TABLE A-1. AMUNDSEN-SCOTT STATION SEWAGE TESTING RESULTS

CONSTITUENT	24-Nov-94 (mg/L)	24-Nov-94 (mg/L)	24-Nov-94 (mg/L)	7-Dec-94 (mg/L)	14-Nov-95 (mg/L)	15-Nov-95 (mg/L)	17-Dec-95 (mg/L)	25-Jan-96 (mg/L)	21-Nov-96 (mg/L)	8-Jan-97 (mg/L)	27-Jan-97 (mg/L)	04-Dec-97 (mg/L)	27-Dec-97 (mg/L)	26-Jan-98 (mg/L)	03-Dec-98 (mg/L)	02-Dec-99 (mg/L)	18-Jan-01 (mg/L)	03-Jan-02 (mg/L)	12-Feb-03 (mg/L)
Characteristic Pollutants																			
Ammonia	4.8	12	4.8	73.5	NA	26.49	27.84	NA	26.80	27.84	12.70	26.22	1.36	14.90	10	NA	NA	NA	NA
Total Kjeldhal Nitrogen	ND	ND	ND	220	138	NA	NA	NA	NA	NA	NA	210	NA	NA	200	NA	NA	NA	NA
Nitrate + Nitrite	0.093	0.068	0.067	ND	0.378	NA	NA	NA	NA	NA	0.23	0.80	NA	NA	0.33	NA	NA	NA	NA
Oil, Grease and Hydrocarbons	ND	ND	16	250	NA	2.6	55.2	170.2	ND	167	146	67	264	NA	58	NA	NA	NA	NA
Orthophosphates	NA	NA	NA	NA	NA	9.94	14.23	NA	11.90	14.23	11.76	23.63	1.10	15.30	1.6	NA	NA	NA	NA
Total Recoverable Phenolics	NA	NA	NA	NA	0.192	NA	NA	NA	NA	NA	1.6	ND	NA	NA	ND	NA	NA	NA	NA
Total Solids	1,310	1,780	600	1,645	NA	1,640	1,332	1,828	520	930	1,244	2,240	2,808	1,724	917	NA	NA	NA	NA
Total Suspended Solids	207	247	120	485	NA	274	184	210	520	186	238	486	418	723	153	NA	NA	NA	NA
Volatile Suspended Solids	200	240	87	485	NA	265	184	184	440	180	220	478	400	646	147	NA	NA	NA	NA
Biochemical Oxygen Demand	1,040	1,410	760	910	NA	966	596	1,420	966	588	615	842	1,681	1,108	470	NA	NA	NA	NA
Chemical Oxygen Demand	2,080	3,000	2,120	2,080	NA	1,800	1,360	2,270	3,000	1,250	1,600	2,560	2,571	1,316	1,160	NA	NA	NA	NA
Volatile and Semi-Volatile Organics																			
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.054	0.026	NA	NA	0.037	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	0.0006
Benzoic Acid	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	2.6	NA	NA	0.870	ND	ND	ND	ND
Bis-2(ethylhexyl)phthalate	NA	NA	NA	NA	0.024	NA	NA	NA	NA	NA	0.22	ND	NA	NA	ND	ND	4.4	0.018	0.018
Chloroform	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	NA	NA	ND	ND	ND	ND	0.001
1,4-Dichlorobenzene	ND	ND	ND	ND	0.004	NA	NA	NA	NA	NA	0.0087	0.0041	NA	NA	ND	ND	ND	0.02	0.0071
2,4-Dichlorophenol	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	NA	NA	ND	ND	ND	ND	0.047
Diethylphthalate	NA	NA	NA	NA	0.004	NA	NA	NA	NA	NA	ND	ND	NA	NA	ND	ND	ND	ND	0.002
Ethyl Benzene	ND	ND	ND	ND	0.005	NA	NA	NA	NA	NA	ND	0.0041	NA	NA	ND	ND	ND	ND	ND
4-Isopropyltoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	0.0005
3,4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	0.084	0.061
4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.058	ND	NA	NA	0.040	ND	ND	ND	ND
Phenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	ND	ND	ND	ND	0.05
Toluene	ND	ND	ND	0.005	0.002	NA	NA	NA	NA	NA	ND	0.042	NA	NA	ND	ND	ND	ND	ND
m,p-Xylenes	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND	0.017	NA	NA	ND	ND	ND	ND	ND
o-Xylenes	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND	0.0039	NA	NA	ND	ND	ND	ND	ND
Metals																			
Cadmium	ND	ND	ND	0.0036	0.0003	NA	NA	NA	NA	NA	ND	ND	NA	NA	0.011	ND	0.005	0.001	0.0007
Chromium	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND		NA	NA	NA	0.007	0.018	0.012	0.007
Copper	2.3	1.7	1.7	4.6	1.9	NA	NA	NA	NA	NA	1.15	8.5	NA	NA	ND	0.78	2.1	2.6	1.8
Lead	ND	ND	ND	0.053	0.026	NA	NA	NA	NA	NA	0.011	0.073	NA	NA	ND	0.25	0.61	0.1	0.013
Mercury	ND	ND	ND	0.00024	0.0002	NA	NA	NA	NA	NA	ND	ND	NA	NA	0.00047	0.0001	0.0008	ND	0.00016
Nickel	NA	NA	NA	NA	0.011	NA	NA	NA	NA	NA	0.024	0.03	NA	NA	ND	ND	0.02	0.012	0.036
Selenium	ND	ND	ND	0.0013	0.002	NA	NA	NA	NA	NA	0.0042	ND	NA	NA	ND	ND	ND	ND	ND
Silver	ND	ND	ND	0.0004	0.001	NA	NA	NA	NA	NA	0.022	ND	NA	NA	ND	ND	ND	ND	0.0004
Thallium	NA	NA	NA	NA	0.001	NA	NA	NA	NA	NA	0.0133	ND	NA	NA	ND	ND	ND	ND	ND
Zinc	NA	NA	NA	NA	0.266	NA	NA	NA	NA	NA	0.255	0.73	NA	NA	ND	0.1	1.3	0.37	0.178

