

ADVANCED STATIONS - RESULTS FROM THE 2ND 45-DAYS  
PERIOD OF EXTENDED CHEMICAL ANALYSES PROGRAMME  
NOVEMBER 1 - DECEMBER 15, 1974

(A PRELIMINARY DISCUSSION)

BY  
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## INTRODUCTION

In accordance with what has been decided by the Steering Committee, a second 45-days period of 24-hourly advanced sampling of air and precipitation was carried out as from November 1st, 1974.

This is a preliminary report of the results from this second 45-days period. The two periods of advanced sampling will be subject to further discussion at a later stage, and comparison will be made with the results from the Nordforsk 100-days sampling programme from the summer 1973.

## RESULTS

Results have been reported from 8 countries (the United Kingdom, France, the Netherlands, Western Germany, Switzerland, Norway, Sweden, and Finland). The data received are listed in the Appendix. As the reports from Switzerland and Western Germany include a few parameters only, they have not been subject to further discussion. Some countries have reported results from an extended period of time, but only data from the actual 45-days period November 1st-December 15th are discussed below. However, the complete set of data can be found in the Appendix. Table I gives a summary of the data available and the sampling periods for the different stations.

## CHEMICAL COMPOSITION

The mean aerosol concentrations for the period November 1st-December 15th are presented in Figure 1, expressed in  $\text{n eq}/\text{m}^3$ . The sulphate concentrations have been corrected for sea-spray

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at Cottered only. The aerosol concentrations are generally slightly lower than those reported from the OECD 45-days advanced stations programme during February and March 1974, particularly at Cottered. The number of cations exceeds the number of anions at most stations. At Birkenes, where chloride is measured, the number of equivalents of positive and negative ions is the same, and this is also the case at Jokioinen. Wageningen has the highest concentrations of ammonium, sulphate and nitrate, and La Crouzille has reported the highest strong acid concentration. The concentration of strong acid at Cottered has been computed with pH as basis. The highest concentrations of sodium were recorded at Råø and Wageningen, while Birkenes, which is also situated close to the sea, received much less. That the sum of the equivalents of anions and cations is not equal to zero is to be expected, as a number of important components have not been determined like chloride, except in Norway, and phosphate.

The ionic balance of the mean values of the precipitation samples is similar to that of the air samples, with an excess of cations except at N 01, where chloride is included but not sodium and the number of anions is larger, and at F 03, where the positive and negative charges are equal.

As at the first 45-days advanced sampling period, the mean concentrations of ammonium and nitrate are approximately equivalent at Birkenes. This is also true for La Crouzille, Råø, and Cottered.

#### COMPARISON OF AIR AND PRECIPITATION DATA

Days with high concentrations of one or more of the components strong acid, sulphate, ammonium and nitrate in air and precipitation have been selected from each station and are

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presented in figures 2-7 as "short periods". The sulphate concentrations have been corrected for sea spray. The units are neq./m<sup>3</sup> and µeq./l for easy visual matching of air and precipitation data. The concentration of an aerosol component expressed in neq./m<sup>3</sup> will be the same as the concentration of that component in precipitation expressed in µeq./l, assuming a cloud water concentration of 1 g/m<sup>3</sup>, and nearly complete rainout. Although this is a simplification of the washout/rainout process, it still provides a basis for comparison of the concentration of ions found in aerosols and precipitation. There are, of course, many factors influencing the concentrations of elements in precipitation. The processes of rainout and washout are probably dependent on the amount and intensity of precipitation (1). The concentration varies with height for sulphur dioxide, sulphate and ammonia (2,3) and may be different at ground level and in the rainforming layers of the atmosphere. The concentration of pollutants in the raindrops may be increased by evaporation of the water as the drops are falling through the atmosphere. The concentration of sulphate and nitrate in the raindrops can increase by absorption of sulphur dioxide gas and nitrogen oxide gas respectively, and subsequent oxidation and hydration. Ammonia gas may be dissolved in acid rain forming ammonium.

The three periods presented from La Crouzille (fig. 2) are November 1st and 8th, and December 12th. There were only 9 days with precipitation during the whole 45-days period. The concentrations of all the elements shown are low, generally. On November 1st, the concentrations of strong acid, ammonium and sulphate are larger in air than in precipitation, which could be due to inefficient rainout/washout of those constituents. Although 11.2 mm of precipitation were recorded, the decrease in concentration does not seem to be a dilution effect as several other compounds show higher concentrations in precipitation than in air.

The second and third of the days presented show higher concentrations of strong acid, ammonia and sulphate in precipitation than in air, the difference being most pronounced on November 8th. This can be caused by scavenging of gaseous sulphur dioxide.

The concentration of nitrate was higher in air than in precipitation on November 8th, indicating a lower concentration in the rainforming layers. 5 µg of NO<sub>2</sub> per m<sup>3</sup> of air were measured at ground level, which was above the average concentration of this gas for November. The higher concentrations of nitrate in precipitation relative to air on November 1st and December 12th can be due to scavenging of gaseous nitrogen dioxide, at least in the last case where it is accompanied by a higher concentration of strong acid in precipitation than in air. It is noticeable that equivalent amounts of nitrate and ammonia were found in precipitation.

The three days presented from Wageningen are November 8th, and 27th, and December 14th (fig. 3). Common for those days were the high concentrations of ammonium in air and the low concentrations of strong acid. The concentrations of sulphate and nitrate are approximately the same in air and precipitation the first two days, whereas on December 14th, more sulphate was found in precipitation than in air and less nitrate. The large amounts of sodium found on November 27th and December 14th indicate large amounts of chloride from sea-spray on the filters, which react with acid particles forming hydrogen chloride gas. The gas escapes and thus only small amounts of strong acid are left on the filters. This explains the increase of the concentration of acid in precipitation as compared to air. As the concentration of sulphate was higher in precipitation than in air on December 14th, scavenging of sulphur dioxide probably accounts for some of the increase of acid for that day. The lower concentration

of ammonium in precipitation than in air could be due to lower concentrations in the rainforming layers.

The amounts of precipitation recorded for the days presented were 2.5 mm, 4.3 mm, and 2.8 mm, respectively, and thus concentrations of pollutants in rainwater were very much influenced by washout.

The periods chosen from Birkenes are November 8th, 19th and 24th (figure 4). The concentrations of pollutants in air were low for all these days, whereas some elements showed considerably higher concentrations in precipitation. The increase of the concentrations of strong acid and sulphate in precipitation as compared to air points to scavenging of sulphur dioxide as a source. The concentrations of nitrate were also greater in precipitation than in air and especially so on November 8th, when the concentration of nitrogen dioxide in air was found to be  $10 \mu\text{g per m}^3$ , which was maximum for that month. The high concentrations of nitrate in precipitation are probably due to washout/rainout of nitrogen oxides. This process would also increase the concentration of ammonium in precipitation as on November 8th, provided ammonia was present in the air. The number of equivalents of strong acid plus ammonium is nearly equal to the number of equivalents of sulphate plus nitrate in the precipitation samples for all three days presented. The concentrations of chloride were measured and were found to be 2, 1 and  $10 \text{ neq./m}^3$  of air and 73, 8, and  $93 \mu\text{eq./l}$  of precipitation, respectively. As sodium was not reported in precipitation, the number of anions exceeds the number of cations on the two days with high concentrations of chloride. However, on November 19th, when the concentrations of element originating from the sea (chloride and magnesium) were low, there are equal numbers of positive and negative ions in precipitation.

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The periods presented from Råø are November 18th and 19th, December 4th (figure 5). The extreme amounts of sodium in precipitation on the first and the third days probably originate from sea-spray. The trajectories show strong winds from the North Sea. The sodium concentrations in air are also large, suggesting large concentrations of chloride on the filters. The sodium chloride particles on the filter react with acid particles, forming hydrogen chloride gas, which escapes to the atmosphere. This explains the very low concentrations of strong acid found on the air sample filters. The same phenomenon was observed at this station during the Nordforsk 100-days sampling programme, and during the OECD 45-days advanced sampling programme from February 15th to March 31st, 1974.

On November 18th, the concentrations of ammonium, sulphate and nitrate are larger in air than in precipitation, possibly due to inefficient washout/rainout. The amount of precipitation was only 2.6 mm. On both the other days shown, the concentrations of the above mentioned compounds were somewhat larger in precipitation than in air, which may be the effect of washout of atmospheric gases. 4.9 and 5.2 mm of rain were recorded for these days, respectively.

The periods presented from Jokioinen are November 12th, 15th, and 27th (figure 6). On the first of these days, all elements measured in both air and precipitation show slightly higher concentrations in precipitation and the difference is considerable for strong acid. The concentration of sodium on the filter was large and the trajectories show strong south-westerly winds. It is possible that interaction between sodium chloride particles from sea-spray and acid particles on the filter has caused the low concentration of strong acid in the air sample, as seemed to be the case at Råø, although the position of the station about 80 km away from a sea with low salinity makes this theory uncertain.

The increases of the concentrations of strong acid in precipitation relative to air on November 15th and 27th were accompanied by increases of the nitrate concentration and may be due to washout of nitrogen oxides. The smaller amounts of ammonium and sulphate in precipitation than in air both days could be the effect of either lower concentrations in the rain-forming layers than at ground level, or inefficient washout/rainout. 2.8 and 3.6 mm of rain were recorded these two days.

The periods presented from Cottered, November 1st, 16th and 17th (figure 7), are characterised by very high concentrations of ammonium in air as compared to the concentrations in precipitation. This may be due to lower concentrations in the rainforming layers than at ground level. Strong acid has not been measured, but has been computed from pH.

There are considerably higher concentrations of acid in precipitation than in air for all three periods. The concentration of sulphate shows an increase in precipitation relative to air on November 1st and the high strong acid value may be explained as oxidation of sulphur dioxide and subsequent hydration. 10.5  $\mu\text{g}$  of sulphur dioxide per  $\text{m}^3$  of air was recorded. The other two days show lower concentrations of sulphate in precipitation than in air, making scavenging of sulphur dioxide unlikely. The concentrations of nitrate are very much the same in air and in precipitation for the three days, which excludes scavenging of nitrogen oxide as a source of strong acid. On November 1st, the amount of precipitation was 1.9 mm and on November 16th, 1.6 mm. At such small rainfalls washout and evaporation of the rain drops can cause large fluctuations of the concentration of pollutants.

