

50-305

RESPONSE TO NUREG-0737 ITEM II.D.1

Docket # *50-305*

Control # *8403280048*

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

.0450	223.	-212.	-92.	-175.	194.	-160.	-.050	.0105	.0172	-.0402	.0074	-.0347	1277.
.0460	-123.	-430.	22.	-106.	176.	-106.	-.043	.0093	.0228	-.0474	.0237	-.0370	966.
.0470	-297.	-451.	103.	-66.	181.	-86.	-.0072	.0083	.0259	-.0473	.0236	-.0376	880.
.0480	-303.	-327.	160.	-41.	202.	-76.	-.0126	.0072	.0256	-.0389	.0209	-.0381	919.
.0490	-298.	-318.	229.	9.	220.	-17.	-.0173	.0052	.0211	-.0245	.0059	-.0421	963.
.0500	-428.	-456.	771.	81.	236.	72.	-.0206	.0026	.0136	-.0058	-.0112	-.0491	1083.
.0510	-567.	-510.	520.	141.	212.	126.	-.0240	.0002	.0063	.0142	-.0258	-.0532	1185.
.0520	-475.	-338.	506.	171.	194.	123.	-.0270	-.0016	.0037	.0282	-.0312	-.0486	1194.
.0530	-206.	-51.	330.	185.	192.	89.	-.0280	-.0031	.0065	.0328	-.0241	-.0359	1172.

ADLPIPE PAGE 2224

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

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	57	MEMBER	2	SEQUENCE	80	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)
.0540	-58.	170.	179.	207.	160.	61.	-.0266	-.0049	.0110	.0328	-.0086	-.0215	1122.		
.0550	-113.	267.	133.	245.	89.	57.	-.0238	-.0071	.0147	.0321	.0094	-.0091	1113.		
.0560	-164.	332.	82.	278.	36.	65.	-.0208	-.0095	.0180	.0298	.0253	.0025	1202.		
.0570	-76.	459.	-16.	287.	22.	73.	-.0195	-.0119	.0205	.0282	.0336	.0131	1239.		
.0580	25.	591.	-53.	278.	13.	94.	-.0205	-.0143	.0194	.0321	.0298	.0188	1228.		
.0590	-50.	559.	53.	282.	-5.	159.	-.0221	-.0172	.0140	.0405	.0165	.0170	1349.		
.0600	-309.	314.	254.	308.	-17.	272.	-.0224	-.0207	.0066	.0477	.0008	.0099	1717.		
.0610	-604.	31.	461.	335.	-28.	395.	-.0218	-.0241	.0004	.0503	-.0115	.0028	2165.		
.0620	-790.	-108.	590.	336.	-50.	484.	-.0210	-.0267	-.0021	.0469	-.0164	.0001	2469.		
.0630	-882.	-135.	615.	312.	-75.	532.	-.0190	-.0284	.0002	.0348	-.0100	.0031	2594.		
.0640	-1018.	-195.	595.	284.	-107.	557.	-.0148	-.0293	.0060	.0145	.0073	.0090	2648.		
.0650	-1249.	-328.	599.	250.	-160.	571.	-.0092	-.0296	.0123	-.0081	.0291	.0141	2684.		
.0660	-1437.	-445.	595.	192.	-216.	564.	-.0041	-.0290	.0173	-.0285	.0473	.0177	2647.		
.0670	-1431.	-475.	520.	102.	-237.	538.	-.0009	-.0275	.0203	-.0445	.0559	.0197	2491.		
.0680	-1252.	-458.	410.	-2.	-227.	511.	.0003	-.0255	.0190	-.0526	.0508	.0179	2334.		
.0690	-1035.	-480.	346.	-107.	-214.	496.	-.0004	-.0231	.0120	-.0502	.0315	.0097	2295.		
.0700	-855.	-558.	338.	-203.	-202.	473.	-.0021	-.0201	.0011	-.0405	.0040	-.0032	2307.		
.0710	-656.	-622.	315.	-308.	-185.	417.	-.0038	-.0162	-.0098	-.0296	-.0229	-.0158	2297.		
.0720	-336.	-587.	199.	-413.	-172.	325.	-.0046	-.0115	-.0174	-.0223	-.0418	-.0237	2309.		
.0730	86.	-443.	-21.	-517.	-171.	195.	-.0039	-.0060	-.0201	-.0215	-.0473	-.0250	2414.		
.0740	458.	-257.	-281.	-614.	-182.	25.	-.0013	.0002	-.0178	-.0274	-.0384	-.0205	2675.		
.0750	678.	-102.	-504.	-686.	-210.	-158.	.0031	.0066	-.0126	-.0371	-.0193	-.0133	3065.		
.0760	808.	11.	-686.	-721.	-246.	-322.	.0081	.0127	-.0071	-.0462	.0027	-.0062	3453.		
.0770	961.	124.	-852.	-735.	-260.	-461.	.0122	.0183	-.0026	-.0514	.0200	-.0007	3781.		
.0780	1141.	248.	-973.	-738.	-242.	-581.	-.0141	.0234	-.0009	-.0489	.0267	.0011	4048.		
.0790	1275.	316.	-993.	-716.	-208.	-664.	.0135	.0277	-.0037	-.0364	.0203	-.0031	4168.		
.0800	1328.	276.	-914.	-658.	-165.	-700.	.0116	.0310	-.0104	-.0159	.0043	-.0135	4070.		
.0810	1322.	187.	-787.	-579.	-107.	-717.	.0090	.0335	-.0180	.0079	-.0147	-.0260	3873.		
.0820	1301.	155.	-656.	-495.	-45.	-741.	.0059	.0356	-.0234	.0306	-.0302	-.0361	3725.		
.0830	1294.	198.	-560.	-400.	8.	-760.	.0035	.0371	-.0250	.0484	-.0365	-.0414	3584.		
.0840	1258.	244.	-504.	-280.	55.	-755.	.0033	.0377	-.0221	.0580	-.0304	-.0414	3369.		
.0850	1094.	243.	-435.	-142.	94.	-731.	.0053	.0375	-.0154	.0602	-.0135	-.0375	3133.		
.0860	793.	209.	-306.	6.	113.	-692.	.0080	.0366	-.0076	.0596	.0077	-.0319	2926.		
.0870	474.	165.	-154.	159.	124.	-626.	.0104	.0349	-.0005	.0593	.0269	-.0265	2745.		
.0880	228.	122.	-18.	309.	150.	-533.	.0120	.0324	.0050	.0605	.0402	-.0218	2646.		
.0890	19.	77.	134.	447.	187.	-425.	.0122	.0293	.0077	.0651	.0447	-.0191	2690.		
.0900	-702.	10.	331.	572.	212.	-304.	.0112	.0258	.0071	.0739	.0412	-.0191	2845.		
.0910	-395.	-83.	515.	682.	232.	-172.	.0101	.0220	.0052	.0831	.0347	-.0200	3091.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

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 57 MEMBER 2 SEQUENCE 80 LOCATION END TYPE RU

.0830	1294.	198.	-560.	-400.	8.	-780.	.0035	.0371	-.0250	.0484	-.0365	-.0414	3584.
.0840	1258.	244.	-504.	-209.	55.	-755.	.0033	.0377	-.0221	.0580	-.0304	-.0414	3369.
.0850	1094.	243.	-435.	-147.	94.	-731.	.0053	.0375	-.0154	.0602	-.0135	-.0375	3133.
.0860	793.	209.	-306.	6.	113.	-692.	.0080	.0366	-.0076	.0596	.0077	-.0319	2926.
.0870	474.	165.	-154.	159.	124.	-626.	.0104	.0349	-.0005	.0593	.0269	-.0265	2745.
.0880	228.	122.	-18.	309.	150.	-533.	.0120	.0324	.0050	.0605	.0402	-.0218	2646.
.0890	19.	77.	134.	447.	167.	-425.	.0122	.0293	.0077	.0651	.0447	-.0191	2690.
.0900	-202.	10.	331.	572.	212.	-304.	.0112	.0258	.0071	.0739	.0412	-.0191	2845.
.0910	-395.	-83.	515.	682.	232.	-172.	.0101	.0220	.0052	.0831	.0347	-.0200	3091.

ADLPIPE PAGE 2225

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.0920	-488.	-137.	613.	764.	258.	-49.	.0096	.0182	.0045	.0883	.0310	-.0182	3371.							
.0930	-477.	-84.	614.	801.	278.	39.	.0092	.0149	.0062	.0885	.0322	-.0120	3543.							
.0940	-413.	51.	550.	794.	282.	95.	.0089	.0121	.0097	.0847	.0380	-.0025	3537.							
.0950	-352.	171.	451.	758.	278.	147.	.0094	.0095	.0138	.0777	.0460	.0077	3423.							
.0960	-315.	235.	355.	705.	272.	213.	.0100	.0068	.0164	.0701	.0509	.0162	3275.							
.0970	-274.	276.	286.	633.	264.	294.	.0094	.0041	.0157	.0657	.0472	.0213	3115.							
.0980	-199.	315.	241.	543.	260.	386.	.0071	.0014	.0114	.0655	.0329	.0227	2986.							
.0990	-128.	313.	223.	444.	265.	494.	.0038	-.0012	.0043	.0679	.0107	.0204	2982.							
.1000	-143.	236.	257.	348.	261.	615.	.0006	-.0038	-.0049	.0713	-.0146	.0150	3145.							
.1010	-268.	107.	335.	257.	234.	738.	-.0019	-.0061	-.0141	.0732	-.0374	.0084	3405.							
.1020	-447.	-19.	400.	162.	193.	843.	-.0030	-.0078	-.0209	.0699	-.0524	.0038	3671.							
.1030	-635.	-107.	420.	65.	141.	920.	-.0023	-.0088	-.0241	.0596	-.0571	.0030	3895.							
.1040	-848.	-182.	418.	-25.	70.	974.	.0000	-.0091	-.0247	.0441	-.0533	.0047	4076.							
.1050	-1098.	-281.	421.	-106.	-19.	1005.	.0038	-.0087	-.0243	.0260	-.0446	.0069	4219.							
.1060	-1332.	-395.	421.	-180.	-116.	1007.	.0081	-.0075	-.0239	.0082	-.0350	.0083	4297.							
.1070	-1460.	-471.	391.	-255.	-211.	966.	.0119	-.0053	-.0242	-.0070	-.0278	.0086	4263.							
.1080	-1450.	-473.	323.	-336.	-298.	871.	.0147	-.0020	-.0253	-.0185	-.0241	.0078	4090.							
.1090	-1324.	-429.	219.	-420.	-372.	728.	.0169	.0022	-.0266	-.0268	-.0225	.0060	3835.							
.1100	-1025.	-353.	34.	-500.	-434.	567.	.0193	.0070	-.0277	-.0323	-.0205	.0029	3639.							
.1110	-660.	-219.	-185.	-583.	-481.	362.	.0214	.0125	-.0274	-.0366	-.0169	.0003	3498.							
.1120	-309.	-39.	-400.	-671.	-504.	111.	.0231	.0188	-.0255	-.0409	-.0116	-.0014	3533.							
.1130	54.	116.	-619.	-745.	-507.	-131.	.0251	.0250	-.0228	-.0440	-.0061	-.0041	3802.							
.1140	428.	226.	-817.	-793.	-498.	-328.	.0270	.0305	-.0209	-.0441	-.0035	-.0094	4140.							
.1150	779.	329.	-962.	-814.	-473.	-494.	.0279	.0353	-.0200	-.0408	-.0062	-.0163	4437.							
.1160	1103.	427.	-1058.	-814.	-424.	-639.	.0275	.0397	-.0195	-.0354	-.0133	-.0244	4668.							
.1170	1350.	469.	-1090.	-790.	-359.	-754.	.0263	.0432	-.0192	-.0283	-.0226	-.0339	4796.							
.1180	1496.	438.	-1047.	-724.	-307.	-812.	.0251	.0456	-.0191	-.0200	-.0312	-.0449	4718.							
.1190	1469.	372.	-926.	-620.	-254.	-844.	.0244	.0472	-.0169	-.0154	-.0339	-.0534	4499.							
.1200	1314.	292.	-786.	-490.	-187.	-856.	.0250	.0480	-.0105	-.0183	-.0265	-.0570	4191.							
.1210	1101.	187.	-655.	-338.	-125.	-819.	.0271	.0477	-.0008	-.0263	-.0096	-.0569	3734.							
.1220	773.	75.	-486.	-175.	-78.	-744.	.0297	.0466	.0103	-.0359	.0123	-.0545	3208.							
.1230	395.	-30.	-295.	-5.	-31.	-637.	.0321	.0448	.0210	-.0447	.0332	-.0509	2663.							
.1240	24.	-131.	-96.	152.	38.	-515.	.0330	.0425	.0296	-.0500	.0469	-.0477	2253.							
.1250	-318.	-246.	141.	301.	115.	-378.	.0316	.0399	.0334	-.0469	.0474	-.0480	2073.							
.1260	-604.	-381.	421.	431.	180.	-213.	.0280	.0368	.0313	-.0333	.0334	-.0530	2142.							
.1270	-853.	-521.	706.	555.	258.	-41.	.0236	.0335	.0258	-.0158	.0113	-.0588	2559.							
.1280	-981.	-632.	905.	668.	346.	124.	.0199	.0303	.0202	.0002	-.0104	-.0618	3181.							
.1290	-1009.	-656.	1009.	743.	416.	247.	.0171	.0277	.0165	.0132	-.0251	-.0600	3700.							

ADLPIPE PAGE 2226

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU
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.1210	1101.	187.	-655.	-338.	-125.	-819.	.0271	.0477	-.0008	-.0263	-.0096	-.0570	4191.
.1220	773.	75.	-486.	-175.	-78.	-744.	.0297	.0466	.0103	-.0359	.0123	-.0545	3208.
.1230	395.	-30.	-295.	-5.	-21.	-637.	.0321	.0448	.0210	-.0447	.0332	-.0509	2663.
.1240	24.	-131.	-96.	158.	38.	-515.	.0330	.0425	.0296	-.0500	.0469	-.0477	2253.
.1250	-318.	-246.	141.	301.	115.	-378.	.0316	.0399	.0334	-.0469	.0474	-.0480	2073.
.1260	-604.	-391.	421.	471.	180.	-213.	.0289	.0368	.0313	-.0333	.0334	-.0530	2142.
.1270	-853.	-521.	706.	555.	258.	-41.	.0236	.0335	.0258	-.0158	.0113	-.0588	2559.
.1280	-981.	-632.	905.	668.	346.	124.	.0199	.0303	.0202	.0002	-.0104	-.0618	3181.
.1290	-1009.	-656.	1009.	743.	416.	247.	.0171	.0277	.0165	.0132	-.0251	-.0600	3700.

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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	57	MEMBER	2	SEQUENCE	80	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)		
.1300	-981.	-562.	1030.	774.	448.	308.	.0155	.0260	.0158	.0219	-.0295	-.0521	3947.		
.1310	-855.	-384.	926.	779.	459.	327.	.0158	.0251	.0186	.0233	-.0229	-.0377	4014.		
.1320	-675.	-173.	730.	758.	473.	301.	.0178	.0247	.0239	.0174	-.0091	-.0182	3934.		
.1330	-460.	31.	519.	703.	471.	251.	.0199	.0249	.0282	.0116	.0029	.0012	3686.		
.1340	-233.	206.	349.	626.	450.	201.	.0210	.0251	.0288	.0109	.0060	.0167	3325.		
.1350	41.	336.	192.	550.	439.	170.	.0213	.0250	.0255	.0144	-.0010	.0283	3020.		
.1360	381.	436.	27.	479.	446.	151.	.0208	.0246	.0192	.0209	-.0159	.0364	2803.		
.1370	645.	528.	-76.	392.	450.	105.	.0190	.0244	.0114	.0305	-.0350	.0417	2529.		
.1380	772.	576.	-102.	302.	427.	53.	.0173	.0241	.0031	.0411	-.0523	.0448	2194.		
.1390	762.	538.	-102.	241.	394.	25.	.0181	.0232	-.0028	.0455	-.0504	.0487	1931.		
.1400	673.	450.	-127.	209.	365.	19.	.0219	.0216	-.0048	.0401	-.0564	.0563	1759.		
.1410	567.	398.	-174.	181.	319.	18.	.0271	.0199	-.0036	.0294	-.0437	.0667	1531.		
.1420	389.	399.	-190.	143.	252.	-1.	.0321	.0183	-.0010	.0172	-.0277	.0785	1208.		
.1430	164.	371.	-179.	125.	179.	-2.	.0372	.0162	.0008	.0053	-.0127	.0890	912.		
.1440	-64.	277.	-150.	133.	118.	26.	.0423	.0137	.0007	-.0051	-.0026	.0965	748.		
.1450	-227.	185.	-105.	133.	62.	56.	.0458	.0112	-.0021	-.0101	-.0006	.1001	656.		
.1460	-264.	157.	-68.	113.	5.	76.	.0470	.0091	-.0069	-.0091	-.0063	.1005	571.		
.1470	-222.	169.	-60.	93.	-34.	87.	.0473	.0072	-.0120	-.0074	-.0144	.1000	550.		
.1480	-110.	177.	-110.	91.	-63.	103.	.0482	.0055	-.0159	-.0086	-.0195	.0998	632.		
.1490	31.	222.	-197.	78.	-102.	97.	.0491	.0045	-.0177	-.0125	-.0193	.1003	672.		
.1500	204.	359.	-318.	35.	-156.	44.	.0491	.0046	-.0163	-.0197	-.0132	.1024	692.		
.1510	482.	554.	-515.	-18.	-207.	-24.	.0489	.0054	-.0117	-.0321	-.0018	.1061	872.		
.1520	811.	728.	-760.	-70.	-234.	-96.	.0485	.0067	-.0048	-.0499	.0125	.1093	1096.		
.1530	1098.	836.	-960.	-130.	-257.	-169.	.0465	.0086	.0018	-.0667	.0236	.1076	1395.		
.1540	1258.	873.	-1037.	-203.	-283.	-251.	.0414	.0112	.0059	-.0775	.0267	.0982	1791.		
.1550	1359.	837.	-1038.	-262.	-288.	-313.	.0338	.0138	.0077	-.0838	.0215	.0818	2084.		
.1560	1506.	745.	-1037.	-295.	-258.	-335.	.0245	.0163	.0082	-.0880	.0104	.0601	2151.		
.1570	1587.	626.	-979.	-330.	-201.	-362.	.0131	.0191	.0085	-.0901	-.0044	.0345	2210.		
.1580	1511.	448.	-816.	-368.	-153.	-393.	.0001	.0222	.0086	-.0897	-.0201	.0050	2337.		
.1590	1301.	160.	-596.	-382.	-111.	-402.	-.0123	.0251	.0095	-.0908	-.0321	-.0263	2361.		
.1600	1010.	-185.	-379.	-373.	-56.	-406.	-.0235	.0280	.0130	-.0969	-.0372	-.0554	2312.		
.1610	684.	-478.	-166.	-366.	-3.	-434.	-.0347	.0311	.0188	-.1049	-.0370	-.0808	2369.		
.1620	353.	-702.	57.	-358.	26.	-472.	-.0460	.0341	.0249	-.1104	-.0347	-.1035	2475.		
.1630	-32.	-938.	296.	-322.	52.	-497.	-.0561	.0365	.0306	-.1145	-.0303	-.1233	2482.		
.1640	-446.	-1222.	536.	-241.	87.	-488.	-.0641	.0378	.0350	-.1166	-.0250	-.1403	2300.		
.1650	-842.	-1475.	777.	-140.	115.	-466.	-.0710	.0383	.0373	-.1130	-.0211	-.1543	2087.		
.1660	-1207.	-1624.	1014.	-46.	136.	-468.	-.0775	.0385	.0379	-.1028	-.0190	-.1639	2041.		
.1670	-1479.	-1691.	1192.	57.	159.	-466.	-.0824	.0379	.0373	-.0882	-.0168	-.1679	2069.		

ADLPIPE PAGE 2227

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

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	57	MEMBER	2	SEQUENCE	80	LOCATION	END	TYPE	RU						
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.1970	25.	-688.	-208.	-953.	-346.	-253.	-731.	.0072	-.0019	-.1194	.0041	-.0807	4692.
.1980	145.	-430.	-272.	-815.	-337.	-392.	-.0736	.0123	-.0007	-.0682	.0154	-.0820	4029.
.1990	263.	-155.	-307.	-652.	-314.	-509.	-.0738	.0133	-.0013	-.0353	.0170	-.0814	3693.
.2000	357.	96.	-302.	-457.	-271.	-590.	-.0736	.0130	-.0033	.0011	.0145	-.0816	3313.
.2010	367.	237.	-241.	-273.	-211.	-630.	-.0728	.0113	-.0063	.0391	.0387	-.0831	2938.
.2020	332.	414.	-115.	4.	-142.	-636.	-.0716	.0084	-.0096	.0770	.0013	-.0860	2718.
.2030	207.	487.	55.	244.	-69.	-612.	-.0695	.0046	-.0121	.1115	-.0045	-.0892	2766.
.2040	30.	513.	234.	480.	9.	-562.	-.0662	-.0001	-.0123	.1385	-.0059	-.0910	3085.
.2050	-197.	490.	409.	700.	87.	-490.	-.0615	-.0053	-.0099	.1561	-.0017	-.0909	3586.

ADLPIPE PAGE 2228 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.22.

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

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU							STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	(PSI)
.2060	-474.	425.	586.	890.	152.	-401.	-.0559	-.0109	-.0055	.1610	.0067	-.0893	4122.
.2070	-775.	321.	763.	1038.	202.	-298.	-.0497	-.0166	.0002	.1660	.0169	-.0869	4584.
.2080	-1051.	139.	912.	1140.	248.	-181.	-.0435	-.0222	.0062	.1600	.0262	-.0838	4923.
.2090	-1261.	39.	1025.	1190.	285.	-52.	-.0378	-.0276	.0114	.1487	.0318	-.0808	5112.
.2100	-1395.	-117.	1100.	1183.	312.	80.	-.0331	-.0326	.0149	.1348	.0319	-.0787	5116.
.2110	-1454.	-272.	1161.	1118.	323.	208.	-.0294	-.0368	.0164	.1194	.0267	-.0774	4934.
.2120	-1427.	-410.	1161.	1003.	321.	329.	-.0265	-.0403	.0164	.1017	.0183	-.0756	4605.
.2130	-1298.	-503.	1086.	842.	303.	434.	-.0239	-.0429	.0158	.0809	.0096	-.0717	4153.
.2140	-1083.	-529.	939.	636.	264.	516.	-.0215	-.0445	.0155	.0569	.0026	-.0648	3591.
.2150	-818.	-501.	731.	393.	200.	573.	-.0190	-.0450	.0157	.0297	-.0011	-.0544	3018.
.2160	-533.	-445.	478.	130.	115.	617.	-.0160	-.0446	.0165	-.0001	-.0011	-.0412	2675.
.2170	-241.	-370.	197.	-140.	14.	652.	-.0128	-.0436	.0172	-.0308	.0010	-.0259	2785.
.2180	44.	-269.	-88.	-411.	-98.	676.	-.0099	-.0419	.0172	-.0595	.0029	-.0099	3325.
.2190	303.	-151.	-348.	-671.	-213.	689.	-.0078	-.0397	.0159	-.0837	.0026	.0052	4111.
.2200	507.	-51.	-562.	-901.	-322.	705.	-.0063	-.0373	.0128	-.1020	-.0008	.0182	4961.
.2210	633.	4.	-714.	-1085.	-421.	732.	-.0051	-.0350	.0081	-.1143	-.0066	.0282	5739.
.2220	674.	25.	-800.	-1221.	-506.	763.	-.0039	-.0326	.0025	-.1206	-.0135	.0356	6369.
.2230	638.	34.	-832.	-1309.	-576.	787.	-.0027	-.0303	-.0028	-.1221	-.0193	.0413	6814.
.2240	535.	37.	-825.	-1346.	-627.	803.	-.0010	-.0279	-.0069	-.1203	-.0218	.0460	7046.
.2250	366.	28.	-785.	-1329.	-660.	807.	.0017	-.0256	-.0094	-.1159	-.0200	.0501	7051.
.2260	142.	11.	-710.	-1263.	-673.	799.	.0053	-.0234	-.0103	-.1084	-.0146	.0530	6839.
.2270	-102.	-2.	-608.	-1152.	-664.	773.	.0092	-.0211	-.0101	-.0970	-.0077	.0543	6421.
.2280	-324.	-4.	-491.	-1002.	-626.	733.	.0134	-.0190	-.0094	-.0811	-.0013	.0534	5801.
.2290	-500.	-0.	-366.	-814.	-554.	679.	.0174	-.0169	-.0089	-.0601	.0028	.0499	4992.
.2300	-621.	9.	-231.	-598.	-454.	611.	.0212	-.0149	-.0090	-.0339	.0035	.0431	4039.
.2310	-677.	32.	-96.	-366.	-331.	523.	.0245	-.0128	-.0096	-.0031	.0012	.0334	3001.
.2320	-650.	84.	16.	-129.	-188.	413.	.0275	-.0106	-.0100	.0298	-.0025	.0222	1969.
.2330	-526.	174.	84.	104.	-32.	281.	.0303	-.0081	-.0093	.0620	-.0057	.0109	1256.
.2340	-320.	299.	104.	322.	126.	130.	.0332	-.0054	-.0072	.0914	-.0068	.0003	1542.
.2350	-64.	444.	87.	518.	278.	-33.	.0360	-.0025	-.0035	.1164	-.0053	-.0093	2456.
.2360	216.	590.	42.	688.	418.	-200.	.0388	.0006	.0016	.1358	-.0011	-.0176	3461.
.2370	509.	726.	-26.	830.	544.	-358.	.0413	.0036	.0078	.1493	.0050	-.0250	4403.
.2380	798.	846.	-103.	939.	652.	-502.	.0430	.0066	.0144	.1571	.0115	-.0320	5212.
.2390	1053.	934.	-169.	1012.	741.	-624.	.0436	.0095	.0207	.1600	.0171	-.0392	5847.
.2400	1240.	966.	-206.	1050.	808.	-714.	.0430	.0121	.0263	.1582	.0210	-.0471	6281.
.2410	1337.	926.	-208.	1056.	851.	-763.	.0414	.0142	.0308	.1517	.0231	-.0557	6495.
.2420	1340.	821.	-175.	1028.	870.	-768.	.0387	.0159	.0344	.1403	.0235	-.0644	6471.
.2430	1257.	671.	-115.	964.	863.	-734.	.0351	.0172	.0372	.1243	.0228	-.0726	6209.

ADLPIPE PAGE 2229 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.22.

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 57 MEMBER 2 SEQUENCE 80 LOCATION END TYPE RU

.2350	-64.	444.	87.	518.	278.	-33.	.0360	-.0025	-.0035	.1164	-.0053	-.0093	2456.
.2360	216.	590.	42.	688.	418.	-200.	.0388	.0006	.0016	.1358	-.0011	-.0176	3461.
.2370	509.	726.	-26.	830.	544.	-358.	.0413	.0026	.0078	.1493	.0050	-.0250	4403.
.2380	798.	879.	-103.	979.	652.	-502.	.0430	.0066	.0144	.1571	.0115	-.0320	5212.
.2390	1053.	954.	-169.	1012.	741.	-624.	.0436	.0095	.0207	.1600	.0171	-.0392	5847.
.2400	1240.	966.	-206.	1050.	808.	-714.	.0430	.0121	.0263	.1582	.0210	-.0471	6281.
.2410	1337.	926.	-208.	1056.	851.	-763.	.0414	.0142	.0308	.1517	.0231	-.0557	6495.
.2420	1340.	821.	-175.	1028.	870.	-768.	.0387	.0159	.0344	.1403	.0235	-.0644	6471.
.2430	1257.	671.	-115.	964.	863.	-734.	.0351	.0172	.0372	.1243	.0228	-.0726	6209.

ADLPIPE PAGE 2229

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.22.

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	57	MEMBER	2	SEQUENCE	80	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)		
.2440	1095.	487.	-37.	866.	830.	-663.	.0308	.0180	.0394	.1039	.0215	-.0794	5722.		
.2450	861.	273.	55.	741.	773.	-559.	.0261	.0184	.0409	.0798	.0199	-.0845	5040.		
.2460	559.	35.	160.	593.	691.	-429.	.0211	.0183	.0415	.0533	.0181	-.0877	4201.		
.2470	211.	-211.	272.	427.	591.	-231.	.0160	.0179	.0410	.0259	.0158	-.0890	3262.		
.2480	-147.	-448.	378.	251.	478.	-122.	.0111	.0171	.0393	-.0009	.0127	-.0882	2310.		
.2490	-485.	-660.	465.	73.	359.	44.	.0066	.0160	.0364	-.0261	.0090	-.0851	1540.		
.2500	-795.	-836.	532.	-102.	237.	204.	.0027	.0147	.0323	-.0484	.0047	-.0795	1374.		
.2510	-1076.	-970.	580.	-269.	114.	352.	-.0003	.0131	.0272	-.0669	.0001	-.0717	1909.		
.2520	-1318.	-1062.	606.	-420.	-6.	484.	-.0021	.0114	.0213	-.0814	-.0044	-.0614	2676.		
.2530	-1499.	-1106.	598.	-551.	-118.	598.	-.0022	.0096	.0149	-.0919	-.0082	-.0488	3428.		
.2540	-1604.	-1091.	552.	-659.	-218.	686.	-.0008	.0078	.0083	-.0984	-.0111	-.0337	4072.		
.2550	-1626.	-1015.	471.	-743.	-303.	743.	.0023	.0060	.0018	-.1004	-.0130	-.0168	4563.		
.2560	-1574.	-890.	361.	-798.	-371.	766.	.0068	.0043	-.0046	-.0980	-.0141	.0013	4871.		
.2570	-1454.	-725.	229.	-822.	-419.	757.	.0127	.0029	-.0108	-.0911	-.0144	.0195	4981.		
.2580	-1261.	-527.	78.	-816.	-444.	715.	.0196	.0016	-.0167	-.0800	-.0140	.0374	4891.		
.2590	-995.	-296.	-92.	-784.	-445.	640.	.0273	.0008	-.0220	-.0655	-.0133	.0542	4612.		
.2600	-673.	-49.	-270.	-728.	-422.	535.	.0354	.0003	-.0265	-.0484	-.0122	.0695	4163.		
.2610	-329.	192.	-441.	-653.	-378.	408.	.0438	.0003	-.0301	-.0299	-.0108	.0826	3580.		
.2620	14.	406.	-595.	-559.	-318.	268.	.0522	.0006	-.0329	-.0109	-.0091	.0930	2909.		
.2630	345.	593.	-727.	-455.	-245.	118.	.0602	.0014	-.0346	.0076	-.0074	.1005	2213.		
.2640	657.	754.	-836.	-346.	-162.	-37.	.0673	.0027	-.0353	.0248	-.0058	.1052	1600.		
.2650	934.	878.	-916.	-235.	-70.	-190.	.0734	.0045	-.0349	.0398	-.0044	.1069	1293.		
.2660	1148.	944.	-954.	-123.	23.	-332.	.0783	.0066	-.0337	.0525	-.0032	.1054	1479.		
.2670	1281.	944.	-942.	-12.	114.	-456.	.0819	.0091	-.0321	.0625	-.0024	.1006	1960.		
.2680	1340.	889.	-888.	92.	198.	-559.	.0840	.0119	-.0300	.0696	-.0020	.0931	2506.		
.2690	1340.	798.	-804.	185.	273.	-644.	.0845	.0150	-.0274	.0733	-.0017	.0838	3019.		
.2700	1277.	677.	-693.	262.	335.	-708.	.0835	.0184	-.0244	.0735	-.0015	.0735	3449.		
.2710	1146.	525.	-556.	324.	378.	-749.	.0811	.0220	-.0213	.0704	-.0013	.0626	3754.		
.2720	962.	345.	-403.	370.	401.	-762.	.0777	.0257	-.0182	.0643	-.0011	.0515	3910.		
.2730	756.	161.	-250.	399.	404.	-752.	.0733	.0295	-.0152	.0556	-.0012	.0413	3931.		
.2740	547.	-4.	-109.	407.	391.	-729.	.0679	.0334	-.0124	.0450	-.0016	.0324	3847.		
.2750	338.	-151.	24.	395.	362.	-699.	.0616	.0373	-.0101	.0335	-.0027	.0249	3675.		
.2760	130.	-288.	148.	371.	318.	-658.	.0550	.0411	-.0086	.0222	-.0046	.0185	3419.		
.2770	-52.	-406.	252.	341.	262.	-606.	.0484	.0446	-.0080	.0116	-.0073	.0136	3102.		
.2780	-177.	-479.	320.	302.	202.	-556.	.0417	.0479	-.0079	.0018	-.0103	.0108	2771.		
.2790	-238.	-497.	349.	255.	141.	-515.	.0352	.0509	-.0079	-.0069	-.0134	.0103	2468.		
.2800	-250.	-473.	348.	204.	79.	-482.	.0294	.0535	-.0082	-.0143	-.0163	.0119	2208.		
.2810	-223.	-428.	323.	158.	18.	-451.	.0244	.0555	-.0087	-.0203	-.0187	.0150	1998.		

ADLPIPE PAGE 2230

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.22.

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	57	MEMBER	2	SEQUENCE	80	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)		

.2730	756.	161.	-250.	399.	404.	-752.	.0733	.0295	-.0152	.0556	-.0012	.0413	3931.
.2740	547.	-4.	-109.	407.	391.	-729.	.0679	.0324	-.0124	.0450	-.0016	.0324	3847.
.2750	338.	-151.	24.	395.	362.	-699.	.0616	.0373	-.0101	.0335	-.0027	.0249	3675.
.2760	130.	-288.	148.	371.	318.	-658.	.0550	.0411	-.0086	.0222	-.0046	.0185	3419.
.2770	-52.	-406.	252.	341.	262.	-606.	.0484	.0446	-.0080	.0116	-.0073	.0136	3102.
.2780	-177.	-479.	320.	302.	202.	-556.	.0417	.0479	-.0079	.0018	-.0103	.0108	2771.
.2790	-238.	-497.	349.	255.	141.	-515.	.0352	.0509	-.0079	-.0069	-.0134	.0103	2468.
.2800	-250.	-473.	348.	204.	79.	-482.	.0294	.0535	-.0082	-.0143	-.0163	.0119	2208.
.2810	-223.	-428.	323.	158.	18.	-451.	.0244	.0555	-.0087	-.0203	-.0187	.0150	1998.

ADLPIPE PAGE 2230 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.22.

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	57	MEMBER	2	SEQUENCE	80	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)		
.2820	-149.	-356.	268.	120.	-36.	-427.	.0205	.0568	-.0091	-.0250	-.0205	.0196	1856.		
.2830	-20.	-243.	187.	86.	-77.	-416.	.0174	.0576	-.0091	-.0280	-.0219	.0255	1801.		
.2840	143.	-106.	94.	59.	-103.	-417.	.0150	.0577	-.0091	-.0289	-.0237	.0319	1808.		
.2850	301.	19.	15.	48.	-115.	-417.	.0135	.0569	-.0094	-.0272	-.0261	.0376	1816.		
.2860	437.	109.	-41.	62.	-111.	-407.	.0130	.0551	-.0103	-.0232	-.0294	.0419	1781.		
.2870	549.	175.	-74.	96.	-91.	-392.	.0133	.0524	-.0113	-.0173	-.0334	.0450	1726.		
.2880	637.	233.	-83.	144.	-57.	-376.	.0140	.0490	-.0123	-.0098	-.0377	.0473	1697.		
.2890	680.	269.	-63.	206.	-15.	-354.	.0155	.0448	-.0132	-.0018	-.0416	.0488	1712.		
.2900	656.	261.	-13.	287.	30.	-319.	.0179	.0398	-.0137	.0056	-.0440	.0497	1794.		
.2910	564.	213.	62.	390.	73.	-271.	.0213	.0342	-.0139	.0118	-.0443	.0505	1973.		
.2920	427.	156.	150.	475.	111.	-221.	.0251	.0284	-.0135	.0166	-.0425	.0517	2234.		
.2930	270.	106.	237.	564.	143.	-170.	.0291	.0224	-.0127	.0199	-.0389	.0537	2529.		
.2940	101.	55.	316.	647.	165.	-116.	.0332	.0165	-.0120	.0219	-.0344	.0562	2827.		
.2950	-76.	-1.	390.	719.	176.	-58.	.0371	.0107	-.0118	.0232	-.0299	.0587	3097.		
.2960	-243.	-47.	452.	771.	171.	-2.	.0403	.0053	-.0126	.0245	-.0266	.0612	3295.		
.2970	-360.	-59.	483.	796.	151.	48.	.0426	.0005	-.0143	.0256	-.0249	.0638	3388.		
.2980	-405.	-31.	469.	791.	119.	88.	.0437	-.0036	-.0166	.0257	-.0246	.0670	3359.		
.2990	-392.	29.	413.	755.	72.	118.	.0439	-.0067	-.0194	.0244	-.0253	.0707	3202.		
.3000	-343.	107.	328.	686.	7.	136.	.0430	-.0090	-.0225	.0212	-.0263	.0745	2918.		
.3010	-259.	202.	212.	587.	-76.	143.	.0412	-.0103	-.0254	.0158	-.0268	.0783	2540.		
.3020	-130.	318.	59.	461.	-169.	138.	.0384	-.0106	-.0276	.0072	-.0264	.0823	2129.		
.3030	33.	448.	-120.	313.	-266.	122.	.0346	-.0101	-.0290	-.0044	-.0250	.0860	1788.		
.3040	192.	566.	-296.	148.	-367.	97.	.0298	-.0088	-.0296	-.0183	-.0232	.0881	1701.		
.3050	316.	643.	-448.	-23.	-469.	73.	.0240	-.0070	-.0298	-.0337	-.0215	.0876	1981.		
.3060	404.	669.	-568.	-190.	-563.	54.	.0174	-.0048	-.0296	-.0503	-.0202	.0841	2488.		
.3070	463.	655.	-659.	-350.	-642.	37.	.0100	-.0024	-.0285	-.0678	-.0195	.0777	3054.		
.3080	484.	606.	-710.	-501.	-703.	19.	.0018	.0002	-.0265	-.0856	-.0194	.0683	3604.		
.3090	440.	503.	-707.	-634.	-746.	4.	-.0068	.0027	-.0237	-.1029	-.0195	.0559	4088.		
.3100	320.	336.	-648.	-738.	-770.	-1.	-.0153	.0050	-.0201	-.1195	-.0191	.0406	4452.		
.3110	145.	121.	-544.	-810.	-770.	3.	-.0234	.0068	-.0155	-.1350	-.0179	.0234	4662.		
.3120	-60.	-107.	-408.	-850.	-744.	6.	-.0311	.0082	-.0099	-.1483	-.0161	.0052	4715.		
.3130	-281.	-334.	-246.	-859.	-695.	9.	-.0382	.0091	-.0037	-.1584	-.0138	-.0134	4609.		
.3140	-518.	-566.	-58.	-829.	-623.	15.	-.0444	.0093	.0025	-.1644	-.0113	-.0320	4328.		
.3150	-762.	-799.	146.	-759.	-532.	27.	-.0494	.0088	.0085	-.1657	-.0090	-.0500	3871.		
.3160	-985.	-1004.	353.	-658.	-425.	37.	-.0532	.0076	.0139	-.1617	-.0070	-.0663	3272.		
.3170	-1154.	-1149.	541.	-532.	-306.	41.	-.0558	.0057	.0187	-.1523	-.0054	-.0798	2567.		
.3180	-1256.	-1227.	697.	-385.	-178.	40.	-.0571	.0033	.0228	-.1381	-.0040	-.0897	1779.		
.3190	-1299.	-1246.	816.	-220.	-48.	36.	-.0569	.0003	.0260	-.1195	-.0022	-.0955	953.		

