

50-305

RESPONSE TO NUREG-0737 ITEM II.D.1

Docket # *50-305*

Control # *8403280048*

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

.0350	0.	0.	0.	0.	0.	0.	0.	.1094	-.0483	.0396	.0584	-.2124	-.3114	0.
.0360	0.	0.	0.	0.	0.	0.	0.	.0979	-.0606	.0537	.0530	-.2585	-.3123	0.
.0370	0.	0.	0.	0.	0.	0.	0.	.0823	-.0742	.0695	.0450	-.2875	-.2978	0.
.0380	0.	0.	0.	0.	0.	0.	0.	.0634	-.0881	.0872	.0480	-.2984	-.2724	0.
.0390	0.	0.	0.	0.	0.	0.	0.	.0418	-.1007	.1067	.0545	-.2863	-.2484	0.
.0400	0.	0.	0.	0.	0.	0.	0.	.0187	-.1118	.1254	.0471	-.2778	-.2255	0.
.0410	0.	0.	0.	0.	0.	0.	0.	-.0048	-.1212	.1450	.0382	-.2361	-.1965	0.
.0420	0.	0.	0.	0.	0.	0.	0.	-.0275	-.1279	.1643	.0427	-.1701	-.1665	0.
.0430	0.	0.	0.	0.	0.	0.	0.	-.0480	-.1312	.1807	.0423	-.1049	-.1458	0.
.0440	0.	0.	0.	0.	0.	0.	0.	-.0649	-.1311	.1925	.0227	-.0387	-.1323	0.
.0450	0.	0.	0.	0.	0.	0.	0.	-.0775	-.1275	.1992	.0046	.0257	-.1199	0.

ADLPIPE PAGE 375

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.03.

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	7	MEMBER	2	SEQUENCE	805	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0460	0.	0.	0.	0.	0.	0.	-.0854	-.1200	.2002	.0002	.0684	-.1113	0.		
.0470	0.	0.	0.	0.	0.	0.	-.0887	-.1097	.1953	-.0126	.0870	-.1093	0.		
.0480	0.	0.	0.	0.	0.	0.	-.0876	-.0973	.1859	-.0370	.0990	-.1061	0.		
.0490	0.	0.	0.	0.	0.	0.	-.0831	-.0822	.1739	-.0401	.1083	-.0952	0.		
.0500	0.	0.	0.	0.	0.	0.	-.0761	-.0643	.1603	-.0143	.1112	-.0802	0.		
.0510	0.	0.	0.	0.	0.	0.	-.0674	-.0449	.1457	.0125	.1175	-.0634	0.		
.0520	0.	0.	0.	0.	0.	0.	-.0576	-.0249	.1309	.0363	.1342	-.0387	0.		
.0530	0.	0.	0.	0.	0.	0.	-.0477	-.0038	.1159	.0781	.1511	-.0052	0.		
.0540	0.	0.	0.	0.	0.	0.	-.0379	.0183	.0998	.1294	.1608	.0283	0.		
.0550	0.	0.	0.	0.	0.	0.	-.0284	.0404	.0816	.1630	.1651	.0568	0.		
.0560	0.	0.	0.	0.	0.	0.	-.0194	.0617	.0611	.1820	.1611	.0840	0.		
.0570	0.	0.	0.	0.	0.	0.	-.0111	.0820	.0389	.2031	.1481	.1111	0.		
.0580	0.	0.	0.	0.	0.	0.	-.0034	.1004	.0155	.2167	.1367	.1337	0.		
.0590	0.	0.	0.	0.	0.	0.	.0037	.1160	-.0089	.2122	.1316	.1512	0.		
.0600	0.	0.	0.	0.	0.	0.	.0102	.1285	-.0337	.2062	.1265	.1678	0.		
.0610	0.	0.	0.	0.	0.	0.	.0160	.1376	-.0579	.2096	.1225	.1847	0.		
.0620	0.	0.	0.	0.	0.	0.	.0216	.1420	-.0807	.2082	.1254	.2008	0.		
.0630	0.	0.	0.	0.	0.	0.	.0268	.1414	-.1021	.1972	.1277	.2171	0.		
.0640	0.	0.	0.	0.	0.	0.	.0315	.1363	-.1219	.1918	.1187	.2343	0.		
.0650	0.	0.	0.	0.	0.	0.	.0357	.1272	-.1395	.1939	.1025	.2492	0.		
.0660	0.	0.	0.	0.	0.	0.	.0392	.1139	-.1545	.1877	.0838	.2602	0.		
.0670	0.	0.	0.	0.	0.	0.	.0415	.0965	-.1664	.1697	.0585	.2684	0.		
.0680	0.	0.	0.	0.	0.	0.	.0422	.0761	-.1747	.1498	.0310	.2720	0.		
.0690	0.	0.	0.	0.	0.	0.	.0415	.0537	-.1787	.1284	.0156	.2675	0.		
.0700	0.	0.	0.	0.	0.	0.	.0392	.0300	-.1786	.0974	.0144	.2544	0.		
.0710	0.	0.	0.	0.	0.	0.	.0355	.0055	-.1751	.0568	.0161	.2334	0.		
.0720	0.	0.	0.	0.	0.	0.	.0309	-.0189	-.1690	.0090	.0125	.2024	0.		
.0730	0.	0.	0.	0.	0.	0.	.0260	-.0427	-.1606	-.0501	.0006	.1602	0.		
.0740	0.	0.	0.	0.	0.	0.	.0214	-.0651	-.1502	-.1189	-.0206	.1100	0.		
.0750	0.	0.	0.	0.	0.	0.	.0176	-.0853	-.1373	-.1841	-.0458	.0559	0.		
.0760	0.	0.	0.	0.	0.	0.	.0151	-.1028	-.1214	-.2361	-.0693	-.0014	0.		
.0770	0.	0.	0.	0.	0.	0.	.0143	-.1176	-.1026	-.2783	-.0962	-.0605	0.		
.0780	0.	0.	0.	0.	0.	0.	.0150	-.1295	-.0810	-.3125	-.1292	-.1173	0.		
.0790	0.	0.	0.	0.	0.	0.	.0175	-.1383	-.0561	-.3286	-.1568	-.1683	0.		
.0800	0.	0.	0.	0.	0.	0.	.0215	-.1436	-.0281	-.3179	-.1700	-.2141	0.		
.0810	0.	0.	0.	0.	0.	0.	.0269	-.1453	.0018	-.2866	-.1772	-.2556	0.		
.0820	0.	0.	0.	0.	0.	0.	.0330	-.1437	.0321	-.2473	-.1873	-.2919	0.		
.0830	0.	0.	0.	0.	0.	0.	.0396	-.1388	.0620	-.2026	-.1975	-.3226	0.		

ADLPIPE PAGE 376

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.03.

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

.0730	0.	0.	0.	0.	0.	0.	0.	.0260	-.0427	-.1606	-.0501	.0006	.1602	0.
.0740	0.	0.	0.	0.	0.	0.	0.	.0214	-.0651	-.1502	-.1189	-.0206	.1100	0.
.0750	0.	0.	0.	0.	0.	0.	0.	.0176	-.0853	-.1373	-.1841	-.0458	.0559	0.
.0760	0.	0.	0.	0.	0.	0.	0.	.0151	-.1028	-.1214	-.2361	-.0693	-.0014	0.
.0770	0.	0.	0.	0.	0.	0.	0.	.0143	-.1176	-.1026	-.2783	-.0962	-.0605	0.
.0780	0.	0.	0.	0.	0.	0.	0.	.0150	-.1295	-.0810	-.3125	-.1292	-.1173	0.
.0790	0.	0.	0.	0.	0.	0.	0.	.0175	-.1383	-.0561	-.3286	-.1568	-.1683	0.
.0800	0.	0.	0.	0.	0.	0.	0.	.0215	-.1436	-.0281	-.3179	-.1700	-.2141	0.
.0810	0.	0.	0.	0.	0.	0.	0.	.0269	-.1453	.0018	-.2866	-.1772	-.2556	0.
.0820	0.	0.	0.	0.	0.	0.	0.	.0330	-.1437	.0321	-.2473	-.1873	-.2919	0.
.0830	0.	0.	0.	0.	0.	0.	0.	.0396	-.1388	.0620	-.2026	-.1975	-.3226	0.

ADLPIPE PAGE 376 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.03.

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	7	MEMBER	2	SEQUENCE	805	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0840	0.	0.	0.	0.	0.	0.	.0459	-.1307	.0911	-.1496	-.2029	-.3486	0.		
.0850	0.	0.	0.	0.	0.	0.	.0514	-.1193	.1186	-.0920	-.2024	-.3701	0.		
.0860	0.	0.	0.	0.	0.	0.	.0554	-.1050	.1439	-.0358	-.1921	-.3856	0.		
.0870	0.	0.	0.	0.	0.	0.	.0573	-.0885	.1669	.0196	-.1595	-.3933	0.		
.0880	0.	0.	0.	0.	0.	0.	.0566	-.0708	.1874	.0750	-.1378	-.3920	0.		
.0890	0.	0.	0.	0.	0.	0.	.0529	-.0526	.2048	.1258	-.0990	-.3803	0.		
.0900	0.	0.	0.	0.	0.	0.	.0461	-.0349	.2188	.1719	-.0509	-.3570	0.		
.0910	0.	0.	0.	0.	0.	0.	.0365	-.0181	.2291	.2195	.0030	-.3216	0.		
.0920	0.	0.	0.	0.	0.	0.	.0244	-.0028	.2351	.2676	.0528	-.2745	0.		
.0930	0.	0.	0.	0.	0.	0.	.0104	.0101	.2361	.3062	.0927	-.2174	0.		
.0940	0.	0.	0.	0.	0.	0.	-.0049	.0204	.2323	.3331	.1235	-.1526	0.		
.0950	0.	0.	0.	0.	0.	0.	-.0207	.0285	.2239	.3554	.1480	-.0828	0.		
.0960	0.	0.	0.	0.	0.	0.	-.0361	.0346	.2112	.3742	.1705	-.0109	0.		
.0970	0.	0.	0.	0.	0.	0.	-.0504	.0387	.1945	.3822	.1935	.0591	0.		
.0980	0.	0.	0.	0.	0.	0.	-.0628	.0408	.1737	.3760	.2128	.1228	0.		
.0990	0.	0.	0.	0.	0.	0.	-.0727	.0412	.1491	.3568	.2230	.1767	0.		
.1000	0.	0.	0.	0.	0.	0.	-.0795	.0400	.1210	.3231	.2240	.2186	0.		
.1010	0.	0.	0.	0.	0.	0.	-.0828	.0375	.0901	.2742	.2172	.2462	0.		
.1020	0.	0.	0.	0.	0.	0.	-.0824	.0341	.0572	.2151	.2013	.2585	0.		
.1030	0.	0.	0.	0.	0.	0.	-.0783	.0300	.0236	.1498	.1776	.2564	0.		
.1040	0.	0.	0.	0.	0.	0.	-.0706	.0254	-.0095	.0784	.1515	.2427	0.		
.1050	0.	0.	0.	0.	0.	0.	-.0596	.0204	-.0411	.0047	.1260	.2195	0.		
.1060	0.	0.	0.	0.	0.	0.	-.0457	.0157	-.0704	-.0631	.1014	.1882	0.		
.1070	0.	0.	0.	0.	0.	0.	-.0295	.0115	-.0969	-.1212	.0800	.1514	0.		
.1080	0.	0.	0.	0.	0.	0.	-.0115	.0076	-.1206	-.1731	.0637	.1126	0.		
.1090	0.	0.	0.	0.	0.	0.	.0076	.0040	-.1415	-.2184	.0567	.0748	0.		
.1100	0.	0.	0.	0.	0.	0.	.0272	.0010	-.1605	-.2477	.0476	.0387	0.		
.1110	0.	0.	0.	0.	0.	0.	.0465	-.0011	-.1792	-.2719	.0206	.0023	0.		
.1120	0.	0.	0.	0.	0.	0.	.0649	-.0028	-.1977	-.3021	-.0238	-.0328	0.		
.1130	0.	0.	0.	0.	0.	0.	.0817	-.0039	-.2148	-.3282	-.0710	-.0616	0.		
.1140	0.	0.	0.	0.	0.	0.	.0959	-.0042	-.2293	-.3392	-.1132	-.0823	0.		
.1150	0.	0.	0.	0.	0.	0.	.1070	-.0034	-.2410	-.3422	-.1499	-.0971	0.		
.1160	0.	0.	0.	0.	0.	0.	.1146	-.0019	-.2493	-.3435	-.1775	-.1054	0.		
.1170	0.	0.	0.	0.	0.	0.	.1183	.0002	-.2534	-.3358	-.1967	-.1046	0.		
.1180	0.	0.	0.	0.	0.	0.	.1178	.0027	-.2530	-.3148	-.2117	-.0948	0.		
.1190	0.	0.	0.	0.	0.	0.	.1133	.0050	-.2485	-.2951	-.2330	-.0807	0.		
.1200	0.	0.	0.	0.	0.	0.	.1049	.0070	-.2396	-.2799	-.2511	-.0625	0.		
.1210	0.	0.	0.	0.	0.	0.	.0930	.0088	-.2250	-.2515	-.2485	-.0368	0.		

ADLPIPE PAGE 377 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.03.

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

.1110	0.	0.	0.	0.	0.	0.	0.	.0465	-.0011	-.1792	-.2719	.0206	.0023	0.
.1120	0.	0.	0.	0.	0.	0.	0.	.0649	-.0028	-.1977	-.3021	-.0238	-.0328	0.
.1130	0.	0.	0.	0.	0.	0.	0.	.0817	-.0039	-.2148	-.3282	-.0710	-.0616	0.
.1140	0.	0.	0.	0.	0.	0.	0.	.0959	-.0042	-.2293	-.3392	-.1132	-.0823	0.
.1150	0.	0.	0.	0.	0.	0.	0.	.1070	-.0034	-.2410	-.3422	-.1499	-.0971	0.
.1160	0.	0.	0.	0.	0.	0.	0.	.1146	-.0019	-.2493	-.3435	-.1775	-.1054	0.
.1170	0.	0.	0.	0.	0.	0.	0.	.1183	.0002	-.2534	-.3358	-.1967	-.1046	0.
.1180	0.	0.	0.	0.	0.	0.	0.	.1178	.0027	-.2530	-.3148	-.2117	-.0948	0.
.1190	0.	0.	0.	0.	0.	0.	0.	.1133	.0050	-.2485	-.2951	-.2330	-.0807	0.
.1200	0.	0.	0.	0.	0.	0.	0.	.1049	.0070	-.2396	-.2799	-.2511	-.0625	0.
.1210	0.	0.	0.	0.	0.	0.	0.	.0930	.0088	-.2250	-.2515	-.2485	-.0368	0.

ADLPIPE PAGE 377

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.03.

S/RV PIPING KEWAUNEE GKWD8F 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	7	MEMBER	2	SEQUENCE	805	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1220	0.	0.	0.	0.	0.	0.	.0781	.0107	-.2052	-.2073	-.2382	-.0072	0.		
.1230	0.	0.	0.	0.	0.	0.	.0607	.0121	-.1812	-.1658	-.2227	.0210	0.		
.1240	0.	0.	0.	0.	0.	0.	.0418	.0129	-.1537	-.1354	-.2019	.0462	0.		
.1250	0.	0.	0.	0.	0.	0.	.0221	.0137	-.1229	-.1011	-.1744	.0708	0.		
.1260	0.	0.	0.	0.	0.	0.	.0022	.0147	-.0894	-.0588	-.1370	.0926	0.		
.1270	0.	0.	0.	0.	0.	0.	-.0170	.0159	-.0548	-.0261	-.0956	.1056	0.		
.1280	0.	0.	0.	0.	0.	0.	-.0349	.0170	-.0195	-.0033	-.0437	.1115	0.		
.1290	0.	0.	0.	0.	0.	0.	-.0510	.0183	.0232	.0232	.0108	.1134	0.		
.1300	0.	0.	0.	0.	0.	0.	-.0650	.0198	.0494	.0488	.0588	.1094	0.		
.1310	0.	0.	0.	0.	0.	0.	-.0766	.0211	.0807	.0611	.1015	.0973	0.		
.1320	0.	0.	0.	0.	0.	0.	-.0856	.0223	.1089	.0646	.1301	.0792	0.		
.1330	0.	0.	0.	0.	0.	0.	-.0924	.0235	.1345	.0734	.1486	.0603	0.		
.1340	0.	0.	0.	0.	0.	0.	-.0969	.0247	.1574	.0820	.1611	.0405	0.		
.1350	0.	0.	0.	0.	0.	0.	-.0995	.0258	.1775	.0825	.1716	.0190	0.		
.1360	0.	0.	0.	0.	0.	0.	-.1002	.0270	.1948	.0854	.1831	-.0010	0.		
.1370	0.	0.	0.	0.	0.	0.	-.0995	.0288	.2086	.0961	.1872	-.0184	0.		
.1380	0.	0.	0.	0.	0.	0.	-.0973	.0307	.2184	.1032	.1872	-.0342	0.		
.1390	0.	0.	0.	0.	0.	0.	-.0938	.0325	.2232	.0982	.1770	-.0499	0.		
.1400	0.	0.	0.	0.	0.	0.	-.0893	.0343	.2226	.0894	.1513	-.0641	0.		
.1410	0.	0.	0.	0.	0.	0.	-.0839	.0364	.2169	.0818	.1184	-.0757	0.		
.1420	0.	0.	0.	0.	0.	0.	-.0776	.0385	.2060	.0667	.0796	-.0860	0.		
.1430	0.	0.	0.	0.	0.	0.	-.0707	.0404	.1905	.0447	.0424	-.0934	0.		
.1440	0.	0.	0.	0.	0.	0.	-.0635	.0422	.1711	.0245	.0063	-.0962	0.		
.1450	0.	0.	0.	0.	0.	0.	-.0560	.0441	.1483	.0066	-.0276	-.0945	0.		
.1460	0.	0.	0.	0.	0.	0.	-.0483	.0456	.1226	-.0148	-.0553	-.0884	0.		
.1470	0.	0.	0.	0.	0.	0.	-.0409	.0470	.0942	-.0385	-.0821	-.0777	0.		
.1480	0.	0.	0.	0.	0.	0.	-.0337	.0480	.0641	-.0561	-.1030	-.0606	0.		
.1490	0.	0.	0.	0.	0.	0.	-.0272	.0488	.0327	-.0708	-.1208	-.0387	0.		
.1500	0.	0.	0.	0.	0.	0.	-.0216	.0490	.0003	-.0902	-.1401	-.0133	0.		
.1510	0.	0.	0.	0.	0.	0.	-.0171	.0489	-.0320	-.1102	-.1561	.0162	0.		
.1520	0.	0.	0.	0.	0.	0.	-.0141	.0487	-.0634	-.1252	-.1681	.0490	0.		
.1530	0.	0.	0.	0.	0.	0.	-.0126	.0483	-.0927	-.1366	-.1696	.0837	0.		
.1540	0.	0.	0.	0.	0.	0.	-.0125	.0480	-.1194	-.1499	-.1523	.1186	0.		
.1550	0.	0.	0.	0.	0.	0.	-.0139	.0479	-.1430	-.1623	-.1453	.1537	0.		
.1560	0.	0.	0.	0.	0.	0.	-.0163	.0482	-.1630	-.1684	-.1162	.1882	0.		
.1570	0.	0.	0.	0.	0.	0.	-.0194	.0490	-.1797	-.1738	-.0878	.2182	0.		
.1580	0.	0.	0.	0.	0.	0.	-.0227	.0501	-.1933	-.1828	-.0612	.2426	0.		
.1590	0.	0.	0.	0.	0.	0.	-.0256	.0516	-.2035	-.1912	-.0372	.2623	0.		

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18.26.03.

S/RV PIPING KEWAUNEE GKWD8F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.1490	0.	0.	0.	0.	0.	0.	0.	-.0272	.0488	.0327	-.0708	-.1208	-.0387	0.
.1500	0.	0.	0.	0.	0.	0.	0.	-.0216	.0490	.0003	-.0902	-.1401	-.0133	0.
.1510	0.	0.	0.	0.	0.	0.	0.	-.0171	.0489	-.0320	-.1102	-.1561	.0162	0.
.1520	0.	0.	0.	0.	0.	0.	0.	-.0141	.0487	-.0634	-.1252	-.1581	.0490	0.
.1530	0.	0.	0.	0.	0.	0.	0.	-.0126	.0483	-.0927	-.1366	-.1596	.0837	0.
.1540	0.	0.	0.	0.	0.	0.	0.	-.0125	.0480	-.1194	-.1499	-.1523	.1186	0.
.1550	0.	0.	0.	0.	0.	0.	0.	-.0139	.0479	-.1430	-.1623	-.1453	.1537	0.
.1560	0.	0.	0.	0.	0.	0.	0.	-.0163	.0482	-.1630	-.1684	-.1162	.1882	0.
.1570	0.	0.	0.	0.	0.	0.	0.	-.0194	.0490	-.1797	-.1738	-.0878	.2182	0.
.1580	0.	0.	0.	0.	0.	0.	0.	-.0227	.0501	-.1933	-.1828	-.0612	.2426	0.
.1590	0.	0.	0.	0.	0.	0.	0.	-.0256	.0516	-.2035	-.1912	-.0372	.2623	0.

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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	7	MEMBER	2	SEQUENCE	805	LOCATION	DIS	TYPE	VA					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)		DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.1600	0.	0.	0.	0.	0.	0.		-.0281	.0535	-.2106	-.1961	-.0237	.2761	0.
.1610	0.	0.	0.	0.	0.	0.		-.0296	.0558	-.2141	-.2007	-.0154	.2831	0.
.1620	0.	0.	0.	0.	0.	0.		-.0301	.0581	-.2135	-.2022	-.0003	.2848	0.
.1630	0.	0.	0.	0.	0.	0.		-.0295	.0607	-.2089	-.1947	.0138	.2818	0.
.1640	0.	0.	0.	0.	0.	0.		-.0278	.0635	-.2008	-.1795	.0261	.2740	0.
.1650	0.	0.	0.	0.	0.	0.		-.0251	.0661	-.1895	-.1638	.0382	.2609	0.
.1660	0.	0.	0.	0.	0.	0.		-.0215	.0685	-.1757	-.1483	.0416	.2428	0.
.1670	0.	0.	0.	0.	0.	0.		-.0175	.0706	-.1596	-.1272	.0394	.2215	0.
.1680	0.	0.	0.	0.	0.	0.		-.0133	.0724	-.1416	-.1039	.0330	.1969	0.
.1690	0.	0.	0.	0.	0.	0.		-.0093	.0735	-.1216	-.0821	.0267	.1699	0.
.1700	0.	0.	0.	0.	0.	0.		-.0061	.0738	-.1000	-.0595	.0182	.1419	0.
.1710	0.	0.	0.	0.	0.	0.		-.0040	.0734	-.0767	-.0350	.0085	.1140	0.
.1720	0.	0.	0.	0.	0.	0.		-.0031	.0717	-.0514	-.0086	.0127	.0882	0.
.1730	0.	0.	0.	0.	0.	0.		-.0036	.0688	-.0248	.0185	.0227	.0644	0.
.1740	0.	0.	0.	0.	0.	0.		-.0054	.0648	.0022	.0473	.0330	.0427	0.
.1750	0.	0.	0.	0.	0.	0.		-.0084	.0594	.0291	.0753	.0455	.0233	0.
.1760	0.	0.	0.	0.	0.	0.		-.0122	.0525	.0552	.0991	.0561	.0060	0.
.1770	0.	0.	0.	0.	0.	0.		-.0165	.0442	.0799	.1205	.0650	-.0085	0.
.1780	0.	0.	0.	0.	0.	0.		-.0211	.0350	.1025	.1398	.0678	-.0215	0.
.1790	0.	0.	0.	0.	0.	0.		-.0255	.0248	.1227	.1557	.0693	-.0335	0.
.1800	0.	0.	0.	0.	0.	0.		-.0296	.0138	.1402	.1675	.0687	-.0443	0.
.1810	0.	0.	0.	0.	0.	0.		-.0331	.0023	.1547	.1744	.0610	-.0543	0.
.1820	0.	0.	0.	0.	0.	0.		-.0359	-.0097	.1663	.1778	.0556	-.0633	0.
.1830	0.	0.	0.	0.	0.	0.		-.0379	-.0218	.1750	.1778	.0507	-.0725	0.
.1840	0.	0.	0.	0.	0.	0.		-.0389	-.0336	.1804	.1755	.0438	-.0815	0.
.1850	0.	0.	0.	0.	0.	0.		-.0388	-.0451	.1826	.1696	.0345	-.0904	0.
.1860	0.	0.	0.	0.	0.	0.		-.0376	-.0561	.1816	.1581	.0205	-.1000	0.
.1870	0.	0.	0.	0.	0.	0.		-.0352	-.0663	.1777	.1435	.0040	-.1098	0.
.1880	0.	0.	0.	0.	0.	0.		-.0318	-.0755	.1711	.1266	-.0188	-.1198	0.
.1890	0.	0.	0.	0.	0.	0.		-.0272	-.0832	.1624	.1081	-.0421	-.1298	0.
.1900	0.	0.	0.	0.	0.	0.		-.0217	-.0895	.1522	.0893	-.0611	-.1393	0.
.1910	0.	0.	0.	0.	0.	0.		-.0153	-.0942	.1407	.0711	-.0786	-.1483	0.
.1920	0.	0.	0.	0.	0.	0.		-.0082	-.0972	.1285	.0540	-.0703	-.1561	0.
.1930	0.	0.	0.	0.	0.	0.		-.0004	-.0985	.1154	.0374	-.0953	-.1633	0.
.1940	0.	0.	0.	0.	0.	0.		.0079	-.0979	.1016	.0226	-.0957	-.1698	0.
.1950	0.	0.	0.	0.	0.	0.		.0167	-.0956	.0868	.0098	-.0923	-.1755	0.
.1960	0.	0.	0.	0.	0.	0.		.0258	-.0917	.0711	-.0026	-.0866	-.1799	0.
.1970	0.	0.	0.	0.	0.	0.		.0351	-.0863	.0542	-.0156	-.0816	-.1831	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.03.

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

.1870	0.	0.	0.	0.	0.	0.	0.	0.	-.0352	-.0663	.1777	.1435	.0040	-.1098	0.
.1880	0.	0.	0.	0.	0.	0.	0.	0.	-.0318	-.0755	.1711	.1266	-.0188	-.1198	0.
.1890	0.	0.	0.	0.	0.	0.	0.	0.	-.0272	-.0822	.1624	.1081	-.0421	-.1298	0.
.1900	0.	0.	0.	0.	0.	0.	0.	0.	-.0217	-.0895	.1522	.0893	-.0611	-.1393	0.
.1910	0.	0.	0.	0.	0.	0.	0.	0.	-.0153	-.0941	.1407	.0711	-.0786	-.1483	0.
.1920	0.	0.	0.	0.	0.	0.	0.	0.	-.0082	-.0972	.1285	.0540	-.0703	-.1561	0.
.1930	0.	0.	0.	0.	0.	0.	0.	0.	-.0004	-.0985	.1154	.0374	-.0953	-.1633	0.
.1940	0.	0.	0.	0.	0.	0.	0.	0.	.0079	-.0979	.1016	.0226	-.0957	-.1698	0.
.1950	0.	0.	0.	0.	0.	0.	0.	0.	.0167	-.0956	.0868	.0098	-.0923	-.1755	0.
.1960	0.	0.	0.	0.	0.	0.	0.	0.	.0258	-.0917	.0711	-.0026	-.0866	-.1799	0.
.1970	0.	0.	0.	0.	0.	0.	0.	0.	.0351	-.0863	.0542	-.0156	-.0816	-.1831	0.

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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	7	MEMBER	2	SEQUENCE	805	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1980	0.	0.	0.	0.	0.	0.	.0443	-.0795	.0364	-.0274	-.0779	-.1843	0.		
.1990	0.	0.	0.	0.	0.	0.	.0532	-.0716	.0182	-.0358	-.0719	-.1822	0.		
.2000	0.	0.	0.	0.	0.	0.	.0614	-.0627	-.0000	-.0398	-.0517	-.1758	0.		
.2010	0.	0.	0.	0.	0.	0.	.0685	-.0531	-.0179	-.0394	-.0489	-.1646	0.		
.2020	0.	0.	0.	0.	0.	0.	.0742	-.0433	-.0351	-.0350	-.0350	-.1479	0.		
.2030	0.	0.	0.	0.	0.	0.	.0781	-.0336	-.0514	-.0265	-.0205	-.1256	0.		
.2040	0.	0.	0.	0.	0.	0.	.0801	-.0241	-.0665	-.0142	-.0065	-.0980	0.		
.2050	0.	0.	0.	0.	0.	0.	.0800	-.0152	-.0802	.0012	.0061	-.0661	0.		
.2060	0.	0.	0.	0.	0.	0.	.0776	-.0071	-.0922	.0182	.0175	-.0304	0.		
.2070	0.	0.	0.	0.	0.	0.	.0732	.0001	-.1023	.0356	.0271	.0078	0.		
.2080	0.	0.	0.	0.	0.	0.	.0668	.0063	-.1103	.0523	.0350	.0469	0.		
.2090	0.	0.	0.	0.	0.	0.	.0588	.0115	-.1159	.0678	.0431	.0851	0.		
.2100	0.	0.	0.	0.	0.	0.	.0496	.0156	-.1190	.0821	.0533	.1212	0.		
.2110	0.	0.	0.	0.	0.	0.	.0397	.0186	-.1195	.0946	.0643	.1537	0.		
.2120	0.	0.	0.	0.	0.	0.	.0297	.0205	-.1177	.1042	.0747	.1807	0.		
.2130	0.	0.	0.	0.	0.	0.	.0201	.0211	-.1135	.1104	.0845	.2011	0.		
.2140	0.	0.	0.	0.	0.	0.	.0115	.0205	-.1072	.1141	.0928	.2142	0.		
.2150	0.	0.	0.	0.	0.	0.	.0044	.0187	-.0991	.1158	.0973	.2191	0.		
.2160	0.	0.	0.	0.	0.	0.	-.0009	.0158	-.0891	.1149	.0972	.2152	0.		
.2170	0.	0.	0.	0.	0.	0.	-.0043	.0118	-.0775	.1115	.0929	.2027	0.		
.2180	0.	0.	0.	0.	0.	0.	-.0056	.0068	-.0641	.1070	.0854	.1823	0.		
.2190	0.	0.	0.	0.	0.	0.	-.0051	.0011	-.0491	.1021	.0760	.1545	0.		
.2200	0.	0.	0.	0.	0.	0.	-.0028	-.0051	-.0327	.0963	.0658	.1201	0.		
.2210	0.	0.	0.	0.	0.	0.	.0007	-.0117	-.0150	.0894	.0551	.0799	0.		
.2220	0.	0.	0.	0.	0.	0.	.0051	-.0113	.0035	.0814	.0435	.0356	0.		
.2230	0.	0.	0.	0.	0.	0.	.0100	-.0250	.0224	.0715	.0317	-.0115	0.		
.2240	0.	0.	0.	0.	0.	0.	.0147	-.0314	.0411	.0594	.0196	-.0601	0.		
.2250	0.	0.	0.	0.	0.	0.	.0190	-.0375	.0591	.0454	.0063	-.1082	0.		
.2260	0.	0.	0.	0.	0.	0.	.0225	-.0431	.0759	.0301	-.0089	-.1542	0.		
.2270	0.	0.	0.	0.	0.	0.	.0249	-.0480	.0911	.0137	-.0248	-.1960	0.		
.2280	0.	0.	0.	0.	0.	0.	.0260	-.0523	.1045	-.0027	-.0400	-.2318	0.		
.2290	0.	0.	0.	0.	0.	0.	.0258	-.0556	.1159	-.0168	-.0539	-.2596	0.		
.2300	0.	0.	0.	0.	0.	0.	.0241	-.0581	.1251	-.0273	-.0659	-.2785	0.		
.2310	0.	0.	0.	0.	0.	0.	.0213	-.0596	.1320	-.0339	-.0760	-.2877	0.		
.2320	0.	0.	0.	0.	0.	0.	.0172	-.0600	.1364	-.0365	-.0851	-.2870	0.		
.2330	0.	0.	0.	0.	0.	0.	.0122	-.0596	.1383	-.0348	-.0929	-.2766	0.		
.2340	0.	0.	0.	0.	0.	0.	.0064	-.0581	.1380	-.0289	-.0987	-.2573	0.		
.2350	0.	0.	0.	0.	0.	0.	-.0000	-.0556	.1354	-.0192	-.1017	-.2306	0.		

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.03.

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

.2250	0.	0.	0.	0.	0.	0.	0.	.0190	-.0375	.0591	.0454	.0063	-.1082	0.
.2260	0.	0.	0.	0.	0.	0.	0.	.0225	-.0431	.0759	.0301	-.0089	-.1542	0.
.2270	0.	0.	0.	0.	0.	0.	0.	.0249	-.0480	.0911	.0137	-.0248	-.1960	0.
.2280	0.	0.	0.	0.	0.	0.	0.	.0260	-.0523	.1045	-.0027	-.0400	-.2318	0.
.2290	0.	0.	0.	0.	0.	0.	0.	.0258	-.0556	.1159	-.0168	-.0539	-.2596	0.
.2300	0.	0.	0.	0.	0.	0.	0.	.0241	-.0581	.1251	-.0273	-.0559	-.2785	0.
.2310	0.	0.	0.	0.	0.	0.	0.	.0213	-.0596	.1320	-.0339	-.0760	-.2877	0.
.2320	0.	0.	0.	0.	0.	0.	0.	.0172	-.0600	.1364	-.0365	-.0851	-.2870	0.
.2330	0.	0.	0.	0.	0.	0.	0.	.0122	-.0596	.1383	-.0348	-.0929	-.2766	0.
.2340	0.	0.	0.	0.	0.	0.	0.	.0064	-.0581	.1380	-.0289	-.0987	-.2573	0.
.2350	0.	0.	0.	0.	0.	0.	0.	-.0000	-.0556	.1354	-.0192	-.1017	-.2306	0.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	7	MEMBER	2	SEQUENCE	805	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2360	0.	0.	0.	0.	0.	0.	-.0067	-.0521	.1308	-.0066	-.1009	-.1981	0.		
.2370	0.	0.	0.	0.	0.	0.	-.0135	-.0476	.1245	.0081	-.0950	-.1612	0.		
.2380	0.	0.	0.	0.	0.	0.	-.0202	-.0420	.1166	.0233	-.0834	-.1219	0.		
.2390	0.	0.	0.	0.	0.	0.	-.0264	-.0356	.1075	.0380	-.0669	-.0821	0.		
.2400	0.	0.	0.	0.	0.	0.	-.0319	-.0282	.0971	.0511	-.0461	-.0435	0.		
.2410	0.	0.	0.	0.	0.	0.	-.0365	-.0201	.0856	.0620	-.0216	-.0072	0.		
.2420	0.	0.	0.	0.	0.	0.	-.0399	-.0115	.0731	.0700	.0048	.0258	0.		
.2430	0.	0.	0.	0.	0.	0.	-.0419	-.0025	.0595	.0743	.0303	.0546	0.		
.2440	0.	0.	0.	0.	0.	0.	-.0424	.0065	.0449	.0744	.0531	.0789	0.		
.2450	0.	0.	0.	0.	0.	0.	-.0414	.0154	.0293	.0708	.0723	.0986	0.		
.2460	0.	0.	0.	0.	0.	0.	-.0389	.0239	.0131	.0643	.0876	.1141	0.		
.2470	0.	0.	0.	0.	0.	0.	-.0350	.0319	-.0038	.0552	.0986	.1254	0.		
.2480	0.	0.	0.	0.	0.	0.	-.0298	.0392	-.0211	.0432	.1046	.1329	0.		
.2490	0.	0.	0.	0.	0.	0.	-.0236	.0458	-.0386	.0283	.1046	.1369	0.		
.2500	0.	0.	0.	0.	0.	0.	-.0166	.0514	-.0561	.0107	.0985	.1376	0.		
.2510	0.	0.	0.	0.	0.	0.	-.0092	.0561	-.0733	-.0091	.0881	.1354	0.		
.2520	0.	0.	0.	0.	0.	0.	-.0017	.0599	-.0898	-.0306	.0745	.1308	0.		
.2530	0.	0.	0.	0.	0.	0.	.0054	.0627	-.1053	-.0535	.0573	.1239	0.		
.2540	0.	0.	0.	0.	0.	0.	.0121	.0645	-.1195	-.0780	.0370	.1153	0.		
.2550	0.	0.	0.	0.	0.	0.	.0178	.0654	-.1320	-.1031	.0157	.1055	0.		
.2560	0.	0.	0.	0.	0.	0.	.0225	.0652	-.1424	-.1271	-.0039	.0953	0.		
.2570	0.	0.	0.	0.	0.	0.	.0260	.0641	-.1503	-.1484	-.0205	.0852	0.		
.2580	0.	0.	0.	0.	0.	0.	.0282	.0621	-.1557	-.1668	-.0338	.0757	0.		
.2590	0.	0.	0.	0.	0.	0.	.0293	.0592	-.1585	-.1822	-.0439	.0672	0.		
.2600	0.	0.	0.	0.	0.	0.	.0292	.0556	-.1588	-.1936	-.0507	.0601	0.		
.2610	0.	0.	0.	0.	0.	0.	.0280	.0513	-.1567	-.2006	-.0547	.0545	0.		
.2620	0.	0.	0.	0.	0.	0.	.0260	.0466	-.1525	-.2037	-.0566	.0502	0.		
.2630	0.	0.	0.	0.	0.	0.	.0232	.0415	-.1465	-.2038	-.0581	.0472	0.		
.2640	0.	0.	0.	0.	0.	0.	.0197	.0362	-.1389	-.2011	-.0601	.0451	0.		
.2650	0.	0.	0.	0.	0.	0.	.0155	.0308	-.1300	-.1965	-.0620	.0438	0.		
.2660	0.	0.	0.	0.	0.	0.	.0108	.0256	-.1196	-.1902	-.0633	.0429	0.		
.2670	0.	0.	0.	0.	0.	0.	.0055	.0208	-.1080	-.1825	-.0640	.0422	0.		
.2680	0.	0.	0.	0.	0.	0.	-.0004	.0164	-.0951	-.1735	-.0638	.0413	0.		
.2690	0.	0.	0.	0.	0.	0.	-.0067	.0126	-.0811	-.1637	-.0621	.0401	0.		
.2700	0.	0.	0.	0.	0.	0.	-.0134	.0094	-.0658	-.1534	-.0588	.0385	0.		
.2710	0.	0.	0.	0.	0.	0.	-.0203	.0069	-.0496	-.1423	-.0548	.0363	0.		
.2720	0.	0.	0.	0.	0.	0.	-.0272	.0053	-.0326	-.1304	-.0508	.0333	0.		
.2730	0.	0.	0.	0.	0.	0.	-.0339	.0044	-.0151	-.1181	-.0472	.0292	0.		