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The washout ratios in units  $10^2$  are listed in Table II. The washout ratio is defined as the concentration of a component per kg rain to the concentration per kg air. The calculations are based upon mean concentrations for the whole period. There were 9 days with precipitation at the French station and between 20 and 34 days, and the other stations. Assuming a cloud water content of  $1 \text{ g/m}^3$  as for "short periods", the washout ratio would be  $13 \times 10^2$  with complete rainout. Consequently, a washout ratio much larger than this shows that other factors have contributed to the concentration of pollutant in precipitation. This is apparently the case for strong acid at all stations, except F 03, and also for other components at some stations, e.g. nitrate. A comparison between the stations shows that N 01 has the highest ratios for all elements measured there, apart from strong acid, for which S 02 has the maximum value. The washout ratios reported from the OECD 45-days programme in February and March are similar. Washout of gases of sulphur dioxide and nitrogen oxides followed by oxidation would explain the high ratios of strong acid, sulphate and nitrate.

#### RELATIONSHIP BETWEEN MEASUREMENTS AND METEOROLOGICAL CONDITIONS

The 850 mb trajectories for the days with the 10 highest sulphate concentrations and the 10 highest strong acid concentrations in air are presented in figures 8 - 18. The trajectories are given for every 6 hour with the position of the air masses each 12th hour indicated with dots. The numbers at the arrows show the positions of the stations. These are as follows:

- |              |                  |
|--------------|------------------|
| 1. Birkenes  | 5. Cottered      |
| 2. Råø       | 6. Vert-le-Petit |
| 3. Jokioinen | 8. Wageningen    |
| 4. Keldsnor  |                  |

The position of La Crouzille is shown by the number 7. Keldsnor is included because it was expected to take part in the programme. All the high strong acid concentrations but one were recorded at La Crouzille. The trajectories for the nearby station Vert-le-Petit show air masses from the NE some days and from SW to NW at other times, although the three highest concentrations were observed in connection with air from the central part of Western Germany. A high acid concentration was observed at Cottered with trajectories from the North Sea.

The 10 highest concentrations of sulphate are reported from four stations. On three of the five days of high measurements from Wageningen, the airmasses arrived via Western Germany, on one day via Midlands in England, and on one day from the North Sea. The observations from La Crouzille coincide with days with high strong acid concentrations in airmasses from the NE. Jokioinen has reported high sulphate concentrations two days, one with airmasses from Eastern Europe, the other with air from the Soviet Union. A high sulphate concentration was found at Cottered when the trajectories arrived from the Atlantic Ocean, south of Ireland.

It appears from this brief analysis of trajectories for 850 mb that some of the very high concentrations of sulphate and strong acid are due to local sources, e.g. when the trajectories arrive from the Atlantic Ocean, whereas long range transport of pollutants has contributed on other occasions, e.g. at Jokioinen.

#### REFERENCES

- (1) Junge, C.E., Air Chemistry and Radioactivity, p. 311, Academic Press, New York, 1963
- (2) Jost, D., Tellus, 26, pp 206-211, 1974
- (3) Georgii, H.W., Müller W.J., Tellus, 26, pp. 180-185, 1974

FIGURES:

I Air samples, November 1st /December 15th, 1974,  
mean values in n eq./m<sup>3</sup>.

2-7 Short periods, mean concentrations in air and  
precipitation samples.

8-18 Trajectories and concentrations on days with  
high sulphate concentration and high strong acid  
concentration in air.

TABLES:

I Data available.

II Washout ratios based on mean values for the  
period November 1st/December 15th, 1974.

AIR SAMPLES:

Country	Strong acid	NO <sub>3</sub> -N	NH <sub>4</sub> -N	SO <sub>4</sub>	Ca	Mg	Na	K	Fe	Cl	NO <sub>2</sub>	TPM
United Kingdom	-	x	x	x	x	x	-	-	-	-	x	-
France	x	x	x	x	x	x	x	x	x	-	x	x
W Germany	-	-	-	x	x	-	-	-	-	-	-	-
Netherlands	x	x	x	x	x	-	x	x	x	-	x <sup>1</sup>	-
Sweden	x	x	x	x	x	-	x	-	x	-	-	x
Finland	x	x	x	x	x	-	x	-	-	-	-	-
Norway	x	x	x	x	x	x	x	x	-	x	x	x

PRECIPITATION SAMPLES:

Country	Strong acid	NO <sub>3</sub> -N	NH <sub>4</sub> -N	SO <sub>4</sub>	Ca	Mg	Na	K	Fe	Cl	N.S.
United Kingdom	-	x	x	x	x	x	-	-	-	-	20
France	x	x	x	x	x	x	x	x	-	-	9
Switzerland	-	x	-	x	-	-	-	-	-	-	13
W Germany	x	-	-	x	x	-	-	x	-	x	24
Netherlands	x	x	x	x	x	-	x	x	x	-	34
Sweden	x	x	x	x	x	-	x	-	-	-	48
Finland	x	x	x	x	x	x	x	-	x	-	32
Norway	x	x	x	x	x	x	-	x	-	x	22

TABLE I: 45-days period November 1 - December 15, 1974.  
Data available.

<sup>1</sup>NO<sub>2</sub>-N

Sampling period:

United Kingdom	A 1/11 - 19/12	P 1/11 - 26/12
France	A 1/11 - 15/12	P 1/11 - 15/12
Switzerland	A -	P 1/11 - 30/11
W Germany	A 1/12 - 31/12	P 1/11 - 31/12
Netherlands	A 1/10 - 31/12	P 1/8 - 31/1 - 1975
Sweden	A 1/11 - 13/12	P 1/11 - 14/12
Finland	A 1/11 - 15/12	P 1/6 - 31/12
Norway	A 1/11 - 31/12	P 1/11 - 31/12

com- ponent \ st.	UK1	F03	NL1	SF2	S02	N01
H <sup>+</sup>	102	5.0	64	5.7	254	152
SO <sub>4</sub> <sup>2-</sup>	9.6 <sup>1</sup>	9.1	12	7.1	21	32
NH <sub>4</sub> <sup>+</sup>	3.1	3.5	5.4	7.3	8.5	40
NO <sub>3</sub> <sup>-</sup>	8.3	7.4	7.2	46	25	94
Cu <sup>2+</sup>	10	8.4	9.9	19	38	43
Mg <sup>2+</sup>	10	6.7				41
Na <sup>+</sup>		70	36	13	52	
K <sup>+</sup>		5.4	61			65
Cl <sup>-</sup>						69

TABLE II: Washout ratio in units 10<sup>2</sup>.

Period November 1 - December 15, 1974.

<sup>1</sup> corrected for sea-spray.

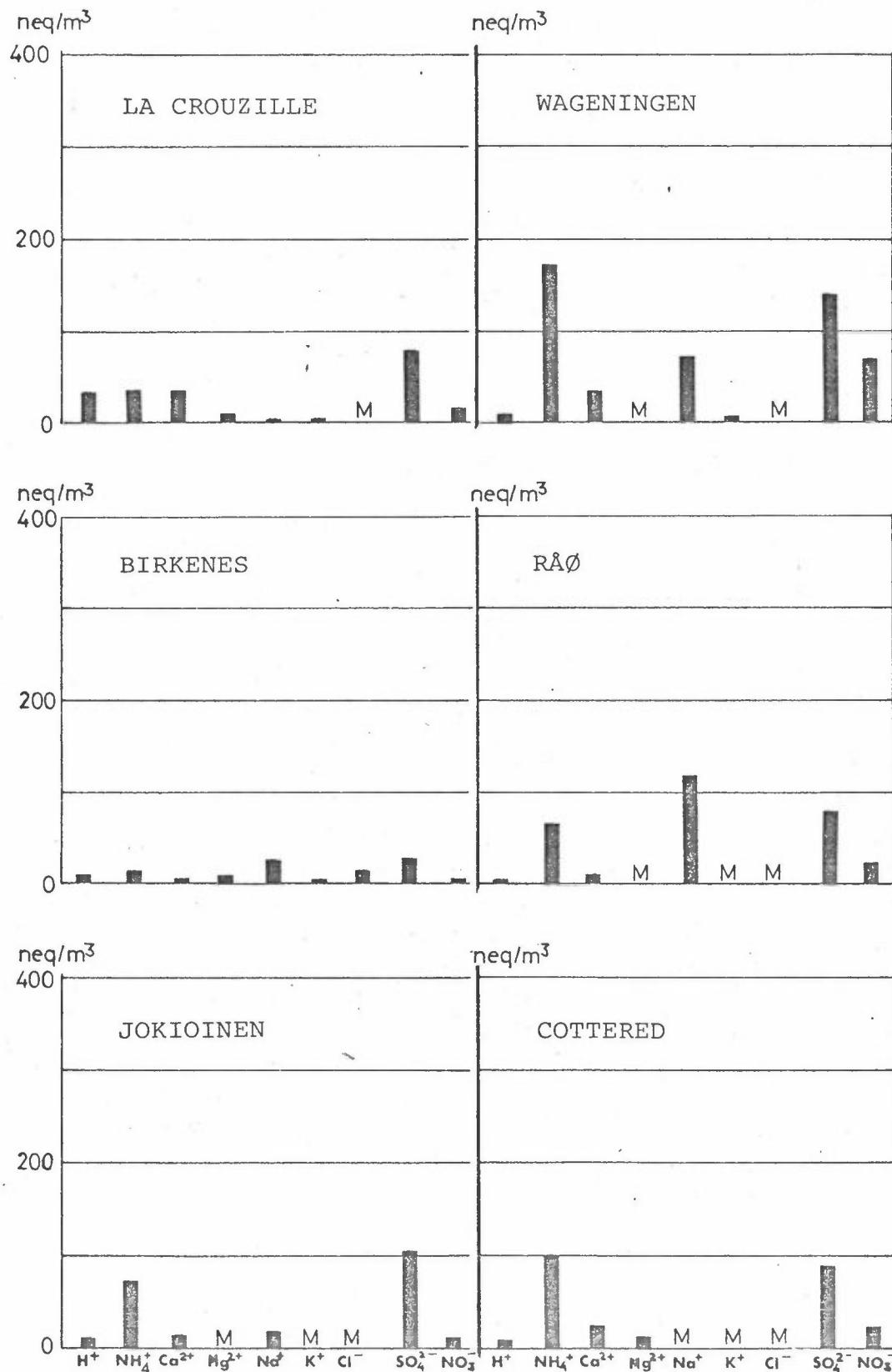


Figure 1: Air samples, November 1 - December 15, 1974.  
Mean values in neq/m<sup>3</sup>.

