

50-305

RESPONSE TO NUREG-0737 ITEM II.D.1

Docket # *50-305*

Control # *8403280048*

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

.2370	-1929.	953.	2655.	3415.	1897.	-139.	-.872	-.0280	.0964	-.0153	-.1619	-.1368	2635.
.2380	-1853.	747.	2481.	3222.	1728.	330.	-.740	-.0252	.0821	.0032	-.1453	-.1065	2474.
.2390	-1734.	544.	2291.	2981.	1614.	729.	-.605	-.0218	.0675	.0212	-.1243	-.0749	2337.
.2400	-1576.	374.	2055.	2701.	1552.	1059.	-.473	-.0176	.0535	.0368	-.0994	-.0434	2218.
.2410	-1391.	227.	1746.	2372.	1554.	1309.	-.347	-.0128	.0405	.0493	-.0712	-.0130	2108.
.2420	-1178.	121.	1388.	2012.	1589.	1465.	-.227	-.0075	.0286	.0584	-.0413	.0156	1991.
.2430	-937.	62.	1025.	1601.	1600.	1513.	-.0119	-.0018	.0176	.0639	-.0116	.0419	1835.
.2440	-686.	9.	670.	1126.	1560.	1436.	-.0016	.0040	.0074	.0663	.0160	.0655	1618.
.2450	-424.	-38.	309.	605.	1461.	1253.	.0082	.0098	-.0021	.0657	.0412	.0860	1360.
.2460	-136.	-42.	-66.	86.	1288.	1006.	.0174	.0155	-.0113	.0619	.0640	.1033	1103.
.2470	160.	-16.	-430.	-407.	1042.	723.	.0262	.0208	-.0201	.0553	.0838	.1170	898.

ADLPIPE PAGE 239

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.25.54.

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	4	MEMBER	1	SEQUENCE	21	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)		
.2480	431.	-2.	-770.	-886.	733.	416.	.0345	.0258	-.0287	.0464	.0994	.1272	824.		
.2490	672.	17.	-1079.	-1344.	341.	108.	.0424	.0302	-.0369	.0351	.1100	.1339	938.		
.2500	873.	74.	-1338.	-1755.	-130.	-165.	.0498	.0339	-.0446	.0211	.1155	.1372	1192.		
.2510	1015.	131.	-1554.	-2108.	-623.	-372.	.0563	.0369	-.0513	.0045	.1164	.1367	1503.		
.2520	1111.	171.	-1763.	-2392.	-1105.	-491.	.0618	.0391	-.0569	-.0147	.1137	.1325	1806.		
.2530	1192.	219.	-1961.	-2599.	-1596.	-517.	.0660	.0406	-.0610	-.0364	.1077	.1248	2085.		
.2540	1231.	245.	-2076.	-2751.	-2076.	-475.	.0689	.0413	-.0636	-.0596	.0975	.1143	2345.		
.2550	1203.	192.	-2078.	-2856.	-2481.	-376.	.0705	.0413	-.0646	-.0829	.0838	.1014	2563.		
.2560	1160.	90.	-2038.	-2879.	-2784.	-197.	.0706	.0405	-.0640	-.1058	.0596	.0868	2703.		
.2570	1147.	-5.	-2003.	-2811.	-2995.	66.	.0692	.0391	-.0618	-.1277	.0571	.0710	2769.		
.2580	1116.	-133.	-1930.	-2724.	-3098.	358.	.0667	.0371	-.0584	-.1467	.0455	.0552	2791.		
.2590	1039.	-334.	-1798.	-2678.	-3095.	630.	.0634	.0345	-.0541	-.1611	.0344	.0406	2791.		
.2600	977.	-538.	-1670.	-2670.	-3041.	876.	.0595	.0314	-.0494	-.1705	.0254	.0278	2791.		
.2610	955.	-707.	-1588.	-2728.	-2969.	1082.	.0552	.0279	-.0445	-.1747	.0194	.0173	2814.		
.2620	933.	-885.	-1548.	-2922.	-2878.	1203.	.0508	.0241	-.0396	-.1730	.0152	.0095	2881.		
.2630	915.	-1069.	-1556.	-3265.	-2809.	1226.	.0464	.0201	-.0348	-.1661	.0119	.0044	3019.		
.2640	935.	-1209.	-1616.	-3713.	-2799.	1165.	.0419	.0160	-.0302	-.1552	.0096	.0017	3231.		
.2650	962.	-1328.	-1683.	-4225.	-2806.	1035.	.0374	.0119	-.0254	-.1409	.0075	.0011	3489.		
.2660	958.	-1455.	-1726.	-4748.	-2778.	866.	.0327	.0080	-.0204	-.1245	.0048	.0019	3753.		
.2670	940.	-1544.	-1759.	-5191.	-2710.	713.	.0275	.0045	-.0147	-.1081	.0021	.0030	3976.		
.2680	906.	-1571.	-1769.	-5475.	-2585.	616.	.0216	.0014	-.0081	-.0933	-.0009	.0039	4102.		
.2690	809.	-1574.	-1685.	-5553.	-2346.	587.	.0151	-.0011	-.0004	-.0804	-.0052	.0042	4083.		
.2700	638.	-1563.	-1474.	-5379.	-1984.	641.	.0080	-.0031	.0081	-.0699	-.0115	.0036	3888.		
.2710	421.	-1496.	-1165.	-4927.	-1535.	787.	.0004	-.0043	.0174	-.0624	-.0193	.0019	3519.		
.2720	159.	-1363.	-784.	-4230.	-1020.	1002.	-.0076	-.0049	.0274	-.0580	-.0288	-.0007	3010.		
.2730	-166.	-1180.	-325.	-3341.	-446.	1250.	-.0157	-.0046	.0376	-.0558	-.0405	-.0039	2423.		
.2740	-539.	-933.	208.	-2286.	154.	1504.	-.0238	-.0037	.0477	-.0552	-.0536	-.0073	1847.		
.2750	-932.	-610.	773.	-1108.	762.	1737.	-.0314	-.0020	.0574	-.0558	-.0668	-.0104	1481.		
.2760	-1330.	-222.	1318.	106.	1371.	1905.	-.0386	.0004	.0665	-.0568	-.0791	-.0128	1583.		
.2770	-1707.	225.	1809.	1275.	1943.	1964.	-.0452	.0034	.0749	-.0580	-.0897	-.0144	2051.		
.2780	-2024.	716.	2225.	2335.	2440.	1882.	-.0511	.0070	.0822	-.0590	-.0981	-.0152	2606.		
.2790	-2256.	1208.	2552.	3222.	2848.	1625.	-.0562	.0110	.0885	-.0593	-.1038	-.0147	3099.		
.2800	-2386.	1672.	2778.	3879.	3152.	1181.	-.0605	.0155	.0936	-.0589	-.1067	-.0131	3462.		
.2810	-2400.	2100.	2891.	4279.	3324.	565.	-.0638	.0201	.0975	-.0581	-.1070	-.0104	3672.		
.2820	-2305.	2480.	2885.	4418.	3367.	-182.	-.0662	.0248	.1001	-.0571	-.1047	-.0067	3746.		
.2830	-2127.	2790.	2772.	4325.	3318.	-1000.	-.0675	.0294	.1015	-.0559	-.0998	-.0022	3735.		
.2840	-1897.	3035.	2580.	4062.	3208.	-1807.	-.0677	.0338	.1017	-.0548	-.0923	.0034	3695.		
.2850	-1647.	3221.	2337.	3696.	3064.	-2522.	-.0666	.0377	.1005	-.0539	-.0824	.0100	3655.		

ADLPIPE PAGE 240

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.25.54.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.2750	-932.	-610.	773.	-1108.	762.	1737.	-.0314	-.0020	.0574	-.0558	-.0668	-.0104	1481.
.2760	-1330.	-222.	1318.	106.	1371.	1905.	-.0386	.0004	.0565	-.0568	-.0791	-.0128	1583.
.2770	-1707.	225.	1809.	1275.	1943.	1964.	-.0452	.0034	.0749	-.0580	-.0897	-.0144	2051.
.2780	-2024.	716.	2225.	2375.	2440.	1882.	-.0511	.0070	.0822	-.0590	-.0981	-.0152	2606.
.2790	-2256.	1208.	2552.	3222.	2848.	1625.	-.0562	.0110	.0885	-.0593	-.1038	-.0147	3099.
.2800	-2386.	1672.	2778.	3879.	3152.	1181.	-.0605	.0155	.0936	-.0589	-.1067	-.0131	3462.
.2810	-2400.	2100.	2891.	4279.	3324.	565.	-.0638	.0201	.0975	-.0581	-.1070	-.0104	3672.
.2820	-2305.	2480.	2885.	4418.	3367.	-182.	-.0662	.0248	.1001	-.0571	-.1047	-.0067	3746.
.2830	-2127.	2790.	2772.	4325.	3318.	-1000.	-.0675	.0294	.1015	-.0559	-.0998	-.0022	3735.
.2840	-1897.	3035.	2580.	4062.	3208.	-1807.	-.0677	.0338	.1017	-.0548	-.0923	.0034	3695.
.2850	-1647.	3221.	2337.	3696.	3064.	-2522.	-.0666	.0377	.1005	-.0539	-.0824	.0100	3655.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
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CONDITION 24

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ENGLISH UNITS

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

SECTION	4	MEMBER	1	SEQUENCE	21	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ				DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2860	-1412.	3336.	2066.	3277.	2918.	-3076.	-.0641	.0411	.0979	-.0532	-.0707	.0174	.0174	3612.	
.2870	-1203.	3372.	1777.	2853.	2785.	-3417.	-.0602	.0439	.0937	-.0524	-.0575	.0257	.0257	3539.	
.2880	-1022.	3332.	1493.	2469.	2653.	-3511.	-.0547	.0459	.0877	-.0517	-.0434	.0348	.0348	3401.	
.2890	-878.	3197.	1241.	2133.	2513.	-3359.	-.0476	.0470	.0799	-.0507	-.0294	.0447	.0447	3172.	
.2900	-770.	2954.	1028.	1832.	2352.	-2982.	-.0388	.0473	.0702	-.0490	-.0164	.0554	.0554	2842.	
.2910	-679.	2620.	839.	1556.	2139.	-2403.	-.0286	.0468	.0586	-.0468	-.0047	.0665	.0665	2409.	
.2920	-597.	2214.	659.	1288.	1863.	-1660.	-.0172	.0455	.0455	-.0442	.0057	.0778	.0778	1893.	
.2930	-532.	1748.	477.	1004.	1534.	-800.	-.0047	.0435	.0312	-.0413	.0148	.0890	.0890	1348.	
.2940	-474.	1247.	277.	686.	1156.	126.	.0083	.0409	.0161	-.0382	.0229	.0999	.0999	910.	
.2950	-406.	743.	46.	319.	723.	1066.	.0214	.0380	.0007	-.0354	.0302	.1099	.1099	895.	
.2960	-328.	246.	-217.	-118.	241.	1957.	.0342	.0347	-.0145	-.0328	.0368	.1187	.1187	1331.	
.2970	-234.	-237.	-512.	-639.	-270.	2739.	.0463	.0313	-.0290	-.0307	.0427	.1259	.1259	1905.	
.2980	-98.	-685.	-848.	-1230.	-810.	3372.	.0573	.0279	-.0424	-.0294	.0482	.1311	.1311	2480.	
.2990	93.	-1090.	-1211.	-1879.	-1375.	3620.	.0668	.0246	-.0543	-.0289	.0532	.1340	.1340	3015.	
.3000	322.	-1463.	-1574.	-2576.	-1944.	4056.	.0745	.0215	-.0644	-.0292	.0571	.1343	.1343	3494.	
.3010	578.	-1788.	-1918.	-3289.	-2496.	4078.	.0803	.0187	-.0725	-.0303	.0596	.1322	.1322	3912.	
.3020	855.	-2035.	-2241.	-3962.	-3010.	3917.	.0842	.0163	-.0784	-.0323	.0613	.1275	.1275	4268.	
.3030	1126.	-2197.	-2523.	-4542.	-3450.	3610.	.0859	.0143	-.0821	-.0351	.0622	.1205	.1205	4550.	
.3040	1355.	-2277.	-2741.	-4995.	-3781.	3195.	.0857	.0126	-.0836	-.0384	.0621	.1114	.1114	4740.	
.3050	1527.	-2257.	-2888.	-5283.	-3992.	2716.	.0837	.0113	-.0830	-.0423	.0610	.1006	.1006	4824.	
.3060	1637.	-2133.	-2957.	-5377.	-4081.	2211.	.0800	.0104	-.0804	-.0465	.0589	.0885	.0885	4788.	
.3070	1675.	-1934.	-2934.	-5274.	-4042.	1708.	.0748	.0098	-.0762	-.0505	.0556	.0754	.0754	4624.	
.3080	1642.	-1685.	-2814.	-4979.	-3881.	1226.	.0685	.0094	-.0705	-.0540	.0510	.0618	.0618	4335.	
.3090	1559.	-1393.	-2614.	-4507.	-3622.	783.	.0612	.0091	-.0637	-.0567	.0454	.0481	.0481	3933.	
.3100	1439.	-1073.	-2346.	-3883.	-3284.	385.	.0532	.0090	-.0561	-.0581	.0389	.0349	.0349	3437.	
.3110	1283.	-757.	-2012.	-3144.	-2877.	35.	.0448	.0088	-.0481	-.0577	.0316	.0225	.0225	2873.	
.3120	1098.	-455.	-1622.	-2322.	-2416.	-262.	.0362	.0087	-.0399	-.0550	.0238	.0114	.0114	2266.	
.3130	896.	-159.	-1205.	-1448.	-1919.	-501.	.0276	.0084	-.0317	-.0499	.0162	.0019	.0019	1655.	
.3140	680.	127.	-790.	-563.	-1395.	-681.	.0193	.0079	-.0237	-.0420	.0094	-.0056	-.0056	1113.	
.3150	450.	397.	-387.	295.	-858.	-810.	.0113	.0072	-.0161	-.0312	.0033	-.0110	-.0110	820.	
.3160	214.	646.	-9.	1096.	-325.	-895.	.0039	.0062	-.0091	-.0176	-.0017	-.0143	-.0143	979.	
.3170	-14.	871.	334.	1814.	188.	-950.	-.0030	.0049	-.0027	-.0015	-.0055	-.0156	-.0156	1386.	
.3180	-227.	1063.	638.	2427.	671.	-986.	-.0094	.0033	.0031	.0169	-.0084	-.0151	-.0151	1823.	
.3190	-418.	1211.	900.	2928.	1115.	-1012.	-.0152	.0014	.0084	.0368	-.0103	-.0134	-.0134	2219.	
.3200	-578.	1311.	1121.	3322.	1519.	-1030.	-.0206	-.0008	.0131	.0576	-.0113	-.0110	-.0110	2558.	
.3210	-704.	1365.	1304.	3624.	1888.	-1037.	-.0256	-.0033	.0173	.0786	-.0114	-.0083	-.0083	2841.	
.3220	-800.	1374.	1460.	3852.	2226.	-1032.	-.0302	-.0060	.0212	.0990	-.0110	-.0058	-.0058	3078.	
.3230	-880.	1342.	1603.	4026.	2539.	-1009.	-.0346	-.0090	.0247	.1183	-.0102	-.0039	-.0039	3280.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.25.54.

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

.3130	896.	-159.	-1205.	-1448.	-1919.	-501.	.0276	.0024	-.0317	-.0499	.0162	-.0019	2266.
.3140	680.	127.	-790.	-563.	-1395.	-681.	.193	.0079	-.0237	-.0420	.0094	-.0056	1113.
.3150	450.	397.	-387.	295.	-858.	-810.	.0113	.0072	-.0161	-.0312	.0033	-.0110	820.
.3160	214.	646.	-9.	1096.	-325.	-895.	.0039	.0062	-.0091	-.0176	-.0017	-.0143	979.
.3170	-14.	871.	334.	1314.	188.	-950.	-.0030	.0049	-.0027	-.0015	-.0055	-.0156	1386.
.3180	-227.	1083.	638.	2427.	671.	-956.	-.0094	.0033	.0031	.0169	-.0084	-.0151	1823.
.3190	-418.	1211.	900.	2928.	1115.	-1012.	-.0152	.0014	.0084	.0368	-.0103	-.0134	2219.
.3200	-578.	1311.	1121.	3322.	1519.	-1030.	-.0206	-.0008	.0131	.0576	-.0113	-.0110	2558.
.3210	-704.	1365.	1304.	3624.	1888.	-1037.	-.0256	-.0033	.0173	.0786	-.0114	-.0083	2841.
.3220	-800.	1374.	1460.	3852.	2226.	-1032.	-.0302	-.0060	.0212	.0990	-.0110	-.0058	3078.
.3230	-880.	1342.	1603.	4026.	2539.	-1009.	-.0346	-.0090	.0247	.1183	-.0102	-.0039	3280.

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83/12/02.

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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	4	MEMBER	1	SEQUENCE	21	LOCATION	END	TYPE	EL	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3240	-950.	1279.	1734.	4167.	2830.	-959.	-.0386	-.0121	.0278	.1357	-.0092	-.0031	3456.	
.3250	-1011.	1201.	1843.	4293.	3102.	-879.	-.0422	-.0153	.0306	.1508	-.0080	-.0036	3619.	
.3260	-1066.	1118.	1936.	4418.	3346.	-770.	-.0455	-.0185	.0329	.1634	-.0067	-.0056	3771.	
.3270	-1121.	1029.	2027.	4539.	3551.	-647.	-.0483	-.0219	.0346	.1734	-.0060	-.0092	3909.	
.3280	-1174.	933.	2113.	4648.	3704.	-527.	-.0505	-.0252	.0356	.1807	-.0061	-.0144	4022.	
.3290	-1211.	839.	2180.	4738.	3789.	-424.	-.0522	-.0284	.0358	.1853	-.0070	-.0211	4099.	
.3300	-1222.	751.	2223.	4802.	3795.	-350.	-.0533	-.0316	.0352	.1871	-.0086	-.0295	4133.	
.3310	-1208.	660.	2243.	4825.	3722.	-322.	-.0538	-.0346	.0339	.1864	-.0109	-.0394	4113.	
.3320	-1165.	565.	2236.	4792.	3569.	-351.	-.0537	-.0375	.0318	.1832	-.0139	-.0507	4034.	
.3330	-1087.	474.	2195.	4695.	3336.	-438.	-.0532	-.0402	.0292	.1775	-.0172	-.0632	3893.	
.3340	-977.	386.	2115.	4526.	3032.	-582.	-.0522	-.0427	.0260	.1694	-.0205	-.0767	3693.	
.3350	-837.	295.	1987.	4277.	2674.	-777.	-.0509	-.0450	.0225	.1590	-.0235	-.0910	3440.	
.3360	-663.	203.	1808.	3947.	2265.	-1011.	-.0492	-.0471	.0188	.1464	-.0260	-.1058	3142.	
.3370	-458.	106.	1584.	3534.	1809.	-1276.	-.0472	-.0489	.0148	.1322	-.0278	-.1207	2811.	
.3380	-232.	-9.	1330.	3039.	1318.	-1561.	-.0449	-.0505	.0106	.1168	-.0291	-.1352	2468.	
.3390	12.	-149.	1045.	2475.	806.	-1844.	-.0421	-.0519	.0062	.1008	-.0297	-.1487	2150.	
.3400	277.	-306.	731.	1867.	281.	-2100.	-.0388	-.0531	.0013	.0848	-.0291	-.1609	1903.	
.3410	546.	-484.	405.	1238.	-240.	-2305.	-.0349	-.0542	-.0040	.0694	-.0273	-.1712	1771.	
.3420	801.	-689.	87.	609.	-735.	-2444.	-.0303	-.0551	-.0099	.0557	-.0245	-.1789	1768.	
.3430	1036.	-914.	-217.	7.	-1191.	-2493.	-.0250	-.0558	-.0164	.0440	-.0203	-.1838	1863.	
.3440	1247.	-1146.	-504.	-541.	-1599.	-2439.	-.0189	-.0564	-.0236	.0350	-.0145	-.1854	2000.	
.3450	1423.	-1385.	-765.	-1024.	-1946.	-2280.	-.0121	-.0569	-.0315	.0289	-.0073	-.1837	2135.	
.3460	1558.	-1629.	-997.	-1442.	-2229.	-2024.	-.0047	-.0571	-.0399	.0259	.0013	-.1787	2250.	
.3470	1663.	-1866.	-1202.	-1794.	-2459.	-1689.	.0033	-.0572	-.0488	.0160	.0109	-.1705	2346.	
.3480	1738.	-2092.	-1377.	-2087.	-2641.	-1296.	.0115	-.0571	-.0578	.0288	.0212	-.1594	2431.	
.3490	1784.	-2310.	-1520.	-2333.	-2772.	-874.	.0198	-.0568	-.0667	.0340	.0318	-.1461	2513.	
.3500	1810.	-2510.	-1640.	-2536.	-2858.	-446.	.0278	-.0561	-.0751	.0409	.0424	-.1311	2593.	
.3510	1826.	-2675.	-1746.	-2696.	-2903.	-34.	.0352	-.0552	-.0826	.0489	.0530	-.1151	2671.	
.3520	1827.	-2805.	-1828.	-2819.	-2905.	339.	.0416	-.0539	-.0890	.0572	.0630	-.0988	2738.	
.3530	1809.	-2899.	-1878.	-2901.	-2856.	653.	.0469	-.0522	-.0938	.0654	.0719	-.0828	2779.	
.3540	1777.	-2944.	-1899.	-2932.	-2757.	899.	.0508	-.0503	-.0968	.0728	.0797	-.0676	2780.	
.3550	1734.	-2929.	-1895.	-2903.	-2610.	1072.	.0532	-.0479	-.0979	.0790	.0863	-.0540	2729.	
.3560	1675.	-2858.	-1860.	-2814.	-2415.	1162.	.0539	-.0453	-.0970	.0837	.0911	-.0421	2619.	
.3570	1595.	-2732.	-1785.	-2662.	-2180.	1167.	.0529	-.0424	-.0941	.0868	.0937	-.0323	2449.	
.3580	1496.	-2547.	-1667.	-2440.	-1912.	1091.	.0504	-.0392	-.0893	.0882	.0939	-.0247	2215.	
.3590	1379.	-2307.	-1510.	-2147.	-1615.	941.	.0463	-.0358	-.0827	.0879	.0919	-.0194	1919.	
.3600	1241.	-2018.	-1316.	-1788.	-1293.	728.	.0409	-.0323	-.0746	.0859	.0875	-.0163	1566.	
.3610	1085.	-1586.	-1092.	-1368.	-955.	463.	.0343	-.0287	-.0651	.0824	.0809	-.0154	1167.	

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.3510	1826.	-2675.	-1746.	-2696.	-2903.	-34.	.0352	-.0552	-.0826	.0489	.0530	-.1151	2671.
.3520	1827.	-2805.	-1828.	-2819.	-2905.	339.	.416	-.0539	-.0890	.0572	.0630	-.0988	2738.
.3530	1809.	-2899.	-1878.	-2901.	-2856.	653.	.0469	-.0522	-.0938	.0654	.0719	-.0828	2779.
.3540	1777.	-2944.	-1899.	-2932.	-2757.	899.	.0508	-.0503	-.0968	.0728	.0797	-.0676	2780.
.3550	1734.	-2929.	-1895.	-2903.	-2610.	1072.	.0532	-.0479	-.0979	.0790	.0863	-.0540	2729.
.3560	1675.	-2958.	-1860.	-2814.	-2415.	1162.	.0539	-.0453	-.0970	.0837	.0911	-.0421	2619.
.3570	1595.	-2732.	-1785.	-2662.	-2180.	1167.	.0529	-.0424	-.0941	.0868	.0937	-.0323	2449.
.3580	1496.	-2547.	-1667.	-2440.	-1912.	1091.	.0504	-.0392	-.0893	.0882	.0939	-.0247	2215.
.3590	1379.	-2307.	-1510.	-2147.	-1615.	941.	.0463	-.0358	-.0827	.0879	.0919	-.0194	1919.
.3600	1241.	-2018.	-1316.	-1788.	-1293.	728.	.0409	-.0323	-.0746	.0859	.0875	-.0163	1566.
.3610	1005.	-1586.	-1092.	-1368.	-955.	463.	.0343	-.0287	-.0651	.0824	.0809	-.0154	1167.

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SECTION	4	MEMBER	1	SEQUENCE	21	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)		
.3620	915.	-1319.	-844.	-899.	-610.	160.	.0268	-.0251	-.0545	.0774	.0723	-.0164	740.		
.3630	734.	-932.	-574.	-397.	-266.	-171.	.0185	-.0216	-.0431	.0713	.0619	-.0191	342.		
.3640	545.	-540.	-288.	120.	69.	-518.	.0097	-.0182	-.0311	.0641	.0498	-.0232	361.		
.3650	358.	-153.	1.	632.	380.	-866.	.0006	-.0149	-.0189	.0562	.0365	-.0284	767.		
.3660	178.	217.	281.	1118.	661.	-1203.	-.0085	-.0119	-.0066	.0477	.0223	-.0344	1193.		
.3670	6.	556.	550.	1560.	907.	-1516.	-.0174	-.0092	.0054	.0388	.0075	-.0407	1589.		
.3680	-161.	856.	809.	1948.	1118.	-1789.	-.0258	-.0069	.0169	.0300	-.0076	-.0469	1936.		
.3690	-324.	1113.	1052.	2277.	1299.	-2005.	-.0336	-.0048	.0279	.0213	-.0225	-.0527	2225.		
.3700	-484.	1324.	1270.	2543.	1458.	-2148.	-.0407	-.0032	.0380	.0130	-.0366	-.0578	2450.		
.3710	-640.	1491.	1458.	2745.	1601.	-2207.	-.0470	-.0019	.0472	.0050	-.0494	-.0619	2608.		
.3720	-794.	1609.	1619.	2883.	1732.	-2177.	-.0522	-.0009	.0555	-.0024	-.0607	-.0647	2700.		
.3730	-945.	1674.	1754.	2954.	1854.	-2061.	-.0565	-.0001	.0627	-.0092	-.0703	-.0661	2731.		
.3740	-1084.	1686.	1860.	2956.	1964.	-1868.	-.0596	.0004	.0688	-.0154	-.0779	-.0660	2703.		
.3750	-1204.	1650.	1928.	2885.	2055.	-1608.	-.0616	.0008	.0737	-.0210	-.0835	-.0642	2622.		
.3760	-1299.	1565.	1955.	2737.	2119.	-1298.	-.0625	.0012	.0773	-.0261	-.0869	-.0607	2491.		
.3770	-1365.	1436.	1942.	2510.	2150.	-954.	-.0621	.0016	.0797	-.0307	-.0884	-.0555	2319.		
.3780	-1398.	1271.	1887.	2210.	2142.	-593.	-.0606	.0022	.0807	-.0349	-.0880	-.0485	2113.		
.3790	-1398.	1081.	1787.	1844.	2090.	-227.	-.0579	.0030	.0803	-.0387	-.0856	-.0399	1885.		
.3800	-1367.	878.	1640.	1419.	1990.	132.	-.0540	.0041	.0786	-.0422	-.0816	-.0296	1649.		
.3810	-1305.	674.	1448.	949.	1838.	472.	-.0490	.0055	.0754	-.0454	-.0761	-.0178	1430.		
.3820	-1215.	477.	1218.	452.	1633.	786.	-.0428	.0073	.0709	-.0484	-.0694	-.0046	1259.		
.3830	-1105.	293.	966.	-54.	1377.	1066.	-.0356	.0096	.0650	-.0512	-.0619	.0098	1175.		
.3840	-980.	129.	702.	-551.	1079.	1308.	-.0275	.0124	.0580	-.0539	-.0540	.0252	1201.		
.3850	-845.	-5.	430.	-1015.	745.	1513.	-.0187	.0156	.0500	-.0567	-.0459	.0411	1327.		
.3860	-705.	-104.	161.	-1427.	389.	1685.	-.0094	.0192	.0413	-.0599	-.0377	.0574	1511.		
.3870	-572.	-166.	-90.	-1770.	31.	1826.	.0001	.0232	.0322	-.0638	-.0299	.0734	1714.		
.3880	-455.	-188.	-312.	-2032.	-310.	1940.	.0095	.0277	.0231	-.0685	-.0224	.0890	1905.		
.3890	-356.	-167.	-504.	-2205.	-618.	2029.	.0187	.0324	.0143	-.0744	-.0153	.1036	2063.		
.3900	-275.	-105.	-670.	-2293.	-881.	2097.	.0272	.0374	.0062	-.0816	-.0083	.1170	2177.		
.3910	-209.	-6.	-810.	-2308.	-1092.	2138.	.0349	.0426	-.0010	-.0901	-.0016	.1290	2245.		
.3920	-155.	120.	-925.	-2269.	-1251.	2145.	.0417	.0478	-.0070	-.0998	.0049	.1394	2267.		
.3930	-105.	264.	-1016.	-2198.	-1365.	2109.	.0474	.0531	-.0120	-.1103	.0110	.1482	2250.		
.3940	-54.	413.	-1094.	-2121.	-1442.	2025.	.0521	.0582	-.0157	-.1211	.0169	.1556	2203.		
.3950	7.	563.	-1171.	-2059.	-1493.	1894.	.0558	.0630	-.0184	-.1318	.0227	.1617	2138.		
.3960	81.	710.	-1255.	-2028.	-1528.	1720.	.0586	.0676	-.0203	-.1416	.0284	.1668	2068.		
.3970	164.	842.	-1339.	-2038.	-1555.	1512.	.0606	.0716	-.0215	-.1499	.0339	.1714	2006.		
.3980	248.	954.	-1421.	-2089.	-1575.	1282.	.0622	.0751	-.0223	-.1559	.0392	.1756	1964.		
.3990	329.	1046.	-1503.	-2176.	-1589.	1052.	.0633	.0779	-.0228	-.1594	.0443	.1798	1950.		

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.3880	-455.	-188.	-12.	-202.	-310.	1940.	.0095	.0277	.0231	-.0685	-.0224	.0890	1905.
.3890	-356.	-167.	-504.	-2205.	-618.	2029.	.0187	.0324	.0143	-.0744	-.0153	.1036	2063.
.3900	-275.	-105.	-670.	-2293.	-881.	2097.	.0272	.0374	.0062	-.0816	-.0083	.1170	2177.
.3910	-209.	-5.	-810.	-2308.	-1092.	2138.	.0349	.0426	-.0010	-.0901	-.0016	.1290	2245.
.3920	-155.	120.	-925.	-2269.	-1251.	2145.	.0417	.0478	-.0070	-.0998	.0040	.1394	2267.
.3930	-105.	264.	-1016.	-2198.	-1365.	2109.	.0474	.0531	-.0120	-.1103	.0110	.1482	2250.
.3940	-54.	413.	-1094.	-2121.	-1442.	2025.	.0521	.0582	-.0157	-.1211	.0169	.1556	2203.
.3950	7.	563.	-1171.	-2059.	-1493.	1894.	.0558	.0630	-.0184	-.1318	.0227	.1617	2138.
.3960	61.	710.	-1255.	-2028.	-1528.	1720.	.0586	.0676	-.0203	-.1416	.0284	.1668	2068.
.3970	164.	842.	-1339.	-2038.	-1555.	1512.	.0606	.0716	-.0215	-.1499	.0339	.1714	2006.
.3980	248.	954.	-1421.	-2089.	-1575.	1282.	.0622	.0751	-.0223	-.1559	.0392	.1756	1964.
.3990	329.	1046.	-1503.	-2176.	-1589.	1052.	.0633	.0779	-.0228	-.1594	.0443	.1798	1950.

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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)
4	1	21					.4000	405.	1120.	-1588.	-2286.	-1600.	845.	.0642	.0799	-.0233	-.1602	.0493	.1839	1965.

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)
.0930	-258.	6121.	2699.	9792.	4809.	-8628.	-.0923	.0399	.0829	.1319	-.0185	-.0043	9375.

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)
4	2	804					0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
							.0010	2.	4.	2.	0.	0.	-1.	-.0000	.0000	-.0000	-.0000	.0000	.0000	1.
							.0020	13.	14.	10.	-1.	3.	1.	-.0000	-.0000	-.0001	-.0001	.0002	.0001	2.
							.0030	32.	4.	19.	-12.	7.	20.	.0000	-.0000	-.0002	-.0003	.0006	.0002	16.
							.0040	59.	-41.	24.	-41.	10.	65.	.0002	-.0000	-.0003	-.0006	.0014	.0006	53.
							.0050	99.	-97.	28.	-90.	7.	132.	.0004	-.0001	-.0007	-.0011	.0025	.0013	108.
							.0060	155.	-152.	28.	-166.	-6.	219.	.0008	-.0002	-.0012	-.0019	.0039	.0025	185.
							.0070	223.	-239.	28.	-288.	-19.	351.	.0015	-.0002	-.0021	-.0030	.0060	.0044	306.
							.0080	286.	-398.	37.	-464.	4.	562.	.0026	-.0003	-.0034	-.0043	.0094	.0073	491.
							.0090	339.	-644.	23.	-679.	81.	880.	.0044	-.0005	-.0052	-.0058	.0157	.0117	751.
							.0100	394.	-930.	-50.	-909.	172.	1301.	.0069	-.0006	-.0078	-.0077	.0253	.0176	1076.
							.0110	428.	-1212.	-160.	-1169.	252.	1775.	.0102	-.0006	-.0112	-.0097	.0367	.0250	1443.
							.0120	401.	-1464.	-276.	-1490.	324.	2237.	.0143	-.0006	-.0155	-.0111	.0483	.0339	1825.
							.0130	345.	-1634.	-427.	-1837.	347.	2644.	.0192	-.0004	-.0207	-.0119	.0598	.0439	2183.
							.0140	332.	-1711.	-671.	-2166.	248.	2993.	.0248	-.0000	-.0269	-.0121	.0720	.0545	2496.
							.0150	396.	-1776.	-993.	-2508.	13.	3289.	.0309	.0005	-.0340	-.0119	.0840	.0650	2788.
							.0160	545.	-1912.	-1336.	-2914.	-294.	3537.	.0373	.0011	-.0419	-.0113	.0954	.0749	3095.
							.0170	812.	-2138.	-1653.	-3356.	-705.	3766.	.0438	.0017	-.0504	-.0110	.1059	.0839	3433.
							.0180	1132.	-2473.	-1845.	-3818.	-1238.	3980.	.0505	.0024	-.0590	-.0113	.1128	.0915	3810.
							.0190	1290.	-2865.	-1736.	-4319.	-1647.	4112.	.0569	.0031	-.0671	-.0114	.1139	.0980	4170.
							.0200	1085.	-3065.	-1201.	-4665.	-1612.	4096.	.0627	.0039	-.0741	-.0101	.1114	.1036	4323.
							.0210	601.	-2838.	-629.	-4444.	-1053.	4040.	.0678	.0052	-.0801	-.0082	.1179	.1078	4110.
							.0220	236.	-2210.	-875.	-3494.	-689.	4018.	.0720	.0069	-.0851	-.0082	.1384	.1077	3619.
							.0230	-157.	-1239.	-1425.	-2338.	-551.	3625.	.0742	.0090	-.0881	-.0080	.1536	.1016	2931.

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.0130	345.	-1634.	-427.	-1837.	347.	2644.	.0192	-.0004	-.0207	-.0119	.0598	.0439	2183.
.0140	332.	-1711.	-671.	-2166.	248.	2993.	.0248	-.0000	-.0269	-.0121	.0720	.0545	2496.
.0150	396.	-1776.	-993.	-2508.	13.	3289.	.0309	.0005	-.0340	-.0119	.0840	.0650	2788.
.0160	545.	-1912.	-1736.	-2914.	-294.	3537.	.0373	.0011	-.0419	-.0113	.0954	.0749	3095.
.0170	812.	-2138.	-1653.	-3356.	-705.	3766.	.0438	.0017	-.0504	-.0110	.1059	.0839	3433.
.0180	1132.	-2473.	-1845.	-3818.	-1230.	3980.	.0505	.0024	-.0590	-.0113	.1128	.0915	3810.
.0190	1290.	-2865.	-1736.	-4319.	-1647.	4112.	.0569	.0031	-.0671	-.0114	.1139	.0980	4170.
.0200	1085.	-3065.	-1201.	-4665.	-1612.	4096.	.0627	.0039	-.0741	-.0101	.1114	.1036	4323.
.0210	601.	-2838.	-629.	-4444.	-1053.	4040.	.0678	.0052	-.0801	-.0082	.1179	.1078	4110.
.0220	236.	-2210.	-875.	-3494.	-689.	4018.	.0720	.0069	-.0851	-.0082	.1384	.1077	3619.
.0230	-157.	-1289.	-1425.	-2338.	-551.	3625.	.0742	.0090	-.0881	-.0080	.1536	.1016	2931.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.25.54.

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	4	MEMBER	2	SEQUENCE	804	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)		
.0240	-658.	-163.	-1568.	-1456.	-36.	2563.	.0736	.0110	-.0891	-.0042	.1565	.0908	1987.		
.0250	-702.	812.	-1576.	-570.	51.	1239.	.0707	.0125	-.0888	-.0006	.1523	.0721	920.		
.0260	-148.	1178.	-1589.	248.	-1187.	-160.	.0657	.0132	-.0863	-.0000	.1296	.0421	824.		
.0270	341.	1113.	-1229.	255.	-2466.	-2155.	.0577	.0129	-.0804	.0030	.0808	.0069	2214.		
.0280	633.	1494.	-427.	143.	-2496.	-4554.	.0465	.0119	-.0724	.0102	.0358	-.0283	3502.		
.0290	1500.	2236.	-393.	1400.	-2912.	-6088.	.0339	.0102	-.0642	.0116	.0241	-.0694	4646.		
.0300	2644.	1965.	-1550.	2607.	-4082.	-6667.	.0217	.0071	-.0542	.0082	.0245	-.1143	5599.		
.0310	3010.	1784.	-1841.	3046.	-4347.	-7680.	.0087	.0023	-.0417	.0073	.0006	-.1509	6293.		
.0320	2821.	2332.	-657.	2739.	-4202.	-9036.	-.0048	-.0045	-.0284	.0093	-.0519	-.1791	6966.		
.0330	2630.	2149.	-27.	2577.	-4499.	-9319.	-.0160	-.0133	-.0160	.0130	-.0947	-.2037	7188.		
.0340	2540.	1376.	-791.	2472.	-5017.	-8608.	-.0249	-.0235	-.0044	.0166	-.1154	-.2221	6919.		
.0350	2379.	1743.	-1381.	2330.	-5477.	-8055.	-.0345	-.0347	.0073	.0177	-.1423	-.2320	6751.		
.0360	1763.	2344.	-773.	1868.	-5549.	-7509.	-.0447	-.0470	.0202	.0216	-.1892	-.2365	6418.		
.0370	693.	1256.	58.	1044.	-4800.	-6027.	-.0532	-.0606	.0341	.0345	-.2303	-.2369	5241.		
.0380	91.	-5.	143.	879.	-3875.	-3855.	-.0611	-.0746	.0478	.0482	-.2438	-.2325	3732.		
.0390	44.	301.	446.	1576.	-3205.	-1893.	-.0717	-.0875	.0625	.0536	-.2501	-.2265	2725.		
.0400	-1049.	-24.	2358.	1529.	-1066.	-73.	-.0851	-.0990	.0816	.0603	-.2711	-.2219	1257.		
.0410	-2671.	-2030.	3862.	932.	2223.	2237.	-.0979	-.1089	.1037	.0687	-.2725	-.2170	2217.		
.0420	-2910.	-2586.	3745.	1955.	4322.	4614.	-.1102	-.1163	.1244	.0638	-.2309	-.2109	4460.		
.0430	-2846.	-1563.	4206.	3429.	6135.	6161.	-.1238	-.1204	.1445	.0515	-.1873	-.2048	6300.		
.0440	-4310.	-2239.	5904.	2715.	9587.	6982.	-.1370	-.1212	.1662	.0472	-.1666	-.1986	8201.		
.0450	-5319.	-3490.	6034.	1523.	11962.	7531.	-.1464	-.1185	.1847	.0378	-.1315	-.1918	9583.		
.0460	-4086.	-2400.	4085.	1886.	11034.	7410.	-.1518	-.1122	.1946	.0141	-.0725	-.1833	9049.		
.0470	-3067.	-1168.	3399.	1314.	10081.	6155.	-.1537	-.1029	.1980	.0017	-.0407	-.1702	8011.		
.0480	-3670.	-2348.	4364.	-1537.	10886.	4350.	-.1501	-.0912	.1964	.0138	-.0429	-.1507	7969.		
.0490	-3207.	-2984.	3615.	-3206.	9940.	2699.	-.1393	-.0769	.1852	.0250	-.0220	-.1252	7271.		
.0500	-1046.	-1010.	1282.	-2377.	6638.	1000.	-.1234	-.0597	.1634	.0277	.0263	-.0943	4800.		
.0510	-280.	240.	732.	-2244.	5225.	-910.	-.1041	-.0408	.1368	.0488	.0505	-.0573	3882.		
.0520	-1179.	-479.	1659.	-3027.	5966.	-2439.	-.0806	-.0211	.1074	.0881	.0544	-.0154	4800.		
.0530	-888.	262.	1168.	-1467.	5044.	-3315.	-.0533	-.0005	.0731	.1143	.0829	.0291	4187.		
.0540	228.	2764.	-59.	1728.	3044.	-4027.	-.0255	.0209	.0367	.1252	.1206	.0735	3597.		
.0550	-274.	3649.	292.	3268.	3116.	-4703.	.0001	.0423	.0038	.1406	.1237	.1134	4395.		
.0560	-1315.	3254.	1071.	4126.	3703.	-4907.	.0239	.0628	-.0256	.1514	.1112	.1454	4990.		
.0570	-771.	4341.	484.	6679.	2273.	-4708.	.0465	.0819	-.0541	.1392	.1186	.1721	5717.		
.0580	-31.	5756.	-5.	9161.	986.	-4579.	.0665	.0989	-.0794	.1183	.1260	.1959	6935.		
.0590	-579.	5224.	768.	9628.	1570.	-4378.	.0831	.1134	-.0996	.1051	.1136	.2128	7207.		
.0600	-678.	4363.	909.	9955.	1441.	-3746.	.0974	.1249	-.1182	.0879	.1117	.2213	7235.		
.0610	562.	4889.	-259.	11215.	-364.	-3042.	.1113	.1329	-.1378	.0631	.1348	.2292	7836.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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18.25.54.

