.	-69.	-349.	.0109	.0203	.0353	.0037	.0108	-.0840	3740.			
.0700	-1596.	-846.	832.	-528.	-380.	-476.	.0026	.0212	.0123	-.0070	.0204	-.0739	3012.			
.0710	-1690.	-839.	154.	-49.	-726.	-559.	-.0058	.0201	-.0111	-.0181	.0281	-.0604	3425.			
.0720	-1518.	-682.	-391.	269.	-935.	-561.	-.0113	.0182	-.0277	-.0233	.0330	-.0452	4194.			
.0730	-1026.	-391.	-677.	356.	-919.	-457.	-.0121	.0158	-.0335	-.0169	.0323	-.0331	4057.			
.0740	-442.	-195.	-657.	317.	-699.	-229.	-.0078	.0118	-.0287	.0009	.0222	-.0264	2992.			
.0750	150.	-91.	-418.	198.	-318.	91.	.0006	.0065	-.0167	.0255	.0069	-.0222	1439.			
.0760	791.	81.	-121.	4.	136.	414.	.0108	.0014	-.0026	.0512	-.0078	-.0172	1626.			
.0770	1339.	287.	87.	-160.	499.	640.	.0185	-.0025	.0079	.0715	-.0211	-.0103	3087.			
.0780	1612.	430.	91.	-174.	659.	719.	.0211	-.0053	.0106	.0821	-.0293	-.0004	3699.			
.0790	1670.	572.	-173.	-32.	618.	675.	.0189	-.0075	.0043	.0824	-.0265	.0141	3420.			
.0800	1623.	736.	-644.	230.	409.	571.	.0135	-.0097	-.0092	.0751	-.0154	.0323	2759.			
.0810	1439.	300.	-1156.	577.	93.	451.	.0064	-.0121	-.0254	.0642	-.0040	.0504	2756.			
.0820	1181.	774.	-1547.	881.	-183.	331.	-.0004	-.0139	-.0380	.0552	.0064	.0639	3579.			
.0830	1066.	812.	-1703.	982.	-285.	234.	-.0041	-.0139	-.0422	.0529	.0148	.0702	3917.			
.0840	1123.	881.	-1561.	872.	-203.	208.	-.0032	-.0127	-.0371	.0580	.0146	.0687	3431.			
.0850	1162.	819.	-1157.	661.	14.	258.	.0020	-.0114	-.0246	.0685	.0062	.0601	2651.			
.0860	1106.	653.	-640.	417.	320.	329.	.0096	-.0098	-.0079	.0813	-.0008	.0467	2315.			
.0870	1000.	517.	-179.	175.	602.	347.	.0170	-.0071	.0084	.0908	-.0029	.0322	2675.			
.0880	787.	405.	112.	17.	727.	275.	.0219	-.0035	.0202	.0900	-.0028	.0210	2901.			
.0890	395.	253.	177.	11.	675.	114.	.0234	.0004	.0257	.0776	.0029	.0141	2557.			
.0900	-82.	86.	36.	137.	524.	-93.	.0228	.0042	.0262	.0588	.0179	.0089	2050.			
.0910	-478.	-63.	-189.	313.	336.	-276.	.0215	.0075	.0241	.0385	.0340	.0032	1999.			
.0920	-707.	-186.	-339.	440.	182.	-384.	.0203	.0103	.0226	.0208	.0417	-.0039	2285.			
.0930	-730.	-265.	-311.	435.	159.	-396.	.0199	.0125	.0246	.0114	.0421	-.0143	2275.			
.0940	-553.	-315.	-92.	295.	288.	-303.	.0204	.0140	.0298	.0134	.0367	-.0297	1912.			
.0950	-255.	-392.	250.	108.	474.	-118.	.0214	.0146	.0351	.0227	.0234	-.0487	1869.			

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.12.

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 54 MEMBER 2 SEQUENCE 826 LOCATION END TYPE RU

.0870	1000.	517.	-177.	175.	602.	347.	.0170	-.0071	.0084	.0908	-.0029	.0322	2675.
.0880	787.	405.	112.	17.	727.	275.	.0219	-.0035	.0202	.0900	-.0028	.0210	2901.
.0890	395.	253.	177.	11.	675.	114.	.0234	.0004	.0257	.0776	.0029	.0141	2557.
.0900	-82.	86.	36.	177.	524.	-93.	.0228	.0042	.0262	.0588	.0179	.0089	2050.
.0910	-478.	-63.	-189.	313.	336.	-276.	.0215	.0075	.0241	.0385	.0340	.0032	1999.
.0920	-707.	-186.	-339.	440.	182.	-384.	.0203	.0103	.0226	.0208	.0417	-.0039	2285.
.0930	-730.	-265.	-311.	435.	159.	-396.	.0199	.0125	.0246	.0114	.0421	-.0143	2275.
.0940	-553.	-315.	-92.	295.	288.	-303.	.0204	.0140	.0298	.0134	.0367	-.0297	1912.
.0950	-255.	-392.	250.	108.	474.	-118.	.0214	.0146	.0351	.0227	.0234	-.0487	1869.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.12.

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	54	MEMBER	2	SEQUENCE	826	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)	
.0960	55.	-479.	569.	-46.	624.	87.		.0213	.0148	.0365	.0316	.0067	-.0665	2357.	
.0970	279.	-518.	716.	-120.	678.	207.		.0182	.0158	.0314	.0341	-.0046	-.0798	2683.	
.0980	328.	-533.	642.	-69.	578.	190.		.0112	.0178	.0189	.0273	-.0092	-.0877	2287.	
.0990	183.	-572.	400.	107.	321.	66.		.0012	.0206	-.0002	.0117	-.0111	-.0905	1286.	
.1000	-76.	-624.	103.	334.	3.	-97.		-.0094	.0237	-.0223	-.0072	-.0106	-.0900	1296.	
.1010	-366.	-684.	-111.	513.	-257.	-249.		-.0180	.0270	-.0425	-.0224	-.0092	-.0901	2334.	
.1020	-655.	-774.	-121.	580.	-403.	-369.		-.0235	.0305	-.0570	-.0297	-.0131	-.0933	2973.	
.1030	-905.	-859.	98.	495.	-410.	-453.		-.0251	.0342	-.0641	-.0297	-.0240	-.0982	2936.	
.1040	-1084.	-894.	462.	277.	-284.	-503.		-.0226	.0378	-.0641	-.0245	-.0368	-.1021	2392.	
.1050	-1233.	-917.	846.	31.	-103.	-526.		-.0169	.0407	-.0598	-.0170	-.0478	-.1041	2005.	
.1060	-1406.	-960.	1127.	-138.	27.	-544.		-.0097	.0422	-.0541	-.0112	-.0554	-.1021	2099.	
.1070	-1563.	-939.	1215.	-220.	66.	-583.		-.0028	.0423	-.0489	-.0103	-.0563	-.0925	2339.	
.1080	-1686.	-841.	1099.	-218.	15.	-626.		.0029	.0408	-.0448	-.0155	-.0498	-.0738	2475.	
.1090	-1745.	-744.	838.	-129.	-108.	-622.		.0077	.0376	-.0416	-.0231	-.0401	-.0506	2407.	
.1100	-1476.	-481.	529.	-66.	-235.	-574.		.0126	.0343	-.0384	-.0222	-.0316	-.0320	2327.	
.1110	-1070.	-183.	280.	-47.	-303.	-446.		.0172	.0294	-.0340	-.0161	-.0262	-.0121	2021.	
.1120	-677.	19.	136.	-49.	-301.	-225.		.0210	.0226	-.0288	-.0082	-.0259	.0120	1416.	
.1130	-198.	192.	41.	-59.	-273.	32.		.0243	.0158	-.0243	.0052	-.0308	.0311	1050.	
.1140	366.	437.	-102.	-72.	-257.	238.		.0266	.0115	-.0219	.0216	-.0349	.0426	1335.	
.1150	836.	737.	-340.	-65.	-286.	357.		.0270	.0092	-.0222	.0307	-.0333	.0554	1726.	
.1160	1106.	975.	-652.	18.	-411.	405.		.0247	.0079	-.0250	.0294	-.0283	.0723	2154.	
.1170	1163.	1044.	-1010.	227.	-629.	399.		.0212	.0077	-.0289	.0228	-.0209	.0859	2907.	
.1180	1209.	1147.	-1379.	438.	-816.	320.		.0189	.0098	-.0306	.0175	-.0069	.0917	3657.	
.1190	1083.	1192.	-1620.	597.	-892.	210.		.0186	.0128	-.0273	.0068	.0071	.0990	4083.	
.1200	844.	1106.	-1581.	640.	-817.	136.		.0209	.0163	-.0174	-.0050	.0112	.1056	3907.	
.1210	784.	1008.	-1237.	497.	-543.	104.		.0265	.0220	-.0008	-.0033	.0077	.0969	2774.	
.1220	743.	840.	-659.	237.	-124.	90.		.0338	.0297	.0195	.0090	.0002	.0741	1053.	
.1230	700.	731.	-4.	-105.	325.	61.		.0402	.0384	.0384	.0206	-.0091	.0502	1294.	
.1240	514.	574.	558.	-359.	631.	9.		.0425	.0462	.0502	.0227	-.0207	.0330	2711.	
.1250	153.	304.	849.	-385.	718.	-106.		.0396	.0530	.0518	.0174	-.0257	.0174	3068.	
.1260	-230.	116.	775.	-222.	628.	-334.		.0325	.0597	.0438	.0062	-.0159	.0024	2782.	
.1270	-730.	-36.	451.	82.	388.	-615.		.0227	.0649	.0286	-.0196	-.0022	-.0009	2732.	
.1280	-1081.	-92.	85.	365.	120.	-848.		.0128	.0682	.0120	-.0502	.0065	.0032	3476.	
.1290	-1194.	-174.	-129.	559.	-28.	-954.		.0055	.0695	-.0001	-.0681	.0098	.0005	4128.	
.1300	-1064.	-272.	-110.	605.	39.	-913.		.0022	.0687	-.0040	-.0680	.0083	-.0117	4091.	
.1310	-587.	-182.	119.	433.	304.	-729.		.0032	.0656	-.0005	-.0575	-.0024	-.0224	3363.	
.1320	-19.	-89.	470.	189.	629.	-409.		.0064	.0587	.0063	-.0473	-.0245	-.0236	2888.	
.1330	581.	-38.	753.	7.	933.	-46.		.0099	.0494	.0122	-.0338	-.0440	-.0239	3486.	

ADLPIPE PAGE 2063

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.12.

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	54	MEMBER	2	SEQUENCE	826	LOCATION	END	TYPE	RU
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.1250	153.	304.	849.	-385.	718.	-106.	.0396	.0530	.0518	.0174	-.0257	.0174	3068.
.1260	-230.	116.	775.	-222.	628.	-334.	.0325	.0597	.0438	.0062	-.0159	.0024	2782.
.1270	-730.	-76.	451.	82.	388.	-615.	.0227	.0649	.0286	-.0196	-.0022	-.0009	2732.
.1280	-1061.	-92.	85.	365.	120.	-648.	.0128	.0682	.0120	-.0502	.0065	.0032	3476.
.1290	-1194.	-174.	-129.	559.	-28.	-954.	.0055	.0695	-.0001	-.0681	.0098	.0005	4128.
.1300	-1064.	-272.	-110.	605.	39.	-913.	.0022	.0687	-.0040	-.0680	.0083	-.0117	4091.
.1310	-587.	-182.	119.	433.	304.	-729.	.0032	.0656	-.0005	-.0575	-.0024	-.0224	3363.
.1320	-19.	-89.	470.	189.	629.	-409.	.0064	.0587	.0063	-.0473	-.0245	-.0236	2888.
.1330	581.	-38.	753.	7.	933.	-46.	.0099	.0494	.0122	-.0338	-.0440	-.0239	3486.

ADLPIPE PAGE 2063

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

83/12/02. 18.29.12.

CONDITION 24
 LOADS
 SHOCK
 PRESSURE
 ENGLISH UNITS

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

SECTION	54	MEMBER	2	SEQUENCE	826	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)		
.1340	1091.	5.	795.	-24.	1117.	238.	.0117	.0395	.0130	-.0216	-.0520	-.0240	4263.		
.1350	1463.	166.	539.	69.	1088.	387.	.0105	.0295	.0058	-.0237	-.0533	-.0122	4319.		
.1360	1736.	466.	62.	226.	861.	424.	.0062	.0194	-.0082	-.0392	-.0516	.0132	3681.		
.1370	1705.	581.	-473.	499.	527.	409.	.0001	.0083	-.0251	-.0566	-.0457	.0405	3109.		
.1380	1548.	586.	-912.	764.	248.	379.	-.0045	-.0027	-.0397	-.0642	-.0356	.0596	3315.		
.1390	1412.	611.	-1111.	871.	97.	390.	-.0047	-.0127	-.0486	-.0670	-.0319	.0763	3581.		
.1400	1252.	666.	-998.	757.	98.	464.	-.0002	-.0213	-.0502	-.0677	-.0402	.0918	3336.		
.1410	1369.	692.	-634.	479.	261.	543.	.0078	-.0273	-.0443	-.0587	-.0515	.0955	2874.		
.1420	1202.	532.	-156.	206.	486.	575.	.0172	-.0311	-.0342	-.0456	-.0609	.0884	2915.		
.1430	947.	390.	259.	-41.	663.	554.	.0267	-.0329	-.0247	-.0402	-.0681	.0824	3228.		
.1440	640.	288.	499.	-209.	697.	506.	.0348	-.0337	-.0197	-.0483	-.0730	.0831	3309.		
.1450	246.	102.	528.	-217.	579.	419.	.0399	-.0331	-.0196	-.0616	-.0698	.0805	2790.		
.1460	-157.	-113.	362.	-100.	366.	272.	.0420	-.0304	-.0228	-.0742	-.0561	.0699	1742.		
.1470	-579.	-317.	87.	73.	91.	117.	.0423	-.0264	-.0278	-.0948	-.0418	.0618	616.		
.1480	-788.	-383.	-199.	184.	-154.	19.	.0431	-.0211	-.0315	-.1194	-.0320	.0566	900.		
.1490	-840.	-501.	-388.	262.	-291.	6.	.0451	-.0149	-.0306	-.1362	-.0254	.0433	1463.		
.1500	-799.	-720.	-431.	301.	-282.	61.	.0480	-.0079	-.0233	-.1403	-.0201	.0190	1557.		
.1510	-479.	-761.	-352.	187.	-144.	172.	.0516	.0002	-.0109	-.1376	-.0186	-.0056	1091.		
.1520	-7.	-677.	-201.	-10.	18.	348.	.0546	.0079	.0031	-.1355	-.0243	-.0220	1301.		
.1530	468.	-615.	-77.	-150.	150.	542.	.0553	.0149	.0156	-.1278	-.0279	-.0372	2174.		
.1540	731.	-686.	-67.	-132.	201.	680.	.0519	.0213	.0236	-.1156	-.0227	-.0525	2694.		
.1550	865.	-670.	-207.	-46.	137.	707.	.0439	.0284	.0257	-.1080	-.0129	-.0589	2693.		
.1560	1052.	-386.	-448.	-11.	-30.	612.	.0318	.0368	.0224	-.1059	-.0042	-.0534	2288.		
.1570	1033.	-170.	-676.	69.	-254.	445.	.0159	.0447	.0161	-.1030	.0034	-.0427	1928.		
.1580	894.	-47.	-824.	164.	-421.	263.	-.0010	.0514	.0103	-.0889	.0147	-.0344	1950.		
.1590	851.	164.	-842.	161.	-491.	124.	-.0164	.0565	.0068	-.0662	.0238	-.0234	1985.		
.1600	823.	417.	-690.	53.	-500.	44.	-.0302	.0592	.0066	-.0428	.0228	-.0033	1886.		
.1610	723.	618.	-398.	-116.	-433.	-27.	-.0428	.0600	.0106	-.0159	.0186	.0191	1675.		
.1620	639.	832.	-59.	-332.	-279.	-137.	-.0538	.0604	.0180	.0182	.0203	.0363	1699.		
.1630	458.	1000.	266.	-522.	-145.	-266.	-.0630	.0595	.0258	.0468	.0212	.0556	2254.		
.1640	253.	1204.	521.	-693.	-68.	-398.	-.0703	.0573	.0317	.0644	.0196	.0811	2993.		
.1650	40.	1409.	688.	-828.	-14.	-543.	-.0763	.0540	.0358	.0773	.0224	.1056	3698.		
.1660	-323.	1430.	801.	-865.	9.	-687.	-.0817	.0491	.0381	.0878	.0285	.1242	4124.		
.1670	-630.	1430.	884.	-891.	9.	-799.	-.0858	.0432	.0384	.0945	.0322	.1385	4467.		
.1680	-817.	1460.	954.	-945.	-3.	-841.	-.0875	.0365	.0367	.0939	.0305	.1512	4723.		
.1690	-878.	1466.	1006.	-1005.	7.	-821.	-.0869	.0295	.0339	.0915	.0283	.1555	4844.		
.1700	-930.	1316.	1033.	-1001.	16.	-759.	-.0849	.0224	.0300	.0886	.0267	.1475	4690.		
.1710	-1004.	1057.	1001.	-935.	-15.	-663.	-.0817	.0155	.0245	.0781	.0230	.1340	4278.		

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

83/12/02. 18.29.12.

CONDITION 24
 LOADS
 SHOCK
 PRESSURE
 ENGLISH UNITS

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

SECTION 54 MEMBER 2 SEQUENCE 826 LOCATION END TYPE RU

.1630	458.	1000.	266.	-522.	-145.	-286.	-.0630	.0595	.0258	.0468	.0212	.0556	2254.
.1640	253.	1204.	521.	-693.	-68.	-398.	-.0703	.0573	.0317	.0644	.0196	.0811	2993.
.1650	40.	1409.	688.	-828.	-14.	-543.	-.0763	.0540	.0358	.0773	.0224	.1056	3698.
.1660	-323.	1430.	801.	-865.	0.	-697.	-.0817	.0491	.0381	.0878	.0285	.1242	4124.
.1670	-630.	1430.	884.	-891.	9.	-799.	-.0858	.0432	.0384	.0945	.0322	.1385	4467.
.1680	-817.	1460.	954.	-945.	-3.	-841.	-.0875	.0365	.0367	.0939	.0305	.1512	4723.
.1690	-878.	1466.	1006.	-1005.	7.	-821.	-.0869	.0295	.0339	.0915	.0283	.1555	4844.
.1700	-930.	1316.	1033.	-1001.	16.	-759.	-.0849	.0224	.0300	.0886	.0267	.1475	4690.
.1710	-1004.	1057.	1001.	-935.	-15.	-663.	-.0817	.0155	.0245	.0781	.0230	.1340	4278.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.12.

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	54	MEMBER	2	SEQUENCE	826	LOCATION	END	TYPE	RU							
TIME	FX	FY	FZ	MX	MY	MZ				DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)			
.1720	-833.	965.	864.	-908.	-62.	-544.	-.0765	.0097	.0176	.0603	.0203	.1181	3960.			
.1730	-650.	802.	650.	-815.	-147.	-389.	-.0702	.0042	.0097	.0372	.0188	.0977	3417.			
.1740	-541.	463.	395.	-620.	-259.	-210.	-.0633	-.0010	.0019	.0145	.0201	.0688	2628.			
.1750	-378.	139.	123.	-427.	-356.	-30.	-.0553	-.0049	-.0046	-.0081	.0234	.0354	2028.			
.1760	-202.	-133.	-125.	-275.	-433.	144.	-.0463	-.0074	-.0093	-.0350	.0239	.0045	1989.			
.1770	-2.	-378.	-315.	-167.	-459.	303.	-.0362	-.0082	-.0114	-.0598	.0230	-.0280	2146.			
.1780	83.	-742.	-428.	-38.	-431.	442.	-.0258	-.0076	-.0106	-.0784	.0226	-.0648	2309.			
.1790	165.	-1063.	-483.	49.	-341.	545.	-.0151	-.0054	-.0073	-.0913	.0237	-.1018	2406.			
.1800	259.	-1256.	-493.	71.	-230.	604.	-.0053	-.0018	-.0025	-.1028	.0228	-.1316	2426.			
.1810	191.	-1484.	-462.	115.	-143.	623.	.0023	.0021	.0030	-.1134	.0200	-.1536	2426.			
.1820	105.	-1667.	-431.	165.	-48.	592.	.0077	.0066	.0090	-.1148	.0223	-.1738	2302.			
.1830	-6.	-1794.	-409.	225.	39.	522.	.0107	.0114	.0147	-.1101	.0276	-.1887	2127.			
.1840	-114.	-1809.	-380.	263.	101.	427.	.0113	.0160	.0195	-.1042	.0306	-.1928	1910.			
.1850	-212.	-1738.	-323.	270.	161.	314.	.0096	.0201	.0236	-.0943	.0319	-.1885	1659.			
.1860	-350.	-1679.	-224.	278.	239.	194.	.0056	.0236	.0275	-.0766	.0339	-.1813	1547.			
.1870	-401.	-1533.	-95.	243.	338.	76.	-.0001	.0265	.0306	-.0509	.0358	-.1718	1580.			
.1880	-432.	-1325.	49.	183.	412.	-23.	-.0072	.0283	.0321	-.0251	.0334	-.1548	1684.			
.1890	-434.	-1050.	166.	111.	457.	-115.	-.0156	.0288	.0317	.0004	.0303	-.1316	1808.			
.1900	-426.	-759.	218.	67.	473.	-211.	-.0252	.0283	.0296	.0274	.0312	-.1074	1949.			
.1910	-480.	-529.	194.	91.	428.	-297.	-.0352	.0263	.0258	.0511	.0337	-.0812	1975.			
.1920	-457.	-231.	92.	117.	343.	-365.	-.0443	.0234	.0211	.0688	.0367	-.0517	1920.			
.1930	-347.	108.	-50.	125.	253.	-404.	-.0520	.0198	.0171	.0818	.0403	-.0217	1838.			
.1940	-207.	381.	-172.	128.	184.	-402.	-.0581	.0155	.0150	.0942	.0438	.0034	1718.			
.1950	-9.	594.	-236.	101.	156.	-342.	-.0621	.0106	.0155	.1067	.0453	.0225	1454.			
.1960	293.	816.	-240.	12.	168.	-217.	-.0637	.0053	.0177	.1172	.0434	.0380	1024.			
.1970	636.	1007.	-207.	-107.	193.	-47.	-.0636	-.0001	.0203	.1248	.0390	.0493	843.			
.1980	913.	1097.	-172.	-196.	195.	120.	-.0632	-.0050	.0217	.1300	.0348	.0537	1125.			
.1990	1076.	1115.	-186.	-239.	138.	233.	-.0633	-.0087	.0205	.1303	.0328	.0531	1348.			
.2000	1111.	1116.	-275.	-240.	-0.	269.	-.0642	-.0110	.0159	.1216	.0327	.0519	1345.			
.2010	982.	1068.	-421.	-189.	-213.	232.	-.0655	-.0119	.0085	.1049	.0342	.0499	1371.			
.2020	699.	924.	-568.	-94.	-453.	141.	-.0666	-.0114	.0004	.0860	.0382	.0431	1805.			
.2030	330.	715.	-641.	-14.	-660.	22.	-.0665	-.0097	-.0058	.0686	.0430	.0311	2467.			
.2040	-63.	494.	-577.	-9.	-795.	-101.	-.0644	-.0068	-.0082	.0528	.0445	.0165	2991.			
.2050	-447.	265.	-354.	-91.	-834.	-206.	-.0600	-.0031	-.0061	.0402	.0413	-.0003	3225.			
.2060	-813.	-0.	-5.	-228.	-773.	-292.	-.0535	.0012	.0001	.0337	.0360	-.0216	3201.			
.2070	-1156.	-287.	401.	-382.	-648.	-366.	-.0459	.0059	.0089	.0319	.0303	-.0459	3122.			
.2080	-1474.	-543.	781.	-528.	-518.	-441.	-.0386	.0108	.0175	.0297	.0239	-.0680	3215.			
.2090	-1758.	-744.	1062.	-628.	-433.	-527.	-.0326	.0154	.0239	.0251	.0184	-.0858	3462.			

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.12.

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	54	MEMBER	2	SEQUENCE	826	LOCATION	END	TYPE	RU
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.2000	1111.	1116.	-775.	-240.	-0.	269.	-.0642	-.0110	.0159	.1216	.0327	.0519	1345.
.2010	982.	1068.	-421.	-189.	-213.	232.	-.0655	-.0119	.0085	.1049	.0342	.0499	1371.
.2020	699.	924.	-568.	-74.	-453.	141.	-.0666	-.0114	.0004	.0860	.0382	.0431	1805.
.2030	330.	715.	-641.	-14.	-660.	12.	-.0665	-.0097	-.0058	.0686	.0430	.0311	2467.
.2040	-63.	494.	-577.	-9.	-795.	-101.	-.0644	-.0068	-.0082	.0528	.0445	.0165	2991.
.2050	-447.	265.	-754.	-91.	-834.	-206.	-.0600	-.0031	-.0061	.0402	.0413	-.0003	3225.
.2060	-813.	-0.	-5.	-228.	-773.	-292.	-.0535	.0012	.0001	.0337	.0360	-.0216	3201.
.2070	-1156.	-287.	401.	-382.	-648.	-366.	-.0459	.0059	.0089	.0319	.0303	-.0459	3122.
.2080	-1474.	-543.	781.	-528.	-518.	-441.	-.0386	.0108	.0175	.0297	.0239	-.0680	3215.
.2090	-1758.	-744.	1062.	-628.	-433.	-527.	-.0326	.0154	.0239	.0251	.0184	-.0858	3462.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.12.

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	54	MEMBER	2	SEQUENCE	826	LOCATION	END	TYPE	RU						STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ			(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)			
.2100	-2005.	-913.	1195.	-643.	-411.	-621.	-.0285	.0196	.0269	.0198	.0168	-.1010	3673.		
.2110	-2203.	-1067.	1172.	-561.	-453.	-706.	-.0262	.0230	.0265	.0144	.0194	-.1141	3767.		
.2120	-2310.	-1168.	1029.	-423.	-537.	-765.	-.0252	.0253	.0235	.0079	.0232	-.1231	3829.		
.2130	-2279.	-1189.	825.	-280.	-619.	-787.	-.0245	.0267	.0199	.0015	.0264	-.1284	3879.		
.2140	-2102.	-1167.	628.	-160.	-649.	-755.	-.0235	.0271	.0176	-.0009	.0284	-.1329	3766.		
.2150	-1790.	-1132.	485.	-75.	-605.	-655.	-.0213	.0263	.0176	.0022	.0282	-.1380	3342.		
.2160	-1346.	-1064.	401.	-38.	-492.	-488.	-.0176	.0244	.0196	.0091	.0250	-.1420	2591.		
.2170	-815.	-946.	350.	-40.	-338.	-282.	-.0131	.0215	.0226	.0176	.0199	-.1435	1649.		
.2180	-294.	-819.	293.	-39.	-185.	-79.	-.0088	.0180	.0250	.0263	.0151	-.1428	766.		
.2190	131.	-709.	192.	1.	-75.	86.	-.0056	.0141	.0253	.0332	.0124	-.1395	426.		
.2200	439.	-597.	27.	85.	-30.	194.	-.0037	.0100	.0227	.0358	.0121	-.1319	798.		
.2210	630.	-475.	-189.	201.	-45.	243.	-.0026	.0061	.0171	.0337	.0137	-.1201	1189.		
.2220	694.	-376.	-408.	334.	-90.	240.	-.0020	.0024	.0101	.0293	.0164	-.1065	1570.		
.2230	653.	-312.	-567.	447.	-124.	201.	-.0012	-.0010	.0035	.0252	.0187	-.0931	1888.		
.2240	558.	-260.	-614.	499.	-114.	152.	.0006	-.0039	-.0013	.0225	.0184	-.0801	1994.		
.2250	446.	-217.	-530.	478.	-47.	115.	.0037	-.0066	-.0035	.0217	.0141	-.0681	1842.		
.2260	322.	-204.	-336.	404.	72.	95.	.0081	-.0089	-.0035	.0235	.0069	-.0586	1573.		
.2270	183.	-219.	-88.	310.	214.	78.	.0130	-.0107	-.0023	.0266	-.0016	-.0517	1438.		
.2280	30.	-234.	142.	224.	339.	46.	.0175	-.0118	-.0015	.0276	-.0103	-.0452	1527.		
.2290	-133.	-233.	292.	176.	410.	-7.	.0210	-.0122	-.0026	.0240	-.0183	-.0376	1664.		
.2300	-296.	-228.	331.	191.	415.	-76.	.0231	-.0121	-.0062	.0166	-.0241	-.0298	1728.		
.2310	-435.	-228.	263.	270.	365.	-144.	.0239	-.0117	-.0118	.0072	-.0276	-.0232	1777.		
.2320	-513.	-220.	126.	383.	282.	-191.	.0239	-.0110	-.0180	-.0034	-.0302	-.0172	1914.		
.2330	-486.	-179.	-39.	492.	199.	-202.	.0236	-.0100	-.0233	-.0138	-.0335	-.0117	2118.		
.2340	-336.	-112.	-195.	576.	147.	-166.	.0238	-.0089	-.0262	-.0220	-.0375	-.0081	2304.		
.2350	-79.	-40.	-323.	636.	141.	-80.	.0248	-.0077	-.0259	-.0265	-.0417	-.0071	2450.		
.2360	255.	36.	-418.	671.	177.	46.	.0266	-.0063	-.0226	-.0285	-.0461	-.0075	2596.		
.2370	637.	135.	-492.	678.	237.	186.	.0288	-.0045	-.0168	-.0292	-.0500	-.0078	2771.		
.2380	1021.	254.	-559.	670.	301.	313.	.0308	-.0022	-.0095	-.0288	-.0523	-.0076	2981.		
.2390	1349.	367.	-628.	665.	349.	411.	.0319	.0006	-.0018	-.0275	-.0519	-.0069	3196.		
.2400	1589.	466.	-699.	670.	370.	472.	.0319	.0036	.0053	-.0257	-.0489	-.0047	3357.		
.2410	1738.	562.	-759.	672.	367.	495.	.0308	.0070	.0114	-.0236	-.0440	-.0006	3405.		
.2420	1795.	650.	-785.	661.	352.	476.	.0286	.0107	.0166	-.0203	-.0379	.0046	3312.		
.2430	1762.	721.	-753.	622.	339.	418.	.0254	.0147	.0210	-.0151	-.0314	.0097	3071.		
.2440	1660.	781.	-652.	545.	336.	330.	.0217	.0189	.0249	-.0079	-.0254	.0147	2690.		
.2450	1506.	833.	-486.	431.	345.	225.	.0175	.0229	.0284	.0008	-.0204	.0200	2227.		
.2460	1298.	861.	-271.	297.	362.	114.	.0133	.0264	.0310	.0102	-.0162	.0253	1800.		
.2470	1040.	857.	-32.	163.	380.	-2.	.0091	.0292	.0326	.0197	-.0122	.0306	1542.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.12.

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	54	MEMBER	2	SEQUENCE	826	LOCATION	END	TYPE	RU						
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.2390	1349.	367.	-623.	665.	349.	411.	.0319	.0006	-.0016	-.0275	-.0519	-.0069	3196.
.2400	1589.	466.	-699.	670.	370.	472.	.0319	.0036	.0053	-.0257	-.0489	-.0047	3357.
.2410	1738.	562.	-759.	672.	367.	495.	.0308	.0070	.0114	-.0236	-.0440	-.0006	3405.
.2420	1795.	650.	-785.	661.	352.	476.	.0286	.0107	.0166	-.0203	-.0379	.0046	3312.
.2430	1762.	721.	-753.	622.	339.	418.	.0254	.0147	.0210	-.0151	-.0314	.0097	3071.
.2440	1660.	781.	-652.	545.	336.	330.	.0217	.0189	.0249	-.0079	-.0254	.0147	2690.
.2450	1506.	833.	-486.	431.	345.	225.	.0175	.0229	.0284	.0008	-.0204	.0200	2227.
.2460	1298.	861.	-271.	297.	362.	114.	.0133	.0264	.0310	.0102	-.0162	.0253	1800.
.2470	1040.	857.	-32.	163.	380.	-2.	.0091	.0292	.0326	.0197	-.0122	.0306	1542.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.12.