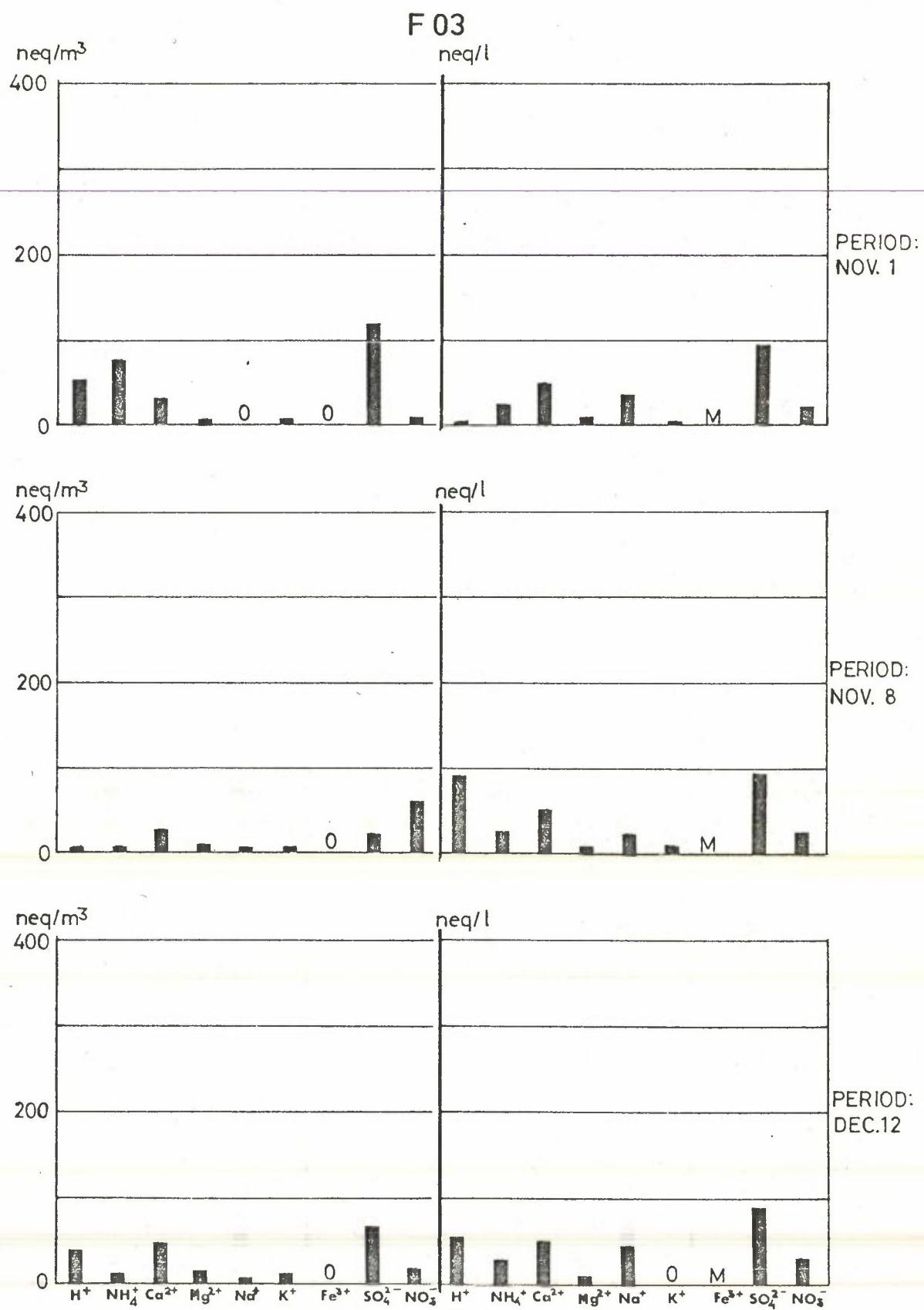


Figure 2: Station F03, La Crouzille. Short periods, mean concentrations in air and precipitation samples.

## NL 01

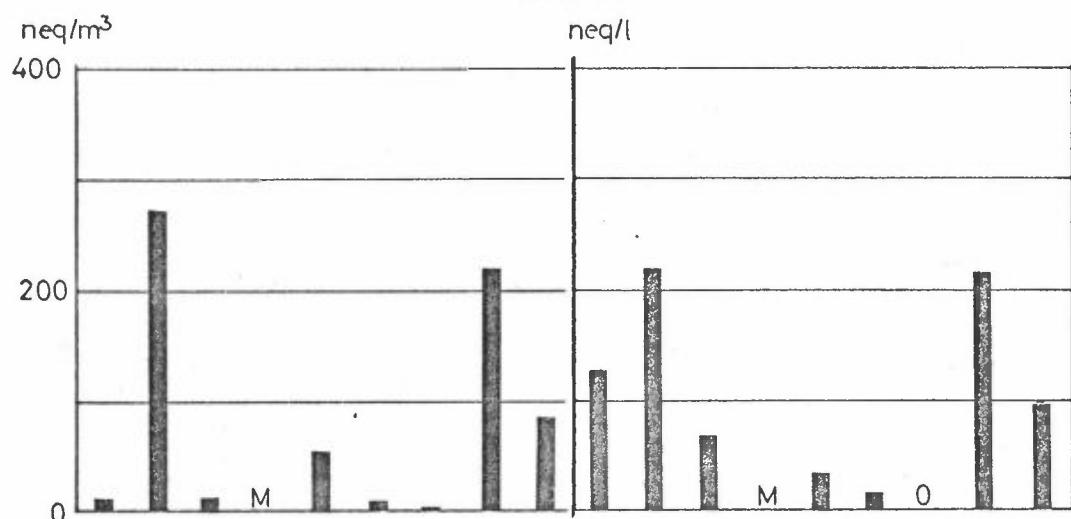
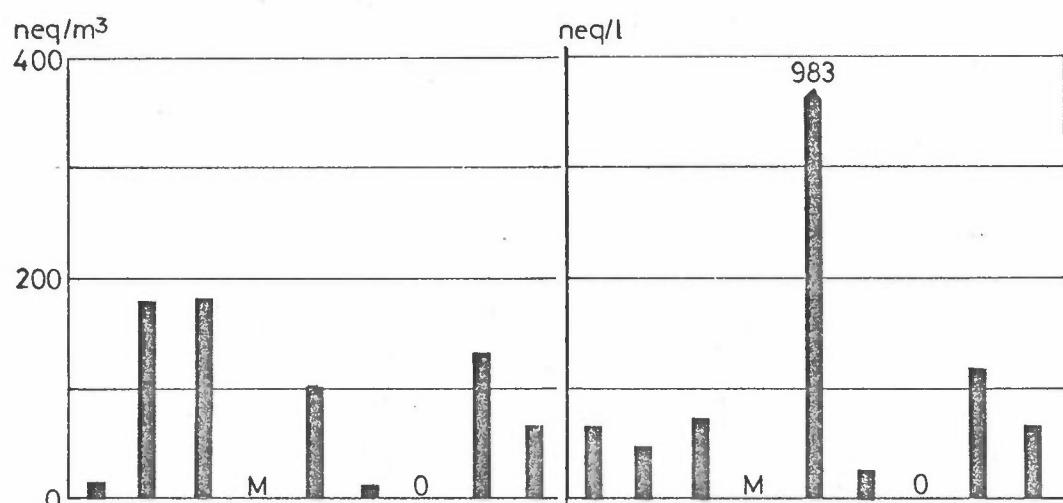
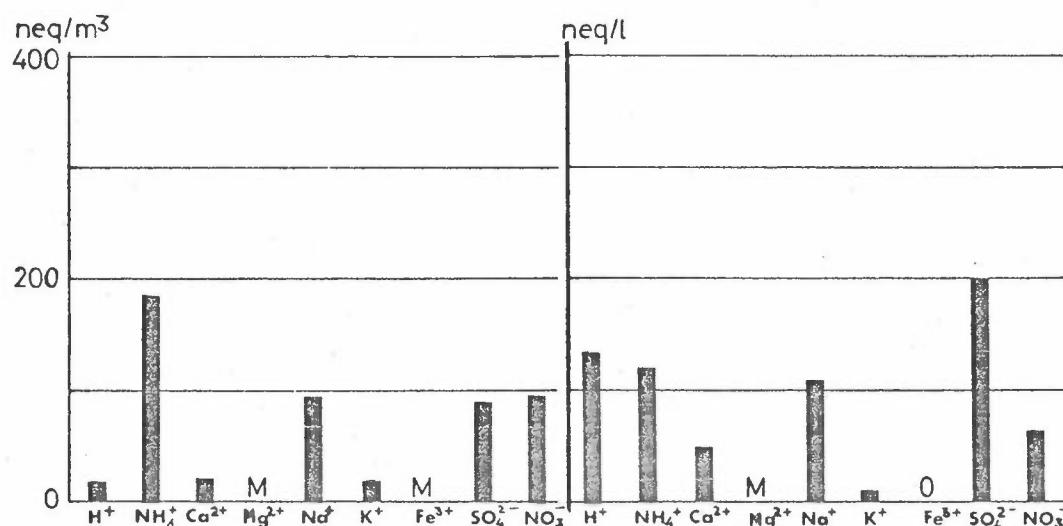
PERIOD:  
NOV. 9PERIOD:  
NOV. 27PERIOD:  
DEC. 14

Figure 3: Station NLL, Wageningen. Short periods, mean concentrations in air and precipitation samples.