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

.0510	-280.	240.	732.	-2244.	5225.	-910.	-1041	-.0408	.1368	.0488	.0505	-.0573	3882.
.0520	-1179.	-479.	1659.	-3027.	5966.	-2439.	-.0806	-.0211	.1074	.0881	.0544	-.0154	4800.
.0530	-888.	262.	1168.	-1467.	5044.	-3315.	-.0533	-.0005	.0731	.1143	.0829	.0291	4187.
.0540	228.	2764.	-59.	1728.	3044.	-4027.	-.0255	.0209	.0367	.1252	.1206	.0735	3597.
.0550	-274.	3649.	292.	3268.	3116.	-4703.	.0001	.0423	.0038	.1406	.1237	.1134	4395.
.0560	-1315.	3254.	1071.	4126.	3703.	-4907.	.0239	.0628	-.0256	.1514	.1112	.1454	4990.
.0570	-771.	4341.	484.	6679.	2273.	-4708.	.0465	.0819	-.0541	.1392	.1186	.1721	5717.
.0580	-31.	5756.	-5.	9161.	986.	-4579.	.0665	.0989	-.0794	.1183	.1260	.1959	6935.
.0590	-579.	5224.	708.	9628.	1570.	-4378.	.0831	.1134	-.0996	.1051	.1136	.2128	7207.
.0600	-678.	4363.	909.	9955.	1441.	-3746.	.0974	.1249	-.1182	.0879	.1117	.2213	7235.
.0610	562.	4889.	-259.	11215.	-364.	-3042.	.1113	.1329	-.1378	.0631	.1348	.2292	7836.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	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)	
.0620	1303.	4978.	-826.	11256.	-1316.	-2693.	.1249	.1363	-.1563	.0514	.1519	.2416	7851.	
.0630	1102.	3546.	-493.	9455.	-1279.	-2420.	.1381	.1351	-.1736	.0591	.1525	.2540	6635.	
.0640	1661.	2528.	-1139.	7734.	-2754.	-1982.	.1508	.1297	-.1920	.0695	.1523	.2627	5693.	
.0650	2948.	2594.	-2823.	6211.	-5430.	-1731.	.1626	.1203	-.2104	.0789	.1817	.2720	5682.	
.0660	3430.	2028.	-3884.	3394.	-7168.	-1760.	.1725	.1067	-.2249	.0980	.1845	.2820	5476.	
.0670	3310.	572.	-4226.	-179.	-8334.	-1612.	.1792	.0893	-.2344	.1225	.1711	.2858	5723.	
.0680	3674.	-374.	-4873.	-2987.	-10018.	-1105.	.1815	.0690	-.2388	.1383	.1630	.2801	7086.	
.0690	4076.	-831.	-5609.	-5237.	-11147.	-415.	.1778	.0468	-.2357	.1424	.1612	.2658	8306.	
.0700	3793.	-1836.	-5741.	-7499.	-10841.	606.	.1674	.0234	-.2228	.1366	.1555	.2402	8894.	
.0710	3413.	-3131.	-5617.	-9158.	-10113.	2174.	.1505	-.0007	-.2010	.1159	.1478	.1994	9312.	
.0720	3402.	-4146.	-5510.	-9990.	-9481.	3936.	.1276	-.0247	-.1720	.0793	.1369	.1466	9655.	
.0730	3169.	-5008.	-4820.	-10757.	-8226.	5452.	.0997	-.0481	-.1361	.0333	.1088	.0863	9840.	
.0740	2441.	-6181.	-3517.	-11564.	-6415.	6843.	.0683	-.0700	-.0947	-.0186	.0633	.0194	10036.	
.0750	1787.	-7162.	-2542.	-11691.	-4916.	8284.	.0356	-.0897	-.0514	-.0768	.0189	-.0522	10211.	
.0760	1412.	-7365.	-2194.	-11037.	-3782.	9461.	.0033	-.1065	-.0092	-.1354	-.0179	-.1225	10125.	
.0770	840.	-7096.	-1617.	-10200.	-2506.	10043.	-.0272	-.1203	.0301	-.1841	-.0607	-.1867	9795.	
.0780	-173.	-6922.	-407.	-9419.	-1035.	10095.	-.0543	-.1309	.0654	-.2164	-.1142	-.2426	9332.	
.0790	-1211.	-6634.	751.	-8319.	332.	9729.	-.0765	-.1382	.0945	-.2324	-.1615	-.2879	8631.	
.0800	-1771.	-5668.	1237.	-6582.	1311.	8894.	-.0941	-.1416	.1160	-.2338	-.1881	-.3215	7510.	
.0810	-1953.	-4301.	1460.	-4551.	1880.	7572.	-.1079	-.1410	.1304	-.2204	-.2028	-.3460	6088.	
.0820	-2185.	-3323.	2034.	-2901.	2340.	5774.	-.1179	-.1368	.1394	-.1913	-.2203	-.3618	4632.	
.0830	-2375.	-2608.	2746.	-1660.	2739.	3461.	-.1241	-.1296	.1442	-.1505	-.2379	-.3667	3179.	
.0840	-2094.	-1430.	3074.	-281.	2693.	753.	-.1277	-.1191	.1452	-.1062	-.2445	-.3620	1894.	
.0850	-1549.	-5.	3120.	1219.	2327.	-2023.	-.1299	-.1055	.1439	-.0624	-.2401	-.3527	2235.	
.0860	-1281.	1003.	3145.	2382.	2274.	-4644.	-.1313	-.0894	.1422	-.0196	-.2294	-.3398	3838.	
.0870	-1133.	1992.	2954.	3483.	2494.	-7089.	-.1313	-.0716	.1405	.0187	-.2089	-.3200	5583.	
.0880	-751.	3473.	2566.	5013.	2597.	-9254.	-.1296	-.0529	.1376	.0507	-.1772	-.2930	7307.	
.0890	-532.	4687.	2542.	6514.	3039.	-10896.	-.1266	-.0343	.1334	.0816	-.1432	-.2614	8798.	
.0900	-756.	5065.	2910.	7549.	4193.	-11881.	-.1216	-.0164	.1278	.1147	-.1093	-.2255	9900.	
.0910	-795.	5431.	2944.	8717.	5220.	-12247.	-.1141	.0001	.1192	.1443	-.0569	-.1837	10726.	
.0920	-365.	6114.	2593.	10203.	5588.	-12050.	-.1035	.0146	.1068	.1695	-.0193	-.1364	11289.	
.0930	-258.	6121.	2699.	11045.	6065.	-11355.	-.0901	.0264	.0913	.1984	.0155	-.0850	11433.	
.0940	-652.	5329.	3369.	10977.	6923.	-10271.	-.0741	.0353	.0736	.2319	.0343	-.0302	11156.	
.0950	-914.	4885.	3720.	10929.	7306.	-8857.	-.0559	.0416	.0535	.2596	.0532	.0269	10685.	
.0960	-971.	4918.	3440.	11095.	7107.	-7094.	-.0366	.0456	.0325	.2771	.0787	.0829	10086.	
.0970	-1394.	4520.	3082.	10720.	7138.	-5041.	-.0175	.0474	.0126	.2884	.1017	.1338	9322.	
.0980	-2044.	3792.	2869.	9795.	7345.	-2916.	.0002	.0472	-.0051	.2923	.1184	.1770	8483.	
.0990	-2341.	3391.	2535.	8846.	7062.	-919.	.0157	.0450	-.0204	.2834	.1322	.2111	7655.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.25.54.

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

.0880	-751.	5473.	2160.	5013.	2597.	-9254.	-1296.	-0529.	.1376.	.0507.	-1772.	-2930.	7307.
.0890	-532.	4687.	2542.	6514.	3039.	-10896.	-1266.	-0343.	.1334.	.0816.	-1432.	-2614.	8798.
.0900	-756.	5065.	2910.	7549.	4193.	-11881.	-1216.	-0164.	.1278.	.1147.	-1093.	-2255.	9900.
.0910	-755.	5431.	2944.	8717.	5220.	-12247.	-1141.	0001.	.1192.	.1443.	-0569.	-1837.	10726.
.0920	-385.	6114.	2593.	10203.	5588.	-12050.	-1035.	.0146.	.1068.	.1695.	-0193.	-1364.	11289.
.0930	-258.	6121.	2699.	11045.	6065.	-11355.	-0901.	.0264.	.0913.	.1984.	.0155.	-0850.	11433.
.0940	-652.	5329.	3369.	10977.	6923.	-10271.	-0741.	.0353.	.0736.	.2319.	.0343.	-0302.	11156.
.0950	-914.	4885.	3720.	10929.	7306.	-8857.	-0559.	.0416.	.0535.	.2596.	.0532.	.0269.	10685.
.0960	-971.	4918.	3440.	11095.	7107.	-7094.	-0366.	.0456.	.0325.	.2771.	.0787.	.0829.	10086.
.0970	-1394.	4520.	3082.	10720.	7138.	-5041.	-0175.	.0474.	.0126.	.2884.	.1017.	.1338.	9322.
.0980	-2044.	3792.	2869.	9795.	7345.	-2916.	0002.	.0472.	-0051.	.2923.	.1184.	.1770.	8483.
.0990	-2341.	3391.	2535.	8846.	7062.	-919.	.0157.	.0450.	-0204.	.2834.	.1322.	.2111.	7655.

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DIS/ADLPIPE

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S/RV PIPING KEWAUNEE GKWOBF 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	4	MEMBER	2	SEQUENCE	804	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)	
.1000	-2384.	2892.	2111.	7609.	6461.	888.	.0283	.0413	-.0322	.2619	.1410	.2338	6755.	
.1010	-2421.	1754.	1739.	5703.	5899.	2496.	.0374	.0365	-.0397	.2311	.1415	.2424	5781.	
.1020	-2115.	553.	1238.	3609.	4979.	3822.	.0425	.0311	-.0436	.1896	.1379	.2365	4880.	
.1030	-1369.	-286.	601.	1708.	3596.	4774.	.0445	.0252	-.0449	.1386	.1329	.2191	4190.	
.1040	-718.	-1263.	161.	-321.	2405.	5364.	.0445	.0190	-.0434	.0847	.1224	.1936	3968.	
.1050	-361.	-2407.	-66.	-2437.	1564.	5659.	.0431	.0128	-.0400	.0312	.1074	.1618	4285.	
.1060	56.	-2980.	-471.	-4040.	563.	5691.	.0406	.0072	-.0362	-.0233	.0959	.1251	4719.	
.1070	521.	-2976.	-1157.	-5107.	-555.	5490.	.0380	.0024	-.0332	-.0766	.0897	.0864	5068.	
.1080	596.	-3034.	-1567.	-6082.	-1194.	5092.	.0363	-.0017	-.0310	-.1223	.0818	.0489	5407.	
.1090	262.	-3200.	-1392.	-6873.	-1179.	4564.	.0360	-.0054	-.0304	-.1581	.0737	.0144	5617.	
.1100	727.	-2932.	-2313.	-7017.	-2166.	4051.	.0374	-.0081	-.0334	-.1917	.0783	-.0180	5653.	
.1110	1537.	-2437.	-3228.	-7122.	-3833.	3307.	.0393	-.0099	-.0392	-.2209	.0737	-.0491	5890.	
.1120	1772.	-2651.	-3022.	-8128.	-5013.	2234.	.0419	-.0111	-.0456	-.2391	.0428	-.0762	6610.	
.1130	2001.	-3245.	-2821.	-9293.	-6163.	1182.	.0462	-.0119	-.0534	-.2507	.0084	-.0967	7559.	
.1140	2965.	-3170.	-3529.	-9479.	-8130.	433.	.0519	-.0118	-.0635	-.2628	-.0086	-.1116	8422.	
.1150	3792.	-2841.	-4124.	-9341.	-9883.	-104.	.0574	-.0107	-.0738	-.2711	-.0224	-.1220	9166.	
.1160	3659.	-3115.	-4039.	-9730.	-10393.	-489.	.0624	-.0090	-.0822	-.2704	-.0441	-.1260	9602.	
.1170	3462.	-3098.	-4172.	-9600.	-10802.	-586.	.0679	-.0068	-.0898	-.2678	-.0579	-.1222	9749.	
.1180	3860.	-2465.	-5187.	-8598.	-11872.	-346.	.0736	-.0044	-.0973	-.2654	-.0573	-.1117	9883.	
.1190	3899.	-1852.	-5204.	-7711.	-12478.	-101.	.0775	-.0022	-.1029	-.2548	-.0709	-.0977	9887.	
.1200	2983.	-2157.	-3946.	-7681.	-11673.	130.	.0795	-.0002	-.1049	-.2313	-.1018	-.0797	9419.	
.1210	2267.	-2685.	-3512.	-7326.	-10639.	713.	.0809	.0017	-.1048	-.2049	-.1129	-.0568	8720.	
.1220	2702.	-1850.	-4063.	-5347.	-10835.	1584.	.0804	.0036	-.1039	-.1851	-.0977	-.0335	8214.	
.1230	2632.	-1442.	-3752.	-3892.	-10104.	2332.	.0768	.0053	-.0994	-.1567	-.0909	-.0107	7465.	
.1240	1452.	-2129.	-2062.	-3698.	-7727.	2778.	.0704	.0066	-.0898	-.1164	-.1029	.0126	6070.	
.1250	789.	-2211.	-1058.	-2880.	-5916.	3178.	.0623	.0077	-.0772	-.0817	-.0997	.0358	4925.	
.1260	926.	-1430.	-1347.	-1236.	-5002.	3575.	.0523	.0091	-.0623	-.0565	-.0724	.0565	4227.	
.1270	381.	-811.	-651.	-201.	-3170.	3606.	.0387	.0108	-.0432	-.0294	-.0545	.0718	3239.	
.1280	-998.	-1081.	692.	-223.	-85.	3350.	.0227	.0127	-.0200	.0018	-.0436	.0833	2264.	
.1290	-1443.	-514.	897.	619.	1831.	3029.	.0062	.0146	.0038	.0218	-.0132	.0913	2422.	
.1300	-1147.	847.	584.	2065.	2738.	2483.	-.0110	.0168	.0276	.0324	.0247	.0948	2854.	
.1310	-1667.	955.	1161.	2016.	4737.	1554.	-.0291	.0189	.0528	.0492	.0411	.0937	3625.	
.1320	-2297.	708.	2205.	1497.	6675.	416.	-.0476	.0210	.0774	.0659	.0431	.0868	4620.	
.1330	-1936.	1233.	2169.	1911.	7154.	-641.	-.0640	.0232	.0987	.0725	.0558	.0775	5010.	
.1340	-1451.	2061.	2066.	2650.	7342.	-1722.	-.0784	.0252	.1174	.0759	.0660	.0683	5388.	
.1350	-1970.	2138.	3063.	2653.	8712.	-2835.	-.0913	.0272	.1346	.0856	.0568	.0587	6429.	
.1360	-2640.	2039.	3772.	2801.	10132.	-3629.	-.1019	.0294	.1488	.0935	.0487	.0479	7496.	
.1370	-2478.	3205.	3541.	4394.	10142.	-4082.	-.1098	.0318	.1587	.0882	.0535	.0360	7940.	

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.1260	526.	-1430.	-47.	-1236.	-5002.	3575.	.527	.0091	-.0623	-.0565	-.0724	.0565	4227.
.1270	381.	-811.	-651.	-201.	-3170.	3606.	.387	.0108	-.0432	-.0294	-.0545	.0718	3239.
.1280	-998.	-1081.	692.	-223.	-85.	3350.	.0227	.0127	-.0200	.0018	-.0436	.0833	2264.
.1290	-1443.	-514.	897.	619.	1831.	3029.	.0062	.0146	.0038	.0218	-.0132	.0913	2422.
.1300	-1147.	347.	584.	2065.	2738.	2453.	-.0110	.0168	.0276	.0324	.0247	.0948	2854.
.1310	-1667.	955.	1161.	2016.	4737.	1554.	-.0291	.0189	.0528	.0492	.0411	.0937	3625.
.1320	-2297.	708.	2205.	1497.	6675.	416.	-.0476	.0210	.0774	.0659	.0431	.0868	4620.
.1330	-1936.	1233.	2169.	1911.	7154.	-641.	-.0640	.0232	.0987	.0725	.0558	.0775	5010.
.1340	-1451.	2061.	2066.	2650.	7342.	-1722.	-.0784	.0252	.1174	.0759	.0560	.0683	5388.
.1350	-1970.	2138.	3063.	2653.	8712.	-2835.	-.0913	.0272	.1346	.0856	.0568	.0587	6429.
.1360	-2640.	2039.	3772.	2601.	10132.	-3629.	-.1019	.0294	.1488	.0935	.0487	.0479	7496.
.1370	-2478.	3205.	3541.	4354.	10142.	-4082.	-.1098	.0318	.1587	.0882	.0535	.0260	7940.

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ENGLISH UNITS

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

SECTION	4	MEMBER	2	SEQUENCE	804	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)		
.1380	-2639.	4178.	3433.	5784.	10403.	-4437.	-.1152	.0342	.1661	.0805	.0507	.0260	8562.		
.1390	-3534.	4276.	4223.	6274.	11404.	-4772.	-.1187	.0363	.1718	.0755	.0262	.0162	9344.		
.1400	-3948.	4514.	4760.	6968.	11512.	-4894.	-.1203	.0384	.1740	.0639	-.0019	.0041	9651.		
.1410	-3643.	4939.	4379.	7899.	10615.	-4796.	-.1196	.0404	.1725	.0440	-.0226	-.0080	9486.		
.1420	-3469.	5109.	4365.	8371.	9795.	-4711.	-.1172	.0422	.1690	.0218	-.0506	-.0193	9247.		
.1430	-3652.	4529.	4729.	8070.	9426.	-4539.	-.1129	.0437	.1634	.0018	-.0836	-.0291	8906.		
.1440	-3307.	4179.	4565.	7999.	8325.	-4150.	-.1063	.0450	.1542	-.0213	-.1050	-.0376	8269.		
.1450	-2548.	4201.	3914.	8040.	6624.	-3694.	-.0973	.0460	.1414	-.0462	-.1159	-.0425	7450.		
.1460	-2273.	3638.	3423.	7143.	5475.	-3319.	-.0859	.0465	.1268	-.0650	-.1282	-.0412	6465.		
.1470	-2160.	3061.	3167.	5916.	4286.	-2960.	-.0724	.0467	.1097	-.0805	-.1400	-.0358	5313.		
.1480	-1600.	2712.	2170.	4798.	2466.	-2455.	-.0566	.0466	.0893	-.0949	-.1366	-.0259	3995.		
.1490	-815.	2467.	878.	3533.	360.	-1942.	-.0389	.0459	.0664	-.1059	-.1261	-.0114	2728.		
.1500	-368.	1873.	149.	1639.	-1386.	-1539.	-.0204	.0447	.0427	-.1104	-.1231	.0073	1780.		
.1510	-63.	347.	-538.	-656.	-2914.	-1067.	-.0011	.0431	.0188	-.1105	-.1200	.0293	2138.		
.1520	667.	276.	-1520.	-2395.	-4867.	-420.	.0180	.0413	-.0055	-.1125	-.1066	.0524	3667.		
.1530	1389.	-314.	-2545.	-3972.	-6494.	394.	.0362	.0394	-.0287	-.1135	-.0865	.0762	5138.		
.1540	1639.	-1142.	-2907.	-5574.	-7273.	1310.	.0526	.0376	-.0491	-.1122	-.0693	.0994	6239.		
.1550	1675.	-1917.	-2999.	-6786.	-7550.	2384.	.0672	.0360	-.0664	-.1125	-.0489	.1217	7029.		
.1560	1847.	-2519.	-3591.	-7449.	-7672.	3642.	.0800	.0349	-.0810	-.1164	-.0168	.1428	7615.		
.1570	2031.	-2660.	-3934.	-7585.	-7725.	4855.	.0899	.0344	-.0926	-.1237	.0136	.1598	7998.		
.1580	1764.	-3112.	-3762.	-7956.	-7153.	5904.	.0972	.0344	-.1004	-.1294	.0332	.1734	8237.		
.1590	1437.	-3700.	-3700.	-8324.	-6468.	6781.	.1026	.0350	-.1052	-.1351	.0489	.1844	8449.		
.1600	1579.	-3550.	-3848.	-7995.	-6485.	7391.	.1060	.0362	-.1083	-.1448	.0635	.1917	8542.		
.1610	1571.	-3335.	-3601.	-7662.	-6302.	7650.	.1073	.0379	-.1093	-.1510	.0694	.1956	8444.		
.1620	1075.	-3791.	-3163.	-7811.	-5288.	7666.	.1071	.0402	-.1079	-.1491	.0711	.1976	8193.		
.1630	1026.	-3528.	-3049.	-7142.	-4863.	7490.	.1057	.0431	-.1061	-.1480	.0800	.1965	7708.		
.1640	1305.	-2707.	-3195.	-5935.	-4854.	7042.	.1032	.0465	-.1039	-.1460	.0931	.1934	7017.		
.1650	1119.	-2429.	-2974.	-5338.	-4190.	6233.	.0996	.0499	-.0999	-.1354	.0965	.1895	6211.		
.1660	853.	-2123.	-2415.	-4826.	-3571.	5125.	.0947	.0534	-.0950	-.1206	.0909	.1831	5320.		
.1670	1012.	-1433.	-2355.	-3953.	-3592.	3877.	.0891	.0569	-.0898	-.1066	.0886	.1749	4449.		
.1680	1262.	-538.	-2392.	-2991.	-3781.	2470.	.0824	.0601	-.0835	-.0923	.0844	.1655	3652.		
.1690	1119.	-129.	-2195.	-2517.	-3440.	992.	.0744	.0627	-.0752	-.0739	.0731	.1550	2950.		
.1700	1004.	329.	-1974.	-1900.	-3162.	-397.	.0653	.0648	-.0657	-.0559	.0602	.1425	2501.		
.1710	1119.	1356.	-1645.	-647.	-3148.	-1645.	.0548	.0660	-.0553	-.0410	.0498	.1284	2434.		
.1720	851.	1820.	-1285.	332.	-2289.	-2650.	.0439	.0660	-.0432	-.0227	.0426	.1156	2371.		
.1730	442.	2169.	-744.	1435.	-1111.	-3361.	.0320	.0649	-.0299	-.0044	.0373	.1017	2575.		
.1740	227.	2731.	-287.	2904.	-163.	-3766.	.0195	.0626	-.0164	.0114	.0356	.0861	3207.		
.1750	-53.	3098.	103.	4211.	981.	-3980.	.0069	.0588	-.0026	.0280	.0338	.0712	3961.		

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INTERNAL FORCES IN THE PIPING
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.1650	1119.	-2429.	-2974.	-5338.	-4190.	6233.	.0996	.0499	-.0999	-.1354	.0965	.1895	6211.
.1660	853.	-2123.	-2415.	-4826.	-3571.	5125.	.0947	.0534	-.0950	-.1206	.0909	.1831	5320.
.1670	1012.	-1433.	-2355.	-3953.	-3592.	3877.	.0891	.0569	-.0898	-.1066	.0886	.1749	4449.
.1680	1262.	-538.	-2392.	-2991.	-3751.	2470.	.0824	.0601	-.0835	-.0923	.0844	.1655	3652.
.1690	1119.	-129.	-2195.	-2517.	-3440.	992.	.0744	.0627	-.0752	-.0739	.0731	.1550	2950.
.1700	1014.	329.	-1974.	-1900.	-3162.	-297.	.0652	.0648	-.0657	-.0559	.0602	.1425	2501.
.1710	1119.	1356.	-1645.	-647.	-3148.	-1645.	.0548	.0660	-.0553	-.0410	.0498	.1284	2434.
.1720	851.	1820.	-1285.	332.	-2289.	-2650.	.0439	.0660	-.0432	-.0227	.0426	.1156	2371.
.1730	442.	2169.	-744.	1435.	-1111.	-3361.	.0320	.0649	-.0299	-.0044	.0373	.1017	2575.
.1740	227.	2731.	-287.	2904.	-163.	-2766.	.0195	.0626	-.0164	.0114	.0356	.0861	3207.
.1750	-53.	3098.	103.	4211.	981.	-2980.	.0069	.0588	-.0026	.0280	.0338	.0712	3961.

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

SECTION	4	MEMBER	2	SEQUENCE	804	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)		
.1760	-494.	3294.	1004.	5267.	2320.	-4090.	-.0056	.0535	.0113	.0461	.0266	.0571	4759.		
.1770	-904.	3214.	1660.	6057.	3545.	-4011.	-.0174	.0468	.0247	.0644	.0194	.0437	5449.		
.1780	-1090.	3328.	2132.	6841.	4282.	-3822.	-.0287	.0389	.0370	.0799	.0125	.0296	6019.		
.1790	-1346.	3258.	2458.	7166.	5006.	-3607.	-.0393	.0299	.0486	.0952	.0045	.0164	6374.		
.1800	-1653.	2982.	2660.	7081.	5652.	-3354.	-.0488	.0201	.0594	.1098	-.0046	.0039	6512.		
.1810	-1762.	2980.	2906.	7062.	5795.	-3074.	-.0575	.0095	.0687	.1207	-.0147	-.0091	6496.		
.1820	-1931.	2659.	2994.	6611.	6024.	-2759.	-.0650	-.0017	.0771	.1312	-.0236	-.0214	6309.		
.1830	-2076.	2259.	3021.	5938.	6220.	-2434.	-.0718	-.0130	.0844	.1394	-.0313	-.0341	6024.		
.1840	-2007.	1926.	2850.	5300.	6062.	-2042.	-.0777	-.0242	.0903	.1430	-.0360	-.0482	5599.		
.1850	-1832.	1478.	2583.	4558.	5713.	-1615.	-.0825	-.0352	.0948	.1434	-.0406	-.0632	5045.		
.1860	-1682.	975.	2548.	3656.	5351.	-1266.	-.0863	-.0459	.0980	.1418	-.0502	-.0783	4451.		
.1870	-1530.	292.	2434.	2566.	4960.	-944.	-.0889	-.0558	.0999	.1384	-.0620	-.0932	3817.		
.1880	-1214.	-142.	2247.	1723.	4178.	-619.	-.0904	-.0648	.1001	.1303	-.0750	-.1088	3075.		
.1890	-1004.	-563.	2045.	925.	3436.	-301.	-.0908	-.0725	.0993	.1195	-.0889	-.1240	2407.		
.1900	-999.	-1027.	1840.	148.	2975.	1.	-.0898	-.0789	.0975	.1074	-.1021	-.1377	2008.		
.1910	-951.	-1084.	1727.	-143.	2427.	302.	-.0879	-.0837	.0943	.0921	-.1128	-.1506	1651.		
.1920	-986.	-1117.	1633.	-217.	2063.	627.	-.0849	-.0869	.0902	.0760	-.1199	-.1623	1461.		
.1930	-1173.	-1219.	1655.	-226.	2022.	910.	-.0811	-.0884	.0854	.0598	-.1244	-.1724	1502.		
.1940	-1285.	-1157.	1670.	-7.	1990.	1118.	-.0765	-.0882	.0796	.0421	-.1242	-.1814	1539.		
.1950	-1214.	-1009.	1570.	378.	1834.	1255.	-.0712	-.0862	.0725	.0235	-.1183	-.1892	1520.		
.1960	-1074.	-1020.	1474.	630.	1685.	1266.	-.0650	-.0826	.0643	.0066	-.1100	-.1949	1483.		
.1970	-877.	-1100.	1453.	677.	1469.	1074.	-.0577	-.0777	.0548	-.0081	-.1021	-.1977	1309.		
.1980	-548.	-1075.	1358.	622.	1017.	688.	-.0494	-.0715	.0438	-.0212	-.0923	-.1968	928.		
.1990	-131.	-1013.	1048.	459.	391.	200.	-.0396	-.0641	.0312	-.0315	-.0778	-.1915	428.		
.2000	289.	-955.	571.	179.	-289.	-328.	-.0284	-.0558	.0167	-.0376	-.0582	-.1811	319.		
.2010	700.	-801.	39.	-149.	-1032.	-885.	-.0157	-.0470	.0005	-.0391	-.0352	-.1652	921.		
.2020	1079.	-595.	-514.	-535.	-1811.	-1436.	-.0016	-.0380	-.0173	-.0356	-.0108	-.1435	1599.		
.2030	1413.	-459.	-1096.	-1008.	-2586.	-1905.	.0137	-.0291	-.0363	-.0271	.0141	-.1165	2269.		
.2040	1751.	-372.	-1673.	-1477.	-3389.	-2225.	.0296	-.0205	-.0562	-.0144	.0388	-.0857	2908.		
.2050	2096.	-318.	-2182.	-1895.	-4182.	-2366.	.0456	-.0125	-.0764	.0014	.0619	-.0522	3482.		
.2060	2392.	-388.	-2601.	-2291.	-4860.	-2303.	.0612	-.0053	-.0959	.0192	.0823	-.0170	3940.		
.2070	2624.	-578.	-2920.	-2620.	-5405.	-2014.	.0759	.0009	-.1139	.0375	.0992	.0186	4270.		
.2080	2779.	-779.	-3089.	-2790.	-5800.	-1504.	.0890	.0061	-.1297	.0547	.1122	.0529	4455.		
.2090	2786.	-975.	-3102.	-2805.	-5925.	-795.	.0999	.0104	-.1425	.0697	.1221	.0847	4451.		
.2100	2642.	-1178.	-3068.	-2662.	-5763.	95.	.1083	.0136	-.1517	.0815	.1306	.1131	4279.		
.2110	2418.	-1304.	-3028.	-2310.	-5434.	1105.	.1141	.0157	-.1573	.0893	.1381	.1369	4049.		
.2120	2105.	-1361.	-2876.	-1841.	-4931.	2126.	.1170	.0169	-.1592	.0937	.1426	.1554	3826.		
.2130	1692.	-1455.	-2575.	-1401.	-4205.	3067.	.1171	.0170	-.1573	.0960	.1434	.1680	3633.		

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PRESSURE

ENGLISH UNITS

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

.2030	1413.	-459.	-1096.	-1008.	-2586.	-1905.	.0137	-.0291	-.0363	-.0271	.0141	-.1165	2269.
.2040	1751.	-372.	-1673.	-1477.	-3389.	-2225.	.0296	-.0205	-.0562	-.0144	.0388	-.0857	2908.
.2050	2056.	-318.	-2182.	-1895.	-4182.	-2366.	.0456	-.0125	-.0764	.0014	.0619	-.0522	3482.
.2060	2392.	-388.	-2601.	-2291.	-4860.	-2303.	.0612	-.0053	-.0959	.0192	.0823	-.0170	3940.
.2070	2624.	-578.	-2920.	-2620.	-5405.	-2014.	.0759	.0009	-.1139	.0375	.0992	.0186	4270.
.2080	2779.	-779.	-3089.	-2790.	-5800.	-1504.	.0890	.0061	-.1297	.0547	.1122	.0529	4455.
.2090	2786.	-975.	-3102.	-2805.	-5925.	-795.	.0999	.0104	-.1425	.0697	.1221	.0847	4451.
.2100	2642.	-1178.	-3068.	-2662.	-5763.	95.	.1083	.0136	-.1517	.0815	.1306	.1131	4279.
.2110	2418.	-1304.	-3028.	-2310.	-5434.	1105.	.1141	.0157	-.1573	.0893	.1381	.1369	4049.
.2120	2105.	-1361.	-2876.	-1841.	-4931.	2126.	.1170	.0169	-.1592	.0937	.1426	.1554	3826.
.2130	1692.	-1455.	-2575.	-1401.	-4205.	3067.	.1171	.0170	-.1573	.0960	.1434	.1680	3633.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.25.55.

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	4	MEMBER	2	SEQUENCE	804	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)		
.2140	1309.	-1558.	-2268.	-973.	-3446.	3876.	.1144	.0161	-.1524	.0963	.1422	.1743	3557.		
.2150	1063.	-1597.	-2027.	-542.	-2839.	4478.	.1093	.0142	-.1447	.0948	.1392	.1740	3593.		
.2160	880.	-1634.	-1743.	-258.	-2307.	4779.	.1018	.0115	-.1347	.0930	.1322	.1675	3581.		
.2170	711.	-1715.	-1393.	-185.	-1790.	4749.	.0922	.0079	-.1224	.0921	.1208	.1554	3423.		
.2180	626.	-1722.	-1094.	-169.	-1409.	4424.	.0809	.0037	-.1085	.0914	.1077	.1379	3132.		
.2190	605.	-1580.	-874.	-136.	-1155.	3833.	.0681	-.0009	-.0928	.0903	.0942	.1158	2700.		
.2200	525.	-1354.	-661.	-160.	-855.	2996.	.0537	-.0059	-.0754	.0890	.0792	.0896	2103.		
.2210	384.	-1051.	-453.	-199.	-504.	1981.	.0379	-.0111	-.0563	.0866	.0530	.0597	1384.		
.2220	259.	-631.	-280.	-129.	-186.	878.	.0210	-.0163	-.0358	.0818	.0464	.0266	611.		
.2230	119.	-177.	-76.	14.	187.	-251.	.0030	-.0215	-.0139	.0745	.0288	-.0091	211.		
.2240	-68.	205.	211.	165.	691.	-1350.	-.0157	-.0265	.0092	.0646	.0095	-.0464	1028.		
.2250	-218.	538.	516.	386.	1196.	-2338.	-.0348	-.0311	.0327	.0515	-.0110	-.0848	1789.		
.2260	-295.	830.	815.	703.	1636.	-3160.	-.0537	-.0354	.0560	.0353	-.0322	-.1230	2445.		
.2270	-390.	1009.	1186.	1028.	2127.	-3801.	-.0717	-.0393	.0784	.0179	-.0547	-.1588	3016.		
.2280	-539.	1084.	1631.	1355.	2694.	-4234.	-.0880	-.0427	.0990	.0006	-.0775	-.1905	3504.		
.2290	-689.	1149.	2035.	1767.	3206.	-4424.	-.1019	-.0455	.1168	-.0158	-.0981	-.2166	3871.		
.2300	-849.	1222.	2335.	2231.	3631.	-4382.	-.1127	-.0475	.1310	-.0299	-.1155	-.2357	4120.		
.2310	-1073.	1271.	2571.	2637.	4007.	-4159.	-.1200	-.0489	.1410	-.0401	-.1303	-.2466	4279.		
.2320	-1331.	1310.	2763.	2966.	4277.	-3799.	-.1235	-.0495	.1464	-.0451	-.1429	-.2485	4343.		
.2330	-1563.	1338.	2882.	3220.	4376.	-3325.	-.1231	-.0494	.1471	-.0448	-.1522	-.2416	4294.		
.2340	-1757.	1309.	2922.	3351.	4337.	-2775.	-.1190	-.0484	.1432	-.0389	-.1578	-.2266	4141.		
.2350	-1899.	1225.	2896.	3349.	4190.	-2189.	-.1118	-.0466	.1353	-.0283	-.1591	-.2047	3905.		
.2360	-1955.	1112.	2805.	3265.	3937.	-1585.	-.1022	-.0439	.1242	-.0144	-.1552	-.1773	3609.		
.2370	-1929.	953.	2655.	3119.	3637.	-979.	-.0906	-.0403	.1106	.0017	-.1455	-.1458	3296.		
.2380	-1853.	747.	2481.	2902.	3369.	-403.	-.0779	-.0358	.0956	.0186	-.1304	-.1117	3010.		
.2390	-1734.	544.	2291.	2642.	3137.	111.	-.0647	-.0303	.0799	.0347	-.1107	-.0767	2765.		
.2400	-1576.	374.	2055.	2362.	2923.	549.	-.0514	-.0241	.0643	.0484	-.0867	-.0423	2560.		
.2410	-1391.	227.	1746.	2062.	2735.	904.	-.0385	-.0172	.0493	.0589	-.0591	-.0095	2388.		
.2420	-1178.	121.	1388.	1744.	2550.	1154.	-.0262	-.0097	.0349	.0658	-.0295	.0209	2223.		
.2430	-937.	62.	1025.	1394.	2329.	1280.	-.0145	-.0019	.0214	.0692	-.0003	.0483	2023.		
.2440	-686.	9.	670.	982.	2059.	1281.	-.0035	.0060	.0087	.0692	.0267	.0722	1764.		
.2450	-424.	-38.	309.	526.	1724.	1177.	.0069	.0138	-.0033	.0662	.0508	.0925	1451.		
.2460	-136.	-42.	-66.	88.	1300.	995.	.0168	.0213	-.0147	.0601	.0721	.1090	1105.		
.2470	160.	-16.	-430.	-317.	806.	766.	.0262	.0284	-.0257	.0516	.0900	.1217	779.		
.2480	431.	-2.	-770.	-718.	267.	512.	.0350	.0348	-.0361	.0409	.1032	.1309	621.		
.2490	672.	17.	-1079.	-1102.	-332.	248.	.0432	.0405	-.0457	.0280	.1109	.1365	794.		
.2500	873.	74.	-1338.	-1439.	-977.	-5.	.0507	.0454	-.0545	.0126	.1130	.1387	1173.		
.2510	1015.	131.	-1554.	-1727.	-1607.	-207.	.0573	.0494	-.0620	-.0052	.1105	.1376	1596.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.25.55.

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

.2410	-1351.	227.	1746.	2062.	2735.	904.	-.385	-.0172	.0493	.0589	-.0591	-.0095	2388.
.2420	-1178.	121.	1380.	1744.	2550.	1154.	-.262	-.0097	.0349	.0658	-.0295	.0209	2223.
.2430	-937.	62.	1025.	1394.	2329.	1280.	-.0145	-.0019	.0214	.0692	-.0003	.0483	2023.
.2440	-786.	9.	670.	982.	2059.	1281.	-.0035	.0060	.0087	.0692	.0267	.0722	1764.
.2450	-424.	-38.	309.	526.	1724.	1177.	.0069	.0138	-.0033	.0662	.0508	.0925	1451.
.2460	-136.	-42.	-66.	88.	1200.	595.	.0168	.0213	-.0147	.0601	.0721	.1090	1105.
.2470	160.	-16.	-430.	-317.	806.	766.	.0262	.0284	-.0257	.0516	.0900	.1217	779.
.2480	431.	-2.	-770.	-718.	267.	512.	.0350	.0348	-.0361	.0409	.1032	.1309	621.
.2490	672.	17.	-1079.	-1102.	-332.	248.	.0432	.0405	-.0457	.0280	.1109	.1365	794.
.2500	873.	74.	-1336.	-1479.	-977.	-5.	.0507	.0454	-.0545	.0126	.130	.1387	1173.
.2510	1015.	131.	-1554.	-1727.	-1607.	-207.	.0573	.0494	-.0620	-.0052	.1105	.1376	1596.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.25.55.

