

50-305

RESPONSE TO NUREG-0737 ITEM II.D.1

Docket # *50-305*

Control # *8403280048*

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

.2170	0.	0.	0.	0.	0.	0.	0.	0.0673	-0.0261	-0.0224	.0848	.0196	-0.0903	0.
.2180	0.	0.	0.	0.	0.	0.	0.	0.0579	-0.0256	-0.0176	.0735	.0152	-0.0994	0.
.2190	0.	0.	0.	0.	0.	0.	0.	0.0476	-0.0259	-0.0128	.0627	.0137	-0.1035	0.
.2200	0.	0.	0.	0.	0.	0.	0.	0.0368	-0.0269	-0.0079	.0530	.0144	-0.1013	0.
.2210	0.	0.	0.	0.	0.	0.	0.	0.0259	-0.0285	-0.0031	.0446	.0162	-0.0923	0.
.2220	0.	0.	0.	0.	0.	0.	0.	0.0153	-0.0301	.0015	.0380	.0188	-0.0767	0.
.2230	0.	0.	0.	0.	0.	0.	0.	0.0053	-0.0314	.0055	.0339	.0214	-0.0557	0.
.2240	0.	0.	0.	0.	0.	0.	0.	-0.0040	-0.0319	.0091	.0316	.0223	-0.0312	0.
.2250	0.	0.	0.	0.	0.	0.	0.	-0.0125	-0.0317	.0123	.0304	.0198	-0.0058	0.
.2260	0.	0.	0.	0.	0.	0.	0.	-0.0203	-0.0307	.0151	.0297	.0134	.0182	0.
.2270	0.	0.	0.	0.	0.	0.	0.	-0.0273	-0.0288	.0174	.0290	.0038	.0388	0.

ADLPIPE PAGE 967

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.55.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	TIME (SEC)	MEMBER	SEQUENCE	LOCATION	TYPE	VA	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)
21	.2280	1	38	DIS	VA		0.	0.	0.	0.	0.	0.	-0.0339	-0.0262	.0193	.0273	-0.0079	.0548	0.
	.2290						0.	0.	0.	0.	0.	0.	-0.0400	-0.0229	.0210	.0238	-0.0213	.0648	0.
	.2300						0.	0.	0.	0.	0.	0.	-0.0460	-0.0189	.0224	.0184	-0.0357	.0683	0.
	.2310						0.	0.	0.	0.	0.	0.	-0.0515	-0.0143	.0235	.0110	-0.0503	.0655	0.
	.2320						0.	0.	0.	0.	0.	0.	-0.0566	-0.0093	.0253	.0017	-0.0642	.0572	0.
	.2330						0.	0.	0.	0.	0.	0.	-0.0609	-0.0039	.0270	-0.0087	-0.0771	.0444	0.
	.2340						0.	0.	0.	0.	0.	0.	-0.0645	.0018	.0288	-0.0193	-0.0884	.0282	0.
	.2350						0.	0.	0.	0.	0.	0.	-0.0671	.0076	.0305	-0.0289	-0.0971	.0106	0.
	.2360						0.	0.	0.	0.	0.	0.	-0.0685	.0133	.0318	-0.0371	-0.1019	-0.0065	0.
	.2370						0.	0.	0.	0.	0.	0.	-0.0685	.0185	.0327	-0.0435	-0.1023	-0.0216	0.
	.2380						0.	0.	0.	0.	0.	0.	-0.0670	.0233	.0327	-0.0482	-0.0986	-0.0334	0.
	.2390						0.	0.	0.	0.	0.	0.	-0.0641	.0275	.0318	-0.0515	-0.0906	-0.0411	0.
	.2400						0.	0.	0.	0.	0.	0.	-0.0597	.0315	.0296	-0.0536	-0.0789	-0.0444	0.
	.2410						0.	0.	0.	0.	0.	0.	-0.0538	.0353	.0264	-0.0547	-0.0645	-0.0437	0.
	.2420						0.	0.	0.	0.	0.	0.	-0.0466	.0391	.0223	-0.0553	-0.0439	-0.0397	0.
	.2430						0.	0.	0.	0.	0.	0.	-0.0382	.0429	.0174	-0.0558	-0.0329	-0.0334	0.
	.2440						0.	0.	0.	0.	0.	0.	-0.0289	.0467	.0120	-0.0564	-0.0172	-0.0256	0.
	.2450						0.	0.	0.	0.	0.	0.	-0.0190	.0504	.0062	-0.0573	-0.0027	-0.0172	0.
	.2460						0.	0.	0.	0.	0.	0.	-0.0089	.0538	.0002	-0.0589	.0104	-0.0090	0.
	.2470						0.	0.	0.	0.	0.	0.	.0010	.0567	-0.0061	-0.0613	.0219	-0.0015	0.
	.2480						0.	0.	0.	0.	0.	0.	.0104	.0588	-0.0123	-0.0647	.0316	.0051	0.
	.2490						0.	0.	0.	0.	0.	0.	.0193	.0599	-0.0185	-0.0694	.0389	.0103	0.
	.2500						0.	0.	0.	0.	0.	0.	.0273	.0602	-0.0244	-0.0755	.0435	.0141	0.
	.2510						0.	0.	0.	0.	0.	0.	.0345	.0598	-0.0298	-0.0831	.0452	.0165	0.
	.2520						0.	0.	0.	0.	0.	0.	.0408	.0589	-0.0346	-0.0916	.0441	.0178	0.
	.2530						0.	0.	0.	0.	0.	0.	.0462	.0576	-0.0388	-0.1011	.0402	.0183	0.
	.2540						0.	0.	0.	0.	0.	0.	.0505	.0562	-0.0423	-0.1113	.0335	.0184	0.
	.2550						0.	0.	0.	0.	0.	0.	.0538	.0548	-0.0451	-0.1219	.0254	.0189	0.
	.2560						0.	0.	0.	0.	0.	0.	.0560	.0533	-0.0471	-0.1319	.0172	.0206	0.
	.2570						0.	0.	0.	0.	0.	0.	.0568	.0520	-0.0486	-0.1409	.0101	.0240	0.
	.2580						0.	0.	0.	0.	0.	0.	.0561	.0507	-0.0494	-0.1487	.0045	.0294	0.
	.2590						0.	0.	0.	0.	0.	0.	.0538	.0497	-0.0495	-0.1548	.0013	.0368	0.
	.2600						0.	0.	0.	0.	0.	0.	.0501	.0490	-0.0490	-0.1590	.0010	.0461	0.
	.2610						0.	0.	0.	0.	0.	0.	.0449	.0488	-0.0476	-0.1618	.0032	.0567	0.
	.2620						0.	0.	0.	0.	0.	0.	.0384	.0493	-0.0452	-0.1637	.0071	.0675	0.
	.2630						0.	0.	0.	0.	0.	0.	.0306	.0507	-0.0419	-0.1641	.0118	.0777	0.
	.2640						0.	0.	0.	0.	0.	0.	.0216	.0529	-0.0378	-0.1647	.0171	.0863	0.
	.2650						0.	0.	0.	0.	0.	0.	.0118	.0560	-0.0329	-0.1655	.0223	.0926	0.

ADLPIPE PAGE 968

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.55.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.2540	0.	0.	0.	0.	0.	0.	0.	.0005	.0562	-.0423	-.1113	.0335	.0184	0.
.2550	0.	0.	0.	0.	0.	0.	0.	.0538	.0548	-.0451	-.1219	.0254	.0189	0.
.2560	0.	0.	0.	0.	0.	0.	0.	.0560	.0533	-.0471	-.1319	.0172	.0206	0.
.2570	0.	0.	0.	0.	0.	0.	0.	.0568	.0520	-.0486	-.1409	.0101	.0240	0.
.2580	0.	0.	0.	0.	0.	0.	0.	.0561	.0507	-.0494	-.1487	.0045	.0294	0.
.2590	0.	0.	0.	0.	0.	0.	0.	.0538	.0497	-.0495	-.1548	.0013	.0368	0.
.2600	0.	0.	0.	0.	0.	0.	0.	.0501	.0490	-.0490	-.1590	.0010	.0461	0.
.2610	0.	0.	0.	0.	0.	0.	0.	.0449	.0488	-.0476	-.1618	.0032	.0567	0.
.2620	0.	0.	0.	0.	0.	0.	0.	.0384	.0493	-.0452	-.1633	.0071	.0675	0.
.2630	0.	0.	0.	0.	0.	0.	0.	.0306	.0507	-.0419	-.1641	.0118	.0777	0.
.2640	0.	0.	0.	0.	0.	0.	0.	.0216	.0529	-.0378	-.1647	.0171	.0863	0.
.2650	0.	0.	0.	0.	0.	0.	0.	.0118	.0560	-.0329	-.1655	.0223	.0926	0.

ADLPIPE PAGE 968

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.55.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	21	MEMBER	1	SEQUENCE	30	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)	
.2660	0.	0.	0.	0.	0.	0.	.0013	.0597	-.0274	-.1666	.0270	.0959	0.	
.2670	0.	0.	0.	0.	0.	0.	-.0095	.0637	-.0215	-.1683	.0304	.0958	0.	
.2680	0.	0.	0.	0.	0.	0.	-.0204	.0679	-.0154	-.1703	.0326	.0925	0.	
.2690	0.	0.	0.	0.	0.	0.	-.0310	.0721	-.0094	-.1722	.0329	.0861	0.	
.2700	0.	0.	0.	0.	0.	0.	-.0409	.0763	-.0036	-.1736	.0309	.0768	0.	
.2710	0.	0.	0.	0.	0.	0.	-.0498	.0803	.0019	-.1741	.0260	.0655	0.	
.2720	0.	0.	0.	0.	0.	0.	-.0573	.0842	.0070	-.1735	.0179	.0531	0.	
.2730	0.	0.	0.	0.	0.	0.	-.0632	.0880	.0115	-.1716	.0065	.0409	0.	
.2740	0.	0.	0.	0.	0.	0.	-.0674	.0916	.0153	-.1683	-.0071	.0300	0.	
.2750	0.	0.	0.	0.	0.	0.	-.0699	.0949	.0183	-.1636	-.0221	.0214	0.	
.2760	0.	0.	0.	0.	0.	0.	-.0708	.0977	.0203	-.1578	-.0373	.0162	0.	
.2770	0.	0.	0.	0.	0.	0.	-.0702	.0998	.0214	-.1509	-.0519	.0144	0.	
.2780	0.	0.	0.	0.	0.	0.	-.0683	.1012	.0216	-.1433	-.0650	.0158	0.	
.2790	0.	0.	0.	0.	0.	0.	-.0654	.1017	.0209	-.1350	-.0765	.0198	0.	
.2800	0.	0.	0.	0.	0.	0.	-.0615	.1013	.0196	-.1263	-.0859	.0253	0.	
.2810	0.	0.	0.	0.	0.	0.	-.0571	.0999	.0177	-.1175	-.0933	.0312	0.	
.2820	0.	0.	0.	0.	0.	0.	-.0522	.0976	.0155	-.1093	-.0987	.0366	0.	
.2830	0.	0.	0.	0.	0.	0.	-.0470	.0945	.0132	-.1018	-.1018	.0408	0.	
.2840	0.	0.	0.	0.	0.	0.	-.0419	.0905	.0109	-.0954	-.1021	.0433	0.	
.2850	0.	0.	0.	0.	0.	0.	-.0368	.0858	.0086	-.0903	-.0992	.0441	0.	
.2860	0.	0.	0.	0.	0.	0.	-.0321	.0804	.0065	-.0864	-.0931	.0435	0.	
.2870	0.	0.	0.	0.	0.	0.	-.0277	.0743	.0045	-.0836	-.0844	.0417	0.	
.2880	0.	0.	0.	0.	0.	0.	-.0237	.0677	.0027	-.0811	-.0733	.0392	0.	
.2890	0.	0.	0.	0.	0.	0.	-.0200	.0604	.0010	-.0782	-.0607	.0362	0.	
.2900	0.	0.	0.	0.	0.	0.	-.0166	.0528	-.0004	-.0745	-.0473	.0335	0.	
.2910	0.	0.	0.	0.	0.	0.	-.0135	.0448	-.0015	-.0694	-.0339	.0313	0.	
.2920	0.	0.	0.	0.	0.	0.	-.0107	.0368	-.0024	-.0625	-.0208	.0301	0.	
.2930	0.	0.	0.	0.	0.	0.	-.0080	.0287	-.0032	-.0540	-.0083	.0300	0.	
.2940	0.	0.	0.	0.	0.	0.	-.0053	.0207	-.0037	-.0441	-.0038	.0313	0.	
.2950	0.	0.	0.	0.	0.	0.	-.0028	.0131	-.0041	-.0331	.0151	.0335	0.	
.2960	0.	0.	0.	0.	0.	0.	-.0003	.0057	-.0044	-.0216	.0254	.0363	0.	
.2970	0.	0.	0.	0.	0.	0.	.0021	-.0011	-.0047	-.0098	.0344	.0390	0.	
.2980	0.	0.	0.	0.	0.	0.	.0046	-.0076	-.0049	.0021	.0420	.0408	0.	
.2990	0.	0.	0.	0.	0.	0.	.0072	-.0136	-.0052	.0138	.0476	.0412	0.	
.3000	0.	0.	0.	0.	0.	0.	.0099	-.0192	-.0054	.0252	.0513	.0399	0.	
.3010	0.	0.	0.	0.	0.	0.	.0127	-.0245	-.0054	.0362	.0531	.0370	0.	
.3020	0.	0.	0.	0.	0.	0.	.0154	-.0295	-.0059	.0468	.0536	.0328	0.	
.3030	0.	0.	0.	0.	0.	0.	.0181	-.0343	-.0062	.0569	.0536	.0281	0.	

ADLPIPE PAGE 969

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.55.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

.2930	0.	0.	0.	0.	0.	0.	0.	0.	-.0080	.0287	-.0032	-.0540	-.0083	.0300	0.
.2940	0.	0.	0.	0.	0.	0.	0.	0.	-.0053	.0207	-.0037	-.0441	.0038	.0313	0.
.2950	0.	0.	0.	0.	0.	0.	0.	0.	-.0028	.0131	-.0041	-.0331	.0151	.0335	0.
.2960	0.	0.	0.	0.	0.	0.	0.	0.	-.0003	.0057	-.0044	-.0216	.0254	.0363	0.
.2970	0.	0.	0.	0.	0.	0.	0.	0.	.0021	-.0011	-.0047	-.0098	.0344	.0390	0.
.2980	0.	0.	0.	0.	0.	0.	0.	0.	.0046	-.0076	-.0049	.0021	.0420	.0408	0.
.2990	0.	0.	0.	0.	0.	0.	0.	0.	.0072	-.0136	-.0052	.0138	.0476	.0412	0.
.3000	0.	0.	0.	0.	0.	0.	0.	0.	.0099	-.0192	-.0054	.0252	.0513	.0399	0.
.3010	0.	0.	0.	0.	0.	0.	0.	0.	.0127	-.0245	-.0056	.0362	.0531	.0370	0.
.3020	0.	0.	0.	0.	0.	0.	0.	0.	.0154	-.0295	-.0059	.0468	.0536	.0328	0.
.3030	0.	0.	0.	0.	0.	0.	0.	0.	.0181	-.0343	-.0062	.0569	.0536	.0281	0.

ADLPIPE PAGE 969

DIG/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.55.

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	21	MEMBER	1	SEQUENCE	38	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	HX	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)		
.3040	0.	0.	0.	0.	0.	0.	.0206	-.0388	-.0065	.0664	.0535	.0237	0.		
.3050	0.	0.	0.	0.	0.	0.	.0229	-.0432	-.0067	.0753	.0541	.0205	0.		
.3060	0.	0.	0.	0.	0.	0.	.0249	-.0473	-.0069	.0839	.0554	.0189	0.		
.3070	0.	0.	0.	0.	0.	0.	.0265	-.0513	-.0069	.0923	.0577	.0194	0.		
.3080	0.	0.	0.	0.	0.	0.	.0277	-.0552	-.0067	.1006	.0604	.0217	0.		
.3090	0.	0.	0.	0.	0.	0.	.0284	-.0589	-.0061	.1092	.0633	.0254	0.		
.3100	0.	0.	0.	0.	0.	0.	.0288	-.0626	-.0053	.1180	.0657	.0298	0.		
.3110	0.	0.	0.	0.	0.	0.	.0286	-.0661	-.0042	.1267	.0671	.0341	0.		
.3120	0.	0.	0.	0.	0.	0.	.0280	-.0695	-.0028	.1348	.0671	.0374	0.		
.3130	0.	0.	0.	0.	0.	0.	.0270	-.0726	-.0012	.1420	.0654	.0389	0.		
.3140	0.	0.	0.	0.	0.	0.	.0255	-.0754	.0005	.1477	.0615	.0380	0.		
.3150	0.	0.	0.	0.	0.	0.	.0237	-.0778	.0024	.1514	.0554	.0342	0.		
.3160	0.	0.	0.	0.	0.	0.	.0214	-.0796	.0043	.1529	.0469	.0274	0.		
.3170	0.	0.	0.	0.	0.	0.	.0189	-.0809	.0062	.1523	.0360	.0179	0.		
.3180	0.	0.	0.	0.	0.	0.	.0162	-.0816	.0083	.1500	.0232	.0060	0.		
.3190	0.	0.	0.	0.	0.	0.	.0132	-.0817	.0103	.1464	.0088	-.0076	0.		
.3200	0.	0.	0.	0.	0.	0.	.0101	-.0812	.0124	.1423	-.0062	-.0221	0.		
.3210	0.	0.	0.	0.	0.	0.	.0068	-.0803	.0145	.1380	-.0211	-.0364	0.		
.3220	0.	0.	0.	0.	0.	0.	.0034	-.0791	.0167	.1342	-.0347	-.0496	0.		
.3230	0.	0.	0.	0.	0.	0.	-.0000	-.0777	.0188	.1311	-.0463	-.0611	0.		
.3240	0.	0.	0.	0.	0.	0.	-.0035	-.0760	.0208	.1290	-.0552	-.0704	0.		
.3250	0.	0.	0.	0.	0.	0.	-.0069	-.0743	.0227	.1278	-.0610	-.0773	0.		
.3260	0.	0.	0.	0.	0.	0.	-.0101	-.0725	.0245	.1275	-.0637	-.0820	0.		
.3270	0.	0.	0.	0.	0.	0.	-.0129	-.0706	.0261	.1281	-.0635	-.0847	0.		
.3280	0.	0.	0.	0.	0.	0.	-.0152	-.0689	.0276	.1293	-.0609	-.0862	0.		
.3290	0.	0.	0.	0.	0.	0.	-.0168	-.0672	.0288	.1309	-.0564	-.0868	0.		
.3300	0.	0.	0.	0.	0.	0.	-.0176	-.0658	.0298	.1328	-.0507	-.0871	0.		
.3310	0.	0.	0.	0.	0.	0.	-.0175	-.0642	.0304	.1349	-.0441	-.0874	0.		
.3320	0.	0.	0.	0.	0.	0.	-.0167	-.0640	.0306	.1367	-.0369	-.0877	0.		
.3330	0.	0.	0.	0.	0.	0.	-.0149	-.0637	.0302	.1383	-.0294	-.0879	0.		
.3340	0.	0.	0.	0.	0.	0.	-.0124	-.0637	.0292	.1393	-.0216	-.0878	0.		
.3350	0.	0.	0.	0.	0.	0.	-.0092	-.0641	.0277	.1395	-.0138	-.0871	0.		
.3360	0.	0.	0.	0.	0.	0.	-.0054	-.0646	.0256	.1389	-.0062	-.0856	0.		
.3370	0.	0.	0.	0.	0.	0.	-.0010	-.0653	.0229	.1373	.0010	-.0832	0.		
.3380	0.	0.	0.	0.	0.	0.	.0038	-.0660	.0197	.1347	.0075	-.0797	0.		
.3390	0.	0.	0.	0.	0.	0.	.0090	-.0667	.0161	.1309	.0132	-.0752	0.		
.3400	0.	0.	0.	0.	0.	0.	.0144	-.0673	.0121	.1260	.0178	-.0700	0.		
.3410	0.	0.	0.	0.	0.	0.	.0199	-.0679	.0077	.1200	.0215	-.0643	0.		

ADLPIPE PAGE 970

DIG/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.55.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

.3310	0.	0.	0.	0.	0.	0.	0.	-.0175	-.0648	.0298	.1328	-.0507	-.0871	0.
.3320	0.	0.	0.	0.	0.	0.	0.	-.0167	-.0640	.0306	.1367	-.0369	-.0877	0.
.3330	0.	0.	0.	0.	0.	0.	0.	-.0149	-.0637	.0302	.1383	-.0294	-.0879	0.
.3340	0.	0.	0.	0.	0.	0.	0.	-.0124	-.0637	.0292	.1393	-.0216	-.0878	0.
.3350	0.	0.	0.	0.	0.	0.	0.	-.0092	-.0641	.0277	.1395	-.0138	-.0871	0.
.3360	0.	0.	0.	0.	0.	0.	0.	-.0054	-.0646	.0256	.1389	-.0062	-.0856	0.
.3370	0.	0.	0.	0.	0.	0.	0.	-.0010	-.0653	.0229	.1373	.0010	-.0832	0.
.3380	0.	0.	0.	0.	0.	0.	0.	.0038	-.0660	.0197	.1347	.0075	-.0797	0.
.3390	0.	0.	0.	0.	0.	0.	0.	.0090	-.0667	.0161	.1309	.0132	-.0752	0.
.3400	0.	0.	0.	0.	0.	0.	0.	.0144	-.0673	.0121	.1260	.0178	-.0700	0.
.3410	0.	0.	0.	0.	0.	0.	0.	.0199	-.0679	.0077	.1200	.0215	-.0643	0.

ADLPIPE PAGE 970

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.55.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	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)	
.3420	0.	0.	0.	0.	0.	0.	.0254	-.0685	.0031	.1130	.0245	-.0584	0.	
.3430	0.	0.	0.	0.	0.	0.	.0308	-.0691	-.0017	.1049	.0268	-.0526	0.	
.3440	0.	0.	0.	0.	0.	0.	.0361	-.0697	-.0065	.0961	.0289	-.0474	0.	
.3450	0.	0.	0.	0.	0.	0.	.0410	-.0702	-.0112	.0867	.0308	-.0430	0.	
.3460	0.	0.	0.	0.	0.	0.	.0457	-.0707	-.0156	.0769	.0326	-.0397	0.	
.3470	0.	0.	0.	0.	0.	0.	.0499	-.0709	-.0196	.0670	.0344	-.0377	0.	
.3480	0.	0.	0.	0.	0.	0.	.0537	-.0709	-.0230	.0571	.0362	-.0370	0.	
.3490	0.	0.	0.	0.	0.	0.	.0569	-.0705	-.0258	.0475	.0381	-.0377	0.	
.3500	0.	0.	0.	0.	0.	0.	.0594	-.0696	-.0280	.0384	.0401	-.0394	0.	
.3510	0.	0.	0.	0.	0.	0.	.0613	-.0681	-.0294	.0298	.0423	-.0420	0.	
.3520	0.	0.	0.	0.	0.	0.	.0622	-.0660	-.0303	.0220	.0448	-.0450	0.	
.3530	0.	0.	0.	0.	0.	0.	.0624	-.0631	-.0306	.0149	.0475	-.0482	0.	
.3540	0.	0.	0.	0.	0.	0.	.0616	-.0594	-.0304	.0086	.0503	-.0514	0.	
.3550	0.	0.	0.	0.	0.	0.	.0600	-.0548	-.0297	.0034	.0531	-.0542	0.	
.3560	0.	0.	0.	0.	0.	0.	.0576	-.0493	-.0286	-.0011	.0553	-.0566	0.	
.3570	0.	0.	0.	0.	0.	0.	.0545	-.0430	-.0272	-.0046	.0565	-.0585	0.	
.3580	0.	0.	0.	0.	0.	0.	.0510	-.0360	-.0254	-.0074	.0563	-.0599	0.	
.3590	0.	0.	0.	0.	0.	0.	.0470	-.0285	-.0234	-.0094	.0546	-.0606	0.	
.3600	0.	0.	0.	0.	0.	0.	.0427	-.0206	-.0213	-.0109	.0510	-.0606	0.	
.3610	0.	0.	0.	0.	0.	0.	.0383	-.0126	-.0190	-.0119	.0456	-.0600	0.	
.3620	0.	0.	0.	0.	0.	0.	.0339	-.0047	-.0167	-.0128	.0383	-.0587	0.	
.3630	0.	0.	0.	0.	0.	0.	.0294	.0027	-.0143	-.0134	.0294	-.0566	0.	
.3640	0.	0.	0.	0.	0.	0.	.0249	.0096	-.0120	-.0140	.0192	-.0540	0.	
.3650	0.	0.	0.	0.	0.	0.	.0205	.0158	-.0096	-.0149	.0079	-.0507	0.	
.3660	0.	0.	0.	0.	0.	0.	.0159	.0212	-.0071	-.0160	-.0040	-.0469	0.	
.3670	0.	0.	0.	0.	0.	0.	.0113	.0259	-.0047	-.0176	-.0161	-.0427	0.	
.3680	0.	0.	0.	0.	0.	0.	.0064	.0298	-.0022	-.0198	-.0277	-.0380	0.	
.3690	0.	0.	0.	0.	0.	0.	.0013	.0330	.0003	-.0227	-.0383	-.0328	0.	
.3700	0.	0.	0.	0.	0.	0.	-.0040	.0350	.0028	-.0263	-.0474	-.0273	0.	
.3710	0.	0.	0.	0.	0.	0.	-.0097	.0377	.0053	-.0307	-.0546	-.0213	0.	
.3720	0.	0.	0.	0.	0.	0.	-.0156	.0393	.0077	-.0356	-.0597	-.0150	0.	
.3730	0.	0.	0.	0.	0.	0.	-.0217	.0406	.0099	-.0410	-.0625	-.0084	0.	
.3740	0.	0.	0.	0.	0.	0.	-.0278	.0415	.0121	-.0466	-.0633	-.0016	0.	
.3750	0.	0.	0.	0.	0.	0.	-.0338	.0423	.0140	-.0522	-.0623	.0052	0.	
.3760	0.	0.	0.	0.	0.	0.	-.0396	.0429	.0157	-.0575	-.0597	.0120	0.	
.3770	0.	0.	0.	0.	0.	0.	-.0449	.0434	.0173	-.0624	-.0560	.0186	0.	
.3780	0.	0.	0.	0.	0.	0.	-.0495	.0438	.0185	-.0667	-.0513	.0250	0.	
.3790	0.	0.	0.	0.	0.	0.	-.0535	.0441	.0195	-.0702	-.0460	.0311	0.	

ADLPIPE PAGE 971

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.56.

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

CONDITION 24

.3690	0.	0.	0.	0.	0.	0.	0.	.0013	.0330	.0003	-.0227	-.0383	-.0328	0.
.3700	0.	0.	0.	0.	0.	0.	0.	-.0040	.0356	.0028	-.0263	-.0474	-.0273	0.
.3710	0.	0.	0.	0.	0.	0.	0.	-.0097	.0377	.0053	-.0307	-.0546	-.0213	0.
.3720	0.	0.	0.	0.	0.	0.	0.	-.0156	.0393	.0077	-.0356	-.0597	-.0150	0.
.3730	0.	0.	0.	0.	0.	0.	0.	-.0217	.0406	.0099	-.0410	-.0625	-.0084	0.
.3740	0.	0.	0.	0.	0.	0.	0.	-.0278	.0415	.0121	-.0466	-.0533	-.0016	0.
.3750	0.	0.	0.	0.	0.	0.	0.	-.0338	.0423	.0140	-.0522	-.0523	.0052	0.
.3760	0.	0.	0.	0.	0.	0.	0.	-.0396	.0429	.0157	-.0575	-.0597	.0120	0.
.3770	0.	0.	0.	0.	0.	0.	0.	-.0449	.0434	.0173	-.0624	-.0560	.0186	0.
.3780	0.	0.	0.	0.	0.	0.	0.	-.0495	.0438	.0185	-.0667	-.0513	.0250	0.
.3790	0.	0.	0.	0.	0.	0.	0.	-.0535	.0441	.0195	-.0702	-.0460	.0311	0.

ADLPIPE PAGE 971

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.56.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	21	MEMBER	1	SEQUENCE	38	LOCATION	DIS	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	FX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3800	0.	0.	0.	0.	0.	0.	-.0565	.0444	.0201	-.0729	-.0403	.0369	0.		
.3810	0.	0.	0.	0.	0.	0.	-.0585	.0445	.0205	-.0747	-.0345	.0422	0.		
.3820	0.	0.	0.	0.	0.	0.	-.0595	.0445	.0205	-.0756	-.0288	.0471	0.		
.3830	0.	0.	0.	0.	0.	0.	-.0595	.0444	.0201	-.0756	-.0234	.0512	0.		
.3840	0.	0.	0.	0.	0.	0.	-.0583	.0442	.0194	-.0748	-.0184	.0546	0.		
.3850	0.	0.	0.	0.	0.	0.	-.0561	.0440	.0183	-.0733	-.0141	.0573	0.		
.3860	0.	0.	0.	0.	0.	0.	-.0530	.0437	.0169	-.0712	-.0104	.0593	0.		
.3870	0.	0.	0.	0.	0.	0.	-.0489	.0433	.0150	-.0688	-.0071	.0608	0.		
.3880	0.	0.	0.	0.	0.	0.	-.0441	.0429	.0128	-.0662	-.0042	.0621	0.		
.3890	0.	0.	0.	0.	0.	0.	-.0386	.0424	.0101	-.0637	-.0014	.0634	0.		
.3900	0.	0.	0.	0.	0.	0.	-.0326	.0419	.0070	-.0614	.0013	.0649	0.		
.3910	0.	0.	0.	0.	0.	0.	-.0262	.0414	.0037	-.0595	.0041	.0670	0.		
.3920	0.	0.	0.	0.	0.	0.	-.0196	.0407	.0000	-.0579	.0069	.0696	0.		
.3930	0.	0.	0.	0.	0.	0.	-.0130	.0400	-.0038	-.0566	.0097	.0729	0.		
.3940	0.	0.	0.	0.	0.	0.	-.0064	.0392	-.0076	-.0553	.0124	.0768	0.		
.3950	0.	0.	0.	0.	0.	0.	-.0001	.0383	-.0113	-.0542	.0149	.0811	0.		
.3960	0.	0.	0.	0.	0.	0.	.0057	.0372	-.0147	-.0530	.0174	.0857	0.		
.3970	0.	0.	0.	0.	0.	0.	.0108	.0361	-.0177	-.0519	.0197	.0903	0.		
.3980	0.	0.	0.	0.	0.	0.	.0151	.0349	-.0203	-.0508	.0219	.0947	0.		
.3990	0.	0.	0.	0.	0.	0.	.0184	.0338	-.0223	-.0499	.0242	.0986	0.		
.4000	0.	0.	0.	0.	0.	0.	.0206	.0327	-.0236	-.0491	.0263	.1015	0.		

MAXIMUM VALUE OF DISCONTINUITY FORCE OCCURS AT

TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	FX	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	21	MEMBER	1	SEQUENCE	38	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	FX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.		
.0010	3.	-1.	6.	-1.	-1.	0.	-.0009	.0000	-.0000	-.0000	.0000	.0000	1.		
.0020	25.	5.	46.	-8.	-7.	1.	-.0001	.0000	-.0001	-.0003	.0002	.0002	5.		
.0030	79.	44.	147.	-17.	-12.	-1.	-.0001	.0000	-.0003	-.0009	.0006	.0006	11.		

ADLPIPE PAGE 972

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.56.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

0.0000 0. 0. 0. 0. 0. 0. 0. 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.

SECTION	21	MEMBER	1	SEQUENCE	33	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	0.0000	0.
.0010	3.	-1.	6.	-1.	-1.	0.		-0.0000	.0000	-0.0000	-0.0000	.0000	.0000	.0000	1.
.0020	25.	5.	46.	-8.	-7.	1.		-0.0001	.0000	-0.0001	-0.0003	.0002	.0002	.0002	5.
.0030	79.	44.	147.	-17.	-18.	-1.		-0.0001	.0000	-0.0001	-0.0009	.0006	.0006	.0006	11.

ADLPIPE PAGE 972 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.56.
 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	21	MEMBER	1	SEQUENCE	38	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)	
.0040	165.	118.	306.	-16.	-34.	-14.		-0.0003	-0.0000	-0.0006	-0.0022	.0012	.0014	19.	
.0050	273.	206.	508.	1.	-54.	-37.		-0.0004	-0.0001	-0.0011	-0.0041	.0020	.0025	31.	
.0060	413.	305.	771.	26.	-73.	-62.		-0.0006	-0.0002	-0.0017	-0.0068	.0030	.0041	47.	
.0070	618.	438.	1165.	39.	-105.	-82.		-0.0009	-0.0003	-0.0025	-0.0105	.0043	.0061	65.	
.0080	922.	635.	1766.	29.	-172.	-108.		-0.0012	-0.0005	-0.0039	-0.0159	.0069	.0092	96.	
.0090	1317.	928.	2553.	27.	-282.	-178.		-0.0015	-0.0008	-0.0057	-0.0233	.0116	.0135	157.	
.0100	1724.	1266.	3387.	96.	-424.	-321.		-0.0015	-0.0013	-0.0078	-0.0327	.0185	.0188	253.	
.0110	2062.	1552.	4141.	262.	-581.	-524.		-0.0011	-0.0020	-0.0103	-0.0434	.0272	.0243	387.	
.0120	2316.	1767.	4794.	481.	-704.	-732.		.0000	-0.0027	-0.0132	-0.0550	.0368	.0293	526.	
.0130	2486.	1929.	5341.	697.	-720.	-887.		.0021	-0.0034	-0.0162	-0.0669	.0458	.0330	627.	
.0140	2479.	1969.	5621.	917.	-583.	-957.		.0054	-0.0040	-0.0193	-0.0779	.0527	.0343	679.	
.0150	2157.	1780.	5417.	1197.	-294.	-931.		.0101	-0.0044	-0.0219	-0.0864	.0561	.0319	724.	
.0160	1468.	1351.	4639.	1542.	103.	-806.		.0162	-0.0046	-0.0239	-0.0909	.0557	.0253	817.	
.0170	463.	709.	3302.	1892.	565.	-622.		.0234	-0.0041	-0.0252	-0.0903	.0528	.0148	970.	
.0180	-731.	-121.	1478.	2166.	1068.	-461.		.0316	-0.0026	-0.0260	-0.0844	.0500	.0016	1152.	
.0190	-1937.	-1021.	-573.	2314.	1516.	-395.		.0400	.0001	-0.0269	-0.0746	.0501	-0.0123	1310.	
.0200	-2921.	-1763.	-2300.	2317.	1688.	-510.		.0482	.0042	-0.0288	-0.0647	.0580	-0.0237	1365.	
.0210	-3545.	-1876.	-3348.	2239.	1470.	-873.		.0560	.0096	-0.0319	-0.0580	.0759	-0.0304	1320.	
.0220	-3916.	-1494.	-4308.	2208.	1355.	-1347.		.0643	.0159	-0.0348	-0.0534	.0934	-0.0344	1369.	
.0230	-4374.	-1640.	-5603.	2077.	1511.	-1538.		.0726	.0230	-0.0374	-0.0469	.1017	-0.0400	1403.	
.0240	-4851.	-2068.	-6366.	1417.	1673.	-928.		.0805	.0311	-0.0393	-0.0371	.0958	-0.0497	1116.	
.0250	-4942.	-2275.	-6278.	92.	1989.	299.		.0876	.0397	-0.0407	-0.0239	.0808	-0.0609	943.	
.0260	-4470.	-2701.	-6492.	-1390.	3034.	1428.		.0939	.0479	-0.0422	-0.0074	.0631	-0.0695	1701.	
.0270	-3879.	-3153.	-7501.	-2206.	4529.	2413.		.0982	.0544	-0.0420	.0093	.0329	-0.0762	2618.	
.0280	-4236.	-3366.	-8591.	-2030.	4733.	3503.		.0984	.0585	-0.0382	.0245	-0.0664	-0.0830	2919.	
.0290	-5114.	-3783.	-9680.	-1569.	3704.	4131.		.0940	.0610	-0.0322	.0414	-0.0322	-0.0854	2702.	
.0300	-3938.	-4157.	-10239.	-2272.	3798.	3937.		.0856	.0628	-0.0269	.0592	-0.0402	-0.0774	2776.	
.0310	-1715.	-3462.	-9271.	-3663.	3605.	3812.		.0718	.0639	-0.0206	.0705	-0.0438	-0.0645	2998.	
.0320	-1153.	-2802.	-7885.	-4272.	1386.	3965.		.0519	.0633	-0.0113	.0738	-0.0487	-0.0552	2807.	
.0330	-1627.	-3030.	-7575.	-4235.	-925.	3486.		.0291	.0603	.0066	.0752	-0.0506	-0.0491	2607.	
.0340	-1123.	-3276.	-7835.	-4552.	-1366.	2209.		.0060	.0553	.0136	.0774	-0.0489	-0.0434	2456.	
.0350	-302.	-3013.	-6981.	-5226.	-1699.	1476.		-0.0186	.0489	.0267	.0766	-0.0499	-0.0428	2666.	
.0360	-341.	-2528.	-4498.	-5742.	-3479.	1943.		-0.0453	.0413	.0390	.0705	-0.0566	-0.0502	3275.	
.0370	-205.	-1794.	-1638.	-5928.	-4756.	2306.		-0.0707	.0315	.0498	.0612	-0.0524	-0.0588	3722.	
.0380	566.	-772.	58.	-5236.	-4120.	1496.		-0.0919	.0186	.0592	.0505	-0.0649	-0.0628	3200.	
.0390	400.	65.	587.	-3104.	-3564.	392.		-0.1103	.0037	.0678	.0375	-0.0690	-0.0643	2222.	
.0400	-409.	608.	1804.	-819.	-4416.	-24.		-0.1269	-0.0114	.0736	.0221	-0.0667	-0.0616	2105.	
.0410	671.	1919.	4852.	-37.	-4695.	-35.		-0.1398	-0.0256	.0751	.0056	-0.0564	-0.0480	2200.	

ADLPIPE PAGE 973 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.56.
 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

.0310	-1715.	-3462.	-9271.	-3663.	3605.	3812.	.0718	.0639	-.0206	.0705	-.0438	-.0645	2978.
.0320	-1157.	-2802.	-7885.	-4272.	1386.	3965.	.0519	.0633	-.0113	.0738	-.0487	-.0552	2807.
.0330	-1627.	-3030.	-7575.	-4235.	-925.	3486.	.0291	.0603	.0006	.0752	-.0506	-.0491	2607.
.0340	-1127.	-3276.	-7835.	-4552.	-1366.	2209.	.0060	.0557	.0136	.0774	-.0489	-.0434	2456.
.0350	-702.	-3013.	-6981.	-5226.	-1699.	1476.	-.0186	.0489	.0267	.0766	-.0499	-.0428	2666.
.0360	-741.	-2528.	-4498.	-5742.	-3479.	1943.	-.0453	.0413	.0390	.0705	-.0566	-.0502	3275.
.0370	-205.	-1794.	-1638.	-5928.	-4756.	2306.	-.0707	.0315	.0498	.0612	-.0524	-.0588	3722.
.0380	566.	-772.	58.	-5236.	-4120.	1456.	-.0919	.0186	.0592	.0505	-.0549	-.0628	3200.
.0390	400.	65.	587.	-3104.	-3564.	392.	-.1103	.0037	.0678	.0375	-.0690	-.0643	2222.
.0400	-409.	608.	1804.	-819.	-4416.	-24.	-.1269	-.0114	.0736	.0221	-.0567	-.0616	2105.
.0410	671.	1919.	4852.	-37.	-4695.	-35.	-.1398	-.0256	.0751	.0056	-.0564	-.0480	2200.