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	54	MEMBER	2	SEQUENCE	826	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)	
.2480	760.	841.	204.	30.	390.	122.		.0049	.0312	.0328	.0278	-.0085	.0359	1531.	
.2490	482.	829.	418.	-97.	385.	-246.		.0010	.0325	.0314	.0335	-.0053	.0414	1744.	
.2500	198.	804.	600.	-206.	364.	-363.		-.0025	.0328	.0283	.0363	-.0027	.0470	2069.	
.2510	-89.	747.	752.	-291.	332.	-464.		-.0052	.0319	.0237	.0366	-.0008	.0517	2392.	
.2520	-355.	665.	874.	-356.	294.	-539.		-.0066	.0300	.0179	.0346	-.0001	.0552	2651.	
.2530	-572.	577.	969.	-410.	257.	-584.		-.0066	.0272	.0114	.0301	-.0012	.0574	2833.	
.2540	-732.	485.	1034.	-457.	223.	-598.		-.0049	.0235	.0045	.0230	-.0039	.0582	2931.	
.2550	-835.	382.	1068.	-489.	193.	-579.		-.0017	.0191	-.0025	.0138	-.0078	.0572	2920.	
.2560	-885.	265.	1063.	-497.	160.	-527.		.0031	.0141	-.0095	.0027	-.0127	.0547	2770.	
.2570	-883.	143.	1015.	-479.	120.	-444.		.0091	.0085	-.0165	-.0105	-.0183	.0514	2478.	
.2580	-827.	31.	918.	-438.	74.	-337.		.0161	.0025	-.0235	-.0252	-.0241	.0477	2081.	
.2590	-719.	-65.	778.	-378.	21.	-217.		.0238	-.0036	-.0301	-.0405	-.0300	.0436	1629.	
.2600	-573.	-151.	609.	-301.	-34.	-86.		.0317	-.0097	-.0363	-.0556	-.0359	.0398	1176.	
.2610	-402.	-227.	426.	-213.	-86.	58.		.0397	-.0159	-.0418	-.0698	-.0419	.0370	883.	
.2620	-210.	-287.	239.	-118.	-129.	205.		.0476	-.0218	-.0466	-.0822	-.0479	.0350	1005.	
.2630	-10.	-327.	60.	-26.	-160.	342.		.0550	-.0272	-.0504	-.0920	-.0537	.0337	1414.	
.2640	177.	-345.	-101.	58.	-179.	458.		.0615	-.0317	-.0532	-.0992	-.0590	.0338	1849.	
.2650	337.	-341.	-238.	131.	-188.	547.		.0668	-.0354	-.0550	-.1038	-.0639	.0358	2213.	
.2660	462.	-321.	-349.	196.	-186.	607.		.0709	-.0381	-.0558	-.1056	-.0676	.0394	2482.	
.2670	542.	-291.	-433.	258.	-172.	639.		.0738	-.0398	-.0559	-.1043	-.0597	.0443	2651.	
.2680	577.	-245.	-489.	308.	-148.	636.		.0753	-.0405	-.0550	-.1001	-.0703	.0506	2696.	
.2690	568.	-182.	-512.	340.	-113.	599.		.0754	-.0401	-.0532	-.0936	-.0595	.0584	2604.	
.2700	515.	-116.	-497.	355.	-64.	535.		.0742	-.0387	-.0504	-.0850	-.0575	.0672	2408.	
.2710	429.	-55.	-446.	358.	2.	455.		.0720	-.0364	-.0467	-.0741	-.0543	.0758	2163.	
.2720	342.	18.	-367.	345.	84.	365.		.0690	-.0332	-.0423	-.0612	-.0600	.0835	1901.	
.2730	270.	116.	-272.	311.	175.	266.		.0654	-.0292	-.0374	-.0472	-.0549	.0907	1662.	
.2740	198.	217.	-170.	269.	268.	167.		.0608	-.0251	-.0325	-.0330	-.0492	.0983	1547.	
.2750	122.	295.	-74.	237.	353.	80.		.0556	-.0212	-.0279	-.0188	-.0426	.1056	1613.	
.2760	66.	364.	-7.	221.	425.	5.		.0501	-.0175	-.0239	-.0049	-.0350	.1116	1787.	
.2770	56.	454.	20.	212.	482.	-58.		.0445	-.0140	-.0209	.0077	-.0265	.1167	1978.	
.2780	88.	557.	11.	206.	525.	-107.		.0389	-.0108	-.0184	.0180	-.0180	.1214	2142.	
.2790	151.	640.	-22.	210.	555.	-131.		.0335	-.0082	-.0164	.0266	-.0099	.1250	2269.	
.2800	258.	699.	-73.	225.	581.	-121.		.0286	-.0064	-.0146	.0342	-.0025	.1262	2370.	
.2810	427.	761.	-140.	237.	608.	-79.		.0247	-.0051	-.0130	.0408	.0039	.1251	2455.	
.2820	651.	832.	-212.	236.	635.	-7.		.0217	-.0043	-.0116	.0459	.0085	.1224	2530.	
.2830	890.	881.	-279.	228.	654.	84.		.0192	-.0043	-.0106	.0496	.0111	.1184	2604.	
.2840	1107.	889.	-343.	226.	657.	183.		.0169	-.0048	-.0103	.0525	.0122	.1124	2682.	
.2850	1292.	875.	-416.	231.	637.	279.		.0152	-.0056	-.0112	.0536	.0128	.1050	2737.	

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.12.

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	54	MEMBER	2	SEQUENCE	826	LOCATION	END	TYPE	RU						
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.2770	56.	454.	20.	212.	482.	-58.	.0445	-.0140	-.0209	.0077	-.0265	.1167	1978.
.2780	88.	557.	11.	206.	525.	-107.	.0389	-.0101	-.0184	.0180	-.0180	.1214	2142.
.2790	151.	640.	-22.	210.	555.	-131.	.0335	-.0082	-.0164	.0266	-.0099	.1250	2269.
.2800	258.	699.	-73.	225.	581.	-121.	.0286	-.0064	-.0146	.0342	-.0025	.1262	2370.
.2810	427.	761.	-140.	237.	608.	-79.	.0247	-.0051	-.0130	.0408	.0039	.1251	2455.
.2820	651.	832.	-212.	236.	635.	-7.	.0217	-.0043	-.0116	.0459	.0085	.1224	2530.
.2830	890.	881.	-279.	228.	654.	34.	.0192	-.0043	-.0106	.0496	.0111	.1184	2604.
.2840	1107.	889.	-343.	226.	657.	183.	.0169	-.0048	-.0103	.0525	.0122	.1124	2682.
.2850	1297.	875.	-416.	231.	637.	279.	.0152	-.0056	-.0112	.0536	.0128	.1050	2737.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.12.

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	54	MEMBER	2	SEQUENCE	826	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2860	1430.	854.	-504.	241.	587.	358.	.0139	-.0065	-.0135	.0520	.0127	.0970	2721.		
.2870	1486.	806.	-592.	257.	505.	409.	.0129	-.0073	-.0169	.0476	.0119	.0885	2609.		
.2880	1432.	708.	-662.	278.	399.	423.	.0120	-.0079	-.0209	.0413	.0109	.0791	2409.		
.2890	1281.	577.	-700.	290.	287.	404.	.0118	-.0082	-.0248	.0334	.0097	.0689	2144.		
.2900	1062.	432.	-690.	278.	182.	364.	.0127	-.0082	-.0280	.0243	.0072	.0581	1840.		
.2910	786.	261.	-616.	240.	97.	313.	.0150	-.0079	-.0300	.0147	.0034	.0466	1515.		
.2920	453.	54.	-477.	175.	39.	251.	.0182	-.0074	-.0306	.0058	-.0014	.0337	1151.		
.2930	88.	-164.	-290.	85.	4.	176.	.0221	-.0067	-.0299	-.0026	-.0068	.0202	730.		
.2940	-282.	-373.	-85.	-20.	-24.	97.	.0264	-.0058	-.0287	-.0118	-.0127	.0074	379.		
.2950	-646.	-577.	104.	-116.	-60.	21.	.0306	-.0049	-.0278	-.0218	-.0182	-.0044	492.		
.2960	-993.	-781.	246.	-180.	-113.	-51.	.0342	-.0040	-.0278	-.0322	-.0220	-.0159	816.		
.2970	-1297.	-957.	323.	-213.	-190.	-125.	.0367	-.0030	-.0288	-.0432	-.0237	-.0261	1165.		
.2980	-1530.	-1080.	331.	-227.	-290.	-191.	.0380	-.0021	-.0307	-.0555	-.0242	-.0336	1549.		
.2990	-1677.	-1161.	284.	-220.	-399.	-234.	.0384	-.0015	-.0331	-.0676	-.0238	-.0384	1913.		
.3000	-1732.	-1219.	201.	-193.	-499.	-241.	.0380	-.0014	-.0351	-.0773	-.0221	-.0420	2190.		
.3010	-1684.	-1238.	99.	-163.	-575.	-215.	.0370	-.0015	-.0363	-.0836	-.0197	-.0446	2371.		
.3020	-1533.	-1193.	-3.	-153.	-623.	-165.	.0355	-.0016	-.0360	-.0873	-.0174	-.0447	2474.		
.3030	-1308.	-1093.	-99.	-162.	-645.	-101.	.0332	-.0018	-.0344	-.0883	-.0154	-.0418	2512.		
.3040	-1051.	-973.	-188.	-172.	-646.	-29.	.0302	-.0020	-.0315	-.0858	-.0124	-.0371	2498.		
.3050	-784.	-834.	-280.	-173.	-635.	38.	.0263	-.0021	-.0278	-.0800	-.0080	-.0306	2461.		
.3060	-523.	-652.	-376.	-174.	-622.	86.	.0215	-.0018	-.0238	-.0726	-.0024	-.0211	2431.		
.3070	-292.	-434.	-466.	-181.	-611.	102.	.0156	-.0012	-.0193	-.0641	.0037	-.0082	2408.		
.3080	-121.	-214.	-533.	-189.	-598.	85.	.0086	-.0003	-.0145	-.0535	.0104	.0067	2361.		
.3090	-12.	-8.	-564.	-198.	-573.	45.	.0009	.0007	-.0092	-.0404	.0174	.0223	2270.		
.3100	54.	199.	-549.	-222.	-532.	-11.	-.0068	.0020	-.0034	-.0254	.0237	.0384	2151.		
.3110	82.	406.	-481.	-271.	-470.	-80.	-.0144	.0035	.0030	-.0094	.0284	.0545	2049.		
.3120	59.	589.	-360.	-339.	-392.	-166.	-.0219	.0052	.0098	.0074	.0318	.0693	2031.		
.3130	-13.	739.	-202.	-415.	-302.	-267.	-.0291	.0071	.0168	.0243	.0342	.0818	2159.		
.3140	-116.	862.	-33.	-490.	-213.	-371.	-.0357	.0089	.0232	.0393	.0357	.0922	2429.		
.3150	-237.	956.	128.	-553.	-136.	-469.	-.0414	.0105	.0285	.0514	.0362	.1005	2754.		
.3160	-375.	1003.	268.	-595.	-73.	-557.	-.0462	.0117	.0326	.0602	.0362	.1056	3054.		
.3170	-512.	1009.	380.	-617.	-26.	-635.	-.0501	.0124	.0355	.0658	.0360	.1067	3306.		
.3180	-622.	987.	462.	-628.	10.	-690.	-.0529	.0127	.0371	.0674	.0347	.1045	3485.		
.3190	-686.	935.	515.	-628.	36.	-707.	-.0542	.0121	.0376	.0650	.0320	.0988	3533.		
.3200	-701.	839.	539.	-611.	58.	-678.	-.0538	.0108	.0371	.0597	.0285	.0888	3413.		
.3210	-664.	707.	532.	-578.	78.	-611.	-.0520	.0089	.0358	.0520	.0247	.0744	3153.		
.3220	-568.	566.	492.	-541.	91.	-514.	-.0489	.0063	.0339	.0413	.0204	.0574	2806.		
.3230	-424.	422.	418.	-498.	91.	-389.	-.0449	.0030	.0312	.0276	.0157	.0391	2382.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.12.

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	54	MEMBER	2	SEQUENCE	826	LOCATION	END	TYPE	RU						
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.3140	-116.	881.	128.	-553.	-213.	-371.	-0.057	.0089	.0232	.0393	.0357	.0922	2429.
.3150	-237.	956.	128.	-553.	-136.	-469.	-0.0414	.0105	.0285	.0514	.0362	.1005	2754.
.3160	-375.	1003.	268.	-595.	-73.	-557.	-0.0462	.0117	.0326	.0602	.0362	.1056	3054.
.3170	-512.	1009.	380.	-617.	-26.	-635.	-0.0501	.0124	.0355	.0658	.0360	.1067	3306.
.3180	-622.	987.	462.	-628.	10.	-690.	-0.0529	.0127	.0371	.0674	.0347	.1045	3485.
.3190	-686.	935.	515.	-628.	36.	-707.	-0.0542	.0121	.0376	.0650	.0320	.0988	3533.
.3200	-701.	839.	539.	-611.	58.	-678.	-0.0538	.0108	.0371	.0597	.0285	.0888	3413.
.3210	-664.	707.	532.	-578.	78.	-611.	-0.0520	.0089	.0358	.0520	.0247	.0744	3153.
.3220	-568.	566.	492.	-541.	91.	-514.	-0.0489	.0063	.0339	.0413	.0204	.0574	2806.
.3230	-424.	422.	418.	-498.	91.	-389.	-0.0449	.0030	.0312	.0276	.0157	.0391	2382.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.12.

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	54	MEMBER	2	SEQUENCE	826	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)		
.3240	-254.	258.	310.	-434.	78.	-239.	-0.0400	-0.0010	.0279	.0122	.0117	.0197	1874.		
.3250	-74.	74.	176.	-350.	54.	-74.	-0.0345	-0.0055	.0241	-0.0034	.0090	-0.0007	1351.		
.3260	110.	-102.	27.	-263.	22.	91.	-0.0287	-0.0103	.0200	-0.0193	.0070	-0.0205	1042.		
.3270	284.	-253.	-115.	-188.	-14.	244.	-0.0229	-0.0152	.0161	-0.0349	.0053	-0.0380	1151.		
.3280	428.	-395.	-234.	-126.	-47.	379.	-0.0175	-0.0200	.0126	-0.0485	.0042	-0.0534	1500.		
.3290	529.	-535.	-319.	-72.	-68.	494.	-0.0123	-0.0247	.0097	-0.0586	.0040	-0.0671	1880.		
.3300	588.	-654.	-368.	-33.	-80.	583.	-0.0076	-0.0290	.0075	-0.0652	.0044	-0.0780	2200.		
.3310	604.	-733.	-381.	-16.	-84.	638.	-0.0037	-0.0328	.0061	-0.0688	.0050	-0.0847	2403.		
.3320	566.	-722.	-360.	-15.	-82.	653.	-0.0009	-0.0361	.0055	-0.0690	.0064	-0.0873	2458.		
.3330	469.	-813.	-310.	-20.	-77.	630.	.0008	-0.0390	.0056	-0.0654	.0088	-0.0863	2371.		
.3340	331.	-818.	-240.	-29.	-70.	577.	.0014	-0.0413	.0064	-0.0583	.0121	-0.0818	2173.		
.3350	173.	-786.	-152.	-47.	-59.	501.	.0013	-0.0432	.0076	-0.0487	.0157	-0.0738	1892.		
.3360	0.	-728.	-45.	-75.	-43.	406.	.0004	-0.0445	.0095	-0.0366	.0193	-0.0631	1549.		
.3370	-183.	-656.	80.	-110.	-20.	295.	-0.0013	-0.0454	.0118	-0.0219	.0228	-0.0512	1178.		
.3380	-356.	-568.	213.	-151.	9.	179.	-0.0034	-0.0457	.0145	-0.0056	.0259	-0.0386	876.		
.3390	-500.	-460.	342.	-195.	38.	70.	-0.0057	-0.0458	.0170	.0111	.0283	-0.0254	788.		
.3400	-617.	-349.	453.	-231.	61.	-27.	-0.0080	-0.0457	.0191	.0274	.0301	-0.0126	896.		
.3410	-710.	-248.	536.	-248.	73.	-113.	-0.0103	-0.0455	.0205	.0427	.0318	-0.0011	1053.		
.3420	-769.	-149.	581.	-250.	69.	-186.	-0.0126	-0.0452	.0211	.0560	.0334	.0091	1191.		
.3430	-783.	-47.	582.	-237.	49.	-241.	-0.0145	-0.0450	.0208	.0661	.0344	.0180	1274.		
.3440	-754.	41.	544.	-205.	16.	-268.	-0.0157	-0.0449	.0196	.0733	.0349	.0248	1261.		
.3450	-689.	100.	477.	-156.	-23.	-266.	-0.0162	-0.0451	.0180	.0782	.0351	.0285	1153.		
.3460	-585.	141.	394.	-102.	-63.	-238.	-0.0159	-0.0453	.0161	.0807	.0346	.0293	995.		
.3470	-443.	176.	302.	-54.	-101.	-189.	-0.0148	-0.0457	.0142	.0805	.0330	.0279	827.		
.3480	-279.	196.	208.	-11.	-136.	-122.	-0.0129	-0.0462	.0121	.0781	.0304	.0245	684.		
.3490	-119.	184.	115.	39.	-169.	-41.	-0.0103	-0.0469	.0099	.0743	.0276	.0188	666.		
.3500	20.	145.	22.	94.	-204.	44.	-0.0074	-0.0478	.0075	.0691	.0249	.0115	854.		
.3510	128.	98.	-67.	147.	-244.	117.	-0.0044	-0.0485	.0048	.0623	.0222	.0039	1148.		
.3520	192.	46.	-147.	193.	-288.	169.	-0.0016	-0.0489	.0019	.0542	.0195	-0.0036	1439.		
.3530	198.	-22.	-208.	236.	-330.	199.	.0011	-0.0492	-0.0010	.0461	.0174	-0.0112	1688.		
.3540	145.	-109.	-239.	272.	-366.	209.	.0036	-0.0491	-0.0036	.0389	.0158	-0.0190	1872.		
.3550	49.	-197.	-234.	293.	-387.	200.	.0060	-0.0486	-0.0057	.0328	.0142	-0.0261	1960.		
.3560	-77.	-274.	-188.	288.	-390.	173.	.0081	-0.0478	-0.0071	.0284	.0125	-0.0324	1924.		
.3570	-230.	-346.	-102.	264.	-374.	129.	.0098	-0.0466	-0.0076	.0263	.0108	-0.0380	1775.		
.3580	-390.	-415.	11.	229.	-340.	75.	.0111	-0.0451	-0.0073	.0266	.0093	-0.0429	1555.		
.3590	-566.	-470.	135.	189.	-295.	18.	.0120	-0.0435	-0.0067	.0288	.0082	-0.0466	1308.		
.3600	-716.	-504.	252.	151.	-245.	-40.	.0125	-0.0416	-0.0059	.0322	.0075	-0.0491	1084.		
.3610	-842.	-519.	347.	123.	-195.	-99.	.0123	-0.0395	-0.0051	.0365	.0076	-0.0506	937.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.12.

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	54	MEMBER	2	SEQUENCE	826	LOCATION	END	TYPE	RU						
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.3530	198.	-22.	-208.	236.	-330.	199.	.011	-.0492	-.0010	.0461	.0174	-.0112	1688.
.3540	145.	-109.	-239.	272.	-366.	209.	.036	-.0491	-.0036	.0389	.0158	-.0190	1872.
.3550	49.	-197.	-234.	293.	-387.	200.	.060	-.0486	-.0057	.0328	.0142	-.0261	1960.
.3560	-77.	-274.	-188.	288.	-390.	173.	.081	-.0478	-.0071	.0284	.0125	-.0324	1924.
.3570	-230.	-346.	-102.	264.	-374.	129.	.098	-.0466	-.0076	.0263	.0108	-.0380	1775.
.3580	-399.	-415.	11.	229.	-340.	75.	.111	-.0451	-.0073	.0266	.0093	-.0429	1555.
.3590	-566.	-470.	135.	189.	-295.	18.	.120	-.0435	-.0067	.0288	.0082	-.0466	1308.
.3600	-716.	-504.	252.	151.	-245.	-40.	.125	-.0416	-.0059	.0322	.0075	-.0491	1084.
.3610	-842.	-519.	347.	123.	-195.	-99.	.123	-.0395	-.0051	.0365	.0076	-.0506	937.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.12.

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	54	MEMBER	2	SEQUENCE	826	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)		
.3620	-934.	-514.	410.	108.	-147.	-156.	.0116	-.0373	-.0043	.0415	.0085	-.0514	896.		
.3630	-972.	-485.	438.	107.	-100.	-200.	.0105	-.0350	-.0036	.0467	.0099	-.0514	926.		
.3640	-945.	-436.	431.	118.	-49.	-222.	.0095	-.0328	-.0027	.0517	.0115	-.0509	958.		
.3650	-850.	-376.	397.	142.	9.	-217.	.0086	-.0306	-.0016	.0570	.0130	-.0508	968.		
.3660	-683.	-305.	342.	171.	79.	-185.	.0081	-.0285	.0001	.0623	.0143	-.0513	985.		
.3670	-446.	-218.	270.	198.	159.	-129.	.0079	-.0265	.0023	.0672	.0150	-.0524	1064.		
.3680	-152.	-120.	184.	226.	244.	-50.	.0081	-.0246	.0047	.0712	.0149	-.0538	1256.		
.3690	175.	-29.	84.	262.	327.	48.	.0086	-.0228	.0069	.0743	.0144	-.0561	1575.		
.3700	511.	51.	-31.	308.	401.	153.	.0092	-.0210	.0086	.0762	.0137	-.0591	1974.		
.3710	835.	127.	-159.	359.	458.	252.	.0097	-.0192	.0095	.0763	.0128	-.0623	2370.		
.3720	1130.	203.	-293.	410.	494.	335.	.0100	-.0173	.0094	.0742	.0115	-.0650	2703.		
.3730	1371.	265.	-425.	463.	508.	398.	.0101	-.0155	.0084	.0703	.0099	-.0673	2964.		
.3740	1541.	298.	-540.	515.	505.	443.	.0101	-.0138	.0066	.0654	.0082	-.0694	3160.		
.3750	1640.	310.	-624.	557.	493.	467.	.0102	-.0123	.0045	.0596	.0061	-.0708	3278.		
.3760	1671.	316.	-668.	575.	476.	467.	.0105	-.0109	.0025	.0531	.0032	-.0713	3286.		
.3770	1634.	314.	-664.	564.	459.	441.	.0110	-.0097	.0009	.0461	-.0004	-.0706	3177.		
.3780	1528.	296.	-613.	531.	446.	396.	.0117	-.0088	-.0001	.0392	-.0046	-.0689	2981.		
.3790	1362.	261.	-522.	480.	435.	337.	.0127	-.0083	-.0006	.0325	-.0091	-.0659	2725.		
.3800	1153.	222.	-404.	414.	421.	268.	.0140	-.0084	-.0009	.0257	-.0138	-.0615	2423.		
.3810	913.	186.	-275.	338.	402.	189.	.0152	-.0089	-.0010	.0187	-.0185	-.0555	2084.		
.3820	657.	154.	-147.	258.	373.	102.	.0161	-.0097	-.0011	.0114	-.0229	-.0483	1735.		
.3830	404.	129.	-34.	182.	332.	15.	.0166	-.0110	-.0015	.0038	-.0268	-.0400	1413.		
.3840	174.	113.	56.	114.	280.	-61.	.0168	-.0127	-.0021	-.0039	-.0301	-.0309	1151.		
.3850	-13.	110.	117.	56.	220.	-119.	.0167	-.0148	-.0029	-.0114	-.0329	-.0212	957.		
.3860	-143.	123.	153.	5.	157.	-158.	.0162	-.0172	-.0038	-.0185	-.0353	-.0116	832.		
.3870	-206.	158.	164.	-43.	96.	-177.	.0153	-.0197	-.0044	-.0247	-.0372	-.0021	768.		
.3880	-204.	207.	156.	-87.	38.	-171.	.0140	-.0224	-.0047	-.0300	-.0388	.0071	730.		
.3890	-145.	257.	132.	-123.	-14.	-137.	.0124	-.0252	-.0047	-.0341	-.0399	.0156	689.		
.3900	-42.	303.	96.	-149.	-60.	-84.	.0105	-.0276	-.0045	-.0369	-.0404	.0225	676.		
.3910	96.	359.	49.	-173.	-100.	-27.	.0081	-.0293	-.0040	-.0388	-.0401	.0276	753.		
.3920	250.	424.	-4.	-199.	-137.	23.	.0053	-.0300	-.0034	-.0404	-.0391	.0312	907.		
.3930	397.	480.	-54.	-223.	-171.	64.	.0019	-.0297	-.0026	-.0415	-.0376	.0331	1075.		
.3940	518.	510.	-93.	-237.	-200.	98.	-.0019	-.0285	-.0017	-.0415	-.0353	.0330	1213.		
.3950	608.	519.	-116.	-248.	-219.	120.	-.0059	-.0264	-.0007	-.0405	-.0322	.0307	1315.		
.3960	665.	520.	-113.	-268.	-229.	123.	-.0101	-.0232	.0005	-.0387	-.0290	.0269	1394.		
.3970	680.	508.	-78.	-300.	-228.	105.	-.0145	-.0191	.0022	-.0364	-.0259	.0216	1460.		
.3980	644.	470.	-9.	-338.	-215.	69.	-.0189	-.0141	.0041	-.0332	-.0228	.0148	1516.		
.3990	557.	401.	87.	-374.	-192.	19.	-.0231	-.0086	.0062	-.0293	-.0195	.0063	1573.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.12.

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	54	MEMBER	2	SEQUENCE	826	LOCATION	END	TYPE	RU						
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.3910	96.	359.	49.	-173.	-100.	-27.	.0081	-.0293	-.0040	-.0388	-.0401	.0276	753.
.3920	250.	424.	-4.	-199.	-137.	23.	.0053	-.0300	-.0034	-.0404	-.0391	.0312	907.
.3930	397.	480.	-54.	-223.	-171.	64.	.0019	-.0297	-.0026	-.0415	-.0376	.0331	1075.
.3940	518.	510.	-93.	-237.	-200.	98.	-.0019	-.0285	-.0017	-.0415	-.0353	.0330	1213.
.3950	608.	519.	-116.	-248.	-212.	120.	-.0059	-.0264	-.0007	-.0405	-.0322	.0307	1315.
.3960	665.	520.	-113.	-266.	-229.	123.	-.0101	-.0232	.0005	-.0387	-.0290	.0269	1394.
.3970	680.	508.	-78.	-300.	-228.	105.	-.0145	-.0191	.0022	-.0364	-.0259	.0216	1460.
.3980	644.	470.	-9.	-338.	-215.	69.	-.0189	-.0141	.0041	-.0332	-.0228	.0148	1516.
.3990	557.	401.	87.	-374.	-192.	19.	-.0231	-.0086	.0062	-.0293	-.0195	.0063	1573.

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DIS/ADLPIPE ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.12.

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	54	MEMBER	2	SEQUENCE	826	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)		
.4000	430.	316.	201.	-411.	-164.	-44.	-.0270	-.0025	.0082	-.0255	-.0162	-.0033	1661.		

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	-878.	1466.	1006.	-1005.	7.	-821.	-.0869	.0295	.0339	.0915	.0283	.1555	4844.

SECTION	55	MEMBER	1	SEQUENCE	826	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.	-0.	-0.	-0.	-0.	-0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	1.		
.0040	0.	-0.	0.	-0.	-1.	-0.	-.0000	-.0000	-.0000	-.0000	-.0001	.0000	4.		
.0050	-1.	-0.	1.	0.	-3.	-1.	-.0000	-.0000	-.0000	.0000	-.0002	-.0000	11.		
.0060	-4.	-1.	4.	1.	-5.	-2.	-.0001	-.0000	-.0001	.0002	-.0005	-.0001	21.		
.0070	-10.	-2.	7.	1.	-8.	-3.	-.0002	-.0000	-.0003	.0003	-.0010	-.0002	32.		
.0080	-19.	-6.	12.	-2.	-10.	-6.	-.0005	-.0001	-.0006	.0004	-.0016	-.0002	44.		
.0090	-34.	-11.	19.	-6.	-10.	-11.	-.0009	-.0002	-.0011	.0006	-.0024	-.0002	61.		
.0100	-61.	-18.	31.	-11.	-8.	-19.	-.0015	-.0002	-.0018	.0011	-.0034	-.0005	87.		
.0110	-107.	-28.	52.	-17.	-1.	-28.	-.0024	-.0003	-.0028	.0019	-.0045	-.0010	123.		
.0120	-179.	-41.	83.	-25.	14.	-39.	-.0038	-.0004	-.0041	.0031	-.0057	-.0015	182.		
.0130	-270.	-62.	120.	-39.	39.	-54.	-.0056	-.0008	-.0057	.0046	-.0067	-.0017	288.		
.0140	-364.	-93.	154.	-59.	78.	-72.	-.0079	-.0014	-.0078	.0065	-.0074	-.0013	454.		
.0150	-441.	-128.	174.	-85.	128.	-89.	-.0104	-.0022	-.0101	.0083	-.0076	-.0004	665.		
.0160	-482.	-158.	171.	-111.	189.	-93.	-.0129	-.0029	-.0126	.0097	-.0073	.0011	889.		
.0170	-471.	-170.	138.	-130.	254.	-75.	-.0151	-.0033	-.0148	.0101	-.0061	.0029	1103.		
.0180	-391.	-158.	72.	-137.	317.	-33.	-.0165	-.0033	-.0161	.0095	-.0037	.0048	1295.		
.0190	-239.	-122.	-25.	-126.	365.	28.	-.0167	-.0028	-.0160	.0081	.0002	.0062	1446.		
.0200	-21.	-70.	-144.	-97.	385.	92.	-.0154	-.0020	-.0139	.0064	.0053	.0069	1523.		
.0210	232.	-5.	-261.	-45.	364.	150.	-.0124	-.0009	-.0095	.0051	.0113	.0060	1477.		
.0220	457.	85.	-338.	53.	293.	209.	-.0078	.0006	-.0027	.0069	.0177	.0025	1358.		
.0230	632.	181.	-370.	177.	178.	261.	-.0025	.0019	.0056	.0106	.0232	-.0019	1351.		

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DIS/ADLPIPE ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.12.

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	55	MEMBER	1	SEQUENCE	826	LOCATION	BEG	TYPE	RU
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.0140	-724.	-93.	154.	-59.	78.	-72.	-.0077	-.0014	-.0078	.0065	-.0074	-.0013	454.
.0150	-441.	-128.	174.	-85.	128.	-89.	-.0104	-.0022	-.0101	.0083	-.0076	-.0004	665.
.0160	-482.	-158.	171.	-111.	189.	-93.	-.0129	-.0029	-.0126	.0097	-.0073	-.0011	889.
.0170	-471.	-170.	138.	-130.	254.	-75.	-.0151	-.0033	-.0148	.0101	-.0061	-.0029	1103.
.0180	-391.	-158.	72.	-137.	317.	-73.	-.0165	-.0033	-.0161	.0095	-.0037	-.0048	1295.
.0190	-239.	-122.	-25.	-126.	365.	28.	-.0167	-.0028	-.0160	.0081	.0002	-.0062	1446.
.0200	-21.	-70.	-144.	-97.	385.	92.	-.0154	-.0020	-.0139	.0064	.0053	-.0069	1523.
.0210	232.	-5.	-261.	-45.	364.	150.	-.0124	-.0009	-.0095	.0051	.0113	-.0060	1477.
.0220	457.	85.	-338.	53.	293.	209.	-.0078	.0006	-.0027	.0069	.0177	-.0025	1358.
.0230	632.	181.	-370.	177.	178.	261.	-.0025	.0019	.0056	.0106	.0232	-.0019	1351.

ADLPIPE PAGE 2071

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

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.12.

CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	55	MEMBER	1	SEQUENCE	826	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)		
.0240	775.	252.	-379.	282.	36.	289.	.0027	.0023	.0137	.0135	.0264	-.0045	1512.		
.0250	946.	281.	-412.	332.	-93.	277.	.0077	.0016	.0201	.0135	.0282	-.0048	1652.		
.0260	1148.	301.	-482.	341.	-173.	250.	.0126	.0012	.0238	.0112	.0309	-.0062	1705.		
.0270	1241.	379.	-511.	374.	-203.	271.	.0169	.0025	.0246	.0102	.0338	-.0118	1885.		
.0280	1177.	476.	-479.	390.	-199.	329.	.0190	.0041	.0229	.0058	.0337	-.0157	2043.		
.0290	1089.	507.	-466.	301.	-140.	347.	.0196	.0041	.0194	-.0071	.0329	-.0131	1794.		
.0300	1008.	511.	-464.	192.	-30.	326.	.0216	.0041	.0157	-.0185	.0377	-.0126	1418.		
.0310	819.	483.	-378.	107.	23.	230.	.0250	.0047	.0136	-.0246	.0415	-.0174	952.		
.0320	447.	404.	-161.	29.	-28.	71.	.0279	.0044	.0147	-.0300	.0391	-.0207	306.		
.0330	-60.	313.	154.	-1.	-154.	-85.	.0299	.0030	.0195	-.0315	.0335	-.0208	659.		
.0340	-541.	188.	492.	18.	-365.	-289.	.0323	.0014	.0252	-.0240	.0243	-.0236	1739.		
.0350	-852.	-26.	753.	-2.	-623.	-601.	.0342	-.0005	.0282	-.0123	.0102	-.0295	3230.		
.0360	-1040.	-235.	897.	-67.	-766.	-865.	.0334	-.0016	.0268	-.0042	-.0028	-.0332	4321.		
.0370	-1281.	-300.	985.	-94.	-697.	-888.	.0281	-.0002	.0205	.0002	-.0101	-.0327	4229.		
.0380	-1585.	-282.	1040.	-111.	-478.	-750.	.0187	.0028	.0092	.0016	-.0163	-.0287	3345.		
.0390	-1691.	-352.	941.	-243.	-152.	-654.	.0071	.0046	-.0060	-.0030	-.0207	-.0191	2667.		
.0400	-1432.	-509.	617.	-478.	273.	-620.	-.0030	.0047	-.0209	-.0127	-.0156	-.0044	3095.		
.0410	-1094.	-590.	291.	-603.	633.	-526.	-.0095	.0064	-.0304	-.0170	-.0056	.0066	3808.		
.0420	-962.	-577.	183.	-545.	707.	-386.	-.0137	.0095	-.0310	-.0143	-.0063	.0124	3629.		
.0430	-949.	-534.	234.	-367.	527.	-260.	-.0160	.0121	-.0217	-.0065	-.0143	.0172	2585.		
.0440	-770.	-520.	270.	-123.	200.	-210.	-.0145	.0126	-.0056	.0103	-.0201	.0197	1177.		
.0450	-380.	-601.	254.	109.	-255.	-330.	-.0096	.0115	.0110	.0357	-.0284	.0153	1611.		
.0460	-11.	-723.	229.	263.	-680.	-508.	-.0059	.0100	.0227	.0574	-.0401	.0088	3319.		
.0470	136.	-712.	187.	336.	-777.	-450.	-.0076	.0092	.0276	.0623	-.0423	.0118	3580.		
.0480	85.	-552.	108.	333.	-518.	-128.	-.0145	.0093	.0247	.0508	-.0337	.0246	2350.		
.0490	40.	-434.	-30.	207.	-134.	147.	-.0228	.0089	.0137	.0329	-.0246	.0359	1071.		
.0500	152.	-440.	-252.	-32.	271.	229.	-.0297	.0071	-.0006	.0161	-.0138	.0411	1330.		
.0510	268.	-429.	-460.	-238.	674.	293.	-.0346	.0044	-.0110	.0029	.0037	.0439	2885.		
.0520	141.	-319.	-462.	-297.	879.	428.	-.0374	.0019	-.0136	-.0064	.0152	.0458	3815.		
.0530	-152.	-197.	-252.	-231.	741.	496.	-.0368	-.0007	-.0081	-.0094	.0120	.0428	3440.		
.0540	-292.	-128.	-34.	-104.	405.	412.	-.0313	-.0036	.0037	-.0029	.0067	.0314	2190.		
.0550	-194.	-93.	85.	40.	38.	243.	-.0223	-.0068	.0180	.0098	.0068	.0147	929.		
.0560	-94.	-50.	185.	157.	-314.	100.	-.0146	-.0095	.0297	.0179	.0028	.0002	1365.		
.0570	-151.	59.	292.	232.	-515.	99.	-.0115	-.0107	.0352	.0158	-.0031	-.0085	2140.		
.0580	-228.	249.	284.	250.	-385.	262.	-.0128	-.0101	.0338	.0065	.0031	-.0129	1973.		
.0590	-113.	416.	82.	166.	-6.	450.	-.0160	-.0089	.0256	-.0079	.0192	-.0151	1790.		
.0600	211.	500.	-250.	-6.	394.	580.	-.0189	-.0078	.0134	-.0263	.0327	-.0160	2557.		
.0610	591.	600.	-585.	-135.	720.	680.	-.0203	-.0055	.0037	-.0437	.0438	-.0175	3731.		

ADLPIPE PAGE 2072

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

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.13.

CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION 55 MEMBER 1 SEQUENCE 826 LOCATION BEG TYPE RU

.0530	-152.	-197.	-252.	-231.	741.	496.	-0368	-0007	-0081	-0094	.0120	.0428	3440.
.0540	-292.	-128.	-34.	-104.	405.	412.	-0313	-0036	.0037	-0029	.0067	.0314	2190.
.0550	-194.	-93.	85.	40.	38.	243.	-0223	-0068	.0180	.0098	.0068	.0147	929.
.0560	-94.	-50.	185.	157.	-314.	100.	-0146	-0095	.0297	.0179	.0028	.0002	1365.
.0570	-151.	59.	292.	272.	-515.	99.	-0115	-0107	.0352	.0158	-0031	-0085	2140.
.0580	-228.	249.	234.	250.	-385.	262.	-0128	-0101	.0338	.0065	.0031	-0129	1973.
.0590	-113.	416.	82.	166.	-6.	450.	-0160	-0089	.0256	-0079	.0192	-0151	1790.
.0600	211.	500.	-250.	-6.	794.	550.	-0189	-0078	.0134	-0263	.0327	-0160	2557.
.0610	591.	600.	-585.	-135.	720.	680.	-0203	-0055	.0037	-0437	.0438	-0175	3731.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKW02F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	55	MEMBER	1	SEQUENCE	826	LOCATION	BEG	TYPE	RU	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)										
.0620	871.	805.	-806.	-98.	914.	875.				-0193	-0010	.0018	-0533	.0553	-0232	4737.
.0630	1060.	1028.	-867.	82.	825.	1026.				-0151	.0044	.0089	-0539	.0579	-0336	4924.
.0640	1300.	1152.	-838.	317.	422.	1011.				-0069	.0085	.0222	-0458	.0484	-0468	4258.
.0650	1641.	1172.	-803.	563.	-111.	850.				.0039	.0109	.0382	-0285	.0364	-0620	3831.
.0660	1921.	1138.	-753.	781.	-588.	635.				.0136	.0128	.0517	-0066	.0260	-0779	4351.
.0670	1970.	1103.	-663.	912.	-888.	480.				.0181	.0149	.0572	.0084	.0143	-0889	5078.
.0680	1813.	1113.	-596.	921.	-877.	486.				.0167	.0177	.0515	.0105	.0070	-0902	5082.
.0690	1596.	1121.	-632.	788.	-516.	588.				.0109	.0203	.0353	.0037	.0108	-0840	4145.
.0700	1389.	1019.	-745.	503.	34.	614.				.0026	.0212	.0123	-0070	.0204	-0739	2966.
.0710	1133.	824.	-827.	156.	564.	548.				-0058	.0201	-0111	-0181	.0281	-0604	2994.
.0720	747.	649.	-772.	-90.	932.	497.				-0113	.0182	-0277	-0233	.0330	-0452	3958.
.0730	260.	492.	-541.	-175.	1009.	409.				-0121	.0158	-0335	-0169	.0323	-0331	4117.
.0740	-180.	256.	-194.	-161.	734.	147.				-0078	.0118	-0287	.0009	.0222	-0264	2857.
.0750	-460.	-36.	166.	-90.	218.	-231.				.0006	.0065	-0167	.0255	.0069	-0222	1232.
.0760	-634.	-283.	491.	29.	-343.	-554.				.0108	.0014	-0026	.0512	-0078	-0172	2434.
.0770	-830.	-467.	778.	133.	-792.	-770.				.0185	-0025	.0079	.0715	-0211	-0103	4153.
.0780	-1072.	-616.	981.	141.	-981.	-890.				.0211	-0053	.0106	.0821	-0293	-0004	4974.
.0790	-1278.	-729.	1028.	31.	-823.	-891.				.0189	-0075	.0043	.0824	-0265	.0141	4529.
.0800	-1400.	-830.	932.	-178.	-411.	-813.				.0135	-0097	-0092	.0751	-0154	.0323	3466.
.0810	-1467.	-962.	776.	-449.	67.	-761.				.0064	-0121	-0254	.0642	-0040	.0504	3308.
.0820	-1521.	-1074.	641.	-677.	478.	-728.				-0004	-0139	-0380	.0552	.0064	.0639	4118.
.0830	-1564.	-1087.	578.	-745.	708.	-654.				-0041	-0139	-0422	.0529	.0148	.0702	4548.
.0840	-1535.	-1034.	596.	-651.	636.	-593.				-0032	-0127	-0371	.0580	.0146	.0687	4057.
.0850	-1349.	-995.	633.	-474.	296.	-634.				.0020	-0114	-0246	.0685	.0062	.0601	3155.
.0860	-1008.	-954.	624.	-261.	-120.	-724.				.0096	-0098	-0079	.0813	-0008	.0467	2908.
.0870	-636.	-851.	570.	-40.	-455.	-746.				.0170	-0071	.0084	.0908	-0029	.0322	3264.
.0880	-737.	-695.	488.	123.	-641.	-668.				.0219	-0035	.0202	.0900	-0028	.0210	3486.
.0890	-92.	-525.	340.	177.	-602.	-525.				.0234	.0004	.0257	.0776	.0029	.0141	3053.
.0900	156.	-363.	107.	133.	-338.	-359.				.0228	.0042	.0262	.0588	.0179	.0089	1908.
.0910	375.	-226.	-132.	45.	-20.	-220.				.0215	.0075	.0241	.0385	.0340	.0032	843.
.0920	491.	-110.	-275.	-21.	170.	-128.				.0203	.0103	.0226	.0208	.0417	-0039	799.
.0930	492.	6.	-290.	-4.	189.	-76.				.0199	.0125	.0246	.0114	.0421	-0143	760.
.0940	434.	105.	-205.	97.	43.	-92.				.0204	.0140	.0298	.0134	.0367	-0297	522.
.0950	381.	151.	-73.	219.	-241.	-202.				.0214	.0146	.0351	.0227	.0234	-0487	1430.
.0960	354.	168.	36.	305.	-515.	-328.				.0213	.0148	.0365	.0316	.0067	-0665	2549.
.0970	318.	221.	69.	328.	-589.	-354.				.0182	.0158	.0314	.0341	-0046	-0798	2840.
.0980	235.	319.	23.	266.	-407.	-258.				.0112	.0178	.0189	.0273	-0092	-0877	2055.
.0990	150.	429.	-96.	117.	-53.	-88.				.0012	.0206	-0002	.0117	-0111	-0905	580.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKW02F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	55	MEMBER	1	SEQUENCE	826	LOCATION	BEG	TYPE	RU	DX	DY	DZ	RX	RY	RZ	STRESS
---------	----	--------	---	----------	-----	----------	-----	------	----	----	----	----	----	----	----	--------

.0910	375.	-226.	-132.	45.	-20.	-220.	.0215	.0075	.0241	.0385	.0340	.0032	843.
.0920	491.	-110.	-275.	-21.	170.	-128.	.0203	.0103	.0226	.0208	.0417	-.0039	799.
.0930	492.	6.	-290.	-4.	189.	-76.	.0199	.0125	.0246	.0114	.0421	-.0143	760.
.0940	434.	105.	-205.	97.	43.	-92.	.0204	.0140	.0228	.0134	.0367	-.0297	522.
.0950	381.	151.	-73.	219.	-241.	-202.	.0214	.0146	.0351	.0227	.0234	-.0487	1430.
.0960	354.	168.	36.	305.	-515.	-328.	.0213	.0143	.0365	.0316	.0067	-.0665	2549.
.0970	318.	221.	69.	328.	-589.	-354.	.0182	.0158	.0314	.0341	-.0046	-.0798	2840.
.0980	235.	319.	23.	266.	-407.	-258.	.0112	.0178	.0189	.0273	-.0092	-.0877	2055.
.0990	150.	429.	-96.	117.	-53.	-38.	.0012	.0206	-.0002	.0117	-.0111	-.0905	580.

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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	55	MEMBER	1	SEQUENCE	826	LOCATION	BEG	TYPE	RU	DX	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ			DY	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)			(IN)						
.1000	159.	539.	-296.	-72.	375.	118.			.0237	-.0223	-.0072	-.0106	-.0900		1492.
.1010	294.	648.	-534.	-228.	746.	314.			.0270	-.0425	-.0224	-.0092	-.0901		3140.
.1020	497.	751.	-725.	-294.	914.	461.			.0305	-.0570	-.0297	-.0131	-.0933		3975.
.1030	723.	868.	-829.	-243.	830.	582.			.0342	-.0641	-.0297	-.0240	-.0982		3892.
.1040	987.	1004.	-879.	-95.	573.	704.			.0378	-.0641	-.0245	-.0368	-.1021		3408.
.1050	1293.	1105.	-914.	73.	239.	784.			.0407	-.0598	-.0170	-.0478	-.1041		3074.
.1060	1572.	1129.	-935.	188.	-77.	797.			.0422	-.0541	-.0112	-.0554	-.1021		3069.
.1070	1715.	1106.	-928.	234.	-271.	812.			.0423	-.0489	-.0103	-.0563	-.0925		3313.
.1080	1680.	1045.	-883.	202.	-311.	854.			.0408	-.0448	-.0155	-.0498	-.0738		3475.
.1090	1498.	898.	-789.	91.	-268.	832.			.0376	-.0416	-.0231	-.0401	-.0506		3281.
.1100	1143.	710.	-586.	7.	-256.	737.			.0343	-.0384	-.0222	-.0316	-.0320		2914.
.1110	703.	476.	-315.	-64.	-297.	597.			.0294	-.0340	-.0161	-.0262	-.0121		2501.
.1120	244.	182.	-18.	-145.	-400.	408.			.0226	-.0288	-.0082	-.0259	.0120		2201.
.1130	-218.	-149.	301.	-212.	-560.	147.			.0158	-.0243	.0052	-.0308	.0311		2302.
.1140	-659.	-437.	595.	-249.	-672.	-101.			.0115	-.0219	.0216	-.0349	.0426		2704.
.1150	-1069.	-629.	807.	-293.	-622.	-210.			.0092	-.0222	.0307	-.0333	.0554		2685.
.1160	-1460.	-777.	943.	-387.	-425.	-226.			.0079	-.0250	.0294	-.0283	.0723		2305.
.1170	-1771.	-956.	1005.	-545.	-151.	-293.			.0077	-.0289	.0238	-.0209	.0859		2379.
.1180	-1944.	-1083.	990.	-666.	163.	-348.			.0098	-.0306	.0175	-.0069	.0917		2870.
.1190	-1928.	-1138.	899.	-736.	401.	-330.			.0128	-.0273	.0068	.0071	.0990		3362.
.1200	-1765.	-1148.	809.	-719.	402.	-297.			.0163	-.0174	-.0050	.0112	.1056		3267.
.1210	-1492.	-1105.	770.	-535.	138.	-330.			.0220	-.0008	-.0033	.0077	.0969		2404.
.1220	-1069.	-1013.	721.	-240.	-284.	-419.			.0297	.0195	.0090	.0002	.0741		2092.
.1230	-580.	-822.	635.	106.	-711.	-398.			.0384	.0384	.0206	-.0091	.0502		3068.
.1240	-122.	-614.	500.	365.	-1011.	-298.			.0462	.0502	.0227	-.0207	.0330		4165.
.1250	274.	-467.	282.	456.	-1023.	-225.			.0530	.0518	.0174	-.0257	.0174		4264.
.1260	603.	-314.	-36.	417.	-659.	-101.			.0597	.0438	.0062	-.0159	.0024		2936.
.1270	868.	-146.	-415.	250.	-84.	132.			.0649	.0286	-.0196	-.0022	-.0009		1100.
.1280	1001.	32.	-723.	64.	458.	417.			.0682	.0120	-.0502	.0065	.0032		2325.
.1290	1024.	137.	-887.	-64.	798.	540.			.0695	-.0001	-.0681	.0098	.0005		3606.
.1300	984.	169.	-892.	-85.	863.	472.			.0687	-.0040	-.0680	.0083	-.0117		3686.
.1310	845.	207.	-728.	24.	631.	382.			.0656	-.0005	-.0575	-.0024	-.0224		2755.
.1320	627.	179.	-452.	140.	183.	246.			.0587	.0063	-.0473	-.0245	-.0236		1259.
.1330	357.	56.	-156.	203.	-227.	2.			.0494	.0122	-.0338	-.0440	-.0239		1137.
.1340	65.	-113.	69.	169.	-398.	-271.			.0395	.0130	-.0216	-.0520	-.0240		1903.
.1350	-279.	-222.	210.	34.	-303.	-364.			.0295	.0058	-.0237	-.0533	-.0122		1772.
.1360	-694.	-251.	296.	-168.	-5.	-245.			.0194	-.0082	-.0392	-.0516	.0132		1111.
.1370	-1052.	-337.	311.	-450.	400.	-168.			.0083	-.0251	-.0566	-.0457	.0405		2334.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.13.

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	55	MEMBER	1	SEQUENCE	826	LOCATION	BEG	TYPE	RU
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.1290	1024.	137.	-887.	-64.	798.	540.	.0055	.0695	-.0001	-.0681	.0098	.0005	3606.
.1300	984.	169.	-892.	-85.	863.	472.	.0022	.0687	-.0040	-.0680	.0083	-.0117	3686.
.1310	845.	207.	-728.	24.	631.	392.	.0032	.0656	-.0005	-.0575	-.0024	-.0224	2755.
.1320	627.	179.	-452.	140.	183.	346.	.0064	.0507	.0063	-.0473	-.0245	-.0236	1259.
.1330	357.	56.	-156.	203.	-227.	2.	.0099	.0494	.0122	-.0338	-.0440	-.0239	1137.
.1340	65.	-113.	69.	169.	-328.	-271.	.0117	.0395	.0130	-.0216	-.0520	-.0240	1903.
.1350	-279.	-222.	210.	34.	-303.	-364.	.0105	.0295	.0058	-.0237	-.0533	-.0122	1772.
.1360	-694.	-251.	296.	-168.	-5.	-245.	.0062	.0194	-.0082	-.0392	-.0516	.0132	1111.
.1370	-1052.	-337.	311.	-450.	400.	-168.	.0001	.0083	-.0251	-.0566	-.0457	.0405	2334.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.13.

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	55	MEMBER	1	SEQUENCE	826	LOCATION	BEG	TYPE	RU	DX	DY	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(PSI)
.1380	-1254.	-460.	270.	-700.	777.	-191.	-.0045	-.0027	-.0397	-.0642	-.0356	.0596	3971.			
.1390	-1268.	-530.	216.	-837.	930.	-195.	-.0047	-.0127	-.0486	-.0670	-.0319	.0763	4727.			
.1400	-1152.	-508.	202.	-824.	773.	-136.	-.0002	-.0213	-.0502	-.0677	-.0402	.0918	4250.			
.1410	-975.	-419.	246.	-662.	412.	-106.	.0078	-.0273	-.0443	-.0587	-.0515	.0955	2937.			
.1420	-714.	-323.	283.	-459.	-15.	-158.	.0172	-.0311	-.0342	-.0456	-.0609	.0884	1812.			
.1430	-386.	-160.	264.	-268.	-396.	-124.	.0267	-.0329	-.0247	-.0402	-.0681	.0824	1843.			
.1440	-46.	46.	177.	-154.	-643.	19.	.0348	-.0337	-.0197	-.0483	-.0730	.0831	2469.			
.1450	221.	212.	49.	-146.	-673.	121.	.0399	-.0331	-.0196	-.0616	-.0598	.0805	2609.			
.1460	349.	356.	-77.	-200.	-483.	168.	.0420	-.0304	-.0228	-.0742	-.0561	.0699	2049.			
.1470	387.	515.	-190.	-300.	-219.	258.	.0423	-.0264	-.0278	-.0948	-.0418	.0618	1690.			
.1480	364.	711.	-251.	-375.	-30.	411.	.0431	-.0211	-.0315	-.1194	-.0320	.0566	2081.			
.1490	309.	839.	-231.	-414.	15.	423.	.0451	-.0149	-.0306	-.1362	-.0254	.0433	2209.			
.1500	205.	881.	-114.	-396.	-85.	250.	.0480	-.0079	-.0233	-.1403	-.0201	.0190	1776.			
.1510	-9.	944.	114.	-271.	-315.	104.	.0516	.0002	-.0109	-.1376	-.0186	-.0056	1599.			
.1520	-290.	992.	399.	-116.	-633.	8.	.0546	.0079	.0031	-.1355	-.0243	-.0220	2402.			
.1530	-554.	930.	653.	-2.	-885.	-170.	.0553	.0149	.0156	-.1278	-.0279	-.0372	3364.			
.1540	-726.	740.	789.	14.	-935.	-447.	.0519	.0213	.0236	-.1156	-.0227	-.0525	3867.			
.1550	-857.	565.	817.	-22.	-778.	-589.	.0439	.0284	.0257	-.1080	-.0129	-.0589	3645.			
.1560	-1039.	496.	805.	-36.	-490.	-474.	.0310	.0368	.0224	-.1059	-.0042	-.0534	2550.			
.1570	-1183.	388.	739.	-78.	-132.	-333.	.0159	.0447	.0161	-.1030	.0034	-.0427	1368.			
.1580	-1189.	189.	599.	-116.	253.	-288.	-.0010	.0514	.0103	-.0889	.0147	-.0344	1496.			
.1590	-1053.	-41.	424.	-97.	540.	-253.	-.0164	.0565	.0068	-.0662	.0238	-.0234	2256.			
.1600	-841.	-286.	270.	-31.	634.	-185.	-.0302	.0592	.0066	-.0428	.0228	-.0033	2468.			
.1610	-615.	-544.	153.	79.	612.	-134.	-.0428	.0600	.0106	-.0159	.0186	.0191	2359.			
.1620	-383.	-775.	54.	246.	581.	-101.	-.0538	.0604	.0180	.0182	.0203	.0363	2386.			
.1630	-92.	-983.	-70.	392.	520.	-50.	-.0630	.0595	.0258	.0468	.0212	.0556	2438.			
.1640	249.	-1128.	-229.	501.	449.	92.	-.0703	.0573	.0317	.0644	.0196	.0811	2534.			
.1650	582.	-1220.	-407.	578.	448.	265.	-.0763	.0540	.0358	.0773	.0224	.1056	2902.			
.1660	874.	-1321.	-580.	590.	502.	355.	-.0817	.0491	.0381	.0678	.0285	.1242	3181.			
.1670	1087.	-1366.	-704.	586.	532.	443.	-.0858	.0432	.0384	.0945	.0322	.1385	3385.			
.1680	1252.	-1321.	-787.	574.	495.	578.	-.0875	.0365	.0367	.0939	.0305	.1512	3560.			
.1690	1367.	-1214.	-828.	560.	432.	686.	-.0869	.0295	.0339	.0915	.0283	.1555	3678.			
.1700	1396.	-1096.	-815.	515.	364.	679.	-.0849	.0224	.0300	.0886	.0267	.1475	3459.			
.1710	1326.	-938.	-754.	425.	293.	639.	-.0817	.0155	.0245	.0781	.0230	.1340	3064.			
.1720	1139.	-656.	-643.	354.	252.	702.	-.0765	.0097	.0176	.0603	.0203	.1181	3080.			
.1730	899.	-366.	-517.	237.	241.	719.	-.0702	.0042	.0097	.0372	.0188	.0977	2965.			
.1740	627.	-131.	-378.	71.	255.	596.	-.0633	-.0010	.0019	.0145	.0201	.0688	2434.			
.1750	320.	127.	-218.	-75.	274.	462.	-.0553	-.0049	-.0046	-.0081	.0234	.0354	2024.			

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.13.

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 55 MEMBER 1 SEQUENCE 826 LOCATION BEG TYPE RU

.1670	1087.	-1366.	-704.	586.	532.	443.	-.0858	.0432	.0384	.0945	.0322	.1385	3385.
.1680	1252.	-1321.	-787.	574.	495.	578.	-.0875	.0365	.0367	.0939	.0305	.1512	3560.
.1690	1367.	-1214.	-828.	560.	432.	686.	-.0869	.0295	.0339	.0915	.0283	.1555	3678.
.1700	1294.	-1076.	-815.	515.	764.	679.	-.0849	.0224	.0300	.0886	.0267	.1475	3459.
.1710	1326.	-938.	-754.	425.	293.	639.	-.0817	.0155	.0245	.0781	.0230	.1340	3064.
.1720	1139.	-656.	-643.	354.	252.	702.	-.0765	.0097	.0176	.0603	.0203	.1181	3080.
.1730	899.	-366.	-517.	237.	241.	719.	-.0702	.0042	.0097	.0372	.0188	.0977	2965.
.1740	627.	-131.	-378.	71.	255.	596.	-.0633	-.0010	.0019	.0145	.0201	.0688	2434.
.1750	320.	127.	-215.	-75.	274.	462.	-.0553	-.0049	-.0046	-.0081	.0234	.0354	2024.

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DIS/ADLPIPE
S/RV PIPING KEWAUNEE GKMOBF 2 RUP DISK
2 SAFETY COLD FKM24F--2 PSV

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.13.

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	55	MEMBER	1	SEQUENCE	826	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	14.	433.	-49.	-186.	247.	396.	-.0463	-.0074	-.0093	-.0350	.0239	.0045	1876.		
.1770	-258.	749.	122.	-244.	166.	335.	-.0362	-.0082	-.0114	-.0598	.0230	-.0280	1668.		
.1780	-427.	994.	258.	-281.	48.	175.	-.0258	-.0076	-.0106	-.0784	.0226	-.0648	1249.		
.1790	-505.	1220.	354.	-262.	-84.	15.	-.0151	-.0054	-.0073	-.0913	.0237	-.1018	1027.		
.1800	-532.	1450.	424.	-188.	-233.	-57.	-.0053	-.0018	-.0025	-.1028	.0228	-.1316	1140.		
.1810	-505.	1605.	455.	-123.	-378.	-127.	.0023	.0021	.0030	-.1134	.0200	-.1536	1558.		
.1820	-440.	1678.	447.	-42.	-447.	-228.	.0077	.0066	.0090	-.1148	.0223	-.1738	1879.		
.1830	-328.	1674.	391.	38.	-450.	-333.	.0107	.0114	.0147	-.1101	.0276	-.1887	2096.		
.1840	-196.	1622.	309.	120.	-438.	-375.	.0113	.0160	.0195	-.1042	.0306	-.1928	2198.		
.1850	-62.	1519.	219.	211.	-416.	-378.	.0096	.0201	.0236	-.0943	.0319	-.1885	2241.		
.1860	90.	1331.	116.	297.	-377.	-426.	.0056	.0236	.0275	-.0766	.0339	-.1813	2395.		
.1870	241.	1098.	21.	402.	-340.	-480.	-.0001	.0265	.0306	-.0509	.0358	-.1718	2659.		
.1880	381.	838.	-65.	494.	-328.	-496.	-.0072	.0283	.0321	-.0251	.0334	-.1548	2888.		
.1890	484.	567.	-141.	566.	-294.	-471.	-.0156	.0288	.0317	.0004	.0303	-.1316	2962.		
.1900	537.	271.	-209.	603.	-192.	-460.	-.0252	.0283	.0296	.0274	.0312	-.1074	2919.		
.1910	555.	-59.	-273.	570.	-46.	-479.	-.0352	.0263	.0258	.0511	.0337	-.0812	2786.		
.1920	522.	-353.	-315.	508.	110.	-447.	-.0443	.0234	.0211	.0688	.0367	-.0517	2558.		
.1930	425.	-599.	-313.	434.	246.	-380.	-.0520	.0198	.0171	.0818	.0403	-.0217	2342.		
.1940	258.	-831.	-244.	355.	322.	-365.	-.0581	.0155	.0150	.0942	.0438	.0034	2248.		
.1950	37.	-1041.	-105.	288.	304.	-401.	-.0621	.0106	.0155	.1067	.0453	.0225	2163.		
.1960	-201.	-1192.	80.	246.	189.	-430.	-.0637	.0053	.0177	.1172	.0434	.0380	1978.		
.1970	-424.	-1291.	277.	213.	21.	-455.	-.0636	-.0001	.0203	.1248	.0390	.0493	1876.		
.1980	-625.	-1353.	455.	164.	-126.	-503.	-.0632	-.0050	.0217	.1300	.0348	.0537	2030.		
.1990	-802.	-1349.	586.	95.	-185.	-517.	-.0633	-.0087	.0205	.1303	.0328	.0531	2080.		
.2000	-928.	-1250.	640.	5.	-133.	-423.	-.0642	-.0110	.0159	.1216	.0327	.0519	1657.		
.2010	-961.	-1079.	601.	-109.	14.	-251.	-.0655	-.0119	.0085	.1049	.0342	.0499	1024.		
.2020	-879.	-879.	478.	-227.	218.	-79.	-.0666	-.0114	.0004	.0860	.0382	.0431	1211.		
.2030	-696.	-653.	308.	-307.	407.	81.	-.0665	-.0097	-.0058	.0686	.0430	.0311	1929.		
.2040	-430.	-386.	128.	-312.	501.	259.	-.0644	-.0068	-.0082	.0528	.0445	.0165	2405.		
.2050	-89.	-102.	-45.	-234.	459.	430.	-.0600	-.0031	-.0061	.0402	.0413	-.0003	2504.		
.2060	321.	166.	-210.	-91.	310.	539.	-.0535	.0012	.0001	.0337	.0360	-.0216	2346.		
.2070	765.	405.	-371.	89.	112.	592.	-.0459	.0059	.0089	.0319	.0303	-.0459	2273.		
.2080	1179.	627.	-524.	272.	-76.	644.	-.0386	.0108	.0175	.0297	.0239	-.0680	2625.		
.2090	1512.	826.	-669.	425.	-190.	713.	-.0326	.0154	.0239	.0251	.0184	-.0858	3179.		
.2100	1747.	971.	-809.	520.	-179.	757.	-.0285	.0196	.0269	.0198	.0168	-.1010	3491.		
.2110	1880.	1044.	-939.	544.	-49.	749.	-.0262	.0230	.0265	.0144	.0194	-.1141	3461.		
.2120	1898.	1066.	-1033.	517.	140.	719.	-.0252	.0253	.0235	.0079	.0232	-.1231	3348.		
.2130	1790.	1058.	-1059.	474.	324.	680.	-.0245	.0267	.0199	.0015	.0264	-.1284	3324.		

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DIS/ADLPIPE
S/RV PIPING KEWAUNEE GKMOBF 2 RUP DISK
2 SAFETY COLD FKM24F--2 PSV

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.13.

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION 55 MEMBER 1 SEQUENCE 826 LOCATION BEG TYPE RU

.2050	-89.	-102.	-45.	-234.	459.	430.	-.0600	-.0031	-.0061	.0402	.0413	-.0003	2504.
.2060	321.	166.	-210.	-91.	310.	539.	-.0535	.0012	.0001	.0337	.0360	-.0216	2346.
.2070	765.	405.	-371.	89.	112.	592.	-.0459	.0059	.0089	.0319	.0303	-.0459	2273.
.2080	1170.	627.	-524.	272.	-76.	644.	-.0386	.0108	.0175	.0297	.0239	-.0680	2625.
.2090	1512.	826.	-609.	425.	-190.	713.	-.0226	.0154	.0239	.0251	.0184	-.0858	3179.
.2100	1747.	971.	-809.	520.	-179.	757.	-.0285	.0196	.0269	.0198	.0168	-.1010	3491.
.2110	1880.	1044.	-939.	544.	-49.	749.	-.0262	.0230	.0265	.0144	.0194	-.1141	3461.
.2120	1898.	1066.	-1033.	517.	140.	719.	-.0252	.0253	.0235	.0079	.0232	-.1231	3348.
.2130	1790.	1058.	-1059.	474.	324.	680.	-.0245	.0267	.0199	.0015	.0264	-.1284	3324.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.13.

