

RESEARCH REPORT NO. 3

June 1, 1961

A summary of Reference Gas Analyses with Applied Physics Corporation
Infrared Gas Analysers Nos. 46 and 55
September 9, 1959 to March 9, 1961

I. Introduction

This report presents a summary of measurements of the concentration of carbon dioxide in specially prepared mixtures in nitrogen gas. The measurements were obtained at the Scripps Institution of Oceanography with the aid of continuous-flow infrared gas analysers manufactured by the Applied Physics Corporation of Pasadena, California.

Index values proportional to concentration have been calculated from observed differences in scale readings of the analysers. The method of measurement and the calculation of index values are as described in Research Report No. 1, October 15, 1958 and Research Report No. 2, June 1, 1961 (referred to as "Report I" and "Report II" hereafter). The format of this report follows closely that of Report II.

II. Succession of Standard Tanks

During the period of this report several standard tanks were retired from use and replaced with substandard tanks raised to the status of standards. On November 9, 1959, Tank 2425 was assigned as high span tank for the remaining period of this report. On November 11, 1959, Tank 164 was assigned as low span tank for the remaining period of the report. On the same date Tank 4296 was discontinued as low span tank. Also on the same date Tank 1004 became a new primary standard and Tank 4260 was retired as a primary standard. On August 2, 1960, Tank 3759 became a primary standard and Tank 1004 was retired. At the closing date of the report Tank 2423 became a primary standard but without retiring Tank 3759.

The final index values of all standard tanks used for the period of this report appear in Table 13.

In figure 1 is shown a diagram illustrating usage of tanks for the period of both Report II and Report III. A dotted line indicates a period during which an index value was being established on a new tank. Arrows point from standard tanks used to establish a new tank to the new tank being established.

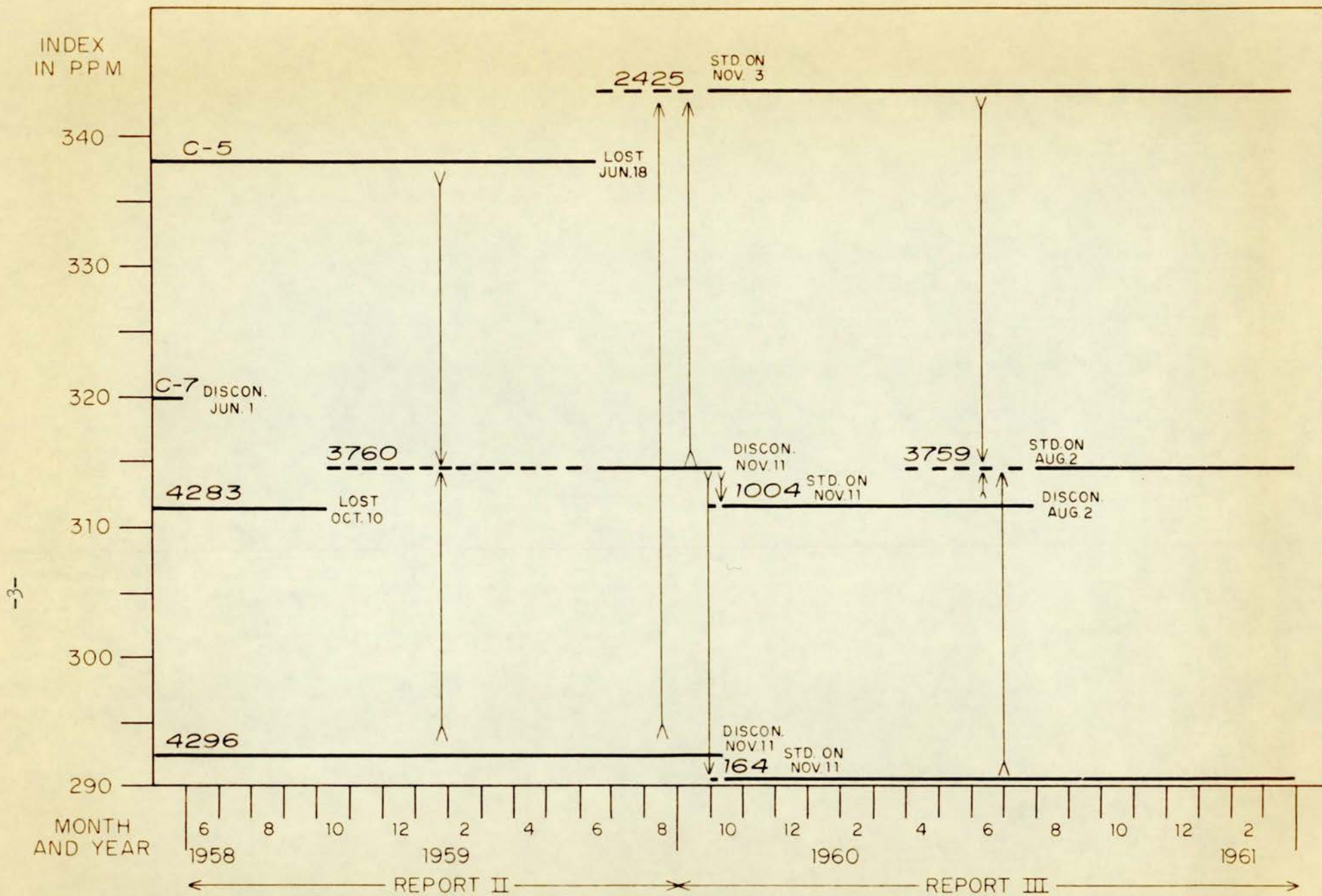
III. Index Differences

Index differences in column 5 of Tables 3 and 4 were obtained from the index values of the separate tanks listed in Table 13, as follows:

3760 vs. 4296	$314.60 - 292.68 = 21.92$
2425 vs. 3760	$343.30 - 314.60 = 28.70$
2425 vs. 4296	$343.30 - 292.68 = 50.62$
2425 vs. 1004	$343.30 - 311.30 = 32.00$
2425 vs. 164	$343.30 - 290.29 = 53.01$
1004 vs. 4296	$311.30 - 292.68 = 18.62$
1004 vs. 164	$311.30 - 290.29 = 21.01$
2425 vs. 3759	$343.30 - 314.27 = 29.03$
3759 vs. 164	$314.27 - 290.29 = 23.98$

Key to Early Tank Numbering System

A-1	2406
A-2	2419
A-3	2407
A-4	2400
A-5	2427
A-6	193
A-7	2401
A-8	136
A-9	1008
A-10	2403
A-11	2399
A-12	148
A-13	2408
A-14	2420
A-15	2404
A-16	2405
A-17	181
A-18	2402
A-19	132, 2424
A-20	2421
A-22	3751
A-23	3754
A-24	4271
A-25	4273
A-26	4276
A-27	4278
A-28	4283
A-29	4289
A-30	4290
A-31	6052
A-32	6060
A-33	6073
A-34	6078
C-5	164
C-7	221
C-8	1004



PROGRESSION OF STANDARD REFERENCE GASES

Table 1. Reference Gas Comparisons with Analyser No. 46

Col: 1	2	3	4	5	6	7	8	9
(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. Of Compari- sons	Recorder Scale Factor	Computed Index Difference	Computed Index	Table and Sheet No.	Date of Analysis
<u>Span 500</u>								<u>1959</u>
3760	4296	-30.52	13	24.94	-	-	3 96	Sept. 16
3760	2425	39.90	11		28.80	343.40	5 96	
4296	2425	70.22	10		50.68	343.36	5 96	
3760	4292	39.77	11		28.70	343.30	12B 96	
3760	2418	-3.18	10		-2.30	312.30	12D 96	
3760	4286	3.47	9		2.50	317.10	12D 97	
3760	2423	3.62	10		2.61	317.21	12D 97	
3760	3759	-6.30	10		-4.55	310.05	12D 97	
3760	4272	8.07	10		5.82	320.42	12A 97	
3760	6051	-6.32	10	24.93	-4.56	310.04	12D 97	
3760	4296	-30.21	10		-	-	3 97	
<u>Span 310</u>								
3760	4296	21.88	13		-	-	3 99	Oct. 6
<u>Span 500</u>								
3760	4296	33.37	12		-	-	3 99	Oct. 6
<u>Span 310</u>								
3760	4296	-20.38	11	16.92	-	-	3 101	Oct. 19
3760	2425	26.70	10		28.40	343.00	5 101	
4296	2425	47.55	10		50.58	343.26	5 101	
3760	4284	-5.28	11		-5.62	308.98	12D 101	

Table 1. Reference Gas Comparisons with Analyser No. 46

Col: 1	2	3	4	5	6	7	8	9
(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. Of Compari- sons	Recorder Scale Factor	Computed Index Difference	Computed Index	Table and Sheet No.	Date of Analysis
<u>Span 310</u>								<u>1959</u>
3760	4296	-22.32	13	18.33	-	-	3 102	Nov. 3
3760	2425	29.13	12		28.61	343.21	5 102	
4296	2425	51.49	10		50.56	343.24	5 102	
3760	2418	-8.52	12		-8.37	306.23	12D 102	
3760	2423	-22.77	10		-22.36	292.24	12A 102	
3760	2425	29.25	6		28.72	343.32	5 102A	
4296	1004	18.88	12	18.27	18.60	311.28	5 104	Nov. 9
2425	1004	-32.43	11		-31.95	311.35	5 104	
2425	4296	-51.36	12		-	-	3 104	
3760	1004	-3.38	13		-3.33	311.27	5 104	
1004	164	-21.32	13		-21.00	290.30	12G 104	
3760	164	-24.71	12		-24.34	290.26	5 105	
4296	164	-2.41	11		-2.37	290.31	5 105	
2425	1004	-32.51	10		-32.03	311.27	5 105	
1004	4269	10.48	10		10.33	321.63	12C 105	
1004	164	-21.41	11	18.24	-21.13	290.17	12G 106	Nov. 10
4296	164	-2.40	14		-2.37	290.31	5 106	
3760	164	-24.67	11		-24.35	290.25	5 106	
3760	1004	-3.44	11		-3.40	311.20	5 106	
2425	1004	-32.44	10		-32.01	311.29	5 106	
1004	4269	10.51	10		10.37	321.67	12C 107	
1004	4293	-13.88	11		-13.70	297.60	12C 107	
1004	164	-21.43	12		-21.15	290.15	12G 107	
1004	4284	-2.38	12		-2.35	308.95	12D 107	
1004	4287	-17.92	12		-17.68	293.62	12D 108	

Table 1. Reference Gas Comparisons with Analyser No. 46

Col: 1	2	3	4	5	6	7	8	9
(Sub)		Observed	No. Of	Recorder	Computed		Table and	
Standard	Compared	Scale	Compari-	Scale	Index	Computed	Sheet	Date of
Tank No.	Tank No.	Difference	sons	Factor	Difference	Index	No.	Analysis
<u>Span 310</u>								<u>1959</u>
2425	1004	-32.27	13	18.21	-31.90	311.40	5 109	Nov. 11
3760	2425	29.08	11		-	-	3 109	
3760	1004	-3.35	15		-3.31	311.29	5 109	
1004	164	-21.32	13		-21.07	290.23	12G 109	
4296	164	-2.39	11		-2.36	290.32	5 109	
1004	4293	-13.85	11		-13.69	297.61	12C 110	
1004	4269	10.47	10		10.35	321.65	12C 110	
1004	4292	32.39	9		32.02	343.32	12B 110	
2425	1004	-32.26	5		-31.89	311.41	5 110	
2425	164	-53.39	13	18.19	-	-	3 111	Nov. 12
1004	2425	32.29	11		-	-	3 111	
1004	164	-21.36	11		-	-	3 111	
1004	4285	-8.05	18		-7.97	303.33	12D 111	
1004	6074	-4.98	10		-4.93	306.37	12D 111	
1004	3753	14.31	10		14.16	325.46	12D 112	
1004	4274	-9.86	10		-9.76	301.54	12D 112	
1004	164	-21.22	9		-	-	3 112	
1004	3758	-21.58	7		-21.35	289.95	12B 112	
2425	164	-53.62	10	18.18	-	-	3 113	Nov. 13
1004	2425	32.39	10		-	-	3 113	
1004	164	-21.17	10		-	-	3 113	
1004	4284	-2.33	11		-2.31	308.99	12D 113	
1004	G-7(221)	9.01	10		8.92	320.22	12G 113	
1004	LGO 16	44.22	12		43.78	355.08	12F 114	
2425	LGO 16	12.01	9		11.89	355.19	12F 114	
1004	LGO 8	12.21	10		12.09	323.39	12F 114	
164	LGO 10	-16.00	8		-15.84	274.45	12F 114	
1004	164	-21.24	10		-	-	3 114	

Table 1. Reference Gas Comparisons with Analyser No. 46

Col: 1	2	3	4	5	6	7	8	9
(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. Of Compari- sons	Recorder Scale Factor	Computed Index Difference	Computed Index	Page and Sheet No.	Date of Analysis
Span 310								1959
2425	164	-53.67	11	18.25	-	-	3 115	Dec. 4
1004	2425	32.45	8		-	-	3 115	
1004	164	-21.33	13		-	-	3 115	
1004	6067	-3.61	10		-3.56	307.74	12D 115	
1004	6081	-7.10	10		-7.00	304.30	12D 115	
1004	4284	9.42	11		9.29	320.59	12A 116	
1004	6071	0.11	10		0.11	311.41	12B 116	
1004	4285	7.19	9		7.09	318.39	12A 116	
2425	164	-53.72	6		-	-	3 116	
1004	164	-21.19	10	18.20	-	-	3 118	Dec. 22
1004	3758	-21.56	14		-21.32	289.98	12B 118	
1004	4286	0.51	9		0.50	311.80	12B 118	
1004	4286	0.49	9		0.48	311.78	12B 118	
3760	4286	-2.81	11		-2.78	311.82	12B 119	
3760	6071	-3.48	11		-3.44	311.16	12B 119	
1004	3760	3.41	11		3.37	314.67	12G 119	
1004	164	-21.34	7		-	-	3 119	

Table 1. Reference Gas Comparisons with Analyser No. 46

Col: 1	2	3	4	5	6	7	8	9
(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. Of Compari- sons	Recorder Scale Factor	Computed Index Difference	Computed Index	Table and Sheet No.	Date of Analysis
<u>Span 310</u>								<u>1960</u>
1004	164	-20.77	12	17.79	-	-	3 122	Jan. 22
1004	7344	3.02	13		3.06	314.36	5 122	
164	7344	23.79	12		24.07	314.36	5 122	
7344	7361	5.63	16		5.70	320.04	12C 122	
7344	7350	1.06	12		1.07	315.41	12A 122	
7344	4286	-2.51	18		-2.54	311.80	12B 123	
1004	164	20.67	11	17.76	-	-	3 124	Jan 26
1004	7344	2.98	11		3.02	314.32	5 124	
164	7344	23.73	10		24.05	314.34	5 124	
7344	4272	-13.28	12		-13.46	300.88	12D 124	
7344	4275	-10.69	10		-10.83	303.51	12D 124	
7344	3759	-3.78	10		-3.83	310.51	12D 125	
7344	4288	-2.71	12		-2.75	311.59	12D 125	
7344	4286	-2.52	14		-2.55	311.79	12B 125	
2425	4292	0.07	9		0.07	343.37	12B 125	
1004	2425	31.64	11		-	-	3 125	
1004	3760	3.36	13		3.41	314.71	12G 126	

Table 1. Reference Gas Comparisons with Analyser No. 46

Col: 1	2	3	4	5	6	7	8	9
(Sub)		Observed	No. Of	Recorder	Computed		Table and	
Standard	Compared	Scale	Compari-	Scale	Index	Computed	Sheet	Date of
Tank No.	Tank No.	Difference	sons	Factor	Difference	Index	No.	Analysis
<u>Span 310</u>								<u>1960</u>
1004	164	20.72	12	17.78	-	-	3 127	Feb. 2
1004	7344	3.02	11		3.06	314.36	5 127	
164	7344	23.88	12		24.18	314.47	5 127	
7344	7362	-12.22	10		-12.37	301.97	12D 127	
7344	7364	4.74	12		4.80	319.14	12A 127	
7344	7366	-8.01	14		-8.11	306.23	12D 128	
7344	2400	-3.11	12		-3.15	311.19	12C 128	
7344	193	-2.58	12		-2.61	311.73	12C 128	
7344	A-12 (148)	-9.27	10		-9.38	304.96	12C 128	
164	7344	23.69	9		23.98	314.27	5 129	
1004	164	-21.49	10	18.56	-	-	3 132	Feb. 12
1004	7344	3.18	12		3.08	314.38	5 132	
164	7344	24.94	10		24.19	314.48	5 132	
7344	7350	0.87	10		0.84	315.18	12A 132	
1004	7350	3.91	12		3.79	315.09	12A 132	
7344	6067	-2.44	12		-2.37	311.97	12B 133	
7344	6081	-7.94	12		-7.70	306.64	12D 133	
7344	4274	-13.09	10		-12.69	301.65	12D 133	
2425	7344	-29.95	6		-29.05	314.25	5 133	
7344	4284	15.35	14		14.89	329.23	12A 133	
7344	3753	11.88	10		11.52	325.86	12D 134	
7344	A-2 (2419)	4.12	12		4.00	318.34	12C 134	
2425	7344	-29.90	6		-29.00	314.30	5 134	

