

50-305

RESPONSE TO NUREG-0737 ITEM II.D.1

Docket # *50-305*

Control # *8403280048*

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

.1650	-561.	-183.	-206.	-148.	-80.	-22.	-.2250	.0300	.0129	-.0363	-.0482	-.0986	727.
.1660	-611.	-26.	-195.	-54.	-100.	168.	-.2275	.0306	.0116	-.0393	-.0479	-.1067	847.
.1670	-651.	142.	-173.	41.	-109.	351.	-.0302	.0312	.0098	-.0423	-.0466	-.1146	1544.
.1680	-717.	248.	-115.	106.	-110.	466.	-.0375	.0316	.0084	-.0459	-.0427	-.1223	2046.
.1690	-731.	343.	-61.	169.	-113.	561.	-.0370	.0319	.0071	-.0500	-.0375	-.1275	2489.
.1700	-681.	486.	-26.	257.	-121.	682.	-.0400	.0321	.0056	-.0544	-.0323	-.1294	3084.
.1710	-635.	635.	21.	341.	-124.	774.	-.0426	.0319	.0035	-.0587	-.0270	-.1301	3569.
.1720	-572.	732.	73.	394.	-124.	789.	-.0451	.0310	.0009	-.0617	-.0211	-.1301	3715.
.1730	-484.	798.	119.	430.	-124.	764.	-.0473	.0295	-.0021	-.0632	-.0153	-.1276	3694.
.1740	-342.	866.	137.	468.	-129.	748.	-.0489	.0277	-.0052	-.0632	-.0099	-.1202	3721.
.1750	-167.	895.	140.	485.	-131.	700.	-.0498	.0252	-.0078	-.0622	-.0032	-.1090	3595.

ADLPIPE PAGE 2684

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.49.

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)	
.1760	-37.	847.	161.	451.	-114.	575.	-.0496	.0219	-.0097	-.0608	.0063	-.0957	3086.	
.1770	93.	764.	184.	391.	-83.	420.	-.0480	.0178	-.0106	-.0598	.0185	-.0789	2419.	
.1780	244.	690.	186.	329.	-46.	287.	-.0447	.0134	-.0104	-.0591	.0321	-.0573	1832.	
.1790	411.	590.	169.	253.	-4.	145.	-.0403	.0084	-.0094	-.0580	.0464	-.0325	1218.	
.1800	524.	417.	163.	141.	109.	-51.	-.0353	.0029	-.0077	-.0559	.0606	-.0069	661.	
.1810	571.	201.	165.	11.	50.	-270.	-.0300	-.0031	-.0062	-.0520	.0726	.0188	1216.	
.1820	649.	-5.	125.	-106.	154.	-451.	-.0248	-.0090	-.0051	-.0454	.0804	.0456	2038.	
.1830	723.	-215.	61.	-219.	187.	-609.	-.0199	-.0147	-.0045	-.0362	.0840	.0715	2813.	
.1840	720.	-454.	10.	-348.	218.	-779.	-.0155	-.0205	-.0044	-.0251	.0846	.0939	3676.	
.1850	662.	-685.	-35.	-476.	244.	-930.	-.0117	-.0259	-.0047	-.0128	.0820	.1126	4476.	
.1860	600.	-865.	-98.	-575.	255.	-1012.	-.0083	-.0307	-.0053	-.0003	.0760	.1289	4972.	
.1870	532.	-1009.	-169.	-648.	254.	-1036.	-.0060	-.0346	-.0057	.0118	.0673	.1422	5209.	
.1880	393.	-1151.	-211.	-715.	251.	-1046.	-.0049	-.0378	-.0061	.0232	.0567	.1503	5391.	
.1890	222.	-1259.	-239.	-760.	238.	-1026.	-.0052	-.0403	-.0069	.0337	.0435	.1528	5420.	
.1900	84.	-1281.	-283.	-758.	206.	-930.	-.0067	-.0416	-.0084	.0432	.0272	.1504	5078.	
.1910	-51.	-1227.	-321.	-717.	163.	-773.	-.0094	-.0420	-.0104	.0510	.0094	.1429	4453.	
.1920	-196.	-1139.	-336.	-664.	118.	-598.	-.0132	-.0415	-.0121	.0562	-.0072	.1300	3762.	
.1930	-334.	-1012.	-331.	-598.	72.	-400.	-.0176	-.0403	-.0129	.0575	-.0205	.1130	3019.	
.1940	-443.	-814.	-317.	-503.	30.	-147.	-.0221	-.0382	-.0123	.0537	-.0291	.0944	2189.	
.1950	-533.	-562.	-283.	-385.	-4.	147.	-.0264	-.0352	-.0099	.0444	-.0320	.0754	1720.	
.1960	-622.	-306.	-219.	-264.	-25.	432.	-.0307	-.0319	-.0058	.0301	-.0290	.0559	2118.	
.1970	-704.	-47.	-132.	-136.	-37.	701.	-.0351	-.0282	-.0010	.0127	-.0224	.0361	2985.	
.1980	-752.	242.	-45.	22.	-49.	972.	-.0399	-.0243	.0032	-.0055	-.0159	.0168	4065.	
.1990	-766.	542.	34.	204.	-67.	1222.	-.0453	-.0204	.0058	-.0219	-.0122	-.0026	5178.	
.2000	-771.	800.	112.	385.	-86.	1401.	-.0516	-.0168	.0062	-.0349	-.0118	-.0225	6074.	
.2010	-764.	1004.	187.	556.	-106.	1507.	-.0586	-.0138	.0049	-.0442	-.0141	-.0416	6720.	
.2020	-716.	1182.	245.	725.	-127.	1576.	-.0652	-.0112	.0027	-.0512	-.0172	-.0574	7259.	
.2030	-630.	1336.	289.	890.	-139.	1613.	-.0705	-.0092	.0008	-.0578	-.0180	-.0683	7689.	
.2040	-551.	1440.	340.	996.	-130.	1592.	-.0736	-.0080	.0005	-.0656	-.0133	-.0740	7858.	
.2050	-486.	1480.	404.	1067.	-95.	1517.	-.0745	-.0077	.0023	-.0753	-.0022	-.0736	7750.	
.2060	-400.	1472.	459.	1104.	-44.	1412.	-.0732	-.0081	.0062	-.0862	.0137	-.0661	7482.	
.2070	-290.	1415.	496.	1111.	15.	1279.	-.0702	-.0092	.0110	-.0962	.0313	-.0526	7070.	
.2080	-194.	1298.	523.	1080.	77.	1096.	-.0663	-.0111	.0156	-.1031	.0473	-.0362	6430.	
.2090	-117.	1131.	535.	1018.	135.	866.	-.0620	-.0138	.0185	-.1047	.0584	-.0190	5606.	
.2100	-27.	941.	510.	938.	175.	623.	-.0577	-.0170	.0191	-.0998	.0622	-.0013	4755.	
.2110	77.	731.	448.	843.	193.	378.	-.0538	-.0205	.0177	-.0886	.0588	.0164	3938.	
.2120	165.	487.	368.	718.	198.	123.	-.0501	-.0244	.0151	-.0727	.0505	.0334	3151.	
.2130	224.	220.	281.	562.	195.	-134.	-.0460	-.0284	.0124	-.0546	.0401	.0495	2547.	

ADLPIPE PAGE 2685

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.49.

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

.2040	-551.	1440.	740.	996.	-130.	1592.	-0.736	-0.0080	.0005	-0.0578	-0.0180	-0.0683	7689.
.2050	-486.	1480.	404.	1067.	-95.	1517.	-0.6745	-0.0077	.0023	-0.0753	-0.0022	-0.0736	7750.
.2060	-400.	1472.	459.	1104.	-44.	1412.	-0.6732	-0.0081	.0062	-0.0862	.0137	-0.0661	7482.
.2070	-290.	1415.	496.	1111.	15.	1279.	-0.6702	-0.0092	.0110	-0.0962	.0313	-0.0526	7070.
.2080	-194.	1298.	523.	1080.	77.	1096.	-0.6663	-0.0111	.0156	-0.1031	.0473	-0.0362	6430.
.2090	-117.	1131.	535.	1018.	135.	866.	-0.6620	-0.0138	.0185	-0.1047	.0584	-0.0190	5606.
.2100	-27.	941.	510.	938.	175.	623.	-0.6577	-0.0170	.0191	-0.0998	.0622	-0.0013	4755.
.2110	77.	731.	448.	843.	193.	378.	-0.6538	-0.0205	.0177	-0.0886	.0588	-0.0164	3938.
.2120	165.	487.	368.	718.	190.	123.	-0.6501	-0.0244	.0151	-0.0727	.0505	-0.0334	3151.
.2130	224.	220.	281.	562.	195.	-134.	-0.6460	-0.0284	.0124	-0.0546	.0401	-0.0495	2547.

ADLPIPE PAGE 2685

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.49.

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	67	MEMBER	3	SEQUENCE	100	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)
.2140	269.	-32.	187.	388.	189.	-357.		-0.0411	-0.0324	.0106	-0.0369	.0302	.0655	2338.
.2150	304.	-249.	90.	204.	181.	-527.		-0.0349	-0.0362	.0105	-0.0215	.0226	.0817	2476.
.2160	314.	-444.	4.	7.	175.	-657.		-0.0280	-0.0396	.0122	-0.0091	.0178	.0970	2837.
.2170	299.	-619.	-72.	-196.	168.	-755.		-0.0207	-0.0427	.0150	.0012	.0146	.1101	3330.
.2180	273.	-755.	-147.	-388.	152.	-810.		-0.0136	-0.0452	.0178	.0107	.0104	.1201	3801.
.2190	243.	-842.	-226.	-555.	122.	-821.		-0.0075	-0.0471	.0196	.0210	.0031	.1258	4167.
.2200	206.	-899.	-305.	-699.	79.	-806.		-0.0028	-0.0485	.0199	.0326	-0.0077	.1263	4467.
.2210	161.	-928.	-376.	-820.	27.	-775.		.0005	-0.0492	.0188	.0452	-0.0209	.1218	4710.
.2220	118.	-912.	-439.	-908.	-31.	-712.		.0028	-0.0492	.0167	.0572	-0.0348	.1133	4817.
.2230	79.	-844.	-487.	-958.	-85.	-613.		.0048	-0.0486	.0146	.0667	-0.0467	.1024	4759.
.2240	34.	-744.	-509.	-979.	-125.	-493.		.0069	-0.0473	.0134	.0718	-0.0538	.0902	4606.
.2250	-22.	-634.	-496.	-977.	-147.	-368.		.0090	-0.0454	.0137	.0719	-0.0549	.0780	4399.
.2260	-73.	-512.	-456.	-943.	-152.	-234.		.0112	-0.0430	.0151	.0674	-0.0505	.0666	4105.
.2270	-107.	-369.	-399.	-872.	-146.	-93.		.0132	-0.0400	.0169	.0599	-0.0428	.0557	3710.
.2280	-136.	-217.	-327.	-767.	-132.	35.		.0148	-0.0367	.0178	.0512	-0.0343	.0442	3250.
.2290	-164.	-71.	-243.	-633.	-115.	135.		.0155	-0.0333	.0172	.0435	-0.0270	.0315	2742.
.2300	-176.	64.	-158.	-471.	-100.	209.		.0151	-0.0296	.0146	.0378	-0.0223	.0182	2189.
.2310	-163.	185.	-81.	-204.	-89.	262.		.0138	-0.0258	.0104	.0340	-0.0199	.0054	1656.
.2320	-143.	283.	-2.	-86.	-76.	289.		.0121	-0.0220	.0054	.0314	-0.0185	-0.0064	1300.
.2330	-129.	353.	83.	111.	-56.	288.		.0106	-0.0183	.0005	.0283	-0.0159	-0.0164	1310.
.2340	-113.	404.	171.	302.	-26.	271.		.0099	-0.0147	-0.0034	.0238	-0.0108	-0.0237	1698.
.2350	-88.	441.	256.	402.	12.	250.		.0104	-0.0112	-0.0059	.0173	-0.0027	-0.0276	2267.
.2360	-63.	455.	339.	640.	58.	219.		.0119	-0.0079	-0.0068	.0092	.0083	-0.0286	2835.
.2370	-47.	441.	416.	769.	108.	174.		.0143	-0.0049	-0.0065	.0007	.0208	-0.0277	3322.
.2380	-35.	409.	480.	869.	156.	122.		.0174	-0.0022	-0.0056	-0.0070	.0330	-0.0256	3719.
.2390	-26.	364.	521.	941.	195.	72.		.0208	.0004	-0.0047	-0.0125	.0430	-0.0232	4021.
.2400	-24.	304.	539.	982.	222.	21.		.0241	.0027	-0.0040	-0.0150	.0496	-0.0212	4201.
.2410	-34.	225.	536.	988.	236.	-31.		.0273	.0047	-0.0036	-0.0142	.0526	-0.0202	4241.
.2420	-56.	138.	513.	963.	238.	-77.		.0302	.0066	-0.0035	-0.0106	.0522	-0.0203	4154.
.2430	-92.	56.	472.	913.	228.	-109.		.0332	.0084	-0.0034	-0.0049	.0487	-0.0214	3952.
.2440	-144.	-24.	417.	836.	209.	-128.		.0360	.0102	-0.0030	.0021	.0429	-0.0236	3635.
.2450	-210.	-106.	354.	733.	182.	-140.		.0387	.0119	-0.0023	.0100	.0355	-0.0268	3205.
.2460	-281.	-187.	282.	609.	146.	-142.		.0409	.0137	-0.0011	.0186	.0266	-0.0310	2681.
.2470	-348.	-253.	201.	473.	100.	-129.		.0427	.0155	.0002	.0278	.0163	-0.0364	2090.
.2480	-408.	-300.	113.	330.	46.	-106.		.0439	.0175	.0013	.0374	.0048	-0.0433	1459.
.2490	-462.	-329.	25.	182.	-13.	-80.		.0444	.0195	.0020	.0472	-0.0075	-0.0520	833.
.2500	-507.	-343.	-62.	77.	-77.	-55.		.0441	.0216	.0025	.0569	-0.0202	-0.0618	424.
.2510	-519.	-343.	-146.	-100.	-143.	-32.		.0430	.0239	.0028	.0659	-0.0324	-0.0721	741.

ADLPIPE PAGE 2686

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

.2400	-24.	224.	536.	988.	236.	-31.	.0241	.0027	-.0040	-.0150	.0496	-.0212	4201.
.2410	-34.	225.	536.	988.	236.	-31.	.0273	.0047	-.0036	-.0142	.0526	-.0202	4241.
.2420	-56.	138.	513.	963.	238.	-77.	.0302	.0066	-.0035	-.0106	.0522	-.0203	4154.
.2430	-92.	56.	472.	913.	228.	-109.	.0332	.0084	-.0034	-.0049	.0487	-.0214	3952.
.2440	-144.	-24.	417.	816.	209.	-128.	.0360	.0102	-.0030	.0021	.0429	-.0236	3635.
.2450	-210.	-106.	354.	733.	182.	-140.	.0387	.0119	-.0023	.0100	.0355	-.0268	3205.
.2460	-281.	-187.	282.	609.	146.	-142.	.0409	.0137	-.0011	.0186	.0266	-.0310	2681.
.2470	-348.	-253.	201.	473.	100.	-129.	.0427	.0155	.0002	.0278	.0163	-.0364	2090.
.2480	-408.	-300.	113.	330.	46.	-106.	.0439	.0175	.0013	.0374	.0048	-.0433	1459.
.2490	-462.	-329.	25.	182.	-13.	-80.	.0444	.0195	.0020	.0472	-.0075	-.0520	833.
.2500	-503.	-343.	-62.	37.	-77.	-55.	.0441	.0216	.0025	.0569	-.0202	-.0618	424.
.2510	-519.	-343.	-146.	-100.	-143.	-32.	.0430	.0239	.0028	.0659	-.0324	-.0721	741.

ADLPIPE PAGE 2686

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.49.

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	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2520	-500.	-331.	-222.	-223.	-208.	-13.	.0412	.0262	.0031	.0734	-.0433	-.0822	1274.	
.2530	-474.	-307.	-283.	-330.	-266.	-7.	.0390	.0287	.0034	.0788	-.0519	-.0919	1769.	
.2540	-416.	-264.	-327.	-415.	-315.	-13.	.0365	.0310	.0039	.0816	-.0576	-.1010	2176.	
.2550	-328.	-205.	-356.	-475.	-353.	-30.	.0339	.0334	.0043	.0818	-.0604	-.1087	2473.	
.2560	-211.	-140.	-370.	-510.	-381.	-63.	.0311	.0357	.0048	.0797	-.0600	-.1147	2669.	
.2570	-69.	-84.	-368.	-525.	-397.	-119.	.0281	.0378	.0052	.0758	-.0568	-.1188	2790.	
.2580	94.	-36.	-352.	-518.	-402.	-197.	.0249	.0397	.0053	.0704	-.0510	-.1209	2859.	
.2590	272.	12.	-326.	-489.	-396.	-288.	.0219	.0413	.0051	.0638	-.0431	-.1211	2889.	
.2600	458.	58.	-289.	-438.	-379.	-391.	.0192	.0426	.0044	.0565	-.0336	-.1194	2918.	
.2610	647.	92.	-242.	-372.	-353.	-505.	.0169	.0435	.0034	.0485	-.0228	-.1155	3004.	
.2620	822.	108.	-189.	-293.	-317.	-628.	.0149	.0440	.0022	.0404	-.0112	-.1095	3181.	
.2630	989.	107.	-132.	-205.	-274.	-751.	.0134	.0441	.0009	.0324	.0007	-.1015	3446.	
.2640	1130.	94.	-73.	-111.	-225.	-871.	.0127	.0438	-.0008	.0249	.0122	-.0921	3782.	
.2650	1238.	71.	-14.	-17.	-172.	-980.	.0126	.0430	-.0028	.0184	.0226	-.0818	4154.	
.2660	1314.	37.	41.	72.	-119.	-1072.	.0133	.0417	-.0050	.0134	.0316	-.0710	4511.	
.2670	1357.	-5.	88.	151.	-69.	-1138.	.0146	.0400	-.0075	.0100	.0389	-.0600	4802.	
.2680	1363.	-50.	125.	218.	-23.	-1175.	.0166	.0380	-.0102	.0085	.0441	-.0493	4988.	
.2690	1323.	-95.	155.	268.	19.	-1180.	.0193	.0356	-.0129	.0086	.0472	-.0394	5050.	
.2700	1239.	-139.	175.	301.	55.	-1150.	.0228	.0329	-.0156	.0102	.0482	-.0305	4966.	
.2710	1120.	-179.	186.	315.	85.	-1083.	.0268	.0301	-.0179	.0129	.0473	-.0225	4721.	
.2720	969.	-214.	188.	312.	107.	-979.	.0314	.0271	-.0199	.0166	.0446	-.0154	4311.	
.2730	787.	-238.	183.	292.	123.	-842.	.0363	.0240	-.0217	.0212	.0401	-.0098	3754.	
.2740	574.	-248.	172.	257.	131.	-676.	.0416	.0208	-.0234	.0265	.0336	-.0059	3069.	
.2750	344.	-245.	152.	212.	130.	-484.	.0467	.0178	-.0251	.0326	.0250	-.0034	2272.	
.2760	114.	-235.	122.	157.	118.	-273.	.0515	.0148	-.0267	.0396	.0148	-.0019	1403.	
.2770	-112.	-224.	87.	94.	100.	-54.	.0558	.0120	-.0283	.0471	.0034	-.0015	613.	
.2780	-336.	-204.	50.	24.	77.	162.	.0597	.0093	-.0299	.0546	-.0085	-.0023	755.	
.2790	-551.	-170.	14.	-44.	53.	374.	.0633	.0069	-.0314	.0614	-.0203	-.0035	1589.	
.2800	-739.	-128.	-22.	-107.	29.	578.	.0663	.0047	-.0326	.0669	-.0311	-.0041	2456.	
.2810	-893.	-97.	-54.	-166.	7.	756.	.0685	.0027	-.0331	.0709	-.0402	-.0037	3231.	
.2820	-1019.	-81.	-77.	-222.	-10.	896.	.0700	.0011	-.0331	.0732	-.0472	-.0023	3852.	
.2830	-1110.	-66.	-91.	-266.	-19.	1000.	.0706	-.0004	-.0330	.0737	-.0525	.0001	4320.	
.2840	-1178.	-48.	-101.	-292.	-3.	1072.	.0704	-.0015	-.0329	.0730	-.0565	.0036	4637.	
.2850	-1192.	-44.	-108.	-305.	-24.	1099.	.0690	-.0024	-.0329	.0715	-.0596	.0083	4760.	
.2860	-1165.	-64.	-110.	-308.	-22.	1072.	.0661	-.0030	-.0332	.0697	-.0616	.0135	4656.	
.2870	-1104.	-93.	-106.	-300.	-15.	999.	.0621	-.0034	-.0338	.0673	-.0627	.0192	4354.	
.2880	-1005.	-117.	-101.	-275.	-3.	894.	.0572	-.0035	-.0346	.0639	-.0628	.0253	3904.	
.2890	-871.	-140.	-93.	-240.	14.	759.	.0516	-.0034	-.0350	.0590	-.0609	.0321	3322.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.49.

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

.2800	-739.	-128.	-22.	-107.	29.	578.	.0663	.0047	-.0326	.0669	-.0311	-.0041	2456.
.2810	-893.	-97.	-54.	-166.	7.	756.	.0685	.0027	-.0331	.0709	-.0402	-.0037	3231.
.2820	-1019.	-81.	-77.	-222.	-10.	896.	.0700	.0011	-.0331	.0732	-.0472	-.0023	3852.
.2830	-1118.	-66.	-91.	-246.	-19.	1000.	.0706	-.0004	-.0330	.0737	-.0525	.0001	4320.
.2840	-1178.	-48.	-101.	-292.	-27.	1072.	.0704	-.0015	-.0329	.0730	-.0565	.0036	4637.
.2850	-1192.	-44.	-108.	-305.	-24.	1099.	.0690	-.0024	-.0329	.0715	-.0596	.0083	4760.
.2860	-1165.	-64.	-110.	-308.	-22.	1072.	.0661	-.0030	-.0332	.0697	-.0616	.0155	4656.
.2870	-1104.	-93.	-106.	-300.	-15.	999.	.0621	-.0034	-.0338	.0673	-.0627	.0192	4354.
.2880	-1005.	-117.	-101.	-275.	-3.	894.	.0572	-.0035	-.0346	.0639	-.0628	.0253	3904.
.2890	-871.	-140.	-93.	-240.	14.	759.	.0516	-.0034	-.0350	.0590	-.0609	.0321	5322.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.49.

S/RV PIPING KEWAUNEE CRK WOOD 2 RUP DISK
2 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	67	MEMBER	3	SEQUENCE	100	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)	
.2900	-711.	-176.	-76.	-206.	37.	591.		.0455	-.0031	-.0346	.0520	-.0560	.0395	2616.	
.2910	-532.	-217.	-50.	-173.	68.	404.		.0392	-.0026	-.0329	.0425	-.0479	.0475	1855.	
.2920	-335.	-241.	-21.	-128.	102.	218.		.0329	-.0018	-.0301	.0304	-.0370	.0558	1159.	
.2930	-130.	-246.	9.	-103.	141.	39.		.0267	-.0007	-.0263	.0165	-.0241	.0637	747.	
.2940	68.	-244.	42.	-77.	178.	-135.		.0204	.0005	-.0219	.0017	-.0105	.0704	986.	
.2950	260.	-241.	73.	-60.	207.	-300.		.0137	.0019	-.0173	-.0129	.0024	.0754	1542.	
.2960	450.	-223.	91.	-47.	225.	-438.		.0067	.0036	-.0128	-.0264	.0131	.0784	2064.	
.2970	626.	-186.	97.	-37.	229.	-546.		-.0005	.0054	-.0088	-.0381	.0206	.0789	2474.	
.2980	771.	-136.	96.	-38.	222.	-628.		-.0077	.0073	-.0053	-.0481	.0249	.0764	2784.	
.2990	883.	-80.	89.	-49.	206.	-680.		-.0148	.0093	-.0020	-.0566	.0265	.0715	2973.	
.3000	974.	-14.	72.	-69.	179.	-691.		-.0214	.0114	.0015	-.0640	.0261	.0655	2992.	
.3010	1040.	59.	46.	-97.	145.	-659.		-.0274	.0136	.0053	-.0707	.0246	.0588	2845.	
.3020	1064.	132.	20.	-138.	109.	-597.		-.0325	.0158	.0095	-.0770	.0225	.0511	2596.	
.3030	1044.	207.	-5.	-190.	74.	-507.		-.0365	.0178	.0139	-.0827	.0199	.0428	2282.	
.3040	996.	283.	-35.	-245.	37.	-386.		-.0395	.0198	.0184	-.0874	.0164	.0345	1915.	
.3050	931.	352.	-74.	-300.	-7.	-241.		-.0417	.0217	.0225	-.0905	.0119	.0266	1606.	
.3060	840.	402.	-113.	-357.	-43.	-89.		-.0434	.0233	.0261	-.0919	.0061	.0190	1548.	
.3070	717.	436.	-150.	-412.	-80.	60.		-.0443	.0247	.0288	-.0915	-.0008	.0115	1768.	
.3080	575.	464.	-187.	-454.	-113.	213.		-.0444	.0259	.0307	-.0897	-.0087	.0048	2144.	
.3090	427.	481.	-224.	-481.	-141.	366.		-.0440	.0269	.0319	-.0869	-.0167	-.0002	2589.	
.3100	272.	471.	-252.	-497.	-161.	504.		-.0430	.0277	.0328	-.0836	-.0239	-.0033	3031.	
.3110	106.	438.	-267.	-503.	-171.	621.		-.0414	.0283	.0332	-.0803	-.0295	-.0047	3412.	
.3120	-60.	403.	-270.	-489.	-169.	727.		-.0393	.0288	.0331	-.0773	-.0335	-.0044	3724.	
.3130	-218.	370.	-265.	-453.	-159.	822.		-.0367	.0291	.0323	-.0746	-.0362	-.0026	3972.	
.3140	-362.	327.	-249.	-401.	-142.	894.		-.0340	.0293	.0310	-.0721	-.0373	.0005	4130.	
.3150	-492.	269.	-220.	-336.	-118.	938.		-.0315	.0293	.0289	-.0696	-.0371	.0044	4189.	
.3160	-598.	214.	-182.	-252.	-91.	967.		-.0292	.0294	.0261	-.0673	-.0360	.0090	4189.	
.3170	-678.	179.	-139.	-148.	-61.	988.		-.0271	.0294	.0226	-.0655	-.0340	.0137	4176.	
.3180	-737.	156.	-85.	-32.	-27.	993.		-.0251	.0293	.0185	-.0644	-.0308	.0182	4150.	
.3190	-778.	137.	-21.	87.	8.	983.		-.0234	.0292	.0144	-.0643	-.0261	.0226	4120.	
.3200	-790.	127.	48.	211.	44.	968.		-.0220	.0290	.0104	-.0652	-.0199	.0270	4137.	
.3210	-773.	136.	117.	335.	77.	954.		-.0207	.0289	.0066	-.0671	-.0126	.0314	4232.	
.3220	-740.	162.	188.	454.	109.	936.		-.0196	.0285	.0030	-.0698	-.0045	.0349	4366.	
.3230	-700.	198.	259.	559.	137.	912.		-.0185	.0280	-.0004	-.0729	.0040	.0372	4503.	
.3240	-642.	242.	323.	651.	159.	889.		-.0177	.0273	-.0034	-.0760	.0123	.0389	4646.	
.3250	-562.	293.	371.	726.	172.	871.		-.0170	.0264	-.0061	-.0787	.0199	.0403	4786.	
.3260	-476.	342.	409.	779.	178.	849.		-.0165	.0251	-.0084	-.0808	.0265	.0409	4866.	
.3270	-399.	386.	437.	805.	180.	819.		-.0158	.0234	-.0102	-.0822	.0322	.0407	4853.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.49.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.3180	-737.	156.	-85.	-32.	-27.	953.	-.0271	.0294	.0226	-.0655	-.0340	.0137	4176.
.3190	-778.	137.	-21.	87.	8.	983.	-.0234	.0292	.0144	-.0643	-.0261	.0226	4120.
.3200	-790.	127.	48.	211.	44.	968.	-.0220	.0290	.0104	-.0652	-.0199	.0270	4137.
.3210	-773.	136.	117.	335.	77.	954.	-.0207	.0289	.0066	-.0671	-.0126	.0314	4232.
.3220	-740.	162.	188.	454.	109.	936.	-.0196	.0285	.0030	-.0698	-.0045	.0349	4366.
.3230	-700.	198.	259.	559.	137.	912.	-.0185	.0280	-.0004	-.0729	.0040	.0372	4503.
.3240	-642.	242.	323.	651.	159.	889.	-.0177	.0273	-.0034	-.0760	.0123	.0389	4646.
.3250	-562.	293.	371.	726.	172.	871.	-.0170	.0264	-.0061	-.0787	.0199	.0403	4786.
.3260	-476.	342.	409.	779.	178.	849.	-.0165	.0251	-.0084	-.0808	.0265	.0409	4866.
.3270	-399.	386.	437.	805.	180.	819.	-.0158	.0234	-.0102	-.0822	.0322	.0407	4853.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.49.

S/RV PIPING KEWAUNEE CRWDEF 2 RUP DISK
2 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	67	MEMBER	3	SEQUENCE	100	LOCATION	END	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ								STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.3280	-326.	426.	452.	806.	176.	788.		-.0149	.0213	-.0114	-.0828	.0367	.0402	4762.
.3290	-250.	457.	448.	784.	167.	757.		-.0138	.0188	-.0120	-.0825	.0400	.0400	4601.
.3300	-179.	467.	422.	733.	153.	720.		-.0125	.0158	-.0120	-.0809	.0422	.0402	4335.
.3310	-124.	453.	398.	654.	137.	667.		-.0111	.0122	-.0115	-.0780	.0430	.0405	3940.
.3320	-82.	422.	354.	552.	118.	606.		-.0095	.0081	-.0106	-.0737	.0422	.0408	3456.
.3330	-47.	378.	292.	433.	97.	540.		-.0076	.0037	-.0096	-.0679	.0396	.0416	2920.
.3340	-17.	310.	210.	299.	74.	464.		-.0058	-.0012	-.0083	-.0606	.0358	.0429	2324.
.3350	4.	213.	139.	148.	51.	371.		-.0040	-.0065	-.0068	-.0523	.0310	.0446	1679.
.3360	16.	102.	54.	-9.	30.	267.		-.0022	-.0120	-.0051	-.0434	.0256	.0465	1123.
.3370	23.	-9.	-34.	-163.	11.	163.		-.0003	-.0177	-.0035	-.0342	.0197	.0487	962.
.3380	28.	-122.	-120.	-311.	-5.	55.		.0015	-.0235	-.0017	-.0252	.0138	.0510	1319.
.3390	31.	-244.	-200.	-453.	-8.	63.		.0029	-.0292	-.0000	-.0165	.0082	.0530	1912.
.3400	36.	-365.	-272.	-582.	-29.	-183.		.0039	-.0349	.0015	-.0084	.0029	.0547	2549.
.3410	49.	-468.	-338.	-688.	-39.	-296.		.0045	-.0403	.0027	-.0009	-.0022	.0558	3130.
.3420	69.	-549.	-394.	-769.	-48.	-403.		.0046	-.0454	.0034	.0057	-.0070	.0556	3628.
.3430	92.	-613.	-435.	-827.	-54.	-507.		.0042	-.0501	.0036	.0111	-.0111	.0541	4053.
.3440	123.	-657.	-462.	-860.	-58.	-603.		.0033	-.0544	.0036	.0151	-.0139	.0515	4389.
.3450	169.	-674.	-475.	-864.	-60.	-682.		.0019	-.0583	.0034	.0172	-.0152	.0482	4602.
.3460	222.	-662.	-473.	-842.	-59.	-745.		.0003	-.0616	.0032	.0173	-.0146	.0439	4697.
.3470	274.	-626.	-452.	-796.	-52.	-795.		-.0014	-.0644	.0029	.0154	-.0120	.0387	4703.
.3480	325.	-567.	-415.	-730.	-41.	-832.		-.0032	-.0668	.0026	.0117	-.0077	.0326	4624.
.3490	383.	-487.	-368.	-644.	-29.	-850.		-.0052	-.0687	.0023	.0068	-.0020	.0262	4450.
.3500	444.	-392.	-314.	-540.	-16.	-851.		-.0072	-.0701	.0018	.0012	.0043	.0195	4207.
.3510	497.	-288.	-252.	-427.	-2.	-843.		-.0092	-.0713	.0009	-.0045	.0110	.0122	3944.
.3520	539.	-179.	-185.	-307.	13.	-828.		-.0110	-.0722	-.0004	-.0099	.0174	.0046	3685.
.3530	574.	-65.	-119.	-184.	27.	-800.		-.0125	-.0728	-.0020	-.0146	.0234	-.0029	3429.
.3540	602.	44.	-57.	-63.	40.	-763.		-.0137	-.0733	-.0037	-.0184	.0290	-.0096	3198.
.3550	615.	138.	3.	49.	53.	-722.		-.0143	-.0737	-.0053	-.0213	.0342	-.0154	3028.
.3560	610.	217.	60.	147.	68.	-680.		-.0141	-.0741	-.0068	-.0231	.0391	-.0200	2916.
.3570	589.	284.	110.	232.	82.	-632.		-.0132	-.0746	-.0082	-.0236	.0434	-.0232	2831.
.3580	553.	334.	149.	301.	95.	-581.		-.0115	-.0750	-.0095	-.0226	.0466	-.0247	2759.
.3590	504.	356.	170.	348.	105.	-534.		-.0091	-.0755	-.0108	-.0197	.0485	-.0246	2697.
.3600	442.	349.	196.	374.	112.	-494.		-.0062	-.0761	-.0120	-.0146	.0487	-.0231	2628.
.3610	371.	322.	201.	381.	115.	-458.		-.0028	-.0768	-.0135	-.0073	.0470	-.0202	2531.
.3620	293.	278.	192.	371.	113.	-424.		.0010	-.0775	-.0152	.0020	.0434	-.0162	2398.
.3630	208.	215.	172.	342.	109.	-398.		.0053	-.0782	-.0169	.0130	.0383	-.0111	2236.
.3640	121.	129.	145.	295.	101.	-381.		.0098	-.0789	-.0183	.0252	.0324	-.0048	2053.
.3650	37.	29.	111.	234.	93.	-367.		.0146	-.0795	-.0194	.0378	.0263	.0027	1857.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.49.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.3560	610.	217.	60.	147.	68.	-680.	-.0141	-.0741	-.0068	-.0231	.0391	-.0200	2916.
.3570	589.	284.	110.	232.	82.	-632.	-.0132	-.0746	-.0082	-.0236	.0434	-.0232	2831.
.3580	557.	334.	149.	301.	95.	-581.	-.0115	-.0750	-.0095	-.0226	.0466	-.0247	2759.
.3590	504.	356.	170.	348.	105.	-524.	-.0091	-.0755	-.0108	-.0197	.0485	-.0246	2697.
.3600	442.	349.	196.	374.	112.	-474.	-.0062	-.0761	-.0120	-.0146	.0487	-.0231	2628.
.3610	371.	322.	201.	381.	115.	-458.	-.0028	-.0768	-.0135	-.0073	.0470	-.0202	2531.
.3620	297.	278.	192.	371.	113.	-424.	.0010	-.0775	-.0152	.0020	.0434	-.0162	2398.
.3630	208.	215.	172.	342.	109.	-398.	.0053	-.0782	-.0164	.0130	.0383	-.0111	2236.
.3640	121.	129.	145.	295.	101.	-381.	.0098	-.0789	-.0183	.0252	.0324	-.0048	2053.
.3650	37.	29.	111.	234.	92.	-367.	.0146	-.0795	-.0194	.0378	.0263	.0027	1857.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/3/12/02.

18.29.49.

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	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)	
.3660	-42.	-76.	72.	163.	84.	-355.	.0197	-.0799	-.0201	.0502	.0205	.0112	1668.	
.3670	-120.	-185.	33.	85.	76.	-347.	.0249	-.0801	-.0202	.0622	.0152	.0202	1526.	
.3680	-194.	-296.	-5.	2.	69.	-345.	.0299	-.0800	-.0200	.0734	.0106	.0294	1469.	
.3690	-256.	-405.	-41.	-79.	62.	-345.	.0346	-.0796	-.0194	.0838	.0065	.0385	1501.	
.3700	-305.	-507.	-76.	-152.	53.	-347.	.0387	-.0787	-.0187	.0935	.0024	.0471	1595.	
.3710	-343.	-599.	-108.	-215.	42.	-352.	.0419	-.0773	-.0181	.1024	-.0017	.0545	1728.	
.3720	-374.	-677.	-133.	-264.	30.	-361.	.0442	-.0755	-.0177	.1105	-.0060	.0601	1870.	
.3730	-394.	-737.	-152.	-295.	18.	-371.	.0455	-.0731	-.0175	.1174	-.0103	.0641	1978.	
.3740	-398.	-777.	-165.	-306.	4.	-377.	.0457	-.0701	-.0172	.1228	-.0142	.0665	2027.	
.3750	-386.	-798.	-169.	-298.	-10.	-380.	.0449	-.0665	-.0168	.1262	-.0171	.0672	2016.	
.3760	-371.	-796.	-161.	-271.	-20.	-380.	.0433	-.0623	-.0160	.1271	-.0185	.0662	1949.	
.3770	-346.	-769.	-141.	-226.	-27.	-373.	.0409	-.0576	-.0147	.1253	-.0180	.0635	1821.	
.3780	-312.	-714.	-112.	-162.	-32.	-354.	.0380	-.0524	-.0128	.1208	-.0156	.0594	1630.	
.3790	-269.	-638.	-73.	-83.	-34.	-325.	.0344	-.0467	-.0104	.1138	-.0115	.0540	1405.	
.3800	-219.	-545.	-27.	9.	-35.	-288.	.0302	-.0406	-.0076	.1047	-.0061	.0472	1209.	
.3810	-166.	-435.	26.	112.	-35.	-242.	.0255	-.0342	-.0045	.0940	.0001	.0389	1123.	
.3820	-112.	-305.	81.	225.	-36.	-187.	.0203	-.0276	-.0015	.0821	.0064	.0293	1229.	
.3830	-58.	-163.	137.	344.	-39.	-123.	.0148	-.0209	.0015	.0697	.0123	.0186	1534.	
.3840	-5.	-19.	192.	465.	-45.	-54.	.0091	-.0142	.0044	.0572	.0175	.0072	1961.	
.3850	44.	123.	245.	592.	-53.	17.	.0032	-.0075	.0072	.0448	.0219	-.0046	2440.	
.3860	87.	264.	293.	694.	-64.	94.	-.0026	-.0011	.0099	.0328	.0254	-.0163	2934.	
.3870	120.	401.	336.	797.	-75.	175.	-.0080	.0050	.0125	.0213	.0281	-.0277	3418.	
.3880	142.	527.	372.	885.	-88.	254.	-.0129	.0106	.0150	.0108	.0298	-.0384	3861.	
.3890	154.	633.	400.	956.	-102.	331.	-.0173	.0157	.0175	.0013	.0306	-.0479	4244.	
.3900	158.	718.	419.	1008.	-118.	404.	-.0211	.0203	.0199	-.0066	.0302	-.0559	4561.	
.3910	152.	782.	426.	1041.	-134.	470.	-.0241	.0241	.0219	-.0127	.0285	-.0624	4799.	
.3920	130.	823.	424.	1052.	-150.	523.	-.0264	.0271	.0235	-.0168	.0253	-.0676	4942.	
.3930	93.	838.	412.	1042.	-165.	561.	-.0279	.0294	.0247	-.0188	.0207	-.0713	4987.	
.3940	50.	826.	389.	1012.	-181.	588.	-.0287	.0308	.0255	-.0187	.0148	-.0731	4943.	
.3950	4.	786.	355.	963.	-196.	600.	-.0288	.0315	.0260	-.0167	.0078	-.0728	4806.	
.3960	-52.	720.	315.	886.	-208.	595.	-.0283	.0314	.0261	-.0131	.0002	-.0709	4571.	
.3970	-120.	635.	270.	812.	-216.	574.	-.0271	.0305	.0260	-.0082	-.0077	-.0676	4247.	
.3980	-190.	537.	221.	718.	-220.	540.	-.0253	.0290	.0256	-.0024	-.0156	-.0627	3862.	
.3990	-255.	423.	167.	615.	-223.	496.	-.0231	.0269	.0250	.0042	-.0234	-.0564	3425.	
.4000	-316.	294.	113.	505.	-222.	437.	-.0208	.0243	.0243	.0111	-.0306	-.0490	2937.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.29.50.

