

50-305

RESPONSE TO NUREG-0737 ITEM II.D.1

Docket # *50-305*

Control # *8403280048*

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

.2930	-432.	-573.	609.	1645.	447.	933.	.0017	.0190	.0113	-.0456	.0006	.0401	991.
.2940	-426.	-214.	430.	1133.	258.	755.	.0026	.0131	.0083	-.0311	.0097	.0379	934.
.2950	-757.	38.	333.	1130.	40.	447.	.0042	.0074	.0053	-.0172	.0175	.0356	819.
.2960	-216.	234.	232.	1057.	-196.	39.	.0560	.0019	.0021	-.0040	.0238	.0333	725.
.2970	-43.	411.	153.	976.	-426.	-427.	.0080	-.0032	-.0010	.0084	.0289	.0304	751.
.2980	126.	545.	92.	737.	-629.	-891.	.0059	-.0078	-.0042	.0199	.0331	.0268	905.
.2990	264.	628.	35.	610.	-786.	-1290.	.0118	-.0121	-.0073	.0304	.0361	.0226	1098.
.3000	753.	726.	-29.	429.	-882.	-1576.	.0135	-.0159	-.0105	.0403	.0382	.0179	1251.
.3010	372.	876.	-108.	248.	-912.	-1723.	.0151	-.0195	-.0136	.0501	.0396	.0127	1325.
.3020	307.	1041.	-207.	79.	-854.	-1776.	.0164	-.0227	-.0166	.0596	.0408	.0074	1314.
.3030	178.	1226.	-316.	-65.	-813.	-1640.	.0175	-.0257	-.0197	.0690	.0422	.0027	1235.

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DIG/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.27.02.

S/RV PIPING KEWAUNEE GKW00F 2 RUP DISK
2 SAFETY COLD FRW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	LN	TYPE	EL	DZ	PX	RY	RZ	STRESS		
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	PX	RY	RZ	STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.3040	20.	1429.	-413.	-170.	-725.	-1475.	.0156	-.0285	-.0226	.0784	.0440	-.0011	1114.
.3050	-147.	1630.	-488.	-228.	-676.	-1285.	.0197	-.0313	-.0253	.0878	.0464	-.0035	979.
.3060	-307.	1788.	-529.	-239.	-559.	-1110.	.0208	-.0340	-.0277	.0973	.0495	-.0043	853.
.3070	-421.	1893.	-518.	-202.	-503.	-980.	.0221	-.0368	-.0299	.1067	.0531	-.0033	755.
.3080	-480.	1942.	-452.	-127.	-470.	-906.	.0235	-.0396	-.0318	.1161	.0563	-.0005	694.
.3090	-491.	1927.	-354.	-32.	-456.	-883.	.0249	-.0424	-.0335	.1255	.0601	.0034	671.
.3100	-475.	1875.	-249.	57.	-451.	-895.	.0261	-.0451	-.0350	.1349	.0628	.0079	677.
.3110	-447.	1839.	-162.	123.	-444.	-918.	.0270	-.0477	-.0362	.1441	.0643	.0121	692.
.3120	-426.	1835.	-120.	154.	-431.	-927.	.0273	-.0502	-.0371	.1526	.0645	.0154	697.
.3130	-431.	1860.	-130.	149.	-401.	-905.	.0269	-.0524	-.0377	.1601	.0631	.0171	675.
.3140	-467.	1923.	-177.	119.	-345.	-845.	.0256	-.0543	-.0379	.1661	.0601	.0164	620.
.3150	-523.	2010.	-240.	82.	-260.	-742.	.0234	-.0559	-.0377	.1702	.0552	.0133	533.
.3160	-583.	2079.	-299.	53.	-143.	-598.	.0204	-.0570	-.0368	.1719	.0483	.0077	416.
.3170	-638.	2100.	-328.	40.	6.	-425.	.0166	-.0577	-.0354	.1711	.0397	-.0002	288.
.3180	-675.	2067.	-313.	43.	182.	-244.	.0122	-.0580	-.0335	.1679	.0294	-.0101	207.
.3190	-678.	1976.	-262.	48.	370.	-69.	.0073	-.0578	-.0312	.1630	.0178	-.0213	256.
.3200	-641.	1831.	-204.	31.	549.	79.	.0023	-.0573	-.0287	.1566	.0051	-.0332	374.
.3210	-574.	1671.	-164.	-36.	701.	193.	-.0029	-.0564	-.0261	.1494	-.0079	-.0452	489.
.3220	-487.	1538.	-166.	-172.	809.	227.	-.0080	-.0552	-.0236	.1421	-.0205	-.0569	578.
.3230	-383.	1440.	-235.	-385.	853.	207.	-.0129	-.0537	-.0212	.1351	-.0321	-.0674	646.
.3240	-264.	1379.	-372.	-665.	827.	128.	-.0176	-.0521	-.0190	.1289	-.0422	-.0764	721.
.3250	-137.	1356.	-546.	-991.	738.	4.	-.0218	-.0504	-.0171	.1235	-.0503	-.0836	833.
.3260	-7.	1338.	-721.	-1325.	598.	-141.	-.0256	-.0486	-.0153	.1190	-.0560	-.0887	985.
.3270	121.	1283.	-865.	-1630.	424.	-273.	-.0288	-.0469	-.0137	.1155	-.0591	-.0916	1150.
.3280	239.	1182.	-948.	-1872.	245.	-355.	-.0314	-.0453	-.0122	.1129	-.0599	-.0924	1295.
.3290	331.	1041.	-961.	-2032.	84.	-353.	-.0333	-.0438	-.0110	.1112	-.0583	-.0914	1391.
.3300	376.	873.	-914.	-2105.	-42.	-241.	-.0346	-.0426	-.0100	.1106	-.0546	-.0890	1428.
.3310	357.	708.	-826.	-2097.	-122.	-15.	-.0352	-.0416	-.0094	.1109	-.0491	-.0854	1416.
.3320	268.	578.	-723.	-2020.	-153.	313.	-.0350	-.0409	-.0091	.1122	-.0420	-.0813	1382.
.3330	114.	509.	-636.	-1893.	-143.	716.	-.0342	-.0405	-.0094	.1144	-.0338	-.0768	1368.
.3340	-92.	516.	-577.	-1774.	-104.	1149.	-.0327	-.0404	-.0102	.1172	-.0248	-.0722	1404.
.3350	-327.	594.	-538.	-1557.	-45.	1558.	-.0304	-.0407	-.0114	.1203	-.0152	-.0679	1483.
.3360	-556.	713.	-505.	-1352.	22.	1894.	-.0273	-.0412	-.0129	.1232	-.0057	-.0639	1568.
.3370	-744.	832.	-462.	-1129.	89.	2115.	-.0234	-.0419	-.0149	.1255	.0033	-.0604	1617.
.3380	-871.	937.	-391.	-884.	151.	2192.	-.0188	-.0428	-.0171	.1270	.0114	-.0574	1597.
.3390	-932.	1031.	-292.	-628.	208.	2117.	-.0135	-.0438	-.0194	.1274	.0185	-.0551	1495.
.3400	-934.	1123.	-188.	-371.	259.	1901.	-.0078	-.0449	-.0220	.1268	.0244	-.0536	1317.
.3410	-893.	1226.	-100.	-125.	298.	1571.	-.0015	-.0461	-.0246	.1253	.0290	-.0530	1081.

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DIG/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.27.04.

S/RV PIPING KEWAUNEE GKW00F 2 RUP DISK
2 SAFETY COLD FRW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

.3310	357.	708.	-826.	-2097.	-122.	-10.	-0.352	-0.0416	-0.0094	.1109	-0.0491	-0.0854	1416.
.3320	268.	578.	-723.	-2020.	-153.	313.	-0.350	-0.0409	-0.0091	.1122	-0.0420	-0.0813	1382.
.3330	114.	509.	-626.	-1892.	-143.	716.	-0.342	-0.0405	-0.0094	.1144	-0.0338	-0.0768	1368.
.3340	-92.	516.	-577.	-1774.	-104.	1149.	-0.337	-0.0404	-0.0102	.1172	-0.0248	-0.0722	1404.
.3350	-327.	594.	-538.	-1557.	-45.	1558.	-0.3304	-0.0407	-0.0114	.1203	-0.0152	-0.0679	1483.
.3360	-956.	712.	-505.	-1352.	22.	1894.	-0.3273	-0.0412	-0.0129	.1232	-0.0057	-0.0639	1568.
.3370	-744.	832.	-462.	-1129.	89.	2115.	-0.3234	-0.0419	-0.0149	.1255	.0033	-0.0604	1617.
.3380	-671.	937.	-391.	-884.	151.	2192.	-0.3188	-0.0428	-0.0171	.1270	.0114	-0.0574	1597.
.3390	-932.	1031.	-292.	-628.	208.	2117.	-0.3135	-0.0438	-0.0194	.1274	.0185	-0.0551	1495.
.3400	-934.	1123.	-186.	-371.	259.	1801.	-0.3076	-0.0449	-0.0220	.1268	.0244	-0.0536	1317.
.3410	-893.	1224.	-100.	-125.	298.	1571.	-0.3015	-0.0461	-0.0246	.1253	.0290	-0.0530	1081.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.27.04.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	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)		
.3420	-831.	1402.	-50.	102.	331.	1156.	.0048	-0.0473	-0.0273	.1231	.0327	-0.0534	813.		
.3430	-773.	1628.	-48.	305.	358.	697.	.0109	-0.0485	-0.0300	.1203	.0356	-0.0547	567.		
.3440	-732.	1904.	-96.	490.	380.	236.	.0167	-0.0497	-0.0326	.1172	.0380	-0.0569	447.		
.3450	-714.	2215.	-174.	671.	402.	-187.	.0221	-0.0508	-0.0350	.1137	.0403	-0.0597	542.		
.3460	-718.	2524.	-249.	866.	430.	-541.	.0269	-0.0519	-0.0370	.1100	.0427	-0.0629	747.		
.3470	-739.	2778.	-285.	1097.	470.	-801.	.0309	-0.0527	-0.0385	.1061	.0453	-0.0659	969.		
.3480	-765.	2934.	-256.	1374.	522.	-951.	.0343	-0.0534	-0.0394	.1017	.0481	-0.0686	1180.		
.3490	-790.	2984.	-152.	1695.	586.	-986.	.0368	-0.0537	-0.0396	.0969	.0512	-0.0706	1379.		
.3500	-819.	2934.	14.	2040.	657.	-927.	.0385	-0.0537	-0.0393	.0918	.0546	-0.0718	1569.		
.3510	-860.	2804.	211.	2380.	725.	-724.	.0393	-0.0531	-0.0383	.0864	.0582	-0.0721	1747.		
.3520	-910.	2629.	406.	2680.	780.	-457.	.0393	-0.0519	-0.0368	.0806	.0618	-0.0716	1906.		
.3530	-970.	2439.	565.	2905.	811.	-130.	.0384	-0.0499	-0.0349	.0745	.0652	-0.0702	2035.		
.3540	-1043.	2248.	670.	3029.	812.	229.	.0367	-0.0472	-0.0326	.0678	.0683	-0.0683	2119.		
.3550	-1120.	2059.	715.	3035.	782.	591.	.0343	-0.0437	-0.0301	.0606	.0707	-0.0658	2150.		
.3560	-1163.	1868.	709.	2922.	725.	934.	.0314	-0.0392	-0.0274	.0527	.0720	-0.0628	2125.		
.3570	-1216.	1657.	666.	2702.	647.	1237.	.0282	-0.0342	-0.0245	.0440	.0719	-0.0594	2050.		
.3580	-1214.	1408.	604.	2389.	560.	1486.	.0248	-0.0284	-0.0216	.0345	.0701	-0.0558	1933.		
.3590	-1180.	1121.	538.	2002.	474.	1670.	.0214	-0.0221	-0.0186	.0244	.0668	-0.0519	1786.		
.3600	-1110.	808.	471.	1561.	399.	1769.	.0182	-0.0156	-0.0156	.0139	.0516	-0.0480	1622.		
.3610	-1011.	481.	399.	1086.	341.	1848.	.0152	-0.0090	-0.0128	.0032	.0547	-0.0439	1463.		
.3620	-896.	159.	316.	596.	307.	1855.	.0125	-0.0025	-0.0101	-0.0072	.0463	-0.0398	1330.		
.3630	-778.	-139.	225.	111.	300.	1816.	.0101	.0037	-0.0075	-0.0171	.0367	-0.0358	1243.		
.3640	-661.	-408.	128.	-347.	319.	1741.	.0080	.0093	-0.0051	-0.0262	.0262	-0.0318	1215.		
.3650	-540.	-652.	37.	-754.	361.	1638.	.0061	.0144	-0.0028	-0.0344	.0149	-0.0278	1240.		
.3660	-414.	-879.	-37.	-1089.	422.	1512.	.0044	.0187	-0.0005	-0.0418	.0032	-0.0238	1288.		
.3670	-281.	-1093.	-69.	-1337.	493.	1364.	.0026	.0223	.0018	-0.0483	-0.0084	-0.0198	1330.		
.3680	-138.	-1301.	-68.	-1493.	540.	1198.	.0007	.0252	.0043	-0.0541	-0.0196	-0.0157	1344.		
.3690	12.	-1491.	-38.	-1559.	610.	1015.	-0.0015	.0274	.0070	-0.0592	-0.0301	-0.0115	1320.		
.3700	164.	-1646.	9.	-1549.	632.	819.	-0.0041	.0290	.0099	-0.0636	-0.0394	-0.0073	1256.		
.3710	309.	-1750.	54.	-1478.	617.	616.	-0.0071	.0301	.0130	-0.0675	-0.0473	-0.0030	1156.		
.3720	447.	-1796.	80.	-1362.	560.	413.	-0.0105	.0308	.0161	-0.0707	-0.0538	.0013	1031.		
.3730	559.	-1780.	81.	-1216.	461.	218.	-0.0142	.0312	.0194	-0.0733	-0.0586	.0056	889.		
.3740	654.	-1765.	57.	-1055.	328.	77.	-0.0183	.0313	.0226	-0.0753	-0.0518	.0101	745.		
.3750	731.	-1587.	12.	-885.	168.	-122.	-0.0224	.0313	.0257	-0.0769	-0.0537	.0146	613.		
.3760	796.	-1444.	-44.	-711.	-9.	-258.	-0.0265	.0317	.0286	-0.0779	-0.0642	.0193	510.		
.3770	852.	-1297.	-97.	-536.	-194.	-373.	-0.0303	.0311	.0313	-0.0785	-0.0637	.0242	459.		
.3780	905.	-1166.	-156.	-365.	-376.	-472.	-0.0336	.0309	.0337	-0.0787	-0.0522	.0291	476.		
.3790	951.	-1056.	-160.	-206.	-557.	-559.	-0.0363	.0308	.0356	-0.0787	-0.0598	.0339	569.		

ADLPIPE PAGE 1057

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.27.16.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

.3680	-12.	-1491.	-38.	-1559.	610.	1015.	-0007	.0252	.0043	-0592	-0201	-0115	1344.
.3690	12.	-1491.	-38.	-1559.	610.	1015.	-0007	.0274	.0070	-0592	-0201	-0115	1320.
.3700	164.	-1646.	9.	-1549.	632.	819.	-0041	.0290	.0099	-0636	-0394	-0073	1256.
.3710	309.	-1750.	54.	-1478.	617.	616.	-0071	.0301	.0130	-0675	-0473	-0030	1156.
.3720	447.	-1756.	83.	-1367.	566.	412.	-0105	.0308	.0161	-0707	-0578	.0013	1031.
.3730	589.	-1780.	81.	-1216.	461.	218.	-0140	.0310	.0194	-0722	-0596	.0056	889.
.3740	654.	-1705.	57.	-1050.	328.	27.	-0183	.0313	.0226	-0753	-0518	.0101	745.
.3750	731.	-1587.	12.	-885.	168.	-122.	-0224	.0313	.0257	-0769	-0537	.0146	613.
.3760	796.	-1444.	-44.	-711.	-9.	-258.	-0265	.0312	.0286	-0779	-0642	.0193	510.
.3770	853.	-1297.	-97.	-536.	-194.	-373.	-0303	.0311	.0313	-0785	-0637	.0242	459.
.3780	905.	-1166.	-136.	-365.	-375.	-472.	-0336	.0309	.0337	-0787	-0522	.0291	476.
.3790	951.	-1056.	-160.	-206.	-757.	-559.	-0363	.0308	.0356	-0787	-0598	.0339	549.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.27.16.

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	23	MEMBER	1	SEQUENCE	40	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)		
.3800	992.	-960.	-191.	-67.	-722.	-635.	-0383	.0306	.0371	-0782	-0568	.0386	650.		
.3810	1027.	-876.	-209.	45.	-868.	-705.	-0395	.0304	.0380	-0774	-0534	.0430	755.		
.3820	1052.	-813.	-222.	125.	-991.	-771.	-0398	.0301	.0385	-0764	-0496	.0469	851.		
.3830	1068.	-774.	-230.	174.	-1087.	-833.	-0393	.0299	.0384	-0752	-0457	.0503	931.		
.3840	1074.	-753.	-228.	190.	-1152.	-893.	-0379	.0297	.0377	-0738	-0417	.0529	991.		
.3850	1068.	-746.	-221.	176.	-1185.	-948.	-0356	.0295	.0365	-0723	-0377	.0548	1030.		
.3860	1050.	-750.	-212.	176.	-1187.	-997.	-0325	.0293	.0348	-0707	-0337	.0560	1049.		
.3870	1016.	-754.	-201.	77.	-1160.	-1042.	-0286	.0291	.0326	-0692	-0297	.0567	1052.		
.3880	965.	-749.	-187.	8.	-1107.	-1086.	-0241	.0289	.0300	-0677	-0255	.0569	1046.		
.3890	896.	-734.	-174.	-58.	-1034.	-1130.	-0190	.0287	.0269	-0661	-0210	.0570	1033.		
.3900	810.	-699.	-163.	-112.	-941.	-1172.	-0133	.0284	.0236	-0645	-0162	.0572	1016.		
.3910	709.	-639.	-148.	-143.	-832.	-1210.	-0077	.0281	.0200	-0627	-0110	.0578	994.		
.3920	597.	-564.	-121.	-140.	-707.	-1242.	-0006	.0276	.0163	-0608	-0056	.0588	968.		
.3930	478.	-493.	-77.	-96.	-568.	-1267.	.0061	.0270	.0124	-0586	.0002	.0605	938.		
.3940	358.	-429.	-16.	-12.	-419.	-1280.	.0129	.0263	.0086	-0560	.0060	.0630	908.		
.3950	242.	-363.	59.	106.	-263.	-1280.	.0196	.0255	.0048	-0531	.0117	.0661	884.		
.3960	134.	-303.	144.	252.	-107.	-1267.	.0260	.0245	.0013	-0499	.0172	.0697	874.		
.3970	37.	-255.	234.	414.	37.	-1246.	.0313	.0234	-0019	-0465	.0223	.0736	886.		
.3980	-45.	-219.	323.	582.	159.	-1225.	.0367	.0223	-0046	-0432	.0270	.0774	920.		
.3990	-109.	-188.	403.	741.	251.	-1205.	.0406	.0212	-0067	-0400	.0310	.0808	968.		
.4000	-157.	-162.	467.	878.	309.	-1186.	.0431	.0202	-0082	-0373	.0343	.0835	1017.		

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)
.1080	377.	2598.	3126.	9889.	2924.	-5621.	.0850	-0510	-0244	-0325	.0054	-0180	7917.

SECTION	23	MEMBER	2	SEQUENCE	810	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	FZ	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	-1.	-3.	-2.	3.	-1.	-2.	-0000	-0000	-0000	-0000	.0000	.0000	2.		
.0020	-5.	-12.	-13.	16.	-4.	-12.	-0000	-0000	-0000	-0000	.0001	.0000	14.		
.0030	-12.	4.	-20.	28.	-13.	-27.	-0001	-0001	-0001	-0001	.0002	-0000	28.		

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
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ENGLISH UNITS

INTERNAL FORCES IN THE PIPING

SECTION	23	MEMBER	2	SEQUENCE	810	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	-1.	-3.	-2.	3.	-1.	-2.		-0.0000	-0.0000	-0.0000	-0.0000	.0000	.0000	2.	
.0020	-5.	-12.	-13.	16.	-4.	-12.		-0.0000	-0.0000	-0.0000	-0.0000	.0001	.0000	14.	
.0030	-12.	4.	-30.	28.	-13.	-27.		-0.0001	-0.0001	-0.0001	-0.0001	.0002	-0.0000	28.	

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

SECTION	23	MEMBER	2	SEQUENCE	810	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)	
.0040	-27.	61.	-56.	37.	-26.	-44.		-0.0002	-0.0002	-0.0000	-0.0002	.0006	-0.0001	43.	
.0050	-40.	139.	-94.	55.	-43.	-68.		-0.0002	-0.0004	-0.0000	-0.0004	.0010	-0.0001	66.	
.0060	-62.	225.	-139.	99.	-59.	-102.		-0.0003	-0.0007	.0000	-0.0005	.0015	-0.0002	104.	
.0070	-79.	322.	-188.	184.	-81.	-157.		-0.0003	-0.0012	.0001	-0.0006	.0023	-0.0002	172.	
.0080	-93.	448.	-248.	315.	-129.	-252.		-0.0004	-0.0019	.0002	-0.0007	.0036	-0.0004	285.	
.0090	-105.	681.	-310.	452.	-210.	-381.		-0.0005	-0.0028	.0004	-0.0010	.0062	-0.0009	425.	
.0100	-124.	1017.	-375.	589.	-346.	-533.		-0.0007	-0.0040	.0009	-0.0015	.0102	-0.0017	584.	
.0110	-152.	1355.	-437.	780.	-502.	-697.		-0.0007	-0.0055	.0016	-0.0021	.0156	-0.0028	782.	
.0120	-182.	1638.	-441.	1059.	-660.	-851.		-0.0004	-0.0071	.0023	-0.0025	.0223	-0.0039	1018.	
.0130	-211.	1862.	-317.	1421.	-789.	-953.		.0005	-0.0088	.0030	-0.0027	.0299	-0.0051	1270.	
.0140	-239.	1994.	-49.	1845.	-945.	-847.		.0022	-0.0103	.0036	-0.0026	.0380	-0.0062	1509.	
.0150	-252.	1971.	316.	2301.	-796.	-780.		.0050	-0.0115	.0038	-0.0023	.0453	-0.0065	1724.	
.0160	-219.	1799.	735.	2718.	-620.	-434.		.0088	-0.0121	.0034	-0.0017	.0510	-0.0062	1902.	
.0170	-179.	1438.	1173.	3036.	-380.	34.		.0134	-0.0116	.0024	-0.0015	.0555	-0.0057	2063.	
.0180	-245.	802.	1571.	3228.	-187.	493.		.0181	-0.0100	.0008	-0.0030	.0505	-0.0057	2204.	
.0190	-459.	-73.	1823.	3257.	-122.	834.		.0223	-0.0072	-0.0015	-0.0073	.0569	-0.0064	2267.	
.0200	-804.	-1042.	1748.	3127.	-285.	958.		.0256	-0.0034	-0.0044	-0.0152	.0757	-0.0080	2213.	
.0210	-1131.	-1408.	1417.	2542.	-671.	986.		.0281	.0014	-0.0071	-0.0264	.0878	-0.0105	1893.	
.0220	-1481.	-984.	1119.	1394.	-989.	1113.		.0312	.0070	-0.0092	-0.0407	.1017	-0.0136	1375.	
.0230	-1870.	-1080.	782.	466.	-1049.	1279.		.0356	.0128	-0.0120	-0.0567	.1120	-0.0135	1158.	
.0240	-1758.	-1694.	605.	-25.	-657.	1731.		.0424	.0193	-0.0164	-0.0690	.1112	-0.0075	1248.	
.0250	-1394.	-2456.	884.	-285.	-104.	2352.		.0502	.0267	-0.0215	-0.0765	.1044	.0015	1599.	
.0260	-1790.	-3743.	1454.	-364.	206.	2597.		.0563	.0336	-0.0265	-0.0843	.1032	.0084	1773.	
.0270	-2440.	-4613.	1855.	-733.	818.	2895.		.0622	.0393	-0.0312	-0.0915	.0982	.0150	2087.	
.0280	-1845.	-4347.	1397.	-1513.	1976.	3903.		.0698	.0442	-0.0357	-0.0918	.0704	.0294	3120.	
.0290	-811.	-4050.	389.	-2346.	2678.	4679.		.0739	.0479	-0.0388	-0.0889	.0361	.0444	3963.	
.0300	-1261.	-4480.	194.	-3216.	2457.	3709.		.0684	.0503	-0.0381	-0.0946	.0293	.0395	3700.	
.0310	-1736.	-4383.	404.	-4176.	2121.	2283.		.0582	.0518	-0.0343	-0.1004	.0226	.0272	3512.	
.0320	183.	-4213.	-340.	-4516.	1987.	1579.		.0476	.0515	-0.0294	-0.0988	.0124	.0263	3492.	
.0330	1487.	-4288.	-1295.	-4641.	1625.	861.		.0328	.0489	-0.0217	-0.0976	-0.0478	.0226	3365.	
.0340	1279.	-7972.	-1105.	-5240.	838.	-479.		.0110	.0451	-0.0093	-0.1013	-0.0567	.0007	3592.	
.0350	1228.	-7663.	-592.	-5400.	131.	-1500.		-0.0127	.0407	.0038	-0.0997	-0.0569	-0.0209	3780.	
.0360	2930.	-7897.	-891.	-4393.	-126.	-1516.		-0.0340	.0349	.0140	-0.0863	-0.1004	-0.0264	3134.	
.0370	3397.	-3666.	-1266.	-3398.	-313.	-1242.		-0.0560	.0278	.0240	-0.0698	-0.1260	-0.0327	2448.	
.0380	2500.	-2087.	-1158.	-3355.	-754.	-1090.		-0.0797	.0194	.0357	-0.0554	-0.1238	-0.0500	2431.	
.0390	1457.	-52.	-1577.	-3280.	-1130.	-346.		-0.0994	.0096	.0458	-0.0352	-0.1243	-0.0578	2349.	
.0400	1458.	1126.	-2677.	-2200.	-1391.	650.		-0.1134	-0.0018	.0523	-0.0072	-0.1373	-0.0491	1808.	
.0410	1470.	2240.	-2767.	-1003.	-1632.	796.		-0.1246	-0.0130	.0577	.0209	-0.1335	-0.0453	1398.	

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
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INTERNAL FORCES IN THE PIPING
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.0310	-1336.	-4303.	-704.	-4176.	2121.	2283.	.582	.0518	-.0343	-.1004	.0226	.0272	3512.
.0320	183.	-4213.	-340.	-4516.	1987.	1579.	.476	.0515	-.0294	-.0988	-.0124	.0763	3492.
.0330	1487.	-4288.	-1295.	-4641.	1625.	861.	.0328	.0489	-.0217	-.0976	-.0478	.0226	3365.
.0340	1279.	-3972.	-1105.	-5240.	238.	-479.	.0110	.0451	-.0093	-.1013	-.0567	.0007	3592.
.0350	1228.	-3663.	-992.	-5400.	131.	-1506.	-.0127	.0407	.0038	-.0997	-.0569	-.0209	3780.
.0360	2530.	-3892.	-991.	-4397.	-126.	-1516.	-.0340	.0349	.0140	-.0863	-.1004	-.0264	3134.
.0370	3397.	-3666.	-1266.	-3398.	-313.	-1242.	-.0560	.0278	.0240	-.0698	-.1260	-.0327	2448.
.0380	2500.	-2087.	-1158.	-3355.	-754.	-1090.	-.0797	.0194	.0357	-.0554	-.1238	-.0500	2431.
.0390	1457.	-52.	-1577.	-3280.	-1126.	-346.	-.0994	.0096	.0458	-.0352	-.1243	-.0578	2349.
.0400	1458.	1126.	-2477.	-2200.	-1391.	650.	-.1134	-.0018	.0523	-.0072	-.1373	-.0491	1808.
.0410	1470.	2240.	-2767.	-1802.	-1632.	790.	-.1246	-.0130	.0577	.0209	-.1335	-.0453	1398.

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ADLPIPE STRESS ANALYSIS

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

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

SECTION	23	MEMBER	2	SEQUENCE	810	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)		
.0420	1015.	3446.	-1855.	32.	-2051.	129.	-.1328	-.0740	.0625	.0480	-.1108	-.0477	1406.		
.0430	966.	3755.	-1554.	1551.	-2617.	-610.	-.1345	-.0360	.0642	.0775	-.0939	-.0394	2091.		
.0440	1379.	4151.	-1567.	2860.	-2887.	-1135.	-.1285	-.0482	.0635	.1084	-.0828	-.0239	2844.		
.0450	1455.	5233.	-886.	3384.	-2823.	-1698.	-.1172	-.0586	.0611	.1374	-.0543	-.0138	3183.		
.0460	1296.	5333.	-25.	4119.	-2467.	-2332.	-.1016	-.0670	.0547	.1651	-.0479	-.0051	3598.		
.0470	1628.	4219.	369.	5314.	-1827.	-2650.	-.0815	-.0732	.0433	.1927	-.0458	.0083	4187.		
.0480	1898.	3718.	754.	5682.	-1071.	-2641.	-.0598	-.0763	.0304	.2147	-.0449	.0159	4285.		
.0490	1180.	4026.	1086.	4879.	-406.	-2624.	-.0391	-.0768	.0180	.2242	-.0340	.0110	3744.		
.0500	260.	4131.	595.	3792.	232.	-2395.	-.0190	-.0754	.0050	.2232	-.0281	.0037	3027.		
.0510	206.	4214.	-364.	2659.	933.	-1818.	.0008	-.0712	-.0082	.2155	-.0340	-.0029	2260.		
.0520	249.	4261.	-617.	1320.	1341.	-1565.	.0172	-.0639	-.0193	.1983	-.0325	-.0185	1650.		
.0530	-479.	3277.	-109.	186.	1267.	-1980.	.0285	-.0547	-.0283	.1702	-.0158	-.0436	1590.		
.0540	-1011.	1635.	303.	-620.	1269.	-2151.	.0390	-.0445	-.0369	.1394	-.0038	-.0643	1734.		
.0550	-607.	651.	324.	-1589.	1742.	-1354.	.0513	-.0332	-.0453	.1139	-.0062	-.0742	1833.		
.0560	-507.	10.	312.	-2767.	2194.	-251.	.0623	-.0219	-.0532	.0911	-.0051	-.0801	2386.		
.0570	-1549.	-1050.	446.	-3810.	2255.	497.	.0695	-.0114	-.0605	.0690	.0113	-.0859	3003.		
.0580	-2463.	-1786.	411.	-4707.	2354.	1372.	.0756	-.0020	-.0679	.0540	.0281	-.0846	3666.		
.0590	-2391.	-1643.	-146.	-5522.	2697.	2724.	.0824	.0060	-.0752	.0496	.0344	-.0710	4531.		
.0600	-2476.	-1308.	-951.	-6182.	2761.	3844.	.0870	.0111	-.0804	.0496	.0448	-.0531	5248.		
.0610	-3356.	-1108.	-1367.	-6683.	2242.	4172.	.0870	.0132	-.0816	.0494	.0711	-.0396	5521.		
.0620	-3728.	-797.	-1241.	-6804.	1606.	4121.	.0847	.0129	-.0793	.0529	.0287	-.0270	5470.		
.0630	-2839.	-941.	-850.	-5999.	1142.	4007.	.0819	.0107	-.0753	.0632	.1135	-.0098	4923.		
.0640	-1867.	-1897.	-87.	-4400.	571.	3536.	.0763	.0064	-.0695	.0759	.1260	.0051	3824.		
.0650	-1681.	-2658.	1124.	-2904.	-170.	2776.	.0671	.0006	-.0614	.0876	.1457	.0101	2710.		
.0660	-1579.	-2458.	1963.	-1839.	-695.	2410.	.0568	-.0064	-.0526	.1012	.1588	.0112	2096.		
.0670	-1148.	-1655.	1689.	-902.	-925.	2655.	.0467	-.0147	-.0453	.1186	.1553	.0144	1990.		
.0680	-1172.	-365.	855.	-269.	-1225.	2889.	.0349	-.0237	-.0388	.1351	.1501	.0119	2123.		
.0690	-1908.	1597.	192.	-202.	-1717.	2686.	.0210	-.0328	-.0317	.1478	.1538	-.0019	2153.		
.0700	-2396.	3612.	-558.	-138.	-2141.	2306.	.0083	-.0420	-.0249	.1586	.1526	-.0175	2123.		
.0710	-2128.	5032.	-1463.	443.	-2337.	1914.	-.0008	-.0515	-.0188	.1688	.1377	-.0277	2058.		
.0720	-1682.	5971.	-1657.	1290.	-2389.	1154.	-.0071	-.0403	-.0120	.1752	.1214	-.0389	1990.		
.0730	-1287.	6246.	-795.	2366.	-2346.	-152.	-.0112	-.0678	-.0047	.1766	.1093	-.0530	2248.		
.0740	-426.	5422.	394.	3939.	-2105.	-1598.	-.0119	-.0737	.0011	.1764	.0897	-.0611	3197.		
.0750	870.	4151.	1420.	5545.	-1607.	-2786.	-.0091	-.0771	.0043	.1763	.0602	-.0611	4321.		
.0760	1778.	3452.	2224.	6298.	-1005.	-3748.	-.0054	-.0776	.0059	.1733	.0327	-.0603	4986.		
.0770	1959.	3388.	2334.	6042.	-485.	-4469.	-.0024	-.0755	.0056	.1656	.0100	-.0590	5076.		
.0780	1826.	3775.	1347.	5064.	-75.	-4710.	-.0001	-.0710	.0034	.1547	-.0147	-.0526	4662.		
.0790	1604.	4747.	-207.	3420.	255.	-4515.	.0009	-.0639	.0005	.1406	-.0394	-.0437	3825.		

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

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

.0690	-1908.	1597.	192.	-202.	-1717.	2686.	.0210	-.0328	-.0317	.1478	.1538	-.0019	2153.
.0700	-2396.	3612.	-558.	-138.	-2141.	2306.	.0083	-.0420	-.0249	.1586	.1526	-.0175	2123.
.0710	-2128.	5032.	-1463.	443.	-2337.	1914.	-.0008	-.0515	-.0188	.1688	.1377	-.0277	2058.
.0720	-1612.	5971.	-1657.	1296.	-2389.	1154.	-.0071	-.0603	-.0120	.1752	.1214	-.0389	1990.
.0730	-1287.	6246.	-795.	2366.	-2346.	-152.	-.0112	-.0678	-.0047	.1766	.1093	-.0530	2248.
.0740	-426.	5422.	394.	3929.	-2105.	-1598.	-.0119	-.0757	.0011	.1764	.0897	-.0611	3197.
.0750	870.	4151.	1420.	5545.	-1607.	-2786.	-.0091	-.0771	.0043	.1763	.0602	-.0611	4321.
.0760	1778.	3452.	2224.	6298.	-1005.	-3748.	-.0054	-.0776	.0059	.1733	.0327	-.0603	4986.
.0770	1959.	3388.	2334.	6042.	-485.	-4469.	-.0024	-.0755	.0056	.1656	.0100	-.0590	5076.
.0780	1826.	3775.	1747.	5064.	-78.	-4710.	-.0001	-.0710	.0034	.1547	-.0147	-.0526	4662.
.0790	1604.	4747.	-207.	3428.	255.	-4515.	.0009	-.0639	.0005	.1406	-.0394	-.0437	3825.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.27.16.

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	23	MEMBER	2	SEQUENCE	810	LOCATION	END	TYPE	EL					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	FX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0800	1206.	5769.	-1539.	1478.	489.	-4259.	-.0003	-.0545	-.0012	.1209	-.0574	-.0368	3056.	
.0810	866.	5778.	-2416.	-27.	567.	-4086.	-.0037	-.0436	-.0012	.0962	-.0710	-.0298	2781.	
.0820	940.	4696.	-2687.	-839.	550.	-3827.	-.0083	-.0315	.0008	.0691	-.0846	-.0205	2667.	
.0830	1309.	3077.	-2113.	-1254.	548.	-3428.	-.0139	-.0185	.0054	.0404	-.0950	-.0121	2488.	
.0840	1655.	880.	-995.	-1323.	568.	-2946.	-.0208	-.0052	.0116	.0101	-.1004	-.0051	2210.	
.0850	1932.	-1746.	20.	-1108.	535.	-2251.	-.0285	.0077	.0177	-.0192	-.1041	.0034	1729.	
.0860	2069.	-3754.	664.	-1166.	444.	-1189.	-.0367	.0206	.0229	-.0451	-.1057	.0126	1162.	
.0870	1798.	-4615.	798.	-1840.	326.	129.	-.0454	.0329	.0269	-.0685	-.1019	.0197	1262.	
.0880	1108.	-4799.	134.	-2846.	158.	1539.	-.0539	.0435	.0293	-.0900	-.0948	.0265	2184.	
.0890	332.	-4471.	-1125.	-3979.	-92.	2962.	-.0611	.0523	.0303	-.1085	-.0874	.0339	3344.	
.0900	-317.	-3666.	-2185.	-5153.	-398.	4156.	-.0664	.0595	.0313	-.1239	-.0774	.0389	4470.	
.0910	-738.	-3315.	-2533.	-5808.	-677.	4781.	-.0695	.0649	.0325	-.1377	-.0645	.0403	5091.	
.0920	-649.	-4161.	-2174.	-5419.	-813.	4839.	-.0693	.0680	.0336	-.1493	-.0549	.0411	4927.	
.0930	25.	-5603.	-1152.	-4288.	-759.	4598.	-.0656	.0695	.0343	-.1573	-.0508	.0411	4268.	
.0940	763.	-6900.	328.	-3012.	-617.	4155.	-.0595	.0696	.0348	-.1630	-.0470	.0368	3484.	
.0950	1070.	-7947.	1628.	-1830.	-472.	3559.	-.0524	.0679	.0340	-.1678	-.0414	.0278	2718.	
.0960	1063.	-8253.	2166.	-1022.	-244.	3128.	-.0440	.0646	.0308	-.1697	-.0382	.0169	2224.	
.0970	899.	-7127.	1874.	-887.	111.	3092.	-.0344	.0604	.0251	-.1668	-.0384	.0045	2169.	
.0980	264.	-4948.	965.	-1277.	450.	3211.	-.0246	.0548	.0175	-.1605	-.0369	-.0109	2349.	
.0990	-947.	-2550.	-252.	-1716.	698.	3213.	-.0146	.0474	.0088	-.1523	-.0313	-.0283	2500.	
.1000	-2110.	-104.	-1330.	-1910.	1044.	3174.	-.0031	.0382	.0001	-.1400	-.0264	-.0444	2594.	
.1010	-2639.	2110.	-1847.	-1563.	1625.	3090.	.0111	.0277	-.0078	-.1223	-.0261	-.0562	2578.	
.1020	-2654.	3245.	-1571.	-316.	2273.	2601.	.0270	.0156	-.0143	-.1008	-.0268	-.0638	2338.	
.1030	-2424.	3143.	-454.	1718.	2776.	1506.	.0427	.0024	-.0188	-.0777	-.0235	-.0693	2423.	
.1040	-1847.	2595.	1198.	3967.	3139.	74.	.0577	-.0107	-.0213	-.0527	-.0175	-.0723	3410.	
.1050	-922.	2065.	2689.	6020.	3380.	-1372.	.0711	-.0232	-.0228	-.0265	-.0122	-.0709	4744.	
.1060	-77.	1682.	3503.	7561.	3361.	-2729.	.0811	-.0343	-.0236	-.0016	-.0058	-.0657	5873.	
.1070	327.	1893.	3653.	8181.	3008.	-3917.	.0861	-.0431	-.0235	.0192	.0059	-.0599	6441.	
.1080	377.	2598.	3126.	7991.	2308.	-4881.	.0855	-.0488	-.0228	.0349	.0226	-.0535	6501.	
.1090	212.	3337.	1892.	7445.	1179.	-5719.	.0790	-.0516	-.0216	.0439	.0444	-.0456	6378.	
.1100	142.	5396.	879.	5935.	299.	-5653.	.0703	-.0504	-.0179	.0481	.0544	-.0360	5529.	
.1110	93.	6474.	-88.	4719.	-452.	-5025.	.0602	-.0467	-.0130	.0465	.0790	-.0196	4657.	
.1120	-100.	5369.	-685.	4481.	-1248.	-4405.	.0480	-.0408	-.0077	.0388	.0930	.0012	4318.	
.1130	-204.	4068.	-76.	4303.	-1928.	-3604.	.0350	-.0310	-.0010	.0285	.1103	.0197	4000.	
.1140	39.	2830.	1122.	4127.	-2336.	-2456.	.0231	-.0188	.0061	.0161	.1240	.0400	3600.	
.1150	338.	550.	1674.	4392.	-2588.	-1233.	.0128	-.0066	.0116	-.0014	.1305	.0667	3535.	
.1160	98.	-1338.	1688.	4173.	-2860.	-36.	.0033	.0058	.0157	-.0226	.1388	.0915	3410.	
.1170	-590.	-1200.	1576.	2691.	-3146.	1402.	-.0046	.0197	.0190	-.0428	.1491	.1100	2946.	

