

50-305

RESPONSE TO NUREG-0737 ITEM II.D.1

Docket # *50-305*

Control # *8403280048*

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

.2620	-297.	2204.	211.	625.	183.	1404.	.502	-.0133	.0826	-.0510	-.0178	.0054	621.
.2630	-324.	2195.	-157.	1379.	215.	1633.	.487	-.0152	.0817	-.0458	-.0211	.0048	861.
.2640	-342.	2124.	-91.	2161.	254.	1776.	.0480	-.0171	.0811	-.0407	-.0284	.0039	1117.
.2650	-348.	2054.	-28.	2920.	302.	1712.	.0482	-.0191	.0806	-.0356	-.0358	.0028	1364.
.2660	-342.	1942.	24.	3607.	357.	1564.	.0491	-.0211	.0800	-.0308	-.0430	.0014	1584.
.2670	-322.	1776.	64.	4201.	419.	1303.	.0509	-.0230	.0790	-.0262	-.0497	-.0003	1773.
.2680	-304.	1327.	95.	4699.	489.	948.	.0534	-.0248	.0774	-.0219	-.0559	-.0023	1934.
.2690	-279.	1134.	125.	5093.	569.	520.	.0564	-.0266	.0751	-.0180	-.0616	-.0045	2067.
.2700	-250.	1156.	136.	5370.	659.	28.	.0599	-.0282	.0721	-.0143	-.0670	-.0068	2171.
.2710	-214.	1202.	129.	5531.	753.	-516.	.0637	-.0292	.0682	-.0106	-.0719	-.0090	2249.
.2720	-170.	762.	114.	5599.	844.	-1098.	.0676	-.0302	.0635	-.0071	-.0757	-.0110	2315.
.2730	-110.	-76.	94.	5593.	927.	-1699.	.0714	-.0306	.0579	-.0036	-.0783	-.0127	2375.

ADLPIPE PAGE 1425

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.27.39.

S/RV PIPING KEWAUNEE GKW0RF 2 RUP DISK  
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	DX	DY	DZ	RX	RY	RZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.2740	-59.	-538.	65.	5511.	1001.	-2298.	.0751	-.0308	.0514	.0000	-.0801	-.0139	2430.
.2750	2.	-403.	31.	5366.	1061.	-2862.	.0783	-.0309	.0441	.0037	-.0311	-.0147	2478.
.2760	54.	-350.	5.	5184.	1101.	-3354.	.0810	-.0309	.0360	.0073	-.0809	-.0150	2517.
.2770	89.	-797.	-10.	4960.	1119.	-3748.	.0830	-.0309	.0272	.0108	-.0797	-.0149	2535.
.2780	102.	-1186.	-32.	4652.	1117.	-4026.	.0842	-.0308	.0176	.0143	-.0780	-.0145	2509.
.2790	92.	-986.	-79.	4219.	1091.	-4189.	.0846	-.0306	.0072	.0179	-.0760	-.0138	2426.
.2800	76.	-692.	-154.	3651.	1037.	-4270.	.0842	-.0303	-.0039	.0216	-.0738	-.0126	2293.
.2810	68.	-950.	-251.	2963.	954.	-4311.	.0831	-.0298	-.0156	.0251	-.0717	-.0110	2134.
.2820	73.	-1439.	-365.	2180.	844.	-4319.	.0811	-.0292	-.0278	.0283	-.0698	-.0090	1971.
.2830	81.	-1436.	-485.	1337.	712.	-4277.	.0784	-.0286	-.0401	.0311	-.0679	-.0067	1821.
.2840	92.	-997.	-598.	482.	561.	-4176.	.0751	-.0279	-.0525	.0333	-.0657	-.0043	1702.
.2850	109.	-757.	-689.	-339.	395.	-4009.	.0710	-.0272	-.0647	.0349	-.0634	-.0017	1622.
.2860	118.	-834.	-753.	-1099.	215.	-3742.	.0663	-.0262	-.0765	.0357	-.0608	.0007	1567.
.2870	107.	-773.	-802.	-1805.	27.	-3337.	.0610	-.0250	-.0877	.0361	-.0583	.0028	1523.
.2880	71.	-434.	-847.	-2468.	-162.	-2785.	.0551	-.0235	-.0983	.0361	-.0560	.0044	1495.
.2890	15.	-153.	-893.	-3081.	-342.	-2103.	.0489	-.0217	-.1079	.0361	-.0545	.0056	1503.
.2900	-55.	-77.	-937.	-3622.	-503.	-1315.	.0425	-.0197	-.1166	.0360	-.0540	.0064	1559.
.2910	-137.	-6.	-972.	-4060.	-637.	-453.	.0361	-.0173	-.1241	.0359	-.0548	.0068	1659.
.2920	-224.	143.	-987.	-4367.	-740.	438.	.0299	-.0148	-.1304	.0357	-.0568	.0068	1786.
.2930	-306.	273.	-974.	-4520.	-811.	1310.	.0242	-.0122	-.1354	.0355	-.0594	.0065	1916.
.2940	-379.	412.	-931.	-4527.	-855.	2117.	.0192	-.0097	-.1391	.0352	-.0621	.0061	2034.
.2950	-443.	642.	-866.	-4415.	-877.	2825.	.0151	-.0070	-.1416	.0349	-.0639	.0054	2133.
.2960	-496.	798.	-784.	-4224.	-888.	3402.	.0120	-.0045	-.1431	.0346	-.0641	.0046	2205.
.2970	-534.	711.	-697.	-3996.	-888.	3812.	.0101	-.0020	-.1435	.0344	-.0619	.0036	2245.
.2980	-549.	581.	-615.	-3781.	-879.	4019.	.0095	.0001	-.1432	.0343	-.0575	.0027	2242.
.2990	-535.	665.	-545.	-3607.	-859.	3999.	.0103	.0018	-.1423	.0344	-.0513	.0020	2189.
.3000	-488.	815.	-481.	-3474.	-833.	3743.	.0123	.0030	-.1408	.0343	-.0435	.0015	2076.
.3010	-405.	727.	-413.	-3370.	-802.	3257.	.0155	.0036	-.1388	.0341	-.0348	.0014	1908.
.3020	-290.	512.	-340.	-3297.	-766.	2573.	.0196	.0036	-.1365	.0336	-.0258	.0016	1706.
.3030	-158.	512.	-268.	-3265.	-726.	1753.	.0245	.0030	-.1338	.0329	-.0170	.0021	1515.
.3040	-25.	669.	-202.	-3278.	-687.	869.	.0298	.0018	-.1309	.0321	-.0084	.0027	1388.
.3050	97.	630.	-143.	-3333.	-654.	-16.	.0353	.0001	-.1278	.0313	.0003	.0033	1363.
.3060	197.	363.	-97.	-3422.	-631.	-851.	.0407	-.0021	-.1245	.0306	.0089	.0039	1438.
.3070	272.	193.	-67.	-3530.	-617.	-1604.	.0458	-.0047	-.1210	.0301	.0170	.0043	1575.
.3080	329.	260.	-45.	-3618.	-613.	-2266.	.0504	-.0078	-.1172	.0298	.0244	.0047	1731.
.3090	377.	359.	-20.	-3639.	-618.	-2851.	.0543	-.0111	-.1131	.0296	.0306	.0050	1872.
.3100	426.	357.	18.	-3555.	-628.	-3370.	.0574	-.0144	-.1088	.0294	.0353	.0055	1982.
.3110	476.	343.	71.	-3353.	-642.	-3815.	.0597	-.0177	-.1042	.0293	.0381	.0061	2054.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.27.39.

S/RV PIPING KEWAUNEE GKW0RF 2 RUP DISK  
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

.3010	-405.	727.	-413.	-3370.	-802.	3257.	.0155	.0036	-.1388	.0341	-.0348	.0014	1908.
.3020	-290.	512.	-340.	-3297.	-766.	2573.	.0196	.0036	-.1365	.0336	-.0258	.0016	1706.
.3030	-158.	512.	-268.	-3265.	-726.	1753.	.0245	.0030	-.1338	.0329	-.0170	.0021	1515.
.3040	-25.	669.	-702.	-3278.	-697.	669.	.0298	.0018	-.1309	.0321	-.0384	.0027	1388.
.3050	97.	630.	-147.	-3333.	-654.	-16.	.0353	.0001	-.1278	.0313	.0003	.0033	1363.
.3060	197.	363.	-97.	-3422.	-631.	-851.	.0407	-.0021	-.1245	.0306	.0089	.0039	1438.
.3070	272.	193.	-67.	-3570.	-617.	-1604.	.0458	-.0047	-.1210	.0301	.0170	.0043	1575.
.3080	329.	260.	-45.	-3618.	-613.	-2266.	.0504	-.0078	-.1172	.0298	.0244	.0047	1731.
.3090	377.	359.	-20.	-3639.	-618.	-2851.	.0543	-.0111	-.1131	.0296	.0306	.0050	1872.
.3100	416.	357.	10.	-3559.	-625.	-3370.	.0574	-.0144	-.1088	.0294	.0353	.0055	1982.
.3110	476.	343.	71.	-3353.	-642.	-3815.	.0597	-.0177	-.1042	.0293	.0381	.0061	2054.

ADLPIPE PAGE 1426

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.27.39.

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	33	MEMBER	1	SEQUENCE	816	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)		
.3120	519.	369.	135.	-3045.	-655.	-4168.	.0609	-.0207	-.0994	.0293	.0391	.0066	2088.		
.3130	549.	374.	203.	-2663.	-669.	-4405.	.0611	-.0233	-.0946	.0294	.0386	.0071	2083.		
.3140	559.	363.	260.	-2252.	-683.	-4510.	.0601	-.0254	-.0898	.0297	.0368	.0074	2041.		
.3150	547.	405.	296.	-1861.	-695.	-4478.	.0580	-.0270	-.0853	.0303	.0338	.0076	1966.		
.3160	515.	451.	308.	-1514.	-707.	-4313.	.0547	-.0279	-.0811	.0311	.0302	.0076	1856.		
.3170	467.	421.	304.	-1215.	-715.	-4032.	.0503	-.0281	-.0773	.0318	.0261	.0077	1714.		
.3180	411.	392.	292.	-963.	-714.	-3660.	.0450	-.0277	-.0741	.0325	.0216	.0079	1546.		
.3190	357.	454.	276.	-762.	-702.	-3225.	.0387	-.0267	-.0714	.0329	.0165	.0083	1359.		
.3200	310.	471.	260.	-616.	-680.	-2746.	.0317	-.0251	-.0692	.0329	.0110	.0090	1162.		
.3210	271.	248.	243.	-538.	-650.	-2230.	.0241	-.0230	-.0676	.0327	.0054	.0101	957.		
.3220	236.	-113.	216.	-553.	-614.	-1674.	.0159	-.0205	-.0666	.0322	.0002	.0114	749.		
.3230	198.	-342.	167.	-686.	-573.	-1071.	.0074	-.0178	-.0662	.0318	-.0045	.0129	560.		
.3240	155.	-435.	94.	-937.	-530.	-420.	-.0014	-.0152	-.0662	.0313	-.0082	.0145	464.		
.3250	106.	-603.	3.	-1276.	-486.	268.	-.0103	-.0128	-.0665	.0310	-.0106	.0159	558.		
.3260	52.	-873.	-91.	-1656.	-443.	976.	-.0191	-.0107	-.0669	.0305	-.0119	.0172	792.		
.3270	-7.	-1009.	-175.	-2022.	-398.	1686.	-.0276	-.0091	-.0674	.0300	-.0124	.0182	1068.		
.3280	-70.	-915.	-233.	-2322.	-355.	2373.	-.0357	-.0081	-.0676	.0292	-.0124	.0188	1340.		
.3290	-131.	-799.	-258.	-2526.	-314.	3002.	-.0431	-.0079	-.0676	.0280	-.0119	.0189	1580.		
.3300	-181.	-809.	-253.	-2640.	-277.	3537.	-.0496	-.0085	-.0672	.0266	-.0111	.0184	1775.		
.3310	-222.	-821.	-231.	-2690.	-243.	3959.	-.0552	-.0099	-.0665	.0250	-.0101	.0174	1923.		
.3320	-257.	-665.	-204.	-2710.	-214.	4263.	-.0597	-.0121	-.0654	.0233	-.0087	.0156	2029.		
.3330	-287.	-394.	-183.	-2730.	-190.	4443.	-.0631	-.0152	-.0640	.0215	-.0066	.0131	2094.		
.3340	-309.	-172.	-172.	-2766.	-173.	4487.	-.0653	-.0190	-.0623	.0198	-.0039	.0099	2116.		
.3350	-320.	-2.	-172.	-2817.	-161.	4390.	-.0664	-.0234	-.0602	.0181	-.0007	.0062	2094.		
.3360	-319.	195.	-174.	-2863.	-153.	4157.	-.0665	-.0281	-.0578	.0163	.0029	.0020	2026.		
.3370	-306.	400.	-168.	-2874.	-150.	3798.	-.0656	-.0330	-.0550	.0143	.0068	-.0023	1912.		
.3380	-279.	541.	-146.	-2826.	-147.	3327.	-.0638	-.0378	-.0519	.0121	.0110	-.0067	1753.		
.3390	-239.	616.	-108.	-2715.	-143.	2768.	-.0615	-.0425	-.0482	.0098	.0155	-.0111	1557.		
.3400	-190.	681.	-60.	-2546.	-137.	2156.	-.0586	-.0467	-.0442	.0075	.0205	-.0151	1340.		
.3410	-138.	750.	-8.	-2328.	-129.	1531.	-.0556	-.0505	-.0398	.0054	.0261	-.0188	1119.		
.3420	-91.	807.	46.	-2066.	-118.	932.	-.0525	-.0536	-.0351	.0036	.0322	-.0222	911.		
.3430	-50.	862.	98.	-1766.	-103.	382.	-.0496	-.0559	-.0301	.0023	.0387	-.0251	726.		
.3440	-12.	923.	145.	-1431.	-83.	-107.	-.0470	-.0575	-.0249	.0014	.0454	-.0275	577.		
.3450	25.	960.	189.	-1059.	-58.	-534.	-.0449	-.0582	-.0196	.0010	.0521	-.0293	477.		
.3460	64.	924.	234.	-645.	-26.	-894.	-.0433	-.0580	-.0143	.0012	.0586	-.0305	442.		
.3470	105.	839.	280.	-191.	12.	-1185.	-.0423	-.0572	-.0090	.0017	.0647	-.0312	482.		
.3480	149.	779.	324.	285.	57.	-1402.	-.0421	-.0557	-.0040	.0026	.0700	-.0314	574.		
.3490	191.	759.	362.	759.	105.	-1535.	-.0426	-.0538	.0007	.0038	.0746	-.0313	688.		

ADLPIPE PAGE 1427

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.09.

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

CONDITION 24

LOADS

SHOCK

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ENGLISH UNITS

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

.3390	-239.	616.	-108.	-2715.	-147.	2768.	-.615	-.0425	-.0482	.0098	.0155	-.0111	1557.
.3400	-190.	681.	-60.	-2546.	-137.	2156.	-.586	-.0467	-.0442	.0075	.0205	-.0151	1340.
.3410	-138.	750.	-8.	-2328.	-129.	1531.	-.0556	-.0505	-.0398	.0054	.0261	-.0188	1119.
.3420	-91.	807.	46.	-2066.	-118.	932.	-.0525	-.0536	-.0351	.0036	.0322	-.0222	911.
.3430	-50.	862.	98.	-1766.	-107.	357.	-.0496	-.0559	-.0301	.0023	.0387	-.0251	726.
.3440	-10.	923.	145.	-1471.	-93.	-107.	-.0470	-.0575	-.0249	.0014	.0454	-.0275	577.
.3450	25.	960.	189.	-1059.	-58.	-534.	-.0449	-.0582	-.0196	.0010	.0521	-.0293	477.
.3460	64.	924.	234.	-645.	-26.	-894.	-.0433	-.0580	-.0143	.0012	.0586	-.0305	442.
.3470	105.	839.	280.	-191.	12.	-1185.	-.0423	-.0572	-.0090	.0017	.0647	-.0312	482.
.3480	149.	779.	324.	285.	57.	-1432.	-.0421	-.0557	-.0040	.0026	.0700	-.0314	574.
.3490	191.	759.	362.	759.	105.	-1535.	-.0426	-.0538	.0007	.0038	.0746	-.0313	688.

ADLPIPE PAGE 1427

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

ADLPIPE STRESS ANALYSIS

83/12/02. 18.28.09.

CONDITION 24  
LOADS  
SHOCK  
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ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	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)
.3500	228.	718.	389.	1205.	154.	-1572.	-.0439	-.0514	.0049	.0053	.0784	-.0310	797.							
.3510	251.	622.	401.	1601.	201.	-1490.	-.0461	-.0488	.0085	.0068	.0812	-.0307	884.							
.3520	255.	519.	401.	1934.	244.	-1300.	-.0490	-.0460	.0114	.0084	.0831	-.0305	940.							
.3530	234.	449.	392.	2194.	282.	-979.	-.0528	-.0432	.0134	.0097	.0838	-.0304	971.							
.3540	193.	383.	373.	2374.	313.	-549.	-.0572	-.0405	.0146	.0107	.0832	-.0306	986.							
.3550	134.	279.	348.	2468.	336.	-30.	-.0622	-.0378	.0149	.0114	.0812	-.0310	1000.							
.3560	60.	155.	318.	2475.	349.	554.	-.0677	-.0353	.0143	.0115	.0779	-.0315	1027.							
.3570	-27.	78.	282.	2390.	352.	1182.	-.0734	-.0331	.0128	.0112	.0733	-.0321	1079.							
.3580	-121.	81.	239.	2211.	344.	1825.	-.0791	-.0311	.0106	.0105	.0678	-.0328	1159.							
.3590	-216.	134.	186.	1938.	322.	2453.	-.0848	-.0294	.0076	.0095	.0615	-.0334	1261.							
.3600	-310.	174.	123.	1582.	289.	3040.	-.0901	-.0278	.0040	.0083	.0547	-.0340	1380.							
.3610	-398.	171.	56.	1161.	244.	3565.	-.0950	-.0263	-.0001	.0070	.0475	-.0345	1508.							
.3620	-481.	140.	-14.	700.	190.	4010.	-.0992	-.0249	-.0044	.0058	.0402	-.0348	1635.							
.3630	-552.	113.	-83.	219.	132.	4351.	-.1026	-.0234	-.0089	.0046	.0325	-.0349	1749.							
.3640	-607.	115.	-153.	-268.	72.	4568.	-.1051	-.0219	-.0132	.0037	.0244	-.0348	1836.							
.3650	-641.	120.	-225.	-745.	15.	4644.	-.1067	-.0202	-.0174	.0032	.0160	-.0345	1887.							
.3660	-654.	83.	-298.	-1194.	-37.	4577.	-.1072	-.0183	-.0211	.0030	.0075	-.0339	1898.							
.3670	-646.	-0.	-373.	-1602.	-79.	4368.	-.1066	-.0162	-.0243	.0033	-.0010	-.0331	1867.							
.3680	-617.	-75.	-447.	-1951.	-110.	4030.	-.1051	-.0139	-.0269	.0040	-.0093	-.0322	1797.							
.3690	-572.	-92.	-517.	-2224.	-131.	3583.	-.1027	-.0113	-.0286	.0051	-.0169	-.0311	1693.							
.3700	-514.	-107.	-575.	-2398.	-141.	3055.	-.0995	-.0085	-.0295	.0063	-.0237	-.0300	1560.							
.3710	-449.	-211.	-615.	-2455.	-142.	2477.	-.0956	-.0055	-.0294	.0075	-.0294	-.0290	1400.							
.3720	-380.	-394.	-631.	-2386.	-133.	1880.	-.0913	-.0025	-.0284	.0087	-.0340	-.0281	1220.							
.3730	-312.	-535.	-625.	-2200.	-110.	1298.	-.0867	.0004	-.0265	.0095	-.0375	-.0272	1026.							
.3740	-250.	-547.	-601.	-1914.	-75.	763.	-.0820	.0031	-.0237	.0101	-.0400	-.0266	828.							
.3750	-196.	-539.	-564.	-1552.	-27.	302.	-.0772	.0055	-.0202	.0104	-.0419	-.0260	635.							
.3760	-154.	-644.	-517.	-1135.	34.	-61.	-.0726	.0074	-.0159	.0104	-.0432	-.0257	456.							
.3770	-129.	-811.	-464.	-680.	106.	-306.	-.0682	.0087	-.0112	.0100	-.0442	-.0255	302.							
.3780	-124.	-895.	-408.	-204.	189.	-420.	-.0641	.0093	-.0060	.0094	-.0453	-.0255	202.							
.3790	-139.	-868.	-348.	284.	280.	-406.	-.0603	.0091	-.0005	.0085	-.0463	-.0257	228.							
.3800	-171.	-812.	-285.	780.	376.	-280.	-.0568	.0081	.0053	.0075	-.0469	-.0259	365.							
.3810	-215.	-730.	-216.	1281.	473.	-66.	-.0535	.0065	.0111	.0063	-.0471	-.0260	549.							
.3820	-266.	-648.	-141.	1784.	568.	209.	-.0503	.0042	.0169	.0051	-.0465	-.0260	756.							
.3830	-319.	-577.	-61.	2280.	656.	507.	-.0471	.0013	.0225	.0039	-.0449	-.0259	973.							
.3840	-368.	-450.	18.	2753.	733.	794.	-.0438	-.0019	.0279	.0029	-.0424	-.0254	1187.							
.3850	-406.	-317.	93.	3189.	796.	1037.	-.0403	-.0055	.0330	.0021	-.0387	-.0246	1383.							
.3860	-431.	-301.	164.	3576.	843.	1211.	-.0365	-.0092	.0375	.0016	-.0340	-.0234	1552.							
.3870	-439.	-344.	229.	3901.	877.	1296.	-.0322	-.0131	.0413	.0014	-.0280	-.0217	1687.							

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

ADLPIPE STRESS ANALYSIS

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

.3770	-129.	-811.	-464.	-680.	106.	-306.	-1.682	.0087	-.0112	.0100	-.0443	-.0255	302.
.3780	-124.	-895.	-400.	-204.	199.	-420.	-.0641	.0093	-.0060	.0094	-.0453	-.0255	202.
.3790	-139.	-868.	-348.	284.	280.	-406.	-.0603	.0091	-.0005	.0085	-.0463	-.0257	228.
.3800	-171.	-812.	-280.	780.	376.	-280.	-.0568	.0081	.0053	.0075	-.0469	-.0259	365.
.3810	-215.	-730.	-216.	1281.	477.	-66.	-.0535	.0065	.0111	.0063	-.0471	-.0260	549.
.3820	-266.	-648.	-141.	1784.	568.	209.	-.0507	.0042	.0169	.0051	-.0465	-.0260	756.
.3830	-319.	-577.	-61.	2280.	656.	507.	-.0471	.0013	.0225	.0039	-.0449	-.0259	973.
.3840	-368.	-450.	18.	2753.	733.	794.	-.0438	-.0019	.0279	.0029	-.0424	-.0254	1187.
.3850	-406.	-317.	93.	3189.	796.	1037.	-.0403	-.0055	.0330	.0021	-.0387	-.0246	1383.
.3860	-431.	-301.	164.	3576.	843.	1211.	-.0365	-.0092	.0375	.0016	-.0340	-.0234	1552.
.3870	-439.	-344.	229.	3901.	877.	1296.	-.0322	-.0131	.0413	.0014	-.0280	-.0217	1687.

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

CONDITION 24  
LOADS  
SHOCK  
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ENGLISH UNITS

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

SECTION	33	MEMBER	1	SEQUENCE	816	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)	
.3880	-431.	-197.	283.	4146.	899.	1285.	-.0275	-.0170	.0444	.0014	-.0210	-.0197	1779.	
.3890	-406.	215.	323.	4296.	911.	1175.	-.0224	-.0206	.0467	.0017	-.0131	-.0172	1824.	
.3900	-366.	619.	349.	4347.	913.	972.	-.0167	-.0238	.0480	.0021	-.0044	-.0144	1823.	
.3910	-315.	744.	364.	4288.	903.	689.	-.0107	-.0262	.0484	.0026	.0048	-.0114	1780.	
.3920	-259.	686.	367.	4128.	883.	347.	-.0043	-.0278	.0478	.0030	.0143	-.0083	1700.	
.3930	-202.	708.	355.	3859.	858.	-37.	.0023	-.0284	.0462	.0034	.0238	-.0051	1587.	
.3940	-143.	845.	329.	3486.	830.	-456.	.0092	-.0281	.0436	.0036	.0329	-.0019	1450.	
.3950	-77.	895.	290.	3021.	801.	-913.	.0162	-.0268	.0402	.0037	.0415	.0013	1307.	
.3960	0.	792.	240.	2480.	774.	-1403.	.0232	-.0246	.0361	.0035	.0494	.0044	1185.	
.3970	84.	691.	182.	1881.	750.	-1908.	.0300	-.0216	.0313	.0031	.0564	.0075	1116.	
.3980	170.	713.	116.	1242.	731.	-2404.	.0366	-.0178	.0261	.0024	.0623	.0103	1125.	
.3990	253.	774.	45.	583.	715.	-2867.	.0429	-.0133	.0206	.0016	.0670	.0130	1209.	
.4000	327.	712.	-30.	-76.	700.	-3274.	.0486	-.0083	.0150	.0007	.0702	.0154	1344.	

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)
.1330	1477.	378.	871.	9701.	722.	-9965.	.1307	.0548	.2035	-.0426	-.0646	.0198	5588.

SECTION	34	MEMBER	1	SEQUENCE	816	LOCATION	BEG	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	0.	-1.	-0.	0.	-0.	0.	.0000	-.0000	.0000	.0000	-.0000	.0000	0.	
.0020	-0.	-3.	-0.	1.	-0.	-0.	.0000	-.0000	.0000	.0000	-.0000	-.0000	0.	
.0030	-0.	-6.	-0.	3.	-1.	-2.	.0000	-.0000	.0000	.0000	-.0001	-.0000	1.	
.0040	-1.	-12.	-1.	8.	-1.	-9.	.0000	-.0000	.0000	.0000	-.0001	-.0001	5.	
.0050	-3.	-26.	-2.	14.	-1.	-22.	.0000	-.0000	.0000	.0001	-.0001	-.0001	11.	
.0060	-5.	-54.	-2.	19.	-1.	-38.	.0000	-.0000	.0000	.0001	-.0002	-.0002	17.	
.0070	-6.	-95.	-2.	19.	-2.	-47.	.0001	-.0001	.0001	.0002	-.0003	-.0003	20.	
.0080	-4.	-140.	-1.	15.	-5.	-40.	.0002	-.0002	.0002	.0002	-.0006	-.0004	17.	
.0090	-1.	-179.	2.	-2.	-6.	-27.	.0004	-.0002	.0003	.0002	-.0008	-.0005	11.	
.0100	2.	-216.	8.	-70.	-2.	-19.	.0007	-.0003	.0005	.0001	-.0003	-.0006	17.	
.0110	6.	-265.	16.	-90.	12.	-1.	.0011	-.0005	.0007	-.0000	.0014	-.0008	36.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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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

0.0000	0.	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
.0010	0.	-1.	-0.	0.	-0.	0.	0.	.0000	-.0000	.0000	.0000	-.0000	.0000	0.
.0020	-0.	-3.	-0.	1.	-0.	-0.	0.	.0000	-.0000	.0000	.0000	-.0000	-.0000	0.
.0030	-0.	-6.	-0.	3.	-1.	-2.	0.	.0000	-.0000	.0000	.0000	-.0001	-.0000	1.
.0040	-1.	-12.	-1.	7.	-1.	-9.	0.	.0000	-.0000	.0000	.0000	-.0001	-.0001	5.
.0050	-3.	-26.	-2.	14.	-1.	-22.	0.	.0000	-.0000	.0000	.0001	-.0001	-.0001	11.
.0060	-5.	-54.	-2.	19.	-1.	-33.	0.	.0000	-.0000	.0000	.0001	-.0002	-.0002	17.
.0070	-6.	-95.	-2.	19.	-2.	-47.	.0001	-.0001	.0001	.0002	-.0003	-.0003	-.0003	20.
.0080	-4.	-140.	-1.	15.	-0.	-40.	.0002	-.0002	.0002	.0002	-.0006	-.0004	-.0004	17.
.0090	-1.	-179.	2.	12.	-2.	-27.	.0004	-.0002	.0003	.0002	-.0008	-.0005	-.0005	11.
.0100	2.	-216.	3.	10.	-2.	-19.	.0007	-.0003	.0005	.0001	-.0003	-.0006	-.0006	17.
.0110	6.	-265.	16.	10.	12.	-1.	.0011	-.0005	.0007	-.0000	.0014	-.0008	-.0008	36.

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DIS/ADLPIPE

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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	34	MEMBER	1	SEQUENCE	816	LOCATION	BEG	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)	
.0120	19.	-329.	22.	-131.	36.	73.	.0016	-.0006	.0010	-.0001	.0046	-.0007	62.	
.0130	46.	-387.	22.	-132.	72.	252.	.0023	-.0009	.0012	.0000	.0093	-.0002	118.	
.0140	89.	-417.	14.	-72.	117.	546.	.0031	-.0011	.0015	.0004	.0153	.0010	226.	
.0150	138.	-422.	-0.	25.	167.	905.	.0038	-.0014	.0020	.0011	.0220	.0026	369.	
.0160	179.	-404.	-9.	93.	216.	1230.	.0044	-.0017	.0026	.0017	.0286	.0044	503.	
.0170	197.	-339.	-1.	57.	257.	1432.	.0045	-.0019	.0035	.0020	.0341	.0060	584.	
.0180	184.	-188.	27.	-122.	285.	1451.	.0041	-.0021	.0046	.0017	.0380	.0071	595.	
.0190	136.	42.	71.	-410.	304.	1255.	.0031	-.0022	.0059	.0009	.0408	.0078	544.	
.0200	56.	277.	113.	-699.	319.	850.	.0015	-.0020	.0072	.0000	.0431	.0077	460.	
.0210	-54.	495.	135.	-864.	342.	224.	-.0005	-.0017	.0083	-.0005	.0465	.0067	384.	
.0220	-195.	638.	125.	-831.	403.	-651.	-.0028	-.0012	.0090	-.0004	.0550	.0043	454.	
.0230	-329.	480.	68.	-492.	480.	-1541.	-.0050	-.0007	.0092	.0009	.0559	.0012	677.	
.0240	-401.	-2.	-31.	147.	525.	-2081.	-.0068	-.0004	.0091	.0036	.0731	-.0008	863.	
.0250	-396.	-494.	-120.	734.	503.	-2170.	-.0080	-.0002	.0091	.0061	.0719	-.0016	941.	
.0260	-367.	-587.	-117.	706.	443.	-2170.	-.0088	.0000	.0093	.0059	.0651	-.0027	933.	
.0270	-360.	-69.	-11.	-25.	416.	-2388.	-.0091	.0007	.0097	.0023	.0619	-.0056	973.	
.0280	-311.	824.	86.	-676.	374.	-2345.	-.0091	.0018	.0098	-.0009	.0563	-.0078	991.	
.0290	-183.	1574.	100.	-763.	243.	-1755.	-.0087	.0032	.0092	-.0017	.0390	-.0075	774.	
.0300	-112.	1876.	110.	-858.	128.	-1541.	-.0082	.0044	.0078	-.0031	.0235	-.0090	710.	
.0310	-124.	2068.	109.	-912.	69.	-1861.	-.0078	.0053	.0055	-.0050	.0150	-.0131	832.	
.0320	-105.	2183.	-2.	-218.	-6.	-1911.	-.0070	.0062	.0022	-.0038	.0049	-.0156	772.	
.0330	-13.	1950.	-219.	1224.	-92.	-1377.	-.0059	.0073	-.0017	.0010	-.0061	-.0149	740.	
.0340	102.	1427.	-425.	2629.	-147.	-612.	-.0044	.0086	-.0056	.0061	-.0129	-.0128	1085.	
.0350	216.	1053.	-520.	3349.	-217.	227.	-.0030	.0098	-.0085	.0087	-.0221	-.0097	1350.	
.0360	316.	1058.	-465.	3118.	-340.	1065.	-.0018	.0108	-.0101	.0078	-.0391	-.0058	1329.	
.0370	360.	1336.	-272.	1988.	-440.	1604.	-.0011	.0118	-.0104	.0036	-.0545	-.0024	1040.	
.0380	357.	1829.	-34.	575.	-461.	1888.	-.0012	.0128	-.0100	-.0016	-.0505	.0006	813.	
.0390	364.	2331.	119.	-265.	-480.	2297.	-.0019	.0139	-.0096	-.0040	-.0556	.0051	948.	
.0400	329.	2100.	159.	-384.	-558.	2443.	-.0035	.0144	-.0097	-.0034	-.0772	.0090	1017.	
.0410	136.	1044.	182.	-493.	-590.	1453.	-.0060	.0139	-.0100	-.0036	-.0821	.0076	659.	
.0420	-130.	63.	168.	-420.	-575.	-129.	-.0089	.0126	-.0106	-.0037	-.0813	.0029	290.	
.0430	-256.	18.	88.	24.	-586.	-864.	-.0112	.0114	-.0114	-.0025	-.0843	.0016	419.	
.0440	-224.	-61.	-44.	778.	-610.	-643.	-.0125	.0103	-.0121	-.0002	-.0895	.0037	473.	
.0450	-139.	-830.	-135.	1223.	-579.	-208.	-.0132	.0091	-.0123	.0007	-.0878	.0057	549.	
.0460	-46.	-1420.	-146.	1111.	-526.	171.	-.0134	.0071	-.0116	-.0009	-.0830	.0065	498.	
.0470	58.	-1248.	-129.	823.	-527.	569.	-.0135	.0044	-.0103	-.0029	-.0343	.0070	454.	
.0480	124.	-1091.	-111.	551.	-531.	699.	-.0138	.0015	-.0085	-.0044	-.0853	.0063	416.	
.0490	121.	-1409.	-68.	134.	-440.	376.	-.0143	-.0010	-.0063	-.0063	-.0735	.0036	239.	