ADLPIPE PAGE 973

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.56.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	21	MEMBER	1	SEQUENCE	38	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)		
.0420	2919.	3560.	8346.	-97.	-4113.	-316.	-.1477	-.0391	.0733	-.0097	-.0381	-.0236	1933.		
.0430	3718.	4023.	10062.	767.	-4411.	-887.	-.1510	-.0526	.0700	-.0213	-.0129	.0058	2139.		
.0440	3496.	3899.	10064.	2476.	-5141.	-1561.	-.1489	-.0664	.0664	-.0287	.0103	.0371	2772.		
.0450	3771.	4110.	9183.	4096.	-4807.	-2279.	-.1406	-.0795	.0621	-.0295	.0232	.0682	3146.		
.0460	4135.	3861.	7960.	5184.	-3834.	-2610.	-.1276	-.0907	.0561	-.0210	.0232	.0923	3260.		
.0470	3864.	3015.	7022.	5699.	-3361.	-2258.	-.1116	-.0995	.0489	-.0039	.0139	.1048	3276.		
.0480	3603.	2600.	6179.	5866.	-2708.	-1902.	-.0923	-.1063	.0415	.0178	.0001	.1086	3156.		
.0490	3423.	2411.	4169.	6372.	-1120.	-2314.	-.0698	-.1111	.0341	.0409	-.0162	.1061	3220.		
.0500	2373.	1806.	1193.	7443.	193.	-3116.	-.0468	-.1132	.0267	.0618	-.0336	.0952	3782.		
.0510	875.	1526.	-778.	8030.	393.	-3530.	-.0247	-.1113	.0192	.0778	-.0476	.0763	4115.		
.0520	318.	1925.	-1055.	6956.	623.	-3628.	-.0033	-.1051	.0110	.0911	-.0526	.0534	3688.		
.0530	525.	1966.	-912.	4491.	1655.	-3724.	.0180	-.0952	.0021	.1055	-.0500	.0274	2842.		
.0540	186.	1396.	-1093.	1884.	2507.	-3462.	.0383	-.0832	-.0056	.1210	-.0498	-.0043	2189.		
.0550	-993.	941.	-1439.	-145.	2596.	-2609.	.0573	-.0709	-.0108	.1367	-.0566	-.0409	1726.		
.0560	-2144.	461.	-2171.	-1791.	2963.	-1724.	.0755	-.0591	-.0149	.1550	-.0633	-.0766	1813.		
.0570	-2534.	-290.	-3056.	-3459.	4239.	-1077.	.0927	-.0483	-.0196	.1767	-.0643	-.1063	2613.		
.0580	-2300.	-523.	-2933.	-5053.	5305.	-96.	.1070	-.0388	-.0247	.1967	-.0623	-.1288	3433.		
.0590	-2062.	-25.	-1887.	-5998.	5237.	1309.	.1177	-.0314	-.0291	.2115	-.0571	-.1432	3782.		
.0600	-1977.	247.	-1608.	-5967.	4902.	2216.	.1252	-.0267	-.0326	.2224	-.0421	-.1465	3765.		
.0610	-1720.	1.	-2428.	-5432.	5057.	2201.	.1304	-.0244	-.0352	.2299	-.0140	-.1379	3628.		
.0620	-1320.	-124.	-2752.	-5132.	4874.	2134.	.1320	-.0238	-.0366	.2311	.0207	-.1221	3464.		
.0630	-1135.	-181.	-1875.	-5342.	3679.	2684.	.1292	-.0243	-.0367	.2260	.0555	-.1048	3290.		
.0640	-947.	-559.	-778.	-5852.	2516.	3328.	.1233	-.0261	-.0359	.2178	.0886	-.0877	3368.		
.0650	-448.	-898.	-153.	-6184.	2290.	3441.	.1158	-.0302	-.0340	.2079	.1171	-.0714	3486.		
.0660	-263.	-849.	225.	-5677.	2161.	3181.	.1064	-.0372	-.0305	.1947	.1363	-.0591	3213.		
.0670	-853.	-563.	646.	-4062.	1339.	2733.	.0946	-.0468	-.0263	.1774	.1466	-.0520	2379.		
.0680	-1217.	163.	1298.	-1898.	611.	1803.	.0815	-.0582	-.0228	.1571	.1543	-.0456	1260.		
.0690	-550.	1564.	2354.	182.	542.	357.	.0681	-.0703	-.0204	.1341	.1626	-.0364	316.		
.0700	221.	2990.	3575.	2241.	216.	-1109.	.0545	-.0822	-.0183	.1080	.1689	-.0256	1176.		
.0710	305.	3811.	4472.	4379.	-781.	-2314.	.0408	-.0928	-.0161	.0787	.1690	-.0147	2350.		
.0720	455.	4220.	4961.	6023.	-1421.	-3363.	.0284	-.1012	-.0139	.0478	.1615	-.0014	3301.		
.0730	1165.	4268.	5298.	6624.	-1311.	-4113.	.0179	-.1065	-.0119	.0188	.1469	.0142	3705.		
.0740	1792.	3679.	5669.	6363.	-1320.	-4182.	.0085	-.1085	-.0100	-.0052	.1250	.0292	3622.		
.0750	2210.	2861.	6098.	5716.	-1640.	-3674.	-.0001	-.1076	-.0078	-.0223	.0955	.0424	3276.		
.0760	2984.	2434.	6367.	5049.	-1588.	-3197.	-.0073	-.1048	-.0053	-.0319	.0618	.0554	2898.		
.0770	3924.	2325.	6164.	4806.	-1254.	-3120.	-.0137	-.1004	-.0030	-.0344	.0295	.0686	2748.		
.0780	4443.	2438.	5613.	5226.	-1332.	-3344.	-.0202	-.0943	-.0006	-.0322	.0017	.0803	2974.		
.0790	4781.	3051.	5154.	5868.	-1712.	-3676.	-.0269	-.0862	.0019	-.0277	-.0214	.0897	3343.		

ADLPIPE PAGE 974

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.56.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.0690	-550.	1564.	2354.	182.	542.	357.	.0681	-.0703	-.0204	.1341	.1626	-.0364	316.
.0700	221.	2990.	3575.	2241.	216.	-1109.	.0545	-.0822	-.0183	.1080	.1589	-.0256	1176.
.0710	305.	3811.	4472.	4379.	-781.	-2314.	.0408	-.0928	-.0161	.0787	.1590	-.0147	2350.
.0720	455.	4220.	4961.	6023.	-1421.	-3363.	.0284	-.1012	-.0139	.0478	.1515	-.0014	3301.
.0730	1165.	4268.	5298.	6624.	-1211.	-4113.	.0179	-.1065	-.0119	.0188	.1469	.0142	3705.
.0740	1792.	3679.	5669.	6363.	-1320.	-4182.	.0085	-.1085	-.0100	-.0052	.1250	.0292	3622.
.0750	2210.	2861.	6098.	5716.	-1640.	-3674.	-.0001	-.1076	-.0078	-.0223	.0955	.0424	3276.
.0760	2984.	2434.	6367.	5049.	-1588.	-3197.	-.0073	-.1048	-.0053	-.0319	.0618	.0554	2898.
.0770	3924.	2325.	6164.	4806.	-1254.	-3120.	-.0137	-.1004	-.0020	-.0344	.0295	.0686	2748.
.0780	4443.	2438.	5613.	5276.	-1332.	-3344.	-.0202	-.0943	-.0006	-.0322	.0017	.0803	2974.
.0790	4781.	3051.	5154.	5868.	-1712.	-3676.	-.0269	-.0862	.0019	-.0277	-.0214	.0897	3343.

ADLPIPE PAGE 974

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.56.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	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)	PX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.0800	5275.	3868.	4803.	6032.	-1866.	-3936.	-.0334	-.0753	.0050	-.0215	-.0400	.0958	3487.	
.0810	5419.	4068.	4174.	5469.	-1957.	-3879.	-.0399	-.0614	.0088	-.0134	-.0537	.0960	3273.	
.0820	4788.	3524.	3134.	4259.	-2211.	-3359.	-.0461	-.0447	.0139	-.0045	-.0539	.0886	2745.	
.0830	3640.	2545.	1704.	2464.	-2251.	-2462.	-.0513	-.0262	.0206	.0048	-.0735	.0736	1944.	
.0840	2104.	993.	-230.	316.	-1916.	-1335.	-.0555	-.0070	.0283	.0155	-.0829	.0516	1104.	
.0850	166.	-978.	-2442.	-1739.	-1607.	-68.	-.0590	.0119	.0359	.0278	-.0895	.0244	1110.	
.0860	-1648.	-2442.	-4302.	-3364.	-1425.	1174.	-.0618	.0292	.0428	.0396	-.0917	-.0045	1798.	
.0870	-2888.	-3019.	-5628.	-4348.	-1141.	2133.	-.0638	.0443	.0480	.0492	-.0898	-.0313	2332.	
.0880	-3867.	-3230.	-6781.	-4480.	-931.	2666.	-.0652	.0567	.0511	.0557	-.0833	-.0546	2482.	
.0890	-4833.	-3252.	-7843.	-3866.	-1063.	2828.	-.0657	.0665	.0526	.0586	-.0714	-.0733	2299.	
.0900	-5442.	-2977.	-8604.	-3174.	-1280.	2819.	-.0648	.0744	.0528	.0576	-.0555	-.0864	2064.	
.0910	-5589.	-2949.	-9073.	-2962.	-1312.	2969.	-.0622	.0811	.0517	.0539	-.0398	-.0953	2059.	
.0920	-5631.	-3639.	-9242.	-3586.	-1337.	3573.	-.0583	.0873	.0494	.0480	-.0286	-.1026	2453.	
.0930	-5650.	-4600.	-8933.	-4822.	-1410.	4554.	-.0530	.0927	.0464	.0393	-.0236	-.1093	3178.	
.0940	-5457.	-5409.	-8309.	-6263.	-1193.	5464.	-.0461	.0963	.0424	.0280	-.0236	-.1147	3935.	
.0950	-5081.	-6108.	-7645.	-7390.	-613.	5953.	-.0376	.0973	.0370	.0152	-.0269	-.1187	4456.	
.0960	-4560.	-6258.	-6553.	-7812.	-58.	6016.	-.0285	.0952	.0298	.0003	-.0329	-.1216	4621.	
.0970	-3692.	-5218.	-4484.	-7457.	309.	5692.	-.0191	.0898	.0208	-.0179	-.0407	-.1226	4399.	
.0980	-2412.	-3325.	-1741.	-6454.	809.	4853.	-.0091	.0812	.0100	-.0386	-.0486	-.1206	3803.	
.0990	-971.	-1347.	991.	-4958.	1660.	3530.	.0014	.0700	-.0024	-.0608	-.0566	-.1152	2956.	
.1000	371.	561.	3541.	-3165.	2637.	2129.	.0124	.0570	-.0151	-.0852	-.0676	-.1065	2173.	
.1010	1467.	2237.	5836.	-1389.	3488.	1074.	.0236	.0431	-.0270	-.1118	-.0831	-.0948	1830.	
.1020	2290.	3051.	7452.	27.	4307.	415.	.0347	.0292	-.0379	-.1375	-.0998	-.0793	2028.	
.1030	2972.	2877.	8218.	930.	5198.	-19.	.0454	.0157	-.0476	-.1597	-.1126	-.0591	2474.	
.1040	3566.	2299.	8398.	1537.	5877.	-327.	.0548	.0029	-.0554	-.1779	-.1189	-.0343	2851.	
.1050	3872.	1593.	8037.	2306.	5959.	-642.	.0622	-.0094	-.0609	-.1912	-.1171	-.0061	3010.	
.1060	3858.	821.	6999.	3534.	5466.	-1236.	.0668	-.0208	-.0645	-.1984	-.1047	.0241	3105.	
.1070	3907.	444.	5667.	5069.	4721.	-2223.	.0685	-.0307	-.0663	-.1992	-.0811	.0551	3409.	
.1080	4194.	662.	4822.	6510.	3622.	-3406.	.0671	-.0382	-.0669	-.1956	-.0453	.0851	3839.	
.1090	4760.	1381.	5183.	7500.	1934.	-4620.	.0623	-.0421	-.0679	-.1920	.0069	.1141	4226.	
.1100	5189.	3066.	5723.	8375.	536.	-5574.	.0561	-.0426	-.0659	-.1887	.0520	.1358	4721.	
.1110	4468.	3716.	5125.	9041.	-707.	-6060.	.0491	-.0392	-.0610	-.1805	.0893	.1460	5111.	
.1120	3021.	2738.	3765.	8766.	-1606.	-5882.	.0419	-.0311	-.0549	-.1650	.1222	.1448	5004.	
.1130	2043.	2072.	3125.	7179.	-1771.	-4983.	.0354	-.0188	-.0478	-.1468	.1480	.1364	4179.	
.1140	1221.	1769.	3131.	4809.	-1687.	-3431.	.0294	-.0033	-.0402	-.1293	.1649	.1228	2879.	
.1150	-223.	491.	2540.	2548.	-1883.	-1632.	.0238	.0139	-.0331	-.1111	.1776	.1059	1670.	
.1160	-1552.	-794.	1335.	964.	-1854.	-279.	.0192	.0311	-.0270	-.0933	.1887	.0909	988.	
.1170	-2245.	-670.	200.	248.	-1451.	405.	.0164	.0473	-.0218	-.0784	.1965	.0800	716.	

ADLPIPE PAGE 975

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.56.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.1070	3907.	444.	5667.	5069.	4721.	-2223.	0685	-.0207	-.0663	-.1992	-.0811	.0551	3409.
.1080	4194.	662.	4822.	6510.	3622.	-3406.	.0671	-.0382	-.0669	-.1956	-.0453	.0851	3839.
.1090	4760.	1381.	5183.	7500.	1934.	-4620.	.0623	-.0421	-.0679	-.1920	.0069	.1141	4226.
.1100	5189.	3066.	5723.	8275.	536.	-5574.	.0561	-.0426	-.0659	-.1887	.0520	.1358	4721.
.1110	4468.	3716.	5125.	9041.	-707.	-6060.	.0491	-.0392	-.0610	-.1805	.0893	.1460	5111.
.1120	3021.	2738.	3765.	8766.	-1606.	-5882.	.0419	-.0311	-.0549	-.1650	.1222	.1448	5004.
.1130	2043.	2072.	3125.	7179.	-1771.	-4983.	.0354	-.0188	-.0478	-.1468	.1480	.1364	4179.
.1140	1221.	1769.	3131.	4809.	-1687.	-3431.	.0294	-.0033	-.0402	-.1293	.1649	.1228	2879.
.1150	-223.	491.	2540.	2548.	-1883.	-1632.	.0238	.0139	-.0331	-.1111	.1776	.1059	1670.
.1160	-1552.	-794.	1335.	964.	-1254.	-279.	.0192	.0311	-.0270	-.0933	.1887	.0909	986.
.1170	-2245.	-670.	200.	248.	-1451.	405.	.0164	.0473	-.0218	-.0784	.1965	.0800	716.

ADLPIPE PAGE 975

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.56.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	21	MEMBER	1	SEQUENCE	38	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)		
.1180	-2545.	-301.	-720.	-222.	-810.	1160.	.0141	.0625	-.0175	-.0640	.1878	.0690	671.		
.1190	-3293.	-934.	-1634.	-847.	-917.	2402.	.0116	.0768	-.0138	-.0468	.1681	.0550	1268.		
.1200	-3419.	-1491.	-2385.	-1929.	-956.	3591.	.0099	.0897	-.0104	-.0273	.1456	.0423	1962.		
.1210	-2117.	-1628.	-2998.	-3394.	-9.	4238.	.0091	.1007	-.0078	-.0101	.1197	.0338	2544.		
.1220	-1712.	-2233.	-4291.	-4104.	68.	4632.	.0073	.1094	-.0044	-.0001	.0886	.0244	2900.		
.1230	-2222.	-3436.	-5814.	-4389.	-857.	5083.	.0038	.1158	-.0003	-.0001	.0513	.0130	3173.		
.1240	-2199.	-4219.	-6822.	-4991.	-1584.	5120.	-.0005	.1204	.0034	-.0081	.0187	.0031	3432.		
.1250	-1180.	-4522.	-7098.	-6059.	-1510.	4576.	-.0057	.1231	.0060	-.0210	-.0073	-.0058	3628.		
.1260	-75.	-4917.	-6428.	-7167.	-1521.	4135.	-.0131	.1240	.0075	-.0389	-.0364	-.0182	3943.		
.1270	-60.	-4891.	-4961.	-7459.	-2938.	3847.	-.0227	.1221	.0093	-.0636	-.0606	-.0329	4167.		
.1280	364.	-3938.	-3237.	-7139.	-3793.	2842.	-.0319	.1171	.0103	-.0934	-.0730	-.0422	4016.		
.1290	1104.	-2694.	-2248.	-5991.	-3400.	883.	-.0394	.1093	.0104	-.1231	-.0749	-.0454	3255.		
.1300	888.	-1884.	-1669.	-4025.	-3221.	-825.	-.0463	.0997	.0102	-.1503	-.0767	-.0481	2446.		
.1310	232.	-1207.	-462.	-2251.	-3334.	-1316.	-.0522	.0897	.0099	-.1744	-.0868	-.0507	1984.		
.1320	-226.	-612.	747.	-1107.	-2851.	-1174.	-.0555	.0799	.0095	-.1917	-.0942	-.0480	1535.		
.1330	-49.	-767.	1064.	-469.	-874.	-1057.	-.0555	.0706	.0078	-.2002	-.0981	-.0374	679.		
.1340	-550.	-1406.	537.	711.	864.	-745.	-.0538	.0615	.0065	-.2030	-.1029	-.0223	630.		
.1350	-1972.	-1882.	-281.	2598.	1399.	-82.	-.0514	.0528	.0062	-.2031	-.1082	-.0040	1383.		
.1360	-2631.	-2307.	-1227.	4107.	2313.	413.	-.0481	.0456	.0051	-.1987	-.1090	.0203	2218.		
.1370	-2413.	-2622.	-2195.	4990.	3650.	496.	-.0443	.0407	.0030	-.1884	-.1015	.0484	2907.		
.1380	-1745.	-2429.	-2262.	5308.	4528.	790.	-.0415	.0381	.0010	-.1754	-.0980	.0731	3290.		
.1390	-1562.	-1860.	-1739.	5476.	4176.	1435.	-.0407	.0378	.0008	-.1609	-.1024	.0893	3297.		
.1400	-1557.	-1596.	-1865.	5352.	3701.	1708.	-.0407	.0393	.0022	-.1423	-.1083	.0977	3153.		
.1410	-827.	-1645.	-2529.	4442.	4067.	1384.	-.0410	.0424	.0045	-.1198	-.1143	.1000	2896.		
.1420	-369.	-1371.	-2724.	3145.	3566.	1119.	-.0432	.0470	.0086	-.0971	-.1205	.0933	2289.		
.1430	-169.	-973.	-1970.	1380.	1994.	1269.	-.0478	.0527	.0136	-.0767	-.1289	.0784	1283.		
.1440	227.	-790.	-1204.	-720.	425.	1188.	-.0533	.0586	.0185	-.0580	-.1314	.0610	681.		
.1450	905.	-589.	-1092.	-2643.	-588.	459.	-.0583	.0634	.0232	-.0416	-.1244	.0451	1287.		
.1460	1324.	-353.	-1357.	-3920.	-1657.	-377.	-.0628	.0665	.0281	-.0283	-.1153	.0299	2002.		
.1470	640.	-407.	-1892.	-4350.	-3602.	-868.	-.0670	.0676	.0332	-.0168	-.1036	.0140	2678.		
.1480	190.	-757.	-2490.	-4854.	-4857.	-1118.	-.0693	.0669	.0371	-.0038	-.0890	.0013	3260.		
.1490	271.	-1160.	-3109.	-5598.	-5021.	-1233.	-.0687	.0643	.0397	.0119	-.0692	-.0064	3571.		
.1500	-83.	-1722.	-3780.	-5934.	-5098.	-956.	-.0659	.0597	.0415	.0289	-.0477	-.0111	3694.		
.1510	-877.	-2468.	-4428.	-5617.	-5108.	-263.	-.0614	.0532	.0420	.0450	-.0307	-.0132	3560.		
.1520	-1715.	-2905.	-5013.	-4694.	-4799.	361.	-.0550	.0449	.0409	.0588	-.0110	-.0094	3151.		
.1530	-1733.	-2782.	-5006.	-3760.	-3716.	758.	-.0470	.0354	.0374	.0690	.0133	.0025	2503.		
.1540	-1512.	-2282.	-4150.	-2764.	-2869.	1141.	-.0386	.0254	.0318	.0748	.0427	.0200	1942.		
.1550	-1324.	-1504.	-2617.	-1608.	-2595.	1525.	-.0304	.0149	.0249	.0765	.0742	.0405	1599.		

ADLPIPE PAGE 976

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.56.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

.1450	905.	-589.	-1092.	-2643.	-588.	459.	-.0583	.0634	.0232	-.0416	-.1244	.0451	1287.
.1460	1324.	-353.	-1357.	-3920.	-1657.	-377.	-.0628	.0665	.0281	-.0283	-.1153	.0299	2002.
.1470	640.	-407.	-1892.	-4350.	-3602.	-868.	-.0670	.0676	.0332	-.0168	-.1036	.0140	2678.
.1480	190.	-757.	-2490.	-4854.	-4857.	-1118.	-.0692	.0669	.0371	-.0038	-.0890	.0013	3260.
.1490	271.	-1160.	-3109.	-5598.	-5021.	-1223.	-.0687	.0643	.0397	.0119	-.0692	-.0064	3571.
.1500	-83.	-1722.	-2780.	-5934.	-5098.	-956.	-.0659	.0597	.0415	.0289	-.0477	-.0111	3694.
.1510	-877.	-2468.	-4428.	-5617.	-5108.	-263.	-.0614	.0532	.0420	.0450	-.0307	-.0132	3560.
.1520	-1715.	-2905.	-5013.	-4694.	-4799.	361.	-.0550	.0449	.0409	.0588	-.0110	-.0094	3151.
.1530	-1733.	-2782.	-5006.	-3760.	-3716.	758.	-.0470	.0354	.0374	.0690	.0133	.0025	2503.
.1540	-1512.	-2282.	-4150.	-2764.	-2869.	1141.	-.0386	.0254	.0318	.0748	.0427	.0200	1942.
.1550	-1324.	-1504.	-2617.	-1608.	-2595.	1525.	-.0304	.0149	.0249	.0765	.0742	.0405	1599.

ADLPIPE PAGE 976

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.56.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	21	MEMBER	1	SEQUENCE	38	LOCATION	END	TYPE	VA						
TIME	FX	FY	FZ	MX	MY	MZ				DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1560	-568.	-521.	-828.	-568.	-2006.	1633.	-.0219	.0042	.0169	.0748	.1034	.0636	1241.		
.1570	53.	394.	584.	559.	-1553.	1324.	-.0130	-.0066	.0089	.0709	.1333	.0870	992.		
.1580	582.	1018.	1760.	1473.	-1213.	914.	-.0040	-.0171	.0012	.0651	.1568	.1074	992.		
.1590	1249.	1485.	3041.	1955.	-848.	662.	.0047	-.0269	-.0060	.0577	.1673	.1220	1046.		
.1600	1765.	1924.	4305.	2247.	-720.	456.	.0129	-.0360	-.0127	.0492	.1676	.1300	1126.		
.1610	2214.	2229.	5201.	2419.	-639.	28.	.0210	-.0445	-.0186	.0410	.1625	.1323	1172.		
.1620	2982.	2339.	5721.	2443.	-200.	-716.	.0288	-.0525	-.0243	.0325	.1516	.1303	1197.		
.1630	3206.	2607.	5787.	2984.	-217.	-1719.	.0361	-.0600	-.0290	.0223	.1370	.1231	1617.		
.1640	3109.	2998.	5597.	3804.	-434.	-2795.	.0426	-.0665	-.0327	.0112	.1173	.1112	2221.		
.1650	3234.	3142.	5275.	4265.	-215.	-3773.	.0487	-.0712	-.0361	.0014	.0929	.0957	2671.		
.1660	3146.	3038.	4754.	4424.	112.	-4526.	.0541	-.0737	-.0387	-.0063	.0671	.0770	2967.		
.1670	2967.	2860.	4218.	4243.	687.	-4842.	.0588	-.0737	-.0401	-.0121	.0358	.0560	3034.		
.1680	2356.	2485.	3406.	3925.	1169.	-4702.	.0625	-.0713	-.0397	-.0145	.0018	.0336	2922.		
.1690	1704.	1661.	2281.	3308.	1868.	-4266.	.0649	-.0667	-.0381	-.0114	-.0306	.0125	2677.		
.1700	1194.	847.	1215.	2485.	2654.	-3719.	.0656	-.0601	-.0357	-.0036	-.0562	-.0043	2437.		
.1710	579.	600.	518.	1725.	2907.	-3088.	.0641	-.0521	-.0320	.0075	-.0710	-.0154	2145.		
.1720	493.	522.	290.	702.	3143.	-2298.	.0601	-.0429	-.0277	.0219	-.0791	-.0204	1854.		
.1730	341.	362.	16.	-99.	2932.	-1561.	.0536	-.0333	-.0226	.0398	-.0762	-.0200	1557.		
.1740	271.	523.	-257.	-568.	2506.	-1016.	.0451	-.0238	-.0169	.0584	-.0541	-.0142	1295.		
.1750	485.	997.	-351.	-1002.	2140.	-482.	.0349	-.0147	-.0103	.0757	-.0485	-.0051	1130.		
.1760	302.	1070.	-630.	-1412.	1407.	244.	.0232	-.0062	-.0027	.0919	-.0310	.0031	941.		
.1770	16.	524.	-1154.	-1994.	798.	1127.	.0106	.0015	.0056	.1070	-.0160	.0083	1137.		
.1780	-483.	-67.	-1956.	-2481.	234.	1936.	-.0022	.0080	.0147	.1196	-.0018	.0096	1479.		
.1790	-995.	-779.	-2922.	-2988.	-92.	2688.	-.0150	.0130	.0244	.1286	.0078	.0057	1884.		
.1800	-1719.	-1895.	-3982.	-3441.	-411.	3417.	-.0279	.0165	.0337	.1329	.0111	-.0040	2281.		
.1810	-2872.	-2814.	-4990.	-3478.	-1107.	3866.	-.0407	.0183	.0428	.1319	.0124	-.0187	2492.		
.1820	-3478.	-3119.	-5592.	-3432.	-1388.	3853.	-.0525	.0185	.0507	.1264	.0103	-.0355	2504.		
.1830	-3883.	-3228.	-5985.	-3257.	-1629.	3482.	-.0632	.0174	.0572	.1188	.0063	-.0540	2361.		
.1840	-4294.	-3328.	-6090.	-2993.	-2116.	3005.	-.0728	.0152	.0623	.1097	-.0012	-.0733	2221.		
.1850	-4400.	-2949.	-5682.	-2758.	-2624.	2448.	-.0805	.0122	.0659	.0991	-.0125	-.0904	2121.		
.1860	-4236.	-2245.	-5107.	-2549.	-3009.	1720.	-.0855	.0085	.0680	.0894	-.0246	-.1031	2016.		
.1870	-3675.	-1933.	-4608.	-2564.	-2966.	1006.	-.0877	.0044	.0681	.0824	-.0401	-.1104	1897.		
.1880	-3167.	-1762.	-4065.	-2547.	-3103.	527.	-.0875	.0001	.0667	.0772	-.0574	-.1119	1897.		
.1890	-2344.	-1222.	-3136.	-2588.	-3239.	301.	-.0846	-.0046	.0637	.0725	-.0750	-.1058	1948.		
.1900	-1022.	-667.	-2045.	-2751.	-3018.	138.	-.0791	-.0097	.0587	.0695	-.0896	-.0914	1915.		
.1910	245.	-352.	-1114.	-2668.	-2819.	-101.	-.0718	-.0155	.0519	.0682	-.0967	-.0703	1820.		
.1920	1558.	217.	-49.	-2268.	-2619.	-358.	-.0629	-.0220	.0440	.0665	-.0985	-.0445	1632.		
.1930	2772.	1122.	1103.	-1551.	-2469.	-604.	-.0529	-.0294	.0357	.0642	-.0946	-.0166	1395.		

ADLPIPE PAGE 977

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.56.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.1830	-3883.	-3228.	-5985.	-3257.	-1629.	3482.	-.0632	.0174	.0572	.1188	.0063	-.0540	2361.
.1840	-4294.	-3328.	-6090.	-2993.	-2116.	3005.	-.0728	.0152	.0623	.1097	-.0012	-.0733	2221.
.1850	-4400.	-2949.	-5682.	-2758.	-2624.	2448.	-.0805	.0122	.0659	.0991	-.0125	-.0904	2121.
.1860	-4236.	-2245.	-5107.	-2549.	-3009.	1720.	-.0855	.0085	.0680	.0894	-.0246	-.1031	2016.
.1870	-3675.	-1933.	-4608.	-2564.	-2966.	1006.	-.0877	.0044	.0681	.0824	-.0401	-.1104	1897.
.1880	-3167.	-1762.	-4065.	-2547.	-3103.	527.	-.0875	.0001	.0667	.0772	-.0574	-.1119	1897.
.1890	-2344.	-1222.	-3136.	-2588.	-3239.	301.	-.0846	-.0046	.0637	.0725	-.0750	-.1058	1948.
.1900	-1022.	-.667.	-2045.	-2751.	-3018.	138.	-.0791	-.0097	.0587	.0695	-.0896	-.0914	1915.
.1910	245.	-.352.	-1114.	-2668.	-2819.	-101.	-.0718	-.0155	.0519	.0682	-.0967	-.0703	1820.
.1920	1558.	217.	-49.	-2268.	-2619.	-358.	-.0629	-.0220	.0440	.0665	-.0985	-.0445	1632.
.1930	2772.	1122.	1103.	-1551.	-2469.	-604.	-.0529	-.0294	.0357	.0642	-.0946	-.0166	1395.

ADLPIPE PAGE 977

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.56.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	21	MEMBER	1	SEQUENCE	38	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)		
.1940	3690.	1741.	1967.	-677.	-2225.	-868.	-.0421	-.0374	.0270	.0627	-.0343	.0099	1163.		
.1950	4340.	2064.	2584.	177.	-1740.	-1120.	-.0307	-.0455	.0185	.0621	-.0693	.0319	973.		
.1960	4690.	2524.	3249.	976.	-1132.	-1233.	-.0193	-.0535	.0107	.0607	-.0528	.0471	908.		
.1970	4499.	2845.	3762.	1751.	-559.	-1183.	-.0082	-.0612	.0041	.0584	-.0362	.0537	1024.		
.1980	3763.	2665.	3774.	2490.	82.	-1134.	.0024	-.0683	-.0015	.0560	-.0187	.0520	1283.		
.1990	2799.	2397.	3469.	3164.	865.	-1218.	.0126	-.0746	-.0060	.0534	.0000	.0436	1640.		
.2000	1734.	2340.	3210.	3736.	1540.	-1357.	.0219	-.0799	-.0095	.0502	.0193	.0303	1998.		
.2010	556.	2189.	3032.	4119.	1904.	-1453.	.0302	-.0837	-.0126	.0473	.0384	.0136	2233.		
.2020	-462.	1952.	2899.	4230.	2127.	-1573.	.0376	-.0859	-.0155	.0456	.0574	-.0036	2338.		
.2030	-1078.	2001.	2858.	4131.	2351.	-1779.	.0447	-.0865	-.0183	.0452	.0749	-.0188	2378.		
.2040	-1481.	2173.	2790.	3942.	2401.	-1954.	.0515	-.0856	-.0207	.0470	.0887	-.0312	2349.		
.2050	-1797.	2077.	2571.	3609.	2209.	-1950.	.0580	-.0831	-.0230	.0522	.0973	-.0411	2184.		
.2060	-1756.	1887.	2338.	2977.	2017.	-1767.	.0645	-.0792	-.0252	.0610	.1010	-.0473	1877.		
.2070	-1240.	1837.	2219.	2053.	1945.	-1449.	.0710	-.0742	-.0274	.0724	.1006	-.0496	1489.		
.2080	-574.	1690.	2079.	1048.	1821.	-995.	.0770	-.0684	-.0295	.0851	.0963	-.0494	1090.		
.2090	15.	1348.	1800.	160.	1582.	-464.	.0823	-.0622	-.0313	.0976	.0884	-.0479	776.		
.2100	638.	1112.	1480.	-573.	1412.	1.	.0866	-.0559	-.0327	.1078	.0785	-.0458	714.		
.2110	1297.	1034.	1232.	-1206.	1369.	354.	.0896	-.0498	-.0337	.1145	.0687	-.0440	871.		
.2120	1802.	891.	1124.	-1801.	1325.	687.	.0907	-.0440	-.0343	.1174	.0590	-.0447	1096.		
.2130	2068.	734.	1213.	-2355.	1247.	1023.	.0897	-.0386	-.0340	.1164	.0494	-.0488	1338.		
.2140	2105.	698.	1392.	-2796.	1251.	1258.	.0868	-.0339	-.0326	.1118	.0404	-.0563	1552.		
.2150	1854.	621.	1432.	-3052.	1376.	1329.	.0820	-.0303	-.0301	.1045	.0326	-.0665	1688.		
.2160	1298.	413.	1326.	-3101.	1514.	1299.	.0755	-.0277	-.0266	.0954	.0257	-.0785	1728.		
.2170	584.	299.	1276.	-2953.	1584.	1225.	.0673	-.0261	-.0224	.0848	.0196	-.0903	1672.		
.2180	-120.	352.	1309.	-2634.	1610.	1072.	.0579	-.0256	-.0176	.0735	.0152	-.0994	1531.		
.2190	-746.	390.	1253.	-2153.	1608.	800.	.0476	-.0259	-.0128	.0627	.0137	-.1035	1314.		
.2200	-1273.	392.	1037.	-1484.	1511.	443.	.0368	-.0269	-.0079	.0530	.0144	-.1013	1014.		
.2210	-1687.	454.	705.	-625.	1247.	57.	.0259	-.0285	-.0031	.0446	.0162	-.0923	654.		
.2220	-1948.	478.	267.	284.	866.	-313.	.0153	-.0301	.0015	.0380	.0188	-.0767	452.		
.2230	-1965.	345.	-224.	1025.	492.	-608.	.0053	-.0314	.0055	.0339	.0214	-.0557	604.		
.2240	-1709.	166.	-616.	1506.	155.	-755.	-.0040	-.0319	.0091	.0316	.0223	-.0312	793.		
.2250	-1287.	47.	-843.	1801.	-187.	-732.	-.0125	-.0317	.0123	.0304	.0198	-.0058	915.		
.2260	-795.	-55.	-967.	1992.	-496.	-609.	-.0203	-.0307	.0151	.0297	.0134	.0182	1003.		
.2270	-226.	-112.	-983.	2085.	-688.	-485.	-.0273	-.0288	.0174	.0290	.0038	.0388	1054.		
.2280	414.	3.	-783.	2078.	-784.	-401.	-.0339	-.0262	.0193	.0273	-.0079	.0548	1058.		
.2290	1037.	287.	-329.	1988.	-872.	-342.	-.0400	-.0229	.0210	.0238	-.0213	.0648	1030.		
.2300	1575.	617.	277.	1819.	-966.	-305.	-.0460	-.0189	.0224	.0184	-.0357	.0683	976.		
.2310	1988.	923.	883.	1571.	-1019.	-313.	-.0515	-.0143	.0238	.0110	-.0503	.0655	890.		

ADLPIPE PAGE 978

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.56.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.2210	-1687.	434.	705.	-625.	1247.	434.	57.	.0259	-.0285	-.0031	.0446	.0162	-.0923	654.
.2220	-1948.	478.	267.	284.	866.	-313.	.0153	-.0301	.0015	.0380	.0188	-.0767	452.	
.2230	-1965.	345.	-224.	1025.	492.	-608.	.0053	-.0314	.0055	.0339	.0214	-.0557	604.	
.2240	-1709.	166.	-616.	1506.	155.	-755.	-.0040	-.0319	.0091	.0316	.0223	-.0312	793.	
.2250	-1287.	47.	-843.	1801.	-187.	-732.	-.0125	-.0317	.0123	.0304	.0198	-.0058	915.	
.2260	-795.	-55.	-967.	1992.	-496.	-609.	-.0203	-.0307	.0151	.0297	.0134	.0182	1003.	
.2270	-226.	-112.	-983.	2085.	-688.	-485.	-.0273	-.0288	.0174	.0290	.0038	.0388	1054.	
.2280	414.	3.	-783.	2078.	-784.	-401.	-.0339	-.0262	.0193	.0273	-.0079	.0548	1058.	
.2290	1037.	287.	-329.	1988.	-872.	-342.	-.0400	-.0229	.0210	.0238	-.0213	.0648	1030.	
.2300	1575.	617.	277.	1819.	-966.	-305.	-.0460	-.0189	.0224	.0184	-.0357	.0683	976.	
.2310	1988.	923.	683.	1571.	-1019.	-313.	-.0515	-.0143	.0238	.0110	-.0503	.0655	890.	

ADLPIPE PAGE 978

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.56.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	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)
.2320	2205.	1147.	1361.	1249.	-1041.	-362.	-.0566	-.0093	.0253	.0017	-.0542	.0572	781.							
.2330	2169.	1175.	1634.	831.	-1070.	-387.	-.0609	-.0039	.0270	-.0087	-.0771	.0444	660.							
.2340	1924.	956.	1702.	288.	-1111.	-332.	-.0645	.0018	.0288	-.0193	-.0884	.0282	560.							
.2350	1555.	576.	1595.	-346.	-1159.	-202.	-.0671	.0076	.0305	-.0289	-.0971	.0106	575.							
.2360	1114.	124.	1313.	-959.	-1217.	-50.	-.0685	.0133	.0318	-.0371	-.1019	-.0065	727.							
.2370	622.	-356.	850.	-1424.	-1290.	80.	-.0685	.0185	.0327	-.0435	-.1023	-.0216	901.							
.2380	121.	-788.	260.	-1648.	-1380.	165.	-.0670	.0233	.0327	-.0482	-.0986	-.0334	1010.							
.2390	-318.	-1071.	-348.	-1623.	-1475.	213.	-.0641	.0275	.0318	-.0515	-.0906	-.0411	1033.							
.2400	-629.	-1205.	-885.	-1444.	-1528.	266.	-.0597	.0215	.0296	-.0536	-.0789	-.0444	993.							
.2410	-807.	-1280.	-1318.	-1239.	-1505.	386.	-.0538	.0353	.0264	-.0547	-.0545	-.0437	931.							
.2420	-920.	-1364.	-1649.	-1074.	-1413.	605.	-.0466	.0391	.0223	-.0553	-.0489	-.0397	879.							
.2430	-1010.	-1477.	-1894.	-983.	-1247.	911.	-.0382	.0429	.0174	-.0558	-.0329	-.0334	858.							
.2440	-1067.	-1637.	-2071.	-999.	-977.	1274.	-.0289	.0467	.0120	-.0564	-.0172	-.0256	886.							
.2450	-1083.	-1832.	-2152.	-1123.	-627.	1666.	-.0190	.0504	.0062	-.0573	-.0027	-.0172	986.							
.2460	-1073.	-1976.	-2079.	-1294.	-267.	2037.	-.0089	.0538	.0002	-.0589	.0104	-.0090	1138.							
.2470	-1021.	-1982.	-1830.	-1437.	79.	2303.	.0010	.0567	-.0061	-.0613	.0219	-.0015	1273.							
.2480	-902.	-1849.	-1459.	-1487.	438.	2391.	.0104	.0588	-.0123	-.0647	.0316	.0051	1336.							
.2490	-756.	-1602.	-1035.	-1385.	784.	2288.	.0193	.0599	-.0185	-.0694	.0389	.0103	1306.							
.2500	-644.	-1257.	-597.	-1117.	1060.	2027.	.0273	.0602	-.0244	-.0755	.0435	.0141	1193.							
.2510	-562.	-891.	-193.	-765.	1297.	1654.	.0345	.0598	-.0298	-.0831	.0452	.0165	1048.							
.2520	-487.	-635.	117.	-442.	1561.	1227.	.0408	.0589	-.0346	-.0916	.0441	.0178	953.							
.2530	-441.	-538.	320.	-196.	1829.	821.	.0462	.0576	-.0388	-.1011	.0402	.0183	944.							
.2540	-448.	-555.	442.	-13.	2044.	487.	.0505	.0562	-.0423	-.1113	.0335	.0184	985.							
.2550	-478.	-669.	477.	126.	2215.	205.	.0538	.0548	-.0451	-.1219	.0254	.0189	1044.							
.2560	-475.	-847.	428.	259.	2365.	-74.	.0560	.0533	-.0471	-.1319	.0172	.0206	1115.							
.2570	-397.	-958.	381.	440.	2444.	-357.	.0568	.0520	-.0486	-.1409	.0101	.0240	1176.							
.2580	-222.	-907.	427.	700.	2388.	-617.	.0561	.0507	-.0494	-.1487	.0045	.0294	1202.							
.2590	58.	-724.	561.	1035.	2207.	-856.	.0538	.0497	-.0495	-.1548	.0013	.0368	1211.							
.2600	418.	-452.	717.	1429.	1941.	-1098.	.0501	.0490	-.0490	-.1590	.0010	.0461	1242.							
.2610	796.	-127.	851.	1850.	1604.	-1315.	.0449	.0488	-.0476	-.1618	.0032	.0567	1302.							
.2620	1123.	145.	943.	2212.	1191.	-1425.	.0384	.0493	-.0452	-.1633	.0071	.0675	1353.							
.2630	1368.	265.	995.	2414.	733.	-1373.	.0306	.0507	-.0419	-.1641	.0118	.0777	1346.							
.2640	1537.	240.	1039.	2395.	286.	-1166.	.0216	.0529	-.0378	-.1647	.0171	.0863	1256.							
.2650	1618.	105.	1084.	2178.	-119.	-845.	.0118	.0560	-.0329	-.1655	.0223	.0926	1096.							
.2660	1564.	-135.	1091.	1856.	-496.	-462.	.0013	.0597	-.0274	-.1666	.0270	.0959	926.							
.2670	1362.	-418.	1038.	1539.	-854.	-79.	-.0095	.0637	-.0215	-.1683	.0304	.0958	826.							
.2680	1072.	-631.	957.	1279.	-1166.	246.	-.0204	.0679	-.0154	-.1703	.0326	.0925	819.							
.2690	747.	-747.	877.	1065.	-1412.	492.	-.0310	.0721	-.0094	-.1722	.0329	.0861	860.							

ADLPIPE PAGE 979

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.56.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

.2590	58.	-724.	561.	1035.	2207.	-856.	.0538	.0497	-.0495	-.1548	.0013	.0368	1211.
.2600	418.	-452.	717.	1429.	1941.	-1098.	.0501	.0490	-.0490	-.1590	.0010	.0461	1242.
.2610	796.	-127.	851.	1850.	1604.	-1315.	.0449	.0488	-.0476	-.1618	.0032	.0567	1302.
.2620	1123.	145.	943.	2212.	1191.	-1425.	.0384	.0493	-.0452	-.1633	.0071	.0675	1353.
.2630	1368.	265.	995.	2414.	733.	-1373.	.0306	.0507	-.0419	-.1641	.0118	.0777	1346.
.2640	1537.	240.	1039.	2395.	286.	-1166.	.0216	.0529	-.0378	-.1647	.0171	.0863	1256.
.2650	1618.	105.	1084.	2178.	-119.	-845.	.0118	.0560	-.0329	-.1655	.0223	.0926	1096.
.2660	1564.	-135.	1091.	1856.	-496.	-462.	.0013	.0517	-.0274	-.1666	.0270	.0959	926.
.2670	1362.	-418.	1038.	1539.	-854.	-79.	-.0095	.0637	-.0215	-.1683	.0304	.0958	826.
.2680	1072.	-631.	957.	1279.	-1166.	246.	-.0204	.0679	-.0154	-.1703	.0326	.0925	819.
.2690	747.	-747.	877.	1065.	-1412.	492.	-.0310	.0721	-.0094	-.1722	.0329	.0861	860.