Table 1. Reference Gas Comparisons with Analyser No. 46

Col: 1	2	3	4	5	6	7	8	9
(Sub)		Observed	No. Of	Recorder	Computed		Table and	
Standard	Compared	Scale	Compari-	Scale	Index	Computed	Sheet	Date of
Tank No.	Tank No.	Difference	sons	Factor	Difference	Index	No.	Analysis
Span 310								1960
1004	2425	32.65	14	18.40	-	-	3 135	Feb. 19
1004	7344	3.07	11		3.00	314.30	5 135	
2425	7344	-29.60	10		-28.96	314.34	5 135	
1004	7350	3.76	9		3.68	314.98	12A 135	
7344	A-1(2406)	5.99	10		5.86	320.20	12C 135	
7344	2407	5.06	12		4.95	319.29	12C 137	
7344	4270	4.02	10		3.93	318.27	12C 136	
7344	4291	21.36	10		20.90	335.24	12C 136	
7344	4290	23.09	11		22.59	336.93	12C 136	
7344	6074	19.16	12		18.74	333.08	12A 136	
7344	A-5(2427)	57.62	11		56.37	370.71	12C 136	
2425	7344	-29.73	11		-29.08	314.22	5 137	
1004	2425	32.81	11	18.56	-	-	3 140	Mar. 4
2425	7344	-29.90	13		-29.00	314.30	5 140	
1004	7344	3.19	10		3.09	314.39	5 140	
1004	7350	3.62	11		3.51	314.81	12A 140	
7344	6067	-2.40	12		-2.33	312.01	12B 140	
7344	4286	-2.55	10		-2.47	311.87	12B 141	
7344	2423	-1.76	10		-1.71	312.63	5 141	
7344	7357	16.62	12		16.12	330.46	12A 141	
7344	A-10(2403)	7.46	12		7.23	321.57	12C 141	
7344	A-11(2399)	4.52	10		4.38	318.72	12C 141	
7344	A-15(2404)	4.30	10		4.17	318.51	12C 142	
7344	A-19(1323)	6.41	11		6.22	320.56	12C 142	
2425	7344	-29.87	11		-28.97	314.33	5 142	

Table 1. Reference Gas Comparisons with Analyser No. 46

Col: 1	2	3	4	5	6	7	8	9
(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. Of Compari- sons	Recorder Scale Factor	Computed Index Difference	Computed Index	Table and Sheet No.	Date of Analysis
<u>Span 310</u>								<u>1960</u>
1004	164	21.40	11	18.39	-	-	3 143	Mar. 10
1004	7344	3.14	11		3.08	314.38	5 143	
164	7344	24.61	12		24.11	314.40	5 143	
1004	7350	3.64	9		3.57	314.87	12A 143	
7344	4286	-2.47	10		-2.42	311.92	12B 143	
7344	6067	-2.33	11		-2.28	312.06	12B 144	
7344	3758	-11.84	10		-11.60	302.74	12D 144	
7344	A-16 (2405)	-13.31	12		-13.04	301.30	12C 144	
7344	A-20 (2421)	-3.99	11		-3.91	310.43	12C 144	
164	7344	24.61	11		24.11	314.40	5 144	
1004	2425	32.69	13	18.42	-	-	3 145	Mar. 11
1004	7344	3.13	16		3.06	314.36	5 145	
2425	7344	-29.61	11		-28.93	314.37	5 145	
1004	7350	3.50	11		3.42	314.72	12A 145	
7344	6067	-2.35	10		-2.30	312.04	12B 145	
7344	2408	-36.13	12		-35.31	279.03	12C 146	
164	7344	24.66	5		24.10	314.39	5 146	
7344	2424	59.87	10		58.50	372.84	12C 146	
7344	2402	24.22	12		23.67	338.01	12C 146	
2425	7344	-29.68	10		-29.00	314.30	5 146	

Table 1. Reference Gas Comparisons with Analyser No. 46

Col: 1	2	3	4	5	6	7	8	9
(Sub)		Observed	No. Of	Recorder	Computed		Table and	
Standard	Compared	Scale	Compari-	Scale	Index	Computed	Sheet	Date of
Tank No.	Tank No.	Difference	sons	Factor	Difference	Index	No.	Analysis
Span 310								1960
1004	2425	32.67	10	18.47	-	-	3	147
1004	7344	3.25	11		3.17	314.47	5	147
2425	7344	-29.68	11		-28.92	314.38	5	147
7344	6067	-2.38	10		-2.32	312.02	12B	147
7344	4274	-5.74	10		-5.59	308.75	12C	148
7344	4288	-10.89	10		-10.61	303.73	12C	148
7344	2423	-1.76	11		-1.72	312.62	5	148
1004	2423	1.44	10		1.40	312.70	5	148
7344	A-2(3419)	4.02	10		3.92	318.26	12C	148
7344	4292	29.64	10		28.89	343.23	12B	149
2425	7344	-29.70	5		-28.94	314.36	5	149
1004	164	-21.53	10	18.49	-	-	3	152
1004	3759	3.09	11		3.01	314.31	5	152
164	3759	24.64	10		23.99	314.28	5	152
1004	7350	3.63	9		3.53	314.83	12A	152
3759	7350	0.62	10		0.60	314.87	12A	152
3759	4285	-7.60	10		-7.40	306.87	12C	153
3759	3753	-2.53	10		-2.46	311.81	12C	153
164	3759	24.75	11		24.09	314.38	5	153
1004	2425	33.15	11	18.65	-	-	3	154
1004	3759	3.11	10		3.00	314.30	5	154
2425	3759	-30.14	10		-29.09	314.21	5	154
1004	7350	3.51	11		3.39	314.69	12A	154
3759	4270	4.21	10		4.06	318.33	12C	154
3759	4290	23.32	12		22.51	336.78	12C	155
3759	4291	21.74	10		20.98	335.25	12C	155
2425	3759	-29.94	10		-28.90	314.40	5	155

Table 1. Reference Gas Comparisons with Analyser No. 46

Col: 1	2	3	4	5	6	7	8	9
(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. Of Compari- sons	Recorder Scale Factor	Computed Index Difference	Computed Index	Table and Sheet No.	Date of Analysis
Span 310								1960
1004	164	-21.28	12	18.37	-	-	3 158	Apr. 14
1004	3759	3.09	10		3.03	314.33	5 158	
164	3759	24.54	10		24.05	314.34	5 158	
3759	A-20	-3.91	19		-3.83	310.44	12C 158	
3759	2418	-7.84	10		-7.68	306.59	12D 158	
3759	7361	6.07	11		5.95	320.22	12D 159	
3759	4270	4.06	10		3.98	318.25	12C 159	
3759	4290	23.06	12		22.60	336.87	12C 159	
3759	4291	21.44	10		21.01	335.28	12C 159	
2425	3759	-29.84	10		-29.24	314.06	5 159	
1004	164	-21.53	10	18.52	-	-	3 160	Apr. 28
1004	3759	3.07	9		2.98	314.28	5 160	
164	3759	24.72	9		24.03	314.32	5 160	
3759	4284	-4.00	10		-3.89	310.38	12C 160	
3759	2403	-5.64	10		-5.48	308.79	12C 160	
3759	2399	3.74	10		3.63	317.90	12A 161	
3759	4270	4.25	11		4.13	318.40	12C 161	
3759	4290	23.22	10		22.57	336.84	12C 161	
3759	4291	21.70	10		21.09	335.36	12C 161	
2425	3759	-29.93	10		-29.09	314.21	5 161	
1004	164	-21.44	9	18.58	-	-	4 164	May 11
1004	3759	2.97	11		2.88	314.18	5 164	
164	3759	24.70	10		23.93	314.22	5 164	
3759	4297	-8.79	10		-8.52	305.75	12D 164	
3759	6051	-4.19	10		-4.06	310.21	12D 164	
3759	7362	-13.02	10		-12.61	301.66	12D 165	
3759	2404	-9.06	10		-8.78	305.49	12C 165	
3759	148	-11.79	8		-11.42	302.85	12D 165	
3759	6067	-2.29	10		-2.22	312.05	12B 165	
164	3759	24.81	10		24.04	314.33	5 165	

Table 1. Reference Gas Comparisons with Analyser No. 46

Col: 1	2	3	4	5	6	7	8	9
(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. Of Compari- sons	Recorder Scale Factor	Computed Index Difference	Computed Index	Table and Sheet No.	Date of Analysis
<u>Span 310</u>								<u>1960</u>
1004	164	-21.42	11	18.46	-	-	4 166	June 2
1004	3759	3.00	11		2.93	314.23	5 166	
164	3759	24.57	10		23.96	314.25	5 166	
3759	4286	5.23	10		5.10	319.37	12A 166	
3759	7357	0.79	10		0.77	315.04	12C 166	
3759	7362	-4.42	10		-4.31	309.96	12D 167	
3759	4292	29.97	10		29.22	343.49	12B 167	
3759	4297	-8.67	10		-8.45	305.82	12D 167	
3759	7364	4.57	10		4.46	318.73	12A 167	
2425	3759	-30.01	10		-29.26	314.04	5 167	
1004	164	-21.40	10	18.44	-	-	3 170	June 22
1004	3759	3.05	11		2.98	314.28	5 170	
164	3759	24.61	10		24.02	314.31	5 170	
3759	2405	-8.47	10		-8.27	306.00	12C 170	
3759	132	-11.16	10		-10.89	303.38	12C 170	
3759	2418	-5.98	12		-5.84	308.43	12C 171	
3759	2421	-7.07	10		-6.90	307.37	12C 171	
3759	4290	23.23	10		22.68	336.95	12C 171	
3759	4291	21.71	10		21.19	335.46	12C 171	
2425	3759	-29.93	8		-29.22	314.08	5 171	
1004	164	-21.46	10	18.52	-	-	3 172	June 2
1004	3759	3.07	11		2.98	314.28	5 172	
164	3759	24.82	9		24.12	314.41	5 172	
3759	4297	-8.69	9		-8.45	305.82	12D 172	
3759	4270	4.21	10		4.09	318.36	12C 172	
3759	6051	-4.22	12		-4.10	310.17	12D 173	
2425	3759	-30.05	6		-29.21	314.09	5 173	
3759	3753	-2.54	12		-2.47	311.80	12C 173	
2425	3759	-29.78	5		-28.94	314.36	5 173	

Table 1. Reference Gas Comparisons with Analyser No. 46

Col: 1	2	3	4	5	6	7	8	9
(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. Of Compari- sons	Recorder Scale Factor	Computed Index Difference	Computed Index	Table and Sheet No.	Date of Analysis
Span 310								1960
1004	164	-21.50	10	18.55	-	-	3 174	June 30
1004	3759	3.06	11		2.97	314.27	5 174	
164	3759	24.76	10		24.03	314.32	5 174	
3759	4293	-17.20	10		-16.69	297.58	12C 174	
3759	4284	-4.09	10		-3.97	210.30	12C 174	
3759	2400	-3.40	9		-3.30	310.97	12C 175	
3759	3753	-2.51	11		-2.44	311.83	12C 175	
3759	7357	0.78	12		0.76	315.03	12C 175	
3759	4269	7.72	10		7.49	321.76	12C 175	
2425	3759	-30.08	10		-29.19	314.11	5 175	
1004	2425	33.09	12	18.62	-	-	3 176	July 1
1004	3759	3.06	11		2.96	314.26	5 176	
2425	3759	-29.96	10		-28.96	314.34	5 176	
3759	7357	0.81	10		0.78	315.05	12C 176	
3759	6067	-2.38	10		-2.30	311.97	12B 176	
3759	3753	-2.54	10		-2.46	311.81	12C 177	
3759	2400	-3.34	10		-3.23	311.04	12C 177	
3759	6051	-4.32	10		-4.18	310.09	12D 177	
3759	4297	-8.80	10		-8.51	305.76	12D 177	
3759	7350	-0.02	10		-0.02	314.25	12A 177	
164	3759	24.85	10		24.02	314.31	5 178	
1004	164	-21.45	10	18.48	-	-	3 179	July 25
1004	3759	3.05	10		2.97	314.27	5 179	
164	3759	24.63	10		23.99	314.28	5 179	
3759	2400	-3.31	10		-3.22	311.05	12C 179	
3759	193	-2.60	11		-2.53	311.74	12C 179	
3759	7358	-36.09	10		-35.15	279.12	12A 180	
3759	7351	-42.20	22		-41.10	273.17	12A 180	
3759	7364	4.53	10		4.41	318.68	12A 180	
3759	A-2	4.07	10		3.96	318.23	12C 180	
2425	3759	-29.95	11		-29.17	314.13	5 180	

Table 1 Reference Gas Comparisons with Analyser No. 46

Col: 1	2	3	4	5	6	7	8	9
(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. Of Compari- sons	Recorder Scale Factor	Computed Index Difference	Computed Index	Table and Sheet No.	Date of Analysis
<u>Span 310</u>								<u>1960</u>
1004	2425	32.24	12	18.50	-	-	3 181	July 26
1004	A-2	7.17	11		6.98	318.28	12C 181	
2425	A-2	-25.77	10		-25.07	318.23	12C 181	
3759*	4286	5.25	9		5.11	319.38	12A 181	
3759*	2407	4.69	11		4.56	318.83	12C 181	
3759*	7364	4.54	10		4.42	318.69	12A 182	
3759*	4291	21.64	10		21.06	335.33	12C 182	
3759*	2402	24.39	9		23.73	338.00	12C 182	
3759*	2425	29.85	11		-	-	3 182	
1004	164	-21.35	10	18.42	-	-	3 183	July 27
1004	7358	-32.85	11		-32.10	279.20	12A 183	
164	7358	-11.37	12		-11.11	279.18	12A 183	
3759*	7358	-36.01	11		-35.19	279.08	12A 183	
3759*	7351	-42.06	10		-41.10	273.17	12A 183	
3759*	2400	-3.33	10		-3.25	311.02	12C 184	
3759*	193	-2.46	10		-2.40	311.87	12C 184	
3759*	2407	4.57	10		4.47	318.74	12C 184	
3759*	4286	5.36	10		5.24	319.51	12A 184	
2425	3759	-29.95	10		-	-	3 184	
1004	164	-21.43	10	18.34	-	-	3 185	July 28
1004	7351	-38.67	11		-37.95	273.35	12A 185	
164	7351	-17.27	10		-16.95	273.34	12A 185	
3759	193	-2.46	10		-2.41	311.86	12C 185	
3759	2402	24.24	10		23.79	338.06	12C 185	
3759	4292	29.82	10		29.27	343.54	12B 186	
1004	7350	3.16	21		3.10	314.40	12A 186	
1004	2402	27.48	10		26.97	338.27	12C 186	

*Tank 3759 considered as Primary Standard July 26-27.

Table 1. Reference Gas Comparisons with Analyser No. 46

Col: 1	2	3	4	5	6	7	8	9
(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. Of Compari- sons	Recorder Scale Factor	Computed Index Difference	Computed Index	Table and Sheet No.	Date of Analysis
Span 310								1960
1004	2425	32.91	10	18.52	-	-	3 187	July 29
1004	3759	3.06	10		2.97	314.27	5 187	
2425	3759	-29.92	10		-29.08	314.22	5 187	
3759*	193	-2.47	10		-2.40	311.87	12C 187	
3759*	2402	24.30	10		23.62	337.89	12C 187	
164	3759	24.62	5		23.93	314.22	5 188	
3759*	7358	-36.15	6		-35.13	279.14	12A 188	
3759*	7351	-42.02	10		-40.84	273.43	12A 188	
3759*	7358	-36.05	6		-35.04	279.23	12A 188	
3759*	6067	-2.22	10		-2.16	312.11	12B 188	
164	3759	24.66	11		23.97	314.26	5 189	
164	7350	24.71	10		24.02	314.31	12A 189	
1004	164	-21.37	10	18.39	-	-	3 190	Aug. 2
1004	3759	3.08	11		3.01	314.31	5 190	
164	3759	24.53	11		24.01	314.30	5 190	
3759*	7366	-8.41	9		-8.23	306.04	12D 190	
3759*	4275	-10.91	10		-10.68	303.59	12D 190	
3759*	4272	-13.65	12		-13.36	300.91	12D 191	
3759*	7355	-43.49	10		-42.57	271.70	12F 191	
2425	3759	29.83	6		29.20	314.10	5 191	
3759*	6074	19.29	10		18.88	333.15	12F 191	
3759*	A-5(2425)	57.96	11		56.73	371.00	12C 191	
2425	3759	29.72	5		29.09	314.21	5 192	

*3759 considered as secondary July 29 and Aug. 2.