S/RV PIPING KEWAUNEE GKWOBF 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

.3930	93.	838.	412.	1042.	93.	-165.	838.	561.	-.0279	.0294	.0247	-.0188	.0207	-.0713	4987.
.3940	50.	826.	389.	1012.	-181.	508.	-.0287	.0308	.0255	-.0187	.0148	-.0731	4943.		
.3950	4.	786.	355.	963.	-196.	600.	-.0288	.0315	.0260	-.0167	.0078	-.0728	4806.		
.3960	-52.	720.	315.	896.	-208.	595.	-.0283	.0314	.0261	-.0131	.0002	-.0709	4571.		
.3970	-120.	635.	270.	812.	-216.	574.	-.0271	.0305	.0260	-.0082	-.0077	-.0676	4247.		
.3980	-190.	537.	221.	718.	-220.	540.	-.0253	.0290	.0256	-.0024	-.0156	-.0627	3862.		
.3990	-255.	423.	167.	615.	-223.	496.	-.0231	.0269	.0250	-.0042	-.0234	-.0564	3425.		
.4000	-316.	294.	113.	505.	-222.	437.	-.0208	.0243	.0243	.0111	-.0306	-.0490	2937.		

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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

MAXIMUM VALUE OF STRESS OCCURS AT

TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.2040	-551.	1440.	340.	996.	-130.	1592.	-.0736	-.0080	.0005	-.0656	-.0133	-.0740	7858.

SECTION	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	VA	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
67	4	101					0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
							.0010	0.	0.	0.	0.	0.	0.	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	0.
							.0020	0.	0.	0.	0.	0.	0.	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	0.
							.0030	0.	0.	0.	0.	0.	0.	.0000	.0000	.0000	-.0000	.0000	-.0000	0.
							.0040	0.	0.	0.	0.	0.	0.	-.0000	.0000	.0000	-.0000	.0000	-.0000	0.
							.0050	0.	0.	0.	0.	0.	0.	-.0000	.0000	-.0000	.0000	-.0000	-.0000	0.
							.0060	0.	0.	0.	0.	0.	0.	-.0000	.0000	-.0000	.0001	-.0001	-.0000	0.
							.0070	0.	0.	0.	0.	0.	0.	-.0001	-.0000	-.0001	.0002	-.0003	-.0001	0.
							.0080	0.	0.	0.	0.	0.	0.	-.0002	-.0000	-.0003	.0005	-.0007	-.0002	0.
							.0090	0.	0.	0.	0.	0.	0.	-.0005	-.0000	-.0006	.0010	-.0014	-.0005	0.
							.0100	0.	0.	0.	0.	0.	0.	-.0008	-.0000	-.0011	.0017	-.0024	-.0008	0.
							.0110	0.	0.	0.	0.	0.	0.	-.0013	-.0000	-.0018	.0028	-.0039	-.0013	0.
							.0120	0.	0.	0.	0.	0.	0.	-.0020	-.0000	-.0027	.0043	-.0061	-.0020	0.
							.0130	0.	0.	0.	0.	0.	0.	-.0030	-.0000	-.0040	.0063	-.0090	-.0028	0.
							.0140	0.	0.	0.	0.	0.	0.	-.0043	-.0000	-.0055	.0087	-.0127	-.0039	0.
							.0150	0.	0.	0.	0.	0.	0.	-.0059	-.0000	-.0072	.0116	-.0170	-.0051	0.
							.0160	0.	0.	0.	0.	0.	0.	-.0075	-.0000	-.0090	.0145	-.0214	-.0065	0.
							.0170	0.	0.	0.	0.	0.	0.	-.0091	-.0000	-.0106	.0170	-.0253	-.0082	0.
							.0180	0.	0.	0.	0.	0.	0.	-.0102	-.0001	-.0117	.0185	-.0279	-.0098	0.
							.0190	0.	0.	0.	0.	0.	0.	-.0108	-.0001	-.0118	.0183	-.0283	-.0111	0.
							.0200	0.	0.	0.	0.	0.	0.	-.0106	-.0001	-.0104	.0158	-.0255	-.0115	0.
							.0210	0.	0.	0.	0.	0.	0.	-.0093	-.0001	-.0074	.0105	-.0191	-.0106	0.
							.0220	0.	0.	0.	0.	0.	0.	-.0070	-.0002	-.0028	.0029	-.0092	-.0080	0.
							.0230	0.	0.	0.	0.	0.	0.	-.0040	-.0003	.0028	-.0063	.0030	-.0042	0.
							.0240	0.	0.	0.	0.	0.	0.	-.0009	-.0005	.0086	-.0155	.0155	-.0000	0.
							.0250	0.	0.	0.	0.	0.	0.	.0016	-.0008	.0135	-.0234	.0262	.0039	0.
							.0260	0.	0.	0.	0.	0.	0.	.0033	-.0011	.0169	-.0288	.0538	.0067	0.
							.0270	0.	0.	0.	0.	0.	0.	.0047	-.0016	.0183	-.0312	.0379	.0086	0.
							.0280	0.	0.	0.	0.	0.	0.	.0057	-.0022	.0174	-.0304	.0385	.0089	0.
							.0290	0.	0.	0.	0.	0.	0.	.0061	-.0029	.0150	-.0275	.0357	.0076	0.
							.0300	0.	0.	0.	0.	0.	0.	.0060	-.0038	.0129	-.0239	.0324	.0075	0.
							.0310	0.	0.	0.	0.	0.	0.	.0066	-.0047	.0122	-.0216	.0322	.0104	0.
							.0320	0.	0.	0.	0.	0.	0.	.0092	-.0056	.0127	-.0223	.0358	.0143	0.
							.0330	0.	0.	0.	0.	0.	0.	.0135	-.0065	.0145	-.0255	.0423	.0188	0.

.0190	0.	0.	0.	0.	0.	0.	0.	-.0108	-.0001	-.0118	.0183	-.0283	-.0111	0.
.0200	0.	0.	0.	0.	0.	0.	0.	-.0106	-.0001	-.0104	.0158	-.0255	-.0115	0.
.0210	0.	0.	0.	0.	0.	0.	0.	-.0093	-.0001	-.0074	.0105	-.0191	-.0106	0.
.0220	0.	0.	0.	0.	0.	0.	0.	-.0070	-.0002	-.0028	.0029	-.0092	-.0080	0.
.0230	0.	0.	0.	0.	0.	0.	0.	-.0040	-.0003	.0028	-.0063	.0030	-.0042	0.
.0240	0.	0.	0.	0.	0.	0.	0.	-.0009	-.0005	.0086	-.0155	.0155	-.0000	0.
.0250	0.	0.	0.	0.	0.	0.	0.	.0016	-.0008	.0135	-.0214	.0262	.0039	0.
.0260	0.	0.	0.	0.	0.	0.	0.	.0033	-.0011	.0169	-.0288	.0338	.0067	0.
.0270	0.	0.	0.	0.	0.	0.	0.	.0047	-.0016	.0183	-.0312	.0379	.0086	0.
.0280	0.	0.	0.	0.	0.	0.	0.	.0057	-.0022	.0174	-.0304	.0385	.0089	0.
.0290	0.	0.	0.	0.	0.	0.	0.	.0061	-.0029	.0150	-.0275	.0357	.0076	0.
.0300	0.	0.	0.	0.	0.	0.	0.	.0060	-.0038	.0129	-.0239	.0324	.0075	0.
.0310	0.	0.	0.	0.	0.	0.	0.	.0066	-.0047	.0122	-.0216	.0322	.0104	0.
.0320	0.	0.	0.	0.	0.	0.	0.	.0092	-.0056	.0127	-.0223	.0358	.0143	0.

.0330 0. 0. 0. 0. 0. 0. 0. .0135 -.0065 .0145 -.0255 .0423 .0188 0.

S/RV PIPING KEWAUNEE GKWOEF 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	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.0340	0.	0.	0.	0.	0.	0.	.0177	-.0075	.0175	-.0293	.0506	.0258	0.	
.0350	0.	0.	0.	0.	0.	0.	.0203	-.0083	.0202	-.0310	.0571	.0346	0.	
.0360	0.	0.	0.	0.	0.	0.	.0211	-.0091	.0196	-.0276	.0563	.0400	0.	
.0370	0.	0.	0.	0.	0.	0.	.0204	-.0098	.0138	-.0173	.0453	.0391	0.	
.0380	0.	0.	0.	0.	0.	0.	.0180	-.0103	.0035	-.0006	.0258	.0332	0.	
.0390	0.	0.	0.	0.	0.	0.	.0135	-.0105	-.0090	.0198	.0006	.0253	0.	
.0400	0.	0.	0.	0.	0.	0.	.0077	-.0104	-.0206	.0397	-.0255	.0173	0.	
.0410	0.	0.	0.	0.	0.	0.	.0033	-.0100	-.0283	.0541	-.0441	.0115	0.	
.0420	0.	0.	0.	0.	0.	0.	.0030	-.0091	-.0306	.0586	-.0489	.0084	0.	
.0430	0.	0.	0.	0.	0.	0.	.0066	-.0077	-.0271	.0524	-.0407	.0079	0.	
.0440	0.	0.	0.	0.	0.	0.	.0116	-.0058	-.0182	.0382	-.0236	.0116	0.	
.0450	0.	0.	0.	0.	0.	0.	.0153	-.0036	-.0059	.0208	-.0019	.0194	0.	
.0460	0.	0.	0.	0.	0.	0.	.0169	-.0009	.0045	.0062	.0159	.0255	0.	
.0470	0.	0.	0.	0.	0.	0.	.0164	.0019	.0078	-.0001	.0197	.0220	0.	
.0480	0.	0.	0.	0.	0.	0.	.0131	.0050	.0038	.0028	.0088	.0086	0.	
.0490	0.	0.	0.	0.	0.	0.	.0062	.0082	-.0038	.0118	-.0098	-.0078	0.	
.0500	0.	0.	0.	0.	0.	0.	-.0031	.0114	-.0112	.0222	-.0302	-.0218	0.	
.0510	0.	0.	0.	0.	0.	0.	-.0115	.0147	-.0164	.0293	-.0473	-.0334	0.	
.0520	0.	0.	0.	0.	0.	0.	-.0162	.0178	-.0173	.0282	-.0533	-.0431	0.	
.0530	0.	0.	0.	0.	0.	0.	-.0169	.0207	-.0123	.0168	-.0442	-.0486	0.	
.0540	0.	0.	0.	0.	0.	0.	-.0152	.0234	-.0018	-.0019	-.0245	-.0470	0.	
.0550	0.	0.	0.	0.	0.	0.	-.0132	.0256	.0112	-.0229	-.0013	-.0405	0.	
.0560	0.	0.	0.	0.	0.	0.	-.0119	.0272	.0227	-.0413	.0196	-.0352	0.	
.0570	0.	0.	0.	0.	0.	0.	-.0120	.0282	.0288	-.0526	.0314	-.0357	0.	
.0580	0.	0.	0.	0.	0.	0.	-.0145	.0285	.0282	-.0536	.0291	-.0407	0.	
.0590	0.	0.	0.	0.	0.	0.	-.0197	.0281	.0230	-.0458	.0158	-.0473	0.	
.0600	0.	0.	0.	0.	0.	0.	-.0261	.0271	.0164	-.0347	.0001	-.0538	0.	
.0610	0.	0.	0.	0.	0.	0.	-.0308	.0254	.0111	-.0258	-.0115	-.0589	0.	
.0620	0.	0.	0.	0.	0.	0.	-.0314	.0232	.0094	-.0227	-.0146	-.0600	0.	
.0630	0.	0.	0.	0.	0.	0.	-.0278	.0205	.0134	-.0281	-.0047	-.0549	0.	
.0640	0.	0.	0.	0.	0.	0.	-.0216	.0175	.0232	-.0416	.0176	-.0439	0.	
.0650	0.	0.	0.	0.	0.	0.	-.0145	.0142	.0360	-.0584	.0446	-.0284	0.	
.0660	0.	0.	0.	0.	0.	0.	-.0079	.0106	.0466	-.0715	.0666	-.0119	0.	
.0670	0.	0.	0.	0.	0.	0.	-.0031	.0068	.0507	-.0755	.0766	-.0009	0.	
.0680	0.	0.	0.	0.	0.	0.	-.0020	.0030	.0462	-.0672	.0698	.0008	0.	
.0690	0.	0.	0.	0.	0.	0.	-.0053	-.0009	.0342	-.0468	.0462	-.0042	0.	
.0700	0.	0.	0.	0.	0.	0.	-.0117	-.0047	.0180	-.0188	.0125	-.0106	0.	
.0710	0.	0.	0.	0.	0.	0.	-.0180	-.0083	.0017	.0092	-.0209	-.0164	0.	

S/RV PIPING KEWAUNEE GKWOEF 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

.0610	0.	0.	0.	0.	0.	0.	0.	-.0308	.0254	.0111	-.0258	-.0115	-.0589	0.
.0620	0.	0.	0.	0.	0.	0.	0.	-.0314	.0232	.0094	-.0227	-.0146	-.0600	0.
.0630	0.	0.	0.	0.	0.	0.	0.	-.0278	.0205	.0134	-.0281	-.0047	-.0549	0.
.0640	0.	0.	0.	0.	0.	0.	0.	-.0216	.0175	.0232	-.0416	.0176	-.0439	0.
.0650	0.	0.	0.	0.	0.	0.	0.	-.0145	.0142	.0360	-.0584	.0446	-.0284	0.
.0660	0.	0.	0.	0.	0.	0.	0.	-.0079	.0106	.0466	-.0715	.0666	-.0119	0.
.0670	0.	0.	0.	0.	0.	0.	0.	-.0031	.0068	.0507	-.0755	.0766	-.0009	0.
.0680	0.	0.	0.	0.	0.	0.	0.	-.0020	.0030	.0462	-.0672	.0698	.0008	0.
.0690	0.	0.	0.	0.	0.	0.	0.	-.0053	-.0009	.0342	-.0468	.0462	-.0042	0.
.0700	0.	0.	0.	0.	0.	0.	0.	-.0117	-.0047	.0180	-.0188	.0125	-.0106	0.
.0710	0.	0.	0.	0.	0.	0.	0.	-.0180	-.0083	.0017	.0092	-.0209	-.0164	0.

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ADLPIPE STRESS ANALYSIS

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18.29.50.

S/RV PIPING KEWAUNEE CKW08F 2 RUP DISK
2 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	67	MEMBER	4	SEQUENCE	101	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0720	0.	0.	0.	0.	0.	0.	-.0213	-.0116	-.0106	.0298	-.0446	-.0208	0.		
.0730	0.	0.	0.	0.	0.	0.	-.0198	-.0145	-.0159	.0387	-.0524	-.0198	0.		
.0740	0.	0.	0.	0.	0.	0.	-.0142	-.0170	-.0134	.0355	-.0434	-.0107	0.		
.0750	0.	0.	0.	0.	0.	0.	-.0063	-.0192	-.0049	.0236	-.0224	.0039	0.		
.0760	0.	0.	0.	0.	0.	0.	.0020	-.0210	.0054	.0090	.0021	.0185	0.		
.0770	0.	0.	0.	0.	0.	0.	.0092	-.0226	.0125	-.0016	.0213	.0293	0.		
.0780	0.	0.	0.	0.	0.	0.	.0138	-.0239	.0129	-.0031	.0278	.0343	0.		
.0790	0.	0.	0.	0.	0.	0.	.0146	-.0251	.0061	.0063	.0192	.0328	0.		
.0800	0.	0.	0.	0.	0.	0.	.0117	-.0261	-.0056	.0237	-.0004	.0264	0.		
.0810	0.	0.	0.	0.	0.	0.	.0071	-.0269	-.0188	.0440	-.0233	.0190	0.		
.0820	0.	0.	0.	0.	0.	0.	.0037	-.0276	-.0302	.0613	-.0420	.0139	0.		
.0830	0.	0.	0.	0.	0.	0.	.0036	-.0281	-.0366	.0704	-.0493	.0125	0.		
.0840	0.	0.	0.	0.	0.	0.	.0071	-.0285	-.0362	.0687	-.0411	.0161	0.		
.0850	0.	0.	0.	0.	0.	0.	.0135	-.0287	-.0297	.0580	-.0197	.0251	0.		
.0860	0.	0.	0.	0.	0.	0.	.0211	-.0289	-.0202	.0430	.0071	.0378	0.		
.0870	0.	0.	0.	0.	0.	0.	.0283	-.0290	-.0112	.0291	.0322	.0495	0.		
.0880	0.	0.	0.	0.	0.	0.	.0337	-.0291	-.0056	.0199	.0508	.0565	0.		
.0890	0.	0.	0.	0.	0.	0.	.0365	-.0291	-.0046	.0178	.0591	.0585	0.		
.0900	0.	0.	0.	0.	0.	0.	.0369	-.0290	-.0073	.0219	.0578	.0577	0.		
.0910	0.	0.	0.	0.	0.	0.	.0360	-.0288	-.0111	.0284	.0528	.0560	0.		
.0920	0.	0.	0.	0.	0.	0.	.0352	-.0284	-.0134	.0327	.0502	.0546	0.		
.0930	0.	0.	0.	0.	0.	0.	.0358	-.0278	-.0129	.0326	.0523	.0552	0.		
.0940	0.	0.	0.	0.	0.	0.	.0374	-.0269	-.0094	.0284	.0584	.0588	0.		
.0950	0.	0.	0.	0.	0.	0.	.0386	-.0257	-.0043	.0225	.0661	.0641	0.		
.0960	0.	0.	0.	0.	0.	0.	.0380	-.0242	-.0005	.0190	.0696	.0672	0.		
.0970	0.	0.	0.	0.	0.	0.	.0347	-.0225	-.0011	.0221	.0624	.0647	0.		
.0980	0.	0.	0.	0.	0.	0.	.0285	-.0206	-.0074	.0335	.0423	.0557	0.		
.0990	0.	0.	0.	0.	0.	0.	.0195	-.0183	-.0180	.0512	.0133	.0410	0.		
.1000	0.	0.	0.	0.	0.	0.	.0089	-.0158	-.0298	.0710	-.0195	.0233	0.		
.1010	0.	0.	0.	0.	0.	0.	-.0017	-.0130	-.0395	.0880	-.0492	.0065	0.		
.1020	0.	0.	0.	0.	0.	0.	-.0101	-.0098	-.0445	.0977	-.0694	-.0070	0.		
.1030	0.	0.	0.	0.	0.	0.	-.0155	-.0063	-.0440	.0979	-.0772	-.0170	0.		
.1040	0.	0.	0.	0.	0.	0.	-.0182	-.0025	-.0383	.0896	-.0743	-.0244	0.		
.1050	0.	0.	0.	0.	0.	0.	-.0194	.0014	-.0293	.0737	-.0646	-.0295	0.		
.1060	0.	0.	0.	0.	0.	0.	-.0202	.0055	-.0191	.0598	-.0529	-.0333	0.		
.1070	0.	0.	0.	0.	0.	0.	-.0214	.0097	-.0100	.0449	-.0432	-.0383	0.		
.1080	0.	0.	0.	0.	0.	0.	-.0231	.0138	-.0027	.0321	-.0371	-.0458	0.		
.1090	0.	0.	0.	0.	0.	0.	-.0250	.0178	.0032	.0207	-.0331	-.0536	0.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/3/12/02.

18.29.50.

S/RV PIPING KEWAUNEE CKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.1090	0.	0.	0.	0.	0.	0.	0.	0.	.0195	-.0183	-.0180	.0512	-.0195	.0410	0.
.1000	0.	0.	0.	0.	0.	0.	0.	0.	.0089	-.0158	-.0298	.0710	-.0195	.0233	0.
.1010	0.	0.	0.	0.	0.	0.	0.	0.	-.0017	-.0130	-.0395	.0880	-.0492	.0065	0.
.1020	0.	0.	0.	0.	0.	0.	0.	0.	-.0101	-.0098	-.0445	.0977	-.0694	-.0070	0.
.1030	0.	0.	0.	0.	0.	0.	0.	0.	-.0155	-.0063	-.0440	.0979	-.0772	-.0170	0.
.1040	0.	0.	0.	0.	0.	0.	0.	0.	-.0182	-.0025	-.0383	.0896	-.0743	-.0244	0.
.1050	0.	0.	0.	0.	0.	0.	0.	0.	-.0194	.0014	-.0293	.0757	-.0646	-.0295	0.
.1060	0.	0.	0.	0.	0.	0.	0.	0.	-.0202	.0055	-.0191	.0598	-.0529	-.0333	0.
.1070	0.	0.	0.	0.	0.	0.	0.	0.	-.0214	.0097	-.0100	.0449	-.0432	-.0383	0.
.1080	0.	0.	0.	0.	0.	0.	0.	0.	-.0231	.0138	-.0027	.0321	-.0371	-.0458	0.
.1090	0.	0.	0.	0.	0.	0.	0.	0.	-.0250	.0178	.0032	.0207	-.0331	-.0536	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02. 18.29.50.

S/RV PIPING KEWAUNEE CKW08F 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	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	VA	DX	DY	DZ	PX	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)
.1100	0.	0.	0.	0.	0.	0.	-.0266	.0217	.0092	.0101	-.0284	-.0578	0.
.1110	0.	0.	0.	0.	0.	0.	-.0275	.0253	.0156	-.0012	-.0221	-.0602	0.
.1120	0.	0.	0.	0.	0.	0.	-.0276	.0286	.0219	-.0131	-.0147	-.0622	0.
.1130	0.	0.	0.	0.	0.	0.	-.0273	.0316	.0276	-.0236	-.0072	-.0613	0.
.1140	0.	0.	0.	0.	0.	0.	-.0270	.0342	.0311	-.0301	-.0026	-.0585	0.
.1150	0.	0.	0.	0.	0.	0.	-.0271	.0362	.0311	-.0316	-.0035	-.0587	0.
.1160	0.	0.	0.	0.	0.	0.	-.0274	.0377	.0276	-.0285	-.0095	-.0623	0.
.1170	0.	0.	0.	0.	0.	0.	-.0276	.0387	.0223	-.0221	-.0177	-.0646	0.
.1180	0.	0.	0.	0.	0.	0.	-.0267	.0393	.0174	-.0148	-.0244	-.0628	0.
.1190	0.	0.	0.	0.	0.	0.	-.0234	.0395	.0150	-.0112	-.0244	-.0600	0.
.1200	0.	0.	0.	0.	0.	0.	-.0164	.0393	.0165	-.0149	-.0134	-.0553	0.
.1210	0.	0.	0.	0.	0.	0.	-.0057	.0390	.0225	-.0247	.0083	-.0434	0.
.1220	0.	0.	0.	0.	0.	0.	.0071	.0385	.0309	-.0376	.0348	-.0258	0.
.1230	0.	0.	0.	0.	0.	0.	.0195	.0378	.0386	-.0489	.0591	-.0101	0.
.1240	0.	0.	0.	0.	0.	0.	.0292	.0371	.0416	-.0537	.0735	-.0005	0.
.1250	0.	0.	0.	0.	0.	0.	.0351	.0363	.0375	-.0471	.0714	.0051	0.
.1260	0.	0.	0.	0.	0.	0.	.0370	.0356	.0259	-.0287	.0518	.0069	0.
.1270	0.	0.	0.	0.	0.	0.	.0365	.0351	.0095	-.0028	.0222	.0010	0.
.1280	0.	0.	0.	0.	0.	0.	.0355	.0347	-.0072	.0220	-.0071	-.0089	0.
.1290	0.	0.	0.	0.	0.	0.	.0361	.0347	-.0198	.0410	-.0286	-.0134	0.
.1300	0.	0.	0.	0.	0.	0.	.0392	.0350	-.0258	.0509	-.0383	-.0090	0.
.1310	0.	0.	0.	0.	0.	0.	.0443	.0356	-.0251	.0506	-.0348	-.0013	0.
.1320	0.	0.	0.	0.	0.	0.	.0502	.0364	-.0204	.0430	-.0225	.0054	0.
.1330	0.	0.	0.	0.	0.	0.	.0553	.0376	-.0158	.0352	-.0117	.0130	0.
.1340	0.	0.	0.	0.	0.	0.	.0580	.0389	-.0149	.0353	-.0104	.0197	0.
.1350	0.	0.	0.	0.	0.	0.	.0568	.0403	-.0192	.0386	-.0198	.0179	0.
.1360	0.	0.	0.	0.	0.	0.	.0519	.0418	-.0275	.0494	-.0376	.0066	0.
.1370	0.	0.	0.	0.	0.	0.	.0449	.0433	-.0375	.0628	-.0603	-.0056	0.
.1380	0.	0.	0.	0.	0.	0.	.0377	.0449	-.0454	.0743	-.0807	-.0126	0.
.1390	0.	0.	0.	0.	0.	0.	.0324	.0464	-.0480	.0774	-.0896	-.0177	0.
.1400	0.	0.	0.	0.	0.	0.	.0301	.0479	-.0442	.0689	-.0834	-.0228	0.
.1410	0.	0.	0.	0.	0.	0.	.0308	.0493	-.0354	.0521	-.0665	-.0226	0.
.1420	0.	0.	0.	0.	0.	0.	.0327	.0505	-.0239	.0317	-.0453	-.0172	0.
.1430	0.	0.	0.	0.	0.	0.	.0333	.0515	-.0122	.0114	-.0246	-.0141	0.
.1440	0.	0.	0.	0.	0.	0.	.0316	.0520	-.0029	-.0056	-.0088	-.0177	0.
.1450	0.	0.	0.	0.	0.	0.	.0279	.0524	.0020	-.0161	-.0020	-.0233	0.
.1460	0.	0.	0.	0.	0.	0.	.0233	.0524	.0026	-.0197	-.0041	-.0282	0.
.1470	0.	0.	0.	0.	0.	0.	.0181	.0521	.0014	-.0210	-.0090	-.0367	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02. 18.29.50.

S/RV PIPING KEWAUNEE CKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

.1370	0.	0.	0.	0.	0.	0.	0.	.0449	.0433	-.0375	.0628	-.0603	-.0056	0.
.1380	0.	0.	0.	0.	0.	0.	0.	.0377	.0449	-.0454	.0743	-.0807	-.0126	0.
.1390	0.	0.	0.	0.	0.	0.	0.	.0324	.0464	-.0480	.0774	-.0896	-.0177	0.
.1400	0.	0.	0.	0.	0.	0.	0.	.0301	.0479	-.0442	.0689	-.0834	-.0228	0.
.1410	0.	0.	0.	0.	0.	0.	0.	.0308	.0493	-.0354	.0521	-.0665	-.0226	0.
.1420	0.	0.	0.	0.	0.	0.	0.	.0327	.0505	-.0239	.0317	-.0453	-.0172	0.
.1430	0.	0.	0.	0.	0.	0.	0.	.0333	.0515	-.0122	.0114	-.0246	-.0141	0.
.1440	0.	0.	0.	0.	0.	0.	0.	.0316	.0520	-.0029	-.0056	-.0088	-.0177	0.
.1450	0.	0.	0.	0.	0.	0.	0.	.0279	.0524	.0020	-.0161	-.0020	-.0233	0.
.1460	0.	0.	0.	0.	0.	0.	0.	.0233	.0524	.0026	-.0197	-.0041	-.0282	0.
.1470	0.	0.	0.	0.	0.	0.	0.	.0181	.0521	.0014	-.0210	-.0090	-.0367	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.50.

S/RV PIPING KEWAUNEE GKWOOF 2 RUP DISK
2 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	DIS	TYPE	VA	DZ	RX	RY	RZ	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)	
.1480	0.	0.	0.	0.	0.	0.	.0130	.0515	.0015	-.0242	-.0103	-.0478	0.
.1490	0.	0.	0.	0.	0.	0.	.0092	.0506	.0048	-.0311	-.0058	-.0535	0.
.1500	0.	0.	0.	0.	0.	0.	.0080	.0496	.0114	-.0421	.0046	-.0512	0.
.1510	0.	0.	0.	0.	0.	0.	.0091	.0484	.0207	-.0574	.0210	-.0475	0.
.1520	0.	0.	0.	0.	0.	0.	.0112	.0470	.0306	-.0750	.0400	-.0467	0.
.1530	0.	0.	0.	0.	0.	0.	.0128	.0456	.0388	-.0890	.0542	-.0447	0.
.1540	0.	0.	0.	0.	0.	0.	.0122	.0442	.0427	-.0950	.0574	-.0412	0.
.1550	0.	0.	0.	0.	0.	0.	.0090	.0428	.0417	-.0927	.0497	-.0432	0.
.1560	0.	0.	0.	0.	0.	0.	.0036	.0414	.0362	-.0840	.0339	-.0532	0.
.1570	0.	0.	0.	0.	0.	0.	-.0027	.0402	.0277	-.0708	.0123	-.0653	0.
.1580	0.	0.	0.	0.	0.	0.	-.0088	.0392	.0185	-.0557	-.0117	-.0733	0.
.1590	0.	0.	0.	0.	0.	0.	-.0143	.0386	.0114	-.0433	-.0317	-.0792	0.
.1600	0.	0.	0.	0.	0.	0.	-.0187	.0382	.0075	-.0367	-.0436	-.0861	0.
.1610	0.	0.	0.	0.	0.	0.	-.0214	.0382	.0062	-.0346	-.0496	-.0906	0.
.1620	0.	0.	0.	0.	0.	0.	-.0229	.0386	.0064	-.0347	-.0525	-.0904	0.
.1630	0.	0.	0.	0.	0.	0.	-.0242	.0392	.0075	-.0366	-.0522	-.0905	0.
.1640	0.	0.	0.	0.	0.	0.	-.0262	.0401	.0086	-.0396	-.0496	-.0946	0.
.1650	0.	0.	0.	0.	0.	0.	-.0285	.0412	.0087	-.0414	-.0477	-.0993	0.
.1660	0.	0.	0.	0.	0.	0.	-.0310	.0424	.0074	-.0417	-.0475	-.1019	0.
.1670	0.	0.	0.	0.	0.	0.	-.0337	.0437	.0058	-.0419	-.0465	-.1044	0.
.1680	0.	0.	0.	0.	0.	0.	-.0369	.0448	.0047	-.0436	-.0428	-.1087	0.
.1690	0.	0.	0.	0.	0.	0.	-.0402	.0456	.0040	-.0457	-.0379	-.1112	0.
.1700	0.	0.	0.	0.	0.	0.	-.0430	.0460	.0030	-.0475	-.0332	-.1095	0.
.1710	0.	0.	0.	0.	0.	0.	-.0453	.0459	.0014	-.0491	-.0283	-.1072	0.
.1720	0.	0.	0.	0.	0.	0.	-.0474	.0451	-.0006	-.0502	-.0228	-.1066	0.
.1730	0.	0.	0.	0.	0.	0.	-.0493	.0435	-.0031	-.0503	-.0176	-.1045	0.
.1740	0.	0.	0.	0.	0.	0.	-.0506	.0409	-.0057	-.0490	-.0127	-.0973	0.
.1750	0.	0.	0.	0.	0.	0.	-.0511	.0375	-.0077	-.0472	-.0066	-.0874	0.
.1760	0.	0.	0.	0.	0.	0.	-.0503	.0330	-.0087	-.0466	.0028	-.0775	0.
.1770	0.	0.	0.	0.	0.	0.	-.0478	.0275	-.0084	-.0471	.0153	-.0651	0.
.1780	0.	0.	0.	0.	0.	0.	-.0437	.0212	-.0069	-.0480	.0294	-.0473	0.
.1790	0.	0.	0.	0.	0.	0.	-.0383	.0141	-.0045	-.0491	.0443	-.0265	0.
.1800	0.	0.	0.	0.	0.	0.	-.0323	.0063	-.0015	-.0502	.0595	-.0067	0.
.1810	0.	0.	0.	0.	0.	0.	-.0261	-.0019	.0012	-.0501	.0728	.0125	0.
.1820	0.	0.	0.	0.	0.	0.	-.0202	-.0104	.0031	-.0471	.0817	.0338	0.
.1830	0.	0.	0.	0.	0.	0.	-.0148	-.0187	.0040	-.0414	.0862	.0548	0.
.1840	0.	0.	0.	0.	0.	0.	-.0102	-.0269	.0040	-.0343	.0877	.0718	0.
.1850	0.	0.	0.	0.	0.	0.	-.0063	-.0344	.0034	-.0261	.0862	.0858	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.50.

S/RV PIPING KEWAUNEE GKWOOF 2 RUP DISK
2 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	0.	0.	0.	0.	0.	0.	0.	0.	-.0511	.0375	-.0077	-.0472	-.0066	-.0874	0.
.1760	0.	0.	0.	0.	0.	0.	0.	0.	-.0503	.0330	-.0087	-.0466	.0028	-.0775	0.
.1770	0.	0.	0.	0.	0.	0.	0.	0.	-.0478	.0275	-.0084	-.0471	.0153	-.0651	0.
.1780	0.	0.	0.	0.	0.	0.	0.	0.	-.0437	.0212	-.0069	-.0480	.0294	-.0473	0.
.1790	0.	0.	0.	0.	0.	0.	0.	0.	-.0383	.0141	-.0045	-.0491	.0443	-.0265	0.
.1800	0.	0.	0.	0.	0.	0.	0.	0.	-.0323	.0063	-.0015	-.0502	.0595	-.0067	0.
.1810	0.	0.	0.	0.	0.	0.	0.	0.	-.0261	-.0019	.0012	-.0501	.0728	.0125	0.
.1820	0.	0.	0.	0.	0.	0.	0.	0.	-.0202	-.0104	.0031	-.0471	.0817	.0338	0.
.1830	0.	0.	0.	0.	0.	0.	0.	0.	-.0148	-.0187	.0040	-.0414	.0862	.0548	0.
.1840	0.	0.	0.	0.	0.	0.	0.	0.	-.0102	-.0269	.0040	-.0343	.0877	.0718	0.
.1850	0.	0.	0.	0.	0.	0.	0.	0.	-.0063	-.0344	.0034	-.0261	.0862	.0858	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.29.50.

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	67	MEMBER	4	SEQUENCE	101	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1860	0.	0.	0.	0.	0.	0.	-.0032	-.0412	.0022	-.0169	.0809	.0994	0.		
.1870	0.	0.	0.	0.	0.	0.	-.0011	-.0469	.0008	-.0073	.0728	.1115	0.		
.1880	0.	0.	0.	0.	0.	0.	-.0005	-.0514	-.0007	.0017	.0627	.1189	0.		
.1890	0.	0.	0.	0.	0.	0.	-.0014	-.0546	-.0028	.0104	.0498	.1215	0.		
.1900	0.	0.	0.	0.	0.	0.	-.0038	-.0563	-.0060	.0196	.0534	.1216	0.		
.1910	0.	0.	0.	0.	0.	0.	-.0075	-.0566	-.0097	.0282	.0151	.1184	0.		
.1920	0.	0.	0.	0.	0.	0.	-.0123	-.0554	-.0131	.0347	-.0021	.1104	0.		
.1930	0.	0.	0.	0.	0.	0.	-.0176	-.0529	-.0152	.0378	-.0162	.0991	0.		
.1940	0.	0.	0.	0.	0.	0.	-.0226	-.0492	-.0154	.0366	-.0256	.0880	0.		
.1950	0.	0.	0.	0.	0.	0.	-.0272	-.0445	-.0132	.0306	-.0292	.0777	0.		
.1960	0.	0.	0.	0.	0.	0.	-.0315	-.0389	-.0088	.0199	-.0268	.0666	0.		
.1970	0.	0.	0.	0.	0.	0.	-.0359	-.0329	-.0032	.0063	-.0208	.0548	0.		
.1980	0.	0.	0.	0.	0.	0.	-.0405	-.0267	.0018	-.0071	-.0150	.0436	0.		
.1990	0.	0.	0.	0.	0.	0.	-.0459	-.0206	.0048	-.0179	-.0120	.0318	0.		
.2000	0.	0.	0.	0.	0.	0.	-.0524	-.0148	.0053	-.0253	-.0125	.0174	0.		
.2010	0.	0.	0.	0.	0.	0.	-.0596	-.0097	.0038	-.0292	-.0156	.0016	0.		
.2020	0.	0.	0.	0.	0.	0.	-.0665	-.0055	.0014	-.0308	-.0196	-.0119	0.		
.2030	0.	0.	0.	0.	0.	0.	-.0719	-.0023	-.0005	-.0324	-.0211	-.0215	0.		
.2040	0.	0.	0.	0.	0.	0.	-.0750	-.0003	-.0003	-.0363	-.0166	-.0276	0.		
.2050	0.	0.	0.	0.	0.	0.	-.0752	.0005	.0027	-.0436	-.0051	-.0292	0.		
.2060	0.	0.	0.	0.	0.	0.	-.0730	.0001	.0081	-.0530	.0115	-.0246	0.		
.2070	0.	0.	0.	0.	0.	0.	-.0690	-.0016	.0148	-.0625	.0301	-.0150	0.		
.2080	0.	0.	0.	0.	0.	0.	-.0641	-.0044	.0210	-.0700	.0472	-.0040	0.		
.2090	0.	0.	0.	0.	0.	0.	-.0590	-.0083	.0250	-.0732	.0594	.0065	0.		
.2100	0.	0.	0.	0.	0.	0.	-.0544	-.0131	.0260	-.0705	.0641	.0170	0.		
.2110	0.	0.	0.	0.	0.	0.	-.0505	-.0185	.0242	-.0621	.0615	.0275	0.		
.2120	0.	0.	0.	0.	0.	0.	-.0470	-.0244	.0207	-.0499	.0532	.0369	0.		
.2130	0.	0.	0.	0.	0.	0.	-.0434	-.0305	.0168	-.0365	.0431	.0453	0.		
.2140	0.	0.	0.	0.	0.	0.	-.0388	-.0365	.0140	-.0241	.0334	.0547	0.		
.2150	0.	0.	0.	0.	0.	0.	-.0329	-.0423	.0130	-.0144	.0259	.0659	0.		
.2160	0.	0.	0.	0.	0.	0.	-.0261	-.0475	.0141	-.0081	.0214	.0773	0.		
.2170	0.	0.	0.	0.	0.	0.	-.0188	-.0520	.0166	-.0042	.0185	.0876	0.		
.2180	0.	0.	0.	0.	0.	0.	-.0119	-.0558	.0189	-.0006	.0141	.0960	0.		
.2190	0.	0.	0.	0.	0.	0.	-.0061	-.0587	.0199	.0043	.0065	.1015	0.		
.2200	0.	0.	0.	0.	0.	0.	-.0020	-.0605	.0191	.0114	-.0048	.1026	0.		
.2210	0.	0.	0.	0.	0.	0.	.0006	-.0614	.0165	.0201	-.0190	.0991	0.		
.2220	0.	0.	0.	0.	0.	0.	.0021	-.0613	.0130	.0293	-.0338	.0926	0.		
.2230	0.	0.	0.	0.	0.	0.	.0034	-.0602	.0096	.0371	-.0467	.0848	0.		