ADLPIPE PAGE 979

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.56.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	VA	VA	DZ	RX	RY	RZ	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)	
.2700	376.	-830.	770.	880.	-1603.	673.	-.0409	.0763	-.0036	-.1736	.0309	.0768	913.
.2710	-44.	-908.	584.	714.	-1738.	804.	-.0498	.0803	.0019	-.1741	.0260	.0655	958.
.2720	-476.	-996.	280.	532.	-1794.	904.	-.0573	.0842	.0070	-.1735	.0179	.0531	974.
.2730	-888.	-1161.	-156.	279.	-1775.	1007.	-.0632	.0880	.0115	-.1716	.0065	.0409	965.
.2740	-1254.	-1440.	-691.	-74.	-1725.	1134.	-.0674	.0916	.0153	-.1683	-.0071	.0300	968.
.2750	-1522.	-1768.	-1274.	-504.	-1663.	1263.	-.0699	.0949	.0183	-.1636	-.0221	.0214	1007.
.2760	-1655.	-2084.	-1885.	-947.	-1590.	1352.	-.0708	.0977	.0203	-.1578	-.0373	.0162	1074.
.2770	-1672.	-2376.	-2516.	-1330.	-1531.	1377.	-.0702	.0998	.0214	-.1509	-.0519	.0144	1149.
.2780	-1584.	-2594.	-3100.	-1613.	-1501.	1338.	-.0683	.1012	.0216	-.1433	-.0650	.0158	1208.
.2790	-1385.	-2677.	-3554.	-1797.	-1469.	1245.	-.0654	.1017	.0209	-.1350	-.0765	.0198	1234.
.2800	-1106.	-2655.	-3864.	-1894.	-1393.	1111.	-.0615	.1013	.0196	-.1263	-.0859	.0253	1219.
.2810	-825.	-2583.	-4047.	-1918.	-1264.	973.	-.0571	.0999	.0177	-.1175	-.0933	.0312	1169.
.2820	-587.	-2464.	-4098.	-1888.	-1079.	867.	-.0522	.0976	.0155	-.1093	-.0987	.0366	1097.
.2830	-418.	-2319.	-4030.	-1823.	-831.	804.	-.0470	.0945	.0132	-.1018	-.1018	.0408	1012.
.2840	-353.	-2210.	-3885.	-1722.	-530.	767.	-.0419	.0905	.0109	-.0954	-.1021	.0433	918.
.2850	-399.	-2136.	-3677.	-1580.	-201.	738.	-.0368	.0858	.0086	-.0903	-.0992	.0441	822.
.2860	-515.	-2032.	-3377.	-1408.	130.	716.	-.0321	.0804	.0065	-.0864	-.0931	.0435	743.
.2870	-671.	-1898.	-2991.	-1208.	436.	701.	-.0277	.0743	.0045	-.0836	-.0844	.0417	686.
.2880	-854.	-1757.	-2562.	-959.	694.	671.	-.0237	.0677	.0027	-.0811	-.0733	.0392	638.
.2890	-1029.	-1577.	-2119.	-649.	897.	605.	-.0200	.6604	.0010	-.0782	-.0607	.0362	591.
.2900	-1155.	-1338.	-1677.	-306.	1041.	507.	-.0166	.0528	-.0004	-.0745	-.0473	.0335	561.
.2910	-1218.	-1087.	-1265.	33.	1102.	401.	-.0135	.0448	-.0015	-.0694	-.0339	.0313	550.
.2920	-1206.	-848.	-898.	347.	1060.	289.	-.0107	.0368	-.0024	-.0625	-.0208	.0301	540.
.2930	-1095.	-598.	-581.	623.	923.	151.	-.0080	.0287	-.0032	-.0540	-.0083	.0300	527.
.2940	-895.	-356.	-330.	840.	701.	-19.	-.0053	.0207	-.0037	-.0441	.0038	.0313	513.
.2950	-641.	-167.	-156.	979.	396.	-208.	-.0028	.0131	-.0041	-.0331	.0151	.0335	504.
.2960	-352.	-15.	-25.	1036.	30.	-406.	-.0003	.0057	-.0044	-.0216	.0254	.0363	522.
.2970	-29.	141.	113.	1011.	-346.	-606.	.0021	-.0011	-.0047	-.0098	.0344	.0390	576.
.2980	299.	285.	270.	904.	-686.	-793.	.0046	-.0076	-.0049	.0021	.0420	.0408	649.
.2990	595.	404.	447.	734.	-956.	-946.	.0072	-.0136	-.0052	.0138	.0476	.0412	718.
.3000	834.	539.	653.	547.	-1135.	-1059.	.0099	-.0192	-.0054	.0252	.0513	.0399	771.
.3010	1011.	710.	885.	389.	-1204.	-1146.	.0127	-.0245	-.0056	.0362	.0531	.0370	800.
.3020	1128.	897.	1137.	268.	-1167.	-1209.	.0154	-.0295	-.0059	.0468	.0536	.0328	797.
.3030	1206.	1098.	1420.	172.	-1050.	-1241.	.0181	-.0343	-.0062	.0569	.0536	.0281	766.
.3040	1261.	1322.	1731.	101.	-889.	-1246.	.0206	-.0388	-.0065	.0664	.0535	.0237	719.
.3050	1289.	1538.	2018.	71.	-715.	-1244.	.0229	-.0432	-.0067	.0753	.0541	.0205	673.
.3060	1292.	1705.	2230.	81.	-550.	-1246.	.0249	-.0473	-.0069	.0839	.0554	.0189	639.
.3070	1282.	1817.	2355.	111.	-414.	-1245.	.0265	-.0513	-.0069	.0923	.0577	.0194	617.

ADLPIPE PAGE 980

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.56.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.2760	-352.	-15.	-25.	1036.	30.	-406.	-606.	.0021	-.0011	-.0047	-.0098	.0344	.0390	522.
.2970	-29.	141.	113.	1011.	-346.	-606.	.0021	-.0011	-.0047	-.0098	.0344	.0390	576.	
.2980	299.	285.	270.	904.	-686.	-793.	.0046	-.0076	-.0049	.0021	.0420	.0408	649.	
.2990	595.	404.	447.	734.	-956.	-946.	.0072	-.0136	-.0052	.0138	.0476	.0412	718.	
.3000	834.	539.	653.	547.	-1135.	-1059.	.0099	-.0192	-.0054	.0252	.0513	.0399	771.	
.3010	1011.	710.	885.	389.	-1204.	-1146.	.0127	-.0245	-.0056	.0362	.0531	.0370	800.	
.3020	1128.	897.	1137.	261.	-1167.	-1209.	.0154	-.0295	-.0059	.0468	.0536	-.0328	797.	
.3030	1206.	1098.	1420.	172.	-1050.	-1241.	.0181	-.0343	-.0062	.0569	.0536	.0281	766.	
.3040	1261.	1322.	1731.	101.	-889.	-1246.	.0206	-.0388	-.0065	.0664	.0535	.0237	719.	
.3050	1289.	1538.	2018.	71.	-715.	-1244.	.0229	-.0432	-.0067	.0753	.0541	.0205	673.	
.3060	1292.	1705.	2230.	81.	-550.	-1246.	.0249	-.0473	-.0069	.0839	.0554	.0189	639.	
.3070	1282.	1817.	2355.	111.	-414.	-1245.	.0265	-.0513	-.0069	.0923	.0577	.0194	617.	

ADLPIPE PAGE 980

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.56.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	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)		
.3080	1265.	1877.	2388.	148.	-323.	-1231.	.0277	-.0552	-.0067	.1006	.0504	.0217	601.		
.3090	1233.	1871.	2309.	202.	-273.	-1214.	.0284	-.0589	-.0061	.1092	.0633	.0254	591.		
.3100	1181.	1818.	2117.	293.	-247.	-1206.	.0288	-.0626	-.0053	.1180	.0657	.0298	593.		
.3110	1109.	1758.	1841.	430.	-236.	-1215.	.0286	-.0661	-.0042	.1267	.0671	.0341	614.		
.3120	1010.	1705.	1521.	609.	-228.	-1243.	.0280	-.0695	-.0028	.1348	.0671	.0374	658.		
.3130	889.	1670.	1201.	814.	-205.	-1290.	.0270	-.0726	-.0012	.1420	.0654	.0389	721.		
.3140	762.	1670.	929.	1023.	-145.	-1346.	.0255	-.0754	.0005	.1477	.0615	.0380	795.		
.3150	630.	1703.	737.	1204.	-46.	-1393.	.0237	-.0778	.0024	.1514	.0554	.0342	863.		
.3160	485.	1735.	626.	1327.	93.	-1411.	.0214	-.0796	.0043	.1529	.0469	.0274	909.		
.3170	334.	1740.	585.	1367.	275.	-1388.	.0189	-.0809	.0062	.1523	.0360	.0179	922.		
.3180	199.	1716.	609.	1311.	489.	-1318.	.0162	-.0816	.0083	.1500	.0232	.0060	901.		
.3190	91.	1659.	684.	1163.	705.	-1194.	.0132	-.0817	.0103	.1464	.0088	-.0076	848.		
.3200	18.	1566.	789.	934.	891.	-1028.	.0101	-.0812	.0124	.1423	-.0062	-.0221	773.		
.3210	1.	1462.	912.	649.	1023.	-846.	.0068	-.0803	.0145	.1380	-.0211	-.0364	693.		
.3220	54.	1379.	1047.	338.	1080.	-675.	.0034	-.0791	.0167	.1342	-.0347	-.0496	618.		
.3230	173.	1327.	1183.	32.	1038.	-529.	-.0000	-.0777	.0188	.1311	-.0463	-.0611	546.		
.3240	339.	1304.	1303.	-252.	890.	-417.	-.0035	-.0760	.0208	.1290	-.0552	-.0704	476.		
.3250	530.	1311.	1390.	-509.	659.	-338.	-.0069	-.0743	.0227	.1278	-.0510	-.0773	421.		
.3260	712.	1323.	1427.	-743.	373.	-282.	-.0101	-.0725	.0245	.1275	-.0637	-.0220	411.		
.3270	849.	1311.	1400.	-956.	67.	-227.	-.0129	-.0706	.0261	.1281	-.0635	-.0847	462.		
.3280	906.	1264.	1294.	-1139.	-218.	-156.	-.0152	-.0689	.0276	.1293	-.0509	-.0862	548.		
.3290	855.	1178.	1099.	-1270.	-443.	-66.	-.0168	-.0672	.0288	.1309	-.0564	-.0868	631.		
.3300	685.	1055.	818.	-1374.	-581.	40.	-.0176	-.0658	.0298	.1328	-.0507	-.0871	682.		
.3310	415.	923.	487.	-1318.	-616.	157.	-.0175	-.0648	.0304	.1349	-.0441	-.0874	686.		
.3320	79.	812.	149.	-1215.	-551.	272.	-.0167	-.0640	.0306	.1367	-.0369	-.0877	638.		
.3330	-292.	741.	-164.	-1019.	-409.	368.	-.0149	-.0637	.0302	.1383	-.0294	-.0879	543.		
.3340	-666.	719.	-437.	-741.	-213.	427.	-.0124	-.0637	.0292	.1393	-.0216	-.0878	413.		
.3350	-1000.	743.	-647.	-415.	13.	442.	-.0092	-.0641	.0277	.1395	-.0138	-.0871	284.		
.3360	-1259.	797.	-773.	-88.	241.	420.	-.0054	-.0646	.0256	.1389	-.0062	-.0856	231.		
.3370	-1415.	865.	-794.	198.	444.	373.	-.0010	-.0653	.0229	.1373	.0010	-.0832	287.		
.3380	-1445.	941.	-695.	408.	610.	309.	.0038	-.0660	.0197	.1347	.0075	-.0797	373.		
.3390	-1341.	1025.	-482.	533.	737.	228.	.0090	-.0667	.0161	.1309	.0132	-.0752	439.		
.3400	-1117.	1117.	-169.	593.	818.	125.	.0144	-.0673	.0121	.1260	.0178	-.0700	477.		
.3410	-785.	1235.	240.	618.	855.	-6.	.0199	-.0679	.0077	.1200	.0215	-.0643	494.		
.3420	-358.	1405.	744.	634.	857.	-170.	.0254	-.0685	.0031	.1130	.0245	-.0584	506.		
.3430	137.	1632.	1321.	663.	839.	-365.	.0308	-.0691	-.0017	.1049	.0268	-.0526	529.		
.3440	648.	1896.	1924.	732.	809.	-585.	.0361	-.0697	-.0065	.0961	.0289	-.0474	580.		
.3450	1125.	2173.	2499.	857.	785.	-820.	.0410	-.0702	-.0112	.0867	.0308	-.0430	667.		

ADLPIPE PAGE 981

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.56.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.3350	-1000.	743.	647.	-415.	13.	442.	-0.092	-0.0641	.0277	.1395	-0.0138	-0.0871	284.
.3360	-1259.	797.	-773.	-88.	241.	420.	-0.0054	-0.0646	.0256	.1389	-0.0062	-0.0856	231.
.3370	-1415.	865.	-794.	198.	444.	373.	-0.0010	-0.0653	.0229	.1373	.0010	-0.0832	287.
.3380	-1445.	941.	-695.	408.	610.	309.	.0038	-0.0660	.0197	.1347	.0075	-0.0797	373.
.3390	-1341.	1025.	-482.	533.	737.	228.	.0090	-0.0667	.0161	.1309	.0132	-0.0752	439.
.3400	-1117.	1117.	-169.	593.	818.	125.	.0144	-0.0673	.0121	.1260	.0178	-0.0700	477.
.3410	-785.	1235.	240.	618.	855.	-6.	.0199	-0.0679	.0077	.1200	.0215	-0.0643	494.
.3420	-358.	1405.	744.	634.	857.	-170.	.0254	-0.0685	.0031	.1130	.0245	-0.0584	506.
.3430	137.	1632.	1321.	663.	839.	-365.	.0308	-0.0691	-0.0017	.1049	.0268	-0.0526	529.
.3440	648.	1896.	1924.	732.	809.	-585.	.0361	-0.0697	-0.0065	.0961	.0289	-0.0474	580.
.3450	1125.	2173.	2499.	857.	785.	-820.	.0410	-0.0702	-0.0112	.0867	.0308	-0.0430	667.

ADLPIPE PAGE 981

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.56.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	21	MEMBER	1	SEQUENCE	38	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)	
.3460	1524.	2428.	2994.	1038.	784.	-1049.		.0457	-0.0707	-0.0156	.0769	.0326	-0.0397	783.	
.3470	1811.	2618.	3369.	1254.	820.	-1242.		.0499	-0.0709	-0.0196	.0670	.0344	-0.0377	912.	
.3480	1961.	2713.	3603.	1480.	896.	-1373.		.0537	-0.0709	-0.0230	.0571	.0362	-0.0370	1035.	
.3490	1971.	2703.	3689.	1702.	1011.	-1432.		.0569	-0.0705	-0.0258	.0475	.0381	-0.0377	1145.	
.3500	1846.	2594.	3626.	1918.	1160.	-1423.		.0594	-0.0696	-0.0280	.0384	.0401	-0.0394	1244.	
.3510	1609.	2405.	3438.	2121.	1326.	-1356.		.0613	-0.0681	-0.0294	.0298	.0423	-0.0420	1333.	
.3520	1298.	2175.	3172.	2299.	1485.	-1240.		.0622	-0.0660	-0.0303	.0220	.0448	-0.0450	1408.	
.3530	953.	1940.	2878.	2435.	1616.	-1090.		.0624	-0.0631	-0.0306	.0149	.0475	-0.0482	1462.	
.3540	610.	1719.	2588.	2512.	1706.	-922.		.0616	-0.0594	-0.0304	.0086	.0503	-0.0514	1487.	
.3550	295.	1522.	2325.	2507.	1747.	-743.		.0600	-0.0548	-0.0297	.0034	.0531	-0.0542	1474.	
.3560	27.	1352.	2102.	2399.	1735.	-548.		.0576	-0.0493	-0.0286	-0.0011	.0553	-0.0566	1411.	
.3570	-189.	1199.	1920.	2173.	1670.	-334.		.0545	-0.0430	-0.0272	-0.0046	.0565	-0.0585	1294.	
.3580	-350.	1048.	1764.	1833.	1566.	-107.		.0510	-0.0360	-0.0254	-0.0074	.0563	-0.0599	1131.	
.3590	-458.	891.	1614.	1396.	1440.	126.		.0470	-0.0285	-0.0234	-0.0094	.0546	-0.0606	942.	
.3600	-524.	727.	1448.	898.	1300.	356.		.0427	-0.0206	-0.0213	-0.0109	.0510	-0.0606	759.	
.3610	-564.	554.	1244.	383.	1155.	573.		.0383	-0.0126	-0.0190	-0.0119	.0456	-0.0600	630.	
.3620	-588.	374.	980.	-100.	1017.	760.		.0339	-0.0047	-0.0167	-0.0128	.0383	-0.0587	597.	
.3630	-607.	191.	643.	-511.	900.	902.		.0294	.0027	-0.0143	-0.0134	.0294	-0.0566	643.	
.3640	-637.	1.	227.	-824.	805.	996.		.0249	.0096	-0.0120	-0.0140	.0192	-0.0540	714.	
.3650	-689.	-202.	-260.	-1035.	732.	1048.		.0205	.0158	-0.0096	-0.0149	.0079	-0.0507	771.	
.3660	-762.	-418.	-796.	-1154.	680.	1065.		.0159	.0212	-0.0071	-0.0160	-0.0040	-0.0469	802.	
.3670	-851.	-644.	-1347.	-1198.	646.	1054.		.0113	.0259	-0.0047	-0.0176	-0.0161	-0.0427	807.	
.3680	-952.	-878.	-1880.	-1183.	616.	1021.		.0064	.0298	-0.0022	-0.0198	-0.0277	-0.0380	787.	
.3690	-1055.	-1107.	-2360.	-1125.	575.	969.		.0013	.0330	.0003	-0.0227	-0.0383	-0.0328	746.	
.3700	-1143.	-1310.	-2753.	-1033.	514.	898.		-0.0040	.0356	.0028	-0.0263	-0.0474	-0.0273	685.	
.3710	-1200.	-1468.	-3029.	-916.	421.	811.		-0.0097	.0377	.0053	-0.0307	-0.0546	-0.0213	606.	
.3720	-1215.	-1567.	-3163.	-783.	288.	713.		-0.0156	.0393	.0077	-0.0356	-0.0597	-0.0150	514.	
.3730	-1177.	-1601.	-3145.	-647.	119.	613.		-0.0217	.0406	.0099	-0.0410	-0.0625	-0.0084	421.	
.3740	-1086.	-1572.	-2988.	-518.	-80.	518.		-0.0278	.0415	.0121	-0.0466	-0.0633	-0.0016	345.	
.3750	-952.	-1494.	-2718.	-400.	-299.	437.		-0.0338	.0423	.0140	-0.0522	-0.0623	.0052	311.	
.3760	-785.	-1382.	-2362.	-301.	-532.	379.		-0.0396	.0429	.0157	-0.0575	-0.0597	.0120	337.	
.3770	-592.	-1250.	-1947.	-235.	-767.	350.		-0.0449	.0434	.0173	-0.0624	-0.0560	.0186	410.	
.3780	-385.	-1117.	-1511.	-202.	-994.	348.		-0.0495	.0438	.0185	-0.0667	-0.0513	.0250	502.	
.3790	-183.	-997.	-1099.	-187.	-1208.	360.		-0.0535	.0441	.0195	-0.0702	-0.0460	.0311	597.	
.3800	-6.	-895.	-756.	-168.	-1405.	373.		-0.0565	.0444	.0201	-0.0729	-0.0403	.0369	686.	
.3810	134.	-812.	-505.	-134.	-1578.	375.		-0.0585	.0445	.0205	-0.0747	-0.0345	.0422	763.	
.3820	232.	-755.	-354.	-91.	-1722.	361.		-0.0595	.0445	.0205	-0.0756	-0.0288	.0471	825.	
.3830	285.	-723.	-297.	-43.	-1831.	329.		-0.0595	.0444	.0201	-0.0756	-0.0234	.0512	872.	

ADLPIPE PAGE 982

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.56.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.3730	-1177.	-1601.	-3145.	-647.	119.	613.	-.0217	.0406	.0099	-.0410	-.0625	-.0084	514.
.3740	-1086.	-1572.	-2988.	-518.	-80.	518.	-.0278	.0415	.0121	-.0466	-.0633	-.0016	345.
.3750	-952.	-1494.	-2718.	-400.	-299.	437.	-.0338	.0423	.0140	-.0522	-.0623	.0052	311.
.3760	-785.	-1382.	-2362.	-301.	-532.	379.	-.0396	.0429	.0157	-.0575	-.0597	.0120	337.
.3770	-592.	-1250.	-1947.	-235.	-767.	350.	-.0449	.0434	.0173	-.0624	-.0560	.0186	410.
.3780	-385.	-1117.	-1511.	-202.	-994.	346.	-.0495	.0438	.0185	-.0667	-.0513	.0250	502.
.3790	-183.	-997.	-1099.	-167.	-1208.	360.	-.0535	.0441	.0195	-.0702	-.0460	.0311	597.
.3800	-6.	-895.	-756.	-168.	-1405.	373.	-.0565	.0444	.0201	-.0729	-.0403	.0369	686.
.3810	134.	-812.	-505.	-134.	-1578.	375.	-.0585	.0445	.0205	-.0747	-.0345	.0422	763.
.3820	232.	-755.	-354.	-91.	-1722.	361.	-.0595	.0445	.0205	-.0756	-.0288	.0471	825.
.3830	285.	-723.	-297.	-43.	-1831.	329.	-.0595	.0444	.0201	-.0756	-.0234	.0512	872.

ADLPIPE PAGE 982

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.56.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	21	MEMBER	1	SEQUENCE	38	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)		
.3840	295.	-707.	-324.	3.	-1901.	275.	-.0583	.0442	.0194	-.0748	-.0184	.0546	900.		
.3850	263.	-707.	-426.	49.	-1930.	198.	-.0561	.0440	.0183	-.0733	-.0141	.0573	909.		
.3860	193.	-721.	-584.	92.	-1918.	101.	-.0530	.0437	.0169	-.0712	-.0104	.0593	901.		
.3870	104.	-733.	-760.	125.	-1867.	-14.	-.0489	.0433	.0150	-.0688	-.0071	.0608	877.		
.3880	20.	-728.	-916.	142.	-1779.	-140.	-.0441	.0429	.0128	-.0662	-.0042	.0621	839.		
.3890	-45.	-705.	-1027.	147.	-1659.	-273.	-.0386	.0424	.0101	-.0637	-.0014	.0634	791.		
.3900	-85.	-660.	-1085.	149.	-1510.	-408.	-.0326	.0419	.0070	-.0614	.0013	.0649	736.		
.3910	-93.	-592.	-1079.	150.	-1334.	-538.	-.0262	.0414	.0037	-.0595	.0041	.0670	678.		
.3920	-61.	-508.	-1004.	146.	-1131.	-650.	-.0196	.0407	.0000	-.0579	.0069	.0696	615.		
.3930	10.	-424.	-870.	137.	-906.	-733.	-.0130	.0400	-.0038	-.0566	.0097	.0729	550.		
.3940	109.	-349.	-704.	137.	-666.	-786.	-.0064	.0392	-.0076	-.0553	.0124	.0768	487.		
.3950	219.	-289.	-538.	159.	-417.	-811.	-.0001	.0383	-.0113	-.0542	.0149	.0811	434.		
.3960	326.	-249.	-390.	204.	-171.	-815.	.0057	.0372	-.0147	-.0530	.0174	.0857	402.		
.3970	429.	-231.	-260.	264.	58.	-800.	.0108	.0361	-.0177	-.0519	.0197	.0903	396.		
.3980	524.	-226.	-145.	332.	256.	-775.	.0151	.0349	-.0203	-.0508	.0219	.0947	413.		
.3990	603.	-228.	-48.	404.	410.	-750.	.0184	.0338	-.0223	-.0499	.0242	.0986	443.		
.4000	651.	-240.	18.	478.	516.	-735.	.0206	.0327	-.0236	-.0491	.0263	.1015	477.		

MAXIMUM VALUE OF STRESS OCCURS AT

TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	PX	RY	RZ	STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.1110	4468.	3716.	5125.	9041.	-707.	-6060.	.0491	-.0392	-.0610	-.1805	.0893	.1460	5111.

SECTION	21	MEMBER	2	SEQUENCE	138	LOCATION	DIS	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
0.0000	0.	0.	0.	0.	0.	0.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.		
.0010	9.	0.	17.	0.	0.	0.	-.0000	.0000	-.0000	-.0000	.0000	.0000	0.		
.0020	60.	0.	111.	0.	0.	0.	-.0000	.0000	-.0001	-.0003	.0002	.0002	0.		
.0030	152.	0.	280.	0.	0.	0.	-.0001	.0000	-.0002	-.0009	.0005	.0006	0.		
.0040	271.	0.	499.	0.	0.	0.	-.0001	-.0000	-.0003	-.0020	.0011	.0013	0.		
.0050	422.	0.	777.	0.	0.	0.	-.0001	-.0001	-.0005	-.0038	.0019	.0023	0.		
.0060	625.	0.	1150.	0.	0.	0.	-.0001	-.0002	-.0008	-.0062	.0027	.0037	0.		
.0070	925.	0.	1704.	0.	0.	0.	-.0001	-.0003	-.0013	-.0097	.0040	.0056	0.		

ADLPIPE PAGE 983

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.56.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

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	9.	0.	17.	0.	0.	0.	-0.0007	.0000	-0.0000	-0.0000	.0000	.0000	0.
.0020	60.	0.	111.	0.	0.	0.	-0.0000	.0000	-0.0001	-0.0003	.0002	.0002	0.
.0030	152.	0.	280.	0.	0.	0.	-0.0001	.0000	-0.0002	-0.0009	.0005	.0006	0.
.0040	271.	0.	499.	0.	0.	0.	-0.0001	-0.0000	-0.0003	-0.0020	.0011	.0013	0.
.0050	422.	0.	777.	0.	0.	0.	-0.0001	-0.0001	-0.0005	-0.0038	.0019	.0023	0.
.0060	625.	0.	1150.	0.	0.	0.	-0.0001	-0.0002	-0.0008	-0.0062	.0027	.0037	0.
.0070	925.	0.	1704.	0.	0.	0.	-0.0001	-0.0003	-0.0013	-0.0097	.0040	.0056	0.

ADLPIPE PAGE 983

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.56.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	DIS	TYPE	RU	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
21	2	138					.0080	1375.	0.	2533.	0.	0.	0.	-0.0001	-0.0005	-0.0019	-0.0147	.0064	.0084	0.
							.0090	1898.	0.	3495.	0.	0.	0.	.0002	-0.0008	-0.0028	-0.0216	.0108	.0123	0.
							.0100	2394.	0.	4410.	0.	0.	0.	.0007	-0.0013	-0.0038	-0.0303	.0173	.0170	0.
							.0110	2839.	0.	5229.	0.	0.	0.	.0018	-0.0019	-0.0050	-0.0402	.0255	.0218	0.
							.0120	3203.	0.	5898.	0.	0.	0.	.0035	-0.0027	-0.0065	-0.0509	.0347	.0262	0.
							.0130	3402.	0.	6266.	0.	0.	0.	.0061	-0.0034	-0.0081	-0.0619	.0437	.0295	0.
							.0140	3297.	0.	6072.	0.	0.	0.	.0095	-0.0040	-0.0098	-0.0723	.0510	.0306	0.
							.0150	2787.	0.	5133.	0.	0.	0.	.0139	-0.0044	-0.0115	-0.0803	.0553	.0285	0.
							.0160	1835.	0.	3379.	0.	0.	0.	.0192	-0.0045	-0.0130	-0.0845	.0560	.0226	0.
							.0170	561.	0.	1033.	0.	0.	0.	.0252	-0.0041	-0.0145	-0.0840	.0544	.0131	0.
							.0180	-768.	0.	-1414.	0.	0.	0.	.0317	-0.0026	-0.0161	-0.0787	.0530	.0011	0.
							.0190	-1834.	0.	-3378.	0.	0.	0.	.0384	.0001	-0.0183	-0.0699	.0545	-.0119	0.
							.0200	-2147.	0.	-3954.	0.	0.	0.	.0451	.0042	-0.0215	-0.0610	.0529	-.0230	0.
							.0210	-2102.	0.	-3872.	0.	0.	0.	.0522	.0096	-0.0253	-0.0552	.0801	-.0301	0.
							.0220	-2594.	0.	-4778.	0.	0.	0.	.0598	.0159	-0.0288	-0.0513	.0973	-.0349	0.
							.0230	-3100.	0.	-5709.	0.	0.	0.	.0675	.0230	-0.0322	-0.0459	.1061	-.0407	0.
							.0240	-3529.	0.	-6499.	0.	0.	0.	.0742	.0311	-0.0353	-0.0380	.1007	-.0487	0.
							.0250	-3835.	0.	-7062.	0.	0.	0.	.0802	.0396	-0.0381	-0.0277	.0865	-.0571	0.
							.0260	-3604.	0.	-6636.	0.	0.	0.	.0856	.0479	-0.0414	-0.0146	.0718	-.0635	0.
							.0270	-3772.	0.	-6946.	0.	0.	0.	.0892	.0544	-0.0431	-0.0003	.0460	-.0684	0.
							.0280	-4922.	0.	-9065.	0.	0.	0.	.0887	.0585	-0.0412	.0146	.0072	-.0725	0.
							.0290	-5903.	0.	-10870.	0.	0.	0.	.0841	.0609	-0.0373	.0318	-.0216	-.0730	0.
							.0300	-5314.	0.	-9787.	0.	0.	0.	.0767	.0628	-0.0341	.0477	-.0293	-.0661	0.
							.0310	-4327.	0.	-7969.	0.	0.	0.	.0645	.0639	-0.0289	.0565	-.0334	-.0550	0.
							.0320	-3529.	0.	-6498.	0.	0.	0.	.0458	.0633	-0.0198	.0593	-.0447	-.0457	0.
							.0330	-3274.	0.	-6029.	0.	0.	0.	.0236	.0603	-0.0082	.0610	-.0533	-.0403	0.
							.0340	-3657.	0.	-6735.	0.	0.	0.	.0010	.0552	.0046	.0623	-.0528	-.0378	0.
							.0350	-3608.	0.	-6644.	0.	0.	0.	-.0235	.0489	.0179	.0606	-.0548	-.0393	0.
							.0360	-2357.	0.	-4341.	0.	0.	0.	-.0511	.0413	.0311	.0549	-.0566	-.0456	0.
							.0370	-765.	0.	-1410.	0.	0.	0.	-.0775	.0315	.0432	.0470	-.0762	-.0536	0.
							.0380	17.	0.	32.	0.	0.	0.	-.0992	.0186	.0539	.0389	-.0768	-.0598	0.
							.0390	219.	0.	404.	0.	0.	0.	-.1179	.0037	.0637	.0310	-.0793	-.0637	0.
							.0400	1309.	0.	2411.	0.	0.	0.	-.1343	-.0114	.0711	.0214	-.0794	-.0614	0.
							.0410	3143.	0.	5789.	0.	0.	0.	-.1456	-.0256	.0746	.0086	-.0699	-.0485	0.
							.0420	4897.	0.	9018.	0.	0.	0.	-.1505	-.0391	.0748	-.0046	-.0499	-.0261	0.
							.0430	6195.	0.	11408.	0.	0.	0.	-.1503	-.0526	.0728	-.0132	-.0256	.0015	0.
							.0440	6078.	0.	11193.	0.	0.	0.	-.1446	-.0663	.0699	-.0168	-.0046	.0315	0.
							.0450	4621.	0.	8510.	0.	0.	0.	-.1325	-.0794	.0654	-.0146	.0093	.0608	0.

ADLPIPE PAGE 984

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.56.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

.0350	-3608.	0.	6644.	0.	0.	0.	0.	-.0235	.0489	.0179	.0606	-.0528	-.0393	0.
.0360	-2357.	0.	-4341.	0.	0.	0.	0.	-.0511	.0413	.0311	.0549	-.0566	-.0456	0.
.0370	-765.	0.	-1410.	0.	0.	0.	0.	-.0775	.0315	.0432	.0470	-.0762	-.0536	0.
.0380	17.	0.	32.	0.	0.	0.	0.	-.0992	.0186	.0539	.0389	-.0768	-.0598	0.
.0390	219.	0.	404.	0.	0.	0.	0.	-.1179	.0037	.0637	.0310	-.0793	-.0637	0.
.0400	1309.	0.	2411.	0.	0.	0.	0.	-.1343	-.0114	.0711	.0214	-.0794	-.0614	0.
.0410	3143.	0.	5789.	0.	0.	0.	0.	-.1456	-.0256	.0746	.0086	-.0599	-.0485	0.
.0420	4897.	0.	9018.	0.	0.	0.	0.	-.1505	-.0391	.0748	-.0046	-.0499	-.0261	0.
.0430	6195.	0.	11408.	0.	0.	0.	0.	-.1503	-.0526	.0728	-.0132	-.0256	.0015	0.
.0440	6078.	0.	11193.	0.	0.	0.	0.	-.1446	-.0663	.0699	-.0168	-.0046	.0315	0.
.0450	4621.	0.	8510.	0.	0.	0.	0.	-.1325	-.0794	.0654	-.0146	.0093	.0608	0.

ADLPIPE PAGE 084

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.56.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	21	MEMBER	2	SEQUENCE	138	LOCATION	DIS	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.0460	3635.	0.	6693.	0.	0.	0.	-.1167	-.0906	.0582	-.0045	.0122	.0839	0.		
.0470	3550.	0.	6537.	0.	0.	0.	-.0992	-.0994	.0488	.0132	.0042	.0974	0.		
.0480	3029.	0.	5578.	0.	0.	0.	-.0794	-.1063	.0388	.0348	-.0077	.1021	0.		
.0490	1817.	0.	3346.	0.	0.	0.	-.0573	-.1111	.0285	.0577	-.0195	.0988	0.		
.0500	733.	0.	1351.	0.	0.	0.	-.0357	-.1132	.0183	.0790	-.0330	.0868	0.		
.0510	-16.	0.	-29.	0.	0.	0.	-.0160	-.1113	.0087	.0951	-.0465	.0679	0.		
.0520	-355.	0.	-653.	0.	0.	0.	.0027	-.1051	-.0009	.1059	-.0508	.0451	0.		
.0530	-48.	0.	-88.	0.	0.	0.	.0208	-.0951	-.0112	.1149	-.0452	.0188	0.		
.0540	143.	0.	263.	0.	0.	0.	.0373	-.0831	-.0205	.1245	-.0426	-.0121	0.		
.0550	-691.	0.	-1272.	0.	0.	0.	.0520	-.0708	-.0272	.1354	-.0491	-.0461	0.		
.0560	-1792.	0.	-3301.	0.	0.	0.	.0660	-.0591	-.0333	.1496	-.0548	-.0790	0.		
.0570	-1944.	0.	-3579.	0.	0.	0.	.0797	-.0483	-.0405	.1670	-.0521	-.1070	0.		
.0580	-1318.	0.	-2427.	0.	0.	0.	.0915	-.0388	-.0478	.1837	-.0470	-.1276	0.		
.0590	-606.	0.	-1115.	0.	0.	0.	.1006	-.0314	-.0537	.1970	-.0420	-.1390	0.		
.0600	-31.	0.	-57.	0.	0.	0.	.1079	-.0267	-.0585	.2081	-.0280	-.1403	0.		
.0610	207.	0.	380.	0.	0.	0.	.1140	-.0244	-.0622	.2163	.0006	-.1320	0.		
.0620	-43.	0.	-80.	0.	0.	0.	.1176	-.0238	-.0638	.2180	.0348	-.1165	0.		
.0630	-244.	0.	-450.	0.	0.	0.	.1169	-.0243	-.0632	.2130	.0561	-.0981	0.		
.0640	-101.	0.	-186.	0.	0.	0.	.1132	-.0261	-.0613	.2043	.0958	-.0797	0.		
.0650	-202.	0.	-372.	0.	0.	0.	.1076	-.0302	-.0582	.1940	.1237	-.0635	0.		
.0660	-704.	0.	-1297.	0.	0.	0.	.0997	-.0372	-.0531	.1822	.1425	-.0519	0.		
.0670	-787.	0.	-1449.	0.	0.	0.	.0887	-.0468	-.0471	.1688	.1504	-.0454	0.		
.0680	7.	0.	13.	0.	0.	0.	.0762	-.0582	-.0414	.1537	.1560	-.0409	0.		
.0690	1262.	0.	2325.	0.	0.	0.	.0638	-.0703	-.0364	.1360	.1642	-.0352	0.		
.0700	2543.	0.	4683.	0.	0.	0.	.0513	-.0822	-.0315	.1152	.1695	-.0282	0.		
.0710	3479.	0.	6408.	0.	0.	0.	.0388	-.0928	-.0260	.0912	.1668	-.0200	0.		
.0720	3643.	0.	6708.	0.	0.	0.	.0278	-.1011	-.0203	.0643	.1574	-.0092	0.		
.0730	3182.	0.	5860.	0.	0.	0.	.0191	-.1064	-.0149	.0369	.1431	.0044	0.		
.0740	2674.	0.	4925.	0.	0.	0.	.0115	-.1084	-.0100	.0125	.1212	.0188	0.		
.0750	2207.	0.	4064.	0.	0.	0.	.0046	-.1076	-.0056	-.0058	.0908	.0328	0.		
.0760	1734.	0.	3192.	0.	0.	0.	-.0010	-.1048	-.0019	-.0167	.0572	.0464	0.		
.0770	1663.	0.	3062.	0.	0.	0.	-.0057	-.1004	.0007	-.0199	.0259	.0592	0.		
.0780	2215.	0.	4079.	0.	0.	0.	-.0108	-.0943	.0027	-.0170	-.0022	.0701	0.		
.0790	2987.	0.	5501.	0.	0.	0.	-.0164	-.0861	.0047	-.0115	-.0263	.0785	0.		
.0800	3631.	0.	6686.	0.	0.	0.	-.0223	-.0752	.0069	-.0051	-.0454	.0837	0.		
.0810	4050.	0.	7458.	0.	0.	0.	-.0287	-.0613	.0098	.0013	-.0594	.0840	0.		
.0820	3780.	0.	6962.	0.	0.	0.	-.0357	-.0447	.0140	.0070	-.0703	.0781	0.		
.0830	2399.	0.	4418.	0.	0.	0.	-.0427	-.0262	.0198	.0114	-.0800	.0658	0.		

ADLPIPE PAGE 085

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.56.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

.0730	3182.	0.	5860.	0.	0.	0.	0.	.0191	-1.064	-.0149	.0369	.1431	-.0092	0.
.0740	2674.	0.	4925.	0.	0.	0.	0.	.0115	-1.084	-.0100	.0125	.1212	.0188	0.
.0750	2207.	0.	4064.	0.	0.	0.	0.	.0046	-1.076	-.0056	-.0058	.0908	.0328	0.
.0760	1734.	0.	3192.	0.	0.	0.	0.	-.0010	-1.048	-.0019	-.0167	.0572	.0464	0.
.0770	1663.	0.	3062.	0.	0.	0.	0.	-.0057	-1.004	.0007	-.0199	.0259	.0592	0.
.0780	2215.	0.	4079.	0.	0.	0.	0.	-.0108	-.0943	.0027	-.0170	-.0022	.0701	0.
.0790	2987.	0.	5501.	0.	0.	0.	0.	-.0164	-.0861	.0047	-.0115	-.0263	.0785	0.
.0800	2631.	0.	6686.	0.	0.	0.	0.	-.0223	-.0752	.0069	-.0051	-.0454	.0837	0.
.0810	4050.	0.	7458.	0.	0.	0.	0.	-.0287	-.0613	.0098	.0013	-.0594	.0840	0.
.0820	3760.	0.	6962.	0.	0.	0.	0.	-.0357	-.0447	.0140	.0070	-.0703	.0781	0.
.0830	2399.	0.	4418.	0.	0.	0.	0.	-.0427	-.0262	.0198	.0114	-.0800	.0658	0.

