

50-305

RESPONSE TO NUREG-0737 ITEM II.D.1

Docket # *50-305*

Control # *8403280048*

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

.2740	263.	574.	81.	194.	-131.	8.	.0265	-.0062	-.0308	.0122	-.0259	.0142	877.
.2950	640.	578.	-113.	266.	-98.	39.	.0311	-.0043	-.0308	.0201	-.0293	.0257	1068.
.2960	982.	783.	-257.	331.	-72.	76.	.0351	-.0022	-.0311	.0246	-.0299	.0367	1296.
.2970	1284.	957.	-333.	390.	-54.	113.	.0383	-.0000	-.0316	.0248	-.0271	.0471	1528.
.2980	1519.	1077.	-337.	445.	-35.	142.	.0404	.0020	-.0324	.0203	-.0215	.0561	1747.
.2990	1670.	1156.	-281.	494.	-13.	162.	.0413	.0037	-.0330	.0120	-.0141	.0621	1942.
.3000	1727.	1216.	-190.	533.	3.	180.	.0413	.0050	-.0333	.0025	-.0058	.0635	2102.
.3010	1678.	1237.	-85.	563.	33.	192.	.0403	.0060	-.0328	-.0060	.0022	.0598	2225.
.3020	1525.	1192.	19.	589.	67.	189.	.0384	.0066	-.0313	-.0127	.0085	.0524	2322.
.3030	1300.	1093.	113.	610.	100.	171.	.0357	.0067	-.0287	-.0172	.0132	.0433	2399.

ADLPIPE PAGE 2013

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.09.

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

CONDITION 24

LOADS
SHOCK
PRESSURE

ENGLISH UNITS

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

SECTION	53	MEMBER	1	SEQUENCE	173	LOCATION	BEG	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3040	1043.	974.	197.	619.	144.	150.	.0321	.0063	-.0252	-.0192	.0174	.0338	2438.		
.3050	775.	837.	285.	614.	170.	125.	.0280	.0057	-.0211	-.0196	.0223	.0249	2424.		
.3060	510.	656.	380.	598.	188.	91.	.0234	.0048	-.0165	-.0193	.0279	.0185	2364.		
.3070	279.	437.	470.	572.	200.	47.	.0182	.0036	-.0117	-.0181	.0341	.0166	2270.		
.3080	113.	217.	538.	535.	203.	1.	.0124	.0020	-.0066	-.0146	.0405	.0200	2136.		
.3090	11.	11.	569.	486.	196.	-43.	.0063	.0001	-.0014	-.0077	.0466	.0272	1961.		
.3100	-53.	-195.	554.	429.	187.	-92.	.0003	-.0019	.0037	.0024	.0508	.0367	1780.		
.3110	-82.	-401.	486.	370.	180.	-145.	-.0056	-.0040	.0088	.0158	.0524	.0479	1629.		
.3120	-57.	-584.	361.	310.	175.	-192.	-.0113	-.0059	.0137	.0326	.0516	.0615	1508.		
.3130	20.	-736.	196.	249.	165.	-229.	-.0168	-.0076	.0185	.0515	.0491	.0767	1406.		
.3140	125.	-861.	20.	192.	153.	-260.	-.0218	-.0091	.0226	.0697	.0457	.0918	1334.		
.3150	247.	-955.	-142.	140.	139.	-284.	-.0261	-.0102	.0259	.0848	.0418	.1058	1292.		
.3160	384.	-1003.	-282.	95.	120.	-296.	-.0298	-.0110	.0284	.0963	.0381	.1179	1243.		
.3170	525.	-1010.	-394.	58.	96.	-293.	-.0330	-.0114	.0301	.1043	.0349	.1275	1170.		
.3180	639.	-990.	-477.	36.	75.	-281.	-.0355	-.0115	.0310	.1083	.0312	.1329	1094.		
.3190	704.	-938.	-527.	29.	59.	-263.	-.0372	-.0113	.0310	.1080	.0266	.1322	1013.		
.3200	718.	-841.	-548.	36.	47.	-234.	-.0382	-.0107	.0304	.1042	.0213	.1247	902.		
.3210	677.	-709.	-541.	54.	36.	-194.	-.0383	-.0099	.0293	.0974	.0157	.1106	766.		
.3220	580.	-570.	-502.	87.	32.	-151.	-.0379	-.0089	.0279	.0874	.0100	.0912	662.		
.3230	435.	-427.	-426.	132.	34.	-109.	-.0368	-.0080	.0262	.0736	.0046	.0677	653.		
.3240	263.	-261.	-317.	183.	37.	-64.	-.0351	-.0073	.0243	.0568	.0005	.0410	737.		
.3250	79.	-74.	-179.	234.	35.	-14.	-.0329	-.0068	.0224	.0381	-.0017	.0124	885.		
.3260	-110.	103.	-27.	286.	35.	31.	-.0303	-.0067	.0204	.0187	-.0025	-.0163	1081.		
.3270	-286.	255.	119.	339.	39.	67.	-.0274	-.0071	.0184	.0002	-.0029	-.0426	1297.		
.3280	-431.	398.	240.	388.	44.	98.	-.0244	-.0079	.0167	-.0154	-.0028	-.0655	1503.		
.3290	-533.	540.	326.	427.	45.	127.	-.0213	-.0093	.0152	-.0268	-.0024	-.0845	1673.		
.3300	-595.	660.	376.	456.	46.	148.	-.0182	-.0111	.0140	-.0340	-.0019	-.0992	1798.		
.3310	-616.	739.	390.	475.	48.	156.	-.0151	-.0135	.0131	-.0372	-.0015	-.1081	1873.		
.3320	-578.	788.	368.	481.	47.	154.	-.0125	-.0165	.0126	-.0361	-.0005	-.1101	1892.		
.3330	-479.	819.	316.	471.	41.	148.	-.0102	-.0200	.0125	-.0311	.0015	-.1055	1849.		
.3340	-340.	826.	244.	446.	30.	135.	-.0083	-.0239	.0128	-.0232	.0043	-.0957	1742.		
.3350	-182.	794.	157.	409.	21.	112.	-.0067	-.0281	.0133	-.0130	.0076	-.0820	1584.		
.3360	-9.	737.	50.	362.	13.	82.	-.0056	-.0324	.0141	-.0003	.0109	-.0651	1388.		
.3370	178.	665.	-78.	308.	8.	52.	-.0050	-.0366	.0150	.0150	.0140	-.0456	1166.		
.3380	355.	576.	-216.	248.	6.	21.	-.0048	-.0407	.0160	.0319	.0167	-.0256	931.		
.3390	500.	467.	-348.	188.	11.	-14.	-.0048	-.0444	.0168	.0484	.0191	-.0068	704.		
.3400	617.	356.	-462.	126.	21.	-48.	-.0051	-.0478	.0173	.0632	.0215	.0100	511.		
.3410	711.	255.	-547.	65.	31.	-76.	-.0057	-.0508	.0173	.0755	.0248	.0248	393.		

ADLPIPE PAGE 2014

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.09.

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

CONDITION 24

LOADS
SHOCK
PRESSURE

ENGLISH UNITS

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

SECTION	53	MEMBER	1	SEQUENCE	173	LOCATION	BEG	TYPE	EL
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.3320	-578.	780.	88.	481.	47.	154.	-.0125	-.0165	.0126	-.0361	-.0005	-.1101	1892.
.3330	-479.	819.	316.	471.	41.	148.	-.0102	-.0200	.0125	-.0311	.0015	-.1055	1849.
.3340	-340.	826.	244.	446.	30.	135.	-.0083	-.0239	.0128	-.0232	.0043	-.0957	1742.
.3350	-182.	794.	157.	409.	21.	112.	-.0067	-.0281	.0133	-.0130	.0076	-.0820	1584.
.3360	-9.	737.	50.	362.	13.	82.	-.0056	-.0324	.0141	-.0003	.0109	-.0651	1388.
.3370	178.	665.	-78.	308.	8.	52.	-.0050	-.0366	.0150	.0150	.0140	-.0456	1166.
.3380	355.	576.	-216.	248.	6.	21.	-.0048	-.0407	.0160	.0319	.0167	-.0256	931.
.3390	500.	467.	-348.	188.	11.	-14.	-.0048	-.0444	.0168	.0484	.0191	-.0068	704.
.3400	617.	356.	-462.	126.	21.	-48.	-.0051	-.0478	.0173	.0632	.0215	.0100	511.
.3410	711.	255.	-547.	65.	31.	-76.	-.0057	-.0508	.0173	.0755	.0248	.0248	393.

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LOADS

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ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	EL								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)	
.3420	773.	155.	-593.	8.	42.	-100.	-.0064	-.0532	.0170	.0843	.0288	.0370	405.	
.3430	790.	52.	-593.	-41.	57.	-121.	-.0071	-.0550	.0162	.0884	.0335	.0457	523.	
.3440	763.	-76.	-551.	-84.	74.	-139.	-.0077	-.0562	.0151	.0880	.0384	.0498	664.	
.3450	698.	-95.	-482.	-119.	91.	-147.	-.0080	-.0569	.0139	.0843	.0434	.0491	785.	
.3460	594.	-135.	-397.	-146.	113.	-149.	-.0080	-.0570	.0126	.0781	.0477	.0439	884.	
.3470	451.	-171.	-305.	-160.	141.	-150.	-.0077	-.0566	.0112	.0700	.0506	.0348	973.	
.3480	286.	-192.	-212.	-164.	173.	-148.	-.0071	-.0558	.0099	.0605	.0524	.0226	1050.	
.3490	124.	-179.	-119.	-163.	203.	-140.	-.0060	-.0547	.0086	.0500	.0535	.0083	1105.	
.3500	-18.	-138.	-27.	-158.	227.	-127.	-.0047	-.0535	.0071	.0387	.0545	-.0064	1137.	
.3510	-129.	-90.	63.	-148.	247.	-113.	-.0032	-.0520	.0054	.0267	.0554	-.0198	1156.	
.3520	-194.	-38.	146.	-135.	260.	-100.	-.0016	-.0505	.0036	.0150	.0562	-.0304	1156.	
.3530	-199.	30.	209.	-122.	264.	-82.	.0002	-.0488	.0017	.0049	.0569	-.0377	1127.	
.3540	-146.	117.	243.	-110.	259.	-60.	.0020	-.0472	-.0002	-.0028	.0573	-.0417	1073.	
.3550	-52.	205.	240.	-100.	248.	-41.	.0040	-.0455	-.0019	-.0072	.0566	-.0430	1011.	
.3560	73.	282.	196.	-91.	236.	-26.	.0060	-.0438	-.0033	-.0078	.0543	-.0416	950.	
.3570	226.	353.	109.	-84.	222.	-11.	.0077	-.0422	-.0044	-.0041	.0507	-.0376	887.	
.3580	395.	421.	-8.	-83.	204.	3.	.0092	-.0408	-.0051	.0032	.0462	-.0320	822.	
.3590	561.	476.	-136.	-87.	183.	14.	.0104	-.0394	-.0057	.0122	.0412	-.0257	756.	
.3600	709.	510.	-253.	-96.	157.	20.	.0111	-.0380	-.0062	.0216	.0363	-.0194	690.	
.3610	836.	525.	-348.	-110.	124.	26.	.0113	-.0366	-.0065	.0306	.0320	-.0134	628.	
.3620	930.	519.	-412.	-129.	85.	31.	.0110	-.0351	-.0067	.0384	.0284	-.0083	590.	
.3630	972.	489.	-439.	-152.	41.	35.	.0101	-.0334	-.0067	.0444	.0252	-.0054	601.	
.3640	947.	439.	-429.	-176.	-6.	37.	.0090	-.0316	-.0064	.0481	.0218	-.0060	673.	
.3650	853.	380.	-393.	-203.	-54.	40.	.0078	-.0296	-.0057	.0501	.0178	-.0109	798.	
.3660	687.	310.	-338.	-230.	-101.	45.	.0063	-.0274	-.0044	.0510	.0130	-.0199	951.	
.3670	450.	222.	-270.	-254.	-142.	49.	.0048	-.0249	-.0027	.0505	.0072	-.0329	1102.	
.3680	155.	123.	-188.	-276.	-176.	53.	.0033	-.0222	-.0006	.0484	.0004	-.0494	1238.	
.3690	-174.	32.	-91.	-296.	-206.	59.	.0018	-.0193	.0014	.0444	-.0064	-.0683	1366.	
.3700	-512.	-46.	20.	-315.	-234.	71.	.0003	-.0162	.0031	.0384	-.0125	-.0881	1489.	
.3710	-838.	-123.	146.	-331.	-258.	85.	-.0012	-.0130	.0042	.0304	-.0177	-.1070	1597.	
.3720	-1132.	-200.	281.	-342.	-277.	99.	-.0027	-.0097	.0047	.0205	-.0217	-.1235	1683.	
.3730	-1371.	-263.	415.	-349.	-293.	114.	-.0040	-.0065	.0044	.0095	-.0244	-.1365	1754.	
.3740	-1540.	-297.	534.	-354.	-307.	131.	-.0050	-.0036	.0034	-.0015	-.0262	-.1455	1818.	
.3750	-1638.	-309.	623.	-356.	-317.	148.	-.0056	-.0011	.0021	-.0114	-.0276	-.1503	1863.	
.3760	-1669.	-315.	671.	-352.	-320.	160.	-.0055	.0009	.0006	-.0195	-.0294	-.1506	1873.	
.3770	-1632.	-316.	670.	-343.	-315.	167.	-.0049	.0024	-.0008	-.0247	-.0319	-.1461	1846.	
.3780	-1525.	-300.	617.	-329.	-306.	170.	-.0036	.0031	-.0020	-.0269	-.0351	-.1372	1793.	
.3790	-1359.	-265.	524.	-312.	-293.	169.	-.0017	.0029	-.0030	-.0267	-.0388	-.1246	1717.	

ADLPIPE PAGE 2015

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
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CONDITION 24

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ENGLISH UNITS

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

SECTION 53 MEMBER 1 SEQUENCE 173 LOCATION BEG TYPE EL

.3710	-83.	-123.	146.	-331.	-258.	85.	-.012	-.0130	.0042	.0304	-.0177	-.1070	1597.
.3720	-1132.	-200.	281.	-342.	-277.	99.	-.0027	-.0097	.0047	.0205	-.0217	-.1235	1683.
.3730	-1171.	-263.	415.	-349.	-293.	114.	-.0040	-.0065	.0044	.0095	-.0244	-.1365	1754.
.3740	-1540.	-297.	534.	-354.	-307.	131.	-.0050	-.0036	.0034	-.0015	-.0262	-.1455	1818.
.3750	-1638.	-309.	623.	-356.	-317.	148.	-.0056	-.0011	.0021	-.0114	-.0276	-.1503	1863.
.3760	-1669.	-315.	671.	-352.	-320.	160.	-.0055	.0009	.0006	-.0195	-.0294	-.1506	1873.
.3770	-1632.	-316.	670.	-343.	-315.	167.	-.0049	.0024	-.0008	-.0247	-.0319	-.1461	1846.
.3780	-1525.	-300.	617.	-329.	-306.	170.	-.0036	.0031	-.0020	-.0269	-.0351	-.1372	1793.
.3790	-1359.	-265.	524.	-312.	-293.	169.	-.0017	.0029	-.0030	-.0267	-.0388	-.1246	1717.

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LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	53	MEMBER	1	SEQUENCE	173	LOCATION	BEG	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3800	-1153.	-226.	405.	-292.	-276.	160.	.0007	.0020	-.0038	-.0249	-.0427	-.1092	1615.		
.3810	-916.	-190.	274.	-268.	-256.	145.	.0033	.0003	-.0045	-.0223	-.0462	-.0913	1485.		
.3820	-661.	-159.	144.	-242.	-233.	125.	.0059	-.0019	-.0052	-.0197	-.0488	-.0716	1337.		
.3830	-407.	-134.	30.	-214.	-207.	101.	.0083	-.0047	-.0058	-.0179	-.0501	-.0515	1174.		
.3840	-177.	-118.	-58.	-185.	-179.	73.	.0103	-.0079	-.0065	-.0176	-.0501	-.0325	998.		
.3850	9.	-113.	-117.	-155.	-146.	41.	.0119	-.0114	-.0072	-.0189	-.0489	-.0159	811.		
.3860	138.	-125.	-150.	-125.	-108.	7.	.0123	-.0149	-.0076	-.0212	-.0468	-.0024	617.		
.3870	202.	-160.	-161.	-95.	-62.	-29.	.0131	-.0185	-.0078	-.0242	-.0440	.0075	436.		
.3880	201.	-208.	-153.	-63.	-9.	-66.	.0126	-.0221	-.0075	-.0275	-.0407	.0137	344.		
.3890	142.	-253.	-129.	-32.	48.	-102.	.0116	-.0255	-.0070	-.0312	-.0371	.0159	438.		
.3900	37.	-295.	-92.	-4.	108.	-131.	.0099	-.0283	-.0062	-.0348	-.0329	.0148	633.		
.3910	-102.	-347.	-46.	24.	167.	-154.	.0075	-.0301	-.0050	-.0380	-.0281	.0113	851.		
.3920	-256.	-413.	6.	53.	224.	-169.	.0046	-.0308	-.0037	-.0406	-.0223	.0069	1069.		
.3930	-401.	-470.	56.	81.	278.	-176.	.0011	-.0304	-.0023	-.0424	-.0172	.0028	1264.		
.3940	-520.	-499.	96.	165.	323.	-169.	-.0028	-.0290	-.0008	-.0430	-.0111	-.0009	1417.		
.3950	-610.	-507.	120.	125.	359.	-152.	-.0069	-.0265	.0007	-.0418	-.0051	-.0039	1529.		
.3960	-667.	-508.	117.	144.	391.	-127.	-.0111	-.0230	.0022	-.0383	.0004	-.0056	1625.		
.3970	-681.	-499.	82.	162.	418.	-95.	-.0154	-.0186	.0038	-.0323	.0049	-.0050	1711.		
.3980	-642.	-463.	12.	177.	438.	-54.	-.0197	-.0134	.0054	-.0236	.0087	-.0022	1775.		
.3990	-553.	-395.	-87.	189.	448.	-4.	-.0236	-.0077	.0069	-.0130	.0117	.0022	1815.		
.4000	-427.	-312.	-202.	198.	450.	51.	-.0271	-.0013	.0083	-.0015	.0139	.0080	1845.		

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)		
.1850	-186.	-1723.	-322.	-509.	443.	-732.	-.0046	.0520	.0333	-.0324	-.0085	-.1071	3717.		

SECTION	53	MEMBER	1	SEQUENCE	825	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.		
.0010	-0.	-0.	-0.	0.	0.	-0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	0.		
.0020	-0.	-0.	-0.	0.	0.	-0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	1.		
.0030	-0.	-1.	0.	0.	0.	-0.	-.0000	-.0000	-.0000	-.0000	-.0001	.0000	2.		

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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	53	MEMBER	1	SEQUENCE	825	LOCATION	END	TYPE	EL						
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SECTION	53	MEMBER	1	SEQUENCE	825	LOCATION	END	TYPE	EL	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
.0010	-0.	-0.	-0.	0.	0.	-0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	.0000	0.
.0020	-0.	-0.	-0.	0.	0.	-0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	.0000	1.
.0030	-0.	-1.	0.	0.	0.	-0.	-.0000	-.0000	-.0000	-.0000	-.0001	.0000	.0000	2.

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CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	53	MEMBER	1	SEQUENCE	825	LOCATION	END	TYPE	EL	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0040	2.	-0.	1.	0.	1.	0.	-.0000	-.0000	-.0000	.0000	-.0002	-.0000	-.0000	2.
.0050	6.	0.	3.	-0.	1.	1.	-.0001	.0000	-.0001	.0001	-.0004	-.0002	-.0002	4.
.0060	16.	3.	6.	-0.	-0.	3.	-.0001	.0000	-.0002	.0002	-.0008	-.0005	-.0005	11.
.0070	29.	6.	9.	0.	-1.	6.	-.0003	.0000	-.0004	.0003	-.0015	-.0009	-.0009	22.
.0080	45.	7.	10.	2.	-1.	10.	-.0006	-.0000	-.0008	.0002	-.0023	-.0014	-.0014	38.
.0090	72.	11.	8.	6.	-2.	17.	-.0011	-.0001	-.0014	-.0000	-.0032	-.0023	-.0023	66.
.0100	119.	22.	2.	10.	-8.	29.	-.0018	-.0001	-.0023	-.0002	-.0040	-.0039	-.0039	117.
.0110	193.	43.	-9.	15.	-22.	48.	-.0029	-.0000	-.0034	-.0004	-.0046	-.0065	-.0065	204.
.0120	289.	75.	-28.	22.	-44.	75.	-.0044	-.0001	-.0048	-.0006	-.0045	-.0097	-.0097	336.
.0130	397.	116.	-55.	33.	-75.	111.	-.0064	-.0003	-.0064	-.0010	-.0035	-.0133	-.0133	514.
.0140	499.	155.	-88.	51.	-112.	149.	-.0087	-.0009	-.0085	-.0017	-.0014	-.0166	-.0166	721.
.0150	572.	186.	-124.	73.	-152.	182.	-.0112	-.0018	-.0107	-.0028	.0018	-.0188	-.0188	925.
.0160	595.	208.	-156.	95.	-189.	200.	-.0136	-.0026	-.0129	-.0039	.0060	-.0189	-.0189	1086.
.0170	543.	214.	-181.	112.	-216.	193.	-.0155	-.0033	-.0148	-.0049	.0110	-.0159	-.0159	1159.
.0180	400.	193.	-188.	116.	-230.	155.	-.0165	-.0036	-.0157	-.0053	.0167	-.0097	-.0097	1123.
.0190	177.	143.	-169.	101.	-233.	90.	-.0162	-.0035	-.0151	-.0045	.0230	-.0009	-.0009	1007.
.0200	-115.	51.	-112.	62.	-228.	5.	-.0142	-.0031	-.0123	-.0020	.0296	.0092	.0092	882.
.0210	-420.	-62.	-9.	-2.	-225.	-85.	-.0106	-.0023	-.0072	.0027	.0362	.0188	.0188	897.
.0220	-610.	-103.	148.	-96.	-249.	-147.	-.0056	-.0010	.0000	.0121	.0426	.0243	.0243	1137.
.0230	-718.	-104.	351.	-206.	-290.	-183.	.0001	.0001	.0085	.0241	.0475	.0272	.0272	1494.
.0240	-855.	-143.	567.	-302.	-318.	-218.	.0055	.0002	.0166	.0346	.0491	.0310	.0310	1830.
.0250	-1085.	-281.	738.	-363.	-302.	-271.	.0107	-.0007	.0229	.0401	.0480	.0365	.0365	2032.
.0260	-1281.	-436.	810.	-396.	-251.	-321.	.0158	-.0010	.0267	.0412	.0467	.0389	.0389	2121.
.0270	-1252.	-405.	786.	-419.	-225.	-335.	.0200	.0009	.0278	.0424	.0473	.0350	.0350	2171.
.0280	-1264.	-348.	701.	-408.	-203.	-371.	.0221	.0030	.0263	.0384	.0475	.0349	.0349	2194.
.0290	-1548.	-507.	539.	-336.	-110.	-466.	.0230	.0034	.0233	.0225	.0466	.0430	.0430	2183.
.0300	-1555.	-546.	258.	-231.	3.	-484.	.0252	.0044	.0207	.0047	.0487	.0408	.0408	2003.
.0310	-1184.	-423.	-80.	-120.	72.	-410.	.0284	.0065	.0194	-.0104	.0503	.0246	.0246	1619.
.0320	-810.	-381.	-319.	-35.	124.	-316.	.0306	.0075	.0205	-.0240	.0446	.0074	.0074	1273.
.0330	-395.	-335.	-375.	-4.	172.	-168.	.0317	.0071	.0244	-.0302	.0307	-.0102	-.0102	899.
.0340	251.	-187.	-318.	-3.	182.	62.	.0325	.0062	.0284	-.0264	.0110	-.0370	-.0370	717.
.0350	899.	-131.	-268.	25.	181.	285.	.0324	.0054	.0291	-.0211	-.0121	-.0684	-.0684	1265.
.0360	1329.	-164.	-292.	81.	231.	433.	.0299	.0051	.0256	-.0196	-.0337	-.0916	-.0916	1856.
.0370	1667.	5.	-403.	138.	289.	531.	.0239	.0066	.0183	-.0193	-.0474	-.1019	-.1019	2314.
.0380	1875.	313.	-605.	224.	287.	565.	.0142	.0091	.0064	-.0229	-.0506	-.0996	-.0996	2509.
.0390	1654.	366.	-893.	391.	293.	477.	.0032	.0100	-.0083	-.0370	-.0441	-.0832	-.0832	2550.
.0400	1123.	162.	-1223.	608.	401.	316.	-.0056	.0091	-.0215	-.0583	-.0315	-.0590	-.0590	2965.
.0410	903.	203.	-1484.	763.	494.	223.	-.0109	.0096	-.0293	-.0695	-.0190	-.0416	-.0416	3494.

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2 SAFETY COLD FKM24F--2 PSV

CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION 53 MEMBER 1 SEQUENCE 825 LOCATION END TYPE EL

.0330	-395.	-335.	-375.	-4.	172.	-168.	.0317	.0071	.0244	-.0302	.0307	-.0102	899.
.0340	251.	-187.	-318.	-3.	182.	62.	.0325	.0062	.0284	-.0264	.0110	-.0370	717.
.0350	899.	-131.	-268.	25.	181.	285.	.0324	.0054	.0291	-.0211	-.0121	-.0684	1265.
.0360	1329.	-164.	-292.	81.	231.	433.	.0299	.0051	.0256	-.0196	-.0337	-.0916	1856.
.0370	1667.	5.	-403.	138.	289.	531.	.0239	.0066	.0183	-.0193	-.0474	-.1019	2314.
.0380	1875.	313.	-605.	224.	287.	565.	.0142	.0091	.0064	-.0229	-.0506	-.0996	2509.
.0390	1654.	366.	-893.	391.	293.	477.	.0032	.0100	-.0083	-.0370	-.0441	-.0832	2550.
.0400	1123.	162.	-1223.	608.	401.	316.	-.0056	.0091	-.0215	-.0583	-.0315	-.0590	2965.
.0410	903.	203.	-1484.	763.	494.	223.	-.0109	.0096	-.0293	-.0695	-.0190	-.0416	3494.

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	53	MEMBER	1	SEQUENCE	825	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)			(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.0420	902.	417.	-1482.	779.	494.	173.	-.0147	.0115	-.0302	-.0646	-.0188	-.0279			3502.
.0430	768.	509.	-1136.	645.	473.	126.	-.0173	.0122	-.0227	-.0444	-.0320	-.0126			3023.
.0440	702.	521.	-513.	408.	480.	161.	-.0165	.0109	-.0090	-.0087	-.0539	-.0065			2427.
.0450	903.	515.	151.	163.	432.	288.	-.0129	.0087	.0045	.0329	-.0780	-.0175			2031.
.0460	1085.	453.	639.	-17.	340.	382.	-.0104	.0066	.0134	.0648	-.0965	-.0297			1910.
.0470	946.	432.	856.	-116.	329.	359.	-.0122	.0047	.0176	.0777	-.1020	-.0212			1868.
.0480	616.	547.	774.	-124.	367.	260.	-.0176	.0034	.0160	.0704	-.0911	.0052			1742.
.0490	312.	639.	409.	-22.	325.	141.	-.0242	.0024	.0077	.0464	-.0656	.0293			1324.
.0500	24.	546.	-78.	148.	240.	23.	-.0295	.0010	-.0033	.0157	-.0313	.0427			1057.
.0510	-209.	441.	-466.	271.	193.	-52.	-.0327	-.0011	-.0103	-.0080	.0028	.0498			1258.
.0520	-281.	465.	-616.	263.	113.	-50.	-.0344	-.0033	-.0107	-.0192	.0247	.0536			1083.
.0530	-168.	493.	-502.	128.	-50.	18.	-.0340	-.0053	-.0054	-.0176	.0293	.0487			519.
.0540	120.	446.	-178.	-77.	-200.	144.	-.0295	-.0072	.0052	-.0025	.0233	.0289			963.
.0550	503.	363.	241.	-296.	-291.	301.	-.0217	-.0089	.0183	.0204	.0143	-.0006			1915.
.0560	768.	243.	606.	-486.	-398.	416.	-.0151	-.0102	.0287	.0369	.0059	-.0243			2812.
.0570	778.	138.	795.	-618.	-527.	434.	-.0126	-.0104	.0337	.0405	.0051	-.0321			3438.
.0580	555.	111.	749.	-663.	-594.	356.	-.0131	-.0092	.0336	.0339	.0201	-.0263			3578.
.0590	112.	34.	482.	-596.	-598.	193.	-.0146	-.0074	.0284	.0166	.0488	-.0130			3232.
.0600	-500.	-208.	109.	-457.	-610.	-29.	-.0158	-.0054	.0196	-.0102	.0810	.0040			2847.
.0610	-1112.	-461.	-175.	-353.	-618.	-263.	-.0156	-.0024	.0127	-.0329	.1083	.0221			2832.
.0620	-1567.	-554.	-213.	-363.	-589.	-470.	-.0135	.0025	.0126	-.0376	.1244	.0373			3123.
.0630	-1863.	-598.	33.	-485.	-560.	-630.	-.0091	.0081	.0194	-.0249	.1223	.0457			3631.
.0640	-1981.	-770.	514.	-683.	-556.	-699.	-.0020	.0125	.0305	-.0006	.1018	.0423			4198.
.0650	-1874.	-892.	1133.	-910.	-544.	-662.	.0071	.0154	.0432	.0332	.0718	.0254			4666.
.0660	-1668.	-1023.	1718.	-1101.	-518.	-591.	.0149	.0177	.0535	.0687	.0422	.0035			5049.
.0670	-1555.	-1108.	2059.	-1192.	-506.	-566.	.0180	.0202	.0564	.0907	.0202	-.0100			5276.
.0680	-1517.	-1061.	2008.	-1155.	-492.	-578.	.0161	.0230	.0499	.0912	.0130	-.0108			5161.
.0690	-1498.	-899.	1558.	-970.	-443.	-611.	.0110	.0255	.0351	.0727	.0273	-.0041			4587.
.0700	-1591.	-821.	843.	-645.	-366.	-684.	.0040	.0263	.0148	.0405	.0478	.0061			3766.
.0710	-1719.	-829.	81.	-277.	-293.	-749.	-.0030	.0250	-.0058	.0041	.0718	.0168			3176.
.0720	-1570.	-676.	-510.	-1.	-245.	-692.	-.0077	.0225	-.0206	-.0216	.0863	.0210			2739.
.0730	-1080.	-372.	-791.	131.	-220.	-500.	-.0087	.0191	-.0264	-.0268	.0843	.0134			2099.
.0740	-489.	-177.	-739.	156.	-190.	-255.	-.0057	.0143	-.0238	-.0137	.0627	-.0046			1323.
.0750	127.	-91.	-447.	107.	-126.	24.	.0007	.0081	-.0154	.0116	.0266	-.0287			623.
.0760	816.	69.	-84.	13.	-43.	333.	.0087	.0019	-.0052	.0414	-.0137	-.0532			1256.
.0770	1396.	276.	172.	-54.	31.	584.	.0147	-.0033	.0020	.0651	-.0477	-.0694			2193.
.0780	1664.	423.	187.	-24.	108.	701.	.0166	-.0076	.0030	.0739	-.0662	-.0713			2651.
.0790	1704.	572.	-92.	119.	198.	729.	.0150	-.0112	-.0026	.0659	-.0642	-.0614			2856.

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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	53	MEMBER	1	SEQUENCE	825	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)			(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)

.0710	-1719.	-829.	31.	-277.	-293.	-749.	-.0030	.0250	-.0058	.0041	.0718	.0168	3176.
.0720	-1570.	-676.	-510.	-1.	-245.	-692.	-.0077	.0225	-.0206	-.0216	.0863	.0210	2739.
.0730	-1080.	-372.	-791.	131.	-220.	-500.	-.0087	.0191	-.0264	-.0268	.0843	.0134	2099.
.0740	-489.	-177.	-739.	156.	-190.	-255.	-.0057	.0143	-.0238	-.0137	.0627	-.0046	1323.
.0750	127.	-91.	-447.	107.	-126.	24.	.0007	.0081	-.0154	.0116	.0266	-.0287	623.
.0760	816.	69.	-84.	13.	-43.	333.	.0087	.0019	-.0052	.0414	-.0137	-.0532	1256.
.0770	1396.	276.	172.	-54.	31.	584.	.0147	-.0033	.0020	.0651	-.0477	-.0694	2193.
.0780	1664.	423.	187.	-24.	108.	701.	.0166	-.0076	.0030	.0739	-.0662	-.0713	2651.
.0790	1704.	572.	-92.	119.	198.	729.	.0150	-.0112	-.0026	.0659	-.0642	-.0614	2856.

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CONDITION 24

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

SECTION	53	MEMBER	1	SEQUENCE	825	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0800	1645.	741.	-608.	354.	268.	723.	.0111	-.0146	-.0138	.0435	-.0449	-.0454	3165.		
.0810	1438.	794.	-1193.	631.	304.	663.	.0057	-.0180	-.0271	.0138	-.0181	-.0263	3602.		
.0820	1140.	754.	-1640.	860.	332.	567.	.0005	-.0206	-.0371	-.0100	.0060	-.0080	4041.		
.0830	1016.	796.	-1803.	949.	351.	512.	-.0023	-.0214	-.0399	-.0168	.0193	.0029	4233.		
.0840	1078.	880.	-1641.	885.	334.	517.	-.0014	-.0206	-.0353	-.0062	.0158	.0036	4024.		
.0850	1137.	817.	-1209.	720.	314.	526.	.0027	-.0192	-.0250	.0164	-.0025	-.0031	3530.		
.0860	1104.	641.	-643.	509.	342.	510.	.0090	-.0172	-.0107	.0457	-.0257	-.0130	2977.		
.0870	1029.	506.	-129.	303.	388.	468.	.0156	-.0141	.0039	.0723	-.0439	-.0207	2535.		
.0880	824.	402.	179.	159.	413.	368.	.0202	-.0098	.0150	.0845	-.0513	-.0198	2150.		
.0890	417.	255.	229.	118.	448.	188.	.0224	-.0052	.0215	.0787	-.0445	-.0089	1866.		
.0900	-74.	91.	66.	172.	517.	-35.	.0232	-.0004	.0246	.0605	-.0245	.0053	2040.		
.0910	-477.	-54.	-190.	268.	574.	-237.	.0233	.0044	.0255	.0369	-.0009	.0159	2525.		
.0920	-712.	-176.	-375.	333.	577.	-376.	.0228	.0088	.0260	.0159	.0149	.0194	2856.		
.0930	-740.	-253.	-350.	309.	548.	-425.	.0223	.0126	.0283	.0080	.0177	.0132	2835.		
.0940	-557.	-301.	-90.	194.	496.	-385.	.0217	.0157	.0324	.0165	.0078	-.0051	2452.		
.0950	-243.	-382.	293.	40.	400.	-287.	.0209	.0181	.0353	.0331	-.0109	-.0323	1843.		
.0960	86.	-431.	634.	-92.	281.	-180.	.0187	.0201	.0341	.0467	-.0302	-.0600	1291.		
.0970	323.	-526.	794.	-154.	186.	-118.	.0144	.0227	.0276	.0505	-.0402	-.0794	1003.		
.0980	363.	-535.	714.	-119.	115.	-147.	.0070	.0260	.0152	.0401	-.0366	-.0854	826.		
.0990	189.	-569.	432.	6.	45.	-263.	-.0026	.0299	-.0027	.0157	-.0219	-.0791	998.		
.1000	-97.	-620.	79.	166.	-19.	-412.	-.0123	.0339	-.0229	-.0138	-.0021	-.0669	1661.		
.1010	-400.	-681.	-174.	291.	-67.	-553.	-.0201	.0378	-.0415	-.0366	.0149	-.0553	2344.		
.1020	-696.	-771.	-204.	327.	-117.	-676.	-.0254	.0418	-.0557	-.0452	.0208	-.0466	2839.		
.1030	-952.	-853.	15.	251.	-168.	-767.	-.0275	.0455	-.0641	-.0382	.0124	-.0400	3078.		
.1040	-1123.	-880.	407.	82.	-193.	-808.	-.0259	.0486	-.0665	-.0193	-.0064	-.0348	3118.		
.1050	-1252.	-897.	827.	-108.	-188.	-823.	-.0210	.0506	-.0645	.0034	-.0276	-.0299	3178.		
.1060	-1405.	-940.	1127.	-247.	-165.	-841.	-.0143	.0511	-.0605	.0205	-.0435	-.0224	3331.		
.1070	-1552.	-916.	1222.	-308.	-132.	-846.	-.0071	.0498	-.0557	.0270	-.0487	-.0096	3398.		
.1080	-1677.	-823.	1108.	-295.	-86.	-821.	-.0004	.0464	-.0507	.0215	-.0430	.0090	3273.		
.1090	-1746.	-744.	837.	-221.	-49.	-762.	.0058	.0415	-.0457	.0074	-.0301	.0266	2966.		
.1100	-1472.	-460.	517.	-126.	-87.	-607.	.0116	.0365	-.0410	-.0016	-.0149	.0318	2336.		
.1110	-1059.	-151.	272.	-54.	-142.	-378.	.0168	.0299	-.0357	-.0053	-.0052	.0318	1523.		
.1120	-669.	18.	147.	-22.	-183.	-118.	.0209	.0208	-.0305	-.0056	-.0050	.0316	817.		
.1130	-190.	160.	64.	-0.	-246.	151.	.0238	.0122	-.0269	-.0005	-.0099	.0250	1079.		
.1140	387.	412.	-77.	38.	-319.	406.	.0257	.0065	-.0253	.0073	-.0126	.0126	1933.		
.1150	866.	728.	-312.	100.	-360.	619.	.0261	.0030	-.0254	.0079	-.0089	.0064	2699.		
.1160	1122.	963.	-638.	204.	-391.	754.	.0246	.0005	-.0270	-.0038	.0028	.0107	3260.		
.1170	1149.	1017.	-1036.	371.	-418.	776.	.0222	-.0004	-.0289	-.0242	.0224	.0192	3571.		

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ADLPIPE STRESS ANALYSIS

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18.29.09.

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

CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION 53 MEMBER 1 SEQUENCE 825 LOCATION END TYPE EL

.1080	-1677.	-323.	1108.	-295.	-86.	-821.	-.0004	.0464	-.0507	.0215	-.0430	.0090	3273.
.1090	-1746.	-744.	837.	-221.	-49.	-762.	.0058	.0415	-.0457	.0074	-.0301	.0266	2966.
.1100	-1472.	-460.	517.	-126.	-87.	-607.	.0116	.0365	-.0410	-.0016	-.0149	.0318	2336.
.1110	-1059.	-151.	272.	-54.	-142.	-371.	.0168	.0299	-.0357	-.0053	-.0052	.0318	1523.
.1120	-669.	18.	147.	-22.	-183.	-118.	.0209	.0208	-.0305	-.0056	-.0050	.0316	817.
.1130	-190.	160.	64.	-0.	-246.	151.	.0238	.0122	-.0269	-.0005	-.0099	.0250	1079.
.1140	387.	412.	-77.	38.	-319.	406.	.0257	.0065	-.0253	.0073	-.0126	.0126	1933.
.1150	866.	726.	-312.	100.	-360.	619.	.0261	.0030	-.0254	.0079	-.0089	.0064	2699.
.1160	1122.	963.	-638.	204.	-391.	754.	.0246	.0005	-.0270	-.0038	.0028	.0107	3260.
.1170	1149.	1017.	-1036.	371.	-418.	776.	.0222	-.0004	-.0289	-.0242	.0224	.0192	3571.