Table 1. Reference Gas Comparisons with Analyser No. 46

Col: 1	2	3	4	5	6	7	8	9
(Sub)		Observed	No. Of	Recorder	Computed		Table and	
Standard	Compared	Scale	Compari-	Scale	Index	Computed	Sheet	Date of
Tank No.	Tank No.	Difference	sons	Factor	Difference	Index	No.	Analysis
<u>Span 310</u>								
3759*	164	-24.44	10	18.39	-	-	3 193	1960
3759	2423	-1.63	9		-1.60	312.67	5 193	Aug. 3
164	2423	22.94	10		22.45	312.74	5 193	
1004	2423	1.52	10		1.49	312.79	5 193	
2423	4284	-2.36	10		-2.31	310.37	12C 193	
2423	3753	-0.97	10		-0.95	311.73	12C 194	
2423	7357	2.26	9		2.21	314.89	12C 194	
2423	2408	-34.33	10		-33.60	279.08	12C 194	
1004	7357	3.79	10		3.71	315.01	12C 194	
1004	2423	1.50	11		1.47	312.77	5 194	
3759	2425	29.84	12	18.46	-	-	3 195	Aug. 4
2425	2423	-31.50	11		-30.72	312.58	5 195	
3759	2423	-1.54	10		-1.50	312.77	5 195	
1004	2423	1.52	11		1.48	312.78	5 195	
2423	4290	24.56	10		23.95	336.63	12C 195	
2423	4284	-2.36	10		-2.30	310.38	12C 196	
2423	3753	-0.98	12		-0.96	311.72	12C 196	
2423	7357	2.29	10		2.23	314.91	12C 196	
2423	3760	2.01	11		1.96	314.64	12G 196	
2425	2423	-31.01	10		-30.24	313.06	5 196	
3759	164	-24.43	13	18.43	-	-	3 197	Aug. 9
3759	2423	-1.58	10		-1.54	312.73	5 197	
164	2423	23.13	10		22.59	312.88	5 197	
2423	4284	-2.43	10		-2.37	310.31	12C 197	
2423	3753	-0.92	10		-0.90	311.78	12C 197	
2423	7357	2.32	11		2.27	314.95	12C 198	
2423	2408	-34.48	10		-33.68	279.00	12C 198	
2423	4292	31.45	10		30.72	343.40	12B 198	
2423	LGO-10	-39.24	10		-38.32	274.36	12F 198	
164	2423	22.97	10		22.43	312.72	5 198	

*3759 advanced permanently to primary status.

Table 1. Reference Gas Comparisons with Analyser No. 46

Col:	1	2	3	4	5	6	7	8	9
	(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. Of Compari- sons	Recorder Scale Factor	Computed Index Difference	Computed Index	Table and Sheet No.	Date of Analysis
	Span 310								1960
	3759	2425	29.67	11	18.45	-	-	3 199	Aug. 10
	3759	2423	-1.50	9		-1.46	312.81	5 199	
	2425	2423	-31.46	10		-30.69	312.61	5 199	
	2423	4284	-2.43	11		-2.37	310.31	12C 199	
	2423	2426	31.20	10		30.44	343.12	12B 199	
	2423	LGO-8	9.97	10		9.73	322.41	12F 200	
	2423	LGO-16	43.20	10		42.15	354.83	12F 200	
	2423	2408	-34.38	11		-33.54	279.14	12C 200	
	164	2423	22.98	10		22.42	312.71	5 200	
	3759	2425	29.47	10	18.27	-	-	3 201	Aug. 15
	3759	2423	-1.55	11		-1.53	312.74	5 201	
	2425	2423	-30.97	10		-30.51	312.79	5 201	
	2423	7361	9.73	10		9.59	322.27	12D 201	
	2423	7366	4.78	10		4.71	317.39	12D 201	
	2423	C-7	7.72	10		7.61	320.29	12G 202	
	164	2423	22.80	5		22.46	312.75	5 202	
	2423	2408	-34.27	10		-33.76	278.92	12C 202	
	2423	4292	31.28	10		30.82	343.50	12B 202	
	2423	4296	-20.28	10		-19.98	292.70	12G 202	
	164	2423	22.84	5		22.50	312.79	5 203	
	3759	164	-24.49	10	18.39	-	-	3 204	Aug. 25
	3759	2423	-1.65	11		-1.62	312.65	5 204	
	164	2423	22.86	10		22.38	312.67	5 204	
	2423	2419	1.29	10		1.26	313.94	12C 204	
	3759	2406	-0.98	10		-0.96	313.31	12B 204	

Table 1. Reference Gas Comparisons with Analyser No. 46

Col:	1	2	3	4	5	6	7	8	9
	(Sub)		Observed	No. Of	Recorder	Computed		Table and	
	Standard	Compared	Scale	Compari-	Scale	Index	Computed	Sheet	Date of
	Tank No.	Tank No.	Difference	sons	Factor	Difference	Index	No.	Analysis
	<u>Span 310</u>								<u>1960</u>
	3759	164	-24.23	10	18.23	-	-	3 205	Sept. 1
	3759	2423	-1.61	11		-1.59	312.68	5 205	
	164	2423	22.73	10		22.44	312.73	5 205	
	2423	3758	-10.09	10		-9.96	302.72	12D 205	
	2423	7362	-2.74	9		-2.70	309.98	12D 205	
	3759	2406	-0.96	10		-0.95	313.32	12B 206	
	3759	2423	-1.60	8		-1.58	312.69	5 206	
	3759	164	-24.30	11	18.33	-	-	3 207	Sept. 8
	3759	2423	-1.59	12		-1.56	312.71	5 207	
	164	2423	22.90	10		22.49	312.78	5 207	
	2423	4272	1.18	9		1.16	313.84	12D 207	
	2423	4275	1.33	10		1.31	313.99	12D 207	
	164	2423	22.89	10		22.48	312.77	5 208	
	3759	164	-24.37	10	18.33	-	-	3 209	Sept. 22
	3759	2423	-1.63	11		-1.60	312.67	5 209	
	164	2423	22.76	10		22.35	312.64	5 209	
	2423	3758	-1.94	12		-1.91	310.77	12D 209	
	2423	7362	-11.63	10		-11.42	301.26	12D 209	
	2423	4296	-20.13	12		-19.77	292.91	12G 210	
	2423	3760	2.03	12		1.99	314.67	12G 210	
	164	2423	22.87	10		22.46	312.75	5 210	
	3759	164	-24.45	12	18.36	-	-	3 211	Oct. 3
	3759	2423	-1.68	11		-1.65	312.62	5 211	
	164	2423	22.80	9		22.35	312.64	5 211	
	2423	6067	-0.63	7		-0.62	312.06	12B 211	
	2423	4292	31.23	10		30.62	343.30	12B 211	

Table 1. Reference Gas Comparisons with Analyser No. 46

Col: 1	2	3	4	5	6	7	8	9
(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. Of Compari- sons	Recorder Scale Factor	Computed Index Difference	Computed Index	Table and Sheet No.	Date of Analysis
Span 310								1960
2425	2423	-31.44	5	18.42	-30.72	312.58	5 212	Oct. 4
3759	2423	-1.63	9		-1.59	312.68	5 213	
3759	164	-24.46	11		-	-	3 213	
164	2423	22.91	11		22.39	312.68	5 213	
2423	3760	1.92	12		1.88	314.56	12G 213	
2423	4296	-20.16	10		-19.70	292.98	12G 213	
2423	C-7	7.68	10		7.50	320.18	12G 214	
2423	1004	-1.58	9		-1.54	311.14	12G 214	
164	2423	22.95	8		22.43	312.72	5 214	
3759	164	-24.22	10	18.32	-	-	3 215	Oct. 10
3759	2423	-1.67	11		-1.64	312.63	5 215	
164	2423	22.83	10		22.43	312.72	5 215	
2423	3760	2.00	10		1.97	314.65	12G 215	
2423	4296	-20.13	10		19.78	292.90	12G 215	
2423	C-7	7.68	10		7.55	320.23	12G 216	
2423	1004	-1.59	11		-1.56	311.12	12G 216	
2425	2423	-31.33	11		-30.78	312.52	5 216	
2423	4269	9.18	12		9.02	321.70	12C 217	
2423	4293	-15.45	10		-15.18	297.50	12C 217	
3759	164	-31.17	10	23.03	-	-	3 217a.	Oct. 31*
3759	2423	-2.05	11		-1.60	312.67	5 217a.	
164	2423	28.57	11		22.33	312.62	5 217a.	
2423	2427	3.95	10		3.09	315.77	12A 217a.	
2423	6074	-28.89	10		-22.58	290.10	12F 217a	
2423	7355	6.73	13		5.26	317.94	12A 217b	
164	2423	28.21	10		22.05	312.34	5 217b	

*From this date until November 20 analyser showed inconsistent sensitivity on account of a faulty detector. Data are of reduced quality.

Table 1. Reference Gas Comparisons with Analyser No. 46

Col: 1	2	3	4	5	6	7	8	9
(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. Of Compari- sons	Recorder Scale Factor	Computed Index Difference	Computed Index	Table and Sheet No.	Date of Analysis
Span 310								1960
3759	164	-27.78	12	21.04	-	-	3 218	Nov. 8
3759	2427	1.77	10		1.51	315.78	12A 218	
164	2427	29.90	10		25.58	315.87	12A 218	
2423	2427	3.87	11		3.31	315.99	12A 218	
2423	7355	6.38	10		5.46	318.14	12A 218	
2423	6081	-6.96	10		-5.95	306.73	12D 219	
2423	148	-11.38	10		-9.74	302.94	12D 219	
3759	7355	4.61	11		3.94	318.21	12A 219	
164	7355	32.85	11		28.10	318.39	12A 219	
3759	164	-27.99	11		-	-	3 219	
3759	164	-31.22	10	23.48	-	-	3 220	Nov. 10A
3759	2423	-2.20	10		-1.69	312.58	5 220	
164	2423	29.15	11		22.35	312.64	5 220	
2423	6067	-0.84	10		-0.64	312.04	12B 220	
2423	4287	-22.32	10	21.50*	-18.69	293.99	12D 220	Nov. 10B
2423	4272	1.46	10		1.22	313.90	12D 221	
164	2423	26.78	10		22.42	312.71	5 221	
3759	2423	-1.76	5		-1.47	312.80	5 221	
3759	164	28.76	5		-	-	3 221	
2423	6071	-1.71	10		-1.43	311.25	12B 221	
3759	164	-29.21	11	21.80	-	-	3 222	Nov. 11
3759	2423	-1.89	13		-1.56	312.71	5 222	
164	2423	27.25	10		22.50	312.79	5 222	
2423	4297	-8.41	10		-6.94	305.74	12D 222	
2423	6051	-3.18	9		-2.63	310.05	12D 223	
2423	4275	1.53	10		1.26	313.94	12D 223	
2423	4269	10.79	10		8.91	321.59	12C 223	
2423	4293	-17.97	10		-14.84	297.84	12C 223	
3759	164	-28.69	8		-	-	3 223	

*After large change occurred spontaneously in C -voltage.

Table 1. Reference Gas Comparisons with Analyser No. 46

Col: 1	2	3	4	5	6	7	8	9
(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. Of Compari- sons	Recorder Scale Factor	Computed Index Difference	Computed Index	Table and Sheet No.	Date of Analysis
Span 310								1960 Nov. 19
3759	164	-24.54	10	18.37*	-	-	3 224	
3759	10065	-17.50	11	18.37*	-17.15	297.12	12E 224	
164	10065	6.91	10	18.37*	6.77	297.06	12E 224	
2423	10065	-15.76	10	18.37*	-15.44	297.24	12E 224	
2423	10070	52.85	11	18.27	52.07	364.75	12E 224	
2423	10064	-14.12	12	18.16	-14.00	298.68	12E 225	
2423	10075	-14.20	10	18.06	-14.15	298.54	12D 225	
2423	10073	-13.93	10	17.96	-13.96	298.72	12E 225	
2423	10072	-13.25	10	17.86	-13.35	299.33	12E 226	
3423	6067	-0.72	10	17.75	0.73	311.95	12B 226	
3759	164	-23.51	10	17.65	-	-	3 226	
164	2423	25.27	27	20.39	22.31	312.60	5 227	1961 Mar. 1
3759	2423	-1.77	12		-1.56	312.71	5 227	
3759	164	-27.14	10		-	-	3 227	
2423	10072	-14.99	15		-13.23	299.45	12E 227	
2423	10073	-15.77	10		-13.92	298.76	12E 227	
2423	10075	-16.20	10		-14.30	298.38	12D 228	
3759	164	-27.37	9		-	-	3 228	
3759	2425	32.40	9	20.00	-	-	3 229	Mar. 2
3759	2423	-2.01	10		-1.81	312.46	5 229	
2425	2423	-34.09	10		-30.68	312.62	5 229	
2423	7361	11.06	10		9.95	322.63	12D 229	
2423	7366	6.06	12		5.45	318.13	12D 229	
2423	148	29.53	3		26.58	339.26	12E 230	
2425	148	-4.37	10		-3.93	339.37	12E 230	
2425	2426	-0.20	10		-0.18	343.12	12B 230	
2425	4292	0.02	11		0.02	343.32	12B 230	
3759	2425	32.29	10		-	-	3 230	

*Analyser drifted throughout run with attending R.S.F. drift. Intermediate values by interpolation.

Table 1. Reference Gas Comparisons with Analyser No. 46

Col: 1	2	3	4	5	6	7	8	9
(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. Of Compari- sons	Recorder Scale Factor	Computed Index Difference	Computed Index	Table and Sheet No.	Date of Analysis
Span 310								1961
3759	2425	32.21	10	20.07	-	-	3 231	Mar. 3
3759	2423	-1.88	12		-1.69	312.58	5 231	
2425	2423	-34.33	10		-30.79	312.51	5 231	
2423	148	30.15	10		27.04	339.72*	- 231	
2423	10072	-15.19	10		-13.62	299.06*	- 231	
2423	4269	10.43	9		9.35	322.03*	- 232	
2423	4293	-17.22	9		-15.44	297.24*	- 232	
2423	1004	-1.72	11		-1.54	311.14	12G 232	
2423	3760	2.44	9		2.19	314.87	12G 232	
2423	C-7	8.76	10		7.86	320.54*	- 232	
2425	2423	-34.32	9		-30.78	312.52	5 233	
3759	2425	32.57	10	20.36	-	-	3 234	Mar. 8
3759	164	-27.18	10		-	-	3 234	
2425	164	-59.43	11		-	-	3 234	
2423	3758	-2.34	12		-2.07	310.61	12D 234	
2423	7362	-12.24	10		-10.82	301.86	12D 234	
2423	10072	-15.39	10		-13.61	299.07	12E 235	
2423	6067	-0.83	10		-0.73	311.95	12B 235	
2423	2406	0.63	6		0.56	313.24	12B 235	
3759	164	-27.52	10		-	-	3 235	
3759	164	-28.01	11	21.07	-	-	3 236	Mar. 9
3759	2423	-1.83	12		-1.56	312.71	5 236	
164	2423	26.03	11		22.24	312.53	5 236	
164	4287	4.51	11		3.85	294.14	12D 236	
164	4296	3.17	11		2.71	293.00	12G 236	
2423	4296	-23.10	11		-19.73	292.95	12G 237	
2423	10072	-15.51	10		-13.25	299.43	12E 237	
2423	4293	-17.68	11		-15.10	297.58	12C 237	
164	4293	8.85	10		7.56	297.85	12C 237	
2423	6051	-3.05	11		-2.61	310.07	12D 237	

*Runs versus these Tanks indicate R.S.F. is considerably too low. Index values are omitted from Table 12 (1004 & 3760 are retained because scale differences were small).