ADLPIPE PAGE 985

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.56.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	21	MEMBER	2	SEQUENCE	138	LOCATION	DIS	TYPE	RU						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.0840	355.	0.	654.	0.	0.	0.	-.0495	-.0070	.0264	.0160	-.0884	.0473	0.		
.0850	-1590.	0.	-2929.	0.	0.	0.	-.0561	.0118	.0327	.0224	-.0942	.0241	0.		
.0860	-3154.	0.	-5808.	0.	0.	0.	-.0623	.0292	.0383	.0294	-.0958	-.0008	0.		
.0870	-4109.	0.	-7567.	0.	0.	0.	-.0674	.0443	.0424	.0360	-.0931	-.0248	0.		
.0880	-4202.	0.	-7738.	0.	0.	0.	-.0715	.0567	.0448	.0415	-.0860	-.0463	0.		
.0890	-3838.	0.	-7068.	0.	0.	0.	-.0743	.0665	.0458	.0450	-.0745	-.0639	0.		
.0900	-3691.	0.	-6796.	0.	0.	0.	-.0750	.0743	.0460	.0451	-.0592	-.0767	0.		
.0910	-3785.	0.	-6971.	0.	0.	0.	-.0735	.0811	.0453	.0416	-.0436	-.0852	0.		
.0920	-3947.	0.	-7269.	0.	0.	0.	-.0704	.0873	.0438	.0342	-.0325	-.0911	0.		
.0930	-4433.	0.	-8163.	0.	0.	0.	-.0658	.0926	.0420	.0229	-.0277	-.0956	0.		
.0940	-5226.	0.	-9624.	0.	0.	0.	-.0593	.0962	.0396	.0088	-.0271	-.0991	0.		
.0950	-5661.	0.	-10426.	0.	0.	0.	-.0513	.0972	.0359	-.0060	-.0286	-.1023	0.		
.0960	-5282.	0.	-9728.	0.	0.	0.	-.0425	.0952	.0306	-.0212	-.0330	-.1054	0.		
.0970	-4092.	0.	-7536.	0.	0.	0.	-.0332	.0898	.0238	-.0373	-.0399	-.1077	0.		
.0980	-2044.	0.	-3765.	0.	0.	0.	-.0231	.0812	.0154	-.0540	-.0463	-.1083	0.		
.0990	623.	0.	1147.	0.	0.	0.	-.0120	.0700	.0056	-.0711	-.0518	-.1067	0.		
.1000	3039.	0.	5596.	0.	0.	0.	-.0001	.0570	-.0043	-.0900	-.0600	-.1021	0.		
.1010	4542.	0.	8364.	0.	0.	0.	.0124	.0431	-.0132	-.1111	-.0731	-.0933	0.		
.1020	5221.	0.	9615.	0.	0.	0.	.0253	.0292	-.0212	-.1327	-.0874	-.0798	0.		
.1030	5214.	0.	9601.	0.	0.	0.	.0384	.0158	-.0282	-.1524	-.0976	-.0610	0.		
.1040	4445.	0.	8186.	0.	0.	0.	.0508	.0029	-.0339	-.1691	-.1020	-.0373	0.		
.1050	3259.	0.	6002.	0.	0.	0.	.0615	-.0094	-.0380	-.1810	-.0999	-.0100	0.		
.1060	2199.	0.	4050.	0.	0.	0.	.0696	-.0208	-.0409	-.1861	-.0889	.0189	0.		
.1070	1471.	0.	2709.	0.	0.	0.	.0750	-.0307	-.0428	-.1844	-.0675	.0476	0.		
.1080	1591.	0.	2929.	0.	0.	0.	.0770	-.0382	-.0441	-.1781	-.0349	.0749	0.		
.1090	3235.	0.	5958.	0.	0.	0.	.0755	-.0421	-.0456	-.1721	.0125	.1008	0.		
.1100	3606.	0.	6640.	0.	0.	0.	.0718	-.0426	-.0441	-.1665	.0535	.1202	0.		
.1110	3188.	0.	5872.	0.	0.	0.	.0660	-.0391	-.0404	-.1572	.0872	.1297	0.		
.1120	2993.	0.	5512.	0.	0.	0.	.0587	-.0311	-.0361	-.1431	.1176	.1299	0.		
.1130	2247.	0.	4138.	0.	0.	0.	.0512	-.0188	-.0310	-.1289	.1429	.1240	0.		
.1140	1002.	0.	1845.	0.	0.	0.	.0438	-.0032	-.0252	-.1167	.1501	.1144	0.		
.1150	224.	0.	413.	0.	0.	0.	.0362	.0139	-.0200	-.1038	.1721	.1024	0.		
.1160	-282.	0.	-519.	0.	0.	0.	.0301	.0311	-.0159	-.0904	.1834	.0912	0.		
.1170	-1170.	0.	-2154.	0.	0.	0.	.0260	.0473	-.0124	-.0777	.1923	.0824	0.		
.1180	-1701.	0.	-3133.	0.	0.	0.	.0225	.0625	-.0098	-.0649	.1854	.0732	0.		
.1190	-1292.	0.	-2379.	0.	0.	0.	.0184	.0767	-.0082	-.0497	.1555	.0625	0.		
.1200	-949.	0.	-1748.	0.	0.	0.	.0153	.0896	-.0070	-.0330	.1428	.0524	0.		
.1210	-815.	0.	-1501.	0.	0.	0.	.0136	.1007	-.0062	-.0196	.1197	.0445	0.		

ADLPIPE PAGE 986

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.56.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

.1110	3188.	0.	5872.	0.	0.	0.	0.	.0660	-.0391	-.0404	-.1572	.0872	.1297	0.
.1120	2993.	0.	5512.	0.	0.	0.	0.	.0587	-.0311	-.0361	-.1431	.1176	.1299	0.
.1130	2247.	0.	4138.	0.	0.	0.	0.	.0512	-.0188	-.0310	-.1289	.1429	.1240	0.
.1140	1002.	0.	1845.	0.	0.	0.	0.	.0438	-.0032	-.0252	-.1167	.1501	.1144	0.
.1150	224.	0.	413.	0.	0.	0.	0.	.0362	.0139	-.0200	-.1038	.1721	.1024	0.
.1160	-282.	0.	-519.	0.	0.	0.	0.	.0301	.0311	-.0159	-.0904	.1834	.0912	0.
.1170	-1170.	0.	-2154.	0.	0.	0.	0.	.0260	.0473	-.0124	-.0777	.1923	.0824	0.
.1180	-1701.	0.	-3133.	0.	0.	0.	0.	.0225	.0625	-.0098	-.0649	.1854	.0732	0.
.1190	-1292.	0.	-2379.	0.	0.	0.	0.	.0184	.0767	-.0082	-.0497	.1655	.0625	0.
.1200	-949.	0.	-1748.	0.	0.	0.	0.	.0153	.0896	-.0070	-.0330	.1428	.0524	0.
.1210	-815.	0.	-1501.	0.	0.	0.	0.	.0136	.1007	-.0062	-.0196	.1197	.0445	0.

ADLPIPE PAGE 986

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.56.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	21	MEMBER	2	SEQUENCE	138	LOCATION	DIS	TYPE	RU						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)		DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.1220	-1329.	0.	-2447.	0.	0.	0.		.0108	.1094	-.0040	-.0120	.0888	.0357	0.	
.1230	-2314.	0.	-4262.	0.	0.	0.		.0060	.1158	.0000	-.0135	.0488	.0257	0.	
.1240	-3551.	0.	-6539.	0.	0.	0.		.0004	.1203	.0048	-.0235	.0141	.0159	0.	
.1250	-4153.	0.	-7647.	0.	0.	0.		-.0058	.1231	.0091	-.0389	-.0117	.0051	0.	
.1260	-3471.	0.	-6392.	0.	0.	0.		-.0147	.1239	.0129	-.0588	-.0408	-.0090	0.	
.1270	-2534.	0.	-4666.	0.	0.	0.		-.0261	.1220	.0178	-.0833	-.0690	-.0243	0.	
.1280	-1784.	0.	-3285.	0.	0.	0.		-.0366	.1171	.0224	-.1113	-.0839	-.0361	0.	
.1290	-1109.	0.	-2042.	0.	0.	0.		-.0447	.1092	.0259	-.1378	-.0847	-.0441	0.	
.1300	-267.	0.	-492.	0.	0.	0.		-.0521	.0997	.0287	-.1603	-.0860	-.0505	0.	
.1310	410.	0.	755.	0.	0.	0.		-.0585	.0897	.0312	-.1797	-.0964	-.0538	0.	
.1320	475.	0.	875.	0.	0.	0.		-.0614	.0799	.0327	-.1937	-.1025	-.0504	0.	
.1330	461.	0.	849.	0.	0.	0.		-.0601	.0706	.0320	-.2005	-.1006	-.0397	0.	
.1340	-70.	0.	-128.	0.	0.	0.		-.0566	.0614	.0308	-.2011	-.1004	-.0236	0.	
.1350	-1406.	0.	-2589.	0.	0.	0.		-.0520	.0528	.0302	-.1975	-.1042	-.0029	0.	
.1360	-2482.	0.	-4570.	0.	0.	0.		-.0457	.0456	.0284	-.1904	-.1024	.0229	0.	
.1370	-2826.	0.	-5204.	0.	0.	0.		-.0385	.0406	.0249	-.1787	-.0910	.0510	0.	
.1380	-2502.	0.	-4608.	0.	0.	0.		-.0327	.0381	.0213	-.1650	-.0849	.0760	0.	
.1390	-2163.	0.	-3984.	0.	0.	0.		-.0299	.0378	.0193	-.1498	-.0903	.0934	0.	
.1400	-2008.	0.	-3699.	0.	0.	0.		-.0288	.0392	.0185	-.1316	-.0977	.1025	0.	
.1410	-1771.	0.	-3261.	0.	0.	0.		-.0289	.0424	.0182	-.1116	-.1026	.1036	0.	
.1420	-1704.	0.	-3139.	0.	0.	0.		-.0319	.0470	.0197	-.0918	-.1103	.0960	0.	
.1430	-1235.	0.	-2274.	0.	0.	0.		-.0383	.0527	.0225	-.0748	-.1231	.0814	0.	
.1440	-414.	0.	-762.	0.	0.	0.		-.0458	.0586	.0255	-.0604	-.1301	.0635	0.	
.1450	64.	0.	117.	0.	0.	0.		-.0527	.0634	.0285	-.0481	-.1261	.0456	0.	
.1460	100.	0.	183.	0.	0.	0.		-.0592	.0665	.0320	-.0379	-.1201	.0282	0.	
.1470	-134.	0.	-247.	0.	0.	0.		-.0655	.0676	.0357	-.0276	-.1140	.0117	0.	
.1480	-362.	0.	-667.	0.	0.	0.		-.0693	.0668	.0381	-.0161	-.1030	-.0013	0.	
.1490	-806.	0.	-1484.	0.	0.	0.		-.0696	.0643	.0389	-.0025	-.0836	-.0093	0.	
.1500	-1472.	0.	-2710.	0.	0.	0.		-.0673	.0597	.0386	.0133	-.0624	-.0132	0.	
.1510	-2058.	0.	-3790.	0.	0.	0.		-.0631	.0531	.0372	.0298	-.0454	-.0133	0.	
.1520	-2677.	0.	-4930.	0.	0.	0.		-.0562	.0448	.0343	.0452	-.0248	-.0075	0.	
.1530	-2907.	0.	-5353.	0.	0.	0.		-.0467	.0354	.0295	.0575	.0026	.0053	0.	
.1540	-2428.	0.	-4471.	0.	0.	0.		-.0361	.0254	.0231	.0660	.0344	.0235	0.	
.1550	-1409.	0.	-2595.	0.	0.	0.		-.0254	.0149	.0158	.0712	.0668	.0448	0.	
.1560	-202.	0.	-372.	0.	0.	0.		-.0141	.0042	.0079	.0730	.0976	.0676	0.	
.1570	661.	0.	1217.	0.	0.	0.		-.0023	-.0066	.0003	.0725	.1288	.0899	0.	
.1580	1263.	0.	2326.	0.	0.	0.		.0090	-.0171	-.0067	.0695	.1533	.1090	0.	
.1590	1780.	0.	3277.	0.	0.	0.		.0195	-.0269	-.0131	.0640	.1649	.1227	0.	

ADLPIPE PAGE 987

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.57.

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

.1490	-806.	0.	-1484.	0.	0.	0.	0.	-.0696	.0663	.0389	-.0025	-.0836	-.0093	0.
.1500	-1472.	0.	-2710.	0.	0.	0.	0.	-.0673	.0597	.0386	.0133	-.0624	-.0132	0.
.1510	-2058.	0.	-3790.	0.	0.	0.	0.	-.0631	.0531	.0372	.0298	-.0454	-.0133	0.
.1520	-2677.	0.	-4930.	0.	0.	0.	0.	-.0562	.0448	.0343	.0452	-.0248	-.0075	0.
.1530	-2907.	0.	-5353.	0.	0.	0.	0.	-.0467	.0354	.0295	.0575	.0026	.0053	0.
.1540	-2428.	0.	-4471.	0.	0.	0.	0.	-.0361	.0254	.0231	.0660	.0344	.0235	0.
.1550	-1409.	0.	-2595.	0.	0.	0.	0.	-.0254	.0149	.0158	.0712	.0668	.0448	0.
.1560	-202.	0.	-372.	0.	0.	0.	0.	-.0141	.0042	.0079	.0730	.0976	.0676	0.
.1570	661.	0.	1217.	0.	0.	0.	0.	-.0023	-.0066	.0003	.0725	.1288	.0899	0.
.1580	1263.	0.	2326.	0.	0.	0.	0.	.0090	-.0171	-.0067	.0695	.1533	.1090	0.
.1590	1780.	0.	3277.	0.	0.	0.	0.	.0195	-.0269	-.0131	.0640	.1549	.1227	0.

ADLPIPE PAGE 987

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.57.

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	DIS	TYPE	RU	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
21	2	138					.1600	2230.	0.	4107.	0.	0.	0.	.0286	-.0360	-.0187	.0569	.1655	.1299	0.
							.1610	2555.	0.	4706.	0.	0.	0.	.0369	-.0445	-.0237	.0496	.1606	.1310	0.
							.1620	2960.	0.	5451.	0.	0.	0.	.0445	-.0525	-.0284	.0415	.1510	.1268	0.
							.1630	3016.	0.	5554.	0.	0.	0.	.0507	-.0600	-.0318	.0326	.1363	.1173	0.
							.1640	2900.	0.	5341.	0.	0.	0.	.0557	-.0665	-.0344	.0232	.1160	.1030	0.
							.1650	2976.	0.	5480.	0.	0.	0.	.0598	-.0712	-.0367	.0142	.0923	.0853	0.
							.1660	2962.	0.	5454.	0.	0.	0.	.0629	-.0736	-.0384	.0066	.0674	.0650	0.
							.1670	2650.	0.	4881.	0.	0.	0.	.0650	-.0736	-.0391	-.0000	.0377	.0434	0.
							.1680	1803.	0.	3320.	0.	0.	0.	.0660	-.0713	-.0384	-.0036	.0052	.0217	0.
							.1690	945.	0.	1740.	0.	0.	0.	.0659	-.0667	-.0371	-.0026	-.0252	.0020	0.
							.1700	317.	0.	584.	0.	0.	0.	.0646	-.0601	-.0356	.0027	-.0486	-.0133	0.
							.1710	-367.	0.	-676.	0.	0.	0.	.0618	-.0520	-.0331	.0116	-.0627	-.0226	0.
							.1720	-530.	0.	-976.	0.	0.	0.	.0573	-.0429	-.0304	.0237	-.0700	-.0259	0.
							.1730	-203.	0.	-374.	0.	0.	0.	.0510	-.0333	-.0274	.0396	-.0678	-.0237	0.
							.1740	233.	0.	428.	0.	0.	0.	.0432	-.0238	-.0238	.0570	-.0569	-.0166	0.
							.1750	479.	0.	882.	0.	0.	0.	.0342	-.0147	-.0193	.0732	-.0423	-.0065	0.
							.1760	494.	0.	910.	0.	0.	0.	.0236	-.0061	-.0135	.0884	-.0270	.0035	0.
							.1770	482.	0.	887.	0.	0.	0.	.0117	.0015	-.0071	.1018	-.0137	.0108	0.
							.1780	-126.	0.	-232.	0.	0.	0.	-.0008	.0080	.0006	.1129	-.0011	.0142	0.
							.1790	-1128.	0.	-2078.	0.	0.	0.	-.0140	.0130	.0092	.1201	.0075	.0123	0.
							.1800	-1997.	0.	-3677.	0.	0.	0.	-.0280	.0165	.0181	.1228	.0099	.0046	0.
							.1810	-2905.	0.	-5351.	0.	0.	0.	-.0425	.0183	.0272	.1210	.0092	-.0083	0.
							.1820	-3629.	0.	-6683.	0.	0.	0.	-.0564	.0185	.0358	.1153	.0063	-.0247	0.
							.1830	-3899.	0.	-7181.	0.	0.	0.	-.0694	.0173	.0432	.1078	.0016	-.0438	0.
							.1840	-3615.	0.	-6657.	0.	0.	0.	-.0814	.0152	.0493	.0992	-.0073	-.0639	0.
							.1850	-3251.	0.	-5988.	0.	0.	0.	-.0912	.0121	.0541	.0894	-.0201	-.0822	0.
							.1860	-3061.	0.	-5637.	0.	0.	0.	-.0978	.0085	.0574	.0805	-.0333	-.0966	0.
							.1870	-2529.	0.	-4657.	0.	0.	0.	-.1010	.0044	.0584	.0738	-.0487	-.1059	0.
							.1880	-1982.	0.	-3650.	0.	0.	0.	-.1009	.0000	.0576	.0689	-.0663	-.1088	0.
							.1890	-1668.	0.	-3072.	0.	0.	0.	-.0973	-.0046	.0552	.0648	-.0844	-.1036	0.
							.1900	-1178.	0.	-2169.	0.	0.	0.	-.0901	-.0097	.0506	.0621	-.0983	-.0904	0.
							.1910	-348.	0.	-641.	0.	0.	0.	-.0802	-.0155	.0441	.0616	-.1049	-.0707	0.
							.1920	507.	0.	934.	0.	0.	0.	-.0682	-.0220	.0363	.0615	-.1060	-.0462	0.
							.1930	1114.	0.	2051.	0.	0.	0.	-.0549	-.0294	.0282	.0615	-.1017	-.0197	0.
							.1940	1784.	0.	3285.	0.	0.	0.	-.0408	-.0373	.0196	.0625	-.0908	.0056	0.
							.1950	2475.	0.	4558.	0.	0.	0.	-.0269	-.0454	.0111	.0641	-.0743	.0267	0.
							.1960	2786.	0.	5131.	0.	0.	0.	-.0136	-.0535	.0034	.0649	-.0560	.0414	0.
							.1970	2762.	0.	5087.	0.	0.	0.	-.0017	-.0611	-.0030	.0646	-.0379	.0482	0.

ADLPIPE PAGE 988

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.57.

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	-2529.	0.	4657.	0.	0.	0.	0.	-.1010	.0044	.0584	.0738	-.0487	-.1059	0.
.1880	-1982.	0.	-3650.	0.	0.	0.	0.	-.1009	.0000	.0576	.0689	-.0663	-.1088	0.
.1890	-1668.	0.	-3072.	0.	0.	0.	0.	-.0973	-.0046	.0552	.0648	-.0844	-.1036	0.
.1900	-1178.	0.	-2169.	0.	0.	0.	0.	-.0901	-.0097	.0506	.0621	-.0983	-.0904	0.
.1910	-348.	0.	-641.	0.	0.	0.	0.	-.0802	-.0155	.0441	.0616	-.1049	-.0707	0.
.1920	507.	0.	934.	0.	0.	0.	0.	-.0682	-.0220	.0363	.0615	-.1060	-.0462	0.
.1930	1114.	0.	2051.	0.	0.	0.	0.	-.0549	-.0294	.0282	.0615	-.1017	-.0197	0.
.1940	1784.	0.	3285.	0.	0.	0.	0.	-.0408	-.0373	.0196	.0625	-.0908	.0056	0.
.1950	2475.	0.	4558.	0.	0.	0.	0.	-.0269	-.0454	.0111	.0641	-.0743	.0267	0.
.1960	2786.	0.	5131.	0.	0.	0.	0.	-.0136	-.0535	.0034	.0649	-.0560	.0414	0.
.1970	2762.	0.	5087.	0.	0.	0.	0.	-.0017	-.0611	-.0030	.0646	-.0379	.0482	0.

ADLPIPE PAGE 988

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.57.

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	21	MEMBER	2	SEQUENCE	138	LOCATION	DIS	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.1980	2601.	0.	4790.	0.	0.	0.	.0087	-.0683	-.0084	.0639	-.0185	.0471	0.	
.1990	2157.	0.	3971.	0.	0.	0.	.0178	-.0746	-.0127	.0626	.0025	.0392	0.	
.2000	1502.	0.	2766.	0.	0.	0.	.0255	-.0799	-.0160	.0605	.0237	.0262	0.	
.2010	1089.	0.	2006.	0.	0.	0.	.0317	-.0837	-.0187	.0584	.0439	.0100	0.	
.2020	998.	0.	1837.	0.	0.	0.	.0370	-.0859	-.0215	.0569	.0635	-.0068	0.	
.2030	892.	0.	1643.	0.	0.	0.	.0422	-.0865	-.0242	.0562	.0817	-.0220	0.	
.2040	744.	0.	1370.	0.	0.	0.	.0474	-.0855	-.0268	.0575	.0956	-.0346	0.	
.2050	746.	0.	1373.	0.	0.	0.	.0527	-.0831	-.0297	.0619	.1037	-.0443	0.	
.2060	801.	0.	1475.	0.	0.	0.	.0585	-.0792	-.0329	.0691	.1068	-.0501	0.	
.2070	799.	0.	1472.	0.	0.	0.	.0648	-.0742	-.0363	.0783	.1062	-.0520	0.	
.2080	881.	0.	1623.	0.	0.	0.	.0709	-.0684	-.0398	.0887	.1015	-.0512	0.	
.2090	1034.	0.	1905.	0.	0.	0.	.0765	-.0622	-.0430	.0991	.0929	-.0490	0.	
.2100	1055.	0.	1942.	0.	0.	0.	.0811	-.0559	-.0455	.1074	.0826	-.0462	0.	
.2110	1022.	0.	1883.	0.	0.	0.	.0844	-.0498	-.0473	.1126	.0726	-.0441	0.	
.2120	1177.	0.	2167.	0.	0.	0.	.0855	-.0440	-.0481	.1141	.0629	-.0443	0.	
.2130	1411.	0.	2598.	0.	0.	0.	.0840	-.0385	-.0476	.1120	.0530	-.0479	0.	
.2140	1456.	0.	2682.	0.	0.	0.	.0802	-.0339	-.0456	.1065	.0440	-.0549	0.	
.2150	1325.	0.	2441.	0.	0.	0.	.0743	-.0303	-.0422	.0986	.0366	-.0648	0.	
.2160	1150.	0.	2118.	0.	0.	0.	.0663	-.0277	-.0376	.0893	.0301	-.0765	0.	
.2170	932.	0.	1716.	0.	0.	0.	.0567	-.0261	-.0321	.0790	.0242	-.0880	0.	
.2180	715.	0.	1317.	0.	0.	0.	.0461	-.0256	-.0260	.0685	.0199	-.0969	0.	
.2190	589.	0.	1085.	0.	0.	0.	.0352	-.0259	-.0200	.0587	.0183	-.1013	0.	
.2200	469.	0.	863.	0.	0.	0.	.0246	-.0269	-.0140	.0504	.0187	-.0996	0.	
.2210	222.	0.	410.	0.	0.	0.	.0148	-.0285	-.0083	.0437	.0198	-.0911	0.	
.2220	-82.	0.	-151.	0.	0.	0.	.0060	-.0301	-.0031	.0388	.0213	-.0762	0.	
.2230	-340.	0.	-627.	0.	0.	0.	-.0016	-.0314	.0013	.0360	.0228	-.0558	0.	
.2240	-582.	0.	-1072.	0.	0.	0.	-.0079	-.0319	.0051	.0345	.0227	-.0318	0.	
.2250	-815.	0.	-1501.	0.	0.	0.	-.0133	-.0317	.0084	.0338	.0192	-.0066	0.	
.2260	-935.	0.	-1723.	0.	0.	0.	-.0182	-.0307	.0112	.0335	.0119	.0173	0.	
.2270	-883.	0.	-1626.	0.	0.	0.	-.0227	-.0288	.0136	.0330	.0018	.0379	0.	
.2280	-660.	0.	-1215.	0.	0.	0.	-.0273	-.0262	.0158	.0314	-.0102	.0537	0.	
.2290	-236.	0.	-434.	0.	0.	0.	-.0323	-.0229	.0179	.0280	-.0238	.0634	0.	
.2300	371.	0.	683.	0.	0.	0.	-.0378	-.0189	.0200	.0226	-.0385	.0666	0.	
.2310	979.	0.	1803.	0.	0.	0.	-.0436	-.0143	.0223	.0150	-.0532	.0635	0.	
.2320	1386.	0.	2553.	0.	0.	0.	-.0497	-.0093	.0250	.0053	-.0672	.0550	0.	
.2330	1535.	0.	2826.	0.	0.	0.	-.0556	-.0039	.0280	-.0059	-.0802	.0421	0.	
.2340	1460.	0.	2688.	0.	0.	0.	-.0611	.0018	.0311	-.0175	-.0916	.0263	0.	
.2350	1191.	0.	2194.	0.	0.	0.	-.0658	.0076	.0340	-.0287	-.1004	.0092	0.	

ADLPIPE PAGE 989

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.57.

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

.2230	-340.	0.	-1072.	0.	0.	0.	0.	-.0079	-.0319	.0051	.0345	.0227	-.0318	0.
.2240	-582.	0.	-1501.	0.	0.	0.	0.	-.0133	-.0317	.0084	.0338	.0192	-.0066	0.
.2250	-815.	0.	-1723.	0.	0.	0.	0.	-.0182	-.0307	.0112	.0335	.0119	-.0173	0.
.2260	-935.	0.	-1626.	0.	0.	0.	0.	-.0227	-.0288	.0136	.0330	.0018	-.0379	0.
.2270	-883.	0.	-1215.	0.	0.	0.	0.	-.0273	-.0262	.0158	.0314	-.0102	-.0537	0.
.2280	-660.	0.	-434.	0.	0.	0.	0.	-.0323	-.0229	.0179	.0280	-.0238	-.0634	0.
.2290	-236.	0.	683.	0.	0.	0.	0.	-.0378	-.0189	.0200	.0226	-.0385	-.0666	0.
.2300	371.	0.	1803.	0.	0.	0.	0.	-.0436	-.0143	.0223	.0150	-.0532	-.0635	0.
.2310	979.	0.	2553.	0.	0.	0.	0.	-.0497	-.0093	.0250	.0053	-.0672	-.0550	0.
.2320	1386.	0.	2826.	0.	0.	0.	0.	-.0556	-.0039	.0280	-.0059	-.0802	-.0421	0.
.2330	1535.	0.	2688.	0.	0.	0.	0.	-.0611	.0018	.0311	-.0175	-.0916	-.0263	0.
.2340	1460.	0.	2194.	0.	0.	0.	0.	-.0658	.0076	.0340	-.0287	-.1004	-.0092	0.
.2350	1191.	0.		0.	0.	0.	0.							0.

ADLPIPE PAGE 989

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.57.

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	21	MEMBER	2	SEQUENCE	138	LOCATION	DIS	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2360	775.	0.	1428.	0.	0.	0.	-.0692	.0133	.0365	-.0384	-.1054	-.0073	0.		
.2370	304.	0.	560.	0.	0.	0.	-.0710	.0185	.0381	-.0462	-.1061	-.0218	0.		
.2380	-127.	0.	-235.	0.	0.	0.	-.0710	.0233	.0387	-.0517	-.1025	-.0331	0.		
.2390	-457.	0.	-842.	0.	0.	0.	-.0690	.0275	.0381	-.0553	-.0948	-.0405	0.		
.2400	-653.	0.	-1203.	0.	0.	0.	-.0650	.0315	.0362	-.0573	-.0833	-.0434	0.		
.2410	-741.	0.	-1365.	0.	0.	0.	-.0590	.0353	.0331	-.0583	-.0689	-.0423	0.		
.2420	-809.	0.	-1490.	0.	0.	0.	-.0513	.0391	.0290	-.0588	-.0530	-.0378	0.		
.2430	-938.	0.	-1728.	0.	0.	0.	-.0421	.0429	.0242	-.0592	-.0365	-.0308	0.		
.2440	-1126.	0.	-2073.	0.	0.	0.	-.0318	.0467	.0189	-.0599	-.0201	-.0221	0.		
.2450	-1306.	0.	-2406.	0.	0.	0.	-.0209	.0504	.0132	-.0611	-.0045	-.0128	0.		
.2460	-1420.	0.	-2615.	0.	0.	0.	-.0098	.0538	.0073	-.0630	.0096	-.0038	0.		
.2470	-1412.	0.	-2601.	0.	0.	0.	.0011	.0567	.0014	-.0657	.0221	.0043	0.		
.2480	-1232.	0.	-2270.	0.	0.	0.	.0113	.0587	-.0044	-.0690	.0328	.0110	0.		
.2490	-890.	0.	-1639.	0.	0.	0.	.0208	.0599	-.0100	-.0731	.0412	.0159	0.		
.2500	-490.	0.	-903.	0.	0.	0.	.0292	.0602	-.0152	-.0784	.0466	.0190	0.		
.2510	-137.	0.	-253.	0.	0.	0.	.0366	.0598	-.0197	-.0849	.0490	.0206	0.		
.2520	125.	0.	231.	0.	0.	0.	.0431	.0589	-.0236	-.0925	.0486	.0208	0.		
.2530	252.	0.	464.	0.	0.	0.	.0485	.0576	-.0267	-.1013	.0454	.0204	0.		
.2540	192.	0.	354.	0.	0.	0.	.0528	.0562	-.0289	-.1111	.0394	.0197	0.		
.2550	-19.	0.	-34.	0.	0.	0.	.0561	.0548	-.0304	-.1213	.0318	.0196	0.		
.2560	-267.	0.	-492.	0.	0.	0.	.0584	.0533	-.0313	-.1310	.024	.0207	0.		
.2570	-464.	0.	-855.	0.	0.	0.	.0596	.0519	-.0317	-.1397	.0171	-.0234	0.		
.2580	-522.	0.	-961.	0.	0.	0.	.0595	.0507	-.0316	-.1469	.0114	-.0282	0.		
.2590	-369.	0.	-679.	0.	0.	0.	.0582	.0497	-.0311	-.1521	.0077	.0349	0.		
.2600	-62.	0.	-115.	0.	0.	0.	.0555	.0490	-.0301	-.1554	.0066	.0434	0.		
.2610	252.	0.	463.	0.	0.	0.	.0516	.0488	-.0284	-.1571	.0079	.0533	0.		
.2620	492.	0.	905.	0.	0.	0.	.0463	.0493	-.0259	-.1578	.0105	.0637	0.		
.2630	647.	0.	1191.	0.	0.	0.	.0397	.0507	-.0225	-.1582	.0139	.0738	0.		
.2640	690.	0.	1271.	0.	0.	0.	.0319	.0529	-.0183	-.1587	.0179	.0827	0.		
.2650	605.	0.	1115.	0.	0.	0.	.0229	.0560	-.0133	-.1599	.0220	.0897	0.		
.2660	438.	0.	807.	0.	0.	0.	.0129	.0597	-.0076	-.1610	.0255	.0939	0.		
.2670	252.	0.	463.	0.	0.	0.	.0020	.0637	-.0015	-.1642	.0280	.0948	0.		
.2680	86.	0.	158.	0.	0.	0.	-.0092	.0679	.0049	-.1668	.0292	.0924	0.		
.2690	-9.	0.	-16.	0.	0.	0.	-.0206	.0721	.0112	-.1693	.0288	.0867	0.		
.2700	-16.	0.	-29.	0.	0.	0.	-.0316	.0763	.0172	-.1712	.0263	.0781	0.		
.2710	-18.	0.	-34.	0.	0.	0.	-.0418	.0803	.0227	-.1721	.0210	.0673	0.		
.2720	-123.	0.	-227.	0.	0.	0.	-.0508	.0842	.0278	-.1722	.0127	.0555	0.		
.2730	-347.	0.	-639.	0.	0.	0.	-.0582	.0880	.0321	-.1711	.0014	.0437	0.		

ADLPIPE PAGE 990

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.57.

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

.2620	492.	0.	905.	0.	0.	0.	.0463	.0493	-.0259	-.1578	.0105	.0637	0.
.2630	647.	0.	1191.	0.	0.	0.	.0397	.0507	-.0225	-.1582	.0139	.0738	0.
.2640	690.	0.	1271.	0.	0.	0.	.0319	.0529	-.0183	-.1587	.0179	.0827	0.
.2650	605.	0.	1115.	0.	0.	0.	.0229	.0560	-.0133	-.1599	.0220	.0897	0.
.2660	438.	0.	807.	0.	0.	0.	.0129	.0597	-.0076	-.1610	.0255	.0939	0.
.2670	252.	0.	463.	0.	0.	0.	.0020	.0637	-.0015	-.1642	.0280	.0948	0.
.2680	86.	0.	158.	0.	0.	0.	-.0092	.0679	.0049	-.1668	.0292	.0924	0.
.2690	-9.	0.	-16.	0.	0.	0.	-.0206	.0721	.0112	-.1693	.0288	.0867	0.
.2700	-16.	0.	-29.	0.	0.	0.	-.0316	.0763	.0172	-.1712	.0263	.0781	0.
.2710	-18.	0.	-34.	0.	0.	0.	-.0418	.0803	.0227	-.1721	.0210	.0673	0.
.2720	-123.	0.	-227.	0.	0.	0.	-.0508	.0842	.0278	-.1722	.0127	.0555	0.
.2730	-347.	0.	-639.	0.	0.	0.	-.0582	.0880	.0321	-.1711	.0014	.0437	0.

ADLPIPE PAGE 990 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.57.

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	21	MEMBER	2	SEQUENCE	138	LOCATION	DIS	TYPE	RU					
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.2740	-646.	0.	-1190.	0.	0.	0.	-.0637	.0915	.0355	-.1689	-.0121	.0333	0.	
.2750	-1004.	0.	-1849.	0.	0.	0.	-.0672	.0948	.0379	-.1656	-.0269	.0252	0.	
.2760	-1398.	0.	-2575.	0.	0.	0.	-.0688	.0977	.0393	-.1611	-.0419	.0202	0.	
.2770	-1760.	0.	-3242.	0.	0.	0.	-.0684	.0998	.0396	-.1555	-.0563	.0185	0.	
.2780	-2032.	0.	-3742.	0.	0.	0.	-.0663	.1012	.0389	-.1488	-.0694	.0198	0.	
.2790	-2187.	0.	-4028.	0.	0.	0.	-.0629	.1017	.0372	-.1412	-.0807	.0234	0.	
.2800	-2208.	0.	-4066.	0.	0.	0.	-.0584	.1012	.0348	-.1329	-.0899	.0285	0.	
.2810	-2123.	0.	-3909.	0.	0.	0.	-.0532	.0999	.0319	-.1244	-.0970	.0339	0.	
.2820	-2014.	0.	-3709.	0.	0.	0.	-.0477	.0976	.0287	-.1161	-.1018	.0389	0.	
.2830	-1923.	0.	-3542.	0.	0.	0.	-.0420	.0945	.0256	-.1085	-.1042	.0428	0.	
.2840	-1831.	0.	-3372.	0.	0.	0.	-.0366	.0905	.0225	-.1017	-.1036	.0452	0.	
.2850	-1746.	0.	-3216.	0.	0.	0.	-.0315	.0858	.0196	-.0961	-.0997	.0460	0.	
.2860	-1698.	0.	-3127.	0.	0.	0.	-.0268	.0804	.0170	-.0917	-.0928	.0454	0.	
.2870	-1645.	0.	-3030.	0.	0.	0.	-.0226	.0743	.0146	-.0882	-.0831	.0437	0.	
.2880	-1531.	0.	-2819.	0.	0.	0.	-.0189	.0676	.0124	-.0848	-.0713	.0412	0.	
.2890	-1373.	0.	-2529.	0.	0.	0.	-.0156	.0604	.0104	-.0810	-.0581	.0382	0.	
.2900	-1213.	0.	-2234.	0.	0.	0.	-.0126	.0528	.0086	-.0762	-.0443	.0354	0.	
.2910	-1034.	0.	-1903.	0.	0.	0.	-.0098	.0448	.0068	-.0701	-.0307	.0330	0.	
.2920	-819.	0.	-1509.	0.	0.	0.	-.0071	.0368	.0050	-.0623	-.0178	.0315	0.	
.2930	-604.	0.	-1113.	0.	0.	0.	-.0044	.0287	.0032	-.0530	-.0056	.0311	0.	
.2940	-418.	0.	-770.	0.	0.	0.	-.0016	.0207	.0015	-.0424	.0058	.0318	0.	
.2950	-261.	0.	-480.	0.	0.	0.	.0012	.0131	-.0003	-.0310	.0162	.0335	0.	
.2960	-133.	0.	-244.	0.	0.	0.	.0039	.0057	-.0020	-.0193	.0255	.0356	0.	
.2970	-23.	0.	-42.	0.	0.	0.	.0067	-.0011	-.0036	-.0075	.0334	.0376	0.	
.2980	100.	0.	184.	0.	0.	0.	.0095	-.0076	-.0053	.0043	.0400	.0389	0.	
.2990	243.	0.	448.	0.	0.	0.	.0121	-.0135	-.0069	.0157	.0449	.0388	0.	
.3000	386.	0.	710.	0.	0.	0.	.0146	-.0192	-.0085	.0269	.0480	.0371	0.	
.3010	537.	0.	989.	0.	0.	0.	.0170	-.0245	-.0100	.0377	.0496	.0338	0.	
.3020	732.	0.	1349.	0.	0.	0.	.0192	-.0295	-.0115	.0481	.0503	.0294	0.	
.3030	965.	0.	1778.	0.	0.	0.	.0213	-.0342	-.0130	.0582	.0506	.0246	0.	
.3040	1196.	0.	2202.	0.	0.	0.	.0233	-.0388	-.0144	.0677	.0510	.0201	0.	
.3050	1400.	0.	2578.	0.	0.	0.	.0252	-.0431	-.0157	.0767	.0520	.0169	0.	
.3060	1559.	0.	2870.	0.	0.	0.	.0270	-.0473	-.0169	.0855	.0539	.0153	0.	
.3070	1636.	0.	3014.	0.	0.	0.	.0287	-.0513	-.0179	.0940	.0565	.0158	0.	
.3080	1618.	0.	2980.	0.	0.	0.	.0302	-.0552	-.0187	.1025	.0595	.0181	0.	
.3090	1528.	0.	2813.	0.	0.	0.	.0314	-.0589	-.0192	.1111	.0625	.0219	0.	
.3100	1383.	0.	2547.	0.	0.	0.	.0322	-.0625	-.0195	.1200	.0650	.0264	0.	
.3110	1195.	0.	2200.	0.	0.	0.	.0326	-.0661	-.0194	.1288	.0664	.0307	0.	

ADLPIPE PAGE 991 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.57.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

.3000	587.	0.	989.	0.	0.	0.	0.	.0170	-.0245	-.0100	.0377	.0496	.0338	0.
.3010	537.	0.	989.	0.	0.	0.	0.	.0170	-.0245	-.0100	.0377	.0496	.0338	0.
.3020	732.	0.	1349.	0.	0.	0.	0.	.0192	-.0295	-.0115	.0481	.0503	.0294	0.
.3030	965.	0.	1778.	0.	0.	0.	0.	.0213	-.0342	-.0130	.0582	.0506	.0246	0.
.3040	1196.	0.	2202.	0.	0.	0.	0.	.0233	-.0388	-.0144	.0677	.0510	.0201	0.
.3050	1400.	0.	2575.	0.	0.	0.	0.	.0252	-.0431	-.0157	.0767	.0520	.0169	0.
.3060	1559.	0.	2870.	0.	0.	0.	0.	.0270	-.0473	-.0169	.0855	.0539	.0153	0.
.3070	1636.	0.	3014.	0.	0.	0.	0.	.0287	-.0513	-.0179	.0940	.0565	.0158	0.
.3080	1618.	0.	2980.	0.	0.	0.	0.	.0302	-.0552	-.0187	.1025	.0595	.0181	0.
.3090	1528.	0.	2813.	0.	0.	0.	0.	.0314	-.0589	-.0192	.1111	.0625	.0219	0.
.3100	1383.	0.	2547.	0.	0.	0.	0.	.0322	-.0625	-.0195	.1200	.0650	.0264	0.
.3110	1195.	0.	2200.	0.	0.	0.	0.	.0326	-.0661	-.0194	.1288	.0664	.0307	0.

ADLPIPE PAGE 991

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.57.

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	DIS	TYPE	RU								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.3120	997.	0.	1835.	0.	0.	0.	.0324	-.0694	-.0190	.1371	.0564	.0340	0.	
.3130	835.	0.	1538.	0.	0.	0.	.0315	-.0726	-.0183	.1446	.0648	.0355	0.	
.3140	727.	0.	1338.	0.	0.	0.	.0299	-.0754	-.0173	.1505	.0611	.0345	0.	
.3150	664.	0.	1223.	0.	0.	0.	.0276	-.0778	-.0159	.1545	.0553	.0307	0.	
.3160	632.	0.	1163.	0.	0.	0.	.0246	-.0796	-.0142	.1562	.0471	.0240	0.	
.3170	610.	0.	1124.	0.	0.	0.	.0209	-.0809	-.0122	.1557	.0368	.0146	0.	
.3180	589.	0.	1084.	0.	0.	0.	.0167	-.0816	-.0099	.1533	.0246	.0029	0.	
.3190	569.	0.	1048.	0.	0.	0.	.0121	-.0816	-.0074	.1495	.0108	-.0103	0.	
.3200	561.	0.	1033.	0.	0.	0.	.0073	-.0812	-.0048	.1448	-.0037	-.0243	0.	
.3210	569.	0.	1047.	0.	0.	0.	.0023	-.0803	-.0021	.1400	-.0181	-.0382	0.	
.3220	607.	0.	1118.	0.	0.	0.	-.0026	-.0791	.0006	.1356	-.0316	-.0512	0.	
.3230	699.	0.	1286.	0.	0.	0.	-.0074	-.0776	.0031	.1319	-.0433	-.0624	0.	
.3240	835.	0.	1537.	0.	0.	0.	-.0120	-.0760	.0054	.1292	-.0526	-.0716	0.	
.3250	971.	0.	1788.	0.	0.	0.	-.0162	-.0743	.0074	.1276	-.0591	-.0784	0.	
.3260	1078.	0.	1986.	0.	0.	0.	-.0200	-.0725	.0093	.1268	-.0626	-.0830	0.	
.3270	1139.	0.	2097.	0.	0.	0.	-.0231	-.0706	.0109	.1268	-.0633	-.0858	0.	
.3280	1123.	0.	2068.	0.	0.	0.	-.0255	-.0689	.0123	.1276	-.0615	-.0871	0.	
.3290	1010.	0.	1861.	0.	0.	0.	-.0272	-.0672	.0133	.1288	-.0577	-.0875	0.	
.3300	809.	0.	1490.	0.	0.	0.	-.0280	-.0658	.0141	.1304	-.0524	-.0875	0.	
.3310	555.	0.	1023.	0.	0.	0.	-.0280	-.0647	.0144	.1322	-.0458	-.0873	0.	
.3320	300.	0.	552.	0.	0.	0.	-.0271	-.0640	.0143	.1341	-.0385	-.0871	0.	
.3330	81.	0.	150.	0.	0.	0.	-.0255	-.0637	.0137	.1359	-.0306	-.0869	0.	
.3340	-90.	0.	-166.	0.	0.	0.	-.0230	-.0637	.0126	.1374	-.0223	-.0864	0.	
.3350	-219.	0.	-403.	0.	0.	0.	-.0197	-.0641	.0110	.1382	-.0138	-.0855	0.	
.3360	-294.	0.	-542.	0.	0.	0.	-.0156	-.0646	.0089	.1382	-.0055	-.0839	0.	
.3370	-307.	0.	-565.	0.	0.	0.	-.0110	-.0653	.0064	.1373	.0023	-.0814	0.	
.3380	-265.	0.	-489.	0.	0.	0.	-.0057	-.0660	.0035	.1352	.0093	-.0781	0.	
.3390	-184.	0.	-340.	0.	0.	0.	-.0000	-.0667	.0003	.1318	.0153	-.0739	0.	
.3400	-57.	0.	-106.	0.	0.	0.	.0060	-.0673	-.0032	.1272	.0202	-.0690	0.	
.3410	136.	0.	250.	0.	0.	0.	.0122	-.0679	-.0068	.1215	.0240	-.0638	0.	
.3420	407.	0.	750.	0.	0.	0.	.0184	-.0685	-.0106	.1148	.0269	-.0585	0.	
.3430	753.	0.	1388.	0.	0.	0.	.0245	-.0691	-.0144	.1072	.0293	-.0535	0.	
.3440	1149.	0.	2116.	0.	0.	0.	.0303	-.0697	-.0181	.0990	.0312	-.0491	0.	
.3450	1545.	0.	2846.	0.	0.	0.	.0358	-.0702	-.0216	.0902	.0330	-.0455	0.	
.3460	1892.	0.	3484.	0.	0.	0.	.0408	-.0706	-.0249	.0811	.0348	-.0430	0.	
.3470	2147.	0.	3954.	0.	0.	0.	.0453	-.0709	-.0276	.0719	.0367	-.0416	0.	
.3480	2279.	0.	4198.	0.	0.	0.	.0491	-.0709	-.0299	.0627	.0388	-.0413	0.	
.3490	2274.	0.	4189.	0.	0.	0.	.0522	-.0705	-.0316	.0536	.0410	-.0421	0.	

