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MAUNA LOA CARBON DIOXIDE PROJECT
REPORT NO. 2
March 15, 1963

A Summary of Reference Gas Analyses with Applied Physics Corporation
Infrared Gas Analyser No. 58 at Mauna Loa Observatory, Hawaii
January 9, 1961 to December 21, 1962

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 Mauna Loa Observatory, Hawaii by personnel of the U. S. Weather Bureau under the direction of Mr. Jack C. Pales. The procedure follows that used at the Scripps Institution of Oceanography, La Jolla, California as described in Research Reports Nos. 1 through 5, (referred to hereafter as "Report I", "Report II", "Report III", "Report IV" and "Report V").

Index values proportional to concentration have been calculated from observed differences in scale readings obtained with analyser No. 58.

The data are assembled in tables which follow this text. This is the second report for Mauna Loa. The first report was completed in June, 1961. Except as noted the presentation is the same as in Mauna Loa Report I.

II. Tables 1. and 2.

The data are presented as in Mauna Loa Report I (referred to hereafter as "MLO-1") except that barometric corrections have been applied in Table 2. This was done as follows. The observed scale differences are assumed to be directly proportional to barometric pressure. The scale differences are adjusted to the values that would be obtained if the observed pressure were changed to a standard pressure of 20.00 inches of mercury.

*the pressure
at the level of the observatory*

Then the index difference is calculated using a recorder scale factor also adjusted to apply to this standard pressure (see below). Since the recorder scale factor has been found to show no significant long term trend, an average value of the corrected factor was determined for each calendar year (see Table 4) and applied to the data for that year. In addition to the new data, measurements reported in MLO-1, beginning in November, 1958 are included in both Tables 2 and 4. But since the adjusted values turn out to influence the results of Table 6 only to a few hundredths of a p.p.m., these are not used to change the results already appearing in Table 6 of MLO-1. Barometric variations in 1961 and 1962 were greater than previously observed. In the case of the new data reported here, ~~for~~ ~~the first time~~, adjustments are carried through into Tables 6 and 7.

The formula for calculating the adjusted index difference is as follows:

$$\begin{array}{l} \text{Computed} \\ \text{Index} \\ \text{Difference} \end{array} = \frac{\text{Observed Scale Difference} \times 18.00 \times 20.000 \text{ inches/Hg}}{\text{Average Corrected Recorder Scale Factor} \times \text{Observed Barometric Pressure (inches/Hg)}}$$

III. Recorder Scale Factor - Table 3.

The procedure used in MLO-1 is continued. Primary tank A-17 remained in use throughout the period of this report. Two secondary tanks were employed: tank 7344 before May 30, 1961 and tank 193 after that date.

Index differences in column 5 were obtained from index values of the separate tanks as follows:

$$\begin{array}{rcl} 4277 \text{ vs } 7344 & 345.84 - 314.35 & = 31.49 \\ 4277 \text{ vs } 193 & 345.84 - 311.76 & = 34.08 \end{array}$$

For convenience in working up future data, provisional values to be used in 1963 are as follows:

$$\begin{array}{rcl} 4277 \text{ vs } 2403 & 345.84 - 311.12 & = 34.72 \\ 2399 \text{ vs } 2403 & 335.54 - 311.12 & = 24.42 \end{array}$$

The index values quoted above are based on comparisons at the Scripps Institution of Oceanography, as follows:

Tank No.	At SIO Before Use at Mauna Loa			At SIO After Use at Mauna Loa			Weighted Average	
	No. of Comps.	Index	Report	No. of Comps.	Index	Report	No. of Comps.	Index
193	115	311.87	IV	51	311.51	VI	166	311.76
2399	93	335.54	V	-	--	-	-	--
2403	102	311.12	V	-	--	-	-	--
4277	63	345.84	II	-	--	-	-	--
7344	375	314.34	III	58	314.45	IV	433	314.35
11083*	104	314.26	VI	-	--	-	-	--

* A replacement for tank A-17

The index value for tank 7344, based on comparisons before and after use, changed by 0.01 p.p.m. from the provisional value based only on comparisons before use, as quoted in MLO-1. This was because tank 7344 was very well determined before use. The results in MLO-1 will not be corrected to reflect this very small change. In the case of tank 193 the final value based on comparisons both before and after use is available the first time this tank appears in a report so that there is no possibility to change the results later on.

IV. Summary of Recorder Scale Factors - Table 4.

Values of the recorder scale factor ^(RSF) before and after adjustment to a standard barometric pressure of 20.000 inches/Hg are given together with the date and observed barometric pressure. [At the end of the table average values are given for each calendar year.] The adjusted recorder scale factors are calculated by the formula:

1250
 1175

 57

4.

$$\text{Adjusted Recorder Scale Factor} = \frac{\text{Weighted Average Recorder Scale Factor on a Given Day} \times 20.000 \text{ inches/Hg}}{\text{Observed Barometric Pressure during Test as Recorded on Daily Data Sheet (inches/Hg)}}$$

It may be seen that there is very little, if any, trend in the recorder scale factor from year to year, and that correcting for the barometric pressure usually makes no significant change in the factor. (It should be kept in mind, however, that pressure changes at Mauna Loa are small compared to more polar locations. Data from stations such as Point Barrow, Alaska or the South Pole may require barometric corrections.)

V. Reference Gas Substandards - Table 5.

As during the period of MLO-1, tank A-17 is treated in this report as a special comparison tank while tanks 7344 and 193 are used in conjunction with span tank 4277 for computing all index values in this report.

Computed index values for A-17 are now available over nearly four years. The average values separated according to comparison tank and calendar year are as follows:

		No. of Comps.	
versus SIO tanks	Feb.'59	10	310.09
versus 4277 and 4297	Mar.'59-Oct.'59	227	310.25
versus 4277 and 6051	Oct.'59-Mar.'60	239	310.33
versus 4277 and 7344	Mar.'60-Dec.'60	422	310.37
versus 4277 and 7344	Jan.'61-May-'61	200	310.43 310.41
versus 4277 and 193	May-'61-Dec.'61	290	310.26 310.54
versus 4277 and 193	Jan.'62-Dec.'62	440	310.19 310.74

Data during 1958 and 1960 are as reported in MLO-1. Except that tank A-17 shows a slight rising trend, the agreement is reasonably good until May, 1961. Runs versus tank 193 agree well with the runs during 1959 (at Scripps and Mauna Loa) but do not agree with the rising trend.

During 1962 the values for working tanks as run at Mauna Loa Observatory

are considerably lower than as run at Scripps. Present evidence, not all discussed in this report, suggests that both tank A-17 and the working tanks ought to have yielded higher values at Mauna Loa by as much as 0.5 p.p.m., perhaps even more (see below), and that the Scripps values for the working tanks are probably nearly correct. Thus a rising trend in A-17 is probably real.

VI. Index Values of Working Tanks - Tables 6 and 7.

The data are reported as in MLO-1. The "special tank checks" in Table 6 are listed with values adjusted for variations in the barometric pressure as discussed above. In Table 7, the runs at Mauna Loa are seen to be in reasonably good agreement with those at Scripps during 1961 but not during 1962. Weighted average index values for 1961 include all data at Scripps and Mauna Loa, but for 1962 include only the Scripps values. These latter values are to be used provisionally to compute air data. The problem of the disagreement of values during 1962 will be discussed in another Mauna Loa report after special tests now in progress (March, 1963) are completed.

Table 1. Reference Gas Comparisons with Analyser No. 50

MAUNA LOA CARBON DIOXIDE PROJECT

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 485								1961
345.98	4277	A-17	-37.54	10	18.98	-35.60	310.38	5 72	Jan. 9
343.5	7344	A-17	-4.15	10		-3.94	310.41	5 72	
	7344	4277	33.30	10		-	-	3 72	
	7344	3758	-3.56	10		-3.38	310.97	6 72	
345.99	4277	A-17	-37.48	10	18.95	-35.60	310.38	5 73	Jan. 19
	7344	A-17	-4.20	10		-3.99	310.36	5 73	
	7344	4277	33.31	10		-	-	3 73	
	7344	3758	-3.85	10		-3.66	310.69	6 73	
	7344	4272	-0.58	10		-0.55	313.80	6 73	
345.99	4277	A-17	-37.47	10	18.98	-35.54	310.45	5 74	Feb. 1
	7344	A-17	-4.12	10		-3.91	310.44	5 74	
	7344	4277	33.37	10		-	-	3 74	
	7344	4272	-0.55	10		-0.52	313.83	6 74	
	7344	4275	-0.44	10		-0.42	313.93	6 74	
345.99	4277	A-17	-37.64	10	19.09	-35.49	310.50	5 75	Feb. 12
	7344	A-17	-4.03	10		-3.80	310.55	5 75	
	7344	4277	33.49	10		-	-	3 75	
	7344	4275	-0.37	10		-0.35	314.00	6 75	
345.99	4277	A-17	-37.91	10	19.20	-35.54	310.45	5 76	Feb. 23
	7344	A-17	-4.05	10		-3.80	310.55	5 76	
	7344	4277	33.63	10		-	-	3 76	
	7344	4275	-0.37	10		-0.35	314.00	6 76	