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ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKWOFF 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

.2140	0.	0.	0.	0.	0.	0.	0.	-.0388	-.0365	.0140	-.0241	.0334	.0547	0.
.2150	0.	0.	0.	0.	0.	0.	0.	-.0329	-.0423	.0130	-.0144	.0259	.0659	0.
.2160	0.	0.	0.	0.	0.	0.	0.	-.0261	-.0475	.0141	-.0081	.0214	.0773	0.
.2170	0.	0.	0.	0.	0.	0.	0.	-.0188	-.0520	.0166	-.0042	.0183	.0876	0.
.2180	0.	0.	0.	0.	0.	0.	0.	-.0119	-.0558	.0189	-.0006	.0141	.0960	0.
.2190	0.	0.	0.	0.	0.	0.	0.	-.0061	-.0587	.0199	.0043	.0065	.1015	0.
.2200	0.	0.	0.	0.	0.	0.	0.	-.0020	-.0605	.0191	.0114	-.0048	.1026	0.
.2210	0.	0.	0.	0.	0.	0.	0.	.0006	-.0614	.0165	.0201	-.0190	.0991	0.
.2220	0.	0.	0.	0.	0.	0.	0.	.0021	-.0613	.0130	.0293	-.0338	.0926	0.
.2230	0.	0.	0.	0.	0.	0.	0.	.0034	-.0602	.0096	.0371	-.0467	.0848	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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

CONDITION 24

LOADS

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PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.2240	0.	0.	0.	0.	0.	0.	.0049	-.0582	.0077	.0416	-.0546	.0764	0.	
.2250	0.	0.	0.	0.	0.	0.	.0068	-.0553	.0078	.0417	-.0561	.0681	0.	
.2260	0.	0.	0.	0.	0.	0.	.0091	-.0518	.0097	.0382	-.0520	.0607	0.	
.2270	0.	0.	0.	0.	0.	0.	.0115	-.0476	.0122	.0327	-.0444	.0541	0.	
.2280	0.	0.	0.	0.	0.	0.	.0134	-.0430	.0141	.0274	-.0358	.0464	0.	
.2290	0.	0.	0.	0.	0.	0.	.0144	-.0382	.0142	.0238	-.0285	.0367	0.	
.2300	0.	0.	0.	0.	0.	0.	.0141	-.0332	.0121	.0231	-.0237	.0255	0.	
.2310	0.	0.	0.	0.	0.	0.	.0128	-.0282	.0081	.0252	-.0214	.0142	0.	
.2320	0.	0.	0.	0.	0.	0.	.0111	-.0233	.0033	.0287	-.0200	.0030	0.	
.2330	0.	0.	0.	0.	0.	0.	.0096	-.0186	-.0013	.0318	-.0174	-.0073	0.	
.2340	0.	0.	0.	0.	0.	0.	.0092	-.0142	-.0048	.0333	-.0120	-.0153	0.	
.2350	0.	0.	0.	0.	0.	0.	.0100	-.0101	-.0064	.0324	-.0033	-.0202	0.	
.2360	0.	0.	0.	0.	0.	0.	.0121	-.0064	-.0061	.0292	.0084	-.0224	0.	
.2370	0.	0.	0.	0.	0.	0.	.0152	-.0030	-.0045	.0247	.0217	-.0231	0.	
.2380	0.	0.	0.	0.	0.	0.	.0189	-.0001	-.0024	.0201	.0348	-.0229	0.	
.2390	0.	0.	0.	0.	0.	0.	.0228	.0025	-.0004	.0168	.0455	-.0223	0.	
.2400	0.	0.	0.	0.	0.	0.	.0266	.0048	.0009	.0156	.0527	-.0221	0.	
.2410	0.	0.	0.	0.	0.	0.	.0299	.0068	.0016	.0165	.0562	-.0228	0.	
.2420	0.	0.	0.	0.	0.	0.	.0328	.0086	.0016	.0192	.0559	-.0245	0.	
.2430	0.	0.	0.	0.	0.	0.	.0356	.0103	.0013	.0232	.0525	-.0267	0.	
.2440	0.	0.	0.	0.	0.	0.	.0381	.0119	.0011	.0277	.0467	-.0295	0.	
.2450	0.	0.	0.	0.	0.	0.	.0403	.0136	.0011	.0323	.0391	-.0331	0.	
.2460	0.	0.	0.	0.	0.	0.	.0420	.0154	.0013	.0369	.0299	-.0374	0.	
.2470	0.	0.	0.	0.	0.	0.	.0432	.0174	.0015	.0417	.0190	-.0424	0.	
.2480	0.	0.	0.	0.	0.	0.	.0437	.0196	.0014	.0467	.0068	-.0485	0.	
.2490	0.	0.	0.	0.	0.	0.	.0435	.0220	.0009	.0519	-.0065	-.0561	0.	
.2500	0.	0.	0.	0.	0.	0.	.0424	.0246	-.0000	.0571	-.0202	-.0649	0.	
.2510	0.	0.	0.	0.	0.	0.	.0406	.0274	-.0010	.0618	-.0336	-.0741	0.	
.2520	0.	0.	0.	0.	0.	0.	.0381	.0304	-.0019	.0656	-.0458	-.0833	0.	
.2530	0.	0.	0.	0.	0.	0.	.0353	.0335	-.0024	.0678	-.0556	-.0924	0.	
.2540	0.	0.	0.	0.	0.	0.	.0324	.0366	-.0026	.0681	-.0625	-.1011	0.	
.2550	0.	0.	0.	0.	0.	0.	.0296	.0398	-.0025	.0667	-.0663	-.1089	0.	
.2560	0.	0.	0.	0.	0.	0.	.0267	.0428	-.0020	.0638	-.0669	-.1153	0.	
.2570	0.	0.	0.	0.	0.	0.	.0238	.0455	-.0013	.0598	-.0645	-.1206	0.	
.2580	0.	0.	0.	0.	0.	0.	.0209	.0480	-.0005	.0549	-.0594	-.1246	0.	
.2590	0.	0.	0.	0.	0.	0.	.0183	.0500	.0000	.0497	-.0520	-.1271	0.	
.2600	0.	0.	0.	0.	0.	0.	.0161	.0516	.0003	.0444	-.0428	-.1280	0.	
.2610	0.	0.	0.	0.	0.	0.	.0143	.0527	.0004	.0389	-.0320	-.1273	0.	

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ADLPIPE STRESS ANALYSIS

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18.29.50.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.2510	0.	0.	0.	0.	0.	0.	0.	.0406	.0274	-.0010	.0618	-.0336	-.0741	0.
.2520	0.	0.	0.	0.	0.	0.	0.	.0381	.0304	-.0019	.0656	-.0458	-.0833	0.
.2530	0.	0.	0.	0.	0.	0.	0.	.0393	.0335	-.0024	.0678	-.0556	-.0924	0.
.2540	0.	0.	0.	0.	0.	0.	0.	.0324	.0366	-.0026	.0681	-.0625	-.1011	0.
.2550	0.	0.	0.	0.	0.	0.	0.	.0296	.0398	-.0025	.0667	-.0663	-.1089	0.
.2560	0.	0.	0.	0.	0.	0.	0.	.0267	.0428	-.0020	.0638	-.0669	-.1153	0.
.2570	0.	0.	0.	0.	0.	0.	0.	.0238	.0455	-.0015	.0598	-.0645	-.1206	0.
.2580	0.	0.	0.	0.	0.	0.	0.	.0209	.0480	-.0005	.0549	-.0594	-.1246	0.
.2590	0.	0.	0.	0.	0.	0.	0.	.0183	.0500	.0000	.0497	-.0520	-.1271	0.
.2600	0.	0.	0.	0.	0.	0.	0.	.0161	.0516	.0003	.0444	-.0428	-.1280	0.
.2610	0.	0.	0.	0.	0.	0.	0.	.0143	.0527	.0004	.0389	-.0320	-.1273	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.29.50.

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	DIS	TYPE	VA	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)
.2620	0.	0.	0.	0.	0.	0.	.0130	.0531	.0004	.0336	-.0202	-.1247	0.
.2630	0.	0.	0.	0.	0.	0.	.0122	.0530	.0003	.0286	-.0080	-.1202	0.
.2640	0.	0.	0.	0.	0.	0.	.0121	.0522	-.0002	.0244	.0040	-.1143	0.
.2650	0.	0.	0.	0.	0.	0.	.0127	.0508	-.0011	.0210	.0152	-.1074	0.
.2660	0.	0.	0.	0.	0.	0.	.0140	.0488	-.0024	.0188	.0250	-.0995	0.
.2670	0.	0.	0.	0.	0.	0.	.0158	.0463	-.0041	.0180	.0332	-.0907	0.
.2680	0.	0.	0.	0.	0.	0.	.0182	.0434	-.0062	.0184	.0393	-.0814	0.
.2690	0.	0.	0.	0.	0.	0.	.0212	.0400	-.0086	.0200	.0434	-.0721	0.
.2700	0.	0.	0.	0.	0.	0.	.0248	.0364	-.0112	.0224	.0455	-.0627	0.
.2710	0.	0.	0.	0.	0.	0.	.0289	.0325	-.0136	.0252	.0456	-.0531	0.
.2720	0.	0.	0.	0.	0.	0.	.0334	.0286	-.0159	.0284	.0438	-.0434	0.
.2730	0.	0.	0.	0.	0.	0.	.0383	.0246	-.0181	.0319	.0402	-.0342	0.
.2740	0.	0.	0.	0.	0.	0.	.0432	.0207	-.0204	.0357	.0345	-.0259	0.
.2750	0.	0.	0.	0.	0.	0.	.0480	.0168	-.0229	.0399	.0266	-.0182	0.
.2760	0.	0.	0.	0.	0.	0.	.0523	.0132	-.0256	.0446	.0169	-.0108	0.
.2770	0.	0.	0.	0.	0.	0.	.0561	.0098	-.0283	.0495	.0058	-.0044	0.
.2780	0.	0.	0.	0.	0.	0.	.0593	.0066	-.0311	.0543	-.0059	.0009	0.
.2790	0.	0.	0.	0.	0.	0.	.0623	.0037	-.0338	.0585	-.0176	.0057	0.
.2800	0.	0.	0.	0.	0.	0.	.0647	.0011	-.0361	.0616	-.0284	.0109	0.
.2810	0.	0.	0.	0.	0.	0.	.0665	-.0013	-.0375	.0633	-.0375	.0163	0.
.2820	0.	0.	0.	0.	0.	0.	.0676	-.0033	-.0382	.0635	-.0445	.0217	0.
.2830	0.	0.	0.	0.	0.	0.	.0681	-.0051	-.0386	.0625	-.0497	.0271	0.
.2840	0.	0.	0.	0.	0.	0.	.0677	-.0066	-.0388	.0608	-.0536	.0327	0.
.2850	0.	0.	0.	0.	0.	0.	.0661	-.0078	-.0391	.0589	-.0566	.0381	0.
.2860	0.	0.	0.	0.	0.	0.	.0632	-.0088	-.0396	.0570	-.0586	.0425	0.
.2870	0.	0.	0.	0.	0.	0.	.0592	-.0095	-.0403	.0550	-.0597	.0461	0.
.2880	0.	0.	0.	0.	0.	0.	.0544	-.0100	-.0410	.0526	-.0598	.0493	0.
.2890	0.	0.	0.	0.	0.	0.	.0490	-.0101	-.0412	.0491	-.0579	.0522	0.
.2900	0.	0.	0.	0.	0.	0.	.0432	-.0100	-.0402	.0435	-.0529	.0548	0.
.2910	0.	0.	0.	0.	0.	0.	.0373	-.0095	-.0377	.0355	-.0446	.0576	0.
.2920	0.	0.	0.	0.	0.	0.	.0316	-.0087	-.0337	.0250	-.0335	.0607	0.
.2930	0.	0.	0.	0.	0.	0.	.0262	-.0075	-.0286	.0127	-.0204	.0637	0.
.2940	0.	0.	0.	0.	0.	0.	.0206	-.0060	-.0227	-.0008	-.0066	.0657	0.
.2950	0.	0.	0.	0.	0.	0.	.0147	-.0041	-.0167	-.0144	.0064	.0663	0.
.2960	0.	0.	0.	0.	0.	0.	.0082	-.0019	-.0111	-.0269	.0168	.0657	0.
.2970	0.	0.	0.	0.	0.	0.	.0014	.0006	-.0063	-.0379	.0239	.0634	0.
.2980	0.	0.	0.	0.	0.	0.	-.0056	.0034	-.0023	-.0475	.0277	.0590	0.
.2990	0.	0.	0.	0.	0.	0.	-.0127	.0063	.0012	-.0561	.0286	.0531	0.

ADLPIPE PAGE 2698

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.50.

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

.2890	0.	0.	0.	0.	0.	0.	0.	.0490	-.0101	-.0412	.0491	-.0579	.0522	0.
.2900	0.	0.	0.	0.	0.	0.	0.	.0432	-.0100	-.0402	.0435	-.0529	.0548	0.
.2910	0.	0.	0.	0.	0.	0.	0.	.0373	-.0095	-.0377	.0355	-.0446	.0576	0.
.2920	0.	0.	0.	0.	0.	0.	0.	.0316	-.0087	-.0337	.0250	-.0335	.0607	0.
.2930	0.	0.	0.	0.	0.	0.	0.	.0262	-.0075	-.0286	.0127	-.0204	.0637	0.
.2940	0.	0.	0.	0.	0.	0.	0.	.0206	-.0060	-.0227	-.0008	-.0066	.0657	0.
.2950	0.	0.	0.	0.	0.	0.	0.	.0147	-.0041	-.0167	-.0144	.0064	.0663	0.
.2960	0.	0.	0.	0.	0.	0.	0.	.0082	-.0019	-.0111	-.0269	.0168	.0657	0.
.2970	0.	0.	0.	0.	0.	0.	0.	.0014	.0006	-.0063	-.0379	.0239	.0634	0.
.2980	0.	0.	0.	0.	0.	0.	0.	-.0056	.0034	-.0023	-.0475	.0277	.0590	0.
.2990	0.	0.	0.	0.	0.	0.	0.	-.0127	.0063	.0012	-.0561	.0286	.0531	0.

ADLPIPE PAGE 2698

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.50.

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	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	VA	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)
.3000	0.	0.	0.	0.	0.	0.	-.0194	.0094	.0047	-.0638	.0274	.0471	0.
.3010	0.	0.	0.	0.	0.	0.	-.0256	.0126	.0084	-.0713	.0249	.0417	0.
.3020	0.	0.	0.	0.	0.	0.	-.0308	.0157	.0125	-.0788	.0220	.0362	0.
.3030	0.	0.	0.	0.	0.	0.	-.0350	.0187	.0167	-.0862	.0187	.0307	0.
.3040	0.	0.	0.	0.	0.	0.	-.0383	.0216	.0208	-.0927	.0146	.0262	0.
.3050	0.	0.	0.	0.	0.	0.	-.0409	.0242	.0245	-.0978	.0094	.0227	0.
.3060	0.	0.	0.	0.	0.	0.	-.0429	.0265	.0275	-.1012	.0031	.0195	0.
.3070	0.	0.	0.	0.	0.	0.	-.0442	.0285	.0296	-.1028	-.0043	.0163	0.
.3080	0.	0.	0.	0.	0.	0.	-.0448	.0300	.0307	-.1027	-.0124	.0139	0.
.3090	0.	0.	0.	0.	0.	0.	-.0448	.0312	.0311	-.1011	-.0206	.0132	0.
.3100	0.	0.	0.	0.	0.	0.	-.0442	.0320	.0312	-.0988	-.0277	.0137	0.
.3110	0.	0.	0.	0.	0.	0.	-.0430	.0324	.0311	-.0962	-.0330	.0153	0.
.3120	0.	0.	0.	0.	0.	0.	-.0410	.0326	.0306	-.0932	-.0365	.0182	0.
.3130	0.	0.	0.	0.	0.	0.	-.0385	.0324	.0296	-.0898	-.0385	.0223	0.
.3140	0.	0.	0.	0.	0.	0.	-.0358	.0321	.0281	-.0860	-.0389	.0269	0.
.3150	0.	0.	0.	0.	0.	0.	-.0333	.0316	.0261	-.0819	-.0379	.0315	0.
.3160	0.	0.	0.	0.	0.	0.	-.0309	.0310	.0234	-.0773	-.0359	.0363	0.
.3170	0.	0.	0.	0.	0.	0.	-.0286	.0304	.0200	-.0725	-.0331	.0411	0.
.3180	0.	0.	0.	0.	0.	0.	-.0264	.0298	.0163	-.0680	-.0292	.0453	0.
.3190	0.	0.	0.	0.	0.	0.	-.0244	.0291	.0126	-.0642	-.0238	.0489	0.
.3200	0.	0.	0.	0.	0.	0.	-.0226	.0286	.0093	-.0614	-.0170	.0526	0.
.3210	0.	0.	0.	0.	0.	0.	-.0209	.0280	.0062	-.0595	-.0092	.0562	0.
.3220	0.	0.	0.	0.	0.	0.	-.0193	.0275	.0034	-.0585	-.0007	.0590	0.
.3230	0.	0.	0.	0.	0.	0.	-.0178	.0269	.0008	-.0582	.0081	.0606	0.
.3240	0.	0.	0.	0.	0.	0.	-.0165	.0261	-.0014	-.0583	.0164	.0616	0.
.3250	0.	0.	0.	0.	0.	0.	-.0154	.0252	-.0033	-.0585	.0238	.0625	0.
.3260	0.	0.	0.	0.	0.	0.	-.0145	.0239	-.0050	-.0588	.0302	.0626	0.
.3270	0.	0.	0.	0.	0.	0.	-.0135	.0224	-.0062	-.0592	.0356	.0618	0.
.3280	0.	0.	0.	0.	0.	0.	-.0124	.0204	-.0071	-.0595	.0398	.0606	0.
.3290	0.	0.	0.	0.	0.	0.	-.0112	.0179	-.0074	-.0597	.0426	.0598	0.
.3300	0.	0.	0.	0.	0.	0.	-.0098	.0148	-.0072	-.0595	.0443	.0592	0.
.3310	0.	0.	0.	0.	0.	0.	-.0084	.0112	-.0066	-.0589	.0447	.0583	0.
.3320	0.	0.	0.	0.	0.	0.	-.0068	.0070	-.0059	-.0576	.0435	.0571	0.
.3330	0.	0.	0.	0.	0.	0.	-.0051	.0023	-.0052	-.0552	.0406	.0563	0.
.3340	0.	0.	0.	0.	0.	0.	-.0034	-.0029	-.0043	-.0521	.0365	.0557	0.
.3350	0.	0.	0.	0.	0.	0.	-.0019	-.0085	-.0033	-.0483	.0314	.0549	0.
.3360	0.	0.	0.	0.	0.	0.	-.0004	-.0145	-.0023	-.0441	.0259	.0540	0.
.3370	0.	0.	0.	0.	0.	0.	.0012	-.0206	-.0012	-.0396	.0199	.0534	0.

ADLPIPE PAGE 2699

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.50.

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

.3270	0.	0.	0.	0.	0.	0.	0.	-.0135	.0224	-.0062	-.0592	.0356	.0618	0.
.3280	0.	0.	0.	0.	0.	0.	0.	-.0124	.0204	-.0071	-.0595	.0398	.0606	0.
.3290	0.	0.	0.	0.	0.	0.	0.	-.0112	.0179	-.0074	-.0597	.0426	.0598	0.
.3300	0.	0.	0.	0.	0.	0.	0.	-.0098	.0148	-.0072	-.0595	.0443	.0592	0.
.3310	0.	0.	0.	0.	0.	0.	0.	-.0084	.0112	-.0066	-.0589	.0447	.0583	0.
.3320	0.	0.	0.	0.	0.	0.	0.	-.0068	.0070	-.0059	-.0576	.0435	.0571	0.
.3330	0.	0.	0.	0.	0.	0.	0.	-.0051	.0023	-.0052	-.0552	.0406	.0563	0.
.3340	0.	0.	0.	0.	0.	0.	0.	-.0034	-.0029	-.0043	-.0521	.0365	.0557	0.
.3350	0.	0.	0.	0.	0.	0.	0.	-.0019	-.0085	-.0035	-.0483	.0314	.0549	0.
.3360	0.	0.	0.	0.	0.	0.	0.	-.0004	-.0145	-.0023	-.0441	.0259	.0540	0.
.3370	0.	0.	0.	0.	0.	0.	0.	.0012	-.0206	-.0012	-.0396	.0199	.0534	0.

ADLPIPE PAGE 2699

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.50.

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	DIS	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.3380	0.	0.	0.	0.	0.	0.	.0027	-.0268	-.0002	-.0351	.0141	.0526	0.	
.3390	0.	0.	0.	0.	0.	0.	.0039	-.0330	.0010	-.0307	.0085	.0515	0.	
.3400	0.	0.	0.	0.	0.	0.	.0046	-.0390	.0019	-.0264	.0033	.0498	0.	
.3410	0.	0.	0.	0.	0.	0.	.0049	-.0446	.0025	-.0221	-.0018	.0476	0.	
.3420	0.	0.	0.	0.	0.	0.	.0048	-.0499	.0027	-.0179	-.0066	.0445	0.	
.3430	0.	0.	0.	0.	0.	0.	.0041	-.0546	.0025	-.0141	-.0106	.0401	0.	
.3440	0.	0.	0.	0.	0.	0.	.0030	-.0588	.0022	-.0110	-.0135	.0349	0.	
.3450	0.	0.	0.	0.	0.	0.	.0015	-.0623	.0019	-.0088	-.0149	.0294	0.	
.3460	0.	0.	0.	0.	0.	0.	-.0001	-.0652	.0017	-.0078	-.0144	.0235	0.	
.3470	0.	0.	0.	0.	0.	0.	-.0017	-.0674	.0017	-.0081	-.0119	.0169	0.	
.3480	0.	0.	0.	0.	0.	0.	-.0034	-.0690	.0019	-.0095	-.0076	.0100	0.	
.3490	0.	0.	0.	0.	0.	0.	-.0051	-.0701	.0021	-.0115	-.0020	.0033	0.	
.3500	0.	0.	0.	0.	0.	0.	-.0069	-.0707	.0022	-.0137	.0043	-.0033	0.	
.3510	0.	0.	0.	0.	0.	0.	-.0086	-.0710	.0020	-.0157	.0108	-.0102	0.	
.3520	0.	0.	0.	0.	0.	0.	-.0101	-.0710	.0014	-.0172	.0172	-.0172	0.	
.3530	0.	0.	0.	0.	0.	0.	-.0114	-.0708	.0004	-.0179	.0232	-.0238	0.	
.3540	0.	0.	0.	0.	0.	0.	-.0123	-.0706	-.0007	-.0179	.0287	-.0293	0.	
.3550	0.	0.	0.	0.	0.	0.	-.0127	-.0704	-.0018	-.0172	.0340	-.0339	0.	
.3560	0.	0.	0.	0.	0.	0.	-.0124	-.0704	-.0029	-.0159	.0390	-.0373	0.	
.3570	0.	0.	0.	0.	0.	0.	-.0112	-.0706	-.0039	-.0138	.0434	-.0391	0.	
.3580	0.	0.	0.	0.	0.	0.	-.0093	-.0711	-.0049	-.0108	.0468	-.0392	0.	
.3590	0.	0.	0.	0.	0.	0.	-.0069	-.0718	-.0060	-.0065	.0489	-.0379	0.	
.3600	0.	0.	0.	0.	0.	0.	-.0040	-.0729	-.0073	-.0008	.0495	-.0354	0.	
.3610	0.	0.	0.	0.	0.	0.	-.0006	-.0742	-.0090	.0066	.0480	-.0317	0.	
.3620	0.	0.	0.	0.	0.	0.	.0031	-.0758	-.0111	.0154	.0446	-.0270	0.	
.3630	0.	0.	0.	0.	0.	0.	.0072	-.0776	-.0133	.0252	.0397	-.0214	0.	
.3640	0.	0.	0.	0.	0.	0.	.0114	-.0795	-.0155	.0356	.0340	-.0149	0.	
.3650	0.	0.	0.	0.	0.	0.	.0160	-.0814	-.0173	.0461	.0281	-.0074	0.	
.3660	0.	0.	0.	0.	0.	0.	.0208	-.0832	-.0186	.0561	.0225	.0011	0.	
.3670	0.	0.	0.	0.	0.	0.	.0258	-.0848	-.0194	.0653	.0174	.0100	0.	
.3680	0.	0.	0.	0.	0.	0.	.0308	-.0861	-.0196	.0736	.0130	.0189	0.	
.3690	0.	0.	0.	0.	0.	0.	.0353	-.0870	-.0195	.0813	.0090	.0277	0.	
.3700	0.	0.	0.	0.	0.	0.	.0392	-.0873	-.0193	.0885	.0050	.0360	0.	
.3710	0.	0.	0.	0.	0.	0.	.0423	-.0871	-.0192	.0953	.0009	.0430	0.	
.3720	0.	0.	0.	0.	0.	0.	.0445	-.0861	-.0193	.1017	-.0035	.0481	0.	
.3730	0.	0.	0.	0.	0.	0.	.0455	-.0844	-.0195	.1075	-.0080	.0516	0.	
.3740	0.	0.	0.	0.	0.	0.	.0456	-.0819	-.0197	.1125	-.0121	.0536	0.	
.3750	0.	0.	0.	0.	0.	0.	.0446	-.0786	-.0196	.1160	-.0154	.0542	0.	

ADLPIPE PAGE 2700

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.50.

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

.3650	0.	0.	0.	0.	0.	0.	0.	.0160	-.0814	-.0173	.0461	.0281	-.0074	0.
.3660	0.	0.	0.	0.	0.	0.	0.	.0208	-.0832	-.0186	.0561	.0225	.0011	0.
.3670	0.	0.	0.	0.	0.	0.	0.	.0258	-.0848	-.0194	.0653	.0174	.0100	0.
.3680	0.	0.	0.	0.	0.	0.	0.	.0308	-.0861	-.0196	.0736	.0130	.0189	0.
.3690	0.	0.	0.	0.	0.	0.	0.	.0353	-.0870	-.0195	.0813	.0090	.0277	0.
.3700	0.	0.	0.	0.	0.	0.	0.	.0392	-.0873	-.0193	.0885	.0050	.0360	0.
.3710	0.	0.	0.	0.	0.	0.	0.	.0423	-.0871	-.0192	.0953	.0009	.0430	0.
.3720	0.	0.	0.	0.	0.	0.	0.	.0445	-.0861	-.0193	.1017	-.0035	.0481	0.
.3730	0.	0.	0.	0.	0.	0.	0.	.0455	-.0844	-.0195	.1075	-.0080	.0516	0.
.3740	0.	0.	0.	0.	0.	0.	0.	.0456	-.0819	-.0197	.1125	-.0121	.0536	0.
.3750	0.	0.	0.	0.	0.	0.	0.	.0446	-.0786	-.0196	.1160	-.0154	.0542	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/3/12/02.

18.29.50.

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	67	MEMBER	4	SEQUENCE	101	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3760	0.	0.	0.	0.	0.	0.	.0429	-.0744	-.0189	.1178	-.0171	.0531	0.		
.3770	0.	0.	0.	0.	0.	0.	.0406	-.0694	-.0176	.1174	-.0169	.0506	0.		
.3780	0.	0.	0.	0.	0.	0.	.0377	-.0636	-.0155	.1149	-.0149	.0470	0.		
.3790	0.	0.	0.	0.	0.	0.	.0343	-.0571	-.0127	.1104	-.0111	.0425	0.		
.3800	0.	0.	0.	0.	0.	0.	.0303	-.0500	-.0092	.1042	-.0060	.0369	0.		
.3810	0.	0.	0.	0.	0.	0.	.0258	-.0424	-.0055	.0967	-.0002	.0301	0.		
.3820	0.	0.	0.	0.	0.	0.	.0209	-.0345	-.0018	.0885	.0056	.0222	0.		
.3830	0.	0.	0.	0.	0.	0.	.0156	-.0263	.0019	.0800	.0110	.0136	0.		
.3840	0.	0.	0.	0.	0.	0.	.0100	-.0180	.0053	.0712	.0156	.0043	0.		
.3850	0.	0.	0.	0.	0.	0.	-.0042	-.0098	.0087	.0626	.0195	-.0052	0.		
.3860	0.	0.	0.	0.	0.	0.	-.0015	-.0018	.0118	.0541	.0224	-.0146	0.		
.3870	0.	0.	0.	0.	0.	0.	-.0069	.0058	.0147	.0459	.0245	-.0235	0.		
.3880	0.	0.	0.	0.	0.	0.	-.0118	.0128	.0175	.0381	.0257	-.0317	0.		
.3890	0.	0.	0.	0.	0.	0.	-.0163	.0192	.0201	.0309	.0259	-.0388	0.		
.3900	0.	0.	0.	0.	0.	0.	-.0201	.0247	.0225	.0246	.0251	-.0446	0.		
.3910	0.	0.	0.	0.	0.	0.	-.0233	.0294	.0244	.0194	.0230	-.0492	0.		
.3920	0.	0.	0.	0.	0.	0.	-.0258	.0330	.0258	.0156	.0195	-.0529	0.		
.3930	0.	0.	0.	0.	0.	0.	-.0276	.0357	.0265	.0132	.0146	-.0554	0.		
.3940	0.	0.	0.	0.	0.	0.	-.0287	.0373	.0267	.0123	.0085	-.0564	0.		
.3950	0.	0.	0.	0.	0.	0.	-.0292	.0378	.0265	.0126	.0015	-.0559	0.		
.3960	0.	0.	0.	0.	0.	0.	-.0291	.0374	.0259	.0140	-.0061	-.0542	0.		
.3970	0.	0.	0.	0.	0.	0.	-.0282	.0361	.0250	.0162	-.0137	-.0516	0.		
.3980	0.	0.	0.	0.	0.	0.	-.0268	.0339	.0238	.0190	-.0214	-.0478	0.		
.3990	0.	0.	0.	0.	0.	0.	-.0250	.0310	.0224	.0222	-.0287	-.0429	0.		
.4000	0.	0.	0.	0.	0.	0.	-.0229	.0275	.0210	.0256	-.0355	-.0374	0.		

MAXIMUM VALUE OF DISCONTINUITY FORCE OCCURS AT

TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	FORCE
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(LB)
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.

SECTION	67	MEMBER	4	SEQUENCE	101	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/3/12/02.

18.29.50.

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

TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	FORCE (LB)
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.

SECTION	67	MEMBER	4	SEQUENCE	101	LOCATION	END	TYPE	VA	DX	DY	DZ	RX	RY	RZ	STRESS (PSI)
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(PSI)

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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

CONDITION 24
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ENGLISH UNITS

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

SECTION	67	MEMBER	4	SEQUENCE	101	LOCATION	END	TYPE	VA	DX	DY	DZ	RX	RY	RZ	STRESS (PSI)
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(PSI)
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
.0010	-0.	-0.	0.	-0.	-0.	-0.	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	0.
.0020	-0.	-0.	0.	-0.	-0.	-0.	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	0.
.0030	-0.	-0.	0.	-0.	0.	-0.	0.0000	0.0000	0.0000	-0.0000	0.0000	0.0000	-0.0000	0.0000	-0.0000	1.
.0040	-0.	-0.	0.	-0.	0.	-0.	-0.0000	0.0000	0.0000	-0.0000	0.0000	0.0000	-0.0000	0.0000	-0.0000	1.
.0050	-1.	-0.	0.	-0.	0.	-0.	-0.0000	0.0000	-0.0000	0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	1.
.0060	-2.	-0.	1.	0.	0.	-0.	-0.0000	0.0000	-0.0000	0.0001	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001	2.
.0070	-4.	-1.	1.	0.	1.	-1.	-0.0001	-0.0000	-0.0001	0.0002	-0.0002	-0.0002	0.0002	-0.0002	-0.0001	4.
.0080	-7.	-3.	1.	0.	1.	-2.	-0.0002	-0.0000	-0.0003	0.0005	-0.0005	-0.0005	0.0005	-0.0005	-0.0002	8.
.0090	-11.	-5.	2.	1.	1.	-5.	-0.0005	-0.0000	-0.0006	0.0010	-0.0010	-0.0010	0.0010	-0.0014	-0.0005	15.
.0100	-17.	-8.	2.	2.	1.	-7.	-0.0008	-0.0000	-0.0011	0.0017	-0.0017	-0.0017	0.0017	-0.0024	-0.0008	23.
.0110	-25.	-12.	1.	4.	1.	-10.	-0.0013	-0.0000	-0.0018	0.0028	-0.0028	-0.0028	0.0028	-0.0039	-0.0013	34.
.0120	-35.	-17.	0.	7.	1.	-15.	-0.0020	-0.0000	-0.0027	0.0043	-0.0043	-0.0043	0.0043	-0.0061	-0.0020	51.
.0130	-47.	-26.	-2.	10.	1.	-23.	-0.0030	-0.0000	-0.0040	0.0063	-0.0063	-0.0063	0.0063	-0.0090	-0.0028	76.
.0140	-58.	-39.	-7.	13.	-1.	-34.	-0.0043	-0.0000	-0.0055	0.0087	-0.0087	-0.0087	0.0087	-0.0127	-0.0039	110.
.0150	-69.	-53.	-13.	16.	-4.	-45.	-0.0059	-0.0000	-0.0072	0.0116	-0.0116	-0.0116	0.0116	-0.0170	-0.0051	147.
.0160	-77.	-63.	-20.	22.	-8.	-54.	-0.0075	-0.0000	-0.0090	0.0145	-0.0145	-0.0145	0.0145	-0.0214	-0.0065	180.
.0170	-81.	-66.	-28.	28.	-12.	-60.	-0.0091	-0.0000	-0.0106	0.0170	-0.0170	-0.0170	0.0170	-0.0255	-0.0082	204.
.0180	-80.	-63.	-34.	33.	-17.	-62.	-0.0102	-0.0001	-0.0117	0.0185	-0.0185	-0.0185	0.0185	-0.0279	-0.0098	218.
.0190	-69.	-52.	-39.	34.	-21.	-59.	-0.0108	-0.0001	-0.0118	0.0183	-0.0183	-0.0183	0.0183	-0.0285	-0.0111	218.
.0200	-48.	-35.	-41.	31.	-24.	-51.	-0.0106	-0.0001	-0.0104	0.0158	-0.0158	-0.0158	0.0158	-0.0255	-0.0115	197.
.0210	-17.	-8.	-39.	24.	-26.	-32.	-0.0093	-0.0001	-0.0074	0.0105	-0.0105	-0.0105	0.0105	-0.0191	-0.0106	146.
.0220	28.	33.	-35.	18.	-26.	5.	-0.0070	-0.0002	-0.0028	0.0029	-0.0029	-0.0029	0.0029	-0.0092	-0.0080	97.
.0230	74.	78.	-28.	10.	-22.	51.	-0.0040	-0.0003	0.0028	-0.0063	0.0030	-0.0042	-0.0063	0.0030	-0.0042	171.
.0240	107.	117.	-16.	-1.	-16.	92.	-0.0009	-0.0005	0.0086	-0.0155	0.0155	-0.0000	-0.0155	0.0155	-0.0000	285.
.0250	136.	136.	-3.	-17.	-12.	115.	0.0016	-0.0008	0.0135	-0.0234	0.0262	0.0039	-0.0234	0.0262	0.0039	356.
.0260	181.	143.	2.	-34.	-18.	120.	0.0033	-0.0011	0.0169	-0.0288	0.0338	0.0067	-0.0288	0.0338	0.0067	382.
.0270	234.	168.	-1.	-35.	-28.	137.	0.0047	-0.0016	0.0183	-0.0312	0.0379	0.0086	-0.0312	0.0379	0.0086	439.
.0280	244.	216.	3.	-14.	-29.	168.	0.0057	-0.0022	0.0174	-0.0304	0.0385	0.0089	-0.0304	0.0385	0.0089	521.
.0290	224.	234.	10.	-3.	-26.	160.	0.0061	-0.0029	0.0150	-0.0275	0.0357	0.0076	-0.0275	0.0357	0.0076	493.
.0300	278.	198.	-9.	-18.	-42.	106.	0.0060	-0.0038	0.0129	-0.0239	0.0324	0.0075	-0.0239	0.0324	0.0075	352.
.0310	347.	155.	-25.	-36.	-58.	66.	0.0066	-0.0047	0.0122	-0.0216	0.0322	0.0104	-0.0216	0.0322	0.0104	289.
.0320	341.	148.	-12.	-44.	-47.	60.	0.0092	-0.0056	0.0127	-0.0223	0.0358	0.0143	-0.0223	0.0358	0.0143	268.
.0330	303.	153.	8.	-54.	-18.	59.	0.0135	-0.0065	0.0145	-0.0255	0.0425	0.0188	-0.0255	0.0425	0.0188	249.
.0340	274.	115.	27.	-81.	11.	42.	0.0177	-0.0075	0.0175	-0.0293	0.0506	0.0258	-0.0293	0.0506	0.0258	278.
.0350	227.	18.	56.	-123.	35.	-0.	0.0203	-0.0083	0.0202	-0.0310	0.0571	0.0346	-0.0310	0.0571	0.0346	390.
.0360	170.	-95.	72.	-159.	52.	-67.	0.0211	-0.0091	0.0196	-0.0276	0.0563	0.0400	-0.0276	0.0563	0.0400	549.
.0370	113.	-166.	60.	-161.	65.	-131.	0.0204	-0.0098	0.0138	-0.0173	0.0453	0.0391	-0.0173	0.0453	0.0391	662.