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	55	MEMBER	1	SEQUENCE	826	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)		
.2140	1570.	1009.	-998.	440.	447.	592.		-.0235	.0271	.0176	-.0009	.0284	-.1329		3219.
.2150	1278.	907.	-857.	422.	469.	426.		-.0213	.0263	.0176	.0022	.0282	-.1380		2842.
.2160	953.	772.	-653.	424.	383.	213.		-.0176	.0244	.0196	.0091	.0250	-.1420		2276.
.2170	610.	624.	-412.	437.	228.	-4.		-.0131	.0215	.0226	.0176	.0199	-.1435		1839.
.2180	257.	469.	-164.	437.	71.	-215.		-.0088	.0180	.0250	.0263	.0151	-.1428		1838.
.2190	-85.	311.	58.	403.	-29.	-403.		-.0056	.0141	.0253	.0332	.0124	-.1395		2131.
.2200	-379.	173.	221.	328.	-47.	-528.		-.0037	.0100	.0227	.0358	.0121	-.1319		2326.
.2210	-591.	67.	308.	220.	9.	-575.		-.0026	.0061	.0171	.0337	.0137	-.1201		2299.
.2220	-710.	-15.	330.	97.	104.	-574.		-.0020	.0024	.0101	.0293	.0164	-.1065		2208.
.2230	-743.	-72.	312.	-12.	186.	-546.		-.0012	-.0010	.0035	.0252	.0187	-.0931		2152.
.2240	-695.	-96.	277.	-79.	197.	-487.		.0006	-.0039	-.0013	.0225	.0184	-.0801		1984.
.2250	-563.	-91.	236.	-97.	107.	-413.		.0037	-.0066	-.0035	.0217	.0141	-.0681		1634.
.2260	-358.	-77.	189.	-79.	-66.	-353.		.0081	-.0089	-.0035	.0235	.0069	-.0586		1374.
.2270	-119.	-54.	137.	-43.	-268.	-306.		.0130	-.0107	-.0023	.0266	-.0016	-.0517		1528.
.2280	107.	-11.	79.	-13.	-442.	-237.		.0175	-.0118	-.0015	.0276	-.0103	-.0452		1872.
.2290	293.	49.	9.	-13.	-541.	-132.		.0210	-.0122	-.0026	.0240	-.0183	-.0376		2078.
.2300	427.	107.	-73.	-59.	-540.	-19.		.0231	-.0121	-.0062	.0166	-.0241	-.0298		2028.
.2310	494.	144.	-154.	-151.	-449.	73.		.0239	-.0117	-.0118	.0072	-.0276	-.0232		1789.
.2320	473.	159.	-207.	-270.	-312.	141.		.0239	-.0110	-.0180	-.0034	-.0302	-.0172		1627.
.2330	352.	159.	-204.	-387.	-180.	186.		.0236	-.0100	-.0233	-.0138	-.0335	-.0117		1739.
.2340	146.	134.	-139.	-486.	-88.	186.		.0238	-.0089	-.0262	-.0220	-.0375	-.0081		1970.
.2350	-114.	73.	-20.	-561.	-51.	120.		.0248	-.0077	-.0259	-.0265	-.0417	-.0071		2151.
.2360	-399.	-19.	138.	-613.	-69.	5.		.0266	-.0063	-.0226	-.0285	-.0461	-.0075		2302.
.2370	-699.	-122.	317.	-639.	-120.	-121.		.0288	-.0045	-.0168	-.0292	-.0500	-.0078		2468.
.2380	-999.	-228.	498.	-644.	-170.	-240.		.0308	-.0022	-.0095	-.0288	-.0523	-.0076		2643.
.2390	-1271.	-341.	653.	-641.	-189.	-350.		.0319	.0006	-.0018	-.0275	-.0519	-.0069		2817.
.2400	-1478.	-460.	759.	-638.	-166.	-439.		.0319	.0036	.0053	-.0257	-.0489	-.0047		2957.
.2410	-1596.	-572.	802.	-629.	-106.	-490.		.0308	.0070	.0114	-.0236	-.0440	-.0006		3003.
.2420	-1620.	-669.	785.	-604.	-24.	-503.		.0286	.0107	.0166	-.0203	-.0379	.0046		2934.
.2430	-1555.	-746.	720.	-552.	60.	-480.		.0254	.0147	.0210	-.0151	-.0314	.0097		2742.
.2440	-1412.	-795.	619.	-470.	128.	-421.		.0217	.0189	.0249	-.0079	-.0254	.0147		2403.
.2450	-1192.	-818.	487.	-361.	170.	-329.		.0175	.0229	.0284	.0008	-.0204	.0200		1931.
.2460	-904.	-825.	326.	-242.	190.	-222.		.0133	.0264	.0310	.0102	-.0162	.0253		1417.
.2470	-570.	-820.	144.	-127.	202.	-110.		.0091	.0292	.0326	.0197	-.0122	.0306		979.
.2480	-223.	-793.	-47.	-20.	215.	19.		.0049	.0312	.0328	.0278	-.0085	.0359		807.
.2490	106.	-734.	-232.	75.	231.	173.		.0010	.0325	.0314	.0335	-.0053	.0414		1113.
.2500	410.	-650.	-406.	148.	252.	327.		-.0025	.0328	.0283	.0363	-.0027	.0470		1665.
.2510	689.	-552.	-567.	193.	271.	490.		-.0052	.0319	.0237	.0366	-.0008	.0517		2210.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.13.

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	55	MEMBER	1	SEQUENCE	826	LOCATION	BEG	TYPE	RU						STRESS
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ		(PSI)

.2430	-1555.	-746.	720.	-552.	60.	-489.	.0254	.0147	.0210	-.0151	-.0314	.0097	2742.
.2440	-1412.	-795.	819.	-470.	128.	-421.	.0217	.0189	.0249	-.0079	-.0254	.0147	2403.
.2450	-1192.	-818.	487.	-361.	170.	-329.	.0175	.0229	.0284	.0008	-.0204	.0200	1931.
.2460	-964.	-825.	326.	-242.	190.	-222.	.0173	.0264	.0310	.0102	-.0162	.0253	1417.
.2470	-570.	-820.	144.	-127.	202.	-110.	.0091	.0292	.0326	.0197	-.0122	.0306	979.
.2480	-223.	-793.	-47.	-70.	215.	19.	.0049	.0312	.0328	.0270	-.0085	.0359	807.
.2490	106.	-734.	-232.	75.	231.	173.	.0010	.0325	.0314	.0335	-.0053	.0414	1113.
.2500	410.	-650.	-406.	148.	252.	337.	-.0025	.0328	.0283	.0363	-.0027	.0470	1665.
.2510	689.	-552.	-567.	193.	271.	490.	-.0052	.0319	.0237	.0366	-.0008	.0517	2210.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.13.

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	SS	MEMBER	1	SEQUENCE	826	LOCATION	BEG	TYPE	RU	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)										
.2520	937.	-439.	-706.	215.	274.	625.	-.0066	.0300	.0179	.0346	-.0001	.0552	2671.			
.2530	1135.	-306.	-810.	221.	253.	747.	-.0066	.0272	.0114	.0301	-.0012	.0574	3058.			
.2540	1266.	-152.	-870.	213.	209.	855.	-.0049	.0235	.0045	.0230	-.0039	.0582	3380.			
.2550	1326.	13.	-884.	190.	146.	935.	-.0017	.0191	-.0025	.0138	-.0078	.0572	3602.			
.2560	1320.	177.	-856.	146.	68.	980.	.0031	.0141	-.0095	.0027	-.0127	.0547	3706.			
.2570	1254.	335.	-794.	79.	-16.	994.	.0091	.0085	-.0165	-.0105	-.0183	.0514	3723.			
.2580	1124.	488.	-699.	-6.	-97.	985.	.0161	.0025	-.0235	-.0252	-.0241	.0477	3694.			
.2590	923.	628.	-569.	-101.	-168.	953.	.0238	-.0036	-.0301	-.0405	-.0300	.0436	3631.			
.2600	668.	747.	-413.	-204.	-229.	896.	.0317	-.0097	-.0363	-.0556	-.0359	.0398	3537.			
.2610	390.	836.	-247.	-313.	-285.	815.	.0397	-.0159	-.0418	-.0698	-.0419	.0370	3429.			
.2620	113.	892.	-82.	-418.	-336.	712.	.0476	-.0218	-.0466	-.0822	-.0479	.0350	3329.			
.2630	-153.	919.	77.	-511.	-382.	596.	.0550	-.0272	-.0504	-.0920	-.0537	.0337	3259.			
.2640	-408.	923.	228.	-586.	-418.	481.	.0615	-.0317	-.0532	-.0992	-.0590	.0338	3232.			
.2650	-636.	903.	360.	-640.	-443.	376.	.0668	-.0354	-.0550	-.1038	-.0639	.0358	3226.			
.2660	-808.	854.	458.	-676.	-452.	276.	.0709	-.0381	-.0558	-.1056	-.0676	.0394	3207.			
.2670	-907.	775.	512.	-697.	-445.	178.	.0738	-.0398	-.0559	-.1043	-.0697	.0443	3157.			
.2680	-942.	677.	528.	-697.	-422.	94.	.0753	-.0405	-.0550	-.1001	-.0703	.0506	3061.			
.2690	-930.	567.	517.	-673.	-390.	33.	.0754	-.0401	-.0532	-.0936	-.0695	.0584	2905.			
.2700	-870.	445.	482.	-628.	-355.	-13.	.0742	-.0387	-.0504	-.0850	-.0675	.0672	2692.			
.2710	-752.	309.	420.	-566.	-323.	-58.	.0720	-.0364	-.0467	-.0741	-.0643	.0758	2444.			
.2720	-588.	169.	340.	-487.	-299.	-100.	.0690	-.0332	-.0423	-.0612	-.0600	.0835	2166.			
.2730	-412.	36.	257.	-390.	-281.	-126.	.0654	-.0292	-.0374	-.0472	-.0549	.0907	1853.			
.2740	-250.	-96.	181.	-289.	-260.	-142.	.0608	-.0251	-.0325	-.0330	-.0492	.0983	1544.			
.2750	-101.	-240.	111.	-201.	-230.	-171.	.0556	-.0212	-.0279	-.0188	-.0426	.1056	1307.			
.2760	38.	-390.	44.	-129.	-189.	-215.	.0501	-.0175	-.0239	-.0049	-.0350	.1116	1173.			
.2770	150.	-528.	-13.	-69.	-136.	-255.	.0445	-.0140	-.0209	.0077	-.0265	.1167	1108.			
.2780	200.	-647.	-41.	-20.	-74.	-283.	.0389	-.0108	-.0184	.0180	-.0180	.1214	1095.			
.2790	180.	-759.	-32.	13.	-14.	-324.	.0335	-.0082	-.0164	.0266	-.0099	.1250	1212.			
.2800	111.	-870.	8.	31.	35.	-395.	.0286	-.0064	-.0146	.0342	-.0025	.1262	1485.			
.2810	15.	-968.	69.	42.	64.	-482.	.0247	-.0051	-.0130	.0408	.0039	.1251	1823.			
.2820	-117.	-1041.	156.	54.	72.	-568.	.0217	-.0043	-.0116	.0459	.0085	.1224	2145.			
.2830	-298.	-1096.	271.	63.	64.	-656.	.0192	-.0043	-.0106	.0496	.0111	.1184	2472.			
.2840	-502.	-1138.	395.	64.	59.	-753.	.0169	-.0048	-.0103	.0525	.0122	.1124	2830.			
.2850	-683.	-1155.	498.	56.	70.	-839.	.0152	-.0056	-.0112	.0536	.0128	.1050	3151.			
.2860	-816.	-1135.	563.	42.	102.	-891.	.0139	-.0065	-.0135	.0520	.0127	.0970	3352.			
.2870	-906.	-1078.	591.	23.	157.	-907.	.0129	-.0073	-.0169	.0476	.0119	.0885	3439.			
.2880	-955.	-988.	588.	6.	230.	-896.	.0120	-.0079	-.0209	.0413	.0109	.0791	3452.			
.2890	-940.	-862.	548.	0.	301.	-853.	.0118	-.0082	-.0248	.0334	.0097	.0689	3375.			

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83/12/02.

18.29.13.

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	SS	MEMBER	1	SEQUENCE	826	LOCATION	BEG	TYPE	RU
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.2810	15.	-768.	69.	42.	64.	-482.	.247	-.0051	-.0130	.0408	.0039	.1251	1823.
.2820	-117.	-1041.	156.	54.	72.	-568.	.217	-.0043	-.0116	.0459	.0085	.1224	2145.
.2830	-298.	-1096.	271.	63.	64.	-656.	.192	-.0043	-.0106	.0496	.0111	.1184	2472.
.2840	-503.	-1138.	395.	64.	59.	-753.	.169	-.0048	-.0103	.0525	.0122	.1124	2830.
.2850	-683.	-1155.	498.	56.	70.	-839.	.152	-.0056	-.0112	.0536	.0128	.1050	3151.
.2860	-816.	-1135.	567.	42.	102.	-871.	.139	-.0065	-.0135	.0520	.0127	.0970	3352.
.2870	-906.	-1078.	591.	23.	157.	-907.	.129	-.0073	-.0169	.0476	.0119	.0885	3439.
.2880	-955.	-988.	588.	6.	230.	-896.	.120	-.0079	-.0209	.0413	.0109	.0791	3452.
.2890	-940.	-862.	548.	0.	301.	-853.	.118	-.0082	-.0248	.0334	.0097	.0689	3375.

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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	55	MEMBER	1	SEQUENCE	826	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	-833.	-699.	469.	14.	342.	-777.	.0127	-.0082	-.0280	.0243	.0072	.0581	3171.		
.2910	-639.	-512.	361.	49.	335.	-607.	.0150	-.0079	-.0300	.0147	.0034	.0466	2860.		
.2920	-389.	-309.	240.	107.	282.	-595.	.0182	-.0074	-.0306	.0058	-.0014	.0337	2489.		
.2930	-114.	-87.	121.	186.	193.	-489.	.0221	-.0067	-.0299	-.0026	-.0068	.0202	2082.		
.2940	172.	149.	3.	272.	79.	-365.	.0264	-.0058	-.0287	-.0118	-.0127	.0074	1726.		
.2950	463.	377.	-117.	346.	-35.	-240.	.0306	-.0049	-.0278	-.0218	-.0182	-.0044	1575.		
.2960	729.	584.	-232.	392.	-122.	-130.	.0342	-.0040	-.0278	-.0322	-.0220	-.0159	1606.		
.2970	925.	772.	-324.	411.	-170.	-24.	.0367	-.0030	-.0288	-.0432	-.0237	-.0261	1662.		
.2980	1023.	942.	-377.	406.	-185.	90.	.0380	-.0021	-.0307	-.0555	-.0242	-.0336	1699.		
.2990	1036.	1074.	-390.	376.	-184.	189.	.0384	-.0015	-.0331	-.0676	-.0238	-.0384	1712.		
.3000	986.	1145.	-366.	324.	-181.	235.	.0380	-.0014	-.0351	-.0773	-.0221	-.0420	1639.		
.3010	877.	1161.	-302.	266.	-192.	236.	.0370	-.0015	-.0363	-.0836	-.0197	-.0446	1508.		
.3020	699.	1141.	-190.	218.	-227.	224.	.0355	-.0016	-.0360	-.0873	-.0174	-.0447	1441.		
.3030	463.	1084.	-41.	181.	-280.	204.	.0332	-.0018	-.0344	-.0883	-.0154	-.0418	1462.		
.3040	212.	977.	120.	148.	-335.	156.	.0302	-.0020	-.0315	-.0858	-.0124	-.0371	1487.		
.3050	-17.	821.	265.	114.	-374.	84.	.0263	-.0021	-.0278	-.0800	-.0080	-.0306	1495.		
.3060	-215.	639.	383.	86.	-388.	25.	.0215	-.0018	-.0238	-.0726	-.0024	-.0211	1487.		
.3070	-392.	445.	476.	69.	-372.	-4.	.0156	-.0012	-.0193	-.0641	.0037	-.0082	1412.		
.3080	-535.	232.	539.	63.	-327.	-21.	.0086	-.0003	-.0145	-.0535	.0104	.0067	1247.		
.3090	-611.	0.	558.	68.	-266.	-40.	.0009	.0007	-.0092	-.0404	.0174	.0223	1036.		
.3100	-598.	-235.	530.	91.	-206.	-50.	-.0058	.0020	-.0034	-.0254	.0237	.0384	862.		
.3110	-513.	-457.	465.	139.	-158.	-40.	-.0144	.0035	.0030	-.0094	.0284	.0545	799.		
.3120	-385.	-656.	378.	208.	-119.	-16.	-.0219	.0052	.0098	.0074	.0318	.0693	896.		
.3130	-225.	-829.	272.	291.	-80.	17.	-.0291	.0071	.0168	.0743	.0342	.0818	1129.		
.3140	-28.	-966.	143.	376.	-37.	64.	-.0357	.0089	.0232	.0393	.0357	.0922	1429.		
.3150	197.	-1067.	-7.	449.	12.	121.	-.0414	.0105	.0285	.0514	.0362	.1005	1734.		
.3160	420.	-1131.	-161.	503.	74.	176.	-.0462	.0117	.0326	.0602	.0362	.1056	2010.		
.3170	603.	-1150.	-300.	542.	149.	230.	-.0501	.0124	.0355	.0658	.0360	.1067	2267.		
.3180	734.	-1118.	-411.	566.	222.	288.	-.0529	.0127	.0371	.0674	.0347	.1045	2511.		
.3190	820.	-1042.	-494.	569.	277.	340.	-.0542	.0121	.0376	.0650	.0320	.0988	2683.		
.3200	865.	-936.	-545.	550.	312.	361.	-.0538	.0108	.0371	.0597	.0285	.0888	2718.		
.3210	852.	-800.	-556.	513.	328.	354.	-.0520	.0089	.0358	.0520	.0247	.0744	2630.		
.3220	761.	-626.	-518.	484.	328.	344.	-.0489	.0063	.0339	.0413	.0204	.0574	2478.		
.3230	601.	-423.	-440.	399.	314.	334.	-.0449	.0030	.0312	.0276	.0157	.0391	2269.		
.3240	406.	-216.	-339.	313.	297.	302.	-.0400	-.0010	.0279	.0122	.0117	.0197	1966.		
.3250	201.	-17.	-230.	209.	283.	244.	-.0345	-.0055	.0241	-.0034	.0090	-.0007	1596.		
.3260	-11.	182.	-116.	101.	267.	186.	-.0287	-.0103	.0200	-.0193	.0070	-.0205	1270.		
.3270	-227.	388.	2.	2.	244.	149.	-.0229	-.0152	.0161	-.0349	.0053	-.0380	1066.		

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

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LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	55	MEMBER	1	SEQUENCE	826	LOCATION	BEG	TYPE	RU						
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.3190	820.	-1042.	-494.	559.	277.	340.	-.0542	.0121	.0376	.0650	.0320	.0988	2683.
.3200	865.	-936.	-545.	550.	312.	361.	-.0538	.0108	.0371	.0597	.0285	.0888	2718.
.3210	852.	-800.	-556.	513.	328.	354.	-.0520	.0082	.0358	.0520	.0247	.0744	2630.
.3220	761.	-626.	-513.	464.	328.	344.	-.0482	.0067	.0339	.0413	.0204	.0574	2478.
.3230	601.	-423.	-443.	399.	314.	334.	-.0449	.0030	.0312	.0276	.0157	.0391	2269.
.3240	404.	-216.	-339.	313.	297.	302.	-.0400	-.0010	.0272	.0122	.0117	.0197	1966.
.3250	201.	-17.	-230.	209.	283.	244.	-.0345	-.0055	.0241	-.0034	.0090	-.0007	1596.
.3260	-11.	122.	-116.	101.	267.	186.	-.0287	-.0103	.0200	-.0193	.0070	-.0205	1270.
.3270	-227.	382.	2.	2.	244.	149.	-.0229	-.0152	.0161	-.0349	.0053	-.0380	1066.

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 LOADS
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 PRESSURE
 ENGLISH UNITS

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

SECTION	55	MEMBER	1	SEQUENCE	826	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)		
.3280	-423.	569.	114.	-83.	214.	117.	-.0175	-.0200	.0126	-.0485	.0042	-.0534	963.	
.3290	-562.	723.	200.	-154.	177.	76.	-.0123	-.0247	.0097	-.0586	.0040	-.0671	921.	
.3300	-630.	845.	252.	-205.	133.	38.	-.0076	-.0290	.0075	-.0652	.0044	-.0780	924.	
.3310	-640.	941.	274.	-232.	86.	23.	-.0037	-.0328	.0061	-.0688	.0050	-.0847	929.	
.3320	-608.	1004.	270.	-237.	47.	25.	-.0009	-.0361	.0055	-.0690	.0064	-.0873	906.	
.3330	-533.	1024.	238.	-225.	21.	29.	.0008	-.0390	.0056	-.0654	.0088	-.0863	852.	
.3340	-402.	1000.	173.	-201.	8.	35.	.0014	-.0413	.0064	-.0582	.0121	-.0818	764.	
.3350	-225.	941.	80.	-164.	2.	51.	.0013	-.0432	.0076	-.0487	.0157	-.0738	642.	
.3360	-28.	852.	-25.	-114.	-1.	70.	.0004	-.0445	.0095	-.0365	.0193	-.0631	500.	
.3370	165.	738.	-129.	-52.	-1.	85.	-.0013	-.0454	.0118	-.0219	.0228	-.0512	371.	
.3380	351.	607.	-228.	18.	-2.	97.	-.0034	-.0457	.0145	-.0056	.0259	-.0386	367.	
.3390	531.	467.	-324.	88.	-5.	107.	-.0057	-.0458	.0170	.0111	.0283	-.0254	518.	
.3400	692.	320.	-410.	147.	-7.	108.	-.0080	-.0457	.0191	.0274	.0301	-.0126	682.	
.3410	810.	171.	-477.	190.	4.	95.	-.0103	-.0455	.0205	.0427	.0318	-.0011	793.	
.3420	867.	35.	-516.	215.	30.	79.	-.0126	-.0452	.0211	.0560	.0334	.0091	863.	
.3430	867.	-80.	-530.	220.	64.	68.	-.0145	-.0450	.0208	.0661	.0344	.0180	892.	
.3440	822.	-178.	-519.	201.	99.	46.	-.0157	-.0449	.0196	.0733	.0349	.0248	855.	
.3450	738.	-261.	-484.	161.	130.	3.	-.0162	-.0451	.0180	.0782	.0351	.0285	773.	
.3460	608.	-317.	-419.	110.	148.	-49.	-.0159	-.0453	.0161	.0807	.0346	.0293	712.	
.3470	435.	-339.	-324.	54.	147.	-93.	-.0148	-.0457	.0142	.0805	.0330	.0279	681.	
.3480	242.	-332.	-211.	-6.	130.	-134.	-.0129	-.0462	.0121	.0781	.0304	.0245	697.	
.3490	54.	-310.	-97.	-74.	104.	-185.	-.0103	-.0469	.0099	.0743	.0276	.0188	840.	
.3500	-113.	-272.	6.	-149.	80.	-236.	-.0074	-.0478	.0075	.0691	.0249	.0115	1083.	
.3510	-257.	-209.	93.	-222.	61.	-264.	-.0044	-.0485	.0048	.0623	.0222	.0039	1306.	
.3520	-371.	-123.	159.	-288.	52.	-261.	-.0016	-.0489	.0019	.0542	.0195	-.0036	1464.	
.3530	-436.	-26.	195.	-346.	54.	-242.	.0011	-.0492	-.0010	.0461	.0174	-.0112	1588.	
.3540	-436.	72.	195.	-392.	60.	-215.	.0036	-.0491	-.0036	.0389	.0158	-.0190	1682.	
.3550	-370.	171.	161.	-418.	59.	-173.	.0060	-.0486	-.0057	.0328	.0142	-.0261	1703.	
.3560	-253.	271.	104.	-419.	49.	-113.	.0081	-.0478	-.0071	.0284	.0125	-.0324	1629.	
.3570	-103.	361.	31.	-395.	31.	-48.	.0098	-.0466	-.0076	.0263	.0108	-.0380	1490.	
.3580	74.	432.	-55.	-353.	9.	11.	.0111	-.0451	-.0073	.0266	.0093	-.0429	1321.	
.3590	271.	478.	-152.	-302.	-11.	64.	.0120	-.0435	-.0067	.0288	.0082	-.0466	1152.	
.3600	469.	502.	-254.	-246.	-22.	111.	.0125	-.0416	-.0059	.0322	.0075	-.0491	1010.	
.3610	640.	500.	-349.	-191.	-16.	146.	.0123	-.0395	-.0051	.0365	.0076	-.0506	899.	
.3620	763.	475.	-425.	-140.	8.	166.	.0116	-.0373	-.0043	.0415	.0085	-.0514	813.	
.3630	833.	426.	-478.	-97.	44.	171.	.0105	-.0350	-.0036	.0467	.0099	-.0514	750.	
.3640	852.	353.	-504.	-63.	79.	150.	.0095	-.0328	-.0027	.0517	.0115	-.0509	676.	
.3650	816.	255.	-496.	-38.	106.	97.	.0086	-.0306	-.0016	.0570	.0130	-.0508	555.	

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

83/12/02. 18.29.13.

CONDITION 24
 LOADS
 SHOCK
 PRESSURE
 ENGLISH UNITS

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

SECTION 55 MEMBER 1 SEQUENCE 826 LOCATION BEG TYPE RU

.3570	-102.	361.	31.	-395.	31.	-48.	.0098	-.0466	-.0076	.0263	.0108	-.0380	1490.
.3580	74.	432.	-55.	-353.	9.	11.	.0111	-.0451	-.0073	.0266	.0093	-.0429	1321.
.3590	271.	478.	-152.	-302.	-11.	64.	.0120	-.0435	-.0067	.0288	.0082	-.0466	1152.
.3600	469.	502.	-254.	-246.	-22.	111.	.0125	-.0416	-.0059	.0322	.0075	-.0491	1010.
.3610	646.	500.	-349.	-191.	-16.	146.	.0123	-.0395	-.0051	.0365	.0076	-.0506	899.
.3620	763.	475.	-423.	-140.	8.	166.	.0116	-.0373	-.0043	.0415	.0085	-.0514	813.
.3630	833.	426.	-478.	-97.	44.	171.	.0105	-.0350	-.0036	.0467	.0099	-.0514	750.
.3640	852.	353.	-504.	-63.	79.	150.	.0095	-.0328	-.0027	.0517	.0115	-.0509	676.
.3650	816.	255.	-496.	-38.	106.	97.	.0086	-.0306	-.0016	.0570	.0130	-.0508	555.

ADLPIPE PAGE 2080

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/31/02.

18.29.13.

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	55	MEMBER	1	SEQUENCE	826	LOCATION	BEG	TYPE	RU	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)										
.3660	715.	141.	-448.	-18.	118.	14.	.0081	-.0285	.0001	.0623	.0143	-.0513	450.			
.3670	548.	22.	-357.	1.	112.	-85.	.0079	-.0265	.0023	.0672	.0130	-.0524	525.			
.3680	329.	-79.	-233.	16.	89.	-197.	.0081	-.0246	.0047	.0712	.0149	-.0538	809.			
.3690	0.	-222.	-92.	19.	59.	-324.	.0086	-.0228	.0069	.0743	.0144	-.0561	1232.			
.3700	-177.	-343.	55.	11.	31.	-458.	.0092	-.0210	.0086	.0762	.0137	-.0591	1715.			
.3710	-443.	-444.	201.	-6.	14.	-576.	.0097	-.0192	.0095	.0763	.0128	-.0623	2150.			
.3720	-704.	-519.	336.	-29.	12.	-661.	.0100	-.0173	.0094	.0742	.0115	-.0650	2472.			
.3730	-936.	-571.	449.	-58.	23.	-719.	.0101	-.0155	.0084	.0703	.0099	-.0673	2695.			
.3740	-1113.	-607.	529.	-92.	43.	-757.	.0101	-.0138	.0066	.0654	.0082	-.0694	2851.			
.3750	-1223.	-621.	573.	-124.	61.	-768.	.0102	-.0123	.0045	.0596	.0061	-.0708	2913.			
.3760	-1271.	-605.	588.	-143.	66.	-740.	.0105	-.0109	.0025	.0531	.0032	-.0713	2826.			
.3770	-1260.	-561.	577.	-147.	55.	-675.	.0110	-.0097	.0009	.0461	-.0004	-.0706	2587.			
.3780	-1189.	-500.	541.	-137.	24.	-585.	.0117	-.0088	-.0001	.0392	-.0046	-.0689	2246.			
.3790	-1054.	-431.	479.	-121.	-23.	-480.	.0127	-.0083	-.0006	.0325	-.0091	-.0659	1850.			
.3800	-869.	-353.	394.	-100.	-81.	-357.	.0140	-.0084	-.0009	.0257	-.0138	-.0615	1417.			
.3810	-661.	-267.	293.	-77.	-140.	-216.	.0152	-.0089	-.0010	.0187	-.0185	-.0555	1002.			
.3820	-456.	-178.	201.	-56.	-192.	-62.	.0161	-.0097	-.0011	.0114	-.0229	-.0483	783.			
.3830	-267.	-94.	109.	-44.	-233.	92.	.0166	-.0110	-.0015	.0038	-.0268	-.0400	949.			
.3840	-100.	-21.	25.	-43.	-261.	239.	.0168	-.0127	-.0021	-.0039	-.0301	-.0309	1332.			
.3850	34.	37.	-43.	-55.	-279.	371.	.0167	-.0148	-.0029	-.0114	-.0329	-.0212	1745.			
.3860	112.	79.	-84.	-73.	-290.	483.	.0162	-.0172	-.0038	-.0185	-.0353	-.0116	2120.			
.3870	125.	106.	-89.	-95.	-296.	575.	.0153	-.0197	-.0044	-.0247	-.0372	-.0021	2439.			
.3880	82.	113.	-64.	-120.	-300.	642.	.0140	-.0224	-.0047	-.0300	-.0388	.0071	2683.			
.3890	2.	96.	-18.	-151.	-303.	674.	.0124	-.0252	-.0047	-.0341	-.0399	.0156	2816.			
.3900	-101.	59.	40.	-182.	-302.	674.	.0105	-.0276	-.0045	-.0369	-.0404	.0225	2839.			
.3910	-225.	20.	108.	-205.	-290.	661.	.0081	-.0293	-.0040	-.0388	-.0401	.0276	2802.			
.3920	-365.	-10.	179.	-216.	-265.	652.	.0053	-.0300	-.0034	-.0404	-.0391	.0312	2747.			
.3930	-499.	-37.	242.	-216.	-227.	639.	.0019	-.0297	-.0026	-.0415	-.0376	.0331	2657.			
.3940	-597.	-68.	283.	-209.	-177.	612.	-.0019	-.0285	-.0017	-.0415	-.0353	.0330	2502.			
.3950	-643.	-98.	294.	-190.	-119.	576.	-.0059	-.0264	-.0007	-.0405	-.0322	.0307	2308.			
.3960	-645.	-113.	280.	-150.	-58.	550.	-.0101	-.0232	.0005	-.0387	-.0290	.0269	2141.			
.3970	-610.	-109.	247.	-88.	1.	539.	-.0145	-.0191	.0022	-.0364	-.0259	.0216	2037.			
.3980	-527.	-95.	189.	-10.	57.	530.	-.0189	-.0141	.0041	-.0332	-.0228	.0148	1989.			
.3990	-384.	-72.	101.	79.	109.	517.	-.0231	-.0086	.0062	-.0293	-.0195	.0063	1996.			
.4000	-186.	-37.	-14.	175.	156.	510.	-.0270	-.0025	.0082	-.0255	-.0162	-.0033	2095.			

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/31/02.

18.29.13.

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

.3950	-647.	-98.	294.	-190.	-119.	576.	-.0059	-.0264	-.0007	-.0405	-.0322	.0307	2308.
.3960	-645.	-113.	280.	-150.	-58.	550.	-.0101	-.0232	.0005	-.0387	-.0290	.0269	2141.
.3970	-610.	-109.	247.	-98.	1.	539.	-.0145	-.0191	.0022	-.0364	-.0259	.0216	2037.
.3980	-517.	-65.	159.	-10.	37.	520.	-.0179	-.0141	.0041	-.0332	-.0228	.0148	1989.
.3990	-324.	-72.	101.	79.	104.	517.	-.0271	-.0076	.0062	-.0293	-.0195	.0063	1990.
.4000	-186.	-27.	-14.	175.	156.	510.	-.0270	-.0025	.0082	-.0255	-.0162	-.0033	2095.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/31/02.

18.29.13.

S/RV PIPING KEWAUNEE GKWOPF 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

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)
.0600	-1813.	-1113.	596.	-921.	877.	-486.	.0167	.0177	.0515	.0105	.0070	-.0902	5082.