ADLPIPE PAGE 2231 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.22.

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	57	MEMBER	2	SEQUENCE	80	LOCATION	END	TYPE	RU
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.3110	145.	121.	544.	-810.	-770.	3.	-.0234	.0068	-.0155	-.1350	-.0179	.0234	4662.
.3120	-60.	-107.	-408.	-850.	-744.	6.	-.0311	.0082	-.0099	-.1483	-.0161	.0052	4715.
.3130	-281.	-334.	-246.	-859.	-695.	9.	-.0382	.0091	-.0037	-.1584	-.0138	-.0134	4609.
.3140	-518.	-566.	-58.	-829.	-623.	15.	-.0444	.0093	.0025	-.1644	-.0113	-.0320	4328.
.3150	-762.	-799.	146.	-759.	-572.	27.	-.0494	.0088	.0085	-.1657	-.0090	-.0500	3871.
.3160	-985.	-1004.	353.	-658.	-425.	37.	-.0532	.0076	.0139	-.1617	-.0070	-.0663	3272.
.3170	-1154.	-1149.	541.	-532.	-306.	41.	-.0558	.0057	.0187	-.1523	-.0054	-.0798	2567.
.3180	-1256.	-1227.	697.	-385.	-178.	40.	-.0571	.0033	.0228	-.1381	-.0040	-.0897	1779.
.3190	-1299.	-1246.	816.	-220.	-48.	36.	-.0569	.0003	.0260	-.1195	-.0022	-.0955	953.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

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	57	MEMBER	2	SEQUENCE	80	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)		
.3200	-1287.	-1205.	899.	-45.	78.	29.	-.0551	-.0031	.0283	-.0970	.0000	-.0970	393.		
.3210	-1208.	-1091.	937.	132.	194.	15.	-.0522	-.0069	.0295	-.0711	.0026	-.0941	980.		
.3220	-1046.	-899.	918.	303.	300.	-6.	-.0482	-.0109	.0299	-.0432	.0055	-.0866	1779.		
.3230	-814.	-647.	846.	463.	393.	-30.	-.0434	-.0150	.0294	-.0144	.0086	-.0750	2538.		
.3240	-547.	-360.	742.	605.	469.	-54.	-.0381	-.0192	.0278	.0147	.0115	-.0605	3203.		
.3250	-271.	-63.	619.	726.	521.	-76.	-.0325	-.0233	.0251	.0430	.0141	-.0440	3743.		
.3260	9.	236.	479.	820.	553.	-91.	-.0269	-.0273	.0217	.0690	.0164	-.0261	4145.		
.3270	287.	528.	322.	882.	567.	-100.	-.0216	-.0311	.0181	.0910	.0186	-.0074	4394.		
.3280	537.	795.	164.	908.	560.	-101.	-.0168	-.0345	.0144	.1082	.0206	.0112	4473.		
.3290	725.	1008.	25.	899.	531.	-90.	-.0126	-.0376	.0106	.1201	.0226	.0284	4375.		
.3300	838.	1145.	-88.	858.	484.	-64.	-.0091	-.0403	.0069	.1259	.0244	.0433	4118.		
.3310	886.	1210.	-178.	784.	422.	-24.	-.0065	-.0425	.0036	.1253	.0261	.0556	3718.		
.3320	882.	1214.	-246.	676.	351.	21.	-.0051	-.0442	.0010	.1185	.0274	.0650	3181.		
.3330	822.	1156.	-287.	538.	270.	69.	-.0048	-.0454	-.0012	.1063	.0280	.0709	2528.		
.3340	699.	1024.	-294.	377.	184.	124.	-.0055	-.0460	-.0028	.0893	.0280	.0731	1823.		
.3350	525.	822.	-275.	201.	94.	183.	-.0069	-.0462	-.0040	.0681	.0277	.0718	1200.		
.3360	324.	578.	-240.	13.	6.	240.	-.0090	-.0459	-.0046	.0437	.0272	.0675	1003.		
.3370	118.	320.	-198.	-185.	-79.	287.	-.0117	-.0451	-.0044	.0176	.0264	.0610	1463.		
.3380	-84.	53.	-153.	-382.	-157.	325.	-.0147	-.0438	-.0038	-.0091	.0254	.0526	2194.		
.3390	-279.	-222.	-105.	-568.	-228.	356.	-.0176	-.0423	-.0029	-.0350	.0244	.0428	2953.		
.3400	-456.	-487.	-59.	-736.	-289.	374.	-.0203	-.0406	-.0020	-.0584	.0232	.0319	3652.		
.3410	-591.	-716.	-23.	-886.	-338.	375.	-.0228	-.0387	-.0013	-.0779	.0214	.0208	4254.		
.3420	-667.	-891.	-5.	-1010.	-372.	357.	-.0249	-.0367	-.0007	-.0926	.0192	.0101	4733.		
.3430	-683.	-1014.	-6.	-1102.	-392.	324.	-.0263	-.0346	-.0005	-.1018	.0167	.0003	5064.		
.3440	-652.	-1086.	-23.	-1157.	-399.	276.	-.0270	-.0326	-.0007	-.1051	.0144	-.0084	5236.		
.3450	-577.	-1101.	-53.	-1177.	-395.	212.	-.0268	-.0307	-.0012	-.1023	.0124	-.0156	5254.		
.3460	-453.	-1051.	-100.	-1161.	-378.	134.	-.0259	-.0289	-.0019	-.0937	.0111	-.0208	5125.		
.3470	-282.	-941.	-167.	-1109.	-349.	46.	-.0241	-.0273	-.0025	-.0801	.0108	-.0238	4857.		
.3480	-86.	-784.	-242.	-1024.	-310.	-48.	-.0216	-.0260	-.0031	-.0619	.0113	-.0250	4470.		
.3490	108.	-600.	-309.	-909.	-263.	-143.	-.0186	-.0249	-.0040	-.0395	.0123	-.0249	3993.		
.3500	285.	-405.	-360.	-766.	-210.	-233.	-.0152	-.0242	-.0050	-.0138	.0136	-.0241	3457.		
.3510	442.	-208.	-395.	-602.	-150.	-314.	-.0116	-.0238	-.0061	.0140	.0149	-.0228	2902.		
.3520	571.	-16.	-409.	-422.	-85.	-383.	-.0081	-.0238	-.0073	.0428	.0160	-.0213	2402.		
.3530	653.	157.	-394.	-233.	-17.	-435.	-.0047	-.0240	-.0084	.0716	.0169	-.0201	2062.		
.3540	671.	291.	-344.	-42.	49.	-469.	-.0016	-.0245	-.0094	.0992	.0178	-.0195	1974.		
.3550	625.	379.	-263.	146.	111.	-480.	.0013	-.0253	-.0102	.1240	.0190	-.0196	2143.		
.3560	528.	428.	-161.	322.	169.	-470.	.0039	-.0262	-.0105	.1451	.0205	-.0201	2481.		
.3570	392.	445.	-44.	478.	220.	-444.	.0060	-.0272	-.0103	.1619	.0222	-.0211	2873.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

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 57 MEMBER 2 SEQUENCE 80 LOCATION END TYPE RU

.3480	-56.	-774.	-48.	-1024.	-310.	-48.	-0.116	-0.0260	-0.0031	-0.0619	.0113	-0.0250	4470.
.3490	108.	-600.	-309.	-909.	-263.	-143.	-0.186	-0.0249	-0.0040	-0.0395	.0123	-0.0249	3993.
.3500	285.	-405.	-360.	-766.	-710.	-233.	-0.152	-0.0242	-0.0050	-0.0138	.0136	-0.0241	3457.
.3510	442.	-208.	-395.	-602.	-150.	-314.	-0.116	-0.0238	-0.0061	.0140	.0149	-0.0228	2902.
.3520	571.	-16.	-409.	-422.	-85.	-323.	-0.081	-0.0238	-0.0073	.0428	.0160	-0.0213	2402.
.3530	653.	157.	-394.	-273.	-17.	-435.	-0.047	-0.0240	-0.0084	.0716	.0169	-0.0201	2062.
.3540	671.	291.	-344.	-42.	49.	-469.	-0.016	-0.0245	-0.0094	.0992	.0178	-0.0195	1974.
.3550	625.	379.	-263.	146.	111.	-480.	.0013	-0.0253	-0.0102	.1240	.0190	-0.0196	2143.
.3560	528.	428.	-161.	322.	169.	-470.	.0039	-0.0262	-0.0105	.1451	.0205	-0.0201	2481.
.3570	792.	445.	-44.	478.	220.	-444.	.0060	-0.0272	-0.0103	.1619	.0222	-0.0211	2873.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

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	57	MEMBER	2	SEQUENCE	80	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)		
.3580	224.	429.	82.	607.	263.	-403.	.0075	-0.0281	-0.0097	.1739	.0240	-0.0225	3231.		
.3590	30.	373.	215.	707.	295.	-346.	.0085	-0.0290	-0.0089	.1811	.0255	-0.0245	3510.		
.3600	-173.	287.	344.	776.	318.	-276.	.0091	-0.0299	-0.0080	.1834	.0264	-0.0270	3684.		
.3610	-358.	189.	457.	808.	330.	-199.	.0092	-0.0305	-0.0071	.1812	.0264	-0.0296	3737.		
.3620	-508.	92.	545.	803.	332.	-119.	.0087	-0.0309	-0.0063	.1748	.0255	-0.0319	3660.		
.3630	-614.	0.	601.	762.	324.	-38.	.0080	-0.0311	-0.0054	.1644	.0239	-0.0337	3459.		
.3640	-678.	-86.	623.	689.	306.	43.	.0072	-0.0311	-0.0047	.1503	.0221	-0.0348	3151.		
.3650	-693.	-157.	609.	587.	276.	118.	.0064	-0.0309	-0.0039	.1331	.0204	-0.0348	2753.		
.3660	-650.	-198.	552.	459.	238.	185.	.0058	-0.0305	-0.0030	.1134	.0192	-0.0333	2292.		
.3670	-544.	-205.	452.	311.	194.	242.	.0053	-0.0299	-0.0019	.0917	.0185	-0.0303	1833.		
.3680	-389.	-183.	318.	151.	147.	290.	.0052	-0.0292	-0.0007	.0690	.0182	-0.0261	1495.		
.3690	-205.	-143.	163.	-14.	97.	330.	.0053	-0.0286	.0003	.0464	.0181	-0.0212	1437.		
.3700	-6.	-89.	1.	-177.	48.	364.	.0057	-0.0280	.0010	.0249	.0178	-0.0160	1701.		
.3710	205.	-23.	-164.	-370.	3.	394.	.0062	-0.0276	.0014	.0053	.0168	-0.0110	2143.		
.3720	417.	51.	-323.	-467.	-34.	420.	.0068	-0.0274	.0014	-0.0118	.0152	-0.0063	2626.		
.3730	607.	123.	-463.	-584.	-63.	443.	.0075	-0.0275	.0011	-0.0260	.0129	-0.0024	3072.		
.3740	750.	180.	-571.	-676.	-84.	465.	.0084	-0.0279	.0005	-0.0371	.0103	.0004	3441.		
.3750	837.	217.	-641.	-737.	-98.	487.	.0094	-0.0287	-0.0002	-0.0452	.0079	.0020	3710.		
.3760	872.	237.	-679.	-768.	-102.	507.	.0106	-0.0297	-0.0008	-0.0506	.0061	.0026	3865.		
.3770	858.	247.	-685.	-768.	-98.	525.	.0120	-0.0310	-0.0010	-0.0535	.0052	.0025	3903.		
.3780	790.	245.	-659.	-739.	-86.	537.	.0135	-0.0325	-0.0009	-0.0539	.0054	.0016	3830.		
.3790	666.	223.	-598.	-683.	-69.	544.	.0151	-0.0342	-0.0006	-0.0520	.0066	-0.0001	3656.		
.3800	496.	183.	-509.	-602.	-47.	548.	.0167	-0.0359	-0.0002	-0.0479	.0086	-0.0028	3401.		
.3810	303.	139.	-404.	-502.	-20.	545.	.0182	-0.0377	.0004	-0.0418	.0108	-0.0059	3091.		
.3820	112.	104.	-293.	-390.	11.	532.	.0195	-0.0394	.0009	-0.0338	.0129	-0.0093	2754.		
.3830	-68.	81.	-184.	-273.	44.	511.	.0205	-0.0409	.0014	-0.0244	.0146	-0.0128	2423.		
.3840	-231.	66.	-81.	-154.	75.	481.	.0211	-0.0423	.0018	-0.0138	.0158	-0.0163	2132.		
.3850	-365.	63.	9.	-40.	105.	444.	.0215	-0.0434	.0020	-0.0029	.0165	-0.0196	1912.		
.3860	-457.	83.	74.	64.	132.	398.	.0214	-0.0442	.0022	.0079	.0168	-0.0223	1769.		
.3870	-484.	133.	107.	150.	155.	342.	.0209	-0.0447	.0026	.0177	.0168	-0.0240	1688.		
.3880	-465.	202.	111.	218.	173.	280.	.0199	-0.0449	.0032	.0260	.0166	-0.0249	1647.		
.3890	-416.	277.	96.	266.	184.	217.	.0186	-0.0448	.0039	.0323	.0161	-0.0253	1625.		
.3900	-345.	350.	66.	294.	188.	157.	.0169	-0.0445	.0046	.0365	.0152	-0.0253	1599.		
.3910	-251.	423.	23.	303.	185.	107.	.0147	-0.0441	.0055	.0380	.0138	-0.0249	1547.		
.3920	-137.	494.	-32.	292.	178.	67.	.0121	-0.0437	.0065	.0367	.0117	-0.0241	1455.		
.3930	-24.	549.	-86.	263.	167.	42.	.0090	-0.0432	.0077	.0324	.0090	-0.0234	1313.		
.3940	61.	571.	-126.	220.	151.	35.	.0056	-0.0429	.0090	.0253	.0056	-0.0232	1123.		
.3950	105.	552.	-143.	167.	129.	48.	.0019	-0.0426	.0102	.0156	.0018	-0.0237	903.		

ADLPIPE PAGE 2233

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

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	57	MEMBER	2	SEQUENCE	80	LOCATION	END	TYPE	RU						
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.3860	-457.	83.	74.	64.	132.	398.	.0214	-.0442	.0022	.0079	.0168	-.0223	1769.
.3870	-484.	133.	107.	150.	155.	342.	.0209	-.0447	.0026	.0177	.0168	-.0240	1688.
.3880	-465.	202.	111.	218.	173.	280.	.0199	-.0449	.0032	.0260	.0166	-.0249	1647.
.3890	-416.	277.	96.	266.	184.	217.	.0186	-.0448	.0039	.0323	.0161	-.0253	1625.
.3900	-345.	350.	66.	294.	188.	157.	.0169	-.0445	.0046	.0365	.0152	-.0253	1599.
.3910	-251.	422.	23.	303.	185.	107.	.0147	-.0441	.0055	.0380	.0138	-.0249	1547.
.3920	-137.	494.	-32.	292.	178.	67.	.0121	-.0437	.0065	.0367	.0117	-.0241	1455.
.3930	-24.	549.	-86.	263.	167.	42.	.0090	-.0432	.0077	.0324	.0090	-.0234	1313.
.3940	61.	571.	-126.	220.	151.	35.	.0056	-.0429	.0090	.0253	.0056	-.0232	1123.
.3950	105.	552.	-143.	167.	129.	48.	.0019	-.0426	.0102	.0156	.0018	-.0237	903.

ADLPIPE PAGE 2233 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.22.

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

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
57	2	80					.3960	118.	501.	-143.	106.	106.	81.	-.0019	-.0425	.0117	.0033	-.0022	-.0246	709.
							.3970	104.	425.	-130.	39.	83.	129.	-.0059	-.0425	.0135	-.0114	-.0062	-.0258	658.
							.3980	53.	323.	-97.	-31.	59.	189.	-.0100	-.0426	.0154	-.0277	-.0101	-.0273	838.
							.3990	-45.	189.	-37.	-99.	35.	263.	-.0139	-.0428	.0174	-.0449	-.0139	-.0293	1181.
							.4000	-185.	23.	45.	-158.	11.	348.	-.0175	-.0431	.0192	-.0622	-.0174	-.0317	1596.

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)
.2250	366.	28.	-785.	-1329.	-660.	807.	.0017	-.0256	-.0094	-.1159	-.0200	.0501	7051.

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
57	3	81					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	0.
							.0030	-0.	-0.	0.	0.	-0.	-0.	.0000	.0000	.0000	-.0000	.0000	.0000	0.
							.0040	-0.	-0.	-0.	0.	-0.	-0.	.0000	.0000	.0000	-.0000	.0000	.0000	0.
							.0050	1.	0.	-1.	-0.	0.	-0.	.0000	.0000	.0000	-.0000	.0000	.0000	2.
							.0060	4.	2.	-3.	-1.	1.	-1.	-.0000	.0000	.0000	-.0001	.0001	-.0000	7.
							.0070	9.	4.	-6.	-3.	2.	-3.	-.0000	.0000	.0001	-.0001	.0000	-.0001	19.
							.0080	16.	8.	-11.	-6.	4.	-7.	-.0001	.0000	.0001	-.0001	-.0001	-.0002	40.
							.0090	28.	12.	-17.	-9.	7.	-11.	-.0002	.0001	.0001	-.0001	-.0003	-.0005	67.
							.0100	51.	20.	-28.	-15.	12.	-17.	-.0004	.0001	.0001	.0000	-.0007	-.0009	107.
							.0110	92.	36.	-48.	-26.	19.	-29.	-.0008	.0001	.0002	.0002	-.0014	-.0015	181.
							.0120	154.	63.	-76.	-44.	30.	-50.	-.0014	.0002	.0002	.0004	-.0024	-.0025	306.
							.0130	230.	96.	-109.	-68.	45.	-79.	-.0022	.0003	.0004	.0007	-.0039	-.0041	472.
							.0140	305.	127.	-139.	-92.	63.	-107.	-.0033	.0004	.0004	.0014	-.0058	-.0062	645.
							.0150	362.	145.	-156.	-111.	82.	-126.	-.0045	.0004	.0004	.0025	-.0082	-.0083	778.
							.0160	386.	143.	-154.	-119.	102.	-125.	-.0058	.0002	.0002	.0041	-.0108	-.0102	835.
							.0170	365.	119.	-127.	-112.	118.	-101.	-.0069	-.0001	-.0000	.0061	-.0133	-.0115	800.
							.0180	286.	71.	-71.	-87.	129.	-53.	-.0077	-.0007	-.0004	.0083	-.0153	-.0118	685.
							.0190	147.	-1.	13.	-44.	127.	20.	-.0082	-.0013	-.0008	.0106	-.0162	-.0109	568.

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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 57 MEMBER 3 SEQUENCE 81 LOCATION END TYPE RU

.0110	92.	36.	-48.	-26.	19.	-29.	-.0008	.0001	.0002	.0002	-.0014	-.0015	181.
.0120	154.	63.	-76.	-44.	30.	-50.	-.0014	.0002	.0002	.0004	-.0024	-.0025	306.
.0130	230.	96.	-109.	-68.	45.	-79.	-.0022	.0003	.0004	.0007	-.0039	-.0041	472.
.0140	305.	127.	-139.	-92.	63.	-107.	-.0033	.0004	.0004	.0014	-.0058	-.0062	645.
.0150	362.	145.	-156.	-111.	82.	-126.	-.0045	.0004	.0004	.0025	-.0082	-.0083	778.
.0160	386.	143.	-154.	-119.	102.	-125.	-.0058	.0002	.0002	.0041	-.0108	-.0102	835.
.0170	365.	119.	-127.	-112.	118.	-101.	-.0069	-.0001	-.0000	.0061	-.0133	-.0115	800.
.0180	286.	71.	-71.	-87.	129.	-53.	-.0077	-.0007	-.0004	.0083	-.0153	-.0118	685.
.0190	147.	-1.	13.	-44.	127.	20.	-.0082	-.0013	-.0008	.0106	-.0162	-.0109	568.

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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	57	MEMBER	3	SEQUENCE	81	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)			
.0200	-46.	-91.	120.	14.	111.	107.	-.0083	-.0021	-.0012	.0124	-.0157	-.0086			645.
.0210	-263.	-183.	231.	80.	78.	197.	-.0078	-.0028	-.0014	.0133	-.0131	-.0051			944.
.0220	-440.	-256.	313.	143.	31.	276.	-.0070	-.0034	-.0013	.0132	-.0086	-.0005			1305.
.0230	-568.	-292.	359.	188.	-24.	321.	-.0060	-.0038	-.0009	.0117	-.0024	.0044			1555.
.0240	-677.	-298.	388.	213.	-81.	324.	-.0049	-.0038	-.0003	.0091	.0044	.0087			1653.
.0250	-826.	-316.	435.	237.	-136.	322.	-.0035	-.0035	-.0002	.0072	.0101	.0124			1761.
.0260	-995.	-373.	502.	280.	-187.	360.	-.0014	-.0034	-.0012	.0079	.0134	.0163			2055.
.0270	-1036.	-414.	512.	320.	-221.	420.	.0014	-.0033	-.0030	.0103	.0140	.0209			2388.
.0280	-939.	-360.	455.	305.	-230.	397.	.0036	-.0026	-.0044	.0113	.0132	.0239			2298.
.0290	-862.	-251.	411.	244.	-225.	285.	.0052	-.0013	-.0057	.0110	.0109	.0241			1827.
.0300	-776.	-202.	372.	217.	-232.	234.	.0077	-.0001	-.0081	.0133	.0067	.0243			1649.
.0310	-565.	-172.	260.	206.	-248.	219.	.0111	.0010	-.0104	.0147	.0042	.0257			1628.
.0320	-212.	-5.	53.	111.	-256.	55.	.0133	.0029	-.0103	.0086	.0065	.0253			1186.
.0330	236.	301.	-216.	-71.	-259.	-266.	.0141	.0056	-.0079	-.0040	.0125	.0219			1580.
.0340	667.	558.	-486.	-232.	-273.	-545.	.0149	.0079	-.0051	-.0172	.0200	.0182			2721.
.0350	947.	655.	-684.	-316.	-289.	-679.	.0163	.0095	-.0031	-.0275	.0267	.0149			3353.
.0360	1100.	680.	-790.	-372.	-277.	-746.	.0170	.0104	-.0019	-.0346	.0288	.0098			3667.
.0370	1307.	736.	-877.	-444.	-210.	-806.	.0160	.0108	-.0009	-.0387	.0247	.0024			3937.
.0380	1574.	785.	-961.	-511.	-89.	-822.	.0136	.0107	-.0002	-.0403	.0156	-.0062			4058.
.0390	1627.	704.	-912.	-522.	49.	-743.	.0106	.0098	-.0004	-.0378	.0028	-.0163			3796.
.0400	1316.	435.	-655.	-438.	165.	-530.	.0079	.0081	-.0022	-.0298	-.0125	-.0268			2951.
.0410	972.	91.	-389.	-284.	246.	-216.	.0059	.0058	-.0040	-.0209	-.0242	-.0335			1810.
.0420	845.	-103.	-289.	-181.	306.	-11.	.0036	.0037	-.0021	-.0211	-.0244	-.0363			1484.
.0430	805.	-78.	-285.	-187.	333.	-34.	-.0001	.0028	.0036	-.0315	-.0138	-.0387			1601.
.0440	598.	-49.	-219.	-192.	299.	-99.	-.0038	.0022	.0099	-.0426	.0017	-.0404			1540.
.0450	223.	-212.	-92.	-82.	215.	15.	-.0054	.0009	.0144	-.0481	.0186	-.0382			964.
.0460	-123.	-430.	22.	64.	143.	201.	-.0063	-.0008	.0176	-.0489	.0325	-.0341			1065.
.0470	-297.	-451.	103.	106.	138.	223.	-.0094	-.0017	.0200	-.0462	.0374	-.0338			1182.
.0480	-303.	-327.	160.	77.	199.	140.	-.0142	-.0021	.0208	-.0376	.0320	-.0365			1065.
.0490	-298.	-318.	229.	118.	280.	193.	-.0177	-.0031	.0188	-.0205	.0200	-.0376			1501.
.0500	-428.	-456.	371.	234.	338.	374.	-.0196	-.0046	.0142	.0038	.0047	-.0373			2320.
.0510	-567.	-510.	520.	304.	368.	457.	-.0217	-.0056	.0096	.0277	-.0097	-.0378			2756.
.0520	-475.	-338.	506.	266.	377.	334.	-.0242	-.0056	.0081	.0418	-.0153	-.0369			2378.
.0530	-206.	-51.	330.	179.	352.	110.	-.0259	-.0051	.0099	.0448	-.0089	-.0315			1711.
.0540	-58.	170.	179.	125.	269.	-68.	-.0260	-.0049	.0122	.0444	.0035	-.0230			1270.
.0550	-113.	267.	133.	127.	142.	-150.	-.0247	-.0052	.0134	.0451	.0161	-.0132			1012.
.0560	-164.	332.	82.	139.	31.	-193.	-.0231	-.0060	.0146	.0444	.0275	-.0027			1000.
.0570	-76.	459.	-16.	104.	-20.	-272.	-.0225	-.0069	.0158	.0421	.0340	.0060			1217.

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DIS/ADLPIPE

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	57	MEMBER	3	SEQUENCE	81	LOCATION	END	TYPE	RU						
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.0490	-298.	-318.	229.	118.	280.	193.	-.0177	-.0031	.0188	-.0205	.0200	-.0376	1501.
.0500	-428.	-456.	371.	274.	338.	374.	-.0196	-.0046	.0142	.0038	.0047	-.0373	2320.
.0510	-567.	-510.	520.	304.	368.	457.	-.0217	-.0056	.0096	.0277	-.0097	-.0378	2756.
.0520	-475.	-338.	506.	266.	377.	334.	-.0242	-.0056	.0081	.0418	-.0153	-.0369	2378.
.0530	-206.	-51.	330.	179.	352.	110.	-.0259	-.0051	.0099	.0448	-.0089	-.0315	1711.
.0540	-58.	170.	179.	125.	269.	-68.	-.0260	-.0049	.0122	.0444	.0035	-.0230	1270.
.0550	-113.	267.	133.	127.	142.	-150.	-.0247	-.0052	.0134	.0451	.0161	-.0132	1012.
.0560	-164.	332.	82.	139.	31.	-193.	-.0231	-.0060	.0146	.0444	.0275	-.0027	1000.
.0570	-76.	459.	-16.	104.	-20.	-272.	-.0225	-.0069	.0158	.0421	.0340	.0060	1217.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKMOBF 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	57	MEMBER	3	SEQUENCE	81	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	25.	591.	-53.	46.	-16.	-341.	-.0233	-.0082	.0154	.0439	.0300	.0105	1436.		
.0590	-50.	559.	53.	53.	13.	-258.	-.0238	-.0104	.0122	.0522	.0170	.0129	1101.		
.0600	-309.	314.	254.	162.	47.	16.	-.0228	-.0136	.0074	.0626	.0019	.0168	705.		
.0610	-604.	31.	461.	285.	70.	324.	-.0211	-.0171	.0032	.0688	-.0102	.0218	1824.		
.0620	-790.	-108.	590.	332.	69.	501.	-.0199	-.0199	.0015	.0662	-.0159	.0268	2522.		
.0630	-882.	-135.	615.	317.	25.	561.	-.0185	-.0219	.0028	.0523	-.0114	.0331	2690.		
.0640	-1018.	-195.	595.	314.	-76.	619.	-.0157	-.0236	.0057	.0306	.0023	.0415	2915.		
.0650	-1249.	-328.	599.	333.	-219.	712.	-.0118	-.0249	.0086	.0069	.0185	.0499	3405.		
.0660	-1437.	-445.	595.	322.	-354.	776.	-.0082	-.0256	.0108	-.0161	.0314	.0555	3806.		
.0670	-1431.	-475.	520.	250.	-427.	773.	-.0056	-.0254	.0122	-.0375	.0374	.0572	3830.		
.0680	-1252.	-458.	410.	149.	-426.	748.	-.0041	-.0247	.0115	-.0523	.0324	.0546	3646.		
.0690	-1035.	-480.	346.	62.	-373.	767.	-.0030	-.0236	.0073	-.0564	.0148	.0472	3567.		
.0700	-855.	-558.	338.	-6.	-296.	816.	-.0022	-.0220	.0007	-.0523	-.0103	.0356	3621.		
.0710	-656.	-622.	315.	-84.	-216.	824.	-.0015	-.0196	-.0060	-.0473	-.0347	.0222	3570.		
.0720	-336.	-587.	199.	-194.	-160.	732.	-.0006	-.0161	-.0108	-.0467	-.0518	.0096	3228.		
.0730	86.	-443.	-21.	-338.	-152.	529.	.0008	-.0116	-.0127	-.0531	-.0571	-.0007	2694.		
.0740	458.	-257.	-281.	-488.	-206.	251.	.0028	-.0063	-.0119	-.0659	-.0500	-.0085	2448.		
.0750	678.	-102.	-504.	-604.	-311.	-28.	.0056	-.0006	-.0097	-.0804	-.0345	-.0142	2837.		
.0760	808.	11.	-686.	-670.	-428.	-264.	.0089	.0049	-.0075	-.0918	-.0167	-.0184	3498.		
.0770	961.	124.	-852.	-716.	-504.	-475.	.0116	.0102	-.0057	-.0978	-.0017	-.0230	4157.		
.0780	1141.	248.	-973.	-759.	-503.	-672.	.0129	.0152	-.0050	-.0958	.0055	-.0302	4722.		
.0790	1275.	316.	-993.	-763.	-430.	-795.	.0129	.0196	-.0068	-.0819	.0022	-.0407	4935.		
.0800	1328.	276.	-914.	-695.	-307.	-797.	.0124	.0230	-.0109	-.0568	-.0091	-.0526	4595.		
.0810	1322.	187.	-787.	-591.	-158.	-748.	.0114	.0257	-.0154	-.0268	-.0223	-.0649	4032.		
.0820	1301.	155.	-656.	-505.	-8.	-751.	.0096	.0283	-.0184	.0019	-.0318	-.0765	3775.		
.0830	1294.	198.	-560.	-434.	113.	-802.	.0077	.0306	-.0190	.0257	-.0332	-.0845	3834.		
.0840	1258.	244.	-504.	-337.	187.	-833.	.0069	.0323	-.0169	.0427	-.0235	-.0860	3831.		
.0850	1094.	243.	-435.	-204.	212.	-822.	.0072	.0333	-.0130	.0540	-.0047	-.0820	3644.		
.0860	797.	209.	-306.	-53.	205.	-782.	.0080	.0337	-.0034	.0633	-.0170	-.0752	3381.		
.0870	474.	165.	-154.	105.	200.	-709.	.0086	.0334	-.0042	.0730	.0366	-.0667	3107.		
.0880	228.	122.	-18.	262.	228.	-605.	.0089	.0324	-.0008	.0839	.0514	-.0573	2909.		
.0890	19.	77.	134.	406.	293.	-480.	.0085	.0310	.0012	.0974	.0589	-.0487	2894.		
.0900	-202.	10.	331.	541.	375.	-327.	.0076	.0291	.0013	.1141	.0584	-.0417	3070.		
.0910	-395.	-83.	515.	674.	454.	-142.	.0069	.0268	.0004	.1305	.0547	-.0341	3443.		
.0920	-488.	-137.	613.	769.	514.	13.	.0065	.0244	.0002	.1408	.0533	-.0248	3863.		
.0930	-477.	-84.	614.	785.	539.	62.	.0058	.0225	.0017	.1424	.0558	-.0148	3985.		
.0940	-413.	51.	550.	729.	522.	24.	.0049	.0209	.0043	.1364	.0512	-.0045	3743.		
.0950	-352.	171.	451.	652.	470.	-8.	.0045	.0194	.0070	.1254	.0676	.0067	3356.		

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83/12/02.

18.29.22.

S/RV PIPING KEWAUNEE GKMOBF 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 57 MEMBER 3 SEQUENCE 81 LOCATION END TYPE RU

.0870	474.	165.	-154.	105.	200.	-709.	.0086	.0334	-.0042	.0730	.0266	-.0667	3107.
.0880	228.	122.	-18.	262.	228.	-605.	.0089	.0324	-.0008	.0839	.0514	-.0573	2909.
.0890	19.	77.	134.	406.	293.	-480.	.0085	.0310	.0012	.0974	.0589	-.0487	2894.
.0900	-202.	10.	331.	541.	375.	-327.	.0076	.0291	.0013	.1141	.0584	-.0417	3070.
.0910	-395.	-83.	515.	674.	454.	-142.	.0069	.0268	.0004	.1305	.0547	-.0341	3443.
.0920	-488.	-137.	613.	769.	514.	13.	.0065	.0244	.0002	.1408	.0533	-.0248	3863.
.0930	-477.	-84.	614.	785.	539.	62.	.0058	.0225	.0017	.1424	.0558	-.0148	3985.
.0940	-413.	51.	550.	729.	522.	24.	.0049	.0209	.0043	.1364	.0512	-.0045	3743.
.0950	-352.	171.	451.	652.	470.	-8.	.0045	.0194	.0070	.1254	.0676	.0067	3356.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.29.22.

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	57	MEMBER	3	SEQUENCE	81	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	-315.	235.	355.	582.	408.	14.	.0046	.0175	.0087	.1133	.0705	.0182	2966.		
.0970	-274.	276.	286.	500.	365.	68.	.0042	.0153	.0086	.1032	.0652	.0278	2599.		
.0980	-199.	315.	241.	397.	359.	138.	.0031	.0130	.0065	.0959	.0504	.0347	2307.		
.0990	-128.	313.	223.	300.	378.	252.	.0017	.0105	.0027	.0910	.0287	.0395	2273.		
.1000	-143.	236.	257.	233.	393.	429.	.0006	.0077	-.0025	.0878	.0034	.0434	2616.		
.1010	-268.	107.	335.	187.	374.	638.	.0001	.0049	-.0081	.0839	-.0209	.0471	3183.		
.1020	-447.	-19.	400.	138.	309.	820.	.0004	.0026	-.0125	.0747	-.0389	.0514	3703.		
.1030	-635.	-107.	420.	75.	196.	948.	.0016	.0007	-.0149	.0582	-.0484	.0572	4054.		
.1040	-848.	-182.	418.	14.	39.	1040.	.0037	-.0005	-.0160	.0368	-.0511	.0638	4342.		
.1050	-1098.	-281.	421.	-27.	-148.	1124.	.0069	-.0013	-.0167	.0141	-.0502	.0700	4731.		
.1060	-1332.	-395.	421.	-55.	-339.	1191.	.0106	-.0014	-.0177	-.0076	-.0485	.0739	5174.		
.1070	-1460.	-471.	391.	-98.	-508.	1196.	.0141	-.0008	-.0189	-.0269	-.0487	.0735	5437.		
.1080	-1450.	-473.	323.	-172.	-640.	1103.	.0169	.0008	-.0204	-.0431	-.0511	.0679	5372.		
.1090	-1324.	-429.	219.	-429.	-741.	937.	.0192	.0032	-.0218	-.0565	-.0543	.0576	5108.		
.1100	-1025.	-353.	34.	-361.	-821.	744.	.0218	.0062	-.0231	-.0668	-.0562	.0449	4864.		
.1110	-860.	-219.	-185.	-480.	-882.	471.	.0239	.0098	-.0233	-.0764	-.0555	.0289	4629.		
.1120	-309.	-39.	-400.	-623.	-923.	115.	.0254	.0141	-.0222	-.0864	-.0519	.0102	4672.		
.1130	54.	116.	-619.	-742.	-942.	-213.	.0272	.0183	-.0204	-.0941	-.0469	-.0086	5082.		
.1140	428.	226.	-817.	-817.	-929.	-461.	.0291	.0220	-.0190	-.0968	-.0437	-.0265	5510.		
.1150	779.	329.	-962.	-868.	-871.	-674.	.0303	.0252	-.0178	-.0946	-.0440	-.0444	5852.		
.1160	1103.	427.	-1058.	-900.	-763.	-865.	.0306	.0281	-.0164	-.0890	-.0467	-.0622	6105.		
.1170	1350.	469.	-1090.	-890.	-623.	-991.	.0303	.0303	-.0149	-.0798	-.0502	-.0790	6134.		
.1180	1496.	438.	-1047.	-815.	-480.	-1014.	.0298	.0317	-.0136	-.0663	-.0533	-.0930	5787.		
.1190	1469.	372.	-926.	-695.	-349.	-1000.	.0293	.0324	-.0111	-.0540	-.0507	-.1029	5286.		
.1200	1314.	292.	-786.	-543.	-240.	-966.	.0291	.0327	-.0062	-.0473	-.0382	-.1068	4731.		
.1210	1101.	187.	-655.	-360.	-167.	-868.	.0296	.0324	.0006	-.0443	-.0175	-.1040	3984.		
.1220	773.	75.	-486.	-166.	-126.	-737.	.0303	.0316	.0080	-.0425	.0070	-.0968	3197.		
.1230	395.	-30.	-295.	31.	-90.	-583.	.0306	.0305	.0153	-.0797	.0304	-.0868	2467.		
.1240	24.	-131.	-96.	219.	-23.	-416.	.0300	.0292	.0214	-.0341	.0479	-.0763	1964.		
.1250	-318.	-246.	141.	388.	91.	-223.	.0283	.0278	.0250	-.0214	.0538	-.0681	1905.		
.1260	-604.	-381.	421.	550.	249.	20.	.0256	.0261	.0250	.0008	.0460	-.0622	2519.		
.1270	-853.	-521.	706.	706.	437.	274.	.0228	.0245	.0229	.0265	.0312	-.0565	3651.		
.1280	-981.	-632.	905.	848.	621.	511.	.0207	.0232	.0205	.0499	.0171	-.0487	4877.		
.1290	-1009.	-656.	1009.	924.	757.	649.	.0188	.0227	.0190	.0674	.0080	-.0398	5674.		
.1300	-981.	-562.	1030.	916.	815.	643.	.0173	.0233	.0190	.0767	.0061	-.0304	5777.		
.1310	-855.	-384.	926.	858.	800.	541.	.0168	.0246	.0207	.0766	.0126	-.0183	5392.		
.1320	-675.	-173.	730.	768.	742.	374.	.0174	.0265	.0237	.0676	.0252	-.0040	4722.		
.1330	-460.	31.	519.	649.	670.	191.	.0183	.0286	.0261	.0566	.0351	.0091	3973.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.29.22.

