

50-305

RESPONSE TO NUREG-0737 ITEM II.D.1

Docket # *50-305*

Control # *8403280048*

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

.3640	475.	-528.	-117.	132.	566.	-341.	.0413	-.0025	-.0177	-.0044	.0230	-.0607	952.
.3650	566.	-484.	-462.	121.	440.	-313.	.0310	.0058	-.0123	-.0087	.0107	-.0576	782.
.3660	467.	-379.	-256.	95.	267.	-247.	.0201	.0143	-.0068	-.0142	-.0040	-.0526	531.
.3670	197.	-219.	-23.	56.	66.	-144.	.0087	.0229	-.0012	-.0219	-.0201	-.0458	237.
.3680	-24.	-17.	231.	5.	-152.	-14.	-.0028	.0314	.0042	-.0210	-.0367	-.0376	216.
.3690	-239.	201.	489.	-49.	-371.	128.	-.0143	.0398	.0093	-.0407	-.0531	-.0285	559.
.3700	-460.	410.	717.	-101.	-573.	263.	-.0254	.0478	.0138	-.0503	-.0580	-.0194	902.
.3710	-669.	586.	907.	-145.	-747.	376.	-.0359	.0553	.0175	-.0593	-.0808	-.0108	1199.
.3720	-831.	718.	1050.	-178.	-880.	461.	-.0456	.0622	.0204	-.0671	-.0904	-.0031	1425.
.3730	-950.	797.	1121.	-198.	-956.	511.	-.0543	.0684	.0223	-.0734	-.0962	.0034	1557.
.3740	-1028.	816.	1098.	-202.	-962.	524.	-.0618	.0737	.0232	-.0779	-.0977	.0083	1573.
.3750	-1043.	773.	987.	-192.	-894.	496.	-.0681	.0782	.0235	-.0806	-.0947	.0117	1469.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.43.

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	16	MEMBER	2	SEQUENCE	852	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)	
.3760	-994.	678.	799.	-168.	-760.	434.	-.0731	.0820	.0229	-.0816	-.0876	.0136	1258.	
.3770	-915.	551.	548.	-136.	-576.	352.	-.0768	.0851	.0218	-.0813	-.0773	.0146	973.	
.3780	-819.	411.	272.	-101.	-373.	262.	-.0794	.0875	.0201	-.0801	-.0651	.0151	659.	
.3790	-708.	263.	23.	-65.	-183.	168.	-.0807	.0894	.0181	-.0783	-.0525	.0152	363.	
.3800	-605.	113.	-166.	-27.	-35.	71.	-.0810	.0909	.0160	-.0763	-.0406	.0152	118.	
.3810	-537.	-27.	-280.	8.	56.	-20.	-.0802	.0923	.0137	-.0744	-.0304	.0156	85.	
.3820	-500.	-134.	-306.	35.	81.	-91.	-.0785	.0935	.0114	-.0730	-.0225	.0168	179.	
.3830	-485.	-190.	-249.	49.	47.	-127.	-.0759	.0946	.0091	-.0725	-.0168	.0195	203.	
.3840	-490.	-189.	-139.	49.	-28.	-126.	-.0725	.0956	.0069	-.0730	-.0129	.0238	194.	
.3850	-501.	-141.	-3.	36.	-119.	-94.	-.0683	.0966	.0046	-.0743	-.0101	.0297	220.	
.3860	-496.	-59.	140.	10.	-210.	-41.	-.0634	.0975	.0024	-.0760	-.0076	.0368	303.	
.3870	-470.	46.	269.	-10.	-287.	27.	-.0578	.0984	-.0001	-.0779	-.0049	.0449	407.	
.3880	-431.	160.	368.	-39.	-341.	102.	-.0516	.0990	-.0028	-.0795	-.0018	.0536	506.	
.3890	-372.	264.	434.	-66.	-369.	170.	-.0448	.0994	-.0059	-.0805	.0022	.0625	582.	
.3900	-290.	333.	462.	-83.	-368.	215.	-.0376	.0996	-.0094	-.0804	.0072	.0709	613.	
.3910	-191.	362.	441.	-90.	-331.	232.	-.0301	.0996	-.0134	-.0789	.0135	.0785	586.	
.3920	-75.	357.	367.	-88.	-256.	229.	-.0225	.0992	-.0176	-.0762	.0211	.0854	501.	
.3930	63.	330.	238.	-82.	-141.	212.	-.0149	.0985	-.0221	-.0724	.0302	.0915	378.	
.3940	222.	282.	56.	-70.	14.	182.	-.0076	.0976	-.0267	-.0680	.0404	.0966	277.	
.3950	393.	208.	-166.	-52.	200.	135.	-.0007	.0964	-.0311	-.0630	.0514	.1005	348.	
.3960	567.	117.	-403.	-29.	396.	75.	.0055	.0952	-.0352	-.0578	.0623	.1034	571.	
.3970	722.	31.	-622.	-7.	577.	19.	.0110	.0938	-.0388	-.0528	.0721	.1055	816.	
.3980	839.	-34.	-794.	9.	717.	-22.	.0155	.0925	-.0419	-.0486	.0797	.1071	1014.	
.3990	913.	-75.	-894.	19.	800.	-48.	.0189	.0911	-.0443	-.0451	.0845	.1083	1132.	
.4000	948.	-98.	-913.	24.	819.	-62.	.0212	.0899	-.0458	-.0425	.0863	.1090	1161.	

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)
.0290	6095.	128.	-8522.	-3.	7191.	7.	.1266	.0452	-.0356	-.0182	.3462	-.0359	10157.

SECTION	17	MEMBER	1	SEQUENCE	852	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)	

ADLPIPE PAGE 787

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.43.

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

MAXIMUM VALUE OF STRESS OCCURS AT

TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.0290	6095.	128.	-8522.	-3.	7191.	7.	.1266	.0452	-.0358	-.0182	.3462	-.0359	10157.

SECTION	17	MEMBER	1	SEQUENCE	852	LOCATION	BEG	TYPE	EL	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
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ADLPIPE PAGE 787 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.43.

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	17	MEMBER	1	SEQUENCE	852	LOCATION	BEG	TYPE	EL	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
.0010	0.	-1.	-4.	0.	3.	-1.	-.0000	-.0000	-.0000	-.0000	-.0001	.0000	.0000	4.									
.0020	11.	-8.	-24.	2.	19.	-5.	-.0000	-.0000	-.0002	-.0000	-.0005	.0001	28.										
.0030	52.	-12.	-56.	3.	50.	-8.	-.0001	-.0000	-.0006	.0001	-.0015	.0001	72.										
.0040	115.	3.	-95.	-1.	92.	2.	-.0001	.0000	-.0012	.0004	-.0029	-.0001	130.										
.0050	185.	44.	-134.	-11.	136.	29.	-.0003	.0003	-.0021	.0010	-.0042	-.0008	196.										
.0060	300.	109.	-137.	-26.	167.	66.	-.0004	.0006	-.0034	.0017	-.0052	-.0018	256.										
.0070	445.	148.	-137.	-38.	204.	97.	-.0006	.0012	-.0053	.0021	-.0064	-.0026	324.										
.0080	580.	181.	-231.	-46.	301.	120.	-.0006	.0019	-.0082	.0022	-.0091	-.0032	462.										
.0090	821.	251.	-379.	-64.	460.	166.	-.0002	.0031	-.0122	.0023	-.0141	-.0043	696.										
.0100	1144.	413.	-559.	-105.	661.	272.	.0002	.0052	-.0174	.0026	-.0205	-.0067	1021.										
.0110	1360.	648.	-806.	-165.	879.	428.	.0032	.0082	-.0236	.0024	-.0264	-.0101	1400.										
.0120	1461.	866.	-1008.	-221.	1038.	571.	.0067	.0121	-.0306	.0003	-.0294	-.0130	1702.										
.0130	1565.	976.	-960.	-249.	1033.	644.	.0114	.0167	-.0380	-.0052	-.0269	-.0137	1755.										
.0140	1676.	973.	-531.	-248.	778.	642.	.0169	.0221	-.0448	-.0144	-.0167	-.0121	1467.										
.0150	1758.	886.	297.	-226.	252.	585.	.0234	.0285	-.0503	-.0275	.0013	-.0087	955.										
.0160	1997.	700.	1515.	-179.	-491.	462.	.0305	.0355	-.0536	-.0441	.0244	-.0034	985.										
.0170	1975.	331.	2576.	-84.	-1197.	218.	.0386	.0425	-.0547	-.0641	.0465	.0049	1723.										
.0180	969.	-276.	2655.	70.	-1506.	-182.	.0483	.0488	-.0541	-.0859	.0604	.0170	2144.										
.0190	-906.	-1047.	1429.	267.	-1174.	-691.	.0595	.0539	-.0529	-.1066	.0591	.0315	1961.										
.0200	-3757.	-1814.	-1595.	463.	95.	-1198.	.0731	.0577	-.0538	-.1219	.0356	.0455	1819.										
.0210	-6350.	-2207.	-5499.	563.	2010.	-1457.	.0893	.0607	-.0581	-.1266	-.0056	.0531	3596.										
.0220	-5799.	-1866.	-7156.	476.	3245.	-1232.	.1049	.0642	-.0629	-.1188	-.0346	.0478	4949.										
.0230	-3951.	-1064.	-6529.	272.	3303.	-703.	.1187	.0674	-.0664	-.1034	-.0298	.0334	4785.										
.0240	-1531.	-509.	-3506.	130.	1924.	-336.	.1293	.0683	-.0675	-.0887	.0117	.0213	2765.										
.0250	-1742.	-751.	-490.	192.	-121.	-496.	.1382	.0652	-.0667	-.0797	.0901	.0201	770.										
.0260	-6132.	-1556.	483.	397.	-1883.	-1027.	.1456	.0588	-.0648	-.0742	.1744	.0249	3081.										
.0270	-6092.	-1889.	4155.	482.	-4298.	-1247.	.1444	.0527	-.0583	-.0637	.2518	.0188	6357.										
.0280	-2785.	-1144.	9178.	292.	-6770.	-755.	.1355	.0489	-.0472	-.0431	.3287	-.0057	9630.										
.0290	-5991.	-10.	8576.	3.	-7191.	-7.	.1266	.0452	-.0356	-.0182	.3462	-.0359	10157.										
.0300	-4288.	304.	8316.	-78.	-6584.	201.	.1096	.0378	-.0226	-.0014	.3077	-.0537	9305.										
.0310	3264.	-259.	9253.	66.	-5277.	-171.	.0841	.0269	-.0079	.0072	.2224	-.0578	7458.										
.0320	2929.	-675.	4264.	172.	-2068.	-446.	.0589	.0160	.0063	.0193	.1049	-.0616	2998.										
.0330	-207.	-73.	-2037.	19.	1292.	-48.	.0318	.0081	.0222	.0420	-.0140	-.0769	1827.										
.0340	4005.	1021.	-2590.	-261.	2732.	674.	-.0021	.0017	.0416	.0653	-.1074	-.0572	3991.										
.0350	7207.	1253.	-2560.	-320.	3529.	827.	-.0357	-.0073	.0598	.0729	-.1743	-.1044	5140.										
.0360	2885.	256.	-6192.	-65.	4824.	169.	-.0627	-.0202	.0730	.0630	-.2196	-.0931	6818.										
.0370	1849.	-809.	-6827.	206.	4979.	-534.	-.0884	-.0334	.0834	.0523	-.2364	-.0783	7079.										

ADLPIPE PAGE 788 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.43.

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

.1410	3490.	-942.	-226.	240.	1502.	-622.	-1461	.1489	.0295	-1762	-2340	.0634	2321.
.1420	2485.	-818.	-24.	209.	650.	-548.	-1443	.1392	.0363	-1530	-1943	.0628	1229.
.1430	1252.	-1064.	626.	271.	-94.	-702.	-1406	.1271	.0423	-1314	-1540	.0658	1072.
.1440	87.	-1429.	703.	365.	-447.	-944.	-1350	.1131	.0469	-1076	-1212	.0693	1560.
.1450	-62.	-1300.	600.	352.	-412.	-911.	-1275	.0992	.0501	-0774	-0992	.0645	1498.
.1460	2932.	-670.	1651.	171.	-342.	-442.	-1202	.0867	.0528	-0412	-0883	.0467	826.
.1470	1011.	373.	-659.	-85.	693.	220.	-1075	.0747	.0531	-0063	-0869	.0222	1034.
.1480	937.	1205.	-1764.	-256.	1403.	663.	-0951	.0618	.0532	.0230	-0838	.0026	2222.
.1490	2101.	1151.	-1638.	-294.	1617.	760.	-0823	.0477	.0530	.0435	-0718	-0078	2558.
.1500	730.	1092.	-2423.	-279.	1766.	721.	-0665	.0341	.0514	.0572	-0499	-0131	2749.
.1510	971.	1161.	-1732.	-256.	1301.	767.	-0514	.0222	.0489	.0674	-0180	-0180	2282.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.43.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	17	MEMBER	1	SEQUENCE	852	LOCATION	BEG	TYPE	EL					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.1520	-306.	1369.	-1730.	-349.	1064.	904.	-0348	.0120	.0439	.0760	.0175	-0211	2032.	
.1530	846.	1489.	-417.	-380.	491.	983.	-0199	.0030	.0365	.0816	.0501	-0187	1643.	
.1540	170.	1369.	-616.	-349.	450.	904.	-0035	-0055	.0253	.0830	.0724	-0089	1509.	
.1550	-1820.	1068.	-1923.	-273.	805.	705.	.0143	-0132	.0110	.0816	.0875	.0067	1560.	
.1560	1214.	791.	-184.	-202.	431.	522.	.0284	-0195	-0036	.0796	.1045	.0241	998.	
.1570	289.	709.	-468.	-181.	383.	468.	.0445	-0240	-0193	.0784	.1250	.0399	892.	
.1580	-1295.	720.	-588.	-184.	58.	475.	.0594	-0272	-0342	.0759	.1533	.0544	725.	
.1590	91.	518.	1653.	-132.	-1068.	342.	.0698	-0303	-0464	.0694	.1915	.0717	1595.	
.1600	-1267.	-9.	2551.	2.	-2007.	-6.	.0790	-0341	-0568	.0588	.2316	.0928	2835.	
.1610	-4255.	-555.	2371.	142.	-2651.	-367.	.0871	-0377	-0651	.0465	.2544	.1116	3785.	
.1620	-1716.	-799.	4878.	204.	-3658.	-528.	.0895	-0404	-0700	.0360	.2812	.1222	5229.	
.1630	-2076.	-662.	4783.	169.	-3687.	-437.	.0916	-0421	-0734	.0301	.2747	.1233	5250.	
.1640	-3238.	-302.	3362.	77.	-3046.	-200.	.0917	-0433	-0744	.0274	.2462	.1174	4313.	
.1650	-797.	56.	3498.	-14.	-2511.	37.	.0868	-0444	-0720	.0252	.2020	.1083	3548.	
.1660	-1163.	241.	1713.	-61.	-1428.	159.	.0815	-0458	-0676	.0231	.1487	.0998	2031.	
.1670	-779.	255.	532.	-65.	-550.	169.	.0732	-0474	-0601	.0214	.0970	.0928	817.	
.1680	-838.	305.	-460.	-78.	90.	201.	.0642	-0487	-0500	.0215	.0541	.0841	330.	
.1690	1388.	415.	352.	-106.	122.	274.	.0531	-0430	-0377	.0229	.0208	.0737	449.	
.1700	2493.	357.	694.	-91.	170.	236.	.0420	-0460	-0250	.0252	-0076	.0663	437.	
.1710	-1419.	43.	-1922.	-11.	907.	28.	.0349	-0485	-0137	.0284	-0341	.0636	1281.	
.1720	741.	-354.	-961.	90.	823.	-234.	.0246	-0493	-0021	.0325	-0557	.0621	1216.	
.1730	1859.	-596.	-697.	152.	935.	-393.	.0166	-0498	.0078	.0392	-0742	.0573	1448.	
.1740	741.	-634.	-1755.	162.	1348.	-419.	.0107	-0501	.0158	.0490	-0882	.0485	2006.	
.1750	1511.	-535.	-1453.	137.	1345.	-353.	.0079	-0505	.0233	.0610	-0924	.0361	1973.	
.1760	558.	-373.	-1750.	95.	1297.	-246.	-0010	-0513	.0300	.0735	-0849	.0211	1870.	
.1770	1137.	-237.	-635.	60.	709.	-156.	-0071	-0525	.0371	.0847	-0646	.0046	1029.	
.1780	-655.	-100.	-505.	26.	166.	-66.	-0114	-0540	.0441	.0938	-0349	-0136	255.	
.1790	-626.	97.	877.	-25.	-739.	64.	-0173	-0553	.0520	.1003	-0014	-0340	1048.	
.1800	796.	340.	2819.	-87.	-1658.	224.	-0252	-0563	.0602	.1042	.0258	-0551	2366.	
.1810	-2374.	560.	1410.	-143.	-1537.	370.	-0307	-0573	.0670	.1063	.0373	-0743	2241.	
.1820	-1799.	706.	1518.	-180.	-1459.	466.	-0395	-0581	.0741	.1057	.0329	-0897	2179.	
.1830	-284.	763.	1523.	-195.	-1078.	504.	-0490	-0589	.0805	.1019	.0131	-1007	1703.	
.1840	309.	666.	562.	-170.	-272.	440.	-0583	-0597	.0860	.0945	-0192	-1061	769.	
.1850	1020.	409.	-544.	-104.	619.	270.	-0679	-0608	.0907	.0848	-0569	-1055	965.	
.1860	246.	106.	-2241.	-27.	1543.	70.	-0761	-0620	.0944	.0754	-0917	-1002	2181.	
.1870	2109.	-173.	-1916.	44.	1003.	-114.	-0853	-0634	.0977	.0676	-1166	-0922	2553.	
.1880	1718.	-418.	-2443.	107.	2051.	-276.	-0916	-0652	.0989	.0616	-1307	-0824	2927.	
.1890	1335.	-614.	-2550.	157.	2026.	-406.	-0961	-0675	.0983	.0573	-1344	-0721	2927.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.43.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