Table 1. Reference Gas Comparisons with Analyser No. 50

MAUNA LOA CARBON DIOXIDE PROJECT

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 485						92249		1961
345.79	4277	A-17	-37.88	10	19.17	-35.57	310.42	5 77	Mar. 7
	7344	A-17	-4.20	10		-3.94	310.41	5 77	
	7344	4277	33.70	10		-	-	3 77	
	7344	4272	-0.43	10		-0.40	313.95	6 77	
	7344	10075	-17.15	10		-16.10	298.25	6 77	
345.79	4277	A-17	-37.88	10	19.14	-35.62	310.37	5 78	Mar. 24
	7344	A-17	-4.21	10		-3.96	310.39	5 78	
	7344	4277	33.64	10		-	-	3 78	
	7344	10075	-17.15	10		-16.12	298.23	6 78	
346.00	4277	A-17	-37.68	10	19.05	-35.60	310.40	5 79	Apr. 6
	7344	A-17	-4.22	10		-3.99	310.36	5 79	
	7344	4277	33.54	10		-	-	3 79	
	7344	10075	-17.13	10		-16.19	298.16	6 79	
	7344	6081	-4.98	10		-4.70	309.65	6 79	
346.00	4277	A-17	-37.95	10	19.12	-35.73	310.27	5 80	Apr. 25
	7344	A-17	-4.27	10		-4.02	310.33	5 80	
	7344	4277	33.56	10		-	-	3 80	
	7344	6081	-4.98	10		-4.69	309.66	6 80	
346.00	4277	A-17	-37.86	10	19.14	-35.61	310.39	5 81	May 12
	7344	A-17	-4.22	10		-3.97	310.38	5 81	
	7344	4277	33.66	10		-	-	3 81	
	7344	6081	-4.83	10		-4.54	309.81	6 81	
	7344	10068	-11.62	10		-10.93	303.42	6 81	

Table 1. Reference Gas Comparisons with Analyser No. 50

MAUNA LOA CARBON DIOXIDE PROJECT

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 485</u>								<u>1961</u>
9-2-64 4	346.00 311.96	4277 193 193 193	A-17 A-17 4277 10068	-38.27 -1.64 36.57 -8.99	10 10 10 10	19.35 -35.60 -1.53 -8.36	310.40 310.43 303.60	5 5 3 6	82 82 82 82
	346.01 311.96	4277 193 193 193 193	A-17 A-17 4277 10068 10067	-37.95 -1.57 36.35 -8.61 7.79	10 10 10 10 10	19.23 -35.52 -1.47 -8.04 7.29	310.49 310.49 303.90 319.25	5 5 3 6 6	83 83 83 83 83
	346.02 311.98	4277 193 193 193	A-17 A-17 4277 10067	-38.44 -1.79 36.53 7.82	10 10 10 10	19.35 -35.76 -1.67 7.27	310.26 310.31 319.25	5 5 3 6	84 84 84 84
	346.02 311.98	4277 193 193 193 193	A-17 A-17 4277 10067 2427	-37.43 -1.61 35.70 7.73 4.07	10 10 10 10 10	18.91 -35.63 -1.53 7.36 3.87	310.39 310.45 319.34 315.85	5 5 3 6 6	85 85 85 85 85
	346.02 311.98	4277 193 193 193	A-17 4277 A-17 2427	-37.22 35.60 -1.60 4.10	5 5 5 5	18.83 -35.58 -1.53 3.92	310.44 310.45 315.90	5 3 5 6	86 86 86 86

Table 1. Reference Gas Comparisons with Analyser No. 58

MAUNA LOA CARBON DIOXIDE PROJECT

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 485								1961
9-2-64	346.02 4277	A-17	-38.62	10	19.52	-35.56	310.46	5 87	July 28
	311.98 193	4277	36.90	10		-	-	3 87	
	193	A-17	-1.59	10		-1.46	310.52	5 87	
	193	4272	-4.41	10		-4.06	307.92	6 87	
	346.02 4277	A-17	-37.49	10	18.99	-35.55	310.47	5 88	Aug. 19
	312.01 193	4277	35.84	10		-	-	3 88	
	193	A-17	-1.62	10		-1.54	310.47	5 88	
	193	4272	-4.19	10		-3.97	308.04	6 88	
	346.03 4277	A-17	-37.33	10	18.90	-35.55	310.48	5 89	Sep. 5
	312.04 193	4277	35.45	10		-	-	3 89	
	193	A-17	-1.42	10		-1.35	310.69	5 89	
	193	4272	-4.29	10		-4.09	307.95	6 89	
	193	7355	-4.91	10		-4.68	307.36	6 89	
	346.03 4277	A-17	-37.46	10	19.01	-35.47	310.54	5 90	Sep. 28
	312.04 193	4277	35.87	10		-	-	3 90	
	193	A-17	-1.56	10		-1.48	310.56	5 90	
	193	7355	-4.94	10		-4.68	307.86	6 90	
	346.03 4277	A-17	-37.48	10	19.06	-35.40	310.63	5 91	Oct. 15
	312.07 193	4277	35.94	10		-	-	3 91	
	193	A-17	-1.52	10		-1.44	310.63	5 91	
	193	7355	-4.77	10		-4.50	307.57	6 91	
	193	136	10.46	10		9.88	321.95	6 91	

Table 1. Reference Gas Comparisons with Analyser No. 59

MAUNA LOA CARBON DIOXIDE PROJECT

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
9-2-64	Span 485 346.04 4277	A-17	-37.91	10	19.18	-35.39	310.65	5 92	1961 Nov. 5
	312.09 193	A-17	-1.61	10		-1.50	310.59	5 92	
	193	4277	36.41	10		-	-	3 92	
	193	136	10.58	10		4.88	321.97	6 92	
	346.04 4277	A-17	-37.58	10	19.10	-35.42	310.62	5 93	Nov. 21
	312.09 193	A-17	-1.55	10		-1.46	310.63	5 93	
	193	4277	36.02	10		-	-	3 93	
	193	136	10.79	10		10.17	322.26	6 93	
	193	3752	9.52	10		8.97	321.06	6 93	
	346.04 4277	A-17	-37.36	10	19.03	-35.34	310.70	5 94	Dec. 2
	312.12 193	A-17	-1.56	10		-1.48	310.64	5 94	
	193	4277	35.90	10		-	-	3 94	
	193	3752	9.59	10		9.07	321.19	6 94	
	346.04 4277	A-17	-37.67	10	19.13	-35.44	310.60	5 95	Dec. 12
	312.12 193	A-17	-1.56	10		-1.47	310.65	5 95	
	193	4277	35.98	10		-	-	3 95	
	193	3752	9.63	10		9.06	321.18	6 95	
	193	3751	15.78	10		14.85	326.97	6 95	
	346.04 4277	A-17	-37.44	10	19.09	-35.30	310.74	5 96	Dec. 28
	312.12 193	A-17	-1.46	10		-1.38	310.74	5 96	
	193	4277	35.96	10		-	-	3 96	
	193	3751	15.79	10		14.89	327.01	6 96	

Table 1. Reference Gas Comparisons with Analyser No. 58

MAUNA LOA CARBON DIOXIDE PROJECT

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
7-2-64	Span 485								1962
346.05	4277	A-17	-37.62	10	19.12	-35.42	310.63	5 97	Jan. 6
312.15	193	A-17	-1.63	10		-1.53	310.62	5 97	
	193	4277	36.02	10		-	-	3 97	
	193	3751	15.79	10		14.87	327.02	6 97	
	193	7364	-10.87	10		-10.23	301.92	6 97	
346.05	4277	A-17	-37.66	10	19.19	-35.32	310.73	5 98	Jan. 21
312.15	193	A-17	-1.51	10		-1.42	310.73	5 98	
	193	4277	36.13	10		-	-	3 98	
	193	7364	-10.99	10		-10.31	301.84	6 98	
346.05	4277	A-17	-37.80	10	19.17	-35.49	310.56	5 99	Jan. 22
312.15	193	A-17	-1.67	10		-1.57	310.59	5 99	
	193	4277	36.06	10		-	-	3 99	
	193	7364	-10.76	10		-10.10	302.05	6 99	
	193	148	6.64	10		6.23	318.38	6 99	
346.06	4277	A-17	-37.67	10	19.13	-35.44	310.62	5 100	Feb. 10
312.17	193	A-17	-1.65	10		-1.55	310.62	5 100	
	193	4277	36.00	10		-	-	3 100	
	193	148	6.67	10		6.28	318.45	6 100	
346.06	4277	A-17	-37.76	10	19.20	-35.40	310.66	5 101	Feb. 28
312.17	193	A-17	-1.65	10		-1.55	310.62	5 101	
	193	4277	36.17	10		-	-	3 101	
	193	148	6.56	10		6.15	318.32	6 101	
	193	10064	-11.10	10		-10.41	301.74	6 101	