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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	53	MEMBER	1	SEQUENCE	825	LOCATION	END	TYPE	EL					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1180	1188.	1142.	-1436.	558.	-411.	752.	.0211	.0016	-.0281	-.0422	.0464	.0244	3818.	
.1190	1057.	1191.	-1691.	692.	-318.	687.	.0221	.0044	-.0226	-.0592	.0614	.0354	3831.	
.1200	808.	1079.	-1655.	712.	-192.	596.	.0249	.0076	-.0121	-.0684	.0576	.0488	3539.	
.1210	763.	981.	-1282.	595.	-95.	519.	.0297	.0137	.0029	-.0540	.0377	.0476	2967.	
.1220	753.	831.	-647.	382.	6.	422.	.0354	.0224	.0202	-.0212	.0069	.0351	2127.	
.1230	746.	747.	74.	120.	93.	345.	.0400	.0322	.0358	.0146	-.0272	.0223	1407.	
.1240	572.	588.	668.	-94.	143.	234.	.0410	.0410	.0450	.0363	-.0552	.0185	1084.	
.1250	197.	305.	951.	-158.	184.	26.	.0376	.0491	.0458	.0402	-.0643	.0213	912.	
.1260	-198.	137.	856.	-60.	253.	-236.	.0313	.0574	.0394	.0282	-.0504	.0274	1311.	
.1270	-725.	-8.	476.	146.	351.	-519.	.0230	.0640	.0275	-.0058	-.0265	.0455	2401.	
.1280	-1105.	-67.	38.	349.	405.	-727.	.0146	.0684	.0138	-.0468	-.0049	.0652	3369.	
.1290	-1238.	-149.	-220.	481.	420.	-857.	.0078	.0710	.0033	-.0722	.0068	.0705	3990.	
.1300	-1110.	-238.	-191.	505.	437.	-884.	.0039	.0717	-.0009	-.0734	.0028	.0572	4135.	
.1310	-609.	-128.	86.	402.	423.	-720.	.0032	.0696	.0002	-.0579	-.0203	.0318	3461.	
.1320	-22.	-54.	470.	239.	383.	-442.	.0040	.0630	.0032	-.0415	-.0577	.0061	2360.	
.1330	596.	-28.	802.	115.	348.	-151.	.0051	.0539	.0056	-.0254	-.0914	-.0220	1480.	
.1340	1123.	9.	880.	107.	349.	77.	.0056	.0443	.0046	-.0173	-.1086	-.0463	1392.	
.1350	1498.	176.	619.	209.	350.	259.	.0042	.0740	-.0023	-.0303	-.1089	-.0537	1802.	
.1360	1759.	483.	94.	377.	314.	419.	.0008	.0227	-.0147	-.0617	-.0955	-.0435	2408.	
.1370	1688.	583.	-499.	593.	298.	470.	-.0038	.0102	-.0289	-.0973	-.0733	-.0235	3036.	
.1380	1503.	581.	-969.	790.	311.	468.	-.0067	-.0020	-.0410	-.1201	-.0501	-.0074	3619.	
.1390	1361.	599.	-1187.	871.	512.	511.	-.0061	-.0134	-.0489	-.1301	-.0401	.0051	3946.	
.1400	1313.	637.	-1084.	786.	272.	616.	-.0018	-.0236	-.0515	-.1274	-.0489	.0149	3861.	
.1410	1354.	666.	-686.	574.	222.	704.	.0054	-.0308	-.0479	-.1051	-.0684	.0165	3489.	
.1420	1199.	514.	-151.	335.	221.	676.	.0139	-.0351	-.0403	-.0739	-.0901	.0164	2936.	
.1430	961.	381.	307.	114.	235.	617.	.0227	-.0374	-.0328	-.0511	-.1080	.0208	2502.	
.1440	671.	273.	550.	-48.	227.	556.	.0307	-.0383	-.0285	-.0469	-.1162	.0317	2248.	
.1450	279.	76.	560.	-110.	213.	425.	.0364	-.0371	-.0274	-.0552	-.1079	.0426	1820.	
.1460	-136.	-126.	383.	-79.	209.	228.	.0396	-.0330	-.0281	-.0684	-.0840	.0489	1191.	
.1470	-584.	-326.	78.	-8.	215.	31.	.0413	-.0272	-.0300	-.0927	-.0568	.0570	812.	
.1480	-801.	-393.	-248.	36.	196.	-70.	.0431	-.0201	-.0310	-.1212	-.0354	.0605	787.	
.1490	-850.	-512.	-462.	48.	181.	-139.	.0454	-.0114	-.0284	-.1403	-.0223	.0513	870.	
.1500	-807.	-729.	-491.	20.	197.	-206.	.0479	-.0014	-.0205	-.1433	-.0180	.0290	1065.	
.1510	-471.	-750.	-369.	-84.	184.	-159.	.0505	.0095	-.0085	-.1352	-.0234	-.0008	963.	
.1520	18.	-663.	-187.	-230.	118.	-9.	.0521	.0192	.0042	-.1272	-.0356	-.0296	965.	
.1530	511.	-605.	-36.	-331.	36.	144.	.0515	.0279	.0156	-.1171	-.0431	-.0588	1355.	
.1540	780.	-688.	-3.	-330.	-1.	202.	.0477	.0358	.0239	-.1077	-.0384	-.0828	1444.	
.1550	913.	-678.	-144.	-262.	-31.	215.	.0401	.0434	.0272	-.1063	-.0237	-.0928	1270.	

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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 53 MEMBER 1 SEQUENCE 825 LOCATION END TYPE EL

.1470	-584.	-326.	70.	-8.	215.	31.	.0413	-.0272	-.0300	-.0927	-.0568	.0570	812.
.1480	-801.	-393.	-248.	36.	196.	-70.	.0431	-.0201	-.0310	-.1212	-.0354	.0605	787.
.1490	-850.	-512.	-462.	48.	181.	-139.	.0454	-.0114	-.0284	-.1403	-.0223	.0513	870.
.1500	-807.	-729.	-491.	20.	197.	-236.	.0479	-.0014	-.0205	-.1433	-.0180	.0290	1065.
.1510	-471.	-750.	-369.	-84.	184.	-159.	.0505	.0095	-.0085	-.1352	-.0234	-.0008	963.
.1520	18.	-663.	-187.	-230.	118.	-9.	.0521	.0192	.0042	-.1272	-.0356	-.0296	965.
.1530	511.	-605.	-36.	-331.	36.	144.	.0515	.0279	.0156	-.1171	-.0431	-.0588	1355.
.1540	780.	-688.	-3.	-330.	-1.	202.	.0477	.0358	.0239	-.1077	-.0384	-.0828	1444.
.1550	913.	-678.	-144.	-262.	-31.	215.	.0401	.0434	.0272	-.1063	-.0237	-.0928	1270.

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 S/RV PIPING KEWAUNEE GKN08F 2 RUP DISK
 2 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	53	MEMBER	1	SEQUENCE	825	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)			(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.1560	1096.	-376.	-413.	-181.	-114.	250.	.0289	.0510	.0254	-.1109	-.0034	-.0880	1228.		
.1570	1047.	-153.	-683.	-78.	-193.	207.	.0144	.0573	.0208	-.1147	.0189	-.0709	1094.		
.1580	880.	-22.	-848.	30.	-231.	117.	-.0010	.0619	.0164	-.1058	.0411	-.0528	974.		
.1590	837.	201.	-871.	87.	-278.	100.	-.0153	.0640	.0135	-.0849	.0565	-.0368	1151.		
.1600	812.	442.	-737.	70.	-355.	154.	-.0284	.0628	.0124	-.0597	.0591	-.0156	1469.		
.1610	704.	623.	-445.	-2.	-412.	200.	-.0405	.0591	.0148	-.0263	.0539	.0095	1710.		
.1620	620.	847.	-63.	-99.	-428.	218.	-.0509	.0548	.0207	.0182	.0489	.0325	1830.		
.1630	438.	1019.	289.	-189.	-422.	206.	-.0595	.0493	.0270	.0573	.0431	.0599	1890.		
.1640	238.	1218.	539.	-265.	-421.	210.	-.0660	.0426	.0317	.0835	.0373	.0924	2014.		
.1650	35.	1426.	704.	-316.	-395.	204.	-.0709	.0351	.0354	.1037	.0359	.1241	2037.		
.1660	-336.	1441.	824.	-330.	-328.	124.	-.0752	.0269	.0378	.1197	.0382	.1535	1798.		
.1670	-655.	1439.	909.	-345.	-282.	59.	-.0783	.0186	.0382	.1306	.0399	.1764	1678.		
.1680	-844.	1460.	966.	-383.	-273.	57.	-.0797	.0102	.0362	.1334	.0375	.1923	1769.		
.1690	-893.	1464.	1017.	-434.	-275.	57.	-.0792	.0029	.0331	.1338	.0337	.1958	1946.		
.1700	-942.	1314.	1052.	-468.	-267.	76.	-.0775	-.0030	.0291	.1323	.0308	.1872	2034.		
.1710	-1027.	1042.	1017.	-484.	-258.	43.	-.0749	-.0075	.0236	.1208	.0278	.1728	2053.		
.1720	-848.	961.	875.	-503.	-281.	91.	-.0706	-.0100	.0172	.1006	.0271	.1500	2177.		
.1730	-657.	798.	647.	-490.	-303.	131.	-.0651	-.0113	.0102	.0718	.0296	.1211	2205.		
.1740	-552.	450.	380.	-433.	-306.	113.	-.0590	-.0111	.0038	.0404	.0363	.0851	2025.		
.1750	-390.	127.	105.	-373.	-305.	97.	-.0520	-.0091	-.0012	.0090	.0441	.0442	1836.		
.1760	-214.	-149.	-153.	-339.	-298.	100.	-.0440	-.0059	-.0046	-.0248	.0476	.0053	1725.		
.1770	-7.	-391.	-349.	-329.	-280.	99.	-.0352	-.0010	-.0058	-.0540	.0468	-.0339	1656.		
.1780	80.	-758.	-459.	-322.	-218.	32.	-.0261	.0052	-.0045	-.0749	.0429	-.0731	1456.		
.1790	174.	-1070.	-499.	-332.	-129.	-47.	-.0169	.0126	-.0010	-.0872	.0366	-.1103	1340.		
.1800	285.	-1250.	-499.	-363.	-45.	-102.	-.0081	.0203	.0037	-.0960	.0273	-.1396	1419.		
.1810	215.	-1486.	-473.	-382.	46.	-196.	-.0014	.0272	.0089	-.1036	.0172	-.1573	1613.		
.1820	129.	-1664.	-431.	-377.	147.	-310.	.0034	.0340	.0148	-.1022	.0121	-.1708	1904.		
.1830	22.	-1782.	-397.	-348.	249.	-429.	.0063	.0399	.0207	-.0955	.0106	-.1780	2261.		
.1840	-85.	-1795.	-372.	-311.	328.	-515.	.0070	.0442	.0254	-.0883	.0088	-.1751	2558.		
.1850	-186.	-1723.	-322.	-275.	388.	-576.	.0055	.0470	.0291	-.0769	.0062	-.1646	2789.		
.1860	-332.	-1667.	-218.	-236.	454.	-644.	.0019	.0482	.0324	-.0572	.0035	-.1504	3070.		
.1870	-383.	-1513.	-75.	-206.	494.	-675.	-.0033	.0481	.0346	-.0292	.0005	-.1360	3215.		
.1880	-415.	-1305.	69.	-185.	501.	-659.	-.0100	.0461	.0347	-.0017	-.0046	-.1166	3167.		
.1890	-421.	-1033.	181.	-162.	488.	-605.	-.0180	.0423	.0331	.0246	-.0086	-.0936	2962.		
.1900	-419.	-739.	236.	-114.	473.	-546.	-.0267	.0373	.0302	.0504	-.0072	-.0703	2730.		
.1910	-489.	-515.	205.	-29.	462.	-502.	-.0356	.0309	.0262	.0697	-.0012	-.0451	2547.		
.1920	-474.	-221.	84.	65.	431.	-415.	-.0436	.0237	.0217	.0811	.0074	-.0201	2247.		
.1930	-364.	117.	-75.	146.	390.	-290.	-.0502	.0162	.0180	.0876	.0167	.0023	1894.		

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 S/RV PIPING KEWAUNEE GKN08F 2 RUP DISK
 2 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	53	MEMBER	1	SEQUENCE	825	LOCATION	END	TYPE	EL
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.1850	-186.	-1723.	322.	-275.	388.	-576.	.0055	.0470	.0291	-.0769	.0062	-.1646	2789.
.1860	-332.	-1667.	-218.	-236.	454.	-644.	.0019	.0482	.0324	-.0572	.0035	-.1504	3070.
.1870	-383.	-1513.	-75.	-206.	494.	-675.	-.0033	.0481	.0346	-.0292	.0005	-.1360	3215.
.1880	-415.	-1305.	69.	-185.	501.	-659.	-.0100	.0461	.0347	-.0017	-.0046	-.1166	3167.
.1890	-421.	-1033.	181.	-162.	488.	-605.	-.0180	.0423	.0331	.0246	-.0086	-.0936	2962.
.1900	-419.	-739.	236.	-114.	473.	-546.	-.0267	.0373	.0302	.0504	-.0072	-.0703	2730.
.1910	-489.	-515.	205.	-29.	462.	-502.	-.0356	.0309	.0262	.0697	-.0012	-.0451	2547.
.1920	-474.	-221.	84.	65.	431.	-415.	-.0436	.0237	.0217	.0811	.0074	-.0201	2247.
.1930	-364.	117.	-75.	146.	390.	-290.	-.0502	.0162	.0180	.0876	.0167	.0023	1894.

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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	53	MEMBER	1	SEQUENCE	825	LOCATION	END	TYPE	EL						STRESS
TIME	FX	FY	FZ	MX	MY	MZ			DY	DZ	RX	RY	RZ	(PSI)	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)		
.1940	-229.	388.	-201.	209.	348.	-164.		-.0553	.0086	.0163	.0941	.0247	.0186	1634.	
.1950	-35.	600.	-256.	236.	294.	-20.		-.0588	.0011	.0168	.1023	.0290	.0268	1409.	
.1960	274.	818.	-246.	211.	215.	176.		-.0604	-.0061	.0185	.1103	.0284	.0271	1304.	
.1970	632.	1002.	-196.	153.	117.	393.		-.0606	-.0126	.0203	.1165	.0249	.0214	1635.	
.1980	918.	1084.	-146.	96.	14.	563.		-.0606	-.0178	.0211	.1204	.0232	.0119	2134.	
.1990	1085.	1099.	-149.	58.	-87.	661.		-.0609	-.0212	.0199	.1189	.0268	.0032	2497.	
.2000	1116.	1101.	-243.	43.	-185.	693.		-.0617	-.0226	.0161	.1077	.0361	.0000	2682.	
.2010	979.	1054.	-414.	56.	-274.	651.		-.0626	-.0224	.0101	.0878	.0506	.0027	2644.	
.2020	686.	910.	-589.	84.	-344.	527.		-.0630	-.0203	.0038	.0662	.0686	.0071	2370.	
.2030	309.	705.	-682.	91.	-399.	352.		-.0623	-.0166	-.0007	.0489	.0855	.0107	2016.	
.2040	-88.	487.	-627.	40.	-451.	172.		-.0599	-.0118	-.0022	.0379	.0954	.0138	1808.	
.2050	-471.	259.	-403.	-75.	-498.	1.		-.0557	-.0062	-.0002	.0351	.0957	.0150	1880.	
.2060	-826.	-3.	-36.	-233.	-525.	-172.		-.0499	.0001	.0053	.0422	.0884	.0119	2238.	
.2070	-1154.	-284.	399.	-406.	-527.	-348.		-.0432	.0068	.0127	.0558	.0768	.0056	2803.	
.2080	-1459.	-537.	804.	-565.	-518.	-514.		-.0367	.0134	.0200	.0682	.0639	.0005	3445.	
.2090	-1738.	-736.	1096.	-680.	-504.	-665.		-.0313	.0196	.0254	.0748	.0540	-.0021	4019.	
.2100	-1985.	-900.	1230.	-724.	-482.	-811.		-.0275	.0253	.0282	.0755	.0512	-.0041	4438.	
.2110	-2189.	-1051.	1200.	-690.	-451.	-946.		-.0252	.0301	.0283	.0702	.0556	-.0070	4684.	
.2120	-2305.	-1153.	1036.	-605.	-420.	-1042.		-.0240	.0338	.0264	.0590	.0535	-.0106	4764.	
.2130	-2283.	-1174.	810.	-502.	-395.	-1078.		-.0232	.0364	.0237	.0457	.0706	-.0160	4678.	
.2140	-2114.	-1150.	602.	-405.	-367.	-1059.		-.0223	.0378	.0220	.0359	.0738	-.0260	4450.	
.2150	-1805.	-1115.	462.	-331.	-337.	-986.		-.0206	.0380	.0219	.0323	.0712	-.0420	4082.	
.2160	-1357.	-1049.	390.	-285.	-311.	-849.		-.0178	.0368	.0232	.0335	.0621	-.0626	3541.	
.2170	-812.	-935.	354.	-259.	-290.	-661.		-.0144	.0345	.0250	.0369	.0489	-.0848	2864.	
.2180	-282.	-810.	313.	-228.	-264.	-469.		-.0111	.0312	.0263	.0404	.0360	-.1050	2182.	
.2190	144.	-704.	224.	-169.	-227.	-310.		-.0086	.0273	.0260	.0408	.0269	-.1196	1568.	
.2200	449.	-594.	59.	-78.	-183.	-188.		-.0069	.0229	.0232	.0354	.0232	-.1264	1020.	
.2210	635.	-475.	-172.	39.	-132.	-102.		-.0056	.0183	.0182	.0244	.0239	-.1252	640.	
.2220	693.	-377.	-412.	165.	-72.	-61.		-.0045	.0137	.0119	.0116	.0271	-.1177	709.	
.2230	644.	-313.	-587.	271.	-4.	-59.		-.0031	.0092	.0058	.0016	.0291	-.1062	1035.	
.2240	543.	-261.	-641.	330.	61.	-66.		-.0010	.0049	.0011	-.0031	.0262	-.0927	1278.	
.2250	432.	-220.	-555.	333.	116.	-65.		.0022	.0009	-.0019	-.0018	.0167	-.0795	1339.	
.2260	316.	-209.	-351.	293.	163.	-61.		.0063	-.0028	-.0032	.0050	.0019	-.0683	1273.	
.2270	187.	-226.	-84.	234.	207.	-68.		.0108	-.0058	-.0036	.0149	-.0150	-.0587	1192.	
.2280	42.	-241.	163.	180.	246.	-86.		.0149	-.0080	-.0043	.0223	-.0311	-.0485	1183.	
.2290	-118.	-239.	319.	155.	282.	-115.		.0181	-.0094	-.0066	.0230	-.0436	-.0364	1275.	
.2300	-282.	-232.	352.	176.	316.	-156.		.0202	-.0099	-.0107	.0163	-.0506	-.0241	1471.	
.2310	-425.	-230.	272.	244.	346.	-203.		.0212	-.0097	-.0161	.0040	-.0521	-.0137	1752.	

ADLPIPE PAGE 2022 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.10.
S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	53	MEMBER	1	SEQUENCE	825	LOCATION	END	TYPE	EL
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.2220	693.	-377.	-412.	165.	-72.	-61.	-.0045	.0137	.0119	.0116	.0271	-.1177	709.
.2230	644.	-313.	-587.	271.	-4.	-59.	-.0031	.0092	.0058	.0016	.0291	-.1062	1035.
.2240	543.	-261.	-641.	330.	61.	-66.	-.0010	.0049	.0011	-.0031	.0262	-.0927	1278.
.2250	432.	-220.	-555.	333.	116.	-65.	.0022	.0009	-.0019	-.0018	.0167	-.0795	1339.
.2260	316.	-209.	-351.	293.	163.	-61.	.0063	-.0028	-.0032	.0050	.0019	-.0683	1273.
.2270	187.	-226.	-84.	234.	207.	-68.	.0108	-.0058	-.0036	.0140	-.0150	-.0587	1192.
.2280	42.	-241.	163.	180.	246.	-86.	.0149	-.0080	-.0043	.0223	-.0311	-.0485	1183.
.2290	-118.	-239.	319.	155.	282.	-115.	.0181	-.0094	-.0066	.0230	-.0436	-.0364	1275.
.2300	-282.	-232.	352.	176.	316.	-156.	.0202	-.0099	-.0107	.0163	-.0506	-.0241	1471.
.2310	-425.	-230.	272.	244.	346.	-203.	.0212	-.0097	-.0161	.0040	-.0521	-.0137	1752.

ADLPIPE PAGE 2022 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.10.
S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	53	MEMBER	1	SEQUENCE	825	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2320	-510.	-221.	117.	337.	365.	-234.		.0214	-.0090	-.0219	-.0122	-.0507	-.0064	2049.	
.2330	-491.	-181.	-65.	430.	368.	-226.		.0211	-.0078	-.0268	-.0295	-.0494	-.0034	2276.	
.2340	-345.	-112.	-231.	510.	359.	-175.		.0211	-.0063	-.0296	-.0446	-.0501	-.0064	2419.	
.2350	-88.	-41.	-358.	572.	348.	-88.		.0216	-.0043	-.0295	-.0557	-.0532	-.0156	2520.	
.2360	250.	33.	-446.	615.	335.	27.		.0228	-.0022	-.0265	-.0634	-.0586	-.0291	2617.	
.2370	639.	130.	-510.	642.	320.	162.		.0243	.0003	-.0212	-.0689	-.0648	-.0438	2744.	
.2380	1030.	250.	-566.	660.	304.	296.		.0257	.0031	-.0142	-.0726	-.0695	-.0574	2928.	
.2390	1361.	365.	-625.	679.	290.	405.		.0266	.0062	-.0066	-.0748	-.0708	-.0679	3146.	
.2400	1601.	464.	-689.	703.	278.	485.		.0266	.0092	.0009	-.0763	-.0683	-.0736	3352.	
.2410	1750.	559.	-749.	724.	264.	536.		.0258	.0121	.0075	-.0766	-.0627	-.0742	3505.	
.2420	1806.	647.	-770.	733.	248.	556.		.0241	.0150	.0133	-.0741	-.0552	-.0699	3557.	
.2430	1769.	718.	-748.	720.	228.	541.		.0217	.0179	.0183	-.0671	-.0473	-.0613	3467.	
.2440	1664.	782.	-646.	676.	201.	501.		.0186	.0207	.0226	-.0553	-.0402	-.0492	3230.	
.2450	1508.	839.	-478.	602.	167.	448.		.0152	.0231	.0261	-.0396	-.0346	-.0347	2869.	
.2460	1298.	868.	-260.	509.	129.	382.		.0116	.0248	.0287	-.0216	-.0300	-.0183	2423.	
.2470	1039.	863.	-17.	408.	93.	302.		.0081	.0257	.0302	-.0028	-.0258	-.0007	1926.	
.2480	758.	847.	223.	306.	57.	214.		.0046	.0259	.0303	.0149	-.0215	.0176	1412.	
.2490	477.	837.	437.	208.	20.	127.		.0014	.0255	.0288	.0296	-.0171	.0362	911.	
.2500	190.	813.	618.	117.	-15.	38.		-.0014	.0243	.0258	.0407	-.0127	.0545	463.	
.2510	-102.	755.	766.	37.	-44.	-51.		-.0035	.0223	.0213	.0482	-.0087	.0711	286.	
.2520	-371.	672.	885.	-34.	-68.	-130.		-.0045	.0196	.0157	.0523	-.0059	.0846	562.	
.2530	-590.	582.	975.	-101.	-91.	-190.		-.0041	.0165	.0092	.0527	-.0051	.0945	872.	
.2540	-749.	489.	1037.	-165.	-112.	-229.		-.0025	.0129	.0022	.0497	-.0063	.1003	1135.	
.2550	-852.	385.	1070.	-222.	-131.	-251.		.0006	.0091	-.0049	.0435	-.0090	.1018	1342.	
.2560	-900.	267.	1066.	-264.	-147.	-254.		.0050	.0031	-.0121	.0336	-.0126	.0990	1476.	
.2570	-895.	142.	1015.	-289.	-162.	-237.		.0106	.0009	-.0192	.0197	-.0168	.0926	1521.	
.2580	-834.	26.	916.	-295.	-173.	-200.		.0170	-.0034	-.0262	.0023	-.0209	.0831	1481.	
.2590	-723.	-70.	775.	-284.	-183.	-148.		.0240	-.0076	-.0328	-.0172	-.0247	.0713	1377.	
.2600	-576.	-156.	605.	-257.	-190.	-83.		.0313	-.0119	-.0388	-.0378	-.0284	.0582	1234.	
.2610	-402.	-236.	419.	-218.	-194.	-7.		.0387	-.0162	-.0443	-.0586	-.0326	.0445	1089.	
.2620	-206.	-301.	230.	-170.	-193.	78.		.0459	-.0205	-.0491	-.0781	-.0371	.0306	1003.	
.2630	-1.	-342.	50.	-115.	-187.	164.		.0527	-.0244	-.0530	-.0950	-.0420	.0176	1025.	
.2640	188.	-361.	-111.	-61.	-176.	243.		.0586	-.0280	-.0559	-.1087	-.0471	.0072	1141.	
.2650	349.	-358.	-246.	-7.	-158.	309.		.0634	-.0311	-.0579	-.1190	-.0522	.0003	1298.	
.2660	473.	-339.	-357.	49.	-133.	362.		.0672	-.0338	-.0591	-.1256	-.0569	-.0032	1452.	
.2670	556.	-309.	-442.	106.	-98.	398.		.0700	-.0358	-.0593	-.1283	-.0606	-.0034	1579.	
.2680	593.	-263.	-500.	161.	-54.	414.		.0716	-.0373	-.0587	-.1271	-.0634	.0002	1671.	
.2690	582.	-197.	-523.	208.	-4.	412.		.0719	-.0382	-.0571	-.1220	-.0656	.0078	1723.	

ADLPIPE PAGE 2023 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.10.
S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	53	MEMBER	1	SEQUENCE	825	LOCATION	END	TYPE	EL
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.2610	-402.	-236.	419.	-218.	-194.	-7.	.0387	-.0162	-.0443	-.0586	-.0326	.0445	1089.
.2620	-206.	-301.	230.	-170.	-193.	78.	.0459	-.0205	-.0491	-.0781	-.0371	-.0306	1003.
.2630	-1.	-342.	50.	-115.	-187.	164.	.0527	-.0244	-.0530	-.0950	-.0420	.0176	1025.
.2640	188.	-381.	-111.	-61.	-176.	243.	.0586	-.0280	-.0559	-.1087	-.0471	.0072	1141.
.2650	349.	-358.	-246.	-7.	-158.	309.	.0634	-.0311	-.0579	-.1190	-.0522	.0003	1298.
.2660	473.	-379.	-357.	49.	-133.	362.	.0672	-.0338	-.0591	-.1256	-.0569	-.0032	1452.
.2670	556.	-309.	-442.	106.	-98.	398.	.0700	-.0358	-.0593	-.1283	-.0566	-.0034	1579.
.2680	593.	-263.	-500.	161.	-54.	414.	.0716	-.0373	-.0587	-.1271	-.0534	.0002	1671.
.2690	582.	-197.	-523.	208.	-4.	412.	.0719	-.0382	-.0571	-.1220	-.0656	.0078	1723.

ADLPIPE PAGE 2023

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.10.

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

CONDITION 24

LOADS
SHOCK
PRESSURE

ENGLISH UNITS

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

SECTION	53	MEMBER	1	SEQUENCE	825	LOCATION	END	TYPE	EL	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)
.2700	525.	-131.	-507.	245.	53.	392.	.0711	-.0384	-.0544	-.1132	-.0575	.0188				1736.
.2710	436.	-71.	-453.	274.	116.	357.	.0693	-.0380	-.0510	-.1010	-.0590	.0311				1735.
.2720	350.	5.	-372.	293.	180.	320.	.0669	-.0367	-.0468	-.0858	-.0702	.0433				1753.
.2730	279.	111.	-274.	303.	241.	285.	.0637	-.0348	-.0422	-.0686	-.0710	.0554				1796.
.2740	206.	216.	-167.	306.	298.	252.	.0598	-.0327	-.0374	-.0508	-.0712	.0679				1853.
.2750	125.	294.	-67.	311.	354.	217.	.0551	-.0308	-.0328	-.0334	-.0701	.0799				1939.
.2760	66.	362.	2.	325.	407.	188.	.0502	-.0289	-.0288	-.0175	-.0672	.0895				2068.
.2770	56.	455.	27.	347.	453.	175.	.0453	-.0268	-.0254	-.0039	-.0627	.0966				2229.
.2780	87.	562.	15.	370.	492.	177.	.0403	-.0249	-.0224	.0066	-.0573	.1018				2392.
.2790	145.	645.	-19.	393.	523.	189.	.0354	-.0233	-.0198	.0146	-.0516	.1044				2542.
.2800	246.	702.	-70.	416.	547.	214.	.0309	-.0219	-.0175	.0207	-.0461	.1026				2687.
.2810	417.	765.	-137.	437.	560.	265.	.0272	-.0206	-.0154	.0251	-.0415	.0958				2831.
.2820	646.	838.	-208.	446.	560.	341.	.0241	-.0195	-.0137	.0278	-.0384	.0852				2959.
.2830	888.	886.	-271.	443.	544.	423.	.0214	-.0189	-.0125	.0293	-.0366	.0726				3057.
.2840	1102.	891.	-329.	434.	517.	494.	.0188	-.0185	-.0121	.0299	-.0350	.0588				3121.
.2850	1286.	873.	-399.	425.	482.	554.	.0167	-.0183	-.0128	.0288	-.0327	.0445				3166.
.2860	1428.	852.	-489.	415.	439.	601.	.0151	-.0178	-.0149	.0248	-.0295	.0311				3181.
.2870	1485.	802.	-585.	403.	389.	618.	.0139	-.0172	-.0180	.0185	-.0251	.0204				3113.
.2880	1425.	703.	-663.	384.	340.	589.	.0128	-.0164	-.0216	.0115	-.0198	.0132				2915.
.2890	1267.	572.	-706.	352.	294.	523.	.0125	-.0153	-.0250	.0047	-.0146	.0091				2597.
.2900	1047.	428.	-701.	299.	248.	438.	.0134	-.0138	-.0280	-.0014	-.0111	.0070				2187.
.2910	774.	257.	-632.	221.	205.	336.	.0154	-.0121	-.0300	-.0056	-.0101	.0063				1686.
.2920	446.	50.	-491.	118.	167.	213.	.0184	-.0102	-.0308	-.0068	-.0116	.0066				1103.
.2930	83.	-167.	-295.	-6.	135.	76.	.0219	-.0081	-.0306	-.0055	-.0150	.0081				577.
.2940	-283.	-374.	-81.	-140.	101.	-60.	.0258	-.0059	-.0299	-.0040	-.0193	.0107				682.
.2950	-640.	-578.	113.	-265.	67.	-191.	.0297	-.0037	-.0295	-.0042	-.0229	.0136				1247.
.2960	-982.	-783.	257.	-367.	37.	-322.	.0332	-.0015	-.0296	-.0067	-.0237	.0161				1829.
.2970	-1284.	-957.	333.	-440.	7.	-444.	.0357	.0008	-.0304	-.0120	-.0213	.0185				2335.
.2980	-1519.	-1077.	337.	-488.	-28.	-541.	.0372	.0029	-.0318	-.0207	-.0165	.0211				2722.
.2990	-1670.	-1156.	281.	-513.	-67.	-604.	.0377	.0045	-.0334	-.0317	-.0099	.0228				2968.
.3000	-1727.	-1216.	190.	-516.	-104.	-634.	.0375	.0056	-.0347	-.0426	-.0026	.0216				3075.
.3010	-1678.	-1237.	85.	-507.	-139.	-626.	.0367	.0064	-.0350	-.0514	.0045	.0175				3051.
.3020	-1525.	-1192.	-19.	-499.	-176.	-574.	.0352	.0067	-.0342	-.0579	.0100	.0123				2916.
.3030	-1300.	-1093.	-113.	-494.	-213.	-490.	.0330	.0065	-.0322	-.0618	.0140	.0075				2717.
.3040	-1043.	-974.	-197.	-481.	-242.	-393.	.0301	.0060	-.0289	-.0625	.0178	.0032				2490.
.3050	-775.	-837.	-285.	-455.	-261.	-292.	.0264	.0052	-.0249	-.0606	.0223	.0001				2240.
.3060	-510.	-656.	-380.	-418.	-273.	-187.	.0221	.0043	-.0204	-.0573	.0276	.0001				1989.
.3070	-279.	-437.	-470.	-375.	-280.	-89.	.0167	.0032	-.0155	-.0525	.0336	.0051				1781.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.10.

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

CONDITION 24

LOADS
SHOCK
PRESSURE

ENGLISH UNITS

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

SECTION 53 MEMBER 1 SEQUENCE 825 LOCATION END TYPE EL

.2990	-1670.	-1156.	281.	-513.	-67.	-604.	.0377	.0045	-.0334	-.0317	-.0099	.0228	2968.
.3000	-1727.	-1216.	190.	-516.	-104.	-634.	.0375	.0056	-.0347	-.0426	-.0026	.0216	3075.
.3010	-1678.	-1237.	85.	-507.	-139.	-626.	.0367	.0064	-.0350	-.0514	.0045	.0175	3051.
.3020	-1525.	-1192.	-19.	-499.	-176.	-574.	.0352	.0067	-.0342	-.0579	.0100	.0123	2916.
.3030	-1300.	-1093.	-113.	-494.	-213.	-490.	.0330	.0065	-.0322	-.0618	.0140	.0075	2717.
.3040	-1043.	-974.	-197.	-481.	-242.	-393.	.0301	.0060	-.0289	-.0625	.0178	.0032	2490.
.3050	-775.	-837.	-285.	-455.	-261.	-292.	.0264	.0052	-.0249	-.0606	.0223	.0001	2240.
.3060	-510.	-656.	-380.	-418.	-273.	-187.	.0221	.0043	-.0204	-.0573	.0276	.0001	1989.
.3070	-279.	-437.	-470.	-375.	-280.	-89.	.0167	.0032	-.0155	-.0525	.0336	.0051	1781.

ADLPIPE PAGE 2024 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.10.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	53	MEMBER	1	SEQUENCE	825	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3080	-113.	-217.	-538.	-330.	-280.	-13.	.0104	.0019	-.0102	-.0450	.0399	.0145	1615.		
.3090	-11.	-11.	-569.	-284.	-270.	41.	.0035	.0005	-.0045	-.0339	.0458	.0268	1469.		
.3100	53.	195.	-554.	-247.	-254.	86.	-.0034	-.0011	.0014	-.0199	.0501	.0411	1360.		
.3110	82.	401.	-486.	-226.	-237.	122.	-.0103	-.0025	.0076	-.0031	.0518	.0569	1306.		
.3120	57.	584.	-361.	-223.	-217.	137.	-.0171	-.0037	.0140	.0164	.0513	.0736	1269.		
.3130	-20.	736.	-196.	-231.	-192.	127.	-.0238	-.0046	.0203	.0373	.0492	.0905	1219.		
.3140	-125.	861.	-20.	-245.	-165.	104.	-.0300	-.0053	.0261	.0570	.0461	.1064	1169.		
.3150	-247.	955.	142.	-257.	-138.	74.	-.0353	-.0058	.0307	.0732	.0426	.1204	1125.		
.3160	-384.	1003.	282.	-264.	-110.	31.	-.0399	-.0061	.0343	.0857	.0393	.1314	1076.		
.3170	-525.	1010.	394.	-268.	-82.	-23.	-.0437	-.0061	.0367	.0944	.0364	.1388	1051.		
.3180	-639.	990.	477.	-274.	-58.	-72.	-.0466	-.0060	.0380	.0984	.0330	.1416	1079.		
.3190	-704.	938.	527.	-281.	-41.	-107.	-.0481	-.0058	.0382	.0975	.0287	.1388	1133.		
.3200	-718.	841.	548.	-288.	-26.	-127.	-.0483	-.0056	.0373	.0927	.0238	.1290	1181.		
.3210	-677.	709.	541.	-295.	-14.	-136.	-.0473	-.0054	.0359	.0845	.0186	.1126	1214.		
.3220	-580.	570.	502.	-304.	-8.	-127.	-.0452	-.0051	.0338	.0725	.0133	.0915	1231.		
.3230	-435.	427.	426.	-313.	-10.	-100.	-.0422	-.0051	.0311	.0565	.0082	.0671	1227.		
.3240	-263.	261.	317.	-313.	-14.	-63.	-.0384	-.0055	.0279	.0375	.0045	.0397	1194.		
.3250	-79.	74.	179.	-303.	-18.	-23.	-.0339	-.0062	.0245	.0172	.0026	.0103	1135.		
.3260	110.	-103.	27.	-288.	-24.	21.	-.0290	-.0072	.0209	-.0037	.0019	-.0186	1082.		
.3270	286.	-255.	-119.	-279.	-34.	67.	-.0241	-.0086	.0175	-.0240	.0017	-.0449	1078.		
.3280	431.	-398.	-240.	-275.	-44.	105.	-.0193	-.0104	.0145	-.0413	.0019	-.0677	1112.		
.3290	533.	-540.	-326.	-274.	-50.	130.	-.0147	-.0124	.0120	-.0543	.0025	-.0872	1149.		
.3300	595.	-660.	-376.	-277.	-53.	147.	-.0104	-.0148	.0102	-.0628	.0032	-.1023	1187.		
.3310	616.	-739.	-390.	-285.	-55.	157.	-.0067	-.0175	.0090	-.0670	.0039	-.1113	1232.		
.3320	578.	-788.	-368.	-295.	-54.	152.	-.0039	-.0205	.0085	-.0667	.0050	-.1136	1256.		
.3330	479.	-819.	-316.	-302.	-48.	127.	-.0020	-.0238	.0087	-.0618	.0071	-.1099	1234.		
.3340	340.	-826.	-244.	-302.	-38.	91.	-.0009	-.0273	.0096	-.0532	.0099	-.1011	1185.		
.3350	182.	-794.	-157.	-298.	-28.	55.	-.0005	-.0310	.0109	-.0416	.0131	-.0878	1136.		
.3360	9.	-737.	-50.	-293.	-19.	16.	-.0007	-.0346	.0126	-.0271	.0161	-.0711	1099.		
.3370	-178.	-665.	78.	-289.	-10.	-30.	-.0016	-.0380	.0148	-.0096	.0189	-.0522	1084.		
.3380	-355.	-576.	216.	-285.	-3.	-72.	-.0030	-.0413	.0171	.0097	.0211	-.0325	1096.		
.3390	-500.	-467.	348.	-278.	-2.	-103.	-.0046	-.0442	.0192	.0289	.0228	-.0133	1107.		
.3400	-617.	-356.	462.	-265.	-5.	-124.	-.0062	-.0468	.0209	.0470	.0245	.0043	1092.		
.3410	-711.	-255.	547.	-241.	-10.	-142.	-.0080	-.0491	.0220	.0629	.0267	.0198	1045.		
.3420	-773.	-155.	593.	-207.	-20.	-154.	-.0098	-.0509	.0224	.0756	.0297	.0328	966.		
.3430	-790.	-52.	593.	-165.	-36.	-151.	-.0113	-.0524	.0220	.0839	.0330	.0427	845.		
.3440	-763.	36.	551.	-114.	-56.	-136.	-.0122	-.0535	.0209	.0877	.0366	.0485	694.		
.3450	-698.	95.	482.	-58.	-78.	-112.	-.0126	-.0542	.0193	.0882	.0402	.0494	553.		