Table 2. Reference Gas Comparisons with Analyser No. 55

Col: 1	2	3	4	5	6	7	8	9
(Sub)		Observed	No. Of	Recorder	Computed		Table and	
Standard Tank No.	Compared Tank No.	Scale Difference	Compari- sons	Scale Factor	Index Difference	Computed Index	Sheet No.	Date of Analysis
Span 340								1959
4274	4275	-30.63	9	17.07	-32.30	-	4 94	Sept. 9
3760	4296	-20.83	11		-	-	4 95	
3760	2425	27.19	8		28.67	343.27	5 95	
4296	2425	48.00	10		50.62	343.30	5 95	
3760	4274	11.55	12		12.18	326.78	12A 95	
3760	4275	-18.90	10		-19.93	294.67	12A 95	
3760	4296	-20.74	10		-	-	4 94	
3760	4296	-21.36	11	17.62	-	-	4 100	Oct. 9
3760	2425	29.30	13		29.93	344.53	5 100	
4296	2425	50.85	10		51.95	344.63	5 100	
3760	4275	-19.38	12		-19.80	294.80	12A 100	
3760	4272	5.79	10		5.91	320.51	12A 100	
1004	4296	-18.13	11	17.56	-	-	4 103	Nov. 5
1004	2425	31.25	10		-	-	4 103	
2425	4296	-49.43	12		-	-	4 103	
1004	4272	9.15	11		9.38	320.68	12A 103	
1004	2423	-18.35	11		-18.81	292.49	12A 103	
2425	164	-49.55	11	16.77	-	-	4 117	Dec. 8
1004	2425	29.09	10		-	-	4 117	
1004	164	-19.94	11		-	-	4 117	
1004	2423	17.70	7		19.00	292.30	12A 117	
1004	4284	8.30	10		8.91	320.21	12A 117	
2425	164	-48.40	11	16.28	-	-	4 120	1960
1004	2425	28.30	11		-	-	4 120	Jan. 7
1004	164	-19.23	12		-	-	4 120	
1004	4284	8.36	15		9.24	320.54	12A 120	

Table 2. Reference Gas Comparisons with Analyser No. 55

Col: 1	2	3	4	5	6	7	8	9
(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. Of Compari- sons	Recorder Scale Factor	Computed Index Difference	Computed Index	Table and Sheet No.	Date of Analysis
Span 340								1960
1004	2425	30.39	10	17.05	-	-	4 156	April 13
1004	3759	2.83	11		2.99	314.29	5 156	
2425	3759	-27.46	10		-28.99	314.31	5 156	
3759	7357	15.68	10		16.55	330.82	12A 156	
3759	A-20(2421)	-3.53	10		-3.73	310.54	12C 156	
2425	3759	-27.43	10		-28.96	313.34	5 157	
1004	2425	30.39	10	17.06	-	-	4 162	May 2
1004	3759	2.89	11		3.05	314.35	5 162	
2425	3759	-27.48	10		-28.99	314.31	5 162	
3759	A-20	-3.39	9		-3.58	310.69	12C 162	
3759	2399	3.37	10		3.56	317.83	12A 162	
2425	3759	-27.35	8		-28.86	314.44	5 163	
1004	2425	30.58	8	17.09	-	-	4 168	June 13
1004	3759	2.86	15		3.01	314.31	5 168	
2425	3759	-27.40	10		-88.86	314.44	5 168	
3759	2399	4.05	11		4.27	318.54	12A 168	
3759	6074	17.51	7		18.44	332.71	12A 168	
2425	3759	-27.49	10		28.95	314.35	5 169	

Table 2. Reference Gas Comparisons with Analyser No. 55

Col:	1	2	3	4	5	6	7	8	9
	(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. Of Compari- sons	Recorder Scale Factor	Computed Index Difference	Computed Index	Table and Sheet No.	Date of Analysis
	Span 340								1960
	2425	164	-49.52	10	16.90	-	-	4 121	Jan. 13
	1004	2425	30.28	11		-	-	4 121	
	1004	164	-19.67	10		-	-	4 121	
	1004	4285	6.74	15		7.18	318.48	12A 121	
	1004	2425	30.39	11	17.03	-	-	4 130	Feb. 3
	1004	7344	2.74	11		2.90	314.20	5 130	
	2425	7344	-27.54	11		-29.11	314.19	5 130	
	7344	4285	4.18	19		4.42	318.76	12A 130	
	7344	7364	1.53	10		4.79	319.13	12A 130	
	2425	7344	-27.42	9		-28.98	314.32	5 131	
	1004	2425	30.34	10	17.09	-	-	4 138	Mar. 1
	1004	7344	2.94	11		3.10	314.40	5 138	
	2425	7344	-27.43	12		-28.85	314.41	5 138	
	7344	7364	4.78	10		5.03	319.37	12A 138	
	7344	4284	13.34	9		14.58	328.92	12A 138	
	2425	7344	-27.51	9		-28.97	314.33	5 139	
	1004	2425	30.34	9	17.02	-	-	4 150	Mar. 22
	1004	7344	2.74	11		2.90	314.20	5 150	
	2425	7344	-27.48	10		-29.06	314.24	5 150	
	7344	4284	14.24	12		15.06	329.40	12A 150	
	7344	7357	15.47	9		16.36	330.70	12A 150	
	2425	7344	-27.49	10		-29.07	314.23	5 151	

Table 3. Recorder Scale Factors of Analyser No. 46

Col:	1	2	3	4	5	6	7	8
(Sub)	Standard	Compared	Observed	No. of	Index	Recorder Scale		Date of Analysis
Tank No.	Tank No.	Difference	Comparisons	Difference	Single	Factor	Wt'd	
					Set		Average	
<u>Span 500</u>								
3760	4296	-30.52	13	21.92	25.06			<u>1959</u> Sept. 16
3760	2425	39.90	11					
4296	2425	70.22	10					
3760	4296	-30.32*	10*	21.92	24.90			
3760	4296	-30.21	10	21.92	24.81			
			33				24.94	
<u>Span 310</u>								
3760	4296	22.03	13	21.92	18.09			<u>1959</u> Oct. 6
			13				18.09	
<u>Span 500</u>								
3760	4296	33.37	12	21.92	27.40			Oct. 6
			12				27.40	
3760	4296	-20.38	11	21.92	16.74			Oct. 19
3760	2425	26.70	10					
4296	2425	47.55	10					
3760	4296	-20.85*	10*	21.92	17.12			
			21				16.93	
3760	4296	-22.32	13	21.92	18.33			Nov. 3
3760	2425	29.13	12					
3760	2425	29.25	6					
Wt. Av.		29.17*	18*					
4296	2425	51.49	10					
3760	4296	-22.32*	18*	21.92	18.33			
			31				18.33	

Table 3. Recorder Scale Factors of Analyser No. 46

Col:	1	2	3	4	5	6	7	8
	(Sub)		Observed			Recorder Scale		
	Standard	Compared	Scale	No. of	Index	Factor		Date of
	Tank No.	Tank No.	Difference	Comparisons	Difference	Single	Wt'd	Analysis
						Set	Average	
Span 310								
	2425	1004	-32.43	11				1959
	2425	1004	-32.51	10				Nov. 9
	Wt.Av.		-32.47*	21*				
	4296	1004	18.88	12				
	2425	4296	51.35*	21*	50.62	18.26		
	2425	4296	51.36	12	50.62	18.26		
	3760	164	24.71	12				
	4296	164	2.41	11				
	3760	4296	22.30*	11*	21.92	18.31		
				44		18.27		
	3760	164	24.67	11				Nov. 10
	4296	164	2.40	14				
	3760	4296	22.27*	11*	21.92	18.29		
	3760	1004	-3.44	11				
	2425	1004	-32.44	10				
	3760	2425	29.00*	10*	28.70	18.19		
				21			18.24	
	3760	1004	-3.35	15				Nov. 11
	2425	1004	-32.27	13				
	2425	1004	-32.26	5				
	Wt.Av.		-32.27*	18*				
	3760	2425	28.92*	18*	28.70	18.14		
	3760	2425	29.08	11	28.70	18.24		
repeat:	3760	1004	-3.35	15				
	1004	164	-21.32	13				
	4296	164	-2.39	11				
	3760	4296	-22.28*	11*	21.92	18.30		
				40			18.21	

Table 2. Recorder Scale Factors of Analyser No. 46

Col: 1	2	3	4	5	6	7	8
(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. of Comparisons	Index Difference	Recorder Scale Factor Single Wt'd Set Average		Date of Analysis
<u>Span 310</u>							<u>1959</u>
2425	164	-53.39	13	53.01	18.13		Nov. 12
1004	2425	32.29	11	32.00	18.16		
1004	164	-21.36	11	21.01	18.30		
1004	164	-21.22	9	21.01	18.18		
			44			18.19	
2425	164	-53.62	10	53.01	18.21		Nov. 13
1004	2425	32.39	10	32.00	18.22		
1004	164	-21.17	10	21.01	18.14		
1004	164	-21.24	10	21.01	18.20		
1004	LGO-16	44.22	12				
2425	LGO-16	12.01	9				
1004	2425	32.21*	9*	32.00	18.12		
			49			18.18	
2425	164	-53.67	11	53.01	18.22		Dec. 4
1004	2425	32.45	8	32.00	18.25		
1004	164	-21.33	13	21.01	18.27		
2425	164	-53.72	6	53.01	18.24		
			38			18.25	
1004	164	-21.19	10	21.01	18.15		Dec. 22
1004	164	-21.34	7	21.01	18.28		
			17			18.20	

Table 3. Recorder Scale Factors of Analyser No. 46

Col:	1	2	3	4	5	6	7	8
	(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. of Comparisons	Index Difference	Recorder Scale Factor Single Set	Wt'd Average	Date of Analysis
	Span 310							1960
	1004	164	-20.77	12	21.01	17.79		Jan. 22
	1004	7344	3.02	13				
	164	7344	23.79	12				
	1004	164	-20.77*	12*	21.01	17.79		
				24			17.79	
	1004	164	-20.67	11	21.01	17.71		Jan. 26
	1004	7344	2.98	11				
	164	7344	23.73	10				
	1004	164	-20.75*	10*	21.01	17.78		
	1004	2425	31.64	11	32.00	17.80		
				32			17.76	
	1004	164	-20.72	12	21.01	17.75		Feb. 2
	1004	7344	3.02	11				
	164	7344	23.88	12				
	164	7344	23.69	9				
	Wt.Av.		23.80*	21*				
	1004	164	-20.78*	21*	21.01	17.80		
				33			17.78	
	1004	164	-21.49	10	21.01	18.41		Feb. 12
	1004	7344	3.18	12				
	164	7344	24.94	10				
	1004	164	-21.76*	10*	21.01	18.64		
repeat:	1004	7344	3.18	12				
	2425	7344	-29.95	6				
	2425	7344	-29.90	6				
	Wt.Av.		-29.92*	12*				
	1004	2425	33.10*	12*	32.00	18.62		
				32			18.56	

Table 3. Recorder Scale Factors of Analyser No. 46

Col:	1	2	3	4	5	6	7	8
	(Sub)		Observed			Recorder Scale		
	Standard	Compared	Scale	No. of	Index	Factor		Date of
	Tank No.	Tank No.	Difference	Comparisons	Difference	Single	Wt'd	Analysis
						Set	Average	
<u>Span 310</u>								
	1004	2425	32.65	14	32.00	18.37		1960
	1004	7344	3.07	11				Feb. 19
	2425	7344	29.60	10				
	2425	7344	29.73	11				
	Wt.Av.		29.67*	21*				
	1004	2425	32.74*	21*	32.00	18.42		
				35			18.40	
	1004	2425	32.81	11	32.00	18.46		Mar. 4
	1004	7344	3.19	10				
	2425	7344	-29.90	13				
	2425	7344	-29.87	11				
	Wt.Av.		-29.89*	24*				
	1004	2425	33.08*	24*	32.00	18.61		
				35			18.56	
	1004	164	-21.40	11	21.01	18.33		Mar. 10
	1004	7344	3.14	11				
	164	7344	24.61	12				
	164	7344	24.61	11				
	Wt.Av.		24.61*	23*				
	1004	164	-21.47*	23*	21.01	18.39		
				34			18.37	

Table 3. Recorder Scale Factors of Analyser No. 46

Col:	1	2	3	4	5	6	7	8
	(Sub)		Observed			Recorder Scale		
	Standard	Compared	Scale	No. of	Index	Factor		Date of
	Tank No.	Tank No.	Difference	Comparisons	Difference	Single	Wt'd	Analysis
						Set	Average	
	Span 310							1960
	1004	2425	32.69	13	32.00	18.39		Mar. 11
	1004	7344	3.13	16				
	2425	7344	-29.61	11				
	2425	7344	-29.68	10				
	Wt.Av.		-29.64*	21*				
	1004	2425	32.77*	21*	32.00	18.43		
repeat:	1004	7344	3.13	16				
	164	7344	24.66	5				
	1004	164	-21.53*	5*	21.01	18.45		
				39			18.42	
	1004	2425	32.67	10	32.00	18.38		Mar. 18
	1004	7344	3.25	11				
	2425	7344	-29.68	11				
	2425	7344	-29.70	5				
	Wt.Av.		-29.69*	16*				
	1004	2425	32.94*	16*	32.00	18.53		
				26			18.47	
	1004	164	21.53	10	21.01	18.45		Mar. 25
	1004	3759	3.09	11				
	164	3759	24.64	10				
	164	3759	24.75	11				
	Wt.Av.		24.70*	21*				
	1004	164	21.61*	21*	21.01	18.51		
				31			18.49	

Table 3. Recorder Scale Factors of Analyser No. 46

Col:	1	2	3	4	5	6	7	8
	(Sub)		Observed			Recorder Scale		
	Standard	Compared	Scale	No. of	Index	Factor		Date of
	Tank No.	Tank No.	Difference	Comparisons	Difference	Single	Wt'd	Analysis
						Set	Average	
	<u>Span 310</u>							
	1004	2425	33.15	11	32.00	18.65		1960
	1004	3759	3.11	10				Apr. 1
	2425	3759	30.14	10				
	2425	3759	29.94	10				
	Wt.Av.		30.04*	20*				
	1004	2425	33.15*	20*	32.00	18.65		
				31			18.65	
	1004	164	-21.28	12	21.01	18.23		Apr. 14
	1004	3759	3.09	10				
	164	3759	24.54	10				
	1004	164	-21.45*	10*	21.01	18.38		
repeat:	1004	3759	3.09	10				
	2425	3759	-29.84	10				
	1004	2425	32.93*	10*	32.00	18.52		
				32			18.37	
	1004	164	-21.53	10	21.01	18.45		Apr. 28
	1004	3759	3.07	9				
	164	3759	24.72	9				
	1004	164	-21.65*	9*	21.01	18.55		
repeat:	1004	3759	3.07	9				
	2425	3759	-29.93	10				
	1004	2425	33.00*	9*	32.00	18.56		
				28			18.52	

Table 3. Recorder Scale Factors of Analyser No. 46

Col:	1	2	3	4	5	6	7	8
	(Sub)		Observed			Recorder Scale		
	Standard	Compared	Scale	No. of	Index	Factor		Date of
	Tank No.	Tank No.	Difference	Comparisons	Difference	Single	Wt'd	Analysis
						Set	Average	
	<u>Span 310</u>							
	1004	164	-21.44	9	21.01	18.37		1960 May 11
	1004	3759	2.97	11				
	164	3759	24.70	10				
	164	3759	24.81	10				
	Wt.Av.		24.76*	20*				
	1004	164	21.79*	20*	21.01	18.67		
				29			18.58	
	1004	164	-21.42	11	21.01	18.35		Jun. 2
	1004	3759	3.00	11				
	164	3759	24.57	10				
	1004	164	21.57*	10*	21.01	18.48		
repeat:	1004	3759	3.00	11				
	2425	3759	-30.01	10				
	1004	2425	33.01*	10*	32.00	18.57		
				31			18.46	
	1004	164	-21.40	10	21.01	18.33		Jun. 22
	1004	3759	3.05	11				
	164	3759	24.61	10				
	1004	164	-21.56*	10*	21.01	18.47		
repeat:	1004	3759	3.05	11				
	2425	3759	-29.93	8				
	1004	2425	32.98*	8*	32.00	18.55		
				28			18.44	

Table 3. Recorder Scale Factors of Analyser No. 46

Col:	1	2	3	4	5	6	7	8
	(Sub)		Observed			Recorder Scale		
	Standard	Compared	Scale	No. of	Index	Factor		Date of
	Tank No.	Tank No.	Difference	Comparisons	Difference	Single	Wt'd	Analysis
						Set	Average	
	<u>Span 310</u>							<u>1960</u>
	1004	164	-21.46	10	21.01	18.39		Jun. 23
	1004	3759	3.07	11				
	164	3759	24.82	9				
	1004	164	-21.75*	9*	21.01	18.63		
repeat:	1004	3759	3.07	9				
	2425	3759	30.05	6				
	2425	3759	29.78	5				
	Wt.Av.		29.93*	11*				
	1004	2425	33.00*	11*	32.00	18.56		
				30			18.52	
	1004	164	21.50	10	21.01	18.42		Jun. 30
	1004	3759	3.06	11				
	164	3759	24.76	10				
	1004	164	21.70*	10*	21.01	18.59		
repeat:	1004	3759	3.06	11				
	2425	3759	-30.08	10				
	1004	2425	33.14*	10*	32.00	18.64		
				30			18.55	
	1004	2425	33.09	12	32.00	18.61		Jul. 1
	1004	3759	3.06	11				
	2425	3759	-29.96	10				
	1004	2425	33.02*	10*	32.00	18.57		
repeat:	1004	3759	3.06	11				
	164	3759	24.85	10				
	1004	164	-21.79*	10*	21.01	18.67		
				32			18.62	

Table 3. Recorder Scale Factors of Analyser No. 46

Col:	1	2	3	4	5	6	7	8
	(Sub)		Observed			Recorder Scale		
	Standard	Compared	Scale	No. of	Index	Factor		Date of
	Tank No.	Tank No.	Difference	Comparisons	Difference	Single	Wt'd	Analysis
						Set	Average	
	<u>Span 310</u>							
	1004	164	-21.45	10	21.01	18.38		1960
	1004	3759	3.05	10				Jul. 25
	164	3759	24.63	9				
	1004	164	-21.58*	9*	21.01	18.49		
repeat:	1004	3759	3.05	10				
	2425	3759	-29.95	11				
	1004	2425	33.00*	10*	32.00	18.56		
				29			18.48	
	1004	2425	32.84	12	32.00	18.47		Jul. 26
	1004	A-2	7.17	11				
	2425	A-2	-25.77	10				
	1004	2425	32.94*	10*	32.00	18.53		
	3759	2425	29.85	11	29.03	18.51		
				33			18.50	
	1004	164	-21.35	10	21.01	18.29		Jul. 27
	1004	7358	-32.85	11				
	164	7358	-11.37	12				
	1004	164	-21.48*	11*	21.01	18.40		
	3759	2425	29.95	10	29.03	18.57		
				31			18.42	
	1004	164	-21.43	10	21.01	18.36		Jul. 28
	1004	7351	-38.67	11				
	164	7351	-17.27	10				
	1004	164	-21.40*	10*	21.01	18.33		
				20			18.34	