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	57	MEMBER	3	SEQUENCE	81	LOCATION	END	TYPE	RU
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.1250	-318.	-246.	41.	388.	91.	-223.	.0283	.0278	.0250	-.0214	.0538	-.0681	1905.
.1260	-604.	-381.	421.	550.	249.	20.	.0256	.0261	.0250	.0008	.0460	-.0622	2519.
.1270	-853.	-521.	706.	706.	437.	27.	.0228	.0245	.0229	.0265	.0312	-.0565	3651.
.1280	-981.	-632.	965.	848.	621.	11.	.0207	.0232	.0205	.0499	.0171	-.0487	4877.
.1290	-1009.	-656.	1009.	924.	757.	64.	.0188	.0227	.0190	.0674	.0080	-.0398	5674.
.1300	-981.	-562.	1030.	916.	815.	643.	.0173	.0233	.0190	.0767	.0061	-.0304	5777.
.1310	-855.	-384.	926.	858.	800.	541.	.0168	.0246	.0207	.0766	.0126	-.0183	5392.
.1320	-675.	-173.	730.	768.	742.	374.	.0174	.0265	.0237	.0676	.0252	-.0040	4722.
.1330	-460.	31.	519.	649.	670.	191.	.0163	.0286	.0261	.0566	.0351	.0091	3973.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

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	57	MEMBER	3	SEQUENCE	81	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	-233.	206.	349.	515.	614.	31.	.0190	.0307	.0263	.0494	.0361	.0192	3348.		
.1350	41.	336.	192.	399.	598.	-75.	.0197	.0323	.0241	.0468	.0282	.0274	3016.		
.1360	381.	436.	27.	302.	619.	-140.	.0204	.0333	.0202	.0480	.0140	.0337	2933.		
.1370	645.	528.	-76.	186.	653.	-232.	.0201	.0343	.0153	.0512	-.0041	.0356	2994.		
.1380	772.	576.	-102.	79.	661.	-310.	.0199	.0349	.0100	.0556	-.0219	.0355	3065.		
.1390	762.	538.	-102.	33.	625.	-311.	.0214	.0348	.0054	.0565	-.0320	.0390	2916.		
.1400	673.	450.	-127.	39.	542.	-258.	.0249	.0340	.0029	.0500	-.0311	.0480	2510.		
.1410	567.	398.	-174.	35.	418.	-230.	.0289	.0329	.0022	.0379	-.0232	.0595	1996.		
.1420	389.	399.	-190.	-2.	268.	-264.	.0325	.0319	.0025	.0233	-.0131	.0700	1569.		
.1430	164.	371.	-179.	-9.	113.	-262.	.0365	.0304	.0022	.0103	-.0045	.0807	1193.		
.1440	-64.	277.	-150.	34.	-18.	-184.	.0407	.0284	.0006	.0012	.0003	.0912	784.		
.1450	-227.	185.	-105.	68.	-107.	-99.	.0440	.0262	-.0022	-.0032	-.0017	.0982	670.		
.1460	-264.	157.	-68.	56.	-151.	-61.	.0458	.0243	-.0059	-.0036	-.0102	.1004	718.		
.1470	-222.	169.	-60.	30.	-168.	-56.	.0470	.0225	-.0096	-.0035	-.0199	.1006	748.		
.1480	-110.	177.	-110.	29.	-189.	-36.	.0484	.0207	-.0126	-.0049	-.0264	.1014	810.		
.1490	31.	222.	-197.	5.	-236.	-65.	.0493	.0193	-.0143	-.0101	-.0286	.1010	1020.		
.1500	204.	359.	-318.	-83.	-309.	-205.	.0490	.0187	-.0138	-.0211	-.0260	.0980	1586.		
.1510	482.	554.	-515.	-199.	-394.	-395.	.0479	.0185	-.0110	-.0384	-.0183	.0947	2471.		
.1520	811.	728.	-760.	-300.	-470.	-567.	.0465	.0183	-.0064	-.0607	-.0069	.0914	3321.		
.1530	1098.	836.	-960.	-388.	-525.	-697.	.0436	.0181	-.0018	-.0817	.0020	.0842	3987.		
.1540	1258.	873.	-1037.	-469.	-544.	-794.	.0386	.0177	.0017	-.0972	.0038	.0702	4467.		
.1550	1359.	837.	-1038.	-513.	-510.	-821.	.0317	.0169	.0041	-.1067	-.0006	.0515	4567.		
.1560	1506.	745.	-1037.	-510.	-419.	-763.	.0236	.0156	.0061	-.1119	-.0084	.0309	4212.		
.1570	1587.	626.	-979.	-502.	-287.	-696.	.0137	.0142	.0083	-.1150	-.0180	.0065	3778.		
.1580	1511.	448.	-816.	-482.	-149.	-602.	.0024	.0127	.0106	-.1153	-.0287	-.0212	3277.		
.1590	1301.	160.	-596.	-398.	-30.	-415.	-.0086	.0109	.0131	-.1145	-.0362	-.0476	2404.		
.1600	1010.	-185.	-379.	-268.	69.	-187.	-.0191	.0089	.0171	-.1166	-.0370	-.0706	1396.		
.1610	684.	-478.	-166.	-161.	149.	-26.	-.0301	.0075	.0224	-.1211	-.0332	-.0926	922.		
.1620	353.	-702.	57.	-81.	209.	74.	-.0413	.0066	.0279	-.1237	-.0283	-.1138	987.		
.1630	-32.	-938.	296.	30.	258.	193.	-.0516	.0057	.0328	-.1231	-.0218	-.1313	1350.		
.1640	-446.	-1222.	536.	205.	304.	378.	-.0598	.0047	.0363	-.1172	-.0142	-.1435	2197.		
.1650	-842.	-1475.	777.	388.	351.	555.	-.0669	.0039	.0380	-.1046	-.0081	-.1527	3182.		
.1660	-1207.	-1624.	1014.	523.	401.	634.	-.0736	.0037	.0384	-.0868	-.0039	-.1608	3816.		
.1670	-1479.	-1691.	1192.	638.	446.	662.	-.0787	.0040	.0376	-.0649	.0003	-.1648	4265.		
.1680	-1678.	-1708.	1303.	758.	473.	677.	-.0814	.0045	.0355	-.0397	.0055	-.1627	4679.		
.1690	-1799.	-1645.	1360.	852.	479.	647.	-.0820	.0052	.0319	-.0115	.0100	-.1559	4890.		
.1700	-1824.	-1463.	1364.	881.	470.	524.	-.0814	.0065	.0275	.0179	.0129	-.1460	4707.		
.1710	-1741.	-1184.	1300.	864.	456.	335.	-.0793	.0081	.0224	.0465	.0153	-.1320	4309.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.29.22.

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	57	MEMBER	3	SEQUENCE	81	LOCATION	END	TYPE	RU
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.1630	-32.	-938.	296.	30.	258.	193.	-.0516	.0057	.0328	-.1231	-.0218	-.1313	1350.
.1640	-446.	-1222.	536.	205.	304.	378.	-.0598	.0047	.0363	-.1172	-.0142	-.1435	2197.
.1650	-842.	-1475.	777.	380.	351.	555.	-.0669	.0039	.0380	-.1046	-.0081	-.1527	3182.
.1660	-1207.	-1624.	1014.	523.	401.	634.	-.0736	.0037	.0384	-.0868	-.0039	-.1608	3816.
.1670	-1479.	-1691.	1192.	678.	446.	662.	-.0787	.0040	.0376	-.0649	.0003	-.1648	4265.
.1680	-1678.	-1700.	1303.	758.	473.	677.	-.0814	.0045	.0355	-.0397	.0055	-.1627	4679.
.1690	-1799.	-1645.	1360.	852.	479.	647.	-.0820	.0052	.0319	-.0115	.0100	-.1559	4890.
.1700	-1824.	-1463.	1364.	881.	470.	524.	-.0814	.0065	.0275	.0179	.0129	-.1460	4707.
.1710	-1741.	-1184.	1300.	864.	456.	335.	-.0793	.0081	.0224	.0465	.0153	-.1320	4309.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

S/RV PIPING KEWAUNEE GKM08F 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	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	PX	RY	RZ	STRESS
57	3	81					(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.1720	-1501.	-863.	1148.	843.	438.	157.	-.0750	.0094	.0162	.0754	.0166	-.1129	4018.							
.1730	-1196.	-510.	960.	799.	415.	-36.	-.0695	.0105	.0093	.1032	.0167	-.0914	3762.							
.1740	-859.	-117.	761.	711.	387.	-271.	-.0636	.0116	.0020	.1284	.0158	-.0698	3563.							
.1750	-469.	293.	533.	600.	350.	-510.	-.0572	.0123	-.0052	.1494	.0149	-.0472	3596.							
.1760	-63.	681.	279.	488.	306.	-719.	-.0502	.0124	-.0116	.1630	.0164	-.0226	3844.							
.1770	329.	1017.	19.	380.	250.	-871.	-.0427	.0116	-.0168	.1685	.0198	.0035	4102.							
.1780	623.	1283.	-194.	263.	179.	-975.	-.0355	.0102	-.0209	.1652	.0240	.0287	4280.							
.1790	839.	1456.	-366.	157.	94.	-997.	-.0287	.0079	-.0238	.1536	.0282	.0533	4229.							
.1800	1005.	1531.	-522.	72.	6.	-932.	-.0224	.0047	-.0254	.1333	.0330	.0769	3901.							
.1810	1091.	1532.	-638.	-17.	-75.	-829.	-.0176	.0010	-.0254	.1047	.0376	.0968	3474.							
.1820	1119.	1460.	-700.	-114.	-149.	-684.	-.0147	-.0031	-.0248	.0717	.0393	.1110	2959.							
.1830	1078.	1299.	-707.	-199.	-212.	-483.	-.0135	-.0075	-.0236	.0356	.0388	.1199	2352.							
.1840	955.	1049.	-690.	-256.	-259.	-223.	-.0136	-.0122	-.0218	-.0035	.0379	.1246	1783.							
.1850	881.	751.	-654.	-306.	-294.	56.	-.0152	-.0168	-.0193	-.0442	.0364	.1245	1786.							
.1860	714.	441.	-578.	-371.	-324.	309.	-.0186	-.0209	-.0164	-.0849	.0335	.1186	2427.							
.1870	529.	116.	-489.	-434.	-356.	557.	-.0231	-.0245	-.0134	-.1233	.0290	.1085	3298.							
.1880	328.	-220.	-401.	-481.	-386.	796.	-.0282	-.0275	-.0103	-.1590	.0242	.0958	4202.							
.1890	140.	-532.	-315.	-524.	-412.	999.	-.0339	-.0296	-.0075	-.1898	.0178	.0802	5011.							
.1900	-24.	-793.	-223.	-577.	-430.	1139.	-.0403	-.0307	-.0055	-.2130	.0087	.0613	5624.							
.1910	-177.	-1006.	-126.	-626.	-439.	1219.	-.0468	-.0307	-.0042	-.2280	-.0017	.0401	6006.							
.1920	-261.	-1179.	-54.	-643.	-443.	1266.	-.0527	-.0299	-.0039	-.2338	-.0115	.0190	6206.							
.1930	-322.	-1273.	-16.	-644.	-447.	1242.	-.0579	-.0281	-.0040	-.2308	-.0192	-.0018	6130.							
.1940	-298.	-1246.	-15.	-661.	-453.	1099.	-.0628	-.0253	-.0041	-.2205	-.0236	-.0229	5675.							
.1950	-217.	-1110.	-55.	-686.	-465.	852.	-.0671	-.0216	-.0038	-.2038	-.0239	-.0432	4959.							
.1960	-100.	-914.	-128.	-688.	-480.	561.	-.0700	-.0174	-.0034	-.1808	-.0201	-.0610	4213.							
.1970	25.	-688.	-208.	-661.	-490.	256.	-.0716	-.0133	-.0031	-.1514	-.0139	-.0762	3597.							
.1980	145.	-430.	-272.	-621.	-480.	-63.	-.0725	-.0093	-.0030	-.1158	-.0080	-.0901	3286.							
.1990	263.	-155.	-307.	-565.	-435.	-374.	-.0728	-.0057	-.0034	-.0739	-.0042	-.1029	3361.							
.2000	357.	96.	-302.	-471.	-352.	-632.	-.0725	-.0031	-.0045	-.0265	-.0029	-.1140	3601.							
.2010	387.	287.	-241.	-328.	-233.	-811.	-.0713	-.0017	-.0062	.0248	-.0034	-.1233	3778.							
.2020	332.	414.	-115.	-152.	-93.	-914.	-.0696	-.0014	-.0080	.0772	-.0046	-.1309	3888.							
.2030	207.	487.	55.	45.	54.	-955.	-.0672	-.0023	-.0092	.1266	-.0042	-.1362	3997.							
.2040	30.	513.	234.	256.	193.	-938.	-.0640	-.0043	-.0091	.1687	.0007	-.1377	4137.							
.2050	-197.	490.	409.	471.	310.	-868.	-.0599	-.0072	-.0073	.2006	.0105	-.1349	4319.							
.2060	-474.	425.	588.	672.	396.	-753.	-.0552	-.0110	-.0041	.2221	.0233	-.1288	4524.							
.2070	-775.	321.	763.	847.	454.	-598.	-.0502	-.0153	-.0002	.2333	.0366	-.1199	4724.							
.2080	-1051.	189.	912.	990.	497.	-405.	-.0450	-.0202	.0041	.2345	.0483	-.1086	4924.							
.2090	-1261.	39.	1025.	1092.	536.	-183.	-.0400	-.0253	.0082	.2272	.0561	-.0959	5133.							

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

S/RV PIPING KEWAUNEE GKM08F 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	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU
57	3	81				



.2010	387.	287.	241.	-328.	-233.	-811.	-.0713	-.0017	-.0062	.0248	-.0034	-.1233	3778.
.2020	332.	414.	-115.	-152.	-93.	-914.	-.0696	-.0014	-.0080	.0772	-.0046	-.1309	3888.
.2030	207.	487.	55.	45.	54.	-955.	-.0672	-.0023	-.0092	.1266	-.0042	-.1362	3997.
.2040	30.	513.	234.	256.	193.	-938.	-.0640	-.0043	-.0091	.1687	.0007	-.1377	4137.
.2050	-197.	490.	409.	471.	310.	-868.	-.0599	-.0072	-.0073	.2006	.0105	-.1349	4319.
.2060	-474.	435.	588.	672.	396.	-753.	-.0552	-.0110	-.0041	.2221	.0233	-.1288	4524.
.2070	-775.	321.	763.	847.	454.	-598.	-.0502	-.0153	-.0002	.2333	.0366	-.1199	4724.
.2080	-1051.	189.	912.	990.	497.	-405.	-.0450	-.0202	.0041	.2345	.0483	-.1086	4924.
.2090	-1261.	39.	1025.	1092.	536.	-183.	-.0400	-.0253	.0082	.2272	.0561	-.0959	5133.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

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	57	MEMBER	3	SEQUENCE	81	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)	
.2100	-1395.	-117.	1108.	1140.	571.	53.		-.0355	-.0304	.0113	.2135	.0578	-.0831	5326.	
.2110	-1454.	-272.	1161.	1133.	597.	291.		-.0315	-.0352	.0133	.1944	.0534	-.0708	5482.	
.2120	-1427.	-410.	1161.	1074.	606.	516.		-.0279	-.0396	.0142	.1697	.0450	-.0583	5578.	
.2130	-1298.	-503.	1086.	956.	585.	700.		-.0247	-.0431	.0146	.1384	.0349	-.0449	5516.	
.2140	-1083.	-529.	939.	772.	523.	819.		-.0218	-.0457	.0151	.1005	.0248	-.0307	5180.	
.2150	-818.	-501.	731.	534.	412.	877.		-.0190	-.0472	.0156	.0565	.0159	-.0153	4618.	
.2160	-533.	-445.	478.	269.	254.	902.		-.0160	-.0478	.0161	.0084	.0087	.0019	4071.	
.2170	-241.	-370.	197.	-7.	62.	906.		-.0128	-.0475	.0164	-.0411	.0024	.0204	3792.	
.2180	44.	-269.	-88.	-296.	-145.	878.		-.0100	-.0463	.0160	-.0889	-.0049	.0382	3913.	
.2190	303.	-151.	-348.	-583.	-348.	825.		-.0078	-.0444	.0148	-.1316	-.0144	.0542	4458.	
.2200	507.	-51.	-562.	-835.	-534.	784.		-.0060	-.0421	.0123	-.1664	-.0262	.0682	5274.	
.2210	633.	4.	-714.	-1029.	-694.	780.		-.0042	-.0395	.0087	-.1917	-.0394	.0803	6118.	
.2220	674.	25.	-800.	-1166.	-826.	799.		-.0024	-.0368	.0044	-.2076	-.0525	.0902	6834.	
.2230	638.	34.	-832.	-1256.	-934.	814.		-.0006	-.0338	.0002	-.2154	-.0633	.0977	7362.	
.2240	535.	37.	-825.	-1294.	-1022.	819.		.0014	-.0305	-.0033	-.2163	-.0697	.1033	7684.	
.2250	366.	28.	-785.	-1277.	-1092.	816.		.0040	-.0272	-.0057	-.2108	-.0707	.1073	7797.	
.2260	142.	11.	-710.	-1210.	-1140.	802.		.0070	-.0238	-.0072	-.1988	-.0669	.1091	7703.	
.2270	-102.	-2.	-608.	-1103.	-1154.	766.		.0104	-.0202	-.0078	-.1798	-.0599	.1079	7390.	
.2280	-324.	-4.	-491.	-960.	-1118.	710.		.0139	-.0167	-.0080	-.1536	-.0513	.1032	6828.	
.2290	-500.	-0.	-366.	-784.	-1024.	639.		.0175	-.0133	-.0079	-.1198	-.0423	.0946	6009.	
.2300	-621.	9.	-231.	-583.	-873.	554.		.0211	-.0099	-.0081	-.0787	-.0343	.0818	4955.	
.2310	-677.	32.	-96.	-371.	-673.	445.		.0245	-.0066	-.0083	-.0320	-.0273	.0647	3706.	
.2320	-650.	84.	16.	-164.	-437.	298.		.0277	-.0033	-.0081	.0170	-.0202	.0443	2312.	
.2330	-526.	174.	84.	27.	-182.	109.		.0306	-.0000	-.0071	.0649	-.0116	.0220	892.	
.2340	-320.	299.	104.	193.	75.	-117.		.0334	.0033	-.0050	.1089	-.0009	-.0012	993.	
.2350	-64.	444.	87.	333.	317.	-366.		.0360	.0065	-.0017	.1469	.0118	-.0241	2451.	
.2360	216.	590.	42.	446.	536.	-617.		.0383	.0095	.0025	.1777	.0263	-.0459	3890.	
.2370	509.	726.	-26.	541.	729.	-853.		.0402	.0121	.0074	.2007	.0415	-.0658	5198.	
.2380	798.	846.	-103.	609.	896.	-1062.		.0413	.0143	.0126	.2159	.0559	-.0838	6331.	
.2390	1053.	934.	-169.	651.	1038.	-1228.		.0414	.0159	.0177	.2239	.0580	-.1000	7242.	
.2400	1240.	966.	-206.	680.	1152.	-1327.		.0405	.0168	.0223	.2251	.0771	-.1137	7864.	
.2410	1337.	926.	-208.	702.	1234.	-1338.		.0388	.0169	.0262	.2198	.0826	-.1242	8140.	
.2420	1340.	821.	-175.	713.	1278.	-1265.		.0362	.0162	.0295	.2077	.0848	-.1309	8076.	
.2430	1257.	671.	-115.	705.	1282.	-1127.		.0327	.0150	.0321	.1886	.0838	-.1338	7709.	
.2440	1095.	487.	-37.	674.	1242.	-934.		.0287	.0133	.0343	.1629	.0803	-.1323	7071.	
.2450	861.	273.	55.	627.	1158.	-691.		.0242	.0112	.0358	.1317	.0746	-.1266	6207.	
.2460	559.	35.	160.	566.	1033.	-409.		.0195	.0088	.0366	.0965	.0668	-.1170	5206.	
.2470	211.	-211.	272.	489.	877.	-108.		.0148	.0063	.0364	.0593	.0570	-.1042	4215.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

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	57	MEMBER	3	SEQUENCE	81	LOCATION	END	TYPE	RU
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.2390	1053.	934.	-169.	651.	1038.	-1228.	.0414	.0159	.0177	.2239	.0580	-.1000	7242.
.2400	1240.	966.	-206.	680.	1152.	-1327.	.0405	.0168	.0223	.2251	.0771	-.1137	7864.
.2410	1337.	926.	-208.	702.	1234.	-1338.	.0388	.0169	.0262	.2198	.0826	-.1242	8140.
.2420	1340.	821.	-175.	713.	1278.	-1265.	.0362	.0162	.0295	.2077	.0848	-.1309	8076.
.2430	1257.	671.	-115.	705.	1282.	-1127.	.0327	.0150	.0321	.1886	.0838	-.1338	7709.
.2440	1095.	487.	-37.	674.	1242.	-934.	.0287	.0123	.0343	.1629	.0803	-.1323	7071.
.2450	861.	273.	55.	627.	1158.	-691.	.0242	.0112	.0358	.1317	.0746	-.1266	6207.
.2460	559.	35.	160.	566.	1033.	-409.	.0195	.0088	.0366	.0965	.0668	-.1170	5206.
.2470	211.	-211.	272.	489.	877.	-108.	.0148	.0063	.0364	.0593	.0570	-.1042	4215.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

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	57	MEMBER	3	SEQUENCE	81	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	HX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2480	-147.	-448.	378.	400.	699.	197.		.0103	.0038	.0352	.0216	.0456	-.0887	3458.	
.2490	-485.	-660.	465.	300.	508.	492.		.0062	.0016	.0330	-.0147	.0330	-.0709	3204.	
.2500	-795.	-836.	532.	190.	311.	757.		.0028	-.0004	.0298	-.0483	.0195	-.0518	3506.	
.2510	-1076.	-970.	580.	73.	111.	931.		.0003	-.0020	.0256	-.0779	.0057	-.0319	4134.	
.2520	-1318.	-1062.	606.	-43.	-87.	1162.		-.0010	-.0030	.0206	-.1028	-.0079	-.0115	4866.	
.2530	-1499.	-1106.	598.	-156.	-277.	1292.		-.0009	-.0036	.0151	-.1226	-.0203	.0093	5555.	
.2540	-1604.	-1091.	552.	-267.	-453.	1361.		.0008	-.0035	.0093	-.1372	-.0310	.0298	6089.	
.2550	-1626.	-1015.	471.	-374.	-607.	1361.		.0040	-.0029	.0034	-.1461	-.0397	.0492	6411.	
.2560	-1574.	-890.	361.	-471.	-735.	1296.		.0084	-.0017	-.0024	-.1487	-.0463	.0666	6522.	
.2570	-1454.	-725.	229.	-550.	-832.	1175.		.0142	.0001	-.0083	-.1450	-.0505	.0815	6432.	
.2580	-1261.	-527.	78.	-611.	-892.	1001.		.0210	.0022	-.0139	-.1351	-.0525	.0932	6150.	
.2590	-995.	-296.	-92.	-658.	-911.	778.		.0284	.0047	-.0190	-.1200	-.0522	.1013	5704.	
.2600	-673.	-49.	-270.	-687.	-891.	517.		.0362	.0076	-.0235	-.1008	-.0498	.1057	5166.	
.2610	-329.	192.	-441.	-694.	-835.	240.		.0442	.0106	-.0273	-.0785	-.0454	.1067	4641.	
.2620	14.	406.	-595.	-674.	-751.	-31.		.0523	.0136	-.0302	-.0542	-.0396	.1045	4215.	
.2630	345.	593.	-727.	-634.	-744.	-292.		.0599	.0166	-.0322	-.0292	-.0327	.0995	3961.	
.2640	657.	754.	-836.	-580.	-516.	-540.		.0667	.0196	-.0332	-.0050	-.0249	.0917	3946.	
.2650	934.	878.	-916.	-512.	-372.	-762.		.0725	.0224	-.0331	.0175	-.0167	.0817	4136.	
.2660	1148.	944.	-954.	-424.	-220.	-936.		.0772	.0250	-.0324	.0382	-.0086	.0701	4386.	
.2670	1281.	944.	-942.	-315.	-68.	-1049.		.0807	.0273	-.0311	.0567	-.0008	.0575	4580.	
.2680	1340.	889.	-888.	-192.	80.	-1108.		.0827	.0293	-.0293	.0721	.0062	.0444	4703.	
.2690	1340.	798.	-804.	-70.	217.	-1125.		.0831	.0313	-.0270	.0836	.0126	.0313	4788.	
.2700	1277.	677.	-693.	47.	335.	-1105.		.0821	.0331	-.0243	.0906	.0179	.0189	4824.	
.2710	1146.	525.	-556.	159.	427.	-1044.		.0798	.0348	-.0215	.0934	.0219	.0080	4752.	
.2720	962.	345.	-403.	265.	489.	-939.		.0764	.0365	-.0186	.0922	.0245	-.0009	4553.	
.2730	756.	161.	-250.	355.	522.	-810.		.0721	.0382	-.0158	.0871	.0255	-.0075	4284.	
.2740	547.	-4.	-109.	417.	530.	-682.		.0669	.0401	-.0130	.0783	.0249	-.0122	4002.	
.2750	338.	-151.	24.	453.	515.	-560.		.0609	.0421	-.0106	.0671	.0225	-.0153	3697.	
.2760	130.	-288.	148.	475.	479.	-435.		.0546	.0441	-.0088	.0551	.0183	-.0168	3348.	
.2770	-52.	-406.	252.	483.	427.	-311.		.0483	.0462	-.0078	.0431	.0127	-.0164	2987.	
.2780	-177.	-479.	320.	468.	367.	-216.		.0420	.0484	-.0071	.0309	.0062	-.0147	2643.	
.2790	-238.	-497.	349.	425.	304.	-167.		.0360	.0507	-.0066	.0187	-.0004	-.0122	2290.	
.2800	-250.	-473.	348.	365.	236.	-152.		.0304	.0529	-.0063	.0073	-.0070	-.0088	1924.	
.2810	-223.	-428.	323.	304.	167.	-153.		.0258	.0549	-.0062	-.0025	-.0130	-.0045	1582.	
.2820	-149.	-356.	268.	241.	103.	-176.		.0221	.0565	-.0062	-.0106	-.0181	.0006	1318.	
.2830	-20.	-243.	187.	169.	53.	-238.		.0191	.0578	-.0060	-.0172	-.0221	.0055	1236.	
.2840	143.	-106.	94.	93.	24.	-327.		.0168	.0587	-.0056	-.0213	-.0254	.0096	1424.	
.2850	301.	19.	15.	39.	17.	-407.		.0154	.0588	-.0055	-.0215	-.0284	.0131	1708.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

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 57 MEMBER 3 SEQUENCE 81 LOCATION END TYPE RU

.2700	130.	-288.	147.	475.	479.	-439.	.0546	.0441	-.0088	.0551	.0183	-.0168	3348.
.2770	-52.	-406.	252.	483.	427.	-311.	.0483	.0462	-.0078	.0431	.0127	-.0164	2987.
.2780	-177.	-479.	320.	468.	367.	-216.	.0420	.0484	-.0071	.0309	.0062	-.0147	2643.
.2790	-230.	-497.	349.	425.	304.	-167.	.0360	.0507	-.0066	.0187	-.0004	-.0122	2290.
.2800	-250.	-472.	348.	365.	236.	-152.	.0304	.0529	-.0063	.0073	-.0070	-.0088	1924.
.2810	-223.	-428.	323.	304.	167.	-153.	.0258	.0549	-.0062	-.0025	-.0130	-.0045	1582.
.2820	-147.	-356.	268.	241.	103.	-176.	.0221	.0565	-.0062	-.0106	-.0181	.0006	1318.
.2830	-20.	-243.	187.	169.	53.	-238.	.0191	.0578	-.0060	-.0172	-.0221	.0055	1236.
.2840	143.	-106.	94.	93.	24.	-327.	.0168	.0587	-.0056	-.0213	-.0254	.0096	1424.
.2850	301.	19.	15.	39.	17.	-407.	.0154	.0588	-.0055	-.0215	-.0284	.0131	1708.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

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	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	FX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.2860	437.	109.	-41.	22.	33.	-452.	.0151	.0580	-.0058	-.0175	-.0311	.0164	1896.	
.2870	549.	175.	-74.	32.	75.	-477.	.0157	.0564	-.0062	-.0100	-.0334	.0191	2019.	
.2880	637.	233.	-83.	57.	137.	-497.	.0167	.0541	-.0066	-.0000	-.0351	.0209	2164.	
.2890	680.	269.	-63.	103.	210.	-498.	.0183	.0510	-.0068	.0117	-.0357	.0226	2298.	
.2900	656.	261.	-13.	183.	283.	-458.	.0208	.0471	-.0071	.0244	-.0348	.0252	2373.	
.2910	564.	213.	62.	290.	345.	-383.	.0240	.0426	-.0073	.0370	-.0321	.0289	2467.	
.2920	427.	156.	150.	400.	393.	-301.	.0275	.0378	-.0072	.0483	-.0277	.0332	2657.	
.2930	270.	106.	237.	503.	426.	-226.	.0311	.0329	-.0070	.0577	-.0224	.0382	2906.	
.2940	101.	55.	316.	599.	439.	-148.	.0347	.0279	-.0069	.0654	-.0168	.0439	3161.	
.2950	-76.	-1.	390.	687.	433.	-64.	.0381	.0231	-.0074	.0716	-.0121	.0501	3401.	
.2960	-243.	-47.	452.	753.	407.	13.	.0410	.0186	-.0086	.0764	-.0096	.0560	3573.	
.2970	-360.	-59.	483.	781.	364.	62.	.0431	.0145	-.0105	.0789	-.0096	.0614	3604.	
.2980	-405.	-31.	469.	766.	303.	78.	.0442	.0111	-.0127	.0781	-.0120	.0664	3451.	
.2990	-392.	29.	413.	710.	220.	65.	.0445	.0084	-.0152	.0734	-.0163	.0710	3113.	
.3000	-343.	107.	328.	616.	111.	29.	.0438	.0063	-.0179	.0648	-.0222	.0748	2617.	
.3010	-259.	202.	212.	489.	-24.	-27.	.0422	.0049	-.0204	.0517	-.0289	.0781	2045.	
.3020	-130.	318.	59.	329.	-177.	-107.	.0396	.0041	-.0225	.0336	-.0354	.0807	1622.	
.3030	33.	448.	-120.	143.	-341.	-206.	.0359	.0037	-.0238	.0108	-.0414	.0822	1768.	
.3040	192.	566.	-296.	-55.	-509.	-305.	.0312	.0035	-.0246	-.0151	-.0472	.0821	2487.	
.3050	316.	643.	-448.	-244.	-672.	-376.	.0255	.0035	-.0250	-.0424	-.0530	.0801	3372.	
.3060	404.	669.	-568.	-412.	-820.	-407.	.0192	.0032	-.0248	-.0704	-.0586	.0763	4190.	
.3070	463.	655.	-659.	-559.	-942.	-409.	.0120	.0028	-.0239	-.0984	-.0637	.0705	4881.	
.3080	484.	606.	-710.	-687.	-1033.	-389.	.0041	.0020	-.0220	-.1257	-.0679	.0622	5424.	
.3090	440.	503.	-707.	-779.	-1092.	-332.	-.0042	.0009	-.0193	-.1509	-.0710	.0518	5766.	
.3100	320.	336.	-648.	-821.	-1120.	-223.	-.0124	-.0007	-.0159	-.1728	-.0722	.0401	5867.	
.3110	145.	121.	-544.	-814.	-1113.	-75.	-.0203	-.0028	-.0118	-.1910	-.0710	.0276	5764.	
.3120	-60.	-107.	-408.	-774.	-1070.	81.	-.0279	-.0052	-.0069	-.2048	-.0672	.0140	5520.	
.3130	-281.	-334.	-246.	-705.	-988.	232.	-.0351	-.0079	-.0014	-.2132	-.0614	-.0004	5159.	
.3140	-518.	-566.	-58.	-597.	-874.	391.	-.0415	-.0108	.0040	-.2150	-.0538	-.0147	4708.	
.3150	-762.	-799.	146.	-451.	-729.	555.	-.0466	-.0139	.0092	-.2095	-.0448	-.0283	4263.	
.3160	-985.	-1004.	353.	-284.	-559.	699.	-.0506	-.0168	.0139	-.1968	-.0351	-.0411	3919.	
.3170	-1154.	-1149.	541.	-115.	-369.	796.	-.0535	-.0196	.0182	-.1776	-.0248	-.0528	3693.	
.3180	-1256.	-1227.	697.	50.	-167.	844.	-.0551	-.0219	.0218	-.1527	-.0141	-.0624	3597.	
.3190	-1299.	-1246.	816.	213.	35.	851.	-.0552	-.0239	.0245	-.1228	-.0029	-.0694	3663.	
.3200	-1287.	-1205.	899.	365.	226.	814.	-.0540	-.0253	.0263	-.0888	.0083	-.0735	3841.	
.3210	-1208.	-1091.	937.	494.	401.	722.	-.0515	-.0263	.0271	-.0521	.0191	-.0748	4016.	
.3220	-1046.	-899.	918.	589.	558.	574.	-.0482	-.0266	.0270	-.0144	.0295	-.0733	4148.	
.3230	-814.	-647.	846.	654.	692.	382.	-.0441	-.0265	.0261	.0229	.0391	-.0689	4279.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

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

CONDITION 24

LOADS

SHOCK

PRSSURE

ENGLISH UNITS

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

SECTION 57 MEMBER 3 SEQUENCE 81 LOCATION END TYPE RU

.3150	-762.	-759.	146.	-451.	-729.	555.	-.0466	-.0139	.0092	-.2095	-.0448	-.0283	4263.
.3160	-985.	-1004.	353.	-284.	-559.	699.	-.0506	-.0168	.0139	-.1968	-.0351	-.0411	3919.
.3170	-1154.	-1149.	541.	-115.	-369.	796.	-.0535	-.0196	.0182	-.1776	-.0248	-.0528	3693.
.3180	-1256.	-1227.	697.	50.	-167.	844.	-.0551	-.0219	.0218	-.1527	-.0141	-.0624	3597.
.3190	-1299.	-1246.	816.	213.	35.	851.	-.0552	-.0239	.0245	-.1228	-.0029	-.0694	3663.
.3200	-1287.	-1205.	899.	365.	226.	814.	-.0540	-.0253	.0263	-.0888	.0083	-.0735	3841.
.3210	-1208.	-1091.	937.	494.	401.	722.	-.0515	-.0263	.0271	-.0521	.0191	-.0748	4016.
.3220	-1046.	-899.	918.	589.	558.	574.	-.0482	-.0266	.0270	-.0144	.0295	-.0733	4148.
.3230	-814.	-647.	846.	654.	692.	382.	-.0441	-.0265	.0261	.0229	.0391	-.0689	4279.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

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	57	MEMBER	3	SEQUENCE	81	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	PZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3240	-547.	-360.	742.	690.	797.	167.		-.0394	-.0259	.0243	.0590	.0473	-.0621	4454.	
.3250	-271.	-63.	619.	701.	870.	-52.		-.0343	-.0252	.0215	.0927	.0535	-.0531	4667.	
.3260	9.	236.	479.	686.	910.	-265.		-.0293	-.0243	.0181	.1221	.0579	-.0423	4885.	
.3270	287.	528.	322.	644.	919.	-466.		-.0244	-.0234	.0144	.1456	.0608	-.0298	5073.	
.3280	537.	795.	164.	576.	896.	-644.		-.0200	-.0227	.0107	.1620	.0521	-.0163	5196.	
.3290	725.	1008.	25.	493.	840.	-775.		-.0162	-.0222	.0069	.1711	.0517	-.0023	5196.	
.3300	838.	1145.	-88.	406.	755.	-841.		-.0130	-.0222	.0033	.1726	.0598	.0120	5010.	
.3310	886.	1210.	-178.	314.	646.	-846.		-.0106	-.0227	-.0000	.1661	.0567	.0259	4631.	
.3320	882.	1214.	-246.	210.	523.	-804.		-.0092	-.0236	-.0027	.1518	.0524	.0386	4097.	
.3330	822.	1156.	-287.	97.	388.	-718.		-.0089	-.0249	-.0048	.1305	.0468	.0495	3430.	
.3340	699.	1024.	-294.	-10.	246.	-576.		-.0095	-.0266	-.0064	.1035	.0403	.0585	2613.	
.3350	525.	822.	-275.	-106.	101.	-381.		-.0107	-.0288	-.0075	.0721	.0332	.0656	1704.	
.3360	324.	578.	-240.	-200.	-42.	-161.		-.0125	-.0312	-.0080	.0371	.0260	.0705	1084.	
.3370	118.	320.	-198.	-297.	-178.	61.		-.0148	-.0336	-.0079	-.0001	.0188	.0730	1466.	
.3380	-84.	53.	-153.	-391.	-304.	280.		-.0175	-.0360	-.0072	-.0376	.0120	.0732	2372.	
.3390	-279.	-222.	-105.	-470.	-417.	497.		-.0200	-.0383	-.0064	-.0734	.0056	.0716	3344.	
.3400	-456.	-487.	-59.	-536.	-515.	697.		-.0222	-.0403	-.0055	-.1056	-.0003	.0680	4253.	
.3410	-591.	-716.	-23.	-597.	-591.	856.		-.0243	-.0419	-.0046	-.1329	-.0057	.0624	5005.	
.3420	-667.	-891.	-5.	-652.	-643.	961.		-.0259	-.0430	-.0039	-.1540	-.0105	.0549	5542.	
.3430	-683.	-1014.	-6.	-695.	-671.	1017.		-.0270	-.0434	-.0034	-.1679	-.0143	.0462	5853.	
.3440	-652.	-1086.	-23.	-720.	-677.	1025.		-.0272	-.0433	-.0032	-.1738	-.0171	.0366	5942.	
.3450	-577.	-1101.	-53.	-731.	-665.	978.		-.0268	-.0426	-.0034	-.1716	-.0186	.0263	5802.	
.3460	-453.	-1051.	-100.	-731.	-634.	874.		-.0256	-.0412	-.0038	-.1618	-.0185	.0157	5441.	
.3470	-282.	-941.	-167.	-719.	-586.	718.		-.0238	-.0393	-.0043	-.1452	-.0166	.0053	4893.	
.3480	-86.	-784.	-242.	-690.	-523.	524.		-.0214	-.0369	-.0049	-.1221	-.0130	-.0048	4225.	
.3490	108.	-600.	-309.	-643.	-448.	309.		-.0185	-.0343	-.0057	-.0931	-.0084	-.0145	3516.	
.3500	285.	-405.	-360.	-575.	-362.	89.		-.0153	-.0315	-.0067	-.0591	-.0030	-.0236	2859.	
.3510	442.	-208.	-395.	-487.	-264.	-125.		-.0119	-.0287	-.0077	-.0216	.0029	-.0319	2370.	
.3520	571.	-16.	-409.	-382.	-158.	-325.		-.0086	-.0260	-.0088	.0179	.0090	-.0393	2194.	
.3530	653.	157.	-394.	-264.	-46.	-498.		-.0055	-.0236	-.0099	.0580	.0152	-.0458	2361.	
.3540	671.	291.	-344.	-131.	63.	-629.		-.0026	-.0215	-.0108	.0972	.0212	-.0512	2696.	
.3550	625.	379.	-263.	15.	167.	-709.		.0001	-.0199	-.0115	.1338	.0272	-.0552	3042.	
.3560	528.	428.	-161.	164.	262.	-743.		.0024	-.0187	-.0119	.1661	.0331	-.0576	3359.	
.3570	392.	445.	-44.	303.	345.	-741.		.0042	-.0180	-.0119	.1927	.0388	-.0588	3637.	
.3580	224.	429.	82.	428.	413.	-701.		.0054	-.0177	-.0115	.2132	.0438	-.0587	3839.	
.3590	30.	373.	215.	540.	466.	-620.		.0062	-.0178	-.0108	.2271	.0477	-.0575	3943.	
.3600	-173.	287.	344.	633.	502.	-502.		.0067	-.0183	-.0101	.2343	.0502	-.0550	3971.	
.3610	-358.	189.	457.	696.	524.	-367.		.0067	-.0191	-.0093	.2346	.0512	-.0517	3944.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.22.