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	4	MEMBER	2	SEQUENCE	804	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)		
.2520	1111.	171.	-1763.	-1953.	-2209.	-322.	.0627	.0525	-.0681	-.0252	.1044	.1333	1999.		
.2530	1192.	219.	-1961.	-2102.	-2811.	-351.	.0668	.0547	-.0726	-.0474	.0949	.1259	2377.		
.2540	1231.	245.	-2076.	-2221.	-3353.	-312.	.0695	.0560	-.0752	-.0710	.0814	.1160	2719.		
.2550	1203.	192.	-2078.	-2342.	-3750.	-196.	.0706	.0563	-.0759	-.0948	.0650	.1042	2983.		
.2560	1160.	90.	-2038.	-2405.	-4022.	18.	.0704	.0557	-.0749	-.1180	.0488	.0911	3159.		
.2570	1147.	-5.	-2003.	-2373.	-4214.	319.	.0689	.0543	-.0725	-.1398	.0347	.0772	3267.		
.2580	1116.	-133.	-1930.	-2341.	-4276.	661.	.0663	.0521	-.0689	-.1587	.0223	.0635	3316.		
.2590	1039.	-334.	-1798.	-2383.	-4193.	1004.	.0628	.0491	-.0643	-.1735	.0113	.0508	3320.		
.2600	977.	-538.	-1670.	-2466.	-4064.	1326.	.0589	.0455	-.0592	-.1835	.0028	.0399	3326.		
.2610	955.	-707.	-1588.	-2593.	-3949.	1600.	.0547	.0414	-.0539	-.1886	-.0026	.0310	3362.		
.2620	933.	-885.	-1548.	-2848.	-3835.	1795.	.0504	.0369	-.0487	-.1885	-.0060	.0245	3439.		
.2630	915.	-1069.	-1556.	-3246.	-3764.	1893.	.0460	.0320	-.0434	-.1837	-.0086	.0201	3585.		
.2640	935.	-1209.	-1616.	-3723.	-3787.	1897.	.0415	.0271	-.0381	-.1754	-.0106	.0179	3801.		
.2650	962.	-1328.	-1683.	-4255.	-3831.	1826.	.0369	.0221	-.0326	-.1639	-.0124	.0172	4051.		
.2660	958.	-1455.	-1726.	-4807.	-3819.	1711.	.0320	.0174	-.0267	-.1504	-.0144	.0177	4296.		
.2670	940.	-1544.	-1759.	-5270.	-3761.	1593.	.0266	.0129	-.0201	-.1365	-.0162	.0185	4494.		
.2680	906.	-1571.	-1769.	-5560.	-3630.	1500.	.0206	.0090	-.0126	-.1233	-.0180	.0190	4588.		
.2690	809.	-1574.	-1685.	-5657.	-3325.	1452.	.0138	.0057	-.0040	-.1110	-.0205	.0190	4530.		
.2700	638.	-1563.	-1474.	-5526.	-2819.	1463.	.0064	.0030	.0055	-.1000	-.0240	.0182	4296.		
.2710	421.	-1496.	-1165.	-5122.	-2171.	1532.	-.0015	.0011	.0158	-.0907	-.0285	.0164	3889.		
.2720	159.	-1363.	-784.	-4469.	-1410.	1632.	-.0099	-.0001	.0268	-.0831	-.0343	.0137	3344.		
.2730	-166.	-1180.	-325.	-3626.	-538.	1728.	-.0186	-.0004	.0382	-.0768	-.0419	.0102	2731.		
.2740	-539.	-933.	208.	-2613.	407.	1793.	-.0272	.0001	.0495	-.0712	-.0507	.0063	2154.		
.2750	-932.	-610.	773.	-1462.	1381.	1799.	-.0354	.0014	.0605	-.0659	-.0595	.0022	1819.		
.2760	-1330.	-222.	1318.	-251.	2347.	1709.	-.0431	.0034	.0707	-.0608	-.0674	-.0019	1964.		
.2770	-1707.	225.	1809.	946.	3247.	1491.	-.0502	.0061	.0800	-.0558	-.0740	-.0058	2491.		
.2780	-2024.	716.	2225.	2063.	4020.	1125.	-.0565	.0094	.0882	-.0508	-.0788	-.0096	3139.		
.2790	-2256.	1208.	2552.	3025.	4642.	602.	-.0618	.0133	.0950	-.0459	-.0815	-.0131	3757.		
.2800	-2386.	1672.	2778.	3773.	5084.	-73.	-.0661	.0175	.1004	-.0412	-.0822	-.0162	4267.		
.2810	-2400.	2100.	2891.	4277.	5309.	-879.	-.0694	.0221	.1044	-.0371	-.0812	-.0187	4633.		
.2820	-2305.	2480.	2885.	4532.	5321.	-1771.	-.0716	.0268	.1069	-.0340	-.0783	-.0207	4860.		
.2830	-2127.	2790.	2772.	4557.	5169.	-2684.	-.0727	.0316	.1080	-.0320	-.0736	-.0217	4985.		
.2840	-1897.	3035.	2580.	4411.	4905.	-3548.	-.0725	.0362	.1075	-.0309	-.0667	-.0213	5049.		
.2850	-1647.	3221.	2337.	4154.	4580.	-4289.	-.0710	.0405	.1054	-.0307	-.0578	-.0190	5072.		
.2860	-1412.	3336.	2066.	3828.	4245.	-4842.	-.0680	.0445	.1017	-.0311	-.0472	-.0146	5050.		
.2870	-1203.	3372.	1777.	3480.	3923.	-5153.	-.0636	.0479	.0963	-.0320	-.0350	-.0079	4955.		
.2880	-1022.	3332.	1493.	3145.	3612.	-5189.	-.0577	.0508	.0891	-.0331	-.0221	.0013	4760.		
.2890	-878.	3197.	1241.	2824.	3320.	-4947.	-.0502	.0529	.0800	-.0340	-.0094	.0131	4444.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.25.55.

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

.2790	-2256.	1208.	2552.	3025.	4642.	602.	-1618	.0133	.0950	-.0459	-.0815	-.0131	3757.
.2800	-2386.	1672.	2770.	3773.	5084.	-73.	-.661	.0175	.1004	-.0412	-.0822	-.0162	4267.
.2810	-2400.	2100.	2891.	4277.	5309.	-879.	-.0694	.0221	.1044	-.0371	-.0812	-.0187	4633.
.2820	-2305.	2480.	2885.	4502.	5321.	-1771.	-.0716	.0268	.1069	-.0340	-.0783	-.0207	4860.
.2830	-2127.	2790.	2772.	4557.	5169.	-2684.	-.0727	.0316	.1080	-.0320	-.0736	-.0217	4985.
.2840	-1897.	3035.	2580.	4411.	4905.	-3540.	-.0725	.0362	.1075	-.0309	-.0567	-.0213	5049.
.2850	-1647.	3221.	2337.	4154.	4580.	-4289.	-.0710	.0405	.1054	-.0307	-.0578	-.0190	5072.
.2860	-1412.	3336.	2066.	3828.	4245.	-4842.	-.0680	.0445	.1017	-.0311	-.0472	-.0146	5050.
.2870	-1203.	3372.	1777.	3480.	3923.	-5153.	-.0636	.0479	.0963	-.0320	-.0350	-.0079	4955.
.2880	-1022.	3332.	1493.	3145.	3612.	-5189.	-.0577	.0508	.0891	-.0331	-.0221	.0013	4760.
.2890	-870.	3197.	1241.	2824.	3320.	-4947.	-.0502	.0529	.0800	-.0340	-.0094	.0131	4444.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	EL								STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2900	-770.	2954.	1028.	2497.	3033.	-4440.	-.0412	.0542	.0691	-.0344	.0021	.0271	3996.	
.2910	-679.	2620.	839.	2161.	2710.	-3696.	-.0309	.0548	.0566	-.0345	.0118	.0430	3415.	
.2920	-597.	2214.	659.	1811.	2330.	-2758.	-.0196	.0546	.0427	-.0344	.0198	.0603	2722.	
.2930	-532.	1748.	477.	1426.	1902.	-1680.	-.0074	.0538	.0277	-.0343	.0261	.0785	1962.	
.2940	-474.	1247.	277.	1001.	1420.	-522.	.0054	.0524	.0120	-.0342	.0310	.0969	1223.	
.2950	-406.	743.	46.	533.	865.	653.	.0182	.0505	-.0039	-.0346	.0348	.1146	814.	
.2960	-328.	246.	-217.	3.	246.	1777.	.0307	.0483	-.0195	-.0355	.0375	.1308	1209.	
.2970	-234.	-237.	-512.	-598.	-423.	2791.	.0426	.0457	-.0344	-.0372	.0393	.1449	1945.	
.2980	-98.	-685.	-848.	-1250.	-1150.	3649.	.0534	.0430	-.0482	-.0398	.0406	.1561	2713.	
.2990	93.	-1090.	-1211.	-1941.	-1931.	4316.	.0628	.0402	-.0605	-.0433	.0413	.1637	3446.	
.3000	322.	-1463.	-1574.	-2671.	-2728.	4765.	.0706	.0374	-.0709	-.0475	.0409	.1675	4115.	
.3010	578.	-1788.	-1918.	-3407.	-3507.	4985.	.0765	.0347	-.0793	-.0522	.0395	.1674	4707.	
.3020	855.	-2035.	-2241.	-4083.	-4246.	4993.	.0806	.0321	-.0855	-.0575	.0375	.1634	5205.	
.3030	1126.	-2197.	-2523.	-4650.	-4890.	4816.	.0827	.0296	-.0894	-.0628	.0354	.1557	5588.	
.3040	1355.	-2277.	-2741.	-5079.	-5385.	4486.	.0829	.0273	-.0910	-.0679	.0330	.1449	5834.	
.3050	1527.	-2257.	-2888.	-5329.	-5712.	4036.	.0813	.0252	-.0904	-.0725	.0305	.1315	5926.	
.3060	1637.	-2133.	-2957.	-5371.	-5865.	3502.	.0781	.0233	-.0878	-.0764	.0280	.1161	5857.	
.3070	1675.	-1934.	-2934.	-5212.	-5827.	2920.	.0735	.0215	-.0834	-.0791	.0251	.0994	5626.	
.3080	1642.	-1685.	-2814.	-4869.	-5604.	2323.	.0677	.0198	-.0775	-.0802	.0219	.0818	5243.	
.3090	1559.	-1393.	-2614.	-4352.	-5232.	1733.	.0608	.0183	-.0703	-.0797	.0183	.0640	4734.	
.3100	1439.	-1073.	-2346.	-3691.	-4741.	1169.	.0532	.0168	-.0621	-.0773	.0144	.0466	4126.	
.3110	1283.	-757.	-2012.	-2930.	-4142.	647.	.0450	.0152	-.0534	-.0726	.0101	.0302	3447.	
.3120	1098.	-455.	-1622.	-2103.	-3455.	177.	.0366	.0136	-.0443	-.0652	.0058	.0153	2729.	
.3130	896.	-159.	-1205.	-1231.	-2715.	-234.	.0282	.0118	-.0351	-.0552	.0019	.0023	2015.	
.3140	680.	127.	-790.	-351.	-1945.	-587.	.0200	.0099	-.0261	-.0425	-.0012	-.0083	1390.	
.3150	450.	397.	-387.	500.	-1163.	-884.	.0121	.0078	-.0175	-.0272	-.0033	-.0165	1041.	
.3160	214.	646.	-9.	1293.	-394.	-1130.	.0046	.0055	-.0094	-.0094	-.0045	-.0221	1187.	
.3170	-14.	871.	334.	2003.	338.	-1333.	-.0024	.0029	-.0019	.0105	-.0046	-.0254	1637.	
.3180	-227.	1063.	638.	2608.	1018.	-1499.	-.0088	.0000	.0050	.0319	-.0040	-.0267	2140.	
.3190	-418.	1211.	900.	3095.	1634.	-1632.	-.0147	-.0031	.0113	.0543	-.0027	-.0264	2603.	
.3200	-578.	1311.	1121.	3471.	2183.	-1729.	-.0202	-.0065	.0170	.0770	-.0007	-.0250	2999.	
.3210	-704.	1365.	1304.	3749.	2669.	-1788.	-.0252	-.0101	.0222	.0993	.0018	-.0231	3328.	
.3220	-800.	1374.	1460.	3945.	3105.	-1807.	-.0299	-.0140	.0269	.1206	.0047	-.0211	3597.	
.3230	-880.	1342.	1603.	4078.	3503.	-1787.	-.0342	-.0180	.0311	.1404	.0078	-.0195	3819.	
.3240	-950.	1279.	1734.	4172.	3873.	-1726.	-.0381	-.0221	.0349	.1582	.0109	-.0186	4010.	
.3250	-1011.	1201.	1843.	4251.	4211.	-1625.	-.0416	-.0263	.0382	.1736	.0140	-.0188	4179.	
.3260	-1066.	1118.	1936.	4329.	4512.	-1492.	-.0447	-.0306	.0409	.1864	.0170	-.0203	4333.	
.3270	-1121.	1029.	2027.	4404.	4773.	-1343.	-.0472	-.0348	.0429	.1965	.0191	-.0232	4470.	

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CONDITION 24

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.3170	-14.	871.	334.	2003.	338.	-1333.	-.0024	.0029	-.0019	.0105	-.0046	-.0254	1637.
.3180	-227.	1063.	638.	2608.	1018.	-1499.	-.0088	.0000	.0050	.0319	-.0040	-.0267	2140.
.3190	-413.	1211.	900.	3095.	1634.	-1632.	-.0147	-.0031	.0113	.0543	-.0027	-.0264	2603.
.3200	-578.	1311.	1121.	3471.	2183.	-1729.	-.0202	-.0065	.0170	.0770	-.0007	-.0250	2999.
.3210	-704.	1365.	1304.	3749.	2669.	-1788.	-.0252	-.0101	.0222	.0993	.0018	-.0231	3328.
.3220	-800.	1374.	1460.	3945.	3105.	-1807.	-.0299	-.0140	.0269	.1206	.0047	-.0211	3597.
.3230	-880.	1342.	1603.	4078.	3503.	-1787.	-.0342	-.0180	.0311	.1404	.0078	-.0195	3819.
.3240	-950.	1279.	1734.	4172.	3873.	-1726.	-.0381	-.0221	.0349	.1582	.0109	-.0186	4010.
.3250	-1011.	1201.	1843.	4251.	4211.	-1625.	-.0416	-.0263	.0382	.1736	.0140	-.0188	4179.
.3260	-1066.	1118.	1936.	4329.	4512.	-1492.	-.0447	-.0306	.0409	.1864	.0170	-.0203	4333.
.3270	-1121.	1029.	2027.	4404.	4773.	-1343.	-.0472	-.0348	.0429	.1965	.0191	-.0232	4470.

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LOADS

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ENGLISH UNITS

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

SECTION	4	MEMBER	2	SEQUENCE	804	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)		
.3280	-1174.	933.	2113.	4465.	4979.	-1192.	-.0492	-.0390	.0442	.2040	.0200	-.0277	4579.		
.3290	-1211.	839.	2180.	4513.	5105.	-1056.	-.0506	-.0432	.0447	.2087	.0198	-.0338	4647.		
.3300	-1222.	751.	2223.	4541.	5134.	-946.	-.0514	-.0472	.0444	.2108	.0182	-.0417	4663.		
.3310	-1208.	660.	2243.	4531.	5065.	-875.	-.0517	-.0511	.0433	.2101	.0154	-.0512	4618.		
.3320	-1165.	565.	2236.	4471.	4896.	-853.	-.0513	-.0549	.0414	.2068	.0114	-.0624	4506.		
.3330	-1087.	474.	2195.	4356.	4621.	-884.	-.0504	-.0584	.0388	.2007	.0065	-.0750	4322.		
.3340	-977.	386.	2115.	4178.	4249.	-966.	-.0491	-.0616	.0357	.1920	.0011	-.0888	4069.		
.3350	-837.	295.	1987.	3929.	3793.	-1089.	-.0474	-.0645	.0320	.1807	-.0044	-.1037	3754.		
.3360	-663.	203.	1808.	3611.	3254.	-1245.	-.0452	-.0672	.0280	.1669	-.0097	-.1191	3382.		
.3370	-458.	106.	1584.	3218.	2638.	-1423.	-.0427	-.0694	.0236	.1511	-.0147	-.1347	2965.		
.3380	-232.	-9.	1330.	2744.	1968.	-1607.	-.0398	-.0714	.0189	.1337	-.0194	-.1498	2521.		
.3390	12.	-149.	1045.	2200.	1258.	-1776.	-.0365	-.0730	.0138	.1153	-.0235	-.1639	2086.		
.3400	277.	-306.	731.	1614.	517.	-1905.	-.0327	-.0743	.0082	.0966	-.0267	-.1763	1719.		
.3410	546.	-484.	405.	1004.	-227.	-1974.	-.0283	-.0752	.0021	.0785	-.0286	-.1863	1501.		
.3420	801.	-689.	87.	382.	-938.	-1967.	-.0233	-.0759	-.0047	.0617	-.0293	-.1935	1491.		
.3430	1036.	-914.	-217.	-221.	-1599.	-1867.	-.0176	-.0762	-.0121	.0471	-.0285	-.1971	1663.		
.3440	1247.	-1146.	-504.	-776.	-2195.	-1665.	-.0112	-.0763	-.0202	.0352	-.0257	-.1970	1929.		
.3450	1423.	-1385.	-765.	-1274.	-2709.	-1363.	-.0041	-.0760	-.0291	.0263	-.0211	-.1930	2217.		
.3460	1558.	-1629.	-997.	-1714.	-3134.	-971.	.0035	-.0755	-.0384	.0209	-.0148	-.1851	2495.		
.3470	1663.	-1866.	-1202.	-2092.	-3484.	-509.	.0116	-.0746	-.0482	.0186	-.0070	-.1737	2761.		
.3480	1738.	-2092.	-1377.	-2415.	-3766.	-2.	.0199	-.0735	-.0580	.0193	.0017	-.1593	3015.		
.3490	1784.	-2310.	-1520.	-2696.	-3973.	526.	.0281	-.0721	-.0677	.0226	.0110	-.1425	3256.		
.3500	1810.	-2510.	-1640.	-2932.	-4119.	1046.	.0359	-.0703	-.0767	.0278	.0208	-.1240	3480.		
.3510	1826.	-2675.	-1746.	-3119.	-4216.	1535.	.0431	-.0683	-.0849	.0343	.0308	-.1048	3683.		
.3520	1827.	-2805.	-1828.	-3263.	-4254.	1964.	.0494	-.0659	-.0918	.0414	.0406	-.0857	3848.		
.3530	1809.	-2899.	-1878.	-3363.	-4221.	2315.	.0545	-.0632	-.0971	.0487	.0497	-.0674	3958.		
.3540	1777.	-2944.	-1899.	-3403.	-4121.	2574.	.0581	-.0602	-.1005	.0555	.0581	-.0507	3998.		
.3550	1734.	-2929.	-1895.	-3370.	-3959.	2731.	.0603	-.0570	-.1020	.0616	.0655	-.0361	3959.		
.3560	1675.	-2858.	-1860.	-3266.	-3732.	2777.	.0607	-.0535	-.1013	.0666	.0716	-.0240	3831.		
.3570	1595.	-2732.	-1785.	-3093.	-3439.	2710.	.0595	-.0499	-.0986	.0704	.0759	-.0147	3613.		
.3580	1496.	-2547.	-1667.	-2841.	-3090.	2531.	.0568	-.0462	-.0938	.0731	.0781	-.0084	3304.		
.3590	1379.	-2307.	-1510.	-2511.	-2690.	2251.	.0524	-.0424	-.0871	.0745	.0783	-.0051	2907.		
.3600	1241.	-2018.	-1316.	-2107.	-2241.	1881.	.0467	-.0387	-.0786	.0747	.0763	-.0045	2430.		
.3610	1085.	-1686.	-1092.	-1637.	-1758.	1438.	.0398	-.0349	-.0687	.0738	.0724	-.0067	1887.		
.3620	915.	-1319.	-844.	-1111.	-1254.	937.	.0319	-.0313	-.0576	.0718	.0665	-.0112	1294.		
.3630	734.	-932.	-574.	-552.	-737.	397.	.0232	-.0278	-.0455	.0688	.0588	-.0176	676.		
.3640	545.	-540.	-288.	21.	-221.	-162.	.0140	-.0245	-.0327	.0650	.0494	-.0255	186.		
.3650	358.	-153.	1.	586.	273.	-721.	.0045	-.0215	-.0196	.0603	.0387	-.0345	652.		

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

.3540	1777.	-2944.	-1899.	-3403.	-4121.	2574.	.0581	-.0602	-.1005	.0555	.0581	-.0507	3998.
.3550	1734.	-2929.	-1895.	-3370.	-3959.	2731.	.0603	-.0570	-.1020	.0616	.0655	-.0361	3959.
.3560	1675.	-2858.	-1860.	-3266.	-3732.	2777.	.0607	-.0535	-.1013	.0666	.0716	-.0240	3831.
.3570	1595.	-2732.	-1785.	-3093.	-3439.	2710.	.0595	-.0499	-.0986	.0704	.0759	-.0147	3613.
.3580	1496.	-2547.	-1667.	-2841.	-3090.	2531.	.0568	-.0462	-.0938	.0731	.0781	-.0084	3304.
.3590	1379.	-2307.	-1510.	-2511.	-2690.	2251.	.0524	-.0424	-.0871	.0745	.0783	-.0051	2907.
.3600	1241.	-2018.	-1316.	-2107.	-2241.	1881.	.0467	-.0387	-.0786	.0747	.0763	-.0045	2430.
.3610	1085.	-1686.	-1092.	-1637.	-1758.	1438.	.0398	-.0349	-.0687	.0738	.0724	-.0067	1887.
.3620	915.	-1319.	-844.	-1111.	-1254.	937.	.0319	-.0313	-.0576	.0718	.0665	-.0112	1294.
.3630	734.	-932.	-574.	-552.	-737.	397.	.0232	-.0278	-.0455	.0688	.0588	-.0176	676.
.3640	541.	-540.	-288.	21.	-221.	-162.	.0140	-.0245	-.0327	.0650	.0494	-.0255	186.
.3650	358.	-153.	1.	586.	273.	-721.	.0045	-.0215	-.0196	.0603	.0387	-.0345	652.

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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	4	MEMBER	2	SEQUENCE	804	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)		
.3660	178.	217.	281.	1122.	730.	-1258.	-.0051	-.0187	-.0065	.0549	.0268	-.0441	1238.		
.3670	6.	556.	550.	1607.	1145.	-1757.	-.0145	-.0162	.0065	.0489	.0141	-.0538	1781.		
.3680	-161.	856.	809.	2029.	1519.	-2198.	-.0235	-.0140	.0191	.0426	.0008	-.0630	2262.		
.3690	-324.	1113.	1052.	2381.	1856.	-2562.	-.0319	-.0121	.0310	.0360	-.0125	-.0712	2669.		
.3700	-484.	1324.	1270.	2663.	2158.	-2832.	-.0396	-.0105	.0420	.0292	-.0251	-.0781	2997.		
.3710	-640.	1491.	1458.	2874.	2430.	-2998.	-.0464	-.0091	.0521	.0224	-.0366	-.0833	3243.		
.3720	-794.	1609.	1619.	3012.	2678.	-3053.	-.0522	-.0079	.0611	.0157	-.0467	-.0865	3408.		
.3730	-945.	1674.	1754.	3073.	2905.	-2999.	-.0570	-.0068	.0688	.0090	-.0552	-.0875	3494.		
.3740	-1084.	1686.	1860.	3056.	3103.	-2842.	-.0606	-.0058	.0753	.0025	-.0619	-.0863	3505.		
.3750	-1204.	1650.	1928.	2959.	3259.	-2592.	-.0631	-.0048	.0803	-.0040	-.0667	-.0828	3443.		
.3760	-1299.	1565.	1955.	2779.	3363.	-2266.	-.0644	-.0037	.0840	-.0105	-.0696	-.0770	3314.		
.3770	-1365.	1436.	1942.	2516.	3409.	-1881.	-.0645	-.0023	.0862	-.0170	-.0708	-.0692	3125.		
.3780	-1398.	1271.	1887.	2179.	3387.	-1454.	-.0673	-.0007	.0869	-.0234	-.0704	-.0593	2886.		
.3790	-1398.	1081.	1787.	1777.	3291.	-1006.	-.0610	.0013	.0861	-.0298	-.0685	-.0475	2611.		
.3800	-1367.	878.	1640.	1323.	3117.	-552.	-.0574	.0038	.0838	-.0362	-.0653	-.0339	2313.		
.3810	-1305.	674.	1448.	834.	2863.	-108.	-.0526	.0067	.0799	-.0424	-.0610	-.0189	2011.		
.3820	-1215.	477.	1218.	328.	2531.	311.	-.0468	.0101	.0746	-.0484	-.0559	-.0026	1733.		
.3830	-1105.	293.	966.	-178.	2132.	695.	-.0399	.0141	.0679	-.0542	-.0504	.0148	1516.		
.3840	-980.	129.	702.	-666.	1680.	1036.	-.0321	.0186	.0600	-.0597	-.0448	.0328	1404.		
.3850	-845.	-5.	430.	-1111.	1187.	1330.	-.0237	.0236	.0511	-.0651	-.0393	.0512	1416.		
.3860	-705.	-104.	161.	-1494.	672.	1576.	-.0148	.0291	.0415	-.0705	-.0339	.0695	1532.		
.3870	-572.	-166.	-90.	-1800.	164.	1773.	-.0056	.0349	.0316	-.0761	-.0288	-.0873	1707.		
.3880	-455.	-188.	-312.	-2020.	-309.	1922.	.0035	.0112	.0216	-.0820	-.0240	.1042	1891.		
.3890	-356.	-167.	-504.	-2145.	-731.	2024.	.0123	.0477	.0120	-.0885	-.0192	.1198	2048.		
.3900	-275.	-105.	-670.	-2178.	-1091.	2083.	.0206	.0544	.0030	-.0959	-.0143	.1339	2160.		
.3910	-209.	-6.	-810.	-2132.	-1382.	2095.	.0281	.0612	-.0051	-.1047	-.0093	.1461	2220.		
.3920	-155.	120.	-925.	-2029.	-1607.	2058.	.0349	.0680	-.0122	-.11	-.0042	.1564	2229.		
.3930	-105.	264.	-1016.	-1895.	-1776.	1971.	.0405	.0747	-.0181	-.125	.0009	.1648	2198.		
.3940	-54.	413.	-1094.	-1756.	-1903.	1833.	.0452	.0811	-.0228	-.1330	.0061	.1713	2138.		
.3950	7.	563.	-1171.	-1632.	-2006.	1650.	.0490	.0872	-.0265	-.1429	.0114	.1764	2068.		
.3960	81.	710.	-1255.	-1539.	-2100.	1429.	.0519	.0928	-.0293	-.1521	.0167	.1802	2002.		
.3970	164.	842.	-1339.	-1490.	-2188.	1180.	.0542	.0977	-.0314	-.1599	.0220	.1832	1954.		
.3980	248.	954.	-1421.	-1490.	-2269.	920.	.0560	.1019	-.0330	-.1658	.0271	.1859	1932.		
.3990	329.	1046.	-1503.	-1531.	-2344.	668.	.0573	.1052	-.0342	-.1694	.0320	.1886	1940.		
.4000	405.	1120.	-1588.	-1599.	-2415.	445.	.0583	.1077	-.0351	-.1703	.0369	.1914	1975.		

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

.3930	-105.	264.	-1016.	-1895.	-1776.	1971.	.405	.0747	-.0121	-.1230	.0009	.1648	2229.
.3940	-54.	413.	-1094.	-1756.	-1903.	1833.	.452	.0811	-.0228	-.1330	.0061	.1713	2138.
.3950	7.	563.	-1171.	-1632.	-2006.	1650.	.0490	.0872	-.0265	-.1429	.0114	.1764	2068.
.3960	21.	710.	-1255.	-1539.	-2100.	1429.	.0519	.0928	-.0293	-.1521	.0167	.1802	2002.
.3970	164.	842.	-1339.	-1490.	-2188.	1180.	.0542	.0977	-.0314	-.1599	.0220	.1832	1954.
.3980	243.	954.	-1421.	-1490.	-2269.	920.	.0560	.1019	-.0330	-.1658	.0271	.1859	1932.
.3990	329.	1046.	-1503.	-1531.	-2344.	668.	.0573	.1052	-.0342	-.1694	.0320	.1886	1940.
.4000	405.	1120.	-1588.	-1599.	-2415.	445.	.0583	.1077	-.0351	-.1703	.0369	.1914	1975.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.25.55.

S/RV PIPING KEWAUNEE GKW08F 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

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)
.0930	-258.	6121.	2699.	11045.	6065.	-11355.	-.0901	.0264	.0913	.1984	.0155	-.0850	11433.

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)
5	1	804					0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
							.0010	-5.	-3.	-3.	-0.	-0.	1.	-.0000	.0000	-.0000	-.0000	.0000	.0000	1.
							.0020	-32.	-11.	-17.	1.	-3.	-1.	-.0000	-.0000	-.0001	-.0001	.0002	.0001	2.
							.0030	-68.	2.	-30.	12.	-7.	-20.	.0000	-.0000	-.0002	-.0003	.0006	.0002	16.
							.0040	-105.	47.	-35.	41.	-10.	-65.	.0002	-.0000	-.0003	-.0006	.0014	.0006	53.
							.0050	-157.	102.	-39.	90.	-7.	-132.	.0004	-.0001	-.0007	-.0011	.0025	.0013	108.
							.0060	-244.	160.	-49.	166.	6.	-215.	.0008	-.0002	-.0012	-.0019	.0039	.0025	185.
							.0070	-357.	251.	-57.	288.	19.	-351.	.0015	-.0002	-.0021	-.0030	.0060	.0044	306.
							.0080	-462.	409.	-55.	464.	-4.	-502.	.0026	-.0003	-.0034	-.0043	.0094	.0073	491.
							.0090	-522.	645.	-7.	679.	-81.	-880.	.0044	-.0005	-.0052	-.0058	.0157	.0117	751.
							.0100	-552.	918.	99.	909.	-172.	-1301.	.0069	-.0006	-.0073	-.0077	.0253	.0176	1076.
							.0110	-553.	1190.	238.	1169.	-252.	-1775.	.0102	-.0006	-.0112	-.0097	.0367	.0250	1443.
							.0120	-498.	1432.	394.	1490.	-324.	-2237.	.0143	-.0006	-.0155	-.0111	.0483	.0339	1825.
							.0130	-406.	1596.	572.	1837.	-347.	-2644.	.0192	-.0004	-.0207	-.0119	.0598	.0439	2183.
							.0140	-343.	1674.	787.	2166.	-248.	-2993.	.0248	-.0000	-.0269	-.0121	.0720	.0545	2496.
							.0150	-347.	1750.	1035.	2508.	-13.	-3289.	.0309	.0005	-.0340	-.0119	.0840	.0650	2788.
							.0160	-444.	1895.	1294.	2914.	294.	-3537.	.0373	.0011	-.0419	-.0113	.0954	.0749	3095.
							.0170	-665.	2136.	1511.	3356.	705.	-3766.	.0438	.0017	-.0504	-.0110	.1059	.0839	3433.
							.0180	-733.	2464.	1610.	3818.	1238.	-3980.	.0505	.0024	-.0590	-.0113	.1128	.0915	3810.
							.0190	-1069.	2824.	1511.	4319.	1647.	-4112.	.0569	.0031	-.0671	-.0114	.1139	.0980	4170.
							.0200	-936.	2975.	1124.	4665.	1612.	-4096.	.0627	.0039	-.0741	-.0101	.1114	.1036	4323.
							.0210	-527.	2702.	706.	4444.	1053.	-4040.	.0678	.0052	-.0801	-.0082	.1179	.1078	4110.
							.0220	21.	2115.	882.	3494.	689.	-4018.	.0720	.0069	-.0851	-.0082	.1384	.1077	3619.
							.0230	636.	1269.	1345.	2338.	551.	-3625.	.0742	.0090	-.0881	-.0080	.1536	.1016	2931.
							.0240	1072.	237.	1566.	1456.	36.	-2563.	.0736	.0111	-.0891	-.0042	.1565	.0908	1987.
							.0250	1006.	-663.	1496.	570.	-51.	-1235.	.0707	.0125	-.0888	-.0006	.1523	.0721	920.
							.0260	565.	-1018.	1257.	-248.	1187.	160.	.0657	.0132	-.0863	-.0000	.1296	.0421	824.
							.0270	152.	-990.	1015.	-255.	2466.	2155.	.0577	.0129	-.0804	.0030	.0808	.0069	2214.
							.0280	-514.	-1355.	520.	-143.	2496.	4554.	.0465	.0119	-.0724	.0102	.0358	-.0283	3502.
							.0290	-1764.	-1981.	123.	-1400.	2912.	6088.	.0339	.0102	-.0642	.0116	.0241	-.0694	4646.
							.0300	-2474.	-1328.	921.	-2807.	4082.	6667.	.0217	.0071	-.0542	.0082	.0245	-.1143	5599.
							.0310	-2115.	-1696.	1536.	-3046.	347.	7680.	.0087	.0023	-.0417	.0073	.0006	-.1509	6293.
							.0320	-3248.	-1934.	750.	-2739.	4202.	9036.	-.0048	-.0045	-.0284	.0093	-.0519	-.1791	6966.

.0320	-3085.	-1856.	112.	-1577.	4499.	6319.	-.0160	-.0137	-.0160	.0130	-.0947	-.2037	7188.
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.0170	-225.	2156.	1111.	3337.	705.	-3786.	0438	.0017	-.0504	-.0110	.1059	.0839	3433.
.0180	-933.	2464.	1610.	3818.	1238.	-3980.	.0505	.0024	-.0590	-.0113	.1128	.0915	3810.
.0190	-1069.	2824.	1511.	4319.	1647.	-4112.	.0569	.0031	-.0671	-.0114	.1139	.0980	4170.
.0200	-936.	2975.	1124.	4665.	1612.	-4096.	.0627	.0039	-.0741	-.0101	.1114	.1036	4323.
.0210	-527.	2718.	706.	4444.	1053.	-4040.	.0678	.0052	-.0801	-.0082	.1179	.1078	4110.
.0220	23.	2115.	882.	3494.	689.	-4018.	.0720	.0069	-.0851	-.0082	.1384	.1077	3619.
.0230	636.	1269.	1345.	2338.	551.	-3625.	.0742	.0090	-.0881	-.0080	.1536	.1016	2931.
.0240	1072.	237.	1566.	1456.	36.	-2563.	.0736	.0110	-.0891	-.0042	.1565	.0908	1987.
.0250	1006.	-663.	1496.	570.	-51.	-1239.	.0707	.0125	-.0888	-.0006	.1523	.0721	920.
.0260	565.	-1018.	1257.	-248.	1187.	160.	.0657	.0132	-.0863	-.0000	.1296	.0421	824.
.0270	152.	-998.	1015.	-255.	2466.	2155.	.0577	.0129	-.0804	.0030	.0808	.0069	2214.
.0280	-514.	-1355.	520.	-143.	2496.	4554.	.0465	.0119	-.0724	.0102	.0358	-.0283	3502.
.0290	-1764.	-1981.	123.	-1400.	2912.	6088.	.0339	.0102	-.0642	.0116	.0241	-.0694	4646.
.0300	-2468.	-1628.	921.	-2807.	4082.	6667.	.0217	.0071	-.0542	.0082	.0245	-.1143	5599.
.0310	-2815.	-1396.	1536.	-3046.	4347.	7680.	.0087	.0023	-.0417	.0073	.0006	-.1509	6293.
.0320	-3248.	-1934.	750.	-2739.	4202.	9036.	-.0048	-.0045	-.0284	.0093	-.0519	-.1791	6966.

.0330 -3085. -1856. 112. -2577. 4499. 9319. -.0160 -.0133 -.0160 .0130 -.0947 -.2037 7188.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

R3/12/02. 18.25.55.

S/RV PIPING REWOUND ORWOOF 2 RUP DISK
2 SAFETY COLD FK224F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

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	S	MEMBER	1	SEQUENCE	804	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)	
.0340	-2348.	-1202.	696.	-2472.	5017.	8608.	-.0249	-.0235	-.0044	.0166	-.1154	-.2221	6919.	
.0350	-2164.	-1524.	1126.	-2330.	5477.	8055.	-.0345	-.0347	.0073	.0177	-.1423	-.2320	6751.	
.0360	-2106.	-2062.	559.	-1868.	5549.	7509.	-.0447	-.0470	.0202	.0216	-.1892	-.2365	6418.	
.0370	-876.	-1157.	-26.	-1044.	4800.	6027.	-.0532	-.0606	.0341	.0345	-.2303	-.2369	5241.	
.0380	490.	-167.	-344.	-879.	3875.	3855.	-.0611	-.0746	.0478	.0482	-.2438	-.2325	3732.	
.0390	533.	-537.	-1357.	-1576.	3205.	1893.	-.0717	-.0875	.0625	.0536	-.2501	-.2265	2725.	
.0400	861.	-237.	-2990.	-1529.	1066.	73.	-.0851	-.0990	.0816	.0603	-.2711	-.2219	1257.	
.0410	2473.	1581.	-3507.	-932.	-2223.	-2237.	-.0979	-.1089	.1037	.0687	-.2725	-.2170	2217.	
.0420	3189.	1994.	-3578.	-1955.	-4322.	-4614.	-.1102	-.1163	.1244	.0638	-.2309	-.2109	4460.	
.0430	2788.	970.	-4630.	-3429.	-6135.	-6161.	-.1238	-.1204	.1445	.0515	-.1873	-.2048	6300.	
.0440	3553.	1590.	-5336.	-2715.	-9587.	-6982.	-.1370	-.1212	.1662	.0472	-.1666	-.1986	8201.	
.0450	4548.	2796.	-4305.	-1523.	-11962.	-7531.	-.1464	-.1185	.1847	.0378	-.1315	-.1918	9583.	
.0460	3502.	1853.	-2870.	-1886.	-11034.	-7410.	-.1518	-.1122	.1946	.0141	-.0725	-.1833	9049.	
.0470	2047.	753.	-2599.	-1314.	-10081.	-6155.	-.1537	-.1029	.1980	.0017	-.0407	-.1702	8011.	
.0480	2274.	1837.	-2533.	1537.	-10886.	-4350.	-.1501	-.0912	.1964	.0138	-.0429	-.1507	7969.	
.0490	2222.	2420.	-1472.	3206.	-9940.	-2699.	-.1393	-.0769	.1852	.0250	-.0220	-.1252	7271.	
.0500	456.	661.	-386.	2377.	-6633.	-1000.	-.1234	-.0597	.1634	.0277	.0263	-.0943	4800.	
.0510	-530.	-392.	-289.	2244.	-5225.	910.	-.1041	-.0408	.1368	.0488	.0505	-.0573	3882.	
.0520	357.	301.	-583.	3027.	-5966.	2439.	-.0806	-.0211	.1074	.0881	.0544	-.0154	4800.	
.0530	761.	-447.	-616.	1467.	-5044.	3315.	-.0533	-.0005	.0731	.1143	.0829	.0291	4187.	
.0540	201.	-2791.	-669.	-1728.	-3044.	4027.	-.0255	.0209	.0367	.1252	.1206	.0735	3597.	
.0550	572.	-3520.	-926.	-3268.	-3116.	4703.	.0001	.0423	.0038	.1406	.1237	.1134	4395.	
.0560	1460.	-3024.	-1071.	-4126.	-3703.	4907.	.0239	.0628	-.0256	.1514	.1112	.1454	4990.	
.0570	1214.	-3987.	-1036.	-6679.	-2273.	4708.	.0465	.0819	-.0541	.1392	.1186	.1721	5717.	
.0580	698.	-5304.	-1041.	-9161.	-986.	4579.	.0665	.0980	-.0794	.1187	.1260	.1959	6935.	
.0590	966.	-4726.	-1037.	-9628.	-1570.	4378.	.0831	.1134	-.0996	.1051	.1136	.2128	7207.	
.0600	756.	-3732.	-639.	-9955.	-1441.	3746.	.0974	.1249	-.1182	.0879	.1117	.2213	7235.	
.0610	-541.	-4062.	40.	-11215.	364.	3042.	.1113	.1329	-.1378	.0631	.1348	.2292	7836.	
.0620	-1230.	-4111.	531.	-11256.	1316.	2693.	.1249	.1363	-.1563	.0514	.1519	.2416	7851.	
.0630	-1010.	-2789.	761.	-9455.	1279.	2420.	.1381	.1351	-.1736	.0591	.1525	.2540	6635.	
.0640	-1498.	-1799.	1199.	-7734.	2754.	1982.	.1508	.1497	-.1920	.0695	.1623	.2627	5693.	
.0650	-2608.	-1806.	2067.	-6211.	5430.	1731.	.1626	.1203	-.2104	.0789	.1817	.2720	5682.	
.0660	-2880.	-1298.	2949.	-3394.	7168.	1760.	.1725	.1067	-.2249	.0980	.1845	.2820	5476.	
.0670	-2509.	-29.	3386.	179.	8334.	1612.	.1792	.0893	-.2344	.1225	.1711	.2958	5723.	
.0680	-2601.	749.	3525.	2987.	10018.	1105.	.1815	.0690	-.2388	.1383	.1630	.2801	7086.	
.0690	-2851.	1090.	3771.	5237.	11147.	415.	.1778	.0468	-.2357	.1424	.1612	.2658	8306.	
.0700	-2592.	1972.	4125.	7499.	10841.	-606.	.1674	.0234	-.2228	.1366	.1555	.2402	8894.	
.0710	-2307.	3199.	4323.	9158.	10113.	-2174.	.1505	-.0007	-.2010	.1159	.1478	.1994	9312.	

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

.0610	-541.	-4062.	40.	-11215.	364.	7042.	.1113	.1329	-.1378	.0631	.1348	.2292	7836.
.0620	-1230.	-4111.	531.	-11256.	1316.	2693.	.1249	.1363	-.1563	.0514	.1519	.2416	7851.
.0630	-1019.	-2739.	761.	-9455.	1279.	2420.	.1381	.1351	-.1736	.0591	.1525	.2540	6635.
.0640	-1498.	-1799.	1199.	-7734.	2754.	1932.	.1508	.1297	-.1920	.0695	.1623	.2627	5693.
.0650	-2608.	-1306.	2067.	-6211.	5430.	1731.	.1626	.1203	-.2104	.0789	.1817	.2720	5682.
.0660	-2880.	-1298.	2949.	-3304.	7169.	1760.	.1725	.1067	-.2249	.0980	.1845	.2820	5476.
.0670	-2509.	-29.	3386.	179.	8334.	1612.	.1792	.0893	-.2344	.1225	.1711	.2858	5723.
.0680	-2601.	749.	3525.	2927.	10018.	1105.	.1815	.0690	-.2388	.1383	.1630	.2801	7086.
.0690	-2851.	1090.	3771.	5237.	11147.	415.	.1778	.0468	-.2357	.1424	.1612	.2658	8306.
.0700	-2592.	1972.	4125.	7499.	10941.	-606.	.1674	.0234	-.2228	.1366	.1555	.2402	8894.
.0710	-2367.	3199.	4323.	6158.	10113.	-2174.	.1505	-.0007	-.2010	.1159	.1478	.1994	9312.