Table 3. Recorder Scale Factors of Analyser No. 46

Col:	1	2	3	4	5	6	7	8
	(Sub)		Observed			Recorder Scale		
	Standard	Compared	Scale	No. of	Index	Factor		Date of
	Tank No.	Tank No.	Difference	Comparisons	Difference	Single	Wt'd	Analysis
						Set	Average	
	<u>Span 310</u>							<u>1960</u>
	1004	2425	32.91	10	32.00	18.51		Jul. 29
	1004	3759	3.06	10				
	2425	3759	-29.92	10				
	1004	2425	32.98*	10*	32.00	18.55		
repeat:	1004	3759	3.06	10				
	164	3759	24.66	11				
	1004	164	-21.60*	10*	21.01	18.51		
				30			18.52	
	1004	164	-21.37	10	21.01	18.31		Aug. 2
	1004	3759	3.08	11				
	164	3759	24.53	11				
	1004	164	-21.45*	11*	21.01	18.38		
repeat:	1004	3759	3.08	11				
	2425	3759	29.83	6				
	2425	3759	29.72	5				
	Wt.Av.		29.78*	11*				
	1004	2425	32.86*	11*	32.00	18.48		
				32			18.39	
	3759	164	-24.44	10	23.98	18.35		Aug. 3
	3759	2423	-1.63	9				
	164	2423	22.94	10				
	3759	164	-24.57*	9*	23.98	18.44		
				19			18.39	

Table 3. Recorder Scale Factors of Analyser No. 46

Col: 1	2	3	4	5	6	7	8
(Sub)		Observed			Recorder Scale		Date of Analysis
Standard	Compared	Scale	No. of	Index	Factor		
Tank No.	Tank No.	Difference	Comparisons	Difference	Single	Wt'd	
					Set	Average	
<u>Span 310</u>							
3759	2425	29.84	12	29.03	18.50		1960
3759	2423	1.54	10				Aug. 4
2425	2423	-31.50	11				
2425	2423	-31.01	10				
Wt.Av.		-31.27*	21*				
3759	2425	29.73*	21*	29.03	18.43		
			33			18.46	
3759	164	-24.43	13	23.98	18.34		Aug. 9
3759	2423	-1.58	10				
164	2423	23.13	10				
164	2423	22.97	10				
Wt.Av.		23.05*	20*				
3759	164	24.63*	20*	23.98	18.49		
			33			18.43	
3759	2425	29.67	11	29.03	18.40		Aug. 10
3759	2423	-1.50	9				
2425	2423	-31.46	10				
3759	2425	29.96*	9*	29.03	18.58		
3759	2423	-1.50	9				
164	2423	22.98	10				
3759	164	-24.48*	9*	23.98	18.38		
			29			18.45	

repeat:

Table 3. Recorder Scale Factors of Analyser No. 46

Col:	1	2	3	4	5	6	7	8
	(Sub)		Observed			Recorder Scale		
	Standard	Compared	Scale	No. of	Index	Factor		Date of
	Tank No.	Tank No.	Difference	Comparisons	Difference	Single	Wt'd	Analysis
						Set	Average	
repeat:	Span 310							1960
	3759	2425	29.47	10	29.03	18.27		Aug. 15
	3759	2423	-1.55	11				
	2425	2423	-30.97	10				
	3759	2425	29.42*	10*	29.03	18.24		
	3759	2423	-1.55	11				
	164	2423	22.80	5				
	164	2423	22.84	5				
	Wt.Av.		22.82*	10*				
	3759	164	-24.37*	10*	23.98	18.29		
				30			18.27	
	3759	164	-24.49	10	23.98	18.38		Aug. 25
	3759	2423	-1.65	11				
	164	2423	22.86	10				
	3759	164	24.51*	10*	23.98	18.40		
				20			18.39	
	3759	164	-24.23	10	23.98	18.19		Sept. 1
	3759	2423	-1.61	11				
	3759	2423	-1.60	8				
	Wt.Av.		-1.61*	19*				
	164	2423	22.73	10				
	3759	164	-24.34*	10*	23.98	18.27		
				20			18.23	

Table 3. Recorder Scale Factors of Analyser No. 46

Col: 1	2	3	4	5	6	7	8
(Sub)		Observed			Recorder Scale		Date of Analysis
Standard Tank No.	Compared Tank No.	Scale Difference	No. of Comparisons	Index Difference	Factor	Wt'd	
					Single Set	Average	
<u>Span 310</u>							<u>1960</u>
3759	164	-24.30	11	23.98	18.24		Sept. 8
3759	2423	-1.59	12				
164	2423	22.90	10				
164	2423	22.89	10				
Wt.Av.		22.90*	20*				
3759	164	24.49*	20*	23.98	18.38		
			31			18.33✓	
3759	164	-24.37	10	23.98	18.29		Sept. 22
3759	2423	-1.63	11				
164	2423	22.76	10				
164	2423	22.87	10				
Wt.Av.		22.82*	20*				
3759	164	24.45*	20*	23.98	18.35		
			30			18.33✓	
3759	164	-24.45	12	23.98	18.35		Oct. 3
3759	2423	-1.68	11				
164	2423	22.80	9				
3759	164	-24.48*	9*	23.98	18.38		
			21			18.36	

Table 3. Recorder Scale Factors of Analyser No. 46

Col:	1	2	3	4	5	6	7	8
	(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. of Comparisons	Index Difference	Recorder Scale Factor		Date of Analysis
						Single Set	Wt'd Average	
	Span 310							1960
	3759	2423	- 1.63	9				Oct. 4
	2425	2423	-31.44	5				
	3759	2425	29.81*	5*	29.03	18.48		
	3759	164	-24.46	11	23.98	18.36		
repeat:	3759	2423	-1.63	9				
	164	2423	22.91	11				
	164	2423	22.95	8				
	Wt.Av.		22.93*	19*				
	3759	164	24.56*	19*	23.98	18.44		
				39			18.42	
	3759	164	-24.22	10	23.98	18.18		Oct. 10
	3759	2423	-1.67	11				
	164	2423	22.83	10				
	3759	164	-24.50*	10*	23.98	18.39		
repeat:	3759	2423	-1.67	11				
	2425	2423	31.33	11				
	3759	2425	29.66*	11*	29.03	18.39		
				31			18.32	
	3759	164	-31.17	10	23.98	23.40		Oct. 31
	3759	2423	-2.05	11				
	164	2423	28.57	11				
	164	2423	28.21	10				
	Wt.Av.		28.40*	21*				
	3759	164	30.45*	21*	23.98	22.86		
				31			23.03	

Table 3. Recorder Scale Factors of Analyser No. 46

Col: 1	2	3	4	5	6	7	8
(Sub)		Observed			Recorder Scale		
Standard	Compared	Scale	No. of	Index	Factor		Date of
Tank No.	Tank No.	Difference	Comparisons	Difference	Single	Wt'd	Analysis
					Set	Average	
<u>Span 310</u>							<u>1960</u>
3759	164	-27.78	12	23.98	20.85		Nov. 8
3759	2427	1.77	10				
164	2427	29.90	10				
3759	164	-28.13*	10*	23.98	21.12		
3759	7355	4.61	11				
164	7355	32.05	11				
3759	164	-28.24*	11*	23.98	21.20		
3759	164	-27.99	11	23.98	21.01		
			44			21.04	
3759	164	31.22	10	23.98	23.43		Nov. 10A
3759	2423	-2.20	10				
164	2423	29.15	11				
3759	164	31.35*	11*	23.98	23.53		
			21			23.48	
3759	164	28.76	5	23.98	21.59		Nov. 10B
3759	2423	-1.76	5				
164	2423	26.78	10				
3759	164	28.54*	5*	23.98	21.42		
			10			21.50	
3759	164	29.21	11	23.98	21.93		Nov. 11
3759	2423	-1.89	13				
164	2423	27.25	10				
3759	164	29.14*	10*	23.98	21.87		
3759	164	28.69	8	23.98	21.54		
			29			21.80	

Table 3 Recorder Scale Factors of Analyser No. 46

Col: 1	2	3	4	5	6	7	8
(Sub)		Observed			Recorder Scale		
Standard Tank No.	Compared Tank No.	Scale Difference	No. of Comparisons	Index Difference	Factor		Date of Analysis
					Single Set	Wt'd Average	
<u>Span 310</u>							<u>1960</u>
3759	164	24.54	10	23.98	18.42		Nov. 19A
3759	10065	-17.50	11				
164	10065	6.91	10				
3759	164	-24.41*	10*	23.98	18.32		
			20			18.37	
3759	164	-23.51	10	23.98	17.65		Nov. 19B
							<u>1961</u>
3759	164	-27.14	10	23.98	20.37		Mar. 1
3759	2423	-1.77	12				
164	2423	25.27	27				
3759	164	27.04*	12*		20.30		
3759	164	-27.37	9	23.98	20.54		
			31			20.39	
3759	2425	32.40	9	29.03	20.09		Mar. 2
3759	2423	-2.01	10				
2425	2423	-34.09	10				
3759	2425	32.08*	10*	29.03	19.89		
3759	2425	32.29	10	29.03	20.02		
			29			20.00	
3759	2425	32.21	10	29.03	19.97		Mar. 3
3759	2423	-1.88	12				
2425	2423	-34.33	10				
2425	2423	-34.32	9				
Wt.Av.		34.33*	19*				
3759	2425	32.45*	19*	29.03	20.12		
			29			20.07	

Table 3. Recorder Scale Factors of Analyser No. 46

Col:	1	2	3	4	5	6	7	8	
(Sub)	Standard	Compared	Observed	No. of	Index	Recorder Scale		Date of	
Tank No.	Tank No.	Difference	Comparisons	Difference	Factor	Single	Wt'd		Analysis
						Set	Average		
<u>Span 310</u>								<u>1961</u>	
3759	2425	32.57	10	29.03	20.20			Mar. 8	
3759	164	-27.18	10	23.98	20.40				
2425	164	-59.43	11	53.01	20.18				
3759	164	-27.52	10	23.98	20.66				
			41				20.36		
3759	164	-28.01	11	23.98	21.02			Mar. 9	
3759	2423	-1.83	12						
164	2423	26.03	11						
164	4296	3.17	11						
2423	4296	-23.10	11						
164	2423	26.27*	11*						
164	4293	8.85	10						
2423	4293	-17.68	11						
164	2423	26.53*	10*						
Wt.Av.		26.27*	32*						
3759	164	28.10*	32*						
			43						
				23.98	21.09		21.07		

Table 4. Recorder Scale Factors of Analyser No. 55

Col:	1	2	3	4	5	6	7	8
(Sub)	Standard	Compared	Observed	No. of	Index	Recorder Scale		Date of
	Tank No.	Tank No.	Scale	Comparisons	Difference	Factor	Wt'd	Analysis
			Difference			Single	Set Average	
								1959
Span 340								
3760	4296	-20.83	11		21.92	17.10		Sept. 9
3760	2425	27.19	8					
4296	2425	48.00	10					
3760	4296	-20.81*	8*		21.92	17.09		
3760	4296	-20.74	10		21.92	17.03		
			29				17.07	
4296	3760	21.36	11		21.92	17.54		Oct. 9
3760	2425	29.30	13					
4296	2425	50.85	10					
4296	3760	21.55*	10*		21.92	17.70		
			44				17.62	
1004	4296	18.13	11		18.62	17.52		Nov. 5
1004	2425	31.25	10		32.00	17.58		
2425	4296	49.43	12		50.62	17.58		
			33					
2425	164	-49.55	11		53.01	16.82		Dec. 8
1004	2425	29.09	10		32.00	16.36		
1004	164	-19.94	11		21.01	17.08		
			32				16.77	
								1960
2425	164	-48.40	11		53.01	16.43		Jan. 7
1004	2425	28.30	11		32.00	15.92		
1004	164	-19.23	12		21.01	16.47		
			34				16.28	

Table 4. Recorder Scale Factors of Analyser No. 55

Col:	1	2	3	4	5	6	7	8
	(Sub)		Observed			Recorder Scale		
	Standard	Compared	Scale	No. of	Index	Factor		Date of
	Tank No.	Tank No.	Difference	Comparisons	Difference	Single Set	Wt'd Average	Analysis
								<u>1960</u>
Span 340								
	2425	164	-49.52	10	53.01	16.81		Jan. 13
	1004	2425	30.28	11	32.00	17.03		
	1004	164	-19.67	10	21.01	16.85		
				31			16.90	
1004 2425 30.39 11 32.00 17.09								Feb. 3
	1004	7344	2.74	11				
	2425	7344	-27.54	11				
	2425	7344	-27.42	9				
	wtd. av.		-27.49*	20*				
	1004	2425	30.23*	20*	32.00	17.00		
				31			17.03	
1004 2425 30.35 10 32.00 17.07								Mar. 1
	1004	7344	2.94	11				
	2425	7344	-27.43	12				
	2425	7344	-27.51	9				
	wtd. av.		-27.46*	21*				
	1004	2425	30.40*	21*	32.00	17.10		
				31			17.09	
1004 2425 30.34 9 32.00 17.07								Mar. 22
	1004	7344	2.74	11				
	2425	7344	-27.48	10				
	2425	7344	-27.49	10				
	wtd. av.		-27.48*	20*				
	1004	2425	30.22*	20*	32.00	17.00		
				29			17.02	

Table 4. Recorder Scale Factors of Analyser No. 55

Col:	1	2	3	4	5	6	7	8
(Sub)	Standard	Compared	Observed	No. of	Index	Recorder Scale		Date of
	Tank No.	Tank No.	Scale	Comparisons	Difference	Factor		Analysis
			Difference			Single	Wt'd	
						Set	Average	
<u>Span 340</u>								
	1004	2425	30.39	10	32.00	17.09		1960
	1004	3759	2.83	11				Apr. 13
	2425	3759	-27.46	10				
	2425	3759	-27.43	10				
	wtd.av.		-27.44*	20*				
	1004	2425	30.27*	20*	32.00	17.03		
				30			17.05	
	1004	2425	30.39	10	32.00	17.09		May 2
	1004	3759	2.89	11				
	2425	3759	-27.48	10				
	2425	3759	-27.35	8				
	wtd.av.		-27.42*	18*				
	1004	2425	30.31*	18*	32.00	17.05		
				28			17.06	
	1004	2425	30.58	8	32.00	17.20		June 13
	1004	3759	2.86	15				
	2425	3759	-27.40	10				
	2425	3759	-27.49	10				
	wtd.av.		-27.44*	20*				
	1004	2425	30.30*	20*	32.00	17.04		
				28			17.09	

Table 5. Index Values of Standards and Substandards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		Single Set		Wt'd. Av.		Compared Tank			
	Analysers	Standard Tank No.	Compared Tank No.	No. of Compari- sons	Index	No. of Compari- sons	Index	No. Pressure (P.S.I.)		Date of Analysis	Dates of Use
										1959	
46		3760	2425	10	343.18			1140	2160	Aug. 25*	
46		3760	2425	11	343.18			1020	2140	Aug. 28*	
46		4296	2425	10	343.34			720	2130	Aug. 28*	
46		3760	2425	11	343.23			1000	2160	Aug. 31*	
46		4296	2425	10	343.42			700	2150	Aug. 31*	
46		3760	2425	11	343.17			920	2110	Sept. 1*	
46		4296	2425	10	343.26			660	2100	Sept. 1*	
55		3760	2425	8	343.27			-	-	Sept. 9	
55		4296	2425	10	343.30			-	-	Sept. 9	
46		3760	2425	11	343.40			80	2060	Sept. 16	
46		4296	2425	10	343.36			600	2070	Sept. 16	
55		3760	2425	13	344.53			695	2000	Oct. 9	
55		4296	2425	10	344.63			570	2000	Oct. 9	
46		3760	2425	10	343.00			-	-	Oct. 19	
46		4296	2425	10	343.26			-	-	Oct. 19	
46		3760	2425	12	343.21			600	1970	Nov. 3	
46		4296	2425	10	343.24			500	1970	Nov. 3	
46		3760	2425	6	343.32	183	343.30	Final**	600	1970	Nov. 3
								Value			
46		4296	1004	12	311.28			470	2080	Nov. 9	
46		2425	1004	11	311.35			1900	2080	Nov. 9	
46		3760	1004	13	311.27			560	2080	Nov. 9	
46		2425	1004	10	311.27			1900	2080	Nov. 9	
46		3760	1004	11	311.20			550	2040	Nov. 10	
46		2425	1004	10	311.29			1880	2040	Nov. 10	
46		2425	1004	13	311.40			1840	1970	Nov. 11	
46		3760	1004	15	311.29			540	1970	Nov. 11	
46		2425	1004	5	311.41	100	311.30	Final***	1750	1970	Nov. 11
								Value			