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	57	MEMBER	3	SEQUENCE	81	LOCATION	END	TYPE	RU
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.3530	657.	157.	-394.	-264.	657.	-46.	-498.	-.0055	-.0236	-.0099	.0580	.0152	-.0458	2361.
.3540	671.	291.	-344.	-131.	63.	-629.	-.0026	-.0215	-.0108	-.0972	.0212	-.0512	2696.	
.3550	625.	379.	-263.	15.	167.	-709.	.0001	-.0199	-.0115	.1338	.0272	-.0552	3042.	
.3560	528.	428.	-161.	164.	262.	-743.	.0024	-.0107	-.0119	.1661	.0331	-.0576	3359.	
.3570	392.	445.	-44.	303.	345.	-741.	.0042	-.0180	-.0119	.1927	.0388	-.0588	3637.	
.3580	224.	429.	82.	428.	413.	-701.	.0054	-.0177	-.0115	.2132	.0438	-.0587	3839.	
.3590	30.	373.	215.	540.	466.	-620.	.0062	-.0178	-.0108	.2271	.0477	-.0575	3943.	
.3600	-173.	287.	344.	633.	502.	-502.	.0067	-.0183	-.0101	.2343	.0502	-.0550	3971.	
.3610	-358.	189.	457.	696.	524.	-367.	.0067	-.0191	-.0093	.2346	.0512	-.0517	3944.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.22.

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	57	MEMBER	3	SEQUENCE	81	LOCATION	END	TYPE	RU	RU	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	(PSI)	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	(PSI)	
.3620	-508.	92.	545.	722.	531.	-228.	.0063	-.0200	-.0084	.2281	.0504	-.0477	3858.		
.3630	-614.	0.	601.	713.	521.	-87.	.0057	-.0210	-.0075	.2153	.0483	-.0428	3705.		
.3640	-678.	-86.	623.	673.	494.	52.	.0050	-.0221	-.0067	.1966	.0451	-.0370	3492.		
.3650	-693.	-157.	609.	601.	448.	178.	.0045	-.0232	-.0059	.1728	.0411	-.0304	3215.		
.3660	-650.	-198.	552.	494.	385.	279.	.0040	-.0242	-.0050	.1445	.0368	-.0232	2862.		
.3670	-544.	-205.	452.	356.	310.	349.	.0036	-.0250	-.0040	.1126	.0326	-.0155	2451.		
.3680	-389.	-183.	318.	198.	225.	393.	.0035	-.0258	-.0030	.0787	.0285	-.0074	2065.		
.3690	-205.	-143.	163.	30.	136.	419.	.0037	-.0265	-.0021	.0445	.0243	.0007	1842.		
.3700	-6.	-89.	1.	-141.	47.	430.	.0042	-.0272	-.0016	.0115	.0199	.0083	1897.		
.3710	205.	-23.	-164.	-307.	-35.	427.	.0048	-.0279	-.0012	-.0190	.0152	.0153	2201.		
.3720	417.	51.	-323.	-462.	-105.	416.	.0056	-.0287	-.0011	-.0462	.0104	.0215	2630.		
.3730	607.	123.	-463.	-596.	-161.	401.	.0065	-.0296	-.0013	-.0690	.0056	.0265	3074.		
.3740	750.	180.	-571.	-702.	-205.	392.	.0076	-.0307	-.0016	-.0869	.0011	.0304	3463.		
.3750	837.	217.	-641.	-773.	-235.	394.	.0089	-.0319	-.0020	-.0995	-.0027	.0331	3751.		
.3760	872.	237.	-679.	-808.	-253.	403.	.0103	-.0333	-.0024	-.1073	-.0052	.0349	3914.		
.3770	858.	247.	-685.	-812.	-260.	411.	.0117	-.0348	-.0026	-.1104	-.0061	.0356	3950.		
.3780	790.	245.	-659.	-784.	-256.	420.	.0131	-.0363	-.0026	-.1090	-.0054	.0351	3863.		
.3790	666.	223.	-598.	-724.	-243.	433.	.0146	-.0379	-.0024	-.1032	-.0033	.0335	3665.		
.3800	496.	183.	-509.	-634.	-224.	453.	.0160	-.0395	-.0023	-.0933	-.0001	.0310	3382.		
.3810	303.	139.	-404.	-525.	-196.	467.	.0174	-.0410	-.0020	-.0801	.0037	.0274	3042.		
.3820	112.	104.	-293.	-408.	-161.	464.	.0184	-.0424	-.0017	-.0643	.0078	.0228	2666.		
.3830	-68.	81.	-184.	-291.	-119.	445.	.0192	-.0435	-.0014	-.0467	.0118	.0173	2275.		
.3840	-231.	66.	-81.	-174.	-77.	414.	.0197	-.0444	-.0011	-.0280	.0152	.0111	1901.		
.3850	-365.	63.	9.	-66.	-35.	368.	.0200	-.0450	-.0009	-.0092	.0181	.0046	1568.		
.3860	-453.	83.	74.	24.	5.	300.	.0199	-.0453	-.0006	.0085	.0204	-.0021	1255.		
.3870	-484.	133.	107.	88.	40.	205.	.0194	-.0453	-.0001	.0240	.0221	-.0088	947.		
.3880	-465.	202.	111.	128.	68.	93.	.0185	-.0451	.0006	.0366	.0233	-.0152	719.		
.3890	-416.	277.	96.	147.	88.	-21.	.0172	-.0447	.0014	.0458	.0238	-.0211	721.		
.3900	-745.	350.	66.	149.	98.	-129.	.0156	-.0444	.0023	.0515	.0234	-.0260	918.		
.3910	-251.	423.	23.	132.	102.	-226.	.0136	-.0440	.0034	.0533	.0220	-.0300	1170.		
.3920	-137.	494.	-32.	97.	100.	-308.	.0111	-.0438	.0048	.0508	.0198	-.0326	1411.		
.3930	-24.	549.	-86.	50.	94.	-365.	.0083	-.0438	.0064	.0443	.0165	-.0341	1585.		
.3940	61.	571.	-126.	2.	82.	-381.	.0052	-.0442	.0080	.0342	.0123	-.0343	1628.		
.3950	105.	552.	-143.	-43.	66.	-351.	.0019	-.0448	.0098	.0210	.0074	-.0331	1502.		
.3960	118.	501.	-143.	-83.	47.	-279.	-.0015	-.0459	.0117	.0048	.0020	-.0306	1232.		
.3970	104.	425.	-130.	-121.	28.	-177.	-.0051	-.0471	.0139	-.0139	-.0032	-.0269	900.		
.3980	53.	323.	-97.	-153.	9.	-45.	-.0088	-.0487	.0163	-.0344	-.0084	-.0224	667.		
.3990	-45.	189.	-37.	-171.	-10.	120.	-.0124	-.0503	.0186	-.0553	-.0135	-.0171	873.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.23.

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	57	MEMBER	3	SEQUENCE	81	LOCATION	END	TYPE	RU
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.3910	-251.	423.	23.	132.	102.	-226.	.0136	-.0440	.0034	.0533	.0220	-.0300	1170.
.3920	-127.	494.	-32.	97.	100.	-308.	.0111	-.0428	.0048	.0508	.0198	-.0326	1411.
.3930	-24.	549.	-86.	50.	94.	-365.	.0083	-.0438	.0064	.0443	.0165	-.0341	1585.
.3940	61.	571.	-126.	2.	82.	-351.	.0052	-.0442	.0080	.0342	.0123	-.0343	1628.
.3950	105.	552.	-142.	-43.	66.	-351.	.0019	-.0448	.0098	.0210	.0074	-.0331	1502.
.3960	118.	501.	-143.	-83.	47.	-279.	-.0015	-.0459	.0117	.0048	.0020	-.0306	1232.
.3970	104.	425.	-130.	-121.	28.	-177.	-.0051	-.0471	.0139	-.0139	-.0032	-.0269	900.
.3980	53.	323.	-97.	-153.	9.	-45.	-.0088	-.0487	.0163	-.0344	-.0084	-.0224	667.
.3990	-45.	189.	-37.	-171.	-10.	120.	-.0124	-.0503	.0186	-.0553	-.0135	-.0171	873.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.23.

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	57	MEMBER	3	SEQUENCE	81	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)		
.4000	-185.	23.	45.	-171.	-29.	316.	-.0157	-.0521	.0207	-.0757	-.0184	-.0111	1504.	

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)
.2410	1337.	926.	-208.	702.	1234.	-1338.	.0388	.0169	.0262	.2198	.0826	-.1242	8140.

SECTION	57	MEMBER	4	SEQUENCE	82	LOCATION	DIS	TYPE VA						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)		
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	0.	
.0030	0.	0.	0.	0.	0.	0.	.0000	-.0000	.0000	-.0000	.0000	.0000	0.	
.0040	0.	0.	0.	0.	0.	0.	.0000	-.0000	.0000	-.0000	.0000	.0000	0.	
.0050	0.	0.	0.	0.	0.	0.	-.0000	-.0000	.0000	-.0000	.0000	.0000	0.	
.0060	0.	0.	0.	0.	0.	0.	-.0000	-.0000	.0000	-.0001	.0001	-.0000	0.	
.0070	0.	0.	0.	0.	0.	0.	-.0000	-.0000	.0000	-.0002	.0001	-.0002	0.	
.0080	0.	0.	0.	0.	0.	0.	-.0001	-.0000	.0001	-.0003	.0000	-.0004	0.	
.0090	0.	0.	0.	0.	0.	0.	-.0002	-.0000	.0001	-.0003	-.0002	-.0008	0.	
.0100	0.	0.	0.	0.	0.	0.	-.0004	-.0000	.0002	-.0004	-.0005	-.0013	0.	
.0110	0.	0.	0.	0.	0.	0.	-.0007	-.0001	.0003	-.0005	-.0010	-.0023	0.	
.0120	0.	0.	0.	0.	0.	0.	-.0012	-.0001	.0004	-.0009	-.0017	-.0039	0.	
.0130	0.	0.	0.	0.	0.	0.	-.0020	-.0002	.0007	-.0012	-.0028	-.0063	0.	
.0140	0.	0.	0.	0.	0.	0.	-.0030	-.0003	.0009	-.0012	-.0042	-.0091	0.	
.0150	0.	0.	0.	0.	0.	0.	-.0041	-.0005	.0011	-.0006	-.0061	-.0118	0.	
.0160	0.	0.	0.	0.	0.	0.	-.0052	-.0007	.0011	.0007	-.0081	-.0136	0.	
.0170	0.	0.	0.	0.	0.	0.	-.0061	-.0011	.0011	.0029	-.0101	-.0142	0.	
.0180	0.	0.	0.	0.	0.	0.	-.0069	-.0014	.0009	.0058	-.0118	-.0131	0.	
.0190	0.	0.	0.	0.	0.	0.	-.0074	-.0018	.0006	.0093	-.0127	-.0102	0.	
.0200	0.	0.	0.	0.	0.	0.	-.0075	-.0021	.0003	.0127	-.0126	-.0056	0.	
.0210	0.	0.	0.	0.	0.	0.	-.0072	-.0024	-.0001	.0155	-.0108	.0004	0.	
.0220	0.	0.	0.	0.	0.	0.	-.0066	-.0024	-.0004	.0171	-.0075	.0071	0.	
.0230	0.	0.	0.	0.	0.	0.	-.0059	-.0023	-.0005	.0168	-.0027	.0132	0.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.23.

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	57	MEMBER	4	SEQUENCE	82	LOCATION	DIS	TYPE VA						STRESS
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.0150	0.	0.	0.	0.	0.	0.	0.	0.	-.0041	-.0005	.0011	-.0006	-.0061	-.0118	0.
.0160	0.	0.	0.	0.	0.	0.	0.	0.	-.0052	-.0007	.0011	.0007	-.0081	-.0136	0.
.0170	0.	0.	0.	0.	0.	0.	0.	0.	-.0061	-.0011	.0011	.0029	-.0101	-.0142	0.
.0180	0.	0.	0.	0.	0.	0.	0.	0.	-.0069	-.0014	.0009	.0058	-.0118	-.0131	0.
.0190	0.	0.	0.	0.	0.	0.	0.	0.	-.0074	-.0018	.0006	.0093	-.0127	-.0102	0.
.0200	0.	0.	0.	0.	0.	0.	0.	0.	-.0075	-.0021	.0003	.0127	-.0126	-.0056	0.
.0210	0.	0.	0.	0.	0.	0.	0.	0.	-.0072	-.0024	-.0001	.0155	-.0108	.0004	0.
.0220	0.	0.	0.	0.	0.	0.	0.	0.	-.0066	-.0024	-.0004	.0171	-.0075	.0071	0.
.0230	0.	0.	0.	0.	0.	0.	0.	0.	-.0059	-.0023	-.0005	.0168	-.0027	.0132	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.29.23.

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	57	MEMBER	4	SEQUENCE	82	LOCATION	DIS	TYPE	VA							
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)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0240	0.	0.	0.	0.	0.	0.	-.0052	-.0020	-.0005	.0149	.0026	.0175	0.			
.0250	0.	0.	0.	0.	0.	0.	-.0042	-.0016	-.0009	.0137	.0069	.0211	0.			
.0260	0.	0.	0.	0.	0.	0.	-.0022	-.0009	-.0021	.0156	.0088	.0261	0.			
.0270	0.	0.	0.	0.	0.	0.	.0005	-.0002	-.0039	.0192	.0085	.0322	0.			
.0280	0.	0.	0.	0.	0.	0.	.0028	.0008	-.0052	.0197	.0075	.0345	0.			
.0290	0.	0.	0.	0.	0.	0.	.0045	.0019	-.0063	.0176	.0053	.0315	0.			
.0300	0.	0.	0.	0.	0.	0.	.0072	.0032	-.0083	.0192	.0010	.0303	0.			
.0310	0.	0.	0.	0.	0.	0.	.0107	.0044	-.0104	.0203	-.0019	.0313	0.			
.0320	0.	0.	0.	0.	0.	0.	.0129	.0058	-.0105	.0115	.0001	.0263	0.			
.0330	0.	0.	0.	0.	0.	0.	.0134	.0070	-.0088	-.0062	.0059	.0140	0.			
.0340	0.	0.	0.	0.	0.	0.	.0139	.0080	-.0068	-.0238	.0129	.0027	0.			
.0350	0.	0.	0.	0.	0.	0.	.0151	.0085	-.0056	-.0364	.0189	-.0042	0.			
.0360	0.	0.	0.	0.	0.	0.	.0157	.0085	-.0046	-.0448	.0212	-.0109	0.			
.0370	0.	0.	0.	0.	0.	0.	.0150	.0080	-.0034	-.0510	.0188	-.0197	0.			
.0380	0.	0.	0.	0.	0.	0.	.0131	.0069	-.0020	-.0545	.0129	-.0287	0.			
.0390	0.	0.	0.	0.	0.	0.	.0108	.0053	-.0012	-.0523	.0037	-.0363	0.			
.0400	0.	0.	0.	0.	0.	0.	.0088	.0034	-.0017	-.0418	-.0084	-.0405	0.			
.0410	0.	0.	0.	0.	0.	0.	.0074	.0012	-.0023	-.0284	-.0177	-.0382	0.			
.0420	0.	0.	0.	0.	0.	0.	.0051	-.0007	-.0005	-.0257	-.0163	-.0351	0.			
.0430	0.	0.	0.	0.	0.	0.	.0008	-.0024	.0041	-.0363	-.0052	-.0382	0.			
.0440	0.	0.	0.	0.	0.	0.	-.0037	-.0038	.0090	-.0475	.0093	-.0418	0.			
.0450	0.	0.	0.	0.	0.	0.	-.0061	-.0050	.0120	-.0498	.0238	-.0364	0.			
.0460	0.	0.	0.	0.	0.	0.	-.0077	-.0061	.0139	-.0464	.0356	-.0271	0.			
.0470	0.	0.	0.	0.	0.	0.	-.0111	-.0067	.0160	-.0424	.0404	-.0263	0.			
.0480	0.	0.	0.	0.	0.	0.	-.0156	-.0071	.0173	-.0348	.0367	-.0317	0.			
.0490	0.	0.	0.	0.	0.	0.	-.0185	-.0073	.0165	-.0167	.0270	-.0316	0.			
.0500	0.	0.	0.	0.	0.	0.	-.0197	-.0073	.0134	.0108	.0135	-.0264	0.			
.0510	0.	0.	0.	0.	0.	0.	-.0211	-.0070	.0104	.0366	.0002	-.0249	0.			
.0520	0.	0.	0.	0.	0.	0.	-.0234	-.0064	.0096	.0495	-.0050	-.0278	0.			
.0530	0.	0.	0.	0.	0.	0.	-.0254	-.0056	.0108	.0499	.0006	-.0292	0.			
.0540	0.	0.	0.	0.	0.	0.	-.0261	-.0048	.0120	.0478	.0108	-.0261	0.			
.0550	0.	0.	0.	0.	0.	0.	-.0254	-.0043	.0123	.0485	.0200	-.0188	0.			
.0560	0.	0.	0.	0.	0.	0.	-.0244	-.0042	.0125	.0481	.0283	-.0098	0.			
.0570	0.	0.	0.	0.	0.	0.	-.0242	-.0045	.0132	.0446	.0333	-.0037	0.			
.0580	0.	0.	0.	0.	0.	0.	-.0249	-.0054	.0131	.0446	.0296	-.0014	0.			
.0590	0.	0.	0.	0.	0.	0.	-.0248	-.0069	.0112	.0529	.0175	.0033	0.			
.0600	0.	0.	0.	0.	0.	0.	-.0231	-.0089	.0079	.0662	.0035	.0149	0.			
.0610	0.	0.	0.	0.	0.	0.	-.0209	-.0112	.0048	.0759	-.0078	.0286	0.			

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.23.

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	57	MEMBER	4	SEQUENCE	82	LOCATION	DIS	TYPE	VA
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.0530	0.	0.	0.	0.	0.	0.	0.	-.0254	-.0056	.0108	.0499	.0006	-.0292	0.
.0540	0.	0.	0.	0.	0.	0.	0.	-.0261	-.0048	.0120	.0478	.0108	-.0261	0.
.0550	0.	0.	0.	0.	0.	0.	0.	-.0254	-.0043	.0123	.0485	.0200	-.0188	0.
.0560	0.	0.	0.	0.	0.	0.	0.	-.0244	-.0042	.0125	.0481	.0283	-.0098	0.
.0570	0.	0.	0.	0.	0.	0.	0.	-.0242	-.0045	.0132	.0446	.0133	-.0037	0.
.0580	0.	0.	0.	0.	0.	0.	0.	-.0249	-.0054	.0131	.0446	.0296	-.0014	0.
.0590	0.	0.	0.	0.	0.	0.	0.	-.0248	-.0069	.0112	.0529	.0175	.0033	0.
.0600	0.	0.	0.	0.	0.	0.	0.	-.0231	-.0089	.0079	.0662	.0035	.0149	0.
.0610	0.	0.	0.	0.	0.	0.	0.	-.0209	-.0112	.0048	.0759	-.0078	.0286	0.

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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	57	MEMBER	4	SEQUENCE	82	LOCATION	DIS	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	FX	RY	FZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0620	0.	0.	0.	0.	0.	0.	-.0195	-.0134	.0036	.0744	-.0133	.0386	0.	
.0630	0.	0.	0.	0.	0.	0.	-.0184	-.0155	.0044	.0600	-.0101	.0465	0.	
.0640	0.	0.	0.	0.	0.	0.	-.0163	-.0174	.0060	.0381	.0007	.0568	0.	
.0650	0.	0.	0.	0.	0.	0.	-.0132	-.0190	.0072	.0150	.0129	.0681	0.	
.0660	0.	0.	0.	0.	0.	0.	-.0103	-.0202	.0082	-.0083	.0220	.0758	0.	
.0670	0.	0.	0.	0.	0.	0.	-.0080	-.0210	.0089	-.0317	.0258	.0779	0.	
.0680	0.	0.	0.	0.	0.	0.	-.0061	-.0214	.0085	-.0494	.0207	.0750	0.	
.0690	0.	0.	0.	0.	0.	0.	-.0041	-.0212	.0059	-.0559	.0046	.0684	0.	
.0700	0.	0.	0.	0.	0.	0.	-.0020	-.0205	.0015	-.0537	-.0183	.0588	0.	
.0710	0.	0.	0.	0.	0.	0.	.0001	-.0191	-.0030	-.0507	-.0404	.0462	0.	
.0720	0.	0.	0.	0.	0.	0.	.0019	-.0169	-.0064	-.0530	-.0558	.0316	0.	
.0730	0.	0.	0.	0.	0.	0.	.0036	-.0139	-.0079	-.0633	-.0610	.0161	0.	
.0740	0.	0.	0.	0.	0.	0.	.0054	-.0104	-.0078	-.0801	-.0554	.0010	0.	
.0750	0.	0.	0.	0.	0.	0.	.0076	-.0063	-.0071	-.0976	-.0429	-.0121	0.	
.0760	0.	0.	0.	0.	0.	0.	.0102	-.0020	-.0065	-.1105	-.0285	-.0226	0.	
.0770	0.	0.	0.	0.	0.	0.	.0123	.0023	-.0060	-.1175	-.0157	-.0328	0.	
.0780	0.	0.	0.	0.	0.	0.	.0133	.0065	-.0061	-1164	-.0085	-.0455	0.	
.0790	0.	0.	0.	0.	0.	0.	.0136	.0104	-.0075	-.1024	-.0098	-.0593	0.	
.0800	0.	0.	0.	0.	0.	0.	.0137	.0140	-.0104	-.0752	-.0176	-.0714	0.	
.0810	0.	0.	0.	0.	0.	0.	.0134	.0173	-.0135	-.0420	-.0265	-.0823	0.	
.0820	0.	0.	0.	0.	0.	0.	.0120	.0203	-.0155	-.0107	-.0318	-.0941	0.	
.0830	0.	0.	0.	0.	0.	0.	.0102	.0230	-.0159	.0152	-.0298	-.1039	0.	
.0840	0.	0.	0.	0.	0.	0.	.0089	.0254	-.0146	.0351	-.0181	-.1068	0.	
.0850	0.	0.	0.	0.	0.	0.	.0083	.0274	-.0123	.0502	.0013	-.1030	0.	
.0860	0.	0.	0.	0.	0.	0.	.0079	.0290	-.0096	.0637	.0227	-.0956	0.	
.0870	0.	0.	0.	0.	0.	0.	.0074	.0302	-.0071	.0780	.0422	-.0857	0.	
.0880	0.	0.	0.	0.	0.	0.	.0069	.0309	-.0049	.0932	.0578	-.0740	0.	
.0890	0.	0.	0.	0.	0.	0.	.0060	.0311	-.0035	.1105	.0670	-.0626	0.	
.0900	0.	0.	0.	0.	0.	0.	.0049	.0309	-.0033	.1309	.0689	-.0519	0.	
.0910	0.	0.	0.	0.	0.	0.	.0043	.0304	-.0038	.1508	.0675	-.0397	0.	
.0920	0.	0.	0.	0.	0.	0.	.0038	.0296	-.0037	.1636	.0678	-.0265	0.	
.0930	0.	0.	0.	0.	0.	0.	.0028	.0288	-.0025	.1653	.0710	-.0155	0.	
.0940	0.	0.	0.	0.	0.	0.	.0016	.0278	-.0005	.1574	.0758	-.0068	0.	
.0950	0.	0.	0.	0.	0.	0.	.0008	.0266	.0017	.1441	.0805	.0033	0.	
.0960	0.	0.	0.	0.	0.	0.	.0006	.0251	.0030	.1297	.0815	.0153	0.	
.0970	0.	0.	0.	0.	0.	0.	.0005	.0233	.0033	.1169	.0749	.0264	0.	
.0980	0.	0.	0.	0.	0.	0.	.0000	.0213	.0025	.1063	.0598	.0351	0.	
.0990	0.	0.	0.	0.	0.	0.	-.0004	.0191	.0006	.0982	.0386	.0432	0.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.29.23.

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	57	MEMBER	4	SEQUENCE	82	LOCATION	DIS	TYPE	VA
---------	----	--------	---	----------	----	----------	-----	------	----



.0910	0.	0.	0.	0.	0.	0.	0.	.0043	.0304	-.0038	.1508	.0675	-.0397	0.
.0920	0.	0.	0.	0.	0.	0.	0.	.0038	.0296	-.0027	.1636	.0678	-.0265	0.
.0930	0.	0.	0.	0.	0.	0.	0.	.0028	.0288	-.0025	.1653	.0710	-.0155	0.
.0940	0.	0.	0.	0.	0.	0.	0.	.0016	.0278	-.0005	.1574	.0758	-.0068	0.
.0950	0.	0.	0.	0.	0.	0.	0.	.0002	.0266	.0017	.1441	.0805	.0033	0.
.0960	0.	0.	0.	0.	0.	0.	0.	.0006	.0251	.0020	.1297	.0815	.0153	0.
.0970	0.	0.	0.	0.	0.	0.	0.	.0005	.0233	.0033	.1169	.0749	.0264	0.
.0980	0.	0.	0.	0.	0.	0.	0.	.0000	.0213	.0025	.1063	.0598	.0351	0.
.0990	0.	0.	0.	0.	0.	0.	0.	-.0004	.0191	.0006	.0982	.0386	.0432	0.

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

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.23.

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

SECTION	57	MEMBER	4	SEQUENCE	82	LOCATION	DIS	TYPE	VA	VA	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	(PSI)	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)			
.1000	0.	0.	0.	0.	0.	0.	-.0003	.0166	-.0023	.0928	.0137	.0522	0.		
.1010	0.	0.	0.	0.	0.	0.	.0004	.0142	-.0057	.0872	-.0111	.0619	0.		
.1020	0.	0.	0.	0.	0.	0.	.0015	.0120	-.0085	.0763	-.0309	.0716	0.		
.1030	0.	0.	0.	0.	0.	0.	.0031	.0100	-.0101	.0577	-.0436	.0812	0.		
.1040	0.	0.	0.	0.	0.	0.	.0055	.0083	-.0110	.0345	-.0507	.0906	0.		
.1050	0.	0.	0.	0.	0.	0.	.0086	.0071	-.0118	.0104	-.0550	.0995	0.		
.1060	0.	0.	0.	0.	0.	0.	.0123	.0062	-.0129	-.0121	-.0586	.1056	0.		
.1070	0.	0.	0.	0.	0.	0.	.0159	.0059	-.0141	-.0324	-.0633	.1059	0.		
.1080	0.	0.	0.	0.	0.	0.	.0189	.0060	-.0154	-.0507	-.0692	.0982	0.		
.1090	0.	0.	0.	0.	0.	0.	.0217	.0066	-.0166	-.0664	-.0750	.0839	0.		
.1100	0.	0.	0.	0.	0.	0.	.0245	.0076	-.0177	-.0791	-.0789	.0663	0.		
.1110	0.	0.	0.	0.	0.	0.	.0268	.0089	-.0180	-.0917	-.0798	.0434	0.		
.1120	0.	0.	0.	0.	0.	0.	.0285	.0105	-.0173	-.1051	-.0773	.0153	0.		
.1130	0.	0.	0.	0.	0.	0.	.0302	.0122	-.0161	-.1157	-.0728	-.0121	0.		
.1140	0.	0.	0.	0.	0.	0.	.0321	.0138	-.0151	-.1201	-.0692	-.0364	0.		
.1150	0.	0.	0.	0.	0.	0.	.0336	.0152	-.0139	-.1189	-.0678	-.0599	0.		
.1160	0.	0.	0.	0.	0.	0.	.0342	.0165	-.0123	-.1138	-.0675	-.0828	0.		
.1170	0.	0.	0.	0.	0.	0.	.0341	.0175	-.0105	-.1039	-.0671	-.1030	0.		
.1180	0.	0.	0.	0.	0.	0.	.0339	.0183	-.0090	-.0880	-.0661	-.1175	0.		
.1190	0.	0.	0.	0.	0.	0.	.0333	.0188	-.0067	-.0720	-.0598	-.1272	0.		
.1200	0.	0.	0.	0.	0.	0.	.0324	.0192	-.0030	-.0608	-.0444	-.1304	0.		
.1210	0.	0.	0.	0.	0.	0.	.0318	.0195	.0018	-.0525	-.0217	-.1253	0.		
.1220	0.	0.	0.	0.	0.	0.	.0311	.0197	.0071	-.0452	.0038	-.1149	0.		
.1230	0.	0.	0.	0.	0.	0.	.0301	.0200	.0122	-.0369	.0280	-.1013	0.		
.1240	0.	0.	0.	0.	0.	0.	.0285	.0202	.0168	-.0260	.0472	-.0868	0.		
.1250	0.	0.	0.	0.	0.	0.	.0262	.0204	.0198	-.0087	.0561	-.0739	0.		
.1260	0.	0.	0.	0.	0.	0.	.0238	.0208	.0206	.0178	.0527	-.0618	0.		
.1270	0.	0.	0.	0.	0.	0.	.0215	.0214	.0199	.0477	.0432	-.0496	0.		
.1280	0.	0.	0.	0.	0.	0.	.0198	.0223	.0189	.0748	.0342	-.0357	0.		
.1290	0.	0.	0.	0.	0.	0.	.0183	.0237	.0182	.0942	.0288	-.0235	0.		
.1300	0.	0.	0.	0.	0.	0.	.0167	.0256	.0184	.1030	.0284	-.0147	0.		
.1310	0.	0.	0.	0.	0.	0.	.0158	.0278	.0195	.1011	.0344	-.0058	0.		
.1320	0.	0.	0.	0.	0.	0.	.0157	.0303	.0214	.0894	.0451	.0035	0.		
.1330	0.	0.	0.	0.	0.	0.	.0160	.0329	.0228	.0750	.0528	.0114	0.		
.1340	0.	0.	0.	0.	0.	0.	.0166	.0352	.0229	.0639	.0521	.0171	0.		
.1350	0.	0.	0.	0.	0.	0.	.0177	.0372	.0214	.0580	.0438	.0224	0.		
.1360	0.	0.	0.	0.	0.	0.	.0190	.0388	.0187	.0563	.0302	.0270	0.		
.1370	0.	0.	0.	0.	0.	0.	.0197	.0400	.0155	.0563	.0130	.0266	0.		

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

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.23.

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

SECTION 57 MEMBER 4 SEQUENCE 82 LOCATION DIS TYPE VA

.1290	0.	0.	0.	0.	0.	0.	0.	.0183	.0237	.0182	.0942	.0288	-.0235	0.
.1300	0.	0.	0.	0.	0.	0.	0.	.0167	.0256	.0184	.1030	.0284	-.0147	0.
.1310	0.	0.	0.	0.	0.	0.	0.	.0158	.0278	.0195	.1011	.0344	-.0058	0.
.1320	0.	0.	0.	0.	0.	0.	0.	.0157	.0303	.0214	.0894	.0451	.0035	0.
.1330	0.	0.	0.	0.	0.	0.	0.	.0160	.0329	.0228	.0750	.0528	.0114	0.
.1340	0.	0.	0.	0.	0.	0.	0.	.0166	.0352	.0229	.0639	.0521	.0171	0.
.1350	0.	0.	0.	0.	0.	0.	0.	.0177	.0372	.0214	.0580	.0438	.0224	0.
.1360	0.	0.	0.	0.	0.	0.	0.	.0170	.0388	.0187	.0563	.0302	.0270	0.
.1370	0.	0.	0.	0.	0.	0.	0.	.0197	.0400	.0155	.0563	.0130	.0266	0.

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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	57	MEMBER	4	SEQUENCE	82	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1380	0.	0.	0.	0.	0.	0.	.0203	.0406	.0118	.0577	-.0043	.0247	0.		
.1390	0.	0.	0.	0.	0.	0.	.0223	.0408	.0082	.0573	-.0154	.0284	0.		
.1400	0.	0.	0.	0.	0.	0.	.0257	.0406	.0057	.0510	-.0169	.0392	0.		
.1410	0.	0.	0.	0.	0.	0.	.0293	.0400	.0043	.0389	-.0124	.0517	0.		
.1420	0.	0.	0.	0.	0.	0.	.0324	.0391	.0036	.0231	-.0066	.0614	0.		
.1430	0.	0.	0.	0.	0.	0.	.0358	.0380	.0026	.0099	-.0021	.0722	0.		
.1440	0.	0.	0.	0.	0.	0.	.0398	.0366	.0007	.0020	-.0010	.0850	0.		
.1450	0.	0.	0.	0.	0.	0.	.0432	.0350	-.0020	-.0015	-.0054	.0944	0.		
.1460	0.	0.	0.	0.	0.	0.	.0454	.0332	-.0049	-.0022	-.0149	.0978	0.		
.1470	0.	0.	0.	0.	0.	0.	.0471	.0315	-.0076	-.0030	-.0248	.0981	0.		
.1480	0.	0.	0.	0.	0.	0.	.0488	.0297	-.0101	-.0045	-.0318	.0995	0.		
.1490	0.	0.	0.	0.	0.	0.	.0499	.0280	-.0115	-.0104	-.0351	.0983	0.		
.1500	0.	0.	0.	0.	0.	0.	.0495	.0264	-.0113	-.0239	-.0345	.0914	0.		
.1510	0.	0.	0.	0.	0.	0.	.0482	.0247	-.0093	-.0446	-.0290	.0828	0.		
.1520	0.	0.	0.	0.	0.	0.	.0463	.0229	-.0059	-.0696	-.0198	.0747	0.		
.1530	0.	0.	0.	0.	0.	0.	.0431	.0207	-.0023	-.0931	-.0124	.0641	0.		
.1540	0.	0.	0.	0.	0.	0.	.0381	.0181	.0009	-.1108	-.0110	.0478	0.		
.1550	0.	0.	0.	0.	0.	0.	.0317	.0151	.0036	-.1213	-.0144	.0288	0.		
.1560	0.	0.	0.	0.	0.	0.	.0242	.0117	.0061	-.1263	-.0196	.0101	0.		
.1570	0.	0.	0.	0.	0.	0.	.0149	.0080	.0091	-.1290	-.0256	-.0119	0.		
.1580	0.	0.	0.	0.	0.	0.	.0043	.0041	.0122	-.1285	-.0323	-.0364	0.		
.1590	0.	0.	0.	0.	0.	0.	-.0063	.0001	.0153	-.1250	-.0365	-.0570	0.		
.1600	0.	0.	0.	0.	0.	0.	-.0166	-.0037	.0191	-.1231	-.0346	-.0731	0.		
.1610	0.	0.	0.	0.	0.	0.	-.0276	-.0071	.0240	-.1241	-.0287	-.0900	0.		
.1620	0.	0.	0.	0.	0.	0.	-.0389	-.0099	.0290	-.1243	-.0221	-.1079	0.		
.1630	0.	0.	0.	0.	0.	0.	-.0493	-.0122	.0333	-.1201	-.0143	-.1218	0.		
.1640	0.	0.	0.	0.	0.	0.	-.0579	-.0137	.0361	-.1090	-.0054	-.1285	0.		
.1650	0.	0.	0.	0.	0.	0.	-.0653	-.0145	.0374	-.0909	.0019	-.1328	0.		
.1660	0.	0.	0.	0.	0.	0.	-.0722	-.0143	.0376	-.0692	.0076	-.1387	0.		
.1670	0.	0.	0.	0.	0.	0.	-.0775	-.0132	.0366	-.0439	.0131	-.1421	0.		
.1680	0.	0.	0.	0.	0.	0.	-.0804	-.0112	.0342	-.0152	.0191	-.1400	0.		
.1690	0.	0.	0.	0.	0.	0.	-.0814	-.0084	.0305	.0156	.0237	-.1346	0.		
.1700	0.	0.	0.	0.	0.	0.	-.0810	-.0048	.0261	.0457	.0264	-.1288	0.		
.1710	0.	0.	0.	0.	0.	0.	-.0791	-.0008	.0211	.0736	.0284	-.1211	0.		
.1720	0.	0.	0.	0.	0.	0.	-.0750	.0035	.0151	.1016	.0292	-.1079	0.		
.1730	0.	0.	0.	0.	0.	0.	-.0697	.0077	.0084	.1278	.0287	-.0929	0.		
.1740	0.	0.	0.	0.	0.	0.	-.0639	.0117	.0015	.1501	.0270	-.0788	0.		
.1750	0.	0.	0.	0.	0.	0.	-.0577	.0152	-.0054	.1675	.0253	-.0638	0.		