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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	5	MEMBER	1	SEQUENCE	804	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)		
.0720	-2438.	4060.	4207.	9990.	9481.	-3936.	.1276	-.0247	-.1720	.0793	.1369	.1466	9655.		
.0730	-2500.	4783.	3730.	10757.	8226.	-5452.	.0997	-.0481	-.1361	.0333	.1088	.0863	9840.		
.0740	-2162.	5734.	3085.	11564.	6415.	-6843.	.0683	-.0700	-.0947	-.0186	.0633	.0194	10036.		
.0750	-1804.	6649.	2717.	11691.	4916.	-8284.	.0356	-.0897	-.0514	-.0768	.0189	-.0522	10211.		
.0760	-1674.	6830.	2633.	11037.	3782.	-9461.	.0033	-.1065	-.0092	-.1354	-.0179	-.1225	10125.		
.0770	-1434.	6559.	2284.	10200.	2506.	-10043.	-.0272	-.1203	.0301	-.1841	-.0607	-.1867	9795.		
.0780	-686.	6318.	1463.	9419.	1035.	-10095.	-.0543	-.1309	.0654	-.2164	-.1142	-.2426	9332.		
.0790	378.	5925.	627.	8319.	-332.	-9729.	-.0765	-.1382	.0945	-.2324	-.1615	-.2879	8631.		
.0800	1101.	4936.	75.	6582.	-1311.	-8894.	-.0941	-.1416	.1160	-.2338	-.1881	-.3215	7510.		
.0810	1292.	3655.	-497.	4551.	-1880.	-7572.	-.1079	-.1410	.1304	-.2204	-.2028	-.3460	6088.		
.0820	1482.	2749.	-1273.	2901.	-2340.	-5774.	-.1179	-.1368	.1394	-.1913	-.2203	-.3618	4632.		
.0830	1861.	2021.	-2022.	1660.	-2739.	-7461.	-.1241	-.1296	.1442	-.1505	-.2379	-.3667	3179.		
.0840	1878.	838.	-2620.	281.	-2693.	-753.	-.1277	-.1191	.1452	-.1062	-.2445	-.3620	1894.		
.0850	1406.	-491.	-3075.	-1219.	-2327.	2023.	-.1299	-.1055	.1439	-.0624	-.2401	-.3527	2235.		
.0860	1021.	-1341.	-3139.	-2382.	-2274.	4644.	-.1313	-.0894	.1422	-.0196	-.2294	-.3398	3838.		
.0870	836.	-2165.	-2729.	-3483.	-2494.	7089.	-.1313	-.0716	.1405	.0187	-.2089	-.3200	5583.		
.0880	496.	-3490.	-2328.	-5013.	-2597.	9254.	-.1296	-.0529	.1376	.0507	-.1772	-.2930	7307.		
.0890	208.	-4573.	-2306.	-6514.	-3039.	10896.	-.1266	-.0343	.1334	.0816	-.1432	-.2614	8798.		
.0900	273.	-4848.	-2367.	-7549.	-4193.	11881.	-.1216	-.0164	.1278	.1147	-.1093	-.2255	9900.		
.0910	234.	-5089.	-2195.	-8717.	-5220.	12247.	-.1141	.0001	.1192	.1443	-.0669	-.1837	10726.		
.0920	-145.	-5632.	-2040.	-10203.	-5588.	12050.	-.1035	.0146	.1068	.1695	-.0193	-.1364	11289.		
.0930	-223.	-5588.	-2299.	-11045.	-6065.	11355.	-.0901	.0264	.0913	.1984	.0155	-.0850	11433.		
.0940	241.	-4253.	-2920.	-10977.	-6923.	10271.	-.0741	.0353	.0736	.2319	.0343	-.0302	11156.		
.0950	674.	-4472.	-3482.	-10929.	-7306.	8857.	-.0559	.0416	.0535	.2596	.0532	.0269	10685.		
.0960	990.	-4520.	-3643.	-11095.	-7107.	7094.	-.0366	.0456	.0325	.2771	.0787	.0829	10086.		
.0970	1639.	-4133.	-3462.	-10720.	-7138.	5041.	-.0175	.0474	.0126	.2884	.1017	.1338	9322.		
.0980	2415.	-3441.	-3263.	-9795.	-7345.	2916.	.0002	.0472	-.0051	.2923	.1184	.1770	8483.		
.0990	2827.	-3094.	-3152.	-8846.	-7062.	919.	.0157	.0450	-.0204	.2834	.1322	.2111	7655.		
.1000	3029.	-2681.	-2897.	-7609.	-6461.	-888.	.0283	.0413	-.0322	.2619	.1410	.2338	6755.		
.1010	3141.	-1635.	-2356.	-5703.	-5899.	-2496.	.0374	.0365	-.0397	.2311	.1415	.2424	5781.		
.1020	2701.	-488.	-1703.	-3609.	-4979.	-3822.	.0425	.0311	-.0436	.1896	.1379	.2365	4880.		
.1030	1732.	364.	-1114.	-1708.	-3596.	-4774.	.0445	.0252	-.0449	.1386	.1329	.2191	4190.		
.1040	970.	1267.	-551.	321.	-2405.	-5364.	.0445	.0190	-.0434	.0847	.1224	.1936	3968.		
.1050	565.	2299.	27.	2437.	-1564.	-5659.	.0431	.0128	-.0400	.0312	.1074	.1618	4285.		
.1060	-13.	2835.	612.	4040.	-563.	-5691.	.0406	.0072	-.0362	-.0233	.0959	.1251	4719.		
.1070	-685.	2670.	1313.	5107.	555.	-5490.	.0380	.0024	-.0332	-.0766	.0897	.0864	5068.		
.1080	-885.	2931.	1940.	6082.	1194.	-5092.	.0363	-.0017	-.0310	-.1223	.0318	.0489	5407.		
.1090	-599.	3024.	2165.	6873.	1179.	-4564.	.0360	-.0054	-.0304	-.1581	.0737	.0144	5617.		

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S/RV PIPING KEWAUNEE GKW02F 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

.0990	2827.	-3094.	-3152.	-8846.	-7062.	919.	.0157	.0450	-.0204	.2834	.1322	.2111	7555.
.1000	3029.	-2681.	-2897.	-7609.	-6461.	-888.	.0283	.0413	-.0322	.2619	.1410	.2338	6755.
.1010	3141.	-1635.	-2356.	-5703.	-5899.	-2476.	.0374	.0365	-.0397	.2311	.1415	.2424	5781.
.1020	2701.	-468.	-1763.	-3609.	-4979.	-7822.	.0425	.0311	-.0436	.1896	.1379	.2365	4880.
.1030	1732.	364.	-1114.	-1708.	-3596.	-4774.	.0445	.0252	-.0449	.1386	.1329	.2191	4190.
.1040	970.	1267.	-551.	321.	-2405.	-5364.	.0445	.0190	-.0434	.0847	.1224	.1936	3968.
.1050	565.	2299.	27.	2437.	-1564.	-5659.	.0431	.0128	-.0400	.0312	.1074	.1618	4285.
.1060	-13.	2835.	612.	4040.	-563.	-5691.	.0406	.0072	-.0362	-.0233	.0959	.1251	4719.
.1070	-685.	2370.	1313.	5107.	555.	-5490.	.0380	.0024	-.0332	-.0766	.0897	.0864	5068.
.1080	-885.	2931.	1940.	6082.	1194.	-5092.	.0363	-.0017	-.0310	-.1223	.0818	.0489	5407.
.1090	-599.	3024.	2165.	6873.	1179.	-4564.	.0360	-.0054	-.0304	-.1581	.0737	.0144	5617.

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CONDITION 24
LOADS
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ENGLISH UNITS

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

SECTION	S	MEMBER	1	SEQUENCE	804	LOCATION	BEG	TYPE	EL	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(DEG)	(PSI)
.1100	-804.	2749.	2882.	7017.	2166.	-4051.	.0374	-.0081	-.0334	-.1917	.0783	-.0180	5653.	
.1110	-1613.	2333.	3364.	7122.	3833.	-3307.	.0393	-.0099	-.0392	-.2209	.0737	-.0491	5890.	
.1120	-2131.	2568.	3297.	8128.	5013.	-2234.	.0419	-.0111	-.0456	-.2391	.0428	-.0762	6610.	
.1130	-2312.	3089.	3350.	9293.	6163.	-1182.	.0462	-.0119	-.0534	-.2507	.0084	-.0967	7559.	
.1140	-2934.	2978.	3644.	9479.	8130.	-433.	.0519	-.0118	-.0635	-.2628	-.0086	-.1116	8422.	
.1150	-3713.	2703.	3760.	9341.	9883.	104.	.0574	-.0107	-.0738	-.2711	-.0224	-.1220	9166.	
.1160	-3762.	3035.	3900.	9730.	10393.	489.	.0624	-.0090	-.0822	-.2704	-.0441	-.1260	9602.	
.1170	-3524.	3064.	4222.	9600.	10802.	586.	.0679	-.0068	-.0898	-.2678	-.0579	-.1222	9749.	
.1180	-3486.	2479.	4822.	8598.	11872.	346.	.0736	-.0044	-.0973	-.2654	-.0573	-.1117	9883.	
.1190	-3530.	1910.	4458.	7711.	12478.	101.	.0775	-.0022	-.1029	-.2548	-.0709	-.0977	9887.	
.1200	-2925.	2191.	3550.	7681.	11673.	-130.	.0795	-.0002	-.1049	-.2313	-.1018	-.0797	9419.	
.1210	-1963.	2657.	3489.	7326.	10639.	-713.	.0809	.0017	-.1048	-.2049	-.1129	-.0568	8720.	
.1220	-2069.	1884.	3390.	5347.	10835.	-1584.	.0804	.0036	-.1039	-.1851	-.0977	-.0335	8214.	
.1230	-2060.	1536.	2713.	3892.	10104.	-2332.	.0768	.0053	-.0994	-.1567	-.0909	-.0107	7465.	
.1240	-1192.	2164.	1519.	3698.	7727.	-2778.	.0704	.0066	-.0898	-.1164	-.1029	-.0126	6070.	
.1250	-459.	2163.	647.	2880.	5916.	-3178.	.0623	.0077	-.0772	-.0817	-.0997	.0358	4925.	
.1260	-188.	1366.	506.	1236.	5002.	-3575.	.0523	.0091	-.0623	-.0565	-.0724	.0565	4227.	
.1270	108.	789.	-172.	201.	3170.	-3606.	.0387	.0108	-.0432	-.0294	-.0545	.0718	3239.	
.1280	1072.	1052.	-770.	223.	85.	-3350.	.0227	.0127	-.0200	.0018	-.0436	.0833	2264.	
.1290	1558.	487.	-876.	-619.	-1831.	-3029.	.0062	.0146	.0038	.0218	-.0132	.0913	2422.	
.1300	1404.	-840.	-971.	-2065.	-2738.	-2483.	-.0110	.0168	.0276	.0324	.0247	.0948	2854.	
.1310	1773.	-963.	-1119.	-2016.	-4737.	-1554.	-.0291	.0189	.0528	.0492	.0411	.0937	3625.	
.1320	1958.	-712.	-1586.	-1497.	-6675.	-416.	-.0476	.0210	.0774	.0659	.0431	.0868	4620.	
.1330	1560.	-1208.	-1697.	-1911.	-7154.	641.	-.0640	.0232	.0987	.0725	.0558	.0775	5010.	
.1340	1205.	-2041.	-1888.	-2650.	-7342.	1722.	-.0784	.0252	.1174	.0759	.0660	.0683	5388.	
.1350	1573.	-2175.	-2541.	-2653.	-8712.	2835.	-.0913	.0272	.1346	.0856	.0568	.0587	6429.	
.1360	2159.	-2105.	-2911.	-2801.	-10132.	3629.	-.1019	.0294	.1488	.0935	.0487	.0479	7496.	
.1370	2030.	-3190.	-3145.	-4384.	-10142.	4082.	-.1098	.0318	.1587	.0882	.0535	.0360	7940.	
.1380	2329.	-4125.	-3201.	-5784.	-10403.	4437.	-.1152	.0342	.1661	.0805	.0507	.0260	8562.	
.1390	3186.	-4262.	-3565.	-6274.	-11404.	4772.	-.1187	.0363	.1718	.0755	.0262	.0162	9344.	
.1400	3512.	-4507.	-4072.	-6968.	-11512.	4894.	-.1203	.0384	.1740	.0639	-.0019	.0041	9651.	
.1410	2358.	-4904.	-4034.	-7899.	-10615.	4796.	-.1196	.0404	.1725	.0440	-.0226	-.0080	9486.	
.1420	3158.	-5050.	-4061.	-8371.	-9795.	4711.	-.1172	.0422	.1690	.0218	-.0506	-.0193	9247.	
.1430	3236.	-4491.	-4028.	-8070.	-9426.	4539.	-.1129	.0437	.1634	.0018	-.0836	-.0291	8906.	
.1440	2851.	-4133.	-3894.	-7999.	-8325.	4150.	-.1063	.0450	.1542	-.0213	-.1050	-.0376	8269.	
.1450	2111.	-4118.	-3608.	-8040.	-8624.	3694.	-.0973	.0460	.1414	-.0462	-.1159	-.0425	7450.	
.1460	1904.	-3567.	-2987.	-7143.	-5475.	3319.	-.0859	.0465	.1268	-.0650	-.1282	-.0412	6465.	
.1470	1710.	-2997.	-2512.	-5916.	-4286.	2960.	-.0724	.0467	.1097	-.0805	-.1400	-.0358	5313.	

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
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ENGLISH UNIT

.1370	2030.	-3190.	-3140.	-4384.	-10142.	4082.	-1098.	.0318	.1587	.0882	.0535	.0360	7940.
.1380	2329.	-4125.	-3201.	-5784.	-10403.	4437.	-1152.	.0342	.1661	.0805	.0507	.0260	8562.
.1390	3166.	-4262.	-3565.	-6274.	-11404.	4772.	-1187.	.0363	.1718	.0755	.0262	.0162	9344.
.1400	3512.	-4507.	-4072.	-6968.	-11512.	4894.	-1203.	.0384	.1740	.0639	-.0019	.0041	9651.
.1410	3258.	-4904.	-4034.	-7899.	-10615.	4796.	-1196.	.0404	.1725	.0440	-.0226	-.0080	9486.
.1420	3158.	-5050.	-4061.	-8371.	-9795.	4711.	-1172.	.0422	.1690	.0218	-.0506	-.0193	9247.
.1430	3236.	-4491.	-4028.	-8070.	-9426.	4539.	-1129.	.0437	.1634	.0018	-.0836	-.0291	8906.
.1440	2851.	-4133.	-3894.	-7999.	-8325.	4150.	-1063.	.0450	.1542	-.0213	-.1050	-.0376	8269.
.1450	2111.	-4118.	-3608.	-8040.	-6624.	3694.	-.0973.	.0460	.1414	-.0462	-.1159	-.0425	7450.
.1460	1904.	-3567.	-2987.	-7143.	-5475.	3319.	-.0859.	.0465	.1268	-.0650	-.1282	-.0412	6465.
.1470	1710.	-2997.	-2512.	-5916.	-4786.	2960.	-.0724.	.0467	.1097	-.0805	-.1400	-.0358	5313.

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2 SAFETY COLD FKM24F--2 PSVCONDITION 24
LOADSSHOCK
PRESSURE

ENGLISH UNITS

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

SECTION	5	MEMBER	1	SEQUENCE	804	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)		
.1480	1258.	-2628.	-1674.	-4798.	-2466.	2455.		-.0566	.0466	.0893	-.0949	-.1366	-.0259	3995.		
.1490	633.	-2357.	-744.	-3533.	-360.	1942.		-.0389	.0459	.0664	-.1059	-.1261	-.0114	2728.		
.1500	207.	-1780.	-105.	-1639.	1386.	1539.		-.0204	.0447	.0427	-.1104	-.1231	.0073	1780.		
.1510	60.	-817.	679.	656.	2914.	1067.		-.0011	.0431	.0188	-.1105	-.1200	.0293	2138.		
.1520	-497.	-270.	1355.	2395.	4867.	420.		.0180	.0413	-.0055	-.1125	-.1066	.0524	3667.		
.1530	-1059.	310.	2038.	3972.	6494.	-394.		.0362	.0394	-.0287	-.1135	-.0865	.0762	5138.		
.1540	-1334.	1112.	2357.	5574.	7273.	-1310.		.0526	.0376	-.0491	-.1122	-.0693	.0994	6239.		
.1550	-1386.	1841.	2511.	6786.	7550.	-2384.		.0672	.0360	-.0664	-.1125	-.0489	.1217	7029.		
.1560	-1318.	2403.	3061.	7449.	7672.	-3642.		.0800	.0349	-.0810	-.1164	-.0168	.1428	7615.		
.1570	-1522.	2563.	3214.	7585.	7725.	-4855.		.0899	.0344	-.0926	-.1237	.0136	.1598	7998.		
.1580	-1424.	3022.	3197.	7956.	7153.	-5904.		.0972	.0344	-.1004	-.1294	.0332	.1734	8237.		
.1590	-1070.	3583.	3418.	8324.	6468.	-6781.		.1026	.0350	-.1052	-.1351	.0489	.1844	8449.		
.1600	-1179.	3441.	3440.	7995.	6485.	-7391.		.1060	.0362	-.1083	-.1448	.0535	.1917	8542.		
.1610	-1307.	3241.	3144.	7662.	6302.	-7650.		.1073	.0379	-.1093	-.1510	.0694	.1956	8444.		
.1620	-849.	3669.	3115.	7811.	5288.	-7666.		.1071	.0402	-.1079	-.1491	.0711	.1976	8193.		
.1630	-825.	3437.	2993.	7142.	4863.	-7490.		.1057	.0431	-.1061	-.1480	.0800	.1965	7708.		
.1640	-1086.	2682.	2856.	5935.	4854.	-7042.		.1032	.0465	-.1039	-.1460	.0931	.1934	7017.		
.1650	-867.	2419.	2781.	5338.	4190.	-6233.		.0996	.0499	-.0999	-.1354	.0965	.1895	6211.		
.1660	-708.	2126.	2381.	4826.	3571.	-5125.		.0947	.0534	-.0950	-.1206	.0909	.1831	5320.		
.1670	-825.	1472.	2163.	3953.	3592.	-3877.		.0891	.0569	-.0898	-.1066	.0886	.1749	4449.		
.1680	-1031.	676.	1993.	2991.	3781.	-2470.		.0824	.0601	-.0835	-.0923	.0844	.1655	3652.		
.1690	-857.	240.	1961.	2517.	3440.	-992.		.0744	.0627	-.0752	-.0739	.0731	.1550	2950.		
.1700	-761.	-182.	1833.	1900.	3162.	397.		.0653	.0648	-.0657	-.0559	.0602	.1425	2501.		
.1710	-1021.	-1145.	1277.	647.	3148.	1645.		.0548	.0660	-.0553	-.0410	.0498	.1284	2434.		
.1720	-687.	-1611.	1047.	-332.	2289.	2650.		.0439	.0660	-.0432	-.0227	.0426	.1156	2371.		
.1730	-285.	-1957.	698.	-1435.	1111.	3761.		.0320	.0649	-.0299	-.0044	.0373	.1017	2575.		
.1740	-180.	-2469.	209.	-2904.	163.	3766.		.0195	.0626	-.0164	.0114	.0356	.0861	3207.		
.1750	36.	-2808.	-230.	-4211.	-981.	3980.		.0069	.0588	-.0026	.0280	.0338	.0712	3961.		
.1760	376.	-3024.	-931.	-5267.	-2320.	4090.		-.0056	.0535	.0113	.0461	.0266	.0571	4759.		
.1770	827.	-2999.	-1471.	-6057.	-3545.	4011.		-.0174	.0468	.0247	.0644	.0194	.0437	5449.		
.1780	973.	-3132.	-2031.	-6841.	-4287.	3822.		-.0287	.0389	.0370	.0799	.0125	.0296	6019.		
.1790	1181.	-3076.	-2329.	-7166.	-5006.	3607.		-.0393	.0299	.0486	.0952	.0045	.0164	6374.		
.1800	1509.	-2836.	-2409.	-7081.	-5652.	3354.		-.0488	.0201	.0594	.1098	-.0046	.0039	6512.		
.1810	1560.	-2868.	-2753.	-7062.	-5795.	3074.		-.0575	.0095	.0687	.1207	-.0147	-.0091	6496.		
.1820	1788.	-2613.	-2815.	-6611.	-6024.	2759.		-.0650	-.0017	.0771	.1312	-.0236	-.0214	6309.		
.1830	1938.	-2267.	-2767.	-5930.	-6220.	2434.		-.0718	-.0130	.0844	.1394	-.0313	-.0341	6024.		
.1840	1834.	-1955.	-2617.	-5300.	-6062.	2042.		-.0777	-.0247	.0903	.1430	-.0360	-.0482	5599.		
.1850	1661.	-1534.	-2369.	-4550.	-5713.	1615.		-.0825	-.0352	.0948	.1434	-.0406	-.0632	5045.		

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FKM24F--2 PSVCONDITION 24
LOADSSHOCK
PRESSURE

ENGLISH UNITS

.1750	36.	-2908.	-230.	-4211.	-981.	3980.	.0069	.0588	-.0026	.0280	.0338	.0881	3207.
.1760	376.	-3074.	-931.	-5267.	-2320.	4090.	-.0056	.0535	.0113	.0461	.0266	.0571	4759.
.1770	827.	-2999.	-1471.	-6057.	-3045.	4011.	-.0174	.0468	.0247	.0644	.0194	.0437	5449.
.1780	973.	-3132.	-2031.	-6841.	-4282.	3822.	-.0287	.0389	.0370	.0799	.0125	.0296	6019.
.1790	1181.	-3076.	-2329.	-7166.	-5006.	3607.	-.0393	.0299	.0486	.0952	.0045	.0164	6374.
.1800	1509.	-2836.	-2409.	-7081.	-5652.	3354.	-.0488	.0201	.0594	.1098	-.0046	.0039	6512.
.1810	1560.	-2868.	-2753.	-7062.	-5795.	3074.	-.0575	.0095	.0687	.1207	-.0147	-.0091	6496.
.1820	1788.	-2613.	-2815.	-6611.	-6024.	2759.	-.0650	-.0017	.0771	.1312	-.0236	-.0214	6309.
.1830	1938.	-2267.	-2767.	-5938.	-6220.	2434.	-.0718	-.0130	.0844	.1394	-.0313	-.0341	6024.
.1840	1834.	-1955.	-2617.	-5300.	-6062.	2042.	-.0777	-.0242	.0903	.1430	-.0360	-.0482	5599.
.1850	1661.	-1534.	-2369.	-4558.	-5713.	1615.	-.0825	-.0352	.0948	.1434	-.0406	-.0632	5045.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	S	MEMBER	1	SEQUENCE	804	LOCATION	BEG	TYPE	EL	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1860	1454.	-1077.	-2312.	-3656.	-5351.	1266.	-.0863	-.0459	.0980	.1418	-.0502	-.0783	4451.	
.1870	1338.	-464.	-2138.	-2566.	-4960.	944.	-.0889	-.0558	.0999	.1384	-.0520	-.0932	3817.	
.1880	1005.	-71.	-2065.	-1723.	-4178.	619.	-.0904	-.0648	.1001	.1303	-.0750	-.1088	3075.	
.1890	780.	322.	-1898.	-925.	-3436.	301.	-.0908	-.0725	.0993	.1195	-.0889	-.1240	2407.	
.1900	821.	753.	-1588.	-148.	-2975.	-1.	-.0898	-.0789	.0975	.1074	-.1021	-.1377	2008.	
.1910	754.	797.	-1546.	143.	-2427.	-302.	-.0879	-.0837	.0943	.0921	-.1128	-.1506	1651.	
.1920	823.	812.	-1524.	217.	-2063.	-627.	-.0849	-.0869	.0902	.0760	-.1199	-.1623	1461.	
.1930	1046.	893.	-1482.	226.	-2022.	-910.	-.0811	-.0884	.0854	.0598	-.1244	-.1724	1502.	
.1940	1140.	841.	-1443.	7.	-1990.	-1118.	-.0765	-.0882	.0796	.0421	-.1242	-.1814	1539.	
.1950	1046.	725.	-1363.	-378.	-1834.	-1255.	-.0712	-.0862	.0725	.0235	-.1183	-.1892	1520.	
.1960	898.	760.	-1252.	-630.	-1685.	-1266.	-.0650	-.0826	.0643	.0066	-.1100	-.1949	1483.	
.1970	670.	856.	-1173.	-677.	-1469.	-1074.	-.0577	-.0777	.0548	-.0081	-.1021	-.1977	1309.	
.1980	292.	859.	-1047.	-622.	-1017.	-688.	-.0494	-.0715	.0438	-.0212	-.0923	-.1968	928.	
.1990	-142.	842.	-722.	-459.	-391.	-200.	-.0396	-.0641	.0312	-.0315	-.0778	-.1915	428.	
.2000	-557.	842.	-236.	-179.	209.	328.	-.0284	-.0558	.0167	-.0376	-.0582	-.1811	319.	
.2010	-970.	754.	259.	149.	1032.	885.	-.0157	-.0470	.0005	-.0391	-.0352	-.1652	921.	
.2020	-1312.	604.	755.	535.	1811.	1436.	-.0016	-.0380	-.0173	-.0356	-.0108	-.1435	1599.	
.2030	-1543.	511.	1282.	1008.	2586.	1905.	.0137	-.0291	-.0363	-.0271	.0141	-.1165	2269.	
.2040	-1777.	467.	1747.	1477.	3389.	2225.	.0296	-.0205	-.0562	-.0144	.0388	-.0857	2908.	
.2050	-2049.	459.	2086.	1895.	4182.	2366.	.0456	-.0125	-.0764	.0014	.0619	-.0522	3482.	
.2060	-2246.	558.	2351.	2291.	4860.	2303.	.0612	-.0053	-.0959	.0192	.0823	-.0170	3940.	
.2070	-2341.	756.	2537.	2620.	5405.	2014.	.0759	.0009	-.1139	.0375	.0992	.0186	4270.	
.2080	-2392.	958.	2566.	2790.	5800.	1504.	.0890	.0061	-.1297	.0547	.1122	.0529	4455.	
.2090	-2356.	1157.	2476.	2805.	5925.	795.	.0999	.0104	-.1425	.0697	.1221	.0847	4451.	
.2100	-2170.	1362.	2405.	2662.	5763.	-95.	.1083	.0136	-.1517	.0815	.1306	.1131	4279.	
.2110	-1896.	1492.	2349.	2310.	5434.	-1105.	.1141	.0157	-.1573	.0893	.1381	.1369	4049.	
.2120	-1578.	1553.	2211.	1841.	4931.	-2126.	.1170	.0169	-.1592	.0937	.1426	.1554	3826.	
.2130	-1201.	1639.	1998.	1401.	4205.	-3067.	.1171	.0170	-.1573	.0960	.1434	.1680	3633.	
.2140	-850.	1730.	1784.	973.	3446.	-3876.	.1144	.0161	-.1524	.0963	.1422	.1743	3557.	
.2150	-629.	1760.	1580.	542.	2839.	-4478.	.1093	.0142	-.1447	.0948	.1392	.1740	3593.	
.2160	-496.	1785.	1342.	258.	2307.	-4779.	.1018	.0115	-.1347	.0930	.1322	.1675	3581.	
.2170	-386.	1842.	1070.	185.	1790.	-4749.	.0922	.0079	-.1224	.0921	.1208	.1554	3423.	
.2180	-331.	1816.	792.	169.	1409.	-4424.	.0809	.0037	-.1085	.0914	.1077	.1379	3132.	
.2190	-317.	1643.	539.	136.	1155.	-3833.	.0681	-.0009	-.0928	.0903	.0942	.1158	2700.	
.2200	-254.	1391.	334.	160.	855.	-2996.	.0537	-.0059	-.0754	.0890	.0792	.0896	2103.	
.2210	-148.	1066.	171.	199.	504.	-1981.	.0379	-.0111	-.0563	.0866	.0630	.0597	1384.	
.2220	-60.	628.	14.	129.	186.	-878.	.0210	-.0163	-.0358	.0818	.0464	.0266	611.	
.2230	41.	153.	-156.	-14.	-187.	251.	.0030	-.0215	-.0139	.0745	.0288	-.0091	211.	

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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

.2120	-157.	153.	199.	141.	425.	-212.	.117	.017	-.157	.096	.143	.168	363.
.2130	-120.	163.	199.	140.	420.	-306.	.117	.017	-.157	.096	.143	.168	363.
.2140	-85.	173.	178.	97.	344.	-387.	.114	.016	-.152	.096	.142	.174	355.
.2150	-62.	176.	158.	54.	283.	-447.	.109	.014	-.144	.094	.139	.174	359.
.2160	-49.	178.	134.	25.	270.	-477.	.101	.011	-.134	.093	.132	.167	358.
.2170	-38.	184.	107.	19.	179.	-474.	.092	.007	-.122	.092	.120	.155	342.
.2180	-33.	181.	79.	16.	140.	-442.	.080	.003	-.108	.091	.107	.137	313.
.2190	-31.	164.	53.	17.	115.	-383.	.068	-.000	-.092	.090	.094	.115	270.
.2200	-25.	139.	33.	16.	85.	-296.	.053	-.005	-.075	.089	.079	.089	210.
.2210	-14.	106.	17.	19.	50.	-198.	.037	-.011	-.056	.086	.053	.059	138.
.2220	-6.	62.	14.	12.	18.	-87.	.021	-.016	-.035	.081	.046	.026	61.
.2230	4.	15.	-15.	-14.	-18.	25.	.003	-.021	-.013	.074	.028	-.009	21.

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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

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)	
.2240	164.	-255.	-330.	-165.	-691.	1350.	-.0157	-.0265	.0092	.0646	.0095	-.0464	1028.	
.2250	211.	-605.	-501.	-386.	-1196.	2338.	-.0348	-.0311	.0327	.0515	-.0110	-.0848	1789.	
.2260	156.	-903.	-680.	-703.	-1636.	3160.	-.0537	-.0354	.0560	.0353	-.0322	-.1230	2445.	
.2270	107.	-1094.	-892.	-1028.	-2127.	3801.	-.0717	-.0393	.0784	.0179	-.0547	-.1588	3016.	
.2280	118.	-1191.	-1143.	-1355.	-2694.	4234.	-.0880	-.0427	.0990	.0006	-.0775	-.1905	3504.	
.2290	150.	-1273.	-1396.	-1767.	-3206.	4424.	-.1019	-.0455	.1168	-.0158	-.0981	-.2166	3871.	
.2300	218.	-1352.	-1593.	-2231.	-3631.	4382.	-.1127	-.0475	.1310	-.0299	-.1155	-.2357	4120.	
.2310	328.	-1402.	-1739.	-2637.	-4007.	4159.	-.1200	-.0489	.1410	-.0401	-.1303	-.2466	4279.	
.2320	616.	-1444.	-1886.	-2966.	-4277.	3799.	-.1235	-.0495	.1464	-.0451	-.1429	-.2485	4343.	
.2330	892.	-1482.	-2045.	-3220.	-4376.	3325.	-.1231	-.0494	.1471	-.0448	-.1522	-.2416	4294.	
.2340	1181.	-1468.	-2180.	-3351.	-4337.	2775.	-.1190	-.0484	.1432	-.0389	-.1578	-.2266	4141.	
.2350	1429.	-1393.	-2278.	-3349.	-4190.	2189.	-.1118	-.0466	.1353	-.0283	-.1591	-.2047	3905.	
.2360	1594.	-1279.	-2340.	-3265.	-3937.	1585.	-.1022	-.0439	.1242	-.0144	-.1552	-.1773	3609.	
.2370	1693.	-1119.	-2362.	-3119.	-3637.	979.	-.0906	-.0403	.1106	.0017	-.1455	-.1458	3296.	
.2380	1745.	-912.	-2343.	-2902.	-3369.	403.	-.0779	-.0358	.0956	.0186	-.1304	-.1117	3010.	
.2390	1722.	-702.	-2283.	-2642.	-3137.	-111.	-.0647	-.0303	.0799	.0347	-.1107	-.0767	2765.	
.2400	1623.	-510.	-2137.	-2362.	-2923.	-549.	-.0514	-.0241	.0643	.0484	-.0867	-.0423	2560.	
.2410	1478.	-331.	-1870.	-2062.	-2735.	-904.	-.0385	-.0172	.0493	.0589	-.0591	-.0095	2388.	
.2420	1289.	-187.	-1525.	-1744.	-2550.	-1154.	-.0262	-.0097	.0349	.0658	-.0295	.0209	2223.	
.2430	1048.	-89.	-1166.	-1394.	-2329.	-1280.	-.0145	-.0019	.0214	.0692	-.0003	.0483	2023.	
.2440	786.	0.	-794.	-982.	-2059.	-1281.	-.0035	.0060	.0087	.0692	.0267	.0722	1764.	
.2450	517.	81.	-400.	-526.	-1724.	-1177.	.0069	.0138	-.0033	.0662	.0508	.0925	1451.	
.2460	222.	118.	-13.	-88.	-1300.	-995.	.0168	.0213	-.0147	.0601	.0721	.1090	1105.	
.2470	-78.	123.	335.	317.	-806.	-766.	.0262	.0284	-.0257	.0516	.0900	.1217	779.	
.2480	-335.	133.	647.	718.	-267.	-512.	.0350	.0348	-.0361	.0409	.1032	.1309	621.	
.2490	-542.	127.	918.	1102.	332.	-248.	.0432	.0405	-.0457	.0280	.1109	.1365	794.	
.2500	-711.	81.	1127.	1439.	977.	5.	.0507	.0454	-.0545	.0126	.1130	.1387	1173.	
.2510	-820.	29.	1300.	1727.	1607.	207.	.0573	.0494	-.0620	-.0052	.1105	.1376	1596.	
.2520	-879.	-6.	1472.	1953.	2209.	322.	.0627	.0525	-.0681	-.0252	.1044	.1333	1999.	
.2530	-929.	-48.	1628.	2102.	2811.	351.	.0668	.0547	-.0726	-.0474	.0949	.1259	2377.	
.2540	-964.	-72.	1727.	2221.	3353.	312.	.0695	.0560	-.0752	-.0710	.0814	.1160	2719.	
.2550	-990.	-27.	1768.	2342.	3750.	196.	.0706	.0563	-.0759	-.0948	.0650	.1042	2983.	
.2560	-924.	63.	1777.	2405.	4022.	-18.	.0704	.0557	-.0749	-.1180	.0488	.0911	3159.	
.2570	-944.	150.	1767.	2373.	4214.	-319.	.0689	.0543	-.0725	-.1398	.0347	.0772	3267.	
.2580	-970.	273.	1741.	2341.	4275.	-661.	.0663	.0521	-.0689	-.1587	.0223	.0635	3316.	
.2590	-952.	459.	1700.	2383.	4193.	-1004.	.0628	.0491	-.0643	-.1735	.0113	.0508	3320.	
.2600	-929.	641.	1637.	2466.	4064.	-1326.	.0589	.0455	-.0597	-.1835	.0028	.0399	3326.	
.2610	-929.	786.	1568.	2593.	3949.	-1600.	.0547	.0414	-.0539	-.1886	-.0026	.0310	3362.	

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

.2510	-920.	29.	1500.	1727.	1607.	207.	.573	.0494	-.0620	-.0052	.1105	.1376	1596.
.2520	-927.	76.	1472.	1953.	2209.	322.	.627	.0525	-.0681	-.0252	.1044	.1333	1999.
.2530	-929.	-48.	1628.	2102.	2811.	351.	.668	.0547	-.0726	-.0474	.0949	.1259	2377.
.2540	-964.	-72.	1727.	2221.	3353.	312.	.695	.0560	-.0752	-.0710	.0814	.1160	2719.
.2550	-950.	-27.	1768.	2342.	3750.	196.	.706	.0563	-.0759	-.0948	.0650	.1042	2983.
.2560	-924.	63.	1777.	2405.	4022.	-18.	.704	.0557	-.0749	-.1180	.0488	.0911	3159.
.2570	-944.	150.	1767.	2373.	4214.	-319.	.689	.0543	-.0725	-.1398	.0347	.0772	3267.
.2580	-970.	273.	1741.	2341.	4276.	-661.	.663	.0521	-.0689	-.1587	.0223	.0635	3316.
.2590	-952.	459.	1700.	2383.	4193.	-1004.	.628	.0491	-.0643	-.1735	.0113	.0508	3320.
.2600	-929.	641.	1637.	2466.	4064.	-1326.	.589	.0455	-.0592	-.1835	.0028	.0399	3326.
.2610	-929.	736.	1568.	2593.	3949.	-1600.	.547	.0414	-.0539	-.1886	-.0026	.0310	3362.

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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	5	MEMBER	1	SEQUENCE	804	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)		
.2620	-923.	940.	1535.	2848.	3835.	-1795.	.0504	.0369	-.0487	-.1885	-.0060	.0245	3439.		
.2630	-911.	1100.	1549.	3246.	3764.	-1893.	.0460	.0320	-.0434	-.1837	-.0086	.0201	3585.		
.2640	-917.	1216.	1579.	3723.	3787.	-1897.	.0415	.0271	-.0381	-.1754	-.0106	.0179	3801.		
.2650	-912.	1304.	1594.	4255.	3831.	-1826.	.0369	.0221	-.0326	-.1639	-.0124	.0172	4051.		
.2660	-871.	1396.	1594.	4807.	3819.	-1711.	.0320	.0174	-.0267	-.1504	-.0144	.0177	4296.		
.2670	-826.	1458.	1590.	5270.	3761.	-1593.	.0266	.0129	-.0201	-.1365	-.0162	.0185	4494.		
.2680	-782.	1468.	1569.	5560.	3630.	-1500.	.0206	.0090	-.0126	-.1233	-.0180	.0190	4588.		
.2690	-688.	1458.	1489.	5657.	3325.	-1452.	.0138	.0057	-.0040	-.1110	-.0205	.0190	4530.		
.2700	-529.	1432.	1309.	5526.	2819.	-1463.	.0064	.0030	.0055	-.1000	-.0240	.0182	4296.		
.2710	-337.	1352.	1034.	5122.	2171.	-1532.	-.0015	.0011	.0158	-.0907	-.0285	.0164	3889.		
.2720	-112.	1215.	699.	4469.	1410.	-1632.	-.0099	-.0001	.0268	-.0831	-.0343	.0137	3344.		
.2730	165.	1035.	312.	3626.	538.	-1728.	-.0186	-.0004	.0382	-.0768	-.0419	.0102	2731.		
.2740	485.	792.	-149.	2613.	-407.	-1793.	-.0272	.0001	.0495	-.0712	-.0507	.0063	2154.		
.2750	839.	472.	-661.	1462.	-1381.	-1799.	-.0354	.0014	.0605	-.0659	-.0595	.0022	1819.		
.2760	1215.	89.	-1159.	251.	-2347.	-1709.	-.0431	.0034	.0707	-.0608	-.0574	-.0019	1964.		
.2770	1569.	-345.	-1605.	-946.	-3247.	-1491.	-.0502	.0061	.0800	-.0558	-.0740	-.0058	2491.		
.2780	1858.	-814.	-1991.	-2063.	-4020.	-1125.	-.0565	.0094	.0882	-.0508	-.0788	-.0096	3139.		
.2790	2073.	-1285.	-2303.	-3025.	-4642.	-602.	-.0618	.0133	.0950	-.0459	-.0815	-.0131	3757.		
.2800	2202.	-1730.	-2520.	-3773.	-5084.	73.	-.0661	.0175	.1004	-.0412	-.0822	-.0162	4267.		
.2810	2213.	-2138.	-2629.	-4277.	-5309.	879.	-.0694	.0221	.1044	-.0371	-.0812	-.0187	4633.		
.2820	2099.	-2490.	-2619.	-4532.	-5321.	1771.	-.0716	.0268	.1069	-.0340	-.0783	-.0207	4860.		
.2830	1898.	-2772.	-2496.	-4557.	-5169.	2684.	-.0727	.0316	.1080	-.0320	-.0736	-.0217	4985.		
.2840	1652.	-2992.	-2295.	-4411.	-4905.	3548.	-.0725	.0362	.1075	-.0309	-.0667	-.0213	5049.		
.2850	1391.	-3155.	-2040.	-4154.	-4580.	4289.	-.0710	.0405	.1054	-.0307	-.0578	-.0190	5072.		
.2860	1142.	-3248.	-1749.	-3828.	-4245.	4842.	-.0680	.0445	.1017	-.0311	-.0472	-.0146	5050.		
.2870	919.	-3262.	-1443.	-3480.	-3923.	5153.	-.0636	.0479	.0963	-.0320	-.0350	-.0079	4955.		
.2880	733.	-3203.	-1154.	-3145.	-3612.	5189.	-.0577	.0508	.0891	-.0331	-.0221	.0013	4760.		
.2890	662.	-3059.	-908.	-2824.	-3320.	4947.	-.0502	.0529	.0800	-.0340	-.0094	.0131	4444.		
.2900	522.	-2816.	-715.	-2497.	-3033.	4440.	-.0412	.0542	.0691	-.0344	.0021	.0271	3996.		
.2910	466.	-2487.	-568.	-2161.	-2710.	3696.	-.0309	.0548	.0566	-.0345	.0118	.0430	3415.		
.2920	429.	-2090.	-450.	-1811.	-2330.	2758.	-.0196	.0546	.0427	-.0344	.0198	.0603	2722.		
.2930	423.	-1639.	-337.	-1426.	-1902.	1680.	-.0074	.0538	.0277	-.0343	.0261	.0785	1962.		
.2940	437.	-1156.	-215.	-1001.	-1420.	522.	.0054	.0524	.0120	-.0342	.0310	.0969	1223.		
.2950	444.	-672.	-76.	-533.	-865.	-653.	.0182	.0505	-.0039	-.0346	.0348	.1146	814.		
.2960	436.	-193.	97.	-3.	-246.	-1777.	.0307	.0483	-.0195	-.0355	.0375	.1308	1209.		
.2970	411.	272.	320.	598.	423.	-2791.	.0426	.0457	-.0344	-.0372	.0393	.1449	1945.		
.2980	338.	703.	589.	1250.	1150.	-3649.	.0534	.0430	-.0482	-.0398	.0406	.1561	2713.		
.2990	198.	1095.	887.	1941.	1931.	-4316.	.0628	.0402	-.0605	-.0433	.0413	.1637	3446.		