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ADLPIPE STRESS ANALYSIS

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18.27.16.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

.1070	327.	1893.	3653.	8181.	3008.	-3917.	.0861	-.0431	-.0235	.0192	.0059	-.0599	6441.
.1080	377.	2598.	3126.	7991.	2308.	-4881.	.0855	-.0488	-.0228	.0349	.0226	-.0535	6501.
.1090	212.	3337.	1892.	7445.	1179.	-5719.	.0790	-.0516	-.0216	.0439	.0444	-.0456	6378.
.1100	142.	5396.	879.	5975.	299.	-5653.	.0703	-.0504	-.0179	.0481	.0644	-.0360	5529.
.1110	53.	6474.	-82.	4719.	-452.	-5025.	.0602	-.0467	-.0130	.0465	.0790	-.0196	4657.
.1120	-100.	5369.	-665.	4481.	-1249.	-4405.	.0400	-.0408	-.0077	.0388	.0930	.0012	4318.
.1130	-204.	4068.	-76.	4303.	-1928.	-3604.	.0350	-.0310	-.0010	.0285	.1103	.0197	4000.
.1140	39.	2830.	1122.	4127.	-2336.	-2456.	.0231	-.0188	.0061	.0161	.1240	.0400	3600.
.1150	338.	550.	1674.	4392.	-2588.	-1233.	.0128	-.0066	.0116	-.0014	.1305	.0667	3535.
.1160	98.	-1338.	1688.	4173.	-2660.	-36.	.0033	.0058	.0157	-.0226	.1388	.0915	3410.
.1170	-590.	-1200.	1576.	2691.	-3146.	1402.	-.0046	.0197	.0190	-.0428	.1491	.1100	2946.

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

SECTION	MEMBER	SEQUENCE	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)		
.1180	-1278.	-698.	1107.	966.	-2966.	2882.	-.0089	.0332	.0195	-.0629	.1500	.1266	2862.	
.1190	-1383.	-1607.	-38.	80.	-2507.	4171.	-.0092	.0447	.0164	-.0817	.1318	.1481	3280.	
.1200	-1397.	-2613.	-711.	-831.	-2135.	4875.	-.0081	.0555	.0127	-.0995	.1117	.1608	3631.	
.1210	-1899.	-3094.	-451.	-2147.	-1814.	4577.	-.0077	.0656	.0104	-.1197	.1024	.1537	3620.	
.1220	-1608.	-3659.	-526.	-3075.	-1319.	4152.	-.0049	.0730	.0083	-.1382	.0774	.1445	3594.	
.1230	-342.	-4605.	-1028.	-3344.	-541.	3659.	.0003	.0768	.0069	-.1572	.0345	.1358	3361.	
.1240	808.	-5184.	-917.	-3603.	-54.	2630.	.0031	.0786	.0082	-.1785	-.0028	.1147	3007.	
.1250	1209.	-5620.	-66.	-3832.	-14.	894.	.0010	.0794	.0119	-.2009	-.0257	.0773	2652.	
.1260	1628.	-6520.	460.	-3437.	198.	-909.	-.0030	.0782	.0151	-.2208	-.0518	.0374	2400.	
.1270	3045.	-6862.	-19.	-2778.	499.	-1851.	-.0066	.0750	.0177	-.2329	-.0924	.0081	2275.	
.1280	3568.	-5751.	-517.	-2821.	465.	-2596.	-.0134	.0700	.0224	-.2437	-.1162	-.0245	2603.	
.1290	2638.	-3798.	-823.	-3362.	4.	-3355.	-.0238	.0637	.0287	-.2522	-.1157	-.0608	3201.	
.1300	1882.	-2178.	-1541.	-3281.	-260.	-3453.	-.0323	.0563	.0334	-.2496	-.1174	-.0825	3216.	
.1310	2046.	-1039.	-2113.	-2338.	86.	-2789.	-.0362	.0482	.0360	-.2345	-.1277	-.0852	2454.	
.1320	2104.	-383.	-1696.	-902.	344.	-1976.	-.0378	.0399	.0386	-.2117	-.1283	-.0767	1482.	
.1330	1043.	-688.	-293.	900.	339.	-1699.	-.0393	.0314	.0414	-.1875	-.1067	-.0657	1316.	
.1340	309.	-1168.	934.	2873.	556.	-1092.	-.0370	.0232	.0424	-.1565	-.0880	-.0420	2105.	
.1350	671.	-1044.	1504.	4606.	1137.	224.	-.0295	.0160	.0415	-.1189	-.0835	-.0034	3201.	
.1360	528.	-933.	2091.	5858.	1571.	1083.	-.0222	.0097	.0401	-.0872	-.0699	.0332	4152.	
.1370	-455.	-1078.	2772.	6601.	1484.	1270.	-.0170	.0052	.0383	-.0636	-.0452	.0625	4640.	
.1380	-1078.	-1049.	3112.	6877.	1531.	1404.	-.0117	.0036	.0349	-.0443	-.0295	.0879	4842.	
.1390	-629.	-675.	2707.	6700.	1925.	1950.	-.0048	.0045	.0299	-.0281	-.0358	.1133	4879.	
.1400	-358.	-503.	2041.	5953.	2155.	2198.	-.0002	.0072	.0254	-.0230	-.0461	.1280	4517.	
.1410	-988.	-668.	1703.	4566.	2073.	1594.	-.0004	.0113	.0226	-.0328	-.0464	.1226	3547.	
.1420	-919.	-617.	1207.	2844.	1954.	1052.	-.0020	.0175	.0205	-.0464	-.0589	.1099	2431.	
.1430	136.	-782.	360.	1282.	2011.	602.	-.0042	.0246	.0180	-.0619	-.0869	.0941	1658.	
.1440	969.	-1353.	-437.	-213.	1800.	-290.	-.0094	.0312	.0168	-.0832	-.1108	.0701	1237.	
.1450	1077.	-1653.	-908.	-2018.	1178.	-1585.	-.0178	.0369	.0181	-.1089	-.1204	.0369	1903.	
.1460	1288.	-1528.	-1453.	-3818.	655.	-2668.	-.0261	.0414	.0201	-.1312	-.1280	.0048	3171.	
.1470	2248.	-1500.	-2420.	-5001.	295.	-3089.	-.0319	.0444	.0211	-.1429	-.1444	-.0144	3967.	
.1480	2832.	-1863.	-2860.	-5648.	-80.	-3500.	-.0372	.0454	.0223	-.1483	-.1491	-.0289	4478.	
.1490	2721.	-2363.	-2425.	-5951.	-618.	-3955.	-.0426	.0450	.0241	-.1472	-.1351	-.0402	4834.	
.1500	2721.	-2954.	-1856.	-5691.	-1034.	-3866.	-.0452	.0430	.0249	-.1349	-.1182	-.0386	4689.	
.1510	2898.	-3565.	-1516.	-4883.	-1059.	-3161.	-.0443	.0393	.0238	-.1122	-.1025	-.0234	3985.	
.1520	2762.	-3656.	-1206.	-4003.	-1088.	-2064.	-.0417	.0343	.0219	-.0827	-.0803	-.0000	3123.	
.1530	1900.	-3199.	-645.	-3266.	-1263.	-1068.	-.0390	.0283	.0201	-.0519	-.0440	.0237	2467.	
.1540	1051.	-2543.	-336.	-2385.	-1521.	-47.	-.0352	.0214	.0173	-.0186	-.0065	.0515	1907.	
.1550	572.	-1714.	-417.	-1385.	-1729.	1006.	-.0298	.0139	.0132	.0167	.0256	.0820	1640.	

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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

.1450	1077.	-1053.	-1007.	-2010.	1170.	-1585.	-0178.	.0369	.0181	-.1089	-.1204	-.0369	1903.
.1460	1288.	-1528.	-1453.	-3818.	655.	-2668.	-.0261	.0414	.0201	-.1312	-.1280	.0048	3171.
.1470	2248.	-1500.	-2420.	-5001.	295.	-3089.	-.0319	.0444	.0211	-.1429	-.1444	-.0144	3967.
.1480	2832.	-1862.	-2060.	-5646.	-80.	-3500.	-.0372	.0454	.0223	-.1483	-.1491	-.0289	4478.
.1490	2721.	-2363.	-2425.	-5951.	-618.	-3955.	-.0426	.0450	.0241	-.1472	-.1351	-.0402	4834.
.1500	2721.	-2954.	-1856.	-5691.	-1034.	-3866.	-.0452	.0430	.0249	-.1349	-.1182	-.0386	4689.
.1510	2898.	-3565.	-1516.	-4883.	-1059.	-3161.	-.0443	.0393	.0238	-.1122	-.1025	-.0234	3985.
.1520	2762.	-3656.	-1206.	-4003.	-1088.	-2064.	-.0417	.0343	.0219	-.0827	-.0803	-.0000	3123.
.1530	1900.	-3199.	-645.	-3266.	-1263.	-1068.	-.0390	.0283	.0201	-.0519	-.0440	.0237	2467.
.1540	1051.	-2543.	-336.	-2385.	-1521.	-47.	-.0352	.0214	.0173	-.0186	-.0065	.0515	1907.
.1550	572.	-1714.	-417.	-1385.	-1729.	1006.	-.0298	.0139	.0132	.0167	.0256	.0820	1640.

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

SECTION	23	MEMBER	2	SEQUENCE	810	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)		
.1560	-90.	-632.	-391.	-588.	-1872.	1656.	-.0241	.0061	.0092	.0488	.0507	.1050	1731.		
.1570	-765.	530.	-324.	57.	-2191.	1995.	-.0180	-.0020	.0057	.0773	.0935	.1219	1998.		
.1580	-1223.	1403.	-181.	752.	-2432.	1995.	-.0109	-.0104	.0022	.1010	.1195	.1320	2180.		
.1590	-1325.	1951.	136.	1543.	-2360.	1698.	-.0024	-.0185	-.0017	.1202	.1353	.1338	2218.		
.1600	-1058.	2284.	486.	2377.	-2149.	1265.	.0072	-.0257	-.0062	.1363	.1390	.1287	2322.		
.1610	-781.	2473.	821.	3015.	-1964.	562.	.0164	-.0324	-.0106	.1468	.1367	.1143	2455.		
.1620	-823.	2599.	1081.	3285.	-1708.	-557.	.0244	-.0387	-.0148	.1486	.1346	.0882	2523.		
.1630	-645.	3185.	887.	3140.	-1413.	-1432.	.0326	-.0439	-.0191	.1473	.1229	.0592	2514.		
.1640	-343.	4041.	414.	2718.	-1025.	-2074.	.0406	-.0479	-.0234	.1431	.1041	.0284	2406.		
.1650	-323.	4514.	69.	2278.	-574.	-2842.	.0472	-.0507	-.0274	.1335	.0871	-.0056	2485.		
.1660	-363.	4533.	-89.	1991.	-195.	-3487.	.0527	-.0520	-.0309	.1217	.0694	-.0371	2710.		
.1670	-333.	4311.	56.	1823.	324.	-3851.	.0579	-.0516	-.0337	.1090	.0502	-.0635	2880.		
.1680	-28.	3876.	318.	1746.	976.	-3793.	.0630	-.0494	-.0359	.0970	.0278	-.0809	2891.		
.1690	122.	2915.	667.	1768.	1632.	-3661.	.0664	-.0458	-.0374	.0839	.0098	-.0913	2953.		
.1700	3.	1836.	1036.	1690.	2072.	-3427.	.0674	-.0406	-.0381	.0710	-.0021	-.0946	2930.		
.1710	18.	1312.	1214.	1252.	2229.	-2779.	.0665	-.0336	-.0380	.0615	-.0126	-.0877	2545.		
.1720	-110.	884.	1170.	563.	2356.	-2157.	.0629	-.0259	-.0374	.0514	-.0167	-.0751	2186.		
.1730	-299.	391.	639.	-214.	2258.	-1487.	.0568	-.0179	-.0364	.0428	-.0176	-.0552	1828.		
.1740	-633.	325.	-56.	-1237.	1886.	-727.	.0482	-.0095	-.0743	.0367	-.0143	-.0315	1598.		
.1750	-1005.	663.	-584.	-2406.	1442.	51.	.0377	-.0013	-.0306	.0320	-.0071	-.0071	1891.		
.1760	-1035.	599.	-1105.	-3167.	988.	865.	.0263	.0058	-.0258	.0289	-.0033	.0203	2311.		
.1770	-980.	-175.	-1359.	-3371.	592.	1449.	.0138	.0114	-.0200	.0260	.0001	.0452	2505.		
.1780	-782.	-914.	-1160.	-3376.	125.	1999.	.0003	.0163	-.0125	.0252	.0026	.0646	2646.		
.1790	-534.	-1697.	-602.	-3201.	-264.	2406.	-.0139	.0201	-.0038	.0238	.0043	.0760	2705.		
.1800	-195.	-2890.	-143.	-2651.	-498.	2669.	-.0281	.0219	.0051	.0200	.0009	.0813	2558.		
.1810	329.	-3769.	42.	-2105.	-765.	3053.	-.0419	.0226	.0137	.0163	-.0100	.0815	2552.		
.1820	515.	-3913.	287.	-2005.	-1016.	3227.	-.0561	.0229	.0223	.0099	-.0182	.0692	2651.		
.1830	527.	-3837.	265.	-2108.	-1258.	3183.	-.0696	.0225	.0297	.0014	-.0275	.0491	2709.		
.1840	637.	-3838.	-189.	-2172.	-1390.	3022.	-.0808	.0211	.0349	-.0077	-.0426	.0266	2678.		
.1850	844.	-3358.	-695.	-2472.	-1403.	2815.	-.0888	.0194	.0384	-.0160	-.0607	.0021	2697.		
.1860	1012.	-2481.	-1047.	-3005.	-1418.	2477.	-.0935	.0176	.0404	-.0224	-.0777	-.0235	2794.		
.1870	958.	-2098.	-1275.	-3315.	-1299.	1726.	-.0947	.0149	.0403	-.0282	-.0909	-.0484	2667.		
.1880	1197.	-1951.	-1520.	-3333.	-1024.	964.	-.0909	.0116	.0377	-.0291	-.1071	-.0656	2439.		
.1890	1680.	-1478.	-1535.	-3335.	-606.	263.	-.0826	.0080	.0335	-.0246	-.1226	-.0760	2292.		
.1900	1938.	-1053.	-1337.	-3243.	-182.	-636.	-.0715	.0038	.0280	-.0170	-.1299	-.0821	2231.		
.1910	1998.	-865.	-1287.	-2921.	99.	-1584.	-.0586	-.0013	.0211	-.0057	-.1312	-.0814	2241.		
.1920	2006.	-292.	-1317.	-2654.	374.	-2337.	-.0444	-.0068	.0135	.0100	-.1272	-.0752	2397.		
.1930	2036.	798.	-1377.	-2516.	638.	-2760.	-.0297	-.0126	.0060	.0296	-.1187	-.0648	2553.		

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.1820	515.	-1913.	187.	-2005.	-1016.	3227.	-1561	.0229	.0223	.0099	-.0182	.0692	2651.
.1830	527.	-3837.	265.	-2108.	-1258.	3183.	-.0696	.0225	.0297	.0014	-.0275	.0491	2709.
.1840	637.	-3838.	-189.	-2172.	-1390.	3022.	-.0808	.0211	.0349	-.0077	-.0426	.0266	2678.
.1850	844.	-3358.	-692.	-2472.	-1403.	2815.	-.0888	.0194	.0384	-.0160	-.0607	.0021	2697.
.1860	1012.	-2481.	-1047.	-3005.	-1418.	2477.	-.0935	.0176	.0404	-.0224	-.0777	-.0235	2794.
.1870	958.	-2098.	-1275.	-3315.	-1299.	1726.	-.0947	.0149	.0403	-.0282	-.0909	-.0484	2667.
.1880	1197.	-1951.	-1520.	-3337.	-1024.	984.	-.0909	.0116	.0377	-.0291	-.1071	-.0656	2439.
.1890	1680.	-1478.	-1535.	-3335.	-606.	265.	-.0826	.0080	.0335	-.0246	-.1226	-.0760	2292.
.1900	1938.	-1053.	-1337.	-3243.	-182.	-636.	-.0715	.0038	.0280	-.0170	-.1299	-.0821	2231.
.1910	1998.	-865.	-1287.	-2921.	99.	-1584.	-.0586	-.0013	.0211	-.0057	-.1312	-.0814	2241.
.1920	2006.	-292.	-1317.	-2654.	374.	-2337.	-.0444	-.0068	.0135	.0100	-.1272	-.0752	2397.
.1930	2036.	798.	-1377.	-2516.	638.	-2760.	-.0297	-.0126	.0060	.0296	-.1187	-.0648	2553.

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
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CONDITION 24
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INTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	EL								STRESS
TIME	FX	FY	FZ	HX	MY	MZ	DX	DY	DZ	RX	RY	RZ		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1940	1842.	1626.	-1483.	-2172.	772.	-3041.	-.0161	-.0189	-.0012	.0503	-.1037	-.0518	2572.	
.1950	1387.	2108.	-1456.	-1594.	774.	-3196.	-.0048	-.0254	-.0075	.0712	-.0821	-.0391	2463.	
.1960	973.	2720.	-1159.	-966.	767.	-2990.	.0047	-.0314	-.0124	.0930	-.0579	-.0278	2180.	
.1970	686.	3175.	-761.	-165.	780.	-2433.	.0122	-.0369	-.0160	.1141	-.0345	-.0174	1726.	
.1980	283.	3120.	-364.	851.	720.	-1760.	.0171	-.0423	-.0183	.1315	-.0101	-.0097	1404.	
.1990	-281.	3048.	143.	1725.	552.	-1022.	.0192	-.0468	-.0190	.1448	.0166	-.0074	1402.	
.2000	-768.	3225.	668.	2322.	341.	-174.	.0195	-.0500	-.0187	.1547	.0419	-.0093	1586.	
.2010	-1102.	3187.	958.	2854.	113.	638.	.0188	-.0522	-.0185	.1607	.0628	-.0130	1973.	
.2020	-1452.	2924.	1069.	3237.	-163.	1237.	.0176	-.0533	-.0185	.1616	.0815	-.0190	2338.	
.2030	-1846.	2942.	1172.	3173.	-465.	1654.	.0165	-.0529	-.0187	.1585	.0991	-.0275	2432.	
.2040	-2094.	3114.	1143.	2783.	-692.	1967.	.0170	-.0511	-.0198	.1532	.1115	-.0353	2344.	
.2050	-2123.	2963.	888.	2350.	-775.	2120.	.0197	-.0484	-.0224	.1462	.1169	-.0399	2196.	
.2060	-2056.	2627.	662.	1806.	-751.	2049.	.0243	-.0448	-.0262	.1377	.1186	-.0427	1909.	
.2070	-1961.	2358.	623.	1072.	-666.	1794.	.0304	-.0401	-.0306	.1285	.1187	-.0450	1479.	
.2080	-1768.	1945.	550.	356.	-496.	1449.	.0378	-.0351	-.0357	.1193	.1149	-.0449	1060.	
.2090	-1473.	1381.	317.	-268.	-230.	1100.	.0458	-.0300	-.0412	.1199	.1068	-.0423	779.	
.2100	-1216.	1046.	91.	-969.	60.	793.	.0532	-.0250	-.0460	.0999	.0979	-.0400	845.	
.2110	-1081.	912.	-51.	-1685.	292.	521.	.0588	-.0202	-.0495	.0890	.0901	-.0394	1205.	
.2120	-984.	632.	-202.	-2153.	473.	299.	.0621	-.0160	-.0516	.0775	.0819	-.0399	1500.	
.2130	-847.	280.	-326.	-2373.	629.	209.	.0626	-.0123	-.0522	.0662	.0727	-.0417	1661.	
.2140	-753.	105.	-314.	-2497.	721.	285.	.0601	-.0093	-.0506	.0554	.0645	-.0456	1762.	
.2150	-798.	-22.	-212.	-2496.	717.	473.	.0547	-.0070	-.0471	.0451	.0580	-.0515	1779.	
.2160	-900.	-228.	-132.	-2301.	662.	755.	.0468	-.0057	-.0422	.0360	.0520	-.0574	1692.	
.2170	-948.	-308.	-65.	-2005.	599.	1150.	.0373	-.0052	-.0362	.0295	.0455	-.0624	1609.	
.2180	-988.	-200.	14.	-1682.	490.	1569.	.0270	-.0053	-.0296	.0260	.0399	-.0659	1585.	
.2190	-1101.	-85.	57.	-1309.	301.	1863.	.0162	-.0063	-.0228	.0248	.0361	-.0672	1548.	
.2200	-1201.	64.	33.	-926.	83.	2009.	.0061	-.0080	-.0162	.0262	.0333	-.0651	1492.	
.2210	-1157.	372.	-32.	-596.	-110.	2052.	-.0024	-.0102	-.0100	.0306	.0298	-.0589	1442.	
.2220	-994.	666.	-80.	-257.	-286.	1926.	-.0090	-.0126	-.0046	.0375	.0259	-.0488	1324.	
.2230	-790.	733.	-35.	152.	-451.	1551.	-.0137	-.0151	-.0000	.0452	.0224	-.0360	1093.	
.2240	-513.	651.	138.	582.	-562.	1009.	-.0166	-.0173	.0037	.0531	.0183	-.0214	872.	
.2250	-119.	554.	351.	971.	-569.	454.	-.0177	-.0188	.0065	.0606	.0117	-.0055	818.	
.2260	290.	436.	486.	1284.	-478.	-55.	-.0175	-.0196	.0083	.0666	.0023	.0104	924.	
.2270	575.	361.	506.	1434.	-336.	-510.	-.0171	-.0196	.0095	.0695	-.0081	.0237	1050.	
.2280	724.	466.	404.	1347.	-180.	-859.	-.0170	-.0187	.0102	.0686	-.0194	.0330	1084.	
.2290	800.	720.	149.	1076.	-15.	-1067.	-.0178	-.0169	.0108	.0640	-.0322	.0380	1022.	
.2300	823.	985.	-234.	717.	153.	-1173.	-.0195	-.0144	.0115	.0555	-.0462	.0383	933.	
.2310	792.	1222.	-628.	310.	297.	-1223.	-.0224	-.0114	.0126	.0432	-.0602	.0336	874.	

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LOADS
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INTERNAL FORCES IN THE PIPING
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.2210	-1157.	372.	-32.	-596.	-110.	2052.	-.0024	-.0102	-.0100	.0306	.0298	-.0589	1442.
.2220	-992.	666.	-80.	-257.	-286.	1926.	-.0090	-.0126	-.0046	.0375	.0259	-.0488	1324.
.2230	-790.	723.	-35.	152.	-451.	1551.	-.0137	-.0151	-.0000	.0452	.0224	-.0360	1093.
.2240	-513.	651.	138.	502.	-562.	1009.	-.0166	-.0173	.0037	.0531	.0183	-.0214	872.
.2250	-119.	554.	351.	971.	-569.	454.	-.0177	-.0188	.0065	.0606	.0117	-.0055	818.
.2260	290.	436.	486.	1284.	-478.	-55.	-.0175	-.0196	.0083	.0666	.0223	.0104	924.
.2270	575.	361.	506.	1434.	-336.	-510.	-.0171	-.0196	.0095	.0695	-.0081	.0237	1050.
.2280	724.	466.	404.	1347.	-180.	-859.	-.0170	-.0187	.0102	.0686	-.0194	.0330	1084.
.2290	800.	720.	149.	1076.	-15.	-1067.	-.0178	-.0169	.0108	.0640	-.0322	.0380	1022.
.2300	823.	985.	-234.	717.	153.	-1173.	-.0195	-.0144	.0115	.0555	-.0462	.0383	933.
.2310	792.	1222.	-628.	310.	297.	-1223.	-.0224	-.0114	.0126	.0432	-.0602	.0336	874.

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

SECTION	23	MEMBER	2	SEQUENCE	810	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	FX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2320	753.	1394.	-924.	-88.	398.	-1232.	-.0262	-.0081	.0144	.0278	-.0734	.0245	875.		
.2330	781.	1361.	-1074.	-367.	471.	-1225.	-.0306	-.0046	.0170	.0103	-.0861	.0126	919.		
.2340	906.	1035.	-1055.	-463.	532.	-1236.	-.0351	-.0011	.0200	-.0081	-.0977	-.0007	959.		
.2350	1100.	504.	-870.	-426.	560.	-1265.	-.0394	.0024	.0233	-.0262	-.1069	-.0143	976.		
.2360	1297.	-93.	-597.	-347.	533.	-1281.	-.0432	.0059	.0264	-.0429	-.1128	-.0266	964.		
.2370	1439.	-653.	-370.	-296.	463.	-1252.	-.0462	.0091	.0289	-.0578	-.1150	-.0363	921.		
.2380	1495.	-1068.	-282.	-323.	368.	-1137.	-.0480	.0122	.0306	-.0703	-.1133	-.0423	835.		
.2390	1450.	-1261.	-335.	-449.	249.	-919.	-.0483	.0151	.0313	-.0798	-.1078	-.0439	710.		
.2400	1299.	-1290.	-457.	-621.	105.	-631.	-.0472	.0179	.0309	-.0865	-.0980	-.0411	601.		
.2410	1081.	-1294.	-568.	-745.	-36.	-315.	-.0444	.0205	.0296	-.0909	-.0847	-.0342	546.		
.2420	866.	-1351.	-599.	-754.	-150.	18.	-.0400	.0229	.0275	-.0932	-.0689	-.0234	518.		
.2430	684.	-1476.	-494.	-629.	-233.	355.	-.0341	.0251	.0250	-.0937	-.0516	-.0099	512.		
.2440	515.	-1696.	-236.	-378.	-290.	655.	-.0270	.0270	.0222	-.0933	-.0331	.0048	546.		
.2450	357.	-2005.	121.	-27.	-315.	900.	-.0192	.0287	.0191	-.0926	-.0143	.0197	643.		
.2460	214.	-2294.	479.	346.	-311.	1118.	-.0109	.0302	.0158	-.0917	.0033	.0335	816.		
.2470	56.	-2431.	757.	639.	-297.	1319.	-.0027	.0314	.0122	-.0909	.0193	.0451	1008.		
.2480	-183.	-2376.	897.	795.	-279.	1475.	.0051	.0322	.0085	-.0908	.0337	.0533	1145.		
.2490	-488.	-2137.	861.	821.	-244.	1586.	.0124	.0326	.0047	-.0914	.0459	.0577	1215.		
.2500	-777.	-1721.	682.	757.	-181.	1671.	.0192	.0326	.0009	-.0923	.0546	.0589	1243.		
.2510	-1021.	-1230.	479.	672.	-94.	1687.	.0256	.0320	-.0025	-.0937	.0602	.0567	1226.		
.2520	-1219.	-845.	373.	676.	12.	1561.	.0314	.0309	-.0053	-.0956	.0635	.0514	1147.		
.2530	-1311.	-656.	419.	846.	148.	1298.	.0368	.0293	-.0075	-.0976	.0643	.0440	1049.		
.2540	-1235.	-620.	614.	1178.	326.	951.	.0419	.0273	-.0091	-.0993	.0621	.0360	1044.		
.2550	-1046.	-696.	914.	1613.	523.	535.	.0466	.0251	-.0100	-.1007	.0579	.0280	1198.		
.2560	-850.	-830.	1238.	2067.	694.	56.	.0505	.0228	-.0103	-.1020	.0532	.0205	1470.		
.2570	-669.	-882.	1491.	2437.	823.	-416.	.0534	.0206	-.0102	-.1027	.0484	.0144	1756.		
.2580	-489.	-768.	1581.	2660.	917.	-817.	.0553	.0188	-.0100	-.1026	.0432	.0108	1975.		
.2590	-352.	-523.	1471.	2732.	959.	-1146.	.0558	.0174	-.0095	-.1018	.0382	.0099	2099.		
.2600	-298.	-170.	1207.	2653.	922.	-1412.	.0547	.0164	-.0087	-.1008	.0344	.0115	2118.		
.2610	-285.	269.	873.	2457.	810.	-1594.	.0522	.0159	-.0072	-.0995	.0315	.0157	2049.		
.2620	-231.	652.	551.	2261.	660.	-1699.	.0482	.0160	-.0050	-.0982	.0289	.0222	1958.		
.2630	-104.	813.	326.	2183.	483.	-1759.	.0429	.0164	-.0017	-.0973	.0263	.0308	1918.		
.2640	77.	736.	276.	2248.	271.	-1791.	.0361	.0174	.0025	-.0973	.0240	.0402	1946.		
.2650	290.	483.	394.	2415.	30.	-1780.	.0280	.0188	.0078	-.0985	.0218	.0494	2022.		
.2660	512.	106.	574.	2638.	-217.	-1699.	.0187	.0205	.0138	-.1012	.0192	.0578	2120.		
.2670	704.	-296.	708.	2839.	-458.	-1516.	.0084	.0227	.0202	-.1055	.0157	.0649	2191.		
.2680	816.	-592.	752.	2918.	-691.	-1226.	-.0025	.0252	.0266	-.1114	.0114	.0700	2184.		
.2690	829.	-760.	690.	2840.	-906.	-857.	-.0137	.0281	.0328	-.1187	.0064	.0724	2091.		

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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

.2590	-392.	-523.	471.	2732.	959.	-1146.	.0558	.0174	-.0095	-.1018	.0382	.0099	2099.
.2600	-298.	-170.	1207.	2653.	922.	-1412.	.0547	.0164	-.0087	-.1008	.0344	.0115	2118.
.2610	-285.	269.	873.	2457.	810.	-1594.	.0522	.0159	-.0072	-.0995	.0315	.0157	2049.
.2620	-231.	652.	551.	2261.	660.	-1699.	.0482	.0160	-.0050	-.0982	.0289	.0222	1958.
.2630	-104.	813.	326.	2183.	483.	-1759.	.0429	.0164	-.0017	-.0973	.0263	.0308	1918.
.2640	77.	736.	276.	2248.	271.	-1791.	.0361	.0174	.0025	-.0973	.0240	.0402	1946.
.2650	290.	483.	394.	2415.	30.	-1780.	.0280	.0188	.0078	-.0985	.0218	.0494	2022.
.2660	512.	106.	574.	2638.	-217.	-1699.	.0187	.0205	.0138	-.1012	.0192	.0578	2120.
.2670	704.	-296.	708.	2839.	-458.	-1516.	.0084	.0227	.0202	-.1055	.0157	.0649	2191.
.2680	816.	-592.	752.	2918.	-691.	-1226.	-.0025	.0252	.0266	-.1114	.0114	.0700	2184.
.2690	829.	-760.	690.	2840.	-906.	-857.	-.0137	.0281	.0328	-.1187	.0064	.0724	2091.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.27.16.

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	23	MEMBER	2	SEQUENCE	810	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)		
.2700	769.	-878.	514.	2643.	-1080.	-444.	-.0245	.0313	.0383	-.1273	.0001	.0725	1948.		
.2710	683.	-973.	274.	2354.	-1191.	-21.	-.0344	.0347	.0430	-.1366	-.0079	.0707	1778.		
.2720	606.	-1064.	59.	1999.	-1222.	363.	-.0425	.0381	.0467	-.1462	-.0174	.0671	1598.		
.2730	578.	-1251.	-79.	1649.	-1166.	639.	-.0486	.0414	.0495	-.1559	-.0282	.0625	1428.		
.2740	634.	-1602.	-128.	1363.	-1034.	759.	-.0522	.0445	.0511	-.1650	-.0402	.0575	1261.		
.2750	774.	-2040.	-88.	1113.	-844.	711.	-.0534	.0473	.0515	-.1730	-.0526	.0526	1057.		
.2760	958.	-2467.	4.	849.	-616.	505.	-.0522	.0498	.0508	-.1797	-.0547	.0481	785.		
.2770	1153.	-2847.	65.	558.	-365.	178.	-.0489	.0517	.0490	-.1848	-.0760	.0444	465.		
.2780	1335.	-3123.	50.	227.	-105.	-210.	-.0439	.0531	.0461	-.1880	-.0361	.0420	220.		
.2790	1475.	-3231.	-30.	-157.	151.	-603.	-.0378	.0540	.0424	-.1889	-.0944	.0407	432.		
.2800	1538.	-3209.	-151.	-550.	394.	-961.	-.0310	.0543	.0381	-.1875	-.1002	.0403	792.		
.2810	1526.	-3127.	-291.	-885.	617.	-1243.	-.0241	.0541	.0335	-.1839	-.1036	.0410	1109.		
.2820	1468.	-2989.	-398.	-1124.	820.	-1407.	-.0175	.0532	.0290	-.1782	-.1046	.0425	1334.		
.2830	1373.	-2820.	-428.	-1239.	993.	-1445.	-.0115	.0517	.0249	-.1706	-.1028	.0445	1447.		
.2840	1232.	-2686.	-380.	-1193.	1115.	-1382.	-.0066	.0496	.0214	-.1612	-.0982	.0465	1442.		
.2850	1049.	-2581.	-258.	-995.	1170.	-1230.	-.0029	.0469	.0187	-.1506	-.0907	.0482	1326.		
.2860	847.	-2441.	-70.	-696.	1159.	-995.	-.0005	.0435	.0168	-.1388	-.0807	.0495	1131.		
.2870	636.	-2273.	145.	-327.	1091.	-703.	.0007	.0397	.0155	-.1262	-.0589	.0503	902.		
.2880	411.	-2095.	332.	83.	973.	-383.	.0010	.0355	.0146	-.1128	-.0559	.0505	707.		
.2890	175.	-1855.	475.	462.	815.	-56.	.0007	.0311	.0139	-.0986	-.0424	.0500	633.		
.2900	-52.	-1527.	571.	758.	638.	255.	-.0000	.0265	.0132	-.0839	-.0290	.0490	690.		
.2910	-241.	-1184.	604.	981.	459.	508.	-.0006	.0218	.0124	-.0690	-.0166	.0476	806.		
.2920	-370.	-863.	573.	1131.	286.	664.	-.0010	.0171	.0112	-.0538	-.0057	.0459	905.		
.2930	-432.	-533.	509.	1182.	117.	703.	-.0009	.0126	.0096	-.0387	.0037	.0436	930.		
.2940	-426.	-214.	430.	1138.	-49.	607.	-.0003	.0083	.0077	-.0240	.0115	.0404	870.		
.2950	-353.	38.	333.	1039.	-209.	379.	.0007	.0041	.0056	-.0103	.0178	.0367	758.		
.2960	-216.	234.	232.	897.	-355.	50.	.0022	.0001	.0034	.0024	.0225	.0323	651.		
.2970	-43.	411.	153.	711.	-485.	-332.	.0040	-.0036	.0010	.0141	.0259	.0271	622.		
.2980	126.	545.	93.	509.	-594.	-725.	.0059	-.0069	-.0015	.0247	.0285	.0213	719.		
.2990	264.	628.	35.	310.	-672.	-1073.	.0078	-.0098	-.0040	.0344	.0304	.0152	879.		
.3000	353.	726.	-29.	97.	-710.	-1314.	.0096	-.0125	-.0066	.0432	.0317	.0092	1009.		
.3010	372.	876.	-108.	-136.	-711.	-1420.	.0113	-.0148	-.0093	.0516	.0328	.0035	1074.		
.3020	307.	1046.	-208.	-363.	-688.	-1404.	.0127	-.0169	-.0119	.0598	.0341	-.0015	1082.		
.3030	178.	1226.	-316.	-568.	-652.	-1291.	.0139	-.0188	-.0144	.0679	.0359	-.0754	1047.		
.3040	20.	1429.	-413.	-745.	-612.	-1109.	.0149	-.0205	-.0168	.0762	.0382	-.0081	991.		
.3050	-147.	1630.	-488.	-881.	-580.	-905.	.0158	-.0223	-.0190	.0847	.0411	-.0092	937.		
.3060	-303.	1788.	-529.	-955.	-566.	-724.	.0166	-.0242	-.0208	.0936	.0447	-.0089	894.		
.3070	-421.	1893.	-518.	-970.	-568.	-594.	.0174	-.0261	-.0224	.1030	.0486	-.0071	857.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.27.17.

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

.2960	-216.	234.	232.	897.	-355.	50.	.0022	.0001	.0034	.0024	.0225	.0323	651.
.2970	-43.	411.	153.	711.	-485.	-332.	.0040	-.0036	.0010	.0141	.0259	.0271	622.
.2980	126.	545.	93.	509.	-594.	-725.	.0059	-.0069	-.0015	.0247	.0285	.0213	719.
.2990	264.	628.	35.	310.	-672.	-1073.	.0078	-.0098	-.0040	.0344	.0304	.0152	879.
.3000	353.	726.	-29.	97.	-710.	-1314.	.0096	-.0125	-.0066	.0432	.0317	.0092	1009.
.3010	372.	876.	-102.	-136.	-711.	-1420.	.0113	-.0148	-.0093	.0516	.0328	.0035	1074.
.3020	307.	1046.	-208.	-363.	-688.	-1404.	.0127	-.0169	-.0119	.0598	.0341	-.0015	1082.
.3030	178.	1226.	-316.	-568.	-652.	-1291.	.0139	-.0188	-.0144	.0679	.0359	-.0054	1047.
.3040	20.	1429.	-413.	-745.	-612.	-1109.	.0149	-.0205	-.0168	.0762	.0382	-.0081	991.
.3050	-147.	1630.	-488.	-881.	-580.	-905.	.0158	-.0223	-.0190	.0847	.0411	-.0092	937.
.3060	-303.	1788.	-529.	-955.	-566.	-724.	.0166	-.0242	-.0208	.0936	.0447	-.0089	894.
.3070	-421.	1893.	-518.	-970.	-568.	-594.	.0174	-.0261	-.0224	.1030	.0486	-.0071	857.

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DIS/ADLPIPE ADLPIPE STRESS ANALYSIS

83/12/02. 18.27.17.

