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SULPHUR POLLUTANTS IN AIR AND PRECIPITATION AT NORWEGIAN BACKGROUND STATIONS

Daily measurements November 1971 - June 1972

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1 INTRODUCTION

In October 1971 NILU established a network of stations for determination of sulphur oxides and acidity in daily samples of air and precipitation. The measurements were part of the preparations for the OECD-project "Long Range Transport of Air Pollutants" (LRTAP), in which ten countries in Western Europe participate. The project started officially on the 1st of July 1972, and NILU is responsible for the central coordination of the project. The purpose of the project is to clarify the connection between emissions, transportation and deposition of pollutants, particularly the sulphur compounds, in Europe.

In the present report results from 23 Norwegian measuring stations are presented. Most of the stations are situated in the eastern and southern part of Norway, where the long range transport of pollutants is assumed to have the larger effect. One station is situated in Northern Norway, the rest in Southern Norway.

The measurements include sulphur dioxide in air, sulphur calculated as sulphate in aerosols, and for precipitation the amount, the pH-value and the concentration of sulphate and strong acid. The measured data are from the period November 1971 - June 1972.

2 MEASURING STATIONS

In all 23 measuring stations have been in operation. A map giving the position of the stations is shown in Figure 1. As shown on the map most of the stations are situated in the southernmost part of Norway. However, some stations were placed around the Oslo fjord in order to investigate the contribution from this more densely populated area. In the southernmost part of the country the stations are roughly situated along two lines, an outer line close to the coast, and an inner line further away from the coast.

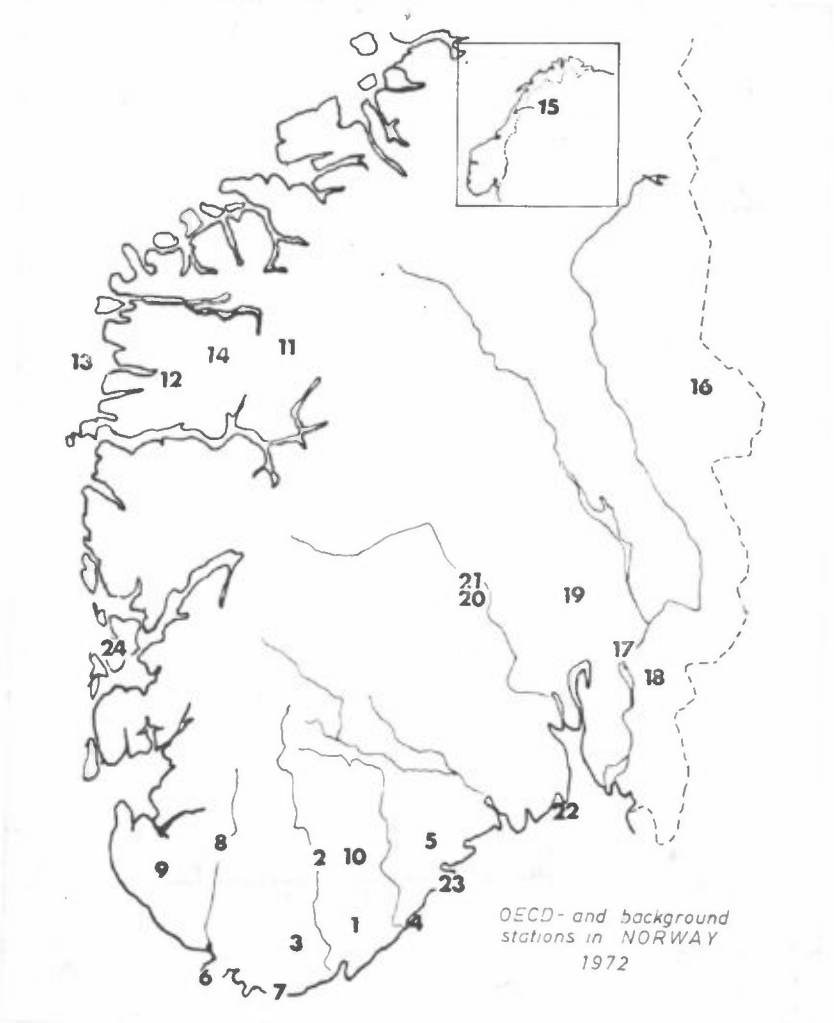

Figure 1: Map of stations.

As the purpose was to study the long range transport, care was taken in positioning the stations so as to avoid pollution from local sources, including domestic heating. Several of the stations were placed at sites used for precipitation stations by the Meteorological Institute. This was done in order to be able to compare present amounts of precipitation with the measurements of the Meteorological Institute.

NO	NAME	METER a.m.s.l.	POS N	POS E	START	DISCONT	AIR	PREC	MI
1	Birkenes	190	58°23'	8°15'	1/11-71	-	x	x	
2	Bygland	215	58°50'	7°48'	1/11-71	17/4-71	x	x	
3	Finsland	275	58°19'	7°35'	1/11-71	-	x[1]	x	x
4	Fløddevigen	10	58°26'	8°45'	1/11-71	17/4-72	x	x	
5	Gjerstad	240	58°53'	8°57'	1/11-71	-		x	x
6	Lista	13	58°06'	6°34'	1/11-71	-		x	x
7	Mandal	138	58°03'	7°27'	1/11-71	-		x	x
8	Skreådalen	475	58°49'	6°43'	1/11-71	-		x	x
9	Søyland	263	58°41'	5°59'	1/11-71	-	x	x	x
10	Tovdal	227	58°48'	8°14'	1/11-71	-		x	x
11	Bjørkhaug	324	61°38'	7°16'	25/6-71	1/7-72		x	x
12	Førde	42	61°28'	5°51'	25/6-71	15/7-72		x	x
13	Kinn	10	61°34'	4°48'	25/6-71	1/7-72		x	x
14	Skei i Jølster	205	61°34'	6°29'	25/6-71	-		x	x
15	Tustervatn	439	65°50'	13°55'	28/12-71	-		x	x
16	Tågmyra	536	61°25'	12°04'	26/12-71	-		x	x
17	Kjeller	120	59°59'	11°03'	2/2-72	-		x	
18	Løken	150	59°48'	11°27'	26/2-72	-		x	
19	Bislingen	680	60°14'	10°37'	26/3-72	-		x	
20	Grimelid	367	60°08'	9°36'	25/3-72	-		x	x
21	Norefjell	810	60°13'	9°31'	27/3-72	-	x	x	
22	Vasser	35	59°04'	10°26'	17/4-72	-	x	x	
23	Lyngør	20	58°38'	9°08'	18/4-72	-	x	x	
24	Fitjar	20	59°55'	5°19'	29/7-72	-		x	x

[1] Air measurements started 20/4-72

NO : refer to number in the map
AIR : air measurement of SO_2
PREC: precipitation
MI : Meteorological Institute, precipitation station.

Table 1: List of stations.

The positions of the stations are given in Table 1. Further, a brief description of each station, extracted from a previous report (1), is given.

NO1 Birkenes: Situated in "Sørlandsheiene", 190 m. a.s.l. The terrain is hilly with characteristic height differences 50-100 meters. The river Tovdalselva runs at 3 km distance, about 150 meters belove the station level. The station is situated on a disbanded farm. The distance to Birkeland centre is 5 km in direction south, and the distance to the coastline is 20 km.

NO2 Bygland: Situated at the Byglandsfjord, 215 m.a.s.l. The valleysides rise to about 600 m above the valley floor. The distance to the coastline is 80 km. The station was later closed down because correlation analysis with other stations indicated pollution from local sources.

NO3 Finsland: Situated in an average hilly terrain with characteristic height differences of 100 m. The station lies 30 km nort-west of the city Kristiansand.

NO4 Flødevigen: Situated at the seashore 10 m. a.s.l., at the inner end of a bay. The station was later closed down because it was influenced by emissions from the town of Arendal, 2-3 km away.

N05 Gjerstad: Situated in hilly terrain, 240 m. a.s. Characteristic height differences are 100-150 meters. The distance to the coastline is 20 km.

N06 Lista: Situated on a flat plain 200-300 m from the coast. With on-shore winds the contribution from seasalts is large for this station.

N07 Mandal: Situated 138 m. a.s.l. The terrain is hilly with characteristic height differences of 50-150 m. The station is situated 2 km north of the city of Mandal. The distance to the coastline is about 3 km.

N08 Skreådalen: Situated on the western side of the valley Sirdalen, 475 m. a.s.l. The station position is close to the western watershed. The terrain has characteristic height differences of 700-800 m. The distance to the coastline is 100 km.

N09 Søyland: Situated in hilly terrain, 263 m. a.s.l. Characteristic height differences are 100-300 m. The distance to the coastline is 25 km.

N10 Tovdal: Situated 227 m. a.s.l, and 50 m above the valley floor. The terrain has characteristic height differences of 300-500 m. The distance to the coastline is 60 km.

N11 Bjørkhaug: Situated in the valley Jostedalen, 324 m. a.s. close to the Jostedalen glacier on a steep slope 250 m above the valley floor. The surrounding mountains are 1000-1500 m above the valley floor.

N12 Førde: Situated on the northern side of the Førdefjord, 42 m. a.s.l. The area is surrounded by mountains about 700 m high. The station is situated 2 km north-west of the village Førde.

N13 Kinn: Situated close to the shoreline on the island Reksta in hilly terrain with characteristic height differences of 100-300 m. The station is situated about 10 km west of the town Florø.

The stations N11, N12 and N13 were part of a special measurement programme and the stations were closed down in July 1972.

N14 Skei i Jølster: Situated at the Jølsterfjord, 205 m. a.s.l. The surrounding mountains are about 1000 m high. The station is situated 1 km north-west of the small village Skei.

N15 Tustervatn: Situated close to the lake Røsvatn in the county Nordland, 439 m. a.s.l. The surrounding mountains are approximately 1000 m high. The station is situated 30 km east of the village Mosjøen.

N16 Tågmyra: Situated in the district Trysil, 536 m. a.s. The terrain is hilly. The valley-sides are 200-400 m high. The station is situated 15 km north-west of the village Innbygda.

N17 Kjeller: Situated in flat terrain close to the Norwegian Institute for Air Research, 120 m. a.s. The station is situated 2 km north of the village Lillestrøm. The distance to Oslo is 20 km.

N18 Løken: Situated in Høland, 150 m. a.s.l. The terrain is hilly and characteristic height differences are 50-100 m. The station is situated 1.5 km north-west of the village Løken, and the distance to Oslo is 40 km.

N19 Bislingen: Situated in Lunner, 680 m. a.s.l. The terrain is hilly with characteristic height differences of 150 m. The station is situated on the top of a hill 35 km north of Oslo.

N20 Grimelid: Situated 367 m. a.s.l, on the western side of the lake Krøderen, 200 m above the valley floor.

N21 Norefjell: Situated 810 m. a.s.l, at Norefjellstua close to the upper limit of the forrested land. The station is situated about 600 m above the lake Krøderen and on the southern sloapes of the Nore Mountain range. There are some cabins and hotels in the area, and the distance to Oslo is about 70 km.

N22 Hvasser: Situated on an island on the western side of the Oslofjord, on a small hill 35 m. a.s.l. The terrain is hilly and the distance to the city of Tønsberg is 15 km to the north.

N23 Lyngør: Situated on an island in slightly hilly terrain in the outskirts of the village Lyngør, 20 m. a.s.l. The distance to the shoreline is 700-800 m.

3 SAMPLING

3.1 Precipitation

For the sampling of precipitation an open polyethylene container of a type produced at NILU for use as dust sampler, has been used so far. The container is mounted about 2 m above the ground on a zinc plated iron stand, as shown in Figure 2. On collecting the samples the container is emptied and rinsed with destilled water. The volume of the sample is measured in ml, and the precipitation in mm is calculated from the sampling area which is 314 cm^2.

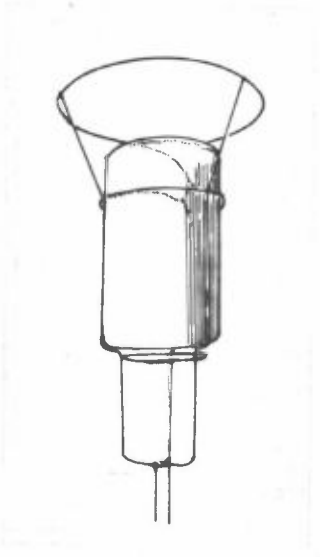

Figure 2:

Precipitation sampler.

Aerodynamic considerations indicate that the volume of the sample collected by a precipitation sampler will give a low estimate of the actual amount of precipitation. Under normal conditions this difference is small, increasing with light precipitation (snow) and strong winds.

Evaporation from the sampler will also give too low precipitation values, but this is of no consequence for the calculation of the deposited amounts of sulphate and strong acid. Since the beginning of July 1972 the samplers were provided with an internal funnel to reduce evaporation losses.

Several of the stations were placed at sites used by the Meteorological Institute for their precipitation samplers. For the station NO3, Finsland, comparison has been made between the two measurements of precipitation. A simple regression analysis based on all cases of precipitation in the first part of 1972, showed that the instrument of the Meteorological Institute on the average gave 3% more precipitation than the NILU sampler. At this station the sampler of the Meteorological Institute is equipped with a screen to reduce the collection error as much as possible, while the NILU precipitation sampler had no such screen. The difference between the two samplers is less for rain than for snow.

In the future the precipitation sampler will be exchanged with a new type which is in accordance with international standards of precipitation samplers. For this new type the evaporation error is reduced to a minimum.

3.2 Air

For air sampling a standard equipment constructed at NILU has been used. The air is passed through a filter and a solution with 0.3% hydrogen peroxide. Particles are deposited on the filter, and sulphur dioxide absorbed in the solution. A picture is shown in Figure 3.

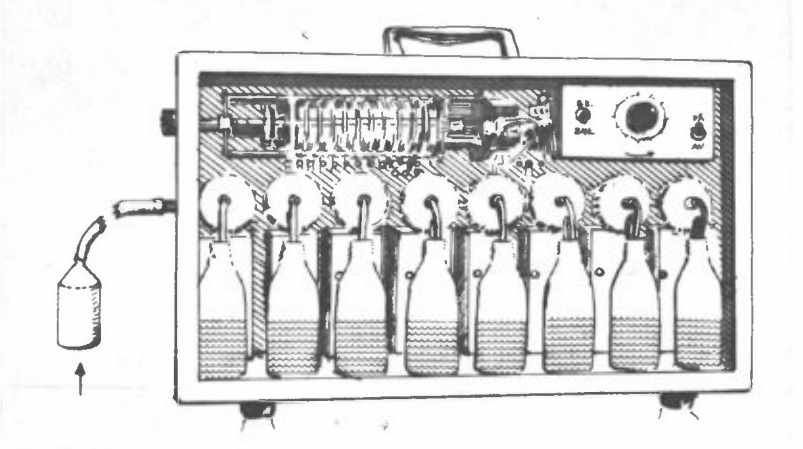

Figure 3: Air sampler.

The equipment contains eight bottles which are shifted automatically after 24 hours. Samples are sent to NILU for analysis once a week. A more detailed description of the sampler is given in (2).

4 CHEMICAL ANALYSIS OF THE SAMPLES

The analytical methods are in accordance with those prescribed for the OECD-project (3).

4.1 Air samples

Sulphate in aerosols collected on filters are determined by X-ray fluorescence. The method is described by Grennfelt et al. (4) and further tested with financial support from NORDFORSK at the Swedish Water and Air Pollution Research Laboratory in Gothenbourg and the Norwegian Institute for Atomic Energy at Kjeller (5), (6). The Norwegian filters are analysed at the Institute for Atomic Energy.

Sulphur dioxide is determined by the barium perchlorate-Thorin method. The method is based on the absorption of sulphur dioxide in an acid hydrogen peroxide solution, and the concentration of sulphate is determined by disproportionation of a coloured barium (II)-thoronolcomplex in 70% dioxane (7), (8).

4.2 Precipitation samples

Sulphate concentration in precipitation is determined by the barium perchlorate-Thorin method after ion exchange with an acid cation exchanger (Dowex 50). Sodium or magnesium is determined by respectively flame emission or atomic absorption. Sodium or magnesium is used to correct the sample for sulphate originating from sea salt. The ratio sulphate/sodium and sulphate/magnesium in sea salt is assumed constant.

The content of strong acid is determined routinely in all samples. The titration method which is used (9) is based on the method of Liberti (10), with colometric generation of OH^--ions and extrapolation of the endpoint by using Gran's plot. Before analysis a known amount of acid is added to the samples in order to bring the pH-value of the sample below 4. In practice this means that only the concentration of acids which are completely (> 90%) dissociated at pH = 4 is measured. The concentration of strong acid is given in microequivalents per liter, shortened to µekv/l. 1 µekv is 1×10^{-6} equivalents, which corresponds to $1{,}008 \times 10^{-6}$ g H^+ ions, or 49×10^{-6} g H_2SO_4. In addition the pH-value is measured in all samples. Good agreement is obtained between the measured pH-value and the content of strong acid for pH < 5.

When the ratio between the concentration of sulphate and strong acid is studied, it becomes evident that sulphuric acid is not the only compound which enters the precipitation. Normally the sulphate concentration is larger than the amount corresponding to strong acid. But there are also cases when the concentration of strong acid is larger than corresponding to the sulphate concentration. In such cases considerable amounts of nitrate have been found in the samples. Chemical analysis of snow samples in southern Norway (11) have shown that appreciable amounts of nitrate are found together with sulphate in the polluted layers.

In monthly precipitation samples from background stations in Norway which are analysed at the International Meteorological Institute (IMI) in Stockholm, the content of S, NH_4-N, NO_3-N, Cl, Na, K, Mg, Ca, pH and bicarbonate or acid is determined in all samples. Granat (12) has made a study of how the pH-value of the precipitation depends on the concentration of these components.

The choice of strong acid and sulphate as the more important analytical parameters have been made because this combination seem to give the maximum information concerning the relationship between acid precipitation and long range transport of air pollutants.

5 RESULTS

Measured values and calculated summaries are reproduced in the appendixes. Appendix 1 gives daily values for the single components at all stations. In addition a monthly and a semi annualy survey for the single components has been worked out. The concentration of sodium which has been used to correct for sea salts, is not given in these surveys. In appendix 2 the complete monthly form for one station is shown as an example. In these forms the sodium and magnesium values are included.

The data show that most of the deposition takes place during a relatively small number of episodes of 1-3 days duration. A table for 3 such episodes is reproduced in appendix 10. The episodes are closley related to the meteorological conditions. The study of this relationship is of primary concern in the LRTAP-project and will not be discussed here.

In the following short comments and brief explanations are given to the different appendixes.

Appendix 1, page 26-70, shows the following measured values:

a) Precipitation (mm) measured with NILU's precipitation collector.

b) Official precipitation data from the Meteorological Institute for those stations which provide such data. In the table the designation 0.0 has

been used in common for both "no precipitation" and for "not measurable precipitation". There is some deviations between the two measurements, this discussed in chapter 3 under sampling.

c) Sulphate in precipitation. The table gives the concentration of sulphate ions in mg/l. The values are corrected for sea salt.

d) pH in precipitation.

e) Strong acid in precipitation given in µekv/l. The determination of strong acid was described under chapter 4, Chemical analysis of samples.

f) Sulphur dioxide in air. The concentration is given as sulphur dioxide in $\mu g/m^3$ for those stations where air samples are collected.

g) Sulphate on filter. This is the concentration of sulphur in aerosols, calculated as $\mu g/m^3$ sulphate. The tables contain these data only for June 1972.

h) Sulphate deposition. This represents the product of the numbers in columns a and c, and gives the deposition measured as mg sulphate/m^2. For the stations Bjørkhaug, Førde, Kinn and Skei where the amount of precipitation has not been measured in the NILU sampler, the measurements of the Meteorological Institute have been used.

i) Deposition of strong acid. This is the product of the figures in the columns a and e. The deposition of strong acid is given in mekv/m^2. For the stations Bjørkhaug, Førde, Kinn and Skei the same comment applies as under point h.

Appendix 2, page 71, shows an example of the measured data for one station during one month. In this table the sodium and magnesium concentrations are included. Due to printing considerations only one sample of these tables is given.

Appendix 3, page 72, shows the monthly deposition of sulphate for each station. The figures are given in mg sulphate /m^2, which corresponds to kg sulphate/km^2. It may be noted that the southernnmost part has the highest values, while some stations at the eastern and western part of South-Norway show high values only from time to time. For the southern part of South Norway March, April and June are the months which show the largest deposition. The highest single value was obtained for June at the station Skreådalen. The month of June also shows the highest average value for all stations. Further, the stations in this region show lower values for November and December 1971 than for the winter months of 1972. The difference is assumed to be due to the weather condtions.

Appendix 4, page 73, shows the pH-value of the precipitation, given as a waited monthly mean value. The stations in the southernmost part show monthly mean values between pH = 3,9 and 4,5. A large number of the values are around pH = 4. Also some of the stations in the eastern part of South-Norway show low values.

Appendix 5, page 74, shows the deposition of strong acid in mekv/m^2. The values are largely comparable to those given in appendix 3. The month of June shows the highest values.

Appendix 6, page 75, shows the deposition of strong acid calculated as kg sulphuric acid/km^2. The values are obtained from the figures in appendix 5 by multiplying with 49. If the amount of strong acid has a negative value, the deposition of sulphuric acid has been set equal to zero.

Appendix 7. If some of the sulphuric acid in the precipitation is neutralized by bases, as for instance ammonia or calcium carbonate, this will influence the ratio between the calculated amounts of acid and sulphate depositon. Using the figures given in appendix 5, deposition of strong acids, the theoretical amount of sulphate in precipitation can be calculated on the assumption that the precipitation only contains diluted sulphuric acid. By relating this theoretical amount of sulphate to the measured content of sulphate, the percentage figures given in appendix 7, page 76, are obtained. If the amount of strong acid is negative, the percentage number has been set equal to zero. If the percentage number is larger than 100, it means that other strong acids than sulphuric acid, i.e. nitric acid, has been present. If the values are low or close to zero, this means that the acids are neutralized by strong or weak bases.

For the month of February it is noted that the percentage figure in appendix 7 is larger than 100 for a number of stations. This is particularly due to the precipitation which arrived around the 10th of February. It is further noted that the percentage figure shows large variations for the stations in the western part of Southern Norway. This means that the precipitation has a very variable composition. A possible explanation is that these stations are strongly influenced by Atlantic air, and that sea salts and nitrogen oxides become more important relative to the sulphur components for these stations, than for the stations in the southern and eastern part of Southern Norway.

Appendix 8, page 77. For the station Birkenes a simple regression analysis has been made in order to study the relation between the observed concentrations of sulphate and strong acid. The analysis was based on the 81 precipitation cases which appeared during the first part of 1972. The correlation coefficient between the concen-

tration of sulphate and strong acid was 0,89. The regression line is nearly parallell to the line for dilute sulphuric acid. The concentration of strong acid is approximately 16 µekv/l less than that corresponding to dilute sulphuric acid, i.e. the acid is partly neutralized. As an illustration observations from three short episodes are also shown in the figure. These episodes are more closely described later.

Appendix 9, page 78, gives semi annual values for sulphate, strong acid and the calculated percentage of sulphuric acid in relation to deposited sulphates for all stations which were in operation during the first part of 1972. The table represents a summary of the results presented in appendix 3, 5, 6 and 7.

Figure 4 and Figure 5, page 17, show deposition maps for sulphate and strong acid for the stations in the southernmost part of Norway. The maps are drawn on a basis of figures given in appendix 9, and attention has been paid to some precipitation measurements from the Meteorological Institute which are not included in this report. The amount of sulphate is given as g/m^2, which is equivalent to kg/decar or ton/km^2. Strong acid is expressed as $mekv/m^2$. The two maps show approximately the same distribution, but the maximum zone for strong acid is perhaps more pronounced than for sulphate.

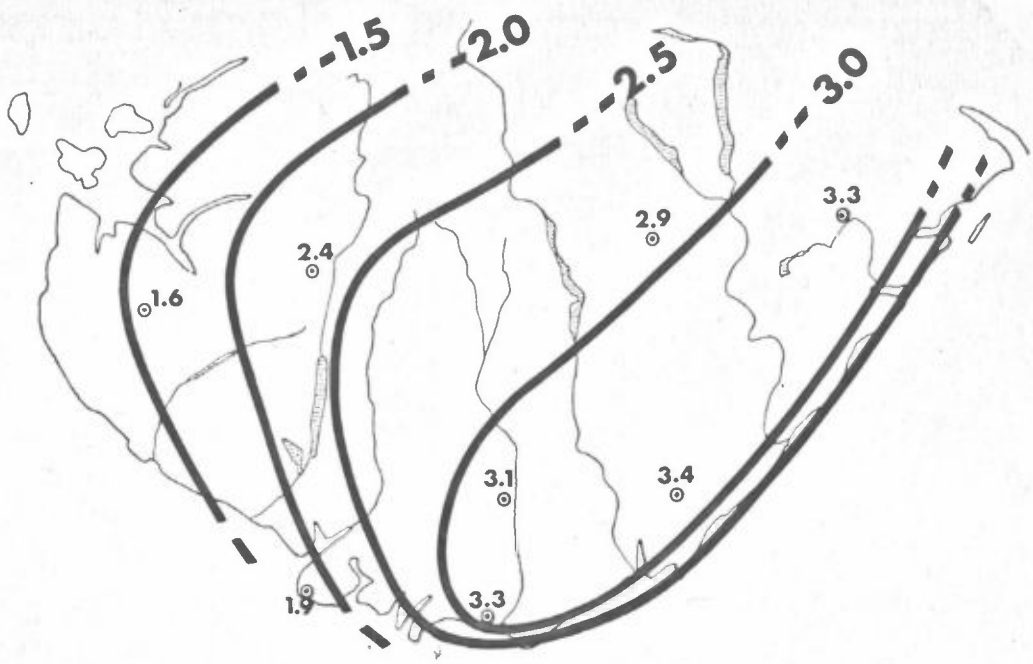

Figure 4: Precipitated sulphate 1.1 - 30.6.1972. (g/m^2)

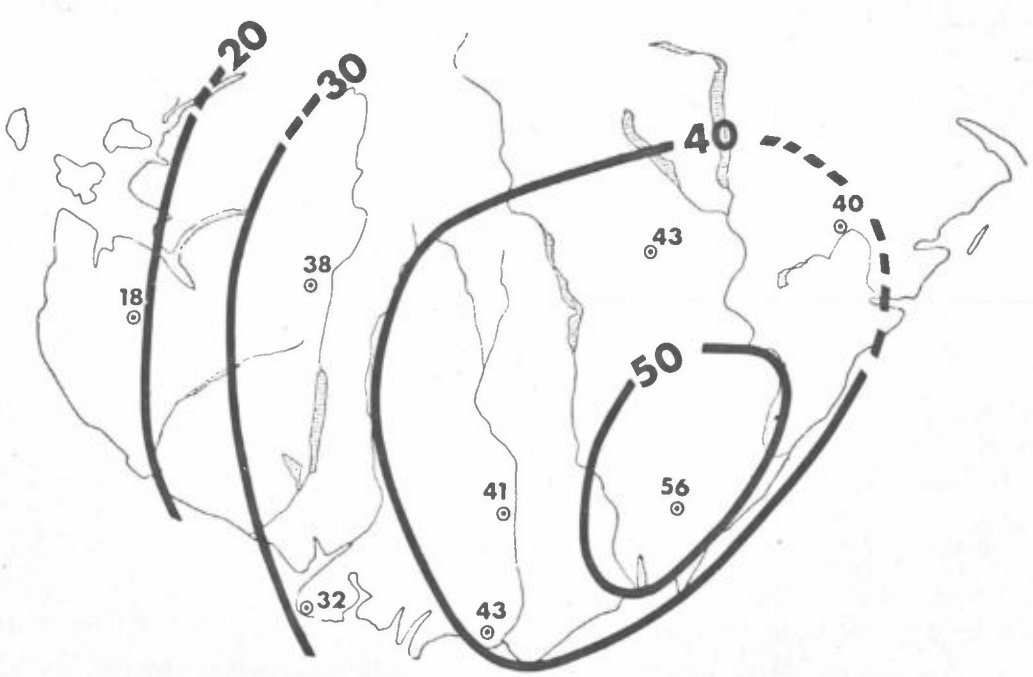

Figure 5: Precipitated strong acid 1.1 - 30.6.1972. ($mekv/m^2$)

Figure 6 shows the cumulative distribution of sulphate in precipitation at the station Birkenes. The abcissa shows days with precipitation, and the precipitation days have been ranged according to diminishing pollution. The ordinate shows accumulated deposition as percentage of the total deposition during the first part of 1972. Approximately 65% of the deposition occurred during 20 days with deposition. Episodes with large amounts of pollution in the first part of 1972, were particularly the periods 23-25 January, 9-13 February, 3-7 March, 10-11 April, 28-30 April, 24-25 May, 2-6 June, 10-11 June and 18-21 June.

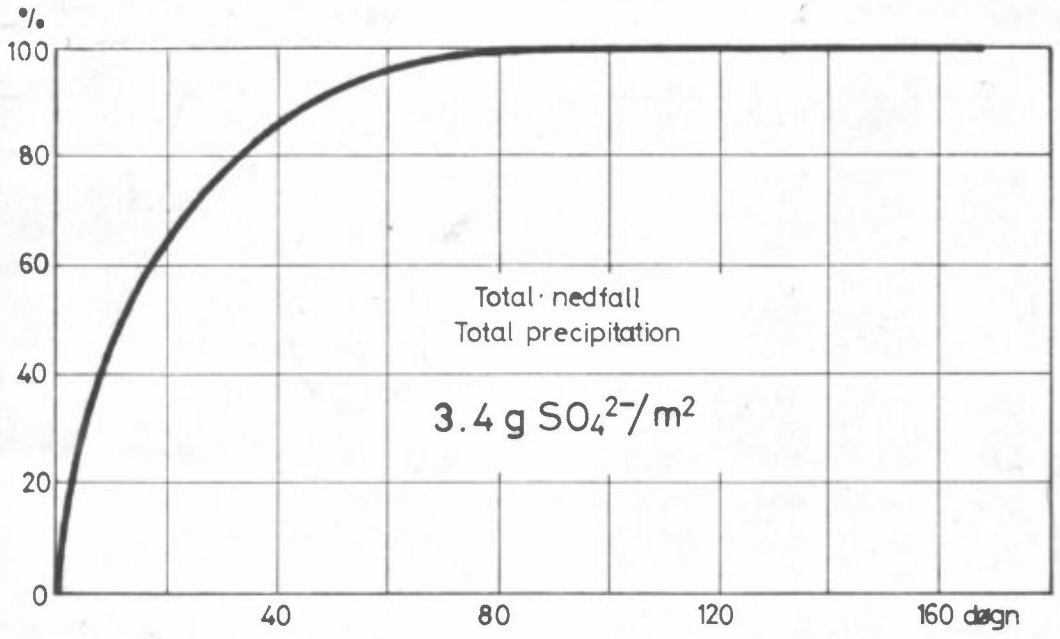

Figure 6: Cumulative distribution of precipitated sulphate, BIRKENES, 1.1 - 30.6.1972.

Appendix 10, page 79, shows the deposition of sulphate and strong acid for all stations during three different episodes, namely 3-7 March, 28-30 April and 2-6 June. The first of these is the single episode which brought down the largest amount of pollutants during the first part of 1972. At Birkenes 20% of the total deposition during the first part of 1972 occurred in this episode. Corresponding figure for the station Gjerstad was 23% and for Mandal 16%.

A map of the sulphate deposition for the episode 3-7 March is given in Figure 7. It is noted that the county of Aust-Agder received the larger part of the deposition. In this case the curves were drawn with no regard to the station Finsland, which had a somewhat less deposition this time than could be expected by comparison with the adjacent stations. Also the values from the station Bygland were disregarded.

A map of the sulphate deposition for the period 28-30 April is given in Figure 8. It is noted that the pollution in this period was more evenly spread over the southern part of the country, and the values were lower than for the March-period. Figure 9, page 20, the deposition of sulphate for the period 2-6 June is shown. In this case the maximum was found in the area between the counties Vest-Agder and Rogaland. The station Skreådalen had the highest value.