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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 53 MEMBER 1 SEQUENCE 825 LOCATION END TYPE EL

.3370	-178.	-665.	78.	-289.	-10.	-30.	-.0016	-.0380	.0148	-.0096	.0189	-.0522	1084.
.3380	-355.	-576.	216.	-285.	-3.	-72.	-.0030	-.0413	.0171	.0097	.0211	-.0325	1096.
.3390	-500.	-467.	348.	-278.	-7.	-103.	-.0046	-.0442	.0192	.0289	.0228	-.0133	1107.
.3400	-617.	-356.	462.	-265.	-5.	-124.	-.0062	-.0468	.0209	.0470	.0245	.0043	1092.
.3410	-711.	-255.	547.	-241.	-10.	-142.	-.0080	-.0491	.0220	.0629	.0267	.0198	1045.
.3420	-773.	-155.	593.	-207.	-20.	-154.	-.0098	-.0509	.0224	.0756	.0297	.0328	966.
.3430	-790.	-52.	593.	-165.	-36.	-151.	-.0113	-.0524	.0220	.0839	.0330	.0427	845.
.3440	-763.	76.	551.	-114.	-56.	-136.	-.0122	-.0535	.0209	.0877	.0366	.0485	694.
.3450	-698.	95.	482.	-58.	-78.	-112.	-.0126	-.0542	.0193	.0882	.0402	.0494	553.

ADLPIPE PAGE 2025

DIS/ADLPIPE ADLPIPE STRESS ANALYSIS
S/RV PIPING KEAUNEE GKM08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

83/12/02. 18.29.10.

CONDITION 24
LOADS
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ENGLISH UNITS

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

SECTION	53	MEMBER	1	SEQUENCE	825	LOCATION	END	TYPE	EL	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3460	-594.	135.	397.	-4.	-103.	-78.	-.0123	-.0544	.0176	.0859	.0431	.0459	483.	
.3470	-451.	171.	305.	40.	-133.	-32.	-.0113	-.0543	.0157	.0809	.0447	.0389	533.	
.3480	-286.	192.	212.	76.	-166.	23.	-.0098	-.0540	.0137	.0738	.0452	.0289	687.	
.3490	-124.	179.	119.	108.	-196.	74.	-.0078	-.0534	.0115	.0653	.0452	.0165	881.	
.3500	18.	138.	27.	139.	-223.	116.	-.0053	-.0527	.0092	.0556	.0453	.0029	1070.	
.3510	129.	90.	-63.	164.	-246.	147.	-.0028	-.0518	.0066	.0447	.0453	-.0099	1235.	
.3520	194.	38.	-146.	184.	-266.	163.	-.0003	-.0508	.0039	.0335	.0454	-.0206	1351.	
.3530	199.	-30.	-209.	197.	-277.	156.	.0020	-.0495	.0012	.0234	.0458	-.0291	1397.	
.3540	146.	-117.	-243.	204.	-280.	127.	.0042	-.0481	-.0013	.0153	.0460	-.0355	1377.	
.3550	52.	-205.	-240.	199.	-276.	86.	.0064	-.0466	-.0033	.0098	.0452	-.0396	1310.	
.3560	-73.	-282.	-196.	179.	-267.	36.	.0083	-.0449	-.0048	.0076	.0433	-.0412	1208.	
.3570	-226.	-353.	-109.	148.	-252.	-24.	.0099	-.0433	-.0055	.0092	.0402	-.0407	1093.	
.3580	-395.	-421.	8.	110.	-230.	-89.	.0111	-.0416	-.0057	.0141	.0363	-.0387	1008.	
.3590	-561.	-476.	136.	72.	-204.	-151.	.0119	-.0400	-.0055	.0210	.0321	-.0357	986.	
.3600	-709.	-510.	253.	42.	-174.	-205.	.0123	-.0384	-.0051	.0288	.0281	-.0320	1017.	
.3610	-836.	-525.	348.	24.	-138.	-254.	.0121	-.0367	-.0047	.0368	.0247	-.0281	1082.	
.3620	-930.	-519.	412.	20.	-97.	-294.	.0114	-.0349	-.0042	.0443	.0221	-.0246	1156.	
.3630	-972.	-489.	439.	31.	-52.	-316.	.0105	-.0330	-.0037	.0507	.0200	-.0223	1202.	
.3640	-947.	-439.	429.	55.	-5.	-316.	.0094	-.0312	-.0030	.0555	.0177	-.0223	1197.	
.3650	-853.	-380.	393.	90.	45.	-293.	.0085	-.0293	-.0019	.0593	.0150	-.0254	1156.	
.3660	-687.	-310.	338.	132.	97.	-248.	.0078	-.0272	-.0004	.0622	.0115	-.0318	1107.	
.3670	-450.	-222.	270.	174.	145.	-179.	.0073	-.0250	.0015	.0640	.0069	-.0411	1080.	
.3680	-155.	-123.	188.	218.	190.	-92.	.0070	-.0227	.0036	.0642	.0014	-.0529	1132.	
.3690	174.	-32.	91.	266.	230.	6.	.0070	-.0203	.0056	.0627	-.0043	-.0669	1315.	
.3700	512.	46.	-20.	319.	267.	104.	.0070	-.0178	.0071	.0595	-.0095	-.0821	1601.	
.3710	838.	123.	-146.	374.	298.	196.	.0070	-.0151	.0078	.0542	-.0140	-.0968	1927.	
.3720	1132.	200.	-281.	427.	320.	276.	.0068	-.0123	.0076	.0468	-.0175	-.1096	2243.	
.3730	1371.	263.	-415.	478.	335.	337.	.0065	-.0096	.0066	.0382	-.0200	-.1200	2516.	
.3740	1540.	297.	-534.	522.	346.	375.	.0062	-.0071	.0050	.0291	-.0217	-.1276	2726.	
.3750	1638.	309.	-623.	555.	351.	392.	.0061	-.0049	.0029	.0204	-.0232	-.1321	2854.	
.3760	1669.	315.	-671.	567.	350.	390.	.0062	-.0030	.0009	.0127	-.0252	-.1329	2883.	
.3770	1632.	316.	-670.	557.	343.	370.	.0066	-.0016	-.0009	.0067	-.0278	-.1298	2805.	
.3780	1525.	300.	-617.	526.	333.	331.	.0072	-.0007	-.0022	.0027	-.0312	-.1230	2632.	
.3790	1359.	265.	-524.	479.	320.	278.	.0083	-.0005	-.0031	.0004	-.0350	-.1132	2388.	
.3800	1153.	226.	-405.	420.	304.	218.	.0096	-.0011	-.0038	-.0010	-.0390	-.1006	2099.	
.3810	916.	190.	-274.	352.	284.	154.	.0110	-.0023	-.0043	-.0020	-.0426	-.0855	1784.	
.3820	661.	159.	-144.	282.	260.	88.	.0121	-.0040	-.0047	-.0030	-.0453	-.0686	1469.	
.3830	407.	134.	-30.	215.	232.	25.	.0130	-.0062	-.0053	-.0047	-.0468	-.0509	1185.	

ADLPIPE PAGE 2026

DIS/ADLPIPE ADLPIPE STRESS ANALYSIS
S/RV PIPING KEAUNEE GKM08F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

83/12/02. 18.29.10.

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION 53 MEMBER 1 SEQUENCE 825 LOCATION END TYPE EL

.3750	1638.	309.	-623.	555.	351.	392.	.0061	-.0049	.0029	.0204	-.0232	-.1321	2854.
.3760	1669.	315.	-671.	567.	350.	390.	.0062	-.0030	.0009	.0127	-.0252	-.1329	2883.
.3770	1632.	316.	-670.	557.	343.	370.	.0066	-.0016	-.0009	.0067	-.0278	-.1298	2805.
.3780	1525.	300.	-617.	526.	333.	331.	.0072	-.0007	-.0022	.0027	-.0312	-.1230	2632.
.3790	1359.	265.	-524.	479.	320.	278.	.0083	-.0005	-.0031	.0004	-.0350	-.1132	2388.
.3800	1153.	226.	-405.	420.	304.	218.	.0096	-.0011	-.0038	-.0010	-.0390	-.1006	2099.
.3810	914.	190.	-274.	352.	284.	154.	.0110	-.0023	-.0043	-.0020	-.0426	-.0855	1784.
.3820	661.	159.	-144.	282.	260.	88.	.0121	-.0040	-.0047	-.0030	-.0453	-.0686	1469.
.3830	407.	134.	-30.	215.	232.	25.	.0130	-.0062	-.0053	-.0047	-.0468	-.0509	1185.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.10.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	53	MEMBER	1	SEQUENCE	825	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(PSI)
.3840	177.	118.	58.	156.	199.	-25.	.0136	-.0090	-.0061	-.0076	-.0472	-.0336	949.		
.3850	-9.	113.	117.	106.	161.	-58.	.0138	-.0120	-.0069	-.0115	-.0465	-.0178	751.		
.3860	-138.	125.	150.	63.	117.	-72.	.0137	-.0152	-.0077	-.0159	-.0450	-.0041	565.		
.3870	-202.	160.	161.	27.	68.	-63.	.0131	-.0186	-.0081	-.0206	-.0430	.0071	361.		
.3880	-201.	208.	153.	-5.	15.	-31.	.0120	-.0220	-.0083	-.0252	-.0407	.0156	131.		
.3890	-142.	253.	129.	-31.	-42.	19.	.0106	-.0254	-.0082	-.0298	-.0380	.0210	206.		
.3900	-37.	295.	92.	-50.	-98.	80.	.0089	-.0282	-.0077	-.0339	-.0348	.0232	508.		
.3910	102.	347.	46.	-65.	-154.	145.	.0067	-.0301	-.0070	-.0373	-.0311	.0230	825.		
.3920	256.	413.	-6.	-80.	-207.	207.	.0039	-.0309	-.0060	-.0403	-.0269	.0216	1133.		
.3930	401.	470.	-56.	-94.	-257.	257.	.0006	-.0307	-.0049	-.0426	-.0223	.0195	1402.		
.3940	520.	499.	-96.	-106.	-299.	289.	-.0030	-.0294	-.0037	-.0437	-.0173	.0165	1602.		
.3950	610.	507.	-120.	-118.	-332.	302.	-.0069	-.0270	-.0023	-.0430	-.0122	.0130	1734.		
.3960	667.	508.	-117.	-138.	-359.	298.	-.0110	-.0235	-.0007	-.0405	-.0075	.0097	1816.		
.3970	681.	499.	-82.	-167.	-381.	272.	-.0153	-.0191	.0012	-.0361	-.0036	.0073	1856.		
.3980	642.	463.	-12.	-205.	-395.	222.	-.0196	-.0138	.0033	-.0295	-.0003	.0057	1855.		
.3990	553.	395.	87.	-247.	-398.	149.	-.0238	-.0078	.0054	-.0214	.0023	.0044	1836.		
.4000	427.	312.	202.	-291.	-394.	60.	-.0275	-.0013	.0076	-.0126	.0044	.0035	1843.		

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)
.0670	-1555.	-1108.	2059.	-1192.	-506.	-566.	.0180	.0202	.0564	.0907	.0202	-.0100	5276.

SECTION	53	MEMBER	2	SEQUENCE	174	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(PSI)
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	-0.	-0.	-0.	0.	0.	-0.	-.0000	-.0000	.0000	-.0000	.0000	.0000	.0000	0.	
.0020	-0.	-0.	-0.	0.	0.	0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	.0000	1.	
.0030	-0.	-1.	0.	0.	1.	0.	.0000	-.0000	-.0000	-.0000	-.0000	.0000	.0000	2.	
.0040	2.	-0.	1.	-0.	1.	1.	-.0000	-.0000	-.0000	-.0000	-.0001	-.0000	.0000	5.	
.0050	6.	0.	3.	-1.	3.	2.	-.0000	.0000	-.0000	.0001	-.0003	-.0001	.0000	12.	
.0060	16.	3.	6.	-2.	5.	4.	-.0001	.0000	-.0001	.0002	-.0006	-.0002	.0000	24.	
.0070	29.	6.	9.	-2.	7.	8.	-.0003	-.0000	-.0003	.0004	-.0011	-.0003	.0000	41.	

ADLPIPE PAGE 2027

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.10.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	53	MEMBER	2	SEQUENCE	174	LOCATION	END	TYPE	EL						
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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	.0000	-0.0000	.0000	.0000	0.
.0020	-0.	-0.	-0.	0.	0.	0.	.0000	-0.0000	.0000	-0.0000	-0.0000	.0000	1.
.0030	-0.	-1.	0.	0.	1.	0.	.0000	-0.0000	-0.0000	-0.0000	-0.0000	.0000	2.
.0040	2.	-0.	1.	-0.	1.	1.	-0.0000	-0.0000	-0.0000	-0.0000	-0.0001	-0.0000	5.
.0050	6.	0.	3.	-1.	3.	2.	-0.0000	.0000	-0.0000	.0001	-0.0003	-0.0001	12.
.0060	16.	3.	6.	-2.	5.	4.	-0.0001	.0000	-0.0001	.0002	-0.0006	-0.0002	24.
.0070	29.	6.	9.	-2.	7.	8.	-0.0003	-0.0000	-0.0003	.0004	-0.0011	-0.0003	41.

ADLPIPE PAGE 2027 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.10.
 S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
 2 SAFETY COLD FKW24F--2 PSV
 CONDITION 24
 LOADS
 SHOCK
 PRESSURE
 ENGLISH UNITS

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

SECTION	53	MEMBER	2	SEQUENCE	174	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ									
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0080	45.	7.	10.	-1.	10.	14.	-0.0005	-0.0001	-0.0007	.0005	-0.0018	-0.0003	65.		
.0090	72.	11.	8.	3.	13.	24.	-0.0010	-0.0002	-0.0012	.0006	-0.0026	-0.0005	101.		
.0100	119.	22.	2.	6.	13.	39.	-0.0016	-0.0002	-0.0020	.0011	-0.0036	-0.0009	156.		
.0110	193.	43.	-9.	9.	8.	63.	-0.0026	-0.0003	-0.0030	.0019	-0.0047	-0.0017	238.		
.0120	289.	75.	-28.	13.	-4.	94.	-0.0039	-0.0004	-0.0044	.0031	-0.0058	-0.0025	356.		
.0130	397.	116.	-55.	22.	-25.	133.	-0.0058	-0.0008	-0.0061	.0046	-0.0066	-0.0031	512.		
.0140	499.	155.	-88.	37.	-55.	174.	-0.0081	-0.0015	-0.0081	.0063	-0.0070	-0.0031	696.		
.0150	572.	186.	-124.	59.	-94.	208.	-0.0106	-0.0023	-0.0105	.0079	-0.0068	-0.0025	880.		
.0160	595.	208.	-156.	83.	-137.	222.	-0.0131	-0.0031	-0.0129	.0090	-0.0060	-0.0011	1023.		
.0170	543.	214.	-181.	103.	-181.	206.	-0.0152	-0.0037	-0.0150	.0092	-0.0043	.0010	1091.		
.0180	400.	193.	-188.	111.	-222.	153.	-0.0166	-0.0037	-0.0162	.0084	-0.0013	.0034	1088.		
.0190	177.	143.	-169.	101.	-256.	72.	-0.0167	-0.0033	-0.0159	.0070	.0030	.0057	1062.		
.0200	-115.	51.	-112.	70.	-282.	-27.	-0.0152	-0.0025	-0.0136	.0054	.0085	.0073	1090.		
.0210	-420.	-62.	-9.	10.	-299.	-127.	-0.0120	-0.0013	-0.0088	.0048	.0148	.0074	1212.		
.0220	-610.	-103.	148.	-100.	-306.	-204.	-0.0073	.0003	-0.0018	.0079	.0212	.0046	1423.		
.0230	-718.	-104.	351.	-240.	-302.	-256.	-0.0019	.0017	.0067	.0133	.0265	.0006	1728.		
.0240	-855.	-143.	567.	-361.	-286.	-299.	.0034	.0021	.0150	.0178	.0294	-0.0017	2052.		
.0250	-1085.	-281.	738.	-424.	-255.	-342.	.0085	.0014	.0214	.0185	.0308	-0.0017	2247.		
.0260	-1281.	-436.	810.	-441.	-215.	-373.	.0135	.0012	.0252	.0163	.0331	-0.0030	2301.		
.0270	-1252.	-405.	786.	-465.	-192.	-392.	.0178	.0027	.0262	.0156	.0358	-0.0084	2383.		
.0280	-1264.	-348.	701.	-452.	-198.	-448.	.0199	.0046	.0245	.0109	.0359	-0.0116	2490.		
.0290	-1548.	-507.	539.	-329.	-204.	-535.	.0205	.0048	.0210	-0.0038	.0355	-0.0080	2465.		
.0300	-1555.	-546.	258.	-177.	-180.	-542.	.0227	.0051	.0176	-0.0172	.0403	-0.0072	2232.		
.0310	-1184.	-423.	-80.	-37.	-153.	-452.	.0262	.0061	.0156	-0.0250	.0440	-0.0127	1788.		
.0320	-810.	-381.	-319.	76.	-112.	-316.	.0290	.0061	.0167	-0.0317	.0412	-0.0174	1283.		
.0330	-395.	-335.	-375.	107.	-11.	-122.	.0308	.0048	.0211	-0.0333	.0343	-0.0197	608.		
.0340	251.	-187.	-318.	75.	125.	157.	.0329	.0032	.0264	-0.0249	.0233	-0.0256	800.		
.0350	899.	-131.	-268.	86.	249.	458.	.0344	.0013	.0286	-0.0130	.0073	-0.0349	1972.		
.0360	1329.	-164.	-292.	151.	364.	678.	.0332	.0002	.0265	-0.0053	-0.0071	-0.0410	2929.		
.0370	1667.	5.	-403.	196.	445.	773.	.0277	.0015	.0199	-0.0014	-0.0154	-0.0413	3410.		
.0380	1875.	313.	-605.	260.	416.	742.	.0181	.0043	.0083	-0.0007	-0.0212	-0.0365	3320.		
.0390	1654.	366.	-893.	460.	295.	606.	.0065	.0057	-0.0070	-0.0080	-0.0239	-0.0250	3045.		
.0400	1123.	162.	-1223.	760.	210.	431.	-0.0034	.0054	-0.0215	-0.0221	-0.0172	-0.0081	3354.		
.0410	903.	203.	-1484.	946.	185.	292.	-0.0096	.0066	-0.0305	-0.0291	-0.0066	.0048	3761.		
.0420	902.	417.	-1482.	925.	185.	176.	-0.0138	.0094	-0.0311	-0.0261	-0.0072	.0121	3583.		
.0430	768.	509.	-1136.	726.	250.	80.	-0.0163	.0114	-0.0223	-0.0158	-0.0162	.0178	2880.		
.0440	702.	521.	-513.	396.	439.	102.	-0.0151	.0114	-0.0066	.0055	-0.0247	.0197	2237.		
.0450	903.	515.	151.	54.	631.	260.	-0.0105	.0099	.0094	.0357	-0.0359	.0130	2557.		

ADLPIPE PAGE 2028 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.29.10.
 S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
 2 SAFETY COLD FKW24F--2 PSV
 CONDITION 24
 LOADS
 SHOCK
 PRESSURE
 ENGLISH UNITS

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

SECTION	53	MEMBER	2	SEQUENCE	174	LOCATION	END	TYPE	EL
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.0370	1667.	5.	-403.	196.	445.	773.	.0277	.0015	.0199	-.0014	-.0154	-.0413	3410.
.0380	1875.	313.	-605.	260.	416.	742.	.0181	.0043	.0083	-.0007	-.0212	-.0365	3320.
.0390	1654.	366.	-893.	460.	295.	606.	.0065	.0057	-.0070	-.0080	-.0239	-.0250	3045.
.0400	1123.	162.	-1223.	760.	210.	431.	-.0034	.0054	-.0215	-.0221	-.0172	-.0081	3354.
.0410	903.	203.	-1484.	946.	185.	292.	-.0096	.0066	-.0305	-.0291	-.0066	.0048	3761.
.0420	902.	417.	-1482.	925.	185.	176.	-.0138	.0094	-.0311	-.0261	-.0072	.0121	3583.
.0430	768.	509.	-1136.	726.	250.	80.	-.0163	.0114	-.0223	-.0158	-.0162	.0178	2880.
.0440	702.	521.	-513.	396.	439.	102.	-.0151	.0114	-.0066	.0055	-.0247	.0197	2237.
.0450	903.	515.	151.	54.	631.	260.	-.0105	.0099	.0094	.0357	-.0359	.0130	2557.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.10.

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

CONDITION 24

LOADS
SHOCK
PRESSURE

ENGLISH UNITS

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

SECTION	53	MEMBER	2	SEQUENCE	174	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ			DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0460	1085.	453.	639.	-187.	722.	400.	-.0071	.0081	.0204	.0607	-.0492	.0045	3158.		
.0470	946.	432.	856.	-314.	754.	363.	-.0089	.0070	.0253	.0673	-.0520	.0077	3338.		
.0480	616.	547.	774.	-330.	711.	180.	-.0155	.0067	.0228	.0558	-.0426	.0227	3004.		
.0490	312.	639.	409.	-190.	504.	-12.	-.0235	.0063	.0124	.0358	-.0307	.0365	2013.		
.0500	24.	546.	-78.	68.	220.	-143.	-.0301	.0046	-.0013	.0153	-.0162	.0435	1012.		
.0510	-209.	441.	-466.	265.	13.	-219.	-.0345	.0021	-.0108	-.0007	.0041	.0473	1286.		
.0520	-281.	465.	-616.	274.	-126.	-236.	-.0370	-.0002	-.0128	-.0100	.0174	.0495	1430.		
.0530	-168.	493.	-502.	119.	-234.	-150.	-.0364	-.0025	-.0074	-.0109	.0151	.0454	1148.		
.0540	120.	446.	-178.	-126.	-235.	23.	-.0311	-.0051	.0041	-.0009	.0093	.0315	998.		
.0550	503.	363.	241.	-393.	-131.	262.	-.0222	-.0078	.0183	.0156	.0076	.0116	1830.		
.0560	768.	243.	606.	-616.	-80.	453.	-.0146	-.0100	.0296	.0269	.0026	-.0056	2869.		
.0570	778.	138.	795.	-758.	-149.	505.	-.0117	-.0107	.0349	.0267	-.0028	-.0152	3444.		
.0580	555.	111.	749.	-792.	-267.	402.	-.0128	-.0097	.0338	.0177	.0048	-.0185	3461.		
.0590	112.	34.	482.	-672.	-429.	199.	-.0155	-.0081	.0265	.0014	.0233	-.0183	3068.		
.0600	-500.	-208.	109.	-438.	-660.	-38.	-.0180	-.0064	.0151	-.0206	.0400	-.0164	2961.		
.0610	-1112.	-461.	-175.	-250.	-860.	-283.	-.0190	-.0036	.0060	-.0410	.0539	-.0151	3505.		
.0620	-1567.	-554.	-213.	-238.	-920.	-528.	-.0177	.0014	.0048	-.0512	.0663	-.0181	4058.		
.0630	-1863.	-598.	33.	-389.	-865.	-717.	-.0134	.0072	.0119	-.0501	.0683	-.0266	4437.		
.0640	-1981.	-730.	514.	-635.	-731.	-762.	-.0055	.0117	.0247	-.0389	.0569	-.0398	4601.		
.0650	-1874.	-892.	1133.	-926.	-508.	-659.	.0050	.0144	.0400	-.0176	.0418	-.0567	4646.		
.0660	-1668.	-1023.	1718.	-1180.	-266.	-518.	.0143	.0165	.0528	.0077	.0280	-.0748	4910.		
.0670	-1555.	-1108.	2059.	-1307.	-129.	-449.	.0184	.0188	.0576	.0245	.0144	-.0868	5181.		
.0680	-1517.	-1061.	2008.	-1270.	-124.	-470.	.0168	.0216	.0516	.0261	.0071	-.0878	5078.		
.0690	-1498.	-899.	1558.	-1046.	-212.	-551.	.0112	.0240	.0357	.0163	.0124	-.0801	4484.		
.0700	-1591.	-821.	843.	-629.	-373.	-662.	.0032	.0247	.0133	-.0001	.0244	-.0681	3684.		
.0710	-1719.	-829.	81.	-149.	-558.	-743.	-.0049	.0233	-.0096	-.0176	.0350	-.0530	3514.		
.0720	-1570.	-676.	-510.	187.	-668.	-711.	-.0103	.0209	-.0258	-.0272	.0417	-.0376	3710.		
.0730	-1080.	-372.	-791.	310.	-648.	-543.	-.0111	.0177	-.0316	-.0220	.0408	-.0269	3361.		
.0740	-489.	-177.	-739.	294.	-502.	-272.	-.0071	.0130	-.0274	-.0036	.0287	-.0231	2398.		
.0750	127.	-91.	-447.	187.	-244.	71.	.0009	.0070	-.0163	.0230	.0099	-.0229	1178.		
.0760	816.	69.	-84.	13.	68.	432.	.0105	.0010	-.0030	.0516	-.0089	-.0220	1632.		
.0770	1396.	276.	172.	-126.	320.	703.	.0178	-.0037	.0067	.0743	-.0255	-.0182	2921.		
.0780	1664.	473.	187.	-123.	447.	813.	.0202	-.0073	.0090	.0851	-.0353	-.0095	3495.		
.0790	1704.	572.	-92.	36.	457.	801.	.0181	-.0102	.0029	.0834	-.0323	.0056	3445.		
.0800	1645.	741.	-608.	318.	357.	733.	.0130	-.0130	-.0100	.0724	-.0195	.0252	3266.		
.0810	1428.	794.	-1193.	672.	176.	627.	.0062	-.0159	-.0256	.0566	-.0055	.0450	3494.		
.0820	1148.	754.	-1640.	973.	16.	501.	-.0003	-.0181	-.0375	.0434	.0073	.0603	4087.		
.0830	1016.	796.	-1803.	1079.	-38.	413.	-.0037	-.0184	-.0413	.0396	.0165	.0678	4316.		

ADLPIPE PAGE 2029

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.10.

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

CONDITION 24

LOADS
SHOCK
PRESSURE

ENGLISH UNITS

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

SECTION	53	MEMBER	2	SEQUENCE	174	LOCATION	END	TYPE	EL
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.0750	127.	-91.	-447.	187.	-244.	71.	.0009	.0070	-.0163	.0230	.0099	-.0229	1178.
.0760	816.	69.	-84.	13.	68.	432.	.0105	.0010	-.0030	.0516	-.0089	-.0220	1632.
.0770	1396.	276.	172.	-126.	320.	703.	.0178	-.0037	.0067	.0743	-.0255	-.0182	2921.
.0780	1664.	423.	187.	-123.	447.	813.	.0202	-.0073	.0090	.0851	-.0353	-.0095	3495.
.0790	1704.	572.	-92.	36.	457.	801.	.0181	-.0102	.0029	.0834	-.0322	.0056	3445.
.0800	1645.	741.	-608.	318.	757.	733.	.0130	-.0130	-.0100	.0724	-.0195	.0252	3266.
.0810	1438.	794.	-1193.	672.	176.	627.	.0062	-.0159	-.0256	.0566	-.0055	.0450	3494.
.0820	1148.	754.	-1640.	973.	16.	501.	-.0003	-.0181	-.0375	.0434	.0073	.0603	4087.
.0830	1016.	796.	-1803.	1079.	-38.	413.	-.0037	-.0184	-.0413	.0396	.0165	.0678	4316.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.10.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	53	MEMBER	2	SEQUENCE	174	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)		(PSI)
.0840	1078.	880.	-1641.	977.	6.	401.		-.0028	-.0173	-.0362	.0462	.0157	.0664		3943.
.0850	1133.	817.	-1209.	759.	130.	438.		.0021	-.0158	-.0242	.0595	.0054	.0571		3308.
.0860	1104.	641.	-643.	495.	328.	473.		.0095	-.0139	-.0080	.0758	-.0043	.0427		2834.
.0870	1029.	506.	-129.	236.	522.	461.		.0168	-.0108	.0081	.0886	-.0089	.0278		2745.
.0880	824.	402.	179.	65.	608.	364.		.0216	-.0067	.0198	.0899	-.0101	.0174		2657.
.0890	417.	255.	229.	42.	589.	170.		.0234	-.0022	.0256	.0775	-.0040	.0125		2294.
.0900	-74.	91.	66.	147.	526.	-74.		.0232	.0023	.0269	.0568	.0123	.0100		2056.
.0910	-477.	-54.	-190.	305.	434.	-290.		.0223	.0064	.0256	.0340	.0298	.0069		2258.
.0920	-712.	-176.	-375.	418.	340.	-425.		.0214	.0100	.0246	.0146	.0389	.0014		2563.
.0930	-740.	-253.	-350.	403.	315.	-455.		.0210	.0129	.0265	.0052	.0395	-.0088		2555.
.0940	-557.	-301.	-90.	258.	374.	-373.		.0214	.0150	.0315	.0092	.0331	-.0254		2194.
.0950	-243.	-382.	293.	61.	450.	-204.		.0219	.0163	.0360	.0214	.0184	-.0467		1858.
.0960	86.	-481.	634.	-104.	492.	-18.		.0213	.0172	.0365	.0326	.0006	-.0670		1878.
.0970	323.	-526.	794.	-182.	487.	93.		.0180	.0187	.0310	.0364	-.0109	-.0817		1972.
.0980	363.	-535.	714.	-133.	398.	72.		.0108	.0213	.0182	.0289	-.0145	-.0894		1591.
.0990	189.	-569.	432.	39.	211.	-59.		.0008	.0246	-.0009	.0108	-.0140	-.0904		830.
.1000	-97.	-620.	79.	259.	-10.	-234.		-.0096	.0281	-.0228	-.0114	-.0106	-.0877		1303.
.1010	-400.	-681.	-174.	431.	-189.	-399.		-.0182	.0318	-.0428	-.0291	-.0068	-.0857		2304.
.1020	-696.	-771.	-204.	487.	-298.	-539.		-.0237	.0356	-.0574	-.0374	-.0093	-.0873		2932.
.1030	-952.	-353.	15.	392.	-324.	-642.		-.0256	.0396	-.0650	-.0364	-.0200	-.0912		3057.
.1040	-1123.	-880.	407.	170.	-256.	-699.		-.0235	.0432	-.0658	-.0283	-.0339	-.0949		2853.
.1050	-1252.	-897.	827.	-78.	-142.	-728.		-.0180	.0459	-.0620	-.0176	-.0465	-.0969		2783.
.1060	-1405.	-940.	1127.	-253.	-52.	-755.		-.0111	.0471	-.0567	-.0095	-.0552	-.0948		2980.
.1070	-1552.	-916.	1222.	-332.	-14.	-789.		-.0042	.0468	-.0516	-.0076	-.0566	-.0850		3196.
.1080	-1677.	-823.	1108.	-319.	-25.	-811.		.0017	.0445	-.0472	-.0130	-.0498	-.0658		3253.
.1090	-1746.	-744.	837.	-218.	-84.	-786.		.0068	.0405	-.0435	-.0218	-.0391	-.0427		3061.
.1100	-1472.	-460.	517.	-124.	-175.	-679.		.0119	.0362	-.0398	-.0218	-.0294	-.0249		2659.
.1110	-1059.	-151.	272.	-69.	-237.	-486.		.0166	.0303	-.0351	-.0160	-.0232	-.0068		2036.
.1120	-669.	18.	147.	-46.	-250.	-221.		.0205	.0221	-.0299	-.0079	-.0229	.0145		1259.
.1130	-190.	160.	64.	-36.	-259.	74.		.0236	.0143	-.0256	.0059	-.0279	.0304		1013.
.1140	387.	412.	-77.	-20.	-278.	334.		.0258	.0089	-.0235	.0226	-.0320	.0392		1625.
.1150	866.	728.	-312.	23.	-311.	519.		.0261	.0058	-.0236	.0316	-.0301	.0503		2262.
.1160	1122.	963.	-638.	135.	-399.	619.		.0241	.0038	-.0261	.0291	-.0239	.0665		2796.
.1170	1149.	1017.	-1036.	351.	-546.	629.		.0208	.0031	-.0296	.0197	-.0146	.0803		3373.
.1180	1188.	1142.	-1436.	575.	-657.	572.		.0188	.0051	-.0306	.0113	.0010	.0873		3896.
.1190	1057.	1191.	-1691.	739.	-665.	472.		.0189	.0080	-.0266	-.0016	.0155	.0960		4109.
.1200	808.	1079.	-1655.	772.	-570.	379.		.0213	.0115	-.0165	-.0141	.0187	.1036		3852.
.1210	763.	981.	-1282.	617.	-364.	326.		.0267	.0175	-.0002	-.0104	.0126	.0952		2939.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.10.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION 53 MEMBER 2 SEQUENCE 174 LOCATION END TYPE EL

.1130	-190.	160.	64.	-36.	-259.	74.	.0236	.0143	-.0256	.0059	-.0279	.0304	1013.
.1140	387.	412.	-77.	-20.	-278.	334.	.0258	.0089	-.0235	.0226	-.0320	.0392	1625.
.1150	866.	728.	-312.	23.	-311.	519.	.0261	.0058	-.0236	.0316	-.0301	.0503	2262.
.1160	1122.	963.	-638.	135.	-399.	619.	.0241	.0038	-.0261	.0291	-.0239	.0665	2796.
.1170	1149.	1017.	-1036.	351.	-546.	629.	.0208	.0031	-.0296	.0197	-.0146	.0803	3373.
.1180	1188.	1142.	-1436.	575.	-657.	572.	.0188	.0051	-.0306	.0113	.0010	.0873	3896.
.1190	1057.	1191.	-1691.	739.	-665.	472.	.0189	.0080	-.0266	-.0016	.0155	.0960	4109.
.1200	808.	1079.	-1655.	772.	-570.	379.	.0213	.0115	-.0165	-.0141	.0187	.1036	3852.
.1210	763.	981.	-1282.	617.	-364.	326.	.0267	.0175	-.0002	-.0104	.0126	.0952	2939.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.10.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	53	MEMBER	2	SEQUENCE	174	LOCATION	END	TYPE	EL							
TIME	FX	FY	FZ	MX	MY	MZ										
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(PSI)
.1220	753.	831.	-647.	337.	-68.	274.	.0330	.0259	.0196	.0054	.0012	.0724	1642.			
.1230	746.	747.	74.	-17.	242.	222.	.0398	.0355	.0378	.0216	-.0122	.0485	1228.			
.1240	572.	588.	668.	-291.	447.	136.	.0419	.0440	.0490	.0271	-.0265	.0317	2055.			
.1250	197.	305.	951.	-349.	513.	-40.	.0388	.0516	.0504	.0222	-.0323	.0178	2321.			
.1260	-198.	137.	856.	-209.	485.	-308.	.0320	.0593	.0428	.0087	-.0219	.0058	2283.			
.1270	-725.	-8.	476.	77.	376.	-623.	.0226	.0653	.0284	-.0215	-.0063	.0063	2732.			
.1280	-1105.	-67.	38.	354.	231.	-868.	.0130	.0692	.0123	-.0561	.0046	.0136	3605.			
.1290	-1238.	-149.	-220.	538.	143.	-992.	.0058	.0711	.0005	-.0767	.0091	.0125	4246.			
.1300	-1110.	-238.	-191.	573.	190.	-972.	.0025	.0709	-.0035	-.0771	.0070	-.0000	4273.			
.1310	-609.	-128.	86.	411.	348.	-769.	.0031	.0630	-.0007	-.0641	-.0059	-.0131	3505.			
.1320	-22.	-54.	476.	179.	528.	-429.	.0057	.0609	.0050	-.0503	-.0308	-.0185	2624.			
.1330	596.	-28.	802.	3.	698.	-54.	.0086	.0514	.0098	-.0339	-.0528	-.0233	2613.			
.1340	1123.	9.	380.	-24.	812.	239.	.0102	.0412	.0101	-.0210	-.0524	-.0268	3161.			
.1350	1498.	176.	619.	89.	795.	423.	.0088	.0308	.0029	-.0242	-.0535	-.0167	3379.			
.1360	1759.	483.	94.	281.	640.	526.	.0046	.0198	-.0109	-.0419	-.0597	.0080	3268.			
.1370	1688.	583.	-499.	568.	428.	536.	-.0012	.0079	-.0274	-.0631	-.0509	.0358	3324.			
.1380	1503.	581.	-969.	834.	264.	507.	-.0054	-.0037	-.0413	-.0743	-.0383	.0556	3774.			
.1390	1361.	599.	-1187.	944.	173.	524.	-.0056	-.0145	-.0501	-.0785	-.0334	.0722	4082.			
.1400	1313.	637.	-1084.	837.	156.	610.	-.0013	-.0237	-.0520	-.0776	-.0416	.0867	3910.			
.1410	1354.	666.	-686.	562.	237.	695.	.0065	-.0301	-.0467	-.0648	-.0542	.0890	3451.			
.1420	1199.	514.	-151.	270.	377.	692.	.0156	-.0339	-.0371	-.0479	-.0656	.0814	3110.			
.1430	961.	381.	307.	5.	493.	639.	.0249	-.0357	-.0281	-.0391	-.0743	.0755	3014.			
.1440	671.	273.	550.	-175.	511.	569.	.0328	-.0362	-.0233	-.0450	-.0795	.0766	2930.			
.1450	279.	76.	560.	-205.	434.	442.	.0380	-.0352	-.0230	-.0582	-.0753	.0753	2435.			
.1460	-136.	-126.	383.	-114.	305.	247.	.0405	-.0317	-.0255	-.0724	-.0598	.0667	1525.			
.1470	-584.	-326.	78.	35.	141.	47.	.0412	-.0268	-.0297	-.0954	-.0430	.0609	570.			
.1480	-801.	-393.	-248.	138.	-16.	-85.	.0423	-.0206	-.0328	-.1216	-.0311	.0571	574.			
.1490	-850.	-512.	-462.	202.	-106.	-104.	.0446	-.0134	-.0316	-.1393	-.0233	.0442	936.			
.1500	-807.	-729.	-491.	215.	-92.	-97.	.0476	-.0051	-.0241	-.1437	-.0181	.0196	946.			
.1510	-471.	-750.	-369.	96.	-10.	5.	.0512	.0041	-.0117	-.1394	-.0178	-.0065	362.			
.1520	18.	-663.	-187.	-91.	63.	199.	.0540	.0125	.0020	-.1345	-.0247	-.0253	851.			
.1530	511.	-605.	-36.	-224.	111.	407.	.0545	.0200	.0142	-.1247	-.0293	-.0429	1783.			
.1540	780.	-688.	-3.	-213.	129.	530.	.0513	.0269	.0225	-.1125	-.0245	-.0597	2186.			
.1550	913.	-678.	-144.	-126.	79.	560.	.0436	.0341	.0251	-.1060	-.0141	-.0663	2163.			
.1560	1096.	-376.	-413.	-57.	-58.	527.	.0316	.0421	.0222	-.1047	-.0037	-.0600	1991.			
.1570	1047.	-153.	-683.	48.	-228.	407.	.0160	.0494	.0164	-.1032	.0060	-.0475	1753.			
.1580	880.	-22.	-848.	158.	-347.	252.	-.0006	.0553	.0111	-.0907	.0188	-.0371	1706.			
.1590	837.	201.	-871.	180.	-408.	160.	-.0158	.0593	.0081	-.0683	.0287	-.0248	1769.			