NOTES:
NA = Not Analyzed
ND = Not detected

TABLE A-2. WASTEWATER CHARACTERIZATION SAMPLE RESULTS FOR UNTREATED WASTEWATER (McMURDO STATION)

GRAB SAMPLES ID	DATE & TIME	STATION POPULATION	AVERAGE FLOW (liters/minute)	pH (units)	SPECIFIC CONDUCTIVIITY (umhos/cm)	TEMPERATURE (C)	SETTLEABLE SOLIDS (ml/L)	TOTAL SUSPENDED SOLIDS (mg/L)	BOD (mg/L)	AMMONIA (mg/L-N)
G-1	02/02/1999 14:15	1,101	151	8.64		22.0		65	265	8.8
G-2	02/03/1999 10:40	1,046	148	8.90	900	21.0		88	249	12.3
G-3	02/04/1999 14:30	1,064	230	9.29	820	22.5	7.0	143	185	9.6
G-4	02/04/1999 18:30	1,064	202	9.26	500	23.5	3.5	136	281	7.6
G-5	02/04/1999 22:30	1,064	98	8.57	600	22.0	7.0	97	500	11.0
G-6	02/05/1999 2:30	1,040	44	8.97	480	20.0	4.0	167	180	19.0
G-7	02/05/1999 6:30	1,040	199	8.13	670	26.0	16.0	332	500	21.2
G-8	02/05/1999 10:30	1,040	167	8.45	500	24.0	15.0	348	500	10.9
G-9	02/05/1999 14:30	1,040	189	8.73	680	24.0	15.0	277	246	12.9
G-10	02/06/1999 14:30	1,061	177	8.54	600	24.0	10.0	117	281	11.6
G-11	02/07/1999 14:30	1,074	183	9.00	725	22.0	22.0	256	500	7.5
G-12	02/08/1999 14:30	962	154	9.33	1,000	31.0	5.0	151	320	10.6

COMPOSITE SAMPLES ID	DATE & TIME	STATION POPULATION	FLOW (liters/day)	pH (units)	SPECIFIC CONDUCTIVIITY (umhos/cm)	TEMPERATURE (C)	SETTLEABLE SOLIDS (ml/L)	TOTAL SUSPENDED SOLIDS (mg/L)	BOD (mg/L)	AMMONIA (mg/L-N)
C-1	2/2 - 2/3 (24 hrs)	1,101	273,656	8.45	850	N/A	N/A	188	405	14.4
C-2	2/3 - 2/4 (24 hrs)	1,046	269,114	9.16	600	N/A	N/A	239	373	16.2
C-3	2/4 - 2/5 (24 hrs)	1,064	259,273	8.80	680	N/A	N/A	257	500	17.3
C-4	2/5 - 2/6 (24 hrs)	1,040	275,170	8.09	650	N/A	N/A	68	250	19.5
C-5	2/6 - 2/7 (24 hrs)	1,061	251,703	8.51	675	N/A	N/A	140	382	27.9
C-6	2/7 - 2/8 (24 hrs)	962	250,189	8.55	800	N/A	N/A	228	475	36.4
	Maximum	1,101	275,170	9.16	850	N/A	N/A	257	500	36.4
	Minimum	962	250,189	8.09	600	N/A	N/A	68	250	14.4
	Average	1,046	263,184	8.59	709	N/A	N/A	187	398	21.9
	Standard Deviation	46	10,995	0.36	95	N/A	N/A	72	89	8.5
	Average per capita Pollutant Loading (kg/person/day)	N/A	N/A	N/A	N/A	N/A	N/A	**0.047**	**0.100**	**0.006**

N/A = Not applicable