Table 1. Reference Gas Comparisons with Analyser No. 50

MAUNA LOA CARBON DIOXIDE PROJECT

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
	<i>9-2-64</i> 346.06	Span 1:85 4277							1962
	312.20	193	A-17	10	19.11	-35.34	310.73	5	102
		193	A-17	10		-1.41	310.79	5	102
		193	4277	10		-	-	3	102
		193	10064	10		-10.35	301.85	6	102
	346.06	4277	A-17	10	19.08	-35.28	310.78	5	103
	312.20	193	A-17	10		-1.49	310.71	5	103
		193	4277	10		-	-	3	103
		193	10064	10		-10.39	301.81	6	103
		193	10072	10		-7.22	304.98	6	103
	346.07	4277	A-17	10	19.14	-35.45	310.62	5	104
	312.23	193	A-17	10		-1.53	310.70	5	104
		193	4277	10		-	-	3	104
		193	10072	10		-7.42	304.81	6	104
	346.07	4277	A-17	10	19.21	-35.44	310.63	5	105
	312.23	193	A-17	10		-1.57	310.64	5	105
		193	4277	10		-	-	3	105
		193	10072	10		-7.31	304.92	6	105
		193	4272	10		-10.34	301.89	6	105
	346.08	4277	A-17	10	19.25	-35.23	310.85	5	106
	312.26	193	A-17	10		-1.49	310.77	5	106
		193	4277	10		-	-	3	106
		193	4272	10		-10.37	301.89	6	106

Table 1. Reference Gas Comparisons with Analyser No. 52

MAUNA LOA CARBON DIOXIDE PROJECT									
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 485								
9-2-67	346.08 4277	A-17	-37.75	10	19.17	-35.45	310.63	5	107
	312.28 193	A-17	-1.76	10		-1.65	310.63	5	107
	193	4272	-11.17	10		-10.49	301.79	6	107
	193	6067	-9.44	10		-8.86	303.42	6	107
	346.08 4277	A-17	-37.48	10	19.09	-35.34	310.74	5	108
	312.28 193	A-17	-1.59	10		-1.50	310.78	5	108
	193	4277	35.80	10		-	-	3	108
	193	6067	-9.17	10		-8.45	303.63	6	108
	346.09 4277	A-17	-37.32	10	19.01	-35.34	310.75	5	109
	312.31 193	A-17	-1.73	10		-1.64	310.67	5	109
	193	4277	35.76	10		-	-	3	109
	193	6067	-9.32	10		-8.82	303.49	6	109
	193	6081	-10.19	10		-9.65	302.66	6	109
	346.10 4277	A-17	-38.06	10	19.38	-35.35	310.75	5	110
	312.34 193	A-17	-1.65	10		-1.53	310.81	5	110
	193	4277	36.28	10		-	-	3	110
	193	6081	-10.22	10		-9.49	302.85	6	110
	346.10 4277	A-17	-37.85	10	19.35	-35.21	310.89	5	111
	312.36 193	A-17	-1.56	10		-1.45	310.91	5	111
	193	4277	36.24	10		-	-	3	111
	193	6081	-10.31	10		-9.59	302.77	6	111
	193	7344	-11.38	10		-10.59	301.77	6	111

Table 1. Reference Gas Comparisons with Analyser No. 52

MAUNA LOA CARBON DIOXIDE PROJECT

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		
	9-2-64 346.11 312.39	Span 485 4277 193 193 193	A-17 A-17 4277 7344	-37.46 -1.71 35.73 -11.19	10 10 10 10	19.08	-35.34 -1.61 - -10.56	310.77 310.78 - 301.83	5 5 3 6	112 112 112 112	1962 Oct. 5
	346.11 312.39	4277 193 193 193 193	A-17 A-17 4277 7344 11097	-38.28 -1.78 36.55 -11.50 -5.30	10 10 10 10 10	19.50	-35.34 -1.64 - -10.62 -4.89	310.77 310.75 - 301.77 307.50	5 5 3 6 6	113 113 113 113 113	Oct. 16
	346.11 312.42	4277 193 193 193	A-17 A-17 4277 11097	-37.65 -1.68 36.09 -5.17	10 10 10 9	19.25	-35.21 -1.57 - -4.83	310.90 310.85 - 307.59	5 5 3 6	114 114 114 114	Nov. 2
	346.11 312.42	4277 193 193 193 193	A-17 A-17 4277 11097 11078	-37.80 -1.64 36.17 -5.15 -4.35	10 10 10 10 10	19.33	-35.20 -1.53 - -4.80 -4.05	310.91 310.89 - 307.62 308.37	5 5 3 6 6	115 115 115 115 115	Nov. 12
	346.11 312.42	4277 193 193 193	A-17 A-17 4277 11078	-37.90 -1.78 36.15 -4.37	10 10 10 10	19.31	-35.33 -1.66 - -4.07	310.78 310.76 - 308.35	5 5 3 6	116 116 116 116	Nov. 26

Table 1. Reference Gas Comparisons with Analyser No. 58

MAUNA LOA CARBON DIOXIDE PROJECT

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
						9-2-64			1962
9-2-64	Span 435 346.12 4277	A-17	-37.72	10	19.25	-35.27	310.85	5 117	Dec. 12
	312.45 193	A-17	-1.71	10		-1.60	310.85	5 117	
	193	4277	36.00	10		-	-	3 117	
	193	11078	-4.36	10		-4.08	308.37	6 117	
	193	2425	-1.86	10		-1.74	310.71	6 117	
	346.12 4277	A-17	-37.41	10	19.09	-35.27	310.85	5 118	Dec. 21
	312.45 193	A-17	-1.75	10		-1.65	310.90	5 118	
	193	4277	35.76	10		-	-	3 118	
	193	2425	-1.68	10		-1.58	310.87	6 118	

Table 2. Reference Gas Comparisons with Analyser No. 40

MAUNA LOA CARBON DIOXIDE PROJECT

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	Barometric Pressure (Inches)	Date of Analysis
	<u>Span 435</u>								
	4297	2425	1.36	10	19.22	1.27	307.05	20.050	<u>1958</u> Dec. 3
	4297	2425	1.27	11		1.18	306.96	20.105	Dec. 15
	4297	4295	-8.03	9		-7.49	298.29	20.080	Dec. 26
	4297	4295	-7.97	9	19.09	-7.51	298.27	20.025	<u>1959</u> Jan. 6
	4297	4292	-10.24	8		-9.64	296.14	20.040	Jan. 20
	4297	4292	-10.10	9		-9.50	296.28	20.050	Jan. 27
	4297	4284	3.60	3		3.39	309.17	20.055	Mar. 1
	4297	4284	3.61	8		3.39	309.17	20.110	Mar. 5
	4297	4284	3.60	8		3.37	309.15	20.120	Mar. 9
	4297	4284	3.59	8		3.38	309.16	20.050	Mar. 11
	4297	2420	2.08	8		1.95	307.73	20.080	Mar. 30
	4297	2420	2.11	9		1.98	307.76	20.070	Apr. 11
	4297	4283	13.73	9		12.90	318.68	20.080	Apr. 23
	4297	4283	13.66	9		12.82	318.60	20.100	May 4
	4297	2418	6.76	8		6.36	312.14	20.060	May 22
	4297	2418	6.85	8		6.43	312.21	20.095	June 7
	4297	2423	12.32	9		11.54	317.32	20.130	June 21
	4297	2423	12.22	11		11.47	317.25	20.085	July 7
	4297	4286	11.99	9		11.27	317.05	20.060	July 22
	4297	4285	-2.53	9		-2.38	303.40	20.085	July 30
	4297	4285	-2.39	8		-2.26	303.52	19.925	Aug. 5
	4297	6074	0.70	9		0.66	306.44	20.055	Aug. 29
	4297	6074	1.86	9		1.75	307.53	20.090	Sep. 5
	4297	4281	-1.43	9		-1.34	304.44	20.100	Sep. 16
	4297	4281	-1.46	9		-1.37	304.41	20.090	Sep. 27

Table 2. Reference Gas Comparisons with Analyser No. 58

MAUNA LOA CARBON DIOXIDE PROJECT

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	Barometric Pressure (Inches)	Date of Analysis
	<u>Span 485</u>								<u>1959</u>
	4297	6067	2.13	9	19.09	2.00	307.78	20.085	Oct. 8
	4297	6067	2.41	9		2.26	308.04	20.150	Oct. 19
	6051	3759	0.50	9		0.47	310.54	20.045	Nov. 2
	6051	3759	0.62	9		0.58	310.65	20.100	Nov. 15
	6051	4288	1.83	10		1.72	311.79	20.085	Nov. 24
	6051	4288	1.72	9		1.62	311.69	20.085	Nov. 30
	6051	4274	-9.09	8		-8.55	301.52	20.045	Dec. 16
	6051	3753	16.89	9		15.92	325.99	20.005	Dec. 24
									<u>1960</u>
	6051	3753	17.06	9	19.25	15.86	325.93	20.110	Jan. 5
	6051	2418	-4.22	9		-3.93	306.14	20.055	Jan. 11
	6051	2418	-4.09	9		-3.81	306.26	20.065	Jan. 23
	6051	7361	10.80	10		10.06	320.13	20.080	Feb. 10
	6051	7361	10.94	10		10.20	320.27	20.060	Feb. 26
	6051	7361	10.76	6		10.06	320.13	20.000	Mar. 2
	6051	7361	10.77	6		10.07	320.14	20.005	Mar. 2
	6051	7362	-8.72	9		-8.15	301.92	20.000	Mar. 14
	6051	7362	-8.80	11		-8.19	301.88	20.100	Mar. 27
	7344	4275	-11.48	9		-10.69	303.66	20.090	Apr. 8
	7344	4275	-11.46	10		-10.68	303.67	20.075	Apr. 23
	7344	4272	-14.56	10		-13.57	300.78	20.060	May 13
	7344	4272	-14.52	10		-13.50	300.85	20.120	May 27
	7344	7366	-8.75	11		-8.14	306.21	20.100	June 12
	7344	7366	-8.86	12		-8.23	306.12	20.140	June 29
	7344	3758	-12.56	11		-11.64	302.71	20.180	July 13
	7344	3758	-12.48	11		-11.60	302.75	20.110	July 26
	7344	6081	-8.19	11		-7.62	306.73	20.105	Aug. 9
	7344	6081	-8.23	11		-7.64	306.71	20.150	Aug. 21