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2 SAFETY COLD FKW24F--2 PSV

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.2520	0.	0.	0.	0.	0.	0.	0.	0.	.0260	.0466	-.1525	-.2037	-.0566	.0502	0.
.2630	0.	0.	0.	0.	0.	0.	0.	0.	.0232	.0415	-.1465	-.2038	-.0581	.0472	0.
.2640	0.	0.	0.	0.	0.	0.	0.	0.	.0197	.0362	-.1389	-.2011	-.0601	.0451	0.
.2650	0.	0.	0.	0.	0.	0.	0.	0.	.0155	.0308	-.1300	-.1965	-.0520	.0438	0.
.2660	0.	0.	0.	0.	0.	0.	0.	0.	.0108	.0256	-.1196	-.1902	-.0533	.0429	0.
.2670	0.	0.	0.	0.	0.	0.	0.	0.	.0055	.0207	-.1080	-.1825	-.0540	.0422	0.
.2680	0.	0.	0.	0.	0.	0.	0.	0.	-.0004	.0164	-.0951	-.1735	-.0538	.0413	0.
.2690	0.	0.	0.	0.	0.	0.	0.	0.	-.0067	.0126	-.0811	-.1637	-.0521	.0401	0.
.2700	0.	0.	0.	0.	0.	0.	0.	0.	-.0134	.0094	-.0658	-.1534	-.0588	.0385	0.
.2710	0.	0.	0.	0.	0.	0.	0.	0.	-.0203	.0069	-.0496	-.1423	-.0548	.0363	0.
.2720	0.	0.	0.	0.	0.	0.	0.	0.	-.0272	.0053	-.0326	-.1304	-.0508	.0333	0.
.2730	0.	0.	0.	0.	0.	0.	0.	0.	-.0339	.0044	-.0151	-.1181	-.0472	.0292	0.

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

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

SECTION	7	MEMBER	2	SEQUENCE	805	LOCATION	DIS	TYPE	VA						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.2740	0.	0.	0.	0.	0.	0.	-.0400	.0043	.0026	-.1053	-.0437	.0242	0.		
.2750	0.	0.	0.	0.	0.	0.	-.0454	.0049	.0202	-.0918	-.0398	.0182	0.		
.2760	0.	0.	0.	0.	0.	0.	-.0498	.0063	.0374	-.0777	-.0352	.0112	0.		
.2770	0.	0.	0.	0.	0.	0.	-.0530	.0084	.0536	-.0635	-.0301	.0030	0.		
.2780	0.	0.	0.	0.	0.	0.	-.0549	.0111	.0683	-.0497	-.0247	-.0064	0.		
.2790	0.	0.	0.	0.	0.	0.	-.0554	.0144	.0812	-.0371	-.0193	-.0168	0.		
.2800	0.	0.	0.	0.	0.	0.	-.0546	.0180	.0918	-.0265	-.0141	-.0279	0.		
.2810	0.	0.	0.	0.	0.	0.	-.0527	.0221	.0997	-.0182	-.0099	-.0394	0.		
.2820	0.	0.	0.	0.	0.	0.	-.0499	.0264	.1049	-.0126	-.0067	-.0506	0.		
.2830	0.	0.	0.	0.	0.	0.	-.0465	.0308	.1073	-.0096	-.0038	-.0607	0.		
.2840	0.	0.	0.	0.	0.	0.	-.0428	.0353	.1070	-.0086	-.0003	-.0685	0.		
.2850	0.	0.	0.	0.	0.	0.	-.0393	.0397	.1043	-.0092	.0044	-.0731	0.		
.2860	0.	0.	0.	0.	0.	0.	-.0363	.0438	.0992	-.0107	.0106	-.0736	0.		
.2870	0.	0.	0.	0.	0.	0.	-.0339	.0476	.0921	-.0125	.0183	-.0693	0.		
.2880	0.	0.	0.	0.	0.	0.	-.0324	.0509	.0831	-.0142	.0268	-.0598	0.		
.2890	0.	0.	0.	0.	0.	0.	-.0318	.0537	.0723	-.0159	.0353	-.0449	0.		
.2900	0.	0.	0.	0.	0.	0.	-.0321	.0558	.0598	-.0175	.0426	-.0251	0.		
.2910	0.	0.	0.	0.	0.	0.	-.0332	.0573	.0458	-.0190	.0478	-.0009	0.		
.2920	0.	0.	0.	0.	0.	0.	-.0349	.0581	.0304	-.0207	.0504	.0266	0.		
.2930	0.	0.	0.	0.	0.	0.	-.0368	.0584	.0139	-.0228	.0508	.0565	0.		
.2940	0.	0.	0.	0.	0.	0.	-.0388	.0581	-.0034	-.0252	.0491	.0872	0.		
.2950	0.	0.	0.	0.	0.	0.	-.0404	.0573	-.0211	-.0284	.0454	.1175	0.		
.2960	0.	0.	0.	0.	0.	0.	-.0414	.0561	-.0391	-.0326	.0398	.1458	0.		
.2970	0.	0.	0.	0.	0.	0.	-.0417	.0545	-.0569	-.0381	.0327	.1709	0.		
.2980	0.	0.	0.	0.	0.	0.	-.0409	.0527	-.0740	-.0446	.0243	.1916	0.		
.2990	0.	0.	0.	0.	0.	0.	-.0390	.0506	-.0902	-.0524	.0147	.2071	0.		
.3000	0.	0.	0.	0.	0.	0.	-.0359	.0483	-.1050	-.0612	.0038	.2167	0.		
.3010	0.	0.	0.	0.	0.	0.	-.0318	.0459	-.1179	-.0709	-.0077	.2202	0.		
.3020	0.	0.	0.	0.	0.	0.	-.0267	.0434	-.1287	-.0806	-.0193	.2178	0.		
.3030	0.	0.	0.	0.	0.	0.	-.0208	.0409	-.1368	-.0897	-.0298	.2099	0.		
.3040	0.	0.	0.	0.	0.	0.	-.0144	.0383	-.1421	-.0975	-.0386	.1971	0.		
.3050	0.	0.	0.	0.	0.	0.	-.0077	.0357	-.1444	-.1035	-.0452	.1802	0.		
.3060	0.	0.	0.	0.	0.	0.	-.0011	.0332	-.1435	-.1073	-.0497	.1601	0.		
.3070	0.	0.	0.	0.	0.	0.	.0053	.0306	-.1397	-.1084	-.0520	.1377	0.		
.3080	0.	0.	0.	0.	0.	0.	.0111	.0281	-.1329	-.1069	-.0522	.1140	0.		
.3090	0.	0.	0.	0.	0.	0.	.0161	.0255	-.1235	-.1024	-.0509	.0900	0.		
.3100	0.	0.	0.	0.	0.	0.	.0201	.0228	-.1116	-.0950	-.0484	.0663	0.		
.3110	0.	0.	0.	0.	0.	0.	.0230	.0201	-.0977	-.0847	-.0448	.0439	0.		

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

.3010	0.	0.	0.	0.	0.	0.	0.	-.0318	.0459	-.1179	-.0709	-.0077	.2202	0.
.3020	0.	0.	0.	0.	0.	0.	0.	-.0267	.0434	-.1287	-.0806	-.0193	.2178	0.
.3030	0.	0.	0.	0.	0.	0.	0.	-.0208	.0409	-.1368	-.0897	-.0298	.2099	0.
.3040	0.	0.	0.	0.	0.	0.	0.	-.0144	.0383	-.1421	-.0975	-.0386	.1971	0.
.3050	0.	0.	0.	0.	0.	0.	0.	-.0077	.0357	-.1444	-.1035	-.0452	.1802	0.
.3060	0.	0.	0.	0.	0.	0.	0.	-.0011	.0332	-.1435	-.1073	-.0497	.1601	0.
.3070	0.	0.	0.	0.	0.	0.	0.	.0053	.0306	-.1397	-.1084	-.0520	.1377	0.
.3080	0.	0.	0.	0.	0.	0.	0.	.0111	.0281	-.1329	-.1069	-.0522	.1140	0.
.3090	0.	0.	0.	0.	0.	0.	0.	.0161	.0255	-.1235	-.1024	-.0509	.0900	0.
.3100	0.	0.	0.	0.	0.	0.	0.	.0201	.0228	-.1116	-.0950	-.0484	.0663	0.
.3110	0.	0.	0.	0.	0.	0.	0.	.0230	.0201	-.0977	-.0847	-.0448	.0439	0.

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2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

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ENGLISH UNITS

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

SECTION	7	MEMBER	2	SEQUENCE	805	LOCATION	DIS	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3120	0.	0.	0.	0.	0.	0.	.0248	.0173	-.0820	-.0716	-.0401	.0233	0.	
.3130	0.	0.	0.	0.	0.	0.	.0254	.0143	-.0648	-.0557	-.0343	.0052	0.	
.3140	0.	0.	0.	0.	0.	0.	.0248	.0112	-.0465	-.0370	-.0272	-.0102	0.	
.3150	0.	0.	0.	0.	0.	0.	.0230	.0079	-.0273	-.0159	-.0191	-.0227	0.	
.3160	0.	0.	0.	0.	0.	0.	.0203	.0044	-.0076	.0071	-.0102	-.0322	0.	
.3170	0.	0.	0.	0.	0.	0.	.0167	.0007	.0122	.0315	-.0007	-.0390	0.	
.3180	0.	0.	0.	0.	0.	0.	.0124	-.0033	.0317	.0565	.0089	-.0433	0.	
.3190	0.	0.	0.	0.	0.	0.	.0076	-.0074	.0507	.0816	.0183	-.0456	0.	
.3200	0.	0.	0.	0.	0.	0.	.0025	-.0118	.0689	.1060	.0274	-.0464	0.	
.3210	0.	0.	0.	0.	0.	0.	-.0026	-.0163	.0860	.1295	.0363	-.0460	0.	
.3220	0.	0.	0.	0.	0.	0.	-.0077	-.0210	.1018	.1513	.0450	-.0450	0.	
.3230	0.	0.	0.	0.	0.	0.	-.0125	-.0257	.1161	.1712	.0532	-.0438	0.	
.3240	0.	0.	0.	0.	0.	0.	-.0167	-.0306	.1288	.1889	.0611	-.0429	0.	
.3250	0.	0.	0.	0.	0.	0.	-.0202	-.0354	.1398	.2044	.0685	-.0425	0.	
.3260	0.	0.	0.	0.	0.	0.	-.0227	-.0402	.1490	.2175	.0752	-.0430	0.	
.3270	0.	0.	0.	0.	0.	0.	-.0242	-.0451	.1562	.2280	.0806	-.0447	0.	
.3280	0.	0.	0.	0.	0.	0.	-.0244	-.0498	.1613	.2356	.0842	-.0479	0.	
.3290	0.	0.	0.	0.	0.	0.	-.0232	-.0544	.1643	.2404	.0855	-.0527	0.	
.3300	0.	0.	0.	0.	0.	0.	-.0205	-.0589	.1650	.2424	.0843	-.0593	0.	
.3310	0.	0.	0.	0.	0.	0.	-.0164	-.0632	.1636	.2413	.0807	-.0678	0.	
.3320	0.	0.	0.	0.	0.	0.	-.0108	-.0673	.1599	.2372	.0746	-.0782	0.	
.3330	0.	0.	0.	0.	0.	0.	-.0038	-.0711	.1541	.2299	.0663	-.0903	0.	
.3340	0.	0.	0.	0.	0.	0.	.0043	-.0746	.1462	.2195	.0562	-.1040	0.	
.3350	0.	0.	0.	0.	0.	0.	.0134	-.0777	.1363	.2062	.0449	-.1189	0.	
.3360	0.	0.	0.	0.	0.	0.	.0233	-.0804	.1247	.1902	.0328	-.1346	0.	
.3370	0.	0.	0.	0.	0.	0.	.0337	-.0827	.1114	.1718	.0199	-.1504	0.	
.3380	0.	0.	0.	0.	0.	0.	.0441	-.0846	.0967	.1513	.0066	-.1657	0.	
.3390	0.	0.	0.	0.	0.	0.	.0544	-.0860	.0809	.1296	-.0068	-.1797	0.	
.3400	0.	0.	0.	0.	0.	0.	.0641	-.0870	.0643	.1074	-.0196	-.1917	0.	
.3410	0.	0.	0.	0.	0.	0.	.0730	-.0876	.0473	.0856	-.0312	-.2007	0.	
.3420	0.	0.	0.	0.	0.	0.	.0807	-.0878	.0303	.0652	-.0413	-.2061	0.	
.3430	0.	0.	0.	0.	0.	0.	.0871	-.0876	.0136	.0470	-.0491	-.2072	0.	
.3440	0.	0.	0.	0.	0.	0.	.0920	-.0870	-.0024	.0319	-.0543	-.2038	0.	
.3450	0.	0.	0.	0.	0.	0.	.0953	-.0861	-.0173	.0202	-.0565	-.1957	0.	
.3460	0.	0.	0.	0.	0.	0.	.0970	-.0848	-.0311	.0122	-.0559	-.1830	0.	
.3470	0.	0.	0.	0.	0.	0.	.0972	-.0833	-.0435	.0077	-.0530	-.1664	0.	
.3480	0.	0.	0.	0.	0.	0.	.0959	-.0813	-.0545	.0064	-.0481	-.1464	0.	
.3490	0.	0.	0.	0.	0.	0.	.0934	-.0791	-.0635	.0077	-.0416	-.1241	0.	

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2 SAFETY COLD FKW24F--2 PSV

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

.3390	0.	0.	0.	0.	0.	0.	0.	.0544	-.0860	.0809	.1296	-.0368	-.1797	0.
.3400	0.	0.	0.	0.	0.	0.	0.	.0641	-.0870	.0643	.1074	-.0196	-.1917	0.
.3410	0.	0.	0.	0.	0.	0.	0.	.0730	-.0876	.0473	.0856	-.0312	-.2007	0.
.3420	0.	0.	0.	0.	0.	0.	0.	.0807	-.0878	.0303	.0652	-.0413	-.2061	0.
.3430	0.	0.	0.	0.	0.	0.	0.	.0871	-.0876	.0136	.0470	-.0491	-.2072	0.
.3440	0.	0.	0.	0.	0.	0.	0.	.0920	-.0870	-.0024	.0319	-.0543	-.2038	0.
.3450	0.	0.	0.	0.	0.	0.	0.	.0953	-.0861	-.0173	.0202	-.0565	-.1957	0.
.3460	0.	0.	0.	0.	0.	0.	0.	.0970	-.0848	-.0311	.0122	-.0559	-.1830	0.
.3470	0.	0.	0.	0.	0.	0.	0.	.0972	-.0833	-.0435	.0077	-.0530	-.1664	0.
.3480	0.	0.	0.	0.	0.	0.	0.	.0959	-.0813	-.0545	.0064	-.0481	-.1464	0.
.3490	0.	0.	0.	0.	0.	0.	0.	.0934	-.0791	-.0638	.0077	-.0416	-.1241	0.

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

SECTION	7	MEMBER	2	SEQUENCE	805	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3500	0.	0.	0.	0.	0.	0.	.0899	-.0766	-.0715	.0112	-.0338	-.1004	0.		
.3510	0.	0.	0.	0.	0.	0.	.0855	-.0738	-.0776	.0164	-.0252	-.0765	0.		
.3520	0.	0.	0.	0.	0.	0.	.0806	-.0708	-.0818	.0224	-.0161	-.0533	0.		
.3530	0.	0.	0.	0.	0.	0.	.0752	-.0674	-.0842	.0289	-.0067	-.0320	0.		
.3540	0.	0.	0.	0.	0.	0.	.0697	-.0639	-.0848	.0354	.0029	-.0131	0.		
.3550	0.	0.	0.	0.	0.	0.	.0642	-.0603	-.0834	.0417	.0123	.0024	0.		
.3560	0.	0.	0.	0.	0.	0.	.0588	-.0565	-.0802	.0476	.0213	.0142	0.		
.3570	0.	0.	0.	0.	0.	0.	.0537	-.0527	-.0751	.0528	.0293	.0219	0.		
.3580	0.	0.	0.	0.	0.	0.	.0489	-.0488	-.0683	.0573	.0361	.0255	0.		
.3590	0.	0.	0.	0.	0.	0.	.0446	-.0451	-.0599	.0611	.0415	.0250	0.		
.3600	0.	0.	0.	0.	0.	0.	.0407	-.0414	-.0499	.0642	.0455	.0208	0.		
.3610	0.	0.	0.	0.	0.	0.	.0372	-.0379	-.0388	.0666	.0479	.0130	0.		
.3620	0.	0.	0.	0.	0.	0.	.0341	-.0346	-.0267	.0682	.0488	.0023	0.		
.3630	0.	0.	0.	0.	0.	0.	.0314	-.0314	-.0140	.0690	.0480	-.0107	0.		
.3640	0.	0.	0.	0.	0.	0.	.0289	-.0285	-.0009	.0688	.0456	-.0254	0.		
.3650	0.	0.	0.	0.	0.	0.	.0266	-.0259	.0121	.0677	.0415	-.0411	0.		
.3660	0.	0.	0.	0.	0.	0.	.0244	-.0235	.0247	.0655	.0359	-.0571	0.		
.3670	0.	0.	0.	0.	0.	0.	.0221	-.0213	.0367	.0622	.0289	-.0727	0.		
.3680	0.	0.	0.	0.	0.	0.	.0196	-.0194	.0478	.0579	.0208	-.0871	0.		
.3690	0.	0.	0.	0.	0.	0.	.0169	-.0177	.0578	.0526	.0123	-.0998	0.		
.3700	0.	0.	0.	0.	0.	0.	.0138	-.0162	.0667	.0465	.0040	-.1100	0.		
.3710	0.	0.	0.	0.	0.	0.	.0103	-.0148	.0742	.0399	-.0037	-.1175	0.		
.3720	0.	0.	0.	0.	0.	0.	.0062	-.0135	.0803	.0328	-.0103	-.1218	0.		
.3730	0.	0.	0.	0.	0.	0.	.0017	-.0122	.0848	.0252	-.0156	-.1227	0.		
.3740	0.	0.	0.	0.	0.	0.	-.0032	-.0108	.0878	.0171	-.0195	-.1202	0.		
.3750	0.	0.	0.	0.	0.	0.	-.0086	-.0093	.0891	.0087	-.0222	-.1144	0.		
.3760	0.	0.	0.	0.	0.	0.	-.0143	-.0075	.0886	-.0002	-.0238	-.1055	0.		
.3770	0.	0.	0.	0.	0.	0.	-.0201	-.0054	.0864	-.0094	-.0244	-.0938	0.		
.3780	0.	0.	0.	0.	0.	0.	-.0259	-.0029	.0824	-.0190	-.0244	-.0794	0.		
.3790	0.	0.	0.	0.	0.	0.	-.0316	.0001	.0767	-.0287	-.0238	-.0628	0.		
.3800	0.	0.	0.	0.	0.	0.	-.0370	.0036	.0693	-.0385	-.0230	-.0444	0.		
.3810	0.	0.	0.	0.	0.	0.	-.0420	.0076	.0604	-.0481	-.0222	-.0245	0.		
.3820	0.	0.	0.	0.	0.	0.	-.0465	.0122	.0501	-.0574	-.0216	-.0035	0.		
.3830	0.	0.	0.	0.	0.	0.	-.0503	.0174	.0386	-.0663	-.0215	.0182	0.		
.3840	0.	0.	0.	0.	0.	0.	-.0534	.0230	.0262	-.0747	-.0219	.0401	0.		
.3850	0.	0.	0.	0.	0.	0.	-.0558	.0292	.0131	-.0825	-.0229	.0618	0.		
.3860	0.	0.	0.	0.	0.	0.	-.0575	.0358	-.0005	-.0898	-.0243	.0829	0.		
.3870	0.	0.	0.	0.	0.	0.	-.0584	.0429	-.0142	-.0966	-.0259	.1029	0.		

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FRW24F--2 PSV

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

.3770	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.3780	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.3790	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.3800	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.3810	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.3820	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.3830	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.3840	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.3850	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.3860	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
.3870	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

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INTERNAL FORCES IN THE PIPING
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SECTION	7	MEMBER	2	SEQUENCE	805	LOCATION	DIS	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3880	0.	0.	0.	0.	0.	0.	-.0587	.0502	-.0277	-.1031	-.0272	.1215	0.	
.3890	0.	0.	0.	0.	0.	0.	-.0584	.0577	-.0410	-.1095	-.0280	.1383	0.	
.3900	0.	0.	0.	0.	0.	0.	-.0576	.0654	-.0536	-.1157	-.0279	.1530	0.	
.3910	0.	0.	0.	0.	0.	0.	-.0563	.0731	-.0656	-.1221	-.0268	.1654	0.	
.3920	0.	0.	0.	0.	0.	0.	-.0546	.0807	-.0767	-.1287	-.0248	.1752	0.	
.3930	0.	0.	0.	0.	0.	0.	-.0527	.0881	-.0869	-.1357	-.0220	.1827	0.	
.3940	0.	0.	0.	0.	0.	0.	-.0506	.0952	-.0960	-.1429	-.0187	.1879	0.	
.3950	0.	0.	0.	0.	0.	0.	-.0484	.1018	-.1041	-.1501	-.0150	.1912	0.	
.3960	0.	0.	0.	0.	0.	0.	-.0463	.1079	-.1111	-.1568	-.0111	.1929	0.	
.3970	0.	0.	0.	0.	0.	0.	-.0444	.1132	-.1168	-.1627	-.0072	.1937	0.	
.3980	0.	0.	0.	0.	0.	0.	-.0429	.1177	-.1213	-.1673	-.0033	.1939	0.	
.3990	0.	0.	0.	0.	0.	0.	-.0417	.1212	-.1244	-.1703	.0006	.1943	0.	
.4000	0.	0.	0.	0.	0.	0.	-.0411	.1238	-.1261	-.1711	.0044	.1950	0.	

MAXIMUM VALUE OF DISCONTINUITY FORCE OCCURS AT

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

SECTION	7	MEMBER	2	SEQUENCE	805	LOCATION	END	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	0.	6.	-2.	0.	-0.	-0.	-.0000	.0000	-.0000	-.0000	.0000	.0000	0.	
.0020	-2.	32.	-10.	0.	-0.	-0.	-.0001	.0000	-.0001	-.0001	.0002	.0001	0.	
.0030	-17.	48.	-21.	-0.	-0.	-0.	-.0002	.0000	-.0004	-.0003	.0006	.0005	0.	
.0040	-53.	39.	-35.	-0.	0.	-0.	-.0005	.0000	-.0009	-.0008	.0014	.0015	0.	
.0050	-102.	34.	-65.	0.	-0.	-0.	-.0009	.0000	-.0017	-.0016	.0024	.0030	0.	
.0060	-158.	58.	-117.	0.	0.	-0.	-.0016	.0001	-.0031	-.0029	.0036	.0053	0.	
.0070	-235.	82.	-189.	0.	-0.	-0.	-.0025	.0002	-.0050	-.0047	.0054	.0089	0.	
.0080	-360.	55.	-219.	0.	-0.	-0.	-.0038	.0003	-.0078	-.0073	.0090	.0143	0.	
.0090	-544.	-56.	-37.	0.	-0.	-0.	-.0056	.0005	-.0116	-.0103	.0160	.0223	0.	
.0100	-793.	-192.	320.	0.	-0.	-0.	-.0077	.0009	-.0165	-.0133	.0263	.0329	0.	
.0110	-1091.	-296.	592.	0.	0.	-0.	-.0098	.0014	-.0224	-.0166	.0383	.0455	0.	

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2 SAFETY COLD FKW24F--2 PSV

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INTERNAL FORCES IN THE PIPING
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.0010	0.	6.	-2.	0.	-0.	-0.	-0.	0.000	.0000	-0.0000	-0.0000	.0000	.0000	0.
.0020	-2.	32.	-10.	0.	-0.	-0.	-0.	-0.0001	.0000	-0.0001	-0.0001	.0002	.0001	0.
.0030	-17.	48.	-21.	-0.	-0.	-0.	-0.	-0.0002	.0000	-0.0004	-0.0003	.0006	.0005	0.
.0040	-53.	39.	-35.	-0.	0.	-0.	-0.	-0.0005	.0000	-0.0009	-0.0008	.0014	.0015	0.
.0050	-102.	34.	-65.	0.	-0.	-0.	-0.	-0.0009	.0000	-0.0017	-0.0016	.0024	.0030	0.
.0060	-158.	58.	-117.	0.	0.	-0.	-0.	-0.0016	.0001	-0.0031	-0.0029	.0036	.0053	0.
.0070	-235.	82.	-189.	0.	-0.	-0.	-0.	-0.0025	.0002	-0.0050	-0.0047	.0054	.0089	0.
.0080	-360.	55.	-219.	0.	-0.	-0.	-0.	-0.0038	.0003	-0.0078	-0.0073	.0090	.0143	0.
.0090	-544.	-56.	-37.	0.	-0.	-0.	-0.	-0.0056	.0005	-0.0116	-0.0103	.0160	.0223	0.
.0100	-793.	-192.	320.	0.	-0.	-0.	-0.	-0.0077	.0009	-0.0165	-0.0133	.0263	.0329	0.
.0110	-1091.	-296.	592.	0.	0.	-0.	-0.	-0.0098	.0014	-0.0224	-0.0166	.0383	.0455	0.

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

SECTION	7	MEMBER	2	SEQUENCE	805	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0120	-1382.	-366.	647.	0.	0.	-0.	-0.0118	.0020	-0.0291	-0.0202	.0505	.0593	0.		
.0130	-1609.	-375.	610.	0.	0.	-0.	-0.0133	.0028	-0.0365	-0.0234	.0621	.0734	0.		
.0140	-1746.	-300.	616.	0.	0.	-0.	-0.0142	.0038	-0.0444	-0.0256	.0727	.0874	0.		
.0150	-1785.	-183.	627.	0.	0.	0.	-0.0144	.0049	-0.0529	-0.0270	.0814	.1008	0.		
.0160	-1708.	-79.	708.	-0.	0.	-0.	-0.0141	.0060	-0.0620	-0.0283	.0885	.1136	0.		
.0170	-1614.	-20.	591.	0.	-0.	-0.	-0.0133	.0071	-0.0721	-0.0304	.0933	.1259	0.		
.0180	-1655.	-78.	-392.	0.	-0.	-0.	-0.0120	.0083	-0.0828	-0.0351	.0933	.1375	0.		
.0190	-1827.	-304.	-2331.	-0.	0.	0.	-0.0102	.0094	-0.0935	-0.0427	.0898	.1474	0.		
.0200	-2133.	-565.	-4682.	0.	-0.	-0.	-0.0074	.0107	-0.1026	-0.0506	.0891	.1540	0.		
.0210	-2518.	-652.	-5440.	0.	-0.	-0.	-0.0031	.0121	-0.1083	-0.0514	.1040	.1568	0.		
.0220	-2804.	-322.	-3960.	-0.	0.	0.	.0032	.0136	-0.1099	-0.0406	.1285	.1544	0.		
.0230	-2711.	434.	-2433.	-0.	0.	0.	.0120	.0151	-0.1075	-0.0252	.1445	.1414	0.		
.0240	-1719.	1314.	-16.	0.	-0.	0.	.0233	.0160	-0.1022	-0.0091	.1538	.1153	0.		
.0250	-555.	1871.	2034.	0.	-0.	0.	.0363	.0161	-0.0955	.0054	.1508	.0807	0.		
.0260	-89.	1925.	-716.	0.	-0.	0.	.0504	.0150	-0.0883	.0107	.1129	.0397	0.		
.0270	886.	1758.	-5484.	0.	-0.	0.	.0656	.0127	-0.0790	.0080	.0498	-0.0122	0.		
.0280	2977.	1937.	-5450.	0.	-0.	0.	.0808	.0094	-0.0661	.0125	.0061	-0.0727	0.		
.0290	4357.	2484.	-2018.	0.	-0.	0.	.0945	.0051	-0.0503	.0316	-0.0120	-0.1288	0.		
.0300	4951.	2428.	1087.	0.	0.	-0.	.1061	-0.0004	-0.0333	.0525	-0.0298	-0.1758	0.		
.0310	6119.	2844.	2209.	-0.	-0.	0.	.1146	-0.0072	-0.0176	.0611	-0.0583	-0.2217	0.		
.0320	7055.	3512.	-542.	0.	0.	-0.	.1195	-0.0155	-0.0034	.0554	-0.1066	-0.2649	0.		
.0330	7109.	2436.	-2058.	-0.	-0.	0.	.1202	-0.0255	.0107	.0501	-0.1511	-0.2923	0.		
.0340	7147.	776.	322.	-0.	-0.	0.	.1169	-0.0366	.0253	.0540	-0.1790	-0.3042	0.		
.0350	7474.	1433.	783.	-0.	0.	0.	.1094	-0.0483	.0396	.0584	-0.2124	-0.3114	0.		
.0360	7253.	2647.	-3259.	0.	-0.	0.	.0979	-0.0606	.0537	.0530	-0.2585	-0.3123	0.		
.0370	6225.	819.	-5157.	-0.	-0.	0.	.0823	-0.0742	.0695	.0450	-0.2875	-0.2978	0.		
.0380	4839.	-2095.	-1762.	-0.	-0.	-0.	.0634	-0.0881	.0878	.0480	-0.2884	-0.2724	0.		
.0390	3150.	-2499.	306.	0.	-0.	0.	.0418	-0.1007	.1067	.0545	-0.2863	-0.2484	0.		
.0400	1032.	-2563.	-1815.	-0.	0.	0.	.0187	-0.1118	.1254	.0471	-0.2778	-0.2255	0.		
.0410	-1120.	-4713.	-429.	-0.	0.	-0.	-0.0048	-0.1212	.1450	.0382	-0.2361	-0.1965	0.		
.0420	-3508.	-6108.	5306.	-0.	0.	0.	-0.0275	-0.1279	.1643	.0427	-0.1701	-0.1665	0.		
.0430	-5969.	-5784.	8491.	0.	0.	-0.	-0.0480	-0.1312	.1807	.0423	-0.1049	-0.1458	0.		
.0440	-7456.	-6519.	9055.	0.	-0.	0.	-0.0649	-0.1311	.1925	.0227	-0.0387	-0.1323	0.		
.0450	-8054.	-7162.	10354.	-0.	-0.	-0.	-0.0775	-0.1275	.1992	.0046	.0257	-0.1199	0.		
.0460	-8292.	-5169.	11021.	0.	-0.	-0.	-0.0854	-0.1200	.2002	.0002	.0684	-0.1113	0.		
.0470	-7717.	-3522.	8479.	0.	-0.	-0.	-0.0887	-0.1097	.1953	-0.0126	.0870	-0.1093	0.		
.0480	-6128.	-4967.	5001.	-0.	0.	-0.	-0.0876	-0.0973	.1859	-0.0370	.0990	-0.1061	0.		
.0490	-4517.	-5602.	3293.	-0.	0.	-0.	-0.0831	-0.0822	.1739	-0.0401	.1083	-0.0952	0.		

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.0390	3150.	-2499.	306.	0.	-0.	0.	.0418	-.1007	.1067	.0545	-.2863	-.2484	0.
.0400	1032.	-2563.	-1815.	-0.	0.	0.	.0187	-.1118	.1254	.0471	-.2778	-.2255	0.
.0410	-1120.	-4713.	-429.	-0.	0.	-0.	-.0048	-.1212	.1450	.0382	-.2361	-.1965	0.
.0420	-3502.	-6108.	5206.	-0.	0.	0.	-.0275	-.1279	.1643	.0427	-.1701	-.1665	0.
.0430	-5969.	-5784.	8491.	0.	0.	-0.	-.0480	-.1312	.1807	.0423	-.1049	-.1458	0.
.0440	-7454.	-6519.	9055.	0.	-0.	0.	-.0649	-.1311	.1925	.0227	-.0387	-.1323	0.
.0450	-8054.	-7162.	10354.	-0.	-0.	-0.	-.0775	-.1275	.1992	.0046	.0257	-.1199	0.
.0460	-8292.	-5169.	11021.	0.	-0.	-0.	-.0854	-.1200	.2002	.0002	.0584	-.1113	0.
.0470	-7717.	-3522.	8479.	0.	-0.	-0.	-.0887	-.1097	.1953	-.0126	.0370	-.1093	0.
.0480	-6128.	-4967.	5001.	-0.	0.	-0.	-.0876	-.0973	.1859	-.0370	.0990	-.1061	0.
.0490	-4517.	-5602.	3293.	-0.	0.	-0.	-.0831	-.0822	.1739	-.0401	.1083	-.0952	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.03.

S/RV PIPING KEWAUNEE GKWC8F 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	7	MEMBER	2	SEQUENCE	805	LOCATION	END	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0500	-3294.	-2855.	2079.	-0.	-0.	0.	-.0761	-.0643	.1603	-.0143	.1112	-.0802	0.	
.0510	-1815.	-1025.	488.	-0.	0.	-0.	-.0674	-.0449	.1457	.0125	.1175	-.0634	0.	
.0520	-389.	-2225.	308.	0.	-0.	-0.	-.0576	-.0249	.1309	.0363	.1342	-.0387	0.	
.0530	116.	-2374.	2159.	-0.	0.	0.	-.0477	-.0038	.1159	.0781	.1511	-.0052	0.	
.0540	295.	-112.	4091.	0.	-0.	0.	-.0379	.0183	.0998	.1294	.1508	.0283	0.	
.0550	947.	1244.	4304.	-0.	0.	-0.	-.0284	.0404	.0816	.1630	.1651	.0568	0.	
.0560	1327.	1457.	3165.	-0.	0.	0.	-.0194	.0617	.0611	.1820	.1611	.0840	0.	
.0570	977.	2982.	2356.	-0.	0.	-0.	-.0111	.0820	.0389	.2031	.1481	.1111	0.	
.0580	853.	4828.	2165.	-0.	0.	0.	-.0034	.1004	.0155	.2167	.1367	.1337	0.	
.0590	1165.	5197.	1035.	0.	-0.	-0.	.0037	.1160	-.0089	.2122	.1316	.1512	0.	
.0600	1011.	5947.	-1116.	0.	-0.	-0.	.0102	.1285	-.0337	.2062	.1265	.1678	0.	
.0610	506.	8157.	-2357.	0.	-0.	-0.	.0160	.1376	-.0579	.2096	.1225	.1847	0.	
.0620	537.	9122.	-2213.	0.	0.	-0.	.0216	.1420	-.0807	.2082	.1254	.2008	0.	
.0630	811.	7860.	-2622.	0.	-0.	-0.	.0268	.1414	-.1021	.1972	.1277	.2171	0.	
.0640	786.	7152.	-4016.	0.	-0.	-0.	.0315	.1363	-.1219	.1918	.1187	.2343	0.	
.0650	1104.	7847.	-4801.	0.	-0.	0.	.0357	.1272	-.1395	.1939	.1025	.2492	0.	
.0660	2071.	7533.	-5133.	0.	-0.	0.	.0392	.1139	-.1545	.1877	.0838	.2602	0.	
.0670	2727.	5543.	-6446.	-0.	-0.	0.	.0415	.0965	-.1664	.1697	.0585	.2684	0.	
.0680	2708.	3719.	-7740.	-0.	-0.	0.	.0422	.0761	-.1747	.1498	.0310	.2720	0.	
.0690	2700.	2677.	-7214.	-0.	0.	0.	.0415	.0537	-.1787	.1284	.0156	.2675	0.	
.0700	2639.	1548.	-5798.	0.	0.	-0.	.0392	.0300	-.1786	.0974	.0144	.2544	0.	
.0710	1864.	235.	-4853.	0.	0.	-0.	.0355	.0055	-.1751	.0568	.0161	.2334	0.	
.0720	655.	-897.	-3908.	0.	0.	-0.	.0309	-.0189	-.1690	.0090	.0125	.2024	0.	
.0730	-366.	-2145.	-3341.	0.	-0.	0.	.0260	-.0427	-.1606	-.0501	.0006	.1602	0.	
.0740	-1336.	-3636.	-4379.	0.	-0.	-0.	.0214	-.0651	-.1502	-.1189	-.0206	.1100	0.	
.0750	-2314.	-4662.	-5678.	0.	-0.	-0.	.0176	-.0853	-.1373	-.1841	-.0458	.0559	0.	
.0760	-2849.	-4797.	-5397.	0.	0.	-0.	.0151	-.1028	-.1214	-.2361	-.0693	-.0014	0.	
.0770	-2945.	-4740.	-4995.	0.	0.	-0.	.0143	-.1176	-.1026	-.2783	-.0962	-.0605	0.	
.0780	-3025.	-5342.	-6013.	0.	0.	-0.	.0150	-.1295	-.0810	-.3125	-.1292	-.1173	0.	
.0790	-2959.	-6257.	-6249.	0.	-0.	-0.	.0175	-.1383	-.0561	-.3286	-.1568	-.1683	0.	
.0800	-2403.	-6432.	-3782.	0.	0.	-0.	.0215	-.1436	-.0281	-.3179	-.1700	-.2141	0.	
.0810	-1606.	-5865.	-887.	-0.	-0.	-0.	.0269	-.1453	.0018	-.2866	-.1772	-.2556	0.	
.0820	-823.	-5641.	293.	0.	-0.	-0.	.0330	-.1437	.0321	-.2473	-.1973	-.2919	0.	
.0830	163.	-6000.	1120.	-0.	-0.	0.	.0396	-.1388	.0620	-.2026	-.1975	-.3226	0.	
.0840	1371.	-5986.	2660.	-0.	-0.	0.	.0459	-.1307	.0911	-.1496	-.2029	-.3486	0.	
.0850	2502.	-5220.	3640.	-0.	0.	0.	.0514	-.1193	.1186	-.0920	-.2024	-.3701	0.	
.0860	3569.	-4141.	3777.	-0.	-0.	0.	.0554	-.1050	.1439	-.0358	-.1921	-.3856	0.	
.0870	4640.	-2694.	4330.	-0.	-0.	0.	.0573	-.0885	.1669	.0196	-.1695	-.3933	0.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.03.