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.10.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	53	MEMBER	2	SEQUENCE	174	LOCATION	END	TYPE	EL							
---------	----	--------	---	----------	-----	----------	-----	------	----	--	--	--	--	--	--	--

.1510	-471.	-750.	369.	96.	-10.	5.	.0512	.0041	-.0117	-.1394	-.0178	-.0065	362.
.1520	18.	-663.	-187.	-91.	63.	199.	.0540	.0125	.0020	-.1345	-.0247	-.0253	851.
.1530	511.	-605.	-36.	-224.	111.	407.	.0545	.0200	.0142	-.1247	-.0293	-.0429	1783.
.1540	780.	-688.	-3.	-213.	129.	530.	.0513	.0269	.0225	-.1125	-.0245	-.0597	2186.
.1550	913.	-678.	-144.	-126.	79.	560.	.0436	.0341	.0251	-.1060	-.0141	-.0663	2163.
.1560	1096.	-376.	-413.	-57.	-58.	527.	.0716	.0421	.0222	-.1047	-.0037	-.0600	1991.
.1570	1047.	-153.	-683.	48.	-228.	407.	.0160	.0494	.0164	-.1032	.0060	-.0475	1753.
.1580	880.	-22.	-848.	158.	-347.	252.	-.0006	.0553	.0111	-.0907	.0188	-.0371	1706.
.1590	837.	201.	-871.	180.	-408.	160.	-.0158	.0593	.0081	-.0683	.0287	-.0248	1769.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.10.

S/RV PIPING KEWAUNEE GKM08F 2 RUP DISK
2 SAFETY COLD FKM24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	53	MEMBER	2	SEQUENCE	174	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1600	812.	442.	-737.	103.	-447.	136.	-.0296	.0604	.0078	-.0437	.0279	-.0042	1786.		
.1610	704.	623.	-445.	-42.	-432.	109.	-.0423	.0594	.0115	-.0148	.0233	.0186	1669.		
.1620	620.	847.	-63.	-233.	-343.	46.	-.0533	.0580	.0190	.0219	.0237	.0365	1556.		
.1630	438.	1019.	289.	-403.	-258.	-46.	-.0625	.0555	.0267	.0527	.0234	.0567	1795.		
.1640	230.	1218.	539.	-549.	-213.	-133.	-.0698	.0516	.0325	.0723	.0211	.0833	2254.		
.1650	35.	1426.	704.	-660.	-170.	-234.	-.0758	.0467	.0367	.0866	.0234	.1091	2690.		
.1660	-336.	1441.	824.	-694.	-129.	-373.	-.0810	.0406	.0393	.0975	.0292	.1293	2980.		
.1670	-655.	1439.	909.	-721.	-110.	-484.	-.0850	.0339	.0398	.1044	.0328	.1448	3267.		
.1680	-844.	1460.	966.	-771.	-115.	-520.	-.0867	.0266	.0381	.1044	.0311	.1579	3499.		
.1690	-893.	1464.	1017.	-830.	-110.	-499.	-.0862	.0195	.0351	.1028	.0288	.1619	3638.		
.1700	-942.	1314.	1052.	-844.	-100.	-470.	-.0842	.0129	.0311	.1001	.0271	.1533	3625.		
.1710	-1027.	1042.	1017.	-809.	-115.	-431.	-.0811	.0069	.0255	.0889	.0237	.1391	3447.		
.1720	-848.	961.	875.	-793.	-152.	-332.	-.0760	.0024	.0185	.0710	.0215	.1220	3260.		
.1730	-657.	798.	647.	-719.	-213.	-213.	-.0697	-.0015	.0106	.0470	.0208	.1002	2912.		
.1740	-552.	450.	380.	-565.	-281.	-108.	-.0627	-.0047	.0029	.0222	.0230	.0698	2390.		
.1750	-390.	127.	105.	-410.	-338.	0.	-.0546	-.0064	-.0034	-.0026	.0271	.0350	1984.		
.1760	-214.	-149.	-153.	-291.	-381.	115.	-.0456	-.0067	-.0081	-.0311	.0283	.0026	1842.		
.1770	-7.	-391.	-349.	-212.	-390.	220.	-.0356	-.0053	-.0102	-.0569	.0276	-.0312	1849.		
.1780	80.	-756.	-459.	-127.	-347.	279.	-.0251	-.0025	-.0094	-.0768	.0268	-.0691	1728.		
.1790	174.	-1070.	-499.	-78.	-254.	311.	-.0145	.0019	-.0061	-.0905	.0269	-.1068	1529.		
.1800	285.	-1250.	-499.	-79.	-152.	328.	-.0047	.0072	-.0013	-.1022	.0249	-.1370	1382.		
.1810	215.	-1486.	-473.	-62.	-64.	298.	.0029	.0124	.0040	-.1131	.0211	-.1588	1160.		
.1820	129.	-1664.	-431.	-34.	34.	226.	.0083	.0179	.0101	-.1151	.0224	-.1785	862.		
.1830	22.	-1782.	-397.	11.	129.	128.	.0114	.0233	.0160	-.1113	.0267	-.1923	681.		
.1840	-85.	-1795.	-372.	47.	198.	30.	.0121	.0279	.0209	-.1059	.0290	-.1952	767.		
.1850	-186.	-1723.	-322.	63.	257.	-68.	.0104	.0316	.0251	-.0964	.0296	-.1897	1019.		
.1860	-332.	-1667.	-218.	78.	330.	-175.	.0064	.0342	.0290	-.0789	.0309	-.1812	1423.		
.1870	-383.	-1513.	-75.	60.	407.	-261.	.0008	.0360	.0322	-.0531	.0318	-.1706	1817.		
.1880	-415.	-1305.	69.	25.	453.	-314.	-.0064	.0362	.0335	-.0267	.0287	-.1527	2058.		
.1890	-421.	-1033.	181.	-15.	473.	-345.	-.0149	.0350	.0330	-.0005	.0253	-.1289	2187.		
.1900	-419.	-739.	236.	-24.	476.	-377.	-.0244	.0326	.0309	.0267	.0261	-.1040	2269.		
.1910	-489.	-515.	205.	28.	443.	-413.	-.0344	.0288	.0273	.0498	.0290	-.0770	2264.		
.1920	-474.	-221.	84.	90.	377.	-416.	-.0434	.0240	.0227	.0669	.0328	-.0470	2122.		
.1930	-364.	117.	-75.	138.	305.	-380.	-.0510	.0187	.0189	.0795	.0373	-.0170	1890.		
.1940	-229.	388.	-201.	173.	247.	-318.	-.0570	.0129	.0170	.0917	.0415	.0078	1636.		
.1950	-35.	600.	-256.	172.	209.	-212.	-.0610	.0067	.0176	.1046	.0433	.0259	1282.		
.1960	274.	818.	-246.	109.	185.	-38.	-.0627	.0004	.0197	.1162	.0415	.0395	815.		
.1970	632.	1002.	-196.	13.	163.	175.	-.0627	-.0057	.0220	.1255	.0371	.0485	892.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.10.

S/RV PIPING KEWAUNEE GKM08F 2 RUP DISK
2 SAFETY COLD FKM24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION 53 MEMBER 2 SEQUENCE 174 LOCATION END TYPE EL

.1890	-421.	-1033.	181.	-15.	473.	-345.	-.0149	.0350	.0330	-.0005	.0253	-.1289	2187.
.1900	-419.	-739.	236.	-24.	476.	-377.	-.0244	.0326	.0309	.0267	.0261	-.1040	2269.
.1910	-489.	-515.	205.	28.	443.	-413.	-.0344	.0288	.0273	.0498	.0290	-.0770	2264.
.1920	-474.	-221.	84.	90.	377.	-416.	-.0434	.0240	.0227	.0669	.0328	-.0470	2122.
.1930	-364.	117.	-75.	138.	305.	-380.	-.0510	.0187	.0189	.0795	.0373	-.0170	1890.
.1940	-229.	388.	-201.	173.	247.	-318.	-.0570	.0129	.0170	.0917	.0415	.0078	1636.
.1950	-35.	600.	-256.	172.	209.	-212.	-.0610	.0067	.0176	.1046	.0433	.0259	1282.
.1960	274.	818.	-246.	109.	185.	-38.	-.0627	.0004	.0197	.1162	.0415	.0395	815.
.1970	632.	1002.	-196.	13.	163.	175.	-.0627	-.0057	.0220	.1255	.0371	.0485	892.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.10.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	53	MEMBER	2	SEQUENCE	174	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DY	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1980	918.	1084.	-146.	-66.	124.	361.	-.0624	-.0109	.0232	.1321	.0331	.0508	1446.		
.1990	1085.	1099.	-149.	-106.	50.	478.	-.0625	-.0146	.0219	.1331	.0318	.0487	1837.		
.2000	1116.	1101.	-243.	-107.	-72.	514.	-.0634	-.0166	.0173	.1245	.0331	.0471	1979.		
.2010	979.	1054.	-414.	-61.	-237.	467.	-.0647	-.0169	.0101	.1070	.0367	.0457	1968.		
.2020	686.	910.	-589.	16.	-411.	344.	-.0656	-.0157	.0023	.0868	.0429	.0403	2004.		
.2030	309.	705.	-682.	71.	-559.	179.	-.0653	-.0129	-.0036	.0684	.0495	.0299	2206.		
.2040	-88.	487.	-627.	50.	-661.	8.	-.0632	-.0090	-.0059	.0525	.0523	.0171	2473.		
.2050	-471.	259.	-403.	-60.	-703.	-148.	-.0588	-.0042	-.0040	.0410	.0496	.0017	2690.		
.2060	-826.	-3.	-36.	-228.	-675.	-292.	-.0525	.0013	.0020	.0363	.0439	-.0186	2875.		
.2070	-1154.	-284.	399.	-417.	-598.	-429.	-.0450	.0072	.0104	.0366	.0370	-.0419	3156.		
.2080	-1459.	-537.	804.	-592.	-514.	-561.	-.0379	.0131	.0187	.0365	.0295	-.0630	3599.		
.2090	-1738.	-736.	1096.	-717.	-457.	-691.	-.0320	.0187	.0248	.0332	.0232	-.0797	4089.		
.2100	-1985.	-900.	1230.	-752.	-435.	-822.	-.0279	.0237	.0278	.0281	.0214	-.0937	4463.		
.2110	-2189.	-1051.	1200.	-689.	-447.	-940.	-.0256	.0278	.0274	.0216	.0242	-.1055	4660.		
.2120	-2305.	-1153.	1036.	-562.	-487.	-1022.	-.0244	.0307	.0247	.0132	.0288	-.1135	4718.		
.2130	-2283.	-1174.	810.	-422.	-528.	-1048.	-.0237	.0325	.0213	.0050	.0326	-.1183	4655.		
.2140	-2114.	-1150.	602.	-300.	-537.	-1011.	-.0226	.0332	.0191	.0010	.0348	-.1230	4418.		
.2150	-1805.	-1115.	462.	-210.	-498.	-904.	-.0204	.0326	.0191	.0030	.0342	-.1292	3933.		
.2160	-1357.	-1049.	390.	-165.	-419.	-722.	-.0169	.0308	.0209	.0096	.0300	-.1352	3178.		
.2170	-812.	-935.	354.	-153.	-317.	-490.	-.0125	.0278	.0236	.0184	.0234	-.1392	2253.		
.2180	-282.	-810.	313.	-137.	-214.	-259.	-.0084	.0240	.0257	.0273	.0173	-.1410	1355.		
.2190	144.	-704.	224.	-84.	-133.	-70.	-.0053	.0198	.0259	.0338	.0136	-.1396	643.		
.2200	449.	-594.	59.	14.	-89.	63.	-.0034	.0153	.0232	.0353	.0128	-.1333	408.		
.2210	635.	-475.	-172.	145.	-78.	138.	-.0023	.0109	.0178	.0317	.0143	-.1220	802.		
.2220	693.	-377.	-412.	289.	-83.	157.	-.0016	.0067	.0109	.0254	.0173	-.1084	1266.		
.2230	644.	-313.	-587.	410.	-78.	133.	-.0007	.0029	.0044	.0198	.0198	-.0945	1634.		
.2240	543.	-261.	-641.	468.	-46.	95.	.0010	-.0007	-.0004	.0163	.0193	-.0809	1791.		
.2250	432.	-220.	-555.	452.	16.	67.	.0041	-.0039	-.0028	.0157	.0143	-.0685	1706.		
.2260	316.	-209.	-351.	380.	107.	50.	.0083	-.0067	-.0032	.0184	.0059	-.0589	1485.		
.2270	187.	-226.	-84.	284.	212.	30.	.0129	-.0089	-.0024	.0227	-.0039	-.0519	1328.		
.2280	42.	-241.	163.	196.	304.	-5.	.0172	-.0103	-.0021	.0248	-.0137	-.0451	1351.		
.2290	-118.	-239.	319.	148.	361.	-58.	.0205	-.0110	-.0036	.0218	-.0224	-.0370	1474.		
.2300	-282.	-232.	352.	164.	377.	-126.	.0224	-.0111	-.0075	.0141	-.0284	-.0284	1606.		
.2310	-425.	-230.	272.	243.	359.	-194.	.0232	-.0107	-.0131	.0036	-.0315	-.0209	1771.		
.2320	-510.	-221.	117.	357.	315.	-240.	.0231	-.0100	-.0194	-.0086	-.0334	-.0142	1990.		
.2330	-491.	-181.	-65.	470.	265.	-242.	.0228	-.0091	-.0248	-.0205	-.0360	-.0085	2208.		
.2340	-345.	-112.	-231.	563.	229.	-191.	.0229	-.0080	-.0279	-.0298	-.0395	-.0053	2378.		
.2350	-88.	-41.	-358.	631.	221.	-88.	.0237	-.0066	-.0278	-.0351	-.0436	-.0053	2519.		

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ADLPIPE STRESS ANALYSIS

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18.29.10.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	53	MEMBER	2	SEQUENCE	174	LOCATION	END	TYPE	EL						
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.2170	187.	-226.	-84.	284.	212.	30.	.0129	-.0089	-.0024	.0227	-.0039	-.0519	1328.
.2280	42.	-241.	163.	196.	304.	-5.	.172	-.0103	-.0021	.0248	-.0137	-.0451	1351.
.2290	-118.	-239.	319.	148.	361.	-58.	.205	-.0110	-.0036	.0218	-.0224	-.0370	1474.
.2300	-282.	-272.	352.	164.	377.	-126.	.0224	-.0111	-.0075	.0141	-.0284	-.0284	1606.
.2310	-425.	-230.	272.	243.	359.	-194.	.0232	-.0107	-.0131	.0036	-.0315	-.0209	1771.
.2320	-510.	-221.	117.	357.	315.	-240.	.0231	-.0100	-.0194	-.0086	-.0334	-.0142	1990.
.2330	-491.	-181.	-65.	470.	265.	-242.	.0228	-.0091	-.0248	-.0205	-.0360	-.0085	2208.
.2340	-345.	-112.	-231.	563.	229.	-191.	.0229	-.0080	-.0279	-.0298	-.0395	-.0053	2378.
.2350	-88.	-41.	-358.	631.	221.	-88.	.0237	-.0066	-.0278	-.0351	-.0436	-.0053	2519.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.29.10.

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

CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	53	MEMBER	2	SEQUENCE	174	LOCATION	END	TYPE	EL	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)	
.2360	250.	33.	-446.	675.	239.	54.	.0254	-.0051	-.0247	-.0374	-.0483	-.0072	2680.
.2370	639.	130.	-510.	694.	269.	216.	.0275	-.0033	-.0191	-.0380	-.0528	-.0092	2895.
.2380	1030.	250.	-566.	700.	302.	369.	.0294	-.0010	-.0119	-.0374	-.0555	-.0107	3163.
.2390	1361.	365.	-625.	709.	326.	491.	.0305	.0017	-.0043	-.0360	-.0555	-.0112	3443.
.2400	1601.	464.	-689.	726.	334.	575.	.0305	.0046	.0030	-.0343	-.0527	-.0098	3674.
.2410	1750.	559.	-749.	740.	327.	619.	.0295	.0077	.0093	-.0322	-.0477	-.0060	3800.
.2420	1806.	647.	-778.	738.	310.	619.	.0275	.0111	.0147	-.0289	-.0415	-.0008	3779.
.2430	1769.	718.	-748.	708.	294.	577.	.0245	.0147	.0195	-.0233	-.0348	.0049	3582.
.2440	1664.	782.	-646.	639.	281.	502.	.0209	.0184	.0237	-.0152	-.0238	.0107	3208.
.2450	1508.	839.	-478.	530.	273.	408.	.0169	.0220	.0273	-.0052	-.0238	.0170	2698.
.2460	1298.	868.	-260.	400.	267.	303.	.0128	.0249	.0301	.0059	-.0196	.0234	2122.
.2470	1039.	863.	-17.	265.	263.	186.	.0086	.0272	.0319	.0169	-.0157	.0298	1556.
.2480	758.	847.	223.	131.	255.	62.	.0046	.0287	.0323	.0267	-.0120	.0363	1093.
.2490	477.	837.	437.	2.	236.	-63.	.0007	.0295	.0309	.0339	-.0087	.0431	913.
.2500	190.	813.	618.	-111.	209.	-187.	-.0027	.0295	.0280	.0380	-.0058	.0499	1124.
.2510	-102.	755.	766.	-202.	177.	-300.	-.0053	.0284	.0235	.0394	-.0036	.0558	1505.
.2520	-371.	672.	885.	-277.	145.	-393.	-.0067	.0263	.0178	.0382	-.0025	.0602	1875.
.2530	-590.	582.	975.	-342.	112.	-458.	-.0066	.0235	.0112	.0344	-.0032	.0629	2173.
.2540	-749.	489.	1037.	-399.	83.	-491.	-.0050	.0200	.0042	.0279	-.0055	.0639	2384.
.2550	-852.	385.	1070.	-443.	58.	-495.	-.0019	.0159	-.0030	.0193	-.0091	.0628	2491.
.2560	-900.	267.	1066.	-465.	32.	-469.	.0027	.0113	-.0102	.0085	-.0137	.0598	2469.
.2570	-895.	142.	1015.	-462.	3.	-412.	.0086	.0062	-.0175	-.0048	-.0190	.0557	2311.
.2580	-834.	26.	916.	-434.	-29.	-330.	.0155	.0008	-.0247	-.0199	-.0244	.0509	2040.
.2590	-723.	-70.	775.	-385.	-54.	-232.	.0230	-.0047	-.0316	-.0357	-.0297	.0456	1696.
.2600	-576.	-156.	605.	-319.	-100.	-119.	.0308	-.0102	-.0380	-.0516	-.0351	.0406	1325.
.2610	-402.	-236.	419.	-240.	-131.	8.	.0387	-.0159	-.0438	-.0667	-.0407	.0363	1021.
.2620	-206.	-301.	230.	-153.	-156.	142.	.0464	-.0213	-.0488	-.0801	-.0464	.0328	972.
.2630	-1.	-342.	50.	-65.	-172.	270.	.0537	-.0263	-.0529	-.0909	-.0519	.0301	1220.
.2640	188.	-361.	-111.	16.	-178.	382.	.0600	-.0306	-.0559	-.0991	-.0571	.0290	1576.
.2650	349.	-358.	-246.	90.	-176.	472.	.0652	-.0342	-.0579	-.1046	-.0519	.0301	1909.
.2660	473.	-339.	-357.	158.	-164.	537.	.0692	-.0371	-.0587	-.1072	-.0657	.0331	2177.
.2670	556.	-309.	-442.	223.	-142.	575.	.0720	-.0390	-.0590	-.1066	-.0680	.0377	2362.
.2680	593.	-253.	-500.	278.	-110.	582.	.0735	-.0401	-.0582	-.1032	-.0689	.0440	2444.
.2690	582.	-197.	-523.	318.	-68.	559.	.0737	-.0402	-.0563	-.0972	-.0685	.0522	2413.
.2700	525.	-131.	-507.	342.	-16.	509.	.0725	-.0395	-.0534	-.0889	-.0671	.0617	2289.
.2710	436.	-71.	-453.	352.	49.	443.	.0704	-.0379	-.0496	-.0782	-.0645	.0711	2121.
.2720	350.	5.	-372.	347.	124.	359.	.0675	-.0354	-.0450	-.0653	-.0611	.0797	1947.
.2730	279.	111.	-274.	325.	203.	292.	.0640	-.0322	-.0400	-.0510	-.0569	.0879	1797.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.10.

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

CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	53	MEMBER	2	SEQUENCE	174	LOCATION	END	TYPE	EL	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)	

.2650	349.	-358.	-246.	90.	-176.	472.	.0652	-.0342	-.0579	-.1046	-.0519	.0301	1909.
.2660	473.	-339.	-357.	158.	-164.	537.	.0692	-.0371	-.0589	-.1072	-.0657	.0331	2177.
.2670	556.	-309.	-442.	223.	-142.	575.	.0720	-.0390	-.0590	-.1066	-.0680	.0377	2362.
.2680	593.	-263.	-500.	278.	-110.	582.	.0735	-.0401	-.0582	-.1032	-.0689	.0440	2444.
.2690	562.	-197.	-523.	318.	-68.	559.	.0737	-.0402	-.0563	-.0972	-.0685	.0522	2413.
.2700	525.	-131.	-507.	342.	-16.	509.	.0725	-.0395	-.0534	-.0889	-.0671	.0617	2289.
.2710	434.	-71.	-453.	352.	49.	443.	.0704	-.0379	-.0496	-.0782	-.0645	.0711	2121.
.2720	350.	5.	-372.	347.	124.	369.	.0675	-.0354	-.0450	-.0653	-.0611	.0797	1947.
.2730	279.	111.	-274.	325.	203.	292.	.0640	-.0322	-.0400	-.0510	-.0569	.0879	1797.

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ADLPIPE STRESS ANALYSIS

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18.29.10.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	53	MEMBER	2	SEQUENCE	174	LOCATION	END	TYPE	EL							
TIME	FX	FY	FZ	MX	MY	MZ									STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)				(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.2740	206.	216.	-167.	294.	281.	215.	.0596	-.0288	-.0348	-.0364	-.0521	.0965			1719.	
.2750	125.	294.	-67.	272.	354.	144.	.0545	-.0256	-.0299	-.0220	-.0464	.1046			1752.	
.2760	66.	362.	2.	264.	418.	85.	.0492	-.0226	-.0257	-.0080	-.0395	.1114			1874.	
.2770	56.	455.	27.	266.	471.	42.	.0438	-.0196	-.0222	.0045	-.0317	.1172			2026.	
.2780	87.	562.	15.	273.	512.	16.	.0384	-.0169	-.0194	.0148	-.0236	.1223			2166.	
.2790	145.	645.	-19.	287.	542.	10.	.0331	-.0148	-.0170	.0232	-.0159	.1261			2289.	
.2800	246.	702.	-70.	308.	566.	32.	.0284	-.0132	-.0148	.0306	-.0087	.1271			2410.	
.2810	417.	765.	-137.	328.	588.	88.	.0247	-.0120	-.0130	.0371	-.0025	.1254			2535.	
.2820	646.	838.	-208.	335.	604.	175.	.0218	-.0112	-.0114	.0422	.0018	.1219			2661.	
.2830	888.	886.	-271.	333.	609.	277.	.0193	-.0110	-.0103	.0462	.0042	.1166			2791.	
.2840	1102.	891.	-329.	332.	600.	378.	.0171	-.0113	-.0099	.0491	.0054	.1095			2925.	
.2850	1286.	873.	-399.	336.	575.	471.	.0153	-.0118	-.0107	.0504	.0062	.1010			3044.	
.2860	1428.	852.	-489.	343.	527.	546.	.0141	-.0123	-.0130	.0487	.0066	.0922			3109.	
.2870	1485.	802.	-585.	353.	458.	586.	.0130	-.0125	-.0165	.0442	.0067	.0832			3073.	
.2880	1425.	703.	-663.	363.	374.	579.	.0122	-.0125	-.0205	.0377	.0068	.0738			2908.	
.2890	1267.	572.	-706.	359.	288.	531.	.0119	-.0121	-.0244	.0298	.0066	.0639			2623.	
.2900	1047.	428.	-701.	330.	207.	458.	.0128	-.0114	-.0277	.0208	.0051	.0538			2246.	
.2910	774.	257.	-632.	271.	139.	370.	.0150	-.0104	-.0299	.0118	.0021	.0430			1788.	
.2920	446.	50.	-491.	182.	90.	263.	.0182	-.0091	-.0306	.0038	-.0021	.0309			1239.	
.2930	83.	-167.	-295.	66.	57.	140.	.0220	-.0075	-.0301	-.0034	-.0071	.0184			615.	
.2940	-283.	-374.	-81.	-65.	28.	15.	.0261	-.0057	-.0292	-.0111	-.0127	.0067			270.	
.2950	-640.	-578.	113.	-185.	-6.	-106.	.0301	-.0040	-.0286	-.0198	-.0178	-.0041			794.	
.2960	-982.	-783.	257.	-273.	-49.	-223.	.0337	-.0023	-.0288	-.0294	-.0211	-.0146			1328.	
.2970	-1284.	-957.	333.	-328.	-107.	-335.	.0362	-.0006	-.0298	-.0400	-.0221	-.0238			1794.	
.2980	-1519.	-1077.	337.	-356.	-180.	-429.	.0376	.0009	-.0317	-.0520	-.0217	-.0304			2186.	
.2990	-1670.	-1156.	281.	-359.	-261.	-489.	.0379	.0020	-.0340	-.0642	-.0202	-.0346			2466.	
.3000	-1727.	-1216.	190.	-378.	-336.	-509.	.0376	.0026	-.0360	-.0743	-.0176	-.0380			2604.	
.3010	-1678.	-1237.	85.	-311.	-396.	-487.	.0367	.0028	-.0369	-.0810	-.0144	-.0409			2615.	
.3020	-1525.	-1192.	-19.	-295.	-440.	-428.	.0353	.0028	-.0366	-.0847	-.0117	-.0416			2540.	
.3030	-1300.	-1093.	-113.	-293.	-467.	-341.	.0330	.0025	-.0348	-.0855	-.0094	-.0396			2421.	
.3040	-1043.	-974.	-197.	-288.	-479.	-243.	.0300	.0020	-.0318	-.0829	-.0064	-.0358			2276.	
.3050	-775.	-837.	-285.	-272.	-480.	-145.	.0263	.0014	-.0279	-.0771	-.0019	-.0303			2129.	
.3060	-510.	-656.	-380.	-251.	-477.	-58.	.0216	.0011	-.0236	-.0697	.0035	-.0216			2024.	
.3070	-279.	-437.	-470.	-233.	-474.	6.	.0158	.0008	-.0189	-.0612	.0095	-.0091			1970.	
.3080	-113.	-217.	-538.	-214.	-466.	38.	.0089	.0007	-.0138	-.0508	.0161	.0057			1920.	
.3090	-11.	-11.	-569.	-199.	-448.	43.	.0014	.0007	-.0082	-.0377	.0229	.0215			1837.	
.3100	53.	195.	-554.	-198.	-417.	33.	-.0062	.0008	-.0021	-.0226	.0288	.0380			1729.	
.3110	82.	401.	-486.	-223.	-374.	9.	-.0137	.0011	.0045	-.0062	.0330	.0546			1627.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.10.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION 53 MEMBER 2 SEQUENCE 174 LOCATION END TYPE EL

.3030	-1300.	-1093.	-113.	-293.	-467.	-341.	.0330	.0025	-.0348	-.0855	-.0094	-.0396	2540.
.3040	-1043.	-974.	-197.	-288.	-479.	-243.	.0300	.0020	-.0318	-.0829	-.0064	-.0358	2276.
.3050	-775.	-837.	-285.	-272.	-480.	-145.	.0263	.0014	-.0279	-.0771	-.0019	-.0303	2129.
.3060	-510.	-656.	-386.	-251.	-477.	-58.	.0216	.0011	-.0236	-.0697	.0035	-.0216	2024.
.3070	-279.	-477.	-470.	-233.	-474.	6.	.0158	.0008	-.0189	-.0612	.0095	-.0091	1970.
.3080	-113.	-217.	-533.	-214.	-466.	38.	.0089	.0007	-.0138	-.0508	.0161	.0057	1920.
.3090	-11.	-11.	-569.	-199.	-448.	43.	.0014	.0007	-.0082	-.0377	.0229	.0215	1837.
.3100	53.	195.	-554.	-198.	-417.	33.	-.0062	.0008	-.0021	-.0226	.0288	.0380	1729.
.3110	82.	401.	-486.	-223.	-374.	9.	-.0137	.0011	.0045	-.0062	.0330	.0546	1627.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/31/02. 18.29.10.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	53	MEMBER	2	SEQUENCE	174	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3120	57.	584.	-361.	-269.	-320.	-36.	-.0211	.0017	.0114	.0113	.0356	.0700	1565.		
.3130	-20.	736.	-196.	-327.	-256.	-104.	-.0282	.0025	.0185	.0289	.0372	.0834	1598.		
.3140	-125.	861.	-20.	-387.	-192.	-182.	-.0348	.0034	.0249	.0448	.0379	.0948	1751.		
.3150	-247.	955.	142.	-439.	-135.	-259.	-.0404	.0042	.0302	.0575	.0377	.1040	1969.		
.3160	-364.	1003.	282.	-475.	-88.	-337.	-.0453	.0049	.0343	.0667	.0371	.1100	2198.		
.3170	-525.	1010.	394.	-496.	-48.	-413.	-.0492	.0055	.0371	.0725	.0364	.1120	2418.		
.3180	-639.	990.	477.	-511.	-18.	-473.	-.0520	.0057	.0387	.0741	.0347	.1104	2600.		
.3190	-704.	938.	527.	-517.	4.	-501.	-.0534	.0056	.0390	.0718	.0318	.1050	2688.		
.3200	-718.	841.	548.	-510.	23.	-494.	-.0531	.0049	.0383	.0664	.0281	.0948	2653.		
.3210	-677.	709.	541.	-494.	40.	-456.	-.0513	.0038	.0369	.0584	.0241	.0798	2513.		
.3220	-580.	570.	502.	-474.	50.	-389.	-.0484	.0023	.0347	.0475	.0196	.0619	2296.		
.3230	-435.	427.	426.	-447.	49.	-296.	-.0445	.0003	.0319	.0334	.0149	.0425	2011.		
.3240	-263.	261.	317.	-404.	40.	-182.	-.0397	-.0024	.0284	.0175	.0110	.0216	1660.		
.3250	-79.	74.	179.	-341.	25.	-58.	-.0343	-.0055	.0245	.0011	.0085	-.0005	1296.		
.3260	110.	-103.	27.	-275.	3.	69.	-.0285	-.0089	.0203	-.0156	.0069	-.0217	1058.		
.3270	286.	-255.	-119.	-218.	-23.	188.	-.0228	-.0125	.0163	-.0319	.0055	-.0407	1079.		
.3280	431.	-398.	-240.	-173.	-46.	292.	-.0174	-.0162	.0128	-.0461	.0047	-.0575	1279.		
.3290	533.	-540.	-326.	-136.	-61.	376.	-.0122	-.0199	.0099	-.0566	.0047	-.0723	1510.		
.3300	595.	-660.	-376.	-111.	-69.	439.	-.0075	-.0235	.0078	-.0635	.0052	-.0840	1711.		
.3310	616.	-739.	-390.	-103.	-72.	477.	-.0036	-.0269	.0064	-.0672	.0059	-.0912	1842.		
.3320	578.	-788.	-368.	-109.	-71.	481.	-.0007	-.0301	.0058	-.0674	.0072	-.0939	1861.		
.3330	479.	-819.	-316.	-117.	-65.	451.	.0010	-.0331	.0061	-.0637	.0096	-.0926	1758.		
.3340	340.	-826.	-244.	-127.	-57.	397.	.0017	-.0358	.0070	-.0567	.0128	-.0876	1571.		
.3350	182.	-794.	-157.	-141.	-46.	328.	.0017	-.0383	.0084	-.0469	.0163	-.0787	1345.		
.3360	9.	-737.	-50.	-162.	-33.	246.	.0009	-.0405	.0104	-.0346	.0197	-.0670	1106.		
.3370	-178.	-665.	78.	-188.	-16.	151.	-.0007	-.0423	.0129	-.0196	.0230	-.0540	902.		
.3380	-355.	-576.	216.	-219.	4.	55.	-.0028	-.0437	.0157	-.0030	.0258	-.0402	843.		
.3390	-500.	-467.	348.	-250.	22.	-31.	-.0050	-.0449	.0183	.0141	.0280	-.0259	945.		
.3400	-617.	-356.	462.	-272.	35.	-104.	-.0072	-.0458	.0204	.0306	.0296	-.0122	1096.		
.3410	-711.	-255.	547.	-278.	40.	-167.	-.0095	-.0466	.0219	.0461	.0312	.0002	1219.		
.3420	-773.	-155.	593.	-268.	34.	-219.	-.0117	-.0471	.0226	.0592	.0328	.0111	1297.		
.3430	-790.	-52.	593.	-242.	15.	-251.	-.0136	-.0476	.0223	.0690	.0340	.0205	1304.		
.3440	-763.	36.	551.	-200.	-14.	-259.	-.0149	-.0480	.0212	.0756	.0349	.0276	1223.		
.3450	-698.	95.	482.	-144.	-46.	-244.	-.0153	-.0484	.0196	.0798	.0355	.0313	1070.		
.3460	-594.	135.	397.	-85.	-80.	-207.	-.0150	-.0488	.0177	.0816	.0354	.0317	888.		
.3470	-451.	171.	305.	-33.	-114.	-151.	-.0139	-.0491	.0157	.0808	.0341	.0298	718.		
.3480	-286.	192.	212.	13.	-149.	-79.	-.0121	-.0494	.0135	.0779	.0319	.0257	630.		
.3490	-124.	179.	119.	61.	-180.	-0.	-.0096	-.0497	.0112	.0736	.0295	.0191	710.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/31/02. 18.29.10.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION 53 MEMBER 2 SEQUENCE 174 LOCATION END TYPE EL

.3410	-711.	-255.	547.	-278.	40.	-167.	-0095	-0466	.0219	.0461	.0312	.0002	1219.
.3420	-773.	-155.	593.	-268.	34.	-219.	-0117	-0471	.0226	.0592	.0328	.0111	1297.
.3430	-790.	-52.	593.	-242.	15.	-251.	-0136	-0476	.0223	.0690	.0340	.0205	1304.
.3440	-763.	36.	551.	-200.	-14.	-259.	-0149	-0480	.0212	.0756	.0349	.0276	1223.
.3450	-698.	95.	482.	-144.	-46.	-244.	-0153	-0484	.0195	.0798	.0355	.0313	1070.
.3460	-594.	125.	397.	-85.	-80.	-207.	-0150	-0488	.0177	.0816	.0354	.0317	888.
.3470	-451.	171.	305.	-33.	-114.	-151.	-0139	-0491	.0157	.0808	.0341	.0298	718.
.3480	-286.	192.	212.	13.	-149.	-79.	-0121	-0494	.0135	.0779	.0319	.0257	630.
.3490	-124.	179.	119.	61.	-180.	-0.	-0096	-0497	.0112	.0736	.0295	.0191	710.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.10.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	53	MEMBER	2	SEQUENCE	174	LOCATION	END	TYPE	EL	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(DEG)	(PSI)
.3500	18.	138.	27.	112.	-211.	75.	-0068	-0500	.0087	.0678	.0272	.0110	935.	
.3510	129.	90.	-63.	159.	-244.	138.	-0038	-0502	.0059	.0604	.0248	.0026	1203.	
.3520	194.	38.	-146.	199.	-278.	180.	-0010	-0501	.0029	.0518	.0226	-0053	1441.	
.3530	199.	-30.	-209.	233.	-308.	194.	.0016	-0497	-0001	.0432	.0209	-0132	1615.	
.3540	146.	-117.	-243.	259.	-330.	185.	.0040	-0491	-0028	.0356	.0196	-0209	1713.	
.3550	52.	-205.	-240.	269.	-342.	157.	.0064	-0481	-0049	.0293	.0182	-0278	1726.	
.3560	-73.	-282.	-196.	256.	-340.	113.	.0085	-0469	-0064	.0249	.0164	-0337	1643.	
.3570	-226.	-353.	-109.	223.	-324.	53.	.0102	-0454	-0069	.0231	.0145	-0387	1481.	
.3580	-395.	-421.	8.	179.	-294.	-16.	.0114	-0437	-0068	.0239	.0127	-0430	1289.	
.3590	-561.	-476.	136.	133.	-257.	-05.	.0123	-0419	-0062	.0266	.0111	-0460	1125.	
.3600	-709.	-510.	253.	91.	-215.	-151.	.0127	-0400	-0055	.0304	.0100	-0478	1037.	
.3610	-826.	-525.	348.	61.	-171.	-213.	.0126	-0380	-0047	.0351	.0096	-0487	1045.	
.3620	-930.	-519.	412.	47.	-126.	-269.	.0118	-0359	-0039	.0402	.0100	-0488	1121.	
.3630	-972.	-489.	439.	49.	-80.	-307.	.0108	-0337	-0031	.0453	.0109	-0483	1198.	
.3640	-947.	-439.	429.	66.	-31.	-318.	.0098	-0317	-0022	.0501	.0119	-0477	1218.	
.3650	-853.	-380.	393.	97.	23.	-299.	.0090	-0297	-0010	.0551	.0129	-0476	1178.	
.3660	-687.	-310.	338.	134.	06.	-252.	.0085	-0277	.0008	.0600	.0135	-0486	1113.	
.3670	-450.	-222.	270.	172.	153.	-176.	.0083	-0258	.0030	.0646	.0133	-0504	1084.	
.3680	-155.	-123.	180.	212.	222.	-76.	.0084	-0238	.0053	.0682	.0124	-0528	1179.	
.3690	174.	-32.	91.	258.	288.	42.	.0089	-0220	.0075	.0709	.0111	-0562	1453.	
.3700	512.	46.	-20.	314.	347.	164.	.0095	-0201	.0091	.0723	.0097	-0605	1853.	
.3710	838.	120.	-146.	375.	394.	280.	.0099	-0182	.0100	.0718	.0082	-0648	2282.	
.3720	1132.	200.	-281.	435.	423.	379.	.0102	-0161	.0098	.0690	.0065	-0686	2672.	
.3730	1371.	263.	-415.	494.	438.	456.	.0102	-0140	.0087	.0646	.0048	-0716	2995.	
.3740	1540.	297.	-534.	550.	440.	508.	.0101	-0121	.0069	.0590	.0031	-0741	3244.	
.3750	1638.	309.	-623.	594.	434.	536.	.0102	-0104	.0047	.0527	.0011	-0758	3397.	
.3760	1669.	315.	-671.	612.	423.	536.	.0104	-0088	.0026	.0458	-0016	-0763	3425.	
.3770	1632.	316.	-670.	602.	410.	510.	.0108	-0074	.0008	.0390	-0051	-0753	3321.	
.3780	1525.	300.	-617.	566.	398.	461.	.0115	-0065	-0004	.0325	-0091	-0731	3105.	
.3790	1359.	265.	-524.	511.	387.	394.	.0124	-0060	-0012	.0264	-0135	-0695	2809.	
.3800	1153.	226.	-405.	441.	373.	317.	.0135	-0061	-0016	.0205	-0181	-0643	2458.	
.3810	916.	190.	-274.	360.	354.	230.	.0146	-0067	-0019	.0143	-0226	-0575	2070.	
.3820	661.	159.	-144.	276.	327.	136.	.0154	-0077	-0023	.0080	-0266	-0493	1676.	
.3830	407.	134.	-30.	197.	291.	43.	.0159	-0092	-0028	.0014	-0301	-0401	1322.	
.3840	177.	118.	58.	128.	247.	-36.	.0160	-0112	-0036	-0055	-0329	-0301	1046.	
.3850	-9.	113.	117.	70.	196.	-95.	.0159	-0136	-0045	-0124	-0351	-0199	853.	
.3860	-138.	125.	150.	20.	141.	-131.	.0153	-0162	-0054	-0188	-0369	-0099	721.	
.3870	-202.	160.	161.	-24.	84.	-142.	.0143	-0191	-0061	-0245	-0382	-0003	624.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.10.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	53	MEMBER	2	SEQUENCE	174	LOCATION	END	TYPE	EL	DZ	RX	RY	RZ	STRESS
---------	----	--------	---	----------	-----	----------	-----	------	----	----	----	----	----	--------

.3790	1359.	265.	-524.	511.	387.	394.	.0124	-.0060	-.0012	.0264	-.0135	-.0695	2809.
.3800	1153.	226.	-405.	441.	373.	317.	.0135	-.0061	-.0016	.0205	-.0181	-.0643	2458.
.3810	916.	190.	-274.	360.	354.	230.	.0146	-.0067	-.0019	.0143	-.0226	-.0575	2070.
.3820	661.	159.	-144.	276.	327.	176.	.0154	-.0077	-.0023	.0080	-.0266	-.0493	1676.
.3830	407.	134.	-30.	197.	291.	43.	.0159	-.0092	-.0028	.0014	-.0301	-.0401	1322.
.3840	177.	118.	58.	128.	247.	-36.	.0160	-.0112	-.0036	-.0055	-.0329	-.0301	1046.
.3850	-9.	113.	117.	70.	196.	-95.	.0159	-.0136	-.0045	-.0124	-.0351	-.0199	853.
.3860	-138.	125.	150.	20.	141.	-131.	.0153	-.0162	-.0054	-.0188	-.0369	-.0099	721.
.3870	-202.	160.	161.	-24.	84.	-142.	.0143	-.0191	-.0061	-.0245	-.0382	-.0003	624.