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.2890	602.	-3059.	-908.	-2824.	-3320.	4947.	-0502	.0529	.0800	-.0340	-.0094	.0131	4444.
.2900	522.	-2816.	-715.	-2497.	-3033.	4440.	-.0412	.0542	.0691	-.0344	.0021	.0271	3996.
.2910	466.	-2487.	-568.	-2161.	-2710.	3696.	-.0309	.0548	.0566	-.0345	.0118	.0430	3415.
.2920	429.	-2090.	-450.	-1811.	-2330.	2758.	-.0196	.0546	.0427	-.0344	.0198	.0603	2722.
.2930	423.	-1639.	-337.	-1426.	-1902.	1680.	-.0074	.0538	.0277	-.0343	.0261	.0785	1962.
.2940	437.	-1156.	-215.	-1001.	-1420.	522.	.0054	.0524	.0120	-.0342	.0310	.0969	1223.
.2950	444.	-672.	-76.	-533.	-865.	-653.	.0182	.0505	-.0039	-.0346	.0348	.1146	814.
.2960	436.	-193.	97.	-3.	-246.	-1777.	.0307	.0483	-.0195	-.0355	.0375	.1308	1209.
.2970	411.	272.	320.	596.	423.	-2791.	.0426	.0457	-.0344	-.0372	.0393	.1449	1945.
.2980	338.	703.	589.	1250.	1150.	-3649.	.0534	.0430	-.0482	-.0398	.0406	.1561	2713.
.2990	198.	1095.	887.	1941.	1931.	-4316.	.0628	.0402	-.0605	-.0433	.0413	.1637	3446.

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

SECTION	5	MEMBER	1	SEQUENCE	804	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)	
.3000	2.	1455.	1201.	2671.	2728.	-4765.	.0706	.0374	-.0709	-.0475	.0409	.1675	4115.	
.3010	-235.	1770.	1522.	3407.	3507.	-4985.	.0765	.0347	-.0793	-.0522	.0395	.1674	4707.	
.3020	-505.	2008.	1830.	4083.	4246.	-4993.	.0806	.0321	-.0855	-.0575	.0375	.1634	5205.	
.3030	-772.	2165.	2106.	4650.	4890.	-4816.	.0827	.0296	-.0894	-.0628	.0354	.1557	5588.	
.3040	-1029.	2242.	2338.	5079.	5385.	-4486.	.0829	.0273	-.0910	-.0679	.0330	.1449	5834.	
.3050	-1228.	2224.	2514.	5329.	5712.	-4036.	.0813	.0252	-.0904	-.0725	.0305	.1315	5926.	
.3060	-1370.	2105.	2620.	5371.	5865.	-3502.	.0781	.0233	-.0878	-.0764	.0280	.1161	5857.	
.3070	-1444.	1912.	2641.	5212.	5827.	-2920.	.0735	.0215	-.0834	-.0791	.0251	.0994	5626.	
.3080	-1452.	1670.	2575.	4869.	5604.	-2323.	.0677	.0198	-.0775	-.0802	.0219	.0818	5243.	
.3090	-1413.	1386.	2430.	4352.	5232.	-1733.	.0608	.0183	-.0703	-.0797	.0183	.0640	4734.	
.3100	-1338.	1077.	2217.	3691.	4741.	-1169.	.0532	.0168	-.0621	-.0773	.0144	.0466	4126.	
.3110	-1227.	770.	1939.	2930.	4142.	-647.	.0450	.0152	-.0534	-.0726	.0101	.0302	3447.	
.3120	-1086.	476.	1601.	2103.	3455.	-177.	.0366	.0136	-.0443	-.0652	.0058	.0153	2729.	
.3130	-921.	188.	1226.	1231.	2715.	234.	.0282	.0118	-.0351	-.0552	.0019	.0023	2015.	
.3140	-734.	-92.	844.	351.	1945.	587.	.0200	.0099	-.0261	-.0425	-.0012	-.0083	1390.	
.3150	-525.	-355.	471.	-500.	1163.	824.	.0121	.0078	-.0175	-.0272	-.0033	-.0165	1041.	
.3160	-305.	-598.	110.	-1293.	394.	1130.	.0046	.0055	-.0094	-.0094	-.0045	-.0221	1187.	
.3170	-81.	-820.	-228.	-2003.	-338.	1333.	-.0024	.0029	-.0019	.0105	-.0046	-.0254	1637.	
.3180	137.	-1013.	-535.	-2608.	-1018.	1499.	-.0088	.0000	.0050	.0319	-.0040	-.0267	2140.	
.3190	337.	-1163.	-801.	-3095.	-1634.	1632.	-.0147	-.0031	.0113	.0543	-.0027	-.0264	2603.	
.3200	503.	-1267.	-1029.	-3471.	-2183.	1729.	-.0202	-.0065	.0170	.0770	-.0007	-.0250	2999.	
.3210	633.	-1325.	-1220.	-3749.	-2669.	1788.	-.0252	-.0101	.0222	.0993	.0018	-.0231	3328.	
.3220	734.	-1340.	-1383.	-3945.	-3105.	1807.	-.0299	-.0140	.0269	.1206	.0047	-.0211	3597.	
.3230	814.	-1316.	-1526.	-4078.	-3503.	1787.	-.0342	-.0180	.0311	.1404	.0078	-.0195	3819.	
.3240	878.	-1262.	-1647.	-4172.	-3873.	1726.	-.0381	-.0221	.0349	.1582	.0109	-.0186	4010.	
.3250	930.	-1191.	-1742.	-4251.	-4211.	1625.	-.0416	-.0263	.0382	.1736	.0140	-.0188	4179.	
.3260	974.	-1114.	-1823.	-4329.	-4512.	1492.	-.0447	-.0306	.0409	.1864	.0170	-.0203	4333.	
.3270	1019.	-1031.	-1900.	-4404.	-4773.	1343.	-.0472	-.0348	.0429	.1965	.0191	-.0232	4470.	
.3280	1066.	-943.	-1971.	-4465.	-4979.	1192.	-.0492	-.0390	.0442	.2040	.0200	-.0277	4579.	
.3290	1101.	-857.	-2031.	-4513.	-5105.	1056.	-.0506	-.0432	.0447	.2087	.0198	-.0338	4647.	
.3300	1112.	-775.	-2077.	-4541.	-5134.	946.	-.0514	-.0472	.0444	.2108	.0182	-.0417	4663.	
.3310	1101.	-691.	-2107.	-4531.	-5065.	875.	-.0517	-.0511	.0433	.2101	.0154	-.0512	4618.	
.3320	1067.	-603.	-2114.	-4471.	-4896.	853.	-.0513	-.0549	.0414	.2068	.0114	-.0624	4506.	
.3330	1000.	-520.	-2092.	-4356.	-4621.	884.	-.0504	-.0584	.0388	.2007	.0065	-.0750	4322.	
.3340	898.	-438.	-2030.	-4178.	-4249.	966.	-.0491	-.0616	.0357	.1920	.0011	-.0888	4069.	
.3350	763.	-352.	-1915.	-3929.	-3793.	1089.	-.0474	-.0645	.0320	.1807	-.0044	-.1037	3754.	
.3360	592.	-261.	-1745.	-3611.	-3254.	1245.	-.0452	-.0672	.0280	.1669	-.0097	-.1191	3382.	
.3370	384.	-166.	-1526.	-3218.	-2638.	1423.	-.0427	-.0694	.0236	.1511	-.0147	-.1347	2965.	

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

.3270	1019.	-1031.	1500.	-4404.	-4773.	1343.	-.472	-.0348	.0429	.1965	.0191	-.0232	4470.
.3280	1066.	-943.	-1971.	-4465.	-4979.	1192.	-.492	-.0390	.0442	.2040	.0200	-.0277	4579.
.3290	1101.	-857.	-2031.	-4513.	-5105.	1056.	-.0506	-.0432	.0447	.2087	.0198	-.0338	4647.
.3300	1112.	-775.	-2077.	-4541.	-5134.	946.	-.0514	-.0472	.0444	.2108	.0182	-.0417	4663.
.3310	1101.	-691.	-2107.	-4531.	-5065.	875.	-.0517	-.0511	.0433	.2101	.0154	-.0512	4618.
.3320	1067.	-603.	-2114.	-4471.	-4890.	853.	-.0513	-.0549	.0414	.2068	.0114	-.0624	4506.
.3330	1000.	-520.	-2092.	-4356.	-4621.	884.	-.0504	-.0584	.0388	.2007	.0065	-.0750	4322.
.3340	898.	-438.	-2030.	-4178.	-4249.	966.	-.0491	-.0616	.0357	.1920	.0011	-.0888	4069.
.3350	763.	-352.	-1915.	-3929.	-3793.	1089.	-.0474	-.0645	.0320	.1807	-.0044	-.1037	3754.
.3360	592.	-261.	-1745.	-3611.	-3254.	1245.	-.0452	-.0672	.0280	.1609	-.0097	-.1111	3382.
.3370	384.	-166.	-1526.	-3218.	-2638.	1423.	-.0427	-.0694	.0236	.1511	-.0147	-.1347	2965.

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

SECTION	5	MEMBER	1	SEQUENCE	804	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)		
.3380	150.	-51.	-1263.	-2744.	-1768.	1607.	-.0398	-.0714	.0189	.1337	-.0194	-.1498	2521.		
.3390	-106.	89.	-962.	-2200.	-1258.	1776.	-.0365	-.0730	.0138	.1153	-.0235	-.1639	2086.		
.3400	-384.	248.	-634.	-1614.	-517.	1905.	-.0327	-.0743	.0082	.0966	-.0267	-.1763	1719.		
.3410	-667.	428.	-295.	-1004.	227.	1974.	-.0283	-.0752	.0021	.0785	-.0286	-.1863	1501.		
.3420	-933.	635.	38.	-382.	938.	1967.	-.0233	-.0759	-.0047	.0617	-.0293	-.1935	1491.		
.3430	-1172.	861.	350.	221.	1599.	1867.	-.0176	-.0762	-.0121	.0471	-.0285	-.1971	1663.		
.3440	-1378.	1093.	629.	776.	2195.	1665.	-.0112	-.0763	-.0202	.0352	-.0257	-.1970	1929.		
.3450	-1538.	1332.	869.	1274.	2709.	1363.	-.0041	-.0760	-.0291	.0263	-.0211	-.1930	2217.		
.3460	-1646.	1575.	1071.	1714.	3134.	971.	.0035	-.0755	-.0384	.0209	-.0148	-.1851	2495.		
.3470	-1712.	1812.	1230.	2092.	3484.	509.	.0116	-.0746	-.0482	.0186	-.0070	-.1737	2761.		
.3480	-1742.	2037.	1346.	2415.	3766.	2.	.0199	-.0735	-.0580	.0193	.0017	-.1593	3015.		
.3490	-1735.	2253.	1426.	2696.	3973.	-526.	.0281	-.0721	-.0677	.0226	.0110	-.1425	3256.		
.3500	-1705.	2450.	1481.	2932.	4119.	-1046.	.0359	-.0703	-.0767	.0278	.0208	-.1240	3480.		
.3510	-1666.	2616.	1519.	3119.	4216.	-1535.	.0431	-.0683	-.0849	.0343	.0308	-.1048	3683.		
.3520	-1621.	2749.	1541.	3263.	4254.	-1964.	.0494	-.0659	-.0918	.0414	.0406	-.0857	3848.		
.3530	-1564.	2846.	1545.	3363.	4221.	-2315.	.0545	-.0632	-.0971	.0487	.0497	-.0674	3958.		
.3540	-1501.	2896.	1534.	3403.	4121.	-2574.	.0581	-.0602	-.1005	.0555	.0581	-.0507	3998.		
.3550	-1439.	2888.	1509.	3370.	3959.	-2731.	.0603	-.0570	-.1020	.0616	.0655	-.0361	3959.		
.3560	-1374.	2825.	1469.	3266.	3732.	-2777.	.0607	-.0535	-.1013	.0666	.0716	-.0240	3831.		
.3570	-1301.	2709.	1405.	3093.	3439.	-2710.	.0595	-.0499	-.0986	.0704	.0759	-.0147	3613.		
.3580	-1219.	2535.	1309.	2841.	3090.	-2531.	.0568	-.0462	-.0938	.0731	.0781	-.0084	3304.		
.3590	-1124.	2304.	1183.	2511.	2690.	-2251.	.0524	-.0424	-.0871	.0745	.0783	-.0051	2907.		
.3600	-1016.	2024.	1030.	2107.	2241.	-1881.	.0467	-.0387	-.0786	.0747	.0763	-.0045	2430.		
.3610	-897.	1702.	852.	1637.	1758.	-1438.	.0398	-.0349	-.0687	.0738	.0724	-.0067	1887.		
.3620	-769.	1345.	653.	1111.	1254.	-937.	.0319	-.0313	-.0576	.0718	.0665	-.0112	1294.		
.3630	-629.	966.	436.	552.	737.	-397.	.0232	-.0278	-.0455	.0688	.0588	-.0176	676.		
.3640	-483.	580.	205.	-21.	221.	162.	.0140	-.0245	-.0327	.0650	.0494	-.0255	186.		
.3650	-339.	200.	-32.	-586.	-273.	721.	.0045	-.0215	-.0196	.0603	.0387	-.0345	652.		
.3660	-203.	-165.	-263.	-1122.	-730.	1258.	-.0051	-.0187	-.0065	.0549	.0268	-.0441	1238.		
.3670	-70.	-501.	-487.	-1607.	-1145.	1757.	-.0145	-.0162	.0065	.0489	.0141	-.0538	1781.		
.3680	62.	-801.	-705.	-2029.	-1519.	2198.	-.0235	-.0140	.0191	.0426	.0008	-.0630	2262.		
.3690	195.	-1062.	-913.	-2381.	-1856.	2562.	-.0319	-.0121	.0310	.0360	-.0125	-.0712	2669.		
.3700	329.	-1279.	-1103.	-2663.	-2158.	2832.	-.0396	-.0105	.0420	.0292	-.0251	-.0781	2997.		
.3710	465.	-1454.	-1267.	-2874.	-2430.	2998.	-.0464	-.0091	.0521	.0224	-.0366	-.0833	3243.		
.3720	603.	-1582.	-1409.	-3012.	-2678.	3053.	-.0522	-.0079	.0611	.0157	-.0467	-.0865	3408.		
.3730	742.	-1661.	-1528.	-3073.	-2905.	2999.	-.0570	-.0068	.0688	.0090	-.0552	-.0875	3494.		
.3740	875.	-1689.	-1620.	-3056.	-3103.	2842.	-.0606	-.0058	.0753	.0025	-.0619	-.0863	3505.		
.3750	989.	-1668.	-1677.	-2959.	-3259.	2592.	-.0631	-.0048	.0803	-.0040	-.0667	-.0828	3443.		

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LOADS

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

.3650	-339.	200.	-32.	-586.	-273.	721.	.0140	-.0245	-.0327	.0650	.0494	-.0255	186.
.3660	-203.	-165.	-263.	-1122.	-730.	1258.	-.0051	-.0187	-.0065	.0549	.0268	-.0441	1238.
.3670	-70.	-501.	-487.	-1607.	-1145.	1757.	-.0145	-.0162	.0065	.0489	.0141	-.0538	1781.
.3680	62.	-801.	-705.	-2029.	-1519.	2198.	-.0235	-.0140	.0191	.0426	.0008	-.0630	2262.
.3690	195.	-1062.	-913.	-2381.	-1856.	2562.	-.0319	-.0121	.0310	.0360	-.0125	-.0712	2669.
.3700	329.	-1279.	-1103.	-2663.	-2158.	2832.	-.0396	-.0105	.0420	.0292	-.0251	-.0781	2997.
.3710	465.	-1454.	-1267.	-2874.	-2430.	2998.	-.0464	-.0091	.0521	.0224	-.0366	-.0833	3243.
.3720	603.	-1582.	-1409.	-3012.	-2678.	3053.	-.0522	-.0079	.0611	.0157	-.0467	-.0865	3408.
.3730	742.	-1661.	-1528.	-3073.	-2905.	2999.	-.0570	-.0068	.0688	.0090	-.0552	-.0875	3494.
.3740	875.	-1689.	-1620.	-3056.	-3103.	2842.	-.0606	-.0058	.0753	.0025	-.0619	-.0863	3505.
.3750	989.	-1668.	-1677.	-2959.	-3259.	2592.	-.0631	-.0048	.0803	-.0040	-.0667	-.0828	3443.

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.25.56.

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

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

SECTION	5	MEMBER	1	SEQUENCE	804	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)	
.3760	1079.	-1600.	-1695.	-2779.	-3363.	2266.	-.0644	-.0037	.0840	-.0105	-.0696	-.0770	3314.	
.3770	1140.	-1486.	-1672.	-2516.	-3409.	1881.	-.0645	-.0023	.0862	-.0170	-.0708	-.0692	3125.	
.3780	1172.	-1336.	-1611.	-2179.	-3387.	1454.	-.0633	-.0007	.0869	-.0234	-.0704	-.0593	2886.	
.3790	1175.	-1160.	-1508.	-1777.	-3291.	1006.	-.0610	.0013	.0861	-.0298	-.0585	-.0475	2611.	
.3800	1149.	-967.	-1361.	-1323.	-3117.	552.	-.0574	.0038	.0838	-.0362	-.0553	-.0339	2313.	
.3810	1096.	-768.	-1176.	-874.	-2863.	108.	-.0526	.0067	.0799	-.0424	-.0610	-.0189	2011.	
.3820	1022.	-574.	-964.	-328.	-2531.	-311.	-.0468	.0101	.0746	-.0484	-.0559	-.0026	1733.	
.3830	936.	-390.	-740.	178.	-2132.	-695.	-.0399	.0141	.0679	-.0542	-.0504	.0148	1516.	
.3840	844.	-224.	-513.	666.	-1680.	-1036.	-.0321	.0186	.0600	-.0597	-.0448	.0328	1404.	
.3850	749.	-84.	-290.	1111.	-1187.	-1330.	-.0237	.0236	.0511	-.0651	-.0393	.0512	1416.	
.3860	653.	24.	-81.	1494.	-672.	-1576.	-.0148	.0291	.0415	-.0705	-.0339	.0695	1532.	
.3870	568.	97.	107.	1800.	-164.	-1773.	-.0056	.0349	.0316	-.0761	-.0288	.0873	1707.	
.3880	500.	132.	265.	2020.	309.	-1922.	.0035	.0412	.0216	-.0820	-.0240	.1042	1891.	
.3890	447.	125.	400.	2145.	731.	-2024.	.0123	.0477	.0120	-.0885	-.0192	.1198	2048.	
.3900	404.	80.	517.	2178.	1091.	-2083.	.0206	.0544	.0030	-.0959	-.0143	.1339	2160.	
.3910	365.	2.	624.	2132.	1382.	-2095.	.0281	.0612	-.0051	-.1042	-.0093	.1461	2220.	
.3920	326.	-103.	720.	2029.	1607.	-2058.	.0348	.0680	-.0122	-.1133	-.0042	.1564	2229.	
.3930	280.	-224.	809.	1895.	1776.	-1971.	.0405	.0747	-.0181	-.1230	.0009	.1648	2198.	
.3940	223.	-351.	902.	1756.	1903.	-1833.	.0452	.0811	-.0228	-.1330	.0061	.1713	2138.	
.3950	145.	-478.	1008.	1632.	2006.	-1650.	.0490	.0872	-.0265	-.1429	.0114	.1764	2068.	
.3960	45.	-601.	1124.	1539.	2100.	-1429.	.0519	.0928	-.0293	-.1521	.0167	.1802	2002.	
.3970	-65.	-712.	1243.	1490.	2183.	-1180.	.0542	.0977	-.0314	-.1599	.0220	.1832	1954.	
.3980	-173.	-806.	1357.	1490.	2269.	-920.	.0560	.1019	-.0330	-.1658	.0271	.1859	1932.	
.3990	-270.	-885.	1464.	1531.	2344.	-668.	.0573	.1052	-.0342	-.1694	.0320	.1886	1940.	
.4000	-356.	-948.	1560.	1599.	2415.	-445.	.0583	.1077	-.0351	-.1703	.0369	.1914	1975.	

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)
.0930	223.	5588.	2299.	11045.	6065.	-11355.	-.0901	.0264	.0913	.1984	.0155	-.0850	11433.

SECTION	5	MEMBER	1	SEQUENCE	22	LOCATION	DIS	TYPE	EL					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	

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ADLPIPE STRESS ANALYSIS

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

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

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)
.0930	223.	5588.	2299.	11045.	6065.	-11355.	-.0901	.0264	.0913	.1984	.0155	-.0850	11433.

SECTION	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	EL	STRESS (PSI)
5	1	22					

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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

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

SECTION	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	EL	STRESS (PSI)						
5	1	22											
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	13.	0.	9.	0.	0.	0.	-.0000	.0000	-.0000	-.0000	.0000	.0000	0.
.0020	75.	0.	52.	0.	0.	0.	-.0000	.0000	-.0001	-.0001	.0002	.0001	0.
.0030	166.	0.	114.	0.	0.	0.	.0000	.0000	-.0002	-.0004	.0006	.0005	0.
.0040	266.	0.	184.	0.	0.	0.	.0001	-.0000	-.0005	-.0010	.0014	.0013	0.
.0050	417.	0.	288.	0.	0.	0.	.0003	-.0000	-.0009	-.0019	.0025	.0026	0.
.0060	670.	0.	463.	0.	0.	0.	.0006	.0000	-.0017	-.0033	.0038	.0047	0.
.0070	1016.	0.	702.	0.	0.	0.	.0010	.0000	-.0028	-.0053	.0058	.0078	0.
.0080	1401.	0.	968.	0.	0.	0.	.0018	.0001	-.0044	-.0080	.0093	.0126	0.
.0090	1766.	0.	1220.	0.	0.	0.	.0031	.0002	-.0067	-.0112	.0159	.0196	0.
.0100	2132.	0.	1473.	0.	0.	0.	.0050	.0004	-.0100	-.0148	.0258	.0288	0.
.0110	2485.	0.	1717.	0.	0.	0.	.0076	.0008	-.0142	-.0187	.0375	.0399	0.
.0120	2746.	0.	1897.	0.	0.	0.	.0109	.0013	-.0193	-.0224	.0493	.0522	0.
.0130	2924.	0.	2020.	0.	0.	0.	.0148	.0019	-.0251	-.0254	.0609	.0652	0.
.0140	3110.	0.	2148.	0.	0.	0.	.0193	.0027	-.0320	-.0277	.0725	.0784	0.
.0150	3365.	0.	2325.	0.	0.	0.	.0244	.0037	-.0396	-.0293	.0834	.0912	0.
.0160	3762.	0.	2599.	0.	0.	0.	.0299	.0047	-.0480	-.0309	.0933	.1035	0.
.0170	4311.	0.	2979.	0.	0.	0.	.0356	.0057	-.0570	-.0331	.1017	.1151	0.
.0180	4793.	0.	3311.	0.	0.	0.	.0414	.0067	-.0660	-.0363	.1062	.1255	0.
.0190	4923.	0.	3401.	0.	0.	0.	.0470	.0077	-.0744	-.0399	.1056	.1338	0.
.0200	4544.	0.	3140.	0.	0.	0.	.0522	.0087	-.0813	-.0419	.1038	.1392	0.
.0210	3734.	0.	2580.	0.	0.	0.	.0570	.0101	-.0873	-.0395	.1135	.1416	0.
.0220	2548.	0.	1761.	0.	0.	0.	.0618	.0118	-.0927	-.0325	.1350	.1394	0.
.0230	1033.	0.	713.	0.	0.	0.	.0653	.0135	-.0958	-.0229	.1502	.1283	0.
.0240	-71.	0.	-49.	0.	0.	0.	.0665	.0149	-.0961	-.0122	.1555	.1077	0.
.0250	-675.	0.	-466.	0.	0.	0.	.0661	.0155	-.0949	-.0017	.1518	.0786	0.
.0260	-1681.	0.	-1161.	0.	0.	0.	.0644	.0148	-.0910	.0056	.1232	.0396	0.
.0270	-2909.	0.	-2010.	0.	0.	0.	.0597	.0129	-.0827	.0098	.0693	-.0083	0.
.0280	-2736.	0.	-1890.	0.	0.	0.	.0523	.0102	-.0722	.0162	.0256	-.0597	0.
.0290	-1436.	0.	-992.	0.	0.	0.	.0446	.0066	-.0628	.0266	.0113	-.1100	0.
.0300	-1585.	0.	-1095.	0.	0.	0.	.0376	.0018	-.0525	.0353	.0045	-.1571	0.
.0310	-1686.	0.	-1165.	0.	0.	0.	.0285	-.0045	-.0391	.0376	-.0209	-.2000	0.
.0320	-1113.	0.	-769.	0.	0.	0.	.0173	-.0125	-.0236	.0366	-.0714	-.2375	0.
.0330	-1606.	0.	-1110.	0.	0.	0.	.0078	-.0223	-.0092	.0382	-.1148	-.2642	0.
.0340	-2743.	0.	-1895.	0.	0.	0.	-.0000	-.0333	.0035	.0420	-.1384	-.2780	0.
.0350	-2194.	0.	-1516.	0.	0.	0.	-.0094	-.0448	.0164	.0433	-.1679	-.2843	0.
.0360	-1242.	0.	-858.	0.	0.	0.	-.0206	-.0573	.0313	.0432	-.2146	-.2853	0.
.0370	-2543.	0.	-1757.	0.	0.	0.	-.0308	-.0711	.0478	.0478	-.2513	-.2769	0.

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ADLPIPE STRESS ANALYSIS

83/12/02. 13.25.56.

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

.0270	-2909.	0.	2010.	0.	0.	0.	0.	.597	.0129	-.0827	.0098	.0693	-.0083	0.
.0280	-2736.	0.	-1890.	0.	0.	0.	0.	.523	.0102	-.0722	.0162	.0256	-.0597	0.
.0290	-1436.	0.	-992.	0.	0.	0.	0.	.0446	.0066	-.0628	.0266	.0113	-.1100	0.
.0300	-1585.	0.	-1095.	0.	0.	0.	0.	.0376	.0018	-.0525	.0353	.0045	-.1571	0.
.0310	-1486.	0.	-1165.	0.	0.	0.	0.	.0285	-.0045	-.0391	.0376	-.0209	-.2000	0.
.0320	-1113.	0.	-769.	0.	0.	0.	0.	.0173	-.0125	-.0236	.0366	-.0714	-.2375	0.
.0330	-1606.	0.	-1110.	0.	0.	0.	0.	.0078	-.0223	-.0092	.0382	-.1148	-.2642	0.
.0340	-2743.	0.	-1895.	0.	0.	0.	0.	-.0000	-.0333	.0035	.0420	-.1384	-.2780	0.
.0350	-2194.	0.	-1516.	0.	0.	0.	0.	-.0094	-.0448	.0164	.0433	-.1679	-.2843	0.
.0360	-1242.	0.	-858.	0.	0.	0.	0.	-.0206	-.0573	.0313	.0432	-.2146	-.2853	0.
.0370	-2543.	0.	-1757.	0.	0.	0.	0.	-.0308	-.0711	.0478	.0478	-.2513	-.2769	0.

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ADLPIPE STRESS ANALYSIS

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
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ENGLISH UNITS

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

SECTION	5	MEMBER	1	SEQUENCE	22	LOCATION	DIS	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)	
.0380	-3869.	0.	-2673.	0.	0.	0.		-.0404	-.0851	.0633	.0578	-.2605	-.2591	0.	
.0390	-2390.	0.	-1651.	0.	0.	0.		-.0525	-.0978	.0791	.0653	-.2646	-.2401	0.	
.0400	-1258.	0.	-869.	0.	0.	0.		-.0676	-.1091	.0994	.0663	-.2749	-.2241	0.	
.0410	-2695.	0.	-1862.	0.	0.	0.		-.0818	-.1188	.1218	.0653	-.2602	-.2058	0.	
.0420	-2949.	0.	-2037.	0.	0.	0.		-.0945	-.1257	.1405	.0648	-.2102	-.1851	0.	
.0430	-1238.	0.	-856.	0.	0.	0.		-.1081	-.1292	.1580	.0596	-.1594	-.1696	0.	
.0440	-1525.	0.	-1054.	0.	0.	0.		-.1214	-.1296	.1777	.0456	-.1211	-.1601	0.	
.0450	-2913.	0.	-2013.	0.	0.	0.		-.1308	-.1262	.1930	.0271	-.0742	-.1512	0.	
.0460	-1632.	0.	-1127.	0.	0.	0.		-.1356	-.1189	.1983	.0099	-.0213	-.1420	0.	
.0470	127.	0.	88.	0.	0.	0.		-.1376	-.1089	.1990	-.0042	.0061	-.1354	0.	
.0480	-1184.	0.	-818.	0.	0.	0.		-.1354	-.0968	.1975	-.0125	.0112	-.1279	0.	
.0490	-2586.	0.	-1787.	0.	0.	0.		-.1264	-.0819	.1862	-.0100	.0289	-.1127	0.	
.0500	-1112.	0.	-769.	0.	0.	0.		-.1121	-.0638	.1637	.0046	.0600	-.0905	0.	
.0510	-318.	0.	-220.	0.	0.	0.		-.0956	-.0442	.1387	.0290	.0779	-.0654	0.	
.0520	-2539.	0.	-1754.	0.	0.	0.		-.0760	-.0240	.1132	.0617	.0874	-.0357	0.	
.0530	-4303.	0.	-2973.	0.	0.	0.		-.0525	-.0026	.0815	.1001	.1110	.0013	0.	
.0540	-4074.	0.	-2815.	0.	0.	0.		-.0285	.0200	.0464	.1362	.1366	.0399	0.	
.0550	-4521.	0.	-3124.	0.	0.	0.		-.0070	.0423	.0158	.1623	.1396	.0732	0.	
.0560	-5701.	0.	-3939.	0.	0.	0.		.0130	.0637	-.0116	.1780	.1299	.1021	0.	
.0570	-5330.	0.	-3682.	0.	0.	0.		.0327	.0840	-.0406	.1853	.1281	.1299	0.	
.0580	-4246.	0.	-2933.	0.	0.	0.		.0502	.1024	-.0673	.1834	.1270	.1544	0.	
.0590	-3989.	0.	-2756.	0.	0.	0.		.0645	.1178	-.0883	.1725	.1171	.1723	0.	
.0600	-2890.	0.	-1997.	0.	0.	0.		.0776	.1301	-.1087	.1577	.1135	.1866	0.	
.0610	-174.	0.	-120.	0.	0.	0.		.0908	.1390	-.1312	.1443	.1255	.2023	0.	
.0620	1634.	0.	1129.	0.	0.	0.		.1033	.1433	-.1515	.1345	.1371	.2190	0.	
.0630	1830.	0.	1264.	0.	0.	0.		.1150	.1424	-.1687	.1293	.1392	.2345	0.	
.0640	2819.	0.	1948.	0.	0.	0.		.1267	.1372	-.1869	.1291	.1425	.2494	0.	
.0650	4832.	0.	3338.	0.	0.	0.		.1376	.1280	-.2053	.1316	.1489	.2643	0.	
.0660	5570.	0.	3848.	0.	0.	0.		.1462	.1144	-.2187	.1339	.1448	.2767	0.	
.0670	5014.	0.	3464.	0.	0.	0.		.1520	.0967	-.2263	.1347	.1285	.2836	0.	
.0680	5073.	0.	3505.	0.	0.	0.		.1542	.0761	-.2297	.1321	.1141	.2840	0.	
.0690	5749.	0.	3972.	0.	0.	0.		.1517	.0534	-.2268	.1216	.1080	.2766	0.	
.0700	5939.	0.	4103.	0.	0.	0.		.1436	.0294	-.2153	.0996	.1049	.2590	0.	
.0710	6092.	0.	4209.	0.	0.	0.		.1303	.0046	-.1964	.0661	.1012	.2300	0.	
.0720	7012.	0.	4845.	0.	0.	0.		.1123	-.0203	-.1715	.0221	.0930	.1905	0.	
.0730	8003.	0.	5529.	0.	0.	0.		.0898	-.0446	-.1401	-.0319	.0711	.1413	0.	
.0740	8201.	0.	5666.	0.	0.	0.		.0642	-.0676	-.1034	-.0931	.0347	.0837	0.	
.0750	8087.	0.	5587.	0.	0.	0.		.0378	-.0883	-.0650	-.1549	-.0027	.0216	0.	

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PRESSURE

ENGLISH UNITS

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

.0650	4832.	0.	3338.	0.	0.	0.	.1376	.1280	-.2053	.1316	.1489	.2643	0.
.0660	5570.	0.	3848.	0.	0.	0.	.1462	.1144	-.2187	.1339	.1448	.2767	0.
.0670	1014.	0.	3464.	0.	0.	0.	.1520	.0967	-.2263	.1347	.1285	.2836	0.
.0680	5073.	0.	3505.	0.	0.	0.	.1542	.0761	-.2297	.1321	.1141	.2840	0.
.0690	5749.	0.	3972.	0.	0.	0.	.1517	.0534	-.2268	.1216	.1380	.2766	0.
.0700	5939.	0.	4103.	0.	0.	0.	.1436	.0294	-.2153	.0996	.1049	.2590	0.
.0710	6092.	0.	4209.	0.	0.	0.	.1303	.0046	-.1964	.0661	.1012	.2300	0.
.0720	7012.	0.	4845.	0.	0.	0.	.1123	-.0203	-.1715	.0221	.0930	.1905	0.
.0730	8003.	0.	5529.	0.	0.	0.	.0898	-.0446	-.1401	-.0319	.0711	.1413	0.
.0740	8201.	0.	5666.	0.	0.	0.	.0642	-.0676	-.1034	-.0931	.0347	.0837	0.
.0750	8087.	0.	5587.	0.	0.	0.	.0378	-.0883	-.0650	-.1549	-.0027	.0216	0.

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

CONDITION 24
LOADS
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ENGLISH UNITS

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

SECTION	5	MEMBER	1	SEQUENCE	22	LOCATION	DIS	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)	
.0760	8324.	0.	5751.	0.	0.	0.		.0119	-.1062	-.0279	-.2104	-.0351	-.0411	0.	
.0770	8274.	0.	5716.	0.	0.	0.		-.0127	-.1211	.0079	-.2550	-.0724	-.1028	0.	
.0780	6853.	0.	4735.	0.	0.	0.		-.0348	-.1331	.0417	-.2845	-.1186	-.1609	0.	
.0790	4399.	0.	3039.	0.	0.	0.		-.0530	-.1417	.0711	-.2952	-.1589	-.2122	0.	
.0800	2374.	0.	1640.	0.	0.	0.		-.0671	-.1465	.0941	-.2856	-.1810	-.2550	0.	
.0810	1098.	0.	759.	0.	0.	0.		-.0779	-.1474	.1113	-.2585	-.1934	-.2912	0.	
.0820	-590.	0.	-407.	0.	0.	0.		-.0858	-.1449	.1249	-.2188	-.2083	-.3216	0.	
.0830	-2970.	0.	-2052.	0.	0.	0.		-.0909	-.1391	.1354	-.1701	-.2230	-.3448	0.	
.0840	-4847.	0.	-3349.	0.	0.	0.		-.0940	-.1300	.1422	-.1159	-.2290	-.3608	0.	
.0850	-5822.	0.	-4022.	0.	0.	0.		-.0960	-.1175	.1463	-.0608	-.2259	-.3718	0.	
.0860	-6774.	0.	-4680.	0.	0.	0.		-.0974	-.1023	.1496	-.0088	-.2152	-.3778	0.	
.0870	-7839.	0.	-5416.	0.	0.	0.		-.0979	-.0850	.1517	.0389	-.1935	-.3762	0.	
.0880	-8402.	0.	-5805.	0.	0.	0.		-.0975	-.0664	.1519	.0835	-.1618	-.3656	0.	
.0890	-8694.	0.	-6006.	0.	0.	0.		-.0963	-.0477	.1504	.1255	-.1261	-.3468	0.	
.0900	-9061.	0.	-6260.	0.	0.	0.		-.0939	-.0295	.1475	.1652	-.0868	-.3191	0.	
.0910	-8789.	0.	-6072.	0.	0.	0.		-.0897	-.0122	.1410	.2027	-.0403	-.2809	0.	
.0920	-7654.	0.	-5288.	0.	0.	0.		-.0831	.0033	.1301	.2384	.0074	-.2326	0.	
.0930	-6759.	0.	-4669.	0.	0.	0.		-.0747	.0164	.1168	.2721	.0436	-.1765	0.	
.0940	-6467.	0.	-4468.	0.	0.	0.		-.0647	.0266	.1019	.3025	.0667	-.1147	0.	
.0950	-5896.	0.	-4073.	0.	0.	0.		-.0530	.0344	.0842	.3280	.0872	-.0482	0.	
.0960	-4980.	0.	-3440.	0.	0.	0.		-.0400	.0402	.0642	.3460	.1109	.0198	0.	
.0970	-4463.	0.	-3083.	0.	0.	0.		-.0268	.0439	.0445	.3542	.1335	.0845	0.	
.0980	-4108.	0.	-2838.	0.	0.	0.		-.0144	.0454	.0261	.3510	.1510	.1422	0.	
.0990	-3309.	0.	-2286.	0.	0.	0.		-.0033	.0450	.0089	.3352	.1631	.1904	0.	
.1000	-2426.	0.	-1676.	0.	0.	0.		.0063	.0430	-.0060	.3054	.1690	.2266	0.	
.1010	-1601.	0.	-1106.	0.	0.	0.		.0136	.0396	-.0177	.2618	.1671	.2482	0.	
.1020	-66.	0.	-46.	0.	0.	0.		.0187	.0352	-.0270	.2067	.1594	.2547	0.	
.1030	2024.	0.	1398.	0.	0.	0.		.0219	.0302	-.0343	.1440	.1478	.2477	0.	
.1040	3361.	0.	2322.	0.	0.	0.		.0241	.0246	-.0392	.0774	.1321	.2298	0.	
.1050	3768.	0.	2604.	0.	0.	0.		.0256	.0187	-.0418	.0103	.1140	.2028	0.	
.1060	4299.	0.	2970.	0.	0.	0.		.0268	.0133	-.0443	-.0538	.0982	.1688	0.	
.1070	4905.	0.	3389.	0.	0.	0.		.0283	.0085	-.0473	-.1122	.0868	.1309	0.	
.1080	4556.	0.	3148.	0.	0.	0.		.0307	.0041	-.0502	-.1629	.0764	.0916	0.	
.1090	3208.	0.	2216.	0.	0.	0.		.0342	.0001	-.0535	-.2037	.0693	.0531	0.	
.1100	2670.	0.	1845.	0.	0.	0.		.0394	-.0030	-.0604	-.2359	.0589	.0178	0.	
.1110	3239.	0.	2238.	0.	0.	0.		.0449	-.0052	-.0691	-.2632	.0561	-.0165	0.	
.1120	3358.	0.	2320.	0.	0.	0.		.0500	-.0071	-.0767	-.2874	.0206	-.0492	0.	
.1130	2841.	0.	1963.	0.	0.	0.		.0561	-.0083	-.0847	-.3060	-.0179	-.0755	0.	

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

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

.1030	2024.	0.	1990.	0.	0.	0.	0.	.0219	.0302	-.0343	.1440	.1478	.2477	0.
.1040	3361.	0.	2322.	0.	0.	0.	0.	.0241	.0246	-.0392	.0774	.1321	.2298	0.
.1050	3768.	0.	2604.	0.	0.	0.	0.	.0256	.0187	-.0418	.0103	.1140	.2028	0.
.1060	4299.	0.	2770.	0.	0.	0.	0.	.0268	.0133	-.0443	-.0538	.0982	.1688	0.
.1070	4905.	0.	3389.	0.	0.	0.	0.	.0283	.0085	-.0473	-.1122	.0868	.1309	0.
.1080	4556.	0.	3148.	0.	0.	0.	0.	.0307	.0041	-.0502	-.1629	.0764	.0916	0.
.1090	3208.	0.	2216.	0.	0.	0.	0.	.0342	.0001	-.0535	-.2037	.0593	.0531	0.
.1100	2670.	0.	1845.	0.	0.	0.	0.	.0394	-.0030	-.0604	-.2359	.0589	.0178	0.
.1110	3239.	0.	2238.	0.	0.	0.	0.	.0449	-.0052	-.0691	-.2632	.0561	-.0165	0.
.1120	3358.	0.	2320.	0.	0.	0.	0.	.0500	-.0071	-.0767	-.2874	.0206	-.0492	0.
.1130	2841.	0.	1963.	0.	0.	0.	0.	.0561	-.0083	-.0847	-.3060	-.0179	-.0755	0.