SECTION	55	MEMBER	1	SEQUENCE	74	LOCATION	END	TYPE	RU	DY	DZ	RX	RY	RZ	STRESS (PSI)
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	-0.	0.	0.	0.	-0.	-0.	-.0000	-.0000	.0000	-.0000	.0000	.0000	.0000	0.	
.0020	-0.	0.	0.	0.	-0.	-0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	.0000	0.	
.0030	-0.	0.	0.	0.	0.	-0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	.0000	1.	
.0040	-0.	0.	-0.	-0.	1.	0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	.0000	3.	
.0050	1.	0.	-1.	-0.	2.	1.	-.0000	-.0000	.0000	.0000	-.0001	-.0000	-.0000	8.	
.0060	4.	1.	-4.	-1.	4.	1.	-.0000	-.0000	-.0000	.0001	-.0003	-.0001	-.0001	16.	
.0070	10.	2.	-7.	-2.	6.	1.	-.0001	-.0000	-.0001	.0002	-.0007	-.0001	-.0001	25.	
.0080	19.	6.	-12.	-1.	8.	1.	-.0003	-.0000	-.0003	.0004	-.0013	.0000	.0000	32.	
.0090	34.	11.	-19.	1.	10.	2.	-.0007	-.0001	-.0007	.0008	-.0020	.0001	.0001	37.	
.0100	61.	18.	-31.	2.	10.	3.	-.0012	-.0001	-.0012	.0014	-.0030	-.0001	-.0001	39.	
.0110	107.	28.	-52.	4.	7.	4.	-.0020	-.0002	-.0020	.0023	-.0044	-.0004	-.0004	33.	
.0120	177.	41.	-83.	6.	-1.	3.	-.0032	-.0002	-.0030	.0038	-.0060	-.0007	-.0007	25.	
.0130	270.	62.	-120.	9.	-16.	-1.	-.0048	-.0004	-.0044	.0058	-.0079	-.0006	-.0006	69.	
.0140	364.	93.	-154.	15.	-39.	-9.	-.0069	-.0006	-.0062	.0083	-.0099	-.0001	-.0001	161.	
.0150	441.	128.	-174.	24.	-71.	-24.	-.0093	-.0010	-.0083	.0110	-.0119	.0008	.0008	293.	
.0160	482.	158.	-171.	36.	-109.	-45.	-.0117	-.0012	-.0106	.0135	-.0137	.0018	.0018	461.	
.0170	471.	170.	-138.	49.	-151.	-74.	-.0139	-.0013	-.0127	.0149	-.0148	.0025	.0025	655.	
.0180	391.	158.	-72.	61.	-194.	-106.	-.0154	-.0011	-.0143	.0150	-.0147	.0026	.0026	855.	
.0190	239.	122.	25.	68.	-229.	-135.	-.0160	-.0007	-.0147	.0137	-.0127	.0019	.0019	1024.	
.0200	21.	70.	144.	64.	-249.	-154.	-.0151	-.0003	-.0134	.0113	-.0084	.0007	.0007	1118.	
.0210	-232.	5.	261.	43.	-245.	-154.	-.0128	.0002	-.0101	.0083	-.0018	-.0013	-.0013	1092.	
.0220	-457.	-85.	338.	-13.	-213.	-134.	-.0091	.0009	-.0048	.0061	.0068	-.0053	-.0053	942.	
.0230	-632.	-131.	370.	-90.	-154.	-102.	-.0046	.0014	.0020	.0044	.0161	-.0096	-.0096	766.	
.0240	-775.	-252.	379.	-161.	-73.	-67.	.0001	.0012	.0091	.0027	.0241	-.0114	-.0114	707.	
.0250	-946.	-281.	412.	-195.	4.	-30.	.0046	.0005	.0147	.0002	.0303	-.0104	-.0104	746.	
.0260	-1148.	-301.	482.	-197.	49.	15.	.0090	-.0003	.0175	-.0025	.0357	-.0102	-.0102	760.	
.0270	-1241.	-379.	511.	-194.	61.	62.	.0129	-.0003	.0177	-.0043	.0395	-.0151	-.0151	792.	
.0280	-1177.	-476.	479.	-163.	58.	89.	.0151	-.0000	.0161	-.0083	.0393	-.0197	-.0197	726.	
.0290	-1389.	-507.	466.	-59.	29.	90.	.0129	-.0007	.0129	-.0160	.0366	-.0179	-.0179	443.	
.0300	-1038.	-511.	464.	52.	-43.	123.	.0177	-.0014	.0083	-.0217	.0374	-.0169	-.0169	524.	
.0310	-819.	-483.	376.	124.	-82.	194.	.0208	-.0017	.0061	-.0241	.0393	-.0183	-.0183	912.	
.0320	-447.	-404.	161.	163.	-44.	284.	.0239	-.0025	.0075	-.0270	.0388	-.0161	-.0161	1233.	

.0330	65.	-313.	-154.	150.	47.	-280.	.0263	-.0024	.0129	-.0267	.0378	-.0109	-.0109	1467.
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.0200	21.	70.	144.	64.	-249.	-154.	-1151	-.0003	-.0134	.0113	-.0084	.0007	1024.
.0210	-332.	5.	261.	43.	-245.	-154.	-.128	.0002	-.0101	.0083	-.0018	-.0013	1092.
.0220	-457.	-85.	338.	-12.	-213.	-124.	-.0091	.0009	-.0048	.0061	.0068	-.0053	942.
.0230	-632.	-131.	376.	-90.	-154.	-102.	-.0046	.0014	.0020	.0044	.0161	-.0096	766.
.0240	-775.	-252.	379.	-161.	-73.	-67.	.0001	.0012	.0091	.0027	.0241	-.0114	707.
.0250	-946.	-231.	412.	-105.	4.	-30.	.0046	.0005	.0147	.0002	.0303	-.0104	746.
.0260	-1143.	-301.	482.	-197.	49.	15.	.0090	-.0003	.0175	-.0025	.0357	-.0102	760.
.0270	-1241.	-379.	511.	-194.	61.	62.	.0129	-.0003	.0177	-.0043	.0395	-.0151	792.
.0280	-1177.	-476.	479.	-163.	58.	39.	.0151	-.0000	.0161	-.0083	.0293	-.0197	726.
.0290	-1089.	-507.	466.	-59.	29.	90.	.0159	-.0007	.0129	-.0160	.0366	-.0179	443.
.0300	-1008.	-511.	464.	52.	-42.	123.	.0177	-.0014	.0098	-.0217	.0374	-.0169	524.
.0310	-819.	-483.	371.	124.	-82.	124.	.0208	-.0017	.0061	-.0241	.0393	-.0183	912.
.0320	-447.	-404.	161.	163.	-44.	284.	.0239	-.0025	.0075	-.0270	.0388	-.0161	1233.

.0330 60. -313. -154. 150. 47. 360. .0263 -.0034 .0128 -.0287 .0378 -.0109 1467.

ADLPIPE PAGE 2002

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

63/12/02.

18.29.13.

570V PIPING KEAUNEE GKW02F 2 RUP DISK
L SAFETY COLD SKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

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	55	MEMBER	1	SEQUENCE	74	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	541.	-188.	-492.	72.	191.	454.	.0293	-.0041	.0194	-.0246	.0364	-.0066	1858.		
.0350	852.	26.	-753.	-10.	368.	578.	.0321	-.0048	.0240	-.0158	.0316	-.0023	2558.		
.0360	1040.	235.	-897.	-45.	474.	658.	.0323	-.0048	.0243	-.0077	.0240	.0018	3032.		
.0370	1281.	300.	-985.	-49.	443.	624.	.0279	-.0027	.0197	-.0027	.0146	.0021	2862.		
.0380	1585.	282.	-1040.	-24.	320.	501.	.0196	.0007	.0103	.0005	.0009	-.0000	2222.		
.0390	1691.	352.	-941.	75.	131.	345.	.0091	.0037	-.0029	.0028	-.0146	.0031	1407.		
.0400	1432.	509.	-617.	235.	-122.	173.	-.0007	.0058	-.0171	.0041	-.0243	.0120	1196.		
.0410	1094.	590.	-291.	321.	-367.	7.	-.0075	.0088	-.0271	.0061	-.0272	.0164	1820.		
.0420	962.	577.	-183.	270.	-408.	-122.	-.0115	.0127	-.0273	.0067	-.0303	.0163	1881.		
.0430	949.	534.	-234.	112.	-280.	-209.	-.0134	.0160	-.0172	.0061	-.0317	.0170	1370.		
.0440	770.	520.	-270.	-125.	-71.	-246.	-.0120	.0180	-.0012	.0103	-.0260	.0189	1065.		
.0450	380.	601.	-254.	-396.	214.	-198.	-.0073	.0185	.0152	.0219	-.0183	.0197	1837.		
.0460	11.	723.	-229.	-608.	484.	-127.	-.0032	.0183	.0274	.0332	-.0149	.0200	2940.		
.0470	-136.	712.	-187.	-676.	548.	-176.	-.0050	.0181	.0325	.0347	-.0137	.0209	3314.		
.0480	-85.	552.	-108.	-597.	383.	-357.	-.0122	.0152	.0289	.0267	-.0142	.0218	2964.		
.0490	-40.	434.	30.	-414.	141.	-528.	-.0206	.0175	.0177	.0182	-.0187	.0220	2559.		
.0500	52.	440.	252.	-178.	-122.	-615.	-.0278	.0150	.0030	.0145	-.0223	.0220	2435.		
.0510	268.	429.	460.	33.	-398.	-670.	-.0337	.0117	-.0092	.0127	-.0195	.0209	2913.		
.0520	-141.	319.	462.	145.	-540.	-709.	-.0372	.0084	-.0131	.0085	-.0154	.0184	3371.		
.0530	152.	197.	252.	137.	-447.	-669.	-.0365	.0046	-.0076	.0035	-.0137	.0149	3049.		
.0540	292.	128.	34.	43.	-235.	-525.	-.0311	.0003	.0039	.0035	-.0072	.0094	2152.		
.0550	194.	93.	-85.	-84.	-20.	-324.	-.0229	-.0042	.0169	.0080	.0055	.0020	1253.		
.0560	94.	50.	-185.	-181.	191.	-144.	-.0155	-.0014	.0280	.0095	.0139	-.0046	1135.		
.0570	151.	-59.	-292.	-203.	330.	-47.	-.0122	-.0115	.0338	.0047	.0152	-.0107	1458.		
.0580	228.	-249.	-284.	-131.	244.	-44.	-.0138	-.0133	.0317	-.0028	.0167	-.0189	1046.		
.0590	113.	-416.	-82.	32.	-12.	-84.	-.0179	-.0143	.0220	-.0160	.0191	-.0271	339.		
.0600	-211.	-500.	250.	245.	-274.	-121.	-.0214	-.0152	.0089	-.0178	.0182	-.0324	1445.		
.0610	-591.	-600.	585.	421.	-487.	-153.	-.0233	-.0150	-.0017	-.0266	.0178	-.0382	2472.		
.0620	-871.	-805.	806.	482.	-821.	-168.	-.0231	-.0133	-.0048	-.0351	.0221	-.0488	3001.		
.0630	-1060.	-1028.	867.	408.	-569.	-123.	-.0194	-.0107	.0014	-.0421	.0277	-.0610	2654.		
.0640	-1300.	-1152.	838.	233.	-307.	2.	-.0111	-.0085	.0150	-.0454	.0326	-.0699	1437.		
.0650	-1641.	-1172.	803.	-4.	34.	180.	-.0001	-.0070	.0313	-.0417	.0395	-.0759	683.		
.0660	-1921.	-1132.	753.	-278.	334.	366.	.0095	-.0056	.0449	-.0370	.0459	-.0814	2050.		
.0670	-1970.	-1103.	663.	-385.	531.	490.	.0146	-.0036	.0514	-.0262	.0449	-.0852	3055.		
.0680	-1812.	-1113.	396.	-390.	536.	492.	.0140	-.0009	.0471	-.0244	.0375	-.0865	3081.		
.0690	-1596.	-1121.	632.	-253.	310.	397.	.0085	.0021	.0315	-.0235	.0287	-.0855	2104.		
.0700	-1389.	-1019.	745.	-17.	-42.	282.	.0004	.0042	.0088	-.0199	.0187	-.0801	1067.		
.0710	-1133.	-824.	827.	237.	-378.	175.	-.0076	.0057	-.0141	-.0149	.0078	-.0692	1789.		

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

.0630	-1060.	-1028.	267.	408.	-569.	-122.	-1194	-.0107	.0014	-.0421	.0277	-.0610	2654.
.0640	-1300.	-1152.	838.	273.	-307.	2.	-.0111	-.0005	.0150	-.0454	.0326	-.0699	1437.
.0650	-1641.	-1172.	803.	-4.	34.	180.	-.0001	-.0070	.0313	-.0417	.0395	-.0759	683.
.0660	-1921.	-1177.	757.	-278.	734.	366.	.0095	-.0056	.0449	-.0330	.0459	-.0814	2050.
.0670	-1970.	-1103.	663.	-385.	531.	490.	.0146	-.0036	.0514	-.0262	.0449	-.0852	3055.
.0680	-1817.	-1113.	596.	-390.	536.	492.	.0140	-.0009	.0471	-.0244	.0375	-.0865	3081.
.0690	-1596.	-1121.	632.	-253.	310.	397.	.0085	.0021	.0315	-.0235	.0287	-.0855	2104.
.0700	-1389.	-1019.	745.	-17.	-42.	282.	.0004	.0042	.0088	-.0199	.0187	-.0801	1067.
.0710	-1133.	-824.	827.	237.	-178.	175.	-.0076	.0053	-.0141	-.0149	.0078	-.0692	1784.

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ADLPIPE STRESS ANALYSIS

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

CONDITION 24

LOADS
SHOCK
PRESSURE

ENGLISH UNITS

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

SECTION	55	MEMBER	1	SEQUENCE	74	LOCATION	END	TYPE	RU	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0720	-747.	-649.	772.	400.	-610.	73.	-.0129	.0063	-.0302	-.0091	-.0003	-.0563	2735.	
.0730	-260.	-492.	541.	409.	-657.	23.	-.0134	.0071	-.0356	-.0003	-.0037	-.0436	2892.	
.0740	180.	-256.	194.	283.	-477.	79.	-.0086	.0070	-.0300	.0128	-.0039	-.0292	2092.	
.0750	460.	36.	-166.	72.	-144.	199.	.0004	.0060	-.0172	.0286	-.0010	-.0127	958.	
.0760	634.	283.	-491.	-165.	214.	304.	.0109	.0053	-.0025	.0437	.0042	.0032	1520.	
.0770	830.	467.	-778.	-356.	504.	359.	.0192	.0052	.0087	.0554	.0069	.0171	2666.	
.0780	1072.	616.	-581.	-435.	631.	349.	.0223	.0056	.0122	.0634	.0055	.0298	3142.	
.0790	1278.	729.	-1028.	-379.	529.	250.	.0201	.0062	.0060	.0684	.0028	.0415	2603.	
.0800	1400.	830.	-932.	-218.	260.	84.	.0144	.0068	-.0080	.0716	-.0009	.0531	1304.	
.0810	1467.	961.	-776.	-10.	-49.	-84.	.0071	.0069	-.0246	.0741	-.0065	.0648	366.	
.0820	1521.	1074.	-641.	164.	-315.	-216.	.0001	.0069	-.0375	.0762	-.0107	.0734	1553.	
.0830	1564.	1087.	-578.	227.	-470.	-302.	-.0040	.0076	-.0424	.0778	-.0107	.0757	2249.	
.0840	1535.	1034.	-596.	158.	-428.	-315.	-.0031	.0087	-.0375	.0795	-.0084	.0729	2070.	
.0850	1349.	995.	-633.	-1.	-208.	-240.	.0022	.0093	-.0247	.0800	-.0047	.0679	1186.	
.0860	1008.	954.	-624.	-194.	53.	-114.	.0096	.0097	-.0083	.0814	.0029	.0606	863.	
.0870	636.	851.	-570.	-366.	257.	-2.	.0165	.0103	.0072	.0801	.0125	.0503	1670.	
.0880	337.	695.	-488.	-455.	373.	57.	.0209	.0112	.0183	.0726	.0191	.0394	2205.	
.0890	92.	525.	-340.	-427.	347.	63.	.0220	.0121	.0230	.0670	.0234	.0293	2069.	
.0900	-156.	363.	-107.	-307.	169.	40.	.0203	.0125	.0217	.0460	.0289	.0193	1316.	
.0910	-375.	226.	132.	-153.	-43.	22.	.0180	.0126	.0178	.0324	.0335	.0093	599.	
.0920	-491.	110.	275.	-32.	-163.	31.	.0164	.0122	.0156	.0201	.0345	-.0002	631.	
.0930	-492.	-6.	290.	7.	-169.	81.	.0160	.0113	.0176	.0113	.0344	-.0107	698.	
.0940	-434.	-105.	205.	-46.	-69.	184.	.0158	.0101	.0233	.0088	.0343	-.0230	755.	
.0950	-381.	-151.	73.	-147.	123.	334.	.0186	.0084	.0299	.0115	.0313	-.0353	1438.	
.0960	-354.	-168.	-36.	-225.	315.	475.	.0196	.0065	.0333	.0153	.0246	-.0465	2288.	
.0970	-318.	-221.	-69.	-222.	376.	548.	.0175	.0054	.0301	.0171	.0163	-.0575	2616.	
.0980	-235.	-319.	-23.	-114.	275.	538.	.0113	.0051	.0191	.0151	.0055	-.0683	2294.	
.0990	-150.	-429.	96.	88.	66.	464.	.0021	.0055	.0016	.0095	-.0085	-.0777	1781.	
.1000	-159.	-539.	296.	329.	-191.	356.	-.0076	.0065	-.0190	.0028	-.0228	-.0856	1945.	
.1010	-294.	-648.	534.	537.	-417.	255.	-.0156	.0079	-.0380	-.0018	-.0344	-.0935	2712.	
.1020	-497.	-751.	725.	653.	-514.	199.	-.0204	.0097	-.0512	-.0038	-.0439	-.1019	3189.	
.1030	-723.	-868.	829.	658.	-447.	182.	-.0212	.0120	-.0565	-.0047	-.0516	-.1098	3044.	
.1040	-987.	-1004.	879.	574.	-271.	178.	-.0180	.0147	-.0552	-.0053	-.0550	-.1161	2463.	
.1050	-1293.	-1125.	914.	454.	-57.	186.	-.0119	.0174	-.0501	-.0052	-.0541	-.1189	1844.	
.1060	-1572.	-1129.	935.	350.	149.	195.	-.0046	.0195	-.0441	-.0053	-.0505	-.1164	1597.	
.1070	-1715.	-1106.	928.	294.	233.	160.	.0020	.0213	-.0395	-.0070	-.0446	-.1077	1602.	
.1080	-1680.	-1045.	883.	296.	285.	64.	.0069	.0226	-.0367	-.0109	-.0370	-.0922	1553.	
.1090	-1498.	-898.	780.	337.	248.	-42.	.0109	.0232	-.0352	-.0142	-.0290	-.0715	1570.	

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ADLPIPE STRESS ANALYSIS

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

CONDITION 24

LOADS
SHOCK
PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING

.1000	-150.	-529.	297.	329.	-191.	356.	-1076	.0065	-.0190	.0028	-.0228	-.0856	1945.
.1010	-294.	-648.	534.	537.	-417.	255.	-.0156	.0079	-.0350	-.0018	-.0344	-.0935	2712.
.1020	-497.	-751.	725.	653.	-514.	199.	-.0204	.0097	-.0512	-.0038	-.0439	-.1019	3189.
.1030	-727.	-868.	829.	658.	-447.	132.	-.0212	.0120	-.0565	-.0047	-.0516	-.1098	3044.
.1040	-927.	-1004.	879.	574.	-371.	170.	-.0130	.0147	-.0552	-.0053	-.0550	-.1161	2463.
.1050	-1293.	-1105.	914.	454.	-32.	136.	-.0119	.0174	-.0501	-.0052	-.0541	-.1189	1844.
.1060	-1572.	-1129.	935.	350.	149.	195.	-.0046	.0195	-.0441	-.0053	-.0505	-.1164	1597.
.1070	-1715.	-1166.	928.	294.	268.	160.	.0020	.0213	-.0395	-.0070	-.0446	-.1077	1602.
.1080	-1680.	-1045.	833.	276.	235.	64.	.0069	.0226	-.0367	-.0109	-.0370	-.0922	1553.
.1090	-1492.	-898.	789.	337.	248.	-42.	.0109	.0232	-.0352	-.0142	-.0290	-.0715	1570.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DICK
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	55	MEMBER	1	SEQUENCE	74	LOCATION	END	TYPE	RU							
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS			
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)			
.1100	-1143.	-710.	586.	332.	225.	-114.	.0150	.0238	-.0335	-.0112	-.0212	-.0525	1557.			
.1110	-703.	-476.	315.	291.	239.	-179.	.0191	.0237	-.0303	-.0046	-.0146	-.0310	1555.			
.1120	-244.	-182.	18.	231.	299.	-248.	.0228	.0228	-.0255	.0036	-.0108	-.0042	1690.			
.1130	218.	149.	-301.	141.	399.	-278.	.0263	.0218	-.0208	.0157	-.0100	.0204	1890.			
.1140	659.	437.	-595.	41.	464.	-283.	.0289	.0221	-.0181	.0298	-.0103	.0376	2036.			
.1150	1069.	629.	-807.	-7.	423.	-343.	.0292	.0234	-.0185	.0387	-.0107	.0516	2034.			
.1160	1460.	777.	-943.	16.	792.	-457.	.0269	.0253	-.0215	.0408	-.0128	.0659	2027.			
.1170	1771.	956.	-1005.	89.	113.	-547.	.0233	.0274	-.0257	.0404	-.0152	.0783	2110.			
.1180	1944.	1083.	-990.	149.	-105.	-603.	.0202	.0304	-.0289	.0398	-.0127	.0836	2352.			
.1190	1928.	1178.	-899.	193.	-271.	-670.	.0189	.0337	-.0273	.0324	-.0074	.0886	2793.			
.1200	1765.	1148.	-809.	171.	-271.	-712.	.0208	.0371	-.0181	.0198	-.0033	.0936	2913.			
.1210	1492.	1105.	-770.	8.	-103.	-641.	.0262	.0411	-.0018	.0120	.0025	.0882	2423.			
.1220	1069.	1013.	-721.	-243.	161.	-471.	.0333	.0456	.0183	.0090	.0098	.0729	2068.			
.1230	580.	822.	-635.	-499.	430.	-324.	.0397	.0504	.0373	.0043	.0155	.0536	2738.			
.1240	122.	614.	-500.	-658.	630.	-241.	.0426	.0545	.0502	-.0047	.0148	.0371	3520.			
.1250	-274.	467.	-282.	-679.	644.	-185.	.0401	.0775	.0528	-.0129	.0103	.0214	3561.			
.1260	-603.	314.	36.	-567.	403.	-175.	.0327	.0600	.0443	-.0197	.0070	.0034	2676.			
.1270	-868.	146.	415.	-319.	34.	-260.	.0226	.0616	.0288	-.0337	.0004	-.0085	1543.			
.1280	-1001.	-32.	723.	-49.	-300.	-389.	.0139	.0620	.0126	-.0510	-.0099	-.0151	1842.			
.1290	-1024.	-137.	887.	129.	-508.	-420.	.0060	.0609	.0012	-.0604	-.0185	-.0222	2507.			
.1300	-984.	-165.	892.	166.	-548.	-324.	.0030	.0582	-.0022	-.0591	-.0222	-.0307	2457.			
.1310	-845.	-207.	728.	75.	-395.	-200.	.0046	.0547	.0024	-.0546	-.0246	-.0359	1676.			
.1320	-627.	-179.	452.	-55.	-85.	-88.	.0092	.0485	.0116	-.0516	-.0303	-.0308	502.			
.1330	-357.	-56.	156.	-176.	194.	47.	.0138	.0413	.0195	-.0440	-.0349	-.0218	995.			
.1340	-65.	113.	-69.	-223.	306.	171.	.0161	.0336	.0210	-.0333	-.0368	-.0127	1551.			
.1350	279.	222.	-210.	-140.	252.	169.	.0152	.0261	.0144	-.0298	-.0414	.0006	1247.			
.1360	694.	251.	-296.	48.	76.	24.	.0114	.0191	.0011	-.0341	-.0498	.0188	349.			
.1370	1052.	377.	-311.	289.	-171.	-128.	.0056	.0115	-.0153	-.0371	-.0581	.0394	1241.			
.1380	1254.	460.	-270.	491.	-417.	-213.	.0008	.0038	-.0304	-.0327	-.0614	.0559	2505.			
.1390	126.	930.	-216.	504.	-514.	-270.	.0005	-.0032	-.0394	-.0290	-.0631	.0707	3077.			
.1400	1157.	508.	-202.	582.	-401.	-310.	.0055	-.0093	-.0401	-.0298	-.0655	.0839	2881.			
.1410	975.	419.	-246.	462.	-163.	-262.	.0139	-.0140	-.0334	-.0284	-.0639	.0888	2074.			
.1420	714.	323.	-223.	305.	107.	-126.	.0074	-.0100	-.0231	-.0253	-.0583	.0870	1294.			
.1430	386.	160.	-264.	191.	340.	-17.	.0028	-.0208	-.0138	-.0283	-.0520	.0636	1483.			
.1440	46.	-46.	-177.	176.	509.	21.	.0400	-.0229	-.0087	-.0395	-.0481	.0822	2012.			
.1450	-221.	-212.	-49.	248.	524.	66.	.0455	-.0244	-.0097	-.0509	-.0440	.0782	2178.			
.1460	-349.	-356.	77.	370.	384.	145.	.0465	-.0249	-.0143	-.0589	-.0374	.0678	2064.			
.1470	-387.	-519.	190.	546.	202.	194.	.0459	-.0245	-.0209	-.0721	-.0327	.0580	2291.			

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ADLPIPE STRESS ANALYSIS

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

.1390	1268.	530.	-210.	584.	-514.	-270.	.0005	-.0032	-.0394	-.0290	-.0631	.0707	3077.
.1400	1152.	508.	-202.	582.	-401.	-310.	.0055	-.0093	-.0401	-.0298	-.0655	.0839	2881.
.1410	975.	419.	-246.	462.	-163.	-262.	.0139	-.0140	-.0334	-.0284	-.0639	.0888	2074.
.1420	714.	323.	-280.	305.	107.	-126.	.0274	-.0180	-.0231	-.0257	-.0583	.0870	1294.
.1430	386.	160.	-264.	191.	340.	-17.	.0323	-.0208	-.0138	-.0283	-.0520	.0836	1483.
.1440	46.	-46.	-177.	176.	509.	21.	.0408	-.0229	-.0087	-.0395	-.0481	.0822	2012.
.1450	-221.	-212.	-49.	248.	524.	66.	.0455	-.0244	-.0093	-.0509	-.0440	.0782	2178.
.1460	-349.	-356.	77.	370.	384.	145.	.0465	-.0249	-.0143	-.0589	-.0374	.0678	2064.
.1470	-387.	-515.	190.	546.	202.	124.	.0459	-.0245	-.0209	-.0721	-.0327	.0580	2291.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.13.

S/RV PIPING KEWAUNEE GKW08F 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	55	MEMBER	1	SEQUENCE	74	LOCATION	END	TYPE	RU							STRESS
TIME	FX	FY	FZ	MX	MY	MZ				DZ	RX	RY	RZ			(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)			(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)		
.1480	-364.	-711.	251.	714.	77.	213.	.0461	-.0229	-.0257	-.0899	-.0297	.0491	2798.			
.1490	-309.	-839.	231.	814.	40.	315.	.0476	-.0207	-.0258	-.1032	-.0249	.0375	3262.			
.1500	-205.	-881.	114.	816.	87.	524.	.0498	-.0179	-.0199	-.1088	-.0164	.0221	3635.			
.1510	0.	-944.	-114.	722.	216.	726.	.0529	-.0137	-.0087	-.1129	-.0071	.0060	3909.			
.1520	290.	-992.	-399.	589.	420.	863.	.0558	-.0087	.0052	-.1191	-.0015	-.0042	4205.			
.1530	554.	-930.	-653.	446.	575.	987.	.0564	-.0034	.0173	-.1191	.0037	-.0117	4578.			
.1540	726.	-740.	-789.	339.	587.	1097.	.0524	.0024	.0243	-.1112	.0102	-.0178	4816.			
.1550	857.	-565.	-817.	292.	469.	1086.	.0438	.0096	.0251	-.1042	.0140	-.0211	4549.			
.1560	1039.	-476.	-805.	273.	278.	970.	.0314	.0127	.0213	-.1015	.0124	-.0223	3695.			
.1570	1183.	-388.	-739.	263.	47.	674.	.0155	.0283	.0149	-.0967	.0072	-.0204	2706.			
.1580	1169.	-189.	-599.	207.	-212.	455.	-.0017	.0377	.0085	-.0824	.0046	-.0181	2025.			
.1590	1053.	41.	-424.	78.	-410.	216.	-.0176	.0468	.0044	-.0628	.0033	-.0130	1756.			
.1600	841.	286.	-270.	-105.	-70.	-67.	-.0311	.0549	.0047	-.0451	-.0011	-.0003	1815.			
.1610	615.	544.	-153.	-338.	-453.	-344.	-.0433	.0619	.0094	-.0264	-.0044	.0154	2472.			
.1620	383.	775.	-54.	-616.	-445.	-580.	-.0546	.0602	.0165	-.0035	-.0018	.0276	3571.			
.1630	92.	983.	70.	-861.	-415.	-814.	-.0640	.0730	.0239	.0155	.0010	.0413	4687.			
.1640	-249.	1128.	229.	-1039.	-367.	-1083.	-.0714	.0764	.0298	.0266	.0020	.0581	5766.			
.1650	-582.	1220.	407.	-1160.	-368.	-1337.	-.0777	.0779	.0334	.0354	.0048	.0734	6750.			
.1660	-874.	1321.	580.	-1221.	-409.	-1516.	-.0837	.0770	.0348	.0447	.0088	.0860	7424.			
.1670	-1087.	1366.	704.	-1238.	-432.	-1643.	-.0880	.0740	.0346	.0517	.0114	.0953	7845.			
.1680	-1252.	1311.	787.	-1205.	-402.	-1739.	-.0897	.0691	.0331	.0529	.0111	.1026	8039.			
.1690	-1367.	1214.	828.	-1140.	-357.	-1753.	-.0891	.0624	.0305	.0529	.0112	.1039	7918.			
.1700	-1396.	1096.	815.	-1038.	-314.	-1642.	-.0870	.0538	.0266	.0536	.0121	.0981	7346.			
.1710	-1326.	938.	754.	-872.	-263.	-1463.	-.0836	.0438	.0215	.0493	.0110	.0890	6435.			
.1720	-1139.	656.	643.	-667.	-230.	-1278.	-.0782	.0334	.0150	.0385	.0099	.0752	5450.			
.1730	-899.	366.	517.	-412.	-215.	-1041.	-.0717	.0223	.0073	.0247	.0090	.0589	4255.			
.1740	-627.	131.	378.	-134.	-223.	-711.	-.0648	.0105	-.0007	.0126	.0098	.0392	2827.			
.1750	-320.	-127.	218.	136.	-236.	-351.	-.0571	-.0007	-.0078	-.0003	.0124	.0160	1656.			
.1760	-14.	-433.	49.	393.	-211.	-15.	-.0481	-.0109	-.0128	-.0185	.0140	-.0066	1667.			
.1770	258.	-749.	-122.	602.	-150.	323.	-.0381	-.0195	-.0150	-.0372	.0161	-.0305	2610.			
.1780	427.	-974.	-258.	756.	-70.	699.	-.0278	-.0267	-.0146	-.0523	.0200	-.0555	3851.			
.1790	505.	-1220.	-354.	844.	14.	1057.	-.0176	-.0318	-.0120	-.0647	.0258	-.0808	5049.			
.1800	532.	-1450.	-424.	880.	115.	1331.	-.0080	-.0346	-.0076	-.0782	.0303	-.1024	5972.			
.1810	505.	-1605.	-455.	889.	219.	1537.	-.0003	-.0355	-.0021	-.0910	.0329	-.1179	6679.			
.1820	440.	-1678.	-447.	843.	264.	1703.	.0046	-.0346	.0032	-.0965	.0377	-.1317	7163.			
.1830	322.	-1674.	-391.	760.	264.	1804.	.0071	-.0318	.0079	-.0967	.0431	-.1413	7375.			
.1840	196.	-1622.	-309.	654.	260.	1800.	.0074	-.0274	.0122	-.0959	.0457	-.1440	7214.			
.1850	62.	-1519.	-219.	514.	254.	1713.	.0056	-.0218	.0162	-.0919	.0464	-.1411	6743.			

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.13.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

2 SAFETY COLD FKM24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

.1770	258.	-749.	-122.	602.	-150.	323.	-.0381	-.0195	-.0150	-.0372	.0161	-.0385	2610.
.1780	427.	-994.	-258.	756.	-70.	699.	-.0278	-.0267	-.0146	-.0523	.0200	-.0555	3851.
.1790	505.	-1220.	-354.	844.	14.	1057.	-.0176	-.0318	-.0120	-.0647	.0258	-.0808	5049.
.1800	532.	-1450.	-424.	910.	115.	1331.	-.0080	-.0346	-.0076	-.0782	.0303	-.1024	5972.
.1810	555.	-1635.	-455.	999.	219.	1537.	-.0003	-.0355	-.0021	-.0910	.0329	-.1179	6679.
.1820	540.	-1675.	-447.	843.	264.	1733.	.0046	-.0346	.0032	-.0965	.0377	-.1317	7163.
.1830	328.	-1674.	-391.	760.	264.	1804.	.0071	-.0318	.0079	-.0967	.0431	-.1413	7375.
.1840	196.	-1622.	-309.	654.	260.	1800.	.0074	-.0274	.0122	-.0959	.0457	-.1440	7214.
.1850	62.	-1519.	-219.	514.	254.	1713.	.0056	-.0218	.0162	-.0919	.0464	-.1411	6743.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.13.