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ADLPIPE STRESS ANALYSIS

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

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

.0270	234.	168.	-1.	-35.	-28.	137.	.0047	-.0016	.0183	-.0312	.0379	.0086	582.
.0280	244.	216.	3.	-14.	-29.	168.	.0057	-.0022	.0174	-.0304	.0385	.0089	521.
.0290	224.	234.	19.	-3.	-26.	160.	.0061	-.0029	.0150	-.0275	.0357	.0076	493.
.0300	270.	198.	-9.	-18.	-42.	106.	.0060	-.0038	.0129	-.0239	.0324	.0075	352.
.0310	347.	155.	-25.	-26.	-58.	66.	.0066	-.0047	.0122	-.0216	.0322	.0104	289.
.0320	341.	148.	-12.	-44.	-47.	60.	.0092	-.0056	.0127	-.0223	.0358	.0143	268.
.0330	303.	153.	8.	-54.	-18.	59.	.0135	-.0065	.0145	-.0255	.0423	.0188	249.
.0340	274.	115.	27.	-81.	11.	42.	.0177	-.0075	.0175	-.0293	.0506	.0258	278.
.0350	227.	18.	56.	-123.	35.	-0.	.0203	-.0083	.0202	-.0310	.0571	.0346	390.
.0360	170.	-95.	72.	-159.	52.	-67.	.0211	-.0091	.0196	-.0276	.0563	.0400	549.
.0370	113.	-166.	60.	-161.	65.	-131.	.0204	-.0098	.0138	-.0173	.0453	.0391	662.

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DIS/ADLPIPE

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

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ENGLISH UNITS

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

SECTION	67	MEMBER	4	SEQUENCE	101	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0380	5.	-192.	44.	-123.	82.	-168.	.0180	-.0103	.0035	-.0006	.0258	.0332	682.		
.0390	-125.	-235.	33.	-80.	91.	-214.	.0135	-.0105	-.0090	.0198	.0006	.0253	749.		
.0400	-165.	-341.	-16.	-70.	70.	-315.	.0077	-.0104	-.0206	.0397	-.0255	.0173	1004.		
.0410	-134.	-441.	-76.	-74.	43.	-399.	.0033	-.0100	-.0283	.0541	-.0441	.0115	1240.		
.0420	-201.	-440.	-76.	-56.	58.	-375.	.0030	-.0091	-.0306	.0586	-.0489	.0084	1168.		
.0430	-342.	-361.	-30.	-27.	110.	-274.	.0066	-.0077	-.0271	.0524	-.0407	.0079	900.		
.0440	-402.	-317.	0.	-31.	151.	-185.	.0116	-.0058	-.0182	.0382	-.0236	.0116	732.		
.0450	-409.	-342.	36.	-70.	170.	-119.	.0153	-.0036	-.0059	.0208	-.0019	.0194	665.		
.0460	-454.	-352.	91.	-89.	182.	-29.	.0169	-.0009	.0045	.0062	.0159	.0255	623.		
.0470	-497.	-275.	108.	-48.	185.	79.	.0164	.0019	.0078	-.0001	.0197	.0220	628.		
.0480	-506.	-146.	83.	33.	169.	168.	.0131	.0050	.0038	.0028	.0088	.0086	731.		
.0490	-532.	-52.	65.	114.	133.	225.	.0062	.0082	-.0038	.0118	-.0098	-.0078	869.		
.0500	-507.	-17.	39.	177.	70.	253.	-.0031	.0114	-.0112	.0222	-.0302	-.0218	963.		
.0510	-384.	13.	-22.	228.	-8.	273.	-.0115	.0147	-.0164	.0293	-.0473	-.0334	1082.		
.0520	-307.	96.	-50.	278.	-52.	323.	-.0162	.0178	-.0173	.0282	-.0533	-.0431	1306.		
.0530	-342.	221.	-1.	316.	-52.	418.	-.0169	.0207	-.0123	.0168	-.0442	-.0486	1600.		
.0540	-316.	327.	48.	327.	-52.	517.	-.0152	.0234	-.0018	-.0019	-.0245	-.0470	1866.		
.0550	-163.	377.	56.	307.	-75.	575.	-.0132	.0256	.0112	-.0229	-.0013	-.0405	1997.		
.0560	-65.	397.	84.	274.	-88.	588.	-.0119	.0272	.0227	-.0413	.0196	-.0352	1991.		
.0570	-63.	429.	129.	257.	-83.	568.	-.0120	.0282	.0288	-.0526	.0314	-.0357	1913.		
.0580	1.	468.	112.	265.	-100.	515.	-.0145	.0285	.0282	-.0536	.0291	-.0407	1789.		
.0590	145.	464.	42.	272.	-145.	412.	-.0197	.0281	.0230	-.0458	.0158	-.0473	1565.		
.0600	255.	397.	-12.	247.	-193.	253.	-.0261	.0271	.0164	-.0347	.0001	-.0538	1225.		
.0610	342.	324.	-52.	203.	-227.	82.	-.0308	.0254	.0111	-.0258	-.0115	-.0589	960.		
.0620	455.	307.	-103.	166.	-241.	-36.	-.0314	.0232	.0094	-.0227	-.0146	-.0600	896.		
.0630	521.	311.	-120.	115.	-219.	-111.	-.0278	.0205	.0134	-.0281	-.0047	-.0549	826.		
.0640	520.	253.	-84.	11.	-173.	-210.	-.0216	.0175	.0232	-.0416	.0176	-.0439	828.		
.0650	552.	135.	-50.	-129.	-131.	-336.	-.0145	.0142	.0360	-.0584	.0446	-.0284	1164.		
.0660	612.	38.	-41.	-242.	-98.	-421.	-.0079	.0106	.0466	-.0715	.0666	-.0119	1507.		
.0670	597.	-4.	-30.	-203.	-61.	-466.	-.0031	.0068	.0507	-.0755	.0766	-.0009	1701.		
.0680	530.	-47.	-32.	-340.	-33.	-545.	-.0020	.0030	.0462	-.0672	.0698	.0008	1956.		
.0690	511.	-131.	-85.	-366.	-41.	-675.	-.0053	-.0009	.0342	-.0468	.0462	-.0042	2339.		
.0700	526.	-235.	-167.	-373.	-75.	-797.	-.0117	-.0047	.0180	-.0188	.0125	-.0106	2686.		
.0710	511.	-325.	-236.	-366.	-106.	-881.	-.0180	-.0083	.0017	.0092	-.0209	-.0164	2918.		
.0720	473.	-374.	-279.	-360.	-120.	-918.	-.0213	-.0116	-.0106	.0298	-.0446	-.0208	3022.		
.0730	421.	-364.	-289.	-350.	-108.	-873.	-.0198	-.0145	-.0159	.0387	-.0524	-.0198	2879.		
.0740	343.	-317.	-255.	-337.	-71.	-738.	-.0142	-.0170	-.0134	.0355	-.0434	-.0107	2477.		
.0750	268.	-290.	-195.	-344.	-26.	-584.	-.0063	-.0192	-.0049	.0236	-.0224	.0039	2064.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.50.

S/RV PIPING KEWAUNEE CFWOEF 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

.0650	552.	175.	-50.	-129.	-131.	-336.	-.0145	.0142	.0360	-.0584	.0446	-.0284	1164.
.0660	612.	38.	-41.	-242.	-98.	-421.	-.0079	.0106	.0466	-.0715	.0666	-.0119	1507.
.0670	597.	-4.	-30.	-303.	-61.	-466.	-.0031	.0068	.0507	-.0755	.0766	-.0009	1701.
.0680	530.	-47.	-32.	-140.	-33.	-545.	-.0020	.0030	.0462	-.0672	.0698	.0008	1956.
.0690	511.	-131.	-85.	-366.	-41.	-675.	-.0053	-.0009	.0342	-.0468	.0462	-.0042	2339.
.0700	526.	-275.	-167.	-373.	-75.	-797.	-.0117	-.0047	.0180	-.0188	.0125	-.0106	2686.
.0710	511.	-325.	-236.	-366.	-106.	-881.	-.0180	.0083	.0017	.0092	-.0209	-.0164	2918.
.0720	473.	-374.	-279.	-360.	-120.	-918.	-.0213	-.0116	-.0106	.0298	-.0446	-.0208	3022.
.0730	421.	-364.	-289.	-350.	-108.	-873.	-.0198	-.0145	-.0159	.0387	-.0524	-.0198	2879.
.0740	347.	-317.	-255.	-327.	-71.	-738.	-.0142	-.0170	-.0134	.0355	-.0434	-.0107	2477.
.0750	268.	-290.	-195.	-344.	-26.	-584.	-.0063	-.0192	-.0049	.0236	-.0224	.0039	2064.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA	DX	DY	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	FX	MY	MZ	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)							
.0760	210.	-292.	-130.	-369.	16.	-457.	.0020	-.0210	.0054	.0090	.0021	.0185	1787.
.0770	124.	-261.	-63.	-362.	57.	-311.	.0092	-.0226	.0125	-.0016	.0213	.0293	1462.
.0780	13.	-168.	-12.	-291.	89.	-126.	.0138	-.0239	.0129	-.0031	.0278	.0343	1002.
.0790	-58.	-75.	-4.	-189.	93.	31.	.0146	-.0251	.0061	.0063	.0192	.0328	646.
.0800	-98.	-40.	-25.	-92.	69.	112.	.0117	-.0261	-.0056	.0237	-.0004	.0264	489.
.0810	-157.	-38.	-40.	2.	42.	164.	.0071	-.0269	-.0188	.0440	-.0233	.0190	513.
.0820	-217.	-19.	-49.	105.	24.	236.	.0037	-.0276	-.0302	.0613	-.0420	.0139	789.
.0830	-258.	24.	-48.	198.	22.	326.	.0036	-.0281	-.0366	.0704	-.0493	.0125	1161.
.0840	-328.	66.	-1.	260.	48.	419.	.0071	-.0285	-.0362	.0687	-.0411	.0161	1506.
.0850	-418.	101.	84.	296.	94.	519.	.0135	-.0287	-.0297	.0580	-.0197	.0251	1839.
.0860	-453.	129.	158.	319.	137.	617.	.0211	-.0289	-.0202	.0430	.0071	.0378	2153.
.0870	-444.	149.	211.	334.	172.	685.	.0283	-.0290	-.0112	.0291	.0322	.0495	2378.
.0880	-466.	160.	265.	346.	205.	710.	.0337	-.0291	-.0056	.0199	.0508	.0565	2483.
.0890	-484.	165.	296.	362.	225.	697.	.0365	-.0291	-.0046	.0178	.0591	.0585	2484.
.0900	-426.	159.	275.	380.	217.	651.	.0369	-.0290	-.0073	.0219	.0578	.0577	2387.
.0910	-346.	129.	239.	304.	197.	578.	.0360	-.0288	-.0111	.0284	.0528	.0560	2195.
.0920	-310.	87.	228.	366.	189.	490.	.0352	-.0284	-.0134	.0327	.0502	.0546	1947.
.0930	-314.	49.	230.	333.	195.	410.	.0358	-.0278	-.0129	.0326	.0523	.0552	1711.
.0940	-297.	16.	228.	290.	205.	347.	.0374	-.0269	-.0094	.0284	.0584	.0588	1510.
.0950	-304.	-39.	241.	229.	219.	281.	.0386	-.0257	-.0043	.0225	.0661	.0641	1288.
.0960	-330.	-121.	258.	155.	226.	186.	.0380	-.0242	-.0005	.0190	.0696	.0672	1007.
.0970	-326.	-197.	239.	90.	213.	73.	.0347	-.0225	-.0011	.0221	.0624	.0647	739.
.0980	-304.	-239.	186.	56.	184.	-36.	.0285	-.0206	-.0074	.0335	.0425	.0557	594.
.0990	-299.	-267.	123.	35.	144.	-150.	.0195	-.0183	-.0180	.0512	.0133	.0410	640.
.1000	-280.	-312.	50.	4.	92.	-287.	.0089	-.0158	-.0298	.0710	-.0195	.0233	916.
.1010	-221.	-365.	-29.	-39.	33.	-421.	-.0017	-.0130	-.0395	.0880	-.0492	.0065	1289.
.1020	-169.	-386.	-87.	-81.	-14.	-503.	-.0101	-.0098	-.0445	.0977	-.0694	-.0070	1549.
.1030	-147.	-363.	-107.	-123.	-38.	-529.	-.0155	-.0063	-.0440	.0979	-.0772	-.0170	1656.
.1040	-113.	-315.	-107.	-172.	-51.	-528.	-.0182	-.0025	-.0383	.0896	-.0743	-.0244	1696.
.1050	-45.	-253.	-103.	-221.	-65.	-504.	-.0194	.0014	-.0293	.0757	-.0646	-.0295	1686.
.1060	42.	-176.	-97.	-255.	-85.	-457.	-.0202	.0055	-.0191	.0598	-.0529	-.0333	1611.
.1070	151.	-87.	-102.	-273.	-112.	-406.	-.0214	.0097	-.0100	.0449	-.0432	-.0383	1527.
.1080	275.	3.	-120.	-279.	-147.	-374.	-.0231	.0138	-.0027	.0321	-.0371	-.0458	1488.
.1090	395.	92.	-140.	-271.	-187.	-342.	-.0250	.0178	.0032	.0207	-.0331	-.0536	1445.
.1100	520.	194.	-159.	-237.	-225.	-266.	-.0266	.0217	.0092	.0101	-.0284	-.0578	1282.
.1110	623.	273.	-167.	-203.	-256.	-202.	-.0275	.0253	.0156	-.0012	-.0221	-.0602	1169.
.1120	675.	313.	-154.	-101.	-274.	-176.	-.0276	.0286	.0219	-.0131	-.0147	-.0622	1133.
.1130	694.	348.	-125.	-141.	-282.	-129.	-.0273	.0316	.0276	-.0236	-.0072	-.0613	1035.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.50.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.1030	-147.	-363.	-107.	-123.	-38.	-529.	-.0155	-.0063	-.0440	.0979	-.0772	-.0170	1656.
.1040	-113.	-315.	-107.	-172.	-51.	-528.	-.0182	-.0025	-.0383	.0896	-.0743	-.0244	1696.
.1050	-45.	-253.	-103.	-221.	-65.	-504.	-.0194	.0014	-.0293	.0757	-.0646	-.0295	1686.
.1060	47.	-176.	-97.	-255.	-85.	-457.	-.0202	.0055	-.0191	.0598	-.0529	-.0333	1611.
.1070	151.	-97.	-102.	-273.	-112.	-406.	-.0214	.0097	-.0100	.0449	-.0432	-.0383	1527.
.1080	275.	0.	-120.	-279.	-147.	-374.	-.0231	.0138	-.0027	.0321	-.0371	-.0458	1488.
.1090	395.	92.	-140.	-271.	-187.	-342.	-.0250	.0178	.0032	.0207	-.0331	-.0536	1445.
.1100	520.	194.	-159.	-237.	-225.	-266.	-.0266	.0217	.0092	.0101	-.0284	-.0578	1282.
.1110	623.	273.	-167.	-203.	-256.	-202.	-.0275	.0253	.0156	-.0012	-.0221	-.0602	1169.
.1120	675.	313.	-154.	-181.	-274.	-176.	-.0276	.0286	.0219	-.0131	-.0147	-.0622	1133.
.1130	694.	348.	-125.	-141.	-282.	-129.	-.0273	.0316	.0276	-.0236	-.0072	-.0613	1035.

ADLPIPE PAGE 2704

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.50.

S/RV PIPING KEWAUNEE CRK00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA								
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1140	721.	390.	-104.	-72.	-290.	-55.	-.0270	.0342	.0311	-.0301	-.0026	-.0585	924.	
.1150	746.	410.	-97.	-2.	-298.	-26.	-.0271	.0362	.0311	-.0316	-.0035	-.0587	910.	
.1160	725.	403.	-85.	62.	-298.	-43.	-.0274	.0377	.0276	-.0285	-.0095	-.0623	934.	
.1170	680.	395.	-73.	137.	-292.	-41.	-.0276	.0387	.0223	-.0221	-.0177	-.0646	990.	
.1180	698.	382.	-90.	214.	-292.	-13.	-.0267	.0393	.0174	-.0148	-.0244	-.0625	1103.	
.1190	697.	370.	-94.	246.	-277.	-26.	-.0234	.0395	.0150	-.0112	-.0244	-.0600	1128.	
.1200	599.	269.	-44.	238.	-224.	-44.	-.0164	.0393	.0165	-.0149	-.0134	-.0553	1004.	
.1210	487.	263.	24.	243.	-152.	36.	-.0057	.0390	.0225	-.0247	.0083	-.0434	877.	
.1220	387.	288.	89.	260.	-72.	186.	.0071	.0385	.0309	-.0376	.0348	-.0258	996.	
.1230	257.	260.	156.	245.	9.	278.	.0195	.0378	.0386	-.0489	.0591	-.0101	1127.	
.1240	42.	171.	238.	204.	90.	288.	.0292	.0371	.0416	-.0537	.0735	-.0005	1107.	
.1250	-159.	97.	279.	203.	144.	313.	.0351	.0363	.0375	-.0471	.0714	.0051	1217.	
.1260	-250.	64.	237.	252.	153.	374.	.0370	.0356	.0259	-.0282	.0518	.0069	1449.	
.1270	-361.	16.	184.	290.	148.	379.	.0365	.0351	.0095	-.0028	.0222	.0010	1518.	
.1280	-532.	-49.	161.	296.	151.	340.	.0355	.0347	-.0072	.0220	-.0071	-.0089	1446.	
.1290	-680.	-70.	144.	310.	158.	377.	.0361	.0347	-.0198	.0410	-.0286	-.0134	1561.	
.1300	-757.	-58.	119.	328.	166.	492.	.0392	.0350	-.0258	.0509	-.0383	-.0090	1870.	
.1310	-839.	-92.	128.	292.	191.	565.	.0443	.0356	-.0251	.0506	-.0348	-.0013	2020.	
.1320	-1001.	-172.	199.	202.	237.	570.	.0502	.0364	-.0204	.0430	-.0225	.0054	1975.	
.1330	-1098.	-196.	247.	148.	268.	624.	.0553	.0376	-.0158	.0352	-.0117	.0130	2114.	
.1340	-1068.	-144.	230.	159.	263.	740.	.0580	.0389	-.0149	.0333	-.0104	.0197	2437.	
.1350	-1027.	-117.	198.	163.	239.	770.	.0568	.0403	-.0192	.0386	-.0198	.0179	2501.	
.1360	-1019.	-157.	173.	132.	207.	667.	.0519	.0418	-.0275	.0494	-.0376	.0066	2161.	
.1370	-971.	-190.	124.	118.	158.	560.	.0449	.0433	-.0375	.0628	-.0603	-.0056	1806.	
.1380	-809.	-176.	32.	135.	90.	518.	.0377	.0449	-.0454	.0743	-.0807	-.0126	1652.	
.1390	-654.	-176.	-25.	117.	34.	449.	.0324	.0464	-.0480	.0774	-.0896	-.0177	1415.	
.1400	-580.	-190.	-11.	48.	9.	370.	.0301	.0479	-.0442	.0689	-.0834	-.0228	1016.	
.1410	-472.	-134.	10.	1.	-3.	284.	.0308	.0493	-.0354	.0521	-.0665	-.0226	864.	
.1420	-303.	-23.	10.	-16.	-16.	308.	.0327	.0505	-.0239	.0317	-.0453	-.0172	938.	
.1430	-132.	13.	15.	-60.	-33.	235.	.0333	.0515	-.0122	.0114	-.0246	-.0141	744.	
.1440	-5.	-49.	38.	-165.	-53.	23.	.0316	.0520	-.0029	-.0056	-.0088	-.0177	531.	
.1450	153.	-69.	20.	-208.	-88.	-153.	.0279	.0524	.0020	-.0161	-.0020	-.0233	878.	
.1460	790.	13.	-41.	-213.	-142.	-216.	.0233	.0524	.0026	-.0197	-.0041	-.0282	1019.	
.1470	581.	72.	-101.	-213.	-188.	-318.	.0181	.0521	.0014	-.0210	-.0090	-.0367	1296.	
.1480	698.	29.	-121.	-285.	-217.	-529.	.0130	.0515	.0015	-.0242	-.0103	-.0478	1943.	
.1490	812.	-34.	-134.	-367.	-236.	-713.	.0092	.0506	.0048	-.0311	-.0058	-.0535	2542.	
.1500	952.	-44.	-162.	-412.	-244.	-784.	.0080	.0496	.0114	-.0421	.0046	-.0512	2796.	
.1510	1048.	-52.	-169.	-468.	-229.	-842.	.0091	.0484	.0207	-.0574	.0210	-.0475	3012.	

ADLPIPE PAGE 2705

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.51.

S/RV PIPING KEWAUNEE CRK00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.1400	-580.	-190.	-11.	48.	9.	-190.	230.	.0301	.0479	-.0442	.0689	-.0834	-.0228	1016.
.1410	-472.	-134.	10.	1.	-3.	284.	.0308	.0493	-.0354	.0521	-.0665	-.0226	864.	
.1420	-303.	-23.	10.	-10.	-16.	308.	.0327	.0505	-.0239	.0317	-.0453	-.0172	938.	
.1430	-132.	13.	15.	-60.	-33.	239.	.0333	.0515	-.0122	.0114	-.0246	-.0141	744.	
.1440	-5.	-49.	38.	-165.	-53.	23.	.0316	.0520	-.0029	-.0056	-.0088	-.0177	531.	
.1450	157.	-69.	20.	-228.	-89.	-153.	.0279	.0524	.0020	-.0161	-.0020	-.0233	878.	
.1460	790.	13.	-41.	-212.	-142.	-216.	.0233	.0524	.0026	-.0197	-.0041	-.0282	1019.	
.1470	581.	72.	-101.	-213.	-188.	-318.	.0181	.0521	.0014	-.0210	-.0090	-.0367	1296.	
.1480	698.	29.	-121.	-285.	-217.	-529.	.0130	.0515	.0015	-.0242	-.0103	-.0478	1943.	
.1490	812.	-34.	-134.	-367.	-236.	-713.	.0092	.0506	.0048	-.0311	-.0058	-.0535	2542.	
.1500	957.	-44.	-162.	-412.	-244.	-784.	.0080	.0496	.0114	-.0421	.0046	-.0512	2796.	
.1510	1048.	-52.	-169.	-468.	-229.	-842.	.0091	.0484	.0207	-.0574	.0210	-.0475	3012.	

ADLPIPE PAGE 2705

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.51.

S/RV PIPING KEWAUNEE CKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA	DX	DY	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	Fz	MX	MY	MZ	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)							
.1520	1019.	-101.	-123.	-559.	-185.	-948.	.0112	.0470	.0306	-.0750	.0400	-.0467	3395.
.1530	982.	-136.	-94.	-622.	-146.	-1005.	.0128	.0456	.0388	-.0890	.0542	-.0447	3624.
.1540	1002.	-142.	-123.	-621.	-130.	-986.	.0122	.0442	.0427	-.0950	.0574	-.0412	3582.
.1550	988.	-191.	-169.	-642.	-122.	-1009.	.0090	.0428	.0417	-.0927	.0497	-.0432	3656.
.1560	871.	-293.	-194.	-677.	-104.	-1106.	.0036	.0414	.0362	-.0840	.0339	-.0532	3957.
.1570	696.	-358.	-219.	-676.	-80.	-1149.	-.0027	.0402	.0277	-.0708	.0123	-.0653	4063.
.1580	581.	-352.	-283.	-615.	-70.	-1072.	-.0088	.0392	.0185	-.0557	-.0117	-.0733	3766.
.1590	468.	-359.	-339.	-559.	-59.	-981.	-.0143	.0386	.0114	-.0433	-.0317	-.0792	3438.
.1600	249.	-412.	-328.	-544.	-24.	-932.	-.0187	.0382	.0075	-.0367	-.0436	-.0861	3283.
.1610	13.	-428.	-298.	-510.	23.	-831.	-.0214	.0382	.0062	-.0346	-.0496	-.0906	2965.
.1620	-124.	-362.	-305.	-421.	58.	-619.	-.0229	.0386	.0064	-.0347	-.0525	-.0904	2285.
.1630	-265.	-290.	-292.	-332.	91.	-404.	-.0242	.0392	.0075	-.0366	-.0522	-.0905	1616.
.1640	-444.	-255.	-241.	-278.	124.	-253.	-.0262	.0401	.0086	-.0396	-.0496	-.0946	1203.
.1650	-561.	-183.	-206.	-202.	139.	-78.	-.0285	.0412	.0087	-.0414	-.0477	-.0993	782.
.1660	-611.	-26.	-195.	-70.	136.	186.	-.0310	.0424	.0074	-.0417	-.0475	-.1019	731.
.1670	-651.	142.	-173.	67.	126.	446.	-.0337	.0437	.0058	-.0419	-.0465	-.1044	1423.
.1680	-717.	248.	-115.	161.	116.	611.	-.0369	.0448	.0047	-.0436	-.0428	-.1087	1954.
.1690	-731.	343.	-61.	249.	92.	749.	-.0402	.0456	.0040	-.0457	-.0379	-.1112	2416.
.1700	-681.	406.	-26.	373.	55.	932.	-.0430	.0460	.0030	-.0475	-.0332	-.1095	3058.
.1710	-635.	625.	21.	496.	20.	1088.	-.0453	.0459	.0014	-.0491	-.0283	-.1072	3639.
.1720	-572.	732.	73.	575.	-18.	1143.	-.0474	.0451	-.0006	-.0502	-.0228	-.1066	3892.
.1730	-484.	798.	119.	629.	-60.	1143.	-.0493	.0435	-.0031	-.0503	-.0176	-.1045	3973.
.1740	-342.	866.	137.	685.	-108.	1150.	-.0506	.0409	-.0057	-.0490	-.0127	-.0973	4085.
.1750	-167.	895.	140.	709.	-152.	1108.	-.0511	.0375	-.0077	-.0472	-.0066	-.0874	4027.
.1760	-32.	847.	161.	664.	-178.	954.	-.0503	.0330	-.0087	-.0466	.0028	-.0775	3579.
.1770	93.	764.	184.	585.	-188.	757.	-.0478	.0275	-.0084	-.0471	.0153	-.0651	2965.
.1780	244.	690.	186.	505.	-188.	584.	-.0437	.0212	-.0069	-.0480	.0294	-.0473	2417.
.1790	411.	590.	169.	404.	-179.	389.	-.0383	.0141	-.0045	-.0491	.0443	-.0265	1791.
.1800	524.	417.	163.	250.	-150.	110.	-.0323	.0063	-.0015	-.0502	.0595	-.0067	949.
.1810	571.	201.	165.	68.	-103.	-207.	-.0261	-.0019	.0012	-.0501	.0728	.0125	734.
.1820	649.	-5.	125.	-101.	-59.	-484.	-.0202	-.0104	.0031	-.0471	.0817	.0338	1516.
.1830	723.	-215.	61.	-268.	-16.	-740.	-.0148	-.0187	.0040	-.0414	.0862	.0548	2395.
.1840	720.	-454.	10.	-458.	39.	-1016.	-.0102	-.0269	.0040	-.0343	.0877	.0718	3392.
.1850	662.	-685.	-35.	-644.	99.	-1267.	-.0063	-.0344	.0034	-.0261	.0862	.0858	4334.
.1860	600.	-865.	-98.	-789.	154.	-1427.	-.0032	-.0412	.0022	-.0169	.0809	.0994	4981.
.1870	532.	-1009.	-169.	-901.	201.	-1512.	-.0011	-.0469	.0008	-.0073	.0728	.1115	5388.
.1880	397.	-1151.	-211.	-1004.	249.	-1579.	-.0005	-.0514	-.0007	.0017	.0627	.1189	5742.
.1890	227.	-1259.	-239.	-1077.	291.	-1599.	-.0014	-.0546	-.0028	.0104	.0498	.1215	5930.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.51.

S/RV PIPING KEWAUNEE CKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.1790	411.	590.	169.	404.	-179.	389.	-.0383	.0141	-.0045	-.0480	.0294	-.0473	2417.
.1800	524.	417.	163.	250.	-150.	110.	-.0323	.0063	-.0015	-.0502	.0595	-.0067	949.
.1810	571.	201.	165.	68.	-103.	-207.	-.0261	-.0019	.0012	-.0501	.0728	.0125	734.
.1820	649.	-5.	125.	-161.	-59.	-424.	-.0202	-.0104	.0031	-.0471	.0817	.0338	1516.
.1830	727.	-215.	61.	-268.	-16.	-740.	-.0148	-.0187	.0040	-.0414	.0862	.0548	2395.
.1840	720.	-454.	10.	-458.	39.	-1016.	-.0102	-.0269	.0040	-.0343	.0877	.0718	3392.
.1850	662.	-685.	-35.	-644.	99.	-1267.	-.0063	-.0344	.0034	-.0261	.0862	.0858	4334.
.1860	600.	-865.	-98.	-789.	154.	-1427.	-.0032	-.0412	.0022	-.0169	.0809	.0994	4981.
.1870	532.	-1009.	-169.	-901.	201.	-1512.	-.0011	-.0469	.0008	-.0073	.0728	.1115	5388.
.1880	393.	-1151.	-211.	-1004.	249.	-1579.	-.0005	-.0514	-.0007	.0017	.0627	.1189	5742.
.1890	227.	-1259.	-239.	-1077.	291.	-1599.	-.0014	-.0546	-.0028	.0104	.0498	.1215	5930.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.51.

S/RV PIPING KEWAUNEE CROWDF 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	END	TYPE	VA								
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1900	84.	-1281.	-283.	-1082.	312.	-1506.	-.0038	-.0563	-.0060	.0196	.0534	.1216	5720.	
.1910	-51.	-1227.	-321.	-1030.	319.	-1319.	-.0075	-.0566	-.0097	.0282	.0151	.1184	5181.	
.1920	-196.	-1139.	-336.	-956.	315.	-1098.	-.0123	-.0554	-.0131	.0347	-.0021	.1104	4531.	
.1930	-334.	-1012.	-331.	-859.	301.	-837.	-.0176	-.0529	-.0152	.0378	-.0162	.0991	3762.	
.1940	-447.	-814.	-317.	-715.	279.	-489.	-.0226	-.0492	-.0154	.0366	-.0256	.0880	2769.	
.1950	-533.	-562.	-283.	-535.	252.	-79.	-.0272	-.0445	-.0132	.0306	-.0292	.0777	1814.	
.1960	-622.	-306.	-219.	-349.	224.	326.	-.0315	-.0389	-.0088	.0199	-.0268	.0666	1604.	
.1970	-704.	-47.	-132.	-153.	193.	714.	-.0359	-.0329	-.0032	.0063	-.0208	.0548	2297.	
.1980	-752.	242.	-45.	78.	153.	1116.	-.0405	-.0267	.0018	-.0071	-.0150	.0436	3436.	
.1990	-766.	542.	34.	337.	104.	1500.	-.0459	-.0206	.0048	-.0179	-.0120	.0318	4688.	
.2000	-771.	800.	112.	584.	51.	1795.	-.0524	-.0148	.0053	-.0253	-.0125	.0174	5744.	
.2010	-764.	1004.	187.	809.	-5.	1992.	-.0596	-.0097	.0038	-.0292	-.0156	.0016	6541.	
.2020	-716.	1182.	245.	1023.	-63.	2138.	-.0665	-.0055	.0014	-.0308	-.0196	-.0119	7212.	
.2030	-630.	1336.	288.	1218.	-115.	2239.	-.0719	-.0023	-.0005	-.0324	-.0211	-.0215	7762.	
.2040	-551.	1440.	340.	1362.	-148.	2262.	-.0750	-.0003	-.0003	-.0363	-.0166	-.0276	8043.	
.2050	-486.	1480.	404.	1445.	-157.	2201.	-.0752	.0005	.0027	-.0436	-.0051	-.0292	8024.	
.2060	-400.	1472.	459.	1483.	-152.	2088.	-.0730	.0001	.0081	-.0530	.0115	-.0246	7804.	
.2070	-290.	1415.	496.	1478.	-136.	1925.	-.0690	-.0016	.0148	-.0625	.0301	-.0150	7392.	
.2080	-194.	1298.	523.	1420.	-109.	1680.	-.0641	-.0044	.0210	-.0700	.0472	-.0040	6711.	
.2090	-117.	1131.	535.	1317.	-76.	1377.	-.0590	-.0083	.0250	-.0732	.0594	.0065	5801.	
.2100	-27.	941.	510.	1190.	-46.	1044.	-.0544	-.0131	.0260	-.0705	.0641	.0170	4819.	
.2110	77.	731.	448.	1041.	-25.	701.	-.0505	-.0185	.0242	-.0621	.0613	.0275	3818.	
.2120	165.	487.	368.	854.	-7.	332.	-.0470	-.0244	.0207	-.0499	.0532	.0369	2787.	
.2130	224.	220.	281.	629.	15.	-47.	-.0434	-.0305	.0168	-.0365	.0431	.0453	1919.	
.2140	269.	-32.	187.	390.	40.	-384.	-.0388	-.0365	.0140	-.0241	.0334	.0547	1668.	
.2150	304.	-249.	90.	148.	67.	-652.	-.0329	-.0423	.0130	-.0144	.0259	.0659	2045.	
.2160	314.	-444.	4.	-100.	97.	-870.	-.0261	-.0475	.0141	-.0081	.0214	.0773	2681.	
.2170	299.	-619.	-72.	-350.	127.	-1046.	-.0188	-.0520	.0166	-.0042	.0183	.0876	3377.	
.2180	273.	-755.	-147.	-578.	151.	-1160.	-.0119	-.0558	.0189	-.0006	.0141	.0960	3969.	
.2190	243.	-842.	-226.	-770.	164.	-1208.	-.0061	-.0587	.0199	.0043	.0065	.1015	4388.	
.2200	206.	-899.	-305.	-932.	165.	-1217.	-.0020	-.0605	.0191	.0114	-.0048	.1026	4690.	
.2210	161.	-928.	-376.	-1063.	155.	-1197.	.0006	-.0614	.0165	.0201	-.0190	.0991	4892.	
.2220	118.	-912.	-439.	-1150.	136.	-1125.	.0021	-.0613	.0130	.0293	-.0338	.0926	4911.	
.2230	79.	-844.	-487.	-1186.	114.	-993.	.0034	-.0602	.0096	.0371	-.0467	.0848	4718.	
.2240	34.	-744.	-509.	-1194.	94.	-827.	.0049	-.0582	.0077	.0416	-.0546	.0764	4402.	
.2250	-22.	-634.	-496.	-1154.	80.	-650.	.0068	-.0553	.0078	.0417	-.0561	.0681	4037.	
.2260	-77.	-512.	-456.	-1089.	69.	-459.	.0091	-.0518	.0097	.0382	-.0520	.0607	3601.	
.2270	-107.	-369.	-399.	-990.	58.	-293.	.0115	-.0476	.0122	.0327	-.0444	.0541	3085.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.51.

S/RV PIPING KEWAUNEE CROWDF 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

.2170	299.	-619.	-72.	-350.	127.	-1046.	-.0188	-.0520	.0166	-.0042	.0214	.0876	3377.
.2180	273.	-755.	-147.	-578.	151.	-1160.	-.0119	-.0558	.0189	-.0006	.0141	.0960	3969.
.2190	247.	-842.	-226.	-770.	164.	-1208.	-.0061	-.0587	.0199	.0043	.0065	.1015	4388.
.2200	206.	-899.	-305.	-972.	165.	-1217.	-.0020	-.0605	.0191	.0114	-.0048	.1026	4690.
.2210	161.	-928.	-376.	-1063.	155.	-1197.	.0006	-.0614	.0165	.0201	-.0190	.0991	4892.
.2220	118.	-912.	-439.	-1150.	136.	-1125.	.0021	-.0613	.0130	.0293	-.0338	.0926	4911.
.2230	70.	-844.	-487.	-1186.	114.	-953.	.0034	-.0602	.0096	.0371	-.0467	.0848	4718.
.2240	34.	-744.	-509.	-1184.	94.	-827.	.0049	-.0582	.0077	.0416	-.0546	.0764	4402.
.2250	-22.	-634.	-496.	-1154.	80.	-650.	.0068	-.0553	.0078	.0417	-.0561	.0681	4037.
.2260	-77.	-512.	-456.	-1089.	69.	-459.	.0091	-.0518	.0097	.0382	-.0520	.0607	3601.
.2270	-107.	-369.	-399.	-900.	50.	-253.	.0115	-.0476	.0122	.0327	-.0444	.0541	3085.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/3/12/02.