S/RV PIPING KEWAUNEE GKWC8F 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

.0770	-2945.	-4740.	4495.	0.	0.	-0.	0.143	-.1176	-.1026	-.2783	-.0962	-.0605	0.
.0780	-3025.	-5342.	-6013.	0.	0.	-0.	0.150	-.1295	-.0810	-.3125	-.1292	-.1173	0.
.0790	-2959.	-6257.	-6249.	0.	-0.	-0.	0.175	-.1383	-.0561	-.3286	-.1568	-.1683	0.
.0800	-2403.	-6432.	-3782.	0.	0.	-0.	0.215	-.1436	-.0281	-.3179	-.1700	-.2141	0.
.0810	-1606.	-5865.	-887.	-0.	-0.	-0.	0.269	-.1453	.0018	-.2866	-.1772	-.2556	0.
.0820	-823.	-5641.	293.	0.	-0.	-0.	0.330	-.1437	.0321	-.2473	-.1873	-.2919	0.
.0830	163.	-6000.	1120.	-0.	-0.	0.	0.396	-.1388	.0620	-.2026	-.1975	-.3226	0.
.0840	1371.	-5986.	2660.	-0.	-0.	0.	0.459	-.1307	.0911	-.1496	-.2029	-.3486	0.
.0850	2502.	-5220.	3640.	-0.	0.	0.	0.514	-.1193	.1186	-.0920	-.2024	-.3701	0.
.0860	3569.	-4141.	3777.	-0.	-0.	0.	0.554	-.1050	.1439	-.0358	-.1921	-.3856	0.
.0870	4640.	-2694.	4330.	-0.	-0.	0.	0.573	-.0885	.1669	.0196	-.1695	-.3933	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.03.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	7	MEMBER	2	SEQUENCE	805	LOCATION	END	TYPE	VA						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.0880	5348.	-828.	5281.	-0.	-0.	0.	.0566	-.0708	.1874	.0750	-.1378	-.3920	0.		
.0890	5441.	588.	5806.	-0.	-0.	0.	.0529	-.0526	.2048	.1258	-.0990	-.3803	0.		
.0900	5151.	1310.	6378.	0.	-0.	0.	.0461	-.0349	.2188	.1719	-.0509	-.3570	0.		
.0910	4606.	2467.	7580.	-0.	-0.	0.	.0365	-.0181	.2291	.2195	.0030	-.3216	0.		
.0920	3666.	4127.	8597.	-0.	-0.	0.	.0244	-.0028	.2351	.2676	.0528	-.2745	0.		
.0930	2408.	4689.	8620.	-0.	0.	-0.	.0104	.0101	.2361	.3062	.0927	-.2174	0.		
.0940	1050.	3886.	8042.	-0.	0.	0.	-.0049	.0204	.2323	.3331	.1235	-.1526	0.		
.0950	-383.	3346.	7542.	-0.	-0.	0.	-.0207	.0285	.2239	.3554	.1480	-.0828	0.		
.0960	-1841.	3600.	7309.	-0.	0.	0.	-.0361	.0346	.2112	.3742	.1705	-.0109	0.		
.0970	-3142.	3614.	7219.	-0.	0.	0.	-.0504	.0387	.1945	.3822	.1935	.0591	0.		
.0980	-4284.	3165.	5996.	-0.	0.	-0.	-.0628	.0408	.1737	.3760	.2128	.1228	0.		
.0990	-5341.	2820.	6417.	0.	0.	-0.	-.0727	.0412	.1491	.3568	.2230	.1767	0.		
.1000	-6149.	2377.	5433.	-0.	0.	-0.	-.0795	.0400	.1210	.3231	.2240	.2186	0.		
.1010	-6541.	1634.	3901.	-0.	0.	-0.	-.0828	.0375	.0901	.2742	.2172	.2462	0.		
.1020	-6617.	1236.	1734.	0.	-0.	-0.	-.0824	.0341	.0572	.2151	.2013	.2585	0.		
.1030	-6457.	1206.	-589.	0.	0.	-0.	-.0783	.0300	.0236	.1498	.1776	.2564	0.		
.1040	-5979.	614.	-2406.	0.	-0.	-0.	-.0706	.0254	-.0095	.0784	.1515	.2427	0.		
.1050	-5237.	-452.	-3717.	-0.	0.	-0.	-.0596	.0204	-.0411	.0047	.1260	.2195	0.		
.1060	-4370.	-833.	-4689.	0.	-0.	-0.	-.0457	.0157	-.0704	-.0631	.1014	.1882	0.		
.1070	-3295.	-513.	-4763.	-0.	0.	-0.	-.0295	.0115	-.0969	-.1212	.0800	.1514	0.		
.1080	-2072.	-569.	-4110.	0.	0.	0.	-.0115	.0076	-.1206	-.1731	.0637	.1126	0.		
.1090	-1017.	-1306.	-3039.	0.	0.	0.	.0076	.0040	-.1415	-.2184	.0567	.0748	0.		
.1100	218.	-1491.	-146.	0.	-0.	-0.	.0272	.0010	-.1605	-.2477	.0476	.0387	0.		
.1110	1470.	-927.	566.	0.	0.	-0.	.0465	-.0011	-.1792	-.2719	.0206	.0023	0.		
.1120	2824.	-933.	-2037.	0.	-0.	0.	.0649	-.0028	-.1977	-.3021	-.0235	-.0328	0.		
.1130	4269.	-1662.	-4237.	0.	-0.	0.	.0817	-.0039	-.2148	-.3282	-.0710	-.0616	0.		
.1140	5412.	-1817.	-4759.	0.	-0.	0.	.0959	-.0042	-.2293	-.3392	-.1132	-.0823	0.		
.1150	6206.	-1422.	-5723.	0.	-0.	0.	.1070	-.0034	-.2410	-.3422	-.1499	-.0971	0.		
.1160	6931.	-1172.	-7229.	0.	-0.	0.	.1146	-.0019	-.2493	-.3435	-.1775	-.1054	0.		
.1170	7245.	-629.	-8174.	0.	-0.	-0.	.1183	.0002	-.2534	-.3358	-.1967	-.1046	0.		
.1180	7267.	204.	-7097.	-0.	0.	0.	.1178	.0027	-.2530	-.3148	-.2117	-.0948	0.		
.1190	6821.	765.	-8146.	-0.	0.	0.	.1133	.0050	-.2485	-.2951	-.2330	-.0807	0.		
.1200	6279.	332.	-10472.	-0.	-0.	0.	.1049	.0070	-.2396	-.2799	-.2511	-.0625	0.		
.1210	5778.	-264.	-9308.	0.	0.	0.	.0930	.0088	-.2250	-.2515	-.2485	-.0368	0.		
.1220	4439.	764.	-7599.	0.	0.	0.	.0781	.0107	-.2052	-.2073	-.2382	-.0072	0.		
.1230	2992.	1253.	-6560.	0.	0.	-0.	.0607	.0121	-.1812	-.1658	-.2227	.0210	0.		
.1240	1730.	192.	-6443.	-0.	0.	-0.	.0418	.0129	-.1537	-.1354	-.2019	.0462	0.		
.1250	313.	-527.	-5465.	-0.	0.	0.	.0221	.0137	-.1229	-.1011	-.1744	.0708	0.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.03.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

.1150	6206.	-1422.	-5723.	0.	-0.	0.	.1070	-.0034	-.2410	-.3422	-.1499	-.0971	0.
.1160	6921.	-1172.	-7229.	0.	-0.	0.	.1146	-.0019	-.2493	-.3435	-.1775	-.1054	0.
.1170	7245.	-629.	-8174.	0.	-0.	0.	.1183	.0002	-.2534	-.3358	-.1967	-.1046	0.
.1180	7267.	204.	-7097.	-0.	0.	0.	.1178	.0027	-.2530	-.3148	-.2117	-.0948	0.
.1190	6821.	765.	-8146.	-0.	0.	0.	.1133	.0050	-.2485	-.2951	-.2330	-.0807	0.
.1200	6279.	332.	-10472.	-0.	-0.	0.	.1049	.0070	-.2396	-.2799	-.2511	-.0625	0.
.1210	5778.	-264.	-9308.	0.	0.	0.	.0930	.0088	-.2250	-.2515	-.2485	-.0368	0.
.1220	4439.	764.	-7599.	0.	0.	0.	.0781	.0107	-.2052	-.2073	-.2382	-.0072	0.
.1230	2992.	1253.	-6560.	0.	0.	-0.	.0607	.0121	-.1812	-.1658	-.2227	.0210	0.
.1240	1730.	192.	-6443.	-0.	0.	-0.	.0418	.0129	-.1537	-.1354	-.2019	.0462	0.
.1250	313.	-527.	-5465.	-0.	0.	0.	.0221	.0137	-.1229	-.1011	-.1744	.0708	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.03.

S/RV PIPING KEWAUNEE GRW02F 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	7	MEMBER	2	SEQUENCE	805	LOCATION	END	TYPE	VA	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ	SX	DY	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)						
.1260	-963.	-244.	-2436.	0.	0.	-0.	.0022	.0147	-.0894	-.0588	-.1370	.0926	0.	
.1270	-2137.	142.	-1433.	0.	-0.	-0.	-.0170	.0159	-.0548	-.0261	-.0956	.1056	0.	
.1280	-2831.	-445.	-189.	-0.	0.	0.	-.0349	.0170	-.0195	-.0033	-.0437	.1115	0.	
.1290	-3621.	-351.	2129.	0.	0.	0.	-.0510	.0183	.0157	.0232	.0108	.1134	0.	
.1300	-4444.	530.	3899.	-0.	0.	-0.	-.0650	.0198	.0494	.0488	.0588	.1094	0.	
.1310	-4370.	244.	5166.	-0.	-0.	0.	-.0766	.0211	.0807	.0611	.1015	.0973	0.	
.1320	-4093.	-209.	4442.	-0.	-0.	0.	-.0856	.0223	.1089	.0646	.1301	.0792	0.	
.1330	-3870.	69.	4413.	0.	-0.	-0.	-.0924	.0235	.1345	.0734	.1486	.0603	0.	
.1340	-3614.	381.	4757.	-0.	0.	-0.	-.0969	.0247	.1574	.0820	.1611	.0405	0.	
.1350	-3179.	-291.	4658.	0.	-0.	-0.	-.0995	.0250	.1775	.0825	.1716	.0190	0.	
.1360	-2683.	-1064.	5851.	-0.	0.	0.	-.1002	.0270	.1948	.0854	.1831	-.0010	0.	
.1370	-2690.	-262.	6947.	-0.	0.	-0.	-.0995	.0288	.2086	.0961	.1872	-.0184	0.	
.1380	-2404.	332.	8688.	-0.	-0.	0.	-.0973	.0307	.2184	.1032	.1872	-.0342	0.	
.1390	-1907.	-129.	9477.	0.	-0.	-0.	-.0938	.0325	.2232	.0982	.1770	-.0499	0.	
.1400	-1746.	-367.	9014.	0.	-0.	0.	-.0893	.0343	.2226	.0894	.1513	-.0641	0.	
.1410	-1537.	-80.	9249.	-0.	0.	-0.	-.0839	.0364	.2169	.0818	.1184	-.0757	0.	
.1420	-1254.	337.	8193.	-0.	0.	-0.	-.0776	.0385	.2060	.0667	.0796	-.0860	0.	
.1430	-767.	98.	7023.	-0.	0.	0.	-.0707	.0404	.1905	.0447	.0424	-.0934	0.	
.1440	-520.	74.	6128.	-0.	-0.	0.	-.0635	.0422	.1711	.0245	.0063	-.0962	0.	
.1450	-394.	474.	5402.	-0.	0.	0.	-.0560	.0441	.1483	.0066	-.0276	-.0945	0.	
.1460	137.	382.	5035.	-0.	0.	0.	-.0483	.0456	.1226	-.0148	-.0553	-.0884	0.	
.1470	531.	407.	3226.	-0.	0.	0.	-.0409	.0470	.0942	-.0385	-.0821	-.0777	0.	
.1480	967.	636.	2497.	-0.	0.	0.	-.0337	.0480	.0641	-.0561	-.1030	-.0606	0.	
.1490	1479.	896.	2130.	0.	-0.	0.	-.0272	.0488	.0327	-.0708	-.1208	-.0387	0.	
.1500	1978.	771.	289.	-0.	0.	0.	-.0216	.0490	.0003	-.0902	-.1401	-.0133	0.	
.1510	2526.	187.	-1404.	0.	-0.	0.	-.0171	.0489	-.0320	-.1102	-.1561	.0162	0.	
.1520	2672.	119.	-3345.	0.	-0.	0.	-.0141	.0487	-.0634	-.1252	-.1581	.0490	0.	
.1530	2715.	49.	-4193.	0.	0.	-0.	-.0126	.0483	-.0927	-.1366	-.1696	.0837	0.	
.1540	2478.	-290.	-5475.	0.	-0.	-0.	-.0125	.0480	-.1194	-.1499	-.1623	.1185	0.	
.1550	1887.	-661.	-6616.	0.	-0.	-0.	-.0139	.0479	-.1430	-.1623	-.1453	.1537	0.	
.1560	1296.	-919.	-5530.	0.	-0.	-0.	-.0163	.0482	-.1630	-.1684	-.1162	.1882	0.	
.1570	374.	-603.	-5421.	-0.	0.	-0.	-.0194	.0490	-.1797	-.1738	-.0878	.2182	0.	
.1580	-429.	-602.	-5872.	-0.	0.	-0.	-.0227	.0501	-.1933	-.1828	-.0612	.2426	0.	
.1590	-915.	-885.	-5607.	0.	0.	-0.	-.0256	.0516	-.2035	-.1912	-.0372	.2623	0.	
.1600	-1492.	-508.	-6166.	0.	-0.	-0.	-.0281	.0535	-.2106	-.1961	-.0237	.2761	0.	
.1610	-1942.	-166.	-7418.	0.	0.	-0.	-.0296	.0558	-.2141	-.2007	-.0154	.2831	0.	
.1620	-1544.	-658.	-6942.	0.	-0.	-0.	-.0301	.0581	-.2135	-.2027	-.0003	.2848	0.	
.1630	-1928.	-468.	-6404.	0.	0.	-0.	-.0295	.0607	-.2089	-.1947	.0138	.2619	0.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.03.

S/RV PIPING KEWAUNEE GRW02F 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

.1530	2715.	49.	-4193.	0.	0.	-0.	-0.126	.0483	-.0927	-.1366	-.1596	.0837	0.
.1540	248.	-290.	-5475.	0.	-0.	-0.	-.0125	.0480	-.1194	-.1499	-.1623	.1186	0.
.1550	1227.	-861.	-6616.	0.	-0.	-0.	-.0139	.0479	-.1430	-.1623	-.1453	.1537	0.
.1560	1296.	-919.	-5530.	0.	-0.	-0.	-.0163	.0482	-.1630	-.1684	-.1162	.1882	0.
.1570	374.	-603.	-5421.	-0.	0.	-0.	-.0194	.0490	-.1797	-.1738	-.0878	.2182	0.
.1580	-429.	-802.	-5872.	-0.	0.	-0.	-.0227	.0501	-.1933	-.1828	-.0512	.2426	0.
.1590	-915.	-885.	-5607.	0.	0.	-0.	-.0256	.0516	-.2035	-.1912	-.0372	.2623	0.
.1600	-1492.	-508.	-6166.	0.	-0.	-0.	-.0281	.0535	-.2106	-.1961	-.0237	.2761	0.
.1610	-1942.	-166.	-7418.	0.	0.	-0.	-.0296	.0558	-.2141	-.2007	-.0154	.2831	0.
.1620	-1844.	-658.	-6947.	0.	-0.	-0.	-.0301	.0581	-.2135	-.2022	-.0303	.2848	0.
.1630	-1928.	-408.	-6424.	0.	0.	-0.	-.0295	.0607	-.2089	-.1947	.0138	.2818	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.03.

S/RV PIPING KELAUNEE GKW0FF 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	7	MEMBER	2	SEQUENCE	805	LOCATION	END	TYPE	VA						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.1640	-1964.	372.	-5744.	0.	-0.	-0.	-.0278	.0635	-.2008	-.1795	.0261	.2740	0.		
.1650	-1473.	403.	-4373.	0.	-0.	-0.	-.0251	.0661	-.1895	-.1638	.0382	.2609	0.		
.1660	-976.	331.	-4249.	0.	0.	-0.	-.0215	.0685	-.1757	-.1483	.0416	.2428	0.		
.1670	-391.	604.	-3810.	0.	0.	-0.	-.0175	.0706	-.1596	-.1272	.0394	.2215	0.		
.1680	298.	1143.	-3527.	0.	0.	-0.	-.0133	.0724	-.1416	-.1039	.0330	.1969	0.		
.1690	1233.	1248.	-3062.	0.	-0.	-0.	-.0093	.0735	-.1216	-.0821	.0267	.1699	0.		
.1700	1942.	1442.	-3090.	-0.	0.	0.	-.0061	.0738	-.1000	-.0595	.0182	.1419	0.		
.1710	2093.	2152.	-4023.	-0.	0.	0.	-.0040	.0734	-.0767	-.0350	.0085	.1140	0.		
.1720	2446.	2115.	-2561.	0.	-0.	-0.	-.0031	.0717	-.0514	-.0086	.0127	.0882	0.		
.1730	2456.	2070.	-1114.	0.	-0.	0.	-.0036	.0688	-.0248	.0185	.0227	.0644	0.		
.1740	2010.	2477.	-255.	-0.	-0.	0.	-.0054	.0648	.0022	.0473	.0330	.0427	0.		
.1750	1562.	2668.	1184.	0.	-0.	-0.	-.0084	.0594	.0291	.0753	.0455	.0233	0.		
.1760	995.	2486.	2150.	-0.	-0.	0.	-.0122	.0525	.0552	.0991	.0561	.0060	0.		
.1770	463.	1911.	3485.	-0.	-0.	0.	-.0165	.0442	.0799	.1205	.0650	-.0085	0.		
.1780	-208.	1718.	3910.	-0.	-0.	0.	-.0211	.0350	.1025	.1398	.0678	-.0215	0.		
.1790	-605.	1522.	4542.	-0.	-0.	0.	-.0255	.0248	.1227	.1557	.0693	-.0335	0.		
.1800	-804.	1117.	5354.	-0.	0.	-0.	-.0296	.0138	.1402	.1675	.0687	-.0443	0.		
.1810	-1301.	903.	4769.	-0.	0.	-0.	-.0331	.0023	.1547	.1744	.0610	-.0543	0.		
.1820	-1539.	279.	5143.	-0.	0.	0.	-.0359	-.0097	.1663	.1778	.0556	-.0633	0.		
.1830	-1676.	-266.	5596.	-0.	0.	-0.	-.0379	-.0218	.1750	.1778	.0507	-.0725	0.		
.1840	-1863.	-491.	5673.	-0.	0.	0.	-.0389	-.0336	.1804	.1755	.0438	-.0815	0.		
.1850	-1999.	-756.	5652.	-0.	0.	-0.	-.0388	-.0451	.1826	.1696	.0345	-.0904	0.		
.1860	-2107.	-1176.	5041.	-0.	-0.	-0.	-.0376	-.0561	.1816	.1581	.0205	-.1000	0.		
.1870	-1994.	-1892.	4871.	0.	-0.	-0.	-.0352	-.0663	.1777	.1435	.0040	-.1098	0.		
.1880	-1991.	-2267.	3783.	-0.	0.	0.	-.0318	-.0755	.1711	.1266	-.0188	-.1198	0.		
.1890	-1865.	-2521.	2620.	-0.	0.	0.	-.0272	-.0832	.1624	.1081	-.0421	-.1298	0.		
.1900	-1513.	-2845.	2225.	-0.	0.	-0.	-.0217	-.0895	.1522	.0893	-.0511	-.1393	0.		
.1910	-1378.	-2882.	1480.	-0.	0.	-0.	-.0153	-.0942	.1407	.0711	-.0786	-.1483	0.		
.1920	-1266.	-3052.	1302.	-0.	0.	0.	-.0082	-.0972	.1285	.0540	-.0903	-.1561	0.		
.1930	-1091.	-3269.	1493.	-0.	-0.	-0.	-.0004	-.0985	.1154	.0374	-.0953	-.1633	0.		
.1940	-923.	-3134.	1600.	0.	-0.	-0.	.0079	-.0979	.1016	.0226	-.0957	-.1698	0.		
.1950	-736.	-2793.	1782.	0.	-0.	-0.	.0167	-.0956	.0868	.0098	-.0923	-.1755	0.		
.1960	-426.	-2637.	2044.	-0.	-0.	-0.	.0258	-.0917	.0711	-.0026	-.0866	-.1799	0.		
.1970	-3.	-2550.	1797.	0.	-0.	-0.	.0351	-.0863	.0542	-.0156	-.0816	-.1831	0.		
.1980	491.	-2237.	917.	0.	-0.	-0.	.0443	-.0795	.0364	-.0274	-.0779	-.1843	0.		
.1990	1086.	-1750.	49.	0.	-0.	-0.	.0532	-.0716	.0182	-.0358	-.0719	-.1822	0.		
.2000	1756.	-1217.	-502.	0.	-0.	-0.	.0614	-.0627	-.0000	-.0398	-.0517	-.1758	0.		
.2010	2400.	-618.	-1019.	-0.	-0.	0.	.0685	-.0531	-.0179	-.0394	-.0489	-.1646	0.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.04.

S/RV PIPING KELAUNEE GKW0FF 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

INTERNAL FORCES IN THE PIPING

.1910	-1378.	-2882.	1480.	-0.	0.	-0.	-0.	.0153	-.0942	.1407	.0711	-.0786	-.1483	0.
.1920	-1266.	-3052.	1302.	-0.	0.	0.	0.	-.0082	-.0972	.1285	.0540	-.0903	-.1561	0.
.1930	-1091.	-3269.	1493.	-0.	-0.	-0.	-0.	-.0004	-.0985	.1154	.0374	-.0953	-.1633	0.
.1940	-923.	-3134.	1600.	0.	-0.	-0.	-0.	.0079	-.0979	.1016	.0226	-.0957	-.1698	0.
.1950	-736.	-2793.	1782.	0.	-0.	-0.	-0.	.0167	-.0956	.0868	.0098	-.0923	-.1755	0.
.1960	-426.	-2677.	2044.	-0.	-0.	-0.	-0.	.0258	-.0917	.0711	-.0026	-.0866	-.1799	0.
.1970	-3.	-2550.	1797.	0.	-0.	-0.	-0.	.0351	-.0863	.0542	-.0156	-.0816	-.1831	0.
.1980	491.	-2237.	917.	0.	-0.	-0.	-0.	.0443	-.0795	.0364	-.0274	-.0779	-.1843	0.
.1990	1086.	-1750.	49.	0.	-0.	-0.	-0.	.0532	-.0716	.0182	-.0358	-.0719	-.1822	0.
.2000	1756.	-1217.	-502.	0.	-0.	-0.	-0.	.0614	-.0627	-.0000	-.0398	-.0617	-.1758	0.
.2010	2400.	-618.	-1019.	-0.	-0.	0.	0.	.0685	-.0531	-.0179	-.0394	-.0489	-.1646	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.04.

S/RV PIPING KEWAUNEE GKW08T 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	7	MEMBER	2	SEQUENCE	805	LOCATION	END	TYPE	VA							
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)				DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.2020	2975.	-25.	-1564.	0.	-0.	0.				.0742	-.0433	-.0351	-.0350	-.0350	-.1479	0.
.2030	3458.	454.	-1997.	0.	-0.	0.				.0781	-.0336	-.0514	-.0265	-.0205	-.1256	0.
.2040	3767.	893.	-2438.	0.	-0.	0.				.0801	-.0241	-.0665	-.0142	-.0065	-.0980	0.
.2050	3877.	1318.	-2924.	-0.	0.	0.				.0800	-.0152	-.0802	.0012	.0061	-.0661	0.
.2060	3810.	1596.	-3304.	-0.	0.	-0.				.0776	-.0071	-.0922	.0182	.0175	-.0304	0.
.2070	3527.	1707.	-3658.	0.	-0.	0.				.0732	.0001	-.1023	.0356	.0271	.0078	0.
.2080	2982.	1774.	-4156.	-0.	0.	0.				.0668	.0063	-.1103	.0523	.0350	.0469	0.
.2090	2242.	1834.	-4542.	0.	-0.	0.				.0588	.0115	-.1159	.0678	.0431	.0851	0.
.2100	1382.	1890.	-4494.	0.	-0.	0.				.0496	.0156	-.1190	.0821	.0533	.1212	0.
.2110	396.	2022.	-4261.	0.	-0.	0.				.0397	.0186	-.1195	.0946	.0643	.1537	0.
.2120	-649.	2174.	-4098.	0.	-0.	-0.				.0297	.0205	-.1177	.1042	.0747	.1807	0.
.2130	-1612.	2189.	-3841.	0.	0.	-0.				.0201	.0211	-.1135	.1104	.0845	.2011	0.
.2140	-2437.	2117.	-3429.	0.	-0.	-0.				.0115	.0205	-.1072	.1141	.0928	.2142	0.
.2150	-3101.	2085.	-3134.	-0.	-0.	0.				.0044	.0187	-.0991	.1158	.0973	.2191	0.
.2160	-3507.	2001.	-3099.	0.	0.	-0.				-.0009	.0158	-.0891	.1149	.0972	.2152	0.
.2170	-3597.	1731.	-3130.	0.	-0.	-0.				-.0043	.0118	-.0775	.1115	.0929	.2027	0.
.2180	-3431.	1355.	-3050.	0.	-0.	-0.				-.0056	.0068	-.0641	.1070	.0854	.1823	0.
.2190	-3045.	993.	-2796.	0.	0.	0.				-.0051	.0011	-.0491	.1021	.0760	.1545	0.
.2200	-2420.	643.	-2320.	-0.	0.	-0.				-.0028	-.0051	-.0327	.0963	.0658	.1201	0.
.2210	-1539.	520.	-1661.	0.	0.	-0.				.0007	-.0117	-.0150	.0894	.0551	.0799	0.
.2220	-837.	46.	-887.	0.	0.	-0.				.0051	-.0183	.0035	.0814	.0435	.0356	0.
.2230	-47.	-255.	45.	0.	0.	0.				.0100	-.0250	.0224	.0715	.0317	-.0115	0.
.2240	726.	-602.	1085.	0.	0.	0.				.0147	-.0314	.0411	.0594	.0196	-.0601	0.
.2250	1390.	-867.	1982.	-0.	0.	0.				.0190	-.0375	.0591	.0454	.0063	-.1082	0.
.2260	1882.	-1019.	2603.	0.	0.	0.				.0225	-.0431	.0759	.0301	-.0089	-.1542	0.
.2270	2224.	-1201.	3060.	-0.	0.	0.				.0249	-.0480	.0911	.0117	-.0248	-.1960	0.
.2280	2411.	-1454.	3449.	-0.	0.	0.				.0260	-.0523	.1045	-.0027	-.0400	-.2318	0.
.2290	2416.	-1646.	3782.	-0.	-0.	0.				.0258	-.0556	.1159	-.0168	-.0539	-.2596	0.
.2300	2285.	-1712.	4079.	-0.	0.	-0.				.0241	-.0581	.1251	-.0273	-.0659	-.2785	0.
.2310	2084.	-1706.	4293.	-0.	0.	0.				.0213	-.0596	.1320	-.0239	-.0760	-.2877	0.
.2320	1808.	-1700.	4316.	-0.	0.	0.				.0172	-.0600	.1364	-.0365	-.0851	-.2870	0.
.2330	1453.	-1742.	4179.	-0.	0.	-0.				.0122	-.0596	.1383	-.0348	-.0929	-.2766	0.
.2340	1074.	-1827.	3964.	0.	-0.	-0.				.0064	-.0581	.1380	-.0289	-.0987	-.2573	0.
.2350	689.	-1866.	3612.	-0.	0.	0.				-.0000	-.0556	.1354	-.0192	-.1017	-.2306	0.
.2360	268.	-1816.	3121.	-0.	0.	0.				-.0067	-.0521	.1308	-.0066	-.1009	-.1981	0.
.2370	-190.	-1764.	2702.	-0.	0.	0.				-.0135	-.0476	.1245	.0031	-.0950	-.1612	0.
.2380	-664.	-1738.	2457.	-0.	0.	-0.				-.0202	-.0420	.1166	.0233	-.0834	-.1219	0.
.2390	-1149.	-1679.	2243.	-0.	0.	-0.				-.0264	-.0356	.1075	.0380	-.0669	-.0821	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.04.

S/RV PIPING KEWAUNEE GKW08T 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

INTERNAL FORCES IN THE PIPING

.2290	2416.	-1646.	3782.	-0.	-0.	0.	0.	.0258	-.0556	.1159	-.0168	-.0539	-.2596	0.
.2300	2285.	-1710.	4079.	-0.	0.	-0.	-0.	.0241	-.0581	.1251	-.0273	-.0659	-.2785	0.
.2310	2084.	-1706.	4293.	-0.	0.	0.	0.	.0213	-.0596	.1320	-.0339	-.0760	-.2877	0.
.2320	1808.	-1700.	4316.	-0.	0.	0.	0.	.0172	-.0600	.1364	-.0365	-.0851	-.2870	0.
.2330	1453.	-1742.	4179.	-0.	0.	-0.	-0.	.0122	-.0596	.1383	-.0348	-.0929	-.2766	0.
.2340	1074.	-1827.	3964.	0.	-0.	-0.	-0.	.0064	-.0581	.1380	-.0289	-.0987	-.2573	0.
.2350	689.	-1866.	3812.	-0.	0.	0.	0.	-.0000	-.0556	.1354	-.0192	-.1017	-.2306	0.
.2360	268.	-1816.	3121.	-0.	0.	0.	0.	-.0067	-.0521	.1308	-.0066	-.1009	-.1981	0.
.2370	-190.	-1764.	2702.	-0.	0.	0.	0.	-.0135	-.0476	.1245	.0081	-.0950	-.1612	0.
.2380	-664.	-1738.	2457.	-0.	0.	-0.	-0.	-.0202	-.0420	.1166	.0233	-.0834	-.1219	0.
.2390	-1149.	-1639.	2243.	-0.	0.	-0.	-0.	-.0264	-.0356	.1075	.0380	-.0569	-.0821	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.04.

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	VA	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(PSI)
.2400	-1623.	-1396.	2017.	-0.	0.	-0.	0.
.2410	-2036.	-1046.	1928.	-0.	0.	-0.	0.
.2420	-2367.	-642.	1965.	-0.	0.	-0.	0.
.2430	-2612.	-225.	1927.	-0.	0.	-0.	0.
.2440	-2744.	160.	1726.	-0.	0.	-0.	0.
.2450	-2734.	517.	1432.	0.	0.	-0.	0.
.2460	-2585.	870.	1128.	-0.	0.	-0.	0.
.2470	-2308.	1174.	858.	-0.	0.	-0.	0.
.2480	-1907.	1370.	593.	-0.	0.	-0.	0.
.2490	-1411.	1493.	184.	-0.	0.	-0.	0.
.2500	-853.	1596.	-427.	0.	-0.	-0.	0.
.2510	-247.	1657.	-1042.	0.	0.	-0.	0.
.2520	376.	1684.	-1537.	-0.	0.	0.	0.
.2530	956.	1739.	-2098.	0.	-0.	0.	0.
.2540	51.	1793.	-2873.	0.	-0.	0.	0.
.2550	40.	1756.	-3669.	0.	-0.	-0.	0.
.2560	2089.	1659.	-4209.	0.	0.	-0.	0.
.2570	2183.	1601.	-4463.	0.	-0.	0.	0.
.2580	2156.	1549.	-4545.	0.	0.	0.	0.
.2590	2040.	1412.	-4482.	0.	-0.	-0.	0.
.2600	1843.	1197.	-4224.	-0.	0.	-0.	0.
.2610	1611.	947.	-3760.	0.	-0.	0.	0.
.2620	1414.	673.	-3222.	-0.	0.	0.	0.
.2630	1273.	406.	-2621.	0.	-0.	0.	0.
.2640	1171.	151.	-2615.	0.	-0.	-0.	0.
.2650	1107.	-161.	-2474.	-0.	0.	0.	0.
.2660	1072.	-528.	-2333.	0.	0.	-0.	0.
.2670	1017.	-815.	-2267.	0.	-0.	-0.	0.
.2680	905.	-967.	-2262.	-0.	0.	0.	0.
.2690	724.	-1089.	-2165.	0.	-0.	0.	0.
.2700	456.	-1246.	-1881.	0.	-0.	-0.	0.
.2710	86.	-1369.	-1494.	-0.	0.	-0.	0.
.2720	-350.	-1397.	-1057.	-0.	0.	0.	0.
.2730	-810.	-1361.	-586.	-0.	0.	-0.	0.
.2740	-1277.	-1323.	-44.	0.	-0.	0.	0.
.2750	-1719.	-1307.	661.	-0.	-0.	0.	0.
.2760	-2076.	-1271.	1526.	-0.	0.	0.	0.
.2770	-2312.	-1155.	2397.	0.	-0.	0.	0.

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ADLPIPE STRESS ANALYSIS

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

CONDITION 24
LOADS
SHOCK
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ENGLISH UNITS

.2670	1017.	-815.	-2267.	0.	-0.	-0.	0.0055	.0208	-.1080	-.1825	-.0540	.0422	0.
.2680	905.	-967.	-2262.	-0.	0.	0.	-.0004	.0164	-.0951	-.1735	-.0638	.0413	0.
.2690	724.	-1089.	-2165.	0.	-0.	0.	-.0067	.0126	-.0811	-.1637	-.0521	.0401	0.
.2700	456.	-1246.	-1881.	0.	-0.	0.	-.0134	.0094	-.0658	-.1534	-.0588	.0385	0.
.2710	86.	-1369.	-1494.	-0.	0.	0.	-.0203	.0069	-.0496	-.1423	-.0548	.0363	0.
.2720	-350.	-1397.	-1057.	-0.	0.	0.	-.0272	.0050	-.0326	-.1304	-.0508	.0333	0.
.2730	-810.	-1361.	-586.	-0.	0.	0.	-.0339	.0044	-.0151	-.1181	-.0472	.0292	0.
.2740	-1277.	-1323.	-44.	0.	-0.	0.	-.0400	.0043	.0026	-.1053	-.0437	.0242	0.
.2750	-1719.	-1307.	661.	-0.	-0.	0.	-.0454	.0049	.0202	-.0918	-.0398	.0182	0.
.2760	-2076.	-1271.	1526.	-0.	0.	0.	-.0498	.0063	.0374	-.0777	-.0352	.0112	0.
.2770	-2312.	-1155.	2397.	0.	-0.	0.	-.0530	.0084	.0536	-.0635	-.0301	.0030	0.

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83/12/02. 18.26.04.

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

CONDITION 24
LOADS
SHOCK
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ENGLISH UNITS

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

SECTION	7	MEMBER	2	SEQUENCE	805	LOCATION	END	TYPE	V						
TIME	FX	FY	FZ	FX	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)		
.2730	-2408.	-975.	3186.	-0.	0.	0.	-.0549	.0111	.0683	-.0497	-.0247	-.0064	0.		
.2790	-2335.	-813.	3928.	-0.	-0.	0.	-.0554	.0144	.0812	-.0371	-.0193	-.0168	0.		
.2800	-2081.	-685.	4564.	-0.	-0.	0.	-.0546	.0180	.0918	-.0265	-.0141	-.0279	0.		
.2810	-1668.	-527.	4914.	-0.	-0.	0.	-.0527	.0221	.0997	-.0182	-.0099	-.0394	0.		
.2820	-1125.	-311.	4930.	-0.	-0.	0.	-.0499	.0264	.1049	-.0126	-.0067	-.0506	0.		
.2830	-497.	-79.	4736.	-0.	0.	-0.	-.0465	.0308	.1073	-.0096	-.0038	-.0607	0.		
.2840	145.	139.	4443.	-0.	0.	-0.	-.0428	.0353	.1070	-.0086	-.0003	-.0685	0.		
.2850	727.	351.	4098.	-0.	-0.	0.	-.0393	.0397	.1043	-.0092	.0044	-.0731	0.		
.2860	1200.	566.	3758.	-0.	-0.	0.	-.0363	.0438	.0992	-.0107	.0106	-.0736	0.		
.2870	1522.	780.	3475.	-0.	0.	0.	-.0339	.0476	.0921	-.0125	.0183	-.0693	0.		
.2880	1661.	971.	3247.	-0.	0.	0.	-.0324	.0509	.0831	-.0142	.0268	-.0598	0.		
.2890	1614.	1096.	3053.	-0.	-0.	0.	-.0318	.0537	.0723	-.0159	.0353	-.0449	0.		
.2900	1401.	1136.	2845.	-0.	-0.	0.	-.0321	.0558	.0598	-.0175	.0426	-.0251	0.		
.2910	1045.	1121.	2540.	0.	-0.	-0.	-.0332	.0573	.0458	-.0190	.0478	-.0009	0.		
.2920	583.	1074.	2109.	0.	0.	-0.	-.0349	.0581	.0304	-.0207	.0504	.0266	0.		
.2930	66.	990.	1609.	0.	-0.	-0.	-.0368	.0584	.0139	-.0228	.0508	.0565	0.		
.2940	-464.	873.	1083.	0.	0.	-0.	-.0388	.0581	-.0034	-.0252	.0491	.0872	0.		
.2950	-976.	751.	497.	-0.	-0.	0.	-.0404	.0573	-.0211	-.0284	.0454	.1175	0.		
.2960	-1425.	626.	-169.	0.	-0.	0.	-.0414	.0561	-.0391	-.0326	.0398	.1458	0.		
.2970	-1769.	529.	-870.	-0.	0.	-0.	-.0417	.0545	-.0569	-.0381	.0327	.1709	0.		
.2980	-1984.	435.	-1570.	-0.	0.	0.	-.0409	.0527	-.0740	-.0446	.0243	.1916	0.		
.2990	-2061.	349.	-2283.	0.	0.	-0.	-.0390	.0506	-.0902	-.0524	.0147	.2071	0.		
.3000	-1989.	261.	-3030.	0.	0.	-0.	-.0359	.0483	-.1050	-.0612	.0038	.2167	0.		
.3010	-1774.	178.	-3788.	0.	0.	-0.	-.0318	.0459	-.1179	-.0709	-.0077	.2202	0.		
.3020	-1443.	112.	-4480.	0.	0.	-0.	-.0267	.0434	-.1187	-.0806	-.0193	.2178	0.		
.3030	-1023.	55.	-5010.	0.	0.	-0.	-.0208	.0409	-.1368	-.0897	-.0298	.2099	0.		
.3040	-540.	3.	-5337.	0.	0.	-0.	-.0144	.0383	-.1421	-.0975	-.0386	.1971	0.		
.3050	-34.	-15.	-5474.	-0.	0.	-0.	-.0077	.0357	-.1444	-.1035	-.0452	.1802	0.		
.3060	459.	5.	-5428.	-0.	0.	0.	-.0011	.0332	-.1435	-.1073	-.0497	.1601	0.		
.3070	917.	27.	-5191.	0.	-0.	-0.	.0053	.0306	-.1397	-.1084	-.0520	.1377	0.		
.3080	1321.	44.	-4801.	-0.	0.	0.	.0111	.0281	-.1329	-.1069	-.0522	.1140	0.		
.3090	1653.	83.	-4335.	0.	0.	-0.	.0161	.0255	-.1235	-.1024	-.0509	.0900	0.		
.3100	1905.	151.	-3838.	0.	-0.	-0.	.0201	.0228	-.1116	-.0950	-.0484	.0663	0.		
.3110	2069.	212.	-3322.	-0.	0.	0.	.0230	.0201	-.0977	-.0847	-.0448	.0439	0.		
.3120	2178.	248.	-2787.	0.	-0.	0.	.0248	.0173	-.0820	-.0711	-.0401	.0233	0.		
.3130	2114.	280.	-2227.	0.	-0.	0.	.0254	.0143	-.0648	-.0557	-.0343	.0052	0.		
.3140	2007.	320.	-1634.	0.	0.	-0.	.0248	.0112	-.0465	-.0370	-.0272	-.0102	0.		
.3150	1827.	363.	-1021.	0.	-0.	0.	.0230	.0079	-.0273	-.0159	-.0191	-.0227	0.		

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

CONDITION 24
LOADS
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ENGLISH UNITS

.3040	-34.	-15.	-5474.	-0.	0.	-0.	0.	-.0077	.0357	-.1444	-.1035	-.0452	.1802	0.
.3050	459.	5.	-5428.	-0.	0.	0.	0.	-.0011	.0332	-.1435	-.1073	-.0497	.1601	0.
.3070	917.	27.	-5191.	0.	-0.	-0.	0.	.0053	.0306	-.1397	-.1084	-.0520	.1377	0.
.3080	1721.	44.	-4801.	-0.	0.	0.	0.	.0111	.0281	-.1329	-.1069	-.0522	.1140	0.
.3090	1853.	83.	-4335.	0.	0.	-0.	0.	.0161	.0259	-.1235	-.1024	-.0509	.0900	0.
.3100	1705.	151.	-3838.	0.	-0.	-0.	0.	.0201	.0228	-.1116	-.0950	-.0484	.0663	0.
.3110	2069.	212.	-3322.	-0.	0.	0.	0.	.0230	.0201	-.0977	-.0847	-.0448	.0439	0.
.3120	2138.	248.	-2787.	0.	-0.	0.	0.	.0248	.0173	-.0820	-.0716	-.0401	.0233	0.
.3130	2114.	280.	-2227.	0.	-0.	0.	0.	.0254	.0143	-.0648	-.0557	-.0343	.0052	0.
.3140	2007.	320.	-1634.	0.	0.	-0.	0.	.0248	.0112	-.0465	-.0370	-.0272	-.0102	0.
.3150	1827.	363.	-1021.	0.	-0.	0.	0.	.0230	.0079	-.0273	-.0159	-.0191	-.0227	0.

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.04.