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	55	MEMBER	1	SEQUENCE	74	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1860	-90.	-1331.	-116.	338.	232.	1595.	.0014	-.0154	.0198	-.0810	.0471	-.1347	6149.		
.1870	-241.	-1098.	-21.	122.	206.	1445.	-.0043	-.0083	.0228	-.0636	.0476	-.1266	5469.		
.1880	-381.	-838.	65.	-94.	204.	1233.	-.0112	-.0012	.0247	-.0455	.0449	-.1132	4679.		
.1890	-484.	-567.	141.	-295.	187.	970.	-.0193	.0057	.0250	-.0264	.0407	-.0960	3849.		
.1900	-537.	-271.	209.	-473.	119.	698.	-.0287	.0120	.0232	-.0044	.0379	-.0778	3180.		
.1910	-555.	59.	273.	-599.	21.	427.	-.0387	.0171	.0195	.0175	.0351	-.0571	2746.		
.1920	-522.	353.	315.	-676.	-83.	137.	-.0479	.0212	.0148	.0357	.0325	-.0350	2593.		
.1930	-425.	599.	313.	-720.	-174.	-146.	-.0556	.0242	.0106	.0505	.0312	-.0131	2818.		
.1940	-258.	831.	244.	-752.	-231.	-366.	-.0619	.0256	.0082	.0648	.0319	.0064	3237.		
.1950	-37.	1041.	105.	-784.	-229.	-514.	-.0660	.0256	.0083	.0785	.0338	.0228	3603.		
.1960	201.	1192.	-80.	-815.	-163.	-618.	-.0676	.0242	.0104	.0895	.0358	.0365	3866.		
.1970	424.	1291.	-277.	-829.	-62.	-679.	-.0674	.0218	.0132	.0977	.0372	.0469	4007.		
.1980	625.	1353.	-455.	-810.	24.	-686.	-.0668	.0185	.0148	.1046	.0381	.0521	3962.		
.1990	802.	1349.	-586.	-739.	53.	-669.	-.0668	.0149	.0137	.1085	.0380	.0518	3727.		
.2000	928.	1250.	-640.	-601.	13.	-675.	-.0675	.0114	.0093	.1062	.0359	.0477	3375.		
.2010	961.	1079.	-601.	-406.	-84.	-697.	-.0688	.0082	.0022	.0982	.0321	.0404	3026.		
.2020	879.	879.	-478.	-192.	-218.	-693.	-.0698	.0052	-.0058	.0886	.0288	.0289	2807.		
.2030	696.	653.	-308.	-5.	-346.	-656.	-.0699	.0027	-.0122	.0787	.0267	.0132	2768.		
.2040	430.	388.	-128.	127.	-408.	-600.	-.0678	.0009	-.0145	.0668	.0249	-.0045	2749.		
.2050	89.	102.	45.	185.	-377.	-520.	-.0631	-.0004	-.0120	.0540	.0233	-.0233	2495.		
.2060	-321.	-166.	210.	170.	-279.	-393.	-.0565	-.0012	-.0053	.0432	.0233	-.0439	1909.		
.2070	-765.	-405.	371.	104.	-152.	-236.	-.0488	-.0016	.0038	.0345	.0246	-.0651	1116.		
.2080	-1179.	-627.	524.	27.	-26.	-93.	-.0413	-.0014	.0130	.0252	.0250	-.0844	376.		
.2090	-1512.	-826.	669.	-31.	55.	12.	-.0350	-.0010	.0200	.0149	.0237	-.1007	241.		
.2100	-1747.	-971.	809.	-56.	55.	97.	-.0307	-.0004	.0233	.0063	.0219	-.1147	466.		
.2110	-1880.	-1044.	939.	-46.	-23.	169.	-.0285	.0000	.0229	.0003	.0199	-.1259	659.		
.2120	-1898.	-1066.	1033.	-8.	-139.	218.	-.0275	.0003	.0199	-.0047	.0172	-.1333	965.		
.2130	-1790.	-1058.	1059.	31.	-248.	249.	-.0268	.0003	.0164	-.0091	.0141	-.1371	1316.		
.2140	-1570.	-1009.	998.	41.	-318.	294.	-.0256	.0000	.0142	-.0107	.0119	-.1386	1626.		
.2150	-1278.	-907.	857.	11.	-326.	372.	-.0233	-.0007	.0143	-.0086	.0110	-.1381	1846.		
.2160	-953.	-772.	653.	-55.	-264.	465.	-.0195	-.0020	.0165	-.0044	.0111	-.1349	2006.		
.2170	-610.	-624.	412.	-139.	-157.	552.	-.0147	-.0036	.0198	.0008	.0116	-.1292	2205.		
.2180	-257.	-469.	164.	-214.	-50.	627.	-.0102	-.0054	.0225	.0067	.0125	-.1216	2480.		
.2190	85.	-311.	-58.	-255.	19.	677.	-.0069	-.0073	.0229	.0128	.0135	-.1127	2700.		
.2200	379.	-173.	-221.	-245.	34.	680.	-.0049	-.0092	.0202	.0173	.0139	-.1024	2702.		
.2210	591.	-67.	-308.	-188.	3.	634.	-.0039	-.0108	.0146	.0196	.0135	-.0911	2468.		
.2220	710.	15.	-330.	-104.	-55.	561.	-.0033	-.0122	.0074	.0209	.0129	-.0797	2140.		
.2230	743.	72.	-312.	-22.	-105.	482.	-.0026	-.0134	.0006	.0222	.0124	-.0694	1845.		

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ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.14.

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 55 MEMBER 1 SEQUENCE 74 LOCATION END TYPE RU

.2150	-1270.	-907.	57.	11.	-326.	372.	-.0233	-.0007	.0143	-.0086	.0110	-.1381	1846.
.2160	-953.	-772.	653.	-55.	-264.	465.	-.0195	-.0020	.0165	-.0044	.0111	-.1349	2006.
.2170	-610.	-624.	412.	-139.	-157.	552.	-.0147	-.0036	.0198	.0008	.0116	-.1292	2205.
.2180	-257.	-469.	164.	-214.	-50.	627.	-.0102	-.0054	.0225	.0067	.0125	-.1216	2480.
.2190	85.	-311.	-98.	-255.	19.	677.	-.0069	-.0073	.0229	.0128	.0135	-.1127	2700.
.2200	379.	-173.	-221.	-245.	34.	680.	-.0049	-.0092	.0202	.0173	.0139	-.1024	2702.
.2210	591.	-67.	-308.	-188.	3.	634.	-.0039	-.0108	.0146	.0196	.0135	-.0911	2468.
.2220	710.	15.	-330.	-104.	-55.	561.	-.0033	-.0122	.0074	.0209	.0129	-.0797	2140.
.2230	743.	72.	-312.	-22.	-105.	482.	-.0026	-.0134	.0006	.0222	.0124	-.0694	1845.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.14.

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	55	MEMBER	1	SEQUENCE	74	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)		
.2240	695.	96.	-277.	34.	-108.	403.	-.0008	-.0144	-.0040	.0231	.0118	-.0599	1564.		
.2250	563.	91.	-236.	54.	-45.	333.	.0026	-.0152	-.0058	.0237	.0108	-.0513	1270.		
.2260	358.	77.	-189.	42.	71.	286.	.0073	-.0158	-.0050	.0250	.0098	-.0441	1111.		
.2270	119.	54.	-137.	17.	204.	259.	.0126	-.0163	-.0030	.0267	.0086	-.0388	1234.		
.2280	-107.	11.	-79.	7.	321.	227.	.0176	-.0164	-.0013	.0269	.0062	-.0345	1469.		
.2290	-293.	-49.	-9.	36.	393.	175.	.0217	-.0161	-.0013	.0245	.0019	-.0306	1611.		
.2300	-427.	-107.	73.	111.	400.	113.	.0243	-.0157	-.0038	.0208	-.0038	-.0273	1606.		
.2310	-494.	-144.	154.	220.	349.	53.	.0257	-.0151	-.0084	.0171	-.0103	-.0246	1551.		
.2320	-473.	-159.	207.	346.	268.	-1.	.0262	-.0143	-.0136	.0134	-.0177	-.0221	1632.		
.2330	-352.	-159.	204.	463.	192.	-46.	.0265	-.0134	-.0178	.0094	-.0254	-.0194	1879.		
.2340	-146.	-134.	139.	550.	141.	-68.	.0273	-.0122	-.0197	.0063	-.0325	-.0168	2134.		
.2350	114.	-73.	20.	596.	123.	-56.	.0288	-.0109	-.0185	.0047	-.0379	-.0143	2281.		
.2360	399.	19.	-138.	604.	139.	-22.	.0311	-.0092	-.0145	.0039	-.0416	-.0114	2314.		
.2370	699.	122.	-317.	580.	176.	14.	.0336	-.0071	-.0081	.0029	-.0436	-.0080	2264.		
.2380	999.	228.	-498.	535.	210.	39.	.0358	-.0043	-.0006	.0018	-.0441	-.0044	2150.		
.2390	1271.	341.	-653.	479.	221.	50.	.0368	-.0009	.0069	.0013	-.0430	-.0007	1977.		
.2400	1478.	460.	-759.	419.	205.	35.	.0366	.0030	.0135	.0012	-.0409	.0034	1745.		
.2410	1596.	572.	-802.	356.	163.	-12.	.0351	.0074	.0190	.0013	-.0382	.0078	1463.		
.2420	1620.	669.	-785.	284.	107.	-86.	.0325	.0123	.0233	.0022	-.0351	.0118	1178.		
.2430	1555.	746.	-720.	196.	49.	-175.	.0289	.0175	.0268	.0040	-.0317	.0147	999.		
.2440	1412.	795.	-619.	90.	1.	-277.	.0246	.0229	.0299	.0066	-.0282	.0165	1088.		
.2450	1192.	818.	-487.	-29.	-29.	-389.	.0201	.0281	.0326	.0098	-.0247	.0177	1460.		
.2460	904.	825.	-326.	-151.	-45.	-502.	.0154	.0329	.0346	.0134	-.0213	.0186	1966.		
.2470	570.	820.	-144.	-264.	-56.	-611.	.0107	.0369	.0355	.0174	-.0178	.0194	2494.		
.2480	223.	793.	47.	-358.	-67.	-716.	.0062	.0400	.0351	.0208	-.0146	.0198	2999.		
.2490	-106.	734.	232.	-425.	-78.	-818.	.0019	.0420	.0332	.0229	-.0120	.0199	3452.		
.2500	-410.	650.	406.	-458.	-91.	-908.	-.0018	.0429	.0297	.0236	-.0101	.0199	3811.		
.2510	-689.	552.	567.	-457.	-101.	-975.	-.0047	.0423	.0249	.0233	-.0088	.0197	4036.		
.2520	-937.	439.	706.	-425.	-101.	-1011.	-.0062	.0404	.0190	.0220	-.0082	.0192	4110.		
.2530	-1135.	306.	810.	-367.	-83.	-1016.	-.0061	.0371	.0126	.0192	-.0084	.0184	4043.		
.2540	-1266.	152.	870.	-286.	-49.	-988.	-.0043	.0326	.0061	.0147	-.0094	.0171	3843.		
.2550	-1326.	-13.	884.	-184.	-2.	-923.	-.0008	.0269	-.0004	.0089	-.0110	.0154	3515.		
.2560	-1320.	-177.	856.	-61.	55.	-824.	.0042	.0204	-.0068	.0021	-.0130	.0136	3093.		
.2570	-1254.	-335.	794.	81.	116.	-699.	.0107	.0130	-.0132	-.0058	-.0155	.0123	2664.		
.2580	-1124.	-488.	699.	238.	175.	-556.	.0182	.0052	-.0194	-.0145	-.0183	.0114	2351.		
.2590	-923.	-628.	569.	401.	227.	-400.	.0262	-.0027	-.0252	-.0234	-.0214	.0110	2279.		
.2600	-668.	-747.	413.	561.	273.	-240.	.0347	-.0105	-.0306	-.0321	-.0250	.0115	2495.		
.2610	-390.	-836.	247.	712.	315.	-81.	.0432	-.0180	-.0352	-.0401	-.0289	.0135	2922.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.14.

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	55	MEMBER	1	SEQUENCE	74	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		

.2530	-1135.	306.	810.	-367.	-83.	-1016.	-.0061	.0371	.0126	.0192	-.0084	.0184	4043.
.2540	-1266.	152.	870.	-226.	-49.	-988.	-.0043	.0326	.0061	.0147	-.0094	.0171	3843.
.2550	-1326.	-13.	834.	-184.	-2.	-923.	-.0008	.0269	-.0004	.0089	-.0110	.0154	3515.
.2560	-1320.	-177.	850.	-61.	55.	-824.	.0042	.0204	-.0069	.0021	-.0130	.0136	3093.
.2570	-1254.	-375.	794.	81.	116.	-699.	.0107	.0130	-.0132	-.0058	-.0155	.0123	2664.
.2580	-1124.	-488.	690.	250.	175.	-556.	.0182	.0052	-.0194	-.0145	-.0183	.0114	2351.
.2590	-923.	-628.	569.	401.	227.	-400.	.0262	-.0027	-.0252	-.0234	-.0214	.0110	2279.
.2600	-668.	-747.	413.	561.	273.	-240.	.0347	-.0109	-.0306	-.0321	-.0250	.0115	2495.
.2610	-390.	-836.	247.	712.	315.	-81.	.0432	-.0180	-.0352	-.0401	-.0289	.0135	2922.

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ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.14.

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	55	MEMBER	1	SEQUENCE	74	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)	
.2620	-113.	-892.	82.	844.	354.	72.		.0516	-.0249	-.0391	-.0468	-.0330	.0167	3427.	
.2630	153.	-919.	-77.	950.	387.	212.		.0596	-.0307	-.0421	-.0520	-.0371	.0209	3911.	
.2640	408.	-923.	-228.	1026.	413.	329.		.0665	-.0354	-.0440	-.0559	-.0411	.0259	4308.	
.2650	636.	-903.	-360.	1070.	430.	417.		.0723	-.0386	-.0450	-.0584	-.0450	.0321	4580.	
.2660	808.	-854.	-458.	1084.	436.	475.		.0768	-.0404	-.0453	-.0593	-.0484	.0392	4707.	
.2670	907.	-775.	-512.	1067.	428.	504.		.0799	-.0407	-.0449	-.0582	-.0509	.0471	4685.	
.2680	942.	-677.	-528.	1020.	407.	501.		.0815	-.0395	-.0438	-.0555	-.0523	.0553	4505.	
.2690	930.	-567.	-517.	943.	379.	465.		.0816	-.0369	-.0420	-.0518	-.0529	.0640	4172.	
.2700	870.	-445.	-482.	840.	346.	404.		.0803	-.0331	-.0394	-.0470	-.0523	.0728	3712.	
.2710	752.	-309.	-420.	714.	313.	330.		.0778	-.0282	-.0362	-.0411	-.0505	.0813	3160.	
.2720	588.	-169.	-340.	568.	282.	249.		.0745	-.0224	-.0324	-.0341	-.0474	.0887	2541.	
.2730	412.	-36.	-257.	407.	252.	158.		.0703	-.0159	-.0285	-.0267	-.0434	.0951	1881.	
.2740	250.	96.	-181.	243.	219.	58.		.0652	-.0092	-.0245	-.0193	-.0388	.1014	1242.	
.2750	101.	240.	-111.	86.	180.	-40.		.0594	-.0027	-.0209	-.0115	-.0337	.1078	762.	
.2760	-38.	390.	-44.	-57.	132.	-128.		.0532	.0034	-.0182	-.0032	-.0280	.1135	719.	
.2770	-150.	528.	13.	-183.	75.	-209.		.0469	.0090	-.0165	.0045	-.0219	.1181	1076.	
.2780	-200.	647.	41.	-289.	15.	-285.		.0406	.0140	-.0154	.0109	-.0161	.1221	1516.	
.2790	-180.	759.	32.	-375.	-44.	-343.		.0344	.0181	-.0146	.0163	-.0106	.1256	1904.	
.2800	-111.	870.	-8.	-446.	-95.	-370.		.0289	.0211	-.0139	.0215	-.0053	.1281	2191.	
.2810	-15.	968.	-69.	-504.	-132.	-368.		.0245	.0231	-.0134	.0260	-.0003	.1292	2383.	
.2820	117.	1041.	-158.	-551.	-153.	-347.		.0211	.0241	-.0129	.0292	.0037	.1292	2497.	
.2830	298.	1096.	-271.	-586.	-160.	-307.		.0183	.0241	-.0123	.0314	.0062	.1282	2541.	
.2840	502.	1138.	-395.	-606.	-167.	-247.		.0160	.0231	-.0123	.0333	.0074	.1259	2522.	
.2850	683.	1155.	-498.	-607.	-181.	-175.		.0142	.0214	-.0132	.0342	.0074	.1221	2454.	
.2860	816.	1135.	-563.	-583.	-207.	-106.		.0130	.0192	-.0154	.0332	.0060	.1168	2344.	
.2870	906.	1078.	-591.	-538.	-244.	-40.		.0122	.0165	-.0185	.0303	.0032	.1101	2209.	
.2880	955.	988.	-588.	-477.	-290.	27.		.0116	.0136	-.0221	.0259	-.0003	.1018	2088.	
.2890	940.	862.	-548.	-411.	-334.	95.		.0116	.0106	-.0254	.0199	-.0041	.0919	2010.	
.2900	833.	699.	-469.	-347.	-357.	163.		.0128	.0075	-.0280	.0121	-.0079	.0808	1956.	
.2910	639.	512.	-361.	-293.	-347.	237.		.0155	.0043	-.0294	.0031	-.0114	.0688	1914.	
.2920	389.	309.	-240.	-254.	-308.	323.		.0191	.0012	-.0292	-.0063	-.0141	.0558	1917.	
.2930	114.	87.	-121.	-227.	-244.	413.		.0233	-.0018	-.0278	-.0161	-.0162	.0421	1982.	
.2940	-172.	-149.	-3.	-202.	-164.	496.		.0278	-.0046	-.0260	-.0267	-.0179	.0286	2089.	
.2950	-463.	-377.	117.	-166.	-83.	571.		.0323	-.0074	-.0245	-.0376	-.0192	.0157	2241.	
.2960	-729.	-584.	232.	-113.	-21.	643.		.0361	-.0100	-.0241	-.0477	-.0198	.0033	2440.	
.2970	-925.	-772.	324.	-42.	13.	703.		.0387	-.0123	-.0250	-.0573	-.0197	-.0081	2629.	
.2980	-1023.	-942.	377.	44.	28.	738.		.0400	-.0143	-.0268	-.0669	-.0196	-.0176	2761.	
.2990	-1036.	-1074.	390.	137.	32.	755.		.0403	-.0161	-.0292	-.0755	-.0191	-.0246	2867.	

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ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.14.

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 55 MEMBER 1 SEQUENCE 74 LOCATION END TYPE RU

.2530	-1135.	306.	10.	-367.	-83.	-1016.	-.0061	.0371	.0126	.0192	-.0084	.0184	4043.
.2540	-1266.	152.	870.	-286.	-49.	-988.	-.0043	.0326	.0061	.0147	-.0094	.0171	3843.
.2550	-1326.	-13.	884.	-184.	-2.	-923.	-.0008	.0269	-.0004	.0089	-.0110	.0154	3515.
.2560	-1320.	-177.	856.	-61.	51.	-824.	.0042	.0204	-.0065	.0021	-.0130	.0136	3093.
.2570	-1254.	-375.	794.	71.	116.	-699.	.0107	.0130	-.0132	-.0058	-.0155	.0123	2664.
.2580	-1124.	-488.	699.	238.	175.	-556.	.0182	.0052	-.0194	-.0145	-.0183	.0114	2351.
.2590	-923.	-628.	569.	401.	227.	-400.	.0262	-.0027	-.0252	-.0234	-.0214	.0110	2279.
.2600	-668.	-747.	413.	561.	273.	-240.	.0347	-.0105	-.0306	-.0321	-.0250	.0115	2495.
.2610	-390.	-876.	247.	712.	315.	-81.	.0472	-.0180	-.0352	-.0401	-.0289	.0135	2922.

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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	55	MEMBER	1	SEQUENCE	74	LOCATION	END	TYPE	RU							STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ				(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)				
.2620	-113.	-892.	82.	844.	354.	72.	.0516	-.0249	-.0391	-.0468	-.0330	.0167				3427.
.2630	153.	-919.	-77.	950.	387.	212.	.0596	-.0307	-.0421	-.0520	-.0371	.0209				3911.
.2640	408.	-923.	-228.	1026.	413.	329.	.0665	-.0354	-.0440	-.0559	-.0411	.0259				4308.
.2650	636.	-903.	-360.	1070.	430.	417.	.0723	-.0386	-.0450	-.0584	-.0450	.0321				4580.
.2660	808.	-854.	-458.	1084.	436.	475.	.0768	-.0404	-.0453	-.0593	-.0484	.0392				4707.
.2670	907.	-775.	-512.	1067.	428.	504.	.0799	-.0407	-.0449	-.0582	-.0509	.0471				4685.
.2680	942.	-677.	-528.	1020.	407.	501.	.0815	-.0395	-.0438	-.0555	-.0523	.0553				4505.
.2690	930.	-567.	-517.	943.	379.	465.	.0816	-.0369	-.0420	-.0518	-.0529	.0640				4172.
.2700	870.	-445.	-482.	840.	346.	404.	.0803	-.0331	-.0394	-.0470	-.0523	.0728				3712.
.2710	752.	-309.	-420.	714.	313.	330.	.0778	-.0282	-.0362	-.0411	-.0505	.0813				3160.
.2720	588.	-169.	-340.	568.	282.	249.	.0745	-.0224	-.0324	-.0341	-.0474	.0887				2541.
.2730	412.	-36.	-257.	407.	252.	158.	.0703	-.0159	-.0285	-.0267	-.0434	.0951				1881.
.2740	250.	96.	-181.	243.	219.	58.	.0652	-.0092	-.0245	-.0193	-.0388	.1014				1242.
.2750	101.	240.	-111.	86.	180.	-40.	.0594	-.0027	-.0209	-.0115	-.0337	.1078				762.
.2760	-38.	390.	-44.	-57.	132.	-128.	.0532	.0034	-.0182	-.0032	-.0280	.1135				719.
.2770	-150.	528.	13.	-183.	75.	-209.	.0469	.0090	-.0165	.0045	-.0219	.1181				1076.
.2780	-200.	647.	41.	-289.	15.	-285.	.0406	.0140	-.0154	.0109	-.0161	.1221				1516.
.2790	-180.	759.	32.	-375.	-44.	-343.	.0344	.0181	-.0146	.0163	-.0106	.1256				1904.
.2800	-111.	870.	-8.	-446.	-95.	-370.	.0289	.0211	-.0139	.0215	-.0053	.1281				2191.
.2810	-15.	968.	-69.	-504.	-132.	-368.	.0245	.0231	-.0134	.0260	-.0003	.1292				2383.
.2820	117.	1041.	-156.	-551.	-153.	-347.	.0211	.0241	-.0129	.0292	.0037	.1292				2497.
.2830	298.	1096.	-271.	-586.	-160.	-307.	.0183	.0241	-.0123	.0314	.0062	.1282				2541.
.2840	502.	1138.	-395.	-606.	-167.	-247.	.0160	.0231	-.0123	.0333	.0074	.1259				2522.
.2850	683.	1155.	-498.	-607.	-181.	-175.	.0142	.0214	-.0132	.0342	.0074	.1221				2454.
.2860	816.	1135.	-563.	-583.	-207.	-106.	.0130	.0192	-.0154	.0332	.0060	.1168				2344.
.2870	906.	1078.	-591.	-538.	-244.	-40.	.0122	.0165	-.0185	.0303	.0032	.1101				2209.
.2880	955.	988.	-588.	-477.	-290.	27.	.0116	.0136	-.0221	.0259	-.0003	.1018				2088.
.2890	940.	862.	-548.	-411.	-334.	95.	.0116	.0106	-.0254	.0199	-.0041	.0919				2010.
.2900	833.	699.	-469.	-347.	-357.	163.	.0128	.0075	-.0280	.0121	-.0079	.0808				1956.
.2910	639.	512.	-361.	-293.	-347.	237.	.0155	.0043	-.0294	.0031	-.0114	.0688				1914.
.2920	389.	309.	-240.	-254.	-308.	323.	.0191	.0012	-.0292	-.0063	-.0141	.0558				1917.
.2930	114.	87.	-121.	-227.	-244.	413.	.0233	-.0018	-.0278	-.0161	-.0162	.0421				1982.
.2940	-172.	-149.	-3.	-202.	-164.	496.	.0278	-.0046	-.0260	-.0267	-.0179	.0286				2089.
.2950	-463.	-377.	117.	-166.	-83.	571.	.0323	-.0074	-.0245	-.0376	-.0192	.0157				2241.
.2960	-729.	-584.	232.	-113.	-21.	643.	.0361	-.0100	-.0241	-.0477	-.0198	.0033				2440.
.2970	-925.	-772.	324.	-42.	13.	703.	.0387	-.0123	-.0250	-.0573	-.0197	-.0081				2629.
.2980	-1023.	-942.	377.	44.	28.	738.	.0400	-.0143	-.0268	-.0669	-.0196	-.0176				2761.
.2990	-1036.	-1074.	390.	137.	32.	755.	.0403	-.0161	-.0292	-.0755	-.0191	-.0246				2867.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.29.14.

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	55	MEMBER	1	SEQUENCE	74	LOCATION	END	TYPE	RU
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.2910	839.	512.	301.	-293.	-347.	237.	.105	.0043	-.0294	-.0031	-.0114	.0688	1914.
.2920	389.	309.	-240.	-254.	-308.	323.	.191	.0012	-.0292	-.0063	-.0141	.0558	1917.
.2930	114.	87.	-121.	-227.	-244.	413.	.0233	-.0018	-.0278	-.0161	-.0162	.0421	1982.
.2940	-172.	-149.	-7.	-202.	-164.	496.	.0278	-.0046	-.0260	-.0267	-.0179	.0286	2089.
.2950	-463.	-377.	117.	-166.	-63.	571.	.0323	-.0074	-.0245	-.0376	-.0192	.0157	2241.
.2960	-729.	-584.	232.	-113.	-21.	643.	.0361	-.0100	-.0241	-.0477	-.0198	.0033	2440.
.2970	-925.	-772.	324.	-42.	13.	703.	.0387	-.0123	-.0250	-.0573	-.0197	-.0081	2629.
.2980	-1023.	-942.	377.	44.	28.	738.	.0400	-.0143	-.0268	-.0669	-.0196	-.0176	2761.
.2990	-1036.	-1074.	390.	137.	32.	755.	.0403	-.0161	-.0292	-.0755	-.0191	-.0246	2867.

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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	55	MEMBER	1	SEQUENCE	74	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3000	-986.	-1145.	366.	223.	32.	771.		.0397	-.0176	-.0316	-.0814	-.0175	-.0294	2998.	
.3010	-877.	-1161.	302.	288.	39.	784.		.0385	-.0187	-.0332	-.0845	-.0147	-.0321	3122.	
.3020	-699.	-1141.	190.	327.	61.	778.		.0367	-.0191	-.0336	-.0859	-.0112	-.0322	3160.	
.3030	-463.	-1084.	41.	336.	95.	748.		.0342	-.0187	-.0325	-.0856	-.0073	-.0297	3083.	
.3040	-212.	-977.	-120.	318.	129.	702.		.0307	-.0176	-.0304	-.0827	-.0024	-.0249	2917.	
.3050	17.	-821.	-265.	277.	150.	637.		.0264	-.0157	-.0277	-.0772	.0034	-.0183	2653.	
.3060	215.	-639.	-383.	219.	154.	537.		.0211	-.0128	-.0247	-.0704	.0093	-.0097	2239.	
.3070	392.	-445.	-476.	143.	141.	395.		.0146	-.0089	-.0214	-.0632	.0148	.0008	1654.	
.3080	535.	-232.	-539.	48.	109.	225.		.0070	-.0043	-.0176	-.0546	.0198	.0124	951.	
.3090	611.	-0.	-558.	-68.	67.	40.		-.0012	.0008	-.0134	-.0442	.0246	.0245	386.	
.3100	598.	235.	-530.	-204.	25.	-156.		-.0095	.0063	-.0085	-.0329	.0287	.0367	964.	
.3110	513.	457.	-465.	-357.	-6.	-362.		-.0175	.0121	-.0028	-.0217	.0317	.0484	1896.	
.3120	385.	656.	-378.	-521.	-29.	-561.		-.0252	.0178	.0036	-.0105	.0337	.0587	2861.	
.3130	225.	829.	-272.	-687.	-52.	-745.		-.0326	.0233	.0102	.0003	.0348	.0668	3788.	
.3140	28.	966.	-143.	-837.	-75.	-913.		-.0393	.0280	.0165	.0097	.0349	.0730	4632.	
.3150	-197.	1067.	7.	-958.	-101.	-1059.		-.0450	.0319	.0220	.0172	.0338	.0771	5343.	
.3160	-420.	1131.	161.	-1043.	-133.	-1170.		-.0497	.0345	.0263	.0227	.0318	.0787	5873.	
.3170	-603.	1150.	300.	-1091.	-173.	-1240.		-.0535	.0357	.0295	.0263	.0290	.0772	6200.	
.3180	-734.	1118.	411.	-1099.	-210.	-1271.		-.0560	.0354	.0317	.0273	.0253	.0730	6321.	
.3190	-820.	1042.	494.	-1067.	-235.	-1255.		-.0569	.0335	.0328	.0258	.0209	.0665	6212.	
.3200	-865.	936.	545.	-997.	-246.	-1184.		-.0561	.0298	.0331	.0227	.0165	.0574	5850.	
.3210	-852.	800.	556.	-895.	-246.	-1057.		-.0539	.0246	.0326	.0184	.0123	.0456	5252.	
.3220	-761.	626.	518.	-762.	-235.	-894.		-.0504	.0181	.0314	.0121	.0083	.0321	4473.	
.3230	-601.	423.	440.	-601.	-215.	-706.		-.0459	.0104	.0296	.0038	.0043	.0179	3551.	
.3240	-406.	216.	339.	-416.	-193.	-492.		-.0406	.0018	.0269	-.0050	.0010	.0033	2511.	
.3250	-201.	17.	230.	-217.	-176.	-259.		-.0349	-.0074	.0235	-.0134	-.0010	-.0112	1422.	
.3260	11.	-182.	116.	-14.	-159.	-26.		-.0289	-.0169	.0197	-.0218	-.0022	-.0251	605.	
.3270	227.	-382.	-2.	181.	-137.	187.		-.0230	-.0260	.0160	-.0302	-.0029	-.0375	1099.	
.3280	423.	-569.	-114.	355.	-112.	382.		-.0174	-.0346	.0125	-.0376	-.0029	-.0485	1991.	
.3290	562.	-723.	-200.	499.	-85.	559.		-.0123	-.0423	.0096	-.0425	-.0017	-.0578	2815.	
.3300	630.	-845.	-252.	609.	-54.	705.		-.0077	-.0489	.0071	-.0453	.0003	-.0648	3482.	
.3310	640.	-941.	-274.	681.	-21.	804.		-.0039	-.0541	.0054	-.0466	.0027	-.0692	3936.	
.3320	608.	-1004.	-270.	716.	6.	857.		-.0013	-.0579	.0044	-.0459	.0055	-.0706	4171.	
.3330	533.	-1024.	-238.	714.	23.	870.		-.0000	-.0602	.0040	-.0426	.0089	-.0655	4203.	
.3340	402.	-1000.	-173.	678.	31.	843.		.0003	-.0612	.0041	-.0371	.0126	-.0656	4042.	
.3350	225.	-941.	-80.	613.	35.	776.		-.0002	-.0608	.0047	-.0300	.0164	-.0591	3695.	
.3360	28.	-852.	25.	521.	36.	679.		-.0016	-.0592	.0059	-.0213	.0201	-.0508	3196.	
.3370	-165.	-738.	129.	404.	35.	564.		-.0036	-.0567	.0076	-.0111	.0236	-.0414	2592.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.14.

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	55	MEMBER	1	SEQUENCE	74	LOCATION	END	TYPE	RU						
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.3300	630.	-845.	-252.	609.	-54.	705.	-.0077	-.0489	.0071	-.0453	.0003	-.0648	3482.
.3310	640.	-941.	-274.	681.	-21.	804.	-.0039	-.0541	.0054	-.0466	.0027	-.0692	3936.
.3320	608.	-1004.	-270.	716.	6.	857.	-.0013	-.0579	.0044	-.0459	.0055	-.0706	4171.
.3330	533.	-1024.	-228.	714.	23.	870.	-.0000	-.0602	.0040	-.0426	.0089	-.0695	4203.
.3340	402.	-1000.	-173.	670.	31.	843.	.0003	-.0612	.0041	-.0371	.0126	-.0656	4042.
.3350	225.	-941.	-80.	613.	35.	776.	-.0002	-.0608	.0047	-.0300	.0164	-.0591	3695.
.3360	28.	-852.	25.	521.	36.	679.	-.0016	-.0592	.0059	-.0213	.0201	-.0508	3196.
.3370	-165.	-738.	129.	404.	35.	564.	-.0036	-.0567	.0076	-.0111	.0236	-.0414	2592.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.14.