ADLPIPE PAGE 992

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.57.

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

.3380	-265.	0.	-487.	0.	0.	0.	0.	-.0057	-.0660	.0035	.1352	.0093	-.0781	0.
.3390	-164.	0.	-340.	0.	0.	0.	0.	-.0000	-.0667	.0003	.1318	.0153	-.0739	0.
.3400	-57.	0.	-106.	0.	0.	0.	0.	.0060	-.0673	-.0032	.1272	.0202	-.0690	0.
.3410	136.	0.	250.	0.	0.	0.	0.	.0122	-.0679	-.0068	.1215	.0240	-.0638	0.
.3420	407.	0.	750.	0.	0.	0.	0.	.0184	-.0685	-.0106	.1148	.0269	-.0585	0.
.3430	753.	0.	1388.	0.	0.	0.	0.	.0245	-.0691	-.0144	.1072	.0293	-.0535	0.
.3440	1149.	0.	2116.	0.	0.	0.	0.	.0303	-.0697	-.0181	.0990	.0312	-.0491	0.
.3450	1545.	0.	2846.	0.	0.	0.	0.	.0358	-.0702	-.0216	.0902	.0330	-.0455	0.
.3460	1892.	0.	3484.	0.	0.	0.	0.	.0408	-.0706	-.0249	.0811	.0348	-.0430	0.
.3470	2147.	0.	3954.	0.	0.	0.	0.	.0453	-.0709	-.0276	.0719	.0367	-.0416	0.
.3480	2279.	0.	4198.	0.	0.	0.	0.	.0491	-.0709	-.0299	.0627	.0388	-.0413	0.
.3490	2274.	0.	4189.	0.	0.	0.	0.	.0522	-.0705	-.0316	.0536	.0410	-.0421	0.

ADLPIPE PAGE 992 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 8/31/02. 18.26.57.

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	21	MEMBER	2	SEQUENCE	138	LOCATION	DIS	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.3500	2144.	0.	3948.	0.	0.	0.	.0546	-.0696	-.0327	.0449	.0434	-.0437	0.		
.3510	1922.	0.	3539.	0.	0.	0.	.0561	-.0681	-.0332	.0367	.0461	-.0460	0.		
.3520	1651.	0.	3041.	0.	0.	0.	.0567	-.0659	-.0331	.0291	.0491	-.0486	0.		
.3530	1379.	0.	2540.	0.	0.	0.	.0565	-.0631	-.0326	.0221	.0521	-.0513	0.		
.3540	1148.	0.	2113.	0.	0.	0.	.0553	-.0593	-.0317	.0159	.0552	-.0538	0.		
.3550	969.	0.	1784.	0.	0.	0.	.0534	-.0548	-.0304	.0104	.0581	-.0561	0.		
.3560	836.	0.	1540.	0.	0.	0.	.0507	-.0493	-.0287	.0056	.0603	-.0579	0.		
.3570	740.	0.	1362.	0.	0.	0.	.0475	-.0430	-.0268	.0014	.0613	-.0591	0.		
.3580	670.	0.	1234.	0.	0.	0.	.0437	-.0360	-.0247	-.0022	.0608	-.0599	0.		
.3590	610.	0.	1123.	0.	0.	0.	.0397	-.0285	-.0224	-.0053	.0587	-.0600	0.		
.3600	540.	0.	995.	0.	0.	0.	.0355	-.0206	-.0200	-.0080	.0548	-.0595	0.		
.3610	453.	0.	833.	0.	0.	0.	.0312	-.0126	-.0176	-.0103	.0489	-.0584	0.		
.3620	346.	0.	636.	0.	0.	0.	.0269	-.0047	-.0151	-.0124	.0412	-.0566	0.		
.3630	215.	0.	395.	0.	0.	0.	.0227	.0027	-.0126	-.0141	.0320	-.0543	0.		
.3640	52.	0.	96.	0.	0.	0.	.0186	.0096	-.0102	-.0157	.0215	-.0514	0.		
.3650	-151.	0.	-278.	0.	0.	0.	.0145	.0158	-.0076	-.0173	.0100	-.0480	0.		
.3660	-394.	0.	-726.	0.	0.	0.	.0104	.0212	-.0051	-.0191	-.0021	-.0441	0.		
.3670	-666.	0.	-1227.	0.	0.	0.	.0062	.0258	-.0024	-.0211	-.0142	-.0398	0.		
.3680	-950.	0.	-1750.	0.	0.	0.	.0020	.0298	.0003	-.0236	-.0259	-.0351	0.		
.3690	-1229.	0.	-2263.	0.	0.	0.	-.0025	.0330	.0031	-.0267	-.0367	-.0300	0.		
.3700	-1480.	0.	-2726.	0.	0.	0.	-.0072	.0356	.0060	-.0304	-.0460	-.0246	0.		
.3710	-1673.	0.	-3082.	0.	0.	0.	-.0122	.0377	.0090	-.0346	-.0534	-.0187	0.		
.3720	-1779.	0.	-3277.	0.	0.	0.	-.0174	.0393	.0120	-.0394	-.0588	-.0126	0.		
.3730	-1789.	0.	-3294.	0.	0.	0.	-.0227	.0405	.0148	-.0445	-.0622	-.0063	0.		
.3740	-1709.	0.	-3146.	0.	0.	0.	-.0280	.0415	.0176	-.0497	-.0635	.0002	0.		
.3750	-1557.	0.	-2867.	0.	0.	0.	-.0332	.0422	.0202	-.0548	-.0631	.0068	0.		
.3760	-1353.	0.	-2492.	0.	0.	0.	-.0381	.0428	.0226	-.0597	-.0613	.0133	0.		
.3770	-1120.	0.	-2062.	0.	0.	0.	-.0426	.0434	.0247	-.0642	-.0582	.0197	0.		
.3780	-876.	0.	-1613.	0.	0.	0.	-.0465	.0438	.0265	-.0681	-.0542	.0260	0.		
.3790	-645.	0.	-1189.	0.	0.	0.	-.0497	.0441	.0279	-.0713	-.0495	.0320	0.		
.3800	-454.	0.	-836.	0.	0.	0.	-.0520	.0444	.0289	-.0737	-.0443	.0377	0.		
.3810	-318.	0.	-586.	0.	0.	0.	-.0534	.0445	.0294	-.0753	-.0390	.0430	0.		
.3820	-235.	0.	-434.	0.	0.	0.	-.0538	.0445	.0296	-.0760	-.0337	.0477	0.		
.3830	-200.	0.	-368.	0.	0.	0.	-.0533	.0444	.0292	-.0759	-.0286	.0518	0.		
.3840	-210.	0.	-387.	0.	0.	0.	-.0517	.0442	.0284	-.0750	-.0239	.0550	0.		
.3850	-264.	0.	-486.	0.	0.	0.	-.0492	.0440	.0271	-.0735	-.0197	.0576	0.		
.3860	-350.	0.	-644.	0.	0.	0.	-.0458	.0436	.0254	-.0714	-.0159	.0594	0.		
.3870	-449.	0.	-826.	0.	0.	0.	-.0416	.0433	.0232	-.0690	-.0125	.0607	0.		

ADLPIPE PAGE 993 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 8/31/02. 18.26.57.

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

.3770	-1120.	0.	-2062.	0.	0.	0.	0.	-.0426	.0434	.0247	-.0642	-.0582	.0197	0.
.3780	-876.	0.	-1613.	0.	0.	0.	0.	-.0465	.0438	.0265	-.0681	-.0542	.0260	0.
.3790	-645.	0.	-1189.	0.	0.	0.	0.	-.0497	.0441	.0279	-.0713	-.0495	.0320	0.
.3800	-454.	0.	-836.	0.	0.	0.	0.	-.0520	.0444	.0289	-.0737	-.0443	.0377	0.
.3810	-318.	0.	-586.	0.	0.	0.	0.	-.0534	.0445	.0294	-.0753	-.0390	.0430	0.
.3820	-235.	0.	-434.	0.	0.	0.	0.	-.0538	.0445	.0296	-.0760	-.0337	.0477	0.
.3830	-200.	0.	-368.	0.	0.	0.	0.	-.0533	.0444	.0292	-.0759	-.0286	.0518	0.
.3840	-210.	0.	-387.	0.	0.	0.	0.	-.0517	.0442	.0284	-.0750	-.0239	.0550	0.
.3850	-264.	0.	-486.	0.	0.	0.	0.	-.0492	.0440	.0271	-.0735	-.0197	.0576	0.
.3860	-350.	0.	-644.	0.	0.	0.	0.	-.0458	.0436	.0254	-.0714	-.0159	.0594	0.
.3870	-449.	0.	-826.	0.	0.	0.	0.	-.0416	.0433	.0232	-.0690	-.0125	.0607	0.

ADLPIPE PAGE 993

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.57.

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	21	MEMBER	2	SEQUENCE	138	LOCATION	DIS	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3880	-533.	0.	-982.	0.	0.	0.		-.0367	.0429	.0207	-.0665	-.0093	.0618	0.	
.3890	-583.	0.	-1073.	0.	0.	0.		-.0310	.0424	.0177	-.0640	-.0062	.0628	0.	
.3900	-596.	0.	-1097.	0.	0.	0.		-.0249	.0419	.0144	-.0618	-.0030	.0641	0.	
.3910	-579.	0.	-1066.	0.	0.	0.		-.0183	.0414	.0107	-.0599	.0002	.0658	0.	
.3920	-529.	0.	-974.	0.	0.	0.		-.0114	.0407	.0069	-.0582	.0036	.0682	0.	
.3930	-442.	0.	-814.	0.	0.	0.		-.0043	.0400	.0030	-.0568	.0070	.0713	0.	
.3940	-336.	0.	-619.	0.	0.	0.		.0027	.0392	-.0010	-.0555	.0105	.0750	0.	
.3950	-242.	0.	-446.	0.	0.	0.		.0095	.0383	-.0048	-.0541	.0137	.0791	0.	
.3960	-172.	0.	-316.	0.	0.	0.		.0158	.0372	-.0084	-.0528	.0169	.0837	0.	
.3970	-115.	0.	-211.	0.	0.	0.		.0216	.0361	-.0115	-.0515	.0198	.0883	0.	
.3980	-62.	0.	-115.	0.	0.	0.		.0264	.0349	-.0142	-.0502	.0227	.0927	0.	
.3990	-18.	0.	-34.	0.	0.	0.		.0301	.0338	-.0163	-.0490	.0254	.0965	0.	
.4000	6.	0.	10.	0.	0.	0.		.0327	.0327	-.0178	-.0481	.0278	.0995	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)
.0430	6195.	0.	11408.	0.	0.	0.	-.1503	-.0526	.0728	-.0132	-.0256	.0015	12982.

SECTION	21	MEMBER	2	SEQUENCE	138	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
0.0000	0.	0.	0.	0.	0.	0.		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.	
.0010	-6.	-1.	-12.	2.	-1.	-1.		-.0000	.0000	-.0000	-.0000	.0000	.0000	1.	
.0020	-36.	5.	-65.	18.	-7.	-13.		-.0000	.0000	-.0001	-.0003	.0002	.0002	11.	
.0030	-73.	44.	-133.	68.	-18.	-47.		-.0001	.0000	-.0002	-.0009	.0005	.0006	40.	
.0040	-105.	118.	-193.	160.	-34.	-109.		-.0001	-.0000	-.0003	-.0020	.0011	.0013	92.	
.0050	-149.	206.	-269.	292.	-54.	-194.		-.0001	-.0001	-.0005	-.0038	.0019	.0023	166.	
.0060	-211.	305.	-379.	468.	-73.	-299.		-.0001	-.0002	-.0008	-.0062	.0027	.0037	263.	
.0070	-308.	438.	-539.	707.	-105.	-436.		-.0001	-.0003	-.0013	-.0097	.0040	.0056	392.	
.0080	-453.	635.	-766.	1042.	-172.	-637.		-.0001	-.0005	-.0019	-.0147	.0064	.0084	578.	
.0090	-581.	928.	-942.	1491.	-282.	-933.		.0002	-.0008	-.0028	-.0216	.0108	.0123	835.	
.0100	-670.	1266.	-1022.	2038.	-424.	-1310.		.0007	-.0013	-.0038	-.0303	.0173	.0170	1153.	
.0110	-778.	1552.	-1088.	2636.	-581.	-1706.		.0018	-.0019	-.0050	-.0402	.0255	.0218	1496.	

ADLPIPE PAGE 994

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.57.

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

.0010	-6.	-1.	-12.	2.	-1.	-1.	-0.000	.0000	-0.0000	-0.0000	.0000	.0000	1.
.0020	-36.	5.	-65.	18.	-7.	-13.	-0.000	.0000	-0.0001	-0.0003	.0002	.0002	11.
.0030	-73.	44.	-133.	68.	-18.	-47.	-0.001	.0000	-0.0002	-0.0009	.0005	.0006	40.
.0040	-105.	118.	-193.	160.	-24.	-109.	-0.001	-0.000	-0.0003	-0.0020	.0011	.0013	92.
.0050	-149.	206.	-269.	292.	-34.	-194.	-0.001	-0.001	-0.0005	-0.0038	.0019	.0023	166.
.0060	-211.	305.	-379.	468.	-47.	-299.	-0.001	-0.002	-0.0008	-0.0062	.0027	.0037	263.
.0070	-308.	438.	-539.	707.	-65.	-436.	-0.001	-0.003	-0.0013	-0.0097	.0040	.0056	392.
.0080	-453.	635.	-766.	1042.	-87.	-637.	-0.001	-0.005	-0.0019	-0.0147	.0064	.0084	578.
.0090	-581.	928.	-942.	1491.	-117.	-933.	.0002	-0.008	-0.0028	-0.0216	.0108	.0123	835.
.0100	-670.	1266.	-1022.	2038.	-156.	-1310.	.0007	-0.013	-0.0038	-0.0303	.0173	.0170	1153.
.0110	-778.	1552.	-1088.	2636.	-204.	-1706.	.0018	-0.019	-0.0050	-0.0402	.0255	.0218	1496.

ADLPIPE PAGE 994 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.57.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
21	2	138					.0120	-887.	1767.	-1104.	3229.	-704.	-2060.	.0035	-0.0027	-0.0065	-0.0509	.0347	.0262	1825.
							.0130	-916.	1929.	-925.	3758.	-720.	-2312.	.0061	-0.0034	-0.0081	-0.0619	.0437	.0295	2095.
							.0140	-818.	1969.	-450.	4140.	-583.	-2378.	.0095	-0.0040	-0.0098	-0.0723	.0510	.0306	2254.
							.0150	-630.	1780.	284.	4302.	-294.	-2168.	.0139	-0.0044	-0.0115	-0.0803	.0553	.0285	2262.
							.0160	-367.	1351.	1260.	4202.	103.	-1648.	.0192	-0.0045	-0.0130	-0.0845	.0560	.0226	2116.
							.0170	-98.	709.	2269.	3785.	565.	-887.	.0252	-0.0041	-0.0145	-0.0840	.0544	.0131	1841.
							.0180	37.	-121.	2892.	3014.	1068.	-42.	.0317	-0.0026	-0.0161	-0.0787	.0530	.0011	1499.
							.0190	-103.	-1021.	2804.	1985.	1516.	716.	.0384	.0001	-0.0183	-0.0699	.0545	-0.0119	1218.
							.0200	-774.	-1763.	1653.	998.	1688.	1164.	.0451	.0042	-0.0215	-0.0610	.0629	-0.0230	1069.
							.0210	-1443.	-1876.	524.	320.	1470.	1160.	.0522	.0096	-0.0253	-0.0552	.0801	-0.0301	890.
							.0220	-1322.	-1494.	470.	-261.	1355.	898.	.0598	.0159	-0.0288	-0.0513	.0973	-0.0349	772.
							.0230	-1274.	-1640.	106.	-1135.	1511.	969.	.0675	.0230	-0.0322	-0.0459	.1061	-0.0407	995.
							.0240	-1322.	-2068.	133.	-2233.	1673.	1853.	.0742	.0311	-0.0353	-0.0380	.1007	-0.0487	1570.
							.0250	-1107.	-2275.	783.	-3508.	1989.	3132.	.0802	.0396	-0.0381	-0.0277	.0865	-0.0571	2393.
							.0260	-866.	-2701.	144.	-5111.	3034.	3990.	.0856	.0479	-0.0414	-0.0146	.0718	-0.0635	3355.
							.0270	-107.	-3153.	-555.	-6506.	4529.	4636.	.0892	.0544	-0.0431	-0.0003	.0460	-0.0684	4304.
							.0280	687.	-3366.	474.	-6955.	4733.	5932.	.0887	.0585	-0.0412	.0146	.0072	-0.0725	4824.
							.0290	788.	-3783.	1190.	-7118.	3704.	7063.	.0841	.0609	-0.0373	.0318	-0.0216	-0.0730	5010.
							.0300	1377.	-4157.	-452.	-8142.	3798.	6194.	.0767	.0628	-0.0341	.0477	-0.0293	-0.0661	5114.
							.0310	2612.	-3462.	-1303.	-8978.	3605.	4795.	.0645	.0639	-0.0289	.0565	-0.0334	-0.0550	5060.
							.0320	2376.	-2802.	-1387.	-8792.	1386.	4626.	.0458	.0633	-0.0198	.0593	-0.0447	-0.0457	4701.
							.0330	1646.	-3030.	-1546.	-8578.	-925.	4419.	.0236	.0603	-0.0082	.0610	-0.0533	-0.0403	4543.
							.0340	2534.	-3276.	-1100.	-9043.	-1366.	2853.	.0010	.0552	.0046	.0623	-0.0528	-0.0378	4490.
							.0350	3306.	-3013.	-337.	-9228.	-1699.	1650.	-0.0235	.0489	.0179	.0606	-0.0548	-0.0393	4465.
							.0360	2016.	-2528.	-157.	-8321.	-3479.	2139.	-0.0511	.0413	.0311	.0549	-0.0566	-0.0456	4344.
							.0370	561.	-1794.	-228.	-6867.	-4756.	2423.	-0.0775	.0315	.0432	.0470	-0.0762	-0.0536	4076.
							.0380	548.	-772.	25.	-5203.	-4120.	1172.	-0.0992	.0186	.0539	.0389	-0.0768	-0.0598	3158.
							.0390	181.	65.	183.	-2768.	-3564.	163.	-0.1179	.0037	.0637	.0310	-0.0793	-0.0637	2116.
							.0400	-1718.	608.	-607.	215.	-4416.	210.	-0.1343	-0.0114	.0711	.0214	-0.0794	-0.0614	2074.
							.0410	-2472.	1919.	-937.	2745.	-4695.	-420.	-0.1456	-0.0256	.0746	.0086	-0.0699	-0.0485	2556.
							.0420	-1978.	3560.	-671.	4688.	-4113.	-1989.	-0.1505	-0.0391	.0748	-0.0046	-0.0499	-0.0261	3068.
							.0430	-2477.	4023.	-1346.	6536.	-4411.	-3018.	-0.1503	-0.0526	.0728	-0.0132	-0.0256	.0015	3956.
							.0440	-2582.	3899.	-1128.	8245.	-5141.	-3565.	-0.1446	-0.0663	.0699	-0.0168	-0.0046	.0315	4850.
							.0450	-851.	4110.	672.	9360.	-4807.	-4441.	-0.1325	-0.0794	.0654	-0.0146	.0093	.0608	5352.
							.0460	500.	3861.	1267.	9748.	-3834.	-4980.	-0.1167	-0.0906	.0582	-0.0045	.0122	.0839	5435.
							.0470	314.	3015.	485.	9724.	-3361.	-4473.	-0.0992	-0.0994	.0488	.0132	.0042	.0974	5258.
							.0480	574.	2600.	601.	9408.	-2708.	-3967.	-0.0794	-0.1063	.0388	.0348	-0.0077	.1021	4950.
							.0490	1606.	2411.	823.	8762.	-1120.	-4277.	-0.0573	-0.1111	.0285	.0577	-0.0195	.0988	4599.

ADLPIPE PAGE 995 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.57.

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

.0390	181.	65.	183.	-2768.	-3564.	163.	-1179	.0037	.0637	.0310	-.0793	-.0637	2116.
.0400	-1718.	608.	-607.	215.	-4416.	210.	-.1343	-.0114	.0711	.0214	-.0794	-.0614	2074.
.0410	-2472.	1219.	-937.	2745.	-4695.	-420.	-.1456	-.0256	.0746	.0086	-.0699	-.0485	2556.
.0420	-1978.	3560.	-671.	4688.	-4113.	-1989.	-.1505	-.0391	.0748	-.0046	-.0499	-.0261	3068.
.0430	-2477.	4023.	-1346.	6536.	-4411.	-3018.	-.1503	-.0526	.0728	-.0132	-.0256	.0015	3956.
.0440	-2582.	3899.	-1128.	8245.	-5141.	-3565.	-.1446	-.0663	.0699	-.0168	-.0046	.0315	4850.
.0450	-851.	4110.	672.	9360.	-4807.	-4441.	-.1325	-.0794	.0654	-.0146	.0093	.0608	5352.
.0460	500.	3861.	1267.	9748.	-3834.	-4980.	-.1167	-.0906	.0582	-.0045	.0122	.0839	5435.
.0470	314.	3015.	485.	9724.	-3361.	-4473.	-.0992	-.0994	.0488	.0132	.0042	.0974	5258.
.0480	574.	2600.	601.	9408.	-2708.	-3967.	-.0794	-.1063	.0388	.0348	-.0077	.1021	4950.
.0490	1606.	2411.	823.	8762.	-1120.	-4277.	-.0573	-.1111	.0285	.0577	-.0195	.0988	4599.

ADLPIPE PAGE 995

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.57.

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

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
21	2	138					.0500	1639.	1806.	-157.	8127.	193.	-4477.	-.0357	-.1132	.0183	.0790	-.0330	.0868	4349.
							.0510	891.	1526.	-750.	7584.	393.	-4031.	-.0160	-.1113	.0087	.0951	-.0465	.0679	4029.
							.0520	672.	1925.	-402.	6351.	623.	-3810.	.0027	-.1051	-.0009	.1059	-.0508	.0451	3483.
							.0530	573.	1966.	-823.	3969.	1655.	-4025.	.0208	-.0951	-.0112	.1149	-.0452	.0188	2760.
							.0540	43.	1396.	-1356.	1257.	2507.	-3569.	.0373	-.0831	-.0205	.1245	-.0426	-.0121	2127.
							.0550	-302.	941.	-167.	-969.	2596.	-2040.	.0520	-.0708	-.0272	.1354	-.0491	-.0461	1613.
							.0560	-352.	461.	1130.	-3036.	2963.	-495.	.0660	-.0591	-.0333	.1496	-.0548	-.0790	2002.
							.0570	-590.	-290.	523.	-5211.	4239.	376.	.0797	-.0483	-.0405	.1670	-.0521	-.1070	3153.
							.0580	-982.	-523.	-506.	-6734.	5305.	1223.	.0915	-.0388	-.0478	.1837	-.0470	-.1276	4058.
							.0590	-1457.	-25.	-771.	-7079.	5237.	2491.	.1006	-.0314	-.0537	.1970	-.0420	-.1390	4289.
							.0600	-1945.	247.	-1551.	-6889.	4902.	3349.	.1079	-.0267	-.0585	.2081	-.0280	-.1403	4262.
							.0610	-1926.	1.	-2808.	-6824.	5057.	3187.	.1140	-.0244	-.0622	.2163	.0006	-.1320	4251.
							.0620	-1276.	-124.	-2672.	-6710.	4874.	2891.	.1176	-.0238	-.0638	.2180	.0348	-.1165	4116.
							.0630	-890.	-181.	-1425.	-6417.	3679.	3335.	.1169	-.0243	-.0632	.2130	.0661	-.0981	3802.
							.0640	-846.	-559.	-591.	-6298.	2516.	3871.	.1132	-.0261	-.0613	.2043	.0958	-.0797	3660.
							.0650	-246.	-898.	219.	-6272.	2290.	3697.	.1076	-.0302	-.0582	.1940	.1237	-.0635	3577.
							.0660	441.	-849.	1522.	-5548.	2161.	3332.	.0997	-.0372	-.0531	.1822	.1425	-.0519	3197.
							.0670	-66.	-563.	2095.	-3692.	1339.	3222.	.0887	-.0468	-.0471	.1688	.1504	-.0454	2380.
							.0680	-1224.	163.	1285.	-1154.	611.	2501.	.0762	-.0582	-.0414	.1537	.1560	-.0409	1322.
							.0690	-1812.	1564.	30.	1532.	542.	672.	.0638	-.0703	-.0364	.1360	.1642	-.0352	824.
							.0700	-2322.	2950.	-1109.	4291.	216.	-1236.	.0513	-.0822	-.0315	.1152	.1695	-.0282	2095.
							.0710	-3175.	3811.	-1936.	6943.	-781.	-2488.	.0388	-.0928	-.0260	.0912	.1668	-.0200	3476.
							.0720	-3188.	4220.	-1747.	8868.	-1421.	-3624.	.0278	-.1011	-.0203	.0643	.1574	-.0092	4538.
							.0730	-2017.	4268.	-562.	9662.	-1311.	-4780.	.0191	-.1064	-.0149	.0369	.1431	.0044	5089.
							.0740	-882.	3679.	744.	9613.	-1320.	-5210.	.0115	-.1084	-.0100	.0125	.1212	.0188	5161.
							.0750	3.	2861.	2035.	9212.	-1640.	-4941.	.0046	-.1076	-.0056	-.0058	.0908	.0328	4959.
							.0760	1251.	2434.	3174.	8699.	-1588.	-4908.	-.0010	-.1040	-.0019	-.0167	.0572	.0464	4740.
							.0770	2261.	2325.	3102.	8339.	-1254.	-5369.	-.0057	-.1004	.0007	-.0199	.0259	.0592	4685.
							.0780	2228.	2438.	1534.	8444.	-1332.	-5891.	-.0108	-.0943	.0027	-.0170	-.0022	.0701	4865.
							.0790	1793.	3051.	-346.	8823.	-1712.	-6417.	-.0164	-.0861	.0047	-.0115	-.0263	.0785	5175.
							.0800	1644.	3868.	-1884.	8785.	-1866.	-6960.	-.0223	-.0752	.0069	-.0051	-.0454	.0837	5325.
							.0810	1369.	4068.	-3284.	7862.	-1957.	-6986.	-.0287	-.0613	.0098	.0013	-.0594	.0840	5013.
							.0820	1008.	3524.	-3828.	6056.	-2211.	-6104.	-.0357	-.0447	.0140	.0070	-.0703	.0781	4161.
							.0830	1241.	2545.	-2714.	3441.	-2251.	-4549.	-.0427	-.0262	.0198	.0114	-.0800	.0658	2874.
							.0840	1749.	993.	-884.	184.	-1916.	-2541.	-.0495	-.0070	.0264	.0160	-.0884	.0473	1494.
							.0850	1757.	-978.	486.	-3139.	-1607.	-163.	-.0561	.0118	.0327	.0224	-.0942	.0241	1655.
							.0860	1506.	-2442.	1506.	-5830.	-1425.	2118.	-.0623	.0292	.0383	.0294	-.0958	-.0008	2983.
							.0870	1220.	-3019.	1939.	-7574.	-1141.	3789.	-.0674	.0443	.0424	.0360	-.0931	-.0248	4005.

ADLPIPE PAGE 996

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.57.

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

.0770	2261.	2325.	3102.	8339.	-1254.	-5364.	-.057	-.1004	.0007	-.0199	.0259	.0592	4685.
.0780	2228.	2438.	1534.	8444.	-1332.	-5891.	-.0108	-.0943	.0027	-.0170	-.0022	.0701	4865.
.0790	1793.	3051.	-346.	8823.	-1712.	-6417.	-.0164	-.0861	.0047	-.0115	-.0263	.0785	5175.
.0800	1644.	3868.	-1884.	8785.	-1866.	-6960.	-.0223	-.0752	.0069	-.0051	-.0454	.0837	5325.
.0810	1369.	4041.	-3284.	7862.	-1957.	-6986.	-.0287	-.0613	.0098	.0013	-.0594	.0840	5013.
.0820	1008.	3524.	-1828.	6056.	-2211.	-6104.	-.0357	-.0447	.0140	.0070	-.0703	.0781	4161.
.0830	1241.	2545.	-2714.	3441.	-2251.	-4549.	-.0427	-.0262	.0198	.0114	-.0800	.0658	2874.
.0840	1749.	993.	-884.	184.	-1916.	-2541.	-.0495	-.0070	.0264	.0160	-.0884	.0473	1494.
.0850	1757.	-978.	486.	-3139.	-1607.	-163.	-.0561	.0118	.0327	.0224	-.0942	.0241	1655.
.0860	1506.	-2442.	1506.	-5830.	-1425.	2118.	-.0623	.0292	.0383	.0294	-.0958	-.0008	2983.
.0870	1220.	-3019.	1939.	-7574.	-1141.	3789.	-.0674	.0443	.0424	.0360	-.0931	-.0248	4005.

ADLPIPE PAGE 996

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.57.

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	21	MEMBER	2	SEQUENCE	138	LOCATION	END	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	PX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.0880	334.	-3230.	957.	-8368.	-931.	4884.	-.0715	.0567	.0448	.0415	-.0860	-.0463	4561.	
.0890	-995.	-3252.	-776.	-8363.	-1063.	5599.	-.0743	.0665	.0458	.0450	-.0745	-.0639	4742.	
.0900	-1752.	-2977.	-1808.	-8067.	-1280.	5939.	-.0750	.0743	.0460	.0451	-.0592	-.0767	4732.	
.0910	-1804.	-2949.	-2102.	-8164.	-1312.	6173.	-.0735	.0811	.0453	.0416	-.0436	-.0852	4836.	
.0920	-1684.	-3639.	-1973.	-8884.	-1337.	6801.	-.0704	.0873	.0438	.0342	-.0325	-.0911	5280.	
.0930	-1217.	-4600.	-770.	-9943.	-1410.	7793.	-.0658	.0926	.0420	.0229	-.0277	-.0956	5957.	
.0940	-231.	-5409.	1315.	-11026.	-1193.	8593.	-.0593	.0962	.0396	.0088	-.0271	-.0991	6575.	
.0950	581.	-6108.	2701.	-11773.	-613.	8865.	-.0513	.0972	.0359	-.0060	-.0286	-.1023	6912.	
.0960	722.	-6258.	3175.	-11569.	-58.	8630.	-.0425	.0952	.0306	-.0212	-.0330	-.1054	6764.	
.0970	400.	-5218.	3052.	-10028.	309.	7808.	-.0332	.0898	.0238	-.0373	-.0399	-.1077	5958.	
.0980	-368.	-3325.	2024.	-7452.	809.	6236.	-.0231	.0812	.0154	-.0540	-.0463	-.1083	4570.	
.0990	-1594.	-1347.	-156.	-4389.	1660.	4086.	-.0120	.0700	.0056	-.0711	-.0518	-.1067	2916.	
.1000	-2668.	561.	-2055.	-1135.	2637.	1916.	-.0001	.0570	-.0043	-.0900	-.0600	-.1021	1617.	
.1010	-3075.	2237.	-2528.	1956.	3488.	233.	.0124	.0431	-.0132	-.1111	-.0731	-.0933	1877.	
.1020	-2931.	3051.	-2163.	4298.	4307.	-898.	.0253	.0292	-.0212	-.1327	-.0874	-.0798	2883.	
.1030	-2241.	2877.	-1383.	5641.	5198.	-1723.	.0384	.0158	-.0282	-.1524	-.0976	-.0610	3684.	
.1040	-880.	2299.	212.	6352.	5877.	-2371.	.0508	.0029	-.0339	-.1691	-.1020	-.0373	4205.	
.1050	613.	1593.	2034.	6914.	5959.	-2862.	.0615	-.0094	-.0380	-.1810	-.0999	-.0100	4483.	
.1060	1660.	821.	2950.	7547.	5466.	-3448.	.0696	-.0208	-.0409	-.1861	-.0889	.0189	4656.	
.1070	2436.	444.	2958.	8318.	4721.	-4463.	.0750	-.0307	-.0428	-.1844	-.0675	.0476	4946.	
.1080	2603.	662.	1893.	9274.	3622.	-5810.	.0770	-.0382	-.0441	-.1781	-.0349	.0749	5402.	
.1090	1525.	1381.	-775.	10471.	1934.	-7349.	.0755	-.0421	-.0456	-.1721	.0125	.1008	6063.	
.1100	1583.	3066.	-917.	11656.	536.	-8549.	.0718	-.0426	-.0441	-.1665	.0535	.1202	6779.	
.1110	1280.	3716.	-746.	11979.	-707.	-8622.	.0660	-.0391	-.0404	-.1572	.0872	.1297	6925.	
.1120	27.	2738.	-1747.	10925.	-1606.	-7613.	.0587	-.0311	-.0361	-.1431	.1176	.1299	6285.	
.1130	-204.	2072.	-1013.	8971.	-1771.	-6154.	.0512	-.0188	-.0310	-.1289	.1429	.1240	5165.	
.1140	219.	1769.	1286.	6604.	-1687.	-4131.	.0438	-.0032	-.0252	-.1167	.1601	.1144	3735.	
.1150	-448.	491.	2127.	4004.	-1883.	-1504.	.0362	.0139	-.0200	-.1038	.1721	.1024	2190.	
.1160	-1270.	-794.	1853.	1729.	-1854.	611.	.0301	.0311	-.0159	-.0904	.1834	.0912	1222.	
.1170	-1075.	-670.	2354.	362.	-1451.	1692.	.0260	.0473	-.0124	-.0777	.1923	.0824	1058.	
.1180	-843.	-301.	2413.	-635.	-810.	2619.	.0225	.0625	-.0098	-.0649	.1854	.0732	1319.	
.1190	-2001.	-934.	745.	-1784.	-917.	4290.	.0184	.0767	-.0082	-.0497	.1655	.0625	2219.	
.1200	-2470.	-1491.	-637.	-3296.	-956.	5551.	.0153	.0896	-.0070	-.0330	.1428	.0524	3058.	
.1210	-1302.	-1628.	-1498.	-5113.	-9.	5451.	.0136	.1007	-.0062	-.0196	.1197	.0445	3502.	
.1220	-384.	-2233.	-1844.	-6564.	68.	5614.	.0108	.1094	-.0040	-.0120	.0888	.0357	4048.	
.1230	92.	-3436.	-1552.	-7722.	-857.	6357.	.0060	.1158	.0000	-.0135	.0488	.0257	4704.	
.1240	1352.	-4219.	-283.	-8902.	-1584.	6381.	.0004	.1203	.0048	-.0235	.0141	.0159	5186.	
.1250	2972.	-4522.	549.	-10128.	-1510.	5253.	-.0058	.1231	.0091	-.0389	-.0117	.0051	5393.	

ADLPIPE PAGE 997

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.57.

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

.1150	-448.	491.	2127.	4004.	-1883.	-1504.	.0362	.0139	-.0200	-.1038	.1721	.1024	2190.
.1160	-1270.	-794.	1853.	1729.	-1854.	611.	.0301	.0311	-.0159	-.0904	.1834	.0912	1222.
.1170	-1075.	-670.	2354.	362.	-1451.	1692.	.0260	.0473	-.0124	-.0777	.1923	.0824	1058.
.1180	-847.	-301.	2417.	-635.	-810.	2619.	.0225	.0625	-.0098	-.0649	.1854	.0732	1319.
.1190	-2001.	-924.	745.	-1784.	-917.	4290.	.0184	.0767	-.0082	-.0497	.1655	.0625	2219.
.1200	-2470.	-1491.	-837.	-3296.	-956.	5551.	.0153	.0896	-.0070	-.0330	.1428	.0524	3058.
.1210	-1302.	-1628.	-1498.	-5113.	-9.	5451.	.0136	.1007	-.0052	-.0196	.1197	.0445	3502.
.1220	-384.	-2233.	-1844.	-6564.	68.	5614.	.0108	.1094	-.0040	-.0120	.0888	.0357	4048.
.1230	92.	-3436.	-1552.	-7722.	-857.	6357.	.0060	.1158	-.0000	-.0135	.0488	.0257	4704.
.1240	1352.	-4219.	-283.	-8902.	-1584.	6381.	.0004	.1203	.0048	-.0235	.0141	.0159	5186.
.1250	2972.	-4522.	549.	-10128.	-1510.	5253.	-.0058	.1231	.0091	-.0389	-.0117	.0051	5393.

ADLPIPE PAGE 997

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.57.

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

SECTION	21	MEMBER	2	SEQUENCE	138	LOCATION	END	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ									STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)		(PSI)
.1260	3396.	-4917.	-36.	-10853.	-1521.	4178.		-.0147	.1239	.0129	-.0588	-.0408	-.0090		5496.
.1270	2473.	-4891.	-295.	-10304.	-2938.	3881.		-.0261	.1220	.0178	-.0833	-.0590	-.0243		5340.
.1280	2148.	-3938.	48.	-8995.	-3793.	2633.		-.0366	.1171	.0224	-.1113	-.0839	-.0361		4738.
.1290	2213.	-2694.	-206.	-7280.	-3400.	250.		-.0447	.1092	.0259	-.1378	-.0847	-.0441		3767.
.1300	1154.	-1884.	-1177.	-4981.	-3221.	-1334.		-.0521	.0997	.0287	-.1603	-.0860	-.0505		2849.
.1310	-178.	-1207.	-1217.	-2516.	-3334.	-1449.		-.0585	.0897	.0312	-.1797	-.0964	-.0538		2072.
.1320	-701.	-612.	-128.	-679.	-2851.	-1045.		-.0614	.0799	.0327	-.1937	-.1025	-.0504		1458.
.1330	-510.	-767.	215.	141.	-874.	-1029.		-.0601	.0706	.0320	-.2005	-.1006	-.0397		636.
.1340	-480.	-1406.	665.	1019.	864.	-430.		-.0566	.0614	.0308	-.2011	-.1004	-.0236		657.
.1350	-566.	-1882.	2308.	2437.	1399.	1048.		-.0520	.0528	.0302	-.1975	-.1042	-.0029		1406.
.1360	-149.	-2307.	3343.	3404.	2313.	1921.		-.0457	.0456	.0284	-.1904	-.1024	.0229		2128.
.1370	413.	-2622.	3009.	3732.	3650.	1880.		-.0385	.0406	.0249	-.1787	-.0910	.0510		2600.
.1380	757.	-2429.	2346.	4011.	4528.	1791.		-.0327	.0381	.0213	-.1650	-.0849	.0760		2956.
.1390	602.	-1860.	2245.	4479.	4176.	2331.		-.0299	.0378	.0193	-.1498	-.0903	.0934		3071.
.1400	451.	-1596.	1833.	4282.	3701.	2601.		-.0288	.0392	.0185	-.1316	-.0977	.1025		2919.
.1410	943.	-1645.	731.	2992.	4067.	1859.		-.0289	.0424	.0182	-.1116	-.1026	.1036		2521.
.1420	1335.	-1371.	415.	1583.	3566.	1330.		-.0319	.0470	.0197	-.0918	-.1103	.0960		1932.
.1430	1066.	-973.	304.	251.	1994.	1366.		-.0383	.0527	.0225	-.0748	-.1231	.0814		1139.
.1440	636.	-790.	-442.	-1410.	425.	1061.		-.0458	.0586	.0255	-.0604	-.1301	.0635		851.
.1450	842.	-589.	-1209.	-3269.	-588.	-60.		-.0527	.0634	.0285	-.0481	-.1261	.0456		1557.
.1460	1224.	-353.	-1541.	-4698.	-1657.	-1136.		-.0592	.0665	.0320	-.0379	-.1201	.0282		2395.
.1470	774.	-407.	-1644.	-5435.	-3602.	-1235.		-.0655	.0676	.0357	-.0276	-.1140	.0117		3110.
.1480	552.	-757.	-1823.	-6281.	-4857.	-1226.		-.0693	.0668	.0381	-.0161	-.1070	-.0013		3765.
.1490	1077.	-1160.	-1624.	-7381.	-5021.	-1388.		-.0696	.0643	.0389	-.0025	-.0836	-.0093		4234.
.1500	1388.	-1722.	-1070.	-8101.	-5098.	-908.		-.0673	.0597	.0386	.0133	-.0624	-.0132		4506.
.1510	1181.	-2468.	-638.	-8156.	-5108.	240.		-.0631	.0531	.0372	.0298	-.0454	-.0133		4511.
.1520	962.	-2905.	-83.	-7568.	-4799.	1344.		-.0562	.0448	.0343	.0452	-.0248	-.0075		4247.
.1530	1174.	-2782.	347.	-6630.	-3716.	1751.		-.0467	.0354	.0295	.0575	.0026	.0053		3655.
.1540	916.	-2282.	321.	-5143.	-2869.	2008.		-.0361	.0254	.0231	.0660	.0344	.0235		2916.
.1550	85.	-1504.	-22.	-3108.	-2595.	2284.		-.0254	.0149	.0158	.0712	.0668	.0448		2179.
.1560	-367.	-521.	-456.	-1043.	-2006.	1958.		-.0141	.0042	.0079	.0730	.0976	.0676		1402.
.1570	-608.	394.	-633.	894.	-1553.	1294.		-.0023	-.0066	.0003	.0725	.1288	.0899		1036.
.1580	-681.	1018.	-566.	2482.	-1213.	581.		.0090	-.0171	-.0067	.0695	.1533	.1090		1323.
.1590	-530.	1485.	-237.	3699.	-848.	-54.		.0195	-.0269	-.0131	.0640	.1549	.1227		1778.
.1600	-465.	1924.	199.	4715.	-720.	-556.		.0286	-.0360	-.0187	.0569	.1655	.1299		2251.
.1610	-342.	2229.	495.	5400.	-639.	-1241.		.0369	-.0445	-.0237	.0496	.1606	.1310		2614.
.1620	22.	2339.	270.	5723.	-200.	-2425.		.0445	-.0525	-.0284	.0415	.1510	.1268		2914.
.1630	191.	2607.	233.	6301.	-217.	-3557.		.0507	-.0600	-.0318	.0326	.1363	.1173		3393.