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	7	MEMBER	2	SEQUENCE	805	LOCATION	END	TYPE	VA						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.3160	1583.	393.	-397.	0.	-0.	-0.	.0203	.0044	-.0076	.0071	-.0102	-.0322	0.		
.3170	1290.	401.	229.	0.	-0.	-0.	.0167	.0007	.0122	.0315	-.0007	-.0390	0.		
.3180	964.	388.	821.	-0.	-0.	0.	.0124	-.0033	.0317	.0505	.0089	-.0433	0.		
.3190	617.	361.	1338.	-0.	-0.	0.	.0076	-.0074	.0507	.0816	.0183	-.0456	0.		
.3200	256.	327.	1771.	-0.	-0.	-0.	.0025	-.0118	.0689	.1060	.0274	-.0464	0.		
.3210	-112.	282.	2150.	-0.	0.	0.	-.0026	-.0163	.0860	.1295	.0363	-.0460	0.		
.3220	-485.	218.	2484.	-0.	0.	-0.	-.0077	-.0210	.1018	.1513	.0450	-.0450	0.		
.3230	-860.	140.	2750.	-0.	0.	-0.	-.0125	-.0257	.1161	.1712	.0532	-.0438	0.		
.3240	-1231.	65.	2968.	-0.	0.	0.	-.0167	-.0306	.1288	.1889	.0511	-.0429	0.		
.3250	-1585.	8.	3190.	0.	-0.	-0.	-.0202	-.0354	.1398	.2044	.0685	-.0425	0.		
.3260	-1914.	-39.	3416.	-0.	0.	-0.	-.0227	-.0402	.1490	.2175	.0752	-.0430	0.		
.3270	-2203.	-94.	3617.	-0.	0.	-0.	-.0242	-.0451	.1562	.2280	.0806	-.0447	0.		
.3280	-2432.	-163.	3780.	-0.	0.	0.	-.0244	-.0498	.1613	.2356	.0842	-.0479	0.		
.3290	-2585.	-270.	3892.	0.	-0.	0.	-.0232	-.0544	.1643	.2404	.0855	-.0527	0.		
.3300	-2648.	-290.	3943.	-0.	0.	-0.	-.0205	-.0589	.1650	.2424	.0843	-.0593	0.		
.3310	-2610.	-363.	3944.	-0.	0.	-0.	-.0164	-.0632	.1636	.2413	.0807	-.0678	0.		
.3320	-2463.	-453.	3892.	0.	-0.	0.	-.0108	-.0673	.1599	.2372	.0746	-.0782	0.		
.3330	-2212.	-543.	3761.	-0.	-0.	0.	-.0038	-.0711	.1541	.2299	.0663	-.0903	0.		
.3340	-1864.	-620.	3556.	0.	-0.	-0.	.0043	-.0746	.1462	.2195	.0562	-.1040	0.		
.3350	-1425.	-685.	3210.	-0.	0.	0.	.0134	-.0777	.1363	.2062	.0449	-.1189	0.		
.3360	-913.	-732.	3017.	0.	-0.	-0.	.0233	-.0804	.1247	.1902	.0328	-.1346	0.		
.3370	-350.	-755.	2626.	0.	-0.	-0.	.0337	-.0827	.1114	.1718	.0199	-.1504	0.		
.3380	243.	-766.	2123.	-0.	0.	0.	.0441	-.0846	.0967	.1513	.0066	-.1657	0.		
.3390	838.	-766.	1537.	0.	-0.	-0.	.0544	-.0860	.0809	.1296	-.0068	-.1797	0.		
.3400	1402.	-746.	897.	-0.	0.	-0.	.0641	-.0870	.0643	.1074	-.0196	-.1917	0.		
.3410	1904.	-712.	224.	0.	-0.	0.	.0730	-.0876	.0473	.0856	-.0312	-.2007	0.		
.3420	2710.	-680.	-449.	0.	-0.	-0.	.0807	-.0878	.0303	.0652	-.0413	-.2061	0.		
.3430	2621.	-652.	-1076.	-0.	0.	0.	.0871	-.0876	.0136	.0470	-.0491	-.2072	0.		
.3440	2792.	-626.	-1609.	-0.	0.	0.	.0920	-.0870	-.0024	.0319	-.0543	-.2038	0.		
.3450	2831.	-604.	-2018.	-0.	0.	0.	.0953	-.0861	-.0173	.0202	-.0565	-.1957	0.		
.3460	2746.	-587.	-2313.	-0.	0.	0.	.0970	-.0848	-.0311	.0122	-.0559	-.1830	0.		
.3470	2549.	-568.	-2536.	0.	-0.	0.	.0972	-.0833	-.0435	.0077	-.0530	-.1664	0.		
.3480	2260.	-552.	-2713.	0.	-0.	0.	.0959	-.0813	-.0545	.0064	-.0481	-.1464	0.		
.3490	1911.	-546.	-2850.	0.	-0.	-0.	.0934	-.0791	-.0638	.0077	-.0416	-.1241	0.		
.3500	1527.	-534.	-2962.	0.	-0.	0.	.0899	-.0766	-.0715	.0112	-.0338	-.1004	0.		
.3510	1131.	-495.	-3074.	0.	-0.	-0.	.0855	-.0738	-.0776	.0164	-.0252	-.0765	0.		
.3520	744.	-438.	-3195.	0.	-0.	0.	.0806	-.0708	-.0818	.0224	-.0161	-.0533	0.		
.3530	385.	-377.	-3304.	0.	-0.	-0.	.0752	-.0674	-.0842	.0289	-.0067	-.0320	0.		

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ADLPIPE STRESS ANALYSIS

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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

.3430	2621.	-852.	-1076.	-0.	-0.	0.	.0871	-.0876	.0136	.0470	-.0491	-.2072	0.
.3440	2792.	-626.	-1609.	-0.	-0.	0.	.0920	-.0870	-.0024	.0319	-.0543	-.2038	0.
.3450	2831.	-604.	-2018.	-0.	-0.	0.	.0953	-.0861	-.0173	.0202	-.0565	-.1957	0.
.3460	2746.	-587.	-2310.	-0.	-0.	0.	.0970	-.0848	-.0311	.0122	-.0559	-.1830	0.
.3470	2549.	-568.	-2536.	0.	-0.	0.	.0972	-.0833	-.0435	.0077	-.0530	-.1664	0.
.3480	2269.	-552.	-2713.	0.	-0.	0.	.0959	-.0813	-.0545	.0064	-.0481	-.1464	0.
.3490	1911.	-546.	-2850.	0.	-0.	-0.	.0934	-.0791	-.0638	.0077	-.0416	-.1241	0.
.3500	1527.	-534.	-2962.	0.	-0.	0.	.0899	-.0766	-.0715	.0112	-.0338	-.1004	0.
.3510	1131.	-495.	-3074.	0.	0.	-0.	.0855	-.0738	-.0776	.0164	-.0252	-.0765	0.
.3520	744.	-438.	-3195.	0.	-0.	0.	.0806	-.0708	-.0818	.0224	-.0161	-.0533	0.
.3530	385.	-377.	-3304.	0.	-0.	-0.	.0752	-.0674	-.0842	.0289	-.0067	-.0320	0.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	7	MEMBER	2	SEQUENCE	805	LOCATION	END	TYPE	VA						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.3540	64.	-308.	-3370.	0.	-0.	0.	.0697	-.0639	-.0848	.0354	.0029	-.0131	0.		
.3550	-210.	-218.	-3372.	0.	0.	-0.	.0642	-.0603	-.0834	.0417	.0123	.0024	0.		
.3560	-428.	-115.	-3307.	0.	-0.	-0.	.0588	-.0565	-.0802	.0476	.0213	.0142	0.		
.3570	-588.	-11.	-3184.	-0.	-0.	0.	.0537	-.0527	-.0751	.0528	.0293	.0219	0.		
.3580	-695.	84.	-2987.	0.	-0.	0.	.0489	-.0488	-.0683	.0573	.0361	.0255	0.		
.3590	-748.	164.	-2688.	0.	-0.	0.	.0446	-.0451	-.0599	.0611	.0415	.0250	0.		
.3600	-748.	233.	-2287.	0.	-0.	0.	.0407	-.0414	-.0499	.0642	.0455	.0208	0.		
.3610	-700.	300.	-1806.	0.	-0.	-0.	.0372	-.0379	-.0388	.0666	.0479	.0130	0.		
.3620	-611.	363.	-1265.	-0.	-0.	0.	.0341	-.0346	-.0267	.0682	.0488	.0023	0.		
.3630	-483.	407.	-676.	-0.	-0.	0.	.0314	-.0314	-.0140	.0690	.0480	-.0107	0.		
.3640	-322.	429.	-70.	0.	-0.	0.	.0289	-.0285	-.0009	.0688	.0456	-.0254	0.		
.3650	-136.	441.	507.	0.	-0.	0.	.0266	-.0259	.0121	.0677	.0415	-.0411	0.		
.3660	68.	447.	1019.	-0.	0.	0.	.0244	-.0235	.0247	.0655	.0359	-.0571	0.		
.3670	279.	437.	1447.	-0.	-0.	0.	.0221	-.0213	.0367	.0622	.0289	-.0727	0.		
.3680	480.	398.	1786.	-0.	-0.	0.	.0196	-.0194	.0478	.0579	.0208	-.0871	0.		
.3690	656.	328.	2056.	-0.	-0.	0.	.0169	-.0177	.0578	.0526	.0123	-.0998	0.		
.3700	792.	241.	2278.	-0.	0.	0.	.0138	-.0162	.0667	.0465	.0040	-.1100	0.		
.3710	875.	145.	2468.	-0.	0.	0.	.0103	-.0148	.0742	.0399	-.0037	-.1175	0.		
.3720	894.	35.	2634.	-0.	0.	-0.	.0062	-.0135	.0803	.0328	-.0103	-.1218	0.		
.3730	845.	-100.	2796.	-0.	0.	0.	.0017	-.0122	.0848	.0252	-.0156	-.1227	0.		
.3740	731.	-254.	2952.	-0.	0.	0.	-.0032	-.0108	.0878	.0171	-.0195	-.1202	0.		
.3750	557.	-407.	3076.	0.	-0.	0.	-.0086	-.0093	.0891	.0087	-.0222	-.1144	0.		
.3760	337.	-550.	3144.	-0.	0.	-0.	-.0143	-.0075	.0886	-.0002	-.0238	-.1055	0.		
.3770	85.	-685.	3155.	-0.	-0.	0.	-.0201	-.0054	.0864	-.0094	-.0244	-.0938	0.		
.3780	-183.	-813.	3107.	-0.	0.	0.	-.0259	-.0029	.0824	-.0190	-.0244	-.0794	0.		
.3790	-451.	-919.	2989.	0.	-0.	0.	-.0316	.0001	.0767	-.0287	-.0238	-.0628	0.		
.3800	-700.	-988.	2795.	-0.	-0.	0.	-.0370	.0036	.0693	-.0385	-.0230	-.0444	0.		
.3810	-915.	-1012.	2530.	-0.	0.	-0.	-.0420	.0076	.0604	-.0481	-.0222	-.0245	0.		
.3820	-1088.	-1001.	2198.	-0.	0.	-0.	-.0465	.0122	.0501	-.0574	-.0216	-.0035	0.		
.3830	-1211.	-968.	1805.	-0.	0.	-0.	-.0503	.0174	.0386	-.0663	-.0215	-.0182	0.		
.3840	-1280.	-914.	1363.	-0.	0.	-0.	-.0534	.0230	.0262	-.0747	-.0219	.0401	0.		
.3850	-1296.	-832.	886.	-0.	-0.	0.	-.0558	.0292	.0131	-.0825	-.0229	.0618	0.		
.3860	-1265.	-719.	395.	-0.	0.	-0.	-.0575	.0358	-.0005	-.0898	-.0243	.0829	0.		
.3870	-1196.	-591.	-83.	0.	0.	-0.	-.0584	.0429	-.0142	-.0966	-.0259	.1029	0.		
.3880	-1096.	-454.	-517.	-0.	0.	0.	-.0587	.0502	-.0277	-.1031	-.0272	.1215	0.		
.3890	-973.	-301.	-887.	-0.	0.	-0.	-.0584	.0577	-.0410	-.1095	-.0280	.1383	0.		
.3900	-834.	-121.	-1134.	-0.	0.	-0.	-.0576	.0654	-.0536	-.1157	-.0279	.1530	0.		
.3910	-680.	86.	-1409.	-0.	0.	-0.	-.0563	.0731	-.0656	-.1221	-.0268	.1654	0.		

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.3810	-915.	-1012.	1330.	-0.	0.	-0.	-0.	-0.420	.0076	.0604	-.0481	-.0222	-.0244	0.
.3820	-1020.	-1001.	1198.	-0.	0.	-0.	-0.	-0.465	.0122	.0501	-.0574	-.0216	-.0035	0.
.3830	-1211.	-968.	1805.	-0.	0.	-0.	-0.	-0.503	.0174	.0386	-.0663	-.0215	.0182	0.
.3840	-1220.	-914.	1763.	-0.	0.	-0.	-0.	-0.534	.0230	.0262	-.0747	-.0219	.0401	0.
.3850	-1296.	-872.	186.	-0.	-0.	0.	-0.	-0.558	.0292	.0131	-.0825	-.0229	.0618	0.
.3860	-1260.	-719.	391.	-0.	0.	-0.	-0.	-0.575	.0358	-.0005	-.0898	-.0243	.0829	0.
.3870	-1196.	-591.	-83.	0.	0.	-0.	-0.	-0.584	.0429	-.0142	-.0966	-.0259	.1029	0.
.3880	-1096.	-454.	-517.	-0.	0.	0.	-0.	-0.587	.0502	-.0277	-.1031	-.0272	.1215	0.
.3890	-973.	-301.	-887.	-0.	0.	-0.	-0.	-0.584	.0577	-.0410	-.1095	-.0280	.1383	0.
.3900	-834.	-121.	-1104.	-0.	0.	-0.	-0.	-0.576	.0654	-.0536	-.1157	-.0279	.1530	0.
.3910	-680.	26.	-1409.	-0.	0.	-0.	-0.	-0.563	.0731	-.0656	-.1221	-.0268	.1654	0.

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FORCES AND MOMENTS ACT ON THE PIPING

SECTION	7	MEMBER	2	SEQUENCE	805	LOCATION	END	TYPE	VA					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.3920	-513.	306.	-1576.	-0.	0.	0.	-.0546	.0807	-.0767	-.1287	-.0248	.1752	0.	
.3930	-333.	527.	-1711.	0.	0.	-0.	-.0527	.0881	-.0869	-.1357	-.0220	.1827	0.	
.3940	-136.	748.	-1835.	0.	0.	-0.	-.0506	.0952	-.0960	-.1429	-.0187	.1879	0.	
.3950	78.	978.	-1961.	-0.	0.	0.	-.0484	.1018	-.1041	-.1501	-.0150	.1912	0.	
.3960	303.	1212.	-2096.	0.	0.	-0.	-.0463	.1079	-.1111	-.1568	-.0111	.1929	0.	
.3970	529.	1422.	-2236.	0.	-0.	-0.	-.0444	.1132	-.1167	-.1627	-.0072	.1937	0.	
.3980	745.	1590.	-2367.	-0.	0.	0.	-.0429	.1177	-.1213	-.1673	-.0033	.1939	0.	
.3990	937.	1721.	-2466.	-0.	0.	0.	-.0417	.1212	-.1244	-.1703	.0006	.1943	0.	
.4000	1091.	1824.	-2516.	-0.	0.	-0.	-.0411	.1238	-.1261	-.1711	.0044	.1950	0.	

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)
.1410	-1537.	-80.	9249.	-0.	0.	-0.	-.0839	.0364	.2169	.0818	.1184	-.0757	0.

SECTION	8	MEMBER	1	SEQUENCE	25	LOCATION	BEG	TYPE	VA					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	1.	5.	1.	-6.	-0.	3.	-.0000	.0000	-.0000	-.0000	.0000	.0000	3.	
.0020	5.	30.	9.	-36.	-1.	18.	-.0001	.0000	-.0001	-.0000	.0002	.0001	19.	
.0030	14.	64.	36.	-85.	-4.	39.	-.0002	.0000	-.0004	-.0003	.0006	.0005	44.	
.0040	28.	97.	82.	-148.	-6.	63.	-.0004	-.0000	-.0008	-.0008	.0014	.0015	75.	
.0050	53.	147.	138.	-241.	1.	106.	-.0007	-.0000	-.0016	-.0016	.0024	.0030	123.	
.0060	103.	237.	219.	-394.	21.	181.	-.0012	.0000	-.0028	-.0028	.0036	.0053	204.	
.0070	174.	361.	347.	-610.	43.	278.	-.0018	.0000	-.0046	-.0047	.0054	.0088	315.	
.0080	245.	486.	611.	-858.	26.	379.	-.0028	.0001	-.0071	-.0072	.0090	.0142	440.	
.0090	332.	585.	1176.	-1093.	-55.	486.	-.0040	.0002	-.0106	-.0103	.0160	.0222	561.	
.0100	445.	692.	1953.	-1335.	-156.	629.	-.0053	.0004	-.0152	-.0134	.0265	.0327	696.	
.0110	539.	836.	2650.	-1622.	-243.	791.	-.0066	.0007	-.0207	-.0168	.0385	.0452	853.	
.0120	585.	988.	3127.	-1919.	-318.	928.	-.0076	.0012	-.0270	-.0204	.0507	.0589	1010.	
.0130	642.	1136.	3450.	-2174.	-335.	1052.	-.0081	.0019	-.0341	-.0236	.0624	.0729	1143.	
.0140	800.	1311.	3710.	-2389.	-215.	1202.	-.0080	.0027	-.0417	-.0258	.0730	.0869	1257.	
.0150	1091.	1545.	3931.	-2618.	61.	1367.	-.0073	.0036	-.0500	-.0272	.0817	.1003	1384.	

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.0050	53.	147.	138.	-241.	1.	106.	-0.007	-0.000	-0.0016	-0.0016	.0024	.0033	75.
.0060	103.	237.	219.	-394.	21.	181.	-0.012	.0000	-0.0028	-0.0028	.0036	.0053	204.
.0070	174.	361.	347.	-610.	43.	278.	-0.018	.0000	-0.0046	-0.0047	.0054	.0088	315.
.0080	245.	486.	611.	-857.	26.	379.	-0.028	.0001	-0.0071	-0.0072	.0090	.0142	440.
.0090	332.	585.	1176.	-1093.	-55.	486.	-0.040	.0002	-0.0106	-0.0103	.0160	.0222	561.
.0100	445.	692.	1953.	-1375.	-156.	629.	-0.053	.0004	-0.0152	-0.0134	.0265	.0327	696.
.0110	539.	836.	2650.	-1622.	-243.	791.	-0.066	.0007	-0.0207	-0.0168	.0385	.0452	853.
.0120	585.	988.	3127.	-1919.	-318.	928.	-0.076	.0012	-0.0270	-0.0204	.0507	.0589	1010.
.0130	642.	1136.	3450.	-2174.	-335.	1052.	-0.081	.0019	-0.0341	-0.0236	.0624	.0729	1143.
.0140	800.	1311.	3710.	-2389.	-415.	1202.	-0.080	.0027	-0.0417	-0.0258	.0730	.0869	1257.
.0150	1091.	1545.	3931.	-2618.	-511.	1367.	-0.073	.0036	-0.0500	-0.0272	.0817	.1003	1384.

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INTERNAL FORCES IN THE PIPING
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SECTION	8	MEMBER	1	SEQUENCE	25	LOCATION	BEG	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0160	1530.	1843.	4316.	-2902.	430.	1527.	-0.0059	.0046	-0.0590	-0.0285	.0888	.1131	1550.		
.0170	2024.	2173.	4518.	-3243.	920.	1672.	-0.0042	.0056	-0.0688	-0.0306	.0936	.1254	1763.		
.0180	2327.	2426.	3704.	-3587.	1540.	1716.	-0.0020	.0066	-0.0791	-0.0350	.0935	.1370	1998.		
.0190	2208.	2461.	1842.	-3808.	2012.	1553.	.0007	.0076	-0.0892	-0.0420	.0898	.1469	2145.		
.0200	1464.	2201.	-554.	-3729.	1962.	1170.	.0041	.0086	-0.0975	-0.0492	.0890	.1533	2049.		
.0210	437.	1766.	-1593.	-3219.	1279.	801.	.0084	.0100	-0.1030	-0.0499	.1039	.1561	1666.		
.0220	-101.	1585.	-954.	-2613.	798.	743.	.0141	.0117	-0.1054	-0.0395	.1286	.1535	1327.		
.0230	-410.	1712.	-450.	-2271.	613.	703.	.0216	.0135	-0.1042	-0.0244	.1448	.1405	1151.		
.0240	-376.	1818.	1705.	-1946.	60.	540.	.0306	.0149	-0.1002	-0.0089	.1541	.1147	947.		
.0250	-118.	1657.	3263.	-1392.	-28.	312.	.0407	.0155	-0.0948	.0051	.1511	.0804	668.		
.0260	-429.	1334.	-1202.	-1066.	1366.	-215.	.0520	.0148	-0.0882	.0112	.1129	.0395	818.		
.0270	-754.	1071.	-6983.	-1231.	2913.	-1011.	.0638	.0129	-0.0791	.0099	.0492	-0.0121	1556.		
.0280	-209.	933.	-6272.	-1317.	3089.	-1458.	.0745	.0102	-0.0669	.0144	.0052	-0.0719	1716.		
.0290	857.	1094.	-3059.	-1211.	3554.	-1261.	.0838	.0067	-0.0530	.0325	-0.0128	-0.1277	1856.		
.0300	2115.	1493.	-714.	-1457.	4875.	-1233.	.0918	.0018	-0.0380	.0524	-0.0305	-0.1744	2454.		
.0310	2945.	2278.	1245.	-2681.	5336.	-1470.	.0968	-0.0045	-0.0232	.0608	-0.0591	-0.2201	2882.		
.0320	2554.	2485.	-776.	-3619.	5281.	-1753.	.0988	-0.0125	-0.0088	.0560	-0.1078	-0.2630	3111.		
.0330	2302.	1160.	-2841.	-2545.	5507.	-1941.	.0980	-0.0223	.0053	.0510	-0.1524	-0.2903	2985.		
.0340	3330.	-193.	-1041.	-943.	5946.	-1766.	.0941	-0.0333	.0193	.0540	-0.1801	-0.3021	2940.		
.0350	4342.	367.	-583.	-1404.	6467.	-1195.	.0866	-0.0448	.0330	.0583	-0.2136	-0.3093	3151.		
.0360	3934.	1274.	-4636.	-2440.	6574.	-1066.	.0756	-0.0573	.0473	.0543	-0.2599	-0.3103	3324.		
.0370	3003.	-184.	-6980.	-528.	5565.	-1674.	.0618	-0.0711	.0636	.0467	-0.2889	-0.2960	2735.		
.0380	2860.	-2761.	-4954.	3490.	4176.	-1680.	.0450	-0.0850	.0815	.0482	-0.2893	-0.2708	2669.		
.0390	2511.	-3534.	-4604.	5739.	3112.	-756.	.0255	-0.0977	.0998	.0540	-0.2868	-0.2473	3080.		
.0400	252.	-3413.	-6563.	6200.	566.	-901.	.0042	-0.1091	.1193	.0474	-0.2781	-0.2251	2948.		
.0410	-2001.	-4367.	-3933.	7716.	-3231.	-1911.	-0.0175	-0.1189	.1399	.0378	-0.2359	-0.1965	4021.		
.0420	-3084.	-5578.	751.	10284.	-5834.	-1599.	-0.0385	-0.1257	.1592	.0403	-0.1691	-0.1672	5591.		
.0430	-4813.	-6114.	2405.	11838.	-8095.	-738.	-0.0581	-0.1292	.1761	.0390	-0.1032	-0.1472	6730.		
.0440	-7360.	-6529.	4991.	11912.	-11901.	-1420.	-0.0749	-0.1296	.1900	.0191	-0.0368	-0.1341	7919.		
.0450	-8454.	-6192.	8869.	10808.	-14310.	-2143.	-0.0874	-0.1263	.1987	.0005	-0.0279	-0.1219	8464.		
.0460	-7686.	-4527.	9028.	8808.	-13035.	-1153.	-0.0953	-0.1190	.2003	-0.0038	.0706	-0.1135	7392.		
.0470	-7356.	-3554.	6412.	7175.	-11709.	-684.	-0.0987	-0.1089	.1968	-0.0156	.0890	-0.1114	6443.		
.0480	-7766.	-4443.	5597.	6849.	-12275.	-2148.	-0.0977	-0.0969	.1896	-0.0391	.1003	-0.1077	6664.		
.0490	-6821.	-4698.	4792.	6498.	-10945.	-2765.	-0.0925	-0.0819	.1780	-0.0418	.1093	-0.0962	6104.		
.0500	-4737.	-2888.	1482.	4928.	-7088.	-1422.	-0.0843	-0.0638	.1623	-0.0153	.1119	-0.0810	4100.		
.0510	-3802.	-1636.	-414.	3759.	-5363.	-981.	-0.0743	-0.0442	.1456	.0122	.1178	-0.0638	3104.		
.0520	-4038.	-2547.	654.	4698.	-6157.	-2054.	-0.0629	-0.0240	.1290	.0359	.1343	-0.0386	3755.		
.0530	-3635.	-3447.	516.	6400.	-5327.	-1923.	-0.0505	-0.0025	.1107	.0771	.1512	-0.0050	4005.		

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.0415	-3584.	-5178.	211.	10214.	-1734.	-1599.	-1035.	-1257.	.1592	.0403	-.1591	-.1672	5591.
.0430	-4813.	-6114.	2405.	11878.	-8095.	-730.	-.0581	-.1292	.1761	.0390	-.1032	-.1472	6730.
.0440	-7360.	-6529.	4991.	11912.	-11901.	-1420.	-.749	-.1296	.1900	.0191	-.0368	-.1341	7919.
.0450	-8454.	-6192.	8869.	10808.	-14310.	-2143.	-.0874	-.1263	.1987	.0005	.0279	-.1219	8464.
.0460	-7686.	-4527.	9028.	5808.	-13035.	-1153.	-.0957	-.1190	.2003	-.0038	.0706	-.1135	7392.
.0470	-7356.	-3554.	6412.	7175.	-11709.	-684.	-.0987	-.1089	.1968	-.0156	.0890	-.1114	6443.
.0480	-7766.	-4443.	5597.	6849.	-12075.	-2148.	-.0977	-.0969	.1896	-.0391	.1003	-.1077	6664.
.0490	-6821.	-4696.	4792.	6498.	-10945.	-2765.	-.0925	-.0819	.1780	-.0418	.1093	-.0962	6104.
.0500	-4737.	-2888.	1482.	4928.	-7088.	-1422.	-.0843	-.0638	.1623	-.0153	.1119	-.0810	4100.
.0510	-3802.	-1636.	-414.	3759.	-5363.	-981.	-.0743	-.0442	.1456	.0122	.1178	-.0638	3104.
.0520	-4038.	-2547.	654.	4698.	-6157.	-2054.	-.0629	-.0240	.1290	.0359	.1343	-.0386	3755.
.0530	-3635.	-3447.	516.	6400.	-5327.	-1923.	-.0505	-.0025	.1107	.0771	.1512	-.0050	4005.

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18.26.04.

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	8	MEMBER	1	SEQUENCE	25	LOCATION	BEG	TYPE	VA						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.0540	-2706.	-2840.	-936.	6651.	-3331.	-556.	-.0380	.0201	.0903	.1281	.1511	.0284	3496.		
.0550	-2624.	-1897.	-568.	5326.	-3457.	-334.	-.0262	.0424	.0493	.1618	.1653	.0570	2980.		
.0560	-2928.	-1229.	-401.	3484.	-4109.	-703.	-.0149	.0638	.0472	.1812	.1512	.0843	2546.		
.0570	-2391.	-258.	-2672.	1553.	-2635.	246.	-.0042	.0841	.0232	.2028	.1481	.1112	1438.		
.0580	-1604.	773.	-3950.	-717.	-1285.	1389.	.0055	.1025	-.0014	.2167	.1367	.1336	948.		
.0590	-1483.	1726.	-2788.	-3844.	-1837.	1266.	.0141	.1179	-.0255	.2125	.1315	.1512	2083.		
.0600	-1119.	3587.	-2626.	-8006.	-1533.	1416.	.0221	.1302	-.0498	.2073	.1262	.1677	3877.		
.0610	120.	6075.	-3568.	-12092.	570.	2834.	.0294	.1391	-.0742	.2113	.1222	.1843	5826.		
.0620	1197.	7256.	-2309.	-14472.	1693.	3788.	.0363	.1434	-.0968	.2100	.1251	.2003	7055.		
.0630	1580.	6929.	-342.	-15139.	1708.	3570.	.0428	.1424	-.1173	.1990	.1273	.2169	7333.		
.0640	2413.	7023.	-819.	-15541.	3375.	3782.	.0491	.1372	-.1367	.1939	.1183	.2340	7660.		
.0650	4163.	7967.	-1682.	-16084.	6401.	4714.	.0547	.1280	-.1546	.1963	.1019	.2490	8408.		
.0660	5685.	8108.	-906.	-15670.	8416.	4905.	.0594	.1144	-.1692	.1902	.0830	.2604	8631.		
.0670	6351.	6843.	-1124.	-13562.	9716.	4287.	.0627	.0967	-.1798	.1723	.0575	.2688	8072.		
.0680	6854.	5344.	-2888.	-10775.	11486.	3994.	.0642	.0760	-.1866	.1527	.0299	.2725	7614.		
.0690	7471.	4437.	-2661.	-8464.	12670.	3907.	.0633	.0534	-.1889	.1309	.0145	.2681	7371.		
.0700	7590.	3921.	-122.	-6972.	12334.	3273.	.0599	.0293	-.1863	.0993	.0135	.2551	6814.		
.0710	7171.	3498.	1824.	-5910.	11512.	2479.	.0545	.0045	-.1795	.0583	.0154	.2339	6175.		
.0720	6723.	2978.	2896.	-4875.	10749.	2098.	.0475	-.0204	-.1695	.0100	.0121	.2027	5618.		
.0730	6051.	2163.	3849.	-3931.	9318.	1643.	.0397	-.0447	-.1563	-.0493	.0004	.1602	4801.		
.0740	4828.	1245.	3645.	-3443.	7319.	650.	.0309	-.0678	-.1403	-.1100	-.0208	.1098	3803.		
.0750	3761.	777.	2726.	-3548.	5689.	-351.	.0230	-.0885	-.1222	-.1829	-.0459	.0555	3147.		
.0760	3409.	820.	2829.	-3893.	4473.	-901.	.0162	-.1064	-.1022	-.2351	-.0693	-.0019	2811.		
.0770	2998.	651.	2794.	-3791.	3081.	-1451.	.0108	-.1213	-.0801	-.2774	-.0962	-.0611	2388.		
.0780	1800.	-395.	856.	-2612.	1403.	-2495.	.0074	-.1332	-.0559	-.3113	-.1292	-.1178	1816.		
.0790	512.	-1988.	-968.	-379.	-234.	-3636.	.0061	-.1419	-.0300	-.3275	-.1568	-.1688	1717.		
.0800	20.	-3155.	-549.	2102.	-1461.	-4208.	.0065	-.1466	-.0030	-.3175	-.1700	-.2144	2308.		
.0810	-161.	-3651.	169.	4206.	-2214.	-4396.	.0085	-.1475	.0241	-.2871	-.1770	-.2557	3034.		
.0820	-786.	-4263.	-625.	6288.	-2827.	-4827.	.0118	-.1449	.0510	-.2481	-.1872	-.2918	3944.		
.0830	-1504.	-5457.	-1644.	8835.	-3369.	-5353.	.0159	-.1392	.0771	-.2037	-.1974	-.3222	5092.		
.0840	-1772.	-6596.	-2175.	11281.	-3407.	-5367.	.0201	-.1300	.1018	-.1512	-.2029	-.3478	6068.		
.0850	-1886.	-6934.	-2983.	12523.	-3020.	-5031.	.0238	-.1175	.1244	-.0938	-.2025	-.3690	6481.		
.0860	-2146.	-6443.	-3417.	12219.	-2858.	-4862.	.0263	-.1023	.1452	-.0375	-.1924	-.3842	6307.		
.0870	-2302.	-5472.	-2730.	10973.	-2924.	-4613.	.0272	-.0849	.1638	.0179	-.1698	-.3917	5744.		
.0880	-2425.	-4454.	-2077.	9578.	-2898.	-3900.	.0260	-.0663	.1799	.0733	-.1382	-.3904	5033.		
.0890	-2994.	-3781.	-1810.	8302.	-3315.	-3154.	.0227	-.0475	.1933	.1241	-.0994	-.3787	4475.		
.0900	-3855.	-3195.	-577.	7083.	-4532.	-2654.	.0171	-.0293	.2039	.1701	-.0511	-.3556	4132.		
.0910	-4342.	-1993.	1372.	5273.	-5610.	-1814.	.0096	-.0121	.2107	.2175	.0030	-.3204	3707.		

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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

.0810	-121.	-1651.	-109.	4206.	-2214.	-4396.	.0625	-.1475	.0241	-.2871	-.1770	-.2557	3034.
.0820	-766.	-4263.	-625.	6288.	-2827.	-4827.	.1118	-.1449	.0510	-.2481	-.1872	-.2918	3944.
.0830	-1504.	-5457.	-1644.	8621.	-3369.	-5353.	.159	-.1392	.0771	-.2037	-.1974	-.3222	5092.
.0840	-1772.	-6596.	-2175.	11201.	-3407.	-5367.	.0201	-.1300	.1018	-.1512	-.2029	-.3478	6068.
.0850	-1788.	-6934.	-2983.	12523.	-3021.	-5031.	.0238	-.1175	.1244	-.0938	-.2025	-.3690	6481.
.0860	-2146.	-6443.	-3417.	12219.	-2838.	-4862.	.0263	-.1023	.1452	-.0375	-.1924	-.3842	6307.
.0870	-2302.	-5472.	-2730.	10973.	-2924.	-4613.	.0272	-.0849	.1638	.0179	-.1698	-.3917	5744.
.0880	-2425.	-4454.	-2077.	9578.	-2098.	-3900.	.0260	-.0663	.1799	.0733	-.1382	-.3904	5033.
.0890	-2994.	-3781.	-1810.	8382.	-3315.	-3154.	.0227	-.0475	.1933	.1241	-.0994	-.3787	4475.
.0900	-3857.	-3195.	-577.	7063.	-4532.	-2654.	.0171	-.0293	.2039	.1701	-.0511	-.3556	4132.
.0910	-4342.	-1993.	1372.	5273.	-5610.	-1814.	.0096	-.0121	.2107	.2175	.0030	-.3204	3707.

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CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	PX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.0920	-4488.	-423.	2371.	3387.	-6012.	-489.	.0007	.0035	.2130	.2655	.0529	-.2737	3242.	
.0930	-4916.	328.	2378.	2461.	-6619.	542.	-.0092	.0165	.2112	.3042	.0931	-.2170	3319.	
.0940	-5636.	18.	2134.	2713.	-7724.	1115.	-.0195	.0267	.2054	.3312	.1240	-.1526	3872.	
.0950	-6064.	-288.	1431.	3236.	-8348.	1935.	-.0298	.0345	.1954	.3535	.1487	-.0831	4292.	
.0960	-6062.	6.	609.	3314.	-8315.	3024.	-.0396	.0404	.1813	.3724	.1714	-.0117	4427.	
.0970	-5994.	417.	698.	3126.	-8485.	3724.	-.0483	.0440	.1641	.3804	.1946	.0579	4583.	
.0980	-5970.	537.	1163.	3070.	-8829.	4072.	-.0557	.0455	.1440	.3743	.2141	.1213	4778.	
.0990	-5785.	454.	845.	3169.	-8631.	4507.	-.0612	.0451	.1211	.3552	.2244	.1749	4799.	
.1000	-5390.	310.	259.	3088.	-8029.	4795.	-.0646	.0431	.0959	.3217	.2254	.2165	4615.	
.1010	-4808.	402.	129.	2323.	-7351.	4642.	-.0654	.0396	.0690	.2732	.2186	.2442	4217.	
.1020	-3935.	1056.	-260.	722.	-6177.	4415.	-.0638	.0352	.0409	.2148	.2025	.2564	3574.	
.1030	-2855.	1856.	-1159.	-1025.	-4463.	4250.	-.0595	.0302	.0126	.1501	.1786	.2543	2928.	
.1040	-1894.	2010.	-1540.	-2071.	-2967.	3668.	-.0525	.0245	-.0147	.0792	.1522	.2408	2414.	
.1050	-1171.	1676.	-1280.	-2546.	-1865.	2619.	-.0431	.0187	-.0403	.0058	.1265	.2179	1922.	
.1060	-452.	1722.	-1104.	-3176.	-584.	1660.	-.0315	.0132	-.0641	-.0618	.1017	.1869	1702.	
.1070	434.	2178.	-386.	-3925.	826.	869.	-.0180	.0084	-.0860	-.1198	.0801	.1504	1923.	
.1080	1021.	2167.	1086.	-4006.	1667.	-253.	-.0031	.0040	-.1056	-.1719	.0637	.1121	2037.	
.1090	925.	1291.	2761.	-2998.	1691.	-1735.	.0129	.0000	-.1228	-.2177	.0566	.0746	1806.	
.1100	2034.	864.	5363.	-2039.	2809.	-2329.	.0296	-.0031	-.1396	-.2478	.0475	.0389	1959.	
.1110	3344.	1227.	5656.	-2118.	4728.	-2498.	.0463	-.0053	-.1565	-.2722	.0205	.0029	2695.	
.1120	3906.	1396.	3677.	-2671.	6162.	-3253.	.0625	-.0072	-.1728	-.3016	-.0244	-.0319	3497.	
.1130	4673.	945.	2104.	-2697.	7539.	-4034.	.0775	-.0084	-.1880	-.3271	-.0721	-.0602	4201.	
.1140	6195.	635.	926.	-2545.	9740.	-3897.	.0906	-.0087	-.2020	-.3380	-.1145	-.0805	5059.	
.1150	7495.	948.	-518.	-3208.	11708.	-3421.	.1010	-.0078	-.2137	-.3407	-.1514	-.0951	5911.	
.1160	8129.	1559.	-949.	-4668.	12367.	-3353.	.1083	-.0063	-.2220	-.3414	-.1792	-.1032	6389.	
.1170	8609.	2235.	-1261.	-6128.	12861.	-2990.	.1123	-.0040	-.2269	-.3334	-.1986	-.1024	6822.	
.1180	9746.	2770.	-930.	-6925.	13993.	-1840.	.1129	-.0013	-.2283	-.3126	-.2134	-.0926	7367.	
.1190	9873.	2906.	-2826.	-7378.	14548.	-951.	.1099	.0012	-.2257	-.2926	-.2347	-.0787	7657.	
.1200	8871.	2536.	-4676.	-7574.	13556.	-970.	.1033	.0033	-.2181	-.2767	-.2530	-.0606	7291.	
.1210	8538.	2241.	-3061.	-7357.	12308.	-751.	.0935	.0053	-.2058	-.2488	-.2502	-.0351	6729.	
.1220	8513.	2848.	-3129.	-7356.	12333.	629.	.0809	.0076	-.1897	-.2049	-.2396	-.0059	6736.	
.1230	7768.	3155.	-3138.	-7061.	11331.	1662.	.0658	.0094	-.1691	-.1637	-.2238	.0218	6305.	
.1240	5894.	2380.	-2539.	-5928.	8534.	1598.	.0487	.0105	-.1439	-.1334	-.2027	.0468	4927.	
.1250	4246.	1455.	-2360.	-4245.	6330.	1835.	.0306	.0115	-.1158	-.0996	-.1750	.0709	3674.	
.1260	3557.	1105.	-1258.	-2697.	5143.	2734.	.0120	.0130	-.0856	-.0581	-.1371	.0923	3008.	
.1270	1920.	1002.	-1056.	-1804.	3026.	3000.	-.0067	.0146	-.0534	-.0257	-.0954	.1050	2169.	
.1280	-134.	461.	1036.	-781.	-387.	2446.	-.0248	.0160	-.0196	-.0033	-.0432	.1106	1217.	
.1290	-1477.	39.	2551.	528.	-2533.	2569.	-.0416	.0178	.0137	.0225	.0115	.1123	1709.	