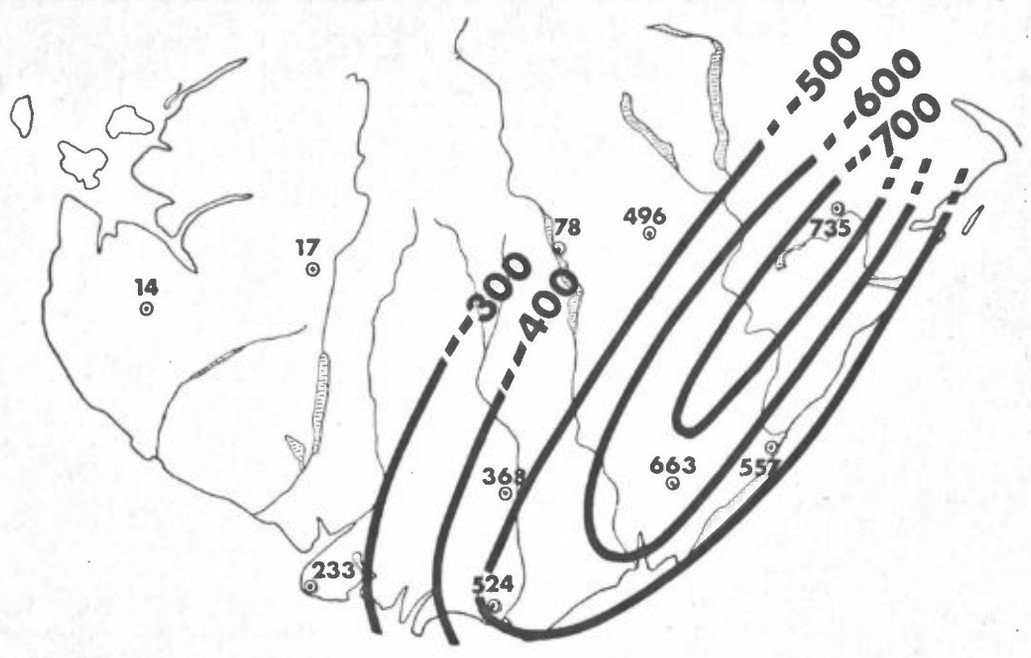

Figure 7: Precipitated sulphate, 3-7 March 1972 (mg/m^2).

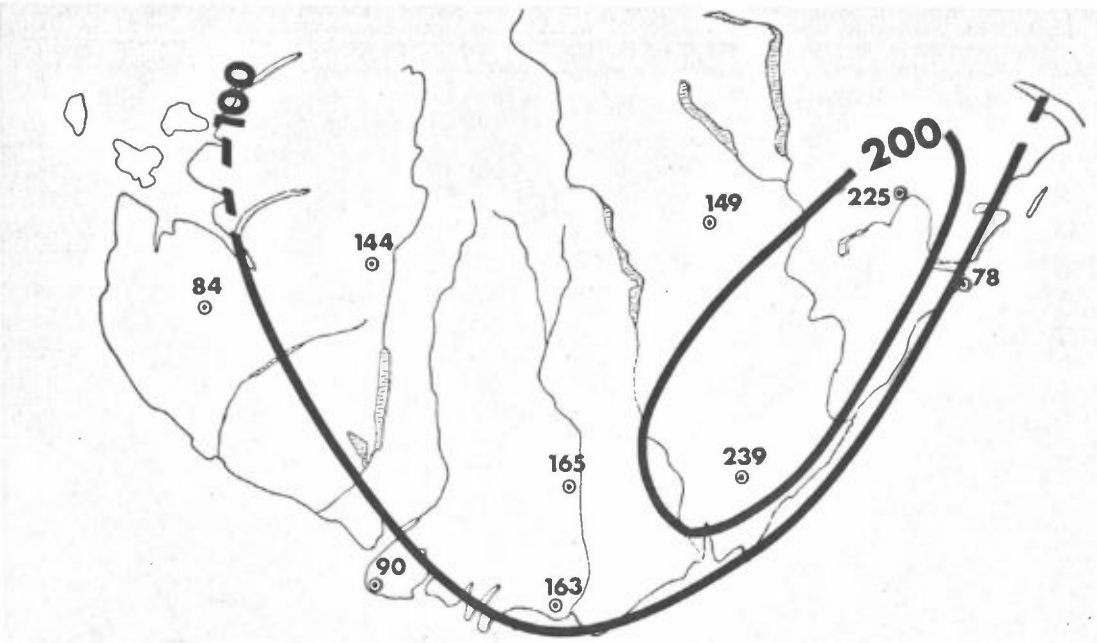

Figure 8: Precipitated sulphate, 28 - 30 April 1972. (mg/m^2)

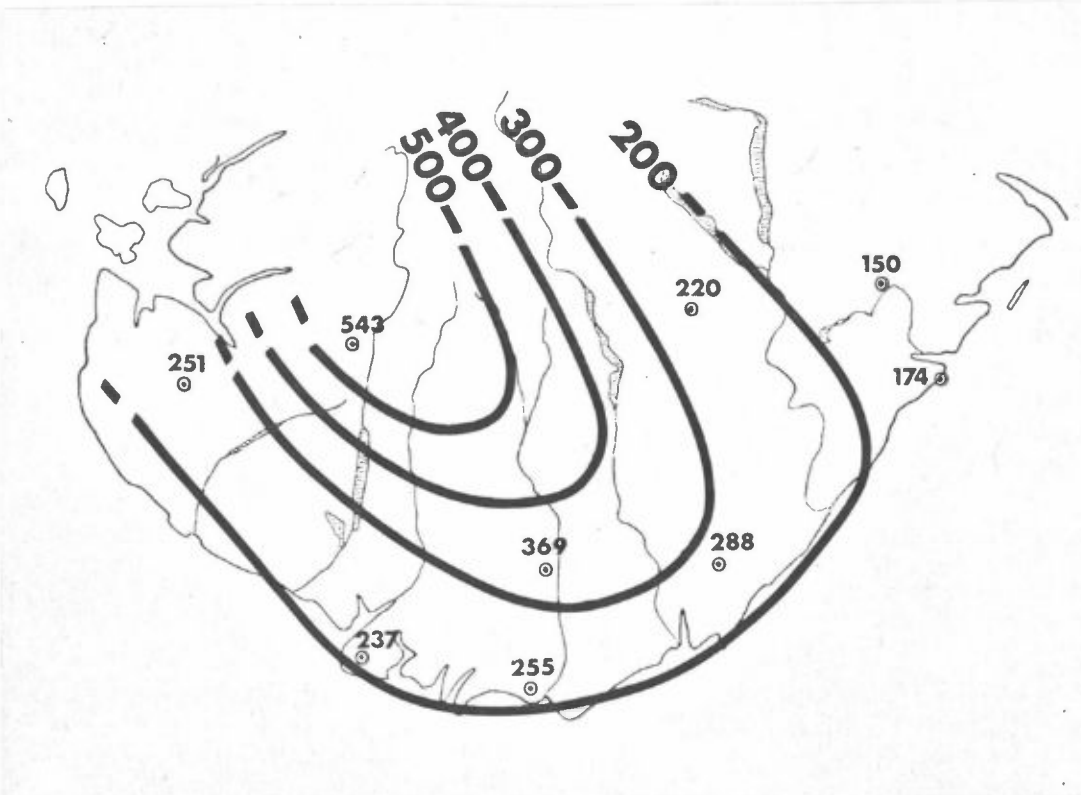

Figure 9: Precipitated sulphate, 2 - 6 June 1972. (mg/m^2)

The measurements of sulphur dioxide in air and sulphate on filters are made at a relatively small number of stations and the conclusions from these measurements therefore are more uncertain. However, it may be noted that the values are generally low. As concerns the sulphur dioxide values, these are much lower than usually in Norwegian towns. Some high values have, however, been observed, and then usually in connection with episodes. Further, the station Norefjell shows high values at the end of March - beginning of April, this is probably due to local pollution due to excessive motorized traffic in connection with the Easter vacation.

Of the remaining stations, Hvasser shows the higher values. This could well be due to local pollution from the Oslofjord area. The highest value measured for sulphur dioxide was 80 $\mu g/m^3$, measured at Hvasser with wind from north.

6 COMPARISON WITH PREVIOUS MEASUREMENTS

In 1955 a network of stations for monthly collection of precipitation in Europe was established. The network was organized by the International Meteorological Institute, Stockholm (IMI). It include stations both in Scandinavia and on the continent. For the time being the following Norwegian stations are still in operation: Lista, Ås, Romerike, Kise, Trysil, Fillefjell, and Tana. Precipitation from all stations are analysed for a number of components, including sulphate and acidity. This network and the OECD stations have one station in common, namely Lista, and it could be of interest to compare results for the period November 1971 - June 1972. In Table 2 the monthly depositions of sulphate and acid for the two stations are shown together with the measured pH-values. For the OECD station daily values have been added up for each month, while the

value for the other station represents the measurement of a monthly sample. The differences do not appear to be systematic, and the figures for total deposited amounts agree well. For acidity a slightly different analytical method has been used, but the difference does not seem to be reflected in the results.

		Nov 1971	Dec 1971	Jan 1972	Feb 1972	March 1972	Apr 1972	May 1972	June 1972	Sum 1. part of 1972
Sulphate mg/m^2	NILU	222	142	327	216	282	429	176	516	1946
	IMI	279	274	238	255	331	432	213	531	2000
Strong acid meq/m^2	NILU	4.04	1.99	4.49	5.00	3.86	7.22	2.88	8.71	32.2
	IMI	2.65	1.90	3.80	4.14	3.95	8.18	2.63	9.88	32.6
pH in precipitation	NILU	4.8	4.4	4.2	3.9	4.1	4.2	4.1	4.0	
	IMI	4.9	4.6	4.0	3.7	3.9	4.0	4.3	4.3	

Table 2: Comparison of NILU's and IMI's precipitation data, LISTA, November 1971 - June 1972.

A deposition map based on the yearly values for the IMI-network for sulphate and strong acid for Europe have been published in connection with the UN Conference in Stockholm (13). For the southernmost part of Norway the map is somewhat misleading, because it indicates a general decrease in the deposition with the distance from the coastline. The present measurements show that the deposition maximum occur 20-50 km from the coast, due to orographic effects.

Table 3 shows the deposition of sulphate and strong acid for the years 1967-1971 for the IMI station Lista. The figures are corrected for the sea-spray effect. In the table are also given values for the first part of 1972.

The deposition of sulphate varies from year to year, with 1967 and 1969 as the years with the largest deposition.

From the data in Table 3 it is not possible to say if the deposition has increased or decreased.

Also the deposition of strong acid varies much from year to year, with 1968 as the year with the largest deposition. Values for the first part of 1972 also are high, while the years 1969, 1970 and 1971 show low values. When the calculated percentages of sulphuric acid are examined, it will be noted that the figures can be separated in two groups. For 1967, 1969, 1970 and 1971 the values are very similar, but for 1968 and first part of 1972 the values are much higher, and highest for the first part of 1972.

Year	Sulphate mg/m^2	Strong acid meq/m^2	Sulphuric acid %	Sulph.acid ton/km^2
1967	4700	33.0	34	1.62
1968	3240	44.3	66	2.17
1969	4470	31.4	34	1.54
1970	3730	26.3	34	1.29
1971	3290	22.7	33	1.11
1972+IMI	2000	32.6	78	1.60
1972+NILU	1946	32.2	79	1.58

Table 3: Precipitation of sulphate and strong acid, calculated percentage sulphuric acid, and precipitated sulphuric acid, IMI-station LISTA 1967-1972.

The regression line for the relation between the concentration of sulphate and strong acid for the station Birkenes

(Appendix 8, page 77), shows that for high concentrations of sulphate and acid a high percentage figure is obtained, while low concentrations give a low percentage figure. The conclusion that the concentration of basis (or neutralized sulphates) in the samples was found to be fairly constant around 16 µekv/l; this concentration therefore is less important at high concentrations of acid. If this conclusion is valid for station Lista as well, it may well be that the concentration of sulphate and strong acid in precipitation has increased somewhat. The emission of sulphur dioxide in Europe has increased during the period 1967-1972. Deposition naturally is connected with precipitation and weather conditions which evidently are very variable from year to year.

7 CONCLUSION

The daily measurements of air and precipitation for the period November 1971 to June 1972 are presented.

The geographical distribution of the deposition of sulphate and strong acid in the southernmost part of Norway is shown. A deposition maximum is situated approximately 50 km inland from the coast. The largest deposition was found in the county of Aust-Agder.

The deposition of pollutants takes place periodically in the form of episodes with a duration from one to four days. These episodes are closely related to the meteorological conditions.

Compared to monthly samples from the Norwegian stations, analysed at IMI, the values show agreement on a semi-annual basis.

When the sulphate measurements from the first part of 1972 are compared with the measurements at the station Lista during the last five years, it is not possible to decide if the deposition has increased or decreased during the last five years. The deposition of strong acid may indicate an increase. Data from more years are, however, needed in order to eliminate the variations in the meteorological conditions from one year to another.

A P P E N D I X

CONTENTS

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA NOVEMBER 1971

SULPHATE IN PRECIPITATION (MILLIGRAMS PER LITER)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14
1	-	-	-	-	-	4.4	-	0.8	3.3	-	0.1	0.5	0.9	0.3
2	-	7.6	3.6	-	-	6.1	-	1.3	-	-	0.1	0.0	1.5	1.7
3	1.7	2.5	1.8	-	-	3.4	2.7	0.4	2.0	-	0.2	0.1	0.9	0.0
4	-	-	1.0	-	-	1.5	2.5	0.3	1.3	-	0.3	0.4	-	0.2
5	0.6	0.3	0.6	0.9	0.8	1.0	1.1	0.2	0.8	0.4	-	-	-	-
6	0.7	0.3	0.4	0.7	0.3	0.9	0.9	0.1	0.4	0.2	-	-	-	-
7	0.2	0.1	0.1	0.9	0.0	0.5	0.5	0.0	0.2	0.0	0.0	0.2	-	-
8	-	-	0.4	-	-	0.5	1.5	0.0	0.2	0.4	-	-	2.9	-
9	-	-	-	-	-	-	-	-	-	-	-	0.2	0.4	0.3
10	-	-	-	-	0.0	3.0	5.2	0.5	0.9	-	0.3	0.3	1.0	0.2
11	-	-	-	-	-	-	3.9	0.8	1.3	-	0.0	0.7	-	0.3
12	-	-	0.2	-	-	2.8	-	0.3	0.9	-	0.2	1.4	0.9	-
13	1.4	0.5	0.7	9.4	0.9	1.5	2.1	0.0	0.2	0.0	-	0.2	-	0.4
14	-	-	-	-	-	1.3	-	0.1	0.1	-	-	0.5	0.4	0.5
15	1.0	0.5	0.3	-	-	1.0	0.5	0.5	0.0	4.0	0.2	0.6	1.2	0.5
16	0.0	0.0	-	-	-	2.2	0.3	0.4	0.1	0.0	0.2	0.0	-	0.2
17	-	-	-	-	-	-	-	0.0	0.7	-	0.0	-	-	0.2
18	-	-	-	-	-	-	-	-	-	-	-	-	1.1	-
19	0.0	-	0.1	0.3	-	1.1	5.0	0.2	0.4	-	-	-	0.5	0.2
20	1.1	0.1	0.1	1.0	0.1	0.7	0.9	0.1	0.0	0.1	0.2	0.4	-	0.7
21	0.3	0.3	0.5	0.6	0.2	1.9	1.5	0.0	-	0.5	-	-	-	-
22	0.4	-	-	2.4	1.0	-	-	-	-	0.3	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	1.2	-
24	-	-	0.1	0.4	-	1.9	1.8	0.4	0.9	0.5	0.0	0.6	0.4	0.5
25	-	-	-	-	-	-	-	0.8	0.6	-	-	0.5	0.7	1.0
26	-	-	2.2	-	-	1.7	2.6	0.8	0.6	-	-	0.1	0.7	0.1
27	4.1	3.2	8.3	-	8.4	0.0	1.3	1.6	1.7	4.7	0.1	0.3	0.7	0.5
28	9.5	7.9	6.0	6.3	11.4	4.9	6.7	2.8	1.4	3.7	0.7	0.1	-	0.2
29	3.7	1.0	3.3	6.2	3.4	4.6	4.5	1.0	2.6	2.5	-	-	-	-
30	3.1	0.4	3.9	7.3	5.3	0.8	-	1.0	-	2.6	-	-	-	-

c

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA NOVEMBER 1971

PH IN PRECIPITATION

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14
1	-	-	-	-	-	5.45	-	5.70	4.65	-	4.80	5.20	5.00	4.95
2	-	7.15	4.60	-	-	4.70	-	5.10	5.00	-	5.35	4.95	4.85	5.40
3	5.15	6.05	4.70	-	-	4.65	4.42	5.70	5.70	-	5.60	5.45	6.50	5.50
4	-	-	5.70	-	-	5.45	4.91	6.15	5.30	-	5.85	4.30	-	5.50
5	4.90	5.55	5.00	5.10	5.70	5.40	4.82	5.40	6.50	5.45	-	-	-	-
6	4.70	6.10	5.10	5.45	5.00	5.45	5.70	5.50	5.80	5.20	-	-	-	-
7	5.20	5.80	5.40	5.35	5.55	5.40	5.25	5.70	5.30	5.55	5.15	5.25	-	-
8	-	-	5.60	-	-	5.30	6.00	5.65	6.65	6.00	-	-	5.55	-
9	-	-	-	-	-	-	-	-	-	-	-	5.05	4.25	6.60
10	-	-	-	-	5.70	6.20	5.30	6.40	6.10	-	3.95	5.30	4.55	5.50
11	-	-	-	-	-	-	5.60	5.90	5.70	-	5.60	5.00	-	5.30
12	-	-	5.25	-	-	5.00	-	5.10	4.90	-	5.10	5.40	5.45	-
13	4.90	6.15	5.50	5.40	5.50	5.05	4.30	5.90	6.10	6.30	-	4.60	-	5.60
14	-	-	-	-	-	6.30	-	6.00	5.70	-	-	5.55	5.55	5.10
15	5.65	5.40	5.60	-	-	4.95	5.40	5.10	5.75	6.65	5.65	5.00	5.10	4.65
16	5.90	-	6.10	-	-	6.90	6.30	5.80	5.80	6.10	5.95	5.30	-	5.75
17	-	-	-	-	-	-	-	5.95	6.10	-	5.90	-	-	4.65
18	-	-	-	-	-	-	-	-	-	-	-	-	6.40	-
19	5.50	-	6.00	6.05	-	6.20	6.50	7.40	6.20	-	-	-	5.45	2.15
20	4.75	6.40	5.50	6.10	5.30	5.15	5.90	5.10	5.90	5.70	5.70	5.00	-	6.05
21	5.20	5.45	5.00	4.45	4.90	4.50	4.95	7.05	-	4.70	-	-	-	-
22	4.70	-	-	4.85	5.90	-	-	-	-	5.85	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	4.80	-
24	-	-	4.95	6.45	-	4.60	5.00	5.60	5.50	6.15	5.05	5.20	5.00	5.10
25	-	-	-	-	-	-	-	6.00	6.30	-	-	5.90	4.80	4.60
26	-	-	4.65	-	-	5.00	4.90	5.30	5.60	-	-	5.25	4.95	5.55
27	4.40	4.30	4.20	-	4.00	4.00	3.80	4.40	4.50	4.00	4.85	5.30	4.90	5.15
28	3.50	3.85	3.80	3.80	3.95	3.90	3.60	4.25	4.80	3.70	4.55	5.30	-	5.70
29	4.10	4.60	4.40	4.15	4.20	3.90	4.30	4.70	4.35	4.30	-	-	-	-
30	6.35	6.30	4.15	4.60	4.45	6.20	-	4.80	5.90	4.50	-	-	-	-

d

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA NOVEMBER 1971

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER LITER)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14
1	-	-	-	-	-	-7	-	-7	-	-	20	5	21	25
2	-	-	32	-	-	-	-	10	9	-	8	18	24	7
3	19	-55	216	-	-	19	36	-4	-1	-	-11	7	-21	-7
4	-	-	-93	-	-	1	10	-20	3	-	3	93	-	9
5	11	-1	10	124	-9	5	9	30	-49	-1	-	-	-	-
6	20	-13	7	1	11	2	0	-4	-3	3	-	-	-	-
7	7	-5	-9	4	-23	3	6	-2	3	-3	12	9	-	-
8	-	-	-5	-	-	2	-11	-2	-68	-14	-	-	7	-
9	-	-	-	-	-	-	-	-	-	-	-	36	84	-66
10	-	-	-	-	-	-	13	-42	-15	-	145	9	44	4
11	-	-	-	-	-	-	-17	-10	-4	-	17	13	-	10
12	-	-	4	-	-	-	-	5	8	-	15	9	9	-
13	11	-27	-8	2	-3	6	48	-12	-15	-72	-	35	-	10
14	-	-	-	-	-	-46	-	-11	-3	-	-	7	4	15
15	-5	0	0	-	-	13	-1	7	-5	-	5	13	14	30
16	-7	-	-13	-	-	137	-23	-4	-8	-57	-1	11	-	9
17	-	-	-	-	-	-	-	-14	-12	-	1	-	-	32
18	-	-	-	-	-	-	-	-	-	-	-	-	-32	-
19	-3	-	5	-8	-	-20	-	-284	-23	-	-	-	9	8
20	19	-63	0	-22	-1	4	-6	-11	-11	-7	3	21	-	-8
21	3	-1	8	45	13	33	13	-622	-	20	-	-	-	-
22	19	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	21	-
24	-	-	9	-	-	23	11	-3	1	-53	14	3	17	9
25	-	-	-	-	-	-	-	-	-34	-	-	-2	21	22
26	-	-	-	-	-	9	10	3	-5	-	-	5	21	7
27	42	69	89	-	104	111	-	42	46	115	24	8	20	13
28	362	172	241	221	138	128	246	60	28	220	62	6	-	-17
29	71	41	63	84	53	-	53	21	-41	51	-	-	-	-
30	-	-29	55	52	31	-	-	17	-23	32	-	-	-	-

e

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA NOVEMBER 1971

SO2 IN AIR (MICROGRAMS PER M3)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14
1	-	7	-	11	-	-	-	-	6	-	-	-	-	-
2	-	5	-	10	-	-	-	-	5	-	-	-	-	-
3	1	7	-	3	-	-	-	-	7	-	-	-	-	-
4	1	6	-	1	-	-	-	-	4	-	-	-	-	-
5	4	4	-	-	-	-	-	-	9	-	-	-	-	-
6	14	9	-	9	-	-	-	-	2	-	-	-	-	-
7	2	5	-	6	-	-	-	-	1	-	-	-	-	-
8	5	6	-	30	-	-	-	-	3	-	-	-	-	-
9	5	2	-	10	-	-	-	-	4	-	-	-	-	-
10	3	3	-	5	-	-	-	-	2	-	-	-	-	-
11	3	3	-	6	-	-	-	-	2	-	-	-	-	-
12	2	2	-	4	-	-	-	-	0	-	-	-	-	-
13	0	2	-	3	-	-	-	-	0	-	-	-	-	-
14	0	3	-	3	-	-	-	-	0	-	-	-	-	-
15	0	4	-	17	-	-	-	-	1	-	-	-	-	-
16	0	2	-	4	-	-	-	-	2	-	-	-	-	-
17	0	2	-	13	-	-	-	-	0	-	-	-	-	-
18	0	3	-	9	-	-	-	-	2	-	-	-	-	-
19	0	3	-	5	-	-	-	-	0	-	-	-	-	-
20	1	5	-	6	-	-	-	-	1	-	-	-	-	-
21	1	1	-	8	-	-	-	-	1	-	-	-	-	-
22	4	1	-	17	-	-	-	-	1	-	-	-	-	-
23	2	1	-	7	-	-	-	-	1	-	-	-	-	-
24	1	2	-	8	-	-	-	-	0	-	-	-	-	-
25	3	1	-	4	-	-	-	-	0	-	-	-	-	-
26	3	1	-	6	-	-	-	-	0	-	-	-	-	-
27	0	2	-	1	-	-	-	-	5	-	-	-	-	-
28	5	5	-	21	-	-	-	-	4	-	-	-	-	-
29	4	4	-	19	-	-	-	-	2	-	-	-	-	-
30	0	4	-	14	-	-	-	-	2	-	-	-	-	-

f

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA NOVEMBER 1971

SULPHATE IN PRECIPITATION (MILLIGRAMS PER M2 PER DAY)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14
1	0	0	0	0	0	1	-	0	7	0	-	-	-	-
2	0	2	6	0	0	6	-	30	-	0	-	-	-	-
3	1	1	3	0	0	13	10	6	47	0	-	-	-	-
4	0	0	2	0	0	8	9	6	27	0	-	-	-	-
5	19	6	32	41	11	30	67	5	12	14	-	-	-	-
6	2	1	3	13	3	2	3	2	2	1	-	-	-	-
7	2	1	2	8	0	9	10	0	6	0	-	-	-	-
8	-	-	2	0	0	6	4	0	2	1	-	-	-	-
9	0	0	0	0	0	0	0	0	0	0	-	-	-	-
10	0	0	0	0	0	3	2	1	3	0	-	-	-	-
11	0	0	0	0	0	-	2	2	9	0	-	-	-	-
12	0	0	0	0	0	3	-	1	6	0	-	-	-	-
13	18	4	9	24	8	9	18	0	2	0	-	-	-	-
14	-	0	0	0	0	1	0	0	1	0	-	-	-	-
15	1	3	3	0	0	4	3	15	0	4	-	-	-	-
16	0	0	-	-	0	29	1	10	4	0	-	-	-	-
17	0	0	0	0	0	-	0	0	3	0	-	-	-	-
18	0	0	0	0	0	0	0	0	0	0	-	-	-	-
19	0	0	0	1	0	2	6	0	2	0	-	-	-	-
20	8	0	2	8	0	12	19	2	0	1	-	-	-	-
21	11	2	-	33	2	18	35	0	-	5	-	-	-	-
22	4	0	0	2	1	0	0	0	0	0	-	-	-	-
23	0	0	0	0	0	0	0	0	0	0	-	-	-	-
24	-	0	0	0	0	15	4	2	11	0	-	-	-	-
25	0	0	0	0	0	0	0	0	2	0	-	-	-	-
26	0	-	2	0	0	3	4	2	6	0	-	-	-	-
27	28	10	66	0	13	0	2	53	24	20	-	-	-	-
28	33	28	27	10	73	46	45	74	47	25	-	-	-	-
29	38	7	29	69	66	5	36	7	5	19	-	-	-	-
30	3	1	7	6	19	0	-	3	-	5	-	-	-	-

h

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA NOVEMBER 1971

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER M2 PER DAY)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14
1	0	0	0	0	0	-2	-	-4	-	0	-	-	-	-
2	0	-	56	0	0	-	-	229	60	0	-	-	-	-
3	8	-18	358	0	0	73	131	-63	-23	0	-	-	-	-
4	0	0	-151	0	0	5	36	-377	61	0	-	-	-	-
5	326	-21	573	5707	-123	148	528	686	-755	-38	-	-	-	-
6	70	-41	45	18	105	4	0	-48	-16	19	-	-	-	-
7	58	-41	-155	36	-146	53	127	-46	69	-23	-	-	-	-
8	-	-	-30	0	0	20	-29	-15	-701	-19	-	-	-	-
9	0	0	0	0	0	0	0	0	0	0	-	-	-	-
10	0	0	0	0	-	-	4	-135	-59	0	-	-	-	-
11	0	0	0	0	0	-	-9	-25	-27	0	-	-	-	-
12	0	0	4	0	0	-	-	16	54	0	-	-	-	-
13	147	-222	-94	5	-27	34	397	-125	-234	-607	-	-	-	-
14	-	0	0	0	0	-18	0	-27	-48	0	-	-	-	-
15	-6	0	0	0	0	50	-6	219	-100	-	-	-	-	-
16	-36	-	-55	-	0	1788	-51	-99	-255	-238	-	-	-	-
17	0	0	0	0	0	-	0	-36	-47	0	-	-	-	-
18	0	0	0	0	0	0	0	0	0	0	-	-	-	-
19	-4	0	7	-24	0	-38	-	-633	-88	0	-	-	-	-
20	145	-401	0	-161	-4	68	-125	-161	-132	-37	-	-	-	-
21	105	-7	-	2288	127	308	303	-317	-	191	-	-	-	-
22	187	0	0	-	-	0	0	0	0	-	-	-	-	-
23	0	0	0	0	0	0	0	0	0	0	-	-	-	-
24	-	0	9	-	0	183	25	-16	13	-19	-	-	-	-
25	0	0	0	0	0	0	0	-	-102	0	-	-	-	-
26	0	-	-	0	0	15	15	9	-46	0	-	-	-	-
27	281	220	703	0	166	163	-	1396	647	491	-	-	-	-
28	1268	602	1074	352	879	1182	1644	1566	922	1499	-	-	-	-
29	723	308	561	936	1029	-	425	134	-76	390	-	-	-	-
30	-	-46	91	40	112	-	-	44	-29	61	-	-	-	-

i

SLUTT

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA DECEMBER 1971

AMOUNT (MM) IN NILU PRECIPITATION COLLECTORS

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-
3	0.3	0.0	1.8	0.0	0.0	3.3	4.6	9.3	6.6	0.2	-	-	-	-
4	0.0	0.0	0.0	0.0	0.0	2.5	0.0	9.5	42.2	0.0	-	-	-	-
5	0.0	0.0	0.1	0.0	0.0	1.0	0.0	1.2	13.0	0.0	-	-	-	-
6	0.0	0.0	0.6	0.0	0.0	0.0	0.4	10.6	1.0	0.0	-	-	-	-
7	2.2	6.2	5.4	0.0	2.0	0.8	1.6	22.0	5.6	3.3	-	-	-	-
8	0.2	0.4	1.1	0.3	0.8	7.9	4.7	12.4	12.4	0.4	-	-	-	-
9	0.0	0.0	0.0	0.0	0.0	6.7	0.0	16.6	24.7	0.0	-	-	-	-
10	0.0	0.0	0.0	0.0	0.0	1.4	0.0	11.8	10.8	0.0	-	-	-	-
11	0.0	0.0	0.0	0.0	0.0	0.8	0.0	6.7	2.5	0.0	-	-	-	-
12	2.6	1.2	4.1	0.4	0.0	0.4	2.1	6.8	4.6	1.7	-	-	-	-
13	1.1	0.0	3.9	0.0	0.6	1.8	4.7	10.9	4.5	0.6	-	-	-	-
14	7.8	8.3	8.4	3.2	6.4	3.1	6.4	23.3	7.0	8.6	-	-	-	-
15	0.2	1.0	4.7	0.0	0.0	0.0	0.0	18.7	0.0	1.2	-	-	-	-
16	0.0	0.0	0.3	0.0	0.0	0.0	0.0	4.5	2.0	0.0	-	-	-	-
17	0.0	0.0	0.2	0.0	0.0	0.0	0.2	1.4	0.4	0.0	-	-	-	-
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.1	0.0	-	-	-	-
19	36.6	-	28.3	15.6	32.6	21.2	27.6	21.2	19.0	35.0	-	-	-	-
20	1.1	1.0	3.2	0.0	0.6	2.2	6.6	27.2	3.2	0.8	-	-	-	-
21	2.7	10.8	6.9	2.9	1.5	1.2	3.5	15.1	3.0	12.5	-	-	-	-
22	0.0	0.0	1.0	0.0	0.0	2.4	1.0	20.4	15.0	0.0	-	-	-	-
23	6.0	13.4	16.9	0.6	0.3	8.8	28.1	53.8	32.0	8.6	-	-	-	-
24	0.0	0.0	1.8	0.0	0.0	10.5	2.2	20.9	27.9	0.0	-	-	-	-
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	-	-	-	-
26	0.7	0.0	1.1	0.0	0.0	0.0	0.3	19.0	8.7	0.0	-	-	-	-
27	0.0	0.0	2.5	1.6	0.6	0.1	0.3	0.1	0.0	13.2	-	-	-	-
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-