.1790	-626.	97.	677.	-25.	-739.	64.	-1173.	-0553	.0520	.1003	-0014	-0340	1048.
.1800	796.	340.	2819.	-87.	-1656.	224.	-0252	-0563	.0602	.1042	.0258	-0551	2366.
.1810	-2374.	1560.	1410.	-143.	-1537.	370.	-0307	-0573	.0670	.1063	.0373	-0743	2241.
.1820	-1799.	716.	1516.	-170.	-1459.	466.	-0395	-0581	.0741	.1057	.0329	-0297	2179.
.1830	-224.	763.	1523.	-195.	-1070.	504.	-0490	-0584	.0805	.1019	.0131	-1007	1703.
.1840	389.	666.	562.	-170.	-272.	440.	-0551	-0597	.0860	.0945	-0192	-1061	769.
.1850	1020.	409.	-544.	-104.	619.	270.	-0679	-0608	.0907	.0848	-0569	-1055	965.
.1860	246.	106.	-2241.	-27.	1543.	70.	-0761	-0620	.0944	.0754	-0917	-1002	2181.
.1870	2109.	-173.	-1916.	44.	1803.	-114.	-0853	-0634	.0977	.0676	-1166	-0922	2553.
.1880	1718.	-418.	-2443.	107.	2051.	-276.	-0916	-0652	.0989	.0616	-1307	-0824	2927.
.1890	1335.	-614.	-2500.	117.	2026.	-406.	-0961	-0675	.0983	.0573	-1344	-0721	2927.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.43.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	EL								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.1900	2933.	-680.	-1271.	174.	1567.	-449.	-0998	-0704	.0958	.0560	-1310	-0627	2343.	
.1910	1954.	-557.	-1569.	142.	1534.	-358.	-0989	-0734	.0899	.0591	-1265	-0550	2238.	
.1920	1768.	-252.	-1533.	64.	1463.	-156.	-0955	-0764	.0817	.0654	-1214	-0496	2082.	
.1930	2270.	199.	-1151.	-51.	1339.	132.	-0892	-0792	.0715	.0727	-1146	-0465	1901.	
.1940	2062.	676.	-1123.	-173.	1268.	447.	-0794	-0816	.0598	.0786	-1045	-0436	1914.	
.1950	1639.	988.	-1005.	-252.	1082.	652.	-0667	-0839	.0475	.0806	-0882	-0375	1820.	
.1960	1727.	1006.	-295.	-257.	635.	664.	-0521	-0863	.0355	.0772	-0545	-0265	1347.	
.1970	1452.	781.	422.	-199.	92.	516.	-0354	-0883	.0241	.0690	-0353	-0117	792.	
.1980	519.	467.	834.	-119.	-418.	309.	-0171	-0896	.0133	.0581	-0039	.0041	753.	
.1990	-32.	140.	1404.	-26.	-935.	92.	.0018	-0903	.0038	.0460	.0260	.0192	1328.	
.2000	-181.	-244.	1943.	62.	-1329.	-161.	.0208	-0909	-0048	.0337	.0498	.0337	1893.	
.2010	-705.	-717.	1818.	183.	-1380.	-473.	.0398	-0919	-0128	.0226	.0541	.0477	2077.	
.2020	-1090.	-1206.	1338.	308.	-1161.	-796.	.0580	-0938	-0202	.0145	.0593	.0597	2036.	
.2030	-777.	-1547.	1024.	395.	-874.	-1021.	.0745	-0963	-0265	.0120	.0693	.0667	1979.	
.2040	-669.	-1611.	591.	411.	-561.	-1064.	.0895	-0992	-0315	.0162	.0685	.0661	1795.	
.2050	-1067.	-1432.	74.	365.	-321.	-946.	.1028	-1029	-0353	.0266	.0711	.0581	1502.	
.2060	-1127.	-1172.	92.	299.	-348.	-774.	.1138	-1076	-0375	.0414	.0794	.0453	1270.	
.2070	-887.	-926.	584.	236.	-612.	-611.	.1224	-1136	-0382	.0591	.0928	.0293	1266.	
.2080	-1264.	-601.	857.	153.	-888.	-396.	.1292	-1200	-0380	.0798	.1077	.0094	1391.	
.2090	-1952.	-50.	916.	13.	-1102.	-33.	.1339	-1258	-0370	.1036	.1204	-0161	1558.	
.2100	-1976.	714.	1180.	-182.	-1283.	471.	.1360	-1306	-0353	.1291	.1279	-0459	1948.	
.2110	-1715.	1502.	1297.	-383.	-1294.	992.	.1359	-1341	-0332	.1532	.1275	-0755	2365.	
.2120	-1651.	2115.	968.	-540.	-1060.	1396.	.1339	-1364	-0310	.1726	.1186	-1005	2591.	
.2130	-1431.	2474.	554.	-631.	-731.	1633.	.1299	-1372	-0283	.1851	.1037	-1186	2680.	
.2140	-1057.	2616.	254.	-667.	-437.	1727.	.1238	-1359	-0249	.1902	.0368	-1293	2687.	
.2150	-952.	2598.	-58.	-663.	-204.	1715.	.1163	-1322	-0209	.1878	.0706	-1332	2613.	
.2160	-982.	2406.	-285.	-614.	-62.	1588.	.1073	-1263	-0164	.1776	.0565	-1299	2407.	
.2170	-758.	1985.	-241.	-507.	-34.	1311.	.0969	-1186	-0117	.1599	.0444	-1189	1985.	
.2180	-545.	1358.	-165.	-347.	-30.	897.	.0854	-1097	-0071	.1363	.0334	-1009	1359.	
.2190	-521.	669.	-237.	-171.	24.	442.	.0732	-0996	-0029	.1096	.0223	-0789	669.	
.2200	-322.	82.	-269.	-21.	95.	54.	.0603	-0885	.0009	.0825	.0112	-0568	158.	
.2210	-16.	-374.	-281.	85.	181.	-220.	.0470	-0767	.0042	.0573	.0005	-0366	421.	
.2220	0.	-618.	-449.	158.	297.	-408.	.0336	-0648	.0072	.0350	-0085	-0184	747.	
.2230	-66.	-839.	-558.	214.	352.	-554.	.0200	-0536	.0100	.0158	-0146	-0016	975.	
.2240	35.	-1033.	-378.	264.	258.	-632.	.0061	-0433	.0129	-0003	-0166	.0137	1096.	
.2250	1.	-1179.	-79.	301.	52.	-779.	-0081	-0340	.0161	-0132	-0145	.0266	1181.	
.2260	-208.	-1231.	249.	314.	-217.	-813.	-0224	-0258	.0196	-0222	-0103	.0360	1269.	
.2270	-213.	-1186.	705.	303.	-520.	-783.	-0369	-0185	.0235	-0274	-0070	.0415	1395.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.44.

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

.3690	231.	-194.	-473.	49.	371.	-128.	-0143	.0798	.0042	-.0310	-.0531	-.0285	559.
.3700	444.	-398.	-697.	101.	573.	-263.	-.0254	.0478	.0138	-.0503	-.0580	-.0194	902.
.3710	645.	-570.	-882.	145.	747.	-376.	-.0359	.0553	.0175	-.0593	-.0808	-.0108	1199.
.3720	802.	-698.	-1023.	178.	880.	-461.	-.0456	.0627	.0204	-.0671	-.0904	-.0031	1425.
.3730	917.	-775.	-1094.	198.	956.	-511.	-.0543	.0684	.0223	-.0734	-.0962	.0034	1557.
.3740	992.	-794.	-1073.	202.	962.	-524.	-.0618	.0737	.0233	-.0779	-.0977	.0083	1573.
.3750	1005.	-751.	-965.	192.	894.	-496.	-.0681	.0782	.0235	-.0806	-.0947	.0117	1469.
.3760	957.	-657.	-781.	168.	760.	-434.	-.0731	.0820	.0229	-.0816	-.0876	.0136	1258.
.3770	878.	-532.	-533.	126.	576.	-352.	-.0768	.0851	.0218	-.0813	-.0773	.0146	973.
.3780	784.	-396.	-262.	101.	373.	-262.	-.0794	.0875	.0201	-.0801	-.0651	.0151	659.
.3790	675.	-254.	-17.	65.	183.	-168.	-.0807	.0894	.0181	-.0783	-.0525	.0152	363.

ADLPIPE PAGE 797 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.44.

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	17	MEMBER	1	SEQUENCE	852	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	575.	-107.	169.	27.	35.	-71.	-.0810	.0909	.0160	-.0763	-.0406	.0152	118.	
.3810	509.	31.	281.	-8.	-56.	20.	-.0802	.0923	.0137	-.0744	-.0304	.0156	85.	
.3820	474.	138.	306.	-35.	-81.	91.	-.0785	.0935	.0114	-.0730	-.0225	.0168	179.	
.3830	460.	192.	248.	-49.	-47.	127.	-.0759	.0946	.0091	-.0725	-.0168	.0195	203.	
.3840	466.	190.	138.	-49.	28.	126.	-.0725	.0956	.0069	-.0730	-.0129	.0238	194.	
.3850	479.	142.	4.	-36.	119.	94.	-.0683	.0966	.0046	-.0743	-.0101	.0297	220.	
.3860	474.	62.	-135.	-16.	210.	41.	-.0634	.0975	.0024	-.0760	-.0076	.0368	303.	
.3870	451.	-41.	-260.	10.	287.	-27.	-.0578	.0984	-.0001	-.0779	-.0049	.0449	407.	
.3880	414.	-154.	-317.	39.	341.	-102.	-.0516	.0990	-.0028	-.0795	-.0018	.0536	506.	
.3890	358.	-257.	-421.	66.	369.	-170.	-.0448	.0994	-.0059	-.0805	.0022	.0625	582.	
.3900	281.	-326.	-449.	83.	368.	-215.	-.0376	.0996	-.0094	-.0804	.0072	.0709	613.	
.3910	186.	-352.	-430.	90.	331.	-232.	-.0301	.0996	-.0134	-.0789	.0135	.0785	586.	
.3920	75.	-347.	-359.	88.	256.	-229.	-.0225	.0992	-.0176	-.0762	.0211	.0854	501.	
.3930	-58.	-322.	-236.	82.	141.	-212.	-.0149	.0985	-.0221	-.0724	.0302	.0915	378.	
.3940	-210.	-276.	-60.	70.	-14.	-182.	-.0076	.0976	-.0267	-.0680	.0404	.0966	277.	
.3950	-375.	-204.	158.	52.	-200.	-135.	-.0007	.0964	-.0311	-.0630	.0514	.1005	348.	
.3960	-544.	-114.	390.	29.	-396.	-75.	.0055	.0952	-.0352	-.0578	.0623	.1034	571.	
.3970	-695.	-29.	606.	7.	-577.	-19.	.0110	.0938	-.0388	-.0528	.0721	.1055	816.	
.3980	-808.	34.	775.	-9.	-717.	22.	.0155	.0925	-.0419	-.0486	.0797	.1071	1014.	
.3990	-879.	73.	872.	-19.	-800.	48.	.0189	.0911	-.0443	-.0451	.0845	.1083	1132.	
.4000	-912.	94.	888.	-24.	-819.	62.	.0212	.0899	-.0458	-.0425	.0863	.1090	1161.	

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)	
.0290	5991.	10.	-8576.	-3.	7191.	7.	.1266	.0452	-.0356	-.0182	.3462	-.0359	10157.	

SECTION	17	MEMBER	1	SEQUENCE	901	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.	1.	4.	-0.	-2.	1.	-.0000	-.0000	-.0000	-.0000	-.0001	.0000	3.	
.0020	-11.	8.	24.	-1.	-11.	3.	-.0000	-.0000	-.0001	-.0001	-.0009	.0002	16.	
.0030	-52.	12.	56.	-1.	-29.	5.	-.0001	-.0000	-.0004	.0000	-.0024	.0003	41.	

ADLPIPE PAGE 798 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.44.

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

.0290 5991. 10. -8576. -3. 7191. 7. .1266 .0452 -.0356 -.0182 .3462 -.0359 10157.

SECTION	17	MEMBER	1	SEQUENCE	901	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	PX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
0.0000	0.	0.	0.	0.	0.	0.		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	-0.	1.	4.	-0.	-2.	1.		-.0000	-.0000	-.0000	-.0000	-.0001	.0000	3.	
.0020	-11.	8.	24.	-1.	-11.	3.		-.0000	-.0000	-.0001	-.0001	-.0009	.0002	16.	
.0030	-52.	12.	56.	-1.	-29.	5.		-.0001	-.0000	-.0004	.0000	-.0024	.0003	41.	

ADLPIPE PAGE 798 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.44.