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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

.1190 4077. 2906. 2026. -7378. 14548. -951. 1699. .0012 -.2257 -.2926 -.2347 -.0787 7657.
.1200 8871. 2516. -4676. -7574. 13556. -970. .1033 .0033 -.2181 -.2767 -.2530 -.0606 7291.
.1210 6738. 2241. -3061. -7357. 12308. -761. .0935 .0053 -.2058 -.2488 -.2502 -.0351 6729.
.1220 6513. 2848. -3129. -7356. 12333. 629. .0809 .0076 -.1897 -.2049 -.2196 -.0059 6736.
.1230 7768. 3155. -3138. -7061. 11331. 1662. .0658 .0094 -.1691 -.1637 -.2238 .0218 6305.
.1240 5894. 2380. -2539. -5928. 8534. 1598. .0487 .0105 -.1439 -.1334 -.2027 .0468 4927.
.1250 4246. 1455. -2360. -4245. 6330. 1835. .0306 .0115 -.1158 -.0996 -.1750 .0709 3674.
.1260 3557. 1105. -1258. -2697. 5140. 2734. .0120 .0130 -.0856 -.0581 -.1371 .0923 3008.
.1270 1920. 1002. -1056. -1804. 3026. 3000. -.0067 .0146 -.0534 -.0257 -.0954 .1050 2169.
.1280 -124. 461. 1036. -711. -287. 2446. -.0248 .0160 -.0196 -.0033 -.0432 .1106 1217.
.1290 -1477. 39. 2551. 528. -2533. 2569. -.0416 .0178 .0137 .0225 .0115 .1123 1709.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

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S/RV PIPING KEWAUNEE GKWO8F 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	B	MEMBER	1	SEQUENCE	25	LOCATION	BEG	TYPE	VA					STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ		(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)		
.1300	-2484.	-124.	2265.	1760.	-3569.	2120.	-.0567	.0197	.0456	.0477	.0599	.1080		2370.
.1310	-3608.	-617.	3659.	2848.	-5686.	2617.	-.0699	.0212	.0762	.0595	.1027	.0959		3223.
.1320	-4963.	-1003.	3492.	3565.	-7683.	1647.	-.0809	.0226	.1045	.0632	.1311	.0780		4043.
.1330	-5429.	-1123.	2315.	4443.	-8114.	1357.	-.0895	.0241	.1295	.0720	.1496	.0591		4382.
.1340	-5768.	-1526.	920.	5798.	-8287.	1197.	-.0959	.0256	.1518	.0806	.1521	.0394		4773.
.1350	-6837.	-2549.	397.	7506.	-9786.	275.	-.1004	.0269	.1719	.0810	.1725	.0180		5781.
.1360	-7578.	-3458.	1383.	9153.	-11357.	-618.	-.1030	.0283	.1890	.0835	.1841	-.0017		6842.
.1370	-7868.	-3482.	474.	10147.	-11438.	-629.	-.1038	.0304	.2020	.0939	.1982	-.0192		7171.
.1380	-7991.	-3632.	834.	11030.	-11794.	-823.	-.1029	.0325	.2111	.1006	.1983	-.0350		7577.
.1390	-8533.	-4391.	1583.	11970.	-12963.	-1651.	-.1006	.0344	.2162	.0953	.1781	-.0505		8305.
.1400	-8851.	-4961.	501.	12504.	-13173.	-2044.	-.0968	.0362	.2162	.0866	.1524	-.0646		8565.
.1410	-8185.	-4944.	-187.	12335.	-12244.	-1764.	-.0919	.0383	.2108	.0790	.1194	-.0762		8187.
.1420	-7668.	-4573.	-1281.	11276.	-11341.	-1653.	-.0859	.0402	.2008	.0643	.0805	-.0864		7535.
.1430	-7213.	-4363.	-1235.	9958.	-10894.	-1976.	-.0791	.0418	.1869	.0426	.0431	-.0937		6978.
.1440	-6375.	-4040.	-1494.	8607.	-9666.	-1869.	-.0715	.0434	.1689	.0227	.0069	-.0964		6128.
.1450	-5213.	-3491.	-2027.	7128.	-7783.	-1310.	-.0634	.0449	.1473	.0051	-.0271	-.0946		4984.
.1460	-4016.	-3053.	-931.	5553.	-6443.	-1115.	-.0548	.0461	.1232	-.0163	-.0549	-.0884		4020.
.1470	-3223.	-2507.	-1109.	3758.	-5043.	-1117.	-.0461	.0470	.0966	-.0394	-.0819	-.0776		2994.
.1480	-1817.	-1842.	-731.	2186.	-2955.	-779.	-.0372	.0477	.0678	-.0567	-.1030	-.0604		1761.
.1490	-124.	-1203.	-211.	879.	-550.	-290.	-.0286	.0480	.0375	-.0713	-.1209	-.0383		505.
.1500	1057.	-804.	-702.	-299.	1474.	-187.	-.0206	.0478	.0066	-.0902	-.1404	-.0128		710.
.1510	2250.	-604.	-798.	-1251.	3274.	-254.	-.0135	.0471	-.0241	-.1097	-.1566	.0169		1647.
.1520	3498.	-138.	-1861.	-2214.	5503.	133.	-.0075	.0463	-.0543	-.1242	-.1688	.0498		2780.
.1530	4814.	390.	-1850.	-3088.	7360.	669.	-.0031	.0455	-.0826	-.1353	-.1703	.0845		3754.
.1540	5417.	750.	-1870.	-3903.	8265.	887.	-.0003	.0448	-.1082	-.1483	-.1631	.1194		4304.
.1550	5527.	977.	-1926.	-4566.	8579.	1010.	.0010	.0442	-.1306	-.1604	-.1462	.1543		4579.
.1560	6054.	1250.	-41.	-5041.	8705.	1427.	.0010	.0441	-.1498	-.1668	-.1169	.1886		4761.
.1570	6137.	1825.	421.	-5862.	8739.	1995.	-.0000	.0445	-.1658	-.1722	-.0883	.2183		5019.
.1580	5317.	2259.	890.	-6753.	8111.	2173.	-.0016	.0453	-.1784	-.1811	-.0617	.2426		5050.
.1590	5706.	2453.	2101.	-7365.	7376.	2182.	-.0033	.0465	-.1878	-.1896	-.0376	.2621		4991.
.1600	5602.	2787.	1269.	-7926.	7390.	2449.	-.0048	.0482	-.1943	-.1943	-.0240	.2757		5206.
.1610	5143.	2991.	-281.	-8329.	7186.	2458.	-.0059	.0503	-.1973	-.1984	-.0157	.2825		5282.
.1620	4767.	2779.	881.	-8225.	6098.	1956.	-.0064	.0526	-.1964	-.2002	-.0006	.2843		4885.
.1630	4394.	2867.	905.	-8031.	5624.	1776.	-.0063	.0554	-.1924	-.1928	.0135	.2813		4688.
.1640	4134.	3120.	451.	-7613.	5591.	1820.	-.0054	.0585	-.1855	-.1777	.0259	.2734		4583.
.1650	3812.	2904.	1509.	-7111.	4867.	1363.	-.0040	.0614	-.1754	-.1625	.0380	.2604		4088.
.1660	3134.	2491.	1160.	-6254.	4188.	730.	-.0020	.0642	-.1629	-.1470	.0414	.2425		3544.
.1670	2898.	2193.	428.	-5393.	4209.	453.	.0003	.0668	-.1486	-.1260	.0391	.2213		3198.

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S/RV PIPING KEWAUNEE GKWO8F 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

.1570	6137.	1825.	421.	-5062.	8739.	1995.	-0000	.0445	-0.1658	-0.1722	-0.0883	.2183	5019.
.1580	5317.	2259.	590.	-6753.	8111.	2173.	-0016	.0453	-0.1784	-0.1811	-0.0617	.2426	5050.
.1590	5706.	2453.	2101.	-7365.	7376.	2182.	-0033	.0465	-0.1878	-0.1896	-0.0376	.2621	4991.
.1600	5602.	2787.	1269.	-7976.	7390.	2449.	-0048	.0482	-0.1943	-0.1943	-0.0240	.2757	5206.
.1610	5143.	2991.	-281.	-8339.	7158.	2458.	-0059	.0503	-0.1973	-0.1984	-0.0157	.2825	5282.
.1620	4767.	2775.	881.	-8225.	6098.	1956.	-0064	.0526	-0.1964	-0.2002	-0.0006	.2843	4885.
.1630	4394.	2867.	905.	-8081.	5624.	1776.	-0063	.0554	-0.1924	-0.1928	.0135	.2813	4688.
.1640	4134.	3120.	451.	-7816.	5591.	1820.	-0054	.0585	-0.1855	-0.1777	.0259	.2734	4583.
.1650	3812.	2904.	1509.	-7111.	4867.	1383.	-0040	.0614	-0.1754	-0.1625	.0380	.2604	4088.
.1660	3134.	2491.	1160.	-6254.	4188.	730.	-0020	.0642	-0.1629	-0.1470	.0414	.2425	3544.
.1670	2899.	2193.	428.	-5353.	4209.	453.	.0000	.0668	-0.1486	-0.1260	.0391	.2213	3198.

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ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE			VA						STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1680	2783.	2041.	-567.	-4648.	4432.	325.	.0025	.0691	-0.1325	-0.1027	.0327	.1969	3014.	
.1690	2640.	1784.	-506.	-4068.	4114.	-50.	.0043	.0708	-0.1145	-0.0810	.0263	.1702	2711.	
.1700	2376.	1599.	-1118.	-3636.	3853.	-296.	.0053	.0717	-0.0948	-0.0584	.0176	.1424	2487.	
.1710	1736.	1512.	-3522.	-3251.	3820.	-200.	.0052	.0718	-0.0736	-0.0335	.0079	.1145	2352.	
.1720	1318.	1010.	-2690.	-2401.	2845.	-266.	.0039	.0708	-0.0505	-0.0075	.0121	.0888	1749.	
.1730	620.	609.	-1755.	-1682.	1497.	-323.	.0013	.0685	-0.0261	.0191	.0222	.0650	1066.	
.1740	-199.	614.	-1826.	-1329.	380.	-95.	-0.0025	.0651	-0.0015	.0476	.0327	.0431	649.	
.1750	-902.	535.	-1076.	-839.	-959.	151.	-0.0072	.0603	.0232	.0753	.0454	.0236	601.	
.1760	-1880.	81.	-721.	25.	-2548.	226.	-0.0126	.0539	.0474	.0987	.0561	.0061	1199.	
.1770	-2633.	-610.	48.	1202.	-4019.	244.	-0.0182	.0461	.0703	.1197	.0652	-0.0085	1969.	
.1780	-3321.	-977.	-380.	2061.	-4942.	408.	-0.0239	.0373	.0913	.1388	.0682	-0.0217	2517.	
.1790	-3728.	-1155.	-47.	2657.	-5799.	497.	-0.0293	.0274	.1102	.1545	.0697	-0.0338	2998.	
.1800	-3928.	-1410.	807.	3284.	-6548.	468.	-0.0343	.0167	.1267	.1660	.0693	-0.0446	3440.	
.1810	-4390.	-1724.	-312.	3947.	-6772.	498.	-0.0385	.0054	.1406	.1731	.0616	-0.0547	3681.	
.1820	-4544.	-2247.	20.	4806.	-7073.	432.	-0.0420	-0.0065	.1519	.1762	.0562	-0.0638	4013.	
.1830	-4580.	-2578.	797.	5374.	-7307.	354.	-0.0446	-0.0184	.1604	.1761	.0515	-0.0730	4254.	
.1840	-4479.	-2537.	1181.	5472.	-7126.	374.	-0.0462	-0.0302	.1660	.1737	.0446	-0.0821	4214.	
.1850	-4227.	-2435.	1573.	5413.	-6720.	375.	-0.0467	-0.0417	.1686	.1677	.0353	-0.0910	4048.	
.1860	-4090.	-2514.	1449.	5421.	-6305.	288.	-0.0461	-0.0528	.1684	.1565	.0213	-0.1006	3899.	
.1870	-3680.	-2792.	1935.	5597.	-5853.	173.	-0.0443	-0.0632	.1657	.1418	.0047	-0.1103	3796.	
.1880	-3287.	-2867.	1071.	5516.	-4973.	159.	-0.0413	-0.0725	.1603	.1251	-0.0181	-0.1202	3481.	
.1890	-2849.	-2795.	249.	5211.	-4117.	50.	-0.0372	-0.0804	.1530	.1070	-0.0415	-0.1301	3112.	
.1900	-2302.	-2771.	447.	4958.	-3564.	-183.	-0.0322	-0.0870	.1442	.0882	-0.0607	-0.1395	2863.	
.1910	-2008.	-2777.	-313.	4836.	-2960.	-336.	-0.0263	-0.0918	.1341	.0703	-0.0783	-0.1485	2662.	
.1920	-1779.	-2971.	-652.	4997.	-2586.	-553.	-0.0197	-0.0950	.1232	.0532	-0.0900	-0.1563	2649.	
.1930	-1661.	-3166.	-413.	5143.	-2559.	-918.	-0.0124	-0.0965	.1115	.0366	-0.0950	-0.1634	2726.	
.1940	-1585.	-3054.	-281.	4949.	-2525.	-1256.	-0.0047	-0.0961	.0989	.0217	-0.0954	-0.1699	2669.	
.1950	-1423.	-2737.	-155.	4538.	-2336.	-1527.	.0036	-0.0939	.0852	.0089	-0.0921	-0.1755	2497.	
.1960	-1176.	-2500.	215.	4146.	-2136.	-1869.	.0122	-0.0902	.0705	-0.0036	-0.0863	-0.1798	2354.	
.1970	-942.	-2302.	222.	3664.	-1837.	-2265.	.0212	-0.0850	.0548	-0.0164	-0.0815	-0.1829	2194.	
.1980	-663.	-1923.	-386.	2875.	-1243.	-2574.	.0302	-0.0784	.0380	-0.0279	-0.0779	-0.1840	1900.	
.1990	-207.	-1340.	-849.	1813.	-426.	-2762.	.0392	-0.0706	.0206	-0.0360	-0.0721	-0.1817	1561.	
.2000	395.	-676.	-824.	651.	465.	-2854.	.0477	-0.0618	.0028	-0.0398	-0.0620	-0.1752	1389.	
.2010	999.	-17.	-773.	-487.	1416.	-2833.	.0555	-0.0524	-0.0150	-0.0392	-0.0494	-0.1638	1502.	
.2020	1567.	568.	-796.	-1518.	2391.	-2704.	.0623	-0.0426	-0.0324	-0.0345	-0.0356	-0.1470	1835.	
.2030	2139.	1068.	-689.	-2422.	3343.	-2469.	.0679	-0.0329	-0.0493	-0.0259	-0.0212	-0.1245	2254.	
.2040	2703.	1570.	-634.	-3278.	4299.	-2079.	.0719	-0.0235	-0.0653	-0.0134	-0.0073	-0.0969	2715.	
.2050	3228.	2093.	-674.	-4113.	5215.	-1539.	.0742	-0.0147	-0.0802	.0022	.0053	-0.0650	3195.	

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S/RV PIPING KEAUNEE 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

.1950	-1423.	-2727.	-155.	4538.	-2336.	-1527.	.0036	-.0939	.0852	.0089	-.0921	-.1755	2497.
.1960	-1176.	-2500.	215.	4146.	-2136.	-1889.	.0122	-.0902	.0705	-.0036	-.0863	-.1798	2354.
.1970	-942.	-2302.	222.	3664.	-1837.	-2285.	.0212	-.0850	.0548	-.0164	-.0815	-.1829	2194.
.1980	-663.	-1922.	-386.	2875.	-1242.	-2574.	.0302	-.0784	.0380	-.0279	-.0779	-.1840	1900.
.1990	-267.	-1340.	-249.	1813.	-426.	-2762.	.0392	-.0706	.0206	-.0360	-.0721	-.1817	1561.
.2000	395.	-678.	-824.	651.	485.	-2854.	.0477	-.0618	.0028	-.0398	-.0520	-.1752	1389.
.2010	999.	-17.	-773.	-487.	1416.	-2833.	.0555	-.0524	-.0150	-.0392	-.0494	-.1638	1502.
.2020	1567.	568.	-796.	-1518.	2391.	-2704.	.0623	-.0426	-.0324	-.0345	-.0356	-.1470	1835.
.2030	2139.	1068.	-689.	-2422.	3343.	-2469.	.0679	-.0329	-.0493	-.0259	-.0212	-.1245	2254.
.2040	2707.	1570.	-634.	-3278.	4299.	-2079.	.0719	-.0235	-.0653	-.0134	-.0073	-.0969	2715.
.2050	3228.	2093.	-674.	-4113.	5215.	-1539.	.0742	-.0147	-.0802	.0022	.0053	-.0650	3195.

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

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

SECTION	8	MEMBER	1	SEQUENCE	25	LOCATION	BEG	TYPE	VA					STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)		(PSI)
.2060	3700.	2543.	-596.	-4852.	5976.	-933.	.0747	-.0066	-.0935	.0194	.0166	-.0294		3634.
.2070	4061.	2880.	-550.	-5469.	6560.	-297.	.0733	.0006	-.1049	.0369	.0263	.0088		4005.
.2080	4228.	3163.	-769.	-6040.	6946.	378.	.0700	.0067	-.1142	.0537	.0341	.0477		4317.
.2090	4215.	3430.	-866.	-6617.	7012.	1088.	.0651	.0118	-.1210	.0694	.0423	.0857		4546.
.2100	4109.	3703.	-479.	-7205.	6749.	1756.	.0587	.0158	-.1252	.0837	.0527	.1215		4699.
.2110	3887.	4000.	-27.	-7805.	6294.	2436.	.0514	.0187	-.1267	.0962	.0639	.1536		4836.
.2120	3492.	4248.	255.	-8339.	5643.	3026.	.0435	.0205	-.1255	.1057	.0745	.1804		4927.
.2130	2987.	4342.	669.	-8677.	4751.	3444.	.0356	.0211	-.1218	.1118	.0845	.2005		4909.
.2140	2512.	4338.	1153.	-8807.	3832.	3741.	.0280	.0205	-.1158	.1154	.0929	.2133		4830.
.2150	2116.	4330.	1301.	-8794.	3101.	3956.	.0212	.0187	-.1078	.1171	.0976	.2180		4747.
.2160	1750.	4250.	1114.	-8581.	2478.	3992.	.0155	.0157	-.0978	.1161	.0975	.2140		4585.
.2170	1418.	3965.	828.	-8002.	1893.	3792.	.0112	.0118	-.0859	.1127	.0932	.2015		4243.
.2180	1159.	3472.	398.	-6989.	1464.	3438.	.0083	.0069	-.0722	.1081	.0857	.1811		3714.
.2190	954.	2856.	-115.	-5649.	1180.	2967.	.0067	.0014	-.0569	.1031	.0762	.1535		3041.
.2200	749.	2175.	-404.	-4125.	863.	2341.	.0062	-.0047	-.0400	.0971	.0660	.1193		2259.
.2210	515.	1455.	-505.	-2496.	499.	1603.	.0066	-.0110	-.0219	.0899	.0552	.0794		1410.
.2220	236.	687.	-640.	-780.	170.	840.	.0075	-.0174	-.0028	.0816	.0436	.0353		543.
.2230	-103.	-153.	-631.	972.	-226.	47.	.0085	-.0238	.0167	.0715	.0317	-.0115		468.
.2240	-491.	-990.	-321.	2588.	-761.	-782.	.0094	-.0300	.0363	.0590	.0196	-.0598		1316.
.2250	-889.	-1664.	-20.	3864.	-1290.	-1549.	.0099	-.0359	.0553	.0447	.0062	-.1078		2042.
.2260	-1281.	-2145.	76.	4754.	-1744.	-2190.	.0098	-.0413	.0732	.0291	-.0090	-.1536		2585.
.2270	-1697.	-2562.	179.	5392.	-2261.	-2749.	.0090	-.0462	.0896	.0126	-.0249	-.1953		3028.
.2280	-2139.	-2979.	360.	5885.	-2876.	-3228.	.0073	-.0503	.1043	-.0039	-.0401	-.2309		3422.
.2290	-2548.	-3306.	481.	6209.	-3451.	-3559.	.0050	-.0537	.1167	-.0181	-.0540	-.2588		3723.
.2300	-2865.	-3465.	586.	6319.	-3941.	-3724.	.0020	-.0562	.1267	-.0288	-.0559	-.2777		3902.
.2310	-3098.	-3507.	699.	6285.	-4387.	-3764.	-.0015	-.0576	.1340	-.0355	-.0760	-.2869		4002.
.2320	-3270.	-3545.	596.	6269.	-4735.	-3683.	-.0053	-.0582	.1385	-.0381	-.0850	-.2863		4066.
.2330	-3357.	-3639.	216.	6375.	-4917.	-3471.	-.0094	-.0578	.1403	-.0363	-.0928	-.2760		4109.
.2340	-3330.	-3732.	-244.	6534.	-4957.	-3154.	-.0135	-.0564	.1394	-.0303	-.0986	-.2569		4118.
.2350	-3209.	-3705.	-742.	6585.	-4874.	-2752.	-.0176	-.0540	.1360	-.0205	-.1015	-.2303		4050.
.2360	-3032.	-3531.	-1301.	6481.	-4663.	-2267.	-.0216	-.0505	.1304	-.0078	-.1006	-.1979		3890.
.2370	-2819.	-3302.	-1704.	6306.	-4397.	-1716.	-.0254	-.0461	.1229	.0070	-.0947	-.1611		3692.
.2380	-2604.	-3060.	-1792.	6074.	-4157.	-1137.	-.0289	-.0406	.1139	.0224	-.0831	-.1220		3490.
.2390	-2425.	-2728.	-1689.	5656.	-3938.	-537.	-.0321	-.0343	.1037	.0371	-.0665	-.0824		3239.
.2400	-2277.	-2235.	-1425.	4952.	-3711.	64.	-.0347	-.0270	.0924	.0503	-.0456	-.0439		2900.
.2410	-2116.	-1621.	-750.	4011.	-3483.	641.	-.0366	-.0191	.0802	.0613	-.0211	-.0077		2507.
.2420	-1938.	-973.	-49.	2952.	-3238.	1184.	-.0377	-.0106	.0672	.0693	.0053	.0251		2127.
.2430	-1768.	-356.	695.	1862.	-2939.	1670.	-.0377	-.0019	.0535	.0736	.0309	.0538		1809.

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ADLPIPE STRESS ANALYSIS

8/31/02. 18.26.04.

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

.2330	-3337.	-3639.	216.	6375.	-4917.	-3471.	-.0094	-.0578	.1403	-.0363	-.0928	-.2760	4109.
.2340	-3330.	-3732.	-244.	6534.	-4957.	-3154.	-.1135	-.0564	.1394	-.0303	-.0986	-.2569	4118.
.2350	-3209.	-3705.	-742.	6585.	-4874.	-2752.	-.0176	-.0540	.1360	-.0205	-.1015	-.2303	4050.
.2360	-3032.	-3531.	-1301.	6481.	-4663.	-2267.	-.0216	-.0505	.1304	-.0078	-.1306	-.1979	3890.
.2370	-2819.	-3302.	-1704.	6306.	-4397.	-1718.	-.0254	-.0461	.1229	.0070	-.0947	-.1611	3692.
.2380	-2600.	-3080.	-1792.	6074.	-4157.	-1137.	-.0289	-.0406	.1139	.0224	-.0831	-.1220	3490.
.2390	-2425.	-2728.	-1689.	5656.	-3938.	-537.	-.0321	-.0343	.1037	.0371	-.0565	-.0824	3239.
.2400	-2277.	-2235.	-1425.	4952.	-3711.	64.	-.0347	-.0270	.0924	.0503	-.0456	-.0439	2900.
.2410	-2116.	-1621.	-850.	4011.	-3483.	641.	-.0366	-.0191	.0802	.0613	-.0211	-.0077	2507.
.2420	-1938.	-973.	-49.	2952.	-3238.	1184.	-.0377	-.0106	.0672	.0693	.0553	.0251	2127.
.2430	-1768.	-356.	695.	1862.	-2939.	1670.	-.0377	-.0019	.0535	.0736	.0309	.0538	1809.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.04.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	VA								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LD)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.2440	-1557.	207.	1279.	788.	-2570.	2059.	-.0366	.0070	.0391	.0739	.0537	.0780	1587.	
.2450	-1381.	726.	1743.	-236.	-2118.	2337.	-.0343	.0156	.0240	.0705	.0728	.0978	1482.	
.2460	-1095.	1199.	2091.	-1154.	-1564.	2517.	-.0307	.0239	.0084	.0641	.0381	.1132	1490.	
.2470	-742.	1583.	2335.	-1886.	-939.	2589.	-.0260	.0317	-.0076	.0550	.0990	.1246	1564.	
.2480	-331.	1837.	2454.	-2394.	-271.	2532.	-.0203	.0388	-.0238	.0432	.1050	.1323	1638.	
.2490	114.	1985.	2272.	-2721.	455.	2363.	-.0138	.0450	-.0401	.0285	.1048	.1364	1702.	
.2500	567.	2064.	1735.	-2929.	1224.	2103.	-.0067	.0504	-.0561	.0111	.0986	.1373	1785.	
.2510	1043.	2085.	1126.	-3047.	1967.	1767.	.0007	.0548	-.0717	-.0086	.0881	.1352	1891.	
.2520	1567.	2083.	608.	-3132.	2674.	1395.	.0079	.0583	-.0866	-.0299	.0743	.1308	2037.	
.2530	2093.	2112.	-29.	-3270.	3374.	1030.	.0148	.0608	-.1003	-.0527	.0570	.1241	2254.	
.2540	2531.	2151.	-873.	-3478.	4006.	663.	.0210	.0624	-.1127	-.0769	.0365	.1156	2505.	
.2550	2852.	2140.	-1661.	-3681.	4469.	236.	.0262	.0629	-.1232	-.1018	.0151	.1059	2717.	
.2560	3098.	2101.	-2162.	-3851.	4779.	-37.	.0303	.0624	-.1317	-.1257	-.0045	.0958	2876.	
.2570	3282.	2117.	-2384.	-4038.	4989.	-258.	.0332	.0610	-.1380	-.1469	-.0212	.0857	3010.	
.2580	3361.	2177.	-2351.	-4240.	5051.	-430.	.0349	.0588	-.1420	-.1653	-.0346	.0762	3097.	
.2590	3317.	2188.	-2081.	-4345.	4946.	-594.	.0354	.0558	-.1436	-.1806	-.0446	.0677	3098.	
.2600	3203.	2101.	-1672.	-4245.	4779.	-702.	.0348	.0521	-.1430	-.1921	-.0514	.0605	3014.	
.2610	3082.	1940.	-1139.	-3948.	4616.	-727.	.0333	.0478	-.1404	-.1993	-.0552	.0549	2867.	
.2620	2982.	1758.	-494.	-3554.	4459.	-712.	.0310	.0430	-.1359	-.2027	-.0571	.0506	2693.	
.2630	2908.	1590.	38.	-3129.	4363.	-672.	.0279	.0379	-.1300	-.2029	-.0586	.0475	2536.	
.2640	2863.	1393.	286.	-2632.	4376.	-587.	.0243	.0327	-.1227	-.2003	-.0505	.0454	2409.	
.2650	2835.	1095.	395.	-1997.	4412.	-479.	.0201	.0274	-.1141	-.1957	-.0624	.0441	2281.	
.2660	2806.	732.	502.	-1293.	4388.	-369.	.0153	.0224	-.1043	-.1896	-.0637	.0433	2151.	
.2670	2756.	439.	509.	-688.	4316.	-233.	.0099	.0176	-.0933	-.1819	-.0643	.0425	2051.	
.2680	2653.	263.	404.	-243.	4167.	-69.	.0040	.0134	-.0812	-.1729	-.0641	.0416	1956.	
.2690	2450.	103.	366.	153.	3819.	78.	-.0025	.0097	-.0679	-.1632	-.0524	.0404	1792.	
.2700	2120.	-120.	440.	598.	3230.	192.	-.0093	.0067	-.0535	-.1529	-.0590	.0387	1542.	
.2710	1673.	-352.	503.	1050.	2465.	300.	-.0165	.0045	-.0382	-.1420	-.0549	.0365	1263.	
.2720	1131.	-522.	513.	1427.	1566.	403.	-.0237	.0030	-.0222	-.1303	-.0508	.0333	1011.	
.2730	501.	-658.	497.	1767.	538.	475.	-.0307	.0024	-.0057	-.1181	-.0471	.0291	894.	
.2740	-214.	-856.	428.	2204.	-587.	503.	-.0373	.0025	.0109	-.1054	-.0435	.0239	1094.	
.2750	-972.	-1156.	371.	2808.	-1757.	492.	-.0432	.0034	.0275	-.0921	-.0395	.0178	1569.	
.2760	-1716.	-1493.	409.	3500.	-2920.	443.	-.0482	.0051	.0435	-.0783	-.0347	.0107	2146.	
.2770	-2411.	-1778.	457.	4158.	-3997.	362.	-.0522	.0074	.0585	-.0643	-.0295	.0024	2708.	
.2780	-3028.	-2019.	442.	4771.	-4915.	248.	-.0549	.0104	.0721	-.0508	-.0241	-.0071	3212.	
.2790	-3523.	-2284.	429.	5396.	-5644.	91.	-.0564	.0139	.0840	-.0384	-.0186	-.0175	3660.	
.2800	-3870.	-2566.	410.	5994.	-6148.	-105.	-.0566	.0179	.0937	-.0279	-.0134	-.0285	4024.	
.2810	-4064.	-2774.	251.	6425.	-6378.	-318.	-.0557	.0221	.1010	-.0198	-.0092	-.0399	4245.	

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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

.2710	1673.	-322.	403.	1050.	2465.	330.	-.0165	.0045	-.0382	-.1420	-.0549	.0365	1263.
.2720	1131.	-522.	513.	1427.	1566.	433.	-.0237	.0030	-.0222	-.1303	-.0508	.0333	1011.
.2730	501.	-658.	497.	1767.	538.	475.	-.0307	.0024	-.0057	-.1181	-.0471	.0291	894.
.2740	-114.	-856.	420.	2204.	-587.	513.	-.0377	.0025	.0109	-.1054	-.0435	.0239	1094.
.2750	-572.	-1156.	371.	2808.	-1757.	492.	-.0432	.0034	.0275	-.0921	-.0395	.0178	1569.
.2760	-1716.	-1493.	409.	3500.	-2920.	443.	-.0482	.0051	.0435	-.0783	-.0347	.0107	2146.
.2770	-2411.	-1778.	457.	4158.	-3997.	362.	-.0522	.0074	.0585	-.0643	-.0295	.0024	2708.
.2780	-3028.	-2019.	442.	4771.	-4915.	248.	-.0549	.0104	.0721	-.0508	-.0241	-.0071	3212.
.2790	-3523.	-2284.	429.	5396.	-5644.	91.	-.0564	.0139	.0840	-.0384	-.0186	-.0175	3660.
.2800	-3870.	-2566.	410.	5994.	-6148.	-105.	-.0566	.0179	.0937	-.0279	-.0134	-.0285	4024.
.2810	-4064.	-2774.	251.	6425.	-6378.	-318.	-.0557	.0221	.1010	-.0198	-.0092	-.0399	4245.

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S/RV PIPING KEWAUNEE GKJ08F 2 RUP DISK
2 SAFETY COLD FWK24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	B	MEMBER	1	SEQUENCE	25	LOCATION	BEG	TYPE	VA				
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.2820	-4107.	-2856.	-57.	6609.	-6335.	-534.	-.0539	.0266	.1057	-.0142	-.0061	-.0510	4298.
.2830	-4014.	-2849.	-382.	6590.	-6082.	-746.	-.0514	.0312	.1079	-.0110	-.0033	-.0609	4217.
.2840	-3830.	-2798.	-655.	6433.	-5692.	-940.	-.0485	.0357	.1076	-.0099	.0000	-.0685	4049.
.2850	-3605.	-2700.	-854.	6150.	-5232.	-1094.	-.0455	.0401	.1049	-.0104	.0046	-.0729	3819.
.2860	-3361.	-2528.	-911.	5728.	-4766.	-1198.	-.0426	.0442	.1001	-.0118	.0107	-.0733	3537.
.2870	-3110.	-2277.	-804.	5184.	-4325.	-1237.	-.0400	.0479	.0932	-.0135	.0183	-.0689	3216.
.2880	-2864.	-1981.	-590.	4573.	-3920.	-1202.	-.0378	.0512	.0844	-.0151	.0268	-.0593	2878.
.2890	-2629.	-1684.	-311.	3949.	-3562.	-1097.	-.0361	.0538	.0738	-.0167	.0353	-.0445	2545.
.2900	-2389.	-1393.	-14.	3323.	-3238.	-924.	-.0349	.0557	.0615	-.0182	.0426	-.0247	2217.
.2910	-2124.	-1085.	200.	2664.	-2896.	-682.	-.0341	.0570	.0476	-.0197	.0478	-.0007	1871.
.2920	-1822.	-748.	297.	1955.	-2506.	-380.	-.0335	.0576	.0324	-.0212	.0505	.0268	1500.
.2930	-1470.	-404.	355.	1216.	-2075.	-38.	-.0329	.0575	.0162	-.0231	.0509	.0564	1127.
.2940	-1059.	-71.	410.	466.	-1591.	334.	-.0323	.0569	-.0009	-.0255	.0493	.0870	792.
.2950	-595.	260.	410.	-304.	-1025.	727.	-.0313	.0558	-.0184	-.0285	.0456	.1171	606.
.2960	-87.	593.	361.	-1107.	-380.	1111.	-.0299	.0543	-.0361	-.0325	.0400	.1453	756.
.2970	463.	921.	322.	-1935.	334.	1457.	-.0279	.0525	-.0534	-.0377	.0329	.1703	1146.
.2980	1056.	1232.	292.	-2757.	1132.	1757.	-.0253	.0504	-.0701	-.0441	.0245	.1910	1622.
.2990	1675.	1516.	235.	-3549.	2007.	1993.	-.0220	.0480	-.0856	-.0516	.0148	.2065	2127.
.3000	2290.	1763.	136.	-4297.	2920.	2138.	-.0180	.0456	-.0997	-.0603	.0039	.2161	2633.
.3010	2875.	1970.	-7.	-4978.	3833.	2183.	-.0134	.0430	-.1120	-.0697	-.0078	.2197	3117.
.3020	3409.	2125.	-177.	-5547.	4712.	2139.	-.0083	.0404	-.1220	-.0793	-.0195	.2174	3555.
.3030	3866.	2208.	-306.	-5960.	5493.	2005.	-.0029	.0377	-.1295	-.0882	-.0301	.2096	3913.
.3040	4217.	2221.	-348.	-6207.	6109.	1782.	.0026	.0352	-.1342	-.0959	-.0390	.1969	4166.
.3050	4444.	2180.	-345.	-6302.	6535.	1497.	.0079	.0326	-.1360	-.1019	-.0457	.1802	4312.
.3060	4539.	2087.	-331.	-6240.	6759.	1173.	.0129	.0302	-.1349	-.1056	-.0503	.1602	4346.
.3070	4503.	1923.	-285.	-6007.	6759.	820.	.0174	.0278	-.1309	-.1069	-.0526	.1380	4255.
.3080	4344.	1703.	-219.	-5633.	6538.	451.	.0212	.0255	-.1243	-.1054	-.0529	.1144	4050.
.3090	4082.	1471.	-197.	-5180.	6141.	94.	.0242	.0232	-.1152	-.1011	-.0515	.0905	3765.
.3100	3736.	1249.	-244.	-4685.	5601.	-233.	.0262	.0208	-.1040	-.0938	-.0490	.0669	3424.
.3110	3314.	1020.	-335.	-4143.	4929.	-525.	.0273	.0185	-.0909	-.0837	-.0454	.0445	3028.
.3120	2824.	773.	-454.	-3546.	4147.	-774.	.0273	.0160	-.0763	-.0707	-.0407	.0240	2583.
.3130	2285.	526.	-585.	-2916.	3295.	-964.	.0262	.0134	-.0604	-.0549	-.0348	.0058	2111.
.3140	1717.	299.	-686.	-2282.	2401.	-1090.	.0242	.0107	-.0435	-.0364	-.0277	-.0096	1634.
.3150	1128.	92.	-742.	-1653.	1488.	-1157.	.0214	.0078	-.0261	-.0155	-.0195	-.0221	1175.
.3160	531.	-111.	-757.	-1019.	583.	-1163.	.0177	.0047	-.0083	-.0073	-.0105	-.0318	774.
.3170	-56.	-319.	-731.	-375.	-284.	-1110.	.0134	.0015	.0096	.0315	-.0009	-.0386	565.
.3180	-621.	-526.	-680.	251.	-1094.	-1009.	.0086	-.0021	.0271	.0563	.0088	-.0431	707.
.3190	-1153.	-708.	-621.	820.	-1829.	-870.	.0035	-.0058	.0441	.0812	.0183	-.0455	1024.

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83/12/02.

18.26.04.

S/RV PIPING KEWAUNEE GKJ08F 2 RUP DISK
2 SAFETY COLD FWK24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.3090	4022.	1471.	-197.	-5180.	6141.	94.	.242	.0232	-1.152	-1.1011	-0.0515	.0905	3765.
.3100	3736.	1249.	-244.	-4685.	5601.	-233.	.262	.0208	-1.040	-0.0938	-0.0490	.0669	3424.
.3110	3314.	1020.	-335.	-4143.	4929.	-525.	.0273	.0185	-0.0909	-0.0837	-0.0454	.0445	3028.
.3120	2824.	773.	-454.	-3544.	4147.	-774.	.0273	.0160	-0.0763	-0.0707	-0.0407	.0240	2583.
.3130	2285.	526.	-585.	-2916.	3295.	-964.	.0262	.0134	-0.0604	-0.0549	-0.0348	.0058	2111.
.3140	1717.	299.	-686.	-2282.	2401.	-1090.	.0242	.0107	-0.0435	-0.0364	-0.0277	-0.0096	1634.
.3150	1128.	92.	-742.	-1653.	1488.	-1157.	.0214	.0078	-0.0261	-0.0155	-0.0195	-0.0221	1175.
.3160	531.	-11.	-757.	-1019.	583.	-1163.	.0177	.0047	-0.0083	-0.0073	-0.0105	-0.0318	774.
.3170	-56.	-319.	-731.	-375.	-284.	-1110.	.0134	.0015	-0.0096	.0315	-0.0009	-0.0386	565.
.3180	-621.	-526.	-680.	251.	-1094.	-1009.	.0086	-0.0021	.0271	.0563	.0088	-0.0431	707.
.3190	-1153.	-708.	-621.	820.	-1329.	-870.	.0035	-0.0058	.0441	.0812	.0183	-0.0455	1024.

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ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.04.