a

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA DECEMBER 1971

OFFICIAL PRECIPITATION DATA (MM)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14
1	-	-	-	-	-	0.0	0.0	0.0	-	0.0	-	-	-	-
2	-	-	-	-	-	0.0	0.0	0.0	-	0.0	-	-	-	-
3	-	-	-	-	-	2.8	6.4	9.0	-	0.1	-	-	-	-
4	-	-	-	-	-	1.6	0.1	9.4	44.0	0.0	-	-	-	-
5	-	-	-	-	-	1.0	0.0	1.3	12.5	0.0	-	-	-	-
6	-	-	-	-	-	0.0	0.6	10.1	1.4	0.0	-	-	-	-
7	-	-	-	-	-	1.3	2.5	21.8	4.1	-	-	-	-	-
8	-	-	-	-	-	6.9	5.5	11.0	18.0	-	-	-	-	-
9	-	-	-	-	-	8.8	0.2	17.4	26.6	0.0	-	-	-	-
10	-	-	-	-	-	1.5	0.0	11.9	11.0	0.0	-	-	-	-
11	-	-	-	-	-	0.9	0.0	6.1	3.5	0.0	-	-	-	-
12	-	-	-	-	-	0.3	2.5	6.4	8.0	-	-	-	-	-
13	-	-	-	-	-	2.6	7.9	11.0	7.2	-	-	-	-	-
14	-	-	-	-	-	3.6	8.6	22.8	16.1	-	-	-	-	-
15	-	-	-	-	-	0.0	1.0	18.8	0.0	-	-	-	-	-
16	-	-	-	-	-	0.0	0.0	4.2	2.3	0.0	-	-	-	-
17	-	-	-	-	-	0.1	0.5	1.3	0.9	0.0	-	-	-	-
18	-	-	-	-	-	0.0	0.0	6.5	0.2	0.0	-	-	-	-
19	-	-	-	-	-	24.8	27.1	21.5	33.5	34.1	-	-	-	-
20	-	-	-	-	-	2.4	7.0	26.8	6.5	1.4	-	-	-	-
21	-	-	-	-	-	1.2	5.0	14.6	3.1	13.0	-	-	-	-
22	-	-	-	-	-	3.4	1.7	20.6	14.1	0.0	-	-	-	-
23	-	-	-	-	-	15.4	33.4	55.5	46.0	8.5	-	-	-	-
24	-	-	-	-	-	10.9	4.0	21.1	29.0	0.0	-	-	-	-
25	-	-	-	-	-	0.0	0.0	2.8	0.0	0.0	-	-	-	-
26	-	-	-	-	-	0.0	0.7	18.2	12.6	0.0	-	-	-	-
27	-	-	-	-	-	0.0	0.3	0.1	0.0	1.2	-	-	-	-
28	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	-	-	-	-
29	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	-	-	-	-
30	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	-	-	-	-

b

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA DECEMBER 1971

SULPHATE IN PRECIPITATION (MILLIGRAMS PER LITER)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	7.9	-	-	5.2	6.5	3.6	3.8	11.7	1.5	-	6.0	2.0
4	-	-	-	-	-	1.0	-	0.2	0.2	-	0.2	0.5	3.5	0.2
5	-	-	-	-	-	1.3	-	0.1	0.7	-	0.2	0.3	0.5	0.8
6	-	-	1.7	-	-	-	2.3	1.6	1.1	-	0.8	1.7	-	-
7	0.8	1.6	0.8	-	0.3	0.0	1.0	0.6	0.6	0.5	0.8	0.2	0.2	0.1
8	-	0.5	0.2	0.7	0.2	0.6	0.6	0.1	0.0	0.0	0.0	0.2	4.9	0.2
9	-	-	-	-	-	0.3	-	0.0	0.1	-	0.0	0.5	0.7	0.1
10	-	-	-	-	-	1.4	-	0.2	0.0	-	0.2	0.6	0.3	0.1
11	-	-	-	-	-	2.0	-	0.7	0.3	-	0.5	-	0.4	0.6
12	2.8	1.6	2.0	6.6	-	-	3.8	1.5	1.9	1.8	0.2	-	-	-
13	3.0	-	2.6	-	1.5	7.9	5.1	1.0	2.0	2.6	0.1	-	1.3	0.1
14	4.6	1.8	4.1	5.9	2.6	4.7	5.2	1.6	2.9	2.2	1.0	-	0.8	0.2
15	-	3.5	2.8	-	-	-	-	1.2	-	2.1	0.1	-	1.5	0.5
16	-	-	6.2	-	-	-	-	2.0	0.0	-	0.0	-	2.7	0.6
17	-	-	18.1	-	-	-	0.0	-	0.1	-	1.9	1.8	0.4	0.4
18	-	-	-	-	-	-	-	11.0	4.8	-	0.8	1.4	1.6	0.6
19	3.1	1.0	3.0	4.0	3.1	2.5	-	1.1	1.4	1.4	1.0	-	-	-
20	3.6	1.6	3.0	-	0.0	2.2	2.8	1.1	1.7	1.6	0.3	0.8	-	0.5
21	0.9	0.5	0.7	0.3	0.0	2.6	0.6	0.9	0.8	0.2	0.8	0.4	0.6	0.4
22	-	-	0.4	-	-	2.0	0.6	0.2	0.5	-	0.1	0.3	0.8	0.0
23	0.7	0.3	0.6	0.0	0.0	1.2	1.5	0.3	0.8	0.3	0.4	0.3	0.5	0.1
24	-	-	0.5	-	-	0.7	1.2	0.3	0.3	-	0.3	0.4	1.2	0.1
25	-	-	-	-	-	-	-	6.5	-	-	0.1	0.3	1.2	0.1
26	12.1	-	3.8	-	-	-	40.5	3.1	5.7	-	2.4	3.1	-	0.7
27	-	-	0.7	1.0	1.4	1.6	3.3	2.3	-	3.0	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-

c

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA DECEMBER 1971

PH IN PRECIPITATION

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	3.80	-	-	3.90	3.90	4.00	4.50	5.20	4.48	-	3.78	4.41
4	-	-	-	-	-	5.40	-	5.90	5.80	-	5.08	5.40	4.09	5.12
5	-	-	-	-	-	5.90	-	6.60	5.25	-	6.05	5.50	5.15	5.21
6	-	-	5.60	-	-	-	6.20	4.85	6.30	-	5.32	4.30	-	-
7	5.50	5.80	5.30	-	5.90	7.60	6.10	5.70	5.80	5.60	4.41	4.60	4.75	5.21
8	-	6.60	6.00	6.15	6.00	5.30	5.10	5.50	5.50	6.00	5.28	4.55	4.65	5.02
9	-	-	-	-	-	5.50	-	6.00	5.80	-	5.49	5.60	5.10	5.22
10	-	-	-	-	-	6.00	-	5.70	5.80	-	5.20	5.00	6.32	5.08
11	-	-	-	-	-	5.70	-	5.80	5.75	-	5.32	-	5.02	4.41
12	-	4.75	4.50	-	-	-	4.40	4.65	4.55	4.50	4.49	-	-	-
13	4.30	-	4.30	-	5.10	4.00	4.20	5.10	4.70	-	5.20	-	4.72	5.39
14	4.00	4.70	4.10	4.00	4.80	4.10	4.10	4.60	4.25	4.40	4.19	-	5.18	5.09
15	-	6.10	4.50	-	-	-	-	5.10	-	4.70	5.45	-	5.32	5.21
16	-	-	-	-	-	-	-	4.90	4.95	-	6.08	-	4.55	5.02
17	-	-	-	-	-	-	4.30	3.90	3.80	-	4.82	4.70	4.38	4.80
18	-	-	-	-	-	-	-	3.80	-	-	5.30	4.80	4.90	5.10
19	4.50	4.80	4.25	4.50	4.20	4.20	-	4.40	4.85	4.70	4.55	-	-	-
20	4.00	5.80	4.10	-	5.60	4.45	4.20	4.50	5.00	5.40	5.02	4.70	-	4.82
21	4.95	5.40	4.80	5.05	5.70	6.10	4.90	5.00	5.90	4.90	5.88	5.05	5.78	4.85
22	-	-	5.50	-	-	6.20	5.90	5.85	5.70	-	4.32	5.05	5.15	5.28
23	4.00	4.80	4.60	5.70	6.00	4.50	4.40	5.20	5.10	4.95	5.20	4.60	5.51	5.39
24	-	-	5.10	-	-	4.80	5.50	5.30	5.40	-	5.20	5.30	4.61	5.65
25	-	-	-	-	-	-	-	3.90	-	-	5.19	4.55	4.62	5.21
26	-	-	3.60	-	-	-	3.55	4.10	3.90	-	4.31	4.40	-	5.72
27	-	-	5.50	5.05	5.85	-	5.55	-	-	4.40	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-

d

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA DECEMBER 1971

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER LITER)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	173	-	-	144	127	101	59	-	35	-	188	49
4	-	-	-	-	-	4	-	-7	-1	-	-3	8	89	12
5	-	-	-	-	-	-13	-	-87	7	-	-15	12	9	10
6	-	-	9	-	-	-	-118	17	-17	-	-9	89	-	-
7	-18	-2	6	-	-18	-	-16	-6	-11	-12	35	42	20	12
8	-	-123	-3	43	-10	2	11	0	-2	-9	-15	51	30	19
9	-	-	-	-	-	1	-	2	-10	-	-9	9	13	11
10	-	-	-	-	-	-9	-	-2	-6	-	-3	25	-18	12
11	-	-	-	-	-	-13	-	-1	-56	-	-	-	17	51
12	-	24	41	22	-	-	41	27	31	42	-13	-	-	-
13	54	-	55	-	-9	115	69	7	9	-	-20	-	20	12
14	101	30	73	109	14	87	105	32	57	47	31	-	12	16
15	-	-103	39	-	-	-	-	7	-	22	-17	-	-	14
16	-	-	-	-	-	-	-	16	-4	-	0	-	41	17
17	-	-	-	-	-	-	-	160	238	-	24	42	52	27
18	-	-	-	-	-	-	-	121	-	-	8	40	17	17
19	42	29	39	44	45	40	-	20	2	23	33	-	-	-
20	57	-26	47	-	-40	32	61	15	2	-8	14	42	-	22
21	5	-9	11	4	-49	-23	6	2	-14	6	-1	22	0	23
22	-	-	14	-	-	-59	-27	-213	-18	-	54	27	13	9
23	14	8	11	-32	-236	26	27	-2	-1	30	13	46	4	12
24	-	-	4	-	-	7	-5	-29	-2	-	13	21	33	7
25	-	-	-	-	-	-	-	116	-	-	12	46	28	14
26	-	-	200	-	-	-	-	55	113	-	64	66	-	7
27	-	-	-6	2	-75	-	-	-	-	35	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-

e

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA DECEMBER 1971

SO2 IN AIR (MICROGRAMS PER M3)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14
1	0	2	-	12	-	-	-	-	-	-	-	-	-	-
2	0	0	-	8	-	-	-	-	-	-	-	-	-	-
3	0	4	-	13	-	-	-	-	7	-	-	-	-	-
4	0	3	-	-	-	-	-	-	0	-	-	-	-	-
5	0	3	-	0	-	-	-	-	0	-	-	-	-	-
6	0	2	-	8	-	-	-	-	0	-	-	-	-	-
7	0	2	-	5	-	-	-	-	0	-	-	-	-	-
8	0	2	-	4	-	-	-	-	0	-	-	-	-	-
9	0	1	-	5	-	-	-	-	0	-	-	-	-	-
10	0	1	-	7	-	-	-	-	0	-	-	-	-	-
11	0	0	-	2	-	-	-	-	6	-	-	-	-	-
12	0	0	-	0	-	-	-	-	6	-	-	-	-	-
13	0	4	-	11	-	-	-	-	3	-	-	-	-	-
14	0	3	-	4	-	-	-	-	4	-	-	-	-	-
15	0	0	-	3	-	-	-	-	5	-	-	-	-	-
16	0	1	-	4	-	-	-	-	2	-	-	-	-	-
17	0	3	-	8	-	-	-	-	5	-	-	-	-	-
18	4	4	-	8	-	-	-	-	6	-	-	-	-	-
19	7	4	-	7	-	-	-	-	4	-	-	-	-	-
20	0	0	-	6	-	-	-	-	2	-	-	-	-	-
21	0	0	-	2	-	-	-	-	1	-	-	-	-	-
22	0	1	-	4	-	-	-	-	0	-	-	-	-	-
23	0	0	-	4	-	-	-	-	0	-	-	-	-	-
24	0	0	-	3	-	-	-	-	0	-	-	-	-	-
25	5	1	-	7	-	-	-	-	5	-	-	-	-	-
26	10	1	-	8	-	-	-	-	3	-	-	-	-	-
27	3	0	-	10	-	-	-	-	0	-	-	-	-	-
28	0	0	-	11	-	-	-	-	0	-	-	-	-	-
29	0	5	-	14	-	-	-	-	0	-	-	-	-	-
30	0	0	-	10	-	-	-	-	0	-	-	-	-	-

f

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA DECEMBER 1971

SULPHATE IN PRECIPITATION (MILLIGRAMS PER M2 PER DAY)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14
1	0	0	0	0	0	0	0	0	0	0	-	-	-	-
2	0	0	0	0	0	0	0	0	0	0	-	-	-	-
3	-	0	14	0	0	17	30	34	25	2	-	-	-	-
4	0	0	0	0	0	2	0	2	9	0	-	-	-	-
5	0	0	-	0	0	1	0	0	9	0	-	-	-	-
6	0	0	1	0	0	0	1	16	1	0	-	-	-	-
7	2	10	4	0	1	0	2	13	3	2	-	-	-	-
8	-	0	0	0	0	5	3	2	0	0	-	-	-	-
9	0	0	0	0	0	2	0	0	1	0	-	-	-	-
10	0	0	0	0	0	2	0	2	0	0	-	-	-	-
11	0	0	0	0	0	2	0	5	1	0	-	-	-	-
12	7	2	8	3	0	-	8	10	9	3	-	-	-	-
13	3	0	10	0	1	14	24	11	9	2	-	-	-	-
14	36	15	35	19	17	14	33	37	20	19	-	-	-	-
15	-	3	13	0	0	0	0	22	0	3	-	-	-	-
16	0	0	2	0	0	0	0	9	0	0	-	-	-	-
17	0	0	4	0	0	-	0	-	0	0	-	-	-	-
18	0	0	0	0	0	0	0	22	1	0	-	-	-	-
19	115	-	86	62	100	52	-	24	26	48	-	-	-	-
20	4	2	10	0	0	5	18	30	6	1	-	-	-	-
21	2	6	5	1	0	3	2	13	2	3	-	-	-	-
22	0	0	0	0	0	5	1	5	8	0	-	-	-	-
23	5	4	10	0	0	11	44	16	25	2	-	-	-	-
24	0	0	1	0	0	7	3	7	10	0	-	-	-	-
25	0	0	0	0	0	0	0	16	0	0	-	-	-	-
26	9	0	4	0	0	0	13	59	50	0	-	-	-	-
27	0	0	2	2	1	0	1	0	0	40	-	-	-	-
28	0	0	0	0	0	0	0	0	0	0	-	-	-	-
29	0	0	0	0	0	0	0	0	0	0	-	-	-	-
30	0	0	0	0	0	0	0	0	0	0	-	-	-	-

h

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA DECEMBER 1971

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER M2 PER DAY)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14
1	0	0	0	0	0	0	0	0	0	0	-	-	-	-
2	0	0	0	0	0	0	0	0	0	0	-	-	-	-
3	-	0	303	0	0	477	590	939	387	-	-	-	-	-
4	0	0	0	0	0	10	0	-67	-42	0	-	-	-	-
5	0	0	-	0	0	-12	0	-105	91	0	-	-	-	-
6	0	0	5	0	0	0	-45	180	-17	0	-	-	-	-
7	-40	-12	32	0	-37	-	-25	-132	-62	-40	-	-	-	-
8	-	-51	-3	14	-8	16	52	0	-25	-4	-	-	-	-
9	0	0	0	0	0	7	0	33	-247	0	-	-	-	-
10	0	0	0	0	0	-12	0	-24	-65	0	-	-	-	-
11	0	0	0	0	0	-10	0	-7	-143	0	-	-	-	-
12	-	29	170	10	0	-	86	184	142	72	-	-	-	-
13	57	0	217	0	-5	205	325	76	41	-	-	-	-	-
14	788	248	616	347	89	266	668	746	399	404	-	-	-	-
15	-	-98	184	0	0	0	0	131	0	27	-	-	-	-
16	0	0	-	0	0	0	0	71	-8	0	-	-	-	-
17	0	0	-	0	0	-	-	224	91	0	-	-	-	-
18	0	0	0	0	0	0	0	239	-	0	-	-	-	-
19	1537	-	1105	686	1467	847	-	424	38	805	-	-	-	-
20	64	-25	153	0	-24	69	404	409	6	-6	-	-	-	-
21	14	-97	76	11	-75	-29	21	. 30	-42	75	-	-	-	-
22	0	0	14	0	0	-143	-26	-4353	-270	0	-	-	-	-
23	85	107	186	-20	-75	230	760	-108	-32	258	-	-	-	-
24	0	0	7	0	0	74	-11	-607	-56	0	-	-	-	-
25	0	0	0	0	0	0	0	281	0	0	-	-	-	-
26	-	0	229	0	0	0	-	1047	986	0	-	-	-	-
27	0	0	-15	3	-43	-	-	-	0	462	-	-	-	-
28	0	0	0	0	0	0	0	0	0	0	-	-	-	-
29	0	0	0	0	0	0	0	0	0	0	-	-	-	-
30	0	0	0	0	0	0	0	0	0	0	-	-	-	-

i

SLUTT

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA JANUARY 1972

AMOUNT (MM) IN NILU PRECIPITATION COLLECTORS

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	2.9	0.6
2	0.0	0.0	0.0	0.4	0.3	0.0	0.1	0.0	0.0	0.4	-	-	-	-	0.1	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.3	0.3
4	6.7	1.1	3.4	5.0	2.9	0.0	1.6	0.1	0.0	2.7	-	-	-	-	0.0	0.0
5	2.2	-	3.2	2.2	2.0	0.0	2.7	0.1	0.0	2.3	-	-	-	-	0.1	0.0
6	0.6	0.0	0.4	4.7	0.0	0.0	0.0	0.0	1.1	1.0	-	-	-	-	1.0	0.0
7	1.0	0.0	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.1	-	-	-	-	0.0	0.0
8	1.0	0.0	0.3	1.4	0.0	0.0	0.6	0.1	0.0	0.7	-	-	-	-	0.0	0.0
9	1.8	0.0	1.7	4.6	0.0	0.5	1.5	0.1	0.0	1.4	-	-	-	-	0.0	0.3
10	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.6	-	-	-	-	0.0	0.0
11	4.9	1.6	3.5	0.9	7.6	8.8	1.0	3.1	0.5	3.7	-	-	-	-	0.0	0.2
12	0.3	2.2	1.4	0.0	10.4	16.1	5.1	6.2	1.5	2.7	-	-	-	-	0.0	0.8
13	0.3	0.0	1.0	0.0	1.5	0.4	0.5	0.1	0.0	1.5	-	-	-	-	0.0	0.0
14	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	-	-	-	-	0.0	0.4
15	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	-	-	-	-	0.0	0.0
16	4.0	0.0	1.6	1.5	0.9	0.0	0.0	0.0	0.0	2.0	-	-	-	-	0.0	0.4
17	8.6	1.0	6.2	0.1	2.7	1.0	1.0	0.2	0.0	4.6	-	-	-	-	0.0	0.0
18	8.9	1.8	3.8	16.7	1.5	0.1	5.9	0.3	0.0	1.9	-	-	-	-	0.0	1.1
19	16.2	0.0	15.3	8.1	14.8	15.4	18.0	12.1	2.7	8.6	-	-	-	-	1.0	2.8
20	1.9	0.0	5.7	3.1	4.6	1.7	4.2	9.3	7.2	3.4	-	-	-	-	0.4	0.0
21	0.0	0.0	0.4	1.6	1.8	2.8	1.7	0.8	2.9	0.3	-	-	-	-	0.0	4.0
22	1.4	1.0	3.2	0.3	0.6	1.0	5.4	6.4	6.4	0.0	-	-	-	-	0.6	0.0
23	6.0	8.0	9.9	1.7	1.7	0.8	2.1	38.6	5.7	6.7	-	-	-	-	1.5	0.0
24	0.5	9.5	15.4	0.0	2.7	8.0	1.0	15.2	3.9	3.4	-	-	-	-	0.0	0.4
25	2.9	2.2	2.5	1.0	7.6	1.3	2.2	0.6	1.1	4.8	-	-	-	-	0.0	0.2
26	0.0	0.5	0.0	0.0	1.7	0.1	0.0	0.5	2.9	1.7	-	-	-	-	0.0	0.9
27	2.7	0.0	0.7	0.5	3.0	0.0	0.4	0.0	0.0	1.0	-	-	-	-	0.5	0.9
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.1	0.2
29	0.5	0.0	0.4	1.3	0.0	0.0	0.0	0.0	0.0	0.6	-	-	-	-	0.0	0.0
30	4.1	0.3	0.4	8.8	1.2	0.0	6.6	0.0	0.0	3.1	-	-	-	-	0.0	0.6
31	3.0	1.6	3.2	5.3	3.4	0.4	2.2	0.3	0.0	4.3	-	-	-	-	0.2	4.7

a

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA JANUARY 1972

OFFICIAL PRECIPITATION DATA (MM)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16
1	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	3.4	0.8
2	-	-	0.0	-	-	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.2	0.8
3	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.4
4	-	-	4.6	-	-	0.0	2.6	0.1	0.0	2.7	0.0	0.0	0.0	0.1	0.0	0.0
5	-	-	3.4	-	-	0.0	3.0	0.1	0.0	2.3	0.0	0.0	0.0	0.1	0.1	0.1
6	-	-	0.6	-	-	0.0	0.0	0.0	0.8	0.7	0.0	0.0	0.0	0.1	1.1	0.0
7	-	-	0.3	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
8	-	-	0.3	-	-	0.0	0.9	0.1	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0
9	-	-	2.4	-	-	0.4	3.8	0.1	0.0	1.3	0.0	0.0	0.0	0.1	0.0	0.4
10	-	-	0.0	-	-	0.0	0.0	0.3	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
11	-	-	4.0	-	-	8.7	1.0	3.6	0.1	3.5	0.5	0.5	0.2	0.0	0.0	0.3
12	-	-	1.7	-	-	16.7	12.5	9.1	0.5	2.6	0.0	0.0	0.0	0.0	0.0	1.0
13	-	-	0.8	-	-	0.7	0.9	0.1	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
14	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5
15	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
16	-	-	2.3	-	-	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.5
17	-	-	7.3	-	-	0.5	0.9	0.5	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0
18	-	-	5.0	-	-	0.1	5.1	0.7	0.0	1.6	0.0	0.0	6.0	0.0	0.0	1.3
19	-	-	17.0	-	-	12.7	21.0	12.7	2.5	9.3	8.4	4.5	5.5	1.9	1.6	3.5
20	-	-	5.8	-	-	2.0	4.0	8.8	17.4	3.0	0.0	0.5	6.3	0.0	0.7	0.0
21	-	-	0.4	-	-	2.8	2.5	0.8	2.9	0.1	0.0	0.1	10.9	0.0	0.0	4.5
22	-	-	3.4	-	-	1.2	6.0	6.5	9.6	0.0	3.0	10.0	1.9	2.0	1.4	0.0
23	-	-	11.0	-	-	0.8	2.5	43.6	36.6	6.9	11.8	30.3	56.1	5.8	2.1	0.0
24	-	-	15.5	-	-	6.8	1.0	18.2	29.5	3.5	9.2	37.3	15.9	0.8	0.0	0.5
25	-	-	2.7	-	-	0.6	2.2	0.8	0.1	4.9	3.1	0.3	3.4	0.0	0.0	0.2
26	-	-	0.0	-	-	0.5	0.0	4.0	0.5	2.0	6.8	0.5	0.4	0.0	0.0	1.1
27	-	-	1.0	-	-	0.0	0.2	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.8	1.1
28	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
29	-	-	0.7	-	-	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
30	-	-	1.5	-	-	0.0	7.5	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.7
31	-	-	6.0	-	-	0.2	3.2	0.3	0.0	4.0	0.0	0.0	0.0	0.0	0.5	5.2

b

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA JANUARY 1972

SULPHATE IN PRECIPITATION (MILLIGRAMS PER LITER)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	3.8	
2	-	-	-	7.5	1.9	-	7.2	-	-	2.2	-	-	-	-	1.1	-	
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.6	0.9	
4	5.7	3.4	1.6	2.0	1.2	-	3.0	-	-	1.0	-	-	-	-	-	-	
5	5.6	3.2	16.7	4.0	2.5	-	8.5	-	-	3.1	-	-	-	-	-	-	
6	-	-	4.4	3.1	-	-	-	-	-	1.3	-	-	-	-	0.5	-	
7	7.0	-	6.8	12.2	-	-	-	-	-	3.4	-	-	-	-	-	-	
8	6.3	-	12.4	8.5	-	-	9.9	-	-	3.6	-	-	-	1.0	-	-	
9	2.3	4.7	3.0	3.5	-	9.2	5.4	7.2	-	5.8	-	-	-	-	-	0.8	c
10	-	-	-	-	6.8	-	-	2.0	-	8.6	-	-	-	-	-	-	
11	7.0	9.3	6.3	13.0	7.7	2.2	5.7	4.1	1.4	7.3	-	-	3.2	-	-	2.2	
12	-	11.4	12.0	-	6.9	2.2	10.6	1.9	4.8	10.8	-	-	-	-	-	2.8	
13	-	-	15.0	-	15.8	1.3	10.9	-	-	12.3	-	-	-	-	-	-	
14	-	-	-	-	-	-	-	-	-	10.7	-	-	-	-	-	2.2	
15	-	-	-	-	-	-	-	-	-	4.9	-	-	-	-	-	-	
16	3.4	-	3.0	10.1	3.0	-	-	-	-	2.5	-	-	-	-	-	-	
17	1.4	3.4	1.3	19.1	3.2	4.6	12.3	1.2	-	1.1	-	-	-	-	-	-	
18	0.8	1.4	0.8	1.7	1.7	9.5	2.8	0.8	-	1.6	-	-	0.4	-	-	-	
19	0.8	-	0.7	2.5	2.6	2.5	2.2	0.7	2.6	1.0	0.2	0.6	0.7	2.2	1.6	-	
20	1.1	-	1.6	3.4	3.8	4.2	3.0	1.1	1.8	2.3	-	-	1.1	-	1.3	-	
21	-	-	3.1	0.2	0.7	1.5	2.2	1.0	1.5	4.1	-	-	0.4	-	-	-	
22	5.1	1.3	4.4	9.4	3.4	5.4	5.4	1.3	2.9	-	1.4	0.8	-	1.4	1.7	-	
23	12.2	4.6	7.7	12.1	8.2	10.6	9.6	2.4	4.6	6.4	0.5	1.1	1.3	1.3	0.9	-	
24	-	12.0	11.3	-	11.6	20.0	19.0	3.9	3.9	24.2	3.5	1.4	2.3	8.1	-	-	
25	18.3	17.3	23.4	25.1	21.4	22.9	19.9	11.7	7.3	18.2	0.8	-	0.0	-	-	-	
26	-	23.2	-	-	19.5	10.8	-	8.7	10.5	20.5	1.9	-	0.0	-	-	-	
27	11.8	-	30.4	-	-	-	35.7	-	-	18.7	-	-	-	-	1.6	-	
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
29	-	-	14.4	2.9	-	-	-	-	-	3.3	-	-	-	-	-	-	
30	3.3	2.5	5.5	1.6	3.3	-	2.1	-	-	0.6	-	-	-	-	-	2.0	
31	4.9	8.2	4.4	2.2	3.6	16.3	6.6	14.5	-	3.6	-	-	-	-	-	0.9	

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA JANUARY 1972

PH IN PRECIPITATION

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.80	-	
2	-	-	-	4.40	5.90	-	6.10	-	-	6.00	-	-	-	-	5.60	-	
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.60	-	
4	4.20	6.45	4.90	4.80	5.50	-	5.80	-	-	4.90	-	-	-	-	-	-	
5	3.80	6.30	4.00	4.30	4.00	-	3.85	-	-	4.40	-	-	-	-	-	-	
6	-	-	-	4.40	-	-	-	-	-	5.50	-	-	-	-	5.60	-	
7	3.80	-	-	4.10	-	-	-	-	-	-	-	-	-	-	-	-	
8	4.10	-	-	3.90	-	-	4.60	-	-	4.40	-	-	-	-	-	-	
9	4.40	4.60	4.55	4.30	-	3.70	4.30	-	-	3.98	-	-	-	-	-	-	
10	-	-	-	-	4.10	-	-	4.27	-	3.90	-	-	-	-	-	-	
11	4.00	4.20	4.00	3.85	3.95	4.65	4.90	4.25	6.85	3.90	-	-	4.20	-	-	-	
12	-	3.90	3.98	-	3.95	4.50	6.20	3.45	6.10	3.80	-	-	-	-	-	4.90	
13	-	-	4.22	-	3.95	4.15	6.30	-	-	3.90	-	-	-	-	-	-	
14	-	-	-	-	-	-	-	-	-	5.43	-	-	-	-	-	-	
15	-	-	-	-	-	-	-	-	-	4.90	-	-	-	-	-	-	
16	4.30	-	4.95	4.10	5.60	-	-	-	-	4.70	-	-	-	-	-	-	d
17	4.40	5.50	4.75	-	6.20	4.40	5.50	-	-	4.65	-	-	-	-	-	-	
18	4.60	4.80	4.80	5.85	5.15	-	4.50	-	-	4.50	-	-	4.80	-	-	5.19	
19	4.90	-	4.60	4.60	4.50	4.50	4.60	4.80	6.00	5.00	4.90	4.80	4.60	6.05	4.30	4.70	
20	4.45	-	4.55	4.20	4.20	4.40	4.30	4.55	4.50	4.45	-	-	4.50	-	5.30	-	
21	-	-	-	5.70	5.75	4.20	5.90	5.80	4.70	-	-	-	4.90	-	-	4.95	
22	4.00	7.15	4.25	-	5.55	3.95	4.10	4.70	4.40	-	5.25	5.45	4.10	5.90	5.00	-	
23	3.70	4.05	3.90	3.65	4.45	3.95	3.80	4.30	4.50	3.95	4.65	4.70	4.48	4.70	-	-	
24	-	3.92	3.80	-	3.80	3.70	3.90	4.20	4.40	3.65	4.10	4.50	4.20	4.20	-	-	
25	3.60	4.00	3.65	3.40	3.50	3.50	3.70	-	3.95	3.55	4.45	-	3.98	-	-	-	
26	-	3.62	-	-	3.80	-	-	3.96	3.60	3.60	4.30	-	-	-	-	-	
27	3.75	-	3.80	3.20	-	-	4.10	-	-	3.81	-	-	-	-	4.16	-	
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
29	-	-	5.37	5.92	-	-	-	-	-	4.64	-	-	-	-	-	-	
30	4.39	-	5.65	4.65	4.49	-	5.10	-	-	6.60	-	-	-	-	-	4.85	
31	4.20	4.05	4.31	4.60	4.88	4.20	4.38	-	-	4.15	-	-	-	-	-	4.49	