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	MEMBER	SEQUENCE	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)
.3080								-480.	1942.	-452.	-932.	-580.	-520.	.0183	-.0281	-.0236	.1127	.0524	-.0041	819.
.3090								-491.	1927.	-354.	-853.	-596.	-504.	.0192	-.0301	-.0247	.1227	.0558	-.0001	779.
.3100								-475.	1875.	-249.	-762.	-609.	-525.	.0199	-.0322	-.0255	.1328	.0584	.0042	747.
.3110								-447.	1839.	-162.	-698.	-612.	-551.	.0204	-.0341	-.0262	.1424	.0600	.0082	728.
.3120								-426.	1835.	-120.	-675.	-599.	-556.	.0206	-.0359	-.0268	.1512	.0603	.0114	714.
.3130								-431.	1860.	-130.	-689.	-569.	-529.	.0202	-.0374	-.0271	.1586	.0591	.0132	700.
.3140								-467.	1923.	-177.	-738.	-518.	-461.	.0192	-.0387	-.0272	.1643	.0564	.0130	683.
.3150								-523.	2010.	-240.	-802.	-443.	-348.	.0176	-.0397	-.0270	.1679	.0522	.0106	661.
.3160								-583.	2079.	-299.	-850.	-339.	-200.	.0154	-.0404	-.0264	.1692	.0462	.0059	631.
.3170								-638.	2100.	-328.	-866.	-208.	-34.	.0127	-.0409	-.0255	.1681	.0386	-.0009	601.
.3180								-675.	2067.	-313.	-852.	-54.	131.	.0097	-.0410	-.0242	.1650	.0296	-.0097	582.
.3190								-678.	1976.	-262.	-816.	120.	282.	.0064	-.0407	-.0228	.1601	.0193	-.0199	587.
.3200								-641.	1831.	-204.	-778.	302.	402.	.0031	-.0402	-.0212	.1537	.0080	-.0310	624.
.3210								-574.	1671.	-164.	-778.	476.	480.	-.0003	-.0394	-.0196	.1463	-.0038	-.0424	695.
.3220								-487.	1538.	-166.	-852.	624.	509.	-.0037	-.0384	-.0180	.1384	-.0156	-.0536	790.
.3230								-383.	1440.	-235.	-1004.	734.	487.	-.0070	-.0371	-.0166	.1303	-.0267	-.0640	900.
.3240								-264.	1379.	-372.	-1227.	798.	419.	-.0103	-.0357	-.0153	.1224	-.0369	-.0732	1026.
.3250								-137.	1356.	-546.	-1503.	813.	317.	-.0133	-.0342	-.0141	.1151	-.0455	-.0806	1171.
.3260								-7.	1338.	-721.	-1791.	777.	197.	-.0162	-.0327	-.0130	.1086	-.0520	-.0862	1322.
.3270								121.	1283.	-865.	-2038.	699.	79.	-.0189	-.0312	-.0118	.1032	-.0563	-.0896	1453.
.3280								239.	1182.	-948.	-2215.	597.	-3.	-.0213	-.0299	-.0106	.0992	-.0581	-.0908	1546.
.3290								331.	1041.	-961.	-2306.	482.	-16.	-.0234	-.0287	-.0094	.0967	-.0575	-.0898	1588.
.3300								376.	873.	-914.	-2311.	365.	62.	-.0251	-.0277	-.0083	.0956	-.0546	-.0869	1578.
.3310								357.	708.	-826.	-2245.	253.	242.	-.0264	-.0269	-.0074	.0960	-.0495	-.0824	1531.
.3320								268.	578.	-723.	-2131.	155.	518.	-.0272	-.0264	-.0067	.0976	-.0426	-.0768	1482.
.3330								114.	509.	-636.	-1991.	71.	870.	-.0275	-.0260	-.0064	.1003	-.0343	-.0704	1465.
.3340								-92.	516.	-577.	-1847.	-1.	1259.	-.0272	-.0260	-.0065	.1037	-.0249	-.0638	1507.
.3350								-327.	594.	-538.	-1711.	-62.	1637.	-.0261	-.0261	-.0070	.1074	-.0150	-.0575	1597.
.3360								-556.	713.	-505.	-1573.	-109.	1952.	-.0242	-.0266	-.0079	.1111	-.0051	-.0520	1691.
.3370								-744.	832.	-462.	-1415.	-141.	2162.	-.0214	-.0272	-.0092	.1145	.0043	-.0474	1744.
.3380								-871.	937.	-391.	-1235.	-156.	2238.	-.0177	-.0280	-.0108	.1173	.0128	-.0442	1726.
.3390								-932.	1031.	-292.	-1044.	-152.	2173.	-.0133	-.0290	-.0128	.1193	.0202	-.0425	1628.
.3400								-934.	1123.	-186.	-853.	-131.	1980.	-.0080	-.0301	-.0149	.1205	.0262	-.0423	1456.
.3410								-893.	1236.	-100.	-679.	-93.	1687.	-.0023	-.0314	-.0173	.1207	.0309	-.0435	1228.
.3420								-831.	1402.	-50.	-541.	-44.	1328.	.0037	-.0326	-.0199	.1202	.0346	-.0462	967.
.3430								-773.	1628.	-48.	-443.	10.	939.	.0097	-.0338	-.0225	.1189	.0375	-.0500	700.
.3440								-732.	1904.	-96.	-377.	63.	557.	.0154	-.0351	-.0251	.1170	.0399	-.0545	455.
.3450								-714.	2215.	-174.	-323.	113.	217.	.0208	-.0362	-.0274	.1147	.0421	-.0594	273.

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DIS/ADLPIPE ADLPIPE STRESS ANALYSIS

83/12/02. 18.27.17.

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

.3350	-327.	594.	-538.	-1711.	-62.	1637.	-.0261	-.0261	-.0070	.1074	-.0150	-.0575	1597.
.3350	-556.	713.	-505.	-1573.	-109.	1952.	-.0242	-.0266	-.0079	.1111	-.0051	-.0520	1691.
.3370	-744.	832.	-462.	-1415.	-141.	2162.	-.0214	-.0272	-.0092	.1145	.0043	-.0474	1744.
.3380	-871.	937.	-391.	-1235.	-156.	2238.	-.0177	-.0280	-.0108	.1173	.0128	-.0442	1726.
.3390	-932.	1031.	-292.	-1044.	-152.	2173.	-.0133	-.0290	-.0128	.1193	.0202	-.0425	1628.
.3400	-934.	1123.	-186.	-853.	-131.	1980.	-.0080	-.0301	-.0149	.1205	.0262	-.0423	1456.
.3410	-893.	1236.	-100.	-679.	-93.	1687.	-.0023	-.0314	-.0173	.1207	.0309	-.0435	1228.
.3420	-831.	1402.	-50.	-541.	-44.	1328.	.0037	-.0326	-.0199	.1202	.0346	-.0462	967.
.3430	-773.	1628.	-48.	-443.	10.	919.	.0097	-.0338	-.0225	.1189	.0375	-.0500	700.
.3440	-732.	1904.	-96.	-377.	63.	557.	.0154	-.0351	-.0251	.1170	.0399	-.0545	455.
.3450	-714.	2215.	-174.	-323.	113.	217.	.0208	-.0362	-.0274	.1147	.0421	-.0594	273.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.27.17.

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	23	MEMBER	2	SEQUENCE	810	LOCATION	END	TYPE	EL					
TIME	FX	FY	FZ	RX	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	-718.	2524.	-249.	-255.	159.	-60.	.0255	-.0373	-.0294	.1122	.0445	-.0643	207.	
.3470	-739.	2778.	-285.	-135.	198.	-260.	.0295	-.0383	-.0309	.1096	.0473	-.0688	239.	
.3480	-765.	2934.	-256.	63.	231.	-377.	.0327	-.0391	-.0318	.1070	.0504	-.0723	301.	
.3490	-790.	2984.	-152.	338.	257.	-404.	.0350	-.0397	-.0320	.1043	.0539	-.0747	395.	
.3500	-819.	2934.	14.	670.	271.	-344.	.0364	-.0400	-.0316	.1015	.0578	-.0759	540.	
.3510	-860.	2804.	211.	1027.	271.	-204.	.0368	-.0398	-.0306	.0983	.0520	-.0757	729.	
.3520	-910.	2629.	406.	1366.	253.	9.	.0364	-.0392	-.0291	.0945	.0560	-.0743	936.	
.3530	-970.	2439.	565.	1644.	216.	274.	.0350	-.0379	-.0273	.0897	.0698	-.0716	1133.	
.3540	-1043.	2248.	670.	1834.	157.	569.	.0329	-.0360	-.0251	.0838	.0730	-.0681	1298.	
.3550	-1120.	2059.	715.	1918.	79.	866.	.0301	-.0333	-.0228	.0766	.0753	-.0639	1420.	
.3560	-1183.	1868.	709.	1896.	-6.	1147.	.0269	-.0300	-.0204	.0679	.0764	-.0593	1494.	
.3570	-1216.	1657.	666.	1784.	-88.	1389.	.0235	-.0260	-.0180	.0578	.0759	-.0543	1525.	
.3580	-1214.	1408.	604.	1600.	-159.	1575.	.0200	-.0215	-.0157	.0464	.0737	-.0493	1517.	
.3590	-1180.	1121.	538.	1361.	-212.	1694.	.0168	-.0166	-.0134	.0340	.0698	-.0444	1472.	
.3600	-1110.	808.	471.	1080.	-238.	1749.	.0139	-.0115	-.0114	.0209	.0542	-.0397	1395.	
.3610	-1011.	481.	399.	774.	-231.	1748.	.0114	-.0063	-.0095	.0076	.0570	-.0351	1298.	
.3620	-896.	159.	316.	453.	-191.	1698.	.0093	-.0012	-.0078	-.0055	.0485	-.0307	1192.	
.3630	-778.	-139.	225.	127.	-120.	1610.	.0077	.0036	-.0063	-.0181	.0388	-.0265	1091.	
.3640	-661.	-408.	128.	-185.	-21.	1492.	.0065	.0080	-.0050	-.0296	.0284	-.0227	1014.	
.3650	-540.	-652.	37.	-458.	100.	1354.	.0055	.0119	-.0037	-.0400	.0174	-.0189	966.	
.3660	-414.	-879.	-33.	-672.	238.	1199.	.0047	.0152	-.0025	-.0490	.0062	-.0153	940.	
.3670	-281.	-1093.	-69.	-813.	379.	1026.	.0039	.0179	-.0011	-.0566	-.0050	-.0119	919.	
.3680	-138.	-1301.	-68.	-872.	513.	838.	.0029	.0200	.0006	-.0628	-.0157	-.0085	885.	
.3690	12.	-1491.	-38.	-856.	625.	640.	.0015	.0215	.0025	-.0678	-.0258	-.0053	835.	
.3700	164.	-1646.	9.	-734.	706.	439.	-.0003	.0225	.0047	-.0717	-.0349	-.0022	770.	
.3710	309.	-1750.	54.	-674.	747.	241.	-.0026	.0230	.0072	-.0746	-.0429	.0009	697.	
.3720	443.	-1796.	80.	-542.	746.	56.	-.0056	.0233	.0099	-.0768	-.0496	.0039	623.	
.3730	559.	-1780.	81.	-405.	701.	-110.	-.0090	.0232	.0128	-.0783	-.0550	.0071	551.	
.3740	654.	-1705.	57.	-273.	618.	-251.	-.0128	.0230	.0157	-.0793	-.0590	.0104	480.	
.3750	731.	-1587.	12.	-148.	506.	-363.	-.0169	.0227	.0187	-.0797	-.0618	.0140	431.	
.3760	796.	-1444.	-44.	-28.	373.	-449.	-.0210	.0224	.0215	-.0797	-.0635	.0178	394.	
.3770	853.	-1297.	-97.	90.	228.	-514.	-.0250	.0220	.0242	-.0793	-.0540	.0219	384.	
.3780	905.	-1166.	-138.	209.	78.	-568.	-.0286	.0216	.0266	-.0786	-.0636	.0261	412.	
.3790	951.	-1056.	-168.	323.	-71.	-617.	-.0317	.0213	.0287	-.0776	-.0624	.0303	472.	
.3800	992.	-960.	-191.	423.	-211.	-660.	-.0342	.0210	.0303	-.0764	-.0604	.0344	547.	
.3810	1027.	-876.	-209.	499.	-337.	-702.	-.0358	.0206	.0315	-.0750	-.0579	.0383	623.	
.3820	1052.	-813.	-222.	553.	-444.	-745.	-.0366	.0204	.0322	-.0735	-.0549	.0418	694.	
.3830	1068.	-774.	-230.	585.	-531.	-794.	-.0366	.0201	.0324	-.0720	-.0517	.0447	755.	

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.3730	559.	-1780.	81.	-405.	701.	-110.	-.0090	.0232	.0128	-.0783	-.0550	.0071	551.
.3740	654.	-1705.	57.	-273.	618.	-251.	-.0128	.0230	.0157	-.0793	-.0590	.0104	486.
.3750	731.	-1587.	12.	-148.	506.	-363.	-.0169	.0227	.0187	-.0797	-.0618	.0140	431.
.3760	796.	-1444.	-44.	-28.	373.	-449.	-.0210	.0224	.0215	-.0797	-.0635	.0178	394.
.3770	853.	-1297.	-97.	90.	228.	-514.	-.0250	.0220	.0242	-.0793	-.0640	.0219	384.
.3780	905.	-1166.	-138.	209.	78.	-568.	-.0286	.0216	.0266	-.0786	-.0636	.0261	412.
.3790	951.	-1056.	-168.	323.	-71.	-617.	-.0317	.0213	.0287	-.0776	-.0624	.0303	472.
.3800	992.	-960.	-191.	423.	-211.	-660.	-.0342	.0210	.0303	-.0764	-.0604	.0344	547.
.3810	1027.	-876.	-209.	499.	-337.	-702.	-.0358	.0206	.0315	-.0750	-.0579	.0383	623.
.3820	1052.	-813.	-222.	553.	-444.	-745.	-.0366	.0204	.0322	-.0735	-.0549	.0418	694.
.3830	1068.	-774.	-230.	585.	-531.	-794.	-.0366	.0201	.0324	-.0720	-.0517	.0447	755.

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

SECTION	23	MEMBER	2	SEQUENCE	810	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	1074.	-753.	-228.	592.	-594.	-847.	-.0356	.0199	.0319	-.0705	-.0481	.0469	803.		
.3850	1068.	-746.	-221.	573.	-631.	-902.	-.0338	.0197	.0310	-.0691	-.0444	.0485	836.		
.3860	1050.	-750.	-212.	532.	-644.	-956.	-.0311	.0196	.0296	-.0678	-.0405	.0495	856.		
.3870	1016.	-754.	-201.	472.	-636.	-1009.	-.0277	.0195	.0277	-.0666	-.0365	.0500	865.		
.3880	965.	-749.	-187.	399.	-610.	-1064.	-.0236	.0195	.0253	-.0655	-.0321	.0501	869.		
.3890	896.	-734.	-174.	322.	-572.	-1119.	-.0189	.0194	.0226	-.0643	-.0273	.0501	875.		
.3900	810.	-699.	-163.	249.	-523.	-1171.	-.0138	.0193	.0196	-.0630	-.0221	.0501	881.		
.3910	709.	-639.	-148.	187.	-464.	-1216.	-.0082	.0190	.0164	-.0615	-.0164	.0506	886.		
.3920	597.	-564.	-121.	150.	-398.	-1254.	-.0023	.0187	.0131	-.0596	-.0103	.0516	892.		
.3930	478.	-493.	-77.	151.	-326.	-1287.	.0038	.0183	.0097	-.0572	-.0039	.0532	900.		
.3940	358.	-429.	-16.	191.	-248.	-1310.	.0099	.0177	.0063	-.0542	.0027	.0556	908.		
.3950	242.	-363.	59.	263.	-165.	-1319.	.0158	.0170	.0030	-.0505	.0092	.0587	913.		
.3960	134.	-303.	144.	361.	-82.	-1314.	.0214	.0162	-.0000	-.0464	.0156	.0623	920.		
.3970	37.	-255.	234.	481.	-6.	-1303.	.0265	.0153	-.0027	-.0421	.0215	.0662	936.		
.3980	-45.	-219.	323.	613.	56.	-1290.	.0307	.0144	-.0050	-.0377	.0269	.0701	963.		
.3990	-109.	-188.	403.	740.	98.	-1276.	.0340	.0135	-.0067	-.0336	.0315	.0735	997.		
.4000	-157.	-162.	467.	851.	118.	-1262.	.0361	.0127	-.0078	-.0300	.0351	.0761	1029.		

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)
.1080	377.	2598.	3126.	7991.	2308.	-4881.	.0855	-.0488	-.0228	.0349	.0226	-.0535	6501.

SECTION	24	MEMBER	1	SEQUENCE	810	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)		
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.		
.0010	-1.	1.	-2.	-3.	1.	2.	-.0000	-.0000	-.0000	-.0000	.0000	.0000	2.		
.0020	-7.	3.	-3.	-16.	4.	12.	-.0000	-.0000	-.0000	-.0000	.0001	.0000	14.		
.0030	-14.	-15.	-8.	-28.	13.	27.	-.0001	-.0001	-.0001	-.0001	.0002	-.0000	28.		
.0040	-15.	-69.	10.	-37.	26.	44.	-.0002	-.0002	-.0000	-.0002	.0006	-.0001	43.		
.0050	-12.	-154.	37.	-55.	43.	68.	-.0002	-.0004	-.0000	-.0004	.0010	-.0001	66.		
.0060	-10.	-255.	60.	-99.	59.	102.	-.0003	-.0007	.0000	-.0005	.0015	-.0002	104.		
.0070	-18.	-366.	66.	-184.	81.	157.	-.0003	-.0012	.0001	-.0006	.0023	-.0002	172.		

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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	-1.	1.	-2.	-3.	1.	2.	-0.0000	-0.0000	-0.0000	-0.0000	.0000	.0000	2.
.0020	-7.	3.	-3.	-16.	4.	12.	-0.0000	-0.0000	-0.0000	-0.0000	.0001	.0000	14.
.0030	-14.	-15.	-8.	-28.	13.	27.	-0.0001	-0.0001	-0.0001	-0.0001	.0002	-0.0000	28.
.0040	-15.	-69.	10.	-37.	26.	44.	-0.0002	-0.0002	-0.0000	-0.0002	.0006	-0.0001	43.
.0050	-12.	-154.	37.	-55.	43.	68.	-0.0002	-0.0004	-0.0000	-0.0004	.0010	-0.0001	66.
.0060	-10.	-255.	60.	-99.	59.	102.	-0.0003	-0.0007	.0000	-0.0005	.0015	-0.0002	104.
.0070	-18.	-366.	66.	-124.	81.	157.	-0.0003	-0.0012	.0001	-0.0006	.0023	-0.0002	172.

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INTERNAL FORCES IN THE PIPING
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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)
24	1	810					.0080	-45.	-508.	61.	-315.	129.	252.	-0.0004	-0.0019	.0002	-0.0007	.0036	-0.0004	285.
							.0090	-80.	-742.	96.	-452.	218.	381.	-0.0005	-0.0028	.0004	-0.0010	.0062	-0.0009	425.
							.0100	-113.	-1023.	136.	-589.	346.	523.	-0.0007	-0.0040	.0009	-0.0015	.0102	-0.0017	584.
							.0110	-145.	-1457.	275.	-780.	502.	697.	-0.0007	-0.0055	.0016	-0.0021	.0156	-0.0028	782.
							.0120	-181.	-1780.	303.	-1059.	660.	851.	-0.0004	-0.0071	.0023	-0.0025	.0223	-0.0039	1018.
							.0130	-206.	-2012.	246.	-1421.	789.	953.	.0005	-0.0088	.0030	-0.0027	.0299	-0.0051	1270.
							.0140	-181.	-2135.	109.	-1845.	847.	945.	.0022	-0.0103	.0036	-0.0026	.0380	-0.0062	1509.
							.0150	-69.	-2116.	-111.	-2301.	796.	780.	.0050	-0.0115	.0038	-0.0023	.0453	-0.0065	1724.
							.0160	139.	-1926.	-402.	-2718.	620.	434.	.0088	-0.0121	.0034	-0.0017	.0510	-0.0062	1902.
							.0170	391.	-1521.	-753.	-3036.	380.	-34.	.0134	-0.0116	.0024	-0.0015	.0555	-0.0057	2063.
							.0180	596.	-884.	-1138.	-3228.	187.	-493.	.0181	-0.0100	.0008	-0.0030	.0605	-0.0057	2204.
							.0190	698.	-88.	-1495.	-3257.	122.	-834.	.0223	-0.0072	-0.0015	-0.0073	.0669	-0.0064	2267.
							.0200	668.	708.	-1758.	-3127.	285.	-958.	.0256	-0.0034	-0.0044	-0.0152	.0757	-0.0080	2213.
							.0210	630.	1074.	-1627.	-2542.	671.	-986.	.0281	.0014	-0.0071	-0.0264	.0878	-0.0105	1893.
							.0220	731.	854.	-957.	-1394.	989.	-1113.	.0312	.0070	-0.0092	-0.0407	.1017	-0.0136	1375.
							.0230	908.	305.	-418.	-466.	1049.	-1279.	.0356	.0128	-0.0120	-0.0567	.1120	-0.0135	1158.
							.0240	1247.	1350.	-447.	25.	657.	-1731.	.0424	.0193	-0.0164	-0.0690	.1112	-0.0075	1248.
							.0250	1589.	2465.	-974.	285.	104.	-2352.	.0502	.0267	-0.0215	-0.0765	.1044	.0015	1599.
							.0260	1596.	3904.	-1665.	364.	-206.	-2597.	.0563	.0336	-0.0265	-0.0843	.1032	.0084	1773.
							.0270	1750.	4765.	-1917.	733.	-818.	-2895.	.0622	.0393	-0.0312	-0.0915	.0982	.0150	2087.
							.0280	2689.	4661.	-1697.	1513.	-1976.	-3903.	.0698	.0442	-0.0357	-0.0918	.0704	.0294	3120.
							.0290	3557.	4424.	-1403.	2346.	-2678.	-4679.	.0779	.0479	-0.0388	-0.0889	.0361	.0444	3963.
							.0300	2835.	4735.	-1014.	3216.	-2457.	-3709.	.0684	.0503	-0.0381	-0.0946	.0293	.0395	3700.
							.0310	1645.	4968.	-523.	4176.	-2121.	-2283.	.0582	.0518	-0.0343	-0.1004	.0226	.0272	3512.
							.0320	1208.	4916.	-336.	4516.	-1987.	-1579.	.0476	.0515	-0.0294	-0.0988	-0.0124	.0263	3492.
							.0330	754.	4626.	8.	4641.	-1625.	-861.	.0328	.0489	-0.0217	-0.0976	-0.0478	.0226	3365.
							.0340	-543.	4191.	903.	5240.	-838.	479.	.0110	.0451	-0.0093	-0.1013	-0.0567	.0007	3592.
							.0350	-1819.	4040.	1399.	5400.	-131.	1506.	-0.0127	.0407	.0038	-0.0997	-0.0569	-0.0209	3780.
							.0360	-2272.	4236.	946.	4393.	126.	1516.	-0.0340	.0349	.0140	-0.0863	-0.1004	-0.0264	3134.
							.0370	-2574.	3983.	701.	3398.	313.	1242.	-0.0560	.0278	.0240	-0.0698	-0.1260	-0.0327	2448.
							.0380	-3058.	2607.	1549.	3355.	754.	1090.	-0.0797	.0194	.0357	-0.0554	-0.1238	-0.0500	2431.
							.0390	-2839.	523.	2610.	3280.	1126.	346.	-0.0994	.0096	.0458	-0.0352	-0.1243	-0.0578	2349.
							.0400	-2114.	-1203.	2876.	2200.	1391.	-650.	-0.1134	-0.0018	.0523	-0.0072	-0.1373	-0.0491	1808.
							.0410	-2124.	-2363.	2814.	1003.	1632.	-796.	-0.1246	-0.0130	.0577	.0209	-0.1335	-0.0453	1398.
							.0420	-2786.	-3152.	2662.	-32.	2081.	-129.	-0.1328	-0.0240	.0625	-0.0480	-0.1108	-0.0477	1406.
							.0430	-3101.	-3738.	2145.	-1551.	2617.	610.	-0.1345	-0.0360	.0642	.0775	-0.0939	-0.0394	2091.
							.0440	-2891.	-4674.	1821.	-2860.	2887.	1135.	-0.1285	-0.0482	.0635	.1084	-0.0328	-0.0239	2844.
							.0450	-2702.	-5751.	1875.	-3384.	2823.	1698.	-0.1172	-0.0586	.0611	.1374	-0.0643	-0.0138	3183.

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.0350	-1819.	4040.	1399.	5400.	-131.	1506.	-.0127	.0407	.0038	-.0997	-.0569	-.0209	3780.
.0360	-2272.	4236.	946.	4393.	126.	1516.	-.0340	.0349	.0140	-.0863	-.1004	-.0264	3134.
.0370	-2574.	3983.	701.	3398.	313.	1242.	-.0560	.0278	.0240	-.0698	-.1260	-.0327	2448.
.0380	-3058.	2607.	1549.	3355.	754.	1090.	-.0797	.0194	.0357	-.0554	-.1238	-.0500	2431.
.0390	-2839.	523.	2610.	3280.	1126.	346.	-.0994	.0096	.0458	-.0352	-.1243	-.0578	2349.
.0400	-2114.	-1203.	2876.	2200.	1391.	-650.	-.1134	-.0018	.0523	-.0072	-.1373	-.0491	1808.
.0410	-2124.	-2363.	2814.	1003.	1632.	-796.	-.1246	-.0130	.0577	.0209	-.1335	-.0453	1398.
.0420	-2786.	-3152.	2662.	-32.	2081.	-129.	-.1328	-.0240	.0625	.0480	-.1108	-.0477	1406.
.0430	-3101.	-3738.	2145.	-1551.	2617.	610.	-.1345	-.0360	.0642	.0775	-.0939	-.0394	2091.
.0440	-2891.	-4674.	1821.	-2860.	2887.	1135.	-.1285	-.0482	.0635	.1084	-.0828	-.0239	2844.
.0450	-2702.	-5751.	1875.	-3364.	2823.	1698.	-.1172	-.0586	.0611	.1374	-.0643	-.0138	3183.

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SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	EL								STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0460	-2632.	-5876.	1326.	-4119.	2467.	2332.	-.1016	-.0670	.0547	.1651	-.0479	-.0051	3598.	
.0470	-2296.	-5034.	-20.	-5314.	1827.	2650.	-.0815	-.0732	.0433	.1927	-.0458	.0083	4187.	
.0480	-1756.	-4405.	-949.	-5682.	1071.	2641.	-.0598	-.0763	.0304	.2147	-.0449	.0159	4285.	
.0490	-1250.	-4482.	-888.	-4879.	406.	2624.	-.0391	-.0768	.0180	.2242	-.0340	.0110	3744.	
.0500	-491.	-4836.	-482.	-3792.	-232.	2395.	-.0190	-.0754	.0050	.2232	-.0281	.0037	3027.	
.0510	513.	-5065.	-164.	-2659.	-933.	1818.	.0008	-.0712	-.0082	.2155	-.0340	-.0029	2260.	
.0520	972.	-4744.	65.	-1320.	-1341.	1565.	.0172	-.0639	-.0193	.1983	-.0325	-.0185	1650.	
.0530	614.	-3535.	20.	-186.	-1267.	1980.	.0285	-.0547	-.0283	.1702	-.0158	-.0436	1590.	
.0540	359.	-1941.	-293.	620.	-1269.	2151.	.0390	-.0445	-.0369	.1394	-.0038	-.0643	1734.	
.0550	852.	-737.	-485.	1589.	-1742.	1354.	.0513	-.0332	-.0453	.1139	-.0062	-.0742	1833.	
.0560	1503.	194.	-447.	2767.	-2194.	251.	.0623	-.0219	-.0532	.0911	-.0051	-.0801	2386.	
.0570	1761.	1241.	-397.	3810.	-2255.	-497.	.0695	-.0114	-.0605	.0690	.0113	-.0859	3003.	
.0580	2103.	2084.	-391.	4707.	-2354.	-1372.	.0756	-.0020	-.0679	.0540	.0281	-.0846	3666.	
.0590	2943.	2319.	-314.	5522.	-2697.	-2724.	.0824	.0060	-.0752	.0496	.0344	-.0710	4531.	
.0600	3733.	2079.	-22.	6182.	-2761.	-3844.	.0870	.0111	-.0804	.0496	.0448	-.0531	5248.	
.0610	3931.	1643.	501.	6683.	-2242.	-4172.	.0870	.0132	-.0816	.0494	.0711	-.0396	5521.	
.0620	3802.	1281.	858.	6804.	-1606.	-4121.	.0847	.0129	-.0793	.0529	.0987	-.0270	5470.	
.0630	3595.	1482.	461.	5999.	-1142.	-4007.	.0819	.0107	-.0753	.0632	.1135	-.0098	4923.	
.0640	3020.	2314.	-537.	4400.	-571.	-3536.	.0763	.0064	-.0695	.0759	.1260	.0051	3824.	
.0650	2103.	2997.	-1316.	2904.	170.	-2776.	.0671	.0006	-.0614	.0876	.1457	.0101	2710.	
.0660	1543.	2830.	-1549.	1839.	695.	-2410.	.0568	-.0064	-.0526	.1012	.1588	.0112	2096.	
.0670	1644.	1863.	-1479.	902.	925.	-2655.	.0467	-.0147	-.0453	.1186	.1553	.0144	1990.	
.0680	1810.	358.	-1053.	269.	1225.	-2889.	.0349	-.0237	-.0388	.1351	.1501	.0119	2123.	
.0690	1612.	-1547.	-150.	202.	1717.	-2686.	.0210	-.0328	-.0317	.1478	.1538	-.0019	2153.	
.0700	1404.	-3529.	772.	138.	2141.	-2306.	.0083	-.0420	-.0249	.1586	.1526	-.0175	2123.	
.0710	1391.	-5198.	1270.	-443.	2337.	-1914.	-.0008	-.0515	-.0188	.1688	.1377	-.0277	2058.	
.0720	1126.	-6323.	1425.	-1296.	2389.	-1154.	-.0071	-.0603	-.0120	.1752	.1214	-.0389	1990.	
.0730	368.	-6626.	1174.	-2366.	2346.	152.	-.0112	-.0678	-.0047	.1766	.1093	-.0530	2248.	
.0740	-474.	-5970.	230.	-3939.	2105.	1598.	-.0119	-.0737	.0011	.1764	.0897	-.0611	3197.	
.0750	-1073.	-4855.	-1035.	-5545.	1607.	2786.	-.0091	-.0771	.0043	.1763	.0602	-.0611	4321.	
.0760	-1516.	-4050.	-1802.	-6298.	1005.	3748.	-.0054	-.0776	.0059	.1733	.0327	-.0603	4986.	
.0770	-1744.	-3905.	-1788.	-6042.	485.	4469.	-.0024	-.0755	.0056	.1656	.0100	-.0590	5076.	
.0780	-1515.	-4398.	-1175.	-5064.	78.	4710.	-.0001	-.0710	.0034	.1547	-.0147	-.0526	4662.	
.0790	-996.	-5323.	-88.	-3428.	-255.	4515.	.0009	-.0639	.0005	.1406	-.0394	-.0437	3825.	
.0800	-636.	-6108.	1158.	-1478.	-489.	4259.	-.0003	-.0545	-.0012	.1209	-.0574	-.0368	3056.	
.0810	-572.	-6049.	1948.	27.	-567.	4086.	-.0037	-.0436	-.0012	.0962	-.0710	-.0298	2781.	
.0820	-687.	-4971.	2036.	839.	-550.	3827.	-.0083	-.0315	.0008	.0691	-.0846	-.0205	2667.	
.0830	-985.	-3152.	1677.	1254.	-548.	3428.	-.0139	-.0185	.0054	.0404	-.0950	-.0121	2488.	

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.0720	1126.	-8323.	1423.	-1296.	2389.	-1154.	-.0071	-.0603	-.0120	.1752	.1214	-.0389	1990.
.0730	368.	-6026.	1174.	-2366.	2346.	152.	-.0112	-.0678	-.0047	.1766	.1093	-.0530	2248.
.0740	-474.	-5970.	230.	-3939.	2105.	1598.	-.0119	-.0737	.0011	.1764	.0897	-.0611	3197.
.0750	-1073.	-4855.	-1035.	-5545.	1607.	2786.	-.0091	-.0771	.0043	.1763	.0502	-.0611	4321.
.0760	-1516.	-4050.	-1002.	-6298.	1005.	3748.	-.0054	-.0776	.0059	.1733	.0327	-.0603	4986.
.0770	-1744.	-3905.	-1788.	-6042.	485.	4469.	-.0024	-.0755	.0056	.1656	.0100	-.0590	5076.
.0780	-1515.	-4398.	-1175.	-5064.	78.	4710.	-.0001	-.0710	.0034	.1547	-.0147	-.0526	4662.
.0790	-996.	-5323.	-88.	-3428.	-255.	4515.	.0009	-.0639	.0005	.1406	-.0394	-.0437	3825.
.0800	-636.	-6108.	1158.	-1478.	-489.	4259.	-.0003	-.0545	-.0012	.1209	-.0574	-.0368	3056.
.0810	-572.	-6049.	1948.	27.	-567.	4086.	-.0037	-.0436	-.0012	.0962	-.0710	-.0298	2781.
.0820	-687.	-4971.	2030.	839.	-550.	3827.	-.0083	-.0315	.0008	.0691	-.0346	-.0205	2667.
.0830	-985.	-3152.	1677.	1254.	-548.	3428.	-.0139	-.0185	.0054	.0404	-.0950	-.0121	2488.

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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)	
.0840	-1442.	-810.	1021.	1323.	-568.	2946.	-.0208	-.0052	.0116	.0101	-.1004	-.0051	2210.	
.0850	-1822.	1736.	173.	1108.	-535.	2251.	-.0285	.0077	.0177	-.0192	-.1041	.0034	1729.	
.0860	-1942.	3831.	-421.	1166.	-444.	1189.	-.0367	.0206	.0229	-.0451	-.1057	.0126	1162.	
.0870	-1812.	4994.	-380.	1840.	-326.	-129.	-.0454	.0329	.0269	-.0685	-.1019	.0197	1262.	
.0880	-1420.	5243.	201.	2846.	-158.	-1539.	-.0539	.0435	.0293	-.0900	-.0948	.0265	2184.	
.0890	-787.	4799.	1100.	3979.	92.	-2962.	-.0611	.0523	.0303	-.1085	-.0874	.0339	3344.	
.0900	-208.	4089.	2081.	5153.	398.	-4156.	-.0664	.0595	.0313	-.1239	-.0774	.0389	4470.	
.0910	-10.	3855.	2615.	5808.	677.	-4781.	-.0695	.0649	.0326	-.1377	-.0645	.0403	5091.	
.0920	-177.	4572.	2245.	5419.	813.	-4839.	-.0693	.0680	.0336	-.1493	-.0549	.0411	4927.	
.0930	-511.	5941.	1172.	4288.	759.	-4598.	-.0656	.0695	.0343	-.1573	-.0508	.0411	4268.	
.0940	-933.	7353.	-43.	3012.	617.	-4155.	-.0595	.0696	.0348	-.1630	-.0470	.0368	3484.	
.0950	-1322.	8349.	-1035.	1838.	472.	-3559.	-.0524	.0679	.0340	-.1678	-.0414	.0278	2718.	
.0960	-1368.	8477.	-1557.	1022.	244.	-3128.	-.0440	.0646	.0308	-.1697	-.0382	.0169	2224.	
.0970	-918.	7430.	-1405.	887.	-111.	-3092.	-.0344	.0604	.0251	-.1668	-.0384	.0045	2169.	
.0980	-201.	5429.	-677.	1277.	-450.	-3211.	-.0246	.0548	.0175	-.1605	-.0369	-.0109	2349.	
.0990	555.	2970.	282.	1716.	-698.	-3213.	-.0146	.0474	.0088	-.1523	-.0313	-.0283	2500.	
.1000	1365.	427.	1137.	1910.	-1044.	-3174.	-.0031	.0382	.0001	-.1400	-.0264	-.0444	2594.	
.1010	2167.	-1741.	1522.	1563.	-1625.	-3090.	.0111	.0277	-.0078	-.1223	-.0261	-.0562	2578.	
.1020	2630.	-2964.	1110.	316.	-2273.	-2601.	.0270	.0156	-.0143	-.1008	-.0268	-.0638	2338.	
.1030	2545.	-3138.	-34.	-1718.	-2776.	-1506.	.0427	.0024	-.0188	-.0777	-.0235	-.0693	2423.	
.1040	2113.	-2758.	-1476.	-3967.	-3139.	-74.	.0577	-.0107	-.0213	-.0527	-.0175	-.0723	3410.	
.1050	1642.	-2344.	-2817.	-6020.	-3380.	1372.	.0711	-.0232	-.0228	-.0265	-.0122	-.0709	4744.	
.1060	1227.	-2238.	-3718.	-7561.	-3361.	2729.	.0811	-.0343	-.0236	-.0016	-.0058	-.0657	5873.	
.1070	845.	-2685.	-3865.	-8181.	-3008.	3917.	.0861	-.0431	-.0235	.0192	.0059	-.0599	6441.	
.1080	473.	-3534.	-3395.	-7991.	-2308.	4881.	.0855	-.0488	-.0228	.0349	.0226	-.0535	6501.	
.1090	20.	-4477.	-2647.	-7445.	-1179.	5719.	.0790	-.0516	-.0216	.0439	.0444	-.0456	6378.	
.1100	4.	-6021.	-1190.	-5935.	-299.	5653.	.0703	-.0504	-.0179	.0481	.0644	-.0360	5529.	
.1110	239.	-7022.	19.	-4719.	452.	5025.	.0602	-.0467	-.0130	.0465	.0790	-.0196	4657.	
.1120	165.	-6444.	227.	-4481.	1248.	4405.	.0480	-.0408	-.0077	.0388	.0930	.0012	4318.	
.1130	-235.	-4810.	-116.	-4303.	1928.	3604.	.0350	-.0310	-.0010	.0285	.1103	.0197	4000.	
.1140	-550.	-2778.	-693.	-4127.	2336.	2456.	.0231	-.0188	.0061	.0161	.1240	.0400	3600.	
.1150	-599.	-665.	-1403.	-4392.	2588.	1233.	.0128	-.0066	.0116	-.0014	.1305	.0667	3535.	
.1160	-501.	840.	-1592.	-4173.	2860.	36.	.0033	.0058	.0157	-.0226	.1388	.0915	3410.	
.1170	-155.	1288.	-917.	-2691.	3146.	-1402.	-.0046	.0197	.0190	-.0428	.1491	.1100	2946.	
.1180	435.	1330.	-38.	-966.	2966.	-2882.	-.0089	.0332	.0195	-.0629	.1500	.1266	2862.	
.1190	1246.	1816.	222.	-80.	2507.	-4171.	-.0092	.0447	.0164	-.0817	.1318	.1481	3280.	
.1200	1667.	2673.	261.	831.	2135.	-4875.	-.0081	.0555	.0127	-.0995	.1117	.1608	3631.	
.1210	1204.	3705.	423.	2147.	1814.	-4577.	-.0077	.0656	.0104	-.1197	.1024	.1537	3620.	

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.1110	220.	-7022.	1.	-4719.	452.	5025.	.0602	-.0467	-.0130	.0465	.0790	-.0196	4657.
.1120	165.	-6444.	227.	-4481.	1248.	4405.	.0480	-.0408	-.0077	.0388	.0930	.0012	4318.
.1130	-235.	-4810.	-116.	-4303.	1928.	3604.	.0350	-.0310	-.0010	.0285	.1103	.0197	4000.
.1140	-550.	-2778.	-693.	-4127.	2336.	2456.	.0231	-.0188	.0061	.0161	.1240	.0400	3600.
.1150	-599.	-665.	-1403.	-4392.	2580.	1233.	.0128	-.0066	.0116	-.0014	.1305	.0667	3535.
.1160	-501.	340.	-1592.	-4172.	2260.	36.	.0033	.0058	.0157	-.0226	.1388	.0915	3410.
.1170	-155.	1288.	-917.	-2691.	3146.	-1402.	-.0046	.0197	.0190	-.0428	.1491	.1100	2946.
.1180	435.	1330.	-38.	-966.	2966.	-2882.	-.0089	.0332	.0195	-.0629	.1500	.1266	2862.
.1190	1246.	1816.	222.	-80.	2507.	-4171.	-.0092	.0447	.0164	-.0817	.1318	.1481	3280.
.1200	1667.	2673.	261.	831.	2135.	-4875.	-.0081	.0555	.0127	-.0995	.1117	.1608	3631.
.1210	1204.	3705.	423.	2147.	1814.	-4577.	-.0077	.0656	.0104	-.1197	.1024	.1537	3620.