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	17	MEMBER	1	SEQUENCE	901	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	PX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0040	-115.	-3.	95.	0.	-52.	-1.		-.0003	.0000	-.0010	.0004	-.0044	-.0002	73.	
.0050	-185.	-44.	134.	5.	-76.	-18.		-.0004	.0002	-.0018	.0013	-.0064	-.0013	110.	
.0060	-300.	-100.	137.	12.	-90.	-40.		-.0006	.0004	-.0031	.0022	-.0079	-.0028	141.	
.0070	-445.	-148.	137.	18.	-108.	-59.		-.0009	.0009	-.0048	.0029	-.0096	-.0042	176.	
.0080	-580.	-181.	231.	22.	-162.	-73.		-.0010	.0016	-.0075	.0032	-.0140	-.0051	252.	
.0090	-821.	-251.	379.	30.	-250.	-101.		-.0008	.0027	-.0111	.0036	-.0216	-.0069	383.	
.0100	-1144.	-413.	559.	49.	-360.	-166.		.0001	.0045	-.0158	.0048	-.0313	-.0111	565.	
.0110	-1360.	-648.	806.	77.	-485.	-260.		.0021	.0072	-.0216	.0059	-.0408	-.0170	785.	
.0120	-1461.	-866.	1008.	103.	-578.	-347.		.0055	.0109	-.0283	.0048	-.0465	-.0221	963.	
.0130	-1565.	-976.	960.	116.	-571.	-392.		.0102	.0156	-.0358	-.0001	-.0439	-.0240	992.	
.0140	-1676.	-973.	531.	116.	-412.	-390.		.0162	.0214	-.0434	-.0093	-.0292	-.0224	818.	
.0150	-1758.	-886.	-297.	105.	-90.	-356.		.0233	.0283	-.0502	-.0228	-.0020	-.0180	539.	
.0160	-1997.	-700.	-1515.	83.	371.	-281.		.0313	.0362	-.0553	-.0404	.0341	-.0108	667.	
.0170	-1975.	-331.	-2576.	39.	799.	-133.		.0403	.0445	-.0581	-.0623	.0585	.0014	1145.	
.0180	-969.	276.	-2655.	-33.	950.	111.		.0504	.0524	-.0584	-.0873	.0871	.0199	1352.	
.0190	906.	1047.	-1429.	-124.	681.	420.		.0516	.0592	-.0569	-.1121	.0790	.0426	1144.	
.0200	3757.	1814.	1595.	-216.	-193.	728.		.0742	.0645	-.0557	-.1314	.0317	.0647	1107.	
.0210	6350.	2207.	5499.	-262.	-1451.	886.		.0887	.0683	-.0564	-.1383	-.0443	.0763	2430.	
.0220	5799.	1866.	7156.	-222.	-2182.	749.		.1031	.0711	-.0588	-.1286	-.0743	.0675	3274.	
.0230	3951.	1064.	6529.	-127.	-2150.	427.		.1169	.0728	-.0625	-.1090	-.0895	.0447	3101.	
.0240	1531.	509.	3506.	-61.	-1225.	204.		.1293	.0723	-.0670	-.0914	-.0186	.0267	1756.	
.0250	1742.	751.	490.	-89.	10.	301.		.1409	.0689	-.0716	-.0836	.0912	.0280	444.	
.0260	6132.	1556.	-483.	-185.	923.	624.		.1513	.0630	-.0755	-.0824	.2034	.0413	1595.	
.0270	6092.	1889.	-4155.	-225.	2391.	758.		.1533	.0565	-.0753	-.0737	.3326	.0387	3557.	
.0280	2785.	1144.	-9178.	-136.	4013.	459.		.1469	.0504	-.0696	-.0491	.4444	.0064	5709.	
.0290	5991.	10.	-8576.	-1.	4153.	4.		.1388	.0438	-.0592	-.0183	.4673	-.0358	5866.	
.0300	4288.	-304.	-8316.	36.	3846.	-122.		.1204	.0348	-.0437	.0002	.4193	-.0570	5436.	
.0310	-3264.	259.	-9253.	-31.	3325.	104.		.0919	.0237	-.0236	.0058	.3159	-.0551	4699.	
.0320	-2929.	675.	-4264.	-80.	1363.	271.		.0624	.0124	-.0008	.0157	.1426	-.0544	1966.	
.0330	207.	73.	2037.	-9.	-793.	29.		.0310	.0027	.0239	.0416	-.0365	-.0761	1121.	
.0340	-4005.	-1021.	2590.	121.	-1515.	-410.		-.0061	-.0059	.0492	.0707	-.1524	-.1079	2224.	
.0350	-7207.	-1253.	2560.	149.	-1884.	-503.		-.0419	-.0156	.0716	.0795	-.2311	-.1177	2762.	
.0360	-2885.	-256.	6192.	30.	-2827.	-103.		-.0705	-.0271	.0082	.0644	-.3015	-.0958	3996.	
.0370	-1849.	809.	6827.	-96.	-2959.	325.		-.0967	-.0387	.0996	.0480	-.3216	-.0697	4207.	
.0380	-7426.	637.	2200.	-76.	-1765.	255.		-.1226	-.0482	.1067	.0516	-.2722	-.0719	2522.	
.0390	-6156.	-712.	735.	85.	-1027.	-286.		-.1409	-.0554	.1090	.0701	-.2093	-.1033	1510.	
.0400	3625.	-1817.	4786.	216.	-1490.	-729.		-.1492	-.0623	.1055	.0802	-.1340	-.1285	2362.	
.0410	2314.	-1658.	3121.	197.	-977.	-665.		-.1590	-.0702	.0984	.0721	-.1457	-.1178	1693.	

ADLPIPE PAGE 799 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.44.

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

CONDITION 24
LOADS
SHOCK
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ENGLISH UNITS

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

.2200	322.	-32.	269.	10.	-70.	-33.	.0606	-.0940	.0003	.0830	.0093	-.0577	110.
.2210	16.	334.	281.	-40.	-111.	134.	.469	-.0801	.0043	.0555	-.0026	-.0331	252.
.2220	-0.	618.	449.	-73.	-180.	248.	.0333	-.0665	.0078	.0317	-.0137	-.0119	445.
.2230	66.	839.	558.	-100.	-216.	337.	.0195	-.0537	.0110	.0114	-.0208	.0073	582.
.2240	-35.	1033.	378.	-123.	-156.	415.	.0055	-.0420	.0140	-.0058	-.0210	.0246	649.
.2250	-1.	1179.	79.	-140.	-32.	473.	-.0085	-.0316	.0169	-.0194	-.0154	.0390	698.
.2260	208.	1231.	-249.	-140.	125.	494.	-.0226	-.0225	.0200	-.0287	-.0066	.0489	749.
.2270	213.	1186.	-705.	-141.	308.	476.	-.0370	-.0149	.0236	-.0337	.0019	.0540	825.
.2280	84.	1097.	-1089.	-130.	447.	440.	-.0514	-.0087	.0277	-.0352	.0045	.0555	905.
.2290	56.	1005.	-1125.	-119.	458.	403.	-.0656	-.0038	.0324	-.0345	-.0040	.0540	878.
.2300	-167.	879.	-932.	-104.	354.	352.	-.0796	-.0001	.0378	-.0317	-.0242	.0486	721.
.2310	-732.	660.	-638.	-78.	169.	265.	-.0928	.0028	.0436	-.0267	-.0538	.0380	457.

ADLPIPE PAGE 804 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.44.

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

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

SECTION	17	MEMBER	1	SEQUENCE	901	LOCATION	END	TYPE	EL						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.2320	-1212.	338.	-96.	-40.	-106.	136.	-.1047	.0052	.0497	-.0195	-.0902	.0223	249.		
.2330	-1513.	-32.	605.	4.	-423.	-13.	-.1146	.0075	.0556	-.0115	-.1284	.0037	597.		
.2340	-1960.	-363.	1134.	43.	-688.	-146.	-.1221	.0098	.0610	-.0049	-.1621	-.0150	995.		
.2350	-2384.	-589.	1501.	70.	-886.	-236.	-.1267	.0124	.0651	-.0014	-.1881	-.0314	1299.		
.2360	-2433.	-704.	1882.	84.	-1044.	-282.	-.1278	.0156	.0677	-.0015	-.2058	-.0447	1532.		
.2370	-2338.	-748.	2149.	89.	-1140.	-300.	-.1253	.0195	.0681	-.0043	-.2141	-.0553	1670.		
.2380	-2337.	-752.	2199.	89.	-1160.	-302.	-.1195	.0244	.0661	-.0091	-.2125	-.0633	1698.		
.2390	-2166.	-703.	2217.	84.	-1147.	-282.	-.1103	.0301	.0614	-.0157	-.2027	-.0680	1672.		
.2400	-1775.	-582.	2212.	69.	-1099.	-233.	-.0980	.0364	.0541	-.0242	-.1844	-.0689	1589.		
.2410	-1460.	-396.	1953.	47.	-957.	-159.	-.0833	.0432	.0444	-.0338	-.1558	-.0660	1372.		
.2420	-1118.	-181.	1454.	22.	-717.	-73.	-.0667	.0503	.0328	-.0433	-.1169	-.0602	1018.		
.2430	-493.	25.	879.	-3.	-411.	10.	-.0487	.0576	.0198	-.0516	-.0700	-.0524	581.		
.2440	174.	197.	162.	-23.	-44.	79.	-.0301	.0648	.0061	-.0581	-.0180	-.0439	132.		
.2450	694.	327.	-674.	-39.	353.	131.	-.0120	.0716	-.0076	-.0631	.0342	-.0350	535.		
.2460	1248.	415.	-1359.	-49.	694.	166.	.0051	.0780	-.0208	-.0667	.0799	-.0262	1010.		
.2470	1857.	450.	-1749.	-53.	923.	180.	.0205	.0838	-.0328	-.0690	.1137	-.0180	1330.		
.2480	2116.	418.	-1990.	-50.	1050.	168.	.0335	.0891	-.0432	-.0702	.1333	-.0110	1504.		
.2490	1980.	314.	-2054.	-37.	1059.	126.	.0436	.0939	-.0519	-.0704	.1376	-.0058	1508.		
.2500	1859.	143.	-1735.	-17.	917.	57.	.0511	.0984	-.0588	-.0701	.1266	-.0025	1298.		
.2510	1720.	-77.	-1183.	9.	679.	-31.	.0562	.1029	-.0640	-.0701	.1048	-.0006	960.		
.2520	1342.	-296.	-681.	35.	433.	-119.	.0589	.1075	-.0677	-.0712	.0785	.0012	636.		
.2530	919.	-455.	-337.	54.	204.	-182.	.0597	.1124	-.0703	-.0744	.0524	.0046	394.		
.2540	662.	-525.	183.	62.	5.	-211.	.0591	.1177	-.0722	-.0800	.0296	.0104	311.		
.2550	452.	-527.	449.	63.	-126.	-211.	.0575	.1235	-.0737	-.0878	.0132	.0183	359.		
.2560	258.	-475.	529.	56.	-182.	-191.	.0552	.1300	-.0752	-.0973	.0041	.0281	380.		
.2570	230.	-353.	544.	42.	-191.	-142.	.0524	.1369	-.0769	-.1088	.0016	.0398	341.		
.2580	258.	-139.	483.	17.	-163.	-56.	.0494	.1440	-.0788	-.1224	.0048	.0538	245.		
.2590	183.	148.	291.	-18.	-95.	59.	.0460	.1512	-.0809	-.1374	.0128	.0691	160.		
.2600	186.	442.	76.	-53.	-8.	177.	.0425	.1581	-.0830	-.1521	.0245	.0836	262.		
.2610	357.	668.	-130.	-79.	95.	268.	.0386	.1647	-.0848	-.1647	.0396	.0948	417.		
.2620	506.	790.	-440.	-94.	237.	317.	.0342	.1707	-.0861	-.1745	.0579	.1014	574.		
.2630	620.	838.	-822.	-100.	403.	336.	.0290	.1759	-.0865	-.1816	.0774	.1036	755.		
.2640	821.	850.	-1142.	-101.	556.	341.	.0229	.1801	-.0857	-.1862	.0952	.1027	932.		
.2650	975.	818.	-1405.	-97.	680.	328.	.0157	.1835	-.0836	-.1880	.1084	.0984	1075.		
.2660	935.	700.	-1613.	-83.	758.	281.	.0073	.1860	-.0798	-.1868	.1144	.0900	1148.		
.2670	837.	494.	-1608.	-59.	745.	198.	-.0023	.1879	-.0746	-.1834	.1102	.0774	1092.		
.2680	701.	257.	-1357.	-31.	628.	103.	-.0128	.1894	-.0673	-.1790	.0952	.0628	899.		
.2690	388.	61.	-987.	-7.	442.	24.	-.0240	.1903	-.0599	-.1751	.0714	.0485	625.		

ADLPIPE PAGE 805 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.44.

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

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

.2970	732.	190.	1004.	-23.	490.	76.	.0176	.0234	-.0236	-.0197	.0826	.0483	701.
.2980	652.	76.	-832.	-9.	411.	30.	.0251	.0095	-.0246	-.0047	.0363	.0443	583.
.2990	559.	-32.	-586.	4.	301.	-13.	.0316	-.0045	-.0248	.0109	.0857	.0405	426.
.3000	448.	-139.	-340.	16.	190.	-56.	.0373	-.0184	-.0242	.0267	.0333	.0368	280.
.3010	336.	-251.	-141.	70.	97.	-101.	.0423	-.0320	-.0232	.0427	.0310	.0331	201.
.3020	272.	-361.	16.	43.	26.	-145.	.0468	-.0451	-.0218	.0583	.0795	.0297	217.
.3030	240.	-460.	120.	55.	-19.	-184.	.0508	-.0578	-.0204	.0733	.0794	.0270	273.
.3040	206.	-552.	163.	66.	-41.	-222.	.0544	-.0698	-.0190	.0876	.0804	.0248	332.
.3050	207.	-657.	176.	78.	-46.	-264.	.0577	-.0808	-.0178	.1012	.0825	.0228	394.
.3060	256.	-775.	165.	92.	-36.	-311.	.0605	-.0909	-.0168	.1141	.0856	.0209	461.
.3070	318.	-878.	93.	104.	0.	-352.	.0629	-.0999	-.0159	.1253	.0903	.0199	519.

ADLPIPE PAGE 806 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.44.

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

CONDITION 24
LOADS
SHOCK
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ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	EL	DX	DY	DZ	RX	RY	RZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	HX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.3080	404.	-933.	-49.	111.	68.	-374.	.0648	-.1077	-.0149	.1341	.0969	.0206	560.
.3090	550.	-921.	-241.	109.	162.	-369.	.0659	-.1143	-.0136	.1399	.1050	.0233	590.
.3100	723.	-935.	-485.	99.	280.	-335.	.0662	-.1197	-.0119	.1424	.1137	.0280	633.
.3110	877.	-676.	-759.	80.	409.	-271.	.0653	-.1242	-.0095	.1417	.1214	.0343	702.
.3120	1025.	-452.	-988.	54.	518.	-181.	.0632	-.1278	-.0062	.1382	.1255	.0418	779.
.3130	1138.	-181.	-1115.	22.	583.	-73.	.0597	-.1308	-.0019	.1326	.1235	.0496	830.
.3140	1129.	103.	-1136.	-12.	590.	41.	.0546	-.1336	.0034	.1260	.1141	.0564	836.
.3150	1009.	364.	-1020.	-43.	529.	146.	.0481	-.1363	.0097	.1196	.0966	.0607	778.
.3160	815.	562.	-760.	-67.	402.	225.	.0402	-.1393	.0169	.1146	.0716	.0612	658.
.3170	545.	671.	-413.	-80.	231.	269.	.0313	-.1426	.0247	.1120	.0415	.0571	513.
.3180	216.	683.	-39.	-81.	41.	274.	.0218	-.1465	.0328	.1120	.0090	.0481	408.
.3190	-118.	599.	316.	-71.	-141.	240.	.0119	-.1509	.0410	.1147	-.0228	.0344	406.
.3200	-394.	433.	627.	-51.	-298.	174.	.0022	-.1558	.0489	.1199	-.0516	.0166	493.
.3210	-631.	202.	845.	-24.	-414.	81.	-.0069	-.1609	.0561	.1270	-.0755	-.0041	597.
.3220	-831.	-67.	961.	8.	-484.	-27.	-.0151	-.1662	.0626	.1354	-.0936	-.0265	685.
.3230	-953.	-347.	1012.	41.	-519.	-139.	-.0222	-.1712	.0680	.1442	-.1062	-.0490	762.
.3240	-1015.	-617.	1011.	73.	-526.	-248.	-.0279	-.1758	.0722	.1527	-.1138	-.0705	828.
.3250	-1066.	-856.	940.	102.	-504.	-344.	-.0321	-.1795	.0754	.1602	-.1165	-.0898	873.
.3260	-1062.	-1038.	839.	123.	-463.	-416.	-.0348	-.1823	.0774	.1658	-.1150	-.1054	896.
.3270	-985.	-1135.	729.	135.	-410.	-455.	-.0359	-.1839	.0784	.1689	-.1102	-.1165	886.
.3280	-895.	-1139.	579.	135.	-339.	-457.	-.0356	-.1842	.0786	.1690	-.1022	-.1226	826.
.3290	-784.	-1058.	404.	126.	-255.	-424.	-.0340	-.1834	.0781	.1660	-.0919	-.1239	722.
.3300	-609.	-904.	252.	107.	-173.	-363.	-.0313	-.1813	.0771	.1602	-.0806	-.1207	588.
.3310	-435.	-686.	123.	82.	-101.	-275.	-.0277	-.1783	.0757	.1518	-.0697	-.1136	430.
.3320	-324.	-418.	24.	50.	-48.	-168.	-.0234	-.1747	.0740	.1415	-.0507	-.1034	256.
.3330	-243.	-134.	11.	16.	-33.	-54.	-.0185	-.1706	.0719	.1301	-.0549	-.0913	92.
.3340	-178.	122.	108.	-14.	-65.	49.	-.0132	-.1664	.0694	.1190	-.0530	-.0790	116.
.3350	-182.	313.	266.	-37.	-128.	126.	-.0075	-.1622	.0665	.1091	-.0542	-.0679	259.
.3360	-233.	428.	457.	-51.	-211.	172.	-.0016	-.1583	.0629	.1012	-.0572	-.0586	391.
.3370	-259.	470.	669.	-56.	-299.	189.	.0047	-.1548	.0587	.0956	-.0502	-.0515	506.
.3380	-269.	443.	835.	-53.	-367.	178.	.0113	-.1518	.0535	.0922	-.0511	-.0465	581.
.3390	-280.	348.	895.	-41.	-392.	140.	.0181	-.1492	.0475	.0911	-.0580	-.0438	591.
.3400	-246.	192.	848.	-23.	-370.	77.	.0252	-.1469	.0405	.0919	-.0501	-.0433	534.
.3410	-153.	-1.	708.	0.	-302.	-0.	.0326	-.1446	.0327	.0938	-.0377	-.0442	427.
.3420	-56.	-196.	474.	23.	-197.	-79.	.0400	-.1423	.0242	.0956	-.0216	-.0455	301.
.3430	31.	-363.	184.	43.	-70.	-146.	.0474	-.1398	.0152	.0966	-.0034	-.0464	236.
.3440	137.	-487.	-102.	58.	57.	-195.	.0546	-.1367	.0060	.0959	.0151	-.0465	299.
.3450	247.	-566.	-360.	67.	174.	-227.	.0617	-.1331	-.0030	.0932	.0326	-.0456	415.