Table 2. Reference Gas Comparisons with Analyser No. 58

MAUNA LOA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8	9
	(Sub)								
	Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. of Comparisons	Recorder Scale Factor	Computed Index Difference	Computed Index	Barometric Pressure (Inches)	Date of Analysis
	<u>1960</u>								
	Span 485								
	7344	148	-12.19	9	19.25	-11.35	303.00	20.085	Sep. 7
	7344	148	-12.22	11		-11.35	303.00	20.125	Sep. 20
	7344	7366	3.94	12		3.67	318.02	20.085	Oct. 20
	7344	7361	8.57	12		7.98	322.33	20.090	Nov. 4
	7344	7361	8.43	11		7.84	322.19	20.120	Nov. 17
	7344	7362	-14.33	10		-13.36	300.99	20.060	Dec. 1
	7344	7362	-14.15	11		-13.18	301.17	20.075	Dec. 15
	<u>1961</u>								
	7344	3758	-3.73	11	19.05	-3.54	310.81	19.890	Jan. 1
	7344	3758	-3.72	12		-3.56	310.79	20.050	Jan. 14
	7344	4272	-0.58	11		-0.55	313.80	20.000	Jan. 26
	7344	4275	-0.52	11		-0.49	313.86	20.135	Feb. 8
	7344	4275	-0.18	11		-0.17	314.18	20.000	Feb. 17
	7344	10075	-17.09	11		-16.05	298.30	20.120	Mar. 16
	7344	10075	-17.05	12		-16.03	298.32	20.100	Apr. 1
	7344	6081	-4.79	11		-4.50	309.85	20.105	Apr. 18
	7344	6081	-4.83	11		-4.52	309.83	20.185	May 3
	7344	10068	-11.39	12		-10.70	303.65	20.120	May 23
	7344	10068	-11.44	11		-10.73	303.62	20.155	May 30
	193	10068	-8.64	11		-8.11	303.85	20.140	May 30
	193	10068	-8.57	11		-8.06	303.90	20.095	June 10
	193	10067	7.99	11		7.53	319.49	20.060	June 24
	193	10067	8.02	12		7.55	319.53	20.075	July 12
	193	4272	-4.05	11		-3.80	308.21	20.140	Aug. 11
	193	4272	-3.94	11		-3.71	308.30	20.085	Aug. 28
	193	7355	-4.63	11		-4.36	307.68	20.050	Sep. 20
	193	7355	-4.72	12		-4.42	307.65	20.175	Oct. 7

9-2-64

Table 2. Reference Gas Comparisons with Analyser No. 58

MAUNA LOA CARBON DIOXIDE PROJECT

Col:	1	2	3	4	5	6	7	8	9
	(Sub) Standard Tank No.	Compared Tank No.	Observed Scale Difference	No. of Compara- sons	Recorder Scale Factor	Computed Index Difference	Computed Index	Barometric Pressure (Inches)	Date of Analysis
	Span 485								1961
	31207 193	136	10.54	11	19.05	9.93	322.00	20.070	Oct. 26
	31209 193	136	10.67	11		10.01	322.10	20.145	Nov. 13
	31209 193	3752	9.62	11		9.05	321.14	20.080	Nov. 28
	31212 193	3752	9.73	11		9.16	321.28	20.070	Dec. 8
	31213 193	3751	15.91	11		15.00	327.12	20.045	Dec. 21
	31215 193	3751	15.87	10	1913 9-24 18.95	14.90	327.05	20.050	Jan. 3
	31215 193	7364	-10.90	10	(1882)	-10.23	301.92	20.060	Jan. 12
	31217 193	148	6.69	11		6.30	318.47	19.980	Feb. 2
	31217 193	148	6.72	12		6.37	318.54	19.850	Feb. 18
	31220 193	10064	-11.04	10		-10.37	301.83	20.025	Mar. 6
	31220 193	10064	-11.11	10		-10.43	301.77	20.050	Mar. 25
	31222 193	10072	-7.70	12		-7.26	304.97	19.970	Apr. 8
	31226 193	4272	-10.94	12		-10.23	302.04	20.140	May 11
	31226 193	4272	-10.70	11		-10.03	302.23	20.080	May 28
	31228 193	6067	-9.18	11		-8.59	303.68	20.120	June 20
	31231 193	6067	-9.04	12		-8.50	303.81	20.025	July 5
	31231 193	6081	-10.06	10		-9.41	302.90	20.110	July 25
	31234 193	6081	-10.10	10		-9.46	302.88	20.100	Aug. 11
	3123 193	7344	-11.23	11		-10.52	301.84	20.090	Sep. 28
	31239 193	7344	-11.22	11		-10.48	301.91	20.135	Oct. 10
	31239 193	11097	-5.20	12		-4.86	307.53	20.125	Oct. 29
	31242 193	11097	-5.24	11		-4.90	307.52	20.110	Nov. 8
	3124 193	11078	-4.26	9		-3.99	308.46	20.100	Nov. 20
	3124 193	11078	-4.24	10		-3.98	308.47	20.070	Dec. 3
	3124 193	2425	-1.70	8		-1.60	310.85	19.980	Dec. 18

Table 3. Recorder Scale Factors of Analyser No. 58

MAUNA LOA CARBON DIOXIDE PROJECT

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
	Span 435					9-1-64		1961
	4277	A-17	-37.54	10				Jan. 9
	7344	A-17	-4.15	10				
	7344	4277	33.39*	10*	31.63	19.00		
	7344	4277	33.30	10	31.63	18.95		
				20			18.98	
	4277	A-17	-37.48	10				Jan. 19
	7344	A-17	-4.20	10				
	7344	4277	33.28*	10*	31.63	18.94		
	7344	4277	33.31	10	31.63	18.96		
				20			18.95	
	4277	A-17	-37.47	10				Feb. 1
	7344	A-17	-4.12	10				
	7344	4277	33.35*	10*	31.64	18.97		
	7344	4277	33.37	10	31.64	18.98		
				20			18.98	
	4277	A-17	-37.64	10				Feb. 12
	7344	A-17	-4.03	10				
	7344	4277	33.61*	10*	31.64	19.12		
	7344	4277	33.49	10	31.64	19.05		
				20			19.09	

Table 3. Recorder Scale Factors of Analyser No. 58

MAUNA LOA CARBON DIOXIDE PROJECT

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
	Span 485					9-1-64		1961
	4277	A-17	-37.91	10				Feb. 23
	7344	A-17	-4.05	10				
	7344	4277	33.86*	10*	31.64	19.26		
	7344	4277	33.63	10	31.64	19.13		
				20			19.20	
	4277	A-17	-37.88	10				Mar. 7
	7344	A-17	-4.20	10				
	7344	4277	33.68*	10*	31.64	19.16		
	7344	4277	33.70	10	31.64	19.17		
				20			19.17	
	4277	A-17	-37.88	10				Mar. 24
	7344	A-17	-4.21	10				
	7344	4277	33.67*	10*	31.65	19.15		
	7344	4277	33.64	10	31.65	19.13		
				20			19.14	
	4277	A-17	-37.68	10				Apr. 6
	7344	A-17	-4.22	10				
	7344	4277	33.46*	10*	31.65	19.03		
	7344	4277	33.54	10	31.65	19.07		
				20			19.05	

Table 3. Recorder Scale Factors of Analyser No. 58

MAUNA LOA CARBON DIOXIDE PROJECT

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
	Span 485					9-1-64		1961 Apr. 25
	4277	A-17	-37.95	10				
	7344	A-17	-4.27	10				
	7344	4277	33.68*	10*	31.65	19.15		
	7344	4277	33.56	10	31.65	19.09	19.12	
				20				
	4277	A-17	-37.86	10				May 12
	7344	A-17	-4.22	10				
	7344	4277	33.64*	10*	31.65	19.13		
	7344	4277	33.66	10	31.65	19.14	19.14	
				20				
	4277	A-17	-38.27	10				May 31
	193	A-17	-1.64	10				
	193	4277	36.63*	10*	34.05	19.36		
	193	4277	36.57	10	34.05	19.35	19.35	
				20				
	4277	A-17	-37.95	10				June 17
	193	A-17	-1.57	10				
	193	4277	-36.38*	10*	34.05	19.23		
	193	4277	-36.35	10	34.05	19.22	19.23	
				20				