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INTERNAL FORCES IN THE PIPING
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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)
24	1	810					.1220	936.	4568.	429.	3075.	1319.	-4152.	-.0049	.0730	.0083	-.1382	.0774	.1445	3594.
							.1230	994.	5094.	322.	3344.	541.	-3659.	.0003	.0768	.0069	-.1572	.0345	.1358	3361.
							.1240	630.	5456.	348.	3603.	54.	-2630.	.0031	.0786	.0082	-.1785	-.0028	.1147	3007.
							.1250	-549.	6154.	256.	3832.	14.	-894.	.0010	.0794	.0119	-.2009	-.0257	.0773	2652.
							.1260	-1855.	7083.	-231.	3437.	-198.	909.	-.0030	.0782	.0151	-.2208	-.0518	.0374	2400.
							.1270	-2295.	7209.	-611.	2778.	-499.	1851.	-.0066	.0750	.0177	-.2329	-.0924	.0081	2275.
							.1280	-2589.	6029.	-1.	2821.	-465.	2596.	-.0134	.0700	.0224	-.2437	-.1162	-.0245	2603.
							.1290	-3042.	4122.	1270.	3362.	-4.	3355.	-.0238	.0637	.0287	-.2522	-.1157	-.0608	3201.
							.1300	-3022.	2372.	2077.	3281.	260.	3453.	-.0323	.0563	.0334	-.2496	-.1174	-.0825	3216.
							.1310	-2461.	1119.	2104.	2338.	-36.	2789.	-.0362	.0482	.0360	-.2345	-.1277	-.0852	2454.
							.1320	-1915.	498.	1593.	902.	-344.	1976.	-.0378	.0399	.0386	-.2117	-.1283	-.0767	1482.
							.1330	-1954.	637.	715.	-900.	-339.	1699.	-.0393	.0314	.0414	-.1875	-.1067	-.0657	1316.
							.1340	-1675.	953.	-417.	-2873.	-556.	1092.	-.0370	.0232	.0424	-.1565	-.0830	-.0420	2105.
							.1350	-626.	845.	-1438.	-4606.	-1137.	-224.	-.0295	.0160	.0415	-.1189	-.0835	-.0034	3201.
							.1360	160.	543.	-2036.	-5858.	-1571.	-1083.	-.0222	.0097	.0401	-.0872	-.0699	.0332	4152.
							.1370	421.	407.	-2366.	-6601.	-1484.	-1270.	-.0170	.0052	.0383	-.0636	-.0452	.0625	4640.
							.1380	628.	422.	-2638.	-6877.	-1531.	-1404.	-.0117	.0036	.0349	-.0443	-.0295	.0879	4842.
							.1390	1253.	335.	-2803.	-6700.	-1925.	-1950.	-.0048	.0045	.0299	-.0281	-.0358	.1133	4879.
							.1400	1696.	178.	-2543.	-5953.	-2155.	-2198.	-.0002	.0072	.0254	-.0230	-.0461	.1280	4517.
							.1410	1358.	171.	-1801.	-4566.	-2073.	-1594.	-.0004	.0113	.0226	-.0328	-.0464	.1226	3547.
							.1420	996.	368.	-1076.	-2844.	-1954.	-1052.	-.0020	.0175	.0205	-.0464	-.0589	.1099	2431.
							.1430	681.	908.	-661.	-1282.	-2011.	-602.	-.0042	.0246	.0180	-.0619	-.0869	.0941	1658.
							.1440	-6.	1577.	-202.	213.	-1800.	290.	-.0094	.0312	.0168	-.0832	-.1108	.0701	1237.
							.1450	-1060.	1922.	703.	2018.	-1178.	1585.	-.0178	.0369	.0181	-.1089	-.1204	.0369	1903.
							.1460	-1955.	1918.	1751.	3818.	-655.	2668.	-.0261	.0414	.0201	-.1312	-.1280	.0048	3171.
							.1470	-2274.	1930.	2361.	5001.	-295.	3089.	-.0319	.0444	.0211	-.1429	-.1444	-.0144	3967.
							.1480	-2704.	2225.	2632.	5646.	80.	3500.	-.0372	.0454	.0223	-.1483	-.1491	-.0289	4478.
							.1490	-3342.	2746.	2689.	5951.	618.	3955.	-.0426	.0450	.0241	-.1472	-.1351	-.0402	4834.
							.1500	-3592.	3365.	2338.	5691.	1034.	3866.	-.0452	.0430	.0249	-.1349	-.1182	-.0386	4689.
							.1510	-3327.	3869.	1687.	4883.	1059.	3161.	-.0443	.0393	.0238	-.1122	-.1025	-.0234	3985.
							.1520	-2711.	3906.	1134.	4003.	1088.	2064.	-.0417	.0343	.0219	-.0827	-.0803	-.0000	3123.
							.1530	-2147.	3441.	908.	3266.	1263.	1068.	-.0390	.0283	.0201	-.0519	-.0440	.0237	2467.
							.1540	-1436.	2697.	687.	2385.	1521.	47.	-.0352	.0214	.0173	-.0186	-.0065	.0515	1907.
							.1550	-565.	1797.	387.	1385.	1729.	-1006.	-.0298	.0139	.0132	.0167	.0256	.0820	1640.
							.1560	42.	739.	279.	588.	1872.	-1656.	-.0241	.0061	.0092	.0488	.0607	.1050	1731.
							.1570	541.	-428.	304.	-57.	2191.	-1995.	-.0180	-.0020	.0057	.0773	.0935	.1219	1998.
							.1580	901.	-1459.	277.	-752.	2432.	-1995.	-.0109	-.0104	.0022	.1010	.1195	.1320	2180.
							.1590	1067.	-2126.	31.	-1543.	2360.	-1698.	-.0024	-.0185	-.0017	.1202	.1353	.1338	2218.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.27.17.

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

.1490	-3342.	2746.	2689.	5951.	618.	3955.	-.0426	.0450	.0241	-.1472	-.1351	-.0402	4834.
.1500	-3592.	3365.	2338.	5691.	1034.	3866.	-.0452	.0430	.0249	-.1349	-.1182	-.0386	4689.
.1510	-3327.	3869.	1682.	4883.	1059.	3161.	-.0443	.0393	.0238	-.1122	-.1025	-.0234	3985.
.1520	-2711.	3906.	1134.	4003.	1028.	2064.	-.0417	.0343	.0219	-.0827	-.0803	-.0000	3123.
.1530	-2147.	3441.	908.	3266.	1263.	1068.	-.0390	.0283	.0201	-.0519	-.0440	.0237	2467.
.1540	-1436.	2677.	687.	2385.	1521.	47.	-.0352	.0214	.0173	-.0186	-.0065	.0515	1907.
.1550	-565.	1797.	387.	1385.	1729.	-1006.	-.0298	.0139	.0132	.0167	.0256	.0820	1640.
.1560	42.	739.	279.	588.	1872.	-1656.	-.0241	.0061	.0092	.0488	.0607	.1050	1731.
.1570	541.	-428.	304.	-57.	2191.	-1995.	-.0180	-.0020	.0057	.0773	.0935	.1219	1998.
.1580	901.	-1459.	277.	-752.	2432.	-1995.	-.0109	-.0104	.0022	.1010	.1195	.1320	2180.
.1590	1067.	-2126.	31.	-1543.	2360.	-1698.	-.0024	-.0185	-.0017	.1202	.1353	.1338	2218.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	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)	
.1600	1155.	-2414.	-480.	-2377.	2149.	-1265.	.0072	-.0257	-.0062	.1363	.1390	.1287	2322.
.1610	1075.	-2566.	-943.	-3015.	1964.	-562.	.0164	-.0324	-.0106	.1468	.1367	.1143	2455.
.1620	706.	-2852.	-1055.	-3285.	1708.	557.	.0244	-.0387	-.0148	.1486	.1346	.0882	2523.
.1630	612.	-3503.	-864.	-3140.	1413.	1432.	.0326	-.0439	-.0191	.1473	.1229	.0592	2514.
.1640	700.	-4309.	-510.	-2718.	1025.	2074.	.0406	-.0479	-.0234	.1431	.1041	.0284	2406.
.1650	582.	-4852.	-176.	-2278.	574.	2842.	.0472	-.0507	-.0274	.1335	.0871	-.0056	2485.
.1660	437.	-4968.	-75.	-1991.	195.	3487.	.0527	-.0520	-.0309	.1217	.0694	-.0371	2710.
.1670	346.	-4711.	-191.	-1823.	-324.	3851.	.0579	-.0516	-.0337	.1090	.0502	-.0635	2880.
.1680	458.	-4177.	-473.	-1746.	-976.	3793.	.0630	-.0494	-.0359	.0970	.0278	-.0809	2891.
.1690	486.	-3305.	-854.	-1768.	-1632.	3661.	.0664	-.0458	-.0374	.0839	.0098	-.0913	2953.
.1700	449.	-2279.	-1214.	-1690.	-2072.	3427.	.0674	-.0406	-.0381	.0710	-.0021	-.0946	2930.
.1710	662.	-1488.	-1364.	-1252.	-2229.	2779.	.0665	-.0336	-.0380	.0615	-.0126	-.0877	2545.
.1720	792.	-918.	-1207.	-563.	-2356.	2157.	.0629	-.0259	-.0374	.0514	-.0167	-.0751	2186.
.1730	954.	-503.	-889.	214.	-2258.	1487.	.0568	-.0179	-.0364	.0428	-.0176	-.0552	1828.
.1740	1124.	-324.	-363.	1237.	-1886.	727.	.0482	-.0095	-.0343	.0367	-.0143	-.0315	1598.
.1750	1235.	-353.	346.	2406.	-1442.	-51.	.0377	-.0013	-.0306	.0320	-.0071	-.0071	1891.
.1760	1387.	-244.	850.	3167.	-988.	-865.	.0263	.0058	-.0258	.0289	-.0033	.0203	2311.
.1770	1284.	327.	966.	3371.	-592.	-1449.	.0138	.0114	-.0200	.0260	.0001	.0452	2505.
.1780	1026.	1193.	823.	3376.	-125.	-1999.	.0003	.0163	-.0125	.0252	.0026	.0646	2646.
.1790	591.	2184.	568.	3201.	264.	-2406.	-.0139	.0201	-.0038	.0238	.0043	.0760	2705.
.1800	125.	3177.	201.	2651.	498.	-2669.	-.0281	.0219	.0051	.0200	.0009	.0813	2558.
.1810	-132.	3857.	-89.	2105.	765.	-3053.	-.0419	.0226	.0137	.0163	-.0100	.0815	2552.
.1820	-545.	4119.	-10.	2005.	1016.	-3227.	-.0561	.0229	.0223	.0097	-.0182	.0692	2651.
.1830	-1011.	4106.	268.	2108.	1258.	-3183.	-.0696	.0225	.0297	.0014	-.0275	.0491	2709.
.1840	-1354.	3898.	573.	2172.	1390.	-3022.	-.0808	.0211	.0349	-.0077	-.0426	.0266	2678.
.1850	-1566.	3387.	1024.	2472.	1403.	-2815.	-.0888	.0194	.0384	-.0160	-.0607	.0021	2697.
.1860	-1742.	2720.	1558.	3005.	1418.	-2477.	-.0935	.0176	.0404	-.0224	-.0777	-.0235	2794.
.1870	-2096.	2287.	1893.	3315.	1299.	-1726.	-.0947	.0149	.0403	-.0282	-.0909	-.0484	2667.
.1880	-2268.	2009.	1918.	3333.	1024.	-964.	-.0909	.0116	.0377	-.0291	-.1071	-.0656	2439.
.1890	-2262.	1662.	1844.	3335.	606.	-263.	-.0826	.0080	.0335	-.0246	-.1226	-.0760	2292.
.1900	-2324.	1316.	1713.	3243.	182.	636.	-.0715	.0038	.0280	-.0170	-.1299	-.0821	2231.
.1910	-2322.	971.	1462.	2921.	-99.	1584.	-.0586	-.0013	.0211	-.0057	-.1312	-.0814	2241.
.1920	-2143.	350.	1307.	2654.	-374.	2337.	-.0444	-.0068	.0135	.0100	-.1272	-.0752	2397.
.1930	-1732.	-614.	1325.	2516.	-638.	2760.	-.0297	-.0126	.0060	.0296	-.1187	-.0648	2553.
.1940	-1287.	-1548.	1296.	2172.	-772.	3041.	-.0161	-.0189	-.0012	.0503	-.1037	-.0518	2572.
.1950	-922.	-2250.	1123.	1594.	-774.	3196.	-.0048	-.0254	-.0075	.0712	-.0821	-.0391	2463.
.1960	-517.	-2801.	858.	966.	-767.	2990.	.0047	-.0314	-.0124	.0930	-.0579	-.0278	2180.
.1970	-26.	-3169.	462.	165.	-780.	2433.	.0122	-.0369	-.0160	.1141	-.0345	-.0174	1726.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.27.17.

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

.1870	-2096.	2287.	1893.	3315.	1299.	-1726.	-0947	.0149	.0403	-.0282	-.0909	-.0484	2667.
.1880	-2268.	2009.	1918.	3333.	1024.	-964.	-.0909	.0116	.0377	-.0291	-.1071	-.0656	2439.
.1890	-2262.	1662.	1844.	3335.	606.	-263.	-.0826	.0080	.0335	-.0246	-.1226	-.0760	2292.
.1900	-2324.	1316.	1713.	3243.	182.	636.	-.0715	.0038	.0280	-.0170	-.1299	-.0821	2231.
.1910	-2322.	971.	1462.	2921.	-99.	1584.	-.0586	-.0013	.0211	-.0057	-.1312	-.0814	2241.
.1920	-2147.	350.	1307.	2654.	-374.	2337.	-.0444	-.0068	.0135	.0100	-.1272	-.0752	2397.
.1930	-1732.	-614.	1325.	2516.	-638.	2760.	-.0297	-.0126	.0060	.0296	-.1187	-.0648	2553.
.1940	-1287.	-1548.	1296.	2172.	-772.	3041.	-.0161	-.0189	-.0012	.0503	-.1037	-.0518	2572.
.1950	-922.	-2250.	1123.	1594.	-774.	3196.	-.0048	-.0254	-.0075	.0712	-.0821	-.0391	2463.
.1960	-517.	-2801.	858.	966.	-767.	2990.	.0047	-.0314	-.0124	.0930	-.0579	-.0278	2180.
.1970	-26.	-3169.	462.	165.	-780.	2433.	.0122	-.0369	-.0160	.1141	-.0345	-.0174	1726.

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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 PSVCONDITION 24
LOADS
SHOCK
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ENGLISH UNITSINTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	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)		
.1980	413.	-3308.	-25.	-851.	-720.	1760.	.0171	-.0423	-.0183	.1315	-.0101	-.0097	1404.	
.1990	743.	-3376.	-405.	-1725.	-552.	1022.	.0192	-.0468	-.0190	.1448	.0166	-.0074	1402.	
.2000	1041.	-3447.	-652.	-2322.	-341.	174.	.0195	-.0500	-.0187	.1547	.0419	-.0093	1586.	
.2010	1306.	-3404.	-895.	-2854.	-113.	-638.	.0188	-.0522	-.0185	.1607	.0628	-.0130	1973.	
.2020	1451.	-3289.	-1054.	-3237.	163.	-1237.	.0176	-.0533	-.0185	.1616	.0815	-.0190	2338.	
.2030	1503.	-3279.	-968.	-3173.	465.	-1654.	.0165	-.0529	-.0187	.1585	.0991	-.0275	2432.	
.2040	1580.	-3311.	-754.	-2783.	692.	-1967.	.0170	-.0511	-.0198	.1532	.1115	-.0353	2344.	
.2050	1682.	-3186.	-614.	-2350.	775.	-2120.	.0197	-.0484	-.0224	.1462	.1169	-.0399	2196.	
.2060	1711.	-2888.	-521.	-1806.	751.	-2049.	.0243	-.0448	-.0262	.1377	.1186	-.0427	1909.	
.2070	1647.	-2472.	-432.	-1072.	666.	-1794.	.0304	-.0401	-.0306	.1285	.1187	-.0450	1479.	
.2080	1584.	-1936.	-432.	-356.	496.	-1449.	.0378	-.0351	-.0357	.1193	.1149	-.0449	1060.	
.2090	1589.	-1389.	-484.	268.	230.	-1100.	.0458	-.0300	-.0412	.1099	.1068	-.0423	779.	
.2100	1627.	-1015.	-413.	969.	-60.	-793.	.0532	-.0250	-.0460	.0999	.0979	-.0400	845.	
.2110	1633.	-777.	-247.	1685.	-292.	-521.	.0588	-.0202	-.0495	.0890	.0901	-.0394	1205.	
.2120	1597.	-498.	-166.	2153.	-473.	-299.	.0621	-.0160	-.0516	.0775	.0819	-.0399	1500.	
.2130	1543.	-176.	-183.	2373.	-629.	-209.	.0626	-.0123	-.0522	.0662	.0727	-.0417	1661.	
.2140	1473.	77.	-178.	2497.	-721.	-285.	.0601	-.0093	-.0506	.0554	.0645	-.0456	1762.	
.2150	1370.	256.	-140.	2496.	-717.	-473.	.0547	-.0070	-.0471	.0451	.0580	-.0515	1779.	
.2160	1262.	393.	-121.	2301.	-662.	-755.	.0468	-.0057	-.0422	.0360	.0520	-.0574	1692.	
.2170	1186.	449.	-112.	2005.	-599.	-1150.	.0373	-.0052	-.0362	.0295	.0455	-.0624	1609.	
.2180	1106.	405.	-83.	1682.	-490.	-1569.	.0270	-.0053	-.0296	.0260	.0399	-.0659	1585.	
.2190	976.	279.	-31.	1309.	-301.	-1863.	.0162	-.0063	-.0228	.0248	.0361	-.0672	1548.	
.2200	829.	38.	67.	926.	-83.	-2009.	.0061	-.0080	-.0162	.0262	.0333	-.0651	1492.	
.2210	715.	-312.	196.	596.	110.	-2052.	-.0024	-.0102	-.0100	.0306	.0298	-.0589	1442.	
.2220	581.	-632.	269.	257.	286.	-1926.	-.0090	-.0126	-.0046	.0375	.0259	-.0488	1324.	
.2230	351.	-793.	228.	-152.	451.	-1551.	-.0137	-.0151	-.0000	.0452	.0224	-.0360	1093.	
.2240	64.	-801.	88.	-582.	562.	-1009.	-.0166	-.0173	.0037	.0531	.0183	-.0214	872.	
.2250	-182.	-723.	-117.	-971.	569.	-454.	-.0177	-.0188	.0065	.0606	.0117	-.0055	818.	
.2260	-357.	-619.	-325.	-1284.	478.	55.	-.0175	-.0196	.0083	.0666	.0023	.0104	924.	
.2270	-485.	-581.	-426.	-1434.	336.	510.	-.0171	-.0196	.0095	.0695	-.0081	.0237	1050.	
.2280	-553.	-682.	-354.	-1347.	180.	859.	-.0170	-.0187	.0102	.0686	-.0194	.0330	1084.	
.2290	-556.	-888.	-149.	-1076.	15.	1067.	-.0178	-.0169	.0108	.0640	-.0322	.0380	1022.	
.2300	-540.	-1114.	123.	-717.	-153.	1173.	-.0195	-.0144	.0115	.0555	-.0462	.0383	933.	
.2310	-556.	-1311.	436.	-310.	-297.	1223.	-.0224	-.0114	.0126	.0432	-.0602	.0336	874.	
.2320	-618.	-1429.	749.	88.	-398.	1232.	-.0262	-.0081	.0144	.0278	-.0734	.0245	875.	
.2330	-738.	-1366.	960.	367.	-471.	1225.	-.0306	-.0046	.0170	.0103	-.0861	.0126	919.	
.2340	-938.	-1044.	998.	463.	-532.	1236.	-.0351	-.0011	.0200	-.0081	-.0977	-.0107	959.	
.2350	-1208.	-499.	887.	426.	-560.	1265.	-.0394	.0024	.0233	-.0262	-.1069	-.0143	976.	

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ADLPIPE STRESS ANALYSIS

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18.27.17.

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

.2240	64.	-801.	-88.	-582.	562.	-1009.	-.0166	-.0173	.0037	.0531	.0183	-.0214	872.
.2250	-182.	-723.	-117.	-971.	569.	-454.	-.0177	-.0188	.0065	.0606	.0117	-.0055	818.
.2260	-357.	-619.	-325.	-1284.	478.	55.	-.0175	-.0196	.0083	.0666	.0023	.0104	924.
.2270	-485.	-581.	-426.	-1434.	336.	510.	-.0171	-.0196	.0095	.0695	-.0081	.0237	1050.
.2280	-553.	-682.	-354.	-1347.	180.	859.	-.0170	-.0187	.0102	.0686	-.0194	.0330	1084.
.2290	-556.	-888.	-149.	-1076.	15.	1067.	-.0178	-.0169	.0108	.0640	-.0322	.0380	1022.
.2300	-540.	-1114.	123.	-717.	-153.	1173.	-.0195	-.0144	.0115	.0555	-.0462	.0383	933.
.2310	-556.	-1311.	438.	-310.	-297.	1223.	-.0224	-.0114	.0126	.0432	-.0602	.0336	874.
.2320	-618.	-1429.	749.	88.	-398.	1232.	-.0262	-.0081	.0144	.0278	-.0734	.0245	875.
.2330	-738.	-1366.	960.	367.	-471.	1225.	-.0306	-.0046	.0170	.0103	-.0861	.0126	919.
.2340	-938.	-1044.	998.	463.	-532.	1236.	-.0351	-.0011	.0200	-.0081	-.0977	-.0007	959.
.2350	-1208.	-499.	887.	426.	-560.	1265.	-.0394	.0024	.0233	-.0262	-.1069	-.0143	976.

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ADLPIPE STRESS ANALYSIS

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	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)	
.2360	-1491.	134.	713.	347.	-533.	1281.	-.0432	.0059	.0264	-.0429	-.1128	-.0266	964.	
.2370	-1717.	701.	574.	296.	-463.	1252.	-.0462	.0091	.0289	-.0578	-.1150	-.0363	921.	
.2380	-1828.	1094.	529.	323.	-368.	1137.	-.0480	.0122	.0306	-.0703	-.1133	-.0423	835.	
.2390	-1806.	1287.	579.	449.	-249.	919.	-.0483	.0151	.0313	-.0798	-.1078	-.0439	710.	
.2400	-1679.	1338.	677.	621.	-105.	631.	-.0472	.0179	.0309	-.0865	-.0980	-.0411	601.	
.2410	-1484.	1345.	747.	745.	36.	315.	-.0444	.0205	.0296	-.0909	-.0847	-.0342	546.	
.2420	-1238.	1391.	722.	754.	150.	-18.	-.0400	.0229	.0275	-.0932	-.0689	-.0234	518.	
.2430	-964.	1525.	570.	629.	233.	-355.	-.0341	.0251	.0250	-.0937	-.0516	-.0099	512.	
.2440	-705.	1762.	300.	378.	290.	-655.	-.0270	.0270	.0222	-.0933	-.0331	.0048	546.	
.2450	-466.	2066.	-50.	27.	315.	-900.	-.0192	.0287	.0191	-.0926	-.0143	.0197	643.	
.2460	-219.	2350.	-415.	-346.	311.	-1118.	-.0109	.0302	.0158	-.0917	.0033	.0335	816.	
.2470	45.	2512.	-708.	-639.	297.	-1319.	-.0027	.0314	.0122	-.0909	.0193	.0451	1008.	
.2480	309.	2486.	-860.	-795.	279.	-1475.	.0051	.0322	.0085	-.0908	.0337	.0533	1145.	
.2490	582.	2252.	-862.	-821.	244.	-1586.	.0124	.0326	.0047	-.0914	.0459	.0577	1215.	
.2500	876.	1841.	-753.	-757.	181.	-1671.	.0192	.0326	.0009	-.0923	.0546	.0589	1243.	
.2510	1141.	1361.	-606.	-672.	94.	-1687.	.0256	.0320	-.0025	-.0937	.0602	.0567	1226.	
.2520	1298.	965.	-520.	-676.	-12.	-1561.	.0314	.0309	-.0053	-.0956	.0635	.0514	1147.	
.2530	1340.	741.	-572.	-846.	-148.	-1298.	.0368	.0293	-.0075	-.0976	.0643	.0440	1049.	
.2540	1308.	680.	-767.	-1178.	-326.	-951.	.0419	.0273	-.0091	-.0993	.0621	.0360	1044.	
.2550	1215.	725.	-1045.	-1613.	-523.	-535.	.0466	.0251	-.0100	-.1007	.0579	.0280	1198.	
.2560	1063.	800.	-1324.	-2067.	-694.	-56.	.0505	.0228	-.0103	-.1020	.0532	.0205	1470.	
.2570	906.	808.	-1527.	-2437.	-823.	416.	.0534	.0206	-.0102	-.1027	.0484	.0144	1756.	
.2580	794.	684.	-1605.	-2660.	-917.	817.	.0553	.0188	-.0100	-.1026	.0432	.0108	1975.	
.2590	719.	424.	-1545.	-2732.	-959.	1146.	.0558	.0174	-.0095	-.1018	.0382	.0099	2099.	
.2600	662.	52.	-1346.	-2653.	-922.	1412.	.0547	.0164	-.0087	-.1008	.0344	.0115	2118.	
.2610	616.	-376.	-1049.	-2457.	-810.	1594.	.0522	.0159	-.0072	-.0995	.0315	.0157	2049.	
.2620	562.	-742.	-753.	-2261.	-660.	1699.	.0482	.0160	-.0050	-.0982	.0289	.0222	1958.	
.2630	457.	-913.	-562.	-2183.	-483.	1759.	.0429	.0164	-.0017	-.0973	.0263	.0308	1918.	
.2640	270.	-839.	-510.	-2248.	-271.	1791.	.0361	.0174	.0025	-.0973	.0240	.0402	1946.	
.2650	13.	-564.	-560.	-2415.	-30.	1780.	.0280	.0188	.0078	-.0985	.0218	.0494	2022.	
.2660	-268.	-179.	-654.	-2638.	217.	1699.	.0187	.0205	.0138	-.1012	.0192	.0578	2120.	
.2670	-520.	207.	-718.	-2839.	458.	1516.	.0084	.0227	.0202	-.1055	.0157	.0649	2191.	
.2680	-722.	507.	-682.	-2918.	691.	1226.	-.0025	.0252	.0266	-.1114	.0114	.0700	2184.	
.2690	-877.	704.	-532.	-2840.	906.	857.	-.0137	.0281	.0328	-.1187	.0064	.0724	2091.	
.2700	-985.	839.	-310.	-2643.	1080.	444.	-.0245	.0313	.0383	-.1273	.0001	.0725	1948.	
.2710	-1049.	951.	-58.	-2354.	1191.	21.	-.0344	.0347	.0430	-.1366	-.0079	.0707	1778.	
.2720	-1090.	1086.	185.	-1999.	1222.	-363.	-.0425	.0381	.0467	-.1462	-.0174	.0671	1598.	
.2730	-1141.	1309.	358.	-1649.	1166.	-639.	-.0486	.0414	.0495	-.1559	-.0282	.0625	1428.	

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.2630	457.	-913.	-562.	-2183.	-483.	1759.	.0429	.0164	-.0017	-.0973	.0263	.0308	1918.
.2640	270.	-839.	-510.	-2248.	-271.	1791.	.0361	.0174	.0025	-.0973	.0240	.0402	1946.
.2650	13.	-564.	-560.	-2415.	-30.	1780.	.0280	.0188	.0078	-.0985	.0218	.0494	2022.
.2660	-268.	-179.	-654.	-2636.	217.	1699.	.0187	.0205	.0133	-.1012	.0192	.0578	2120.
.2670	-520.	207.	-713.	-2839.	458.	1516.	.0084	.0227	.0202	-.1055	.0157	.0649	2191.
.2680	-722.	507.	-682.	-2918.	691.	1226.	-.0925	.0252	.0266	-.1114	.0114	.0700	2184.
.2690	-877.	704.	-532.	-2840.	906.	857.	-.0137	.0281	.0328	-.1187	.0064	.0724	2091.
.2700	-985.	839.	-310.	-2643.	1080.	444.	-.0245	.0313	.0383	-.1273	.0001	.0725	1948.
.2710	-1049.	951.	-58.	-2354.	1191.	21.	-.0344	.0347	.0430	-.1366	-.0079	.0707	1778.
.2720	-1090.	1086.	185.	-1999.	1222.	-363.	-.0425	.0381	.0467	-.1462	-.0174	.0671	1598.
.2730	-1141.	1309.	358.	-1649.	1166.	-639.	-.0486	.0414	.0495	-.1559	-.0282	.0625	1428.

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	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)
.2740	-1221.	1667.	409.	-1363.	1034.	-759.	-.0522	.0445	.0511	-.1650	-.0402	.0575	1261.
.2750	-1332.	2123.	359.	-1113.	844.	-711.	-.0534	.0473	.0515	-.1730	-.0526	.0526	1057.
.2760	-1461.	2587.	271.	-849.	616.	-505.	-.0522	.0498	.0508	-.1797	-.0647	.0481	785.
.2770	-1572.	2978.	195.	-558.	365.	-178.	-.0489	.0517	.0490	-.1848	-.0760	.0444	465.
.2780	-1631.	3237.	162.	-227.	105.	210.	-.0439	.0531	.0461	-.1880	-.0861	.0420	220.
.2790	-1633.	3352.	183.	157.	-151.	603.	-.0378	.0540	.0424	-.1889	-.0944	.0407	432.
.2800	-1585.	3353.	233.	550.	-394.	961.	-.0310	.0543	.0381	-.1875	-.1002	.0403	792.
.2810	-1484.	3275.	279.	885.	-617.	1243.	-.0241	.0541	.0335	-.1839	-.1036	.0410	1109.
.2820	-1325.	3136.	307.	1124.	-820.	1407.	-.0175	.0532	.0290	-.1782	-.1046	.0425	1334.
.2830	-1131.	2974.	293.	1239.	-993.	1445.	-.0115	.0517	.0249	-.1706	-.1028	.0445	1447.
.2840	-937.	2837.	208.	1193.	-1115.	1382.	-.0066	.0496	.0214	-.1612	-.0982	.0465	1442.
.2850	-754.	2718.	66.	995.	-1170.	1230.	-.0029	.0469	.0187	-.1506	-.0907	.0482	1326.
.2860	-575.	2568.	-87.	696.	-1159.	995.	-.0005	.0435	.0168	-.1388	-.0807	.0495	1131.
.2870	-400.	2375.	-234.	327.	-1091.	703.	.0007	.0397	.0155	-.1262	-.0689	.0503	902.
.2880	-240.	2155.	-376.	-83.	-973.	383.	.0010	.0355	.0146	-.1128	-.0559	.0505	707.
.2890	-93.	1891.	-483.	-462.	-815.	56.	.0007	.0311	.0139	-.0986	-.0424	.0500	633.
.2900	48.	1561.	-525.	-758.	-638.	-255.	-.0000	.0265	.0132	-.0839	-.0290	.0490	690.
.2910	177.	1190.	-517.	-981.	-459.	-508.	-.0006	.0218	.0124	-.0690	-.0166	.0476	806.
.2920	275.	828.	-487.	-1131.	-286.	-664.	-.0010	.0171	.0112	-.0538	-.0057	.0459	905.
.2930	320.	496.	-440.	-1182.	-117.	-703.	-.0009	.0126	.0096	-.0387	.0037	.0436	930.
.2940	308.	192.	-371.	-1138.	49.	-607.	-.0003	.0083	.0077	-.0240	.0115	.0404	870.
.2950	247.	-81.	-287.	-1039.	209.	-379.	.0007	.0041	.0056	-.0103	.0178	.0367	758.
.2960	149.	-313.	-201.	-897.	355.	-50.	.0022	.0001	.0034	.0024	.0225	.0323	651.
.2970	18.	-492.	-125.	-711.	485.	332.	.0040	-.0036	.0010	.0141	.0259	.0271	622.
.2980	-129.	-612.	-68.	-509.	594.	725.	.0059	-.0069	-.0015	.0247	.0285	.0213	719.
.2990	-252.	-703.	-20.	-310.	672.	1073.	.0078	-.0098	-.0040	.0344	.0304	.0152	879.
.3000	-317.	-808.	40.	-97.	710.	1314.	.0096	-.0125	-.0066	.0432	.0317	.0092	1009.
.3010	-312.	-938.	117.	136.	711.	1420.	.0113	-.0148	-.0093	.0516	.0328	.0035	1074.
.3020	-249.	-1083.	198.	363.	688.	1404.	.0127	-.0169	-.0119	.0598	.0341	-.0015	1082.
.3030	-138.	-1247.	280.	568.	652.	1291.	.0139	-.0188	-.0144	.0679	.0359	-.0054	1047.
.3040	10.	-1432.	363.	745.	612.	1109.	.0149	-.0205	-.0168	.0762	.0382	-.0081	991.
.3050	166.	-1614.	430.	881.	580.	905.	.0158	-.0223	-.0190	.0847	.0411	-.0092	937.
.3060	302.	-1763.	460.	955.	566.	724.	.0166	-.0242	-.0208	.0936	.0447	-.0089	894.
.3070	408.	-1869.	452.	970.	568.	594.	.0174	-.0261	-.0224	.1030	.0486	-.0071	857.
.3080	479.	-1927.	404.	932.	580.	520.	.0183	-.0281	-.0236	.1127	.0524	-.0041	819.
.3090	516.	-1928.	317.	853.	596.	504.	.0192	-.0301	-.0247	.1227	.0558	-.0001	779.
.3100	526.	-1894.	213.	762.	609.	525.	.0199	-.0322	-.0255	.1328	.0584	.0042	747.
.3110	532.	-1868.	127.	698.	612.	551.	.0204	-.0341	-.0262	.1424	.0600	.0082	728.

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.3010	-312.	-938.	117.	136.	711.	1420.	.0113	-.0148	-.0093	.0516	.0328	-.0035	1074.
.3020	-249.	-1083.	198.	363.	688.	1404.	.0127	-.0169	-.0119	.0598	.0341	-.0015	1082.
.3030	-138.	-1247.	280.	568.	652.	1291.	.0139	-.0188	-.0144	.0679	.0359	-.0054	1047.
.3040	10.	-1432.	363.	745.	612.	1109.	.0149	-.0205	-.0168	.0762	.0382	-.0081	991.
.3050	166.	-1614.	430.	881.	580.	905.	.0158	-.0223	-.0190	.0847	.0411	-.0092	937.
.3060	302.	-1763.	460.	955.	566.	724.	.0166	-.0242	-.0208	.0936	.0447	-.0089	894.
.3070	408.	-1869.	452.	970.	568.	594.	.0174	-.0261	-.0224	.1030	.0486	-.0071	857.
.3080	479.	-1927.	404.	932.	580.	520.	.0183	-.0281	-.0236	.1127	.0524	-.0041	819.
.3090	516.	-1928.	317.	853.	596.	504.	.0192	-.0301	-.0247	.1227	.0558	-.0001	779.
.3100	526.	-1894.	213.	762.	609.	525.	.0199	-.0322	-.0255	.1328	.0584	.0042	747.
.3110	532.	-1868.	127.	698.	612.	551.	.0204	-.0341	-.0262	.1424	.0600	.0082	728.

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

SECTION	MEMBER	SEQUENCE	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)	
.3120	551.	-1878.	82.	675.	599.	556.	.0206	-.0359	-.0268	.1512	.0503	.0114	714.	
.3130	581.	-1923.	78.	689.	569.	529.	.0202	-.0374	-.0271	.1586	.0591	.0132	700.	
.3140	619.	-1993.	109.	738.	518.	461.	.0192	-.0387	-.0272	.1643	.0564	.0130	683.	
.3150	661.	-2075.	161.	802.	443.	348.	.0176	-.0397	-.0270	.1679	.0522	.0106	661.	
.3160	703.	-2144.	215.	850.	339.	200.	.0154	-.0404	-.0264	.1692	.0462	.0059	631.	
.3170	732.	-2174.	253.	866.	208.	34.	.0127	-.0409	-.0255	.1681	.0386	-.0009	601.	
.3180	734.	-2142.	262.	852.	54.	-131.	.0097	-.0410	-.0242	.1650	.0296	-.0097	582.	
.3190	707.	-2042.	239.	816.	-120.	-282.	.0064	-.0407	-.0228	.1601	.0193	-.0199	587.	
.3200	653.	-1893.	200.	778.	-302.	-402.	.0031	-.0402	-.0212	.1537	.0080	-.0310	624.	
.3210	576.	-1731.	179.	778.	-476.	-480.	-.0003	-.0394	-.0196	.1463	-.0038	-.0424	695.	
.3220	478.	-1588.	202.	852.	-624.	-509.	-.0037	-.0384	-.0180	.1384	-.0156	-.0536	790.	
.3230	364.	-1475.	274.	1004.	-734.	-487.	-.0070	-.0371	-.0166	.1303	-.0267	-.0640	900.	
.3240	237.	-1399.	394.	1227.	-798.	-419.	-.0103	-.0357	-.0153	.1224	-.0369	-.0732	1026.	
.3250	103.	-1358.	555.	1503.	-813.	-317.	-.0133	-.0342	-.0141	.1151	-.0455	-.0806	1171.	
.3260	-37.	-1324.	726.	1791.	-777.	-197.	-.0162	-.0327	-.0130	.1086	-.0520	-.0862	1322.	
.3270	-180.	-1258.	867.	2038.	-699.	-79.	-.0189	-.0312	-.0118	.1032	-.0563	-.0896	1453.	
.3280	-312.	-1144.	954.	2215.	-597.	3.	-.0213	-.0299	-.0106	.0992	-.0581	-.0908	1546.	
.3290	-415.	-990.	981.	2306.	-482.	16.	-.0234	-.0287	-.0094	.0967	-.0575	-.0898	1588.	
.3300	-468.	-817.	957.	2311.	-365.	-62.	-.0251	-.0277	-.0083	.0956	-.0546	-.0869	1578.	
.3310	-461.	-653.	898.	2245.	-253.	-242.	-.0264	-.0269	-.0074	.0960	-.0495	-.0824	1531.	
.3320	-391.	-521.	820.	2131.	-155.	-518.	-.0272	-.0264	-.0067	.0976	-.0426	-.0768	1482.	
.3330	-258.	-446.	740.	1991.	-71.	-870.	-.0275	-.0260	-.0064	.1003	-.0343	-.0704	1465.	
.3340	-74.	-449.	678.	1847.	1.	-1259.	-.0272	-.0260	-.0065	.1037	-.0249	-.0638	1507.	
.3350	138.	-530.	641.	1711.	62.	-1637.	-.0261	-.0261	-.0070	.1074	-.0150	-.0575	1597.	
.3360	350.	-655.	609.	1573.	109.	-1952.	-.0242	-.0266	-.0079	.1111	-.0051	-.0520	1691.	
.3370	534.	-780.	554.	1415.	141.	-2162.	-.0214	-.0272	-.0092	.1145	.0043	-.0474	1744.	
.3380	671.	-889.	468.	1235.	156.	-2238.	-.0177	-.0280	-.0108	.1173	.0128	-.0442	1726.	
.3390	758.	-989.	364.	1044.	152.	-2173.	-.0133	-.0290	-.0128	.1193	.0202	-.0425	1628.	
.3400	805.	-1095.	255.	853.	131.	-1980.	-.0080	-.0301	-.0149	.1205	.0262	-.0423	1456.	
.3410	823.	-1223.	154.	679.	93.	-1687.	-.0023	-.0314	-.0173	.1207	.0309	-.0435	1228.	
.3420	824.	-1393.	81.	541.	44.	-1328.	.0037	-.0326	-.0199	.1202	.0346	-.0462	967.	
.3430	822.	-1622.	51.	443.	-10.	-939.	.0097	-.0338	-.0225	.1189	.0375	-.0500	700.	
.3440	830.	-1907.	63.	377.	-63.	-557.	.0154	-.0351	-.0251	.1170	.0399	-.0545	455.	
.3450	854.	-2227.	103.	323.	-113.	-217.	.0208	-.0362	-.0274	.1147	.0421	-.0594	273.	
.3460	889.	-2541.	144.	255.	-159.	60.	.0255	-.0373	-.0294	.1122	.0445	-.0643	207.	
.3470	930.	-2804.	156.	135.	-198.	260.	.0295	-.0383	-.0309	.1096	.0473	-.0688	239.	
.3480	972.	-2980.	113.	-63.	-231.	377.	.0327	-.0391	-.0318	.1070	.0504	-.0723	301.	
.3490	1012.	-3051.	10.	-338.	-257.	404.	.0350	-.0397	-.0320	.1043	.0539	-.0747	395.	

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CONDITION 24

LOADS

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PRESSURE

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

.3390	758.	-989.	364.	1044.	152.	-2173.	-.0133	-.0290	-.0128	.1193	.0202	-.0442	1726.
.3400	805.	-1095.	255.	853.	131.	-1980.	-.0080	-.0301	-.0149	.1205	.0262	-.0423	1456.
.3410	823.	-1223.	154.	679.	93.	-1687.	-.0023	-.0314	-.0173	.1207	.0309	-.0435	1228.
.3420	824.	-1393.	81.	541.	44.	-1328.	.0037	-.0326	-.0199	.1202	.0346	-.0462	967.
.3430	822.	-1622.	51.	443.	-10.	-939.	.0097	-.0338	-.0225	.1189	.0375	-.0500	700.
.3440	830.	-1907.	63.	377.	-63.	-557.	.0154	-.0351	-.0251	.1170	.0399	-.0545	455.
.3450	854.	-2227.	103.	323.	-113.	-217.	.0208	-.0362	-.0274	.1147	.0421	-.0594	273.
.3460	889.	-2541.	144.	255.	-159.	60.	.0255	-.0373	-.0294	.1122	.0445	-.0643	207.
.3470	930.	-2804.	156.	135.	-198.	260.	.0295	-.0383	-.0309	.1096	.0473	-.0688	239.
.3480	972.	-2980.	113.	-63.	-231.	377.	.0327	-.0391	-.0318	.1070	.0504	-.0723	301.
.3490	1012.	-3051.	10.	-338.	-257.	404.	.0350	-.0397	-.0320	.1043	.0539	-.0747	395.