ADLPIPE PAGE 807 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.45.

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

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

.3340	-172.	122.	108.	-14.	-65.	47.	-0.152	-1.664	.0694	.1190	-.0530	-.0790	116.
.3350	-182.	313.	266.	-37.	-128.	126.	-.0075	-.1622	.0665	.1091	-.0542	-.0679	259.
.3360	-233.	428.	457.	-51.	-211.	172.	-.0016	-.1583	.0629	.1012	-.0572	-.0586	391.
.3370	-259.	470.	669.	-56.	-299.	189.	.0047	-.1548	.0587	.0956	-.0602	-.0515	506.
.3380	-269.	443.	835.	-53.	-367.	178.	.0113	-.1518	.0535	.0922	-.0611	-.0465	581.
.3390	-280.	348.	895.	-41.	-397.	140.	.0181	-.1492	.0475	.0911	-.0580	-.0438	591.
.3400	-246.	192.	848.	-23.	-370.	77.	.0252	-.1469	.0405	.0919	-.0501	-.0433	534.
.3410	-153.	-1.	708.	0.	-302.	-0.	.0326	-.1446	.0327	.0938	-.0377	-.0442	427.
.3420	-56.	-196.	474.	23.	-197.	-79.	.0400	-.1423	.0242	.0956	-.0216	-.0455	301.
.3430	31.	-363.	184.	43.	-70.	-146.	.0474	-.1398	.0152	.0966	-.0034	-.0464	236.
.3440	137.	-487.	-102.	58.	57.	-195.	.0546	-.1367	.0060	.0959	.0151	-.0465	299.
.3450	247.	-566.	-360.	67.	174.	-227.	.0617	-.1331	-.0030	.0932	.0326	-.0456	415.

ADLPIPE PAGE 807

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

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

SECTION	17	MEMBER	1	SEQUENCE	901	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)		
.3460	335.	-595.	-584.	71.	274.	-239.	.0683	-.1287	-.0117	.0882	.0481	-.0437	523.		
.3470	419.	-564.	-751.	67.	351.	-226.	.0745	-.1235	-.0196	.0807	.0610	-.0407	598.		
.3480	507.	-472.	-853.	56.	402.	-189.	.0800	-.1177	-.0266	.0708	.0709	-.0366	633.		
.3490	575.	-334.	-906.	40.	432.	-134.	.0848	-.1113	-.0325	.0591	.0778	-.0320	641.		
.3500	624.	-176.	-912.	21.	440.	-71.	.0887	-.1044	-.0372	.0464	.0816	-.0277	630.		
.3510	665.	-23.	-860.	3.	424.	-9.	.0917	-.0971	-.0409	.0336	.0823	-.0243	599.		
.3520	676.	113.	-765.	-13.	387.	45.	.0938	-.0898	-.0435	.0214	.0801	-.0223	551.		
.3530	649.	220.	-642.	-26.	335.	88.	.0948	-.0824	-.0451	.0106	.0755	-.0218	490.		
.3540	616.	285.	-498.	-34.	273.	114.	.0949	-.0752	-.0459	.0018	.0694	-.0231	421.		
.3550	591.	298.	-361.	-35.	215.	120.	.0939	-.0682	-.0460	-.0045	.0630	-.0262	351.		
.3560	564.	258.	-274.	-31.	177.	104.	.0921	-.0614	-.0454	-.0083	.0577	-.0311	293.		
.3570	556.	176.	-248.	-21.	166.	71.	.0893	-.0548	-.0443	-.0098	.0541	-.0371	256.		
.3580	590.	62.	-279.	-7.	182.	25.	.0856	-.0484	-.0426	-.0092	.0526	-.0438	260.		
.3590	641.	-71.	-368.	8.	224.	-28.	.0809	-.0420	-.0404	-.0072	.0527	-.0505	319.		
.3600	688.	-210.	-492.	25.	279.	-84.	.0752	-.0355	-.0375	-.0045	.0533	-.0568	413.		
.3610	734.	-339.	-604.	40.	330.	-136.	.0685	-.0288	-.0339	-.0019	.0528	-.0620	507.		
.3620	758.	-441.	-670.	52.	359.	-177.	.0607	-.0216	-.0297	-.0001	.0497	-.0656	570.		
.3630	727.	-503.	-677.	60.	358.	-202.	.0519	-.0140	-.0248	.0001	.0431	-.0670	587.		
.3640	651.	-517.	-606.	61.	321.	-207.	.0421	-.0060	-.0193	-.0016	.0325	-.0661	546.		
.3650	546.	-475.	-455.	56.	247.	-190.	.0314	.0026	-.0132	-.0057	.0180	-.0627	448.		
.3660	393.	-374.	-253.	44.	148.	-150.	.0201	.0116	-.0068	-.0122	.0004	-.0566	304.		
.3670	190.	-218.	-26.	26.	33.	-87.	.0082	.0209	-.0002	-.0208	-.0190	-.0481	137.		
.3680	-23.	-21.	221.	2.	-92.	-8.	-.0039	.0303	.0063	-.0309	-.0394	-.0378	130.		
.3690	-231.	194.	473.	-23.	-217.	78.	-.0159	.0395	.0124	-.0417	-.0593	-.0265	327.		
.3700	-444.	398.	697.	-47.	-332.	160.	-.0275	.0484	.0179	-.0524	-.0777	-.0152	525.		
.3710	-645.	570.	882.	-68.	-430.	229.	-.0385	.0567	.0224	-.0623	-.0933	-.0048	695.		
.3720	-802.	698.	1023.	-83.	-506.	280.	-.0485	.0643	.0259	-.0708	-.1052	.0043	825.		
.3730	-917.	775.	1094.	-92.	-548.	311.	-.0574	.0710	.0282	-.0775	-.1123	.0115	899.		
.3740	-992.	794.	1073.	-94.	-549.	318.	-.0649	.0768	.0293	-.0821	-.1138	.0167	906.		
.3750	-1005.	751.	965.	-89.	-507.	301.	-.0711	.0816	.0292	-.0845	-.1096	.0196	842.		
.3760	-957.	657.	781.	-78.	-427.	264.	-.0759	.0854	.0282	-.0851	-.1002	.0206	717.		
.3770	-878.	532.	533.	-63.	-318.	214.	-.0792	.0885	.0263	-.0841	-.0868	.0203	549.		
.3780	-784.	396.	262.	-47.	-198.	159.	-.0814	.0908	.0239	-.0822	-.0711	.0193	365.		
.3790	-675.	254.	17.	-30.	-87.	102.	-.0823	.0925	.0211	-.0796	-.0552	.0179	194.		
.3800	-575.	107.	-169.	-13.	-0.	43.	-.0821	.0940	.0182	-.0768	-.0408	.0164	63.		
.3810	-509.	-31.	-281.	4.	52.	-12.	-.0811	.0952	.0153	-.0742	-.0292	.0153	76.		
.3820	-474.	-138.	-306.	16.	66.	-55.	-.0791	.0964	.0125	-.0723	-.0208	.0154	124.		
.3830	-460.	-192.	-248.	23.	45.	-77.	-.0764	.0976	.0100	-.0715	-.0158	.0175	130.		

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2 SAFETY COLD FKW24F--2 PSV

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.3730	-917.	775.	1094.	-92.	-548.	311.	-.0574	.0710	.0282	-.0775	-.1123	.0115	899.
.3740	-992.	754.	1073.	-94.	-549.	318.	-.0649	.0768	.0293	-.0821	-.1138	.0167	906.
.3750	-1005.	751.	965.	-89.	-507.	301.	-.0711	.0816	.0292	-.0845	-.1096	.0196	842.
.3760	-957.	657.	781.	-78.	-427.	264.	-.0759	.0854	.0282	-.0851	-.1002	.0206	717.
.3770	-878.	532.	533.	-63.	-318.	214.	-.0792	.0885	.0263	-.0841	-.0868	.0203	549.
.3780	-784.	396.	262.	-47.	-198.	159.	-.0814	.0908	.0239	-.0822	-.0711	.0193	365.
.3790	-675.	254.	17.	-30.	-87.	102.	-.0823	.0925	.0211	-.0796	-.0552	.0179	194.
.3800	-575.	107.	-169.	-13.	-0.	43.	-.0821	.0940	.0182	-.0768	-.0408	.0164	63.
.3810	-509.	-31.	-281.	4.	52.	-12.	-.0811	.0952	.0153	-.0742	-.0292	.0153	76.
.3820	-474.	-138.	-306.	16.	66.	-55.	-.0791	.0964	.0125	-.0723	-.0208	.0154	124.
.3830	-460.	-192.	-248.	23.	45.	-77.	-.0764	.0976	.0100	-.0715	-.0158	.0175	130.

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

SECTION	17	MEMBER	1	SEQUENCE	901	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)	
.3840	-466.	-190.	-138.	23.	0.	-76.	-.0729	.0989	.0076	-.0720	-.0131	.0218	113.	
.3850	-479.	-142.	-4.	17.	-55.	-57.	-.0686	.1003	.0053	-.0735	-.0118	.0282	115.	
.3860	-474.	-62.	135.	7.	-111.	-25.	-.0637	.1017	.0029	-.0757	-.0109	.0361	160.	
.3870	-451.	41.	260.	-5.	-158.	16.	-.0580	.1030	.0004	-.0781	-.0097	.0453	225.	
.3880	-414.	154.	357.	-18.	-192.	62.	-.0517	.1043	-.0025	-.0803	-.0075	.0552	287.	
.3890	-358.	257.	421.	-31.	-212.	103.	-.0449	.1052	-.0058	-.0819	-.0040	.0652	335.	
.3900	-281.	326.	449.	-39.	-213.	131.	-.0375	.1059	-.0096	-.0821	.0010	.0743	358.	
.3910	-186.	352.	430.	-42.	-195.	141.	-.0298	.1063	-.0139	-.0808	.0078	.0822	345.	
.3920	-75.	347.	359.	-41.	-153.	139.	-.0220	.1062	-.0186	-.0780	.0167	.0891	298.	
.3930	58.	322.	236.	-38.	-88.	129.	-.0141	.1057	-.0237	-.0741	.0277	.0949	227.	
.3940	210.	276.	60.	-33.	1.	111.	-.0064	.1049	-.0289	-.0694	.0405	.0995	163.	
.3950	375.	204.	-158.	-24.	108.	82.	.0008	.1038	-.0340	-.0640	.0546	.1027	194.	
.3960	544.	114.	-390.	-14.	221.	46.	.0074	.1025	-.0388	-.0584	.0588	.1046	320.	
.3970	695.	29.	-606.	-3.	326.	12.	.0132	.1011	-.0431	-.0530	.0816	.1058	460.	
.3980	808.	-34.	-775.	4.	407.	-14.	.0180	.0997	-.0467	-.0484	.0917	.1068	575.	
.3990	879.	-73.	-872.	9.	454.	-29.	.0216	.0983	-.0494	-.0447	.0979	.1076	643.	
.4000	912.	-94.	-888.	11.	465.	-38.	.0239	.0970	-.0511	-.0420	.1000	.1080	659.	

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)
.0290	5991.	10.	-8576.	-1.	4153.	4.	.1388	.0438	-.0592	-.0183	.4673	-.0358	5866.

SECTION	17	MEMBER	2	SEQUENCE	853	LOCATION	DIS	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	-.0001	.0000	0.	
.0020	0.	0.	0.	0.	0.	0.	-.0001	.0000	-.0001	-.0001	-.0009	.0002	0.	
.0030	0.	0.	0.	0.	0.	0.	-.0002	-.0000	-.0002	.0000	-.0024	.0003	0.	
.0040	0.	0.	0.	0.	0.	0.	-.0004	-.0000	-.0006	.0004	-.0045	-.0002	0.	
.0050	0.	0.	0.	0.	0.	0.	-.0006	.0000	-.0013	.0013	-.0066	-.0013	0.	
.0060	0.	0.	0.	0.	0.	0.	-.0009	.0001	-.0023	.0023	-.0081	-.0029	0.	
.0070	0.	0.	0.	0.	0.	0.	-.0011	.0004	-.0040	.0029	-.0099	-.0043	0.	

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

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FORCES AND MOMENTS ACT ON THE PIPING

TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
.0010	0.	0.	0.	0.	0.	0.	-.0000	.0000	-.0000	-.0000	-.0001	.0000	0.
.0020	0.	0.	0.	0.	0.	0.	-.0001	.0000	-.0001	-.0001	-.0009	.0002	0.
.0030	0.	0.	0.	0.	0.	0.	-.0002	-.0000	-.0002	.0000	-.0024	.0003	0.
.0040	0.	0.	0.	0.	0.	0.	-.0004	-.0000	-.0006	.0004	-.0045	-.0002	0.
.0050	0.	0.	0.	0.	0.	0.	-.0006	.0000	-.0013	.0013	-.0066	-.0013	0.
.0060	0.	0.	0.	0.	0.	0.	-.0009	.0001	-.0023	.0023	-.0081	-.0029	0.
.0070	0.	0.	0.	0.	0.	0.	-.0011	.0004	-.0040	.0029	-.0099	-.0043	0.