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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 57 MEMBER 4 SEQUENCE 82 LOCATION DIS TYPE VA

.1670	0.	0.	0.	0.	0.	0.	0.	0.	-.0775	-.0132	.0366	-.0439	.0131	-.1421	0.
.1680	0.	0.	0.	0.	0.	0.	0.	0.	-.0804	-.0112	.0342	-.0152	.0191	-.1400	0.
.1690	0.	0.	0.	0.	0.	0.	0.	0.	-.0814	-.0084	.0305	.0156	.0237	-.1346	0.
.1700	0.	0.	0.	0.	0.	0.	0.	0.	-.0810	-.0048	.0261	.0457	.0264	-.1288	0.
.1710	0.	0.	0.	0.	0.	0.	0.	0.	-.0791	-.0008	.0211	.0736	.0284	-.1211	0.
.1720	0.	0.	0.	0.	0.	0.	0.	0.	-.0750	.0035	.0151	.1016	.0292	-.1079	0.
.1730	0.	0.	0.	0.	0.	0.	0.	0.	-.0697	.0077	.0084	.1278	.0287	-.0929	0.
.1740	0.	0.	0.	0.	0.	0.	0.	0.	-.0639	.0117	.0015	.1501	.0270	-.0788	0.
.1750	0.	0.	0.	0.	0.	0.	0.	0.	-.0577	.0152	-.0054	.1675	.0253	-.0638	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.23.

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	57	MEMBER	4	SEQUENCE	82	LOCATION	DIS	TYPE	VA						
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)
.1760	0.	0.	0.	0.	0.	0.	0.	0.	-.0509	.0179	-.0117	.1775	.0255	-.0459	0.
.1770	0.	0.	0.	0.	0.	0.	0.	0.	-.0438	.0196	-.0172	.1794	.0273	-.0249	0.
.1780	0.	0.	0.	0.	0.	0.	0.	0.	-.0370	.0201	-.0216	.1723	.0295	-.0031	0.
.1790	0.	0.	0.	0.	0.	0.	0.	0.	-.0306	.0194	-.0250	.1573	.0313	.0204	0.
.1800	0.	0.	0.	0.	0.	0.	0.	0.	-.0247	.0174	-.0271	.1342	.0337	.0457	0.
.1810	0.	0.	0.	0.	0.	0.	0.	0.	-.0203	.0141	-.0278	.1026	.0358	.0685	0.
.1820	0.	0.	0.	0.	0.	0.	0.	0.	-.0176	.0098	-.0275	.0665	.0355	.0871	0.
.1830	0.	0.	0.	0.	0.	0.	0.	0.	-.0164	.0046	-.0266	.0278	.0332	.1021	0.
.1840	0.	0.	0.	0.	0.	0.	0.	0.	-.0185	-.0014	-.0251	-.0130	.0309	.1149	0.
.1850	0.	0.	0.	0.	0.	0.	0.	0.	-.0180	-.0078	-.0228	-.0553	.0283	.1236	0.
.1860	0.	0.	0.	0.	0.	0.	0.	0.	-.0212	-.0142	-.0200	-.0978	.0244	.1258	0.
.1870	0.	0.	0.	0.	0.	0.	0.	0.	-.0255	-.0204	-.0169	-.1379	.0191	.1237	0.
.1880	0.	0.	0.	0.	0.	0.	0.	0.	-.0302	-.0261	-.0137	-.1748	.0133	.1188	0.
.1890	0.	0.	0.	0.	0.	0.	0.	0.	-.0354	-.0309	-.0107	-.2066	.0061	.1101	0.
.1900	0.	0.	0.	0.	0.	0.	0.	0.	-.0412	-.0347	-.0080	-.2312	-.0035	.0961	0.
.1910	0.	0.	0.	0.	0.	0.	0.	0.	-.0470	-.0374	-.0059	-.2472	-.0141	.0782	0.
.1920	0.	0.	0.	0.	0.	0.	0.	0.	-.0522	-.0387	-.0047	-.2532	-.0239	.0592	0.
.1930	0.	0.	0.	0.	0.	0.	0.	0.	-.0569	-.0388	-.0042	-.2500	-.0316	.0382	0.
.1940	0.	0.	0.	0.	0.	0.	0.	0.	-.0613	-.0375	-.0037	-.2398	-.0361	.0134	0.
.1950	0.	0.	0.	0.	0.	0.	0.	0.	-.0653	-.0351	-.0033	-.2234	-.0366	-.0138	0.
.1960	0.	0.	0.	0.	0.	0.	0.	0.	-.0682	-.0318	-.0030	-.2001	-.0331	-.0399	0.
.1970	0.	0.	0.	0.	0.	0.	0.	0.	-.0699	-.0279	-.0029	-.1697	-.0271	-.0640	0.
.1980	0.	0.	0.	0.	0.	0.	0.	0.	-.0709	-.0237	-.0030	-.1327	-.0208	-.0874	0.
.1990	0.	0.	0.	0.	0.	0.	0.	0.	-.0713	-.0196	-.0034	-.0890	-.0157	-.1096	0.
.2000	0.	0.	0.	0.	0.	0.	0.	0.	-.0709	-.0159	-.0042	-.0387	-.0119	-.1289	0.
.2010	0.	0.	0.	0.	0.	0.	0.	0.	-.0697	-.0128	-.0054	.0168	-.0091	-.1441	0.
.2020	0.	0.	0.	0.	0.	0.	0.	0.	-.0678	-.0107	-.0067	.0743	-.0063	-.1556	0.
.2030	0.	0.	0.	0.	0.	0.	0.	0.	-.0655	-.0095	-.0077	.1294	-.0017	-.1630	0.
.2040	0.	0.	0.	0.	0.	0.	0.	0.	-.0626	-.0094	-.0076	.1774	.0071	-.1649	0.
.2050	0.	0.	0.	0.	0.	0.	0.	0.	-.0592	-.0103	-.0065	.2155	.0200	-.1611	0.
.2060	0.	0.	0.	0.	0.	0.	0.	0.	-.0552	-.0121	-.0044	.2427	.0351	-.1525	0.
.2070	0.	0.	0.	0.	0.	0.	0.	0.	-.0510	-.0149	-.0016	.2587	.0499	-.1398	0.
.2080	0.	0.	0.	0.	0.	0.	0.	0.	-.0466	-.0184	.0017	.2639	.0527	-.1236	0.
.2090	0.	0.	0.	0.	0.	0.	0.	0.	-.0422	-.0224	.0049	.2593	.0713	-.1048	0.
.2100	0.	0.	0.	0.	0.	0.	0.	0.	-.0379	-.0267	.0077	.2467	.0739	-.0855	0.
.2110	0.	0.	0.	0.	0.	0.	0.	0.	-.0339	-.0311	.0098	.2271	.0702	-.0664	0.
.2120	0.	0.	0.	0.	0.	0.	0.	0.	-.0301	-.0353	.0112	.2004	.0619	-.0472	0.
.2130	0.	0.	0.	0.	0.	0.	0.	0.	-.0265	-.0390	.0123	.1654	.0512	-.0283	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.23.

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 57 MEMBER 4 SEQUENCE 82 LOCATION DIS TYPE VA

.2050	0.	0.	0.	0.	0.	0.	0.	-.0592	-.0103	-.0065	.2155	.0200	-.1611	0.
.2060	0.	0.	0.	0.	0.	0.	0.	-.0552	-.0121	-.0044	.2427	.0351	-.1525	0.
.2070	0.	0.	0.	0.	0.	0.	0.	-.0510	-.0149	-.0016	.2587	.0499	-.1398	0.
.2080	0.	0.	0.	0.	0.	0.	0.	-.0466	-.0184	.0017	.2639	.0527	-.1236	0.
.2090	0.	0.	0.	0.	0.	0.	0.	-.0422	-.0224	.0049	.2593	.0713	-.1048	0.
.2100	0.	0.	0.	0.	0.	0.	0.	-.0379	-.0267	.0077	.2467	.0739	-.0855	0.
.2110	0.	0.	0.	0.	0.	0.	0.	-.0339	-.0311	.0098	.2271	.0702	-.0664	0.
.2120	0.	0.	0.	0.	0.	0.	0.	-.0301	-.0353	.0112	.2004	.0519	-.0472	0.
.2130	0.	0.	0.	0.	0.	0.	0.	-.0265	-.0390	.0123	.1654	.0512	-.0283	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.23.

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	57	MEMBER	4	SEQUENCE	82	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2140	0.	0.	0.	0.	0.	0.	-.0232	-.0422	.0133	.1219	.0393	-.0103	0.		
.2150	0.	0.	0.	0.	0.	0.	-.0200	-.0445	.0143	.0708	.0273	.0074	0.		
.2160	0.	0.	0.	0.	0.	0.	-.0167	-.0460	.0152	.0148	.0157	.0260	0.		
.2170	0.	0.	0.	0.	0.	0.	-.0133	-.0467	.0157	-.0431	.0039	.0451	0.		
.2180	0.	0.	0.	0.	0.	0.	-.0102	-.0464	.0157	-.0994	-.0092	.0628	0.		
.2190	0.	0.	0.	0.	0.	0.	-.0075	-.0454	.0151	-.1507	-.0242	.0779	0.		
.2200	0.	0.	0.	0.	0.	0.	-.0051	-.0437	.0136	-.1930	-.0411	.0913	0.		
.2210	0.	0.	0.	0.	0.	0.	-.0027	-.0415	.0110	-.2241	-.0587	.1037	0.		
.2220	0.	0.	0.	0.	0.	0.	-.0002	-.0386	.0079	-.2442	-.0754	.1144	0.		
.2230	0.	0.	0.	0.	0.	0.	.0021	-.0354	.0047	-.2547	-.0891	.1226	0.		
.2240	0.	0.	0.	0.	0.	0.	.0044	-.0317	.0019	-.2568	-.0978	.1284	0.		
.2250	0.	0.	0.	0.	0.	0.	.0070	-.0277	-.0003	-.2508	-.1008	.1322	0.		
.2260	0.	0.	0.	0.	0.	0.	.0099	-.0235	-.0019	-.2368	-.0984	.1334	0.		
.2270	0.	0.	0.	0.	0.	0.	.0129	-.0191	-.0030	-.2146	-.0918	.1309	0.		
.2280	0.	0.	0.	0.	0.	0.	.0160	-.0147	-.0037	-.1841	-.0822	.1242	0.		
.2290	0.	0.	0.	0.	0.	0.	.0192	-.0103	-.0042	-.1450	-.0707	.1132	0.		
.2300	0.	0.	0.	0.	0.	0.	.0225	-.0061	-.0048	-.0978	-.0586	.0975	0.		
.2310	0.	0.	0.	0.	0.	0.	.0256	-.0020	-.0054	-.0446	-.0462	.0768	0.		
.2320	0.	0.	0.	0.	0.	0.	.0284	.0018	-.0056	.0108	-.0326	.0517	0.		
.2330	0.	0.	0.	0.	0.	0.	.0311	.0054	-.0052	.0647	-.0170	.0235	0.		
.2340	0.	0.	0.	0.	0.	0.	.0334	.0086	-.0038	.1140	.0006	-.0065	0.		
.2350	0.	0.	0.	0.	0.	0.	.0355	.0114	-.0016	.1566	.0200	-.0368	0.		
.2360	0.	0.	0.	0.	0.	0.	.0372	.0137	.0013	.1913	.0404	-.0660	0.		
.2370	0.	0.	0.	0.	0.	0.	.0385	.0154	.0049	.2174	.0608	-.0927	0.		
.2380	0.	0.	0.	0.	0.	0.	.0390	.0165	.0087	.2350	.0797	-.1168	0.		
.2390	0.	0.	0.	0.	0.	0.	.0386	.0169	.0127	.2446	.0957	-.1376	0.		
.2400	0.	0.	0.	0.	0.	0.	.0373	.0165	.0163	.2470	.1078	-.1540	0.		
.2410	0.	0.	0.	0.	0.	0.	.0354	.0154	.0196	.2425	.1156	-.1646	0.		
.2420	0.	0.	0.	0.	0.	0.	.0327	.0136	.0224	.2308	.1189	-.1691	0.		
.2430	0.	0.	0.	0.	0.	0.	.0293	.0113	.0250	.2115	.1181	-.1676	0.		
.2440	0.	0.	0.	0.	0.	0.	.0254	.0086	.0272	.1848	.1135	-.1603	0.		
.2450	0.	0.	0.	0.	0.	0.	.0212	.0057	.0291	.1520	.1055	-.1473	0.		
.2460	0.	0.	0.	0.	0.	0.	.0168	.0028	.0303	.1147	.0943	-.1292	0.		
.2470	0.	0.	0.	0.	0.	0.	.0125	-.0001	.0308	.0748	.0803	-.1074	0.		
.2480	0.	0.	0.	0.	0.	0.	.0085	-.0027	.0305	.0342	.0540	-.0828	0.		
.2490	0.	0.	0.	0.	0.	0.	.0049	-.0049	.0293	-.0056	.0462	-.0564	0.		
.2500	0.	0.	0.	0.	0.	0.	.0020	-.0066	.0272	-.0428	.0273	-.0294	0.		
.2510	0.	0.	0.	0.	0.	0.	.0001	-.0076	.0242	-.0762	.0080	-.0028	0.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.23.

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 57 MEMBER 4 SEQUENCE 82 LOCATION DIS TYPE VA

.2420	0.	0.	0.	0.	0.	0.	0.	.0227	.0136	.0224	.2308	.1189	-.1691	0.
.2430	0.	0.	0.	0.	0.	0.	0.	.0293	.0113	.0250	.2115	.1181	-.1676	0.
.2440	0.	0.	0.	0.	0.	0.	0.	.0254	.0086	.0272	.1848	.1135	-.1603	0.
.2450	0.	0.	0.	0.	0.	0.	0.	.0212	.0057	.0291	.1520	.1055	-.1473	0.
.2460	0.	0.	0.	0.	0.	0.	0.	.0168	.0028	.0303	.1147	.0943	-.1292	0.
.2470	0.	0.	0.	0.	0.	0.	0.	.0125	-.0001	.0308	.0748	.0803	-.1074	0.
.2480	0.	0.	0.	0.	0.	0.	0.	.0085	-.0027	.0305	.0342	.0540	-.0828	0.
.2490	0.	0.	0.	0.	0.	0.	0.	.0049	-.0049	.0293	-.0056	.0462	-.0564	0.
.2500	0.	0.	0.	0.	0.	0.	0.	.0020	-.0066	.0272	-.0428	.0273	-.0294	0.
.2510	0.	0.	0.	0.	0.	0.	0.	.0001	-.0076	.0242	-.0762	.0080	-.0028	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.23.

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	57	MEMBER	4	SEQUENCE	82	LOCATION	DIS	TYPE	VA						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)			
.2520	0.	0.	0.	0.	0.	0.	-.0007	-.0079	.0204	-.1049	-.0109	.0229			0.
.2530	0.	0.	0.	0.	0.	0.	.0000	-.0075	.0160	-.1284	-.0285	.0475			0.
.2540	0.	0.	0.	0.	0.	0.	.0021	-.0063	.0113	-.1465	-.0440	.0700			0.
.2550	0.	0.	0.	0.	0.	0.	.0056	-.0044	.0063	-.1588	-.0570	.0893			0.
.2560	0.	0.	0.	0.	0.	0.	.0103	-.0018	.0011	-.1645	-.0571	.1048			0.
.2570	0.	0.	0.	0.	0.	0.	.0162	.0013	-.0042	-.1631	-.0740	.1161			0.
.2580	0.	0.	0.	0.	0.	0.	.0230	.0048	-.0095	-.1550	-.0776	.1227			0.
.2590	0.	0.	0.	0.	0.	0.	.0304	.0085	-.0145	-.1412	-.0778	.1242			0.
.2600	0.	0.	0.	0.	0.	0.	.0381	.0124	-.0191	-.1226	-.0749	.1210			0.
.2610	0.	0.	0.	0.	0.	0.	.0459	.0163	-.0231	-.1002	-.0690	.1139			0.
.2620	0.	0.	0.	0.	0.	0.	.0536	.0200	-.0264	-.0750	-.0609	.1039			0.
.2630	0.	0.	0.	0.	0.	0.	.0610	.0236	-.0289	-.0485	-.0511	.0913			0.
.2640	0.	0.	0.	0.	0.	0.	.0675	.0268	-.0305	-.0223	-.0399	.0763			0.
.2650	0.	0.	0.	0.	0.	0.	.0729	.0296	-.0311	.0027	-.0278	.0600			0.
.2660	0.	0.	0.	0.	0.	0.	.0772	.0320	-.0310	.0264	-.0155	.0435			0.
.2670	0.	0.	0.	0.	0.	0.	.0803	.0340	-.0304	.0484	-.0036	.0277			0.
.2680	0.	0.	0.	0.	0.	0.	.0821	.0357	-.0293	.0678	.0076	.0130			0.
.2690	0.	0.	0.	0.	0.	0.	.0823	.0370	-.0276	.0832	.0177	-.0004			0.
.2700	0.	0.	0.	0.	0.	0.	.0810	.0382	-.0255	.0939	.0263	-.0121			0.
.2710	0.	0.	0.	0.	0.	0.	.0785	.0392	-.0230	.1002	.0329	-.0212			0.
.2720	0.	0.	0.	0.	0.	0.	.0751	.0402	-.0204	.1023	.0372	-.0269			0.
.2730	0.	0.	0.	0.	0.	0.	.0707	.0412	-.0178	.0998	.0392	-.0297			0.
.2740	0.	0.	0.	0.	0.	0.	.0655	.0424	-.0151	.0929	.0390	-.0306			0.
.2750	0.	0.	0.	0.	0.	0.	.0597	.0437	-.0125	.0827	.0363	-.0301			0.
.2760	0.	0.	0.	0.	0.	0.	.0536	.0452	-.0104	.0713	.0313	-.0278			0.
.2770	0.	0.	0.	0.	0.	0.	.0476	.0468	-.0089	.0594	.0244	-.0238			0.
.2780	0.	0.	0.	0.	0.	0.	.0417	.0486	-.0077	.0466	.0165	-.0193			0.
.2790	0.	0.	0.	0.	0.	0.	.0359	.0506	-.0066	.0330	.0083	-.0154			0.
.2800	0.	0.	0.	0.	0.	0.	.0307	.0525	-.0058	.0197	.0000	-.0115			0.
.2810	0.	0.	0.	0.	0.	0.	.0264	.0544	-.0052	.0080	-.0078	-.0072			0.
.2820	0.	0.	0.	0.	0.	0.	.0229	.0560	-.0047	-.0021	-.0145	-.0029			0.
.2830	0.	0.	0.	0.	0.	0.	.0201	.0573	-.0041	-.0109	-.0198	.0002			0.
.2840	0.	0.	0.	0.	0.	0.	.0180	.0582	-.0035	-.0173	-.0238	.0016			0.
.2850	0.	0.	0.	0.	0.	0.	.0168	.0585	-.0031	-.0192	-.0269	.0027			0.
.2860	0.	0.	0.	0.	0.	0.	.0166	.0582	-.0031	-.0158	-.0292	.0045			0.
.2870	0.	0.	0.	0.	0.	0.	.0172	.0572	-.0033	-.0080	-.0303	.0062			0.
.2880	0.	0.	0.	0.	0.	0.	.0182	.0555	-.0035	.0026	-.0302	.0073			0.
.2890	0.	0.	0.	0.	0.	0.	.0198	.0531	-.0037	.0156	-.0289	.0086			0.

ADLPIPE PAGE 2252

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.23.

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 57 MEMBER 4 SEQUENCE 82 LOCATION DIS TYPE VA

.2810	0.	0.	0.	0.	0.	0.	0.	0.	.0264	.0544	-.0052	.0080	-.0078	-.0072	0.
.2820	0.	0.	0.	0.	0.	0.	0.	0.	.0229	.0560	-.0047	-.0021	-.0145	-.0029	0.
.2830	0.	0.	0.	0.	0.	0.	0.	0.	.0201	.0573	-.0041	-.0109	-.0198	-.0002	0.
.2840	0.	0.	0.	0.	0.	0.	0.	0.	.0180	.0582	-.0035	-.0173	-.0238	.0016	0.
.2850	0.	0.	0.	0.	0.	0.	0.	0.	.0168	.0585	-.0031	-.0192	-.0269	.0027	0.
.2860	0.	0.	0.	0.	0.	0.	0.	0.	.0166	.0582	-.0031	-.0158	-.0292	.0045	0.
.2870	0.	0.	0.	0.	0.	0.	0.	0.	.0172	.0572	-.0033	-.0080	-.0303	.0062	0.
.2880	0.	0.	0.	0.	0.	0.	0.	0.	.0182	.0555	-.0035	.0026	-.0302	.0073	0.
.2890	0.	0.	0.	0.	0.	0.	0.	0.	.0198	.0531	-.0037	.0156	-.0289	.0086	0.

ADLPIPE PAGE 2252 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.23.

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	57	MEMBER	4	SEQUENCE	82	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	HX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2900	0.	0.	0.	0.	0.	0.	.0222	.0502	-.0040	.0306	-.0260	.0120	0.		
.2910	0.	0.	0.	0.	0.	0.	.0252	.0469	-.0043	.0462	-.0216	.0174	0.		
.2920	0.	0.	0.	0.	0.	0.	.0284	.0432	-.0046	.0606	-.0161	.0237	0.		
.2930	0.	0.	0.	0.	0.	0.	.0316	.0393	-.0047	.0729	-.0099	.0305	0.		
.2940	0.	0.	0.	0.	0.	0.	.0348	.0354	-.0051	.0833	-.0040	.0380	0.		
.2950	0.	0.	0.	0.	0.	0.	.0379	.0316	-.0060	.0919	.0004	.0463	0.		
.2960	0.	0.	0.	0.	0.	0.	.0406	.0280	-.0074	.0985	.0022	.0541	0.		
.2970	0.	0.	0.	0.	0.	0.	.0427	.0246	-.0091	.1016	.0010	.0607	0.		
.2980	0.	0.	0.	0.	0.	0.	.0439	.0216	-.0110	.1002	-.0030	.0660	0.		
.2990	0.	0.	0.	0.	0.	0.	.0444	.0191	-.0131	.0938	-.0096	.0701	0.		
.3000	0.	0.	0.	0.	0.	0.	.0441	.0168	-.0152	.0823	-.0185	.0730	0.		
.3010	0.	0.	0.	0.	0.	0.	.0428	.0149	-.0172	.0653	-.0288	.0748	0.		
.3020	0.	0.	0.	0.	0.	0.	.0406	.0132	-.0187	.0424	-.0394	.0753	0.		
.3030	0.	0.	0.	0.	0.	0.	.0374	.0116	-.0196	.0142	-.0499	.0743	0.		
.3040	0.	0.	0.	0.	0.	0.	.0330	.0099	-.0199	-.0175	-.0602	.0718	0.		
.3050	0.	0.	0.	0.	0.	0.	.0278	.0081	-.0198	-.0504	-.0705	.0683	0.		
.3060	0.	0.	0.	0.	0.	0.	.0219	.0060	-.0193	-.0833	-.0801	.0642	0.		
.3070	0.	0.	0.	0.	0.	0.	.0151	.0035	-.0180	-.1156	-.0385	.0589	0.		
.3080	0.	0.	0.	0.	0.	0.	.0076	.0006	-.0160	-.1465	-.0751	.0518	0.		
.3090	0.	0.	0.	0.	0.	0.	-.0004	-.0027	-.0132	-.1743	-.0998	.0437	0.		
.3100	0.	0.	0.	0.	0.	0.	-.0085	-.0064	-.0099	-.1973	-.1018	.0357	0.		
.3110	0.	0.	0.	0.	0.	0.	-.0164	-.0104	-.0061	-.2152	-.1004	.0279	0.		
.3120	0.	0.	0.	0.	0.	0.	-.0241	-.0145	-.0017	-.2278	-.0955	.0192	0.		
.3130	0.	0.	0.	0.	0.	0.	-.0315	-.0187	.0030	-.2340	-.0375	.0095	0.		
.3140	0.	0.	0.	0.	0.	0.	-.0382	-.0228	.0077	-.2325	-.0768	-.0001	0.		
.3150	0.	0.	0.	0.	0.	0.	-.0437	-.0265	.0120	-.2226	-.0640	-.0089	0.		
.3160	0.	0.	0.	0.	0.	0.	-.0482	-.0298	.0158	-.2048	-.0497	-.0177	0.		
.3170	0.	0.	0.	0.	0.	0.	-.0516	-.0324	.0191	-.1806	-.0344	-.0268	0.		
.3180	0.	0.	0.	0.	0.	0.	-.0538	-.0342	.0217	-.1508	-.0182	-.0354	0.		
.3190	0.	0.	0.	0.	0.	0.	-.0546	-.0352	.0235	-.1160	-.0016	-.0427	0.		
.3200	0.	0.	0.	0.	0.	0.	-.0539	-.0354	.0244	-.0775	.0147	-.0485	0.		
.3210	0.	0.	0.	0.	0.	0.	-.0521	-.0346	.0244	-.0370	.0302	-.0531	0.		
.3220	0.	0.	0.	0.	0.	0.	-.0494	-.0330	.0236	.0035	.0448	-.0566	0.		
.3230	0.	0.	0.	0.	0.	0.	-.0458	-.0308	.0221	.0426	.0580	-.0585	0.		
.3240	0.	0.	0.	0.	0.	0.	-.0416	-.0281	.0198	.0797	.0589	-.0586	0.		
.3250	0.	0.	0.	0.	0.	0.	-.0370	-.0251	.0167	.1137	.0771	-.0566	0.		
.3260	0.	0.	0.	0.	0.	0.	-.0322	-.0220	.0131	.1426	.0826	-.0525	0.		
.3270	0.	0.	0.	0.	0.	0.	-.0276	-.0191	.0094	.1646	.0357	-.0464	0.		

ADLPIPE PAGE 2253 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.23.

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 57 MEMBER 4 SEQUENCE 82 LOCATION DIS TYPE VA

.3190	0.	0.	0.	0.	0.	0.	0.	0.	-.0546	-.0352	.0235	-.1160	-.0016	-.0427	0.
.3200	0.	0.	0.	0.	0.	0.	0.	0.	-.0539	-.0354	.0244	-.0775	.0147	-.0485	0.
.3210	0.	0.	0.	0.	0.	0.	0.	0.	-.0521	-.0346	.0244	-.0370	.0302	-.0531	0.
.3220	0.	0.	0.	0.	0.	0.	0.	0.	-.0494	-.0330	.0236	.0035	.0448	-.0566	0.
.3230	0.	0.	0.	0.	0.	0.	0.	0.	-.0458	-.0308	.0221	.0426	.0580	-.0585	0.
.3240	0.	0.	0.	0.	0.	0.	0.	0.	-.0416	-.0281	.0198	.0797	.0589	-.0586	0.
.3250	0.	0.	0.	0.	0.	0.	0.	0.	-.0370	-.0251	.0167	.1137	.0771	-.0566	0.
.3260	0.	0.	0.	0.	0.	0.	0.	0.	-.0322	-.0220	.0131	.1426	.0326	-.0525	0.
.3270	0.	0.	0.	0.	0.	0.	0.	0.	-.0276	-.0191	.0094	.1646	.0357	-.0464	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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

CONDITION 24

LOADS  
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ENGLISH UNITS

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

SECTION	57	MEMBER	4	SEQUENCE	82	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3280	0.	0.	0.	0.	0.	0.	-.0234	-.0165	.0057	.1789	.0864	-.0384	0.		
.3290	0.	0.	0.	0.	0.	0.	-.0196	-.0145	.0021	.1854	.0344	-.0285	0.		
.3300	0.	0.	0.	0.	0.	0.	-.0164	-.0132	-.0013	.1842	.0302	-.0163	0.		
.3310	0.	0.	0.	0.	0.	0.	-.0139	-.0128	-.0042	.1748	.0741	-.0025	0.		
.3320	0.	0.	0.	0.	0.	0.	-.0124	-.0133	-.0065	.1573	.0664	.0116	0.		
.3330	0.	0.	0.	0.	0.	0.	-.0119	-.0146	-.0082	.1326	.0572	.0253	0.		
.3340	0.	0.	0.	0.	0.	0.	-.0121	-.0168	-.0093	.1024	.0468	.0389	0.		
.3350	0.	0.	0.	0.	0.	0.	-.0130	-.0197	-.0100	.0680	.0358	.0522	0.		
.3360	0.	0.	0.	0.	0.	0.	-.0144	-.0232	-.0100	.0302	.0246	.0642	0.		
.3370	0.	0.	0.	0.	0.	0.	-.0164	-.0271	-.0094	-.0099	.0137	.0739	0.		
.3380	0.	0.	0.	0.	0.	0.	-.0186	-.0311	-.0084	-.0501	.0034	.0813	0.		
.3390	0.	0.	0.	0.	0.	0.	-.0208	-.0351	-.0072	-.0882	-.0061	.0867	0.		
.3400	0.	0.	0.	0.	0.	0.	-.0227	-.0389	-.0060	-.1223	-.0147	.0897	0.		
.3410	0.	0.	0.	0.	0.	0.	-.0244	-.0422	-.0048	-.1512	-.0222	.0895	0.		
.3420	0.	0.	0.	0.	0.	0.	-.0257	-.0449	-.0038	-.1738	-.0284	.0857	0.		
.3430	0.	0.	0.	0.	0.	0.	-.0265	-.0468	-.0031	-.1887	-.0330	.0792	0.		
.3440	0.	0.	0.	0.	0.	0.	-.0265	-.0479	-.0027	-.1952	-.0360	.0703	0.		
.3450	0.	0.	0.	0.	0.	0.	-.0259	-.0480	-.0028	-.1931	-.0371	.0589	0.		
.3460	0.	0.	0.	0.	0.	0.	-.0246	-.0473	-.0031	-.1831	-.0361	.0454	0.		
.3470	0.	0.	0.	0.	0.	0.	-.0228	-.0457	-.0036	-.1659	-.0329	.0305	0.		
.3480	0.	0.	0.	0.	0.	0.	-.0204	-.0433	-.0044	-.1417	-.0276	.0147	0.		
.3490	0.	0.	0.	0.	0.	0.	-.0177	-.0403	-.0054	-.1112	-.0209	-.0014	0.		
.3500	0.	0.	0.	0.	0.	0.	-.0147	-.0368	-.0066	-.0750	-.0131	-.0172	0.		
.3510	0.	0.	0.	0.	0.	0.	-.0116	-.0331	-.0080	-.0348	-.0045	-.0322	0.		
.3520	0.	0.	0.	0.	0.	0.	-.0085	-.0293	-.0094	.0079	.0046	-.0459	0.		
.3530	0.	0.	0.	0.	0.	0.	-.0057	-.0256	-.0107	.0515	.0139	-.0581	0.		
.3540	0.	0.	0.	0.	0.	0.	-.0031	-.0221	-.0119	.0946	.0229	-.0679	0.		
.3550	0.	0.	0.	0.	0.	0.	-.0007	-.0190	-.0129	.1355	.0318	-.0749	0.		
.3560	0.	0.	0.	0.	0.	0.	.0013	-.0165	-.0136	.1721	.0404	-.0789	0.		
.3570	0.	0.	0.	0.	0.	0.	.0027	-.0144	-.0138	.2028	.0483	-.0807	0.		
.3580	0.	0.	0.	0.	0.	0.	.0037	-.0130	-.0137	.2268	.0551	-.0800	0.		
.3590	0.	0.	0.	0.	0.	0.	.0042	-.0122	-.0134	.2438	.0505	-.0769	0.		
.3600	0.	0.	0.	0.	0.	0.	.0045	-.0119	-.0128	.2535	.0540	-.0714	0.		
.3610	0.	0.	0.	0.	0.	0.	.0044	-.0122	-.0121	.2555	.0555	-.0644	0.		
.3620	0.	0.	0.	0.	0.	0.	.0039	-.0129	-.0112	.2496	.0550	-.0565	0.		
.3630	0.	0.	0.	0.	0.	0.	.0034	-.0139	-.0103	.2363	.0525	-.0476	0.		
.3640	0.	0.	0.	0.	0.	0.	.0028	-.0153	-.0093	.2163	.0585	-.0378	0.		
.3650	0.	0.	0.	0.	0.	0.	.0024	-.0168	-.0083	.1902	.0533	-.0274	0.		

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ADLPIPE STRESS ANALYSIS

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18.29.23.

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

CONDITION 24

LOADS  
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ENGLISH UNITS

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

SECTION 57 MEMBER 4 SEQUENCE 82 LOCATION DIS TYPE VA

.3570	0.	0.	0.	0.	0.	0.	0.	.0027	-.0144	-.0138	.2028	.0483	-.0807	0.
.3580	0.	0.	0.	0.	0.	0.	0.	.0037	-.0130	-.0137	.2262	.0551	-.0800	0.
.3590	0.	0.	0.	0.	0.	0.	0.	.0042	-.0122	-.0134	.2438	.0505	-.0769	0.
.3600	0.	0.	0.	0.	0.	0.	0.	.0045	-.0119	-.0128	.2535	.0540	-.0714	0.
.3610	0.	0.	0.	0.	0.	0.	0.	.0044	-.0122	-.0121	.2555	.0555	-.0644	0.
.3620	0.	0.	0.	0.	0.	0.	0.	.0039	-.0129	-.0112	.2496	.0550	-.0565	0.
.3630	0.	0.	0.	0.	0.	0.	0.	.0034	-.0139	-.0103	.2363	.0525	-.0476	0.
.3640	0.	0.	0.	0.	0.	0.	0.	.0028	-.0153	-.0093	.2163	.0585	-.0378	0.
.3650	0.	0.	0.	0.	0.	0.	0.	.0024	-.0168	-.0083	.1902	.0533	-.0274	0.

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

SECTION	57	MEMBER	4	SEQUENCE	32	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3660	0.	0.	0.	0.	0.	0.	.0021	-.0185	-.0072	.1585	.0473	-.0170	0.		
.3670	0.	0.	0.	0.	0.	0.	.0019	-.0202	-.0061	.1225	.0409	-.0070	0.		
.3680	0.	0.	0.	0.	0.	0.	.0020	-.0220	-.0050	.0838	.0344	-.0027	0.		
.3690	0.	0.	0.	0.	0.	0.	.0024	-.0237	-.0041	.0445	.0277	.0118	0.		
.3700	0.	0.	0.	0.	0.	0.	.0030	-.0254	-.0033	.0064	.0207	.0201	0.		
.3710	0.	0.	0.	0.	0.	0.	.0039	-.0271	-.0028	-.0291	.0137	.0273	0.		
.3720	0.	0.	0.	0.	0.	0.	.0049	-.0288	-.0025	-.0609	.0070	.0334	0.		
.3730	0.	0.	0.	0.	0.	0.	.0061	-.0305	-.0024	-.0878	.0006	.0382	0.		
.3740	0.	0.	0.	0.	0.	0.	.0074	-.0322	-.0024	-.1088	-.0052	.0420	0.		
.3750	0.	0.	0.	0.	0.	0.	.0088	-.0338	-.0026	-.1237	-.0099	.0448	0.		
.3760	0.	0.	0.	0.	0.	0.	.0103	-.0355	-.0028	-.1325	-.0129	.0469	0.		
.3770	0.	0.	0.	0.	0.	0.	.0118	-.0370	-.0030	-.1358	-.0140	.0477	0.		
.3780	0.	0.	0.	0.	0.	0.	.0132	-.0385	-.0030	-.1336	-.0133	.0473	0.		
.3790	0.	0.	0.	0.	0.	0.	.0145	-.0399	-.0030	-.1260	-.0109	.0459	0.		
.3800	0.	0.	0.	0.	0.	0.	.0158	-.0412	-.0030	-.1135	-.0072	.0437	0.		
.3810	0.	0.	0.	0.	0.	0.	.0170	-.0423	-.0030	-.0971	-.0026	.0403	0.		
.3820	0.	0.	0.	0.	0.	0.	.0179	-.0432	-.0030	-.0779	.0024	.0353	0.		
.3830	0.	0.	0.	0.	0.	0.	.0185	-.0439	-.0028	-.0567	.0075	.0290	0.		
.3840	0.	0.	0.	0.	0.	0.	.0189	-.0444	-.0028	-.0345	.0121	.0217	0.		
.3850	0.	0.	0.	0.	0.	0.	.0190	-.0447	-.0026	-.0124	.0161	.0136	0.		
.3860	0.	0.	0.	0.	0.	0.	.0189	-.0447	-.0024	.0081	.0195	.0047	0.		
.3870	0.	0.	0.	0.	0.	0.	.0183	-.0447	-.0019	.0256	.0223	-.0049	0.		
.3880	0.	0.	0.	0.	0.	0.	.0174	-.0445	-.0013	.0394	.0242	-.0146	0.		
.3890	0.	0.	0.	0.	0.	0.	.0162	-.0443	-.0004	.0494	.0253	-.0238	0.		
.3900	0.	0.	0.	0.	0.	0.	.0146	-.0443	.0006	.0553	.0252	-.0318	0.		
.3910	0.	0.	0.	0.	0.	0.	.0127	-.0443	.0019	.0567	.0240	-.0384	0.		
.3920	0.	0.	0.	0.	0.	0.	.0105	-.0446	.0034	.0533	.0217	-.0434	0.		
.3930	0.	0.	0.	0.	0.	0.	.0078	-.0451	.0052	.0454	.0184	-.0464	0.		
.3940	0.	0.	0.	0.	0.	0.	.0050	-.0460	.0072	.0339	.0139	-.0469	0.		
.3950	0.	0.	0.	0.	0.	0.	.0019	-.0472	.0092	.0193	.0086	-.0447	0.		
.3960	0.	0.	0.	0.	0.	0.	-.0013	-.0488	.0115	.0019	.0028	-.0400	0.		
.3970	0.	0.	0.	0.	0.	0.	-.0047	-.0506	.0140	-.0180	-.0030	-.0332	0.		
.3980	0.	0.	0.	0.	0.	0.	-.0082	-.0526	.0167	-.0396	-.0086	-.0248	0.		
.3990	0.	0.	0.	0.	0.	0.	-.0116	-.0546	.0193	-.0611	-.0142	-.0146	0.		
.4000	0.	0.	0.	0.	0.	0.	-.0147	-.0567	.0217	-.0817	-.0196	-.0028	0.		