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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  
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ENGLISH UNITS

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

.0390	364.	2331.	119.	-265.	-480.	2297.	-.0012	.0120	-.0100	-.0016	-.0556	.0051	813.
.0400	329.	2100.	159.	-384.	-550.	2443.	-.0035	.0144	-.0097	-.0034	-.0772	.0090	1017.
.0410	136.	1044.	182.	-483.	-590.	1453.	-.0060	.0139	-.0100	-.0036	-.0821	.0076	659.
.0420	-130.	63.	168.	-420.	-575.	-129.	-.0089	.0126	-.0106	-.0037	-.0813	.0029	290.
.0430	-256.	18.	88.	24.	-586.	-864.	-.0112	.0114	-.0114	-.0025	-.0843	.0016	419.
.0440	-224.	-61.	-44.	778.	-610.	-643.	-.0125	.0103	-.0121	-.0002	-.0895	.0037	473.
.0450	-139.	-830.	-135.	1223.	-579.	-208.	-.0132	.0091	-.0123	.0007	-.0878	.0057	549.
.0460	-46.	-1420.	-146.	1111.	-526.	171.	-.0134	.0071	-.0115	-.0009	-.0830	.0065	498.
.0470	58.	-1248.	-129.	823.	-527.	569.	-.0135	.0044	-.0103	-.0029	-.0843	.0070	454.
.0480	124.	-1091.	-111.	551.	-531.	679.	-.0138	.0015	-.0085	-.0044	-.0853	.0063	416.
.0490	121.	-1409.	-68.	174.	-440.	376.	-.0143	-.0010	-.0063	-.0063	-.0735	.0036	239.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.28.09.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	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)
34	1	816					.0500	99.	-1537.	-29.	-244.	-281.	1.	-.0149	-.0031	-.0040	-.0078	-.0525	.0012	149.
							.0510	108.	-1149.	-21.	-389.	-123.	-59.	-.0154	-.0049	-.0019	-.0081	-.0311	.0009	166.
							.0520	127.	-1134.	-32.	-387.	25.	41.	-.0159	-.0067	-.0000	-.0076	-.0105	.0021	157.
							.0530	104.	-1882.	-48.	-340.	171.	18.	-.0164	-.0084	.0015	-.0070	.0101	.0034	153.
							.0540	41.	-2438.	-77.	-178.	296.	-188.	-.0170	-.0098	.0025	-.0058	.0286	.0045	158.
							.0550	-51.	-2347.	-128.	168.	395.	-503.	-.0177	-.0106	.0032	-.0036	.0444	.0057	265.
							.0560	-154.	-2360.	-178.	545.	480.	-828.	-.0183	-.0107	.0036	-.0010	.0588	.0069	442.
							.0570	-247.	-2457.	-183.	650.	564.	-1065.	-.0186	-.0104	.0038	.0005	.0732	.0086	550.
							.0580	-314.	-1502.	-133.	409.	647.	-1147.	-.0187	-.0095	.0039	.0006	.0871	.0105	553.
							.0590	-355.	368.	-69.	83.	723.	-1106.	-.0186	-.0078	.0036	.0002	.0997	.0125	531.
							.0600	-396.	1513.	-21.	-122.	795.	-1165.	-.0184	-.0054	.0027	.0003	.1114	.0131	568.
							.0610	-470.	1508.	5.	-192.	852.	-1575.	-.0182	-.0025	.0010	.0007	.1208	.0110	723.
							.0620	-564.	1692.	13.	-159.	873.	-2285.	-.0179	.0004	-.0017	.0010	.1258	.0062	984.
							.0630	-614.	2392.	-10.	70.	840.	-2869.	-.0172	.0035	-.0053	.0018	.1241	.0005	1200.
							.0640	-562.	2351.	-76.	575.	762.	-2921.	-.0156	.0066	-.0099	.0035	.1166	-.0042	1233.
							.0650	-400.	1387.	-172.	1298.	673.	-2351.	-.0132	.0099	-.0151	.0060	.1069	-.0072	1111.
							.0660	-154.	932.	-263.	2003.	596.	-1301.	-.0103	.0133	-.0207	.0085	.0972	-.0088	988.
							.0670	118.	1396.	-298.	2367.	534.	-94.	-.0074	.0164	-.0263	.0095	.0876	-.0097	975.
							.0680	343.	1667.	-243.	2135.	492.	837.	-.0052	.0187	-.0316	.0080	.0793	-.0113	941.
							.0690	486.	1359.	-124.	1472.	474.	1323.	-.0039	.0200	-.0369	.0044	.0739	-.0138	820.
							.0700	574.	1112.	-28.	986.	461.	1593.	-.0037	.0203	-.0425	.0015	.0697	-.0155	774.
							.0710	617.	871.	-8.	987.	443.	1763.	-.0047	.0197	-.0487	.0005	.0652	-.0157	830.
							.0720	589.	73.	-48.	1355.	436.	1642.	-.0069	.0180	-.0557	.0007	.0617	-.0152	872.
							.0730	495.	-840.	-136.	2009.	435.	1244.	-.0101	.0154	-.0631	.0018	.0572	-.0143	964.
							.0740	381.	-1088.	-280.	3026.	377.	870.	-.0142	.0120	-.0707	.0044	.0449	-.0116	1272.
							.0750	257.	-1079.	-444.	4176.	247.	528.	-.0189	.0081	-.0780	.0079	.0233	-.0076	1692.
							.0760	86.	-1569.	-555.	4977.	87.	-89.	-.0240	.0037	-.0843	.0102	-.0013	-.0043	1998.
							.0770	-128.	-2097.	-582.	5228.	-69.	-1017.	-.0293	-.0009	-.0892	.0107	-.0241	-.0025	2138.
							.0780	-336.	-1859.	-544.	5059.	-207.	-1981.	-.0342	-.0053	-.0925	.0102	-.0435	-.0014	2182.
							.0790	-502.	-1268.	-466.	4637.	-300.	-2793.	-.0384	-.0094	-.0945	.0094	-.0558	-.0008	2175.
							.0800	-608.	-1201.	-382.	4172.	-323.	-3362.	-.0415	-.0130	-.0952	.0090	-.0583	-.0008	2154.
							.0810	-631.	-1535.	-330.	3920.	-308.	-3547.	-.0431	-.0158	-.0950	.0102	-.0543	-.0007	2125.
							.0820	-580.	-1644.	-308.	3851.	-293.	-3401.	-.0433	-.0178	-.0939	.0126	-.0489	-.0010	2065.
							.0830	-497.	-1582.	-273.	3672.	-285.	-3193.	-.0421	-.0190	-.0918	.0149	-.0431	-.0028	1956.
							.0840	-393.	-1712.	-212.	3288.	-297.	-2946.	-.0397	-.0192	-.0888	.0166	-.0389	-.0057	1776.
							.0850	-241.	-1835.	-142.	2840.	-361.	-2414.	-.0362	-.0185	-.0850	.0182	-.0411	-.0082	1503.
							.0860	-50.	-1552.	-64.	2329.	-469.	-1598.	-.0317	-.0168	-.0805	.0198	-.0493	-.0097	1149.
							.0870	124.	-926.	36.	1666.	-569.	-818.	-.0268	-.0143	-.0754	.0209	-.0572	-.0111	779.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.28.09.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.0770	-128.	-2097.	-582.	5221.	-69.	-1017.	-1293.	-0009	-0892	.0107	-0241	-0025	2138.
.0780	-336.	-1359.	-544.	5059.	-207.	-1951.	-1342	-0053	-0925	.0102	-0435	-0014	2182.
.0790	-502.	-1268.	-466.	4677.	-300.	-2793.	-0384	-0094	-0945	.0094	-0558	-0008	2175.
.0800	-603.	-1201.	-382.	4172.	-323.	-3362.	-0415	-0130	-0952	.0090	-0583	-0008	2154.
.0810	-631.	-1575.	-379.	3970.	-708.	-3547.	-0431	-0158	-0950	.0102	-0543	-0007	2125.
.0820	-580.	-1644.	-308.	3851.	-293.	-3401.	-0433	-0178	-0939	.0126	-0489	-0010	2065.
.0830	-497.	-1582.	-273.	3672.	-285.	-3193.	-0421	-0190	-0918	.0149	-0431	-0028	1956.
.0840	-397.	-1712.	-212.	3288.	-297.	-2946.	-0397	-0192	-0888	.0166	-0389	-0057	1776.
.0850	-241.	-1835.	-142.	2840.	-261.	-2414.	-0362	-0185	-0850	.0182	-0411	-0082	1503.
.0860	-50.	-1552.	-64.	2329.	-409.	-1598.	-0317	-0168	-0805	.0198	-0493	-0097	1149.
.0870	124.	-926.	36.	1660.	-509.	-818.	-0260	-0143	-0754	.0209	-0572	-0111	779.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.09.

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	34	MEMBER	1	SEQUENCE	816	LOCATION	BEG	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)	
.0880	244.	-197.	136.	1003.	-635.	-282.	-0218	-0111	-0702	.0219	-0513	-0130	490.	
.0890	301.	639.	199.	609.	-674.	-14.	-0169	-0075	-0650	.0241	-0625	-0151	364.	
.0900	290.	1525.	219.	538.	-687.	-52.	-0123	-0036	-0600	.0279	-0607	-0174	351.	
.0910	221.	2140.	217.	651.	-667.	-343.	-0079	.0004	-0551	.0324	-0552	-0199	399.	
.0920	144.	2420.	220.	778.	-628.	-572.	-0034	.0044	-0503	.0370	-0483	-0214	462.	
.0930	119.	2707.	254.	741.	-583.	-367.	.0013	.0083	-0453	.0409	-0425	-0203	406.	
.0940	171.	3109.	341.	399.	-529.	393.	.0063	.0123	-0401	.0434	-0373	-0163	309.	
.0950	275.	3241.	477.	-253.	-460.	1520.	.0113	.0163	-0347	.0442	-0318	-0103	645.	
.0960	383.	2900.	642.	-1104.	-378.	2643.	.0157	.0202	-0292	.0437	-0258	-0040	1159.	
.0970	445.	2036.	807.	-1986.	-286.	3402.	.0191	.0241	-0240	.0422	-0190	.0009	1585.	
.0980	440.	1300.	935.	-2690.	-178.	3641.	.0212	.0279	-0193	.0403	-0105	.0036	1818.	
.0990	387.	550.	1000.	-3057.	-49.	3456.	.0221	.0319	-0154	.0385	.0002	.0046	1852.	
.1000	322.	-290.	998.	-3093.	89.	3085.	.0218	.0362	-0123	.0365	.0117	.0047	1753.	
.1010	281.	-849.	954.	-2967.	219.	2769.	.0208	.0408	-0097	.0336	.0214	.0051	1631.	
.1020	280.	-679.	897.	-2885.	320.	2623.	.0191	.0455	-0075	.0289	.0264	.0062	1570.	
.1030	302.	-22.	849.	-2985.	373.	2550.	.0163	.0496	-0056	.0218	.0242	.0078	1583.	
.1040	306.	368.	806.	-3239.	377.	2306.	.0137	.0526	-0039	.0126	.0149	.0088	1603.	
.1050	261.	393.	736.	-3402.	349.	1700.	.0097	.0541	-0026	.0025	.0016	.0085	1533.	
.1060	156.	420.	594.	-3148.	314.	709.	.0051	.0539	-0019	-0068	-0117	.0069	1301.	
.1070	-0.	296.	354.	-2271.	298.	-587.	.0001	.0520	-0018	-0140	-0213	.0045	949.	
.1080	-181.	-665.	25.	-785.	303.	-1984.	-0048	.0487	-0019	-0185	-0269	.0020	865.	
.1090	-364.	-1820.	-336.	974.	335.	-3317.	-0092	.0444	-0017	-0213	-0282	-0000	1394.	
.1100	-539.	-484.	-652.	2512.	454.	-4519.	-0125	.0391	-0005	-0241	-0178	-0015	2083.	
.1110	-646.	626.	-909.	3775.	571.	-5162.	-0143	.0329	.0023	-0264	-0067	-0005	2577.	
.1120	-680.	-1809.	-1069.	4524.	625.	-5209.	-0143	.0262	.0072	-0290	-0021	.0029	2780.	
.1130	-697.	-5035.	-1058.	4230.	658.	-5059.	-0128	.0194	.0145	-0344	.0020	.0067	2659.	
.1140	-717.	-5110.	-891.	2945.	689.	-4850.	-0097	.0132	.0238	-0427	.0088	.0103	2294.	
.1150	-724.	-3609.	-691.	1470.	699.	-4475.	-0052	.0087	.0343	-0506	.0154	.0141	1911.	
.1160	-734.	-3986.	-569.	509.	709.	-4069.	.0006	.0062	.0451	-0553	.0235	.0174	1670.	
.1170	-760.	-4914.	-553.	228.	739.	-3769.	.0076	.0058	.0557	-0566	.0347	.0193	1544.	
.1180	-802.	-3029.	-616.	411.	783.	-3612.	.0158	.0067	.0660	-0556	.0480	.0193	1492.	
.1190	-794.	-446.	-752.	1067.	715.	-3175.	.0252	.0087	.0762	-0519	.0480	.0193	1375.	
.1200	-742.	-358.	-883.	1688.	526.	-2553.	.0358	.0119	.0868	-0476	.0341	.0185	1246.	
.1210	-682.	-2331.	-882.	1450.	315.	-2030.	.0474	.0165	.0983	-0463	.0193	.0155	1009.	
.1220	-526.	-578.	-755.	419.	76.	-1007.	.0601	.0226	.1108	-0474	.0021	.0132	439.	
.1230	-249.	2765.	-550.	-1039.	-158.	701.	.0736	.0300	.1239	-0492	-0123	.0128	507.	
.1240	104.	3765.	-323.	-2538.	-355.	2822.	.0872	.0381	.1372	-0501	-0322	.0135	1530.	
.1250	446.	3317.	-88.	-3997.	-470.	4797.	.1001	.0460	.1500	-0501	-0377	.0135	2513.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.09.

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



.1140	-117.	-3110.	-691.	2945.	699.	-4475.	-0052	.0087	.0343	-.0506	.0154	.0141	1911.
.1150	-724.	-3809.	-569.	509.	709.	-4069.	.0006	.0062	.0451	-.0553	.0235	.0174	1670.
.1160	-734.	-3986.	-553.	228.	739.	-3769.	.0076	.0058	.0557	-.0566	.0347	.0193	1544.
.1170	-760.	-4914.	-553.	228.	739.	-3769.	.0076	.0058	.0557	-.0566	.0347	.0193	1544.
.1180	-802.	-3029.	-616.	411.	787.	-3612.	.0158	.0067	.0660	-.0556	.0480	.0193	1492.
.1190	-794.	-446.	-752.	1067.	715.	-3175.	.0252	.0087	.0762	-.0519	.0480	.0193	1375.
.1200	-742.	-368.	-887.	1688.	526.	-2553.	.0358	.0119	.0869	-.0476	.0341	.0185	1246.
.1210	-682.	-2301.	-882.	1450.	315.	-2030.	.0474	.0165	.0983	-.0463	.0193	.0155	1009.
.1220	-526.	-578.	-755.	419.	76.	-1007.	.0601	.0226	.1108	-.0474	.0021	.0132	439.
.1230	-249.	2765.	-550.	-1039.	-158.	701.	.0736	.0300	.1239	-.0492	-.0153	.0128	507.
.1240	104.	3765.	-323.	-2576.	-355.	2822.	.0872	.0381	.1372	-.0501	-.0302	.0135	1530.
.1250	446.	3317.	-88.	-3997.	-470.	4797.	.1001	.0460	.1500	-.0501	-.0377	.0135	2513.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.09.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	34	MEMBER	1	SEQUENCE	S16	LOCATION	BEG	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1260	712.	4594.	141.	-5337.	-499.	6228.	.1115	.0528	.1620	-.0494	-.0360	.0115	3297.		
.1270	919.	6414.	307.	-6175.	-543.	7294.	.1208	.0583	.1726	-.0463	-.0364	.0092	3841.		
.1280	1027.	8458.	449.	-6803.	-578.	7745.	.1279	.0623	.1820	-.0427	-.0353	.0056	4143.		
.1290	1064.	3085.	615.	-7580.	-591.	7801.	.1327	.0646	.1899	-.0406	-.0320	.0021	4372.		
.1300	1115.	2839.	799.	-8502.	-613.	8062.	.1355	.0651	.1963	-.0404	-.0323	.0016	4708.		
.1310	1202.	3839.	962.	-9333.	-642.	8697.	.1363	.0636	.2008	-.0412	-.0380	.0052	5126.		
.1320	1304.	3026.	1045.	-9703.	-699.	9581.	.1348	.0602	.2033	-.0417	-.0520	.0124	5479.		
.1330	1313.	1216.	1055.	-9701.	-722.	9965.	.1307	.0548	.2035	-.0426	-.0546	.0198	5588.		
.1340	1176.	1306.	989.	-9313.	-705.	9482.	.1235	.0476	.2017	-.0438	-.0721	.0255	5341.		
.1350	896.	2196.	837.	-8483.	-671.	9112.	.1136	.0388	.1980	-.0449	-.0753	.0292	4718.		
.1360	500.	782.	629.	-7398.	-607.	5992.	.1014	.0287	.1930	-.0464	-.0722	.0306	3828.		
.1370	99.	-1875.	385.	-6158.	-545.	3817.	.0880	.0181	.1870	-.0483	-.0585	.0324	2916.		
.1380	-248.	-2648.	147.	-5037.	-474.	1929.	.0741	.0077	.1808	-.0514	-.0648	.0353	2173.		
.1390	-517.	-2012.	-64.	-4121.	-430.	434.	.0605	-.0019	.1746	-.0555	-.0557	.0388	1672.		
.1400	-746.	-2669.	-228.	-3529.	-428.	-971.	.0475	-.0101	.1689	-.0607	-.0720	.0411	1479.		
.1410	-982.	-4227.	-324.	-3373.	-443.	-2629.	.0354	-.0168	.1639	-.0672	-.0779	.0400	1725.		
.1420	-1169.	-4304.	-401.	-3290.	-520.	-4161.	.0248	-.0218	.1593	-.0731	-.0873	.0370	2139.		
.1430	-1289.	-3615.	-483.	-3106.	-630.	-5418.	.0162	-.0250	.1552	-.0773	-.0969	.0327	2519.		
.1440	-1336.	-4320.	-568.	-2807.	-725.	-6335.	.0099	-.0262	.1515	-.0797	-.1026	.0273	2796.		
.1450	-1309.	-5566.	-639.	-2512.	-755.	-6872.	.0062	-.0252	.1482	-.0807	-.0996	.0211	2952.		
.1460	-1208.	-5128.	-681.	-2298.	-711.	-6964.	.0052	-.0219	.1452	-.0806	-.0878	.0148	2957.		
.1470	-1011.	-3616.	-709.	-2051.	-685.	-6394.	.0068	-.0167	.1427	-.0787	-.0775	.0100	2709.		
.1480	-780.	-3124.	-689.	-2001.	-676.	-5527.	.0107	-.0098	.1405	-.0762	-.0684	.0054	2374.		
.1490	-541.	-2997.	-614.	-2202.	-693.	-4482.	.0163	-.0017	.1386	-.0735	-.0513	.0013	2023.		
.1500	-287.	-1378.	-511.	-2489.	-737.	-3152.	.0234	.0074	.1367	-.0700	-.0575	-.0013	1639.		
.1510	-37.	911.	-398.	-2741.	-761.	-1637.	.0314	.0170	.1344	-.0654	-.0526	-.0023	1317.		
.1520	211.	1901.	-310.	-2752.	-759.	87.	.0397	.0266	.1316	-.0590	-.0467	-.0011	1146.		
.1530	422.	1938.	-238.	-2596.	-699.	1778.	.0476	.0358	.1282	-.0515	-.0355	.0016	1293.		
.1540	581.	2640.	-173.	-2363.	-611.	3311.	.0546	.0440	.1241	-.0435	-.0219	.0053	1651.		
.1550	650.	3612.	-85.	-2281.	-502.	4364.	.0601	.0508	.1195	-.0364	-.0061	.0085	1986.		
.1560	601.	3494.	48.	-2540.	-345.	4666.	.0639	.0560	.1142	-.0314	.0152	.0096	2136.		
.1570	518.	2960.	182.	-2863.	-190.	4727.	.0660	.0595	.1081	-.0275	.0348	.0105	2219.		
.1580	456.	3298.	301.	-3177.	-29.	4842.	.0667	.0609	.1008	-.0247	.0528	.0122	2324.		
.1590	437.	3798.	390.	-3411.	143.	5099.	.0662	.0602	.0921	-.0232	.0697	.0145	2462.		
.1600	483.	3217.	408.	-3295.	281.	5611.	.0644	.0570	.0818	-.0217	.0804	.0180	2613.		
.1610	558.	2004.	346.	-2776.	377.	6124.	.0611	.0517	.0698	-.0201	.0853	.0213	2702.		
.1620	588.	1369.	230.	-2021.	468.	6147.	.0560	.0447	.0562	-.0191	.0898	.0223	2603.		
.1630	574.	1222.	46.	-906.	517.	5720.	.0490	.0362	.0415	-.0177	.0898	.0214	2333.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.09.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.1530	422.	1938.	-238.	-2596.	-699.	1778.	.0476	.0358	.1282	-.0515	-.0355	.0016	1293.
.1540	581.	2640.	-173.	-2363.	-611.	3311.	.0546	.0440	.1241	-.0435	-.0219	.0053	1651.
.1550	650.	3612.	-85.	-2281.	-502.	4364.	.0601	.0508	.1195	-.0364	-.0061	.0085	1986.
.1560	601.	3494.	48.	-2540.	-345.	4666.	.0679	.0560	.1142	-.0314	.0152	.0096	2136.
.1570	518.	2960.	182.	-2363.	-190.	4727.	.0660	.0595	.1081	-.0275	.0348	.0105	2219.
.1580	456.	3298.	301.	-3177.	-29.	4842.	.0667	.0609	.1008	-.0247	.0528	.0122	2324.
.1590	437.	3798.	390.	-3411.	143.	5099.	.0662	.0602	.0921	-.0232	.0697	.0145	2462.
.1600	483.	3217.	408.	-3295.	281.	5611.	.0644	.0570	.0818	-.0217	.0804	.0180	2613.
.1610	558.	2004.	346.	-2776.	377.	6124.	.0611	.0517	.0698	-.0201	.0853	.0213	2702.
.1620	568.	1369.	230.	-2021.	463.	6147.	.0560	.0447	.0562	-.0191	.0898	.0223	2603.
.1630	574.	1322.	46.	-906.	517.	5726.	.0490	.0362	.0415	-.0177	.0898	.0214	2333.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.28.09.

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

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	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)
34	1	316					.1640	507.	553.	-186.	482.	534.	4839.	.0404	.0267	.0259	-.0157	.0366	.0188	1963.
							.1650	398.	-538.	-428.	1926.	546.	3621.	.0305	.0169	.0101	-.0135	.0829	.0150	1660.
							.1660	298.	-1190.	-658.	3333.	533.	2471.	.0197	.0070	-.0054	-.0109	.0763	.0122	1679.
							.1670	199.	-1585.	-832.	4439.	522.	1393.	.0084	-.0023	-.0199	-.0087	.0704	.0105	1879.
							.1680	100.	-2346.	-932.	5157.	499.	418.	-.0030	-.0103	-.0331	-.0066	.0641	.0099	2086.
							.1690	-24.	-3253.	-944.	5410.	475.	-585.	-.0144	-.0167	-.0447	-.0049	.0594	.0100	2192.
							.1700	-172.	-3553.	-885.	5304.	440.	-1590.	-.0254	-.0212	-.0546	-.0030	.0553	.0107	2229.
							.1710	-332.	-3320.	-784.	5027.	379.	-2514.	-.0359	-.0236	-.0630	-.0001	.0493	.0123	2261.
							.1720	-536.	-3375.	-640.	4545.	353.	-3606.	-.0454	-.0239	-.0701	.0032	.0481	.0131	2333.
							.1730	-735.	-3671.	-500.	4153.	339.	-4556.	-.0538	-.0220	-.0762	.0082	.0481	.0142	2478.
							.1740	-896.	-3553.	-380.	3928.	340.	-5210.	-.0605	-.0180	-.0815	.0147	.0491	.0159	2622.
							.1750	-1017.	-2904.	-265.	3751.	354.	-5601.	-.0655	-.0123	-.0860	.0220	.0513	.0173	2709.
							.1760	-1075.	-2178.	-154.	3592.	337.	-5641.	-.0685	-.0052	-.0899	.0297	.0494	.0186	2687.
							.1770	-1086.	-1568.	-22.	3266.	298.	-5502.	-.0697	.0028	-.0931	.0367	.0445	.0186	2570.
							.1780	-1036.	-658.	128.	2781.	224.	-5122.	-.0692	.0113	-.0958	.0427	.0342	.0173	2341.
							.1790	-931.	545.	293.	2151.	144.	-4569.	-.0670	.0199	-.0981	.0476	.0213	.0144	2027.
							.1800	-759.	1561.	440.	1580.	71.	-3768.	-.0635	.0282	-.1005	.0520	.0066	.0105	1640.
							.1810	-503.	2327.	535.	1303.	-10.	-2581.	-.0590	.0357	-.1032	.0569	-.0112	.0067	1160.
							.1820	-221.	3118.	600.	1171.	-47.	-1364.	-.0539	.0420	-.1063	.0614	-.0247	.0017	722.
							.1830	72.	3895.	629.	1222.	-60.	-177.	-.0487	.0468	-.1099	.0655	-.0349	-.0040	496.
							.1840	360.	4123.	623.	1468.	-68.	945.	-.0439	.0498	-.1138	.0695	-.0437	-.0099	701.
							.1850	624.	3767.	599.	1787.	-68.	1936.	-.0400	.0508	-.1181	.0728	-.0510	-.0155	1058.
							.1860	854.	3419.	580.	2039.	-61.	2798.	-.0372	.0500	-.1224	.0747	-.0574	-.0200	1389.
							.1870	1023.	3198.	589.	2055.	-18.	3394.	-.0359	.0473	-.1268	.0746	-.0599	-.0237	1592.
							.1880	1141.	2782.	603.	1982.	27.	3855.	-.0362	.0431	-.1311	.0730	-.0618	-.0254	1740.
							.1890	1193.	2133.	608.	1903.	78.	4095.	-.0383	.0374	-.1356	.0703	-.0618	-.0253	1812.
							.1900	1157.	1628.	588.	1916.	139.	3964.	-.0422	.0306	-.1402	.0670	-.0579	-.0239	1768.
							.1910	1034.	1288.	513.	2208.	186.	3457.	-.0479	.0228	-.1450	.0637	-.0527	-.0216	1648.
							.1920	808.	644.	387.	2759.	234.	2423.	-.0552	.0145	-.1501	.0607	-.0449	-.0195	1476.
							.1930	506.	-284.	215.	3551.	281.	980.	-.0636	.0060	-.1551	.0580	-.0355	-.0177	1483.
							.1940	185.	-1009.	6.	4543.	321.	-560.	-.0724	-.0021	-.1597	.0559	-.0256	-.0155	1841.
							.1950	-105.	-1391.	-214.	5593.	354.	-1909.	-.0809	-.0096	-.1637	.0541	-.0153	-.0124	2376.
							.1960	-329.	-1717.	-415.	6524.	378.	-2904.	-.0886	-.0159	-.1664	.0524	-.0046	-.0084	2870.
							.1970	-477.	-2027.	-570.	7206.	392.	-3509.	-.0952	-.0210	-.1676	.0506	.0069	-.0039	3220.
							.1980	-561.	-2121.	-663.	7553.	406.	-3837.	-.1004	-.0245	-.1670	.0487	.0198	.0004	3404.
							.1990	-606.	-2099.	-688.	7538.	429.	-4058.	-.1043	-.0264	-.1644	.0467	.0346	.0034	3439.
							.2000	-627.	-2225.	-652.	7219.	459.	-4264.	-.1070	-.0267	-.1599	.0450	.0501	.0049	3369.
							.2010	-632.	-2431.	-563.	6678.	492.	-4467.	-.1085	-.0255	-.1538	.0439	.0653	.0049	3230.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.28.09.

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

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

.1910	1034.	1288.	517.	2208.	186.	3457.	-.479	.0228	-.1450	.0637	-.0527	-.0216	1648.
.1920	808.	644.	387.	2759.	234.	2423.	-.552	.0145	-.1501	.0607	-.0449	-.0195	1476.
.1930	506.	-234.	215.	7551.	781.	980.	-.0636	.0060	-.1551	.0580	-.0355	-.0177	1483.
.1940	185.	-1009.	6.	4543.	321.	-560.	-.0724	-.0021	-.1597	.0559	-.0256	-.0155	1641.
.1950	-105.	-1391.	-214.	5593.	754.	-1909.	-.0809	-.0096	-.1637	.0541	-.0153	-.0124	2376.
.1960	-329.	-1717.	-419.	6524.	771.	-2904.	-.0886	-.0159	-.1664	.0524	-.0046	-.0084	2870.
.1970	-477.	-2027.	-570.	7206.	392.	-3509.	-.0952	-.0210	-.1676	.0506	.0069	-.0039	3220.
.1980	-561.	-2121.	-663.	7553.	406.	-4837.	-.1004	-.0245	-.1670	.0487	.0198	.0004	3404.
.1990	-606.	-2099.	-688.	7538.	429.	-4058.	-.1043	-.0264	-.1644	.0467	.0346	.0034	3439.
.2000	-627.	-2225.	-652.	7219.	459.	-4264.	-.1070	-.0267	-.1599	.0450	.0501	.0049	3369.
.2010	-632.	-2431.	-568.	6678.	492.	-4467.	-.1085	-.0255	-.1538	.0439	.0553	.0049	3230.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.09.

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	34	MEMBER	1	SEQUENCE	816	LOCATION	BEG	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2020	-623.	-2441.	-446.	5964.	533.	-4656.	-.1088	-.0228	-.1461	.0432	.0301	.0037	3044.		
.2030	-598.	-2216.	-297.	5140.	575.	-4779.	-.1078	-.0187	-.1374	.0431	.0940	.0017	2826.		
.2040	-550.	-1910.	-139.	4298.	603.	-4748.	-.1056	-.0135	-.1278	.0435	.1045	-.0004	2581.		
.2050	-484.	-1539.	21.	3461.	606.	-4566.	-.1023	-.0074	-.1178	.0442	.1102	-.0023	2312.		
.2060	-419.	-1027.	186.	2578.	591.	-4328.	-.0980	-.0010	-.1075	.0445	.1114	-.0043	2036.		
.2070	-366.	-455.	348.	1672.	563.	-4088.	-.0929	.0055	-.0973	.0441	.1088	-.0063	1787.		
.2080	-320.	43.	487.	862.	530.	-3814.	-.0871	.0118	-.0876	.0431	.1032	-.0082	1584.		
.2090	-277.	519.	585.	248.	505.	-3479.	-.0807	.0176	-.0786	.0419	.0970	-.0096	1414.		
.2100	-236.	1088.	637.	-139.	505.	-3082.	-.0739	.0229	-.0706	.0402	.0930	-.0106	1255.		
.2110	-190.	1696.	640.	-288.	528.	-2605.	-.0666	.0275	-.0636	.0380	.0913	-.0112	1073.		
.2120	-132.	2190.	594.	-199.	561.	-2028.	-.0592	.0312	-.0576	.0354	.0905	-.0112	848.		
.2130	-63.	2533.	507.	88.	594.	-1373.	-.0516	.0338	-.0526	.0322	.0894	-.0109	601.		
.2140	18.	2730.	390.	518.	618.	-668.	-.0442	.0352	-.0485	.0283	.0872	-.0104	420.		
.2150	112.	2670.	250.	1046.	624.	76.	-.0371	.0355	-.0450	.0239	.0832	-.0097	490.		
.2160	218.	2276.	98.	1631.	609.	850.	-.0305	.0348	-.0419	.0190	.0773	-.0088	778.		
.2170	332.	1720.	-60.	2238.	575.	1631.	-.0246	.0331	-.0390	.0136	.0703	-.0076	1135.		
.2180	448.	1277.	-220.	2852.	527.	2371.	-.0196	.0306	-.0361	.0081	.0627	-.0061	1503.		
.2190	546.	970.	-380.	3464.	471.	2964.	-.0158	.0275	-.0328	.0026	.0554	-.0046	1839.		
.2200	602.	593.	-532.	4028.	412.	3264.	-.0134	.0240	-.0289	-.0028	.0485	-.0037	2087.		
.2210	602.	72.	-666.	4473.	349.	3180.	-.0125	.0202	-.0241	-.0082	.0419	-.0035	2207.		
.2220	545.	-466.	-773.	4736.	277.	2732.	-.0130	.0161	-.0183	-.0138	.0347	-.0039	2197.		
.2230	445.	-944.	-850.	4786.	192.	2024.	-.0147	.0122	-.0112	-.0195	.0262	-.0045	2087.		
.2240	321.	-1416.	-895.	4624.	90.	1190.	-.0173	.0084	-.0028	-.0252	.0159	-.0049	1916.		
.2250	187.	-1869.	-914.	4268.	-25.	327.	-.0204	.0051	.0070	-.0308	.0036	-.0046	1718.		
.2260	48.	-2184.	-907.	3734.	-143.	-537.	-.0238	.0025	.0182	-.0361	-.0097	-.0039	1515.		
.2270	-98.	-2340.	-876.	3034.	-255.	-1422.	-.0272	.0006	.0307	-.0410	-.0232	-.0031	1349.		
.2280	-252.	-2453.	-823.	2192.	-355.	-2335.	-.0302	-.0005	.0444	-.0455	-.0364	-.0024	1293.		
.2290	-407.	-2557.	-748.	1222.	-438.	-3245.	-.0327	-.0010	.0591	-.0493	-.0487	-.0021	1402.		
.2300	-551.	-2571.	-647.	122.	-496.	-4079.	-.0341	-.0006	.0747	-.0526	-.0589	-.0019	1650.		
.2310	-665.	-2473.	-523.	-1089.	-526.	-4720.	-.0342	.0004	.0909	-.0554	-.0564	-.0018	1955.		
.2320	-728.	-2317.	-379.	-2366.	-531.	-5035.	-.0328	.0021	.1074	-.0573	-.0716	-.0011	2243.		
.2330	-731.	-2075.	-219.	-3670.	-516.	-4963.	-.0297	.0044	.1239	-.0586	-.0751	.0002	2486.		
.2340	-679.	-1684.	-48.	-4964.	-485.	-4534.	-.0249	.0071	.1401	-.0590	-.0774	.0021	2705.		
.2350	-585.	-1210.	126.	-6178.	-445.	-3827.	-.0186	.0101	.1556	-.0586	-.0792	.0042	2922.		
.2360	-465.	-762.	289.	-7235.	-402.	-2938.	-.0110	.0133	.1700	-.0573	-.0809	.0065	3138.		
.2370	-336.	-299.	437.	-8098.	-356.	-1973.	-.0026	.0166	.1830	-.0550	-.0819	.0085	3348.		
.2380	-212.	282.	565.	-8759.	-305.	-1012.	.0064	.0197	.1945	-.0521	-.0812	.0103	3540.		
.2390	-90.	398.	672.	-9223.	-247.	-86.	.0157	.0227	.2041	-.0489	-.0784	.0118	3702.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.09.

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

.2290	-407.	-2557.	-748.	1222.	-438.	-3245.	-.327	-.0010	.0591	-.0493	-.0487	-.0021	1402.
.2300	-551.	-2571.	-647.	122.	-496.	-4079.	-.0341	-.0006	.0747	-.0526	-.0589	-.0019	1650.
.2310	-665.	-2473.	-523.	-1089.	-526.	-4720.	-.0342	.0004	.0909	-.0554	-.0564	-.0018	1955.
.2320	-728.	-2317.	-379.	-2366.	-531.	-5035.	-.0328	.0021	.1074	-.0573	-.0716	-.0011	2243.
.2330	-731.	-2075.	-211.	-3670.	-516.	-4963.	-.0297	.0044	.1239	-.0586	-.0751	.0002	2486.
.2340	-679.	-1684.	-48.	-4964.	-485.	-4534.	-.0249	.0071	.1401	-.0590	-.0774	.0021	2705.
.2350	-585.	-1210.	126.	-6178.	-445.	-3827.	-.0186	.0101	.1556	-.0586	-.0792	.0042	2922.
.2360	-465.	-762.	289.	-7235.	-402.	-2938.	-.0110	.0133	.1700	-.0573	-.0809	.0065	3138.
.2370	-336.	-299.	437.	-8098.	-356.	-1973.	-.0026	.0166	.1830	-.0550	-.0819	.0085	3348.
.2380	-212.	282.	565.	-8759.	-305.	-1012.	.0064	.0197	.1945	-.0521	-.0812	.0103	3540.
.2390	-90.	398.	672.	-9223.	-247.	-86.	.0157	.0227	.2041	-.0489	-.0784	.0118	3702.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.09.