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2 SAFETY COLD FKW24F--2 PSV

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

SECTION	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	RU	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
17	2	853					.0080	0.	0.	0.	0.	0.	0.	-.0014	.0010	-.0062	.0032	-.0144	-.0053	0.
							.0090	0.	0.	0.	0.	0.	0.	-.0014	.0019	-.0092	.0037	-.0222	-.0072	0.
							.0100	0.	0.	0.	0.	0.	0.	-.0008	.0034	-.0130	.0049	-.0321	-.0114	0.
							.0110	0.	0.	0.	0.	0.	0.	.0010	.0055	-.0179	.0060	-.0420	-.0176	0.
							.0120	0.	0.	0.	0.	0.	0.	.0043	.0087	-.0241	.0051	-.0479	-.0229	0.
							.0130	0.	0.	0.	0.	0.	0.	.0090	.0134	-.0318	.0002	-.0452	-.0249	0.
							.0140	0.	0.	0.	0.	0.	0.	.0154	.0195	-.0407	-.0090	-.0302	-.0233	0.
							.0150	0.	0.	0.	0.	0.	0.	.0232	.0272	-.0500	-.0225	-.0022	-.0189	0.
							.0160	0.	0.	0.	0.	0.	0.	.0321	.0362	-.0584	-.0402	.0350	-.0114	0.
							.0170	0.	0.	0.	0.	0.	0.	.0420	.0461	-.0643	-.0622	.0703	.0011	0.
							.0180	0.	0.	0.	0.	0.	0.	.0527	.0563	-.0663	-.0874	.0892	.0202	0.
							.0190	0.	0.	0.	0.	0.	0.	.0637	.0658	-.0639	-.1124	.0805	.0435	0.
							.0200	0.	0.	0.	0.	0.	0.	.0751	.0737	-.0582	-.1319	.0312	.0664	0.
							.0210	0.	0.	0.	0.	0.	0.	.0877	.0787	-.0518	-.1389	-.0476	.0784	0.
							.0220	0.	0.	0.	0.	0.	0.	.1007	.0804	-.0496	-.1291	-.0994	.0692	0.
							.0230	0.	0.	0.	0.	0.	0.	.1146	.0795	-.0538	-.1093	-.0944	.0456	0.
							.0240	0.	0.	0.	0.	0.	0.	.1287	.0769	-.0648	-.0915	-.0215	.0271	0.
							.0250	0.	0.	0.	0.	0.	0.	.1432	.0735	-.0793	-.0838	.0912	.0287	0.
							.0260	0.	0.	0.	0.	0.	0.	.1567	.0689	-.0930	-.0828	.2055	.0427	0.
							.0270	0.	0.	0.	0.	0.	0.	.1621	.0620	-.1045	-.0742	.3381	.0405	0.
							.0280	0.	0.	0.	0.	0.	0.	.1586	.0525	-.1091	-.0494	.4536	.0075	0.
							.0290	0.	0.	0.	0.	0.	0.	.1512	.0412	-.1007	-.0183	.4768	-.0358	0.
							.0300	0.	0.	0.	0.	0.	0.	.1315	.0299	-.0810	.0002	.4282	-.0572	0.
							.0310	0.	0.	0.	0.	0.	0.	.1001	.0190	-.0520	.0057	.3236	-.0548	0.
							.0320	0.	0.	0.	0.	0.	0.	.0661	.0076	-.0136	.0156	.1457	-.0538	0.
							.0330	0.	0.	0.	0.	0.	0.	.0300	-.0047	.0274	.0416	-.0383	-.0760	0.
							.0340	0.	0.	0.	0.	0.	0.	-.0102	-.0170	.0628	.0710	-.1559	-.1089	0.
							.0350	0.	0.	0.	0.	0.	0.	-.0482	-.0278	.0919	.0798	-.2355	-.1188	0.
							.0360	0.	0.	0.	0.	0.	0.	-.0785	-.0369	.1150	.0645	-.3080	-.0961	0.
							.0370	0.	0.	0.	0.	0.	0.	-.1052	-.0456	.1282	.0478	-.3285	-.0690	0.
							.0380	0.	0.	0.	0.	0.	0.	-.1298	-.0554	.1305	.0515	-.2762	-.0713	0.
							.0390	0.	0.	0.	0.	0.	0.	-.1464	-.0660	.1271	.0703	-.2117	-.1039	0.
							.0400	0.	0.	0.	0.	0.	0.	-.1539	-.0755	.1218	.0807	-.1874	-.1302	0.
							.0410	0.	0.	0.	0.	0.	0.	-.1627	-.0823	.1112	.0726	-.1479	-.1193	0.
							.0420	0.	0.	0.	0.	0.	0.	-.1703	-.0866	.0979	.0600	-.1049	-.0828	0.
							.0430	0.	0.	0.	0.	0.	0.	-.1681	-.0896	.0876	.0586	-.1153	-.0606	0.
							.0440	0.	0.	0.	0.	0.	0.	-.1603	-.0915	.0777	.0674	-.1301	-.0703	0.
							.0450	0.	0.	0.	0.	0.	0.	-.1523	-.0909	.0648	.0704	-.0935	-.0797	0.

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.0340	0.	0.	0.	0.	0.	0.	0.	-.0482	-.0278	.0919	.0798	-.2355	-.1188	0.
.0350	0.	0.	0.	0.	0.	0.	0.	-.0785	-.0369	.1150	.0645	-.3080	-.0961	0.
.0370	0.	0.	0.	0.	0.	0.	0.	-.1052	-.0456	.1282	.0478	-.3285	-.0690	0.
.0380	0.	0.	0.	0.	0.	0.	0.	-.1299	-.0554	.1305	.0515	-.2762	-.0713	0.
.0390	0.	0.	0.	0.	0.	0.	0.	-.1464	-.0660	.1271	.0703	-.2117	-.1039	0.
.0400	0.	0.	0.	0.	0.	0.	0.	-.1539	-.0755	.1218	.0807	-.1874	-.1302	0.
.0410	0.	0.	0.	0.	0.	0.	0.	-.1627	-.0823	.1112	.0726	-.1479	-.1193	0.
.0420	0.	0.	0.	0.	0.	0.	0.	-.1705	-.0866	.0979	.0600	-.1049	-.0828	0.
.0430	0.	0.	0.	0.	0.	0.	0.	-.1681	-.0896	.0876	.0586	-.1153	-.0606	0.
.0440	0.	0.	0.	0.	0.	0.	0.	-.1603	-.0915	.0777	.0674	-.1301	-.0703	0.
.0450	0.	0.	0.	0.	0.	0.	0.	-.1523	-.0909	.0648	.0704	-.0935	-.0797	0.

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PRESSURE
ENGLISH UNITS

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

SECTION	17	MEMBER	2	SEQUENCE	853	LOCATION	DIS	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)	
.0460	0.	0.	0.	0.	0.	0.	-.1415	-.0866	.0515	.0514	-.0332	-.0479	0.	
.0470	0.	0.	0.	0.	0.	0.	-.1259	-.0794	.0410	.0110	.0147	.0220	0.	
.0480	0.	0.	0.	0.	0.	0.	-.1097	-.0723	.0334	-.0314	.0625	.0924	0.	
.0490	0.	0.	0.	0.	0.	0.	-.0955	-.0682	.0300	-.0543	.1022	.1330	0.	
.0500	0.	0.	0.	0.	0.	0.	-.0808	-.0684	.0337	-.0521	.0886	.1398	0.	
.0510	0.	0.	0.	0.	0.	0.	-.0659	-.0728	.0438	-.0365	.0160	.1305	0.	
.0520	0.	0.	0.	0.	0.	0.	-.0520	-.0807	.0568	-.0178	-.0325	.1280	0.	
.0530	0.	0.	0.	0.	0.	0.	-.0369	-.0920	.0694	.0056	-.1817	.1349	0.	
.0540	0.	0.	0.	0.	0.	0.	-.0181	-.1069	.0786	.0404	-.2545	.1268	0.	
.0550	0.	0.	0.	0.	0.	0.	.0042	-.1252	.0815	.0874	-.2727	.0865	0.	
.0560	0.	0.	0.	0.	0.	0.	.0299	-.1455	.0773	.1389	-.2384	.0321	0.	
.0570	0.	0.	0.	0.	0.	0.	.0576	-.1658	.0669	.1843	-.1716	-.0069	0.	
.0580	0.	0.	0.	0.	0.	0.	.0846	-.1852	.0518	.2180	-.0865	-.0290	0.	
.0590	0.	0.	0.	0.	0.	0.	.1099	-.2035	.0345	.2463	-.0048	-.0570	0.	
.0600	0.	0.	0.	0.	0.	0.	.1337	-.2205	.0179	.2805	.0546	-.1051	0.	
.0610	0.	0.	0.	0.	0.	0.	.1546	-.2348	.0027	.3208	.0931	-.1633	0.	
.0620	0.	0.	0.	0.	0.	0.	.1707	-.2443	-.0114	.3529	.1207	-.2082	0.	
.0630	0.	0.	0.	0.	0.	0.	.1829	-.2474	-.0240	.3624	.1330	-.2213	0.	
.0640	0.	0.	0.	0.	0.	0.	.1920	-.2437	-.0352	.3491	.1393	-.2040	0.	
.0650	0.	0.	0.	0.	0.	0.	.1962	-.2341	-.0465	.3220	.1670	-.1750	0.	
.0660	0.	0.	0.	0.	0.	0.	.1952	-.2198	-.0576	.2872	.2129	-.1465	0.	
.0670	0.	0.	0.	0.	0.	0.	.1912	-.2016	-.0659	.2437	.2416	-.1112	0.	
.0680	0.	0.	0.	0.	0.	0.	.1833	-.1806	-.0708	.1900	.2428	-.0603	0.	
.0690	0.	0.	0.	0.	0.	0.	.1700	-.1584	-.0735	.1308	.2308	-.0036	0.	
.0700	0.	0.	0.	0.	0.	0.	.1535	-.1369	-.0737	.0764	.2001	.0398	0.	
.0710	0.	0.	0.	0.	0.	0.	.1365	-.1174	-.0716	.0360	.1509	.0634	0.	
.0720	0.	0.	0.	0.	0.	0.	.1178	-.1003	-.0700	.0101	.1168	.0752	0.	
.0730	0.	0.	0.	0.	0.	0.	.0971	-.0854	-.0703	-.0074	.1165	.0849	0.	
.0740	0.	0.	0.	0.	0.	0.	.0773	-.0725	-.0708	-.0224	.1326	.0955	0.	
.0750	0.	0.	0.	0.	0.	0.	.0584	-.0615	-.0706	-.0355	.1607	.1045	0.	
.0760	0.	0.	0.	0.	0.	0.	.0376	-.0526	-.0690	-.0433	.2038	.1065	0.	
.0770	0.	0.	0.	0.	0.	0.	.0151	-.0457	-.0633	-.0431	.2323	.0979	0.	
.0780	0.	0.	0.	0.	0.	0.	-.0073	-.0404	-.0506	-.0355	.2105	.0797	0.	
.0790	0.	0.	0.	0.	0.	0.	-.0306	-.0358	-.0314	-.0234	.1461	.0573	0.	
.0800	0.	0.	0.	0.	0.	0.	-.0557	-.0311	-.0081	-.0108	.0544	.0355	0.	
.0810	0.	0.	0.	0.	0.	0.	-.0792	-.0252	.0182	-.0008	-.0321	.0174	0.	
.0820	0.	0.	0.	0.	0.	0.	-.0979	-.0177	.0456	.0050	-.1341	.0060	0.	
.0830	0.	0.	0.	0.	0.	0.	-.1125	-.0084	.0705	.0066	-.2080	.0035	0.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.45.

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

.0720	0.	0.	0.	0.	0.	0.	0.	0.	.1175	-.1003	-.0700	.0101	.1168	.0752	0.
.0730	0.	0.	0.	0.	0.	0.	0.	0.	.0971	-.0854	-.0703	-.0074	.1165	.0849	0.
.0740	0.	0.	0.	0.	0.	0.	0.	0.	.0773	-.0725	-.0708	-.0224	.1326	.0955	0.
.0750	0.	0.	0.	0.	0.	0.	0.	0.	.0584	-.0615	-.0706	-.0355	.1607	.1045	0.
.0760	0.	0.	0.	0.	0.	0.	0.	0.	.0376	-.0526	-.0690	-.0433	.2038	.1065	0.
.0770	0.	0.	0.	0.	0.	0.	0.	0.	.0151	-.0457	-.0633	-.0431	.2323	.0979	0.
.0780	0.	0.	0.	0.	0.	0.	0.	0.	-.0073	-.0404	-.0506	-.0355	.2105	.0797	0.
.0790	0.	0.	0.	0.	0.	0.	0.	0.	-.0306	-.0358	-.0314	-.0234	.1461	.0573	0.
.0800	0.	0.	0.	0.	0.	0.	0.	0.	-.0557	-.0311	-.0081	-.0108	.0544	.0355	0.
.0810	0.	0.	0.	0.	0.	0.	0.	0.	-.0792	-.0252	.0182	-.0008	-.0321	.0174	0.
.0820	0.	0.	0.	0.	0.	0.	0.	0.	-.0979	-.0177	.0456	.0050	-.1341	.0060	0.
.0830	0.	0.	0.	0.	0.	0.	0.	0.	-.1125	-.0084	.0705	.0066	-.2080	.0035	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.45.

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	17	MEMBER	2	SEQUENCE	353	LOCATION	DIS	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)		
.0840	0.	0.	0.	0.	0.	0.	-.1227	.0024	.0906	.0032	-.2412	.0092	0.		
.0850	0.	0.	0.	0.	0.	0.	-.1267	.0141	.1063	-.0070	-.2527	.0195	0.		
.0860	0.	0.	0.	0.	0.	0.	-.1256	.0255	.1171	-.0244	-.2516	.0308	0.		
.0870	0.	0.	0.	0.	0.	0.	-.1219	.0354	.1227	-.0439	-.2364	.0392	0.		
.0880	0.	0.	0.	0.	0.	0.	-.1154	.0425	.1237	-.0574	-.2210	.0387	0.		
.0890	0.	0.	0.	0.	0.	0.	-.1052	.0458	.1213	-.0595	-.2148	.0219	0.		
.0900	0.	0.	0.	0.	0.	0.	-.0925	.0453	.1148	-.0510	-.2019	-.0119	0.		
.0910	0.	0.	0.	0.	0.	0.	-.0786	.0417	.1036	-.0365	-.1668	-.0536	0.		
.0920	0.	0.	0.	0.	0.	0.	-.0636	.0358	.0890	-.0203	-.1132	-.0926	0.		
.0930	0.	0.	0.	0.	0.	0.	-.0483	.0286	.0724	-.0035	-.0481	-.1259	0.		
.0940	0.	0.	0.	0.	0.	0.	-.0346	.0210	.0557	.0149	.0203	-.1565	0.		
.0950	0.	0.	0.	0.	0.	0.	-.0239	.0136	.0411	.0337	.0727	-.1854	0.		
.0960	0.	0.	0.	0.	0.	0.	-.0172	.0077	.0306	.0475	.0899	-.2087	0.		
.0970	0.	0.	0.	0.	0.	0.	-.0153	.0042	.0248	.0516	.0662	-.2198	0.		
.0980	0.	0.	0.	0.	0.	0.	-.0180	.0036	.0231	.0459	.0044	-.2145	0.		
.0990	0.	0.	0.	0.	0.	0.	-.0235	.0060	.0241	.0340	-.0836	-.1951	0.		
.1000	0.	0.	0.	0.	0.	0.	-.0306	.0111	.0253	.0185	-.1741	-.1692	0.		
.1010	0.	0.	0.	0.	0.	0.	-.0375	.0185	.0242	-.0002	-.2449	-.1418	0.		
.1020	0.	0.	0.	0.	0.	0.	-.0418	.0279	.0191	-.0221	-.2867	-.1117	0.		
.1030	0.	0.	0.	0.	0.	0.	-.0420	.0388	.0096	-.0465	-.2968	-.0761	0.		
.1040	0.	0.	0.	0.	0.	0.	-.0377	.0508	-.0047	-.0720	-.2736	-.0378	0.		
.1050	0.	0.	0.	0.	0.	0.	-.0288	.0631	-.0228	-.0956	-.2268	-.0038	0.		
.1060	0.	0.	0.	0.	0.	0.	-.0149	.0753	-.0433	-.1151	-.1690	.0219	0.		
.1070	0.	0.	0.	0.	0.	0.	.0022	.0873	-.0657	-.1316	-.0996	.0423	0.		
.1080	0.	0.	0.	0.	0.	0.	.0214	.0993	-.0886	-.1408	-.0328	.0669	0.		
.1090	0.	0.	0.	0.	0.	0.	.0427	.1112	-.1104	-.1672	.0005	.1020	0.		
.1100	0.	0.	0.	0.	0.	0.	.0618	.1223	-.1336	-.1762	.0765	.1279	0.		
.1110	0.	0.	0.	0.	0.	0.	.0822	.1324	-.1551	-.1757	.1748	.1370	0.		
.1120	0.	0.	0.	0.	0.	0.	.1031	.1418	-.1724	-.1761	.2738	.1452	0.		
.1130	0.	0.	0.	0.	0.	0.	.1194	.1505	-.1850	-.1838	.3776	.1706	0.		
.1140	0.	0.	0.	0.	0.	0.	.1299	.1577	-.1903	-.1924	.4589	.2060	0.		
.1150	0.	0.	0.	0.	0.	0.	.1355	.1615	-.1852	-.1901	.4783	.2217	0.		
.1160	0.	0.	0.	0.	0.	0.	.1342	.1611	-.1701	-.1712	.4358	.2019	0.		
.1170	0.	0.	0.	0.	0.	0.	.1266	.1568	-.1470	-.1395	.3448	.1594	0.		
.1180	0.	0.	0.	0.	0.	0.	.1108	.1501	-.1200	-.1059	.2503	.1165	0.		
.1190	0.	0.	0.	0.	0.	0.	.0947	.1422	-.0900	-.0816	.1373	.0852	0.		
.1200	0.	0.	0.	0.	0.	0.	.0794	.1334	-.0612	-.0675	.0377	.0612	0.		
.1210	0.	0.	0.	0.	0.	0.	.0598	.1237	-.0385	-.0541	-.0091	.0324	0.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.45.