18.29.51.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA								
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2280	-136.	-217.	-327.	-835.	47.	-55.	.0134	-.0430	.0141	.0274	-.0358	.0464	2549.	
.2290	-164.	-71.	-243.	-661.	33.	111.	.0144	-.0382	.0142	.0238	-.0285	.0367	2043.	
.2300	-176.	64.	-150.	-463.	13.	246.	.0141	-.0332	.0121	.0231	-.0237	.0255	1594.	
.2310	-163.	185.	-81.	-243.	-14.	353.	.0128	-.0282	.0081	.0252	-.0214	.0142	1304.	
.2320	-143.	283.	-2.	-17.	-41.	423.	.0111	-.0233	.0033	.0287	-.0200	.0030	1293.	
.2330	-129.	353.	83.	201.	-62.	452.	.0096	-.0186	-.0013	.0318	-.0174	-.0073	1516.	
.2340	-113.	404.	171.	408.	-75.	457.	.0092	-.0142	-.0048	.0333	-.0120	-.0153	1879.	
.2350	-88.	441.	256.	601.	-81.	451.	.0100	-.0101	-.0064	.0324	-.0033	-.0202	2299.	
.2360	-63.	455.	339.	767.	-78.	425.	.0121	-.0064	-.0061	.0292	.0084	-.0224	2678.	
.2370	-47.	441.	416.	896.	-67.	373.	.0152	-.0030	-.0045	.0247	.0217	-.0231	2960.	
.2380	-35.	409.	480.	991.	-50.	306.	.0189	-.0001	-.0024	.0201	.0348	-.0229	3158.	
.2390	-26.	364.	521.	1054.	-31.	236.	.0228	.0025	-.0004	.0168	.0455	-.0223	3287.	
.2400	-24.	304.	539.	1081.	-13.	158.	.0266	.0048	.0009	.0156	.0527	-.0221	3323.	
.2410	-34.	225.	536.	1060.	9.	71.	.0299	.0068	.0016	.0165	.0562	-.0228	3255.	
.2420	-56.	138.	513.	1021.	22.	-13.	.0328	.0086	.0016	.0192	.0559	-.0245	3107.	
.2430	-92.	56.	472.	948.	40.	-80.	.0356	.0103	.0013	.0232	.0525	-.0267	2898.	
.2440	-144.	-24.	417.	850.	58.	-132.	.0381	.0119	.0011	.0277	.0467	-.0295	2622.	
.2450	-210.	-106.	354.	724.	75.	-177.	.0403	.0136	.0011	.0323	.0391	-.0331	2279.	
.2460	-281.	-187.	282.	578.	88.	-212.	.0420	.0154	.0013	.0369	.0299	-.0374	1890.	
.2470	-348.	-253.	201.	422.	95.	-226.	.0432	.0174	.0015	.0417	.0190	-.0424	1483.	
.2480	-408.	-300.	113.	263.	95.	-221.	.0437	.0196	.0014	.0467	.0068	-.0485	1083.	
.2490	-462.	-329.	25.	104.	88.	-205.	.0435	.0220	.0009	.0519	-.0065	-.0561	749.	
.2500	-503.	-343.	-62.	-49.	73.	-184.	.0424	.0246	-.0000	.0571	-.0202	-.0649	622.	
.2510	-519.	-343.	-146.	-190.	48.	-160.	.0406	.0274	-.0010	.0618	-.0336	-.0741	770.	
.2520	-508.	-331.	-222.	-314.	14.	-137.	.0381	.0304	-.0019	.0656	-.0458	-.0833	1044.	
.2530	-474.	-307.	-283.	-418.	-25.	-121.	.0353	.0335	-.0024	.0678	-.0556	-.0924	1325.	
.2540	-416.	-264.	-327.	-495.	-60.	-111.	.0324	.0366	-.0026	.0681	-.0625	-.1011	1557.	
.2550	-328.	-205.	-356.	-541.	-115.	-106.	.0296	.0398	-.0025	.0667	-.0663	-.1089	1714.	
.2560	-211.	-140.	-370.	-562.	-164.	-115.	.0267	.0428	-.0020	.0638	-.0669	-.1153	1814.	
.2570	-69.	-84.	-368.	-562.	-216.	-153.	.0238	.0455	-.0013	.0598	-.0645	-.1206	1891.	
.2580	94.	-36.	-352.	-544.	-267.	-217.	.0209	.0480	-.0005	.0549	-.0594	-.1246	1959.	
.2590	272.	12.	-326.	-502.	-317.	-296.	.0183	.0500	.0000	.0497	-.0520	-.1271	2017.	
.2600	458.	58.	-289.	-438.	-362.	-387.	.0161	.0516	.0003	.0444	-.0428	-.1280	2090.	
.2610	647.	92.	-242.	-361.	-400.	-495.	.0143	.0527	.0004	.0389	-.0320	-.1273	2226.	
.2620	822.	108.	-189.	-276.	-432.	-619.	.0130	.0531	.0004	.0336	-.0202	-.1247	2444.	
.2630	989.	107.	-132.	-185.	-455.	-750.	.0122	.0530	.0003	.0286	-.0080	-.1202	2728.	
.2640	1130.	94.	-73.	-91.	-467.	-882.	.0121	.0522	-.0002	.0244	.0040	-.1143	3049.	
.2650	1238.	71.	-14.	-0.	-467.	-1007.	.0127	.0508	-.0011	.0210	.0152	-.1074	3377.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/3/12/02.

18.29.51.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING

.2550	-32.	-205.	-356.	-541.	-115.	-106.	.0296	.0398	-.0025	.0667	-.0663	-.1089	1714.
.2560	-211.	-140.	-270.	-562.	-164.	-115.	.0267	.0428	-.0020	.0638	-.0669	-.1153	1814.
.2570	-69.	-84.	-368.	-562.	-216.	-153.	.0238	.0455	-.0013	.0598	-.0645	-.1206	1891.
.2580	94.	-76.	-352.	-544.	-267.	-217.	.0209	.0480	-.0005	.0549	-.0594	-.1246	1959.
.2590	272.	12.	-326.	-502.	-717.	-296.	.0183	.0500	.0000	.0497	-.0520	-.1271	2017.
.2600	458.	58.	-282.	-438.	-362.	-387.	.0161	.0516	.0003	.0444	-.0428	-.1280	2090.
.2610	647.	92.	-242.	-361.	-400.	-495.	.0143	.0527	.0004	.0389	-.0320	-.1273	2226.
.2620	822.	108.	-189.	-276.	-432.	-619.	.0130	.0531	.0004	.0336	-.0202	-.1247	2444.
.2630	989.	107.	-132.	-185.	-455.	-750.	.0122	.0530	.0003	.0286	-.0080	-.1202	2728.
.2640	1130.	94.	-73.	-91.	-467.	-882.	.0121	.0522	-.0002	.0244	.0040	-.1143	3049.
.2650	1238.	71.	-14.	-0.	-467.	-1007.	.0127	.0508	-.0011	.0210	.0152	-.1074	3377.

ADLPIPE PAGE 2708

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.51.

S/RV PIPING KEWAUNEE CKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.2660	1314.	37.	41.	83.	-456.	-1118.	.0140	.0488	-.0024	.0188	.0250	-.0995	3681.	
.2670	1357.	-5.	88.	154.	-438.	-1205.	.0158	.0463	-.0041	.0180	.0332	-.0907	3928.	
.2680	1363.	-50.	125.	211.	-409.	-1262.	.0182	.0434	-.0062	.0184	.0393	-.0814	4088.	
.2690	1323.	-95.	155.	252.	-371.	-1285.	.0212	.0400	-.0086	.0200	.0434	-.0721	4141.	
.2700	1239.	-139.	175.	275.	-323.	-1271.	.0248	.0364	-.0112	.0224	.0455	-.0627	4076.	
.2710	1120.	-179.	186.	280.	-270.	-1216.	.0289	.0325	-.0136	.0252	.0456	-.0531	3884.	
.2720	969.	-214.	188.	269.	-212.	-1121.	.0334	.0286	-.0159	.0284	.0438	-.0434	3564.	
.2730	787.	-238.	183.	243.	-150.	-986.	.0383	.0246	-.0181	.0319	.0402	-.0342	3121.	
.2740	574.	-248.	172.	205.	-85.	-815.	.0432	.0207	-.0204	.0357	.0345	-.0259	2569.	
.2750	344.	-245.	152.	160.	-22.	-610.	.0480	.0168	-.0229	.0399	.0266	-.0182	1920.	
.2760	114.	-235.	122.	106.	36.	-383.	.0523	.0132	-.0256	.0446	.0169	-.0108	1214.	
.2770	-112.	-224.	87.	43.	88.	-149.	.0561	.0098	-.0283	.0495	.0058	-.0044	542.	
.2780	-336.	-204.	50.	-23.	136.	87.	.0593	.0066	-.0311	.0543	-.0059	.0009	496.	
.2790	-551.	-170.	14.	-84.	180.	325.	.0623	.0037	-.0338	.0585	-.0176	.0057	1159.	
.2800	-739.	-128.	-22.	-129.	217.	556.	.0647	.0011	-.0361	.0616	-.0284	.0109	1865.	
.2810	-893.	-97.	-54.	-193.	247.	755.	.0665	-.0013	-.0375	.0633	-.0375	.0163	2487.	
.2820	-1019.	-81.	-77.	-246.	272.	908.	.0676	-.0033	-.0382	.0635	-.0445	.0217	2979.	
.2830	-1118.	-66.	-91.	-287.	293.	1024.	.0681	-.0051	-.0386	.0625	-.0497	.0271	3355.	
.2840	-1178.	-48.	-101.	-309.	308.	1106.	.0677	-.0066	-.0388	.0608	-.0536	.0327	3616.	
.2850	-1192.	-44.	-108.	-321.	313.	1136.	.0661	-.0078	-.0391	.0589	-.0566	.0381	3714.	
.2860	-1165.	-64.	-110.	-329.	310.	1099.	.0632	-.0088	-.0396	.0570	-.0586	.0425	3615.	
.2870	-1104.	-93.	-106.	-328.	300.	1010.	.0592	-.0095	-.0403	.0550	-.0597	.0461	3356.	
.2880	-1005.	-117.	-101.	-308.	286.	890.	.0544	-.0100	-.0410	.0526	-.0598	.0493	2993.	
.2890	-871.	-140.	-93.	-270.	266.	738.	.0490	-.0101	-.0412	.0491	-.0579	.0522	2531.	
.2900	-711.	-176.	-76.	-252.	244.	546.	.0432	-.0100	-.0402	.0435	-.0529	.0548	1974.	
.2910	-532.	-217.	-50.	-228.	219.	332.	.0373	-.0095	-.0377	.0355	-.0446	.0576	1395.	
.2920	-335.	-241.	-21.	-197.	194.	126.	.0316	-.0087	-.0337	.0250	-.0335	.0607	925.	
.2930	-130.	-246.	9.	-162.	168.	-64.	.0262	-.0075	-.0286	.0127	-.0204	.0637	738.	
.2940	68.	-244.	42.	-134.	142.	-248.	.0206	-.0060	-.0227	-.0008	-.0066	.0657	960.	
.2950	260.	-241.	73.	-115.	112.	-420.	.0147	-.0041	-.0167	-.0144	.0064	.0663	1366.	
.2960	450.	-223.	91.	-97.	75.	-559.	.0082	-.0019	-.0111	-.0269	.0168	.0657	1741.	
.2970	626.	-186.	97.	-78.	74.	-658.	.0014	.0006	-.0063	-.0379	.0239	.0634	2019.	
.2980	771.	-136.	96.	-66.	-8.	-725.	-.0056	.0034	-.0023	-.0475	.0277	.0590	2216.	
.2990	883.	-80.	89.	-64.	-48.	-758.	-.0127	.0063	.0012	-.0561	.0286	.0531	2318.	
.3000	974.	-14.	72.	-69.	-90.	-743.	-.0194	.0094	.0047	-.0638	.0274	.0471	2287.	
.3010	1040.	59.	46.	-80.	-128.	-682.	-.0256	.0126	.0084	-.0713	.0249	.0417	2125.	
.3020	1064.	132.	20.	-105.	-158.	-588.	-.0308	.0157	.0125	-.0788	.0220	.0362	1879.	
.3030	1044.	207.	-5.	-140.	-177.	-465.	-.0350	.0187	.0167	-.0862	.0187	.0307	1571.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.51.

S/RV PIPING KEWAUNEE CKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING

.2940	68.	-244.	42.	-134.	142.	-248.	.206	-.0060	-.0227	-.0008	-.0066	.0657	960.
.2950	260.	-241.	73.	-115.	112.	-420.	.147	-.0041	-.0167	-.0144	.0064	.0663	1366.
.2960	450.	-223.	91.	-97.	75.	-559.	.0082	-.0019	-.0111	-.0269	.0168	.0657	1741.
.2970	626.	-106.	97.	-78.	34.	-658.	.0014	.0006	-.0063	-.0379	.0239	.0634	2019.
.2980	771.	-136.	96.	-66.	-8.	-725.	-.0056	.0034	-.0023	-.0475	.0277	.0590	2216.
.2990	883.	-80.	89.	-64.	-48.	-758.	-.0127	.0063	.0012	-.0561	.0286	.0531	2318.
.3000	974.	-14.	72.	-69.	-90.	-743.	-.0194	.0094	.0047	-.0638	.0274	.0471	2287.
.3010	1040.	59.	46.	-80.	-128.	-682.	-.0256	.0126	.0084	-.0713	.0249	.0417	2125.
.3020	1064.	132.	20.	-105.	-158.	-588.	-.0308	.0157	.0125	-.0788	.0220	.0362	1879.
.3030	1044.	207.	-5.	-140.	-177.	-465.	-.0350	.0187	.0167	-.0862	.0187	.0307	1571.

ADLPIPE PAGE 2709

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.51.

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	67	MEMBER	4	SEQUENCE	101	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3040	996.	203.	-35.	-178.	-189.	-307.	-.0383	.0216	.0208	-.0927	.0146	.0262	1223.		
.3050	931.	352.	-74.	-218.	-196.	-128.	-.0409	.0242	.0245	-.0978	.0094	.0227	973.		
.3060	840.	402.	-113.	-265.	-196.	51.	-.0429	.0265	.0275	-.1012	.0031	.0195	1015.		
.3070	717.	436.	-150.	-313.	-186.	221.	-.0442	.0285	.0296	-.1028	-.0043	.0163	1297.		
.3080	575.	464.	-187.	-350.	-168.	393.	-.0448	.0300	.0307	-.1027	-.0124	.0139	1681.		
.3090	427.	481.	-224.	-375.	-144.	560.	-.0448	.0312	.0311	-.1011	-.0206	.0132	2097.		
.3100	272.	471.	-252.	-395.	-115.	701.	-.0442	.0320	.0312	-.0988	-.0277	.0137	2473.		
.3110	106.	438.	-267.	-409.	-77.	812.	-.0430	.0324	.0311	-.0962	-.0330	.0153	2776.		
.3120	-60.	403.	-270.	-404.	-34.	910.	-.0410	.0326	.0306	-.0932	-.0365	.0182	3030.		
.3130	-218.	370.	-265.	-376.	12.	997.	-.0385	.0324	.0296	-.0898	-.0385	.0223	3243.		
.3140	-362.	327.	-249.	-334.	57.	1057.	-.0358	.0321	.0281	-.0860	-.0389	.0269	3375.		
.3150	-492.	269.	-220.	-281.	99.	1082.	-.0333	.0316	.0261	-.0819	-.0379	.0315	3413.		
.3160	-598.	214.	-182.	-208.	135.	1092.	-.0309	.0310	.0234	-.0773	-.0359	.0363	3405.		
.3170	-678.	179.	-139.	-111.	165.	1100.	-.0286	.0304	.0200	-.0725	-.0331	.0411	3400.		
.3180	-737.	156.	-85.	1.	189.	1098.	-.0264	.0298	.0163	-.0680	-.0292	.0453	3390.		
.3190	-778.	137.	-21.	120.	206.	1081.	-.0244	.0291	.0126	-.0642	-.0238	.0489	3368.		
.3200	-790.	127.	48.	244.	214.	1062.	-.0226	.0286	.0093	-.0614	-.0170	.0526	3377.		
.3210	-773.	136.	117.	374.	212.	1051.	-.0209	.0280	.0062	-.0595	-.0092	.0562	3455.		
.3220	-740.	162.	188.	502.	204.	1044.	-.0193	.0275	.0034	-.0585	-.0007	.0590	3578.		
.3230	-700.	198.	259.	620.	191.	1034.	-.0178	.0269	.0008	-.0582	.0081	.0606	3712.		
.3240	-642.	242.	323.	725.	171.	1028.	-.0165	.0261	-.0014	-.0583	.0164	.0616	3861.		
.3250	-562.	293.	371.	815.	143.	1028.	-.0154	.0252	-.0033	-.0585	.0238	.0625	4014.		
.3260	-476.	342.	409.	881.	111.	1024.	-.0145	.0239	-.0050	-.0588	.0302	.0626	4124.		
.3270	-399.	386.	437.	919.	81.	1011.	-.0135	.0224	-.0062	-.0592	.0356	.0618	4163.		
.3280	-326.	426.	452.	931.	54.	993.	-.0124	.0204	-.0071	-.0595	.0398	.0606	4145.		
.3290	-250.	457.	448.	916.	27.	973.	-.0112	.0179	-.0074	-.0597	.0426	.0598	4067.		
.3300	-179.	467.	429.	867.	4.	937.	-.0098	.0148	-.0072	-.0595	.0443	.0592	3883.		
.3310	-124.	453.	398.	782.	-11.	876.	-.0084	.0112	-.0066	-.0589	.0447	.0583	3572.		
.3320	-82.	422.	354.	671.	-20.	798.	-.0068	.0070	-.0059	-.0576	.0435	.0571	3173.		
.3330	-47.	378.	292.	539.	-22.	711.	-.0051	.0023	-.0052	-.0552	.0406	.0563	2716.		
.3340	-17.	310.	219.	384.	-19.	603.	-.0034	-.0029	-.0043	-.0521	.0365	.0557	2176.		
.3350	4.	213.	139.	207.	-11.	466.	-.0019	-.0085	-.0033	-.0483	.0314	.0549	1550.		
.3360	16.	102.	54.	19.	2.	312.	-.0004	-.0145	-.0023	-.0441	.0259	.0540	951.		
.3370	23.	-9.	-34.	-167.	21.	158.	.0012	-.0206	-.0012	-.0396	.0199	.0534	701.		
.3380	28.	-122.	-120.	-347.	42.	-1.	.0027	-.0268	-.0002	-.0351	.0141	.0526	1062.		
.3390	31.	-244.	-200.	-522.	64.	-173.	.0039	-.0330	.0010	-.0307	.0085	.0515	1684.		
.3400	36.	-365.	-272.	-683.	84.	-348.	.0046	-.0390	.0019	-.0264	.0033	.0498	2346.		
.3410	49.	-468.	-338.	-817.	100.	-508.	.0049	-.0446	.0025	-.0221	-.0018	.0476	2943.		

ADLPIPE PAGE 2710

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.51.

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

.3310	-124.	453.	398.	782.	-11.	876.	-.0084	.0112	-.0066	-.0589	.0447	.0583	3572.
.3320	-82.	422.	354.	671.	-20.	798.	-.0068	.0070	-.0059	-.0576	.0435	.0571	3173.
.3330	-47.	378.	292.	539.	-22.	711.	-.0051	.0023	-.0052	-.0552	.0406	.0563	2716.
.3340	-17.	310.	219.	384.	-19.	603.	-.0034	-.0029	-.0045	-.0521	.0365	.0557	2176.
.3350	4.	212.	139.	207.	-11.	466.	-.0019	-.0085	-.0033	-.0483	.0314	.0549	1550.
.3360	16.	102.	54.	19.	2.	312.	-.0004	-.0145	-.0023	-.0441	.0259	.0540	951.
.3370	23.	-9.	-34.	-167.	21.	158.	.0012	-.0206	-.0012	-.0396	.0199	.0534	701.
.3380	28.	-122.	-120.	-347.	42.	-1.	.0027	-.0268	-.0002	-.0351	.0141	.0526	1062.
.3390	31.	-244.	-200.	-522.	64.	-173.	.0039	-.0330	.0010	-.0307	.0085	.0515	1684.
.3400	36.	-365.	-272.	-683.	84.	-348.	.0046	-.0390	.0019	-.0264	.0033	.0498	2346.
.3410	49.	-468.	-338.	-817.	100.	-508.	.0049	-.0446	.0025	-.0221	-.0018	.0476	2943.

ADLPIPE PAGE 2710

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.51.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA								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)		
.3420	69.	-549.	-394.	-921.	111.	-651.	.0048	-.0499	.0027	-.0179	-.0066	.0445	3448.	
.3430	92.	-613.	-435.	-996.	110.	-785.	.0041	-.0546	.0025	-.0141	-.0106	.0401	3874.	
.3440	123.	-657.	-462.	-1041.	118.	-902.	.0030	-.0588	.0022	-.0110	-.0135	.0349	4205.	
.3450	169.	-674.	-475.	-1050.	111.	-991.	.0015	-.0623	.0019	-.0088	-.0149	.0294	4406.	
.3460	222.	-662.	-473.	-1025.	98.	-1051.	-.0001	-.0652	.0017	-.0078	-.0144	.0235	4475.	
.3470	274.	-626.	-452.	-970.	83.	-1088.	-.0017	-.0674	.0017	-.0081	-.0119	.0169	4440.	
.3480	325.	-567.	-415.	-888.	65.	-1101.	-.0034	-.0690	.0019	-.0095	-.0076	.0100	4306.	
.3490	383.	-487.	-368.	-779.	43.	-1086.	-.0051	-.0701	.0021	-.0115	-.0020	.0033	4067.	
.3500	444.	-392.	-314.	-650.	16.	-1047.	-.0069	-.0707	.0022	-.0137	.0043	-.0033	3750.	
.3510	497.	-288.	-252.	-509.	-10.	-996.	-.0086	-.0710	.0020	-.0157	.0108	-.0102	3401.	
.3520	539.	-179.	-185.	-359.	-35.	-933.	-.0101	-.0710	.0014	-.0172	.0172	-.0172	3044.	
.3530	574.	-65.	-119.	-206.	-59.	-857.	-.0114	-.0708	.0004	-.0179	.0232	-.0238	2686.	
.3540	602.	44.	-57.	-55.	-80.	-772.	-.0123	-.0706	-.0007	-.0179	.0287	-.0293	2366.	
.3550	615.	138.	3.	83.	-97.	-689.	-.0127	-.0704	-.0018	-.0172	.0340	-.0339	2133.	
.3560	610.	217.	60.	203.	-107.	-612.	-.0124	-.0704	-.0029	-.0159	.0390	-.0373	1987.	
.3570	589.	284.	110.	306.	-110.	-533.	-.0112	-.0706	-.0039	-.0138	.0434	-.0391	1900.	
.3580	553.	334.	149.	389.	-106.	-458.	-.0093	-.0711	-.0049	-.0108	.0468	-.0392	1856.	
.3590	504.	356.	178.	443.	-97.	-399.	-.0069	-.0718	-.0060	-.0065	.0489	-.0379	1838.	
.3600	442.	349.	196.	468.	-83.	-359.	-.0040	-.0729	-.0073	-.0008	.0495	-.0354	1812.	
.3610	371.	322.	201.	469.	-65.	-331.	-.0006	-.0742	-.0090	.0066	.0480	-.0317	1757.	
.3620	293.	278.	192.	447.	-43.	-314.	.0031	-.0758	-.0111	.0154	.0446	-.0270	1667.	
.3630	208.	215.	172.	402.	-19.	-312.	.0072	-.0776	-.0133	.0252	.0397	-.0214	1550.	
.3640	121.	129.	145.	333.	7.	-329.	.0114	-.0795	-.0155	.0356	.0340	-.0149	1423.	
.3650	37.	29.	111.	246.	34.	-356.	.0160	-.0814	-.0173	.0461	.0281	-.0074	1320.	
.3660	-42.	-76.	72.	148.	62.	-387.	.0208	-.0832	-.0186	.0561	.0225	.0011	1275.	
.3670	-120.	-185.	33.	41.	91.	-424.	.0258	-.0848	-.0194	.0653	.0174	.0100	1326.	
.3680	-194.	-276.	-5.	-70.	118.	-468.	.0308	-.0861	-.0196	.0736	.0130	.0189	1484.	
.3690	-256.	-405.	-41.	-179.	142.	-514.	.0353	-.0870	-.0195	.0813	.0090	.0277	1712.	
.3700	-305.	-507.	-76.	-279.	161.	-559.	.0392	-.0873	-.0193	.0885	.0050	.0360	1962.	
.3710	-343.	-599.	-108.	-365.	173.	-603.	.0423	-.0871	-.0192	.0953	.0009	.0430	2208.	
.3720	-374.	-677.	-133.	-434.	181.	-645.	.0445	-.0861	-.0193	.1017	-.0035	.0481	2429.	
.3730	-394.	-737.	-152.	-481.	181.	-681.	.0455	-.0844	-.0195	.1075	-.0080	.0516	2595.	
.3740	-398.	-777.	-165.	-502.	174.	-705.	.0456	-.0819	-.0197	.1125	-.0121	.0536	2686.	
.3750	-388.	-798.	-169.	-499.	160.	-718.	.0446	-.0786	-.0196	.1160	-.0154	.0542	2704.	
.3760	-371.	-796.	-161.	-472.	142.	-718.	.0429	-.0744	-.0189	.1178	-.0171	.0531	2648.	
.3770	-346.	-769.	-141.	-419.	120.	-699.	.0406	-.0694	-.0176	.1174	-.0169	.0506	2506.	
.3780	-312.	-714.	-112.	-340.	94.	-658.	.0377	-.0636	-.0155	.1149	-.0149	.0470	2271.	
.3790	-269.	-638.	-73.	-241.	64.	-597.	.0343	-.0571	-.0127	.1104	-.0111	.0425	1967.	

ADLPIPE PAGE 2711

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.51.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING

.3690	-256.	-405.	-41.	-179.	142.	-514.	.0353	-.0870	-.0195	.0813	.0090	.0277	1712.
.3700	-305.	-507.	-76.	-279.	161.	-559.	.0392	-.0873	-.0193	.0885	.0050	.0360	1962.
.3710	-343.	-599.	-108.	-365.	173.	-603.	.0423	-.0871	-.0192	.0953	.0009	.0430	2208.
.3720	-374.	-677.	-137.	-474.	181.	-645.	.0445	-.0861	-.0193	.1017	-.0035	.0481	2429.
.3730	-394.	-737.	-152.	-481.	181.	-681.	.0455	-.0844	-.0195	.1075	-.0080	.0516	2595.
.3740	-398.	-777.	-165.	-502.	174.	-705.	.0456	-.0819	-.0197	.1125	-.0121	.0536	2686.
.3750	-388.	-798.	-169.	-499.	160.	-718.	.0446	-.0786	-.0196	.1160	-.0154	.0542	2704.
.3760	-371.	-796.	-161.	-472.	142.	-718.	.0429	-.0744	-.0189	.1178	-.0171	.0531	2648.
.3770	-346.	-769.	-141.	-419.	120.	-699.	.0406	-.0694	-.0176	.1174	-.0169	.0506	2506.
.3780	-312.	-714.	-112.	-340.	94.	-658.	.0377	-.0636	-.0155	.1149	-.0149	.0470	2271.
.3790	-269.	-638.	-73.	-241.	64.	-597.	.0343	-.0571	-.0127	.1104	-.0111	.0425	1967.

ADLPIPE PAGE 2711

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.51.

S/RV PIPING KEWAUNEE GKWOOD 2 RUP DISK
2 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	67	MEMBER	4	SEQUENCE	101	LOCATION	END	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.3800	-219.	-545.	-27.	-124.	30.	-521.		.0303	-.0500	-.0092	.1042	-.0060	.0369	1631.
.3810	-166.	-435.	26.	7.	-6.	-429.		.0258	-.0424	-.0055	.0967	-.0002	.0301	1304.
.3820	-112.	-305.	81.	155.	-45.	-318.		.0209	-.0345	-.0018	.0885	.0056	.0222	1084.
.3830	-58.	-163.	137.	311.	-86.	-193.		.0156	-.0263	.0019	.0800	.0110	.0136	1144.
.3840	-5.	-19.	192.	469.	-129.	-62.		.0100	-.0180	.0055	.0712	.0156	.0043	1493.
.3850	44.	123.	245.	623.	-173.	70.		.0042	-.0098	.0087	.0625	.0195	-.0052	1980.
.3860	87.	264.	293.	772.	-216.	208.		-.0015	-.0018	.0118	.0541	.0224	-.0146	2518.
.3870	120.	401.	336.	910.	-254.	348.		-.0069	.0058	.0147	.0459	.0245	-.0235	3063.
.3880	142.	527.	372.	1030.	-289.	483.		-.0118	.0128	.0175	.0381	.0257	-.0317	3571.
.3890	154.	633.	400.	1129.	-318.	606.		-.0163	.0192	.0201	.0309	.0259	-.0388	4015.
.3900	158.	718.	419.	1202.	-343.	718.		-.0201	.0247	.0225	.0246	.0251	-.0446	4385.
.3910	152.	782.	426.	1251.	-361.	812.		-.0233	.0294	.0244	.0194	.0230	-.0492	4667.
.3920	130.	823.	424.	1272.	-371.	884.		-.0258	.0330	.0258	.0156	.0195	-.0529	4844.
.3930	93.	838.	412.	1265.	-372.	931.		-.0276	.0357	.0265	.0132	.0146	-.0554	4910.
.3940	50.	826.	389.	1231.	-367.	954.		-.0287	.0373	.0267	.0123	.0085	-.0564	4868.
.3950	4.	786.	355.	1171.	-355.	951.		-.0292	.0378	.0265	.0126	.0015	-.0559	4714.
.3960	-52.	720.	315.	1085.	-336.	919.		-.0291	.0374	.0259	.0140	-.0061	-.0542	4445.
.3970	-120.	635.	270.	979.	-308.	863.		-.0282	.0361	.0250	.0162	-.0137	-.0516	4080.
.3980	-190.	537.	221.	859.	-273.	789.		-.0268	.0339	.0238	.0190	-.0214	-.0478	3643.
.3990	-255.	423.	167.	725.	-236.	697.		-.0250	.0310	.0224	.0222	-.0287	-.0429	3142.
.4000	-316.	294.	113.	581.	-196.	584.		-.0229	.0275	.0210	.0256	-.0355	-.0374	2576.

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)
.2040	-551.	1440.	340.	1362.	-148.	2262.		-.0750	-.0003	-.0003	-.0363	-.0166	-.0276	8043.

SECTION	68	MEMBER	1	SEQUENCE	101	LOCATION	BEG	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
0.0000	0.	0.	0.	0.	0.	0.		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
.0010	0.	0.	-0.	-0.	0.	-0.		-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	0.
.0020	0.	0.	-0.	-0.	0.	-0.		-.0000	-.0000	-.0000	-.0000	-.0000	-.0000	0.
.0030	0.	0.	-0.	-0.	0.	-0.		.0000	.0000	.0000	-.0000	.0000	-.0000	1.

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18.29.51.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

SECTION	68	MEMBER	1	SEQUENCE	101	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.		
.0010	0.	0.	-0.	-0.	0.	0.	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	0.		
.0020	0.	0.	-0.	-0.	0.	0.	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	0.		
.0030	0.	0.	-0.	-0.	0.	0.	0.0000	0.0000	0.0000	-0.0000	0.0000	-0.0000	1.		

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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	68	MEMBER	1	SEQUENCE	101	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0040	0.	0.	-0.	-0.	0.	-0.	-0.0000	0.0000	0.0000	-0.0000	0.0000	-0.0000	1.		
.0050	0.	0.	-0.	-0.	0.	-0.	-0.0000	0.0000	-0.0000	0.0000	-0.0000	-0.0000	0.		
.0060	-0.	0.	-0.	-0.	0.	1.	-0.0000	0.0000	-0.0000	0.0001	-0.0001	-0.0000	2.		
.0070	-1.	0.	-0.	-1.	0.	2.	-0.0001	-0.0000	-0.0001	0.0002	-0.0003	-0.0001	7.		
.0080	-2.	2.	-1.	-2.	0.	5.	-0.0002	-0.0000	-0.0003	0.0005	-0.0007	-0.0002	15.		
.0090	-3.	2.	-2.	-4.	0.	9.	-0.0005	-0.0000	-0.0006	0.0010	-0.0014	-0.0005	30.		
.0100	-6.	2.	-3.	-7.	0.	16.	-0.0008	-0.0000	-0.0011	0.0017	-0.0024	-0.0008	53.		
.0110	-10.	0.	-4.	-11.	0.	26.	-0.0013	-0.0000	-0.0018	0.0028	-0.0039	-0.0013	85.		
.0120	-15.	-0.	-6.	-16.	0.	40.	-0.0020	-0.0000	-0.0027	0.0043	-0.0061	-0.0020	130.		
.0130	-23.	-0.	-9.	-22.	0.	61.	-0.0030	-0.0000	-0.0040	0.0063	-0.0090	-0.0028	197.		
.0140	-35.	-1.	-11.	-29.	0.	91.	-0.0043	-0.0000	-0.0055	0.0087	-0.0127	-0.0039	289.		
.0150	-48.	-3.	-13.	-35.	0.	126.	-0.0059	-0.0000	-0.0072	0.0116	-0.0170	-0.0051	396.		
.0160	-60.	-8.	-16.	-42.	0.	158.	-0.0075	-0.0000	-0.0090	0.0145	-0.0214	-0.0065	496.		
.0170	-68.	-13.	-19.	-50.	0.	178.	-0.0091	-0.0000	-0.0106	0.0170	-0.0253	-0.0082	562.		
.0180	-69.	-13.	-22.	-58.	0.	180.	-0.0102	-0.0001	-0.0117	0.0185	-0.0279	-0.0098	575.		
.0190	-63.	-9.	-24.	-62.	0.	164.	-0.0108	-0.0001	-0.0118	0.0183	-0.0283	-0.0111	533.		
.0200	-49.	-1.	-23.	-59.	0.	129.	-0.0106	-0.0001	-0.0104	0.0158	-0.0255	-0.0115	432.		
.0210	-30.	-3.	-18.	-46.	0.	79.	-0.0093	-0.0001	-0.0074	0.0105	-0.0191	-0.0106	279.		
.0220	-9.	-33.	-8.	-21.	0.	24.	-0.0070	-0.0002	-0.0028	0.0029	-0.0092	-0.0080	96.		
.0230	13.	-74.	5.	12.	0.	-35.	-0.0040	-0.0003	0.0028	-0.0063	0.0030	-0.0042	112.		
.0240	32.	-112.	10.	48.	0.	-84.	-0.0009	-0.0005	0.0086	-0.0155	0.0155	-0.0000	295.		
.0250	45.	-129.	31.	81.	0.	-117.	0.0016	-0.0008	0.0135	-0.0234	0.0262	0.0039	433.		
.0260	54.	-123.	40.	103.	0.	-140.	0.0033	-0.0011	0.0169	-0.0288	0.0338	0.0067	530.		
.0270	67.	-151.	43.	111.	0.	-165.	0.0047	-0.0016	0.0183	-0.0312	0.0379	0.0086	604.		
.0280	81.	-195.	35.	92.	0.	-212.	0.0057	-0.0022	0.0174	-0.0304	0.0385	0.0089	703.		
.0290	103.	-160.	21.	54.	0.	-270.	0.0061	-0.0029	0.0150	-0.0275	0.0357	0.0076	838.		
.0300	103.	-82.	18.	47.	0.	-269.	0.0060	-0.0038	0.0129	-0.0239	0.0324	0.0075	832.		
.0310	87.	-60.	27.	71.	0.	-226.	0.0066	-0.0047	0.0122	-0.0216	0.0322	0.0104	721.		
.0320	93.	-49.	29.	76.	-0.	-243.	0.0092	-0.0056	0.0127	-0.0223	0.0358	0.0143	775.		
.0330	121.	6.	28.	72.	-0.	-315.	0.0135	-0.0065	0.0145	-0.0255	0.0423	0.0188	984.		
.0340	122.	52.	41.	107.	-0.	-318.	0.0177	-0.0075	0.0175	-0.0293	0.0506	0.0258	1020.		
.0350	80.	67.	69.	180.	-0.	-208.	0.0203	-0.0083	0.0202	-0.0310	0.0571	0.0346	837.		
.0360	36.	120.	87.	228.	-0.	-94.	0.0211	-0.0091	0.0196	-0.0276	0.0563	0.0400	749.		
.0370	25.	221.	81.	211.	-0.	-66.	0.0204	-0.0098	0.0138	-0.0173	0.0453	0.0391	673.		
.0380	31.	295.	56.	146.	-0.	-80.	0.0180	-0.0103	0.0035	-0.0006	0.0258	0.0332	507.		
.0390	19.	354.	27.	71.	-0.	-50.	0.0135	-0.0105	-0.0090	0.0198	0.0006	0.0253	264.		
.0400	-13.	485.	8.	22.	-0.	34.	0.0077	-0.0104	-0.0206	0.0397	-0.0255	0.0173	124.		
.0410	-42.	603.	4.	12.	-0.	109.	0.0033	-0.0100	-0.0283	0.0541	-0.0441	0.0115	335.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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

CONDITION 24

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

.0310	87.	-60.	27.	71.	0.	-226.	.0066	-.0047	.0122	-.0216	.0322	.0104	721.
.0320	93.	-49.	29.	76.	-0.	-243.	.0092	-.0056	.0127	-.0223	.0358	.0143	775.
.0330	121.	6.	28.	72.	-0.	-315.	.0135	-.0065	.0145	-.0255	.0423	.0188	984.
.0340	122.	52.	41.	107.	-0.	-318.	.0177	-.0075	.0175	-.0293	.0506	.0258	1020.
.0350	80.	67.	69.	180.	-0.	-208.	.0203	-.0083	.0202	-.0310	.0571	.0346	837.
.0360	36.	120.	87.	228.	-0.	-94.	.0211	-.0091	.0196	-.0276	.0563	.0400	749.
.0370	25.	221.	81.	211.	-0.	-66.	.0204	-.0098	.0138	-.0173	.0453	.0391	673.
.0380	31.	295.	56.	146.	-0.	-80.	.0180	-.0103	.0035	-.0006	.0258	.0332	507.
.0390	19.	354.	27.	71.	-0.	-50.	.0135	-.0105	-.0090	.0198	.0006	.0253	264.
.0400	-17.	405.	8.	22.	-0.	34.	.0077	-.0104	-.0206	.0397	-.0255	.0173	124.
.0410	-42.	603.	4.	12.	-0.	109.	.0033	-.0100	-.0283	.0541	-.0441	.0115	335.