N 01

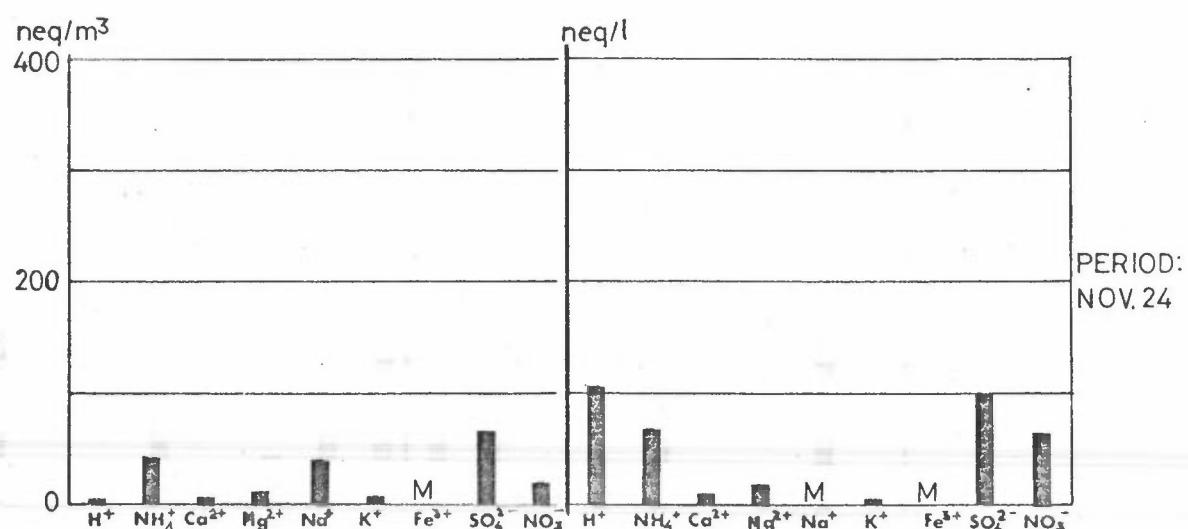
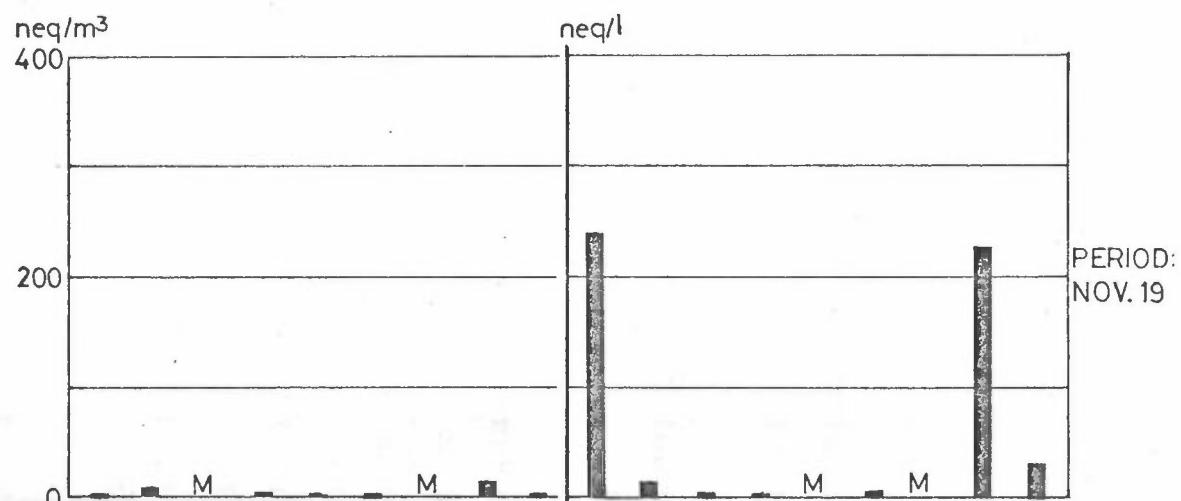
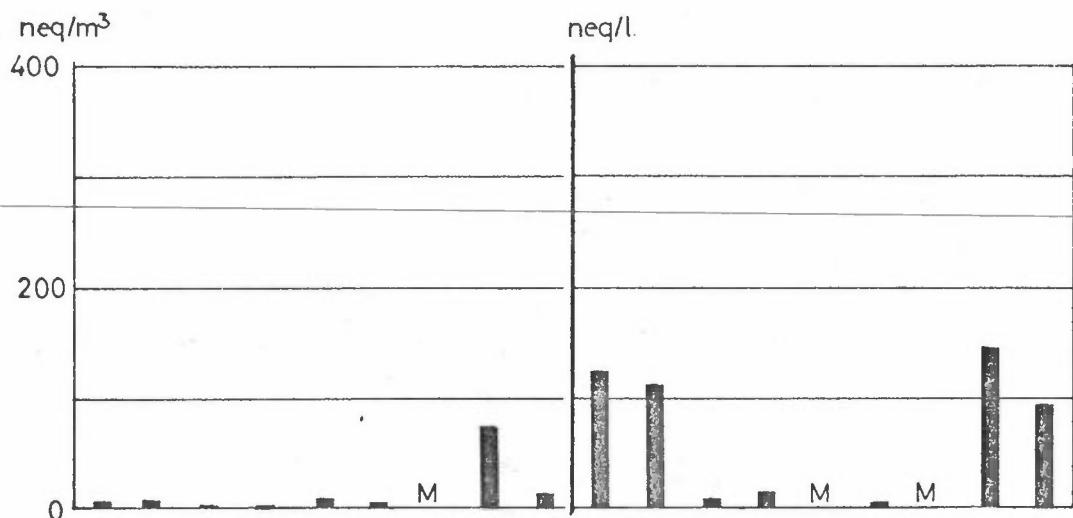


Figure 4: Station N01, Birkenes. Short periods, mean concentrations in air and precipitation samples.

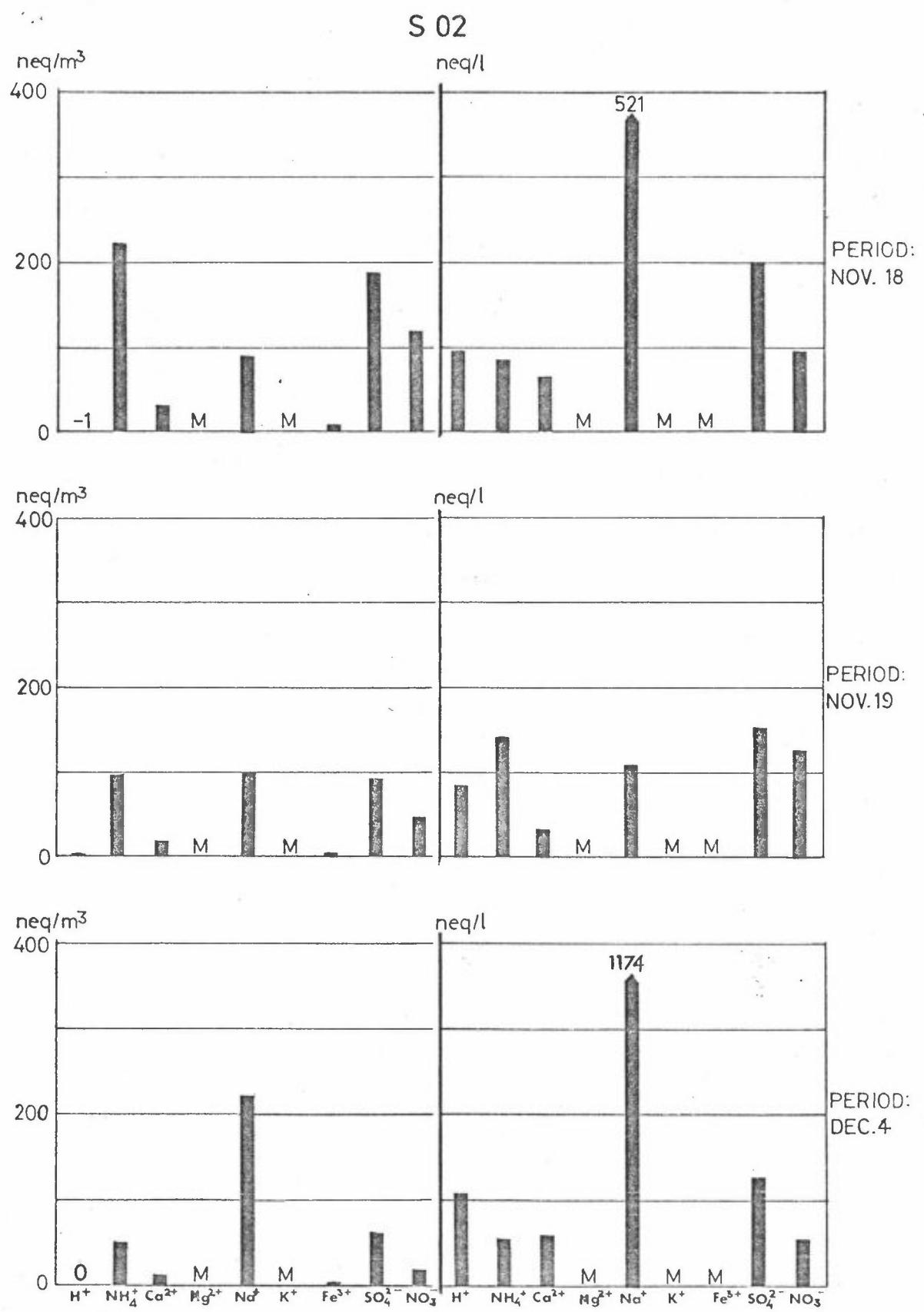


Figure 5: Station S02, Råö. Short periods, mean concentrations in air and precipitation samples.