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DIC/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.10.

S/RV PIPING KEWAUNEE GK108F 2 RUP DISK
2 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	53	MEMBER	2	SEQUENCE	174	LOCATION	END	TYPE	EL					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3880	-201.	208.	153.	-62.	28.	-125.	.0130	-.0221	-.0065	-.0292	-.0391	.0087	534.	
.3890	-142.	253.	129.	-92.	-25.	-80.	.0114	-.0251	-.0066	-.0328	-.0397	.0167	467.	
.3900	-37.	295.	92.	-113.	-76.	-17.	.0094	-.0278	-.0063	-.0352	-.0397	.0229	512.	
.3910	102.	347.	46.	-130.	-122.	52.	.0071	-.0296	-.0059	-.0368	-.0389	.0272	695.	
.3920	256.	413.	-6.	-149.	-166.	116.	.0043	-.0305	-.0051	-.0379	-.0375	.0301	938.	
.3930	401.	470.	-56.	-165.	-207.	170.	.0009	-.0303	-.0043	-.0387	-.0356	.0315	1174.	
.3940	520.	499.	-96.	-176.	-241.	210.	-.0028	-.0291	-.0033	-.0386	-.0329	.0309	1363.	
.3950	610.	507.	-120.	-186.	-266.	234.	-.0067	-.0269	-.0022	-.0374	-.0296	.0284	1495.	
.3960	667.	508.	-117.	-206.	-283.	237.	-.0108	-.0236	-.0008	-.0353	-.0262	.0245	1580.	
.3970	661.	499.	-82.	-240.	-292.	217.	-.0152	-.0193	.0010	-.0326	-.0231	.0194	1625.	
.3980	642.	463.	-12.	-282.	-290.	172.	-.0195	-.0141	.0031	-.0289	-.0201	.0130	1640.	
.3990	553.	395.	87.	-326.	-278.	107.	-.0236	-.0082	.0053	-.0246	-.0169	.0051	1650.	
.4000	427.	312.	202.	-374.	-259.	25.	-.0274	-.0018	.0075	-.0203	-.0139	-.0037	1700.	

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)
.0670	-1555.	-1108.	2059.	-1307.	-129.	-449.	.0184	.0188	.0576	.0245	.0144	-.0868	5181.

SECTION	54	MEMBER	1	SEQUENCE	174	LOCATION	BEG	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	0.	0.	0.	-0.	-0.	0.	-.0000	-.0000	.0000	-.0000	.0000	.0000	0.	
.0020	0.	0.	0.	-0.	-0.	-0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	1.	
.0030	0.	0.	-0.	-0.	-1.	-0.	.0000	-.0000	-.0000	-.0000	-.0000	.0000	2.	
.0040	-2.	0.	-1.	0.	-1.	-1.	-.0000	-.0000	-.0000	-.0000	-.0001	-.0000	5.	
.0050	-6.	-0.	-3.	1.	-3.	-2.	-.0000	.0000	-.0000	.0001	-.0003	-.0001	12.	
.0060	-15.	-3.	-5.	2.	-5.	-4.	-.0001	.0000	-.0001	.0002	-.0006	-.0002	24.	
.0070	-28.	-6.	-7.	2.	-7.	-8.	-.0003	-.0000	-.0003	.0004	-.0011	-.0003	41.	
.0080	-44.	-8.	-8.	1.	-10.	-14.	-.0005	-.0001	-.0007	.0005	-.0018	-.0003	65.	
.0090	-70.	-12.	-5.	-3.	-13.	-24.	-.0010	-.0002	-.0012	.0006	-.0026	-.0005	101.	
.0100	-116.	-23.	1.	-6.	-13.	-39.	-.0016	-.0002	-.0020	.0011	-.0036	-.0009	156.	
.0110	-188.	-43.	13.	-9.	-8.	-63.	-.0026	-.0003	-.0030	.0019	-.0047	-.0017	238.	

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DIC/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.10.

S/RV PIPING KEWAUNEE GK108F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	174	LOCATION	BEG	TYPE	RU					
---------	----	--------	---	----------	-----	----------	-----	------	----	--	--	--	--	--

.0030	0.	0.	-0.	-0.	-1.	-0.	.0000	-.0000	-.0000	-.0000	-.0000	.0000	2.
.0040	-2.	0.	-1.	0.	-1.	-1.	-.0000	-.0000	-.0000	-.0000	-.0001	-.0000	5.
.0050	-6.	-0.	-3.	1.	-3.	-2.	-.0000	.0000	-.0000	.0001	-.0003	-.0001	12.
.0060	-15.	-3.	-5.	2.	-5.	-4.	-.0001	.0000	-.0001	.0002	-.0006	-.0002	24.
.0070	-28.	-6.	-7.	2.	-7.	-8.	-.0003	-.0000	-.0003	.0004	-.0011	-.0003	41.
.0080	-44.	-8.	-8.	1.	-10.	-14.	-.0005	-.0001	-.0007	.0005	-.0018	-.0003	65.
.0090	-70.	-12.	-5.	-3.	-13.	-24.	-.0010	-.0002	-.0012	.0006	-.0026	-.0005	101.
.0100	-116.	-23.	1.	-6.	-13.	-39.	-.0016	-.0002	-.0020	.0011	-.0036	-.0009	156.
.0110	-188.	-43.	13.	-9.	-8.	-63.	-.0026	-.0003	-.0030	.0019	-.0047	-.0017	238.

ADLPIPE PAGE 2038

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.10.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	174	LOCATION	BEG	TYPE	RU	DX	DY	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ				(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)										
.0120	-283.	-74.	32.	-13.	4.	-94.				-.0039	-.0004	-.0044	.0031	-.0058	-.0025	356.
.0130	-392.	-113.	60.	-22.	25.	-133.				-.0058	-.0008	-.0061	.0046	-.0066	-.0031	512.
.0140	-493.	-152.	93.	-37.	55.	-174.				-.0081	-.0015	-.0081	.0063	-.0070	-.0031	696.
.0150	-571.	-185.	126.	-59.	94.	-208.				-.0106	-.0023	-.0105	.0079	-.0068	-.0025	880.
.0160	-598.	-208.	154.	-83.	137.	-222.				-.0131	-.0031	-.0129	.0090	-.0060	-.0011	1023.
.0170	-550.	-216.	172.	-103.	181.	-206.				-.0152	-.0037	-.0150	.0092	-.0043	.0010	1091.
.0180	-413.	-196.	172.	-111.	222.	-153.				-.0166	-.0037	-.0162	.0084	-.0013	.0034	1088.
.0190	-195.	-148.	145.	-101.	256.	-72.				-.0167	-.0033	-.0159	.0070	.0030	.0057	1062.
.0200	93.	-62.	83.	-70.	282.	27.				-.0152	-.0025	-.0136	.0054	.0085	.0073	1090.
.0210	399.	46.	-21.	-10.	299.	127.				-.0120	-.0013	-.0088	.0048	.0148	.0074	1212.
.0220	599.	96.	-168.	100.	306.	204.				-.0073	.0003	-.0018	.0079	.0212	.0046	1423.
.0230	719.	113.	-351.	240.	302.	256.				-.0019	.0017	.0067	.0133	.0265	.0006	1728.
.0240	860.	157.	-546.	361.	286.	299.				.0034	.0021	.0150	.0178	.0294	-.0017	2052.
.0250	1087.	281.	-706.	404.	255.	342.				.0085	.0014	.0214	.0185	.0308	-.0017	2247.
.0260	1291.	420.	-775.	441.	215.	373.				.0175	.0012	.0252	.0163	.0331	-.0030	2301.
.0270	1282.	408.	-752.	465.	192.	392.				.0178	.0027	.0262	.0156	.0358	-.0084	2383.
.0280	1287.	376.	-676.	452.	198.	448.				.0199	.0046	.0245	.0109	.0359	-.0116	2490.
.0290	1533.	516.	-535.	329.	204.	535.				.0205	.0048	.0210	-.0038	.0355	-.0080	2465.
.0300	1539.	549.	-269.	177.	180.	542.				.0227	.0051	.0176	-.0172	.0403	-.0072	2232.
.0310	1198.	447.	50.	37.	153.	452.				.0262	.0061	.0156	-.0250	.0440	-.0127	1788.
.0320	624.	407.	279.	-76.	112.	316.				.0290	.0061	.0167	-.0317	.0412	-.0174	1283.
.0330	393.	348.	367.	-107.	11.	122.				.0308	.0048	.0211	-.0333	.0343	-.0197	608.
.0340	-745.	197.	354.	-75.	-125.	-157.				.0329	.0032	.0264	-.0249	.0233	-.0256	800.
.0350	-867.	129.	319.	-86.	-249.	-458.				.0344	.0013	.0286	-.0130	.0073	-.0349	1972.
.0360	-1280.	136.	342.	-151.	-364.	-678.				.0332	.0002	.0265	-.0053	-.0071	-.0410	2920.
.0370	-1617.	-24.	462.	-196.	-445.	-773.				.0277	.0015	.0199	-.0014	-.0154	-.0413	3410.
.0380	-1049.	-293.	653.	-260.	-416.	-742.				.0181	.0043	.0083	-.0007	-.0212	-.0365	3320.
.0390	-1675.	-346.	887.	-460.	-295.	-606.				.0065	.0057	-.0070	-.0080	-.0239	-.0250	3045.
.0400	-1171.	-189.	1159.	-760.	-210.	-431.				-.0034	.0054	-.0215	-.0221	-.0172	-.0081	3354.
.0410	-928.	-234.	1388.	-946.	-185.	-292.				-.0096	.0066	-.0305	-.0291	.0066	.0048	3761.
.0420	-918.	-413.	1370.	-925.	-185.	-176.				-.0138	.0094	-.0311	-.0261	-.0072	.0121	3583.
.0430	-814.	-49.	1048.	-726.	-250.	-80.				-.0163	.0114	-.0223	-.0158	-.0162	.0178	2880.
.0440	-748.	-511.	506.	-396.	-439.	-102.				-.0151	.0114	-.0066	.0055	-.0247	.0197	2237.
.0450	-893.	-516.	-96.	-54.	-631.	-260.				-.0105	.0099	.0094	.0357	-.0359	.0130	2557.
.0460	-1024.	-465.	-573.	187.	-722.	-400.				-.0071	.0081	.0204	.0607	-.0492	.0045	3158.
.0470	-889.	-446.	-777.	314.	-754.	-363.				-.0089	.0070	.0253	.0673	-.0520	.0077	3338.
.0480	-599.	-549.	-679.	330.	-711.	-180.				-.0155	.0067	.0228	.0558	-.0426	.0227	3004.
.0490	-328.	-625.	-366.	190.	-504.	12.				-.0235	.0063	.0124	.0358	-.0307	.0365	2013.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.11.

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

.0410	-928.	-274.	1388.	-946.	-185.	-292.	-.0096	.0066	-.0305	-.0291	-.0066	.0048	3761.
.0420	-918.	-413.	1370.	-925.	-185.	-176.	-.0138	.0094	-.0311	-.0261	-.0072	.0121	3583.
.0430	-814.	-489.	1048.	-726.	-250.	-80.	-.0163	.0114	-.0223	-.0158	-.0162	.0178	2880.
.0440	-748.	-511.	506.	-396.	-439.	-102.	-.0151	.0114	-.0066	.0055	-.0247	.0197	2237.
.0450	-893.	-516.	-76.	-54.	-631.	-260.	-.0105	.0099	.0094	.0357	-.0250	.0130	2557.
.0460	-1024.	-465.	-573.	107.	-722.	-400.	-.0071	.0081	.0204	.0607	-.0492	.0045	3158.
.0470	-889.	-446.	-777.	314.	-754.	-353.	-.0089	.0070	.0253	.0673	-.0520	.0077	3338.
.0480	-599.	-549.	-679.	330.	-711.	-180.	-.0155	.0067	.0228	.0558	-.0426	.0227	3004.
.0490	-328.	-625.	-366.	190.	-504.	12.	-.0035	.0063	.0124	.0358	-.0307	.0365	2013.

ADLPIPE PAGE 2039

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.11.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	RU								
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0500	-49.	-538.	31.	-68.	-220.	143.	-.0301	.0046	-.0013	.0153	-.0162	.0435	1012.	
.0510	190.	-444.	379.	-205.	-13.	219.	-.0345	.0021	-.0168	-.0007	.0041	.0473	1286.	
.0520	250.	-465.	534.	-274.	126.	236.	-.0370	-.0002	-.0128	-.0100	.0174	.0495	1430.	
.0530	111.	-489.	429.	-119.	234.	160.	-.0364	-.0025	-.0074	-.0109	.0151	.0454	1148.	
.0540	-166.	-444.	141.	126.	235.	-23.	-.0311	-.0051	.0041	-.0009	.0093	.0315	998.	
.0550	-490.	-367.	-210.	393.	131.	-262.	-.0222	-.0078	.0183	.0156	.0076	.0116	1830.	
.0560	-713.	-258.	-536.	616.	80.	-453.	-.0146	-.0100	.0296	.0269	.0026	-.0056	2869.	
.0570	-731.	-159.	-725.	758.	149.	-505.	-.0117	-.0107	.0349	.0267	-.0028	-.0152	3444.	
.0580	-536.	-110.	-677.	792.	267.	-402.	-.0128	-.0097	.0338	.0177	.0048	-.0185	3461.	
.0590	-114.	-30.	-429.	672.	429.	-199.	-.0155	-.0081	.0265	.0014	.0233	-.0183	3068.	
.0600	485.	197.	-131.	438.	660.	38.	-.0180	-.0064	.0151	-.0206	.0000	-.0164	2961.	
.0610	1086.	434.	82.	250.	860.	283.	-.0190	-.0036	.0060	-.0410	.0539	-.0151	3505.	
.0620	1535.	543.	117.	238.	920.	528.	-.0177	.0014	.0048	-.0512	.0663	-.0181	4058.	
.0630	1822.	617.	-98.	389.	865.	717.	-.0134	.0072	.0119	-.0501	.0683	-.0266	4437.	
.0640	1947.	753.	-547.	635.	731.	762.	-.0055	.0117	.0247	-.0389	.0569	-.0398	4601.	
.0650	1884.	901.	-1112.	926.	508.	659.	.0050	.0144	.0400	-.0176	.0418	-.0567	4646.	
.0660	1727.	1021.	-1628.	1180.	266.	518.	.0143	.0165	.0528	.0077	.0280	-.0748	4910.	
.0670	1622.	1102.	-1936.	1307.	129.	449.	.0184	.0188	.0576	.0245	.0144	-.0868	5181.	
.0680	1563.	1084.	-1894.	1270.	124.	470.	.0168	.0216	.0516	.0261	.0071	-.0878	5078.	
.0690	1526.	919.	-1479.	1046.	212.	551.	.0112	.0240	.0357	.0163	.0124	-.0801	4484.	
.0700	1596.	846.	-832.	629.	373.	662.	.0032	.0247	.0133	-.0001	.0244	-.0681	3684.	
.0710	1690.	839.	-154.	149.	558.	743.	-.0049	.0233	-.0096	-.0176	.0350	-.0530	3514.	
.0720	1518.	682.	391.	-187.	668.	711.	-.0103	.0209	-.0258	-.0272	.0417	-.0376	3710.	
.0730	1026.	391.	677.	-310.	648.	543.	-.0111	.0177	-.0316	-.0220	.0408	-.0269	3361.	
.0740	442.	195.	657.	-294.	502.	272.	-.0071	.0130	-.0274	-.0036	.0287	-.0231	2398.	
.0750	-150.	91.	418.	-187.	244.	-71.	.0009	.0070	-.0163	.0230	.0099	-.0229	1178.	
.0760	-791.	-81.	121.	-13.	-68.	-432.	.0105	.0010	-.0030	.0516	-.0089	-.0220	1632.	
.0770	-1339.	-287.	-87.	126.	-320.	-703.	.0178	-.0037	.0067	.0743	-.0255	-.0182	2921.	
.0780	-1612.	-430.	-91.	123.	-447.	-817.	.0202	-.0073	.0090	.0851	-.0353	-.0095	3495.	
.0790	-1670.	-572.	173.	-36.	-457.	-801.	.0181	-.0102	.0029	.0834	-.0323	.0056	3445.	
.0800	-1623.	-736.	644.	-318.	-357.	-733.	.0130	-.0130	-.0100	.0724	-.0195	.0252	3266.	
.0810	-1439.	-800.	1156.	-672.	-176.	-627.	.0062	-.0159	-.0256	.0566	-.0055	.0450	3494.	
.0820	-1181.	-774.	1547.	-973.	-16.	-501.	-.0003	-.0181	-.0375	.0434	.0073	.0603	4087.	
.0830	-1066.	-812.	1703.	-1079.	38.	-413.	-.0037	-.0184	-.0413	.0396	.0165	.0678	4316.	
.0840	-1123.	-881.	1561.	-977.	-6.	-401.	-.0028	-.0173	-.0362	.0462	.0157	.0664	3943.	
.0850	-1162.	-819.	1157.	-759.	-130.	-438.	.0021	-.0158	-.0242	.0595	.0054	.0571	3308.	
.0860	-1106.	-653.	640.	-495.	-328.	-473.	.0095	-.0139	-.0080	.0758	-.0043	.0427	2834.	
.0870	-1000.	-517.	179.	-236.	-522.	-461.	.0168	-.0108	.0081	.0786	-.0089	.0278	2745.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.11.

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

.0790	-1670.	-572.	173.	-36.	-457.	-801.	.0181	-.0102	.0029	.0834	-.0323	.0056	3445.
.0800	-1623.	-736.	644.	-318.	-357.	-733.	.0130	-.0130	-.0100	.0724	-.0195	.0252	3266.
.0810	-1439.	-800.	1156.	-672.	-176.	-627.	.0062	-.0159	-.0256	.0566	-.0055	.0450	3494.
.0820	-1181.	-774.	1547.	-973.	-16.	-501.	-.0003	-.0181	-.0375	.0434	.0073	.0603	4087.
.0830	-1066.	-812.	1703.	-1079.	38.	-413.	-.0037	-.0184	-.0413	.0396	.0165	.0678	4316.
.0840	-1123.	-881.	1561.	-977.	-6.	-401.	-.0028	-.0173	-.0362	.0462	.0157	.0664	3943.
.0850	-1162.	-819.	1157.	-759.	-130.	-438.	.0021	-.0158	-.0242	.0595	.0054	.0571	3308.
.0860	-1106.	-653.	640.	-495.	-328.	-473.	.0095	-.0139	-.0080	.0758	-.0043	.0427	2834.
.0870	-1000.	-517.	179.	-236.	-522.	-461.	.0168	-.0108	.0081	.0886	-.0089	.0278	2745.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.11.

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	54	MEMBER	1	SEQUENCE	174	LOCATION	BEG	TYPE	RU	DX	DY	DZ	PX	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)										
.0880	-787.	-405.	-112.	-65.	-608.	-364.	.0216	-.0067	.0198	.0899	-.0101	.0174	2657.			
.0890	-395.	-253.	-177.	-42.	-589.	-170.	.0234	-.0022	.0256	.0775	-.0040	.0125	2294.			
.0900	82.	-86.	-36.	-147.	-526.	74.	.0232	.0023	.0269	.0568	.0123	.0100	2056.			
.0910	478.	63.	189.	-305.	-434.	290.	.0223	.0064	.0256	.0340	.0298	.0069	2258.			
.0920	707.	186.	339.	-418.	-340.	425.	.0214	.0100	.0246	.0146	.0389	.0014	2563.			
.0930	730.	265.	311.	-403.	-315.	455.	.0210	.0129	.0265	.0052	.0395	-.0088	2555.			
.0940	553.	315.	92.	-258.	-374.	373.	.0214	.0150	.0315	.0092	.0331	-.0254	2194.			
.0950	255.	392.	-250.	-61.	-450.	204.	.0219	.0163	.0360	.0214	.0184	-.0467	1858.			
.0960	-55.	479.	-569.	104.	-492.	18.	.0213	.0172	.0365	.0326	.0006	-.0670	1878.			
.0970	-279.	518.	-716.	132.	-487.	-93.	.0180	.0187	.0310	.0364	-.0109	-.0817	1972.			
.0980	-328.	533.	-642.	133.	-398.	-72.	.0108	.0213	.0182	.0289	-.0145	-.0894	1591.			
.0990	-183.	572.	-400.	-39.	-211.	59.	.0008	.0246	-.0009	.0108	-.0140	-.0904	830.			
.1000	76.	624.	-103.	-259.	10.	234.	-.0096	.0281	-.0228	-.0114	-.0106	-.0877	1303.			
.1010	366.	684.	111.	-431.	189.	399.	-.0182	.0318	-.0428	-.0291	-.0068	-.0857	2304.			
.1020	655.	774.	121.	-487.	298.	539.	-.0237	.0356	-.0574	-.0374	-.0093	-.0873	2932.			
.1030	905.	859.	-98.	-392.	324.	642.	-.0256	.0396	-.0650	-.0364	-.0200	-.0912	3057.			
.1040	1084.	894.	-462.	-170.	256.	699.	-.0235	.0432	-.0658	-.0283	-.0339	-.0949	2853.			
.1050	1233.	917.	-846.	78.	142.	728.	-.0180	.0459	-.0620	-.0176	-.0465	-.0969	2783.			
.1060	1406.	960.	-1127.	253.	52.	755.	-.0111	.0471	-.0567	-.0095	-.0552	-.0948	2980.			
.1070	1563.	939.	-1215.	332.	14.	789.	-.0042	.0468	-.0516	-.0076	-.0566	-.0850	3196.			
.1080	1686.	841.	-1099.	319.	25.	811.	.0017	.0445	-.0472	-.0130	-.0498	-.0658	3253.			
.1090	1745.	744.	-838.	218.	84.	786.	.0068	.0405	-.0435	-.0218	-.0391	-.0427	3061.			
.1100	1476.	481.	-529.	124.	175.	679.	.0119	.0362	-.0398	-.0218	-.0294	-.0249	2659.			
.1110	1070.	183.	-280.	69.	237.	486.	.0166	.0303	-.0351	-.0160	-.0232	-.0068	2036.			
.1120	677.	-19.	-136.	46.	250.	221.	.0205	.0221	-.0299	-.0079	-.0229	.0145	1259.			
.1130	198.	-192.	-41.	36.	259.	-74.	.0236	.0143	-.0256	.0059	-.0279	.0304	1013.			
.1140	-366.	-437.	102.	20.	278.	-334.	.0258	.0089	-.0235	.0226	-.0320	.0392	1625.			
.1150	-836.	-737.	340.	-23.	311.	-519.	.0261	.0058	-.0236	.0316	-.0301	.0503	2262.			
.1160	-1106.	-975.	652.	-135.	399.	-619.	.0241	.0038	-.0261	.0291	-.0239	.0665	2796.			
.1170	-1163.	-1044.	1010.	-351.	546.	-629.	.0208	.0031	-.0296	.0197	-.0146	.0803	3373.			
.1180	-1209.	-1147.	1379.	-575.	657.	-572.	.0188	.0051	-.0306	.0113	.0010	.0873	3896.			
.1190	-1083.	-1192.	1620.	-779.	665.	-472.	.0189	.0080	-.0266	-.0016	.0155	.0960	4109.			
.1200	-844.	-1106.	1581.	-772.	570.	-379.	.0213	.0115	-.0165	-.0141	.0187	.1036	3852.			
.1210	-784.	-1008.	1237.	-617.	364.	-326.	.0267	.0175	-.0002	-.0104	.0126	.0952	2939.			
.1220	-743.	-840.	659.	-337.	68.	-274.	.0338	.0259	.0196	.0054	.0012	.0724	1642.			
.1230	-700.	-731.	4.	17.	-242.	-222.	.0398	.0355	.0378	.0216	-.0122	.0485	1228.			
.1240	-514.	-574.	-558.	291.	-447.	-136.	.0419	.0440	.0490	.0271	-.0265	.0317	2055.			
.1250	-153.	-304.	-849.	349.	-513.	40.	.0388	.0516	.0504	.0222	-.0323	.0178	2321.			

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ADLPIPE STRESS ANALYSIS

83/12/02.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNIT

.1170	-1163.	-1044.	1010.	-351.	546.	-629.	.0208	.0031	-.0296	.0197	-.0146	.0803	3373.
.1180	-1209.	-1147.	1379.	-575.	657.	-572.	.0198	.0051	-.0306	.0113	.0010	.0873	3896.
.1190	-1083.	-1192.	1620.	-739.	665.	-472.	.0189	.0080	-.0266	-.0016	.0155	.0960	4109.
.1200	-844.	-1106.	1581.	-772.	570.	-379.	.0213	.0115	-.0165	-.0141	.0187	.1036	3852.
.1210	-784.	-1008.	1237.	-617.	364.	-326.	.0267	.0175	-.0002	-.0104	.0126	.0952	2939.
.1220	-743.	-840.	659.	-337.	68.	-274.	.0338	.0259	.0196	.0054	.0012	.0724	1642.
.1230	-700.	-731.	4.	17.	-242.	-222.	.0398	.0355	.0378	.0216	-.0122	.0485	1228.
.1240	-514.	-574.	-558.	291.	-447.	-136.	.0419	.0440	.0490	.0271	-.0265	.0317	2055.
.1250	-153.	-304.	-849.	349.	-513.	40.	.0388	.0516	.0504	.0222	-.0323	.0178	2321.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.11.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	174	LOCATION	BEG	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1260	230.	-116.	-775.	209.	-485.	308.	.0320	.0593	.0428	.0087	-.0219	.0058	2283.		
.1270	730.	36.	-451.	-77.	-376.	623.	.0226	.0653	.0284	-.0215	-.0063	.0063	2732.		
.1280	1081.	92.	-85.	-354.	-231.	868.	.0130	.0692	.0123	-.0561	.0046	.0136	3605.		
.1290	1194.	174.	129.	-538.	-143.	992.	.0058	.0711	.0005	-.0767	.0091	.0125	4246.		
.1300	1064.	272.	110.	-573.	-190.	972.	.0025	.0709	-.0035	-.0771	.0070	-.0000	4273.		
.1310	587.	182.	-119.	-411.	-348.	769.	.0031	.0680	-.0007	-.0641	-.0059	-.0131	3505.		
.1320	19.	89.	-470.	-179.	-528.	429.	.0057	.0609	.0050	-.0503	-.0308	-.0185	2624.		
.1330	-581.	38.	-753.	-3.	-698.	54.	.0086	.0514	.0098	-.0339	-.0528	-.0233	2613.		
.1340	-1091.	-5.	-795.	24.	-812.	-239.	.0102	.0412	.0101	-.0210	-.0624	-.0268	3161.		
.1350	-1463.	-166.	-539.	-89.	-795.	-423.	.0088	.0308	.0029	-.0242	-.0635	-.0167	3379.		
.1360	-1736.	-466.	-62.	-281.	-640.	-526.	.0046	.0198	-.0109	-.0419	-.0597	.0080	3268.		
.1370	-1705.	-581.	473.	-568.	-428.	-536.	-.0012	.0379	-.0274	-.0631	-.0509	.0358	3324.		
.1380	-1548.	-586.	912.	-834.	-264.	-507.	-.0054	-.0037	-.0413	-.0743	-.0383	.0556	3774.		
.1390	-1412.	-611.	1111.	-944.	-173.	-524.	-.0056	-.0145	-.0501	-.0785	-.0334	.0722	4082.		
.1400	-1352.	-666.	998.	-837.	-156.	-610.	-.0013	-.0237	-.0520	-.0776	-.0416	.0867	3710.		
.141	-1369.	-692.	634.	-562.	-237.	-695.	.0065	-.0301	-.0467	-.0648	-.0542	.0890	3451.		
.1420	-1202.	-532.	156.	-270.	-377.	-692.	.0156	-.0339	-.0371	-.0479	-.0656	.0814	3110.		
.1430	-947.	-390.	-259.	-5.	-493.	-639.	.0249	-.0357	-.0281	-.0391	-.0743	.0755	3014.		
.1440	-640.	-288.	-499.	175.	-511.	-569.	.0328	-.0362	-.0233	-.0450	-.0795	.0766	2930.		
.1450	-246.	-102.	-528.	205.	-434.	-442.	.0380	-.0352	-.0230	-.0582	-.0753	.0753	2435.		
.1460	157.	113.	-362.	114.	-305.	-247.	.0405	-.0317	-.0255	-.0724	-.0598	.0667	1525.		
.1470	579.	317.	-87.	-75.	-141.	-47.	.0412	-.0268	-.0297	-.0954	-.1430	.0609	570.		
.1480	788.	383.	199.	-138.	16.	65.	.0423	-.0206	-.0328	-.1216	-.0311	.0571	574.		
.1490	840.	501.	388.	-202.	106.	104.	.0446	-.0134	-.0316	-.1393	-.0233	.0442	936.		
.1500	799.	720.	431.	-215.	92.	97.	.0476	-.0051	-.0241	-.1437	-.0181	.0196	946.		
.1510	479.	761.	352.	-96.	10.	-5.	.0512	.0041	-.0117	-.1394	-.0178	-.0065	362.		
.1520	7.	677.	201.	91.	-63.	-199.	.0540	.0125	.0020	-.1345	-.0247	-.0253	851.		
.1530	-468.	615.	77.	224.	-111.	-407.	.0545	.0200	.0142	-.1247	-.0293	-.0429	1783.		
.1540	-731.	686.	67.	213.	-129.	-530.	.0513	.0269	.0225	-.1125	-.0245	-.0597	2186.		
.1550	-865.	670.	207.	126.	-79.	-560.	.0436	.0341	.0251	-.1060	-.0141	-.0663	2163.		
.1560	-1052.	386.	448.	57.	58.	-527.	.0316	.0421	.0222	-.1047	-.0037	-.0600	1991.		
.1570	-1033.	170.	676.	-48.	228.	-407.	.0160	.0494	.0164	-.1032	.0060	-.0475	1753.		
.1580	-894.	47.	824.	-158.	347.	-252.	-.0006	.0553	.0111	-.0907	.0188	-.0371	1706.		
.1590	-851.	-164.	842.	-180.	408.	-160.	-.0158	.0593	.0081	-.0683	.0287	-.0248	1769.		
.1600	-823.	-417.	690.	-103.	447.	-136.	-.0296	.0604	.0078	-.0437	.0279	-.0042	1786.		
.1610	-723.	-618.	398.	42.	432.	-109.	-.0423	.0594	.0115	-.0148	.0233	.0186	1669.		
.1620	-639.	-832.	59.	233.	343.	-46.	-.0533	.0580	.0190	-.0219	.0237	.0365	1556.		
.1630	-458.	-1000.	-266.	403.	258.	46.	-.0625	.0555	.0267	.0527	.0234	.0567	1795.		

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DIS/ADLPIPE

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18.29.11.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

.1550	-865.	670.	207.	126.	-79.	-560.	.0436	.0341	.0251	-.1060	-.0141	-.0663	2163.
.1560	-1052.	376.	448.	57.	58.	-527.	.0316	.0421	.0222	-.1047	-.0037	-.0600	1991.
.1570	-1033.	170.	676.	-48.	222.	-407.	.0160	.0494	.0164	-.1032	.0060	-.0475	1753.
.1580	-394.	47.	824.	-152.	747.	-252.	-.0006	.0553	.0111	-.0907	.0128	-.0371	1706.
.1590	-851.	-164.	842.	-180.	400.	-160.	-.0158	.0593	.0081	-.0683	.0287	-.0248	1769.
.1600	-823.	-417.	690.	-103.	447.	-136.	-.0296	.0604	.0078	-.0437	.0279	-.0042	1786.
.1610	-723.	-618.	306.	42.	432.	-109.	-.0423	.0594	.0115	-.0148	.0233	.0186	1669.
.1620	-639.	-832.	59.	233.	343.	-46.	-.0533	.0580	.0190	.0219	.0237	.0365	1556.
.1630	-458.	-1000.	-266.	403.	258.	46.	-.0625	.0555	.0267	.0527	.0234	.0567	1795.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.11.

S/RV PIPING KEWAUNEE GKW03F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	174	LOCATION	REG	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ				DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1640	-253.	-1204.	-521.	549.	213.	133.	-.0698	.0516	.0325	.0723	.0211	.0833	2254.		
.1650	-40.	-1409.	-688.	660.	170.	234.	-.0758	.0467	.0367	.0866	.0234	.1091	2690.		
.1660	323.	-1430.	-801.	694.	129.	373.	-.0810	.0406	.0393	.0975	.0292	.1293	2980.		
.1670	630.	-1430.	-884.	721.	110.	484.	-.0850	.0339	.0398	.1044	.0328	.1448	3267.		
.1680	817.	-1460.	-954.	771.	115.	520.	-.0867	.0266	.0381	.1044	.0311	.1579	3499.		
.1690	878.	-1466.	-1006.	830.	110.	499.	-.0862	.0195	.0351	.1028	.0288	.1619	3638.		
.1700	930.	-1316.	-1033.	844.	100.	470.	-.0842	.0129	.0311	.1001	.0271	.1533	3625.		
.1710	1004.	-1057.	-1001.	809.	115.	431.	-.0811	.0069	.0255	.0889	.0237	.1391	3447.		
.1720	833.	-965.	-864.	793.	152.	332.	-.0760	.0024	.0185	.0710	.0215	.1220	3260.		
.1730	650.	-802.	-650.	719.	213.	213.	-.0697	-.0015	.0106	.0470	.0208	.1002	2912.		
.1740	541.	-463.	-395.	565.	281.	108.	-.0627	-.0047	.0029	.0222	.0230	.0698	2390.		
.1750	378.	-139.	-123.	410.	338.	-0.	-.0546	-.0064	-.0034	-.0026	.0271	.0350	1984.		
.1760	202.	133.	125.	291.	381.	-115.	-.0456	-.0067	-.0081	-.0311	.0283	.0026	1842.		
.1770	2.	378.	315.	212.	390.	-220.	-.0356	-.0053	-.0102	-.0569	.0276	-.0312	1849.		
.1780	-83.	742.	428.	127.	347.	-275.	-.0251	-.0025	-.0094	-.0768	.0268	-.0691	1728.		
.1790	-165.	1063.	483.	78.	254.	-311.	-.0145	.0019	-.0061	-.0905	.0269	-.1068	1529.		
.1800	-259.	1256.	493.	79.	152.	-328.	-.0047	.0072	-.0013	-.1022	.0249	-.1370	1382.		
.1810	-191.	1484.	462.	62.	64.	-298.	.0029	.0124	.0040	-.1131	.0211	-.1588	1160.		
.1820	-105.	1667.	431.	34.	-34.	-226.	.0083	.0179	.0101	-.1151	.0224	-.1785	862.		
.1830	6.	1794.	409.	-11.	-129.	-128.	.0114	.0233	.0160	-.1113	.0267	-.1923	681.		
.1840	114.	1809.	380.	-47.	-198.	-30.	.0121	.0279	.0209	-.1059	.0290	-.1952	767.		
.1850	212.	1738.	323.	-63.	-257.	68.	.0104	.0316	.0251	-.0964	.0296	-.1897	1019.		
.1860	350.	1679.	224.	-78.	-330.	175.	-.0064	.0342	.0290	-.0789	.0309	-.1812	1423.		
.1870	401.	1533.	95.	-60.	-407.	261.	.0008	.0360	.0322	-.0531	.0318	-.1706	1817.		
.1880	432.	1325.	-49.	-25.	-453.	314.	-.0064	.0362	.0335	-.0267	.0287	-.1527	2058.		
.1890	434.	1050.	-166.	15.	-477.	345.	-.0149	.0350	.0330	-.0005	.0253	-.1289	2187.		
.1900	426.	759.	-218.	24.	-476.	377.	-.0244	.0326	.0309	.0267	.0261	-.1040	2269.		
.1910	480.	529.	-194.	-20.	-443.	413.	-.0344	.0288	.0273	.0498	.0290	-.0770	2264.		
.1920	457.	231.	-92.	-90.	-377.	416.	-.0434	.0240	.0227	.0669	.0328	-.0470	2122.		
.1930	347.	-108.	50.	-138.	-305.	380.	-.0510	.0187	.0189	.0795	.0373	-.0170	1890.		
.1940	207.	-381.	172.	-173.	-247.	318.	-.0570	.0129	.0170	.0917	.0415	.0078	1636.		
.1950	9.	-594.	236.	-172.	-209.	212.	-.0610	.0067	.0176	.1046	.0433	.0259	1282.		
.1960	-293.	-816.	240.	-109.	-185.	38.	-.0627	.0004	.0197	.1162	.0415	.0395	815.		
.1970	-636.	-1007.	207.	-13.	-163.	-175.	-.0627	-.0057	.0220	.1255	.0371	.0485	892.		
.1980	-913.	-1097.	172.	66.	-124.	-361.	-.0624	-.0109	.0232	.1321	.0331	.0508	1446.		
.1990	-1076.	-1115.	186.	106.	-50.	-478.	-.0625	-.0146	.0219	.1331	.0318	.0487	1837.		
.2000	-1111.	-1116.	275.	107.	72.	-514.	-.0634	-.0166	.0173	.1245	.0331	.0471	1979.		
.2010	-982.	-1068.	421.	61.	237.	-467.	-.0647	-.0169	.0101	.1070	.0367	.0457	1968.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKW03F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	174	LOCATION	REG	TYPE	RU						
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.1930	347.	-100.	50.	-138.	-305.	380.	-.0510	.0187	.0189	.0795	.0373	-.0170	1890.
.1940	207.	-301.	172.	-173.	-247.	318.	-.0570	.0129	.0170	.0917	.0415	-.0078	1636.
.1950	9.	-594.	236.	-172.	-209.	212.	-.0610	.0067	.0176	.1046	.0433	.0259	1282.
.1960	-293.	-316.	240.	-109.	-185.	38.	-.0627	.0004	.0197	.1162	.0415	.0395	815.
.1970	-636.	-1007.	207.	-13.	-163.	-175.	-.0627	-.0057	.0220	.1255	.0371	.0485	892.
.1980	-917.	-1097.	172.	66.	-124.	-361.	-.0624	-.0109	.0232	.1321	.0331	.0508	1446.
.1990	-1076.	-1115.	186.	106.	-50.	-478.	-.0625	-.0146	.0219	.1331	.0318	.0487	1837.
.2000	-1111.	-1116.	275.	107.	72.	-514.	-.0634	-.0166	.0173	.1245	.0331	.0471	1979.
.2010	-982.	-1068.	421.	61.	237.	-467.	-.0647	-.0169	.0101	.1070	.0367	.0457	1968.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.11.