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

.1100	0.	0.	0.	0.	0.	0.	0.	.0618	.1223	-.1336	-.1762	.0765	.1279	0.
.1110	0.	0.	0.	0.	0.	0.	0.	.0822	.1324	-.1551	-.1757	.1748	.1370	0.
.1120	0.	0.	0.	0.	0.	0.	0.	.1031	.1418	-.1724	-.1761	.2738	.1452	0.
.1130	0.	0.	0.	0.	0.	0.	0.	.1194	.1505	-.1850	-.1838	.3776	.1706	0.
.1140	0.	0.	0.	0.	0.	0.	0.	.1299	.1577	-.1903	-.1924	.4589	.2060	0.
.1150	0.	0.	0.	0.	0.	0.	0.	.1355	.1615	-.1852	-.1901	.4783	.2217	0.
.1160	0.	0.	0.	0.	0.	0.	0.	.1342	.1611	-.1701	-.1712	.4358	.2019	0.
.1170	0.	0.	0.	0.	0.	0.	0.	.1266	.1568	-.1470	-.1395	.3448	.1594	0.
.1180	0.	0.	0.	0.	0.	0.	0.	.1108	.1501	-.1200	-.1059	.2503	.1165	0.
.1190	0.	0.	0.	0.	0.	0.	0.	.0947	.1422	-.0900	-.0816	.1373	.0852	0.
.1200	0.	0.	0.	0.	0.	0.	0.	.0794	.1334	-.0612	-.0675	.0377	.0612	0.
.1210	0.	0.	0.	0.	0.	0.	0.	.0598	.1237	-.0385	-.0541	-.0091	.0324	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.45.

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	17	MEMBER	2	SEQUENCE	853	LOCATION	DIS	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)	
.1220	0.	0.	0.	0.	0.	0.	.0438	.1132	-.0200	-.0298	-.0438	-.0156	0.	
.1230	0.	0.	0.	0.	0.	0.	.0296	.1030	-.0063	.0015	-.0632	-.0797	0.	
.1240	0.	0.	0.	0.	0.	0.	.0169	.0949	.0019	.0267	-.0638	-.1365	0.	
.1250	0.	0.	0.	0.	0.	0.	.0049	.0909	.0044	.0360	-.0413	-.1639	0.	
.1260	0.	0.	0.	0.	0.	0.	-.0094	.0915	.0022	.0282	.0039	-.1625	0.	
.1270	0.	0.	0.	0.	0.	0.	-.0197	.0960	.0000	.0095	.0167	-.1496	0.	
.1280	0.	0.	0.	0.	0.	0.	-.0316	.1037	-.0027	-.0121	.0182	-.1375	0.	
.1290	0.	0.	0.	0.	0.	0.	-.0446	.1140	-.0055	-.0320	.0148	-.1267	0.	
.1300	0.	0.	0.	0.	0.	0.	-.0560	.1267	-.0072	-.0563	-.0004	-.1087	0.	
.1310	0.	0.	0.	0.	0.	0.	-.0693	.1415	-.0085	-.0947	-.0018	-.0743	0.	
.1320	0.	0.	0.	0.	0.	0.	-.0808	.1571	-.0077	-.1451	-.0082	-.0221	0.	
.1330	0.	0.	0.	0.	0.	0.	-.0939	.1718	-.0049	-.1939	-.0105	.0339	0.	
.1340	0.	0.	0.	0.	0.	0.	-.1067	.1834	.0012	-.2270	-.0273	.0712	0.	
.1350	0.	0.	0.	0.	0.	0.	-.1177	.1908	.0111	-.2415	-.0715	.0816	0.	
.1360	0.	0.	0.	0.	0.	0.	-.1307	.1943	.0228	-.2443	-.1247	.0794	0.	
.1370	0.	0.	0.	0.	0.	0.	-.1411	.1944	.0362	-.2419	-.1981	.0796	0.	
.1380	0.	0.	0.	0.	0.	0.	-.1513	.1917	.0484	-.2368	-.2588	.0839	0.	
.1390	0.	0.	0.	0.	0.	0.	-.1579	.1863	.0580	-.2258	-.2980	.0852	0.	
.1400	0.	0.	0.	0.	0.	0.	-.1595	.1785	.0641	-.2062	-.3046	.0805	0.	
.1410	0.	0.	0.	0.	0.	0.	-.1599	.1687	.0653	-.1815	-.2597	.0742	0.	
.1420	0.	0.	0.	0.	0.	0.	-.1553	.1575	.0646	-.1575	-.2048	.0722	0.	
.1430	0.	0.	0.	0.	0.	0.	-.1488	.1451	.0633	-.1373	-.1513	.0780	0.	
.1440	0.	0.	0.	0.	0.	0.	-.1412	.1309	.0626	-.1156	-.1129	.0857	0.	
.1450	0.	0.	0.	0.	0.	0.	-.1325	.1147	.0628	-.0851	-.0916	.0803	0.	
.1460	0.	0.	0.	0.	0.	0.	-.1247	.0966	.0638	-.0456	-.0798	.0544	0.	
.1470	0.	0.	0.	0.	0.	0.	-.1128	.0776	.0667	-.0045	-.0992	.0184	0.	
.1480	0.	0.	0.	0.	0.	0.	-.1008	.0591	.0681	.0285	-.1094	-.0090	0.	
.1490	0.	0.	0.	0.	0.	0.	-.0876	.0423	.0667	.0499	-.1007	-.0210	0.	
.1500	0.	0.	0.	0.	0.	0.	-.0706	.0273	.0626	.0633	-.0829	-.0257	0.	
.1510	0.	0.	0.	0.	0.	0.	-.0535	.0140	.0547	.0738	-.0435	-.0313	0.	
.1520	0.	0.	0.	0.	0.	0.	-.0347	.0026	.0441	.0836	-.0026	-.0368	0.	
.1530	0.	0.	0.	0.	0.	0.	-.0177	-.0066	.0307	.0898	.0414	-.0358	0.	
.1540	0.	0.	0.	0.	0.	0.	-.0000	-.0136	.0164	.0906	.0541	-.0246	0.	
.1550	0.	0.	0.	0.	0.	0.	.0184	-.0185	.0010	.0875	.0712	-.0056	0.	
.1560	0.	0.	0.	0.	0.	0.	.0336	-.0218	-.0171	.0840	.0973	.0151	0.	
.1570	0.	0.	0.	0.	0.	0.	.0508	-.0240	-.0357	.0823	.1180	.0318	0.	
.1580	0.	0.	0.	0.	0.	0.	.0676	-.0250	-.0551	.0799	.1513	.0462	0.	
.1590	0.	0.	0.	0.	0.	0.	.0809	-.0250	-.0755	.0723	.2116	.0658	0.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.45.

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

.1480	0.	0.	0.	0.	0.	0.	0.	0.	-1.008	.0591	.0681	.0285	-.1094	-.0090	0.
.1490	0.	0.	0.	0.	0.	0.	0.	0.	-.0876	.0423	.0667	.0499	-.1007	-.0210	0.
.1500	0.	0.	0.	0.	0.	0.	0.	0.	-.0706	.0273	.0626	.0633	-.0829	-.0257	0.
.1510	0.	0.	0.	0.	0.	0.	0.	0.	-.0535	.0140	.0547	.0738	-.0435	-.0313	0.
.1520	0.	0.	0.	0.	0.	0.	0.	0.	-.0347	.0026	.0441	.0836	-.0026	-.0368	0.
.1530	0.	0.	0.	0.	0.	0.	0.	0.	-.0177	-.0066	.0307	.0898	.0414	-.0358	0.
.1540	0.	0.	0.	0.	0.	0.	0.	0.	-.0000	-.0136	.0164	.0906	.0641	-.0246	0.
.1550	0.	0.	0.	0.	0.	0.	0.	0.	.0184	-.0185	.0010	.0875	.0712	-.0056	0.
.1560	0.	0.	0.	0.	0.	0.	0.	0.	.0336	-.0218	-.0171	.0840	.0973	.0151	0.
.1570	0.	0.	0.	0.	0.	0.	0.	0.	.0508	-.0240	-.0357	.0823	.1180	.0318	0.
.1580	0.	0.	0.	0.	0.	0.	0.	0.	.0676	-.0250	-.0551	.0799	.1513	.0462	0.
.1590	0.	0.	0.	0.	0.	0.	0.	0.	.0809	-.0250	-.0755	.0723	.2116	.0658	0.

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ADLPIPE STRESS ANALYSIS

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

CONDITION 24

LOADS

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ENGLISH UNITS

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

SECTION	17	MEMBER	2	SEQUENCE	853	LOCATION	DIS	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)		
.1600	0.	0.	0.	0.	0.	0.	.0930	-.0243	-.0936	.0587	.2583	.0929	0.		
.1610	0.	0.	0.	0.	0.	0.	.1036	-.0238	-.1078	.0434	.3111	.1180	0.		
.1620	0.	0.	0.	0.	0.	0.	.1075	-.0240	-.1177	.0315	.3485	.1314	0.		
.1630	0.	0.	0.	0.	0.	0.	.1094	-.0255	-.1202	.0264	.3424	.1309	0.		
.1640	0.	0.	0.	0.	0.	0.	.1075	-.0280	-.1157	.0257	.3010	.1209	0.		
.1650	0.	0.	0.	0.	0.	0.	.0997	-.0309	-.1061	.0255	.2485	.1076	0.		
.1660	0.	0.	0.	0.	0.	0.	.0907	-.0337	-.0916	.0244	.1746	.0970	0.		
.1670	0.	0.	0.	0.	0.	0.	.0789	-.0361	-.0748	.0229	.1068	.0899	0.		
.1680	0.	0.	0.	0.	0.	0.	.0671	-.0382	-.0572	.0232	.0518	.0806	0.		
.1690	0.	0.	0.	0.	0.	0.	.0540	-.0398	-.0404	.0252	.0195	.0690	0.		
.1700	0.	0.	0.	0.	0.	0.	.0414	-.0408	-.0237	.0272	-.0092	.0622	0.		
.1710	0.	0.	0.	0.	0.	0.	.0324	-.0413	-.0066	.0286	-.0521	.0631	0.		
.1720	0.	0.	0.	0.	0.	0.	.0209	-.0418	.0076	.0305	-.0706	.0661	0.		
.1730	0.	0.	0.	0.	0.	0.	.0118	-.0429	.0202	.0359	-.0905	.0641	0.		
.1740	0.	0.	0.	0.	0.	0.	.0049	-.0449	.0313	.0455	-.1129	.0557	0.		
.1750	0.	0.	0.	0.	0.	0.	-.0022	-.0478	.0393	.0580	-.1166	.0422	0.		
.1760	0.	0.	0.	0.	0.	0.	-.0066	-.0516	.0449	.0714	-.1089	.0253	0.		
.1770	0.	0.	0.	0.	0.	0.	-.0111	-.0560	.0477	.0833	-.0771	.0073	0.		
.1780	0.	0.	0.	0.	0.	0.	-.0134	-.0607	.0494	.0932	-.0385	-.0125	0.		
.1790	0.	0.	0.	0.	0.	0.	-.0168	-.0655	.0504	.1008	.0121	-.0351	0.		
.1800	0.	0.	0.	0.	0.	0.	-.0225	-.0701	.0525	.1061	.0574	-.0590	0.		
.1810	0.	0.	0.	0.	0.	0.	-.0274	-.0742	.0583	.1094	.0644	-.0807	0.		
.1820	0.	0.	0.	0.	0.	0.	-.0365	-.0774	.0661	.1096	.0590	-.0978	0.		
.1830	0.	0.	0.	0.	0.	0.	-.0474	-.0796	.0761	.1061	.0331	-.1095	0.		
.1840	0.	0.	0.	0.	0.	0.	-.0591	-.0806	.0880	.0982	-.0139	-.1138	0.		
.1850	0.	0.	0.	0.	0.	0.	-.0715	-.0806	.1000	.0870	-.0678	-.1101	0.		
.1860	0.	0.	0.	0.	0.	0.	-.0822	-.0801	.1109	.0760	-.1204	-.1014	0.		
.1870	0.	0.	0.	0.	0.	0.	-.0930	-.0794	.1180	.0667	-.1489	-.0902	0.		
.1880	0.	0.	0.	0.	0.	0.	-.1003	-.0791	.1219	.0592	-.1679	-.0776	0.		
.1890	0.	0.	0.	0.	0.	0.	-.1050	-.0795	.1218	.0539	-.1714	-.0650	0.		
.1900	0.	0.	0.	0.	0.	0.	-.1082	-.0808	.1175	.0522	-.1588	-.0549	0.		
.1910	0.	0.	0.	0.	0.	0.	-.1069	-.0832	.1110	.0560	-.1539	-.0486	0.		
.1920	0.	0.	0.	0.	0.	0.	-.1032	-.0864	.1019	.0640	-.1476	-.0468	0.		
.1930	0.	0.	0.	0.	0.	0.	-.0965	-.0899	.0904	.0738	-.1381	-.0488	0.		
.1940	0.	0.	0.	0.	0.	0.	-.0861	-.0931	.0772	.0824	-.1268	-.0513	0.		
.1950	0.	0.	0.	0.	0.	0.	-.0723	-.0952	.0622	.0861	-.1074	-.0488	0.		
.1960	0.	0.	0.	0.	0.	0.	-.0561	-.0958	.0459	.0828	-.0752	-.0380	0.		
.1970	0.	0.	0.	0.	0.	0.	-.0375	-.0950	.0290	.0733	-.0360	-.0206	0.		

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ADLPIPE STRESS ANALYSIS

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

CONDITION 24

LOADS

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ENGLISH UNITS

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

.1870	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.1880	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.1890	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.1900	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.1910	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.1920	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.1930	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.1940	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.1950	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.1960	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.1970	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

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

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

SECTION	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	RU							STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	(PSI)
.1980	0.	0.	0.	0.	0.	0.	-.0170	-.0930	.0128	.0606	.0043	-.0012	0.
.1990	0.	0.	0.	0.	0.	0.	.0040	-.0904	-.0021	.0468	.0435	.0176	0.
.2000	0.	0.	0.	0.	0.	0.	.0246	-.0876	-.0150	.0324	.0746	.0365	0.
.2010	0.	0.	0.	0.	0.	0.	.0444	-.0853	-.0250	.0186	.0895	.0559	0.
.2020	0.	0.	0.	0.	0.	0.	.0627	-.0842	-.0325	.0078	.0904	.0735	0.
.2030	0.	0.	0.	0.	0.	0.	.0790	-.0850	-.0381	.0034	.0851	.0844	0.
.2040	0.	0.	0.	0.	0.	0.	.0936	-.0881	-.0423	.0072	.0786	.0846	0.
.2050	0.	0.	0.	0.	0.	0.	.1069	-.0937	-.0458	.0186	.0764	.0745	0.
.2060	0.	0.	0.	0.	0.	0.	.1184	-.1015	-.0492	.0349	.0952	.0587	0.
.2070	0.	0.	0.	0.	0.	0.	.1279	-.1110	-.0525	.0540	.1037	.0400	0.
.2080	0.	0.	0.	0.	0.	0.	.1357	-.1219	-.0550	.0765	.1234	.0163	0.
.2090	0.	0.	0.	0.	0.	0.	.1413	-.1335	-.0562	.1033	.1397	-.0156	0.
.2100	0.	0.	0.	0.	0.	0.	.1440	-.1451	-.0560	.1330	.1506	-.0541	0.
.2110	0.	0.	0.	0.	0.	0.	.1438	-.1554	-.0539	.1616	.1506	-.0927	0.
.2120	0.	0.	0.	0.	0.	0.	.1412	-.1633	-.0498	.1843	.1373	-.1248	0.
.2130	0.	0.	0.	0.	0.	0.	.1361	-.1679	-.0443	.1988	.1164	-.1469	0.
.2140	0.	0.	0.	0.	0.	0.	.1289	-.1686	-.0379	.2047	.0943	-.1593	0.
.2150	0.	0.	0.	0.	0.	0.	.1203	-.1653	-.0311	.2022	.0738	-.1630	0.
.2160	0.	0.	0.	0.	0.	0.	.1104	-.1580	-.0243	.1909	.0570	-.1575	0.
.2170	0.	0.	0.	0.	0.	0.	.0993	-.1471	-.0178	.1709	.0445	-.1417	0.
.2180	0.	0.	0.	0.	0.	0.	.0872	-.1333	-.0117	.1439	.0335	-.1164	0.
.2190	0.	0.	0.	0.	0.	0.	.0744	-.1176	-.0059	.1133	.0215	-.0865	0.
.2200	0.	0.	0.	0.	0.	0.	.0608	-.1009	-.0004	.0830	.0092	-.0577	0.
.2210	0.	0.	0.	0.	0.	0.	.0469	-.0842	.0046	.0554	-.0029	-.0328	0.
.2220	0.	0.	0.	0.	0.	0.	.0329	-.0682	.0091	.0315	-.0141	-.0113	0.
.2230	0.	0.	0.	0.	0.	0.	.0189	-.0532	.0129	.0112	-.0213	.0080	0.
.2240	0.	0.	0.	0.	0.	0.	.0050	-.0395	.0158	-.0060	-.0214	.0256	0.
.2250	0.	0.	0.	0.	0.	0.	-.0089	-.0275	.0182	-.0197	-.0155	.0401	0.
.2260	0.	0.	0.	0.	0.	0.	-.0228	-.0174	.0205	-.0291	-.0064	.0501	0.
.2270	0.	0.	0.	0.	0.	0.	-.0369	-.0092	.0232	-.0340	.0026	.0551	0.
.2280	0.	0.	0.	0.	0.	0.	-.0512	-.0029	.0271	-.0355	.0055	.0565	0.
.2290	0.	0.	0.	0.	0.	0.	-.0657	.0018	.0325	-.0348	-.0030	.0549	0.
.2300	0.	0.	0.	0.	0.	0.	-.0801	.0049	.0396	-.0320	-.0234	.0494	0.
.2310	0.	0.	0.	0.	0.	0.	-.0942	.0068	.0480	-.0269	-.0534	.0386	0.
.2320	0.	0.	0.	0.	0.	0.	-.1070	.0076	.0573	-.0196	-.0905	.0226	0.
.2330	0.	0.	0.	0.	0.	0.	-.1179	.0081	.0666	-.0115	-.1294	.0037	0.
.2340	0.	0.	0.	0.	0.	0.	-.1263	.0086	.0749	-.0048	-.1636	-.0153	0.
.2350	0.	0.	0.	0.	0.	0.	-.1315	.0097	.0814	-.0013	-.1901	-.0319	0.