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

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



.3960	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.3970	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.7950	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.3990	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.4000	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

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

MAXIMUM VALUE OF DISCONTINUITY FORCE 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)	FORCE (LB)
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
57	4	82					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.	-0.0000	.0000	.0000	-0.0000	-0.0000	-0.0000	0.
							.0020	-0.	-0.	0.	0.	-0.	-0.	-0.0000	.0000	.0000	-0.0000	.0000	-0.0000	0.
							.0030	-0.	-0.	0.	0.	-0.	-0.	.0000	-0.0000	.0000	-0.0000	.0000	.0000	0.
							.0040	-0.	-0.	-0.	0.	-0.	-0.	.0000	-0.0000	.0000	-0.0000	.0000	.0000	0.
							.0050	1.	0.	-1.	-0.	-0.	-0.	-0.0000	-0.0000	.0000	-0.0000	.0000	.0000	2.
							.0060	4.	2.	-3.	-1.	0.	-2.	-0.0000	-0.0000	.0000	-0.0001	.0001	-0.0000	6.
							.0070	9.	4.	-6.	-3.	1.	-5.	-0.0000	-0.0000	.0000	-0.0002	.0001	-0.0002	18.
							.0080	16.	8.	-11.	-7.	3.	-9.	-0.0001	-0.0000	.0001	-0.0003	.0000	-0.0004	37.
							.0090	28.	12.	-17.	-12.	6.	-15.	-0.0002	-0.0000	.0001	-0.0003	-0.0002	-0.0008	61.
							.0100	51.	20.	-28.	-19.	11.	-23.	-0.0004	-0.0000	.0002	-0.0004	-0.0005	-0.0013	98.
							.0110	92.	36.	-48.	-33.	20.	-40.	-0.0007	-0.0001	.0003	-0.0005	-0.0010	-0.0023	169.
							.0120	154.	63.	-76.	-55.	34.	-70.	-0.0012	-0.0001	.0004	-0.0009	-0.0017	-0.0039	290.
							.0130	230.	96.	-109.	-85.	52.	-110.	-0.0020	-0.0002	.0007	-0.0012	-0.0028	-0.0063	451.
							.0140	305.	127.	-139.	-115.	74.	-148.	-0.0030	-0.0003	.0009	-0.0012	-0.0042	-0.0091	614.
							.0150	362.	145.	-156.	-138.	100.	-171.	-0.0041	-0.0005	.0011	-0.0006	-0.0061	-0.0118	735.
							.0160	386.	143.	-154.	-145.	126.	-169.	-0.0052	-0.0007	.0011	.0007	-0.0081	-0.0136	779.
							.0170	365.	119.	-127.	-134.	149.	-136.	-0.0061	-0.0011	.0011	.0029	-0.0101	-0.0142	737.
							.0180	286.	71.	-71.	-101.	155.	-70.	-0.0069	-0.0014	.0009	.0058	-0.0118	-0.0131	626.
							.0190	147.	-1.	13.	-44.	168.	27.	-0.0074	-0.0018	.0006	.0093	-0.0127	-0.0102	535.
							.0200	-46.	-91.	120.	30.	152.	144.	-0.0075	-0.0021	.0003	.0127	-0.0126	-0.0056	645.
							.0210	-263.	-183.	231.	113.	116.	264.	-0.0072	-0.0024	-0.0001	.0155	-0.0108	.0004	943.
							.0220	-440.	-256.	313.	189.	63.	367.	-0.0066	-0.0024	-0.0004	.0171	-0.0075	.0071	1271.
							.0230	-568.	-292.	359.	240.	-2.	421.	-0.0059	-0.0023	-0.0005	.0168	-0.0027	.0132	1475.
							.0240	-677.	-298.	388.	265.	-72.	422.	-0.0052	-0.0020	-0.0005	.0149	.0026	.0175	1531.
							.0250	-826.	-316.	435.	291.	-142.	420.	-0.0042	-0.0016	-0.0009	.0137	.0069	.0211	1613.
							.0260	-995.	-373.	502.	344.	-203.	475.	-0.0022	-0.0009	-0.0021	.0156	.0088	.0261	1889.
							.0270	-1036.	-414.	512.	394.	-243.	551.	.0005	-0.0002	-0.0039	.0192	.0085	.0322	2188.
							.0280	-939.	-360.	455.	368.	-254.	509.	.0028	.0008	-0.0052	.0197	.0075	.0345	2062.
							.0290	-862.	-251.	411.	284.	-250.	354.	.0045	.0019	-0.0063	.0176	.0053	.0315	1576.
							.0300	-776.	-202.	372.	248.	-254.	286.	.0072	.0032	-0.0083	.0192	.0010	.0303	1385.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.23.

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

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

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

.0200	-46.	-91.	120.	30.	152.	144.	-0.075	-0.0021	.0003	.0127	-.0126	-.0056	645.
.0210	-263.	-133.	231.	113.	110.	264.	-0.072	-0.0024	-.0001	.0155	-.0108	.0004	943.
.0220	-440.	-256.	313.	189.	63.	367.	-0.066	-0.0024	-.0004	.0171	-.0075	.0071	1271.
.0230	-565.	-292.	359.	240.	-2.	421.	-0.059	-0.0023	-.0005	.0168	-.0077	.0132	1475.
.0240	-677.	-298.	388.	265.	-72.	422.	-0.052	-0.0020	-.0005	.0149	.0026	.0175	1531.
.0250	-826.	-316.	435.	291.	-142.	420.	-0.042	-0.0016	-.0009	.0137	.0069	.0211	1613.
.0260	-995.	-373.	502.	344.	-203.	475.	-0.022	-0.0009	-.0021	.0156	.0088	.0261	1889.
.0270	-1036.	-414.	512.	394.	-243.	551.	.0005	-0.0002	-.0039	.0192	.0085	.0322	2188.
.0280	-939.	-360.	455.	368.	-254.	509.	.0028	.0008	-.0052	.0197	.0075	.0345	2062.
.0290	-862.	-251.	411.	284.	-250.	354.	.0045	.0019	-.0063	.0176	.0053	.0315	1576.
.0300	-776.	-202.	372.	247.	-254.	286.	.0072	.0032	-.0083	.0192	.0010	.0303	1385.

ADLPIPE PAGE 2256

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

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.23.

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.0310	-565.	-172.	260.	235.	-268.	267.	.0107	.0044	-.0104	.0203	-.0019	.0313	1356.	
.0320	-212.	-5.	53.	110.	-283.	46.	.0129	.0058	-.0105	.0115	.0001	.0263	934.	
.0330	236.	301.	-216.	-132.	-298.	-387.	.0134	.0070	-.0088	-.0062	.0059	.0140	1537.	
.0340	667.	558.	-486.	-341.	-327.	-757.	.0139	.0080	-.0068	-.0238	.0129	.0027	2714.	
.0350	947.	655.	-604.	-439.	-364.	-921.	.0151	.0085	-.0056	-.0364	.0189	-.0042	3294.	
.0360	1100.	680.	-790.	-496.	-361.	-991.	.0157	.0085	-.0046	-.0448	.0212	-.0109	3545.	
.0370	1207.	736.	-877.	-577.	-283.	-1065.	.0150	.0080	-.0034	-.0510	.0188	-.0197	3783.	
.0380	1574.	785.	-961.	-652.	-136.	-1090.	.0131	.0069	-.0020	-.0545	.0129	-.0287	3885.	
.0390	1627.	704.	-912.	-646.	37.	-973.	.0108	.0053	-.0012	-.0523	.0037	-.0363	3555.	
.0400	1316.	435.	-655.	-510.	191.	-657.	.0088	.0034	-.0017	-.0418	-.0084	-.0405	2596.	
.0410	972.	91.	-389.	-287.	307.	-209.	.0074	.0012	-.0023	-.0284	-.0177	-.0382	1428.	
.0420	845.	-103.	-289.	-143.	380.	75.	.0051	-.0007	-.0005	-.0257	-.0163	-.0351	1255.	
.0430	805.	-78.	-285.	-155.	400.	38.	.0008	-.0024	-.0041	-.0363	-.0052	-.0382	1309.	
.0440	598.	-49.	-219.	-169.	345.	-49.	-.0037	-.0038	.0090	-.0475	.0093	-.0418	1180.	
.0450	223.	-212.	-92.	-28.	228.	118.	-.0061	-.0050	.0120	-.0498	.0238	-.0364	785.	
.0460	-123.	-430.	22.	165.	123.	384.	-.0077	-.0061	.0139	-.0464	.0356	-.0271	1325.	
.0470	-297.	-451.	103.	208.	113.	406.	-.0111	-.0067	.0160	-.0424	.0404	-.0263	1430.	
.0480	-303.	-327.	160.	147.	197.	269.	-.0156	-.0071	.0173	-.0348	.0367	-.0317	1107.	
.0490	-298.	-310.	229.	102.	309.	318.	-.0185	-.0073	.0165	-.0167	.0270	-.0316	1458.	
.0500	-428.	-456.	371.	325.	399.	553.	-.0197	-.0073	.0134	.0108	.0135	-.0264	2298.	
.0510	-567.	-510.	520.	400.	461.	653.	-.0211	-.0070	.0104	.0366	.0002	-.0249	2712.	
.0520	-475.	-338.	506.	322.	486.	459.	-.0234	-.0064	.0096	.0495	-.0050	-.0278	2258.	
.0530	-206.	-51.	370.	175.	447.	122.	-.0254	-.0056	.0108	.0499	.0006	-.0292	1508.	
.0540	-58.	170.	179.	76.	334.	-145.	-.0261	-.0048	.0120	.0478	.0108	-.0261	1131.	
.0550	-113.	267.	133.	57.	174.	-272.	-.0254	-.0043	.0123	.0485	.0200	-.0188	997.	
.0560	-164.	332.	82.	76.	28.	-346.	-.0244	-.0042	.0125	.0481	.0283	-.0098	1070.	
.0570	-76.	459.	-16.	-4.	-45.	-476.	-.0242	-.0045	.0132	.0446	.0333	-.0037	1454.	
.0580	25.	591.	-53.	-92.	-34.	-598.	-.0249	-.0054	.0131	.0446	.0296	-.0014	1843.	
.0590	-50.	559.	53.	-82.	25.	-505.	-.0248	-.0069	.0112	.0529	.0175	.0033	1557.	
.0600	-309.	314.	254.	75.	85.	-136.	-.0231	-.0089	.0079	.0662	.0035	.0149	538.	
.0610	-604.	31.	461.	256.	128.	281.	-.0209	-.0112	.0048	.0759	-.0078	.0286	1221.	
.0620	-790.	-108.	590.	329.	139.	510.	-.0195	-.0134	.0036	.0744	-.0133	.0386	1895.	
.0630	-882.	-135.	615.	320.	84.	578.	-.0184	-.0155	.0044	.0600	-.0101	.0465	2025.	
.0640	-1018.	-195.	595.	332.	-57.	656.	-.0163	-.0174	.0060	.0381	.0007	.0568	2244.	
.0650	-1249.	-328.	599.	363.	-257.	776.	-.0132	-.0190	.0072	.0150	.0129	.0681	2794.	
.0660	-1437.	-445.	595.	399.	-435.	902.	-.0103	-.0202	.0082	-.0083	.0220	.0758	3279.	
.0670	-1431.	-475.	520.	338.	-539.	912.	-.0080	-.0210	.0089	-.0317	.0258	.0779	3383.	
.0680	-1252.	-458.	410.	270.	-544.	889.	-.0061	-.0214	.0085	-.0494	.0207	.0750	3251.	

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

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.23.

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

SECTION 57 MEMBER 4 SEQUENCE 82 LOCATION END TYPE VA

.0610	-704.	31.	481.	256.	128.	281.	-0.009	-0.0112	.0048	.0759	-0.0078	.0286	1221.
.0620	-790.	-108.	590.	329.	139.	510.	-0.005	-0.0134	.0036	.0744	-0.0133	.0386	1895.
.0630	-882.	-175.	615.	310.	14.	578.	-0.0124	-0.0155	.0044	.0600	-0.0101	.0465	2025.
.0640	-1018.	-191.	595.	331.	-17.	656.	-0.0103	-0.0174	.0060	.0381	.0007	.0568	2244.
.0650	-1249.	-307.	590.	307.	-257.	796.	-0.0132	-0.0190	.0072	.0150	.0129	.0681	2794.
.0660	-1437.	-445.	595.	399.	-435.	902.	-0.0103	-0.0202	.0082	-0.0083	.0220	.0758	3279.
.0670	-1431.	-475.	520.	378.	-539.	912.	-0.0080	-0.0210	.0089	-0.0317	.0258	.0779	3383.
.0680	-1252.	-458.	410.	230.	-544.	889.	-0.0061	-0.0214	.0085	-0.0494	.0207	.0750	3251.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.23.

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	57	MEMBER	4	SEQUENCE	82	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	PZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0690	-1035.	-480.	346.	159.	-468.	927.	-0.0041	-0.0212	.0059	-0.0559	.0046	.0684	3195.		
.0700	-855.	-558.	338.	110.	-351.	1019.	-0.0020	-0.0205	.0015	-0.0537	-0.0183	.0588	3296.		
.0710	-656.	-622.	315.	49.	-234.	1084.	.0001	-0.0191	-0.0030	-0.0507	-0.0404	.0462	3318.		
.0720	-336.	-587.	199.	-64.	-153.	972.	.0019	-0.0169	-0.0064	-0.0530	-0.0558	.0316	3001.		
.0730	86.	-443.	-21.	-232.	-142.	726.	.0036	-0.0139	-0.0079	-0.0633	-0.0610	.0161	2359.		
.0740	458.	-257.	-281.	-414.	-219.	386.	.0054	-0.0104	-0.0078	-0.0801	-0.0554	.0010	1846.		
.0750	678.	-102.	-504.	-556.	-370.	49.	.0076	-0.0063	-0.0071	-0.0976	-0.0429	-0.0121	2036.		
.0760	808.	11.	-686.	-640.	-537.	-230.	.0102	-0.0020	-0.0065	-0.1105	-0.0285	-0.0226	2635.		
.0770	961.	124.	-852.	-705.	-648.	-483.	.0123	.0023	-0.0060	-0.1175	-0.0157	-0.0328	3263.		
.0780	1141.	248.	-973.	-771.	-658.	-726.	.0133	.0065	-0.0061	-0.1164	-0.0085	-0.0455	3792.		
.0790	1275.	316.	-993.	-790.	-562.	-872.	.0126	.0104	-0.0075	-0.1024	-0.0098	-0.0593	3966.		
.0800	1328.	276.	-914.	-717.	-392.	-854.	.0137	.0140	-0.0104	-0.0752	-0.0176	-0.0714	3595.		
.0810	1322.	187.	-787.	-597.	-188.	-767.	.0134	.0173	-0.0135	-0.0420	-0.0265	-0.0823	3011.		
.0820	1301.	155.	-656.	-510.	14.	-756.	.0120	.0203	-0.0155	-0.0107	-0.0318	-0.0941	2776.		
.0830	1294.	198.	-560.	-454.	176.	-826.	.0102	.0230	-0.0159	.0152	-0.0298	-0.1039	2918.		
.0840	1258.	244.	-504.	-371.	265.	-879.	.0089	.0254	-0.0146	.0351	-0.0181	-0.1068	3013.		
.0850	1094.	243.	-435.	-241.	281.	-876.	.0083	.0274	-0.0123	.0502	.0013	-0.1030	2893.		
.0860	793.	209.	-306.	-88.	259.	-835.	.0079	.0290	-0.0096	.0637	.0227	-0.0956	2674.		
.0870	474.	165.	-154.	73.	246.	-759.	.0074	.0302	-0.0071	.0780	.0422	-0.0857	2436.		
.0880	228.	122.	-18.	233.	274.	-647.	.0069	.0309	-0.0049	.0932	.0578	-0.0740	2252.		
.0890	19.	77.	134.	381.	356.	-513.	.0060	.0311	-0.0035	.1105	.0670	-0.0626	2225.		
.0900	-202.	10.	331.	523.	472.	-341.	.0049	.0309	-0.0033	.1309	.0689	-0.0519	2382.		
.0910	-395.	-83.	515.	669.	586.	-125.	.0043	.0304	-0.0038	.1508	.0675	-0.0397	2731.		
.0920	-488.	-137.	613.	773.	666.	49.	.0038	.0296	-0.0037	.1636	.0678	-0.0265	3107.		
.0930	-477.	-84.	614.	776.	695.	76.	.0028	.0288	-0.0025	.1653	.0710	-0.0155	3176.		
.0940	-413.	51.	550.	690.	664.	-18.	.0016	.0278	-0.0005	.1574	.0758	-0.0068	2915.		
.0950	-352.	171.	451.	590.	584.	-100.	.0008	.0266	.0017	.1441	.0805	.0033	2543.		
.0960	-315.	235.	355.	509.	488.	-104.	.0006	.0251	.0030	.1297	.0815	.0153	2169.		
.0970	-274.	276.	286.	420.	426.	-66.	.0005	.0233	.0033	.1169	.0749	.0264	1831.		
.0980	-199.	315.	241.	311.	417.	-9.	.0000	.0213	.0025	.1063	.0598	.0351	1583.		
.0990	-128.	313.	223.	215.	445.	109.	-0.0004	.0191	.0006	.0982	.0386	.0432	1541.		
.1000	-143.	236.	257.	164.	471.	319.	-0.0003	.0166	-0.0023	.0928	.0137	.0522	1802.		
.1010	-268.	107.	335.	146.	456.	578.	.0004	.0142	-0.0057	.0872	-0.0111	.0619	2285.		
.1020	-447.	-19.	400.	123.	378.	807.	.0015	.0120	-0.0085	.0763	-0.0309	.0716	2736.		
.1030	-635.	-107.	420.	80.	229.	965.	.0031	.0100	-0.0101	.0577	-0.0436	.0812	3027.		
.1040	-848.	-182.	418.	37.	21.	1079.	.0055	.0083	-0.0110	.0345	-0.0507	.0906	3283.		
.1050	-1098.	-281.	421.	19.	-225.	1194.	.0086	.0071	-0.0118	.0104	-0.0550	.0995	3696.		
.1060	-1332.	-395.	421.	18.	-472.	1300.	.0123	.0062	-0.0129	-0.0121	-0.0586	.1056	4207.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.24.

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	57	MEMBER	4	SEQUENCE	82	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	PZ	STRESS		

.0980	-199.	315.	241.	311.	417.	-9.	.0000	.0213	.0025	.1063	.0598	.0351	1583.
.0990	-128.	311.	223.	215.	445.	109.	-.0004	.0191	.0006	.0952	.0386	.0432	1541.
.1000	-147.	236.	257.	164.	471.	319.	-.0003	.0166	-.0023	.0928	.0137	.0522	1802.
.1010	-261.	107.	225.	146.	436.	378.	.0004	.0142	-.0007	.0872	-.0111	.0619	2285.
.1020	-447.	-19.	400.	127.	777.	807.	.0115	.0110	-.0085	.0763	-.0309	.0716	2736.
.1030	-635.	-107.	426.	80.	229.	955.	.0031	.0100	-.0101	.0577	-.0436	.0812	3027.
.1040	-848.	-182.	418.	27.	21.	1079.	.0055	.0083	-.0110	.0345	-.0507	.0906	3283.
.1050	-1098.	-281.	421.	19.	-225.	1194.	.0086	.0071	-.0118	.0104	-.0550	.0995	3696.
.1060	-1332.	-395.	421.	18.	-472.	1300.	.0123	.0062	-.0129	-.0121	-.0586	.1056	4207.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.24.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK  
2 SAFETY COLD FRW24F--2 PSV

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

SECTION	57	MEMBER	4	SEQUENCE	32	LOCATION	END	TYPE	VA							
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS			
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)			
.1070	-1480.	-471.	391.	-5.	-684.	1332.	.0159	.0059	-.0141	-.0324	-.0533	.1059	4553.			
.1080	-1450.	-473.	311.	-76.	-843.	1241.	.0189	.0060	-.0154	-.0507	-.0592	.0982	4569.			
.1090	-1324.	-429.	219.	-175.	-960.	1061.	.0217	.0066	-.0166	-.0664	-.0750	.0839	4384.			
.1100	-1025.	-353.	34.	-279.	-1049.	850.	.0245	.0076	-.0177	-.0791	-.0789	.0663	4194.			
.1110	-660.	-219.	-185.	-420.	-1120.	535.	.0268	.0089	-.0180	-.0917	-.0798	.0434	3985.			
.1120	-309.	-39.	-400.	-594.	-1172.	118.	.0285	.0105	-.0173	-.1051	-.0773	.0153	4012.			
.1130	54.	116.	-619.	-740.	-1199.	-261.	.0302	.0122	-.0161	-.1157	-.0728	-.0121	4360.			
.1140	428.	226.	-817.	-832.	-1185.	-539.	.0321	.0138	-.0151	-.1201	-.0592	-.0364	4699.			
.1150	779.	329.	-962.	-900.	-1107.	-780.	.0336	.0152	-.0139	-.1189	-.0678	-.0599	4946.			
.1160	1103.	427.	-1058.	-951.	-964.	-999.	.0342	.0165	-.0123	-.1138	-.0575	-.0828	5117.			
.1170	1350.	469.	-1090.	-949.	-779.	-1131.	.0341	.0175	-.0105	-.1039	-.0671	-.1030	5078.			
.1180	1496.	438.	-1047.	-868.	-583.	-1134.	.0339	.0183	-.0090	-.0880	-.0661	-.1175	4692.			
.1190	1469.	372.	-926.	-739.	-405.	-1092.	.0333	.0188	-.0067	-.0720	-.0598	-.1272	4196.			
.1200	1314.	292.	-786.	-575.	-272.	-1030.	.0324	.0192	-.0030	-.0608	-.0444	-.1304	3682.			
.1210	1101.	187.	-655.	-373.	-192.	-897.	.0318	.0195	.0018	-.0525	-.0217	-.1253	3013.			
.1220	773.	75.	-486.	-160.	-155.	-733.	.0311	.0197	.0071	-.0452	.0038	-.1149	2330.			
.1230	395.	-30.	-295.	52.	-126.	-551.	.0301	.0200	.0122	-.0369	.0280	-.1013	1727.			
.1240	24.	-131.	-96.	254.	-60.	-358.	.0285	.0202	.0168	-.0260	.0472	-.0868	1347.			
.1250	-318.	-246.	141.	440.	77.	-131.	.0262	.0204	.0198	-.0087	.0561	-.0739	1414.			
.1260	-604.	-381.	421.	620.	289.	157.	.0238	.0208	.0206	.0178	.0527	-.0618	2135.			
.1270	-953.	-521.	706.	796.	543.	461.	.0215	.0214	.0199	.0477	.0432	-.0496	3251.			
.1280	-981.	-632.	905.	955.	784.	741.	.0198	.0223	.0189	.0748	.0342	-.0357	4381.			
.1290	-1009.	-656.	1009.	1032.	958.	838.	.0183	.0237	.0182	.0942	.0288	-.0235	5064.			
.1300	-911.	-562.	1030.	1000.	1032.	842.	.0167	.0256	.0184	.1030	.0284	-.0147	5066.			
.1310	-855.	-384.	926.	905.	1001.	668.	.0158	.0278	.0195	.1011	.0344	-.0058	4582.			
.1320	-675.	-173.	730.	774.	901.	418.	.0157	.0303	.0214	.0894	.0451	.0035	3830.			
.1330	-460.	31.	519.	616.	768.	155.	.0160	.0329	.0228	.0750	.0528	.0114	3079.			
.1340	-233.	206.	349.	449.	711.	-71.	.0166	.0352	.0229	.0639	.0521	.0171	2569.			
.1350	41.	336.	192.	310.	691.	-220.	.0177	.0372	.0214	.0580	.0438	.0224	2400.			
.1360	381.	436.	27.	197.	722.	-313.	.0190	.0388	.0187	.0563	.0302	.0270	2466.			
.1370	645.	528.	-76.	65.	773.	-432.	.0197	.0400	.0155	.0563	.0130	.0266	2700.			
.1380	772.	576.	-102.	-53.	800.	-525.	.0203	.0406	.0118	.0577	-.0043	.0247	2914.			
.1390	762.	538.	-102.	-90.	761.	-510.	.0223	.0408	.0082	.0573	-.0154	.0284	2800.			
.1400	673.	450.	-127.	-62.	646.	-423.	.0257	.0406	.0057	.0510	-.0169	.0392	2357.			
.1410	567.	398.	-174.	-51.	476.	-377.	.0293	.0400	.0043	.0389	-.0124	.0517	1854.			
.1420	389.	399.	-190.	-88.	277.	-420.	.0324	.0391	.0036	.0231	-.0066	.0614	1553.			
.1430	164.	371.	-179.	-89.	74.	-417.	.0358	.0380	.0026	.0099	-.0021	.0722	1316.			
.1440	-64.	277.	-150.	-25.	-99.	-308.	.0398	.0366	.0007	.0020	-.0010	.0850	987.			

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18.29.24.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK  
2 SAFETY COLD FRW24F--2 PSV

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

SECTION 57 MEMBER 4 SEQUENCE 32 LOCATION END TYPE VA

.1350	41.	310.	17.	31.	691.	-220.	.177	.0374	.0214	.0580	.0438	.0224	2400.
.1360	381.	436.	27.	197.	722.	-313.	.150	.0381	.0187	.0563	.0302	.0270	2466.
.1370	545.	528.	-76.	45.	773.	-432.	.137	.0400	.0155	.0562	.0130	.0266	2700.
.1380	772.	576.	-102.	-53.	800.	-525.	.0203	.0406	.0118	.0577	-.0043	.0247	2914.
.1390	762.	530.	-102.	-91.	761.	-510.	.0223	.0408	.0082	.0573	-.0154	.0284	2800.
.1400	677.	450.	-127.	-41.	646.	-427.	.0257	.0406	.0057	.0510	-.0169	.0392	2357.
.1410	567.	392.	-174.	-51.	476.	-377.	.0293	.0400	.0043	.0389	-.0124	.0517	1854.
.1420	389.	329.	-190.	-88.	277.	-420.	.0324	.0391	.0036	.0231	-.0066	.0614	1553.
.1430	164.	371.	-179.	-89.	74.	-417.	.0358	.0380	.0026	.0099	-.0021	.0722	1316.
.1440	-64.	277.	-150.	-25.	-99.	-308.	.0398	.0366	.0007	.0020	-.0010	.0850	987.

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S/RV PIPING KILWAUNEE 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	57	MEMBER	4	SEQUENCE	82	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	PX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1450	-227.	185.	-105.	29.	-207.	-191.	.0432	.0350	-.0020	-.0015	-.0054	.0944	859.		
.1460	-264.	157.	-68.	22.	-247.	-142.	.0454	.0332	-.0049	-.0022	-.0149	.0978	860.		
.1470	-222.	169.	-60.	-7.	-245.	-141.	.0471	.0315	-.0076	-.0030	-.0248	.0981	863.		
.1480	-110.	177.	-110.	-8.	-263.	-119.	.0488	.0297	-.0101	-.0045	-.0318	.0995	878.		
.1490	31.	222.	-197.	-36.	-315.	-160.	.0499	.0280	-.0115	-.0104	-.0351	.0983	1081.		
.1500	204.	359.	-318.	-153.	-400.	-352.	.0495	.0264	-.0113	-.0239	-.0345	.0914	1687.		
.1510	482.	554.	-515.	-306.	-505.	-614.	.0482	.0247	-.0093	-.0446	-.0290	.0828	2591.		
.1520	811.	728.	-760.	-437.	-610.	-847.	.0463	.0229	-.0059	-.0696	-.0198	.0747	3442.		
.1530	1098.	936.	-960.	-540.	-684.	-1010.	.0431	.0207	-.0023	-.0931	-.0124	.0641	4059.		
.1540	1258.	873.	-1037.	-626.	-699.	-1115.	.0381	.0181	.0009	-.1108	-.0110	.0478	4433.		
.1550	1359.	637.	-1038.	-662.	-642.	-1122.	.0317	.0151	.0036	-.1213	-.0144	.0288	4418.		
.1560	1506.	745.	-1037.	-637.	-515.	-1017.	.0242	.0117	.0061	-.1263	-.0196	.0101	3974.		
.1570	1587.	626.	-979.	-604.	-339.	-894.	.0149	.0080	.0091	-.1290	-.0256	-.0119	3441.		
.1580	1511.	448.	-816.	-549.	-147.	-725.	.0043	.0041	.0122	-.1285	-.0323	-.0364	2803.		
.1590	1301.	160.	-596.	-408.	19.	-423.	-.0063	.0001	.0153	-.1250	-.0365	-.0570	1788.		
.1600	1010.	-185.	-379.	-206.	143.	-58.	-.0166	-.0037	.0191	-.1231	-.0346	-.0731	784.		
.1610	684.	-478.	-166.	-40.	239.	215.	-.0276	-.0071	.0240	-.1241	-.0287	-.0900	986.		
.1620	353.	-702.	57.	83.	318.	398.	-.0389	-.0099	.0290	-.1243	-.0221	-.1079	1570.		
.1630	-32.	-938.	296.	239.	389.	601.	-.0493	-.0122	.0333	-.1201	-.0143	-.1218	2282.		
.1640	-446.	-1222.	536.	470.	432.	891.	-.0579	-.0137	.0361	-.1090	-.0054	-.1285	3334.		
.1650	-842.	-1475.	777.	702.	390.	1160.	-.0653	-.0145	.0374	-.0909	.0019	-.1328	4384.		
.1660	-1207.	-1624.	1014.	860.	558.	1286.	-.0722	-.0143	.0376	-.0692	.0076	-.1387	5003.		
.1670	-1479.	-1591.	1192.	982.	616.	1331.	-.0775	-.0132	.0366	-.0439	.0131	-.1421	5370.		
.1680	-1678.	-1708.	1303.	1101.	645.	1344.	-.0804	-.0112	.0342	-.0152	.0191	-.1400	5636.		
.1690	-1799.	-1645.	1360.	1177.	647.	1280.	-.0814	-.0084	.0305	.0156	.0237	-.1346	5644.		
.1700	-1824.	-1463.	1364.	1163.	633.	1077.	-.0810	-.0048	.0261	.0457	.0264	-.1288	5193.		
.1710	-1741.	-1184.	1300.	1083.	611.	769.	-.0791	-.0008	.0211	.0736	.0284	-.1211	4447.		
.1720	-1501.	-863.	1148.	993.	583.	463.	-.0750	.0035	.0151	.1016	.0292	-.1079	3775.		
.1730	-1176.	-510.	960.	875.	551.	129.	-.0697	.0077	.0084	.1278	.0287	-.0929	3169.		
.1740	-859.	-117.	761.	703.	515.	-261.	-.0639	.0117	.0015	.1501	.0270	-.0788	2767.		
.1750	-469.	293.	533.	505.	472.	-660.	-.0577	.0152	-.0054	.1675	.0253	-.0638	2908.		
.1760	-67.	681.	279.	313.	414.	-1019.	-.0509	.0179	-.0117	.1775	.0255	-.0459	3479.		
.1770	329.	1017.	19.	177.	337.	-1301.	-.0438	.0196	-.0172	.1794	.0273	-.0249	4108.		
.1780	623.	1283.	-194.	-32.	242.	-1506.	-.0370	.0201	-.0216	.1723	.0295	-.0031	4842.		
.1790	829.	1456.	-366.	-171.	133.	-1593.	-.0306	.0194	-.0250	.1573	.0313	.0204	4891.		
.1800	1005.	1531.	-522.	-266.	17.	-1553.	-.0247	.0174	-.0271	.1342	.0337	.0457	4795.		
.1810	1091.	1532.	-638.	-350.	-95.	-1447.	-.0203	.0141	-.0278	.1026	.0358	.0685	4537.		
.1820	1119.	1460.	-700.	-427.	-189.	-1269.	-.0176	.0098	-.0275	.0665	.0355	.0871	4112.		

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S/RV PIPING KILWAUNEE 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

.1740	-859.	-117.	761.	703.	515.	-261.	-129.	-1639	.0117	.0015	.1501	.0270	-.0288	3169.
.1750	-409.	293.	533.	505.	472.	-660.	-10577	.0152	-.0054	.1675	.0253	-.0638	2908.	
.1760	-63.	681.	279.	313.	414.	-1019.	-.0509	.0179	-.0117	.1775	.0255	-.0459	3479.	
.1770	329.	1017.	19.	137.	337.	-1301.	-.0438	.0196	-.0172	.1794	.0273	-.0249	4108.	
.1780	613.	1273.	-194.	-72.	242.	-1006.	-.0370	.0201	-.0216	.1723	.0295	-.0031	4642.	
.1790	839.	1436.	-366.	-171.	133.	-1593.	-.0306	.0194	-.0250	.1573	.0313	.0204	4891.	
.1800	1005.	1531.	-522.	-266.	17.	-1553.	-.0247	.0174	-.0271	.1342	.0337	.0457	4795.	
.1810	1091.	1532.	-630.	-350.	-95.	-1447.	-.0203	.0141	-.0278	.1026	.0358	.0685	4537.	
.1820	1119.	1460.	-700.	-427.	-189.	-1269.	-.0176	.0098	-.0275	.0665	.0355	.0871	4112.	