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

CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	174	LOCATION	BEG	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2020	-699.	-924.	568.	-16.	411.	-344.	-.0656	-.0157	.0023	.0868	.0429	.0403	2004.		
.2030	-330.	-715.	641.	-71.	559.	-179.	-.0653	-.0129	-.0036	.0684	.0495	.0299	2206.		
.2040	63.	-494.	577.	-50.	661.	-8.	-.0632	-.0090	-.0059	.0525	.0523	.0171	2473.		
.2050	447.	-265.	354.	60.	703.	148.	-.0588	-.0042	-.0040	.0410	.0496	.0017	2690.		
.2060	813.	0.	5.	228.	675.	292.	-.0525	.0013	.0020	.0363	.0439	-.0186	2875.		
.2070	1156.	287.	-401.	417.	598.	429.	-.0450	.0072	.0104	.0366	.0370	-.0419	3156.		
.2080	1474.	543.	-781.	592.	514.	561.	-.0379	.0131	.0187	.0365	.0295	-.0630	3599.		
.2090	1758.	744.	-1062.	717.	457.	691.	-.0320	.0187	.0248	.0332	.0232	-.0797	4089.		
.2100	2005.	913.	-1195.	752.	435.	822.	-.0279	.0237	.0278	.0281	.0214	-.0937	4463.		
.2110	2203.	1067.	-1172.	689.	447.	940.	-.0256	.0278	.0274	.0216	.0242	-.1055	4660.		
.2120	2310.	1168.	-1029.	562.	487.	1022.	-.0244	.0307	.0247	.0132	.0288	-.1135	4718.		
.2130	2279.	1189.	-825.	422.	528.	1048.	-.0237	.0325	.0213	.0050	.0326	-.1183	4655.		
.2140	2102.	1167.	-628.	300.	537.	1011.	-.0226	.0332	.0191	.0010	.0348	-.1230	4418.		
.2150	1790.	1132.	-485.	210.	498.	904.	-.0204	.0326	.0191	.0030	.0342	-.1292	3933.		
.2160	1346.	1064.	-401.	165.	419.	722.	-.0169	.0308	.0209	.0096	.0300	-.1352	3178.		
.2170	815.	946.	-350.	153.	317.	490.	-.0125	.0278	.0236	.0184	.0234	-.1392	2253.		
.2180	294.	819.	-293.	137.	214.	259.	-.0084	.0240	.0257	.0273	.0173	-.1410	1355.		
.2190	-131.	709.	-192.	84.	133.	70.	-.0053	.0198	.0259	.0338	.0136	-.1396	643.		
.2200	-439.	597.	-27.	-14.	89.	-63.	-.0034	.0153	.0232	.0353	.0128	-.1333	408.		
.2210	-630.	475.	189.	-145.	78.	-138.	-.0023	.0109	.0178	.0317	.0143	-.1220	802.		
.2220	-694.	376.	408.	-289.	83.	-157.	-.0016	.0067	.0109	.0254	.0173	-.1084	1266.		
.2230	-653.	312.	567.	-410.	78.	-133.	-.0007	.0029	.0044	.0198	.0198	-.0945	1634.		
.2240	-558.	260.	614.	-468.	46.	-95.	.0010	-.0007	-.0004	.0163	.0193	-.0809	1791.		
.2250	-446.	217.	530.	-452.	-16.	-67.	.0041	-.0039	-.0028	.0157	.0143	-.0685	1706.		
.2260	-322.	204.	336.	-380.	-107.	-50.	.0083	-.0067	-.0032	.0184	.0059	-.0589	1485.		
.2270	-183.	219.	88.	-284.	-212.	-30.	.0129	-.0089	-.0024	.0227	-.0039	-.0519	1328.		
.2280	-30.	234.	-142.	-196.	-304.	5.	.0172	-.0103	-.0021	.0248	-.0137	-.0451	1351.		
.2290	133.	233.	-292.	-148.	-361.	58.	.0205	-.0110	-.0036	.0218	-.0224	-.0370	1474.		
.2300	296.	228.	-331.	-164.	-377.	126.	.0224	-.0111	-.0075	.0141	-.0284	-.0284	1606.		
.2310	435.	228.	-263.	-243.	-359.	194.	.0232	-.0107	-.0131	.0036	-.0315	-.0209	1771.		
.2320	513.	220.	-126.	-357.	-315.	240.	.0231	-.0100	-.0194	-.0086	-.0334	-.0142	1990.		
.2330	486.	179.	39.	-470.	-265.	242.	.0228	-.0091	-.0248	-.0205	-.0360	-.0085	2208.		
.2340	336.	112.	195.	-563.	-229.	191.	.0229	-.0080	-.0279	-.0298	-.0395	-.0053	2378.		
.2350	79.	40.	323.	-631.	-221.	88.	.0237	-.0066	-.0278	-.0351	-.0436	-.0053	2519.		
.2360	-255.	-36.	418.	-675.	-239.	-54.	.0254	-.0051	-.0247	-.0374	-.0483	-.0072	2680.		
.2370	-637.	-135.	492.	-694.	-269.	-216.	.0275	-.0033	-.0191	-.0380	-.0528	-.0092	2895.		
.2380	-1021.	-254.	559.	-700.	-302.	-369.	.0294	-.0010	-.0119	-.0374	-.0555	-.0107	3163.		
.2390	-1349.	-357.	628.	-709.	-326.	-491.	.0305	.0017	-.0043	-.0360	-.0555	-.0112	3443.		

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.11.

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

CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	174	LOCATION	BEG	TYPE	RU
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.2310	435.	228.	-263.	-243.	-359.	194.	.0232	-.0107	-.0131	.0036	-.0315	-.0209	1771.
.2320	513.	220.	-126.	-357.	-315.	240.	.0231	-.0100	-.0194	-.0086	-.0334	-.0142	1990.
.2330	486.	179.	39.	-470.	-265.	242.	.0228	-.0091	-.0248	-.0205	-.0360	-.0085	2208.
.2340	736.	112.	195.	-567.	-229.	191.	.0229	-.0080	-.0279	-.0298	-.0395	-.0053	2378.
.2350	79.	40.	323.	-631.	-221.	88.	.0237	-.0066	-.0278	-.0351	-.0436	-.0053	2519.
.2360	-255.	-36.	418.	-675.	-239.	-54.	.0254	-.0051	-.0247	-.0374	-.0483	-.0072	2680.
.2370	-637.	-135.	492.	-694.	-269.	-216.	.0275	-.0033	-.0191	-.0380	-.0528	-.0092	2895.
.2380	-1021.	-254.	559.	-700.	-302.	-369.	.0294	-.0010	-.0119	-.0374	-.0555	-.0107	3163.
.2390	-1349.	-367.	628.	-709.	-326.	-491.	.0305	.0017	-.0043	-.0360	-.0555	-.0112	3443.

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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	54	MEMBER	1	SEQUENCE	174	LOCATION	BEG	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2400	-1589.	-466.	699.	-726.	-334.	-575.	.0305	.0046	.0030	-.0343	-.0527	-.0098	3674.		
.2410	-1738.	-562.	759.	-740.	-327.	-619.	.0295	.0077	.0093	-.0322	-.0477	-.0060	3800.		
.2420	-1795.	-650.	785.	-738.	-310.	-619.	.0275	.0111	.0147	-.0289	-.0415	-.0008	3779.		
.2430	-1762.	-721.	753.	-708.	-294.	-577.	.0245	.0147	.0195	-.0233	-.0348	.0049	3582.		
.2440	-1660.	-781.	652.	-639.	-281.	-502.	.0209	.0184	.0237	-.0152	-.0288	.0107	3208.		
.2450	-1506.	-833.	486.	-530.	-273.	-408.	.0169	.0220	.0273	-.0052	-.0238	.0170	2698.		
.2460	-1298.	-861.	271.	-400.	-267.	-303.	.0128	.0249	.0301	.0059	-.0196	.0234	2122.		
.2470	-1040.	-857.	32.	-265.	-263.	-186.	.0086	.0272	.0319	.0169	-.0157	.0298	1556.		
.2480	-760.	-841.	-204.	-131.	-255.	-62.	.0046	.0287	.0323	.0267	-.0120	.0363	1093.		
.2490	-482.	-829.	-418.	-2.	-236.	63.	.0007	.0295	.0309	.0339	-.0087	.0431	913.		
.2500	-198.	-804.	-600.	111.	-209.	187.	-.0027	.0295	.0280	.0380	-.0058	.0499	1124.		
.2510	89.	-747.	-752.	202.	-177.	300.	-.0053	.0284	.0235	.0394	-.0036	.0558	1505.		
.2520	355.	-665.	-874.	277.	-145.	393.	-.0067	.0263	.0178	.0382	-.0025	.0602	1875.		
.2530	572.	-577.	-969.	342.	-112.	458.	-.0066	.0235	.0112	.0344	-.0032	.0629	2173.		
.2540	732.	-485.	-1034.	399.	-83.	491.	-.0050	.0200	.0042	.0279	-.0055	.0639	2384.		
.2550	835.	-382.	-1068.	443.	-58.	495.	-.0019	.0159	-.0030	.0193	-.0091	.0628	2491.		
.2560	885.	-265.	-1063.	465.	-72.	469.	.0027	.0113	-.0102	.0085	-.0137	.0598	2469.		
.2570	883.	-143.	-1015.	462.	-3.	412.	.0086	.0062	-.0175	-.0048	-.0190	.0557	2311.		
.2580	827.	-31.	-918.	434.	29.	330.	.0155	.0008	-.0247	-.0199	-.0244	.0509	2040.		
.2590	719.	65.	-778.	385.	64.	232.	.0230	-.0047	-.0316	-.0357	-.0297	.0456	1696.		
.2600	573.	151.	-609.	319.	100.	119.	.0308	-.0102	-.0380	-.0516	-.0351	.0406	1325.		
.2610	402.	227.	-426.	240.	131.	-8.	.0387	-.0159	-.0438	-.0667	-.0407	.0363	1021.		
.2620	210.	287.	-239.	153.	156.	-142.	.0464	-.0213	-.0488	-.0801	-.0464	.0328	972.		
.2630	10.	327.	-60.	65.	172.	-270.	.0537	-.0263	-.0529	-.0909	-.0519	.0301	1220.		
.2640	-177.	345.	101.	-16.	178.	-382.	.0600	-.0306	-.0559	-.0991	-.0571	.0290	1576.		
.2650	-337.	341.	238.	-90.	176.	-472.	.0652	-.0342	-.0579	-.1046	-.0619	.0301	1909.		
.2660	-462.	321.	349.	-158.	164.	-537.	.0692	-.0371	-.0589	-.1072	-.0657	.0331	2177.		
.2670	-542.	291.	433.	-223.	142.	-575.	.0720	-.0390	-.0590	-.1066	-.0680	.0377	2362.		
.2680	-577.	245.	489.	-278.	110.	-582.	.0735	-.0401	-.0582	-.1032	-.0689	.0440	2444.		
.2690	-568.	182.	512.	-318.	68.	-559.	.0737	-.0402	-.0563	-.0972	-.0685	.0522	2413.		
.2700	-515.	116.	497.	-342.	16.	-509.	.0725	-.0395	-.0534	-.0889	-.0671	.0617	2289.		
.2710	-429.	55.	446.	-352.	-49.	-443.	.0704	-.0379	-.0496	-.0782	-.0645	.0711	2121.		
.2720	-342.	-18.	367.	-347.	-124.	-369.	.0675	-.0354	-.0450	-.0653	-.0611	.0797	1947.		
.2730	-270.	-116.	272.	-325.	-203.	-292.	.0640	-.0322	-.0400	-.0510	-.0569	.0879	1797.		
.2740	-198.	-217.	170.	-294.	-281.	-215.	.0596	-.0288	-.0348	-.0364	-.0521	.0965	1719.		
.2750	-122.	-295.	74.	-272.	-354.	-144.	.0545	-.0256	-.0299	-.0220	-.0464	.1046	1752.		
.2760	-66.	-364.	7.	-264.	-418.	-85.	.0492	-.0226	-.0257	-.0080	-.0395	.1114	1674.		
.2770	-56.	-454.	-20.	-266.	-471.	-42.	.0438	-.0196	-.0222	.0045	-.0317	.1172	2026.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.11.

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

CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION 54 MEMBER 1 SEQUENCE 174 LOCATION BEG TYPE RU

.2690	-569.	182.	512.	-318.	68.	-559.	.0737	-.0402	-.0563	-.0972	-.0585	.0522	2413.
.2700	-515.	116.	497.	-342.	16.	-509.	.0725	-.0395	-.0534	-.0889	-.0571	.0617	2289.
.2710	-429.	55.	446.	-352.	-49.	-443.	.0704	-.0379	-.0496	-.0782	-.0545	.0711	2121.
.2720	-342.	-18.	367.	-347.	-124.	-369.	.0675	-.0354	-.0450	-.0653	-.0511	.0797	1947.
.2730	-270.	-116.	272.	-325.	-203.	-292.	.0640	-.0322	-.0400	-.0510	-.0569	.0879	1797.
.2740	-198.	-217.	170.	-294.	-281.	-215.	.0596	-.0288	-.0348	-.0364	-.0521	.0965	1719.
.2750	-122.	-295.	74.	-272.	-354.	-144.	.0545	-.0256	-.0299	-.0220	-.0464	.1046	1752.
.2760	-66.	-364.	7.	-264.	-418.	-85.	.0492	-.0226	-.0257	-.0080	-.0395	.1114	1874.
.2770	-56.	-454.	-20.	-266.	-471.	-42.	.0438	-.0196	-.0222	.0045	-.0317	.1172	2026.

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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	54	MEMBER	1	SEQUENCE	174	LOCATION	BEG	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2780	-88.	-557.	-11.	-273.	-512.	-16.	.0384	-.0169	-.0194	.0148	-.0236	.1223	2166.		
.2790	-151.	-640.	22.	-287.	-542.	-10.	.0331	-.0148	-.0170	.0232	-.0159	.1261	2289.		
.2800	-258.	-699.	73.	-308.	-566.	-32.	.0284	-.0132	-.0148	.0306	-.0087	.1271	2410.		
.2810	-427.	-761.	140.	-328.	-588.	-88.	.0247	-.0120	-.0130	.0371	-.0025	.1254	2535.		
.2820	-651.	-832.	212.	-335.	-604.	-175.	.0218	-.0112	-.0114	.0422	.0018	.1219	2661.		
.2830	-890.	-881.	279.	-333.	-609.	-277.	.0193	-.0110	-.0103	.0462	.0042	.1166	2791.		
.2840	-1107.	-889.	343.	-332.	-600.	-378.	.0171	-.0113	-.0099	.0491	.0054	.1095	2925.		
.2850	-1292.	-875.	416.	-336.	-575.	-471.	.0153	-.0118	-.0107	.0504	.0062	.1010	3044.		
.2860	-1430.	-854.	504.	-343.	-527.	-546.	.0141	-.0123	-.0130	.0487	.0066	.0922	3109.		
.2870	-1486.	-806.	592.	-353.	-458.	-586.	.0130	-.0125	-.0165	.0442	.0067	.0832	3073.		
.2880	-1432.	-708.	662.	-363.	-374.	-579.	.0122	-.0125	-.0205	.0377	.0068	.0738	2908.		
.2890	-1281.	-577.	700.	-359.	-288.	-531.	.0119	-.0121	-.0244	.0298	.0066	.0639	2623.		
.2900	-1062.	-432.	690.	-330.	-207.	-458.	.0128	-.0114	-.0277	.0208	.0051	.0538	2246.		
.2910	-786.	-261.	616.	-271.	-139.	-370.	.0150	-.0104	-.0299	.0118	.0021	.0430	1788.		
.2920	-453.	-54.	477.	-182.	-90.	-263.	.0182	-.0091	-.0306	.0038	-.0021	.0309	1239.		
.2930	-88.	164.	290.	-66.	-57.	-140.	.0220	-.0075	-.0301	-.0034	-.0071	.0184	615.		
.2940	282.	373.	85.	65.	-28.	-15.	.0261	-.0057	-.0292	-.0111	-.0127	.0067	270.		
.2950	646.	577.	-104.	185.	6.	106.	.0301	-.0040	-.0286	-.0198	-.0178	-.0041	794.		
.2960	993.	781.	-246.	273.	49.	223.	.0337	-.0023	-.0288	-.0294	-.0211	-.0146	1328.		
.2970	1297.	957.	-323.	328.	107.	335.	.0362	-.0006	-.0298	-.0400	-.0221	-.0238	1794.		
.2980	1530.	1080.	-331.	356.	180.	429.	.0376	.0009	-.0317	-.0520	-.0217	-.0304	2186.		
.2990	1677.	1161.	-284.	359.	261.	489.	.0379	.0020	-.0340	-.0642	-.0202	-.0346	2466.		
.3000	1732.	1219.	-201.	338.	336.	509.	.0376	.0026	-.0360	-.0743	-.0176	-.0380	2604.		
.3010	1684.	1238.	-99.	311.	396.	487.	.0367	.0028	-.0369	-.0810	-.0144	-.0419	2615.		
.3020	1533.	1193.	3.	295.	440.	428.	.0353	.0028	-.0366	-.0847	-.0117	-.0416	2540.		
.3030	1308.	1093.	99.	293.	467.	341.	.0330	.0025	-.0348	-.0855	-.0094	-.0396	2421.		
.3040	1051.	973.	188.	288.	479.	243.	.0300	.0020	-.0318	-.0829	-.0064	-.0358	2276.		
.3050	784.	834.	280.	272.	480.	145.	.0263	.0014	-.0279	-.0771	-.0019	-.0303	2129.		
.3060	523.	652.	376.	251.	477.	58.	.0216	.0011	-.0236	-.0697	.0035	-.0216	2024.		
.3070	292.	434.	466.	233.	474.	-6.	.0158	.0008	-.0189	-.0612	.0095	-.0091	1970.		
.3080	121.	214.	533.	214.	466.	-38.	.0089	.0007	-.0138	-.0508	.0161	.0057	1920.		
.3090	12.	8.	564.	199.	448.	-43.	.0014	.0007	-.0082	-.0377	.0229	.0215	1837.		
.3100	-54.	-199.	549.	198.	417.	-33.	-.0062	.0002	-.0021	-.0226	.0288	.0380	1729.		
.3110	-82.	-406.	481.	223.	374.	-9.	-.0137	.0011	.0045	-.0062	.0330	.0546	1627.		
.3120	-59.	-589.	360.	269.	320.	36.	-.0211	.0017	.0114	-.0113	.0356	.0700	1565.		
.3130	13.	-739.	202.	327.	256.	104.	-.0282	.0025	.0185	.0289	.0372	.0834	1598.		
.3140	116.	-862.	33.	387.	192.	182.	-.0348	.0034	.0249	.0448	.0379	.0948	1751.		
.3150	237.	-956.	-128.	439.	135.	259.	-.0404	.0042	.0302	.0575	.0377	.1040	1969.		

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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	54	MEMBER	1	SEQUENCE	174	LOCATION	BEG	TYPE	RU
---------	----	--------	---	----------	-----	----------	-----	------	----

.3070	292.	434.	466.	233.	474.	46.	.0158	.0008	-.0189	-.0612	.0095	-.0091	1970.
.3080	121.	214.	533.	214.	466.	-38.	.0089	.0007	-.0138	-.0502	.0161	.0057	1920.
.3090	12.	8.	564.	199.	448.	-43.	.0014	.0007	-.0022	-.0377	.0229	.0215	1837.
.3100	-54.	-199.	549.	198.	417.	-33.	-.0062	.0003	-.0021	-.0226	.0288	.0380	1729.
.3110	-82.	-406.	481.	223.	374.	-9.	-.0137	.0011	.0045	-.0062	.0330	.0546	1627.
.3120	-59.	-589.	360.	269.	320.	36.	-.0211	.0017	.0114	.0113	.0356	.0700	1565.
.3130	17.	-739.	202.	327.	256.	104.	-.0282	.0025	.0185	.0289	.0372	.0834	1598.
.3140	116.	-862.	33.	387.	192.	182.	-.0348	.0034	.0249	.0448	.0379	.0948	1751.
.3150	237.	-956.	-128.	439.	135.	259.	-.0404	.0042	.0302	.0575	.0377	.1040	1969.

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ADLPIPE STRESS ANALYSIS

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

CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	174	LOCATION	BEG	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3160	375.	-1003.	-268.	475.	88.	337.	-.0453	.0049	.0343	.0667	.0371	.1100	2198.		
.3170	512.	-1009.	-380.	496.	48.	413.	-.0492	.0055	.0371	.0725	.0364	.1120	2418.		
.3180	622.	-987.	-462.	511.	18.	473.	-.0520	.0057	.0387	.0741	.0347	.1104	2600.		
.3190	686.	-935.	-515.	517.	-4.	501.	-.0534	.0056	.0390	.0718	.0318	.1050	2688.		
.3200	701.	-839.	-539.	510.	-23.	494.	-.0531	.0049	.0383	.0664	.0281	.0948	2653.		
.3210	664.	-707.	-532.	494.	-40.	456.	-.0513	.0038	.0369	.0584	.0241	.0798	2513.		
.3220	568.	-566.	-492.	474.	-50.	389.	-.0484	.0023	.0347	.0475	.0196	.0619	2296.		
.3230	424.	-422.	-418.	447.	-49.	276.	-.0445	.0003	.0319	.0334	.0149	.0425	2011.		
.3240	254.	-258.	-310.	404.	-40.	182.	-.0397	-.0024	.0284	.0175	.0110	.0216	1660.		
.3250	74.	-74.	-176.	341.	-25.	58.	-.0343	-.0055	.0245	.0011	.0085	-.0005	1296.		
.3260	-110.	102.	-27.	275.	-3.	-69.	-.0285	-.0089	.0203	-.0156	.0069	-.0217	1058.		
.3270	-284.	253.	115.	218.	23.	-188.	-.0228	-.0125	.0163	-.0319	.0055	-.0407	1079.		
.3280	-428.	395.	234.	173.	46.	-292.	-.0174	-.0162	.0128	-.0461	.0047	-.0575	1279.		
.3290	-529.	535.	319.	136.	61.	-376.	-.0122	-.0199	.0099	-.0566	.0047	-.0723	1510.		
.3300	-588.	654.	368.	111.	69.	-439.	-.0075	-.0235	.0078	-.0635	.0052	-.0840	1711.		
.3310	-604.	733.	381.	103.	72.	-477.	-.0036	-.0269	.0064	-.0672	.0059	-.0912	1842.		
.3320	-566.	782.	360.	109.	71.	-481.	-.0007	-.0301	.0058	-.0674	.0072	-.0939	1861.		
.3330	-469.	813.	310.	117.	65.	-451.	.0010	-.0331	.0061	-.0637	.0096	-.0926	1758.		
.3340	-331.	818.	240.	127.	57.	-397.	.0017	-.0358	.0070	-.0567	.0128	-.0876	1571.		
.3350	-173.	786.	152.	141.	46.	-328.	.0017	-.0383	.0084	-.0469	.0163	-.0787	1345.		
.3360	-0.	728.	45.	162.	33.	-246.	.0009	-.0405	.0104	-.0346	.0197	-.0670	1106.		
.3370	183.	656.	-80.	188.	16.	-151.	-.0007	-.0423	.0129	-.0196	.0230	-.0540	902.		
.3380	356.	568.	-213.	219.	-4.	-55.	-.0028	-.0437	.0157	-.0030	.0258	-.0402	843.		
.3390	500.	460.	-342.	250.	-22.	31.	-.0050	-.0449	.0183	.0141	.0280	-.0259	945.		
.3400	617.	349.	-453.	272.	-35.	104.	-.0072	-.0458	.0204	.0306	.0296	-.0122	1096.		
.3410	710.	248.	-536.	278.	-40.	167.	-.0095	-.0466	.0219	.0461	.0312	.0002	1219.		
.3420	769.	149.	-581.	268.	-34.	219.	-.0117	-.0471	.0226	.0592	.0328	.0111	1297.		
.3430	783.	47.	-582.	242.	-15.	251.	-.0136	-.0476	.0223	.0690	.0340	.0205	1304.		
.3440	754.	-41.	-544.	200.	14.	259.	-.0149	-.0480	.0212	.0756	.0349	.0276	1223.		
.3450	689.	-100.	-477.	144.	46.	244.	-.0153	-.0484	.0196	.0798	.0355	.0313	1070.		
.3460	585.	-141.	-394.	85.	80.	207.	-.0150	-.0488	.0177	.0816	.0354	.0317	888.		
.3470	443.	-176.	-302.	33.	114.	151.	-.0139	-.0491	.0157	.0808	.0341	.0298	718.		
.3480	279.	-196.	-208.	-13.	149.	79.	-.0121	-.0494	.0135	.0779	.0319	.0257	630.		
.3490	119.	-184.	-115.	-61.	180.	0.	-.0096	-.0497	.0112	.0736	.0295	.0191	710.		
.3500	-20.	-145.	-22.	-112.	211.	-75.	-.0068	-.0500	.0087	.0678	.0272	.0110	935.		
.3510	-128.	-98.	67.	-159.	244.	-138.	-.0038	-.0502	.0059	.0604	.0248	.0026	1203.		
.3520	-192.	-46.	147.	-199.	278.	-180.	-.0010	-.0501	.0029	.0518	.0226	-.0053	1441.		
.3530	-198.	22.	208.	-233.	308.	-194.	.0016	-.0497	-.0001	.0432	.0209	-.0132	1615.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.29.11.

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

CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION 54 MEMBER 1 SEQUENCE 174 LOCATION BEG TYPE RU

.3450	689.	-100.	-477.	144.	46.	244.	-0153	-0484	.0196	.0798	.0355	.0313	1070.
.3460	585.	-141.	-394.	85.	80.	207.	-0150	-0488	.0177	.0816	.0354	.0317	888.
.3470	443.	-176.	-302.	33.	114.	151.	-0139	-0491	.0157	.0808	.0341	.0298	718.
.3480	279.	-196.	-208.	-13.	149.	79.	-0121	-0494	.0135	.0779	.0319	.0257	630.
.3490	119.	-184.	-115.	-1.	180.	0.	-0096	-0497	.0112	.0736	.0295	.0191	710.
.3500	-20.	-145.	-22.	-112.	211.	-75.	-0068	-0500	.0087	.0678	.0272	.0110	935.
.3510	-128.	-98.	67.	-159.	244.	-138.	-0038	-0502	.0059	.0604	.0248	.0026	1203.
.3520	-192.	-46.	147.	-199.	278.	-180.	-0010	-0501	.0029	.0518	.0226	-0053	1441.
.3530	-198.	22.	208.	-233.	308.	-194.	.0016	-0497	-0001	.0432	.0209	-0132	1615.

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ADLPIPE STRESS ANALYSIS

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	174	LOCATION	BEG	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3540	-145.	109.	239.	-259.	330.	-185.	.0040	-0491	-0028	.0356	.0196	-0209	1713.		
.3550	-49.	197.	234.	-269.	342.	-157.	.0064	-0481	-0049	.0293	.0182	-0278	1726.		
.3560	77.	274.	188.	-256.	340.	-113.	.0085	-0469	-0064	.0249	.0164	-0337	1643.		
.3570	230.	346.	102.	-223.	324.	-53.	.0102	-0454	-0069	.0231	.0145	-0387	1481.		
.3580	399.	415.	-11.	-179.	294.	16.	.0114	-0437	-0068	.0239	.0127	-0430	1289.		
.3590	566.	470.	-135.	-133.	257.	85.	.0123	-0419	-0062	.0266	.0111	-0460	1125.		
.3600	716.	504.	-252.	-91.	215.	151.	.0127	-0400	-0055	.0304	.0100	-0478	1037.		
.3610	842.	519.	-347.	-61.	171.	213.	.0126	-0380	-0047	.0351	.0096	-0487	1045.		
.3620	934.	514.	-410.	-47.	126.	269.	.0118	-0359	-0039	.0402	.0100	-0488	1121.		
.3630	972.	485.	-438.	-49.	80.	307.	.0108	-0337	-0031	.0453	.0109	-0483	1198.		
.3640	945.	436.	-431.	-66.	31.	318.	.0098	-0317	-0022	.0501	.0119	-0477	1218.		
.3650	850.	376.	-397.	-97.	-23.	299.	.0090	-0297	-0010	.0551	.0129	-0476	1178.		
.3660	683.	305.	-342.	-134.	-86.	252.	.0085	-0277	.0008	.0600	.0135	-0486	1113.		
.3670	446.	218.	-270.	-172.	-153.	176.	.0083	-0258	.0030	.0646	.0133	-0504	1084.		
.3680	152.	120.	-184.	-212.	-222.	76.	.0084	-0238	.0053	.0682	.0124	-0528	1179.		
.3690	-175.	29.	-84.	-258.	-288.	-42.	.0089	-0220	.0075	.0709	.0111	-0562	1453.		
.3700	-511.	-51.	31.	-314.	-347.	-164.	.0095	-0201	.0091	.0723	.0097	-0605	1853.		
.3710	-835.	-127.	159.	-375.	-394.	-280.	.0099	-0182	.0100	.0718	.0082	-0648	2282.		
.3720	-1130.	-203.	293.	-435.	-423.	-379.	.0102	-0161	.0098	.0690	.0065	-0686	2672.		
.3730	-1371.	-265.	425.	-494.	-438.	-456.	.0102	-0140	.0087	.0646	.0048	-0716	2995.		
.3740	-1541.	-298.	540.	-550.	-440.	-508.	.0101	-0121	.0069	.0590	.0031	-0741	3244.		
.3750	-1640.	-310.	624.	-594.	-434.	-536.	.0102	-0104	.0047	.0527	.0011	-0758	3397.		
.3760	-1671.	-316.	668.	-612.	-423.	-536.	.0104	-0088	.0026	.0458	-0016	-0763	3425.		
.3770	-1634.	-314.	664.	-602.	-410.	-510.	.0108	-0074	.0008	.0390	-0051	-0753	3321.		
.3780	-1528.	-296.	613.	-566.	-398.	-461.	.0115	-0065	-0004	.0325	-0091	-0731	3105.		
.3790	-1362.	-261.	522.	-511.	-387.	-394.	.0124	-0060	-0012	.0264	-0135	-0695	2809.		
.3800	-1153.	-222.	404.	-441.	-373.	-317.	.0135	-0061	-0016	.0205	-0181	-0643	2458.		
.3810	-913.	-186.	275.	-360.	-354.	-230.	.0146	-0067	-0019	.0143	-0226	-0575	2070.		
.3820	-657.	-154.	147.	-276.	-327.	-136.	.0154	-0077	-0023	.0080	-0266	-0493	1676.		
.3830	-404.	-129.	34.	-197.	-291.	-43.	.0159	-0092	-0028	.0014	-0301	-0401	1322.		
.3840	-174.	-113.	-56.	-128.	-247.	36.	.0160	-0112	-0036	-0055	-0329	-0301	1046.		
.3850	13.	-110.	-117.	-70.	-196.	95.	.0159	-0136	-0045	-0124	-0351	-0199	853.		
.3860	143.	-123.	-153.	-20.	-141.	131.	.0153	-0162	-0054	-0188	-0369	-0099	721.		
.3870	206.	-158.	-164.	24.	-84.	142.	.0143	-0191	-0061	-0245	-0382	-0003	624.		
.3880	204.	-207.	-156.	63.	-28.	125.	.0130	-0221	-0065	-0292	-0391	.0087	534.		
.3890	145.	-257.	-132.	92.	25.	80.	.0114	-0251	-0066	-0328	-0397	.0167	467.		
.3900	42.	-303.	-96.	113.	76.	17.	.0094	-0278	-0063	-0352	-0397	.0229	512.		
.3910	-96.	-359.	-49.	130.	122.	-52.	.0071	-0296	-0059	-0368	-0389	.0272	695.		

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ADLPIPE STRESS ANALYSIS

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	174	LOCATION	BEG	TYPE	RU
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.3830	-404.	-129.	34.	-197.	-291.	-43.	.0159	-.0092	-.0028	.0014	-.0301	-.0401	1322.
.3840	-174.	-112.	-56.	-128.	-247.	36.	.0160	-.0112	-.0036	-.0055	-.0329	-.0301	1046.
.3850	13.	-110.	-117.	-70.	-196.	95.	.0159	-.0136	-.0045	-.0124	-.0351	-.0199	853.
.3860	147.	-123.	-153.	-20.	-141.	131.	.0153	-.0162	-.0054	-.0188	-.0369	-.0099	721.
.3870	206.	-158.	-164.	24.	-84.	142.	.0143	-.0191	-.0061	-.0245	-.0382	-.0003	624.
.3880	204.	-207.	-156.	63.	-28.	125.	.0130	-.0221	-.0065	-.0292	-.0391	.0087	534.
.3890	145.	-257.	-132.	92.	25.	80.	.0114	-.0251	-.0066	-.0328	-.0397	.0167	467.
.3900	42.	-303.	-96.	113.	76.	17.	.0094	-.0278	-.0063	-.0352	-.0397	.0229	512.
.3910	-96.	-359.	-49.	130.	122.	-52.	.0071	-.0296	-.0059	-.0368	-.0369	.0272	695.

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CONDITION 24

LOADS
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ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	174	LOCATION	BEG	TYPE	RU	DX	DY	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	(IN)		(IN)	(IN)	(DEG)	(DEG)	(DEG)		(PSI)	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)										
.3920	-250.	-424.	4.	149.	166.	-116.	.0043		-.0305	-.0051	-.0379	-.0375	.0301		938.	
.3930	-397.	-480.	54.	165.	207.	-170.	.0009		-.0303	-.0043	-.0387	-.0356	.0315		1174.	
.3940	-518.	-510.	93.	176.	241.	-210.	-.0028		-.0291	-.0033	-.0386	-.0329	.0309		1363.	
.3950	-608.	-519.	116.	186.	266.	-234.	-.0067		-.0269	-.0022	-.0374	-.0296	.0284		1495.	
.3960	-665.	-520.	113.	206.	283.	-237.	-.0108		-.0236	-.0008	-.0353	-.0262	.0245		1580.	
.3970	-680.	-508.	78.	240.	292.	-217.	-.0152		-.0193	.0010	-.0326	-.0231	.0194		1625.	
.3980	-644.	-470.	9.	282.	290.	-172.	-.0195		-.0141	.0031	-.0289	-.0201	.0130		1640.	
.3990	-557.	-401.	-87.	326.	278.	-107.	-.0236		-.0082	.0053	-.0246	-.0169	.0051		1650.	
.4000	-430.	-316.	-201.	374.	259.	-25.	-.0274		-.0018	.0075	-.0203	-.0139	-.0037		1700.	

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)
.0670	-1622.	-1102.	1936.	-1307.	-129.	-449.	.0184	.0188	.0576	.0245	.0144	-.0868	5181.

SECTION	54	MEMBER	1	SEQUENCE	73	LOCATION	END	TYPE	RU	DX	DY	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	(IN)		(IN)	(IN)	(DEG)	(DEG)	(DEG)		(PSI)	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)										
0.0000	0.	0.	0.	0.	0.	0.	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	-0.	-0.	-0.	0.	0.	-0.	-.0000		-.0000	.0000	-.0000	.0000	.0000	.0000	0.	
.0020	-0.	-0.	-0.	0.	0.	0.	.0000		-.0000	.0000	-.0000	-.0000	.0000	.0000	1.	
.0030	-0.	-0.	0.	0.	1.	0.	.0000		-.0000	-.0000	-.0000	-.0000	.0000	.0000	2.	
.0040	2.	-0.	1.	-0.	1.	1.	-.0000		-.0000	-.0000	-.0000	-.0001	-.0001	-.0001	5.	
.0050	6.	0.	3.	-1.	3.	2.	-.0000		.0000	-.0000	.0001	-.0003	-.0001	.0001	12.	
.0060	15.	3.	5.	-2.	5.	4.	-.0001		.0000	-.0001	.0002	-.0006	-.0002	-.0002	24.	
.0070	28.	6.	7.	-2.	7.	8.	-.0003		-.0000	-.0003	.0004	-.0011	-.0003	-.0003	41.	
.0080	44.	8.	8.	-1.	10.	14.	-.0005		-.0001	-.0007	.0005	-.0018	-.0003	-.0003	65.	
.0090	70.	12.	5.	3.	13.	24.	-.0010		-.0002	-.0012	.0006	-.0026	-.0005	-.0005	101.	
.0100	116.	23.	-1.	6.	13.	39.	-.0016		-.0002	-.0020	.0011	-.0036	-.0009	-.0009	156.	
.0110	188.	43.	-13.	9.	8.	63.	-.0026		-.0003	-.0030	.0019	-.0047	-.0017	-.0017	238.	
.0120	283.	74.	-32.	13.	-4.	94.	-.0039		-.0004	-.0044	.0031	-.0058	-.0025	-.0025	356.	
.0130	392.	113.	-60.	22.	-25.	133.	-.0058		-.0008	-.0061	.0046	-.0066	-.0031	-.0031	512.	
.0140	496.	152.	-93.	37.	-55.	174.	-.0081		-.0015	-.0081	.0063	-.0070	-.0031	-.0031	696.	
.0150	571.	185.	-126.	59.	-94.	208.	-.0106		-.0023	-.0105	.0079	-.0068	-.0025	-.0025	880.	

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ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.11.