## SF 2

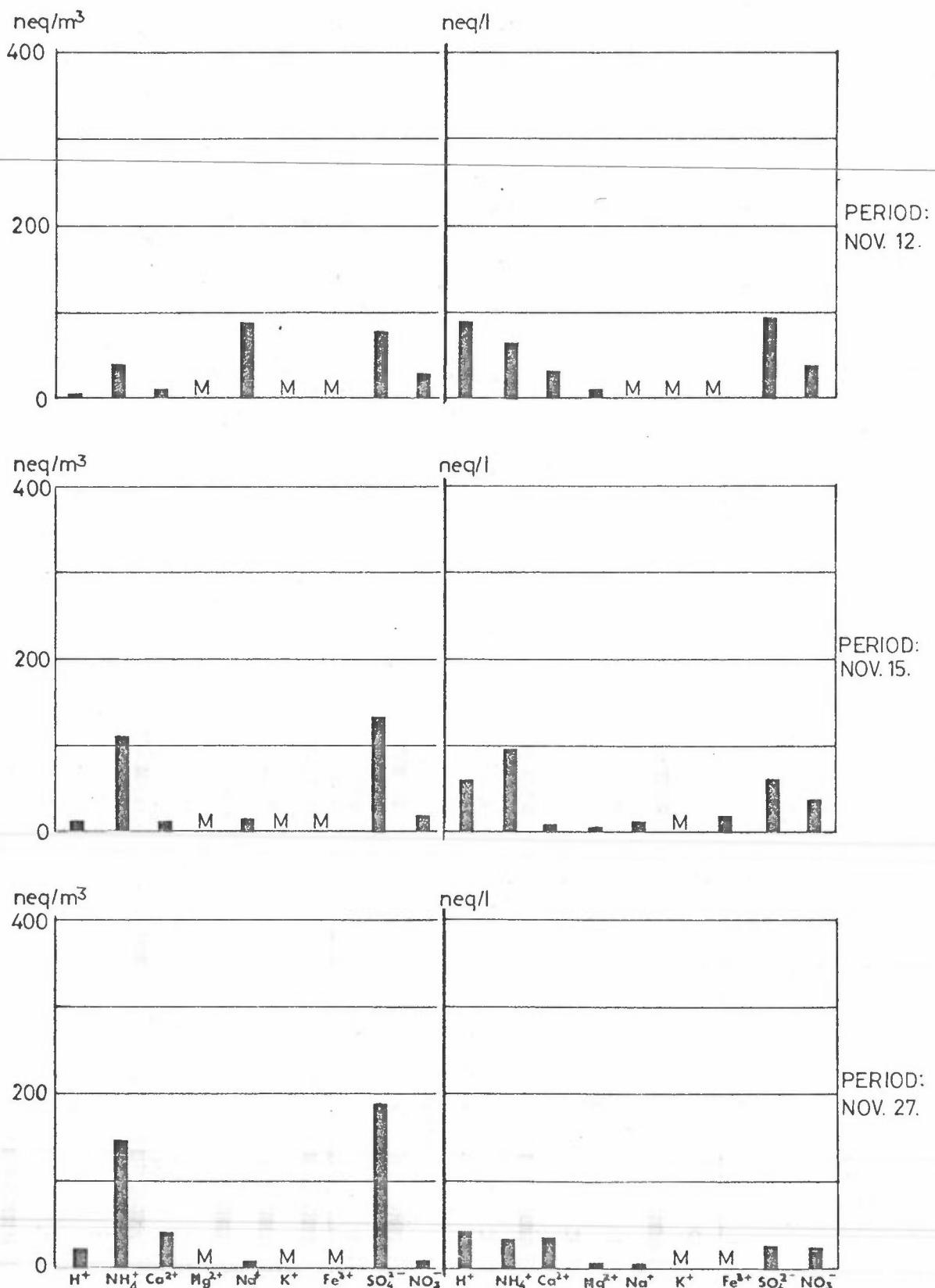


Figure 6: Station SF2, Jokioinen. Short periods, mean concentrations in air and precipitation samples.

# UK 1

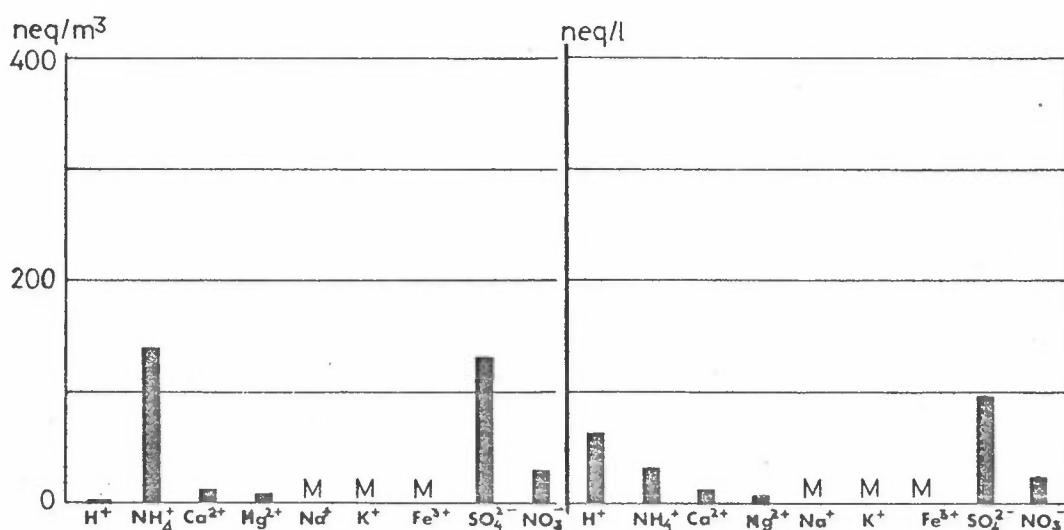
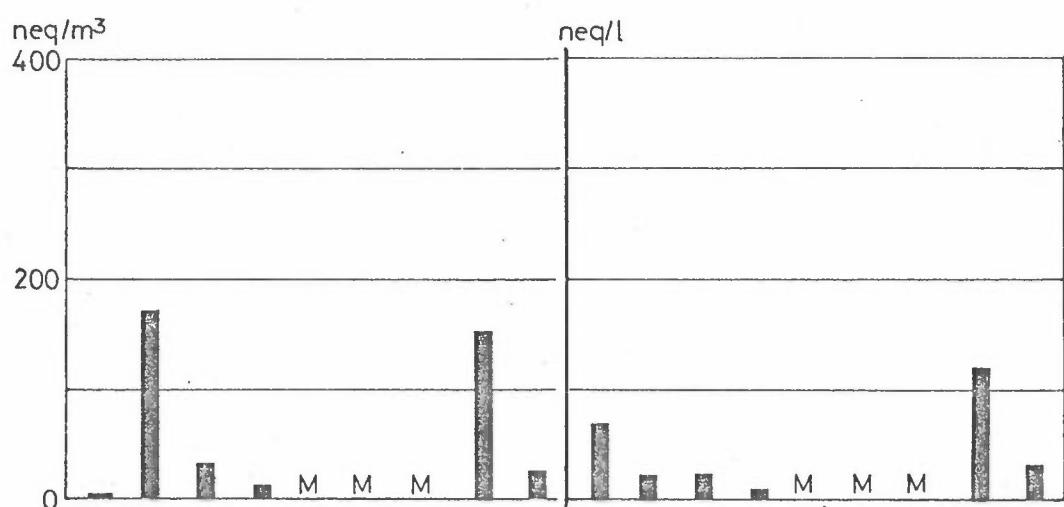
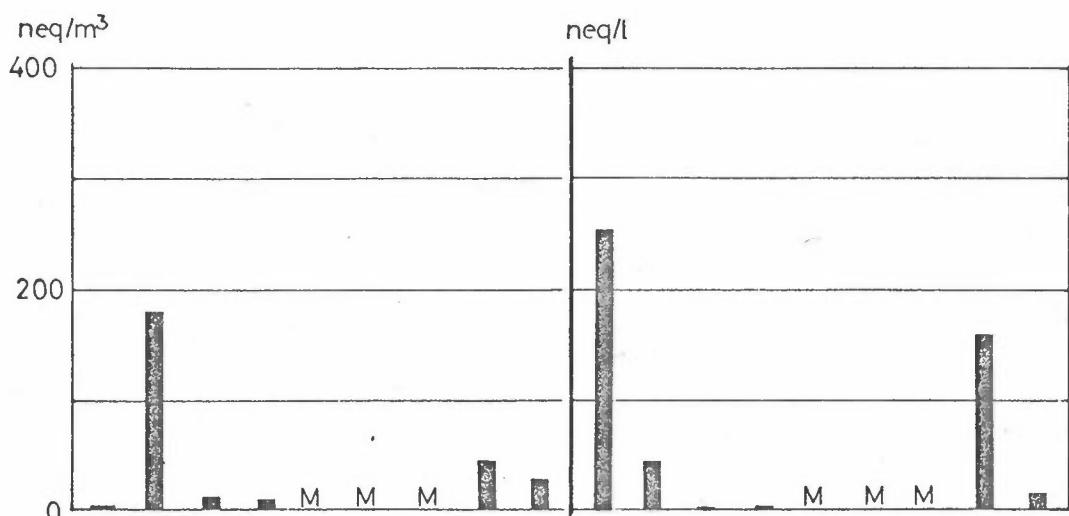
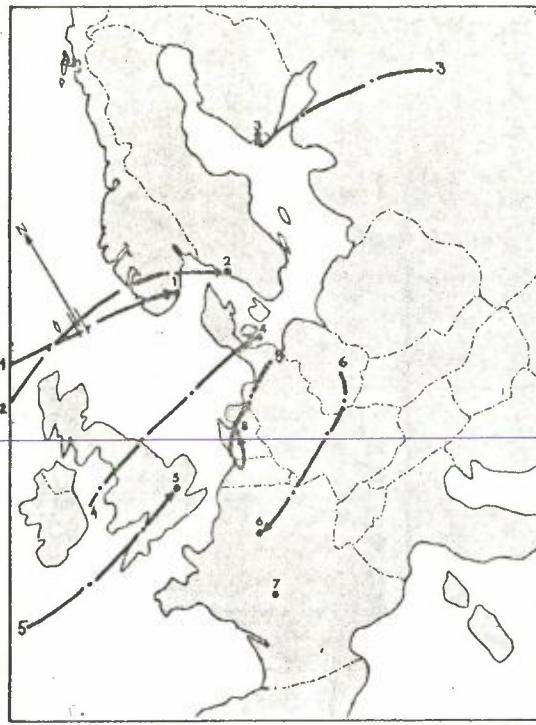
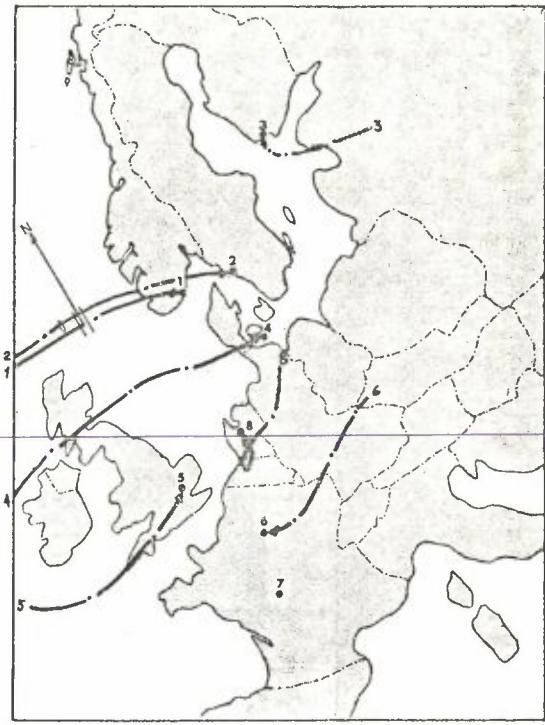