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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	57	MEMBER	4	SEQUENCE	82	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(PSI)
.1830	1078.	1299.	-707.	-473.	-265.	-999.	-.0164	.0046	-.0266	.0278	.0332	.1021	.1149	.1149	2600.
.1840	995.	1049.	-690.	-473.	-325.	-634.	-.0165	-.0014	-.0251	-.0130	.0309	.1149	.1149	.1149	2600.
.1850	381.	751.	-654.	-453.	-370.	-231.	-.0180	-.0078	-.0228	-.0553	.0283	.1236	.1236	.1236	1914.
.1860	714.	441.	-578.	-448.	-407.	150.	-.0212	-.0142	-.0200	-.0978	.0244	.1258	.1258	.1258	1898.
.1870	529.	116.	-489.	-438.	-444.	531.	-.0255	-.0204	-.0169	-.1379	.0191	.1237	.1237	.1237	2492.
.1880	328.	-220.	-401.	-410.	-483.	908.	-.0302	-.0261	-.0137	-.1748	.0133	.1188	.1188	.1188	3367.
.1890	140.	-532.	-315.	-383.	-516.	1238.	-.0354	-.0309	-.0107	-.2066	.0061	.1101	.1101	.1101	4244.
.1900	-24.	-793.	-223.	-378.	-533.	1485.	-.0412	-.0347	-.0080	-.2312	-.0035	.0961	.0961	.0961	4935.
.1910	-177.	-1006.	-126.	-381.	-536.	1651.	-.0470	-.0374	-.0059	-.2472	-.0141	.0782	.0782	.0782	5406.
.1920	-281.	-1179.	-54.	-360.	-534.	1768.	-.0522	-.0387	-.0047	-.2532	-.0239	.0592	.0592	.0592	5723.
.1930	-322.	-1273.	-16.	-341.	-530.	1784.	-.0569	-.0388	-.0042	-.2500	-.0316	.0382	.0382	.0382	5754.
.1940	-298.	-1246.	-15.	-364.	-530.	1789.	-.0613	-.0375	-.0037	-.2398	-.0361	.0134	.0134	.0134	5329.
.1950	-217.	-1110.	-55.	-420.	-540.	1327.	-.0653	-.0351	-.0033	-.2234	-.0366	-.0138	-.0138	-.0138	4541.
.1960	-100.	-914.	-128.	-464.	-560.	957.	-.0682	-.0318	-.0030	-.2001	-.0331	-.0399	-.0399	-.0399	3655.
.1970	25.	-688.	-208.	-488.	-576.	558.	-.0699	-.0279	-.0029	-.1697	-.0271	-.0640	-.0640	-.0640	2855.
.1980	145.	-430.	-272.	-506.	-564.	132.	-.0709	-.0237	-.0030	-.1327	-.0208	-.0874	-.0874	-.0874	2340.
.1990	263.	-155.	-307.	-514.	-507.	-294.	-.0713	-.0196	-.0034	-.0890	-.0157	-.1096	-.1096	-.1096	2371.
.2000	357.	96.	-302.	-479.	-399.	-657.	-.0709	-.0159	-.0042	-.0387	-.0119	-.1289	-.1289	-.1289	2754.
.2010	387.	287.	-241.	-385.	-247.	-918.	-.0697	-.0128	-.0054	.0168	-.0091	-.1441	-.1441	-.1441	3119.
.2020	332.	414.	-115.	-245.	-64.	-1080.	-.0678	-.0107	-.0067	.0743	-.0063	-.1556	-.1556	-.1556	3373.
.2030	207.	487.	55.	-74.	127.	-1158.	-.0655	-.0095	-.0077	.1294	-.0017	-.1630	-.1630	-.1630	3552.
.2040	30.	513.	234.	123.	303.	-1161.	-.0626	-.0094	-.0076	.1774	.0071	-.1649	-.1649	-.1649	3668.
.2050	-197.	490.	409.	335.	442.	-1092.	-.0592	-.0103	-.0065	.2155	.0200	-.1611	-.1611	-.1611	3725.
.2060	-474.	425.	588.	543.	540.	-961.	-.0552	-.0121	-.0044	.2427	.0351	-.1525	-.1525	-.1525	3739.
.2070	-775.	321.	763.	734.	604.	-775.	-.0510	-.0149	-.0016	.2557	.0499	-.1398	-.1398	-.1398	3732.
.2080	-1051.	109.	912.	902.	647.	-538.	-.0466	-.0184	.0017	.2635	.0627	-.1236	-.1236	-.1236	3751.
.2090	-1261.	79.	1025.	1033.	685.	-260.	-.0422	-.0224	.0049	.2593	.0713	-.1048	-.1048	-.1048	3853.
.2100	-1395.	-117.	1108.	1115.	725.	37.	-.0379	-.0267	.0077	.2467	.0739	-.0855	-.0855	-.0855	4046.
.2110	-1454.	-272.	1161.	1142.	760.	340.	-.0339	-.0311	.0098	.2271	.0702	-.0664	-.0664	-.0664	4299.
.2120	-1427.	-410.	1161.	1115.	775.	627.	-.0301	-.0353	.0112	.2004	.0619	-.0472	-.0472	-.0472	4550.
.2130	-1298.	-503.	1086.	1023.	752.	858.	-.0265	-.0390	.0123	.1654	.0512	-.0283	-.0283	-.0283	4662.
.2140	-1083.	-529.	939.	853.	676.	998.	-.0232	-.0422	.0133	.1219	.0393	-.0103	-.0103	-.0103	4493.
.2150	-818.	-501.	731.	618.	538.	1057.	-.0200	-.0445	.0143	.0708	.0273	.0074	.0074	.0074	4067.
.2160	-533.	-445.	478.	352.	337.	1071.	-.0167	-.0460	.0152	.0148	.0157	.0260	.0260	.0260	3581.
.2170	-241.	-370.	197.	71.	91.	1057.	-.0133	-.0467	.0157	-.0431	.0039	.0451	.0451	.0451	3234.
.2180	44.	-269.	-98.	-228.	-173.	-998.	-.0102	-.0464	.0157	-.0994	-.0092	.0628	.0628	.0628	3157.
.2190	303.	-151.	-348.	-530.	-429.	905.	-.0075	-.0454	.0151	-.1507	-.0242	.0779	.0779	.0779	3447.
.2200	507.	-51.	-562.	-796.	-659.	831.	-.0051	-.0437	.0136	-.1930	-.0411	.0913	.0913	.0913	4033.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.24.

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

.2120	-1427.	-410.	1161.	1115.	775.	627.	-.0301	-.0353	.0112	.2004	.0519	-.0472	4550.
.2130	-1298.	-503.	1086.	1023.	752.	858.	-.0265	-.0390	.0123	.1654	.0512	-.0283	4662.
.2140	-1083.	-529.	939.	853.	676.	998.	-.0232	-.0422	.0133	.1219	.0393	-.0103	4493.
.2150	-818.	-501.	731.	618.	538.	1057.	-.0200	-.0445	.0143	.0708	.0273	.0074	4067.
.2160	-533.	-445.	478.	352.	337.	1071.	-.0167	-.0460	.0152	.0148	.0157	.0260	3581.
.2170	-241.	-370.	197.	71.	91.	1057.	-.0133	-.0467	.0157	-.0431	.0039	.0451	3234.
.2180	44.	-269.	-88.	-228.	-173.	998.	-.0102	-.0464	.0157	-.0994	-.0092	.0628	3157.
.2190	303.	-151.	-348.	-530.	-429.	905.	-.0075	-.0454	.0151	-.1507	-.0242	.0779	3447.
.2200	507.	-51.	-562.	-796.	-659.	831.	-.0051	-.0437	.0136	-.1950	-.0411	.0913	4033.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.24.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA								
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	FX	RY	FZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2210	633.	4.	-714.	-996.	-855.	809.	-.0027	-.0415	.0110	-.2241	-.0587	.1037	4690.	
.2220	674.	25.	-800.	-1134.	-1016.	820.	-.0002	-.0386	.0079	-.2442	-.0754	.1144	5261.	
.2230	638.	34.	-832.	-1224.	-1147.	830.	.0021	-.0354	.0047	-.2547	-.0891	.1226	5692.	
.2240	535.	37.	-825.	-1264.	-1256.	828.	.0044	-.0317	.0019	-.2568	-.0978	.1284	5976.	
.2250	366.	28.	-785.	-1246.	-1349.	821.	.0070	-.0277	-.0003	-.2508	-.1008	.1322	6119.	
.2260	142.	11.	-710.	-1178.	-1417.	804.	.0099	-.0235	-.0019	-.2368	-.0984	.1334	6117.	
.2270	-102.	-2.	-608.	-1073.	-1444.	762.	.0129	-.0191	-.0030	-.2146	-.0918	.1309	5944.	
.2280	-324.	-4.	-471.	-936.	-1410.	696.	.0160	-.0147	-.0037	-.1841	-.0822	.1242	5567.	
.2290	-500.	-0.	-366.	-767.	-1303.	615.	.0192	-.0103	-.0042	-.1450	-.0707	.1132	4965.	
.2300	-621.	9.	-231.	-574.	-1122.	520.	.0225	-.0061	-.0048	-.0978	-.0586	.0975	4147.	
.2310	-677.	32.	-96.	-374.	-876.	398.	.0256	-.0020	-.0054	-.0446	-.0462	.0768	3140.	
.2320	-650.	84.	16.	-185.	-584.	230.	.0284	.0018	-.0056	.0108	-.0326	.0517	1991.	
.2330	-526.	174.	84.	-18.	-270.	8.	.0311	.0054	-.0052	.0647	-.0170	.0235	824.	
.2340	-320.	299.	104.	117.	4.	-263.	.0334	.0086	-.0038	.1140	.0006	-.0065	886.	
.2350	-64.	444.	87.	223.	340.	-563.	.0355	.0114	-.0016	.1566	.0200	-.0368	2112.	
.2360	216.	590.	42.	306.	605.	-865.	.0372	.0137	.0013	.1913	.0404	-.0660	3343.	
.2370	509.	726.	-26.	370.	830.	-1146.	.0385	.0154	.0049	.2174	.0608	-.0927	4463.	
.2380	798.	846.	-103.	413.	1041.	-1393.	.0390	.0165	.0087	.2350	.0797	-.1188	5438.	
.2390	1053.	934.	-169.	438.	1214.	-1587.	.0386	.0169	.0127	.2446	.0957	-.1376	6227.	
.2400	1240.	966.	-206.	460.	1356.	-1690.	.0373	.0165	.0163	.2470	.1078	-.1540	6739.	
.2410	1337.	926.	-208.	492.	1460.	-1679.	.0354	.0154	.0196	.2425	.1156	-.1646	6932.	
.2420	1340.	821.	-175.	527.	1520.	-1560.	.0327	.0136	.0224	.2308	.1189	-.1691	6817.	
.2430	1257.	671.	-115.	551.	1531.	-1360.	.0293	.0113	.0250	.2115	.1181	-.1676	6451.	
.2440	1095.	487.	-37.	560.	1487.	-1094.	.0254	.0086	.0272	.1848	.1135	-.1603	5868.	
.2450	861.	273.	55.	560.	1387.	-769.	.0212	.0057	.0291	.1520	.1055	-.1473	5115.	
.2460	559.	35.	160.	550.	1236.	-398.	.0168	.0028	.0302	.1147	.0943	-.1292	4290.	
.2470	211.	-211.	272.	520.	1046.	-6.	.0125	-.0001	.0308	.0748	.0803	-.1074	3563.	
.2480	-147.	-448.	378.	488.	829.	386.	.0085	-.0027	.0305	.0342	.0640	-.0828	3153.	
.2490	-485.	-660.	465.	434.	596.	757.	.0049	-.0049	.0293	-.0056	.0462	-.0564	3215.	
.2500	-795.	-836.	532.	363.	355.	1085.	.0020	-.0066	.0272	-.0428	.0273	-.0294	3643.	
.2510	-1076.	-970.	580.	270.	109.	1354.	.0001	-.0076	.0242	-.0762	.0080	-.0028	4218.	
.2520	-1318.	-1062.	606.	180.	-135.	1563.	-.0007	-.0075	.0204	-.1049	-.0109	.0229	4804.	
.2530	-1499.	-1106.	598.	78.	-372.	1704.	.0000	-.0075	.0160	-.1284	-.0285	.0475	5311.	
.2540	-1604.	-1091.	552.	-74.	-592.	1761.	.0021	-.0067	.0113	-.1465	-.0440	.0700	5654.	
.2550	-1626.	-1015.	471.	-155.	-788.	1727.	.0056	-.0044	.0063	-.1588	-.0570	.0893	5792.	
.2560	-1574.	-890.	361.	-277.	-951.	1610.	.0103	-.0018	.0011	-.1645	-.0571	.1048	5749.	
.2570	-1454.	-725.	229.	-389.	-1077.	1423.	.0162	.0013	-.0042	-.1631	-.0740	.1161	5555.	
.2580	-1261.	-527.	78.	-490.	-1157.	1171.	.0230	.0048	-.0095	-.1550	-.0776	.1227	5226.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.24.

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

.2490	-465.	-660.	507.	474.	596.	757.	.0049	-.0049	.0293	-.0056	.0462	-.0564	3215.
.2500	-795.	-836.	532.	363.	355.	1085.	.0020	-.0066	.0272	-.0428	.0273	-.0294	3643.
.2510	-1076.	-970.	560.	270.	109.	1354.	.0001	-.0076	.0242	-.0762	.0080	-.0028	4218.
.2520	-1318.	-1062.	606.	180.	-135.	1563.	-.0007	-.0079	.0204	-.1049	-.0109	.0229	4804.
.2530	-1499.	-1107.	665.	78.	-370.	1704.	.0000	-.0075	.0160	-.1284	-.0285	.0475	5311.
.2540	-1604.	-1091.	652.	-74.	-500.	1761.	.0021	-.0063	.0113	-.1465	-.0440	.0700	5654.
.2550	-1626.	-1010.	471.	-105.	-788.	1727.	.0056	-.0044	.0063	-.1588	-.0570	.0893	5792.
.2560	-1574.	-890.	361.	-277.	-951.	1610.	.0103	-.0018	.0011	-.1645	-.0571	.1048	5749.
.2570	-1454.	-725.	229.	-389.	-1077.	1423.	.0162	.0013	-.0042	-.1631	-.0740	.1161	5555.
.2580	-1261.	-527.	78.	-490.	-1157.	1171.	.0230	.0048	-.0095	-.1550	-.0776	.1227	5226.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.24.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNIT.

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

SECTION	57	MEMBER	4	SEQUENCE	82	LOCATION	END	TYPE	VA							
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2590	-995.	-296.	-92.	-583.	-1108.	860.		.0304	.0085	-.0145	-.1412	-.0778	.1242	4799.		
.2600	-673.	-49.	-270.	-663.	-1168.	506.		.0381	.0124	-.0191	-.1226	-.0749	.1210	4366.		
.2610	-329.	192.	-441.	-718.	-1106.	141.		.0459	.0163	-.0231	-.1002	-.0590	.1139	4035.		
.2620	14.	406.	-595.	-742.	-1008.	-208.		.0536	.0200	-.0264	-.0750	-.0609	.1039	3860.		
.2630	345.	593.	-727.	-740.	-830.	-534.		.0610	.0236	-.0289	-.0485	-.0511	.0913	3856.		
.2640	657.	754.	-836.	-719.	-725.	-838.		.0675	.0268	-.0305	-.0223	-.0399	.0763	4019.		
.2650	934.	878.	-916.	-677.	-551.	-1102.		.0729	.0296	-.0311	.0027	-.0278	.0600	4275.		
.2660	1148.	944.	-954.	-603.	-365.	-1294.		.0772	.0320	-.0310	.0264	-.0155	.0435	4482.		
.2670	1281.	944.	-942.	-494.	-175.	-1401.		.0803	.0340	-.0304	.0484	-.0036	.0277	4550.		
.2680	1340.	889.	-888.	-361.	10.	-1432.		.0821	.0357	-.0293	.0678	.0076	.0130	4494.		
.2690	1340.	798.	-804.	-221.	183.	-1409.		.0823	.0370	-.0276	.0832	.0177	-.0004	4375.		
.2700	1277.	677.	-693.	-81.	335.	-1340.		.0810	.0382	-.0255	.0939	.0263	-.0121	4210.		
.2710	1146.	525.	-556.	61.	456.	-1216.		.0785	.0392	-.0230	.1002	.0329	-.0212	3961.		
.2720	962.	345.	-403.	202.	541.	-1044.		.0751	.0402	-.0204	.1023	.0372	-.0269	3628.		
.2730	756.	161.	-250.	328.	592.	-844.		.0707	.0412	-.0178	.0998	.0392	-.0297	3291.		
.2740	547.	-4.	-109.	423.	612.	-634.		.0655	.0424	-.0151	.0929	.0390	-.0306	3014.		
.2750	338.	-151.	24.	488.	606.	-478.		.0597	.0437	-.0125	.0827	.0363	-.0301	2777.		
.2760	130.	-288.	148.	536.	575.	-302.		.0536	.0452	-.0104	.0713	.0313	-.0278	2561.		
.2770	-52.	-408.	252.	567.	525.	-136.		.0476	.0468	-.0089	.0544	.0244	-.0238	2388.		
.2780	-177.	-479.	320.	567.	465.	-15.		.0417	.0486	-.0077	.0466	.0165	-.0193	2231.		
.2790	-238.	-497.	349.	527.	400.	38.		.0359	.0506	-.0066	.0330	.0083	-.0154	2015.		
.2800	-250.	-473.	348.	461.	329.	43.		.0307	.0525	-.0058	.0197	.0000	-.0115	1729.		
.2810	-223.	-428.	323.	390.	255.	23.		.0264	.0544	-.0052	.0080	-.0078	-.0072	1420.		
.2820	-149.	-356.	268.	313.	185.	-28.		.0229	.0560	-.0047	-.0021	-.0145	-.0029	1108.		
.2830	-20.	-243.	187.	218.	130.	-132.		.0201	.0573	-.0041	-.0109	-.0198	.0002	869.		
.2840	143.	-106.	94.	114.	99.	-274.		.0180	.0582	-.0035	-.0173	-.0238	.0016	953.		
.2850	301.	19.	15.	34.	95.	-401.		.0168	.0585	-.0031	-.0192	-.0269	.0027	1258.		
.2860	437.	109.	-41.	-2.	119.	-479.		.0166	.0582	-.0031	-.0158	-.0292	.0045	1502.		
.2870	549.	175.	-74.	-6.	173.	-527.		.0172	.0572	-.0033	-.0080	-.0303	.0062	1688.		
.2880	637.	233.	-83.	5.	252.	-568.		.0182	.0555	-.0035	.0026	-.0302	.0073	1892.		
.2890	680.	269.	-63.	42.	344.	-584.		.0198	.0531	-.0037	.0156	-.0289	.0086	2065.		
.2900	656.	261.	-13.	122.	432.	-541.		.0222	.0502	-.0040	.0306	-.0260	.0120	2139.		
.2910	564.	213.	62.	276.	506.	-449.		.0252	.0469	-.0043	.0462	-.0216	.0174	2179.		
.2920	427.	156.	150.	356.	560.	-348.		.0284	.0432	-.0046	.0606	-.0161	.0237	2280.		
.2930	270.	106.	237.	466.	593.	-259.		.0316	.0393	-.0047	.0729	-.0099	.0305	2426.		
.2940	101.	55.	316.	571.	602.	-168.		.0348	.0354	-.0051	.0833	-.0040	.0380	2574.		
.2950	-76.	-1.	390.	669.	585.	-67.		.0379	.0316	-.0060	.0919	.0004	.0463	2711.		
.2960	-243.	-47.	452.	742.	547.	22.		.0406	.0280	-.0074	.0985	.0022	.0541	2806.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.24.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNIT.

INTERNAL FORCES IN THE PIPING



.2880	137.	213.	-83.	5.	252.	-568.	.182	.0555	-.0035	.0026	-.0302	.0073	1892.
.2890	67.	269.	-63.	42.	344.	-584.	.198	.0531	-.0037	.0156	-.0289	.0086	2065.
.2900	656.	261.	-13.	122.	432.	-541.	.222	.0562	-.0040	.0306	-.0260	.0120	2139.
.2910	564.	213.	62.	276.	596.	-449.	.0252	.0469	-.0043	.0462	-.0216	.0174	2179.
.2920	427.	156.	157.	356.	560.	-348.	.0284	.0432	-.0046	.0606	-.0161	.0237	2280.
.2930	270.	106.	237.	466.	597.	-259.	.0316	.0393	-.0047	.0729	-.0099	.0305	2426.
.2940	101.	55.	316.	571.	602.	-168.	.0348	.0354	-.0051	.0833	-.0040	.0380	2574.
.2950	-76.	-1.	390.	669.	585.	-67.	.0379	.0316	-.0060	.0919	.0004	.0463	2711.
.2960	-243.	-47.	452.	742.	547.	22.	.0406	.0280	-.0074	.0985	.0022	.0541	2806.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.24.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA									
TIME	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)		
.2970	-360.	-59.	483.	772.	490.	71.	.0427	.0246	-.0091	.1016	.0010	.0607	2788.		
.2980	-405.	-31.	469.	750.	412.	72.	.0439	.0216	-.0110	.1002	-.0030	.0660	2613.		
.2990	-392.	29.	413.	683.	398.	34.	.0444	.0191	-.0131	.0938	-.0096	.0701	2281.		
.3000	-343.	107.	328.	575.	173.	-34.	.0441	.0168	-.0152	.0823	-.0185	.0730	1830.		
.3010	-259.	202.	212.	431.	7.	-128.	.0428	.0149	-.0172	.0653	-.0288	.0748	1366.		
.3020	-130.	318.	59.	250.	-182.	-252.	.0406	.0132	-.0187	.0424	-.0394	.0753	1215.		
.3030	33.	448.	-120.	42.	-386.	-401.	.0374	.0116	-.0196	.0142	-.0499	.0743	1697.		
.3040	192.	566.	-296.	-175.	-593.	-544.	.0330	.0099	-.0199	-.0175	-.0602	.0718	2505.		
.3050	316.	643.	-448.	-375.	-793.	-642.	.0278	.0081	-.0198	-.0504	-.0705	.0683	3306.		
.3060	404.	669.	-568.	-547.	-973.	-680.	.0219	.0060	-.0193	-.0833	-.0801	.0642	3971.		
.3070	463.	655.	-659.	-623.	-1120.	-673.	.0151	.0035	-.0180	-.1156	-.0885	.0589	4487.		
.3080	484.	606.	-710.	-796.	-1228.	-631.	.0076	.0006	-.0160	-.1465	-.0951	.0518	4848.		
.3090	440.	503.	-707.	-865.	-1296.	-531.	-.0004	-.0027	-.0132	-.1743	-.0998	.0437	5008.		
.3100	320.	336.	-648.	-869.	-1327.	-354.	-.0085	-.0064	-.0099	-.1973	-.1018	.0357	4944.		
.3110	145.	121.	-544.	-816.	-1317.	-121.	-.0164	-.0104	-.0061	-.2152	-.1004	.0279	4728.		
.3120	-60.	-107.	-408.	-729.	-1262.	125.	-.0241	-.0145	-.0017	-.2278	-.0955	.0192	4451.		
.3130	-281.	-334.	-246.	-614.	-1162.	365.	-.0315	-.0187	.0030	-.2340	-.0875	.0095	4150.		
.3140	-518.	-566.	-58.	-460.	-1022.	613.	-.0382	-.0228	.0077	-.2325	-.0768	-.0001	3887.		
.3150	-762.	-799.	146.	-268.	-846.	868.	-.0437	-.0265	.0120	-.2226	-.0640	-.0089	3777.		
.3160	-985.	-1004.	353.	-62.	-639.	1091.	-.0482	-.0298	.0158	-.2048	-.0497	-.0177	3850.		
.3170	-1154.	-1149.	541.	132.	-406.	1243.	-.0516	-.0324	.0191	-.1806	-.0344	-.0268	3999.		
.3180	-1256.	-1227.	697.	308.	-160.	1320.	-.0538	-.0342	.0217	-.1508	-.0182	-.0354	4153.		
.3190	-1299.	-1246.	816.	470.	83.	1334.	-.0546	-.0352	.0235	-.1160	-.0016	-.0427	4309.		
.3200	-1287.	-1205.	899.	609.	314.	1279.	-.0539	-.0354	.0244	-.0775	.0147	-.0485	4413.		
.3210	-1208.	-1091.	937.	708.	524.	1141.	-.0521	-.0346	.0244	-.0370	.0302	-.0531	4386.		
.3220	-1046.	-899.	918.	759.	711.	917.	-.0494	-.0330	.0236	.0035	.0448	-.0566	4218.		
.3230	-814.	-647.	846.	767.	869.	626.	-.0458	-.0308	.0221	.0426	.0580	-.0585	4005.		
.3240	-547.	-360.	742.	740.	992.	299.	-.0416	-.0281	.0198	.0797	.0689	-.0586	3872.		
.3250	-271.	-63.	619.	686.	1076.	-37.	-.0370	-.0251	.0167	.1137	.0771	-.0566	3885.		
.3260	9.	236.	479.	608.	1122.	-367.	-.0322	-.0220	.0131	.1426	.0826	-.0525	4039.		
.3270	287.	528.	322.	593.	1128.	-684.	-.0276	-.0191	.0094	.1646	.0857	-.0464	4295.		
.3280	537.	795.	164.	380.	1095.	-966.	-.0234	-.0165	.0057	.1789	.0964	-.0384	4591.		
.3290	725.	1008.	25.	257.	1023.	-1181.	-.0196	-.0145	.0021	.1854	.0844	-.0285	4815.		
.3300	838.	1145.	-58.	138.	915.	-1301.	-.0164	-.0132	-.0013	.1842	.0802	-.0163	4858.		
.3310	886.	1210.	-178.	35.	779.	-1332.	-.0139	-.0128	-.0042	.1748	.0741	-.0025	4696.		
.3320	982.	1214.	-246.	-67.	624.	-1293.	-.0124	-.0133	-.0065	.1573	.0664	.0116	4373.		
.3330	822.	1156.	-287.	-164.	458.	-1184.	-.0119	-.0146	-.0082	.1326	.0572	.0253	3894.		
.3340	699.	1024.	-294.	-239.	284.	-990.	-.0121	-.0168	-.0093	.1024	.0468	.0389	3216.		

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ADLPIPE STRESS ANALYSIS

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18.29.24.

S/RV PIPING KEWAUNEE GKW08F 2 DUP 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

.3260	9.	236.	479.	608.	1122.	-367.	-0322	-0220	.0131	.1426	.0826	-.0525	4039.
.3270	287.	528.	322.	503.	1128.	-684.	-0276	-0191	.0094	.1646	.0857	-.0464	4295.
.3280	537.	795.	164.	380.	1095.	-966.	-0234	-0165	.0057	.1789	.0864	-.0384	4591.
.3290	725.	1008.	25.	253.	1023.	-1181.	-0196	-0145	.0021	.1854	.0844	-.0285	4815.
.3300	838.	1145.	-88.	178.	915.	-1301.	-0164	-0132	-.0013	.1842	.0802	-.0163	4858.
.3310	886.	1210.	-178.	35.	779.	-1332.	-0139	-0128	-.0042	.1748	.0741	-.0025	4696.
.3320	882.	1214.	-246.	-67.	624.	-1293.	-0124	-0133	-.0065	.1573	.0664	.0116	4173.
.3330	822.	1156.	-287.	-164.	458.	-1184.	-0119	-0146	-.0082	.1326	.0572	.0253	3194.
.3340	699.	1024.	-294.	-239.	284.	-990.	-0121	-0168	-.0093	.1024	.0468	.0389	3116.

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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	57	MEMBER	4	SEQUENCE	82	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3350	525.	822.	-275.	-288.	105.	-716.	-.0130	-.0197	-.0100	.0680	.0358	.0522	2368.		
.3360	324.	578.	-240.	-325.	-70.	-398.	-.0144	-.0232	-.0100	.0302	.0246	.0642	1579.		
.3370	118.	320.	-198.	-363.	-236.	-73.	-.0164	-.0271	-.0094	-.0099	.0137	.0739	1337.		
.3380	-84.	53.	-153.	-396.	-390.	253.	-.0186	-.0311	-.0084	-.0501	.0034	.0813	1857.		
.3390	-279.	-222.	-105.	-413.	-530.	580.	-.0208	-.0351	-.0072	-.0882	-.0061	.0867	2699.		
.3400	-456.	-487.	-59.	-418.	-649.	888.	-.0227	-.0389	-.0060	-.1223	-.0147	.0897	3580.		
.3410	-591.	-716.	-23.	-426.	-742.	1141.	-.0244	-.0422	-.0048	-.1512	-.0222	.0895	4336.		
.3420	-667.	-891.	-5.	-440.	-804.	1319.	-.0257	-.0449	-.0038	-.1738	-.0284	.0857	4886.		
.3430	-683.	-1014.	-6.	-454.	-836.	1428.	-.0265	-.0468	-.0031	-.1887	-.0330	.0792	5219.		
.3440	-652.	-1086.	-23.	-461.	-842.	1468.	-.0265	-.0479	-.0027	-.1952	-.0360	.0703	5337.		
.3450	-577.	-1101.	-53.	-467.	-825.	1432.	-.0259	-.0480	-.0028	-.1931	-.0371	.0589	5224.		
.3460	-453.	-1051.	-100.	-477.	-785.	1312.	-.0246	-.0473	-.0031	-.1831	-.0361	.0454	4871.		
.3470	-232.	-941.	-167.	-487.	-726.	1116.	-.0228	-.0457	-.0036	-.1659	-.0329	.0305	4311.		
.3480	-86.	-784.	-242.	-493.	-649.	865.	-.0204	-.0433	-.0044	-.1417	-.0276	.0147	3610.		
.3490	108.	00.	-309.	-486.	-558.	577.	-.0177	-.0403	-.0054	-.1112	-.0209	-.0014	2853.		
.3500	285.	05.	-360.	-461.	-452.	260.	-.0147	-.0368	-.0066	-.0750	-.0131	-.0172	2140.		
.3510	442.	-208.	-395.	-418.	-332.	-13.	-.0116	-.0331	-.0080	-.0348	-.0045	-.0322	1625.		
.3520	571.	-16.	-409.	-359.	-201.	-291.	-.0085	-.0293	-.0094	.0079	.0046	-.0459	1532.		
.3530	653.	157.	-394.	-282.	-64.	-535.	-.0057	-.0256	-.0107	.0515	.0139	-.0581	1851.		
.3540	671.	291.	-344.	-184.	72.	-724.	-.0031	-.0221	-.0119	.0946	.0229	-.0679	2284.		
.3550	625.	379.	-263.	-62.	201.	-845.	-.0007	-.0190	-.0120	.1355	.0318	-.0749	2649.		
.3560	528.	428.	-161.	70.	317.	-905.	.0013	-.0165	-.0136	.1721	.0404	-.0789	2925.		
.3570	392.	445.	-44.	199.	418.	-917.	.0027	-.0144	-.0138	.2028	.0483	-.0807	3125.		
.3580	224.	429.	82.	323.	503.	-878.	.0037	-.0130	-.0137	.2268	.0551	-.0800	3230.		
.3590	30.	373.	215.	441.	567.	-782.	.0042	-.0122	-.0134	.2438	.0605	-.0769	3229.		
.3600	-173.	287.	344.	548.	612.	-636.	.0045	-.0119	-.0128	.2535	.0640	-.0714	3160.		
.3610	-358.	139.	457.	629.	638.	-467.	.0044	-.0122	-.0121	.2555	.0655	-.0644	3074.		
.3620	-508.	92.	545.	674.	648.	-292.	.0039	-.0129	-.0112	.2496	.0650	-.0565	2980.		
.3630	-614.	0.	601.	684.	638.	-117.	.0034	-.0139	-.0103	.2363	.0625	-.0476	2869.		
.3640	-678.	-86.	623.	664.	605.	57.	.0028	-.0153	-.0093	.2163	.0585	-.0378	2739.		
.3650	-693.	-157.	609.	609.	549.	214.	.0024	-.0168	-.0083	.1902	.0533	-.0274	2579.		
.3660	-650.	-198.	552.	515.	473.	335.	.0021	-.0185	-.0072	.1585	.0473	-.0170	2356.		
.3670	-544.	-205.	452.	383.	379.	412.	.0019	-.0202	-.0061	.1225	.0409	-.0070	2064.		
.3680	-389.	-183.	318.	227.	272.	455.	.0020	-.0220	-.0050	.0838	.0344	.0027	1753.		
.3690	-205.	-143.	163.	56.	158.	472.	.0024	-.0237	-.0041	.0445	.0277	.0118	1523.		
.3700	-6.	-89.	1.	-120.	46.	468.	.0030	-.0254	-.0033	.0064	.0207	.0201	1477.		
.3710	205.	-23.	-164.	-294.	-58.	447.	.0039	-.0271	-.0028	-.0291	.0137	.0273	1638.		
.3720	417.	51.	-323.	-459.	-148.	413.	.0049	-.0288	-.0025	-.0609	.0070	.0334	1930.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.29.24.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

.3640	-678.	-56.	623.	664.	605.	57.	.0028	-.0153	-.0093	.2163	.0585	-.0378	2739.
.3650	-693.	-157.	609.	609.	549.	214.	.0024	-.0168	-.0083	.1902	.0533	-.0274	2579.
.3660	-650.	-198.	552.	515.	472.	335.	.0021	-.0185	-.0072	.1585	.0473	-.0170	2356.
.3670	-544.	-205.	457.	383.	379.	412.	.0019	-.0202	-.0061	.1225	.0409	-.0070	2064.
.3680	-389.	-183.	318.	277.	272.	455.	.0020	-.0220	-.0050	.0878	.0344	.0027	1753.
.3690	-265.	-143.	167.	76.	157.	472.	.0024	-.0237	-.0041	.0445	.0277	.0118	1523.
.3700	-6.	-89.	1.	-120.	46.	488.	.0030	-.0254	-.0033	.0064	.0207	.0201	1477.
.3710	205.	-23.	-164.	-294.	-58.	447.	.0039	-.0271	-.0028	-.0291	.0137	.0273	1638.
.3720	417.	51.	-323.	-459.	-148.	413.	.0049	-.0288	-.0025	-.0609	.0070	.0334	1930.

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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	57	MEMBER	4	SEQUENCE	82	LOCATION	END	TYPE	VA					
TIME	FX	FY	FZ	HX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3730	607.	123.	-463.	-604.	-220.	376.	.0061	-.0305	-.0024	-.0878	.0006	.0382	2264.	
.3740	750.	180.	-571.	-718.	-276.	349.	.0074	-.0322	-.0024	-.1088	-.0052	.0420	2569.	
.3750	827.	217.	-641.	-793.	-317.	340.	.0088	-.0338	-.0026	-.1237	-.0099	.0448	2796.	
.3760	872.	237.	-679.	-832.	-343.	341.	.0103	-.0355	-.0028	-.1325	-.0129	.0469	2927.	
.3770	858.	247.	-685.	-838.	-355.	344.	.0118	-.0370	-.0030	-.1358	-.0140	.0477	2960.	
.3780	790.	245.	-659.	-811.	-356.	350.	.0132	-.0385	-.0030	-.1336	-.0133	.0473	2897.	
.3790	666.	223.	-598.	-749.	-347.	368.	.0145	-.0399	-.0030	-.1260	-.0109	.0459	2747.	
.3800	496.	183.	-509.	-653.	-329.	396.	.0158	-.0412	-.0030	-.1135	-.0072	.0437	2530.	
.3810	303.	139.	-404.	-538.	-301.	420.	.0170	-.0423	-.0030	-.0971	-.0026	.0403	2270.	
.3820	112.	104.	-293.	-419.	-262.	424.	.0179	-.0432	-.0030	-.0779	.0024	.0353	1981.	
.3830	-68.	81.	-184.	-301.	-216.	407.	.0185	-.0439	-.0028	-.0567	.0075	.0290	1673.	
.3840	-231.	66.	-81.	-186.	-167.	374.	.0189	-.0444	-.0028	-.0345	.0121	.0217	1368.	
.3850	-365.	63.	9.	-81.	-117.	323.	.0190	-.0447	-.0026	-.0124	.0161	.0136	1075.	
.3860	-453.	83.	76.	1.	-71.	242.	.0189	-.0447	-.0024	.0081	.0195	.0047	766.	
.3870	-484.	133.	107.	52.	-28.	124.	.0183	-.0447	-.0019	.0256	.0223	-.0049	417.	
.3880	-465.	202.	111.	74.	7.	-18.	.0174	-.0445	-.0013	.0394	.0242	-.0146	233.	
.3890	-416.	277.	96.	77.	31.	-163.	.0162	-.0443	-.0004	.0494	.0253	-.0238	555.	
.3900	-345.	350.	66.	62.	46.	-299.	.0146	-.0443	.0006	.0553	.0252	-.0318	938.	
.3910	-251.	423.	23.	30.	52.	-423.	.0127	-.0443	.0019	.0567	.0240	-.0384	1299.	
.3920	-137.	494.	-32.	-19.	54.	-530.	.0105	-.0446	.0034	.0533	.0217	-.0434	1623.	
.3930	-24.	549.	-86.	-76.	50.	-606.	.0078	-.0451	.0052	.0454	.0184	-.0464	1863.	
.3940	61.	571.	-126.	-128.	42.	-628.	.0050	-.0460	.0072	.0339	.0139	-.0469	1954.	
.3950	105.	552.	-143.	-167.	28.	-588.	.0019	-.0472	.0092	.0193	.0086	-.0447	1861.	
.3960	118.	501.	-143.	-195.	12.	-493.	-.0013	-.0488	.0115	.0019	.0028	-.0400	1612.	
.3970	104.	425.	-130.	-215.	-4.	-357.	-.0047	-.0506	.0140	-.0180	-.0030	-.0332	1269.	
.3980	53.	323.	-97.	-225.	-20.	-184.	-.0082	-.0526	.0167	-.0396	-.0086	-.0248	887.	
.3990	-45.	189.	-37.	-214.	-37.	35.	-.0116	-.0546	.0193	-.0611	-.0142	-.0146	670.	
.4000	-185.	23.	45.	-179.	-54.	297.	-.0147	-.0567	.0217	-.0817	-.0196	-.0028	1067.	

MAXIMUM VALUE OF STRESS OCCURS AT

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)
.2410	1337.	926.	-208.	492.	1460.	-1679.	.0354	.0154	.0196	.2425	.1156	-.1646	6932.

SECTION	58	MEMBER	1	SEQUENCE	82	LOCATION	BEG	TYPE	VA					
TIME	FX	FY	FZ	HX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.29.24.

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	58	MEMBER	1	SEQUENCE	82	LOCATION	BEG	TYPE	VA
---------	----	--------	---	----------	----	----------	-----	------	----

TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.2410	1237.	926.	-202.	492.	1460.	-1679.	.0354	.0154	.0196	.2425	.1156	-.1646	6932.

SECTION	58	MEMBER	1	SEQUENCE	82	LOCATION	BEG	TYPE	VA	VA	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)		

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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	58	MEMBER	1	SEQUENCE	82	LOCATION	BEG	TYPE	VA	VA	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	0.0000	0.
.0010	0.	-0.	-0.	-0.	-0.	0.	-0.0000	.0000	.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	0.
.0020	0.	-0.	-0.	-0.	-0.	0.	-0.0000	.0000	.0000	-0.0000	.0000	.0000	.0000	.0000	0.
.0030	0.	-0.	-0.	-0.	-0.	0.	.0000	-0.0000	.0000	-0.0000	.0000	.0000	.0000	.0000	0.
.0040	0.	-0.	0.	0.	0.	-0.	.0000	-0.0000	.0000	-0.0000	.0000	.0000	.0000	.0000	0.
.0050	-0.	-0.	1.	1.	0.	0.	-0.0000	-0.0000	.0000	-0.0000	.0000	.0000	.0000	.0000	2.
.0060	-3.	-1.	2.	2.	0.	2.	-0.0000	-0.0000	.0000	-0.0001	.0001	.0001	-0.0000	-0.0000	8.
.0070	-7.	-3.	5.	4.	0.	6.	-0.0000	-0.0000	.0000	-0.0002	.0001	.0001	-0.0002	-0.0002	27.
.0080	-14.	-7.	8.	7.	0.	11.	-0.0001	-0.0000	.0001	-0.0003	.0000	.0000	-0.0004	-0.0004	40.
.0090	-23.	-10.	13.	10.	0.	19.	-0.0002	-0.0000	.0001	-0.0003	-0.0002	-0.0002	-0.0008	-0.0008	65.
.0100	-38.	-14.	20.	17.	0.	32.	-0.0004	-0.0000	.0002	-0.0004	-0.0005	-0.0005	-0.0013	-0.0013	110.
.0110	-69.	-22.	34.	29.	0.	57.	-0.0007	-0.0001	.0003	-0.0005	-0.0010	-0.0010	-0.0023	-0.0023	194.
.0120	-118.	-41.	58.	48.	0.	98.	-0.0012	-0.0001	.0004	-0.0009	-0.0017	-0.0017	-0.0039	-0.0039	332.
.0130	-183.	-67.	86.	71.	0.	152.	-0.0020	-0.0002	.0007	-0.0012	-0.0028	-0.0028	-0.0063	-0.0063	509.
.0140	-246.	-91.	110.	91.	0.	204.	-0.0030	-0.0003	.0009	-0.0012	-0.0042	-0.0042	-0.0091	-0.0091	681.
.0150	-292.	-101.	121.	101.	0.	242.	-0.0041	-0.0005	.0011	-0.0006	-0.0061	-0.0061	-0.0118	-0.0118	797.
.0160	-305.	-90.	113.	94.	0.	253.	-0.0052	-0.0007	.0011	.0007	-0.0081	-0.0081	-0.0136	-0.0136	821.
.0170	-276.	-59.	81.	67.	-0.	229.	-0.0061	-0.0011	.0011	.0029	-0.0101	-0.0101	-0.0142	-0.0142	726.
.0180	-195.	-12.	24.	20.	-0.	162.	-0.0069	-0.0014	.0009	.0058	-0.0118	-0.0118	-0.0131	-0.0131	495.
.0190	-59.	50.	-56.	-47.	-0.	49.	-0.0074	-0.0018	.0006	.0093	-0.0127	-0.0127	-0.0102	-0.0102	207.
.0200	120.	115.	-152.	-126.	-0.	-100.	-0.0075	-0.0021	.0003	.0127	-0.0126	-0.0126	-0.0056	-0.0056	490.
.0210	316.	176.	-245.	-203.	0.	-262.	-0.0072	-0.0024	-0.0001	.0155	-0.0108	-0.0108	.0004	.0004	1009.
.0220	482.	238.	-308.	-256.	0.	-400.	-0.0066	-0.0024	-0.0004	.0171	-0.0075	-0.0075	.0071	.0071	1444.
.0230	585.	262.	-330.	-274.	0.	-486.	-0.0059	-0.0023	-0.0005	.0168	-0.0027	-0.0027	.0132	.0132	1696.
.0240	633.	235.	-320.	-265.	0.	-525.	-0.0052	-0.0020	-0.0005	.0149	.0026	.0026	.0175	.0175	1790.
.0250	698.	196.	-326.	-271.	0.	-579.	-0.0042	-0.0016	-0.0009	.0137	.0069	.0069	.0211	.0211	1944.
.0260	828.	213.	-378.	-314.	0.	-687.	-0.0022	-0.0009	-0.0021	.0156	.0088	.0088	.0261	.0261	2297.
.0270	906.	305.	-410.	-340.	-0.	-752.	.0005	-0.0002	-0.0039	.0192	.0085	.0085	.0322	.0322	2512.
.0280	806.	295.	-353.	-293.	-0.	-669.	.0028	.0008	-0.0052	.0197	.0075	.0075	.0345	.0345	2223.
.0290	632.	117.	-266.	-221.	-0.	-524.	.0045	.0019	-0.0063	.0176	.0053	.0053	.0315	.0315	1730.
.0300	552.	63.	-236.	-196.	-0.	-458.	.0072	.0032	-0.0083	.0192	.0010	.0010	.0303	.0303	1515.
.0310	453.	153.	-188.	-156.	-0.	-376.	.0107	.0044	-0.0104	.0203	-0.0019	-0.0019	.0313	.0313	1237.
.0320	123.	25.	11.	9.	-0.	-102.	.0129	.0058	-0.0105	.0115	.0001	.0001	.0263	.0263	311.
.0330	-405.	-369.	340.	282.	0.	336.	.0134	.0070	-0.0088	-0.0062	.0059	.0059	.0140	.0140	1335.
.0340	-870.	-661.	645.	535.	0.	722.	.0139	.0080	-0.0068	-0.0238	.0129	.0129	.0027	.0027	2733.
.0350	-1108.	-707.	818.	679.	0.	920.	.0151	.0085	-0.0056	-0.0364	.0189	.0189	-0.0042	-0.0042	3478.
.0360	-1212.	-710.	895.	742.	-0.	1006.	.0157	.0085	-0.0046	-0.0448	.0212	.0212	-0.0109	-0.0109	3803.
.0370	-1358.	-750.	960.	796.	-0.	1127.	.0150	.0080	-0.0034	-0.0510	.0188	.0188	-0.0197	-0.0197	4198.

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.24.

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	58	MEMBER	1	SEQUENCE	82	LOCATION	BEG	TYPE	VA	VA	DZ	RX	RY	RZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		

.0270	532.	117.	86.	-221.	-0.	-324.	.045	.0019	-.0063	.0176	.0053	.0315	1730.
.0300	532.	63.	-236.	-196.	-0.	-458.	.072	.0032	-.0083	.0192	.0010	.0303	1515.
.0310	453.	153.	-188.	-156.	-0.	-376.	.107	.0044	-.0104	.0203	-.0019	.0313	1237.
.0320	123.	25.	11.	9.	-0.	-102.	.0129	.0053	-.0105	.0115	.0001	.0263	311.
.0330	-407.	-383.	-749.	202.	0.	336.	.0134	.0070	-.0088	-.0062	.0059	.0140	1335.
.0340	-870.	-661.	645.	535.	0.	722.	.0139	.0080	-.0068	-.0238	.0129	.0027	2733.
.0350	-1103.	-707.	818.	679.	0.	920.	.0151	.0085	-.0056	-.0364	.0189	-.0042	3478.
.0360	-1212.	-710.	895.	742.	-0.	1026.	.0157	.0085	-.0046	-.0448	.0212	-.0109	3803.
.0370	-1358.	-750.	960.	796.	-0.	1127.	.0150	.0080	-.0034	-.0510	.0188	-.0197	4198.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.24.

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	58	MEMBER	1	SEQUENCE	82	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0380	-1545.	-705.	1009.	838.	-0.	1282.	.0131	.0069	-.0020	-.0545	.0129	-.0287	4659.		
.0390	-1540.	-549.	920.	763.	-0.	1278.	.0108	.0053	-.0012	-.0523	.0037	-.0363	4529.		
.0400	-1163.	-293.	610.	507.	-0.	956.	.0088	.0034	-.0017	-.0418	-.0084	-.0405	3317.		
.0410	-649.	138.	244.	202.	0.	539.	.0074	.0012	-.0023	-.0284	-.0177	-.0382	1750.		
.0420	-398.	463.	77.	64.	-0.	330.	.0051	-.0007	-.0005	-.0257	-.0163	-.0351	1023.		
.0430	-427.	379.	128.	106.	0.	354.	.0008	-.0024	.0041	-.0363	-.0052	-.0382	1125.		
.0440	-748.	145.	166.	138.	0.	289.	-.0037	-.0038	.0090	-.0475	.0093	-.0418	974.		
.0450	29.	242.	53.	44.	0.	-24.	-.0061	-.0050	.0120	-.0498	.0238	-.0364	152.		
.0460	439.	514.	-102.	-85.	0.	-355.	-.0077	-.0061	.0139	-.0464	.0356	-.0271	1139.		
.0470	571.	453.	-157.	-131.	0.	-474.	-.0111	-.0067	.0160	-.0424	.0404	-.0263	1495.		
.0480	488.	182.	-160.	-133.	-0.	-405.	-.0156	-.0071	.0173	-.0348	.0367	-.0317	1296.		
.0490	506.	212.	-275.	-229.	-0.	-420.	-.0185	-.0073	.0165	-.0167	.0270	-.0316	1454.		
.0500	739.	472.	-534.	-444.	-0.	-613.	-.0197	-.0073	.0134	.0108	.0135	-.0264	2302.		
.0510	914.	516.	-750.	-623.	-0.	-759.	-.0211	-.0070	.0104	.0366	.0002	-.0249	2986.		
.0520	741.	263.	-730.	-606.	-0.	-615.	-.0234	-.0064	.0096	.0495	-.0050	-.0278	2625.		
.0530	335.	-64.	-522.	-433.	0.	-278.	-.0254	-.0056	.0108	.0499	.0006	-.0292	1565.		
.0540	73.	-337.	-341.	-283.	0.	-60.	-.0261	-.0048	.0120	.0478	.0108	-.0261	881.		
.0550	64.	-516.	-277.	-230.	0.	-53.	-.0254	-.0043	.0123	.0485	.0200	-.0188	717.		
.0560	57.	-605.	-222.	-184.	-0.	-47.	-.0244	-.0042	.0125	.0481	.0283	-.0098	579.		
.0570	-125.	-715.	-108.	-89.	-0.	104.	-.0242	-.0045	.0132	.0446	.0333	-.0037	417.		
.0580	-323.	-865.	-38.	-32.	-0.	268.	-.0249	-.0054	.0131	.0446	.0296	-.0014	820.		
.0590	-280.	-811.	-151.	-126.	-0.	232.	-.0248	-.0069	.0112	.0529	.0175	.0033	804.		
.0600	25.	-419.	-431.	-358.	-0.	-21.	-.0231	-.0089	.0079	.0662	.0035	.0149	1091.		
.0610	373.	28.	-714.	-592.	-0.	-310.	-.0209	-.0112	.0048	.0759	-.0078	.0286	2034.		
.0620	546.	231.	-838.	-695.	-0.	-454.	-.0195	-.0134	.0036	.0744	-.0133	.0386	2525.		
.0630	560.	269.	-791.	-656.	-0.	-465.	-.0184	-.0155	.0044	.0600	-.0101	.0465	2446.		
.0640	621.	354.	-692.	-574.	0.	-516.	-.0163	-.0174	.0060	.0381	.0007	.0568	2348.		
.0650	826.	495.	-618.	-513.	-0.	-685.	-.0132	-.0190	.0072	.0150	.0129	.0681	2604.		
.0660	1009.	591.	-516.	-428.	-0.	-837.	-.0103	-.0202	.0082	-.0083	.0220	.0758	2860.		
.0670	999.	619.	-334.	-277.	-0.	-829.	-.0080	-.0210	.0089	-.0317	.0258	.0779	2658.		
.0680	862.	651.	-145.	-121.	-0.	-715.	-.0061	-.0214	.0085	-.0494	.0207	.0750	2207.		
.0690	768.	760.	-53.	-44.	-0.	-638.	-.0041	-.0212	.0059	-.0559	.0046	.0684	1945.		
.0700	745.	935.	-48.	-40.	0.	-618.	-.0020	-.0205	.0015	-.0537	-.0183	.0588	1884.		
.0710	680.	1074.	-28.	-23.	0.	-565.	.0001	-.0191	-.0030	-.0507	-.0404	.0462	1719.		
.0720	479.	1080.	105.	87.	0.	-397.	.0019	-.0169	-.0064	-.0530	-.0558	.0316	1237.		
.0730	143.	932.	379.	314.	0.	-119.	.0036	-.0139	-.0079	-.0633	-.0610	.0161	1022.		
.0740	-211.	665.	731.	607.	0.	175.	.0054	-.0104	-.0078	-.0801	-.0554	.0010	1921.		
.0750	-451.	364.	1059.	879.	0.	375.	.0076	-.0063	-.0071	-.0976	-.0429	-.0121	2905.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.24.

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	58	MEMBER	1	SEQUENCE	82	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		

.0670	999.	619.	-334.	-277.	0.	-829.	-.0010	-.0210	.0089	-.0317	.0258	.0779	2658.
.0680	862.	651.	-145.	-121.	0.	-715.	-.0061	-.0214	.0085	-.0494	.0207	.0750	2207.
.0690	768.	760.	-53.	-44.	0.	-638.	-.0041	-.0212	.0059	-.0559	.0046	.0684	1945.
.0700	745.	915.	-48.	-40.	0.	-618.	-.0010	-.0205	.0015	-.0537	-.0123	.0588	1884.
.0710	680.	1074.	-27.	-23.	0.	-565.	.0001	-.0191	-.0030	-.0507	-.0404	.0462	1719.
.0720	479.	1080.	105.	87.	0.	-397.	.0019	-.0169	-.0064	-.0530	-.0558	.0316	1237.
.0730	143.	932.	379.	314.	0.	-119.	.0036	-.0139	-.0079	-.0633	-.0310	.0161	1022.
.0740	-211.	665.	731.	607.	0.	175.	.0054	-.0104	-.0078	-.0801	-.0554	.0010	1921.
.0750	-451.	364.	1059.	879.	0.	375.	.0076	-.0063	-.0071	-.0976	-.0429	-.0121	2905.

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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	58	MEMBER	1	SEQUENCE	82	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0760	-582.	105.	1315.	1071.	0.	483.		.0102	-.0020	-.0065	-.1105	-.0285	-.0226	3630.	
.0770	-730.	-119.	1522.	1263.	0.	606.		.0123	.0023	-.0060	-.1175	-.0157	-.0328	4261.	
.0780	-927.	-348.	1658.	1376.	0.	770.		.0133	.0065	-.0061	-.1164	-.0085	-.0455	4795.	
.0790	-1054.	-493.	1635.	1357.	0.	875.		.0136	.0104	-.0075	-.1024	-.0098	-.0593	4912.	
.0800	-1041.	-450.	1427.	1134.	0.	864.		.0137	.0140	-.0104	-.0752	-.0176	-.0714	4459.	
.0810	-977.	-318.	1125.	934.	0.	811.		.0134	.0173	-.0135	-.0420	-.0265	-.0823	3763.	
.0820	-972.	-308.	844.	700.	0.	807.		.0120	.0203	-.0155	-.0107	-.0318	-.0941	3249.	
.0830	-1018.	-421.	625.	519.	0.	845.		.0102	.0230	-.0159	.0152	-.0298	-.1039	3016.	
.0840	-1034.	-508.	446.	370.	0.	858.		.0089	.0254	-.0146	.0351	-.0181	-.1068	2844.	
.0850	-944.	-551.	263.	218.	0.	784.		.0083	.0274	-.0123	.0502	.0013	-.1030	2474.	
.0860	-739.	-617.	48.	40.	0.	613.		.0079	.0290	-.0096	.0637	.0227	-.0956	1870.	
.0870	-500.	-661.	-190.	-157.	0.	415.		.0074	.0302	-.0071	.0780	.0422	-.0857	1350.	
.0880	-311.	-628.	-430.	-357.	0.	258.		.0069	.0309	-.0049	.0932	.0578	-.0740	1340.	
.0890	-154.	-564.	-692.	-574.	0.	128.		.0060	.0311	-.0035	.1105	.0670	-.0626	1789.	
.0900	40.	-479.	-998.	-828.	0.	-33.		.0049	.0309	-.0033	.1309	.0689	-.0519	2522.	
.0910	249.	-316.	-1302.	-1081.	0.	-206.		.0043	.0304	-.0038	.1508	.0675	-.0397	3347.	
.0920	367.	-145.	-1503.	-1248.	0.	-304.		.0038	.0296	-.0037	.1636	.0678	-.0265	3907.	
.0930	340.	-135.	-1539.	-1277.	0.	-282.		.0028	.0288	-.0025	.1653	.0710	-.0155	3979.	
.0940	228.	-275.	-1434.	-1190.	0.	-189.		.0016	.0278	-.0005	.1574	.0758	-.0068	3665.	
.0950	139.	-385.	-1265.	-1050.	0.	-115.		.0008	.0266	.0017	.1441	.0805	.0033	3214.	
.0960	123.	-391.	-1097.	-911.	0.	-102.		.0006	.0251	.0030	.1297	.0815	.0153	2788.	
.0970	140.	-369.	-943.	-783.	0.	-116.		.0005	.0233	.0033	.1169	.0749	.0264	2407.	
.0980	139.	-339.	-796.	-660.	0.	-115.		.0000	.0213	.0025	.1063	.0598	.0351	2039.	
.0990	159.	-230.	-678.	-562.	0.	-132.		-.0004	.0191	.0006	.0982	.0386	.0432	1757.	
.1000	289.	-29.	-620.	-514.	0.	-240.		-.0003	.0166	-.0023	.0928	.0137	.0522	1727.	
.1010	527.	198.	-591.	-491.	0.	-438.		.0004	.0142	-.0057	.0872	-.0111	.0619	2000.	
.1020	776.	378.	-512.	-425.	0.	-644.		.0015	.0120	-.0085	.0763	-.0309	.0716	2348.	
.1030	980.	479.	-346.	-287.	0.	-814.		.0031	.0100	-.0101	.0577	-.0436	.0812	2625.	
.1040	1182.	523.	-135.	-112.	0.	-981.		.0055	.0083	-.0110	.0345	-.0507	.0906	3003.	
.1050	1415.	574.	65.	54.	0.	-1174.		.0086	.0071	-.0118	.0104	-.0550	.0995	3576.	
.1060	1626.	650.	244.	203.	0.	-1350.		.0123	.0062	-.0129	-.0121	-.0586	.1056	4151.	
.1070	1712.	691.	423.	351.	0.	-1421.		.0159	.0059	-.0141	-.0324	-.0633	.1059	4452.	
.1080	1619.	639.	613.	509.	0.	-1344.		.0189	.0060	-.0154	-.0507	-.0692	.0982	4372.	
.1090	1384.	540.	798.	663.	0.	-1149.		.0217	.0066	-.0166	-.0664	-.0750	.0839	4034.	
.1100	1016.	512.	992.	823.	0.	-844.		.0245	.0076	-.0177	-.0791	-.0789	.0663	3585.	
.1110	540.	385.	1198.	994.	0.	-448.		.0268	.0089	-.0180	-.0917	-.0798	.0434	3317.	
.1120	-2.	116.	1406.	1167.	0.	2.		.0285	.0105	-.0173	-.1051	-.0773	.0153	3549.	
.1130	-528.	-84.	1575.	1307.	0.	438.		.0302	.0122	-.0161	-.1157	-.0728	-.0121	4194.	

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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

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

SECTION	58	MEMBER	1	SEQUENCE	82	LOCATION	BEG	TYPE	VA						
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.1050	1415.	574.	65.	54.	-0.	-1174.	.0086	.0071	-.0118	.0104	-.0550	.0995	3576.
.1060	1626.	650.	244.	203.	-0.	-1350.	.0123	.0062	-.0129	-.0121	-.0586	.1056	4151.
.1070	1712.	691.	423.	351.	-0.	-1421.	.0159	.0059	-.0141	-.0324	-.0633	.1059	4452.
.1080	1619.	639.	613.	509.	0.	-1344.	.0189	.0060	-.0154	-.0507	-.0692	.0982	4372.
.1090	1384.	540.	793.	663.	0.	-1149.	.0217	.0066	-.0166	-.0664	-.0750	.0839	4034.
.1100	1016.	512.	992.	823.	0.	-844.	.0245	.0076	-.0177	-.0791	-.0789	.0663	3585.
.1110	540.	385.	1198.	994.	0.	-448.	.0268	.0089	-.0180	-.0917	-.0798	.0434	3317.
.1120	-2.	116.	1406.	1167.	0.	2.	.0285	.0105	-.0173	-.1051	-.0773	.0153	3549.
.1130	-528.	-84.	1575.	1307.	-0.	438.	.0302	.0122	-.0161	-.1157	-.0728	-.0121	4194.

ADLPIPE PAGE 2269

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

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.24.

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

SECTION	56	MEMBER	1	SEQUENCE	82	LOCATION	BEG	TYPE	VA					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)		
.1140	-977.	-161.	1667.	1384.	-0.	811.	.0321	.0138	-.0151	-.1201	-.0592	-.0364		4879.
.1150	-1373.	-247.	1684.	1397.	-0.	1140.	.0336	.0152	-.0139	-.1189	-.0578	-.0599		5485.
.1160	-1745.	-342.	1639.	1360.	-0.	1449.	.0342	.0165	-.0123	-.1138	-.0675	-.0828		6045.
.1170	-2028.	-359.	1509.	1252.	-0.	1683.	.0341	.0175	-.0105	-.1039	-.0571	-.1030		6381.
.1180	-2142.	-263.	1272.	1056.	-0.	1778.	.0339	.0183	-.0090	-.0880	-.0561	-.1175		6289.
.1190	-2111.	-203.	972.	807.	0.	1752.	.0333	.0188	-.0067	-.0720	-.0598	-.1272		5868.
.1200	-1998.	-170.	681.	565.	-0.	1659.	.0324	.0192	-.0030	-.0608	-.0444	-.1304		5330.
.1210	-1787.	-70.	414.	343.	0.	1483.	.0318	.0195	.0018	-.0525	-.0217	-.1253		4630.
.1220	-1450.	-14.	153.	127.	-0.	1204.	.0311	.0197	.0071	-.0452	.0038	-.1149		3682.
.1230	-1043.	12.	-108.	-89.	-0.	866.	.0301	.0200	.0122	-.0369	.0280	-.1013		2648.
.1240	-640.	55.	-369.	-307.	-0.	531.	.0285	.0202	.0168	-.0260	.0472	-.0868		1865.
.1250	-235.	134.	-663.	-550.	-0.	195.	.0262	.0204	.0198	-.0087	.0561	-.0739		1776.
.1260	200.	274.	-1016.	-843.	-0.	-166.	.0238	.0208	.0206	.0178	.0527	-.0618		2615.
.1270	619.	440.	-1388.	-1152.	-0.	-514.	.0215	.0214	.0199	.0477	.0432	-.0496		3838.
.1280	942.	652.	-1691.	-1403.	0.	-782.	.0198	.0223	.0189	.0748	.0342	-.0357		4886.
.1290	1134.	744.	-1847.	-1533.	0.	-941.	.0183	.0237	.0182	.0942	.0288	-.0235		5473.
.1300	1206.	599.	-1832.	-1520.	0.	-1001.	.0167	.0256	.0184	.1030	.0284	-.0147		5537.
.1310	1166.	358.	-1654.	-1373.	0.	-968.	.0158	.0278	.0195	.1011	.0344	-.0058		5110.
.1320	1040.	82.	-1358.	-1127.	0.	-863.	.0157	.0303	.0214	.0894	.0451	.0035		4317.
.1330	891.	-199.	-1021.	-847.	-0.	-740.	.0160	.0329	.0228	.0750	.0528	.0114		3421.
.1340	763.	-457.	-719.	-596.	-0.	-633.	.0166	.0352	.0229	.0639	.0521	.0171		2645.
.1350	625.	-586.	-482.	-400.	-0.	-519.	.0177	.0372	.0214	.0580	.0438	.0224		1993.
.1360	432.	-576.	-298.	-248.	-0.	-359.	.0190	.0388	.0187	.0563	.0302	.0270		1326.
.1370	210.	-620.	-159.	-132.	-0.	-175.	.0197	.0400	.0155	.0563	.0130	.0266		665.
.1380	58.	-677.	-79.	-65.	0.	-48.	.0203	.0406	.0118	.0577	-.0043	.0247		247.
.1390	26.	-609.	-54.	-45.	0.	-22.	.0223	.0408	.0082	.0573	-.0154	.0284		152.
.1400	56.	-436.	-27.	-23.	0.	-46.	.0257	.0406	.0057	.0510	-.0169	.0392		157.
.1410	59.	-333.	59.	49.	0.	-49.	.0293	.0400	.0043	.0389	-.0124	.0517		211.
.1420	38.	-404.	182.	151.	0.	-32.	.0324	.0391	.0036	.0231	-.0066	.0614		471.
.1430	73.	-425.	254.	211.	-0.	-61.	.0358	.0380	.0026	.0099	-.0021	.0722		669.
.1440	168.	-285.	240.	199.	-0.	-140.	.0398	.0366	.0007	.0020	-.0010	.0850		739.
.1450	218.	-127.	191.	158.	-0.	-181.	.0432	.0350	-.0020	-.0015	-.0054	.0944		731.
.1460	144.	-54.	160.	133.	0.	-120.	.0454	.0332	-.0049	-.0022	-.0149	.0978		545.
.1470	-9.	-19.	142.	118.	0.	7.	.0471	.0315	-.0076	-.0030	-.0248	.0981		360.
.1480	-173.	99.	132.	110.	0.	144.	.0488	.0297	-.0101	-.0045	-.0318	.0995		550.
.1490	-362.	146.	182.	151.	0.	300.	.0499	.0280	-.0115	-.0104	-.0351	.0983		1022.
.1500	-625.	-28.	346.	287.	0.	519.	.0495	.0264	-.0113	-.0239	-.0345	.0914		1805.
.1510	-957.	-267.	610.	507.	0.	794.	.0482	.0247	-.0093	-.0446	-.0290	.0828		2865.

ADLPIPE PAGE 2270

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

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.24.

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

SECTION 56 MEMBER 1 SEQUENCE 82 LOCATION BEG TYPE VA

.1440	73.	-425.	240.	211.	-0.	-140.	.0398	.0366	.0007	.0026	.0099	-.0021	.0722	669.
.1450	168.	-285.	191.	152.	-0.	-131.	.0432	.0350	-.0020	-.0015	-.0054	-.0054	.0944	721.
.1460	144.	-54.	160.	133.	0.	-120.	.0454	.0332	-.0049	-.0022	-.0149	-.0149	.0978	545.
.1470	-9.	-19.	142.	110.	0.	7.	.0471	.0315	-.0076	-.0030	-.0248	-.0248	.0981	360.
.1480	-173.	99.	132.	110.	0.	144.	.0488	.0297	-.0101	-.0045	-.0318	-.0318	.0995	550.
.1490	-362.	146.	182.	151.	0.	300.	.0499	.0280	-.0115	-.0104	-.0351	-.0351	.0983	1022.
.1500	-625.	-28.	346.	287.	0.	519.	.0495	.0264	-.0113	-.0239	-.0345	-.0345	.0914	1805.
.1510	-957.	-267.	610.	507.	0.	794.	.0482	.0247	-.0093	-.0446	-.0290	-.0290	.0828	2865.

ADLPIPE PAGE 2270

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.24.

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	58	MEMBER	1	SEQUENCE	82	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1520	-1285.	-432.	906.	752.	0.	1066.	.0463	.0229	-.0059	-.0696	-.0198	.0747	3969.		
.1530	-1529.	-524.	1156.	959.	0.	1269.	.0431	.0207	-.0023	-.0931	-.0124	.0641	4838.		
.1540	-1649.	-622.	1301.	1080.	0.	1369.	.0381	.0181	.0009	-.1108	-.0110	.0478	5303.		
.1550	-1675.	-622.	1333.	1106.	0.	1390.	.0317	.0151	.0036	-.1213	-.0144	.0288	5404.		
.1560	-1677.	-435.	1288.	1069.	0.	1392.	.0242	.0117	.0061	-.1263	-.0196	.0101	5339.		
.1570	-1652.	-262.	1197.	993.	0.	1371.	.0149	.0080	.0091	-.1290	-.0256	-.0119	5151.		
.1580	-1494.	-119.	1032.	856.	0.	1240.	.0043	.0041	.0122	-.1285	-.0323	-.0364	4583.		
.1590	-1142.	161.	784.	651.	0.	948.	-.0063	.0001	.0153	-.1250	-.0365	-.0570	3498.		
.1600	-699.	529.	523.	434.	-0.	580.	-.0166	-.0037	.0191	-.1231	-.0346	-.0731	2204.		
.1610	-285.	751.	318.	264.	-0.	236.	-.0276	-.0071	.0240	-.1241	-.0287	-.0900	1078.		
.1620	103.	813.	153.	127.	-0.	-85.	-.0389	-.0099	.0290	-.1243	-.0221	-.1079	464.		
.1630	536.	891.	-48.	-40.	-0.	-445.	-.0493	-.0122	.0333	-.1201	-.0143	-.1218	1360.		
.1640	1033.	1105.	-320.	-266.	-0.	-857.	-.0579	-.0137	.0361	-.1090	-.0054	-.1285	2730.		
.1650	1498.	1296.	-620.	-515.	-0.	-1243.	-.0653	-.0145	.0374	-.0909	.0019	-.1328	4094.		
.1660	1833.	1289.	-885.	-735.	-0.	-1522.	-.0722	-.0143	.0376	-.0692	.0076	-.1387	5140.		
.1670	2044.	1225.	-1111.	-922.	-0.	-1697.	-.0775	-.0132	.0366	-.0439	.0131	-.1421	5874.		
.1680	2185.	1176.	-1314.	-1090.	-0.	-1813.	-.0804	-.0112	.0342	-.0152	.0191	-.1400	6437.		
.1690	2240.	1054.	-1469.	-1220.	-0.	-1859.	-.0814	-.0084	.0305	.0156	.0237	-.1346	6763.		
.1700	2145.	762.	-1535.	-1274.	-0.	-1781.	-.0810	-.0048	.0261	.0457	.0264	-.1288	6660.		
.1710	1902.	368.	-1518.	-1260.	-0.	-1579.	-.0791	-.0008	.0211	.0736	.0284	-.1211	6145.		
.1720	1567.	51.	-1463.	-1214.	-0.	-1301.	-.0750	.0035	.0151	.1016	.0292	-.1079	5412.		
.1730	1158.	-270.	-1379.	-1144.	-0.	-961.	-.0697	.0077	.0084	.1278	.0287	-.0929	4545.		
.1740	670.	-657.	-1255.	-1041.	-0.	-556.	-.0639	.0117	.0015	.1501	.0270	-.0788	3590.		
.1750	131.	-1033.	-1095.	-909.	-0.	-108.	-.0577	.0152	-.0054	.1675	.0253	-.0638	2784.		
.1760	-409.	-1338.	-910.	-755.	0.	339.	-.0509	.0179	-.0117	.1775	.0255	-.0459	2519.		
.1770	-896.	-1544.	-705.	-585.	-0.	743.	-.0438	.0196	-.0172	.1794	.0273	-.0249	2878.		
.1780	-1274.	-1712.	-489.	-406.	0.	1057.	-.0370	.0201	-.0216	.1723	.0295	-.0031	3445.		
.1790	-1510.	-1773.	-280.	-233.	-0.	1253.	-.0306	.0194	-.0250	.1573	.0313	.0204	3877.		
.1800	-1627.	-1681.	-74.	-62.	-0.	1350.	-.0247	.0174	-.0271	.1342	.0337	.0457	4112.		
.1810	-1660.	-1535.	136.	113.	-0.	1378.	-.0203	.0141	-.0278	.1026	.0358	.0685	4206.		
.1820	-1602.	-1333.	331.	275.	-0.	1329.	-.0176	.0098	-.0275	.0665	.0355	.0871	4130.		
.1830	-1436.	-1040.	487.	404.	0.	1192.	-.0164	.0046	-.0266	.0278	.0332	.1021	3829.		
.1840	-1187.	-617.	607.	503.	0.	985.	-.0165	-.0014	-.0251	-.0130	.0309	.1149	3366.		
.1850	-894.	-145.	714.	593.	0.	742.	-.0180	-.0078	-.0228	-.0553	.0283	.1236	2888.		
.1860	-566.	261.	824.	684.	0.	470.	-.0212	-.0142	-.0200	-.0978	.0244	.1258	2524.		
.1870	-197.	657.	930.	772.	0.	163.	-.0255	-.0204	-.0169	-.1379	.0191	.1237	2401.		
.1880	201.	1054.	1032.	856.	0.	-167.	-.0302	-.0261	-.0137	-.1748	.0133	.1188	2654.		
.1890	589.	1394.	1134.	942.	-0.	-489.	-.0354	-.0309	-.0107	-.2066	.0061	.1101	3227.		

ADLPIPE PAGE 2271

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.24.

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	58	MEMBER	1	SEQUENCE	82	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		



.1810	-1660.	-1575.	136.	113.	-0.	1378.	-.203	.0141	-.0278	.1026	.0358	.0685	4206.
.1820	-1602.	-1333.	331.	275.	-0.	1329.	-.176	.0098	-.0275	.0665	.0355	.0871	4130.
.1830	-1436.	-1040.	487.	404.	0.	1192.	-.164	.0046	-.0266	.0278	.0332	.1021	3829.
.1840	-1187.	-617.	607.	503.	0.	985.	-.0165	-.0014	-.0251	-.0130	.0309	.1149	3366.
.1850	-894.	-145.	714.	593.	0.	742.	-.0180	-.0078	-.0228	-.0553	.0283	.1236	2888.
.1860	-566.	261.	824.	684.	0.	470.	-.0212	-.0142	-.0200	-.0978	.0244	.1258	2524.
.1870	-197.	657.	930.	772.	0.	163.	-.0255	-.0204	-.0169	-.1379	.0191	.1237	2401.
.1880	201.	1054.	1032.	856.	0.	-167.	-.0302	-.0261	-.0137	-.1748	.0133	.1188	2654.
.1890	589.	1394.	1134.	942.	-0.	-489.	-.0354	-.0309	-.0107	-.2066	.0061	.1101	3227.

ADLPIPE PAGE 2271

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.24.

S/RV PIPING KEWAUNEE GKW03F 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	58	MEMBER	1	SEQUENCE	82	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1900	935.	1617.	1238.	1027.	-0.	-776.	-.0412	-.0347	-.0080	-.2312	-.0035	.0961	3917.		
.1910	1235.	1737.	1322.	1097.	-0.	-1025.	-.0470	-.0374	-.0059	-.2472	-.0141	.0782	4567.		
.1920	1482.	1832.	1371.	1138.	-0.	-1230.	-.0522	-.0387	-.0047	-.2532	-.0239	.0592	5098.		
.1930	1631.	1833.	1404.	1166.	-0.	-1354.	-.0569	-.0388	-.0042	-.2500	-.0316	.0382	5435.		
.1940	1627.	1642.	1456.	1209.	-0.	-1350.	-.0613	-.0375	-.0037	-.2398	-.0361	.0134	5513.		
.1950	1483.	1291.	1522.	1263.	0.	-1231.	-.0653	-.0351	-.0033	-.2234	-.0366	-.0138	5366.		
.1960	1266.	886.	1563.	1297.	-0.	-1050.	-.0682	-.0318	-.0030	-.2001	-.0331	-.0399	5077.		
.1970	1010.	460.	1554.	1289.	-0.	-839.	-.0699	-.0279	-.0029	-.1697	-.0271	-.0640	4679.		
.1980	713.	-9.	1489.	1236.	-0.	-592.	-.0709	-.0237	-.0030	-.1327	-.0208	-.0874	4167.		
.1990	380.	-485.	1351.	1121.	-0.	-315.	-.0713	-.0196	-.0034	-.0890	-.0157	-.1096	3542.		
.2000	54.	-882.	1107.	918.	-0.	-45.	-.0709	-.0159	-.0042	-.0387	-.0119	-.1289	2797.		
.2010	-222.	-1158.	740.	614.	-0.	184.	-.0697	-.0128	-.0054	.0168	-.0091	-.1441	1951.		
.2020	-435.	-1332.	272.	225.	-0.	361.	-.0678	-.0107	-.0067	.0743	-.0063	-.1556	1294.		
.2030	-596.	-1423.	-255.	-212.	-0.	494.	-.0655	-.0095	-.0077	.1294	-.0017	-.1630	1636.		
.2040	-712.	-1423.	-794.	-659.	-0.	591.	-.0626	-.0094	-.0076	.1774	.0071	-.1649	2693.		
.2050	-773.	-1341.	-1310.	-1087.	0.	641.	-.0592	-.0103	-.0065	.2155	.0200	-.1611	3839.		
.2060	-760.	-1205.	-1781.	-1478.	0.	631.	-.0552	-.0121	-.0044	.2427	.0351	-.1525	4889.		
.2070	-680.	-1025.	-2190.	-1817.	-0.	565.	-.0510	-.0149	-.0016	.2587	.0499	-.1398	5789.		
.2080	-563.	-782.	-2519.	-2091.	-0.	467.	-.0466	-.0184	.0017	.2639	.0627	-.1236	6517.		
.2090	-437.	-480.	-2759.	-2290.	-0.	362.	-.0422	-.0224	.0049	.2593	.0713	-.1048	7053.		
.2100	-311.	-146.	-2908.	-2414.	-0.	258.	-.0379	-.0267	.0077	.2467	.0739	-.0855	7384.		
.2110	-190.	199.	-2962.	-2458.	-0.	158.	-.0339	-.0311	.0098	.2271	.0702	-.0664	7494.		
.2120	-92.	548.	-2904.	-2410.	0.	76.	-.0301	-.0353	.0112	.2004	.0619	-.0472	7335.		
.2130	-44.	853.	-2704.	-2244.	-0.	36.	-.0265	-.0390	.0123	.1654	.0512	-.0283	6827.		
.2140	-52.	1055.	-2342.	-1944.	0.	43.	-.0232	-.0422	.0133	.1219	.0393	-.0103	5915.		
.2150	-84.	1151.	-1834.	-1522.	0.	70.	-.0200	-.0445	.0143	.0708	.0273	.0074	4634.		
.2160	-99.	1188.	-1216.	-1009.	0.	82.	-.0167	-.0460	.0152	.0148	.0157	.0260	3080.		
.2170	-87.	1182.	-526.	-437.	0.	72.	-.0133	-.0467	.0157	-.0431	.0039	.0451	1346.		
.2180	-67.	1103.	204.	169.	-0.	56.	-.0102	-.0464	.0157	-.0994	-.0092	.0628	541.		
.2190	-38.	960.	924.	767.	-0.	31.	-.0075	-.0454	.0151	-.1507	-.0242	.0779	2334.		
.2200	35.	821.	1570.	1303.	-0.	-29.	-.0051	-.0437	.0136	-.1930	-.0411	.0913	3964.		
.2210	176.	733.	2097.	1740.	-0.	-146.	-.0027	-.0415	.0110	-.2241	-.0587	.1037	5313.		
.2220	367.	666.	2500.	2075.	0.	-305.	-.0002	-.0386	.0079	-.2442	-.0754	.1144	6379.		
.2230	575.	579.	2793.	2318.	0.	-477.	.0021	-.0354	.0047	-.2547	-.0891	.1226	7200.		
.2240	784.	471.	2983.	2476.	0.	-651.	.0044	-.0317	.0019	-.2568	-.0978	.1284	7788.		
.2250	999.	360.	3064.	2543.	0.	-829.	.0070	-.0277	-.0003	-.2508	-.1008	.1322	8137.		
.2260	1207.	239.	3033.	2517.	-0.	-1002.	.0099	-.0235	-.0019	-.2368	-.0984	.1334	8241.		
.2270	1371.	102.	2891.	2400.	-0.	-1138.	.0129	-.0191	-.0030	-.2146	-.0918	.1309	8080.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.24.

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	58	MEMBER	1	SEQUENCE	82	LOCATION	BEG	TYPE	VA						
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