Table 3. Recorder Scale Factors of Analyser No.58

MAUNA LOA CARBON DIOXIDE PROJECT

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
	Span 485							1961
	4277	A-17	38.44	10				July 2
	193	A-17	1.79	10				
	193	4277	36.65*	10*	34.04	19.38		
	193	4277	-36.53	10	34.04	19.32		
				20			19.35	
	4277	A-17	37.43	10				July 20
	193	A-17	-1.61	10				
	193	4277	35.82*	10*	34.04	18.84		
	193	4277	-35.70	10	34.04	18.88		
				20			18.91	
	4277	A-17	-37.22	5				July 21
	193	A-17	1.60	5				
	193	4277	35.62*	5*	34.04	18.84		
	193	4277	-35.60	5	34.04	18.82		
				10			18.83	
	4277	A-17	-38.62	10				July 28
	193	A-17	1.59	10				
	193	4277	-37.03*	10*	34.04	19.58		
	193	4277	-36.90	10	34.04	19.51		
				20			19.55	

Table 3. Recorder Scale Factors of Analyser No. 58

MAUNA LOA CARBON DIOXIDE PROJECT

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
	Span 485							1961
	4277	A-17	-37.49	10				Aug. 19
	193	A-17	1.62	10				
	193	4277	35.87*	10*	34.01	18.98		
	193	4277	-35.84	10	34.01	18.97		
				20			1898	
	4277	A-17	-37.33	10				Sep. 5
	193	A-17	1.42	10				
	193	4277	35.91*	10*	33.99	19.02		
	193	4277	-35.45	10	33.99	18.77		
				20			18.90	
	4277	A-17	37.46	10				Sep. 28
	193	A-17	1.56	10				
	193	4277	35.90*	10*	33.99	19.01		
	193	4277	35.87	10	33.99	19.00		
				20			19.01	
	4277	A-17	-37.48	10				Oct. 15
	193	A-17	-1.52	10				
	193	4277	35.96*	10*	33.96	19.06		
	193	4277	35.94	10	33.96	19.05		
				20			19.06	

Table 3. Recorder Scale Factors of Analyser No. 58

MAUNA LOA CARBON DIOXIDE PROJECT

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
	Span 485					4-1-64		1961
	4277	A-17	37.91	10				Nov. 5
	193	A-17	1.61	10				
	193	4277	36.30*	10*	33.95	19.25		
	193	4277	-36.41	10	33.75	19.30		
				20			19.28	
	4277	A-17	37.58	10				Nov. 21
	193	A-17	1.55	10				
	193	4277	36.03*	10*	33.95	19.10		
	193	4277	-36.02	10	33.95	19.10		
				20			19.10	
	4277	A-17	37.36	10				Dec. 2
	193	A-17	1.56	10				
	193	4277	35.80*	10*	33.92	19.00		
	193	4277	35.90	10	33.92	19.05		
				20			19.03	
	4277	A-17	37.67	10				Dec. 12
	193	A-17	1.56	10				
	193	4277	36.11*	10*	33.92	19.16		
	193	4277	35.98	10	33.92	19.09		
				20			19.13	

Table 3. Recorder Scale Factors of Analyser No. 58

MAUNA LOA CARBON DIOXIDE PROJECT

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
	Span 485					9-1-64		1961 Dec. 28
	4277	A-17	-37.44	10				
	193	A-17	-1.46	10				
	193	4277	35.98*	10*	33.92	19.09		
	193	4277	35.96	10	33.92	19.08		
				20			19.09	
	Span 485							1962 Jan. 6
	4277	A-17	-37.62	10				
	193	A-17	-1.63	10				
	193	4277	35.99*	10*	33.90	19.11		
	193	4277	36.02	10	33.90	19.13		
				20			19.12	
	Span 485							1962 Jan. 21
	4277	A-17	-37.66	10				
	193	A-17	1.51	10				
	193	4277	36.15*	10*	33.90	19.20		
	193	4277	36.13	10	33.90	19.18		
				20			19.19	
	Span 485							1962 Jan. 22
	4277	A-17	-37.80	10				
	193	A-17	-1.67	10				
	193	4277	36.13*	10*	33.90	19.18		
	193	4277	36.06	10	33.90	19.15		
				20			19.17	

Table 3. Recorder Scale Factors of Analyser No. 58

MAUNA LOA CARBON DIOXIDE PROJECT

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
	Span 485							
	4277	A-17	37.67	10				1962
	193	A-17	1.65	10				Feb. 10
	193	4277	36.02*	10*	33.89	19.13		
	193	4277	-36.00	10	33.89	19.12		
				20			19.13	
	4277	A-17	37.76	10				Feb. 28
	193	A-17	1.65	10				
	193	4277	36.11*	10*	33.89	19.18		
	193	4277	-36.17	10	33.89	19.21		
				20			19.20	
	4277	A-17	-37.52	10				Mar. 14
	193	A-17	-1.50	10				
	193	4277	36.02*	10*	33.86	19.15		
	193	4277	35.85	10	33.86	19.06		
				20			19.11	
	4277	A-17	-37.40	10				Mar. 31
	193	A-17	-1.58	10				
	193	4277	35.82*	10*	33.86	19.04		
	193	4277	35.96	10	33.86	19.12		
				20			19.08	

Table 3. Recorder Scale Factors of Analyser No. 58

MAUNA LOA CARBON DIOXIDE PROJECT

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
	Span 485							
	4277	A-17	-37.69	10				1962
	193	A-17	-1.63	10				Apr. 14
	193	4277	36.06*	10*	33.84	19.18		
	193	4277	35.90	10	33.84	19.10		
				20			19.14	
	4277	A-17	-37.82	10				Apr. 26
	193	A-17	-1.68	10				
	193	4277	36.14*	10*	33.84	19.22		
	193	4277	36.09	10	33.84	19.20		
				20			19.21	
	4277	A-17	-37.69	10				May 19
	193	A-17	-1.59	10				
	193	4277	36.10*	10*	33.82	19.21		
	193	4277	36.22	10	33.82	19.27		
				20			19.25	
	4277	A-17	-37.75	10				June 4
	193	A-17	-1.76	10				
	193	4277	35.99*	10*	33.80	19.17		
	193	4277	Not Run	10				
							19.17	

Table 3. Recorder Scale Factors of Analyser No. 58

MAUNA LOA CARBON DIOXIDE PROJECT

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
	Span 485							1962
	4277	A-17	-37.48	10				June 27
	193	A-17	-1.59	10				
	193	4277	35.89*	10*	3380	19.11		
	193	4277	35.80	10	3380	19.07		
				20			19.09	
	4277	A-17	-37.32	10				July 11
	193	A-17	-1.73	10				
	193	4277	35.59*	10*	3378	18.97		
	193	4277	35.76	10	3378	19.05		
				20			19.01	
	4277	A-17	-38.06	10				Aug. 2
	193	A-17	-1.65	10				
	193	4277	36.41*	10*	3376	19.41		
	193	4277	36.28	10	3376	19.34		
				20			19.38	
	4277	A-17	-37.85	10				Sep. 13
	193	A-17	-1.56	10				
	193	4277	36.29*	10*	3374	19.36		
	193	4277	36.24	10	3374	19.33		
				20			19.35	

Table 3. Recorder Scale Factors of Analyser No. 58

MAUNA LOA CARBON DIOXIDE PROJECT

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
	Span 485							1962
	4277	A-17	-37.46	10				Oct. 5
	193	A-17	-1.71	10				
	193	4277	35.75*	10*	3372	19.08		
	193	4277	35.73	10	33.72	19.07		
				20			19.08	
	4277	A-17	-38.28	10				Oct. 16
	193	A-17	-1.78	10				
	193	4277	36.50*	10*	3372	19.48		
	193	4277	36.55	10	33.72	19.51		
				20			19.50	
	4277	A-17	-37.65	10				Nov. 2
	193	A-17	-1.68	10				
	193	4277	35.97*	10*	33.69	19.23		
	193	4277	36.09	10	33.69	19.28		
				20			19.25	
	4277	A-17	-37.80	10				Nov. 12
	193	A-17	-1.64	10				
	193	4277	36.16*	10*	33.69	19.32		
	193	4277	36.17	10	33.69	19.33		
				20			19.33	

Table 3. Recorder Scale Factors of Analyser No. 58

MAUNA LOA CARBON DIOXIDE PROJECT

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
	Span 485							
	4277	A-17	-37.90	10		9-2-64		1962 Nov. 26
	193	A-17	-1.78	10				
	193	4277	36.12*	10*	33.69		19.30	
	193	4277	36.15	10	33.69		19.31	
				20			19.31	
	4277	A-17	-37.72	10				Dec. 12
	193	A-17	-1.71	10				
	193	4277	36.01*	10*	33.67		19.25	
	193	4277	36.00	10	33.67		19.25	
				20			19.25	
	4277	A-17	-37.41	10				Dec. 21
	193	A-17	-1.75	10				
	193	4277	35.66*	10*	33.67		19.06	
	193	4277	35.76	10	33.67		19.13	
				20			19.09	