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

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

.2250	0.	0.	0.	0.	0.	0.	0.	-.0089	-.0275	.0182	-.0197	-.0155	.0401	0.
.2260	0.	0.	0.	0.	0.	0.	0.	-.0228	-.0174	.0205	-.0291	-.0064	.0501	0.
.2270	0.	0.	0.	0.	0.	0.	0.	-.0369	-.0092	.0232	-.0340	.0026	.0551	0.
.2280	0.	0.	0.	0.	0.	0.	0.	-.0512	-.0029	.0271	-.0355	.0055	.0565	0.
.2290	0.	0.	0.	0.	0.	0.	0.	-.0657	.0018	.0325	-.0348	-.0030	.0549	0.
.2300	0.	0.	0.	0.	0.	0.	0.	-.0801	.0049	.0396	-.0320	-.0234	.0494	0.
.2310	0.	0.	0.	0.	0.	0.	0.	-.0942	.0068	.0480	-.0269	-.0534	.0386	0.
.2320	0.	0.	0.	0.	0.	0.	0.	-.1070	.0076	.0573	-.0196	-.0905	.0226	0.
.2330	0.	0.	0.	0.	0.	0.	0.	-.1179	.0081	.0666	-.0115	-.1294	.0037	0.
.2340	0.	0.	0.	0.	0.	0.	0.	-.1263	.0086	.0749	-.0048	-.1536	-.0153	0.
.2350	0.	0.	0.	0.	0.	0.	0.	-.1315	.0097	.0814	-.0013	-.1901	-.0319	0.

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

CONDITION 24

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

SECTION	17	MEMBER	2	SEQUENCE	853	LOCATION	DIS	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)	
.2360	0.	0.	0.	0.	0.	0.	-.1331	.0117	.0855	-.0013	-.2082	-.0454	0.	
.2370	0.	0.	0.	0.	0.	0.	-.1309	.0148	.0867	-.0041	-.2167	-.0560	0.	
.2380	0.	0.	0.	0.	0.	0.	-.1250	.0191	.0845	-.0089	-.2152	-.0640	0.	
.2390	0.	0.	0.	0.	0.	0.	-.1155	.0246	.0790	-.0155	-.2053	-.0687	0.	
.2400	0.	0.	0.	0.	0.	0.	-.1028	.0311	.0701	-.0240	-.1870	-.0694	0.	
.2410	0.	0.	0.	0.	0.	0.	-.0874	.0384	.0580	-.0337	-.1580	-.0664	0.	
.2420	0.	0.	0.	0.	0.	0.	-.0697	.0463	.0430	-.0433	-.1186	-.0603	0.	
.2430	0.	0.	0.	0.	0.	0.	-.0505	.0545	.0259	-.0516	-.0710	-.0524	0.	
.2440	0.	0.	0.	0.	0.	0.	-.0306	.0626	.0076	-.0582	-.0182	-.0437	0.	
.2450	0.	0.	0.	0.	0.	0.	-.0111	.0703	-.0107	-.0632	.0350	-.0347	0.	
.2460	0.	0.	0.	0.	0.	0.	.0073	.0775	-.0279	-.0668	.0815	-.0258	0.	
.2470	0.	0.	0.	0.	0.	0.	.0235	.0841	-.0428	-.0691	.1158	-.0175	0.	
.2480	0.	0.	0.	0.	0.	0.	.0370	.0900	-.0550	-.0703	.1358	-.0106	0.	
.2490	0.	0.	0.	0.	0.	0.	.0472	.0952	-.0640	-.0705	.1400	-.0055	0.	
.2500	0.	0.	0.	0.	0.	0.	.0545	.1000	-.0699	-.0702	.1287	-.0024	0.	
.2510	0.	0.	0.	0.	0.	0.	.0589	.1046	-.0731	-.0701	.1063	-.0007	0.	
.2520	0.	0.	0.	0.	0.	0.	.0609	.1093	-.0745	-.0711	.0795	.0009	0.	
.2530	0.	0.	0.	0.	0.	0.	.0610	.1145	-.0748	-.0743	.0528	.0042	0.	
.2540	0.	0.	0.	0.	0.	0.	.0599	.1204	-.0747	-.0799	.0296	.0099	0.	
.2550	0.	0.	0.	0.	0.	0.	.0579	.1271	-.0748	-.0876	.0129	.0179	0.	
.2560	0.	0.	0.	0.	0.	0.	.0553	.1346	-.0755	-.0971	.0037	.0276	0.	
.2570	0.	0.	0.	0.	0.	0.	.0525	.1429	-.0769	-.1087	.0012	.0395	0.	
.2580	0.	0.	0.	0.	0.	0.	.0495	.1516	-.0791	-.1224	.0044	.0536	0.	
.2590	0.	0.	0.	0.	0.	0.	.0463	.1604	-.0819	-.1375	.0126	.0692	0.	
.2600	0.	0.	0.	0.	0.	0.	.0431	.1690	-.0850	-.1522	.0245	.0840	0.	
.2610	0.	0.	0.	0.	0.	0.	.0396	.1769	-.0882	-.1649	.0398	.0954	0.	
.2620	0.	0.	0.	0.	0.	0.	.0357	.1837	-.0911	-.1747	.0584	.1021	0.	
.2630	0.	0.	0.	0.	0.	0.	.0310	.1893	-.0932	-.1818	.0784	.1044	0.	
.2640	0.	0.	0.	0.	0.	0.	.0254	.1936	-.0940	-.1864	.0965	.1035	0.	
.2650	0.	0.	0.	0.	0.	0.	.0185	.1966	-.0930	-.1882	.1100	.0992	0.	
.2660	0.	0.	0.	0.	0.	0.	.0103	.1984	-.0898	-.1870	.1161	.0906	0.	
.2670	0.	0.	0.	0.	0.	0.	.0006	.1991	-.0842	-.1835	.1119	.0779	0.	
.2680	0.	0.	0.	0.	0.	0.	-.0103	.1991	-.0762	-.1790	.0966	.0630	0.	
.2690	0.	0.	0.	0.	0.	0.	-.0222	.1988	-.0661	-.1751	.0724	.0486	0.	
.2700	0.	0.	0.	0.	0.	0.	-.0345	.1984	-.0546	-.1724	.0427	.0364	0.	
.2710	0.	0.	0.	0.	0.	0.	-.0468	.1980	-.0424	-.1710	.0118	.0269	0.	
.2720	0.	0.	0.	0.	0.	0.	-.0585	.1979	-.0302	-.1706	-.0157	.0199	0.	
.2730	0.	0.	0.	0.	0.	0.	-.0695	.1978	-.0186	-.1707	-.0371	.0153	0.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.45.

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

.3000	0.	0.	0.	0.	0.	0.	0.	.0394	-.0160	-.0313	.0267	.0877	.0367	0.
.3010	0.	0.	0.	0.	0.	0.	0.	.0444	-.0303	-.0300	.0427	.0812	.0329	0.
.3020	0.	0.	0.	0.	0.	0.	0.	.0488	-.0442	-.0285	.0584	.0796	.0294	0.
.3030	0.	0.	0.	0.	0.	0.	0.	.0528	-.0575	-.0270	.0735	.0793	.0266	0.
.3040	0.	0.	0.	0.	0.	0.	0.	.0564	-.0700	-.0258	.0878	.0803	.0243	0.
.3050	0.	0.	0.	0.	0.	0.	0.	.0597	-.0816	-.0247	.1014	.0823	.0221	0.
.3060	0.	0.	0.	0.	0.	0.	0.	.0627	-.0922	-.0240	.1143	.0855	.0202	0.
.3070	0.	0.	0.	0.	0.	0.	0.	.0652	-.1015	-.0234	.1256	.0903	.0191	0.
.3080	0.	0.	0.	0.	0.	0.	0.	.0672	-.1095	-.0230	.1344	.0971	.0197	0.
.3090	0.	0.	0.	0.	0.	0.	0.	.0686	-.1160	-.0225	.1402	.1054	.0224	0.
.3100	0.	0.	0.	0.	0.	0.	0.	.0691	-.1211	-.0216	.1427	.1144	.0272	0.
.3110	0.	0.	0.	0.	0.	0.	0.	.0685	-.1250	-.0199	.1419	.1223	.0337	0.

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DIS/ADLPIPE ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.45.

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	17	MEMBER	2	SEQUENCE	853	LOCATION	DIS	TYPE	RU						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.3120	0.	0.	0.	0.	0.	0.	.0665	-.1278	-.0170	.1383	.1267	.0414	0.		
.3130	0.	0.	0.	0.	0.	0.	.0629	-.1300	-.0126	.1326	.1249	.0494	0.		
.3140	0.	0.	0.	0.	0.	0.	.0576	-.1320	-.0065	.1260	.1155	.0565	0.		
.3150	0.	0.	0.	0.	0.	0.	.0506	-.1341	.0013	.1195	.0978	.0610	0.		
.3160	0.	0.	0.	0.	0.	0.	.0421	-.1368	.0107	.1145	.0725	.0617	0.		
.3170	0.	0.	0.	0.	0.	0.	.0324	-.1404	.0211	.1118	.0420	.0578	0.		
.3180	0.	0.	0.	0.	0.	0.	.0220	-.1451	.0320	.1118	.0091	.0488	0.		
.3190	0.	0.	0.	0.	0.	0.	.0113	-.1507	.0430	.1146	-.0231	.0350	0.		
.3200	0.	0.	0.	0.	0.	0.	.0009	-.1573	.0534	.1197	-.0523	.0170	0.		
.3210	0.	0.	0.	0.	0.	0.	-.0088	-.1644	.0627	.1269	-.0764	-.0039	0.		
.3220	0.	0.	0.	0.	0.	0.	-.0175	-.1718	.0707	.1354	-.0947	-.0265	0.		
.3230	0.	0.	0.	0.	0.	0.	-.0249	-.1790	.0772	.1443	-.1074	-.0493	0.		
.3240	0.	0.	0.	0.	0.	0.	-.0308	-.1856	.0821	.1529	-.1150	-.0711	0.		
.3250	0.	0.	0.	0.	0.	0.	-.0351	-.1913	.0854	.1604	-.1176	-.0906	0.		
.3260	0.	0.	0.	0.	0.	0.	-.0377	-.1955	.0873	.1661	-.1161	-.1064	0.		
.3270	0.	0.	0.	0.	0.	0.	-.0387	-.1981	.0879	.1692	-.1111	-.1176	0.		
.3280	0.	0.	0.	0.	0.	0.	-.0382	-.1990	.0874	.1693	-.1030	-.1237	0.		
.3290	0.	0.	0.	0.	0.	0.	-.0364	-.1981	.0860	.1663	-.0925	-.1249	0.		
.3300	0.	0.	0.	0.	0.	0.	-.0334	-.1957	.0840	.1604	-.0810	-.1216	0.		
.3310	0.	0.	0.	0.	0.	0.	-.0294	-.1918	.0816	.1520	-.0700	-.1143	0.		
.3320	0.	0.	0.	0.	0.	0.	-.0249	-.1870	.0791	.1416	-.0608	-.1038	0.		
.3330	0.	0.	0.	0.	0.	0.	-.0199	-.1815	.0765	.1301	-.0550	-.0914	0.		
.3340	0.	0.	0.	0.	0.	0.	-.0145	-.1759	.0739	.1189	-.0531	-.0789	0.		
.3350	0.	0.	0.	0.	0.	0.	-.0089	-.1705	.0711	.1090	-.0545	-.0676	0.		
.3360	0.	0.	0.	0.	0.	0.	-.0030	-.1656	.0678	.1011	-.0577	-.0582	0.		
.3370	0.	0.	0.	0.	0.	0.	.0031	-.1614	.0639	.0954	-.0609	-.0510	0.		
.3380	0.	0.	0.	0.	0.	0.	.0097	-.1579	.0589	.0921	-.0619	-.0461	0.		
.3390	0.	0.	0.	0.	0.	0.	.0166	-.1551	.0526	.0911	-.0589	-.0435	0.		
.3400	0.	0.	0.	0.	0.	0.	.0239	-.1528	.0449	.0919	-.0510	-.0431	0.		
.3410	0.	0.	0.	0.	0.	0.	.0316	-.1507	.0361	.0938	-.0384	-.0442	0.		
.3420	0.	0.	0.	0.	0.	0.	.0394	-.1486	.0261	.0957	-.0220	-.0457	0.		
.3430	0.	0.	0.	0.	0.	0.	.0473	-.1462	.0155	.0967	-.0035	-.0468	0.		
.3440	0.	0.	0.	0.	0.	0.	.0550	-.1431	.0047	.0961	.0152	-.0469	0.		
.3450	0.	0.	0.	0.	0.	0.	.0625	-.1394	-.0059	.0934	.0330	-.0461	0.		
.3460	0.	0.	0.	0.	0.	0.	.0696	-.1347	-.0158	.0884	.0488	-.0443	0.		
.3470	0.	0.	0.	0.	0.	0.	.0760	-.1291	-.0249	.0808	.0618	-.0412	0.		
.3480	0.	0.	0.	0.	0.	0.	.0818	-.1227	-.0327	.0709	.0718	-.0371	0.		
.3490	0.	0.	0.	0.	0.	0.	.0866	-.1155	-.0392	.0592	.0788	-.0323	0.		

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DIS/ADLPIPE ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.45.

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

CONDITION 24
LOADS
SHOCK
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ENGLISH UNITS

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

.3770	0.	0.	0.	0.	0.	0.	0.	0.	-.0815	.0924	.0338	-.0843	-.0875	.0207	0.
.3780	0.	0.	0.	0.	0.	0.	0.	0.	-.0832	.0945	.0300	-.0823	-.0716	.0196	0.
.3790	0.	0.	0.	0.	0.	0.	0.	0.	-.0837	.0961	.0258	-.0797	-.0554	.0181	0.
.3800	0.	0.	0.	0.	0.	0.	0.	0.	-.0832	.0973	.0216	-.0768	-.0408	.0165	0.
.3810	0.	0.	0.	0.	0.	0.	0.	0.	-.0818	.0984	.0177	-.0742	-.0290	.0152	0.
.3820	0.	0.	0.	0.	0.	0.	0.	0.	-.0796	.0995	.0143	-.0723	-.0207	.0153	0.
.3830	0.	0.	0.	0.	0.	0.	0.	0.	-.0768	.1008	.0113	-.0715	-.0157	.0173	0.
.3840	0.	0.	0.	0.	0.	0.	0.	0.	-.0732	.1025	.0087	-.0719	-.0131	.0217	0.
.3850	0.	0.	0.	0.	0.	0.	0.	0.	-.0690	.1044	.0063	-.0735	-.0120	.0280	0.
.3860	0.	0.	0.	0.	0.	0.	0.	0.	-.0640	.1066	.0039	-.0757	-.0112	.0360	0.
.3870	0.	0.	0.	0.	0.	0.	0.	0.	-.0583	.1088	.0013	-.0781	-.0100	.0453	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.26.45.