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

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

SECTION	MEMBER	SEQUENCE	LOCATION	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)	
.3500	1048.	-3022.	-143.	-670.	-271.	344.	.0364	-.0400	-.0316	.1015	.0578	-.0759	540.	
.3510	1084.	-2914.	-320.	-1027.	-271.	204.	.0368	-.0398	-.0306	.0983	.0520	-.0757	729.	
.3520	1124.	-2763.	-488.	-1366.	-253.	-9.	.0364	-.0392	-.0291	.0945	.0560	-.0743	936.	
.3530	1168.	-2592.	-620.	-1644.	-216.	-274.	.0350	-.0379	-.0273	.0897	.0698	-.0716	1133.	
.3540	1206.	-2409.	-702.	-1834.	-157.	-569.	.0329	-.0360	-.0251	.0838	.0730	-.0681	1298.	
.3550	1231.	-2217.	-729.	-1918.	-79.	-866.	.0301	-.0333	-.0228	.0766	.0753	-.0639	1420.	
.3560	1241.	-2013.	-704.	-1896.	6.	-1147.	.0269	-.0300	-.0204	.0679	.0764	-.0593	1494.	
.3570	1229.	-1781.	-644.	-1784.	88.	-1389.	.0235	-.0260	-.0180	.0578	.0759	-.0543	1525.	
.3580	1186.	-1503.	-569.	-1600.	159.	-1575.	.0200	-.0215	-.0157	.0464	.0737	-.0493	1517.	
.3590	1112.	-1177.	-492.	-1361.	212.	-1694.	.0168	-.0166	-.0134	.0340	.0698	-.0444	1472.	
.3600	1015.	-820.	-415.	-1080.	238.	-1749.	.0139	-.0115	-.0114	.0209	.0642	-.0397	1395.	
.3610	909.	-454.	-337.	-774.	231.	-1748.	.0114	-.0063	-.0095	.0076	.0570	-.0351	1298.	
.3620	800.	-96.	-257.	-453.	191.	-1698.	.0093	-.0012	-.0078	-.0055	.0485	-.0307	1192.	
.3630	694.	236.	-177.	-127.	120.	-1610.	.0077	.0036	-.0063	-.0181	.0388	-.0265	1091.	
.3640	595.	534.	-100.	185.	21.	-1492.	.0065	.0080	-.0050	-.0296	.0284	-.0227	1014.	
.3650	505.	795.	-32.	458.	-100.	-1354.	.0055	.0119	-.0037	-.0400	.0174	-.0189	966.	
.3660	419.	1027.	14.	672.	-238.	-1199.	.0047	.0152	-.0025	-.0490	.0062	-.0153	940.	
.3670	326.	1242.	29.	813.	-379.	-1026.	.0039	.0179	-.0011	-.0566	-.0050	-.0119	919.	
.3680	219.	1444.	11.	872.	-513.	-838.	.0029	.0200	.0006	-.0628	-.0157	-.0085	885.	
.3690	100.	1621.	-28.	856.	-625.	-640.	.0015	.0215	.0025	-.0678	-.0258	-.0053	835.	
.3700	-30.	1756.	-70.	784.	-706.	-439.	-.0003	.0225	.0047	-.0717	-.0349	-.0022	770.	
.3710	-169.	1838.	-102.	674.	-747.	-241.	-.0026	.0230	.0072	-.0746	-.0429	.0009	697.	
.3720	-312.	1863.	-114.	542.	-746.	-56.	-.0056	.0233	.0099	-.0768	-.0496	.0039	623.	
.3730	-453.	1827.	-98.	405.	-701.	110.	-.0090	.0232	.0128	-.0783	-.0550	.0071	551.	
.3740	-588.	1736.	-53.	273.	-618.	251.	-.0128	.0230	.0157	-.0793	-.0590	.0104	486.	
.3750	-711.	1604.	14.	148.	-506.	363.	-.0169	.0227	.0187	-.0797	-.0518	.0140	431.	
.3760	-823.	1453.	90.	28.	-373.	449.	-.0210	.0224	.0215	-.0797	-.0635	.0178	394.	
.3770	-924.	1302.	162.	-90.	-228.	514.	-.0250	.0220	.0242	-.0793	-.0640	.0219	384.	
.3780	-1018.	1168.	221.	-209.	-78.	568.	-.0286	.0216	.0266	-.0786	-.0636	.0261	412.	
.3790	-1102.	1054.	266.	-323.	71.	617.	-.0317	.0213	.0287	-.0776	-.0624	.0303	472.	
.3800	-1172.	958.	301.	-423.	211.	660.	-.0342	.0210	.0303	-.0764	-.0604	.0344	547.	
.3810	-1224.	874.	330.	-499.	337.	702.	-.0358	.0206	.0315	-.0750	-.0579	.0383	623.	
.3820	-1258.	807.	351.	-553.	444.	745.	-.0366	.0204	.0322	-.0735	-.0549	.0418	694.	
.3830	-1277.	762.	360.	-585.	531.	794.	-.0366	.0201	.0324	-.0720	-.0517	.0447	755.	
.3840	-1282.	741.	356.	-592.	594.	847.	-.0356	.0199	.0319	-.0705	-.0481	.0469	803.	
.3850	-1268.	738.	343.	-573.	631.	902.	-.0338	.0197	.0310	-.0691	-.0444	.0485	836.	
.3860	-1234.	740.	325.	-532.	644.	956.	-.0311	.0196	.0296	-.0678	-.0405	.0495	856.	
.3870	-1180.	748.	304.	-472.	636.	1009.	-.0277	.0195	.0277	-.0666	-.0365	.0500	865.	

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.3770	-924.	1302.	162.	-90.	-228.	514.	-.0250	.0220	.0242	-.0793	-.0640	.0219	384.
.3780	-1018.	1168.	221.	-209.	-78.	568.	-.0286	.0216	.0266	-.0786	-.0636	.0261	412.
.3790	-1102.	1054.	266.	-323.	71.	617.	-.0317	.0213	.0287	-.0776	-.0624	.0303	472.
.3800	-1172.	958.	301.	-423.	211.	660.	-.0342	.0210	.0303	-.0764	-.0604	.0344	547.
.3810	-1224.	874.	330.	-499.	337.	702.	-.0358	.0206	.0315	-.0750	-.0579	.0383	623.
.3820	-1258.	807.	351.	-553.	444.	745.	-.0366	.0204	.0322	-.0735	-.0549	.0418	694.
.3830	-1277.	762.	360.	-585.	531.	794.	-.0366	.0201	.0324	-.0720	-.0517	.0447	755.
.3840	-1282.	741.	356.	-592.	594.	847.	-.0356	.0199	.0319	-.0705	-.0481	.0469	803.
.3850	-1268.	738.	343.	-573.	631.	902.	-.0338	.0197	.0310	-.0691	-.0444	.0485	836.
.3860	-1234.	742.	325.	-532.	644.	956.	-.0311	.0196	.0296	-.0678	-.0405	.0495	856.
.3870	-1180.	748.	304.	-472.	636.	1009.	-.0277	.0195	.0277	-.0666	-.0365	.0500	865.

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SECTION	MEMBER	SEQUENCE	LOCATION	BEG	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)
.3880	-1109.	750.	278.	-399.	610.	1064.	-.0236	.0195	.0253	-.0655	-.0321	.0501	869.
.3890	-1022.	744.	248.	-322.	572.	1119.	-.0189	.0194	.0226	-.0643	-.0273	.0501	875.
.3900	-916.	717.	216.	-249.	523.	1171.	-.0138	.0193	.0196	-.0630	-.0221	.0501	881.
.3910	-788.	663.	183.	-187.	464.	1216.	-.0082	.0190	.0164	-.0615	-.0164	.0506	886.
.3920	-645.	592.	141.	-150.	398.	1254.	-.0023	.0187	.0131	-.0596	-.0103	.0516	892.
.3930	-494.	522.	77.	-151.	326.	1287.	.0038	.0183	.0097	-.0572	-.0039	.0532	900.
.3940	-338.	457.	-12.	-191.	248.	1310.	.0099	.0177	.0063	-.0542	.0027	.0556	908.
.3950	-175.	392.	-114.	-263.	165.	1319.	.0158	.0170	.0030	-.0505	.0092	.0587	913.
.3960	-11.	323.	-223.	-361.	82.	1314.	.0214	.0162	-.0000	-.0464	.0156	.0623	920.
.3970	142.	260.	-335.	-481.	6.	1303.	.0265	.0153	-.0027	-.0421	.0215	.0662	936.
.3980	271.	211.	-447.	-613.	-56.	1290.	.0307	.0144	-.0050	-.0377	.0269	.0701	963.
.3990	371.	173.	-549.	-740.	-98.	1276.	.0340	.0135	-.0067	-.0336	.0315	.0735	997.
.4000	441.	135.	-624.	-851.	-118.	1262.	.0361	.0127	-.0078	-.0300	.0351	.0761	1029.

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)
.1080	-473.	3534.	3395.	7991.	2308.	-4881.	.0855	-.0488	-.0228	.0349	.0226	-.0535	6501.

SECTION	MEMBER	SEQUENCE	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)
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
.0010	1.	-1.	2.	2.	-1.	-1.	-.0000	-.0000	-.0000	.0000	.0000	-.0000	2.
.0020	7.	-3.	8.	12.	-4.	-8.	-.0000	-.0000	-.0000	.0001	.0000	-.0001	10.
.0030	14.	15.	8.	21.	-11.	-18.	-.0001	-.0001	-.0000	.0001	.0002	-.0002	20.
.0040	15.	69.	-10.	29.	-22.	-29.	-.0001	-.0002	-.0000	.0000	.0004	-.0004	31.
.0050	12.	154.	-37.	45.	-37.	-46.	-.0002	-.0004	-.0000	-.0000	.0008	-.0006	50.
.0060	10.	255.	-60.	82.	-51.	-70.	-.0002	-.0007	.0000	.0001	.0012	-.0008	80.
.0070	18.	366.	-66.	148.	-71.	-109.	-.0003	-.0012	.0001	.0005	.0019	-.0012	133.
.0080	45.	508.	-61.	249.	-114.	-175.	-.0004	-.0018	.0003	.0012	.0030	-.0019	219.
.0090	80.	742.	-96.	360.	-192.	-261.	-.0005	-.0027	.0006	.0017	.0051	-.0033	326.
.0100	113.	1083.	-186.	479.	-305.	-359.	-.0007	-.0039	.0012	.0020	.0085	-.0051	453.
.0110	145.	1457.	-275.	645.	-445.	-468.	-.0007	-.0053	.0020	.0026	.0132	-.0071	615.

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2 SAFETY COLD FKM24F--2 PSV

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.0010	1.	-1.	2.	2.	-1.	-1.	-.0000	-.0000	-.0000	.0000	.0000	-.0000	2.
.0020	7.	-3.	8.	12.	-4.	-8.	-.0000	-.0000	-.0000	.0001	.0000	-.0001	10.
.0030	14.	15.	8.	21.	-11.	-18.	-.0001	-.0001	-.0000	.0001	.0002	-.0002	20.
.0040	15.	69.	-10.	29.	-22.	-29.	-.0001	-.0002	-.0000	.0000	.0004	-.0004	31.
.0050	12.	154.	-37.	45.	-37.	-46.	-.0002	-.0004	-.0000	-.0000	.0008	-.0006	50.
.0060	10.	255.	-60.	82.	-51.	-70.	-.0002	-.0007	.0000	.0001	.0012	-.0008	80.
.0070	18.	366.	-66.	148.	-71.	-109.	-.0003	-.0012	.0001	.0005	.0019	-.0012	133.
.0080	45.	508.	-61.	249.	-114.	-175.	-.0004	-.0018	.0003	.0012	.0030	-.0019	219.
.0090	80.	742.	-96.	360.	-192.	-261.	-.0005	-.0027	.0006	.0017	.0051	-.0033	326.
.0100	113.	1083.	-186.	479.	-305.	-359.	-.0007	-.0039	.0012	.0020	.0085	-.0051	453.
.0110	145.	1457.	-275.	645.	-445.	-468.	-.0007	-.0053	.0020	.0026	.0132	-.0071	615.

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	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)	
.0120	181.	1780.	-303.	876.	-594.	-569.	-.0004	-.0069	.0029	.0039	.0191	-.0093	810.	
.0130	206.	2012.	-246.	1163.	-723.	-632.	.0004	-.0086	.0039	.0060	.0262	-.0113	1017.	
.0140	181.	2135.	-109.	1490.	-800.	-626.	.0019	-.0100	.0048	.0087	.0341	-.0124	1216.	
.0150	69.	2116.	111.	1834.	-795.	-522.	.0043	-.0112	.0054	.0119	.0418	-.0119	1393.	
.0160	-139.	1926.	402.	2134.	-689.	-306.	.0077	-.0116	.0054	.0151	.0486	-.0097	1525.	
.0170	-391.	1521.	753.	2343.	-534.	-14.	.0119	-.0112	.0047	.0173	.0546	-.0065	1620.	
.0180	-596.	884.	1138.	2454.	-422.	270.	.0161	-.0096	.0032	.0171	.0506	-.0039	1688.	
.0190	-698.	88.	1495.	2447.	-414.	473.	.0200	-.0070	.0006	.0130	.0674	-.0028	1703.	
.0200	-668.	-708.	1758.	2331.	-599.	530.	.0231	-.0036	-.0031	.0043	.0754	-.0040	1661.	
.0210	-630.	-1074.	1627.	1887.	-963.	539.	.0254	.0007	-.0070	-.0107	.0855	-.0066	1473.	
.0220	-731.	-854.	957.	1051.	-1231.	635.	.0283	.0057	-.0109	-.0324	.0976	-.0089	1172.	
.0230	-908.	-805.	418.	400.	-1268.	713.	.0322	.0108	-.0157	-.0541	.1074	-.0078	1017.	
.0240	-1247.	-1350.	447.	-1.	-944.	928.	.0381	.0165	-.0216	-.0694	.1084	.0008	893.	
.0250	-1589.	-2465.	974.	-326.	-513.	1251.	.0449	.0233	-.0278	-.0787	.1042	.0134	938.	
.0260	-1596.	-3904.	1665.	-493.	-276.	1341.	.0501	.0297	-.0337	-.0869	.1044	.0215	981.	
.0270	-1750.	-4765.	1917.	-830.	280.	1468.	.0553	.0350	-.0393	-.0962	.1022	.0301	1152.	
.0280	-2689.	-4661.	1697.	-1513.	1279.	1988.	.0618	.0394	-.0447	-.1015	.0799	.0509	1892.	
.0290	-3557.	-4424.	1403.	-2236.	1844.	2328.	.0652	.0427	-.0486	-.1041	.0487	.0705	2506.	
.0300	-2835.	-4735.	1014.	-2839.	1804.	1709.	.0609	.0449	-.0491	-.1149	.0403	.0601	2543.	
.0310	-1645.	-4968.	523.	-3494.	1749.	890.	.0530	.0465	-.0464	-.1263	.0314	.0401	2701.	
.0320	-1208.	-4916.	336.	-3746.	1719.	423.	.0442	.0462	-.0424	-.1267	-.0046	.0352	2793.	
.0330	-754.	-4626.	-8.	-3743.	1480.	-24.	.0316	.0438	-.0354	-.1260	-.0419	.0272	2713.	
.0340	543.	-4191.	-903.	-3952.	1038.	-630.	.0133	.0404	-.0239	-.1329	-.0547	-.0018	2787.	
.0350	1819.	-4040.	-1399.	-3878.	629.	-965.	-.0071	.0365	-.0110	-.1317	-.0681	-.0285	2727.	
.0360	2272.	-4236.	-946.	-3073.	412.	-756.	-.0263	.0315	.0004	-.1118	-.1023	-.0338	2151.	
.0370	2574.	-3983.	-701.	-2257.	258.	-295.	-.0466	.0253	.0121	-.0889	-.1280	-.0380	1544.	
.0380	3058.	-2607.	-1549.	-2030.	-1.	259.	-.0685	.0180	.0254	-.0742	-.1271	-.0529	1380.	
.0390	2839.	-523.	-2610.	-1795.	-305.	1105.	-.0876	.0091	.0377	-.0538	-.1284	-.0553	1436.	
.0400	2114.	1203.	-2876.	-907.	-681.	1897.	-.1024	-.0012	.0473	-.0196	-.1418	-.0407	1490.	
.0410	2124.	2363.	-2814.	33.	-927.	2170.	-.1142	-.0113	.0564	.0158	-.1384	-.0358	1591.	
.0420	2786.	3152.	-2662.	835.	-1264.	1937.	-.1228	-.0209	.0651	.0492	-.1176	-.0418	1658.	
.0430	3101.	3738.	-2145.	1967.	-1793.	1427.	-.1256	-.0317	.0711	.0881	-.1032	-.0385	2035.	
.0440	2891.	4674.	-1821.	2924.	-2138.	888.	-.1216	-.0428	.0746	.1269	-.0935	-.0270	2514.	
.0450	2702.	5751.	-1875.	3268.	-2104.	338.	-.1120	-.0521	.0761	.1590	-.0751	-.0207	2630.	
.0460	2632.	5876.	-1326.	3688.	-1820.	-321.	-.0977	-.0595	.0734	.1911	-.0573	-.0163	2780.	
.0470	2296.	5034.	20.	4331.	-1386.	-904.	-.0792	-.0648	.0657	.2259	-.0527	-.0058	3125.	
.0480	1756.	4405.	949.	4329.	-831.	-1249.	-.0584	-.0671	.0555	.2498	-.0487	.0010	3088.	
.0490	1250.	4482.	888.	3543.	-258.	-1492.	-.0378	-.0672	.0442	.2539	-.0354	-.0039	2597.	

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.0390	2839.	-523.	-2610.	-1795.	-305.	1105.	-.0876	.0091	.0377	-.0538	-.1284	-.0553	1436.
.0400	2114.	1203.	-2876.	-907.	-681.	1897.	-.1024	-.0012	.0473	-.0196	-.1418	-.0407	1490.
.0410	2124.	2363.	-2814.	33.	-927.	2170.	-.1142	-.0113	.0564	.0158	-.1384	-.0358	1591.
.0420	2786.	3152.	-2662.	835.	-1264.	1937.	-.1228	-.0209	.0651	.0492	-.1176	-.0418	1658.
.0430	3101.	3738.	-2145.	1967.	-1793.	1427.	-.1256	-.0317	.0711	.0881	-.1032	-.0385	2035.
.0440	2891.	4674.	-1821.	2924.	-2138.	888.	-.1216	-.0428	.0746	.1269	-.0935	-.0270	2514.
.0450	2702.	5751.	-1875.	3268.	-2104.	338.	-.1120	-.0521	.0761	.1590	-.0751	-.0207	2630.
.0460	2632.	5876.	-1326.	3688.	-1820.	-321.	-.0977	-.0595	.0734	.1911	-.0573	-.0163	2780.
.0470	2296.	5034.	20.	4331.	-1386.	-904.	-.0792	-.0648	.0657	.2259	-.0527	-.0058	3125.
.0480	1756.	4405.	949.	4329.	-831.	-1249.	-.0584	-.0671	.0555	.2498	-.0487	.0010	3088.
.0490	1250.	4482.	888.	3543.	-258.	-1492.	-.0378	-.0672	.0442	.2539	-.0354	-.0039	2597.

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INTERNAL FORCES IN THE PIPING
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SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	EL	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)							
.0500	491.	4836.	482.	2603.	276.	-1628.	-.0173	-.0658	.0307	.2457	-.0271	-.0101	2078.
.0510	-513.	5065.	164.	1594.	817.	-1559.	.0031	-.0619	.0161	.2305	-.0303	-.0136	1600.
.0520	-972.	4744.	-65.	439.	1161.	-1583.	.0209	-.0551	.0026	.2045	-.0274	-.0279	1356.
.0530	-614.	3535.	-20.	-486.	1151.	-1935.	.0346	-.0466	-.0097	.1693	-.0118	-.0555	1553.
.0540	-359.	1941.	293.	-1150.	1169.	-2138.	.0470	-.0373	-.0216	.1337	-.0002	-.0776	1816.
.0550	-852.	737.	485.	-1988.	1527.	-1729.	.0601	-.0271	-.0333	.1020	-.0006	-.0829	2052.
.0560	-1503.	-194.	447.	-2967.	1857.	-1068.	.0712	-.0167	-.0441	.0716	.0027	-.0822	2467.
.0570	-1761.	-1241.	397.	-3781.	1873.	-567.	.0780	-.0072	-.0540	.0430	.0194	-.0836	2870.
.0580	-2103.	-2084.	391.	-4512.	1907.	38.	.0829	.0015	-.0631	.0222	.0367	-.0771	3302.
.0590	-2943.	-2319.	314.	-5241.	2097.	921.	.0873	.0087	-.0711	.0121	.0448	-.0554	3855.
.0600	-3733.	-2079.	22.	-5793.	2038.	1646.	.0890	.0134	-.0763	.0075	.0558	-.0309	4285.
.0610	-3931.	-1643.	-501.	-6100.	1535.	1915.	.0864	.0151	-.0773	.0039	.0797	-.0156	4432.
.0620	-3802.	-1281.	-858.	-6102.	962.	1970.	.0817	.0147	-.0741	.0066	.1043	-.0034	4370.
.0630	-3595.	-1482.	-461.	-5468.	496.	1945.	.0764	.0126	-.0683	.0220	.1172	.0126	3926.
.0640	-3020.	-2314.	537.	-4238.	-68.	1692.	.0690	.0087	-.0601	.0449	.1273	.0241	3076.
.0650	-2103.	-2997.	1316.	-3024.	-714.	1346.	.0589	.0034	-.0496	.0663	.1438	.0243	2282.
.0660	-1543.	-2830.	1549.	-2114.	-1155.	1295.	.0482	-.0029	-.0386	.0869	.1549	.0232	1844.
.0670	-1644.	-1863.	1479.	-1326.	-1397.	1588.	.0378	-.0105	-.0291	.1100	.1509	.0280	1683.
.0680	-1810.	-358.	1053.	-759.	-1684.	1892.	.0264	-.0187	-.0207	.1303	.1448	.0273	1782.
.0690	-1612.	1547.	150.	-580.	-2044.	1993.	.0141	-.0269	-.0122	.1431	.1464	.0129	1964.
.0700	-1404.	3529.	-772.	-410.	-2331.	1932.	.0034	-.0353	-.0042	.1542	.1434	-.0043	2060.
.0710	-1391.	5198.	-1270.	112.	-2472.	1721.	-.0038	-.0440	.0029	.1679	.1277	-.0166	2032.
.0720	-1126.	6323.	-1425.	832.	-2457.	1220.	-.0079	-.0522	.0103	.1799	.1112	-.0322	1932.
.0730	-368.	6626.	-1174.	1710.	-2294.	347.	-.0094	-.0591	.0180	.1885	.0991	-.0539	1943.
.0740	474.	5970.	-230.	2908.	-1989.	-720.	-.0078	-.0645	.0240	.1989	.0805	-.0708	2424.
.0750	1073.	4855.	1035.	4059.	-1508.	-1708.	-.0033	-.0678	.0274	.2096	.0531	-.0785	3138.
.0760	1516.	4050.	1802.	4560.	-901.	-2519.	.0017	-.0683	.0284	.2118	.0280	-.0835	3564.
.0770	1744.	3905.	1788.	4340.	-336.	-3135.	.0057	-.0665	.0268	.2028	.0072	-.0863	3616.
.0780	1515.	4398.	1175.	3592.	92.	-3445.	.0083	-.0627	.0224	.1859	-.0161	-.0812	3355.
.0790	996.	5323.	88.	2354.	439.	-3429.	.0092	-.0565	.0167	.1612	-.0397	-.0707	2819.
.0800	636.	6108.	-1158.	914.	733.	-3281.	.0077	-.0482	.0116	.1292	-.0570	-.0617	2348.
.0810	572.	6049.	-1948.	-162.	882.	-3149.	.0040	-.0387	.0079	.0952	-.0706	-.0533	2207.
.0820	687.	4971.	-2036.	-719.	896.	-2941.	-.0011	-.0280	.0063	.0633	-.0843	-.0423	2128.
.0830	985.	3152.	-1677.	-973.	914.	-2575.	-.0074	-.0165	.0073	.0326	-.0945	-.0314	1955.
.0840	1442.	810.	-1021.	-938.	953.	-2097.	-.0150	-.0047	.0100	.0027	-.0993	-.0215	1676.
.0850	1822.	-1736.	-173.	-681.	905.	-1467.	-.0238	.0069	.0129	-.0244	-.1026	-.0088	1249.
.0860	1942.	-3831.	421.	-649.	775.	-561.	-.0334	.0183	.0152	-.0502	-.1039	.0068	779.
.0870	1812.	-4994.	380.	-1077.	636.	567.	-.0435	.0294	.0164	-.0776	-.0999	.0222	926.

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.1150	599.	665.	1403.	3520.	-2620.	-846.	.0011	-.0076	.0160	.0260	.1189	.0564	3012.
.1160	501.	-840.	1592.	3490.	-2930.	142.	-.0120	.0033	.0178	.0038	.1266	.0884	3073.
.1170	135.	-1288.	917.	2453.	-3213.	1349.	-.0229	.0157	.0184	-.0258	.1361	.1159	2872.
.1180	-435.	-1330.	30.	1202.	-3054.	2512.	-.0298	.0278	.0160	-.0568	.1383	.1421	2786.
.1190	-1246.	-1816.	-222.	548.	-2724.	3320.	-.0324	.0379	.0101	-.0812	.1225	.1714	2918.
.1200	-1667.	-2673.	-261.	-176.	-2429.	3711.	-.0322	.0475	.0036	-.1047	.1041	.1883	2992.
.1210	-1204.	-3705.	-423.	-1207.	-2002.	3550.	-.0306	.0568	-.0017	-.1328	.0758	.1800	2865.
.1220	-936.	-4568.	-429.	-1966.	-1455.	3177.	-.0256	.0635	-.0068	-.1568	.0726	.1686	2702.
.1230	-994.	-5094.	-320.	-2189.	-699.	2598.	-.0176	.0667	-.0113	-.1770	.0329	.1568	2338.
.1240	-630.	-5456.	-748.	-2365.	-140.	1724.	-.0106	.0682	-.0131	-.1992	-.0028	.1296	1975.
.1250	549.	-6154.	-256.	-2508.	118.	540.	-.0068	.0689	-.0125	-.2224	-.0263	.0823	1731.

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SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	EL	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	HX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.1260	1855.	-7083.	231.	-2192.	532.	-667.	-.0046	.0680	-.0119	-.2389	-.0520	.0320	1586.							
.1270	2295.	-7209.	611.	-1710.	878.	-1390.	-.0030	.0650	-.0112	-.2465	-.0914	-.0029	1598.							
.1280	2589.	-6029.	1.	-1658.	965.	-1855.	-.0049	.0604	-.0082	-.2574	-.1156	-.0395	1799.							
.1290	3042.	-4122.	-1270.	-1892.	725.	-2174.	-.0109	.0546	-.0032	-.2693	-.1173	-.0794	2003.							
.1300	3022.	-2372.	-2077.	-1722.	542.	-2099.	-.0169	.0478	.0017	-.2664	-.1201	-.1012	1866.							
.1310	2461.	-1119.	-2104.	-1006.	782.	-1601.	-.0204	.0404	.0062	-.2457	-.1281	-.0997	1379.							
.1320	1915.	-498.	-1593.	39.	881.	-1012.	-.0233	.0331	.0119	-.2141	-.1267	-.0864	905.							
.1330	1954.	-637.	-715.	1402.	791.	-730.	-.0270	.0254	.0186	-.1785	-.1044	-.0739	1191.							
.1340	1675.	-953.	417.	2836.	836.	-303.	-.0283	.0181	.0244	-.1353	-.0838	-.0471	2003.							
.1350	626.	-845.	1438.	4006.	1107.	467.	-.0259	.0117	.0286	-.0873	-.0758	-.0012	2819.							
.1360	-160.	-543.	2036.	4883.	1326.	941.	-.0236	.0060	.0315	-.0479	-.0596	.0400	3469.							
.1370	-421.	-407.	2366.	5425.	1155.	1004.	-.0228	.0019	.0332	-.0198	-.0352	.0699	3800.							
.1380	-628.	-422.	2638.	5560.	1133.	1026.	-.0210	.0005	.0324	.0010	-.0193	.0959	3887.							
.1390	-1253.	-335.	2803.	5278.	1389.	1250.	-.0170	.0015	.0290	.0156	-.0238	.1242	3774.							
.1400	-1696.	-178.	2543.	4639.	1561.	1280.	-.0137	.0040	.0245	.0156	-.0334	.1403	3410.							
.1410	-1358.	-171.	1801.	3644.	1622.	856.	-.0131	.0077	.0201	-.0027	-.0347	.1317	2750.							
.1420	-996.	-368.	1076.	2344.	1648.	485.	-.0125	.0134	.0154	-.0270	-.0485	.1160	1959.							
.1430	-681.	-908.	661.	1107.	1810.	146.	-.0117	.0201	.0099	-.0523	-.0769	.0979	1434.							
.1440	6.	-1577.	202.	-16.	1780.	-452.	-.0128	.0262	.0053	-.0827	-.1025	.0689	1238.							
.1450	1060.	-1922.	-703.	-1274.	1456.	-1225.	-.0165	.0315	.0026	-.1194	-.1159	.0285	1543.							
.1460	1955.	-1918.	-1751.	-2520.	1216.	-1832.	-.0204	.0357	.0011	-.1527	-.1268	-.0094	2254.							
.1470	2274.	-1930.	-2361.	-3376.	982.	-2085.	-.0232	.0385	-.0000	-.1717	-.1453	-.0309	2755.							
.1480	2704.	-2225.	-2632.	-3821.	718.	-2300.	-.0265	.0396	.0002	-.1811	-.1520	-.0477	3045.							
.1490	3342.	-2746.	-2689.	-3994.	309.	-2470.	-.0309	.0394	.0023	-.1817	-.1407	-.0617	3173.							
.1500	3592.	-3365.	-2338.	-3801.	-95.	-2314.	-.0343	.0379	.0049	-.1678	-.1255	-.0597	3000.							
.1510	3327.	-3869.	-1682.	-3245.	-241.	-1802.	-.0361	.0348	.0070	-.1402	-.1094	-.0406	2507.							
.1520	2711.	-3906.	-1134.	-2647.	-446.	-1036.	-.0374	.0306	.0093	-.1056	-.0867	-.0111	1940.							
.1530	2147.	-3441.	-908.	-2120.	-754.	-290.	-.0392	.0253	.0120	-.0707	-.0505	.0183	1529.							
.1540	1436.	-2697.	-687.	-1500.	-1171.	432.	-.0403	.0192	.0140	-.0326	-.0136	.0518	1315.							
.1550	565.	-1797.	-387.	-833.	-1579.	1118.	-.0401	.0125	.0150	.0082	.0181	.0879	1420.							
.1560	-42.	-739.	-279.	-298.	-1851.	1556.	-.0387	.0056	.0156	.0446	.0529	.1145	1642.							
.1570	-541.	428.	-304.	136.	-2263.	1753.	-.0359	-.0017	.0161	.0764	.0844	.1330	1932.							
.1580	-901.	1459.	-277.	617.	-2577.	1671.	-.0309	-.0092	.0161	.1039	.1093	.1425	2111.							
.1590	-1067.	2126.	-31.	1149.	-2563.	1355.	-.0232	-.0164	.0150	.1278	.1254	.1422	2102.							
.1600	-1155.	2414.	480.	1657.	-2422.	905.	-.0130	-.0228	.0128	.1489	.1297	.1340	2070.							
.1610	-1075.	2566.	943.	2020.	-2270.	261.	-.0018	-.0286	.0098	.1632	.1279	.1150	2056.							
.1620	-706.	2852.	1055.	2174.	-1955.	-633.	.0096	-.0341	.0059	.1669	.1265	.0823	2016.							
.1630	-612.	3503.	864.	2006.	-1622.	-1389.	.0218	-.0388	.0012	.1646	.1155	.0480	1975.							

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.1530	2147.	-3441.	-908.	-2120.	-754.	-290.	-0392	.0253	.0120	-.0707	-.0505	.0183	1529.
.1540	1436.	-2697.	-687.	-1500.	-1171.	432.	-.0403	.0192	.0140	-.0326	-.0136	.0518	1315.
.1550	565.	-1797.	-387.	-833.	-1579.	1118.	-.0401	.0125	.0150	.0082	.0181	.0879	1420.
.1560	-42.	-739.	-279.	-298.	-1851.	1556.	-.0387	.0056	.0156	.0446	.0529	.1145	1642.
.1570	-541.	428.	-304.	176.	-2263.	1753.	-.0359	-.0017	.0161	.0764	.0844	.1330	1932.
.1580	-901.	1459.	-277.	617.	-2577.	1671.	-.0309	-.0092	.0161	.1039	.1093	.1425	2111.
.1590	-1067.	2126.	-31.	1149.	-2563.	1355.	-.0232	-.0164	.0150	.1278	.1254	.1422	2102.
.1600	-1155.	2414.	480.	1657.	-2422.	905.	-.0130	-.0228	.0128	.1489	.1297	.1340	2070.
.1610	-1075.	2566.	943.	2020.	-2270.	261.	-.0018	-.0286	.0098	.1632	.1279	.1150	2056.
.1620	-706.	2852.	1055.	2174.	-1955.	-633.	.0096	-.0341	.0059	.1669	.1265	.0823	2016.
.1630	-612.	3503.	864.	2006.	-1622.	-1389.	.0218	-.0388	.0012	.1646	.1155	.0480	1975.

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	EL	TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS
24	1	41					(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.1640	-700.	4309.	510.	1616.	-1213.	-1994.	.0342	-.0422	-.0042	.1576	.0979	.0136	1913.							
.1650	-582.	4852.	176.	1248.	-705.	-2642.	.0455	-.0447	-.0098	.1454	.0825	-.0248	2026.							
.1660	-437.	4968.	75.	992.	-288.	-3198.	.0555	-.0458	-.0151	.1319	.0660	-.0600	2265.							
.1670	-346.	4711.	191.	812.	238.	-3541.	.0644	-.0453	-.0198	.1183	.0490	-.0884	2454.							
.1680	-458.	4177.	473.	689.	838.	-3599.	.0723	-.0432	-.0237	.1061	.0295	-.1053	2534.							
.1690	-486.	3305.	854.	677.	1449.	-3572.	.0774	-.0399	-.0270	.0935	.0146	-.1148	2638.							
.1700	-449.	2279.	1214.	606.	1858.	-3426.	.0791	-.0352	-.0294	.0805	.0049	-.1165	2659.							
.1710	-662.	1488.	1364.	242.	1958.	-2974.	.0776	-.0289	-.0308	.0682	-.0047	-.1057	2406.							
.1720	-792.	918.	1207.	-254.	2077.	-2481.	.0725	-.0220	-.0316	.0540	-.0080	-.0891	2187.							
.1730	-954.	503.	889.	-783.	1981.	-1940.	.0639	-.0149	-.0319	.0405	-.0092	-.0650	1942.							
.1740	-1124.	324.	363.	-1492.	1632.	-1289.	.0523	-.0074	-.0309	.0279	-.0074	-.0365	1725.							
.1750	-1235.	353.	-346.	-2290.	1240.	-567.	.0385	-.0001	-.0281	.0156	-.0020	-.0071	1797.							
.1760	-1387.	244.	-850.	-2753.	809.	155.	.0276	.0061	-.0240	.0077	.0000	.0254	1944.							
.1770	-1284.	-327.	-966.	-2795.	445.	734.	.0080	.0110	-.0185	.0038	.0021	.0539	1971.							
.1780	-1026.	-1193.	-823.	-2709.	13.	1330.	-.0079	.0154	-.0111	.0032	.0029	.0767	2034.							
.1790	-591.	-2184.	-568.	-2479.	-319.	1864.	-.0235	.0188	-.0024	.0032	.0034	.0909	2101.							
.1800	-125.	-3177.	-201.	-1932.	-501.	2270.	-.0382	.0204	.0062	.0035	-.0004	.0980	2037.							
.1810	132.	-3857.	89.	-1407.	-749.	2719.	-.0517	.0210	.0144	.0035	-.0120	.1006	2125.							
.1820	545.	-4119.	10.	-1216.	-912.	3084.	-.0642	.0213	.0221	-.0019	-.0209	.0899	2317.							
.1830	1011.	-4106.	-268.	-1173.	-1035.	3289.	-.0750	.0209	.0283	-.0107	-.0309	.0702	2455.							
.1840	1354.	-3898.	-573.	-1116.	-1068.	3332.	-.0830	.0197	.0321	-.0200	-.0465	.0472	2475.							
.1850	1566.	-3387.	-1024.	-1275.	-994.	3291.	-.0875	.0182	.0342	-.0300	-.0646	.0220	2471.							
.1860	1742.	-2720.	-1558.	-1654.	-919.	3116.	-.0885	.0166	.0349	-.0397	-.0819	-.0051	2457.							
.1870	2096.	-2287.	-1893.	-1870.	-696.	2598.	-.0861	.0143	.0337	-.0473	-.0949	-.0341	2208.							
.1880	2268.	-2009.	-1918.	-1928.	-386.	1956.	-.0795	.0114	.0306	-.0483	-.1103	-.0559	1869.							
.1890	2262.	-1662.	-1844.	-2037.	24.	1289.	-.0691	.0083	.0266	-.0439	-.1244	-.0706	1625.							
.1900	2324.	-1316.	-1713.	-2080.	447.	459.	-.0568	.0046	.0219	-.0358	-.1304	-.0822	1467.							
.1910	2322.	-971.	-1462.	-1959.	701.	-454.	-.0436	.0000	.0163	-.0226	-.1311	-.0876	1435.							
.1920	2143.	-350.	-1307.	-1894.	925.	-1238.	-.0300	-.0049	.0107	-.0055	-.1265	-.0865	1647.							
.1930	1732.	614.	-1325.	-1932.	1111.	-1777.	-.0166	-.0100	.0056	.0144	-.1173	-.0790	1921.							
.1940	1287.	1548.	-1296.	-1784.	1156.	-2197.	-.0051	-.0158	.0012	.0368	-.1022	-.0683	2060.							
.1950	922.	2250.	-1123.	-1433.	1069.	-2472.	.0041	-.0216	-.0020	.0609	-.0807	-.0572	2056.							
.1960	517.	2801.	-858.	-1052.	956.	-2423.	.0112	-.0269	-.0037	.0861	-.0565	-.0451	1894.							
.1970	26.	3169.	-462.	-531.	834.	-2087.	.0164	-.0317	-.0041	.1118	-.0327	-.0318	1557.							
.1980	-413.	3308.	25.	199.	638.	-1632.	.0191	-.0365	-.0035	.1352	-.0081	-.0205	1189.							
.1990	-743.	3376.	405.	858.	366.	-1062.	.0196	-.0405	-.0018	.1537	.0184	-.0140	953.							
.2000	-1041.	3447.	652.	1311.	71.	-365.	.0189	-.0432	.0004	.1672	.0434	-.0110	918.							
.2010	-1306.	3404.	895.	1723.	-233.	302.	.0174	-.0450	.0019	.1762	.0639	-.0100	1189.							