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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

SECTION	68	MEMBER	1	SEQUENCE	101	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0420	-27.	616.	1.	3.	-0.	70.	.0030	-.0091	-.0306	.0586	-.0489	.0084	214.		
.0430	30.	581.	-5.	-12.	-0.	-79.	.0066	-.0077	-.0271	.0524	-.0407	.0079	243.		
.0440	72.	567.	8.	22.	-0.	-187.	.0116	-.0058	-.0182	.0382	-.0236	.0116	574.		
.0450	54.	495.	48.	126.	-0.	-142.	.0153	-.0036	-.0059	.0208	-.0019	.0194	577.		
.0460	17.	336.	82.	215.	-0.	-44.	.0169	-.0009	.0045	.0062	.0159	.0255	666.		
.0470	31.	215.	71.	186.	-0.	-80.	.0164	.0019	.0078	-.0001	.0197	.0220	616.		
.0480	87.	185.	21.	54.	-0.	-227.	.0131	.0050	.0038	.0028	.0088	.0086	710.		
.0490	110.	136.	-34.	-87.	-0.	-288.	.0062	.0082	-.0038	.0118	-.0098	-.0078	914.		
.0500	71.	15.	-72.	-187.	-0.	-185.	-.0031	.0114	-.0112	.0222	-.0302	-.0218	801.		
.0510	23.	-108.	-102.	-265.	-0.	-60.	-.0115	.0147	-.0164	.0293	-.0473	-.0334	827.		
.0520	20.	-204.	-133.	-348.	-0.	-51.	-.0162	.0178	-.0173	.0282	-.0533	-.0431	1069.		
.0530	44.	-327.	-158.	-411.	0.	-116.	-.0169	.0207	-.0123	.0168	-.0442	-.0486	1300.		
.0540	43.	-509.	-156.	-408.	0.	-112.	-.0152	.0234	-.0018	-.0019	-.0245	-.0470	1286.		
.0550	2.	-701.	-130.	-339.	0.	-4.	-.0132	.0256	.0112	-.0229	-.0013	-.0405	1032.		
.0560	-39.	-824.	-105.	-275.	0.	101.	-.0119	.0272	.0227	-.0413	.0196	-.0352	890.		
.0570	-51.	-861.	-103.	-269.	0.	132.	-.0120	.0282	.0288	-.0526	.0314	-.0357	912.		
.0580	-59.	-865.	-117.	-305.	0.	155.	-.0145	.0285	.0282	-.0536	.0291	-.0407	1042.		
.0590	-99.	-855.	-128.	-335.	0.	258.	-.0197	.0281	.0230	-.0458	.0158	-.0473	1286.		
.0600	-158.	-787.	-131.	-341.	0.	411.	-.0261	.0271	.0164	-.0347	.0001	-.0538	1626.		
.0610	-199.	-666.	-128.	-334.	0.	518.	-.0308	.0254	.0111	-.0258	-.0115	-.0589	1874.		
.0620	-206.	-578.	-117.	-305.	0.	538.	-.0314	.0232	.0094	-.0227	-.0146	-.0600	1882.		
.0630	-196.	-524.	-88.	-230.	0.	512.	-.0278	.0205	.0134	-.0281	-.0047	-.0549	1708.		
.0640	-194.	-416.	-34.	-90.	0.	505.	-.0216	.0175	.0232	-.0416	.0176	-.0439	1561.		
.0650	-215.	-278.	40.	104.	0.	561.	-.0145	.0142	.0360	-.0584	.0446	-.0284	1734.		
.0660	-249.	-229.	111.	290.	0.	649.	-.0079	.0106	.0466	-.0715	.0666	-.0119	2163.		
.0670	-262.	-219.	154.	403.	0.	684.	-.0031	.0068	.0507	-.0755	.0766	-.0009	2414.		
.0680	-247.	-93.	164.	427.	0.	645.	-.0020	.0030	.0462	-.0672	.0698	.0008	2354.		
.0690	-242.	114.	156.	408.	0.	632.	-.0053	-.0009	.0342	-.0468	.0462	-.0042	2289.		
.0700	-272.	252.	146.	380.	0.	711.	-.0117	-.0047	.0180	-.0188	.0125	-.0106	2451.		
.0710	-303.	339.	132.	345.	0.	791.	-.0180	-.0083	.0017	.0092	-.0209	-.0164	2624.		
.0720	-292.	458.	116.	303.	-0.	760.	-.0213	-.0116	-.0106	.0298	-.0446	-.0208	2489.		
.0730	-246.	523.	108.	281.	-0.	642.	-.0198	-.0145	-.0159	.0387	-.0524	-.0198	2132.		
.0740	-203.	451.	119.	311.	-0.	529.	-.0142	-.0170	-.0134	.0355	-.0434	-.0107	1866.		
.0750	-169.	354.	149.	390.	-0.	440.	-.0063	-.0192	-.0049	.0236	-.0224	.0039	1787.		
.0760	-126.	338.	182.	475.	-0.	328.	.0020	-.0210	.0054	.0090	.0021	.0185	1756.		
.0770	-65.	316.	196.	511.	-0.	171.	.0092	-.0226	.0125	-.0016	.0213	.0293	1638.		
.0780	5.	222.	179.	467.	-0.	-13.	.0138	-.0239	.0129	-.0031	.0278	.0343	1420.		
.0790	71.	155.	138.	360.	-0.	-185.	.0146	-.0251	.0061	.0063	.0192	.0328	1231.		

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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
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PRESSURE
ENGLISH UNITS

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

.0700	-272.	252.	146.	380.	0.	711.	-.0117	-.0047	.0180	-.0188	.0125	-.0106	2451.
.0710	-303.	339.	132.	345.	0.	791.	-.0180	-.0083	.0017	.0092	-.0209	-.0164	2624.
.0720	-292.	458.	116.	303.	-0.	760.	-.0213	-.0116	-.0106	.0298	-.0446	-.0208	2489.
.0730	-246.	523.	108.	281.	-0.	642.	-.0198	-.0145	-.0159	.0387	-.0524	-.0198	2132.
.0740	-203.	451.	119.	311.	-0.	529.	-.0142	-.0170	-.0134	.0355	-.0434	-.0107	1866.
.0750	-169.	354.	149.	390.	-0.	440.	-.0063	-.0192	-.0049	.0236	-.0224	.0039	1787.
.0760	-126.	330.	182.	475.	-0.	328.	.0020	-.0210	.0054	.0090	.0021	.0185	1756.
.0770	-65.	316.	196.	511.	-0.	171.	.0092	-.0226	.0125	-.0016	.0213	.0293	1638.
.0780	5.	222.	179.	467.	-0.	-13.	.0138	-.0239	.0129	-.0031	.0278	.0343	1420.
.0790	71.	155.	130.	360.	-0.	-105.	.0146	-.0251	.0061	.0063	.0192	.0328	1231.

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ADLPIPE STRESS ANALYSIS

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18.29.51.

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	TYPE	VA	VA	VA	VA	VA	VA	VA	VA	VA	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	(PSI)	
.0800	119.	183.	87.	227.	-0.	-311.	.0117	-.0261	-.0056	.0237	-.0004	.0264	1171.	
.0810	146.	216.	39.	91.	-0.	-382.	.0071	-.0269	-.0188	.0440	-.0233	.0190	1194.	
.0820	170.	195.	-14.	-36.	-0.	-444.	.0037	-.0276	-.0302	.0613	-.0420	.0139	1356.	
.0830	212.	172.	-53.	-139.	-0.	-553.	.0036	-.0281	-.0366	.0704	-.0493	.0125	1733.	
.0840	268.	169.	-76.	-199.	-0.	-698.	.0071	-.0285	-.0362	.0687	-.0411	.0161	2209.	
.0850	316.	136.	-80.	-209.	-0.	-825.	.0135	-.0287	-.0297	.0580	-.0197	.0251	2589.	
.0860	348.	62.	-70.	-182.	-0.	-909.	.0211	-.0289	-.0202	.0430	.0071	.0378	2820.	
.0870	377.	16.	-59.	-153.	-0.	-984.	.0283	-.0290	-.0112	.0291	.0322	.0495	3030.	
.0880	415.	41.	-59.	-155.	-0.	-1081.	.0337	-.0291	-.0056	.0199	.0508	.0565	3322.	
.0890	448.	102.	-73.	-189.	-0.	-1170.	.0365	-.0291	-.0046	.0178	.0591	.0585	3605.	
.0900	461.	158.	-89.	-233.	-0.	-1201.	.0369	-.0290	-.0073	.0219	.0578	.0577	3723.	
.0910	452.	215.	-101.	-264.	-0.	-1180.	.0360	-.0288	-.0111	.0284	.0528	.0560	3678.	
.0920	440.	288.	-107.	-280.	0.	-1147.	.0352	-.0284	-.0134	.0327	.0502	.0546	3590.	
.0930	425.	348.	-105.	-273.	0.	-1108.	.0358	-.0278	-.0129	.0326	.0523	.0552	3472.	
.0940	393.	348.	-88.	-231.	0.	-1025.	.0374	-.0269	-.0094	.0284	.0584	.0588	3196.	
.0950	335.	311.	-60.	-157.	0.	-874.	.0386	-.0257	-.0043	.0225	.0661	.0641	2702.	
.0960	263.	297.	-30.	-79.	0.	-686.	.0380	-.0242	-.0005	.0190	.0696	.0672	2102.	
.0970	197.	310.	-13.	-34.	0.	-503.	.0347	-.0225	-.0011	.0221	.0624	.0647	1534.	
.0980	131.	315.	-15.	-40.	0.	-341.	.0285	-.0206	-.0074	.0335	.0425	.0557	1045.	
.0990	74.	328.	-31.	-81.	0.	-192.	.0195	-.0183	-.0180	.0512	.0133	.0410	635.	
.1000	14.	382.	-47.	-124.	0.	-38.	.0089	-.0158	-.0298	.0710	-.0195	.0233	394.	
.1010	-51.	430.	-54.	-141.	0.	132.	-.0017	-.0130	-.0395	.0880	-.0492	.0065	589.	
.1020	-112.	403.	-49.	-128.	-0.	291.	-.0101	-.0098	-.0445	.0977	-.0694	-.0070	967.	
.1030	-150.	331.	-36.	-94.	-0.	392.	-.0155	-.0063	-.0440	.0979	-.0772	-.0170	1227.	
.1040	-165.	271.	-16.	-42.	-0.	432.	-.0182	-.0025	-.0383	.0896	-.0743	-.0244	1319.	
.1050	-175.	192.	10.	27.	-0.	456.	-.0194	.0014	-.0293	.0757	-.0646	-.0295	1388.	
.1060	-188.	66.	30.	98.	-0.	489.	-.0202	.0055	-.0191	.0598	-.0529	-.0333	1518.	
.1070	-192.	-47.	56.	147.	-0.	502.	-.0214	.0097	-.0100	.0449	-.0432	-.0383	1590.	
.1080	-180.	-88.	61.	159.	-0.	469.	-.0231	.0138	-.0027	.0321	-.0371	-.0458	1505.	
.1090	-166.	-119.	57.	148.	-0.	432.	-.0250	.0178	.0032	.0207	-.0331	-.0536	1389.	
.1100	-178.	-277.	59.	155.	-0.	464.	-.0266	.0217	.0092	.0101	-.0284	-.0578	1487.	
.1110	-192.	-400.	61.	159.	-0.	500.	-.0275	.0253	.0156	-.0012	-.0221	-.0602	1595.	
.1120	-197.	-410.	55.	144.	-0.	504.	-.0276	.0286	.0219	-.0131	-.0147	-.0622	1596.	
.1130	-212.	-488.	51.	133.	-0.	552.	-.0273	.0316	.0276	-.0236	-.0072	-.0613	1726.	
.1140	-246.	-654.	47.	123.	-0.	641.	-.0270	.0342	.0311	-.0301	-.0026	-.0585	1985.	
.1150	-255.	-696.	29.	76.	-0.	664.	-.0271	.0362	.0311	-.0316	-.0035	-.0587	2033.	
.1160	-232.	-594.	-5.	-14.	-0.	606.	-.0274	.0377	.0276	-.0285	-.0095	-.0623	1844.	
.1170	-218.	-546.	-40.	-104.	-0.	568.	-.0276	.0387	.0223	-.0221	-.0177	-.0646	1757.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.51.

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

.1070	-192.	-47.	56.	147.	-0.	502.	-.0214	.0097	-.0100	.0449	-.0432	-.0383	1590.
.1080	-180.	-88.	61.	159.	-0.	469.	-.0231	.0158	-.0027	.0321	-.0371	-.0458	1505.
.1090	-166.	-119.	57.	148.	-0.	432.	-.0250	.0178	.0032	.0207	-.0331	-.0536	1389.
.1100	-178.	-277.	59.	155.	-0.	464.	-.0266	.0217	.0092	.0101	-.0284	-.0578	1487.
.1110	-192.	-400.	61.	159.	-0.	500.	-.0275	.0253	.0156	-.0012	-.0221	-.0602	1595.
.1120	-197.	-410.	55.	144.	-0.	504.	-.0276	.0286	.0219	-.0131	-.0147	-.0622	1596.
.1130	-212.	-488.	51.	133.	-0.	552.	-.0273	.0316	.0276	-.0236	-.0072	-.0613	1726.
.1140	-246.	-654.	47.	123.	-0.	641.	-.0270	.0342	.0311	-.0301	-.0026	-.0585	1985.
.1150	-255.	-696.	29.	76.	-0.	664.	-.0271	.0362	.0311	-.0316	-.0035	-.0587	2033.
.1160	-232.	-594.	-5.	-14.	-0.	606.	-.0274	.0377	.0276	-.0285	-.0095	-.0623	1844.
.1170	-218.	-546.	-40.	-104.	-0.	568.	-.0276	.0387	.0223	-.0221	-.0177	-.0646	1757.

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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	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	VA								
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1180	-220.	-582.	-59.	-153.	-0.	575.	-.0267	.0393	.0174	-.0148	-.0244	-.0628	1810.	
.1190	-188.	-462.	-71.	-185.	-0.	490.	-.0234	.0395	.0150	-.0112	-.0244	-.0600	1594.	
.1200	-100.	-219.	-80.	-208.	-0.	283.	-.0164	.0393	.0165	-.0149	-.0134	-.0553	1068.	
.1210	-32.	-155.	-71.	-185.	-0.	83.	-.0057	.0390	.0225	-.0247	.0083	-.0434	616.	
.1220	28.	-250.	-47.	-122.	-0.	-73.	.0071	.0385	.0309	-.0376	.0348	-.0258	432.	
.1230	92.	-210.	-23.	-59.	-0.	-255.	.0195	.0378	.0386	-.0489	.0591	-.0101	795.	
.1240	178.	4.	-14.	-37.	-0.	-463.	.0292	.0371	.0416	-.0537	.0735	-.0005	1414.	
.1250	226.	114.	-21.	-55.	-0.	-590.	.0351	.0363	.0375	-.0471	.0714	.0051	1804.	
.1260	242.	75.	-41.	-106.	-0.	-631.	.0370	.0356	.0259	-.0282	.0518	.0069	1946.	
.1270	281.	183.	-81.	-212.	-0.	-733.	.0365	.0351	.0095	-.0028	.0222	.0010	2321.	
.1280	347.	431.	-130.	-339.	-0.	-906.	.0355	.0347	-.0072	.0220	-.0071	-.0089	2942.	
.1290	386.	496.	-162.	-424.	-0.	-1006.	.0361	.0347	-.0198	.0410	-.0286	-.0134	3321.	
.1300	370.	339.	-166.	-432.	-0.	-989.	.0392	.0350	-.0258	.0509	-.0383	-.0090	3282.	
.1310	370.	273.	-147.	-382.	-0.	-964.	.0443	.0356	-.0251	.0506	-.0348	-.0013	3154.	
.1320	370.	393.	-126.	-327.	-0.	-988.	.0502	.0364	-.0204	.0430	-.0225	.0054	3166.	
.1330	362.	335.	-106.	-278.	0.	-943.	.0553	.0376	-.0158	.0352	-.0117	.0130	2991.	
.1340	307.	65.	-95.	-248.	0.	-800.	.0580	.0389	-.0149	.0333	-.0104	.0197	2547.	
.1350	262.	-55.	-102.	-267.	0.	-684.	.0568	.0403	-.0192	.0386	-.0198	.0179	2234.	
.1360	230.	87.	-126.	-329.	0.	-621.	.0519	.0418	-.0275	.0494	-.0376	.0066	2138.	
.1370	183.	151.	-151.	-393.	0.	-477.	.0449	.0433	-.0375	.0628	-.0603	-.0056	1880.	
.1380	76.	-26.	-157.	-409.	0.	-200.	.0377	.0449	-.0454	.0743	-.0807	-.0126	1385.	
.1390	-17.	-135.	-150.	-391.	0.	45.	.0324	.0464	-.0480	.0774	-.0896	-.0177	1197.	
.1400	-60.	-58.	-139.	-362.	0.	157.	.0301	.0479	-.0442	.0689	-.0834	-.0228	1201.	
.1410	-100.	-128.	-117.	-305.	0.	260.	.0308	.0493	-.0354	.0521	-.0665	-.0226	1220.	
.1420	-166.	-408.	-83.	-215.	0.	433.	.0327	.0505	-.0239	.0317	-.0453	-.0172	1470.	
.1430	-220.	-519.	-44.	-114.	0.	597.	.0333	.0515	-.0122	.0114	-.0246	-.0141	1850.	
.1440	-269.	-339.	-14.	-38.	0.	701.	.0316	.0520	-.0029	-.0056	-.0088	-.0177	2134.	
.1450	-317.	-262.	2.	5.	0.	827.	.0279	.0524	.0020	-.0161	-.0020	-.0233	2516.	
.1460	-384.	-451.	9.	23.	0.	1001.	.0233	.0524	.0026	-.0197	-.0041	-.0282	3046.	
.1470	-422.	-513.	6.	15.	0.	1101.	.0181	.0521	.0014	-.0210	-.0090	-.0367	3349.	
.1480	-430.	-293.	8.	21.	0.	1122.	.0130	.0515	.0015	-.0242	-.0103	-.0478	3414.	
.1490	-450.	-144.	29.	77.	0.	1194.	.0092	.0506	.0048	-.0311	-.0058	-.0535	3641.	
.1500	-510.	-237.	60.	179.	0.	1331.	.0080	.0496	.0114	-.0421	.0046	-.0512	4085.	
.1510	-530.	-266.	110.	288.	0.	1382.	.0091	.0484	.0207	-.0574	.0210	-.0475	4295.	
.1520	-498.	-70.	143.	373.	0.	1300.	.0112	.0470	.0306	-.0750	.0400	-.0467	4114.	
.1530	-481.	32.	175.	457.	0.	1254.	.0128	.0456	.0388	-.0890	.0542	-.0447	4060.	
.1540	-505.	-75.	208.	543.	-0.	1318.	.0122	.0442	.0427	-.0950	.0574	-.0412	4337.	
.1550	-519.	-63.	230.	600.	-0.	1355.	.0090	.0428	.0417	-.0927	.0497	-.0432	4506.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.29.51.

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

.1450	-317.	-262.	2.	5.	0.	827.	.0279	.0524	.0020	-.0161	-.0020	-.0233	2516.
.1460	-384.	-451.	9.	23.	0.	1001.	.0235	.0524	.0026	-.0197	-.0041	-.0282	3046.
.1470	-422.	-513.	6.	15.	0.	1101.	.0181	.0521	.0014	-.0210	-.0090	-.0367	3349.
.1480	-430.	-293.	8.	21.	0.	1122.	.0130	.0515	.0015	-.0242	-.0103	-.0478	3414.
.1490	-450.	-144.	29.	77.	0.	1194.	.0092	.0506	.0048	-.0311	-.0058	-.0535	3641.
.1500	-510.	-237.	69.	179.	0.	1331.	.0080	.0496	.0114	-.0421	.0046	-.0512	4085.
.1510	-530.	-266.	110.	288.	0.	1382.	.0091	.0484	.0207	-.0574	.0210	-.0475	4295.
.1520	-498.	-70.	143.	373.	0.	1300.	.0112	.0470	.0306	-.0750	.0400	-.0467	4114.
.1530	-481.	32.	175.	457.	0.	1254.	.0128	.0456	.0388	-.0890	.0542	-.0447	4060.
.1540	-505.	-75.	208.	543.	-0.	1318.	.0122	.0442	.0427	-.0950	.0574	-.0412	4337.
.1550	-519.	-63.	230.	600.	-0.	1355.	.0090	.0428	.0417	-.0927	.0497	-.0432	4506.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.51.

S/RV PIPING KEWAUNEE GKWOOF 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	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.1560	-480.	201.	234.	610.	-0.	1272.	.0036	.0414	.0362	-.0840	.0339	-.0532	4291.	
.1570	-445.	409.	224.	584.	-0.	1162.	-.0027	.0402	.0277	-.0708	.0123	-.0653	3955.	
.1580	-433.	360.	217.	567.	-0.	1128.	-.0088	.0392	.0185	-.0557	-.0117	-.0733	3841.	
.1590	-423.	312.	218.	569.	-0.	1102.	-.0143	.0386	.0114	-.0433	-.0317	-.0792	3774.	
.1600	-380.	448.	217.	567.	-0.	990.	-.0187	.0382	.0075	-.0367	-.0436	-.0861	3470.	
.1610	-326.	527.	214.	559.	-0.	850.	-.0214	.0382	.0062	-.0346	-.0496	-.0906	3094.	
.1620	-290.	373.	215.	561.	-0.	756.	-.0229	.0386	.0064	-.0347	-.0525	-.0904	2864.	
.1630	-245.	234.	211.	549.	-0.	639.	-.0242	.0392	.0075	-.0366	-.0522	-.0905	2564.	
.1640	-171.	275.	195.	508.	-0.	447.	-.0262	.0401	.0086	-.0396	-.0496	-.0946	2059.	
.1650	-97.	264.	169.	441.	-0.	252.	-.0285	.0412	.0087	-.0414	-.0477	-.0993	1545.	
.1660	-42.	33.	133.	346.	-0.	109.	-.0310	.0424	.0074	-.0417	-.0475	-.1019	1105.	
.1670	7.	-220.	90.	233.	-0.	-20.	-.0337	.0437	.0058	-.0419	-.0465	-.1044	713.	
.1680	66.	-297.	41.	107.	-0.	-171.	-.0369	.0448	.0047	-.0436	-.0428	-.1087	615.	
.1690	105.	-388.	-7.	-17.	-0.	-274.	-.0402	.0456	.0040	-.0457	-.0379	-.1112	837.	
.1700	113.	-666.	-55.	-143.	-0.	-294.	-.0430	.0460	.0030	-.0475	-.0332	-.1095	995.	
.1710	121.	-933.	-111.	-289.	-0.	-316.	-.0453	.0459	.0014	-.0491	-.0283	-.1072	1303.	
.1720	146.	-1016.	-168.	-438.	-0.	-380.	-.0474	.0451	-.0006	-.0502	-.0228	-.1066	1763.	
.1730	158.	-1056.	-220.	-574.	-0.	-413.	-.0493	.0435	-.0031	-.0503	-.0176	-.1045	2151.	
.1740	133.	-1221.	-258.	-674.	-0.	-347.	-.0506	.0409	-.0057	-.0490	-.0127	-.0973	2305.	
.1750	95.	-1349.	-281.	-732.	-0.	-247.	-.0511	.0375	-.0077	-.0472	-.0066	-.0874	2350.	
.1760	77.	-1250.	-292.	-762.	-0.	-200.	-.0503	.0330	-.0087	-.0466	.0028	-.0775	2396.	
.1770	61.	-1085.	-287.	-750.	-0.	-160.	-.0478	.0275	-.0084	-.0471	.0153	-.0651	2332.	
.1780	25.	-1023.	-264.	-688.	-0.	-66.	-.0437	.0212	-.0069	-.0480	.0294	-.0473	2102.	
.1790	-18.	-943.	-222.	-578.	-0.	47.	-.0383	.0141	-.0045	-.0491	.0443	-.0265	1765.	
.1800	-42.	-666.	-168.	-437.	-0.	111.	-.0323	.0063	-.0015	-.0502	.0595	-.0067	1372.	
.1810	-59.	-291.	-106.	-275.	-0.	153.	-.0261	-.0019	.0012	-.0501	.0728	.0125	958.	
.1820	-96.	-18.	-30.	-77.	-0.	251.	-.0202	-.0104	.0031	-.0471	.0817	.0338	798.	
.1830	-139.	229.	54.	142.	-0.	363.	-.0148	-.0187	.0040	-.0414	.0862	.0548	1184.	
.1840	-157.	600.	137.	357.	-0.	410.	-.0102	-.0269	.0040	-.0343	.0877	.0718	1652.	
.1850	-157.	1000.	215.	562.	-0.	410.	-.0063	-.0344	.0034	-.0261	.0862	.0858	2115.	
.1860	-163.	1258.	291.	760.	-0.	425.	-.0032	-.0412	.0022	-.0169	.0809	.0994	2647.	
.1870	-173.	1414.	364.	948.	-0.	450.	-.0011	-.0469	.0008	-.0073	.0728	.1115	3194.	
.1880	-161.	1626.	422.	1101.	-0.	420.	-.0005	-.0514	-.0007	.0017	.0627	.1189	3584.	
.1890	-130.	1830.	462.	1206.	-0.	339.	-.0014	-.0546	-.0028	.0104	.0498	.1215	3810.	
.1900	-98.	1860.	484.	1263.	-0.	255.	-.0038	-.0563	-.0060	.0196	.0334	.1216	3920.	
.1910	-56.	1762.	485.	1265.	-0.	147.	-.0075	-.0566	-.0097	.0282	.0151	.1184	3873.	
.1920	11.	1682.	465.	1213.	-0.	-28.	-.0123	-.0554	-.0131	.0347	-.0021	.1104	3692.	
.1930	98.	1592.	429.	1118.	-0.	-257.	-.0176	-.0529	-.0152	.0378	-.0162	.0991	3489.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.51.

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

.1830	-139.	229.	54.	142.	-0.	363.	-.148	-.0187	.0040	-.0414	.0862	.0548	1184.
.1840	-157.	600.	137.	357.	-0.	410.	-.0102	-.0269	.0040	-.0343	.0877	.0718	1652.
.1850	-157.	1000.	215.	562.	-0.	410.	-.0063	-.0344	.0034	-.0261	.0862	.0858	2115.
.1860	-163.	1258.	291.	760.	-0.	425.	-.0032	-.0412	.0022	-.0169	.0809	.0994	2647.
.1870	-173.	1414.	364.	948.	-0.	450.	-.0011	-.0469	.0008	-.0073	.0728	.1115	3194.
.1880	-161.	1626.	422.	1101.	-0.	420.	-.0005	-.0514	-.0007	.0017	.0627	.1189	3584.
.1890	-130.	1830.	462.	1206.	-0.	339.	-.0014	-.0546	-.0028	.0104	.0498	.1215	3810.
.1900	-90.	1860.	484.	1263.	-0.	255.	-.0038	-.0563	-.0060	.0196	.0334	.1216	3920.
.1910	-56.	1762.	485.	1265.	-0.	147.	-.0075	-.0566	-.0097	.0282	.0151	.1184	3873.
.1920	11.	1682.	465.	1213.	-0.	-28.	-.0123	-.0554	-.0131	.0347	-.0021	.1104	3692.
.1930	98.	1592.	429.	1118.	-0.	-257.	-.0176	-.0529	-.0152	.0378	-.0162	.0991	3489.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.51.

S/RV PIPING KEWAUNEE GKWOOF 2 RUP DISK
2 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	68	MEMBER	1	SEQUENCE	101	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1940	187.	1354.	380.	991.	-0.	-487.	-.0226	-.0492	-.0154	.0366	-.0256	.0880	5360.		
.1950	273.	1000.	322.	841.	-0.	-712.	-.0272	-.0445	-.0132	.0306	-.0292	.0777	5352.		
.1960	367.	673.	255.	665.	-0.	-958.	-.0315	-.0389	-.0088	.0199	-.0268	.0666	3548.		
.1970	462.	362.	178.	463.	-0.	-1205.	-.0359	-.0329	-.0032	.0063	-.0208	.0548	3927.		
.1980	540.	-40.	90.	234.	-0.	-1409.	-.0405	-.0267	.0018	-.0071	-.0150	.0436	4344.		
.1990	603.	-480.	-8.	-22.	-0.	-1574.	-.0459	-.0206	.0048	-.0179	-.0120	.0318	4787.		
.2000	664.	-806.	-115.	-301.	-0.	-1732.	-.0524	-.0148	.0053	-.0253	-.0125	.0174	5347.		
.2010	716.	-1018.	-224.	-503.	-0.	-1866.	-.0596	-.0097	.0038	-.0292	-.0156	.0016	5948.		
.2020	741.	-1234.	-323.	-843.	-0.	-1934.	-.0665	-.0055	.0014	-.0308	-.0196	-.0119	6418.		
.2030	747.	-1453.	-408.	-1065.	-0.	-1949.	-.0719	-.0023	-.0005	-.0324	-.0211	-.0215	6755.		
.2040	751.	-1567.	-475.	-1239.	-0.	-1958.	-.0750	-.0003	-.0003	-.0363	-.0166	-.0276	7048.		
.2050	740.	-1570.	-518.	-1352.	-0.	-1952.	-.0752	.0005	.0027	-.0436	-.0051	-.0292	7224.		
.2060	722.	-1556.	-533.	-1389.	-0.	-1883.	-.0730	.0001	.0081	-.0530	.0115	-.0246	7117.		
.2070	670.	-1524.	-521.	-1359.	-0.	-1747.	-.0690	-.0016	.0148	-.0625	.0301	-.0150	6733.		
.2080	611.	-1384.	-493.	-1285.	-0.	-1594.	-.0641	-.0044	.0210	-.0700	.0472	-.0040	6229.		
.2090	551.	-1136.	-454.	-1185.	-0.	-1438.	-.0590	-.0083	.0250	-.0732	.0594	.0065	5669.		
.2100	477.	-878.	-406.	-1059.	-0.	-1245.	-.0544	-.0131	.0260	-.0705	.0641	.0170	4972.		
.2110	385.	-635.	-347.	-905.	-0.	-1005.	-.0505	-.0185	.0242	-.0621	.0613	.0275	4114.		
.2120	291.	-337.	-278.	-725.	-0.	-758.	-.0470	-.0244	.0207	-.0499	.0532	.0369	3191.		
.2130	204.	18.	-200.	-521.	0.	-532.	-.0434	-.0305	.0168	-.0365	.0431	.0453	2265.		
.2140	122.	325.	-112.	-292.	0.	-319.	-.0388	-.0365	.0140	-.0241	.0334	.0547	1315.		
.2150	45.	569.	-16.	-41.	0.	-117.	-.0329	-.0423	.0130	-.0144	.0259	.0659	377.		
.2160	-19.	772.	85.	221.	0.	51.	-.0261	-.0475	.0141	-.0081	.0214	.0773	688.		
.2170	-66.	970.	183.	478.	0.	172.	-.0188	-.0520	.0166	-.0042	.0183	.0876	1546.		
.2180	-100.	1110.	274.	716.	0.	261.	-.0119	-.0558	.0189	-.0006	.0141	.0960	2318.		
.2190	-125.	1175.	352.	919.	0.	326.	-.0061	-.0587	.0199	.0043	.0065	.1015	2967.		
.2200	-135.	1219.	413.	1078.	0.	353.	-.0020	-.0605	.0191	.0114	-.0048	.1026	3450.		
.2210	-128.	1264.	455.	1188.	0.	335.	.0006	-.0614	.0165	.0201	-.0190	.0991	3754.		
.2220	-109.	1255.	479.	1250.	0.	286.	.0021	-.0613	.0130	.0293	-.0338	.0926	3900.		
.2230	-81.	1165.	487.	1269.	0.	212.	.0034	-.0602	.0096	.0371	-.0467	.0848	3915.		
.2240	-42.	1043.	480.	1253.	0.	110.	.0049	-.0582	.0077	.0416	-.0546	.0764	3826.		
.2250	4.	922.	463.	1208.	-0.	-10.	.0068	-.0553	.0078	.0417	-.0561	.0681	3674.		
.2260	47.	768.	436.	1137.	-0.	-122.	.0091	-.0518	.0097	.0382	-.0520	.0607	3480.		
.2270	84.	562.	397.	1035.	-0.	-218.	.0115	-.0476	.0122	.0327	-.0444	.0541	3218.		
.2280	121.	357.	341.	890.	-0.	-316.	.0134	-.0430	.0141	.0274	-.0358	.0464	2872.		
.2290	160.	193.	268.	699.	-0.	-418.	.0144	-.0382	.0142	.0238	-.0285	.0367	2476.		
.2300	189.	45.	182.	474.	-0.	-494.	.0141	-.0332	.0121	.0231	-.0237	.0255	2081.		
.2310	201.	-110.	88.	229.	-0.	-524.	.0128	-.0282	.0081	.0252	-.0214	.0142	1739.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.51.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.2220	-109.	1255.	479.	1250.	0.	286.	.0021	-.0613	.0130	.0293	-.0338	.0926	3900.
.2230	-81.	1165.	487.	1269.	0.	212.	.0034	-.0602	.0096	.0371	-.0467	.0848	3915.
.2240	-42.	1043.	480.	1253.	0.	110.	.0049	-.0582	.0077	.0416	-.0546	.0764	3826.
.2250	4.	922.	463.	1268.	-0.	-10.	.0068	-.0553	.0078	.0417	-.0561	.0681	3674.
.2260	47.	768.	436.	1137.	-0.	-122.	.0091	-.0518	.0097	.0382	-.0520	.0607	3480.
.2270	84.	562.	397.	1035.	-0.	-218.	.0115	-.0476	.0122	.0327	-.0444	.0541	3218.
.2280	121.	357.	341.	890.	-0.	-316.	.0134	-.0430	.0141	.0274	-.0358	.0464	2872.
.2290	160.	193.	268.	699.	-0.	-418.	.0144	-.0382	.0142	.0238	-.0285	.0367	2476.
.2300	189.	45.	182.	474.	-0.	-494.	.0141	-.0332	.0121	.0231	-.0237	.0255	2081.
.2310	201.	-110.	88.	229.	-0.	-524.	.0128	-.0282	.0081	.0252	-.0214	.0142	1739.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.29.51.

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	68	MEMBER	1	SEQUENCE	101	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2320	200.	-239.	-10.	-25.	-0.	-522.	.0111	-.0233	.0033	.0287	-.0200	.0030	1591.		
.2330	195.	-319.	-107.	-278.	-0.	-508.	.0096	-.0186	-.0013	.0318	-.0174	-.0073	1761.		
.2340	182.	-390.	-197.	-513.	-0.	-475.	.0092	-.0142	-.0048	.0333	-.0120	-.0153	2126.		
.2350	159.	-448.	-275.	-717.	-0.	-416.	.0100	-.0101	-.0064	.0324	-.0035	-.0202	2521.		
.2360	132.	-494.	-339.	-884.	-0.	-344.	.0121	-.0064	-.0061	.0292	.0084	-.0224	2886.		
.2370	106.	-490.	-389.	-1013.	-0.	-277.	.0152	-.0030	-.0045	.0247	.0217	-.0231	3196.		
.2380	81.	-454.	-424.	-1105.	-0.	-212.	.0189	-.0001	-.0024	.0201	.0348	-.0229	3422.		
.2390	55.	-411.	-444.	-1158.	-0.	-143.	.0228	.0025	-.0004	.0168	.0455	-.0223	3548.		
.2400	28.	-347.	-450.	-1173.	-0.	-73.	.0266	.0048	.0009	.0156	.0527	-.0221	3576.		
.2410	7.	-250.	-442.	-1154.	-0.	-7.	.0299	.0068	.0016	.0165	.0562	-.0228	3509.		
.2420	-20.	-142.	-422.	-1100.	-0.	52.	.0328	.0086	.0016	.0192	.0559	-.0245	3351.		
.2430	-40.	-48.	-390.	-1017.	-0.	105.	.0356	.0103	.0013	.0252	.0525	-.0267	3109.		
.2440	-59.	38.	-347.	-905.	-0.	151.	.0381	.0119	.0011	.0277	.0467	-.0295	2792.		
.2450	-73.	130.	-295.	-769.	-0.	191.	.0403	.0136	.0011	.0323	.0391	-.0331	2410.		
.2460	-89.	213.	-235.	-614.	-0.	232.	.0420	.0154	.0013	.0369	.0299	-.0374	1995.		
.2470	-107.	262.	-172.	-448.	-0.	278.	.0432	.0174	.0015	.0417	.0190	-.0424	1603.		
.2480	-123.	282.	-109.	-283.	-0.	320.	.0437	.0196	.0014	.0467	.0068	-.0485	1301.		
.2490	-136.	290.	-49.	-129.	-0.	354.	.0435	.0220	.0009	.0519	-.0065	-.0561	1147.		
.2500	-150.	291.	4.	11.	-0.	391.	.0424	.0246	-.0000	.0571	-.0202	-.0649	1189.		
.2510	-171.	241.	51.	124.	-0.	446.	.0406	.0274	-.0010	.0618	-.0336	-.0741	1416.		
.2520	-200.	174.	91.	238.	-0.	522.	.0381	.0304	-.0019	.0656	-.0458	-.0833	1745.		
.2530	-237.	94.	120.	314.	-0.	608.	.0353	.0335	-.0024	.0678	-.0556	-.0924	2081.		
.2540	-267.	0.	137.	359.	-0.	697.	.0324	.0366	-.0026	.0681	-.0625	-.1011	2384.		
.2550	-306.	-119.	142.	371.	-0.	798.	.0296	.0398	-.0025	.0667	-.0663	-.1089	2677.		
.2560	-357.	-250.	137.	357.	0.	919.	.0267	.0428	-.0020	.0638	-.0669	-.1153	3000.		
.2570	-406.	-365.	123.	320.	0.	1059.	.0238	.0455	-.0013	.0598	-.0645	-.1206	3365.		
.2580	-465.	-463.	101.	262.	0.	1212.	.0209	.0480	-.0005	.0549	-.0594	-.1246	3771.		
.2590	-526.	-560.	70.	184.	0.	1372.	.0183	.0500	.0000	.0497	-.0520	-.1271	4212.		
.2600	-589.	-648.	34.	88.	0.	1533.	.0161	.0516	.0003	.0444	-.0428	-.1280	4672.		
.2610	-649.	-711.	-8.	-20.	0.	1693.	.0143	.0527	.0004	.0389	-.0320	-.1273	5149.		
.2620	-711.	-749.	-49.	-128.	0.	1853.	.0130	.0531	.0004	.0336	-.0202	-.1247	5651.		
.2630	-770.	-765.	-89.	-273.	0.	2009.	.0122	.0530	.0003	.0286	-.0080	-.1202	6151.		
.2640	-821.	-755.	-127.	-372.	0.	2141.	.0121	.0522	-.0002	.0244	.0040	-.1143	6591.		
.2650	-859.	-715.	-162.	-424.	0.	2240.	.0127	.0508	-.0011	.0210	.0152	-.1074	6934.		
.2660	-887.	-653.	-191.	-499.	0.	2304.	.0140	.0488	-.0024	.0188	.0250	-.0995	7172.		
.2670	-895.	-577.	-212.	-554.	0.	2334.	.0158	.0463	-.0041	.0180	.0332	-.0907	7296.		
.2680	-889.	-489.	-225.	-587.	0.	2318.	.0182	.0434	-.0062	.0184	.0393	-.0814	7273.		
.2690	-861.	-384.	-230.	-599.	0.	2245.	.0212	.0400	-.0086	.0200	.0434	-.0721	7068.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.52.