*Data in Research Report II

** Tank converted to Primary Span Standard on Nov. 9, 1959.

*** Tank converted to Primary Standard on Nov. 12, 1959

Table 5. Index Values of Standards and Substandards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		Single Set		Wt'd.Av.		Compared Tank			
	Analysers	Standard Tank No.	Compared Tank No.	No. of Compari- sons	Index	No. of Compari- sons	Index	No. Pressure (P.S.I.)		Date of Analysis	Dates of Use
										<u>1959</u>	
46		3760	164	10	290.64*			1180	2170	Aug. 25**	
46		3760	164	12	290.26			560	2180	Nov. 9	
46		4296	164	11	290.31			440	2180	Nov. 9	
46		4296	164	14	290.31			450	2050	Nov. 10	
46		3760	164	11	290.25			550	2050	Nov. 10	
46		4296	164	11	290.32	59	290.29	Final***	-	Nov. 11	
								Value			
										<u>1960</u>	
46		1004	7344	13	314.36			1380	2180	Jan. 22	
46		164	7344	12	314.36			1850	2180	Jan. 22	
46		1004	7344	11	314.32			1370	2060	Jan. 26	
46		164	7344	10	314.34			1810	2060	Jan. 26	
46		1004	7344	11	314.36			1310	1910	Feb. 2	
46		164	7344	12	314.47			1790	1910	Feb. 2	
46		164	7344	9	314.27			1800	1840	Feb. 2	
55		1004	7344	11	314.20			1270	1810	Feb. 3	
55		2425	7344	11	314.19			1480	1810	Feb. 3	
55		2425	7344	9	314.32			1490	1810	Feb. 3	
46		1004	7344	12	314.38			1380	1800	Feb. 12	
46		164	7344	10	314.48			1740	1800	Feb. 12	
46		2425	7344	6	314.25			1500	1800	Feb. 12	
46		2425	7344	6	314.30			1500	1770	Feb. 12	
46		1004	7344	11	314.30			1240	1720	Feb. 19	
46		2425	7344	10	314.34			1490	1720	Feb. 19	
46		2425	7344	11	314.22			1490	1640	Feb. 19	
55		1004	7344	11	314.40			1220	1650	Mar. 1	
55		2425	7344	12	314.41			1420	1650	Mar. 1	
55		2425	7344	9	314.33			1420	1620	Mar. 1	

*Omitted from average

**Data in Research Report II

*** Tank converted to Primary Span Standard on Nov. 12, 1959

Table 5. Index Values of Standards and Substandards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		Single Set		Wt'd.Av.		Compared Tank			
	Analysers	Standard Tank No.	Compared Tank No.	No. of Compari- sons	Index	No. of Compari- sons	Index	No. Pressure (P.S.I.)		Date of Analysis	Dates of Use
										<u>1960</u>	
46		2425	7344	13	314.30			1440	1600	Mar. 4	
46		1004	7344	10	314.39			1210	1600	Mar. 4	
46		2425	7344	11	314.33			1410	1550	Mar. 4	
46		1004	7344	11	314.38			1200	1540	Mar. 10	
46		164	7344	12	314.40			1750	1540	Mar. 10	
46		164	7344	11	314.40			1720	1500	Mar. 10	
46		1004	7344	16	314.36			1190	1490	Mar. 11	
46		2425	7344	11	314.37			1400	1490	Mar. 11	
46		164	7344	5	314.39			1720	1470	Mar. 11	
46		2425	7344	10	314.30			1400	1450	Mar. 11	
46		1004	7344	11	314.47			1160	1410	Mar. 18	
46		2425	7344	11	314.38			1390	1410	Mar. 18	
46		2425	7344	5	314.36			1390	1390	Mar. 18	
55		1004	7344	11	314.20			1120	1400	Mar. 22	
55		2425	7344	10	314.24			1340	1390	Mar. 22	
55		2425	7344	10	314.23	375	314.34	Final* Value	1350	1370	Mar. 22
										<u>1959</u>	
46		1004	3759	11	314.31			1110	2150	Mar. 25	
46		164	3759	10	314.28			1700	2150	Mar. 25	
46		164	3759	11	314.38			1700	2150	Mar. 25	
46		1004	3759	10	314.30			1090	2090	Apr. 1	
46		2425	3759	10	314.21			1310	2090	Apr. 1	
46		2425	3759	10	314.40			1310	2090	Apr. 1	
55		1004	3759	11	314.29			1100	2020	Apr. 13	
55		2425	3759	10	314.31			1300	2020	Apr. 13	
55		2425	3759	10	314.34			1310	2020	Apr. 13	
46		1004	3759	10	314.33			1050	1990	Apr. 14	
46		164	3759	10	314.34			1670	1990	Apr. 14	
46		2425	3759	10	314.06			1300	1990	Apr. 14	
46		1004	3759	9	314.28			1060	1970	Apr. 28	

* Tank converted to Primary Standard for Mauna Loa on March 22, 1960

Table 5. Index Values of Standards and Substandards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		Single Set		Wt'd.Av.		Compared Tank		Date of	Dates of Use
	Analysers	Standard Tank No.	Compared Tank No.	No. of Compari- sons	Index	No. of Compari- sons	Index	No. Pressure (P.S.I.)		Analysis	
										<u>1959</u>	
	46	164	3759	9	314.32			1690	1960	Apr. 28	
	46	2425	3759	10	314.21			1290	1890	Apr. 28	
	55	1004	3759	11	314.35			1030	1880	May 2.	
	55	2425	3759	10	314.31			1270	1870	May 2	
	55	2425	3759	8	314.44			1260	1870	May 2	
										<u>1960</u>	
	46	1004	3759	11	314.18			1020	1880	May 11	
	46	164	3759	10	314.22			1680	1870	May 11	
	46	164	3759	10	314.33			1670	1830	May 11	
	46	1004	3759	11	314.23			1000	1800	Jun. 2	
	46	164	3759	10	314.25			1650	1800	Jun. 2	
	46	2425	3759	10	314.04			1280	1750	Jun. 2	
	55	1004	3759	15	314.31			1000	1700	Jun. 13	
	55	2425	3759	10	314.44			1230	1700	Jun. 13	
	55	2425	3759	10	314.35			1230	1700	Jun. 13	
	46	1004	3759	11	314.28			960	1680	Jun. 22	
	46	164	3759	10	314.31			1600	1680	Jun. 22	
	46	2425	3759	8	314.08			1230	1690	Jun. 22	
	46	1004	3759	11	314.28			940	1600	Jun. 23	
	46	164	3759	9	314.41			1600	1600	Jun. 23	
	46	2425	3759	6	314.09			1230	1580	Jun. 23	
	46	2425	3759	5	314.36			1230	1570	Jun. 23	
	46	1004	3759	11	314.27			930	1540	Jun. 30	
	46	164	3759	10	314.32			158	1530	Jun. 30	
	46	2425	3759	10	314.11			1110	1500	Jun. 30	
	46	1004	3759	11	314.26			920	1480	Jul. 1	
	46	2425	3759	10	314.34			1200	1480	Jul. 1	
	46	164	3759	10	314.31			1600	1440	Jul. 1	
	46	1004	3759	10	314.27			900	1410	Jul. 25	
	46	164	3759	10	314.28			1580	1400	Jul. 25	
	46	2425	3759	11	314.13			1200	1380	Jul. 25	

Table 5. Index Values of Standards and Substandards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		Single Set		Wt'd.Av.		Compared Tank			
	Analysers	Standard Tank No.	Compared Tank No.	No. of Compari- sons	Index	No. of Compari- sons	Index	No. Pressure (P.S.I.)		Date of Analysis	Dates of Use
										<u>1960</u>	
46		1004	3759	10	314.27			790 1250		Jul. 29	
46		2425	3759	10	314.22			1150 1250		Jul. 29	
46		164	3759	5	314.22			1550 1230		Jul. 29	
46		164	3759	11	314.26			1550 1200		Jul. 29	
46		1004	3759	11	314.31			735 1190		Aug. 2	
46		164	3759	11	314.30			1495 1190		Aug. 2	
46		2425	3759	6	314.10			1140 1150		Aug. 2	
46		2425	3759	5	314.21	499	314.27	Final Value*	1150 1120	Aug. 2	
46		7344	2423	10	312.63			1600 2130		Mar. 4	
46		7344	2423	11	312.62			1410 2150		Mar. 18	
46		1004	2423	10	312.70			1160 2150		Mar. 18	
46		3759	2423	9	312.67			1100 2105		Aug. 3	
46		164	2423	10	312.74			1480 2100		Aug. 3	
46		1004	2423	10	312.79			740 2100		Aug. 3	
46		1004	2423	11	312.77			720 2080		Aug. 3	
46		2425	2423	11	312.58			1130 2090		Aug. 4	
46		3759	2423	10	312.77			1100 2080		Aug. 4	
46		1004	2423	11	312.78			720 2050		Aug. 4	
46		2425	2423	10	313.06**			1110 2000		Aug. 4	
46		3759	2423	10	312.73			1090 1990		Aug. 9	
46		164	2423	10	312.88			1460 1980		Aug. 9	
46		164	2423	10	312.72			1480 1950		Aug. 9	
46		3759	2423	9	312.81			1080 1940		Aug. 10	
46		2425	2423	10	312.61			1090 1940		Aug. 10	
46		164	2423	10	312.71			1460 1900		Aug. 10	
46		3759	2423	11	312.74			1060 1880		Aug. 15	
46		2425	2423	10	312.79			1090 1880		Aug. 15	
46		164	2423	5	312.75			1450 1830		Aug. 15	
46		164	2423	5	312.79			1450 1810		Aug. 15	
46		3759	2423	11	312.65			1040 1800		Aug. 25	

* Tank converted to Primary Standard on Aug. 3, 1960

** Omitted from average

Table 5. Index Values of Standards and Substandards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		Single	Set	Wt'd.Av.		Compared Tank			
	Analysers	Standard	Compared	No. of		No. of		No. Pressure	Date of	Dates of Use	
		Tank No.	Tank No.	Compari-	Index	Compari-	Index	(P.S.I.)	Analysis		
				sons		sons					
										1960	
46		164	2423	10	312.67			1410	1800	Aug. 25	
46		3759	2423	11	312.68			1025	1800	Sept. 1	
46		164	2423	10	312.73			1410	1790	Sept. 1	
46		3759	2423	8	312.69			1020	1780	Sept. 1	
46		3759	2423	12	312.71			1010	1770	Sept. 8	
46		164	2423	10	312.78			1410	1770	Sept. 8	
46		164	2423	10	312.77			1400	1740	Sept. 8	
46		3759	2423	11	312.67			980	1700	Sept. 22	
46		164	2423	10	312.64			1370	1700	Sept. 22	
46		164	2423	10	312.75			1370	1660	Sept. 22	
46		3759	2423	11	312.62			950	1640	Oct. 3	
46		164	2423	9	312.64			1350	1640	Oct. 3	
46		2425	2423	5	312.58			1060	1600	Oct. 4	
46		3759	2423	9	312.68			940	1580	Oct. 4	
46		164	2423	11	312.68			1330	1580	Oct. 4	
46		164	2423	8	312.72			1330	1580	Oct. 4	
46		3759	2423	11	312.63			920	1530	Oct. 10	
46		164	2423	10	312.72			1320	1540	Oct. 10	
46		2425	2423	11	312.52			1080	1520	Oct. 10	
46		3759	2423	11	312.67			890	1480	Oct. 31	
46		164	2423	11	312.62			1300	1470	Oct. 31	
46		164	2423	10	312.34*			1300	1440	Oct. 31	
46		3759	2423	10	312.58			830	1430	Nov. 10, A	
46		164	2423	11	312.64			1230	1410	Nov. 10, A	
46		164	2423	10	312.71			1240	1380	Nov. 10, B	
46		3759	2423	5	312.80			830	1380	Nov. 10, B	
46		3759	2423	13	312.71			810	1350	Nov. 11	
46		164	2423	10	312.79			1220	1340	Nov. 11	

*Omitted from average

Table 5. Index Values of Standards and Substandards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		Single Set		Wt'd. Av.		Compared Tank			
	Analysers	Standard Tank No.	Compared Tank No.	No. of Compari- sons	Index	No. of Compari- sons	Index	No. Pressure (P.S.I.)		Date of Analysis	Dates of Use
										<u>1961</u>	
46		164	2423	27	312.60			1140	1190	Mar. 1	
46		3759	2423	12	312.71			740	1160	Mar. 1	
46		3759	2423	10	312.46			710	1150	Mar. 2	
46		2425	2423	10	312.62			1030	1150	Mar. 2	
46		3759	2423	12	312.58			690	1100	Mar. 3	
46		2425	2423	10	312.51			970	1100	Mar. 3	
46		2425	2423	9	312.52			980	1040	Mar. 3	
46		3759	2423	12	312.71			640	960	Mar. 9	
46		164	2423	11	312.53	595	312.68	Final* Value	1060	950	Mar. 9

* Tank converted to Primary Standard on March 16, 1961

Table 12 Index Values of Working Reference Gases and Retired (Sub)standards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		Single Set		Wt'd.Av.		Compared Tank			
	Analysers	Standard	Compared	No. of		No. of		No. Pressure		Date of	Dates of Use
	Tank No.	Tank No.	Tank No.	Compari- sons	Index	Compari- sons	Index	(P.S.I.)		Analysis	
A.	<u>Scripps</u>	<u>Pier</u>								<u>1959</u>	<u>1959</u>
	46	3760	4274	10	326.67			2140		June 6*	Aug. 2 - Sept. 9
	46	3760	4274	10	326.83			630		Sept. 1*	
	55	3760	4274	12	326.78	32	326.76	4274	250	Sept. 9	
	46	3760	4275	10	294.67			2240		Jun. 18*	Sept. 9 - Oct. 12
	46	3760	4275	10	294.58			2210		Sept. 1*	
	55	3760	4275	10	294.67			2210		Sept. 9	
	55	3760	4275	12	294.80	42	294.69	4275	450	Oct. 9	
	46	3760	4272	10	320.42			2130		Sept. 16	Oct. 12 - Nov. 5
	55	3760	4272	10	320.51			2130		Oct. 9	
	55	1004	4272	11	320.68	31	320.54	4272	240	Nov. 5	
	46	3760	2423	10	292.24			2120		Nov. 3	Nov. 5 - Dec. 8
	55	1004	2423	11	292.49			2150		Nov. 5	
	55	1004	2423	7	292.30	28	292.35	2423	190	Dec. 8	
	46	1004	4284	11	320.59			2150		Dec. 4	<u>1960</u>
	55	1004	4284	10	320.21			2100		Dec. 8	Dec. 8 - Jan. 7
	55	1004	4284	15	320.54	36	320.46	4284	420	<u>1960</u> Jan. 7	
	46	1004	4285	9	318.39			2140		<u>1959</u> Dec. 4	<u>1960</u> Jan. 7 - Feb. 3
	55	1004	4285	15	318.48			1690		<u>1960</u> Jan. 13	
	55	7344	4285	19	318.76	43	318.58	4285	420	Feb. 3	

*Data in Research Report II

Table 12 Index Values of Working Reference Gases and Retired (Sub)standards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		<u>Single Set</u>		<u>Wt'd.Av.</u>		<u>Compared Tank</u>			
	Analysers	Standard Tank No.	Compared Tank No.	No. of Compari- sons	Index	No. of Compari- sons	Index	No.	Pressure (P.S.I.)	Date of Analysis	Dates of Use
A.	<u>Scripps Pier</u>									<u>1960</u>	<u>1960</u>
	46	7344	7364	12	319.14				2190	Feb. 2	Feb. 3. - Mar. 1
	55	7344	7364	10	319.13				2150	Feb. 3	
	55	7344	7364	10	319.37	32	319.21	7364	420	Mar. 1	
	46	7344	4284	14	329.23				2110	Feb. 12	Mar. 1 - Mar. 21
	55	7344	4284	9	328.92				2060	Mar. 1	
	55	7344	4284	12	329.40	35	329.21	4284	110	Mar. 22	
	46	7344	7357	12	330.46				2130	Mar. 4	Mar. 21 - Apr. 15
	55	7344	7357	9	330.70				2000	Mar. 22	
	55	3759	7357	10	330.82	31	330.65	7357	400	Apr. 13	
Var.	Various	A-20		-	-	49	310.50	A-20*		Mar-May	Apr. 15 - May 2
	46	3759	2399	10	317.90				2020	Apr. 28	May 2 - June 13
	55	3759	2399	10	317.83				1980	May 2	
	55	3759	2399	11	318.54**	20	317.86	2399	20	Jun. 13	
	46	7344	6074	12	333.08				2190	Feb. 19	June 13 - 16
	55	3759	6074	7	332.71	19	332.94	6074	2200	Jun. 13	

*See Antarctic 3rd year returns.