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

CONDITION 24

LOADS

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INTERNAL FORCES IN THE PIPING
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.1910	2322.	-971.	1462.	-1959.	701.	-454.	-.0436	.0000	.0163	-.0226	-.1311	-.0876	1435.
.1920	2143.	-350.	-1307.	-1894.	925.	-1238.	-.0300	-.0049	.0107	-.0055	-.1265	-.0865	1647.
.1930	1732.	614.	-1325.	-1932.	1111.	-1777.	-.0166	-.0100	.0056	.0144	-.1173	-.0790	1921.
.1940	1287.	1548.	-1296.	-1784.	1156.	-2197.	-.0051	-.0158	.0012	.0368	-.1022	-.0683	2060.
.1950	922.	2250.	-1123.	-1433.	1069.	-2472.	.0041	-.0216	-.0020	.0609	-.0807	-.0572	2056.
.1960	517.	2801.	-858.	-1052.	956.	-2423.	.0112	-.0269	-.0037	.0861	-.0565	-.0451	1894.
.1970	26.	3169.	-462.	-531.	834.	-2087.	.0164	-.0317	-.0041	.1118	-.0327	-.0318	1557.
.1980	-413.	3308.	25.	199.	638.	-1632.	.0191	-.0365	-.0035	.1352	-.0081	-.0205	1189.
.1990	-743.	3376.	405.	858.	366.	-1062.	.0196	-.0405	-.0018	.1537	.0184	-.0140	953.
.2000	-1041.	3447.	652.	1311.	71.	-365.	.0189	-.0432	.0004	.1672	.0434	-.0110	918.
.2010	-1306.	3404.	895.	1723.	-233.	302.	.0174	-.0450	.0019	.1762	.0639	-.0100	1189.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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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	END	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)	
.2020	-1451.	3289.	1054.	2042.	-553.	812.	.0158	-.0460	.0026	.1794	.0818	-.012'	1528.	
.2030	-1503.	3279.	968.	2027.	-857.	1200.	.0149	-.0455	.0024	.1758	.0982	-.0184	1689.	
.2040	-1580.	3311.	754.	1743.	-1076.	1476.	.0156	-.0438	.0008	.1679	.1097	-.0243	1702.	
.2050	-1682.	3186.	614.	1409.	-1164.	1562.	.0186	-.0414	-.0027	.1580	.1146	-.0280	1620.	
.2060	-1711.	2888.	521.	972.	-1136.	1444.	.0234	-.0381	-.0076	.1461	.1161	-.0315	1401.	
.2070	-1647.	2472.	432.	366.	-1029.	1180.	.0299	-.0339	-.0133	.1324	.1162	-.0353	1084.	
.2080	-1584.	1936.	432.	-247.	-847.	812.	.0375	-.0292	-.0199	.1186	.1126	-.0374	808.	
.2090	-1589.	1389.	484.	-792.	-588.	403.	.0457	-.0247	-.0268	.1054	.1051	-.0371	718.	
.2100	-1627.	1015.	413.	-1385.	-297.	37.	.0533	-.0202	-.0332	.0910	.0970	-.0368	955.	
.2110	-1633.	777.	247.	-1966.	-49.	-264.	.0592	-.0159	-.0383	.0757	.0899	-.0379	1337.	
.2120	-1597.	498.	166.	-2338.	147.	-495.	.0629	-.0122	-.0421	.0614	.0822	-.0397	1614.	
.2130	-1543.	176.	183.	-2504.	312.	-592.	.0640	-.0090	-.0442	.0489	.0736	-.0419	1747.	
.2140	-1473.	-77.	178.	-2576.	418.	-504.	.0623	-.0063	-.0441	.0375	.0659	-.0453	1792.	
.2150	-1370.	-256.	140.	-2521.	438.	-280.	.0577	-.0043	-.0418	.0274	.0596	-.0497	1735.	
.2160	-1262.	-393.	121.	-2289.	406.	44.	.0506	-.0033	-.0380	.0197	.0538	-.0537	1567.	
.2170	-1186.	-449.	112.	-1977.	359.	474.	.0418	-.0029	-.0328	.0153	.0476	-.0560	1392.	
.2180	-1106.	-405.	83.	-1648.	268.	939.	.0319	-.0031	-.0266	.0140	.0419	-.0566	1291.	
.2190	-976.	-279.	31.	-1271.	110.	1316.	.0214	-.0041	-.0198	.0153	.0378	-.0558	1236.	
.2200	-829.	-38.	-67.	-883.	-70.	1566.	.0111	-.0058	-.0130	.0192	.0344	-.0525	1213.	
.2210	-715.	312.	-196.	-552.	-228.	1706.	.0021	-.0079	-.0063	.0259	.0303	-.0459	1218.	
.2220	-581.	632.	-269.	-237.	-370.	1684.	-.0054	-.0101	-.0000	.0350	.0257	-.0365	1173.	
.2230	-351.	793.	-228.	120.	-495.	1448.	-.0112	-.0125	.0055	.0454	.0214	-.0261	1035.	
.2240	-64.	801.	-88.	474.	-565.	1059.	-.0153	-.0146	.0102	.0562	.0167	-.0148	870.	
.2250	182.	723.	117.	770.	-546.	627.	-.0176	-.0161	.0139	.0663	.0099	-.0023	764.	
.2260	357.	619.	325.	993.	-443.	200.	-.0186	-.0170	.0163	.0745	.0007	.0103	745.	
.2270	485.	581.	426.	1096.	-287.	-192.	-.0191	-.0171	.0176	.0784	-.0093	.0208	774.	
.2280	553.	682.	354.	1028.	-110.	-494.	-.0195	-.0165	.0180	.0771	-.0201	.0280	772.	
.2290	556.	888.	149.	826.	77.	-679.	-.0202	-.0150	.0177	.0709	-.0323	.0319	722.	
.2300	540.	1114.	-123.	567.	270.	-770.	-.0214	-.0129	.0169	.0602	-.0457	.0318	670.	
.2310	556.	1311.	-438.	289.	450.	-791.	-.0232	-.0103	.0162	.0454	-.0590	.0271	644.	
.2320	618.	1429.	-749.	33.	596.	-754.	-.0255	-.0074	.0159	.0277	-.0719	.0183	648.	
.2330	738.	1366.	-960.	-122.	714.	-690.	-.0281	-.0044	.0161	.0087	-.0841	.0068	675.	
.2340	938.	1044.	-998.	-135.	818.	-629.	-.0306	-.0014	.0168	-.0100	-.0953	-.0064	701.	
.2350	1208.	499.	-887.	-52.	886.	-572.	-.0330	.0017	.0179	-.0275	-.1042	-.0199	712.	
.2360	1491.	-134.	-713.	57.	896.	-505.	-.0352	.0048	.0190	-.0434	-.1101	-.0322	694.	
.2370	1717.	-701.	-574.	144.	854.	-415.	-.0370	.0076	.0199	-.0577	-.1125	-.0416	647.	
.2380	1828.	-1094.	-529.	169.	777.	-282.	-.0382	.0103	.0202	-.0701	-.1111	-.0469	569.	
.2390	1806.	-1287.	-579.	107.	658.	-96.	-.0387	.0128	.0199	-.0804	-.1060	-.0472	454.	

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

CONDITION 24
LOADS
SHOCK
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ENGLISH UNITS

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

.2290	556.	888.	149.	826.	77.	888.	-679.	-.0202	-.0150	.0177	.0709	-.0323	.0319	722.
.2300	540.	1114.	-123.	567.	270.	-770.	-.0214	-.0129	.0169	.0602	-.0457	.0318	670.	
.2310	556.	1311.	-438.	289.	450.	-791.	-.0232	-.0103	.0162	.0454	-.0590	.0271	644.	
.2320	618.	1429.	-749.	33.	596.	-754.	-.0255	-.0074	.0159	.0277	-.0719	.0183	648.	
.2330	738.	1366.	-960.	-122.	714.	-690.	-.0281	-.0044	.0161	.0087	-.0841	.0068	675.	
.2340	938.	1044.	-978.	-135.	818.	-629.	-.0306	-.0014	.0168	-.0100	-.0953	-.0064	701.	
.2350	1208.	499.	-887.	-52.	886.	-572.	-.0330	.0017	.0179	-.0275	-.1042	-.0199	712.	
.2360	1491.	-134.	-713.	57.	896.	-505.	-.0352	.0048	.0190	-.0434	-.1101	-.0322	694.	
.2370	1717.	-701.	-574.	144.	854.	-415.	-.0370	.0076	.0199	-.0577	-.1125	-.0416	647.	
.2380	1828.	-1094.	-529.	169.	777.	-282.	-.0382	.0103	.0202	-.0701	-.1111	-.0469	569.	
.2390	1806.	-1287.	-579.	107.	658.	-96.	-.0387	.0128	.0199	-.0804	-.1060	-.0472	454.	

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

CONDITION 24
LOADS
SHOCK
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ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	EL							STRESS
TIME (SEC)	FX (LR)	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)
.2400	1679.	-1338.	-677.	-4.	500.	120.	-.0384	.0153	.0189	-.0882	-.0968	-.0428	346.
.2410	1484.	-1345.	-747.	-90.	328.	331.	-.0370	.0175	.0173	-.0935	-.0841	-.0341	320.
.2420	1238.	-1391.	-722.	-103.	165.	528.	-.0346	.0195	.0153	-.0960	-.0687	-.0216	380.
.2430	964.	-1525.	-570.	-33.	12.	707.	-.0310	.0214	.0132	-.0960	-.0517	-.0065	477.
.2440	705.	-1762.	-300.	122.	-122.	844.	-.0264	.0230	.0109	-.0941	-.0334	.0096	581.
.2450	466.	-2066.	50.	346.	-230.	930.	-.0211	.0244	.0085	-.0913	-.0148	.0254	687.
.2460	219.	-2350.	415.	579.	-312.	988.	-.0152	.0256	.0058	-.0882	.0029	.0401	800.
.2470	-45.	-2512.	708.	748.	-380.	1032.	-.0089	.0266	.0028	-.0858	.0189	.0524	896.
.2480	-309.	-2486.	860.	819.	-429.	1051.	-.0027	.0273	-.0005	-.0848	.0334	.0611	943.
.2490	-582.	-2252.	862.	799.	-446.	1042.	.0035	.0276	-.0041	-.0855	.0456	.0660	935.
.2500	-876.	-1841.	753.	713.	-429.	1014.	.0098	.0275	-.0078	-.0871	.0545	.0675	884.
.2510	-1141.	-1361.	606.	614.	-377.	940.	.0161	.0269	-.0113	-.0892	.0604	.0652	798.
.2520	-1298.	-965.	520.	587.	-293.	772.	.0224	.0259	-.0143	-.0911	.0640	.0591	683.
.2530	-1340.	-741.	572.	686.	-170.	509.	.0287	.0244	-.0166	-.0922	.0653	.0500	587.
.2540	-1308.	-680.	767.	902.	-7.	186.	.0350	.0226	-.0182	-.0917	.0637	.0397	621.
.2550	-1215.	-725.	1045.	1199.	179.	-185.	.0409	.0206	-.0191	-.0903	.0603	.0291	826.
.2560	-1063.	-800.	1324.	1519.	350.	-592.	.0460	.0184	-.0195	-.0886	.0563	.0185	1124.
.2570	-906.	-808.	1527.	1783.	488.	-981.	.0499	.0164	-.0194	-.0868	.0519	.0096	1411.
.2580	-794.	-684.	1605.	1941.	595.	-1309.	.0525	.0147	-.0192	-.0852	.0469	.0035	1628.
.2590	-719.	-424.	1545.	1994.	658.	-1572.	.0535	.0134	-.0187	-.0840	.0420	.0006	1768.
.2600	-662.	-52.	1346.	1949.	653.	-1768.	.0525	.0124	-.0179	-.0834	.0378	.0007	1827.
.2610	-616.	376.	1049.	1828.	582.	-1881.	.0497	.0119	-.0165	-.0834	.0343	.0038	1811.
.2620	-562.	742.	753.	1718.	472.	-1919.	.0452	.0118	-.0142	-.0833	.0310	.0099	1765.
.2630	-457.	913.	562.	1709.	336.	-1906.	.0391	.0122	-.0110	-.0829	.0276	.0182	1740.
.2640	-270.	839.	510.	1816.	166.	-1846.	.0314	.0129	-.0068	-.0823	.0244	.0275	1749.
.2650	-13.	564.	560.	2009.	-31.	-1728.	.0224	.0141	-.0016	-.0823	.0213	.0368	1786.
.2660	268.	179.	654.	2256.	-234.	-1538.	.0122	.0156	.0041	-.0833	.0179	.0459	1847.
.2670	520.	-207.	718.	2498.	-432.	-1262.	.0013	.0174	.0100	-.0861	.0136	.0543	1909.
.2680	722.	-507.	682.	2654.	-623.	-896.	-.0101	.0196	.0157	-.0913	.0086	.0614	1934.
.2690	877.	-704.	532.	2694.	-793.	-466.	-.0214	.0221	.0209	-.0989	.0030	.0664	1919.
.2700	985.	-839.	310.	2641.	-922.	-10.	-.0322	.0249	.0252	-.1085	-.0037	.0694	1886.
.2710	1049.	-951.	58.	2507.	-994.	436.	-.0417	.0278	.0286	-.1195	-.0118	.0704	1842.
.2720	1090.	-1036.	-185.	2307.	-992.	828.	-.0492	.0309	.0309	-.1312	-.0211	.0696	1782.
.2730	1141.	-1309.	-358.	2092.	-908.	1107.	-.0544	.0339	.0322	-.1428	-.0315	.0670	1709.
.2740	1221.	-1667.	-409.	1902.	-755.	1231.	-.0571	.0366	.0324	-.1535	-.0428	.0630	1610.
.2750	1332.	-2123.	-359.	1713.	-549.	1195.	-.0572	.0392	.0316	-.1629	-.0545	.0580	1456.
.2760	1461.	-2587.	-271.	1492.	-305.	1009.	-.0550	.0415	.0298	-.1711	-.0657	.0522	1232.
.2770	1572.	-2978.	-195.	1236.	-41.	700.	-.0507	.0432	.0270	-.1779	-.0761	.0466	958.

ADLPIPE PAGE 1088 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.27.18.

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

.2670	520.	-207.	718.	2498.	-432.	-1262.	.0013	.0174	.0100	-.0861	.0136	.0543	1909.
.2680	722.	-507.	682.	2654.	-623.	-876.	-.0101	.0196	.0157	-.0913	.0086	.0614	1934.
.2690	877.	-704.	532.	2694.	-793.	-466.	-.0214	.0221	.0209	-.0989	.0030	.0664	1919.
.2700	985.	-839.	310.	2641.	-922.	-10.	-.0322	.0249	.0252	-.1085	-.0037	.0694	1886.
.2710	1047.	-951.	58.	2507.	-994.	436.	-.0417	.0278	.0286	-.1195	-.0118	.0704	1842.
.2720	1090.	-1036.	-185.	2307.	-992.	828.	-.0492	.0309	.0309	-.1312	-.0211	.0696	1782.
.2730	1141.	-1309.	-358.	2092.	-908.	1107.	-.0544	.0339	.0322	-.1428	-.0315	.0670	1709.
.2740	1221.	-1667.	-409.	1902.	-755.	1231.	-.0571	.0366	.0324	-.1535	-.0428	.0630	1610.
.2750	1332.	-2123.	-359.	1713.	-549.	1195.	-.0572	.0392	.0316	-.1629	-.0545	.0580	1456.
.2760	1461.	-2587.	-271.	1492.	-305.	1009.	-.0550	.0415	.0298	-.1711	-.0657	.0522	1232.
.2770	1572.	-2978.	-195.	1236.	-41.	700.	-.0507	.0437	.0270	-.1779	-.0761	.0466	958.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	EHD	TYPE	EL								STRESS
24	1	41					DX	DY	DZ	RX	RY	RZ	(PSI)	
TIME	FX	FY	FZ	MX	MY	MZ	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)								
.2780	1631.	-3237.	-162.	938.	227.	315.	-.0450	.0445	.0235	-.1830	-.0854	.0418	684.	
.2790	1633.	-3352.	-183.	587.	486.	-89.	-.0382	.0454	.0193	-.1863	-.0930	.0381	517.	
.2800	1585.	-3353.	-233.	220.	724.	-472.	-.0311	.0458	.0149	-.1875	-.0982	.0354	601.	
.2810	1484.	-3275.	-279.	-104.	932.	-799.	-.0240	.0457	.0105	-.1861	-.1009	.0343	831.	
.2820	1325.	-3136.	-307.	-356.	1107.	-1033.	-.0175	.0450	.0065	-.1821	-.1012	.0347	1049.	
.2830	1131.	-2974.	-293.	-510.	1242.	-1157.	-.0118	.0437	.0033	-.1753	-.0989	.0363	1195.	
.2840	937.	-2837.	-208.	-535.	1318.	-1183.	-.0074	.0419	.0010	-.1659	-.0937	.0385	1247.	
.2850	754.	-2718.	-66.	-435.	1322.	-1115.	-.0043	.0396	-.0003	-.1542	-.0860	.0410	1202.	
.2860	575.	-2568.	87.	-247.	1260.	-960.	-.0025	.0368	-.0006	-.1408	-.0759	.0436	1081.	
.2870	400.	-2375.	234.	7.	1144.	-739.	-.0019	.0335	-.0000	-.1261	-.0642	.0460	918.	
.2880	240.	-2155.	376.	300.	980.	-482.	-.0023	.0298	.0010	-.1104	-.0515	.0480	763.	
.2890	93.	-1891.	483.	571.	783.	-204.	-.0032	.0260	.0023	-.0941	-.0384	.0495	667.	
.2900	-48.	-1561.	525.	781.	573.	67.	-.0045	.0221	.0037	-.0778	-.0256	.0502	655.	
.2910	-177.	-1190.	517.	937.	370.	289.	-.0055	.0180	.0048	-.0617	-.0138	.0503	706.	
.2920	-275.	-828.	487.	1033.	182.	432.	-.0062	.0140	.0056	-.0459	-.0036	.0495	765.	
.2930	-320.	-496.	440.	1044.	9.	482.	-.0062	.0102	.0059	-.0307	.0050	.0474	775.	
.2940	-308.	-192.	371.	978.	-148.	424.	-.0055	.0065	.0058	-.0165	.0120	.0436	726.	
.2950	-247.	81.	287.	871.	-287.	256.	-.0042	.0030	.0053	-.0036	.0173	.0384	642.	
.2960	-149.	313.	201.	730.	-405.	4.	-.0022	-.0004	.0045	.0080	.0210	.0320	562.	
.2970	-18.	492.	125.	550.	-501.	-290.	.0001	-.0035	.0034	.0183	.0236	.0245	538.	
.2980	129.	612.	68.	355.	-576.	-593.	.0027	-.0062	.0021	.0276	.0254	.0162	606.	
.2990	252.	703.	20.	163.	-626.	-866.	.0054	-.0087	.0005	.0358	.0266	.0080	728.	
.3000	317.	808.	-40.	-38.	-645.	-1062.	.0079	-.0109	-.0012	.0432	.0275	.0005	838.	
.3010	312.	938.	-117.	-255.	-639.	-1156.	.0102	-.0127	-.0029	.0500	.0284	-.0058	907.	
.3020	249.	1083.	-198.	-467.	-619.	-1158.	.0121	-.0144	-.0047	.0566	.0297	-.0106	940.	
.3030	138.	1247.	-280.	-660.	-596.	-1087.	.0136	-.0158	-.0064	.0632	.0316	-.0138	946.	
.3040	-10.	1432.	-363.	-829.	-575.	-964.	.0147	-.0173	-.0079	.0701	.0341	-.0153	941.	
.3050	-166.	1614.	-430.	-965.	-567.	-823.	.0155	-.0187	-.0091	.0776	.0372	-.0152	936.	
.3060	-302.	1763.	-460.	-1052.	-576.	-700.	.0161	-.0202	-.0099	.0859	.0409	-.0138	936.	
.3070	-408.	1869.	-452.	-1091.	-599.	-614.	.0165	-.0218	-.0104	.0950	.0448	-.0113	936.	
.3080	-479.	1927.	-404.	-1090.	-630.	-573.	.0169	-.0235	-.0104	.1048	.0485	-.0079	932.	
.3090	-516.	1928.	-317.	-1056.	-662.	-575.	.0172	-.0252	-.0103	.1152	.0518	-.0039	925.	
.3100	-526.	1894.	-213.	-1015.	-688.	-605.	.0173	-.0269	-.0099	.1257	.0544	.0002	922.	
.3110	-532.	1868.	-127.	-991.	-701.	-637.	.0174	-.0285	-.0095	.1357	.0559	.0040	924.	
.3120	-551.	1878.	-82.	-994.	-696.	-651.	.0172	-.0300	-.0090	.1446	.0562	.0072	929.	
.3130	-581.	1923.	-78.	-1019.	-673.	-636.	.0166	-.0313	-.0085	.1519	.0552	.0091	928.	
.3140	-619.	1993.	-109.	-1066.	-626.	-580.	.0157	-.0324	-.0081	.1572	.0528	.0094	920.	
.3150	-661.	2075.	-161.	-1117.	-553.	-481.	.0145	-.0332	-.0076	.1604	.0489	.0078	901.	

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LOADS

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

.3050	-166.	1614.	-430.	-965.	-567.	-823.	.0155	-.0187	-.0091	.0776	.0372	-.0152	936.
.3060	-302.	1763.	-460.	-1052.	-576.	-700.	.0161	-.0202	-.0099	.0859	.0409	-.0138	936.
.3070	-403.	1869.	-452.	-1091.	-599.	-614.	.0165	-.0218	-.0104	.0950	.0448	-.0113	936.
.3080	-479.	1927.	-404.	-1090.	-630.	-573.	.0169	-.0235	-.0104	.1048	.0485	-.0079	932.
.3090	-516.	1928.	-317.	-1056.	-662.	-575.	.0172	-.0252	-.0103	.1152	.0518	-.0039	925.
.3100	-526.	1894.	-213.	-1015.	-688.	-605.	.0173	-.0269	-.0099	.1257	.0544	.0002	922.
.3110	-532.	1868.	-127.	-991.	-701.	-637.	.0174	-.0285	-.0095	.1357	.0559	.0040	924.
.3120	-551.	1878.	-82.	-994.	-696.	-651.	.0172	-.0300	-.0090	.1446	.0562	.0072	929.
.3130	-581.	1923.	-78.	-1019.	-673.	-636.	.0166	-.0313	-.0085	.1519	.0552	.0091	928.
.3140	-619.	1993.	-109.	-1066.	-626.	-580.	.0157	-.0324	-.0081	.1572	.0528	.0094	920.
.3150	-661.	2075.	-161.	-1117.	-553.	-481.	.0145	-.0332	-.0076	.1604	.0489	.0078	901.

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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)
.3160	-703.	2144.	-215.	-1150.	-452.	-348.	.0130	-.0338	-.0070	.1614	.0435	.0042	865.
.3170	-732.	2174.	-253.	-1152.	-523.	-195.	.0113	-.0341	-.0064	.1603	.0367	-.0014	817.
.3180	-734.	2142.	-262.	-1127.	-168.	-34.	.0095	-.0341	-.0057	.1573	.0286	-.0089	768.
.3190	-707.	2042.	-239.	-1084.	9.	121.	.0077	-.0339	-.0049	.1527	.0193	-.0180	735.
.3200	-653.	1893.	-200.	-1037.	197.	254.	.0059	-.0334	-.0043	.1468	.0090	-.0280	732.
.3210	-576.	1731.	-179.	-1017.	383.	356.	.0042	-.0326	-.0037	.1396	-.0018	-.0387	771.
.3220	-472.	1588.	-202.	-1051.	553.	422.	.0025	-.0317	-.0034	.1313	-.0128	-.0495	850.
.3230	-364.	1475.	-274.	-1144.	693.	449.	.0008	-.0305	-.0031	.1224	-.0234	-.0598	951.
.3240	-237.	1399.	-394.	-1288.	794.	440.	-.0009	-.0293	-.0031	.1133	-.0333	-.0690	1062.
.3250	-103.	1358.	-555.	-1471.	851.	405.	-.0028	-.0279	-.0030	.1043	-.0419	-.0769	1177.
.3260	37.	1324.	-726.	-1661.	860.	355.	-.0048	-.0266	-.0028	.0961	-.0486	-.0830	1283.
.3270	180.	1258.	-867.	-1821.	825.	306.	-.0069	-.0253	-.0024	.0893	-.0533	-.0870	1363.
.3280	312.	1144.	-954.	-1930.	757.	282.	-.0090	-.0241	-.0018	.0843	-.0557	-.0886	1410.
.3290	415.	990.	-981.	-1977.	665.	307.	-.0112	-.0230	-.0009	.0813	-.0556	-.0877	1421.
.3300	468.	817.	-957.	-1961.	555.	396.	-.0134	-.0222	.0001	.0802	-.0532	-.0844	1400.
.3310	461.	653.	-898.	-1895.	436.	555.	-.0154	-.0215	.0012	.0810	-.0485	-.0788	1363.
.3320	391.	521.	-820.	-1797.	316.	780.	-.0172	-.0210	.0023	.0833	-.0418	-.0716	1337.
.3330	258.	446.	-740.	-1685.	198.	1053.	-.0187	-.0207	.0031	.0868	-.0336	-.0632	1346.
.3340	74.	449.	-678.	-1575.	84.	1346.	-.0196	-.0206	.0036	.0910	-.0244	-.0544	1397.
.3350	-138.	530.	-641.	-1474.	-21.	1619.	-.0198	-.0208	.0038	.0954	-.0145	-.0459	1476.
.3360	-350.	655.	-609.	-1376.	-112.	1835.	-.0190	-.0212	.0036	.0998	-.0047	-.0386	1548.
.3370	-534.	780.	-554.	-1272.	-186.	1961.	-.0172	-.0218	.0029	.1040	.0047	-.0329	1580.
.3380	-671.	889.	-468.	-1158.	-236.	1976.	-.0143	-.0225	.0019	.1079	.0131	-.0295	1552.
.3390	-758.	989.	-364.	-1042.	-261.	1875.	-.0103	-.0235	.0004	.1110	.0204	-.0283	1456.
.3400	-805.	1095.	-255.	-929.	-259.	1668.	-.0052	-.0245	-.0014	.1133	.0264	-.0295	1299.
.3410	-823.	1223.	-154.	-833.	-236.	1379.	.0006	-.0257	-.0036	.1145	.0310	-.0328	1098.
.3420	-824.	1393.	-81.	-767.	-194.	1037.	.0068	-.0268	-.0060	.1148	.0347	-.0378	879.
.3430	-822.	1622.	-51.	-729.	-143.	673.	.0133	-.0280	-.0087	.1141	.0375	-.0441	676.
.3440	-830.	1907.	-63.	-711.	-90.	317.	.0196	-.0292	-.0114	.1125	.0399	-.0511	528.
.3450	-854.	2227.	-103.	-699.	-41.	-2.	.0255	-.0303	-.0139	.1105	.0421	-.0582	472.
.3460	-889.	2541.	-144.	-669.	2.	-265.	.0308	-.0314	-.0161	.1083	.0445	-.0649	485.
.3470	-930.	2804.	-156.	-594.	34.	-460.	.0353	-.0323	-.0178	.1065	.0473	-.0707	507.
.3480	-972.	2980.	-113.	-453.	55.	-580.	.0388	-.0331	-.0188	.1050	.0506	-.0750	497.
.3490	-1012.	3051.	-10.	-246.	63.	-621.	.0412	-.0337	-.0191	.1041	.0542	-.0777	452.
.3500	-1048.	3022.	143.	11.	54.	-583.	.0426	-.0341	-.0188	.1034	.0583	-.0786	395.
.3510	-1084.	2914.	320.	295.	28.	-473.	.0427	-.0340	-.0179	.1025	.0626	-.0777	376.
.3520	-1124.	2763.	488.	574.	-15.	-298.	.0419	-.0335	-.0166	.1009	.0669	-.0750	436.
.3530	-1168.	2592.	620.	815.	-74.	-73.	.0400	-.0325	-.0151	.0980	.0707	-.0708	554.

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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

.3420	-822.	1622.	-51.	-729.	-143.	673.	.0133	-.0280	-.0087	.1141	.0375	-.0441	676.
.3430	-830.	1907.	-63.	-711.	-90.	317.	.0196	-.0292	-.0114	.1125	.0399	-.0511	528.
.3450	-854.	2227.	-103.	-699.	-41.	-2.	.0255	-.0303	-.0139	.1105	.0421	-.0582	472.
.3460	-829.	2541.	-144.	-669.	2.	-265.	.0308	-.0314	-.0161	.1083	.0445	-.0649	485.
.3470	-930.	2804.	-156.	-594.	34.	-460.	.0353	-.0323	-.0178	.1065	.0473	-.0707	507.
.3480	-972.	2980.	-113.	-452.	55.	-520.	.0388	-.0331	-.0188	.1050	.0506	-.0750	497.
.3490	-1012.	3051.	-10.	-246.	63.	-621.	.0412	-.0337	-.0191	.1041	.0542	-.0777	452.
.3500	-1048.	3022.	143.	11.	54.	-583.	.0426	-.0341	-.0188	.1034	.0583	-.0786	395.
.3510	-1084.	2914.	320.	295.	28.	-473.	.0427	-.0340	-.0179	.1025	.0626	-.0777	376.
.3520	-1124.	2763.	488.	574.	-15.	-298.	.0419	-.0335	-.0166	.1009	.0669	-.0750	436.
.3530	-1168.	2592.	620.	815.	-74.	-73.	.0400	-.0325	-.0151	.0980	.0707	-.0708	554.

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

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CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	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)
.3540	-1206.	2409.	702.	996.	-150.	182.	.0372	-.0308	-.0135	.0934	.0739	-.0655	690.
.3550	-1231.	2217.	729.	1103.	-235.	446.	.0337	-.0286	-.0119	.0868	.0761	-.0595	818.
.3560	-1241.	2013.	704.	1134.	-319.	700.	.0299	-.0257	-.0104	.0780	.0770	-.0531	924.
.3570	-1229.	1781.	644.	1098.	-393.	924.	.0258	-.0223	-.0092	.0673	.0763	-.0467	1003.
.3580	-1186.	1503.	569.	1008.	-448.	1103.	.0219	-.0184	-.0083	.0549	.0739	-.0405	1052.
.3590	-1112.	1177.	492.	873.	-478.	1228.	.0182	-.0142	-.0076	.0412	.0698	-.0347	1065.
.3600	-1015.	820.	415.	702.	-477.	1297.	.0150	-.0097	-.0072	.0266	.0542	-.0296	1045.
.3610	-909.	454.	337.	508.	-442.	1314.	.0123	-.0052	-.0071	.0116	.0570	-.0249	995.
.3620	-800.	96.	257.	297.	-372.	1284.	.0101	-.0008	-.0072	-.0034	.0485	-.0207	923.
.3630	-694.	-236.	177.	78.	-272.	1217.	.0084	.0034	-.0074	-.0177	.0391	-.0170	842.
.3640	-595.	-534.	100.	-134.	-147.	1121.	.0072	.0072	-.0077	-.0310	.0290	-.0138	767.
.3650	-505.	-795.	32.	-321.	-1.	1003.	.0063	.0106	-.0080	-.0428	.0184	-.0108	710.
.3660	-419.	-1027.	-14.	-467.	158.	869.	.0056	.0134	-.0080	-.0530	.0077	-.0080	673.
.3670	-326.	-1242.	-29.	-558.	320.	723.	.0049	.0157	-.0077	-.0612	-.0029	-.0055	652.
.3680	-219.	-1444.	-11.	-587.	471.	571.	.0040	.0174	-.0071	-.0676	-.0131	-.0033	637.
.3690	-100.	-1621.	28.	-558.	603.	417.	.0028	.0187	-.0059	-.0723	-.0227	-.0012	621.
.3700	30.	-1756.	70.	-482.	704.	271.	.0011	.0195	-.0043	-.0756	-.0315	.0008	604.
.3710	169.	-1838.	102.	-373.	769.	138.	-.0012	.0199	-.0023	-.0777	-.0393	.0027	584.
.3720	312.	-1863.	114.	-243.	794.	26.	-.0041	.0200	.0001	-.0788	-.0460	.0047	560.
.3730	453.	-1827.	98.	-104.	778.	-61.	-.0076	.0198	.0028	-.0793	-.0516	.0070	531.
.3740	588.	-1736.	53.	34.	726.	-121.	-.0116	.0195	.0056	-.0793	-.0560	.0095	497.
.3750	711.	-1604.	-14.	169.	644.	-154.	-.0159	.0192	.0085	-.0789	-.0592	.0125	461.
.3760	823.	-1453.	-90.	300.	541.	-165.	-.0203	.0187	.0113	-.0781	-.0614	.0159	431.
.3770	924.	-1302.	-162.	427.	424.	-160.	-.0246	.0183	.0141	-.0769	-.0626	.0196	420.
.3780	1018.	-1168.	-221.	552.	298.	-151.	-.0287	.0179	.0166	-.0755	-.0628	.0235	435.
.3790	1102.	-1054.	-266.	668.	170.	-143.	-.0323	.0175	.0188	-.0737	-.0622	.0275	475.
.3800	1172.	-958.	-301.	767.	47.	-139.	-.0352	.0172	.0207	-.0719	-.0608	.0313	526.
.3810	1224.	-874.	-330.	843.	-66.	-144.	-.0374	.0168	.0221	-.0700	-.0588	.0349	578.
.3820	1258.	-807.	-351.	895.	-165.	-163.	-.0386	.0165	.0230	-.0682	-.0564	.0381	623.
.3830	1277.	-762.	-360.	923.	-247.	-197.	-.0390	.0163	.0234	-.0665	-.0535	.0406	658.
.3840	1282.	-741.	-356.	923.	-309.	-245.	-.0384	.0161	.0233	-.0650	-.0503	.0425	677.
.3850	1268.	-738.	-343.	897.	-351.	-306.	-.0369	.0160	.0226	-.0637	-.0469	.0436	681.
.3860	1234.	-742.	-325.	848.	-372.	-379.	-.0345	.0159	.0213	-.0627	-.0432	.0442	674.
.3870	1180.	-748.	-304.	778.	-376.	-462.	-.0312	.0158	.0196	-.0620	-.0392	.0442	660.
.3880	1109.	-750.	-278.	691.	-367.	-554.	-.0273	.0158	.0175	-.0614	-.0348	.0439	647.
.3890	1022.	-744.	-248.	597.	-349.	-655.	-.0228	.0158	.0150	-.0608	-.0300	.0433	642.
.3900	916.	-717.	-216.	502.	-323.	-761.	-.0179	.0157	.0122	-.0601	-.0247	.0429	652.
.3910	788.	-663.	-183.	413.	-293.	-867.	-.0125	.0155	.0093	-.0591	-.0189	.0429	677.

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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

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

.3810	1172.	-958.	-101.	767.	47.	-139.	-10352	.0172	.0207	-.0719	-.0608	.0313	526.
.3820	1224.	-874.	-330.	843.	-66.	-144.	-.0374	.0168	.0221	-.0700	-.0588	.0349	578.
.3830	1258.	-807.	-351.	895.	-165.	-163.	-.0386	.0165	.0230	-.0682	-.0564	.0381	623.
.3840	1277.	-762.	-360.	923.	-247.	-197.	-.0390	.0163	.0234	-.0665	-.0535	.0406	658.
.3850	1282.	-741.	-356.	927.	-309.	-245.	-.0384	.0161	.0233	-.0650	-.0503	.0425	677.
.3860	1268.	-738.	-243.	897.	-351.	-306.	-.0369	.0160	.0226	-.0637	-.0469	.0436	681.
.3870	1234.	-742.	-325.	848.	-372.	-379.	-.0345	.0159	.0213	-.0627	-.0432	.0442	674.
.3880	1180.	-748.	-304.	778.	-376.	-462.	-.0312	.0158	.0196	-.0620	-.0392	.0442	660.
.3880	1109.	-750.	-278.	691.	-367.	-554.	-.0273	.0158	.0175	-.0614	-.0348	.0439	647.
.3890	1022.	-744.	-248.	597.	-349.	-655.	-.0228	.0158	.0150	-.0608	-.0300	.0433	642.
.3900	916.	-717.	-216.	502.	-323.	-761.	-.0179	.0157	.0122	-.0601	-.0247	.0429	652.
.3910	788.	-663.	-183.	413.	-293.	-867.	-.0125	.0155	.0093	-.0591	-.0189	.0429	677.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKW02F 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	MEMBER	SEQUENCE	LOCATION	END	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)	
.3920	645.	-592.	-141.	339.	-259.	-974.	-.0070	.0153	.0063	-.0576	-.0127	.0435	717.	
.3930	494.	-522.	-77.	292.	-222.	-1079.	-.0014	.0149	.0033	-.0554	-.0061	.0447	769.	
.3940	338.	-457.	12.	273.	-184.	-1179.	.0042	.0144	.0004	-.0522	.0007	.0467	825.	
.3950	175.	-392.	114.	278.	-143.	-1267.	.0095	.0138	-.0023	-.0483	.0075	.0495	880.	
.3960	11.	-323.	223.	305.	-103.	-1342.	.0144	.0131	-.0047	-.0437	.0141	.0530	930.	
.3970	-142.	-260.	335.	354.	-68.	-1405.	.0188	.0123	-.0067	-.0387	.0204	.0568	978.	
.3980	-271.	-211.	447.	416.	-43.	-1456.	.0223	.0115	-.0083	-.0336	.0260	.0605	1021.	
.3990	-371.	-173.	549.	482.	-31.	-1491.	.0250	.0107	-.0094	-.0288	.0307	.0638	1057.	
.4000	-441.	-135.	624.	546.	-33.	-1510.	.0267	.0099	-.0099	-.0246	.0344	.0665	1083.	

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)
.1080	-473.	3534.	3395.	5509.	1861.	-4762.	.0922	-.0450	-.0148	.0848	.0316	-.0861	5066.

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU								STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	(PSI)	
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	1.	-1.	2.	0.	-1.	-0.	-.0000	-.0000	-.0000	.0000	.0000	-.0000	0.	
.0020	7.	-3.	8.	3.	-4.	-1.	-.0000	-.0000	-.0000	.0001	.0000	-.0001	3.	
.0030	14.	15.	8.	13.	-11.	-4.	-.0000	-.0001	-.0000	.0002	.0001	-.0003	12.	
.0040	15.	69.	-10.	38.	-22.	-14.	-.0001	-.0002	-.0000	.0002	.0003	-.0005	31.	
.0050	12.	154.	-37.	84.	-37.	-34.	-.0001	-.0004	.0000	.0003	.0005	-.0008	66.	
.0060	10.	255.	-60.	143.	-51.	-60.	-.0000	-.0007	.0001	.0007	.0009	-.0012	110.	
.0070	18.	366.	-66.	215.	-71.	-91.	.0000	-.0012	.0003	.0015	.0014	-.0017	164.	
.0080	45.	508.	-61.	311.	-114.	-129.	.0002	-.0018	.0007	.0028	.0021	-.0028	240.	
.0090	80.	742.	-96.	458.	-192.	-179.	.0003	-.0027	.0012	.0040	.0037	-.0045	356.	
.0100	113.	1083.	-186.	669.	-305.	-244.	.0006	-.0038	.0019	.0053	.0063	-.0068	522.	
.0110	145.	1457.	-275.	926.	-445.	-320.	.0011	-.0053	.0029	.0071	.0099	-.0094	725.	
.0120	181.	1780.	-303.	1185.	-594.	-384.	.0019	-.0069	.0043	.0097	.0147	-.0120	930.	
.0130	206.	2012.	-246.	1414.	-723.	-422.	.0032	-.0085	.0059	.0133	.0209	-.0143	1108.	
.0140	181.	2135.	-109.	1601.	-800.	-440.	.0049	-.0099	.0076	.0175	.0282	-.0154	1243.	
.0150	69.	2116.	111.	1721.	-795.	-452.	.0072	-.0111	.0091	.0220	.0360	-.0147	1314.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.27.18.

S/RV PIPING KEWAUNEE GKW02F 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

.0050	12.	154.	-37.	84.	-37.	-34.	-.0001	-.0004	.0000	.0003	.0005	-.0008	66.
.0060	10.	253.	-60.	143.	-51.	-60.	-.0000	-.0007	.0001	.0007	.0009	-.0012	110.
.0070	18.	366.	-66.	215.	-71.	-91.	.0000	-.0012	.0003	.0015	.0014	-.0017	164.
.0080	45.	508.	-61.	311.	-114.	-129.	.0002	-.0018	.0007	.0028	.0021	-.0028	240.
.0090	80.	742.	-96.	458.	-192.	-179.	.0003	-.0027	.0012	.0040	.0037	-.0045	356.
.0100	113.	1083.	-186.	609.	-305.	-244.	.0006	-.0038	.0019	.0053	.0063	-.0068	522.
.0110	145.	1457.	-275.	925.	-445.	-320.	.0011	-.0053	.0029	.0071	.0099	-.0094	725.
.0120	181.	1780.	-303.	1155.	-594.	-384.	.0019	-.0069	.0043	.0097	.0147	-.0120	930.
.0130	206.	2012.	-246.	1414.	-723.	-422.	.0032	-.0081	.0059	.0133	.0209	-.0143	1108.
.0140	181.	2135.	-109.	1601.	-800.	-440.	.0049	-.0099	.0076	.0175	.0282	-.0154	1243.
.0150	69.	2116.	111.	1721.	-795.	-452.	.0072	-.0111	.0091	.0220	.0360	-.0147	1314.