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

.2590	-526.	-560.	70.	104.	0.	1372.	.0183	.0500	.0000	.0497	-.0520	-.1271	4212.
.2600	-588.	-648.	34.	88.	0.	1533.	.0161	.0516	.0003	.0444	-.0428	-.1280	4672.
.2610	-649.	-711.	-8.	-20.	0.	1693.	.0143	.0527	.0004	.0389	-.0320	-.1273	5149.
.2620	-711.	-749.	-49.	-128.	0.	1853.	.0130	.0531	.0004	.0336	-.0202	-.1247	5631.
.2630	-770.	-765.	-89.	-273.	0.	2009.	.0122	.0530	.0003	.0286	-.0080	-.1202	6151.
.2640	-821.	-755.	-127.	-372.	0.	2141.	.0121	.0522	-.0002	.0244	.0040	-.1143	6591.
.2650	-859.	-715.	-162.	-424.	0.	2240.	.0127	.0508	-.0011	.0210	.0152	-.1074	6934.
.2660	-883.	-653.	-191.	-499.	0.	2304.	.0140	.0488	-.0024	.0188	.0250	-.0995	7172.
.2670	-895.	-577.	-212.	-554.	0.	2334.	.0158	.0463	-.0041	.0180	.0332	-.0907	7296.
.2680	-889.	-499.	-225.	-587.	0.	2318.	.0182	.0434	-.0062	.0184	.0393	-.0814	7273.
.2690	-861.	-384.	-230.	-599.	0.	2245.	.0212	.0400	-.0086	.0200	.0434	-.0721	7068.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.52.

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	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	VA								
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2700	-812.	-269.	-226.	-589.	0.	2118.	.0248	.0364	-.0112	.0224	.0455	-.0627	6686.	
.2710	-746.	-156.	-217.	-556.	0.	1946.	.0289	.0325	-.0136	.0252	.0456	-.0531	6156.	
.2720	-665.	-54.	-192.	-500.	0.	1734.	.0334	.0286	-.0159	.0284	.0438	-.0434	5489.	
.2730	-566.	44.	-164.	-429.	0.	1475.	.0383	.0246	-.0181	.0319	.0402	-.0342	4673.	
.2740	-449.	138.	-134.	-351.	0.	1171.	.0432	.0207	-.0204	.0357	.0345	-.0259	3718.	
.2750	-324.	210.	-102.	-266.	0.	845.	.0480	.0168	-.0229	.0399	.0266	-.0182	2694.	
.2760	-199.	255.	-66.	-171.	0.	519.	.0523	.0132	-.0256	.0446	.0169	-.0108	1662.	
.2770	-73.	295.	-28.	-72.	0.	192.	.0561	.0098	-.0283	.0495	.0058	-.0044	623.	
.2780	51.	338.	8.	20.	0.	-144.	.0593	.0066	-.0311	.0543	-.0059	.0009	444.	
.2790	181.	360.	39.	101.	0.	-473.	.0623	.0037	-.0338	.0585	-.0176	.0057	1471.	
.2800	293.	349.	68.	177.	0.	-765.	.0647	.0011	-.0361	.0616	-.0284	.0109	2388.	
.2810	387.	335.	96.	251.	0.	-1009.	.0665	-.0013	-.0375	.0633	-.0375	.0163	3163.	
.2820	465.	342.	121.	316.	0.	-1212.	.0676	-.0033	-.0382	.0635	-.0445	.0217	3809.	
.2830	525.	346.	139.	363.	0.	-1369.	.0681	-.0051	-.0386	.0625	-.0497	.0271	4308.	
.2840	561.	324.	151.	394.	0.	-1464.	.0677	-.0066	-.0388	.0608	-.0536	.0327	4613.	
.2850	573.	302.	158.	412.	0.	-1493.	.0661	-.0078	-.0391	.0589	-.0566	.0381	4712.	
.2860	562.	317.	160.	417.	0.	-1466.	.0632	-.0088	-.0396	.0570	-.0586	.0425	4635.	
.2870	533.	348.	155.	404.	0.	-1390.	.0592	-.0095	-.0403	.0550	-.0597	.0461	4405.	
.2880	488.	361.	144.	375.	0.	-1272.	.0544	-.0100	-.0410	.0526	-.0598	.0493	4033.	
.2890	428.	371.	129.	338.	0.	-1116.	.0490	-.0101	-.0412	.0491	-.0579	.0522	3547.	
.2900	359.	407.	115.	300.	0.	-935.	.0432	-.0100	-.0402	.0435	-.0529	.0548	2987.	
.2910	282.	451.	101.	265.	0.	-736.	.0373	-.0095	-.0377	.0355	-.0446	.0576	2378.	
.2920	201.	462.	89.	232.	0.	-526.	.0316	-.0087	-.0337	.0250	-.0335	.0607	1748.	
.2930	127.	446.	77.	201.	0.	-322.	.0262	-.0075	-.0286	.0127	-.0204	.0637	1153.	
.2940	52.	438.	65.	171.	0.	-136.	.0206	-.0060	-.0227	-.0008	-.0066	.0657	664.	
.2950	-14.	433.	56.	146.	0.	37.	.0147	-.0041	-.0167	-.0144	.0064	.0663	457.	
.2960	-77.	394.	48.	124.	0.	202.	.0082	-.0019	-.0111	-.0269	.0168	.0657	722.	
.2970	-131.	325.	39.	103.	-0.	342.	.0014	.0006	-.0063	-.0379	.0239	.0634	1086.	
.2980	-166.	265.	30.	78.	-0.	434.	-.0056	.0034	-.0023	-.0475	.0277	.0590	1341.	
.2990	-186.	209.	21.	56.	-0.	485.	-.0127	.0063	.0012	-.0561	.0286	.0531	1486.	
.3000	-199.	120.	19.	49.	-0.	518.	-.0194	.0094	.0047	-.0638	.0274	.0471	1584.	
.3010	-203.	2.	23.	60.	-0.	529.	-.0256	.0126	.0084	-.0713	.0249	.0417	1619.	
.3020	-188.	-101.	32.	84.	-0.	492.	-.0308	.0157	.0125	-.0788	.0220	.0362	1517.	
.3030	-155.	-182.	45.	117.	-0.	403.	-.0350	.0187	.0167	-.0862	.0187	.0307	1277.	
.3040	-112.	-277.	63.	164.	-0.	291.	-.0383	.0216	.0208	-.0927	.0146	.0262	1017.	
.3050	-66.	-380.	86.	226.	-0.	172.	-.0409	.0242	.0245	-.0978	.0094	.0227	862.	
.3060	-12.	-444.	113.	294.	-0.	31.	-.0429	.0265	.0275	-.1012	.0031	.0195	898.	
.3070	53.	-460.	137.	358.	-0.	-139.	-.0442	.0285	.0296	-.1028	-.0043	.0163	1169.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.29.52.

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

CONDITION 24

LOADS

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

.2960	-77.	394.	45.	124.	0.	302.	.0082	-.0019	-.0111	-.0269	.0168	.0657	722.
.2970	-131.	325.	39.	103.	-0.	342.	.0014	.0006	-.0063	-.0379	.0239	.0634	1086.
.2980	-166.	265.	30.	78.	-0.	434.	-.0056	.0034	-.0023	-.0475	.0277	.0590	1341.
.2990	-186.	209.	21.	56.	-0.	485.	-.0127	.0063	.0012	-.0561	.0286	.0531	1486.
.3000	-199.	120.	19.	49.	-0.	518.	-.0194	.0094	.0047	-.0638	.0274	.0471	1584.
.3010	-203.	2.	23.	60.	-0.	529.	-.0256	.0126	.0084	-.0713	.0249	.0417	1619.
.3020	-188.	-101.	32.	64.	-0.	492.	-.0308	.0157	.0125	-.0788	.0220	.0362	1517.
.3030	-155.	-182.	45.	117.	-0.	403.	-.0350	.0187	.0167	-.0862	.0187	.0307	1277.
.3040	-112.	-277.	65.	164.	-0.	291.	-.0383	.0216	.0208	-.0927	.0146	.0262	1017.
.3050	-66.	-380.	86.	226.	-0.	172.	-.0409	.0242	.0245	-.0978	.0094	.0227	862.
.3060	-12.	-444.	113.	294.	-0.	31.	-.0429	.0265	.0275	-.1012	.0031	.0195	898.
.3070	53.	-460.	137.	358.	-0.	-139.	-.0442	.0285	.0296	-.1028	-.0043	.0163	1169.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKWOBF 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	GE	MEMBER	1	SEQUENCE	101	LOCATION	BEG	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RA	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3080	121.	-468.	160.	418.	-0.	-316.	-.0448	.0300	.0307	-.1027	-.0124	.0139	1594.	
.3090	183.	-478.	183.	476.	-0.	-479.	-.0448	.0312	.0311	-.1011	-.0206	.0132	2054.	
.3100	241.	-454.	204.	532.	-0.	-629.	-.0442	.0320	.0312	-.0988	-.0277	.0137	2506.	
.3110	297.	-387.	222.	579.	-0.	-773.	-.0430	.0324	.0311	-.0962	-.0330	.0153	2939.	
.3120	348.	-320.	233.	609.	-0.	-908.	-.0410	.0326	.0306	-.0932	-.0365	.0182	3326.	
.3130	393.	-269.	237.	619.	-0.	-1025.	-.0385	.0324	.0296	-.0898	-.0385	.0223	3641.	
.3140	430.	-202.	233.	608.	-0.	-1121.	-.0358	.0321	.0281	-.0860	-.0389	.0269	3881.	
.3150	459.	-110.	221.	575.	-0.	-1196.	-.0333	.0316	.0261	-.0819	-.0379	.0315	4038.	
.3160	478.	-34.	198.	516.	-0.	-1246.	-.0309	.0310	.0234	-.0773	-.0359	.0363	4102.	
.3170	489.	5.	164.	428.	-0.	-1275.	-.0286	.0304	.0200	-.0725	-.0331	.0411	4092.	
.3180	497.	32.	119.	311.	-0.	-1296.	-.0264	.0298	.0163	-.0680	-.0292	.0453	4053.	
.3190	499.	59.	67.	174.	-0.	-1303.	-.0244	.0291	.0126	-.0642	-.0238	.0489	3998.	
.3200	492.	54.	10.	25.	-0.	-1283.	-.0226	.0286	.0093	-.0614	-.0170	.0526	3905.	
.3210	476.	3.	-50.	-131.	-0.	-1243.	-.0209	.0280	.0062	-.0595	-.0092	.0562	3801.	
.3220	461.	-65.	-113.	-295.	-0.	-1203.	-.0193	.0275	.0034	-.0585	-.0007	.0590	3768.	
.3230	449.	-130.	-177.	-462.	-0.	-1171.	-.0178	.0269	.0008	-.0582	.0081	.0606	3828.	
.3240	437.	-215.	-237.	-618.	-0.	-1127.	-.0165	.0261	-.0014	-.0583	.0164	.0616	3909.	
.3250	407.	-331.	-289.	-753.	-0.	-1062.	-.0154	.0252	-.0033	-.0585	.0238	.0625	3961.	
.3260	381.	-442.	-332.	-866.	-0.	-995.	-.0145	.0239	-.0050	-.0588	.0302	.0626	4012.	
.3270	361.	-523.	-366.	-955.	-0.	-941.	-.0135	.0224	-.0062	-.0592	.0356	.0618	4077.	
.3280	341.	-594.	-388.	-1011.	-0.	-888.	-.0124	.0204	-.0071	-.0595	.0398	.0606	4095.	
.3290	314.	-670.	-393.	-1026.	0.	-820.	-.0112	.0179	-.0074	-.0597	.0426	.0598	3996.	
.3300	284.	-720.	-382.	-997.	0.	-741.	-.0098	.0148	-.0072	-.0595	.0443	.0592	3778.	
.3310	255.	-716.	-356.	-928.	0.	-666.	-.0084	.0112	-.0066	-.0589	.0447	.0583	3474.	
.3320	228.	-680.	-316.	-823.	0.	-594.	-.0068	.0070	-.0059	-.0576	.0435	.0571	3089.	
.3330	196.	-632.	-262.	-684.	0.	-512.	-.0051	.0023	-.0052	-.0552	.0406	.0563	2598.	
.3340	159.	-554.	-196.	-511.	0.	-416.	-.0034	-.0029	-.0043	-.0521	.0365	.0557	2004.	
.3350	120.	-425.	-119.	-311.	0.	-314.	-.0019	-.0085	-.0033	-.0483	.0314	.0549	1346.	
.3360	80.	-270.	-37.	-95.	0.	-210.	-.0004	-.0145	-.0023	-.0441	.0259	.0540	701.	
.3370	39.	-121.	49.	128.	0.	-101.	.0012	-.0206	-.0012	-.0396	.0199	.0534	495.	
.3380	-5.	32.	134.	351.	0.	12.	.0027	-.0268	-.0002	-.0351	.0141	.0526	1068.	
.3390	-48.	205.	217.	567.	0.	126.	.0039	-.0330	.0010	-.0307	.0085	.0515	1766.	
.3400	-94.	376.	294.	767.	0.	245.	.0046	-.0390	.0019	-.0264	.0033	.0498	2449.	
.3410	-141.	514.	361.	941.	0.	367.	.0049	-.0446	.0025	-.0221	-.0018	.0476	3071.	
.3420	-184.	624.	414.	1079.	0.	480.	.0048	-.0499	.0027	-.0179	-.0066	.0445	3592.	
.3430	-221.	725.	451.	1177.	0.	578.	.0041	-.0546	.0025	-.0141	-.0106	.0401	3989.	
.3440	-256.	801.	474.	1237.	0.	668.	.0030	-.0588	.0022	-.0110	-.0135	.0349	4277.	
.3450	-290.	828.	483.	1259.	0.	756.	.0015	-.0623	.0019	-.0088	-.0149	.0294	4468.	

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S/RV PIPING KEWAUNEE GKWOBF 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

.3350	120.	-425.	-119.	-311.	0.	-314.	-.0019	-.0085	-.0033	-.0483	.0314	.0549	1346.
.3360	80.	-270.	-37.	-95.	0.	-210.	-.0004	-.0145	-.0023	-.0441	.0259	.0540	701.
.3370	39.	-121.	49.	128.	0.	-101.	.0012	-.0206	-.0012	-.0396	.0199	.0534	495.
.3380	-5.	32.	134.	351.	0.	12.	.0027	-.0268	-.0002	-.0351	.0141	.0526	1068.
.3390	-48.	205.	217.	567.	0.	126.	.0039	-.0330	.0010	-.0307	.0085	.0515	1766.
.3400	-94.	376.	294.	767.	0.	245.	.0046	-.0390	.0019	-.0264	.0033	.0498	2449.
.3410	-141.	514.	361.	941.	0.	367.	.0049	-.0446	.0025	-.0221	-.0018	.0476	3071.
.3420	-184.	624.	414.	1079.	0.	480.	.0048	-.0499	.0027	-.0179	-.0066	.0445	3592.
.3430	-221.	725.	451.	1177.	0.	578.	.0041	-.0546	.0025	-.0141	-.0106	.0401	3989.
.3440	-256.	801.	474.	1237.	0.	668.	.0030	-.0588	.0022	-.0110	-.0135	.0349	4277.
.3450	-290.	828.	483.	1259.	0.	756.	.0015	-.0623	.0019	-.0088	-.0149	.0294	4468.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.29.52.

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	68	MEMBER	1	SEQUENCE	101	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3460	-319.	811.	476.	1242.	0.	832.	-.0001	-.0652	.0017	-.0078	-.0144	.0235	4547.		
.3470	-330.	774.	454.	1184.	0.	882.	-.0017	-.0674	.0017	-.0081	-.0119	.0169	4493.		
.3480	-350.	713.	419.	1092.	0.	912.	-.0034	-.0690	.0019	-.0095	-.0076	.0100	4329.		
.3490	-359.	612.	373.	973.	0.	935.	-.0051	-.0701	.0021	-.0115	-.0020	.0033	4106.		
.3500	-364.	482.	319.	832.	0.	951.	-.0069	-.0707	.0022	-.0137	.0043	-.0033	3843.		
.3510	-362.	351.	257.	671.	0.	945.	-.0086	-.0710	.0020	-.0157	.0108	-.0102	3525.		
.3520	-351.	226.	190.	497.	0.	915.	-.0101	-.0710	.0014	-.0172	.0172	-.0172	3166.		
.3530	-335.	93.	122.	319.	0.	873.	-.0114	-.0708	.0004	-.0179	.0232	-.0238	2826.		
.3540	-317.	-42.	57.	148.	0.	827.	-.0123	-.0706	-.0007	-.0179	.0287	-.0293	2554.		
.3550	-295.	-155.	-3.	-9.	0.	770.	-.0127	-.0704	-.0018	-.0172	.0340	-.0339	2343.		
.3560	-268.	-238.	-57.	-147.	0.	699.	-.0124	-.0704	-.0029	-.0159	.0390	-.0373	2174.		
.3570	-238.	-307.	-101.	-263.	0.	621.	-.0112	-.0706	-.0039	-.0138	.0434	-.0391	2051.		
.3580	-208.	-361.	-134.	-351.	0.	543.	-.0093	-.0711	-.0049	-.0108	.0468	-.0392	1966.		
.3590	-179.	-379.	-156.	-408.	0.	467.	-.0069	-.0718	-.0060	-.0065	.0489	-.0379	1887.		
.3600	-151.	-357.	-167.	-435.	0.	394.	-.0040	-.0729	-.0073	-.0008	.0495	-.0354	1785.		
.3610	-124.	-311.	-167.	-435.	0.	324.	-.0006	-.0742	-.0090	.0066	.0480	-.0317	1651.		
.3620	-99.	-246.	-158.	-411.	0.	259.	.0031	-.0758	-.0111	.0154	.0446	-.0270	1477.		
.3630	-75.	-153.	-139.	-364.	0.	196.	.0072	-.0776	-.0133	.0252	.0397	-.0214	1257.		
.3640	-54.	-31.	-113.	-294.	0.	142.	.0114	-.0795	-.0155	.0356	.0340	-.0149	993.		
.3650	-38.	102.	-78.	-204.	0.	100.	.0160	-.0814	-.0173	.0461	.0281	-.0074	692.		
.3660	-26.	233.	-39.	-101.	0.	67.	.0208	-.0832	-.0186	.0561	.0225	.0011	368.		
.3670	-14.	370.	4.	9.	0.	35.	.0258	-.0848	-.0194	.0653	.0174	.0100	111.		
.3680	-3.	514.	46.	121.	0.	8.	.0308	-.0861	-.0196	.0736	.0130	.0189	369.		
.3690	3.	647.	88.	230.	0.	-7.	.0353	-.0870	-.0195	.0813	.0090	.0277	700.		
.3700	2.	760.	126.	329.	0.	-6.	.0392	-.0873	-.0193	.0885	.0050	.0360	1002.		
.3710	0.	861.	157.	410.	0.	-0.	.0423	-.0871	-.0192	.0953	.0009	.0430	1248.		
.3720	-2.	953.	179.	467.	-0.	5.	.0445	-.0861	-.0193	.1017	-.0035	.0481	1420.		
.3730	-6.	1023.	191.	497.	-0.	15.	.0455	-.0844	-.0195	.1075	-.0080	.0516	1512.		
.3740	-14.	1058.	192.	502.	-0.	36.	.0456	-.0819	-.0197	.1125	-.0121	.0536	1531.		
.3750	-24.	1064.	185.	482.	-0.	64.	.0446	-.0786	-.0196	.1160	-.0154	.0542	1478.		
.3760	-33.	1049.	167.	435.	-0.	86.	.0429	-.0744	-.0189	.1178	-.0171	.0531	1348.		
.3770	-38.	1005.	139.	362.	-0.	100.	.0406	-.0694	-.0176	.1174	-.0169	.0506	1143.		
.3780	-42.	924.	102.	267.	-0.	110.	.0377	-.0636	-.0155	.1149	-.0149	.0470	879.		
.3790	-46.	810.	59.	154.	-0.	121.	.0343	-.0571	-.0127	.1104	-.0111	.0425	596.		
.3800	-49.	675.	9.	24.	-0.	129.	.0303	-.0500	-.0092	.1042	-.0060	.0369	398.		
.3810	-49.	523.	-47.	-122.	-0.	128.	.0258	-.0424	-.0055	.0967	-.0002	.0301	538.		
.3820	-45.	347.	-109.	-284.	-0.	118.	.0209	-.0345	-.0018	.0885	.0056	.0222	935.		
.3830	-40.	152.	-174.	-454.	-0.	105.	.0156	-.0263	.0019	.0800	.0110	.0136	1419.		

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ADLPIPE STRESS ANALYSIS

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18.29.52.

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

.3730	-6.	1023.	191.	497.	-0.	15.	.0455	-.0844	-.0195	.1075	-.0080	.0516	1512.
.3740	-14.	1058.	192.	502.	-0.	36.	.4456	-.0819	-.0197	.1125	-.0121	.0536	1531.
.3750	-24.	1064.	185.	482.	-0.	64.	.0446	-.0786	-.0196	.1160	-.0154	.0542	1478.
.3760	-33.	1049.	167.	435.	-0.	86.	.0429	-.0744	-.0189	.1178	-.0171	.0531	1348.
.3770	-38.	1005.	139.	362.	-0.	100.	.0406	-.0694	-.0176	.1174	-.0169	.0506	1143.
.3780	-42.	924.	102.	267.	-0.	110.	.0377	-.0636	-.0155	.1149	-.0149	.0470	879.
.3790	-46.	810.	59.	154.	-0.	121.	.0343	-.0571	-.0127	.1104	-.0111	.0425	596.
.3800	-49.	675.	9.	24.	-0.	129.	.0303	-.0500	-.0092	.1042	-.0060	.0369	398.
.3810	-49.	523.	-47.	-122.	-0.	128.	.0258	-.0424	-.0055	.0967	-.0002	.0301	538.
.3820	-45.	347.	-109.	-204.	-0.	118.	.0209	-.0345	-.0018	.0885	.0056	.0222	935.
.3830	-40.	152.	-174.	-454.	-0.	105.	.0156	-.0262	.0019	.0800	.0110	.0136	1419.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.52.

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	68	MEMBER	1	SEQUENCE	101	LOCATION	BEG	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3840	-35.	-44.	-241.	-628.	-0.	91.	.0100	-.0180	.0053	.0712	.0156	.0043	1930.	
.3850	-30.	-239.	-306.	-798.	-0.	78.	.0042	-.0098	.0087	.0626	.0195	-.0052	2439.	
.3860	-24.	-437.	-368.	-961.	-0.	63.	-.0015	-.0018	.0118	.0541	.0224	-.0146	2930.	
.3870	-17.	-632.	-426.	-1112.	-0.	43.	-.0069	.0058	.0147	.0459	.0245	-.0235	3386.	
.3880	-8.	-808.	-478.	-1246.	-0.	20.	-.0118	.0128	.0175	.0381	.0257	-.0317	3791.	
.3890	-1.	-964.	-520.	-1355.	-0.	1.	-.0163	.0192	.0201	.0309	.0259	-.0388	4123.	
.3900	4.	-1103.	-550.	-1436.	-0.	-9.	-.0201	.0247	.0225	.0246	.0251	-.0446	4367.	
.3910	8.	-1213.	-570.	-1488.	-0.	-21.	-.0233	.0294	.0244	.0194	.0230	-.0492	4526.	
.3920	16.	-1279.	-580.	-1513.	-0.	-42.	-.0258	.0330	.0258	.0156	.0195	-.0529	4605.	
.3930	26.	-1303.	-579.	-1511.	-0.	-67.	-.0276	.0357	.0265	.0132	.0146	-.0554	4600.	
.3940	31.	-1299.	-566.	-1476.	-0.	-81.	-.0287	.0373	.0267	.0123	.0085	-.0564	4497.	
.3950	33.	-1262.	-540.	-1410.	-0.	-85.	-.0292	.0378	.0265	.0126	.0015	-.0559	4296.	
.3960	34.	-1182.	-505.	-1317.	0.	-90.	-.0291	.0374	.0259	.0140	-.0061	-.0542	4015.	
.3970	38.	-1064.	-461.	-1203.	0.	-100.	-.0282	.0361	.0250	.0162	-.0137	-.0516	3673.	
.3980	41.	-926.	-410.	-1070.	0.	-108.	-.0268	.0339	.0238	.0190	-.0214	-.0478	3273.	
.3990	40.	-774.	-353.	-920.	0.	-103.	-.0250	.0310	.0224	.0222	-.0287	-.0429	2816.	
.4000	36.	-600.	-290.	-757.	0.	-93.	-.0229	.0275	.0210	.0256	-.0355	-.0374	2321.	

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)
.2670	895.	577.	212.	554.	0.	-2334.	.0158	.0463	-.0041	.0180	.0332	-.0907	7296.

SECTION	68	MEMBER	1	SEQUENCE	102	LOCATION	DIS	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	0.	0.	0.	0.	0.	0.	.0000	-.0000	-.0000	.0000	-.0000	-.0000	0.	
.0020	0.	0.	0.	0.	0.	0.	.0000	-.0000	-.0000	-.0000	-.0000	-.0000	0.	
.0030	0.	0.	0.	0.	0.	0.	.0000	-.0000	.0000	-.0000	.0000	-.0000	0.	
.0040	0.	0.	0.	0.	0.	0.	.0000	.0000	-.0000	-.0000	.0000	-.0000	0.	
.0050	0.	0.	0.	0.	0.	0.	-.0000	.0000	-.0000	.0000	-.0000	-.0000	0.	
.0060	0.	0.	0.	0.	0.	0.	-.0000	.0000	-.0000	.0001	-.0001	-.0001	0.	
.0070	0.	0.	0.	0.	0.	0.	-.0001	-.0000	-.0001	.0003	-.0003	-.0002	0.	

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ADLPIPE STRESS ANALYSIS

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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

TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
.0010	0.	0.	0.	0.	0.	0.	.0000	-.0000	-.0000	.0000	-.0000	-.0000	0.
.0020	0.	0.	0.	0.	0.	0.	.0000	-.0000	-.0000	-.0000	-.0000	-.0000	0.
.0030	0.	0.	0.	0.	0.	0.	.0000	-.0000	.0000	-.0000	.0000	-.0000	0.
.0040	0.	0.	0.	0.	0.	0.	.0000	.0000	-.0000	-.0000	.0000	-.0000	0.
.0050	0.	0.	0.	0.	0.	0.	-.0000	.0000	-.0000	.0000	-.0000	-.0000	0.
.0060	0.	0.	0.	0.	0.	0.	-.0000	.0000	-.0000	.0001	-.0001	-.0001	0.
.0070	0.	0.	0.	0.	0.	0.	-.0001	-.0000	-.0001	.0003	-.0003	-.0002	0.

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ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKWOOF 2 RUP DISK
2 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	DIS	TYPE	VA								STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	(PSI)	
.0080	0.	0.	0.	0.	0.	0.	-.0002	-.0000	-.0002	.0006	-.0007	-.0004	0.	
.0090	0.	0.	0.	0.	0.	0.	-.0003	-.0000	-.0004	.0012	-.0014	-.0008	0.	
.0100	0.	0.	0.	0.	0.	0.	-.0006	-.0000	-.0007	.0020	-.0024	-.0014	0.	
.0110	0.	0.	0.	0.	0.	0.	-.0009	-.0000	-.0012	.0032	-.0039	-.0023	0.	
.0120	0.	0.	0.	0.	0.	0.	-.0014	-.0000	-.0018	.0049	-.0061	-.0035	0.	
.0130	0.	0.	0.	0.	0.	0.	-.0022	-.0000	-.0026	.0071	-.0090	-.0052	0.	
.0140	0.	0.	0.	0.	0.	0.	-.0031	-.0000	-.0035	.0098	-.0127	-.0074	0.	
.0150	0.	0.	0.	0.	0.	0.	-.0043	-.0000	-.0046	.0129	-.0170	-.0099	0.	
.0160	0.	0.	0.	0.	0.	0.	-.0055	-.0000	-.0058	.0161	-.0214	-.0126	0.	
.0170	0.	0.	0.	0.	0.	0.	-.0066	-.0000	-.0068	.0190	-.0255	-.0150	0.	
.0180	0.	0.	0.	0.	0.	0.	-.0074	-.0001	-.0076	.0208	-.0279	-.0167	0.	
.0190	0.	0.	0.	0.	0.	0.	-.0078	-.0001	-.0077	.0207	-.0283	-.0174	0.	
.0200	0.	0.	0.	0.	0.	0.	-.0076	-.0001	-.0069	.0180	-.0255	-.0164	0.	
.0210	0.	0.	0.	0.	0.	0.	-.0067	-.0001	-.0050	.0123	-.0191	-.0136	0.	
.0220	0.	0.	0.	0.	0.	0.	-.0052	-.0002	-.0021	.0037	-.0092	-.0089	0.	
.0230	0.	0.	0.	0.	0.	0.	-.0033	-.0003	.0015	-.0067	.0030	-.0029	0.	
.0240	0.	0.	0.	0.	0.	0.	-.0013	-.0005	.0051	-.0174	.0155	.0032	0.	
.0250	0.	0.	0.	0.	0.	0.	.0002	-.0008	.0083	-.0265	.0262	.0084	0.	
.0260	0.	0.	0.	0.	0.	0.	.0013	-.0011	.0104	-.0328	.0338	.0121	0.	
.0270	0.	0.	0.	0.	0.	0.	.0021	-.0016	.0113	-.0354	.0379	.0149	0.	
.0280	0.	0.	0.	0.	0.	0.	.0029	-.0022	.0106	-.0339	.0385	.0171	0.	
.0290	0.	0.	0.	0.	0.	0.	.0033	-.0029	.0090	-.0296	.0357	.0179	0.	
.0300	0.	0.	0.	0.	0.	0.	.0033	-.0038	.0077	-.0258	.0324	.0179	0.	
.0310	0.	0.	0.	0.	0.	0.	.0035	-.0047	.0073	-.0244	.0322	.0191	0.	
.0320	0.	0.	0.	0.	0.	0.	.0052	-.0056	.0077	-.0252	.0358	.0236	0.	
.0330	0.	0.	0.	0.	0.	0.	.0082	-.0065	.0088	-.0283	.0423	.0309	0.	
.0340	0.	0.	0.	0.	0.	0.	.0109	-.0075	.0108	-.0335	.0506	.0380	0.	
.0350	0.	0.	0.	0.	0.	0.	.0122	-.0083	.0129	-.0379	.0571	.0426	0.	
.0360	0.	0.	0.	0.	0.	0.	.0123	-.0091	.0128	-.0364	.0563	.0436	0.	
.0370	0.	0.	0.	0.	0.	0.	.0120	-.0098	.0093	-.0254	.0453	.0416	0.	
.0380	0.	0.	0.	0.	0.	0.	.0107	-.0103	.0028	-.0062	.0258	.0363	0.	
.0390	0.	0.	0.	0.	0.	0.	.0080	-.0105	-.0051	.0170	.0006	.0272	0.	
.0400	0.	0.	0.	0.	0.	0.	.0043	-.0105	-.0124	.0388	-.0255	.0160	0.	
.0410	0.	0.	0.	0.	0.	0.	.0014	-.0100	-.0170	.0537	-.0441	.0073	0.	
.0420	0.	0.	0.	0.	0.	0.	.0015	-.0091	-.0183	.0585	-.0489	.0057	0.	
.0430	0.	0.	0.	0.	0.	0.	.0046	-.0077	-.0161	.0529	-.0407	.0109	0.	
.0440	0.	0.	0.	0.	0.	0.	.0083	-.0059	-.0103	.0373	-.0236	.0188	0.	
.0450	0.	0.	0.	0.	0.	0.	.0106	-.0036	-.0021	.0159	-.0019	.0249	0.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.0350	0.	0.	0.	0.	0.	0.	0.	.0122	-.0083	.0129	-.0379	.0571	.0426	0.
.0360	0.	0.	0.	0.	0.	0.	0.	.0123	-.0091	.0128	-.0364	.0563	.0436	0.
.0370	0.	0.	0.	0.	0.	0.	0.	.0120	-.0098	.0093	-.0254	.0453	.0416	0.
.0380	0.	0.	0.	0.	0.	0.	0.	.0107	-.0103	.0028	-.0062	.0258	.0363	0.
.0390	0.	0.	0.	0.	0.	0.	0.	.0090	-.0105	-.0051	.0170	.0006	.0272	0.
.0400	0.	0.	0.	0.	0.	0.	0.	.0043	-.0105	-.0124	.0388	-.0255	.0160	0.
.0410	0.	0.	0.	0.	0.	0.	0.	.0014	-.0100	-.0170	.0537	-.0441	.0073	0.
.0420	0.	0.	0.	0.	0.	0.	0.	.0015	-.0091	-.0183	.0585	-.0489	.0057	0.
.0430	0.	0.	0.	0.	0.	0.	0.	.0046	-.0077	-.0161	.0529	-.0407	.0109	0.
.0440	0.	0.	0.	0.	0.	0.	0.	.0083	-.0059	-.0103	.0373	-.0236	.0188	0.
.0450	0.	0.	0.	0.	0.	0.	0.	.0106	-.0036	-.0021	.0159	-.0019	.0249	0.

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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	68	MEMBER	1	SEQUENCE	102	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	FX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0460	0.	0.	0.	0.	0.	0.	.0114	-.0010	.0049	-.0020	.0159	.0272	0.		
.0470	0.	0.	0.	0.	0.	0.	.0115	.0019	.0070	-.0073	.0197	.0251	0.		
.0480	0.	0.	0.	0.	0.	0.	.0103	.0050	.0041	.0007	.0088	.0173	0.		
.0490	0.	0.	0.	0.	0.	0.	.0065	.0082	-.0010	.0151	-.0098	.0033	0.		
.0500	0.	0.	0.	0.	0.	0.	.0007	.0114	-.0058	.0294	-.0302	-.0147	0.		
.0510	0.	0.	0.	0.	0.	0.	-.0047	.0147	-.0091	.0395	-.0473	-.0311	0.		
.0520	0.	0.	0.	0.	0.	0.	-.0074	.0178	-.0099	.0415	-.0533	-.0412	0.		
.0530	0.	0.	0.	0.	0.	0.	-.0072	.0208	-.0069	.0326	-.0442	-.0442	0.		
.0540	0.	0.	0.	0.	0.	0.	-.0059	.0234	-.0004	.0137	-.0245	-.0427	0.		
.0550	0.	0.	0.	0.	0.	0.	-.0048	.0256	.0079	-.0098	-.0013	-.0403	0.		
.0560	0.	0.	0.	0.	0.	0.	-.0041	.0273	.0152	-.0308	.0196	-.0391	0.		
.0570	0.	0.	0.	0.	0.	0.	-.0039	.0283	.0190	-.0423	.0314	-.0407	0.		
.0580	0.	0.	0.	0.	0.	0.	-.0052	.0286	.0184	-.0418	.0291	-.0467	0.		
.0590	0.	0.	0.	0.	0.	0.	-.0086	.0282	.0149	-.0329	.0158	-.0572	0.		
.0600	0.	0.	0.	0.	0.	0.	-.0130	.0271	.0106	-.0216	.0001	-.0696	0.		
.0610	0.	0.	0.	0.	0.	0.	-.0161	.0254	.0072	-.0130	-.0115	-.0788	0.		
.0620	0.	0.	0.	0.	0.	0.	-.0165	.0232	.0060	-.0110	-.0146	-.0806	0.		
.0630	0.	0.	0.	0.	0.	0.	-.0141	.0206	.0085	-.0192	-.0047	-.0745	0.		
.0640	0.	0.	0.	0.	0.	0.	-.0102	.0175	.0149	-.0382	.0176	-.0633	0.		
.0650	0.	0.	0.	0.	0.	0.	-.0061	.0142	.0233	-.0624	.0446	-.0499	0.		
.0660	0.	0.	0.	0.	0.	0.	-.0025	.0106	.0303	-.0826	.0666	-.0369	0.		
.0670	0.	0.	0.	0.	0.	0.	.0001	.0069	.0331	-.0909	.0766	-.0272	0.		
.0680	0.	0.	0.	0.	0.	0.	.0007	.0030	.0302	-.0836	.0698	-.0240	0.		
.0690	0.	0.	0.	0.	0.	0.	-.0016	-.0009	.0226	-.0625	.0462	-.0285	0.		
.0700	0.	0.	0.	0.	0.	0.	-.0063	-.0047	.0123	-.0334	.0125	-.0379	0.		
.0710	0.	0.	0.	0.	0.	0.	-.0111	-.0083	.0021	-.0041	-.0209	-.0468	0.		
.0720	0.	0.	0.	0.	0.	0.	-.0135	-.0116	-.0057	.0182	-.0446	-.0500	0.		
.0730	0.	0.	0.	0.	0.	0.	-.0128	-.0145	-.0091	.0279	-.0524	-.0445	0.		
.0740	0.	0.	0.	0.	0.	0.	-.0096	-.0170	-.0073	.0236	-.0434	-.0310	0.		
.0750	0.	0.	0.	0.	0.	0.	-.0051	-.0192	-.0017	.0087	-.0224	-.0130	0.		
.0760	0.	0.	0.	0.	0.	0.	-.0004	-.0210	.0051	-.0092	.0021	.0059	0.		
.0770	0.	0.	0.	0.	0.	0.	.0038	-.0226	.0099	-.0212	.0213	.0227	0.		
.0780	0.	0.	0.	0.	0.	0.	.0066	-.0239	.0102	-.0210	.0278	.0348	0.		
.0790	0.	0.	0.	0.	0.	0.	.0069	-.0251	.0058	-.0076	.0192	.0399	0.		
.0800	0.	0.	0.	0.	0.	0.	.0048	-.0261	-.0016	.0150	-.0004	.0383	0.		
.0810	0.	0.	0.	0.	0.	0.	.0014	-.0269	-.0100	.0405	-.0233	.0336	0.		
.0820	0.	0.	0.	0.	0.	0.	-.0012	-.0276	-.0172	.0627	-.0420	.0309	0.		
.0830	0.	0.	0.	0.	0.	0.	-.0015	-.0281	-.0213	.0758	-.0493	.0338	0.		