S/RV PIPING KEMANEE GKMO8F 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	8	MEMBER	1	SEQUENCE	25	LOCATION	BEG	TYPE VA						STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)		DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	(PSI)
.3200	-1640.	-852.	-554.	1306.	-2483.	-699.	-0.0017	-0.0098	.0603	.1055	.0276	-0.0463	1355.	
.3210	-2076.	-964.	-450.	1712.	-3062.	-499.	-0.0070	-0.0139	.0755	.1289	.0365	-0.0461	1661.	
.3220	-2464.	-1057.	-311.	2048.	-3581.	-283.	-0.0121	-0.0183	.0895	.1506	.0453	-0.0452	1937.	
.3230	-2819.	-1130.	-164.	2307.	-4053.	-66.	-0.0169	-0.0227	.1022	.1704	.0536	-0.0441	2186.	
.3240	-3138.	-1169.	4.	2481.	-4489.	147.	-0.0211	-0.0273	.1136	.1880	.0615	-0.0433	2405.	
.3250	-3408.	-1169.	225.	2577.	-4885.	355.	-0.0247	-0.0319	.1233	.2034	.0590	-0.0430	2593.	
.3260	-3629.	-1148.	472.	2627.	-5239.	549.	-0.0274	-0.0366	.1314	.2165	.0758	-0.0436	2759.	
.3270	-3813.	-1135.	700.	2668.	-5549.	707.	-0.0290	-0.0412	.1378	.2268	.0813	-0.0454	2904.	
.3280	-3948.	-1133.	884.	2714.	-5797.	815.	-0.0295	-0.0458	.1423	.2344	.0849	-0.0486	3024.	
.3290	-4019.	-1129.	1004.	2759.	-5954.	873.	-0.0287	-0.0503	.1449	.2392	.0863	-0.0535	3102.	
.3300	-4019.	-1122.	1043.	2806.	-5999.	876.	-0.0266	-0.0547	.1455	.2412	.0851	-0.0601	3131.	
.3310	-3947.	-1127.	1022.	2871.	-5931.	812.	-0.0231	-0.0589	.1441	.2401	.0814	-0.0686	3111.	
.3320	-3803.	-1150.	947.	2956.	-5747.	675.	-0.0183	-0.0630	.1407	.2359	.0753	-0.0789	3045.	
.3330	-3590.	-1178.	798.	3033.	-5436.	471.	-0.0122	-0.0668	.1355	.2287	.0670	-0.0910	2925.	
.3340	-3312.	-1192.	605.	3069.	-5006.	210.	-0.0051	-0.0703	.1283	.2183	.0568	-0.1046	2754.	
.3350	-2962.	-1186.	432.	3044.	-4471.	-96.	.0030	-0.0735	.1195	.2051	.0454	-0.1193	2535.	
.3360	-2543.	-1152.	275.	2936.	-3830.	-429.	.0117	-0.0764	.1091	.1892	.0332	-0.1348	2270.	
.3370	-2071.	-1086.	91.	2725.	-3092.	-774.	.0209	-0.0788	.0972	.1709	.0202	-0.1504	1965.	
.3380	-1558.	-986.	-115.	2403.	-2282.	-1119.	.0303	-0.0809	.0841	.1506	.0067	-0.1656	1639.	
.3390	-1009.	-850.	-318.	1970.	-1419.	-1443.	.0395	-0.0825	.0700	.1290	-0.068	-0.1794	1324.	
.3400	-433.	-669.	-510.	1437.	-517.	-1719.	.0484	-0.0838	.0552	.1070	-0.0197	-0.1912	1078.	
.3410	145.	-450.	-683.	825.	388.	-1936.	.0567	-0.0846	.0399	.0855	-0.0315	-0.2001	1003.	
.3420	697.	-206.	-813.	172.	1249.	-2094.	.0642	-0.0851	.0246	.0653	-0.0417	-0.2053	1146.	
.3430	1205.	50.	-887.	-481.	2043.	-2182.	.0706	-0.0851	.0094	.0473	-0.0496	-0.2064	1419.	
.3440	1656.	312.	-893.	-1099.	2749.	-2190.	.0758	-0.0848	-0.0054	.0323	-0.0549	-0.2029	1726.	
.3450	2043.	576.	-805.	-1663.	3325.	-2192.	.0798	-0.0841	-0.0194	.0207	-0.0571	-0.1949	2013.	
.3460	2361.	839.	-638.	-2163.	3826.	-1985.	.0826	-0.0831	-0.0325	.0128	-0.0565	-0.1822	2260.	
.3470	2611.	1099.	-457.	-2594.	4208.	-1784.	.0841	-0.0817	-0.0445	.0084	-0.0536	-0.1656	2463.	
.3480	2798.	1344.	-294.	-2951.	4500.	-1530.	.0844	-0.0800	-0.0553	.0071	-0.0487	-0.1457	2622.	
.3490	2930.	1567.	-139.	-3239.	4701.	-1242.	.0837	-0.0780	-0.0647	.0085	-0.0421	-0.1235	2738.	
.3500	3022.	1780.	-3.	-3483.	4829.	-926.	.0820	-0.0756	-0.0726	.0121	-0.0343	-0.0999	2824.	
.3510	3081.	1994.	83.	-3706.	4903.	-592.	.0795	-0.0729	-0.0790	.0172	-0.0257	-0.0761	2894.	
.3520	3103.	2198.	122.	-3909.	4916.	-258.	.0763	-0.0700	-0.0837	.0233	-0.0165	-0.0531	2946.	
.3530	3083.	2370.	140.	-4076.	4855.	55.	.0726	-0.0667	-0.0866	.0298	-0.0070	-0.0318	2971.	
.3540	3021.	2505.	151.	-4197.	4724.	340.	.0686	-0.0633	-0.0876	.0364	.0026	-0.0131	2966.	
.3550	2920.	2607.	168.	-4274.	4531.	594.	.0642	-0.0596	-0.0867	.0427	.0121	.0024	2932.	
.3560	2775.	2673.	200.	-4301.	4269.	804.	.0597	-0.0559	-0.0839	.0486	.0211	.0141	2865.	
.3570	2577.	2687.	229.	-4254.	3939.	958.	.0551	-0.0520	-0.0792	.0538	.0291	.0218	2754.	

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.04.

S/RV PIPING KEMANEE GKMO8F 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

.3470	2611.	1099.	-457.	-2594.	4208.	-1784.	.841	-.0817	-.0445	.0084	-.0536	-.1656	2463.
.3480	2798.	1344.	-294.	-2951.	4500.	-1530.	.844	-.0800	-.0553	.0071	-.0487	-.1457	2622.
.3490	2930.	1567.	-139.	-3239.	4701.	-1242.	.837	-.0780	-.0647	.0085	-.0421	-.1235	2738.
.3500	3022.	1780.	-3.	-3483.	4829.	-926.	.820	-.0756	-.0726	.0121	-.0343	-.0999	2824.
.3510	3081.	1994.	83.	-3706.	4903.	-592.	.795	-.0729	-.0790	.0172	-.0257	-.0761	2894.
.3520	3103.	2198.	122.	-3909.	4916.	-258.	.763	-.0700	-.0837	.0233	-.0165	-.0531	2946.
.3530	3083.	2370.	140.	-4076.	4855.	55.	.726	-.0667	-.0866	.0298	-.0070	-.0318	2971.
.3540	3021.	2505.	151.	-4197.	4724.	340.	.686	-.0633	-.0876	.0364	.0026	-.0131	2966.
.3550	2920.	2607.	168.	-4274.	4531.	594.	.642	-.0596	-.0867	.0427	.0121	.0024	2932.
.3560	2775.	2673.	200.	-4301.	4269.	804.	.597	-.0559	-.0839	.0486	.0211	.0141	2865.
.3570	2577.	2687.	229.	-4254.	3929.	958.	.551	-.0520	-.0792	.0538	.0291	.0218	2754.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.04.

S/RV PIPING KEAUNOE 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	8	MEMBER	1	SEQUENCE	25	LOCATION	BEG	TYPE	VA				STRESS
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	
.3580	2324.	2630.	246.	-4103.	3547.	1054.	.0505	-.0482	-.0727	.0583	.0360	.0253	2589.
.3590	2020.	2498.	277.	-3835.	3096.	1092.	.0461	-.0443	-.0645	.0619	.0414	.0248	2366.
.3600	1675.	2306.	335.	-3460.	2590.	1071.	.0417	-.0406	-.0548	.0649	.0454	.0205	2087.
.3610	1294.	2069.	403.	-2999.	2045.	995.	.0376	-.0370	-.0438	.0672	.0479	.0128	1764.
.3620	888.	1792.	465.	-2457.	1474.	869.	.0336	-.0335	-.0319	.0686	.0488	.0021	1403.
.3630	469.	1470.	522.	-1835.	886.	697.	.0298	-.0303	-.0193	.0692	.0480	-.0108	1009.
.3640	51.	1115.	563.	-1155.	298.	487.	.0261	-.0273	-.0063	.0689	.0456	-.0255	604.
.3650	-347.	751.	558.	-455.	-266.	253.	.0226	-.0245	.0068	.0676	.0416	-.0412	274.
.3660	-710.	398.	493.	234.	-788.	7.	.0191	-.0220	.0195	.0653	.0360	-.0571	385.
.3670	-1034.	52.	361.	906.	-1261.	-242.	.0156	-.0198	.0317	.0619	.0289	-.0726	737.
.3680	-1322.	-296.	167.	1566.	-1690.	-486.	.0121	-.0178	.0431	.0574	.0209	-.0870	1104.
.3690	-1575.	-642.	-61.	2208.	-2079.	-714.	.0084	-.0161	.0535	.0520	.0124	-.0996	1460.
.3700	-1791.	-967.	-282.	2808.	-2431.	-913.	.0046	-.0146	.0628	.0459	.0040	-.1098	1793.
.3710	-1975.	-1259.	-472.	3350.	-2751.	-1077.	.0006	-.0132	.0708	.0392	-.0036	-.1172	2093.
.3720	-2138.	-1524.	-610.	3835.	-3047.	-1201.	-.0037	-.0120	.0774	.0320	-.0103	-.1215	2363.
.3730	-2282.	-1769.	-673.	4268.	-3323.	-1286.	-.0082	-.0108	.0825	.0243	-.0155	-.1224	2605.
.3740	-2404.	-1989.	-653.	4633.	-3569.	-1329.	-.0129	-.0095	.0861	.0162	-.0194	-.1200	2810.
.3750	-2497.	-2159.	-567.	4896.	-3767.	-1323.	-.0178	-.0082	.0881	.0077	-.0220	-.1142	2961.
.3760	-2555.	-2268.	-429.	5035.	-3905.	-1271.	-.0227	-.0066	.0883	-.0012	-.0235	-.1054	3045.
.3770	-2573.	-2324.	-242.	5056.	-3973.	-1177.	-.0275	-.0047	.0869	-.0105	-.0242	-.0937	3063.
.3780	-2545.	-2334.	-23.	4965.	-3962.	-1046.	-.0321	-.0025	.0837	-.0200	-.0241	-.0794	3017.
.3790	-2464.	-2292.	209.	4760.	-3862.	-882.	-.0364	.0002	.0787	-.0298	-.0235	-.0629	2902.
.3800	-2325.	-2186.	439.	4433.	-3669.	-689.	-.0403	.0034	.0722	-.0395	-.0227	-.0445	2716.
.3810	-2123.	-2020.	649.	3999.	-3380.	-473.	-.0436	.0071	.0641	-.0490	-.0219	-.0247	2464.
.3820	-1863.	-1814.	812.	3495.	-3000.	-242.	-.0464	.0114	.0546	-.0582	-.0213	-.0037	2161.
.3830	-1555.	-1591.	906.	2960.	-2543.	-11.	-.0484	.0162	.0439	-.0669	-.0211	.0179	1829.
.3840	-1207.	-1361.	924.	2416.	-2026.	210.	-.0497	.0216	.0322	-.0752	-.0216	.0398	1481.
.3850	-830.	-1120.	861.	1872.	-1463.	419.	-.0503	.0275	.0197	-.0829	-.0226	.0615	1131.
.3860	-437.	-873.	721.	1342.	-876.	610.	-.0502	.0338	.0068	-.0900	-.0241	.0826	804.
.3870	-52.	-642.	527.	852.	-300.	771.	-.0495	.0405	-.0064	-.0967	-.0257	.1026	557.
.3880	305.	-438.	306.	415.	235.	896.	-.0482	.0476	-.0194	-.1030	-.0271	.1212	475.
.3890	625.	-255.	85.	20.	711.	982.	-.0465	.0549	-.0321	-.1092	-.0279	.1381	568.
.3900	903.	-77.	-108.	-360.	1120.	1034.	-.0444	.0623	-.0442	-.1154	-.0279	.1528	734.
.3910	1136.	103.	-254.	-739.	1456.	1054.	-.0421	.0698	-.0556	-.1216	-.0268	.1651	911.
.3920	1324.	271.	-358.	-1113.	1722.	1042.	-.0397	.0773	-.0662	-.1282	-.0248	.1751	1078.
.3930	1469.	423.	-434.	-1481.	1931.	997.	-.0372	.0845	-.0757	-.1351	-.0221	.1826	1233.
.3940	1584.	569.	-485.	-1859.	2101.	926.	-.0347	.0914	-.0843	-.1423	-.0188	.1878	1385.
.3950	1683.	727.	-513.	-2260.	2253.	842.	-.0323	.0979	-.0918	-.1493	-.0152	.1911	1547.

ADLPIPE PAGE 406

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.04.

S/RV PIPING KEAUNOE 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

.3850	-830.	-1120.	861.	1872.	-1463.	419.	-.503	.0275	.0197	-.0829	-.0226	.0615	1131.
.3860	-437.	-873.	721.	1342.	-876.	610.	-.502	.0358	.0068	-.0900	-.0241	.0826	804.
.3870	-52.	-642.	527.	852.	-300.	771.	-.0495	.0405	-.0064	-.0967	-.0257	.1026	557.
.3880	305.	-478.	306.	415.	235.	896.	-.0482	.0476	-.0194	-.1030	-.0271	.1212	475.
.3890	625.	-255.	85.	20.	711.	982.	-.0465	.0549	-.0321	-.1092	-.0279	.1381	568.
.3900	903.	-77.	-108.	-360.	1120.	1034.	-.0444	.0623	-.0442	-.1154	-.0279	.1528	734.
.3910	1136.	103.	-254.	-739.	1456.	1054.	-.0421	.0698	-.0556	-.1216	-.0268	.1651	911.
.3920	1324.	271.	-358.	-1113.	1722.	1042.	-.0397	.0773	-.0662	-.1282	-.0248	.1751	1078.
.3930	1469.	423.	-434.	-1481.	1931.	997.	-.0372	.0845	-.0757	-.1351	-.0221	.1826	1233.
.3940	1584.	569.	-485.	-1819.	2101.	926.	-.0347	.0914	-.0843	-.1423	-.0188	.1878	1385.
.3950	1683.	727.	-513.	-2260.	2253.	842.	-.0323	.0979	-.0918	-.1497	-.0152	.1911	1547.

ADLPIPE PAGE 406 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.04.
 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	8	MEMBER	1	SEQUENCE	25	LOCATION	BEG	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3960	1776.	893.	-530.	-2669.	2403.	757.	-.0302	.1038	-.0981	-.1560	-.0113	.1929	1720.	
.3970	1857.	1041.	-545.	-3044.	2549.	673.	-.0283	.1090	-.1033	-.1618	-.0075	.1937	1887.	
.3980	1925.	1154.	-553.	-3348.	2685.	593.	-.0268	.1135	-.1074	-.1664	-.0037	.1941	2030.	
.3990	1981.	1236.	-543.	-3574.	2809.	532.	-.0257	.1170	-.1102	-.1693	.0002	.1944	2145.	
.4000	2030.	1300.	-506.	-3721.	2921.	503.	-.0251	.1196	-.1118	-.1701	.0040	.1952	2229.	

MAXIMUM VALUE OF STRESS OCCURS AT

TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.0660	-5685.	-8108.	906.	15630.	-8416.	-4905.	.0594	.1144	-.1692	.1902	.0830	.2604	8631.

SECTION	8	MEMBER	1	SEQUENCE	27	LOCATION	DIS	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	0.	0.	0.	0.	0.	0.	-.0000	-.0000	-.0000	.0000	.0000	-.0000	0.	
.0020	0.	0.	0.	0.	0.	0.	-.0000	.0000	-.0001	.0000	.0002	.0000	0.	
.0030	0.	0.	0.	0.	0.	0.	-.0001	.0001	-.0004	-.0000	.0006	.0004	0.	
.0040	0.	0.	0.	0.	0.	0.	-.0001	.0002	-.0010	-.0004	.0014	.0013	0.	
.0050	0.	0.	0.	0.	0.	0.	-.0003	.0005	-.0018	-.0009	.0024	.0028	0.	
.0060	0.	0.	0.	0.	0.	0.	-.0005	.0008	-.0031	-.0017	.0035	.0049	0.	
.0070	0.	0.	0.	0.	0.	0.	-.0009	.0014	-.0051	-.0030	.0052	.0081	0.	
.0080	0.	0.	0.	0.	0.	0.	-.0012	.0023	-.0080	-.0048	.0098	.0133	0.	
.0090	0.	0.	0.	0.	0.	0.	-.0012	.0036	-.0122	-.0071	.0158	.0210	0.	
.0100	0.	0.	0.	0.	0.	0.	-.0007	.0053	-.0177	-.0096	.0261	.0311	0.	
.0110	0.	0.	0.	0.	0.	0.	.0001	.0072	-.0244	-.0121	.0381	.0431	0.	
.0120	0.	0.	0.	0.	0.	0.	.0012	.0095	-.0319	-.0149	.0502	.0564	0.	
.0130	0.	0.	0.	0.	0.	0.	.0027	.0119	-.0400	-.0174	.0618	.0701	0.	
.0140	0.	0.	0.	0.	0.	0.	.0046	.0143	-.0486	-.0191	.0720	.0837	0.	
.0150	0.	0.	0.	0.	0.	0.	.0068	.0167	-.0577	-.0200	.0799	.0967	0.	
.0160	0.	0.	0.	0.	0.	0.	.0092	.0190	-.0673	-.0207	.0860	.1091	0.	
.0170	0.	0.	0.	0.	0.	0.	.0116	.0214	-.0775	-.0221	.0896	.1212	0.	
.0180	0.	0.	0.	0.	0.	0.	.0137	.0241	-.0877	-.0255	.0884	.1329	0.	
.0190	0.	0.	0.	0.	0.	0.	.0156	.0271	-.0973	-.0316	.0843	.1437	0.	

ADLPIPE PAGE 407 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.04.
 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

.0090	0.	0.	0.	0.	0.	0.	0.	-.0012	.0036	-.0122	-.0071	.0158	.0210	0.
.0100	0.	0.	0.	0.	0.	0.	0.	-.0007	.0053	-.0177	-.0096	.0261	.0311	0.
.0110	0.	0.	0.	0.	0.	0.	0.	-.0001	.0072	-.0244	-.0121	.0381	.0431	0.
.0120	0.	0.	0.	0.	0.	0.	0.	.0012	.0095	-.0319	-.0149	.0502	.0564	0.
.0130	0.	0.	0.	0.	0.	0.	0.	.0027	.0119	-.0400	-.0174	.0618	.0701	0.
.0140	0.	0.	0.	0.	0.	0.	0.	.0046	.0143	-.0486	-.0191	.0720	.0837	0.
.0150	0.	0.	0.	0.	0.	0.	0.	.0068	.0167	-.0577	-.0200	.0799	.0967	0.
.0160	0.	0.	0.	0.	0.	0.	0.	.0092	.0190	-.0673	-.0207	.0860	.1091	0.
.0170	0.	0.	0.	0.	0.	0.	0.	.0116	.0214	-.0775	-.0221	.0896	.1212	0.
.0180	0.	0.	0.	0.	0.	0.	0.	.0137	.0241	-.0877	-.0255	.0884	.1329	0.
.0190	0.	0.	0.	0.	0.	0.	0.	.0156	.0271	-.0973	-.0316	.0843	.1437	0.

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

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

SECTION	8	MEMBER	1	SEQUENCE	27	LOCATION	DIS	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0200	0.	0.	0.	0.	0.	0.	.0189	.0302	-.1055	-.0386	.0845	.1516	0.	
.0210	0.	0.	0.	0.	0.	0.	.0259	.0321	-.1125	-.0404	.1012	.1554	0.	
.0220	0.	0.	0.	0.	0.	0.	.0360	.0320	-.1172	-.0321	.1263	.1527	0.	
.0230	0.	0.	0.	0.	0.	0.	.0464	.0301	-.1176	-.0185	.1423	.1398	0.	
.0240	0.	0.	0.	0.	0.	0.	.0571	.0265	-.1146	-.0043	.1520	.1146	0.	
.0250	0.	0.	0.	0.	0.	0.	.0667	.0217	-.1090	.0078	.1483	.0810	0.	
.0260	0.	0.	0.	0.	0.	0.	.0711	.0163	-.0985	.0134	.1083	.0421	0.	
.0270	0.	0.	0.	0.	0.	0.	.0714	.0099	-.0831	.0135	.0431	-.0061	0.	
.0280	0.	0.	0.	0.	0.	0.	.0745	.0008	-.0668	.0188	-.0012	-.0641	0.	
.0290	0.	0.	0.	0.	0.	0.	.0806	-.0111	-.0511	.0362	-.0220	-.1206	0.	
.0300	0.	0.	0.	0.	0.	0.	.0850	-.0238	-.0343	.0564	-.0444	-.1670	0.	
.0310	0.	0.	0.	0.	0.	0.	.0850	-.0362	-.0168	.0685	-.0751	-.2104	0.	
.0320	0.	0.	0.	0.	0.	0.	.0786	-.0476	.0021	.0671	-.1225	-.2515	0.	
.0330	0.	0.	0.	0.	0.	0.	.0700	-.0588	.0206	.0600	-.1667	-.2795	0.	
.0340	0.	0.	0.	0.	0.	0.	.0612	-.0709	.0372	.0588	-.1958	-.2940	0.	
.0350	0.	0.	0.	0.	0.	0.	.0477	-.0841	.0541	.0637	-.2300	-.3030	0.	
.0360	0.	0.	0.	0.	0.	0.	.0288	-.0963	.0727	.0623	-.2741	-.3033	0.	
.0370	0.	0.	0.	0.	0.	0.	.0103	-.1067	.0916	.0498	-.2989	-.2884	0.	
.0380	0.	0.	0.	0.	0.	0.	-.0061	-.1174	.1093	.0396	-.2962	-.2672	0.	
.0390	0.	0.	0.	0.	0.	0.	-.0249	-.1283	.1272	.0374	-.2906	-.2494	0.	
.0400	0.	0.	0.	0.	0.	0.	-.0439	-.1363	.1455	.0289	-.2745	-.2266	0.	
.0410	0.	0.	0.	0.	0.	0.	-.0571	-.1411	.1615	.0153	-.2240	-.1951	0.	
.0420	0.	0.	0.	0.	0.	0.	-.0659	-.1449	.1741	.0096	-.1531	-.1692	0.	
.0430	0.	0.	0.	0.	0.	0.	-.0735	-.1460	.1844	.0027	-.0830	-.1543	0.	
.0440	0.	0.	0.	0.	0.	0.	-.0776	-.1410	.1914	-.0166	-.0087	-.1385	0.	
.0450	0.	0.	0.	0.	0.	0.	-.0783	-.1341	.1936	-.0311	.0599	-.1222	0.	
.0460	0.	0.	0.	0.	0.	0.	-.0792	-.1260	.1915	-.0306	.0991	-.1160	0.	
.0470	0.	0.	0.	0.	0.	0.	-.0798	-.1143	.1864	-.0377	.1152	-.1145	0.	
.0480	0.	0.	0.	0.	0.	0.	-.0766	-.0978	.1782	-.0580	.1287	-.1048	0.	
.0490	0.	0.	0.	0.	0.	0.	-.0703	-.0813	.1660	-.0587	.1349	-.0906	0.	
.0500	0.	0.	0.	0.	0.	0.	-.0629	-.0670	.1507	-.0294	.1293	-.0792	0.	
.0510	0.	0.	0.	0.	0.	0.	-.0523	-.0509	.1337	.0005	.1319	-.0625	0.	
.0520	0.	0.	0.	0.	0.	0.	-.0378	-.0320	.1154	.0225	.1500	-.0337	0.	
.0530	0.	0.	0.	0.	0.	0.	-.0227	-.0140	.0956	.0584	.1647	-.0021	0.	
.0540	0.	0.	0.	0.	0.	0.	-.0092	.0028	.0747	.1069	.1699	.0256	0.	
.0550	0.	0.	0.	0.	0.	0.	.0034	.0215	.0533	.1442	.1744	.0545	0.	
.0560	0.	0.	0.	0.	0.	0.	.0142	.0416	.0315	.1699	.1720	.0849	0.	
.0570	0.	0.	0.	0.	0.	0.	.0222	.0600	.0090	.1971	.1563	.1092	0.	

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2 SAFETY COLD FKW24F--2 PSV

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

.0470	0.	0.	0.	0.	0.	0.	0.	-.0798	-.1143	.1864	-.0377	.1152	-.1145	0.
.0480	0.	0.	0.	0.	0.	0.	0.	-.0766	-.0978	.1782	-.0580	.1287	-.1048	0.
.0490	0.	0.	0.	0.	0.	0.	0.	-.0703	-.0813	.1660	-.0587	.1349	-.0906	0.
.0500	0.	0.	0.	0.	0.	0.	0.	-.0629	-.0670	.1507	-.0294	.1293	-.0792	0.
.0510	0.	0.	0.	0.	0.	0.	0.	-.0523	-.0509	.1337	.0005	.1319	-.0625	0.
.0520	0.	0.	0.	0.	0.	0.	0.	-.0372	-.0320	.1154	.0225	.1500	-.0337	0.
.0530	0.	0.	0.	0.	0.	0.	0.	-.0227	-.0140	.0956	.0584	.1547	-.0021	0.
.0540	0.	0.	0.	0.	0.	0.	0.	-.0092	.0028	.0747	.1069	.1599	.0256	0.
.0550	0.	0.	0.	0.	0.	0.	0.	.0034	.0215	.0533	.1442	.1744	.0545	0.
.0560	0.	0.	0.	0.	0.	0.	0.	.0142	.0416	.0315	.1699	.1720	.0849	0.
.0570	0.	0.	0.	0.	0.	0.	0.	.0222	.0600	.0090	.1971	.1563	.1092	0.

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

SECTION	S	MEMBER	1	SEQUENCE	27	LOCATION	DIS	TYPE	VA					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.0580	0.	0.	0.	0.	0.	0.	.0295	.0772	-.0144	.2177	.1422	.1284	0.	
.0590	0.	0.	0.	0.	0.	0.	.0374	.0940	-.0380	.2243	.1382	.1487	0.	
.0600	0.	0.	0.	0.	0.	0.	.0443	.1074	-.0618	.2323	.1322	.1679	0.	
.0610	0.	0.	0.	0.	0.	0.	.0504	.1157	-.0855	.2478	.1232	.1821	0.	
.0620	0.	0.	0.	0.	0.	0.	.0574	.1208	-.1083	.2535	.1227	.1959	0.	
.0630	0.	0.	0.	0.	0.	0.	.0642	.1232	-.1290	.2457	.1238	.2134	0.	
.0640	0.	0.	0.	0.	0.	0.	.0684	.1202	-.1472	.2419	.1103	.2299	0.	
.0650	0.	0.	0.	0.	0.	0.	.0704	.1117	-.1631	.2446	.0863	.2417	0.	
.0660	0.	0.	0.	0.	0.	0.	.0711	.1004	-.1756	.2364	.0617	.2522	0.	
.0670	0.	0.	0.	0.	0.	0.	.0696	.0873	-.1836	.2127	.0327	.2614	0.	
.0680	0.	0.	0.	0.	0.	0.	.0658	.0712	-.1875	.1846	.0008	.2639	0.	
.0690	0.	0.	0.	0.	0.	0.	.0619	.0527	-.1882	.1553	-.0181	.2581	0.	
.0700	0.	0.	0.	0.	0.	0.	.0585	.0334	-.1856	.1190	-.0192	.2468	0.	
.0710	0.	0.	0.	0.	0.	0.	.0536	.0141	-.1791	.0748	-.0171	.2284	0.	
.0720	0.	0.	0.	0.	0.	0.	.0462	-.0050	-.1689	.0235	-.0192	.1980	0.	
.0730	0.	0.	0.	0.	0.	0.	.0364	-.0227	-.1548	-.0381	-.0274	.1564	0.	
.0740	0.	0.	0.	0.	0.	0.	.0250	-.0383	-.1372	-.1068	-.0431	.1095	0.	
.0750	0.	0.	0.	0.	0.	0.	.0133	-.0528	-.1170	-.1702	-.0631	.0593	0.	
.0760	0.	0.	0.	0.	0.	0.	.0028	-.0670	-.0950	-.2208	-.0328	.0046	0.	
.0770	0.	0.	0.	0.	0.	0.	-.0067	-.0800	-.0706	-.2630	-.1051	-.0524	0.	
.0780	0.	0.	0.	0.	0.	0.	-.0153	-.0910	-.0436	-.2995	-.1323	-.1058	0.	
.0790	0.	0.	0.	0.	0.	0.	-.0209	-.1007	-.0153	-.3214	-.1544	-.1540	0.	
.0800	0.	0.	0.	0.	0.	0.	-.0224	-.1106	.0127	-.3190	-.1642	-.1992	0.	
.0810	0.	0.	0.	0.	0.	0.	-.0214	-.1199	.0403	-.2959	-.1594	-.2410	0.	
.0820	0.	0.	0.	0.	0.	0.	-.0196	-.1267	.0681	-.2639	-.1776	-.2766	0.	
.0830	0.	0.	0.	0.	0.	0.	-.0171	-.1306	.0951	-.2273	-.1861	-.3067	0.	
.0840	0.	0.	0.	0.	0.	0.	-.0138	-.1321	.1202	-.1826	-.1915	-.3343	0.	
.0850	0.	0.	0.	0.	0.	0.	-.0102	-.1312	.1429	-.1296	-.1919	-.3578	0.	
.0860	0.	0.	0.	0.	0.	0.	-.0060	-.1272	.1628	-.0730	-.1825	-.3733	0.	
.0870	0.	0.	0.	0.	0.	0.	-.0012	-.1206	.1793	-.0143	-.1504	-.3806	0.	
.0880	0.	0.	0.	0.	0.	0.	.0031	-.1119	.1924	.0446	-.1296	-.3809	0.	
.0890	0.	0.	0.	0.	0.	0.	.0066	-.1013	.2022	.0987	-.0904	-.3715	0.	
.0900	0.	0.	0.	0.	0.	0.	.0097	-.0894	.2080	.1487	-.0400	-.3495	0.	
.0910	0.	0.	0.	0.	0.	0.	.0119	-.0777	.2095	.2009	.0157	-.3163	0.	
.0920	0.	0.	0.	0.	0.	0.	.0117	-.0668	.2071	.2532	.0561	-.2734	0.	
.0930	0.	0.	0.	0.	0.	0.	.0089	-.0556	.2014	.2939	.1078	-.2203	0.	
.0940	0.	0.	0.	0.	0.	0.	.0042	-.0441	.1925	.3201	.1419	-.1588	0.	
.0950	0.	0.	0.	0.	0.	0.	-.0016	-.0336	.1801	.3405	.1588	-.0935	0.	

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.0850	0.	0.	0.	0.	0.	0.	0.	-.1102	-.1312	.1429	-.1296	-.1919	-.3578	0.
.0860	0.	0.	0.	0.	0.	0.	0.	-.0060	-.1272	.1628	-.0730	-.1925	-.3733	0.
.0870	0.	0.	0.	0.	0.	0.	0.	-.0012	-.1206	.1793	-.0143	-.1504	-.3806	0.
.0880	0.	0.	0.	0.	0.	0.	0.	.0031	-.1119	.1924	.0446	-.1296	-.3809	0.
.0890	0.	0.	0.	0.	0.	0.	0.	.0066	-.1013	.2022	.0987	-.0904	-.3715	0.
.0900	0.	0.	0.	0.	0.	0.	0.	.0097	-.0894	.2080	.1487	-.0400	-.3495	0.
.0910	0.	0.	0.	0.	0.	0.	0.	.0119	-.0777	.2095	.2009	.0157	-.3163	0.
.0920	0.	0.	0.	0.	0.	0.	0.	.0117	-.0668	.2071	.2532	.0561	-.2734	0.
.0930	0.	0.	0.	0.	0.	0.	0.	.0089	-.0556	.2014	.2939	.1078	-.2203	0.
.0940	0.	0.	0.	0.	0.	0.	0.	.0042	-.0441	.1925	.3201	.1419	-.1588	0.
.0950	0.	0.	0.	0.	0.	0.	0.	-.0016	-.0336	.1801	.3405	.1588	-.0935	0.

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

SECTION	8	MEMBER	1	SEQUENCE	27	LOCATION	DIS	TYPE	VA					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)		DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.0960	0.	0.	0.	0.	0.	0.	0.	-.0074	-.0245	.1639	.3582	.1920	-.0267	0.
.0970	0.	0.	0.	0.	0.	0.	0.	-.0121	-.0159	.1445	.3660	.2158	.0402	0.
.0980	0.	0.	0.	0.	0.	0.	0.	-.0160	-.0074	.1225	.3597	.2363	.1021	0.
.0990	0.	0.	0.	0.	0.	0.	0.	-.0199	.0004	.0987	.3402	.2463	.1537	0.
.1000	0.	0.	0.	0.	0.	0.	0.	-.0232	.0080	.0734	.3071	.2463	.1940	0.
.1010	0.	0.	0.	0.	0.	0.	0.	-.0255	.0153	.0473	.2615	.2380	.2227	0.
.1020	0.	0.	0.	0.	0.	0.	0.	-.0269	.0217	.0210	.2084	.2193	.2372	0.
.1030	0.	0.	0.	0.	0.	0.	0.	-.0273	.0271	-.0048	.1494	.1914	.2373	0.
.1040	0.	0.	0.	0.	0.	0.	0.	-.0253	.0322	-.0294	.0825	.1614	.2270	0.
.1050	0.	0.	0.	0.	0.	0.	0.	-.0207	.0369	-.0524	.0119	.1326	.2088	0.
.1060	0.	0.	0.	0.	0.	0.	0.	-.0137	.0401	-.0737	-.0528	.1040	.1824	0.
.1070	0.	0.	0.	0.	0.	0.	0.	-.0045	.0418	-.0934	-.1083	.0780	.1501	0.
.1080	0.	0.	0.	0.	0.	0.	0.	.0074	.0430	-.1113	-.1595	.0583	.1168	0.
.1090	0.	0.	0.	0.	0.	0.	0.	.0222	.0440	-.1278	-.2072	.0497	.0848	0.
.1100	0.	0.	0.	0.	0.	0.	0.	.0369	.0431	-.1436	-.2401	.0360	.0509	0.
.1110	0.	0.	0.	0.	0.	0.	0.	.0483	.0417	-.1577	-.2647	.0037	.0160	0.
.1120	0.	0.	0.	0.	0.	0.	0.	.0563	.0416	-.1695	-.2919	-.0439	-.0150	0.
.1130	0.	0.	0.	0.	0.	0.	0.	.0627	.0422	-.1800	-.3162	-.0941	-.0402	0.
.1140	0.	0.	0.	0.	0.	0.	0.	.0678	.0420	-.1897	-.3273	-.1413	-.0614	0.
.1150	0.	0.	0.	0.	0.	0.	0.	.0713	.0416	-.1976	-.3281	-.1823	-.0776	0.
.1160	0.	0.	0.	0.	0.	0.	0.	.0736	.0421	-.2032	-.3242	-.2112	-.0849	0.
.1170	0.	0.	0.	0.	0.	0.	0.	.0741	.0425	-.2062	-.3117	-.2313	-.0844	0.
.1180	0.	0.	0.	0.	0.	0.	0.	.0718	.0421	-.2061	-.2891	-.2488	-.0790	0.
.1190	0.	0.	0.	0.	0.	0.	0.	.0649	.0422	-.2013	-.2679	-.2705	-.0687	0.
.1200	0.	0.	0.	0.	0.	0.	0.	.0555	.0431	-.1922	-.2507	-.2551	-.0508	0.
.1210	0.	0.	0.	0.	0.	0.	0.	.0466	.0428	-.1804	-.2233	-.2796	-.0265	0.
.1220	0.	0.	0.	0.	0.	0.	0.	.0358	.0400	-.1653	-.1810	-.2590	-.0030	0.
.1230	0.	0.	0.	0.	0.	0.	0.	.0237	.0372	-.1463	-.1418	-.2507	.0202	0.
.1240	0.	0.	0.	0.	0.	0.	0.	.0111	.0358	-.1235	-.1148	-.2228	.0443	0.
.1250	0.	0.	0.	0.	0.	0.	0.	-.0015	.0337	-.0983	-.0861	-.1897	.0658	0.
.1260	0.	0.	0.	0.	0.	0.	0.	-.0132	.0304	-.0719	-.0505	-.1494	.0822	0.
.1270	0.	0.	0.	0.	0.	0.	0.	-.0240	.0278	-.0439	-.0216	-.1026	.0932	0.
.1280	0.	0.	0.	0.	0.	0.	0.	-.0322	.0263	-.0156	-.0021	-.0429	.1005	0.
.1290	0.	0.	0.	0.	0.	0.	0.	-.0389	.0241	.0122	.0192	.0164	.1006	0.
.1300	0.	0.	0.	0.	0.	0.	0.	-.0453	.0216	.0394	.0396	.0573	.0932	0.
.1310	0.	0.	0.	0.	0.	0.	0.	-.0504	.0204	.0657	.0482	.1149	.0825	0.
.1320	0.	0.	0.	0.	0.	0.	0.	-.0559	.0198	.0909	.0501	.1487	.0682	0.
.1330	0.	0.	0.	0.	0.	0.	0.	-.0612	.0184	.1141	.0559	.1591	.0501	0.

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83/12/02. 18.26.05.

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

.1230	0.	0.	0.	0.	0.	0.	0.	.0237	.0372	-.1463	-.1418	-.2507	-.0030	0.
.1240	0.	0.	0.	0.	0.	0.	0.	.0111	.0358	-.1235	-.1148	-.2228	-.0443	0.
.1250	0.	0.	0.	0.	0.	0.	0.	-.0015	.0337	-.0983	-.0861	-.1897	-.0658	0.
.1260	0.	0.	0.	0.	0.	0.	0.	-.0132	.0304	-.0719	-.0505	-.1494	-.0822	0.
.1270	0.	0.	0.	0.	0.	0.	0.	-.0240	.0278	-.0439	-.0216	-.1026	-.0932	0.
.1280	0.	0.	0.	0.	0.	0.	0.	-.0322	.0263	-.0156	-.0021	-.0429	-.1005	0.
.1290	0.	0.	0.	0.	0.	0.	0.	-.0389	.0241	.0122	.0192	.0164	-.1006	0.
.1300	0.	0.	0.	0.	0.	0.	0.	-.0453	.0216	.0394	.0396	.0573	-.0932	0.
.1310	0.	0.	0.	0.	0.	0.	0.	-.0504	.0204	.0657	.0482	.1149	-.0825	0.
.1320	0.	0.	0.	0.	0.	0.	0.	-.0559	.0198	.0909	.0501	.1487	-.0682	0.
.1330	0.	0.	0.	0.	0.	0.	0.	-.0612	.0184	.1141	.0559	.1591	-.0501	0.