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	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.0160	-139.	1926.	402.	1723.	-689.	-448.	.0100	-.0116	.0100	.0260	.0435	-.0118	1287.	
.0170	-391.	1521.	753.	1575.	-534.	-412.	.0133	-.0111	.0099	.0284	.0506	-.0077	1155.	
.0180	-596.	884.	1138.	1292.	-422.	-339.	.0168	-.0096	.0083	.0277	.0575	-.0041	944.	
.0190	-698.	88.	1495.	922.	-414.	-239.	.0204	-.0070	.0048	.0226	.0643	-.0022	700.	
.0200	-668.	-708.	1758.	536.	-599.	-151.	.0236	-.0036	-.0007	.0125	.0710	-.0029	551.	
.0210	-630.	-1074.	1627.	226.	-963.	-104.	.0265	.0007	-.0082	-.0047	.0784	-.0053	670.	
.0220	-731.	-854.	957.	74.	-1231.	-111.	.0298	.0057	-.0172	-.0292	.0885	-.0074	834.	
.0230	-908.	-805.	418.	-27.	-1268.	-214.	.0334	.0107	-.0270	-.0531	.0981	-.0064	867.	
.0240	-1247.	-1350.	447.	-458.	-944.	-345.	.0374	.0165	-.0365	-.0707	.1015	.0025	745.	
.0250	-1589.	-2465.	974.	-1320.	-513.	-371.	.0413	.0232	-.0448	-.0833	.1004	.0159	986.	
.0260	-1596.	-3904.	1665.	-2193.	-276.	-288.	.0447	.0296	-.0526	-.0945	.1023	.0245	1503.	
.0270	-1750.	-4765.	1917.	-2786.	280.	-318.	.0480	.0348	-.0604	-.1065	.1042	.0333	1900.	
.0280	-2689.	-4661.	1697.	-3245.	1279.	-757.	.0497	.0392	-.0674	-.1150	.0893	.0544	2406.	
.0290	-3557.	-4424.	1403.	-3668.	1844.	-1303.	.0488	.0426	-.0722	-.1209	.0523	.0734	2903.	
.0300	-2835.	-4735.	1014.	-3874.	1804.	-1184.	.0470	.0447	-.0754	-.1340	.0536	.0616	2989.	
.0310	-1645.	-4968.	523.	-4028.	1749.	-788.	.0439	.0463	-.0756	-.1477	.0443	.0404	3007.	
.0320	-1208.	-4916.	336.	-4089.	1719.	-810.	.0365	.0461	-.0718	-.1490	.0081	.0341	3039.	
.0330	-754.	-4626.	-8.	-3735.	1480.	-794.	.0258	.0436	-.0646	-.1473	-.0310	.0249	2761.	
.0340	543.	-4191.	-903.	-3031.	1038.	-75.	.0140	.0403	-.0547	-.1527	-.0471	-.0038	2160.	
.0350	1819.	-4040.	-1399.	-2450.	629.	892.	-.0004	.0364	-.0415	-.1497	-.0635	-.0287	1808.	
.0360	2272.	-4236.	-946.	-2108.	412.	1563.	-.0187	.0314	-.0253	-.1265	-.0992	-.0316	1791.	
.0370	2574.	-3983.	-701.	-1541.	258.	2333.	-.0384	.0252	-.0083	-.0997	-.1261	-.0322	1892.	
.0380	3058.	-2607.	-1549.	-449.	-1.	3381.	-.0574	.0179	.0083	-.0813	-.1271	-.0426	2299.	
.0390	2839.	-523.	-2610.	869.	-305.	4003.	-.0765	.0091	.0251	-.0565	-.1307	-.0408	2769.	
.0400	2114.	1203.	-2876.	2029.	-681.	4055.	-.0949	-.0012	.0427	-.0164	-.1468	-.0238	3091.	
.0410	2124.	2363.	-2814.	2906.	-927.	4339.	-.1079	-.0112	.0598	.0241	-.1453	-.0173	3575.	
.0420	2786.	3152.	-2662.	3552.	-1264.	4781.	-.1151	-.0208	.0762	.0617	-.1269	-.0227	4104.	
.0430	3101.	3738.	-2145.	4156.	-1793.	4592.	-.1183	-.0316	.0912	.1055	-.1164	-.0214	4346.	
.0440	2891.	4674.	-1821.	4783.	-2138.	3839.	-.1164	-.0426	.1035	.1488	-.1093	-.0136	4378.	
.0450	2702.	5751.	-1875.	5182.	-2104.	3097.	-.1078	-.0519	.1121	.1829	-.0906	-.0110	4309.	
.0460	2632.	5876.	-1326.	5042.	-1820.	2366.	-.0941	-.0593	.1165	.2159	-.0708	-.0105	3949.	
.0470	2296.	5034.	20.	4311.	-1386.	1439.	-.0774	-.0646	.1166	.2505	-.0529	-.0043	3203.	
.0480	1756.	4405.	949.	3360.	-831.	544.	-.0579	-.0669	.1116	.2716	-.0548	-.0010	2362.	
.0490	1250.	4482.	888.	2637.	-258.	-216.	-.0361	-.0670	.1006	.2714	-.0373	-.0088	1792.	
.0500	491.	4836.	482.	2111.	276.	-1126.	-.0142	-.0656	.0848	.2591	-.0251	-.0180	1623.	
.0510	-513.	5065.	164.	1426.	817.	-2082.	.0070	-.0618	.0664	.2390	-.0243	-.0239	1788.	
.0520	-972.	4744.	-65.	505.	1161.	-2575.	.0279	-.0550	.0466	.2072	-.0188	-.0397	1934.	
.0530	-614.	3535.	-20.	-466.	1151.	-2562.	.0476	-.0465	.0262	.1666	-.0033	-.0683	1919.	

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

.0430	3101.	2738.	-2145.	4156.	-1793.	4592.	-1183.	-0.0316	.0912	.1055	-.1164	-.0214	4346.
.0440	2891.	4674.	-1821.	4783.	-2138.	3839.	-1164	-.0426	.1035	.1488	-.1093	-.0136	4378.
.0450	2702.	5751.	-1875.	5182.	-2104.	3097.	-1078	-.0519	.1121	.1829	-.0906	-.0110	4309.
.0460	2632.	5876.	-1326.	5042.	-1820.	2366.	-.0941	-.0593	.1165	.2159	-.0708	-.0105	3949.
.0470	2756.	5074.	20.	4311.	-1286.	1439.	-.0774	-.0646	.1166	.2505	-.0529	-.0043	3203.
.0480	1756.	4405.	949.	3360.	-831.	544.	-.0579	-.0669	.1116	.2716	-.0548	-.0010	2362.
.0490	1250.	4482.	888.	2637.	-258.	-216.	-.0361	-.0670	.1006	.2714	-.0373	-.0088	1792.
.0500	491.	4836.	482.	2111.	276.	-1126.	-.0142	-.0656	.0848	.2591	-.0251	-.0180	1623.
.0510	-513.	5065.	164.	1426.	817.	-2082.	.0070	-.0618	.0664	.2390	-.0243	-.0239	1788.
.0520	-972.	4744.	-65.	505.	1161.	-2575.	.0279	-.0550	.0466	.2072	-.0188	-.0397	1934.
.0530	-614.	3535.	-20.	-466.	1151.	-2562.	.0476	-.0465	.0262	.1666	-.0033	-.0683	1919.

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ADLPIPE STRESS ANALYSIS

83/12/02.

18.27.19.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
24	2	42					.0540	-359.	1941.	293.	-1450.	1169.	-2504.	.0649	-.0372	.0063	.1263	.0084	-.0908	2103.
							.0550	-852.	737.	485.	-2483.	1527.	-2598.	.0789	-.0270	-.0127	.0893	.0107	-.0952	2632.
							.0560	-1503.	-194.	447.	-3423.	1857.	-2603.	.0894	-.0167	-.0306	.0535	.0164	-.0926	3157.
							.0570	-1761.	-1241.	397.	-4187.	1873.	-2365.	.0962	-.0072	-.0471	.0204	.0332	-.0919	3478.
							.0580	-2103.	-2084.	391.	-4911.	1907.	-2109.	.0994	.0014	-.0611	-.0046	.0508	-.0829	3825.
							.0590	-2943.	-2319.	314.	-5561.	2097.	-2083.	.0987	.0087	-.0717	-.0186	.0503	-.0587	4245.
							.0600	-3733.	-2079.	22.	-5815.	2038.	-2164.	.0947	.0133	-.0782	-.0255	.0708	-.0324	4402.
							.0610	-3931.	-1643.	-501.	-5589.	1535.	-2098.	.0886	.0150	-.0801	-.0293	.0910	-.0162	4155.
							.0620	-3802.	-1281.	-858.	-5226.	962.	-1911.	.0813	.0146	-.0764	-.0256	.1114	-.0033	3806.
							.0630	-3595.	-1482.	-461.	-4998.	496.	-1725.	.0726	.0125	-.0669	-.0078	.1208	.0133	3580.
							.0640	-3020.	-2314.	537.	-4786.	-68.	-1391.	.0629	.0086	-.0531	.0193	.1268	.0249	3360.
							.0650	-2103.	-2997.	1316.	-4367.	-714.	-801.	.0530	.0053	-.0373	.0454	.1385	.0258	3031.
							.0660	-1543.	-2830.	1549.	-3695.	-1155.	-280.	.0424	-.0031	-.0214	.0704	.1463	.0261	2616.
							.0670	-1644.	-1863.	1479.	-2836.	-1397.	-91.	.0309	-.0106	-.0064	.0982	.1406	.0323	2132.
							.0680	-1810.	-358.	1053.	-1834.	-1684.	45.	.0195	-.0187	.0067	.1230	.1324	.0328	1679.
							.0690	-1612.	1547.	150.	-733.	-2044.	347.	.0102	-.0268	.0181	.1394	.1314	.0195	1482.
							.0700	-1404.	3529.	-772.	378.	-2331.	499.	.0031	-.0351	.0285	.1541	.1262	.0026	1627.
							.0710	-1391.	5198.	-1270.	1408.	-2472.	301.	-.0013	-.0438	.0389	.1722	.1095	-.0108	1928.
							.0720	-1126.	6323.	-1425.	2286.	-2457.	70.	-.0018	-.0520	.0493	.1887	.0931	-.0285	2263.
							.0730	-368.	6626.	-1174.	2907.	-2294.	-29.	.0019	-.0589	.0594	.2016	.0822	-.0530	2496.
							.0740	474.	5970.	-230.	3143.	-1989.	-236.	.0078	-.0643	.0683	.2161	.0658	-.0736	2512.
							.0750	1073.	4855.	1035.	3003.	-1508.	-613.	.0145	-.0676	.0747	.2296	.0419	-.0851	2303.
							.0760	1516.	4050.	1802.	2720.	-901.	-971.	.0211	-.0682	.0765	.2325	.0213	-.0934	2040.
							.0770	1744.	3905.	1788.	2515.	-336.	-1355.	.0260	-.0664	.0728	.2223	.0047	-.0990	1939.
							.0780	1515.	4398.	1175.	2392.	92.	-1898.	.0277	-.0625	.0643	.2029	-.0154	-.0963	2060.
							.0790	996.	5323.	88.	2264.	439.	-2412.	.0264	-.0564	.0526	.1743	-.0365	-.0873	2249.
							.0800	636.	6108.	-1158.	2096.	733.	-2632.	.0229	-.0480	.0398	.1377	-.0516	-.0785	2321.
							.0810	572.	6049.	-1948.	1826.	882.	-2565.	.0173	-.0384	.0282	.0999	-.0640	-.0695	2204.
							.0820	687.	4971.	-2036.	1359.	896.	-2240.	.0097	-.0279	.0194	.0652	-.0777	-.0571	1866.
							.0830	985.	3152.	-1677.	738.	914.	-1570.	.0008	-.0163	.0137	.0319	-.0877	-.0432	1322.
							.0840	1442.	810.	-1021.	104.	953.	-625.	-.0092	-.0046	.0100	.0003	-.0923	-.0292	771.
							.0850	1822.	-1736.	-173.	-505.	905.	393.	-.0211	.0068	.0073	-.0277	-.0959	-.0119	747.
							.0860	1942.	-3831.	421.	-1079.	775.	1422.	-.0345	.0182	.0041	-.0551	-.0982	.0092	1312.
							.0870	1812.	-4994.	380.	-1466.	636.	2417.	-.0486	.0292	-.0008	-.0848	-.0952	.0307	1953.
							.0880	1420.	-5243.	-201.	-1523.	453.	3192.	-.0627	.0386	-.0075	-.1147	-.0896	.0518	2403.
							.0890	787.	-4799.	-1100.	-1346.	176.	3679.	-.0758	.0463	-.0149	-.1421	-.0849	.0728	2644.
							.0900	208.	-4089.	-2081.	-1135.	-139.	4049.	-.0858	.0526	-.0214	-.1669	-.0782	.0890	2836.
							.0910	10.	-3855.	-2615.	-1007.	-461.	4393.	-.0913	.0573	-.0257	-.1857	-.0683	.0970	3050.

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2 SAFETY COLD FKW24F--2 PSV

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.0810	572.	6049.	1248.	1826.	882.	-2565.	.0173	-.0384	.0282	.0999	-.0640	-.0675	2204.
.0820	687.	4971.	-2036.	1359.	896.	-2240.	.0097	-.0279	.0194	.0652	-.0777	-.0571	1866.
.0830	985.	3192.	-1677.	738.	914.	-1570.	.0008	-.0163	.0137	.0319	-.0877	-.0432	1322.
.0840	1442.	510.	-1021.	104.	957.	-625.	-.0092	-.0046	.0100	.0003	-.0923	-.0292	771.
.0850	1822.	-1736.	-173.	-505.	905.	393.	-.0211	.0068	.0073	-.0277	-.0959	-.0119	747.
.0860	1942.	-3831.	421.	-1079.	775.	1422.	-.0345	.0182	.0041	-.0551	-.0982	.0092	1312.
.0870	1812.	-4994.	380.	-1466.	636.	2417.	-.0486	.0292	-.0008	-.0848	-.0952	.0307	1953.
.0880	1420.	-5243.	-201.	-1523.	453.	3192.	-.0627	.0386	-.0075	-.1147	-.0896	.0518	2403.
.0890	787.	-4799.	-1100.	-1346.	176.	3679.	-.0758	.0463	-.0149	-.1421	-.0849	.0728	2644.
.0900	208.	-4089.	-2081.	-1175.	-139.	4649.	-.0858	.0526	-.0214	-.1669	-.0782	.0890	2836.
.0910	10.	-3855.	-2815.	-1007.	-401.	4393.	-.0913	.0573	-.0257	-.1857	-.0683	.0970	3050.

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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	END	TYPE	RU	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	PX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
24	2	42					.0920	177.	-4572.	-2245.	-1054.	-543.	4635.	-.0918	.0600	-.0273	-.1938	-.0502	.0988	3225.
							.0930	511.	-5941.	-1172.	-1322.	-538.	4768.	-.0876	.0612	-.0265	-.1927	-.0557	.0966	3355.
							.0940	933.	-7353.	43.	-1659.	-442.	4831.	-.0792	.0612	-.0248	-.1884	-.0504	.0883	3456.
							.0950	1322.	-8349.	1035.	-1832.	-325.	4734.	-.0680	.0596	-.0243	-.1835	-.0433	.0736	3429.
							.0960	1368.	-8477.	1557.	-1801.	-143.	4361.	-.0551	.0566	-.0263	-.1785	-.0378	.0575	3182.
							.0970	918.	-7430.	1405.	-1632.	141.	3737.	-.0414	.0528	-.0309	-.1747	-.0345	.0425	2751.
							.0980	201.	-5429.	677.	-1279.	417.	2953.	-.0269	.0479	-.0375	-.1717	-.0296	.0257	2187.
							.0990	-555.	-2970.	-282.	-705.	621.	2041.	-.0116	.0413	-.0446	-.1665	-.0217	.0054	1514.
							.1000	-1365.	-427.	-1137.	-63.	900.	1012.	.0051	.0331	-.0500	-.1552	-.0135	-.0143	914.
							.1010	-2167.	1741.	-1522.	463.	1366.	-89.	.0233	.0237	-.0515	-.1341	-.0073	-.0306	974.
							.1020	-2630.	2964.	-1110.	833.	1882.	-1168.	.0429	.0129	-.0484	-.1019	-.0014	-.0464	1595.
							.1030	-2545.	3138.	34.	1059.	2281.	-2113.	.0629	.0011	-.0408	-.0614	.0069	-.0647	2214.
							.1040	-2113.	2758.	1476.	1145.	2576.	-2914.	.0820	-.0107	-.0301	-.0174	.0164	-.0830	2733.
							.1050	-1642.	2344.	2817.	1198.	2767.	-3673.	.0981	-.0218	-.0183	.0261	.0238	-.0969	3203.
							.1060	-1227.	2238.	3718.	1363.	2734.	-4398.	.1093	-.0319	-.0075	.0643	.0293	-.1060	3610.
							.1070	-845.	2685.	3865.	1667.	2440.	-4947.	.1147	-.0397	.0009	.0912	.0367	-.1121	3884.
							.1080	-473.	3534.	3395.	2043.	1861.	-5245.	.1135	-.0449	.0066	.1063	.0453	-.1145	3996.
							.1090	-20.	4477.	2647.	2476.	898.	-5280.	.1055	-.0474	.0099	.1119	.0542	-.1134	3977.
							.1100	-4.	6021.	1190.	2927.	173.	-5029.	.0926	-.0463	.0119	.1044	.0646	-.1015	3924.
							.1110	-239.	7022.	-19.	3393.	-496.	-4661.	.0751	-.0432	.0138	.0940	.0709	-.0783	3900.
							.1120	-165.	6444.	-227.	3588.	-1256.	-3986.	.0544	-.0381	.0164	.0855	.0760	-.0504	3713.
							.1130	235.	4810.	116.	3194.	-1895.	-2736.	.0329	-.0294	.0199	.0732	.0861	-.0211	3109.
							.1140	550.	2778.	693.	2516.	-2303.	-1312.	.0113	-.0182	.0230	.0576	.0957	.0135	2463.
							.1150	599.	665.	1403.	2088.	-2620.	-234.	-.0105	-.0076	.0237	.0419	.0995	.0533	2264.
							.1160	501.	-840.	1592.	1865.	-2930.	654.	-.0310	.0032	.0207	.0190	.1050	.0906	2382.
							.1170	155.	-1288.	917.	1517.	-3213.	1507.	-.0485	.0156	.0144	-.0145	.1124	.1240	2601.
							.1180	-435.	-1330.	38.	1163.	-3054.	2068.	-.0617	.0277	.0046	-.0501	.1157	.1551	2607.
							.1190	-1246.	-1816.	-222.	774.	-2724.	2048.	-.0710	.0378	-.0070	-.0774	.1024	.1867	2356.
							.1200	-1667.	-2673.	-261.	91.	-2429.	2009.	-.0747	.0474	-.0189	-.1049	.0862	.2045	2126.
							.1210	-1204.	-3705.	-423.	-775.	-2002.	2320.	-.0712	.0566	-.0309	-.1385	.0811	.1967	2131.
							.1220	-936.	-4568.	-429.	-1528.	-1455.	2221.	-.0635	.0634	-.0415	-.1668	.0619	.1839	2065.
							.1230	-994.	-5094.	-322.	-1860.	-699.	1534.	-.0527	.0665	-.0504	-.1885	.0277	.1687	1713.
							.1240	-630.	-5456.	-348.	-2009.	-140.	1081.	-.0394	.0680	-.0572	-.2117	-.0039	.1376	1541.
							.1250	549.	-6154.	-256.	-2246.	118.	1100.	-.0248	.0687	-.0616	-.2359	-.0254	.0869	1688.
							.1260	1855.	-7083.	231.	-2428.	532.	1227.	-.0111	.0677	-.0643	-.2520	-.0480	.0336	1869.
							.1270	2295.	-7209.	611.	-2333.	878.	953.	-.0015	.0647	-.0649	-.2580	-.0850	-.0042	1799.
							.1280	2589.	-6029.	1.	-1659.	965.	787.	.0046	.0602	-.0643	-.2668	-.1085	-.0425	1398.
							.1290	3042.	-4122.	-1270.	-596.	725.	931.	.0073	.0545	-.0619	-.2763	-.1120	-.0829	891.

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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

.1180	-435.	-1370.	38.	1163.	-3054.	2068.	-0617	.0277	.0046	-.0501	.1157	.1551	2607.
.1190	-1246.	-1816.	-222.	774.	-2724.	2048.	-.0710	.0378	-.0070	-.0774	.1024	.1867	2356.
.1200	-1667.	-2673.	-261.	91.	-2429.	2009.	-.0747	.0474	-.0189	-.1049	.0862	.2045	2126.
.1210	-1204.	-3705.	-423.	-775.	-2002.	2320.	-.0712	.0566	-.0309	-.1385	.0811	.1967	2131.
.1220	-936.	-4568.	-429.	-1528.	-1455.	2221.	-.0635	.0634	-.0415	-.1668	.0619	.1839	2065.
.1230	-994.	-5094.	-322.	-1860.	-699.	1584.	-.0527	.0665	-.0504	-.1885	.0277	.1687	1713.
.1240	-630.	-5456.	-748.	-2009.	-140.	1081.	-.0394	.0680	-.0572	-.2117	-.0039	.1376	1541.
.1250	549.	-6154.	-256.	-2246.	118.	1100.	-.0248	.0687	-.0616	-.2359	-.0254	.0869	1688.
.1260	1855.	-7083.	231.	-2428.	532.	1227.	-.0111	.0677	-.0643	-.2520	-.0480	.0336	1869.
.1270	2295.	-7209.	611.	-2333.	878.	953.	-.0015	.0647	-.0649	-.2580	-.0850	-.0042	1799.
.1280	2589.	-6029.	1.	-1659.	965.	787.	.0046	.0602	-.0643	-.2668	-.1085	-.0425	1398.
.1290	3042.	-4122.	-1270.	-596.	725.	931.	.0073	.0545	-.0619	-.2763	-.1120	-.0829	891.

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2 SAFETY COLD FKW24F--2 PSV

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
24	2	42					.1300	3022.	-2372.	-2077.	398.	542.	986.	.0059	.0477	-.0563	-.2702	-.1161	-.1044	804.
							.1310	2461.	-1119.	-2104.	1142.	782.	911.	.0018	.0404	-.0469	-.2453	-.1223	-.1016	1117.
							.1320	1915.	-498.	-1593.	1665.	881.	943.	-.0043	.0330	-.0338	-.2093	-.1202	-.0866	1420.
							.1330	1954.	-637.	-715.	2132.	791.	1265.	-.0108	.0254	-.0187	-.1685	-.0986	-.0724	1754.
							.1340	1675.	-953.	417.	2410.	836.	1407.	-.0181	.0181	-.0028	-.1204	-.0776	-.0439	1964.
							.1350	626.	-845.	1438.	2538.	1107.	1106.	-.0260	.0116	.0123	-.0687	-.0677	.0032	2010.
							.1360	-160.	-543.	2036.	2805.	1326.	778.	-.0327	.0059	.0242	-.0261	-.0478	.0449	2156.
							.1370	-421.	-407.	2366.	3010.	1155.	574.	-.0383	.0019	.0323	.0042	-.0267	.0744	2208.
							.1380	-628.	-422.	2638.	2867.	1133.	385.	-.0421	.0005	.0360	.0249	-.0109	.0999	2094.
							.1390	-1253.	-335.	2803.	2417.	1389.	-28.	-.0443	.0015	.0355	.0374	-.0136	.1277	1879.
							.1400	-1696.	-178.	2543.	2043.	1561.	-451.	-.0445	.0040	.0306	.0346	-.0218	.1426	1759.
							.1410	-1358.	-171.	1801.	1806.	1622.	-530.	-.0417	.0077	.0217	.0128	-.0227	.1326	1675.
							.1420	-996.	-368.	1076.	1245.	1648.	-532.	-.0376	.0134	.0110	-.0169	-.0363	.1159	1438.
							.1430	-681.	-908.	661.	432.	1810.	-550.	-.0327	.0200	-.0006	-.0479	-.0635	.0968	1308.
							.1440	6.	-1577.	202.	-222.	1780.	-446.	-.0273	.0262	-.0124	-.0834	-.0894	.0664	1246.
							.1450	1060.	-1922.	-703.	-557.	1456.	-143.	-.0219	.0315	-.0237	-.1246	-.1052	.0246	1055.
							.1460	1955.	-1918.	-1751.	-733.	1216.	164.	-.0173	.0357	-.0330	-.1619	-.1178	-.0142	963.
							.1470	2274.	-1930.	-2361.	-966.	982.	236.	-.0153	.0384	-.0387	-.1841	-.1381	-.0361	942.
							.1480	2704.	-2225.	-2632.	-1134.	718.	460.	-.0150	.0395	-.0408	-.1951	-.1467	-.0530	956.
							.1490	3342.	-2746.	-2689.	-1250.	309.	941.	-.0163	.0393	-.0390	-.1966	-.1384	-.0660	1075.
							.1500	3592.	-3365.	-2338.	-1414.	-95.	1352.	-.0202	.0378	-.0333	-.1826	-.1263	-.0625	1320.
							.1510	3327.	-3869.	-1682.	-1528.	-241.	1595.	-.0264	.0347	-.0250	-.1537	-.1112	-.0412	1497.
							.1520	2711.	-3906.	-1134.	-1490.	-446.	1731.	-.0344	.0305	-.0149	-.1174	-.0899	-.0092	1568.
							.1530	2147.	-3441.	-908.	-1193.	-754.	1901.	-.0429	.0252	-.0044	-.0801	-.0561	.0229	1596.
							.1540	1436.	-2697.	-687.	-799.	-1171.	1898.	-.0517	.0191	.0061	-.0392	-.0223	.0584	1597.
							.1550	565.	-1797.	-387.	-438.	-1579.	1695.	-.0595	.0125	.0162	.0046	.0064	.0959	1589.
							.1560	-42.	-739.	-279.	-13.	-1851.	1514.	-.0641	.0056	.0249	.0437	.0392	.1232	1612.
							.1570	-541.	428.	-304.	446.	-2263.	1201.	-.0654	-.0016	.0325	.0780	.0677	.1414	1753.
							.1580	-901.	1459.	-277.	899.	-2577.	751.	-.0624	-.0091	.0387	.1082	.0902	.1494	1908.
							.1590	-1067.	2126.	-31.	1180.	-2563.	266.	-.0544	-.0163	.0431	.1344	.1064	.1468	1910.
							.1600	-1155.	2414.	480.	1167.	-2422.	-275.	-.0422	-.0227	.0457	.1570	.1119	.1358	1822.
							.1610	-1075.	2566.	943.	1057.	-2270.	-837.	-.0265	-.0285	.0459	.1720	.1112	.1134	1780.
							.1620	-706.	2852.	1055.	1097.	-1955.	-1353.	-.0076	-.0340	.0429	.1762	.1121	.0766	1765.
							.1630	-612.	3503.	864.	1124.	-1622.	-2014.	.0124	-.0386	.0376	.1735	.1036	.0384	1900.
							.1640	-700.	4309.	510.	1095.	-1213.	-2708.	.0325	-.0421	.0305	.1653	.0890	.0002	2132.
							.1650	-582.	4852.	176.	1068.	-705.	-3236.	.0524	-.0445	.0220	.1520	.0773	-.0415	2346.
							.1660	-437.	4968.	75.	915.	-288.	-3644.	.0702	-.0456	.0137	.1373	.0539	-.0794	2540.
							.1670	-346.	4711.	191.	618.	238.	-3894.	.0855	-.0451	.0060	.1224	.0507	-.1095	2662.

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S/RV PIPING KEWAUNEE GKW02F 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

.1570	-541.	428.	-304.	446.	-2263.	1201.	-.0654	-.0016	.0325	.0780	.0677	.1414	1753.
.1580	-901.	1459.	-277.	899.	-2577.	751.	-.0624	-.0091	.0387	.1082	.0902	.1494	1908.
.1590	-1067.	2126.	-31.	1180.	-2563.	266.	-.0544	-.0163	.0431	.1344	.1064	.1468	1910.
.1600	-1155.	2414.	480.	1167.	-2422.	-275.	-.0422	-.0227	.0457	.1570	.1119	.1358	1822.
.1610	-1075.	2566.	943.	1057.	-2270.	-837.	-.0265	-.0285	.0459	.1720	.1112	.1134	1780.
.1620	-766.	2852.	1055.	1097.	-1955.	-1353.	-.0076	-.0340	.0429	.1762	.1121	.0766	1765.
.1630	-612.	3503.	864.	1124.	-1622.	-2014.	.0124	-.0386	.0376	.1735	.1036	.0384	1900.
.1640	-700.	4309.	510.	1095.	-1213.	-2708.	.0325	-.0421	.0305	.1653	.0890	.0002	2132.
.1650	-582.	4852.	176.	1068.	-705.	-3236.	.0524	-.0445	.0220	.1520	.0773	-.0415	2346.
.1660	-437.	4968.	75.	915.	-288.	-3644.	.0702	-.0456	.0137	.1373	.0539	-.0794	2540.
.1670	-346.	4711.	191.	618.	228.	-3894.	.0855	-.0451	.0060	.1224	.0507	-.1095	2662.

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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

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	DX	DY	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)							
.1680	-458.	4177.	473.	207.	838.	-4056.	.0970	-.0430	-.0006	.1087	.0357	-.1270	2802.
.1690	-486.	3305.	854.	-194.	1449.	-4058.	.1042	-.0398	-.0066	.0949	.0253	-.1365	2914.
.1700	-449.	2279.	1214.	-633.	1858.	-3885.	.1061	-.0351	-.0118	.0804	.0187	-.1373	2934.
.1710	-662.	1488.	1364.	-1151.	1958.	-3649.	.1020	-.0288	-.0160	.0657	.0097	-.1245	2897.
.1720	-792.	918.	1207.	-1486.	2077.	-3289.	.0931	-.0219	-.0202	.0490	.0073	-.1055	2807.
.1730	-954.	503.	889.	-1691.	1981.	-2915.	.0790	-.0149	-.0237	.0335	.0054	-.0788	2635.
.1740	-1124.	324.	363.	-1863.	1632.	-2436.	.0609	-.0074	-.0259	.0184	.0047	-.0471	2342.
.1750	-1235.	353.	-346.	-1937.	1240.	-1827.	.0403	-.0001	-.0262	.0036	.0072	-.0139	1980.
.1760	-1387.	244.	-850.	-1896.	809.	-1261.	.0181	.0061	-.0240	-.0055	.0060	.0223	1629.
.1770	-1284.	-327.	-966.	-1809.	445.	-578.	-.0040	.0110	-.0194	-.0093	.0053	.0544	1315.
.1780	-1026.	-1193.	-823.	-1869.	13.	282.	-.0251	.0154	-.0120	-.0098	.0030	.0813	1274.
.1790	-591.	-2184.	-568.	-1899.	-319.	1261.	-.0441	.0187	-.0032	-.0092	.0010	.0998	1551.
.1800	-125.	-3177.	-201.	-1727.	-501.	2143.	-.0606	.0203	.0058	-.0069	-.0041	.1106	1885.
.1810	132.	-3857.	89.	-1498.	-749.	2854.	-.0749	.0209	.0143	-.0047	-.0175	.1165	2231.
.1820	545.	-4119.	10.	-1226.	-912.	3640.	-.0853	.0212	.0210	-.0088	-.0276	.1090	2661.
.1830	1011.	-4106.	-268.	-900.	-1035.	4320.	-.0920	.0208	.0253	-.0166	-.0386	.0918	3055.
.1840	1354.	-3898.	-573.	-530.	-1068.	4714.	-.0951	.0195	.0272	-.0246	-.0544	.0701	3277.
.1850	1566.	-3387.	-1024.	-230.	-994.	4889.	-.0942	.0181	.0270	-.0342	-.0720	.0452	3366.
.1860	1742.	-2720.	-1558.	-63.	-919.	4894.	-.0894	.0165	.0254	-.0446	-.0887	.0177	3357.
.1870	2096.	-2287.	-1893.	62.	-696.	4737.	-.0804	.0142	.0224	-.0524	-.1000	-.0133	3228.
.1880	2268.	-2009.	-1918.	30.	-386.	4270.	-.0688	.0113	.0192	-.0537	-.1132	-.0382	2890.
.1890	2262.	-1662.	-1844.	-154.	24.	3598.	-.0549	.0083	.0161	-.0501	-.1242	-.0567	2428.
.1900	2324.	-1316.	-1713.	-331.	447.	2832.	-.0395	.0046	.0130	-.0427	-.1271	-.0729	1945.
.1910	2322.	-971.	-1462.	-467.	701.	1916.	-.0246	.0000	.0103	-.0295	-.1259	-.0835	1411.
.1920	2143.	-350.	-1307.	-560.	925.	950.	-.0108	-.0049	.0084	-.0125	-.1197	-.0874	970.
.1930	1732.	614.	-1325.	-580.	1111.	-9.	.0013	-.0100	.0076	.0073	-.1091	-.0841	845.
.1940	1287.	1548.	-1296.	-461.	1156.	-883.	.0109	-.0157	.0080	.0304	-.0936	-.0771	1029.
.1950	922.	2250.	-1123.	-286.	1069.	-1531.	.0178	-.0215	.0101	.0560	-.0728	-.0686	1273.
.1960	517.	2801.	-858.	-176.	956.	-1896.	.0223	-.0268	.0141	.0827	-.0494	-.0574	1436.
.1970	26.	3169.	-462.	-60.	834.	-2060.	.0245	-.0316	.0195	.1101	-.0265	-.0435	1499.
.1980	-413.	3308.	25.	173.	638.	-2054.	.0245	-.0364	.0255	.1363	-.0034	-.0310	1454.
.1990	-743.	3376.	405.	445.	366.	-1821.	.0233	-.0404	.0316	.1574	.0211	-.0222	1287.
.2000	-1041.	3447.	652.	646.	71.	-1428.	.0214	-.0431	.0369	.1727	.0439	-.0161	1057.
.2010	-1306.	3404.	895.	809.	-233.	-1032.	.0194	-.0449	.0407	.1834	.0622	-.0120	898.
.2020	-1451.	3289.	1054.	966.	-553.	-669.	.0180	-.0458	.0422	.1879	.0777	-.0120	876.
.2030	-1503.	3279.	968.	1039.	-857.	-334.	.0181	-.0454	.0412	.1845	.0919	-.0159	935.
.2040	-1580.	3311.	754.	973.	-1076.	-136.	.0200	-.0437	.0377	.1756	.1018	-.0205	982.
.2050	-1682.	3186.	614.	782.	-1164.	-155.	.0236	-.0413	.0319	.1643	.1060	-.0240	951.

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

.1940	1207.	1348.	1208.	-421.	1156.	-1531.	.0178	-.0215	.0101	.0560	-.0728	-.0686	1029.
.1950	922.	2250.	1123.	-286.	1069.	-1531.	.1178	-.0215	.0101	.0560	-.0728	-.0686	1273.
.1960	517.	2801.	-358.	-176.	956.	-1896.	.0223	-.0268	.0141	.0827	-.0494	-.0574	1436.
.1970	26.	3169.	-462.	-60.	834.	-2060.	.0245	-.0316	.0195	.1101	-.0265	-.0435	1499.
.1980	-413.	3308.	25.	172.	631.	-2054.	.0245	-.0364	.0255	.1363	-.0034	-.0310	1454.
.1990	-747.	3376.	405.	445.	766.	-1821.	.0233	-.0404	.0316	.1574	.0211	-.0222	1287.
.2000	-1041.	3447.	652.	646.	71.	-1428.	.0214	-.0431	.0369	.1727	.0439	-.0161	1057.
.2010	-1306.	3404.	895.	809.	-233.	-1032.	.0194	-.0449	.0407	.1834	.0622	-.0120	898.
.2020	-1451.	3289.	1054.	966.	-553.	-669.	.0180	-.0458	.0422	.1879	.0777	-.0120	876.
.2030	-1503.	3279.	968.	1039.	-857.	-334.	.0181	-.0454	.0412	.1845	.0919	-.0159	935.
.2040	-1580.	3311.	754.	973.	-1076.	-136.	.0200	-.0437	.0377	.1756	.1018	-.0205	982.
.2050	-1682.	3186.	614.	782.	-1164.	-155.	.0236	-.0413	.0319	.1643	.1060	-.0240	951.

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

SECTION	24	MEMBER	2	SEQUENCE	42	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	-1711.	2888.	521.	440.	-1136.	-302.	.0293	-.0380	.0242	.1501	.1077	-.0282	846.	
.2070	-1647.	2472.	432.	-75.	-1029.	-502.	.0367	-.0338	.0152	.1332	.1086	-.0334	773.	
.2080	-1584.	1936.	432.	-588.	-847.	-805.	.0450	-.0292	.0053	.1160	.1063	-.0374	914.	
.2090	-1589.	1389.	484.	-1286.	-588.	-1219.	.0534	-.0246	-.0048	.0995	.1008	-.0394	1259.	
.2100	-1627.	1015.	413.	-1806.	-297.	-1624.	.0611	-.0202	-.0146	.0820	.0948	-.0413	1649.	
.2110	-1633.	777.	247.	-2218.	-49.	-1931.	.0675	-.0159	-.0233	.0639	.0895	-.0441	1982.	
.2120	-1597.	498.	166.	-2507.	147.	-2125.	.0717	-.0122	-.0304	.0477	.0833	-.0471	2218.	
.2130	-1543.	176.	183.	-2690.	312.	-2167.	.0734	-.0090	-.0352	.0342	.0760	-.0498	2338.	
.2140	-1473.	-77.	178.	-2759.	418.	-2008.	.0723	-.0063	-.0376	.0224	.0689	-.0524	2317.	
.2150	-1370.	-256.	140.	-2663.	430.	-1678.	.0685	-.0043	-.0375	.0127	.0629	-.0553	2142.	
.2160	-1262.	-393.	121.	-2413.	406.	-1244.	.0621	-.0033	-.0351	.0064	.0568	-.0571	1850.	
.2170	-1186.	-449.	112.	-2091.	359.	-736.	.0535	-.0029	-.0307	.0038	.0502	-.0567	1514.	
.2180	-1106.	-405.	83.	-1733.	268.	-190.	.0435	-.0031	-.0246	.0044	.0439	-.0544	1189.	
.2190	-976.	-279.	31.	-1302.	110.	320.	.0325	-.0041	-.0173	.0080	.0386	-.0511	907.	
.2200	-829.	-38.	-67.	-814.	-70.	720.	.0214	-.0058	-.0094	.0144	.0339	-.0460	734.	
.2210	-715.	312.	-196.	-352.	-228.	976.	.0109	-.0078	-.0011	.0233	.0286	-.0383	716.	
.2220	-581.	632.	-269.	38.	-370.	1091.	.0014	-.0101	.0073	.0344	.0230	-.0286	777.	
.2230	-351.	793.	-228.	353.	-495.	1090.	-.0065	-.0125	.0153	.0468	.0178	-.0188	841.	
.2240	-64.	801.	-88.	583.	-565.	994.	-.0128	-.0146	.0225	.0591	.0126	-.0090	859.	
.2250	182.	723.	117.	650.	-546.	812.	-.0175	-.0161	.0285	.0704	.0058	.0017	792.	
.2260	357.	619.	325.	661.	-443.	565.	-.0210	-.0170	.0328	.0792	-.0025	.0124	658.	
.2270	485.	581.	426.	661.	-287.	303.	-.0234	-.0171	.0350	.0834	-.0115	.0211	527.	
.2280	553.	682.	354.	667.	-110.	71.	-.0252	-.0164	.0351	.0820	-.0209	.0268	458.	
.2290	556.	888.	149.	673.	77.	-112.	-.0267	-.0150	.0333	.0752	-.0318	.0297	463.	
.2300	540.	1114.	-123.	692.	270.	-219.	-.0278	-.0128	.0301	.0638	-.0437	.0290	522.	
.2310	556.	1311.	-430.	736.	450.	-223.	-.0285	-.0102	.0261	.0484	-.0557	.0242	601.	
.2320	618.	1429.	-749.	790.	596.	-123.	-.0290	-.0073	.0218	.0300	-.0574	.0158	676.	
.2330	738.	1366.	-960.	858.	714.	63.	-.0291	-.0043	.0179	.0108	-.0789	.0050	754.	
.2340	930.	1044.	-998.	884.	818.	328.	-.0289	-.0013	.0146	-.0079	-.0892	-.0072	841.	
.2350	1208.	499.	-887.	853.	886.	661.	-.0285	.0017	.0120	-.0252	-.0977	-.0196	941.	
.2360	1491.	-134.	-713.	785.	896.	1017.	-.0281	.0048	.0098	-.0410	-.1035	-.0307	1056.	
.2370	1717.	-701.	-574.	731.	854.	1338.	-.0279	.0076	.0077	-.0552	-.1062	-.0390	1178.	
.2380	1828.	-1094.	-529.	709.	777.	1584.	-.0281	.0103	.0053	-.0676	-.1054	-.0432	1282.	
.2390	1806.	-1287.	-579.	698.	658.	1748.	-.0286	.0128	.0028	-.0781	-.1011	-.0425	1344.	
.2400	1679.	-1338.	-677.	687.	500.	1833.	-.0293	.0152	.0000	-.0863	-.0932	-.0372	1362.	
.2410	1484.	-1345.	-747.	673.	328.	1846.	-.0300	.0174	-.0027	-.0919	-.0816	-.0279	1343.	
.2420	1738.	-1391.	-722.	674.	165.	1792.	-.0303	.0194	-.0052	-.0945	-.0575	-.0150	1286.	
.2430	964.	-1525.	-570.	549.	12.	1691.	-.0300	.0213	-.0073	-.0945	-.0517	.0003	1199.	