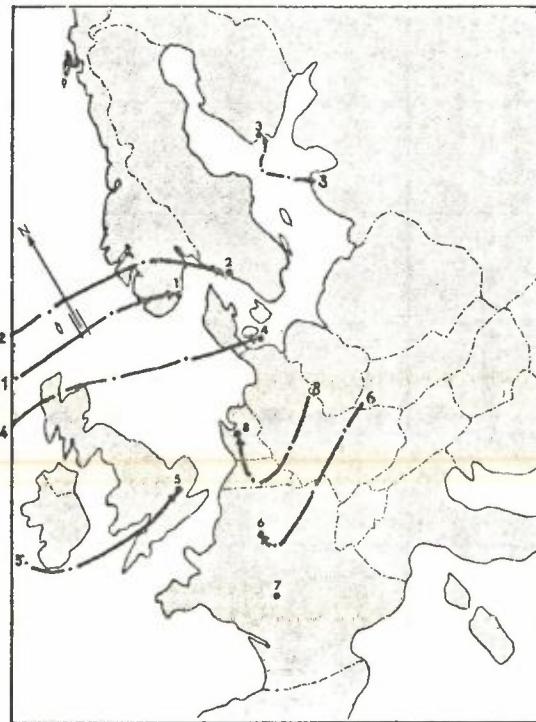
Figure 7: Station UK1, Cottered. Short periods, mean concentrations in air and precipitation samples.



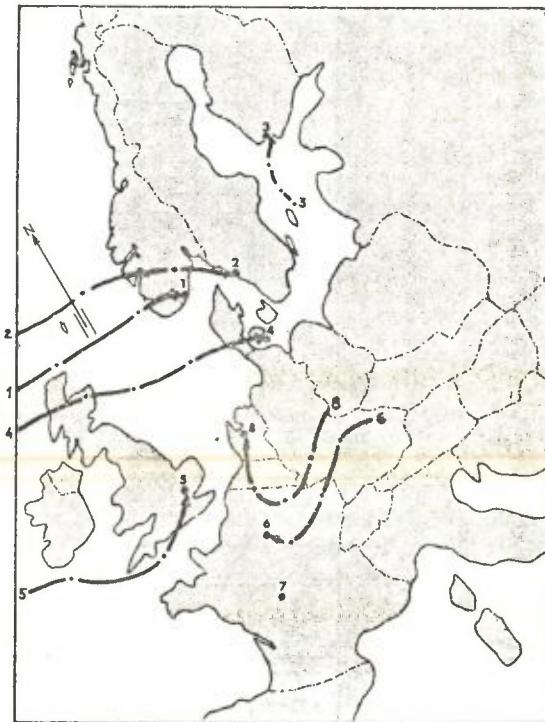
Trajectories arriving at  
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Trajectories arriving at  
741107, 06 GMT.



Trajectories arriving at  
741107, 12 GMT.



Trajectories arriving at  
741107, 18 GMT.

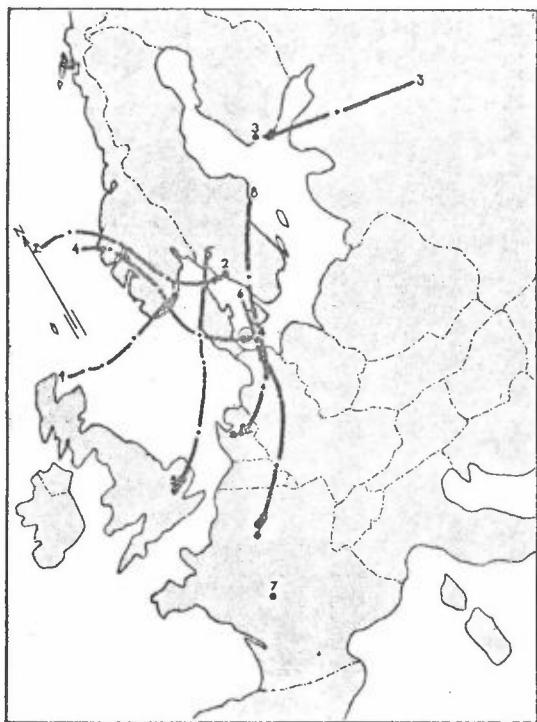
FIGURE 8

Day with high sulphate concentration and high strong acid concentration.

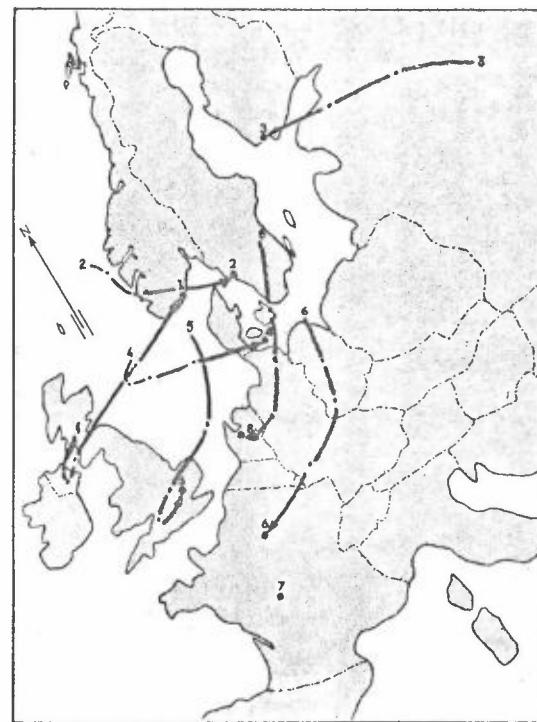
Observed concentrations, neq/m<sup>3</sup>:

sulphate: N01 - 0.3  
S02 - 2.9  
SF2 - 6.0  
UK1 - 11.1  
F03 - 16.6  
NLL - 22.3

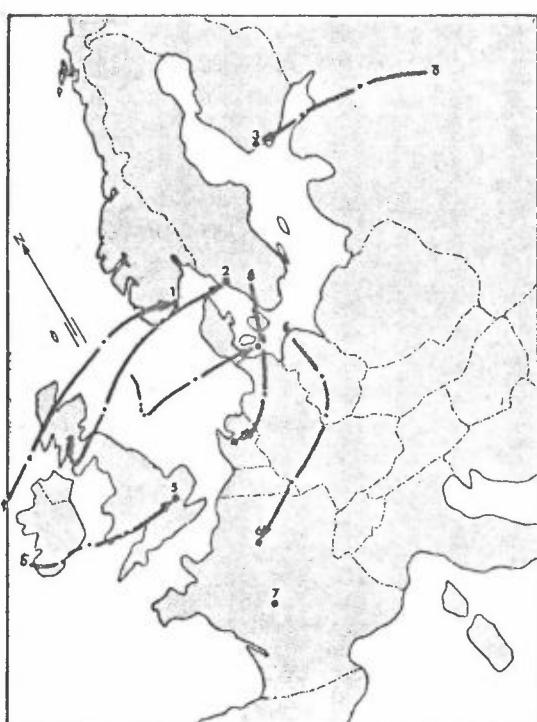
strong acid: N01 - 2  
S02 - 3  
SF2 - 13  
UK1 - 7  
F03 - 169  
NLL - 23



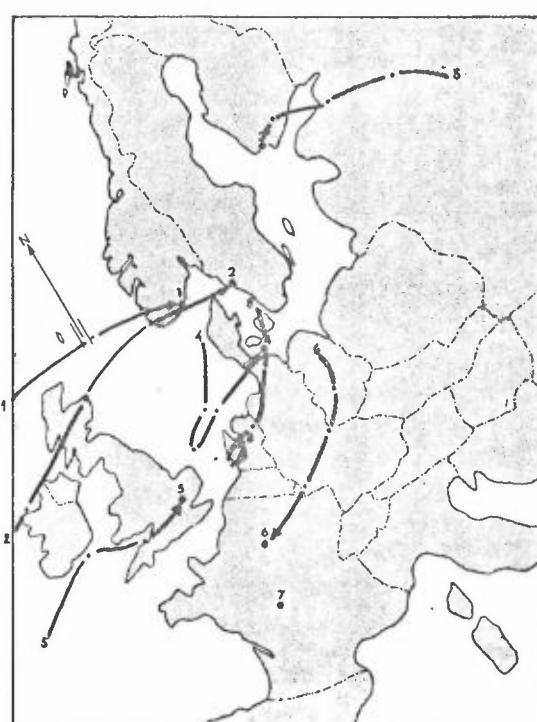
Trajectories arriving at  
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Trajectories arriving at  
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Trajectories arriving at  
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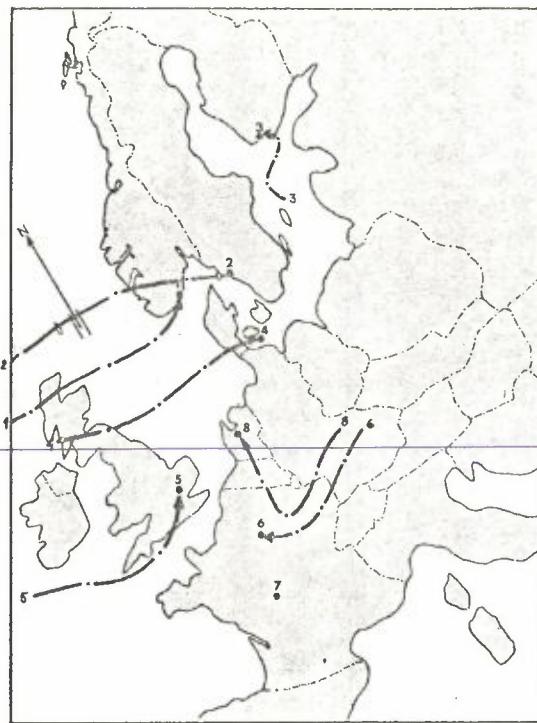
FIGURE 9

Day with high sulphate concentration and high strong acid concentration.