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	55	MEMBER	1	SEQUENCE	74	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)		
.3380	-351.	-607.	228.	271.	35.	437.	-.0061	-.0534	.0097	.0002	.0267	-.0314	1925.		
.3390	-531.	-467.	324.	135.	36.	303.	-.0086	-.0496	.0118	.0118	.0292	-.0210	1247.		
.3400	-692.	-320.	410.	6.	36.	173.	-.0111	-.0458	.0135	.0234	.0310	-.0107	660.		
.3410	-810.	-171.	477.	-108.	28.	56.	-.0136	-.0421	.0147	.0349	.0323	-.0012	467.		
.3420	-867.	-35.	516.	-198.	10.	-48.	-.0160	-.0387	.0151	.0453	.0330	.0073	763.		
.3430	-867.	80.	530.	-258.	-12.	-138.	-.0179	-.0359	.0147	.0540	.0328	.0146	1093.		
.3440	-822.	178.	519.	-286.	-35.	-202.	-.0192	-.0338	.0136	.0610	.0320	.0204	1315.		
.3450	-738.	261.	484.	-286.	-56.	-232.	-.0196	-.0326	.0121	.0669	.0311	.0243	1390.		
.3460	-608.	317.	419.	-261.	-70.	-230.	-.0192	-.0322	.0103	.0713	.0299	.0261	1326.		
.3470	-435.	339.	324.	-216.	-70.	-205.	-.0178	-.0325	.0087	.0736	.0283	.0261	1143.		
.3480	-242.	332.	211.	-153.	-59.	-158.	-.0157	-.0336	.0070	.0742	.0263	.0244	850.		
.3490	-54.	310.	97.	-74.	-45.	-87.	-.0129	-.0354	.0052	.0740	.0244	.0211	458.		
.3500	113.	272.	-6.	19.	-31.	-3.	-.0098	-.0377	.0032	.0729	.0225	.0165	135.		
.3510	257.	209.	-93.	122.	-20.	80.	-.0065	-.0402	.0009	.0705	.0204	.0109	549.		
.3520	371.	123.	-159.	229.	-15.	153.	-.0034	-.0425	-.0015	.0668	.0181	.0046	1031.		
.3530	436.	26.	-195.	333.	-18.	219.	-.0005	-.0449	-.0040	.0629	.0159	-.0024	1491.		
.3540	436.	-72.	-195.	426.	-23.	278.	.0022	-.0469	-.0063	.0593	.0141	-.0098	1901.		
.3550	370.	-171.	-161.	500.	-24.	323.	.0047	-.0485	-.0082	.0559	.0124	-.0172	2224.		
.3560	253.	-271.	-104.	548.	-19.	351.	.0070	-.0494	-.0092	.0528	.0110	-.0243	2431.		
.3570	103.	-361.	-31.	567.	-9.	365.	.0088	-.0497	-.0094	.0507	.0099	-.0311	2520.		
.3580	-74.	-432.	55.	559.	4.	368.	.0102	-.0493	-.0090	.0499	.0092	-.0372	2499.		
.3590	-271.	-478.	152.	530.	16.	356.	.0112	-.0484	-.0082	.0501	.0087	-.0422	2385.		
.3600	-469.	-502.	254.	485.	22.	330.	.0116	-.0469	-.0073	.0510	.0084	-.0460	2192.		
.3610	-640.	-500.	349.	430.	17.	294.	.0114	-.0450	-.0065	.0526	.0083	-.0489	1944.		
.3620	-763.	-475.	425.	367.	1.	251.	.0106	-.0426	-.0058	.0548	.0084	-.0508	1659.		
.3630	-833.	-426.	478.	300.	-21.	204.	.0095	-.0399	-.0052	.0571	.0085	-.0517	1357.		
.3640	-852.	-353.	504.	232.	-43.	160.	.0084	-.0371	-.0045	.0595	.0088	-.0515	1063.		
.3650	-816.	-255.	496.	160.	-59.	127.	.0074	-.0344	-.0035	.0622	.0095	-.0506	795.		
.3660	-715.	-141.	448.	85.	-66.	110.	.0068	-.0317	-.0020	.0648	.0104	-.0494	574.		
.3670	-548.	-22.	357.	9.	-60.	104.	.0066	-.0291	.0000	.0669	.0113	-.0480	450.		
.3680	-329.	99.	233.	-63.	-41.	110.	.0067	-.0267	.0023	.0683	.0121	-.0465	497.		
.3690	-83.	222.	92.	-125.	-18.	129.	.0072	-.0246	.0045	.0692	.0128	-.0452	674.		
.3700	177.	343.	-55.	-174.	4.	157.	.0079	-.0227	.0062	.0696	.0132	-.0444	876.		
.3710	443.	444.	-201.	-206.	20.	185.	.0085	-.0211	.0072	.0689	.0129	-.0442	1036.		
.3720	704.	519.	-336.	-219.	29.	205.	.0090	-.0196	.0073	.0668	.0118	-.0445	1125.		
.3730	936.	571.	-449.	-215.	29.	217.	.0092	-.0183	.0065	.0636	.0100	-.0453	1146.		
.3740	1113.	607.	-529.	-198.	23.	224.	.0095	-.0173	.0052	.0599	.0078	-.0464	1119.		
.3750	1223.	621.	-573.	-173.	20.	223.	.0098	-.0165	.0035	.0556	.0052	-.0478	1054.		

ADLPIPE PAGE 2091

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.14.

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	55	MEMBER	1	SEQUENCE	74	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		

.3300	630.	-845.	-252.	609.	-54.	705.	-.0077	-.0489	.0071	-.0453	.0003	-.0648	3482.
.3310	640.	-941.	-274.	601.	-21.	804.	-.0039	-.0541	.0054	-.0466	.0027	-.0692	3936.
.3320	608.	-1004.	-270.	716.	6.	857.	-.0013	-.0570	.0044	-.0459	.0055	-.0706	4171.
.3330	533.	-1024.	-238.	714.	23.	870.	-.0000	-.0602	.0040	-.0426	.0089	-.0695	4203.
.3340	402.	-1000.	-173.	678.	31.	843.	.0003	-.0612	.0041	-.0371	.0126	-.0656	4042.
.3350	225.	-941.	-80.	613.	35.	776.	-.0002	-.0608	.0047	-.0300	.0164	-.0591	3695.
.3360	28.	-852.	25.	521.	36.	679.	-.0016	-.0592	.0059	-.0213	.0201	-.0508	3196.
.3370	-165.	-738.	129.	404.	35.	564.	-.0036	-.0567	.0076	-.0111	.0236	-.0414	2592.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.14.

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	55	MEMBER	1	SEQUENCE	74	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)
.3380	-351.	-607.	228.	271.	35.	437.		-.0061	-.0534	.0097	.0002	.0267	-.0314	1925.
.3390	-531.	-467.	324.	135.	36.	303.		-.0086	-.0496	.0118	.0118	.0292	-.0210	1247.
.3400	-692.	-320.	410.	6.	36.	173.		-.0111	-.0458	.0135	.0234	.0310	-.0107	660.
.3410	-810.	-171.	477.	-108.	28.	56.		-.0136	-.0421	.0147	.0349	.0323	-.0012	467.
.3420	-867.	-35.	516.	-198.	10.	-48.		-.0160	-.0387	.0151	.0453	.0330	.0073	763.
.3430	-867.	80.	530.	-258.	-12.	-138.		-.0179	-.0359	.0147	.0540	.0328	.0146	1093.
.3440	-822.	178.	519.	-286.	-35.	-202.		-.0192	-.0338	.0136	.0610	.0320	.0204	1315.
.3450	-738.	261.	484.	-286.	-56.	-232.		-.0196	-.0326	.0121	.0669	.0311	.0243	1390.
.3460	-608.	317.	419.	-261.	-70.	-230.		-.0192	-.0322	.0103	.0713	.0299	.0261	1326.
.3470	-435.	339.	324.	-216.	-70.	-205.		-.0178	-.0325	.0087	.0736	.0283	.0261	1143.
.3480	-242.	332.	211.	-153.	-59.	-158.		-.0157	-.0336	.0070	.0742	.0263	.0244	850.
.3490	-54.	310.	97.	-74.	-45.	-87.		-.0129	-.0354	.0052	.0740	.0244	.0211	458.
.3500	113.	272.	-6.	19.	-31.	-3.		-.0098	-.0377	.0032	.0729	.0225	.0165	135.
.3510	257.	209.	-93.	122.	-20.	80.		-.0065	-.0402	.0009	.0705	.0204	.0109	549.
.3520	371.	123.	-159.	229.	-15.	153.		-.0034	-.0425	-.0015	.0668	.0181	.0046	1031.
.3530	436.	26.	-195.	333.	-18.	219.		-.0005	-.0449	-.0040	.0629	.0159	-.0024	1491.
.3540	436.	-72.	-195.	426.	-23.	278.		.0022	-.0469	-.0063	.0593	.0141	-.0098	1901.
.3550	370.	-171.	-161.	500.	-24.	323.		.0047	-.0485	-.0082	.0559	.0124	-.0172	2224.
.3560	253.	-271.	-104.	548.	-19.	351.		.0070	-.0494	-.0092	.0528	.0110	-.0243	2431.
.3570	103.	-361.	-31.	567.	-9.	365.		.0088	-.0497	-.0094	.0507	.0099	-.0311	2520.
.3580	-74.	-432.	55.	559.	4.	368.		.0102	-.0493	-.0090	.0499	.0092	-.0372	2499.
.3590	-271.	-478.	152.	530.	16.	356.		.0112	-.0484	-.0082	.0501	.0087	-.0422	2385.
.3600	-469.	-502.	254.	485.	22.	330.		.0116	-.0469	-.0073	.0510	.0084	-.0460	2192.
.3610	-640.	-500.	349.	430.	17.	294.		.0114	-.0450	-.0065	.0526	.0083	-.0489	1944.
.3620	-763.	-475.	425.	367.	1.	251.		.0106	-.0426	-.0058	.0548	.0084	-.0508	1659.
.3630	-833.	-426.	478.	300.	-21.	204.		.0095	-.0399	-.0052	.0571	.0085	-.0517	1357.
.3640	-852.	-353.	504.	232.	-43.	160.		.0084	-.0371	-.0045	.0595	.0088	-.0515	1063.
.3650	-816.	-255.	496.	160.	-59.	127.		.0074	-.0344	-.0035	.0622	.0095	-.0506	795.
.3660	-715.	-141.	448.	85.	-66.	110.		.0068	-.0317	-.0020	.0648	.0104	-.0494	574.
.3670	-548.	-22.	357.	9.	-60.	104.		.0066	-.0291	.0000	.0669	.0113	-.0480	450.
.3680	-329.	99.	233.	-63.	-41.	110.		.0067	-.0267	.0023	.0683	.0121	-.0465	497.
.3690	-83.	222.	92.	-125.	-18.	129.		.0072	-.0246	.0045	.0692	.0128	-.0452	674.
.3700	177.	343.	-55.	-174.	4.	157.		.0079	-.0227	.0062	.0696	.0132	-.0444	876.
.3710	443.	444.	-201.	-206.	20.	185.		.0085	-.0211	.0072	.0689	.0129	-.0442	1036.
.3720	704.	519.	-336.	-219.	29.	205.		.0090	-.0196	.0073	.0668	.0118	-.0445	1125.
.3730	936.	571.	-449.	-215.	29.	217.		.0092	-.0183	.0065	.0636	.0100	-.0453	1146.
.3740	1113.	607.	-529.	-198.	23.	224.		.0095	-.0173	.0052	.0599	.0078	-.0464	1119.
.3750	1223.	621.	-573.	-173.	20.	223.		.0098	-.0165	.0035	.0556	.0052	-.0478	1054.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.14.

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	55	MEMBER	1	SEQUENCE	74	LOCATION	END	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS

.1680 -1252. 1321. 787. -1205. -402. -1739. -1.897 .0691 .0331 .0529 .0111 .1026 8039.

SECTION	55	MEMBER	2	SEQUENCE	75	LOCATION	END	TYPE	RE	DZ	RX	RY	RZ	STRESS
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)	

ADLPIPE PAGE 2092 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.14.
 S/RV PIPING KEWAUNEE GKWOBF 2 RUP DISK
 2 SAFETY COLD FKW24F--2 PSV
 CONDITION 24
 LOADS
 SHOCK
 PRESSURE
 ENGLISH UNITS

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

SECTION	55	MEMBER	2	SEQUENCE	75	LOCATION	END	TYPE	RE	DZ	RX	RY	RZ	STRESS
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)	
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
.0010	-0.	0.	0.	0.	0.	-0.	-0.0000	-0.0000	.0000	-0.0000	-0.0000	.0000	.0000	0.
.0020	-0.	0.	0.	0.	0.	-0.	.0000	-0.0000	.0000	-0.0000	-0.0000	.0000	.0000	0.
.0030	-0.	0.	0.	0.	0.	0.	.0000	-0.0000	.0000	-0.0000	-0.0000	.0000	.0000	1.
.0040	-0.	0.	-0.	-0.	1.	0.	.0000	-0.0000	.0000	-0.0000	-0.0000	.0000	.0000	3.
.0050	1.	0.	-1.	-1.	2.	0.	-0.0000	-0.0000	.0000	.0000	-0.0001	-0.0000	-0.0000	8.
.0060	4.	1.	-4.	-1.	4.	1.	-0.0000	-0.0000	-0.0000	.0001	-0.0003	-0.0000	-0.0000	17.
.0070	10.	2.	-7.	-2.	6.	1.	-0.0001	-0.0000	-0.0001	.0002	-0.0006	-0.0000	-0.0000	26.
.0080	19.	6.	-12.	-2.	8.	-0.	-0.0003	-0.0000	-0.0003	.0004	-0.0011	.0000	.0000	34.
.0090	34.	11.	-19.	-1.	10.	-2.	-0.0006	-0.0001	-0.0006	.0008	-0.0019	.0001	.0001	41.
.0100	61.	18.	-31.	-0.	10.	-3.	-0.0011	-0.0001	-0.0010	.0014	-0.0029	-0.0001	-0.0001	45.
.0110	107.	28.	-52.	-0.	9.	-4.	-0.0018	-0.0001	-0.0017	.0024	-0.0043	-0.0004	-0.0004	42.
.0120	179.	41.	-83.	-1.	3.	-9.	-0.0030	-0.0001	-0.0026	.0038	-0.0060	-0.0007	-0.0007	39.
.0130	270.	62.	-120.	-1.	-8.	-19.	-0.0046	-0.0002	-0.0039	.0058	-0.0080	-0.0008	-0.0008	86.
.0140	364.	93.	-154.	0.	-26.	-37.	-0.0066	-0.0003	-0.0055	.0085	-0.0104	-0.0005	-0.0005	188.
.0150	441.	128.	-174.	4.	-52.	-61.	-0.0089	-0.0005	-0.0075	.0113	-0.0128	.0002	.0002	335.
.0160	482.	158.	-171.	11.	-82.	-92.	-0.0112	-0.0006	-0.0097	.0140	-0.0151	.0007	.0007	516.
.0170	471.	170.	-138.	22.	-117.	-124.	-0.0133	-0.0006	-0.0117	.0157	-0.0168	.0009	.0009	716.
.0180	391.	158.	-72.	36.	-152.	-152.	-0.0149	-0.0005	-0.0133	.0161	-0.0172	.0005	.0005	912.
.0190	239.	122.	25.	48.	-183.	-171.	-0.0155	-0.0002	-0.0138	.0150	-0.0156	-0.0005	-0.0005	1066.
.0200	21.	70.	144.	53.	-203.	-174.	-0.0148	.0001	-0.0128	.0127	-0.0116	-0.0019	-0.0019	1139.
.0210	-232.	5.	261.	42.	-206.	-156.	-0.0127	.0004	-0.0099	.0093	-0.0051	-0.0037	-0.0037	1090.
.0220	-457.	-85.	338.	1.	-187.	-110.	-0.0093	.0007	-0.0051	.0062	.0039	-0.0071	-0.0071	904.
.0230	-632.	-181.	370.	-61.	-146.	-49.	-0.0051	.0008	.0011	.0032	.0139	-0.0106	-0.0106	690.
.0240	-775.	-252.	379.	-121.	-85.	7.	-0.0008	.0005	.0077	.0002	.0229	-0.0117	-0.0117	619.
.0250	-946.	-281.	412.	-153.	-26.	52.	.0035	-0.0003	.0128	-0.0029	.0302	-0.0099	-0.0099	682.
.0260	-1148.	-301.	482.	-149.	7.	103.	.0078	-0.0011	.0153	-0.0056	.0361	-0.0089	-0.0089	757.
.0270	-1241.	-379.	511.	-134.	13.	173.	.0115	-0.0014	.0153	-0.0075	.0400	-0.0130	-0.0130	912.
.0280	-1177.	-476.	479.	-87.	11.	229.	.0137	-0.0016	.0137	-0.0108	.0398	-0.0170	-0.0170	1022.
.0290	-1089.	-507.	466.	21.	-8.	247.	.0146	-0.0024	.0107	-0.0167	.0367	-0.0152	-0.0152	1034.
.0300	-1008.	-511.	464.	133.	-67.	273.	.0164	-0.0031	.0065	-0.0204	.0366	-0.0140	-0.0140	1298.
.0310	-819.	-483.	378.	201.	-101.	336.	.0195	-0.0036	.0037	-0.0217	.0380	-0.0145	-0.0145	1686.
.0320	-447.	-404.	161.	228.	-68.	402.	.0226	-0.0043	.0051	-0.0241	.0380	-0.0112	-0.0112	1948.
.0330	60.	-313.	-154.	200.	12.	452.	.0250	-0.0049	.0104	-0.0264	.0382	-0.0050	-0.0050	2062.
.0340	541.	-188.	-492.	102.	133.	509.	.0280	-0.0052	.0170	-0.0239	.0387	.0006	.0006	2236.
.0350	852.	26.	-753.	-14.	283.	571.	.0310	-0.0052	.0218	-0.0170	.0363	.0065	.0065	2658.
.0360	1040.	235.	-697.	-83.	376.	589.	.0314	-0.0046	.0226	-0.0100	.0302	.0116	.0116	2938.
.0370	1281.	300.	-985.	-97.	358.	536.	.0274	-0.0024	.0185	-0.0051	.0203	.0111	.0111	2720.

ADLPIPE PAGE 2093 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.14.
 S/RV PIPING KEWAUNEE GKWOBF 2 RUP DISK
 2 SAFETY COLD FKW24F--2 PSV
 CONDITION 24
 LOADS
 SHOCK
 PRESSURE
 ENGLISH UNITS

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

SECTION	55	MEMBER	2	SEQUENCE	75	LOCATION	END	TYPE	RE	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	HX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	

.0290	-1089.	-507.	466.	21.	-8.	247.	.146	-.0016	.0107	-.0167	.0367	-.0152	1034.
.0300	-1008.	-511.	464.	133.	-67.	273.	.164	-.0031	.0065	-.0204	.0366	-.0140	1298.
.0310	-819.	-483.	378.	201.	-101.	336.	.0195	-.0036	.0037	-.0217	.0380	-.0145	1686.
.0320	-447.	-404.	161.	228.	-68.	402.	.0226	-.0043	.0051	-.0241	.0380	-.0112	1948.
.0330	60.	-313.	-154.	200.	12.	452.	.0250	-.0049	.0104	-.0264	.0382	-.0050	2062.
.0340	541.	-188.	-492.	102.	132.	509.	.0280	-.0052	.0170	-.0239	.0387	.0006	2236.
.0350	852.	26.	-753.	-14.	283.	571.	.0310	-.0052	.0218	-.0170	.0363	.0065	2658.
.0360	1040.	235.	-897.	-83.	376.	589.	.0314	-.0046	.0226	-.0100	.0302	.0116	2938.
.0370	1281.	300.	-985.	-97.	358.	536.	.0274	-.0024	.0185	-.0051	.0203	.0111	2720.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.14.

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	55	MEMBER	2	SEQUENCE	75	LOCATION	END	TYPE	RE	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0380	1585.	282.	-1040.	-69.	268.	419.	.0196	.0010	.0100	-.0011	.0051	.0071	2093.	
.0390	1691.	352.	-941.	19.	125.	242.	.0097	.0042	-.0021	.0031	-.0128	.0076	1140.	
.0400	1432.	509.	-617.	154.	-85.	24.	.0002	.0069	-.0156	.0074	-.0259	.0132	742.	
.0410	1094.	590.	-291.	227.	-278.	-166.	-.0065	.0102	-.0252	.0111	-.0319	.0147	1650.	
.0420	962.	577.	-183.	178.	-308.	-291.	-.0103	.0140	-.0252	.0110	-.0355	.0127	1918.	
.0430	949.	534.	-234.	27.	-198.	-366.	-.0122	.0173	-.0152	.0078	-.0351	.0125	1738.	
.0440	770.	520.	-270.	-208.	-27.	-399.	-.0111	.0194	.0004	.0079	-.0267	.0142	1830.	
.0450	380.	601.	-254.	-492.	200.	-375.	-.0067	.0204	.0162	.0145	-.0153	.0161	2712.	
.0460	11.	723.	-229.	-723.	419.	-339.	-.0029	.0205	.0281	.0218	-.0084	.0176	3764.	
.0470	-136.	712.	-187.	-790.	471.	-384.	-.0047	.0204	.0330	.0222	-.0063	.0179	4159.	
.0480	-85.	552.	-108.	-684.	338.	-518.	-.0118	.0203	.0296	.0161	-.0090	.0162	3851.	
.0490	-40.	434.	30.	-483.	143.	-655.	-.0200	.0192	.0188	.0113	-.0167	.0137	3448.	
.0500	-152.	440.	252.	-248.	-73.	-744.	-.0270	.0166	.0044	.0119	-.0237	.0119	3289.	
.0510	-268.	429.	460.	-35.	-306.	-796.	-.0329	.0132	-.0078	.0140	-.0245	.0096	3562.	
.0520	-141.	319.	462.	94.	-427.	-803.	-.0366	.0095	-.0119	.0120	-.0224	.0065	3815.	
.0530	152.	197.	252.	106.	-349.	-727.	-.0359	.0055	-.0065	.0070	-.0195	.0039	3395.	
.0540	292.	128.	34.	22.	-179.	-562.	-.0308	.0008	.0045	.0051	-.0102	.0010	2464.	
.0550	194.	93.	-85.	-99.	-14.	-352.	-.0231	-.0040	.0166	.0070	.0052	-.0030	1525.	
.0560	94.	50.	-185.	-189.	157.	-159.	-.0160	-.0085	.0270	.0065	.0164	-.0066	1223.	
.0570	151.	-59.	-292.	-194.	269.	-30.	-.0128	-.0121	.0327	.0012	.0195	-.0109	1388.	
.0580	228.	-249.	-284.	-92.	197.	29.	-.0144	-.0146	.0306	-.0048	.0199	-.0188	913.	
.0590	113.	-416.	-82.	98.	-18.	38.	-.0185	-.0164	.0209	-.0088	.0188	-.0276	445.	
.0600	-211.	-500.	250.	324.	-235.	25.	-.0219	-.0178	.0080	-.0126	.0146	-.0337	1674.	
.0610	-591.	-600.	585.	517.	-410.	23.	-.0238	-.0184	-.0025	-.0182	.0113	-.0401	2755.	
.0620	-871.	-805.	806.	610.	-524.	68.	-.0238	-.0175	-.0058	-.0253	.0139	-.0506	3366.	
.0630	-1060.	-1028.	867.	572.	-484.	178.	-.0202	-.0160	.0000	-.0334	.0202	-.0615	3213.	
.0640	-1300.	-1152.	838.	416.	-268.	339.	-.0122	-.0145	.0132	-.0399	.0285	-.0678	2504.	
.0650	-1641.	-1172.	803.	183.	8.	523.	-.0015	-.0132	.0289	-.0408	.0398	-.0707	2313.	
.0660	-1921.	-1138.	753.	-57.	249.	699.	.0078	-.0118	.0420	-.0366	.0501	-.0729	3105.	
.0670	-1970.	-1103.	663.	-210.	411.	813.	.0129	-.0098	.0484	-.0326	.0517	-.0746	3901.	
.0680	-1813.	-1113.	596.	-213.	422.	818.	.0125	-.0071	.0445	-.0309	.0444	-.0759	3943.	
.0690	-1596.	-1121.	632.	-75.	241.	725.	.0074	-.0041	.0296	-.0274	.0326	-.0766	3204.	
.0700	-1389.	-1019.	745.	145.	-45.	581.	-.0003	-.0015	.0077	-.0196	.0181	-.0736	2505.	
.0710	-1133.	-824.	827.	368.	-316.	417.	-.0078	.0005	-.0143	-.0101	.0028	-.0652	2668.	
.0720	-747.	-649.	772.	503.	-503.	263.	-.0127	.0025	-.0299	-.0014	-.0083	-.0546	3163.	
.0730	-260.	-492.	541.	488.	-540.	167.	-.0131	.0044	-.0350	.0074	-.0123	-.0430	3115.	
.0740	180.	-256.	194.	324.	-392.	154.	-.0083	.0057	-.0295	.0180	-.0102	-.0280	2215.	
.0750	460.	36.	-166.	67.	-120.	189.	.0005	.0063	-.0171	.0295	-.0029	-.0099	974.	

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ADLPIPE STRESS ANALYSIS

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

CONDITION 24

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

SECTION 55 MEMBER 2 SEQUENCE 75 LOCATION END TYPE RE

.0290	-1089.	-507.	466.	21.	-8.	247.	.146	-.0024	.0107	-.0167	.0367	-.0152	1034.
.0300	-1008.	-511.	464.	133.	-67.	273.	.0164	-.0031	.0065	-.0204	.0366	-.0140	1298.
.0310	-819.	-483.	378.	201.	-101.	336.	.0195	-.0036	.0037	-.0217	.0380	-.0145	1686.
.0320	-447.	-404.	161.	228.	-68.	402.	.0226	-.0043	.0051	-.0241	.0380	-.0112	1948.
.0330	60.	-313.	-154.	200.	12.	452.	.0250	-.0049	.0104	-.0264	.0382	-.0050	2062.
.0340	541.	-188.	-492.	102.	133.	509.	.0280	-.0052	.0170	-.0239	.0387	.0006	2236.
.0350	852.	26.	-753.	-14.	283.	571.	.0310	-.0052	.0218	-.0170	.0363	.0065	2658.
.0360	1040.	235.	-897.	-83.	376.	589.	.0314	-.0046	.0226	-.0100	.0302	.0116	2938.
.0370	1281.	300.	-985.	-97.	358.	536.	.0274	-.0024	.0185	-.0051	.0203	.0111	2720.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.14.

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	55	MEMBER	2	SEQUENCE	75	LOCATION	END	TYPE	RE						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)		
.0380		1585.	282.	-1040.	-69.	268.	419.	.0196	.0010	.0100	-.0011	.0051	.0071		2093.
.0390		1691.	352.	-941.	19.	125.	242.	.0097	.0042	-.0021	.0031	-.0128	.0076		1140.
.0400		1432.	509.	-617.	154.	-85.	24.	.0002	.0069	-.0156	.0074	-.0259	.0132		742.
.0410		1094.	590.	-291.	227.	-278.	-166.	-.0065	.0102	-.0252	.0111	-.0319	.0147		1650.
.0420		962.	577.	-183.	178.	-308.	-291.	-.0103	.0140	-.0252	.0110	-.0355	.0127		1918.
.0430		949.	534.	-234.	27.	-198.	-366.	-.0122	.0173	-.0152	.0078	-.0351	.0125		1738.
.0440		770.	520.	-270.	-208.	-27.	-399.	-.0111	.0194	.0004	.0079	-.0267	.0142		1880.
.0450		380.	601.	-254.	-492.	200.	-375.	-.0067	.0204	.0162	.0145	-.0153	.0161		2712.
.0460		11.	723.	-229.	-723.	419.	-339.	-.0029	.0205	.0281	.0218	-.0084	.0176		3764.
.0470		-136.	712.	-187.	-790.	471.	-384.	-.0047	.0204	.0330	.0222	-.0063	.0179		4159.
.0480		-85.	552.	-108.	-684.	338.	-518.	-.0118	.0203	.0296	.0161	-.0090	.0162		3851.
.0490		-40.	434.	30.	-483.	143.	-655.	-.0200	.0192	.0188	.0113	-.0167	.0137		3448.
.0500		-152.	440.	252.	-248.	-73.	-744.	-.0270	.0166	.0044	.0119	-.0237	.0119		3289.
.0510		-268.	429.	460.	-35.	-306.	-796.	-.0329	.0132	-.0078	.0140	-.0245	.0096		3562.
.0520		-141.	319.	462.	94.	-427.	-803.	-.0366	.0095	-.0119	.0120	-.0224	.0065		3815.
.0530		152.	197.	252.	106.	-349.	-727.	-.0359	.0055	-.0065	.0070	-.0195	.0039		3395.
.0540		292.	128.	34.	22.	-179.	-562.	-.0308	.0008	.0045	.0051	-.0102	.0010		2464.
.0550		194.	93.	-85.	-99.	-14.	-352.	-.0231	-.0040	.0166	.0070	.0052	-.0030		1525.
.0560		94.	50.	-185.	-189.	157.	-159.	-.0160	-.0085	.0270	.0065	.0164	-.0066		1223.
.0570		151.	-59.	-292.	-194.	269.	-30.	-.0128	-.0121	.0327	.0012	.0195	-.0109		1388.
.0580		228.	-249.	-284.	-92.	197.	29.	-.0144	-.0146	.0306	-.0048	.0199	-.0188		913.
.0590		113.	-416.	-82.	98.	-18.	38.	-.0185	-.0164	.0209	-.0088	.0188	-.0276		445.
.0600		-211.	-500.	250.	324.	-235.	25.	-.0219	-.0178	.0080	-.0126	.0146	-.0337		1674.
.0610		-591.	-600.	585.	517.	-410.	23.	-.0238	-.0184	-.0025	-.0182	.0113	-.0401		2755.
.0620		-871.	-805.	806.	610.	-524.	68.	-.0238	-.0175	-.0058	-.0253	.0139	-.0506		3366.
.0630		-1060.	-1028.	867.	572.	-484.	178.	-.0202	-.0160	.0000	-.0334	.0202	-.0615		3213.
.0640		-1300.	-1152.	838.	416.	-268.	339.	-.0122	-.0145	.0132	-.0399	.0285	-.0678		2504.
.0650		-1641.	-1172.	803.	183.	8.	523.	-.0015	-.0132	.0289	-.0408	.0398	-.0707		2313.
.0660		-1921.	-1138.	753.	-57.	249.	699.	.0078	-.0118	.0420	-.0366	.0501	-.0729		3105.
.0670		-1970.	-1103.	663.	-210.	411.	813.	.0129	-.0098	.0484	-.0326	.0517	-.0746		3901.
.0680		-1813.	-1113.	596.	-213.	422.	818.	.0125	-.0071	.0445	-.0309	.0444	-.0759		3943.
.0690		-1596.	-1121.	632.	-75.	241.	725.	.0074	-.0041	.0296	-.0274	.0326	-.0766		3204.
.0700		-1389.	-1019.	745.	145.	-45.	581.	-.0003	-.0015	.0077	-.0196	.0181	-.0736		2505.
.0710		-1133.	-824.	827.	368.	-316.	417.	-.0078	.0005	-.0143	-.0101	.0028	-.0652		2668.
.0720		-747.	-649.	772.	503.	-503.	263.	-.0127	.0025	-.0299	-.0014	-.0083	-.0546		3163.
.0730		-260.	-492.	541.	488.	-540.	167.	-.0131	.0044	-.0350	.0074	-.0123	-.0430		3115.
.0740		180.	-256.	194.	324.	-392.	154.	-.0083	.0057	-.0295	.0180	-.0102	-.0280		2215.
.0750		460.	36.	-166.	67.	-120.	189.	.0005	.0063	-.0171	.0295	-.0029	-.0099		974.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

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

CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	55	MEMBER	2	SEQUENCE	75	LOCATION	END	TYPE	RE
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.0670	-1070.	-1103.	663.	-210.	411.	213.	.0129	-.0098	.0484	-.0326	.0517	-.0746	3901.
.0680	-1213.	-1113.	596.	-213.	422.	818.	.0125	-.0071	.0445	-.0309	.0444	-.0759	3943.
.0690	-1596.	-1121.	632.	-75.	241.	725.	.0074	-.0041	.0296	-.0274	.0326	-.0766	3204.
.0700	-1380.	-1019.	745.	145.	-45.	581.	-.0003	-.0015	.0077	-.0196	.0181	-.0736	2505.
.0710	-1133.	-824.	827.	368.	-316.	417.	-.0078	.0005	-.0143	-.0101	.0028	-.0652	2668.
.0720	-747.	-649.	772.	503.	-503.	263.	-.0127	.0025	-.0299	-.0014	-.0083	-.0546	3163.
.0730	-260.	-492.	541.	488.	-540.	167.	-.0131	.0044	-.0350	.0074	-.0123	-.0430	3115.
.0740	180.	-256.	194.	324.	-392.	154.	-.0083	.0057	-.0295	.0180	-.0102	-.0280	2215.
.0750	460.	36.	-166.	67.	-120.	189.	.0005	.0063	-.0171	.0295	-.0029	-.0099	974.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.14.