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA JANUARY 1972

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER LITER)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-282	8	-3
2	-	-	-	-	-	-	-	-	-	-60	-	-	-	-261	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-190
4	28	-35	16	21	-30	-	-31	-	-	18	-	-	-	-558	-	-
5	110	-59	124	53	56	-	78	-	-	50	-	-	-	-	-	-
6	-	-	-	44	-	-	-	-	-	2	-	-	-	-	-8	-
7	105	-	-	169	-	-	-	-	-	-	-	-	-	-	-	-
8	94	-	-	151	-	-	52	-	-	44	-	-	-	-612	-	-
9	45	30	29	85	-	213	57	-	-	120	-	-	-	-	-	-
10	-	-	-	-	94	-	-	72	-	138	-	-	-	-	-	-
11	122	59	102	295	120	28	13	64	-113	127	-	-	73	-	-	-
12	-	-	115	-	121	34	-95	34	-31	161	-	-	-	-	-	63
13	-	-	-	-	134	75	-286	-	-	147	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	72	-	-	-	-	-	-
16	53	-	14	98	-15	-	-	-	-	20	-	-	-	-	-	-
17	47	-11	18	-	-388	36	-12	-	-	20	-	-	-	-	-	-
18	26	18	20	-40	5	-	35	-	-	31	-	-	14	-	-	8
19	18	-	26	32	38	34	30	17	-46	-15	5	15	28	-21	55	21
20	39	-	32	73	64	43	53	28	42	35	-	-	35	-	17	-
21	-	-	-	-5	-27	59	-7	-	17	-	-	-	15	-	-	11
22	114	-268	62	-	-40	117	89	22	49	-	-3	1	98	-40	25	-
23	220	93	152	240	40	258	157	56	88	126	28	26	42	23	-	-
24	-	145	180	-	183	245	292	71	45	266	94	34	77	68	-	-
25	297	102	318	480	376	359	235	-	146	334	43	-	137	-	-	-
26	-	-	-	-	170	-	-	128	295	302	56	-	-	-	-	-
27	207	-	172	420	-	-	368	-	-	212	-	-	-	-	99	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-22	-	-	-	-	-	28	-	-	-	-	-	-
30	50	-	-	26	35	-	8	-	-	-39	-	-	-	-	-	28
31	82	96	50	32	14	-	57	-	-	80	-	-	-	-	-	39

e

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA JANUARY 1972

SO2 IN AIR (MICROGRAMS PER M3)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16
1	9	4	-	8	-	-	-	-	0	-	-	-	-	-	-	-
2	5	8	-	9	-	-	-	-	0	-	-	-	-	-	-	-
3	4	2	-	4	-	-	-	-	0	-	-	-	-	-	-	-
4	7	0	-	6	-	-	-	-	1	-	-	-	-	-	-	-
5	11	0	-	8	-	-	-	-	3	-	-	-	-	-	-	-
6	8	1	-	6	-	-	-	-	2	-	-	-	-	-	-	-
7	5	1	-	6	-	-	-	-	3	-	-	-	-	-	-	-
8	20	1	-	4	-	-	-	-	2	-	-	-	-	-	-	-
9	5	1	-	4	-	-	-	-	4	-	-	-	-	-	-	-
10	2	0	-	8	-	-	-	-	5	-	-	-	-	-	-	-
11	1	0	-	3	-	-	-	-	6	-	-	-	-	-	-	-
12	1	0	-	3	-	-	-	-	3	-	-	-	-	-	-	-
13	1	0	-	2	-	-	-	-	0	-	-	-	-	-	-	-
14	3	0	-	6	-	-	-	-	0	-	-	-	-	-	-	-
15	6	4	-	6	-	-	-	-	1	-	-	-	-	-	-	-
16	7	41	-	8	-	-	-	-	1	-	-	-	-	-	-	-
17	7	0	-	6	-	-	-	-	0	-	-	-	-	-	-	-
18	7	0	-	16	-	-	-	-	1	-	-	-	-	-	-	-
19	35	2	-	45	-	-	-	-	1	-	-	-	-	-	-	-
20	12	3	-	26	-	-	-	-	0	-	-	-	-	-	-	-
21	3	0	-	24	-	-	-	-	0	-	-	-	-	-	-	-
22	6	6	-	13	-	-	-	-	0	-	-	-	-	-	-	-
23	12	8	-	21	-	-	-	-	1	-	-	-	-	-	-	-
24	51	0	-	64	-	-	-	-	17	-	-	-	-	-	-	-
25	39	31	-	51	-	-	-	-	37	-	-	-	-	-	-	-
26	28	27	-	32	-	-	-	-	25	-	-	-	-	-	-	-
27	32	18	-	19	-	-	-	-	10	-	-	-	-	-	-	-
28	13	4	-	15	-	-	-	-	1	-	-	-	-	-	-	-
29	8	0	-	12	-	-	-	-	3	-	-	-	-	-	-	-
30	7	0	-	9	-	-	-	-	3	-	-	-	-	-	-	-
31	18	8	-	24	-	-	-	-	5	-	-	-	-	-	-	-

f

SULPHATE IN PRECIPITATION (MILLIGRAMS PER M2 PER DAY)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16
1	0	0	0	0	0	0	0	0	0	0	0	0	0	-	3	2
2	0	0	0	3	1	0	1	0	0	1	0	0	0	-	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	-	1	0
4	38	4	5	10	3	-	5	-	0	3	0	0	0	-	0	0
5	13	-	54	9	5	0	23	-	0	7	0	0	0	-	-	0
6	-	0	2	15	0	0	0	0	-	1	0	0	0	-	1	0
7	7	0	2	10	0	0	0	0	0	0	0	0	0	0	-	0
8	6	0	3	12	0	0	6	-	0	3	0	0	0	0	0	0
9	4	0	5	16	0	5	8	1	0	8	0	0	0	-	0	0
10	0	0	0	0	2	0	0	1	0	5	0	0	0	0	0	0
11	34	15	22	12	59	20	5	13	1	27	-	-	1	0	0	0
12	-	25	17	0	72	35	54	12	7	29	0	0	0	0	0	2
13	-	0	14	0	23	1	5	-	0	18	0	0	0	0	0	0
14	-	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1
15	-	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
16	13	0	5	15	3	0	0	0	0	5	0	0	0	0	0	-
17	12	3	8	2	9	4	12	0	0	5	0	0	0	0	0	0
18	7	3	3	28	3	1	16	0	0	3	0	0	2	0	0	-
19	12	0	11	20	39	39	40	9	7	8	2	3	4	4	2	-
20	2	0	9	11	18	7	13	11	13	8	0	-	7	0	1	0
21	0	0	1	0	1	4	4	1	4	1	0	-	5	0	0	-
22	7	1	14	3	2	5	29	8	18	0	4	8	-	3	1	0
23	74	37	76	21	14	9	20	94	26	43	6	34	75	8	1	0
24	-	115	175	0	31	161	18	59	15	83	32	53	37	7	0	-
25	52	39	58	26	162	29	44	7	8	88	3	-	0	0	0	-
26	0	11	0	0	33	1	0	4	31	35	13	-	0	0	0	-
27	32	0	21	-	0	0	16	0	0	18	0	0	0	0	1	-
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
29	-	0	6	4	0	0	0	0	0	2	0	0	0	0	0	0
30	14	1	2	14	4	0	14	0	0	2	0	0	0	0	0	1
31	15	13	14	11	12	6	15	4	0	16	0	0	0	0	-	4

h

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER M2 PER DAY)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16
1	0	0	0	0	0	0	0	0	0	0	0	0	0	-56	23	-2
2	0	0	0	-	-	0	-	0	0	-23	0	0	0	-52	-	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-60
4	187	-39	55	105	-86	-	-49	-	0	48	0	0	0	-56	0	0
5	245	-	403	118	114	0	209	-	0	115	0	0	0	-	-	0
6	-	0	-	207	0	0	0	0	-	2	0	0	0	-	-8	0
7	107	0	-	134	0	0	0	0	0	-	0	0	0	0	-	0
8	90	0	-	216	0	0	30	-	0	32	0	0	0	-61	0	0
9	79	0	48	387	0	115	87	-	0	168	0	0	0	-	0	-
10	0	0	0	0	30	0	0	23	0	88	0	0	0	0	0	0
11	598	94	357	272	917	248	12	200	-58	469	-	-	15	0	0	-
12	-	-	161	0	1263	548	-481	210	-45	430	0	0	0	0	0	50
13	-	0	-	0	196	31	-137	-	0	215	0	0	0	0	0	0
14	-	0	0	0	0	0	0	0	0	-	0	0	0	0	0	-
15	-	0	0	0	0	0	0	0	0	28	0	0	0	0	0	0
16	211	0	22	147	-13	0	0	0	0	39	0	0	0	0	0	-
17	404	-11	111	-	-1062	34	-11	-	0	93	0	0	0	0	0	0
18	232	32	76	-668	8	-	206	-	0	58	0	0	84	0	0	9
19	292	0	397	259	561	524	539	206	-123	-129	42	68	154	-40	56	59
20	74	0	183	225	297	71	223	260	302	118	0	-	221	0	7	0
21	0	0	-	-8	-48	165	-12	-	49	-	0	-	163	0	0	44
22	163	-256	197	-	-23	119	482	140	312	0	-9	10	186	-80	14	0
23	1331	740	1500	413	66	214	330	2162	499	846	330	788	2356	133	-	0
24	-	1385	2779	0	495	1965	279	1083	175	914	865	1268	1224	54	0	-
25	851	227	790	489	2848	457	524	-	167	1616	133	-	466	0	0	-
26	0	-	0	0	292	-	0	65	864	519	381	-	-	0	0	-
27	560	0	120	201	0	0	164	0	0	209	0	0	0	0	47	-
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
29	-	0	-	-28	0	0	0	0	0	16	0	0	0	0	0	0
30	207	-	-	230	42	0	52	0	0	-119	0	0	0	0	0	18
31	248	153	159	169	47	-	127	-	0	341	0	0	0	0	-	185

i

SLUTT

AMOUNT (MM) IN NILU PRECIPITATION COLLECTORS

a

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17
1	8.1	1.8	3.0	9.4	4.7	0.2	4.8	0.0	0.0	4.8	-	-	-	-	0.0	5.6	-
2	1.5	1.1	1.5	2.0	1.8	0.0	2.2	0.0	0.0	1.8	-	-	-	-	1.0	0.6	-
3	3.0	3.2	2.6	5.2	6.2	0.0	3.7	0.7	0.0	3.6	-	-	-	-	0.0	1.0	-
4	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	-	-	-	-	0.0	-	-
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-	-	-	-	0.0	0.4	-
6	2.2	3.5	3.6	2.9	2.4	0.2	1.9	2.0	1.0	-	-	-	-	-	0.0	0.4	-
7	0.4	4.1	1.5	0.9	1.3	0.0	0.3	3.6	3.3	3.9	-	-	-	-	0.0	0.6	-
8	0.3	0.0	2.6	0.0	0.0	0.0	0.5	8.0	3.3	1.1	-	-	-	-	0.1	0.3	-
9	6.4	0.0	6.4	5.7	1.5	9.1	6.8	12.3	4.5	0.0	-	-	-	-	0.0	2.1	-
10	1.3	-	1.0	1.5	4.8	0.3	0.3	3.7	0.6	3.5	-	-	-	-	0.4	2.4	-
11	13.7	3.5	8.0	9.4	8.3	3.9	7.2	0.0	0.0	0.8	-	-	-	-	0.0	0.0	-
12	22.0	2.0	19.4	25.2	18.1	6.6	21.3	6.9	1.6	7.7	-	-	-	-	0.1	4.2	-
13	3.1	1.9	2.5	1.4	1.9	2.9	5.1	4.8	3.6	17.4	-	-	-	-	0.4	0.0	-
14	2.5	0.0	2.9	4.2	0.0	1.8	2.1	4.9	0.3	4.4	-	-	-	-	1.4	0.6	-
15	1.8	0.0	1.4	0.6	0.0	3.2	1.3	1.2	0.3	1.5	-	-	-	-	7.0	0.0	-
16	9.5	3.8	9.7	7.4	10.2	4.2	5.6	1.5	0.2	1.1	-	-	-	-	1.6	0.4	-
17	2.1	0.0	1.3	1.2	2.5	0.0	0.7	0.0	0.0	4.1	-	-	-	-	0.0	0.0	-
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	-	-	-	-	1.6	0.0	-
19	0.0	0.0	0.0	0.8	0.6	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.0	1.3	-
20	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	-	-	-	-	0.0	0.4	-
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	1.4	0.0	-
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	-	-	-	-	3.6	0.0	-
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	4.8	0.0	-
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	2.2	0.0	-
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.0	0.0	-
26	0.8	0.0	1.8	0.7	0.5	0.2	0.0	0.0	0.0	0.6	-	-	-	-	0.5	0.0	-
27	2.2	2.2	2.0	1.6	1.4	0.0	0.7	1.3	0.4	1.7	-	-	-	-	0.5	1.3	-
28	0.8	0.0	1.1	0.0	0.0	0.0	1.0	0.3	0.0	0.3	-	-	-	-	0.0	0.0	-
29	0.8	0.0	0.3	0.0	0.0	0.0	0.6	0.8	0.0	0.8	-	-	-	-	0.0	0.2	-

OFFICIAL PRECIPITATION DATA (MM)

b

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17
1	-	-	3.5	-	-	0.2	5.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	5.7	-
2	-	-	2.5	-	-	0.0	1.3	0.0	0.0	1.9	0.0	0.0	0.0	0.0	1.2	0.7	-
3	-	-	4.0	-	-	0.0	2.0	0.5	0.0	3.7	0.0	0.0	0.0	0.0	0.0	1.1	-
4	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-
5	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.5	-
6	-	-	4.8	-	-	0.0	0.1	1.2	0.3	-	0.0	0.0	0.0	0.0	0.0	0.4	-
7	-	-	1.8	-	-	0.1	0.6	3.2	4.5	3.5	2.0	5.0	1.3	5.5	0.0	0.6	-
8	-	-	2.7	-	-	0.0	0.5	6.0	3.5	0.9	0.0	0.1	2.2	0.4	0.1	0.3	-
9	-	-	6.7	-	-	9.0	6.6	12.1	12.6	0.0	4.7	0.6	6.6	0.0	0.0	2.3	-
10	-	-	1.2	-	-	0.6	0.1	3.7	1.2	3.5	4.1	0.4	0.0	0.0	0.8	2.5	-
11	-	-	9.5	-	-	2.9	10.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	-
12	-	-	19.5	-	-	4.8	16.0	7.5	2.5	7.4	5.3	0.0	5.5	0.0	0.2	5.1	-
13	-	-	5.8	-	-	2.9	5.0	4.8	6.0	16.6	5.4	1.2	4.4	0.0	0.6	0.0	-
14	-	-	2.8	-	-	1.8	2.0	4.9	0.1	3.7	6.7	14.7	7.1	13.6	2.0	0.7	-
15	-	-	1.8	-	-	2.9	2.0	1.2	0.1	1.4	1.3	3.0	0.0	2.7	9.4	0.0	-
16	-	-	10.5	-	-	5.1	5.0	1.7	0.1	0.8	0.0	0.0	0.0	0.0	2.1	0.6	-
17	-	-	1.2	-	-	0.0	0.1	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	-
18	-	-	0.0	-	-	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	3.4	0.0	-
19	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	-
20	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.4	-
21	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	2.0	0.0	-
22	-	-	0.0	-	-	0.0	0.0	0.0	0.1	0.0	0.0	1.1	0.0	0.6	6.9	0.0	-
23	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	-
24	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	-
25	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
26	-	-	2.0	-	-	0.1	0.5	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.7	0.0	-
27	-	-	2.2	-	-	0.0	1.0	1.0	0.2	1.5	0.0	0.0	0.0	0.0	0.5	1.4	-
28	-	-	1.0	-	-	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-
29	-	-	0.5	-	-	0.0	0.0	0.9	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.2	-

SULPHATE IN PRECIPITATION (MILLIGRAMS PER LITER)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17
1	5.5	2.1	3.3	7.8	3.2	13.0	4.4	-	-	4.4	-	-	-	-	-	1.6	-
2	5.8	6.5	9.0	19.7	3.9	-	5.0	-	-	9.5	-	-	-	-	0.5	1.0	-
3	3.9	3.2	5.0	6.2	5.5	-	4.4	3.7	-	4.6	-	-	-	-	-	6.2	5.1
4	-	25.3	-	-	-	-	-	-	-	3.9	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	4.5	2.3	3.5	4.8	2.5	5.6	12.8	2.2	12.7	-	-	-	-	-	-	3.0	-
7	-	6.8	-	13.3	7.3	12.6	15.5	4.2	6.8	2.7	2.3	1.2	2.2	1.5	-	3.0	5.5
8	-	-	6.0	-	-	-	18.4	4.0	5.7	10.1	-	-	2.1	2.0	0.9	-	-
9	6.8	-	9.6	7.3	15.6	10.0	12.5	4.6	6.4	-	0.6	6.7	3.8	-	-	1.7	-
10	8.0	7.7	11.7	10.0	5.5	21.3	24.1	6.4	9.2	7.1	0.6	7.5	-	-	-	0.9	5.2
11	5.6	6.6	6.5	6.2	6.0	6.2	6.2	-	-	4.1	-	-	-	-	-	-	-
12	2.4	6.0	2.5	3.7	3.8	2.1	2.5	1.2	3.1	4.9	0.6	-	2.2	-	-	2.0	-
13	7.0	1.8	3.0	8.9	5.7	5.0	6.2	3.4	3.4	3.4	0.9	3.0	1.6	-	-	-	-
14	6.9	-	7.7	8.3	-	4.2	7.0	1.6	5.1	2.7	0.5	0.8	1.2	1.1	1.3	4.0	-
15	6.7	-	3.9	-	-	7.1	21.0	5.0	5.7	5.3	0.5	1.4	-	0.6	0.1	-	-
16	5.4	3.3	4.4	5.9	7.2	6.9	10.1	2.7	8.0	7.2	-	-	-	-	0.3	2.0	-
17	4.3	-	3.7	7.4	1.2	-	4.0	-	-	4.2	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	3.1	-	-	-	-	0.9	-	-
19	-	-	-	-	8.2	-	-	-	-	-	-	-	-	-	-	2.3	-
20	-	9.2	-	-	-	-	-	-	-	9.8	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	9.1	-	1.7	-	-
22	-	-	-	-	-	-	-	-	19.8	-	-	12.0	-	6.2	0.5	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	6.9	-	7.7	11.9	11.1	20.0	-	-	-	8.1	-	-	-	-	-	-	-
27	5.4	6.0	7.6	7.4	2.2	-	12.4	2.9	7.2	2.3	-	-	-	-	-	4.8	-
28	9.5	-	8.5	-	-	-	12.8	10.4	-	6.2	-	-	-	-	-	-	-
29	-	-	-	-	-	-	13.5	17.3	-	7.7	-	-	-	-	-	4.3	-

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LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA FEBRUARY 1972

PH IN PRECIPITATION

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17
1	3.98	4.68	4.25	3.92	4.20	3.82	4.12	-	-	4.11	-	-	-	-	-	4.35	-
2	3.98	3.98	3.85	3.55	4.12	-	3.71	-	-	3.80	-	-	-	-	-	5.00	-
3	4.12	4.32	4.35	3.98	4.00	-	4.20	4.11	-	4.15	-	-	-	-	-	4.03	4.00
4	-	3.58	-	-	-	-	-	-	-	4.04	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	4.18	4.51	4.38	4.20	4.20	-	4.22	4.60	5.06	-	-	-	-	-	-	-	-
7	-	3.99	3.80	3.70	3.98	-	4.30	4.05	4.10	4.28	4.40	5.15	4.30	5.35	-	-	4.20
8	-	-	3.82	-	-	-	3.38	4.10	4.02	3.75	-	-	4.12	7.00	-	-	-
9	3.81	-	3.71	3.90	3.55	3.78	3.69	4.00	3.92	-	4.52	4.20	3.95	-	-	4.38	-
10	4.02	3.75	4.06	5.69	4.08	3.39	3.59	3.88	4.11	3.75	4.28	4.18	-	-	-	4.72	4.00
11	3.85	4.60	3.91	3.72	3.90	3.71	3.91	-	-	4.21	-	-	-	-	-	-	-
12	4.20	6.18	-	4.10	4.18	4.22	4.30	4.22	4.20	3.92	4.20	-	4.08	-	-	4.42	-
13	3.75	6.32	4.21	3.70	3.82	3.91	3.79	4.05	4.18	4.02	4.40	5.61	4.03	-	-	-	-
14	3.85	-	4.30	3.78	-	3.99	6.70	4.55	-	4.30	4.98	4.98	5.08	5.48	4.48	4.59	-
15	4.02	-	4.10	3.91	-	4.05	4.08	4.10	-	4.05	5.82	6.20	-	6.80	5.50	-	-
16	4.02	4.48	4.31	4.15	3.90	3.92	3.92	4.12	-	3.98	-	-	-	-	5.52	-	-
17	4.02	-	6.08	3.95	4.21	-	5.13	-	-	4.10	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	5.62	-	-	-	-	5.70	-	-
19	-	-	-	3.68	3.93	-	-	-	-	-	-	-	-	-	-	4.52	-
20	-	-	-	-	-	-	-	-	-	3.71	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	3.80	-	4.60	-	-
22	-	-	-	-	-	-	-	-	6.48	-	-	5.05	-	6.52	5.30	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.82	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.85	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	3.91	-	4.11	3.76	3.81	3.51	-	-	-	4.01	-	-	-	-	-	-	-
27	4.01	6.05	4.41	4.42	4.41	-	4.22	4.31	5.99	4.42	-	-	-	-	-	4.22	-
28	3.83	-	4.22	-	-	-	3.83	5.78	-	4.48	-	-	-	-	-	-	-
29	-	-	-	-	-	-	3.91	3.60	-	3.88	-	-	-	-	-	4.64	-

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STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER LITER)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17
1	127	35	72	134	80	188	81	-	-	91	-	-	-	-	-	53	-
2	100	123	174	346	96	-	229	-	-	162	-	-	-	-	-	33	-
3	91	56	52	124	127	-	70	90	-	83	-	-	-	-	-	135	109
4	-	320	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	77	41	52	81	79	-	76	32	30	-	-	-	-	-	-	-	-
7	-	133	184	234	139	-	32	110	97	61	38	9	60	-7	-	-	75
8	-	-	176	-	-	-	-	104	135	190	-	-	68	-60	-	-	-
9	168	-	232	140	374	207	249	130	245	-	33	282	131	-	-	51	-
10	98	238	102	-8	111	568	80	172	118	209	56	96	-	-	-	23	109
11	166	29	131	203	146	232	149	-	-	88	-	-	-	-	-	-	-
12	70	-48	65	99	92	63	64	63	69	121	67	-	100	-	-	43	-
13	196	-140	74	799	176	145	183	98	77	116	44	-64	57	-	-	-	-
14	158	-	58	177	-	119	-15	35	-	52	13	11	12	1	39	33	-
15	107	-	88	140	-	106	77	98	-	94	4	-21	-	-105	-19	-	-
16	105	43	56	81	150	148	151	77	-	119	-	-	-	-	6	-	-
17	112	-	-11	126	80	-	8	-	-	95	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-9	-	-	-	-	4	-	-
19	-	-	-	244	128	-	-	-	-	-	-	-	-	-	-	35	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	173	-	34	-	-
22	-	-	-	-	-	-	-	-	-	-	-	7	-	-56	5	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-14	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	128	-	86	182	-	-	-	-	-	96	-	-	-	-	-	-	-
27	112	-32	44	41	40	-	82	55	-52	26	-	-	-	-	-	64	-
28	150	-	66	-	-	-	168	-	-	27	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	218	-	148	-	-	-	-	-	-	-

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SO2 IN AIR (MICROGRAMS PER M3)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17
1	28	19	-	37	-	-	-	-	35	-	-	-	-	-	-	-	-
2	34	23	-	60	-	-	-	-	29	-	-	-	-	-	-	-	-
3	27	18	-	36	-	-	-	-	35	-	-	-	-	-	-	-	-
4	17	9	-	23	-	-	-	-	20	-	-	-	-	-	-	-	-
5	18	3	-	20	-	-	-	-	12	-	-	-	-	-	-	-	-
6	13	2	-	17	-	-	-	-	9	-	-	-	-	-	-	-	-
7	14	6	-	15	-	-	-	-	15	-	-	-	-	-	-	-	-
8	6	5	-	7	-	-	-	-	7	-	-	-	-	-	-	-	-
9	15	6	-	17	-	-	-	-	9	-	-	-	-	-	-	-	-
10	8	4	-	7	-	-	-	-	17	-	-	-	-	-	-	-	-
11	13	6	-	10	-	-	-	-	8	-	-	-	-	-	-	-	-
12	15	5	-	12	-	-	-	-	22	-	-	-	-	-	-	-	-
13	10	0	-	8	-	-	-	-	14	-	-	-	-	-	-	-	-
14	7	6	-	8	-	-	-	-	8	-	-	-	-	-	-	-	-
15	5	4	-	3	-	-	-	-	5	-	-	-	-	-	-	-	-
16	8	7	-	8	-	-	-	-	7	-	-	-	-	-	-	-	-
17	7	4	-	8	-	-	-	-	18	-	-	-	-	-	-	-	-
18	10	6	-	7	-	-	-	-	7	-	-	-	-	-	-	-	-
19	6	5	-	17	-	-	-	-	12	-	-	-	-	-	-	-	-
20	6	4	-	9	-	-	-	-	0	-	-	-	-	-	-	-	-
21	5	0	-	13	-	-	-	-	0	-	-	-	-	-	-	-	-
22	12	0	-	10	-	-	-	-	0	-	-	-	-	-	-	-	-
23	0	0	-	12	-	-	-	-	0	-	-	-	-	-	-	-	-
24	7	0	-	17	-	-	-	-	0	-	-	-	-	-	-	-	-
25	13	0	-	19	-	-	-	-	0	-	-	-	-	-	-	-	-
26	20	4	-	8	-	-	-	-	7	-	-	-	-	-	-	-	-
27	2	0	-	8	-	-	-	-	0	-	-	-	-	-	-	-	-
28	3	0	-	9	-	-	-	-	0	-	-	-	-	-	-	-	-
29	4	0	-	8	-	-	-	-	2	-	-	-	-	-	-	-	-

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LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA FEBRUARY 1972

SULPHATE IN PRECIPITATION (MILLIGRAMS PER M2 PER DAY)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17
1	45	4	10	73	15	2	21	0	0	21	0	0	0	0	0	9	-
2	9	7	14	39	7	0	11	0	0	17	0	0	0	0	0	1	-
3	12	10	13	32	34	0	16	3	0	17	0	0	0	0	0	6	-
4	0	16	0	0	0	0	0	0	0	1	0	0	0	0	0	-	-
5	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	-	-
6	10	8	12	14	6	1	24	4	12	-	0	0	0	0	0	1	-
7	-	28	-	11	10	0	5	15	23	10	5	6	3	8	0	2	-
8	-	0	16	0	0	0	9	32	19	12	0	-	5	1	0	-	-
9	43	0	61	42	24	91	85	56	28	0	3	4	25	0	-	4	-
10	10	-	12	15	26	7	8	24	5	25	3	3	0	0	-	2	-
11	77	23	52	58	50	24	45	0	0	3	0	0	0	0	0	0	-
12	53	12	49	92	69	14	54	8	5	38	3	0	12	0	-	8	-
13	22	4	8	13	11	14	31	16	12	60	5	4	7	0	-	0	-
14	18	0	22	35	0	8	15	8	1	12	3	12	8	15	2	2	-
15	12	0	6	-	0	23	28	6	2	8	1	4	0	2	1	0	-
16	51	12	43	44	74	29	57	4	2	8	0	0	0	0	0	1	-
17	9	0	5	9	3	0	3	0	0	17	0	0	0	0	0	0	-
18	0	0	0	0	0	0	0	0	0	5	0	0	0	0	1	0	-
19	0	0	0	-	5	0	0	0	0	0	0	0	0	0	0	3	-
20	-	4	0	0	0	0	0	0	0	2	0	0	0	0	0	-	-
21	0	0	0	0	0	0	0	0	0	0	0	0	38	0	2	0	-
22	0	0	0	0	0	0	0	0	5	0	0	13	0	4	2	0	-
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	-
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	-
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
26	6	0	14	8	6	3	0	0	0	5	0	0	0	0	-	0	-
27	12	13	15	12	3	0	9	4	3	4	0	0	0	0	-	6	-
28	7	0	9	0	0	0	13	3	0	2	0	0	0	0	0	0	-
29	-	0	-	0	0	0	9	14	0	6	0	0	0	0	0	1	-

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA FEBRUARY 1972

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER M2 PER DAY)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17
1	1035	61	215	1263	374	30	392	0	0	440	0	0	0	0	0	295	-
2	153	137	266	683	171	0	510	0	0	294	0	0	0	0	-	21	-
3	275	178	136	639	784	0	261	63	0	301	0	0	0	0	0	129	-
4	0	204	0	0	0	0	0	0	0	-	0	0	0	0	0	-	-
5	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	-	-
6	172	144	185	237	189	-	145	63	29	-	0	0	0	0	0	-	-
7	-	550	281	201	186	-	10	399	321	235	76	45	78	-39	0	-	-
8	-	0	459	0	0	0	-	834	443	218	0	-	150	-24	-	-	-
9	1070	0	1477	802	571	1878	1696	1597	1092	0	155	169	865	0	-	107	-
10	125	-	104	-12	530	181	25	635	68	738	230	38	0	0	-	55	-
11	2272	102	1042	1906	1208	894	1072	0	0	67	0	0	0	0	0	0	-
12	1537	-98	1262	2496	1669	417	1365	437	110	932	355	0	550	0	-	182	-
13	611	-267	188	1144	331	420	932	474	279	2016	238	-77	251	0	-	0	-
14	402	0	166	744	0	220	-32	172	-	228	87	162	85	14	56	19	-
15	191	0	126	80	0	337	103	119	-	138	5	-63	0	-284	-133	0	-
16	1003	162	544	598	1537	622	846	118	-	129	0	0	0	0	10	-	-
17	235	0	-14	156	199	0	6	0	0	387	0	0	0	0	0	0	-
18	0	0	0	0	0	0	0	0	0	-15	0	0	0	0	6	0	-
19	0	0	0	194	81	0	0	0	0	0	0	0	0	0	0	47	-
20	-	-	0	0	0	0	0	0	0	-	0	0	0	0	0	-	-
21	0	0	0	0	0	0	0	0	0	0	0	0	727	0	48	0	-
22	0	0	0	0	0	0	0	0	-	0	0	8	0	-34	18	0	-
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	76	0	-
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-31	0	-
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
26	106	0	153	127	-	-	0	0	0	55	0	0	0	0	-	0	-
27	250	-71	87	65	56	0	57	70	-23	43	0	0	0	0	-	86	-
28	115	0	71	0	0	0	171	-	0	9	0	0	0	0	0	0	-
29	-	0	-	0	0	0	-	180	0	122	0	0	0	0	0	-	-

SLUTT

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA MARCH 1972

AMOUNT (MM) IN NILU PRECIPITATION COLLECTORS

a

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18
1	0.8	0.0	1.0	1.2	1.2	0.0	1.4	0.2	0.0	0.9	-	-	-	-	0.0	0.5	-	0.0
2	3.2	1.1	4.5	1.8	4.4	0.0	2.5	0.1	0.0	3.5	-	-	-	-	0.0	0.2	-	0.0
3	6.0	2.9	11.5	2.2	5.2	0.9	6.8	0.3	0.0	12.0	-	-	-	-	0.0	3.6	-	2.2
4	59.2	15.3	64.9	26.1	54.4	27.1	37.8	15.7	4.6	39.8	-	-	-	-	0.0	1.4	-	0.0
5	20.7	4.8	12.7	24.5	30.6	5.2	21.1	0.1	0.0	10.8	-	-	-	-	0.0	2.2	-	1.4
6	14.0	0.5	7.0	23.2	12.4	0.0	5.5	0.0	0.0	7.3	-	-	-	-	0.0	1.7	-	2.9
7	13.4	4.8	10.0	23.9	13.4	0.3	6.7	0.1	0.0	10.6	-	-	-	-	0.0	2.3	-	4.7
8	4.5	0.5	3.8	8.0	7.8	0.2	2.4	0.6	1.8	2.3	-	-	-	-	0.0	0.1	-	3.9
9	0.2	0.0	0.0	0.7	1.0	0.0	0.0	0.0	0.0	0.5	-	-	-	-	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.6	0.0	0.0	1.2
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	5.3	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	37.6	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	15.3	0.0	0.0	0.0
14	1.0	0.0	0.0	0.0	1.7	0.1	0.0	0.2	0.0	2.2	-	-	-	-	0.0	0.0	0.0	0.0
15	6.2	0.9	5.4	6.7	3.4	3.5	6.1	5.0	2.9	3.9	-	-	-	-	11.4	0.0	0.0	0.0
16	0.0	0.0	0.0	0.4	0.0	0.3	0.0	0.0	0.0	0.3	-	-	-	-	0.8	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	5.6	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	1.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	-	-	-	-	2.5	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.2	0.0	9.2	14.3	0.0	-	-	-	-	11.3	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	2.3	0.0	36.1	43.7	0.0	-	-	-	-	5.2	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.0	-	-	-	-	1.1	0.9	0.0	0.0
24	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.5	0.6	0.0	-	-	-	-	0.3	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.0	0.1	0.0	0.0
26	7.3	8.6	9.2	8.0	8.9	8.9	9.1	18.8	11.8	6.9	-	-	-	-	0.0	6.2	11.5	11.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	3.3	0.0	-	-	-	-	0.7	4.3	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.3	0.3	10.4	5.7	0.0	-	-	-	-	0.0	0.4	0.0	0.3
29	0.0	0.0	0.0	0.0	0.0	0.5	0.0	5.0	4.3	0.0	-	-	-	-	0.0	0.2	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.8	0.0	-	-	-	-	0.0	0.1	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.4	0.0	0.0	0.0