ADLPIPE PAGE 998

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.57.

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

.1530	1174.	-2782.	347.	-6630.	-3716.	1751.	-.0467	.0354	.0295	.0575	.0026	.0053	3655.
.1540	916.	-2282.	321.	-5143.	-2869.	2008.	-.0361	.0254	.0231	.0660	.0344	.0235	2916.
.1550	85.	-1504.	-22.	-3108.	-2595.	2284.	-.0254	.0149	.0158	.0712	.0668	.0448	2179.
.1560	-767.	-521.	-456.	-1043.	-2006.	1958.	-.0141	.0042	.0079	.0730	.0976	.0676	1402.
.1570	-608.	394.	-633.	894.	-1553.	1294.	-.0023	-.0066	.0003	.0725	.1288	.0899	1036.
.1580	-681.	1018.	-566.	2482.	-1213.	581.	.0050	-.0171	-.0067	.0695	.1533	.1090	1323.
.1590	-530.	1485.	-237.	3699.	-848.	-54.	.0195	-.0269	-.0131	.0640	.1549	.1227	1778.
.1600	-465.	1924.	199.	4715.	-720.	-556.	.0286	-.0360	-.0187	.0569	.1655	.1299	2251.
.1610	-342.	2229.	495.	5400.	-639.	-1241.	.0369	-.0445	-.0237	.0496	.1606	.1310	2614.
.1620	22.	2339.	270.	5723.	-200.	-2425.	.0445	-.0525	-.0284	.0415	.1510	.1268	2914.
.1630	191.	2607.	233.	6301.	-217.	-3557.	.0507	-.0600	-.0318	.0326	.1363	.1173	3393.

ADLPIPE PAGE 998

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.57.

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	21	MEMBER	2	SEQUENCE	138	LOCATION	END	TYPE	RU						
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)		
.1640	209.	2998.	256.	7012.	-434.	-4577.	.0557	-.0665	-.0344	.0232	.1160	.1030	3930.		
.1650	258.	3142.	-205.	7289.	-215.	-5627.	.0598	-.0712	-.0367	.0142	.0923	.0853	4317.		
.1660	184.	3038.	-700.	7150.	112.	-6330.	.0629	-.0736	-.0384	.0066	.0574	.0650	4475.		
.1670	317.	2860.	-663.	6661.	687.	-6543.	.0650	-.0736	-.0391	-.0000	.0377	.0434	4387.		
.1680	553.	2485.	86.	5878.	1169.	-6052.	.0660	-.0713	-.0384	-.0036	.0052	.0217	3991.		
.1690	759.	1661.	541.	4616.	1868.	-5243.	.0659	-.0667	-.0371	-.0026	-.0252	.0020	3389.		
.1700	877.	847.	631.	3181.	2654.	-4404.	.0646	-.0601	-.0356	.0027	-.0486	-.0133	2833.		
.1710	947.	600.	1194.	2022.	2907.	-3420.	.0618	-.0520	-.0331	.0116	-.0627	-.0226	2307.		
.1720	1022.	522.	1266.	869.	3143.	-2581.	.0573	-.0429	-.0304	.0237	-.0700	-.0258	1949.		
.1730	544.	362.	389.	-90.	2932.	-1756.	.0510	-.0333	-.0274	.0396	-.0678	-.0237	1602.		
.1740	39.	523.	-685.	-716.	2506.	-1172.	.0432	-.0238	-.0238	.0570	-.0569	-.0166	1339.		
.1750	6.	997.	-1232.	-1203.	2140.	-760.	.0342	-.0147	-.0193	.0732	-.0423	-.0065	1205.		
.1760	-192.	1070.	-1540.	-1773.	1407.	71.	.0236	-.0061	-.0135	.0884	-.0270	.0035	1061.		
.1770	-465.	524.	-2041.	-2656.	798.	1118.	.0117	.0015	-.0071	.1018	-.0137	.0108	1401.		
.1780	-357.	-67.	-1724.	-3603.	234.	2213.	-.0008	.0080	.0006	.1129	-.0011	.0142	1984.		
.1790	133.	-779.	-844.	-4663.	-92.	3259.	-.0140	.0130	.0092	.1201	.0075	.0123	2666.		
.1800	278.	-1895.	-305.	-5723.	-411.	4403.	-.0280	.0165	.0181	.1228	.0099	.0046	3390.		
.1810	34.	-2814.	360.	-6339.	-1107.	5512.	-.0425	.0183	.0272	.1210	.0092	-.0083	3971.		
.1820	151.	-3119.	1091.	-6638.	-1388.	5847.	-.0564	.0185	.0358	.1153	.0063	-.0247	4196.		
.1830	16.	-3228.	1195.	-6688.	-1629.	5708.	-.0694	.0173	.0432	.1078	.0016	-.0438	4191.		
.1840	-679.	-3328.	567.	-6484.	-2116.	5467.	-.0814	.0152	.0493	.0992	-.0073	-.0639	4096.		
.1850	-1149.	-2949.	305.	-6016.	-2624.	4970.	-.0912	.0121	.0541	.0897	-.0201	-.0822	3858.		
.1860	-1175.	-2245.	530.	-5477.	-3009.	4148.	-.0978	.0085	.0574	.0805	-.0333	-.0966	3515.		
.1870	-1146.	-1933.	50.	-5205.	-2966.	3112.	-.1010	.0044	.0584	.0758	-.0487	-.1059	3164.		
.1880	-1185.	-1762.	-415.	-4877.	-3103.	2342.	-.1009	.0000	.0576	.0789	-.0663	-.1088	2923.		
.1890	-676.	-1222.	-64.	-4386.	-3239.	1644.	-.0973	-.0046	.0552	.0648	-.0844	-.1036	2669.		
.1900	156.	-667.	124.	-3924.	-3018.	724.	-.0901	-.0097	.0506	.0621	-.0983	-.0904	2345.		
.1910	593.	-352.	-473.	-3307.	-2819.	-241.	-.0802	-.0155	.0441	.0616	-.1049	-.0707	2040.		
.1920	1051.	217.	-984.	-2296.	-2619.	-1251.	-.0682	-.0220	.0363	.0615	-.1060	-.0462	1734.		
.1930	1658.	1122.	-948.	-919.	-2469.	-2193.	-.0549	-.0294	.0282	.0615	-.1017	-.0197	1606.		
.1940	1906.	1741.	-1318.	450.	-2225.	-2984.	-.0408	-.0373	.0196	.0625	-.0908	.0056	1757.		
.1950	1865.	2064.	-1974.	1659.	-1740.	-3608.	-.0269	-.0454	.0111	.0641	-.0743	.0267	2032.		
.1960	1904.	2524.	-1882.	2839.	-1132.	-3922.	-.0136	-.0535	.0034	.0649	-.0560	.0414	2330.		
.1970	1736.	2845.	-1325.	3907.	-559.	-3762.	-.0017	-.0611	-.0030	.0646	-.0379	.0482	2555.		
.1980	1162.	2665.	-1016.	4654.	82.	-3292.	.0087	-.0683	-.0084	.0639	-.0185	.0471	2672.		
.1990	643.	2397.	-502.	5153.	865.	-2823.	.0178	-.0746	-.0127	.0626	.0025	.0392	2783.		
.2000	232.	2340.	444.	5577.	1540.	-2351.	.0255	-.0799	-.0160	.0605	.0237	.0262	2927.		
.2010	-533.	2189.	1025.	5857.	1904.	-1772.	.0317	-.0837	-.0187	.0584	.0439	.0100	3003.		

ADLPIPE PAGE 999

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.57.

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

.1910	593.	-357.	-473.	-3307.	-2819.	-241.	-.0802	-.0155	.0441	.0616	-.1049	-.0707	2040.
.1920	1051.	217.	-984.	-2296.	-2619.	-1251.	-.0682	-.0220	.0363	.0615	-.1060	-.0462	1734.
.1930	1658.	1122.	-948.	-919.	-2469.	-2193.	-.0549	-.0294	.0282	.0615	-.1017	-.0197	1606.
.1940	1906.	1741.	-1318.	450.	-2225.	-2984.	-.0408	-.0373	.0196	.0625	-.0908	.0056	1757.
.1950	1865.	2064.	-1974.	1659.	-1740.	-3608.	-.0269	-.0454	.0111	.0641	-.0743	.0267	2032.
.1960	1904.	2524.	-1882.	2839.	-1132.	-3922.	-.0136	-.0535	.0034	.0649	-.0560	.0414	2330.
.1970	1736.	2845.	-1325.	3907.	-559.	-3762.	-.0017	-.0611	-.0030	.0646	-.0379	.0482	2555.
.1980	1162.	2665.	-1016.	4654.	82.	-3292.	.0087	-.0683	-.0084	.0639	-.0185	.0471	2672.
.1990	643.	2397.	-502.	5153.	865.	-2823.	.0178	-.0746	-.0127	.0626	.0025	.0392	2783.
.2000	232.	2340.	444.	5577.	1540.	-2351.	.0255	-.0799	-.0160	.0605	.0237	.0262	2927.
.2010	-533.	2189.	1025.	5857.	1904.	-1772.	.0317	-.0837	-.0187	.0584	.0439	.0100	3003.

ADLPIPE PAGE 999 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.57.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.2020	-1459.	1952.	1062.	5892.	2127.	-1309.	.0370	-.0859	-.0215	.0569	.0535	-.0068	2999.							
.2030	-1971.	2001.	1215.	5769.	2351.	-1181.	.0422	-.0865	-.0242	.0562	.0817	-.0220	2970.							
.2040	-2225.	2173.	1420.	5542.	2401.	-1105.	.0474	-.0855	-.0268	.0575	.0956	-.0346	2877.							
.2050	-2543.	2077.	1198.	5083.	2209.	-920.	.0527	-.0831	-.0297	.0619	.1037	-.0443	2633.							
.2060	-2557.	1887.	863.	4317.	2017.	-760.	.0585	-.0792	-.0329	.0691	.1068	-.0501	2261.							
.2070	-2039.	1837.	747.	3325.	1945.	-739.	.0648	-.0742	-.0363	.0783	.1062	-.0520	1838.							
.2080	-1455.	1690.	456.	2240.	1821.	-666.	.0709	-.0684	-.0398	.0887	.1015	-.0512	1388.							
.2090	-1019.	1348.	-104.	1192.	1582.	-473.	.0765	-.0622	-.0430	.0991	.0929	-.0490	954.							
.2100	-416.	1112.	-462.	276.	1412.	-365.	.0811	-.0559	-.0455	.1074	.0826	-.0462	696.							
.2110	275.	1034.	-651.	-500.	1369.	-390.	.0844	-.0498	-.0473	.1126	.0726	-.0441	707.							
.2120	625.	891.	-1043.	-1157.	1325.	-346.	.0855	-.0440	-.0481	.1141	.0529	-.0443	840.							
.2130	657.	734.	-1385.	-1659.	1247.	-162.	.0840	-.0385	-.0476	.1120	.0530	-.0479	976.							
.2140	648.	698.	-1290.	-1998.	1251.	51.	.0802	-.0339	-.0456	.1065	.0440	-.0549	1105.							
.2150	529.	621.	-1009.	-2231.	1376.	265.	.0743	-.0307	-.0422	.0986	.0366	-.0648	1235.							
.2160	148.	413.	-792.	-2340.	1514.	555.	.0663	-.0277	-.0376	.0893	.0301	-.0765	1332.							
.2170	-348.	299.	-440.	-2222.	1584.	891.	.0567	-.0261	-.0321	.0790	.0242	-.0880	1345.							
.2180	-835.	352.	-7.	-1883.	1610.	1141.	.0461	-.0256	-.0260	.0685	.0199	-.0969	1278.							
.2190	-1335.	390.	168.	-1435.	1608.	1228.	.0352	-.0259	-.0200	.0587	.0183	-.1013	1162.							
.2200	-1741.	392.	174.	-890.	1511.	1172.	.0246	-.0269	-.0140	.0504	.0187	-.0996	988.							
.2210	-1910.	454.	295.	-221.	1247.	1024.	.0148	-.0285	-.0083	.0437	.0198	-.0911	763.							
.2220	-1866.	478.	418.	437.	866.	804.	.0060	-.0301	-.0031	.0388	.0213	-.0762	591.							
.2230	-1624.	345.	403.	897.	492.	518.	-.0016	-.0314	.0013	.0360	.0228	-.0558	537.							
.2240	-1127.	166.	456.	1153.	155.	225.	-.0079	-.0319	.0051	.0345	.0227	-.0318	555.							
.2250	-472.	47.	658.	1317.	-187.	6.	-.0133	-.0317	.0084	.0338	.0192	-.0066	624.							
.2260	140.	-55.	756.	1437.	-496.	-153.	-.0182	-.0307	.0112	.0335	.0119	.0173	716.							
.2270	657.	-112.	642.	1521.	-688.	-355.	-.0227	-.0288	.0136	.0330	.0018	.0379	800.							
.2280	1074.	3.	432.	1629.	-784.	-638.	-.0273	-.0262	.0158	.0314	-.0102	.0537	898.							
.2290	1273.	287.	106.	1800.	-872.	-937.	-.0323	-.0229	.0179	.0280	-.0238	.0634	1035.							
.2300	1204.	617.	-405.	1978.	-966.	-1208.	-.0378	-.0189	.0200	.0226	-.0385	.0666	1177.							
.2310	1009.	923.	-920.	2077.	-1019.	-1453.	-.0436	-.0143	.0223	.0150	-.0532	.0635	1280.							
.2320	818.	1147.	-1193.	2029.	-1041.	-1625.	-.0497	-.0097	.0250	.0053	-.0672	.0550	1313.							
.2330	634.	1175.	-1192.	1760.	-1070.	-1631.	-.0556	-.0039	.0280	-.0059	-.0502	.0421	1234.							
.2340	464.	956.	-987.	1263.	-1111.	-1435.	-.0611	.0018	.0311	-.0175	-.0916	.0263	1036.							
.2350	364.	576.	-599.	569.	-1159.	-1094.	-.0658	.0076	.0340	-.0287	-.1004	.0092	793.							
.2360	338.	124.	-115.	-206.	-1217.	-688.	-.0692	.0133	.0365	-.0384	-.1054	-.0073	662.							
.2370	318.	-356.	290.	-937.	-1290.	-277.	-.0710	.0185	.0381	-.0462	-.1061	-.0218	758.							
.2380	248.	-788.	494.	-1499.	-1380.	96.	-.0710	.0233	.0387	-.0517	-.1025	-.0331	956.							
.2390	139.	-1071.	494.	-1822.	-1475.	396.	-.0690	.0275	.0381	-.0553	-.0948	-.0405	1114.							

ADLPIPE PAGE 1000 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.57.

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

.2290	1074.	287.	106.	1800.	-872.	-937.	-.0323	-.0229	.0179	.0280	-.0238	.0634	1035.
.2300	1204.	617.	-405.	1978.	-966.	-1208.	-.0378	-.0189	.0200	.0226	-.0385	.0666	1177.
.2310	1009.	923.	-920.	2077.	-1019.	-1453.	-.0436	-.0143	.0223	.0150	-.0532	.0635	1280.
.2320	818.	1147.	-1193.	2029.	-1041.	-1625.	-.0497	-.0093	.0250	.0053	-.0672	.0550	1313.
.2330	634.	1175.	-1192.	1768.	-1070.	-1631.	-.0556	-.0079	.0280	-.0059	-.0502	.0421	1234.
.2340	464.	956.	-987.	1263.	-1111.	-1435.	-.0611	.0018	.0311	-.0175	-.0916	.0263	1036.
.2350	364.	576.	-599.	569.	-1159.	-1094.	-.0658	.0076	.0340	-.0287	-.1004	.0092	793.
.2360	338.	124.	-115.	-206.	-1217.	-688.	-.0692	.0133	.0365	-.0384	-.1054	-.0073	662.
.2370	318.	-356.	290.	-937.	-1290.	-277.	-.0710	.0185	.0381	-.0462	-.1061	-.0218	758.
.2380	248.	-788.	494.	-1499.	-1780.	96.	-.0710	.0233	.0387	-.0517	-.1025	-.0331	956.
.2390	139.	-1071.	494.	-1822.	-1475.	396.	-.0690	.0275	.0381	-.0553	-.0948	-.0405	1114.

ADLPIPE PAGE 1000 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.57.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	END	TYPE	RU	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.2400	75.	-1205.	319.	-1952.	-1528.	627.	-.0650	.0315	.0362	-.0573	-.0333	-.0434	1198.							
.2410	-67.	-1280.	46.	-1994.	-1505.	849.	-.0590	.0353	.0331	-.0583	-.0589	-.0423	1236.							
.2420	-111.	-1364.	-159.	-2019.	-1413.	1132.	-.0513	.0391	.0290	-.0588	-.0530	-.0378	1271.							
.2430	-72.	-1477.	-167.	-2069.	-1247.	1490.	-.0421	.0429	.0242	-.0592	-.0365	-.0308	1330.							
.2440	58.	-1637.	1.	-2186.	-977.	1885.	-.0318	.0467	.0189	-.0599	-.0201	-.0221	1428.							
.2450	223.	-1832.	254.	-2357.	-627.	2287.	-.0209	.0504	.0132	-.0611	-.0045	-.0128	1567.							
.2460	347.	-1976.	536.	-2486.	-267.	2653.	-.0098	.0538	.0073	-.0630	.0096	-.0038	1708.							
.2470	392.	-1982.	771.	-2486.	79.	2889.	.0011	.0567	.0014	-.0657	.0221	.0043	1786.							
.2480	330.	-1849.	811.	-2323.	438.	2908.	.0113	.0587	-.0044	-.0690	.0328	.0110	1757.							
.2490	134.	-1602.	604.	-1978.	784.	2721.	.0208	.0599	-.0100	-.0731	.0412	.0159	1619.							
.2500	-153.	-1257.	306.	-1459.	1060.	2396.	.0292	.0602	-.0152	-.0784	.0466	.0190	1405.							
.2510	-425.	-891.	60.	-875.	1297.	1976.	.0366	.0598	-.0197	-.0849	.0490	.0206	1181.							
.2520	-613.	-635.	-114.	-375.	1561.	1506.	.0431	.0589	-.0236	-.0925	.0486	.0208	1032.							
.2530	-694.	-538.	-145.	-13.	1829.	1074.	.0485	.0576	-.0267	-.1013	.0454	.0204	994.							
.2540	-640.	-555.	89.	240.	2044.	744.	.0528	.0562	-.0289	-.1111	.0394	.0197	1025.							
.2550	-460.	-669.	511.	400.	2215.	479.	.0561	.0548	-.0304	-.1213	.0318	.0196	1078.							
.2560	-208.	-847.	919.	504.	2365.	198.	.0584	.0533	-.0313	-.1310	.0240	.0207	1137.							
.2570	67.	-958.	1235.	658.	2444.	-129.	.0596	.0519	-.0317	-.1397	.0171	.0234	1187.							
.2580	300.	-907.	1388.	945.	2388.	-489.	.0595	.0507	-.0316	-.1469	.0114	.0282	1225.							
.2590	427.	-724.	1240.	1356.	2207.	-890.	.0582	.0497	-.0311	-.1521	.0077	.0349	1284.							
.2600	481.	-452.	832.	1840.	1941.	-1338.	.0555	.0490	-.0301	-.1554	.0066	.0434	1402.							
.2610	544.	-127.	388.	2337.	1604.	-1771.	.0516	.0488	-.0284	-.1571	.0079	.0533	1566.							
.2620	632.	145.	38.	2752.	1191.	-2069.	.0463	.0493	-.0259	-.1578	.0105	.0637	1707.							
.2630	721.	265.	-196.	2984.	733.	-2157.	.0397	.0507	-.0225	-.1582	.0139	.0738	1759.							
.2640	847.	240.	-232.	2991.	286.	-2047.	.0319	.0529	-.0183	-.1587	.0179	.0827	1704.							
.2650	1013.	105.	-31.	2799.	-119.	-1773.	.0229	.0560	-.0133	-.1599	.0220	.0897	1554.							
.2660	1125.	-135.	284.	2481.	-496.	-1358.	.0129	.0597	-.0076	-.1618	.0255	.0939	1346.							
.2670	1110.	-418.	575.	2134.	-854.	-860.	.0020	.0637	-.0015	-.1642	.0280	.0948	1150.							
.2680	986.	-631.	799.	1828.	-1166.	-369.	-.0092	.0679	.0049	-.1668	.0292	.0924	1031.							
.2690	756.	-747.	894.	1568.	-1412.	64.	-.0206	.0721	.0112	-.1693	.0288	.0867	989.							
.2700	392.	-830.	799.	1321.	-1603.	458.	-.0316	.0763	.0172	-.1712	.0263	.0781	997.							
.2710	-26.	-908.	617.	1048.	-1738.	829.	-.0418	.0803	.0227	-.1721	.0210	.0673	1028.							
.2720	-353.	-996.	507.	692.	-1794.	1177.	-.0508	.0842	.0278	-.1722	.0127	.0555	1057.							
.2730	-541.	-1161.	483.	190.	-1775.	1516.	-.0582	.0880	.0321	-.1711	.0014	.0437	1098.							
.2740	-608.	-1440.	499.	-470.	-1725.	1853.	-.0637	.0915	.0355	-.1689	-.0121	.0333	1207.							
.2750	-518.	-1768.	576.	-1234.	-1663.	2136.	-.0672	.0948	.0379	-.1656	-.0269	.0252	1394.							
.2760	-256.	-2084.	690.	-2028.	-1590.	2300.	-.0688	.0977	.0393	-.1611	-.0419	.0202	1619.							
.2770	88.	-2376.	726.	-2772.	-1531.	2335.	-.0684	.0998	.0396	-.1555	-.0563	.0185	1844.							

ADLPIPE PAGE 1001 DIS/ADLPIPE ADLPIPE STRESS ANALYSIS 83/12/02. 18.26.57.

S/RV PIPING KEWAUNEE GKWOEF 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

.2660	1125.	-175.	114.	2481.	-496.	-1358.	.0129	.0597	-.0076	-.1618	.0255	.0939	1346.
.2670	1110.	-418.	575.	2134.	-854.	-860.	.0020	.0637	-.0015	-.1642	.0280	.0948	1150.
.2680	986.	-631.	799.	1828.	-1166.	-369.	-.0092	.0679	.0049	-.1668	.0292	.0924	1031.
.2690	756.	-747.	894.	1568.	-1412.	64.	-.0206	.0721	.0112	-.1693	.0288	.0867	989.
.2700	392.	-870.	799.	1321.	-1603.	458.	-.0316	.0763	.0172	-.1712	.0263	.0781	997.
.2710	-26.	-908.	617.	1048.	-1738.	829.	-.0418	.0803	.0227	-.1721	.0210	.0673	1028.
.2720	-353.	-996.	507.	692.	-1794.	1177.	-.0508	.0842	.0278	-.1722	.0127	.0555	1057.
.2730	-541.	-1161.	483.	190.	-1775.	1516.	-.0582	.0880	.0321	-.1711	.0014	.0437	1098.
.2740	-608.	-1440.	499.	-470.	-1725.	1853.	-.0637	.0915	.0355	-.1689	-.0121	.0333	1207.
.2750	-518.	-1768.	576.	-1234.	-1663.	2136.	-.0672	.0948	.0379	-.1656	-.0269	.0252	1394.
.2760	-256.	-2084.	690.	-2022.	-1590.	2300.	-.0688	.0977	.0393	-.1611	-.0419	.0202	1619.
.2770	88.	-2376.	726.	-2772.	-1531.	2335.	-.0684	.0998	.0396	-.1555	-.0563	.0185	1844.

ADLPIPE PAGE 1001

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.57.

S/RV PIPING KEWAUNEE GKW02F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSVCONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITSINTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	21	MEMBER	2	SEQUENCE	138	LOCATION	END	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.2780	446.	-2594.	642.	-3390.	-1501.	2248.	-.0663	.1012	.0389	-.1488	-.0894	.0198	2032.	
.2790	802.	-2677.	474.	-3834.	-1469.	2039.	-.0629	.1017	.0372	-.1412	-.0907	.0234	2148.	
.2800	1102.	-2655.	202.	-4109.	-1393.	1746.	-.0584	.1012	.0348	-.1329	-.0899	.0285	2192.	
.2810	1298.	-2583.	-138.	-4238.	-1264.	1446.	-.0532	.0999	.0319	-.1244	-.0970	.0339	2180.	
.2820	1427.	-2454.	-389.	-4238.	-1079.	1203.	-.0477	.0976	.0287	-.1161	-.1018	.0389	2126.	
.2830	1505.	-2319.	-487.	-4134.	-831.	1044.	-.0420	.0945	.0256	-.1085	-.1042	.0428	2035.	
.2840	1478.	-2210.	-513.	-3949.	-530.	969.	-.0366	.0905	.0225	-.1017	-.1036	.0452	1922.	
.2850	1348.	-2136.	-461.	-3688.	-201.	966.	-.0315	.0858	.0196	-.0961	-.0997	.0460	1789.	
.2860	1182.	-2032.	-250.	-3344.	130.	1011.	-.0268	.0804	.0170	-.0917	-.0928	.0454	1638.	
.2870	974.	-1898.	39.	-2922.	436.	1086.	-.0226	.0743	.0146	-.0882	-.0831	.0437	1475.	
.2880	677.	-1757.	257.	-2428.	694.	1161.	-.0189	.0676	.0124	-.0848	-.0713	.0412	1302.	
.2890	345.	-1577.	410.	-1864.	897.	1194.	-.0156	.0604	.0104	-.0810	-.0581	.0382	1120.	
.2900	58.	-1338.	557.	-1267.	1041.	1169.	-.0126	.0528	.0086	-.0762	-.0443	.0354	944.	
.2910	-185.	-1087.	639.	-692.	1102.	1099.	-.0098	.0448	.0068	-.0701	-.0307	.0330	798.	
.2920	-386.	-848.	610.	-168.	1060.	980.	-.0071	.0368	.0050	-.0623	-.0178	.0315	681.	
.2930	-491.	-598.	532.	290.	923.	779.	-.0044	.0287	.0032	-.0530	-.0056	.0311	582.	
.2940	-477.	-356.	440.	650.	701.	494.	-.0016	.0207	.0015	-.0424	.0058	.0318	504.	
.2950	-380.	-167.	324.	889.	396.	159.	.0012	.0131	-.0003	-.0310	.0162	.0335	462.	
.2960	-219.	-15.	219.	1022.	30.	-204.	.0039	.0057	-.0020	-.0193	.0255	.0356	488.	
.2970	-7.	141.	155.	1075.	-746.	-589.	.0067	-.0011	-.0036	-.0075	.0334	.0376	597.	
.2980	199.	285.	86.	1059.	-686.	-965.	.0095	-.0076	-.0053	.0043	.0400	.0389	744.	
.2990	352.	404.	-1.	990.	-956.	-1287.	.0121	-.0135	-.0069	.0157	.0449	.0388	883.	
.3000	449.	539.	-56.	922.	-1135.	-1537.	.0146	-.0192	-.0085	.0269	.0480	.0371	994.	
.3010	474.	710.	-103.	896.	-1204.	-1725.	.0170	-.0245	-.0100	.0377	.0496	.0338	1072.	
.3020	396.	897.	-212.	920.	-1167.	-1856.	.0192	-.0295	-.0115	.0481	.0503	.0294	1114.	
.3030	241.	1098.	-357.	986.	-1050.	-1933.	.0213	-.0342	-.0130	.0582	.0506	.0246	1129.	
.3040	65.	1322.	-471.	1093.	-889.	-1969.	.0233	-.0388	-.0144	.0677	.0510	.0201	1135.	
.3050	-111.	1538.	-559.	1228.	-715.	-1983.	.0252	-.0431	-.0157	.0767	.0520	.0169	1143.	
.3060	-267.	1705.	-641.	1360.	-550.	-1987.	.0270	-.0473	-.0169	.0855	.0539	.0153	1157.	
.3070	-354.	1817.	-659.	1461.	-414.	-1980.	.0287	-.0513	-.0179	.0940	.0565	.0158	1169.	
.3080	-354.	1877.	-593.	1517.	-323.	-1957.	.0302	-.0552	-.0187	.1025	.0595	.0181	1170.	
.3090	-295.	1871.	-504.	1526.	-273.	-1920.	.0314	-.0589	-.0192	.1111	.0625	.0219	1156.	
.3100	-202.	1818.	-430.	1507.	-247.	-1883.	.0322	-.0625	-.0195	.1200	.0650	.0264	1136.	
.3110	-85.	1758.	-359.	1486.	-236.	-1851.	.0326	-.0661	-.0194	.1288	.0664	.0307	1118.	
.3120	13.	1705.	-314.	1481.	-228.	-1822.	.0324	-.0694	-.0190	.1371	.0664	.0340	1106.	
.3130	54.	1670.	-337.	1503.	-205.	-1799.	.0315	-.0726	-.0183	.1446	.0648	.0355	1103.	
.3140	36.	1670.	-409.	1555.	-145.	-1783.	.0299	-.0754	-.0173	.1505	.0611	.0345	1111.	
.3150	-34.	1703.	-486.	1626.	-46.	-1754.	.0276	-.0778	-.0159	.1545	.0553	.0307	1121.	

ADLPIPE PAGE 1002

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.58.

S/RV PIPING KEWAUNEE GKW02F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSVCONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITSINTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

.3040	65.	1322.	-471.	1003.	-729.	-1969.	.0233	-.0318	-.0144	.0677	.0510	.0201	1135.
.3050	-111.	1538.	-559.	1228.	-715.	-1983.	.0252	-.0431	-.0157	.0767	.0520	.0169	1143.
.3060	-267.	1705.	-641.	1360.	-550.	-1987.	.0270	-.0473	-.0169	.0855	.0539	.0153	1157.
.3070	-754.	1817.	-659.	1461.	-414.	-1980.	.0287	-.0513	-.0179	.0940	.0565	.0158	1169.
.3080	-354.	1877.	-593.	1517.	-323.	-1957.	.0302	-.0552	-.0187	.1025	.0595	.0181	1170.
.3090	-295.	1871.	-504.	1526.	-273.	-1920.	.0314	-.0589	-.0192	.1111	.0625	.0219	1156.
.3100	-202.	1818.	-430.	1507.	-247.	-1883.	.0322	-.0625	-.0195	.1200	.0650	.0264	1136.
.3110	-85.	1758.	-359.	1486.	-236.	-1851.	.0326	-.0661	-.0194	.1288	.0664	.0307	1118.
.3120	17.	1705.	-314.	1481.	-228.	-1822.	.0324	-.0694	-.0190	.1371	.0664	.0340	1106.
.3130	54.	1670.	-337.	1503.	-205.	-1799.	.0315	-.0726	-.0183	.1446	.0648	.0355	1103.
.3140	36.	1670.	-409.	1555.	-145.	-1733.	.0299	-.0754	-.0173	.1505	.0511	.0345	1111.
.3150	-34.	1703.	-486.	1626.	-46.	-1754.	.0276	-.0770	-.0159	.1545	.0553	.0307	1121.

ADLPIPE PAGE 1002

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.58.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	21	MEMBER	2	SEQUENCE	138	LOCATION	END	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3160	-147.	1735.	-537.	1686.	93.	-1689.	.0246	-.0796	-.0142	.1562	.0471	.0240	1119.	
.3170	-276.	1740.	-539.	1702.	275.	-1580.	.0209	-.0809	-.0122	.1557	.0368	.0146	1096.	
.3180	-390.	1716.	-476.	1660.	489.	-1432.	.0167	-.0816	-.0099	.1533	.0246	.0029	1053.	
.3190	-478.	1659.	-364.	1555.	705.	-1246.	.0121	-.0816	-.0074	.1495	.0108	-.0103	990.	
.3200	-543.	1566.	-244.	1386.	891.	-1039.	.0073	-.0812	-.0048	.1448	-.0037	-.0243	913.	
.3210	-568.	1462.	-135.	1172.	1023.	-847.	.0023	-.0803	-.0021	.1400	-.0181	-.0382	830.	
.3220	-553.	1379.	-71.	939.	1080.	-706.	-.0026	-.0791	.0006	.1356	-.0316	-.0512	748.	
.3230	-526.	1327.	-104.	710.	1038.	-628.	-.0074	-.0776	.0031	.1319	-.0433	-.0624	659.	
.3240	-496.	1304.	-234.	495.	890.	-611.	-.0120	-.0760	.0054	.1292	-.0526	-.0716	557.	
.3250	-441.	1311.	-397.	288.	659.	-642.	-.0162	-.0743	.0074	.1276	-.0591	-.0784	452.	
.3260	-366.	1323.	-558.	76.	373.	-690.	-.0200	-.0725	.0093	.1268	-.0526	-.0830	369.	
.3270	-290.	1311.	-698.	-154.	67.	-713.	-.0231	-.0706	.0109	.1268	-.0633	-.0858	343.	
.3280	-217.	1264.	-774.	-397.	-218.	-676.	-.0255	-.0689	.0123	.1276	-.0615	-.0871	381.	
.3290	-155.	1178.	-762.	-641.	-443.	-557.	-.0272	-.0672	.0133	.1288	-.0577	-.0875	449.	
.3300	-124.	1055.	-672.	-865.	-581.	-353.	-.0280	-.0658	.0141	.1304	-.0524	-.0875	515.	
.3310	-140.	923.	-536.	-1039.	-616.	-81.	-.0280	-.0647	.0144	.1322	-.0458	-.0873	567.	
.3320	-220.	812.	-403.	-1130.	-551.	227.	-.0271	-.0640	.0143	.1341	-.0385	-.0871	599.	
.3330	-373.	741.	-314.	-1113.	-409.	536.	-.0255	-.0637	.0137	.1359	-.0306	-.0869	610.	
.3340	-576.	719.	-270.	-991.	-213.	809.	-.0230	-.0637	.0126	.1374	-.0223	-.0864	608.	
.3350	-781.	743.	-244.	-787.	13.	1015.	-.0197	-.0641	.0110	.1382	-.0138	-.0855	602.	
.3360	-965.	797.	-231.	-531.	241.	1142.	-.0156	-.0646	.0089	.1382	-.0055	-.0839	601.	
.3370	-1109.	865.	-229.	-257.	444.	1184.	-.0110	-.0653	.0064	.1373	.0023	-.0814	605.	
.3380	-1180.	941.	-206.	10.	610.	1137.	-.0057	-.0660	.0035	.1352	.0093	-.0781	605.	
.3390	-1157.	1025.	-142.	257.	737.	997.	-.0000	-.0667	.0003	.1318	.0153	-.0739	593.	
.3400	-1059.	1117.	-63.	497.	818.	765.	.0060	-.0673	-.0032	.1272	.0202	-.0690	574.	
.3410	-921.	1235.	-10.	756.	855.	444.	.0122	-.0679	-.0068	.1215	.0240	-.0638	574.	
.3420	-765.	1405.	-6.	1061.	857.	35.	.0184	-.0685	-.0106	.1148	.0269	-.0585	639.	
.3430	-617.	1632.	-67.	1420.	839.	-443.	.0245	-.0691	-.0144	.1072	.0293	-.0535	800.	
.3440	-500.	1896.	-192.	1835.	809.	-957.	.0303	-.0697	-.0181	.0990	.0312	-.0491	1041.	
.3450	-421.	2173.	-347.	2290.	785.	-1465.	.0358	-.0702	-.0216	.0902	.0330	-.0455	1326.	
.3460	-368.	2428.	-490.	2755.	784.	-1923.	.0408	-.0706	-.0249	.0811	.0348	-.0430	1617.	
.3470	-336.	2618.	-585.	3186.	820.	-2280.	.0453	-.0709	-.0276	.0719	.0367	-.0416	1876.	
.3480	-318.	2713.	-594.	3546.	896.	-2498.	.0491	-.0709	-.0299	.0627	.0388	-.0413	2076.	
.3490	-304.	2703.	-500.	3817.	1011.	-2561.	.0522	-.0705	-.0316	.0536	.0410	-.0421	2206.	
.3500	-298.	2594.	-322.	3997.	1160.	-2481.	.0546	-.0696	-.0327	.0449	.0434	-.0437	2270.	
.3510	-313.	2405.	-101.	4092.	1326.	-2278.	.0561	-.0681	-.0332	.0367	.0461	-.0460	2281.	
.3520	-353.	2175.	131.	4118.	1485.	-1984.	.0567	-.0659	-.0331	.0291	.0491	-.0486	2252.	
.3530	-426.	1940.	337.	4085.	1616.	-1637.	.0565	-.0631	-.0326	.0221	.0521	-.0513	2197.	

ADLPIPE PAGE 1003

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.58.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

.3430	-617.	1632.	-67.	1420.	839.	-443.	.0245	-.0691	-.0144	.1072	.0289	-.0535	800.
.3440	-500.	1896.	-192.	1835.	809.	-957.	.0303	-.0697	-.0181	.0990	.0312	-.0491	1041.
.3450	-421.	2173.	-347.	2290.	785.	-1465.	.0350	-.0702	-.0216	.0902	.0330	-.0455	1326.
.3460	-368.	2428.	-490.	2755.	704.	-1923.	.0408	-.0706	-.0249	.0811	.0348	-.0430	1617.
.3470	-336.	2618.	-585.	3186.	620.	-2280.	.0453	-.0709	-.0276	.0719	.0367	-.0416	1876.
.3480	-318.	2713.	-574.	3546.	596.	-2498.	.0491	-.0709	-.0299	.0627	.0388	-.0413	2076.
.3490	-304.	2703.	-500.	3817.	1011.	-2561.	.0522	-.0705	-.0316	.0536	.0410	-.0421	2206.
.3500	-298.	2594.	-322.	3997.	1160.	-2431.	.0546	-.0696	-.0327	.0449	.0434	-.0437	2270.
.3510	-313.	2405.	-101.	4092.	1326.	-2278.	.0561	-.0681	-.0332	.0367	.0461	-.0460	2281.
.3520	-353.	2175.	131.	4118.	1485.	-1984.	.0567	-.0659	-.0331	.0291	.0491	-.0486	2252.
.3530	-426.	1940.	327.	4085.	1616.	-1637.	.0565	-.0631	-.0326	.0221	.0521	-.0513	2197.