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	55	MEMBER	2	SEQUENCE	75	LOCATION	END	TYPE	RE						
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)		
.0760	634.	283.	-491.	-210.	171.	221.	.0108	.0071	-.0029	.0399	.0070	.0075	1460.		
.0770	830.	467.	-778.	-430.	408.	223.	.0188	.0083	.0080	.0479	.0135	.0223	2645.		
.0780	1072.	616.	-981.	-533.	514.	168.	.0220	.0097	.0115	.0544	.0137	.0346	3169.		
.0790	1278.	729.	-1028.	-495.	431.	36.	.0199	.0112	.0055	.0604	.0097	.0445	2744.		
.0800	1400.	810.	-932.	-350.	210.	-159.	.0145	.0126	-.0082	.0667	.0025	.0531	1828.		
.0810	1467.	962.	-776.	-163.	-43.	-366.	.0074	.0135	-.0242	.0729	-.0072	.0615	1682.		
.0820	1521.	1074.	-641.	-7.	-261.	-531.	.0006	.0141	-.0367	.0782	-.0149	.0675	2468.		
.0830	1564.	1087.	-578.	54.	-390.	-620.	-.0034	.0150	-.0415	.0811	-.0169	.0683	3066.		
.0840	1535.	1034.	-596.	-6.	-358.	-618.	-.0026	.0159	-.0368	.0810	-.0140	.0656	2981.		
.0850	1349.	945.	-633.	-159.	-179.	-531.	.0025	.0163	-.0244	.0793	-.0075	.0622	2432.		
.0860	1008.	754.	-624.	-346.	30.	-393.	.0095	.0162	-.0085	.0771	.0035	.0572	2189.		
.0870	636.	851.	-570.	-501.	192.	-251.	.0160	.0161	.0063	.0726	.0157	.0491	2473.		
.0880	337.	695.	-488.	-565.	284.	-146.	.0202	.0161	.0169	.0637	.0238	.0396	2709.		
.0890	92.	525.	-340.	-511.	262.	-90.	.0211	.0159	.0213	.0517	.0278	.0300	2425.		
.0900	-156.	363.	-107.	-364.	113.	-66.	.0193	.0153	.0198	.0401	.0309	.0197	1616.		
.0910	-375.	226.	132.	-189.	-64.	-44.	.0169	.0143	.0158	.0296	.0327	.0095	853.		
.0920	-491.	110.	275.	-49.	-161.	-1.	.0153	.0128	.0136	.0194	.0322	.0001	702.		
.0930	-492.	-6.	290.	8.	-162.	82.	.0149	.0111	.0156	.0113	.0320	-.0094	759.		
.0940	-434.	-105.	205.	-30.	-78.	215.	.0157	.0090	.0212	.0078	.0332	-.0198	963.		
.0950	-381.	-151.	73.	-123.	84.	378.	.0175	.0067	.0279	.0085	.0328	-.0296	1697.		
.0960	-354.	-168.	-36.	-198.	248.	-16.	.0186	.0043	.0317	.0107	.0287	-.0384	2558.		
.0970	-318.	-221.	-69.	-187.	305.	613.	.0168	.0026	.0289	.0124	.0212	-.0482	2961.		
.0980	-235.	-319.	-23.	-63.	230.	631.	.0110	.0016	.0186	.0124	.0092	-.0592	2817.		
.0990	-150.	-429.	96.	156.	70.	590.	.0024	.0012	.0021	.0107	-.0076	-.0698	2563.		
.1000	-159.	-539.	296.	415.	-129.	514.	-.0068	.0015	-.0174	.0086	-.0251	-.0796	2808.		
.1010	-294.	-648.	534.	640.	-308.	445.	-.0144	.0022	-.0356	.0080	-.0396	-.0892	3498.		
.1020	-497.	-751.	725.	772.	-380.	419.	-.0188	.0034	-.0481	.0083	-.0504	-.0984	3996.		
.1030	-723.	-868.	829.	796.	-319.	436.	-.0194	.0052	-.0531	.0077	-.0571	-.1064	4013.		
.1040	-987.	-1004.	879.	734.	-171.	472.	-.0161	.0075	-.0516	.0057	-.0582	-.1123	3712.		
.1050	-1293.	-1105.	914.	630.	8.	510.	-.0101	.0099	-.0466	.0037	-.0544	-.1145	3382.		
.1060	-1572.	-1129.	935.	530.	172.	526.	-.0030	.0122	-.0410	.0019	-.0482	-.1116	3198.		
.1070	-1715.	-1106.	928.	470.	267.	484.	.0033	.0144	-.0368	-.0008	-.0408	-.1035	3030.		
.1080	-1680.	-1045.	883.	463.	276.	370.	.0080	.0165	-.0345	-.0046	-.0329	-.0896	2727.		
.1090	-1498.	-898.	789.	480.	240.	221.	.0118	.0182	-.0335	-.0071	-.0254	-.0708	2423.		
.1100	-1143.	-710.	586.	445.	215.	94.	.0156	.0200	-.0323	-.0043	-.0180	-.0534	2100.		
.1110	-703.	-476.	315.	366.	219.	-39.	.0195	.0216	-.0295	.0015	-.0113	-.0332	1790.		
.1120	-244.	-182.	18.	260.	266.	-195.	.0230	.0226	-.0250	.0083	-.0067	-.0080	1753.		
.1130	218.	149.	-301.	117.	346.	-321.	.0265	.0236	-.0204	.0185	-.0047	.0155	2030.		

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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	55	MEMBER	2	SEQUENCE	75	LOCATION	END	TYPE	RE
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.1050	-1293.	-1105.	914.	630.	8.	510.	-.101	.0099	-.0466	.0037	-.0544	-.1145	3382.
.1060	-1572.	-1129.	935.	570.	172.	526.	-.030	.0122	-.0110	.0019	-.0482	-.1116	3198.
.1070	-1715.	-1106.	928.	470.	267.	484.	.0033	.0144	-.0368	-.0008	-.0408	-.1035	3030.
.1080	-1680.	-1045.	883.	467.	276.	370.	.0080	.0165	-.0345	-.0046	-.0329	-.0896	2727.
.1090	-1498.	-898.	789.	480.	240.	221.	.0118	.0182	-.0335	-.0071	-.0254	-.0708	2423.
.1100	-1143.	-710.	586.	445.	215.	94.	.0156	.0200	-.0323	-.0043	-.0180	-.0534	2100.
.1110	-703.	-476.	315.	366.	219.	-39.	.0195	.0216	-.0295	.0015	-.0113	-.0332	1790.
.1120	-244.	-182.	18.	260.	206.	-195.	.0230	.0226	-.0250	.0083	-.0067	-.0080	1753.
.1130	218.	149.	-301.	117.	346.	-321.	.0265	.0236	-.0204	.0185	-.0047	.0155	2030.

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ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKM08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	55	MEMBER	2	SEQUENCE	75	LOCATION	END	TYPE	RE					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1140	659.	437.	-595.	-28.	395.	-411.	.0291	.0253	-.0177	.0305	-.0041	.0322	2382.	
.1150	1069.	629.	-807.	-108.	357.	-527.	.0295	.0279	-.0181	.0385	-.0051	.0450	2695.	
.1160	1460.	777.	-943.	-107.	248.	-685.	.0273	.0307	-.0209	.0410	-.0089	.0572	3073.	
.1170	1771.	956.	-1005.	-63.	100.	-827.	.0238	.0335	-.0249	.0419	-.0137	.0677	3485.	
.1180	1944.	1083.	-990.	-23.	-85.	-920.	.0207	.0368	-.0281	.0423	-.0141	.0718	3859.	
.1190	1928.	1138.	-899.	11.	-227.	-1004.	.0194	.0402	-.0267	.0358	-.0110	.0756	4296.	
.1200	1765.	1148.	-809.	-12.	-227.	-1048.	.0211	.0434	-.0178	.0228	-.0069	.0799	4476.	
.1210	1492.	1105.	-770.	-168.	-91.	-964.	.0262	.0469	-.0019	.0121	.0011	.0760	4103.	
.1220	1069.	1013.	-721.	-405.	120.	-768.	.0330	.0503	.0176	.0044	.0118	.0640	3656.	
.1230	580.	822.	-635.	-629.	336.	-564.	.0391	.0538	.0361	-.0049	.0210	.0478	3796.	
.1240	122.	614.	-500.	-756.	503.	-421.	.0419	.0565	.0489	-.0166	.0229	.0333	4178.	
.1250	-274.	467.	-282.	-753.	518.	-322.	.0396	.0582	.0518	-.0252	.0187	.0188	4043.	
.1260	-603.	314.	36.	-616.	317.	-267.	.0324	.0594	.0437	-.0298	.0122	.0011	3101.	
.1270	-868.	146.	415.	-342.	18.	-303.	.0225	.0598	.0288	-.0390	.0007	-.0122	1909.	
.1280	-1001.	-32.	723.	-44.	-248.	-379.	.0133	.0592	.0134	-.0511	-.0138	-.0209	1899.	
.1290	-1024.	-137.	887.	151.	-411.	-380.	.0067	.0573	.0026	-.0571	-.0251	-.0286	2419.	
.1300	-984.	-169.	892.	193.	-444.	-274.	.0038	.0542	-.0005	-.0554	-.0294	-.0357	2321.	
.1310	-845.	-207.	728.	107.	-316.	-140.	.0055	.0502	.0041	-.0526	-.0297	-.0387	1510.	
.1320	-627.	-179.	452.	-26.	-53.	-36.	.0102	.0448	.0135	-.0522	-.0313	-.0317	288.	
.1330	-357.	-56.	156.	-167.	184.	63.	.0149	.0384	.0215	-.0471	-.0321	-.0207	1069.	
.1340	-65.	113.	-69.	-241.	276.	138.	.0172	.0317	.0231	-.0376	-.0326	-.0099	1633.	
.1350	279.	222.	-210.	-176.	235.	104.	.0165	.0253	.0168	-.0328	-.0379	.0030	1298.	
.1360	694.	251.	-296.	8.	100.	-49.	.0130	.0192	.0041	-.0336	-.0485	.0186	466.	
.1370	1052.	337.	-311.	235.	-95.	-227.	.0076	.0127	-.0117	-.0321	-.0600	.0362	1419.	
.1380	1254.	460.	-270.	408.	-296.	-347.	.0030	.0063	-.0264	-.0243	-.0565	.0508	2555.	
.1390	1268.	530.	-216.	500.	-376.	-426.	.0028	.0003	-.0353	-.0187	-.0695	.0643	3158.	
.1400	1152.	508.	-202.	501.	-277.	-459.	.0078	-.0050	-.0358	-.0195	-.0704	.0770	3062.	
.1410	975.	419.	-246.	395.	-80.	-385.	.0161	-.0095	-.0294	-.0202	-.0557	.0830	2327.	
.1420	714.	323.	-283.	254.	138.	-220.	.0253	-.0134	-.0196	-.0201	-.0565	.0839	1515.	
.1430	386.	160.	-264.	166.	332.	-64.	.0344	-.0166	-.0108	-.0250	-.0471	.0827	1570.	
.1440	46.	-46.	-177.	183.	465.	34.	.0423	-.0192	-.0060	-.0364	-.0411	.0823	2089.	
.1450	-221.	-212.	-49.	282.	475.	128.	.0468	-.0213	-.0068	-.0464	-.0368	.0792	2365.	
.1460	-349.	-356.	77.	427.	351.	250.	.0477	-.0226	-.0122	-.0522	-.0321	.0701	2531.	
.1470	-387.	-515.	190.	628.	196.	345.	.0469	-.0232	-.0190	-.0622	-.0298	.0611	3101.	
.1480	-364.	-711.	251.	827.	92.	422.	.0471	-.0228	-.0239	-.0768	-.0285	.0526	3895.	
.1490	-309.	-839.	231.	948.	59.	560.	.0484	-.0217	-.0243	-.0884	-.0241	.0426	4601.	
.1500	-205.	-681.	114.	956.	88.	782.	.0503	-.0199	-.0190	-.0942	-.0151	.0305	5168.	
.1510	9.	-944.	-114.	872.	186.	1003.	.0530	-.0168	-.0083	-.1003	-.0042	.0179	5601.	

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ADLPIPE STRESS ANALYSIS

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18.29.14.

S/RV PIPING KEWAUNEE GKM08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION 55 MEMBER 2 SEQUENCE 75 LOCATION END TYPE RE

.1430	386.	160.	-264.	166.	332.	-64.	.0344	-.0166	-.0108	-.0250	-.0471	.0827	1570.
.1440	46.	-46.	-177.	183.	465.	34.	.0423	-.0192	-.0060	-.0364	-.0411	.0823	2089.
.1450	-221.	-212.	-49.	282.	475.	128.	.0468	-.0213	-.0068	-.0464	-.0368	.0792	2365.
.1460	-749.	-356.	77.	427.	351.	250.	.0477	-.0226	-.0122	-.0522	-.0321	.0701	2531.
.1470	-387.	-515.	190.	628.	196.	345.	.0469	-.0232	-.0190	-.0622	-.0298	.0611	3101.
.1480	-364.	-711.	251.	627.	92.	422.	.0471	-.0228	-.0239	-.0768	-.0285	.0526	3895.
.1490	-309.	-839.	231.	948.	59.	560.	.0484	-.0217	-.0243	-.0884	-.0241	.0426	4601.
.1500	-205.	-881.	114.	956.	88.	782.	.0503	-.0199	-.0190	-.0942	-.0151	.0305	5168.
.1510	9.	-944.	-114.	872.	186.	1003.	.0530	-.0168	-.0083	-.1003	-.0042	.0179	5601.

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ADLPIPE STRESS ANALYSIS

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	55	MEMBER	2	SEQUENCE	75	LOCATION	END	TYPE	RE						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1520	290.	-992.	-399.	747.	349.	1154.	.0558	-.0126	.0051	-.1091	.0040	.0101	5919.		
.1530	554.	-930.	-653.	594.	472.	1259.	.0561	-.0077	.0168	-.1119	.0112	.0046	6135.		
.1540	726.	-740.	-789.	457.	472.	1314.	.0519	-.0019	.0233	-.1063	.0178	.0001	6131.		
.1550	857.	-565.	-817.	382.	366.	1252.	.0432	.0053	.0240	-.1003	.0201	-.0037	5672.		
.1560	1039.	-496.	-805.	352.	207.	1055.	.0309	.0143	.0203	-.0977	.0159	-.0077	4722.		
.1570	1183.	-388.	-739.	325.	19.	788.	.0153	.0242	.0144	-.0928	.0077	-.0097	3556.		
.1580	1189.	-189.	-599.	237.	-198.	510.	-.0018	.0341	.0082	-.0793	.0017	-.0111	2488.		
.1590	1053.	41.	-424.	71.	-367.	204.	-.0175	.0440	.0044	-.0619	-.0023	-.0099	1778.		
.1600	841.	286.	-270.	-151.	-415.	-151.	-.0309	.0534	.0050	-.0472	-.0075	-.0018	1948.		
.1610	615.	544.	-153.	-425.	-400.	-503.	-.0430	.0619	.0099	-.0324	-.0105	.0096	3215.		
.1620	383.	775.	-54.	-739.	-400.	-808.	-.0544	.0695	.0168	-.0142	-.0079	.0181	4865.		
.1630	92.	983.	70.	-1017.	-380.	-1102.	-.0639	.0757	.0240	.0006	-.0047	.0283	6457.		
.1640	-243.	1128.	229.	-1218.	-340.	-1413.	-.0713	.0803	.0299	.0088	-.0031	.0410	7913.		
.1650	-582.	1220.	407.	-1354.	-341.	-1695.	-.0778	.0830	.0333	.0158	-.0003	.0523	9164.		
.1660	-874.	1321.	580.	-1431.	-379.	-1903.	-.0839	.0831	.0345	.0243	.0032	.0621	10061.		
.1670	-1087.	1366.	704.	-1455.	-398.	-2042.	-.0884	.0808	.0341	.0311	.0054	.0694	10597.		
.1680	-1252.	1321.	787.	-1415.	-370.	-2126.	-.0900	.0764	.0327	.0331	.0056	.0752	10770.		
.1690	-1367.	1214.	828.	-1333.	-332.	-2108.	-.0894	.0697	.0300	.0344	.0063	.0764	10502.		
.1700	-1396.	1096.	815.	-1212.	-297.	-1963.	-.0874	.0608	.0261	.0369	.0077	.0724	9708.		
.1710	-1326.	938.	754.	-1022.	-254.	-1738.	-.0839	.0502	.0210	.0354	.0073	.0661	8480.		
.1720	-1139.	656.	643.	-771.	-223.	-1470.	-.0785	.0387	.0145	.0282	.0066	.0553	6991.		
.1730	-899.	366.	517.	-471.	-207.	-1148.	-.0720	.0263	.0068	.0189	.0059	.0428	5249.		
.1740	-627.	131.	378.	-155.	-212.	-750.	-.0651	.0130	-.0012	.0113	.0067	.0282	3314.		
.1750	-320.	-127.	218.	156.	-223.	-314.	-.0575	.0001	-.0084	.0029	.0090	.0107	1732.		
.1760	-14.	-433.	49.	462.	-199.	111.	-.0485	-.0119	-.0135	-.0110	.0111	-.0066	2150.		
.1770	258.	-749.	-122.	721.	-145.	542.	-.0386	-.0225	-.0159	-.0263	.0140	-.0251	3812.		
.1780	427.	-994.	-258.	914.	-78.	990.	-.0285	-.0316	-.0158	-.0390	.0190	-.0440	5633.		
.1790	505.	-1220.	-354.	1038.	-10.	1414.	-.0184	-.0385	-.0136	-.0502	.0258	-.0635	7320.		
.1800	532.	-1450.	-424.	1111.	75.	1756.	-.0090	-.0429	-.0095	-.0633	.0317	-.0805	8676.		
.1810	505.	-1605.	-455.	1144.	166.	2007.	-.0015	-.0452	-.0043	-.0762	.0357	-.0925	9667.		
.1820	440.	-1678.	-447.	1110.	204.	2195.	.0033	-.0452	.0007	-.0827	.0411	-.1034	10300.		
.1830	328.	-1674.	-391.	1027.	201.	2294.	.0056	-.0431	.0051	-.0846	.0464	-.1114	10524.		
.1840	196.	-1622.	-309.	912.	201.	2275.	.0058	-.0388	.0093	-.0857	.0490	-.1141	10263.		
.1850	62.	-1519.	-219.	756.	200.	2158.	.0039	-.0329	.0132	-.0842	.0496	-.1124	9578.		
.1860	-90.	-1331.	-116.	550.	183.	1985.	-.0002	-.0258	.0168	-.0763	.0501	-.1080	8631.		
.1870	-241.	-1098.	-21.	297.	161.	1767.	-.0060	-.0178	.0198	-.0628	.0502	-.1023	7507.		
.1880	-381.	-838.	65.	39.	162.	1479.	-.0128	-.0093	.0219	-.0484	.0475	-.0923	6211.		
.1890	-484.	-567.	141.	-205.	152.	1136.	-.0208	-.0008	.0225	-.0328	.0432	-.0794	4860.		

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ADLPIPE STRESS ANALYSIS

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

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

SECTION	55	MEMBER	2	SEQUENCE	75	LOCATION	END	TYPE	RE						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		

.1810	505.	-1605.	-455.	1144.	166.	2007.	-.0015	-.0452	-.0043	-.0762	.0357	-.0925	9667.
.1820	440.	-1678.	-447.	1110.	204.	2195.	.0033	-.0452	.0007	-.0827	.0411	-.1034	10300.
.1830	328.	-1674.	-391.	1027.	201.	2294.	.0056	-.0431	.0051	-.0846	.0464	-.1114	10524.
.1840	196.	-1622.	-309.	912.	201.	2275.	.0058	-.0288	.0093	-.0857	.0490	-.1141	10263.
.1850	62.	-1519.	-219.	756.	200.	2158.	.0039	-.0329	.0132	-.0842	.0496	-.1124	9578.
.1860	-90.	-1331.	-116.	550.	183.	1985.	-.0002	-.0258	.0168	-.0763	.0501	-.1080	8631.
.1870	-241.	-1098.	-21.	297.	161.	1767.	-.0060	-.0178	.0198	-.0628	.0502	-.1023	7507.
.1880	-381.	-838.	65.	39.	162.	1479.	-.0128	-.0093	.0219	-.0484	.0475	-.0923	6211.
.1890	-484.	-567.	141.	-205.	152.	1136.	-.0208	-.0008	.0225	-.0328	.0432	-.0794	4860.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.14.

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	55	MEMBER	2	SEQUENCE	75	LOCATION	END	TYPE	RE						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1900	-537.	-271.	209.	-430.	95.	777.	-.0301	.0072	.0208	-.0137	.0394	-.0656	3730.		
.1910	-555.	59.	273.	-608.	13.	410.	-.0399	.0142	.0174	.0060	.0354	-.0496	3061.		
.1920	-522.	353.	315.	-732.	-73.	34.	-.0489	.0202	.0129	.0230	.0314	-.0324	3073.		
.1930	-425.	599.	313.	-815.	-150.	-321.	-.0566	.0249	.0088	.0373	.0289	-.0153	3710.		
.1940	-258.	831.	244.	-884.	-201.	-609.	-.0629	.0280	.0064	.0511	.0287	.0004	4557.		
.1950	-37.	1041.	105.	-950.	-204.	-818.	-.0671	.0294	.0064	.0643	.0307	.0141	5302.		
.1960	201.	1192.	-80.	-1004.	-155.	-967.	-.0688	.0292	.0083	.0748	.0335	.0260	5855.		
.1970	424.	1291.	-277.	-1034.	-76.	-1057.	-.0686	.0277	.0109	.0827	.0362	.0352	6180.		
.1980	625.	1353.	-455.	-1025.	-10.	-1082.	-.0680	.0249	.0124	.0899	.0382	.0402	6220.		
.1990	802.	1349.	-586.	-954.	8.	-1064.	-.0680	.0215	.0113	.0951	.0384	.0400	5965.		
.2000	928.	1250.	-640.	-800.	-27.	-1041.	-.0687	.0177	.0071	.0953	.0358	.0358	5481.		
.2010	961.	1079.	-601.	-578.	-107.	-1013.	-.0698	.0138	.0002	.0910	.0308	.0282	4885.		
.2020	879.	879.	-478.	-332.	-219.	-951.	-.0707	.0098	-.0075	.0854	.0256	.0167	4301.		
.2030	696.	653.	-308.	-109.	-326.	-847.	-.0706	.0060	-.0136	.0790	.0218	.0018	3814.		
.2040	430.	388.	-128.	65.	-377.	-714.	-.0685	.0027	-.0159	.0697	.0192	-.0148	3379.		
.2050	89.	102.	45.	169.	-350.	-550.	-.0638	-.0002	-.0132	.0581	.0180	-.0319	2810.		
.2060	-321.	-166.	210.	196.	-269.	-345.	-.0572	-.0026	-.0066	.0471	.0194	-.0499	2000.		
.2070	-765.	-405.	371.	169.	-165.	-117.	-.0496	-.0046	.0024	.0373	.0223	-.0680	1098.		
.2080	-1179.	-627.	524.	127.	-60.	90.	-.0421	-.0059	.0115	.0266	.0244	-.0845	696.		
.2090	-1512.	-826.	669.	101.	11.	254.	-.0358	-.0068	.0185	.0153	.0242	-.0987	1141.		
.2100	-1747.	-971.	809.	98.	14.	381.	-.0316	-.0074	.0220	.0062	.0224	-.1111	1643.		
.2110	-1880.	-1044.	939.	120.	-47.	475.	-.0292	-.0078	.0217	.0004	.0194	-.1210	2053.		
.2120	-1898.	-1066.	1033.	161.	-138.	530.	-.0281	-.0082	.0190	-.0041	.0152	-.1276	2384.		
.2130	-1790.	-1058.	1059.	199.	-222.	559.	-.0273	-.0085	.0157	-.0078	.0107	-.1311	2645.		
.2140	-1570.	-1009.	998.	202.	-275.	590.	-.0260	-.0089	.0137	-.0093	.0076	-.1321	2845.		
.2150	-1278.	-907.	857.	155.	-278.	637.	-.0237	-.0095	.0138	-.0081	.0067	-.1305	2974.		
.2160	-953.	-772.	653.	67.	-224.	691.	-.0198	-.0104	.0160	-.0053	.0076	-.1260	3044.		
.2170	-610.	-624.	412.	-39.	-133.	735.	-.0151	-.0114	.0192	-.0019	.0095	-.1191	3122.		
.2180	-257.	-469.	164.	-139.	-43.	764.	-.0106	-.0125	.0217	.0023	.0118	-.1106	3247.		
.2190	85.	-311.	-58.	-205.	15.	788.	-.0074	-.0136	.0221	.0074	.0137	-.1012	3317.		
.2200	379.	-173.	-221.	-218.	30.	731.	-.0054	-.0147	.0194	.0119	.0143	-.0912	3185.		
.2210	591.	-67.	-308.	-177.	6.	653.	-.0043	-.0155	.0138	.0152	.0136	-.0808	2826.		
.2220	710.	15.	-330.	-106.	-39.	557.	-.0037	-.0162	.0067	.0180	.0123	-.0709	2371.		
.2230	743.	72.	-312.	-34.	-78.	461.	-.0029	-.0167	-.0001	.0208	.0111	-.0620	1957.		
.2240	695.	96.	-277.	18.	-79.	375.	-.0011	-.0171	-.0047	.0229	.0104	-.0540	1602.		
.2250	563.	91.	-236.	39.	-25.	306.	.0023	-.0174	-.0064	.0240	.0103	-.0465	1292.		
.2260	358.	77.	-189.	30.	72.	264.	.0070	-.0175	-.0057	.0251	.0108	-.0400	1147.		
.2270	119.	54.	-137.	9.	183.	243.	.0123	-.0176	-.0036	.0265	.0114	-.0349	1272.		

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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	55	MEMBER	2	SEQUENCE	75	LOCATION	END	TYPE	RE						
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.1810	505.	-1605.	-455.	1144.	166.	2007.	-.0015	-.0452	-.0043	-.0762	.0357	-.0925	9667.
.1820	440.	-1678.	-447.	1110.	204.	2195.	.0033	-.0452	.0007	-.0827	.0411	-.1034	10300.
.1830	328.	-1674.	-391.	1027.	201.	2294.	.0056	-.0431	.0051	-.0846	.0464	-.1114	10524.
.1840	196.	-1622.	-309.	912.	201.	2275.	.0058	-.0388	.0093	-.0857	.0490	-.1141	10263.
.1850	62.	-1519.	-219.	756.	200.	2158.	.0039	-.0329	.0132	-.0842	.0496	-.1124	9578.
.1860	-90.	-1331.	-116.	550.	183.	1985.	-.0002	-.0258	.0168	-.0763	.0501	-.1080	8631.
.1870	-241.	-1098.	-21.	297.	161.	1767.	-.0060	-.0178	.0198	-.0628	.0502	-.1023	7507.
.1880	-381.	-838.	65.	39.	162.	1479.	-.0128	-.0093	.0219	-.0484	.0475	-.0923	6211.
.1890	-484.	-567.	141.	-205.	152.	1136.	-.0208	-.0008	.0225	-.0328	.0432	-.0794	4860.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.14.

S/RV PIPING KEWAUNEE GKW0RF 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	55	MEMBER	2	SEQUENCE	75	LOCATION	END	TYPE	RE						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(PSI)
.1900	-537.	-271.	209.	-430.	95.	777.	-.0301	.0072	.0208	-.0137	.0394	-.0656	3730.		
.1910	-555.	59.	273.	-600.	13.	410.	-.0399	.0142	.0174	.0060	.0354	-.0496	3061.		
.1920	-522.	353.	315.	-732.	-73.	34.	-.0489	.0202	.0129	.0230	.0314	-.0324	3073.		
.1930	-425.	599.	313.	-815.	-150.	-321.	-.0566	.0249	.0088	.0373	.0289	-.0153	3710.		
.1940	-258.	831.	244.	-884.	-201.	-609.	-.0629	.0280	.0064	.0511	.0287	.0004	4557.		
.1950	-37.	1041.	105.	-950.	-204.	-818.	-.0671	.0294	.0064	.0643	.0307	.0141	5302.		
.1960	201.	1192.	-80.	-1004.	-155.	-967.	-.0688	.0292	.0083	.0748	.0335	.0260	5855.		
.1970	424.	1291.	-277.	-1034.	-76.	-1057.	-.0686	.0277	.0109	.0827	.0362	.0352	6180.		
.1980	625.	1353.	-455.	-1025.	-10.	-1032.	-.0680	.0249	.0124	.0899	.0382	.0402	6220.		
.1990	802.	1349.	-586.	-954.	8.	-1064.	-.0680	.0215	.0113	.0951	.0384	.0400	5965.		
.2000	928.	1250.	-640.	-800.	-27.	-1041.	-.0687	.0177	.0071	.0953	.0358	.0358	5481.		
.2010	961.	1079.	-601.	-578.	-107.	-1013.	-.0698	.0138	.0002	.0910	.0308	.0282	4885.		
.2020	879.	879.	-478.	-332.	-219.	-951.	-.0707	.0098	-.0075	.0854	.0256	.0167	4301.		
.2030	696.	653.	-308.	-109.	-326.	-847.	-.0706	.0060	-.0136	.0790	.0218	.0018	3814.		
.2040	430.	388.	-128.	65.	-377.	-714.	-.0685	.0027	-.0159	.0697	.0192	-.0148	3379.		
.2050	89.	102.	45.	169.	-350.	-550.	-.0638	-.0002	-.0132	.0581	.0180	-.0319	2810.		
.2060	-321.	-166.	210.	196.	-269.	-345.	-.0572	-.0026	-.0066	.0471	.0194	-.0499	2000.		
.2070	-765.	-405.	371.	169.	-165.	-117.	-.0496	-.0046	.0024	.0373	.0223	-.0680	1098.		
.2080	-1179.	-627.	524.	127.	-60.	90.	-.0421	-.0059	.0115	.0266	.0244	-.0845	696.		
.2090	-1512.	-826.	669.	101.	11.	254.	-.0358	-.0068	.0185	.0153	.0242	-.0987	1141.		
.2100	-1747.	-971.	809.	98.	14.	381.	-.0316	-.0074	.0220	.0062	.0224	-.1111	1643.		
.2110	-1880.	-1044.	939.	120.	-47.	475.	-.0292	-.0078	.0217	.0004	.0194	-.1210	2053.		
.2120	-1898.	-1066.	1033.	161.	-138.	530.	-.0281	-.0082	.0190	-.0041	.0152	-.1276	2384.		
.2130	-1790.	-1058.	1059.	199.	-222.	559.	-.0273	-.0085	.0157	-.0078	.0107	-.1311	2645.		
.2140	-1570.	-1009.	998.	202.	-275.	590.	-.0260	-.0089	.0137	-.0093	.0076	-.1321	2845.		
.2150	-1278.	-907.	857.	155.	-278.	637.	-.0237	-.0095	.0138	-.0081	.0067	-.1305	2974.		
.2160	-953.	-772.	653.	67.	-224.	691.	-.0198	-.0104	.0160	-.0053	.0076	-.1260	3044.		
.2170	-610.	-624.	412.	-39.	-133.	735.	-.0151	-.0114	.0192	-.0019	.0095	-.1191	3122.		
.2180	-257.	-469.	164.	-139.	-43.	764.	-.0106	-.0125	.0217	.0023	.0118	-.1106	3247.		
.2190	85.	-311.	-58.	-205.	15.	788.	-.0074	-.0136	.0221	.0074	.0137	-.1012	3317.		
.2200	379.	-173.	-221.	-218.	30.	731.	-.0054	-.0147	.0194	.0119	.0143	-.0912	3185.		
.2210	591.	-67.	-308.	-177.	6.	653.	-.0043	-.0155	.0138	.0152	.0136	-.0808	2826.		
.2220	710.	15.	-330.	-106.	-39.	557.	-.0037	-.0162	.0067	.0180	.0123	-.0709	2371.		
.2230	743.	72.	-312.	-34.	-78.	461.	-.0029	-.0167	-.0001	.0208	.0111	-.0620	1957.		
.2240	695.	96.	-277.	18.	-79.	375.	-.0011	-.0171	-.0047	.0229	.0104	-.0540	1602.		
.2250	563.	91.	-236.	39.	-25.	306.	.0023	-.0174	-.0064	.0240	.0103	-.0465	1292.		
.2260	358.	77.	-189.	30.	72.	264.	.0070	-.0175	-.0057	.0251	.0108	-.0400	1147.		
.2270	119.	54.	-137.	9.	183.	243.	.0123	-.0176	-.0036	.0265	.0114	-.0349	1272.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.14.

S/RV PIPING KEWAUNEE GKW0RF 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	55	MEMBER	2	SEQUENCE	75	LOCATION	END	TYPE	RE
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