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	17	MEMBER	2	SEQUENCE	853	LOCATION	DIS	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3880	0.	0.	0.	0.	0.	0.		-.0519	.1109	-.0018	-.0804	-.0079	.0554	0.	
.3890	0.	0.	0.	0.	0.	0.		-.0450	.1128	-.0053	-.0820	-.0045	.0654	0.	
.3900	0.	0.	0.	0.	0.	0.		-.0375	.1143	-.0095	-.0822	.0005	.0746	0.	
.3910	0.	0.	0.	0.	0.	0.		-.0297	.1153	-.0144	-.0809	.0074	.0826	0.	
.3920	0.	0.	0.	0.	0.	0.		-.0216	.1157	-.0199	-.0781	.0164	.0894	0.	
.3930	0.	0.	0.	0.	0.	0.		-.0134	.1156	-.0260	-.0742	.0275	.0952	0.	
.3940	0.	0.	0.	0.	0.	0.		-.0054	.1150	-.0323	-.0695	.0405	.0998	0.	
.3950	0.	0.	0.	0.	0.	0.		.0022	.1141	-.0387	-.0641	.0549	.1029	0.	
.3960	0.	0.	0.	0.	0.	0.		.0092	.1128	-.0447	-.0584	.0593	.1047	0.	
.3970	0.	0.	0.	0.	0.	0.		.0153	.1113	-.0502	-.0530	.0824	.1058	0.	
.3980	0.	0.	0.	0.	0.	0.		.0203	.1098	-.0546	-.0484	.0926	.1067	0.	
.3990	0.	0.	0.	0.	0.	0.		.0241	.1084	-.0578	-.0447	.0989	.1075	0.	
.4000	0.	0.	0.	0.	0.	0.		.0265	.1071	-.0597	-.0419	.1011	.1080	0.	

MAXIMUM VALUE OF DISCONTINUITY FORCE OCCURS AT

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

SECTION	17	MEMBER	2	SEQUENCE	853	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
0.0000	0.	0.	0.	0.	0.	0.		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	-0.	1.	4.	0.	0.	-0.		-.0000	.0000	-.0000	-.0000	-.0001	.0000	0.	
.0020	-11.	8.	24.	0.	0.	0.		-.0001	.0000	-.0001	-.0001	-.0009	.0002	0.	
.0030	-52.	12.	56.	0.	0.	-0.		-.0002	-.0000	-.0002	.0000	-.0024	.0003	0.	
.0040	-115.	-3.	95.	-0.	0.	0.		-.0004	-.0000	-.0006	.0004	-.0045	-.0002	0.	
.0050	-185.	-44.	134.	-0.	0.	0.		-.0006	.0000	-.0013	.0013	-.0066	-.0013	0.	
.0060	-300.	-100.	137.	-0.	0.	0.		-.0009	.0001	-.0023	.0023	-.0081	-.0029	0.	
.0070	-445.	-148.	137.	-0.	0.	-0.		-.0011	.0004	-.0040	.0029	-.0099	-.0043	0.	
.0080	-580.	-181.	231.	-0.	0.	0.		-.0014	.0010	-.0062	.0032	-.0144	-.0053	0.	
.0090	-821.	-251.	379.	-0.	0.	0.		-.0014	.0019	-.0092	.0037	-.0222	-.0072	0.	
.0100	-1144.	-413.	559.	0.	0.	-0.		-.0008	.0034	-.0130	.0049	-.0321	-.0114	0.	
.0110	-1360.	-648.	806.	-0.	0.	0.		.0010	.0055	-.0179	.0060	-.0420	-.0176	0.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.45.

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

.2280	84.	1097.	-1050.	0.	-0.	0.	-0.512	-0.0029	.0271	-.0355	.0055	.0565	0.
.2290	56.	1005.	-1125.	-0.	-0.	0.	-.0657	.0018	.0325	-.0348	-.0030	.0549	0.
.2300	-167.	879.	-932.	0.	-0.	0.	-.0801	.0049	.0396	-.0320	-.0234	.0494	0.
.2310	-732.	660.	-638.	0.	-0.	0.	-.0942	.0068	.0480	-.0269	-.0534	.0386	0.
.2320	-1212.	338.	-76.	0.	-0.	0.	-.1070	.0076	.0573	-.0196	-.0905	.0226	0.
.2330	-1513.	-32.	605.	-0.	-0.	0.	-.1179	.0081	.0666	-.0115	-.1294	.0037	0.
.2340	-1960.	-363.	1134.	-0.	0.	0.	-.1263	.0086	.0749	-.0048	-.1536	-.0153	0.
.2350	-2384.	-589.	1501.	-0.	-0.	0.	-.1315	.0097	.0814	-.0013	-.1901	-.0319	0.
.2360	-2433.	-704.	1882.	-0.	-0.	0.	-.1331	.0117	.0855	-.0013	-.2082	-.0454	0.
.2370	-2338.	-748.	2149.	0.	-0.	-0.	-.1309	.0148	.0867	-.0041	-.2167	-.0560	0.
.2380	-2337.	-752.	2199.	0.	0.	-0.	-.1250	.0191	.0845	-.0089	-.2152	-.0640	0.
.2390	-2166.	-703.	2217.	-0.	-0.	0.	-.1155	.0246	.0790	-.0155	-.2053	-.0687	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.46.

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	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
17	.2400	-1775.	-532.	2212.	0.	-0.	0.	-.1028	.0311	.0701	-.0240	-.1870	-.0694	0.
	.2410	-1460.	-396.	1953.	0.	-0.	0.	-.0874	.0384	.0580	-.0337	-.1580	-.0664	0.
	.2420	-1118.	-181.	1454.	-0.	-0.	0.	-.0697	.0463	.0430	-.0433	-.1186	-.0603	0.
	.2430	-493.	25.	879.	0.	-0.	-0.	-.0505	.0545	.0259	-.0516	-.0710	-.0524	0.
	.2440	174.	197.	162.	-0.	-0.	0.	-.0306	.0626	.0076	-.0582	-.0182	-.0437	0.
	.2450	694.	327.	-674.	0.	-0.	-0.	-.0111	.0703	-.0107	-.0632	.0350	-.0347	0.
	.2460	1248.	415.	-1359.	0.	-0.	0.	.0073	.0775	-.0279	-.0668	.0815	-.0258	0.
	.2470	1857.	450.	-1749.	0.	-0.	0.	.0235	.0841	-.0428	-.0691	.1158	-.0175	0.
	.2480	2116.	418.	-1990.	0.	0.	0.	.0370	.0900	-.0550	-.0703	.1358	-.0106	0.
	.2490	1980.	314.	-2054.	0.	-0.	-0.	.0472	.0952	-.0640	-.0705	.1400	-.0055	0.
	.2500	1859.	143.	-1735.	0.	0.	-0.	.0545	.1000	-.0699	-.0702	.1287	-.0024	0.
	.2510	1720.	-77.	-1183.	-0.	0.	0.	.0589	.1046	-.0731	-.0701	.1063	-.0007	0.
	.2520	1342.	-296.	-681.	0.	0.	0.	.0609	.1093	-.0745	-.0711	.0795	.0009	0.
	.2530	919.	-455.	-237.	0.	0.	-0.	.0610	.1145	-.0748	-.0743	.0528	.0042	0.
	.2540	662.	-525.	183.	-0.	0.	0.	.0599	.1204	-.0747	-.0799	.0296	.0099	0.
	.2550	452.	-527.	449.	0.	0.	0.	.0579	.1271	-.0748	-.0876	.0129	.0179	0.
	.2560	258.	-475.	529.	0.	-0.	-0.	.0553	.1346	-.0755	-.0971	.0037	.0276	0.
	.2570	230.	-353.	544.	0.	0.	-0.	.0525	.1429	-.0769	-.1087	.0012	.0395	0.
	.2580	258.	-139.	483.	-0.	0.	0.	.0495	.1516	-.0791	-.1224	.0044	.0536	0.
	.2590	183.	148.	291.	0.	0.	-0.	.0463	.1604	-.0819	-.1375	.0126	.0692	0.
	.2600	186.	442.	76.	0.	0.	-0.	.0431	.1690	-.0850	-.1522	.0245	.0840	0.
	.2610	357.	668.	-130.	0.	0.	-0.	.0396	.1769	-.0882	-.1649	.0398	.0954	0.
	.2620	506.	790.	-440.	0.	0.	0.	.0357	.1837	-.0911	-.1747	.0584	.1021	0.
	.2630	620.	838.	-822.	0.	0.	-0.	.0310	.1893	-.0932	-.1818	.0784	.1044	0.
	.2640	821.	850.	-1142.	0.	0.	0.	.0254	.1936	-.0940	-.1864	.0965	.1035	0.
	.2650	975.	818.	-1405.	0.	0.	-0.	.0185	.1966	-.0930	-.1882	.1100	.0992	0.
	.2660	935.	700.	-1613.	0.	-0.	-0.	.0103	.1984	-.0898	-.1870	.1161	.0906	0.
	.2670	837.	494.	-1608.	0.	0.	0.	.0006	.1991	-.0842	-.1835	.1119	.0779	0.
	.2680	701.	257.	-1357.	0.	0.	-0.	-.0103	.1991	-.0762	-.1790	.0966	.0630	0.
	.2690	388.	61.	-987.	-0.	-0.	0.	-.0222	.1988	-.0661	-.1751	.0724	.0486	0.
	.2700	5.	-52.	-543.	-0.	0.	0.	-.0345	.1984	-.0546	-.1724	.0427	.0364	0.
	.2710	-258.	-86.	-48.	0.	0.	-0.	-.0468	.1980	-.0424	-.1710	.0118	.0269	0.
	.2720	-475.	-65.	337.	-0.	0.	0.	-.0585	.1979	-.0302	-.1706	-.0157	.0199	0.
	.2730	-715.	3.	512.	0.	-0.	-0.	-.0695	.1978	-.0186	-.1707	-.0371	.0153	0.
	.2740	-773.	122.	618.	-0.	0.	0.	-.0793	.1976	-.0078	-.1712	-.0532	.0134	0.
	.2750	-710.	269.	684.	-0.	-0.	0.	-.0879	.1973	.0020	-.1712	-.0655	.0136	0.
	.2760	-745.	331.	654.	-0.	-0.	0.	-.0953	.1966	.0107	-.1696	-.0754	.0143	0.
	.2770	-799.	420.	643.	0.	-0.	-0.	-.1015	.1953	.0183	-.1660	-.0852	.0143	0.

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.46.

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

CONDITION 24
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INTERNAL FORCES IN THE PIPING
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.3810	-509.	-31.	-201.	0.	-0.	0.	-0.218	.0984	.0177	-.0742	-.0290	.0152	0.
.3820	-474.	-138.	-306.	0.	-0.	0.	-.0796	.0995	.0143	-.0723	-.0207	.0153	0.
.3830	-460.	-192.	-248.	-0.	-0.	0.	-.0768	.1008	.0113	-.0715	-.0157	.0173	0.
.3840	-466.	-190.	-138.	0.	-0.	0.	-.0732	.1025	.0087	-.0719	-.0131	.0217	0.
.3850	-479.	-142.	-4.	0.	-0.	-0.	-.0690	.1044	.0063	-.0735	-.0120	.0280	0.
.3860	-474.	-62.	125.	0.	-0.	-0.	-.0640	.1066	.0039	-.0757	-.0112	.0360	0.
.3870	-451.	41.	260.	-0.	-0.	0.	-.0583	.1088	.0013	-.0781	-.0100	.0453	0.
.3880	-414.	154.	357.	-0.	-0.	0.	-.0519	.1109	-.0018	-.0804	-.0079	.0554	0.
.3890	-358.	257.	421.	0.	-0.	0.	-.0450	.1128	-.0053	-.0820	-.0045	.0654	0.
.3900	-281.	326.	449.	0.	0.	0.	-.0375	.1143	-.0095	-.0822	.0005	.0746	0.
.3910	-186.	352.	430.	0.	0.	-0.	-.0297	.1153	-.0144	-.0809	.0074	.0826	0.

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INTERNAL FORCES IN THE PIPING
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SECTION	17	MEMBER	2	SEQUENCE	853	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)	
.3920	-75.	347.	359.	0.	0.	0.	-.0216	.1157	-.0199	-.0781	.0164	.0894	0.	
.3930	58.	322.	236.	-0.	-0.	0.	-.0134	.1156	-.0260	-.0742	.0275	.0952	0.	
.3940	210.	276.	60.	0.	-0.	-0.	-.0054	.1150	-.0323	-.0695	.0405	.0998	0.	
.3950	375.	204.	-158.	0.	0.	0.	.0022	.1141	-.0387	-.0641	.0549	.1029	0.	
.3960	544.	114.	-390.	-0.	0.	0.	.0092	.1128	-.0447	-.0584	.0593	.1047	0.	
.3970	695.	29.	-606.	0.	0.	-0.	.0153	.1113	-.0502	-.0530	.0824	.1058	0.	
.3980	808.	-34.	-775.	0.	0.	-0.	.0203	.1098	-.0546	-.0484	.0926	.1067	0.	
.3990	879.	-73.	-872.	0.	0.	-0.	.0241	.1084	-.0578	-.0447	.0989	.1075	0.	
.4000	912.	-94.	-888.	0.	-0.	-0.	.0265	.1071	-.0597	-.0419	.1011	.1080	0.	

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)
.2880	-755.	486.	706.	0.	-0.	-0.	-.0780	.1375	.0259	-.0990	-.1088	.0503	0.

SECTION	16	MEMBER	1	SEQUENCE	807	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	4.	-8.	6.	-2.	-2.	1.	-.0000	-.0000	-.0000	.0000	.0000	-.0000	4.	
.0020	29.	-55.	36.	-15.	-12.	7.	-.0000	-.0000	-.0002	.0001	.0002	-.0000	28.	
.0030	80.	-155.	90.	-29.	-41.	11.	-.0000	-.0000	-.0006	.0002	.0004	-.0001	72.	
.0040	154.	-285.	155.	-23.	-91.	2.	-.0000	.0001	-.0013	.0003	.0008	-.0000	133.	
.0050	237.	-416.	217.	22.	-159.	-23.	-.0001	.0004	-.0023	.0002	.0013	.0001	230.	
.0060	305.	-565.	242.	96.	-232.	-75.	-.0002	.0008	-.0036	-.0000	.0019	.0002	370.	
.0070	375.	-805.	210.	168.	-350.	-127.	-.0004	.0014	-.0055	-.0004	.0026	.0003	576.	
.0080	513.	-1199.	106.	230.	-630.	-190.	-.0003	.0021	-.0084	-.0009	.0037	.0005	984.	
.0090	748.	-1656.	-152.	351.	-1179.	-310.	.0003	.0032	-.0126	-.0020	.0053	.0008	1792.	
.0100	1122.	-2011.	-497.	613.	-2001.	-528.	.0017	.0052	-.0180	-.0044	.0073	.0015	3049.	
.0110	1657.	-2194.	-752.	1004.	-3009.	-824.	.0041	.0079	-.0244	-.0084	.0099	.0026	4629.	
.0120	2225.	-2269.	-930.	1427.	-4038.	-1118.	.0075	.0111	-.0314	-.0141	.0129	.0040	6252.	
.0130	2583.	-2273.	-1215.	1797.	-4893.	-1326.	.0117	.0147	-.0384	-.0214	.0156	.0054	7597.	
.0140	2900.	-2034.	-1801.	2117.	-5417.	-1422.	.0166	.0184	-.0447	-.0306	.0173	.0069	8457.	
.0150	3860.	-1311.	-2815.	2424.	-5514.	-1419.	.0201	.0225	-.0494	-.0421	.0174	.0086	8741.	

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