Table 4. Summary of Recorder Scale Factors

MAUNA LOA CARBON DIOXIDE PROJECT

1	2	3	4	1	2	3	4
Wt'd. Average Recorder Scale Factor	Barometric Pressure (Inches)	Adjusted Recorder Scale Factor	Date of Analysis	Wt'd. Average Recorder Scale Factor	Barometric Pressure (Inches)	Adjusted Recorder Scale Factor	Date of Analysis
			<u>1958</u>				<u>1959</u>
19.15	19.900	19.25	Nov. 22	19.15	20.130	19.03	Oct. 26
19.24	20.035	19.21	Nov. 26	19.08	20.035	19.05	Nov. 7
19.28	20.040	19.24	Dec. 10	19.12	20.100	19.02	Nov. 21
19.21	20.120	19.10	Dec. 20-21	19.18	20.140	19.05	Nov. 27
19.20	19.910	19.29	Dec. 31	18.90	20.040	18.86	Dec. 3
				19.15	20.115	19.04	Dec. 10
			<u>1959</u>	19.32	20.050	19.27	Dec. 19
19.25	19.970	19.28	Jan. 14	19.07	19.965	19.10	Dec. 28
19.22	19.985	19.23	Jan. 21				
19.49	20.010	19.48	Feb. 22				
19.34	20.135	19.21	Mar. 20	19.25	20.040	19.21	<u>1960</u> Jan. 8
19.26	20.060	19.20	Apr. 3	19.34	20.085	19.26	Jan. 16
19.28	20.055	19.23	Apr. 16	19.17	20.120	19.06	Jan. 30
19.15	20.170	18.99	Apr. 28	20.02	19.950	20.07	Feb. 17
18.55	20.070	18.49	May 15	19.30	19.975	19.32	Mar. 3
18.96	20.135	18.83	Jun. 3	19.41	20.100	19.31	Mar. 21
18.86	20.080	18.78	Jun. 11	19.52	20.080	19.44	Mar. 29
18.81	20.125	18.69	Jul. 2	19.44	20.030	19.41	Mar. 30
19.21	20.085	19.13	Jul. 8	19.33	20.075	19.26	Apr. 16
19.26	20.170	19.10	Jul. 13	19.30	20.095	19.21	May 3
19.25	20.100	19.15	Jul. 16	19.40	20.080	19.32	May 19
19.30	20.135	19.17	Jul. 27	19.43	20.095	18.91	Jun. 3
19.13	20.070	19.06	Aug. 1	19.23	-	-	Jun. 23
19.43	20.070	19.36	Aug. 8	19.16	20.080	19.08	Jul. 4
19.68	20.100	19.58	Aug. 22	19.22	20.090	19.13	Jul. 19
19.41	20.050	19.36	Sep. 1	19.39	20.120	19.27	Aug. 2
19.20	20.070	19.13	Sep. 10	19.38	20.120	19.26	Aug. 14
18.94	20.070	18.87	Sep. 20	19.18	20.060	19.12	Aug. 27
19.04	20.070	18.97	Oct. 2	19.30	20.105	19.20	Sep. 13
19.28	20.115	19.17	Oct. 12	19.17	20.075	19.10	Sep. 26

Table 4. Summary of Recorder Scale Factors

MAUNA LOA CARBON DIOXIDE PROJECT

1	2	3	4	1	2	3	4
Wt'd. Average Recorder Scale Factor	Barometric Pressure (Inches)	Adjusted Recorder Scale Factor	Date of Analysis	Wt'd. Average Recorder Scale Factor	Barometric Pressure (Inches)	Adjusted Recorder Scale Factor	Date of Analysis
			<u>1960</u>				<u>1961</u>
19.35	20.140	19.22	Oct. 12	19.10	20.095	19.01	Nov. 21
19.31	20.075	19.24	Oct. 26	19.03	20.085	18.95	Dec. 2
19.38	20.085	19.30	Nov. 11	19.13	20.005	19.13	Dec. 12
19.29	20.095	19.20	Nov. 23	19.09	20.030	19.06	Dec. 28
19.42	20.055	19.37	Dec. 8				
19.14	20.070	19.07	Dec. 22				<u>1962</u>
			<u>1961</u>	19.12	20.025	19.10	Jan. 6
18.98	20.020	18.96	Jan. 9	19.19	20.115	19.08	Jan. 21
18.95	19.980	18.97	Jan. 19	19.17	20.085	19.09	Jan. 22
18.98	20.115	18.87	Feb. 1	19.13	20.165	18.97	Feb. 10
19.09	20.065	19.02	Feb. 12	19.20	19.990	19.21	Feb. 28
19.20	20.020	19.18	Feb. 23	19.11	19.980	19.13	Mar. 14
19.17	20.065	19.10	Mar. 7	19.08	20.125	18.96	Mar. 31
19.14	20.095	19.04	Mar. 24	19.14	20.035	19.11	Apr. 14
19.05	20.020	19.03	Apr. 6	19.21	20.150	19.07	Apr. 26
19.12	20.065	19.06	Apr. 25	19.25	20.120	19.14	May 19
19.14	20.110	19.04	May 12	19.17	20.150	19.03	Jun. 4
19.35	20.110	19.24	May 31	19.09	20.050	19.04	Jun. 27
19.23	20.120	19.12	Jun. 17	19.01	20.065	18.95	Jul. 11
19.35	20.090	19.26	Jul. 2	19.38	20.220	19.17	Aug. 2
18.91	20.100	18.82	Jul. 20	19.35	20.080	19.27	Sep. 13
18.83	20.105	18.73	Jul. 21	19.08	20.080	19.00	Oct. 5
19.55	20.095	19.46	Jul. 28	19.50	20.050	19.45	Oct. 16
18.98	20.090	18.90	Aug. 19	19.25	20.030	19.22	Nov. 2
18.90	20.015	18.89	Sep. 5	19.33	20.130	19.21	Nov. 12
19.01	20.130	18.89	Sep. 28	19.31	20.080	19.23	Nov. 26
19.06	20.000	19.06	Oct. 15	19.25	20.050	19.20	Dec. 12
19.28	19.970	19.31	Nov. 5	19.09	19.940	19.15	Dec. 21

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Table 4. Summary of Recorder Scale Factors

MAUNA LOA CARBON DIOXIDE PROJECT

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
Wt'd. Average Recorder Scale Factor	Barometric Pressure (Inches)	Adjusted Recorder Scale Factor	Date of Analysis
<u>Yearly Averages (Not Weighted)</u>			<u>Year</u>
19.22	20.000	19.22	1958
19.17	20.080	19.09	1959
19.34	20.076	19.25	1960
19.11	20.063	19.05	1961
19.04	20.078	18.95	1962
19.20 checked 9		19.13 checked 9	

Table 5. Index Values of Standards and Substandards

MAUNA LOA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Analysers	(Sub) Standard Tank No.	Compared Tank No.	Single Set No. of Compari- sons	Index	Wt'd Av.	Index	Compared Tank No. Pressure (P.S.I.)		Date of Analysis	Dates of Use
<u>58</u>									<u>1961</u>	
	4277	A-17	10	310.38			1410 1500		Jan. 9*	
	7344	A-17	10	310.41			850 1500		Jan. 9	
	4277	A-17	10	310.38			1360 1500		Jan. 19	
	7344	A-17	10	310.36			800 1500		Jan. 19	
	4277	A-17	10	310.45			1400 1500		Feb. 1	
	7344	A-17	10	310.44			780 1500		Feb. 1	
	4277	A-17	10	310.50			1310 1470		Feb. 12	
	7344	A-17	10	310.55			700 1470		Feb. 12	
	4277	A-17	10	310.45			1300 1470		Feb. 23	
	7344	A-17	10	310.55			620 1470		Feb. 23	
	4277	A-17	10	310.42			1320 1490		Mar. 7	
	7344	A-17	10	310.41			580 1490		Mar. 7	
	4277	A-17	10	310.37			1310 1460		Mar. 24	
	7344	A-17	10	310.39			530 1460		Mar. 24	
	4277	A-17	10	310.40			1300 1420		Apr. 6	
	7344	A-17	10	310.36			500 1420		Apr. 6	
	4277	A-17	10	310.27			1280 1430		Apr. 25	
	7344	A-17	10	310.33			490 1430		Apr. 25	
	4277	A-17	10	310.39			1260 1410		May 12	
	7344 -	A-17	10	310.38			400 1410		May 12	
				310.40						
	Versus	7344:			100	310.42				
	Versus	4277:			100	310.40				
	Wt'd. Av.				200	310.41 A-17				

*Data for 1960 not recopied

Table 5. Index Values of Standards and Substandards

MAUNA LOA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Analyser	(Sub) Standard Tank No.	Compared Tank No.	<u>Single</u> No. of Compari- <u>Set</u> sons	Index	<u>Wt'd</u> No. of Compari- <u>Av.</u> sons	Index	Compared Tank Pressure (P.S.I.)		Date of Analysis	Dates of Use
<u>58</u>									<u>1961</u>	
	4277	A-17	10	310.40			1240	1400	May	31
	193	A-17	10	310.43			1900	1400	May	31
	4277	A-17	10	310.49			1230	1370	Jun.	17
	193	A-17	10	310.49			1830	1370	Jun.	17
	4277	A-17	10	310.26			1270	1400	Jul.	2
	193	A-17	10	310.31			1800	1400	Jul.	2
	4277	A-17	10	310.39			1200	1390	Jul.	20
	193	A-17	10	310.45			1700	1390	Jul.	20
	4277	A-17	5	310.44			1170	1380	Jul.	21
	193	A-17	5	310.45			1700	1380	Jul.	21
	4277	A-17	10	310.46			1170	1390	Jul.	28
	193	A-17	10	310.52			1670	1390	Jul.	28
	4277	A-17	10	310.47			1170	1320	Aug.	19
	193	A-17	10	310.47			1650	1320	Aug.	19
	4277	A-17	10	310.48			1160	1320	Sep.	5
	193	A-17	10	310.69			1620	1320	Sep.	5
	4277	A-17	10	310.56			1150	1320	Sep.	28
	193	A-17	10	310.56			1590	1320	Sep.	28
	4277	A-17	10	310.63			1120	1320	Oct.	15
	193	A-17	10	310.63			1580	1320	Oct.	15
	4277	A-17	10	310.65			1120	1310	Nov.	5
	193	A-17	10	310.59			1530	1310	Nov.	5
	4277	A-17	10	310.62			1100	1280	Nov.	21
	193	A-17	10	310.63			1490	1280	Nov.	21
	4277	A-17	10	310.70			1080	1270	Dec.	2
	193	A-17	10	310.64			1460	1270	Dec.	2
	4277	A-17	10	310.60			1060	1230	Dec.	12
	193	A-17	10	310.65			1400	1230	Dec.	12
	4277	A-17	10	310.74			1050	1220	Dec.	28
	193	A-17	10	310.74			1370	1220	Dec.	28

Table 5. Index Values of Standards and Substandards

MAUNA LOA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Analyser	(Sub) Standard Tank No.	Compared Tank No.	Single No. of Compari- sons	Set Index	Wt'd No. of Compari- sons	Av. Index	Compared Tank No. Pressure (P.S.I.)		Date of Analysis	Dates of Use
<u>58</u>									1962	
	4277	A-17	10	310.63			1030	1200	Jan. 6	
	193	A-17	10	310.62			1320	1200	Jan. 6	
	4277	A-17	10	310.73			1000	1200	Jan. 21	
	193	A-17	10	310.73			1230	1200	Jan. 21	
	4277	A-17	10	310.56			940	1110	Jan. 22	
	193	A-17	10	310.58			1140	1110	Jan. 22	
	4277	A-17	10	310.62			920	1100	Feb. 10	
	193	A-17	10	310.62			1090	1100	Feb. 10	
	4277	A-17	10	310.66			910	1090	Feb. 28	
	193	A-17	10	310.62			1070	1090	Feb. 28	
	4277	A-17	10	310.72			900	1070	Mar. 14	
	193	A-17	10	310.79			1060	1070	Mar. 14	
	4277	A-17	10	310.78			900	1060	Mar. 31	
	193	A-17	10	310.71			1000	1060	Mar. 31	
	4277	A-17	10	310.62			870	1070	Apr. 14	
	193	A-17	10	310.70			990	1070	Apr. 14	
	4277	A-17	10	310.63			890	1050	Apr. 26	
	193	A-17	10	310.66			980	1050	Apr. 26	
	4277	A-17	10	310.85			860	1030	May 19	
	193	A-17	10	310.77			940	1030	May 19	
	4277	A-17	10	310.63			320	1100	June 4	
	193	A-17	10	310.63			890	1100	June 4	
	4277	A-17	10	310.74			850	1000	June 27	
	193	A-17	10	310.78			900	1000	June 27	
	4277	A-17	10	310.75			830	1000	July 11	
	193	A-17	10	310.67			870	1000	July 11	

Table 5. Index Values of Standards and Substandards

Col: 1	2	3	4	5	6	7	8	9	10	11
Analyser	(Sub) Standard Tank No.	Compared Tank No.	Single No. of Compari- Set Index sons	Index	Wt'd No. of Compari- Av. Index sons	Index	Compared No. Pressure Tank (P.S.I.)		Date of Analysis	Dates of Use
									<u>1962</u>	
	4277	A-17	10	310.75			800 990		Aug. 2	
	193	A-17	10	310.81			810 990		Aug. 2	
	4277	A-17	10	310.89			780 980		Sep. 13	
	193	A-17	10	310.91			700 980		Sep. 13	
	4277	A-17	10	310.77			770 960		Oct. 5	
	193	A-17	10	310.78			650 960		Oct. 5	
	4277	A-17	10	310.77			760 930		Oct. 16	
	193	A-17	10	310.75			620 930		Oct. 16	
	4277	A-17	10	310.90			720 900		Nov. 2	
	193	A-17	10	310.85			550 900		Nov. 2	
	4277	A-17	10	310.91			690 880		Nov. 12	
	193	A-17	10	310.89			500 880		Nov. 12	
	4277	A-17	10	310.78			690 860		Nov. 26	
	193	A-17	10	310.76			490 860		Nov. 26	
	4277	A-17	10	310.86			580 860		Dec. 12	
	193	A-17	10	310.85			400 860		Dec. 12	
	4277	A-17	10	310.85			660 840		Dec. 21	
	193	A-17	10	310.80			400 840		Dec. 21	

58

1961

Versus 193:
Versus 4277:
Wt'd. Av. for 1961:

145	310.55
145	310.53
290	310.54

1962

Versus 193:
Versus 4277:
Wt'd. Av. for 1962

220	310.74
220	310.74
440	310.74

Wt'd. Av. for 1961 and 1962:

730	310.66 A-17*
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*Set is incomplete

Table 6. Index Values of Working Reference Gases and Retired (Sub)standards

MAUNA LOA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Analyser	(Sub) Standard Tank No.	Compared Tank No.	Single Set No. of Compari- sons	Index	Wt'd Av. No. of Compari- sons	Index	Compared Tank No. Pressure (P.S.I.)		Date of Analysis	Dates of Use
<u>58</u>	7344	3758	10	310.57				2140	<u>1960</u> Dec. 22	
	7344	3758	11	310.81				-	<u>1961</u> Jan. 1	
	7344	3758	10	310.97				1140	Jan. 9	
	7344	3758	12	310.79				-	Jan. 14	
	7344	3758	10	310.69	53	310.77	3758	400	Jan. 19	
	7344	4272	10	313.80				2120	Jan. 19	
	7344	4272	11	313.80				-	Jan. 26	
	7344	4272	10	313.83				1030	Feb. 1	
	7344	4272	10	313.95	41	313.84	4272	-	Mar. 7	
	7344	4275	10	313.93				2100	Feb. 1	
	7344	4275	11	313.86				-	Feb. 8	
	7344	4275	10	314.00				1170	Feb. 12	
	7344	4275	11	314.18				-	Feb. 17	
	7344	4275	10	314.00	52	314.00	4275	360	Feb. 23	
	7344	10075	10	298.25				2300	Mar. 7	
	7344	10075	11	298.30				-	Mar. 16	
	7344	10075	10	298.23				1160	Mar. 24	
	7344	10075	12	298.32				-	Apr. 1	
	7344	10075	10	298.16	53	298.26	10075	400	Apr. 6	
	7344	6081	10	309.65				2170	Apr. 6	
	7344	6081	11	309.85				-	Apr. 18	
	7344	6081	10	309.66				1190	Apr. 25	
	7344	6081	11	309.83				-	May 3	
	7344	6081	10	309.81	52	309.76	6081	410	May 12	
	7344	10068	10	303.42				2130	May 12	
	7344	10068	12	303.65				-	May 23	

*Special Tank Checks

Table 6. Index Values of Working Reference Gases and Retired (Sub)standards

MAUNA LOA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Analyser	(Sub) Standard Tank No.	Compared Tank No.	Single Set No. of Compari- sons	Index	Wt'd Av. No. of Compari- sons	Index	Compared Tank No. Pressure (P.S.I.)	Compared Tank	Date of Analysis	Dates of Use
									<u>1961</u>	
	7344	10068	11	303.62				-	May 30	
	193	10068	11	303.85				-	May 30	
	193	10068	10	303.60				1200	May 31	
	193	10068	11	303.90				-	June 10	
	193	10068	10	303.90	75	303.71	10068	400	June 17	
	193	10067	10	319.25				2200	June 17	
	193	10067	11	319.49				-	June 24	
	193	10067	10	319.25				1220	July 2	
	193	10067	12	319.53				-	July 12	
	193	10067	10	319.34	53	319.38	10067	410	July 20	
	193	2427	10	315.85				2230	July 20	
	193	2427	5	315.90	15	315.87	2427	550	July 21	
	193	4272	10	307.92				2270	July 28	
	193	4272	11	308.21				-	Aug. 11	
	193	4272	10	308.04				1220	Aug. 19	
	193	4272	11	308.30				-	Aug. 28	
	193	4272	10	307.95	52	308.09	4272	450	Sep. 5	
	193	7355	10	307.36				2260	Sep. 5	
	193	7355	11	307.68				-	Sep. 20	
	193	7355	10	307.36				1220	Sep. 23	
	193	7355	12	307.65				-	Oct. 7	
	193	7355	10	307.57	53	307.53	7355	400	Oct. 15	
	193	136	10	321.95				2160	Oct. 15	
	193	136	11	322.00				-	Oct. 26	
	193	136	10	321.97				1190	Nov. 5	
	193	136	11	322.10				-	Nov. 13	
	193	136	10	322.26	52	322.06	136	-	Nov. 21	

*Special Tank Checks

Table 6. Index Values of Working Reference Gases and Retired (Sub)standards

MAUNA LOA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Analyser	(Sub) Standard Tank No.	Compared Tank No.	Single No. of Compari- sons	Set Index	Wt'd No. of Compari- sons	Av. Index	Compared No. Pressure (P.S.I.)	Tank	Date of Analysis	Dates of Use
<u>58</u>									<u>1961</u>	
	193	3752	10	321.06			2150		Nov. 21	
	193	3752	11	321.14			-		Nov. 28	
	193	3752	10	321.19			1200		Dec. 2	
	193	3752	11	321.28			-		Dec. 8	
	193	3752	10	321.18	52	321.17	3752	500	Dec. 12	
	193	3751	10	326.97			2090		Dec. 12	
	193	3751	11	327.12			-		Dec. 21	
	193	3751	10	327.01			1210		Dec. 23	
									<u>1962</u>	
	193	3751	10	327.05			-		Jan. 3	
	193	3751	10	327.02	51	327.04	3751	380	Jan. 6	
	193	7364	10	301.92			2200		Jan. 6	
	193	7364	10	301.92			-		Jan. 12	
	193	7364	10	301.84			1180		Jan. 21	
	193	7364	10	302.05	40	301.93	7364	320	Jan. 22	
	193	148	10	318.38			2060		Jan. 22	
	193	148	11	318.47			-		Feb. 2	
	193	148	10	318.45			485		Feb. 10	
	193	148	12	318.54			-		Feb. 13	
	193	148	10	318.32	53	318.44	148	470	Feb. 28	
	193	10064	10	301.76			1900		Feb. 28	
	193	10064	10	301.83			-		Mar. 6	
	193	10064	10	301.85			1220		Mar. 14	
	193	10064	10	301.77			-		Mar. 25	
	193	10064	10	301.81	50	301.80	10064	484	Mar. 31	
	193	10072	10	304.98			2130		Mar. 31	
	193	10072	12	304.97			-		Apr. 8	
	193	10072	10	304.81			1220		Apr. 14	
	193	10072	10	304.92	42	304.92	10072	350	Apr. 26	

*Special Tank Checks

Table 6. Index Values of Working Reference Gases and Retired (Sub)standards

MAUNA LOA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Analyser	(Sub) Standard Tank No.	Compared Tank No.	Single No. of Compari- sons	Set Index	Wt'd No. of Compari- sons	Av. Index	Compared No.	Tank Pressure (P.S.I.)	Date of Analysis	Dates of Use
<u>58</u>									1962	
	193	4272	10	301.89				2300	Apr. 26	
	193	4272	12	302.04				-	May 11	
	193	4272	10	301.89				-	May 19	
	193	4272	11	302.23				-	May 28	
	193	4272	10	301.79	53	301.98	4272	-	June 4	
	193	6067	10	303.42				2250	June 4	
	193	6067	11	303.69				-	June 20	
	193	6067	10	303.63				-	June 27	
	193	6067	12	303.81				-	July 5	
	193	6067	10	303.49	53	303.62	6067	520	July 11	
	193	6081	10	302.66				2300	July 11	
	193	6081	10	302.85				1200	Aug. 2	
	193	6081	10	302.90				-	July 25	
	193	6081	10	302.88				-	Aug. 11	
	193	6081	10	302.77	50	302.81	6081	431	Sep. 13	
	193	7344	10	301.77				2270	Sep. 13	
	193	7344	11	301.84				-	Sep. 28	
	193	7344	10	301.83				1200	Oct. 5	
	193	7344	11	301.91				-	Oct. 10	
	193	7344	10	301.77	52	301.83	7344	400	Oct. 16	
	193	11097	10	307.50				2200	Oct. 16	
	193	11097	12	307.53				-	Oct. 29	
	193	11097	9	307.59				1200	Nov. 2	
	193	11097	11	307.52				-	Nov. 8	
	193	11097	10	307.62	52	307.55	11097	400	Nov. 12	

*Special Tank Checks

Table 6. Index Values of Working Reference Gases and Retired (Sub)standards

MAUNA LOA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11
Analyser	(Sub) Standard Tank No.	Compared Tank No.	Single Set No. of Comparisons	Index	Wt'd Av. No. of Comparisons	Index	Compared Tank No. Pressure (P.S.I.)		Date of Analysis	Dates of Use
<u>58</u>									<u>1962</u>	
	193	11078	10	308.37				2200	Nov. 12	
	193	11078	9	308.46				-	Nov. 20	
	193	11078	10	308.35				1200	Nov. 26	
	193	11078	10	308.47				-	Dec. 3	
	193	11078	10	308.37	49	308.40	1078	250	Dec. 12	
	193	2425	10	310.71				2200	Dec. 12	
	193	2425	8	310.85				-	Dec. 18	
	193	2425	10	310.87	Incomplete			1300	Dec. 21	

*Special Tank Checks

Table 7. Combined Scripps and Mauna Loa Index Values of Working Reference Gases

MAUNA LOA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11	12
Tank No.	At Scripps Prior to Use No. of Comparisons	Index	At Mauna Loa No. of Comparisons	Index	At Scripps After Use No. of Comparisons	Index	Pressure (P.S.I.)	Wt'd, Average No. of Comparisons	Index	Tank No.	Date Use Began
<u>II° Tank 7344 in use:</u>											<u>1960</u>
3758	12	310.77 ✓	53	310.77	24	310.64 ✓	425	89	310.73	3758	Dec. 22
4272	19	313.87 ✓	41	313.84	10	314.10 ✓	400	70	313.89	4272	Jan. 19
4275	20	313.96 ✓	52	314.00	10	314.18 ✓	400	82	314.01	4275	Feb. 1
10075	10	298.46 ✓	53	298.26	12	298.38 ✓	440	875	298.31	10075	Mar. 7
6081	10	309.81 ✓	52	309.76	11	309.93 ✓	375	73	309.79	6081	Apr. 6
10068	10	303.68 ✓	75	303.71	10	303.68 ✓	385	95	303.70	10068	May 12
<u>II° Tank 193 in use:</u>											
10067	10	319.37 ✓	53	319.38	10	319.14 ✓	375	73	319.35	10067	Jun. 17
2427	51	315.84 ✓	15	315.87	9	315.81 ✓	310	75	315.84	2427	Jul. 20
4272	9	307.94 ✓	52	308.09	10	308.13 ✓	430	71	308.08	4272	Jul. 28
7355	10	307.56 ✓	53	307.53	10	307.48 ✓	400	73	307.53	7355	Sep. 5
136	20	321.76 ✓	52	322.06	10	322.31 ✓	390	82	322.02	136	Oct. 15
3752	10	320.87 ✓	52	321.17	10	321.05 ✓	500	72	321.11	3752	Nov. 21
3751	10	326.75 ✓	51	327.04	11	327.21 ✓	380	72	327.03	3751	Dec. 12

Table 7. Combined Scripps and Mauna Loa Index Values of Working Reference Gases

MAUNA LOA CARBON DIOXIDE PROJECT

Col: 1	2	3	4	5	6	7	8	9	10	11	12
Tank No.	At Scripps Prior to Use No. of Comparisons	Index	At Mauna Loa No. of Comparisons	Index	At Scripps After Use No. of Comparisons	Index	Pressure (P.S.I.)	Wt'd. Average Sample Values Col. No. of Comparisons	Index	Tank No.	Date Use Began
II ^o Tank 193 in use:											1962
7364	10	302.20 ✓	40	301.93 ⁹⁻³⁻⁶⁴	10	302.61	300	6020	302.09	7364	Jan. 6
148	10	318.22 ✓	53	318.44	11	318.35	475	7421	318.40	148	Jan. 22
10064	20	301.53 ✓	50	301.80	10	301.59	460	8030	301.71	10064	Feb. 28
10072	20	304.68 ✓	42	304.92	11	304.93	400	7331	304.86	10072	Mar. 31
4275**	10	304.77 ✓	-		10	304.66	2140	-	304.82	4275	-
4272	10	302.19 ✓	53	301.98	32	302.08	480	4542	302.04	4272	Apr. 26
6067	10	303.79 ✓	53	303.62	22	303.61	520	8532	303.64	6067	Jun. 4
6081	11	302.92 ✓	50	302.81	11	302.78	440	7222	302.82	6081	Jul. 11
7344	12	301.86 ✓	52	301.83	12	302.29*	50	6422	301.84	7344	Sep. 13
11097	10	307.40 ✓	52	307.55	10	307.42	500	7128	307.51	11097	Oct. 16
11078	10	308.34 ✓	49	308.40	10	308.37	280	6728	308.39	11078	Nov. 12

* Omitted from average

** Tank accidentally not used at Mauna Loa

*** The values for this tank, tank 4272 above, and succeeding tanks in this column are non-final values from Scripps Report VI