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

SECTION	8	MEMBER	1	SEQUENCE	27	LOCATION	DIS	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1340	0.	0.	0.	0.	0.	0.	-.0653	.0170	.1352	.0599	.1328	.0301	0.	
.1350	0.	0.	0.	0.	0.	0.	-.0676	.0168	.1542	.0557	.1974	.0113	0.	
.1360	0.	0.	0.	0.	0.	0.	-.0677	.0167	.1699	.0535	.2128	-.0059	0.	
.1370	0.	0.	0.	0.	0.	0.	-.0678	.0156	.1825	.0601	.2176	-.0238	0.	
.1380	0.	0.	0.	0.	0.	0.	-.0668	.0155	.1915	.0637	.2185	-.0393	0.	
.1390	0.	0.	0.	0.	0.	0.	-.0658	.0172	.1974	.0563	.2111	-.0521	0.	
.1400	0.	0.	0.	0.	0.	0.	-.0665	.0194	.1997	.0465	.1865	-.0652	0.	
.1410	0.	0.	0.	0.	0.	0.	-.0675	.0216	.1976	.0394	.1517	-.0780	0.	
.1420	0.	0.	0.	0.	0.	0.	-.0685	.0248	.1914	.0282	.1112	-.0879	0.	
.1430	0.	0.	0.	0.	0.	0.	-.0682	.0291	.1811	.0114	.0728	-.0929	0.	
.1440	0.	0.	0.	0.	0.	0.	-.0673	.0334	.1667	-.0038	.0337	-.0952	0.	
.1450	0.	0.	0.	0.	0.	0.	-.0656	.0376	.1486	-.0167	-.0050	-.0948	0.	
.1460	0.	0.	0.	0.	0.	0.	-.0623	.0425	.1273	-.0327	-.0367	-.0885	0.	
.1470	0.	0.	0.	0.	0.	0.	-.0586	.0479	.1034	-.0497	-.0675	-.0763	0.	
.1480	0.	0.	0.	0.	0.	0.	-.0540	.0526	.0769	-.0621	-.0944	-.0594	0.	
.1490	0.	0.	0.	0.	0.	0.	-.0493	.0570	.0487	-.0728	-.1189	-.0384	0.	
.1500	0.	0.	0.	0.	0.	0.	-.0453	.0620	.0200	-.0877	-.1436	-.0125	0.	
.1510	0.	0.	0.	0.	0.	0.	-.0415	.0672	-.0089	-.1039	-.1545	-.0182	0.	
.1520	0.	0.	0.	0.	0.	0.	-.0384	.0717	-.0375	-.1155	-.1820	.0501	0.	
.1530	0.	0.	0.	0.	0.	0.	-.0348	.0757	-.0654	-.1242	-.1863	.0833	0.	
.1540	0.	0.	0.	0.	0.	0.	-.0310	.0802	-.0915	-.1347	-.1835	.1178	0.	
.1550	0.	0.	0.	0.	0.	0.	-.0269	.0847	-.1154	-.1446	-.1675	.1527	0.	
.1560	0.	0.	0.	0.	0.	0.	-.0219	.0887	-.1374	-.1498	-.1394	.1856	0.	
.1570	0.	0.	0.	0.	0.	0.	-.0179	.0925	-.1561	-.1532	-.1111	.2136	0.	
.1580	0.	0.	0.	0.	0.	0.	-.0148	.0968	-.1713	-.1593	-.0831	.2378	0.	
.1590	0.	0.	0.	0.	0.	0.	-.0121	.1011	-.1831	-.1657	-.0575	.2577	0.	
.1600	0.	0.	0.	0.	0.	0.	-.0112	.1047	-.1909	-.1689	-.0434	.2707	0.	
.1610	0.	0.	0.	0.	0.	0.	-.0108	.1080	-.1947	-.1718	-.0339	.2778	0.	
.1620	0.	0.	0.	0.	0.	0.	-.0084	.1109	-.1954	-.1734	-.0163	.2816	0.	
.1630	0.	0.	0.	0.	0.	0.	-.0057	.1122	-.1928	-.1666	-.0010	.2793	0.	
.1640	0.	0.	0.	0.	0.	0.	-.0027	.1121	-.1870	-.1529	.0114	.2713	0.	
.1650	0.	0.	0.	0.	0.	0.	.0011	.1115	-.1782	-.1399	.0248	.2599	0.	
.1660	0.	0.	0.	0.	0.	0.	.0038	.1102	-.1661	-.1268	.0300	.2441	0.	
.1670	0.	0.	0.	0.	0.	0.	.0057	.1076	-.1516	-.1088	.0278	.2235	0.	
.1680	0.	0.	0.	0.	0.	0.	.0068	.1038	-.1349	-.0879	.0212	.1993	0.	
.1690	0.	0.	0.	0.	0.	0.	.0076	.0995	-.1163	-.0679	.0157	.1737	0.	
.1700	0.	0.	0.	0.	0.	0.	.0072	.0941	-.0958	-.0466	.0081	.1467	0.	
.1710	0.	0.	0.	0.	0.	0.	.0055	.0874	-.0736	-.0231	-.0005	.1181	0.	

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

CONDITION 24

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

.1610	0.	0.	0.	0.	0.	0.	0.	-.0108	.1080	-.1947	-.1718	-.0339	.2778	0.
.1620	0.	0.	0.	0.	0.	0.	0.	-.0084	.1109	-.1954	-.1734	-.0165	.2816	0.
.1630	0.	0.	0.	0.	0.	0.	0.	-.0057	.1122	-.1923	-.1666	-.0010	.2793	0.
.1640	0.	0.	0.	0.	0.	0.	0.	-.0027	.1121	-.1870	-.1529	.0114	.2713	0.
.1650	0.	0.	0.	0.	0.	0.	0.	.0011	.1115	-.1782	-.1399	.0248	.2599	0.
.1660	0.	0.	0.	0.	0.	0.	0.	.0038	.1102	-.1661	-.1268	.0300	.2441	0.
.1670	0.	0.	0.	0.	0.	0.	0.	.0057	.1076	-.1516	-.1088	.0278	.2235	0.
.1680	0.	0.	0.	0.	0.	0.	0.	.0068	.1038	-.1349	-.0879	.0212	.1993	0.
.1690	0.	0.	0.	0.	0.	0.	0.	.0076	.0995	-.1163	-.0679	.0157	.1737	0.
.1700	0.	0.	0.	0.	0.	0.	0.	.0072	.0941	-.0958	-.0466	.0081	.1467	0.
.1710	0.	0.	0.	0.	0.	0.	0.	.0055	.0874	-.0736	-.0231	-.0005	.1181	0.

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ENGLISH UNITS

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

SECTION	8	MEMBER	1	SEQUENCE	27	LOCATION	DIS	TYPE	VA					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	FZ (DEG)	STRESS (PSI)	
.1720	0.	0.	0.	0.	0.	0.	.0052	.0797	-.0511	.0004	.0060	.0919	0.	
.1730	0.	0.	0.	0.	0.	0.	.0047	.0709	-.0280	.0249	.0192	.0677	0.	
.1740	0.	0.	0.	0.	0.	0.	.0031	.0605	-.0045	.0519	.0325	.0447	0.	
.1750	0.	0.	0.	0.	0.	0.	.0009	.0492	.0188	.0777	.0484	.0237	0.	
.1760	0.	0.	0.	0.	0.	0.	-.0021	.0374	.0417	.0984	.0631	.0052	0.	
.1770	0.	0.	0.	0.	0.	0.	-.0058	.0250	.0636	.1158	.0758	-.0106	0.	
.1780	0.	0.	0.	0.	0.	0.	-.0106	.0119	.0841	.1321	.0815	-.0252	0.	
.1790	0.	0.	0.	0.	0.	0.	-.0155	-.0017	.1027	.1457	.0852	-.0382	0.	
.1800	0.	0.	0.	0.	0.	0.	-.0203	-.0152	.1192	.1552	.0865	-.0494	0.	
.1810	0.	0.	0.	0.	0.	0.	-.0258	-.0285	.1337	.1601	.0799	-.0601	0.	
.1820	0.	0.	0.	0.	0.	0.	-.0301	-.0414	.1455	.1608	.0751	-.0698	0.	
.1830	0.	0.	0.	0.	0.	0.	-.0334	-.0541	.1544	.1590	.0705	-.0791	0.	
.1840	0.	0.	0.	0.	0.	0.	-.0363	-.0663	.1606	.1561	.0628	-.0883	0.	
.1850	0.	0.	0.	0.	0.	0.	-.0386	-.0776	.1642	.1502	.0521	-.0971	0.	
.1860	0.	0.	0.	0.	0.	0.	-.0405	-.0876	.1654	.1391	.0369	-.1064	0.	
.1870	0.	0.	0.	0.	0.	0.	-.0417	-.0963	.1642	.1242	.0189	-.1158	0.	
.1880	0.	0.	0.	0.	0.	0.	-.0429	-.1037	.1612	.1080	-.0059	-.1258	0.	
.1890	0.	0.	0.	0.	0.	0.	-.0431	-.1095	.1562	.0909	-.0311	-.1350	0.	
.1900	0.	0.	0.	0.	0.	0.	-.0416	-.1137	.1493	.0732	-.0515	-.1432	0.	
.1910	0.	0.	0.	0.	0.	0.	-.0389	-.1163	.1410	.0559	-.0703	-.1515	0.	
.1920	0.	0.	0.	0.	0.	0.	-.0344	-.1172	.1312	.0385	-.0827	-.1585	0.	
.1930	0.	0.	0.	0.	0.	0.	-.0280	-.1164	.1200	.0218	-.0878	-.1642	0.	
.1940	0.	0.	0.	0.	0.	0.	-.0203	-.1140	.1074	.0077	-.0884	-.1690	0.	
.1950	0.	0.	0.	0.	0.	0.	-.0116	-.1102	.0934	-.0039	-.0856	-.1730	0.	
.1960	0.	0.	0.	0.	0.	0.	-.0020	-.1048	.0782	-.0150	-.0805	-.1754	0.	
.1970	0.	0.	0.	0.	0.	0.	.0077	-.0978	.0621	-.0262	-.0764	-.1763	0.	
.1980	0.	0.	0.	0.	0.	0.	.0172	-.0895	.0451	-.0350	-.0741	-.1753	0.	
.1990	0.	0.	0.	0.	0.	0.	.0269	-.0804	.0273	-.0398	-.0702	-.1713	0.	
.2000	0.	0.	0.	0.	0.	0.	.0368	-.0707	.0087	-.0400	-.0625	-.1633	0.	
.2010	0.	0.	0.	0.	0.	0.	.0465	-.0606	-.0101	-.0360	-.0524	-.1509	0.	
.2020	0.	0.	0.	0.	0.	0.	.0554	-.0504	-.0287	-.0283	-.0413	-.1338	0.	
.2030	0.	0.	0.	0.	0.	0.	.0632	-.0409	-.0468	-.0170	-.0295	-.1115	0.	
.2040	0.	0.	0.	0.	0.	0.	.0694	-.0309	-.0639	-.0021	-.0183	-.0849	0.	
.2050	0.	0.	0.	0.	0.	0.	.0735	-.0221	-.0798	.0158	-.0083	-.0545	0.	
.2060	0.	0.	0.	0.	0.	0.	.0757	-.0140	-.0940	.0349	.0010	-.0209	0.	
.2070	0.	0.	0.	0.	0.	0.	.0758	-.0066	-.1063	.0539	.0090	.0149	0.	
.2080	0.	0.	0.	0.	0.	0.	.0738	-.0000	-.1163	.0722	.0159	.0513	0.	
.2090	0.	0.	0.	0.	0.	0.	.0702	.0056	-.1238	.0894	.0239	.0867	0.	

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CONDITION 24

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

.1990	0.	0.	0.	0.	0.	0.	0.	.0269	-.0804	.0273	-.0398	-.0702	-.1713	0.
.2000	0.	0.	0.	0.	0.	0.	0.	.0368	-.0707	.0087	-.0400	-.0625	-.1633	0.
.2010	0.	0.	0.	0.	0.	0.	0.	.0465	-.0606	-.0101	-.0360	-.0524	-.1509	0.
.2020	0.	0.	0.	0.	0.	0.	0.	.0554	-.0504	-.0287	-.0283	-.0413	-.1338	0.
.2030	0.	0.	0.	0.	0.	0.	0.	.0632	-.0404	-.0468	-.0170	-.0295	-.1115	0.
.2040	0.	0.	0.	0.	0.	0.	0.	.0694	-.0309	-.0639	-.0021	-.0183	-.0849	0.
.2050	0.	0.	0.	0.	0.	0.	0.	.0735	-.0221	-.0798	.0158	-.0083	-.0545	0.
.2060	0.	0.	0.	0.	0.	0.	0.	.0757	-.0140	-.0940	.0349	.0010	-.0209	0.
.2070	0.	0.	0.	0.	0.	0.	0.	.0758	-.0066	-.1063	.0539	.0090	.0149	0.
.2080	0.	0.	0.	0.	0.	0.	0.	.0758	-.0000	-.1163	.0722	.0159	.0513	0.
.2090	0.	0.	0.	0.	0.	0.	0.	.0702	.0056	-.1238	.0894	.0239	.0867	0.

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

SECTION	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	VA	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(PSI)
.2100	0.	0.	0.	0.	0.	0.	0.
.2110	0.	0.	0.	0.	0.	0.	0.
.2120	0.	0.	0.	0.	0.	0.	0.
.2130	0.	0.	0.	0.	0.	0.	0.
.2140	0.	0.	0.	0.	0.	0.	0.
.2150	0.	0.	0.	0.	0.	0.	0.
.2160	0.	0.	0.	0.	0.	0.	0.
.2170	0.	0.	0.	0.	0.	0.	0.
.2180	0.	0.	0.	0.	0.	0.	0.
.2190	0.	0.	0.	0.	0.	0.	0.
.2200	0.	0.	0.	0.	0.	0.	0.
.2210	0.	0.	0.	0.	0.	0.	0.
.2220	0.	0.	0.	0.	0.	0.	0.
.2230	0.	0.	0.	0.	0.	0.	0.
.2240	0.	0.	0.	0.	0.	0.	0.
.2250	0.	0.	0.	0.	0.	0.	0.
.2260	0.	0.	0.	0.	0.	0.	0.
.2270	0.	0.	0.	0.	0.	0.	0.
.2280	0.	0.	0.	0.	0.	0.	0.
.2290	0.	0.	0.	0.	0.	0.	0.
.2300	0.	0.	0.	0.	0.	0.	0.
.2310	0.	0.	0.	0.	0.	0.	0.
.2320	0.	0.	0.	0.	0.	0.	0.
.2330	0.	0.	0.	0.	0.	0.	0.
.2340	0.	0.	0.	0.	0.	0.	0.
.2350	0.	0.	0.	0.	0.	0.	0.
.2360	0.	0.	0.	0.	0.	0.	0.
.2370	0.	0.	0.	0.	0.	0.	0.
.2380	0.	0.	0.	0.	0.	0.	0.
.2390	0.	0.	0.	0.	0.	0.	0.
.2400	0.	0.	0.	0.	0.	0.	0.
.2410	0.	0.	0.	0.	0.	0.	0.
.2420	0.	0.	0.	0.	0.	0.	0.
.2430	0.	0.	0.	0.	0.	0.	0.
.2440	0.	0.	0.	0.	0.	0.	0.
.2450	0.	0.	0.	0.	0.	0.	0.
.2460	0.	0.	0.	0.	0.	0.	0.
.2470	0.	0.	0.	0.	0.	0.	0.

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
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CONDITION 24

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

.2370	0.	0.	0.	0.	0.	0.	0.	0.	-.0404	-.0601	.1311	-.0117	-.0816	-.1590	0.
.2380	0.	0.	0.	0.	0.	0.	0.	0.	-.0420	-.0539	.1211	.0039	-.0705	-.1221	0.
.2390	0.	0.	0.	0.	0.	0.	0.	0.	-.0423	-.0466	.1093	.0195	-.0545	-.0848	0.
.2400	0.	0.	0.	0.	0.	0.	0.	0.	-.0414	-.0383	.0961	.0344	-.0344	-.0482	0.
.2410	0.	0.	0.	0.	0.	0.	0.	0.	-.0392	-.0292	.0816	.0479	-.0109	-.0137	0.
.2420	0.	0.	0.	0.	0.	0.	0.	0.	-.0358	-.0195	.0662	.0588	.0142	.0177	0.
.2430	0.	0.	0.	0.	0.	0.	0.	0.	-.0315	-.0092	.0501	.0662	.0384	.0452	0.
.2440	0.	0.	0.	0.	0.	0.	0.	0.	-.0266	.0014	.0336	.0696	.0596	.0686	0.
.2450	0.	0.	0.	0.	0.	0.	0.	0.	-.0211	.0122	.0168	.0692	.0770	.0880	0.
.2460	0.	0.	0.	0.	0.	0.	0.	0.	-.0150	.0227	-.0001	.0656	.0904	.1035	0.
.2470	0.	0.	0.	0.	0.	0.	0.	0.	-.0087	.0329	-.0170	.0528	.0994	.1152	0.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.05.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	8	MEMBER	1	SEQUENCE	27	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(DEG)	(PSI)	
.2480	0.	0.	0.	0.	0.	0.	-.0021	.0426	-.0337	.0486	.1035	.1235	0.		
.2490	0.	0.	0.	0.	0.	0.	.0042	.0517	-.0498	.0350	.1015	.1287	0.		
.2500	0.	0.	0.	0.	0.	0.	.0100	.0601	-.0652	.0184	.0936	.1309	0.		
.2510	0.	0.	0.	0.	0.	0.	.0152	.0678	-.0797	-.0007	.0816	.1304	0.		
.2520	0.	0.	0.	0.	0.	0.	.0199	.0746	-.0931	-.0216	.0664	.1277	0.		
.2530	0.	0.	0.	0.	0.	0.	.0236	.0804	-.1051	-.0436	.0479	.1227	0.		
.2540	0.	0.	0.	0.	0.	0.	.0260	.0853	-.1154	-.0669	.0264	.1160	0.		
.2550	0.	0.	0.	0.	0.	0.	.0275	.0892	-.1239	-.0909	.0045	.1081	0.		
.2560	0.	0.	0.	0.	0.	0.	.0281	.0919	-.1305	-.1139	-.0155	.0994	0.		
.2570	0.	0.	0.	0.	0.	0.	.0281	.0932	-.1352	-.1343	-.0325	.0905	0.		
.2580	0.	0.	0.	0.	0.	0.	.0274	.0933	-.1379	-.1519	-.0460	.0818	0.		
.2590	0.	0.	0.	0.	0.	0.	.0262	.0921	-.1386	-.1668	-.0559	.0741	0.		
.2600	0.	0.	0.	0.	0.	0.	.0245	.0897	-.1374	-.1785	-.0526	.0673	0.		
.2610	0.	0.	0.	0.	0.	0.	.0223	.0862	-.1344	-.1866	-.0665	.0615	0.		
.2620	0.	0.	0.	0.	0.	0.	.0197	.0818	-.1299	-.1912	-.0684	.0569	0.		
.2630	0.	0.	0.	0.	0.	0.	.0165	.0765	-.1238	-.1928	-.0701	.0532	0.		
.2640	0.	0.	0.	0.	0.	0.	.0125	.0708	-.1163	-.1920	-.0723	.0504	0.		
.2650	0.	0.	0.	0.	0.	0.	.0079	.0648	-.1075	-.1894	-.0745	.0481	0.		
.2660	0.	0.	0.	0.	0.	0.	.0029	.0588	-.0976	-.1855	-.0758	.0461	0.		
.2670	0.	0.	0.	0.	0.	0.	-.0025	.0528	-.0866	-.1798	-.0763	.0442	0.		
.2680	0.	0.	0.	0.	0.	0.	-.0084	.0471	-.0745	-.1724	-.0756	.0423	0.		
.2690	0.	0.	0.	0.	0.	0.	-.0144	.0417	-.0615	-.1640	-.0729	.0401	0.		
.2700	0.	0.	0.	0.	0.	0.	-.0205	.0369	-.0475	-.1552	-.0679	.0375	0.		
.2710	0.	0.	0.	0.	0.	0.	-.0267	.0327	-.0327	-.1456	-.0618	.0343	0.		
.2720	0.	0.	0.	0.	0.	0.	-.0329	.0290	-.0172	-.1352	-.0552	.0304	0.		
.2730	0.	0.	0.	0.	0.	0.	-.0390	.0259	-.0012	-.1242	-.0487	.0256	0.		
.2740	0.	0.	0.	0.	0.	0.	-.0446	.0235	.0149	-.1129	-.0420	.0200	0.		
.2750	0.	0.	0.	0.	0.	0.	-.0495	.0218	.0309	-.1015	-.0349	.0134	0.		
.2760	0.	0.	0.	0.	0.	0.	-.0533	.0206	.0462	-.0898	-.0270	.0059	0.		
.2770	0.	0.	0.	0.	0.	0.	-.0560	.0200	.0606	-.0780	-.0190	-.0026	0.		
.2780	0.	0.	0.	0.	0.	0.	-.0576	.0199	.0736	-.0664	-.0111	-.0120	0.		
.2790	0.	0.	0.	0.	0.	0.	-.0578	.0206	.0848	-.0560	-.0037	-.0222	0.		
.2800	0.	0.	0.	0.	0.	0.	-.0570	.0219	.0939	-.0473	.0028	-.0328	0.		
.2810	0.	0.	0.	0.	0.	0.	-.0553	.0238	.1008	-.0404	.0077	-.0436	0.		
.2820	0.	0.	0.	0.	0.	0.	-.0530	.0264	.1053	-.0353	.0108	-.0539	0.		
.2830	0.	0.	0.	0.	0.	0.	-.0501	.0295	.1072	-.0319	.0130	-.0628	0.		
.2840	0.	0.	0.	0.	0.	0.	-.0467	.0332	.1067	-.0302	.0155	-.0695	0.		
.2850	0.	0.	0.	0.	0.	0.	-.0430	.0372	.1037	-.0297	.0189	-.0730	0.		

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.05.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.2750	0.	0.	0.	0.	0.	0.	0.	-0.495	.0218	.0309	-0.1015	-0.0349	.0134	0.
.2760	0.	0.	0.	0.	0.	0.	0.	-0.533	.0206	.0462	-0.0898	-0.0270	.0059	0.
.2770	0.	0.	0.	0.	0.	0.	0.	-0.560	.0200	.0606	-0.0780	-0.0190	-0.0026	0.
.2780	0.	0.	0.	0.	0.	0.	0.	-0.576	.0199	.0736	-0.0664	-0.0111	-0.0120	0.
.2790	0.	0.	0.	0.	0.	0.	0.	-0.578	.0206	.0848	-0.0560	-0.0037	-0.0222	0.
.2800	0.	0.	0.	0.	0.	0.	0.	-0.570	.0219	.0939	-0.0473	.0028	-0.0328	0.
.2810	0.	0.	0.	0.	0.	0.	0.	-0.553	.0238	.1008	-0.0404	.0077	-0.0436	0.
.2820	0.	0.	0.	0.	0.	0.	0.	-0.530	.0264	.1053	-0.0353	.0108	-0.0539	0.
.2830	0.	0.	0.	0.	0.	0.	0.	-0.501	.0295	.1072	-0.0319	.0130	-0.0628	0.
.2840	0.	0.	0.	0.	0.	0.	0.	-0.467	.0332	.1067	-0.0302	.0155	-0.0695	0.
.2850	0.	0.	0.	0.	0.	0.	0.	-0.430	.0372	.1037	-0.0297	.0189	-0.0730	0.

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	8	MEMBER	1	SEQUENCE	27	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2860	0.	0.	0.	0.	0.	0.	-0.0392	.0414	.0983	-0.0296	.0237	-0.0726	0.		
.2870	0.	0.	0.	0.	0.	0.	-0.0355	.0456	.0908	-0.0296	.0300	-0.0676	0.		
.2880	0.	0.	0.	0.	0.	0.	-0.0320	.0498	.0812	-0.0293	.0372	-0.0577	0.		
.2890	0.	0.	0.	0.	0.	0.	-0.0289	.0539	.0699	-0.0289	.0445	-0.0428	0.		
.2900	0.	0.	0.	0.	0.	0.	-0.0266	.0577	.0570	-0.0285	.0508	-0.0232	0.		
.2910	0.	0.	0.	0.	0.	0.	-0.0249	.0612	.0427	-0.0281	.0550	-0.0003	0.		
.2920	0.	0.	0.	0.	0.	0.	-0.0240	.0644	.0273	-0.0275	.0566	.0270	0.		
.2930	0.	0.	0.	0.	0.	0.	-0.0235	.0672	.0111	-0.0272	.0560	.0557	0.		
.2940	0.	0.	0.	0.	0.	0.	-0.0233	.0696	-0.0058	-0.0273	.0531	.0853	0.		
.2950	0.	0.	0.	0.	0.	0.	-0.0231	.0715	-0.0229	-0.0280	.0481	.1142	0.		
.2960	0.	0.	0.	0.	0.	0.	-0.0229	.0730	-0.0399	-0.0296	.0410	.1414	0.		
.2970	0.	0.	0.	0.	0.	0.	-0.0224	.0741	-0.0564	-0.0323	.0321	.1654	0.		
.2980	0.	0.	0.	0.	0.	0.	-0.0214	.0747	-0.0722	-0.0361	.0217	.1854	0.		
.2990	0.	0.	0.	0.	0.	0.	-0.0200	.0749	-0.0867	-0.0411	.0098	.2004	0.		
.3000	0.	0.	0.	0.	0.	0.	-0.0182	.0745	-0.0996	-0.0473	-0.0034	.2099	0.		
.3010	0.	0.	0.	0.	0.	0.	-0.0159	.0737	-0.1106	-0.0544	-0.0174	.2138	0.		
.3020	0.	0.	0.	0.	0.	0.	-0.0131	.0723	-0.1194	-0.0619	-0.0313	.2121	0.		
.3030	0.	0.	0.	0.	0.	0.	-0.0098	.0704	-0.1258	-0.0693	-0.0440	.2052	0.		
.3040	0.	0.	0.	0.	0.	0.	-0.0060	.0679	-0.1295	-0.0760	-0.0545	.1936	0.		
.3050	0.	0.	0.	0.	0.	0.	-0.0020	.0649	-0.1306	-0.0814	-0.0625	.1781	0.		
.3060	0.	0.	0.	0.	0.	0.	.0022	.0613	-0.1291	-0.0851	-0.0677	.1595	0.		
.3070	0.	0.	0.	0.	0.	0.	.0063	.0572	-0.1249	-0.0868	-0.0701	.1386	0.		
.3080	0.	0.	0.	0.	0.	0.	.0101	.0526	-0.1183	-0.0863	-0.0699	.1164	0.		
.3090	0.	0.	0.	0.	0.	0.	.0134	.0475	-0.1094	-0.0833	-0.0576	.0936	0.		
.3100	0.	0.	0.	0.	0.	0.	.0161	.0419	-0.0985	-0.0774	-0.0635	.0711	0.		
.3110	0.	0.	0.	0.	0.	0.	.0179	.0359	-0.0859	-0.0689	-0.0580	.0496	0.		
.3120	0.	0.	0.	0.	0.	0.	.0190	.0295	-0.0718	-0.0578	-0.0511	.0297	0.		
.3130	0.	0.	0.	0.	0.	0.	.0192	.0227	-0.0566	-0.0440	-0.0428	.0119	0.		
.3140	0.	0.	0.	0.	0.	0.	.0187	.0156	-0.0406	-0.0275	-0.0333	-0.0035	0.		
.3150	0.	0.	0.	0.	0.	0.	.0175	.0081	-0.0240	-0.0087	-0.0226	-0.0161	0.		
.3160	0.	0.	0.	0.	0.	0.	.0157	.0004	-0.0072	.0119	-0.0112	-0.0262	0.		
.3170	0.	0.	0.	0.	0.	0.	.0134	-0.0075	.0096	.0339	.0306	-0.0338	0.		
.3180	0.	0.	0.	0.	0.	0.	.0105	-0.0156	.0261	.0566	.0124	-0.0391	0.		
.3190	0.	0.	0.	0.	0.	0.	.0073	-0.0237	.0421	.0795	.0237	-0.0425	0.		
.3200	0.	0.	0.	0.	0.	0.	.0038	-0.0318	.0573	.1021	.0346	-0.0445	0.		
.3210	0.	0.	0.	0.	0.	0.	.0003	-0.0399	.0716	.1239	.0449	-0.0454	0.		
.3220	0.	0.	0.	0.	0.	0.	-0.0032	-0.0478	.0847	.1444	.0548	-0.0457	0.		
.3230	0.	0.	0.	0.	0.	0.	-0.0064	-0.0556	.0966	.1632	.0542	-0.0458	0.		

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	0.	0.	0.	0.	0.	0.	0.	.0192	.0227	-.0566	-.0440	-.0428	.0119	0.
.3140	0.	0.	0.	0.	0.	0.	0.	.0187	.0156	-.0406	-.0275	-.0333	-.0035	0.
.3150	0.	0.	0.	0.	0.	0.	0.	.0175	.0081	-.0240	-.0087	-.0226	-.0161	0.
.3160	0.	0.	0.	0.	0.	0.	0.	.0157	.0004	-.0072	.0119	-.0112	-.0262	0.
.3170	0.	0.	0.	0.	0.	0.	0.	.0134	-.0075	.0096	.0339	.0306	-.0338	0.
.3180	0.	0.	0.	0.	0.	0.	0.	.0105	-.0156	.0261	.0566	.0124	-.0391	0.
.3190	0.	0.	0.	0.	0.	0.	0.	.0073	-.0237	.0421	.0795	.0237	-.0425	0.
.3200	0.	0.	0.	0.	0.	0.	0.	.0038	-.0318	.0573	.1021	.0346	-.0445	0.
.3210	0.	0.	0.	0.	0.	0.	0.	.0003	-.0399	.0716	.1239	.0449	-.0454	0.
.3220	0.	0.	0.	0.	0.	0.	0.	-.0032	-.0478	.0847	.1444	.0548	-.0457	0.
.3230	0.	0.	0.	0.	0.	0.	0.	-.0064	-.0556	.0966	.1632	.0542	-.0458	0.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	B	MEMBER	1	SEQUENCE	27	LOCATION	DIS	TYPE	VA					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3240	0.	0.	0.	0.	0.	0.	-.0091	-.0631	.1071	.1801	.0731	-.0460	0.	
.3250	0.	0.	0.	0.	0.	0.	-.0113	-.0703	.1161	.1950	.0815	-.0467	0.	
.3260	0.	0.	0.	0.	0.	0.	-.0127	-.0773	.1235	.2078	.0890	-.0482	0.	
.3270	0.	0.	0.	0.	0.	0.	-.0133	-.0839	.1293	.2179	.0952	-.0507	0.	
.3280	0.	0.	0.	0.	0.	0.	-.0131	-.0901	.1334	.2252	.0993	-.0544	0.	
.3290	0.	0.	0.	0.	0.	0.	-.0120	-.0959	.1358	.2298	.1010	-.0595	0.	
.3300	0.	0.	0.	0.	0.	0.	-.0101	-.1012	.1365	.2316	.1000	-.0662	0.	
.3310	0.	0.	0.	0.	0.	0.	-.0072	-.1060	.1355	.2303	.0962	-.0745	0.	
.3320	0.	0.	0.	0.	0.	0.	-.0035	-.1103	.1327	.2259	.0897	-.0842	0.	
.3330	0.	0.	0.	0.	0.	0.	.0010	-.1139	.1283	.2184	.0807	-.0954	0.	
.3340	0.	0.	0.	0.	0.	0.	.0062	-.1169	.1222	.2081	.0695	-.1079	0.	
.3350	0.	0.	0.	0.	0.	0.	.0122	-.1191	.1145	.1951	.0569	-.1212	0.	
.3360	0.	0.	0.	0.	0.	0.	.0186	-.1207	.1053	.1798	.0431	-.1351	0.	
.3370	0.	0.	0.	0.	0.	0.	.0254	-.1214	.0948	.1623	.0282	-.1491	0.	
.3380	0.	0.	0.	0.	0.	0.	.0321	-.1215	.0831	.1433	.0127	-.1625	0.	
.3390	0.	0.	0.	0.	0.	0.	.0388	-.1208	.0704	.1233	-.0029	-.1746	0.	
.3400	0.	0.	0.	0.	0.	0.	.0452	-.1194	.0570	.1032	-.0181	-.1847	0.	
.3410	0.	0.	0.	0.	0.	0.	.0512	-.1175	.0430	.0838	-.0322	-.1922	0.	
.3420	0.	0.	0.	0.	0.	0.	.0566	-.1152	.0287	.0659	-.0445	-.1962	0.	
.3430	0.	0.	0.	0.	0.	0.	.0614	-.1124	.0143	.0501	-.0545	-.1964	0.	
.3440	0.	0.	0.	0.	0.	0.	.0655	-.1094	.0002	.0371	-.0616	-.1924	0.	
.3450	0.	0.	0.	0.	0.	0.	.0689	-.1061	-.0135	.0273	-.0656	-.1841	0.	
.3460	0.	0.	0.	0.	0.	0.	.0716	-.1027	-.0266	.0208	-.0664	-.1716	0.	
.3470	0.	0.	0.	0.	0.	0.	.0735	-.0992	-.0388	.0176	-.0646	-.1555	0.	
.3480	0.	0.	0.	0.	0.	0.	.0746	-.0955	-.0500	.0172	-.0606	-.1365	0.	
.3490	0.	0.	0.	0.	0.	0.	.0750	-.0918	-.0600	.0193	-.0547	-.1152	0.	
.3500	0.	0.	0.	0.	0.	0.	.0746	-.0880	-.0686	.0233	-.0473	-.0928	0.	
.3510	0.	0.	0.	0.	0.	0.	.0736	-.0841	-.0758	.0289	-.0389	-.0702	0.	
.3520	0.	0.	0.	0.	0.	0.	.0720	-.0801	-.0813	.0353	-.0298	-.0484	0.	
.3530	0.	0.	0.	0.	0.	0.	.0699	-.0761	-.0851	.0421	-.0202	-.0283	0.	
.3540	0.	0.	0.	0.	0.	0.	.0675	-.0721	-.0870	.0487	-.0102	-.0107	0.	
.3550	0.	0.	0.	0.	0.	0.	.0649	-.0682	-.0871	.0551	-.0001	.0038	0.	
.3560	0.	0.	0.	0.	0.	0.	.0620	-.0644	-.0852	.0609	.0096	.0146	0.	
.3570	0.	0.	0.	0.	0.	0.	.0589	-.0607	-.0813	.0658	.0185	.0216	0.	
.3580	0.	0.	0.	0.	0.	0.	.0556	-.0573	-.0755	.0697	.0264	.0246	0.	
.3590	0.	0.	0.	0.	0.	0.	.0522	-.0541	-.0679	.0726	.0330	.0237	0.	
.3600	0.	0.	0.	0.	0.	0.	.0488	-.0511	-.0586	.0744	.0383	.0192	0.	
.3610	0.	0.	0.	0.	0.	0.	.0452	-.0485	-.0480	.0752	.0421	.0114	0.	

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2 SAFETY COLD FKW24F--2 PSV

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.3510	0.	0.	0.	0.	0.	0.	0.	.0736	-.0841	-.0758	.0289	-.0389	-.0702	0.
.3520	0.	0.	0.	0.	0.	0.	0.	.0720	-.0801	-.0813	.0353	-.0298	-.0484	0.
.3530	0.	0.	0.	0.	0.	0.	0.	.0699	-.0761	-.0851	.0421	-.0202	-.0283	0.
.3540	0.	0.	0.	0.	0.	0.	0.	.0675	-.0721	-.0870	.0487	-.0102	-.0107	0.
.3550	0.	0.	0.	0.	0.	0.	0.	.0649	-.0682	-.0871	.0551	-.0001	.0038	0.
.3560	0.	0.	0.	0.	0.	0.	0.	.0620	-.0644	-.0852	.0609	.0096	.0146	0.
.3570	0.	0.	0.	0.	0.	0.	0.	.0589	-.0607	-.0813	.0658	.0185	.0216	0.
.3580	0.	0.	0.	0.	0.	0.	0.	.0556	-.0573	-.0755	.0697	.0264	.0246	0.
.3590	0.	0.	0.	0.	0.	0.	0.	.0522	-.0541	-.0679	.0726	.0330	.0237	0.
.3600	0.	0.	0.	0.	0.	0.	0.	.0488	-.0511	-.0586	.0744	.0383	.0192	0.
.3610	0.	0.	0.	0.	0.	0.	0.	.0452	-.0485	-.0480	.0752	.0421	.0114	0.

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SECTION	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	VA	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(PSI)
.3620	0.	0.	0.	0.	0.	0.	0.
.3630	0.	0.	0.	0.	0.	0.	0.
.3640	0.	0.	0.	0.	0.	0.	0.
.3650	0.	0.	0.	0.	0.	0.	0.
.3660	0.	0.	0.	0.	0.	0.	0.
.3670	0.	0.	0.	0.	0.	0.	0.
.3680	0.	0.	0.	0.	0.	0.	0.
.3690	0.	0.	0.	0.	0.	0.	0.
.3700	0.	0.	0.	0.	0.	0.	0.
.3710	0.	0.	0.	0.	0.	0.	0.
.3720	0.	0.	0.	0.	0.	0.	0.
.3730	0.	0.	0.	0.	0.	0.	0.
.3740	0.	0.	0.	0.	0.	0.	0.
.3750	0.	0.	0.	0.	0.	0.	0.
.3760	0.	0.	0.	0.	0.	0.	0.
.3770	0.	0.	0.	0.	0.	0.	0.
.3780	0.	0.	0.	0.	0.	0.	0.
.3790	0.	0.	0.	0.	0.	0.	0.
.3800	0.	0.	0.	0.	0.	0.	0.
.3810	0.	0.	0.	0.	0.	0.	0.
.3820	0.	0.	0.	0.	0.	0.	0.
.3830	0.	0.	0.	0.	0.	0.	0.
.3840	0.	0.	0.	0.	0.	0.	0.
.3850	0.	0.	0.	0.	0.	0.	0.
.3860	0.	0.	0.	0.	0.	0.	0.
.3870	0.	0.	0.	0.	0.	0.	0.
.3880	0.	0.	0.	0.	0.	0.	0.
.3890	0.	0.	0.	0.	0.	0.	0.
.3900	0.	0.	0.	0.	0.	0.	0.
.3910	0.	0.	0.	0.	0.	0.	0.
.3920	0.	0.	0.	0.	0.	0.	0.
.3930	0.	0.	0.	0.	0.	0.	0.
.3940	0.	0.	0.	0.	0.	0.	0.
.3950	0.	0.	0.	0.	0.	0.	0.
.3960	0.	0.	0.	0.	0.	0.	0.
.3970	0.	0.	0.	0.	0.	0.	0.
.3980	0.	0.	0.	0.	0.	0.	0.
.3990	0.	0.	0.	0.	0.	0.	0.

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.3890	0.	0.	0.	0.	0.	0.	0.	-.0515	.0865	-.0294	-.1094	-.0296	.1335	0.
.3900	0.	0.	0.	0.	0.	0.	0.	-.0496	.0963	-.0414	-.1143	-.0305	.1483	0.
.3910	0.	0.	0.	0.	0.	0.	0.	-.0472	.1059	-.0529	-.1194	-.0302	.1609	0.
.3920	0.	0.	0.	0.	0.	0.	0.	-.0445	.1153	-.0636	-.1248	-.0288	.1711	0.
.3930	0.	0.	0.	0.	0.	0.	0.	-.0416	.1243	-.0734	-.1305	-.0266	.1791	0.
.3940	0.	0.	0.	0.	0.	0.	0.	-.0386	.1328	-.0822	-.1363	-.0237	.1850	0.
.3950	0.	0.	0.	0.	0.	0.	0.	-.0356	.1407	-.0900	-.1421	-.0204	.1890	0.
.3960	0.	0.	0.	0.	0.	0.	0.	-.0329	.1479	-.0967	-.1473	-.0170	.1915	0.
.3970	0.	0.	0.	0.	0.	0.	0.	-.0304	.1541	-.1022	-.1519	-.0135	.1929	0.
.3980	0.	0.	0.	0.	0.	0.	0.	-.0282	.1592	-.1066	-.1554	-.0101	.1939	0.
.3990	0.	0.	0.	0.	0.	0.	0.	-.0265	.1632	-.1098	-.1576	-.0066	.1947	0.

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SECTION	8	MEMBER	1	SEQUENCE	27	LOCATION	DIS	TYPE	VA	DX	DY	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ				(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)										
.4000	0.	0.	0.	0.	0.	0.				-.0253	.1660	-.1117	-.1578	-.0031	.1957	0.