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA MARCH 1972

OFFICIAL PRECIPITATION DATA (MM)

b

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18
1	-	-	1.3	-	-	0.0	0.7	0.4	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.6	-	-
2	-	-	5.5	-	-	0.0	1.2	0.2	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.2	-	-
3	-	-	13.5	-	-	0.2	6.9	1.2	0.0	11.1	0.0	0.0	0.0	0.0	0.0	4.1	-	-
4	-	-	65.0	-	-	27.7	35.5	16.0	2.3	36.0	0.0	0.0	0.0	0.6	0.0	1.5	-	-
5	-	-	12.5	-	-	5.0	20.0	0.2	0.0	10.5	3.1	0.0	0.0	0.0	0.0	1.9	-	-
6	-	-	7.0	-	-	0.0	3.7	0.0	0.0	6.8	0.5	0.0	0.0	0.0	0.0	1.6	-	-
7	-	-	10.0	-	-	0.1	3.1	0.1	0.0	10.5	0.0	0.0	0.0	0.0	0.0	2.6	-	-
8	-	-	4.0	-	-	0.3	1.9	0.5	1.5	2.5	0.0	0.0	0.0	0.0	0.0	0.1	-	-
9	-	-	0.0	-	-	0.0	0.5	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	-	-
10	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	-	-
11	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	3.4	5.5	2.2	17.0	0.0	-	-
12	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	8.0	64.4	0.0	-	-
13	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	27.7	0.0	-	-
14	-	-	0.0	-	-	0.1	0.0	0.2	0.0	2.2	0.0	0.7	2.5	1.0	0.0	0.0	-	-
15	-	-	5.5	-	-	3.3	5.8	5.1	3.5	3.7	0.0	0.2	0.0	0.1	13.8	0.0	-	-
16	-	-	0.0	-	-	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1.5	0.0	-	-
17	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
18	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.3	0.0	-	-
19	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	0.0	1.5	0.0	-	-
20	-	-	0.0	-	-	0.0	0.0	0.0	0.2	0.0	3.0	10.1	5.5	8.6	3.2	0.0	-	-
21	-	-	0.0	-	-	0.3	0.0	9.6	15.2	0.0	28.5	55.2	5.6	45.2	29.0	0.0	-	-
22	-	-	0.0	-	-	3.8	0.0	34.5	44.4	0.0	9.3	8.3	1.3	15.8	22.0	0.0	-	-
23	-	-	0.0	-	-	0.2	0.0	1.6	0.3	0.0	0.0	6.2	0.0	13.5	3.0	1.2	-	-
24	-	-	0.0	-	-	0.0	0.0	0.5	0.6	0.0	2.5	4.0	11.3	5.6	0.6	0.0	-	-
25	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	2.5	3.1	4.2	5.3	0.0	0.1	-	-
26	-	-	9.3	-	-	7.4	9.0	19.0	14.4	7.4	7.7	4.7	4.5	3.4	0.0	7.2	-	-
27	-	-	0.0	-	-	0.0	0.0	0.4	3.3	0.0	3.0	9.1	1.2	10.3	1.0	5.0	-	-
28	-	-	0.0	-	-	0.5	0.4	11.7	5.5	0.0	1.9	3.6	4.6	3.8	0.0	0.4	-	-
29	-	-	0.0	-	-	1.1	0.1	6.5	3.9	0.0	0.0	3.5	0.0	0.0	0.0	0.2	-	-
30	-	-	0.0	-	-	0.0	0.0	1.8	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
31	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	-	-

SULPHATE IN PRECIPITATION (MILLIGRAMS PER LITER)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18
1	6.7	-	7.5	8.9	8.9	-	8.0	11.8	-	6.8	-	-	-	-	-	6.5	-	-
2	6.9	12.6	5.6	9.8	6.0	-	10.9	15.0	-	6.1	-	-	-	-	-	4.6	-	-
3	9.1	8.6	11.5	8.1	8.4	35.0	8.3	9.4	-	7.3	-	-	-	-	-	4.7	11.5	5.8
4	6.2	1.5	1.6	5.3	7.5	6.1	5.1	0.8	3.1	7.3	-	-	-	20.9	-	9.8	-	-
5	6.0	3.0	4.0	6.0	5.7	6.4	9.7	8.4	-	3.3	3.4	-	-	-	-	10.8	14.2	13.9
6	6.0	10.6	7.3	7.6	6.6	-	8.0	-	-	2.2	3.2	-	-	-	-	5.6	-	5.4
7	2.2	2.2	2.9	3.2	2.0	12.4	3.9	-	-	6.4	-	-	-	-	-	4.7	-	3.8
8	1.8	4.8	1.8	1.6	3.1	4.0	2.0	1.3	1.6	3.1	-	-	-	-	-	-	-	1.9
9	-	-	-	12.9	3.5	-	-	-	-	10.3	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	1.4
11	-	-	-	-	-	-	-	-	-	-	-	5.0	6.2	1.4	2.2	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	1.4	-	1.5	0.3	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	14.7	-	0.1	-	-	-
14	4.7	-	-	-	7.1	14.0	-	34.0	-	3.4	-	-	22.2	11.9	-	-	-	-
15	4.7	5.9	6.5	5.5	5.6	3.3	4.4	5.3	7.9	4.6	-	-	-	-	0.2	-	-	-
16	-	4.7	-	15.7	-	13.3	-	-	-	-	-	-	-	-	5.1	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.2	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	13.2	-	4.1	-	-	-
20	-	-	-	-	-	-	-	-	-	-	9.0	0.5	1.7	6.1	1.9	-	-	-
21	-	-	-	-	-	9.5	-	1.8	2.0	-	0.1	0.5	1.3	0.1	5.8	-	-	-
22	-	-	-	-	-	1.8	-	0.1	0.9	-	1.1	1.2	3.6	0.7	0.6	-	-	-
23	-	-	-	-	-	-	-	-	2.6	-	-	1.6	-	4.1	0.8	4.7	-	-
24	-	-	-	1.8	-	-	-	7.5	4.2	-	0.6	5.5	3.7	0.2	0.6	-	-	-
25	-	-	-	-	11.9	-	-	-	-	-	1.0	7.4	8.2	1.0	-	-	-	-
26	3.7	5.6	6.1	4.3	5.1	2.6	5.2	5.2	2.1	5.2	1.8	2.5	2.6	0.8	-	2.1	3.6	2.8
27	-	-	-	-	-	-	-	1.6	1.0	-	0.1	0.9	2.2	0.0	1.8	1.4	-	-
28	-	-	-	-	-	6.8	4.7	1.5	1.3	-	0.4	2.3	4.3	1.3	-	3.6	-	3.5
29	-	-	-	-	-	0.0	-	1.7	1.5	-	-	3.1	-	-	-	-	-	-
30	-	-	-	-	-	-	-	1.7	1.4	-	-	-	-	-	-	0.6	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-

c

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA MARCH 1972

PH IN PRECIPITATION

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18
1	4.12	-	4.45	3.91	3.91	-	4.00	-	-	4.05	-	-	-	-	-	4.79	-	-
2	3.98	6.55	4.29	3.82	4.62	-	3.95	-	-	4.00	-	-	-	-	-	5.00	-	-
3	3.90	4.00	3.90	3.95	3.91	3.35	4.00	-	-	3.98	-	-	-	-	-	4.21	4.20	4.38
4	4.02	5.30	4.82	4.22	4.08	4.05	4.08	4.72	4.52	4.28	-	-	-	5.65	-	4.10	-	-
5	4.18	4.78	4.72	-	4.30	4.12	4.08	4.37	-	4.32	4.08	-	-	-	-	3.92	3.81	3.80
6	4.15	6.70	4.42	4.12	4.20	-	4.15	-	-	4.38	-	-	-	-	-	4.20	-	4.35
7	4.35	4.58	4.52	4.30	4.62	3.80	4.30	-	-	4.15	-	-	-	-	-	4.30	-	4.20
8	4.51	5.98	5.62	4.58	5.08	4.59	4.98	5.95	6.20	4.40	-	-	-	-	-	-	-	4.48
9	-	-	-	3.75	6.68	-	-	-	-	4.07	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.22	-	-	4.66
11	-	-	-	-	-	-	-	-	-	-	-	4.35	4.02	6.10	4.62	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	5.50	-	5.95	4.52	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	3.50	-	5.52	-	-	-
14	3.96	-	-	-	3.95	3.77	-	3.36	-	4.15	-	-	3.40	4.42	-	-	-	-
15	4.10	6.95	4.45	4.05	4.20	4.08	4.28	4.05	4.25	4.15	-	-	-	-	5.58	-	-	-
16	-	4.22	-	-	-	-	-	-	-	-	-	-	-	-	4.38	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.00	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	3.68	-	6.55	-	-	-
20	-	-	-	-	-	-	-	-	-	-	4.21	5.48	4.68	4.21	6.05	-	-	-
21	-	-	-	-	-	4.37	-	5.80	4.88	-	5.59	4.85	4.61	5.50	3.99	-	-	-
22	-	-	-	-	-	5.50	-	5.65	5.21	-	5.72	4.68	4.53	5.60	5.02	-	-	-
23	-	-	-	-	-	-	-	-	5.68	-	-	4.72	-	4.38	6.15	5.26	-	-
24	-	-	-	5.00	-	-	-	4.01	6.28	-	4.92	4.42	4.10	5.70	5.21	-	-	-
25	-	-	-	-	4.20	-	-	-	-	-	4.69	4.05	3.80	5.81	-	-	-	-
26	4.25	4.68	4.89	4.40	4.35	4.41	4.40	4.70	4.48	4.30	4.31	4.50	4.28	6.40	-	4.51	4.21	4.40
27	-	-	-	-	-	-	-	6.48	5.95	-	6.15	5.35	4.30	6.18	4.38	4.78	-	-
28	-	-	-	-	-	5.65	-	4.80	5.02	-	5.21	4.78	4.12	4.62	-	4.45	-	4.40
29	-	-	-	-	-	4.98	-	5.02	5.28	-	-	6.35	-	-	-	-	-	-
30	-	-	-	-	-	-	-	5.70	5.92	-	-	-	-	-	-	5.46	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.93	-	-	-

d

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA MARCH 1972

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER LITER)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18
1	90	-	42	164	114	-	106	-	-	90	-	-	-	-	-	21	-	-
2	116	-60	58	158	24	-	125	-	-	109	-	-	-	-	-	-	-	-
3	139	109	145	134	105	330	126	-	-	118	-	-	-	-	-	65	69	39
4	98	0	14	68	95	91	82	18	33	68	-	-	-	-	-	88	-	-
5	75	18	21	70	51	78	86	-	-	51	92	-	-	-	-	128	161	165
6	73	-297	40	81	63	-	74	-	-	42	-	-	-	-	-	63	-	45
7	44	30	29	56	22	208	54	-	-	77	-	-	-	-	-	55	-	64
8	32	-32	-4	30	-4	-	11	-81	-24	39	-	-	-	-	-	-	-	38
9	-	-	-	198	-764	-	-	-	-	87	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	48	109	-21	25	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-16	-	-12	0	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	301	-	-5	-	-	-
14	130	-	-	-	127	-	-	-	-	77	-	-	448	58	-	-	-	-
15	94	-226	36	97	67	95	67	92	54	79	-	-	-	-	-18	-	-	-
16	-	61	-	8	-	-	-	-	-	-	-	-	-	-	42	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	117	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	227	-	-110	-	-	-
20	-	-	-	-	-	-	-	-	-	-	68	-2	21	65	-15	-	-	-
21	-	-	-	-	-	-	-	-67	10	-	-4	12	22	-1	107	-	-	-
22	-	-	-	-	-	-6	-	-7	1	-	-9	23	34	-4	5	-	-	-
23	-	-	-	-	-	-	-	-	15	-	-	20	-	45	-16	0	-	-
24	-	-	-	15	-	-	-	92	-76	-	11	41	84	-14	-	-	-	-
25	-	-	-	-	69	-	-	-	-	-	23	92	172	-14	-	-	-	-
26	56	21	5	47	44	35	42	19	29	51	50	30	58	-48	-	32	60	44
27	-	-	-	-	-	-	-	-39	-21	-	-30	-3	45	-19	44	15	-	-
28	-	-	-	-	-	-	-	12	5	-	7	15	68	22	-	36	-	-
29	-	-	-	-	-	4	-	7	2	-	-	0	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-7	-18	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-

e

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA MARCH 1972

SO2 IN AIR (MICROGRAMS PER M3)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18
1	3	2	-	4	-	-	-	-	0	-	-	-	-	-	-	-	-	-
2	3	1	-	19	-	-	-	-	2	-	-	-	-	-	-	-	-	-
3	5	2	-	16	-	-	-	-	1	-	-	-	-	-	-	-	-	-
4	13	4	-	23	-	-	-	-	24	-	-	-	-	-	-	-	-	-
5	7	2	-	6	-	-	-	-	10	-	-	-	-	-	-	-	-	-
6	4	0	-	9	-	-	-	-	14	-	-	-	-	-	-	-	-	-
7	13	0	-	12	-	-	-	-	15	-	-	-	-	-	-	-	-	-
8	11	16	-	19	-	-	-	-	16	-	-	-	-	-	-	-	-	-
9	-	1	-	1	-	-	-	-	14	-	-	-	-	-	-	-	-	-
10	-	2	-	12	-	-	-	-	12	-	-	-	-	-	-	-	-	-
11	3	1	-	9	-	-	-	-	3	-	-	-	-	-	-	-	-	-
12	0	0	-	4	-	-	-	-	4	-	-	-	-	-	-	-	-	-
13	0	2	-	14	-	-	-	-	0	-	-	-	-	-	-	-	-	-
14	9	2	-	20	-	-	-	-	12	-	-	-	-	-	-	-	-	-
15	12	2	-	19	-	-	-	-	7	-	-	-	-	-	-	-	-	-
16	14	2	-	19	-	-	-	-	10	-	-	-	-	-	-	-	-	-
17	18	2	-	29	-	-	-	-	17	-	-	-	-	-	-	-	-	-
18	9	4	-	16	-	-	-	-	11	-	-	-	-	-	-	-	-	-
19	0	3	-	18	-	-	-	-	7	-	-	-	-	-	-	-	-	-
20	18	14	-	13	-	-	-	-	19	-	-	-	-	-	-	-	-	-
21	0	0	-	5	-	-	-	-	3	-	-	-	-	-	-	-	-	-
22	0	0	-	3	-	-	-	-	0	-	-	-	-	-	-	-	-	-
23	0	0	-	9	-	-	-	-	0	-	-	-	-	-	-	-	-	-
24	5	0	-	2	-	-	-	-	0	-	-	-	-	-	-	-	-	-
25	11	1	-	11	-	-	-	-	16	-	-	-	-	-	-	-	-	-
26	1	0	-	7	-	-	-	-	9	-	-	-	-	-	-	-	-	-
27	3	0	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
28	0	0	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
29	0	0	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
30	0	0	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
31	0	0	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-

f

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA MARCH 1972

SULPHATE IN PRECIPITATION (MILLIGRAMS PER M2 PER DAY)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18
1	5	0	7	11	11	0	11	2	0	6	0	0	0	0	0	4	-	0
2	22	14	25	18	26	0	28	1	0	21	0	0	0	0	0	1	-	0
3	55	25	132	18	43	31	56	2	0	88	0	0	0	0	0	17	-	13
4	369	24	106	140	409	165	192	13	14	290	0	0	0	13	0	13	-	0
5	125	14	51	147	174	33	205	1	0	35	11	0	0	0	0	24	-	19
6	84	5	51	175	83	0	44	0	0	16	2	0	0	0	0	9	-	16
7	30	10	29	77	26	4	26	-	0	68	0	0	0	0	0	11	-	18
8	8	2	7	13	24	1	5	1	3	7	0	0	0	0	0	-	-	8
9	-	0	0	9	4	0	0	0	0	5	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
11	0	0	0	0	0	0	0	0	0	0	0	17	34	3	11	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	3	0	12	13	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	21	0	2	0	0	0
14	5	0	0	0	12	1	0	8	0	8	0	-	56	12	0	0	0	0
15	29	5	35	37	19	11	27	26	23	18	0	-	0	-	3	0	0	0
16	0	28	0	6	0	3	0	0	0	-	0	0	0	0	4	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	109	0	4	0	0	0
20	0	0	0	0	0	0	0	0	-	0	27	5	9	52	5	0	0	0
21	0	0	0	0	0	2	0	17	29	0	4	25	7	4	66	0	0	0
22	0	0	0	0	0	4	0	5	38	0	10	10	5	11	3	0	0	0
23	0	0	0	0	0	0	0	-	1	0	0	10	0	56	1	4	0	0
24	0	0	0	3	0	0	0	4	3	0	2	22	41	1	0	0	0	0
25	0	0	0	0	16	0	0	0	0	0	2	23	34	6	0	-	0	0
26	27	48	56	34	45	23	48	98	25	36	14	12	12	3	0	13	41	31
27	0	0	0	0	0	0	0	1	3	0	0	8	3	0	1	6	0	0
28	0	0	0	0	0	2	2	15	8	0	1	8	20	5	0	1	0	1
29	0	0	0	0	0	0	0	8	6	0	0	2	0	0	0	-	0	0
30	0	0	0	0	0	0	0	2	4	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

h

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA MARCH 1972

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER M2 PER DAY)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18
1	69	0	40	198	134	0	145	-	0	80	0	0	0	0	0	11	-	0
2	369	-67	258	292	105	0	318	-	0	382	0	0	0	0	0	-	-	0
3	841	312	1662	290	541	294	858	-	0	1420	0	0	0	0	0	232	-	87
4	5802	0	909	1775	5171	2468	3101	282	151	2706	0	0	0	-	0	120	-	0
5	1552	86	267	1713	1558	402	1818	-	0	552	285	0	0	0	0	285	-	231
6	1022	-142	280	1877	782	0	435	0	0	305	-	0	0	0	0	104	-	129
7	588	143	290	1337	294	66	361	-	0	814	0	0	0	0	0	124	-	302
8	143	-15	-15	241	-31	-	26	-46	-44	89	0	0	0	0	0	-	-	150
9	-	0	0	139	-778	0	0	0	0	42	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	0	0	-
11	0	0	0	0	0	0	0	0	0	0	0	163	600	-46	132	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	-34	0	-96	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	421	0	-76	0	0	0
14	124	0	0	0	210	-	0	-	0	172	0	-	1120	58	0	0	0	0
15	586	-201	195	648	226	333	409	457	158	307	0	-	0	-	-206	0	0	0
16	0	369	0	3	0	-	0	0	0	-	0	0	0	0	33	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	655	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	1861	0	-109	0	0	0
20	0	0	0	0	0	0	0	0	-	0	204	-20	116	559	-37	0	0	0
21	0	0	0	0	0	-	0	-614	143	0	-114	662	123	-45	1206	0	0	0
22	0	0	0	0	0	-14	0	-253	44	0	-84	191	44	-63	26	0	0	0
23	0	0	0	0	0	0	0	-	9	0	0	124	0	608	-18	0	0	0
24	0	0	0	23	0	0	0	50	-48	0	28	164	949	-78	-	0	0	0
25	0	0	0	0	92	0	0	0	0	0	58	285	722	-74	0	-	0	0
26	410	180	46	374	392	312	382	358	343	351	385	141	261	-163	0	199	688	483
27	0	0	0	0	0	0	0	-17	-70	0	-90	-27	54	-196	31	64	0	0
28	0	0	0	0	0	-	-	125	29	0	13	54	313	84	0	13	0	-
29	0	0	0	0	0	2	0	35	9	0	0	0	0	0	0	-	0	0
30	0	0	0	0	0	0	0	-10	-50	0	0	0	0	0	0	-	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0

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SLUTT

AMOUNT (MM) IN NILU PRECIPITATION COLLECTORS

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20
1	0.8	4.8	1.6	0.6	2.4	3.1	3.4	4.8	0.6	2.4	-	-	-	-	0.0	1.1	0.0	0.0	0.0	0.2
2	11.1	8.0	10.5	11.8	13.6	13.5	16.9	21.5	12.4	11.5	-	-	-	-	1.1	9.9	0.0	16.0	13.5	11.8
3	0.0	0.0	1.4	0.0	0.0	3.6	2.0	7.3	4.8	0.0	-	-	-	-	0.7	9.7	13.7	3.0	0.0	0.0
4	36.9	19.4	34.5	24.8	24.7	12.1	25.7	13.5	10.8	34.7	-	-	-	-	0.1	8.1	1.5	0.0	25.9	6.3
5	5.4	3.0	6.6	4.5	12.1	1.5	6.2	8.1	3.8	6.0	-	-	-	-	0.0	0.6	8.7	10.0	2.5	12.6
6	4.1	3.0	6.7	4.6	2.9	3.4	6.2	6.0	3.2	3.6	-	-	-	-	0.1	0.0	1.3	3.2	3.0	6.2
7	3.7	0.0	9.0	5.0	2.6	3.9	5.7	5.4	0.4	5.3	-	-	-	-	2.4	1.1	0.0	0.0	5.9	1.6
8	1.9	7.1	4.5	0.0	0.0	1.8	2.7	2.9	4.4	1.5	-	-	-	-	0.9	0.0	0.0	0.0	0.0	0.0
9	0.5	0.0	0.2	0.0	0.0	0.0	0.3	2.5	2.2	0.1	-	-	-	-	0.0	1.7	0.0	0.6	0.0	0.1
10	31.8	18.8	33.2	6.6	15.5	18.0	17.5	2.2	7.0	33.5	-	-	-	-	0.0	0.6	3.8	3.1	4.0	9.2
11	27.7	9.5	20.1	18.8	8.3	10.4	14.6	2.5	2.9	22.9	-	-	-	-	0.3	1.8	3.2	1.9	3.2	6.6
12	0.0	1.0	1.1	0.0	6.5	0.1	0.0	6.4	4.1	2.4	-	-	-	-	0.0	3.0	0.4	0.9	0.0	2.3
13	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	-	-	-	-	2.8	0.0	0.0	0.0	0.7	0.0
14	0.0	0.0	0.0	2.4	2.0	11.6	2.1	5.7	5.2	0.7	-	-	-	-	0.8	0.0	0.0	0.0	0.0	0.0
15	5.4	19.1	17.2	6.4	4.3	3.9	15.1	2.8	5.6	15.9	-	-	-	-	0.0	0.5	0.0	1.1	22.8	2.5
16	14.6	8.3	7.3	8.3	8.0	0.0	3.9	0.0	0.3	16.9	-	-	-	-	0.0	0.0	0.6	0.0	0.0	0.0
17	0.0	0.0	0.0	0.4	0.0	0.5	0.0	1.4	7.7	0.0	-	-	-	-	0.0	0.2	7.8	7.3	0.0	2.0
18	1.1	0.0	0.0	0.0	1.1	0.0	1.3	0.0	0.0	0.4	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.9
19	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.8	0.0	-	-	-	-	3.5	0.2	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	-	0.0	0.2	1.7	0.0	2.9	0.0	-	-	-	-	0.5	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	4.1	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	1.0	0.0	0.0	0.0	0.0	0.0
24	0.0	-	0.0	-	0.0	0.0	0.0	0.4	0.0	0.0	-	-	-	-	8.7	0.0	0.0	0.0	0.0	0.0
25	0.0	-	0.0	-	0.0	0.0	0.0	0.0	4.5	0.0	-	-	-	-	2.1	0.0	0.0	0.0	0.0	0.0
26	0.0	-	0.0	-	0.0	0.0	0.0	0.1	0.5	0.0	-	-	-	-	1.1	0.0	0.0	0.0	0.0	0.0
27	0.0	-	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	2.3	0.0	0.0	0.0	0.0	0.0
28	5.1	-	4.5	-	4.2	4.7	10.5	4.7	6.6	4.1	-	-	-	-	0.0	0.0	0.0	1.0	1.1	0.0
29	53.5	-	52.5	-	39.8	20.8	31.4	38.6	31.1	46.7	-	-	-	-	0.0	2.7	24.8	7.9	18.1	26.2
30	0.0	-	1.9	-	5.9	2.0	0.0	4.8	0.6	1.3	-	-	-	-	0.9	8.3	0.0	6.4	0.0	6.9

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA APRIL 1972

AMOUNT (MM) IN NILU PRECIPITATION COLLECTORS

DATE	N 21	N 22	N 23
1	0.7	-	-
2	12.3	-	-
3	0.0	-	-
4	9.2	-	-
5	12.1	-	-
6	9.1	-	-
7	2.5	-	-
8	0.0	-	-
9	0.1	-	-
10	15.6	-	-
11	7.6	-	-
12	1.6	-	-
13	0.0	-	-
14	0.3	-	-
15	2.2	-	-
16	1.1	-	-
17	2.4	0.2	-
18	2.5	0.0	0.0
19	0.0	0.0	0.0
20	0.0	0.0	0.1
21	0.0	0.0	0.0
22	0.0	0.0	0.0
23	0.0	0.0	0.0
24	0.0	0.0	0.0
25	0.0	0.0	0.0
26	0.0	0.0	0.0
27	0.0	0.0	0.0
28	0.6	2.6	2.0
29	23.2	8.6	21.6
30	13.1	1.1	0.0

a

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA APRIL 1972

OFFICIAL PRECIPITATION DATA (MM)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20
1	-	-	2.0	-	-	3.5	3.4	4.6	3.0	2.5	3.4	2.7	11.4	0.5	0.0	1.2	-	-	-	0.1
2	-	-	11.0	-	-	13.1	17.4	22.6	16.5	10.5	7.9	18.9	15.8	10.8	1.4	11.8	-	-	-	11.7
3	-	-	1.5	-	-	4.0	3.2	7.6	4.5	0.0	0.6	10.4	2.9	5.7	0.9	11.0	-	-	-	0.0
4	-	-	35.0	-	-	12.7	25.0	13.5	16.4	35.0	7.5	0.6	1.4	0.9	0.3	7.5	-	-	-	5.8
5	-	-	6.7	-	-	1.3	6.5	7.9	6.1	5.5	4.4	1.0	2.6	0.0	0.1	0.7	-	-	-	12.0
6	-	-	6.6	-	-	3.6	6.4	6.1	7.4	3.3	5.4	0.4	5.3	1.0	0.2	0.0	-	-	-	6.0
7	-	-	9.0	-	-	3.9	5.8	5.5	0.5	4.8	6.7	4.8	0.2	1.0	2.6	1.2	-	-	-	2.3
8	-	-	4.3	-	-	1.8	3.0	3.0	5.0	1.2	0.0	0.0	0.0	0.0	1.1	0.0	-	-	-	0.0
9	-	-	0.0	-	-	0.0	0.5	2.7	2.4	0.1	0.2	1.8	0.0	0.0	0.0	2.2	-	-	-	0.1
10	-	-	33.0	-	-	18.6	16.5	2.1	8.4	32.4	0.0	0.5	0.0	0.0	0.0	0.6	-	-	-	8.7
11	-	-	21.7	-	-	9.6	13.9	2.5	3.0	22.4	0.0	0.0	0.0	0.0	0.4	2.2	-	-	-	6.5
12	-	-	1.0	-	-	0.2	0.0	6.5	4.7	2.5	0.0	0.5	0.4	0.7	0.1	3.3	-	-	-	2.0
13	-	-	0.0	-	-	0.0	0.4	0.0	0.3	0.0	0.0	2.0	0.2	2.5	3.7	0.0	-	-	-	0.0
14	-	-	0.0	-	-	12.1	2.5	6.0	9.5	0.5	0.0	0.0	1.1	0.0	0.9	0.0	-	-	-	0.0
15	-	-	18.2	-	-	5.0	16.5	2.7	6.0	15.0	0.0	0.2	0.0	0.9	0.0	0.5	-	-	-	2.5
16	-	-	9.5	-	-	0.0	5.3	0.0	0.3	17.0	0.0	0.0	9.9	0.0	0.0	0.0	-	-	-	-
17	-	-	0.0	-	-	0.8	0.3	1.5	8.0	0.0	0.6	1.6	0.0	2.1	0.0	0.1	-	-	-	2.0
18	-	-	0.0	-	-	0.0	2.5	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	0.9
19	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.1	0.0	-	-	-	0.0
20	-	-	0.0	-	-	0.2	0.0	0.0	0.9	0.0	1.8	4.1	10.6	5.2	4.0	0.1	-	-	-	0.0
21	-	-	0.0	-	-	0.2	2.3	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.6	0.0	-	-	-	0.0
22	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	0.0	-	-	-	0.0
23	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	-	-	-	0.0
24	-	-	0.0	-	-	0.0	0.0	0.3	0.0	0.0	0.0	0.9	6.0	1.5	9.8	0.0	-	-	-	0.0
25	-	-	0.0	-	-	0.0	0.0	0.0	3.5	0.0	3.0	7.6	7.6	5.1	3.4	0.0	-	-	-	0.0
26	-	-	0.0	-	-	0.0	0.0	0.1	0.4	0.0	0.0	2.9	2.9	4.7	2.0	0.0	-	-	-	0.0
27	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	3.0	0.0	-	-	-	0.0
28	-	-	5.8	-	-	4.9	11.0	5.1	10.2	3.9	1.0	0.2	2.7	0.0	0.0	0.0	-	-	-	0.0
29	-	-	53.0	-	-	26.0	29.5	37.6	51.4	48.7	4.0	0.3	1.7	0.0	0.0	3.2	-	-	-	26.5
30	-	-	3.0	-	-	4.2	0.0	5.8	2.7	1.4	6.5	5.2	0.8	2.1	1.2	9.4	-	-	-	7.1

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA APRIL 1972

OFFICIAL PRECIPITATION DATA (MM)

DATE	N 21	N 22	N 23
1	-	-	-
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-
7	-	-	-
8	-	-	-
9	-	-	-
10	-	-	-
11	-	-	-
12	-	-	-
13	-	-	-
14	-	-	-
15	-	-	-
16	-	-	-
17	-	-	-
18	-	-	-
19	-	-	-
20	-	-	-
21	-	-	-
22	-	-	-
23	-	-	-
24	-	-	-
25	-	-	-
26	-	-	-
27	-	-	-
28	-	-	-
29	-	-	-
30	-	-	-

b

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA APRIL 1972

SULPHATE IN PRECIPITATION (MILLIGRAMS PER LITER)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20
1	1.6	3.2	4.3	3.0	2.5	1.6	1.9	1.1	2.5	1.5	0.1	2.0	0.9	-	-	1.0	-	-	-	0.9
2	1.9	1.2	1.0	3.3	1.8	1.4	2.4	0.4	0.4	1.5	0.1	0.4	0.4	0.2	0.4	0.6	-	2.4	1.1	0.2
3	-	-	0.8	-	-	0.9	0.7	0.4	0.4	-	0.2	0.5	2.2	0.3	0.0	0.3	2.1	0.9	-	-
4	3.0	1.3	2.8	2.9	2.7	3.9	3.6	1.6	1.9	1.6	0.5	2.2	5.6	2.6	0.9	1.9	2.0	-	2.1	2.7
5	3.4	1.2	3.3	4.0	2.4	5.1	4.0	2.4	4.1	2.7	1.2	3.3	6.9	-	-	6.0	2.1	2.1	1.6	0.7
6	3.7	4.2	3.8	6.5	5.8	3.4	3.2	2.6	0.9	4.4	1.1	2.6	1.5	2.9	-	-	6.0	3.7	6.0	3.9
7	4.7	-	3.5	5.5	5.8	2.8	4.7	3.2	2.2	4.4	0.7	2.2	-	2.3	3.3	6.3	-	-	13.3	5.6
8	2.9	3.0	4.0	-	-	5.9	7.6	3.3	4.5	3.6	-	-	-	-	3.8	-	-	-	-	-
9	5.6	-	11.0	-	-	-	9.9	3.2	4.5	3.1	8.5	5.2	-	-	-	3.5	-	6.4	-	-
10	5.6	2.5	4.1	6.4	6.1	4.1	6.5	3.0	1.2	2.2	-	-	-	-	-	6.3	6.0	6.8	6.5	5.8
11	5.1	5.7	3.2	4.3	10.5	4.1	6.5	10.3	4.8	7.4	-	-	-	-	4.9	4.5	6.5	5.7	5.9	8.6
12	-	1.5	7.8	-	4.8	-	-	1.3	3.0	1.3	-	15.9	-	9.5	-	4.6	13.4	7.7	-	3.3
13	-	-	-	-	-	-	17.0	-	1.8	-	-	8.4	-	3.6	4.3	-	-	-	18.6	-
14	-	-	-	15.6	18.4	6.0	16.6	6.0	4.0	13.1	-	-	18.4	-	1.3	-	-	-	-	-
15	11.0	4.1	5.5	12.4	10.6	9.5	6.0	4.8	4.0	6.5	-	-	-	1.6	-	15.5	-	20.8	8.5	11.6
16	5.7	1.6	3.1	6.7	11.7	-	4.5	-	3.7	2.6	-	-	0.8	-	-	-	21.0	3.8	-	-
17	-	-	-	2.7	-	3.6	-	1.5	1.3	-	2.3	3.6	-	1.5	-	-	4.8	2.7	-	10.3
18	5.9	-	-	-	10.9	-	5.9	-	-	7.2	-	-	-	-	-	-	-	-	-	12.3
19	-	-	-	-	-	-	-	-	-	-	-	-	1.0	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	2.6	-	0.0	1.3	0.6	0.6	4.4	-	-	-	-	-
21	-	-	-	-	-	3.9	1.9	-	0.6	-	-	-	-	-	1.1	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2	-	-	-	-	-
24	-	-	-	-	-	-	-	7.0	-	-	-	3.6	1.3	1.2	0.2	-	-	-	-	-
25	-	-	-	-	-	-	-	-	4.1	-	2.2	1.8	1.5	0.5	0.6	-	-	-	-	-
26	-	-	-	-	-	-	-	-	0.0	-	-	2.0	1.7	0.4	0.2	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	-	-	-	-	-
28	3.8	-	3.1	-	2.9	4.2	4.9	1.9	3.1	1.3	1.7	-	1.1	-	-	-	-	2.0	3.8	-
29	4.1	-	2.7	-	4.7	3.1	3.5	3.0	2.0	3.0	2.4	2.7	2.9	-	-	4.7	6.0	5.8	4.5	3.4
30	-	-	3.9	-	4.1	3.0	-	4.1	4.2	4.0	1.7	3.9	10.8	4.4	1.2	3.2	-	3.3	-	4.0

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA APRIL 1972

SULPHATE IN PRECIPITATION (MILLIGRAMS PER LITER)

DATE	N 21	N 22	N 23
1	0.5	-	-
2	0.2	-	-
3	-	-	-
4	2.2	-	-
5	0.7	-	-
6	3.9	-	-
7	4.6	-	-
8	-	-	-
9	8.1	-	-
10	4.8	-	-
11	8.6	-	-
12	4.6	-	-
13	-	-	-
14	14.5	-	-
15	8.2	-	-
16	9.7	-	-
17	6.3	2.8	-
18	6.1	-	-
19	-	-	-
20	-	-	-
21	-	-	-
22	-	-	-
23	-	-	-
24	-	-	-
25	-	-	-
26	-	-	-
27	-	-	-
28	0.7	3.5	-
29	4.3	6.1	3.6
30	2.3	5.3	-

C

PH IN PRECIPITATION

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20
1	5.26	5.95	5.30	6.55	5.22	5.11	4.98	4.92	5.44	5.21	4.85	5.60	4.72	-	-	5.02	-	-	-	4.75
2	4.60	5.10	5.60	4.41	4.59	4.78	4.68	5.28	5.31	4.65	5.45	5.68	5.20	5.80	5.11	5.00	-	4.52	4.95	4.98
3	-	-	6.10	-	-	5.90	6.15	5.55	5.82	-	6.45	5.92	4.41	5.65	5.02	5.20	5.58	4.78	-	-
4	4.39	5.20	4.51	4.55	5.61	4.35	4.31	4.60	4.58	4.68	4.90	5.06	3.89	6.80	5.68	4.48	4.45	-	4.68	4.38
5	4.10	4.62	4.51	4.21	4.82	4.10	4.10	4.38	4.10	4.20	4.65	5.62	3.85	-	-	4.12	4.52	4.40	4.40	4.70
6	4.21	4.29	4.20	4.31	6.89	4.45	4.39	4.32	4.42	4.35	4.71	5.15	4.58	4.90	-	-	3.98	4.12	4.02	4.05
7	4.00	-	4.81	4.39	4.38	4.25	4.11	4.22	4.70	4.02	4.68	5.09	-	6.39	4.20	3.98	-	-	3.72	3.89
8	4.10	4.39	4.59	-	-	3.92	3.90	4.22	4.10	4.15	-	-	-	-	4.09	-	-	-	-	-
9	4.10	-	6.95	-	-	-	4.02	4.50	4.15	5.81	3.86	5.60	-	-	-	4.55	-	4.02	-	-
10	4.09	6.12	4.22	3.99	4.10	4.22	4.54	4.60	4.53	4.35	-	-	-	-	-	5.71	4.22	4.23	4.15	3.99
11	4.40	4.32	5.30	4.38	4.38	4.20	4.25	4.10	7.02	4.38	-	-	-	-	4.27	4.22	4.40	4.29	4.31	4.11
12	-	6.75	4.38	-	4.32	-	-	4.91	4.51	4.65	-	3.86	-	3.98	-	4.58	3.94	3.96	-	4.41
13	-	-	-	-	-	-	4.07	-	5.27	-	-	4.41	-	4.35	4.28	-	-	-	3.60	-
14	-	-	-	4.39	4.01	3.89	3.45	3.95	4.12	3.63	-	-	3.50	-	5.50	-	-	-	-	-
15	3.80	4.15	4.29	3.70	3.86	3.78	4.28	4.22	4.28	3.96	-	-	-	5.65	-	3.70	-	3.86	3.89	3.75
16	4.05	4.60	4.89	3.97	3.82	-	4.95	-	6.15	4.25	-	-	4.85	-	-	-	3.85	4.18	-	-
17	-	-	-	5.75	-	4.81	-	5.65	5.35	-	4.85	5.70	-	6.12	-	-	4.19	4.35	-	3.82
18	4.11	-	-	-	4.00	-	5.42	-	-	4.32	-	-	-	-	-	-	-	-	-	3.80
19	-	-	-	-	-	-	-	-	-	-	-	-	4.70	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	6.18	-	6.10	5.75	5.02	5.98	5.48	-	-	-	-	-
21	-	-	-	-	-	6.20	6.08	-	6.63	-	-	-	-	-	5.41	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.23	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.51	-	-	-	-	-
24	-	-	-	-	-	-	-	6.40	-	-	-	6.50	4.56	6.35	5.30	-	-	-	-	-
25	-	-	-	-	-	-	-	-	5.91	-	6.11	5.59	4.60	6.28	5.21	-	-	-	-	-
26	-	-	-	-	-	-	-	-	6.60	-	-	5.10	4.90	6.50	5.25	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.62	-	-	-	-	-
28	4.18	-	4.41	-	4.61	4.18	4.11	5.15	4.87	4.78	6.05	-	4.70	-	-	-	-	6.48	7.25	-
29	4.21	-	4.29	-	4.28	4.29	4.39	-	4.71	4.38	4.20	6.22	3.97	-	-	4.37	4.08	4.01	4.29	4.15
30	-	-	4.70	-	4.39	4.41	-	4.41	5.79	-	4.19	4.22	3.68	5.31	4.32	4.39	-	4.33	-	4.37

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA APRIL 1972

PH IN PRECIPITATION

DATE	N 21	N 22	N 23
1	5.00	-	-
2	5.10	-	-
3	-	-	-
4	4.71	-	-
5	4.71	-	-
6	4.11	-	-
7	4.10	-	-
8	-	-	-
9	3.87	-	-
10	4.05	-	-
11	4.10	-	-
12	4.51	-	-
13	-	-	-
14	3.73	-	-
15	3.85	-	-
16	3.81	-	-
17	4.15	6.52	-
18	4.10	-	-
19	-	-	-
20	-	-	-
21	-	-	-
22	-	-	-
23	-	-	-
24	-	-	-
25	-	-	-
26	-	-	-
27	-	-	-
28	5.31	4.40	-
29	4.14	3.89	4.20
30	4.45	3.95	-

d

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER LITER)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20
1	0	-24	-1	-68	-10	2	8	9	0	-2	13	-6	16	-	-	9	-	-	-	-
2	24	4	-3	37	27	14	20	0	3	20	-2	-3	6	-2	8	12	-	31	10	8
3	-	-	-33	-	-	-20	-18	-15	-13	-	-24	-12	43	-7	12	1	25	16	-	-
4	41	4	33	25	-20	44	49	26	30	23	12	12	139	-70	-	33	20	-	23	42
5	78	24	33	63	12	88	80	43	91	64	24	-2	151	-	-	68	31	41	43	21
6	62	54	66	50	-98	34	42	48	39	44	23	8	30	20	-	-	109	83	105	91
7	103	-	12	42	42	57	81	63	24	96	22	9	-	-47	68	105	-	-	216	144
8	90	44	25	-	-	127	125	62	80	74	-	-	-	-	94	-	-	-	-	-
9	84	-	-	-	-	-	100	28	74	-	141	-6	-	-	-	29	-	92	-	-
10	92	-29	62	102	88	64	30	19	29	47	-	-	-	-	-	-12	63	58	72	115
11	45	49	2	40	46	69	60	79	-108	46	-	-	-	-	72	67	45	55	49	79
12	-	-92	45	-	47	-	-	10	28	22	-	124	-	108	-	29	-	114	-	35
13	-	-	-	-	-	-	-	-	-	-	-	34	-	41	55	-	-	-	268	-
14	-	-	-	42	95	144	368	119	78	240	-	-	-	-	0	-	-	-	-	-
15	175	71	62	217	152	191	63	57	58	117	-	-	-	-4	-	224	-	146	135	189
16	101	28	14	115	180	-	8	-	-	58	-	-	16	-	-	-	147	66	-	-
17	-	-	-	-66	-	12	-	-6	1	-	16	-13	-	-24	-	-	74	45	-	161
18	94	-	-	-	116	-	-1	-	-	36	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	22	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-60	-	-12	-6	8	-25	-3	-	-	-	-	-
21	-	-	-	-	-	-	-15	-	-46	-	-	-	-	-	-3	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-	-
24	-	-	-	-	-	-	-	-44	-	-	-	-35	29	-94	2	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-31	-	-22	-5	27	-57	1	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-57	-	-	5	11	-111	1	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	-	-	-	-	-
28	75	-	49	-	26	74	85	0	15	20	-	-	22	-	-	-	-	-34	-358	-
29	64	-	50	-	61	56	46	20	11	53	71	-28	126	-	-	47	98	105	58	74
30	-	-	20	-	41	39	-	35	-14	60	51	64	250	-6	48	44	-	51	-	44

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA APRIL 1972

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER LITER)

DATE	N 21	N 22	N 23
1	6	-	-
2	2	-	-
3	-	-	-
4	20	-	-
5	22	-	-
6	88	-	-
7	85	-	-
8	-	-	-
9	-	-	-
10	93	-	-
11	88	-	-
12	32	-	-
13	-	-	-
14	216	-	-
15	141	-	-
16	168	-	-
17	83	-	-
18	92	-	-
19	-	-	-
20	-	-	-
21	-	-	-
22	-	-	-
23	-	-	-
24	-	-	-
25	-	-	-
26	-	-	-
27	-	-	-
28	8	43	-
29	77	129	66
30	38	113	-

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA APRIL 1972

SO2 IN AIR (MICROGRAMS PER M3)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20
1	2	0	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-
2	0	0	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-
3	1	2	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
4	5	0	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
5	5	0	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
6	3	0	-	5	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
7	1	0	-	5	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
8	0	0	-	4	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-
9	0	0	-	4	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
10	0	0	-	7	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
11	0	3	-	9	-	-	-	-	9	-	-	-	-	-	-	-	-	-	-	-
12	0	3	-	10	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-
13	0	0	-	4	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
14	0	0	-	3	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
15	3	0	-	7	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
16	0	0	-	7	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
17	0	4	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
18	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
19	0	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
20	0	-	0	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
21	0	-	0	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
22	1	-	4	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
23	0	-	0	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
24	0	-	0	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
25	0	-	0	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
26	0	-	0	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
27	0	-	0	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
28	0	-	0	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
29	1	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-
30	1	-	4	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA APRIL 1972

SO2 IN AIR (MICROGRAMS PER M3)

DATE	N 21	N 22	N 23
1	42	-	-
2	47	-	-
3	60	-	-
4	7	-	-
5	28	-	-
6	10	-	-
7	14	-	-
8	16	-	-
9	18	-	-
10	53	-	-
11	15	-	-
12	8	-	-
13	9	-	-
14	6	-	-
15	6	-	-
16	13	-	-
17	7	0	-
18	4	9	-
19	7	11	3
20	2	8	2
21	3	3	2
22	8	2	3
23	10	2	2
24	29	13	9
25	7	2	0
26	0	4	0
27	0	1	0
28	0	0	0
29	15	7	0
30	14	2	3

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA APRIL 1972

SULPHATE IN PRECIPITATION (MILLIGRAMS PER M2 PER DAY)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20
1	1	15	7	2	6	5	7	5	1	4	0	5	10	-	0	1	0	0	0	0
2	21	9	10	38	24	18	40	9	5	17	1	8	6	3	0	6	0	38	15	3
3	0	0	1	0	0	3	1	3	2	0	0	6	6	0	0	3	29	3	0	0
4	112	26	98	71	66	48	94	22	20	56	4	1	8	2	0	15	3	0	54	17
5	18	4	21	18	29	8	25	19	16	16	5	3	18	0	0	4	18	21	4	9
6	15	13	25	29	17	11	20	16	3	16	6	1	8	3	-	0	8	12	18	24
7	17	0	31	28	15	11	27	18	1	24	5	11	-	2	8	7	0	0	78	9
8	6	22	18	0	0	10	21	9	20	5	0	0	0	0	3	0	0	0	0	0
9	3	0	2	0	0	0	3	8	10	0	2	9	0	0	0	6	0	4	0	-
10	179	48	135	42	94	73	113	6	8	75	0	-	0	0	0	4	23	21	26	53
11	141	55	64	82	87	43	94	25	14	170	0	0	0	0	2	8	21	11	19	56
12	0	1	9	0	31	-	0	9	12	3	0	8	-	7	0	14	6	7	0	8
13	0	0	0	0	0	0	2	0	0	0	0	17	-	9	12	0	0	0	13	0
14	0	0	0	37	36	69	35	34	20	9	0	0	20	0	1	0	0	0	0	0
15	60	78	95	79	45	37	91	13	22	103	0	-	0	1	0	7	0	23	193	29
16	83	13	23	55	93	0	18	0	1	44	0	0	8	0	0	0	12	0	0	0
17	0	0	0	1	0	2	0	2	10	0	1	6	0	3	0	-	38	19	0	21
18	7	0	0	0	11	0	8	0	0	3	0	0	0	0	0	0	0	0	0	11
19	0	0	0	-	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
20	0	0	0	-	0	0	0	0	2	0	0	5	6	3	15	-	0	0	0	0
21	0	0	0	-	0	1	3	0	2	0	0	0	0	0	1	0	0	0	0	0
22	0	0	0	-	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
23	0	0	0	-	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
24	0	-	0	-	0	0	0	2	0	0	0	3	8	2	1	0	0	0	0	0
25	0	-	0	-	0	0	0	0	18	0	7	14	11	3	1	0	0	0	0	0
26	0	-	0	-	0	0	0	-	0	0	0	6	5	2	0	0	0	0	0	0
27	0	-	0	-	0	0	0	0	0	0	0	0	-	-	2	0	0	0	0	0
28	19	-	14	-	12	20	52	9	21	6	2	-	3	0	0	0	2	4	0	0
29	220	-	144	-	188	64	111	116	61	138	9	1	5	0	0	13	148	46	81	90
30	0	-	7	-	24	6	0	20	3	5	11	20	9	9	1	27	0	21	0	28

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA APRIL 1972

SULPHATE IN PRECIPITATION (MILLIGRAMS PER M2 PER DAY)

DATE	N 21	N 22	N 23
1	0	-	-
2	3	-	-
3	0	-	-
4	21	-	-
5	8	-	-
6	36	-	-
7	12	-	-
8	0	-	-
9	1	-	-
10	75	-	-
11	66	-	-
12	7	-	-
13	0	-	-
14	5	-	-
15	18	-	-
16	11	-	-
17	15	0	-
18	15	0	0
19	0	0	0
20	0	0	-
21	0	0	0
22	0	0	0
23	0	0	0
24	0	0	0
25	0	0	0
26	0	0	0
27	0	0	0
28	0	9	-
29	101	52	78
30	30	6	0

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA APRIL 1972

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER M2 PER DAY)

DATE	N 01	N 02	N 03	N 04	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20
1	0	-115	-2	-43	-24	6	27	44	0	-5	44	-16	182	-	0	10	0	0	0	-
2	267	32	-32	436	366	189	337	0	37	229	-16	-57	95	-22	9	119	0	495	135	94
3	0	0	-46	0	0	-73	-36	-109	-62	0	-14	-125	125	-40	8	10	342	48	0	0
4	1514	78	1139	620	-494	532	1260	352	323	798	90	7	195	-63	-	267	31	0	597	265
5	422	73	216	283	145	134	499	348	348	387	106	-2	393	0	0	43	268	410	108	265
6	257	163	441	228	-281	115	262	290	124	160	124	3	159	20	-	0	146	269	311	562
7	377	0	108	211	110	223	464	341	11	513	147	43	-	-47	165	114	0	0	1272	229
8	172	314	111	0	0	222	342	178	351	108	0	0	0	0	84	0	0	0	0	0
9	40	0	-	0	0	0	32	71	165	-	28	-11	0	0	0	50	0	53	0	-
10	2928	-545	2060	672	1361	1149	525	42	203	1574	0	-	0	0	0	-7	241	177	291	1062
11	1246	468	40	752	381	720	875	196	-316	1051	0	0	0	0	23	124	143	105	156	518
12	0	-88	52	0	305	-	0	64	116	52	0	62	-	76	0	88	-	102	0	80
13	0	0	0	0	0	0	-	0	-	0	0	68	-	103	156	0	0	0	188	0
14	0	0	0	99	187	1668	773	682	402	168	0	0	-	0	0	0	0	0	0	0
15	947	1356	1066	1381	648	742	951	161	325	1862	0	-	0	-4	0	107	0	158	3072	475
16	1479	232	102	952	1432	0	32	0	-	982	0	0	158	0	0	0	84	0	0	0
17	0	0	0	-29	0	6	0	-8	8	0	10	-21	0	-50	0	-	579	327	0	323
18	105	0	0	0	122	0	-1	0	0	16	0	0	0	0	0	0	0	0	0	-
19	0	0	0	-	0	0	0	0	0	0	0	0	44	0	0	0	0	0	0	0
20	0	0	0	-	0	0	0	0	-46	0	-22	-25	85	-130	-11	-	0	0	0	0
21	0	0	0	-	0	-	-25	0	-132	0	0	0	0	0	-1	0	0	0	0	0
22	0	0	0	-	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0
23	0	0	0	-	0	0	0	0	0	0	0	0	0	0	31	0	0	0	0	0
24	0	-	0	-	0	0	0	-15	0	0	0	-31	174	-141	17	0	0	0	0	0
25	0	-	0	-	0	0	0	0	-138	0	-66	-38	205	-291	2	0	0	0	0	0
26	0	-	0	-	0	0	0	-	-29	0	0	15	32	-522	1	0	0	0	0	0
27	0	-	0	-	0	0	0	0	0	0	0	0	-	-	52	0	0	0	0	0
28	382	-	218	-	109	349	893	0	98	83	-	-	59	0	0	0	0	-35	-410	0
29	3422	-	2626	-	2427	1162	1444	772	342	2477	284	-8	214	0	0	129	2433	829	1052	1936
30	0	-	38	-	243	77	0	167	-9	80	332	333	200	-13	43	367	0	325	0	304

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA APRIL 1972

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER M2 PER DAY)

DATE	N 21	N 22	N 23
1	4	-	-
2	25	-	-
3	0	-	-
4	185	-	-
5	266	-	-
6	801	-	-
7	216	-	-
8	0	-	-
9	-	-	-
10	1451	-	-
11	672	-	-
12	51	-	-
13	0	-	-
14	69	-	-
15	314	-	-
16	187	-	-
17	201	-	-
18	234	0	0
19	0	0	0
20	0	0	-
21	0	0	0
22	0	0	0
23	0	0	0
24	0	0	0
25	0	0	0
26	0	0	0
27	0	0	0
28	5	112	-
29	1789	1109	1429
30	496	129	0

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LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA MAY 1972

AMOUNT (MM) IN NILU PRECIPITATION COLLECTORS

DATE	N 01	N 03	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20	N 21	N 22
1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	-	-	-	-	0.0	5.9	0.0	0.6	5.9	0.0	0.3	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.2	0.0	0.0	0.0	0.0	1.0	2.4	1.3
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.2	1.2	0.0	1.3	1.7	3.6	3.3	1.1	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0
8	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	-	-	-	-	0.0	0.0	0.0	0.0	0.0	1.4	4.6	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.2	1.3	0.0	0.0	0.0	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.0	0.1	1.5	0.0	0.0	0.3	1.9	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.2	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	1.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.8	3.2	0.0	-	-	-	-	0.9	0.0	0.0	0.0	0.0	0.0	2.4	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0
17	6.8	1.1	5.4	0.0	5.5	0.0	0.0	3.6	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5
18	15.9	8.0	6.3	4.3	14.5	2.9	0.8	3.2	-	-	-	-	0.0	2.2	12.4	14.0	0.0	12.7	12.9	3.6
19	1.6	2.9	2.9	0.0	0.0	2.3	1.7	8.8	-	-	-	-	0.0	3.1	6.2	4.0	0.0	6.7	11.0	0.0
20	4.5	5.6	0.0	0.0	3.2	0.0	0.0	4.1	-	-	-	-	0.8	2.5	0.0	0.0	17.2	0.0	0.0	3.2
21	12.6	11.7	4.3	7.0	12.4	3.9	0.8	6.8	-	-	-	-	15.1	2.5	0.0	16.5	0.0	0.0	2.4	6.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	2.5	1.4	0.0	0.0	0.0	2.5	0.8	0.0
23	0.0	0.0	0.0	1.0	0.6	0.0	0.6	0.0	-	-	-	-	1.0	2.1	0.0	0.0	0.8	0.0	0.0	0.0
24	15.6	11.8	7.6	11.8	12.6	21.1	11.8	14.7	-	-	-	-	0.0	5.6	4.8	8.0	10.5	1.2	0.0	1.7
25	9.2	10.1	8.6	6.7	13.8	8.0	4.9	8.7	-	-	-	-	1.1	0.0	6.4	9.5	13.3	16.8	3.9	2.7
26	17.5	16.6	12.7	7.1	6.7	37.2	17.3	15.3	-	-	-	-	0.0	6.9	5.5	5.6	3.2	5.9	24.9	5.2
27	7.0	13.2	3.2	0.0	1.7	4.1	7.8	1.2	-	-	-	-	1.6	0.3	0.0	1.5	0.0	0.0	8.3	0.5
28	0.0	0.0	0.0	0.7	0.4	0.0	1.7	0.0	-	-	-	-	2.4	0.8	0.0	0.0	0.0	0.0	0.8	0.0
29	6.4	2.9	0.0	1.9	5.3	8.1	5.5	1.1	-	-	-	-	0.0	0.5	0.0	0.5	10.4	1.7	1.8	0.0
30	3.5	5.9	0.0	1.0	0.2	1.5	2.4	0.3	-	-	-	-	0.0	15.8	0.0	0.0	5.4	3.2	10.5	1.1
31	0.3	0.0	2.4	0.0	0.6	2.4	19.4	0.6	-	-	-	-	0.0	10.0	1.0	3.8	0.0	3.9	2.4	1.1

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA MAY 1972

AMOUNT (MM) IN NILU PRECIPITATION COLLECTORS

DATE	N 23
1	0.0
2	0.3
3	0.0
4	0.3
5	0.0
6	0.0
7	0.0
8	0.0
9	0.0
10	0.0
11	0.0
12	0.0
13	0.0
14	0.0
15	0.0
16	0.0
17	5.6
18	6.2
19	0.0
20	4.3
21	8.3
22	0.0
23	0.0
24	9.8
25	0.0
26	10.8
27	6.0
28	0.0
29	2.4
30	0.9
31	0.0

a

OFFICIAL PRECIPITATION DATA (MM)

DATE	N 01	N 03	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20	N 21	N 22
1	-	0.0	-	0.0	0.0	0.0	0.1	0.7	8.5	7.9	8.0	5.9	0.1	5.8	-	-	-	0.0	-	-
2	-	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	-	-	-	0.7	-	-
3	-	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	-	-	-	0.0	-	-
4	-	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	-	-	-	0.0	-	-
5	-	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	0.0	-	-
6	-	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	0.0	-	-
7	-	1.5	-	1.7	2.0	3.6	0.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	0.0	-	-
8	-	0.0	-	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	0.7	-	-
9	-	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	-	-	-	0.0	-	-
10	-	0.2	-	0.6	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	0.3	-	-
11	-	0.0	-	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	0.0	-	-
12	-	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-	-	-	0.0	-	-
13	-	0.0	-	0.0	0.0	0.0	1.5	0.7	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	0.0	-	-
14	-	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	-	-	-	0.1	-	-
15	-	0.0	-	0.0	0.0	1.0	3.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	-	-	-	0.0	-	-
16	-	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	0.0	-	-
17	-	2.5	-	0.0	4.5	0.0	0.0	0.4	0.0	0.0	0.0	1.2	0.0	0.0	-	-	-	0.0	-	-
18	-	8.5	-	4.6	14.0	2.8	0.5	4.2	3.3	3.2	1.2	0.0	0.0	2.3	-	-	-	16.5	-	-
19	-	4.2	-	0.0	0.0	3.2	3.3	9.8	4.8	4.4	7.7	0.0	0.0	3.0	-	-	-	8.0	-	-
20	-	5.7	-	0.0	3.5	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.8	2.7	-	-	-	0.0	-	-
21	-	12.5	-	7.6	14.5	4.5	0.5	8.4	0.0	0.0	0.0	0.0	15.1	2.6	-	-	-	0.0	-	-
22	-	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	1.7	-	-	-	2.1	-	-
23	-	0.0	-	1.5	0.7	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.5	2.4	-	-	-	0.0	-	-
24	-	13.5	-	13.3	12.9	22.3	18.5	15.2	11.3	1.4	3.1	0.0	0.0	5.9	-	-	-	1.1	-	-
25	-	10.2	-	7.6	11.9	8.9	5.0	10.3	12.0	9.9	7.8	5.1	1.6	0.0	-	-	-	19.1	-	-
26	-	17.5	-	13.6	9.0	39.5	27.5	16.5	2.0	0.0	0.6	0.0	0.1	9.0	-	-	-	7.6	-	-
27	-	14.5	-	0.0	2.8	5.2	8.5	2.0	0.0	0.0	0.0	0.0	2.0	0.3	-	-	-	0.0	-	-
28	-	0.0	-	0.9	0.6	0.0	2.0	0.0	0.0	0.0	0.0	0.0	3.2	0.8	-	-	-	0.0	-	-
29	-	5.9	-	2.2	5.6	8.9	5.5	1.6	2.4	19.0	6.3	1.6	0.0	0.5	-	-	-	2.3	-	-
30	-	7.2	-	1.2	0.9	2.1	3.0	0.6	0.0	5.3	1.0	0.0	0.0	16.5	-	-	-	4.4	-	-
31	-	0.0	-	0.0	0.8	3.2	20.0	0.9	0.0	5.3	0.0	0.0	0.0	10.1	-	-	-	5.6	-	-

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA MAY 1972

OFFICIAL PRECIPITATION DATA (MM)

DATE	N 23
1	-
2	-
3	-
4	-
5	-
6	-
7	-
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9	-
10	-
11	-
12	-
13	-
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17	-
18	-
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20	-
21	-
22	-
23	-
24	-
25	-
26	-
27	-
28	-
29	-
30	-
31	-

b

SULPHATE IN PRECIPITATION (MILLIGRAMS PER LITER)

DATE	N 01	N 03	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20	N 21	N 22
1	-	-	-	-	-	-	0.4	24.1	6.6	4.7	7.0	7.0	-	5.5	-	17.5	3.5	-	18.9	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27.8	12.7	36.9
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	7.5	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	9.1	-	0.4	7.8	5.7	10.1	9.5	-	-	-	-	-	-	-	-	-	-	10.8	-
8	-	-	-	-	-	5.0	-	-	-	-	-	-	-	-	-	-	-	22.7	8.4	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	13.9	-	-	-	-	-	-
10	-	-	-	24.7	15.8	-	-	-	-	-	-	-	-	-	-	-	-	17.8	-	-
11	-	-	-	-	-	-	20.8	-	-	-	-	-	-	-	-	-	-	-	7.5	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.6	-	-	42.8	9.3	-
13	-	-	-	-	-	-	10.1	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	5.0	-	-	-	-	12.3	-	-
15	-	-	-	-	-	8.8	4.4	-	-	-	-	-	0.3	-	-	-	-	-	4.1	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.0	-
17	4.7	4.3	3.2	-	5.4	-	-	6.3	-	-	-	9.7	-	-	-	-	-	-	-	4.8
18	4.0	4.3	5.8	6.5	4.8	4.6	11.7	5.0	1.1	0.8	2.7	-	-	2.4	2.0	3.1	-	2.5	2.0	5.4
19	11.8	3.7	12.9	-	-	14.4	8.6	4.9	2.9	3.3	3.8	-	-	5.9	4.6	7.2	-	11.2	7.8	-
20	2.3	2.7	-	-	2.9	-	-	3.8	-	-	-	-	11.2	2.2	-	-	6.2	-	-	4.5
21	1.5	2.9	4.0	4.0	1.9	5.9	10.8	1.8	-	-	-	-	0.4	3.7	-	2.0	-	-	4.8	2.3
22	-	-	-	-	-	-	-	-	-	-	-	-	3.8	2.6	-	-	-	4.2	3.1	-
23	-	-	-	9.5	15.4	-	9.5	-	-	-	-	-	10.9	7.2	-	-	20.0	-	-	-
24	5.5	6.2	6.3	4.8	6.4	5.5	4.4	4.3	3.5	22.9	2.7	-	-	2.2	9.8	8.4	4.2	9.4	-	9.5
25	1.9	1.7	3.2	2.4	2.1	1.8	2.0	1.7	0.8	0.7	-	2.3	5.1	-	3.6	3.5	2.0	1.9	8.4	5.6
26	1.9	1.7	2.3	2.4	2.9	1.0	1.8	1.1	0.3	-	3.2	-	-	0.6	5.9	2.8	4.5	1.9	1.9	3.2
27	0.9	1.3	1.6	-	3.3	0.5	1.2	2.0	-	-	-	-	1.2	2.2	-	2.8	-	-	2.0	4.9
28	-	-	-	8.4	7.2	-	2.6	-	-	-	-	-	0.9	1.3	-	-	-	-	1.3	-
29	3.5	2.2	-	4.0	4.0	2.1	3.4	3.2	0.5	0.5	1.1	1.3	-	1.3	-	3.3	2.0	0.5	1.2	-
30	3.5	1.8	-	3.8	8.8	1.5	3.0	1.8	-	0.6	0.3	-	-	0.5	-	-	4.0	1.4	0.9	0.4
31	-	-	3.8	-	3.5	0.5	1.6	4.5	-	0.4	-	-	-	1.5	5.3	3.5	-	3.4	2.7	5.2

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA MAY 1972

SULPHATE IN PRECIPITATION (MILLIGRAMS PER LITER)

DATE	N 23
1	-
2	5.5
3	-
4	-
5	-
6	-
7	-
8	-
9	-
10	-
11	-
12	-
13	-
14	-
15	-
16	-
17	7.1
18	5.7
19	-
20	5.1
21	2.6
22	-
23	-
24	5.7
25	-
26	1.8
27	1.9
28	-
29	3.9
30	7.3
31	-

C

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA MAY 1972

PH IN PRECIPITATION

DATE	N 01	N 03	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20	N 21	N 22
1	-	-	-	-	-	-	-	3.79	4.02	4.31	4.01	5.75	-	4.20	-	3.72	4.51	-	3.85	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.18	4.40	4.02
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	4.13	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	4.47	-	3.77	4.02	4.20	4.88	4.02	-	-	-	-	-	-	-	-	-	-	3.87	-
8	-	-	-	-	-	3.90	-	-	-	-	-	-	-	-	-	-	-	3.89	4.02	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	3.89	-	-	-	-	-	-
10	-	-	-	-	3.79	-	-	-	-	-	-	-	-	-	-	-	-	3.91	-	-
11	-	-	-	-	-	-	6.15	-	-	-	-	-	-	-	-	-	-	-	4.09	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.98	-	-	4.00	4.09	-
13	-	-	-	-	-	-	6.61	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	4.26	-	-	-	-	-	-	-
15	-	-	-	-	-	4.83	6.31	-	-	-	-	-	4.90	-	-	-	-	-	4.15	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.39	-
17	4.29	4.28	4.90	-	4.60	-	-	4.67	-	-	-	6.31	-	-	-	-	-	-	-	5.41
18	4.07	4.18	4.61	3.81	4.05	4.02	6.20	4.15	5.25	5.59	4.35	-	-	5.55	4.55	5.02	-	4.49	4.55	4.15
19	3.70	4.20	3.61	-	-	3.60	4.05	3.91	4.38	4.20	4.25	-	-	4.39	4.29	3.85	-	3.77	3.85	-
20	4.98	4.72	-	-	5.65	-	-	4.89	-	-	-	-	3.71	6.11	-	-	5.40	-	-	4.90
21	5.00	5.20	5.50	4.21	4.90	4.61	6.35	4.89	-	-	-	-	5.01	6.13	-	4.85	-	-	4.79	4.50
22	-	-	-	-	-	-	-	-	-	-	-	-	4.25	5.50	-	-	-	5.01	6.49	-
23	-	-	-	3.93	3.99	-	4.90	-	-	-	-	-	-	4.28	-	-	3.92	-	-	-
24	3.99	3.91	4.11	4.00	4.08	4.10	4.30	4.10	4.31	5.68	4.30	-	-	4.69	3.89	3.90	4.20	4.25	-	3.89
25	5.09	4.52	4.40	4.25	4.60	4.50	5.51	4.70	4.90	5.09	-	5.79	4.13	-	4.19	4.21	4.40	4.38	4.02	4.11
26	4.53	4.50	4.51	4.60	4.35	4.75	4.63	4.61	4.60	-	4.55	-	-	6.00	4.05	4.20	4.31	4.50	4.45	4.29
27	5.68	4.60	4.65	-	4.30	5.35	5.40	4.45	-	-	-	-	5.88	-	-	4.12	-	-	4.59	4.01
28	-	-	-	4.11	-	-	6.15	-	-	-	-	-	5.41	5.45	-	-	-	-	6.02	-
29	4.19	4.49	-	4.35	4.20	4.63	4.39	4.71	5.71	6.00	4.68	5.75	-	5.40	-	3.93	4.40	4.60	5.88	-
30	4.19	4.52	-	7.22	-	5.65	4.68	-	-	5.31	4.69	-	-	5.88	-	-	4.10	4.59	4.65	3.88
31	-	-	4.40	-	4.81	5.45	4.95	4.19	-	5.40	-	-	-	4.70	4.20	4.29	-	4.13	4.30	3.99

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA MAY 1972

PH IN PRECIPITATION

DATE	N 23
1	-
2	-
3	-
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6	-
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10	-
11	-
12	-
13	-
14	-
15	-
16	-
17	4.39
18	4.23
19	-
20	5.35
21	4.80
22	-
23	-
24	4.09
25	-
26	4.52
27	4.50
28	-
29	4.45
30	5.68
31	-

d

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER LITER)

DATE	N 01	N 03	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20	N 21	N 22
1	-	-	-	-	-	-	-	103	97	48	96	-21	-	75	-	213	33	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82	37	109
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	26	-	167	89	61	9	84	-	-	-	-	-	-	-	-	-	-	173	-
8	-	-	-	-	-	129	-	-	-	-	-	-	-	-	-	-	-	158	99	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	148	-	-	-	-	-	-
10	-	-	-	-	162	-	-	-	-	-	-	-	-	-	-	-	-	148	-	-
11	-	-	-	-	-	-	-42	-	-	-	-	-	-	-	-	-	-	-	95	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	148	-	-	-	86	-
13	-	-	-	-	-	-	-95	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	58	-	-	-	-	-	-	-
15	-	-	-	-	-	8	-59	-	-	-	-	-	12	-	-	-	-	-	69	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41	-
17	49	49	10	-	20	-	-	18	-	-	-	-138	-	-	-	-	-	-	-	-16
18	88	66	18	143	88	94	-38	68	-8	-19	44	-	-	-5	21	4	-	32	24	73
19	208	61	220	-	-	269	95	123	42	62	57	-	-	39	53	137	-	186	146	-
20	2	18	-	-	-13	-	-	13	-	-	-	-	196	-38	-	-	-6	-	-	12
21	7	-2	-11	58	10	19	-88	9	-	-	-	-	3	-34	-	11	-	-	17	25
22	-	-	-	-	-	-	-	-	-	-	-	-	51	-5	-	-	-	4	-80	-
23	-	-	-	120	90	-	6	-	-	-	-	-	100	49	-	-	120	-	-	-
24	104	117	75	95	89	81	53	77	50	-13	48	-	-	18	139	121	60	60	-	142
25	7	27	38	53	25	29	6	24	13	4	-	-29	66	-	65	59	37	43	90	82
26	28	27	28	32	41	18	25	24	23	-	32	-	-	-38	93	62	40	32	31	53
27	-8	19	22	-	45	-	3	27	-	-	-	-	-29	-	-	74	-	-	24	112
28	-	-	-	64	-	-	-57	-	-	-	-	-	-1	-4	-	-	-	-	-28	-
29	64	27	-	48	60	14	39	14	-11	-41	14	-25	-	0	-	-	29	24	-23	-
30	64	21	-	-306	-	-8	21	-	-	-4	9	-	-	-19	-	-	70	21	21	121
31	-	-	23	-	22	-7	9	50	-	-7	-	-	-	17	54	54	-	65	46	90

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA MAY 1972

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER LITER)

DATE	N 23
1	-
2	-
3	-
4	-
5	-
6	-
7	-
8	-
9	-
10	-
11	-
12	-
13	-
14	-
15	-
16	-
17	43
18	57
19	-
20	-4
21	10
22	-
23	-
24	87
25	-
26	25
27	32
28	-
29	28
30	-18
31	-

e

SO2 IN AIR (MICROGRAMS PER M3)

DATE	N 01	N 03	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20	N 21	N 22
1	0	7	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	37	11
2	1	11	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	14	10
3	0	4	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	15	16
4	1	6	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	7	14
5	1	4	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	26	6
6	5	8	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	13	6
7	5	6	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	14	7
8	5	7	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	30	11
9	6	18	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	18	8
10	4	8	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	6	7
11	3	9	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	0	5
12	0	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	5	9
13	9	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41	4
14	4	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	4
15	4	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	12
16	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	13
17	5	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	9
18	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	9
19	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	17
20	0	3	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	15	10
21	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	4
22	0	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	4
23	0	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	4
24	0	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	15	2
25	0	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	12	4
26	0	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	18	1
27	0	6	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	13	3
28	6	4	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	39	2
29	7	4	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	22	1
30	8	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	19	2
31	6	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	10	4

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA MAY 1972

SO2 IN AIR (MICROGRAMS PER M3)

DATE	N 23
1	4
2	4
3	2
4	5
5	2
6	5
7	8
8	16
9	12
10	6
11	4
12	3
13	2
14	2
15	20
16	4
17	7
18	4
19	8
20	6
21	3
22	6
23	7
24	5
25	2
26	2
27	2
28	1
29	2
30	3
31	1

SULPHATE IN PRECIPITATION (MILLIGRAMS PER M2 PER DAY)

DATE	N 01	N 03	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20	N 21	N 22
1	0	0	0	0	0	0	0	12	56	37	56	41	0	33	0	10	21	0	5	0
2	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	27	31	49
3	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	-	11	0	1	13	21	33	11	0	0	0	0	0	0	0	0	0	0	16	0
8	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	32	39	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	44	0	0	0	0	0	0
10	0	-	0	4	21	0	9	0	0	0	0	0	0	0	0	0	0	14	0	0
11	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	-	27	0	0	11	18	0
13	0	0	0	0	0	0	15	-	0	0	0	0	0	0	0	0	0	0	-	0
14	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	0	0
15	0	0	0	0	0	7	14	0	0	0	0	0	0	0	0	0	0	0	10	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0
17	32	5	17	0	30	0	0	23	0	0	0	12	0	0	0	0	0	0	0	12
18	64	32	37	28	70	13	9	16	4	3	3	0	0	5	25	43	0	32	26	19
19	19	11	38	0	0	33	15	43	14	15	29	0	0	18	29	29	0	74	85	0
20	10	15	0	0	9	0	0	16	0	0	0	0	9	6	0	0	107	0	0	14
21	19	34	17	28	24	23	8	12	0	0	0	0	7	9	0	34	0	0	12	14
22	0	0	0	0	0	0	0	0	0	0	0	0	10	4	0	0	0	10	2	0
23	0	0	0	9	10	0	6	0	0	0	0	0	11	15	0	0	15	0	0	0
24	85	73	48	56	80	116	52	63	39	32	8	0	0	12	47	67	44	11	0	16
25	18	17	27	16	28	15	10	15	10	7	-	12	6	0	23	33	26	32	33	15
26	33	29	30	17	19	38	32	18	1	0	2	0	0	4	32	16	14	11	48	17
27	7	18	5	0	6	2	9	2	0	0	0	0	2	1	0	4	0	0	17	2
28	0	0	0	6	3	0	4	0	0	0	0	0	2	1	0	0	0	0	1	0
29	22	6	0	8	21	17	19	4	1	10	7	2	0	1	0	2	20	1	2	0
30	12	11	0	4	1	2	7	0	0	3	0	0	0	7	0	0	22	5	9	0
31	-	0	9	0	2	1	31	3	0	2	0	0	0	15	5	13	0	13	7	6

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA MAY 1972

SULPHATE IN PRECIPITATION (MILLIGRAMS PER M2 PER DAY)

DATE	N 23
1	0
2	2
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	40
18	35
19	0
20	22
21	21
22	0
23	0
24	56
25	0
26	20
27	11
28	0
29	9
30	7
31	0

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA MAY 1972

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER M2 PER DAY)

DATE	N 01	N 03	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20	N 21	N 22
1	0	0	0	0	0	0	-	48	825	379	768	-124	0	439	0	122	195	0	-	0
2	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	81	90	146
3	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	127	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	-	31	0	218	147	221	30	96	0	0	0	0	0	0	0	0	0	0	264	0
8	0	0	0	0	0	764	0	0	0	0	0	0	0	0	0	0	0	221	460	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	471	0	0	0	0	0	0
10	0	-	0	-	217	0	0	0	0	0	0	0	0	0	0	0	0	118	0	0
11	0	0	0	0	0	0	-19	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	-	217	0	0	-	164	0
13	0	0	0	0	0	0	-139	-	0	0	0	0	0	0	0	0	0	0	-	0
14	0	0	0	0	0	0	0	0	0	0	0	0	59	0	0	0	0	-	0	0
15	0	0	0	0	0	6	-192	0	0	0	0	0	11	0	0	0	0	0	167	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	117	0
17	335	53	54	0	109	0	0	65	0	0	0	-166	0	0	0	0	0	0	0	-41
18	1401	525	113	614	1277	269	-29	221	-26	-61	53	0	0	-11	261	56	0	405	309	260
19	331	175	644	0	0	617	163	1077	202	273	439	0	0	119	329	549	0	1237	1608	0
20	9	101	0	0	-41	0	0	53	0	0	0	0	162	-97	0	0	-103	0	0	38
21	88	-23	-48	406	124	74	-67	61	0	0	0	0	45	-84	0	181	0	0	41	151
22	0	0	0	0	0	0	0	0	0	0	0	0	127	-7	0	0	0	10	-61	0
23	0	0	0	115	57	0	4	0	0	0	0	0	99	103	0	0	92	0	0	0
24	1622	1378	573	1119	1119	1707	628	1132	565	-18	149	0	0	101	668	963	630	73	0	235
25	65	272	327	354	344	231	29	209	156	40	-	-148	74	0	414	560	492	723	355	219
26	490	449	357	227	274	670	433	367	46	0	19	0	0	-261	512	347	127	187	772	273
27	-56	251	70	0	77	-	23	33	0	0	0	0	-46	-	0	113	0	0	199	57
28	0	0	0	45	-	0	-98	0	0	0	0	0	-2	-3	0	0	0	0	-21	0
29	407	77	0	92	317	114	216	16	-26	-779	88	-40	0	0	0	-	303	41	-42	0
30	224	124	0	-312	-	-12	49	-	0	-21	9	0	0	-300	0	0	379	68	221	131
31	-	0	56	0	14	-17	175	32	0	-37	0	0	0	170	52	206	0	252	111	103

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA MAY 1972

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER M2 PER DAY)

DATE	N 23
1	0
2	-
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	240
18	352
19	0
20	-17
21	83
22	0
23	0
24	853
25	0
26	271
27	194
28	0
29	67
30	-16
31	0

SLUTT

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA JUNE 1972

AMOUNT (MM) IN NILU PRECIPITATION COLLECTORS

DATE	N 01	N 03	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20	N 21	N 22
1	2.9	1.3	2.9	0.0	0.0	0.0	0.0	1.5	-	-	-	-	0.0	2.8	4.3	1.9	6.0	1.8	1.2	0.0
2	4.8	5.6	0.0	5.1	5.7	13.7	7.6	4.5	-	-	-	-	0.0	1.6	7.0	0.8	0.0	2.4	0.0	0.0
3	16.9	12.7	14.3	3.2	4.5	13.9	6.4	10.8	-	-	-	-	0.0	2.2	0.0	8.0	10.7	13.3	9.6	2.9
4	4.8	6.8	3.4	3.7	3.9	8.6	8.5	4.8	-	-	-	-	6.6	3.4	0.0	2.2	1.8	0.2	9.9	0.3
5	0.0	0.0	0.0	0.4	0.0	8.5	3.8	1.6	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.3	2.9	0.0
6	15.6	22.4	5.5	26.7	16.9	52.5	28.6	13.5	-	-	-	-	0.0	4.3	8.4	8.0	17.2	9.9	15.3	6.5
7	0.0	0.0	3.8	0.4	0.0	0.4	1.1	0.3	-	-	-	-	3.8	12.7	11.8	5.3	0.0	8.4	0.0	0.0
8	12.7	9.5	6.9	9.0	14.2	6.7	10.4	9.5	-	-	-	-	0.0	0.2	2.4	0.0	4.6	6.2	13.4	3.1
9	0.5	0.3	0.0	0.3	0.6	10.7	3.1	0.0	-	-	-	-	0.0	1.4	2.2	1.5	1.3	0.6	2.3	0.0
10	34.7	27.5	20.1	4.0	36.6	10.6	18.2	37.1	-	-	-	-	0.0	1.5	0.0	0.0	3.6	7.0	7.8	6.1
11	0.1	1.5	13.2	3.6	0.0	4.8	3.5	13.9	-	-	-	-	0.0	5.2	0.0	0.0	1.1	1.1	3.0	0.0
12	0.8	0.0	6.4	0.0	0.0	0.0	0.0	1.3	-	-	-	-	8.3	21.5	18.1	19.0	21.3	12.0	8.9	21.3
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	8.8	15.2	5.6	3.5	7.0	2.7	2.7	0.7
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	9.1	0.0	0.0	0.0	0.0	1.5	8.6	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.4	4.5	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.0	0.0	12.1	0.0	0.0	0.0	0.0	0.0
17	0.0	0.8	0.0	0.0	0.0	15.4	4.5	0.8	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	38.8	28.9	11.1	21.7	22.2	48.6	21.1	17.1	-	-	-	-	0.0	6.7	0.0	23.5	24.4	3.1	13.2	11.7
19	0.0	0.0	0.0	0.5	0.0	0.7	4.0	0.0	-	-	-	-	15.6	22.4	1.4	0.0	0.0	0.0	0.0	0.0
20	0.0	1.1	0.0	0.0	0.4	1.7	1.3	0.0	-	-	-	-	0.0	6.1	0.0	0.0	0.0	2.1	0.4	0.0
21	16.2	22.4	13.4	10.4	16.2	31.1	16.5	17.0	-	-	-	-	5.3	1.7	5.3	0.0	7.6	7.4	14.6	3.5
22	3.8	11.8	0.0	10.2	2.5	10.9	17.0	0.0	-	-	-	-	18.4	8.8	0.0	0.0	0.0	0.0	0.0	0.0
23	0.2	0.4	0.0	0.0	1.0	0.1	1.6	0.0	-	-	-	-	1.3	0.7	0.0	0.0	9.9	0.0	0.0	0.0
24	0.0	0.0	0.0	0.3	1.0	1.5	0.6	0.0	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
25	0.0	0.4	0.0	0.7	0.5	12.2	6.7	0.3	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	7.3	0.0	0.0	0.0	0.0	2.2	-	-	-	-	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	6.2	0.0	0.0	0.0	0.2	0.0	-	-	-	-	0.0	11.3	0.0	0.0	22.9	0.0	1.5	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	-	-	-	-	0.0	1.0	0.0	0.0	1.0	1.3	5.2	0.7
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	0.0	0.6	22.3	0.0	0.0	14.2	7.3	0.0

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA JUNE 1972

AMOUNT (MM) IN NILU PRECIPITATION COLLECTORS

DATE	N 23
1	0.0
2	0.0
3	12.7
4	4.1
5	0.0
6	8.7
7	0.0
8	7.4
9	0.0
10	19.7
11	1.3
12	6.0
13	0.0
14	0.0
15	0.0
16	0.0
17	0.0
18	13.5
19	0.0
20	0.0
21	8.1
22	7.7
23	0.0
24	0.0
25	0.0
26	0.0
27	0.5
28	4.4
29	0.0
30	0.0

a

OFFICIAL PRECIPITATION DATA (MM)

DATE	N 01	N 03	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20	N 21	N 22
1	-	2.0	-	0.0	0.0	0.0	0.0	2.3	0.0	3.0	4.8	2.7	0.0	3.0	-	-	-	2.7	-	-
2	-	6.0	-	5.2	5.5	14.0	17.7	5.2	0.0	0.5	0.3	0.3	0.0	1.9	-	-	-	3.5	-	-
3	-	14.0	-	5.0	5.0	14.0	12.4	11.6	18.0	2.7	6.4	2.7	0.0	2.4	-	-	-	14.7	-	-
4	-	7.0	-	4.7	4.0	9.5	11.7	5.5	12.2	11.3	11.6	6.5	7.0	3.8	-	-	-	0.4	-	-
5	-	0.0	-	1.1	0.2	9.4	6.0	2.2	5.8	1.6	7.6	3.0	0.0	0.0	-	-	-	0.8	-	-
6	-	23.0	-	27.6	16.9	53.1	28.6	13.8	18.5	13.4	12.2	11.2	0.0	4.5	-	-	-	10.4	-	-
7	-	0.0	-	1.0	0.0	0.4	0.9	0.8	14.0	13.9	8.6	13.1	4.5	13.8	-	-	-	10.7	-	-
8	-	10.5	-	10.6	14.3	7.4	12.5	9.8	4.0	8.0	6.1	4.0	0.1	0.2	-	-	-	6.9	-	-
9	-	0.3	-	0.7	1.0	11.3	4.0	0.1	2.8	4.2	25.2	0.6	0.2	1.6	-	-	-	1.1	-	-
10	-	27.0	-	4.6	35.2	11.8	19.2	37.5	0.0	0.9	3.2	0.0	0.0	1.6	-	-	-	7.3	-	-
11	-	3.5	-	4.7	0.0	5.5	6.0	15.4	5.6	0.2	3.2	0.0	0.0	5.5	-	-	-	1.5	-	-
12	-	0.0	-	0.0	0.0	0.0	0.0	1.6	1.0	0.1	2.8	0.0	9.5	22.6	-	-	-	12.3	-	-
13	-	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	16.2	-	-	-	3.5	-	-
14	-	0.0	-	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	13.2	0.0	-	-	-	2.3	-	-
15	-	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	4.8	-	-	-	0.0	-	-
16	-	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	-	-	-	0.0	-	-
17	-	1.0	-	0.0	0.0	16.6	11.7	1.0	1.4	7.0	12.5	1.6	0.0	0.0	-	-	-	0.0	-	-
18	-	32.5	-	22.6	23.0	48.5	37.6	18.3	24.0	24.8	17.3	6.8	0.1	6.8	-	-	-	4.2	-	-
19	-	0.0	-	0.7	0.0	1.3	4.3	0.1	1.2	0.8	0.0	7.5	16.2	23.6	-	-	-	0.0	-	-
20	-	2.0	-	0.0	0.5	2.6	2.1	0.0	0.0	0.5	0.0	0.0	0.0	6.5	-	-	-	5.1	-	-
21	-	23.5	-	11.7	15.2	32.4	26.8	17.7	14.0	0.5	4.6	2.1	6.7	1.9	-	-	-	8.0	-	-
22	-	13.0	-	13.5	4.0	11.6	19.0	0.2	0.0	5.4	0.2	0.2	18.8	15.6	-	-	-	0.0	-	-
23	-	0.8	-	0.0	1.8	0.5	2.0	0.1	0.0	2.1	0.0	0.0	1.8	0.8	-	-	-	0.0	-	-
24	-	0.0	-	0.2	1.0	2.0	3.0	0.0	0.6	0.8	6.9	0.1	0.0	0.0	-	-	-	0.0	-	-
25	-	2.0	-	1.5	0.8	8.8	21.2	0.3	0.5	14.7	55.3	0.1	0.0	0.0	-	-	-	0.0	-	-
26	-	0.0	-	0.0	0.0	0.1	0.0	0.0	0.0	0.9	10.5	0.0	0.0	0.0	-	-	-	0.0	-	-
27	-	0.0	-	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.3	0.0	0.0	0.3	-	-	-	0.0	-	-
28	-	0.0	-	0.0	0.0	0.1	0.1	0.0	9.6	10.3	3.5	1.4	0.0	11.6	-	-	-	0.0	-	-
29	-	0.0	-	0.0	0.0	0.0	0.0	1.8	7.8	3.6	2.4	2.2	0.2	1.0	-	-	-	3.0	-	-
30	-	0.0	-	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.0	0.0	0.0	0.7	-	-	-	14.2	-	-

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA JUNE 1972

OFFICIAL PRECIPITATION DATA (MM)

DATE	N 23
1	-
2	-
3	-
4	-
5	-
6	-
7	-
8	-
9	-
10	-
11	-
12	-
13	-
14	-
15	-
16	-
17	-
18	-
19	-
20	-
21	-
22	-
23	-
24	-
25	-
26	-
27	-
28	-
29	-
30	-

b

SULPHATE IN PRECIPITATION (MILLIGRAMS PER LITER)

DATE	N 01	N 03	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20	N 21	N 22
1	3.4	2.0	2.8	-	-	-	-	2.2	-	0.4	0.5	4.0	-	2.0	3.6	2.9	2.7	2.0	2.3	-
2	6.3	5.7	-	6.7	9.7	5.9	5.6	4.9	-	0.6	8.2	-	-	2.3	8.6	4.4	-	2.3	-	-
3	7.2	8.0	5.8	9.5	8.4	5.7	4.7	5.1	2.6	1.4	3.6	3.6	-	6.3	-	6.6	6.5	6.4	6.5	11.4
4	10.3	9.2	9.3	8.5	9.5	10.1	5.0	8.7	3.5	0.7	1.0	1.3	5.6	12.1	-	7.8	20.6	-	8.5	26.0
5	-	-	-	35.5	-	18.9	12.4	12.4	8.6	10.8	7.4	5.0	-	-	-	-	-	27.1	11.4	-
6	5.6	7.7	6.5	4.8	7.4	3.9	3.1	6.0	8.3	3.0	2.6	4.7	-	7.6	6.4	6.2	4.9	7.3	7.5	6.1
7	-	-	5.2	6.0	-	4.2	3.2	2.5	4.0	1.2	1.1	0.7	4.8	3.6	6.7	8.3	-	4.5	-	-
8	5.3	3.8	3.0	4.5	3.9	3.8	2.5	2.8	0.6	0.4	3.7	0.3	-	-	7.8	-	4.6	4.2	3.7	9.6
9	5.1	-	-	17.8	2.3	4.4	4.7	-	4.6	1.8	3.2	-	-	6.7	16.5	12.1	6.7	6.6	1.9	-
10	3.2	3.4	4.7	9.4	5.1	4.1	4.7	3.7	-	6.8	11.5	-	-	4.2	-	-	7.0	6.5	6.9	8.3
11	-	8.6	6.3	8.9	-	5.8	5.6	4.6	4.6	5.3	-	-	-	7.3	-	-	14.7	14.6	12.2	-
12	7.8	-	3.1	-	-	-	-	4.5	9.0	-	-	-	0.7	1.7	2.6	2.8	2.2	2.0	2.1	2.2
13	-	-	-	-	-	-	-	-	-	-	-	-	0.4	2.1	2.6	2.2	1.4	2.2	3.2	7.5
14	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	3.1	0.8	-
15	-	-	-	-	-	-	-	-	-	-	-	-	0.9	3.3	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.4	-	-	-	-	-
17	-	25.3	-	-	-	10.0	9.6	26.7	9.7	4.6	3.8	1.8	-	-	-	-	-	-	-	-
18	2.6	3.1	3.0	3.3	4.6	1.5	2.0	2.5	1.7	0.4	1.3	0.5	-	3.2	-	1.6	3.5	9.4	5.0	2.7
19	-	-	-	0.7	-	3.3	1.5	-	1.1	2.3	-	0.4	2.5	0.4	3.4	-	-	-	-	-
20	-	6.3	-	-	6.5	6.7	4.8	-	-	-	-	-	-	1.3	-	-	-	5.2	1.7	-
21	3.4	2.8	3.2	3.6	4.4	2.4	2.8	4.0	5.9	2.4	4.0	2.0	3.5	6.2	4.1	-	5.5	3.3	3.5	6.2
22	2.1	1.6	-	1.7	3.3	1.6	2.0	-	-	2.7	-	-	0.6	0.7	-	-	-	-	-	-
23	-	5.5	-	-	2.7	5.0	1.8	-	-	1.1	-	-	0.6	0.8	-	-	-	-	-	-
24	-	-	-	29.9	18.0	13.6	9.5	-	4.0	4.0	4.7	-	-	-	-	-	-	-	8.9	-
25	-	29.8	-	37.9	51.5	6.0	6.5	36.1	3.5	2.3	1.6	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	9.6	11.3	-	-	-	-	-	-	-	-	-
27	-	-	3.5	-	-	-	-	8.2	-	-	-	-	-	2.8	-	-	-	-	-	-
28	-	-	2.5	-	-	-	30.8	-	6.9	5.0	8.1	14.5	-	2.9	-	-	3.4	-	12.2	-
29	-	-	-	-	-	-	-	5.2	3.3	2.3	13.9	5.0	-	3.0	-	-	12.2	3.0	3.8	18.0
30	-	-	-	-	-	-	-	-	-	4.3	-	-	-	5.2	1.9	-	-	3.0	3.5	-

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA JUNE 1972

SULPHATE IN PRECIPITATION (MILLIGRAMS PER LITER)

DATE	N 23
1	-
2	-
3	6.7
4	7.6
5	-
6	6.7
7	-
8	5.4
9	-
10	5.6
11	3.8
12	2.7
13	-
14	-
15	-
16	-
17	-
18	2.5
19	-
20	-
21	4.0
22	1.7
23	-
24	-
25	-
26	-
27	-
28	3.2
29	-
30	-

C

PH IN PRECIPITATION

DATE	N 01	N 03	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20	N 21	N 22
1	4.25	4.72	4.38	-	-	-	-	5.21	-	5.79	5.31	4.71	-	4.69	4.20	5.51	4.21	4.35	4.50	-
2	3.83	3.89	-	3.72	3.75	3.91	3.95	4.00	-	6.55	3.78	-	-	4.55	3.75	5.80	-	4.31	-	-
3	3.95	3.85	4.01	3.75	3.80	4.05	4.22	4.00	4.17	5.99	4.10	5.02	-	4.00	-	3.91	3.89	3.95	3.92	3.53
4	3.78	3.85	3.80	3.88	3.80	3.80	4.15	3.82	4.10	4.82	4.52	5.50	3.99	3.80	-	3.89	3.61	3.55	3.88	3.31
5	-	-	-	3.41	-	3.90	3.93	3.92	3.92	3.96	3.89	4.61	-	-	-	-	-	3.59	3.90	-
6	4.09	4.00	3.79	4.11	3.91	4.30	4.48	4.12	3.89	4.50	4.20	4.40	-	4.10	4.09	4.29	4.20	4.07	4.05	4.09
7	-	-	4.19	4.15	-	6.89	5.80	5.40	4.20	4.60	4.55	4.65	4.35	4.49	4.05	4.11	-	4.25	-	-
8	3.88	4.18	4.12	4.00	4.10	4.18	4.48	4.25	4.95	5.31	4.70	4.99	-	-	3.92	-	4.17	4.11	4.32	3.72
9	4.19	-	-	3.45	3.85	4.08	4.18	-	4.09	4.55	4.09	6.05	-	4.05	3.52	3.89	3.99	4.05	4.39	-
10	4.35	4.35	4.20	3.95	4.09	4.15	4.38	4.25	-	6.55	3.61	-	-	4.20	-	-	3.99	3.95	3.99	3.85
11	-	3.91	4.11	3.79	-	3.99	4.13	4.11	4.02	6.60	4.00	-	-	3.98	-	-	3.70	3.59	3.78	-
12	3.71	-	4.45	-	-	-	-	4.15	3.79	-	3.51	-	4.75	4.55	4.28	4.25	4.40	4.40	4.51	4.33
13	-	-	-	-	-	-	-	-	-	-	-	-	4.90	4.71	4.29	4.19	4.52	4.32	4.78	3.79
14	-	-	-	-	-	-	-	-	-	-	-	-	4.80	-	-	-	-	4.20	4.79	-
15	-	-	-	-	-	-	-	-	-	-	-	-	4.88	4.25	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.42	-	-	-	-	-
17	-	3.51	-	-	-	3.71	3.81	3.40	3.98	4.21	4.10	6.15	-	-	-	-	-	-	-	-
18	4.31	4.55	4.40	4.15	4.05	4.71	4.61	4.39	4.50	5.02	4.61	5.79	-	4.45	-	4.51	4.22	3.88	4.12	4.35
19	-	-	-	5.39	-	6.29	5.69	-	5.62	4.50	-	5.42	4.36	5.19	4.65	-	-	-	-	-
20	-	3.95	-	-	4.18	3.91	4.32	-	-	-	-	-	-	4.65	-	-	-	6.00	4.88	-
21	4.15	4.30	4.30	4.05	4.00	4.32	4.35	4.10	3.90	6.25	4.00	5.70	4.43	4.79	4.08	-	4.10	4.30	4.21	3.89
22	4.41	4.65	-	4.90	4.32	4.60	4.69	-	-	4.39	-	-	4.78	4.81	-	-	-	-	-	-
23	-	4.32	-	-	4.52	-	5.05	-	-	4.82	-	-	4.89	5.49	-	-	-	-	-	-
24	-	-	-	3.25	3.50	3.61	4.43	-	6.85	4.88	3.99	-	-	-	-	-	-	-	4.10	-
25	-	3.20	-	3.12	3.01	3.92	3.90	3.25	4.40	4.42	4.48	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	4.02	3.72	-	-	-	-	-	-	-	-	-
27	-	-	4.45	-	-	-	-	4.02	-	-	-	-	-	4.39	-	-	-	-	-	-
28	-	-	4.75	-	-	-	4.62	-	3.95	4.18	3.90	4.12	-	4.52	-	-	4.50	-	3.90	-
29	-	-	-	-	-	-	-	4.35	4.55	5.25	3.69	5.00	-	4.67	-	-	4.11	4.31	4.32	3.70
30	-	-	-	-	-	-	-	-	-	5.02	-	-	-	6.63	4.50	-	-	4.35	4.38	-

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA JUNE 1972

PH IN PRECIPITATION

DATE	N 23
1	-
2	-
3	3.91
4	5.70
5	-
6	4.12
7	-
8	4.00
9	-
10	4.09
11	4.22
12	4.23
13	-
14	-
15	-
16	-
17	-
18	4.43
19	-
20	-
21	4.45
22	4.61
23	-
24	-
25	-
26	-
27	-
28	4.58
29	-
30	-

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER LITER)

DATE	N 01	N 03	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20	N 21	N 22
1	61	11	36	-	-	-	-	6	-	-15	-14	14	-	16	63	-3	50	39	29	-
2	141	124	-	190	202	119	117	86	-	-	168	-	-	29	189	-16	-	42	-	-
3	111	134	90	170	156	111	62	89	66	-50	71	-5	-	91	-	136	117	112	115	251
4	177	147	152	135	147	212	74	146	79	13	22	-8	100	155	-	143	244	-	141	496
5	-	-	-	376	-	123	120	123	115	95	150	22	-	-	-	-	-	312	131	-
6	80	131	159	68	109	44	44	75	125	24	60	40	-	78	78	50	60	91	97	82
7	-	-	59	36	-	-	-18	-	54	20	24	19	42	31	71	78	-	67	-	-
8	131	86	66	92	67	72	44	56	-	-3	15	7	-	-	111	-	65	100	49	190
9	52	-	-	-	138	88	108	-	7	23	82	-44	-	80	231	100	98	92	40	-
10	51	49	76	105	71	68	66	51	-	-93	301	-	-	58	-	-	101	117	104	145
11	-	125	69	137	-	111	85	82	86	-184	98	-	-	103	-	-	190	264	185	-
12	184	-	48	-	-	-	-	70	140	-	302	-	18	25	50	51	32	37	34	47
13	-	-	-	-	-	-	-	-	-	-	-	-	9	15	48	62	22	45	15	182
14	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	47	10	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	51	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	-	-	-	-	-
17	-	-	-	-	-	271	179	448	75	60	72	-125	-	-	-	-	-	-	-	-
18	37	30	50	58	77	17	29	36	29	7	12	-57	-	-	-	30	53	141	83	44
19	-	-	-	-10	-	-57	-7	-	-	29	-	-9	37	12	15	-	-	-	-	-
20	-	96	-	-	-	110	50	-	-	-	-	-	-	38	-	-	-	-	-	-
21	60	51	60	80	80	43	54	76	120	-100	90	-21	32	21	75	-	73	58	63	128
22	31	19	-	21	40	17	11	-	-	41	-	-	10	-	-	-	-	-	-	-
23	-	-	-	-	12	-	6	-	-	8	-	-	4	-	-	-	-	-	-	-
24	-	-	-	548	393	288	36	-	-177	1	103	-	-	-	-	-	-	-	-	-
25	-	572	-	796	1004	136	136	-	42	36	32	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	110	237	-	-	-	-	-	-	-	-	-
27	-	-	35	-	-	-	-	84	-	-	-	-	-	28	-	-	-	-	-	-
28	-	-	13	-	-	-	-	-	127	68	137	100	-	32	-	-	31	-	136	-
29	-	-	-	-	-	-	-	44	29	2	-	18	-	34	-	-	88	30	50	-
30	-	-	-	-	-	-	-	-	-	-2	-	-	-	-	18	-	-	27	46	-

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA JUNE 1972

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER LITER)

DATE	N 23
1	-
2	-
3	114
4	-28
5	-
6	77
7	-
8	99
9	-
10	87
11	55
12	61
13	-
14	-
15	-
16	-
17	-
18	37
19	-
20	-
21	34
22	26
23	-
24	-
25	-
26	-
27	-
28	29
29	-
30	-

SO2 IN AIR (MICROGRAMS PER M3)

DATE	N 01	N 03	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20	N 21	N 22
1	0	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	13	5
2	0	8	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	14	3
3	0	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	4	4
4	0	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	14	8
5	0	0	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	15	6
6	0	0	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	21	7
7	0	0	-	-	-	-	9	-	-	-	-	-	-	-	-	-	-	-	7	5
8	0	0	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	12	6
9	0	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	30	6
10	0	0	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	12	8
11	0	0	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	12	18
12	0	0	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	50	7
13	0	0	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	2	3
14	5	0	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	5	4
15	0	0	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	12	3
16	0	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	1	3
17	0	9	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	5	3
18	0	2	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	2	1
19	0	3	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	7	0
20	0	12	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	6	12
21	0	5	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	4	0
22	0	0	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	3	0
23	0	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	3	11
24	4	5	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	5	1
25	6	8	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	5	17
26	3	6	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	10	35
27	5	4	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	8	13
28	3	8	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	20	10
29	3	7	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	17	5
30	2	4	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	12	6

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA JUNE 1972

SO2 IN AIR (MICROGRAMS PER M3)

DATE	N 23
1	0
2	7
3	3
4	4
5	5
6	4
7	2
8	5
9	5
10	7
11	5
12	6
13	0
14	2
15	6
16	0
17	3
18	0
19	11
20	5
21	7
22	7
23	7
24	7
25	1
26	26
27	22
28	5
29	5
30	5

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA JUNE 1972

SULPHATE ON FILTERS (MICROGRAMS PER M3)

DATE	N 01	N 03	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20	N 21	N 22
1	1.7	2.6	-	-	-	-	1.6	-	-	-	-	-	-	-	-	-	-	-	1.2	2.8
2	2.9	0.8	-	-	-	-	4.1	-	-	-	-	-	-	-	-	-	-	-	1.6	3.4
3	4.3	2.9	-	-	-	-	0.6	-	-	-	-	-	-	-	-	-	-	-	1.7	6.2
4	5.8	4.9	-	-	-	-	2.7	-	-	-	-	-	-	-	-	-	-	-	3.2	13.5
5	8.4	7.4	-	-	-	-	6.1	-	-	-	-	-	-	-	-	-	-	-	7.1	5.8
6	7.7	3.1	-	-	-	-	13.1	-	-	-	-	-	-	-	-	-	-	-	10.1	11.2
7	2.4	3.2	-	-	-	-	6.5	-	-	-	-	-	-	-	-	-	-	-	0.9	3.4
8	4.5	3.3	-	-	-	-	3.6	-	-	-	-	-	-	-	-	-	-	-	0.9	4.9
9	4.3	-	-	-	-	-	2.7	-	-	-	-	-	-	-	-	-	-	-	3.0	4.2
10	4.8	4.3	-	-	-	-	4.5	-	-	-	-	-	-	-	-	-	-	-	4.5	6.6
11	4.0	4.7	-	-	-	-	4.0	-	-	-	-	-	-	-	-	-	-	-	5.6	9.6
12	4.8	4.3	-	-	-	-	2.1	-	-	-	-	-	-	-	-	-	-	-	3.4	4.7
13	3.3	3.7	-	-	-	-	3.6	-	-	-	-	-	-	-	-	-	-	-	0.3	1.4
14	3.2	2.9	-	-	-	-	3.7	-	-	-	-	-	-	-	-	-	-	-	0.6	4.7
15	4.4	3.6	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	1.1	4.0
16	3.0	2.1	-	-	-	-	3.0	-	-	-	-	-	-	-	-	-	-	-	1.8	3.7
17	6.0	3.0	-	-	-	-	5.3	-	-	-	-	-	-	-	-	-	-	-	6.2	9.6
18	2.2	0.9	-	-	-	-	7.0	-	-	-	-	-	-	-	-	-	-	-	1.8	6.4
19	0.7	0.0	-	-	-	-	1.5	-	-	-	-	-	-	-	-	-	-	-	0.3	1.1
20	1.1	1.0	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	0.4	2.2
21	2.9	2.6	-	-	-	-	2.3	-	-	-	-	-	-	-	-	-	-	-	1.1	4.0
22	7.9	1.0	-	-	-	-	2.1	-	-	-	-	-	-	-	-	-	-	-	1.1	2.0
23	1.7	1.3	-	-	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	0.4	3.0
24	0.9	0.7	-	-	-	-	1.1	-	-	-	-	-	-	-	-	-	-	-	1.3	1.6
25	4.4	7.3	-	-	-	-	9.1	-	-	-	-	-	-	-	-	-	-	-	5.2	3.8
26	9.3	12.1	-	-	-	-	10.3	-	-	-	-	-	-	-	-	-	-	-	10.7	7.9
27	8.8	9.3	-	-	-	-	7.4	-	-	-	-	-	-	-	-	-	-	-	5.8	8.5
28	4.8	9.8	-	-	-	-	2.4	-	-	-	-	-	-	-	-	-	-	-	3.8	7.6
29	2.4	2.9	-	-	-	-	3.0	-	-	-	-	-	-	-	-	-	-	-	3.9	9.7
30	3.0	3.8	-	-	-	-	3.0	-	-	-	-	-	-	-	-	-	-	-	1.8	7.6

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA JUNE 1972

SULPHATE ON FILTERS (MICROGRAMS PER M3)

DATE	N 23
1	2.5
2	3.8
3	6.8
4	9.5
5	10.6
6	9.7
7	3.6
8	5.5
9	4.9
10	7.8
11	6.2
12	3.9
13	3.0
14	4.0
15	4.2
16	3.1
17	6.3
18	4.9
19	1.2
20	1.4
21	3.6
22	1.5
23	2.8
24	1.3
25	4.3
26	8.5
27	9.1
28	5.2
29	4.2
30	5.0

SULPHATE IN PRECIPITATION (MILLIGRAMS PER M2 PER DAY)

DATE	N 01	N 03	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20	N 21	N 22
1	10	3	8	0	0	0	0	3	0	1	2	11	0	6	15	6	16	3	3	0
2	30	32	0	34	56	81	43	22	0	0	2	-	0	4	61	4	0	5	0	0
3	122	102	83	31	38	79	30	55	47	4	23	10	0	14	0	53	70	85	63	33
4	49	63	31	31	37	87	42	42	43	8	12	8	37	42	0	17	38	-	84	8
5	0	0	0	14	0	93	46	20	50	17	56	15	0	0	0	0	0	9	33	0
6	87	173	35	128	125	204	90	81	153	41	31	53	0	32	54	50	85	72	115	40
7	0	0	19	2	0	1	3	1	56	16	9	10	18	46	79	44	0	38	0	0
8	68	37	21	41	55	26	26	27	2	3	23	1	-	-	18	0	21	26	50	29
9	2	-	0	6	1	48	14	0	13	7	80	-	0	10	37	18	9	4	4	0
10	111	93	95	38	186	43	85	139	0	6	37	0	0	6	0	0	25	45	54	51
11	-	13	83	32	0	28	20	65	26	1	-	0	0	38	0	0	16	15	36	0
12	6	0	20	0	0	0	0	6	9	-	-	0	6	37	47	52	47	23	19	46
13	0	0	0	0	0	0	0	0	0	0	0	0	3	32	15	8	10	6	9	5
14	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	5	7	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	-	0	0	0	29	0	0	0	0	0
17	0	19	0	0	0	155	43	22	14	33	47	3	0	0	0	0	0	0	0	0
18	101	90	33	69	102	72	43	42	41	9	23	4	0	21	0	37	84	29	67	31
19	0	0	0	0	0	2	6	0	1	2	0	3	39	10	5	0	0	0	0	0
20	0	7	0	0	3	12	6	0	0	-	0	0	0	8	0	0	0	11	1	0
21	55	64	42	37	71	75	47	68	82	1	18	4	18	11	22	0	42	25	52	22
22	8	18	0	17	8	17	34	0	0	15	-	-	11	6	0	0	0	0	0	0
23	-	2	0	0	3	0	3	0	0	2	0	0	1	1	0	0	-	0	0	0
24	0	0	0	10	17	21	5	0	2	3	32	-	0	0	0	0	0	0	2	0
25	0	13	0	27	26	73	44	9	2	34	88	-	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	9	118	0	0	0	0	0	0	0	0	0
27	0	0	26	0	0	0	0	18	0	0	-	0	0	1	0	0	0	0	0	0
28	0	0	15	0	0	0	6	0	66	52	28	20	0	32	0	0	77	0	19	0
29	0	0	0	0	0	0	0	8	26	8	33	11	-	3	0	0	12	4	20	13
30	0	0	0	0	0	0	0	0	0	1	0	0	0	3	42	0	0	42	26	0

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA JUNE 1972

SULPHATE IN PRECIPITATION (MILLIGRAMS PER M2 PER DAY)

DATE	N 23
1	0
2	0
3	85
4	31
5	0
6	58
7	0
8	40
9	0
10	110
11	5
12	16
13	0
14	0
15	0
16	0
17	0
18	34
19	0
20	0
21	32
22	13
23	0
24	0
25	0
26	0
27	-
28	14
29	0
30	0

h

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA JUNE 1972

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER M2 PER DAY)

DATE	N 01	N 03	N 05	N 06	N 07	N 08	N 09	N 10	N 11	N 12	N 13	N 14	N 15	N 16	N 17	N 18	N 19	N 20	N 21	N 22
1	175	14	103	0	0	0	0	9	0	-45	-67	38	0	45	271	-6	302	68	35	0
2	673	695	0	968	1157	1633	894	389	0	-	50	-	0	46	1324	-13	0	99	0	0
3	1873	1706	1289	552	695	1540	397	963	1188	-135	454	-14	0	197	0	1087	1251	1494	1105	735
4	845	1006	513	498	571	1822	631	697	964	147	255	-52	656	533	0	319	450	-	1391	158
5	0	0	0	144	0	1041	451	196	667	152	1140	66	0	0	0	0	0	99	375	0
6	1248	2940	871	1818	1839	2308	1261	1012	2313	322	732	448	0	333	655	398	1031	904	1482	532
7	0	0	222	15	0	-	-19	-	756	278	206	249	160	393	841	417	0	565	0	0
8	1668	821	454	832	951	481	457	535	-	-24	91	28	-	-	261	0	296	621	655	581
9	25	-	0	-	79	941	330	0	20	97	2066	-26	0	115	515	146	125	53	92	0
10	1769	1348	1524	418	2599	719	1202	1890	0	-84	963	0	0	85	0	0	367	819	814	886
11	-	191	909	488	0	534	298	1143	482	-37	314	0	0	531	0	0	206	277	554	0
12	152	0	306	0	0	0	0	89	140	-	846	0	150	538	907	969	680	443	303	1002
13	0	0	0	0	0	0	0	0	0	0	0	0	79	227	269	217	154	123	41	127
14	0	0	0	0	0	0	0	0	0	0	0	0	91	0	0	0	0	72	86	0
15	0	0	0	0	0	0	0	0	0	0	0	0	-	231	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	-	0	0	0	351	0	0	0	0	0
17	0	-	0	0	0	4175	798	371	105	420	900	-200	0	0	0	0	0	0	0	0
18	1437	867	557	1200	1711	826	613	614	696	174	208	-388	0	-	0	705	1296	431	1094	513
19	0	0	0	-5	0	-40	-28	0	-	23	0	-68	577	269	21	0	0	0	0	0
20	0	110	0	0	-	189	67	0	0	-	0	0	0	232	0	0	0	-	-	0
21	974	1143	802	835	1299	1336	890	1292	1680	-50	414	-44	170	36	396	0	558	432	922	448
22	118	224	0	215	102	186	187	0	0	221	-	-	184	-	0	0	0	0	0	0
23	-	-	0	0	11	-	10	0	0	17	0	0	5	-	0	0	-	0	0	0
24	0	0	0	174	375	440	21	0	-106	1	711	-	0	0	0	0	0	0	-	0
25	0	255	0	557	511	1654	909	-	21	529	1770	-	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	99	2489	0	0	0	0	0	0	0	0	0
27	0	0	256	0	0	0	0	187	0	0	-	0	0	9	0	0	0	0	0	0
28	0	0	81	0	0	0	-	0	1219	700	480	140	0	361	0	0	710	0	208	0
29	0	0	0	0	0	0	0	67	226	7	-	40	-	32	0	0	90	38	258	-
30	0	0	0	0	0	0	0	0	0	-1	0	0	0	-	401	0	0	382	337	0

LONG RANGE TRANSPORT OF AIR POLLUTANTS, FINAL DATA JUNE 1972

STRONG ACID IN PRECIPITATION (MICROEQUIVALENTS PER M2 PER DAY)

DATE	N 23
1	0
2	0
3	1451
4	-115
5	0
6	667
7	0
8	737
9	0
10	1717
11	70
12	363
13	0
14	0
15	0
16	0
17	0
18	501
19	0
20	0
21	276
22	200
23	0
24	0
25	0
26	0
27	-
28	126
29	0
30	0

SLUTT

Appendix 2: Example of monthly table for one station.

LONG RANGE TRANSPORT OF AIR POLLUTANTS. MONTHLY SUMMARY OF RESULTS

STATION 201 , BIRKENES NORWAY

MONTH JUN 1972

DATE	PRECIPIT		CONCENTRATIONS IN PRECIPITATION					PRECIPITATION PR SQ.M		AIR CONCENTRATIONS	
	MM (NILU)	MM (MI)	MICROEQ. PR LITER		MILLIGRAM PR LITER			MILLIEQ. PR SQ.M	MILLIGRAM PR SQ.M	MICROGRAM PR CU.M	
			PH	H+	NA+	MG++	SO4--	H+	SO4--	SO2	SO4--
1	2.8	-	4.25	61	0.2	0.06	3.4	0.17	9.7	0	1.7
2	4.7	-	3.82	141	0.5	0.06	6.3	0.67	30.0	0	2.9
3	16.8	-	3.95	111	0.4	0.05	7.2	1.87	122.1	0	4.3
4	4.7	-	3.78	177	0.4	0.06	10.3	0.84	49.4	0	5.8
5	0.0	-	-	-	-	-	-	0.00	0.0	0	8.3
6	15.5	-	4.09	80	0.0	0.03	5.5	1.24	86.8	0	7.6
7	0.0	-	-	-	-	-	-	0.00	0.0	0	2.4
8	12.7	-	3.87	131	0.4	0.06	5.3	1.66	67.8	0	4.5
9	0.4	-	4.18	52	1.1	0.13	5.1	0.02	2.4	0	4.3
10	34.6	-	4.34	51	0.1	0.02	3.1	1.76	110.6	0	4.8
11	0.1	-	-	-	-	-	-	-	-	0	4.0
12	0.8	-	3.70	184	0.3	0.06	7.8	0.15	6.4	0	4.8
13	0.0	-	-	-	-	-	-	0.00	0.0	0	3.2
14	0.0	-	-	-	-	-	-	0.00	0.0	5	3.2
15	0.0	-	-	-	-	-	-	0.00	0.0	0	4.4
16	0.0	-	-	-	-	-	-	0.00	0.0	0	3.0
17	0.0	-	-	-	-	-	-	0.00	0.0	0	6.0
18	38.8	-	4.31	37	0.4	0.05	2.5	1.43	100.5	0	2.2
19	0.0	-	-	-	-	-	-	0.00	0.0	0	0.6
20	0.0	-	-	-	-	-	-	0.00	0.0	0	1.1
21	16.2	-	4.15	60	0.7	0.10	3.3	0.97	55.0	0	2.9
22	3.8	-	4.40	31	1.4	0.17	2.0	0.11	8.0	0	7.9
23	0.1	-	-	-	-	-	-	-	-	0	1.7
24	0.0	-	-	-	-	-	-	0.00	0.0	4	0.8
25	0.0	-	-	-	-	-	-	0.00	0.0	6	4.4
26	0.0	-	-	-	-	-	-	0.00	0.0	3	9.3
27	0.0	-	-	-	-	-	-	0.00	0.0	5	8.8
28	0.0	-	-	-	-	-	-	0.00	0.0	3	4.8
29	0.0	-	-	-	-	-	-	0.00	0.0	3	2.4
30	0.0	-	-	-	-	-	-	0.00	0.0	2	3.0

TOTAL PRECIPITATION DURING THE MONTH 153. MM BASED ON NILU MEASUREMENTS

PRECIPITATED STRONG ACID 10.96 MILLIEQV. H+/M2

PRECIPITATED SULPHATE 649. MILLIGRAM SO4/M2

WEIGHTED MEAN PH IN PRECIPITATION 4.12

CALCULATED PERCENTAGE OF SULPHURIC ACID BASED ON THE PRECIPITATED SULPHATE 81.

MAXIMUM 24 HR SO2-CONCENTRATION 5.9 MICROGRAM SO2/M3 (.21 PPHM) AT JUN,25

Appendix 3: Precipitated sulphate (mg/m² month).

	NAME	Nov. 1971	Dec. 1971	Jan. 1972	Feb. 1972	March 1972	April 1972	May 1972	June 1972
N 01	Birkenes	169	182	343	396	758	901	321	649
N 02	Bygland	66	42	266	142	176			
N 03	Finsland	193	209	529	359	499	705	261	729
N 04	Flødevigen	215	86	242	498	688			
N 05	Gjerstad	197	119	496	342	892	779	229	513
N 06	Lista	222	142	327	216	282	429	176	516
N 07	Mandal	278	182	347	443	643	765	337	729
N 08	Skreådalen	222	354	224	199	205	348	318	1115
N 09	Søyland	228	215	131	117	157	273	273	637
N 10	Tovdal	95	126	425	273	597	693	237	627
N 11	Bjørkhaug			59	22	72	54	125	633
N 12	Førde			98	46	145	125	110	274
N 13	Kinn			131	98	350	134	106	665
N 14	Skei i Jølster			21	29	177	49	67	153
N 15	Tustervatn			9	21	162	53	65	137
N 16	Tågmyra			12	46	103	115	174	375
N 17	Kjeller						306	188	424
N 18	Løken					107	226	251	289
N 19	Bislingen						506	269	553
N 20	Grimelid						358	280	450
N 21	Norefjell						424	369	660
N 22	Vasser							165	278
N 23	Lyngør							224	438

Appendix 4: pH of precipitation, weighted monthly mean.

	NAME	Nov. 1971	Dec. 1971	Jan. 1972	Feb. 1972	March 1972	April 1972	May 1972	June 1972
N 01	Birkenes	4,60	4,32	4,15	3,98	4,10	4,21	4,30	4,12
N 02	Bygland	4,89	4,97	4,04	4,36	4,61			
N 03	Finsland	4,78	4,35	4,11	4,04	4,53	4,42	4,37	4,16
N 04	Flødevigen	4,65	4,45	4,37	3,94	4,20			
N 05	Gjerstad	4,52	4,32	4,04	4,02	4,21	4,33	4,34	4,17
N 06	Lista	4,75	4,43	4,18	3,89	4,10	4,23	4,11	4,02
N 07	Mandal	4,61	4,32	4,35	4,00	4,13	4,31	4,28	3,98
N 08	Skreådalen	4,89	4,70	4,35	4,09	4,81	4,52	4,33	4,14
N 09	Søyland	5,23	4,92	4,30	4,09	4,89	4,60	4,68	4,31
N 10	Tovdal	4,59	4,65	4,05	4,03	4,21	4,34	4,30	4,14
N 11	Bjørkhaug			4,43	4,45	4,79	4,64	4,39	4,10
N 12	Førde			4,64	4,99	4,75	5,02	4,84	4,56
N 13	Kinn			4,43	4,09	3,96	4,52	4,24	4,15
N 14	Skei i Jølster			4,79	5,51	4,93	5,24	5,79	4,76
N 15	Tustervatn			4,68	5,06	4,49	4,72	4,56	4,50
N 16	Tågmyra			4,70	4,39	4,33	4,55	4,66	4,47
N 17	Kjeller						4,27	4,20	4,15
N 18	Løken					4,31	4,30	4,28	4,23
N 19	Bislingen						4,18	4,42	4,20
N 20	Grimelid						4,20	4,24	4,14
N 21	Norefjell						4,25	4,28	4,14
N 22	Vasser							4,25	4,04
N 23	Lyngør							4,40	4,19

Appendix 5: Precipitated strong acid (meq/m^2 month).

	NAME	Nov. 1971	Dec. 1971	Jan. 1972	Feb. 1972	March 1972	April 1972	May 1972	June 1972
N 01	Birkenes	3,27	2,50	5,88	9,55	11,51	13,56	4,92	10,96
N 02	Bygland	0,33	0,10	2,32	1,10	0,67			
N 03	Finsland	2,99	3,28	7,36	6,75	3,93	8,14	3,41	11,32
N 04	Flødevigen	4,04	1,05	2,87	11,32	8,91			
N 05	Gjerstad	2,12	1,29	5,95	7,89	8,70	7,04	2,15	7,89
N 06	Lista	4,04	1,99	4,49	5,00	3,86	7,22	2,88	8,71
N 07	Mandal	3,42	2,80	2,57	7,56	7,82	8,65	4,04	11,90
N 08	Skreådalen	2,17	-0,39	4,35	5,16	0,37	3,57	4,64	19,78
N 09	Søyland	-0,91	1,17	2,14	2,32	0,67	2,12	1,21	9,37
N 10	Tovdal	1,67	2,05	6,09	6,34	7,22	10,54	3,41	9,45
N 11	Bjørkhaug			1,74	1,15	0,68	1,05	1,74	10,37
N 12	Førde			2,13	0,28	1,70	0,20	-0,22	2,81
N 13	Kinn			4,87	2,70	6,58	2,32	1,52	14,02
N 14	Skei i Jølster			-0,16	-0,37	0,55	-1,12	-0,48	0,22
N 15	Tustervatn		0,23	0,14	0,05	1,68	0,59	0,65	2,07
N 16	Tågmyra			0,30	0,94	1,15	1,42	0,64	4,21
N 17	Kjeller						4,27	2,45	6,21
N 18	Løken					1,38	3,26	3,10	4,24
N 19	Bislingen						6,77	2,12	7,52
N 20	Grimelid						6,11	3,42	6,92
N 21	Norefjell						6,97	4,75	9,75
N 22	Vasser							1,57	4,98
N 23	Lyngør							2,02	5,99

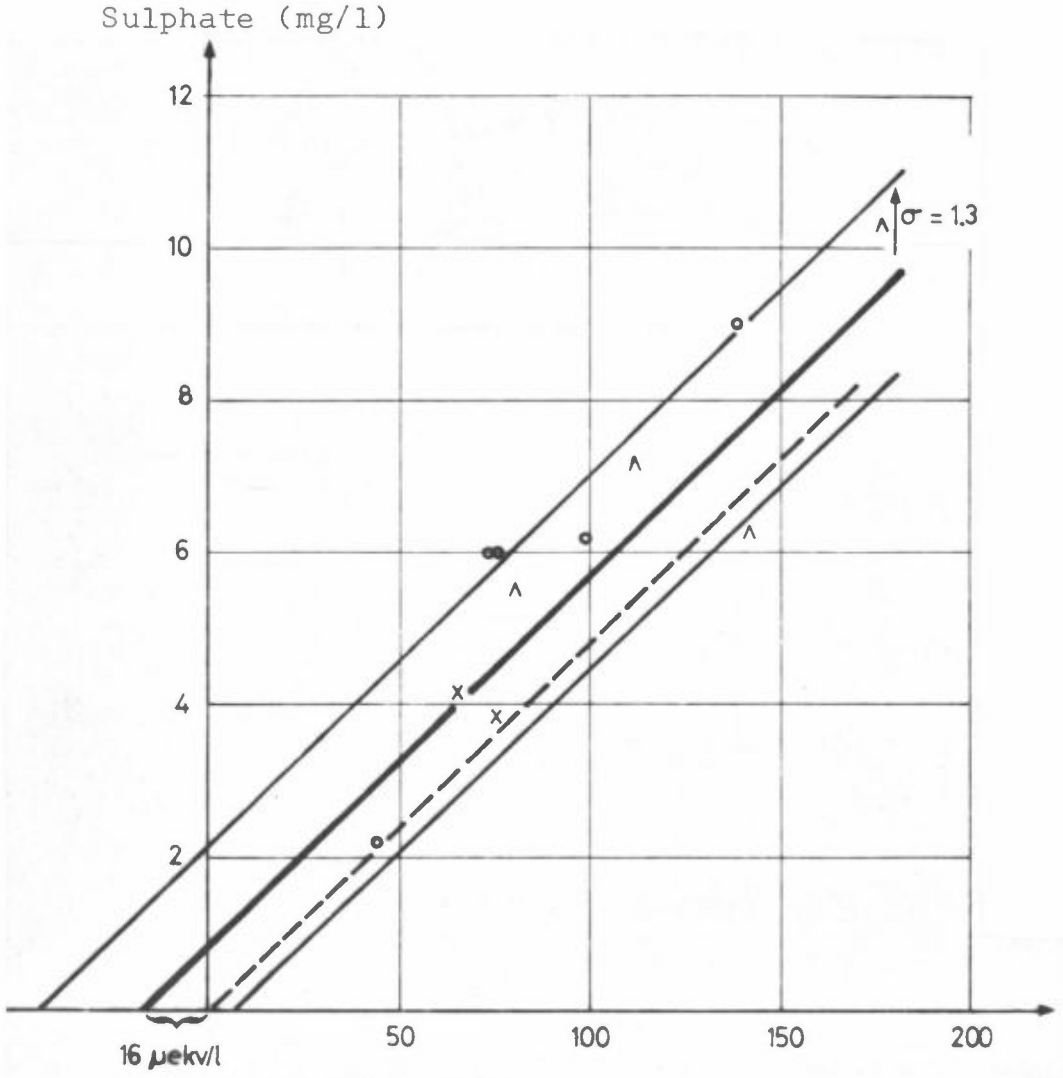
Appendix 6: Precipitation of sulphuric acid, based on the measurement of strong acid, (mg/m^2 or kg/km^2).

	NAME	Nov. 1971	Dec. 1971	Jan. 1972	Feb. 1972	March 1972	April 1972	May 1972	June 1972
N 01	Birkenes	160	123	288	468	564	669	241	537
N 02	Bygland	16	5	114	54	33			
N 03	Finsland	147	161	361	331	193	399	167	555
N 04	Flødevigen	180	51	141	555	437			
N 05	Gjerstad	104	63	292	387	426	345	105	387
N 06	Lista	180	98	220	245	189	354	141	427
N 07	Mandal	168	137	126	370	383	424	198	583
N 08	Skreådalen	106	0	213	253	18	175	227	969
N 09	Søyland	0	57	105	114	33	104	59	459
N 10	Tovdal	82	100	298	311	354	516	167	463
N 11	Bjørkhaug			85	56	33	51	85	508
N 12	Førde			104	14	83	10	0	138
N 13	Kinn			239	132	322	114	74	687
N 14	Skei i Jølster			0	0	27	0	0	11
N 15	Tustervatn		11	7	2	82	29	32	101
N 16	Tågmyra			15	46	56	70	31	206
N 17	Kjeller						209	120	304
N 18	Løken					68	160	152	208
N 19	Bislingen						332	104	368
N 20	Grimelid						299	168	339
N 21	Norefjell						342	233	478
N 22	Vasser							77	244
N 23	Lyngør							99	294

Appendix 7: Percent of the total sulphate in the precipitation which is the "sulphuric acid equivalent" to the strong acid concentration.

	NAME	Nov. 1971	Dec. 1971	Jan. 1972	Feb. 1972	March 1972	April 1972	May 1972	Jun 197
N 01	Birkenes	93	66	82	117	73	72	74	81
N 02	Bygland	24	11	42	37	18			
N 03	Finsland	74	75	66	89	38	54	63	74
N 04	Flødevigen	90	59	56	109	62			
N 05	Gjerstad	52	52	58	111	47	43	45	74
N 06	Lista	87	67	66	111	66	81	79	81
N 07	Mandal	59	74	36	82	58	54	58	78
N 08	Skreådalen	47	0	93	124	9	49	70	85
N 09	Søyland	0	26	78	95	20	37	21	71
N 10	Tovdal	84	78	69	111	58	73	69	72
N 11	Bjørkhaug			142	251	45	93	67	79
N 12	Førde			104	29	56	8	0	49
N 13	Kinn			178	132	90	83	69	101
N 14	Skei i Jølster			0	0	15	0	0	7
N 15	Tustervatn			75	11	50	53	48	73
N 16	Tågmyra			120	98	54	59	18	54
N 17	Kjeller					83	67	63	70
N 18	Løken					62	69	59	70
N 19	Bislingen						64	38	65
N 20	Grimelid						82	59	74
N 21	Norefjell						79	62	71
N 22	Vasser							46	86
N 23	Lyngør							43	66

Appendix 8: Relation between concentrations of sulphate and strong acid, BIRKENES, 1.1 - 30.6 1972.



——— Regression line

------ Diluted sulphuric acid

Observations in 1972:

for the period 3- 7 March
" " " 28-30 April
" " " 2- 6 June

Appendix 9: Total precipitation in the first half of 1972.

	Name	Sulphate mg/m^2	strong acid $mekv/m^2$	% sulphuric acid	Sulphuric acid, ton/km^2			
N 01	Birkenes	3388	56.4	80	2.76			
N 02	Bygland							
N 03	Finsland	3082	40.9	64	2.00			
N 04	Fløddevigen							
N 05	Gjerstad	3251	39.6	59	1.94			
N 06	Lista	1946	32.2	79	1.58			
N 07	Mandal	3264	42.5	63	2.08			
N 08	Skreådalen	2409	37.9	75	1.86			
N 09	Søyland	1588	17.8	54	0.87			
N 10	Tovdal	2852	43.1	72	2.11			
N 11	Bjørkhaug	965	16.7	83	0.82			
N 12	Førde	798	6.9	42	0.33			
N 13	Kinn	1484	32.0	104	1.57			
N 14	Skei i Jølster	496	-1.4	0	0			
N 15	Tustervatn	447	5.2	56	0.25			
N 16	Tågmyra	825	8.7	50	0.43			
N 17	Kjeller							
N 18	Løken							
N 19	Bislingen							
N 20	Grimelid							
N 21	Norefjell							
N 22	Vasser							
N 23	Lyngør							

Appendix 10: Precipitation in three episodes.

		Sulphate mg/m²				Strong acid meq/m²		
	NAME	1-7 March	28-30 April	2-6 June		3-7 March	28-30 April	2-6 June
N 01	Birkenes	663	239	288		9.8	3.8	4.6
N 02	Bygland	78				0.4		
N 03	Finsland	368	165	369		3.4	2.9	6.3
N 04	Flødevigen	557				7.0		
N 05	Gjerstad	735	225	150		8.3	2.8	2.7
N 06	Lista	233	90	237		3.2	1.6	4.0
N 07	Mandal	524	163	255		6.5	2.3	4.2
N 08	Skreådalen	17	144	543		0.3	0.9	8.3
N 09	Søyland	14	84	251		0.2	0.4	3.6
N 10	Tovdal	496	149	220		5.8	2.6	3.2
N 11	Bjørkhaug	12	22	292		0.3	0.6	5.1
N 12	Førde	0	21	70		0	0.3	0.5
N 13	Kinn	0	16	124		0	0.5	2.6
N 14	Skei i Jølster	13	9	86		0	0	0.4
N 15	Tustervatn	0	1	37		0	0	0.7
N 16	Tågmyra	74	40	91		0.9	0.5	1.1
N 17	Kjeller		148	114			2.4	2.0
N 18	Løken	66	68	124		0.7	1.1	1.8
N 19	Bislingen		85	193			0.6	2.7
N 20	Grimelid		118	172			2.2	2.6
N 21	Norefjell		131	294			2.3	4.3
N 22	Vasser		67	81			1.3	1.4
N 23	Lyngør		78	174			1.4	2.0