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	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	RU								
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2400	3.	1347.	757.	-9509.	-187.	786.	.0250	.0253	.2118	-.0456	-.0735	.0132	3830.	
.2410	87.	1610.	823.	-9660.	-124.	1573.	.0340	.0275	.2174	-.0428	-.0668	.0145	3928.	
.2420	152.	1842.	870.	-9710.	-60.	2246.	.0425	.0292	.2210	-.0408	-.0586	.0155	4000.	
.2430	198.	2109.	896.	-9672.	-0.	2788.	.0503	.0303	.2224	-.0399	-.0495	.0162	4039.	
.2440	228.	2296.	894.	-9531.	53.	3204.	.0573	.0308	.2217	-.0404	-.0396	.0166	4035.	
.2450	250.	2304.	853.	-9232.	97.	3533.	.0635	.0307	.2187	-.0419	-.0292	.0168	3967.	
.2460	273.	2192.	761.	-8702.	128.	3818.	.0688	.0299	.2135	-.0443	-.0189	.0170	3814.	
.2470	296.	2034.	610.	-7893.	148.	4045.	.0731	.0285	.2062	-.0471	-.0090	.0170	3559.	
.2480	311.	1853.	407.	-6834.	162.	4154.	.0764	.0264	.1971	-.0502	.0005	.0167	3210.	
.2490	313.	1634.	167.	-5606.	172.	4120.	.0786	.0238	.1864	-.0536	.0095	.0159	2793.	
.2500	309.	1318.	-93.	-4286.	174.	3988.	.0798	.0207	.1748	-.0571	.0173	.0148	2350.	
.2510	303.	915.	-353.	-2962.	165.	3805.	.0801	.0172	.1626	-.0606	.0232	.0137	1936.	
.2520	293.	525.	-591.	-1742.	144.	3576.	.0794	.0135	.1504	-.0639	.0269	.0127	1597.	
.2530	274.	186.	-789.	-719.	113.	3273.	.0780	.0098	.1386	-.0669	.0285	.0118	1345.	
.2540	237.	-176.	-935.	68.	75.	2872.	.0758	.0062	.1275	-.0694	.0280	.0108	1153.	
.2550	183.	-575.	-1028.	628.	34.	2372.	.0729	.0028	.1175	-.0709	.0257	.0098	985.	
.2560	113.	-931.	-1070.	992.	-4.	1804.	.0696	-.0003	.1087	-.0713	.0221	.0089	826.	
.2570	31.	-1211.	-1066.	1180.	-39.	1202.	.0660	-.0030	.1012	-.0703	.0173	.0082	676.	
.2580	-59.	-1313.	-1014.	1175.	-71.	584.	.0622	-.0053	.0950	-.0680	.0118	.0075	527.	
.2590	-152.	-1245.	-916.	964.	-99.	-27.	.0586	-.0075	.0902	-.0648	.0061	.0069	389.	
.2600	-241.	-1276.	-779.	571.	-126.	-587.	.0552	-.0095	.0866	-.0608	-.0000	.0064	333.	
.2610	-318.	-1506.	-615.	33.	-154.	-1054.	.0524	-.0114	.0842	-.0560	-.0068	.0059	428.	
.2620	-376.	-1656.	-432.	-625.	-183.	-1404.	.0502	-.0133	.0826	-.0510	-.0138	.0054	621.	
.2630	-414.	-1599.	-239.	-1375.	-215.	-1633.	.0487	-.0152	.0817	-.0458	-.0211	.0048	861.	
.2640	-428.	-1534.	-49.	-2161.	-234.	-1736.	.0480	-.0171	.0811	-.0407	-.0284	.0039	1117.	
.2650	-417.	-1526.	125.	-2920.	-302.	-1712.	.0482	-.0191	.0806	-.0356	-.0358	.0028	1364.	
.2660	-382.	-1475.	275.	-3607.	-357.	-1564.	.0491	-.0211	.0800	-.0308	-.0430	.0014	1584.	
.2670	-324.	-1287.	398.	-4201.	-419.	-1303.	.0509	-.0230	.0790	-.0262	-.0497	-.0003	1773.	
.2680	-247.	-1018.	495.	-4699.	-489.	-948.	.0534	-.0248	.0774	-.0219	-.0559	-.0023	1934.	
.2690	-155.	-956.	567.	-5093.	-569.	-520.	.0564	-.0266	.0751	-.0180	-.0616	-.0045	2067.	
.2700	-52.	-1204.	616.	-5370.	-659.	-28.	.0599	-.0282	.0721	-.0143	-.0670	-.0068	2171.	
.2710	59.	-1347.	646.	-5531.	-753.	516.	.0637	-.0294	.0682	-.0106	-.0719	-.0090	2249.	
.2720	174.	-838.	665.	-5599.	-844.	1098.	.0676	-.0302	.0635	-.0071	-.0757	-.0110	2315.	
.2730	286.	106.	679.	-5593.	-927.	1699.	.0714	-.0306	.0579	-.0036	-.0783	-.0127	2375.	
.2740	392.	607.	690.	-5511.	-1001.	2298.	.0751	-.0308	.0514	.0000	-.0801	-.0139	2430.	
.2750	486.	453.	703.	-5366.	-1061.	2862.	.0783	-.0309	.0441	.0037	-.0811	-.0147	2478.	
.2760	560.	391.	720.	-5184.	-1101.	3354.	.0810	-.0309	.0360	.0073	-.0809	-.0150	2517.	
.2770	613.	337.	740.	-4960.	-1119.	3748.	.0830	-.0309	.0272	.0108	-.0797	-.0149	2535.	

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18.28.10.

S/RV PIPING KEWAUNEE GKMOBF 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

.2673	-324.	-1287.	393.	-4201.	-419.	-1303.	.0509	-.0230	.0790	-.0262	-.0497	-.0003	1773.
.2680	-247.	-1018.	495.	-4609.	-489.	-948.	.534	-.0248	.0774	-.0219	-.0559	-.0023	1934.
.2690	-155.	-956.	567.	-5093.	-569.	-520.	.0564	-.0266	.0751	-.0180	-.0516	-.0045	2067.
.2700	-52.	-1204.	616.	-5370.	-659.	-23.	.0599	-.0282	.0721	-.0143	-.0570	-.0068	2171.
.2710	59.	-1347.	646.	-5531.	-752.	516.	.0637	-.0294	.0682	-.0106	-.0719	-.0090	2249.
.2720	174.	-838.	665.	-5599.	-844.	1090.	.0676	-.0302	.0635	-.0071	-.0757	-.0110	2315.
.2730	286.	106.	679.	-5593.	-927.	1699.	.0714	-.0306	.0579	-.0036	-.0783	-.0127	2375.
.2740	392.	607.	690.	-5511.	-1001.	2298.	.0751	-.0308	.0514	.0000	-.0801	-.0139	2430.
.275.	486.	453.	703.	-5366.	-1061.	2862.	.0783	-.0309	.0441	.0037	-.0811	-.0147	2478.
.2760	560.	391.	720.	-5184.	-1101.	3354.	.0810	-.0309	.0360	.0077	-.0809	-.0150	2517.
.2770	613.	337.	740.	-4960.	-1119.	3748.	.0830	-.0309	.0272	.0108	-.0797	-.0149	2535.

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

CONDITION 24

LOADS

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ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	RU	TIME	FX	FY	FZ	HX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS
34	1	816					(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.2780	641.	1184.	754.	-4652.	-1117.	4026.	.0842	-.0308	.0176	.0143	-.0780	-.0145	2509.							
.2790	648.	913.	754.	-4219.	-1091.	4189.	.0846	-.0306	.0072	.0179	-.0760	-.0138	2426.							
.2800	639.	589.	733.	-3651.	-1037.	4270.	.0842	-.0303	-.0039	.0216	-.0738	-.0126	2293.							
.2810	623.	896.	692.	-2963.	-954.	4311.	.0831	-.0298	-.0156	.0251	-.0717	-.0110	2134.							
.2820	602.	1459.	631.	-2180.	-844.	4319.	.0811	-.0292	-.0278	.0283	-.0698	-.0090	1971.							
.2830	577.	1468.	554.	-1337.	-712.	4277.	.0784	-.0286	-.0401	.0311	-.0579	-.0067	1821.							
.2840	546.	958.	465.	-482.	-561.	4176.	.0751	-.0279	-.0525	.0333	-.0657	-.0043	1702.							
.2850	509.	619.	372.	339.	-395.	4009.	.0710	-.0272	-.0647	.0349	-.0634	-.0017	1622.							
.2860	460.	639.	279.	1099.	-215.	3742.	.0663	-.0262	-.0765	.0357	-.0508	.0007	1567.							
.2870	395.	570.	186.	1805.	-27.	3337.	.0610	-.0250	-.0877	.0361	-.0583	.0028	1523.							
.2880	310.	229.	94.	2468.	162.	2785.	.0551	-.0235	-.0983	.0361	-.0560	.0044	1495.							
.2890	208.	-70.	5.	3081.	342.	2103.	.0489	-.0217	-.1079	.0361	-.0545	.0056	1503.							
.2900	91.	-132.	-74.	3622.	503.	1315.	.0425	-.0197	-.1166	.0360	-.0540	.0064	1559.							
.2910	-35.	-115.	-137.	4060.	637.	453.	.0361	-.0173	-.1241	.0359	-.0548	.0068	1659.							
.2920	-164.	-151.	-177.	4367.	740.	-438.	.0299	-.0148	-.1304	.0357	-.0568	.0068	1786.							
.2930	-290.	-226.	-191.	4520.	811.	-1310.	.0242	-.0122	-.1354	.0355	-.0594	.0065	1916.							
.2940	-406.	-368.	-179.	4527.	855.	-2117.	.0192	-.0097	-.1391	.0352	-.0621	.0061	2034.							
.2950	-506.	-566.	-147.	4415.	877.	-2825.	.0151	-.0070	-.1416	.0349	-.0639	.0054	2133.							
.2960	-585.	-603.	-101.	4224.	888.	-3402.	.0120	-.0045	-.1431	.0346	-.0641	.0046	2205.							
.2970	-639.	-361.	-51.	3996.	888.	-3812.	.0101	-.0020	-.1435	.0344	-.0619	.0036	2245.							
.2980	-662.	-115.	-6.	3781.	879.	-4019.	.0095	.0001	-.1432	.0343	-.0575	.0027	2242.							
.2990	-651.	-130.	27.	3607.	859.	-3999.	.0103	.0018	-.1423	.0344	-.0513	.0020	2189.							
.3000	-605.	-211.	46.	3474.	833.	-3743.	.0123	.0030	-.1408	.0343	-.0435	.0015	2076.							
.3010	-527.	-50.	52.	3370.	802.	-3257.	.0155	.0036	-.1388	.0341	-.0348	.0014	1908.							
.3020	-422.	194.	44.	3297.	766.	-2573.	.0196	.0036	-.1365	.0336	-.0258	.0016	1706.							
.3030	-301.	160.	22.	3265.	726.	-1753.	.0245	.0030	-.1338	.0329	-.0170	.0021	1515.							
.3040	-174.	-59.	-16.	3278.	687.	-869.	.0298	.0018	-.1309	.0321	-.0084	.0027	1388.							
.3050	-52.	-59.	-64.	3333.	654.	16.	.0353	.0001	-.1278	.0313	.0003	.0033	1363.							
.3060	59.	194.	-120.	3472.	631.	851.	.0407	-.0021	-.1245	.0306	.0089	.0039	1438.							
.3070	154.	324.	-179.	3530.	617.	1604.	.0458	-.0047	-.1210	.0301	.0170	.0043	1575.							
.3080	233.	149.	-231.	3610.	613.	2266.	.0504	-.0078	-.1172	.0298	.0244	.0047	1731.							
.3090	301.	-120.	-266.	3679.	618.	2851.	.0543	-.0111	-.1131	.0296	.0306	.0050	1872.							
.3100	361.	-296.	-277.	3555.	628.	3370.	.0574	-.0144	-.1088	.0294	.0353	.0055	1982.							
.3110	413.	-422.	-261.	3353.	642.	3815.	.0597	-.0177	-.1042	.0293	.0381	.0061	2054.							
.3120	455.	-553.	-220.	3045.	655.	4168.	.0609	-.0207	-.0994	.0293	.0391	.0066	2088.							
.3130	485.	-652.	-158.	2663.	669.	4405.	.0611	-.0233	-.0946	.0294	.0386	.0071	2083.							
.3140	501.	-712.	-85.	2257.	683.	4510.	.0601	-.0254	-.0898	.0297	.0368	.0074	2041.							
.3150	502.	-879.	-9.	1861.	695.	4478.	.0580	-.0270	-.0853	.0303	.0338	.0076	1966.							

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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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

.3050	-57.	-59.	-64.	2333.	654.	16.	.253	.0001	-.1278	.0313	.0003	.0033	1363.
.3060	59.	194.	-120.	3422.	631.	851.	.0407	-.0021	-.1245	.0306	.0089	.0039	1438.
.3070	154.	324.	-179.	3530.	617.	1604.	.0450	-.0047	-.1210	.0301	.0170	.0043	1575.
.3080	237.	149.	-231.	3617.	617.	2266.	.0504	-.0078	-.1172	.0298	.0244	.0047	1731.
.3090	301.	-120.	-266.	3679.	618.	2851.	.0543	-.0111	-.1131	.0296	.0306	.0050	1872.
.3100	361.	-296.	-277.	3555.	628.	3370.	.0574	-.0144	-.1086	.0294	.0353	.0055	1982.
.3110	417.	-422.	-261.	3353.	642.	3815.	.0597	-.0177	-.1042	.0293	.0381	.0061	2054.
.3120	455.	-553.	-220.	3045.	655.	4168.	.0609	-.0207	-.0994	.0293	.0391	.0066	2088.
.3130	485.	-658.	-158.	2663.	669.	4405.	.0611	-.0233	-.0946	.0294	.0386	.0071	2083.
.3140	501.	-742.	-85.	2252.	683.	4510.	.0601	-.0254	-.0898	.0297	.0368	.0074	2041.
.3150	502.	-829.	-9.	1861.	695.	4478.	.0580	-.0270	-.0853	.0303	.0338	.0076	1966.

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

CONDITION 24  
LOADS  
SHOCK  
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ENGLISH UNITS

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

SECTION	34	MEMBER	1	SEQUENCE	016	LOCATION	BEG	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3160	487.	-887.	63.	1514.	707.	4313.	.0547	-.0279	-.0811	.0311	.0302	.0076	1856.	
.3170	458.	-845.	129.	1215.	715.	4032.	.0503	-.0281	-.0773	.0318	.0261	.0077	1714.	
.3180	416.	-821.	186.	963.	714.	3660.	.0450	-.0277	-.0741	.0325	.0216	.0079	1546.	
.3190	365.	-870.	231.	762.	702.	3225.	.0387	-.0267	-.0714	.0329	.0165	.0083	1359.	
.3200	306.	-802.	264.	616.	680.	2746.	.0317	-.0251	-.0692	.0329	.0110	.0090	1162.	
.3210	238.	-421.	280.	538.	650.	2230.	.0241	-.0230	-.0676	.0327	.0054	.0101	957.	
.3220	159.	120.	278.	553.	614.	1674.	.0159	-.0205	-.0666	.0322	.0002	.0114	749.	
.3230	68.	518.	254.	686.	573.	1071.	.0074	-.0178	-.0662	.0318	-.0045	.0129	560.	
.3240	-35.	774.	208.	937.	530.	420.	-.0014	-.0152	-.0662	.0313	-.0082	.0145	464.	
.3250	-148.	1116.	148.	1276.	486.	-268.	-.0103	-.0128	-.0665	.0310	-.0106	.0159	558.	
.3260	-267.	1550.	82.	1656.	443.	-976.	-.0191	-.0107	-.0669	.0305	-.0119	.0172	792.	
.3270	-387.	1811.	20.	2022.	398.	-1686.	-.0276	-.0091	-.0674	.0300	-.0124	.0182	1068.	
.3280	-502.	1803.	-31.	2322.	355.	-2373.	-.0357	-.0081	-.0676	.0292	-.0124	.0188	1340.	
.3290	-603.	1759.	-65.	2526.	314.	-3002.	-.0431	-.0079	-.0676	.0280	-.0119	.0189	1580.	
.3300	-685.	1839.	-85.	2640.	277.	-3537.	-.0496	-.0085	-.0672	.0266	-.0111	.0184	1775.	
.3310	-740.	1893.	-95.	2690.	243.	-3959.	-.0552	-.0099	-.0665	.0250	-.0101	.0174	1923.	
.3320	-768.	1722.	-102.	2710.	214.	-4263.	-.0597	-.0121	-.0654	.0233	-.0087	.0156	2029.	
.3330	-766.	1368.	-113.	2730.	190.	-4443.	-.0631	-.0152	-.0640	.0215	-.0066	.0131	2094.	
.3340	-734.	1008.	-132.	2766.	173.	-4487.	-.0653	-.0190	-.0623	.0198	-.0039	.0099	2116.	
.3350	-672.	675.	-159.	2817.	161.	-4390.	-.0664	-.0234	-.0602	.0181	-.0007	.0062	2094.	
.3360	-583.	311.	-193.	2863.	153.	-4157.	-.0665	-.0281	-.0578	.0163	.0029	.0020	2026.	
.3370	-470.	-66.	-228.	2874.	150.	-3796.	-.0656	-.0330	-.0550	.0143	.0068	-.0023	1912.	
.3380	-341.	-381.	-261.	2826.	147.	-3327.	-.0638	-.0378	-.0519	.0121	.0110	-.0067	1753.	
.3390	-201.	-616.	-288.	2715.	143.	-2768.	-.0615	-.0425	-.0482	.0098	.0155	-.0111	1557.	
.3400	-58.	-808.	-308.	2546.	137.	-2156.	-.0586	-.0467	-.0442	.0075	.0205	-.0151	1340.	
.3410	78.	-976.	-321.	2328.	129.	-1531.	-.0556	-.0505	-.0398	.0054	.0261	-.0188	1119.	
.3420	201.	-1121.	-324.	2066.	118.	-932.	-.0525	-.0536	-.0351	.0036	.0322	-.0222	911.	
.3430	305.	-1257.	-315.	1766.	103.	-382.	-.0496	-.0559	-.0301	.0023	.0387	-.0251	726.	
.3440	388.	-1361.	-293.	1431.	83.	107.	-.0470	-.0575	-.0249	.0014	.0454	-.0275	577.	
.3450	453.	-1374.	-256.	1059.	58.	534.	-.0449	-.0582	-.0196	.0010	.0521	-.0293	477.	
.3460	498.	-1256.	-202.	645.	26.	894.	-.0433	-.0580	-.0143	.0012	.0586	-.0305	442.	
.3470	528.	-1067.	-131.	191.	-12.	1185.	-.0423	-.0572	-.0090	.0017	.0647	-.0312	482.	
.3480	542.	-903.	-46.	-205.	-57.	1402.	-.0421	-.0557	-.0040	.0026	.0700	-.0314	574.	
.3490	543.	-779.	46.	-759.	-105.	1535.	-.0426	-.0538	.0007	.0038	.0746	-.0313	688.	
.3500	501.	-627.	140.	-1205.	-154.	1572.	-.0439	-.0514	.0049	.0053	.0784	-.0310	797.	
.3510	506.	-426.	231.	-1601.	-201.	1498.	-.0461	-.0488	.0085	.0068	.0812	-.0307	884.	
.3520	486.	-237.	312.	-1934.	-244.	1300.	-.0490	-.0460	.0114	.0084	.0831	-.0305	940.	
.3530	414.	-96.	380.	-2194.	-282.	979.	-.0523	-.0432	.0134	.0097	.0838	-.0304	971.	

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ADLPIPE STRESS ANALYSIS

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18.28.10.

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

CONDITION 24  
LOADS  
SHOCK  
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ENGLISH UNITS

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

.3430	305.	-1257.	315.	1766.	100.	-382.	-.0496	-.0559	-.0301	.0023	.0387	-.0251	726.
.3440	388.	-1361.	-293.	1431.	33.	107.	-.0470	-.0575	-.0249	.0014	.0454	-.0275	577.
.3450	453.	-1374.	-256.	1059.	58.	534.	-.0449	-.0582	-.0196	.0010	.0521	-.0293	477.
.3460	498.	-1356.	-207.	645.	26.	894.	-.0433	-.0580	-.0143	.0012	.0586	-.0305	442.
.3470	528.	-1067.	-121.	191.	-12.	1185.	-.0423	-.0572	-.0090	.0017	.0647	-.0312	482.
.3480	543.	-903.	-46.	-255.	-57.	1402.	-.0421	-.0557	-.0040	.0026	.0700	-.0314	574.
.3490	543.	-779.	46.	-759.	-105.	1535.	-.0426	-.0538	.0007	.0038	.0746	-.0313	688.
.3500	531.	-627.	140.	-1205.	-154.	1572.	-.0439	-.0514	.0049	.0053	.0784	-.0310	797.
.3510	506.	-426.	231.	-1601.	-201.	1498.	-.0461	-.0488	.0085	.0068	.0512	-.0307	884.
.3520	466.	-237.	312.	-1934.	-244.	1300.	-.0490	-.0460	.0114	.0084	.0831	-.0305	940.
.3530	414.	-76.	390.	-2194.	-282.	979.	-.0523	-.0432	.0134	.0097	.0838	-.0304	971.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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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	34	MEMBER	1	SEQUENCE	816	LOCATION	BEG	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)		
.3540	351.	37.	431.	-2374.	-313.	549.	-.0572	-.0405	.0146	.0107	.0332	-.0306	986.		
.3550	280.	210.	462.	-2468.	-336.	30.	-.0622	-.0378	.0149	.0114	.0812	-.0310	1000.		
.3560	204.	390.	473.	-2475.	-349.	-554.	-.0677	-.0353	.0143	.0115	.0779	-.0315	1027.		
.3570	125.	485.	461.	-2390.	-352.	-1182.	-.0734	-.0331	.0128	.0112	.0733	-.0321	1079.		
.3580	46.	448.	428.	-2211.	-344.	-1825.	-.0791	-.0311	.0106	.0105	.0678	-.0328	1159.		
.3590	-30.	328.	374.	-1938.	-322.	-2453.	-.0848	-.0294	.0076	.0095	.0515	-.0334	1261.		
.3600	-101.	222.	304.	-1582.	-289.	-7040.	-.0901	-.0278	.0040	.0083	.0547	-.0340	1380.		
.3610	-164.	174.	222.	-1161.	-244.	-3565.	-.0950	-.0263	-.0001	.0070	.0475	-.0345	1508.		
.3620	-219.	152.	134.	-700.	-190.	-4010.	-.0992	-.0249	-.0044	.0058	.0402	-.0348	1635.		
.3630	-262.	107.	46.	-219.	-132.	-4351.	-.1026	-.0234	-.0089	.0046	.0325	-.0349	1749.		
.3640	-290.	25.	31.	268.	-72.	-4568.	-.1051	-.0219	-.0132	.0037	.0244	-.0348	1836.		
.3650	-301.	-39.	-113.	745.	-15.	-4644.	-.1067	-.0202	-.0174	.0032	.0160	-.0345	1887.		
.3660	-294.	-31.	-178.	1194.	37.	-4577.	-.1072	-.0183	-.0211	.0030	.0075	-.0339	1898.		
.3670	-268.	33.	-228.	1602.	79.	-4368.	-.1066	-.0162	-.0243	.0033	-.0010	-.0331	1867.		
.3680	-224.	85.	-264.	1951.	110.	-4030.	-.1051	-.0139	-.0269	.0040	-.0093	-.0322	1797.		
.3690	-164.	99.	-282.	2224.	131.	-3583.	-.1027	-.0113	-.0286	.0051	-.0169	-.0311	1693.		
.3700	-93.	166.	-283.	2398.	141.	-3055.	-.0995	-.0085	-.0295	.0063	-.0237	-.0300	1560.		
.3710	-13.	378.	-265.	2455.	142.	-2477.	-.0956	-.0055	-.0294	.0075	-.0294	-.0290	1400.		
.3720	70.	686.	-230.	2386.	133.	-1880.	-.0913	-.0025	-.0284	.0087	-.0340	-.0281	1220.		
.3730	153.	928.	-183.	2200.	110.	-1298.	-.0867	.0004	-.0265	.0095	-.0375	-.0272	1026.		
.3740	230.	1031.	-127.	1914.	75.	-763.	-.0820	.0031	-.0237	.0101	-.0400	-.0266	828.		
.3750	296.	1129.	-69.	1552.	27.	-302.	-.0772	.0055	-.0202	.0104	-.0419	-.0260	635.		
.3760	349.	1358.	-13.	1135.	-34.	61.	-.0726	.0074	-.0159	.0104	-.0432	-.0257	456.		
.3770	384.	1627.	39.	680.	-106.	306.	-.0682	.0087	-.0112	.0100	-.0443	-.0255	302.		
.3780	398.	1750.	85.	204.	-189.	420.	-.0641	.0093	-.0060	.0094	-.0453	-.0255	202.		
.3790	393.	1692.	125.	-284.	-280.	406.	-.0603	.0091	-.0005	.0085	-.0463	-.0257	228.		
.3800	369.	1562.	162.	-780.	-376.	280.	-.0568	.0081	.0053	.0075	-.0469	-.0259	365.		
.3810	329.	1401.	196.	-1281.	-473.	66.	-.0535	.0065	.0111	.0063	-.0471	-.0260	549.		
.3820	279.	1226.	232.	-1784.	-568.	-209.	-.0503	.0042	.0169	.0051	-.0465	-.0260	756.		
.3830	222.	1029.	270.	-2280.	-656.	-507.	-.0471	.0013	.0225	.0039	-.0449	-.0259	973.		
.3840	163.	774.	310.	-2753.	-733.	-794.	-.0438	-.0019	.0279	.0029	-.0424	-.0254	1187.		
.3850	108.	558.	352.	-3189.	-796.	-1037.	-.0403	-.0055	.0330	.0021	-.0387	-.0246	1383.		
.3860	60.	486.	395.	-3576.	-847.	-1211.	-.0365	-.0092	.0375	.0016	-.0340	-.0234	1552.		
.3870	22.	425.	438.	-3901.	-877.	-1296.	-.0322	-.0131	.0413	.0014	-.0280	-.0217	1687.		
.3880	-6.	64.	477.	-4146.	-899.	-1285.	-.0275	-.0170	.0444	.0014	-.0210	-.0197	1779.		
.3890	-22.	-625.	509.	-4296.	-911.	-1175.	-.0224	-.0206	.0467	.0017	-.0131	-.0172	1824.		
.3900	-29.	-1261.	531.	-4343.	-913.	-972.	-.0167	-.0238	.0480	.0021	-.0044	-.0144	1823.		
.3910	-26.	-1518.	541.	-4288.	-903.	-689.	-.0107	-.0262	.0484	.0026	.0048	-.0114	1780.		

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ADLPIPE STRESS ANALYSIS

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18.28.10.

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

.3810	329.	1401.	196.	-1281.	-473.	66.	-.0535	.0065	.0111	.0063	-.0471	-.0260	549.
.3820	279.	1226.	232.	-1704.	-568.	-209.	-.0503	.0042	.0169	.0051	-.0465	-.0260	756.
.3830	222.	1029.	270.	-2210.	-656.	-507.	-.0471	.0013	.0223	.0039	-.0449	-.0259	973.
.3840	163.	774.	310.	-2753.	-733.	-794.	-.0438	-.0019	.0279	.0029	-.0424	-.0254	1187.
.3850	108.	558.	352.	-3189.	-796.	-1037.	-.0403	-.0055	.0330	.0021	-.0387	-.0246	1383.
.3860	68.	488.	395.	-3576.	-847.	-1111.	-.0265	-.0092	.0375	.0016	-.0340	-.0234	1552.
.3870	22.	425.	436.	-3901.	-877.	-1206.	-.0327	-.0131	.0413	.0014	-.0280	-.0217	1687.
.3880	-6.	64.	477.	-4146.	-899.	-1285.	-.0275	-.0170	.0444	.0014	-.0210	-.0197	1779.
.3890	-22.	-625.	509.	-4296.	-911.	-1175.	-.0224	-.0206	.0467	.0017	-.0131	-.0172	1824.
.3900	-29.	-1261.	531.	-4343.	-913.	-972.	-.0167	-.0236	.0480	.0021	-.0044	-.0144	1823.
.3910	-26.	-1518.	541.	-4288.	-903.	-689.	-.0107	-.0262	.0484	.0026	.0048	-.0114	1780.

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

SECTION	34	MEMBER	1	SEQUENCE	816	LOCATION	BEG	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3920	-17.	-1517.	537.	-4128.	-883.	-347.	-.0043	-.0278	.0478	.0030	.0143	-.0083	1700.	
.3930	-3.	-1576.	516.	-3859.	-858.	37.	.0023	-.0284	.0462	.0034	.0238	-.0051	1587.	
.3940	16.	-1734.	478.	-3486.	-830.	456.	.0092	-.0281	.0436	.0036	.0329	-.0019	1450.	
.3950	42.	-1765.	424.	-3021.	-801.	913.	.0162	-.0268	.0402	.0037	.0415	.0013	1307.	
.3960	76.	-1597.	354.	-2480.	-774.	1403.	.0232	-.0246	.0361	.0035	.0494	.0044	1185.	
.3970	115.	-1424.	273.	-1881.	-750.	1908.	.0300	-.0216	.0313	.0031	.0564	.0075	1116.	
.3980	158.	-1385.	183.	-1242.	-731.	2404.	.0366	-.0178	.0261	.0024	.0623	.0103	1125.	
.3990	201.	-1361.	88.	-583.	-715.	2867.	.0429	-.0133	.0206	.0016	.0670	.0130	1209.	
.4000	241.	-1132.	-8.	76.	-700.	3274.	.0486	-.0083	.0150	.0007	.0702	.0154	1344.	

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)
.1330	-1313.	-1216.	-1055.	9701.	722.	-9965.	.1307	.0548	.2035	-.0426	-.0546	.0198	5588.

SECTION	34	MEMBER	1	SEQUENCE	817	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)	
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	-0.	1.	0.	0.	0.	0.	.0000	.0000	-.0000	-.0000	-.0000	-.0000	0.	
.0020	0.	3.	0.	0.	0.	-0.	.0000	-.0000	-.0000	-.0000	-.0000	.0000	0.	
.0030	0.	6.	0.	1.	1.	-1.	-.0000	-.0000	-.0000	-.0000	-.0001	.0000	0.	
.0040	1.	12.	1.	2.	1.	-2.	-.0000	-.0000	-.0000	-.0000	-.0001	.0000	1.	
.0050	3.	26.	2.	2.	1.	-5.	-.0000	-.0000	-.0000	-.0000	-.0001	.0000	2.	
.0060	5.	54.	2.	2.	1.	-6.	-.0000	-.0000	-.0000	-.0000	-.0002	.0000	3.	
.0070	6.	95.	2.	-1.	2.	-4.	-.0000	-.0001	-.0000	-.0000	-.0003	.0000	2.	
.0080	4.	140.	1.	-7.	5.	6.	-.0000	-.0001	-.0000	.0000	-.0005	-.0000	4.	
.0090	1.	179.	-7.	-18.	6.	20.	-.0001	-.0002	-.0000	.0001	-.0007	-.0001	11.	
.0100	-2.	216.	-8.	-35.	2.	36.	-.0001	-.0003	-.0000	.0002	-.0002	-.0001	20.	
.0110	-6.	265.	-16.	-54.	-12.	58.	-.0001	-.0004	-.0000	.0003	.0011	-.0003	32.	
.0120	-19.	329.	-22.	-68.	-36.	97.	-.0001	-.0005	.0000	.0005	.0037	-.0005	50.	
.0130	-46.	387.	-22.	-68.	-72.	164.	-.0000	-.0007	.0001	.0006	.0076	-.0010	77.	
.0140	-89.	417.	-14.	-50.	-117.	254.	.0001	-.0010	.0002	.0006	.0126	-.0016	114.	
.0150	-138.	422.	0.	-24.	-167.	339.	.0004	-.0013	.0003	.0007	.0182	-.0024	152.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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

CONDITION 24  
LOADS  
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ENGLISH UNITS

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





.0430	756.	-18.	-88.	-317.	586.	-1442.	-.0061	.0114	-.0020	-.0099	-.0710	-.0035	705.
.0440	224.	61.	44.	-384.	610.	-1370.	-.0056	.0104	-.0010	-.0103	-.0756	-.0026	621.
.0450	139.	330.	135.	-9.	579.	-1042.	-.0057	.0094	.0002	-.0101	-.0747	-.0016	478.
.0460	46.	1420.	146.	204.	526.	-534.	-.0062	.0076	.0014	-.0088	-.0710	-.0001	326.
.0470	-58.	1241.	129.	374.	527.	-47.	-.0069	.0049	.0025	-.0071	-.0723	.0016	252.
.0480	-124.	1351.	111.	444.	531.	420.	-.0076	.0019	.0035	-.0053	-.0732	.0038	325.
.0490	-121.	1409.	60.	481.	440.	709.	-.0080	-.0006	.0044	-.0032	-.0735	.0065	386.
.0500	-99.	1537.	29.	506.	281.	888.	-.0080	-.0026	.0052	-.0012	-.0461	.0089	425.
.0510	-108.	1149.	21.	579.	127.	1024.	-.0076	-.0045	.0059	.0004	-.0283	.0104	476.
.0520	-123.	1174.	32.	679.	-25.	1068.	-.0067	-.0063	.0064	.0017	-.0111	.0111	508.
.0530	-104.	1372.	48.	773.	-171.	914.	-.0053	-.0077	.0068	.0027	.0062	.0112	485.