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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	DIS	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)
.1140	3127.	0.	2160.	0.	0.	0.	.0631	-.0086	-.0953	-.3171	-.0443	-.0936	0.
.1150	4118.	0.	2845.	0.	0.	0.	.0695	-.0078	-.1058	-.3225	-.0569	-.1057	0.
.1160	4394.	0.	3036.	0.	0.	0.	.0745	-.0062	-.1134	-.3239	-.0905	-.1116	0.
.1170	4315.	0.	2981.	0.	0.	0.	.0792	-.0039	-.1201	-.3195	-.1065	-.1087	0.
.1180	4608.	0.	3184.	0.	0.	0.	.0835	-.0013	-.1268	-.3079	-.1124	-.0968	0.
.1190	5199.	0.	3592.	0.	0.	0.	.0854	.0012	-.1302	-.2910	-.1295	-.0813	0.
.1200	4894.	0.	3381.	0.	0.	0.	.0845	.0033	-.1286	-.2699	-.1558	-.0630	0.
.1210	3992.	0.	2758.	0.	0.	0.	.0829	.0054	-.1251	-.2424	-.1619	-.0379	0.
.1220	4741.	0.	3275.	0.	0.	0.	.0799	.0076	-.1218	-.2087	-.1498	-.0094	0.
.1230	5524.	0.	3817.	0.	0.	0.	.0738	.0094	-.1138	-.1720	-.1406	.0177	0.
.1240	4917.	0.	3397.	0.	0.	0.	.0644	.0105	-.0994	-.1351	-.1402	.0417	0.
.1250	4068.	0.	2811.	0.	0.	0.	.0538	.0116	-.0830	-.0979	-.1283	.0651	0.
.1260	3696.	0.	2554.	0.	0.	0.	.0422	.0131	-.0658	-.0618	-.0979	.0866	0.
.1270	3382.	0.	2337.	0.	0.	0.	.0275	.0146	-.0441	-.0300	-.0714	.0998	0.
.1280	1992.	0.	1376.	0.	0.	0.	.0108	.0161	-.0182	-.0026	-.0447	.1062	0.
.1290	896.	0.	619.	0.	0.	0.	-.0054	.0178	.0067	.0219	-.0052	.1092	0.
.1300	464.	0.	321.	0.	0.	0.	-.0217	.0196	.0308	.0425	.0362	.1071	0.
.1310	-739.	0.	-510.	0.	0.	0.	-.0387	.0212	.0570	.0575	.0531	.0975	0.
.1320	-1786.	0.	-1234.	0.	0.	0.	-.0557	.0226	.0829	.0683	.0758	.0814	0.
.1330	-2249.	0.	-1554.	0.	0.	0.	-.0703	.0241	.1046	.0778	.0909	.0645	0.
.1340	-2850.	0.	-1969.	0.	0.	0.	-.0829	.0256	.1236	.0866	.1020	.0472	0.
.1350	-4322.	0.	-2986.	0.	0.	0.	-.0944	.0268	.1421	.0943	.1006	.0282	0.
.1360	-5937.	0.	-4102.	0.	0.	0.	-.1035	.0283	.1574	.1016	.1003	.0099	0.
.1370	-6427.	0.	-4440.	0.	0.	0.	-.1098	.0303	.1671	.1076	.1042	-.0063	0.
.1380	-7416.	0.	-5123.	0.	0.	0.	-.1140	.0324	.1744	.1099	.1019	-.0207	0.
.1390	-9048.	0.	-6251.	0.	0.	0.	-.1168	.0342	.1806	.1070	.0827	-.0353	0.
.1400	-9736.	0.	-6727.	0.	0.	0.	-.1177	.0361	.1828	.0994	.0551	-.0493	0.
.1410	-9530.	0.	-6584.	0.	0.	0.	-.1163	.0381	.1804	.0869	.0292	-.0606	0.
.1420	-9070.	0.	-6266.	0.	0.	0.	-.1134	.0400	.1757	.0686	-.0033	-.0707	0.
.1430	-8906.	0.	-6153.	0.	0.	0.	-.1090	.0417	.1691	.0465	-.0378	-.0787	0.
.1440	-7990.	0.	-5520.	0.	0.	0.	-.1023	.0433	.1582	.0237	-.0650	-.0828	0.
.1450	-6443.	0.	-4451.	0.	0.	0.	-.0934	.0448	.1433	.0009	-.0849	-.0820	0.
.1460	-5600.	0.	-3869.	0.	0.	0.	-.0827	.0460	.1268	-.0225	-.1028	-.0764	0.
.1470	-4816.	0.	-3327.	0.	0.	0.	-.0704	.0469	.1081	-.0451	-.1199	-.0665	0.
.1480	-3673.	0.	-2538.	0.	0.	0.	-.0559	.0476	.0857	-.0646	-.1254	-.0506	0.
.1490	-2246.	0.	-1552.	0.	0.	0.	-.0401	.0479	.0608	-.0812	-.1253	-.0295	0.
.1500	-1137.	0.	-785.	0.	0.	0.	-.0239	.0477	.0360	-.0967	-.1301	-.0053	0.
.1510	-486.	0.	-336.	0.	0.	0.	-.0073	.0470	.0112	-.1107	-.1334	.0226	0.

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ADLPIPE STRESS ANALYSIS

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

CONDITION 24

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ENGLISH UNITS

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

.1400	-7730.	0.	-727.	0.	0.	0.	0.	-.1177	.0361	.1828	.0994	.0551	-.0493	0.
.1410	-9530.	0.	-6584.	0.	0.	0.	0.	-.1163	.0381	.1804	.0869	.0292	-.0606	0.
.1420	-9070.	0.	-6266.	0.	0.	0.	0.	-.1134	.0400	.1757	.0086	-.0333	-.0707	0.
.1430	-8906.	0.	-6153.	0.	0.	0.	0.	-.1050	.0417	.1691	.0465	-.0378	-.0787	0.
.1440	-7990.	0.	-5520.	0.	0.	0.	0.	-.1023	.0433	.1582	.0237	-.0850	-.0828	0.
.1450	-6443.	0.	-4451.	0.	0.	0.	0.	-.0934	.0448	.1433	.0009	-.0849	-.0820	0.
.1460	-5600.	0.	-3869.	0.	0.	0.	0.	-.0927	.0460	.1268	-.0225	-.1028	-.0764	0.
.1470	-4816.	0.	-3327.	0.	0.	0.	0.	-.0704	.0469	.1081	-.0451	-.1199	-.0665	0.
.1480	-3673.	0.	-2538.	0.	0.	0.	0.	-.0559	.0476	.0857	-.0646	-.1254	-.0506	0.
.1490	-2246.	0.	-1552.	0.	0.	0.	0.	-.0401	.0479	.0608	-.0812	-.1253	-.0295	0.
.1500	-1137.	0.	-735.	0.	0.	0.	0.	-.0239	.0477	.0360	-.0967	-.1301	-.0053	0.
.1510	-416.	0.	-336.	0.	0.	0.	0.	-.0073	.0470	.0112	-.1107	-.1334	.0226	0.

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ADLPIPE STRESS ANALYSIS

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18.25.56.

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	5	MEMBER	1	SEQUENCE	22	LOCATION	DIS	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)	
.1520	851.	0.	588.	0.	0.	0.		.0092	.0463	-.0143	-.1224	-.1291	.0534	0.	
.1530	2405.	0.	1662.	0.	0.	0.		.0247	.0456	-.0389	-.1323	-.1167	.0859	0.	
.1540	3636.	0.	2512.	0.	0.	0.		.0385	.0448	-.0604	-.1416	-.1028	.1177	0.	
.1550	4511.	0.	3116.	0.	0.	0.		.0506	.0442	-.0790	-.1505	-.0835	.1488	0.	
.1560	5246.	0.	3625.	0.	0.	0.		.0614	.0441	-.0956	-.1585	-.0525	.1794	0.	
.1570	6476.	0.	4474.	0.	0.	0.		.0697	.0446	-.1092	-.1669	-.0231	.2057	0.	
.1580	7214.	0.	4984.	0.	0.	0.		.0756	.0454	-.1186	-.1762	-.0010	.2267	0.	
.1590	7317.	0.	5055.	0.	0.	0.		.0799	.0466	-.1249	-.1852	.0170	.2435	0.	
.1600	7807.	0.	5394.	0.	0.	0.		.0826	.0483	-.1295	-.1925	.0317	.2552	0.	
.1610	8136.	0.	5621.	0.	0.	0.		.0835	.0504	-.1312	-.1971	.0382	.2609	0.	
.1620	7420.	0.	5127.	0.	0.	0.		.0832	.0527	-.1299	-.1973	.0451	.2620	0.	
.1630	7086.	0.	4896.	0.	0.	0.		.0823	.0555	-.1281	-.1920	.0557	.2589	0.	
.1640	6938.	0.	4793.	0.	0.	0.		.0807	.0536	-.1256	-.1814	.0681	.2522	0.	
.1650	5905.	0.	4080.	0.	0.	0.		.0780	.0615	-.1205	-.1669	.0748	.2413	0.	
.1660	4757.	0.	3286.	0.	0.	0.		.0742	.0643	-.1135	-.1493	.0728	.2260	0.	
.1670	3864.	0.	2670.	0.	0.	0.		.0700	.0669	-.1062	-.1290	.0704	.2083	0.	
.1680	3084.	0.	2131.	0.	0.	0.		.0648	.0691	-.0977	-.1073	.0654	.1884	0.	
.1690	1816.	0.	1255.	0.	0.	0.		.0584	.0708	-.0868	-.0854	.0562	.1664	0.	
.1700	733.	0.	506.	0.	0.	0.		.0509	.0717	-.0746	-.0629	.0451	.1432	0.	
.1710	281.	0.	194.	0.	0.	0.		.0423	.0718	-.0616	-.0394	.0347	.1195	0.	
.1720	-860.	0.	-594.	0.	0.	0.		.0331	.0707	-.0468	-.0150	.0318	.0978	0.	
.1730	-1902.	0.	-1314.	0.	0.	0.		.0231	.0685	-.0310	.0098	.0320	.0768	0.	
.1740	-2296.	0.	-1586.	0.	0.	0.		.0125	.0650	-.0152	.0345	.0344	.0568	0.	
.1750	-2665.	0.	-1841.	0.	0.	0.		.0017	.0602	.0010	.0587	.0375	.0387	0.	
.1760	-3155.	0.	-2180.	0.	0.	0.		-.0093	.0538	.0174	.0819	.0367	.0220	0.	
.1770	-3808.	0.	-2631.	0.	0.	0.		-.0197	.0460	.0333	.1036	.0352	.0074	0.	
.1780	-3936.	0.	-2719.	0.	0.	0.		-.0296	.0372	.0478	.1230	.0316	-.0063	0.	
.1790	-4034.	0.	-2787.	0.	0.	0.		-.0389	.0273	.0615	.1393	.0270	-.0188	0.	
.1800	-4309.	0.	-2977.	0.	0.	0.		-.0474	.0167	.0741	.1524	.0212	-.0302	0.	
.1810	-4261.	0.	-2944.	0.	0.	0.		-.0550	.0053	.0850	.1623	.0119	-.0414	0.	
.1820	-4445.	0.	-3071.	0.	0.	0.		-.0615	-.0065	.0947	.1692	.0044	-.0517	0.	
.1830	-4418.	0.	-3053.	0.	0.	0.		-.0672	-.0185	.1029	.1724	-.0019	-.0620	0.	
.1840	-3994.	0.	-2760.	0.	0.	0.		-.0718	-.0303	.1090	.1717	-.0073	-.0726	0.	
.1850	-3494.	0.	-2414.	0.	0.	0.		-.0753	-.0418	.1135	.1673	-.0134	-.0835	0.	
.1860	-2947.	0.	-2036.	0.	0.	0.		-.0779	-.0529	.1166	.1595	-.0243	-.0949	0.	
.1870	-2532.	0.	-1750.	0.	0.	0.		-.0794	-.0632	.1181	.1487	-.0376	-.1062	0.	
.1880	-1841.	0.	-1272.	0.	0.	0.		-.0797	-.0725	.1177	.1353	-.0540	-.1179	0.	
.1890	-1332.	0.	-920.	0.	0.	0.		-.0789	-.0804	.1159	.1195	-.0713	-.1295	0.	

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2 SAFETY COLD FKW24F--2 PSV

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.1790	-4034.	0.	2767.	0.	0.	0.	0.	-.389	.0273	.0615	.1393	.0270	-.0188	0.
.1800	-4309.	0.	-2977.	0.	0.	0.	0.	-.474	.0167	.0741	.1524	.0212	-.0302	0.
.1810	-4261.	0.	-2944.	0.	0.	0.	0.	-.550	.0053	.0850	.1623	.0119	-.0414	0.
.1820	-4445.	0.	-3071.	0.	0.	0.	0.	-.615	-.0065	.0947	.1692	.0344	-.0517	0.
.1830	-4418.	0.	-3053.	0.	0.	0.	0.	-.672	-.0185	.1029	.1724	-.0019	-.0620	0.
.1840	-3994.	0.	-2760.	0.	0.	0.	0.	-.0718	-.0303	.1090	.1717	-.0073	-.0726	0.
.1850	-3494.	0.	-2414.	0.	0.	0.	0.	-.0753	-.0418	.1135	.1673	-.0134	-.0835	0.
.1860	-2947.	0.	-2036.	0.	0.	0.	0.	-.0779	-.0529	.1166	.1595	-.0243	-.0949	0.
.1870	-2532.	0.	-1750.	0.	0.	0.	0.	-.0794	-.0632	.1181	.1487	-.0376	-.1062	0.
.1880	-1841.	0.	-1272.	0.	0.	0.	0.	-.0797	-.0725	.1177	.1353	-.0540	-.1179	0.
.1890	-1332.	0.	-920.	0.	0.	0.	0.	-.0789	-.0804	.1159	.1195	-.0713	-.1295	0.

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

SECTION	5	MEMBER	1	SEQUENCE	22	LOCATION	DIS	TYPE	EL						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.1900	-1212.	0.	-837.	0.	0.	0.	-.0770	-.0869	.1130	.1026	-.0864	-.1402	0.		
.1910	-978.	0.	-675.	0.	0.	0.	-.0741	-.0918	.1085	.0858	-.0998	-.1505	0.		
.1920	-1018.	0.	-704.	0.	0.	0.	-.0702	-.0950	.1029	.0694	-.1087	-.1597	0.		
.1930	-1334.	0.	-922.	0.	0.	0.	-.0654	-.0965	.0964	.0531	-.1135	-.1682	0.		
.1940	-1495.	0.	-1033.	0.	0.	0.	-.0600	-.0961	.0887	.0370	-.1137	-.1759	0.		
.1950	-1444.	0.	-997.	0.	0.	0.	-.0537	-.0939	.0795	.0213	-.1090	-.1827	0.		
.1960	-1418.	0.	-979.	0.	0.	0.	-.0466	-.0901	.0693	.0065	-.1019	-.1880	0.		
.1970	-1375.	0.	-950.	0.	0.	0.	-.0388	-.0849	.0579	-.0076	-.0950	-.1916	0.		
.1980	-1181.	0.	-816.	0.	0.	0.	-.0301	-.0784	.0151	-.0203	-.0874	-.1925	0.		
.1990	-926.	0.	-640.	0.	0.	0.	-.0204	-.0705	.0308	-.0305	-.0760	-.1894	0.		
.2000	-667.	0.	-461.	0.	0.	0.	-.0097	-.0618	.0148	-.0370	-.0596	-.1816	0.		
.2010	-365.	0.	-252.	0.	0.	0.	.0020	-.0523	-.0025	-.0390	-.0402	-.1685	0.		
.2020	-122.	0.	-85.	0.	0.	0.	.0145	-.0426	-.0209	-.0365	-.0194	-.1496	0.		
.2030	40.	0.	28.	0.	0.	0.	.0276	-.0329	-.0400	-.0294	.0019	-.1251	0.		
.2040	364.	0.	251.	0.	0.	0.	.0408	-.0235	-.0595	-.0184	.0228	-.0956	0.		
.2050	941.	0.	650.	0.	0.	0.	.0537	-.0146	-.0789	-.0042	.0422	-.0621	0.		
.2060	1568.	0.	1083.	0.	0.	0.	.0658	-.0065	-.0973	.0119	.0593	-.0255	0.		
.2070	2160.	0.	1493.	0.	0.	0.	.0768	.0006	-.1139	.0285	.0735	.0129	0.		
.2080	2834.	0.	1958.	0.	0.	0.	.0862	.0067	-.1283	.0446	.0845	.0514	0.		
.2090	3551.	0.	2453.	0.	0.	0.	.0935	.0118	-.1398	.0591	.0935	.0884	0.		
.2100	4162.	0.	2876.	0.	0.	0.	.0987	.0158	-.1481	.0714	.1023	.1229	0.		
.2110	4670.	0.	3226.	0.	0.	0.	.1016	.0188	-.1530	.0809	.1106	.1532	0.		
.2120	5082.	0.	3511.	0.	0.	0.	.1022	.0206	-.1544	.0875	.1169	.1780	0.		
.2130	5330.	0.	3683.	0.	0.	0.	.1005	.0212	-.1523	.0916	.1206	.1962	0.		
.2140	5463.	0.	3775.	0.	0.	0.	.0969	.0205	-.1471	.0936	.1226	.2071	0.		
.2150	5573.	0.	3850.	0.	0.	0.	.0915	.0187	-.1395	.0940	.1221	.2103	0.		
.2160	5570.	0.	3849.	0.	0.	0.	.0844	.0158	-.1293	.0932	.1175	.2054	0.		
.2170	5332.	0.	3684.	0.	0.	0.	.0760	.0118	-.1167	.0919	.1088	.1925	0.		
.2180	4875.	0.	3368.	0.	0.	0.	.0664	.0070	-.1024	.0906	.0979	.1725	0.		
.2190	4211.	0.	2909.	0.	0.	0.	.0560	.0014	-.0864	.0893	.0861	.1458	0.		
.2200	3287.	0.	2271.	0.	0.	0.	.0445	-.0046	-.0686	.0876	.0733	.1131	0.		
.2210	2163.	0.	1494.	0.	0.	0.	.0321	-.0109	-.0492	.0848	.0594	.0754	0.		
.2220	958.	0.	662.	0.	0.	0.	.0188	-.0174	-.0285	.0805	.0451	.0336	0.		
.2230	-304.	0.	-210.	0.	0.	0.	.0049	-.0238	-.0067	.0741	.0300	-.0109	0.		
.2240	-1555.	0.	-1075.	0.	0.	0.	-.0097	-.0300	.0160	.0651	.0137	-.0570	0.		
.2250	-2587.	0.	-1787.	0.	0.	0.	-.0246	-.0359	.0389	.0533	-.0038	-.1031	0.		
.2260	-3319.	0.	-2293.	0.	0.	0.	-.0394	-.0413	.0613	.0390	-.0226	-.1476	0.		
.2270	-3880.	0.	-2681.	0.	0.	0.	-.0537	-.0462	.0827	.0233	-.0425	-.1885	0.		

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.2170	5332.	0.	3684.	0.	0.	0.	0.	.0760	.0118	-.1167	.0919	.1088	.1925	0.
.2180	4875.	0.	3368.	0.	0.	0.	0.	.0664	.0070	-.1024	.0906	.0979	.1725	0.
.2190	4211.	0.	2909.	0.	0.	0.	0.	.0560	.0014	-.0864	.0893	.0861	.1458	0.
.2200	3287.	0.	2271.	0.	0.	0.	0.	.0445	-.0046	-.0686	.0876	.0733	.1131	0.
.2210	2163.	0.	1494.	0.	0.	0.	0.	.0321	-.0109	-.0492	.0848	.0594	.0754	0.
.2220	958.	0.	662.	0.	0.	0.	0.	.0188	-.0174	-.0285	.0805	.0451	.0336	0.
.2230	-304.	0.	-210.	0.	0.	0.	0.	.0049	-.0238	-.0067	.0741	.0300	-.0109	0.
.2240	-1555.	0.	-1075.	0.	0.	0.	0.	-.0097	-.0300	.0160	.0651	.0137	-.0570	0.
.2250	-2587.	0.	-1787.	0.	0.	0.	0.	-.0246	-.0359	.0389	.0533	-.0038	-.1031	0.
.2260	-3319.	0.	-2293.	0.	0.	0.	0.	-.0394	-.0413	.0613	.0390	-.0226	-.1476	0.
.2270	-3880.	0.	-2681.	0.	0.	0.	0.	-.0537	-.0462	.0827	.0233	-.0425	-.1885	0.

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

SECTION	5	MEMBER	1	SEQUENCE	22	LOCATION	DIS	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)		
.2280	-4340.	0.	-2998.	0.	0.	0.	-.0669	-.0504	.1023	.0076	-.0625	-.2238	0.		
.2290	-4638.	0.	-3204.	0.	0.	0.	-.0783	-.0538	.1192	-.0068	-.0806	-.2518	0.		
.2300	-4787.	0.	-3308.	0.	0.	0.	-.0874	-.0562	.1326	-.0184	-.0962	-.2711	0.		
.2310	-4880.	0.	-3372.	0.	0.	0.	-.0939	-.0577	.1422	-.0263	-.1095	-.2810	0.		
.2320	-4948.	0.	-3419.	0.	0.	0.	-.0976	-.0582	.1476	-.0297	-.1210	-.2811	0.		
.2330	-4979.	0.	-3440.	0.	0.	0.	-.0984	-.0578	.1488	-.0280	-.1301	-.2715	0.		
.2340	-4944.	0.	-3416.	0.	0.	0.	-.0964	-.0564	.1458	-.0216	-.1360	-.2531	0.		
.2350	-4773.	0.	-3297.	0.	0.	0.	-.0919	-.0540	.1392	-.0113	-.1381	-.2273	0.		
.2360	-4432.	0.	-3062.	0.	0.	0.	-.0855	-.0506	.1294	.0019	-.1356	-.1956	0.		
.2370	-3985.	0.	-2753.	0.	0.	0.	-.0775	-.0461	.1172	.0169	-.1275	-.1597	0.		
.2380	-3468.	0.	-2396.	0.	0.	0.	-.0684	-.0407	.1035	.0323	-.1139	-.1212	0.		
.2390	-2853.	0.	-1971.	0.	0.	0.	-.0588	-.0343	.0887	.0466	-.0954	-.0822	0.		
.2400	-2159.	0.	-1491.	0.	0.	0.	-.0490	-.0271	.0736	.0586	-.0726	-.0441	0.		
.2410	-1457.	0.	-1007.	0.	0.	0.	-.0392	-.0191	.0586	.0675	-.0461	-.0082	0.		
.2420	-763.	0.	-527.	0.	0.	0.	-.0296	-.0106	.0438	.0728	-.0176	.0247	0.		
.2430	-86.	0.	-59.	0.	0.	0.	-.0202	-.0019	.0294	.0745	.0104	.0537	0.		
.2440	509.	0.	352.	0.	0.	0.	-.0112	.0070	.0156	.0726	.0360	.0785	0.		
.2450	999.	0.	690.	0.	0.	0.	-.0024	.0156	.0022	.0673	.0586	.0989	0.		
.2460	1425.	0.	985.	0.	0.	0.	.0063	.0239	-.0109	.0594	.0779	.1150	0.		
.2470	1775.	0.	1226.	0.	0.	0.	.0147	.0317	-.0236	.0491	.0934	.1271	0.		
.2480	1980.	0.	1368.	0.	0.	0.	.0230	.0388	-.0358	.0367	.1041	.1353	0.		
.2490	2041.	0.	1410.	0.	0.	0.	.0309	.0450	-.0473	.0222	.1091	.1399	0.		
.2500	2009.	0.	1388.	0.	0.	0.	.0382	.0504	-.0579	.0054	.1084	.1410	0.		
.2510	1896.	0.	1310.	0.	0.	0.	.0448	.0548	-.0673	-.0134	.1030	.1390	0.		
.2520	1742.	0.	1204.	0.	0.	0.	.0506	.0583	-.0754	-.0341	.0941	.1343	0.		
.2530	1628.	0.	1125.	0.	0.	0.	.0552	.0608	-.0820	-.0566	.0817	.1272	0.		
.2540	1548.	0.	1070.	0.	0.	0.	.0585	.0624	-.0867	-.0804	.0655	.1180	0.		
.2550	1461.	0.	1009.	0.	0.	0.	.0605	.0629	-.0894	-.1047	.0472	.1073	0.		
.2560	1436.	0.	992.	0.	0.	0.	.0612	.0624	-.0904	-.1281	.0296	.0958	0.		
.2570	1560.	0.	1078.	0.	0.	0.	.0607	.0611	-.0898	-.1497	.0145	.0843	0.		
.2580	1757.	0.	1211.	0.	0.	0.	.0591	.0589	-.0878	-.1686	.0016	.0732	0.		
.2590	1898.	0.	1311.	0.	0.	0.	.0567	.0558	-.0845	-.1840	-.0092	.0631	0.		
.2600	2025.	0.	1399.	0.	0.	0.	.0536	.0521	-.0802	-.1950	-.0170	.0545	0.		
.2610	2176.	0.	1503.	0.	0.	0.	.0502	.0478	-.0754	-.2013	-.0219	.0477	0.		
.2620	2303.	0.	1591.	0.	0.	0.	.0464	.0430	-.0701	-.2033	-.0247	.0426	0.		
.2630	2384.	0.	1647.	0.	0.	0.	.0424	.0380	-.0644	-.2015	-.0267	.0392	0.		
.2640	2440.	0.	1685.	0.	0.	0.	.0381	.0327	-.0583	-.1964	-.0284	.0372	0.		
.2650	2438.	0.	1685.	0.	0.	0.	.0336	.0275	-.0517	-.1886	-.0300	.0363	0.		

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.2550	1461.	0.	1009.	0.	0.	0.	0.	.0605	.0629	-.0894	-.1047	.0472	.1073	0.
.2560	1434.	0.	992.	0.	0.	0.	0.	.0612	.0624	-.0904	-.1281	.0296	.0958	0.
.2570	1560.	0.	1078.	0.	0.	0.	0.	.0607	.0611	-.0898	-.1497	.0145	.0843	0.
.2580	1753.	0.	1211.	0.	0.	0.	0.	.0591	.0589	-.0878	-.1686	.0016	.0732	0.
.2590	1898.	0.	1311.	0.	0.	0.	0.	.0567	.0558	-.0845	-.1840	-.0092	.0631	0.
.2600	2025.	0.	1399.	0.	0.	0.	0.	.0536	.0521	-.0802	-.1950	-.0170	.0545	0.
.2610	2176.	0.	1503.	0.	0.	0.	0.	.0502	.0478	-.0754	-.2013	-.0219	.0477	0.
.2620	2303.	0.	1591.	0.	0.	0.	0.	.0464	.0430	-.0701	-.2033	-.0247	.0426	0.
.2630	2384.	0.	1647.	0.	0.	0.	0.	.0424	.0380	-.0644	-.2015	-.0267	.0392	0.
.2640	2440.	0.	1685.	0.	0.	0.	0.	.0381	.0327	-.0583	-.1964	-.0284	.0372	0.
.2650	2438.	0.	1685.	0.	0.	0.	0.	.0336	.0275	-.0517	-.1886	-.0300	.0363	0.

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INTERNAL FORCES IN THE PIPING
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SECTION	5	MEMBER	1	SEQUENCE	22	LOCATION	DIS	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)		
.2660	2373.	0.	1639.	0.	0.	0.	.0286	.0224	-.0444	-.1790	-.0314	.0361	0.		
.2670	2311.	0.	1596.	0.	0.	0.	.0231	.0177	-.0364	-.1683	-.0325	.0361	0.		
.2680	2271.	0.	1569.	0.	0.	0.	.0170	.0134	-.0275	-.1572	-.0334	.0359	0.		
.2690	2180.	0.	1506.	0.	0.	0.	.0102	.0098	-.0176	-.1460	-.0342	.0352	0.		
.2700	2011.	0.	1389.	0.	0.	0.	.0029	.0068	-.0067	-.1348	-.0351	.0339	0.		
.2710	1804.	0.	1246.	0.	0.	0.	-.0050	.0045	.0049	-.1237	-.0365	.0317	0.		
.2720	1555.	0.	1075.	0.	0.	0.	-.0132	.0031	.0172	-.1128	-.0390	.0285	0.		
.2730	1220.	0.	843.	0.	0.	0.	-.0216	.0024	.0298	-.1020	-.0427	.0244	0.		
.2740	771.	0.	533.	0.	0.	0.	-.0300	.0025	.0424	-.0908	-.0473	.0193	0.		
.2750	193.	0.	134.	0.	0.	0.	-.0379	.0034	.0546	-.0791	-.0518	.0135	0.		
.2760	-503.	0.	-348.	0.	0.	0.	-.0452	.0051	.0661	-.0671	-.0555	.0069	0.		
.2770	-1257.	0.	-869.	0.	0.	0.	-.0518	.0074	.0766	-.0550	-.0581	-.0004	0.		
.2780	-2018.	0.	-1394.	0.	0.	0.	-.0576	.0104	.0859	-.0433	-.0595	-.0085	0.		
.2790	-2786.	0.	-1925.	0.	0.	0.	-.0623	.0139	.0937	-.0323	-.0593	-.0171	0.		
.2800	-3536.	0.	-2443.	0.	0.	0.	-.0660	.0178	.1000	-.0227	-.0579	-.0261	0.		
.2810	-4184.	0.	-2891.	0.	0.	0.	-.0686	.0221	.1046	-.0151	-.0557	-.0350	0.		
.2820	-4681.	0.	-3234.	0.	0.	0.	-.0701	.0265	.1074	-.0098	-.0526	-.0435	0.		
.2830	-5043.	0.	-3484.	0.	0.	0.	-.0706	.0311	.1086	-.0068	-.0483	-.0508	0.		
.2840	-5295.	0.	-3658.	0.	0.	0.	-.0699	.0356	.1079	-.0058	-.0423	-.0561	0.		
.2850	-5430.	0.	-3752.	0.	0.	0.	-.0681	.0400	.1055	-.0064	-.0347	-.0585	0.		
.2860	-5434.	0.	-3754.	0.	0.	0.	-.0652	.0441	.1012	-.0081	-.0254	-.0574	0.		
.2870	-5295.	0.	-3658.	0.	0.	0.	-.0611	.0478	.0952	-.0105	-.0146	-.0522	0.		
.2880	-5016.	0.	-3466.	0.	0.	0.	-.0558	.0511	.0872	-.0131	-.0032	-.0426	0.		
.2890	-4619.	0.	-3192.	0.	0.	0.	-.0494	.0537	.0774	-.0156	.0080	-.0285	0.		
.2900	-4100.	0.	-2833.	0.	0.	0.	-.0420	.0556	.0660	-.0180	.0179	-.0102	0.		
.2910	-3439.	0.	-2376.	0.	0.	0.	-.0336	.0569	.0530	-.0203	.0258	.0116	0.		
.2920	-2658.	0.	-1836.	0.	0.	0.	-.0244	.0575	.0386	-.0226	.0316	.0363	0.		
.2930	-1814.	0.	-1253.	0.	0.	0.	-.0145	.0575	.0233	-.0251	.0355	.0629	0.		
.2940	-932.	0.	-644.	0.	0.	0.	-.0042	.0569	.0073	-.0280	.0377	.0903	0.		
.2950	-15.	0.	-10.	0.	0.	0.	.0062	.0558	-.0089	-.0315	.0384	.1172	0.		
.2960	897.	0.	619.	0.	0.	0.	.0164	.0543	-.0249	-.0359	.0378	.1424	0.		
.2970	1762.	0.	1217.	0.	0.	0.	.0263	.0525	-.0403	-.0413	.0362	.1647	0.		
.2980	2581.	0.	1783.	0.	0.	0.	.0355	.0504	-.0546	-.0478	.0338	.1830	0.		
.2990	3351.	0.	2315.	0.	0.	0.	.0437	.0481	-.0675	-.0553	.0306	.1966	0.		
.3000	4035.	0.	2788.	0.	0.	0.	.0508	.0456	-.0786	-.0637	.0265	.2049	0.		
.3010	4599.	0.	3177.	0.	0.	0.	.0565	.0430	-.0877	-.0726	.0214	.2077	0.		
.3020	5029.	0.	3474.	0.	0.	0.	.0609	.0404	-.0945	-.0814	.0161	.2050	0.		
.3030	5303.	0.	3664.	0.	0.	0.	.0638	.0378	-.0991	-.0897	.0111	.1973	0.		

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.2920	-2257.	0.	-1858.	0.	0.	0.	0.	-0.145	.0575	.0233	-.0251	.0316	.0363	0.
.2930	-1814.	0.	-1253.	0.	0.	0.	0.	-.0042	.0569	.0073	-.0280	.0377	.0903	0.
.2940	-932.	0.	-644.	0.	0.	0.	0.	.0062	.0558	-.0089	-.0315	.0384	.1172	0.
.2950	-15.	0.	-10.	0.	0.	0.	0.	.0164	.0543	-.0249	-.0359	.0378	.1424	0.
.2960	897.	0.	619.	0.	0.	0.	0.	.0263	.0525	-.0403	-.0413	.0362	.1647	0.
.2970	1762.	0.	1217.	0.	0.	0.	0.	.0355	.0504	-.0546	-.0478	.0338	.1830	0.
.2980	2581.	0.	1783.	0.	0.	0.	0.	.0437	.0481	-.0675	-.0553	.0306	.1966	0.
.2990	3351.	0.	2315.	0.	0.	0.	0.	.0508	.0456	-.0786	-.0637	.0265	.2049	0.
.3000	4035.	0.	2788.	0.	0.	0.	0.	.0565	.0430	-.0877	-.0726	.0214	.2077	0.
.3010	4599.	0.	3177.	0.	0.	0.	0.	.0609	.0404	-.0945	-.0814	.0161	.2050	0.
.3020	5029.	0.	3474.	0.	0.	0.	0.	.0638	.0378	-.0991	-.0897	.0111	.1973	0.
.3030	5303.	0.	3664.	0.	0.	0.	0.							0.

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INTERNAL FORCES IN THE PIPING
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SECTION	5	MEMBER	1	SEQUENCE	22	LOCATION	DIS	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ				DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3040	5393.	0.	3726.	0.	0.	0.	.0652	.0352	-.1013	-.0969	.0066	.1850	0.		
.3050	5299.	0.	3661.	0.	0.	0.	.0653	.0327	-.1012	-.1025	.0027	.1690	0.		
.3060	5036.	0.	3479.	0.	0.	0.	.0639	.0303	-.0989	-.1062	-.0004	.1501	0.		
.3070	4618.	0.	3190.	0.	0.	0.	.0614	.0279	-.0947	-.1075	-.0029	.1291	0.		
.3080	4078.	0.	2818.	0.	0.	0.	.0576	.0255	-.0886	-.1063	-.0049	.1068	0.		
.3090	3471.	0.	2398.	0.	0.	0.	.0529	.0232	-.0811	-.1024	-.0067	.0842	0.		
.3100	2832.	0.	1957.	0.	0.	0.	.0474	.0209	-.0723	-.0959	-.0083	.0619	0.		
.3110	2179.	0.	1505.	0.	0.	0.	.0413	.0185	-.0626	-.0865	-.0098	.0408	0.		
.3120	1530.	0.	1057.	0.	0.	0.	.0347	.0160	-.0522	-.0743	-.0109	.0214	0.		
.3130	903.	0.	624.	0.	0.	0.	.0279	.0134	-.0415	-.0593	-.0114	.0043	0.		
.3140	303.	0.	209.	0.	0.	0.	.0210	.0107	-.0307	-.0416	-.0109	-.0100	0.		
.3150	-266.	0.	-184.	0.	0.	0.	.0141	.0078	-.0201	-.0215	-.0094	-.0216	0.		
.3160	-794.	0.	-549.	0.	0.	0.	.0074	.0047	-.0097	.0007	-.0070	-.0302	0.		
.3170	-1274.	0.	-880.	0.	0.	0.	.0010	.0014	.0002	.0245	-.0037	-.0362	0.		
.3180	-1700.	0.	-1174.	0.	0.	0.	-.0052	-.0021	.0097	.0492	.0001	-.0397	0.		
.3190	-2055.	0.	-1420.	0.	0.	0.	-.0110	-.0058	.0185	.0741	.0044	-.0413	0.		
.3200	-2316.	0.	-1600.	0.	0.	0.	-.0165	-.0098	.0268	.0986	.0089	-.0414	0.		
.3210	-2480.	0.	-1713.	0.	0.	0.	-.0216	-.0140	.0344	.1221	.0138	-.0406	0.		
.3220	-2563.	0.	-1771.	0.	0.	0.	-.0263	-.0183	.0414	.1442	.0188	-.0392	0.		
.3230	-2582.	0.	-1784.	0.	0.	0.	-.0307	-.0228	.0477	.1643	.0238	-.0379	0.		
.3240	-2548.	0.	-1761.	0.	0.	0.	-.0346	-.0273	.0534	.1821	.0287	-.0369	0.		
.3250	-2467.	0.	-1704.	0.	0.	0.	-.0380	-.0320	.0582	.1975	.0334	-.0366	0.		
.3260	-2359.	0.	-1630.	0.	0.	0.	-.0409	-.0366	.0622	.2104	.0378	-.0373	0.		
.3270	-2257.	0.	-1560.	0.	0.	0.	-.0431	-.0412	.0653	.2206	.0411	-.0393	0.		
.3280	-2178.	0.	-1505.	0.	0.	0.	-.0446	-.0458	.0674	.2281	.0430	-.0429	0.		
.3290	-2114.	0.	-1460.	0.	0.	0.	-.0454	-.0503	.0684	.2329	.0432	-.0481	0.		
.3300	-2056.	0.	-1421.	0.	0.	0.	-.0455	-.0547	.0684	.2349	.0418	-.0552	0.		
.3310	-2021.	0.	-1396.	0.	0.	0.	-.0447	-.0589	.0673	.2341	.0386	-.0641	0.		
.3320	-2017.	0.	-1393.	0.	0.	0.	-.0433	-.0630	.0652	.2305	.0338	-.0748	0.		
.3330	-2028.	0.	-1401.	0.	0.	0.	-.0411	-.0668	.0621	.2238	.0277	-.0873	0.		
.3340	-2043.	0.	-1411.	0.	0.	0.	-.0384	-.0703	.0582	.2143	.0205	-.1012	0.		
.3350	-2049.	0.	-1416.	0.	0.	0.	-.0351	-.0735	.0535	.2018	.0130	-.1163	0.		
.3360	-2030.	0.	-1402.	0.	0.	0.	-.0314	-.0764	.0480	.1866	.0053	-.1321	0.		
.3370	-1971.	0.	-1361.	0.	0.	0.	-.0273	-.0788	.0420	.1689	-.0025	-.1480	0.		
.3380	-1866.	0.	-1289.	0.	0.	0.	-.0228	-.0809	.0354	.1492	-.0103	-.1634	0.		
.3390	-1701.	0.	-1175.	0.	0.	0.	-.0180	-.0825	.0283	.1282	-.0177	-.1775	0.		
.3400	-1453.	0.	-1004.	0.	0.	0.	-.0129	-.0838	.0206	.1066	-.0242	-.1896	0.		
.3410	-1130.	0.	-781.	0.	0.	0.	-.0075	-.0846	.0123	.0853	-.0296	-.1989	0.		

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.3300	-2050.	0.	-1421.	0.	0.	0.	0.	-.0455	-.0547	.0684	.2349	.0418	-.0552	0.
.3310	-2021.	0.	-1396.	0.	0.	0.	0.	-.0447	-.0589	.0673	.2341	.0386	-.0641	0.
.3320	-2017.	0.	-1393.	0.	0.	0.	0.	-.0433	-.0630	.0652	.2305	.0338	-.0748	0.
.3330	-2028.	0.	-1401.	0.	0.	0.	0.	-.0411	-.0668	.0621	.2238	.0277	-.0873	0.
.3340	-2043.	0.	-1411.	0.	0.	0.	0.	-.0384	-.0703	.0582	.2143	.0205	-.1012	0.
.3350	-2049.	0.	-1416.	0.	0.	0.	0.	-.0351	-.0735	.0535	.2018	.0130	-.1163	0.
.3360	-2030.	0.	-1402.	0.	0.	0.	0.	-.0314	-.0764	.0480	.1866	.0053	-.1321	0.
.3370	-1971.	0.	-1361.	0.	0.	0.	0.	-.0273	-.0788	.0420	.1689	-.0025	-.1480	0.
.3380	-1866.	0.	-1289.	0.	0.	0.	0.	-.0228	-.0809	.0354	.1492	-.0103	-.1634	0.
.3390	-1701.	0.	-1175.	0.	0.	0.	0.	-.0180	-.0825	.0283	.1282	-.0177	-.1775	0.
.3400	-1453.	0.	-1004.	0.	0.	0.	0.	-.0129	-.0838	.0206	.1066	-.0242	-.1896	0.
.3410	-1130.	0.	-781.	0.	0.	0.	0.	-.0075	-.0846	.0123	.0853	-.0296	-.1989	0.