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

CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	73	LOCATION	END	TYPE	RU	DX	DY	DZ	RX	RY	RZ	STRESS
---------	----	--------	---	----------	----	----------	-----	------	----	----	----	----	----	----	----	--------

.0070	28.	6.	7.	-2.	7.	8.	-.0003	-.0000	-.0003	.0004	-.0011	-.0003	41.
.0080	44.	8.	9.	-1.	10.	14.	-.0005	-.0001	-.0007	.0005	-.0018	-.0003	65.
.0090	70.	12.	5.	3.	13.	24.	-.0010	-.0002	-.0012	.0006	-.0026	-.0005	101.
.0100	116.	23.	-1.	6.	13.	32.	-.0016	-.0002	-.0020	.0011	-.0036	-.0009	156.
.0110	188.	43.	-13.	9.	8.	63.	-.0026	-.0003	-.0030	.0019	-.0047	-.0017	238.
.0120	283.	74.	-32.	13.	-4.	94.	-.0039	-.0004	-.0044	.0031	-.0058	-.0025	356.
.0130	392.	113.	-60.	22.	-25.	133.	-.0058	-.0008	-.0061	.0046	-.0066	-.0031	512.
.0140	496.	152.	-93.	37.	-55.	174.	-.0081	-.0015	-.0081	.0063	-.0070	-.0031	696.
.0150	571.	185.	-126.	59.	-94.	208.	-.0106	-.0023	-.0105	.0079	-.0068	-.0025	880.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	73	LOCATION	END	TYPE	RU					STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ		(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)		
.0160	598.	208.	-154.	83.	-137.	222.	-.0131	-.0031	-.0129	.0090	-.0060	-.0011	1023.	
.0170	550.	216.	-172.	103.	-181.	206.	-.0152	-.0037	-.0150	.0092	-.0043	-.0010	1091.	
.0180	413.	196.	-172.	111.	-222.	153.	-.0166	-.0037	-.0162	.0064	-.0013	.0034	1088.	
.0190	195.	148.	-145.	101.	-256.	72.	-.0167	-.0033	-.0159	.0070	.0030	.0057	1062.	
.0200	-93.	62.	-83.	70.	-282.	-27.	-.0152	-.0025	-.0136	.0054	.0085	.0073	1090.	
.0210	-399.	-46.	21.	10.	-299.	-127.	-.0120	-.0013	-.0088	.0048	.0148	.0074	1212.	
.0220	-599.	-96.	168.	-100.	-306.	-204.	-.0073	.0003	-.0018	.0079	.0212	.0046	1423.	
.0230	-719.	-113.	351.	-240.	-302.	-256.	-.0019	.0017	.0067	.0133	.0265	.0006	1728.	
.0240	-860.	-157.	546.	-361.	-286.	-299.	.0034	.0021	.0150	.0178	.0294	-.0017	2052.	
.0250	-1087.	-281.	706.	-424.	-255.	-342.	.0085	.0014	.0214	.0185	.0308	-.0017	2247.	
.0260	-1291.	-420.	775.	-441.	-215.	-373.	.0135	.0012	.0252	.0163	.0331	-.0030	2301.	
.0270	-1282.	-408.	752.	-465.	-192.	-392.	.0178	.0027	.0262	.0156	.0358	-.0084	2383.	
.0280	-1287.	-376.	676.	-452.	-198.	-448.	.0199	.0046	.0245	.0109	.0359	-.0116	2490.	
.0290	-1533.	-516.	535.	-329.	-204.	-535.	.0205	.0048	.0210	-.0038	.0355	-.0080	2465.	
.0300	-1539.	-549.	269.	-177.	-180.	-542.	.0227	.0051	.0176	-.0172	.0403	-.0072	2232.	
.0310	-1198.	-447.	-50.	-37.	-153.	-452.	.0262	.0061	.0156	-.0250	.0440	-.0127	1788.	
.0320	-824.	-407.	-279.	76.	-112.	-316.	.0290	.0061	.0167	-.0317	.0412	-.0174	1283.	
.0330	-393.	-348.	-367.	107.	-11.	-122.	.0308	.0048	.0211	-.0333	.0343	-.0197	608.	
.0340	245.	-197.	-354.	75.	125.	157.	.0329	.0032	.0264	-.0249	.0233	-.0256	800.	
.0350	867.	-129.	-319.	86.	249.	458.	.0344	.0013	.0286	-.0130	.0073	-.0349	1972.	
.0360	1280.	-136.	-342.	151.	364.	678.	.0332	.0002	.0265	-.0053	-.0071	-.0410	2929.	
.0370	1617.	24.	-462.	196.	445.	773.	.0277	.0015	.0199	-.0014	-.0154	-.0413	3410.	
.0380	1849.	293.	-653.	260.	416.	742.	.0181	.0043	.0083	-.0007	-.0212	-.0365	3320.	
.0390	1675.	346.	-887.	460.	295.	606.	.0065	.0057	-.0070	-.0080	-.0239	-.0250	3045.	
.0400	1171.	189.	-1159.	760.	210.	431.	-.0034	.0054	-.0215	-.0221	-.0172	-.0081	3354.	
.0410	928.	234.	-1388.	946.	185.	292.	-.0096	.0066	-.0305	-.0291	-.0066	.0048	3761.	
.0420	918.	413.	-1370.	925.	185.	175.	-.0138	.0094	-.0311	-.0261	-.0072	.0121	3583.	
.0430	814.	489.	-1048.	726.	250.	80.	-.0163	.0114	-.0223	-.0158	-.0162	.0178	2880.	
.0440	748.	511.	-506.	396.	439.	102.	-.0151	.0114	-.0066	.0055	-.0247	.0197	2237.	
.0450	893.	516.	96.	54.	631.	260.	-.0105	.0099	.0094	.0357	-.0359	.0130	2557.	
.0460	1024.	465.	573.	-187.	722.	400.	-.0071	.0081	.0204	.0607	-.0492	.0045	3158.	
.0470	889.	446.	777.	-314.	754.	363.	-.0089	.0070	.0253	.0673	-.0520	.0077	3338.	
.0480	599.	549.	679.	-330.	711.	180.	-.0155	.0067	.0228	.0558	-.0426	.0227	3004.	
.0490	328.	625.	366.	-190.	504.	-12.	-.0235	.0063	.0124	.0358	-.0307	.0365	2013.	
.0500	49.	538.	-31.	68.	220.	-143.	-.0301	.0046	-.0013	.0153	-.0162	.0435	1012.	
.0510	-190.	444.	-379.	265.	13.	-219.	-.0345	.0021	-.0108	-.0007	.0041	.0473	1286.	
.0520	-250.	465.	-534.	274.	-126.	-236.	-.0370	-.0002	-.0128	-.0100	.0174	.0495	1430.	
.0530	-111.	489.	-429.	119.	-234.	-160.	-.0364	-.0025	-.0074	-.0109	.0151	.0454	1148.	

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18.29.11.

S/RV PIPING KEWAUNEE GKM08F 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 54 MEMBER 1 SEQUENCE 73 LOCATION END TYPE RU

.0450	893.	516.	96.	54.	631.	260.	-.0105	.0099	.0094	.0357	-.0359	.0130	2557.
.0460	1024.	465.	573.	-187.	722.	400.	-.0071	.0081	.0204	.0607	-.0492	.0045	3158.
.0470	389.	446.	777.	-314.	754.	363.	-.0089	.0070	.0253	.0673	-.0520	.0077	3338.
.0480	599.	549.	679.	-330.	711.	130.	-.0155	.0067	.0228	.0558	-.0426	.0227	3004.
.0490	328.	625.	366.	-190.	504.	-12.	-.0235	.0063	.0124	.0358	-.0307	.0365	2013.
.0500	49.	538.	-31.	68.	220.	-143.	-.0301	.0046	-.0013	.0153	-.0162	.0435	1012.
.0510	-190.	444.	-379.	265.	13.	-219.	-.0345	.0021	-.0108	-.0007	.0041	.0473	1286.
.0520	-250.	465.	-534.	274.	-126.	-236.	-.0370	-.0002	-.0128	-.0100	.0174	.0495	1430.
.0530	-111.	489.	-429.	119.	-234.	-160.	-.0364	-.0025	-.0074	-.0109	.0151	.0454	1148.

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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	54	MEMBER	1	SEQUENCE	73	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)		
.0540	166.	444.	-141.	-126.	-235.	23.	-.0311	-.0051	.0041	-.0009	.0093	.0315	998.		
.0550	490.	367.	210.	-393.	-131.	262.	-.0222	-.0078	.0183	.0156	.0076	.0116	1830.		
.0560	713.	258.	536.	-616.	-80.	453.	-.0146	-.0100	.0296	.0269	.0026	-.0056	2869.		
.0570	731.	159.	725.	-758.	-149.	505.	-.0117	-.0107	.0349	.0267	-.0028	-.0152	3444.		
.0580	536.	119.	677.	-792.	-267.	402.	-.0128	-.0097	.0338	.0177	.0048	-.0185	3461.		
.0590	114.	30.	429.	-672.	-429.	199.	-.0155	-.0081	.0265	.0014	.0233	-.0183	3068.		
.0600	-485.	-197.	131.	-438.	-660.	-38.	-.0180	-.0064	.0151	-.0206	.0400	-.0164	2961.		
.0610	-1086.	-434.	-82.	-250.	-860.	-283.	-.0190	-.0036	.0060	-.0410	.0539	-.0151	3505.		
.0620	-1535.	-543.	-117.	-238.	-920.	-528.	-.0177	.0014	.0048	-.0512	.0563	-.0181	4058.		
.0630	-1822.	-617.	98.	-389.	-865.	-717.	-.0134	.0072	.0119	-.0501	.0683	-.0266	4437.		
.0640	-1947.	-753.	547.	-635.	-731.	-762.	-.0055	-.0117	.0247	-.0389	.0569	-.0398	4601.		
.0650	-1884.	-901.	1112.	-926.	-508.	-659.	.0050	.0144	.0400	-.0176	.0418	-.0567	4646.		
.0660	-1727.	-1021.	1628.	-1180.	-266.	-518.	.0143	.0165	.0528	.0077	.0280	-.0748	4910.		
.0670	-1622.	-1102.	1936.	-1307.	-129.	-449.	.0184	.0188	.0576	.0245	.0144	-.0868	5181.		
.0680	-1563.	-1064.	1894.	-1270.	-124.	-470.	.0168	.0216	.0516	.0261	.0071	-.0878	5078.		
.0690	-1526.	-919.	1479.	-1046.	-212.	-551.	.0112	.0240	.0357	.0163	.0124	-.0801	4484.		
.0700	-1596.	-846.	832.	-629.	-373.	-662.	.0032	.0247	.0133	-.0001	.0244	-.0681	3684.		
.0710	-1690.	-839.	154.	-149.	-558.	-743.	-.0049	.0233	-.0096	-.0176	.0350	-.0530	3514.		
.0720	-1518.	-682.	-391.	187.	-668.	-711.	-.0103	.0209	-.0258	-.0272	.0417	-.0376	3710.		
.0730	-1026.	-391.	-677.	310.	-648.	-543.	-.0111	.0177	-.0316	-.0220	.0408	-.0269	3361.		
.0740	-442.	-195.	-657.	294.	-502.	-272.	-.0071	.0130	-.0274	-.0036	.0287	-.0231	2398.		
.0750	150.	-91.	-418.	187.	-244.	71.	.0009	.0070	-.0163	.0230	.0099	-.0229	1178.		
.0760	791.	81.	-121.	13.	68.	432.	.0105	.0010	-.0030	.0516	-.0089	-.0220	1632.		
.0770	1339.	287.	87.	-126.	320.	703.	.0178	-.0037	.0067	.0743	-.0255	-.0182	2921.		
.0780	1612.	430.	91.	-123.	447.	813.	.0202	-.0073	.0090	.0851	-.0353	-.0095	3495.		
.0790	1670.	572.	-173.	36.	457.	801.	.0181	-.0102	.0029	.0834	-.0323	.0056	3445.		
.0800	1623.	736.	-644.	318.	357.	733.	.0130	-.0130	-.0100	.0724	-.0195	.0252	3266.		
.0810	1439.	800.	-1156.	672.	176.	627.	.0062	-.0159	-.0256	.0566	-.0055	.0450	3494.		
.0820	1181.	774.	-1547.	973.	16.	501.	-.0003	-.0181	-.0375	.0434	.0073	.0603	4087.		
.0830	1066.	812.	-1703.	1079.	-38.	413.	-.0037	-.0184	-.0413	.0396	.0165	.0678	4316.		
.0840	1123.	881.	-1561.	977.	6.	401.	-.0028	-.0173	-.0362	.0462	.0157	.0664	3943.		
.0850	1162.	819.	-1157.	759.	130.	438.	.0021	-.0158	-.0242	.0595	.0054	.0571	3308.		
.0860	1106.	653.	-640.	495.	328.	473.	.0095	-.0139	-.0080	.0758	-.0043	.0427	2834.		
.0870	1000.	517.	-179.	236.	522.	461.	.0168	-.0108	.0081	.0886	-.0089	.0278	2745.		
.0880	787.	405.	112.	65.	608.	364.	.0216	-.0067	.0198	.0899	-.0101	.0174	2657.		
.0890	395.	253.	177.	42.	589.	170.	.0234	-.0022	.0256	.0775	-.0040	.0125	2294.		
.0900	-82.	86.	36.	147.	526.	-74.	.0232	.0023	.0269	.0568	.0123	.0100	2056.		
.0910	-478.	-63.	-189.	305.	434.	-290.	.0223	.0064	.0256	.0340	.0298	.0069	2258.		

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

CONDITION 24

LOADS

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ENGLISH UNITS

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

SECTION 54 MEMBER 1 SEQUENCE 73 LOCATION END TYPE RU

.0840	1123.	881.	-1561.	977.	6.	401.	-.028	-.0173	-.0362	.0462	.0157	.0664	3943.
.0850	1162.	819.	-1157.	759.	130.	438.	.0021	-.0158	-.0242	.0595	.0054	.0571	3308.
.0860	1104.	653.	-640.	495.	328.	473.	.0095	-.0139	-.0080	.0758	-.0043	.0427	2834.
.0870	1000.	517.	-179.	276.	522.	461.	.0168	-.0108	.0081	.0886	-.0089	.0278	2745.
.0880	787.	405.	112.	65.	608.	364.	.0216	-.0067	.0191	.0899	-.0101	.0174	2657.
.0890	395.	253.	177.	42.	539.	170.	.0234	-.0022	.0256	.0775	-.0040	.0125	2294.
.0900	-82.	86.	36.	147.	526.	-74.	.0232	.0023	.0269	.0568	.0123	.0100	2056.
.0910	-478.	-63.	-189.	305.	434.	-290.	.0223	.0064	.0256	.0340	.0298	.0069	2258.

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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	54	MEMBER	1	SEQUENCE	73	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)	
.0920	-707.	-186.	-339.	418.	340.	-425.	.0214	.0100	.0246	.0146	.0387	.0014	2563.	
.0930	-730.	-265.	-311.	403.	315.	-455.	.0210	.0129	.0265	.0052	.0395	-.0088	2555.	
.0940	-553.	-315.	-92.	258.	374.	-373.	.0214	.0150	.0315	.0092	.0331	-.0254	2194.	
.0950	-255.	-392.	250.	61.	450.	-204.	.0219	.0163	.0360	.0214	.0184	-.0467	1858.	
.0960	55.	-479.	509.	-104.	492.	-18.	.0213	.0172	.0365	.0326	.0006	-.0670	1878.	
.0970	279.	-518.	716.	-182.	487.	93.	.0180	.0187	.0310	.0364	-.0109	-.0817	1972.	
.0980	328.	-533.	642.	-133.	398.	72.	.0108	.0213	.0182	.0289	-.0145	-.0894	1591.	
.0990	183.	-572.	400.	39.	211.	-59.	.0008	.0246	-.0009	.0108	-.0140	-.0904	830.	
.1000	-76.	-624.	103.	259.	-10.	-234.	-.0076	.0281	-.0228	-.0114	-.0106	-.0877	1303.	
.1010	-366.	-684.	-111.	431.	-189.	-399.	-.0182	.0318	-.0428	-.0291	-.0068	-.0857	2304.	
.1020	-655.	-774.	-121.	487.	-298.	-539.	-.0237	.0356	-.0574	-.0374	-.0093	-.0873	2932.	
.1030	-905.	-859.	98.	392.	-324.	-642.	-.0256	.0396	-.0650	-.0364	-.0200	-.0912	3057.	
.1040	-1084.	-894.	462.	170.	-256.	-699.	-.0235	.0432	-.0658	-.0283	-.0339	-.0949	2853.	
.1050	-1233.	-917.	846.	-78.	-142.	-728.	-.0180	.0459	-.0620	-.0176	-.0465	-.0969	2783.	
.1060	-1406.	-960.	1127.	-253.	-52.	-755.	-.0111	.0471	-.0567	-.0095	-.0552	-.0948	2980.	
.1070	-1563.	-939.	1215.	-332.	-14.	-789.	-.0042	.0468	-.0516	-.0076	-.0566	-.0850	3196.	
.1080	-1686.	-841.	1099.	-319.	-25.	-811.	.0017	.0445	-.0472	-.0130	-.0498	-.0658	3253.	
.1090	-1745.	-744.	838.	-218.	-84.	-786.	.0068	.0405	-.0435	-.0218	-.0391	-.0427	3061.	
.1100	-1476.	-481.	529.	-124.	-175.	-679.	.0119	.0362	-.0398	-.0218	-.0294	-.0249	2659.	
.1110	-1070.	-183.	280.	-69.	-237.	-486.	.0166	.0303	-.0351	-.0160	-.0232	-.0068	2036.	
.1120	-677.	19.	136.	-46.	-250.	-221.	.0205	.0221	-.0299	-.0079	-.0229	.0145	1259.	
.1130	-198.	192.	41.	-36.	-259.	74.	.0236	.0143	-.0256	.0059	-.0279	.0304	1013.	
.1140	366.	437.	-102.	-20.	-278.	334.	.0258	.0089	-.0235	.0226	-.0320	.0392	1625.	
.1150	836.	737.	-340.	23.	-311.	519.	.0261	.0058	-.0236	.0316	-.0301	.0503	2262.	
.1160	1106.	975.	-652.	135.	-399.	619.	.0241	.0038	-.0261	.0291	-.0239	.0665	2796.	
.1170	1163.	1044.	-1010.	351.	-546.	629.	.0208	.0031	-.0296	.0197	-.0146	.0803	3373.	
.1180	1209.	1147.	-1379.	575.	-657.	572.	.0183	.0051	-.0306	.0113	.0010	.0873	3896.	
.1190	1083.	1192.	-1620.	739.	-665.	472.	.0189	.0080	-.0266	-.0016	.0155	.0960	4109.	
.1200	844.	1106.	-1581.	772.	-570.	379.	.0213	.0115	-.0165	-.0141	.0187	.1036	3852.	
.1210	784.	1008.	-1237.	617.	-364.	326.	.0267	.0175	-.0002	-.0104	.0126	.0952	2939.	
.1220	743.	840.	-659.	337.	-68.	274.	.0338	.0259	.0196	.0054	.0012	.0724	1642.	
.1230	700.	731.	-4.	-17.	242.	222.	.0398	.0355	.0378	.0216	-.0122	.0485	1228.	
.1240	514.	574.	558.	-291.	447.	136.	.0419	.0440	.0490	.0271	-.0265	.0317	2055.	
.1250	153.	304.	849.	-349.	513.	-40.	.0388	.0516	.0504	.0222	-.0323	.0178	2321.	
.1260	-230.	116.	775.	-209.	485.	-308.	.0320	.0593	.0428	.0087	-.0219	.0058	2283.	
.1270	-730.	-36.	451.	77.	376.	-623.	.0226	.0653	.0284	-.0215	-.0063	.0063	2732.	
.1280	-1081.	-92.	85.	354.	231.	-868.	.0130	.0692	.0123	-.0561	.0046	.0136	3605.	
.1290	-1194.	-174.	-129.	538.	143.	-992.	.0058	.0711	.0005	-.0767	.0091	.0125	4246.	

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ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.11.

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	54	MEMBER	1	SEQUENCE	73	LOCATION	END	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	

.1210	784.	1008.	-1237.	617.	-364.	326.	.0267	.0175	-.0002	-.0104	.0126	.0952	2939.
.1220	743.	840.	-659.	337.	-68.	274.	.0338	.0259	.0196	.0054	.0012	.0724	1642.
.1230	700.	731.	-4.	-17.	242.	222.	.0398	.0355	.0378	.0216	-.0122	.0485	1228.
.1240	514.	574.	558.	-291.	447.	176.	.0419	.0440	.0490	.0271	-.0265	.0317	2055.
.1250	153.	304.	849.	-349.	513.	-40.	.0388	.0516	.0504	.0222	-.0323	.0178	2321.
.1260	-230.	116.	775.	-209.	485.	-308.	.0320	.0593	.0428	.0087	-.0219	.0058	2283.
.1270	-730.	-36.	451.	77.	376.	-623.	.0226	.0653	.0284	-.0215	-.0063	.0063	2732.
.1280	-1081.	-92.	85.	354.	231.	-868.	.0130	.0692	.0123	-.0561	.0046	.0136	3605.
.1290	-1194.	-174.	-129.	538.	143.	-992.	.0058	.0711	.0005	-.0767	.0091	.0125	4246.

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.11.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	73	LOCATION	END	TYPE	RU					STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	FX	RY	RZ		(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)		
.1300	-1064.	-272.	-110.	573.	190.	-972.	.0025	.0709	-.0035	-.0771	.0070	-.0000		4273.
.1310	-587.	-182.	119.	411.	348.	-769.	.0031	.0680	-.0007	-.0641	-.0059	-.0131		3505.
.1320	-19.	-89.	470.	179.	528.	-429.	.0057	.0609	.0050	-.0503	-.0308	-.0185		2624.
.1330	581.	-38.	753.	3.	698.	-54.	.0086	.0514	.0098	-.0339	-.0528	-.0233		2613.
.1340	1091.	5.	795.	-24.	812.	239.	.0102	.0412	.0101	-.0210	-.0524	-.0268		3161.
.1350	1463.	166.	539.	89.	795.	423.	.0088	.0308	.0029	-.0242	-.0635	-.0167		3379.
.1360	1736.	466.	62.	281.	640.	526.	.0046	.0198	-.0109	-.0419	-.0597	.0080		3268.
.1370	1705.	581.	-473.	568.	428.	556.	-.0012	.0079	-.0274	-.0631	-.0509	.0358		3324.
.1380	1548.	586.	-912.	834.	264.	507.	-.0054	-.0037	-.0413	-.0743	-.0383	.0556		3774.
.1390	1412.	611.	-1111.	944.	173.	524.	-.0056	-.0145	-.0501	-.0785	-.0334	.0722		4082.
.1400	1352.	666.	-998.	837.	156.	610.	-.0013	-.0237	-.0520	-.0776	-.0416	.0867		3910.
.1410	1369.	692.	-634.	562.	237.	695.	.0065	-.0301	-.0467	-.0648	-.0542	.0890		3451.
.1420	1202.	532.	-156.	270.	377.	692.	.0156	-.0339	-.0371	-.0479	-.0556	.0814		3110.
.1430	947.	390.	259.	5.	493.	639.	.0249	-.0357	-.0281	-.0391	-.0743	.0755		3014.
.1440	640.	288.	499.	-175.	511.	569.	.0328	-.0362	-.0233	-.0450	-.0795	.0766		2930.
.1450	246.	102.	528.	-205.	434.	442.	.0380	-.0352	-.0230	-.0582	-.0753	.0753		2435.
.1460	-157.	-113.	362.	-114.	305.	247.	.0405	-.0317	-.0255	-.0724	-.0598	.0667		1525.
.1470	-579.	-317.	87.	35.	141.	47.	.0412	-.0268	-.0297	-.0954	-.0430	.0609		570.
.1480	-788.	-383.	-199.	138.	-16.	-65.	.0423	-.0206	-.0328	-.1216	-.0311	.0571		574.
.1490	-840.	-501.	-388.	202.	-106.	-104.	.0446	-.0134	-.0316	-.1393	-.0233	.0442		936.
.1500	-799.	-720.	-431.	215.	-92.	-97.	.0476	-.0051	-.0241	-.1437	-.0181	.0196		746.
.1510	-479.	-761.	-352.	96.	-10.	5.	.0512	.0041	-.0117	-.1394	-.0178	-.0065		362.
.1520	-7.	-677.	-201.	-91.	63.	199.	.0540	.0125	.0020	-.1345	-.0247	-.0253		851.
.1530	468.	-615.	-77.	-224.	111.	407.	.0545	.0200	.0142	-.1247	-.0293	-.0429		1783.
.1540	731.	-686.	-67.	-213.	129.	530.	.0513	.0269	.0225	-.1125	-.0245	-.0597		2186.
.1550	865.	-670.	-207.	-126.	79.	560.	.0436	.0341	.0251	-.1060	-.0141	-.0663		2163.
.1560	1052.	-376.	-448.	-57.	-58.	527.	.0316	.0421	.0222	-.1047	-.0037	-.0600		1991.
.1570	1033.	-170.	-676.	48.	-228.	407.	.0160	.0494	.0164	-.1032	.0060	-.0475		1753.
.1580	894.	-47.	-824.	158.	-347.	252.	-.0006	.0553	.0111	-.0907	.0188	-.0371		1706.
.1590	851.	164.	-842.	180.	-408.	160.	-.0158	.0593	.0091	-.0683	.0287	-.0248		1769.
.1600	823.	417.	-690.	103.	-447.	136.	-.0296	.0604	.0078	-.0437	.0279	-.0042		1786.
.1610	723.	618.	-398.	-42.	-432.	109.	-.0423	.0594	.0115	-.0148	.0233	.0186		1669.
.1620	639.	832.	-59.	-233.	-343.	46.	-.0533	.0580	.0190	.0219	.0237	.0365		1556.
.1630	458.	1000.	266.	-403.	-258.	-46.	-.0625	.0555	.0267	.0527	.0234	.0567		1795.
.1640	253.	1204.	521.	-549.	-213.	-133.	-.0698	.0516	.0325	.0723	.0211	.0833		2254.
.1650	40.	1409.	688.	-660.	-170.	-234.	-.0758	.0467	.0367	.0866	.0234	.1091		2690.
.1660	-323.	1430.	801.	-694.	-129.	-373.	-.0810	.0406	.0393	.0975	.0292	.1293		2980.
.1670	-630.	1430.	884.	-721.	-110.	-484.	-.0850	.0339	.0398	.1044	.0328	.1448		3267.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.11.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	73	LOCATION	END	TYPE	RU
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.1590	851.	144.	842.	180.	851.	-408.	160.	-.0158	.0593	.0081	-.0683	.0287	-.0248	1769.
.1600	823.	417.	-690.	103.	-447.	126.	-.0226	.0604	.0078	-.0437	.0279	-.0042	1786.	
.1610	723.	618.	-398.	-42.	-432.	109.	-.0423	.0594	.0115	-.0148	.0233	.0186	1669.	
.1620	639.	872.	-59.	-233.	-343.	46.	-.0533	.0580	.0190	.0219	.0237	.0365	1556.	
.1630	458.	1000.	266.	-403.	-258.	-46.	-.0625	.0555	.0267	.0527	.0234	.0567	1795.	
.1640	253.	1204.	521.	-549.	-213.	-133.	-.0698	.0516	.0325	.0723	.0211	.0833	2254.	
.1650	40.	1409.	688.	-660.	-170.	-234.	-.0758	.0467	.0367	.0866	.0234	.1091	2690.	
.1660	-323.	1430.	801.	-694.	-129.	-373.	-.0810	.0406	.0393	.0975	.0292	.1293	2980.	
.1670	-630.	1430.	884.	-721.	-110.	-484.	-.0850	.0339	.0398	.1044	.0328	.1448	3267.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.11.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	73	LOCATION	END	TYPE	RU							
TIME	FX	FY	FZ	MX	MY	MZ										
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(PSI)
.1680	-817.	1460.	954.	-771.	-115.	-520.	-.0867	.0266	.0381	.1044	.0311	.1579	3499.			
.1690	-878.	1466.	1006.	-830.	-110.	-499.	-.0862	.0195	.0351	.1028	.0288	.1619	3638.			
.1700	-930.	1316.	1033.	-844.	-100.	-470.	-.0842	.0129	.0311	.1001	.0271	.1533	3625.			
.1710	-1004.	1057.	1001.	-809.	-115.	-431.	-.0811	.0069	.0255	.0889	.0237	.1391	3447.			
.1720	-833.	965.	864.	-793.	-152.	-332.	-.0760	.0024	.0185	.0710	.0215	.1220	3260.			
.1730	-650.	802.	650.	-719.	-213.	-213.	-.0697	-.0015	.0106	.0470	.0208	.1002	2912.			
.1740	-541.	463.	395.	-565.	-281.	-108.	-.0627	-.0047	.0029	.0222	.0230	.0698	2390.			
.1750	-378.	139.	123.	-410.	-338.	0.	-.0546	-.0064	-.0034	-.0026	.0271	.0350	1984.			
.1760	-202.	-133.	-125.	-291.	-381.	115.	-.0456	-.0067	-.0081	-.0311	.0283	.0026	1842.			
.1770	-2.	-378.	-315.	-212.	-390.	220.	-.0356	-.0053	-.0102	-.0569	.0276	-.0312	1849.			
.1780	83.	-742.	-428.	-127.	-347.	279.	-.0251	-.0025	-.0094	-.0768	.0268	-.0691	1728.			
.1790	165.	-1063.	-483.	-78.	-254.	311.	-.0145	.0019	-.0061	-.0905	.0269	-.1068	1529.			
.1800	259.	-1256.	-493.	-79.	-152.	328.	-.0047	.0072	-.0013	-.1022	.0249	-.1370	1382.			
.1810	191.	-1484.	-462.	-62.	-64.	298.	.0029	.0124	.0040	-.1131	.0211	-.1588	1160.			
.1820	105.	-1667.	-431.	-34.	34.	226.	.0083	.0179	.0101	-.1151	.0224	-.1785	862.			
.1830	-6.	-1794.	-409.	11.	129.	128.	.0114	.0233	.0160	-.1113	.0267	-.1923	681.			
.1840	-114.	-1809.	-380.	47.	198.	30.	.0121	.0279	.0209	-.1059	.0290	-.1952	767.			
.1850	-212.	-1738.	-323.	63.	257.	-68.	.0104	.0316	.0251	-.0964	.0296	-.1897	1019.			
.1860	-350.	-1679.	-224.	78.	330.	-175.	.0064	.0342	.0290	-.0789	.0309	-.1812	1423.			
.1870	-401.	-1533.	-95.	60.	407.	-261.	.0008	.0360	.0322	-.0531	.0318	-.1706	1817.			
.1880	-432.	-1325.	49.	25.	453.	-314.	-.0064	.0362	.0335	-.0267	.0287	-.1527	2058.			
.1890	-434.	-1050.	166.	-15.	473.	-345.	-.0149	.0350	.0330	-.0005	.0253	-.1289	2187.			
.1900	-426.	-759.	218.	-24.	476.	-377.	-.0244	.0326	.0309	.0267	.0261	-.1040	2269.			
.1910	-480.	-529.	194.	28.	443.	-413.	-.0344	.0288	.0273	.0498	.0290	-.0770	2264.			
.1920	-457.	-231.	92.	90.	377.	-416.	-.0434	.0240	.0227	.0669	.0328	-.0470	2122.			
.1930	-347.	108.	-50.	138.	305.	-380.	-.0510	.0187	.0189	.0795	.0373	-.0170	1890.			
.1940	-207.	381.	-172.	173.	247.	-318.	-.0570	.0129	.0170	.0917	.0415	.0078	1636.			
.1950	-9.	594.	-236.	172.	209.	-212.	-.0610	.0067	.0176	.1046	.0433	.0259	1282.			
.1960	293.	816.	-240.	109.	185.	-38.	-.0627	.0004	.0197	.1162	.0415	.0395	815.			
.1970	636.	1007.	-207.	13.	163.	175.	-.0627	-.0057	.0220	.1255	.0371	.0485	892.			
.1980	913.	1097.	-172.	-66.	124.	361.	-.0624	-.0109	.0232	.1321	.0331	.0508	1446.			
.1990	1076.	1115.	-186.	-106.	50.	478.	-.0625	-.0146	.0219	.1331	.0318	.0487	1837.			
.2000	1111.	1116.	-275.	-107.	-72.	514.	-.0634	-.0166	.0173	.1245	.0331	.0471	1979.			
.2010	982.	1068.	-421.	-61.	-237.	467.	-.0647	-.0169	.0101	.1070	.0367	.0457	1968.			
.2020	699.	924.	-568.	16.	-411.	344.	-.0656	-.0157	.0023	.0868	.0429	.0403	2004.			
.2030	330.	715.	-641.	71.	-559.	179.	-.0653	-.0129	-.0036	.0684	.0495	.0299	2206.			
.2040	-63.	494.	-577.	50.	-661.	8.	-.0632	-.0090	-.0059	.0525	.0523	.0171	2473.			
.2050	-447.	265.	-354.	-60.	-703.	-148.	-.0588	-.0042	-.0040	.0410	.0496	.0017	2690.			

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.29.11.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION 54 MEMBER 1 SEQUENCE 73 LOCATION END TYPE RU

.1970	636.	1007.	-207.	13.	163.	175.	-.0627	-.0057	.0220	.1255	.0371	.0485	892.
.1980	913.	1097.	-172.	-66.	124.	361.	-.0624	-.0109	.0232	.1321	.0331	.0508	1446.
.1990	1076.	1115.	-186.	-106.	50.	478.	-.0625	-.0146	.0219	.1331	.0318	.0487	1837.
.2000	1111.	1116.	-275.	-107.	-72.	514.	-.0634	-.0166	.0173	.1245	.0331	.0471	1979.
.2010	982.	1068.	-421.	-61.	-237.	467.	-.0647	-.0169	.0101	.1070	.0367	.0457	1968.
.2020	699.	924.	-568.	16.	-411.	344.	-.0656	-.0157	.0023	.0868	.0429	.0403	2004.
.2030	330.	715.	-641.	71.	-559.	179.	-.0653	-.0129	-.0036	.0684	.0495	.0299	2206.
.2040	-63.	494.	-577.	50.	-661.	8.	-.0632	-.0090	-.0059	.0525	.0523	.0171	2473.
.2050	-447.	265.	-354.	-60.	-703.	-148.	-.0588	-.0042	-.0040	.0410	.0496	.0017	2690.

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

ADLPIPE STRESS ANALYSIS

83/12/02. 18.29.11.

CONDITION 24
LOADS
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ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	73	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2060	-813.	-0.	-5.	-228.	-675.	-292.	-.0525	.0013	.0020	.0363	.0439	-.0186	2875.		
.2070	-1156.	-287.	401.	-417.	-598.	-429.	-.0450	.0072	.0104	.0366	.0370	-.0419	3156.		
.2080	-1474.	-543.	781.	-592.	-514.	-561.	-.0379	.0131	.0187	.0365	.0295	-.0630	3599.		
.2090	-1758.	-744.	1062.	-717.	-457.	-691.	-.0320	.0187	.0248	.0332	.0232	-.0797	4089.		
.2100	-2005.	-913.	1195.	-752.	-435.	-822.	-.0279	.0237	.0278	.0281	.0214	-.0937	4463.		
.2110	-2203.	-1067.	1172.	-689.	-447.	-940.	-.0256	.0278	.0274	.0216	.0242	-.1055	4660.		
.2120	-2310.	-1168.	1029.	-562.	-487.	-1022.	-.0244	.0307	.0247	.0132	.0288	-.1135	4718.		
.2130	-2279.	-1189.	825.	-422.	-528.	-1048.	-.0237	.0325	.0213	.0050	.0326	-.1183	4655.		
.2140	-2102.	-1167.	628.	-300.	-537.	-1011.	-.0226	.0332	.0191	.0010	.0348	-.1230	4418.		
.2150	-1790.	-1132.	485.	-210.	-498.	-904.	-.0204	.0326	.0191	.0030	.0342	-.1292	3933.		
.2160	-1346.	-1064.	401.	-165.	-419.	-722.	-.0169	.0308	.0209	.0096	.0300	-.1352	3178.		
.2170	-815.	-946.	350.	-153.	-317.	-490.	-.0125	.0278	.0236	.0184	.0234	-.1392	2253.		
.2180	-294.	-819.	293.	-137.	-214.	-259.	-.0084	.0240	.0257	.0273	.0173	-.1410	1355.		
.2190	131.	-709.	192.	-84.	-133.	-70.	-.0053	.0198	.0259	.0338	.0136	-.1396	643.		
.2200	439.	-597.	27.	14.	-89.	63.	-.0034	.0153	.0232	.0353	.0128	-.1333	408.		
.2210	630.	-475.	-129.	145.	-78.	138.	-.0023	.0109	.0178	.0317	.0143	-.1220	802.		
.2220	694.	-376.	-408.	289.	-83.	157.	-.0016	.0067	.0109	.0254	.0173	-.1084	1266.		
.2230	653.	-312.	-567.	410.	-78.	133.	-.0007	.0028	.0044	.0198	.0198	-.0945	1634.		
.2240	558.	-260.	-614.	468.	-46.	95.	-.0010	-.0007	-.0004	.0163	.0193	-.0809	1791.		
.2250	446.	-217.	-530.	452.	16.	67.	.0041	-.0039	-.0028	.0157	.0143	-.0685	1706.		
.2260	322.	-204.	-336.	380.	107.	50.	.0083	-.0067	-.0032	.0184	.0059	-.0589	1485.		
.2270	183.	-219.	-88.	284.	212.	30.	.0129	-.0089	-.0024	.0227	-.0039	-.0519	1328.		
.2280	30.	-234.	142.	196.	304.	-5.	.0172	-.0103	-.0021	.0248	-.0137	-.0451	1351.		
.2290	-133.	-233.	292.	148.	361.	-58.	.0205	-.0110	-.0036	.0218	-.0224	-.0370	1474.		
.2300	-296.	-228.	331.	164.	377.	-126.	.0224	-.0111	-.0075	.0141	-.0284	-.0284	1606.		
.2310	-435.	-228.	263.	243.	359.	-194.	.0232	-.0107	-.0131	.0036	-.0315	-.0209	1771.		
.2320	-513.	-220.	126.	357.	315.	-240.	.0231	-.0100	-.0194	-.0086	-.0334	-.0142	1990.		
.2330	-486.	-179.	-39.	470.	265.	-242.	.0228	-.0091	-.0248	-.0205	-.0360	-.0085	2208.		
.2340	-336.	-112.	-195.	563.	229.	-191.	.0229	-.0080	-.0279	-.0298	-.0395	-.0053	2378.		
.2350	-79.	-40.	-323.	631.	221.	-88.	.0237	-.0066	-.0278	-.0351	-.0436	-.0053	2519.		
.2360	255.	36.	-418.	675.	239.	54.	.0254	-.0051	-.0247	-.0374	-.0483	-.0072	2680.		
.2370	637.	135.	-492.	694.	269.	216.	.0275	-.0033	-.0191	-.0380	-.0528	-.0092	2895.		
.2380	1021.	254.	-559.	700.	302.	369.	.0294	-.0010	-.0119	-.0374	-.0555	-.0107	3163.		
.2390	1349.	367.	-628.	709.	326.	491.	.0305	.0017	-.0043	-.0360	-.0555	-.0112	3443.		
.2400	1589.	466.	-699.	726.	334.	575.	.0305	.0046	.0030	-.0343	-.0527	-.0098	3674.		
.2410	1738.	562.	-759.	740.	327.	619.	.0295	.0077	.0093	-.0322	-.0477	-.0060	3800.		
.2420	1795.	650.	-785.	738.	310.	619.	.0275	.0111	.0147	-.0289	-.0415	-.0008	3779.		
.2430	1762.	721.	-753.	708.	294.	577.	.0245	.0147	.0195	-.0233	-.0348	.0049	3582.		