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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

.2330	738.	1366.	-960.	858.	714.	63.	-.0291	-.0043	.0179	.0108	-.0789	.0050	754.
.2340	938.	1044.	-990.	884.	818.	328.	-.0289	-.0013	.0146	-.0079	-.0892	-.0072	841.
.2350	1208.	499.	-887.	853.	886.	661.	-.0285	.0017	.0120	-.0252	-.0977	-.0196	941.
.2360	1491.	-134.	-713.	771.	896.	1017.	-.0281	.0048	.0098	-.0410	-.1035	-.0307	1056.
.2370	1717.	-701.	-574.	771.	854.	1338.	-.0279	.0076	.0077	-.0552	-.1062	-.0390	1178.
.2380	1828.	-1094.	-529.	709.	777.	1584.	-.0281	.0103	.0053	-.0676	-.1054	-.0432	1282.
.2390	1806.	-1287.	-579.	698.	698.	1748.	-.0286	.0128	.0028	-.0781	-.1011	-.0425	1344.
.2400	1679.	-1338.	-677.	697.	500.	1833.	-.0293	.0152	.0000	-.0863	-.0932	-.0372	1362.
.2410	1484.	-1345.	-747.	673.	328.	1846.	-.0300	.0174	-.0027	-.0919	-.0816	-.0279	1343.
.2420	1238.	-1291.	-720.	674.	169.	1792.	-.0303	.0194	-.0052	-.0945	-.0575	-.0150	1286.
.2430	964.	-1525.	-570.	549.	12.	1691.	-.0300	.0213	-.0073	-.0945	-.0517	.0003	1199.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU								
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)	
.2440	705.	-1762.	-300.	428.	-122.	1533.	-.0290	.0230	-.0091	-.0926	-.0343	.0165	1095.	
.2450	466.	-2066.	50.	295.	-230.	1405.	-.0271	.0244	-.0108	-.0895	-.0165	.0320	980.	
.2460	219.	-2350.	415.	156.	-312.	1211.	-.0243	.0255	-.0127	-.0861	.0006	.0463	850.	
.2470	-45.	-2512.	708.	26.	-380.	985.	-.0208	.0265	-.0150	-.0836	.0161	.0581	712.	
.2480	-309.	-2486.	860.	-59.	-429.	735.	-.0164	.0272	-.0181	-.0827	.0303	.0662	575.	
.2490	-582.	-2252.	862.	-80.	-446.	448.	-.0112	.0275	-.0219	-.0834	.0423	.0702	430.	
.2500	-876.	-1841.	753.	-55.	-429.	120.	-.0052	.0274	-.0260	-.0852	.0514	.0707	302.	
.2510	-1141.	-1361.	606.	-4.	-377.	-225.	.0016	.0269	-.0300	-.0874	.0576	.0673	296.	
.2520	-1298.	-965.	520.	57.	-293.	-553.	.0094	.0258	-.0334	-.0893	.0619	.0597	423.	
.2530	-1340.	-741.	572.	102.	-170.	-858.	.0177	.0244	-.0359	-.0899	.0540	.0490	594.	
.2540	-1308.	-680.	767.	119.	-7.	-1150.	.0264	.0226	-.0373	-.0888	.0637	.0370	779.	
.2550	-1215.	-725.	1045.	132.	179.	-1425.	.0348	.0205	-.0377	-.0865	.0616	.0245	972.	
.2560	-1063.	-800.	1324.	167.	350.	-1676.	.0424	.0184	-.0375	-.0838	.0589	.0121	1160.	
.2570	-906.	-808.	1527.	224.	488.	-1906.	.0485	.0164	-.0369	-.0811	.0555	.0014	1335.	
.2580	-794.	-684.	1605.	302.	595.	-2120.	.0526	.0147	-.0362	-.0789	.0513	-.0063	1498.	
.2590	-719.	-424.	1545.	417.	658.	-2307.	.0543	.0133	-.0355	-.0772	.0468	-.0104	1641.	
.2600	-662.	-52.	1346.	574.	653.	-2444.	.0534	.0124	-.0346	-.0763	.0426	-.0112	1748.	
.2610	-616.	376.	1049.	757.	582.	-2510.	.0500	.0119	-.0332	-.0760	.0386	-.0086	1810.	
.2620	-562.	742.	753.	950.	472.	-2493.	.0442	.0119	-.0310	-.0757	.0345	-.0026	1826.	
.2630	-457.	913.	562.	1135.	336.	-2372.	.0363	.0122	-.0277	-.0748	.0301	.0061	1787.	
.2640	-270.	839.	510.	1296.	166.	-2121.	.0267	.0129	-.0233	-.0735	.0256	.0162	1679.	
.2650	-13.	564.	560.	1438.	-31.	-1741.	.0156	.0141	-.0180	-.0725	.0211	.0270	1522.	
.2660	268.	179.	654.	1589.	-234.	-1265.	.0034	.0156	-.0123	-.0724	.0162	.0379	1378.	
.2670	520.	-207.	718.	1765.	-432.	-732.	-.0096	.0174	-.0069	-.0740	.0104	.0487	1321.	
.2680	722.	-507.	682.	1958.	-623.	-159.	-.0227	.0195	-.0022	-.0782	.0040	.0584	1389.	
.2690	877.	-704.	532.	2151.	-793.	429.	-.0354	.0221	.0014	-.0851	-.0028	.0663	1572.	
.2700	965.	-839.	310.	2325.	-922.	995.	-.0470	.0248	.0036	-.0944	-.0105	.0722	1814.	
.2710	1049.	-951.	58.	2448.	-994.	1506.	-.0570	.0278	.0045	-.1054	-.0191	.0760	2050.	
.2720	1090.	-1086.	-185.	2496.	-992.	1940.	-.0646	.0308	.0042	-.1175	-.0284	.0774	2234.	
.2730	1141.	-1309.	-358.	2458.	-908.	2272.	-.0695	.0338	.0029	-.1299	-.0382	.0766	2337.	
.2740	1221.	-1667.	-409.	2319.	-755.	2478.	-.0714	.0366	.0007	-.1416	-.0484	.0735	2344.	
.2750	1732.	-2103.	-359.	2079.	-549.	2555.	-.0704	.0391	-.0022	-.1522	-.0585	.0686	2251.	
.2760	1461.	-2587.	-271.	1769.	-305.	2501.	-.0668	.0414	-.0059	-.1618	-.0579	.0622	2075.	
.2770	1577.	-2978.	-195.	1436.	-41.	2304.	-.0611	.0431	-.0102	-.1703	-.0764	.0551	1830.	
.2780	1631.	-3237.	-162.	1103.	227.	1980.	-.0541	.0444	-.0151	-.1772	-.0837	.0483	1535.	
.2790	1633.	-3352.	-183.	773.	486.	1578.	-.0463	.0453	-.0202	-.1825	-.0894	.0423	1229.	
.2800	1585.	-3353.	-233.	458.	724.	1146.	-.0384	.0457	-.0251	-.1856	-.0928	.0373	965.	
.2810	1484.	-3273.	-279.	171.	932.	716.	-.0309	.0455	-.0294	-.1859	-.0940	.0340	802.	

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING

.2710	1049.	-951.	58.	2448.	-994.	1506.	-0570	.0278	.0045	-.1054	-.0191	.0760	2050.
.2720	1090.	-1086.	-105.	2496.	-992.	1940.	-.0646	.0300	.0042	-.1175	-.0284	.0774	2234.
.2730	1141.	-1309.	-358.	2458.	-908.	2272.	-.0695	.0338	.0029	-.1299	-.0382	.0766	2337.
.2740	1221.	-1667.	-409.	2319.	-755.	2478.	-.0714	.0366	.0007	-.1416	-.0484	.0735	2344.
.2750	1732.	-2123.	-319.	2079.	-549.	2559.	-.0704	.0391	-.0022	-.1522	-.0585	.0686	2251.
.2760	1461.	-2587.	-271.	1769.	-300.	2501.	-.0668	.0414	-.0059	-.1618	-.0579	.0622	2075.
.2770	1572.	-2978.	-195.	1436.	-41.	2304.	-.0611	.0431	-.0102	-.1702	-.0764	.0551	1830.
.2780	1631.	-3237.	-162.	1103.	227.	1980.	-.0541	.0444	-.0151	-.1772	-.0837	.0483	1535.
.2790	1633.	-3352.	-183.	772.	486.	1578.	-.0463	.0452	-.0202	-.1825	-.0894	.0423	1229.
.2800	1585.	-3353.	-203.	458.	724.	1146.	-.0384	.0457	-.0251	-.1856	-.0928	.0373	965.
.2810	1484.	-3275.	-279.	181.	932.	716.	-.0309	.0455	-.0294	-.1859	-.0940	.0340	802.

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S/RV PIPING KEWAUNEE GKW0RF 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	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	PX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.2820	1325.	-3136.	-307.	-42.	1107.	320.	-.0243	.0448	-.0326	-.1832	-.0931	.0327	777.							
.2830	1131.	-2974.	-293.	-211.	1242.	-3.	-.0189	.0436	-.0345	-.1774	-.0897	.0330	849.							
.2840	937.	-2837.	-209.	-322.	1318.	-226.	-.0149	.0418	-.0348	-.1684	-.0840	.0345	927.							
.2850	754.	-2718.	-66.	-367.	1322.	-345.	-.0124	.0395	-.0335	-.1565	-.0762	.0369	954.							
.2860	575.	-2568.	87.	-336.	1260.	-373.	-.0112	.0367	-.0308	-.1424	-.0666	.0398	914.							
.2870	400.	-2375.	234.	-232.	1144.	-330.	-.0113	.0334	-.0270	-.1267	-.0557	.0429	817.							
.2880	240.	-2155.	376.	-84.	980.	-236.	-.0122	.0297	-.0224	-.1098	-.0442	.0460	682.							
.2890	93.	-1891.	483.	78.	783.	-109.	-.0137	.0259	-.0174	-.0922	-.0326	.0486	535.							
.2900	-48.	-1561.	525.	245.	573.	18.	-.0152	.0220	-.0125	-.0748	-.0214	.0505	420.							
.2910	-177.	-1190.	517.	409.	370.	108.	-.0165	.0180	-.0078	-.0578	-.0111	.0515	379.							
.2920	-275.	-828.	487.	536.	182.	152.	-.0170	.0140	-.0036	-.0414	-.0023	.0512	395.							
.2930	-320.	-496.	440.	595.	9.	155.	-.0166	.0102	-.0001	-.0260	.0050	.0492	414.							
.2940	-308.	-192.	371.	599.	-148.	110.	-.0151	.0065	.0028	-.0120	.0109	.0451	423.							
.2950	-247.	81.	287.	578.	-287.	4.	-.0126	.0030	.0051	.0005	.0152	.0392	435.							
.2960	-149.	313.	201.	525.	-405.	-147.	-.0091	-.0004	.0066	.0115	.0180	.0316	457.							
.2970	-18.	492.	125.	423.	-501.	-308.	-.0049	-.0035	.0076	.0211	.0199	.0228	488.							
.2980	129.	612.	68.	285.	-576.	-461.	-.0004	-.0062	.0082	.0294	.0211	.0132	533.							
.2990	252.	703.	20.	142.	-626.	-608.	.0042	-.0087	.0083	.0367	.0220	.0038	596.							
.3000	317.	808.	-40.	3.	-645.	-738.	.0085	-.0108	.0081	.0431	.0227	-.0046	661.							
.3010	312.	938.	-117.	-135.	-639.	-838.	.0121	-.0127	.0076	.0489	.0236	-.0114	716.							
.3020	249.	1083.	-198.	-266.	-619.	-904.	.0151	-.0143	.0071	.0545	.0251	-.0165	760.							
.3030	138.	1247.	-280.	-374.	-596.	-946.	.0172	-.0158	.0067	.0603	.0272	-.0196	795.							
.3040	-10.	1472.	-363.	-458.	-575.	-974.	.0186	-.0172	.0066	.0665	.0299	-.0208	823.							
.3050	-166.	1614.	-430.	-526.	-567.	-993.	.0193	-.0186	.0069	.0734	.0330	-.0204	848.							
.3060	-302.	1763.	-460.	-582.	-576.	-1008.	.0195	-.0201	.0078	.0813	.0366	-.0187	876.							
.3070	-408.	1869.	-452.	-630.	-599.	-1030.	.0193	-.0217	.0093	.0901	.0403	-.0160	909.							
.3080	-479.	1927.	-404.	-677.	-630.	-1062.	.0189	-.0234	.0113	.0998	.0439	-.0125	949.							
.3090	-516.	1928.	-317.	-732.	-662.	-1102.	.0183	-.0251	.0137	.1102	.0469	-.0086	997.							
.3100	-526.	1894.	-213.	-798.	-688.	-1142.	.0177	-.0268	.0164	.1206	.0493	-.0048	1047.							
.3110	-532.	1868.	-127.	-862.	-701.	-1180.	.0169	-.0284	.0190	.1305	.0508	-.0012	1093.							
.3120	-551.	1878.	-82.	-911.	-696.	-1214.	.0160	-.0299	.0213	.1392	.0511	.0019	1125.							
.3130	-581.	1923.	-78.	-940.	-673.	-1229.	.0151	-.0312	.0233	.1463	.0502	.0039	1138.							
.3140	-619.	1993.	-109.	-954.	-626.	-1212.	.0141	-.0323	.0249	.1514	.0482	.0044	1122.							
.3150	-661.	2075.	-161.	-953.	-553.	-1156.	.0131	-.0331	.0260	.1545	.0449	.0032	1077.							
.3160	-703.	2144.	-215.	-931.	-452.	-1066.	.0123	-.0337	.0268	.1555	.0402	.0002	1001.							
.3170	-732.	2174.	-253.	-893.	-323.	-942.	.0117	-.0340	.0272	.1545	.0343	-.0046	902.							
.3180	-734.	2142.	-262.	-859.	-188.	-780.	.0114	-.0340	.0273	.1517	.0274	-.0112	792.							
.3190	-707.	2042.	-239.	-840.	9.	-601.	.0115	-.0338	.0271	.1473	.0194	-.0193	696.							

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

INTERNAL FORCES IN THE PIPING

.3090	-516.	1928.	-317.	-732.	-662.	-1102.	.0183	-.0251	.0137	.1102	.0469	-.0086	997.
.3100	-526.	1894.	-213.	-798.	-688.	-1142.	.0177	-.0268	.0164	.1206	.0493	-.0048	1047.
.3110	-532.	1868.	-127.	-862.	-701.	-1180.	.0169	-.0284	.0190	.1305	.0508	-.0012	1093.
.3120	-511.	1870.	-12.	-911.	-696.	-1214.	.0160	-.0299	.0213	.1392	.0511	.0019	1125.
.3130	-581.	1923.	-75.	-940.	-673.	-1229.	.0151	-.0312	.0233	.1463	.0502	.0039	1138.
.3140	-619.	1993.	-109.	-954.	-626.	-1212.	.0141	-.0322	.0249	.1514	.0482	.0044	1122.
.3150	-661.	2075.	-161.	-953.	-553.	-1156.	.0131	-.0331	.0260	.1545	.0449	.0032	1077.
.3160	-703.	2144.	-215.	-931.	-452.	-1066.	.0123	-.0337	.0268	.1555	.0402	.0002	1001.
.3170	-732.	2174.	-253.	-893.	-323.	-942.	.0117	-.0340	.0272	.1545	.0343	-.0046	902.
.3180	-734.	2142.	-262.	-857.	-183.	-783.	.0114	-.0340	.0273	.1517	.0274	-.0112	792.
.3190	-707.	2042.	-239.	-840.	9.	-601.	.0115	-.0338	.0271	.1473	.0194	-.0193	696.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU								STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	(PSI)	
.3200	-653.	1893.	-700.	-833.	197.	-415.	.0118	-.0333	.0265	.1415	.0105	-.0285	641.	
.3210	-576.	1731.	-179.	-834.	383.	-233.	.0123	-.0726	.0255	.1343	.0010	-.0383	638.	
.3220	-478.	1588.	-202.	-845.	553.	-67.	.0129	-.0316	.0241	.1259	-.0087	-.0484	682.	
.3230	-364.	1475.	-274.	-864.	693.	77.	.0133	-.0305	.0223	.1167	-.0183	-.0583	748.	
.3240	-237.	1399.	-394.	-886.	794.	198.	.0135	-.0292	.0204	.1071	-.0274	-.0672	813.	
.3250	-103.	1358.	-555.	-905.	851.	299.	.0134	-.0279	.0184	.0976	-.0356	-.0749	861.	
.3260	37.	1324.	-726.	-920.	860.	392.	.0128	-.0265	.0168	.0888	-.0423	-.0809	889.	
.3270	180.	1258.	-867.	-936.	825.	489.	.0115	-.0252	.0156	.0815	-.0472	-.0847	903.	
.3280	312.	1144.	-954.	-956.	757.	601.	.0097	-.0241	.0151	.0761	-.0501	-.0861	916.	
.3290	415.	990.	-981.	-976.	665.	731.	.0073	-.0230	.0153	.0729	-.0507	-.0848	936.	
.3300	468.	817.	-957.	-984.	555.	874.	.0044	-.0221	.0161	.0719	-.0491	-.0808	963.	
.3310	461.	653.	-898.	-977.	436.	1026.	.0011	-.0214	.0174	.0728	-.0452	-.0744	999.	
.3320	391.	521.	-820.	-960.	316.	1179.	-.0024	-.0210	.0190	.0755	-.0395	-.0660	1047.	
.3330	258.	446.	-740.	-930.	198.	1317.	-.0058	-.0207	.0207	.0794	-.0322	-.0565	1095.	
.3340	74.	449.	-678.	-883.	84.	1421.	-.0088	-.0206	.0221	.0840	-.0238	-.0465	1129.	
.3350	-138.	530.	-641.	-819.	-21.	1478.	-.0109	-.0208	.0233	.0889	-.0147	-.0371	1139.	
.3360	-350.	655.	-609.	-755.	-112.	1477.	-.0119	-.0212	.0241	.0937	-.0055	-.0292	1121.	
.3370	-534.	780.	-554.	-706.	-186.	1416.	-.0114	-.0217	.0244	.0984	.0033	-.0234	1074.	
.3380	-671.	889.	-468.	-680.	-236.	1291.	-.0092	-.0225	.0243	.1026	.0113	-.0202	996.	
.3390	-758.	939.	-364.	-670.	-261.	1100.	-.0053	-.0234	.0236	.1061	.0185	-.0199	886.	
.3400	-905.	1095.	-255.	-669.	-259.	846.	.0001	-.0245	.0223	.1087	.0245	-.0224	748.	
.3410	-823.	1223.	-154.	-676.	-236.	539.	.0067	-.0256	.0204	.1103	.0293	-.0273	604.	
.3420	-824.	1393.	-81.	-684.	-194.	197.	.0143	-.0268	.0181	.1107	.0332	-.0343	497.	
.3430	-822.	1622.	-51.	-677.	-143.	-156.	.0223	-.0279	.0157	.1101	.0365	-.0427	480.	
.3440	-830.	1907.	-63.	-647.	-90.	-530.	.0304	-.0291	.0122	.1086	.0392	-.0517	567.	
.3450	-854.	2227.	-103.	-593.	-41.	-874.	.0380	-.0302	.0093	.1068	.0418	-.0607	713.	
.3460	-889.	2541.	-144.	-532.	2.	-1173.	.0449	-.0313	.0066	.1050	.0446	-.0690	865.	
.3470	-930.	2804.	-156.	-435.	34.	-1409.	.0507	-.0322	.0046	.1035	.0476	-.0760	994.	
.3480	-972.	2980.	-113.	-338.	55.	-1572.	.0552	-.0330	.0034	.1028	.0510	-.0811	1085.	
.3490	-1012.	3051.	-10.	-236.	63.	-1654.	.0582	-.0336	.0030	.1027	.0547	-.0842	1127.	
.3500	-1048.	3022.	143.	-135.	54.	-1653.	.0597	-.0339	.0033	.1031	.0587	-.0850	1119.	
.3510	-1084.	2914.	320.	-32.	28.	-1579.	.0597	-.0339	.0042	.1033	.0628	-.0835	1065.	
.3520	-1124.	2763.	488.	76.	-15.	-1445.	.0581	-.0334	.0053	.1027	.0667	-.0800	976.	
.3530	-1168.	2592.	620.	182.	-74.	-1265.	.0552	-.0324	.0063	.1008	.0701	-.0746	863.	
.3540	-1206.	2409.	702.	279.	-150.	-1049.	.0511	-.0308	.0071	.0970	.0728	-.0680	738.	
.3550	-1231.	2217.	729.	359.	-235.	-811.	.0462	-.0285	.0073	.0909	.0744	-.0606	618.	
.3560	-1241.	2013.	704.	415.	-319.	-567.	.0408	-.0257	.0069	.0824	.0746	-.0528	520.	
.3570	-1229.	1731.	644.	441.	-393.	-330.	.0353	-.0223	.0058	.0717	.0734	-.0450	456.	

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DIG/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.27.19.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNIT

.3440	-989.	2541.	-144.	-522.	2.	-1173.	.0449	-.0312	.0066	.1050	.0446	-.0690	865.
.3470	-930.	2804.	-156.	-435.	34.	-1409.	.0507	-.0322	.0046	.1035	.0476	-.0760	994.
.3480	-972.	2920.	-113.	-338.	55.	-1572.	.0552	-.0330	.0034	.1028	.0510	-.0811	1085.
.3490	-1012.	3051.	-10.	-226.	63.	-1654.	.0582	-.0326	.0030	.1027	.0547	-.0842	1127.
.3500	-1048.	3022.	143.	-125.	54.	-1653.	.0597	-.0339	.0033	.1031	.0587	-.0850	1119.
.3510	-1084.	2914.	320.	-32.	28.	-1579.	.0597	-.0329	.0042	.1033	.0628	-.0835	1065.
.3520	-1124.	2763.	488.	70.	-10.	-1445.	.0581	-.0324	.0053	.1027	.0667	-.0800	976.
.3530	-1168.	2592.	620.	182.	-74.	-1265.	.0552	-.0324	.0063	.1008	.0701	-.0746	863.
.3540	-1206.	2409.	792.	279.	-150.	-1049.	.0511	-.0308	.0071	.0970	.0728	-.0680	738.
.3550	-1231.	2217.	729.	359.	-235.	-811.	.0462	-.0285	.0073	.0969	.0744	-.0606	618.
.3560	-1241.	2013.	704.	415.	-319.	-567.	.0408	-.0257	.0069	.0824	.0746	-.0528	520.
.3570	-1229.	1781.	644.	441.	-393.	-330.	.0353	-.0223	.0058	.0717	.0734	-.0450	456.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.27.19.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	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)
.3580	-1186.	1503.	529.	427.	-448.	-108.	.0299	-.0184	.0041	.0590	.0706	-.0376	423.
.3590	-1112.	1177.	492.	370.	-478.	93.	.0249	-.0141	.0017	.0447	.0563	-.0310	413.
.3600	-1010.	820.	415.	279.	-477.	261.	.0205	-.0097	-.0011	.0294	.0507	-.0251	412.
.3610	-909.	454.	337.	164.	-442.	386.	.0168	-.0052	-.0043	.0135	.0537	-.0201	411.
.3620	-800.	96.	257.	35.	-372.	467.	.0138	-.0008	-.0077	-.0024	.0457	-.0157	403.
.3630	-694.	-236.	177.	-103.	-272.	509.	.0114	.0034	-.0112	-.0178	.0371	-.0121	395.
.3640	-595.	-534.	100.	-236.	-147.	514.	.0095	.0072	-.0145	-.0320	.0279	-.0091	394.
.3650	-505.	-795.	32.	-354.	-1.	487.	.0080	.0105	-.0173	-.0448	.0184	-.0065	406.
.3660	-419.	-1027.	-14.	-452.	158.	441.	.0068	.0134	-.0196	-.0556	.0089	-.0043	439.
.3670	-326.	-1242.	-29.	-528.	320.	391.	.0057	.0156	-.0212	-.0643	-.0005	-.0024	492.
.3680	-219.	-1444.	-11.	-576.	471.	347.	.0044	.0174	-.0219	-.0709	-.0096	-.0007	553.
.3690	-100.	-1621.	28.	-587.	603.	315.	.0028	.0186	-.0217	-.0756	-.0183	.0009	605.
.3700	30.	-1756.	70.	-554.	704.	302.	.0008	.0194	-.0207	-.0785	-.0263	.0024	637.
.3710	169.	-1838.	102.	-476.	769.	311.	-.0018	.0198	-.0191	-.0801	-.0336	.0040	645.
.3720	312.	-1863.	114.	-359.	794.	345.	-.0051	.0199	-.0169	-.0805	-.0402	.0058	631.
.3730	453.	-1827.	98.	-205.	778.	402.	-.0091	.0198	-.0143	-.0802	-.0459	.0079	606.
.3740	588.	-1736.	53.	-20.	726.	479.	-.0135	.0195	-.0114	-.0793	-.0506	.0105	587.
.3750	711.	-1604.	-14.	183.	644.	572.	-.0185	.0191	-.0083	-.0779	-.0545	.0137	594.
.3760	823.	-1453.	-90.	391.	541.	675.	-.0236	.0187	-.0052	-.0762	-.0574	.0173	640.
.3770	924.	-1302.	-162.	592.	424.	783.	-.0287	.0183	-.0021	-.0740	-.0595	.0214	721.
.3780	1018.	-1168.	-221.	778.	298.	888.	-.0336	.0179	.0008	-.0717	-.0606	.0256	821.
.3790	1102.	-1054.	-266.	940.	170.	982.	-.0381	.0175	.0035	-.0692	-.0609	.0299	923.
.3800	1172.	-958.	-301.	1074.	47.	1057.	-.0418	.0171	.0058	-.0666	-.0605	.0339	1016.
.3810	1224.	-874.	-330.	1179.	-66.	1105.	-.0448	.0168	.0077	-.0642	-.0593	.0377	1090.
.3820	1258.	-807.	-351.	1253.	-165.	1121.	-.0467	.0165	.0090	-.0621	-.0576	.0408	1139.
.3830	1277.	-762.	-360.	1290.	-247.	1107.	-.0476	.0163	.0098	-.0602	-.0554	.0432	1158.
.3840	1282.	-741.	-356.	1287.	-309.	1063.	-.0474	.0161	.0099	-.0587	-.0526	.0448	1144.
.3850	1268.	-738.	-343.	1247.	-351.	988.	-.0460	.0159	.0095	-.0576	-.0495	.0456	1098.
.3860	1234.	-742.	-325.	1179.	-372.	831.	-.0437	.0159	.0084	-.0570	-.0459	.0456	1023.
.3870	1180.	-748.	-304.	1088.	-376.	742.	-.0404	.0158	.0068	-.0567	-.0420	.0450	923.
.3880	1109.	-750.	-278.	975.	-367.	578.	-.0364	.0158	.0048	-.0567	-.0375	.0439	803.
.3890	1022.	-744.	-248.	850.	-349.	388.	-.0317	.0157	.0023	-.0567	-.0326	.0426	672.
.3900	916.	-717.	-216.	722.	-327.	174.	-.0266	.0157	-.0003	-.0567	-.0271	.0413	546.
.3910	788.	-663.	-183.	599.	-293.	-63.	-.0212	.0155	-.0031	-.0567	-.0211	.0403	452.
.3920	645.	-592.	-141.	463.	-259.	-315.	-.0157	.0152	-.0058	-.0553	-.0146	.0398	426.
.3930	494.	-522.	-77.	371.	-222.	-575.	-.0103	.0149	-.0084	-.0535	-.0078	.0400	485.
.3940	338.	-457.	12.	261.	-184.	-834.	-.0051	.0144	-.0106	-.0507	-.0007	.0410	602.
.3950	175.	-392.	114.	161.	-143.	-1038.	-.0003	.0138	-.0125	-.0470	.0065	.0429	748.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.27.19.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

.3850	1268.	-738.	-243.	1247.	-351.	988.	-.0460	.0159	.0095	-.0576	-.0495	.0456	1098.
.3860	1234.	-742.	-325.	1179.	-372.	881.	-.0437	.0159	.0084	-.0570	-.0459	.0456	1023.
.3870	1180.	-748.	-304.	1088.	-376.	742.	-.0404	.0158	.0068	-.0567	-.0420	.0450	923.
.3880	1109.	-750.	-278.	975.	-367.	578.	-.0364	.0158	.0048	-.0567	-.0375	.0439	803.
.3890	1022.	-744.	-248.	850.	-349.	380.	-.0317	.0157	.0023	-.0567	-.0326	.0426	672.
.3900	916.	-717.	-216.	722.	-327.	174.	-.0266	.0157	-.0003	-.0567	-.0271	.0413	546.
.3910	788.	-663.	-182.	599.	-293.	-63.	-.0212	.0155	-.0031	-.0563	-.0211	.0403	452.
.3920	645.	-592.	-141.	483.	-259.	-315.	-.0157	.0152	-.0058	-.0553	-.0146	.0398	426.
.3930	494.	-522.	-77.	371.	-222.	-575.	-.0103	.0149	-.0084	-.0535	-.0078	.0400	485.
.3940	331.	-457.	12.	261.	-184.	-834.	-.0051	.0144	-.0104	-.0507	-.0007	.0410	602.
.3950	175.	-392.	114.	161.	-143.	-1028.	-.0003	.0138	-.0125	-.0470	.0065	.0429	748.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.27.19.

S/RV PIPING KEWAUNEE GKW02F 2 RUP DICK
2 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	24	MEMBER	2	SEQUENCE	42	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	11.	-323.	223.	78.	-103.	-1331.	.0039	.0131	-.0138	-.0426	.0134	.0454	901.		
.3970	-142.	-260.	335.	13.	-68.	-1550.	.0075	.0123	-.0148	-.0377	.0199	.0484	1046.		
.3980	-271.	-211.	447.	-40.	-43.	-1733.	.0103	.0115	-.0152	-.0326	.0257	.0514	1169.		
.3990	-371.	-173.	549.	-78.	-31.	-1870.	.0123	.0107	-.0152	-.0276	.0305	.0543	1262.		
.4000	-441.	-135.	624.	-91.	-33.	-1960.	.0134	.0099	-.0149	-.0233	.0342	.0566	1323.		

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)
.0600	-3733.	-2079.	22.	-5815.	2038.	-2164.	.0947	.0133	-.0782	-.0255	.0708	-.0324	4402.

SECTION	24	MEMBER	3	SEQUENCE	211	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	1.	-1.	2.	-0.	-0.	0.	-.0000	-.0000	.0000	.0000	-.0000	-.0000	0.		
.0020	7.	-3.	8.	-1.	-7.	2.	-.0000	-.0000	.0000	.0001	.0000	-.0001	3.		
.0030	14.	15.	8.	0.	-9.	4.	-.0000	-.0001	.0000	.0002	.0001	-.0003	8.		
.0040	15.	69.	-10.	30.	-19.	1.	.0000	-.0002	.0000	.0005	.0002	-.0006	24.		
.0050	12.	154.	-37.	74.	-30.	-11.	.0000	-.0003	.0001	.0009	.0004	-.0010	54.		
.0060	10.	255.	-60.	126.	-43.	-28.	.0001	-.0006	.0003	.0017	.0007	-.0016	92.		
.0070	18.	366.	-66.	179.	-60.	-43.	.0002	-.0010	.0006	.0030	.0011	-.0024	130.		
.0080	45.	508.	-61.	245.	-99.	-53.	.0004	-.0015	.0011	.0049	.0017	-.0006	182.		
.0090	80.	742.	-96.	366.	-167.	-59.	.0008	-.0023	.0019	.0071	.0029	-.0057	274.		
.0100	113.	1063.	-106.	559.	-264.	-71.	.0013	-.0033	.0029	.0098	.0050	-.0084	419.		
.0110	145.	1457.	-275.	790.	-388.	-90.	.0020	-.0045	.0043	.0134	.0081	-.0115	597.		
.0120	181.	1780.	-303.	1002.	-527.	-101.	.0029	-.0059	.0061	.0178	.0123	-.0146	766.		
.0130	206.	2012.	-246.	1156.	-657.	-102.	.0042	-.0073	.0083	.0227	.0179	-.0172	899.		
.0140	181.	2135.	-109.	1247.	-754.	-121.	.0058	-.0085	.0107	.0279	.0249	-.0186	986.		
.0150	69.	2116.	111.	1254.	-793.	-194.	.0077	-.0094	.0129	.0328	.0326	-.0182	1009.		
.0160	-139.	1926.	402.	1138.	-758.	-320.	.0098	-.0098	.0144	.0365	.0404	-.0156	947.		
.0170	-391.	1521.	753.	881.	-688.	-460.	.0123	-.0094	.0147	.0373	.0479	-.0117	815.		
.0180	-596.	884.	1128.	517.	-656.	-562.	.0151	-.0081	.0131	.0342	.0550	-.0079	679.		
.0190	-698.	88.	1485.	112.	-705.	-600.	.0181	-.0059	.0091	.0260	.0516	-.0056	629.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.27.19.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

.0090	80.	742.	-96.	366.	-167.	-59.	.0008	-.0023	.0019	.0071	.0029	-.0057	274.
.0100	113.	1083.	-186.	559.	-264.	-71.	.0013	-.0033	.0029	.0098	.0050	-.0084	419.
.0110	145.	1457.	-275.	790.	-388.	-90.	.0020	-.0045	.0043	.0134	.0081	-.0115	597.
.0120	181.	1780.	-303.	1002.	-527.	-101.	.0029	-.0059	.0061	.0178	.0123	-.0146	766.
.0130	206.	2012.	-246.	1156.	-657.	-102.	.0042	-.0073	.0083	.0227	.0179	-.0172	899.
.0140	181.	2135.	-109.	1247.	-754.	-121.	.0058	-.0085	.0107	.0279	.0249	-.0186	986.
.0150	69.	2116.	111.	1254.	-793.	-194.	.0077	-.0094	.0129	.0328	.0326	-.0182	1009.
.0160	-139.	1926.	402.	1138.	-758.	-320.	.0098	-.0098	.0144	.0365	.0404	-.0156	947.
.0170	-391.	1521.	753.	881.	-688.	-460.	.0123	-.0094	.0147	.0373	.0479	-.0117	815.
.0180	-596.	884.	1138.	517.	-656.	-562.	.0151	-.0081	.0131	.0342	.0550	-.0079	679.
.0190	-698.	28.	1495.	112.	-705.	-600.	.0181	-.0059	.0091	.0260	.0516	-.0056	629.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.27.19.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	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)	
.0200	-668.	-708.	1758.	-260.	-912.	-580.	.0212	-.0030	.0024	.0129	.0572	-.0060	749.	
.0210	-630.	-1074.	1627.	-430.	-1255.	-550.	.0241	.0006	-.0070	-.0062	.0728	-.0083	968.	
.0220	-731.	-854.	957.	-269.	-1472.	-588.	.0273	.0047	-.0186	-.0307	.0817	-.0108	1084.	
.0230	-908.	-805.	418.	-93.	-1487.	-780.	.0304	.0087	-.0309	-.0542	.0911	-.0109	1134.	
.0240	-1247.	-1350.	447.	-434.	-1232.	-1148.	.0332	.0135	-.0423	-.0746	.0955	-.0033	1172.	
.0250	-1589.	-2465.	974.	-1360.	-932.	-1472.	.0356	.0192	-.0524	-.0936	.0957	.0095	1487.	
.0260	-1596.	-3904.	1665.	-2323.	-759.	-1543.	.0380	.0247	-.0617	-.1117	.0981	.0188	1948.	
.0270	-1750.	-4765.	1917.	-2883.	-259.	-1745.	.0400	.0291	-.0710	-.1278	.1022	.0275	2278.	
.0280	-2689.	-4661.	1697.	-3245.	582.	-2672.	.0401	.0327	-.0793	-.1385	.0910	.0447	2860.	
.0290	-3557.	-4424.	1403.	-3558.	1010.	-3653.	.0382	.0354	-.0856	-.1466	.0656	.0589	3504.	
.0300	-2835.	-4735.	1014.	-3498.	1150.	-3184.	.0391	.0372	-.0904	-.1603	.0573	.0492	3281.	
.0310	-1645.	-4968.	523.	-3346.	1376.	-2181.	.0376	.0386	-.0925	-.1741	.0489	.0329	2847.	
.0320	-1208.	-4916.	336.	-3318.	1450.	-1966.	.0324	.0384	-.0896	-.1756	.0129	.0273	2778.	
.0330	-754.	-4626.	-8.	-2838.	1335.	-1678.	.0244	.0363	-.0830	-.1709	-.0267	.0189	2398.	
.0340	543.	-4191.	-903.	-1743.	1237.	-226.	.0162	.0335	-.0738	-.1701	-.0429	-.0028	1449.	
.0350	1819.	-4040.	-1399.	-928.	1127.	1433.	.0049	.0303	-.0605	-.1625	-.0592	-.0191	1379.	
.0360	2272.	-4236.	-946.	-788.	950.	2324.	-.0118	.0262	-.0424	-.1380	-.0951	-.0167	1774.	
.0370	2574.	-3983.	-701.	-400.	828.	3280.	-.0306	.0212	-.0228	-.1080	-.1217	-.0116	2296.	
.0380	3058.	-2607.	-1549.	875.	751.	4730.	-.0488	.0150	-.0037	-.0811	-.1219	-.0141	3282.	
.0390	2839.	-523.	-2610.	2355.	517.	5454.	-.0681	.0074	.0162	-.0460	-.1256	-.0085	4019.	
.0400	2114.	1203.	-2876.	3322.	28.	5303.	-.0877	-.0013	.0383	.0020	-.1433	.0073	4218.	
.0410	2124.	2363.	-2814.	3942.	-222.	5713.	-.1016	-.0096	.0603	.0480	-.1424	.0156	4681.	
.0420	2786.	3152.	-2662.	4355.	-448.	6589.	-.1090	-.0175	.0815	.0892	-.1245	.0143	5333.	
.0430	3101.	3738.	-2145.	4572.	-970.	6629.	-.1126	-.0264	.1018	.1358	-.1165	.0146	5467.	
.0440	2891.	4674.	-1821.	4846.	-1389.	5862.	-.1115	-.0356	.1193	.1825	-.1116	.0166	5211.	
.0450	2702.	5751.	-1875.	5066.	-1386.	5133.	-.1037	-.0434	.1322	.2193	-.0933	.0140	4950.	
.0460	2632.	5876.	-1326.	4611.	-1173.	4378.	-.0906	-.0494	.1408	.2503	-.0730	.0097	4358.	
.0470	2296.	5034.	20.	3329.	-945.	3184.	-.0747	-.0535	.1447	.2778	-.0649	.0092	3169.	
.0480	1756.	4405.	949.	2007.	-592.	1937.	-.0556	-.0553	.1418	.2911	-.0560	.0059	1922.	
.0490	1250.	4482.	888.	1301.	-110.	917.	-.0334	-.0552	.1310	.2863	-.0370	-.0074	1075.	
.0500	491.	4836.	482.	921.	321.	-359.	-.0107	-.0541	.1140	.2713	-.0236	-.0237	701.	
.0510	-513.	5065.	164.	361.	701.	-1823.	.0113	-.0509	.0931	.2474	-.0218	-.0376	1339.	
.0520	-972.	4744.	-65.	-377.	980.	-2593.	.0339	-.0452	.0695	.2098	-.0158	-.0572	1885.	
.0530	-614.	3535.	-20.	-1138.	1034.	-2517.	.0562	-.0380	.0446	.1627	-.0005	-.0851	1988.	
.0540	-359.	1941.	293.	-1980.	1069.	-2491.	.0754	-.0301	.0200	.1156	.0107	-.1068	2263.	
.0550	-852.	737.	485.	-2883.	1311.	-2973.	.0898	-.0215	-.0034	.0715	.0140	-.1126	2928.	
.0560	-1507.	-154.	447.	-3623.	1520.	-3420.	.0997	-.0129	-.0255	.0297	.0204	-.1111	3511.	
.0570	-1761.	-1241.	397.	-4158.	1491.	-3429.	.1057	-.0050	-.0456	-.0083	.0370	-.1094	3769.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.27.19.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS