

CHAPTER 5

DIFFUSION MEASUREMENTS DURING PROJECT PRAIRIE GRASS

H. E. Cramer, F. A. Record, and H. C. Vaughan
Massachusetts Institute of Technology

5.1 Introduction

The diffusion measurements obtained during Project Prairie Grass comprise average or time-mean concentrations determined at selected points downwind from a continuous point source of sulfur-dioxide gas located near ground level. Sulfur dioxide is relatively inexpensive and readily available; the sampling technique is based on firmly established and extremely simple physical principles, and is capable of resolving minute concentrations of the order of 0.01 parts per million. The sampling network utilized midget impingers mounted at a height of 1.5 m along five semicircular, concentric arcs located within 800 m of the release-point. Limited vertical sampling was carried out along the 100-m arc by means of impingers mounted at 9 levels on 6 lightweight towers. Electrically-operated vacuum units suitably positioned within the sampling network provided aspiration for the impingers. During the diffusion experiments, air was drawn into the impingers through short sections of capillary tubing and bubbled through a dilute hydrogen-peroxide solution. Sulfur dioxide present in the air samples combined with the hydrogen peroxide to form sulfuric acid. Average gas concentrations were determined from laboratory measurements of the electrical conductivity of the aspirated solutions.

Data are available for approximately 70 diffusion experiments carried out in a wide variety of weather conditions. Approximately half the data refer to unstable (daytime) thermal stratification and the remainder were obtained at night in the presence of temperature inversions. In the experiments, the sampling networks were put in operation just before the start of the gas release which lasted for 10 minutes; operation of the networks continued for several additional minutes after

the end of the gas release to permit the wind to transport the tracer beyond the 800-m arc. A detailed description of the apparatus and techniques used during the diffusion experiments is given below.

5.2 Generation of the Tracer

The basic features of the sulfur-dioxide generator are shown schematically in Figure 5.1 and a photograph of the field installation of the generating equipment is presented in Figure 5.2. Operation of the generator may be described as follows: Liquid sulfur dioxide from an inverted 150-lb cylinder was vaporized in a specially-constructed chamber immersed in 150 gallons of hot water contained in a large circular tank. Approximately 3×10^6 calories were required to vaporize the sulfur dioxide released during each experiment. This amount of heat must be supplied from an external source to maintain a constant rate of emission consistent with efficient source operation. Otherwise, the attendant rapid cooling of the gas-liquid interface produces excessive pressure decreases throughout the system and a consequent steady decrease in the rate of emission. The requisite heat transfer was facilitated by continuous circulation of the heated water in the large tank through a 100-ft coil of copper tubing placed inside the vaporization chamber; thermostatically-controlled immersion heaters rated at 10 kw maintained the water temperature at approximately 50°C. It was frequently necessary, during the latter part of the daytime gas releases, to add liquid sulfur dioxide to the vaporization chamber to maintain the required emission rate; electric strip heaters attached to the exterior of the inverted steel cylinder aided in effecting this transfer. From the vaporizer, the gas flowed through a pressure regulator and an adjustable valve controlling the flow rate into a large ironcase meter (American Meter Company Type 500B). Total output registered on a special indicating dial at the top of the meter case. The gas meter was adjusted at the factory to read about 1 percent low with an accuracy of \pm 0.5 percent. Pressure and temperature of the gas were measured both at the inlet and outlet

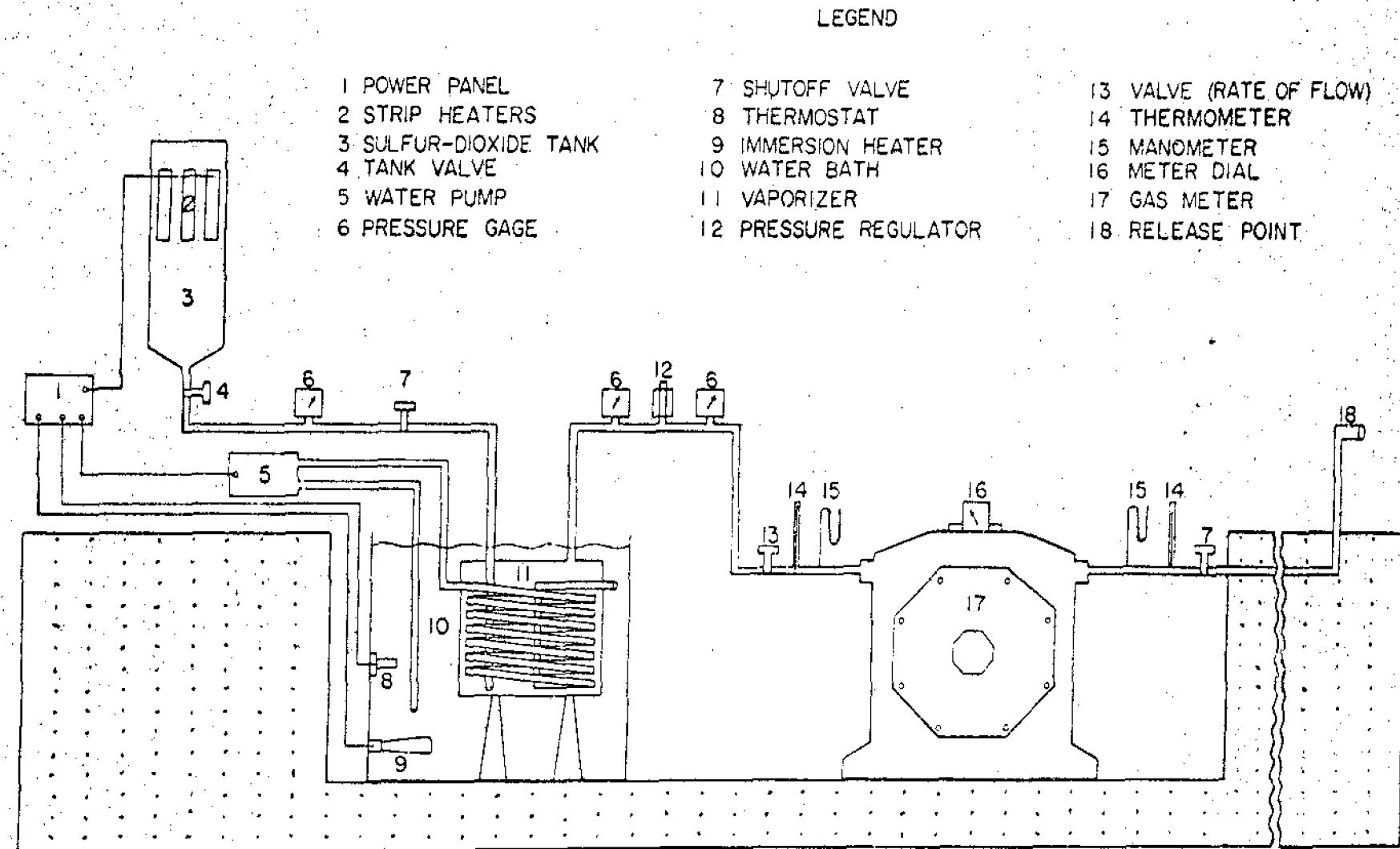


Figure 5.1 Schematic diagram of sulfur-dioxide generator.

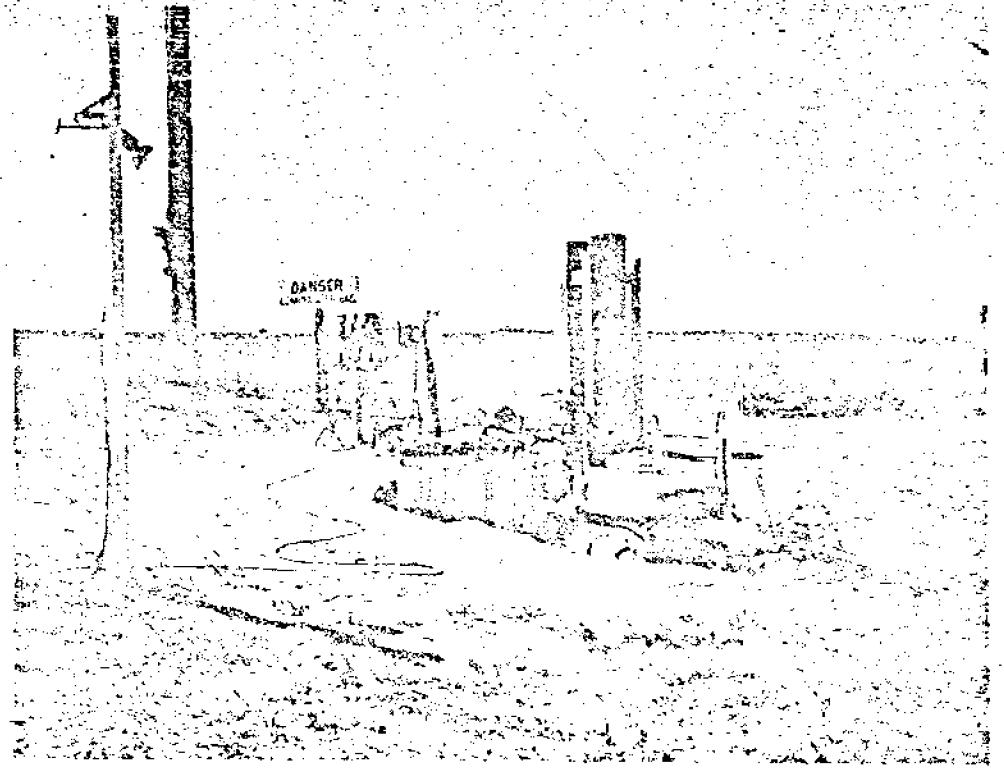


Figure 5.2 Field installation of sulfur-dioxide generating apparatus.

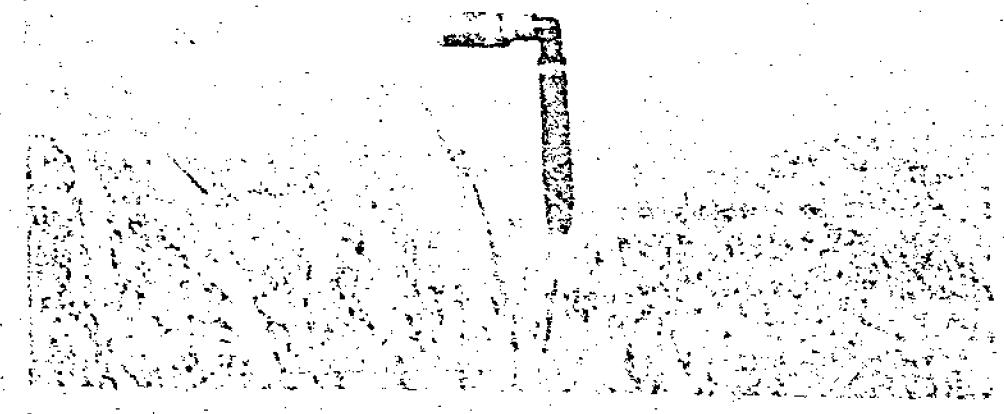


Figure 5.3 Release-point for the tracer.

of the meter to permit accurate reduction of the total amount of gas released to a source strength expressed in g sec^{-1} . As shown in Figure 5.2, the gas meter and the large water tank were set in a shallow trench to minimize the disturbance to the natural air flow immediately upwind from the release point for the sulfur-dioxide gas. The tracer was conducted from the meter outlet through a 50-m length of 2-inch plastic pipe buried just beneath the surface of the ground, and was released horizontally at a height of 46 centimeters. A photograph of the orifice is presented in Figure 5.3; the picture was taken prior to the start of the field experiments before the grass at the field site was mowed. In s. experiments (Nos. 63-68), the height of the release point was adjusted to 1.5 m, the height of the samplers in the horizontal sampling network.

The rate of tracer emission was adjustable over a wide range; the maximum source strength of about 100 g sec^{-1} was utilized during the daytime releases. Uniformity of the emission rate was checked during the releases by marking the passage of each 10 cu ft of gas through the meter on an Esterline-Angus recorder; a manually-operated switch activated a sidemarker pen that put a pip at the side of the moving chart roll. During all nighttime experiments and during most daytime experiments, observed variations in the emission rate were less than 5 percent. In a few daytime gas releases, the emission rate during the last minute of source operation was from 5 to 10 percent below the initial rate.

5.3 Description of the Sampling Network

Average gas concentrations were determined at approximately six hundred individual sampling stations located within a semicircle of radius 800 m centered on the release point for the tracer. As shown in Figure 1.1, the base line of the horizontal sampling network was oriented along a true East-West line to take advantage of prevailing southerly winds. Midget impingers (Mine Safety Appliance Company) were mounted at a height of 1.5 m on steel fence posts located along five

semicircular arcs. The posts were placed at intervals of 2 degrees along the 50-, 100-, 200-, and 400-m arcs; at 800 m, a separate interval of 1 degree was used. The posts for each arc were numbered consecutively, Post Number 1 being located at the intersection of the arc with the western limb of the base line (that is at a true angular bearing of 270 degrees from the release point). Details of the impinger installation are shown in Figures 5.4 and 5.5, and a view of part of the fence post array along the 100-m arc appears in Figure 5.7.

Each impinger contained 10 ml of dilute (slightly acidified) hydrogen peroxide solution. Use of capillaries (see Figure 5.5) reduced the variations in flow rate between impingers to within 1 or 2 percent; otherwise, variations of the order of 10 percent were frequently present. Each section of precision bore capillary tubing (inside diameter - 0.0252 ± 0.0003 in.; length - 1.330 to 1.335 in.) was tested individually in the laboratory with a standard impinger; only those sections that were within 1.5 percent of standard were selected for field use. Air thus drawn into the impingers passed down the central glass tubes and was broken into tiny bubbles as it impinged upon the bottom of the glass flasks. Sulfur dioxide present in the air reacted with the hydrogen peroxide to form sulfuric acid. The collection efficiency of the impingers, as indicated by laboratory tests described below, was greater than 97 percent for all the Prairie Grass experiments.

Aspiration of the impingers was provided by 11 vacuum units (electric motor, pump, tank, vacuum regulator) apportioned as follows along the various arcs: one unit at 50 m; two units at 100 m (one for the vertical network described below), 200 m, and 400 m; and four units at 800 meters. One of the units used in field experiments is shown in Figure 5.6. The 1/3-hp motor, pump, and tank are sold commercially for use with farm milking machines (Sears Roebuck and Company); the diaphragm-type regulator (Fisher Governor Company Type 734A), seen at the extreme left of the photograph, maintained the line vacuum within 1 to 2 percent of the desired value during the 10-minute sampling period.

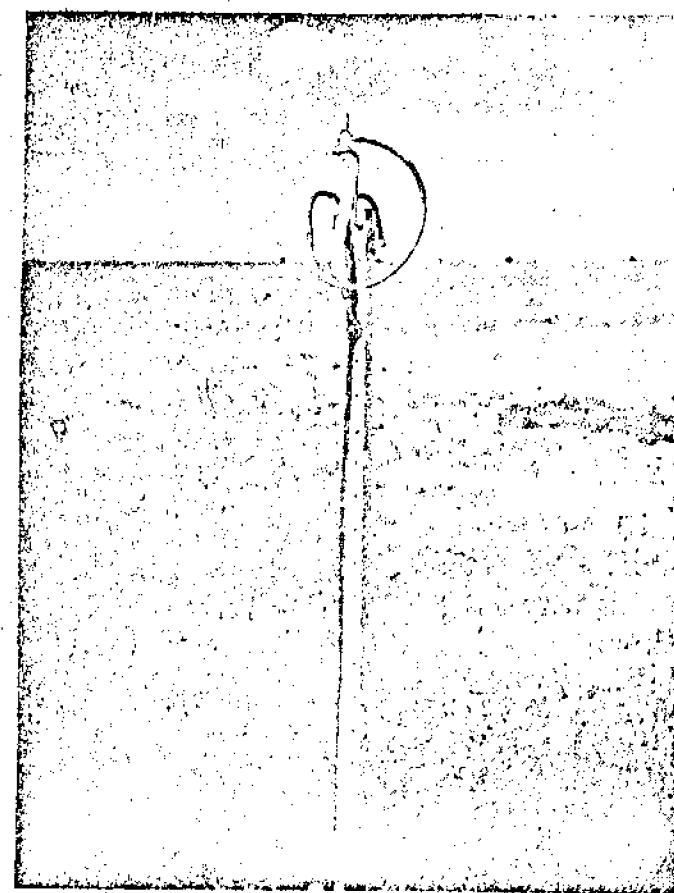


Figure 5.4 Midget impinger mounted at height of 1.5 m on steel fence post.

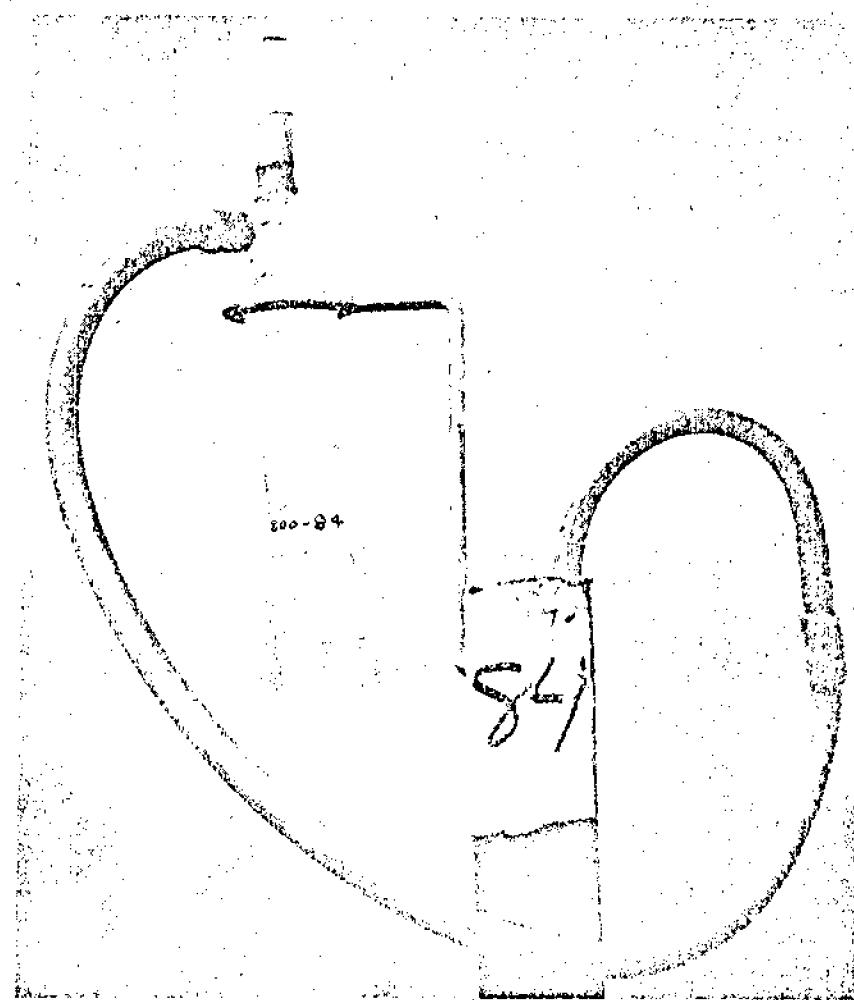


Figure 5.5 Close-up of midget impinger in operation.

A visual check on the line vacuum was provided by a mercury manometer mounted on a steel fence post. Heavy-wall rubber hose was attached to the inlets of the vacuum tanks (see Figure 5.6) and laid on the ground along the arcs of the sampling network. Copper tubing was inserted in the hose at each sampling station and fastened to the steel fence posts (see Figure 5.4). The impingers were set in ring holders attached to the tops of the posts and connected to the vacuum line by short lengths of gum rubber tubing (see Figure 5.5). An aspiration rate of $1.0 \text{ liter min}^{-1}$ was used at 50 and 100 m; this required a line vacuum of 51 mm of mercury. A somewhat higher aspiration rate ($1.5 \text{ liter min}^{-1}$, requiring a line vacuum of 100 mm of mercury) was used at the other arcs to compensate in part for the expected decrease in concentration with travel distance. The maximum drop in line vacuum along the longest sections of rubber hose was about 4 percent; this is equivalent to a reduction of about 2 percent in the rate of aspiration. Operation of the vacuum-pump motors was controlled from a central switchboard located along the center-line of the sampling network at a travel distance of about 450 m from the release point. Line vacuums were checked and necessary adjustments made just before the start of each diffusion experiment.

Average gas concentrations were also determined along the vertical from midget impingers mounted at nine levels on each of six towers located along the 100-m arc. The lightweight television-type towers (Alprodco, Inc.) were spaced at intervals of 14 degrees and were positioned symmetrically with respect to the center line of the horizontal sampling network. A photograph of the tower array appears in Figure 5.7. The towers were constructed of aluminum alloy with triangular cross sections measuring 8-1/2 inches on a side; each tower rested on a small cement base and was supported at three levels by 3/16-inch stranded-steel guy wires. The technique for installing the impingers on the towers is illustrated in Figure 5.8.

Heavy rubber hose similar to that used in the horizontal network was

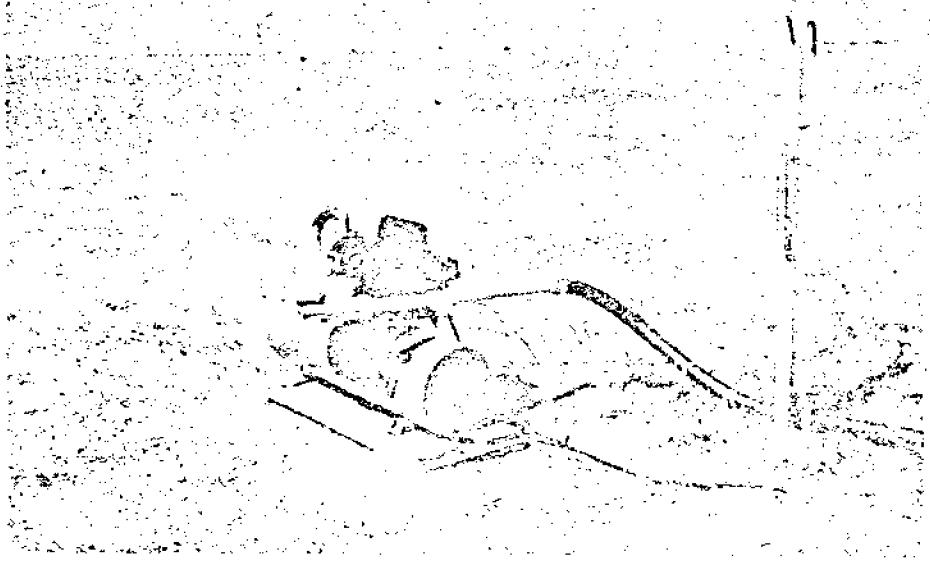


Figure 5.6 Vacuum unit used to aspirate midget impingers; mercury manometer indicating line vacuum is mounted on steel post.

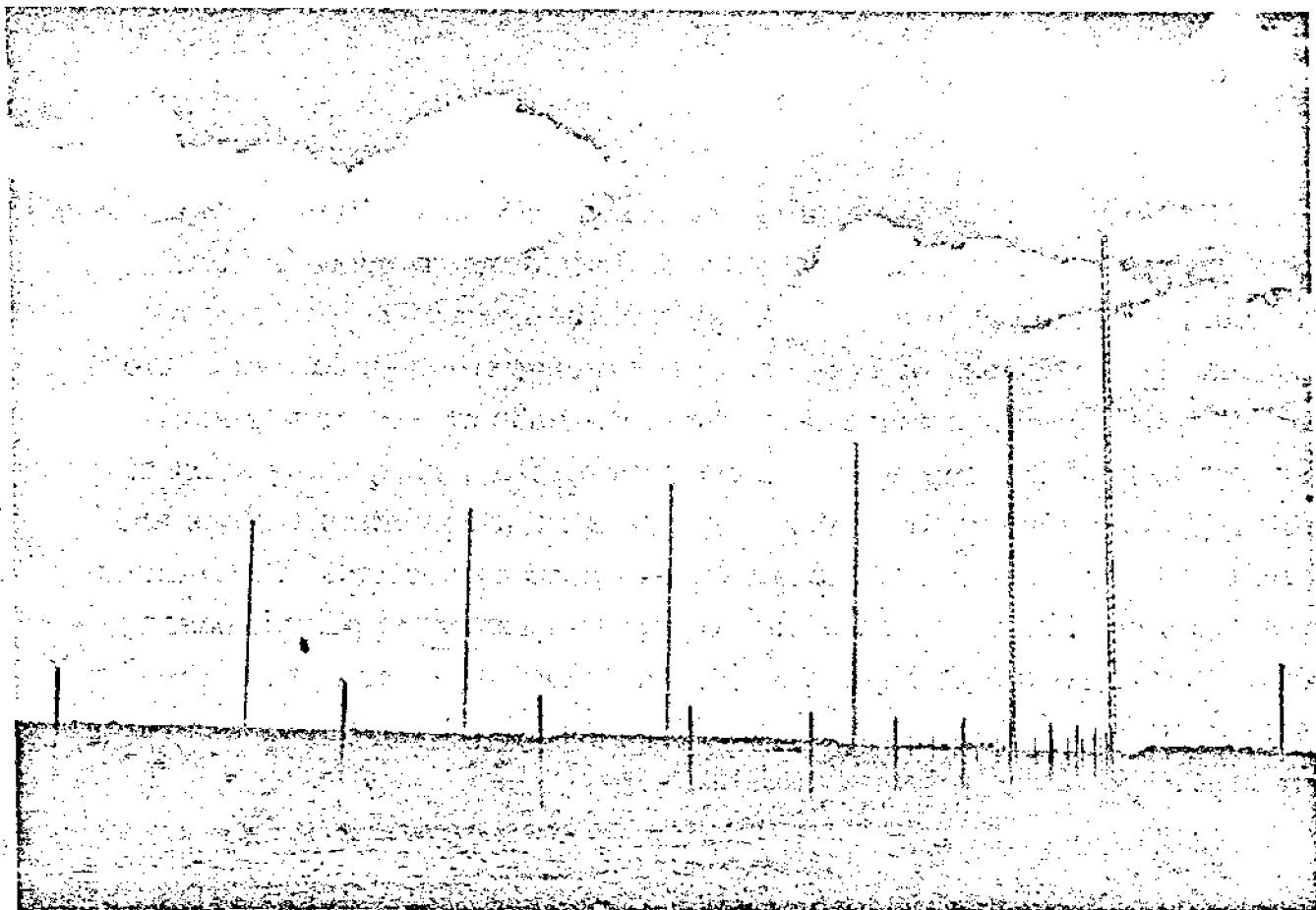


Figure 5.7 Tower array at 100-m arc.

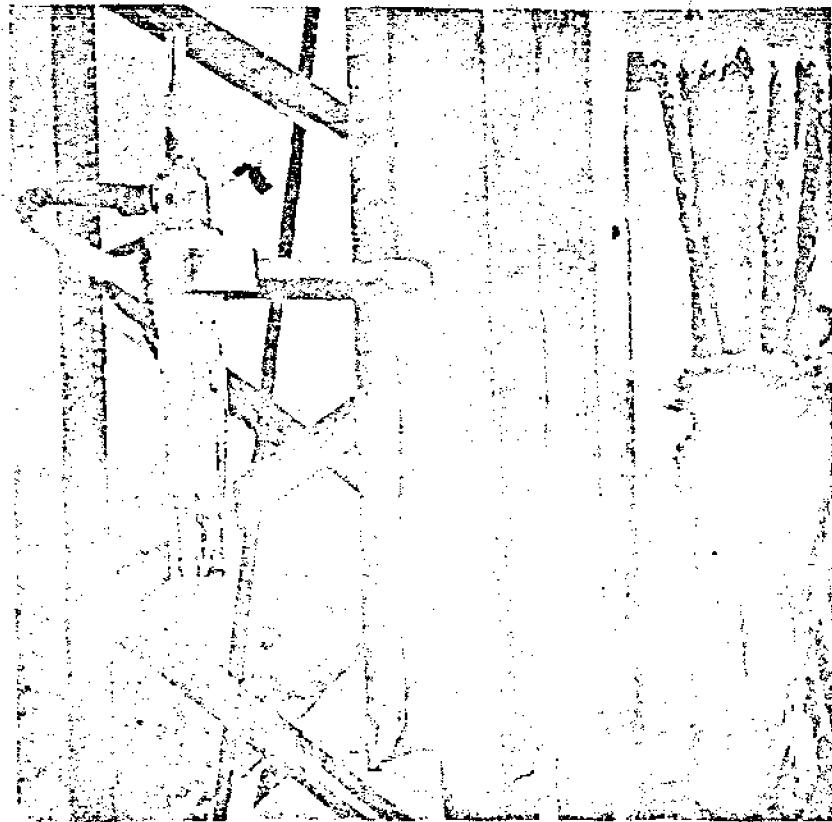


Figure 5.8 Close-up of impinger installation
on tower

fitted with short lengths of solid brass rod (5/8 in. in diameter); a portion of the interior of each rod was drilled out to make the line vacuum available at a port on the side of the rods. The ports comprised short sections of 1/4-inch brass tubing silver-soldered to the brass rods. Spring clamps fastened to the ends of the brass rods served to hold the impingers securely in place. Prior to the start of a diffusion experiment, the rubber hose was raised by simple block and tackle gear; the ascent of the hose was guided by sections of aluminum track fastened to the sides of the towers and slotted to permit passage of the brass rods (see Figure 5.8). Impingers were inserted in the spring clamps and gum rubber tubing used to connect the impinger outlets to the line-vacuum ports. At the conclusion of the experiment, the rubber hose was lowered and the impingers removed for transport.

to the laboratory and subsequent analysis. The rope used to raise and lower the vertical sampling apparatus appears at the extreme right of Figure 5.8. This simple technique worked very satisfactorily. A single vacuum unit located at the center of the 100-m arc provided aspiration for the impingers on the 6 towers. Concentrations were determined at 9 levels on each tower: 0.5, 1.0, 1.5, 2.5, 4.5, 7.5, 10.5, 13.5, and 17.5 meters.

5.4 Laboratory Procedure

The successful execution of the diffusion experiments depended in large measure upon careful analytic procedure and high standards of cleanliness. Any contamination of the impinger solutions seriously impaired the high degree of resolution otherwise obtainable in the measurements. A special laboratory building was erected at the field site to provide storage space for the impingers and auxiliary apparatus, as well as working space for analysis of the aspirated solutions. The building was of double-wall plywood construction, fully insulated, and painted white on the exterior to minimize the absorption of solar radiation. Incursions of dust were largely eliminated through the use of sealed windows and a single entrance on the north side of the building, sheltered from the prevailing southerly winds. An exterior view of the laboratory building appears in Figure 5.9. Suitable temperatures were maintained within the laboratory building by two air conditioners.

Diffusion experiments were scheduled in pairs, each experiment requiring the use of 599 impingers. The impingers were filled by means of pipettes that automatically metered 10 ml of solution. The filling operation is shown in Figure 5.10; the wire basket appearing in the figure contains approximately 50 impingers. After the impingers were filled with hydrogen-peroxide solution, the baskets were stored on shelves in the laboratory (see Figure 5.11) until the field crew took them to the sampling network. Much of the work of installing the impingers within the network and returning the samplers to the laboratory was performed by 12 high-school age boys from O'Neill, Nebraska.

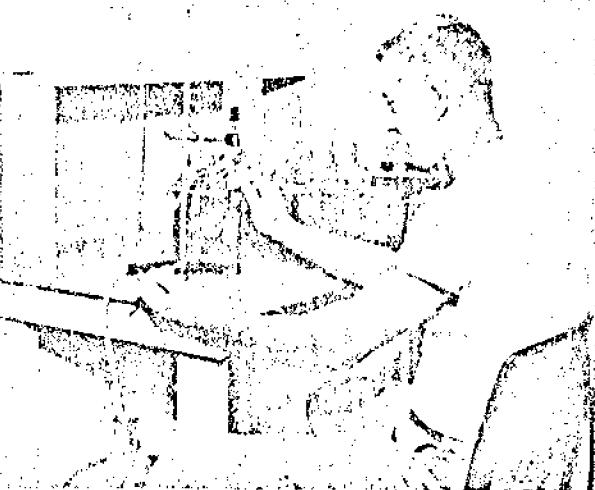


Figure 5.10 Filling impingers
with solution.

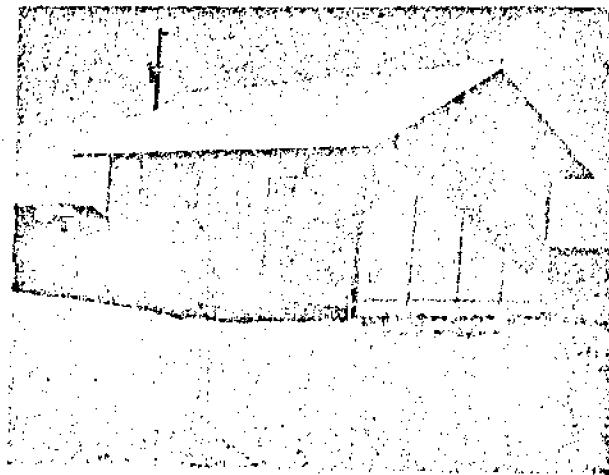


Figure 5.9 Exterior of laboratory.

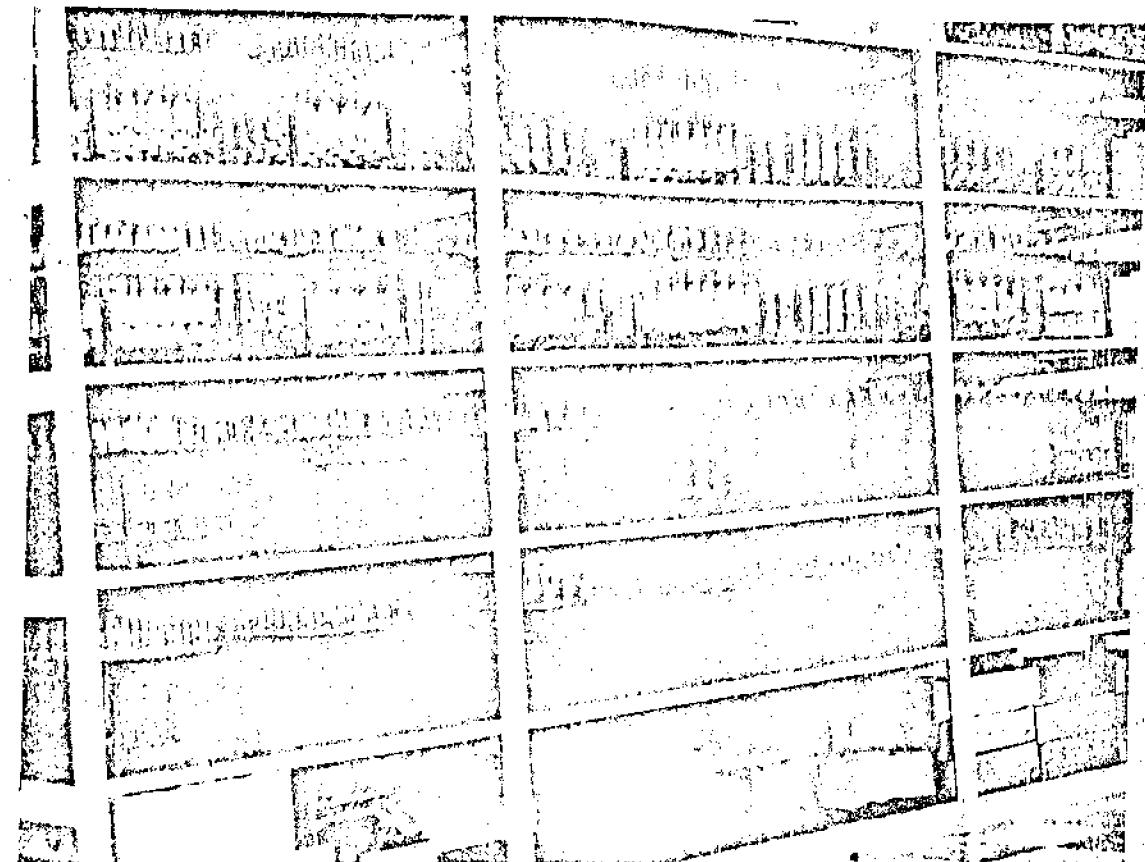


Figure 5.11 Shelves for storage of impinger baskets.

The following precautions were taken to avoid any mixup in the impingers: All baskets were clearly labeled with respect to the appropriate arc and the spaces for individual impingers were numbered according to the posts of the horizontal sampling network; the impingers in each

basket were similarly labeled. There were two complete sets of impingers; the baskets of one set were painted blue and those of the second set were painted red. Only one set was ever permitted to leave the laboratory during preparations for a gas release. The impingers for the vertical sampling network were placed in separate baskets and clearly labeled. The field crew left the sampling network area after the impingers had been installed and waited for the conclusion of the experiment. Then, after the tracer had cleared the networks and the meteorological measurements were ended, the field crew collected the impingers and returned the baskets to the laboratory for analysis.

The analysis consisted of measuring the electrical conductance of the aspirated solutions using conductivity cells and Wheatstone bridges. The impinger baskets were placed one at a time in a constant-temperature water bath. When the bath temperature reached the prescribed value, the conductance of the solution in each impinger was measured. An analysis team is shown in Figure 5.12; the man standing has removed the top of the impinger assembly and inserted the dip-type conductivity cell into the solution; the man seated is reading the resistance on a Wheatstone bridge. This equipment was duplicated at



Figure 5.12 Analysis team determining conductance of aspirated solutions

the other end of the laboratory. When all the conductances had been determined and checked for accuracy, the impingers were emptied, rinsed, and refilled with solution in preparation for the next experiment. After the laboratory and field crews had become proficient, it was possible to conduct four diffusion experiments within an 8-hour period.

Reduction of the electrical conductivities to gas concentrations is based on well-known laboratory procedures.* Calibration curves may be obtained directly by determining the conductance of sulfuric acid solutions of known normality. Equivalent conductance for these solutions is tabulated in standard reference books for a wide range of normality and temperature. The relationship between the specific conductance of a solution at a temperature of 27°C and the normality of the solution is shown in Figure 5.13. The scale at the right of the figure expresses normality in terms of milligrams of sulfur dioxide per cubic meter of air for 10 ml of absorbing solution and a sample volume of air of 15 liters. The reference level for zero concentration was obtained from the average conductance of aspirated solutions contained in impingers that were clearly in sectors of the sampling network outside the limits of the gas plume. The uncertainty in the laboratory technique for determining conductance is less than 2 percent within the normal range of concentrations.

5.5 Collection Efficiency of the Midget Impingers

The apparatus shown in Figure 5.14 was used to determine collection efficiencies of the midget impingers in the laboratory. Sulfur-dioxide gas and air were metered into the vertical pipe at the left and entered the large mixing tank; the mixture was removed from the tank and drawn through the pipe and rubber hose shown at the right of the photograph by an exhauster located outside the laboratory building. Both the amount of air and sulfur dioxide were adjustable over a

*For a previous application of this method see: Dean, R. S., and others, 1944: Report submitted to the Trail Arbitral Tribunal. Bull. U. S. Bureau of Mines, No. 453.

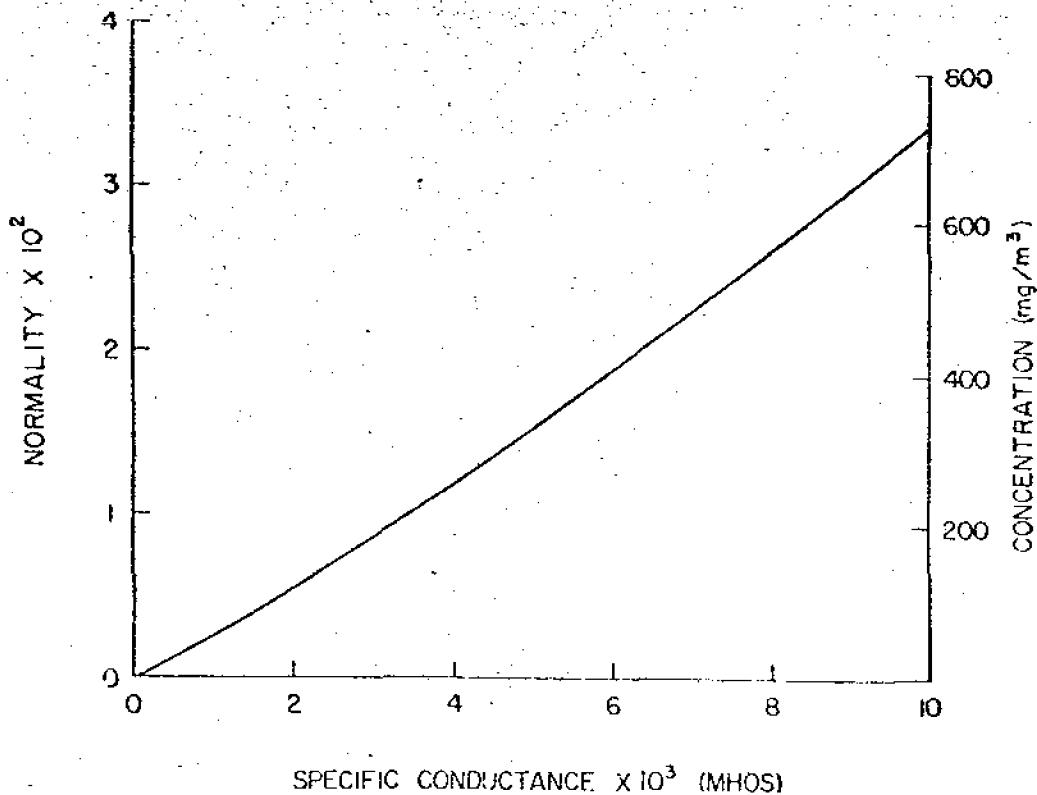


Figure 5.13 Calibration curve showing specific conductance as function of normality and concentration.

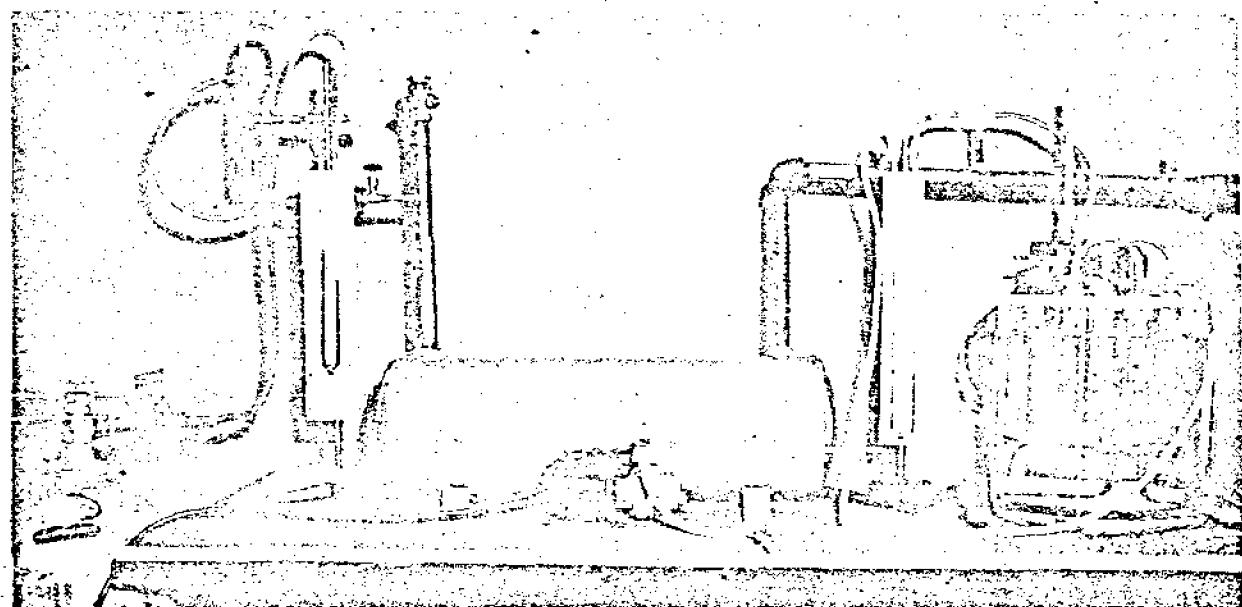


Figure 5.14 Apparatus for determining collection efficiency of midget impingers.

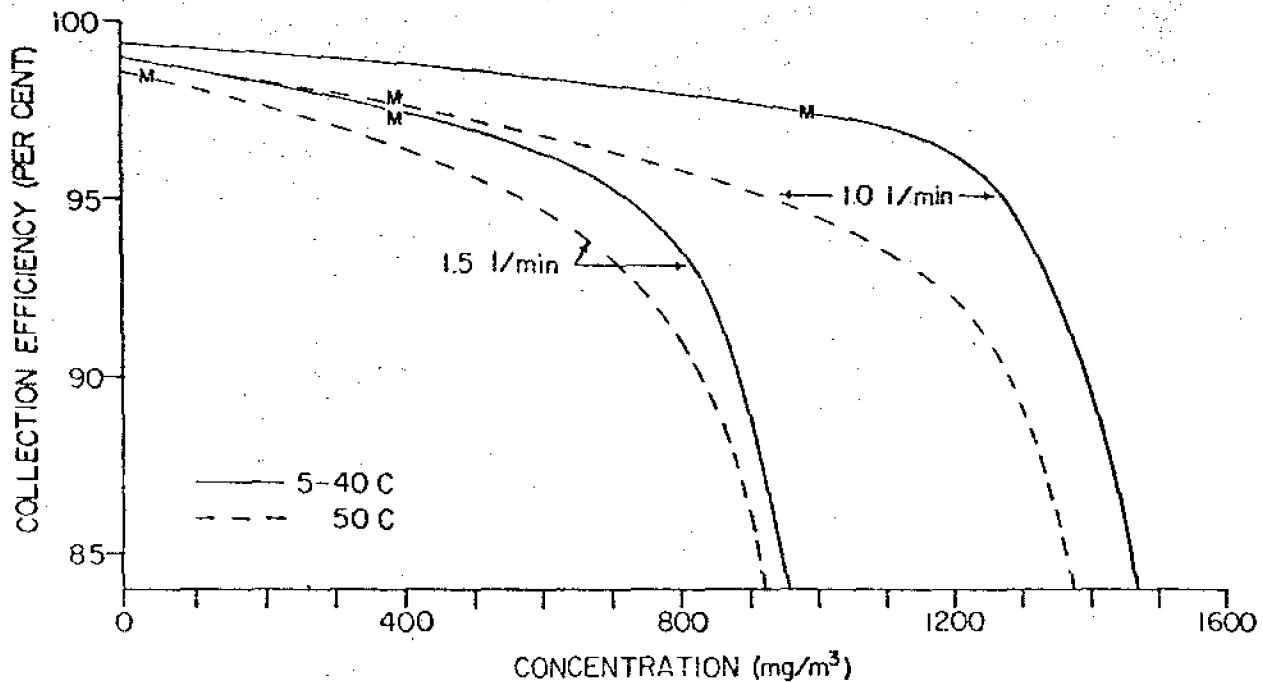


Figure 5.15. Collection efficiencies of midget impingers used in Prairie Grass diffusion experiments

wide range. The mixture was sampled through ports in the exit pipe in the following manner: The small vacuum pump in the foreground drew the mixture at a predetermined rate (1.0 or 1.5 liter min^{-1}) through four impingers connected in series by non-absorbing plastic tubing. Samples were obtained over 1-minute periods at levels of concentration approximately 10 times larger than those encountered in the field experiments. This procedure was intended to compensate for the meandering of the gas plume during field experiments produced by the larger-scale fluctuations in azimuth wind direction; in effect, the gas plume is present at an individual sampling station for only a fraction of the 10-minute sampling time. The significance of solution temperature on the measurement technique was investigated by immersing the four impingers in a water bath; the bath temperature was then varied over the range from 5° to 50°C . Conductivity measurements of the solutions in the four impingers provided concentration data used in calculating the collection efficiencies presented in Figure 5.15.

The results are directly applicable to the Project Prairie Grass diffusion experiments; the concentrations plotted in Figure 5.15 are adjusted for the 10-minute sampling periods of the field experiments (that is they are 1/10 the values determined from the laboratory tests described above). Maximum 10-minute concentrations measured during the Prairie Grass experiments are indicated in the figure by the symbol M. The data indicate that the collection efficiencies during Prairie Grass were greater than 97 percent in all cases. The sharp decrease in collection efficiency with increasing concentration exhibited by the curves is associated with the removal of hydrogen peroxide from the solution; the concentration at which this occurs can be altered by changing the amount of hydrogen peroxide in the solution. The solution used during Prairie Grass, and in the laboratory experiments for determining the collection efficiency, was prepared by adding 50 ml of 30 percent hydrogen peroxide and 10 ml of 1/10 normal sulfuric acid to 18 liters of distilled water. The solution's temperature appears to have no significant effect on collection efficiency for temperatures within the 5° to 40°C range; for temperatures of 50°C, the collection efficiency is somewhat reduced as indicated by the dashed lines in Figure 5.15.

5.6 Discussion of the Reliability of the Concentration Measurements

As pointed out, above, determining time-mean gas concentrations involves a relatively large number of individual measurement techniques and pieces of equipment. With few exceptions, the uncertainties associated with these individual procedures are all within the range of from 1 to 2 percent. It is also evident that many, if not most, of these uncertainties are probably random and tend largely to compensate one another. The accuracy of the determination of average source strength for individual gas releases depends principally upon the reliability of the gas meter and on the representativeness of the temperature measurements obtained, during the releases, at the inlet and outlet of the meter.

In calculating the weight of gas released, arithmetic means of the

inlet and outlet measurements were used. For the nighttime gas releases, there is no significant difference between the two sets of data. During the daytime releases, the inlet temperature is frequently 10° to 12°C lower than the outlet temperature. In these cases, use of the average temperature might lead to uncertainties of the order of 1 to 2 percent in the calculated source strength. Changes in ambient air temperature have only a slight effect on the mechanical parts of the gas meter; the manufacturer states that the temperature coefficient for the displacement mechanism is approximately 0.05 percent per degree Fahrenheit. Over the range of temperatures encountered during the experiments, this would result in an uncertainty of about 1 percent. Duration of the gas release was controlled within limits of 1 to 2 percent. Residual sulfur dioxide remaining in the plastic pipe used to conduct the tracer from the meter to the release-point constitutes approximately 1 percent of the total volume released during nighttime experiments and about 0.5 percent of the total volume released during the daytime experiments. This appears to be a negligible source of error. The adjustment in the gas meter at the factory, resulting in dial readings approximately 1 percent too low, is offset very nicely by the collection efficiency of the impingers which averages approximately 99 percent.

Possible sources of error in the collection of gas samples exist principally in variations in the rate of aspiration and loss of solution due to evaporation. As mentioned above, laboratory tests of individual impingers and capillaries limited the variation in flow rate under standard vacuum to a range of 1 to 2 percent. In field use, line vacuum depended upon the initial adjustment based on mercury manometer readings, the sensitivity of the vacuum regulators, and the line drop along the arcs. Each of these factors contains an uncertainty of about 1 to 2 percent with respect to the aspiration rate. All concentrations were calculated on the assumption that the volume of absorbing solution in the impingers remained unchanged during the experiments. There is

actually a small reduction in volume due to loss of water vapor during aspiration. Similar loss of sulfuric acid is considered insignificant in view of its very low vapor pressure.

The water vapor loss may be estimated in two ways. The amount of water vapor required to saturate the entrained air may be calculated from a knowledge of the aspiration rate, air temperature, relative humidity, and the duration of the sampling period. The latter comprises both the actual operation time of the sampling networks during each gas release and the time required to check the line vacuum prior to the start of each release. No records were kept of the total aeration time which varied from experiment to experiment and from one arc to another. However, a period of about 18 to 30 minutes was usually required. Calculations based on the maximum aeration time of 30 minutes and an aspiration rate of $1.0 \text{ liter min}^{-1}$ indicate, for the nighttime experiments, a median error of 2 percent and an extreme range from 0.6 to 5.0 percent. Similar calculations for the daytime experiments indicate a median error of 5.5 percent with an extreme range from 2 to 10 percent. Loss of solution by evaporation may also be estimated from differences in the conductance of aspirated solutions in impingers located outside the limits of the time-mean gas plume and the conductance of unaspired solutions in spare impingers. These data are available for practically all the experiments and permit calculation of correction factors at each travel distance.

The principal source of uncertainty in this method is the presence of background contaminants that may affect the conductance of the aspirated solutions; it appears that this factor is generally quite small and probably does not account for more than a 1 or 2 percent variation in conductance. Approximate correction factors based on conductances are presented in Table 5.4; the results indicate a median error of 3 to 5 percent for the nighttime experiments and of 6 to 9 percent for the daytime experiments. The lower estimates refer to the concentration measurements at 50 and 100 m, and the higher estimates refer to the

remaining travel distances and reflect principally the difference in rates of aspiration discussed above.

The laboratory analysis of the aspirated solutions was performed in the following manner: Baskets containing about fifty impingers were placed one at a time in the water baths. When the proper bath temperature had been attained, a dip-type conductivity cell was inserted in one impinger and the conductance determined. Then the cell was removed, excess solution was shaken off, and the cell was inserted in the next impinger, and the process repeated. This procedure entailed a slight carry-over of solution from one impinger to the next. The usual practice involved determination of conductances from one edge of the plume to a point slightly beyond the peak concentration; the analysis then continued from the other edge of the plume towards the peak. The reduction in concentration produced by the carry-over and subsequent dilution of solutions is estimated to be from 0 to 1 percent. The Wheatstone bridge had an uncertainty of about 1 percent. Errors due to the original adjustment of the conductivity cells and to changes in cell constants are believed to be about 1 or 2 percent. A change of about 7 percent was noted in the constant of one conductivity cell during the period of the experiments; conductances determined with this cell were subsequently adjusted. Electrolytic solutions have temperature coefficients of resistance of about 2 percent per degree Centigrade; since the water bath temperature was maintained constant within 0.1°C , variations in solution temperature may be neglected as a possible source of error.

Reduction of the electrical conductivities of the aspirated solutions to concentrations was based on results of laboratory determinations of the specific conductance of sulfuric acid solutions of known normality. The values thus obtained are in substantial agreement with those derived from published data. The calibration curves used in reducing the measured conductances are believed accurate to about ± 3 percent. The reference level for zero concentration was obtained from the arithmetic mean of the conductances of aspirated solutions contained in

impingers located outside the limits of the time-mean gas plume. In general, this concentration level is almost entirely due to the small amount of sulfuric acid added in preparing the dilute hydrogen-peroxide solution. It does not, therefore, indicate the presence of any significant amount of sulfur-dioxide in the atmosphere at the Prairie Grass field site. As the limit of resolution of the sampling technique is approached, the uncertainty of determination increases rapidly; for concentrations less than 0.10 mg m^{-3} , this uncertainty is approximately 25 percent.

Approximate checks on the reliability of the concentration measurements were obtained by comparing the calculated source strengths with the mass transport of sulfur-dioxide gas through a vertical cross section at a travel distance of 100 meters. This is the only distance at which vertical concentration data are available. The results indicate that the estimates for the mass transport are about 10 percent higher, on the average, than the calculated source strengths for the nighttime experiments; a similar average discrepancy of about 15 percent is noted in the case of the daytime experiments. Roughly one-third of these differences can be explained by the loss of solution due to evaporation; the remainder may be due in part to undetected systematic errors in the sampling technique, to overestimates of the mean wind speed, and to errors inherent in the method of computing the mass transport. At any rate, there is no evidence of any significant loss of sulfur dioxide due to absorption by vegetation or any other factor. It appears likely that the absolute magnitudes of the Prairie Grass diffusion measurements are accurate to within 10 percent and that the relative concentrations are accurate to within 5 percent.

Summaries of the results of the Prairie Grass diffusion measurements are presented in Tables 5.1 to 5.3. Table 5.1 summarizes the source strengths for the individual experiments calculated on the basis of the total volumes of gas released and the temperature and pressure of the gas as it passed through the meter. Ten-minute average gas concentrations measured at a height of 1.5 m at five travel

distances are summarized in Table 5.2. The average concentrations determined from the vertical sampling array at 100 m are presented in Table 5.3. Slow-response meteorological data, useful in converting the concentrations to standard values, are found in Tables 5.4 and 5.5.

Table 5.1. Source strengths Q expressed in g sec^{-1} for individual Prairie Grass diffusion experiments

Run No.	$Q(\text{g sec}^{-1})$	Run No.	$Q(\text{g sec}^{-1})$	Run No.	$Q(\text{g sec}^{-1})$
1	81.5	24	41.2	46	99.7
2	83.9	25	101.4	47	103.1
3	56.3	26	97.6	48S	104.0
4	50.5	27	98.8	48	104.1
5	77.8	28	41.7	49	102.0
6	89.5	29	41.5	50	102.8
7	89.9	30	98.4	51	102.4
8	91.1	31	96.0	52	104.0
9	92.0	32	41.4	53	45.2
10	92.1	33	94.7	54	43.4
11	95.9	34	97.4	55	45.3
12	99.1	35S	41.8	56	45.9
13	61.1	35	38.8	57	101.5
14	49.1	36	40.0	58	40.5
15	95.5	37	40.3	59	40.2
16	93.0	38	45.4	60	38.5
17	56.5	39	40.7	61	102.1
18	57.6	40	40.5	62	102.1
19	101.8	41	39.9	65	44.1
20	101.2	42	56.4	66	43.1
21	50.9	43	98.9	67	45.0
22	48.4	44	100.7	68	42.8
23	40.9	45	100.8		

Table 5.2

Ten-minute average gas concentrations measured during Project Prairie Grass at a height of 1.5 m at five travel distances: 50, 100, 200, 400, and 800 m. Entries are in units of mg m^{-3} . Individual sampling stations at each travel distance are identified in terms of post numbers which are consecutive; Post No. 1 is located due west of the release-point (that is, at a true angular bearing of 270 degrees from the source). A 2-degree angular separation between adjacent stations was used at the four shorter travel distances and a 1-degree angular separation was used at 800 m.

Remarks

No data are presented for Runs No. 63 and 64 due to the presence of extremely light and variable winds. Data for all other experiments have been included. The measurements obtained under stable night-time conditions should be interpreted with care. In particular, when the wind speed at a height of 2 m is $< 2 \text{ m sec}^{-1}$, significant vertical stratification may occur in the plume; in some cases, the plume axis is found below the height of the sampling stations at the shorter travel distances. If this phenomenon is not taken into account, the measurements indicate an increase in axial concentration with increasing travel distance. The vertical concentration measurements presented in Table 5.3 are useful in resolving these problems. With regard to the tabular entries, the letter "M" indicates missing data and the blank spaces denote no measurable concentration.

Run No. 4 - Gas released for 9.5 minutes only. Concentrations have been adjusted to a 10-minute release period.

Run No. 25 - Several gnats were caught in the capillary tubes used as entrances to the samplers. All concentrations known to have been influenced have been indicated as missing.

Runs No. 30 and 31 - Background resistances unusually low and variable. Data believed not significantly affected, except for concentrations below 5 mg m^{-3} .

- Run No. 45 - Concentration at Post 38 of the 50-m arc is an adjusted value.
- Run No. 47 - Rate of gas release during the first 90 seconds of the run varied by perhaps + 50 percent of the average rate for the 10-minute period.
- Run No. 50 - Vacuum line to Sampler 62 of the 200-m arc became disconnected during the run. All values measured at this arc are too low.
- Run No. 51 - Vacuum line to Sampler 56 of the 400-m arc is believed to have been disconnected throughout the run. All values for this arc have been adjusted to make allowance for the reduced vacuum.
- Run No. 57 - Vacuum line to Sampler 47 of the 100-m arc is believed to have become disconnected. All values measured at this arc are probably too low.

Table 5.2 (Continued)

DATE 3 July 1956
TIME 1100-1110 CSTCONCENTRATION (mg m^{-3})

RUN NO. 1

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m		Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							46						0.145
	2							24	47	123	14.8	1.18	0.310	0.215
2	3								48					0.205
	4							25	49	109	14.7	1.23	0.295	0.215
3	5								50					0.260
	6							26	51	89.4	14.5	0.970	0.090	0.160
4	7	0.110	0.160						52					0.105
	8							27	53	92.9	14.2	0.995	0.090	0.100
5	9	1.49	0.700						54					0.090
	10							28	55	115	13.5	1.70	0.420	0.100
6	11	6.13	0.8						56					0.165
	12							29	57	122	17.0	1.99	0.520	0.190
7	13	25.3	0.765						58					0.185
	14							30	59	118	13.8	2.20	0.510	0.170
8	15	37.0	2.20						60					0.145
	16							31	61	106	14.9	2.51	0.495	0.085
9	17	50.9	2.17	0.155					62					0.100
	18							32	63	114	19.1	2.05	0.725	0.070
10	19	63.8	6.22	0.755	0.030				64					0.060
	20							33	65	108	18.4	1.57	1.12	0.075
11	21	66.9	11.6	0.675	0.015				66					0.080
	22							34	67	68.1	17.1	2.35	0.895	0.045
12	23	77.7	9.64	0.525	0.045				68					0.050
	24							35	69	70.6	17.3	2.79	1.02	0.020
13	25	89.1	9.07	0.455	0.070				70					0.030
	26					0.055		36	71	80.6	18.2	3.56	0.410	0.045
14	27	139	14.3	0.920	0.255	0.020			72					
	28					0.015		37	73	99.5	20.2	3.71	0.665	
15	29	119	11.6	1.28	0.140	0.065			74					
	30					0.010		38	75	112	25.4	3.97	0.610	
16	31	134	18.7	.995	0.270	0.000			76					
	32					0.045		39	77	123	19.8	4.08	0.650	
17	33	103	19.5	1.87	0.295	0.020			78					
	34					0.025		40	79	140	24.0	4.07	0.460	
18	35	84.0	22.0	1.77	0.160	0.025			80					
	36					0.025		41	81	120	21.7	3.34	0.340	
19	37	107	25.6	3.82	0.090	0.055			82					
	38					0.070		42	83	124	24.4	3.62	0.255	
20	39	106	23.8	4.38	0.130	0.150			84					
	40					0.155		43	85	121	19.3	2.12	0.060	
21	41	103	22.5	4.25	0.225	0.170			86					
	42					0.195		44	87	125	17.5	1.73		
22	43	95.7	11.2	2.06	0.385	0.155			88					
	44					0.150		45	89	95.0	11.6	1.56		
23	45	88.1	10.9	1.94	0.410	0.160			90					

Table 5.2 (Continued)

DATE 3 July 1956
TIME 1100-1110 CSTCONCENTRATION (mg m^{-3})

RUN NO. 1

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
46	91	60.6	8.01	0.945				136					
	92						69	137					
47	93	60.6	7.39	0.625				138					
	94						70	139					
48	95	41.1	8.42	0.215				140					
	96						71	141					
49	97	34.7	5.21	0.070				142					
	98						72	143					
50	99	20.0	1.46					144					
	100						73	145					
51	101	12.8	0.230					146					
	102						74	147					
52	103	7.32	0.345					148					
	104						75	149					
53	105	4.47	0.100					150					
	106						76	151					
54	107	3.11						152					
	108						77	153					
55	109	0.185						154					
	110						78	155					
56	111							156					
	112						79	157					
57	113							158					
	114						80	159					
58	115							160					
	116						81	161					
59	117							162					
	118						82	163					
60	119							164					
	120						83	165					
61	121							166					
	122						84	167					
62	123							168					
	124						85	169					
63	125							170					
	126						86	171					
64	127							172					
	128						87	173					
65	129							174					
	130						88	175					
66	131							176					
	132						89	177					
67	133							178					
	134						90	179					
68	135							180					
							91	181					

Table 5.2 (Continued)

DATE 3 July 1956
TIME 1500-1510 CSTCONCENTRATION (mg m^{-3})

RUN NO. 2

POST NO.		ARC				POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	Inner Arcs	800m arc	50m	100m	200m	400m	800m	
1	1	37.4	0.030				46					0.210	
	2						24	47	146	23.9	3.80	0.355	0.165
2	3	38.5					48					0.200	
	4				0.080		25	49	124	25.5	4.61	0.350	0.160
3	5	23.8	2.10				50					0.165	
	6				0.220		26	51	124	25.4	4.71	0.400	0.100
4	7	30.4	3.20				52					0.105	
	8				0.065		27	53	135	29.7	4.77	0.450	0.055
5	9	38.6	2.00				54					0.120	
	10				0.125		28	55	148	31.2	3.43	1.13	0.120
6	11	58.4	1.77				56					0.130	
	12				0.075		29	57	163	36.9	3.90	1.14	0.115
7	13	73.3	1.88	0.220			58					0.060	
	14				0.070		30	59	144	45.9	4.56	1.06	0.085
8	15	67.6	2.87	1.04	0.085	0.155		60					
	16					0.050	31	61	147	36.3	9.87	0.710	
9	17	56.4	8.93	1.24	0.205	0.115		62					
	18					0.075	32	63	174	42.3	6.29	0.400	
10	19	83.9	13.8	1.63	0.160	0.065		64					
	20						33	65	153	47.9	4.28	0.670	
11	21	81.5	17.1	2.18	0.320			66					
	22					0.130	34	67	163	44.7	2.85	0.050	
12	23	66.8	12.6	2.32	0.285	0.070		68					
	24					0.025	35	69	135	44.3	2.52	0.040	
13	25	66.9	13.5	4.21	0.125	0.040		70					
	26					0.030	36	71	128	14.9	1.42	0.095	
14	27	95.0	10.6	3.28	0.100	0.090		72					
	28					0.110	37	73	100	7.38	0.400		
15	29	116	11.3	1.67	0.105	0.160		74					
	30					0.130	38	75	74.0	0.265	0.050		
16	31	132	12.6	1.12	0.075	0.135		76					
	32					0.065	39	77	34.4	0.450	0.085		
17	33	129	21.8	2.19	0.065	0.025		78					
	34					0.050	40	79	6.61	0.160			
18	35	141	28.5	3.73	0.140			80					
	36					0.315	41	81	2.59	0.075			
19	37	190	38.3	3.70	0.210	0.130		82					
	38					0.140	42	83	0.805	0.050			
20	39	175	35.6	4.05	0.250	0.005		84					
	40					0.120	43	85					
21	41	154	35.9	4.17	0.195	0.195		86					
	42					0.275	44	87					
22	43	192	26.9	4.33	0.270	0.200		88					
	44					0.295	45	89					
23	45	175	27.3	3.67	0.430	0.225		90					

DATE 5 July 1956
TIME 2200-2210 CST

Table 5.2 (Continued)

CONCENTRATION (mg m^{-3})

RUN NO. 3

POST NO.		ARC				POST NO.		ARC							
Inner Arcs	800m arc	50m	100m	200m	400m	800m		Inner Arcs	800m arc	50m	100m	200m	400m	800m	
1	1							24	46						
	2							25	47						
2	3								48						
	4								26	49					
3	5									50					
	6								27	51					
4	7									52					
	8								28	53					
5	9									54					
	10								29	55					
6	11									56					
	12								30	57					
7	13									58					
	14								31	59					
8	15									60					
	16								32	61					
9	17									62					
	18								33	63					
10	19									64					
	20								34	65				0.060	
11	21									66				0.260	
	22								35	67				0.275	
12	23									68				0.215	
	24								36	69				0.235	
13	25									70				0.215	
	26								37	71				0.205	
14	27									72				0.250	
	28								38	73				0.200	
15	29									74				0.195	
	30								39	75	0.175			0.180	
16	31									76				0.205	
	32								40	77	0.435	0.035	0.025	0.215	
17	33									78				0.200	
	34								41	79	0.840	0.030	0.025	0.215	
18	35									80				0.215	
	36								42	81	1.43	0.035	0.026	0.030	0.210
19	37									82				0.235	
	38								43	83	2.10	0.035	0.025	0.030	0.220
20	39									84				0.195	
	40								44	85	3.68	0.085	0.015	0.035	0.195
21	41									86				0.205	
	42								45	87	5.84	0.375	0.005	0.025	0.190
22	43									88				0.200	
	44								46	89	7.61	1.28	0.005	0.025	0.200
23	45									90				0.215	

Table 5.2 (Continued)

DATE 5 July 1958
TIME 2200-2210 CST

CONCENTRATION (mg m⁻³)

RUN NO. 3

POST NO.		ARC					POST NO.		ARC						
Line:	Arcs	800m	50m	100m	200m	400m	800m	Line:	Arcs	800m	50m	100m	200m	400m	800m
49	91	0.00	2.79	0.015			0.235	69	130						0.030
	92						0.220	70	137	30.0	43.5	19.8	0.04	0.500	
47	93	11.0	1.25	0.110	0.010	0.225		71	138						0.500
	94						0.245	72	139	29.1	44.3	25.0	0.78	0.470	
48	95	12.1	0.48	0.320	0.020	0.205		73	140						0.255
	96						0.260	74	141	33.2	47.6	28.6	0.77	0.140	
49	97	15.2	5.85	1.03	0.010	0.235		75	142						0.025
	98						0.245	76	143	32.5	50.0	30.0	12.1		
50	99	10.5	11.7	2.25	0.020	0.200		77	144						
	100						0.220	78	145	27.8	52.3	37.9	11.1		
51	101	22.1	13.5	3.87	0.020	0.185		79	146						
	102						0.155	80	147	21.0	45.0	41.0	10.3		
52	103	22.1	14.0	4.97	0.020	0.125		81	148						
	104						0.120	82	149	24.0	58.0	53.1	16.6		
53	105	22.7	10.7	0.55	0.035	0.125		83	150						
	106						0.140	84	151	19.1	50.0	61.5	14.7		
54	107	23.1	17.0	8.49	0.055	0.120		85	152						
	108						0.125	86	153	18.8	54.0	67.2	15.4		
55	109	24.0	19.2	10.6	0.120	0.105		87	154						
	110						0.075	88	155	19.1	58.7	65.7	16.7		
56	111	27.0	21.5	11.0	0.170	0.115		89	156						
	112						0.075	90	157	14.3	58.7	71.7	15.1		
67	113	27.9	23.9	10.4	0.275	0.110		91	158						
	114						0.115	92	159	17.1	42.5	56.4	14.0		
58	115	28.4	23.7	11.6	0.385	0.105		93	160						
	116						0.100	94	161	17.4	43.1	51.2	14.4		
69	117	34.1	24.8	11.1	0.600	0.085		95	162						
	118						0.100	96	163	15.3	55.5	63.4	16.9		
60	119	41.0	23.4	12.3	0.800	0.085		97	164						
	120						0.040	98	165	9.98	70.8	63.4	17.6		
61	121	38.4	24.3	12.2	1.15	0.065		99	166						
	122						0.090	100	167	8.34	90.0	60.9	18.4		
62	123	42.5	23.9	13.0	1.37	0.105		101	168						
	124						0.145	102	169	14.4	103	53.1	0.250		
63	125	41.1	24.0	13.0	1.24	0.155		103	170						
	126						0.200	104	171	24.2	140	65.5	10.1		
64	127	44.6	26.3	14.3	2.82	0.185		105	172						
	128						0.290	106	173	32.0	207	68.7	0.830		
65	129	39.3	28.0	16.4	2.93	0.375		107	174						
	130						0.330	108	175	32.4	246	80.0	0.010		
66	131	33.0	34.5	15.8	3.77	0.445		109	176						
	132						0.485	110	177	28.1	226	76.0	0.010		
67	133	33.2	30.3	10.9	4.60	0.545		111	178						
	134						0.045	112	179	29.7	201	58.7	0.010		
68	135	29.7	39.8	19.4	4.00	0.025		113	180						
								114	181	13.7	181	18.1	0.005		

DATE 6 July 1958
TIME 0100-0110 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 4

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m	
1	1	1.37	0.535	0.345	0.030	0.005		40						0.025
	2						21	47	1.91	1.27	1.27	3.57	0.020	
2	3	1.53	0.470	0.335	0.075			48						0.035
	4						25	49	2.23	1.48	1.30	4.25	0.025	
3	5	1.42	0.500	0.315	0.130	0.015		50						0.020
	6					0.020	20	51	2.48	1.63	1.45	4.50	0.010	
4	7	1.23	0.525	0.310	0.190	0.005		52						0.025
	8					0.020	27	53	2.78	1.91	1.55	4.50	0.030	
5	9	1.31	0.530	0.350	0.235	0.015		54						0.045
	10					0.020	28	55	3.09	1.88	1.05	5.09	0.030	
0	11	1.42	0.575	0.350	0.375	0.005		56						0.050
	12						20	57	3.71	2.04	1.80	5.24	0.035	
7	13	1.51	0.545	0.420	0.450	0.010		58						0.030
	14						30	59	4.33	2.42	2.03	5.41	0.030	
8	15	1.66	0.580	0.440	0.585			60						0.020
	16						31	61	5.13	2.49	2.13	5.83	0.035	
9	17	1.59	0.625	0.490	0.665			62						0.040
	18						32	63	6.76	3.03	2.24	6.00	0.045	
10	19	1.43	0.645	0.510	0.795			64						0.060
	20						33	65	8.88	3.17	2.32	6.21	0.020	
11	21	1.66	0.705	0.550	0.900	0.005		66						0.050
	22					0.020	34	67	7.80	3.02	2.19	6.54	0.040	
12	23	1.51	0.785	0.615	1.06			68						0.050
	24						35	69	8.09	3.63	2.57	6.48	0.035	
13	25	1.04	0.815	0.655	1.28	0.035		70						0.050
	26					0.010	36	71	10.3	4.17	2.55	6.87	0.060	
14	27	1.47	0.860	0.700	1.33	0.005		72						0.065
	28					0.090	37	73	12.6	5.20	2.57	7.30	0.075	
15	29	1.83	0.910	0.700	1.53	0.010		74						0.075
	30					0.030	38	75	14.1	5.75	2.55	7.38	0.090	
16	31	1.89	0.910	0.750	1.75	0.110		76						0.085
	32					0.010	39	77	14.0	6.38	2.49	8.01	0.055	
17	33	1.69	1.20	0.815	1.98	0.140		78						0.080
	34					0.095	40	79	12.9	6.41	2.58	8.94	0.000	
18	35	1.78	1.19	0.855	2.18	0.010		80						0.060
	36						41	81	12.2	6.09	2.69	9.13	0.080	
19	37	1.77	1.19	0.950	2.23			82						0.040
	38						42	83	10.8	5.29	2.91	9.96	0.025	
20	39	1.62	1.15	1.04	2.33	0.005		84						0.055
	40						43	85	9.54	5.01	2.96	11.2	0.095	
21	41	1.93	1.27	1.12	2.60	0.010		86						0.055
	42						44	87	9.09	4.42	3.17	12.7	0.050	
22	43	1.93	1.38	1.11	2.83	0.005		88						0.105
	44						45	89	9.09	3.38	3.15	15.1	0.090	
23	45	2.10	1.32	1.20	3.07	0.060		90						0.100

DATE 6 July 1956
TIME 0100-0110 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 4

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m Arc	S	50m	200m	400m	S	Inner Arcs	800m Arc	50m	100m	200m	400m	800m	
40	91	8.81	3.81	3.39	17.3	0.120		130						10.7
	92					0.115	69	137	61.8	104	115	17.8	8.37	
47	93	10.5	3.00	3.47	20.5	0.140		138						5.11
	94					0.135	70	139	78.0	218	152	66.7	1.53	
18	95	14.3	3.71	3.61	24.1	0.135		140						0.220
	96					0.080	71	141	69.8	174	151	8.48		
49	97	27.0	1.80	3.95	21.5	0.095		142						
	98					0.065	72	143	62.8	140	65.5	0.135		
60	99	51.3	7.93	4.84	23.3	0.110		144						
	100					0.110	73	145	68.1	87.8	2.02			
61	101	98.8	10.7	7.34	23.3	0.140		146						
	102					0.120	74	147	53.1	12.0	0.050			
52	103	135	14.8	13.7	21.2	0.095		148						
	104					0.085	75	149	32.2	4.58				
63	105	153	30.5	25.8	27.1	0.105		150						
	106					0.135	76	151	2.00	0.170				
64	107	162	91.1	35.4	30.9	0.125		152						
	108					0.100	77	153	0.535	0.045				
65	109	180	161	70.0	29.8	0.215		154						
	110					0.285	78	155	0.275					
66	111	177	199	104	20.6	0.285		156						
	112					0.300	79	157	0.065					
67	113	196	221	133	20.7	0.355		158						
	114					0.465	80	159	0.040					
68	115	208	216	105	24.8	0.460		160						
	116					0.385	81	161						
69	117	238	213	80.2	22.3	0.670		162						
	118					0.715	82	163						
70	119	297	202	66.7	17.7	0.955		164						
	120					1.22	83	165						
61	121	261	212	55.1	18.6	1.66		166						
	122					2.22	84	167						
62	123	208	210	48.3	14.8	2.91		168						
	124					3.61	85	169						
63	125	235	186	50.2	14.9	4.33		170						
	126					4.65	86	171						
64	127	221	177	49.2	13.8	5.01		172						
	128					6.37	87	173						
65	129	190	182	59.6	15.9	6.84		174						
	130					8.18	88	175						
66	131	159	152	68.2	17.1	9.01		176						
	132					10.1	89	177						
67	133	135	161	73.6	20.1	10.6		178						
	134					11.2	90	179						
68	135	107	163	77.3	27.7	11.4		180						
							91	181						

DATE 6 July 1956
TIME 1400-1410⁰ CST

Table 5.2 (Continued)
CONCENTRATION (mg m⁻³)

RUN NO. 5

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1						10						
	2						21	17					
2	3						25	12	0.315				
	4						29	51	2.09				
3	5						27	53	8.84				
	6						30	53	13.1	0.300			
4	7						31	61	13.7	3.17	0.003		
	8						32	63	17.0	2.28	0.075		
5	9						33	65	18.0	2.87	1.42	0.040	
	10						34	67	27.3	5.00	1.11	0.080	
6	11						35	69	35.3	5.87	1.28	0.305	
	12						36	71	18.3	6.45	1.00	0.520	
7	13						37	73	32.7	9.42	2.33	0.710	0.045
	14						38	75	55.7	13.4	4.39	0.650	0.110
8	15						39	77	71.0	21.9	5.97	1.18	0.155
	16						40	79	91.5	27.2	9.19	1.75	0.200
9	17						41	81	115	36.3	10.0	1.81	0.320
	18						42	83	150	45.3	10.0	1.60	0.205
10	19						43	85	197	48.2	9.69	1.75	0.280
	20						44	87	203	53.3	11.1	1.97	0.420
11	21						45	89	174	55.7	14.8	2.82	0.480
	22							90					0.390
12	23												
	24												
13	25												
	26												
14	27												
	28												
15	29												
	30												
16	31												
	32												
17	33												
	34												
18	35												
	36												
19	37												
	38												
20	39												
	40												
21	41												
	42												
22	43												
	44												
23	45												

DATE 6 July 1956
TIME 1400-1410 CST

Table 5.2 (Continued)
CONCENTRATION (mg m⁻³)

RUN NO. 5

PCST NO.	Inner Arcs	ARC					Inner Arcs	Post No.	ARC				
		50m	100m	200m	400m	800m			50m	100m	200m	400m	800m
10	01	150	17.0	11.8	2.20	0.370		138					
	02					0.410	69	137					
17	03	150	14.4	10.4	1.75	0.320		138					
	04					0.285	70	139					
18	05	150	10.1	8.87	1.20	0.360		140					
	06					0.280	71	141					
40	07	137	28.5	6.30	1.18	0.240		142					
	08					0.135	72	143					
50	09	103	19.1	9.01	1.00	0.105		144					
	100					0.075	73	145					
61	101	07.4	11.8	2.50	0.365	0.035		146					
	102						74	147					
52	103	39.9	5.09	0.950	0.040			148					
	104						75	149					
63	105	10.4	1.50	0.335				150					
	106						76	151					
54	107	0.01	0.415	0.010				152					
	108						77	153					
55	109	2.87	0.050					154					
	110						78	155					
50	111	1.23	0.040					156					
	112						79	157					
57	113	0.570	0.055					158					
	114						80	159					
68	115	0.075						160					
	116						81	161					
60	117					..		162					
	118						82	163					
00	119							164					
	120						83	165					
61	121							166					
	122						84	167					
62	123							168					
	124						85	169					
63	125							170					
	126						86	171					
64	127							172					
	128						87	173					
65	129							174					
	130						88	175					
66	131							176					
	132						89	177					
67	133							178					
	134						90	179					
68	135							180					
							91	181					

DATE 6 July 1958
TIME 1700-1710 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO.6

POST NO.		ARC				POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m
1	1						16					
	2						21	47				
2	3						48					
	4						23	49				
3	5						50					
	6						20	51				
4	7						52					
	8						27	53				
5	9						54					
	10						28	55				
0	11						56					
	12						29	57				
7	13						58					
	14						30	59				
8	15						60					
	16						31	01				
9	17						62					
	18						32	63				
10	19						64					
	20						33	05	0.040			
11	21						65					
	22						34	07	0.155			
12	23						66					
	24						35	09	1.85	0.000		
13	25						70					
	26						36	71	6.37	0.005		
14	27						72					
	28						37	73	18.9	2.43	0.200	
15	29						74					
	30						38	75	46.1	9.84	1.52	0.035
16	31						76					0.025
	32						39	77	81.5	23.0	2.72	0.235
17	33						78					0.035
	34						40	79	118	34.1	6.12	0.690
18	35						80					0.095
	36						41	81	188	47.3	11.5	1.85
19	37						82					0.150
	38						42	83	240	62.9	14.6	3.25
20	39						84					0.440
	40						43	85	261	80.6	17.5	3.50
21	41						86					0.765
	42						44	87	251	80.3	24.2	4.00
22	43						88					0.765
	44						45	89	263	70.2	19.0	4.24
23	45						90					0.885

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Table 3.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 6

POST NO.		ARC					POST NO.		ARC					RUN NO. 6	
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m		
16	91	218	58.3	14.2	3.27	0.900		130							
	92					1.03	69	137							
17	93	182	65.3	13.7	3.23	1.12		138							
	94					0.920	70	139							
18	95	140	45.2	11.9	3.23	0.720		140							
	96					0.520	71	141							
19	97	133	35.1	10.5	2.05	0.570		142							
	98					0.400	72	143							
20	99	106	31.1	9.12	1.43	0.320		144							
	100					0.255	73	145							
51	101	72.5	18.5	3.95	0.615	0.075		146							
	102					0.020	74	147							
52	103	10.7	8.66	2.63	0.176	0.020		148							
	104					0.156	75	149							
53	105	19.5	3.66	0.835	0.020			150							
	106						76	151							
54	107	8.64	1.05	0.095				152							
	108						77	153							
55	109	3.02	0.445					154							
	110						78	155							
56	111	0.610	0.060					156							
	112						79	157							
57	113	0.005						158							
	114						80	159							
58	115							160							
	116						81	161							
59	117							162							
	118						82	163							
60	119							164							
	120						83	165							
61	121							166							
	122						84	167							
62	123							168							
	124						85	169							
63	125							170							
	126						86	171							
64	127							172							
	128						87	173							
65	129							174							
	130						88	175							
66	131							176							
	132						89	177							
67	133							178							
	134						90	179							
68	135							180							
							91	181							

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Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 7

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							40					
	2							41	47	35.4	5.18		
2	3							48					
	4							49	39.1	8.25	0.005		
3	5							50					
	6							51	48.0	7.88	0.020		
4	7							52					
	8							53	53.1	9.08	0.395		
5	9							54					
	10							55	62.1	11.0	1.28		
6	11							56					
	12							57	73.1	13.8	3.00		
7	13							58					
	14							59	70.1	11.1	2.35		
8	15							60					
	16							61	55.1	10.1	1.74		
9	17							62					
	18							63	64.3	8.42	2.11		
10	19							64					
	20							65	40.1	6.83	3.18		
11	21							66					
	22							67	34.0	7.26	2.14		
12	23							68					
	24							69	43.1	5.00	1.21	0.035	
13	25							70					
	26							71	38.4	6.12	0.975	0.035	
14	27							72					
	28							73	29.0	5.80	0.645	0.140	
15	29							74					
	30		.					75	29.3	8.46	0.435	0.100	
16	31	0.015						76					
	32							77	30.0	7.88	0.405	0.105	
17	33	0.015						78					
	34							79	49.1	11.3	0.905	0.400	
18	35	0.130						80					
	36							81	85.7	18.0	2.86	0.210	
19	37	0.830	0.035					82					
	38							83	63.5	18.8	4.21	0.270	
20	39	1.76	0.035					84					0.035
	40							85	82.4	22.4	4.49	0.380	0.050
21	41	6.98	0.280					86					0.035
	42							87	97.8	23.3	4.57	0.550	0.060
22	43	15.2	0.930					88					0.045
	44							89	87.9	M	4.04	0.700	0.045
23	45	26.3	1.79	0.030				90					0.080

DATE 10 July 1958
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Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 7

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
10	91	79.4	10.4	3.23	0.700	0.065		136					
	92					0.040	60	137	88.0	11.2	1.25		
17	93	67.1	17.1	3.11	0.680	0.035		138					
	94					0.020	70	139	39.0	6.00	0.840		
18	95	54.3	15.5	3.47	0.390	0.025		140					
	96					0.035	71	141	32.7	3.29	0.300		
19	97	46.4	11.7	2.28	0.305	0.045		142					
	98					0.025	72	143	28.4	3.45			
50	99	40.7	10.2	1.89	0.360	0.035		144					
	100					0.040	73	145	21.0	0.90	0.110		
51	101	53.9	11.3	1.70	0.430	0.040		146					
	102					0.040	74	147	24.6	3.24			
52	103	56.7	11.8	1.81	0.480	0.010		148					
	104					0.025	75	149	18.5	0.755			
53	105	58.2	11.7	1.05	0.380	0.035		150					
	106					0.035	76	151	12.0	0.175			
54	107	41.6	8.82	1.92	0.285	0.030		152					
	108					0.000	77	153	17.3				
55	109	30.5	6.77	1.07	0.385	0.050		154					
	110					0.045	78	155	14.9				
56	111	33.6	5.69	1.85	0.450	0.005		156					
	112					0.040	79	157	7.98				
57	113	32.9	5.91	1.53	0.285	0.070		158					
	114					0.025	80	159	1.20				
58	115	39.3	5.73	1.55	0.220	0.045		160					
	116					0.005	81	161	0.115				
59	117	51.2	7.79	1.23	0.170	0.040		162					
	118					0.016	82	163	0.085				
60	119	61.1	9.71	1.39	0.175	0.045		164					
	120					0.020	83	165	0.040				
61	121	57.0	13.5	2.61	0.140	0.010		166					
	122					0.010	84	167	0.015				
62	123	47.9	14.4	5.14	0.125	0.030		168					
	124					0.060	85	169	0.030				
63	125	54.3	10.1	3.09	0.070	0.025		170					
	126					0.035	86	171	0.020				
64	127	53.4	17.0	3.42	0.375			172					
	128						87	173	0.035				
65	129	65.1	19.5	4.18	0.490			174					
	130						88	175	0.045				
66	131	70.4	19.4	2.69	0.135			176					
	132						89	177	0.025				
67	133	65.6	21.2	2.44	0.060			178					
	134						90	179	0.020				
68	135	73.8	14.4	1.06				180					
							91	181					

DATE 10 July 1958
TIME 1700-1710 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 8

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m	
1	1							10						
	2							24	17					
2	3							25	49					
	4							26	50					
3	5							27	51					
	6							28	52					
4	7							29	53					
	8							30	54					
5	9							31	55					
	10							32	56					
6	11							33	57					
	12							34	58					
7	13							35	59					
	14							36	60					
8	15							37	61					
	16							38	62					
9	17							39	63	0.025				
	18							40	64					
10	19							41	65	0.030				
	20							42	66					
11	21							43	67	0.030				
	22							44	68					
12	23							45	69	0.010				
	24							46	70					
13	25							47	71	0.025				
	26							48	72					
14	27							49	73	0.170				
	28							50	74					
15	29							51	75	5.34	0.025			
	30							52	76					
16	31							53	77	14.6	0.130	0.035		
	32							54	78					
17	33							55	79	18.2	1.79	0.100		
	34							56	80					
18	35							57	81	20.7	4.71	0.580		
	36							58	82					
19	37							59	83	27.0	6.23	1.46	0.205	
	38							60	84				0.045	
20	39							61	85	54.9	11.5	2.75	0.440	0.060
	40							62	86				0.060	
21	41							63	87	101	23.6	3.03	0.610	0.150
	42							64	88				0.100	
22	43							65	89	186	51.2	6.49	1.10	0.205
	44							66	90				0.290	
23	45													

DATE 10 July 1958
TIME 1700-1710 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 8

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
46	91	200	73.1	11.8	2.34	0.355		130					
	92					0.415	69	137	0.035				
47	93	341	89.9	23.6	3.74	0.585		138					
	94					0.525	70	139					
48	95	422	115	25.7	3.79	0.635		140					
	96					0.075	71	141					
49	97	381	111	20.4	3.97	0.695		142					
	98					0.695	72	143					
50	99	326	92.1	23.9	4.25	0.495		144					
	100					0.545	73	145					
51	101	207	68.3	17.7	3.35	0.635		146					
	102					0.725	74	147					
52	103	204	50.0	13.1	2.71	0.805		148					
	104					0.495	75	149					
53	105	140	41.1	10.5	1.80	0.545		150					
	106					0.425	76	151					
54	107	91.1	21.0	5.04	1.15	0.300		152					
	108					0.300	77	153					
55	109	02.7	9.33	2.97	1.15	0.220		154					
	110					0.105	78	155					
56	111	01.2	8.55	2.40	0.530	0.160		156					
	112					0.055	79	157					
57	113	30.3	6.87	2.49	0.200	0.045		158					
	114					0.030	80	159					
58	115	23.0	7.20	1.31	0.070	0.020		160					
	116						81	161					
59	117	14.0	3.45	0.330				162					
	118						82	163					
60	119	10.9	1.86	0.180				164					
	120						83	165					
61	121	10.4	0.735					166					
	122						84	167					
62	123	10.1	1.06					168					
	124						85	169					
63	125	8.40	0.975					170					
	126						86	171					
64	127	6.42	0.975					172					
	128						87	173					
65	129	2.06	1.01					174					
	130						88	175					
66	131	1.29	0.135					176					
	132						89	177					
67	133	0.440	0.070					178					
	134						90	179					
68	135	0.235						180					
							91	181					

DATE 11 July 1956
TIME 1000-1010 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 9

POST NO.	ARC					POST NO.	ARC					RUN NO. 9
	Inner Arcs	800m arc	50m	100m	200m		Inner Arcs	800m arc	50m	100m	200m	
1 1						40						
2 2						41						
2 3						42						
4 4						43						
3 5						44						
6 6						45						
4 7						46						
8 8						47						
5 9						48						
10 10						49						
6 11						50						
12 12						51						
7 13						52						
14 14						53						
8 15						54						
10 16						55						
9 17						56						
18 18						57						
10 19						58						
20 20						59						
11 21						60						
22 22						61						
12 23						62						
24 24						63						
13 25						64						
26 26						65						
14 27						66						
28 28						67						
15 29						68						
30 30						69						
16 31						70						
32 32						71						
17 33						72						
34 34						73						
18 35						74						
36 36						75						
19 37						76						
38 38						77						
20 39						78						
40 40						79						
21 41						80						
42 42						81						
22 43						82						
44 44						83	0.025					
23 45						84						
						85	0.250					
						86						
						87	1.60					
						88						
						89	5.60	0.290				
						90						

DATE 11 July 1958
TIME 1000-1010 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 9

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m	
16	91	20.4	2.30					136						0.035
	92							69	137	19.8	6.78	1.10	0.250	0.045
47	93	39.8	5.79					138						0.020
	94							70	139	12.8	4.28	0.515	0.125	0.015
18	95	11.9	9.16	0.120				140						
	96							71	141	11.3	1.48	0.200	0.115	
49	97	56.1	17.3	1.68				142						
	98							72	143	6.39	0.590	0.105	0.015	
50	99	37.2	26.9	1.07	0.175			144						
	100					0.035		73	145	2.21	0.090	0.040	0.010	
51	101	33.5	28.2	8.93	1.00	0.055		146						
	102					0.133		74	147	1.00	0.020			
52	103	11.5	32.9	9.83	2.18	0.235		148						
	104					0.415		75	149	0.150				
53	105	148	42.6	12.6	2.80	0.520		150						
	106					0.460		76	151					
54	107	183	56.1	14.2	2.14	0.440		152						
	108					0.470		77	153					
55	109	200	55.7	11.3	2.26	0.470		154						
	110					0.450		78	155					
56	111	198	45.9	10.2	2.29	0.405		156						
	112					0.375		79	157					
57	113	171	44.4	12.2	2.53	0.450		158						
	114					0.470		80	159					
58	115	159	48.5	12.6	2.68	0.510		160						
	116					0.340		81	161					
59	117	130	41.3	10.6	2.53	0.245		162						
	118					0.315		82	163					
60	119	123	38.7	9.73	1.86	0.380		164						
	120					0.385		83	165					
61	121	114	34.6	8.46	2.12	0.395		166						
	122					0.450		84	167					
62	123	102	26.0	6.50	1.57	0.405		168						
	124					0.295		85	169					
63	125	72.9	17.6	4.72	0.925	0.200		170						
	126					0.150		86	171					
64	127	48.6	11.5	3.31	0.825	0.115		172						
	128					0.080		87	173					
65	129	41.0	8.03	2.97	0.595	0.085		174						
	130					0.130		88	175					
66	131	32.9	7.04	2.29	0.855	0.155		176						
	132					0.145		89	177					
67	133	26.9	8.31	2.48	0.675	0.095		178						
	134					0.060		90	179					
68	135	25.2	8.90	2.75	0.535	0.050		180						
								91	181					

DATE 11 JULY 1956
TIME 1200 - 1210 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 10

POST NO.		ARC				POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	Inner Arcs	800m arc	50m	100m	200m	400m	
16	91						130				0.055	
	92					69	137	170	41.1	6.21	1.22	0.005
47	93						138				0.095	
	94					70	139	158	29.7	6.88	0.860	0.125
48	95	0.175					140				0.115	
	96					71	141	137	24.3	7.76	0.690	0.000
49	97	0.590					142				0.100	
	98					73	143	117	24.3	7.74	0.700	0.070
50	99	3.69					144				0.130	
	100					73	145	117	24.2	5.34	0.780	0.135
51	101	8.78					146					
	102					74	147	102	24.3	2.96	0.630	
52	103	15.5					148					
	104					75	149	97.5	27.6	3.32	0.600	
53	105	25.5					150					
	106					76	151	110	28.2	4.05	0.120	
54	107	36.3	0.070				152					
	108					77	153	88.2	21.2	2.06	0.120	
55	109	39.0	0.890				154					
	110					78	155	80.7	11.4	1.19	0.190	
56	111	47.6	1.86				156					
	112					79	157	57.8	10.6	0.785	0.325	
57	113	38.1	1.20	0.195			158					
	114					80	159	45.2	8.61	1.02	0.150	
58	115	38.7	8.73	0.485	0.110		160					
	116					81	161	31.2	6.84	1.82	0.035	
59	117	32.3	9.17	0.605	0.150		162					
	118					82	163	25.8	3.80	1.74		
60	119	38.7	10.3	0.825	0.095		164					
	120					83	165	20.3	1.85	0.775		
61	121	32.5	8.72	1.51	0.250	0.040	166					
	122					84	167	17.7	1.36	0.030		
62	123	61.7	12.2	2.25	0.540	0.070	168					
	124					85	169	12.8	1.16			
63	125	80.0	17.7	1.28	0.590	0.055	170					
	126					86	171	6.30	0.935			
64	127	124	30.0	8.95	0.560	0.90	172					
	128					87	173	3.68	0.490			
65	129	161	37.4	11.4	0.820	0.090	174					
	130					88	175	1.50	0.055			
66	131	170	39.2	8.18	2.70	0.165	176					
	132					89	177	0.335				
67	133	165	39.5	10.4	1.98	0.155	178					
	134					90	179					
68	135	164	43.1	10.1	1.28	0.125	180					
						91	181					

DATE 14 July 1958
TIME 0800-0810 CST

Table 5.2 (Continued)

CONCENTRATION (mg m^{-3})

RUN NO. 11

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							46					
	2							47					
2	3							48					
	4							49					
3	5							50					
	6							51					
4	7							52					
	8							53					
5	9							54					
	10							55					
6	11							56					
	12							57					
7	13							58					
	14							59					
8	15							60					
	16							61					
9	17							62					
	18							63					
10	19							64					
	20							65					
11	21							66					
	22							67					
12	23							68					
	24							69					
13	25							70					
	26							71					
14	27							72					
	28							73	0.065				
15	29							74					
	30							75	0.035	0.025			
16	31							76					
	32							77	2.39	0.180	0.070		
17	33							78					
	34							79	0.95	0.910	0.055		
18	35							80					
	36							81	16.7	1.01	0.175	0.020	
19	37							82					
	38							83	33.0	4.37	0.845	0.185	
20	39							84					
	40							85	63.9	14.6	2.86	0.440	
21	41							86					0.020
	42							87	113	28.4	6.47	1.35	0.095
22	43							88					0.235
	44							89	167	49.7	11.8	1.76	0.340
23	45							90					430

DATE 14 July 1958
TIME 0800-0810 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 11

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m	
46	91	209	73.3	20.5	3.64	0.480		136						
	92					0.850	69	137						
47	93	263	87.0	28.9	6.67	1.27		138						
	94					1.67	70	139						
48	95	273	89.3	29.5	7.61	1.68		140						
	96					1.72	71	141						
49	97	289	83.0	27.7	7.10	1.42		142						
	98					1.02	72	143						
50	99	251	75.3	23.0	4.57	0.820		144						
	100					0.590	73	145						
51	101	204	56.6	11.6	2.46	0.383		146						
	102					0.225	74	147						
52	103	124	32.0	8.86	0.775	0.170		148						
	104					0.085	75	149						
53	105	68.3	13.8	1.54	0.215	0.015		150						
	106					0.020	76	151						
54	107	35.4	4.59	0.475	0.030			152						
	108						77	153						
55	109	19.4	0.600	0.030	0.020			154						
	110						78	155						
56	111	5.87	0.070	0.020				156						
	112						79	157						
57	113	0.990	0.025					158						
	114						80	159						
58	115	0.080						160						
	116						81	161						
59	117	0.045						162						
	118						82	163						
60	119							164						
	120						83	165						
61	121							166						
	122						84	167						
62	123							168						
	124						85	169						
63	125							170						
	126						86	171						
64	127							172						
	128						87	173						
65	129							174						
	130						88	175						
66	131							176						
	132						89	177						
67	133							178						
	134						90	179						
68	135							180						
							91	181						

DATE 14 July 1958
TIME 1000-1010 CST

Table 5.2 (Continued)

CONCENTRATION (mg m⁻³)

RUN NO.12

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							46					
	2							47					
2	3							48					
	4							49					
3	5							50					
	6							51					
4	7							52					
	8							53					
5	9							54					
	10							55					
6	11							56					
	12							57					
7	13							58					
	14							59					
8	15							60					
	16							61					
9	17							62					
	18							63	0.03				
10	19							64					
	20							65					
11	21							66					
	22							67					
12	23							68					
	24							69					
13	25							70					
	26							71					
14	27							72					
	28							73					
15	29							74					
	30							75					
16	31							76					
	32							77	0.115				
17	33							78					
	34							79	1.39				
18	35							80					
	36							81	4.95	0.105			
19	37							82					
	38							83	5.28	1.60			
20	39							84					
	40							85	10.3	3.23			
21	41							86					
	42							87	20.1	6.00	0.095		
22	43							88					
	44							89	39.8	8.10	1.75	0.030	
23	45							90					

DATE 14 July 1956
TIME 1000-1010 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 12

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
49	91	67.7	18.9	3.76	0.320			136					
	92					0.040		137					
47	93	81.0	25.7	6.86	1.19	0.115		138					
	94					0.380		139					
48	95	92.7	24.6	7.67	1.78	0.170		140					
	96					0.480		141					
49	97	88.7	20.3	7.02	1.67	0.430		142					
	98					0.440		143					
50	99	109	36.0	9.17	2.13	0.510		144					
	100					0.630		145					
61	101	130	47.0	16.0	3.55	0.770		146					
	102					0.970		147					
62	103	173	57.2	18.2	5.03	1.22		148					
	104					1.46		149					
63	105	216	61.6	20.6	5.46	1.19		150					
	106					1.58		151					
64	107	218	58.7	19.1	4.97	1.54		152					
	108					1.34		153					
55	109	186	60.0	19.6	4.18	1.04		154					
	110					0.580		155					
66	111	198	53.9	17.2	3.44	0.910		156					
	112					0.130		157					
57	113	129	44.6	10.7	2.08	0.075		158					
	114					0.060		159					
68	115	107	31.4	5.25	0.340			160					
	116							161					
69	117	78.2	13.6	2.83				162					
	118							163					
60	119	48.8	6.03	0.735				164					
	120							165					
61	121	27.2	3.79	0.040				166					
	122							167					
62	123	12.1	0.680					168					
	124							169					
63	125	12.7	0.085					170					
	126							171					
64	127	0.235						172					
	128							173					
65	129	0.330						174					
	130							175					
66	131							176					
	132							177					
67	133							178					
	134							179					
68	135							180					
								181					

Table 5.2 (Continued)

DATE 22 July 1956
TIME 2000-2010 CSTCONCENTRATION (mg m^{-3})

RUN NO.13

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							46					
	2							47					
2	3							48					
	4							49					
3	5							50					
	6							51					
4	7							52					
	8							53					
5	9							54					
	10							55					
6	11							56					
	12							57					
7	13							58					
	14							59					
8	15							60					
	16							61					
9	17							62					
	18							63					
10	19							64					
	20							65					
11	21							66					
	22							67					
12	23							68					
	24							69					
13	25							70					
	26							71					
14	27							72					
	28							73					
15	29							74					
	30							75					
16	31							76					
	32							77	0.005				
17	33							78					
	34							79	0.100				
18	35							80					
	36							81	0.305	0.455			
19	37							82					
	38							83	0.790	2.22			
20	39							84					
	40							85	3.45	6.96			
21	41							86					
	42							87	10.3	13.8			
22	43							88					
	44							89	24.6	120	0.365		
23	45							90					

DATE 22 July 1956
TIME 2000 - 2010 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 13

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
46	91	103	216	30.2				136					
	92						69	137					
47	93	87.3	281	87.1				138					
	94						70	139					
48	95	114	419	287	7.25			140					
	96						71	141					
49	97	174	330	490	53.0	0.035		142					
	98					0.400	72	143					
50	99	174	227	253	113	7.93		144					
	100					20.9	73	145					
51	101	161	146	141	58.8	17.0		146					
	102					17.9	74	147					
52	103	141	104	118	51.5	17.7		148					
	104					15.7	75	149					
53	105	105	82.4	127	60.3	18.4		150					
	106					24.3	76	151					---
54	107	83.3	76.4	130	77.0	32.7		152					
	108					57.2	77	153					
55	109	60.0	65.4	138	98.3	74.0		154					
	110					80.1	78	155					
56	111	40.4	49.1	122	131	104		156					
	112					74.3	79	157					
57	113	25.5	36.5	78.3	115	44.5		158					
	114					0.375	80	159					
58	115	16.5	24.9	35.0	30.3	0.030		160					
	116					0.025	81	161					
59	117	13.1	14.0	8.83	0.275			162					
	118						82	163					
60	119	10.8	5.39	1.33	0.020			164					
	120						83	165					
61	121	5.70	1.41	0.050				166					
	122						84	167					
62	123	2.87	0.175					168					
	124						85	169					
63	125	1.69						170					
	126						86	171					
64	127	0.295						172					
	128						87	173					
65	129	0.075						174					
	130						88	175					
66	131							176					
	132						89	177					
67	133							178					
	134						90	179					
68	135							180					
							91	181					

Table 5.2 (Continued)

DATE 22 July 1958
TIME 2200-2210 CSTCONCENTRATION (mg m^{-3})

RUN NO.14

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1						46						
	2						47						
2	3						48						
	4						49	0.110					
3	5						50						
	6						51	0.145					
4	7						52						
	8						53	0.210					
5	9						54						
	10						55	0.200					
6	11						56						
	12						57	0.315					
7	13						58						
	14						59	0.380					
8	15						60						
	16						61	0.000	0.040				
9	17						62						
	18						63	2.70	0.080				
10	19						64						
	20						65	18.3	0.110				
11	21						66						
	22						67	45.6	0.355				
12	23						68						
	24						69	68.9	7.53	0.010			
13	25						70						
	26						71	143	61.1	0.085			
14	27						72						
	28						73	350	168	4.84			
15	29						74						
	30						75	455	312	46.4	0.020		
16	31						76						
	32						77	611	570	131	3.32		
17	33						78						
	34						79	680	822	402	23.1		
18	35						80						
	36						81	702	707	402	146	0.450	
19	37						82					2.13	
	38						83	552	339	93.8	115	7.37	
20	39						84					17.0	
	40						85	426	67.4	6.87	25.8	21.6	
21	41						86					5.77	
	42						87	228	7.50	1.83	14.4	4.42	
22	43						88					3.92	
	44						89	101	3.15	1.49	8.18	2.78	
23	45						90					2.75	

DATE 22 July 1956
TIME 2200-2210 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 14

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m	
16	91	0.09	2.54	1.20	0.335	2.83		136						
	92					2.29	69	137						
17	93	1.28	2.07	1.13	3.47	2.04		138						
	94					2.90	70	139						
18	95	3.68	1.80	0.930	1.79	3.17		140						
	96					3.33	71	141						
19	97	3.51	2.00	0.830	1.18	3.43		142						
	98					3.49	72	143						
50	99	3.44	1.95	0.800	0.860	2.90		144						
	100					1.88	73	145						
61	101	3.41	1.86	0.800	0.620	1.76		146						
	102					1.38	74	147						
62	103	1.05	1.84	1.02	0.450	1.28		148						
	104					1.22	75	149						
63	105	3.80	2.07	1.23	0.460	0.775		150						
	106					0.480	76	151						
64	107	3.81	2.19	1.29	0.465	0.460		152						
	108					0.305	77	153						
65	109	3.51	2.03	1.10	0.385	0.185		154						
	110					0.150	78	155						
66	111	2.81	1.79	0.940	0.300	0.090		156						
	112					0.060	79	157						
67	113	2.12	1.62	0.760	0.240	0.025		158						
	114						80	159						
68	115	1.50	1.34	0.670	0.155			160						
	116						81	161						
69	117	1.06	0.985	0.415	0.090			162						
	118						82	163						
70	119	0.725	0.730	0.180				164						
	120					..		83	165					
71	121	0.450	0.330	0.030				84	167					
	122							85	168					
72	123	0.180	0.055					86	169					
	124							87	170					
73	125	0.070						88	171					
	126							89	172					
74	127							90	173					
	128							91	174					
75	129							92	175					
	130							93	176					
76	131							94	177					
	132							95	178					
77	133							96	179					
	134							97	180					
78	135							98	181					

DATE 23 July 1956
TIME 0800-0810 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO.15

POST NO.		ARC					POST NO.		ARC				
Inner Arc	800m arc	50m	100m	200m	400m	800m	Inner Arc	800m arc	50m	100m	200m	400m	800m
1	1							46					
	2							24	47				
2	3								48				
	4							23	49				
3	5								50				
	6							26	51				
4	7								52				
	8							27	53				
5	9								54				
	10							28	55				
6	11								56				
	12							29	57				
7	13								58				
	14							30	59				
8	15								60				
	16							31	61				
9	17								62				
	18							32	63				
10	19								64				
	20							33	65				
11	21								66				
	22							34	67				
12	23								68				
	24							35	69				
13	25								70				
	26							36	71				
14	27								72				
	28							37	73	0.025			
15	29								74				
	30							38	75	1.25			
16	31								76				
	32							39	77	7.40			
17	33								78				
	34							40	79	9.69			
18	35								80				
	36							41	81	16.2	0.026		
19	37								82				
	38							42	83	28.2	0.190		
20	39								84				
	40							43	85	29.7	1.21		
21	41								86				
	42							44	87	31.1	4.38		
22	43								88				
	44							45	89	20.6	5.06		
23	45								90				

DATE 23 July 1956
TIME 0800-0810 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 15

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
46	91	19.7	13.5					136					
	92							137	4.31	2.76	0.135		
47	93	29.1	6.12	0.165				138					
	94							139	0.860	0.200			
48	95	41.1	4.11	0.435				140					
	96							141	0.040				
49	97	70.1	7.17	0.740	0.035			142					
	98							143					
50	99	99.6	15.6	0.950	0.030			144					
	100							145					
51	101	146	21.6	2.26	0.110			146					
	102							147					
52	103	197	38.6	3.89	0.335			148					
	104					0.065		149					
53	105	245	53.3	5.74	0.500	0.150		150					
	106					0.205		151					
54	107	291	75.9	8.52	0.830	0.365		152					
	108					0.410		153					
55	109	336	75.9	14.6	1.23	0.470		154					
	110					0.460		155					
56	111	414	80.4	21.1	2.44	0.390		156					
	112					0.360		157					
57	113	414	107	21.7	3.91	0.465		158					
	114					0.535		159					
58	115	408	100	20.0	4.79	0.495		160					
	116					0.460		161					
59	117	333	88.2	21.6	3.76	0.445		162					
	118					0.415		163					
60	119	249	76.5	19.6	2.25	0.410		164					
	120					0.310		165					
61	121	222	61.5	16.0	2.32	0.245		166					
	122					0.175		167					
62	123	201	48.0	12.3	2.09	0.270		168					
	124					0.245		169					
63	125	125	38.4	9.91	0.530	0.220		170					
	126					0.270		171					
64	127	111	30.6	7.59	0.520	0.220		172					
	128					0.255		173					
65	129	86.1	19.7	6.90	0.780	0.140		174					
	130					0.045		175					
66	131	46.2	17.1	4.94	1.11			176					
	132							177					
67	133	34.4	11.9	4.11	0.415			178					
	134							179					
68	135	16.5	4.95	0.870	0.070			180					
								181					

DATE 23 July 1956
TIME 1000-1010 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO.16

POST NO.	ARC					POST NO.	ARC					Inner Arcs	800m	50m	100m	200m	400m	800m
	Inner Arcs	800m	50m	100m	200m		Inner Arcs	800m	50m	100m	200m							
1 1								40										
2 2							24	47										
2 3								48										
3 4							25	49										
3 5								50										
3 6							26	51										
4 7								52										
4 8							27	53										
5 9								54										
5 10							28	55										
6 11								56										
6 12							29	57										
7 13								58										
7 14							30	59										
8 15								60										
8 16							31	61										
9 17								62										
9 18							32	63										
10 19								64										
10 20							33	65	1.10									
11 21								66										
11 22							34	67	10.3									
12 23								68										
12 24							35	69	20.0	0.035								
13 25								70										
13 26							36	71	29.9	0.110								
14 27								72										
14 28							37	73	39.9	0.560								
15 29								74										
15 30							38	75	48.0	2.25								
16 31								76										
16 32							39	77	64.1	7.17	0.025							
17 33								78										
17 34							40	79	84.8	12.3	0.030							
18 35								80										
18 36							41	81	126	20.7	0.375							
19 37								82										
19 38							42	83	136	21.6	1.71							
20 39								84										
20 40							43	85	143	30.3	1.74							
21 41								86										
21 42							44	87	179	32.7	2.69							
22 43								88										
22 44							45	89	182	34.4	3.82	0.085						
23 45								90										

DATE 23 July 1956
TIME 1000-1010 CST

Table 5.2 (Continued)

CONCENTRATION (mg m^{-3})

RUN NO. 10

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m	
10	91	165	28.7	5.14	0.075	0.015		136						
	92					0.030	69	137	3.08	0.140	0.015			
17	93	143	26.9	6.36	0.625	0.030		138						
	94					0.040	70	139	1.33	0.035				
18	95	155	24.0	6.39	0.345	0.045		140						
	96					0.045	71	141	0.055	0.025				
19	97	121	21.6	6.16	0.340	0.045		142						
	98					0.035	72	143	0.025					
50	99	118	22.8	3.62	0.190	0.030		144						
	100					0.015	73	145						
61	101	116	21.9	2.54	0.130	0.025		146						
	102					0.015	74	147						
62	103	103	15.6	1.86	0.245	0.045		148						
	104					0.050	75	149						
63	105	93.9	15.5	1.27	0.190	0.045		150						
	106					0.030	76	151						
64	107	82.1	13.8	0.635	0.215	0.040		152						
	108					0.040	77	153						
65	109	80.9	12.8	1.04	0.235	0.045		154						
	110					0.080	78	155						
66	111	81.3	11.6	1.89	0.190	0.070		156						
	112					0.075	79	157						
67	113	71.7	10.8	1.32	0.585	0.040		158						
	114					0.055	80	159						
68	115	61.2	9.26	2.41	0.715	0.050		160						
	116					0.065	81	161						
59	117	84.3	15.3	2.89	0.905	0.035		162						
	118					0.075	82	163						
60	119	99.0	24.9	4.03	0.955	0.045		164						
	120					0.030	83	165						
61	121	87.0	22.5	4.40	0.625			166						
	122						84	167						
62	123	74.7	23.1	4.42	0.695			168						
	124						85	169						
63	125	59.8	16.9	3.50	0.380			170						
	126						86	171						
64	127	48.6	10.8	2.49	0.135			172						
	128						87	173						
65	129	35.7	8.49	0.865				174						
	130						88	175						
66	131	27.8	3.08	0.475				176						
	132						89	177						
67	133	22.8	1.38	0.240				178						
	134						90	179						
68	135	14.8	0.930	0.025				180						
							91	181						

DATE 23 July 1956
TIME 2000-2010 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO.17

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							46					
	2							47					
2	3							48					
	4							49					
3	5							50					
	6							51					
4	7							52					
	8							53					
5	9							54					
	10							55					
6	11							56					
	12							57					
7	13							58					
	14							59					
8	15							60					
	16							61					
9	17							62					
	18							63					
10	19							64					
	20							65					
11	21							66					
	22							67					
12	23							68					
	24							69					
13	25							70					
	26							71					
14	27							72					
	28							73	0.160				
15	29							74					
	30							75	1.40	0.030			
16	31							76					
	32							77	20.1	0.345			
17	33							78					
	34							79	54.3	2.96	0.110	0.025	
18	35							80					
	36							81	159	20.1	1.84	0.150	
19	37							82					0.085
	38							83	302	76.2	13.4	2.03	0.435
20	39							84					1.86
	40							85	618	177	48.8	13.1	4.94
21	41							86					8.09
	42							87	633	269	83.2	24.9	9.74
22	43							88					9.04
	44							89	646	254	86.2	25.7	6.28
23	45							90					2.98

DATE 23 July 1956
TIME 2000 - 2010 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 17

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
40	91	501	101	16.0	8.63	0.755	69	136					
	92					0.285	70	137					
47	93	330	20.6	14.4	1.11	0.035	71	138					
	94						72	139					
48	95	195	33.2	2.70			73	140					
	96						74	141					
49	97	106	8.93	0.245			75	142					
	98						76	143					
50	99	29.4	1.00				77	144					
	100						78	145					
51	101	8.72	0.060				79	146					
	102						80	147					
52	103	1.10					81	148					
	104						82	149					
53	105	0.295					83	150					
	106						84	151					
54	107						85	152					
	108						86	153					
55	109						87	154					
	110						88	155					
56	111						89	156					
	112						90	157					
57	113						91	158					
	114						92	159					
58	115						93	160					
	116						94	161					
59	117						95	162					
	118						96	163					
60	119						97	164					
	120						98	165					
61	121						99	166					
	122						100	167					
62	123						101	168					
	124						102	169					
63	125						103	170					
	126						104	171					
64	127						105	172					
	128						106	173					
65	129						107	174					
	130						108	175					
66	131						109	176					
	132						110	177					
67	133						111	178					
	134						112	179					
68	135						113	180					
							114	181					

Table 5.2 (Continued)

DATE 23 July 1956
TIME 2200-2210 CSTCONCENTRATION (mg m^{-3})

RUN NO. 18

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m		Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							46						
	2							24	47					
2	3								48					
	4							25	49					
3	5								50					
	6							26	51					
4	7								52					
	8							27	53					
5	9								54					
	10							28	55					
6	11								56					
	12							29	57					
7	13								58					
	14							30	59					
8	15								60					
	16							31	61					
9	17								62					
	18							32	63					
10	19								64					
	20							33	65					
11	21								66					
	22							34	67					
12	23								68					
	24							35	69					
13	25								70					
	26							36	71					
14	27								72					
	28							37	73					
15	29								74					
	30							38	75					
16	31								76					
	32							39	77	0.095				
17	33								78					
	34							40	79	0.646				
18	35								80					
	36							41	81	6.67	0.095			
19	37								82					
	38							42	83	29.6	1.69	0.025		
20	39								84					
	40							43	85	106	17.1	0.730		
21	41								86					
	42							44	87	218	69.6	14.3	0.640	
22	43								88					
	44							45	89	368	158	50.9	11.7	0.040
23	45								90					0.685

DATE 23 July 1956
TIME 2200 - 2210 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO 18

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m	
16	91	584	237	85.0	32.3	8.04		136						
	92					11.0		137						
17	93	620	242	82.4	29.5	14.0		138						
	94					11.3.		139						
18	95	615	177	51.4	17.9	8.49		140						
	96					8.34		141						
49	97	167	152	62.0	16.8	9.35		142						
	98					6.86		143						
50	99	321	118	31.6	8.60	2.38		144						
	100					0.435		145						
61	101	206	42.2	6.61	0.693	0.080		146						
	102					0.075		147						
52	103	72.0	6.66	0.545	0.055	0.035		148						
	104							149						
63	105	17.1	0.783	0.065				150						
	106							151						
54	107	3.15	0.085					152						
	108							153						
55	109	1.49						154						
	110							155						
66	111	0.025						156						
	112							157						
57	113							158						
	114							159						
68	115							160						
	116							161						
59	117							162						
	118							163						
60	119							164						
	120							165						
61	121							166						
	122							167						
62	123							168						
	124							169						
63	125							170						
	126							171						
64	127							172						
	128							173						
65	129							174						
	130							175						
66	131							176						
	132							177						
67	133							178						
	134							179						
68	135						180						
								181						

DATE 25 July 1956
TIME 1100-1110 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3}),

RUN NO. 19

POST NO.		ARC				POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1						16						
	2						21	17	2.52				
2	3						18						
	4						23	19	4.13				
3	5						50						
	6						26	51	11.3	0.226			
4	7						52						
	8						27	53	21.0	1.91	0.025		
5	9						54						
	10						28	55	33.5	4.38	0.330		
6	11						56						
	12						29	57	48.6	8.57	0.740		
7	13						58						
	14						30	59	57.2	14.2	1.86	0.180	
8	15						60						
	16						31	61	76.2	20.4	3.30	0.820	
9	17						62						
	18						32	63	108	27.9	6.65	0.620	
10	19						64						0.040
	20						33	65	144	39.2	8.21	0.735	0.090
11	21						66						0.105
	22						34	67	141	41.3	12.1	1.73	0.090
12	23						68						0.125
	24						35	69	164	41.3	10.5	2.30	0.135
13	25						70						0.185
	26						36	71	182	33.8	6.79	2.09	0.230
14	27						72						0.365
	28						37	73	213	47.0	4.72	0.980	0.210
15	29						74						0.220
	30						38	75	218	54.8	6.41	0.655	0.225
16	31						76						0.190
	32						39	77	210	51.0	6.60	1.08	0.185
17	33						78						0.175
	34						40	79	192	51.0	8.21	1.88	0.160
18	35						80						0.245
	36						41	81	198	47.9	11.3	1.81	0.200
19	37						82						0.370
	38						42	83	180	47.1	13.4	1.88	0.285
20	39						84						0.215
	40						43	85	152	49.7	11.4	2.13	0.135
21	41						86						0.135
	42						44	87	142	36.9	10.8	1.87	0.090
22	43						88						0.075
	44						45	89	107	27.3	7.28	0.445	0.035
23	45						90						0.015

DATE 25 July 1958
TIME 1100 - 1110 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 19

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
10	91	02.3	21.8	3.50	0.090			136					
	92							137					
17	93	11.3	13.2	1.16				138					
	94							139					
48	95	30.3	4.63	0.380				140					
	96							141					
49	97	23.0	1.69	0.110				142					
	98							143					
60	99	16.8	0.970					144					
	100							145					
61	101	10.2	0.140					146					
	102							147					
62	103	2.85	0.025					148					
	104							149					
63	105	0.930						150					
	106							151					
64	107	0.115						152					
	108							153					
65	109	0.045						154					
	110							155					
66	111							156					
	112							157					
67	113							158					
	114							159					
68	115							160					
	116							161					
69	117							162					
	118							163					
60	119							164					
	120							165					
61	121							166					
	122							167					
62	123							168					
	124							169					
63	125							170					
	126							171					
64	127							172					
	128							173					
65	129							174					
	130							175					
66	131							176					
	132							177					
67	133							178					
	134							179					
68	135							180					
								181					

DATE 25 July 1956
TIME 1300-1310 CST

Table 5.2 (Continued)

CONCENTRATION (mg m^{-3})

RUN NO. 20

POST NO.		ARC				POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	Inner Arcs	800m arc	50m	100m	200m	400m	
1	1						46					
	2						47					
2	3						48					
	4						49					
3	5						50					
	6						51					
4	7						52					
	8						53					
5	9						54					
	10						55					
6	11						56					
	12						57	0.180				
7	13						58					
	14						59	1.23				
8	15						60					
	16						61	2.79	0.060			
9	17						62					
	18						63	5.60	0.016			
10	19						64					
	20						65	9.57	2.36	0.015		
11	21						66					
	22						67	20.4	2.76	0.350		
12	23						68				0.025	
	24						69	45.6	8.22	1.84	0.105	0.050
13	25						70				0.125	
	26						71	89.0	18.6	4.47	1.09	0.235
14	27						72				0.350	
	28						73	130	38.0	8.95	1.80	0.470
15	29						74				0.680	
	30						75	149	51.0	12.9	2.76	0.795
16	31						76				0.735	
	32						77	162	52.2	14.7	3.42	0.735
17	33						78				0.565	
	34						79	170	47.1	13.9	3.06	0.495
18	35						80				0.460	
	36						81	170	46.5	11.4	2.88	0.305
19	37						82				0.525	
	38						83	171	46.5	10.7	2.08	0.445
20	39						84				0.400	
	40						85	170	39.6	9.22	2.33	0.330
21	41						86				0.315	
	42						87	146	36.6	8.74	1.97	0.355
22	43						88				0.430	
	44						89	134	30.2	8.95	1.42	0.380
23	45						90				0.230	

DATE 25 July 1956
TIME 1300 - 1310 CST

Table 5.2 (Continued)
CONCENTRATION (mg m⁻³)

RUN NO. 20

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m Arc	50m	100m	200m	400m	800m	Inner Arcs	800m Arc	50m	100m	200m	400m	800m	
46	91	120	33.9	8.16	1.47	0.205		136						
	92					0.210	69	137						
17	93	114	32.7	8.56	1.25	0.110		138						
	94					0.075	70	139						
48	95	99.9	27.9	6.62	1.01	0.060		140						
	96					0.065	71	141						
49	97	83.4	20.4	4.28	0.875	0.095		142						
	98					0.090	72	143						
60	99	57.9	9.77	2.47	0.370			144						
	100						73	145						
61	101	35.6	6.24	1.49	0.030			146						
	102						74	147						
62	103	26.1	3.68	0.325				148						
	104						75	149						
63	105	21.2	0.925	0.045				150						
	106						76	151						
64	107	11.2	0.095					152						
	108						77	153						
65	109	1.88						154						
	110						78	155						
66	111	0.225						156						
	112						79	157						
67	113							158						
	114						80	159						
68	115							160						
	116						81	161						
69	117							162						
	118						82	163						
70	119							164						
	120						83	165						
71	121							166						
	122						84	167						
72	123							168						
	124						85	169						
73	125							170						
	126						86	171						
74	127							172						
	128						87	173						
75	129							174						
	130						88	175						
76	131							176						
	132						89	177						
77	133							178						
	134						90	179						
78	135							180						
							91	181						

Table 5.2 (Continued)

DATE 25 July 1956
TIME 2200-2210 CSTCONCENTRATION (mg m^{-3})

RUN NO. 21

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m			50m	100m	200m	400m	800m
1	1								46				
	2								47				
2	3								48				
	4								49				
3	5								50				
	6								51				
4	7								52				
	8								53				
5	9								54				
	10								55				
6	11								56				
	12								57				
7	13								58				
	14								59				
8	15								60				
	16								61				
9	17								62				
	18								63				
10	19								64				
	20								65				
11	21								66				
	22								67	0.230			
12	23								68				
	24								69	0.925			
13	25								70				
	26								71	2.55	0.025		
14	27								72				
	28								73	6.63	0.380		
15	29								74				
	30								75	15.6	2.39	0.040	
16	31								76				
	32								77	39.3	8.70	0.975	0.095
17	33								78				
	34								79	66.5	22.5	5.29	1.11
18	35								80				
	36								81	131	41.0	11.0	3.22
19	37								82				
	38								83	310	65.9	19.1	4.72
20	39								84				
	40								85	91.7	27.1	8.37	2.31
21	41								86				
	42								87	275	98.0	29.0	9.03
22	43								88				
	44								89	265	91.5	27.0	8.43
23	45								90				
													0.955

DATE 25 July 1956
TIME 2200 - 2210 CST

Table 5.2 (Continued)

CONCENTRATION (mg l^{-3})

RUN NO. 21

POST NO.		ARC					POST NO.		ARC					
Inner Arc	800m Arc	50m	100m	200m	400m	800m	Inner Arc	800m Arc	50m	100m	200m	400m	800m	
40	91	201	66.3	17.1	2.18	0.280		136						
	92					0.075	69	137						
47	93	120	34.7	4.98	0.485			138						
	94						70	139						
48	95	76.2	12.0	1.51	0.035			140						
	96						71	141						
49	97	35.6	1.83	0.140				142						
	98						72	143						
60	99	10.6	0.415					144						
	100						73	145						
61	101	1.36	0.086					146						
	102						74	147						
62	103	0.110						148						
	104						75	149						
63	105	0.026						150						
	106						76	151						
64	107	0.045						152						
	108						77	153						
65	109							154						
	110						78	155						
66	111							156						
	112						79	157						
67	113							158						
	114						80	159						
68	115							160						
	116						81	161						
59	117							162						
	118						82	163						
60	119							164						
	120						83	165						
61	121							166						
	122						84	167						
62	123							168						
	124						85	169						
63	125							170						
	126						86	171						
64	127							172						
	128						87	173						
65	129							174						
	130						88	175						
66	131							176						
	132						89	177						
67	133							178						
	134						90	179						
68	135							180						
							91	181						

Table 5.2 (Continued)

DATE 26 July 1958

TIME .0000-0010 CST

CONCENTRATION (mg m^{-3})

RUN NO. 22

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1						46						
	2						47						
2	3						48						
	4						49						
3	5						50						
	6						51						
4	7						52						
	8						53						
5	9						54						
	10						55						
6	11						56						
	12						57						
7	13						58						
	14						59						
8	15						60						
	16						61						
9	17						62						
	18						63						
10	19						64						
	20						65	0.235					
11	21						66						
	22						67	1.56					
12	23						68						
	24						69	4.65	0.036				
13	25						70						
	26						71	11.7	0.865				
14	27						72						
	28						73	27.0	4.22	0.060			
15	29						74						
	30						75	39.0	11.4	1.04			
16	31						76						
	32						77	117	30.8	5.92	0.230		
17	33						78						0.016
	34						79	170	55.8	14.4	2.37	0.040	
18	35						80						0.305
	36						81	213	78.5	25.5	7.11	0.695	
19	37						82						2.13
	38						83	224	81.8	27.7	8.64	2.51	
20	39						84						2.31
	40						85	200	60.3	16.3	4.76	1.74	
21	41						86						0.865
	42						87	143	33.8	7.46	1.71	0.450	
22	43						88						0.205
	44						89						0.075
23	45						90						0.020

DATE 26 July 1958
TIME 0000 - 0010 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO.22

POST NO.		ARC					POST NO.		ARC				
Inner Arc	800m arc	50m	100m	200m	400m	800m	Inner Arc	800m arc	50m	100m	200m	400m	800m
46	91	37.4	0.78	0.895	0.065			136					
	92							137					
47	93	18.5	2.24	0.265				138					
	94							139					
48	95	7.08	0.480	0.070				140					
	96							141					
49	97	2.60	0.080	0.020				142					
	98							143					
50	99	0.750						144					
	100							145					
51	101	0.185						146					
	102							147					
52	103	0.030						148					
	104							149					
53	105							150					
	106							151					
54	107							152					
	108							153					
55	109							154					
	110							155					
56	111							156					
	112							157					
57	113							158					
	114							159					
58	115							160					
	116							161					
59	117							162					
	118							163					
60	119							164					
	120							165					
61	121							166					
	122							167					
62	123							168					
	124							169					
63	125							170					
	126							171					
64	127							172					
	128							173					
65	129							174					
	130							175					
66	131							176					
	132							177					
67	133							178					
	134							179					
68	135							180					
								181					

Table 5.2 (Continued)

DATE 29 July 1956
TIME 2100-2110 CSTCONCENTRATION (mg m^{-3})

RUN NO. 23

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m		Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							24	46					
	2								47	24.5				
2	3								48	8.39				
	4								49	10.4				
3	5								50					
	6								51	7.5				
4	7								52	1.42				
	8								53	0.300				
5	9								54					
	10								55	1.48				
6	11								56	0.080				
	12								57	0.300				
7	13								58					
	14								59	0.185				
8	15								60					
	16								61	0.045				
9	17								62					
	18								63					
10	19	0.060							64					
	20								65					
11	21	0.670							66					
	22								67					
12	23	3.42	0.045						68					
	24								69					
13	25	9.87	1.18						70					
	26								71					
14	27	33.6	5.04	0.120					72					
	28								73					
15	29	09.6	15.6	1.66	0.050				74					
	30								75					
16	31	95.0	32.9	7.95	0.740	0.035			76					
	32								77					
17	33	124	43.7	13.7	1.51	0.260			78					
	34								79					
18	35	145	52.8	18.1	4.81	1.24			80					
	36								81					
19	37	170	61.7	19.6	6.36	2.09			82					
	38								83					
20	39	176	55.2	16.8	3.94	1.34			84					
	40								85					
21	41	136	40.4	10.6	2.71	0.876			86					
	42								87					
22	43	94.7	23.7	6.82	1.77	0.345			88					
	44								89					
23	45	54.9	14.3	4.49	0.810				90					

DATE 29 July 1958
TIME 2300-2310 CST

Table 5.2 (Continued)

CONCENTRATION (mg m^{-3})

RUN NO. 24

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1						46						0.110
	2						21	47	101	34.8	10.9	2.00	0.345
2	3						48						0.795
	4						22	49	124	45.3	14.8	5.00	1.23
3	5						50						1.60
	6						26	51	158	50.4	17.0	5.58	1.81
4	7						52						1.92
	8						27	53	152	50.7	16.0	5.43	1.08
5	9						54						1.10
	10						28	55	141	46.5	14.0	4.24	0.645
6	11						56						0.435
	12						29	57	125	39.2	9.50	1.08	0.185
7	13						58						0.110
	14						30	59	86.4	22.4	4.05	0.420	0.035
8	15						60						
	16						31	61	61.5	10.0	1.73	0.055	
9	17						62						
	18						32	63	29.6	4.32	0.215		
10	19						64						
	20						33	65	13.3	0.990			
11	21						66						
	22						34	67	4.37	0.155			
12	23						68						
	24						35	69	1.44				
13	25						70						
	26						36	71	0.200				
14	27						72						
	28						37	73	0.025				
15	29	0.040					74						
	30						38	75					
16	31	0.130					76						
	32						39	77					
17	33	0.610	0.020				78						
	34						40	79					
18	35	0.830	0.120				80						
	36						41	81					
19	37	3.62	0.310				82						
	38						42	83					
20	39	10.0	0.800	0.050			84						
	40						43	85					
21	41	31.1	2.25	0.245			86						
	42						44	87					
22	43	53.4	9.21	1.07	0.050		88						
	44						45	89					
23	45	79.7	21.9	4.30	0.755		90						

DATE 1 August 1956
TIME 1300-1310 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 25

POST NO.		ARC				POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1						40						
	2						24	47					
2	3						48						
	4						25	49					
3	5						50						
	6						26	91	0.630				
4	7						52						
	8						27	53	7.01				
5	9						54						
	10						28	95	19.2	0.100			
6	11						56						
	12						29	57	27.3	1.67	0.020		
7	13						58						
	14						30	59	28.8	3.33	0.015	0.020	0.045
8	15						60						0.060
	16						31	61	20.6	0.73	0.730	0.050	0.050
9	17						62						0.105
	18						32	63	26.4	0.45	1.64	0.100	0.075
10	19						64					M	
	20						33	65	17.6	9.06	2.64	0.125	0.045
11	21						66						0.050
	22						34	67	74.7	12.7	2.03	0.370	0.000
12	23						68						0.110
	24						35	69	96.0	17.3	2.13	0.330	0.090
13	25						70						0.075
	26						36	71	129	21.9	1.25	0.410	0.056
14	27						72						0.035
	28						37	73	212	23.6	1.89	1.46	0.030
15	29						74						0.035
	30						38	75	284	41.0	3.19	0.900	M
16	31						76						0.020
	32						39	77	299	38.9	3.11	1.30	M
17	33						78						0.025
	34						40	79	305	40.1	2.81	1.10	0.025
18	35						80						0.060
	36						41	81	206	37.5	5.08	0.800	0.105
19	37						82						0.065
	38						42	83	255	33.5	3.19	0.450	0.170
20	39						84						0.175
	40						43	85	206	31.8	4.32	0.800	0.185
21	41						86						0.125
	42						44	87	186	27.2	2.86	0.540	0.080
22	43						88						0.055
	44						45	89	156	20.1	0.960	0.470	0.065
23	45						90						0.066

DATE 1 August 1958
TIME 1300 - 1310 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 25

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m Arc	50m	100m	200m	400m	800m	Inner Arcs	800m Arc	50m	100m	200m	400m	800m
46	91	170	14.0	1.15	0.425	M	69	136					
	92					0.045	70	137	0.05	1.02	0.010		
47	93	150	15.0	1.50	M	0.055		138					
	94					0.065		139	0.600				
48	95	161	17.0	2.20	0.275	0.065		140					
	96					0.075	71	141	0.135				
49	97	102	20.3	0.045	0.395	0.115		142					
	98					0.080	72	143	0.025				
50	99	116	27.3	3.55	0.485	0.105		144					
	100					0.145	73	145					
51	101	112	29.0	5.16	0.755	0.200		146					
	102					0.145	74	147					
52	103	91.7	24.0	8.14	0.685	0.220		148					
	104					0.040	75	149					
53	105	91.5	22.5	7.31	0.595	0.235		150					
	106					0.235	76	151					
54	107	85.5	18.0	3.11	0.685	0.230		152					
	108					0.040	77	153					
55	109	92.1	13.7	3.74	M	0.165		154					
	110					0.095	78	155					
56	111	85.2	13.7	0.855	0.815	0.085		156					
	112						79	157					
57	113	74.7	11.0	0.735	0.715	0.045		158					
	114					0.050	80	159					
58	115	63.4	14.0	0.715	1.11			160					
	116						81	161					
59	117	73.5	12.0	2.42	1.16			162					
	118						82	163					
60	119	80.4	13.3	3.02	1.19			164					
	120						83	165					
61	121	80.7	17.3	3.92	0.805			166					
	122						84	167					
62	123	110	26.4	3.69	0.675			168					
	124						85	169					
63	125	148	26.4	5.41	0.370			170					
	126						86	171					
64	127	105	28.0	4.87	0.300			172					
	128						87	173					
65	129	60.9	16.7	6.42	0.340			174					
	130						88	175					
66	131	34.1	19.2	5.99	0.485			176					
	132						89	177					
67	133	8.19	18.5	0.515	0.195			178					
	134						90	179					
68	135	23.0	5.80	0.320				180					
							91	181					

DATE 2 August 1958
TIME 1200-1210 CST

Table 5.2 (Continued)

CONCENTRATION (mg m^{-3})

RUN NO. 26

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m Arc	50m	100m	200m	400m	800m	Inner Arcs	800m Arc	50m	100m	200m	400m	800m
1	1						16						
	2						24	47					
2	3							48					
	4						25	49					
3	5							50					
	6						26	51					
4	7							52					
	8						27	53					
5	9							54					
	10						28	55					
6	11							56					
	12						29	57					
7	13							58					
	14						30	59					
8	15							60					
	16						31	61					
9	17							62					
	18						32	63	0.030				
10	19							64					
	20						33	65	1.62				
11	21							66					
	22						34	67	2.09				
12	23							68					
	24						35	69	8.09				
13	25							70					
	26						36	71	17.0	0.510			
14	27							72					
	28						37	73	34.7	5.84	0.080		
15	29							74					
	30						38	75	46.6	13.8	0.560		
16	31							76					
	32						39	77	59.1	17.1	1.22	0.028	
17	33							78					
	34						40	79	73.8	21.8	1.53	0.055	
18	35							80					
	36						41	81	79.4	22.8	3.23	0.305	
19	37							82					
	38						42	83	93.2	23.7	6.62	0.490	0.036
20	39							84					0.075
	40						43	85	127	28.5	6.92	1.26	0.145
21	41							86					0.145
	42						44	87	133	36.9	7.62	2.16	0.180
22	43							88					0.280
	44						45	89	121	33.5	9.60	2.18	0.440
23	45							90					0.540

DATE 2 August 1956
TIME 1200-1210 CST

Table 5.2 (Continued)
CONCENTRATION (mg n.⁻³)

RUN NO. 20

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m	
16	91	123	37.4	10.1	2.18	0.365		136						
	92					0.385	69	137						
47	93	121	38.4	10.3	2.07	0.340		138						
	94					0.325	70	139						
48	95	114	36.3	11.6	2.48	0.280		140						
	96					0.280	71	141						
49	97	126	41.6	12.2	2.54	0.285		142						
	98					0.310	72	143						
50	99	139	48.5	12.9	2.75	0.335		144						
	100					0.445	73	145						
51	101	144	47.1	11.6	1.92	0.465		146						
	102					0.360	74	147						
52	103	158	42.6	10.6	1.59	0.260		148						
	104					0.265	75	149						
53	105	148	39.5	9.90	0.923	0.300		150						
	106					0.300	76	151						
54	107	121	33.6	6.92	1.23	0.310		152						
	108					0.370	77	153						
55	109	96.8	25.8	5.08	1.47	0.355		154						
	110					0.355	78	155						
56	111	70.1	18.6	4.28	1.60	0.415		156						
	112					0.320	79	157						
57	113	50.4	13.1	4.13	1.13	0.185		158						
	114					0.150	80	159						
58	115	34.7	7.13	2.57	0.745	0.085		160						
	116					0.055	81	161						
59	117	24.6	6.12	0.990	0.255			162						
	118						82	163						
60	119	21.5	6.21	1.22	0.240			164						
	120						83	165						
61	121	16.4	6.03	1.56	0.155			166						
	122						84	167						
62	123	11.8	5.15	1.56	0.235			168						
	124						85	169						
63	125	7.17	3.39	1.29	0.190			170						
	126						86	171						
64	127	5.67	3.18	1.34	0.130			172						
	128						87	173						
65	129	3.90	1.97	0.980	0.050			174						
	130						88	175						
66	131	1.49	0.910	0.590				176						
	132						89	177						
67	133	0.190	0.245	0.125				178						
	134						90	179						
68	135				0.030			180						
							91	181						

DATE 2 August 1956
TIME 1400-1410 CST

Table 5.2 (Continued)

CONCENTRATION (mg m^{-3})

RUN NO. 27

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							46					
	2							47					
2	3							48					
	4							49					
3	5							50					
	6							51					
4	7							52					
	8							53					
5	9							54					
	10							55					
6	11							56					
	12							57					
7	13							58					
	14							59					
8	15							60					
	16							01	0.030				
9	17							62					
	18							63	0.540				
10	19							64					
	20							65	1.79	0.240			
11	21							66					
	22							67	7.08	1.04	0.205		
12	23							68					
	24							69	12.2	4.01	0.680		
13	25							70					
	26							71	18.8	6.57	2.57	0.080	
14	27							72					0.050
	28							73	21.5	10.1	4.29	0.880	0.060
15	29							74					0.130
	30							75	40.2	14.4	3.78	0.980	0.165
16	31							76					0.170
	32							77	52.1	17.4	4.56	1.07	0.185
17	33							78					0.255
	34							79	93.9	19.8	6.23	1.21	0.390
18	35							80					0.580
	36							81	133	32.1	7.81	2.48	0.710
19	37							82					0.800
	38							83	159	49.1	12.4	3.73	0.840
20	39							84					0.870
	40							85	200	60.0	17.7	4.73	0.980
21	41							86					0.930
	42							87	221	73.1	19.7	4.17	0.940
22	43							88					0.750
	44							89	221	57.3	17.8	3.66	0.670
23	45							90					0.620

DATE 2 August 1956
TIME 1400-1410 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 27

POST NO.	ARC					POST NO.	ARC					POST NO.	ARC				
	Inner Arcs	800m arc	50m	100m	200m		400m	800m	Inner Arcs	800m arc	50m		100m	200m	400m	800m	
46 91	188	45.3	13.7	2.33	0.405				136								
	92					0.505			69	137							
47 93	164	41.4	9.77	2.36	0.355				138								
	94					0.350			70	139							
48 95	161	49.8	11.7	2.40	0.355				140								
	96					0.355			71	141							
49 97	150	50.1	14.2	2.39	0.330				142								
	98					0.225			72	143							
50 99	132	44.6	13.1	1.56	0.185				144								
	100					0.185			73	145							
51 101	132	36.2	9.37	1.00	0.145				146								
	102					0.120			74	147							
52 103	141	36.3	6.06	0.355	0.100				148								
	104					0.060			75	149							
53 105	123	23.0	3.86	0.050	0.050				150								
	106					0.025			76	151							
54 107	101	19.2	1.69						152								
	108								77	153							
55 109	63.3	10.8	0.535						154								
	110								78	155							
56 111	34.4	8.49	0.025						156								
	112								79	157							
57 113	22.1	1.65							158								
	114								80	159							
58 115	7.86	0.416							160								
	116								81	161							
59 117	3.27								82	162							
	118								83	163							
60 119	0.940								84	164							
	120								85	165							
61 121	0.210								86	166							
	122								87	167							
62 123									88	168							
	124								89	169							
63 125									90	170							
	126								91	171							
64 127									92	172							
	128								93	173							
65 129									94	174							
	130								95	175							
66 131									96	176							
	132								97	177							
67 133									98	178							
	134								99	179							
68 135									100	180							
									101	181							

DATE 3 August 1956
TIME 0000-0010 CST

Table 5.2 (Continued)
CONCENTRATION (mg m⁻³)

RUN NO.28

POST NO.		ARC				POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							46					
	2							47					
2	3							48					
	4							49					
3	5							50					
	6							51					
4	7							52					
	8							53					
5	9							54					
	10							55					
6	11							56					
	12							57					
7	13							58					
	14							59					
8	15							60					
	16							61					
9	17							62					
	18							63					
10	19							64					
	20							65	0.070				
11	21							66					
	22							67	0.160				
12	23							68					
	24							69	12.0	0.370			
13	25							70					
	26							71	42.5	5.81	0.065		
14	27							72					
	28							73	100	20.4	1.03	0.045	
15	29							74					
	30							75	152	45.6	8.24	0.120	
16	31							76					
	32							77	218	79.8	22.4	2.28	
17	33							78					0.055
	34							79	299	115	33.9	10.4	0.370
18	35							80					2.35
	36							81	378	156	42.8	18.2	6.79
19	37							82					10.1
	38							83	408	192	57.9	21.1	6.65
20	39		.					84					6.87
	40							85	450	179	59.5	19.0	4.72
21	41							86					2.57
	42							87	408	144	46.9	13.6	0.925
22	43							88					0.250
	44							89	326	98.3	24.3	4.93	0.065
23	45							90					0.030

DATE 3 August 1956
TIME 0000-0010 CST

Table 5.2 (Continued)

CONCENTRATION (mg m^{-3})

RUN NO. 28

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
10	91	209	52.2	13.9	0.755			136					
	92							137					
17	93	107	17.4	4.82	0.020			138					
	94							139					
18	95	50.7	6.75	0.490	0.020			140					
	96							141					
19	97	21.3	1.10	0.030				142					
	98							143					
50	99	5.91	0.115					144					
	100							145					
51	101	0.610						146					
	102							147					
52	103							148					
	104							149					
53	105							150					
	106							151					
54	107							152					
	108							153					
55	109							154					
	110							155					
56	111							156					
	112							157					
57	113	.						158					
	114							159					
58	115							160					
	116							161					
59	117							162					
	118							163					
60	119							164					
	120							165					
61	121							166					
	122							167					
62	123							168					
	124							169					
63	125							170					
	126							171					
64	127							172					
	128							173					
65	129							174					
	130							175					
66	131							176					
	132							177					
67	133							178					
	134							179					
68	135							180					
								181					

DATE 3 AUGUST 1956
TIME 0200 - 0210 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 29

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
46	91						69	136					1.06
	92						70	137	115	43.5	15.4	4.18	0.870
47	93						71	138					1.41
	94						72	139	101	40.8	16.7	5.97	1.80
48	95	0.025					73	140	81.0	30.8	8.31	3.09	1.23
	96						74	141	142				0.880
49	97	0.020					75	143	38.1	11.1	2.93	0.716	0.436
	98						76	144					0.150
50	99	0.070					77	145	13.6	3.47	0.735	0.128	0.036
	100						78	146	146				0.010
51	101	0.170					79	147	4.13	0.815	0.180	0.056	
	102						80	148					
52	103	0.780					81	149	0.920	0.395	0.115	0.025	
	104						82	150					
53	105	2.13	0.025				83	151	0.380	0.135	0.055		
	106						84	152					
54	107	0.93	0.205				85	153	0.185	0.055	0.015		
	108						86	154					
55	109	16.7	1.23	0.015			87	155	0.100				
	110						88	156					
56	111	44.6	0.32	0.370			89	157	0.040				
	112						90	158					
57	113	91.5	16.5	1.94	0.180		91	159					
	114					0.025	92	160					
58	115	127	35.7	8.63	1.27	0.085	93	161					
	116					0.230	94	162					
59	117	167	63.0	19.9	5.45	0.745	95	163					
	118					1.40	96	164					
60	119	234	79.6	27.0	9.18	2.18	97	165					
	120					2.80	98	166					
61	121	234	87.8	24.2	7.37	2.48	99	167					
	122					1.78	100	168					
62	123	248	74.9	21.8	5.66	1.54	101	169					
	124					1.24	102	170					
63	125	191	71.1	21.9	7.62	1.53	103	171					
	126					1.82	104	172					
64	127	180	51.5	13.3	4.48	1.78	105	173					
	128					1.60	106	174					
65	129	152	41.7	12.6	2.90	1.10	107	175					
	130					0.905	108	176					
66	131	146	45.6	12.0	3.24	0.795	109	177					
	132					0.625	110	178					
67	133	128	40.6	11.2	3.66	0.795	111	179					
	134					0.835	112	180					
68	135	112	35.6	10.0	2.65	0.835	113	181					

DATE 3 August 1956
TIME 1300-1310 CST

Table 5.2-(Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 30

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							40					
	2							41					
2	3							42					
	4							43					
3	5							44					
	6							45					
4	7							46					
	8							47					
6	9							48					
	10							49					
6	11							50					
	12							51					
7	13							52					
	14							53					
8	15							54					
	16							55					
9	17							56					
	18							57					
10	19							58					
	20							59					
11	21							60					
	22							61					
12	23							62					
	24							63					
13	25							64					
	26							65					
14	27							66					
	28							67	0.250				
15	29							68					
	30							69	1.79				
16	31							70					
	32							71	3.88				
17	33							72					
	34							73	6.29				
18	35							74					
	36							75	9.72				
19	37							76					
	38							77	12.0	1.92			
20	39							78					
	40							79	17.0	0.678			
21	41							80					
	42							81	26.0	1.68			
22	43							82					
	44							83	38.3	5.52	0.870		
23	45							84					
								85	60.9	17.1	2.83		
								86					
								87	70.8	20.7	3.77	0.740	
								88					
								89	88.4	26.9	5.19	1.19	
								90					0.430

DATE 3 August 1956
TIME 1300-1310 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 30

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
40	91	91.7	25.8	5.12	1.27	0.500		138					
	92					0.210	69	137					
47	93	98.0	28.2	7.00	1.01	0.180		138					
	94					0.180	70	139					
48	95	100	29.3	6.61	0.880	0.190		140					
	96					0.160	71	141					
49	97	113	27.8	8.59	1.29	0.020		142					
	98					0	72	143					
50	99	141	32.9	9.49	2.21	0.020		144					
	100					0.250	73	145					
51	101	141	41.0	9.49	2.23	0.180		146					
	102					0.300	74	147					
52	103	148	52.2	12.6	2.99	0.440		148					
	104					0.320	75	149					
53	105	203	88.2	17.0	2.57	0.380		150					
	106					0.600	76	151					
54	107	221	67.8	17.0	3.02	0.620		152					
	108					0.000	77	153					
55	109	203	54.3	15.0	2.36	0.630		154					
	110					0.680	78	155					
56	111	177	51.2	12.0	2.08	0.410		156					
	112					0.130	79	157					
57	113	150	41.1	10.1	1.91	0.250		158					
	114					0.200	80	159					
58	115	125	34.8	8.89	1.36			160					
	116						81	161					
59	117	94.2	25.1	5.61	0.680			162					
	118						82	163					
60	119	71.0	17.1	2.12	0.610			164					
	120						83	165					
61	121	39.3	9.48	1.36	0.470			166					
	122						84	167					
62	123	38.7	6.32	2.42	0.640			168					
	124						85	169					
63	125	21.3	5.48	2.08	0.480			170					
	126						86	171					
64	127	18.8	6.12	1.73				172					
	128						87	173					
65	129	11.0	2.31					174					
	130						88	175					
66	131	4.50	0.736					176					
	132						89	177					
67	133	1.64						178					
	134						90	179					
68	135	0.660						180					
							91	181					

DATE 3 AUGUST 1956
TIME 1500 - 1510 CST

Table 5.2 (Continued)
CONCENTRATION (mg m⁻³)

RUN NO. 31

POST NO.		ARC				POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
46	91						69	136					0.590
	92						70	137	158	51.3	14.5	3.02	0.710
47	93						71	138					0.780
	94						72	139	170	56.3	17.5	3.81	1.03
48	95						73	140					1.62
	96						74	141	177	59.0	14.8	4.04	1.07
49	97						75	142					1.46
	98						76	143	135	44.3	13.4	4.41	1.30
50	99						77	144					1.23
	100						78	145	85.7	33.5	14.0	3.62	1.23
51	101						79	146					0.760
	102						80	147	54.9	22.4	7.15	1.60	0.190
52	103						81	148					0.230
	104						82	149	37.8	11.8	2.97	0.910	0.310
53	105	0.405	0.375				83	150					
	106						84	151	22.1	5.37	1.63	0.290	
54	107	1.58	0.765				85	152					
	108						86	153	11.4	3.80	0.900		
55	109	2.15	1.82	0.560			87	154					
	110						88	155	4.37	2.46			
56	111	11.7	3.59	1.75	0.610	0.550	89	156					
	112					1.06	90	157	4.02	0.960			
57	113	24.2	7.20	3.44	0.880	0.310	91	158					
	114					0.09C	92	159	1.89	0.225			
58	115	39.2	12.6	4.17	1.12	0.830	93	160					
	116					0.800	94	161	0.735				
59	117	53.8	17.3	6.42	1.48	1.40	95	162					
	118					0.800	96	163					
60	119	66.1	22.7	6.87	2.05	0.400	97	164					
	120					0.780	98	165					
61	121	124	31.2	9.81	2.69	0.620	99	166					
	122					0.600	100	167					
62	123	155	41.1	11.0	3.35	0.320	101	168					
	124					0.710	102	169					
63	125	157	37.2	9.11	2.15	0.940	103	170					
	126					0.780	104	171					
64	127	129	34.4	8.31	1.18	0.950	105	172					
	128					0.300	106	173					
65	129	116	37.2	8.31	0.890	0.660	107	174					
	130					0.160	108	175					
66	131	155	36.6	7.81	1.00	0.660	109	176					
	132					0.600	110	177					
67	133	152	33.6	7.33	1.36	0.720	111	178					
	134					0.740	112	179					
68	135	165	40.1	10.3	2.79	0.850	113	180					
							114	181					

DATE 6 August 1958
TIME 2000 - 2010 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 32

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
40	91	132	6.35	0.015				136					
	92						69	137					
47	93	44.0	0.435	0.010				138					
	94						70	139					
48	95	8.35	0.060	0.010				140					
	96						71	141					
49	97	0.850						142					
	98						72	143					
60	99	0.080						144					
	100						73	145					
61	101							146					
	102						74	147					
62	103							148					
	104						75	149					
63	105							150					
	106						76	151					
64	107							152					
	108						77	153					
55	109							154					
	110						78	155					
66	111							156					
	112						79	157					
67	113							158					
	114						80	159					
68	115							160					
	116						81	161					
69	117							162					
	118						82	163					
60	119							164					
	120						83	165					
61	121							166					
	122						84	167					
62	123							168					
	124						85	169					
63	125							170					
	126						86	171					
64	127							172					
	128						87	173					
65	129							174					
	130						88	175					
66	131							176					
	132						89	177					
67	133							178					
	134						90	179					
68	135							180					
	136						91	181					

DATE 6 August 1956
TIME 2000-2010 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 32

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1						46						
	2						47						
2	3						48						
	4						49						
3	5						50						
	6						51						
4	7						52						
	8						53						
6	9						54						
	10						55						
6	11						56						
	12						57						
7	13						58						
	14						59						
8	15						60						
	16						61						
9	17						62						
	18						63	0.003					
10	19						64						
	20						65	0.090					
11	21						66						
	22						67	0.565					
12	23						68						
	24						69	3.12	0.075				
13	25						70						
	26						71	7.22	0.660				
14	27						72						
	28						73	32.1	6.30				
15	29						74						
	30						75	78.5	31.5	0.760			
16	31						76						
	32						77	207	67.3	14.5	0.395		
17	33						78						0.015
	34						79	358	162	63.1	7.17	0.115	
18	35						80						1.66
	36						81	615	434	129	46.8	6.18	
19	37						82						19.7
	38						83	729	624	285	121	41.1	
20	39						84						58.6
	40						85	707	618	205	80.3	31.3	
21	41						86						5.20
	42						87	608	240	45.2	3.98	0.270	
22	43						88						0.030
	44						89	369	58.8	1.63	0.045	0.010	
23	45						90						0.015

DATE 7 August 1956
TIME 1300-1310 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 33

POST NO.		ARC					POST NO.		ARC						
Inner Arcs	800m arc	50m	100m	200m	400m	800m			Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1								46						
	2								47						
2	3								48						
	4								49						
3	5								50						
	6								51						
4	7								52						
	8								53						
5	9								54						
	10								55						
6	11								56						
	12								57						
7	13								58						
	14								59						
8	15								60						
	16								61						
9	17								62						
	18								63						
10	19								64						
	20								65	0.780					
11	21								66						
	22								67	2.33	0.070				
12	23								68						
	24								69	4.78	0.920	0.090			
13	25								70						
	26								71	12.0	2.88	0.240			
14	27								72						
	28								73	27.8	6.00	0.935			
15	29								74						
	30								75	40.4	11.1	1.86	0.176		
16	31								76						
	32								77	51.3	18.9	4.20	0.466		
17	33								78						
	34								79	55.7	21.6	5.94	0.925	0.030	
18	35								80						0.080
	36								81	60.8	17.7	4.23	1.13	0.086	
19	37								82						0.100
	38								83	59.9	15.6	3.76	0.675	0.145	
20	39								84						0.125
	40								85	57.2	17.6	4.01	0.725	0.140	
21	41								86						0.160
	42								87	71.3	21.5	4.62	1.02	0.195	
22	43								88						0.335
	44								89	106	24.6	6.44	1.42	0.425	
23	45								90						0.465

DATE 7 August 1956
TIME 1300 - 1310 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO.33

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m	
46	91	138	48.3	7.67	2.28	0.590		136						
	92					0.640	69	137						
47	93	158	30.9	10.9	3.01	0.520		138						
	94					0.440	70	139						
48	95	191	59.1	16.6	2.62	0.420		140						
	96					0.710	71	141						
49	97	207	63.6	17.5	3.95	0.740		142						
	98					0.680	72	143						
50	99	180	62.7	19.1	3.56	0.660		144						
	100					0.560	73	145						
51	101	138	52.4	13.8	3.03	0.500		146						
	102					0.230	74	147						
52	103	128	40.2	7.83	1.23	0.070		148						
	104						75	149						
53	105	85.5	20.1	4.26	0.590			150						
	106						76	151						
54	107	49.2	9.77	1.38	0.080			152						
	108						77	153						
55	109	23.9	2.88	0.415				154						
	110						78	155						
56	111	7.05	0.880	0.043				156						
	112						79	157						
57	113	2.43	0.135					158						
	114						80	159						
58	115	0.425	0.025					160						
	116						81	161						
59	117	0.200						162						
	118						82	163						
60	119							164						
	120						83	165						
61	121							166						
	122						84	167						
62	123							168						
	124						85	169						
63	125							170						
	126						86	171						
64	127							172						
	128						87	173						
65	129							174						
	130						88	175						
66	131							176						
	132						89	177						
67	133							178						
	134						90	179						
68	135							180						
							91	181						

DATE 7 August 1958
TIME 1500-1510 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 34

POST NO.		ARC				POST NO.		ARC			
Inner Arcs	800m arc	50m	100m	200m	400m	Inner Arcs	800m arc	50m	100m	200m	400m
1	1					16					
	2					24	47	60.8	15.9	2.22	0.135
2	3					18					
	4					25	49	99.6	24.9	6.95	0.525 0.045
3	5					30					0.080
	6					30	51	130	34.7	11.4	1.44 0.180
4	7					32					0.320
	8					27	53	152	45.5	14.4	3.28 0.570
5	9					34					0.700
	10					38	55	180	60.2	10.1	3.83 0.970
6	11					29	57	201	68.7	18.3	4.48 1.06
	12					38					1.17
7	13					30	59	192	64.1	20.0	4.65 1.12
	14					60					1.27
8	15					31	61	162	59.7	18.8	5.10 1.30
	16					62					1.04
9	17					32	63	162	51.0	15.7	4.23 0.970
	18					64					0.720
10	19					33	65	130	40.6	11.9	2.61 0.390
	20					66					0.100
11	21					34	67	102	26.1	8.12	0.805 0.045
	22					68					0.030
12	23					35	69	70.2	13.3	1.42	0.155 0.015
	24					70					
13	25					36	71	46.1	8.89	0.250	0.040
	26					72					
14	27					37	73	26.6	3.02	0.025	0.016
	28					74					
15	29					38	75	11.5	0.895	0.020	
	30					76					
16	31					39	77	6.68	0.040	0.025	
	32					78					
17	33					40	79	3.69			
	34					80					
18	35	0.065				41	81	0.525			
	36					82					
19	37	0.380				42	83	0.070			
	38					84					
20	39	3.96				43	85	0.040			
	40					86					
21	41	12.7	0.495			44	87				
	42					88					
22	43	19.2	3.12	0.040		45	89				
	44					90					
23	45	33.3	6.34	0.700	0.015						

DATE 7 August 1956
TIME 2303-2313 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 35

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m	
1	1						16							1.19
	2						24	17	339	133	45.0	12.6	2.94	
2	3						18							1.35
	4						25	19	387	136	43.1	11.7	5.27	
3	5						20	20						5.29
	6						26	21	366	130	35.2	11.7	4.17	
4	7						22							2.76
	8						27	23	296	91.5	24.1	8.41	1.54	
5	9						28	24						0.985
	10						29	25	188	52.1	13.6	3.15	0.520	
6	11						30							
	12						29	27	99.0	24.8	3.83	0.610		
7	13						31	28						
	14						30	29	49.4	6.87	0.510	0.055		
8	15						31	31	20.9	0.380	0.055			
	16						32	33	5.87	0.095	0.025			
9	17						33							
	18						34	37						
10	19						33	35	0.705					
	20						35	36						
11	21						36	38						
	22						37	37						
12	23						38	38						
	24						39	39						
13	25						40	40						
	26						41	41						
14	27						42	42						
	28						43	43						
15	29						44	44						
	30						45	45						
16	31	0.055					46	46						
	32						47	47						
17	33	0.418					48	48						
	34						49	49						
18	35	0.385					50	50						
	36						51	51						
19	37	3.63	0.180				52	52						
	38						53	53						
20	39	15.5	1.35	0.035			54	54						
	40						55	55						
21	41	68.7	8.64	0.600			56	56						
	42						57	57						
22	43	136	34.1	6.20	0.335		58	58						
	44						59	59	0.055					
23	45	231	81.6	24.1	4.41	0.285	60	60						

DATE 11 August 1956
TIME 2130-2140 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 35

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							16					
	2							24	17	182	0.81		
2	3							18					
	4							25	19	87.0	0.490		
3	5							20	21	24.2			
	6							22	23	3.78			
4	7							27	28	0.440			
	8							28	29	58			
5	9							30	31	59			
	10							31	32	60			
6	11							32	33	61			
	12							33	34	62			
7	13							34	35	63			
	14							35	36	64			
8	15							36	37	65			
	16							37	38	66			
9	17							38	39	67			
	18							39	40	68			
10	19							40	41	69			
	20							41	42	70			
11	21							42	43	71			
	22							43	44	72			
12	23	0.225						44	45	73			
	24							45	46	74			
13	25	2.15	0.105					46	47	75			
	26							47	48	76			
14	27	14.3	2.07	1.59	0.435	13.8		48	49	77			
	28							49	50	78			
15	29	69.3	16.4	14.7	13.0	10.2		50	51	79			
	30							51	52	80			
16	31	168	61.4	45.8	32.8	5.77		52	53	81			
	32							53	54	82			
17	33	350	180	75.6	37.4	5.91		54	55	83			
	34							55	56	84			
18	35	312	228	145	41.9	3.52		56	57	85			
	36							57	58	86			
19	37	591	575	253	76.2	2.47		58	59	87			
	38							59	60	88			
20	39	641	575	200	50.5	0.225		60	61	89			
	40							61	62	90			
21	41	600	405	81.1	8.45	0.080		62	63	91			
	42							63	64	92			
22	43	352	198	14.8	0.120			64	65	93			
	44							65	66	94			
23	45	366	54.6	0.755				66	67	95			

DATE 11 August 1956
TIME 2330-2340 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 36

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							46					
	2							47	0.090				
2	3							48					
	4							49	0.095				
3	5							50					
	6							51	0.105	0.035			
4	7							52					
	8							53	0.140	0.045			
5	9							54					
	10							55	0.135	0.085			
6	11							56					
	12							57	0.185	0.075			
7	13							58					
	14							59	2.95	0.130	0.040		
8	15							60					
	16							61	12.0	0.140	0.040		
9	17							62					
	18							63	63.5	2.10	0.025		
10	19							64					
	20							65	251	24.3	0.220		
11	21							66					
	22							67	492	161	6.51	0.055	
12	23							68					
	24							69	747	405	71.4	0.445	
13	25							70					0.045
	26							71	830	540	203	17.9	0.160
14	27							72					0.760
	28							73	794	431	152	64.0	2.63
15	29							74					6.85
	30							75	660	266	79.2	38.9	15.6
16	31							76					29.8
	32							77	423	130	59.2	31.3	38.6
17	33							78					21.9
	34							79	210	53.3	26.0	20.7	2.34
18	35							80					
	36							81	76.2	10.3	3.25	1.08	
19	37							82					
	38							83	21.9	0.580	0.054		
20	39							84					
	40							85	5.45				
21	41							86					
	42							87	1.74				
22	43							88					
	44							89					
23	45	0.075						90					

Table 5.2 (Continued)

DATE 12 August 1958
TIME 0300-0310 CSTCONCENTRATION (mg m^{-3})

RUN NO.37

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							46					
	2							47					
2	3							48					
	4							49					
3	5							50					
	6							51					
4	7							52					
	8							53					
5	9							54					
	10							55					
0	11							56					
	12							57					
7	13							58					
	14							59					
8	15							60					
	16							61					
9	17							62					
	18							63					
10	19							64					
	20							65					
11	21							66					
	22							67					
12	23							68					
	24							69					
13	25							70					
	26							71					
14	27							72					
	28							73					
15	29							74					
	30							75					
16	31							76					
	32							77	0.055				
17	33							78					
	34							79	0.795	0.025			
18	35							80					
	36							81	3.09	0.325			
19	37							82					
	38							83	11.8	1.53	0.040		
20	39							84					
	40							85	27.6	6.53	0.780	0.045	
21	41							86					
	42							87	53.0	17.6	4.53	0.860	0.060
22	43							88					0.230
	44							89	99.3	37.1	10.3	3.06	0.795
23	45							90					1.41

DATE 12 August 1956
TIME 0300-0310 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 37

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m	
16	01	173	55.8	16.1	3.31	1.94		136						
	02					1.98	69	137						
17	03	176	60.9	18.5	4.29	1.55		138						
	04					1.44	70	139						
18	05	224	78.0	18.9	5.40	1.34		140						
	06					1.46	71	141						
19	07	221	71.1	22.9	7.39	2.08		142						
	08					2.02	72	143						
50	99	170	57.6	18.5	4.01	1.62		144						
	100					0.975	73	145						
51	101	128	30.6	8.01	2.03	0.480		146						
	102					0.150	74	147						
52	103	68.9	13.5	3.31	0.520	0.025		148						
	104						75	149						
53	105	28.4	6.42	0.805	0.100			150						
	106						76	151						
54	107	15.5	1.56	0.085				152						
	108						77	153						
55	109	7.80	0.480	0.080				154						
	110						78	155						
56	111	3.59	0.130					156						
	112						79	157						
57	113	1.39	0.055					158						
	114						80	159						
58	115	0.055						160						
	116						81	161						
59	117	0.020						162						
	118						82	163						
60	119							164						
	120						83	165						
61	121							166						
	122						84	167						
62	123							168						
	124						85	169						
63	125							170						
	126						86	171						
64	127							172						
	128						87	173						
65	129							174						
	130						88	175						
66	131							176						
	132						89	177						
67	133							178						
	134						90	179						
68	135							180						
							91	181						

DATE 12 August 1956
TIME 0500-0510 CST

Table 5.2 (Continued)

CONCENTRATION (mg m^{-3})

RUN NO. 38

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							46					
	2							47					
2	3							48					
	4							49					
3	5							50					
	6							51					
4	7							52					
	8							53					
5	9							54					
	10							55					
6	11							56					
	12							57					
7	13							58					
	14							59					
8	15							60					
	16							61	0.020				
9	17							62					
	18							63	0.350				
10	19							64					
	20							65	1.74				
11	21							66					
	22							67	5.48	0.210			
12	23							68					
	24							69	19.4	1.08	0.020		
13	25							70					
	26							71	54.6	5.00	0.270		
14	27							72					
	28							73	126	19.8	1.65	0.055	
15	29							74					
	30							75	219	57.6	11.6	1.36	0.075
16	31							76					0.520
	32							77	333	118	33.0	7.90	1.00
17	33							78					3.85
	34							79	380	153	51.4	18.7	6.01
18	35							80					6.41
	36							81	360	134	46.9	13.7	4.63
19	37							82					1.91
	38							83	273	87.3	17.1	3.44	0.580
20	39							84					0.085
	40							85	170	31.5	4.61	0.430	
21	41							86					
	42							87	84.3	7.55	0.980	0.050	
22	43							88					
	44							89	30.3	1.97	0.140	0.025	
23	45							90					

DATE 12 August 1956
TIME 0500-0510 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 38

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
46	91	2.64	0.300					136					
	92						69	137					
47	93	1.38	0.050					138					
	94						70	139					
48	95	0.210						140					
	96						71	141					
49	97	0.030						142					
	98						72	143					
50	99							144					
	100						73	145					
51	101							146					
	102						74	147					
52	103							148					
	104						75	149					
53	105							150					
	106						76	151					
54	107							152					
	108						77	153					
55	109							154					
	110						78	155					
56	111							156					
	112						79	157					
57	113							158					
	114						80	159					
58	115							160					
	116						81	161					
59	117							162					
	118						82	163					
60	119							164					
	120						83	165					
61	121							166					
	122						84	167					
62	123							168					
	124						85	169					
63	125							170					
	126						86	171					
64	127							172					
	128						87	173					
65	129							174					
	130						88	175					
66	131							176					
	132						89	177					
67	133							178					
	134						90	179					
68	135							180					
							91	181					

DATE 13 August 1956
TIME 2230-2240 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 39

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m	
1	1						16							M
	2						24	47	362	117	36.8	8.24		M
2	3						48							M
	1						25	49	470	140	12.7	17.0		M
3	5						50							3.70
	6						26	51	425	161	54.2	20.1		2.10
4	7						52							1.50
	8						27	53	378	130	19.0	10.7		1.83
5	9						64							1.36
	10						28	55	249	79.7	20.0	3.43		0.835
6	11						66							M
	12						29	57	166	37.5	4.42	0.540		M
7	13						58							M
	14						30	59	92.2	13.1	1.95	0.080		
8	15						60							
	16						31	61	38.6	2.13	0.180			
9	17						62							
	18						32	63	11.6	0.310				
10	19						64							
	20						33	65	2.62	0.015				
11	21						66							
	22						34	67	0.446					
12	23						68							
	24						35	69	0.005					
13	25						70							
	26						36	71						
14	27						72							
	28						37	73						
15	29						74							
	30						38	75						
16	31						76							
	32						39	77						
17	33	0.225	0.040				78							
	34						40	79						
18	35	1.22	0.110				80							
	36						41	81						
19	37	7.83	0.340	0.050			82							
	38						42	83						
20	39	30.5	1.86	0.210	0.060		84							
	40						43	85						
21	41	91.0	11.1	0.350	0.075	M	86							
	42						44	87						
22	43	182	39.6	4.62	0.045	M	88							
	44						45	89						
23	45	276	98.4	23.8	1.38	M	90							

DATE 14 August 1956,
TIME 0030-0040 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 40

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m	
1	1							46						
	2							24	47					
2	3							48						
	4							25	49					
3	5							50						
	6							26	51					
4	7							52						
	8							27	53					
5	9							54						
	10							28	55					
6	11							56						
	12							29	57					
7	13							58						
	14							30	59					
8	15							60						
	16							31	61					
9	17							62						
	18							32	63					
10	19							64						
	20							33	65					
11	21							66						
	22							34	67					
12	23							68						
	24							35	69	0.295				
13	25							70						
	26							36	71	0.640				
14	27							72						
	28							37	73	2.85	0.080			
15	29							74						
	30							38	75	11.6	0.455	0.025		
16	31							76						
	32							39	77	24.9	2.97	0.180	M	
17	33							78						
	34							40	79	64.8	14.2	2.33	M	
18	35							80					0.035	
	36							41	81	156	42.2	11.5	M	0.260
19	37							82					0.735	
	38							42	83	227	76.4	25.8	M	1.38
20	39							84					1.64	
	40							43	85	318	105	27.9	M	1.72
21	41							86					1.57	
	42							44	87	312	99.9	26.8	M	1.55
22	43							88					1.49	
	44							45	89	281	77.1	24.3	M	1.56
23	45							90					1.38	

DATE 14 August 1956
TIME 0030-0040 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 40

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m Arc	50m	100m	200m	400m	800m	Inner Arcs	800m Arc	50m	100m	200m	400m	800m	
40	91	215	75.6	18.3	4.95	1.34	69	138						
	92					1.28		137						
47	93	201	53.7	17.7	3.73	1.36		138						
	94					1.15	70	139						
48	95	204	52.7	16.6	5.05	0.000		140						
	96					1.22	71	141						
49	97	168	54.8	14.5	4.80	1.36		142						
	98					1.62	72	143						
50	99	180	24.1	23.7	3.83	1.70		144						
	100					2.21	73	145						
51	101	183	70.4	32.7	14.6	3.33		146						
	102					5.99	74	147						
52	103	123	42.1	14.3	3.83	6.18		148						
	104					2.80	75	149						
53	105	08.3	16.1	2.15	0.375	0.405		150						
	106					0.012	76	151						
54	107	33.0	2.19	0.085				152						
	108						77	153						
55	109	10.7	0.195					154						
	110						78	155						
56	111	1.35						156						
	112						79	157						
57	113	0.150						158						
	114						80	159						
58	115	0.025						160						
	116						81	161						
59	117	--						162						
	118						82	163						
60	119							164						
	120						83	165						
61	121							166						
	122						84	167						
62	123							168						
	124						85	169						
63	125							170						
	126						86	171						
64	127							172						
	128						87	173						
65	129							174						
	130						88	175						
66	131							176						
	132						89	177						
67	133							178						
	134						90	179						
68	135							180						
							91	181						

DATE 14 AUGUST 1956
TIME 0300 - 0310 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 41

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
46	91							136					
	92						69	137					
47	93							138					
	94						70	139					
48	95	0.280						140					
	96						71	141					
49	97	2.00	0.185					142					
	98						72	143					
50	99	22.7	1.92	0.125				144					
	100						73	145					
51	101	74.7	18.0	2.27	0.215			146					
	102					0.010	74	147					
52	103	198	69.7	17.0	4.32	0.240		148					
	104					1.34	75	149					
53	105	378	142	48.8	10.7	4.33		150					
	106					8.57	76	151					
54	107	450	189	67.8	25.0	9.92		152					
	108					0.43	77	153					
55	109	362	144	39.0	9.00	1.72		154					
	110					0.400	78	155					
56	111	236	64.7	9.81	0.675	0.065		156					
	112						79	157					
57	113	106	18.0	0.765				158					
	114						80	159					
58	115	33.0	2.10	0.035				160					
	116						81	161					
59	117	4.97	0.295					162					
	118						82	163					
60	119	0.270						164					
	120						83	165					
61	121							166					
	122						84	167					
62	123							168					
	124						85	169					
63	125							170					
	126						86	171					
64	127							172					
	128						87	173					
65	129							174					
	130						88	175					
66	131							176					
	132						89	177					
67	133							178					
	134						90	179					
68	135							180					
							91	181					

Table 5.2 (Continued)

DATE 14 AUGUST 1956

TIME 0500 - 0510 CST

CONCENTRATION (mg m^{-3})

RUN NO. 42

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
46	91							136					
	92						69	137	1.05	0.055			
47	93							138					
	94						70	139	0.075				
48	95							140					
	96						71	141					
49	97							142					
	98						72	143					
50	99							144					
	100						73	145					
51	101	0.580						146					
	102						74	147					
52	103	0.845						148					
	104						75	149					
53	105	2.01						150					
	106						76	151					
54	107	9.68	0.440					152					
	108						77	153					
55	109	21.0	2.88	0.075	0.005			154					
	110						78	155					
56	111	50.3	5.87	1.07	0.045			156					
	112						79	157					
57	113	106.	25.2	5.24	1.07	0.070		158					
	114						80	159					
58	115	183	63.0	15.6	3.49	0.725		160					
	116						81	161					
59	117	242	83.9	25.3	7.12	1.70		162					
	118						82	163					
60	119	276	100	31.6	7.77	1.98		164					
	120						83	165					
61	121	264	84.8	23.4	5.59	2.11		166					
	122						84	167					
62	123	204	56.1	15.5	5.16	1.94		168					
	124						85	169					
63	125	127	41.3	12.6	4.17	1.36		170					
	126						86	171					
64	127	103	32.3	9.66	1.94	0.310		172					
	128						87	173					
65	129	76.2	17.1	2.76	0.455	0.020		174					
	130						88	175					
66	131	48.6	4.52	0.595	0.060			176					
	132						89	177					
67	133	19.7	1.23	0.090				178					
	134						90	179					
68	135	5.18	0.225					180					
							91	181					

DATE 15 August 1956
TIME 1200-1210 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 43

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m	
1	1							46					0.055	
	2							24	47	2.43	0.240	0.025	0.270	0.080
2	3							48						0.125
	4							25	49	3.71	0.025	0.245	0.315	0.095
3	5							50						0.075
	6							26	51	10.4	1.91	0.965	0.615	0.080
4	7							52						0.100
	8							27	53	26.1	3.42	1.72	0.565	0.090
5	9							54						0.095
	10							28	55	38.7	3.30	1.80	0.575	0.105
6	11							56						0.090
	12							29	57	40.4	8.58	2.63	0.730	0.035
7	13							58						0.060
	14							30	59	64.5	21.3	3.78	0.825	0.085
8	15							60						0.075
	16							31	61	81.2	33.2	5.27	1.29	0.050
9	17							62						0.095
	18							32	63	111	36.8	7.65	1.02	0.105
10	19							64						0.145
	20							33	65	126	30.0	9.47	0.935	0.075
11	21							66						0.060
	22							34	67	114	26.4	6.31	0.735	0.090
12	23							68						0.065
	24							35	69	110	20.6	3.97	0.745	0.075
13	25							70						0.075
	26							36	71	123	23.3	5.13	0.625	0.070
14	27							72						0.080
	28							37	73	114	20.4	6.93	0.715	0.070
15	29							74						0.100
	30							38	75	137	40.4	7.09	1.47	0.120
16	31							76						0.135
	32							39	77	153	42.3	11.9	1.82	0.250
17	33							78						0.255
	34							40	79	189	16.5	14.7	2.40	0.305
18	35							80						0.450
	36							41	81	219	51.2	16.0	2.63	0.450
19	37							82						0.490
	38							42	83	249	58.2	14.0	2.45	0.540
20	39							84						0.490
	40							43	85	225	57.3	11.6	2.10	0.460
21	41					0.055		86						0.410
	42					0.060		44	87	200	48.8	10.5	2.07	0.330
22	43	0.025				0.070		88						0.275
	44					0.115		45	89	177	40.8	7.21	1.76	0.205
23	45	0.465			0.080	0.080		90						0.205

DATE 15 August 1958
TIME 1200-1210 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 43

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
40	91	135	30.9	6.81	1.36	0.220	69	136					
	92					0.240		137					
17	93	121	30.5	7.09	0.910	0.235		138					
	94					0.155	70	139					
18	95	114	19.5	4.55	0.710	0.155		140					
	96					0.125	71	141					
49	97	81.6	23.6	4.99	0.490	0.100		142					
	98					0.070	72	143					
50	99	60.0	18.0	3.12	0.325	0.050		144					
	100					0.015	73	145					
51	101	49.8	11.1	1.24	0.135	0.030		146					
	102						74	147					
52	103	31.5	9.93	0.120				148					
	104						75	149					
53	105	8.55	2.22	0.045				150					
	106						76	151					
54	107	4.77	0.520					152					
	108						77	153					
55	109	4.40	0.095					154					
	110						78	155					
56	111	1.77						156					
	112						79	157					
57	113	1.49						158					
	114						80	159					
58	115	0.045						160					
	116						81	161					
59	117							162					
	118						82	163					
00	119							164					
	120						83	165					
61	121							166					
	122						84	167					
62	123							168					
	124						85	169					
03	125							170					
	126						86	171					
64	127							172					
	128						87	173					
05	129							174					
	130						88	175					
06	131							176					
	132						89	177					
07	133							178					
	134						90	179					
08	135							180					
							91	181					

Table 8.2 (Continued)

DATE 15 August 1956
TIME 1400-1410 CST

CONCENTRATION (mg m⁻³)

RUN NO.44

DATE 15 August 1956
TIME 1400-1410 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 44

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
46	91	23.0	2.78	0.355	0.060			136					
	92						69	137					
47	93	18.5	1.36	0.065	0.055			138					
	94						70	139					
48	95	8.13	0.500	0.070	0.030			140					
	96						71	141					
49	97	6.17	0.090					142					
	98						72	143					
50	99	2.87						144					
	100						73	145					
51	101	0.355						146					
	102						74	147					
52	103							148					
	104						75	149					
53	105							150					
	106						76	151					
54	107							152					
	108						77	153					
55	109							154					
	110						78	155					
56	111							156					
	112						79	157					
57	113							158					
	114						80	159					
58	115							160					
	116						81	161					
59	117							162					
	118						82	163					
60	119							164					
	120						83	165					
61	121							166					
	122						84	167					
62	123							168					
	124						85	169					
63	125							170					
	126						86	171					
64	127							172					
	128						87	173					
65	129							174					
	130						88	175					
66	131							176					
	132						89	177					
67	133							178					
	134						90	179					
68	135							180					
							91	181					

DATE 15 August 1956
TIME 1700-1710 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 15

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1						24	46					
	2						24	47	0.065				
2	3							48					
	4						25	49	0.520				
3	5							50					
	6						26	51	3.08	0.040			
4	7							52					
	8						27	53	11.5	0.140			
5	9							54					
	10						28	55	27.8	0.790	0.085		
6	11							56					
	12						29	57	45.8	3.24	0.000		
7	13							58					
	14						30	59	71.7	11.3	1.04	0.075	
8	15							60					
	16						31	61	114	25.5	5.10	0.740	0.000
9	17							62					0.115
	18						32	63	168	48.9	11.6	3.98	0.295
10	19							64					0.095
	20						33	65	204	73.2	21.5	4.95	1.00
11	21							66					1.80
	22						34	67	246	86.9	28.6	7.12	2.50
12	23							68					2.84
	24						35	69	266	99.0	31.4	8.93	2.20
13	25							70					1.84
	26						36	71	291	98.6	29.8	7.24	1.43
14	27							72					1.82
	28						37	73	285	86.3	21.2	6.85	2.27
15	29							74					2.81
	30						38	75	297	99.3	28.6	8.37	2.29
16	31							76					1.80
	32						39	77	362	114	41.4	6.56	1.50
17	33							78					0.735
	34						40	79	288	105	28.1	3.39	0.330
18	35							80					0.125
	36						41	81	215	58.4	10.9	1.17	0.060
19	37							82					0.025
	38						42	83	150	32.7	3.97	0.420	0.010
20	39							84					
	40						43	85	105	18.0	1.45	0.075	
21	41							86					
	42						44	87	63.7	8.06	0.450		
22	43							88					
	44						45	89	34.2	1.47	0.025		
23	45	0.040						90					

DATE 15 August 1956
TIME 1700-1710 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO.45

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m Arc	50m	100m	200m	400m	800m	Inner Arcs	800m Arc	50m	100m	200m	400m	800m
46	91	10.9	0.170					136					
	92						69	137					
47	93	1.88	0.035					138					
	94						70	139					
48	95	0.545						140					
	96						71	141					
49	97							142					
	98						72	143					
50	99							144					
	100						73	145					
51	101							146					
	102						74	147					
52	103							148					
	104						75	149					
53	105							150					
	106						76	151					
54	107							152					
	108						77	153					
55	109							154					
	110						78	155					
56	111							156					
	112						79	157					
57	113							158					
	114						80	159					
58	115							160					
	116						81	161					
59	117							162					
	118						82	163					
60	119							164					
	120						83	165					
61	121							166					
	122						84	167					
62	123							168					
	124						85	169					
63	125							170					
	126						86	171					
64	127							172					
	128						87	173					
65	129							174					
	130						88	175					
66	131							176					
	132						89	177					
67	133							178					
	134						90	179					
68	135							180					
							91	181					

DATE 15 August 1956
TIME 1845-1855 CST

Table 5.2 (Continued)

CONCENTRATION (mg m^{-3})

RUN NO. 46

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m Arc	50m	100m	200m	400m	800m	Inner Arcs	800m Arc	50m	100m	200m	400m	800m
1	1							46					1.01
	2							47	434	114	27.8	1.84	1.12
2	3							48					1.81
	4							49	363	111	32.6	8.48	2.62
3	5							50					3.08
	6							51	267	22.1	32.0	11.0	2.83
4	7							52					1.74
	8							53	206	72.3	22.1	6.63	0.895
5	9							54					0.445
	10							55	147	41.0	11.8	1.44	0.110
6	11							56					0.060
	12							57	99.0	28.4	4.29	0.235	0.015
7	13							58					
	14							59	64.5	17.1	0.480		
8	15							60					
	16							61	37.1	4.79	—		
9	17							62					
	18							63	18.9	0.265			
10	19							64					
	20							65	11.4	0.130			
11	21							66					
	22							67	1.88	0.040			
12	23							68					
	24							69	0.370	0.140			
13	25							70					
	26							71	0.160	0.155			
14	27	0.068	0.110	0.055				72					
	28							73					
15	29	0.536	0.125	0.066				74					
	30							75					
16	31	4.39	0.325	0.085				76					
	32							77					
17	33	16.4	2.09	0.420	0.050			78					
	34							79					
18	35	69.3	13.6	3.53	0.716	0.095		80					
	36							81					
19	37	177	58.6	17.6	3.95	1.10		82					
	38							83					
20	39	384	131	53.1	16.0	0.08		84					
	40							85					
21	41	512	198	60.8	20.9	3.63		86					
	42							87					
22	43	564	188	47.8	12.6	4.01		88					
	44							89					
23	45	546	142	33.3	9.79	1.86		90					

Table 5.2 (Continued)

DATE 20 AUGUST 1956
TIME 1000 - 1010 CSTCONCENTRATION (mg m^{-3})

RUN NO. 47

POST NO.		ARC					POST NO.		ARC				
Inner Arc	800m Arc	S	100m	200m	400m	800m	Inner Arc	800m Arc	S	100m	200m	400m	800m
16	91							136					
	92						69	137	48.2	6.32	1.49	0.405	0.035
17	93							138					0.040
	94						70	139	38.1	7.22	1.29	0.515	0.075
18	95							140					0.080
	96						71	141	57.5	11.3	2.09	0.445	0.095
19	97							142					0.110
	98						72	143	92.7	18.0	2.69	0.625	0.105
60	99							144					0.100
	100						73	145	139	24.8	3.72	0.745	0.100
61	101							146					0.110
	102						74	147	182	35.4	3.67	0.685	0.110
62	103							148					0.200
	104						75	149	213	47.0	8.16	1.06	0.240
63	105							150					0.205
	106						76	151	218	42.6	9.49	1.38	0.205
64	107							152					0.180
	108						77	153	224	42.6	7.33	1.29	0.180
65	109							154					0.185
	110						78	155	260	42.3	6.02	2.00	0.175
66	111							156					0.125
	112						79	157	263	47.6	5.51	1.36	0.110
67	113							158					0.145
	114						80	159	278	47.4	7.70	1.42	0.185
68	115							160					0.185
	116						81	161	293	46.8	7.09	1.12	0.105
69	117							162					0.085
	118						82	163	284	53.3	6.65	0.975	0.100
60	119							164					0.125
	120						83	165	221	43.5	7.84	1.02	0.120
61	121	0.480						166					0.115
	122						84	167	192	41.6	8.33	0.955	0.085
62	123	2.18						168					0.055
	124						85	169	158	41.7	7.40	1.38	0.080
63	125	4.61	0.080					170					0.065
	126						86	171	122	39.0	8.39	0.845	
64	127	9.54	1.20	0.040				172					
	128						87	173	35.2	26.0	5.86	0.595	
65	129	19.7	6.32	0.625				174					
	130						88	175	22.3	15.6	4.10	0.565	
66	131	35.7	6.00	0.415	0.135			176					
	132						89	177	37.1	10.2	3.34	0.415	
67	133	33.5	4.92	0.735	0.155			178					
	134						90	179	22.2	7.46	2.54	0.435	
68	135	37.1	5.61	0.795	0.225			180					
							91	181	21.3	4.43	1.32	0.470	

DATE 20 August 1958
TIME 1233-1243 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 48-S

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							46					
	2							24	47	1.92			
2	3							48					
	4							25	49	1.85			
3	5							50					
	6							26	51	1.83			
4	7								52				
	8								27	53	3.03		
5	9									54			
	10								28	55	4.89		
6	11									56			
	12								29	57	4.74		
7	13									58			
	14								30	59	5.51		
8	15									60			
	16								31	61	5.97		
9	17									62			
	18								32	63	13.3	0.040	
10	19									64			
	20								33	65	19.2	0.130	
11	21									66			
	22								34	67	26.9	0.620	
12	23									68			
	24								35	69	27.3	1.01	
13	25									70			
	26								36	71	31.5	3.66	
14	27									72			
	28								37	73	35.3	4.38	
15	29									74			
	30								38	75	39.6	4.68	
16	31	0.045								76			
	32								39	77	51.8	8.52	
17	33	0.070								78			
	34								40	79	49.5	10.1	0.150
18	35	0.155								80			
	36								41	81	57.0	10.3	0.256
19	37	0.245								82			
	38								42	83	65.2	12.8	0.260
20	39	0.355								84			
	40								43	85	74.7	9.38	0.455
21	41	0.595								86			
	42								44	87	82.3	9.03	1.11
22	43	1.15								88			
	44								45	89	87.0	8.40	1.12
23	45	1.25								90			

DATE 20 August 1956
TIME 1233-1243 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 48-9

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m	
46	91	71.0	5.60	0.695				136						0.070
	92						60	137	143	40.4	0.51	1.18	0.185	
47	93	76.2	7.35	0.675				138						0.095
	94						70	139	125	45.2	11.6	2.12	0.140	
48	95	58.8	4.98	0.645				140						0.145
	96						71	141	115	36.0	8.93	1.31	0.180	
49	97	50.6	3.45	0.745				142						0.140
	98						72	143	85.4	29.3	9.83	1.27	0.120	
50	99	47.3	4.40	0.945				144						0.080
	100						73	145	78.6	22.9	5.11	1.16	0.045	
51	101	46.4	6.66	1.22				146						0.090
	102						74	147	57.0	14.4	2.53	0.745	0.040	
52	103	39.2	7.91	0.945	0.020			148						0.035
	104						75	149	39.6	16.0	3.23	0.525		
53	105	37.1	3.58	0.905	0.005			150						
	106						76	151	45.2	16.2	2.64	0.340		
54	107	39.5	5.72	0.905	:			152						
	108						77	153	42.8	9.56	1.80	0.130		
55	109	38.6	7.38	1.05	0.105			154						
	110						78	155	33.5	6.46	2.42			
56	111	42.8	7.98	0.865	0.180			156						
	112						79	157	16.8	7.13	0.695			
57	113	54.8	8.48	0.935	0.215			158						
	114						80	159	17.6	3.27	0.185			
58	115	80.6	9.41	1.44	0.235			160						
	116						81	161	19.5	1.39	0.030			
59	117	74.0	9.62	0.955	0.255			162						
	118						82	163	10.2	0.355				
60	119	66.2	8.16	1.07	0.050			164						
	120						83	165	1.21					
61	121	60.8	7.62	0.895	0.010			166						
	122						84	167	0.150					
62	123	74.0	6.66	1.29	0.025			168						
	124						85	169	0.065					
63	125	78.6	4.91	0.785	0.075			170						
	126						86	171	0.055					
64	127	89.9	8.16	0.915	0.275			172						
	128						87	173	0.040					
65	129	97.8	18.9	3.08	0.535			174						
	130						88	175						
66	131	101	22.8	2.23	0.365			176						
	132						89	177						
67	133	130	26.0	2.02	0.045			178						
	134					0.045	90	179						
68	135	140	24.6	3.13	0.725	0.115		91	180					
							92	181						

DATE 21 AUGUST 1956
TIME 0900 - 0910 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 48

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
16	91						136						
	92						69	137	41.4	6.79	1.11	0.020	
17	93							138					
	94						70	139	26.2	3.06	0.056		
18	95	0.030						140					
	96						71	141	17.6	0.730	0.026		
40	97	0.545						142					
	98						72	143	7.58	0.065			
50	99	2.40						144					
	100						73	145		1.82			
61	101	6.28	0.068					146					
	102						74	147		0.215			
52	103	12.3	0.480					148					
	104						75	149		0.010			
53	105	20.0	3.20					150					
	106						76	151					
54	107	29.4	5.13	0.085				152					
	108						77	153					
55	109	36.9	6.15	0.700	0.020			154					
	110						78	155					
56	111	40.7	7.35	1.20	0.110	0.040		156					
	112						79	157					
57	113	53.9	13.8	1.82	0.400	0.115		158					
	114						80	159					
58	115	83.0	21.9	4.71	0.950	0.285		160					
	116						81	161					
59	117	97.5	31.7	8.12	1.54	0.395		162					
	118						82	163					
60	119	155	39.3	10.5	2.07	0.410		164					
	120						83	165					
61	121	130	48.0	14.1	3.05	0.640		166					
	122						84	167					
62	123	186	56.6	17.1	3.45	0.660		168					
	124						85	169					
63	125	209	65.0	17.0	3.64	0.980		170					
	126						86	171					
64	127	127	65.0	19.5	4.00	1.31		172					
	128						87	173					
65	129	224	69.7	13.8	4.68	0.630		174					
	130						88	175					
66	131	158	39.9	11.0	3.32	0.135		176					
	132						89	177					
67	133	105	26.3	8.81	0.990			178					
	134						90	179					
68	135	62.1	18.0	3.54	0.085			180					
							91	181					

Table 5.2 (Continued)

DATE 21 August 1956
TIME 1100-1110 CSTCONCENTRATION (mg m^{-3})

RUN NO.49

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							46					
	3							47					
2	3							48					
	4							49					
3	5							50					
	6							51					
4	7							52					
	8							53					
5	9							54					
	10							55					
6	11							56					
	12							57					
7	13							58					
	14							59					
8	15							60					
	16							61					
9	17							62					
	18							63					
10	19							64					
	20							65					
11	21							66					
	22							67					
12	23							68					
	24							69					
13	25							70					
	26							71	0.110				
14	27							72					
	28							73	0.175				
15	29							74					
	30							75	0.130				
16	31							76					
	32							77	4.19	0.265			
17	33							78					
	34							79	7.10	1.14			
18	35							80					
	36							81	9.99	2.76	0.215		
19	37							82					
	38							83	8.72	3.63	1.75	0.040	
20	39							84					
	40							85	18.5	4.89	1.85	0.620	
21	41							86					
	42							87	29.9	9.45	2.31	0.850	0.070
22	43							88					0.145
	44							89	49.5	12.4	3.63	1.35	0.160
23	45							90					0.125

DATE 21 August 1958
TIME 1100-1110 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 49

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m Arc	50m	100m	200m	400m	800m	Inner Arcs	800m Arc	50m	100m	200m	400m	800m
46	91	67.1	17.9	3.15	1.15	0.065	69	136					
	92					0.075	70	137	0.605				
47	93	54.0	18.8	4.48	0.755	0.110	71	138					
	94					0.115	72	139					
48	95	68.7	21.2	3.99	0.285	0.080	73	140					
	96					0.095	74	141					
49	97	101	21.5	3.92	0.505	0.115	75	142					
	98					0.085	76	143					
50	99	128	26.0	5.08	0.945	0.155	77	144					
	100					0.175	78	145					
51	101	140	38.1	8.35	1.83	0.270	79	146					
	102					0.275	80	147					
52	103	155	38.6	10.5	2.28	0.415	81	148					
	104					0.535	82	149					
53	105	164	44.3	10.8	2.35	0.515	83	150					
	106					0.545	84	151					
54	107	173	57.3	11.8	2.21	0.525	85	152					
	108					0.585	86	153					
55	109	189	60.0	15.4	2.62	0.625	87	154					
	110					0.535	88	155					
56	111	201	66.8	15.0	3.00	0.165	89	156					
	112					0.525	90	157					
57	113	209	65.1	18.7	3.32	0.575	91	158					
	114					0.555	92	159					
58	115	200	57.3	15.8	2.48	0.455	93	160					
	116					0.535	94	161					
59	117	161	38.9	10.9	2.25	0.445	95	162					
	118					0.320	96	163					
60	119	121	34.2	9.38	1.46	0.300	97	164					
	120					0.300	98	165					
61	121	105	26.7	6.66	1.50	0.225	99	166					
	122					0.215	100	167					
62	123	71.7	16.6	3.37	1.09	0.205	101	168					
	124					0.135	102	169					
63	125	56.6	13.8	2.74	0.645	0.065	103	170					
	126					0.035	104	171					
64	127	37.7	9.33	2.84	0.360	0.035	105	172					
	128					0.035	106	173					
65	129	20.0	4.59	1.46	0.175	0.030	107	174					
	130						108	175					
66	131	8.42	0.970	0.565	0.075		109	176					
	132						110	177					
67	133	0.33	0.285	0.095			111	178					
	134						112	179					
68	135	2.90	0.075				113	180					
							114	181					

Table 5.2 (Continued)

DATE 21 AUGUST 1956
TIME 1400-1410 CSTCONCENTRATION (mg m^{-3})

RUN NO. 50

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
49	91							136					0.440
	93						69	137	107	31.7	7.09	2.46	0.300
47	93	9.060						136					0.350
	94						70	139	73.1	20.0	3.45	1.04	0.300
48	95	0.580						140					0.190
	96						71	141	42.2	10.1	1.62	0.375	0.130
49	97	3.20						142					0.085
	98						72	143	27.0	8.21	0.680	0.045	0.045
50	99	14.2	0.075					144					
	100						73	145	24.8	1.20	0.055		
51	101	19.2	0.450	0.025				146					
	102						74	147	9.62	0.180			
52	103	17.1	2.00	0.140				148					
	104						75	149	4.32	0.150			
53	105	22.8	4.23	0.260	0.015			150					
	106						76	151	3.45	0.050			
54	107	25.4	7.52	0.370	0.050			152					
	108						77	153	2.43				
55	109	15.5	9.72	1.95	0.040			154					
	110					0.045	78	155		0.790			
56	111	06.0	15.9	3.45	0.180	0.075		156					
	112					0.080	79	157		0.345			
57	113	88.5	25.7	4.76	1.12	0.195		158					
	114					0.280	80	159		0.050			
58	115	112	30.9	7.12	1.94	0.280		160					
	116					0.285	81	161					
60	117	136	32.7	8.55	1.82	0.255		162					
	118					0.215	82	163					
60	119	166	42.8	7.98	1.62	0.190		164					
	120					0.160	83	165					
61	121	169	46.1	7.46	1.37	0.145		166					
	122					0.150	84	167					
62	123	165	42.8	M	1.65	0.150		168					
	124					0.180	85	169					
63	125	201	47.0	7.56	1.88	0.180		170					
	126					0.250	86	171					
64	127	231	51.2	9.76	2.30	0.370		172					
	128					0.340	87	173					
65	129	243	64.7	14.3	3.12	0.310		174					
	130					0.390	88	175					
66	131	237	77.0	18.3	2.74	0.430		176					
	132					0.400	89	177					
67	133	237	72.5	18.0	3.63	0.450		178					
	134					0.600	90	179					
68	135	162	55.2	14.3	3.83	0.470		180					
							91	181					

Table 5.2 (Continued)

DATE 21 AUGUST 1956
TIME 1530 - 1540 CSTCONCENTRATION (mg m^{-3})

RUN NO. 51

POST NO.		ARC					POST NO.		ARC				
Inner Arc	800m arc	50m	100m	200m	400m	800m	Inner Arc	800m arc	50m	100m	200m	400m	800m
16	91						136						0.045
	92						00	137	80.6	25.5	1.08	0.520	0.135
47	03						138						0.135
	04						70	139	84.9	30.8	4.70	0.760	0.230
18	95	0.025					140						0.225
	96						71	141	80.3	22.2	5.15	1.13	0.185
49	07	0.040					142						0.160
	08						72	143	60.0	14.8	4.60	1.03	0.145
50	90	0.060					144						0.210
	100						73	145	71.6	14.2	3.97	0.860	0.210
51	101	0.085					146						0.135
	102						74	147	99.3	17.1	4.68	1.21	0.155
52	103	0.095					148						0.210
	104						75	149	150	27.3	5.81	1.80	0.300
53	105	0.065					150						0.315
	106						76	151	201	47.3	9.33	2.47	0.410
54	107	0.090					152						0.450
	108						77	153	227	68.7	12.7	3.12	0.430
55	100	0.105					154						0.410
	110						78	155	240	71.0	18.4	2.72	0.285
56	111	0.155					156						0.235
	112						79	157	267	68.1	18.6	2.97	0.240
57	113	0.205					158						0.185
	114						80	159	219	70.3	15.3	2.10	0.230
58	115	1.14					160						0.290
	116						81	161	191	55.7	10.0	1.43	0.320
59	117	2.61					162						0.155
	118						82	163	155	39.5	9.33	1.60	0.120
60	119	3.48					164						0.095
	120						83	165	119	34.7	9.33	2.81	0.035
61	121	4.28					166						
	122						84	167	97.3	34.1	8.40	1.53	
62	123	5.48	0.110				168						
	124						85	169	75.3	23.3	5.35	0.730	
63	125	8.19	1.74				170						
	126						86	171	62.7	14.6	3.29	0.045	
64	127	11.7	3.54				172						
	128						87	173	38.0	9.39	2.16		
65	120	17.0	4.01	0.155			174						
	130						88	175	27.6	6.09	0.650		
66	131	36.3	3.89	1.14	0.010		176						
	132						89	177	14.4	4.98	0.080		
67	133	54.6	7.07	1.08	0.205		178						
	134						90	179	9.39	3.02			
68	135	91.1	16.8	1.53	0.400		180						
							91	181	8.61	0.450			

Table 5.2 (Continued)

DATE 24 August 1956
TIME 1117-1127 CSTCONCENTRATION (mg m^{-3})

RUN NO. 52

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m	
1	1	21.2	6.24	0.135				46						0.015
	2							47	104	18.3	2.45	0.570	0.040	
2	3	27.3	12.7	0.480				48						0.050
	4							49	112	21.2	2.39	0.350	0.040	
3	5	32.0	12.2	1.25				50						0.035
	6							51	91.1	24.5	3.27	0.200	0.010	
4	7	41.1	12.0	1.59				52						0.010
	9							53	101	20.1	5.13	0.100	0.030	
1	10	35.3	9.68	1.00				54						0.010
	11							55	113	20.1	4.35	0.085	0.000	
11	12	43.4	9.59	1.28				56						0.030
	13							57	176	30.3	3.92	0.380		
13	14	40.8	9.78	1.63				58						
	15							59	168	29.0	2.68	0.360		
8	15	42.0	10.3	1.72		0.060		60						0.010
	16					0.035		61	151	27.0	1.57	0.155		
9	17	45.0	11.7	1.88	0.055	0.030		62						0.035
	18					0.025		63	140	18.3	0.940	0.025	0.003	
10	19	45.6	9.06	1.56	0.090			64						
	20					0.020		65	110	8.84	0.350	0.050		
11	21	73.8	7.10	1.68	0.150			66						
	22							67	76.8	7.05	0.070			
12	23	92.6	9.93	1.26	0.300	0.030		68						
	24							69	51.2	4.53				
13	25	99.5	22.2	0.790	0.330	0.035		70						
	26					0.055		71	44.6	3.84				
14	27	108	29.6	0.700	0.290	0.025		72						
	28					0.030		73	42.6	3.16				
15	29	129	26.9	2.28	0.295			74						
	30					0.005		75	50.9	2.91				
16	31	137	21.2	3.71	0.420			76						
	32					0.015		77	43.4	1.92				
17	33	137	19.6	4.89	0.800	0.010		78						
	34					0.015		79	24.9	0.215				
18	35	80.3	17.0	4.81	1.05			80						
	36							81	7.88	0.018				
19	37	88.4	19.5	4.71	0.970	0.016		82						
	38					0.030		83	5.45	0.015				
20	39	73.1	21.3	5.98	0.480	0.055		84						
	40					0.060		85	3.23	0.010				
21	41	78.5	21.9	4.95	0.44	0.080		86						
	42					0.015		87	2.31					
22	43	84.0	23.1	3.14	0.450	0.015		88						
	44					0.030		89	0.325					
23	45	90.8	15.5	3.54	0.740	0.100		90						

DATE 24 August 1958
TIME 2000-2010 CST

Table 5.3 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 53

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							40					
	2							24	47	158	4.53		
2	3								48				
	4							25	49	37.8	0.115		
3	5								50				
	6							26	51	2.76			
4	7								52				
	8							27	53	0.035			
5	9								54				
	10							28	55				
6	11								56				
	12							29	57				
7	13								58				
	14							30	59				
8	15								60				
	16							31	61				
9	17								62				
	18							32	63				
10	19								64				
	20							33	65				
11	21								66				
	22							34	67				
12	23								68				
	24							35	69				
13	25								70				
	26							36	71				
14	27	0.110							72				
	28							37	73				
15	29	2.60							74				
	30							38	75				
16	31	23.1	0.710	0.050					76				
	32							39	77				
17	33	109	16.7	0.775	0.035				78				
	34							40	79				
18	35	218	102	21.0	0.925				80				
	36					0.160		41	81				
19	37	608	305	115	31.7	4.41			82				
	38					24.7		42	83				
20	39	786	534	233	86.2	34.2			84				
	40					25.6		43	85				
21	41	923	488	162	50.3	12.8			86				
	42					2.52		44	87				
22	43	755	258	28.4	3.48	0.210			88				
	44					0.025		45	89				
23	45	410	47.1	0.955					90				

DATE 24 August 1956
TIME 2200-2210 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 54

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m Arc	50m	100m	200m	400m	800m	Inner Arcs	800m Arc	50m	100m	200m	400m	800m
1	1						46						3.60
	2						24	47	374	156	62.0	22.3	7.92
2	3						48						9.51
	4						25	49	422	171	55.8	19.3	6.62
3	5						50						2.04
	6						26	51	356	105	25.0	4.82	0.800
4	7						52						0.030
	8						27	53	215	43.4	0.38	0.670	0.065
5	9						54						0.080
	10						28	55	105	13.2	1.11	0.555	0.085
6	11						56						0.015
	12						29	57	40.1	2.31	0.205		0.070
7	13						58						
	14						30	59	6.87	0.350			
8	15						60						
	16						31	61	1.37				
9	17						62						
	18						32	63	0.070				
10	19						64						
	20						33	65					
11	21						66						
	22						34	67					
12	23						68						
	24						35	69					
13	25						70						
	26						36	71					
14	27						72						
	28						37	73					
15	29						74						
	30						38	76					
16	31						76						
	32						39	77					
17	33	0.240					78						
	34						40	79					
18	35	0.780					80						
	36						41	81					
19	37	6.81	0.100	0.135			82						
	38						42	83					
20	39	20.1	2.04	0.180			84						
	40						43	85					
21	41	80.1	13.8	1.11	0.050		86						
	42						44	87					
22	43	152	44.4	8.01	0.880	0.040	88						
	44					0.155	45	89					
23	45	261	99.3	32.2	7.12	1.04	90						

DATE 25 August 1956
TIME 0100-0110 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 55

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1						46						
	2						24	47	0.485	0.010			
2	3						48						
	4						25	49	0.635	0.020			
3	5						50						
	6						26	51	2.45	0.030			
4	7						52						
	8						27	53	8.19	0.190			
5	9						54						
	10						28	55	20.0	1.01	0.035		
6	11						56						
	12						29	57	44.7	5.49	0.430		
7	13						58						
	14						30	59	80.9	18.5	2.53	0.345	0.025
8	15						60						0.115
	16						31	61	145	44.7	13.4	2.10	0.305
9	17						62						0.885
	18						32	63	192	66.8	22.4	5.54	1.85
10	19						64						2.49
	20						33	65	219	84.2	27.2	7.83	2.83
11	21						66						2.39
	22						34	67	218	82.7	26.3	7.35	1.81
12	23						68						1.19
	24						35	69	192	65.6	18.7	3.45	0.615
13	25						70						0.275
	26						36	71	156	38.0	8.09	0.860	0.085
14	27						72						0.020
	28						37	73	97.2	14.9	1.30	0.045	
15	29						74						
	30		—				38	75	50.1	4.04	0.335		
16	31						76						
	32						39	77	14.3	0.805	0.080		
17	33						78						
	34						40	79	1.01	0.300			
18	35						80						
	36						41	81	0.500	0.080			
19	37						82						
	38						42	83	0.100				
20	39						84						
	40						43	85	0.050				
21	41						86						
	42						44	87					
22	43						88						
	44						45	89					
23	45	0.330					90						

DATE 25 August 1958
TIME 0300-0310 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 56

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m Arc	50m	100m	200m	400m	800m	Inner Arcs	800m Arc	50m	100m	200m	400m	800m
1	1						46						
	2						24	47	0.335	0.130			
2	3						48						
	4						25	49	2.90	0.155	0.020		
3	5						50						
	6						26	51	8.55	0.405	0.035		
4	7						52						
	8						27	53	33.0	3.50	0.243		
5	9						54						
	10						28	55	77.9	14.1	2.13	0.085	
0	11						56						
	12						29	57	130	40.3	9.01	1.18	0.050
7	13						58						0.195
	14						30	59	216	74.0	22.7	4.90	0.746
8	15						60						2.08
	16						31	61	284	110	33.0	11.3	3.76
9	17						62						4.50
	18						32	63	308	110	30.3	12.6	4.74
10	19						64						1.20
	20						33	65	270	91.7	28.7	8.48	2.48
11	21						66						0.905
	22						34	67	210	70.2	10.7	2.88	0.230
12	23						68						0.075
	24						35	69	147	36.9	5.58	0.510	0.025
13	25						70						
	26						36	71	92.7	13.0	0.915	0.030	
14	27						72						
	28						37	73	41.3	2.81	0.095	0.010	
15	29						74						
	30						38	75	10.8	0.370			
16	31						76						
	32						39	77	2.40				
17	33						78						
	34						40	79	0.310				
18	35						80						
	36						41	81					
19	37						82						
	38						42	83					
20	39						84						
	40						43	85					
21	41	0.085					86						
	42						44	87					
22	43	0.115	0.070				88						
	44						45	89					
23	45	0.200	0.120				90						

DATE 25 August 1938
TIME 1730-1740 CST

Table 5.3 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 57

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							46					
	2							47					
2	3							48					
	4							49					
3	5							50					
	6							51					
4	7							52					
	8							53					
5	9							54					
	10							55					
6	11							56					
	12							57					
7	13							58					
	14							59					
8	15							60					
	16							61					
9	17							62					
	18							63					
10	19							64					
	20							65					
11	21							66					
	22							67					
12	23							68					
	24							69					
13	25							70					
	26							71					
14	27							72					
	28							73					
15	29							74					
	30							75					
16	31							76					
	32							77	0.145				
17	33							78					
	34							79	0.260				
18	35							80					
	36							81	0.550				
19	37							82					
	38							83	2.31				
20	39							84					
	40							85	3.27				
21	41							86					
	42							87	5.69	0.145			
22	43							88					
	44							89	6.68	0.550			
23	45							90					

DATE 25 August 1956
TIME 1730-1740 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 57

POST NO.		ARC					POST NO.		ARC				
Inner Arc	800m arc	50m	100m	200m	400m	800m	Inner Arc	800m arc	50m	100m	200m	400m	800m
46	91	15.0	2.96	0.590				136					
	92							69	137	0.060			
47	93	32.7	M	1.41	0.020				138				
	94							70	139				
48	95	58.6	9.00	4.19	0.520				140				
	96							71	141				
49	97	81.9	15.3	5.04	1.37				142				
	98							72	143				
50	99	132	29.1	7.35	1.53	0.110			144				
	100					0.335		73	145				
51	101	171	44.7	11.0	2.46	0.600			146				
	102					0.740		74	147				
52	103	224	57.8	18.2	3.60	0.910			148				
	104					1.13		75	149				
53	105	270	74.0	30.0	6.16	1.25			150				
	106					1.79		76	151				
54	107	282	79.4	29.2	8.82	1.96			152				
	108					2.27		77	153				
55	109	281	75.3	26.4	7.33	1.93			154				
	110					1.33		78	155				
56	111	243	38.6	20.4	4.30	0.910			156				
	112					0.730		79	157				
57	113	201	51.6	17.5	3.36	0.590			158				
	114					0.500		80	159				
58	115	159	17.9	12.0	2.78	0.630			160				
	116					0.840		81	161				
59	117	142	37.2	12.6	2.84	0.820			162				
	118					0.930		82	163				
60	119	118	28.7	8.61	2.73	0.600			164				
	120					0.460		83	165				
61	121	86.7	17.7	5.27	2.16	0.320			166				
	122					0.100		84	167				
62	123	34.0	8.70	4.28	1.19				168				
	124							85	169				
63	125	42.2	7.37	2.54	0.250				170				
	126							86	171				
64	127	34.0	4.47	0.610	0.045				172				
	128							87	173				
65	129	10.7	1.37	0.035	0.020				174				
	130							88	175				
66	131	1.62	1.28	0.020					176				
	132							89	177				
67	133	0.850	0.930						178				
	134							90	179				
68	135	0.165							180				
								91	181				

DATE 25 August 1956
TIME 1930-1940 CST

Table 5.2 (Continued)

CONCENTRATION (mg m^{-3})

RUN NO. 58

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1						24	46					
	2							47					
2	3							48					
	4						25	49					
3	5							50					
	6						26	51					
4	7							52					
	8						27	53					
5	9							54					
	10						28	55					
6	11							56					
	12						29	57					
7	13							58					
	14						30	59					
8	15							60					
	16						31	61					
9	17							62					
	18						32	63					
10	19							64					
	20						33	65					
11	21							66					
	22						34	67					
12	23							68					
	24						35	69					
13	25							70					
	26						36	71					
14	27							72					
	28						37	73					
15	29							74					
	30						38	75					
16	31							76					
	32						39	77					
17	33							78					
	34						40	79	0.020				
18	35							80					
	36						41	81	0.560				
19	37							82					
	38						42	83	6.68				
20	39							84					
	40						43	85	60.2	2.96	0.035		
21	41							86					0.040
	42						44	87	279	48.9	4.34	0.800	3.10
22	43							88					24.5
	44						45	89	557	293	80.9	43.8	59.4
23	45							90					48.2

DATE 25 August 1958
TIME 1930 - 1940 CST

Table 5.2 (Continued)

CONCENTRATION (mg m^{-3})

RUN NO. 58

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m	
10	91	1000	060	311	140	12.0		136						
	92					0.215	69	137						
47	93	794	575	221	27.1			138						
	94						70	139						
18	95	633	318	37.9	0.090			140						
	96						71	141						
40	97	410	52.1	0.550				142						
	98						72	143						
50	99	150	2.93	0.020				144						
	100						73	145						
61	101	21.0						146						
	102						74	147						
52	103	1.10						148						
	104						75	149						
53	105	0.090						150						
	106						76	151						
54	107							152						
	108						77	153						
65	109							154						
	110						78	155						
58	111							156						
	112						79	157						
57	113							158						
	114						80	159						
58	115							160						
	116						81	161						
50	117							162						
	118						82	163						
60	119							164						
	120						83	165						
61	121							166						
	122						84	167						
62	123							168						
	124						85	169						
63	125							170						
	126						86	171						
64	127							172						
	128						87	173						
65	129							174						
	130						88	175						
66	131							176						
	132						89	177						
67	133							178						
	134						90	179						
68	135							180						
							91	181						

DATE 25 August 1956
TIME 2230-2240 CST

Table 5.2 (Continued)
CONCENTRATION (mg r⁻³)

RUN NO. 59

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							46					
	2							47					
2	3							48					
	4							49					
3	5							50					
	6							51					
4	7							52					
	8							53					
5	9							54					
	10							55					
6	11							56					
	12							57					
7	13							58					
	14							59					
8	15							60					
	16							61					
9	17							62					
	18							63					
10	19							64					
	20							65					
11	21							66					
	22							67					
12	23							68					
	24							69	0.110				
13	25							70					
	26							71	0.165				
14	27							72					
	28							73	0.330				
15	29							74					
	30							75	1.30				
16	31							76					
	32							77	14.3	0.300			
17	33							78					
	34							79	100	7.01	0.090		
18	35							80					
	36							81	332	77.0	7.43	0.325	
19	37							82					0.165
	38							83	567	303	88.8	22.1	3.43
20	39							84					20.3
	40							85	723	521	239	101	39.4
21	41							86					22.3
	42							87	707	419	134	26.4	3.55
22	43							88					0.295
	44							89	552	174	22.1	0.635	0.030
23	45							90					

DATE 25 August 1956
TIME 2230 - 2240 CST

Table 5.2 (Continued)

CONCENTRATION (mg m^{-3})

RUN NO. 59

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
40	91	239	23.6	0.870				136					
	92						69	137					
47	93	67.2	2.51					138					
	94						70	139					
48	95	11.8	0.305					140					
	96						71	141					
49	97	4.43	0.066					142					
	98						72	143					
50	99	0.205						144					
	100						73	145					
51	101							146					
	102						74	147					
53	103							148					
	104						75	149					
53	105							150					
	106						76	151					
54	107							152					
	108						77	153					
55	109							154					
	110						78	155					
56	111							156					
	112						79	157					
57	113							158					
	114						80	159					
58	115							160					
	116						81	161					
59	117							162					
	118						82	163					
60	119							164					
	120						83	165					
61	121							166					
	122						84	167					
62	123							168					
	124						85	169					
63	125							170					
	126						86	171					
64	127							172					
	128						87	173					
65	129							174					
	130						88	175					
66	131							176					
	132						89	177					
67	133							178					
	134						90	179					
68	135							180					
							91	181					

DATE 26 August 1958
TIME 0030-0040 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 60

POST NO.		ARC				POST NO.		ARC						
Inner Arcs	800m arc	50m	100m	200m	400m	800m		Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1								46					
	2								47					
2	3								48					
	4								49					
3	5								50					
	6								51					
4	7								52					
	8								53					
5	9								54					
	10								55					
6	11								56					
	12								57					
7	13								58					
	14								59					
8	15								60					
	16								61					
9	17								62					
	18								63					
10	19								64					
	20								65					
11	21								66					
	22								67					
12	23								68					
	24								69					
13	25								70					
	26								71					
14	27								72					
	28								73					
15	29								74					
	30								75					
16	31								76					
	32								77					
17	33								78					
	34								79					
18	35								80					
	36								81					
19	37								82					
	38								83					
20	39								84					
	40								85					
21	41								86					
	42								87	0.015	0.010			
22	43								88					
	44								89	0.045	0.070			
23	45								90					

Table 5.2 (Continued)

DATE 26 August 1956
TIME 0030 - 0040 CETCONCENTRATION (mg m^{-3})

RUN NO. 60

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
46	91	0.125	0.515					136					
	92							69	137				
47	93	0.210	0.480					138					
	94							70	139				
48	95	0.870	0.375	0.070				140					
	96							71	141				
49	97	4.07	0.470	0.120				142					
	98							72	143				
50	99	22.5	1.73	0.275				144					
	100							73	145				
51	101	05.0	0.12	0.795	0.030			146					
	102							74	147				
52	103	130	33.2	6.40	0.540			148					
	104					0.085		75	149				
53	105	237	83.1	26.4	6.18	0.545		150					
	106					1.79		76	151				
54	107	302	118	43.6	15.1	4.15		152					
	108					6.07		77	153				
55	109	281	111	40.2	10.8	4.75		154					
	110					2.44		78	155				
56	111	212	51.4	13.3	3.20	0.815		156					
	112					0.135		79	157				
57	113	110	27.2	2.98	0.270	0.030		158					
	114							80	159				
58	115	44.7	4.94	0.330				160					
	116							81	161				
59	117	10.6	0.416					162					
	118							82	163				
60	119	1.76	0.060					164					
	120							83	165				
61	121	0.220	0.045					166					
	122							84	167				
62	123	0.140						168					
	124							85	169				
63	125	0.110						170					
	126							86	171				
64	127							172					
	128							87	173				
65	129							174					
	130							88	175				
66	131							176					
	132							89	177				
67	133							178					
	134							90	179				
68	135							180					
								91	181				

DATE 27 August 1958
TIME 1100-1110 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 61

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							46					
	2							47					
2	3							48					
	4							49					
3	5							50					
	6							51					
4	7							52					
	8							53					
5	9							54					
	10							55					
6	11							56					
	12							57					
7	13							58					
	14							59					
8	15							60					
	16							61					
9	17							62					
	18							63					
10	19							64					
	20							65					
11	21							66					
	22							67					
12	23							68					
	24							69					
13	25							70					
	26							71					
14	27							72					
	28							73					
15	29							74					
	30							75					
16	31							76					
	32							77					
17	33							78					
	34							79	0.325				
18	35							80					
	36							81	4.53				
19	37							82					
	38							83	9.57				
20	39							84					
	40							85	18.9	0.095			
21	41							86					
	42							87	20.9	1.85			
22	43							88					
	44							89	19.8	4.85	0.075		
23	45							90					

Table 5.2 (Continued)

DATE 27 August 1956
TIME 1100 - 1110 CSTCONCENTRATION (mg m^{-3})

RUN NO. 61

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
46	91	29.3	0.36	0.870	0.025		69	136					
	92						70	137	18.2	5.22	1.38	0.083	
47	93	10.2	9.03	3.75	0.070			138					
	94						71	139	22.7	5.37	1.37		
48	95	60.8	17.3	3.34	1.04	0.030		140					
	96					0.080	72	141	17.1	5.67	0.780		
49	97	72.0	21.8	4.08	1.15	0.125		142					
	98					0.265	73	143	12.3	4.05	0.140		
50	99	87.3	23.4	7.13	1.89	0.390		144					
	100					0.625	74	145	8.09	0.865			
51	101	104	32.0	9.73	3.19	0.905		146					
	102					0.945	75	147	2.24	0.055			
52	103	133	35.3	12.2	3.39	0.685		148					
	104					0.615	76	149	0.050				
53	105	201	41.3	12.4	3.05	0.595		150					
	106					0.515	77	151	0.045				
54	107	161	42.6	14.5	3.16	0.555		152					
	108					0.500	78	153					
55	109	101	48.8	16.1	3.65	0.775		154					
	110					0.905	79	155					
56	111	159	55.7	12.3	4.33	0.955		156					
	112					0.845	80	157					
57	113	143	64.3	15.9	3.21	0.735		158					
	114					0.595	81	159					
58	115	148	43.8	10.4	2.31	0.810		160					
	116					0.450	82	161					
59	117	128	39.6	9.83	2.09	0.425		162					
	118					0.320	83	163					
60	119	106	39.0	9.23	2.36	0.420		164					
	120					0.230	84	165					
61	121	85.4	29.4	8.42	2.09	0.230		166					
	122					0.185	85	167					
62	123	71.1	19.5	7.39	1.11	0.180		168					
	124					0.170	86	169					
63	125	59.0	16.7	4.93	1.05	0.085		170					
	126					0.080	87	171					
64	127	43.9	13.3	4.83	1.10	0.080		172					
	128					0.105	88	173					
65	129	40.2	11.7	4.26	0.925	0.145		174					
	130					0.145	89	175					
66	131	35.0	9.87	2.06	0.865	0.135		176					
	132					0.060	90	177					
67	133	26.1	6.08	1.50	0.490			178					
	134						91	179					
68	135	21.3	4.87	1.29	0.415			180					
							92	181					

Table 5.2 (Continued)

DATE 27 AUGUST 1956
TIME 1400 - 1410 CSTCONCENTRATION (mg m^{-3})

RUN NO. 62

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
10	91						60	130					
	92						60	137	29.1	4.11	0.045		
17	93						60	138					
	94						70	130	14.6	2.60			
18	95	0.160					70	140					
	96						71	141	7.20	0.015			
49	97	0.780					72	142					
	98						72	143	4.05	0.300			
60	99	2.66	0.063				73	144					
	100						73	145	3.39	0.170			
51	101	0.89	1.02				74	146					
	102						74	147	2.21	0.095			
52	103	14.2	3.68				75	148					
	104						75	149	1.32	0.100			
53	105	50.1	6.03	0.215		0.015	76	150					
	106						76	151	0.380	0.105			
54	107	99.6	15.2	1.21		0.040	76	152					
	108						77	153	0.065	0.070			
55	109	145	28.2	3.93	0.050	0.330	78	154					
	110						78	155	0.230				
60	111	179	49.4	8.78	0.585	0.210	79	156					
	112						79	157	0.210				
57	113	231	76.4	16.2	1.45	0.430	80	158					
	114						80	159	0.175				
58	115	296	88.4	21.6	3.71	0.745	81	160					
	116						81	161	1.00				
50	117	335	113	32.9	7.33	1.45	82	162					
	118						82	163	1.00				
60	119	378	115	33.8	8.08	1.93	83	164					
	120						83	165	1.00				
61	121	333	98.4	31.4	7.63	1.72	84	166					
	122						84	167	1.14				
62	123	266	81.9	25.5	7.94	1.27	85	168					
	124						85	169	0.835				
63	125	170	67.7	16.0	7.68	0.005	86	170					
	126						86	171	0.350				
64	127	168	45.0	9.79	1.75	0.190	87	172					
	128						87	173	0.125				
65	129	144	31.7	5.82	0.745	0.075	88	174					
	130						88	175	0.075				
66	131	113	10.4	2.92	0.320	0.095	89	176					
	132						89	177	0.085				
67	133	80.3	7.01	1.79	0.050	0.075	90	178					
	134						90	179	0.000				
68	135	64.2	6.59	0.446		0.090	91	180					
	136						91	181					

Table 5.2 (Continued)

DATE 29 August 1956
TIME 1930-1940 CSTCONCENTRATION (mg m^{-3})

RUN NO. 65

POST NO.		ARC				POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1						46						
	2						47						
2	3						48						
	4						49						
3	5						50						
	6						51						
4	7						52						
	8						53						
5	9						54						
	10						55						
6	11						56						
	12						57						
7	13						58						
	14						59	0.045					
8	15						60						
	16						61	0.065					
9	17						62						
	18						63	0.150					
10	19						64						
	20						65	0.215					
11	21						66						
	22						67	0.370					
12	23						68						
	24						69	0.945					
13	25						70						
	26						71	2.94	0.045				
14	27						72						
	28						73	12.3	0.550				
15	29						74						
	30						75	39.3	5.81	0.170			
16	31						76						
	32						77	93.5	19.1	2.17	0.120		
17	33						78						0.015
	34						79	174	60.9	14.8	2.37	0.290	
18	35						80						1.47
	36						81	281	110	37.8	12.7	3.42	
19	37						82						6.12
	38						83	354	153	56.2	21.1	7.02	
20	39						84						6.08
	40						85	312	118	38.7	11.4	3.32	
21	41						86						0.925
	42						87	213	63.0	13.7	1.70	0.185	
22	43						88						0.030
	44						89	118	20.3	2.09	0.095		
23	45						90						

DATE 29 August 1956
TIME 1930-1940 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO.65

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
46	91	19.4	3.80	0.145			69	136					
	92						69	137					
47	93	16.2	0.415					138					
	94						70	139					
48	95	2.38						140					
	96						71	141					
49	97	0.310						142					
	98						72	143					
50	99							144					
	100						73	145					
51	101							146					
	102						74	147					
52	103							148					
	104						75	149					
53	105							150					
	106						76	151					
54	107							152					
	108						77	153					
55	109							154					
	110						78	155					
56	111							156					
	112						79	157					
57	113							158					
	114						80	159					
58	115							160					
	116						81	161					
59	117							162					
	118						82	163					
60	119							164					
	120						83	165					
61	121							166					
	122						84	167					
62	123							168					
	124						85	169					
63	125							170					
	126						86	171					
64	127							172					
	128						87	173					
65	129							174					
	130						88	175					
66	131							176					
	132						89	177					
67	133							178					
	134						90	179					
68	135							180					
							91	181					

Table 5.2 (Continued)

DATE 29 August 1958
TIME 2130-2140 CSTCONCENTRATION (mg m^{-3})

RUN NO. 6

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1							40					
	2						21	47	0.430				
2	3							48					
	4						25	49	0.445				
3	5							50					
	6						26	51	0.365	0.055			
4	7							52					
	8						27	53	0.303	0.100			
5	9							54					
	10						28	55	0.280	0.205			
0	11							56					
	12						29	57	0.315	0.245			
7	13							58					
	14						30	59	0.885	0.270	0.150		
8	15							60					
	16						31	61	4.61	0.495	0.080		
9	17							62					
	18						32	63	24.9	1.61	0.553		
10	19							64					
	20						33	65	70.4	28.8	4.58	0.190	
11	21							66					
	22						34	67	108	78.9	28.1	5.65	0.025
12	23							68					0.130
	24						35	69	159	106	45.9	17.1	1.09
13	25							70					4.80
	26						36	71	218	82.1	29.9	13.1	7.72
14	27							72					6.89
	28						37	73	203	60.0	19.8	6.24	5.21
15	29							74					4.13
	30						38	75	215	64.4	20.5	7.00	2.66
16	31							76					2.85
	32						39	77	278	98.9	31.0	11.2	3.29
17	33							78					4.88
	34						40	79	359	155	57.7	23.2	7.50
18	35	0.060						80					7.17
	36						41	81	390	176	66.9	19.3	2.61
19	37	0.130						82					0.446
	38						42	83	321	138	30.0	2.86	0.035
20	39	0.200						84					
	40						43	85	234	47.3	4.34	0.030	
21	41	0.275						86					
	42						44	87	114	9.41	0.225		
22	43	0.360						88					
	44						45	89	37.2	0.960	0.060		
23	45	0.395						90					

DATE 29 August 1958
TIME 2130-2140 CST

Table 5.2 (Continued)

CONCENTRATION (mg m^{-3})

RUN NO. 00

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
40	91	3.02						136					
	92							60	137				
47	93	0.085						138					
	94							70	139				
48	95							140					
	96							71	141				
49	97							142					
	98							72	143				
50	99							144					
	100							73	145				
51	101							146					
	102							74	147				
52	103							148					
	104							75	149				
53	105							150					
	106							76	151				
54	107							152					
	108							77	153				
55	109							154					
	110							78	155				
56	111							156					
	112							79	157				
67	113							158					
	114							80	159				
68	115							160					
	116							81	161				
69	117							162					
	118							82	163				
60	119							164					
	120							83	165				
61	121							166					
	122							84	167				
62	123							168					
	124							85	169				
63	125							170					
	126							86	171				
64	127							172					
	128							87	173				
65	129							174					
	130							88	175				
66	131							176					
	132							89	177				
C7	133							178					
	134							90	179				
68	135							180					
								91	181				

Table 5.2 (Continued)

DATE 30 August 1956
TIME 0030-0040 CSTCONCENTRATION (mg m^{-3})

RUN NO. 67

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m Arc	50m	100m	200m	400m	800m	Inner Arcs	800m Arc	50m	100m	200m	400m	800m
1	1							46					
	2							47					
2	3							48					
	4							49					
3	5							50					
	6							51					
4	7							52					
	8							53					
6	9							54					
	10							55					
6	11							56					
	12							57					
7	13							58					
	14							59					
8	15							60					
	16							61					
9	17							62					
	18							63					
10	19							64					
	20							65					
11	21							66					
	22							67					
12	23							68					
	24							69					
13	25							70					
	26							71					
14	27							72					
	28							73					
15	29							74					
	30							75					
16	31							76					
	32							77	0.065				
17	33							78					
	34							79	0.175				
18	35							80					
	36							81	0.870	0.035			
19	37							82					
	38							83	2.60	0.160	0.040		
20	39							84					
	40							85	10.8	2.10	0.070		
21	41							86					
	42							87	39.0	7.08	0.720	0.070	
22	43							88					
	44							89	84.2	23.7	3.72	0.380	
23	45							90					.075

DATE 30 August 1956
TIME 0030-0040 CST

Table 5.2 (Continued)

CONCENTRATION (mg m^{-3})

RUN NO. 67

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m Arc	50m	100m	200m	400m	800m	Inner Arcs	800m Arc	50m	100m	200m	400m	800m	
46	91	150	52.1	13.0	2.27	0.410		136						
	92					1.46		69	131					
47	93	222	78.8	23.0	8.46	2.77		138						
	94					3.92		70	139					
48	95	281	124	41.1	13.8	4.37		140						
	96					5.99		71	141					
49	97	306	126	48.3	17.3	0.10		142						
	98					4.61		72	143					
50	99	275	109	36.3	10.4	1.81		144						
	100					0.390		73	145					
51	101	186	55.2	14.0	1.78	0.120		146						
	102							74	147					
52	103	105	21.0	2.61	0.069			148						
	104							75	149					
53	105	40.8	4.55	0.195				150						
	106							76	151					
54	107	14.5	0.545					152						
	108							77	153					
55	109	3.75	0.110					154						
	110							78	155					
56	111	0.935	0.105					156						
	112							79	157					
57	113	0.165	0.235					158						
	114							80	159					
58	115							81	160					
	116							82	161					
59	117							83	162					
	118							84	163					
60	119							85	164					
	120							86	165					
61	121							87	166					
	122							88	167					
62	123							89	168					
	124							90	169					
63	125							91	170					
	126							92	171					
64	127							93	172					
	128							94	173					
65	129							95	174					
	130							96	175					
66	131							97	176					
	132							98	177					
67	133							99	178					
	134							100	179					
68	135							101	180					
								102	181					

DATE 30 August 1956
TIME 0230-0240 CST

Table 5.2 (Continued)

CONCENTRATION (mg m^{-3})

RUN NO. 68

POST NO.		ARC					POST NO.		ARC				
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m
1	1						24	46					
	2						25	47					
2	3						26	48					
	4						27	49					
3	5						28	50					
	6						29	51					
4	7						30	52					
	8						31	53					
5	9						32	54					
	10						33	55					
6	11						34	56					
	12						35	57	0.105				
7	13						36	58					
	14						37	59	0.130				
8	15						38	60					
	16						39	61	0.175				
9	17						40	62					
	18						41	63	0.255				
10	19						42	64					
	20						43	65	0.435	0.055			
11	21						44	66					
	22						45	67	0.700	0.015	0.030		
12	23						46	68					
	24						47	69	3.21	0.450	0.035		
13	25						48	70					
	26						49	71	17.0	0.780	0.030		
14	27						50	72					
	28						51	73	38.6	4.56	M		
15	29						52	74					
	30						53	75	102	10.7	1.88	0.045	
16	31						54	76					
	32						55	77	188	66.6	9.27	0.450	
17	33						56	78					
	34						57	79	320	110	28.5	4.31	0.100
18	35						58	80					
	36						59	81	480	173	47.3	13.0	0.890
19	37						60	82				M	
	38						61	83	581	275	77.5	22.0	8.09
20	39						62	84					
	40						63	85	561	300	120	41.1	20.2
21	41						64	86					
	42						65	87	470	231	86.9	35.2	14.6
22	43						66	88					
	44						67	89	330	105	28.9	10.2	0.980
23	45						68	90					
													0.090

DATE 30 August 1958
TIME 0230-0240 CST

Table 5.2 (Continued)
CONCENTRATION (mg m^{-3})

RUN NO. 68

POST NO.		ARC					POST NO.		ARC					
Inner Arcs	800m arc	50m	100m	200m	400m	800m	Inner Arcs	800m arc	50m	100m	200m	400m	800m	
16	91	140	23.4	4.45	0.935		69	130						
	92							137						
17	93	57.0	3.00	0.220	0.015			138						
	94						70	139						
18	95	14.0	0.355	0.020				140						
	96						71	141						
49	97	3.11						142						
	98						72	143						
50	99	0.300						144						
	100						73	145						
51	101							146						
	102						74	147						
52	103							148						
	104						75	149						
53	105							150						
	106						76	151						
54	107							152						
	108						77	153						
55	109							154						
	110						78	155						
56	111							156						
	112						79	157						
57	113							158						
	114						80	159						
58	115							160						
	116						81	161						
59	117							162						
	118						82	163						
60	119							164						
	120						83	165						
61	121							166						
	122						84	167						
62	123							168						
	124						85	169						
63	125							170						
	126						86	171						
64	127							172						
	128						87	173						
65	129							174						
	130						88	175						
66	131							176						
	132						89	177						
67	133							178						
	134						90	179						
68	135							180						
							91	181						

Table 5.3

Ten-minute average gas concentrations measured along the vertical during Project Prairie Grass; entries are in units of mg m^{-3} . Samplers were located at nine levels on each of six towers positioned along the 100-m arc of the horizontal sampling network. Individual towers were located equidistant between the pairs of fence posts listed below:

TOWER NO.	POST NOS.
1	28-29
2	35-36
3	42-43
4	49-50
5	56-57
6	63-64

Remarks

The vertical sampling network was first placed in operation during Run No. 13 on 22 July 1956. No data are available for Runs No. 23, 28, 35, 53, 63, and 64. All towers were outside the time-mean plume during Runs No. 23, 35, and 53. The letter "M" indicates missing data, and blank spaces in the table signify no measurable concentration. The value of the concentration at the 0.5-m level on Tower No. 4 for Run No. 13 was estimated.

CONCENTRATION (mg m⁻³)

Tower No.	Height (m)	Run No.								
		13	14	15	16	17	18	19	20	21
1	17.5							0.250		
	13.5							1.43		
	10.5							2.42		
	7.5							3.09		
	4.5							3.80		
	2.5							5.91		
	1.5							7.34		
	1.0							7.31		
	0.5							7.01		
2	17.5				0.025			3.12	0.130	
	13.5				0.045			5.40	0.385	
	10.5				0.140			7.11	0.975	
	7.5				0.275			14.2	3.26	
	4.5	0.175			0.055			25.1	7.58	
	2.5	8.34			0.035			35.0	11.	
	1.5	23.0			0.095			40.7	13.1	
	1.0	28.5			0.060			41.6	13.4	
	0.5	29.6			0.050			41.9	13.3	
3	17.5	0.280	0.085	8.87	0.280			1.07	0.440	0.090
	13.5		0.580	6.57	M			3.89	2.01	0.720
	10.5	0.330	0.175	6.56	6.09			8.21	5.19	4.29
	7.5		0.170	10.9	18.9	0.250	16.8	13.3	15.3	
	4.5	2.22	0.360	18.9	55.4	2.04	29.6	26.1	42.9	
	2.5	76.2	0.245	25.4	92.6	5.16	41.4	39.9	70.8	
	1.5	5.18	174	0.285	28.5	115	6.02	M	45.6	83.7
	1.0	42.9	237	0.235	29.6	126	5.87	54.2	46.5	90.5
	0.5	61.8	297	0.400	29.0	132	6.02	56.7	47.7	96.3
4	17.5	0.415	2.84	13.6		0.085	0.030	1.29		
	13.5	1.46	4.16	16.5	0.040	1.23	0.095	3.33		
	10.5	0.095	7.46	15.9	0.130	2.76	0.215	5.87	0.080	
	7.5	0.090	7.29	17.1	0.580	3.59	0.726	7.52	0.255	
	4.5	0.070	9.24	22.8	2.66	41.0	1.25	10.7	0.585	
	2.5	28.7	0.860	11.3	23.4	3.45	101	1.47	14.1	0.835
	1.5	239	1.97	10.6	23.1	3.66	135	1.31	15.9	1.05
	1.0	675	2.42	10.8	23.7	4.14	153	1.43	16.4	1.18
	0.5	2200*	2.67	10.8	23.6	3.56	165	1.53	17.1	1.29
5	17.5	0.070	5.21	1.55						
	13.5		11.8	2.73						
	10.5		19.2	3.81						
	7.5		30.2	7.37						
	4.5	0.100	58.8	9.17						
	2.5	1.14	0.540	74.7	8.58					
	1.5	34.5	1.56	83.1	10.4					
	1.0	83.3	2.09	81.3	11.0					
	0.5	158	2.45	106	11.8					
6	17.5	0.145	4.67	1.53						
	13.5	0.105	8.22	4.44						
	10.5	0.090	8.99	7.10						
	7.5		14.5	11.0						
	4.5		19.8	12.1						
	2.5	0.100	29.0	14.3						
	1.5		36.3	13.7						
	1.0	0.085	38.9	13.4						
	0.5		42.2	14.5						

*ESTIMATED VALUE

CONCENTRATION (mg m⁻³)

Tower No.	Height (m)	Run No.								
		22	24	25	26	27	29	30	31	32
1	17.5		0.110	0.195						
	13.5		1.00	0.650						
	10.5		3.71	0.230						
	7.5		10.7	0.630						
	4.5		25.8	0.565						
	2.5		38.9	0.525						
	1.5		44.3	0.970						
	1.0		47.4	1.06						
	0.5		50.1	0.865						
2	17.5	0.040		6.51	0.015	0.005				
	13.5	0.080		5.61	0.035	0.150				
	10.5	0.130		11.5	0.065	0.225				
	7.5	0.225		15.5	0.170	0.370				
	4.5	0.325		17.9	0.130	0.980				
	2.5	0.215		20.3	0.035	3.92				0.150
	1.5	0.340		20.7	0.035	5.37				0.190
	1.0	0.175		20.3	0.025	5.96				0.205
	0.5	0.150		19.8	0.015	6.56				0.125
3	17.5	0.200		10.4	1.20	1.68		1.09		
	13.5	1.33		14.0	3.24	4.40		2.22		
	10.5	4.31		21.3	6.20	7.05		3.56		
	7.5	12.6		24.2	7.85	16.8		5.16		0.375
	4.5	33.6		28.2	15.3	30.9		7.98		38.1
	2.5	60.8		29.6	22.2	44.6		10.6		330
	1.5	76.8		28.7	25.2	54.6		10.4		651
	1.0	81.8		30.5	27.0	60.6		10.6		830
	0.5	86.9		31.4	29.1	64.5		10.9		951
4	17.5		3.38	0.920	1.33			1.16		
	13.5		6.35	2.39	M			2.34		
	10.5		7.94	3.54	M			4.17		
	7.5		8.90	10.2	12.8			7.11		
	4.5		9.32	22.4	25.8			15.0		
	2.5		15.9	35.6	39.3			23.1		
	1.5		19.1	44.1	44.7			29.3		0.055
	1.0		20.4	46.5	47.4			32.4		0.200
	0.5		23.0	50.4	49.4			35.6		7.02
5	17.5		1.64	0.400	0.145			1.36		
	13.5		2.30	1.16	M			2.22		
	10.5		2.01	1.94	M	0.120		6.11		
	7.5		7.38	4.37	2.34	1.07		14.3		0.150
	4.5		9.74	7.59	2.55	5.36		28.5		0.705
	2.5		13.0	11.7	2.55	9.89		39.2		2.90
	1.5		13.4	15.5	2.84	11.9		46.4		4.64
	1.0		12.8	17.1	2.86	12.8		48.6		5.25
	0.5		12.6	19.1	3.12	12.2		49.5		4.91
6	17.5		2.00	0.115		M			1.91	
	13.5		4.04	0.045		M	0.095		4.56	
	10.5		5.69	0.040		M	0.110		8.19	
	7.5		8.15	0.695		M	0.895		13.8	
	4.5		13.4	1.45		M	2.72		21.5	
	2.5		20.1	2.51		57.6	4.43		32.7	
	1.5		29.3	2.85		67.7	5.64		33.8	
	1.0		30.6	3.20		68.9	6.44		35.7	
	0.5		34.1	3.54		74.1	7.11		38.4	

CONCENTRATION (mg m^{-3})

Table 5.3 (Continued)
CONCENTRATION (mg m⁻³)

Tower No.	Height (m)	Run No.								
		42	43	44	45	46	47	48S	48	49
1	17.5		0.630	1.01		0.135				
	13.5		2.42	3.54	0.340	0.180				
	10.5		3.95	7.08	0.440	0.730				
	7.5		5.04	13.1	0.670	3.66				
	4.5		5.87	17.6	1.91	12.6				
	2.5		6.05	22.5	1.58	24.2				
	1.5		5.97	25.1	1.44	32.1				
	1.0		6.29	27.2	1.45	37.7				
	0.5		6.57	29.7	1.64	41.0				
2	17.5		2.27	0.600	0.135			0.950		
	13.5		5.49	3.03	1.32			0.740		
	10.5		8.85	6.02	4.50			1.27		
	7.5		13.8	11.6	14.0			1.91		
	4.5		17.0	24.2	41.3	0.020		2.00		
	2.5		18.3	36.0	75.5	0.035		2.37		
	1.5		19.5	43.2	96.9	0.045		2.42		
	1.0		21.2	48.2	107	0.035		2.46		
	0.5		21.5	48.5	113	0.060		2.13		
3	17.5		2.88	1.37	0.355			7.50		0.020
	13.5		6.38	1.89	0.835			9.05		0.055
	10.5		11.4	4.71	1.50			9.71		0.040
	7.5		19.5	8.27	4.67			11.8		0.345
	4.5		38.3	12.7	12.5			11.4		1.10
	2.5		51.9	14.7	19.7			11.8		2.96
	1.5		54.6	15.0	24.2			10.7		3.99
	1.0		57.8	14.9	26.0			10.9		4.88
	0.5		60.6	14.6	27.0			11.3		5.07
4	17.5		0.150	0.160				3.35		0.630
	13.5		0.930	0.320				4.01		1.71
	10.5		2.49	0.270				4.59		4.85
	7.5		4.61	0.070				3.75		9.42
	4.5		12.8	0.015				4.41		17.6
	2.5		19.2	0.020				3.83		21.8
	1.5		23.0	0.035				3.36		24.3
	1.0		24.2	0.015				3.24		25.1
	0.5		25.1	0.050				3.24		24.8
5	17.5							5.42	0.070	0.580
	13.5	0.185						4.95	0.750	1.70
	10.5	1.32						5.42	1.74	5.21
	7.5	3.08						6.36	4.76	15.2
	4.5	8.28						6.18	7.10	38.9
	2.5	12.9						8.73	9.15	50.4
	1.5	15.5						8.43	10.6	66.3
	1.0	15.9						8.31	10.8	68.6
	0.5	16.4						8.69	11.3	73.1
6	17.5	0.050					0.065	6.32	0.880	1.22
	13.5	0.345					0.375	6.65	5.09	1.74
	10.5	1.86					0.460	6.41	10.5	2.72
	7.5	7.13					0.865	6.56	25.1	5.21
	4.5	18.9					0.530	4.19	43.8	7.80
	2.5	32.9					0.155	5.18	59.7	11.6
	1.5	37.4					0.250	5.70	66.6	12.8
	1.0	39.5					0.440	6.06	69.5	14.0
	0.5	43.1					0.410	6.32	72.8	14.9

CONCLUDING REMARKS

CONCENTRATION (PPM) IN %

Tower No.	Height (m)	Run No.					
		60	61	62	65	66	67
1	17.5						
	13.5						
	10.5						
	7.5						
	4.5				0.065		
	2.5				0.230		
	1.5				0.185		
	1.0				0.225		
	0.5				0.210		
2	17.5						
	13.5						
	10.5						
	7.5				2.04		0.115
	4.5				25.5		0.430
	2.5				76.5		0.490
	1.5				106		0.390
	1.0				118		0.330
	0.5				116		0.415
3	17.5						
	13.5	0.085		0.925			0.020
	10.5	0.205		4.80	0.065		0.220
	7.5	0.300		20.4	3.21	0.120	7.23
	4.5	0.250		64.2	30.0	0.275	71.7
	2.5	0.070		120	73.5	0.805	200
	1.5	0.045		145	93.9	0.865	281
	1.0	0.065		158	100	0.955	330
	0.5	0.070		164	103	1.17	362
4	17.5	0.245				0.025	
	13.5	0.020	1.62			0.400	
	10.5	0.065	4.37	0.080		3.50	
	7.5	0.385	9.29	0.170		16.7	
	4.5	0.500	15.9	0.145		53.7	
	2.5	0.745	22.1			92.7	
	1.5	0.985	23.7			120	
	1.0	0.940	23.4			129	
	0.5	0.785	23.7			143	
5	17.5	0.005	0.165	2.09			
	13.5	0.480	0.705	4.83			
	10.5	1.97	2.69	9.53			
	7.5	8.00	8.63	15.6			
	4.5	23.0	25.2	21.8			
	2.5	38.3	42.8	50.1			
	1.5	47.4	54.0	60.9			
	1.0	49.7	59.3	67.7			
	0.5	50.7	M	71.9			
6	17.5		0.070	5.46			
	13.5		0.200	8.89			
	10.5		0.950	14.6			
	7.5		2.16	21.0			
	4.5		7.61	37.5			
	2.5		13.5	57.6			
	1.5		14.7	61.8			
	1.0		15.5	61.8			
	0.5		17.0	63.0			

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Table 5.4. Correction factors by which concentration data presented in Tables 5.2 and 5.3 should be multiplied to compensate for evaporational loss of impinger solution during aspiration. Tower data corrections are the same as those for the 100-m arc. Blank spaces signify missing data.

RUN NO.	ARC (m)				
	50	100	200	400	800
1	0.97	0.96	0.90	0.93	0.96
2			0.92	0.93	0.96
3	0.99	1.00	0.99	0.98	1.00
4	0.98	0.99	0.98	0.99	1.00
5	0.93	0.93	0.90	0.91	0.91
6	0.93	0.93	0.90	0.89	0.92
7	0.95	0.93	0.91	0.90	0.92
8	0.94	0.93	0.90	0.89	0.92
9	0.93	0.94	0.92	0.93	0.93
10	0.95	0.94	0.92	0.92	0.93
11	0.96	0.96	0.95	0.95	0.95
12	0.95	0.95	0.93	0.93	0.92
13	0.97	0.97	0.95	0.95	0.95
14	0.99	0.99	0.97	0.97	0.98
15	0.94	0.96	0.95	0.95	0.96
16	0.96	0.96	0.94	0.94	0.95
17	0.95	0.95	0.93	0.92	0.93
18	0.98	0.97	0.97	0.95	0.97
19	0.93	0.93	0.91	0.90	0.91
20	0.92	0.93	0.89	0.88	0.89
21	0.98	0.97	0.94	0.95	0.93
22	0.99	0.98	0.95	0.96	0.94
23	0.95	0.94	0.93	0.93	0.94
24	0.94	0.95	0.94	0.93	0.94
25	0.94	0.94	0.94	0.94	0.94
26	0.95	0.95	0.93	0.93	0.93
27	0.94	0.94	0.92	0.92	0.92
28	0.99	1.00	0.97	0.98	0.97
29	0.97	0.98	0.97	0.97	0.97
30					
31					
32	0.97	0.93	0.93	0.92	0.93
33	0.94	0.94	0.93	0.93	0.93
34	0.93	0.93	0.89	0.91	0.91
35	0.94	0.94	0.94	0.94	0.94
35S	0.96	0.98	0.98	0.97	0.98
36	0.96	0.96	0.95	0.94	0.96
37	0.99	0.99	0.97	0.98	0.98
38	0.98	0.99	0.98	0.98	0.98
39	0.94	0.95	0.93	0.93	0.95

Table 5.4 (Continued)

RUN NO.	ARC (m)				
	50	100	200	400	800
40	0.96	0.98	0.96	0.94	0.94
41	0.97	0.97	0.96	0.95	0.96
42	0.96	0.97	0.96	0.97	0.97
43	0.91	0.90	0.87	0.87	0.87
44	0.91	0.92	0.87	0.85	0.88
45	0.92	0.92	0.88	0.87	0.88
46	0.92	0.93	0.92	0.92	0.92
47	0.93	0.94	0.93	0.93	0.93
48	0.96	0.96	0.95	0.96	0.96
48S	0.93	0.94	0.92	0.93	0.88
49	0.97	0.95	0.94	0.93	0.94
50	0.92	0.93	0.93	0.92	0.92
51	0.96	0.95	0.92	0.91	0.90
52	0.93	0.93	0.90	0.89	0.90
53	0.99	0.97	0.96	0.95	0.96
54	0.98	0.96	0.96	0.97	0.97
55	0.95	0.97	0.96	0.95	0.96
56	0.99	0.98	0.98	0.98	0.97
57	0.91	0.93	0.88	0.88	0.88
58	0.95	0.96	0.93	0.93	0.91
59	0.97	0.97	0.93	0.93	0.92
60	0.95	0.94	0.93	0.92	0.93
61	0.89	0.92	0.88	0.88	0.92
62		0.91	0.87	0.88	0.96
63					
64					
65	0.94	0.95	0.93	0.93	
66	0.94	0.98	0.97	0.94	0.95
67	0.97	0.97	0.95	0.95	
68	0.96	0.97	0.96	0.96	0.94