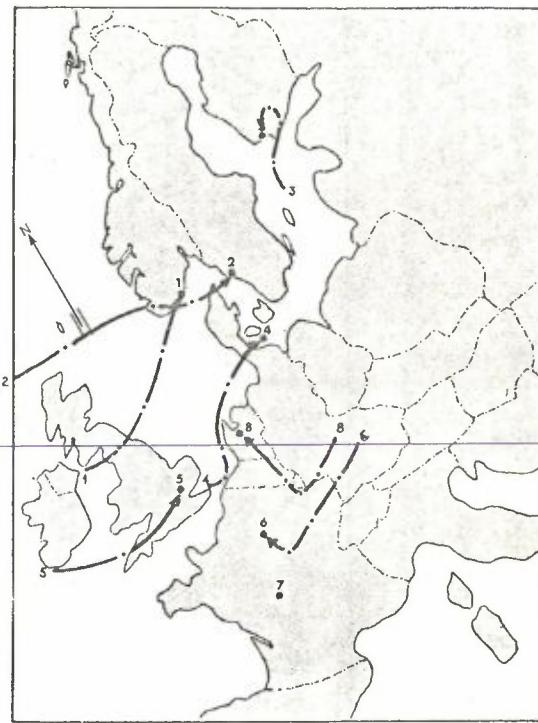
Observed concentrations, neq/m<sup>3</sup>:

sulphate:	N01 -	1.6
	S02 -	3.5
	SF2 -	5.8
	UK1 -	-
	F03 -	<u>13.1</u>
	NLL -	<u>18.6</u>

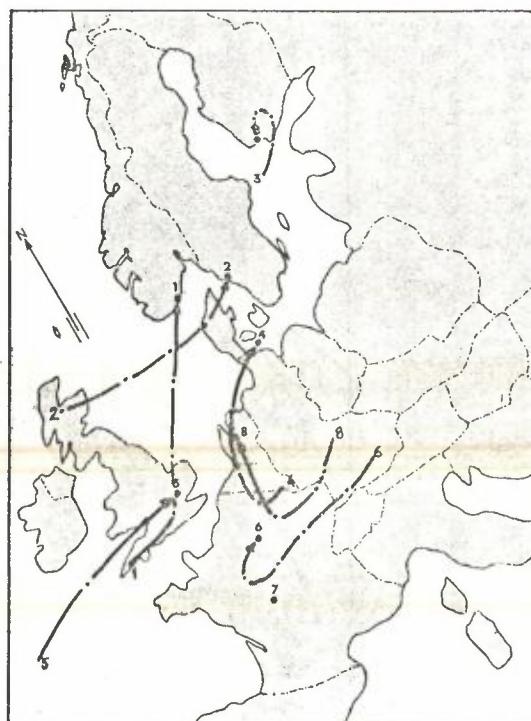
strong acid:	N01 -	3
	S02 -	2
	SF2 -	13
	UK1 -	-
	F03 -	162
	NLL -	<u>21</u>



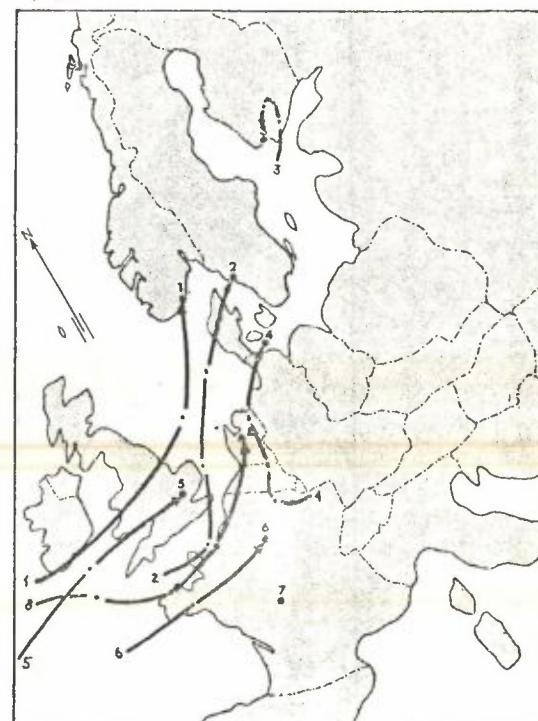
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Trajectories arriving at  
741108, 06 GMT.



Trajectories arriving at  
741108, 12 GMT.



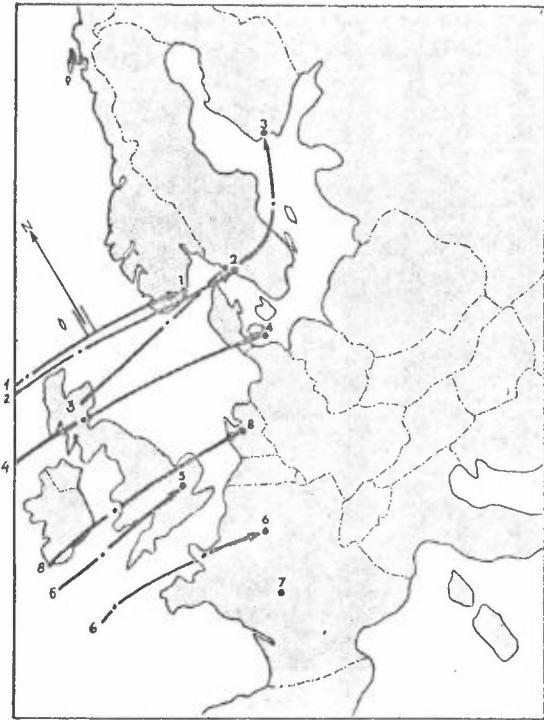
Trajectories arriving at  
741108, 18 GMT.

FIGURE 10

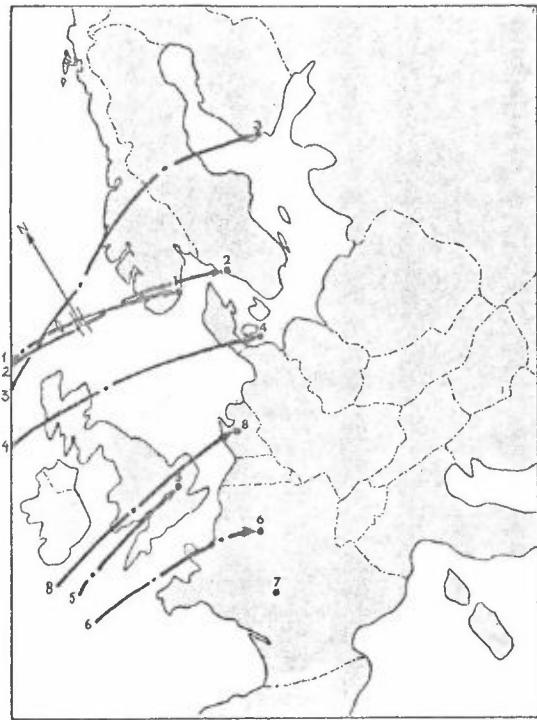
Day with high sulphate concentration.

Observed sulphate concentrations, neq/m<sup>3</sup>:

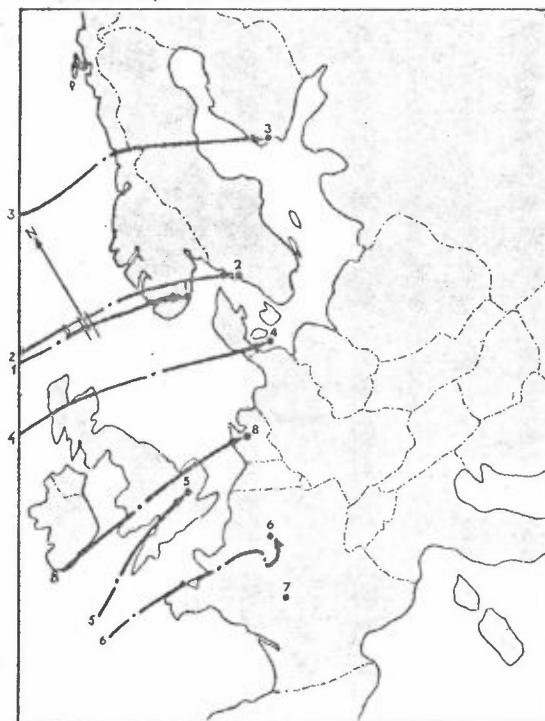
N01 -	3.5
S02 -	3.6
SF2 -	5.4
UK1 -	3.2
F03 -	1.0
NLL -	<u>16.5</u>



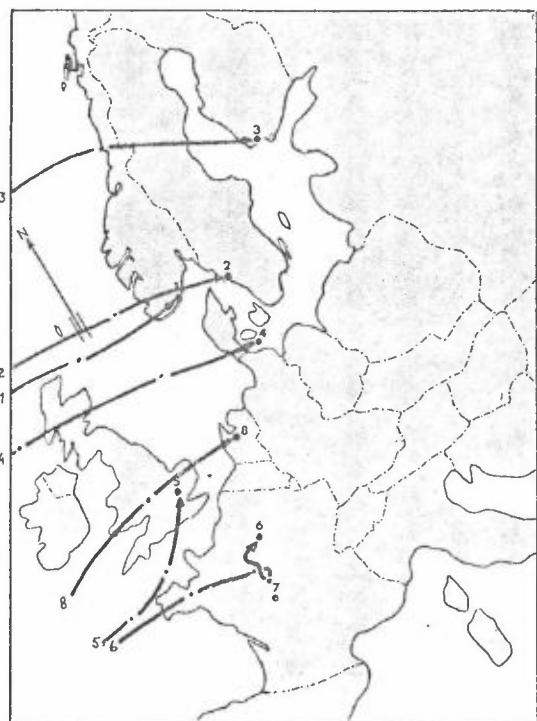
Trajectories arriving at  
741203, 00 GMT.