**Omit from average.

Table 12 Index Values of Working Reference Gases and Retired (Sub)standards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		Single Set		Wt'd.Av.		Compared Tank			
	Analysers	Standard Tank No.	Compared Tank No.	No. of Compari- sons	Index	No. of Compari- sons	Index	No. Pressure (P.S.I.)		Date of Analysis	Dates of Use
<u>A. Monsoon Pre-cruise</u>											
	46	Various	2400	-	-	51	311.06	2400*		1960 Feb. - Jul.	
	46	Various	193	-	-	53	311.81	193*		Feb. - Jul.	
	46	Various	4291	-	-	60	335.32	4291*		Feb. - Jul.	
	46	Various	2402	-	-	51	338.05	2402*		Mar. - Jul.	
	46	3759	7358	10	279.12				2250	Jul. 25	
	46	164	7358	12	279.18				2240	Jul. 27	
	46	1004	7358	11	279.20				2240	Jul. 27	
	46	3759	7358	11	279.08				2240	Jul. 27	
	46	3759	7358	6	279.14				2220	Jul. 29	
	46	3759	7358	6	279.23	56	279.15	7358	2220	Jul. 29	
	46	3759	7351	22	273.17				2250	Jul. 25	
	46	3759	7351	10	273.17				2250	Jul. 27	
	46	1004	7351	11	273.35				2220	Jul. 28	
	46	164	7351	10	273.34				2220	Jul. 28	
	46	3759	7351	10	273.43	63	273.27	7351	2210	Jul. 29	
	46	3759	4286	10	319.37				2110	Jun. 2	
	46	3759	4286	9	319.38				2130	Jul. 26	
	46	3759	4286	10	319.51	29	319.42	4286	2140	Jul. 27	
	46	3759	7364	10	318.73				2120	Jun. 2	
	46	3759	7364	10	318.68				2180	Jul. 25	
	46	3759	7364	10	318.69	30	318.70	7364	2130	Jul. 26	

*See Antarctic 3rd Year Returns.

Table 12 Index Values of Working Reference Gases and Retired (Sub)standards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		Single Set		Wt'd.Av.		Compared Tank			
	Analysers	Standard Tank No.	Compared Tank No.	No. of Compari- sons	Index	No. of Compari- sons	Index	No. Pressure (P.S.I.)		Date of Analysis	Dates of Use
A.	<u>Monsoon Pre-cruise</u>										<u>1960</u>
	46	Various	2407	-	-	33	318.97	2407*		Feb. - Jul.	
	46	Various	4270	-	-	51	318.32	4270*		Feb. - Jun.	
	46	2423	2427	10	315.77				2260	Oct. 31	
	46	3759	2427	10	315.78				2200	Nov. 8	
	46	164	2427	10	315.87				2200	Nov. 8	
	46	2423	2427	11	315.99	41	315.86	2427	2200	Nov. 8	
	46	2423	7355	13	317.94				2230	Oct. 31	
	46	2423	7355	10	318.14				2210	Nov. 8	
	46	3759	7355	11	318.21				2230	Nov. 8	
	46	164	7355	11	318.39	45	318.16	7355	2220	Nov. 8	
	46	7344	7350	12	315.41					Jan. 22	
	46	7344	7350	10	315.18				2190	Feb. 12	
	46	1004	7350	12	315.09				2190	Feb. 12	
	46	1004	7350	9	314.98				2190	Feb. 19	
	46	1004	7350	11	314.81				2170	Mar. 4	
	46	1004	7350	9	314.87					Mar. 10	
	46	1004	7350	11	314.72				2150	Mar. 11	
	46	1004	7350	9	314.83				2180	Mar. 25	
	46	3759	7350	10	314.87				2180	Mar. 25	
	46	1004	7350	11	314.69				2150	Apr. 1	
	46	3759	7350	10	314.25				2180	Jul. 1	
	46	1004	7350	21	314.40				2170	Jul. 28	
	46	164	7350	10	314.31	31**	314.34	7350	2150	Jul. 29	

*See Antarctic 3rd Year Returns

**July, 1960 comparisons only. Previous values not used because of evident drift in values.

Table 12 Index Values of Working Reference Gases and Retired (Sub)standards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		Single Set		Wt'd.Av.		Compared Tank			
	Analysers	Standard Tank No.	Compared Tank No.	No. of Compari- sons	Index	No. of Compari- sons	Index	No.	Pressure (P.S.I.)	Date of Analysis	Dates of Use
B.	Scripps Laboratory										
	46	3760	6071	10	311.14				2170	<u>1959</u> Jul. 6*	<u>1959</u> Aug. 11 - Dec. 3
	46	3760	6071	10	311.15				1240	Aug. 28*	
	46	1004	6071	10	311.41				400	Dec. 4	
	46	3760	6071	11	311.16				420	Dec. 22	
	46	2423	6071	10	311.25	51	311.22	6071	400	<u>1960</u> Nov. 10	
	46	3760	3758	10	290.09				2240	<u>1959</u> Jun. 18*	Aug. 11 - Dec. 21
	46	3760	3758	10	289.97				1980	Aug. 28*	
	46	1004	3758	7	289.95				-	Nov. 12	
	46	1004	3758	14	289.98	41	289.99	3758	1430	Dec. 22	
	46	1004	4286	9	311.80				1610	Dec. 22	Dec. 7, 1959 -
	46	1004	4286	9	311.78				1610	Dec. 22	Mar. 9, 1960
	46	3760	4286	11	311.82				1610	Dec. 22	
	46	7344	4286	18	311.80				1420	<u>1960</u> Jan. 22	
	46	7344	4286	14	311.79				-	Jan. 26	
	46	7344	4286	10	311.87				590	Mar. 4	
	46	7344	4286	10	311.92	81	311.82	4286	400	Mar. 10	
	46	3760	4292	10	343.32				2180	<u>1959</u> Aug. 25*	<u>1960</u> Jan. 20 - Nov. 18
	46	3760	4292	11	343.30				2200	Sept. 16	
	46	1004	4292	9	343.32				1970	Nov. 11	

*Data in Research Report II.

Table 12 Index Values of Working Reference Gases and Retired (Sub)standards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		<u>Single Set</u>		<u>Wt'd.Av.</u>		<u>Compared Tank</u>			
	Analysers	Standard Tank No.	Compared Tank No.	No. of Compari- sons	Index	No. of Compari- sons	Index	No.	Pressure (P.S.I.)	Date of Analysis	Dates of Use
B. <u>Scripps Laboratory</u>											
	46	2425	4292	9	343.37				2060	<u>1960</u> Jan. 26	<u>1960</u> Jan. 20 - Nov. 18
	46	7344	4292	10	343.23				1860	Mar. 18	
	46	3759	4292	10	343.49				1800	Jun. 2	
	46	3759	4292	10	343.54				1760	Jul. 28	
	46	2423	4292	10	343.40				1730	Aug. 9	
	46	2423	4292	10	343.50				1710	Aug. 15	
	46	2423	4292	10	343.30				1630	Oct. 3	
	46	2425	4292	11	343.32	110	343.37	4292**	1550	<u>1961</u> Mar. 2	
	46	7344	6067	12	311.97				2110	<u>1960</u> Feb. 12	<u>1960</u> Mar. 16 - Nov. 18
	46	7344	6067	12	312.01				2090	Mar. 4	
	46	7344	6067	11	312.06				2100	Mar. 10	
	46	7344	6067	10	312.04					Mar. 11	
	46	7344	6067	10	312.02				2040	Mar. 18	
	46	3759	6067	10	312.05				1620	May 11	
	46	3759	6067	10	311.97				1450	Jul. 1	
	46	3759	6067	10	312.11				1250	Jul. 29	
	46	2423	6067	7	312.06				900	Oct. 3	
	46	2423	6067	10	312.04				800	Nov. 10	
	46	2423	6067	10	311.95				510	Nov. 19	
	46	2423	6067	10	311.95	122	312.02	6067	510	<u>1961</u> Mar. 8	

**Values not final, but will be used to compute flask indices for stated use period
(Jun. 20 - Nov. 18, 1960)

Table 12 Index Values of Working Reference Gases and Retired (Sub)standards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		Single Set		Wt'd.Av.		Compared Tank			
	Analysers	Standard	Compared	No. of	Index	No. of	Index	No. Pressure		Date of	Dates of Use
	Tank No.	Tank No.	Tank No.	Compari- sons		Compari- sons		(P.S.I.)		Analysis	
B.	<u>Scripps Laboratory</u>										
	46	3760	2426	10	343.05			2170		<u>1959</u> Aug. 25*	
	46	2423	2426	10	343.12			1710		<u>1960</u> Aug. 10	
	46	2425	2426	10	343.12	30	343.10	2426	1160	<u>1961</u> May 2	
	46	3759	2406	10	313.31			2150		<u>1960</u> Aug. 25	
	46	3759	2406	10	313.32			2130		Sept. 1	
	46	2423	2406	6	313.24	Incomplete		2160		<u>1961</u> Mar. 8	
C.	<u>Antarctic 2 Yr. Returns</u>										
	46	3760	4293	10	297.82			1660		<u>1959</u> Apr. 30*	
	46	C-5	4293	11	297.88			1680		May 15*	
	46	4296	4293	10	297.98			1670		May 15*	
	46	3760	4293	11	298.03			1640		May 15*	
	46	4296	4293	10	297.95			1660		May 18*	
	46	3760	4293	10	297.74			1600		Aug. 31*	
	46	1004	4293	11	297.60			1620		Nov. 10	
	46	1004	4293	11	297.61			1620		Nov. 11	

*Data in Research Report II.

Table 12 Index Values of Working Reference Gases and Retired (Sub)standards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		Single Set		Wt'd.Av.		Compared Tank			
	Analysers	Standard Tank No.	Compared Tank No.	No. of Compari- sons	Index	No. of Compari- sons	Index	No. Pressure (P.S.I.)		Date of Analysis	Dates of Use
C.	<u>Antarctic 2 Yr. Returns</u>									<u>1960</u>	
	46	3759	4293	10	297.58			1580		Jun. 30	
	46	2423	4293	10	297.50			1560		Oct. 10	
	46	2423	4293	10	297.84			1570		Nov. 11	
										<u>1961</u>	
	46	2423	4293	11	297.58			1590		Mar. 9	
	46	164	4293	10	297.85	135	297.77	4293 1570		Mar. 9	
										<u>1959</u>	
	46	3760	4269	10	321.54			1320		Apr. 30*	
	46	3760	4269	10	321.58			1300		May 15*	
	46	C-5	4269	10	321.63			1310		May 18*	
	46	4296	4269	11	321.48			1310		May 18*	
	46	3760	4269	10	321.65			1300		Aug. 31*	
	46	1004	4269	10	321.63			1220		Nov. 9	
	46	1004	4269	10	321.67			1210		Nov. 10	
	46	1004	4269	10	321.65			1210		Nov. 11	
										<u>1960</u>	
	46	3759	4269	10	321.76			1190		Jun. 30	
	46	2423	4269	12	321.70			480		Oct. 10	
	46	2423	4269	10	321.59	113	321.63	4269 1190		Nov. 11	

*Data in Research Report II.

Table 12 Index Values of Working Reference Gases and Retired (Sub)standards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		Single Set		Wt'd. Av.		Compared Tank			
Analysers	Standard Tank No.	Compared Tank No.	No. of Compari- sons	Index	No. of Compari- sons	Index	No. Pressure (P.S.I.)	Date of Analysis	Dates of Use		
C.	<u>Antarctic 3rd Year Returns - 1st Year Tanks</u>										1960
46	7344	A-1 (2406)			10	320.20	A-1	1020	Feb.	19	
46	7344	A-2 (2419)	12	318.34				1120	Feb.	12	
46	7344	A-2	10	318.26				1120	Mar.	18	
46	3759	A-2	10	318.23				1150	Jul.	25	
46	1004	A-2	11	318.28				1110	Jul.	26	
46	2425	A-2	10	318.23	53	318.27	A-2	1110	Jul.	26	
46	7344	A-3 (2407)	12	319.29					Feb.	19	
46	3759	A-3	11	318.83			A-3*	2100	Jul.	26	
46	3759	A-3	10	318.74	33	318.97 (2407)		2100	Jul.	27	
46	7344	A-4 (2400)	12	311.19				2090	Feb.	2	
46	3759	A-4	9	310.97				2030	Jun.	30	
46	3759	A-4	10	311.04				2060	Jul.	1	
46	3759	A-4	10	311.05			A-4**	2040	Jul.	25	
46	3759	A-4	10	311.02	51	311.06 (2400)		2030	Jul.	27	
46	7344	A-5 (2427)	10	370.71				2090	Feb.	19	
46	3759	A-5	11	371.00	21	370.86	A-5	1260	Aug.	2	
46	7344	A-6 (193)	12	311.73				2090	Feb.	2	
46	3759	A-6	11	311.74				2080	Jul.	25	
46	3759	A-6	10	311.87				2090	Jul.	27	
46	3759	A-6	10	311.86			A-6**	2040	Jul.	28	
46	3759	A-6	10	311.87	53	311.81 (193)		2020	Jul.	29	
							A-19***				
46	7344	A-19 (2424)	10	372.84	Incomplete (2424)			1600	Mar.	11	
C.	<u>Antarctic 3rd Year Returns - 2nd Year Tanks</u>										
46	7344	4270	10	318.27				2010	Feb.	19	
46	3759	4270	10	318.33				2010	Apr.	1	
46	3759	4270	10	318.25				2020	Apr.	14	
46	3759	4270	11	318.40				2020	Apr.	28	
46	3759	4270	10	318.36	51	318.32	4270*	2000	Jun.	23	

*Reused as Monsoon Working Tank

**Reused as Monsoon Primary Tank

***Held for Manometric study

Table 12 Index Values of Working Reference Gases and Retired (Sub)standards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		Single Set		Wt'd.Av.		Compared Tank			
	Analysers	Standard	Compared	No. of		No. of		No. Pressure		Date of	Dates of Use
	Tank No.	Tank No.	Tank No.	Compari- sons	Index	Compari- sons	Index	(P.S.I.)		Analysis	
C.	<u>Antarctic 3rd Year Returns - 2nd Year Tanks</u>										
	46	7344	4290	11	336.93			2170		1960 Feb. 19	
	46	3759	4290	12	336.78			1970		Apr. 1	
	46	3759	4290	12	336.87			1850		Apr. 14	
	46	3759	4290	10	336.84			2150		Apr. 28	
	46	3759	4290	10	336.95			2140		Jun. 22	
	46	2423	4290	10	336.63	65	336.83	4290* 2150		Aug. 4	
C.	<u>Antarctic 3rd Year Returns - 2nd Year Tanks</u>										
	46	7344	4291	10	335.24			1900		Feb. 19	
	46	3759	4291	10	335.25			1910		Apr. 1	
	46	3759	4291	10	335.28			1910		Apr. 14	
	46	3759	4291	10	335.36			1910		Apr. 28	
	46	3759	4291	10	335.46			1880		Jun. 22	
	46	3759	4291	10	335.33	60	335.32	4291**1900		Jul. 26	
C.	<u>Antarctic 3rd Year Returns - 3rd Year Tanks</u>										
	46	7344	A-10 (2403)			12	321.57	A-10 410		Mar. 4	
	46	7344	A-11 (2399)			10	318.72	A-11 300		Mar. 4	
	46	7344	A-12 (148)			10	304.96	A-12 150		Feb. 2	
	46	7344	A-13 (2408)	12	279.03			1900		Mar. 11	
	46	2423	A-13	10	279.08			1920		Aug. 3	
	46	2423	A-13	10	279.00			1900		Aug. 9	
	46	2423	A-13	11	279.14			A-13***1900		Aug. 10	
	46	2423	A-13	10	278.92	53	279.04 (2408)	1880		Aug. 15	

*Reused as 5th Year Antarctic High Span Tank

**Reused as Monsoon High Span Tank

***Reused as 5th Year Antarctic Low Span Tank

Table 12 Index Values of Working Reference Gases and Retired (Sub)standards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		Single Set		Wt'd.Av.		Compared Tank			
	Analysers	Standard	Compared	No. of		No. of				Date of	Dates of Use
		Tank No.	Tank No.	Compari- sons	Index	Compari- sons	Index	No. Pressure (P.S.I.)		Analysis	
<u>C. Antarctic 3rd Year Returns - 3rd Year Tanks</u>											
										1960	
46	7344	A-15	(2404)			10	318.51	A-15	400	Mar. 4	
46	7344	A-16	(2405)			12	301.30	A-16	230	Mar. 10	
46	7344	A-18	(2402)	12	338.01				1490	Mar. 11	
46	3759	A-18		9	338.00					Jul. 26	
46	3759	A-18		10	338.06				1480	Jul. 28	
46	1004	A-18		10	338.27			A-18*	1490	Jul. 28	
46	3759	A-18		10	337.89	51	338.05 (2402)		1480	Jul. 29	
46	7344	A-19	(132)			11	320.56	A-19	670	Mar. 4	
46	7344	A-20	(2421)	11	310.43				1410	Mar. 10	
55	3759	A-20		10	310.54				1430	Apr. 13	
46	3759	A-20		19	310.44				1410	Apr. 14	
55	3759	A-20		9	310.69	49	310.50	A-20**	120	May 2	
<u>C. Antarctic 5th Year - New Fillings</u>											
46	3759	4284		10	310.38				2200	Apr. 28	
46	3759	4284		10	310.30				2190	Jun. 30	
46	2423	4284		10	310.37				2190	Aug. 3	
46	2423	4284		10	310.38				2190	Aug. 4	
46	2423	4284		10	310.31				2150	Aug. 9	
46	2423	4284		11	310.31	61	310.34	4284	2150	Aug. 10	
46	3759	3753		10	311.81				2140	Mar. 25	
46	3759	3753		12	311.80				2160	Jun. 23	
46	3759	3753		11	311.83				2110	Jun. 30	
46	3759	3753		10	311.81				2180	Jul. 1	
46	2423	3753		10	311.73				2110	Aug. 3	
46	2423	3753		12	311.72				2100	Aug. 4	
46	2423	3753		10	311.78	75	311.78	3753	2100	Aug. 9	