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SECTION	5	MEMBER	1	SEQUENCE	22	LOCATION	DIS	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	-755.	0.	-522.	0.	0.	0.	-.0018	-.0851	.0036	.0653	-.0335	-.2048	0.		
.3430	-336.	0.	-232.	0.	0.	0.	.0042	-.0851	-.0057	.0475	-.0358	-.2066	0.		
.3440	123.	0.	85.	0.	0.	0.	.0105	-.0848	-.0154	.0325	-.0358	-.2040	0.		
.3450	603.	0.	416.	0.	0.	0.	.0171	-.0841	-.0255	.0209	-.0337	-.1969	0.		
.3460	1085.	0.	750.	0.	0.	0.	.0238	-.0831	-.0359	.0128	-.0295	-.1855	0.		
.3470	1567.	0.	1082.	0.	0.	0.	.0306	-.0817	-.0463	.0082	-.0235	-.1702	0.		
.3480	2038.	0.	1408.	0.	0.	0.	.0372	-.0800	-.0565	.0069	-.0163	-.1516	0.		
.3490	2479.	0.	1713.	0.	0.	0.	.0436	-.0779	-.0662	.0083	-.0080	-.1306	0.		
.3500	2890.	0.	1997.	0.	0.	0.	.0494	-.0755	-.0752	.0119	.0009	-.1082	0.		
.3510	3274.	0.	2262.	0.	0.	0.	.0545	-.0728	-.0831	.0170	.0103	-.0854	0.		
.3520	3614.	0.	2497.	0.	0.	0.	.0587	-.0699	-.0896	.0230	.0198	-.0631	0.		
.3530	3883.	0.	2683.	0.	0.	0.	.0619	-.0666	-.0945	.0294	.0290	-.0424	0.		
.3540	4073.	0.	2814.	0.	0.	0.	.0638	-.0632	-.0975	.0357	.0377	-.0239	0.		
.3550	4186.	0.	2892.	0.	0.	0.	.0644	-.0596	-.0986	.0418	.0459	-.0084	0.		
.3560	4208.	0.	2907.	0.	0.	0.	.0637	-.0558	-.0976	.0473	.0531	.0037	0.		
.3570	4125.	0.	2850.	0.	0.	0.	.0617	-.0519	-.0945	.0521	.0587	.0120	0.		
.3580	3930.	0.	2716.	0.	0.	0.	.0584	-.0481	-.0895	.0561	.0626	.0165	0.		
.3590	3622.	0.	2502.	0.	0.	0.	.0538	-.0443	-.0825	.0595	.0647	.0172	0.		
.3600	3209.	0.	2217.	0.	0.	0.	.0482	-.0405	-.0739	.0621	.0650	.0143	0.		
.3610	2709.	0.	1872.	0.	0.	0.	.0417	-.0369	-.0638	.0641	.0634	.0081	0.		
.3620	2133.	0.	1473.	0.	0.	0.	.0344	-.0335	-.0525	.0653	.0600	-.0009	0.		
.3630	1491.	0.	1030.	0.	0.	0.	.0265	-.0303	-.0402	.0657	.0549	-.0122	0.		
.3640	809.	0.	559.	0.	0.	0.	.0182	-.0272	-.0274	.0654	.0481	-.0251	0.		
.3650	123.	0.	85.	0.	0.	0.	.0097	-.0245	-.0142	.0642	.0398	-.0392	0.		
.3660	-544.	0.	-376.	0.	0.	0.	.0012	-.0220	-.0010	.0620	.0302	-.0536	0.		
.3670	-1180.	0.	-815.	0.	0.	0.	-.0072	-.0198	.0120	.0590	.0196	-.0677	0.		
.3680	-1772.	0.	-1224.	0.	0.	0.	-.0154	-.0178	.0245	.0551	.0082	-.0808	0.		
.3690	-2309.	0.	-1595.	0.	0.	0.	-.0230	-.0161	.0363	.0506	-.0033	-.0924	0.		
.3700	-2775.	0.	-1917.	0.	0.	0.	-.0301	-.0146	.0471	.0454	-.0143	-.1019	0.		
.3710	-3159.	0.	-2183.	0.	0.	0.	-.0366	-.0133	.0569	.0397	-.0245	-.1089	0.		
.3720	-3459.	0.	-2390.	0.	0.	0.	-.0423	-.0120	.0656	.0335	-.0333	-.1130	0.		
.3730	-3673.	0.	-2538.	0.	0.	0.	-.0471	-.0108	.0729	.0269	-.0406	-.1141	0.		
.3740	-3793.	0.	-2620.	0.	0.	0.	-.0511	-.0096	.0788	.0199	-.0463	-.1121	0.		
.3750	-3804.	0.	-2628.	0.	0.	0.	-.0542	-.0082	.0833	.0124	-.0503	-.1071	0.		
.3760	-3704.	0.	-2559.	0.	0.	0.	-.0564	-.0066	.0863	.0044	-.0527	-.0992	0.		
.3770	-3503.	0.	-2420.	0.	0.	0.	-.0575	-.0048	.0877	-.0040	-.0537	-.0885	0.		
.3780	-3211.	0.	-2219.	0.	0.	0.	-.0577	-.0025	.0875	-.0129	-.0534	-.0754	0.		
.3790	-2845.	0.	-1965.	0.	0.	0.	-.0568	.0001	.0858	-.0220	-.0520	-.0601	0.		

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FORCES AND MOMENTS ACT ON THE PIPING

.3690	-2309.	0.	-1595.	0.	0.	0.	0.	-.0230	-.0161	.0363	.0506	-.0033	-.0924	0.
.3700	-2775.	0.	-1917.	0.	0.	0.	0.	-.0301	-.0146	.0471	.0454	-.0143	-.1019	0.
.3710	-3159.	0.	-2183.	0.	0.	0.	0.	-.0366	-.0133	.0569	.0397	-.0245	-.1089	0.
.3720	-3459.	0.	-2390.	0.	0.	0.	0.	-.0423	-.0120	.0654	.0335	-.0333	-.1130	0.
.3730	-3673.	0.	-2538.	0.	0.	0.	0.	-.0471	-.0108	.0729	.0269	-.0406	-.1141	0.
.3740	-3793.	0.	-2620.	0.	0.	0.	0.	-.0511	-.0096	.0782	.0199	-.0463	-.1121	0.
.3750	-3804.	0.	-2628.	0.	0.	0.	0.	-.0542	-.0082	.0833	.0124	-.0503	-.1071	0.
.3760	-3704.	0.	-2559.	0.	0.	0.	0.	-.0564	-.0066	.0863	.0044	-.0527	-.0992	0.
.3770	-3503.	0.	-2420.	0.	0.	0.	0.	-.0575	-.0048	.0877	-.0040	-.0537	-.0885	0.
.3780	-3211.	0.	-2219.	0.	0.	0.	0.	-.0577	-.0025	.0875	-.0129	-.0534	-.0754	0.
.3790	-2845.	0.	-1965.	0.	0.	0.	0.	-.0568	.0001	.0858	-.0220	-.0520	-.0601	0.

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CONDITION 24

LOADS

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ENGLISH UNITS

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

SECTION	5	MEMBER	1	SEQUENCE	22	LOCATION	DIS	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	-2415.	0.	-1669.	0.	0.	0.	-.0548	.0033	.0824	-.0313	-.0496	-.0429	0.		
.3810	-1937.	0.	-1338.	0.	0.	0.	-.0519	.0071	.0775	-.0406	-.0465	-.0242	0.		
.3820	-1435.	0.	-991.	0.	0.	0.	-.0479	.0113	.0711	-.0497	-.0430	-.0042	0.		
.3830	-939.	0.	-648.	0.	0.	0.	-.0430	.0162	.0634	-.0585	-.0394	.0165	0.		
.3840	-468.	0.	-324.	0.	0.	0.	-.0373	.0216	.0546	-.0668	-.0360	.0377	0.		
.3850	-30.	0.	-20.	0.	0.	0.	-.0309	.0274	.0447	-.0746	-.0328	.0588	0.		
.3860	366.	0.	253.	0.	0.	0.	-.0240	.0338	.0343	-.0820	-.0300	.0795	0.		
.3870	698.	0.	482.	0.	0.	0.	-.0168	.0405	.0235	-.0890	-.0273	.0993	0.		
.3880	952.	0.	658.	0.	0.	0.	-.0096	.0476	.0126	-.0958	-.0248	.1177	0.		
.3890	1131.	0.	781.	0.	0.	0.	-.0024	.0549	.0021	-.1027	-.0222	.1345	0.		
.3900	1248.	0.	862.	0.	0.	0.	.0044	.0623	-.0079	-.1098	-.0192	.1492	0.		
.3910	1315.	0.	909.	0.	0.	0.	.0106	.0698	-.0171	-.1172	-.0157	.1617	0.		
.3920	1339.	0.	925.	0.	0.	0.	.0163	.0773	-.0253	-.1252	-.0118	.1718	0.		
.3930	1326.	0.	916.	0.	0.	0.	.0212	.0845	-.0324	-.1336	-.0076	.1796	0.		
.3940	1289.	0.	890.	0.	0.	0.	.0254	.0914	-.0384	-.1422	-.0032	.1852	0.		
.3950	1252.	0.	865.	0.	0.	0.	.0288	.0979	-.0433	-.1509	.0015	.1890	0.		
.3960	1229.	0.	849.	0.	0.	0.	.0316	.1038	-.0473	-.1590	.0063	.1913	0.		
.3970	1207.	0.	834.	0.	0.	0.	.0338	.1090	-.0504	-.1661	.0111	.1927	0.		
.3980	1175.	0.	812.	0.	0.	0.	.0354	.1134	-.0528	-.1716	.0158	.1937	0.		
.3990	1140.	0.	788.	0.	0.	0.	.0367	.1170	-.0546	-.1750	.0205	.1948	0.		
.4000	1118.	0.	772.	0.	0.	0.	.0376	.1195	-.0558	-.1761	.0251	.1962	0.		

MAXIMUM VALUE OF DISCONTINUITY FORCE OCCURS AT

TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	FORCE
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(LB)
.1400	-9736.	0.	-6727.	0.	0.	0.	-.1177	.0361	.1828	.0994	.0551	-.0493	11834.

SECTION	5	MEMBER	1	SEQUENCE	22	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	-7.	3.	-6.	-1.	0.	2.	-.0000	.0000	-.0000	-.0000	.0000	.0000	1.		
.0020	-43.	11.	-35.	-8.	2.	15.	-.0000	.0000	-.0001	-.0001	.0002	.0001	12.		
.0030	-98.	-2.	-84.	-28.	4.	56.	.0000	.0000	-.0002	-.0004	.0006	.0005	42.		

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

.1400 -9736. 0. 0727. 0. 0. 0. -.1177 .0361 .1823 .0994 .0551 -.0493 11834.

SECTION	5	MEMBER	1	SEQUENCE	22	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	-7.	3.	-6.	-1.	0.	2.		-.0000	.0000	-.0000	-.0000	.0000	.0000	1.
.0020	-43.	11.	-35.	-8.	2.	15.		-.0000	.0000	-.0001	-.0001	.0002	.0001	12.
.0030	-98.	-2.	-84.	-28.	4.	56.		.0000	.0000	-.0002	-.0004	.0006	.0005	42.

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

SECTION	5	MEMBER	1	SEQUENCE	22	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	-161.	-47.	-149.	-66.	3.	129.		.0001	-.0000	-.0005	-.0010	.0014	.0013	98.
.0050	-260.	-102.	-249.	-123.	-5.	234.		.0003	-.0000	-.0009	-.0019	.0025	.0026	178.
.0060	-426.	-160.	-414.	-212.	-28.	377.		.0006	.0000	-.0017	-.0033	.0038	.0047	292.
.0070	-659.	-251.	-645.	-350.	-53.	586.		.0010	.0000	-.0028	-.0053	.0058	.0078	461.
.0080	-939.	-409.	-913.	-544.	-44.	880.		.0018	.0001	-.0044	-.0080	.0093	.0126	698.
.0090	-1244.	-645.	-1213.	-763.	17.	1274.		.0031	.0002	-.0067	-.0112	.0159	.0196	1001.
.0100	-1580.	-918.	-1572.	-971.	85.	1760.		.0050	.0004	-.0100	-.0148	.0258	.0288	1356.
.0110	-1932.	-1190.	-1955.	-1192.	140.	2283.		.0076	.0008	-.0142	-.0187	.0375	.0399	1739.
.0120	-2248.	-1432.	-2291.	-1459.	191.	2760.		.0109	.0013	-.0193	-.0224	.0493	.0522	2108.
.0130	-2518.	-1596.	-2592.	-1733.	193.	3148.		.0148	.0019	-.0251	-.0254	.0509	.0652	2426.
.0140	-2767.	-1674.	-2936.	-1958.	63.	3477.		.0193	.0027	-.0320	-.0277	.0725	.0784	2690.
.0150	-3018.	-1750.	-3360.	-2177.	-217.	3789.		.0244	.0037	-.0396	-.0293	.0834	.0912	2949.
.0160	-3317.	-1899.	-3893.	-2465.	-583.	4116.		.0299	.0047	-.0480	-.0309	.0933	.1035	3258.
.0170	-3647.	-2136.	-4490.	-2821.	-1061.	4504.		.0356	.0057	-.0570	-.0331	.1017	.1151	3653.
.0180	-3860.	-2464.	-4921.	-3272.	-1645.	4920.		.0414	.0067	-.0660	-.0363	.1062	.1255	4134.
.0190	-3854.	-2824.	-4913.	-3870.	-2053.	5190.		.0470	.0077	-.0744	-.0399	.1056	.1338	4578.
.0200	-3608.	-2975.	-4264.	-4441.	-1932.	5130.		.0522	.0087	-.0813	-.0419	.1038	.1392	4755.
.0210	-3207.	-2718.	-3286.	-4409.	-1247.	4810.		.0570	.0101	-.0873	-.0395	.1135	.1416	4478.
.0220	-2572.	-2115.	-2643.	-3290.	-846.	4388.		.0618	.0118	-.0927	-.0325	.1350	.1394	3740.
.0230	-1669.	-1269.	-2058.	-1783.	-715.	3517.		.0653	.0135	-.0958	-.0229	.1502	.1283	2701.
.0240	-1001.	-237.	-1517.	-655.	-185.	2037.		.0665	.0149	-.0961	-.0122	.1555	.1077	1448.
.0250	-331.	663.	-1030.	307.	-93.	585.		.0661	.0155	-.0949	-.0017	.1518	.0786	450.
.0260	1116.	1018.	-96.	1041.	-1344.	-643.		.0644	.0148	-.0910	.0056	.1232	.0396	1225.
.0270	2756.	990.	995.	917.	-2630.	-2414.		.0597	.0129	-.0827	.0098	.0693	-.0083	2485.
.0280	3250.	1355.	1370.	588.	-2654.	-4526.		.0523	.0102	-.0722	.0162	.0256	-.0597	3559.
.0290	3199.	1981.	869.	1713.	-3155.	-5511.		.0446	.0066	-.0628	.0266	.0113	-.1100	4433.
.0300	4053.	1628.	174.	3499.	-4556.	-5653.		.0376	.0018	-.0525	.0353	.0045	-.1571	5433.
.0310	4501.	1396.	-372.	4035.	-4976.	-6439.		.0285	-.0045	-.0391	.0376	-.0209	-.2000	6123.
.0320	4361.	1934.	20.	3378.	-4743.	-7663.		.0173	-.0125	-.0236	.0366	-.0714	-.2375	6487.
.0330	4691.	1856.	998.	2868.	-4904.	-8019.		.0078	-.0223	-.0092	.0382	-.1148	-.2642	6624.
.0340	5091.	1202.	1199.	2991.	-5436.	-7580.		-.0000	-.0333	.0035	.0420	-.1384	-.2780	6603.
.0350	4357.	1524.	390.	3117.	-5951.	-7184.		-.0094	-.0448	.0164	.0433	-.1679	-.2843	6629.
.0360	3349.	2062.	299.	2422.	-5913.	-6764.		-.0206	-.0573	.0313	.0432	-.2146	-.2853	6272.
.0370	3419.	1157.	1783.	1175.	-4904.	-5772.		-.0308	-.0711	.0478	.0478	-.2513	-.2769	5166.
.0380	3379.	167.	3016.	718.	-3751.	-4145.		-.0404	-.0851	.0633	.0578	-.2605	-.2591	3799.
.0390	1857.	537.	3008.	923.	-2894.	-2272.		-.0525	-.0978	.0791	.0653	-.2646	-.2401	2557.
.0400	397.	237.	3859.	-28.	-418.	-572.		-.0676	-.1091	.0994	.0663	-.2749	-.2241	478.
.0410	222.	-1581.	5369.	-1125.	3166.	1211.		-.0818	-.1188	.1218	.0653	-.2602	-.2058	2407.

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

.0310	4501.	1396.	-372.	4035.	-4976.	-6439.	.0285	-.0045	-.0391	.0376	-.0209	-.2000	6123.
.0320	4361.	1934.	20.	3378.	-4743.	-7663.	.0173	-.0125	-.0236	.0366	-.0714	-.2375	6487.
.0330	4691.	1856.	998.	2868.	-4904.	-8019.	.0078	-.0223	-.0092	.0382	-.1148	-.2642	6624.
.0340	5091.	1202.	1199.	2991.	-5436.	-7580.	-.0000	-.0333	.0035	.0420	-.1384	-.2780	6603.
.0350	4357.	1524.	390.	3117.	-5951.	-7184.	-.0094	-.0448	.0164	.0433	-.1679	-.2843	6629.
.0360	3349.	2062.	299.	2422.	-5913.	-6764.	-.0206	-.0573	.0313	.0432	-.2146	-.2853	6272.
.0370	3419.	1157.	1783.	1175.	-4904.	-5772.	-.0308	-.0711	.0478	.0478	-.2513	-.2769	5166.
.0380	3379.	167.	3016.	718.	-3751.	-4145.	-.0404	-.0851	.0633	.0578	-.2605	-.2591	3799.
.0390	1857.	537.	3008.	923.	-2894.	-2272.	-.0525	-.0978	.0791	.0653	-.2546	-.2411	2557.
.0400	397.	237.	3859.	-28.	-418.	-572.	-.0676	-.1091	.0994	.0663	-.2749	-.2241	478.
.0410	222.	-1581.	5369.	-1125.	3166.	1211.	-.0818	-.1188	.1218	.0653	-.2602	-.2058	2407.

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CONDITION 24

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ENGLISH UNITS

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

SECTION	5	MEMBER	1	SEQUENCE	22	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	-241.	-1994.	5615.	-191.	5366.	3283.		-.0945	-.1257	.1405	.0648	-.2102	-.1851	4242.	
.0430	-1549.	-970.	5486.	852.	7320.	4858.		-.1081	-.1292	.1580	.0596	-.1594	-.1696	5950.	
.0440	-2028.	-1590.	6389.	-313.	10995.	5386.		-.1214	-.1296	.1777	.0456	-.1211	-.1601	8255.	
.0450	-1635.	-2796.	6318.	-1109.	13308.	5624.		-.1308	-.1262	.1930	.0271	-.0742	-.1512	9767.	
.0460	-1870.	-1853.	3997.	133.	11990.	5888.		-.1356	-.1189	.1983	.0099	-.0213	-.1420	9004.	
.0470	-2174.	-753.	2511.	-158.	10806.	5206.		-.1376	-.1089	.1990	-.0042	.0061	-.1354	8086.	
.0480	-1090.	-1837.	3351.	-3110.	11628.	3476.		-.1354	-.0968	.1975	-.0125	.0112	-.1279	8445.	
.0490	363.	-2420.	3259.	-4289.	10484.	1958.		-.1264	-.0819	.1862	-.0100	.0289	-.1127	7748.	
.0500	656.	-661.	1155.	-2664.	6764.	877.		-.1121	-.0638	.1637	.0046	.0500	-.0905	4936.	
.0510	848.	392.	509.	-2349.	5211.	-699.		-.0956	-.0442	.1387	.0290	.0779	-.0654	3881.	
.0520	2182.	-301.	2337.	-3374.	6116.	-2574.		-.0760	-.0240	.1132	.0617	.0874	-.0357	5018.	
.0530	3541.	447.	3589.	-1738.	5250.	-3800.		-.0525	-.0026	.0815	.1001	.1110	.0013	4523.	
.0540	3873.	2791.	3484.	1722.	3190.	-4638.		-.0285	.0200	.0464	.1362	.1366	.0399	3968.	
.0550	3949.	3520.	4050.	3217.	3355.	-5643.		-.0070	.0423	.0158	.1623	.1396	.0732	4928.	
.0560	4241.	3024.	5017.	3931.	4081.	-6227.		.0130	.0637	-.0116	.1780	.1299	.1021	5675.	
.0570	4116.	3987.	4719.	6628.	2612.	-6073.		.0327	.0840	-.0406	.1853	.1281	.1299	6310.	
.0580	3547.	5304.	3974.	9272.	1261.	-5908.		.0502	.1024	-.0673	.1834	.1270	.1544	7459.	
.0590	3003.	4726.	3793.	9668.	1881.	-5755.		.0645	.1178	-.0883	.1725	.1171	.1723	7689.	
.0600	2135.	3732.	2636.	10082.	1651.	-4822.		.0776	.1301	-.1087	.1577	.1135	.1866	7615.	
.0610	715.	4062.	81.	11743.	-439.	-3489.		.0908	.1390	-.1312	.1443	.1255	.2023	8263.	
.0620	-404.	4111.	-1660.	12051.	-1566.	-2784.		.1033	.1433	-.1515	.1345	.1371	.2190	8403.	
.0630	-811.	2789.	-2026.	10207.	-1544.	-2384.		.1150	.1424	-.1687	.1293	.1392	.2345	7141.	
.0640	-1321.	1799.	-3147.	8595.	-3158.	-1513.		.1267	.1372	-.1869	.1291	.1425	.2494	6256.	
.0650	-2223.	1806.	-5405.	7533.	-6129.	-674.		.1376	.1280	-.2053	.1316	.1489	.2643	6562.	
.0660	-2690.	1298.	-6797.	5120.	-8060.	-468.		.1462	.1144	-.2187	.1339	.1448	.2767	6444.	
.0670	-2506.	29.	-6850.	1620.	-9259.	-287.		.1520	.0967	-.2263	.1347	.1285	.2836	6339.	
.0680	-2471.	-749.	-7030.	-1211.	-10980.	410.		.1542	.0761	-.2297	.1321	.1141	.2840	7451.	
.0690	-2898.	-1090.	-7743.	-3373.	-12185.	1294.		.1517	.0534	-.2268	.1216	.1080	.2766	8566.	
.0700	-3346.	-1972.	-8228.	-5557.	-11910.	2337.		.1436	.0294	-.2153	.0996	.1049	.2590	8998.	
.0710	-3785.	-3199.	-8532.	-7265.	-11182.	3976.		.1303	.0046	-.1964	.0661	.1012	.2300	9379.	
.0720	-4574.	-4060.	-9052.	-8265.	-10545.	5963.		.1123	-.0203	-.1715	.0221	.0930	.1905	9885.	
.0730	-5503.	-4783.	-9259.	-9377.	-9212.	7643.		.0898	-.0446	-.1401	-.0319	.0711	.1413	10249.	
.0740	-6039.	-5784.	-8751.	-10650.	-7242.	9035.		.0642	-.0676	-.1034	-.0931	.0347	.0837	10604.	
.0750	-6283.	-6649.	-8304.	-11080.	-5633.	10442.		.0378	-.0883	-.0650	-.1549	-.0027	.0216	10942.	
.0760	-6650.	-6830.	-8383.	-10493.	-4467.	11583.		.0119	-.1062	-.0279	-.2104	-.0351	-.0411	10957.	
.0770	-6840.	-6559.	-8000.	-9808.	-3098.	11989.		-.0127	-.1211	.0079	-.2550	-.0724	-.1028	10647.	
.0780	-6168.	-6318.	-6198.	-9432.	-1385.	11600.		-.0348	-.1331	.0417	-.2845	-.1186	-.1609	10121.	
.0790	-4777.	-5925.	-3667.	-8726.	266.	10599.		-.0530	-.1417	.0711	-.2952	-.1589	-.2122	9256.	

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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

.0690	-2898.	-1090.	-7743.	-3373.	-12185.	1294.	.1517	.0534	-.2268	.1216	.1080	.2766	8566.
.0700	-3346.	-1972.	-8228.	-5557.	-11910.	2337.	.1436	.0294	-.2153	.0996	.1049	.2590	8998.
.0710	-3785.	-3199.	-8532.	-7265.	-11182.	3976.	.1303	.0046	-.1964	.0661	.1012	.2300	9379.
.0720	-4574.	-4060.	-9052.	-8265.	-10545.	5963.	.1123	-.0203	-.1715	.0221	.0730	.1905	9885.
.0730	-5503.	-4783.	-9259.	-9377.	-9212.	7643.	.0898	-.0446	-.1401	-.0319	.0711	.1413	10249.
.0740	-6039.	-5784.	-8751.	-10650.	-7242.	9035.	.0642	-.0676	-.1034	-.0931	.0347	.0837	10604.
.0750	-6283.	-6649.	-8304.	-11080.	-5633.	10442.	.0378	-.0883	-.0650	-.1549	-.0027	.0216	10942.
.0760	-6650.	-6830.	-8383.	-10493.	-4467.	11583.	.0119	-.1062	-.0279	-.2104	-.0351	-.0411	10957.
.0770	-6840.	-6559.	-8000.	-9808.	-3098.	11989.	-.0127	-.1211	.0079	-.2550	-.0724	-.1028	10647.
.0780	-6168.	-6318.	-6198.	-9432.	-1385.	11600.	-.0348	-.1331	.0417	-.2845	-.1186	-.1609	10121.
.0790	-4777.	-5925.	-3667.	-8726.	266.	10599.	-.0530	-.1417	.0711	-.2952	-.1589	-.2122	9256.

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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	5	MEMBER	1	SEQUENCE	22	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)		
.0800	-3476.	-4936.	-1715.	-7159.	1435.	9202.	-.0671	-.1465	.0941	-.2856	-.1810	-.2550	7918.		
.0810	-2390.	-3655.	-262.	-5271.	2132.	7547.	-.0779	-.1474	.1113	-.2585	-.1934	-.2912	6369.		
.0820	-893.	-2749.	1680.	-3919.	2755.	5484.	-.0858	-.1449	.1249	-.2188	-.2083	-.3216	4908.		
.0830	1109.	-2021.	4074.	-2985.	3336.	2840.	-.0909	-.1391	.1354	-.1701	-.2230	-.3448	3573.		
.0840	2969.	-838.	5969.	-1775.	3401.	-92.	-.0940	-.1300	.1422	-.1159	-.2290	-.3608	2587.		
.0850	4416.	491.	7098.	-350.	3058.	-2857.	-.0960	-.1175	.1463	-.0608	-.2259	-.3718	2831.		
.0860	5752.	1341.	7819.	885.	2969.	-5428.	-.0974	-.1023	.1496	-.0088	-.2152	-.3778	4213.		
.0870	7003.	2165.	8145.	2307.	3091.	-7924.	-.0979	-.0850	.1517	.0389	-.1935	-.3762	5940.		
.0880	7906.	3490.	8133.	4214.	3080.	-10147.	-.0975	-.0664	.1519	.0835	-.1518	-.3656	7692.		
.0890	8485.	4573.	8312.	5862.	3482.	-11833.	-.0963	-.0477	.1504	.1255	-.1261	-.3468	9205.		
.0900	8789.	4848.	8628.	6899.	4655.	-12902.	-.0939	-.0295	.1475	.1652	-.0868	-.3191	10349.		
.0910	8556.	5089.	8267.	8189.	5646.	-13290.	-.0897	-.0122	.1410	.2027	-.0403	-.2809	11189.		
.0920	7799.	5632.	7328.	9825.	5938.	-12991.	-.0831	.0033	.1301	.2384	.0074	-.2326	11685.		
.0930	6981.	5588.	6968.	10523.	6452.	-12247.	-.0747	.0164	.1168	.2721	.0436	-.1765	11721.		
.0940	6226.	4853.	7388.	10034.	7481.	-11276.	-.0647	.0266	.1019	.3025	.0667	-.1147	11355.		
.0950	5222.	4472.	7555.	9641.	8019.	-10023.	-.0530	.0344	.0842	.3280	.0872	-.0482	10821.		
.0960	3989.	4520.	7084.	9727.	7889.	-8436.	-.0400	.0402	.0642	.3460	.1109	.0198	10178.		
.0970	2824.	4133.	6546.	9399.	7968.	-6657.	-.0268	.0439	.0445	.3542	.1335	.0845	9440.		
.0980	1692.	3441.	6101.	8494.	8236.	-4818.	-.0144	.0454	.0261	.3510	.1510	.1422	8611.		
.0990	482.	3094.	5438.	7560.	7985.	-2978.	-.0033	.0450	.0089	.3352	.1631	.1904	7679.		
.1000	-603.	2681.	4574.	6407.	7363.	-1203.	.0063	.0430	-.0060	.3054	.1690	.2266	6629.		
.1010	-1539.	1635.	3463.	4657.	6717.	535.	.0136	.0396	-.0177	.2618	.1671	.2482	5521.		
.1020	-2635.	468.	1749.	2764.	5624.	2305.	.0187	.0352	-.0270	.2067	.1594	.2547	4501.		
.1030	-3756.	-364.	-285.	1072.	4014.	3921.	.0219	.0302	-.0343	.1440	.1478	.2477	3851.		
.1040	-4331.	-1267.	-1771.	-771.	2625.	5079.	.0241	.0246	-.0392	.0774	.1321	.2298	3889.		
.1050	-4334.	-2299.	-2630.	-2710.	1630.	5775.	.0256	.0187	-.0418	.0103	.1140	.2028	4438.		
.1060	-4286.	-2835.	-3582.	-4069.	451.	6210.	.0268	.0133	-.0443	-.0538	.0982	.1688	5014.		
.1070	-4220.	-2870.	-4702.	-4769.	-878.	6372.	.0283	.0085	-.0473	-.1122	.0868	.1309	5397.		
.1080	-3671.	-2931.	-5088.	-5419.	-1655.	6091.	.0307	.0041	-.0502	-.1629	.0764	.0916	5607.		
.1090	-2609.	-3024.	-4381.	-6102.	-1645.	5428.	.0342	.0001	-.0535	-.2037	.0693	.0531	5616.		
.1100	-1865.	-2749.	-4726.	-5832.	-2787.	4974.	.0394	-.0030	-.0604	-.2359	.0689	.0178	5497.		
.1110	-1626.	-2333.	-5601.	-5630.	-4643.	4584.	.0449	-.0052	-.0691	-.2632	.0561	-.0165	5809.		
.1120	-1228.	-2568.	-5617.	-6700.	-5874.	3828.	.0500	-.0071	-.0767	-.2874	.0206	-.0492	6537.		
.1130	-529.	-3089.	-5313.	-7902.	-7058.	2967.	.0561	-.0083	-.0847	-.3060	-.0179	-.0755	7416.		
.1140	-193.	-2978.	-5804.	-7918.	-9155.	2527.	.0631	-.0086	-.0953	-.3171	-.0443	-.0936	8335.		
.1150	-405.	-2703.	-6605.	-7685.	-11026.	2353.	.0695	-.0078	-.1058	-.3225	-.0669	-.1057	9197.		
.1160	-632.	-3035.	-6935.	-8040.	-11568.	2055.	.0745	-.0062	-.1134	-.3239	-.0905	-.1116	9596.		
.1170	-791.	-3064.	-7204.	-7743.	-12005.	1837.	.0792	-.0039	-.1201	-.3195	-.1065	-.1087	9708.		

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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

.1070	-4220.	-2870.	-402.	-4769.	-878.	6372.	.0283	.0085	-.0473	-.1122	.0868	.1309	5397.
.1080	-3671.	-2931.	-5088.	-5419.	-1655.	6091.	.0307	.0041	-.0502	-.1629	.0764	.0916	5607.
.1090	-2609.	-3024.	-4381.	-6102.	-1645.	5428.	.0342	.0001	-.0535	-.2037	.0693	.0531	5616.
.1100	-1265.	-2749.	-4726.	-5832.	-2787.	4974.	.0394	-.0030	-.0604	-.2359	.0689	.0178	5497.
.1110	-1626.	-2333.	-5601.	-5630.	-4643.	4584.	.0449	-.0052	-.0691	-.2632	.0561	-.0165	5809.
.1120	-1228.	-2568.	-5617.	-6700.	-5874.	3828.	.0500	-.0071	-.0767	-.2874	.0206	-.0492	6537.
.1130	-529.	-3089.	-5313.	-7902.	-7058.	2967.	.0561	-.0083	-.0847	-.3060	-.0179	-.0755	7416.
.1140	-193.	-2978.	-5804.	-7918.	-9155.	2527.	.0631	-.0086	-.0953	-.3171	-.0443	-.0936	8335.
.1150	-405.	-2703.	-6605.	-7685.	-11026.	2353.	.0695	-.0078	-.1058	-.3225	-.0569	-.1057	9197.
.1160	-632.	-3035.	-6935.	-8040.	-11568.	2055.	.0745	-.0062	-.1134	-.3239	-.0905	-.1116	9596.
.1170	-791.	-3064.	-7204.	-7743.	-12005.	1837.	.0792	-.0039	-.1201	-.3195	-.1065	-.1087	9708.

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CONDITION 24

LOADS

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PRESSURE

ENGLISH UNITS

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

SECTION	5	MEMBER	1	SEQUENCE	22	LOCATION	END	TYPE	EL						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1180	-1123.	-2479.	-8006.	-6350.	-13179.	1951.	.0835	-.0013	-.1268	-.3079	-.1124	-.0968	9948.		
.1190	-1670.	-1910.	-8050.	-5585.	-13725.	2117.	.0854	.0012	-.1302	-.2910	-.1295	-.0813	10089.		
.1200	-1969.	-2191.	-6931.	-6072.	-12680.	2077.	.0845	.0033	-.1286	-.2699	-.1558	-.0630	9579.		
.1210	-2028.	-2657.	-6247.	-5808.	-11515.	2234.	.0829	.0054	-.1251	-.2424	-.1519	-.0379	8822.		
.1220	-2672.	-1884.	-6665.	-3785.	-11706.	3022.	.0799	.0076	-.1218	-.2087	-.1498	-.0094	8539.		
.1230	-3464.	-1536.	-6530.	-2644.	-10851.	3702.	.0738	.0094	-.1138	-.1720	-.1406	.0177	7931.		
.1240	-3725.	-2164.	-4916.	-3163.	-8151.	3801.	.0644	.0105	-.0994	-.1351	-.1402	.0417	6426.		
.1250	-3609.	-2163.	-3457.	-2807.	-6090.	3812.	.0538	.0116	-.0830	-.0979	-.1283	.0651	5199.		
.1260	-3508.	-1366.	-3059.	-1139.	-5116.	3921.	.0422	.0131	-.0658	-.0618	-.0979	.0866	4412.		
.1270	-3489.	-789.	-2165.	-390.	-3126.	3691.	.0275	.0146	-.0441	-.0300	-.0714	.0998	3271.		
.1280	-3064.	-1052.	-606.	-763.	188.	2972.	.0108	.0161	-.0182	-.0026	-.0447	.1062	2072.		
.1290	-2454.	-487.	256.	94.	2183.	2291.	-.0054	.0178	.0067	.0219	-.0052	.1092	2134.		
.1300	-1868.	840.	651.	1655.	3089.	1587.	-.0217	.0196	.0308	.0425	.0362	.1071	2593.		
.1310	-1035.	963.	1629.	1543.	5160.	440.	-.0387	.0212	.0570	.0575	.0631	.0975	3643.		
.1320	-172.	712.	2820.	745.	7206.	-751.	-.0557	.0226	.0829	.0683	.0758	.0814	4909.		
.1330	689.	1208.	3251.	1162.	7655.	-1687.	-.0703	.0241	.1046	.0778	.0909	.0645	5341.		
.1340	1645.	2041.	3857.	1904.	7833.	-2731.	-.0829	.0256	.1236	.0866	.1020	.0472	5737.		
.1350	2750.	2175.	5527.	1577.	9368.	-4062.	-.0944	.0268	.1421	.0943	.1006	.0282	6964.		
.1360	3778.	2105.	7013.	1520.	10927.	-5155.	-.1035	.0283	.1574	.1016	.1003	.0099	8208.		
.1370	4396.	3190.	7585.	3114.	10964.	-5736.	-.1098	.0303	.1671	.1076	.1042	-.0063	8601.		
.1380	5087.	4125.	8324.	4602.	11272.	-6418.	-.1140	.0324	.1744	.1099	.1019	-.0207	9277.		
.1390	5862.	4262.	9816.	4916.	12446.	-7231.	-.1168	.0342	.1806	.1070	.0827	-.0353	10253.		
.1400	6225.	4507.	10799.	5371.	12686.	-7571.	-.1177	.0361	.1828	.0994	.0551	-.0493	10596.		
.1410	6172.	4904.	10618.	6372.	11763.	-7464.	-.1163	.0381	.1804	.0869	.0292	-.0606	10326.		
.1420	5912.	5050.	10328.	6848.	10923.	-7299.	-.1134	.0400	.1757	.0686	-.0033	-.0707	9986.		
.1430	5670.	4491.	10101.	6495.	10558.	-7067.	-.1090	.0417	.1691	.0465	-.0378	-.0787	9618.		
.1440	5139.	4133.	9414.	6450.	9384.	-6409.	-.1023	.0433	.1582	.0237	-.0650	-.0828	8807.		
.1450	4331.	4118.	8059.	6640.	7539.	-5558.	-.0924	.0448	.1433	.0009	-.0849	-.0820	7739.		
.1460	3697.	3567.	6856.	6004.	6252.	-4973.	-.0827	.0460	.1268	-.0225	-.1028	-.0764	6736.		
.1470	3106.	2997.	5839.	4958.	4954.	-4409.	-.0704	.0469	.1081	-.0451	-.1199	-.0665	5581.		
.1480	2415.	2628.	4212.	4238.	2926.	-3597.	-.0559	.0476	.0857	-.0646	-.1254	-.0506	4234.		
.1490	1612.	2357.	2296.	3432.	574.	-2704.	-.0401	.0479	.0608	-.0812	-.1253	-.0295	2970.		
.1500	929.	1780.	890.	1805.	-1341.	-1971.	-.0239	.0477	.0360	-.0967	-.1301	-.0053	2015.		
.1510	426.	817.	-344.	-194.	-3030.	-1246.	-.0073	.0470	.0112	-.1107	-.1334	.0226	2212.		
.1520	-353.	270.	-1943.	-1643.	-5174.	-205.	.0092	.0463	-.0143	-.1224	-.1291	.0534	3662.		
.1530	-1346.	-310.	-3700.	-2930.	-6995.	1012.	.0247	.0456	-.0389	-.1323	-.1167	.0858	5157.		
.1540	-2303.	-1112.	-4869.	-4462.	-7866.	2219.	.0385	.0448	-.0604	-.1416	-.1028	.1177	6276.		
.1550	-3124.	-1841.	-5628.	-5684.	-8177.	3452.	.0506	.0442	-.0790	-.1505	-.0835	.1488	7104.		

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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	4331.	4118.	5059.	6640.	7539.	-5558.	-.0934	.0448	.1433	.0009	-.0849	-.0820	7739.
.1460	3697.	3567.	6856.	6004.	6252.	-4973.	-.0827	.0460	.1268	-.0225	-.1028	-.0764	6736.
.1470	3106.	2997.	5839.	4958.	4954.	-4409.	-.0704	.0469	.1081	-.0451	-.1199	-.0665	5581.
.1480	2415.	2628.	4212.	4238.	2926.	-3597.	-.0559	.0476	.0857	-.0646	-.1254	-.0506	4234.
.1490	1612.	2357.	2296.	3432.	574.	-2704.	-.0401	.0479	.0608	-.0812	-.1253	-.0295	2970.
.1500	929.	1780.	890.	1805.	-1341.	-1971.	-.0239	.0477	.0360	-.0967	-.1301	-.0053	2015.
.1510	426.	817.	-344.	-194.	-3030.	-1246.	-.0073	.0470	.0112	-.1107	-.1334	.0226	2212.
.1520	-353.	270.	-1943.	-1643.	-5174.	-205.	.0092	.0463	-.0143	-.1224	-.1291	.0534	3662.
.1530	-1346.	-310.	-3700.	-2930.	-6995.	1012.	.0247	.0456	-.0389	-.1323	-.1167	.0858	5157.
.1540	-2303.	-1112.	-4869.	-4462.	-7866.	2219.	.0385	.0448	-.0604	-.1416	-.1028	.1177	6276.
.1550	-3124.	-1841.	-5628.	-5684.	-8177.	3452.	.0506	.0442	-.0790	-.1505	-.0835	.1488	7104.