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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	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)
34	1	817					.0540	-41.	2438.	77.	872.	-296.	555.	-.0034	-.0090	.0068	.0034	.0219	.0110	432.
							.0550	51.	2347.	128.	984.	-395.	40.	-.0012	-.0098	.0066	.0036	.0354	.0104	426.
							.0560	154.	2360.	173.	1054.	-480.	-557.	.0012	-.0099	.0059	.0035	.0479	.0093	516.
							.0570	247.	2457.	183.	994.	-564.	-1155.	.0033	-.0095	.0048	.0035	.0504	.0078	652.
							.0580	314.	1502.	133.	790.	-647.	-1677.	.0051	-.0090	.0032	.0039	.0724	.0059	788.
							.0590	355.	-368.	69.	534.	-723.	-2085.	.0063	-.0079	.0013	.0041	.0833	.0039	911.
							.0600	396.	-1513.	21.	310.	-795.	-2399.	.0067	-.0059	-.0009	.0041	.0933	.0023	1022.
							.0610	470.	-1508.	-5.	143.	-852.	-2651.	.0062	-.0030	-.0032	.0036	.1014	.0016	1119.
							.0620	564.	-1692.	-13.	39.	-873.	-2787.	.0046	-.0001	-.0056	.0028	.1059	.0018	1172.
							.0630	614.	-2392.	10.	24.	-840.	-2656.	.0018	.0027	-.0081	.0014	.1050	.0023	1118.
							.0640	562.	-2351.	76.	109.	-762.	-2140.	-.0022	.0058	-.0106	-.0006	.0993	.0026	913.
							.0650	400.	-1387.	172.	253.	-673.	-1245.	-.0071	.0095	-.0133	-.0031	.0916	.0025	577.
							.0660	154.	-932.	263.	360.	-596.	-82.	-.0123	.0130	-.0162	-.0059	.0837	.0019	281.
							.0670	-118.	-1396.	298.	316.	-534.	1160.	-.0185	.0159	-.0194	-.0084	.0755	.0013	528.
							.0680	-343.	-1667.	243.	49.	-492.	2251.	-.0239	.0181	-.0230	-.0103	.0681	.0011	925.
							.0690	-486.	-1359.	124.	-368.	-474.	3055.	-.0284	.0195	-.0267	-.0118	.0532	.0014	1249.
							.0700	-574.	-1112.	28.	-734.	-461.	3569.	-.0319	.0199	-.0304	-.0135	.0593	.0018	1474.
							.0710	-617.	-871.	8.	-915.	-443.	3791.	-.0339	.0194	-.0338	-.0161	.0551	.0021	1575.
							.0720	-589.	-73.	48.	-924.	-438.	3662.	-.0346	.0180	-.0370	-.0192	.0518	.0024	1526.
							.0730	-495.	340.	136.	-788.	-435.	3209.	-.0340	.0157	-.0398	-.0227	.0473	.0029	1337.
							.0740	-381.	1088.	280.	-506.	-377.	2561.	-.0322	.0124	-.0425	-.0265	.0363	.0032	1058.
							.0750	-257.	1079.	444.	-180.	-247.	1781.	-.0296	.0085	-.0451	-.0302	.0177	.0034	725.
							.0760	-86.	1569.	555.	19.	-87.	859.	-.0265	.0042	-.0479	-.0332	-.0033	.0040	346.
							.0770	128.	2097.	582.	14.	69.	-135.	-.0232	-.0001	-.0509	-.0349	-.0226	.0053	61.
							.0780	336.	1859.	544.	-161.	207.	-1039.	-.0202	-.0047	-.0543	-.0355	-.0388	.0068	430.
							.0790	502.	1268.	466.	-440.	300.	-1722.	-.0178	-.0090	-.0579	-.0351	-.0490	.0085	723.
							.0800	608.	1201.	382.	-735.	323.	-2106.	-.0164	-.0126	-.0616	-.0339	-.0509	.0102	904.
							.0810	631.	1535.	330.	-947.	308.	-2128.	-.0161	-.0153	-.0652	-.0324	-.0473	.0117	943.
							.0820	580.	1644.	308.	-1080.	293.	-1815.	-.0168	-.0173	-.0689	-.0305	-.0423	.0128	856.
							.0830	497.	1582.	273.	-1213.	285.	-1280.	-.0184	-.0185	-.0724	-.0278	-.0366	.0140	717.
							.0840	393.	1712.	212.	-1383.	297.	-591.	-.0206	-.0187	-.0759	-.0243	-.0321	.0149	615.
							.0850	241.	1835.	142.	-1559.	361.	245.	-.0233	-.0179	-.0793	-.0203	-.0329	.0151	650.
							.0860	50.	1552.	64.	-1750.	469.	1144.	-.0260	-.0162	-.0825	-.0159	-.0386	.0143	860.
							.0870	-124.	926.	-36.	-1986.	569.	1932.	-.0283	-.0139	-.0856	-.0111	-.0442	.0130	1135.
							.0880	-244.	197.	-136.	-2226.	635.	2477.	-.0299	-.0111	-.0884	-.0064	-.0469	.0112	1360.
							.0890	-301.	-639.	-199.	-2402.	674.	2728.	-.0307	-.0077	-.0909	-.0022	-.0472	.0089	1483.
							.0900	-290.	-1525.	-219.	-2508.	687.	2665.	-.0304	-.0041	-.0932	.0012	-.0450	.0064	1494.
							.0910	-221.	-2140.	-217.	-2603.	667.	2331.	-.0293	-.0003	-.0951	.0039	-.0400	.0035	1428.

ADLPIPE PAGE 1442

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.10.

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

.0810	421.	1535.	320.	-947.	308.	-2128.	-.1161	-.0153	-.0652	-.0324	-.0473	.0117	943.
.0820	580.	1644.	308.	-1080.	293.	-1815.	-.1168	-.0173	-.0689	-.0305	-.0423	.0128	856.
.0830	497.	1582.	273.	-1213.	285.	-1280.	-.0184	-.0185	-.0724	-.0278	-.0366	.0140	717.
.0840	353.	1712.	212.	-1383.	207.	-591.	-.0206	-.0187	-.0759	-.0243	-.0321	.0149	615.
.0850	241.	1335.	142.	-1559.	711.	245.	-.0233	-.0179	-.0793	-.0203	-.0329	.0151	650.
.0860	50.	1552.	64.	-1750.	429.	1144.	-.0260	-.0162	-.0825	-.0159	-.0386	.0143	860.
.0870	-124.	226.	-36.	-1986.	569.	1932.	-.0283	-.0139	-.0856	-.0111	-.0442	.0130	1135.
.0880	-244.	197.	-136.	-2226.	635.	2477.	-.0299	-.0111	-.0884	-.0064	-.0469	.0112	1360.
.0890	-301.	-639.	-199.	-2402.	674.	2728.	-.0307	-.0077	-.0909	-.0022	-.0472	.0089	1483.
.0900	-299.	-1525.	-219.	-2508.	607.	2665.	-.0304	-.0041	-.0932	.0012	-.0450	.0064	1494.
.0910	-221.	-2140.	-217.	-2603.	667.	2331.	-.0293	-.0003	-.0951	.0039	-.0400	.0035	1428.

ADLPIPE PAGE 1442

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.10.

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	34	MEMBER	1	SEQUENCE	817	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	-144.	-2420.	-220.	-2756.	628.	1868.	-.0275	.0035	-.0967	.0060	-.0340	-.0001	1360.		
.0930	-119.	-2707.	-254.	-3031.	583.	1441.	-.0252	.0074	-.0980	.0079	-.0292	-.0045	1367.		
.0940	-171.	-3109.	-341.	-3464.	529.	1143.	-.0227	.0112	-.0990	.0096	-.0253	-.0097	1479.		
.0950	-275.	-3241.	-477.	-4037.	460.	957.	-.0200	.0152	-.0995	.0111	-.0213	-.0152	1675.		
.0960	-383.	-2300.	-642.	-4675.	378.	804.	-.0172	.0193	-.0992	.0125	-.0172	-.0201	1910.		
.0970	-445.	-2036.	-807.	-5277.	286.	600.	-.0142	.0234	-.0978	.0134	-.0125	-.0237	2134.		
.0980	-440.	-1300.	-935.	-5729.	178.	322.	-.0110	.0275	-.0950	.0137	-.0065	-.0254	2304.		
.0990	-387.	-550.	-1000.	-5941.	49.	26.	-.0079	.0317	-.0907	.0132	.0013	-.0255	2384.		
.1000	-322.	290.	-998.	-5890.	-89.	-190.	-.0048	.0363	-.0845	.0120	.0097	-.0239	2365.		
.1010	-281.	849.	-954.	-5617.	-219.	-244.	-.0018	.0411	-.0766	.0104	.0164	-.0213	2258.		
.1020	-280.	679.	-897.	-5187.	-320.	-106.	.0010	.0457	-.0669	.0088	.0191	-.0176	2086.		
.1030	-302.	22.	-849.	-4652.	-373.	165.	.0038	.0496	-.0555	.0073	.0157	-.0131	1874.		
.1040	-306.	-368.	-806.	-4015.	-377.	453.	.0068	.0524	-.0426	.0058	.0063	-.0075	1629.		
.1050	-261.	-393.	-736.	-3220.	-349.	648.	.0101	.0539	-.0283	.0041	-.0063	-.0007	1326.		
.1060	-156.	-420.	-594.	-2194.	-314.	696.	.0139	.0537	-.0126	.0015	-.0188	.0068	932.		
.1070	0.	-296.	-354.	-915.	-298.	586.	.0182	.0519	.0040	-.0021	-.0281	.0147	452.		
.1080	181.	665.	-25.	556.	-203.	355.	.0229	.0489	.0212	-.0067	-.0338	.0224	291.		
.1090	364.	1820.	336.	2049.	-335.	40.	.0281	.0450	.0385	-.0119	-.0358	.0294	833.		
.1100	539.	484.	652.	3357.	-454.	-335.	.0335	.0392	.0552	-.0167	-.0281	.0351	1366.		
.1110	646.	-626.	909.	4404.	-571.	-652.	.0390	.0327	.0711	-.0209	-.0197	.0389	1801.		
.1120	680.	1309.	1069.	5093.	-625.	-907.	.0446	.0268	.0856	-.0240	-.0164	.0405	2091.		
.1130	697.	5035.	1058.	5292.	-658.	-1213.	.0501	.0211	.0987	-.0251	-.0130	.0404	2195.		
.1140	717.	5110.	891.	5075.	-689.	-1605.	.0555	.0150	.1104	-.0241	-.0069	.0387	2154.		
.1150	724.	3609.	691.	4753.	-699.	-2041.	.0607	.0099	.1209	-.0219	-.0005	.0354	2095.		
.1160	734.	3986.	569.	4611.	-709.	-2532.	.0655	.0076	.1307	-.0195	.0074	.0308	2130.		
.1170	760.	4914.	553.	4752.	-739.	-3071.	.0699	.0074	.1398	-.0170	.0179	.0254	2290.		
.1180	802.	3029.	616.	5129.	-783.	-3609.	.0734	.0077	.1482	-.0143	.0302	.0193	2536.		
.1190	794.	446.	752.	5700.	-715.	-3971.	.0760	.0089	.1558	-.0114	.0317	.0123	2802.		
.1200	742.	868.	883.	6254.	-526.	-4126.	.0774	.0122	.1623	-.0077	.0221	.0048	3014.		
.1210	682.	2301.	882.	6490.	-315.	-4108.	.0776	.0173	.1674	-.0022	.0122	-.0027	3085.		
.1220	526.	578.	755.	6373.	-76.	-3728.	.0765	.0228	.1710	.0047	.0003	-.0106	2963.		
.1230	249.	-2765.	550.	5987.	158.	-2946.	.0742	.0290	.1733	.0123	-.0117	-.0192	2678.		
.1240	-104.	-3765.	323.	5444.	355.	-1887.	.0711	.0368	.1743	.0198	-.0222	-.0277	2317.		
.1250	-446.	-3317.	88.	4789.	470.	-781.	.0677	.0448	.1744	.0268	-.0270	-.0353	1956.		
.1260	-712.	-4594.	-141.	4069.	499.	182.	.0644	.0513	.1738	.0329	-.0246	-.0414	1647.		
.1270	-919.	-6414.	-307.	3413.	543.	980.	.0616	.0561	.1728	.0375	-.0240	-.0461	1441.		
.1280	-1027.	-5458.	-449.	2762.	578.	1498.	.0597	.0605	.1717	.0410	-.0221	-.0491	1282.		
.1290	-1064.	-3085.	-615.	2047.	591.	1778.	.0587	.0636	.1708	.0436	-.0185	-.0506	1114.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.10.

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

.1190	794.	446.	752.	5700.	-715.	-3971.	.0760	.0089	.1558	-.0114	.0317	.0123	2536.
.1200	742.	868.	883.	6254.	-526.	-4126.	.0774	.0122	.1623	-.0077	.0221	.0048	3014.
.1210	682.	2301.	882.	6490.	-315.	-4108.	.0776	.0173	.1674	-.0022	.0122	-.0027	3085.
.1220	528.	578.	755.	6377.	-76.	-3728.	.0765	.0228	.1710	.0047	.0303	-.0106	2963.
.1230	249.	-2765.	550.	5987.	158.	-2946.	.0742	.0290	.1733	.0123	-.0117	-.0192	2678.
.1240	-104.	-3765.	727.	5444.	355.	-1887.	.0711	.0368	.1743	.0198	-.0222	-.0277	2317.
.1250	-446.	-3317.	88.	4789.	479.	-731.	.0677	.0448	.1744	.0268	-.0270	-.0353	1956.
.1260	-712.	-4594.	-141.	4069.	489.	182.	.0644	.0513	.1738	.0329	-.0246	-.0414	1647.
.1270	-919.	-6414.	-307.	3413.	543.	980.	.0616	.0561	.1728	.0375	-.0240	-.0461	1441.
.1280	-1027.	-5458.	-449.	2762.	578.	1498.	.0597	.0605	.1717	.0410	-.0221	-.0491	1282.
.1290	-1064.	-3085.	-615.	2047.	591.	1778.	.0587	.0636	.1708	.0436	-.0185	-.0506	1114.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.28.10.

S/RV PIPING KEWAUNEE GKW00F 2 RUP DISK  
2 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)	HX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
34	1	817					.1300	-1115.	-2839.	-799.	1312.	613.	1975.	.0588	.0641	.1703	.0455	-.0183	-.0516	983.
							.1310	-1202.	-3839.	-962.	678.	642.	2123.	.0600	.0623	.1705	.0464	-.0234	-.0523	931.
							.1320	-1304.	-3026.	-1045.	302.	699.	2158.	.0625	.0592	.1717	.0458	-.0361	-.0525	918.
							.1330	-1313.	-1216.	-1055.	204.	722.	1852.	.0663	.0544	.1741	.0441	-.0481	-.0512	802.
							.1340	-1176.	-1306.	-989.	416.	705.	1105.	.0714	.0471	.1778	.0413	-.0561	-.0478	552.
							.1350	-896.	-2196.	-837.	950.	671.	-50.	.0775	.0380	.1827	.0376	-.0600	-.0423	467.
							.1360	-500.	-782.	-629.	1734.	607.	-1493.	.0842	.0285	.1885	.0335	-.0534	-.0348	950.
							.1370	-99.	1875.	-385.	2697.	545.	-2928.	.0909	.0188	.1949	.0292	-.0561	-.0266	1612.
							.1380	248.	2648.	-147.	3712.	474.	-4160.	.0969	.0086	.2016	.0251	-.0540	-.0180	2246.
							.1390	517.	2012.	64.	4700.	430.	-5086.	.1019	-.0012	.2082	.0217	-.0560	-.0095	2784.
							.1400	746.	2669.	228.	5579.	428.	-5745.	.1054	-.0092	.2142	.0190	-.0623	-.0006	3218.
							.1410	982.	4227.	324.	6286.	443.	-6208.	.1074	-.0154	.2194	.0173	-.0678	.0087	3550.
							.1420	1169.	4304.	401.	6899.	520.	-6364.	.1075	-.0203	.2236	.0161	-.0755	.0177	3772.
							.1430	1289.	3615.	483.	7449.	630.	-6185.	.1057	-.0238	.2267	.0151	-.0826	.0260	3893.
							.1440	1336.	4320.	568.	7920.	725.	-5686.	.1021	-.0248	.2283	.0142	-.0861	.0330	3923.
							.1450	1309.	5566.	639.	8259.	755.	-4909.	.0969	-.0233	.2284	.0136	-.0824	.0383	3868.
							.1460	1208.	5128.	681.	8425.	711.	-3906.	.0904	-.0202	.2268	.0132	-.0716	.0416	3737.
							.1470	1011.	3616.	709.	8430.	685.	-2704.	.0829	-.0154	.2234	.0130	-.0620	.0423	3563.
							.1480	780.	3124.	689.	8202.	676.	-1494.	.0749	-.0087	.2183	.0131	-.0530	.0407	3356.
							.1490	541.	2997.	614.	7732.	693.	-390.	.0668	-.0007	.2115	.0134	-.0456	.0371	3119.
							.1500	287.	1378.	511.	7085.	737.	567.	.0592	.0078	.2032	.0138	-.0408	.0312	2868.
							.1510	37.	-911.	398.	6325.	761.	1306.	.0522	.0166	.1935	.0139	-.0353	.0234	2610.
							.1520	-211.	-1901.	310.	5539.	759.	1811.	.0462	.0259	.1827	.0135	-.0294	.0140	2358.
							.1530	-422.	-1938.	238.	4737.	699.	2016.	.0414	.0351	.1712	.0126	-.0196	.0037	2085.
							.1540	-581.	-2640.	173.	3919.	611.	1917.	.0378	.0431	.1590	.0114	-.0080	-.0069	1768.
							.1550	-650.	-3612.	85.	3048.	502.	1486.	.0352	.0496	.1464	.0102	.0053	-.0167	1376.
							.1560	-601.	-3494.	-48.	2111.	345.	740.	.0336	.0548	.1338	.0093	.0230	-.0248	908.
							.1570	-518.	-2960.	-182.	1227.	190.	-68.	.0325	.0585	.1213	.0083	.0391	-.0315	499.
							.1580	-456.	-3298.	-301.	467.	29.	-741.	.0315	.0598	.1093	.0072	.0534	-.0367	352.
							.1590	-437.	-3798.	-390.	-102.	-143.	-1165.	.0303	.0588	.0981	.0058	.0564	-.0403	473.
							.1600	-483.	-3217.	-408.	-378.	-281.	-1263.	.0288	.0559	.0878	.0038	.0741	-.0421	541.
							.1610	-558.	-2004.	-346.	-339.	-377.	-1103.	.0269	.0510	.0784	.0012	.0767	-.0419	487.
							.1620	-588.	-1369.	-230.	-48.	-468.	-853.	.0247	.0442	.0699	-.0018	.0792	-.0389	391.
							.1630	-574.	-1222.	-46.	490.	-517.	-557.	.0225	.0358	.0620	-.0054	.0781	-.0335	363.
							.1640	-507.	-553.	186.	1190.	-534.	-275.	.0202	.0266	.0545	-.0095	.0744	-.0260	535.
							.1650	-398.	538.	428.	1924.	-546.	-36.	.0181	.0170	.0469	-.0135	.0705	-.0170	803.
							.1660	-298.	1190.	658.	2588.	-533.	211.	.0162	.0074	.0388	-.0175	.0642	-.0075	1064.
							.1670	-199.	1585.	832.	2047.	-522.	402.	.0147	-.0017	.0300	-.0208	.0585	.0018	1251.

ADLPIPE PAGE 1444

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.28.10.

S/RV PIPING KEWAUNEE GKW00F 2 RUP DISK  
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

.1570	-519.	-2960.	-182.	1227.	190.	-62.	.325	.0585	.1213	.0083	.0250	-.0248	908.
.1580	-456.	-3298.	-301.	467.	29.	-741.	.315	.0598	.1093	.0072	.0534	-.0367	352.
.1590	-437.	-3798.	-390.	-102.	-143.	-1165.	.303	.0588	.0981	.0058	.0664	-.0403	473.
.1600	-487.	-3217.	-405.	-378.	-281.	-1263.	.298	.0559	.0878	.0038	.0741	-.0421	541.
.1610	-558.	-2004.	-746.	-339.	-777.	-1103.	.269	.0510	.0784	.0012	.0767	-.0419	487.
.1620	-589.	-1369.	-230.	-48.	-465.	-853.	.247	.0442	.0699	-.0018	.0792	-.0389	391.
.1630	-574.	-1222.	-46.	490.	-517.	-557.	.225	.0358	.0620	-.0054	.0781	-.0335	363.
.1640	-507.	-553.	186.	1190.	-534.	-275.	.202	.0266	.0545	-.0095	.0744	-.0260	535.
.1650	-398.	538.	428.	1924.	-546.	-36.	.181	.0170	.0469	-.0135	.0705	-.0170	803.
.1660	-298.	1190.	658.	2528.	-532.	211.	.162	.0074	.0388	-.0175	.0542	-.0075	1064.
.1670	-199.	1585.	832.	3047.	-522.	432.	.147	-.0017	.0300	-.0208	.0585	.0018	1251.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.10.

S/RV PIPING KEWAUNEE GKWOFF 2 RUP DISK  
2 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	34	MEMBER	1	SEQUENCE	017	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)	
.1680	-100.	2346.	932.	3228.	-499.	484.		.0136	-.0095	.0200	-.0235	.0527	.0105	1325.	
.1690	24.	3253.	944.	3089.	-475.	373.		.0129	-.0156	.0088	-.0252	.0486	.0183	1263.	
.1700	172.	3553.	835.	2664.	-440.	46.		.0127	-.0200	-.0037	-.0261	.0453	.0250	1084.	
.1710	332.	3320.	784.	2029.	-379.	-473.		.0129	-.0224	-.0173	-.0263	.0407	.0301	850.	
.1720	536.	3375.	640.	1217.	-353.	-1221.		.0131	-.0227	-.0318	-.0259	.0401	.0339	706.	
.1730	735.	3671.	500.	351.	-339.	-2056.		.0131	-.0207	-.0470	-.0251	.0404	.0361	848.	
.1740	896.	3553.	380.	-508.	-340.	-2858.		.0126	-.0168	-.0626	-.0241	.0414	.0365	1173.	
.1750	1017.	2904.	265.	-1363.	-354.	-3551.		.0111	-.0113	-.0783	-.0228	.0433	.0353	1533.	
.1760	1075.	2178.	154.	-2206.	-337.	-4029.		.0084	-.0045	-.0940	-.0210	.0418	.0327	1848.	
.1770	1086.	1568.	22.	-3070.	-298.	-4270.		.0042	.0033	-.1094	-.0188	.0378	.0293	2114.	
.1780	1036.	658.	-128.	-3937.	-224.	-4201.		-.0015	.0116	-.1242	-.0161	.0291	.0253	2312.	
.1790	931.	-545.	-293.	-4784.	-144.	-3807.		-.0089	.0198	-.1384	-.0131	.0180	.0211	2454.	
.1800	759.	-1561.	-440.	-5538.	-71.	-3060.		-.0177	.0277	-.1515	-.0103	.0050	.0167	2539.	
.1810	503.	-2327.	-535.	-6121.	10.	-1948.		-.0278	.0349	-.1634	-.0081	-.0110	.0122	2578.	
.1820	221.	-3118.	-600.	-6572.	47.	-621.		-.0387	.0409	-.1740	-.0064	-.0236	.0082	2649.	
.1830	-72.	-3895.	-629.	-6886.	60.	828.		-.0499	.0454	-.1832	-.0054	-.0336	.0048	2783.	
.1840	-360.	-4123.	-623.	-7074.	68.	2299.		-.0610	.0483	-.1909	-.0052	-.0422	.0020	2985.	
.1850	-624.	-3767.	-599.	-7183.	68.	3682.		-.0713	.0495	-.1972	-.0057	-.0494	-.0002	3239.	
.1860	-854.	-3419.	-580.	-7262.	61.	4890.		-.0804	.0488	-.2020	-.0067	-.0560	-.0017	3513.	
.1870	-1023.	-3198.	-589.	-7354.	18.	5808.		-.0878	.0462	-.2054	-.0078	-.0594	-.0026	3761.	
.1880	-1141.	-2782.	-603.	-7408.	-27.	6413.		-.0932	.0421	-.2073	-.0091	-.0624	-.0030	3932.	
.1890	-1193.	-2133.	-608.	-7375.	-78.	6643.		-.0965	.0367	-.2078	-.0108	-.0635	-.0030	3983.	
.1900	-1157.	-1628.	-588.	-7204.	-139.	6448.		-.0975	.0300	-.2068	-.0128	-.0610	-.0022	3880.	
.1910	-1034.	-1288.	-513.	-6826.	-186.	5846.		-.0964	.0224	-.2043	-.0153	-.0570	-.0007	3607.	
.1920	-808.	-644.	-387.	-6246.	-234.	4851.		-.0933	.0143	-.2005	-.0181	-.0503	.0018	3175.	
.1930	-506.	284.	-215.	-5486.	-281.	3579.		-.0889	.0061	-.1956	-.0211	-.0419	.0051	2631.	
.1940	-185.	1009.	-6.	-4595.	-321.	2221.		-.0835	-.0016	-.1899	-.0241	-.0329	.0089	2052.	
.1950	105.	1391.	214.	-3662.	-354.	963.		-.0779	-.0091	-.1837	-.0269	-.0234	.0127	1526.	
.1960	329.	1717.	415.	-2793.	-378.	-61.		-.0723	-.0153	-.1774	-.0291	-.0132	.0164	1131.	
.1970	477.	2027.	570.	-2079.	-392.	-784.		-.0674	-.0203	-.1713	-.0306	-.0020	.0199	905.	
.1980	561.	2121.	663.	-1585.	-406.	-1211.		-.0632	-.0237	-.1658	-.0313	.0106	.0233	817.	
.1990	606.	2099.	688.	-1345.	-429.	-1393.		-.0599	-.0257	-.1610	-.0310	.0249	.0267	796.	
.2000	627.	2225.	652.	-1348.	-459.	-1383.		-.0574	-.0260	-.1569	-.0299	.0397	.0301	796.	
.2010	632.	2431.	568.	-1562.	-492.	-1221.		-.0557	-.0247	-.1534	-.0282	.0541	.0333	820.	
.2020	623.	2441.	446.	-1952.	-533.	-948.		-.0548	-.0220	-.1506	-.0260	.0580	.0361	897.	
.2030	593.	2216.	297.	-2468.	-575.	-599.		-.0544	-.0180	-.1480	-.0234	.0509	.0382	1045.	
.2040	550.	1910.	139.	-3048.	-603.	-198.		-.0543	-.0128	-.1456	-.0207	.0908	.0394	1249.	
.2050	484.	1539.	-21.	-3650.	-606.	208.		-.0545	-.0069	-.1430	-.0180	.0964	.0394	1487.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.10.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.1750	105.	1391.	14.	-3662.	-354.	963.	-.0779	-.0091	-.1037	-.0269	-.0234	.0127	1526.
.1960	329.	1717.	415.	-2793.	-378.	-61.	-.0723	-.0153	-.1774	-.0291	-.0132	.0164	1131.
.1970	477.	2027.	570.	-2079.	-392.	-734.	-.0674	-.0203	-.1713	-.0206	-.0020	.0199	905.
.1980	561.	2321.	637.	-1585.	-406.	-1211.	-.0632	-.0237	-.1658	-.0317	.0106	.0233	817.
.1990	606.	2099.	688.	-1345.	-429.	-1393.	-.0599	-.0257	-.1610	-.0310	.0249	.0267	796.
.2000	627.	2225.	652.	-1348.	-459.	-1323.	-.0574	-.0260	-.1569	-.0299	.0397	.0301	796.
.2010	632.	2431.	569.	-1562.	-492.	-1221.	-.0557	-.0247	-.1534	-.0282	.0541	.0333	820.
.2020	623.	2441.	446.	-1952.	-533.	-948.	-.0548	-.0220	-.1506	-.0260	.0680	.0361	897.
.2030	593.	2216.	297.	-2468.	-575.	-599.	-.0544	-.0180	-.1480	-.0234	.0809	.0382	1045.
.2040	550.	1910.	139.	-3048.	-603.	-198.	-.0543	-.0128	-.1456	-.0207	.0908	.0394	1249.
.2050	484.	1579.	-21.	-7650.	-606.	208.	-.0545	-.0069	-.1430	-.0180	.0964	.0394	1487.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.28.10.

S/RV PIPING KEWAUNEE GKW00F 2 RUP DISK  
2 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	34	MEMBER	1	SEQUENCE	817	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)	
.2060	419.	1027.	-186.	-4249.	-591.	554.		-.0548	-.0006	-.1400	-.0152	.0780	.0384	1736.	
.2070	366.	459.	-348.	-4803.	-563.	797.		-.0549	.0057	-.1362	-.0126	.0759	.0364	1967.	
.2080	320.	-43.	-437.	-5245.	-530.	936.		-.0549	.0118	-.1315	-.0103	.0911	.0334	2148.	
.2090	277.	-519.	-585.	-5518.	-505.	984.		-.0547	.0175	-.1256	-.0086	.0855	.0294	2258.	
.2100	236.	-1088.	-637.	-5596.	-505.	959.		-.0543	.0226	-.1182	-.0076	.0815	.0247	2287.	
.2110	190.	-1696.	-640.	-5470.	-528.	898.		-.0538	.0269	-.1095	-.0073	.0793	.0195	2235.	
.2120	132.	-2190.	-594.	-5146.	-561.	838.		-.0532	.0304	-.0992	-.0079	.0777	.0138	2105.	
.2130	63.	-2533.	-507.	-4652.	-594.	809.		-.0526	.0329	-.0876	-.0093	.0759	.0082	1910.	
.2140	-18.	-2730.	-390.	-4024.	-618.	833.		-.0520	.0343	-.0748	-.0114	.0731	.0027	1668.	
.2150	-112.	-2670.	-250.	-3300.	-624.	930.		-.0513	.0346	-.0609	-.0141	.0690	-.0022	1398.	
.2160	-218.	-2276.	-98.	-2514.	-609.	1108.		-.0507	.0340	-.0461	-.0173	.0635	-.0065	1129.	
.2170	-332.	-1720.	60.	-1699.	-575.	1361.		-.0499	.0325	-.0306	-.0208	.0572	-.0099	903.	
.2180	-443.	-1277.	220.	-871.	-527.	1659.		-.0488	.0302	-.0148	-.0245	.0507	-.0123	781.	
.2190	-546.	-970.	380.	-46.	-471.	1948.		-.0474	.0272	.0013	-.0281	.0446	-.0135	804.	
.2200	-602.	-593.	532.	759.	-412.	2158.		-.0454	.0238	.0174	-.0314	.0391	-.0133	933.	
.2210	-602.	-72.	666.	1521.	-349.	2236.		-.0428	.0201	.0334	-.0341	.0340	-.0117	1094.	
.2220	-545.	466.	773.	2223.	-277.	2169.		-.0394	.0163	.0489	-.0358	.0284	-.0088	1251.	
.2230	-445.	944.	850.	2860.	-192.	1978.		-.0354	.0125	.0639	-.0363	.0219	-.0049	1397.	
.2240	-321.	1416.	895.	3436.	-90.	1697.		-.0308	.0089	.0783	-.0356	.0138	-.0004	1538.	
.2250	-187.	1869.	914.	3959.	25.	1358.		-.0256	.0058	.0918	-.0335	.0042	.0044	1680.	
.2260	-48.	2184.	907.	4432.	143.	971.		-.0201	.0033	.1045	-.0300	-.0064	.0092	1822.	
.2270	98.	2340.	876.	4853.	255.	539.		-.0143	.0014	.1163	-.0251	-.0174	.0140	1962.	
.2280	252.	2453.	823.	5215.	355.	68.		-.0083	.0003	.1270	-.0190	-.0283	.0186	2098.	
.2290	407.	2557.	748.	5506.	438.	-417.		-.0024	-.0001	.1366	-.0119	-.0387	.0227	2223.	
.2300	551.	2571.	647.	5706.	496.	-878.		.0033	.0002	.1450	-.0038	-.0476	.0261	2325.	
.2310	665.	2473.	523.	5798.	526.	-1261.		.0086	.0013	.1523	.0049	-.0545	.0285	2391.	
.2320	728.	2317.	379.	5778.	531.	-1515.		.0134	.0029	.1584	.0139	-.0595	.0297	2407.	
.2330	731.	2075.	219.	5642.	516.	-1616.		.0177	.0051	.1633	.0229	-.0634	.0295	2364.	
.2340	679.	1684.	48.	5392.	485.	-1578.		.0214	.0077	.1672	.0316	-.0664	.0279	2263.	
.2350	585.	1210.	-126.	5046.	445.	-1438.		.0246	.0106	.1702	.0396	-.0691	.0251	2113.	
.2360	465.	762.	-289.	4631.	402.	-1245.		.0274	.0136	.1724	.0466	-.0718	.0213	1931.	
.2370	336.	299.	-437.	4167.	356.	-1051.		.0300	.0167	.1740	.0523	-.0738	.0166	1731.	
.2380	212.	-292.	-565.	3676.	305.	-895.		.0324	.0196	.1752	.0567	-.0743	.0113	1523.	
.2390	98.	-898.	-672.	3178.	247.	-796.		.0347	.0224	.1761	.0596	-.0727	.0056	1318.	
.2400	-7.	-1347.	-757.	2697.	187.	-760.		.0371	.0248	.1770	.0612	-.0693	-.0003	1127.	
.2410	-27.	-1610.	-823.	2255.	124.	-790.		.0395	.0269	.1779	.0615	-.0640	-.0062	960.	
.2420	-152.	-1842.	-870.	1890.	60.	-877.		.0419	.0285	.1792	.0606	-.0573	-.0118	833.	
.2430	-198.	-2109.	-896.	1610.	0.	-1007.		.0443	.0296	.1809	.0588	-.0495	-.0170	762.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKW00F 2 RUP DISK  
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

.2330	731.	2075.	219.	5642.	516.	-1616.	.0177	.0051	.1633	.0229	-.0534	.0295	2364.
.2340	679.	1624.	43.	5392.	485.	-1578.	.0214	.0077	.1672	.0316	-.0664	.0279	2263.
.2350	585.	1210.	-126.	5046.	445.	-1436.	.0246	.0106	.1702	.0396	-.0591	.0251	2113.
.2360	465.	762.	-229.	4671.	402.	-1245.	.0274	.0136	.1724	.0466	-.0718	.0213	1931.
.2370	336.	299.	-437.	4167.	356.	-1051.	.0300	.0167	.1740	.0523	-.0738	.0166	1731.
.2380	212.	-272.	-565.	3676.	305.	-895.	.0324	.0196	.1752	.0567	-.0743	.0113	1523.
.2390	98.	-892.	-672.	3178.	247.	-796.	.0347	.0224	.1761	.0596	-.0727	.0056	1318.
.2400	-7.	-1347.	-757.	2697.	187.	-760.	.0371	.0248	.1770	.0612	-.0593	-.0003	1127.
.2410	-27.	-1610.	-823.	2255.	124.	-790.	.0395	.0269	.1779	.0615	-.0540	-.0062	960.
.2420	-152.	-1842.	-870.	1890.	60.	-877.	.0419	.0285	.1792	.0606	-.0573	-.0118	833.
.2430	-192.	-2109.	-896.	1610.	0.	-1007.	.0443	.0296	.1809	.0588	-.0495	-.0170	762.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.10.

S/RV PIPING KEWAUNEE GKW02F 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	34	MEMBER	1	SEQUENCE	817	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)		
.2440	-228.	-2296.	-894.	1485.	-57.	-1154.	.0466	.0300	.1832	.0560	-.0408	-.0216	755.	
.2450	-257.	-2304.	-853.	1553.	-97.	-1283.	.0488	.0299	.1861	.0524	-.0314	-.0254	809.	
.2460	-273.	-2192.	-761.	1854.	-128.	-1362.	.0508	.0292	.1897	.0481	-.0218	-.0284	925.	
.2470	-296.	-2034.	-610.	2403.	-148.	-1383.	.0526	.0278	.1939	.0430	-.0124	-.0305	1114.	
.2480	-311.	-1853.	-407.	3172.	-162.	-1359.	.0541	.0258	.1984	.0373	-.0032	-.0315	1386.	
.2490	-313.	-1634.	-167.	4102.	-172.	-1301.	.0555	.0232	.2030	.0313	.0056	-.0316	1728.	
.2500	-309.	-1318.	93.	5119.	-174.	-1206.	.0566	.0207	.2074	.0251	.0133	-.0307	2111.	
.2510	-303.	-915.	353.	6136.	-165.	-1078.	.0576	.0169	.2111	.0190	.0194	-.0290	2501.	
.2520	-293.	-525.	591.	7063.	-144.	-935.	.0584	.0133	.2138	.0132	.0236	-.0267	2860.	
.2530	-274.	-186.	789.	7818.	-113.	-811.	.0593	.0098	.2151	.0078	.0260	-.0239	3155.	
.2540	-237.	176.	935.	8346.	-75.	-735.	.0601	.0063	.2148	.0031	.0263	-.0207	3362.	
.2550	-183.	575.	1028.	8622.	-34.	-727.	.0610	.0030	.2126	-.0010	.0250	-.0173	3472.	
.2560	-113.	931.	1070.	8641.	4.	-791.	.0620	.0000	.2084	-.0044	.0222	-.0138	3482.	
.2570	-31.	1211.	1066.	8413.	39.	-922.	.0630	-.0026	.2023	-.0070	.0182	-.0104	3396.	
.2580	59.	1313.	1014.	7951.	71.	-1112.	.0639	-.0049	.1943	-.0088	.0135	-.0073	3222.	
.2590	152.	1245.	916.	7279.	99.	-1341.	.0648	-.0071	.1846	-.0096	.0084	-.0046	2970.	
.2600	241.	1276.	779.	6444.	126.	-1584.	.0654	-.0090	.1734	-.0094	.0028	-.0024	2663.	
.2610	318.	1506.	615.	5503.	154.	-1806.	.0657	-.0109	.1610	-.0082	-.0033	-.0007	2325.	
.2620	376.	1656.	432.	4512.	183.	-1981.	.0656	-.0127	.1477	-.0060	-.0097	.0004	1979.	
.2630	414.	1599.	239.	3527.	215.	-2089.	.0649	-.0147	.1339	-.0029	-.0162	.0008	1647.	
.2640	428.	1534.	49.	2606.	254.	-2113.	.0637	-.0166	.1197	.0010	-.0227	.0006	1350.	
.2650	417.	1526.	-125.	1797.	302.	-2043.	.0618	-.0186	.1056	.0056	-.0290	-.0001	1098.	
.2660	382.	1475.	-275.	1131.	357.	-1874.	.0594	-.0206	.0916	.0107	-.0348	-.0013	890.	
.2670	324.	1287.	-398.	617.	419.	-1613.	.0564	-.0225	.0780	.0160	-.0401	-.0030	713.	
.2680	247.	1018.	-495.	244.	489.	-1273.	.0530	-.0245	.0649	.0213	-.0447	-.0051	556.	
.2690	155.	956.	-567.	-8.	569.	-874.	.0492	-.0263	.0521	.0265	-.0487	-.0076	419.	
.2700	52.	1204.	-616.	-171.	659.	-436.	.0451	-.0278	.0398	.0312	-.0520	-.0103	324.	
.2710	-59.	1347.	-646.	-281.	753.	18.	.0410	-.0290	.0279	.0353	-.0548	-.0134	323.	
.2720	-174.	838.	-665.	-323.	844.	464.	.0370	-.0299	.0162	.0386	-.0565	-.0166	416.	
.2730	-286.	-106.	-679.	-515.	927.	876.	.0331	-.0306	.0047	.0409	-.0572	-.0199	552.	
.2740	-392.	-607.	-690.	-702.	1001.	1231.	.0297	-.0310	-.0066	.0421	-.0573	-.0232	696.	
.2750	-486.	-453.	-703.	-960.	1061.	1508.	.0267	-.0311	-.0178	.0422	-.0569	-.0265	834.	
.2760	-560.	-391.	-720.	-1297.	1101.	1683.	.0242	-.0311	-.0289	.0413	-.0559	-.0295	962.	
.2770	-613.	-837.	-740.	-1701.	1119.	1766.	.0224	-.0312	-.0397	.0393	-.0543	-.0322	1082.	
.2780	-641.	-1134.	-754.	-2137.	1117.	1745.	.0212	-.0312	-.0502	.0363	-.0526	-.0344	1194.	
.2790	-648.	-913.	-754.	-2564.	1091.	1640.	.0205	-.0309	-.0603	.0324	-.0511	-.0361	1298.	
.2800	-639.	-589.	-737.	-2950.	1037.	1478.	.0204	-.0305	-.0698	.0277	-.0502	-.0371	1388.	
.2810	-623.	-296.	-692.	-3268.	954.	1292.	.0203	-.0301	-.0787	.0224	-.0500	-.0375	1461.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.10.

S/RV PIPING KEWAUNEE GKW02F 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

.2710	-59.	1347.	-646.	-281.	753.	1347.	18.	.0410	-.0290	.0279	.0353	-.0548	-.0134	323.
.2720	-174.	338.	-665.	-383.	844.	464.	.0370	-.0299	.0162	.0386	-.0565	-.0166	416.	
.2730	-286.	-106.	-679.	-515.	927.	876.	.0331	-.0306	.0047	.0409	-.0572	-.0199	552.	
.2740	-392.	-607.	-690.	-701.	1101.	1231.	.0297	-.0310	-.0066	.0421	-.0573	-.0232	696.	
.2750	-486.	-453.	-707.	-960.	1061.	1508.	.0267	-.0311	-.0178	.0422	-.0569	-.0265	834.	
.2760	-560.	-391.	-710.	-1297.	1101.	1688.	.0242	-.0311	-.0289	.0413	-.0559	-.0295	962.	
.2770	-613.	-837.	-740.	-1701.	1119.	1766.	.0224	-.0312	-.0397	.0393	-.0543	-.0322	1082.	
.2780	-641.	-1124.	-754.	-2137.	1117.	1745.	.0212	-.0312	-.0502	.0363	-.0526	-.0344	1194.	
.2790	-648.	-913.	-754.	-2564.	1091.	1640.	.0205	-.0309	-.0603	.0324	-.0511	-.0361	1298.	
.2800	-639.	-509.	-737.	-2950.	1037.	1478.	.0204	-.0305	-.0698	.0277	-.0502	-.0371	1388.	
.2810	-623.	-376.	-692.	-3268.	954.	1292.	.0203	-.0301	-.0787	.0224	-.0500	-.0375	1461.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.10.

S/RV PIPING KEWAUNLE 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)
34	1	817					.2820	-602.	-1459.	-631.	-3503.	844.	1102.	.0216	-.0297	-.0870	.0167	-.0506	-.0372	1512.
							.2830	-577.	-1468.	-554.	-3647.	712.	915.	.0228	-.0291	-.0944	.0109	-.0517	-.0361	1535.
							.2840	-546.	-958.	-465.	-3705.	561.	738.	.0242	-.0282	-.1011	.0051	-.0530	-.0343	1532.
							.2850	-509.	-619.	-372.	-3689.	395.	571.	.0259	-.0274	-.1071	-.0004	-.0544	-.0318	1506.
							.2860	-460.	-639.	-279.	-3611.	215.	403.	.0278	-.0264	-.1124	-.0055	-.0559	-.0285	1460.
							.2870	-395.	-570.	-186.	-3480.	27.	217.	.0300	-.0252	-.1171	-.0102	-.0577	-.0245	1399.
							.2880	-310.	-229.	-94.	-3311.	-162.	5.	.0323	-.0236	-.1212	-.0144	-.0597	-.0199	1330.
							.2890	-208.	70.	-5.	-3126.	-342.	-232.	.0347	-.0217	-.1249	-.0182	-.0623	-.0148	1265.
							.2900	-91.	132.	74.	-2955.	-503.	-492.	.0372	-.0196	-.1282	-.0215	-.0655	-.0094	1219.
							.2910	35.	115.	137.	-2828.	-637.	-766.	.0397	-.0173	-.1313	-.0244	-.0693	-.0039	1203.
							.2920	164.	151.	177.	-2771.	-740.	-1042.	.0421	-.0148	-.1341	-.0267	-.0736	.0015	1225.
							.2930	290.	226.	191.	-2800.	-811.	-1303.	.0443	-.0122	-.1368	-.0286	-.0779	.0066	1282.
							.2940	406.	388.	179.	-2914.	-855.	-1536.	.0462	-.0095	-.1393	-.0299	-.0815	.0111	1366.
							.2950	506.	566.	147.	-3096.	-877.	-1726.	.0477	-.0069	-.1415	-.0308	-.0839	.0150	1465.
							.2960	585.	603.	101.	-3316.	-888.	-1863.	.0488	-.0043	-.1435	-.0314	-.0843	.0180	1567.
							.2970	639.	361.	51.	-3540.	-888.	-1936.	.0494	-.0019	-.1449	-.0315	-.0821	.0200	1658.
							.2980	662.	115.	6.	-3729.	-879.	-1935.	.0495	.0001	-.1459	-.0314	-.0775	.0210	1722.
							.2990	651.	130.	-27.	-3852.	-859.	-1856.	.0490	.0018	-.1462	-.0309	-.0709	.0208	1750.
							.3000	605.	211.	-46.	-3892.	-833.	-1793.	.0481	.0030	-.1459	-.0301	-.0625	.0194	1737.
							.3010	527.	50.	-52.	-3842.	-802.	-1488.	.0467	.0036	-.1449	-.0290	-.0530	.0169	1684.
							.3020	422.	-194.	-44.	-3697.	-766.	-1227.	.0450	.0036	-.1432	-.0276	-.0433	.0134	1593.
							.3030	301.	-160.	-22.	-3458.	-726.	-954.	.0431	.0030	-.1409	-.0259	-.0336	.0091	1469.
							.3040	174.	59.	16.	-3138.	-687.	-698.	.0410	.0018	-.1381	-.0240	-.0240	.0042	1319.
							.3050	52.	59.	64.	-2755.	-654.	-483.	.0389	.0001	-.1349	-.0220	-.0146	-.0010	1153.
							.3060	-59.	-194.	120.	-2339.	-631.	-323.	.0368	-.0022	-.1315	-.0198	-.0055	-.0064	981.
							.3070	-154.	-324.	179.	-1921.	-617.	-221.	.0348	-.0049	-.1280	-.0176	.0029	-.0117	815.
							.3080	-233.	-149.	231.	-1543.	-613.	-166.	.0329	-.0078	-.1246	-.0154	.0104	-.0166	670.
							.3090	-301.	120.	266.	-1246.	-618.	-139.	.0311	-.0110	-.1215	-.0132	.0165	-.0211	561.
							.3100	-361.	296.	277.	-1059.	-628.	-122.	.0295	-.0143	-.1189	-.0109	.0210	-.0250	497.
							.3110	-413.	422.	261.	-1000.	-642.	-102.	.0279	-.0176	-.1167	-.0087	.0235	-.0282	478.
							.3120	-455.	553.	220.	-1065.	-655.	-73.	.0263	-.0205	-.1149	-.0067	.0242	-.0305	503.
							.3130	-485.	658.	158.	-1278.	-669.	-37.	.0249	-.0231	-.1137	-.0047	.0234	-.0318	565.
							.3140	-501.	742.	85.	-1488.	-683.	3.	.0235	-.0252	-.1128	-.0030	.0212	-.0320	657.
							.3150	-502.	839.	9.	-1780.	-695.	40.	.0223	-.0267	-.1122	-.0016	.0180	-.0313	767.
							.3160	-487.	887.	-63.	-2084.	-707.	70.	.0212	-.0276	-.1117	-.0004	.0141	-.0295	884.
							.3170	-458.	845.	-129.	-2375.	-715.	87.	.0202	-.0278	-.1112	.0004	.0099	-.0268	996.
							.3180	-416.	321.	-186.	-2634.	-714.	87.	.0193	-.0275	-.1105	.0010	.0053	-.0234	1096.
							.3190	-365.	370.	-231.	-2842.	-702.	64.	.0186	-.0264	-.1097	.0013	.0005	-.0194	1175.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.10.

S/RV PIPING KEWAUNLE 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



.3090	-701.	120.	266.	-1246.	-618.	-139.	.0311	-.0110	-.1215	-.0132	.0165	-.0211	561.
.3100	-361.	276.	277.	-1059.	-628.	-122.	.0295	-.0143	-.1189	-.0109	.0210	-.0250	497.
.3110	-413.	422.	261.	-1000.	-642.	-102.	.0279	-.0176	-.1167	-.0087	.0235	-.0282	478.
.3120	-455.	552.	720.	-1065.	-655.	-73.	.0263	-.0205	-.1149	-.0067	.0242	-.0305	503.
.3130	-465.	658.	158.	-1278.	-669.	-37.	.0249	-.0231	-.1137	-.0047	.0234	-.0318	565.
.3140	-501.	742.	95.	-1480.	-683.	3.	.0235	-.0252	-.1125	-.0030	.0212	-.0320	657.
.3150	-502.	839.	9.	-1780.	-695.	40.	.0223	-.0267	-.1122	-.0016	.0180	-.0313	767.
.3160	-487.	887.	-63.	-2084.	-707.	70.	.0212	-.0276	-.1117	-.0004	.0141	-.0295	884.
.3170	-458.	845.	-129.	-2375.	-715.	37.	.0202	-.0278	-.1112	.0004	.0099	-.0268	996.
.3180	-416.	821.	-166.	-2634.	-714.	37.	.0193	-.0275	-.1105	.0010	.0053	-.0234	1096.
.3190	-365.	870.	-231.	-2942.	-702.	64.	.0186	-.0264	-.1097	.0013	.0005	-.0194	1175.

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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	34	MEMBER	1	SEQUENCE	817	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	-306.	802.	-264.	-2988.	-680.	8.		.0181	-.0248	-.1086	.0014	-.0045	-.0149	1230.	
.3210	-238.	421.	-280.	-3062.	-650.	-90.		.0177	-.0228	-.1070	.0012	-.0093	-.0102	1257.	
.3220	-159.	-120.	-278.	-3055.	-614.	-242.		.0175	-.0205	-.1051	.0007	-.0138	-.0053	1254.	
.3230	-68.	-518.	-254.	-2968.	-573.	-457.		.0173	-.0180	-.1027	-.0002	-.0176	-.0004	1227.	
.3240	35.	-774.	-208.	-2812.	-530.	-733.		.0172	-.0155	-.0999	-.0015	-.0203	.0044	1185.	
.3250	148.	-1116.	-148.	-2611.	-486.	-1062.		.0171	-.0131	-.0967	-.0031	-.0217	.0090	1148.	
.3260	267.	-1550.	-82.	-2397.	-443.	-1424.		.0168	-.0112	-.0933	-.0049	-.0220	.0133	1133.	
.3270	387.	-1811.	-20.	-2199.	-398.	-1794.		.0161	-.0097	-.0896	-.0069	-.0215	.0173	1150.	
.3280	502.	-1803.	31.	-2043.	-355.	-2141.		.0150	-.0088	-.0858	-.0090	-.0205	.0208	1196.	
.3290	603.	-1759.	65.	-1939.	-314.	-2429.		.0133	-.0085	-.0819	-.0110	-.0191	.0239	1253.	
.3300	685.	-1639.	85.	-1878.	-277.	-2624.		.0108	-.0091	-.0779	-.0129	-.0174	.0264	1300.	
.3310	740.	-1893.	95.	-1838.	-243.	-2702.		.0075	-.0105	-.0737	-.0146	-.0157	.0284	1315.	
.3320	768.	-1722.	102.	-1793.	-214.	-2647.		.0034	-.0127	-.0694	-.0161	-.0136	.0297	1286.	
.3330	766.	-1368.	113.	-1715.	-190.	-2454.		-.0017	-.0157	-.0650	-.0173	-.0109	.0305	1204.	
.3340	734.	-1008.	132.	-1582.	-173.	-2121.		-.0077	-.0194	-.0603	-.0182	-.0078	.0306	1064.	
.3350	672.	-675.	159.	-1386.	-161.	-1658.		-.0145	-.0236	-.0554	-.0187	-.0044	.0301	870.	
.3360	583.	-311.	193.	-1128.	-153.	-1087.		-.0219	-.0282	-.0505	-.0187	-.0006	.0289	632.	
.3370	470.	66.	228.	-821.	-150.	-437.		-.0298	-.0329	-.0454	-.0181	.0034	.0271	378.	
.3380	341.	381.	261.	-481.	-147.	260.		-.0379	-.0377	-.0405	-.0168	.0077	.0246	227.	
.3390	201.	616.	288.	-125.	-143.	964.		-.0462	-.0423	-.0356	-.0151	.0123	.0216	394.	
.3400	58.	808.	308.	228.	-137.	1635.		-.0543	-.0464	-.0311	-.0128	.0174	.0181	665.	
.3410	-78.	976.	321.	560.	-129.	2236.		-.0621	-.0501	-.0269	-.0101	.0231	.0141	926.	
.3420	-201.	1121.	324.	847.	-118.	2738.		-.0694	-.0532	-.0233	-.0070	.0295	.0099	1151.	
.3430	-305.	1257.	315.	1070.	-103.	3123.		-.0761	-.0555	-.0203	-.0038	.0363	.0056	1325.	
.3440	-388.	1361.	293.	1208.	-83.	3388.		-.0820	-.0570	-.0179	-.0006	.0435	.0012	1444.	
.3450	-453.	1374.	256.	1245.	-58.	3540.		-.0872	-.0577	-.0163	.0027	.0508	-.0030	1506.	
.3460	-498.	1256.	202.	1171.	-26.	3593.		-.0917	-.0576	-.0155	.0058	.0581	-.0069	1516.	
.3470	-528.	1067.	131.	986.	12.	3566.		-.0954	-.0568	-.0153	.0087	.0649	-.0103	1485.	
.3480	-542.	907.	46.	702.	57.	3481.		-.0985	-.0554	-.0158	.0112	.0713	-.0132	1425.	
.3490	-543.	779.	-46.	344.	105.	3356.		-.1010	-.0535	-.0168	.0135	.0770	-.0154	1355.	
.3500	-531.	627.	-140.	-59.	154.	3209.		-.1030	-.0512	-.0182	.0153	.0819	-.0167	1290.	
.3510	-506.	426.	-231.	-476.	201.	3052.		-.1045	-.0487	-.0193	.0167	.0858	-.0171	1242.	
.3520	-466.	237.	-312.	-873.	244.	2894.		-.1057	-.0460	-.0214	.0176	.0886	-.0165	1217.	
.3530	-414.	96.	-380.	-1224.	282.	2743.		-.1066	-.0432	-.0229	.0182	.0902	-.0150	1211.	
.3540	-351.	-37.	-431.	-1503.	313.	2606.		-.1073	-.0405	-.0242	.0184	.0903	-.0126	1214.	
.3550	-280.	-210.	-462.	-1691.	336.	2488.		-.1078	-.0379	-.0252	.0181	.0889	-.0095	1215.	
.3560	-204.	-390.	-473.	-1778.	349.	2389.		-.1081	-.0355	-.0257	.0176	.0858	-.0057	1203.	
.3570	-125.	-485.	-461.	-1760.	352.	2308.		-.1094	-.0332	-.0257	.0167	.0813	-.0016	1173.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.10.

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

.3470	-528.	1067.	131.	986.	12.	3566.	-0954	-0568	-0153	.0087	.0649	-0103	1485.
.3480	-542.	903.	46.	702.	57.	3481.	-0985	-0554	-0158	.0112	.0713	-0132	1425.
.3490	-543.	779.	-46.	344.	105.	3356.	-1010	-0535	-0168	.0135	.0770	-0154	1355.
.3500	-531.	627.	-143.	-19.	154.	3209.	-1030	-0512	-0182	.0153	.0819	-0167	1290.
.3510	-506.	426.	-271.	-476.	201.	3052.	-1045	-0497	-0193	.0167	.0858	-0171	1242.
.3520	-466.	237.	-312.	-873.	244.	2894.	-1057	-0460	-0214	.0176	.0886	-0165	1217.
.3530	-414.	96.	-380.	-1224.	282.	2743.	-1066	-0432	-0229	.0182	.0902	-0150	1211.
.3540	-351.	-37.	-431.	-1503.	313.	2606.	-1073	-0405	-0242	.0184	.0903	-0126	1214.
.3550	-280.	-210.	-462.	-1691.	336.	2438.	-1078	-0379	-0252	.0181	.0889	-0095	1215.
.3560	-204.	-398.	-473.	-1778.	349.	2389.	-1081	-0355	-0257	.0176	.0858	-0057	1203.
.3570	-125.	-485.	-461.	-1760.	352.	2308.	-1084	-0333	-0257	.0167	.0813	-0016	1173.

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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	34	MEMBER	1	SEQUENCE	817	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)	
.3580	-46.	-448.	-428.	-1640.	344.	2241.		-1086	-0313	-0253	.0155	.0756	.0028	1123.
.3590	30.	-328.	-374.	-1431.	322.	2134.		-1088	-0295	-0245	.0139	.0588	.0071	1056.
.3600	101.	-222.	-304.	-1154.	239.	2134.		-1089	-0279	-0233	.0121	.0513	.0113	980.
.3610	164.	-174.	-222.	-836.	244.	2086.		-1090	-0264	-0219	.0099	.0531	.0150	907.
.3620	219.	-152.	-134.	-508.	190.	2038.		-1091	-0249	-0205	.0075	.0445	.0181	846.
.3630	262.	-107.	-46.	-198.	132.	1993.		-1092	-0235	-0190	.0048	.0355	.0206	805.
.3640	290.	-25.	38.	70.	72.	1956.		-1093	-0219	-0176	.0020	.0260	.0223	786.
.3650	301.	39.	113.	275.	15.	1934.		-1094	-0202	-0165	-0009	.0163	.0231	784.
.3660	294.	31.	178.	405.	-37.	1934.		-1096	-0183	-0156	-0039	.0066	.0231	793.
.3670	268.	-33.	228.	454.	-79.	1960.		-1097	-0162	-0151	-0067	-0028	.0223	808.
.3680	224.	-85.	264.	422.	-110.	2016.		-1099	-0139	-0149	-0093	-0118	.0207	828.
.3690	164.	-99.	282.	316.	-131.	2104.		-1101	-0113	-0150	-0116	-0199	.0186	855.
.3700	93.	-166.	283.	145.	-141.	2219.		-1102	-0085	-0153	-0134	-0269	.0161	894.
.3710	13.	-378.	265.	-72.	-142.	2358.		-1101	-0056	-0158	-0146	-0326	.0133	948.
.3720	-70.	-686.	230.	-315.	-133.	2513.		-1099	-0027	-0164	-0150	-0370	.0104	1018.
.3730	-153.	-928.	183.	-556.	-110.	2674.		-1093	.0001	-0169	-0146	-0400	.0075	1097.
.3740	-230.	-1031.	127.	-768.	-75.	2830.		-1085	.0028	-0173	-0133	-0417	.0049	1177.
.3750	-296.	-1129.	69.	-927.	-27.	2968.		-1072	.0051	-0175	-0113	-0425	.0026	1248.
.3760	-349.	-1358.	13.	-1017.	34.	3078.		-1054	.0069	-0174	-0084	-0424	.0007	1301.
.3770	-384.	-1527.	-39.	-1030.	106.	3146.		-1031	.0081	-0170	-0049	-0419	-0007	1329.
.3780	-398.	-1750.	-85.	-968.	189.	3164.		-1002	.0087	-0163	-0009	-0410	-0015	1330.
.3790	-393.	-1692.	-125.	-842.	280.	3128.		-0967	.0085	-0152	.0036	-0399	-0019	1305.
.3800	-369.	-1562.	-162.	-674.	376.	3038.		-0926	.0076	-0140	.0084	-0383	-0017	1258.
.3810	-329.	-1401.	-196.	-486.	473.	2898.		-0879	.0060	-0126	.0133	-0363	-0012	1194.
.3820	-279.	-1226.	-232.	-303.	568.	2716.		-0827	.0037	-0111	.0180	-0336	-0005	1120.
.3830	-222.	-1029.	-270.	-148.	656.	2502.		-0770	.0010	-0096	.0226	-0300	.0004	1040.
.3840	-163.	-774.	-310.	-37.	733.	2264.		-0709	-0022	-0082	.0267	-0257	.0013	955.
.3850	-108.	-558.	-352.	20.	796.	2013.		-0644	-0057	-0069	.0302	-0206	.0021	869.
.3860	-60.	-488.	-395.	18.	843.	1755.		-0577	-0094	-0057	.0331	-0148	.0026	781.
.3870	-22.	-425.	-438.	-41.	877.	1494.		-0508	-0132	-0047	.0351	-0081	.0027	695.
.3880	6.	-64.	-477.	-147.	899.	1234.		-0437	-0170	-0038	.0364	-0006	.0024	615.
.3890	22.	625.	-509.	-283.	911.	974.		-0365	-0204	-0030	.0368	.0076	.0016	547.
.3900	29.	1261.	-531.	-434.	913.	714.		-0293	-0234	-0022	.0363	.0163	.0003	497.
.3910	26.	1518.	-541.	-580.	903.	454.		-0221	-0257	-0014	.0350	.0254	-0014	468.
.3920	17.	1517.	-537.	-705.	883.	193.		-0150	-0273	-0004	.0330	.0344	-0035	460.
.3930	3.	1576.	-516.	-789.	858.	-64.		-0080	-0279	.0007	.0303	.0433	-0060	468.
.3940	-16.	1724.	-478.	-820.	830.	-310.		-0011	-0275	.0021	.0270	.0518	-0086	485.
.3950	-42.	1765.	-424.	-794.	801.	-533.		.0056	-0262	.0037	.0232	.0597	-0114	501.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.10.

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

.3150	-108.	-558.	-722.	20.	796.	2013.	-.0644	-.0057	-.0069	.0302	-.0206	.0021	869.
.3360	-60.	-438.	-395.	18.	843.	1755.	-.0577	-.0094	-.0057	.0331	-.0148	.0026	781.
.3370	-22.	-425.	-430.	-41.	877.	1494.	-.0508	-.0132	-.0047	.0351	-.0081	.0027	695.
.338.	6.	-64.	-477.	-147.	899.	1234.	-.0437	-.0170	-.0038	.0364	-.0006	.0024	615.
.3890	22.	625.	-509.	-293.	911.	974.	-.0365	-.0204	-.0030	.0368	.0076	.0016	547.
.3900	29.	1261.	-531.	-474.	913.	714.	-.0293	-.0234	-.0022	.0363	.0163	.0003	497.
.3910	26.	1518.	-541.	-580.	903.	454.	-.0221	-.0257	-.0014	.0350	.0254	-.0014	468.
.3920	17.	1517.	-537.	-705.	883.	193.	-.0150	-.0273	-.0004	.0330	.0344	-.0035	460.
.3930	3.	1576.	-516.	-789.	858.	-64.	-.0080	-.0279	.0007	.0303	.0433	-.0060	468.
.3940	-16.	1774.	-479.	-620.	830.	-310.	-.0011	-.0275	.0021	.0270	.0518	-.0086	485.
.3950	-42.	1765.	-424.	-794.	801.	-533.	.0056	-.0262	.0037	.0232	.0597	-.0114	501.

ADLPIPE PAGE 1450 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.28.10.

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	34	MEMBER	1	SEQUENCE	817	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)		
.3960	-76.	1597.	-354.	-710.	774.	-722.	.0120	-.0241	.0055	.0190	.0570	-.0142	512.		
.3970	-115.	1424.	-273.	-576.	750.	-873.	.0181	-.0211	.0076	.0145	.0735	-.0169	516.		
.3980	-158.	1385.	-183.	-403.	731.	-984.	.0240	-.0173	.0098	.0098	.0790	-.0193	518.		
.3990	-201.	1361.	-88.	-205.	715.	-1059.	.0296	-.0129	.0122	.0049	.0832	-.0214	519.		
.4000	-241.	1132.	8.	0.	700.	-1103.	.0350	-.0079	.0146	-.0000	.0861	-.0229	524.		

MAXIMUM VALUE OF STRESS OCCURS AT

TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RY	RY	RZ	STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.1890	-1193.	-2133.	-602.	-7375.	-78.	6643.	-.0965	.0367	-.2078	-.0108	-.0635	-.0030	3983.

SECTION	35	MEMBER	1	SEQUENCE	817	LOCATION	BEG	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.		
.0010	-0.	-0.	0.	-0.	-0.	-0.	.0000	.0000	-.0000	-.0000	-.0000	-.0000	0.		
.0020	0.	-2.	0.	-0.	-0.	0.	.0000	-.0000	-.0000	-.0000	-.0000	.0000	0.		
.0030	0.	-5.	0.	-1.	-1.	1.	-.0000	-.0000	-.0000	-.0000	-.0001	.0000	0.		
.0040	0.	-9.	0.	-2.	-1.	2.	-.0000	-.0000	-.0000	-.0000	-.0001	.0000	1.		
.0050	1.	-17.	0.	-2.	-1.	5.	-.0000	-.0000	-.0000	-.0000	-.0001	.0000	2.		
.0060	1.	-38.	0.	-2.	-1.	6.	-.0000	-.0000	-.0000	-.0000	-.0002	.0000	3.		
.0070	0.	-72.	-0.	1.	-2.	4.	-.0000	-.0001	-.0000	-.0000	-.0003	.0000	2.		
.0080	-1.	-115.	-1.	7.	-5.	-6.	-.0000	-.0001	-.0000	.0000	-.0005	-.0000	4.		
.0090	-3.	-154.	-3.	18.	-6.	-20.	-.0001	-.0002	-.0000	.0001	-.0007	-.0001	11.		
.0100	-5.	-184.	-5.	35.	-2.	-36.	-.0001	-.0003	-.0000	.0002	-.0002	-.0001	20.		
.0110	-8.	-213.	-7.	54.	12.	-58.	-.0001	-.0004	-.0000	.0003	.0011	-.0003	32.		
.0120	-13.	-257.	-8.	68.	36.	-97.	-.0001	-.0005	.0000	.0005	.0037	-.0005	50.		
.0130	-21.	-320.	-7.	68.	77.	-164.	-.0000	-.0007	.0001	.0006	.0076	-.0010	77.		
.0140	-32.	-382.	-2.	50.	117.	-254.	.0001	-.0010	.0002	.0006	.0126	-.0016	114.		
.0150	-40.	-416.	4.	24.	167.	-339.	.0004	-.0013	.0003	.0007	.0182	-.0024	152.		
.0160	-40.	-413.	8.	15.	216.	-380.	.0008	-.0016	.0004	.0008	.0237	-.0031	176.		
.0170	-27.	-373.	6.	45.	257.	-343.	.0015	-.0018	.0005	.0011	.0283	-.0036	173.		
.0180	2.	-285.	-2.	122.	285.	-207.	.0024	-.0020	.0007	.0017	.0316	-.0037	149.		
.0190	45.	-124.	-14.	227.	304.	20.	.0035	-.0022	.0008	.0025	.0339	-.0035	153.		

ADLPIPE PAGE 1451 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.28.10.

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

.0000	-3.	-154.	-3.	18.	-6.	-20.	-.0001	-.0002	-.0000	.0001	-.0007	-.0001	11.
.0100	-5.	-184.	-5.	35.	-2.	-36.	-.0001	-.0003	-.0000	.0002	-.0002	-.0001	20.
.0110	-8.	-213.	-7.	54.	12.	-58.	-.0001	-.0004	-.0000	.0003	.0011	-.0003	32.
.0120	-13.	-257.	-9.	68.	36.	-97.	-.0001	-.0005	.0000	.0005	.0037	-.0005	50.
.0130	-21.	-320.	-7.	68.	72.	-154.	-.0000	-.0007	.0001	.0006	.0076	-.0010	77.
.0140	-32.	-372.	-2.	50.	117.	-254.	.0001	-.0010	.0002	.0006	.0126	-.0016	114.
.0150	-40.	-416.	4.	74.	167.	-339.	.0004	-.0013	.0003	.0007	.0182	-.0024	152.
.0160	-40.	-413.	0.	15.	216.	-380.	.0008	-.0016	.0004	.0008	.0237	-.0031	176.
.0170	-27.	-373.	6.	45.	257.	-343.	.0015	-.0018	.0005	.0011	.0283	-.0036	173.
.0180	2.	-285.	-2.	102.	205.	-207.	.0024	-.0020	.0007	.0017	.0316	-.0037	149.
.0190	45.	-124.	-14.	227.	304.	26.	.0035	-.0022	.0008	.0025	.0339	-.0035	153.

ADLPIPE PAGE 1451

DIS/ADLPIPE ADLPIPE STRESS ANALYSIS  
 S/RV PIPING KEWAUNEE GKWC8F 2 RUP DISK  
 2 SAFETY COLD FKW24F--2 PSV

83/12/02. 18.28.10.

CONDITION 24  
 LOADS  
 SHOCK  
 PRESSURE  
 ENGLISH UNITS

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

SECTION	35	MEMBER	1	SEQUENCE	217	LOCATION	BEG	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0200	98.	100.	-22.	319.	319.	343.	.0047	-.0021	.0010	.0034	.0359	-.0027	227.	
.0210	155.	352.	-21.	349.	342.	712.	.0058	-.0019	.0014	.0040	.0388	-.0015	346.	
.0220	210.	544.	-5.	291.	403.	1106.	.0066	-.0014	.0019	.0043	.0458	.0003	487.	
.0230	246.	523.	26.	124.	480.	1421.	.0070	-.0009	.0026	.0042	.0550	.0023	604.	
.0240	244.	189.	69.	-131.	525.	1530.	.0068	-.0004	.0033	.0035	.0612	.0040	651.	
.0250	193.	-351.	102.	-345.	503.	1398.	.0059	-.0000	.0039	.0027	.0604	.0052	612.	
.0260	126.	-708.	101.	-347.	443.	1137.	.0045	.0002	.0042	.0027	.0551	.0064	509.	
.0270	51.	-421.	62.	-120.	416.	856.	.0025	.0007	.0044	.0036	.0525	.0078	385.	
.0280	-43.	553.	22.	95.	374.	454.	.0001	.0015	.0044	.0042	.0478	.0088	239.	
.0290	-156.	1632.	7.	135.	243.	-105.	-.0025	.0026	.0046	.0038	.0334	.0088	119.	
.0300	-242.	2141.	-4.	133.	128.	-529.	-.0052	.0037	.0048	.0032	.0205	.0091	225.	
.0310	-288.	2078.	-5.	69.	69.	-745.	-.0076	.0046	.0052	.0023	.0134	.0097	302.	
.0320	-322.	1822.	27.	-239.	-6.	-963.	-.0099	.0054	.0056	.0002	.0051	.0096	398.	
.0330	-355.	1642.	87.	-751.	-92.	-1261.	-.0119	.0066	.0060	-.0031	-.0040	.0082	590.	
.0340	-371.	1525.	130.	-1193.	-147.	-1531.	-.0135	.0081	.0061	-.0065	-.0095	.0060	781.	
.0350	-363.	1367.	124.	-1331.	-217.	-1714.	-.0147	.0094	.0056	-.0090	-.0172	.0033	875.	
.0360	-326.	1208.	53.	-1070.	-340.	-1776.	-.0152	.0105	.0044	-.0101	-.0314	.0005	843.	
.0370	-252.	1267.	-73.	-456.	-440.	-1636.	-.0150	.0113	.0027	-.0098	-.0444	-.0021	704.	
.0380	-149.	1760.	-214.	274.	-461.	-1325.	-.0142	.0122	.0009	-.0090	-.0500	-.0043	574.	
.0390	-41.	2499.	-321.	805.	-480.	-975.	-.0129	.0131	-.0008	-.0087	-.0547	-.0065	543.	
.0400	77.	2697.	-376.	1044.	-550.	-376.	-.0111	.0137	-.0020	-.0092	-.0645	-.0079	518.	
.0410	224.	1827.	-401.	1153.	-590.	232.	-.0092	.0136	-.0026	-.0094	-.0687	-.0071	528.	
.0420	362.	392.	-388.	1092.	-575.	1040.	-.0074	.0126	-.0026	-.0096	-.0682	-.0050	648.	
.0430	420.	-346.	-334.	817.	-586.	1442.	-.0061	.0114	-.0020	-.0099	-.0710	-.0035	705.	
.0440	387.	-228.	-248.	384.	-610.	1370.	-.0056	.0104	-.0010	-.0103	-.0756	-.0026	621.	
.0450	295.	-72.	-164.	9.	-579.	1042.	-.0057	.0094	.0002	-.0101	-.0747	-.0016	478.	
.0460	169.	-431.	-101.	-204.	-526.	584.	-.0062	.0076	.0014	-.0088	-.0710	-.0001	326.	
.0470	21.	-1101.	-49.	-339.	-527.	47.	-.0069	.0049	.0025	-.0071	-.0723	.0016	252.	
.0480	-118.	-1667.	-1.	-444.	-531.	-420.	-.0076	.0019	.0035	-.0053	-.0732	.0038	325.	
.0490	-227.	-1881.	37.	-481.	-440.	-709.	-.0080	-.0006	.0044	-.0032	-.0635	.0065	386.	
.0500	-308.	-1715.	70.	-506.	-281.	-888.	-.0080	-.0026	.0052	-.0012	-.0461	.0089	425.	
.0510	-367.	-1398.	109.	-579.	-123.	-1029.	-.0076	-.0045	.0059	.0004	-.0283	.0104	476.	
.0520	-293.	-1478.	150.	-679.	25.	-1068.	-.0067	-.0063	.0064	.0017	-.0111	.0111	508.	
.0530	-370.	-2173.	185.	-773.	171.	-914.	-.0053	-.0077	.0068	.0027	.0062	.0112	485.	
.0540	-297.	-2928.	217.	-872.	296.	-555.	-.0034	-.0090	.0068	.0034	.0219	.0110	432.	
.0550	-182.	-3156.	244.	-984.	395.	-40.	-.0012	-.0098	.0066	.0036	.0354	.0104	426.	
.0560	-42.	-2991.	260.	-1054.	480.	557.	.0012	-.0099	.0059	.0035	.0479	.0093	516.	
.0570	106.	-2690.	251.	-994.	564.	1155.	.0033	-.0095	.0048	.0035	.0604	.0078	652.	