MAXIMUM VALUE OF DISCONTINUITY FORCE OCCURS AT

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

SECTION	8	MEMBER	1	SEQUENCE	27	LOCATION	END	TYPE	VA	DX	DY	DZ	RX	RY	RZ	STRESS
TIME	FX	FY	FZ	MX	MY	MZ				(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)										
0.0000	0.	0.	0.	0.	0.	0.				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
.0010	-1.	-5.	-1.	2.	0.	-1.				-.0000	-.0000	-.0000	.0000	.0000	-.0000	1.
.0020	-5.	-30.	-9.	11.	2.	-5.				-.0000	.0000	-.0001	.0000	.0002	.0000	6.
.0030	-14.	-64.	-36.	33.	-0.	-10.				-.0001	.0001	-.0004	-.0000	.0006	.0004	16.
.0040	-28.	-97.	-82.	67.	-8.	-19.				-.0001	.0002	-.0010	-.0004	.0014	.0013	33.
.0050	-53.	-147.	-138.	120.	-19.	-40.				-.0003	.0005	-.0018	-.0009	.0024	.0028	60.
.0060	-103.	-237.	-219.	199.	-33.	-75.				-.0005	.0008	-.0031	-.0017	.0035	.0049	101.
.0070	-174.	-361.	-347.	313.	-55.	-117.				-.0009	.0014	-.0051	-.0030	.0052	.0081	159.
.0080	-245.	-486.	-611.	458.	-98.	-161.				-.0012	.0023	-.0080	-.0048	.0088	.0133	232.
.0090	-332.	-585.	-1176.	611.	-198.	-225.				-.0012	.0036	-.0122	-.0071	.0158	.0210	319.
.0100	-445.	-692.	-1953.	765.	-351.	-319.				-.0007	.0053	-.0177	-.0096	.0261	.0311	422.
.0110	-539.	-836.	-2650.	933.	-498.	-417.				.0001	.0072	-.0244	-.0121	.0381	.0431	533.
.0120	-585.	-988.	-3127.	1105.	-599.	-486.				.0012	.0095	-.0319	-.0149	.0502	.0564	631.
.0130	-642.	-1136.	-3450.	1238.	-679.	-544.				.0027	.0119	-.0400	-.0174	.0618	.0701	709.
.0140	-800.	-1311.	-3710.	1309.	-785.	-616.				.0046	.0143	-.0486	-.0191	.0720	.0837	771.
.0150	-1091.	-1545.	-3931.	1345.	-921.	-675.				.0068	.0167	-.0577	-.0200	.0799	.0967	827.
.0160	-1530.	-1843.	-4316.	1384.	-1100.	-702.				.0092	.0190	-.0673	-.0207	.0860	.1091	891.
.0170	-2024.	-2173.	-4518.	1453.	-1273.	-700.				.0116	.0214	-.0775	-.0221	.0896	.1212	963.
.0180	-2327.	-2426.	-3704.	1589.	-1280.	-631.				.0137	.0241	-.0877	-.0255	.0884	.1329	1001.
.0190	-2208.	-2461.	-1842.	1780.	-1017.	-452.				.0156	.0271	-.0973	-.0316	.0943	.1437	984.
.0200	-1464.	-2201.	554.	1915.	-508.	-185.				.0189	.0302	-.1055	-.0386	.0845	.1516	933.
.0210	-437.	-1766.	1593.	1764.	-206.	-11.				.0259	.0321	-.1125	-.0404	.1012	.1554	832.
.0220	101.	-1585.	954.	1307.	-454.	-34.				.0360	.0320	-.1172	-.0321	.1263	.1527	649.
.0230	410.	-1712.	450.	861.	-751.	63.				.0464	.0301	-.1176	-.0185	.1423	.1398	536.

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.0130	-842.	-1136.	450.	1238.	-679.	-544.	.0027	.0119	-.0400	-.0174	.0618	.0701	709.
.0140	-800.	-1311.	-3710.	1309.	-785.	-616.	.0046	.0143	-.0486	-.0191	.0720	.0837	771.
.0150	-1091.	-1545.	-3931.	1349.	-921.	-675.	.0068	.0167	-.0577	-.0200	.0799	.0967	827.
.0160	-1530.	-1843.	-4316.	1384.	-1100.	-702.	.0092	.0190	-.0673	-.0207	.0860	.1091	891.
.0170	-2024.	-2173.	-4518.	1453.	-1273.	-700.	.0116	.0214	-.0775	-.0221	.0896	.1212	963.
.0180	-2327.	-2426.	-3704.	1589.	-1280.	-631.	.0137	.0241	-.0877	-.0255	.0884	.1329	1001.
.0190	-2208.	-2461.	-1842.	1780.	-1017.	-452.	.0156	.0271	-.0973	-.0316	.0843	.1437	984.
.0200	-1464.	-2201.	554.	1915.	-508.	-105.	.0189	.0302	-.1055	-.0386	.0845	.1516	933.
.0210	-437.	-1766.	1593.	1764.	-206.	-11.	.0259	.0321	-.1125	-.0404	.1012	.1554	832.
.0220	101.	-1585.	954.	1307.	-454.	-34.	.0360	.0320	-.1172	-.0321	.1263	.1527	649.
.0230	410.	-1712.	450.	861.	-751.	63.	.0464	.0301	-.1176	-.0185	.1423	.1398	536.

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SECTION	8	MEMBER	1	SEQUENCE	27	LOCATION	END	TYPE	VA							
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS			
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)			
.0240	376.	-1818.	-1705.	448.	-1132.	274.	.0571	.0265	-.1146	-.0043	.1520	.1146	585.			
.0250	118.	-1657.	-3263.	27.	-1528.	429.	.0667	.0217	-.1090	.0078	.1483	.0810	744.			
.0260	429.	-1334.	1202.	-33.	-1182.	812.	.0711	.0163	-.0985	.0134	.1083	.0421	672.			
.0270	754.	-1071.	6983.	348.	-411.	1490.	.0714	.0099	-.0831	.0135	.0431	-.0061	742.			
.0280	209.	-933.	6272.	549.	-456.	1876.	.0745	.0008	-.0668	.0188	-.0012	-.0641	940.			
.0290	-857.	-1094.	3059.	310.	-1479.	1751.	.0806	-.0111	-.0511	.0362	-.0220	-.1206	1084.			
.0300	-2115.	-1493.	714.	227.	-2814.	1901.	.0850	-.0238	-.0343	.0564	-.0444	-.1670	1595.			
.0310	-2945.	-2278.	-1245.	804.	-3466.	2489.	.0850	-.0362	-.0168	.0685	-.0751	-.2104	2035.			
.0320	-2554.	-2485.	776.	1571.	-2829.	2864.	.0786	-.0476	.0021	.0671	-.1225	-.2515	2025.			
.0330	-2302.	-1160.	2841.	1589.	-2339.	2460.	.0700	-.0588	.0206	.0600	-.1667	-.2795	1757.			
.0340	-3330.	193.	1041.	1102.	-2737.	1680.	.0612	-.0709	.0372	.0588	-.1958	-.2940	1591.			
.0350	-4342.	-367.	583.	1101.	-2628.	1359.	.0477	-.0841	.0541	.0637	-.2300	-.3030	1480.			
.0360	-3934.	-1274.	4636.	1390.	-1259.	1636.	.0288	-.0963	.0727	.0623	-.2741	-.3033	1166.			
.0370	-3003.	184.	6980.	679.	31.	1592.	.0103	-.1067	.0916	.0498	-.2989	-.2884	811.			
.0380	-2860.	2761.	4954.	-1215.	397.	445.	-.0061	-.1174	.1093	.0396	-.2962	-.2672	634.			
.0390	-2511.	3534.	4604.	-2828.	1016.	-824.	-.0249	-.1283	.1272	.0374	-.2906	-.2494	1460.			
.0400	-252.	3413.	6563.	-3388.	2578.	-626.	-.0439	-.1363	.1455	.0289	-.2745	-.2266	2017.			
.0410	2001.	4367.	3933.	-4118.	3342.	-42.	-.0571	-.1411	.1615	.0153	-.2240	-.1951	2485.			
.0420	3084.	5578.	-751.	-5688.	2958.	-896.	-.0659	-.1449	.1741	.0096	-.1531	-.1692	3034.			
.0430	4813.	6114.	-2405.	-6801.	3054.	-1997.	-.0735	-.1460	.1844	.0027	-.0830	-.1543	3617.			
.0440	7360.	6529.	-4991.	-6532.	3605.	-1500.	-.0776	-.1416	.1914	-.0166	-.0087	-.1385	3566.			
.0450	8454.	6192.	-8869.	-5707.	3377.	-626.	-.0783	-.1341	.1936	-.0311	.0599	-.1222	3121.			
.0460	7686.	4527.	-9028.	-5078.	2665.	-872.	-.0792	-.1260	.1915	-.0306	.0991	-.1160	2718.			
.0470	7356.	3554.	-6412.	-4247.	2780.	-906.	-.0798	-.1143	.1864	-.0377	.1152	-.1145	2416.			
.0480	7766.	4443.	-5597.	-3188.	3373.	161.	-.0766	-.0978	.1782	-.0580	.1287	-.1048	2177.			
.0490	6821.	4696.	-4792.	-2629.	3182.	665.	-.0703	-.0813	.1660	-.0587	.1349	-.0906	1959.			
.0500	4737.	2888.	-1482.	-2549.	2523.	131.	-.0629	-.0670	.1507	-.0294	.1293	-.0792	1682.			
.0510	3802.	1636.	414.	-2412.	2416.	249.	-.0523	-.0509	.1337	.0005	.1319	-.0625	1604.			
.0520	4038.	2547.	-654.	-2600.	2537.	915.	-.0378	-.0320	.1154	.0225	.1500	-.0337	1755.			
.0530	3635.	3447.	-516.	-3560.	2102.	381.	-.0227	-.0140	.0956	.0584	.1647	-.0021	1946.			
.0540	2706.	2840.	936.	-4311.	1521.	-715.	-.0092	.0028	.0747	.1069	.1699	.0256	2168.			
.0550	2624.	1897.	568.	-3763.	1549.	-515.	.0034	.0215	.0533	.1442	.1744	.0545	1922.			
.0560	2928.	1229.	401.	-2472.	1876.	153.	.0142	.0416	.0315	.1699	.1720	.0849	1456.			
.0570	2391.	258.	2672.	-1340.	1860.	-362.	.0222	.0600	.0090	.1971	.1563	.1092	1088.			
.0580	1604.	-773.	3950.	80.	1730.	-1043.	.0295	.0772	-.0144	.2177	.1422	.1284	948.			
.0590	1483.	-1726.	2788.	2422.	1862.	-494.	.0374	.0940	-.0380	.2243	.1382	.1487	1450.			
.0600	1119.	-3587.	2626.	5051.	1785.	189.	.0443	.1074	-.0618	.2323	.1322	.1679	2512.			
.0610	-120.	-6075.	3568.	7087.	1125.	-117.	.0504	.1157	-.0855	.2478	.1232	.1821	3363.			

ADLPIPE PAGE 419 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.05.

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	3802.	1638.	414.	-2412.	2416.	249.	-.0523	-.0509	.1337	.0005	.1319	-.0625	1604.
.0520	4038.	2547.	-654.	-2600.	2537.	2547.	-.378	-.0320	.1154	.0225	.1500	-.0337	1755.
.0530	3635.	3447.	-516.	-3560.	2102.	381.	-.0227	-.0140	.0956	.0584	.1647	-.0021	1946.
.0540	2706.	2840.	936.	-4311.	1521.	-715.	-.0092	.0028	.0747	.1069	.1599	.0256	2168.
.0550	2624.	1897.	568.	-3763.	1549.	-515.	.0034	.0215	.0533	.1442	.1744	.0545	1922.
.0560	2928.	1229.	401.	-2472.	1878.	153.	.0142	.0416	.0315	.1699	.1720	.0849	1456.
.0570	2391.	258.	2672.	-1347.	1660.	-362.	.0222	.0600	.0090	.1971	.1563	.1092	1088.
.0580	1604.	-773.	3950.	80.	1730.	-1043.	.0295	.0772	-.0144	.2177	.1422	.1284	948.
.0590	1483.	-1726.	2788.	2422.	1862.	-494.	.0374	.0940	-.0380	.2243	.1382	.1487	1450.
.0600	1119.	-3587.	2626.	0051.	1785.	189.	.0443	.1074	-.0618	.2323	.1322	.1679	2512.
.0610	-120.	-6075.	3568.	7007.	1125.	-117.	.0504	.1157	-.0855	.2478	.1232	.1821	3363.

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DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.05.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FKM24F--2 PSVCONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITSINTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	E	MEMBER	1	SEQUENCE	27	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0620	-1197.	-7256.	2309.	8493.	726.	-542.	.0574	.1208	-.1083	.2535	.1227	.1959	3991.		
.0630	-1580.	-6929.	342.	9431.	-253.	-470.	.0642	.1232	-.1290	.2457	.1238	.2134	4427.		
.0640	-2413.	-7023.	819.	9754.	-1021.	-641.	.0684	.1202	-.1472	.2419	.1103	.2299	4606.		
.0650	-4163.	-7967.	1682.	9520.	-2219.	-1150.	.0704	.1117	-.1631	.2446	.0863	.2417	4613.		
.0660	-5685.	-8108.	906.	8950.	-3327.	-1279.	.0711	.1004	-.1756	.2364	.0617	.2522	4514.		
.0670	-6351.	-6843.	1124.	7924.	-3980.	-1226.	.0696	.0873	-.1836	.2127	.0327	.2614	4195.		
.0680	-6854.	-5344.	2888.	6372.	-4548.	-1604.	.0658	.0712	-.1875	.1846	.0008	.2639	3745.		
.0690	-7471.	-4437.	2661.	4809.	-5324.	-1922.	.0619	.0527	-.1882	.1553	-.0181	.2581	3481.		
.0700	-7590.	-3921.	122.	3741.	-6026.	-1519.	.0585	.0334	-.1856	.1190	-.0198	.2468	3399.		
.0710	-7171.	-3498.	-1824.	3029.	-6420.	-915.	.0536	.0141	-.1791	.0748	-.0171	.2284	3354.		
.0720	-6723.	-2978.	-2896.	2421.	-6505.	-766.	.0462	-.0050	-.1689	.0235	-.0192	.1980	3273.		
.0730	-6051.	-2163.	-3849.	2149.	-6054.	-676.	.0364	-.0227	-.1548	-.0381	-.0274	.1564	3027.		
.0740	-4828.	-1245.	-3645.	2417.	-4971.	-93.	.0250	-.0383	-.1372	-.1068	-.0431	.1095	2591.		
.0750	-3761.	-777.	-2726.	2908.	-3809.	699.	.0133	-.0528	-.1170	-.1702	-.0631	.0593	2270.		
.0760	-3409.	-820.	-2829.	3217.	-2930.	1268.	.0028	-.0670	-.0950	-.2208	-.0828	.0046	2124.		
.0770	-2998.	-651.	-2794.	3254.	-1860.	1742.	-.0067	-.0800	-.0706	-.2630	-.1051	-.0524	1937.		
.0780	-1800.	395.	-856.	2937.	-303.	2318.	-.0153	-.0910	-.0436	-.2995	-.1323	-.1058	1759.		
.0790	-512.	1988.	968.	2017.	1089.	2746.	-.0209	-.1007	-.0153	-.3214	-.1544	-.1540	1676.		
.0800	-20.	3155.	549.	498.	1723.	2796.	-.0224	-.1106	.0127	-.3190	-.1642	-.1992	1557.		
.0810	161.	3651.	-169.	-1198.	2005.	2763.	-.0214	-.1199	.0403	-.2959	-.1694	-.2410	1696.		
.0820	786.	4263.	625.	-2776.	2459.	2921.	-.0196	-.1267	.0681	-.2639	-.1776	-.2766	2212.		
.0830	1504.	5457.	1644.	-4339.	2865.	2912.	-.0171	-.1306	.0951	-.2273	-.1861	-.3067	2793.		
.0840	1772.	6596.	2175.	-5846.	2920.	2417.	-.0138	-.1321	.1202	-.1826	-.1915	-.3343	3265.		
.0850	1886.	6934.	2983.	-6810.	2800.	1929.	-.0102	-.1312	.1429	-.1296	-.1919	-.3578	3567.		
.0860	2146.	6443.	3417.	-6911.	2619.	1980.	-.0060	-.1272	.1628	-.0730	-.1825	-.3733	3586.		
.0870	2302.	5472.	2730.	-6465.	2248.	2165.	-.0012	-.1206	.1793	-.0143	-.1604	-.3806	3364.		
.0880	2425.	4454.	2077.	-5909.	1829.	1908.	.0031	-.1119	.1924	.0446	-.1296	-.3809	3033.		
.0890	2994.	3781.	1810.	-5267.	1658.	1463.	.0066	-.1013	.2022	.0987	-.0904	-.3715	2677.		
.0900	3855.	3195.	577.	-4450.	1613.	1225.	.0097	-.0894	.2080	.1487	-.0400	-.3495	2291.		
.0910	4342.	1993.	-1372.	-3631.	1419.	922.	.0119	-.0777	.2095	.2009	.0157	-.3163	1877.		
.0920	4488.	423.	-2371.	-3038.	1254.	299.	.0117	-.0668	.2071	.2532	.0661	-.2734	1547.		
.0930	4916.	-328.	-2378.	-2731.	1505.	-396.	.0089	-.0556	.2014	.2939	.1078	-.2203	1473.		
.0940	5636.	-18.	-2134.	-2728.	2126.	-1107.	.0042	-.0441	.1925	.3201	.1419	-.1588	1702.		
.0950	6064.	288.	-1431.	-2999.	2711.	-2063.	-.0016	-.0336	.1801	.3405	.1688	-.0935	2127.		
.0960	6062.	-6.	-609.	-3319.	3048.	-3021.	-.0074	-.0245	.1639	.3582	.1920	-.0267	2542.		
.0970	5994.	-417.	-698.	-3469.	3235.	-3538.	-.0121	-.0159	.1445	.3660	.2158	.0402	2773.		
.0980	5970.	-537.	-1163.	-3512.	3389.	-3832.	-.0160	-.0074	.1225	.3597	.2363	.1021	2908.		
.0990	5785.	-454.	-845.	-3543.	3487.	-4304.	-.0199	.0004	.0987	.3402	.2463	.1537	3081.		

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S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK
2 SAFETY COLD FKM24F--2 PSVCONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITSINTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.0890	2994.	3781.	1010.	-5267.	1658.	1463.	.0066	-.1013	.2022	.0987	-.0904	-.3715	2677.
.0900	3855.	3195.	577.	-4450.	1613.	1225.	.0097	-.0894	.2080	.1487	-.0400	-.3495	2291.
.0910	4342.	1993.	-1372.	-3631.	1419.	922.	.0119	-.0777	.2095	.2009	.0157	-.3163	1877.
.0920	4488.	423.	-2371.	-7038.	1254.	299.	.0117	-.0668	.2071	.2532	.0561	-.2734	1547.
.0930	4916.	-328.	-2378.	-2731.	1505.	-396.	.0089	-.0556	.2014	.2939	.1078	-.2203	1473.
.0940	5636.	-18.	-2134.	-2728.	2126.	-1107.	.0042	-.0441	.1925	.3201	.1419	-.1588	1702.
.0950	6064.	288.	-1431.	-2999.	2711.	-2063.	-.0016	-.0336	.1801	.3405	.1688	-.0935	2127.
.0960	6062.	-6.	-609.	-3319.	3048.	-3021.	-.0074	-.0245	.1639	.3582	.1920	-.0267	2542.
.0970	5994.	-417.	-698.	-3469.	3235.	-3538.	-.0121	-.0159	.1445	.3660	.2158	.0402	2773.
.0980	5970.	-537.	-1162.	-3512.	3389.	-3832.	-.0160	-.0074	.1225	.3597	.2363	.1021	2908.
.0990	5785.	-454.	-845.	-3543.	3487.	-4304.	-.0199	.0004	.0987	.3402	.2463	.1537	3081.

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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	8	MEMBER	1	SEQUENCE	27	LOCATION	END	TYPE	VA							
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)			
.1000	5390.	-310.	-259.	-3343.	3473.	-4656.	-.0232	.0080	.0734	.3071	.2463	.1940	3141.			
.1010	4808.	-402.	-129.	-2654.	3332.	-4463.	-.0255	.0153	.0473	.2615	.2380	.2227	2891.			
.1020	3935.	-1056.	260.	-1592.	3052.	-3943.	-.0269	.0217	.0210	.2084	.2193	.2372	2453.			
.1030	2855.	-1856.	1159.	-505.	2629.	-3419.	-.0273	.0271	-.0048	.1494	.1914	.2373	2035.			
.1040	1894.	-2010.	1540.	415.	2096.	-2769.	-.0253	.0322	-.0294	.0825	.1614	.2270	1639.			
.1050	1171.	-1676.	1280.	1165.	1473.	-1870.	-.0207	.0369	-.0524	.0119	.1326	.2088	1242.			
.1060	452.	-1722.	1104.	1757.	705.	-889.	-.0137	.0401	-.0737	-.0528	.1040	.1824	980.			
.1070	-434.	-2178.	386.	2131.	-296.	105.	-.0045	.0418	-.0934	-.1083	.0780	.1501	1009.			
.1080	-1021.	-2167.	-1086.	2220.	-1312.	1223.	.0074	.0430	-.1113	-.1595	.0583	.1168	1337.			
.1090	-925.	-1291.	-2761.	1934.	-2164.	2312.	.0222	.0440	-.1278	-.2072	.0497	.0848	1739.			
.1100	-2034.	-864.	-5363.	1327.	-3532.	2715.	.0369	.0431	-.1436	-.2401	.0360	.0509	2178.			
.1110	-3344.	-1227.	-5656.	1108.	-4503.	3046.	.0483	.0417	-.1577	-.2647	.0037	.0160	2600.			
.1120	-3906.	-1396.	-3677.	1521.	-4589.	3877.	.0563	.0416	-.1695	-.2919	-.0439	-.0150	2904.			
.1130	-4673.	-945.	-2104.	1918.	-4629.	4457.	.0627	.0422	-.1800	-.3162	-.0941	-.0402	3143.			
.1140	-6195.	-635.	-926.	2021.	-5050.	4182.	.0678	.0420	-.1897	-.3273	-.1413	-.0614	3215.			
.1150	-7495.	-948.	518.	2427.	-5301.	3845.	.0713	.0416	-.1976	-.3281	-.1823	-.0776	3273.			
.1160	-8129.	-1555.	949.	3386.	-5241.	4049.	.0736	.0421	-.2032	-.3242	-.2112	-.0849	3486.			
.1170	-8609.	-2235.	1261.	4287.	-5203.	3990.	.0741	.0425	-.2062	-.3117	-.2313	-.0844	3671.			
.1180	-9746.	-2770.	930.	4643.	-5547.	3079.	.0718	.0421	-.2061	-.2891	-.2488	-.0790	3684.			
.1190	-9873.	-2906.	2826.	4983.	-5149.	2251.	.0649	.0422	-.2013	-.2679	-.2705	-.0687	3520.			
.1200	-8871.	-2536.	4676.	5485.	-4155.	2104.	.0555	.0431	-.1922	-.2507	-.2851	-.0508	3372.			
.1210	-8538.	-2241.	3061.	5511.	-3904.	1764.	.0466	.0428	-.1804	-.2233	-.2796	-.0265	3271.			
.1220	-8513.	-2848.	3129.	5010.	-3920.	645.	.0358	.0400	-.1653	-.1810	-.2690	-.0030	2996.			
.1230	-7768.	-3155.	3138.	4462.	-3528.	-250.	.0237	.0372	-.1463	-.1418	-.2507	.0202	2668.			
.1240	-5894.	-2380.	2539.	3967.	-2542.	-533.	.0111	.0358	-.1235	-.1148	-.2228	.0443	2222.			
.1250	-4246.	-1455.	2360.	3046.	-1776.	-1184.	-.0015	.0337	-.0983	-.0861	-.1897	.0658	1743.			
.1260	-3557.	-1105.	1258.	1787.	-1650.	-2240.	-.0132	.0304	-.0719	-.0505	-.1494	.0822	1549.			
.1270	-1920.	-1002.	1056.	978.	-972.	-2552.	-.0240	.0278	-.0439	-.0216	-.1026	.0932	1359.			
.1280	134.	-461.	-1036.	402.	-187.	-2240.	-.0322	.0263	-.0156	-.0021	-.0429	.1005	1070.			
.1290	1477.	-39.	-2551.	-560.	175.	-2552.	-.0389	.0241	.0122	.0192	.0164	.1006	1227.			
.1300	2484.	124.	-2265.	-1658.	509.	-3175.	-.0453	.0216	.0394	.0396	.0673	.0932	1696.			
.1310	3608.	617.	-3659.	-2340.	1077.	-2893.	-.0504	.0204	.0657	.0482	.1149	.0825	1815.			
.1320	4963.	1003.	-3492.	-2739.	2032.	-2095.	-.0559	.0198	.0909	.0501	.1487	.0682	1876.			
.1330	5429.	1123.	-2315.	-3518.	2606.	-1859.	-.0612	.0184	.1141	.0559	.1691	.0501	2229.			
.1340	5768.	1526.	-920.	-4541.	3123.	-1879.	-.0653	.0170	.1352	.0599	.1828	.0301	2729.			
.1350	6837.	2549.	-397.	-5406.	3975.	-1415.	-.0676	.0168	.1542	.0557	.1974	.0113	3214.			
.1360	7578.	3458.	-1383.	-6304.	4494.	-928.	-.0677	.0167	.1699	.0535	.2128	-.0059	3654.			
.1370	7868.	3482.	-474.	-7278.	4743.	-929.	-.0678	.0156	.1825	.0601	.2176	-.0238	4094.			

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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

.1270	-1920.	-1002.	1056.	978.	-972.	-2552.	-0240	.0278	-.0439	-.0216	-.1026	.0932	1549.
.1280	134.	-461.	-1036.	402.	-187.	-2240.	-.0322	.0263	-.0156	-.0021	-.0429	.1005	1070.
.1290	1477.	-39.	-2551.	-560.	175.	-2552.	-.0389	.0241	.0122	.0192	.0164	.1006	1227.
.1300	2484.	174.	-1265.	-1658.	509.	-3175.	-.0493	.0216	.0394	.0396	.0673	.0932	1696.
.1310	2608.	617.	-3659.	-2340.	1077.	-2893.	-.0504	.0204	.0657	.0482	.1149	.0825	1815.
.1320	4063.	1003.	-3492.	-2739.	2032.	-2095.	-.0559	.0198	.0909	.0501	.1487	.0682	1876.
.1330	5429.	1123.	-2315.	-3518.	2606.	-1859.	-.0612	.0184	.1141	.0559	.1691	.0501	2229.
.1340	5768.	1526.	-920.	-4541.	3123.	-1879.	-.0653	.0170	.1352	.0599	.1828	.0301	2729.
.1350	6837.	2549.	-397.	-5406.	3975.	-1415.	-.0676	.0168	.1542	.0557	.1974	.0113	3214.
.1360	7578.	3458.	-1383.	-6304.	4494.	-928.	-.0677	.0167	.1699	.0535	.2128	-.0059	3654.
.1370	7668.	3482.	-474.	-7278.	4743.	-929.	-.0678	.0156	.1825	.0601	.2176	-.0238	4094.

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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	8	MEMBER	1	SEQUENCE	27	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(DEG)	(DEG)	(PSI)
.1380	7991.	3632.	-834.	-8037.	4837.	-802.	-.0668	.0155	.1915	.0637	.2185	-.0393			4412.
.1390	8533.	4391.	-1583.	-8353.	5224.	-313.	-.0658	.0172	.1974	.0563	.2111	-.0521			4619.
.1400	8851.	4961.	-501.	-8417.	5656.	-175.	-.0665	.0194	.1997	.0465	.1865	-.0652			4753.
.1410	8185.	4944.	187.	-8262.	5584.	-447.	-.0675	.0216	.1976	.0394	.1517	-.0780			4678.
.1420	7668.	4573.	1281.	-7509.	5597.	-393.	-.0685	.0248	.1914	.0282	.1112	-.0879			4393.
.1430	7213.	4363.	1235.	-6364.	5503.	24.	-.0682	.0291	.1811	.0114	.0728	-.0929			3943.
.1440	6375.	4040.	1494.	-5279.	5082.	62.	-.0673	.0334	.1667	-.0038	.0337	-.0952			3434.
.1450	5213.	3491.	2027.	-4252.	4395.	-251.	-.0656	.0376	.1486	-.0167	-.0050	-.0948			2868.
.1460	4016.	3053.	931.	-3038.	3551.	-250.	-.0623	.0425	.1273	-.0327	-.0367	-.0885			2193.
.1470	3223.	2507.	1109.	-1693.	2883.	-5.	-.0586	.0479	.1034	-.0497	-.0575	-.0763			1567.
.1480	1817.	1842.	731.	-669.	1784.	-45.	-.0540	.0526	.0769	-.0621	-.0944	-.0594			893.
.1490	124.	1203.	211.	112.	542.	-248.	-.0493	.0570	.0487	-.0728	-.1189	-.0384			284.
.1500	-1057.	804.	702.	961.	-289.	-173.	-.0453	.0620	.0200	-.0877	-.1436	-.0125			477.
.1510	-2250.	604.	798.	1748.	-1064.	-16.	-.0415	.0672	-.0089	-.1039	-.1645	.0182			959.
.1520	-3498.	138.	1861.	2328.	-1789.	-194.	-.0384	.0717	-.0375	-.1155	-.1820	.0501			1379.
.1530	-4814.	-390.	1850.	2767.	-2566.	-494.	-.0348	.0757	-.0654	-.1242	-.1883	.0833			1784.
.1540	-5417.	-750.	1870.	3286.	-2966.	-551.	-.0310	.0802	-.0915	-.1347	-.1835	.1178			2090.
.1550	-5527.	-977.	1926.	3761.	-3164.	-573.	-.0269	.0847	-.1154	-.1446	-.1675	.1527			2319.
.1560	-6054.	-1250.	41.	4011.	-3699.	-868.	-.0219	.0887	-.1374	-.1498	-.1394	.1856			2589.
.1570	-6137.	-1825.	-421.	4359.	-3871.	-1179.	-.0179	.0925	-.1561	-.1532	-.1111	.2136			2787.
.1580	-5817.	-2259.	-890.	4892.	-3717.	-1162.	-.0148	.0968	-.1713	-.1593	-.0831	.2378			2930.
.1590	-5706.	-2453.	-2101.	5344.	-3615.	-1085.	-.0121	.1011	-.1831	-.1657	-.0575	.2577			3066.
.1600	-5602.	-2787.	-1269.	5629.	-3342.	-1202.	-.0112	.1047	-.1909	-.1689	-.0434	.2707			3119.
.1610	-5143.	-2991.	-281.	5864.	-2823.	-1120.	-.0108	.1080	-.1947	-.1718	-.0339	.2778			3095.
.1620	-4767.	-2779.	-881.	5936.	-2565.	-713.	-.0084	.1109	-.1954	-.1734	-.0163	.2816			3049.
.1630	-4394.	-2867.	-905.	5719.	-2409.	-493.	-.0057	.1122	-.1928	-.1666	-.0010	.2793			2917.
.1640	-4134.	-3120.	-451.	5245.	-2387.	-424.	-.0027	.1121	-.1870	-.1529	.0114	.2713			2708.
.1650	-3812.	-2904.	-1509.	4718.	-2401.	-64.	.0011	.1115	-.1782	-.1399	.0248	.2599			2481.
.1660	-3134.	-2491.	-1160.	4201.	-2124.	384.	.0038	.1102	-.1661	-.1268	.0300	.2441			2213.
.1670	-2898.	-2193.	-428.	3547.	-2013.	527.	.0057	.1076	-.1516	-.1088	.0278	.2235			1927.
.1680	-2783.	-2041.	567.	2966.	-1886.	588.	.0068	.1038	-.1349	-.0879	.0212	.1993			1670.
.1690	-2640.	-1784.	506.	2598.	-1713.	849.	.0076	.0995	-.1163	-.0679	.0157	.1737			1511.
.1700	-2376.	-1599.	1118.	2319.	-1395.	1011.	.0072	.0941	-.0958	-.0466	.0081	.1467			1354.
.1710	-1736.	-1512.	3522.	2004.	-814.	876.	.0055	.0874	-.0736	-.0231	-.0005	.1181			1094.
.1720	-1318.	-1010.	2690.	1569.	-556.	718.	.0052	.0797	-.0511	.0004	.0060	.0919			849.
.1730	-620.	-609.	1755.	1180.	-201.	595.	.0047	.0709	-.0280	.0249	.0192	.0677			627.
.1740	199.	-614.	1826.	823.	273.	370.	.0031	.0605	-.0045	.0519	.0325	.0447			442.
.1750	902.	-535.	1076.	398.	698.	88.	.0009	.0492	.0188	.0777	.0484	.0237			379.

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

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.1650	-3012.	-2904.	509.	4718.	-2401.	-64.	.011	.1115	-.1782	-.1399	.0248	.2599	2481.
.1660	-3134.	-2491.	-1160.	4201.	-2124.	384.	.078	.1102	-.1661	-.1268	.0300	.2441	2213.
.1670	-2898.	-2193.	-428.	3547.	-2013.	527.	.0057	.1076	-.1516	-.1088	.0278	.2235	1927.
.1680	-2783.	-2041.	567.	2966.	-1886.	588.	.0068	.1038	-.1349	-.0879	.0212	.1993	1670.
.1690	-2640.	-1784.	506.	2598.	-1717.	649.	.0076	.0995	-.1163	-.0679	.0157	.1737	1511.
.1700	-2776.	-1599.	1117.	2319.	-1395.	1011.	.0072	.0941	-.0958	-.0466	.0081	.1467	1354.
.1710	-1736.	-1512.	2522.	2004.	-314.	876.	.0055	.0874	-.0736	-.0231	-.0005	.1181	1094.
.1720	-1318.	-1010.	2690.	1569.	-556.	718.	.0052	.0797	-.0511	.0004	.0060	.0919	849.
.1730	-620.	-609.	1755.	1180.	-201.	595.	.0047	.0709	-.0280	.0249	.0192	.0677	627.
.1740	199.	-614.	1826.	822.	273.	370.	.0031	.0605	-.0045	.0519	.0325	.0447	442.
.1750	902.	-575.	1076.	398.	698.	58.	.0009	.0492	.0188	.0777	.0484	.0237	379.

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SECTION	8	MEMBER	1	SEQUENCE	27	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.1760	1880.	-81.	721.	-91.	1321.	-189.	-.0021	.0374	.0417	.0984	.0531	.0052	627.		
.1770	2633.	610.	-48.	-700.	1928.	-516.	-.0058	.0250	.0636	.1158	.0758	-.0106	949.		
.1780	3321.	977.	380.	-1256.	2376.	-846.	-.0106	.0119	.0841	.1321	.0815	-.0252	1320.		
.1790	3728.	1155.	47.	-1705.	2749.	-1013.	-.0155	-.0017	.1027	.1457	.0852	-.0382	1589.		
.1800	3928.	1410.	-807.	-2122.	2951.	-1099.	-.0203	-.0152	.1192	.1552	.0865	-.0494	1779.		
.1810	4390.	1724.	312.	-2527.	3295.	-1269.	-.0258	-.0285	.1337	.1601	.0799	-.0601	2035.		
.1820	4544.	2247.	-20.	-2954.	3320.	-1437.	-.0301	-.0414	.1455	.1608	.0751	-.0698	2189.		
.1830	4580.	2578.	-797.	-3250.	3177.	-1508.	-.0334	-.0541	.1544	.1590	.0705	-.0791	2244.		
.1840	4479.	2537.	-1181.	-3382.	2908.	-1509.	-.0363	-.0663	.1606	.1561	.0528	-.0883	2207.		
.1850	4227.	2435.	-1573.	-3408.	2534.	-1464.	-.0386	-.0776	.1642	.1502	.0521	-.0971	2105.		
.1860	4090.	2514.	-1449.	-3350.	2287.	-1413.	-.0405	-.0876	.1654	.1391	.0369	-.1064	2013.		
.1870	3680.	2792.	-1935.	-3296.	1956.	-1422.	-.0417	-.0963	.1642	.1242	.0189	-.1158	1916.		
.1880	3287.	2867.	-1071.	-3154.	1786.	-1442.	-.0429	-.1037	.1612	.1080	-.0059	-.1258	1828.		
.1890	2849.	2795.	-249.	-2907.	1659.	-1301.	-.0431	-.1095	.1562	.0909	-.0311	-.1350	1683.		
.1900	2302.	2771.	-447.	-2676.	1467.	-1056.	-.0416	-.1137	.1493	.0732	-.0515	-.1432	1513.		
.1910	2608.	2777.	313.	-2548.	1446.	-906.	-.0389	-.1163	.1410	.0559	-.0703	-.1515	1437.		
.1920	1779.	2971.	652.	-2549.	1411.	-776.	-.0344	-.1172	.1312	.0385	-.0827	-.1585	1413.		
.1930	1661.	3166.	413.	-2534.	1376.	-498.	-.0280	-.1164	.1200	.0218	-.0878	-.1642	1371.		
.1940	1589.	3054.	281.	-2432.	1342.	-110.	-.0203	-.1140	.1074	.0077	-.0884	-.1690	1303.		
.1950	1423.	2737.	155.	-2283.	1233.	303.	-.0116	-.1102	.0934	-.0039	-.0856	-.1730	1224.		
.1960	1176.	2500.	-215.	-2086.	1071.	750.	-.0020	-.1048	.0782	-.0150	-.0305	-.1754	1154.		
.1970	942.	2302.	-222.	-1767.	961.	1235.	.0077	-.0978	.0621	-.0262	-.0764	-.1763	1106.		
.1980	663.	1923.	386.	-1291.	869.	1714.	.0172	-.0895	.0451	-.0350	-.0741	-.1753	1085.		
.1990	207.	1340.	849.	-708.	636.	2163.	.0269	-.0804	.0273	-.0398	-.0702	-.1713	1107.		
.2000	-395.	676.	824.	-94.	229.	2552.	.0368	-.0707	.0087	-.0400	-.0625	-.1633	1201.		
.2010	-999.	17.	773.	501.	-247.	2829.	.0465	-.0606	-.0101	-.0360	-.0524	-.1509	1350.		
.2020	-1567.	-568.	796.	1050.	-744.	2958.	.0554	-.0504	-.0287	-.0283	-.0413	-.1338	1512.		
.2030	-2139.	-1068.	689.	1542.	-1272.	2947.	.0632	-.0404	-.0468	-.0170	-.0295	-.1115	1669.		
.2040	-2703.	-1570.	634.	1985.	-1789.	2782.	.0694	-.0309	-.0639	-.0021	-.0183	-.0849	1807.		
.2050	-3228.	-2093.	674.	2389.	-2254.	2475.	.0735	-.0221	-.0798	.0158	-.0083	-.0545	1927.		
.2060	-3700.	-2543.	596.	2757.	-2661.	2070.	.0757	-.0140	-.0940	.0349	.0010	-.0209	2041.		
.2070	-4061.	-2880.	550.	3096.	-2968.	1586.	.0758	-.0066	-.1063	.0539	.0090	.0149	2143.		
.2080	-4228.	-3163.	769.	3474.	-3118.	1037.	.0738	-.0000	-.1163	.0722	.0159	.0513	2227.		
.2090	-4215.	-3430.	866.	3791.	-3152.	466.	.0702	.0056	-.1238	.0894	.0239	.0867	2321.		
.2100	-4109.	-3703.	479.	4154.	-3149.	-99.	.0658	.0102	-.1290	.1052	.0347	.1199	2443.		
.2110	-3887.	-4000.	27.	4510.	-3079.	-646.	.0605	.0137	-.1316	.1193	.0469	.1496	2577.		
.2120	-3492.	-4246.	-255.	4840.	-2881.	-1127.	.0546	.0161	-.1316	.1303	.0590	.1741	2692.		
.2130	-2987.	-4342.	-669.	5100.	-2590.	-1502.	.0486	.0173	-.1290	.1373	.0711	.1926	2771.		

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