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

ADLPIPE STRESS ANALYSIS

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CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	73	LOCATION	END	TYPE	RU
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.2340	-530.	-112.	-177.	563.	229.	-171.	.0277	-.0020	-.0279	-.0298	-.0395	-.0053	2378.
.2350	-79.	-40.	-323.	631.	221.	-88.	.0237	-.0066	-.0278	-.0351	-.0436	-.0053	2519.
.2360	255.	36.	-418.	675.	239.	54.	.0254	-.0051	-.0247	-.0374	-.0483	-.0072	2680.
.2370	637.	135.	-492.	694.	269.	216.	.0275	-.0033	-.0191	-.0380	-.0528	-.0092	2895.
.2380	1021.	254.	-559.	700.	302.	369.	.0294	-.0010	-.0119	-.0374	-.0555	-.0107	3163.
.2390	1349.	367.	-628.	709.	326.	491.	.0305	.0017	-.0043	-.0360	-.0555	-.0112	3443.
.2400	1589.	466.	-699.	726.	334.	575.	.0305	.0046	.0030	-.0343	-.0527	-.0098	3674.
.2410	1738.	562.	-759.	740.	327.	619.	.0295	.0077	.0093	-.0322	-.0477	-.0060	3800.
.2420	1795.	650.	-785.	738.	310.	619.	.0275	.0111	.0147	-.0289	-.0415	-.0008	3779.
.2430	1762.	721.	-753.	708.	294.	577.	.0245	.0147	.0195	-.0233	-.0348	.0049	3582.

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ADLPIPE STRESS ANALYSIS

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

CONDITION 24

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

SECTION	54	MEMBER	1	SEQUENCE	73	LOCATION	END	TYPE	RU						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	HX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	PY (DEG)	RZ (DEG)	STRESS (PSI)		
.2440	1660.	781.	-652.	639.	281.	502.	.0209	.0184	.0237	-.0152	-.0288	.0107	3208.		
.2450	1506.	833.	-486.	530.	273.	408.	.0169	.0220	.0273	-.0052	-.0238	.0170	2698.		
.2460	1298.	861.	-271.	400.	267.	303.	.0128	.0249	.0301	.0059	-.0196	.0234	2122.		
.2470	1040.	857.	-32.	265.	263.	186.	.0086	.0272	.0319	.0169	-.0157	.0298	1556.		
.2480	760.	841.	204.	131.	255.	62.	.0046	.0287	.0323	.0267	-.0120	.0363	1093.		
.2490	482.	829.	418.	2.	236.	-63.	.0007	.0295	.0309	.0339	-.0087	.0431	913.		
.2500	198.	804.	600.	-111.	209.	-187.	-.0027	.0295	.0280	.0380	-.0058	.0499	1124.		
.2510	-89.	747.	752.	-202.	177.	-300.	-.0053	.0284	.0235	.0394	-.0036	.0558	1505.		
.2520	-355.	665.	874.	-277.	145.	-393.	-.0067	.0263	.0178	.0382	-.0025	.0602	1875.		
.2530	-572.	577.	969.	-342.	112.	-458.	-.0066	.0235	.0112	.0344	-.0032	.0629	2173.		
.2540	-732.	485.	1034.	-399.	83.	-491.	-.0050	.0200	.0042	.0279	-.0055	.0639	2384.		
.2550	-835.	382.	1068.	-443.	58.	-495.	-.0019	.0159	-.0030	.0193	-.0091	.0628	2491.		
.2560	-885.	265.	1063.	-465.	32.	-469.	.0027	.0113	-.0102	.0085	-.0137	.0598	2469.		
.2570	-883.	143.	1015.	-462.	3.	-412.	.0086	.0062	-.0175	-.0048	-.0190	.0557	2311.		
.2580	-327.	31.	918.	-434.	-29.	-330.	.0155	.0008	-.0247	-.0199	-.0244	.0509	2040.		
.2590	-719.	-65.	778.	-385.	-64.	-232.	.0230	-.0047	-.0316	-.0357	-.0297	.0456	1696.		
.2600	-573.	-151.	609.	-319.	-100.	-119.	.0308	-.0102	-.0380	-.0516	-.0351	.0406	1325.		
.2610	-402.	-227.	426.	-240.	-131.	8.	.0387	-.0159	-.0433	-.0667	-.0407	.0363	1021.		
.2620	-210.	-287.	239.	-153.	-156.	142.	.0464	-.0213	-.0488	-.0801	-.0464	.0328	972.		
.2630	-10.	-327.	60.	-65.	-172.	270.	.0537	-.0263	-.0529	-.0909	-.0519	.0301	1220.		
.2640	177.	-345.	-101.	16.	-178.	382.	.0600	-.0306	-.0559	-.0991	-.0571	.0290	1576.		
.2650	337.	-341.	-238.	90.	-176.	472.	.0652	-.0342	-.0579	-.1046	-.0619	.0301	1909.		
.2660	462.	-321.	-349.	158.	-164.	537.	.0692	-.0371	-.0589	-.1072	-.0657	.0331	2177.		
.2670	542.	-291.	-433.	223.	-142.	575.	.0720	-.0390	-.0591	-.1066	-.0580	.0377	2362.		
.2680	577.	-245.	-489.	278.	-110.	582.	.0735	-.0401	-.0582	-.1032	-.0589	.0440	2444.		
.2690	568.	-182.	-512.	318.	-68.	559.	.0737	-.0402	-.0563	-.0972	-.0685	.0522	2413.		
.2700	515.	-116.	-497.	342.	-16.	509.	.0725	-.0395	-.0534	-.0889	-.0571	.0617	2289.		
.2710	429.	-55.	-446.	352.	49.	443.	.0704	-.0379	-.0496	-.0782	-.0645	.0711	2121.		
.2720	342.	18.	-367.	347.	124.	369.	.0675	-.0354	-.0450	-.0653	-.0511	.0797	1947.		
.2730	270.	116.	-272.	325.	203.	292.	.0640	-.0322	-.0400	-.0510	-.0569	.0879	1797.		
.2740	198.	217.	-170.	294.	281.	215.	.0596	-.0288	-.0348	-.0364	-.0521	.0965	1719.		
.2750	122.	295.	-74.	272.	354.	144.	.0545	-.0256	-.0299	-.0220	-.0464	.1046	1752.		
.2760	66.	364.	-7.	264.	418.	85.	.0492	-.0226	-.0257	-.0080	-.0395	.1114	1874.		
.2770	56.	454.	20.	266.	471.	42.	.0438	-.0196	-.0222	.0045	-.0317	.1172	2026.		
.2780	88.	557.	11.	273.	512.	16.	.0384	-.0169	-.0194	.0148	-.0236	.1223	2166.		
.2790	151.	640.	-22.	287.	542.	10.	.0331	-.0148	-.0170	.0232	-.0159	.1261	2289.		
.2800	258.	699.	-73.	308.	566.	32.	.0284	-.0132	-.0143	.0306	-.0087	.1271	2410.		
.2810	427.	761.	-140.	328.	588.	88.	.0247	-.0120	-.0130	.0371	-.0025	.1254	2535.		

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

CONDITION 24

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

SECTION 54 MEMBER 1 SEQUENCE 73 LOCATION END TYPE RU

.2730	270.	116.	-272.	325.	203.	292.	.0640	-.0322	-.0400	-.0510	-.0569	.0879	1797.
.2740	198.	217.	-170.	294.	281.	215.	.0596	-.0288	-.0348	-.0364	-.0521	.0965	1719.
.2750	122.	295.	-74.	272.	354.	144.	.0545	-.0256	-.0299	-.0220	-.0464	.1046	1752.
.2760	66.	364.	-7.	264.	418.	85.	.0492	-.0226	-.0257	-.0080	-.0395	.1114	1874.
.2770	56.	454.	20.	266.	471.	42.	.0438	-.0196	-.0222	.0045	-.0317	.1172	2026.
.2780	88.	557.	11.	273.	512.	16.	.0384	-.0169	-.0194	.0148	-.0236	.1223	2166.
.2790	151.	640.	-22.	287.	542.	10.	.0331	-.0148	-.0170	.0232	-.0159	.1261	2289.
.2800	258.	699.	-73.	308.	566.	32.	.0284	-.0132	-.0148	.0306	-.0087	.1271	2410.
.2810	427.	761.	-140.	328.	588.	88.	.0247	-.0120	-.0130	.0371	-.0025	.1254	2535.

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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	54	MEMBER	1	SEQUENCE	73	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)	(DEG)	(PSI)	
.2820	651.	832.	-212.	335.	604.	175.	.0218	-.0112	-.0114	.0422	.0018	.1219	2661.		
.2830	890.	881.	-279.	333.	609.	277.	.0193	-.0110	-.0103	.0462	.0042	.1166	2791.		
.2840	1107.	889.	-343.	332.	600.	378.	.0171	-.0113	-.0099	.0491	.0054	.1095	2925.		
.2850	1292.	875.	-416.	336.	575.	471.	.0153	-.0118	-.0107	.0504	.0062	.1010	3044.		
.2860	1430.	854.	-504.	343.	527.	546.	.0141	-.0123	-.0130	.0487	.0066	.0922	3109.		
.2870	1486.	806.	-592.	353.	458.	586.	.0130	-.0125	-.0165	.0442	.0067	.0832	3073.		
.2880	1432.	708.	-662.	363.	374.	579.	.0122	-.0125	-.0205	.0377	.0068	.0738	2908.		
.2890	1281.	577.	-700.	359.	288.	531.	.0119	-.0121	-.0244	.0298	.0066	.0639	2623.		
.2900	1062.	432.	-690.	330.	207.	458.	.0128	-.0114	-.0277	.0208	.0051	.0538	2246.		
.2910	786.	261.	-616.	271.	139.	370.	.0150	-.0104	-.0299	.0118	.0021	.0430	1788.		
.2920	453.	54.	-477.	182.	90.	263.	.0182	-.0091	-.0306	.0038	-.0021	.0309	1239.		
.2930	88.	-164.	-290.	66.	57.	140.	.0220	-.0075	-.0301	-.0034	-.0071	.0184	615.		
.2940	-282.	-373.	-85.	-65.	28.	15.	.0261	-.0057	-.0292	-.0111	-.0127	.0067	270.		
.2950	-646.	-577.	104.	-185.	-6.	-106.	.0301	-.0040	-.0286	-.0198	-.0178	-.0041	794.		
.2960	-993.	-781.	246.	-273.	-49.	-223.	.0337	-.0023	-.0288	-.0294	-.0211	-.0146	1328.		
.2970	-1297.	-957.	323.	-328.	-107.	-335.	.0362	-.0006	-.0298	-.0400	-.0221	-.0238	1794.		
.2980	-1530.	-1080.	331.	-356.	-180.	-429.	.0376	.0009	-.0317	-.0520	-.0217	-.0304	2186.		
.2990	-1677.	-1161.	284.	-359.	-261.	-489.	.0379	.0020	-.0340	-.0642	-.0202	-.0346	2466.		
.3000	-1732.	-1219.	201.	-338.	-336.	-509.	.0376	.0026	-.0360	-.0743	-.0176	-.0380	2604.		
.3010	-1684.	-1238.	99.	-311.	-396.	-487.	.0367	.0028	-.0369	-.0810	-.0144	-.0409	2615.		
.3020	-1533.	-1193.	-3.	-295.	-440.	-428.	.0353	.0028	-.0366	-.0847	-.0117	-.0416	2540.		
.3030	-1308.	-1093.	-99.	-293.	-467.	-341.	.0330	.0025	-.0348	-.0855	-.0094	-.0396	2421.		
.3040	-1051.	-973.	-188.	-288.	-477.	-243.	.0300	.0020	-.0318	-.0829	-.0064	-.0358	2276.		
.3050	-784.	-834.	-280.	-272.	-480.	-145.	.0263	.0014	-.0279	-.0771	-.0019	-.0303	2129.		
.3060	-523.	-652.	-376.	-251.	-477.	-58.	.0216	.0011	-.0236	-.0697	.0035	-.0216	2024.		
.3070	-292.	-434.	-466.	-233.	-474.	6.	.0158	.0008	-.0189	-.0612	.0095	-.0091	1970.		
.3080	-121.	-214.	-533.	-214.	-466.	38.	.0089	.0007	-.0138	-.0508	.0161	.0057	1920.		
.3090	-12.	-8.	-564.	-199.	-448.	43.	.0014	.0007	-.0082	-.0377	.0229	.0215	1837.		
.3100	54.	199.	-549.	-198.	-417.	33.	-.0062	.0008	-.0021	-.0226	.0288	.0380	1729.		
.3110	82.	406.	-481.	-223.	-374.	9.	-.0137	.0011	.0045	-.0062	.0330	.0546	1627.		
.3120	59.	589.	-360.	-269.	-320.	-36.	-.0211	.0017	.0114	-.0113	.0356	.0700	1565.		
.3130	-13.	739.	-202.	-327.	-256.	-104.	-.0282	.0025	.0185	.0289	.0372	.0834	1598.		
.3140	-116.	862.	-33.	-387.	-192.	-182.	-.0348	.0034	.0249	.0448	.0379	.0948	1751.		
.3150	-237.	956.	128.	-439.	-135.	-259.	-.0404	.0042	.0302	.0575	.0377	.1040	1969.		
.3160	-375.	1003.	268.	-475.	-88.	-337.	-.0453	.0049	.0343	.0667	.0371	.1100	2198.		
.3170	-512.	1009.	380.	-496.	-48.	-413.	-.0492	.0055	.0371	.0725	.0364	.1120	2418.		
.3180	-622.	987.	462.	-511.	-18.	-473.	-.0520	.0057	.0387	.0741	.0347	.1104	2600.		
.3190	-686.	935.	515.	-517.	4.	-501.	-.0534	.0056	.0390	.0718	.0318	.1050	2688.		

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ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.12.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	73	LOCATION	END	TYPE	RU
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.3110	82.	406.	-481.	-223.	-374.	9.	-.0137	.0011	.0045	-.0062	.0330	.0546	1627.
.3120	59.	589.	-360.	-269.	-320.	-36.	-.0211	.0017	.0114	.0113	.0356	.0700	1565.
.3130	-13.	739.	-202.	-327.	-256.	-104.	-.0282	.0025	.0185	.0289	.0372	.0834	1598.
.3140	-116.	362.	-33.	-307.	-192.	-182.	-.0348	.0034	.0249	.0448	.0379	.0948	1751.
.3150	-237.	956.	128.	-439.	-135.	-259.	-.0404	.0042	.0302	.0575	.0377	.1040	1969.
.3160	-375.	1003.	260.	-475.	-88.	-337.	-.0453	.0049	.0343	.0667	.0371	.1100	2198.
.3170	-512.	1009.	380.	-496.	-48.	-413.	-.0492	.0055	.0371	.0725	.0364	.1120	2418.
.3180	-622.	987.	462.	-511.	-18.	-473.	-.0520	.0057	.0387	.0741	.0347	.1104	2600.
.3190	-686.	935.	515.	-517.	4.	-501.	-.0534	.0056	.0390	.0718	.0318	.1050	2688.

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

83/12/02. 18.29.12.

CONDITION 24
 LOADS
 SHOCK
 PRESSURE
 ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	73	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)	(DEG)	(DEG)	(PSI)
.3200	-701.	839.	539.	-510.	23.	-494.	-.0531	.0049	.0383	.0664	.0281	.0948	2653.		
.3210	-664.	707.	532.	-494.	40.	-456.	-.0513	.0038	.0369	.0584	.0241	.0798	2513.		
.3220	-568.	566.	492.	-474.	50.	-389.	-.0484	.0023	.0347	.0475	.0196	.0619	2296.		
.3230	-424.	422.	418.	-447.	49.	-296.	-.0445	.0003	.0319	.0334	.0149	.0425	2011.		
.3240	-254.	258.	310.	-404.	40.	-182.	-.0397	-.0024	.0284	.0175	.0110	.0216	1660.		
.3250	-74.	74.	176.	-341.	25.	-58.	-.0343	-.0055	.0245	.0011	.0085	-.0005	1296.		
.3260	110.	-102.	27.	-275.	3.	59.	-.0285	-.0089	.0203	-.0156	.0069	-.0217	1058.		
.3270	284.	-253.	-115.	-218.	-23.	188.	-.0228	-.0125	.0163	-.0319	.0055	-.0407	1079.		
.3280	428.	-395.	-234.	-173.	-46.	292.	-.0174	-.0162	.0128	-.0461	.0047	-.0575	1279.		
.3290	529.	-535.	-319.	-136.	-61.	376.	-.0122	-.0199	.0099	-.0566	.0047	-.0723	1510.		
.3300	588.	-654.	-368.	-111.	-69.	439.	-.0075	-.0235	.0078	-.0635	.0052	-.0840	1711.		
.3310	604.	-733.	-381.	-103.	-72.	477.	-.0036	-.0269	.0064	-.0672	.0059	-.0912	1842.		
.3320	566.	-782.	-360.	-109.	-71.	481.	-.0007	-.0301	.0058	-.0674	.0072	-.0939	1861.		
.3330	469.	-813.	-310.	-117.	-65.	451.	.0010	-.0331	.0061	-.0637	.0096	-.0926	1758.		
.3340	331.	-818.	-240.	-127.	-57.	397.	.0017	-.0358	.0070	-.0567	.0128	-.0876	1571.		
.3350	173.	-786.	-152.	-141.	-46.	328.	.0017	-.0383	.0084	-.0469	.0163	-.0787	1345.		
.3360	0.	-728.	-45.	-162.	-33.	246.	.0009	-.0405	.0104	-.0346	.0197	-.0670	1106.		
.3370	-183.	-656.	80.	-188.	-16.	151.	-.0007	-.0423	.0129	-.0196	.0230	-.0540	902.		
.3380	-356.	-568.	213.	-219.	4.	55.	-.0028	-.0437	.0157	-.0030	.0258	-.0402	843.		
.3390	-500.	-460.	342.	-250.	22.	-31.	-.0050	-.0449	.0183	.0141	.0280	-.0259	945.		
.3400	-617.	-349.	453.	-272.	35.	-104.	-.0072	-.0458	.0204	.0306	.0296	-.0122	1096.		
.3410	-710.	-248.	536.	-278.	40.	-167.	-.0095	-.0466	.0219	.0461	.0312	.0002	1219.		
.3420	-769.	-149.	581.	-268.	34.	-219.	-.0117	-.0471	.0226	.0592	.0328	.0111	1297.		
.3430	-783.	-47.	582.	-242.	15.	-251.	-.0136	-.0476	.0223	.0690	.0340	.0205	1304.		
.3440	-754.	41.	544.	-200.	-14.	-259.	-.0149	-.0480	.0212	.0756	.0349	.0276	1223.		
.3450	-689.	100.	477.	-144.	-46.	-244.	-.0153	-.0484	.0196	.0798	.0355	.0313	1070.		
.3460	-585.	141.	394.	-85.	-80.	-207.	-.0150	-.0488	.0177	.0816	.0354	.0317	888.		
.3470	-443.	176.	302.	-33.	-114.	-151.	-.0139	-.0491	.0157	.0808	.0341	.0298	718.		
.3480	-279.	196.	208.	13.	-149.	-79.	-.0121	-.0494	.0135	.0779	.0319	.0257	630.		
.3490	-119.	184.	115.	61.	-180.	-0.	-.0096	-.0497	.0112	.0736	.0295	.0191	710.		
.3500	20.	145.	22.	112.	-211.	75.	-.0068	-.0500	.0087	.0678	.0272	.0110	935.		
.3510	128.	98.	-67.	159.	-244.	138.	-.0038	-.0502	.0059	.0604	.0248	.0026	1203.		
.3520	192.	46.	-147.	199.	-278.	180.	-.0010	-.0501	.0029	.0518	.0226	-.0053	1441.		
.3530	198.	-22.	-208.	233.	-308.	194.	.0016	-.0497	-.0001	.0432	.0209	-.0132	1615.		
.3540	145.	-109.	-239.	259.	-330.	185.	.0040	-.0491	-.0028	.0356	.0196	-.0209	1713.		
.3550	49.	-197.	-234.	269.	-342.	157.	.0064	-.0481	-.0049	.0293	.0182	-.0278	1726.		
.3560	-77.	-274.	-188.	256.	-340.	113.	.0085	-.0469	-.0064	.0249	.0164	-.0337	1643.		
.3570	-230.	-346.	-102.	223.	-324.	53.	.0102	-.0454	-.0069	.0231	.0145	-.0387	1481.		

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

83/12/02. 18.29.12.

CONDITION 24
 LOADS
 SHOCK
 PRESSURE
 ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	73	LOCATION	END	TYPE	RU
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.3490	-119.	184.	115.	61.	-180.	-0.	-.0096	-.0497	.0112	.0736	.0295	.0191	710.
.3500	20.	145.	22.	112.	-211.	75.	-.0068	-.0500	.0087	.0678	.0272	.0110	935.
.3510	128.	98.	-67.	159.	-244.	138.	-.0038	-.0502	.0059	.0604	.0248	.0026	1203.
.3520	192.	46.	-147.	199.	-278.	180.	-.0010	-.0501	.0029	.0518	.0226	-.0053	1441.
.3530	198.	-22.	-208.	233.	-308.	194.	.0016	-.0497	-.0001	.0432	.0209	-.0132	1615.
.3540	145.	-109.	-239.	259.	-330.	185.	.0040	-.0491	-.0028	.0356	.0196	-.0209	1713.
.3550	49.	-197.	-234.	269.	-342.	157.	.0064	-.0481	-.0049	.0293	.0182	-.0278	1726.
.3560	-77.	-274.	-188.	256.	-340.	113.	.0085	-.0469	-.0064	.0249	.0164	-.0337	1643.
.3570	-230.	-346.	-102.	223.	-324.	53.	.0102	-.0454	-.0069	.0231	.0145	-.0387	1481.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.12.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	73	LOCATION	END	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3580	-399.	-415.	11.	179.	-294.	-16.	.0114	-.0437	-.0068	.0239	.0127	-.0430	1289.	
.3590	-566.	-470.	135.	133.	-257.	-85.	.0123	-.0419	-.0062	.0266	.0111	-.0460	1125.	
.3600	-716.	-504.	252.	91.	-215.	-151.	.0127	-.0400	-.0055	.0304	.0100	-.0478	1037.	
.3610	-842.	-519.	347.	61.	-171.	-213.	.0126	-.0380	-.0047	.0351	.0096	-.0487	1045.	
.3620	-934.	-514.	410.	47.	-126.	-269.	.0118	-.0359	-.0039	.0402	.0100	-.0488	1121.	
.3630	-972.	-485.	438.	49.	-80.	-307.	.0108	-.0337	-.0031	.0453	.0109	-.0483	1198.	
.3640	-945.	-436.	431.	66.	-31.	-318.	.0098	-.0317	-.0022	.0501	.0119	-.0477	1218.	
.3650	-850.	-376.	397.	97.	23.	-299.	.0090	-.0297	-.0010	.0551	.0129	-.0476	1178.	
.3660	-683.	-305.	342.	134.	86.	-252.	.0085	-.0277	-.0008	.0600	.0135	-.0486	1113.	
.3670	-446.	-218.	270.	172.	153.	-176.	.0083	-.0258	.0030	.0646	.0133	-.0504	1084.	
.3680	-152.	-120.	184.	212.	222.	-76.	.0084	-.0238	.0053	.0682	.0124	-.0528	1179.	
.3690	175.	-29.	84.	258.	288.	42.	.0089	-.0220	.0075	.0709	.0111	-.0562	1453.	
.3700	511.	51.	-31.	314.	347.	164.	.0095	-.0201	.0091	.0723	.0097	-.0605	1853.	
.3710	835.	127.	-159.	375.	394.	280.	.0099	-.0182	.0100	.0718	.0082	-.0648	2282.	
.3720	1130.	203.	-293.	435.	423.	379.	.0102	-.0161	.0098	.0690	.0065	-.0686	2672.	
.3730	1371.	265.	-425.	494.	438.	456.	.0102	-.0140	.0087	.0646	.0048	-.0716	2995.	
.3740	1541.	298.	-540.	550.	440.	508.	.0101	-.0121	.0069	.0590	.0031	-.0741	3244.	
.3750	1640.	310.	-624.	594.	434.	536.	.0102	-.0104	.0047	.0527	.0011	-.0758	3397.	
.3760	1671.	316.	-668.	612.	423.	536.	.0104	-.0088	.0026	.0458	-.0016	-.0763	3425.	
.3770	1634.	314.	-664.	602.	410.	510.	.0108	-.0074	.0008	.0390	-.0051	-.0753	3321.	
.3780	1528.	296.	-613.	566.	398.	461.	.0115	-.0065	-.0004	.0325	-.0091	-.0731	3105.	
.3790	1362.	261.	-522.	511.	387.	394.	.0124	-.0060	-.0012	.0264	-.0135	-.0695	2809.	
.3800	1153.	222.	-404.	441.	373.	317.	.0135	-.0061	-.0016	.0205	-.0181	-.0643	2458.	
.3810	913.	186.	-275.	360.	354.	230.	.0146	-.0067	-.0019	.0143	-.0226	-.0575	2070.	
.3820	657.	154.	-147.	276.	327.	136.	.0154	-.0077	-.0023	.0080	-.0266	-.0493	1676.	
.3830	404.	129.	-34.	197.	291.	43.	.0159	-.0092	-.0028	.0014	-.0301	-.0401	1322.	
.3840	174.	113.	56.	128.	247.	-36.	.0160	-.0112	-.0036	-.0055	-.0329	-.0301	1046.	
.3850	-13.	110.	117.	70.	196.	-95.	.0159	-.0136	-.0045	-.0124	-.0351	-.0199	853.	
.3860	-143.	123.	153.	20.	141.	-131.	.0153	-.0162	-.0054	-.0188	-.0369	-.0099	721.	
.3870	-206.	158.	164.	-24.	84.	-142.	.0143	-.0191	-.0061	-.0245	-.0382	-.0003	624.	
.3880	-204.	207.	156.	-63.	28.	-125.	.0130	-.0221	-.0065	-.0292	-.0391	.0087	534.	
.3890	-145.	257.	132.	-92.	-25.	-80.	.0114	-.0251	-.0066	-.0328	-.0397	.0167	467.	
.3900	-42.	303.	96.	-113.	-76.	-17.	.0094	-.0278	-.0063	-.0352	-.0397	.0229	512.	
.3910	96.	359.	49.	-130.	-122.	52.	.0071	-.0296	-.0059	-.0368	-.0389	.0272	695.	
.3920	250.	424.	-4.	-149.	-166.	116.	.0043	-.0305	-.0051	-.0379	-.0375	.0301	938.	
.3930	397.	480.	-54.	-165.	-207.	170.	.0009	-.0303	-.0043	-.0387	-.0356	.0315	1174.	
.3940	518.	510.	-93.	-176.	-241.	210.	-.0028	-.0291	-.0033	-.0386	-.0329	.0309	1363.	
.3950	608.	519.	-116.	-186.	-266.	234.	-.0067	-.0269	-.0022	-.0374	-.0296	.0284	1495.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.12.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION 54 MEMBER 1 SEQUENCE 73 LOCATION END TYPE RU

.3870	-206.	158.	164.	-24.	24.	-125.	.0130	-.0121	-.0061	-.0245	-.0382	-.0003	624.
.3880	-204.	207.	156.	-63.	28.	-125.	.0130	-.0221	-.0065	-.0292	-.0391	.0087	534.
.3890	-145.	257.	132.	-92.	-25.	-20.	.0114	-.0251	-.0066	-.0328	-.0397	.0167	467.
.3900	-42.	303.	96.	-113.	-76.	-17.	.0094	-.0278	-.0063	-.0352	-.0397	.0229	512.
.3910	96.	359.	49.	-130.	-122.	52.	.0071	-.0296	-.0059	-.0368	-.0389	.0272	695.
.3920	250.	424.	-4.	-149.	-166.	116.	.0043	-.0305	-.0051	-.0379	-.0375	.0301	938.
.3930	397.	480.	-54.	-165.	-207.	170.	.0009	-.0303	-.0043	-.0387	-.0356	.0315	1174.
.3940	518.	510.	-93.	-176.	-241.	210.	-.0028	-.0291	-.0033	-.0386	-.0329	.0309	1363.
.3950	608.	519.	-116.	-186.	-266.	234.	-.0067	-.0269	-.0022	-.0374	-.0296	.0284	1495.

ADLPIPE PAGE 2059

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.12.

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

CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	54	MEMBER	1	SEQUENCE	73	LOCATION	END	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3960	665.	520.	-113.	-206.	-283.	237.	-.0108	-.0236	-.0008	-.0353	-.0262	.0245	1580.	
.3970	680.	508.	-78.	-240.	-292.	217.	-.0152	-.0193	.0010	-.0326	-.0231	.0194	1625.	
.3980	644.	470.	-9.	-282.	-290.	172.	-.0195	-.0141	.0031	-.0289	-.0201	.0130	1640.	
.3990	557.	401.	87.	-326.	-278.	107.	-.0236	-.0082	.0053	-.0246	-.0169	.0051	1650.	
.4000	430.	316.	201.	-374.	-259.	25.	-.0274	-.0018	.0075	-.0203	-.0139	-.0037	1700.	

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)
.0670	-1622.	-1102.	1936.	-1307.	-129.	-449.	.0184	.0188	.0576	.0245	.0144	-.0868	5181.

SECTION	54	MEMBER	2	SEQUENCE	826	LOCATION	END	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	-0.	-0.	-0.	0.	0.	0.	-.0000	-.0000	.0000	-.0000	.0000	.0000	0.	
.0020	-0.	-0.	-0.	0.	0.	0.	.0000	-.0000	.0000	-.0000	.0000	.0000	1.	
.0030	-0.	-0.	0.	0.	1.	0.	.0000	-.0000	.0000	-.0000	-.0000	.0000	2.	
.0040	2.	-0.	1.	-0.	2.	1.	-.0000	-.0000	-.0000	-.0000	-.0001	.0000	7.	
.0050	6.	0.	3.	-1.	4.	2.	-.0000	-.0000	-.0000	.0000	-.0002	-.0000	16.	
.0060	15.	3.	5.	-2.	7.	4.	-.0001	-.0000	-.0001	.0002	-.0005	-.0001	32.	
.0070	28.	6.	7.	-3.	12.	7.	-.0002	-.0000	-.0003	.0003	-.0010	-.0002	53.	
.0080	44.	8.	8.	-2.	17.	12.	-.0005	-.0001	-.0006	.0004	-.0016	-.0002	78.	
.0090	70.	12.	5.	1.	22.	21.	-.0009	-.0002	-.0011	.0006	-.0024	-.0002	114.	
.0100	116.	23.	-1.	3.	26.	34.	-.0015	-.0002	-.0018	.0011	-.0034	-.0005	162.	
.0110	188.	43.	-13.	4.	28.	53.	-.0024	-.0003	-.0028	.0019	-.0045	-.0010	224.	
.0120	283.	74.	-32.	5.	23.	78.	-.0038	-.0004	-.0041	.0031	-.0057	-.0015	304.	
.0130	392.	113.	-60.	8.	9.	108.	-.0056	-.0008	-.0057	.0046	-.0067	-.0017	406.	
.0140	496.	152.	-93.	19.	-17.	141.	-.0079	-.0014	-.0078	.0065	-.0074	-.0013	533.	
.0150	571.	185.	-126.	37.	-53.	167.	-.0104	-.0022	-.0101	.0083	-.0076	-.0004	671.	
.0160	598.	208.	-154.	58.	-99.	177.	-.0129	-.0029	-.0126	.0097	-.0073	.0011	787.	
.0170	550.	216.	-172.	77.	-153.	158.	-.0151	-.0033	-.0148	.0101	-.0061	.0029	870.	
.0180	413.	196.	-172.	88.	-210.	110.	-.0165	-.0033	-.0161	.0095	-.0037	.0048	945.	
.0190	195.	148.	-145.	84.	-265.	39.	-.0167	-.0028	-.0160	.0081	.0002	.0062	1047.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.29.12.

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

CONDITION 24

LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	54	MEMBER	2	SEQUENCE	826	LOCATION	END	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	

.0110	188.	43.	-13.	4.	28.	53.	-.0024	-.0003	-.0028	.0019	-.0045	-.0010	224.
.0120	283.	74.	-32.	5.	23.	78.	-.0038	-.0004	-.0041	.0031	-.0057	-.0015	304.
.0130	392.	113.	-60.	8.	9.	108.	-.0056	-.0008	-.0057	.0046	-.0067	-.0017	406.
.0140	496.	152.	-97.	19.	-17.	141.	-.0079	-.0014	-.0078	.0065	-.0074	-.0013	533.
.0150	571.	183.	-126.	37.	-53.	167.	-.0104	-.0022	-.0101	.0083	-.0076	-.0004	671.
.0160	598.	208.	-154.	58.	-99.	177.	-.0129	-.0029	-.0126	.0097	-.0073	.0011	787.
.0170	550.	216.	-172.	77.	-153.	158.	-.0151	-.0033	-.0148	.0101	-.0061	.0029	870.
.0180	413.	196.	-172.	88.	-210.	110.	-.0165	-.0033	-.0161	.0095	-.0037	.0048	945.
.0190	195.	148.	-145.	84.	-265.	39.	-.0167	-.0028	-.0160	.0081	-.0002	.0062	1047.

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DIS/ADLPIPE

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CONDITION 24

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ENGLISH UNITS

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

SECTION	54	MEMBER	2	SEQUENCE	826	LOCATION	END	TYPE	RU						STRESS
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ		(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)		
.0200	-93.	62.	-83.	62.	-311.	-41.		-.0154	-.0020	-.0139	.0064	.0053	.0069		1196.
.0210	-399.	-46.	21.	15.	-342.	-117.		-.0124	-.0009	-.0095	.0051	.0113	.0060		1349.
.0220	-599.	-96.	168.	-89.	-340.	-183.		-.0078	.0006	-.0027	.0069	.0177	.0025		1480.
.0230	-719.	-113.	351.	-226.	-311.	-231.		-.0025	.0019	.0056	.0106	.0232	-.0019		1675.
.0240	-860.	-157.	546.	-342.	-269.	-265.		.0027	.0023	.0137	.0135	.0264	-.0045		1902.
.0250	-1087.	-281.	706.	-391.	-230.	-281.		.0077	.0016	.0201	.0135	.0282	-.0048		1990.
.0260	-1291.	-420.	775.	-391.	-199.	-281.		.0126	.0012	.0238	.0112	.0309	-.0062		1944.
.0270	-1282.	-408.	752.	-417.	-180.	-303.		.0169	.0025	.0246	.0102	.0338	-.0118		2036.
.0280	-1287.	-376.	676.	-407.	-203.	-366.		.0190	.0041	.0229	.0058	.0337	-.0157		2180.
.0290	-1533.	-516.	535.	-268.	-269.	-421.		.0196	.0041	.0194	-.0071	.0329	-.0131		2118.
.0300	-1539.	-549.	269.	-111.	-304.	-422.		.0216	.0041	.0157	-.0185	.0377	-.0126		1984.
.0310	-1198.	-447.	-50.	16.	-307.	-354.		.0250	.0047	.0136	-.0246	.0415	-.0174		1751.
.0320	-824.	-407.	-279.	125.	-271.	-227.		.0279	.0044	.0147	-.0300	.0391	-.0207		1400.
.0330	-393.	-348.	-367.	149.	-139.	-46.		.0299	.0030	.0195	-.0315	.0335	-.0208		778.
.0340	245.	-197.	-354.	98.	77.	200.		.0323	.0014	.0252	-.0240	.0243	-.0236		880.
.0350	867.	-129.	-319.	101.	283.	486.		.0342	-.0005	.0282	-.0123	.0102	-.0295		2133.
.0360	1280.	-136.	-342.	167.	442.	708.		.0334	-.0016	.0268	-.0042	-.0028	-.0332		3178.
.0370	1617.	24.	-462.	193.	536.	768.		.0281	-.0002	.0205	.0002	-.0101	-.0327		3571.
.0380	1849.	293.	-653.	225.	493.	678.		.0187	.0028	.0092	.0016	-.0163	-.0287		3239.
.0390	1675.	346.	-887.	419.	300.	530.		.0071	.0046	-.0060	-.0030	-.0207	-.0191		2758.
.0400	1171.	189.	-1159.	738.	95.	389.		-.0030	.0047	-.0209	-.0127	-.0156	-.0044		3133.
.0410	928.	234.	-1388.	918.	-9.	241.		-.0095	.0064	-.0304	-.0170	-.0056	.0066		3544.
.0420	918.	413.	-1370.	876.	-6.	85.		-.0137	.0095	-.0310	-.0143	-.0063	.0124		3286.
.0430	814.	489.	-1048.	667.	117.	-27.		-.0160	.0121	-.0217	-.0065	-.0143	.0172		2531.
.0440	748.	511.	-506.	335.	417.	-10.		-.0145	.0126	-.0056	.0103	-.0201	.0197		1995.
.0450	893.	516.	96.	-7.	759.	147.		-.0096	.0115	.0110	.0357	-.0284	.0153		2885.
.0460	1024.	465.	573.	-242.	970.	298.		-.0059	.0100	.0227	.0574	-.0401	.0088		3893.
.0470	889.	446.	777.	-367.	1031.	265.		-.0076	.0092	.0276	.0623	-.0423	.0118		4205.
.0480	599.	549.	679.	-396.	932.	60.		-.0145	.0093	.0247	.0508	-.0337	.0246		3787.
.0490	328.	625.	366.	-265.	624.	-149.		-.0228	.0089	.0137	.0329	-.0246	.0359		2591.
.0500	49.	538.	-31.	3.	219.	-261.		-.0297	.0071	-.0006	.0161	-.0138	.0411		1273.
.0510	-190.	444.	-379.	212.	-93.	-317.		-.0346	.0044	-.0110	.0029	.0037	.0439		1466.
.0520	-250.	465.	-534.	219.	-273.	-338.		-.0374	.0019	-.0136	-.0064	.0152	.0458		1816.
.0530	-111.	489.	-429.	60.	-342.	-267.		-.0368	-.0007	-.0081	-.0094	.0120	.0428		1635.
.0540	166.	444.	-141.	-179.	-246.	-75.		-.0313	-.0036	.0037	-.0029	.0067	.0314		1169.
.0550	490.	367.	210.	-437.	-26.	182.		-.0223	-.0068	.0180	.0098	.0068	.0147		1768.
.0560	713.	258.	536.	-646.	123.	396.		-.0146	-.0095	.0297	.0179	.0028	.0002		2867.
.0570	731.	159.	725.	-777.	98.	470.		-.0115	-.0107	.0352	.0158	-.0031	-.0085		3409.

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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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ENGLISH UNITS

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

SECTION 54 MEMBER 2 SEQUENCE 826 LOCATION END TYPE RU