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DIS/ADLPIPE ADLPIPE STRESS ANALYSIS  
 S/RV PIPING KEWAUNEE GKWC8F 2 RUP DISK  
 2 SAFETY COLD FKW24F--2 PSV

83/12/02. 18.28.11.

CONDITION 24  
 LOADS  
 SHOCK  
 PRESSURE  
 ENGLISH UNITS

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

.0470	21.	-1101.	-49.	-339.	-527.	47.	-.069	.0049	.0025	-.0071	-.0723	.0016	252.
.0480	-118.	-1667.	-1.	-444.	-531.	-420.	-.076	.0019	.0035	-.0053	-.0732	.0038	325.
.0490	-227.	-1891.	37.	-481.	-440.	-709.	-.080	-.0006	.0044	-.0032	-.0635	.0065	386.
.0500	-307.	-1715.	70.	-506.	-281.	-880.	-.080	-.0026	.0052	-.0112	-.0461	.0089	425.
.0510	-367.	-1398.	109.	-579.	-123.	-1029.	-.076	-.0045	.0059	.0004	-.0223	.0104	476.
.0520	-393.	-1478.	150.	-679.	25.	-1068.	-.067	-.0063	.0064	.0017	-.0111	.0111	508.
.0530	-370.	-2173.	185.	-773.	171.	-914.	-.053	-.0077	.0068	.0027	.0062	.0112	485.
.0540	-297.	-2928.	217.	-872.	296.	-555.	-.074	-.0090	.0068	.0034	.0219	.0110	432.
.0550	-182.	-3156.	244.	-984.	395.	-40.	-.0612	-.0098	.0066	.0036	.0354	.0104	426.
.0560	-42.	-2991.	260.	-1054.	450.	257.	.0012	-.0099	.0059	.0035	.0479	.0093	516.
.0570	106.	-2690.	251.	-994.	504.	1155.	.0033	-.0095	.0048	.0035	.0504	.0078	652.

ADLPIPE PAGE 1452

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

ADLPIPE STRESS ANALYSIS

83/12/02. 18.28.11.

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

SECTION	35	MEMBER	1	SEQUENCE	B17	LOCATION	BFG	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	245.	-2015.	217.	-790.	647.	1677.	.0051	-.0090	.0032	.0039	.0724	.0059	788.		
.0590	364.	-785.	171.	-534.	723.	2085.	.0063	-.0079	.0013	.0041	.0833	.0039	911.		
.0600	459.	499.	129.	-310.	795.	2399.	.0067	-.0059	-.0009	.0041	.0933	.0023	1022.		
.0610	531.	1313.	94.	-143.	852.	2651.	.0062	-.0030	-.0032	.0036	.1014	.0016	1119.		
.0620	567.	1716.	68.	-39.	873.	2787.	.0046	-.0001	-.0056	.0028	.1059	.0018	1172.		
.0630	544.	1848.	55.	-24.	840.	2656.	.0018	.0027	-.0081	.0014	.1050	.0023	1118.		
.0640	444.	1630.	55.	-109.	762.	2140.	-.0022	.0058	-.0106	-.0006	.0993	.0026	913.		
.0650	271.	1297.	59.	-253.	673.	1245.	-.0071	.0095	-.0133	-.0031	.0916	.0025	577.		
.0660	48.	1393.	54.	-360.	596.	82.	-.0128	.0130	-.0162	-.0059	.0837	.0019	281.		
.0670	-191.	1902.	21.	-316.	534.	-1160.	-.0185	.0159	-.0194	-.0084	.0755	.0013	528.		
.0680	-405.	2251.	-51.	-49.	492.	-2251.	-.0239	.0181	-.0230	-.0103	.0681	.0011	925.		
.0690	-566.	2201.	-147.	368.	474.	-3055.	-.0284	.0195	-.0267	-.0118	.0632	.0014	1249.		
.0700	-668.	1957.	-237.	734.	461.	-3569.	-.0319	.0199	-.0304	-.0135	.0593	.0018	1474.		
.0710	-709.	1532.	-299.	915.	443.	-3791.	-.0339	.0194	-.0338	-.0161	.0551	.0021	1575.		
.0720	-680.	818.	-332.	924.	436.	-3662.	-.0346	.0180	-.0370	-.0192	.0518	.0024	1526.		
.0730	-586.	57.	-339.	788.	435.	-3209.	-.0340	.0157	-.0398	-.0227	.0473	.0029	1337.		
.0740	-451.	-462.	-320.	506.	377.	-2561.	-.0322	.0124	-.0425	-.0265	.0363	.0032	1058.		
.0750	-289.	-902.	-290.	180.	247.	-1781.	-.0296	.0085	-.0451	-.0302	.0177	.0034	725.		
.0760	-105.	-1479.	-275.	-19.	87.	-859.	-.0265	.0042	-.0479	-.0332	-.0033	.0040	346.		
.0770	84.	-1965.	-285.	-14.	-69.	135.	-.0232	-.0001	-.0509	-.0349	-.0226	.0053	61.		
.0780	247.	-2087.	-314.	161.	-207.	1039.	-.0202	-.0047	-.0543	-.0355	-.0388	.0068	430.		
.0790	362.	-2028.	-349.	440.	-300.	1722.	-.0178	-.0090	-.0579	-.0351	-.0490	.0085	723.		
.0800	412.	-2093.	-377.	733.	-323.	2106.	-.0164	-.0126	-.0616	-.0339	-.0509	.0102	904.		
.0810	391.	-2274.	-380.	947.	-308.	2128.	-.0161	-.0153	-.0652	-.0324	-.0473	.0117	943.		
.0820	302.	-2438.	-360.	1080.	-293.	1815.	-.0168	-.0173	-.0689	-.0305	-.0423	.0128	856.		
.0830	168.	-2601.	-328.	1213.	-285.	1280.	-.0184	-.0185	-.0724	-.0278	-.0366	.0140	717.		
.0840	6.	-2749.	-292.	1303.	-297.	591.	-.0206	-.0187	-.0759	-.0243	-.0321	.0149	615.		
.0850	-176.	-2697.	-250.	1559.	-361.	-245.	-.0233	-.0179	-.0793	-.0203	-.0329	.0151	650.		
.0860	-357.	-2303.	-207.	1750.	-469.	-1144.	-.0260	-.0162	-.0825	-.0159	-.0386	.0143	860.		
.0870	-505.	-1625.	-169.	1986.	-569.	-1932.	-.0283	-.0139	-.0856	-.0111	-.0442	.0130	1135.		
.0880	-594.	-764.	-135.	2276.	-635.	-2477.	-.0299	-.0111	-.0884	-.0064	-.0469	.0112	1360.		
.0890	-614.	205.	-97.	2402.	-674.	-2728.	-.0307	-.0077	-.0909	-.0022	-.0472	.0089	1483.		
.0900	-562.	1113.	-58.	2508.	-687.	-2685.	-.0304	-.0041	-.0932	.0012	-.0450	.0064	1494.		
.0910	-447.	1739.	-30.	2603.	-667.	-2331.	-.0293	-.0003	-.0951	.0039	-.0400	.0035	1428.		
.0920	-296.	2052.	-25.	2756.	-628.	-1868.	-.0275	.0035	-.0967	.0060	-.0340	-.0001	1360.		
.0930	-140.	2217.	-54.	3031.	-583.	-1441.	-.0252	.0074	-.0980	.0079	-.0292	-.0045	1367.		
.0940	-0.	2320.	-123.	3464.	-529.	-1143.	-.0227	.0112	-.0990	.0096	-.0253	-.0097	1479.		
.0950	117.	2187.	-227.	4037.	-460.	-957.	-.0200	.0152	-.0995	.0111	-.0213	-.0152	1675.		

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

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.0850	-176.	-2697.	-250.	1559.	-361.	-245.	-.0233	-.0179	-.0793	-.0203	-.0329	.0151	650.
.0860	-357.	-2303.	-207.	1750.	-469.	-1144.	-.0260	-.0162	-.0825	-.0159	-.0386	.0143	860.
.0870	-505.	-1625.	-169.	1986.	-569.	-1932.	-.0283	-.0139	-.0856	-.0111	-.0442	.0130	1135.
.0880	-594.	-764.	-135.	2226.	-635.	-2477.	-.0299	-.0111	-.0884	-.0064	-.0469	.0112	1360.
.0890	-714.	205.	-97.	2402.	-674.	-2728.	-.0307	-.0077	-.0909	-.0022	-.0472	.0089	1483.
.0900	-862.	1113.	-58.	2501.	-687.	-2865.	-.0304	-.0041	-.0932	.0012	-.0450	.0064	1494.
.0910	-447.	1739.	-30.	2603.	-667.	-2331.	-.0293	-.0003	-.0951	.0039	-.0400	.0035	1428.
.0920	-296.	2052.	-25.	2756.	-628.	-1868.	-.0275	.0035	-.0967	.0066	-.0340	-.0001	1360.
.0930	-140.	2217.	-14.	3031.	-583.	-1441.	-.0252	.0074	-.0980	.0079	-.0292	-.0045	1367.
.0940	-0.	2320.	-123.	3464.	-529.	-1143.	-.0227	.0112	-.0990	.0096	-.0253	-.0097	1479.
.0950	117.	2187.	-227.	4037.	-460.	-957.	-.0200	.0152	-.0995	.0111	-.0213	-.0152	1675.

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

SECTION	35	MEMBER	1	SEQUENCE	817	LOCATION	BEG	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0960	218.	1644.	-355.	4675.	-378.	-804.	-.0172	.0193	-.0992	.0125	-.0172	-.0201	1910.		
.0970	307.	719.	-485.	5277.	-286.	-600.	-.0142	.0234	-.0978	.0134	-.0125	-.0237	2134.		
.0980	385.	-407.	-600.	5729.	-178.	-322.	-.0110	.0275	-.0950	.0137	-.0065	-.0254	2304.		
.0990	437.	-1506.	-681.	5941.	-49.	-26.	-.0079	.0317	-.0907	.0132	.0013	-.0255	2384.		
.1000	447.	-2241.	-722.	5890.	89.	190.	-.0048	.0363	-.0845	.0120	.0097	-.0239	2365.		
.1010	401.	-2238.	-729.	5617.	219.	244.	-.0018	.0411	-.0766	.0104	.0164	-.0213	2258.		
.1020	298.	-1458.	-711.	5187.	320.	106.	.0010	.0457	-.0669	.0088	.0191	-.0176	2086.		
.1030	150.	-353.	-674.	4652.	373.	-165.	.0038	.0496	-.0555	.0073	.0157	-.0131	1874.		
.1040	-20.	611.	-621.	4015.	377.	-453.	.0068	.0524	-.0426	.0058	.0063	-.0075	1629.		
.1050	-189.	1202.	-544.	3220.	349.	-648.	.0101	.0539	-.0283	.0041	-.0063	-.0007	1326.		
.1060	-340.	1346.	-434.	2194.	314.	-696.	.0139	.0537	-.0126	.0015	-.0188	.0068	932.		
.1070	-465.	896.	-290.	915.	298.	-586.	.0182	.0519	.0040	-.0021	-.0281	.0147	452.		
.1080	-561.	111.	-122.	-556.	303.	-355.	.0229	.0489	.0212	-.0067	-.0338	.0224	291.		
.1090	-628.	13.	42.	-2049.	335.	-40.	.0281	.0450	.0385	-.0119	-.0358	.0294	833.		
.1100	-664.	141.	173.	-3357.	454.	335.	.0335	.0392	.0552	-.0167	-.0281	.0351	1366.		
.1110	-682.	-394.	259.	-4404.	571.	652.	.0390	.0327	.0711	-.0209	-.0197	.0389	1801.		
.1120	-678.	-2199.	289.	-5093.	625.	907.	.0446	.0268	.0856	-.0240	-.0164	.0405	2091.		
.1130	-635.	-4601.	248.	-5292.	658.	1213.	.0501	.0211	.0987	-.0251	-.0130	.0404	2195.		
.1140	-548.	-6286.	156.	-5075.	689.	1605.	.0555	.0150	.1104	-.0241	-.0069	.0387	2154.		
.1150	-424.	-6803.	63.	-4753.	699.	2041.	.0607	.0099	.1209	-.0219	-.0005	.0354	2095.		
.1160	-265.	-6521.	19.	-4611.	709.	2532.	.0655	.0076	.1307	-.0195	.0074	.0308	2130.		
.1170	-79.	-5519.	43.	-4752.	739.	3071.	.0699	.0074	.1398	-.0170	.0179	.0254	2290.		
.1180	120.	-4183.	128.	-5129.	783.	3609.	.0734	.0077	.1482	-.0143	.0302	.0193	2536.		
.1190	299.	-3231.	264.	-5700.	715.	3971.	.0760	.0089	.1558	-.0114	.0317	.0123	2802.		
.1200	445.	-3086.	415.	-6254.	526.	4126.	.0774	.0122	.1623	-.0077	.0221	.0048	3014.		
.1210	558.	-2969.	529.	-6490.	315.	4108.	.0776	.0173	.1674	-.0022	.0122	-.0027	3085.		
.1220	602.	-1687.	595.	-6373.	76.	3728.	.0765	.0228	.1710	.0047	.0003	-.0106	2963.		
.1230	571.	641.	620.	-5987.	-158.	2946.	.0742	.0290	.1733	.0123	-.0117	-.0192	2678.		
.1240	483.	2904.	613.	-5444.	-355.	1887.	.0711	.0368	.1743	.0198	-.0222	-.0277	2317.		
.1250	371.	4546.	579.	-4789.	-470.	781.	.0677	.0448	.1744	.0268	-.0270	-.0353	1956.		
.1260	266.	5726.	521.	-4089.	-499.	-182.	.0644	.0513	.1738	.0329	-.0246	-.0414	1647.		
.1270	174.	6351.	455.	-3413.	-543.	-930.	.0616	.0561	.1728	.0375	-.0240	-.0461	1441.		
.1280	114.	6056.	372.	-2762.	-578.	-1498.	.0597	.0605	.1717	.0410	-.0221	-.0491	1282.		
.1290	81.	5264.	262.	-2047.	-591.	-1778.	.0587	.0636	.1708	.0436	-.0185	-.0506	1114.		
.1300	53.	4795.	133.	-1312.	-613.	-1975.	.0588	.0641	.1703	.0455	-.0183	-.0516	983.		
.1310	26.	4607.	8.	-678.	-642.	-2123.	.0600	.0623	.1705	.0464	-.0234	-.0523	931.		
.1320	11.	4127.	-88.	-302.	-699.	-2158.	.0625	.0592	.1717	.0458	-.0361	-.0525	918.		
.1330	43.	3397.	-145.	-204.	-722.	-1852.	.0663	.0544	.1741	.0441	-.0481	-.0512	802.		

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

.1210	271.	641.	620.	-5987.	-150.	2946.	.742	.0290	.1733	.0123	-.0117	-.0192	2678.
.1240	487.	2904.	617.	-5444.	-355.	1887.	.711	.0368	.1743	.0198	-.0222	-.0277	2317.
.1250	371.	4946.	579.	-4789.	-470.	731.	.0677	.0446	.1744	.0263	-.0270	-.0353	1956.
.1260	266.	5776.	501.	-4069.	-422.	-132.	.0644	.0513	.1738	.0329	-.0246	-.0414	1647.
.1270	174.	6351.	405.	-3413.	-543.	-950.	.0616	.0561	.1729	.0375	-.0240	-.0461	1441.
.1280	114.	6356.	371.	-2762.	-575.	-1498.	.0597	.0605	.1717	.0410	-.0221	-.0491	1282.
.1290	81.	5264.	262.	-2047.	-591.	-1778.	.0587	.0636	.1708	.0436	-.0185	-.0506	1114.
.1300	53.	4795.	133.	-1312.	-613.	-1975.	.0588	.0641	.1703	.0455	-.0183	-.0516	983.
.1310	26.	4607.	0.	-678.	-642.	-2123.	.0600	.0622	.1705	.0464	-.0234	-.0523	931.
.1320	11.	4177.	-87.	-302.	-690.	-2158.	.0625	.0592	.1717	.0458	-.0361	-.0525	918.
.1330	43.	3397.	-145.	-204.	-722.	-1852.	.0663	.0544	.1741	.0441	-.0481	-.0512	802.

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	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)
.1340	135.	2871.	-155.	-416.	-705.	-1105.	.0714	.0471	.1772	.0413	-.0561	-.0478	552.							
.1350	280.	2184.	-113.	-950.	-671.	50.	.0775	.0380	.1827	.0376	-.0600	-.0423	467.							
.1360	456.	591.	-28.	-1734.	-607.	1493.	.0842	.0285	.1885	.0335	-.0584	-.0348	950.							
.1370	617.	-1541.	91.	-2697.	-545.	2928.	.0909	.0188	.1949	.0292	-.0561	-.0266	1612.							
.1380	731.	-3175.	226.	-3712.	-474.	4160.	.0969	.0086	.2016	.0251	-.0540	-.0180	2246.							
.1390	780.	-4074.	364.	-4700.	-430.	5086.	.1019	-.0012	.2082	.0217	-.0560	-.0095	2784.							
.1400	722.	-4797.	491.	-5579.	-422.	5745.	.1054	-.0092	.2142	.0190	-.0623	-.0006	3218.							
.1410	720.	-5513.	598.	-6286.	-443.	6208.	.1074	-.0154	.2194	.0173	-.0678	.0087	3550.							
.1420	610.	-5958.	695.	-6899.	-520.	6364.	.1075	-.0203	.2236	.0161	-.0755	.0177	3772.							
.1430	447.	-6365.	787.	-7449.	-630.	6185.	.1057	-.0238	.2267	.0151	-.0826	.0260	3893.							
.1440	242.	-7016.	868.	-7920.	-725.	5686.	.1021	-.0248	.2283	.0142	-.0861	.0330	3923.							
.1450	8.	-7425.	932.	-8259.	-755.	4909.	.0969	-.0233	.2284	.0136	-.0824	.0383	3868.							
.1460	-237.	-6981.	968.	-8425.	-711.	3906.	.0904	-.0202	.2268	.0132	-.0716	.0416	3737.							
.1470	-481.	-5933.	978.	-8430.	-685.	2704.	.0829	-.0154	.2234	.0130	-.0620	.0423	3563.							
.1480	-668.	-4904.	950.	-8202.	-676.	1494.	.0749	-.0087	.2183	.0131	-.0530	.0407	3356.							
.1490	-836.	-3760.	879.	-7732.	-693.	390.	.0668	-.0007	.2115	.0134	-.0456	.0371	3119.							
.1500	-918.	-2068.	777.	-7085.	-737.	-567.	.0592	.0078	.2032	.0138	-.0408	.0312	2868.							
.1510	-923.	-122.	653.	-6325.	-761.	-1306.	.0522	.0166	.1935	.0139	-.0353	.0234	2610.							
.1520	-853.	1476.	519.	-5539.	-759.	-1811.	.0462	.0259	.1827	.0135	-.0294	.0140	2358.							
.1530	-706.	2634.	379.	-4737.	-699.	-2016.	.0414	.0351	.1712	.0126	-.0196	.0037	2085.							
.1540	-494.	3538.	233.	-3019.	-611.	-1917.	.0378	.0431	.1590	.0114	-.0080	-.0069	1768.							
.1550	-225.	4272.	79.	-3048.	-502.	-1486.	.0352	.0496	.1464	.0102	.0053	-.0167	1376.							
.1560	83.	4534.	-84.	-2111.	-345.	-740.	.0336	.0548	.1338	.0093	.0230	-.0248	908.							
.1570	379.	4754.	-236.	-1227.	-190.	60.	.0325	.0585	.1213	.0083	.0391	-.0315	499.							
.1580	620.	5140.	-363.	-467.	-29.	741.	.0315	.0598	.1093	.0072	.0534	-.0367	352.							
.1590	779.	5284.	-454.	102.	143.	1165.	.0303	.0588	.0981	.0058	.0564	-.0403	473.							
.1600	937.	4721.	-492.	371.	281.	1263.	.0288	.0559	.0878	.0038	.0741	-.0421	541.							
.1610	804.	3696.	-473.	339.	377.	1103.	.0269	.0510	.0784	.0012	.0767	-.0419	487.							
.1620	708.	2678.	-408.	48.	468.	853.	.0247	.0442	.0699	-.0018	.0792	-.0389	391.							
.1630	561.	1725.	-300.	-490.	517.	557.	.0225	.0358	.0620	-.0054	.0781	-.0335	363.							
.1640	382.	629.	-163.	-1190.	534.	275.	.0202	.0286	.0545	-.0095	.0744	-.0260	535.							
.1650	188.	-803.	-21.	-1924.	546.	36.	.0181	.0170	.0469	-.0135	.0705	-.0170	803.							
.1660	-10.	-1848.	111.	-2588.	533.	-211.	.0162	.0074	.0388	-.0175	.0642	-.0075	1064.							
.1670	-207.	-5120.	209.	-3047.	522.	-402.	.0147	-.0017	.0300	-.0208	.0585	.0018	1251.							
.1680	-766.	-4310.	261.	-3228.	499.	-484.	.0136	-.0095	.0200	-.0235	.0527	.0105	1325.							
.1690	-470.	-5171.	262.	-3089.	475.	-373.	.0129	-.0156	.0088	-.0252	.0486	.0183	1263.							
.1700	-507.	-5611.	216.	-2364.	443.	-46.	.0127	-.0200	-.0037	-.0261	.0453	.0250	1084.							
.1710	-475.	-5339.	138.	-2029.	379.	473.	.0129	-.0224	-.0173	-.0263	.0407	.0301	850.							

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.13.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.1610	804.	7906.	-477.	339.	777.	1103.	.0269	.0510	.0784	.0012	.0767	-.0419	487.
.1620	708.	2678.	-400.	48.	467.	853.	.0247	.0442	.0699	-.0018	.0792	-.0389	791.
.1630	501.	1721.	-300.	-490.	517.	557.	.0225	.0358	.0620	-.0054	.0781	-.0335	363.
.1640	702.	829.	-163.	-1100.	534.	275.	.0202	.0268	.0545	-.0095	.0744	-.0260	535.
.1650	108.	-612.	-11.	-1924.	546.	76.	.0181	.0170	.0469	-.0135	.0705	-.0170	803.
.1660	-15.	-1548.	111.	-1590.	533.	-211.	.0162	.0074	.0388	-.0175	.0542	-.0075	1064.
.1670	-207.	-3120.	209.	-7047.	522.	-402.	.0147	-.0017	.0300	-.0208	.0585	.0018	1251.
.1680	-766.	-4310.	261.	-7228.	499.	-484.	.0136	-.0090	.0200	-.0235	.0527	.0105	1325.
.1690	-470.	-5171.	262.	-3009.	475.	-373.	.0129	-.0106	.0088	-.0252	.0486	.0183	1263.
.1700	-507.	-5611.	216.	-7864.	440.	-46.	.0127	-.0200	-.0037	-.0261	.0453	.0250	1084.
.1710	-470.	-5339.	138.	-3009.	379.	473.	.0129	-.0224	-.0173	-.0262	.0407	.0301	850.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.13.

S/RV PIPING KEWAUNEE GKW00F 2 RUP DISK  
2 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	35	MEMBER	1	SEQUENCE	017	LOCATION	BEG	TYPE	RU					STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	(PSI)	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)		
.1720	-374.	-5952.	35.	-1217.	353.	1221.	.0131	-.0227	-.0318	-.0259	.0401	.0339	706.	
.1730	-725.	-5905.	-72.	-351.	339.	2056.	.0131	-.0207	-.0470	-.0251	.0404	.0361	848.	
.1740	-49.	-5471.	-173.	508.	340.	2858.	.0126	-.0163	-.0626	-.0241	.0414	.0365	1173.	
.1750	132.	-4653.	-268.	1363.	354.	3551.	.0111	-.0113	-.0783	-.0228	.0433	.0353	1533.	
.1760	296.	-3590.	-355.	2206.	337.	4029.	.0084	-.0045	-.0940	-.0210	.0418	.0327	1848.	
.1770	427.	-2398.	-439.	3070.	298.	4270.	.0042	.0033	-.1094	-.0188	.0378	.0293	2114.	
.1780	507.	-1059.	-520.	3937.	224.	4201.	-.0015	.0116	-.1242	-.0161	.0291	.0253	2312.	
.1790	527.	366.	-596.	4784.	144.	3807.	-.0029	.0198	-.1384	-.0131	.0180	.0211	2454.	
.1800	477.	1744.	-658.	5538.	71.	3060.	-.0177	.0277	-.1515	-.0103	.0050	.0167	2539.	
.1810	355.	3023.	-697.	6121.	-10.	1948.	-.0278	.0349	-.1634	-.0081	-.0110	.0122	2578.	
.1820	181.	4153.	-722.	6572.	-47.	621.	-.0387	.0409	-.1740	-.0064	-.0236	.0082	2649.	
.1830	-28.	4988.	-734.	6886.	-60.	-828.	-.0499	.0454	-.1832	-.0054	-.0336	.0048	2783.	
.1840	-253.	5314.	-738.	7074.	-68.	-2299.	-.0610	.0483	-.1909	-.0052	-.0422	.0020	2965.	
.1850	-470.	5140.	-741.	7183.	-68.	-7682.	-.0713	.0495	-.1972	-.0057	-.0494	-.0002	3239.	
.1860	-867.	4715.	-752.	7262.	-61.	-4890.	-.0804	.0488	-.2020	-.0067	-.0560	-.0017	3513.	
.1870	-817.	4182.	-775.	7354.	-18.	-5808.	-.0878	.0462	-.2054	-.0078	-.0594	-.0026	3761.	
.1880	-912.	3543.	-801.	7408.	27.	-6413.	-.0932	.0421	-.2073	-.0091	-.0624	-.0030	3932.	
.1890	-944.	2816.	-818.	7375.	78.	-6643.	-.0965	.0367	-.2078	-.0108	-.0635	-.0030	3983.	
.1900	-902.	2060.	-817.	7204.	139.	-6448.	-.0975	.0300	-.2068	-.0128	-.0610	-.0022	3880.	
.1910	-792.	1211.	-784.	6826.	156.	-5846.	-.0964	.0224	-.2043	-.0152	-.0570	-.0007	3607.	
.1920	-620.	143.	-716.	6246.	234.	-4851.	-.0933	.0143	-.2005	-.0181	-.0503	.0018	3175.	
.1930	-407.	-1052.	-616.	5486.	281.	-3579.	-.0889	.0061	-.1956	-.0211	-.0419	.0051	2631.	
.1940	-189.	-2122.	-490.	4595.	321.	-2221.	-.0835	-.0018	-.1899	-.0241	-.0329	.0089	2052.	
.1950	3.	-2955.	-354.	3662.	354.	-963.	-.0779	-.0091	-.1837	-.0269	-.0234	.0127	1526.	
.1960	144.	-3580.	-223.	2793.	378.	61.	-.0723	-.0153	-.1774	-.0291	-.0132	.0164	1131.	
.1970	222.	-4002.	-114.	2079.	392.	784.	-.0674	-.0203	-.1713	-.0306	-.0020	.0199	905.	
.1980	239.	-4207.	-37.	1585.	406.	1211.	-.0632	-.0237	-.1658	-.0313	.0106	.0233	817.	
.1990	203.	-4292.	1.	1345.	429.	1393.	-.0599	-.0257	-.1610	-.0310	.0249	.0267	796.	
.2000	127.	-4382.	1.	1348.	459.	1383.	-.0574	-.0260	-.1569	-.0299	.0397	.0301	796.	
.2010	25.	-4448.	-33.	1562.	492.	1221.	-.0557	-.0247	-.1534	-.0282	.0541	.0333	820.	
.2020	-97.	-4340.	-94.	1252.	523.	940.	-.0540	-.0220	-.1506	-.0260	.0580	.0361	897.	
.2030	-215.	-3948.	-177.	2468.	575.	599.	-.0544	-.0180	-.1480	-.0234	.0809	.0382	1045.	
.2040	-330.	-3342.	-271.	3048.	603.	198.	-.0543	-.0128	-.1456	-.0207	.0908	.0394	1249.	
.2050	-424.	-2539.	-370.	3650.	606.	-208.	-.0545	-.0069	-.1430	-.0180	.0964	.0394	1487.	
.2060	-491.	-1636.	-471.	4249.	591.	-554.	-.0548	-.0006	-.1400	-.0152	.0980	.0384	1736.	
.2070	-515.	-938.	-568.	4803.	563.	-777.	-.0549	.0057	-.1362	-.0126	.0959	.0364	1967.	
.2080	-499.	-225.	-650.	5245.	520.	-936.	-.0549	.0110	-.1315	-.0103	.0911	.0334	2148.	
.2090	-447.	451.	-710.	5519.	505.	-934.	-.0547	.0175	-.1256	-.0086	.0855	.0294	2258.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.13.

S/RV PIPING KEWAUNEE GKW00F 2 RUP DISK  
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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



.1990	207.	-4292.	1.	1348.	429.	1333.	-.599	-.0260	-.1569	-.0299	.0397	.0301	796.
.2000	127.	-4332.	1.	1348.	459.	1333.	-.574	-.0260	-.1569	-.0299	.0397	.0301	796.
.2010	25.	-4443.	-33.	1562.	492.	1221.	-.0557	-.0247	-.1534	-.0282	.0541	.0333	820.
.2020	-97.	-4340.	-94.	1252.	523.	940.	-.0340	-.0720	-.1506	-.0260	.0580	.0361	897.
.2030	-215.	-3961.	-177.	2468.	575.	599.	-.0544	-.0180	-.1490	-.0234	.0309	.0382	1045.
.2040	-323.	-3342.	-271.	3048.	603.	198.	-.0543	-.0129	-.1456	-.0207	.0308	.0394	1249.
.2050	-424.	-2539.	-370.	3650.	606.	-208.	-.0545	-.0069	-.1430	-.0180	.0364	.0394	1487.
.2060	-491.	-1636.	-471.	4249.	591.	-554.	-.0548	-.0006	-.1400	-.0152	.0380	.0384	1736.
.2070	-515.	-933.	-568.	4803.	563.	-777.	-.0549	.0057	-.1362	-.0126	.0359	.0364	1967.
.2080	-499.	-225.	-650.	5245.	510.	-976.	-.0549	.0115	-.1315	-.0103	.0311	.0334	2148.
.2090	-447.	451.	-710.	5518.	505.	-934.	-.0547	.0175	-.1256	-.0086	.0355	.0294	2258.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.13.

S/RV PIPING KEWAUNEE SKW00F 2 RUP DISK  
2 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	25	MEMBER	1	SEQUENCE	817	LOCATION	BEG	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2100	-366.	1185.	-746.	5596.	505.	-959.	-.0543	.0226	-.1182	-.0076	.0315	.0247	2287.	
.2110	-267.	1934.	-750.	5470.	528.	-898.	-.0538	.0269	-.1095	-.0073	.0793	.0195	2235.	
.2120	-162.	2586.	-747.	5146.	561.	-838.	-.0532	.0304	-.0992	-.0079	.0777	.0138	2105.	
.2130	-62.	3032.	-712.	4652.	594.	-809.	-.0526	.0329	-.0876	-.0093	.0759	.0082	1910.	
.2140	23.	3198.	-671.	4024.	618.	-833.	-.0520	.0343	-.0748	-.0114	.0731	.0027	1668.	
.2150	84.	3052.	-623.	3300.	624.	-930.	-.0513	.0346	-.0609	-.0141	.0690	-.0022	1398.	
.2160	116.	2623.	-576.	2514.	609.	-1108.	-.0507	.0340	-.0461	-.0173	.0635	-.0065	1129.	
.2170	116.	2040.	-531.	1699.	575.	-1361.	-.0499	.0325	-.0306	-.0208	.0572	-.0099	903.	
.2180	88.	1462.	-489.	871.	527.	-1659.	-.0488	.0302	-.0148	-.0245	.0507	-.0123	781.	
.2190	40.	951.	-449.	46.	471.	-1948.	-.0474	.0272	.0013	-.0281	.0446	-.0135	804.	
.2200	-16.	444.	-408.	-759.	412.	-2158.	-.0454	.0238	.0174	-.0314	.0391	-.0133	933.	
.2210	-70.	-146.	-367.	-1521.	349.	-2236.	-.0428	.0201	.0334	-.0341	.0340	-.0117	1094.	
.2220	-116.	-834.	-321.	-2223.	277.	-2169.	-.0394	.0163	.0489	-.0358	.0284	-.0088	1251.	
.2230	-155.	-1532.	-269.	-2860.	192.	-1978.	-.0314	.0125	.0639	-.0363	.0219	-.0049	1397.	
.2240	-187.	-2207.	-206.	-3436.	90.	-1697.	-.0308	.0089	.0783	-.0356	.0138	-.0004	1538.	
.2250	-215.	-2772.	-129.	-3959.	-25.	-1358.	-.0256	.0058	.0918	-.0335	.0042	.0044	1680.	
.2260	-236.	-3153.	-34.	-4432.	-143.	-971.	-.0201	.0033	.1045	-.0300	-.0064	.0092	1822.	
.2270	-248.	-3354.	75.	-4853.	-255.	-539.	-.0143	.0014	.1163	-.0251	-.0174	.0140	1962.	
.2280	-249.	-3458.	198.	-5215.	-355.	-68.	-.0083	.0003	.1270	-.0190	-.0283	.0186	2098.	
.2290	-239.	-3523.	328.	-5506.	-438.	417.	-.0024	-.0001	.1366	-.0119	-.0387	.0227	2223.	
.2300	-224.	-3518.	458.	-5706.	-496.	878.	.0033	.0002	.1450	-.0038	-.0476	.0261	2325.	
.2310	-208.	-3386.	581.	-5798.	-526.	1261.	.0086	.0013	.1523	.0049	-.0545	.0285	2391.	
.2320	-199.	-3108.	691.	-5778.	-531.	1515.	.0134	.0029	.1584	.0139	-.0595	.0297	2407.	
.2330	-199.	-2698.	780.	-5642.	-516.	1616.	.0177	.0051	.1633	.0229	-.0534	.0295	2364.	
.2340	-206.	-2188.	844.	-5397.	-485.	1578.	.0214	.0077	.1672	.0316	-.0564	.0279	2263.	
.2350	-212.	-1619.	881.	-5046.	-445.	1438.	.0246	.0106	.1702	.0396	-.0591	.0251	2113.	
.2360	-211.	-1016.	889.	-4631.	-402.	1245.	.0274	.0136	.1724	.0466	-.0718	.0213	1931.	
.2370	-196.	-364.	869.	-4167.	-356.	1051.	.0300	.0167	.1740	.0523	-.0738	.0166	1731.	
.2380	-161.	337.	823.	-3676.	-305.	895.	.0324	.0196	.1752	.0567	-.0743	.0113	1523.	
.2390	-105.	1014.	754.	-3178.	-247.	796.	.0347	.0224	.1761	.0596	-.0727	.0056	1318.	
.2400	-31.	1573.	666.	-2697.	-187.	760.	.0371	.0248	.1770	.0612	-.0693	-.0003	1127.	
.2410	57.	2000.	565.	-2255.	-124.	790.	.0395	.0269	.1779	.0615	-.0640	-.0062	960.	
.2420	155.	2357.	459.	-1880.	-60.	877.	.0419	.0285	.1792	.0606	-.0573	-.0118	833.	
.2430	255.	2672.	358.	-1610.	-0.	1007.	.0443	.0296	.1809	.0588	-.0495	-.0170	762.	
.2440	750.	2899.	272.	-1485.	53.	1154.	.0466	.0300	.1832	.0560	-.0408	-.0216	755.	
.2450	429.	2991.	213.	-1553.	97.	1283.	.0488	.0299	.1861	.0524	-.0314	-.0254	809.	
.2460	486.	2959.	191.	-1854.	120.	1362.	.0508	.0292	.1897	.0481	-.0218	-.0284	925.	
.2470	517.	2647.	211.	-2403.	148.	1383.	.0526	.0278	.1930	.0430	-.0124	-.0305	1114.	