*Reused as Monsoon High Span Tank

**Reused as Pier Tank Apr. 15 - May 2, 1960.

Table 12 Index Values of Working Reference Gases and Retired (Sub)standards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		<u>Single Set</u>		<u>Wt'd.Av.</u>		<u>Compared Tank</u>			
	Analys	Standard	Compared	No. of	Index	No. of	Index	No.	Pressure	Date of	Dates of Use
	Tank No.	Tank No.	Tank No.	Compara-		Compara-			(P.S.I.)	Analysis	
				sons		sons					
C.	<u>Antarctic 5th Year - New Fillings</u>										<u>1960</u>
	46	3759	7357	10	315.04				2200		Jun. 2
	46	3759	7357	12	315.03				2200		Jun. 30
	46	3759	7357	10	315.05				2180		Jul. 1
	46	2423	7357	9	314.89				2190		Aug. 3
	46	1004	7357	10	315.01				2190		Aug. 3
	46	2423	7357	10	314.91				2170		Aug. 4
	46	2423	7357	11	314.95	72	314.98	7357	2150		Aug. 9
	46	Various	2408	-	-	53	279.04	2408*			Mar.-Aug.
	46	Various	4290	-	-	65	336.83	4290*			Feb.-Aug.
	46	3759	132			10	303.38	132	2230		Jun. 22
	46	3759	2403			10	308.79	2403	2120		Apr. 28
	46	3759	2404			10	305.49	2404	2250		May 11
	46	3759	2405			10	306.00	2405	2210		Jun. 22
	46	3759	2418			10	308.43	2418	2160		Jun. 22
	46	2423	2419			10	313.94	2419	2150		Aug. 25
	46	3759	2421			10	307.37	2421	2170		Jun. 22
	46	7344	4274			10	308.75	4274	2170		Mar. 18
	46	3759	4285			10	306.87	4285	2180		Mar. 25
	46	7344	4288			10	303.73	4288	2150		Mar. 18
D.	<u>Mauna Loa - New Fillings</u>										<u>1959</u>
	46	3760	3759			10	310.05	3759	2150		Sept. 16
	46	3760	6051			10	310.04	6051	2150		Sept. 16
	46	3760	2418			12	306.23	2418	2130		Nov. 3
	46	1004	3753			10	325.46	3753	2120		Nov. 12
	46	1004	4274			10	301.54	4274	2120		Nov. 12

*See Antarctic 3rd Year Returns

Table 12 Index Values of Working Reference Gases and Retired (Sub)standards

Col:	1	2	3	4	5	6	7	8	9	10	11
	(Sub)			<u>Single Set</u>		<u>Wt'd. Av.</u>		<u>Compared Tank</u>			
	Analys	Standard	Compared	No. of		No. of		No. Pressure		Date of	Dates of Use
	Tank No.	Tank No.	Tank No.	Comari-	Index	Comari-	Index	(P.S.I.)		Analysis	
				sons		sons					
D.	<u>Mauna Loa - New Fillings</u>									<u>1960</u>	
	46	7344	7361			16	320.04	7361	2220	Jan. 22	
	46	7344	4272			12	300.88	4272	2200	Jan. 26	
	46	7344	4275			10	303.51	4275	2180	Jan. 26	
	46	7344	7362			10	301.97	7362	2190	Feb. 2	
	46	7344	7366			14	306.23	7366	2190	Feb. 2	
	46	7344	6081			12	306.64	6081	2100	Feb. 12	
	46	7344	3758			10	302.74	3758	2120	Mar. 10	
	46 55	Various	7344			375	314.34	7344*	-	-	
	46	3759	148			8	302.85	148	2250	May 11	
	46	3759	7362			10	309.96	7362	2200	Jun. 2	
	46	2423	7361			10	322.27	7361	2100	Aug. 15	
	46	2423	7366			10	317.39	7366	2100	Aug. 15	
	46	2423	3758			12	310.77	3758	2100	Sept. 22	
	46	2423	7362			10	301.26	7362	2110	Sept. 22	
	46	2423	4272	9	313.84				2120	Sept. 8	
	46	2423	4272	10	313.90	19	313.87	4272	2070	Nov. 10	
	46	2423	4275	10	313.99				2130	Sept. 8	
	46	2423	4275	10	313.94	20	313.96	4275	2080	Nov. 11	
	46	2423	10075	10	298.54				2330	Nov. 19	
	46	2423	10075	10	298.38	20	298.46	10075	2280	<u>1961</u> Mar. 1	
	<u>Mauna Loa - Returns</u>									<u>1959</u>	
	46	3760	2418			10	312.30	2418	400	Sept. 16	
	46	3760	2423			10	317.21	2423	520	Sept. 16	
	46	3760	4286			9	317.10	4286	370	Sept. 16	
	46	3760	4284	11	308.98					Oct. 19	
	46	1004	4284	12	308.95				200	Nov. 10	
	46	1004	4284	11	308.99	34	308.97	4284		Nov. 13	
	46	1004	4287	12	293.62				1660	Nov. 10	

*See Table 5.

Table 12 Index Values of Working Reference Gases and Retired (Sub)standards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		<u>Single Set</u>		<u>Wt'd. Av.</u>		<u>Compared Tank</u>			
	Analysers	Standard	Compared	No. of	Index	No. of	Index	No. Pressure		Date of	Dates of Use
	Tank No.	Tank No.	Tank No.	Compari- sons		Compari- sons		(P.S.I.)		Analysis	
D.	<u>Mauna Loa - Returns</u>										
	46	2423	4287	10	293.99			1600		<u>1960</u> Nov. 10	
	46	164	4287	11	294.14	Incomplete		1640		<u>1961</u> Mar. 9	
	46	1004	4285			18	303.33	4285	410	<u>1959</u> Nov. 12	
	46	1004	6074			10	306.37	6074	370	Nov. 12	
	46	1004	6067			10	307.74	6067	300	Dec. 4	
	46	1004	6081			10	304.30	6081	375	Dec. 4	
	46	7344	3759			10	310.51	3759	200	<u>1960</u> Jan. 26	
	46	7344	4288			12	311.59	4288	325	Jan. 26	
	46	7344	4274			10	301.65	4274	280	Feb. 12	
	46	7344	3753			10	325.86	3753	350	Feb. 12	
	46	3759	2418			10	306.59	2418	300	Apr. 14	
	46	3759	7361			11	320.22	7361	400	Apr. 14	
	46	3759	4297	10	305.75				580	May 11	
	46	3759	4297	10	305.82				580	Jun. 2	
	46	3759	4297	9	305.82				550	Jun. 23	
	46	3759	4297	10	305.76				660	Jul. 1	
	46	2423	4297	10	305.74	49	305.78	4297	530	Nov. 11	
	46	3759	6051	10	310.21				890	May 11	
	46	3759	6051	12	310.17				890	Jun. 23	
	46	3759	6051	10	310.09				870	Jul. 1	
	46	2423	6051	9	310.05				870	Nov. 11	

Table 12 Index Values of Working Reference Gases and Retired (Sub)standards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		<u>Single Set</u>		<u>Wt'd.Av.</u>		<u>Compared Tank</u>			
	Analysers	Standard	Compared	No. of	Index	No. of	Index	No.	Pressure	Date of	Dates of Use
	Tank No.	Tank No.	Tank No.	Compari- sons		Compari- sons			(P.S.I.)	Analysis	
D.	<u>Mauna Loa - Returns</u>										
	46	2423	6051	11	310.07	52	310.12	6051*	900	<u>1961</u> Mar. 9	
	46	3759	7362			10	301.66	7362	590	<u>1960</u> May 11	
	46	3759	7366			9	306.04	7366	380	Aug. 2	
	46	3759	4275			10	303.59	4275	400	Aug. 2	
	46	3759	4272			12	300.91	4272	250	Aug. 2	
	46	2423	3758			10	302.72	3758	330	Sept. 1	
	46	2423	7362			9	309.98	7362	2200	Sept. 1	
	46	2423	6081			10	306.73	6081	270	Nov. 8	
	46	2423	148			10	302.94	148	370	Nov. 8	
	46	2423	7361			10	322.63	7361	390	<u>1961</u> Mar. 2	
	46	2423	7366			12	318.13	7366	270	Mar. 2	
	46	2423	3758			12	310.61	3758	410	Mar. 8	
	46	2423	7362			10	301.86	7362		Mar. 8	
E.	<u>Point Barrow - New Fillings</u>										
	46	3759	10065	11	297.12				2240	<u>1960</u> Nov. 19	
	46	164	10065	10	297.06				2230	Nov. 19	
	46	2423	10065	10	297.24	31	297.14	10065	2220	Nov. 19	
	46	2423	10070			11	364.75	10070	2180	Nov. 19	
	46	2423	10064			12	298.68	10064	2220	Nov. 19	
	46	2423	10072	10	299.33				2240	Nov. 19	
	46	2423	10072	15	299.45				2250	<u>1961</u> Mar. 1	
	46	2423	10072	10	299.07				2240	Mar. 8	
	46	2423	10072	10	299.43	Incomplete			2240	Mar. 9	

*Not final

Table 12 Index Values of Working Reference Gases and Retired (Sub)standards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		Single Set		Wt'd.Av.		Compared Tank			
	Analys	Standard	Compared	No. of	Index	No. of	Index	No.	Pressure	Date of	Dates of Use
	Tank No.	Tank No.	Tank No.	Compara-	sons	Compara-	sons		(P.S.I.)	Analysis	
E.	<u>Point Barrow - New Fillings</u>										1960
	46	2423	10073	10	298.72				2240	Nov. 19	
										1961	
	46	2423	10073	10	298.76	20	298.74	10073	2270	Mar. 1	
	46	2423	148	3	339.26				2160	Mar. 2	
	46	2425	148	10	339.37	Incomplete			2150	Mar. 2	
F.	<u>Lamont Standards</u>										1959
	46	C-8	LGO-8	4	323.96				600	Apr. 16*	
	46	3760	LGO-8	10	323.60				570	Apr. 17*	
	46	3760	LGO-8	10	323.68				570	May 15*	
	46	1004	LGO-8	10	323.39**				550	Nov. 13	
										1960	
	46	2423	LGO-8	10	322.41**	24	32 4 ³ .69	LGO-8	560	Aug. 10	error found Oct 4 68 CDK
										1959	
	46	C-8	LGO-10	2	274.98				1480	Apr. 16*	
	46	3760	LGO-10	10	274.36				1450	Apr. 17*	
	46	3760	LGO-10	10	274.61				1440	May 15*	
	46	164	LGO-10	8	274.45				1410	Nov. 13	
										1960	
	46	2423	LGO-10	10	274.36	40	274.47	LGO-10	1400	Aug. 9	
										1959	
	46	C-8	LGO-16	2	355.31				700	Apr. 16*	
	46	3760	LGO-16	10	355.40				700	Apr. 17*	
	46	3760	LGO-16	10	355.02				700	May 15*	
	46	1004	LGO-16	12	355.08				460	Nov. 13	
	46	2425	LGO-16	9	355.19	43	355.17	LGO-16	460	Nov. 13	

*Data in Research Report II

**Omit from average

Table 12 Index Values of Working Reference Gases and Retired (Sub)standards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		Single Set		Wt'd.Av.		Compared Tank			
	Analysers	Standard Tank No.	Compared Tank No.	No. of Compari- sons	Index	No. of Compari- sons	Index	No. Pressure (P.S.I.)		Date of Analysis	Dates of Use
F.	<u>Special Use Tanks</u>										
	46	3759	7355			10	271.70	7355	1100	<u>1960</u> Aug. 2	
	46	3759	6074			10	333.15	6074	1280	Aug. 2	
		<u>Rejected tank</u>									
	46	2423	6074			10	290.10	6074	2250	Oct. 31	
G.	<u>Retired Standards</u>										
	46	3760	C-7 (221)	11	319.99				560	<u>1959</u> Apr. 17*	
	46	C-5	C-7	11	320.19				550	Apr. 17*	
	46	3760	C-7	10	320.07				550	Apr. 30*	
	46	4296	C-7	11	320.04				540	Jul. 6*	
	46	3760	C-7	11	320.16				530	Jul. 6*	
	46	4296	C-7	10	320.29				530	Jul. 6*	
	46	3760	C-7	11	320.08				500	Aug. 25*	
	46	4296	C-7	11	320.04				500	Aug. 25*	
	46	4296	C-7	10	320.11				500	Aug. 25*	
	46	3760	C-7	11	319.99				490	Aug. 28*	
	46	4296	C-7	10	320.03				490	Aug. 28*	
	46	1004	C-7	10	320.22	127	320.10	C-7**		Nov. 13	
	46	2423	C-7	10	320.29				450	<u>1960</u> Aug. 15	
	46	2423	C-7	10	320.18				440	Oct. 4	
	46	2423	C-7	10	320.23				420	Oct. 10	
	46	2423	C-7	10	320.54	Incomplete			420	<u>1961</u> Mar. 3	

*Data in Research Report II

**Not Final

Table 12 Index Values of Working Reference Gases and Retired (Sub)standards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		<u>Single Set</u>		<u>Wt'd.Av.</u>		<u>Compared Tank</u>			
	Analysers	Standard Tank No.	Compared Tank No.	No. of Compari- sons	Index	No. of Compari- sons	Index	No.	Pressure (P.S.I.)	Date of Analysis	Dates of Use
G.	<u>Retired Standards</u>										
	46	1004	3760	11	314.67				500	<u>1959</u> Dec. 22	
	46	1004	3760	13	314.71				500	<u>1960</u> Jan. 26	
	46	2423	3760	11	314.64				500	Aug. 4	
	46	2423	3760	12	314.67				490	Sept. 22	
	46	2423	3760	12	314.56				480	Oct. 4	
	46	2423	3760	10	314.65				480	Oct. 10	
	46	2423	3760	9	314.87	78	314.68	3760*	460	<u>1961</u> Mar. 3	
	46	2423	1004	9	311.14				710	<u>1960</u> Oct. 4	
	46	2423	1004	11	311.12				705	Oct. 10	
	46	2423	1004	11	311.14	31	311.13	1004*	700	<u>1961</u> Mar. 3	
	46	2423	4296	10	292.70				410	<u>1960</u> Aug. 15	
	46	2423	4296	12	292.91				410	Sept. 22	
	46	2423	4296	10	292.98				400	Oct. 4	
	46	2423	4296	10	292.90				480	Oct. 10	

*Not Final

Table 12 Index Values of Working Reference Gases and Retired (Sub)standards

Col:	1	2	3	4	5	6	7	8	9	10	11
		(Sub)		<u>Single Set</u>		<u>Wt'd.Av.</u>		<u>Compared Tank</u>			
	Analysers	Standard	Compared	No. of	Index	No. of	Index	No.	Pressure	Date of	Dates of Use
	Tank No.	Tank No.	Tank No.	Compara-		Compara-			(P.S.I.)	Analysis	
				sons		sons					
G.	<u>Retired Standards</u>										<u>1961</u>
	46	164	4296	11	293.00				420	Mar. 9	
	46	2423	4296	11	292.95	64	292.91	4296*	410	Mar. 9	
										<u>1959</u>	
	46	1004	164	13	290.30				2180	Nov. 9**	
	46	1004	164	11	290.17				2050	Nov. 10**	
	46	1004	164	12	290.15				2050	Nov. 10**	
	46	1004	164	13	290.23	49	290.22	164		Nov. 11**	

*Not Final

**Obtained during the same period Tank 1004 was being established as a standard.

Table 13. Index Values of Standards and Principle Substandards

Reference To:	No. of Comparisons	Index	Tank No.
Report I, Table 3	63	292.68	4296
Report II, Table 5	298	314.60	3760
Report III, Table 5	183	343.30	2425
Report III, Table 5	100	311.30	1004
Report III, Table 5	59	290.29	164
Report III, Table 5	375	314.34	7344
Report III, Table 5	499	314.27	3759
Report III, Table 5	595	312.68	2423