ADLPIPE PAGE 1003

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.58.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	21	MEMBER	2	SEQUENCE	138	LOCATION	END	TYPE	RU							
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)				DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.3540	-538.	1719.	475.	3996.	1706.	-1272.	.0553	-.0593	-.0317	.0159	.0552	-.0538	2121.			
.3550	-673.	1522.	541.	3840.	1747.	-912.	.0534	-.0548	-.0304	.0104	.0581	-.0561	2023.			
.3560	-809.	1352.	562.	3604.	1735.	-563.	.0507	-.0493	-.0287	.0056	.0603	-.0579	1893.			
.3570	-923.	1199.	558.	3274.	1670.	-226.	.0475	-.0430	-.0268	.0014	.0613	-.0591	1726.			
.3580	-1020.	1048.	530.	2844.	1566.	94.	.0437	-.0360	-.0247	-.0022	.0608	-.0599	1522.			
.3590	-1068.	891.	490.	2322.	1440.	388.	.0397	-.0285	-.0224	-.0053	.0587	-.0600	1293.			
.3600	-1064.	727.	453.	1728.	1300.	657.	.0355	-.0206	-.0200	-.0080	.0548	-.0595	1059.			
.3610	-1017.	554.	411.	1096.	1155.	897.	.0312	-.0126	-.0176	-.0103	.0489	-.0584	856.			
.3620	-934.	374.	344.	462.	1017.	1098.	.0269	-.0047	-.0151	-.0124	.0412	-.0566	734.			
.3630	-822.	191.	247.	-142.	900.	1251.	.0227	.0027	-.0126	-.0141	.0320	-.0543	725.			
.3640	-689.	1.	131.	-694.	805.	1361.	.0186	.0096	-.0102	-.0157	.0215	-.0514	809.			
.3650	-538.	-202.	18.	-1185.	732.	1443.	.0145	.0158	-.0076	-.0173	.0100	-.0480	940.			
.3660	-368.	-418.	-70.	-1610.	680.	1502.	.0104	.0212	-.0051	-.0191	-.0021	-.0441	1080.			
.3670	-185.	-644.	-120.	-1970.	646.	1542.	.0062	.0258	-.0024	-.0211	-.0142	-.0398	1211.			
.3680	-2.	-878.	-130.	-2261.	616.	1567.	.0020	.0298	.0003	-.0236	-.0259	-.0351	1321.			
.3690	174.	-1107.	-97.	-2478.	575.	1574.	-.0025	.0330	.0031	-.0267	-.0367	-.0300	1402.			
.3700	338.	-1310.	-27.	-2612.	514.	1553.	-.0072	.0356	.0060	-.0304	-.0460	-.0246	1444.			
.3710	473.	-1468.	53.	-2653.	421.	1499.	-.0122	.0377	.0090	-.0346	-.0534	-.0187	1441.			
.3720	564.	-1567.	114.	-2596.	288.	1410.	-.0174	.0393	.0120	-.0394	-.0588	-.0126	1391.			
.3730	611.	-1601.	149.	-2451.	119.	1287.	-.0227	.0405	.0148	-.0445	-.0622	-.0063	1298.			
.3740	623.	-1572.	159.	-2231.	-80.	1140.	-.0280	.0415	.0176	-.0497	-.0635	.0002	1175.			
.3750	605.	-1494.	149.	-1958.	-299.	982.	-.0332	.0422	.0202	-.0548	-.0631	.0068	1036.			
.3760	568.	-1382.	130.	-1656.	-532.	829.	-.0381	.0428	.0226	-.0597	-.0613	.0133	903.			
.3770	527.	-1250.	115.	-1351.	-767.	689.	-.0426	.0434	.0247	-.0642	-.0582	.0197	797.			
.3780	491.	-1117.	102.	-1068.	-994.	568.	-.0465	.0438	.0265	-.0681	-.0542	.0260	734.			
.3790	462.	-997.	89.	-817.	-1208.	465.	-.0497	.0441	.0279	-.0713	-.0495	.0320	717.			
.3800	448.	-895.	81.	-601.	-1405.	376.	-.0520	.0444	.0289	-.0737	-.0443	.0377	737.			
.3810	453.	-812.	82.	-424.	-1578.	298.	-.0534	.0445	.0294	-.0753	-.0390	.0430	778.			
.3820	467.	-755.	80.	-293.	-1722.	229.	-.0538	.0445	.0296	-.0760	-.0337	.0477	825.			
.3830	484.	-723.	70.	-214.	-1831.	165.	-.0533	.0444	.0292	-.0759	-.0286	.0518	867.			
.3840	505.	-707.	62.	-183.	-1901.	105.	-.0517	.0442	.0284	-.0750	-.0239	.0550	896.			
.3850	527.	-707.	60.	-195.	-1930.	47.	-.0492	.0440	.0271	-.0735	-.0197	.0576	909.			
.3860	543.	-721.	61.	-242.	-1918.	-10.	-.0458	.0436	.0254	-.0714	-.0159	.0594	906.			
.3870	552.	-733.	66.	-311.	-1867.	-73.	-.0416	.0433	.0232	-.0690	-.0125	.0607	888.			
.3880	553.	-728.	67.	-383.	-1779.	-151.	-.0367	.0429	.0207	-.0665	-.0093	.0618	856.			
.3890	537.	-705.	45.	-442.	-1659.	-247.	-.0310	.0424	.0177	-.0640	-.0062	.0628	813.			
.3900	510.	-660.	12.	-473.	-1510.	-359.	-.0249	.0419	.0144	-.0618	-.0030	.0641	760.			
.3910	486.	-592.	-13.	-468.	-1334.	-484.	-.0183	.0414	.0107	-.0599	.0002	.0658	700.			

ADLPIPE PAGE 1004

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.58.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

.3810	453.	-812.	82.	-424.	-1578.	298.	-.0534	.0445	.0294	-.0753	-.0390	.0430	778.
.3820	467.	-755.	80.	-297.	-1722.	229.	-.0538	.0445	.0296	-.0760	-.0337	.0477	825.
.3830	484.	-722.	70.	-214.	-1831.	165.	-.0523	.0444	.0292	-.0759	-.0286	.0518	867.
.3840	505.	-707.	62.	-183.	-1901.	105.	-.0517	.0442	.0284	-.0750	-.0239	.0550	896.
.3850	527.	-707.	60.	-195.	-1930.	47.	-.0492	.0440	.0271	-.0735	-.0197	.0576	909.
.3860	543.	-721.	61.	-242.	-1918.	-10.	-.0458	.0436	.0254	-.0714	-.0159	.0594	906.
.3870	552.	-733.	66.	-311.	-1867.	-73.	-.0416	.0433	.0232	-.0690	-.0125	.0607	888.
.3880	553.	-728.	67.	-383.	-1779.	-151.	-.0367	.0429	.0207	-.0665	-.0093	.0618	856.
.3890	537.	-705.	45.	-442.	-1659.	-247.	-.0310	.0424	.0177	-.0640	-.0062	.0628	813.
.3900	510.	-660.	12.	-473.	-1510.	-359.	-.0249	.0419	.0144	-.0618	-.0030	.0641	760.
.3910	486.	-592.	-17.	-468.	-1334.	-484.	-.0183	.0414	.0107	-.0599	.0002	.0658	700.

ADLPIPE PAGE 1004

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.58.

S/RV PIPING KEMAUNEE GKW08F 2 RUP DISK
2 SAFETY COLL FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	21	MEMBER	2	SEQUENCE	138	LOCATION	END	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.3920	468.	-508.	-30.	-430.	-1131.	-615.		-.0114	.0407	.0069	-.0582	.0036	.0682	636.
.3930	452.	-424.	-57.	-362.	-906.	-739.		-.0043	.0400	.0030	-.0568	.0070	.0713	574.
.3940	446.	-349.	-85.	-267.	-666.	-848.		.0027	.0392	-.0010	-.0555	.0105	.0750	521.
.3950	461.	-289.	-92.	-149.	-417.	-937.		.0095	.0383	-.0048	-.0541	.0137	.0791	486.
.3960	498.	-249.	-74.	-19.	-171.	-1002.		.0158	.0372	-.0084	-.0528	.0169	.0837	476.
.3970	544.	-231.	-49.	115.	58.	-1046.		.0216	.0361	-.0115	-.0515	.0198	.0883	494.
.3980	587.	-226.	-30.	249.	256.	-1075.		.0264	.0349	-.0142	-.0502	.0227	.0927	531.
.3990	621.	-228.	-14.	377.	410.	-1096.		.0301	.0338	-.0163	-.0490	.0254	.0965	576.
.4000	646.	-240.	8.	489.	516.	-1109.		.0327	.0327	-.0178	-.0481	.0278	.0995	617.

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)
.1110	1280.	3716.	-746.	11979.	-707.	-8622.		.0660	-.0391	-.0404	-.1572	.0872	.1297	6925.

SECTION	22	MEMBER	1	SEQUENCE	138	LOCATION	BEG	TYPE	RU					
TIME	FX	FY	FZ	MX	MY	MZ		DX	DY	DZ	RX	RY	RZ	STRESS
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)		(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
0.0000	0.	0.	0.	0.	0.	0.		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.
.0010	3.	3.	5.	-2.	1.	1.		-.0000	.0000	-.0000	-.0000	.0000	.0000	2.
.0020	14.	7.	29.	-18.	7.	13.		-.0000	.0000	-.0001	-.0003	.0002	.0002	16.
.0030	30.	-15.	61.	-68.	18.	47.		-.0001	.0000	-.0002	-.0009	.0005	.0006	57.
.0040	47.	-77.	95.	-160.	34.	119.		-.0001	-.0000	-.0003	-.0020	.0011	.0013	132.
.0050	72.	-157.	143.	-292.	54.	194.		-.0001	-.0001	-.0005	-.0038	.0019	.0023	239.
.0060	105.	-246.	206.	-468.	73.	299.		-.0001	-.0002	-.0008	-.0062	.0027	.0037	378.
.0070	145.	-352.	287.	-707.	105.	436.		-.0001	-.0003	-.0013	-.0097	.0040	.0056	564.
.0080	196.	-497.	395.	-1042.	172.	637.		-.0001	-.0005	-.0019	-.0147	.0064	.0084	831.
.0090	239.	-744.	483.	-1491.	282.	933.		.0002	-.0008	-.0028	-.0216	.0108	.0123	1201.
.0100	277.	-1078.	542.	-2038.	424.	1310.		.0007	-.0013	-.0038	-.0303	.0173	.0170	1658.
.0110	327.	-1398.	597.	-2636.	581.	1706.		.0018	-.0019	-.0050	-.0402	.0255	.0218	2152.
.0120	381.	-1658.	598.	-3229.	704.	2060.		.0035	-.0027	-.0065	-.0509	.0347	.0262	2625.
.0130	412.	-1862.	448.	-3758.	720.	2312.		.0061	-.0034	-.0081	-.0619	.0437	.0295	3014.
.0140	403.	-1964.	106.	-4140.	583.	2378.		.0095	-.0040	-.0098	-.0723	.0510	.0306	3242.
.0150	354.	-1892.	-374.	-4302.	294.	2168.		.0139	-.0044	-.0115	-.0803	.0553	.0285	3253.

ADLPIPE PAGE 1005

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.58.

S/RV PIPING KEMAUNEE GKW08F 2 RUP DISK
2 SAFETY COLL FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

.0040	47.	-77.	95.	-110.	74.	109.	-.0001	-.0000	-.0003	-.0020	.0011	.0013	132.
.0050	72.	-157.	143.	-292.	54.	194.	-.0001	-.0001	-.0005	-.0038	.0019	.0023	239.
.0060	105.	-246.	206.	-468.	73.	299.	-.0001	-.0002	-.0008	-.0062	.0027	.0037	378.
.0070	145.	-352.	287.	-707.	105.	436.	-.0001	-.0003	-.0013	-.0097	.0040	.0056	564.
.0080	196.	-497.	395.	-1042.	172.	637.	-.0001	-.0005	-.0019	-.0147	.0064	.0084	831.
.0090	239.	-744.	487.	-1491.	252.	973.	.0002	-.0008	-.0028	-.0216	.0108	.0123	1201.
.0100	277.	-1078.	542.	-2030.	424.	1310.	.0007	-.0017	-.0038	-.0303	.0173	.0170	1658.
.0110	327.	-1398.	597.	-2636.	581.	1708.	.0018	-.0019	-.0050	-.0402	.0255	.0218	2152.
.0120	381.	-1658.	598.	-3229.	704.	2060.	.0035	-.0027	-.0065	-.0509	.0347	.0262	2625.
.0130	412.	-1862.	448.	-3758.	720.	2312.	.0061	-.0034	-.0081	-.0619	.0437	.0295	3014.
.0140	403.	-1964.	100.	-4140.	583.	2378.	.0095	-.0040	-.0098	-.0723	.0510	.0306	3242.
.0150	354.	-1892.	-374.	-4302.	254.	2168.	.0139	-.0044	-.0115	-.0803	.0553	.0285	3253.

ADLPIPE PAGE 1005

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.58.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	RU	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.0160	242.	-1648.	-946.	-4202.	-103.	1648.	.0192	-.0045	-.0130	-.0845	.0560	.0226	3043.							
.0170	123.	-1213.	-1529.	-3785.	-565.	887.	.0252	-.0041	-.0145	-.0840	.0544	.0131	2648.							
.0180	136.	-528.	-1968.	-3014.	-1068.	42.	.0317	-.0026	-.0161	-.0787	.0530	.0011	2155.							
.0190	355.	349.	-2102.	-1985.	-1516.	-716.	.0384	.0001	-.0183	-.0699	.0545	-.0119	1752.							
.0200	837.	1250.	-1695.	-998.	-1688.	-1164.	.0451	.0042	-.0215	-.0610	.0529	-.0230	1537.							
.0210	1296.	1541.	-1134.	-320.	-1470.	-1160.	.0522	.0096	-.0253	-.0552	.0801	-.0301	1280.							
.0220	1538.	1130.	-962.	261.	-1355.	-898.	.0598	.0159	-.0288	-.0513	.0973	-.0349	1110.							
.0230	1826.	1249.	-655.	1135.	-1511.	-969.	.0675	.0230	-.0322	-.0459	.1061	-.0407	1432.							
.0240	1712.	1812.	-517.	2233.	-1673.	-1853.	.0742	.0311	-.0353	-.0380	.1007	-.0487	2258.							
.0250	1323.	2404.	-869.	3508.	-1989.	-3132.	.0802	.0396	-.0381	-.0277	.0865	-.0571	3442.							
.0260	1594.	3437.	-1102.	5111.	-3034.	-3990.	.0856	.0479	-.0414	-.0146	.0718	-.0635	4826.							
.0270	1911.	4190.	-1229.	6506.	-4529.	-4636.	.0892	.0544	-.0431	-.0003	.0460	-.0684	6190.							
.0280	1104.	4053.	-1125.	6955.	-4733.	-5932.	.0887	.0585	-.0412	.0146	.0072	-.0725	6939.							
.0290	143.	3936.	-440.	7118.	-3704.	-7063.	.0841	.0609	-.0373	.0318	-.0216	-.0730	7206.							
.0300	438.	4338.	162.	8142.	-3798.	-6194.	.0767	.0628	-.0341	.0477	-.0293	-.0661	7356.							
.0310	248.	4079.	130.	8978.	-3605.	-4795.	.0645	.0639	-.0289	.0565	-.0334	-.0550	7278.							
.0320	-958.	3787.	707.	8792.	-1386.	-4626.	.0458	.0633	-.0198	.0593	-.0447	-.0457	6761.							
.0330	-1810.	3916.	1508.	8578.	925.	-4419.	.0236	.0603	-.0082	.0610	-.0533	-.0403	6534.							
.0340	-1716.	3757.	1156.	9043.	1366.	-2853.	.0010	.0552	.0046	.0623	-.0528	-.0378	6458.							
.0350	-1738.	3458.	471.	9228.	1699.	-1650.	-.0235	.0489	.0179	.0606	-.0548	-.0393	6422.							
.0360	-2442.	3493.	692.	8321.	3479.	-2139.	-.0511	.0413	.0311	.0549	-.0666	-.0456	6248.							
.0370	-2743.	3129.	1022.	6867.	4756.	-2423.	-.0775	.0315	.0432	.0470	-.0762	-.0536	5862.							
.0380	-1900.	1697.	786.	5203.	4120.	-1172.	-.0992	.0186	.0539	.0389	-.0768	-.0598	4543.							
.0390	-896.	-19.	1031.	2768.	3564.	-163.	-.1179	.0037	.0637	.0310	-.0793	-.0637	3043.							
.0400	-438.	-1017.	2165.	-215.	4416.	-210.	-.1343	-.0114	.0711	.0214	-.0794	-.0614	2984.							
.0410	-269.	-2171.	2298.	-2745.	4695.	420.	-.1456	-.0256	.0746	.0086	-.0599	-.0485	3677.							
.0420	15.	-3488.	1426.	-4688.	4113.	1989.	-.1505	-.0391	.0748	-.0046	-.0499	-.0261	4412.							
.0430	198.	-3822.	1383.	-6536.	4411.	3018.	-.1503	-.0526	.0728	-.0132	-.0256	.0015	5691.							
.0440	-175.	-4045.	1360.	-8245.	5141.	3565.	-.1446	-.0663	.0699	-.0168	-.0046	.0315	6977.							
.0450	-768.	-4861.	296.	-9360.	4807.	4441.	-.1325	-.0794	.0654	-.0146	.0093	.0608	7698.							
.0460	-1037.	-4854.	-518.	-9748.	3834.	4980.	-.1167	-.0906	.0582	-.0045	.0122	.0839	7818.							
.0470	-1317.	-3812.	-478.	-9724.	3361.	4473.	-.0992	-.0994	.0488	.0132	.0042	.0974	7562.							
.0480	-1677.	-3343.	-712.	-9408.	2708.	3967.	-.0794	-.1063	.0388	.0348	-.0077	.1021	7120.							
.0490	-1396.	-3525.	-1018.	-8762.	1120.	4277.	-.0573	-.1111	.0285	.0577	-.0195	.0988	6615.							
.0500	-684.	-3445.	-334.	-8127.	-193.	4477.	-.0357	-.1132	.0183	.0790	-.0330	.0868	6255.							
.0510	-517.	-3435.	618.	-7584.	-393.	4031.	-.0160	-.1113	.0087	.0951	-.0465	.0679	5795.							
.0520	-532.	-3585.	680.	-6351.	-623.	3810.	.0027	-.1051	-.0009	.1059	-.0508	.0451	5010.							
.0530	155.	-2888.	315.	-3969.	-1655.	4025.	.0208	-.0951	-.0112	.1149	-.0452	.0188	3970.							

ADLPIPE PAGE 1006

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.58.

S/RV PIPING KEWAUNEE GKWOEF 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

.0420	15.	-1488.	426.	-4658.	4112.	1989.	-.505	-.0391	.0748	-.0046	-.0499	-.0261	4412.
.0430	198.	-3822.	1383.	-6536.	4411.	3018.	-.503	-.0526	.0728	-.0132	-.0256	.0015	5691.
.0440	-175.	-4045.	1360.	-8245.	5141.	3565.	-.1446	-.0663	.0699	-.0168	-.0046	.0215	6977.
.0450	-768.	-4861.	296.	-9360.	4807.	4441.	-.1325	-.0794	.0654	-.0146	.0093	.0608	7698.
.0460	-1027.	-4854.	-516.	-9748.	3834.	4980.	-.1167	-.0906	.0582	-.0045	.0122	.0839	7818.
.0470	-1317.	-3812.	-478.	-9724.	3361.	4473.	-.0992	-.0994	.0488	.0132	.0042	.0974	7562.
.0480	-1277.	-3343.	-712.	-9408.	2708.	3567.	-.0794	-.1067	.0388	.0348	-.0077	.1021	7120.
.0490	-1396.	-3525.	-1018.	-8762.	1120.	4277.	-.0573	-.1111	.0285	.0577	-.0195	.0988	6615.
.0500	-684.	-3445.	-334.	-8127.	-193.	4477.	-.0357	-.1132	.0183	.0790	-.0330	.0868	6255.
.0510	-517.	-3435.	618.	-7584.	-393.	4031.	-.0160	-.1113	.0087	.0951	-.0465	.0679	5795.
.0520	-532.	-3585.	660.	-6351.	-623.	3810.	.0027	-.1051	-.0009	.1059	-.0508	.0451	5010.
.0530	155.	-2888.	315.	-3969.	-1655.	4025.	.0208	-.0951	-.0112	.1149	-.0452	.0188	3970.

ADLPIPE PAGE 1006

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02. 18.26.58.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	RU	DX	DY	DZ	RX	RY	RZ	STRESS
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.0540	792.	-1545.	102.	-1257.	-2507.	3569.	.0373	-.0831	-.0205	.1245	-.0426	-.0121	3059.
.0550	520.	-716.	-233.	969.	-2596.	2040.	.0520	-.0708	-.0272	.1354	-.0491	-.0461	2320.
.0560	415.	-138.	-563.	3036.	-2963.	495.	.0660	-.0591	-.0333	.1496	-.0548	-.0790	2879.
.0570	1364.	816.	-492.	5211.	-4239.	-376.	.0797	-.0483	-.0405	.1670	-.0521	-.1070	4535.
.0580	2220.	1394.	-174.	6734.	-5305.	-1223.	.0915	-.0388	-.0478	.1837	-.0470	-.1276	5837.
.0590	2191.	1137.	358.	7079.	-5237.	-2491.	.1006	-.0314	-.0537	.1970	-.0420	-.1390	6169.
.0500	2297.	809.	1237.	6889.	-4902.	-3349.	.1079	-.0267	-.0585	.2081	-.0280	-.1403	6130.
.0610	3001.	727.	1910.	6824.	-5057.	-3187.	.1140	-.0244	-.0622	.2163	.0006	-.1320	6115.
.0620	3128.	543.	1744.	6710.	-4874.	-2891.	.1176	-.0238	-.0638	.2180	.0348	-.1165	5920.
.0630	2258.	682.	1094.	6417.	-3679.	-3335.	.1169	-.0243	-.0632	.2130	.0661	-.0981	5469.
.0640	1448.	1499.	296.	6298.	-2516.	-3871.	.1132	-.0261	-.0613	.2043	.0958	-.0797	5264.
.0650	1202.	2156.	-877.	6272.	-2290.	-3697.	.1076	-.0302	-.0582	.1940	.1237	-.0635	5145.
.0660	985.	2005.	-1908.	5548.	-2161.	-3332.	.0997	-.0372	-.0531	.1822	.1425	-.0519	4599.
.0670	763.	1349.	-1826.	3692.	-1339.	-3222.	.0887	-.0468	-.0471	.1688	.1504	-.0454	3424.
.0680	1102.	213.	-932.	1154.	-611.	-2501.	.0762	-.0582	-.0414	.1537	.1560	-.0409	1902.
.0690	1920.	-1602.	-118.	-1532.	-542.	-672.	.0638	-.0703	-.0364	.1360	.1542	-.0352	1186.
.0700	2503.	-3457.	731.	-4291.	-216.	1236.	.0513	-.0822	-.0315	.1152	.1695	-.0282	3013.
.0710	2522.	-4706.	1668.	-6943.	781.	2488.	.0388	-.0928	-.0260	.0912	.1668	-.0200	4999.
.0720	2186.	-5485.	1752.	-8868.	1421.	3624.	.0278	-.1011	-.0203	.0643	.1574	-.0092	6528.
.0730	1613.	-5675.	698.	-9662.	1311.	4780.	.0191	-.1064	-.0149	.0369	.1431	.0044	7319.
.0740	658.	-4889.	-598.	-9613.	1320.	5210.	.0115	-.1084	-.0100	.0125	.1212	.0188	7424.
.0750	-622.	-3725.	-1706.	-9212.	1640.	4941.	.0046	-.1076	-.0056	-.0058	.0908	.0328	7132.
.0760	-1687.	-3095.	-2616.	-8699.	1588.	4908.	-.0010	-.1048	-.0019	-.0167	.0571	.0464	6817.
.0770	-2095.	-3023.	-2674.	-8339.	1254.	5369.	-.0057	-.1004	.0007	-.0199	.0257	.0592	6738.
.0780	-1959.	-3345.	-1452.	-8444.	1332.	5891.	-.0108	-.0943	.0027	-.0170	-.0022	.0701	6998.
.0790	-1748.	-4235.	282.	-8823.	1712.	6417.	-.0164	-.0861	.0047	-.0115	-.0263	.0785	7444.
.0800	-1416.	-5217.	1706.	-8785.	1866.	6960.	-.0223	-.0752	.0069	-.0051	-.0454	.0837	7659.
.0810	-1071.	-5290.	2743.	-7862.	1957.	6986.	-.0287	-.0613	.0098	.0013	-.0594	.0840	7211.
.0820	-1030.	-4362.	3102.	-6056.	2211.	6104.	-.0357	-.0447	.0140	.0070	-.0703	.0781	5984.
.0830	-1374.	-2923.	2337.	-3441.	2251.	4549.	-.0427	-.0262	.0198	.0114	-.0800	.0658	4133.
.0840	-1748.	-902.	949.	-184.	1916.	2541.	-.0495	-.0070	.0264	.0160	-.0884	.0473	2149.
.0850	-1929.	1544.	-196.	3139.	1607.	163.	-.0561	.0118	.0327	.0224	-.0942	.0241	2380.
.0860	-1948.	3391.	-945.	5830.	1425.	-2118.	-.0623	.0292	.0383	.0294	-.0958	-.0008	4290.
.0870	-1644.	4156.	-1167.	7574.	1141.	-3789.	-.0674	.0443	.0424	.0360	-.0931	-.0248	5760.
.0880	-855.	4335.	-391.	8368.	931.	-4884.	-.0715	.0567	.0448	.0415	-.0860	-.0463	6561.
.0890	101.	4092.	1063.	8363.	1063.	-5599.	-.0743	.0665	.0458	.0450	-.0745	-.0639	6821.
.0900	797.	3420.	2155.	8067.	1280.	-5939.	-.0750	.0743	.0460	.0451	-.0592	-.0767	6807.
.0910	1140.	3153.	2485.	8164.	1312.	-6173.	-.0735	.0811	.0453	.0416	-.0436	-.0852	6955.

ADLPIPE PAGE 1007

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

8/12/02. 18.26.58.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

.0810	-1071.	-5290.	2743.	-7862.	1957.	6986.	-.0223	-.0752	.0069	-.0051	-.0454	.0837	7659.
.0820	-1030.	-4362.	3102.	-6056.	2211.	6104.	-.0357	-.0447	.0140	.0070	-.0703	.0781	5984.
.0830	-1374.	-2923.	2337.	-3441.	2251.	4549.	-.0427	-.0262	.0198	.0114	-.0800	.0658	4133.
.0840	-1748.	-902.	949.	-184.	1916.	2541.	-.0495	-.0070	.0264	.0160	-.0884	.0473	2149.
.0850	-1929.	1544.	-196.	3179.	1607.	163.	-.0561	.0118	.0327	.0224	-.0942	.0241	2380.
.0860	-1948.	3351.	-945.	5870.	1425.	-2118.	-.0623	.0292	.0383	.0294	-.0958	-.0008	4290.
.0870	-1644.	4156.	-1167.	7574.	1141.	-3789.	-.0674	.0443	.0424	.0360	-.0931	-.0248	5760.
.0880	-855.	4335.	-391.	8368.	931.	-4884.	-.0715	.0567	.0448	.0415	-.0860	-.0463	6561.
.0890	101.	4092.	1063.	8367.	1063.	-5599.	-.0743	.0665	.0458	.0450	-.0745	-.0639	6821.
.0900	797.	3420.	2155.	6067.	1250.	-5939.	-.0750	.0743	.0460	.0451	-.0592	-.0767	6807.
.0910	1140.	3153.	2485.	8164.	1312.	-6173.	-.0735	.0811	.0453	.0416	-.0436	-.0852	6955.

ADLPIPE PAGE 1007

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.58.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	RU	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	RX	RY	RZ	STRESS
TIME (SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)
.0920	1035.	3963.	2181.	8884.	1337.	-6801.	-.0704	.0273	.0438	.0342	-.0325	-.0911	7595.						
.0930	359.	5286.	1087.	9943.	1410.	-7793.	-.0650	.0926	.0420	.0229	-.0277	-.0956	8568.						
.0940	-497.	6461.	-621.	11026.	1193.	-8593.	-.0593	.0962	.0396	.0088	-.0271	-.0991	9457.						
.0950	-937.	7423.	-2025.	11773.	613.	-8865.	-.0513	.0972	.0359	-.0060	-.0286	-.1023	9942.						
.0960	-961.	7692.	-2535.	11569.	58.	-8630.	-.0425	.0952	.0306	-.0212	-.0330	-.1054	9729.						
.0970	-777.	6585.	-2269.	10028.	-309.	-7808.	-.0332	.0898	.0238	-.0373	-.0399	-.1077	8569.						
.0980	-97.	4473.	-1295.	7452.	-809.	-6236.	-.0231	.0812	.0154	-.0540	-.0463	-.1083	6573.						
.0990	1196.	2179.	231.	4389.	-1660.	-4086.	-.0120	.0700	.0056	-.0711	-.0518	-.1067	4194.						
.1000	2402.	-126.	1570.	1135.	-2637.	-1916.	-.0001	.0570	-.0043	-.0900	-.0600	-.1021	2326.						
.1010	2886.	-2191.	2091.	-1956.	-3488.	-233.	.0124	.0431	-.0132	-.1111	-.0731	-.0933	2700.						
.1020	2812.	-3225.	1789.	-4298.	-4307.	898.	.0253	.0292	-.0212	-.1327	-.0874	-.0798	4146.						
.1030	2434.	-3081.	738.	-5641.	-5198.	1723.	.0384	.0158	-.0282	-.1524	-.0976	-.0610	5299.						
.1040	1610.	-2498.	-957.	-6352.	-5877.	2371.	.0508	.0029	-.0339	-.1691	-.1020	-.0373	6048.						
.1050	457.	-1892.	-2583.	-6914.	-5959.	2852.	.0615	-.0094	-.0380	-.1810	-.0999	-.0100	6448.						
.1060	-512.	-1379.	-3421.	-7547.	-5466.	3448.	.0696	-.0208	-.0409	-.1861	-.0889	.0189	6697.						
.1070	-1037.	-1415.	-3518.	-8318.	-4721.	4463.	.0750	-.0307	-.0428	-.1844	-.0675	.0476	7114.						
.1080	-1099.	-1982.	-2816.	-9274.	-3622.	5810.	.0770	-.0382	-.0441	-.1781	-.0349	.0749	7770.						
.1090	-637.	-2719.	-1129.	-10471.	-1934.	7349.	.0755	-.0421	-.0456	-.1721	.0125	.1008	8721.						
.1100	-604.	-4685.	-396.	-11656.	-536.	8549.	.0718	-.0426	-.0441	-.1665	.0535	.1202	9750.						
.1110	-504.	-5647.	251.	-11979.	707.	8622.	.0660	-.0391	-.0404	-.1572	.0872	.1297	9960.						
.1120	20.	-4581.	1028.	-10925.	1606.	7613.	.0587	-.0311	-.0361	-.1431	.1176	.1299	9041.						
.1130	234.	-3481.	378.	-8971.	1771.	6154.	.0512	-.0188	-.0310	-.1289	.1429	.1240	7429.						
.1140	-41.	-2524.	-1199.	-6604.	1687.	4131.	.0438	-.0032	-.0252	-.1167	.1601	.1144	5372.						
.1150	-113.	-513.	-1850.	-4004.	1883.	1504.	.0362	.0139	-.0200	-.1038	.1721	.1024	3150.						
.1160	293.	1215.	-1781.	-1729.	1854.	-611.	.0301	.0311	-.0159	-.0904	.1834	.0912	1758.						
.1170	790.	1053.	-1864.	-362.	1451.	-1692.	.0260	.0473	-.0124	-.0777	.1923	.0824	1522.						
.1180	1250.	564.	-1557.	635.	810.	-2619.	.0225	.0625	-.0098	-.0649	.1854	.0732	1897.						
.1190	1557.	1400.	-178.	1784.	917.	-4290.	.0184	.0767	-.0082	-.0497	.1655	.0625	3192.						
.1200	1637.	2277.	758.	3296.	956.	-5551.	.0153	.0896	-.0070	-.0330	.1428	.0524	4399.						
.1210	1790.	2634.	789.	5113.	9.	-5451.	.0136	.1007	-.0062	-.0196	.1197	.0445	5038.						
.1220	1339.	3185.	993.	6564.	-68.	-5614.	.0108	.1094	-.0040	-.0120	.0888	.0357	5822.						
.1230	138.	4217.	1348.	7712.	857.	-6357.	.0060	.1158	.0000	-.0135	.0488	.0257	6766.						
.1240	-1140.	4878.	877.	8902.	1584.	-6381.	.0004	.1203	.0048	-.0235	.0141	.0159	7460.						
.1250	-1780.	5279.	-72.	10128.	1510.	-5253.	-.0058	.1231	.0091	-.0389	-.0117	.0051	7757.						
.1260	-2135.	6036.	-321.	10853.	1521.	-4178.	-.0147	.1239	.0129	-.0588	-.0408	-.0090	7905.						
.1270	-2963.	6285.	155.	10304.	2938.	-3881.	-.0261	.1220	.0178	-.0833	-.0690	-.0243	7681.						
.1280	-3276.	5236.	365.	8995.	3793.	-2633.	-.0366	.1171	.0224	-.1113	-.0839	-.0361	6815.						
.1290	-2441.	3484.	545.	7280.	3400.	-250.	-.0447	.1092	.0259	-.1378	-.0847	-.0441	5418.						

ADLPIPE PAGE 1007

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.58.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

.1180	1250.	564.	557.	675.	810.	-2619.	.0225	.0625	-.0098	-.0649	.1854	.0232	1897.
.1190	1557.	1400.	-178.	1784.	917.	-4290.	.184	.0767	-.0082	-.0497	.1655	.0625	3192.
.1200	1637.	2277.	758.	3296.	956.	-5551.	.0153	.0896	-.0070	-.0330	.1428	.0524	4399.
.1210	1790.	2634.	789.	5113.	9.	-5451.	.0136	.1007	-.0062	-.0196	.1197	.0445	5038.
.1220	1339.	3185.	997.	6564.	-68.	-5614.	.0108	.1094	-.0040	-.0120	.0888	.0357	5822.
.1230	138.	4217.	1347.	7722.	857.	-6357.	.0060	.1118	.0000	-.0135	.0488	.0257	6766.
.1240	-1140.	4878.	877.	8902.	1504.	-6381.	.0004	.1207	.0048	-.0235	.0141	.0159	7460.
.1250	-1780.	5279.	-72.	10128.	1510.	-5253.	-.0058	.1231	.0091	-.0389	-.0117	.0051	7757.
.1260	-2135.	6036.	-321.	10853.	1521.	-4178.	-.0147	.1239	.0129	-.0588	-.0408	-.0090	7905.
.1270	-2967.	6285.	155.	10304.	2638.	-3881.	-.0261	.1220	.0178	-.0833	-.0590	-.0243	7681.
.1280	-3776.	5236.	365.	8995.	3793.	-2633.	-.0366	.1171	.0224	-.1113	-.0839	-.0361	6815.
.1290	-2441.	3484.	545.	7280.	3400.	-250.	-.0447	.1092	.0259	-.1378	-.0847	-.0441	5418.

ADLPIPE PAGE 1008

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.58.

S/RV PIPING KEWAUNEE GKHO8F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	RU							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)
.1300	-1479.	2078.	1353.	4981.	3221.	1334.	-.0521	.0997	.0287	-.1603	-.0860	-.0505	4098.
.1310	-1299.	1069.	1845.	2516.	3334.	1449.	-.0585	.0897	.0312	-.1797	-.0964	-.0538	2980.
.1320	-1278.	444.	1231.	679.	2851.	1045.	-.0614	.0799	.0327	-.1937	-.1025	-.0504	2097.
.1330	-456.	721.	39.	-141.	874.	1029.	-.0601	.0706	.0320	-.2005	-.1006	-.0397	915.
.1340	111.	1250.	-970.	-1019.	-864.	430.	-.0566	.0614	.0308	-.2011	-.1004	-.0236	946.
.1350	-298.	1295.	-1750.	-2437.	-1399.	-1048.	-.0520	.0528	.0302	-.1975	-.1042	-.0029	2022.
.1360	-416.	1352.	-2450.	-3404.	-2313.	-1921.	-.0457	.0456	.0284	-.1904	-.1024	.0229	3061.
.1370	184.	1561.	-2893.	-3732.	-3650.	-1880.	-.0385	.0406	.0249	-.1787	-.0910	.0510	3740.
.1380	554.	1487.	-2964.	-4011.	-4528.	-1791.	-.0327	.0381	.0213	-.1650	-.0849	.0760	4252.
.1390	131.	1049.	-2571.	-4479.	-4176.	-2331.	-.0299	.0378	.0193	-.1498	-.0903	.0934	4417.
.1400	-111.	847.	-1920.	-4282.	-3701.	-2601.	-.0288	.0392	.0185	-.1316	-.0977	.1025	4199.
.1410	325.	977.	-1412.	-2992.	-4067.	-1859.	-.0289	.0424	.0182	-.1116	-.1026	.1036	3626.
.1420	226.	843.	-960.	-1583.	-3566.	-1330.	-.0319	.0470	.0197	-.0918	-.1103	.0960	2778.
.1430	-520.	827.	-263.	-251.	-1994.	-1366.	-.0383	.0527	.0225	-.0748	-.1231	.0814	1638.
.1440	-1004.	1177.	539.	1410.	-425.	-1061.	-.0450	.0586	.0255	-.0604	-.1301	.0635	1223.
.1450	-1015.	1335.	1015.	3269.	588.	60.	-.0527	.0634	.0285	-.0481	-.1261	.0456	2239.
.1460	-1176.	1176.	1428.	4698.	1657.	1136.	-.0592	.0665	.0320	-.0379	-.1201	.0282	3444.
.1470	-1799.	1164.	2201.	5435.	3602.	1235.	-.0655	.0676	.0357	-.0276	-.1140	.0117	4473.
.1480	-2168.	1524.	2583.	6281.	4857.	1226.	-.0693	.0668	.0381	-.0161	-.1030	-.0013	5415.
.1490	-2148.	2001.	2145.	7381.	5021.	1388.	-.0696	.0643	.0389	-.0025	-.0836	-.0093	6089.
.1500	-2206.	2585.	1558.	8101.	5098.	908.	-.0673	.0597	.0386	.0133	-.0524	-.0132	6481.
.1510	-2327.	3233.	1248.	8156.	5108.	-240.	-.0631	.0531	.0372	.0298	-.0454	-.0133	6488.
.1520	-2220.	3416.	930.	7568.	4799.	-1344.	-.0562	.0448	.0343	.0452	-.0248	-.0075	6108.
.1530	-1629.	3055.	383.	6630.	3716.	-1751.	-.0467	.0354	.0295	.0575	.0026	.0053	5257.
.1540	-947.	2449.	157.	5143.	2869.	-2008.	-.0361	.0254	.0231	.0660	.0344	.0235	4194.
.1550	-441.	1639.	352.	3108.	2595.	-2284.	-.0254	.0149	.0158	.0712	.0668	.0448	3134.
.1560	146.	588.	459.	1043.	2006.	-1958.	-.0141	.0042	.0079	.0730	.0976	.0676	2016.
.1570	705.	-503.	456.	-894.	1553.	-1294.	-.0023	-.0066	.0003	.0725	.1288	.0899	1490.
.1580	*1052.	-1297.	319.	-2482.	1213.	-581.	.0090	-.0171	-.0067	.0695	.1533	.1090	1903.
.1590	1064.	-1809.	-22.	-3699.	848.	54.	.0195	-.0269	-.0131	.0640	.1549	.1227	2558.
.1600	809.	-2169.	-387.	-4715.	720.	556.	.0286	-.0360	-.0187	.0569	.1555	.1299	3237.
.1610	557.	-2390.	-706.	-5400.	639.	1241.	.0369	-.0445	-.0237	.0496	.1506	.1310	3760.
.1620	537.	-2502.	-866.	-5723.	200.	2425.	.0445	-.0525	-.0284	.0415	.1510	.1268	4192.
.1630	368.	-2997.	-715.	-6301.	217.	3557.	.0507	-.0600	-.0318	.0326	.1363	.1173	4880.
.1640	126.	-3727.	-355.	-7010.	434.	4577.	.0557	-.0665	-.0344	.0232	.1160	.1030	5652.
.1650	129.	-4107.	-19.	-7289.	215.	5627.	.0598	-.0712	-.0367	.0142	.0923	.0853	6209.
.1660	222.	-4091.	266.	-7150.	-112.	6230.	.0629	-.0736	-.0384	.0066	.0574	.0650	6437.
.1670	192.	-3880.	130.	-6661.	-687.	6543.	.0650	-.0730	-.0391	-.0000	.0377	.0434	6311.

ADLPIPE PAGE 1009

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.58.

S/RV PIPING KEWAUNEE GKHO8F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSV

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

.1570	765.	-503.	456.	-894.	1553.	-1294.	-1023.	-0066	.0003	.0725	.1288	.0899	1490.
.1580	1052.	-1297.	319.	-2482.	1213.	-581.	.090	-0171	-0067	.0695	.1533	.1090	1903.
.1590	1064.	-1809.	-22.	-3699.	848.	54.	.0195	-0269	-0131	.0640	.1549	.1227	2558.
.1600	869.	-2169.	-387.	-4715.	720.	556.	.0286	-0360	-0187	.0569	.1555	.1299	3237.
.1610	557.	-2390.	-706.	-5400.	670.	1241.	.0369	-0445	-0237	.0496	.1506	.1310	3760.
.1620	537.	-2502.	-866.	-5727.	200.	2425.	.0445	-0525	-0284	.0415	.1510	.1268	4192.
.1630	368.	-2997.	-715.	-6301.	217.	3557.	.0507	-0600	-0318	.0326	.1363	.1173	4880.
.1640	126.	-3727.	-355.	-7012.	434.	4577.	.0557	-0665	-0344	.0232	.1160	.1030	5652.
.1650	129.	-4107.	19.	-7289.	215.	5627.	.0598	-0712	-0367	.0142	.0923	.0853	6209.
.1660	222.	-4091.	266.	-7150.	-112.	6030.	.0629	-0736	-0384	.0066	.0574	.0650	6437.
.1670	192.	-3880.	130.	-6661.	-687.	6543.	.0650	-0736	-0391	-0000	.0377	.0434	6311.

ADLPIPE PAGE 1009

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02 . 18.26.58.