ADLPIPE PAGE 1457

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.13.

S/RV PIPING KEWAUNEE SKW00F 2 RUP DISK  
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

.2370	-166.	-374.	879.	-4167.	-356.	1051.	879.	.300	.0167	.1740	.0522	-.0738	.0166	1731.
.2380	-161.	337.	823.	-3676.	-305.	895.	824.	.324	.0196	.1752	.0567	-.0743	.0113	1523.
.2390	-165.	1314.	754.	-3178.	-247.	796.	747.	.0224	.1761	.0596	-.0727	.0056	1318.	
.2400	-31.	1573.	606.	-2687.	-137.	765.	637.	.0248	.1770	.0612	-.0673	-.0003	1127.	
.2410	57.	2331.	561.	-2255.	-124.	775.	575.	.0265	.1779	.0615	-.0640	-.0062	960.	
.2420	155.	2357.	459.	-1880.	-69.	877.	449.	.0285	.1792	.0606	-.0573	-.0118	833.	
.2430	255.	2672.	358.	-1610.	-40.	1007.	343.	.0296	.1809	.0588	-.0495	-.0170	762.	
.2440	350.	2359.	272.	-1485.	57.	1154.	246.	.0300	.1832	.0560	-.0408	-.0216	755.	
.2450	429.	2991.	117.	-1552.	97.	1233.	133.	.0488	.0299	.1861	.0524	-.0314	-.0254	809.
.2460	484.	2359.	191.	-1554.	128.	1262.	508.	.0292	.1897	.0481	-.0218	-.0284	925.	
.2470	517.	2647.	211.	-1403.	148.	1383.	526.	.0278	.1939	.0430	-.0124	-.0305	1114.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.13.

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

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

SECTION	35	MEMBER	1	SEQUENCE	17	LOCATION	BEG	TYPE	RU	DX	DY	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(PSI)
.2480	522.	2660.	269.	-3172.	162.	1359.	.0541	.0258	.1984	.0373	-.0032	-.0315	1786.			
.2490	504.	2355.	358.	-4102.	172.	1301.	.0555	.0232	.2030	.0313	.0056	-.0316	1728.			
.2500	467.	1937.	466.	-5119.	174.	1206.	.0566	.0202	.2074	.0251	.0133	-.0307	2111.			
.2510	404.	1468.	579.	-6136.	165.	1078.	.0576	.0169	.2111	.0190	.0194	-.0290	2501.			
.2520	332.	1005.	682.	-7063.	144.	935.	.0584	.0133	.2138	.0132	.0236	-.0267	2860.			
.2530	256.	548.	761.	-7818.	113.	811.	.0593	.0098	.2151	.0078	.0260	-.0239	3155.			
.2540	184.	94.	808.	-8346.	75.	735.	.0601	.0063	.2148	.0031	.0263	-.0207	3362.			
.2550	124.	-317.	820.	-8622.	34.	727.	.0610	.0030	.2126	-.0010	.0250	-.0173	3472.			
.2560	79.	-609.	797.	-8641.	-4.	791.	.0620	.0000	.2084	-.0044	.0222	-.0138	3482.			
.2570	51.	-683.	758.	-8413.	-39.	922.	.0630	-.0026	.2023	-.0070	.0182	-.0104	3396.			
.2580	40.	-557.	651.	-7951.	-71.	1112.	.0639	-.0049	.1943	-.0088	.0135	-.0073	3222.			
.2590	46.	-389.	542.	-7279.	-99.	1341.	.0648	-.0071	.1846	-.0096	.0084	-.0046	2970.			
.2600	63.	-315.	419.	-6444.	-126.	1584.	.0654	-.0090	.1734	-.0094	.0028	-.0024	2663.			
.2610	87.	-314.	295.	-5503.	-154.	1806.	.0657	-.0109	.1610	-.0082	-.0033	-.0007	2325.			
.2620	112.	-291.	181.	-4512.	-183.	1981.	.0656	-.0127	.1477	-.0060	-.0097	.0004	1979.			
.2630	135.	-231.	55.	-3527.	-215.	2087.	.0649	-.0147	.1339	-.0029	-.0162	.0008	1647.			
.2640	151.	-204.	18.	-2606.	-254.	2113.	.0637	-.0166	.1197	.0010	-.0227	.0006	1350.			
.2650	158.	-244.	-14.	-1797.	-302.	2043.	.0618	-.0186	.1056	.0056	-.0290	-.0001	1098.			
.2660	154.	-241.	-8.	-1121.	-357.	1874.	.0594	-.0206	.0916	.0107	-.0348	-.0013	890.			
.2670	139.	-145.	35.	-617.	-419.	1613.	.0564	-.0225	.0780	.0160	-.0401	-.0030	713.			
.2680	116.	-141.	106.	-244.	-489.	1273.	.0530	-.0245	.0649	.0213	-.0447	-.0051	556.			
.2690	86.	-402.	199.	8.	-569.	874.	.0492	-.0263	.0521	.0265	-.0487	-.0076	419.			
.2700	53.	-787.	302.	171.	-659.	436.	.0451	-.0278	.0398	.0312	-.0520	-.0103	324.			
.2710	21.	-858.	404.	281.	-753.	-18.	.0410	-.0290	.0279	.0353	-.0548	-.0134	323.			
.2720	-6.	-404.	492.	382.	-844.	-464.	.0370	-.0299	.0162	.0386	-.0565	-.0166	416.			
.2730	-25.	252.	556.	515.	-927.	-876.	.0331	-.0306	.0047	.0409	-.0572	-.0199	552.			
.2740	-33.	650.	589.	702.	-1001.	-1231.	.0297	-.0310	-.0066	.0421	-.0573	-.0232	696.			
.2750	-17.	732.	587.	960.	-1061.	-1508.	.0267	-.0311	-.0178	.0422	-.0569	-.0265	834.			
.2760	-5.	805.	549.	1297.	-1101.	-1688.	.0242	-.0311	-.0289	.0413	-.0559	-.0295	962.			
.2770	31.	986.	478.	1791.	-1119.	-1786.	.0224	-.0312	-.0397	.0393	-.0543	-.0322	1082.			
.2780	78.	1046.	382.	2137.	-1117.	-1745.	.0212	-.0312	-.0502	.0363	-.0526	-.0344	1194.			
.2790	132.	891.	271.	2564.	-1091.	-1640.	.0205	-.0309	-.0603	.0324	-.0511	-.0361	1298.			
.2800	186.	758.	155.	2950.	-1037.	-1478.	.0204	-.0305	-.0698	.0277	-.0502	-.0371	1388.			
.2810	232.	1016.	42.	3268.	-954.	-1292.	.0208	-.0301	-.0787	.0224	-.0500	-.0375	1461.			
.2820	267.	1339.	-61.	3563.	-844.	-1102.	.0216	-.0297	-.0870	.0167	-.0506	-.0372	1512.			
.2830	286.	1370.	-150.	3647.	-712.	-915.	.0228	-.0291	-.0944	.0109	-.0517	-.0361	1535.			
.2840	290.	1053.	-221.	3735.	-561.	-735.	.0242	-.0282	-.1011	.0051	-.0530	-.0343	1532.			
.2850	177.	616.	-274.	3659.	-295.	-571.	.0259	-.0274	-.1071	-.0004	-.0544	-.0318	1506.			

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.13.

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

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

.2750	-27.	732.	317.	960.	-1061.	-1508.	2311.	.0267	-.0711	-.0178	.0422	-.0569	-.0265	834.
.2760	-5.	861.	549.	1297.	-1101.	-1688.	2242.	-.0311	-.0289	.0413	-.0559	-.0295	962.	
.2770	31.	986.	478.	1701.	-1119.	-1766.	2224.	-.0312	-.0397	.0393	-.0543	-.0322	1082.	
.2780	78.	1046.	302.	2137.	-1117.	-1745.	2212.	-.0312	-.0502	.0363	-.0526	-.0344	1194.	
.2790	122.	1091.	271.	2564.	-1021.	-1640.	2205.	-.0309	-.0603	.0324	-.0511	-.0361	1298.	
.2800	180.	1128.	155.	2986.	-1037.	-1478.	2204.	-.0305	-.0699	.0277	-.0502	-.0371	1388.	
.2810	232.	1016.	42.	3268.	-.954.	-1292.	2208.	-.0301	-.0787	.0224	-.0500	-.0375	1461.	
.2820	267.	1139.	-61.	3503.	-844.	-1102.	2216.	-.0297	-.0870	.0167	-.0506	-.0372	1512.	
.2830	286.	1370.	-150.	3647.	-712.	-915.	2228.	-.0291	-.0944	.0109	-.0517	-.0361	1535.	
.2840	299.	1052.	-221.	3705.	-561.	-738.	2242.	-.0282	-.1011	.0051	-.0530	-.0343	1532.	
.2850	277.	676.	-274.	3689.	-295.	-571.	2259.	-.0274	-.1071	-.0004	-.0544	-.0318	1506.	

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ADLPIPE STRESS ANALYSIS

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

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

SECTION	25	MEMBER	1	SEQUENCE	217	LOCATION	BEG	TYPE	RU						STRESS
TIME	FX	FY	FZ	MX	MY	MZ				DZ	RX	RY	RZ		(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)			(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	
.2860	251.	471.	-310.	3611.	-215.	-403.		.0278	-.0264	-.1124	-.0055	-.0559	-.0285		1460.
.2870	216.	324.	-330.	3480.	-27.	-217.		.0300	-.0252	-.1171	-.0102	-.0577	-.0245		1399.
.2880	175.	106.	-337.	3311.	162.	-5.		.0323	-.0236	-.1212	-.0144	-.0597	-.0199		1330.
.2890	131.	-135.	-335.	3126.	342.	232.		.0347	-.0217	-.1249	-.0182	-.0523	-.0148		1265.
.2900	87.	-244.	-331.	2955.	503.	492.		.0372	-.0196	-.1282	-.0215	-.0555	-.0094		1219.
.2910	44.	-182.	-331.	2828.	637.	766.		.0397	-.0173	-.1313	-.0244	-.0593	-.0039		1203.
.2920	7.	-96.	-340.	2771.	740.	1042.		.0421	-.0148	-.1341	-.0267	-.0736	.0015		1225.
.2930	-35.	-112.	-363.	2800.	811.	1303.		.0443	-.0122	-.1368	-.0286	-.0779	.0066		1282.
.2940	-60.	-257.	-399.	2914.	855.	1536.		.0462	-.0095	-.1393	-.0299	-.0815	.0111		1366.
.2950	-100.	-339.	-445.	3096.	877.	1726.		.0477	-.0069	-.1415	-.0308	-.0839	.0150		1465.
.2960	-126.	-495.	-496.	3316.	888.	1863.		.0488	-.0043	-.1435	-.0314	-.0843	.0180		1567.
.2970	-148.	116.	-545.	3540.	888.	1936.		.0494	-.0019	-.1449	-.0315	-.0821	.0200		1658.
.2980	-165.	386.	-584.	3729.	879.	1935.		.0495	.0001	-.1459	-.0314	-.0775	.0210		1722.
.2990	-179.	524.	-608.	3852.	859.	1856.		.0490	.0018	-.1462	-.0309	-.0709	.0208		1750.
.3000	-187.	644.	-612.	3892.	833.	1703.		.0491	.0030	-.1459	-.0301	-.0625	.0194		1737.
.3010	-189.	830.	-593.	3842.	802.	1486.		.0467	.0036	-.1449	-.0290	-.0530	.0169		1684.
.3020	-182.	971.	-552.	3697.	766.	1227.		.0450	.0036	-.1432	-.0276	-.0433	.0134		1593.
.3030	-163.	940.	-488.	3458.	726.	954.		.0431	.0030	-.1400	-.0259	-.0336	.0091		1469.
.3040	-129.	820.	-404.	3138.	687.	698.		.0410	.0018	-.1381	-.0240	-.0240	.0042		1319.
.3050	-80.	802.	-305.	2755.	654.	433.		.0389	.0001	-.1349	-.0220	-.0146	-.0010		1153.
.3060	-17.	901.	-197.	2379.	631.	323.		.0368	-.0022	-.1315	-.0198	-.0055	-.0064		981.
.3070	58.	925.	-88.	1921.	617.	221.		.0348	-.0049	-.1280	-.0176	.0029	-.0117		815.
.3080	138.	723.	14.	1543.	613.	166.		.0329	-.0078	-.1246	-.0154	.0104	-.0166		670.
.3090	217.	349.	101.	1246.	618.	139.		.0311	-.0110	-.1215	-.0132	.0165	-.0211		561.
.3100	287.	-72.	165.	1059.	628.	122.		.0295	-.0143	-.1189	-.0109	.0210	-.0250		497.
.3110	344.	-323.	204.	1000.	642.	102.		.0279	-.0176	-.1167	-.0087	.0235	-.0282		478.
.3120	384.	-546.	216.	1065.	655.	73.		.0263	-.0205	-.1149	-.0067	.0242	-.0305		503.
.3130	405.	-755.	204.	1238.	669.	37.		.0249	-.0231	-.1137	-.0047	.0234	-.0318		565.
.3140	408.	-952.	174.	1488.	683.	-3.		.0235	-.0252	-.1128	-.0030	.0212	-.0320		657.
.3150	797.	-1081.	132.	1780.	695.	-40.		.0223	-.0267	-.1122	-.0016	.0180	-.0313		767.
.3160	763.	-1110.	83.	2084.	707.	-70.		.0212	-.0276	-.1117	-.0004	.0141	-.0295		884.
.3170	720.	-1093.	32.	2375.	715.	-87.		.0202	-.0278	-.1112	.0004	.0099	-.0268		996.
.3180	267.	-1095.	-17.	2634.	714.	-87.		.0193	-.0275	-.1105	.0010	.0053	-.0234		1096.
.3190	209.	-1055.	-59.	2842.	702.	-64.		.0186	-.0264	-.1097	.0013	.0005	-.0194		1175.
.3200	149.	-815.	-93.	2988.	680.	-8.		.0181	-.0248	-.1086	.0014	-.0045	-.0149		1230.
.3210	95.	-317.	-117.	3062.	650.	90.		.0177	-.0228	-.1070	.0012	-.0093	-.0102		1257.
.3220	49.	306.	-131.	3055.	614.	242.		.0175	-.0205	-.1051	.0007	-.0138	-.0053		1254.
.3230	17.	392.	-135.	2968.	573.	457.		.0173	-.0180	-.1027	-.0002	-.0176	-.0004		1227.

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

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

.3130	465.	-755.	204.	1238.	669.	37.	.0249	-.0231	-.1137	-.0047	.0234	-.0318	565.
.3140	408.	-952.	174.	1488.	683.	-3.	.0235	-.0252	-.1128	-.0030	.0212	-.0320	657.
.3150	393.	-1031.	162.	1780.	695.	-40.	.0223	-.0267	-.1122	-.0016	.0180	-.0313	767.
.3160	363.	-1110.	132.	2084.	707.	-79.	.0212	-.0276	-.1117	-.0004	.0141	-.0295	884.
.3170	320.	-1193.	92.	2375.	715.	-87.	.0202	-.0278	-.1112	.0004	.0099	-.0268	996.
.3180	267.	-1095.	-17.	2634.	714.	-87.	.0193	-.0275	-.1105	.0010	.0053	-.0234	1096.
.3190	209.	-1055.	-59.	2842.	702.	-64.	.0186	-.0264	-.1097	.0013	.0005	-.0194	1175.
.3200	149.	-815.	-93.	2988.	680.	-8.	.0181	-.0248	-.1086	.0014	-.0045	-.0149	1230.
.3210	95.	-317.	-117.	3062.	650.	90.	.0177	-.0228	-.1070	.0012	-.0093	-.0102	1257.
.3220	49.	306.	-131.	3055.	614.	242.	.0175	-.0205	-.1051	.0007	-.0138	-.0053	1254.
.3230	17.	392.	-135.	2968.	573.	457.	.0173	-.0180	-.1027	-.0002	-.0176	-.0004	1227.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.28.13.

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	RU	DX	DY	DZ	FX	RY	FZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MY (FT-LB)	MZ (FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3240	1.	1422.	-132.	2612.	530.	733.	.0172	-.0155	-.0999	-.0015	-.0203	.0044	1185.
.3250	-1.	1761.	-126.	2611.	486.	1062.	.0171	-.0131	-.0967	-.0031	-.0217	.0090	1148.
.3260	10.	2473.	-123.	2397.	447.	1424.	.0168	-.0112	-.0933	-.0049	-.0220	.0133	1133.
.3270	34.	2838.	-128.	2199.	398.	1794.	.0161	-.0097	-.0896	-.0069	-.0215	.0173	1150.
.3280	61.	3028.	-144.	2043.	355.	2141.	.0150	-.0088	-.0858	-.0090	-.0205	.0208	1196.
.3290	87.	3138.	-172.	1979.	314.	2429.	.0133	-.0085	-.0819	-.0110	-.0191	.0239	1253.
.3300	106.	3244.	-208.	1878.	277.	2624.	.0108	-.0091	-.0779	-.0129	-.0174	.0264	1300.
.3310	112.	3276.	-246.	1838.	243.	2702.	.0075	-.0105	-.0737	-.0146	-.0157	.0284	1315.
.3320	104.	3119.	-260.	1793.	214.	2647.	.0034	-.0127	-.0694	-.0161	-.0136	.0297	1286.
.3330	79.	2760.	-303.	1715.	190.	2454.	-.0017	-.0157	-.0650	-.0173	-.0109	.0305	1204.
.3340	38.	2279.	-309.	1582.	173.	2121.	-.0077	-.0194	-.0603	-.0182	-.0078	.0306	1064.
.3350	-12.	1760.	-295.	1386.	161.	1658.	-.0145	-.0236	-.0554	-.0187	-.0044	.0301	870.
.3360	-84.	1234.	-260.	1128.	152.	1087.	-.0219	-.0282	-.0505	-.0187	-.0006	.0289	632.
.3370	-155.	716.	-204.	821.	150.	437.	-.0298	-.0329	-.0454	-.0181	.0034	.0271	378.
.3380	-225.	236.	-131.	481.	147.	-260.	-.0379	-.0377	-.0405	-.0168	.0077	.0246	227.
.3390	-287.	-173.	-45.	125.	143.	-964.	-.0462	-.0423	-.0356	-.0151	.0123	.0216	394.
.3400	-335.	-570.	59.	-228.	137.	-1635.	-.0543	-.0464	-.0311	-.0128	.0174	.0181	665.
.3410	-363.	-765.	149.	-560.	129.	-2236.	-.0621	-.0501	-.0269	-.0101	.0231	.0141	926.
.3420	-367.	-1003.	245.	-847.	118.	-2738.	-.0694	-.0532	-.0233	-.0070	.0295	.0099	1151.
.3430	-348.	-1210.	332.	-1070.	103.	-3123.	-.0761	-.0555	-.0203	-.0038	.0363	.0056	1325.
.3440	-306.	-1332.	404.	-1208.	83.	-3388.	-.0820	-.0570	-.0179	-.0006	.0435	.0012	1444.
.3450	-245.	-1300.	456.	-1245.	58.	-3540.	-.0872	-.0577	-.0163	.0027	.0508	-.0030	1506.
.3460	-177.	-1115.	485.	-1171.	26.	-3593.	-.0917	-.0576	-.0155	.0058	.0581	-.0069	1516.
.3470	-94.	-851.	487.	-986.	-12.	-3566.	-.0954	-.0568	-.0153	.0087	.0649	-.0103	1485.
.3480	-15.	-584.	466.	-702.	-57.	-3481.	-.0985	-.0554	-.0158	.0112	.0713	-.0132	1425.
.3490	56.	-323.	425.	-344.	-105.	-3356.	-.1010	-.0535	-.0168	.0135	.0770	-.0154	1355.
.3500	116.	-46.	360.	59.	-154.	-3209.	-.1030	-.0512	-.0182	.0153	.0819	-.0167	1290.
.3510	160.	240.	302.	470.	-201.	-3052.	-.1045	-.0487	-.0198	.0167	.0858	-.0171	1242.
.3520	186.	503.	234.	873.	-244.	-2894.	-.1057	-.0460	-.0214	.0176	.0886	-.0165	1217.
.3530	197.	729.	170.	1224.	-282.	-2743.	-.1066	-.0432	-.0229	.0182	.0902	-.0150	1211.
.3540	182.	950.	114.	1503.	-313.	-2606.	-.1073	-.0405	-.0242	.0184	.0903	-.0126	1214.
.3550	153.	1134.	72.	1691.	-336.	-2488.	-.1078	-.0379	-.0252	.0181	.0889	-.0095	1215.
.3560	110.	1335.	45.	1778.	-349.	-2359.	-.1081	-.0355	-.0257	.0176	.0858	-.0057	1203.
.3570	57.	1479.	34.	1760.	-352.	-2308.	-.1084	-.0333	-.0257	.0167	.0813	-.0016	1173.
.3580	-3.	1418.	38.	1640.	-344.	-2241.	-.1086	-.0313	-.0253	.0155	.0756	.0028	1123.
.3590	-64.	1258.	55.	1431.	-322.	-2134.	-.1088	-.0295	-.0245	.0139	.0688	.0071	1056.
.3600	-127.	1094.	81.	1114.	-289.	-2134.	-.1089	-.0279	-.0233	.0121	.0613	.0113	980.
.3610	-174.	977.	110.	836.	-244.	-2086.	-.1090	-.0264	-.0219	.0099	.0531	.0150	907.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.28.13.

S/RV PIPING KENAWNEE GKW08F 2 RUP DISK  
2 SAFETY COLD FKW24F--2 PSVCONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

.3510	160.	240.	202.	476.	-201.	-3052.	-1045	-0487	-0198	.0167	.0358	-0171	1242.
.3520	186.	303.	234.	672.	-244.	-2894.	-1057	-0460	-0214	.0176	.0386	-0165	1217.
.3530	193.	729.	170.	1224.	-282.	-2743.	-1066	-0432	-0229	.0182	.0902	-0150	1211.
.3540	187.	989.	114.	1507.	-317.	-2606.	-1077	-0405	-0242	.0184	.0907	-0126	1214.
.3550	157.	1194.	73.	1691.	-336.	-2488.	-1078	-0379	-0252	.0181	.0889	-0095	1215.
.3560	110.	1389.	45.	1778.	-349.	-2359.	-1081	-0355	-0257	.0176	.0858	-0057	1203.
.3570	57.	1479.	34.	1760.	-352.	-2208.	-1084	-0333	-0257	.0167	.0813	-0016	1173.
.3580	-3.	1418.	28.	1640.	-344.	-2241.	-1086	-0313	-0253	.0155	.0756	.0028	1123.
.3590	-64.	1258.	55.	1431.	-322.	-2184.	-1088	-0295	-0245	.0139	.0688	.0071	1056.
.3600	-127.	1094.	81.	1154.	-289.	-2134.	-1089	-0279	-0233	.0121	.0613	.0113	980.
.3610	-174.	977.	110.	876.	-244.	-2086.	-1090	-0264	-0219	.0099	.0531	.0150	907.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.13.

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	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	RU									
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)		
.3620	-216.	873.	136.	508.	-190.	-2038.	-1091	-0249	-0205	.0075	.0445	.0181	846.		
.3630	-246.	734.	154.	190.	-132.	-1993.	-1092	-0235	-0190	.0048	.0355	.0206	805.		
.3640	-264.	577.	160.	-70.	-72.	-1956.	-1093	-0219	-0176	.0020	.0260	.0223	786.		
.3650	-270.	464.	150.	-275.	-15.	-1934.	-1094	-0202	-0165	-0009	.0163	.0231	784.		
.3660	-267.	430.	125.	-405.	37.	-1934.	-1096	-0183	-0156	-0039	.0066	.0231	793.		
.3670	-257.	435.	83.	-454.	79.	-1960.	-1097	-0162	-0151	-0067	-0028	.0223	808.		
.3680	-241.	435.	28.	-422.	110.	-2016.	-1099	-0139	-0149	-0092	-0118	.0207	828.		
.3690	-223.	463.	-50.	-316.	131.	-2104.	-1101	-0113	-0150	-0116	-0199	.0186	855.		
.3700	-205.	612.	-109.	-145.	141.	-2219.	-1102	-0085	-0153	-0134	-0269	.0161	894.		
.3710	-188.	912.	-180.	72.	142.	-2358.	-1101	-0056	-0158	-0146	-0326	.0133	948.		
.3720	-175.	1275.	-244.	315.	133.	-2513.	-1099	-0027	-0164	-0150	-0370	.0104	1018.		
.3730	-165.	1577.	-296.	556.	110.	-2674.	-1093	.0001	-0169	-0146	-0400	.0075	1097.		
.3740	-161.	1806.	-327.	768.	75.	-2830.	-1085	.0028	-0173	-0133	-0417	.0049	1177.		
.3750	-160.	2061.	-334.	927.	27.	-2968.	-1072	.0051	-0175	-0113	-0425	.0026	1248.		
.3760	-163.	2375.	-314.	1017.	-34.	-3078.	-1064	.0069	-0174	-0084	-0424	.0007	1301.		
.3770	-168.	2657.	-267.	1030.	-106.	-3146.	-1031	.0081	-0170	-0049	-0419	-0007	1329.		
.3780	-174.	2769.	-194.	968.	-189.	-3164.	-1002	.0087	-0163	-0009	-0410	-0015	1330.		
.3790	-180.	2677.	-101.	842.	-280.	-3128.	-0967	.0085	-0152	.0036	-0399	-0019	1305.		
.3800	-185.	2451.	8.	674.	-376.	-3038.	-0926	.0076	-0140	.0084	-0382	-0017	1258.		
.3810	-182.	2190.	120.	486.	-470.	-2898.	-0879	.0060	-0126	.0133	-0363	-0012	1194.		
.3820	-182.	1893.	231.	310.	-568.	-2716.	-0827	.0037	-0111	.0180	-0336	-0005	1120.		
.3830	-186.	1530.	334.	148.	-656.	-2502.	-0770	.0010	-0096	.0226	-0300	.0004	1040.		
.3840	-180.	1164.	421.	37.	-733.	-2264.	-0709	-0022	-0082	.0267	-0257	.0013	955.		
.3850	-171.	901.	488.	-20.	-796.	-2013.	-0644	-0057	-0069	.0302	-0206	.0021	869.		
.3860	-157.	724.	530.	-10.	-843.	-1755.	-0577	-0094	-0057	.0331	-0148	.0026	781.		
.3870	-137.	489.	550.	41.	-977.	-1494.	-0508	-0132	-0047	.0351	-0081	.0027	695.		
.3880	-111.	-193.	550.	147.	-899.	-1234.	-0437	-0170	-0038	.0364	-0006	.0024	615.		
.3890	-78.	-1043.	527.	283.	-911.	-974.	-0365	-0204	-0030	.0367	.0076	.0016	547.		
.3900	-34.	-1804.	487.	434.	-910.	-714.	-0293	-0234	-0022	.0363	.0163	.0003	497.		
.3910	13.	-2246.	405.	580.	-903.	-454.	-0221	-0257	-0014	.0350	.0254	-0014	468.		
.3920	70.	-2474.	270.	700.	-887.	-193.	-0150	-0272	-0004	.0330	.0344	-0035	460.		
.3930	131.	-2557.	710.	760.	-855.	64.	-0090	-0279	.0007	.0303	.0433	-0060	468.		
.3940	195.	-2636.	651.	820.	-830.	310.	-0011	-0275	.0021	.0270	.0518	-0086	485.		
.3950	256.	-2644.	192.	794.	-801.	533.	.0056	-0262	.0037	.0232	.0597	-0114	501.		
.3960	318.	-2487.	130.	710.	-774.	722.	.0120	-0241	.0055	.0190	.0670	-0142	512.		
.3970	359.	-2300.	89.	576.	-750.	873.	.0181	-0211	.0076	.0145	.0735	-0169	516.		
.3980	484.	-2162.	44.	400.	-731.	954.	.0240	-0177	.0098	.0098	.0790	-0193	518.		
.3990	416.	-1973.	0.	200.	-710.	1009.	.0296	-0129	.0122	.0049	.0832	-0214	519.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.13.

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

CONDITION 24  
 LOADS  
 SHOCK  
 PRESSURE  
 ENGLISH UNITS

.3890	-78.	-1043.	527.	223.	-911.	-974.	-365.	-.0204	-.0030	.0368	.0076	.0016	547.
.3900	-36.	-1394.	487.	434.	-913.	-714.	-.0293	-.0234	-.0022	.0363	.0163	.0003	497.
.3910	13.	-2246.	435.	580.	-903.	-454.	-.0221	-.0257	-.0014	.0350	.0254	-.0014	468.
.3920	70.	-2474.	275.	705.	-887.	-193.	-.0150	-.0273	-.0004	.0330	.0344	-.0035	460.
.3930	131.	-2557.	712.	719.	-858.	64.	-.0080	-.0279	.0007	.0303	.0433	-.0060	458.
.3940	195.	-2652.	151.	810.	-830.	310.	-.0011	-.0275	.0021	.0270	.0518	-.0086	485.
.3950	256.	-2644.	192.	794.	-801.	533.	.0056	-.0262	.0037	.0232	.0597	-.0114	501.
.3960	312.	-2487.	138.	710.	-774.	722.	.0120	-.0241	.0055	.0190	.0670	-.0142	512.
.3970	359.	-2300.	89.	576.	-750.	873.	.0181	-.0211	.0076	.0145	.0735	-.0169	516.
.3980	394.	-2163.	44.	403.	-731.	984.	.0240	-.0173	.0098	.0098	.0790	-.0193	518.
.3990	416.	-1973.	0.	205.	-715.	1059.	.0296	-.0129	.0122	.0049	.0832	-.0214	519.

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.28.13.

S/RV PIPING KEWAUNEE GKW02F 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	35	MEMBER	1	SEQUENCE	817	LOCATION	BEG	TYPE	RU	DZ	PX	RY	RZ	STRESS
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)	
.4000	425.	-1559.	-43.	-0.	-700.	1103.	.0350	-.0079	.0146	-.0000	.0861	-.0229	524.	

MAXIMUM VALUE OF STRESS OCCURS AT

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)
.1890	944.	-2816.	818.	-7375.	-78.	6643.	-.0965	.0367	-.2078	-.0108	-.0535	-.0030	3983.

SECTION	35	MEMBER	1	SEQUENCE	850	LOCATION	END	TYPE	RU	DZ	PX	RY	RZ	STRESS
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)	
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.	2.	-0.	-0.	0.	0.	-.0000	.0000	.0000	.0000	-.0000	-.0000	0.	
.0030	-0.	5.	-0.	-0.	1.	0.	.0000	.0000	.0000	.0000	-.0000	-.0000	0.	
.0040	-0.	9.	-0.	-0.	1.	1.	.0000	-.0000	.0000	.0000	-.0001	-.0000	0.	
.0050	-1.	17.	-0.	-0.	1.	1.	.0000	-.0000	.0000	.0000	-.0001	-.0000	1.	
.0060	-1.	38.	-0.	0.	1.	1.	.0000	-.0000	.0000	.0000	-.0001	-.0000	1.	
.0070	-0.	72.	0.	1.	2.	-1.	.0000	-.0000	.0000	-.0000	-.0002	-.0000	1.	
.0080	1.	115.	1.	3.	5.	-4.	.0000	-.0001	.0000	-.0000	-.0004	.0000	3.	
.0090	3.	154.	3.	5.	6.	-9.	.0000	-.0001	-.0000	-.0000	-.0005	.0000	5.	
.0100	5.	184.	5.	8.	2.	-12.	-.0000	-.0002	-.0000	-.0001	-.0002	.0001	6.	
.0110	8.	213.	7.	9.	-12.	-15.	-.0000	-.0003	-.0000	-.0001	.0009	.0001	8.	
.0120	13.	257.	8.	4.	-36.	-20.	-.0001	-.0004	-.0001	-.0001	.0029	.0002	17.	
.0130	21.	320.	7.	-9.	-72.	-27.	-.0001	-.0006	-.0001	-.0001	.0060	.0002	31.	
.0140	32.	382.	2.	-31.	-117.	-31.	-.0002	-.0009	-.0002	-.0001	.0099	.0003	50.	
.0150	40.	416.	-4.	-58.	-167.	-20.	-.0004	-.0011	-.0003	-.0001	.0144	.0004	72.	
.0160	40.	413.	-5.	-53.	-216.	20.	-.0005	-.0014	-.0004	-.0001	.0188	.0004	93.	
.0170	27.	373.	-6.	-97.	-257.	100.	-.0008	-.0017	-.0006	-.0001	.0225	.0003	117.	
.0180	-2.	285.	0.	-100.	-285.	232.	-.0011	-.0019	-.0007	-.0002	.0251	.0000	150.	
.0190	-45.	124.	14.	-102.	-304.	374.	-.0014	-.0021	-.0009	-.0004	.0270	-.0004	198.	
.0200	-98.	-100.	22.	-118.	-319.	537.	-.0015	-.0021	-.0011	-.0005	.0286	-.0010	255.	
.0210	-155.	-352.	21.	-164.	-342.	684.	-.0014	-.0020	-.0014	-.0005	.0310	-.0018	314.	
.0220	-210.	-544.	5.	-245.	-407.	776.	-.0011	-.0016	-.0017	-.0004	.0367	-.0025	368.	
.0230	-246.	-523.	-26.	-360.	-480.	795.	-.0004	-.0011	-.0019	-.0001	.0441	-.0032	400.	