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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

.0740	0.	0.	0.	0.	0.	0.	0.	-.0096	-.0170	-.0073	.0236	-.0434	-.0310	0.
.0750	0.	0.	0.	0.	0.	0.	0.	-.0051	-.0192	-.0017	.0087	-.0224	-.0130	0.
.0760	0.	0.	0.	0.	0.	0.	0.	-.0004	-.0210	.0051	-.0092	.0021	.0059	0.
.0770	0.	0.	0.	0.	0.	0.	0.	.0038	-.0226	.0099	-.0212	.0213	.0227	0.
.0780	0.	0.	0.	0.	0.	0.	0.	.0066	-.0239	.0102	-.0210	.0278	.0348	0.
.0790	0.	0.	0.	0.	0.	0.	0.	.0069	-.0251	.0058	-.0076	.0192	.0399	0.
.0800	0.	0.	0.	0.	0.	0.	0.	.0048	-.0261	-.0016	.0150	-.0004	.0383	0.
.0810	0.	0.	0.	0.	0.	0.	0.	.0014	-.0269	-.0100	.0405	-.0233	.0336	0.
.0820	0.	0.	0.	0.	0.	0.	0.	-.0012	-.0276	-.0172	.0627	-.0420	.0309	0.
.0830	0.	0.	0.	0.	0.	0.	0.	-.0015	-.0281	-.0213	.0758	-.0493	.0338	0.

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ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKWOBF 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	68	MEMBER	1	SEQUENCE	102	LOCATION	DIS	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0840	0.	0.	0.	0.	0.	0.	.0006	-.0285	-.0209	.0764	-.0411	.0429	0.	
.0850	0.	0.	0.	0.	0.	0.	.0045	-.0288	-.0166	.0660	-.0197	.0568	0.	
.0860	0.	0.	0.	0.	0.	0.	.0091	-.0289	-.0103	.0500	.0071	.0727	0.	
.0870	0.	0.	0.	0.	0.	0.	.0135	-.0290	-.0044	.0349	.0322	.0873	0.	
.0880	0.	0.	0.	0.	0.	0.	.0170	-.0291	-.0007	.0259	.0508	.0980	0.	
.0890	0.	0.	0.	0.	0.	0.	.0191	-.0291	-.0000	.0251	.0591	.1034	0.	
.0900	0.	0.	0.	0.	0.	0.	.0195	-.0290	-.0017	.0309	.0578	.1039	0.	
.0910	0.	0.	0.	0.	0.	0.	.0189	-.0288	-.0040	.0385	.0528	.1014	0.	
.0920	0.	0.	0.	0.	0.	0.	.0187	-.0284	-.0053	.0434	.0502	.0987	0.	
.0930	0.	0.	0.	0.	0.	0.	.0193	-.0278	-.0048	.0431	.0523	.0977	0.	
.0940	0.	0.	0.	0.	0.	0.	.0205	-.0269	-.0024	.0373	.0584	.0982	0.	
.0950	0.	0.	0.	0.	0.	0.	.0213	-.0257	.0011	.0285	.0661	.0977	0.	
.0960	0.	0.	0.	0.	0.	0.	.0209	-.0243	.0038	.0220	.0696	.0936	0.	
.0970	0.	0.	0.	0.	0.	0.	.0189	-.0226	.0036	.0234	.0624	.0841	0.	
.0980	0.	0.	0.	0.	0.	0.	.0153	-.0206	-.0002	.0350	.0425	.0688	0.	
.0990	0.	0.	0.	0.	0.	0.	.0101	-.0184	-.0069	.0543	.0133	.0484	0.	
.1000	0.	0.	0.	0.	0.	0.	.0038	-.0158	-.0144	.0758	-.0195	.0247	0.	
.1010	0.	0.	0.	0.	0.	0.	-.0024	-.0130	-.0204	.0934	-.0492	.0014	0.	
.1020	0.	0.	0.	0.	0.	0.	-.0074	-.0098	-.0235	.1026	-.0694	-.0182	0.	
.1030	0.	0.	0.	0.	0.	0.	-.0102	-.0063	-.0230	.1015	-.0772	-.0321	0.	
.1040	0.	0.	0.	0.	0.	0.	-.0112	-.0026	-.0194	.0912	-.0743	-.0410	0.	
.1050	0.	0.	0.	0.	0.	0.	-.0112	.0014	-.0136	.0746	-.0646	-.0470	0.	
.1060	0.	0.	0.	0.	0.	0.	-.0111	.0055	-.0070	.0561	-.0529	-.0521	0.	
.1070	0.	0.	0.	0.	0.	0.	-.0112	.0097	-.0012	.0393	-.0432	-.0575	0.	
.1080	0.	0.	0.	0.	0.	0.	-.0114	.0138	.0033	.0260	-.0371	-.0638	0.	
.1090	0.	0.	0.	0.	0.	0.	-.0118	.0178	.0069	.0150	-.0331	-.0702	0.	
.1100	0.	0.	0.	0.	0.	0.	-.0124	.0217	.0107	.0041	-.0284	-.0756	0.	
.1110	0.	0.	0.	0.	0.	0.	-.0127	.0253	.0146	-.0073	-.0221	-.0794	0.	
.1120	0.	0.	0.	0.	0.	0.	-.0123	.0287	.0185	-.0186	-.0147	-.0816	0.	
.1130	0.	0.	0.	0.	0.	0.	-.0120	.0317	.0220	-.0287	-.0072	-.0825	0.	
.1140	0.	0.	0.	0.	0.	0.	-.0119	.0342	.0242	-.0348	-.0026	-.0831	0.	
.1150	0.	0.	0.	0.	0.	0.	-.0118	.0362	.0241	-.0345	-.0035	-.0842	0.	
.1160	0.	0.	0.	0.	0.	0.	-.0116	.0378	.0217	-.0280	-.0095	-.0856	0.	
.1170	0.	0.	0.	0.	0.	0.	-.0115	.0388	.0182	-.0181	-.0177	-.0864	0.	
.1180	0.	0.	0.	0.	0.	0.	-.0110	.0394	.0150	-.0089	-.0244	-.0848	0.	
.1190	0.	0.	0.	0.	0.	0.	-.0087	.0395	.0134	-.0041	-.0244	-.0788	0.	
.1200	0.	0.	0.	0.	0.	0.	-.0036	.0394	.0143	-.0069	-.0134	-.0662	0.	
.1210	0.	0.	0.	0.	0.	0.	.0037	.0390	.0181	-.0176	.0083	-.0466	0.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02. 18.29.52.

S/RV PIPING KEWAUNEE GKWOBF 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

.1110	0.	0.	0.	0.	0.	0.	0.	0.	-.0127	.0253	.0146	-.0073	-.0221	-.0794	0.
.1120	0.	0.	0.	0.	0.	0.	0.	0.	-.0123	.0287	.0185	-.0186	-.0147	-.0816	0.
.1130	0.	0.	0.	0.	0.	0.	0.	0.	-.0120	.0317	.0220	-.0287	-.0072	-.0825	0.
.1140	0.	0.	0.	0.	0.	0.	0.	0.	-.0119	.0342	.0242	-.0348	-.0026	-.0831	0.
.1150	0.	0.	0.	0.	0.	0.	0.	0.	-.0118	.0362	.0241	-.0345	-.0035	-.0842	0.
.1160	0.	0.	0.	0.	0.	0.	0.	0.	-.0116	.0378	.0217	-.0280	-.0095	-.0856	0.
.1170	0.	0.	0.	0.	0.	0.	0.	0.	-.0115	.0388	.0182	-.0181	-.0177	-.0864	0.
.1180	0.	0.	0.	0.	0.	0.	0.	0.	-.0110	.0394	.0150	-.0089	-.0244	-.0848	0.
.1190	0.	0.	0.	0.	0.	0.	0.	0.	-.0087	.0395	.0134	-.0041	-.0244	-.0788	0.
.1200	0.	0.	0.	0.	0.	0.	0.	0.	-.0036	.0394	.0145	-.0069	-.0134	-.0662	0.
.1210	0.	0.	0.	0.	0.	0.	0.	0.	.0037	.0390	.0181	-.0176	.0085	-.0466	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.52.

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	68	MEMBER	1	SEQUENCE	102	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1220	0.	0.	0.	0.	0.	0.	0.	.0122	.0385	.0236	-.0329	.0348	-.0230	0.	
.1230	0.	0.	0.	0.	0.	0.	0.	.0204	.0379	.0286	-.0467	.0591	-.0003	0.	
.1240	0.	0.	0.	0.	0.	0.	0.	.0272	.0371	.0305	-.0523	.0735	.0173	0.	
.1250	0.	0.	0.	0.	0.	0.	0.	.0314	.0363	.0279	-.0450	.0714	.0278	0.	
.1260	0.	0.	0.	0.	0.	0.	0.	.0328	.0356	.0205	-.0242	.0518	.0311	0.	
.1270	0.	0.	0.	0.	0.	0.	0.	.0330	.0351	.0099	.0053	.0222	.0292	0.	
.1280	0.	0.	0.	0.	0.	0.	0.	.0333	.0347	-.0010	.0350	-.0071	.0259	0.	
.1290	0.	0.	0.	0.	0.	0.	0.	.0344	.0346	-.0093	.0573	-.0286	.0253	0.	
.1300	0.	0.	0.	0.	0.	0.	0.	.0367	.0349	-.0132	.0675	-.0385	.0290	0.	
.1310	0.	0.	0.	0.	0.	0.	0.	.0402	.0355	-.0128	.0653	-.0348	.0357	0.	
.1320	0.	0.	0.	0.	0.	0.	0.	.0446	.0364	-.0099	.0555	-.0225	.0433	0.	
.1330	0.	0.	0.	0.	0.	0.	0.	.0484	.0375	-.0072	.0459	-.0117	.0493	0.	
.1340	0.	0.	0.	0.	0.	0.	0.	.0503	.0389	-.0069	.0429	-.0104	.0505	0.	
.1350	0.	0.	0.	0.	0.	0.	0.	.0500	.0404	-.0099	.0488	-.0198	.0441	0.	
.1360	0.	0.	0.	0.	0.	0.	0.	.0478	.0418	-.0157	.0620	-.0376	.0304	0.	
.1370	0.	0.	0.	0.	0.	0.	0.	.0439	.0433	-.0226	.0779	-.0605	.0127	0.	
.1380	0.	0.	0.	0.	0.	0.	0.	.0395	.0449	-.0280	.0900	-.0807	-.0049	0.	
.1390	0.	0.	0.	0.	0.	0.	0.	.0363	.0464	-.0301	.0924	-.0896	-.0195	0.	
.1400	0.	0.	0.	0.	0.	0.	0.	.0356	.0479	-.0282	.0828	-.0834	-.0288	0.	
.1410	0.	0.	0.	0.	0.	0.	0.	.0367	.0493	-.0231	.0638	-.0665	-.0326	0.	
.1420	0.	0.	0.	0.	0.	0.	0.	.0382	.0505	-.0162	.0400	-.0455	-.0358	0.	
.1430	0.	0.	0.	0.	0.	0.	0.	.0390	.0515	-.0093	.0158	-.0246	-.0371	0.	
.1440	0.	0.	0.	0.	0.	0.	0.	.0384	.0521	-.0039	-.0042	-.0088	-.0446	0.	
.1450	0.	0.	0.	0.	0.	0.	0.	.0365	.0524	-.0014	-.0163	-.0020	-.0550	0.	
.1460	0.	0.	0.	0.	0.	0.	0.	.0337	.0524	-.0016	-.0206	-.0041	-.0666	0.	
.1470	0.	0.	0.	0.	0.	0.	0.	.0307	.0521	-.0031	-.0216	-.0095	-.0790	0.	
.1480	0.	0.	0.	0.	0.	0.	0.	.0280	.0515	-.0037	-.0250	-.0105	-.0909	0.	
.1490	0.	0.	0.	0.	0.	0.	0.	.0258	.0506	-.0020	-.0340	-.0058	-.0994	0.	
.1500	0.	0.	0.	0.	0.	0.	0.	.0246	.0496	.0018	-.0490	.0046	-.1024	0.	
.1510	0.	0.	0.	0.	0.	0.	0.	.0252	.0484	.0073	-.0685	.0210	-.1006	0.	
.1520	0.	0.	0.	0.	0.	0.	0.	.0268	.0470	.0133	-.0893	.0400	-.0966	0.	
.1530	0.	0.	0.	0.	0.	0.	0.	.0277	.0456	.0181	-.1065	.0542	-.0929	0.	
.1540	0.	0.	0.	0.	0.	0.	0.	.0268	.0442	.0204	-.1158	.0574	-.0919	0.	
.1550	0.	0.	0.	0.	0.	0.	0.	.0241	.0428	.0196	-.1158	.0497	-.0952	0.	
.1560	0.	0.	0.	0.	0.	0.	0.	.0204	.0414	.0159	-.1074	.0339	-.1021	0.	
.1570	0.	0.	0.	0.	0.	0.	0.	.0162	.0401	.0102	-.0932	.0123	-.1099	0.	
.1580	0.	0.	0.	0.	0.	0.	0.	.0116	.0392	.0043	-.0775	-.0117	-.1166	0.	
.1590	0.	0.	0.	0.	0.	0.	0.	.0072	.0385	-.0002	-.0652	-.0317	-.1216	0.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.52.

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

.1490	0.	0.	0.	0.	0.	0.	0.	.0258	.0506	-.0020	-.0340	-.0058	-.0994	0.
.1500	0.	0.	0.	0.	0.	0.	0.	.0246	.0496	.0018	-.0490	.0046	-.1024	0.
.1510	0.	0.	0.	0.	0.	0.	0.	.0252	.0484	.0073	-.0685	.0210	-.1006	0.
.1520	0.	0.	0.	0.	0.	0.	0.	.0268	.0470	.0133	-.0893	.0400	-.0966	0.
.1530	0.	0.	0.	0.	0.	0.	0.	.0277	.0456	.0181	-.1065	.0542	-.0929	0.
.1540	0.	0.	0.	0.	0.	0.	0.	.0268	.0442	.0204	-.1158	.0574	-.0919	0.
.1550	0.	0.	0.	0.	0.	0.	0.	.0241	.0428	.0196	-.1158	.0497	-.0952	0.
.1560	0.	0.	0.	0.	0.	0.	0.	.0204	.0414	.0159	-.1074	.0539	-.1021	0.
.1570	0.	0.	0.	0.	0.	0.	0.	.0162	.0401	.0102	-.0932	.0123	-.1099	0.
.1580	0.	0.	0.	0.	0.	0.	0.	.0116	.0392	.0043	-.0775	-.0117	-.1166	0.
.1590	0.	0.	0.	0.	0.	0.	0.	.0072	.0385	-.0002	-.0652	-.0317	-.1216	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.52.

S/RV PIPING KEWAUNEE CKWOOD 2 RUP DISK
2 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	68	MEMBER	1	SEQUENCE	102	LOCATION	DIS	TYPE	VA						
TIME	FS	FY	FZ	Mx	My	Mz									
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1600	0.	0.	0.	0.	0.	0.	.0038	.0382	-.0027	-.0584	-.0436	-.1241	0.		
.1610	0.	0.	0.	0.	0.	0.	.0014	.0382	-.0036	-.0561	-.0496	-.1232	0.		
.1620	0.	0.	0.	0.	0.	0.	-.0006	.0386	-.0034	-.0562	-.0525	-.1194	0.		
.1630	0.	0.	0.	0.	0.	0.	-.0024	.0392	-.0027	-.0577	-.0522	-.1151	0.		
.1640	0.	0.	0.	0.	0.	0.	-.0044	.0401	-.0020	-.0591	-.0496	-.1118	0.		
.1650	0.	0.	0.	0.	0.	0.	-.0066	.0412	-.0020	-.0583	-.0477	-.1090	0.		
.1660	0.	0.	0.	0.	0.	0.	-.0092	.0424	-.0029	-.0550	-.0475	-.1061	0.		
.1670	0.	0.	0.	0.	0.	0.	-.0120	.0437	-.0040	-.0509	-.0465	-.1037	0.		
.1680	0.	0.	0.	0.	0.	0.	-.0149	.0448	-.0049	-.0477	-.0428	-.1021	0.		
.1690	0.	0.	0.	0.	0.	0.	-.0181	.0456	-.0055	-.0451	-.0379	-.1007	0.		
.1700	0.	0.	0.	0.	0.	0.	-.0213	.0461	-.0063	-.0420	-.0332	-.0982	0.		
.1710	0.	0.	0.	0.	0.	0.	-.0242	.0460	-.0076	-.0380	-.0283	-.0951	0.		
.1720	0.	0.	0.	0.	0.	0.	-.0268	.0452	-.0092	-.0334	-.0228	-.0920	0.		
.1730	0.	0.	0.	0.	0.	0.	-.0293	.0435	-.0111	-.0283	-.0176	-.0886	0.		
.1740	0.	0.	0.	0.	0.	0.	-.0318	.0410	-.0129	-.0231	-.0127	-.0840	0.		
.1750	0.	0.	0.	0.	0.	0.	-.0339	.0376	-.0143	-.0191	-.0066	-.0779	0.		
.1760	0.	0.	0.	0.	0.	0.	-.0349	.0331	-.0151	-.0173	.0028	-.0698	0.		
.1770	0.	0.	0.	0.	0.	0.	-.0349	.0276	-.0149	-.0183	.0153	-.0589	0.		
.1780	0.	0.	0.	0.	0.	0.	-.0340	.0213	-.0139	-.0216	.0294	-.0448	0.		
.1790	0.	0.	0.	0.	0.	0.	-.0325	.0141	-.0122	-.0269	.0443	-.0283	0.		
.1800	0.	0.	0.	0.	0.	0.	-.0304	.0063	-.0101	-.0334	.0595	-.0110	0.		
.1810	0.	0.	0.	0.	0.	0.	-.0281	-.0019	-.0080	-.0395	.0728	.0067	0.		
.1820	0.	0.	0.	0.	0.	0.	-.0262	-.0104	-.0064	-.0441	.0817	.0242	0.		
.1830	0.	0.	0.	0.	0.	0.	-.0247	-.0188	-.0053	-.0468	.0862	.0408	0.		
.1840	0.	0.	0.	0.	0.	0.	-.0234	-.0269	-.0048	-.0480	.0877	.0561	0.		
.1850	0.	0.	0.	0.	0.	0.	-.0225	-.0345	-.0046	-.0477	.0862	.0701	0.		
.1860	0.	0.	0.	0.	0.	0.	-.0221	-.0413	-.0047	-.0461	.0809	.0830	0.		
.1870	0.	0.	0.	0.	0.	0.	-.0224	-.0470	-.0049	-.0437	.0728	.0942	0.		
.1880	0.	0.	0.	0.	0.	0.	-.0235	-.0515	-.0053	-.0406	.0627	.1027	0.		
.1890	0.	0.	0.	0.	0.	0.	-.0254	-.0547	-.0061	-.0359	.0498	.1085	0.		
.1900	0.	0.	0.	0.	0.	0.	-.0281	-.0564	-.0075	-.0289	.0534	.1118	0.		
.1910	0.	0.	0.	0.	0.	0.	-.0316	-.0567	-.0094	-.0203	.0151	.1128	0.		
.1920	0.	0.	0.	0.	0.	0.	-.0355	-.0555	-.0112	-.0119	-.0021	.1114	0.		
.1930	0.	0.	0.	0.	0.	0.	-.0395	-.0530	-.0123	-.0051	-.0162	.1090	0.		
.1940	0.	0.	0.	0.	0.	0.	-.0432	-.0493	-.0122	-.0014	-.0256	.1067	0.		
.1950	0.	0.	0.	0.	0.	0.	-.0467	-.0445	-.0106	-.0017	-.0292	.1050	0.		
.1960	0.	0.	0.	0.	0.	0.	-.0498	-.0390	-.0076	-.0057	-.0268	.1034	0.		
.1970	0.	0.	0.	0.	0.	0.	-.0527	-.0330	-.0040	-.0115	-.0208	.1011	0.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.52.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.1870	0.	0.	0.	0.	0.	0.	0.	-.0224	-.0470	-.0049	-.0437	.0809	.0830	0.
.1880	0.	0.	0.	0.	0.	0.	0.	-.0235	-.0515	-.0053	-.0406	.0627	.1027	0.
.1890	0.	0.	0.	0.	0.	0.	0.	-.0254	-.0547	-.0061	-.0359	.0498	.1085	0.
.1900	0.	0.	0.	0.	0.	0.	0.	-.0281	-.0564	-.0075	-.0289	.0334	.1118	0.
.1910	0.	0.	0.	0.	0.	0.	0.	-.0316	-.0567	-.0094	-.0203	.0151	.1128	0.
.1920	0.	0.	0.	0.	0.	0.	0.	-.0355	-.0555	-.0112	-.0119	-.0021	.1114	0.
.1930	0.	0.	0.	0.	0.	0.	0.	-.0395	-.0530	-.0123	-.0051	-.0162	.1090	0.
.1940	0.	0.	0.	0.	0.	0.	0.	-.0432	-.0493	-.0122	-.0014	-.0256	.1067	0.
.1950	0.	0.	0.	0.	0.	0.	0.	-.0467	-.0445	-.0106	-.0017	-.0292	.1050	0.
.1960	0.	0.	0.	0.	0.	0.	0.	-.0498	-.0390	-.0076	-.0057	-.0268	.1034	0.
.1970	0.	0.	0.	0.	0.	0.	0.	-.0527	-.0330	-.0040	-.0115	-.0208	.1011	0.

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DIS/ADLPIPE

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S/RV PIPING KEWAUNEE CKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

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ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	VA	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)
.1780	0.	0.	0.	0.	0.	0.	-.0559	-.0267	-.0008	-.0161	-.0150	.0977	0.
.1990	0.	0.	0.	0.	0.	0.	-.0596	-.0205	.0011	-.0171	-.0120	.0923	0.
.2000	0.	0.	0.	0.	0.	0.	-.0637	-.0148	.0014	-.0137	-.0125	.0840	0.
.2010	0.	0.	0.	0.	0.	0.	-.0683	-.0097	.0003	-.0068	-.0156	.0733	0.
.2020	0.	0.	0.	0.	0.	0.	-.0727	-.0054	-.0013	.0016	-.0196	.0624	0.
.2030	0.	0.	0.	0.	0.	0.	-.0762	-.0022	-.0025	.0085	-.0211	.0533	0.
.2040	0.	0.	0.	0.	0.	0.	-.0779	-.0002	-.0024	.0113	-.0166	.0476	0.
.2050	0.	0.	0.	0.	0.	0.	-.0779	.0006	-.0004	.0084	-.0051	.0458	0.
.2060	0.	0.	0.	0.	0.	0.	-.0763	.0002	.0032	.0004	.0115	.0477	0.
.2070	0.	0.	0.	0.	0.	0.	-.0737	-.0015	.0078	-.0103	.0301	.0521	0.
.2080	0.	0.	0.	0.	0.	0.	-.0704	-.0043	.0120	-.0206	.0472	.0572	0.
.2090	0.	0.	0.	0.	0.	0.	-.0668	-.0083	.0149	-.0277	.0594	.0618	0.
.2100	0.	0.	0.	0.	0.	0.	-.0635	-.0131	.0160	-.0299	.0641	.0648	0.
.2110	0.	0.	0.	0.	0.	0.	-.0607	-.0185	.0152	-.0273	.0613	.0661	0.
.2120	0.	0.	0.	0.	0.	0.	-.0582	-.0244	.0135	-.0220	.0532	.0660	0.
.2130	0.	0.	0.	0.	0.	0.	-.0553	-.0305	.0115	-.0164	.0431	.0658	0.
.2140	0.	0.	0.	0.	0.	0.	-.0517	-.0366	.0102	-.0129	.0334	.0670	0.
.2150	0.	0.	0.	0.	0.	0.	-.0472	-.0423	.0102	-.0128	.0259	.0704	0.
.2160	0.	0.	0.	0.	0.	0.	-.0420	-.0475	.0115	-.0166	.0214	.0754	0.
.2170	0.	0.	0.	0.	0.	0.	-.0364	-.0521	.0136	-.0225	.0183	.0810	0.
.2180	0.	0.	0.	0.	0.	0.	-.0309	-.0559	.0156	-.0281	.0141	.0859	0.
.2190	0.	0.	0.	0.	0.	0.	-.0259	-.0587	.0167	-.0310	.0065	.0889	0.
.2200	0.	0.	0.	0.	0.	0.	-.0219	-.0606	.0166	-.0300	-.0048	.0890	0.
.2210	0.	0.	0.	0.	0.	0.	-.0187	-.0615	.0154	-.0255	-.0190	.0862	0.
.2220	0.	0.	0.	0.	0.	0.	-.0160	-.0614	.0135	-.0187	-.0338	.0816	0.
.2230	0.	0.	0.	0.	0.	0.	-.0135	-.0603	.0117	-.0116	-.0467	.0767	0.
.2240	0.	0.	0.	0.	0.	0.	-.0106	-.0583	.0108	-.0066	-.0546	.0722	0.
.2250	0.	0.	0.	0.	0.	0.	-.0075	-.0554	.0111	-.0047	-.0561	.0685	0.
.2260	0.	0.	0.	0.	0.	0.	-.0041	-.0518	.0126	-.0055	-.0520	.0654	0.
.2270	0.	0.	0.	0.	0.	0.	-.0008	-.0477	.0145	-.0070	-.0444	.0625	0.
.2280	0.	0.	0.	0.	0.	0.	.0023	-.0431	.0158	-.0068	-.0358	.0586	0.
.2290	0.	0.	0.	0.	0.	0.	.0048	-.0382	.0160	-.0030	-.0285	.0527	0.
.2300	0.	0.	0.	0.	0.	0.	.0065	-.0332	.0148	.0049	-.0237	.0445	0.
.2310	0.	0.	0.	0.	0.	0.	.0075	-.0282	.0124	.0164	-.0214	.0343	0.
.2320	0.	0.	0.	0.	0.	0.	.0081	-.0233	.0094	.0297	-.0200	.0231	0.
.2330	0.	0.	0.	0.	0.	0.	.0089	-.0186	.0066	.0425	-.0174	.0122	0.
.2340	0.	0.	0.	0.	0.	0.	.0102	-.0142	.0045	.0530	-.0120	.0029	0.
.2350	0.	0.	0.	0.	0.	0.	.0123	-.0101	.0036	.0599	-.0033	-.0042	0.

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ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE CKW00F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

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ENGLISH UNITS

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

.2250	0.	0.	0.	0.	0.	0.	0.	0.	-.0075	-.0554	.0111	-.0047	-.0561	.0685	0.
.2260	0.	0.	0.	0.	0.	0.	0.	0.	-.0041	-.0518	.0126	-.0055	-.0520	.0654	0.
.2270	0.	0.	0.	0.	0.	0.	0.	0.	-.0008	-.0477	.0145	-.0070	-.0444	.0625	0.
.2280	0.	0.	0.	0.	0.	0.	0.	0.	.0023	-.0431	.0158	-.0068	-.0358	.0586	0.
.2290	0.	0.	0.	0.	0.	0.	0.	0.	.0048	-.0382	.0160	-.0030	-.0285	.0527	0.
.2300	0.	0.	0.	0.	0.	0.	0.	0.	.0065	-.0332	.0148	.0049	-.0237	.0445	0.
.2310	0.	0.	0.	0.	0.	0.	0.	0.	.0075	-.0282	.0124	.0164	-.0214	.0343	0.
.2320	0.	0.	0.	0.	0.	0.	0.	0.	.0081	-.0233	.0094	.0297	-.0200	.0231	0.
.2330	0.	0.	0.	0.	0.	0.	0.	0.	.0089	-.0186	.0066	.0425	-.0174	.0122	0.
.2340	0.	0.	0.	0.	0.	0.	0.	0.	.0102	-.0142	.0045	.0530	-.0120	.0029	0.
.2350	0.	0.	0.	0.	0.	0.	0.	0.	.0123	-.0101	.0036	.0599	-.0035	-.0042	0.

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ENGLISH UNITS

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

SECTION	GS	MEMBER	1	SEQUENCE	102	LOCATION	DIS	TYPE	VA							
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS			
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)			
.2360	0.	0.	0.	0.	0.	0.	.0152	-.0063	.0039	.0632	.0084	-.0092	0.			
.2370	0.	0.	0.	0.	0.	0.	.0188	-.0030	.0052	.0636	.0217	-.0125	0.			
.2380	0.	0.	0.	0.	0.	0.	.0228	-.0001	.0068	.0625	.0348	-.0148	0.			
.2390	0.	0.	0.	0.	0.	0.	.0269	.0025	.0083	.0613	.0455	-.0168	0.			
.2400	0.	0.	0.	0.	0.	0.	.0309	.0048	.0094	.0606	.0527	-.0193	0.			
.2410	0.	0.	0.	0.	0.	0.	.0346	.0068	.0102	.0608	.0562	-.0225	0.			
.2420	0.	0.	0.	0.	0.	0.	.0382	.0086	.0106	.0615	.0559	-.0265	0.			
.2430	0.	0.	0.	0.	0.	0.	.0416	.0103	.0107	.0622	.0525	-.0307	0.			
.2440	0.	0.	0.	0.	0.	0.	.0449	.0119	.0109	.0625	.0467	-.0353	0.			
.2450	0.	0.	0.	0.	0.	0.	.0481	.0136	.0113	.0619	.0391	-.0405	0.			
.2460	0.	0.	0.	0.	0.	0.	.0509	.0154	.0118	.0605	.0299	-.0463	0.			
.2470	0.	0.	0.	0.	0.	0.	.0533	.0174	.0122	.0589	.0190	-.0530	0.			
.2480	0.	0.	0.	0.	0.	0.	.0553	.0195	.0124	.0576	.0068	-.0608	0.			
.2490	0.	0.	0.	0.	0.	0.	.0568	.0219	.0123	.0569	-.0065	-.0697	0.			
.2500	0.	0.	0.	0.	0.	0.	.0577	.0245	.0119	.0567	-.0202	-.0799	0.			
.2510	0.	0.	0.	0.	0.	0.	.0581	.0274	.0113	.0567	-.0336	-.0912	0.			
.2520	0.	0.	0.	0.	0.	0.	.0579	.0304	.0108	.0565	-.0458	-.1034	0.			
.2530	0.	0.	0.	0.	0.	0.	.0574	.0335	.0104	.0557	-.0556	-.1158	0.			
.2540	0.	0.	0.	0.	0.	0.	.0567	.0366	.0100	.0544	-.0625	-.1279	0.			
.2550	0.	0.	0.	0.	0.	0.	.0559	.0398	.0098	.0525	-.0663	-.1395	0.			
.2560	0.	0.	0.	0.	0.	0.	.0550	.0428	.0098	.0501	-.0669	-.1507	0.			
.2570	0.	0.	0.	0.	0.	0.	.0538	.0455	.0098	.0475	-.0645	-.1613	0.			
.2580	0.	0.	0.	0.	0.	0.	.0524	.0480	.0098	.0449	-.0594	-.1711	0.			
.2590	0.	0.	0.	0.	0.	0.	.0510	.0501	.0096	.0427	-.0520	-.1798	0.			
.2600	0.	0.	0.	0.	0.	0.	.0497	.0517	.0092	.0410	-.0428	-.1869	0.			
.2610	0.	0.	0.	0.	0.	0.	.0485	.0527	.0087	.0397	-.0320	-.1923	0.			
.2620	0.	0.	0.	0.	0.	0.	.0474	.0532	.0080	.0385	-.0202	-.1959	0.			
.2630	0.	0.	0.	0.	0.	0.	.0464	.0530	.0073	.0376	-.0080	-.1974	0.			
.2640	0.	0.	0.	0.	0.	0.	.0457	.0522	.0064	.0371	.0040	-.1966	0.			
.2650	0.	0.	0.	0.	0.	0.	.0453	.0508	.0052	.0373	.0152	-.1934	0.			
.2660	0.	0.	0.	0.	0.	0.	.0451	.0489	.0038	.0380	.0250	-.1880	0.			
.2670	0.	0.	0.	0.	0.	0.	.0452	.0464	.0021	.0392	.0332	-.1803	0.			
.2680	0.	0.	0.	0.	0.	0.	.0456	.0434	.0003	.0410	.0393	-.1705	0.			
.2690	0.	0.	0.	0.	0.	0.	.0463	.0401	-.0018	.0430	.0434	-.1583	0.			
.2700	0.	0.	0.	0.	0.	0.	.0474	.0364	-.0039	.0450	.0455	-.1440	0.			
.2710	0.	0.	0.	0.	0.	0.	.0488	.0326	-.0058	.0466	.0456	-.1278	0.			
.2720	0.	0.	0.	0.	0.	0.	.0503	.0286	-.0077	.0477	.0438	-.1100	0.			
.2730	0.	0.	0.	0.	0.	0.	.0520	.0246	-.0095	.0484	.0402	-.0909	0.			

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ADLPIPE STRESS ANALYSIS

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18.29.52.

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

CONDITION 24

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ENGLISH UNITS

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

.2630	0.	0.	0.	0.	0.	0.	0.	.0464	.0530	.0073	.0376	-.0202	-.1959	0.
.2640	0.	0.	0.	0.	0.	0.	0.	.0457	.0522	.0064	.0371	.0040	-.1966	0.
.2650	0.	0.	0.	0.	0.	0.	0.	.0453	.0508	.0052	.0373	.0152	-.1934	0.
.2660	0.	0.	0.	0.	0.	0.	0.	.0451	.0489	.0038	.0380	.0250	-.1880	0.
.2670	0.	0.	0.	0.	0.	0.	0.	.0452	.0464	.0071	.0392	.0332	-.1803	0.
.2680	0.	0.	0.	0.	0.	0.	0.	.0456	.0434	.0003	.0410	.0393	-.1705	0.
.2690	0.	0.	0.	0.	0.	0.	0.	.0463	.0401	-.0018	.0430	.0434	-.1583	0.
.2700	0.	0.	0.	0.	0.	0.	0.	.0474	.0364	-.0039	.0450	.0453	-.1440	0.
.2710	0.	0.	0.	0.	0.	0.	0.	.0488	.0326	-.0058	.0466	.0456	-.1278	0.
.2720	0.	0.	0.	0.	0.	0.	0.	.0503	.0286	-.0077	.0477	.0438	-.1100	0.
.2730	0.	0.	0.	0.	0.	0.	0.	.0520	.0246	-.0095	.0484	.0402	-.0909	0.

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

SECTION	68	MEMBER	1	SEQUENCE	102	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2740	0.	0.	0.	0.	0.	0.	.0539	.0207	-.0114	.0491	.0343	-.0709	0.		
.2750	0.	0.	0.	0.	0.	0.	.0556	.0168	-.0134	.0501	.0266	-.0506	0.		
.2760	0.	0.	0.	0.	0.	0.	.0569	.0132	-.0155	.0511	.0169	-.0308	0.		
.2770	0.	0.	0.	0.	0.	0.	.0578	.0097	-.0176	.0523	.0058	-.0118	0.		
.2780	0.	0.	0.	0.	0.	0.	.0585	.0066	-.0199	.0536	-.0059	.0065	0.		
.2790	0.	0.	0.	0.	0.	0.	.0590	.0037	-.0220	.0546	-.0176	.0239	0.		
.2800	0.	0.	0.	0.	0.	0.	.0590	.0010	-.0239	.0548	-.0284	.0403	0.		
.2810	0.	0.	0.	0.	0.	0.	.0586	-.0013	-.0254	.0537	-.0373	.0531	0.		
.2820	0.	0.	0.	0.	0.	0.	.0576	-.0033	-.0263	.0514	-.0443	.0683	0.		
.2830	0.	0.	0.	0.	0.	0.	.0563	-.0051	-.0271	.0485	-.0497	.0797	0.		
.2840	0.	0.	0.	0.	0.	0.	.0543	-.0066	-.0278	.0457	-.0536	.0890	0.		
.2850	0.	0.	0.	0.	0.	0.	.0515	-.0078	-.0286	.0431	-.0566	.0954	0.		
.2860	0.	0.	0.	0.	0.	0.	.0477	-.0088	-.0295	.0410	-.0586	.0988	0.		
.2870	0.	0.	0.	0.	0.	0.	.0433	-.0096	-.0306	.0395	-.0597	.0995	0.		
.2880	0.	0.	0.	0.	0.	0.	.0384	-.0100	-.0317	.0382	-.0598	.0981	0.		
.2890	0.	0.	0.	0.	0.	0.	.0330	-.0102	-.0325	.0361	-.0579	.0950	0.		
.2900	0.	0.	0.	0.	0.	0.	.0275	-.0100	-.0324	.0320	-.0529	.0907	0.		
.2910	0.	0.	0.	0.	0.	0.	.0219	-.0096	-.0314	.0253	-.0446	.0858	0.		
.2920	0.	0.	0.	0.	0.	0.	.0165	-.0087	-.0295	.0161	-.0335	.0809	0.		
.2930	0.	0.	0.	0.	0.	0.	.0114	-.0075	-.0268	.0050	-.0204	.0761	0.		
.2940	0.	0.	0.	0.	0.	0.	.0062	-.0060	-.0237	-.0074	-.0066	.0709	0.		
.2950	0.	0.	0.	0.	0.	0.	.0010	-.0041	-.0204	-.0200	.0064	.0648	0.		
.2960	0.	0.	0.	0.	0.	0.	-.0046	-.0019	-.0173	-.0317	.0168	.0579	0.		
.2970	0.	0.	0.	0.	0.	0.	-.0103	.0006	-.0147	-.0419	.0239	.0503	0.		
.2980	0.	0.	0.	0.	0.	0.	-.0160	.0034	-.0126	-.0505	.0277	.0423	0.		
.2990	0.	0.	0.	0.	0.	0.	-.0216	.0063	-.0107	-.0582	.0286	.0344	0.		
.3000	0.	0.	0.	0.	0.	0.	-.0270	.0094	-.0089	-.0657	.0274	.0272	0.		
.3010	0.	0.	0.	0.	0.	0.	-.0319	.0126	-.0068	-.0736	.0249	.0214	0.		
.3020	0.	0.	0.	0.	0.	0.	-.0362	.0157	-.0044	-.0821	.0220	.0173	0.		
.3030	0.	0.	0.	0.	0.	0.	-.0396	.0187	-.0019	-.0907	.0187	.0152	0.		
.3040	0.	0.	0.	0.	0.	0.	-.0425	.0216	.0007	-.0990	.0146	.0150	0.		
.3050	0.	0.	0.	0.	0.	0.	-.0449	.0242	.0030	-.1064	.0094	.0161	0.		
.3060	0.	0.	0.	0.	0.	0.	-.0468	.0266	.0050	-.1125	.0031	.0183	0.		
.3070	0.	0.	0.	0.	0.	0.	-.0482	.0285	.0065	-.1166	-.0043	.0216	0.		
.3080	0.	0.	0.	0.	0.	0.	-.0492	.0301	.0073	-.1187	-.0124	.0260	0.		
.3090	0.	0.	0.	0.	0.	0.	-.0497	.0312	.0078	-.1194	-.0206	.0315	0.		
.3100	0.	0.	0.	0.	0.	0.	-.0499	.0320	.0082	-.1193	-.0277	.0378	0.		
.3110	0.	0.	0.	0.	0.	0.	-.0497	.0325	.0084	-.1184	-.0330	.0450	0.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02.

18.29.52.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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