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	RU	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
22	1	138					.1680	-122.	-3461.	-277.	-5878.	-1169.	6052.	.0660	-0713	-0384	-0036	.0052	.0217	5741.
							.1690	-293.	-2534.	-662.	-4616.	-1868.	5243.	.0659	-0667	-0371	-0026	-0252	.0020	4874.
							.1700	-209.	-1532.	-955.	-3181.	-2654.	4404.	.0646	-0601	-0356	.0027	-0486	-0133	4075.
							.1710	-254.	-1099.	-1231.	-2022.	-2907.	3420.	.0618	-0520	-0331	.0116	-0627	-0226	3318.
							.1720	-194.	-772.	-1236.	-869.	-3143.	2581.	.0573	-0429	-0304	.0237	-0700	-0258	2803.
							.1730	59.	-376.	-580.	90.	-2932.	1756.	.0510	-0333	-0274	.0396	-0678	-0237	2305.
							.1740	443.	-389.	266.	716.	-2506.	1172.	.0432	-0238	-0238	.0570	-0569	-0166	1926.
							.1750	730.	-781.	804.	1203.	-2140.	760.	.0342	-0147	-0193	.0732	-0423	-0065	1733.
							.1760	762.	-756.	1276.	1773.	-1407.	-71.	.0236	-0061	-0135	.0884	-0270	.0035	1527.
							.1770	770.	-39.	1611.	2656.	-798.	-1118.	.0117	.0015	-0071	.1018	-0137	.0108	2015.
							.1780	587.	652.	1391.	3603.	-234.	-2213.	-0008	.0080	.0006	.1129	-0011	.0142	2854.
							.1790	284.	1409.	726.	4663.	92.	-3259.	-0140	.0130	.0092	.1201	.0075	.0123	3835.
							.1800	1.	2593.	226.	5723.	411.	-4403.	-0280	.0165	.0181	.1228	.0099	.0046	4875.
							.1810	-342.	3493.	-88.	6339.	1107.	-5512.	-0425	.0183	.0272	.1210	.0092	-0083	5711.
							.1820	-471.	3683.	-507.	6628.	1388.	-5847.	-0564	.0185	.0358	.1153	.0063	-0247	6036.
							.1830	-370.	3656.	-551.	6688.	1629.	-5708.	-0694	.0173	.0432	.1078	.0016	-0438	6028.
							.1840	-214.	3686.	-43.	6484.	2116.	-5467.	-0814	.0152	.0493	.0992	-0073	-0639	5892.
							.1850	-216.	3236.	390.	6016.	2624.	-4970.	-0912	.0121	.0541	.0894	-0201	-0822	5549.
							.1860	-304.	2400.	563.	5477.	3009.	-4148.	-0978	.0085	.0574	.0805	-0333	-0966	5056.
							.1870	-205.	2034.	848.	5205.	2966.	-3112.	-1010	.0044	.0584	.0738	-0487	-1059	4551.
							.1880	-360.	1878.	1179.	4877.	3107.	-2342.	-1009	.0000	.0576	.0689	-0563	-1088	4204.
							.1890	-903.	1386.	1101.	4386.	3239.	-1644.	-0973	-0046	.0552	.0648	-0844	-1036	3839.
							.1900	-1351.	929.	888.	3924.	3018.	-724.	-0901	-0097	.0506	.0621	-0983	-0904	3372.
							.1910	-1537.	711.	1034.	3307.	2819.	241.	-0802	-0155	.0441	.0616	-1049	-0707	2934.
							.1920	-1708.	143.	1218.	2296.	2619.	1251.	-0682	-0220	.0363	.0615	-1060	-0462	2495.
							.1930	-1969.	-894.	1260.	919.	2469.	2193.	-0549	-0294	.0282	.0615	-1017	-0197	2310.
							.1940	-1950.	-1655.	1456.	-450.	2025.	2984.	-0408	-0373	.0196	.0625	-0908	.0056	2527.
							.1950	-1418.	-2086.	1637.	-1659.	1740.	3608.	-0269	-0454	.0111	.0641	-0743	.0267	2922.
							.1960	-1339.	-2656.	1401.	-2839.	1132.	3922.	-0136	-0535	.0034	.0649	-0560	.0414	3351.
							.1970	-1111.	-3072.	960.	-3907.	559.	3762.	-0017	-0611	-0030	.0646	-0379	.0482	3675.
							.1980	-664.	-2975.	593.	-4654.	-82.	3292.	.0087	-0683	-0084	.0639	-0185	.0471	3843.
							.1990	-77.	-2844.	70.	-5153.	-865.	2823.	.0178	-0746	-0127	.0626	.0025	.0392	4003.
							.2000	435.	-2958.	-596.	-5577.	-1540.	2351.	.0255	-0799	-0160	.0605	.0237	.0262	4209.
							.2010	915.	-2890.	-972.	-5857.	-1904.	1772.	.0317	-0837	-0187	.0584	.0439	.0100	4320.
							.2020	1461.	-2631.	-1070.	-5892.	-2127.	1309.	.0370	-0859	-0215	.0569	.0635	-0068	4313.
							.2030	1938.	-2658.	-1220.	-5769.	-2351.	1161.	.0422	-0865	-0242	.0562	.0817	-0220	4272.
							.2040	2319.	-2834.	-1278.	-5542.	-2401.	1105.	.0474	-0855	-0268	.0575	.0956	-0346	4138.
							.2050	2326.	-2722.	-1018.	-5083.	-2000.	920.	.0527	-0831	-0297	.0619	.1037	-0443	3787.

ADLPIPE PAGE 1010

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02 . 18.26.58.

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

.1940	-1950.	-1655.	1452.	-450.	2275.	2984.	-0402	-0373	.0190	.0625	-0908	.0056	2527.
.1950	-1618.	-2086.	1637.	-1659.	1740.	3608.	-0269	-0454	.0111	.0641	-0743	.0267	2922.
.1960	-1739.	-2656.	1401.	-2839.	1132.	3922.	-0136	-0535	.0034	.0649	-0560	.0414	3351.
.1970	-1111.	-3072.	960.	-3907.	559.	3762.	-0017	-0611	-0030	.0646	-0379	.0482	3675.
.1980	-664.	-2975.	593.	-4654.	-62.	3292.	.0087	-0683	-0084	.0639	-0185	.0471	3843.
.1990	-77.	-2844.	70.	-5153.	-865.	2823.	.0178	-0746	-0127	.0626	.0025	.0392	4003.
.2000	435.	-2952.	-596.	-5577.	-1540.	2351.	.0255	-0799	-0160	.0605	.0237	.0262	4209.
.2010	915.	-2890.	-972.	-5857.	-1904.	1772.	.0317	-0837	-0187	.0584	.0439	.0100	4320.
.2020	1461.	-2631.	-1070.	-5892.	-2127.	1309.	.0370	-0859	-0215	.0569	.0535	-0068	4313.
.2030	1938.	-2658.	-1220.	-5769.	-2351.	1161.	.0422	-0865	-0242	.0562	.0817	-0220	4272.
.2040	2219.	-2834.	-1278.	-5542.	-2401.	1105.	.0474	-0855	-0268	.0575	.0956	-0346	4138.
.2050	2326.	-2702.	-1018.	-5083.	-2209.	920.	.0527	-0831	-0297	.0619	.1037	-0443	3787.

ADLPIPE PAGE 1010

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.58.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

ENGLISH UNITS

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

SECTION	22	MEMBER	1	SEQUENCE	138	LOCATION	BEG	TYPE	RU						
TIME	FX	FY	FZ	MX	MY	MZ	DX	DY	DZ	PX	RY	RZ	STRESS		
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)		
.2060	2271.	-2409.	-746.	-4317.	-2017.	760.	.0585	-0792	-0329	.0691	.1068	-0501	3252.		
.2070	2051.	-2207.	-686.	-3325.	-1945.	739.	.0648	-0742	-0363	.0783	.1062	-0520	2644.		
.2080	1728.	-1875.	-539.	-2240.	-1821.	666.	.0709	-0684	-0398	.0887	.1015	-0512	1997.		
.2090	1350.	-1378.	-173.	-1192.	-1582.	473.	.0765	-0622	-0430	.0991	.0929	-0490	1373.		
.2100	956.	-1074.	117.	-276.	-1412.	365.	.0811	-0559	-0455	.1074	.0826	-0462	1001.		
.2110	645.	-960.	277.	500.	-1369.	390.	.0844	-0498	-0473	.1126	.0726	-0441	1017.		
.2120	464.	-718.	499.	1157.	-1325.	346.	.0855	-0440	-0481	.1141	.0529	-0443	1208.		
.2130	343.	-419.	688.	1659.	-1247.	162.	.0840	-0385	-0476	.1120	.0530	-0479	1403.		
.2140	279.	-283.	641.	1998.	-1251.	-51.	.0802	-0339	-0456	.1065	.0440	-0549	1589.		
.2150	372.	-171.	468.	2231.	-1376.	-265.	.0743	-0303	-0422	.0986	.0366	-0648	1776.		
.2160	590.	36.	333.	2340.	-1514.	-555.	.0663	-0277	-0376	.0893	.0301	-0765	1915.		
.2170	792.	125.	175.	2222.	-1584.	-891.	.0567	-0261	-0321	.0790	.0242	-0880	1935.		
.2180	985.	30.	-16.	1883.	-1610.	-1141.	.0461	-0256	-0260	.0685	.0199	-0969	1839.		
.2190	1242.	-63.	-109.	1435.	-1608.	-1228.	.0352	-0259	-0200	.0587	.0183	-1013	1672.		
.2200	1457.	-168.	-103.	890.	-1511.	-1172.	.0246	-0269	-0140	.0504	.0187	-0996	1421.		
.2210	1476.	-404.	-93.	221.	-1247.	-1024.	.0148	-0285	-0083	.0437	.0198	-0911	1098.		
.2220	1332.	-620.	-85.	-437.	-866.	-804.	.0060	-0301	-0031	.0388	.0213	-0762	849.		
.2230	1103.	-626.	-108.	-897.	-492.	-518.	-0016	-0314	.0013	.0360	.0228	-0558	773.		
.2240	742.	-509.	-249.	-1153.	-155.	-225.	-0079	-0319	.0051	.0345	.0227	-0318	798.		
.2250	234.	-399.	-458.	-1317.	187.	-6.	-0133	-0317	.0084	.0338	.0192	-0066	897.		
.2260	-281.	-282.	-570.	-1437.	496.	153.	-0182	-0307	.0112	.0335	.0119	.0173	1030.		
.2270	-665.	-210.	-537.	-1521.	688.	355.	-0227	-0288	.0136	.0330	.0018	.0379	1150.		
.2280	-906.	-318.	-396.	-1629.	784.	638.	-0273	-0262	.0158	.0314	-0102	.0537	1292.		
.2290	-1028.	-583.	-110.	-1800.	872.	937.	-0323	-0229	.0179	.0280	-0238	.0634	1489.		
.2300	-1028.	-871.	323.	-1970.	966.	1208.	-0378	-0189	.0200	.0226	-0385	.0666	1692.		
.2310	-938.	-1132.	758.	-2077.	1019.	1453.	-0436	-0143	.0223	.0150	-0532	.0635	1842.		
.2320	-834.	-1323.	1042.	-2029.	1041.	1625.	-0497	-0093	.0250	.0053	-0572	.0550	1888.		
.2330	-778.	-1309.	1135.	-1768.	1070.	1631.	-0556	-0039	.0280	-0059	-0802	.0421	1774.		
.2340	-799.	-1013.	1046.	-1263.	1111.	1435.	-0611	.0018	.0311	-0175	-0916	.0263	1490.		
.2350	-889.	-523.	785.	-569.	1159.	1094.	-0658	.0076	.0340	-0287	-1004	.0092	1141.		
.2360	-1004.	33.	434.	206.	1217.	688.	-0692	.0133	.0365	-0384	-1054	-0073	953.		
.2370	-1082.	571.	143.	977.	1290.	277.	-0710	.0185	.0381	-0462	-1061	-0218	1091.		
.2380	-1090.	951.	19.	1499.	1380.	-96.	-0710	.0232	.0387	-0517	-1025	-0331	1375.		
.2390	-1019.	1206.	64.	1822.	1475.	-396.	-0690	.0275	.0381	-0553	-0948	-0405	1603.		
.2400	-874.	1261.	213.	1952.	1528.	-627.	-0650	.0315	.0362	-0573	-0833	-0434	1723.		
.2410	-693.	1283.	380.	1994.	1505.	-849.	-0590	.0353	.0331	-0583	-0889	-0423	1778.		
.2420	-536.	1347.	470.	2019.	1417.	-1132.	-0513	.0391	.0290	-0588	-0530	-0378	1828.		
.2430	-433.	1468.	405.	2069.	1247.	-1492.	-0421	.0429	.0242	-0592	-0365	-0308	1913.		

ADLPIPE PAGE 1011

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02.

18.26.58.

S/RV PIPING KEWAUNEE GKW08F 2 RUP DISK

2 SAFETY COLD FKW24F--2 PSV

CONDITION 24

LOADS

SHOCK

PRESSURE

.2320	-824.	-1323.	042.	-2029.	1041.	1625.	-.0497	-.0097	.0250	.0053	-.0572	.0550	1888.
.2330	-778.	-1309.	1135.	-1768.	1070.	1631.	-.0556	-.0039	.0280	-.0059	-.0802	.0421	1774.
.2340	-799.	-1013.	1046.	-1263.	1111.	1435.	-.0611	.0018	.0311	-.0175	-.0916	.0263	1490.
.2350	-989.	-523.	785.	-569.	1159.	1094.	-.0658	.0076	.0340	-.0287	-.1004	.0092	1141.
.2360	-1004.	72.	434.	206.	1217.	638.	-.0692	.0137	.0365	-.0384	-.1054	-.0073	953.
.2370	-1082.	571.	143.	937.	1290.	277.	-.0710	.0185	.0381	-.0462	-.1061	-.0218	1091.
.2380	-1090.	991.	19.	1499.	1380.	-96.	-.0710	.0232	.0387	-.0517	-.1025	-.0331	1375.
.2390	-1019.	1206.	64.	1822.	1475.	-396.	-.0690	.0275	.0381	-.0552	-.0948	-.0405	1603.
.2400	-874.	1261.	213.	1952.	1520.	-627.	-.0650	.0315	.0362	-.0573	-.0833	-.0434	1723.
.2410	-693.	1283.	380.	1994.	1505.	-849.	-.0590	.0353	.0331	-.0583	-.0689	-.0423	1778.
.2420	-536.	1347.	470.	2019.	1417.	-1132.	-.0513	.0391	.0290	-.0588	-.0530	-.0378	1828.
.2430	-433.	1468.	405.	2069.	1247.	-1490.	-.0421	.0429	.0242	-.0592	-.0365	-.0308	1913.

ADLPIPE PAGE 1011

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.58.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	RC								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	FX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.2440	-365.	1671.	175.	2186.	977.	-1885.	-.0318	.0467	.0189	-.0599	-.0201	-.0221	2054.	
.2450	-311.	1951.	-156.	2357.	627.	-2287.	-.0209	.0504	.0132	-.0611	-.0045	-.0128	2254.	
.2460	-265.	2202.	-497.	2406.	267.	-2653.	-.0098	.0530	.0073	-.0630	.0096	-.0038	2457.	
.2470	-181.	2304.	-765.	2486.	-79.	-2889.	.0011	.0567	.0014	-.0657	.0221	.0043	2569.	
.2480	5.	2226.	-876.	2323.	-438.	-2908.	.0113	.0587	-.0044	-.0690	.0328	.0110	2526.	
.2490	255.	1983.	-787.	1978.	-784.	-2721.	.0208	.0599	-.0100	-.0731	.0412	.0159	2329.	
.2500	578.	1584.	-565.	1459.	-1060.	-2396.	.0292	.0602	-.0152	-.0784	.0466	.0190	2021.	
.2510	835.	1125.	-341.	875.	-1297.	-1975.	.0366	.0598	-.0197	-.0849	.0490	.0200	1699.	
.2520	1043.	775.	-212.	375.	-1561.	-1506.	.0431	.0589	-.0236	-.0925	.0486	.0208	1484.	
.2530	1146.	612.	-240.	13.	-1829.	-1374.	.0485	.0576	-.0267	-.1013	.0454	.0204	1430.	
.2540	1079.	594.	-453.	-240.	-2044.	-744.	.0528	.0562	-.0289	-.1111	.0394	.0197	1475.	
.2550	888.	686.	-799.	-400.	-2215.	-479.	.0561	.0548	-.0304	-.1213	.0318	.0196	1551.	
.2560	677.	838.	-1162.	-504.	-2365.	-198.	.0584	.0533	-.0313	-.1310	.0240	.0207	1635.	
.2570	473.	912.	-1444.	-658.	-2444.	129.	.0596	.0519	-.0317	-.1397	.0171	.0234	1708.	
.2580	273.	818.	-1556.	-945.	-2388.	489.	.0595	.0507	-.0316	-.1469	.0114	.0282	1762.	
.2590	130.	592.	-1431.	-1356.	-2207.	890.	.0582	.0497	-.0311	-.1521	.0077	.0349	1846.	
.2600	74.	260.	-1116.	-1840.	-1941.	1338.	.0555	.0490	-.0301	-.1554	.0066	.0434	2016.	
.2610	46.	-149.	-739.	-2337.	-1604.	1771.	.0516	.0488	-.0284	-.1571	.0079	.0533	2253.	
.2620	-24.	-504.	-395.	-2752.	-1191.	2069.	.0463	.0493	-.0259	-.1578	.0105	.0637	2456.	
.2630	-152.	-655.	-155.	-2984.	-733.	2157.	.0397	.0507	-.0225	-.1582	.0139	.0738	2531.	
.2640	-330.	-592.	-105.	-2991.	-286.	2047.	.0319	.0529	-.0183	-.1587	.0179	.0827	2451.	
.2650	-538.	-371.	-254.	-2799.	119.	1773.	.0229	.0560	-.0133	-.1599	.0220	.0897	2235.	
.2660	-735.	-30.	-483.	-2481.	496.	1358.	.0129	.0597	-.0076	-.1618	.0255	.0939	1936.	
.2670	-871.	342.	-671.	-2134.	854.	860.	.0020	.0637	-.0015	-.1642	.0280	.0948	1654.	
.2680	-913.	616.	-776.	-1828.	1166.	369.	-.0092	.0679	.0049	-.1668	.0292	.0924	1482.	
.2690	-843.	769.	-769.	-1568.	1412.	-64.	-.0206	.0721	.0112	-.1693	.0288	.0867	1423.	
.2700	-678.	874.	-620.	-1321.	1603.	-458.	-.0316	.0763	.0172	-.1712	.0263	.0781	1434.	
.2710	-476.	961.	-396.	-1048.	1738.	-829.	-.0418	.0803	.0227	-.1721	.0210	.0673	1478.	
.2720	-306.	1046.	-209.	-692.	1794.	-1177.	-.0508	.0842	.0278	-.1722	.0127	.0555	1520.	
.2730	-214.	1223.	-105.	-190.	1775.	-1516.	-.0582	.0880	.0321	-.1711	.0014	.0437	1579.	
.2740	-224.	1551.	-75.	470.	1725.	-1353.	-.0637	.0915	.0355	-.1689	-.0121	.0333	1736.	
.2750	-347.	1957.	-127.	1274.	1663.	-2136.	-.0672	.0940	.0379	-.1656	-.0269	.0252	2005.	
.2760	-556.	2352.	-228.	2028.	1590.	-2300.	-.0688	.0977	.0393	-.1611	-.0419	.0202	2328.	
.2770	-800.	2708.	-284.	2772.	1531.	-2335.	-.0684	.0998	.0396	-.1555	-.0563	.0185	2652.	
.2780	-1049.	2969.	-246.	3390.	1501.	-2248.	-.0663	.1012	.0389	-.1488	-.0694	.0198	2923.	
.2790	-1268.	3070.	-136.	3834.	1469.	-2039.	-.0629	.1017	.0372	-.1412	-.0807	.0234	3090.	
.2800	-1413.	3047.	31.	4109.	1392.	-1746.	-.0584	.1012	.0348	-.1329	-.0899	.0285	3152.	
.2810	-1472.	2967.	249.	4238.	1264.	-1446.	-.0532	.0999	.0319	-.1244	-.0970	.0339	3136.	

ADLPIPE PAGE 1012

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.58.

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

CONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITS

.2710	-476.	961.	396.	-1048.	1738.	-829.	-.0418	.0803	.0227	-.1721	.0210	.0673	1478.
.2720	-306.	1046.	-209.	-602.	1794.	-1177.	-.0508	.0842	.0278	-.1722	.0127	.0555	1520.
.2730	-214.	1223.	-105.	-190.	1775.	-1516.	-.0582	.0880	.0321	-.1711	.0014	.0437	1579.
.2740	-224.	1551.	-75.	470.	1725.	-1357.	-.0637	.0915	.0355	-.1689	-.0121	.0333	1736.
.2750	-347.	1957.	-127.	1274.	1667.	-2136.	-.0672	.0948	.0379	-.1656	-.1289	.0252	2005.
.2760	-556.	2352.	-228.	2028.	1590.	-2300.	-.0688	.0977	.0393	-.1611	-.0419	.0202	2328.
.2770	-800.	2708.	-284.	2772.	1531.	-2335.	-.0684	.0998	.0396	-.1555	-.0563	.0185	2652.
.2780	-1049.	2969.	-246.	3390.	1501.	-2248.	-.0663	.1012	.0389	-.1488	-.0694	.0198	2923.
.2790	-1268.	3070.	-136.	3834.	1469.	-2039.	-.0609	.1017	.0372	-.1412	-.0807	.0234	3090.
.2800	-1413.	3047.	38.	4109.	1393.	-1746.	-.0584	.1012	.0348	-.1329	-.0899	.0285	3152.
.2810	-1472.	2967.	249.	4238.	1264.	-1446.	-.0532	.0999	.0319	-.1244	-.0970	.0339	3136.

ADLPIPE PAGE 1012

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.58.

S/RV PIPING KEWAUNEE GKW02F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSVCONDITION 24
LOADS
SHOCK
PRESSURE
ENGLISH UNITSINTERNAL FORCES IN THE PIPING
FORCES AND MOMENTS ACT ON THE PIPING

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	RU	TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)
.2820	-1481.	2833.	407.	4238.	1079.	-1203.	-.0477	.0976	.0287	-.1161	-.1018	.0389	3057.							
.2830	-1447.	2671.	463.	4134.	831.	-1044.	-.0420	.0945	.0256	-.1085	-.1042	.0428	2928.							
.2840	-1343.	2543.	441.	3949.	530.	-969.	-.0366	.0905	.0225	-.1017	-.1036	.0452	2764.							
.2850	-1173.	2446.	342.	3688.	201.	-966.	-.0315	.0858	.0196	-.0961	-.0997	.0460	2573.							
.2860	-976.	2319.	141.	3344.	-130.	-1011.	-.0268	.0804	.0170	-.0917	-.0928	.0454	2356.							
.2870	-761.	2164.	-109.	2922.	-476.	-1086.	-.0226	.0743	.0146	-.0882	-.0831	.0437	2122.							
.2880	-507.	2000.	-317.	2428.	-694.	-1161.	-.0189	.0676	.0124	-.0848	-.0713	.0412	1873.							
.2890	-231.	1778.	-469.	1864.	-897.	-1194.	-.0156	.0604	.0104	-.0810	-.0581	.0382	1610.							
.2900	26.	1476.	-586.	1267.	-1041.	-1169.	-.0126	.0520	.0086	-.0762	-.0443	.0354	1358.							
.2910	239.	1160.	-639.	692.	-1102.	-1099.	-.0098	.0448	.0068	-.0701	-.0307	.0330	1148.							
.2920	392.	864.	-608.	168.	-1060.	-980.	-.0071	.0368	.0050	-.0623	-.0178	.0315	980.							
.2930	467.	555.	-533.	-290.	-923.	-779.	-.0044	.0287	.0032	-.0530	-.0056	.0311	837.							
.2940	460.	255.	-443.	-650.	-701.	-494.	-.0016	.0207	.0015	-.0424	.0058	.0318	725.							
.2950	375.	22.	-335.	-889.	-396.	-159.	.0012	.0131	-.0003	-.0310	.0162	.0335	665.							
.2960	221.	-160.	-230.	-1022.	-30.	204.	.0039	.0057	-.0020	-.0193	.0255	.0356	703.							
.2970	27.	-330.	-153.	-1075.	346.	589.	.0067	-.0011	-.0036	-.0075	.0334	.0376	859.							
.2980	-158.	-467.	-89.	-1059.	686.	965.	.0095	-.0076	-.0053	.0043	.0400	.0389	1070.							
.2990	-303.	-559.	-24.	-990.	956.	1287.	.0121	-.0135	-.0069	.0157	.0449	.0388	1270.							
.3000	-397.	-667.	36.	-922.	1135.	1537.	.0146	-.0192	-.0085	.0269	.0480	.0371	1430.							
.3010	-415.	-824.	106.	-898.	1204.	1725.	.0170	-.0245	-.0100	.0377	.0496	.0338	1541.							
.3020	-338.	-1002.	212.	-920.	1167.	1856.	.0192	-.0295	-.0115	.0481	.0503	.0294	1602.							
.3030	-192.	-1191.	334.	-986.	1050.	1933.	.0213	-.0342	-.0130	.0582	.0506	.0246	1625.							
.3040	-20.	-1402.	437.	-1093.	889.	1969.	.0233	-.0388	-.0144	.0677	.0510	.0201	1632.							
.3050	156.	-1609.	516.	-1228.	715.	1983.	.0252	-.0431	-.0157	.0767	.0520	.0169	1644.							
.3060	318.	-1770.	568.	-1360.	550.	1987.	.0270	-.0473	-.0169	.0855	.0539	.0153	1665.							
.3070	429.	-1877.	564.	-1461.	414.	1980.	.0287	-.0513	-.0179	.0940	.0565	.0158	1682.							
.3080	465.	-1927.	497.	-1517.	323.	1957.	.0302	-.0552	-.0187	.1025	.0595	.0181	1683.							
.3090	446.	-1912.	395.	-1526.	273.	1920.	.0314	-.0589	-.0192	.1111	.0625	.0219	1663.							
.3100	397.	-1858.	300.	-1507.	247.	1833.	.0322	-.0625	-.0195	.1200	.0650	.0264	1634.							
.3110	332.	-1812.	221.	-1406.	236.	1851.	.0326	-.0661	-.0194	.1288	.0664	.0307	1608.							
.3120	276.	-1795.	174.	-1401.	228.	1822.	.0324	-.0694	-.0190	.1371	.0664	.0340	1590.							
.3130	254.	-1802.	205.	-1503.	205.	1799.	.0315	-.0726	-.0183	.1446	.0648	.0355	1586.							
.3140	267.	-1849.	267.	-1555.	145.	1753.	.0299	-.0754	-.0173	.1505	.0611	.0345	1598.							
.3150	347.	-1922.	340.	-1626.	46.	1754.	.0276	-.0778	-.0159	.1545	.0553	.0307	1613.							
.3160	424.	-1981.	399.	-1686.	-93.	1689.	.0246	-.0796	-.0142	.1562	.0471	.0240	1610.							
.3170	507.	-1997.	417.	-1702.	-275.	1580.	.0209	-.0809	-.0122	.1557	.0368	.0146	1577.							
.3180	575.	-1967.	381.	-1660.	-489.	1432.	.0167	-.0816	-.0099	.1533	.0246	.0029	1514.							
.3190	611.	-1885.	304.	-1555.	-705.	1248.	.0121	-.0816	-.0074	.1465	.0108	-.0103	1425.							

ADLPIPE PAGE 1017

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.58.

S/RV PIPING KEWAUNEE GKW02F 2 RUP DISK
2 SAFETY COLD FKW24F--2 PSVCONDITION 24
LOADS
SHOCK

.3090	446.	-1912.	395.	-1526.	273.	1920.	.0314	-.0589	-.0192	.1111	.0525	.0219	1663.
.3100	397.	-1858.	300.	-1507.	247.	1883.	.0322	-.0625	-.0195	.1200	.0650	.0264	1634.
.3110	332.	-1812.	221.	-1486.	236.	1851.	.0326	-.0661	-.0194	.1288	.0564	.0307	1608.
.3120	276.	-1795.	184.	-1481.	220.	1822.	.0324	-.0694	-.0190	.1371	.0564	.0340	1590.
.3130	259.	-1802.	205.	-1503.	205.	1799.	.0315	-.0726	-.0183	.1446	.0648	.0355	1586.
.3140	287.	-1849.	267.	-1555.	145.	1783.	.0299	-.0754	-.0173	.1505	.0611	.0345	1598.
.3150	347.	-1922.	340.	-1626.	46.	1754.	.0276	-.0778	-.0159	.1545	.0553	.0307	1613.
.3160	424.	-1981.	399.	-1686.	-93.	1689.	.0246	-.0796	-.0142	.1562	.0471	.0240	1610.
.3170	507.	-1997.	417.	-1702.	-275.	1580.	.0209	-.0809	-.0122	.1557	.0368	.0146	1577.
.3180	575.	-1967.	381.	-1660.	-429.	1432.	.0167	-.0816	-.0099	.1533	.0246	.0029	1514.
.3190	611.	-1885.	304.	-1555.	-705.	1246.	.0121	-.0816	-.0074	.1495	.0108	-.0103	1425.

ADLPIPE PAGE 1013

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.58.

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	RU								
TIME	IX	FY	FZ	MX	MY	MZ	DX	DY	DZ	PX	RY	RZ	STRESS	
(SEC)	(LB)	(LB)	(LB)	(FT-LB)	(FT-LB)	(FT-LB)	(IN)	(IN)	(IN)	(DEG)	(DEG)	(DEG)	(PSI)	
.3200	612.	-1753.	221.	-1386.	-891.	1039.	.0073	-.0812	-.0048	.1448	-.0037	-.0243	1313.	
.3210	579.	-1608.	153.	-1172.	-1023.	847.	.0023	-.0803	-.0021	.1400	-.0181	-.0382	1194.	
.3220	519.	-1490.	129.	-939.	-1080.	706.	-.0026	-.0791	.0006	.1356	-.0316	-.0512	1076.	
.3230	442.	-1406.	185.	-710.	-1038.	628.	-.0074	-.0776	.0031	.1319	-.0433	-.0624	947.	
.3240	351.	-1357.	322.	-495.	-890.	611.	-.0120	-.0760	.0054	.1292	-.0526	-.0716	801.	
.3250	244.	-1344.	495.	-288.	-659.	642.	-.0162	-.0743	.0074	.1276	-.0591	-.0784	650.	
.3260	128.	-1335.	668.	-76.	-373.	690.	-.0200	-.0725	.0093	.1268	-.0526	-.0830	531.	
.3270	12.	-1293.	812.	154.	-67.	713.	-.0231	-.0706	.0109	.1268	-.0533	-.0858	494.	
.3280	-97.	-1208.	893.	397.	219.	676.	-.0255	-.0689	.0123	.1276	-.0615	-.0871	548.	
.3290	-185.	-1082.	899.	641.	443.	557.	-.0272	-.0672	.0135	.1288	-.0577	-.0875	645.	
.3300	-230.	-927.	839.	865.	581.	353.	-.0280	-.0658	.0141	.1304	-.0574	-.0875	741.	
.3310	-213.	-770.	736.	1039.	616.	81.	-.0280	-.0647	.0144	.1322	-.0458	-.0873	816.	
.3320	-127.	-646.	624.	1130.	551.	-227.	-.0271	-.0640	.0143	.1341	-.0385	-.0871	861.	
.3330	29.	-576.	539.	1113.	409.	-536.	-.0255	-.0637	.0137	.1359	-.0306	-.0869	877.	
.3340	238.	-577.	488.	991.	213.	-809.	-.0230	-.0637	.0126	.1374	-.0223	-.0864	874.	
.3350	469.	-642.	457.	787.	-13.	-1015.	-.0197	-.0641	.0110	.1382	-.0138	-.0855	866.	
.3360	688.	-743.	433.	531.	-241.	-1142.	-.0156	-.0646	.0089	.1382	-.0055	-.0839	864.	
.3370	866.	-849.	405.	257.	-444.	-1184.	-.0110	-.0653	.0064	.1373	.0023	-.0814	870.	
.3380	977.	-946.	350.	-10.	-610.	-1137.	-.0057	-.0660	.0035	.1352	.0093	-.0781	870.	
.3390	1011.	-1036.	260.	-257.	-737.	-997.	-.0000	-.0667	.0003	.1318	.0153	-.0739	853.	
.3400	979.	-1126.	159.	-497.	-818.	-765.	.0060	-.0673	-.0032	.1272	.0202	-.0690	826.	
.3410	902.	-1239.	81.	-756.	-855.	-444.	.0122	-.0679	-.0068	.1215	.0240	-.0638	825.	
.3420	807.	-1404.	44.	-1061.	-857.	-35.	.0184	-.0685	-.0106	.1148	.0269	-.0585	919.	
.3430	717.	-1629.	59.	-1420.	-839.	443.	.0245	-.0691	-.0144	.1072	.0293	-.0535	1151.	
.3440	650.	-1901.	128.	-1835.	-809.	957.	.0303	-.0697	-.0181	.0990	.0312	-.0491	1498.	
.3450	612.	-2201.	229.	-2290.	-785.	1485.	.0358	-.0702	-.0216	.0902	.0330	-.0455	1907.	
.3460	600.	-2495.	325.	-2755.	-784.	1923.	.0408	-.0706	-.0249	.0811	.0348	-.0430	2325.	
.3470	607.	-2730.	379.	-3186.	-820.	2280.	.0453	-.0709	-.0276	.0719	.0367	-.0416	2698.	
.3480	621.	-2868.	360.	-3546.	-856.	2498.	.0491	-.0709	-.0299	.0627	.0388	-.0413	2985.	
.3490	635.	-2899.	256.	-3817.	-1011.	2561.	.0572	-.0705	-.0316	.0536	.0410	-.0421	3173.	
.3500	657.	-2831.	84.	-3997.	-1160.	2481.	.0546	-.0696	-.0327	.0449	.0434	-.0437	3266.	
.3510	693.	-2623.	-123.	-4092.	-1326.	2278.	.0561	-.0681	-.0332	.0367	.0461	-.0460	3281.	
.3520	743.	-2491.	-331.	-4118.	-1485.	1984.	.0567	-.0659	-.0331	.0291	.0491	-.0486	3240.	
.3530	809.	-2287.	-507.	-4085.	-1616.	1637.	.0565	-.0631	-.0326	.0221	.0521	-.0513	3160.	
.3540	896.	-2037.	-622.	-3996.	-1706.	1272.	.0553	-.0593	-.0317	.0159	.0552	-.0538	3051.	
.3550	995.	-1897.	-673.	-3840.	-1747.	912.	.0534	-.0548	-.0304	.0104	.0581	-.0561	2909.	
.3560	1087.	-1714.	-674.	-3604.	-1735.	563.	.0507	-.0493	-.0287	.0056	.0603	-.0579	2723.	
.3570	1144.	-1520.	-643.	-3274.	-1670.	226.	.0475	-.0430	-.0268	.0014	.0613	-.0591	2482.	

ADLPIPE PAGE 1014

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.58.

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

.3460	600.	-2491.	325.	-2755.	-784.	1923.	.0408	-.0706	-.0249	.0811	.0348	-.0430	2325.
.3470	607.	-2730.	379.	-3186.	-820.	2280.	.0453	-.0709	-.0276	.0719	.0367	-.0416	2698.
.3480	621.	-2868.	360.	-3546.	-896.	2498.	.0491	-.0709	-.0299	.0627	.0388	-.0413	2985.
.3490	635.	-2899.	256.	-3817.	-1011.	2561.	.0522	-.0705	-.0316	.0536	.0410	-.0421	3173.
.3500	657.	-2831.	84.	-3997.	-1160.	2481.	.0546	-.0696	-.0327	.0449	.0434	-.0437	3266.
.3510	693.	-2683.	-123.	-4092.	-1326.	2278.	.0561	-.0681	-.0332	.0367	.0461	-.0460	3281.
.3520	743.	-2491.	-331.	-4118.	-1485.	1984.	.0567	-.0659	-.0331	.0291	.0491	-.0486	3240.
.3530	809.	-2287.	-507.	-4085.	-1616.	1637.	.0565	-.0631	-.0326	.0221	.0521	-.0513	3160.
.3540	896.	-2087.	-622.	-3996.	-1706.	1272.	.0553	-.0593	-.0317	.0159	.0552	-.0538	3051.
.3550	995.	-1897.	-673.	-3840.	-1747.	912.	.0534	-.0548	-.0304	.0104	.0581	-.0561	2909.
.3560	1083.	-1714.	-674.	-3604.	-1735.	563.	.0507	-.0493	-.0287	.0056	.0603	-.0579	2723.
.3570	1144.	-1520.	-643.	-3274.	-1670.	226.	.0475	-.0430	-.0268	.0014	.0613	-.0591	2482.

ADLPIPE PAGE 1014

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.58.

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

SECTION	MEMBER	SEQUENCE	LOCATION	BEG	TYPE	RU								
TIME (SEC)	FX (LB)	FY (LB)	FZ (LB)	MX (FT-LB)	MY (FT-LB)	MZ (FT-LB)	DX (IN)	DY (IN)	DZ (IN)	RX (DEG)	RY (DEG)	RZ (DEG)	STRESS (PSI)	
.3580	1171.	-1301.	-591.	-2844.	-1566.	-94.	.0437	-.0360	-.0247	-.0022	.0508	-.0599	2190.	
.3590	1163.	-1053.	-533.	-2522.	-1440.	-388.	.0397	-.0285	-.0224	-.0053	.0587	-.0600	1860.	
.3600	1113.	-784.	-476.	-1728.	-1300.	-657.	.0355	-.0206	-.0200	-.0080	.0548	-.0595	1523.	
.3610	1028.	-502.	-413.	-1096.	-1155.	-897.	.0312	-.0126	-.0176	-.0103	.0489	-.0584	1232.	
.3620	920.	-222.	-336.	-462.	-1017.	-1098.	.0269	-.0047	-.0151	-.0124	.0412	-.0566	1056.	
.3630	803.	42.	-242.	142.	-900.	-1251.	.0227	.0027	-.0126	-.0141	.0320	-.0543	1043.	
.3640	679.	286.	-137.	694.	-805.	-1361.	.0186	.0096	-.0102	-.0157	.0215	-.0514	1164.	
.3650	547.	517.	-35.	1185.	-732.	-1443.	.0145	.0158	-.0076	-.0173	.0100	-.0480	1352.	
.3660	405.	740.	44.	1610.	-680.	-1502.	.0104	.0212	-.0051	-.0191	-.0021	-.0441	1554.	
.3670	254.	958.	87.	1970.	-646.	-1542.	.0062	.0258	-.0024	-.0211	-.0142	-.0398	1742.	
.3680	97.	1172.	92.	2261.	-616.	-1567.	.0020	.0298	.0003	-.0236	-.0259	-.0351	1900.	
.3690	-64.	1375.	63.	2478.	-575.	-1574.	-.0025	.0330	.0031	-.0267	-.0367	-.0300	2016.	
.3700	-222.	1545.	9.	2612.	-514.	-1553.	-.0072	.0356	.0060	-.0304	-.0460	-.0246	2077.	
.3710	-366.	1666.	-47.	2653.	-421.	-1499.	-.0122	.0377	.0090	-.0346	-.0534	-.0187	2073.	
.3720	-488.	1728.	-86.	2596.	-288.	-1410.	-.0174	.0393	.0120	-.0394	-.0588	-.0126	2001.	
.3730	-584.	1727.	-99.	2451.	-119.	-1287.	-.0227	.0405	.0148	-.0445	-.0522	-.0063	1868.	
.3740	-654.	1667.	-87.	2231.	80.	-1140.	-.0280	.0415	.0176	-.0497	-.0635	.0002	1690.	
.3750	-701.	1561.	-55.	1958.	299.	-982.	-.0332	.0422	.0202	-.0548	-.0631	.0068	1490.	
.3760	-735.	1428.	-11.	1656.	532.	-829.	-.0381	.0428	.0226	-.0597	-.0613	.0133	1299.	
.3770	-762.	1286.	29.	1351.	767.	-689.	-.0426	.0434	.0247	-.0642	-.0582	.0197	1146.	
.3780	-788.	1154.	59.	1068.	994.	-568.	-.0465	.0438	.0265	-.0681	-.0542	.0260	1055.	
.3790	-812.	1042.	82.	817.	1208.	-465.	-.0497	.0441	.0279	-.0713	-.0495	.0320	1032.	
.3800	-836.	945.	100.	601.	1405.	-376.	-.0520	.0444	.0289	-.0737	-.0443	.0377	1061.	
.3810	-863.	862.	112.	474.	1578.	-298.	-.0534	.0445	.0294	-.0753	-.0390	.0430	1119.	
.3820	-886.	800.	122.	293.	1722.	-229.	-.0538	.0445	.0296	-.0760	-.0337	.0477	1187.	
.3830	-907.	764.	130.	214.	1831.	-165.	-.0533	.0444	.0292	-.0759	-.0286	.0518	1248.	
.3840	-917.	744.	132.	183.	1901.	-105.	-.0517	.0442	.0284	-.0750	-.0239	.0550	1289.	
.3850	-915.	738.	130.	195.	1930.	-47.	-.0492	.0440	.0271	-.0735	-.0197	.0576	1308.	
.3860	-905.	744.	126.	242.	1918.	10.	-.0458	.0436	.0254	-.0714	-.0159	.0594	1303.	
.3870	-882.	749.	119.	311.	1867.	73.	-.0416	.0433	.0232	-.0690	-.0125	.0607	1277.	
.3880	-843.	744.	111.	382.	1779.	151.	-.0367	.0429	.0207	-.0665	-.0093	.0618	1231.	
.3890	-787.	724.	110.	442.	1659.	247.	-.0310	.0424	.0177	-.0640	-.0062	.0628	1169.	
.3900	-715.	686.	114.	477.	1510.	359.	-.0249	.0419	.0144	-.0618	-.0030	.0641	1094.	
.3910	-634.	622.	111.	468.	1334.	484.	-.0183	.0414	.0107	-.0599	.0002	.0658	1007.	
.3920	-549.	545.	96.	430.	1131.	615.	-.0114	.0407	.0069	-.0582	.0036	.0682	915.	
.3930	-460.	471.	71.	362.	906.	739.	-.0043	.0400	.0030	-.0568	.0070	.0713	825.	
.3940	-375.	403.	36.	267.	666.	848.	.0027	.0392	-.0010	-.0555	.0105	.0750	749.	
.3950	-300.	340.	-15.	149.	417.	937.	.0095	.0383	-.0048	-.0541	.0137	.0791	698.	

ADLPIPE PAGE 1015

DIS/ADLPIPE

ADLPIPE STRESS ANALYSIS

83/12/02. 18.26.58.

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

CONDITION 24