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.28.13.

S/RV PIPING KEWAUNEE GKW02F 2 RUP DISK  
2 SAFETY COLD FKM24F--2 PSV

CONDITION 24  
LOADS

.0130	21.	320.	7.	-9.	-72.	-27.	-0.001	-0.006	-0.001	-0.001	.0060	.0002	31.
.0140	32.	332.	2.	-31.	-117.	-31.	-0.002	-0.009	-0.002	-0.001	.0099	.0003	50.
.0150	40.	416.	-4.	-52.	-167.	-20.	-0.004	-0.011	-0.003	-0.001	.0144	.0004	72.
.0160	40.	413.	-7.	-83.	-216.	20.	-0.006	-0.014	-0.004	-0.001	.0188	.0004	93.
.0170	27.	373.	-6.	-97.	-257.	100.	-0.008	-0.017	-0.006	-0.001	.0225	.0003	117.
.0180	-2.	285.	2.	-100.	-285.	222.	-0.011	-0.019	-0.007	-0.002	.0251	.0000	150.
.0190	-45.	124.	14.	-102.	-304.	374.	-0.014	-0.021	-0.009	-0.004	.0270	-0.004	198.
.0200	-92.	-100.	22.	-118.	-319.	537.	-0.015	-0.021	-0.011	-0.005	.0286	-0.010	255.
.0210	-155.	-352.	21.	-164.	-342.	684.	-0.014	-0.020	-0.014	-0.005	.0310	-0.018	314.
.0220	-210.	-544.	5.	-245.	-403.	736.	-0.011	-0.016	-0.017	-0.004	.0367	-0.025	368.
.0230	-246.	-523.	-26.	-300.	-480.	795.	-0.004	-0.011	-0.019	-0.001	.0441	-0.032	400.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

23/12/02 . 18.28.13.

S/RV PIPING KEWAUNEE GKW00F 2 RUP DISK  
2 SAFETY COLD FKW24F--2 PSVCONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITSINTERNAL FORCES IN THE PIPING  
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	35	MEMBER	1	SEQUENCE	850	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ									
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0240	-244.	-189.	-69.	-427.	-525.	684.	.0007	-0.005	-0.021	.0003	.0492	-0.0036	392.		
.0250	-198.	351.	-102.	-574.	-503.	387.	.0022	.0001	-0.021	.0007	.0489	-0.0036	343.		
.0260	-128.	708.	-101.	-558.	-443.	15.	.0038	.0005	-0.019	.0009	.0450	-0.0035	286.		
.0270	-51.	421.	-62.	-439.	-416.	-394.	.0055	.0008	-0.014	.0008	.0430	-0.0031	289.		
.0280	43.	-553.	-22.	-297.	-374.	-839.	.0071	.0013	-0.008	.0007	.0393	-0.0025	388.		
.0290	156.	-1632.	-7.	-195.	-243.	-1298.	.0084	.0021	-0.000	.0009	.0279	-0.0016	536.		
.0300	242.	-2141.	4.	-100.	-128.	-1649.	.0092	.0030	.0008	.0012	.0176	-0.0007	665.		
.0310	288.	-2078.	5.	-23.	-69.	-1846.	.0093	.0038	.0016	.0015	.0118	.0001	741.		
.0320	322.	-1822.	-27.	-8.	6.	-1936.	.0087	.0042	.0026	.0022	.0052	.0011	777.		
.0330	355.	-1642.	-87.	-28.	92.	-1934.	.0073	.0060	.0036	.0032	-0.0019	.0023	777.		
.0340	371.	-1525.	-130.	19.	147.	-1810.	.0053	.0076	.0049	.0041	-0.0062	.0035	729.		
.0350	363.	-1367.	-124.	219.	217.	-1551.	.0026	.0090	.0065	.0046	-0.0122	.0048	635.		
.0360	326.	-1208.	-53.	596.	340.	-1159.	-0.006	.0100	.0083	.0045	-0.0236	.0058	541.		
.0370	252.	-1267.	73.	1112.	440.	-634.	-0.041	.0109	.0103	.0039	-0.0344	.0066	543.		
.0380	149.	-1760.	214.	1655.	461.	-18.	-0.076	.0116	.0121	.0031	-0.0395	.0071	689.		
.0390	41.	-2499.	321.	2086.	430.	604.	-0.110	.0122	.0137	.0025	-0.0438	.0073	893.		
.0400	-77.	-2697.	376.	2343.	558.	1205.	-0.138	.0127	.0147	.0021	-0.0518	.0072	1081.		
.0410	-224.	-1827.	401.	2453.	590.	1783.	-0.158	.0129	.0151	.0019	-0.0553	.0064	1240.		
.0420	-362.	-392.	388.	2402.	575.	2221.	-0.167	.0125	.0149	.0019	-0.0551	.0053	1333.		
.0430	-420.	346.	334.	2186.	586.	2342.	-0.164	.0115	.0142	.0021	-0.0576	.0044	1307.		
.0440	-387.	228.	248.	1845.	610.	2114.	-0.147	.0104	.0130	.0024	-0.0517	.0039	1152.		
.0450	-295.	72.	164.	1470.	579.	1617.	-0.118	.0094	.0115	.0027	-0.0515	.0034	907.		
.0460	-169.	431.	101.	1117.	526.	934.	-0.080	.0078	.0098	.0027	-0.0591	.0030	621.		
.0470	-21.	1101.	49.	777.	527.	142.	-0.036	.0052	.0080	.0027	-0.0503	.0025	381.		
.0480	118.	1667.	1.	449.	531.	-645.	.0009	.0025	.0062	.0025	-0.0511	.0019	381.		
.0490	227.	1881.	-37.	152.	440.	-1370.	.0052	.0001	.0044	.0023	-0.0535	.0011	565.		
.0500	308.	1715.	-70.	-129.	281.	-1880.	.0088	-0.020	.0026	.0021	-0.0398	.0002	765.		
.0510	367.	1398.	-109.	-406.	123.	-2277.	.0114	-0.041	.0008	.0019	-0.0255	-0.0005	930.		
.0520	393.	1478.	-150.	-667.	-25.	-2470.	.0130	-0.058	-0.003	.0018	-0.0117	-0.0012	1027.		
.0530	370.	2173.	-185.	-892.	-171.	-2417.	.0133	-0.070	-0.023	.0017	.0023	-0.0019	1036.		
.0540	297.	2928.	-217.	-1077.	-296.	-2114.	.0124	-0.080	-0.036	.0016	.0152	-0.0026	960.		
.0550	162.	3156.	-244.	-1215.	-395.	-1601.	.0104	-0.087	-0.047	.0016	.0264	-0.0033	822.		
.0560	42.	2991.	-260.	-1286.	-480.	-937.	.0075	-0.089	-0.056	.0015	.0370	-0.0038	667.		
.0570	-106.	2696.	-251.	-1265.	-564.	-200.	.0040	-0.086	-0.063	.0012	.0476	-0.0041	562.		
.0580	-245.	2015.	-217.	-1159.	-647.	530.	.0003	-0.083	-0.063	.0007	.0577	-0.0041	573.		
.0590	-364.	785.	-171.	-1008.	-723.	1186.	-0.034	-0.077	-0.071	.0000	.0569	-0.0039	689.		
.0600	-459.	-499.	-129.	-350.	-795.	1731.	-0.066	-0.061	-0.075	-0.0007	.0752	-0.0035	837.		
.0610	-531.	-1313.	-94.	-704.	-852.	2125.	-0.092	-0.035	-0.071	-0.0013	.0821	-0.0030	961.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

23/12/02 . 18.28.13.

S/RV PIPING KEWAUNEE GKW00F 2 RUP DISK  
2 SAFETY COLD FKW24F--2 PSVCONDITION 24  
LOADS

.0510	267.	1298.	-109.	-406.	123.	-2277.	.0114	-.0041	.0000	.0019	-.0255	-.0005	930.
.0520	393.	1470.	-150.	-667.	-25.	-2470.	.0130	-.0058	-.0003	.0018	-.0117	-.0012	1027.
.0530	370.	2172.	-180.	-892.	-171.	-2417.	.0133	-.0070	-.0023	.0017	.0023	-.0019	1036.
.0540	297.	2328.	-217.	-1077.	-206.	-2114.	.0124	-.0080	-.0039	.0016	.0152	-.0024	960.
.0550	182.	3106.	-244.	-1210.	-795.	-1651.	.0104	-.0087	-.0047	.0016	.0264	-.0033	822.
.0560	42.	2291.	-260.	-1286.	-480.	-937.	.0075	-.0089	-.0056	.0015	.0370	-.0038	667.
.0570	-196.	2696.	-251.	-1265.	-564.	-230.	.0040	-.0086	-.0063	.0012	.0476	-.0041	562.
.0580	-245.	2015.	-217.	-1159.	-647.	530.	.0003	-.0083	-.0063	.0007	.0577	-.0041	573.
.0590	-364.	785.	-171.	-1008.	-723.	1188.	-.0034	-.0077	-.0071	.0000	.0569	-.0039	689.
.0600	-459.	-499.	-129.	-350.	-795.	1731.	-.0066	-.0061	-.0075	-.0007	.0752	-.0035	837.
.0610	-531.	-1313.	-94.	-704.	-052.	2125.	-.0092	-.0035	-.0071	-.0013	.0821	-.0030	961.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.13.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	75	MEMBER	1	SEQUENCE	850	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)		
.0620	-567.	-1716.	-66.	-576.	-873.	2316.	-.0109	-.0007	-.0082	-.0019	.0861	-.0023	1020.		
.0630	-544.	-1848.	-55.	-472.	-840.	2238.	-.0117	.0020	-.0085	-.0025	.0859	-.0013	978.		
.0640	-444.	-1630.	-55.	-383.	-752.	1855.	-.0113	.0053	-.0087	-.0030	.0820	.0001	819.		
.0650	-271.	-1297.	-59.	-281.	-673.	1196.	-.0101	.0090	-.0087	-.0034	.0763	.0020	562.		
.0660	-48.	-1393.	-54.	-124.	-596.	347.	-.0083	.0125	-.0084	-.0038	.0701	.0042	281.		
.0670	191.	-1902.	-21.	131.	-534.	-563.	-.0061	.0153	-.0073	-.0045	.0533	.0065	316.		
.0680	405.	-2251.	51.	504.	-492.	-1392.	-.0041	.0173	-.0068	-.0055	.0569	.0086	626.		
.0690	566.	-2201.	147.	957.	-474.	-2035.	-.0024	.0188	-.0055	-.0066	.0524	.0103	922.		
.0700	668.	-1957.	237.	1402.	-461.	-2444.	-.0015	.0193	-.0041	-.0077	.0488	.0116	1146.		
.0710	709.	-1532.	299.	1775.	-443.	-2592.	-.0014	.0188	-.0027	-.0086	.0450	.0125	1273.		
.0720	680.	-818.	332.	2063.	-438.	-2456.	-.0021	.0177	-.0014	-.0092	.0418	.0130	1299.		
.0730	586.	-57.	337.	2262.	-435.	-2065.	-.0035	.0157	-.0003	-.0098	.0374	.0129	1241.		
.0740	451.	462.	320.	2374.	-377.	-1494.	-.0054	.0126	.0005	-.0101	.0277	.0125	1136.		
.0750	289.	902.	290.	2433.	-247.	-815.	-.0076	.0088	.0010	-.0105	.0121	.0118	1035.		
.0760	105.	1479.	275.	2495.	-87.	-84.	-.0098	.0047	.0012	-.0112	-.0052	.0108	1003.		
.0770	-84.	1965.	285.	2580.	69.	618.	-.0115	.0005	.0010	-.0122	-.0210	.0095	1065.		
.0780	-247.	2087.	314.	2663.	207.	1185.	-.0126	-.0040	.0002	-.0136	-.0341	.0081	1173.		
.0790	-362.	2028.	349.	2704.	300.	1531.	-.0129	-.0083	-.0012	-.0152	-.0422	.0069	1253.		
.0800	-412.	2093.	377.	2656.	323.	1606.	-.0122	-.0119	-.0035	-.0171	-.0436	.0059	1252.		
.0810	-391.	2274.	380.	2475.	308.	1387.	-.0105	-.0145	-.0066	-.0191	-.0403	.0052	1145.		
.0820	-302.	2438.	360.	2158.	293.	933.	-.0081	-.0164	-.0107	-.0211	-.0356	.0049	946.		
.0830	-168.	2601.	328.	1737.	285.	235.	-.0051	-.0176	-.0156	-.0232	-.0301	.0048	713.		
.0840	-6.	2749.	292.	1243.	297.	-537.	-.0021	-.0177	-.0212	-.0255	-.0254	.0050	556.		
.0850	176.	2697.	250.	691.	361.	-1340.	.0007	-.0169	-.0272	-.0279	-.0247	.0055	622.		
.0860	357.	2303.	207.	110.	469.	-2072.	.0029	-.0155	-.0336	-.0302	-.0279	.0062	854.		
.0870	505.	1625.	169.	-463.	569.	-2614.	.0039	-.0134	-.0400	-.0325	-.0312	.0070	1089.		
.0880	594.	764.	135.	-1012.	635.	-2871.	.0036	-.0108	-.0461	-.0347	-.0324	.0077	1248.		
.0890	614.	-205.	97.	-1528.	674.	-2798.	.0019	-.0078	-.0518	-.0366	-.0319	.0083	1308.		
.0900	562.	-1113.	58.	-1983.	687.	-2391.	-.0013	-.0045	-.0568	-.0381	-.0294	.0088	1277.		
.0910	447.	-1739.	30.	-2333.	667.	-1691.	-.0057	-.0009	-.0609	-.0393	-.0248	.0091	1187.		
.0920	296.	-2052.	25.	-2532.	628.	-794.	-.0109	.0028	-.0638	-.0402	-.0197	.0093	1094.		
.0930	140.	-2217.	54.	-2545.	583.	183.	-.0166	.0066	-.0655	-.0409	-.0159	.0097	1051.		
.0940	0.	-2320.	123.	-2359.	529.	1139.	-.0222	.0104	-.0658	-.0414	-.0133	.0103	1072.		
.0950	-117.	-2187.	227.	-1990.	460.	2011.	-.0273	.0144	-.0647	-.0416	-.0109	.0108	1150.		
.0960	-218.	-1644.	355.	-1485.	378.	2763.	-.0314	.0187	-.0625	-.0414	-.0086	.0111	1268.		
.0970	-307.	-719.	485.	-908.	286.	3367.	-.0342	.0231	-.0592	-.0407	-.0060	.0110	1404.		
.0980	-385.	407.	600.	-332.	178.	3783.	-.0354	.0276	-.0550	-.0393	-.0024	.0105	1526.		
.0990	-437.	1506.	681.	184.	49.	3956.	-.0346	.0322	-.0500	-.0372	.0024	.0094	1589.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.13.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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



.0890	614.	-205.	97.	-1528.	674.	-2798.	1019.	-0078.	-0510.	-0366.	-0319.	.0083.	1308.
.0900	562.	-1113.	58.	-1993.	637.	-2391.	1013.	-0045.	-0568.	-0381.	-0294.	.0088.	1277.
.0910	447.	-1739.	30.	-2373.	667.	-1691.	10057.	-0009.	-0609.	-0393.	-0248.	.0091.	1187.
.0920	296.	-2052.	25.	-2570.	620.	-794.	10109.	0027.	-0638.	-0402.	-0197.	.0093.	1094.
.0930	140.	-2217.	54.	-2545.	582.	133.	10166.	0066.	-0653.	-0409.	-0159.	.0097.	1051.
.0940	0.	-2320.	123.	-2309.	529.	1179.	10222.	0104.	-0658.	-0414.	-0133.	.0103.	1072.
.0950	-117.	-2187.	227.	-1990.	460.	2011.	10273.	0144.	-0647.	-0416.	-0109.	.0108.	1150.
.0960	-218.	-1644.	355.	-1485.	378.	2763.	10314.	0187.	-0625.	-0414.	-0086.	.0111.	1268.
.0970	-307.	-719.	485.	-700.	286.	3367.	10342.	0231.	-0592.	-0407.	-0060.	.0110.	1404.
.0980	-785.	407.	600.	-332.	178.	3703.	10354.	0276.	-0550.	-0393.	-0024.	.0105.	1526.
.0990	-437.	1506.	631.	184.	49.	3956.	10346.	0327.	-0500.	-0372.	0024.	.0094.	1589.

ADLPIPE PAGE 1464

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.28.13.

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

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

SECTION	35	MEMBER	1	SEQUENCE	850	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)		
.1000	-447.	2241.	722.	610.	-89.	3830.	-0318.	0371.	-0445.	-0342.	0076.	0079.	1557.		
.1010	-401.	2238.	729.	947.	-219.	3370.	-0268.	0419.	-0384.	-0304.	0115.	0061.	1407.		
.1020	-298.	1458.	711.	1209.	-320.	2580.	-0198.	0462.	-0310.	-0260.	0118.	0040.	1151.		
.1030	-150.	353.	674.	1416.	-373.	1518.	-0110.	0497.	-0247.	-0211.	0072.	0016.	846.		
.1040	20.	-611.	621.	1576.	-377.	274.	-0008.	0522.	-0170.	-0155.	-0022.	-0011.	659.		
.1050	189.	-1202.	544.	1680.	-349.	-1050.	0104.	0535.	-0088.	-0094.	-0143.	-0043.	807.		
.1060	340.	-1346.	434.	1716.	-314.	-2365.	0219.	0533.	-0001.	-0027.	-0260.	-0078.	1179.		
.1070	465.	-896.	290.	1695.	-298.	-3598.	0334.	0516.	0092.	0047.	-0349.	-0116.	1601.		
.1080	561.	-111.	122.	1656.	-303.	-4696.	0443.	0489.	0189.	0126.	-0407.	-0156.	2002.		
.1090	628.	-13.	-42.	1669.	-335.	-5613.	0541.	0450.	0291.	0206.	-0434.	-0194.	2354.		
.1100	664.	-141.	-173.	1300.	-454.	-6313.	0625.	0392.	0396.	0284.	-0384.	-0230.	2641.		
.1110	682.	394.	-259.	2072.	-571.	-6790.	0691.	0328.	0502.	0357.	-0327.	-0262.	2858.		
.1120	678.	2199.	-289.	2494.	-625.	-7012.	0736.	0276.	0607.	0423.	-0306.	-0288.	2997.		
.1130	635.	4601.	-248.	3059.	-658.	-6930.	0758.	0227.	0706.	0479.	-0279.	-0309.	3051.		
.1140	548.	6286.	-156.	3675.	-689.	-6535.	0758.	0171.	0794.	0525.	-0225.	-0325.	3021.		
.1150	424.	6803.	-63.	4182.	-699.	-5854.	0735.	0122.	0868.	0563.	-0164.	-0337.	2901.		
.1160	265.	6521.	-19.	4436.	-709.	-4917.	0693.	0098.	0922.	0597.	-0088.	-0343.	2673.		
.1170	79.	5519.	-43.	4366.	-739.	-3780.	0633.	0093.	0955.	0628.	0011.	-0346.	2336.		
.1180	-120.	4183.	-128.	3978.	-783.	-2529.	0560.	0092.	0967.	0654.	0124.	-0344.	1918.		
.1190	-299.	3231.	-264.	3321.	-715.	-1284.	0480.	0100.	0958.	0676.	0154.	-0337.	1457.		
.1200	-445.	3086.	-415.	2520.	-526.	-119.	0396.	0133.	0934.	0691.	0102.	-0324.	1034.		
.1210	-558.	2969.	-529.	1728.	-315.	910.	0314.	0183.	0897.	0697.	0050.	-0307.	794.		
.1220	-602.	1687.	-595.	1015.	-76.	1694.	0237.	0234.	0854.	0694.	-0014.	-0284.	793.		
.1230	-571.	-641.	-620.	410.	158.	2197.	0168.	0288.	0809.	0683.	-0081.	-0257.	899.		
.1240	-483.	-2904.	-613.	-74.	355.	2457.	0108.	0358.	0765.	0668.	-0141.	-0227.	997.		
.1250	-371.	-4546.	-579.	-420.	470.	2557.	0059.	0433.	0726.	0650.	-0163.	-0198.	1057.		
.1260	-266.	-5726.	-521.	-618.	499.	2576.	0021.	0493.	0695.	0631.	-0133.	-0173.	1082.		
.1270	-174.	-6351.	-455.	-684.	543.	2547.	-0008.	0540.	0675.	0614.	-0117.	-0152.	1080.		
.1280	-114.	-6056.	-372.	-586.	578.	2524.	-0026.	0584.	0667.	0600.	-0090.	-0139.	1065.		
.1290	-81.	-5264.	-262.	-307.	591.	2506.	-0035.	0618.	0673.	0588.	-0051.	-0131.	1041.		
.1300	-53.	-4795.	-133.	114.	613.	2450.	-0034.	0625.	0692.	0580.	-0044.	-0129.	1014.		
.1310	-26.	-4607.	-8.	608.	642.	2356.	-0024.	0607.	0722.	0576.	-0088.	-0131.	1010.		
.1320	-11.	-4127.	38.	1090.	699.	2261.	-0004.	0577.	0762.	0580.	-0202.	-0139.	1046.		
.1330	-43.	-3397.	145.	1507.	722.	2242.	0024.	0532.	0808.	0591.	-0317.	-0154.	1122.		
.1340	-135.	-2871.	155.	1310.	705.	2321.	0060.	0461.	0857.	0608.	-0400.	-0178.	1214.		
.1350	-280.	-2184.	113.	1966.	671.	2467.	0104.	0372.	0907.	0632.	-0447.	-0211.	1294.		
.1360	-454.	-591.	26.	1983.	607.	2612.	0156.	0283.	0954.	0660.	-0446.	-0250.	1338.		
.1370	-617.	1541.	-91.	1374.	545.	2627.	0219.	0193.	0998.	0692.	-0437.	-0292.	1313.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.28.13.

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

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

.1270	-174.	-6351.	-432.	-684.	543.	2547.	-0008	.0540	.0675	.0614	-.0117	-.0152	1080.
.1280	-114.	-6050.	-372.	-586.	578.	2524.	-0026	.0584	.0667	.0600	-.0090	-.0139	1065.
.1290	-81.	-5264.	-262.	-307.	591.	2506.	-0035	.0618	.0673	.0588	-.0051	-.0131	1041.
.1300	-57.	-4705.	-133.	114.	617.	2450.	-0034	.0625	.0692	.0580	-.0044	-.0129	1014.
.1310	-26.	-4637.	8.	608.	642.	2356.	-0024	.0607	.0722	.0576	-.0088	-.0131	1010.
.1320	-11.	-4127.	33.	1090.	699.	2261.	-0004	.0577	.0762	.0580	-.0202	-.0139	1046.
.1330	-47.	-3397.	145.	1507.	722.	2242.	.0024	.0532	.0808	.0591	-.0317	-.0154	1122.
.1340	-135.	-2371.	155.	1810.	705.	2321.	.0060	.0461	.0857	.0608	-.0400	-.0178	1214.
.1350	-260.	-2184.	113.	1966.	671.	2467.	.0104	.0372	.0907	.0632	-.0447	-.0211	1294.
.1360	-454.	-591.	21.	1923.	607.	2612.	.0156	.0283	.0954	.0660	-.0446	-.0250	1338.
.1370	-617.	1541.	-91.	1874.	541.	2827.	.0219	.0193	.0998	.0692	-.0437	-.0292	1313.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.13.

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

CONDITION 24  
LOADS  
SHOCK  
PRESSURE  
ENGLISH UNITS

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

SECTION	35	MEMBER	1	SEQUENCE	850	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)		
.1380	-731.	3175.	-226.	1677.	474.	2417.	.0292	.0097	.1038	.0723	-.0432	-.0333	1196.		
.1390	-780.	4074.	-364.	1426.	430.	1937.	.0374	.0002	.1071	.0753	-.0462	-.0370	981.		
.1400	-772.	4797.	-491.	1160.	428.	1206.	.0463	-.0076	.1097	.0780	-.0525	-.0404	693.		
.1410	-720.	5513.	-598.	904.	443.	268.	.0557	-.0135	.1116	.0802	-.0577	-.0433	418.		
.1420	-610.	5958.	-695.	641.	520.	-871.	.0650	-.0183	.1127	.0821	-.0536	-.0456	482.		
.1430	-447.	6365.	-787.	369.	630.	-2158.	.0740	-.0216	.1129	.0835	-.0583	-.0470	914.		
.1440	-242.	7016.	-868.	104.	725.	-3512.	.0820	-.0223	.1124	.0844	-.0596	-.0475	1440.		
.1450	-8.	7425.	-932.	-124.	755.	-4839.	.0885	-.0207	.1110	.0847	-.0553	-.0470	1966.		
.1460	237.	6981.	-968.	-289.	711.	-6042.	.0929	-.0178	.1091	.0844	-.0554	-.0455	2444.		
.1470	481.	5933.	-978.	-376.	685.	-7034.	.0950	-.0134	.1066	.0835	-.0464	-.0429	2840.		
.1480	688.	4904.	-950.	-345.	676.	-7687.	.0942	-.0070	.1037	.0818	-.0377	-.0396	3100.		
.1490	836.	3760.	-879.	-183.	693.	-7918.	.0904	.0006	.1006	.0795	-.0298	-.0356	3190.		
.1500	918.	2068.	-777.	91.	737.	-7694.	.0835	.0086	.0974	.0766	-.0240	-.0312	3102.		
.1510	923.	122.	-653.	452.	761.	-6998.	.0739	.0167	.0940	.0732	-.0180	-.0264	2831.		
.1520	853.	-1476.	-519.	870.	759.	-5863.	.0618	.0254	.0907	.0696	-.0122	-.0215	2398.		
.1530	706.	-2634.	-379.	1330.	699.	-4342.	.0479	.0342	.0873	.0657	-.0037	-.0167	1844.		
.1540	494.	-3598.	-233.	1819.	611.	-2531.	.0329	.0418	.0840	.0616	-.0059	-.0122	1275.		
.1550	225.	-4272.	-79.	2335.	502.	-541.	.0176	.0481	.0807	.0573	.0167	-.0084	983.		
.1560	-83.	-4534.	84.	2864.	345.	1489.	.0031	.0533	.0775	.0528	.0309	-.0053	1303.		
.1570	-379.	-4754.	236.	3347.	190.	3346.	-.0099	.0568	.0742	.0483	.0434	-.0028	1901.		
.1580	-620.	-5140.	363.	3733.	29.	4842.	-.0203	.0580	.0708	.0439	.0541	-.0008	2453.		
.1590	-779.	-5284.	454.	3980.	-143.	5844.	-.0277	.0570	.0672	.0397	.0632	.0007	2838.		
.1600	-837.	-4721.	492.	4045.	-281.	6272.	-.0316	.0543	.0634	.0359	.0577	.0017	2997.		
.1610	-804.	-3696.	473.	3919.	-377.	6136.	-.0319	.0498	.0592	.0325	.0582	.0021	2926.		
.1620	-708.	-2678.	408.	3627.	-468.	5515.	-.0290	.0433	.0547	.0295	.0585	.0019	2656.		
.1630	-561.	-1725.	300.	3191.	-517.	4489.	-.0231	.0352	.0499	.0268	.0563	.0009	2220.		
.1640	-382.	-629.	163.	2662.	-534.	3166.	-.0151	.0263	.0449	.0243	.0523	-.0007	1674.		
.1650	-188.	603.	21.	2108.	-546.	1660.	-.0055	.0172	.0397	.0218	.0581	-.0028	1099.		
.1660	15.	1848.	-111.	1588.	-533.	72.	.0047	.0080	.0344	.0191	.0520	-.0051	673.		
.1670	207.	3120.	-209.	1165.	-522.	-1462.	.0148	-.0006	.0290	.0160	.0466	-.0075	779.		
.1680	366.	4310.	-261.	876.	-499.	-2811.	.0239	-.0081	.0235	.0124	.0414	-.0099	1199.		
.1690	470.	5171.	-262.	735.	-475.	-3856.	.0312	-.0138	.0176	.0083	.0378	-.0121	1587.		
.1700	507.	5611.	-216.	720.	-440.	-4520.	.0364	-.0180	.0118	.0035	.0353	-.0142	1845.		
.1710	478.	5809.	-138.	706.	-379.	-4775.	.0390	-.0204	.0055	-.0017	.0321	-.0158	1942.		
.1720	376.	5952.	-35.	899.	-353.	-4605.	.0390	-.0207	-.0014	-.0074	.0321	-.0170	1888.		
.1730	225.	5905.	72.	999.	-339.	-4084.	.0365	-.0187	-.0089	-.0133	.0327	-.0176	1693.		
.1740	49.	5471.	173.	1051.	-340.	-3302.	.0318	-.0149	-.0170	-.0194	.0336	-.0174	1397.		
.1750	-132.	4653.	262.	1046.	-354.	-2359.	.0254	-.0097	-.0257	-.0255	.0352	-.0164	1045.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.28.35.

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

.1650	-188.	603.	21.	2108.	-548.	1640.	-0055	.0172	.0397	.0218	.0581	-0028	1674.
.1660	15.	1848.	-111.	1588.	-533.	72.	.0047	.0080	.0344	.0191	.0520	-0051	673.
.1670	207.	3120.	-209.	1165.	-522.	-1462.	.0148	-0006	.0290	.0160	.0466	-0075	779.
.1680	366.	4310.	-261.	370.	-499.	-2811.	.0239	-0081	.0235	.0124	.0414	-0079	1199.
.1690	470.	5171.	-262.	735.	-475.	-7856.	.0312	-0138	.0178	.0083	.0378	-0121	1587.
.1700	507.	5611.	-216.	720.	-440.	-4520.	.0364	-0181	.0118	.0035	.0353	-0142	1845.
.1710	478.	5809.	-138.	796.	-379.	-4775.	.0390	-0204	.0055	-0017	.0321	-0158	1948.
.1720	376.	5952.	-35.	399.	-353.	-4605.	.0390	-0207	-0014	-0074	.0321	-0170	1888.
.1730	225.	5905.	72.	999.	-239.	-4034.	.0365	-0187	-0089	-0133	.0327	-0176	1693.
.1740	49.	5471.	170.	1051.	-340.	-3302.	.0313	-0149	-0170	-0194	.0336	-0174	1397.
.1750	-132.	4653.	268.	1046.	-354.	-2359.	.0254	-0097	-0257	-0255	.0352	-0164	1045.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.28.75.

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	35	MEMBER	1	SEQUENCE	850	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)	
.1760	-296.	3590.	355.	985.	-337.	-1370.	.0177	-0033	-0348	-0317	.0341	-0145	690.	
.1770	-427.	2398.	439.	883.	-293.	-429.	.0095	.0042	-0443	-0379	.0310	-0118	412.	
.1780	-507.	1059.	520.	747.	-224.	361.	.0011	.0119	-0538	-0440	.0240	-0083	345.	
.1790	-527.	-366.	596.	583.	-144.	933.	-0068	.0196	-0632	-0499	.0147	-0040	445.	
.1800	-477.	-1744.	658.	586.	-71.	1235.	-0139	.0271	-0722	-0554	.0034	.0008	520.	
.1810	-355.	-3023.	697.	156.	10.	1243.	-0199	.0339	-0806	-0603	-0108	.0061	503.	
.1820	-181.	-4153.	722.	-74.	47.	1006.	-0249	.0395	-0880	-0645	-0225	.0116	405.	
.1830	28.	-4988.	734.	-278.	60.	576.	-0286	.0437	-0944	-0681	-0322	.0170	258.	
.1840	253.	-5314.	738.	-434.	60.	25.	-0314	.0465	-0995	-0709	-0407	.0223	176.	
.1850	472.	-5140.	741.	-511.	68.	-565.	-0334	.0477	-1032	-0731	-0479	.0271	307.	
.1860	667.	-4715.	752.	-494.	61.	-1114.	-0348	.0472	-1055	-0745	-0546	.0313	490.	
.1870	817.	-4182.	775.	-379.	18.	-1541.	-0358	.0448	-1064	-0754	-0590	.0347	637.	
.1880	912.	-3543.	801.	-203.	-27.	-1799.	-0367	.0409	-1061	-0757	-0530	.0373	727.	
.1890	944.	-2816.	818.	-9.	-78.	-1849.	-0375	.0357	-1048	-0754	-0653	.0390	743.	
.1900	902.	-2060.	817.	151.	-139.	-1671.	-0383	.0293	-1027	-0745	-0642	.0396	675.	
.1910	792.	-1211.	784.	227.	-186.	-1285.	-0390	.0220	-1003	-0730	-0612	.0392	529.	
.1920	620.	-143.	716.	197.	-234.	-729.	-0396	.0142	-0975	-0710	-0556	.0378	317.	
.1930	407.	1052.	616.	56.	-281.	-88.	-0397	.0065	-0948	-0686	-0483	.0356	120.	
.1940	189.	2122.	490.	-182.	-321.	523.	-0392	-0011	-0921	-0659	-0402	.0329	257.	
.1950	-3.	2955.	354.	-479.	-354.	792.	-0378	-0081	-0895	-0631	-0314	.0298	464.	
.1960	-144.	3580.	223.	-785.	-378.	1237.	-0355	-0141	-0871	-0604	-0218	.0267	607.	
.1970	-222.	4002.	114.	-1054.	-392.	1216.	-0321	-0189	-0848	-0580	-0110	.0237	665.	
.1980	-238.	4207.	37.	-1250.	-406.	934.	-0278	-0223	-0825	-0561	.0014	.0209	647.	
.1990	-203.	4292.	-1.	-1351.	-429.	431.	-0228	-0242	-0803	-0546	.0151	.0183	595.	
.2000	-127.	4382.	-1.	-1354.	-459.	-236.	-0174	-0245	-0782	-0536	.0293	.0159	582.	
.2010	-25.	4448.	33.	-1267.	-492.	-1000.	-0119	-0232	-0760	-0520	.0429	.0139	677.	
.2020	93.	4340.	94.	-1102.	-533.	-1789.	-0068	-0205	-0738	-0527	.0559	.0122	870.	
.2030	215.	3968.	177.	-876.	-575.	-2533.	-0024	-0166	-0716	-0527	.0678	.0108	1100.	
.2040	330.	3342.	271.	-610.	-603.	-3167.	.0009	-0117	-0692	-0527	.0771	.0099	1317.	
.2050	426.	2539.	370.	-318.	-606.	-3629.	.0029	-0060	-0666	-0527	.0826	.0095	1482.	
.2060	491.	1688.	471.	-9.	-591.	-3862.	.0034	-0000	-0637	-0525	.0845	.0095	1568.	
.2070	515.	908.	568.	305.	-563.	-3837.	.0023	.0060	-0604	-0519	.0831	.0098	1561.	
.2080	499.	225.	650.	604.	-530.	-3553.	-0003	.0118	-0566	-0509	.0790	.0105	1462.	
.2090	447.	-451.	710.	874.	-505.	-3037.	-0043	.0173	-0523	-0492	.0740	.0115	1284.	
.2100	366.	-1185.	746.	1115.	-505.	-2333.	-0093	.0222	-0473	-0468	.0700	.0127	1057.	
.2110	267.	-1934.	756.	1332.	-528.	-1502.	-0150	.0263	-0415	-0435	.0672	.0142	833.	
.2120	162.	-2586.	743.	1540.	-561.	-616.	-0210	.0295	-0349	-0395	.0650	.0158	703.	
.2130	62.	-3072.	712.	1759.	-594.	254.	-0268	.0319	-0274	-0346	.0624	.0175	752.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.28.36.

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