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	5	MEMBER	1	SEQUENCE	22	LOCATION	END	TYPE	EL						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	FZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.1560	-3928.	-2403.	-6685.	-6126.	-8390.	4776.	.0614	.0441	-.0956	-.1585	-.0525	.1794	7707.		
.1570	-4954.	-2563.	-7689.	-6201.	-8496.	6126.	.0697	.0446	-.1092	-.1669	-.0231	.2057	8204.		
.1580	-5791.	-3022.	-8182.	-6638.	-7909.	7206.	.0756	.0454	-.1186	-.1762	-.0010	.2267	8487.		
.1590	-6247.	-3583.	-8473.	-6958.	-7220.	7996.	.0799	.0466	-.1249	-.1852	.0178	.2435	8644.		
.1600	-6628.	-3441.	-8833.	-6601.	-7254.	8638.	.0826	.0483	-.1295	-.1925	.0317	.2552	8809.		
.1610	-6829.	-3241.	-8765.	-6399.	-7033.	8929.	.0835	.0504	-.1312	-.1971	.0382	.2609	8792.		
.1620	-6572.	-3669.	-8242.	-6617.	-5957.	8779.	.0832	.0527	-.1299	-.1973	.0451	.2620	8428.		
.1630	-6260.	-3437.	-7889.	-5983.	-5507.	8549.	.0823	.0555	-.1281	-.1920	.0557	.2589	7953.		
.1640	-5852.	-2682.	-7649.	-4756.	-5506.	8103.	.0807	.0586	-.1256	-.1814	.0681	.2522	7340.		
.1650	-5038.	-2419.	-6861.	-4165.	-4801.	7130.	.0780	.0615	-.1205	-.1669	.0748	.2413	6438.		
.1660	-4049.	-2126.	-5868.	-3828.	-4090.	5885.	.0742	.0643	-.1135	-.1493	.0728	.2260	5476.		
.1670	-3039.	-1472.	-4832.	-2990.	-4086.	4581.	.0700	.0669	-.1062	-.1290	.0704	.2083	4602.		
.1680	-2053.	-626.	-4124.	-2012.	-4270.	3130.	.0648	.0691	-.0977	-.1073	.0654	.1884	3818.		
.1690	-959.	-240.	-3216.	-1508.	-3901.	1490.	.0584	.0708	-.0868	-.0854	.0562	.1664	2993.		
.1700	28.	182.	-2339.	-905.	-3588.	-26.	.0509	.0717	-.0746	-.0629	.0451	.1432	2494.		
.1710	740.	1145.	-1471.	174.	-3506.	-1310.	.0423	.0718	-.0616	-.0394	.0347	.1195	2526.		
.1720	1547.	1611.	-453.	1089.	-2564.	-2577.	.0331	.0707	-.0468	-.0150	.0318	.0978	2558.		
.1730	2187.	1957.	616.	2050.	-1273.	-3563.	.0231	.0685	-.0310	.0098	.0320	.0768	2901.		
.1740	2476.	2469.	1378.	3323.	-223.	-4116.	.0125	.0650	-.0152	.0345	.0344	.0568	3569.		
.1750	2629.	2808.	2071.	4439.	1027.	-4506.	.0017	.0602	.0010	.0587	.0375	.0387	4319.		
.1760	2778.	3024.	3111.	5150.	2535.	-4836.	-.0093	.0538	.0174	.0810	.0367	.0220	5060.		
.1770	2980.	2999.	4102.	5652.	3914.	-4992.	-.0197	.0460	.0333	.1036	.0352	.0074	5727.		
.1780	2963.	3132.	4751.	6154.	4771.	-4904.	-.0296	.0372	.0478	.1230	.0316	-.0063	6203.		
.1790	2853.	3076.	5116.	6315.	5574.	-4789.	-.0389	.0273	.0615	.1393	.0270	-.0188	6531.		
.1800	2800.	2836.	5386.	6158.	6276.	-4667.	-.0474	.0167	.0741	.1524	.0212	-.0302	6710.		
.1810	2701.	2868.	5697.	5960.	6487.	-4419.	-.0550	.0053	.0850	.1623	.0119	-.0414	6643.		
.1820	2658.	2613.	5886.	5445.	6756.	-4179.	-.0615	-.0065	.0947	.1692	.0044	-.0517	6491.		
.1830	2481.	2267.	5819.	4754.	6962.	-3871.	-.0672	-.0185	.1029	.1724	-.0019	-.0620	6253.		
.1840	2160.	1955.	5377.	4157.	6764.	-3368.	-.0718	-.0303	.1090	.1717	-.0073	-.0726	5813.		
.1850	1834.	1534.	4783.	3493.	6349.	-2772.	-.0753	-.0418	.1135	.1673	-.0134	-.0835	5230.		
.1860	1493.	1077.	4348.	2564.	5950.	-2231.	-.0779	-.0529	.1166	.1595	-.0243	-.0949	4619.		
.1870	1195.	464.	3888.	1490.	5513.	-1737.	-.0794	-.0632	.1181	.1487	-.0376	-.1062	4024.		
.1880	836.	71.	3337.	637.	4677.	-1165.	-.0797	-.0725	.1177	.1353	-.0540	-.1179	3277.		
.1890	551.	-322.	2818.	-122.	3877.	-657.	-.0789	-.0804	.1159	.1195	-.0713	-.1295	2652.		
.1900	390.	-753.	2425.	-788.	3364.	-299.	-.0770	-.0869	.1130	.1026	-.0864	-.1402	2338.		
.1910	224.	-797.	2221.	-1062.	2801.	46.	-.0741	-.0918	.1085	.0858	-.0998	-.1505	2019.		
.1920	196.	-812.	2228.	-1127.	2441.	338.	-.0702	-.0950	.1029	.0694	-.1087	-.1597	1827.		
.1930	289.	-893.	2404.	-1123.	2420.	517.	-.0654	-.0965	.0964	.0531	-.1135	-.1682	1832.		

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

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

.1830	2481.	2267.	5819.	4754.	6962.	-3871.	-.0672	-.0185	.1029	.1724	-.0019	-.0620	6253.
.1840	2160.	1955.	5377.	4157.	6764.	-3368.	-.0718	-.0303	.1090	.1717	-.0073	-.0726	5813.
.1850	1834.	1534.	4783.	3493.	6349.	-2772.	-.0753	-.0418	.1135	.1673	-.0134	-.0835	5230.
.1860	1493.	1077.	4348.	2564.	5950.	-2231.	-.0779	-.0529	.1166	.1595	-.0243	-.0949	4619.
.1870	1195.	464.	3888.	1490.	5513.	-1737.	-.0794	-.0632	.1181	.1487	-.0376	-.1062	4024.
.1880	836.	71.	3337.	637.	4677.	-1165.	-.0797	-.0725	.1177	.1353	-.0540	-.1179	3277.
.1890	551.	-322.	2818.	-122.	3877.	-657.	-.0789	-.0804	.1159	.1195	-.0713	-.1295	2652.
.1900	390.	-753.	2425.	-788.	3364.	-299.	-.0770	-.0869	.1130	.1026	-.0864	-.1402	2338.
.1910	224.	-797.	2221.	-1062.	2801.	46.	-.0741	-.0918	.1085	.0858	-.0998	-.1505	2019.
.1920	196.	-812.	2228.	-1127.	2441.	338.	-.0702	-.0950	.1029	.0694	-.1087	-.1597	1827.
.1930	289.	-893.	2404.	-1123.	2420.	517.	-.0654	-.0965	.0964	.0531	-.1135	-.1682	1832.

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
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CONDITION 24

LOADS

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ENGLISH UNITS

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

SECTION	5	MEMBER	1	SEQUENCE	22	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)		
.1940	355.	-841.	2476.	-878.	2394.	665.	-.0600	-.0961	.0887	.0370	-.1137	-.1759	1776.		
.1950	398.	-725.	2361.	-435.	2211.	831.	-.0537	-.0939	.0795	.0213	-.1090	-.1827	1619.		
.1960	519.	-760.	2231.	-128.	2023.	927.	-.0466	-.0901	.0693	.0065	-.1019	-.1880	1503.		
.1970	705.	-856.	2123.	-52.	1765.	873.	-.0388	-.0849	.0579	-.0076	-.0950	-.1916	1328.		
.1980	890.	-859.	1863.	-41.	1243.	689.	-.0301	-.0784	.0451	-.0203	-.0874	-.1925	958.		
.1990	1068.	-842.	1361.	-29.	504.	428.	-.0204	-.0705	.0308	-.0305	-.0760	-.1894	446.		
.2000	1224.	-842.	697.	-52.	-316.	120.	-.0097	-.0618	.0148	-.0370	-.0596	-.1816	231.		
.2010	1335.	-754.	-7.	-105.	-1200.	-234.	.0020	-.0523	-.0025	-.0390	-.0402	-.1685	827.		
.2020	1434.	-604.	-670.	-211.	-2111.	-631.	.0145	-.0426	-.0209	-.0365	-.0194	-.1496	1492.		
.2030	1504.	-511.	-1309.	-392.	-3010.	-994.	.0276	-.0329	-.0400	-.0294	.0019	-.1251	2153.		
.2040	1413.	-467.	-1998.	-609.	-3927.	-1198.	.0408	-.0235	-.0595	-.0184	.0228	-.0956	2798.		
.2050	1107.	-459.	-2737.	-846.	-4815.	-1197.	.0537	-.0146	-.0789	-.0042	.0422	-.0621	3392.		
.2060	678.	-558.	-3434.	-1114.	-5565.	-1011.	.0658	-.0065	-.0973	.0119	.0593	-.0255	3886.		
.2070	181.	-756.	-4030.	-1369.	-6156.	-636.	.0768	.0006	-.1139	.0285	.0735	.0129	4272.		
.2080	-441.	-958.	-4524.	-1549.	-6562.	-62.	.0862	.0067	-.1283	.0446	.0845	.0514	4545.		
.2090	-1194.	-1157.	-4929.	-1636.	-6667.	664.	.0935	.0118	-.1398	.0591	.0935	.0884	4649.		
.2100	-1992.	-1362.	-5281.	-1556.	-6469.	1491.	.0987	.0158	-.1481	.0714	.1023	.1229	4596.		
.2110	-2774.	-1492.	-5575.	-1251.	-6096.	2380.	.1016	.0188	-.1530	.0809	.1106	.1532	4491.		
.2120	-3504.	-1553.	-5723.	-862.	-5527.	3244.	.1022	.0206	-.1544	.0875	.1169	.1780	4359.		
.2130	-4129.	-1639.	-5681.	-546.	-4716.	4001.	.1005	.0212	-.1523	.0916	.1206	.1962	4185.		
.2140	-4613.	-1730.	-5559.	-243.	-3874.	4639.	.0969	.0205	-.1471	.0936	.1226	.2071	4077.		
.2150	-4944.	-1760.	-5430.	76.	-3203.	5130.	.0915	.0187	-.1395	.0940	.1221	.2103	4077.		
.2160	-5075.	-1785.	-5191.	230.	-2611.	5365.	.0844	.0158	-.1293	.0932	.1175	.2054	4025.		
.2170	-4946.	-1842.	-4753.	152.	-2031.	5287.	.0760	.0118	-.1167	.0919	.1088	.1925	3819.		
.2180	-4544.	-1816.	-4160.	25.	-1594.	4928.	.0664	.0070	-.1024	.0906	.0979	.1725	3491.		
.2190	-3894.	-1643.	-3448.	-55.	-1292.	4298.	.0560	.0014	-.0864	.0893	.0861	.1458	3025.		
.2200	-3034.	-1391.	-2605.	-157.	-947.	3382.	.0445	-.0046	-.0686	.0876	.0733	.1131	2370.		
.2210	-2015.	-1066.	-1666.	-241.	-553.	2252.	.0321	-.0109	-.0492	.0848	.0594	.0754	1572.		
.2220	-898.	-628.	-676.	-201.	-195.	1024.	.0188	-.0174	-.0285	.0805	.0451	.0336	715.		
.2230	264.	-153.	367.	-88.	221.	-245.	.0049	-.0238	-.0067	.0741	.0300	-.0109	230.		
.2240	1392.	255.	1404.	22.	771.	-1483.	-.0097	-.0300	.0160	.0651	.0137	-.0570	1126.		
.2250	2376.	605.	2288.	196.	1313.	-2559.	-.0246	-.0359	.0389	.0533	-.0038	-.1031	1943.		
.2260	3163.	903.	2973.	455.	1778.	-3406.	-.0394	-.0413	.0613	.0390	-.0226	-.1476	2608.		
.2270	3773.	1094.	3572.	692.	2302.	-4055.	-.0537	-.0462	.0827	.0233	-.0425	-.1885	3177.		
.2280	4222.	1191.	4142.	898.	2915.	-4512.	-.0669	-.0504	.1023	.0076	-.0625	-.2238	3671.		
.2290	4488.	1273.	4600.	1186.	3478.	-4734.	-.0783	-.0538	.1192	-.0068	-.0806	-.2518	4039.		
.2300	4569.	1352.	4901.	1555.	3946.	-4742.	-.0874	-.0562	.1326	-.0184	-.0962	-.2711	4288.		
.2310	4502.	1402.	5110.	1890.	4368.	-4613.	-.0939	-.0577	.1422	-.0263	-.1095	-.2810	4468.		

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

CONDITION 24

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ENGLISH UNITS

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

.2210	-2015.	-1066.	-1666.	-241.	-553.	2252.	.0321	-.0109	-.0492	.0848	.0594	.0754	1572.
.2220	-898.	-628.	-676.	-201.	-195.	1024.	.0188	-.0174	-.0285	.0805	.0451	.0336	715.
.2230	264.	-153.	367.	-88.	121.	-245.	.0049	-.0238	-.0067	.0741	.0300	-.0109	230.
.2240	1392.	255.	1404.	22.	771.	-1483.	-.0097	-.0300	.0160	.0651	.0137	-.0570	1126.
.2250	2376.	605.	2288.	196.	1313.	-2559.	-.0246	-.0359	.0389	.0533	-.0038	-.1031	1943.
.2260	3163.	903.	2973.	455.	1778.	-3406.	-.0394	-.0413	.0613	.0390	-.0226	-.1476	2608.
.2270	3773.	1094.	3572.	692.	2302.	-4055.	-.0537	-.0462	.0827	.0233	-.0425	-.1885	3177.
.2280	4222.	1191.	4142.	898.	2915.	-4512.	-.0669	-.0504	.1023	.0076	-.0625	-.2238	3671.
.2290	4488.	1273.	4600.	1186.	3478.	-4734.	-.0783	-.0538	.1192	-.0068	-.0806	-.2518	4039.
.2300	4569.	1352.	4901.	1555.	3946.	-4742.	-.0874	-.0562	.1326	-.0184	-.0962	-.2711	4288.
.2310	4502.	1402.	5110.	1890.	4368.	-4613.	-.0939	-.0577	.1422	-.0263	-.1095	-.2810	4468.

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ENGLISH UNITS

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

SECTION	5	MEMBER	1	SEQUENCE	22	LOCATION	END	TYPE	EL						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.2320	4332.	1444.	5305.	2146.	4695.	-4387.	-.0976	-.0582	.1476	-.0297	-.1210	-.2811	4566.		
.2330	4087.	1482.	5485.	2321.	4857.	-4067.	-.0984	-.0578	.1488	-.0280	-.1301	-.2715	4548.		
.2340	3764.	1468.	5596.	2378.	4878.	-3667.	-.0964	-.0564	.1458	-.0216	-.1360	-.2531	4415.		
.2350	3343.	1393.	5575.	2315.	4780.	-3199.	-.0919	-.0540	.1392	-.0113	-.1381	-.2273	4179.		
.2360	2839.	1279.	5403.	2184.	4559.	-2661.	-.0855	-.0506	.1294	.0019	-.1356	-.1956	3850.		
.2370	2292.	1119.	5115.	2006.	4275.	-2079.	-.0775	-.0461	.1172	.0169	-.1275	-.1597	3478.		
.2380	1723.	912.	4739.	1773.	4011.	-1493.	-.0684	-.0407	.1035	.0323	-.1139	-.1212	3122.		
.2390	1130.	702.	4254.	1519.	3764.	-930.	-.0588	-.0343	.0887	.0466	-.0954	-.0822	2807.		
.2400	536.	510.	3628.	1293.	3512.	-403.	-.0490	-.0271	.0736	.0586	-.0726	-.0441	2537.		
.2410	-21.	331.	2877.	1112.	3257.	60.	-.0392	-.0191	.0586	.0675	-.0461	-.0082	2320.		
.2420	-526.	187.	2053.	958.	2987.	436.	-.0296	-.0106	.0438	.0728	-.0176	.0247	2135.		
.2430	-963.	89.	1225.	787.	2671.	708.	-.0202	-.0019	.0294	.0745	.0104	.0537	1937.		
.2440	-1295.	-0.	442.	561.	2301.	865.	-.0112	.0070	.0156	.0726	.0360	.0785	1699.		
.2450	-1515.	-81.	-290.	304.	1861.	917.	-.0024	.0156	.0022	.0673	.0586	.0989	1413.		
.2460	-1647.	-118.	-972.	67.	1330.	898.	.0063	.0239	-.0109	.0594	.0779	.1150	1083.		
.2470	-1697.	-123.	-1561.	-155.	736.	829.	.0147	.0317	-.0236	.0491	.0934	.1271	754.		
.2480	-1645.	-133.	-2015.	-391.	108.	714.	.0230	.0388	-.0358	.0367	.1041	.1353	553.		
.2490	-1499.	-127.	-2328.	-631.	-565.	559.	.0309	.0450	-.0473	.0222	.1091	.1399	684.		
.2500	-1299.	-81.	-2516.	-851.	-1270.	386.	.0382	.0504	-.0579	.0054	.1084	.1410	1063.		
.2510	-1076.	-29.	-2609.	-1041.	-1944.	233.	.0448	.0548	-.0673	-.0134	.1030	.1390	1495.		
.2520	-864.	6.	-2676.	-1171.	-2585.	143.	.0506	.0583	-.0754	-.0341	.0941	.1343	1915.		
.2530	-699.	48.	-2752.	-1233.	-3221.	133.	.0552	.0608	-.0820	-.0566	.0817	.1272	2326.		
.2540	-584.	72.	-2796.	-1296.	-3785.	187.	.0585	.0624	-.0867	-.0804	.0655	.1180	2700.		
.2550	-511.	27.	-2777.	-1401.	-4188.	303.	.0605	.0629	-.0894	-.1047	.0472	.1073	2984.		
.2560	-511.	-63.	-2769.	-1470.	-4459.	520.	.0612	.0624	-.0904	-.1281	.0296	.0958	3184.		
.2570	-616.	-150.	-2845.	-1455.	-4651.	847.	.0607	.0611	-.0898	-.1497	.0145	.0843	3334.		
.2580	-783.	-273.	-2952.	-1451.	-4712.	1225.	.0591	.0589	-.0878	-.1686	.0016	.0732	3424.		
.2590	-946.	-459.	-3011.	-1539.	-4619.	1592.	.0567	.0558	-.0845	-.1840	-.0092	.0631	3452.		
.2600	-1097.	-641.	-3036.	-1678.	-4476.	1934.	.0536	.0521	-.0802	-.1950	-.0170	.0545	3476.		
.2610	-1247.	-786.	-3072.	-1859.	-4349.	2234.	.0502	.0478	-.0754	-.2013	-.0219	.0477	3526.		
.2620	-1380.	-940.	-3126.	-2152.	-4227.	2454.	.0464	.0430	-.0701	-.2033	-.0247	.0426	3600.		
.2630	-1473.	-1100.	-3196.	-2562.	-4158.	2575.	.0424	.0380	-.0644	-.2015	-.0267	.0392	3721.		
.2640	-1522.	-1216.	-3264.	-3037.	-4186.	2604.	.0381	.0327	-.0583	-.1964	-.0284	.0372	3903.		
.2650	-1526.	-1304.	-3278.	-3573.	-4233.	2545.	.0336	.0275	-.0517	-.1886	-.0300	.0363	4109.		
.2660	-1502.	-1396.	-3234.	-4136.	-4216.	2425.	.0286	.0224	-.0444	-.1790	-.0314	.0361	4304.		
.2670	-1485.	-1458.	-3186.	-4609.	-4151.	2294.	.0231	.0177	-.0364	-.1683	-.0325	.0361	4458.		
.2680	-1489.	-1468.	-3138.	-4911.	-4011.	2180.	.0170	.0134	-.0275	-.1572	-.0334	.0359	4520.		
.2690	-1492.	-1458.	-2995.	-5050.	-3680.	2030.	.0102	.0098	-.0176	-.1460	-.0342	.0352	4439.		

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83/12/02.

18.25.57.

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

.2590	-946.	-459.	-3011.	-1539.	-4619.	1592.	.0567	.0558	-.0845	-.1840	-.0092	.0631	3452.
.2600	-1097.	-641.	-3036.	-1678.	-4476.	1934.	.0536	.0521	-.0802	-.1950	-.0170	.0545	3476.
.2610	-1247.	-786.	-3072.	-1859.	-4349.	2234.	.0502	.0478	-.0754	-.2013	-.0219	.0477	3526.
.2620	-1380.	-940.	-3126.	-2152.	-4227.	2454.	.0464	.0430	-.0701	-.2033	-.0247	.0426	3600.
.2630	-1473.	-1100.	-3196.	-2562.	-4158.	2575.	.0424	.0380	-.0644	-.2015	-.0267	.0392	3721.
.2640	-1522.	-1216.	-3264.	-3037.	-4186.	2604.	.0381	.0327	-.0583	-.1964	-.0284	.0372	3903.
.2650	-1526.	-1304.	-3278.	-3573.	-4233.	2545.	.0336	.0275	-.0517	-.1886	-.0300	.0363	4109.
.2660	-1502.	-1396.	-3234.	-4136.	-4216.	2425.	.0286	.0224	-.0444	-.1790	-.0314	.0361	4304.
.2670	-1485.	-1458.	-3186.	-4609.	-4151.	2294.	.0231	.0177	-.0364	-.1683	-.0325	.0361	4458.
.2680	-1469.	-1468.	-3138.	-4911.	-4011.	2180.	.0170	.0134	-.0275	-.1572	-.0334	.0359	4520.
.2690	-1492.	-1456.	-2995.	-5050.	-3680.	2030.	.0102	.0098	-.0176	-.1460	-.0342	.0352	4439.

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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	5	MEMBER	1	SEQUENCE	22	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)		
.2700	-1482.	-1432.	-2699.	-5011.	-3122.	2003.	.0029	.0068	-.0067	-.1348	-.0351	.0339	4202.		
.2710	-1467.	-1352.	-2280.	-4742.	-2399.	1955.	-.0050	.0045	.0049	-.1237	-.0365	.0317	3817.		
.2720	-1444.	-1215.	-1774.	-4250.	-1550.	1911.	-.0132	.0031	.0172	-.1128	-.0390	.0285	3310.		
.2730	-1385.	-1035.	-1155.	-3589.	-574.	1828.	-.0216	.0024	.0298	-.1020	-.0427	.0244	2742.		
.2740	-1256.	-792.	-384.	-2791.	495.	1679.	-.0300	.0025	.0424	-.0908	-.0473	.0193	2221.		
.2750	-1032.	-472.	528.	-1872.	1605.	1439.	-.0379	.0034	.0546	-.0791	-.0518	.0135	1924.		
.2760	-712.	-89.	1507.	-877.	2708.	1081.	-.0452	.0051	.0661	-.0671	-.0555	.0069	2052.		
.2770	-312.	345.	2474.	138.	3733.	597.	-.0518	.0074	.0766	-.0550	-.0581	-.0004	2550.		
.2780	160.	814.	3385.	1108.	4612.	-8.	-.0576	.0104	.0859	-.0433	-.0595	-.0085	3197.		
.2790	714.	1285.	4228.	1964.	5317.	-729.	-.0623	.0139	.0937	-.0323	-.0593	-.0171	3852.		
.2800	1334.	1730.	4963.	2652.	5814.	-1553.	-.0660	.0178	.1000	-.0227	-.0579	-.0261	4433.		
.2810	1971.	2138.	5520.	3150.	6060.	-2439.	-.0686	.0221	.1046	-.0151	-.0557	-.0350	4888.		
.2820	2582.	2490.	5853.	3454.	6056.	-3334.	-.0701	.0265	.1074	-.0098	-.0526	-.0435	5209.		
.2830	3145.	2772.	5982.	3578.	5857.	-4192.	-.0706	.0311	.1086	-.0068	-.0483	-.0508	5421.		
.2840	3643.	2992.	5953.	3567.	5526.	-4964.	-.0699	.0356	.1079	-.0058	-.0423	-.0561	5554.		
.2850	4039.	3155.	5792.	3466.	5122.	-5597.	-.0681	.0400	.1055	-.0064	-.0347	-.0585	5622.		
.2860	4293.	3248.	5504.	3306.	4704.	-6034.	-.0652	.0441	.1012	-.0081	-.0254	-.0574	5618.		
.2870	4376.	3262.	5101.	3122.	4298.	-6229.	-.0611	.0478	.0952	-.0105	-.0146	-.0522	5518.		
.2880	4283.	3203.	4620.	2933.	3912.	-6157.	-.0558	.0511	.0872	-.0131	-.0032	-.0426	5300.		
.2890	4017.	3059.	4100.	2724.	3559.	-5819.	-.0494	.0537	.0774	-.0156	.0080	-.0285	4951.		
.2900	3579.	2816.	3547.	2469.	3227.	-5225.	-.0420	.0556	.0660	-.0180	.0179	-.0102	4462.		
.2910	2973.	2487.	2944.	2170.	2871.	-4392.	-.0336	.0569	.0530	-.0203	.0258	.0116	3828.		
.2920	2229.	2090.	2286.	1833.	2465.	-3363.	-.0244	.0575	.0386	-.0226	.0316	.0363	3070.		
.2930	1391.	1639.	1590.	1452.	2016.	-2200.	-.0145	.0575	.0233	-.0251	.0355	.0629	2237.		
.2940	494.	1156.	859.	1031.	1514.	-962.	-.0042	.0569	.0073	-.0280	.0377	.0903	1395.		
.2950	-429.	672.	86.	577.	934.	296.	.0062	.0558	-.0089	-.0315	.0384	.1172	767.		
.2960	-1333.	193.	-717.	79.	283.	1511.	.0164	.0543	-.0249	-.0359	.0378	.1424	1037.		
.2970	-2172.	-272.	-1537.	-462.	-429.	2622.	.0263	.0525	-.0403	-.0413	.0362	.1647	1818.		
.2980	-2918.	-703.	-2372.	-1026.	-1215.	3597.	.0355	.0504	-.0546	-.0478	.0338	.1830	2651.		
.2990	-3549.	-1095.	-3202.	-1608.	-2067.	4409.	.0437	.0481	-.0675	-.0553	.0306	.1966	3457.		
.3000	-4037.	-1455.	-3989.	-2216.	-2945.	5027.	.0508	.0456	-.0786	-.0637	.0265	.2049	4201.		
.3010	-4363.	-1770.	-4699.	-2821.	-3812.	5430.	.0565	.0430	-.0877	-.0726	.0214	.2077	4859.		
.3020	-4523.	-2008.	-5305.	-3363.	-4640.	5623.	.0609	.0404	-.0945	-.0814	.0161	.2050	5412.		
.3030	-4521.	-2165.	-5770.	-3804.	-5369.	5622.	.0638	.0378	-.0991	-.0897	.0111	.1973	5833.		
.3040	-4364.	-2242.	-6063.	-4119.	-5936.	5437.	.0652	.0352	-.1013	-.0969	.0066	.1850	6095.		
.3050	-4070.	-2224.	-6174.	-4273.	-6319.	5089.	.0653	.0327	-.1012	-.1025	.0027	.1690	6181.		
.3060	-3665.	-2105.	-6099.	-4244.	-6510.	4609.	.0639	.0303	-.0989	-.1062	-.0004	.1501	6090.		
.3070	-3174.	-1912.	-5832.	-4050.	-6485.	4032.	.0614	.0279	-.0947	-.1075	-.0029	.1291	5826.		

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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

.2970	-2172.	-272.	-1527.	-462.	-429.	2622.	.0263	.0525	-.0403	-.0413	.0362	.1647	1818.
.2980	-2918.	-703.	-2372.	-1026.	-1215.	3597.	.0355	.0504	-.0546	-.0478	.0338	.1830	2651.
.2990	-3549.	-1095.	-3202.	-1608.	-2067.	4409.	.0437	.0481	-.0675	-.0553	.0306	.1966	3457.
.3000	-4037.	-1455.	-3989.	-2216.	-2945.	5027.	.0508	.0456	-.0786	-.0637	.0265	.2049	4201.
.3010	-4763.	-1770.	-4699.	-2821.	-3812.	5430.	.0565	.0430	-.0877	-.0726	.0214	.2077	4859.
.3020	-4523.	-2008.	-5305.	-3362.	-4640.	5623.	.0609	.0404	-.0945	-.0814	.0161	.2050	5412.
.3030	-4521.	-2165.	-5770.	-3804.	-5369.	5622.	.0638	.0378	-.0991	-.0897	.0111	.1973	5833.
.3040	-4364.	-2242.	-6063.	-4119.	-5936.	5437.	.0652	.0352	-.1013	-.0969	.0066	.1850	6095.
.3050	-4070.	-2224.	-6174.	-4273.	-6319.	5089.	.0653	.0327	-.1012	-.1025	.0027	.1690	6181.
.3060	-3665.	-2105.	-6099.	-4244.	-6510.	4609.	.0639	.0303	-.0989	-.1062	-.0004	.1501	6090.
.3070	-3174.	-1912.	-5832.	-4050.	-6485.	4032.	.0614	.0279	-.0947	-.1075	-.0029	.1291	5826.

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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	5	MEMBER	1	SEQUENCE	22	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	-2626.	-1670.	-5392.	-3712.	-6250.	3394.	.0576	.0255	-.0886	-.1063	-.0049	.1068	5408.		
.3090	-2058.	-1386.	-4828.	-3237.	-5848.	2733.	.0529	.0232	-.0811	-.1024	-.0067	.0842	4867.		
.3100	-1494.	-1077.	-4174.	-2649.	-5309.	2073.	.0474	.0209	-.0723	-.0959	-.0083	.0619	4237.		
.3110	-952.	-770.	-3445.	-1998.	-4646.	1437.	.0413	.0185	-.0626	-.0865	-.0098	.0408	3544.		
.3120	-444.	-476.	-2658.	-1313.	-3880.	839.	.0347	.0160	-.0522	-.0743	-.0109	.0214	2818.		
.3130	18.	-188.	-1850.	-605.	-3051.	288.	.0279	.0134	-.0415	-.0593	-.0114	.0043	2106.		
.3140	431.	92.	-1054.	108.	-2189.	-215.	.0210	.0107	-.0307	-.0416	-.0109	-.0100	1484.		
.3150	792.	355.	-287.	794.	-1313.	-670.	.0141	.0078	-.0201	-.0215	-.0094	-.0216	1129.		
.3160	1099.	598.	439.	1426.	-452.	-1076.	.0074	.0047	-.0097	.0007	-.0070	-.0302	1242.		
.3170	1355.	820.	1109.	1984.	369.	-1438.	.0010	.0014	.0002	.0245	-.0037	-.0362	1670.		
.3180	1563.	1013.	1709.	2450.	1132.	-1755.	-.0052	-.0021	.0097	.0492	.0001	-.0397	2170.		
.3190	1718.	1163.	2221.	2815.	1821.	-2021.	-.0110	-.0058	.0185	.0741	.0044	-.0413	2639.		
.3200	1813.	1267.	2629.	3083.	2431.	-2224.	-.0165	-.0098	.0268	.0986	.0089	-.0414	3042.		
.3210	1847.	1325.	2934.	3267.	2968.	-2363.	-.0216	-.0140	.0344	.1221	.0138	-.0406	3375.		
.3220	1829.	1340.	3154.	3379.	3446.	-2439.	-.0263	-.0183	.0414	.1442	.0188	-.0392	3645.		
.3230	1768.	1316.	3310.	3434.	3881.	-2457.	-.0307	-.0228	.0477	.1643	.0238	-.0379	3865.		
.3240	1670.	1262.	3408.	3456.	4281.	-2420.	-.0346	-.0273	.0534	.1821	.0287	-.0369	4051.		
.3250	1537.	1191.	3447.	3475.	4642.	-2333.	-.0380	-.0320	.0582	.1975	.0334	-.0366	4213.		
.3260	1385.	1114.	3453.	3502.	4963.	-2210.	-.0409	-.0366	.0622	.2104	.0378	-.0373	4357.		
.3270	1238.	1031.	3460.	3524.	5244.	-2069.	-.0431	-.0412	.0653	.2206	.0411	-.0393	4482.		
.3280	1113.	943.	3476.	3537.	5469.	-1928.	-.0446	-.0458	.0674	.2281	.0430	-.0429	4578.		
.3290	1013.	857.	3491.	3543.	5609.	-1794.	-.0454	-.0503	.0684	.2329	.0432	-.0481	4633.		
.3300	944.	775.	3498.	3536.	5648.	-1676.	-.0455	-.0547	.0684	.2349	.0418	-.0552	4631.		
.3310	920.	691.	3504.	3500.	5583.	-1584.	-.0447	-.0589	.0673	.2341	.0386	-.0641	4568.		
.3320	950.	603.	3508.	3425.	5411.	-1528.	-.0433	-.0630	.0652	.2305	.0338	-.0748	4438.		
.3330	1028.	520.	3493.	3311.	5124.	-1508.	-.0411	-.0668	.0621	.2238	.0277	-.0873	4236.		
.3340	1145.	438.	3441.	3156.	4728.	-1521.	-.0384	-.0703	.0582	.2143	.0205	-.1012	3967.		
.3350	1286.	352.	3331.	2957.	4235.	-1558.	-.0351	-.0735	.0535	.2018	.0130	-.1163	3636.		
.3360	1438.	261.	3147.	2718.	3643.	-1606.	-.0314	-.0764	.0480	.1866	.0053	-.1321	3249.		
.3370	1586.	166.	2887.	2430.	2962.	-1657.	-.0273	-.0788	.0420	.1689	-.0025	-.1480	2814.		
.3380	1716.	51.	2552.	2081.	2215.	-1696.	-.0228	-.0809	.0354	.1492	-.0103	-.1634	2346.		
.3390	1806.	-89.	2137.	1679.	1419.	-1704.	-.0180	-.0825	.0283	.1282	-.0177	-.1775	1875.		
.3400	1836.	-248.	1638.	1247.	583.	-1657.	-.0129	-.0838	.0206	.1066	-.0242	-.1896	1452.		
.3410	1797.	-428.	1076.	794.	-257.	-1543.	-.0075	-.0846	.0123	.0853	-.0296	-.1989	1183.		
.3420	1689.	-635.	484.	323.	-1062.	-1357.	-.0018	-.0851	.0036	.0653	-.0335	-.2048	1182.		
.3430	1508.	-861.	-118.	-143.	-1808.	-1089.	.0042	-.0851	-.0057	.0475	-.0358	-.2066	1426.		
.3440	1255.	-1093.	-714.	-579.	-2481.	-737.	.0105	-.0848	-.0154	.0325	-.0358	-.2040	1787.		
.3450	935.	-1332.	-1286.	-979.	-3058.	-307.	.0171	-.0841	-.0255	.0209	-.0337	-.1969	2174.		

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83/12/02.

18.25.58.

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

.3340	1145.	438.	3441.	3156.	4728.	-1521.	-.0384	-.0703	.0582	.2143	.0205	-.1012	3967.
.3350	1286.	352.	3331.	2957.	4235.	-1558.	-.0351	-.0735	.0535	.2018	.0130	-.1163	3636.
.3360	1438.	261.	3147.	2718.	3643.	-1606.	-.0314	-.0764	.0480	.1866	.0053	-.1321	3249.
.3370	1586.	166.	2887.	2430.	2962.	-1657.	-.0273	-.0788	.0420	.1689	-.0025	-.1480	2814.
.3380	1716.	51.	2552.	2081.	2215.	-1696.	-.0228	-.0809	.0354	.1492	-.0103	-.1634	2346.
.3390	1806.	-89.	2137.	1679.	1419.	-1704.	-.0180	-.0825	.0283	.1282	-.0177	-.1775	1875.
.3400	1836.	-248.	1638.	1247.	583.	-1657.	-.0129	-.0838	.0206	.1066	-.0242	-.1896	1452.
.3410	1797.	-428.	1076.	794.	-257.	-1543.	-.0075	-.0846	.0123	.0853	-.0296	-.1989	1183.
.3420	1689.	-635.	484.	323.	-1052.	-1357.	-.0018	-.0851	.0036	.0653	-.0335	-.2048	1182.
.3430	1508.	-861.	-118.	-143.	-1808.	-1089.	.0042	-.0851	-.0057	.0475	-.0358	-.2066	1426.
.3440	1255.	-1093.	-714.	-579.	-2481.	-737.	.0165	-.0848	-.0154	.0325	-.0358	-.2040	1787.
.3450	935.	-1332.	-1286.	-979.	-3058.	-307.	.0171	-.0841	-.0255	.0209	-.0337	-.1969	2174.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

03/12/02. 18.25.58.

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	S	MEMBER	1	SEQUENCE	22	LOCATION	END	TYPE	EL					
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.3460	561.	-1575.	-1821.	-1343.	-3533.	186.		.0238	-.0831	-.0359	.0128	-.0295	-.1855	2550.
.3470	146.	-1812.	-2313.	-1666.	-3921.	726.		.0306	-.0817	-.0463	.0082	-.0235	-.1702	2913.
.3480	-296.	-2037.	-2754.	-1956.	-4226.	1290.		.0372	-.0800	-.0565	.0069	-.0163	-.1516	3257.
.3490	-744.	-2253.	-3138.	-2221.	-4448.	1853.		.0436	-.0779	-.0662	.0083	-.0080	-.1306	3576.
.3500	-1185.	-2450.	-3478.	-2453.	-4600.	2394.		.0494	-.0755	-.0752	.0119	.0009	-.1082	3866.
.3510	-1608.	-2616.	-3781.	-2640.	-4698.	2891.		.0545	-.0728	-.0831	.0170	.0103	-.0854	4122.
.3520	-1993.	-2749.	-4038.	-2789.	-4735.	3321.		.0587	-.0699	-.0896	.0230	.0198	-.0631	4328.
.3530	-2319.	-2846.	-4228.	-2899.	-4695.	3659.		.0619	-.0666	-.0945	.0294	.0290	-.0424	4463.
.3540	-2572.	-2896.	-4348.	-2951.	-4585.	3893.		.0638	-.0632	-.0975	.0357	.0377	-.0239	4516.
.3550	-2746.	-2888.	-4401.	-2930.	-4412.	4016.		.0644	-.0596	-.0986	.0418	.0459	-.0084	4480.
.3560	-2834.	-2825.	-4376.	-2840.	-4169.	4017.		.0637	-.0558	-.0976	.0473	.0531	.0037	4346.
.3570	-2824.	-2709.	-4255.	-2686.	-3855.	3890.		.0617	-.0519	-.0945	.0521	.0587	.0120	4112.
.3580	-2711.	-2535.	-4025.	-2464.	-3479.	3636.		.0584	-.0481	-.0895	.0561	.0526	.0165	3777.
.3590	-2497.	-2304.	-3685.	-2171.	-3044.	3263.		.0538	-.0443	-.0825	.0595	.0647	.0172	3345.
.3600	-2193.	-2024.	-3247.	-1814.	-2554.	2785.		.0482	-.0405	-.0739	.0621	.0650	.0143	2826.
.3610	-1812.	-1702.	-2724.	-1398.	-2024.	2221.		.0417	-.0369	-.0638	.0641	.0534	.0081	2234.
.3620	-1364.	-1345.	-2127.	-933.	-1468.	1588.		.0344	-.0335	-.0525	.0653	.0500	-.0009	1588.
.3630	-862.	-966.	-1466.	-441.	-895.	905.		.0265	-.0303	-.0402	.0657	.0549	-.0122	908.
.3640	-327.	-580.	-764.	57.	-319.	198.		.0182	-.0272	-.0274	.0654	.0481	-.0251	256.
.3650	217.	-200.	-53.	544.	236.	-505.		.0097	-.0245	-.0142	.0642	.0398	-.0392	525.
.3660	747.	165.	639.	1003.	752.	-1181.		.0012	-.0220	-.0010	.0620	.0302	-.0536	1161.
.3670	1250.	501.	1302.	1411.	1224.	-1811.		-.0072	-.0198	.0120	.0590	.0196	-.0677	1754.
.3680	1710.	801.	1929.	1755.	1655.	-2376.		-.0154	-.0178	.0245	.0551	.0082	-.0808	2282.
.3690	2114.	1062.	2509.	2030.	2045.	-2857.		-.0230	-.0161	.0363	.0506	-.0033	-.0924	2735.
.3700	2446.	1279.	3020.	2238.	2398.	-3238.		-.0301	-.0146	.0471	.0454	-.0143	-.1019	3107.
.3710	2694.	1454.	3450.	2384.	2717.	-3507.		-.0366	-.0133	.0569	.0397	-.0245	-.1089	3395.
.3720	2856.	1582.	3799.	2463.	3008.	-3659.		-.0423	-.0120	.0656	.0335	-.0333	-.1130	3598.
.3730	2931.	1661.	4066.	2470.	3273.	-3693.		-.0471	-.0108	.0729	.0269	-.0406	-.1141	3720.
.3740	2918.	1689.	4240.	2408.	3505.	-3611.		-.0511	-.0096	.0788	.0199	-.0463	-.1121	3760.
.3750	2814.	1668.	4305.	2278.	3686.	-3418.		-.0542	-.0082	.0833	.0124	-.0503	-.1071	3720.
.3760	2626.	1600.	4254.	2080.	3804.	-3127.		-.0564	-.0066	.0863	.0044	-.0527	-.0992	3603.
.3770	2362.	1486.	4092.	1815.	3853.	-2754.		-.0575	-.0048	.0877	-.0040	-.0537	-.0885	3419.
.3780	2039.	1336.	3829.	1492.	3824.	-2317.		-.0577	-.0025	.0875	-.0129	-.0534	-.0754	3177.
.3790	1670.	1160.	3473.	1122.	3710.	-1838.		-.0568	.0001	.0858	-.0220	-.0520	-.0601	2892.
.3800	1266.	967.	3030.	722.	3507.	-1336.		-.0548	.0033	.0824	-.0313	-.0496	-.0429	2576.
.3810	841.	768.	2514.	306.	3212.	-828.		-.0519	.0071	.0775	-.0406	-.0465	-.0242	2246.
.3820	413.	574.	1955.	-111.	2833.	-334.		-.0479	.0113	.0711	-.0497	-.0430	-.0042	1924.
.3830	3.	390.	1388.	-522.	2383.	129.		-.0430	.0162	.0634	-.0585	-.0394	.0165	1646.

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