Trajectories arriving at  
741203, 06 GMT.



Trajectories arriving at  
741203, 12 GMT.



Trajectories arriving at  
741203, 18 GMT.

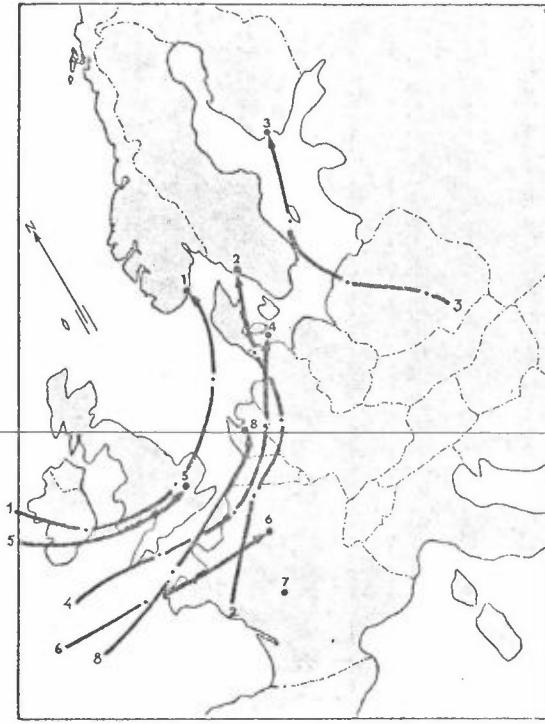
FIGURE 11

Day with high sulphate concentration and high strong acid concentration.

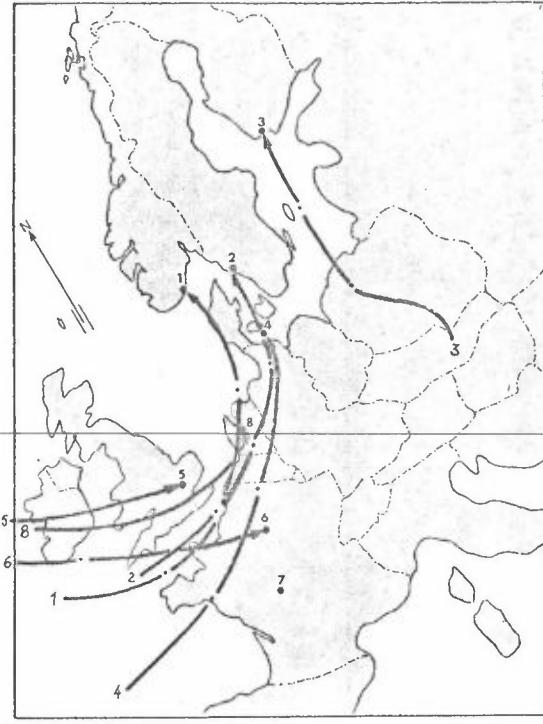
Observed concentrations, neq/m<sup>3</sup>:

sulphate:	N01 - 1.1
	S02 - 2.5
	SF2 - 1.5
	UK1 - -
	F03 - 6.6
	NLL - <u>15.4</u>

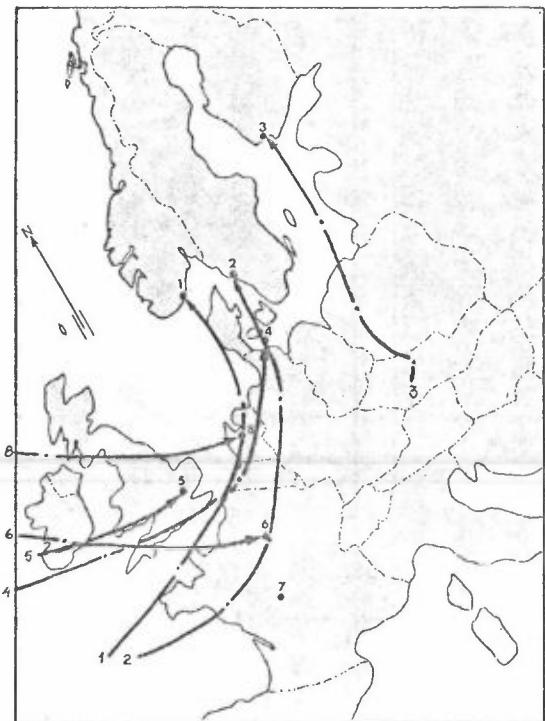
strong acid:	N01 - 2
	S02 - $\frac{1}{2}$
	SF2 - 0
	UK1 - -
	F03 - 71
	NLL - <u>10</u>



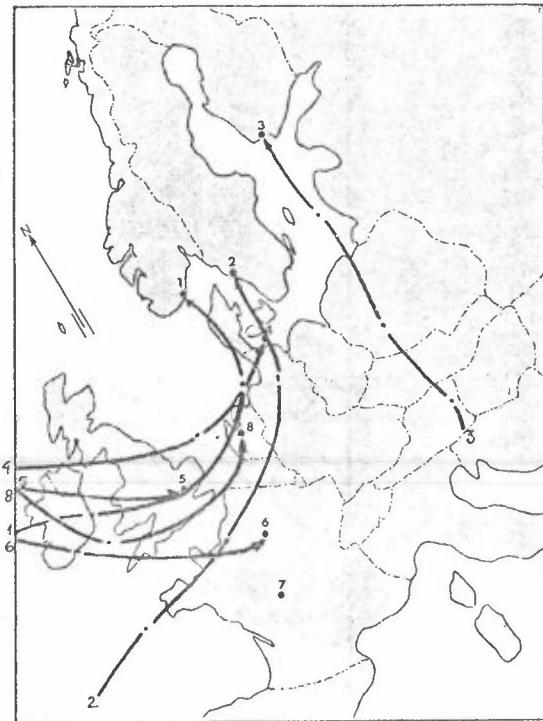
Trajectories arriving at  
741125, 00 GMT.



Trajectories arriving at  
741125, 06 GMT.



Trajectories arriving at  
741125, 12 GMT.

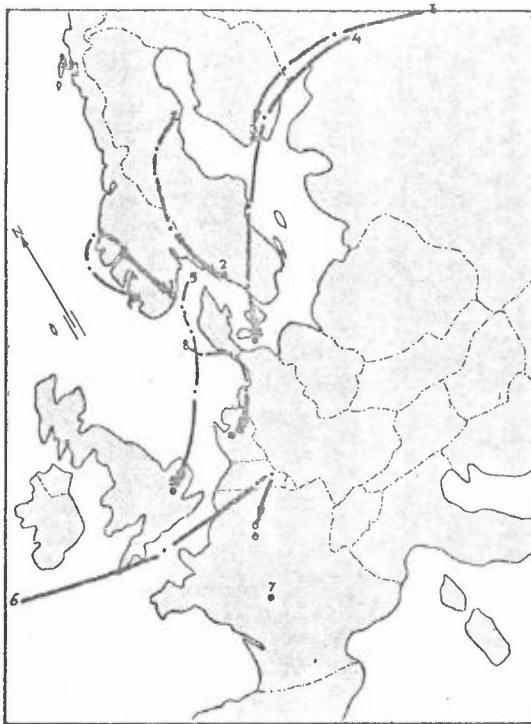


Trajectories arriving at  
741125, 18 GMT.

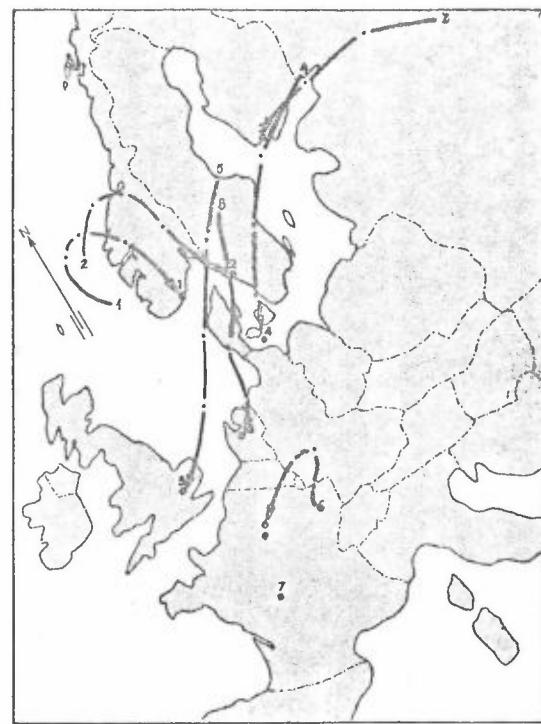
FIGURE 12

Day with high sulphate concentration.

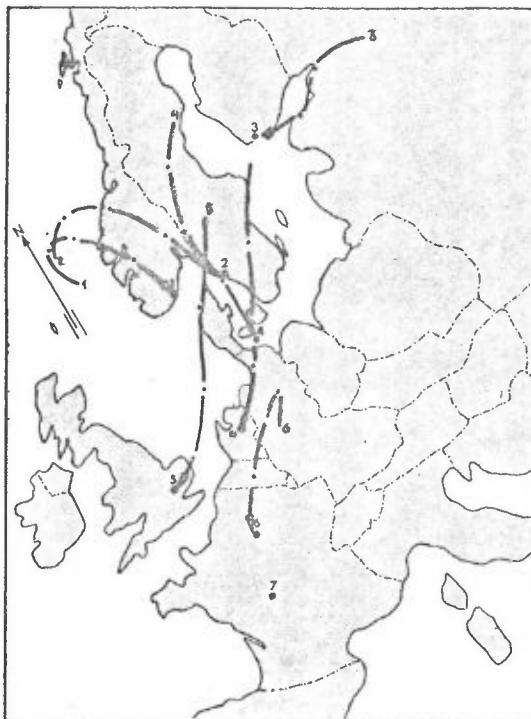
Observed sulphate concentrations, neq/m<sup>3</sup>: N01 - 1.5  
 S02 - 3.7  
 SF2 - 12.2  
 UK1 - -  
 F03 - 2.0  
 NLL - 2.4



Trajectories arriving at  
741105, 00 GMT.



Trajectories arriving at  
741105, 06 GMT.



Trajectories arriving at  
741105, 12 GMT.



Trajectories arriving at  
741105, 18 GMT.

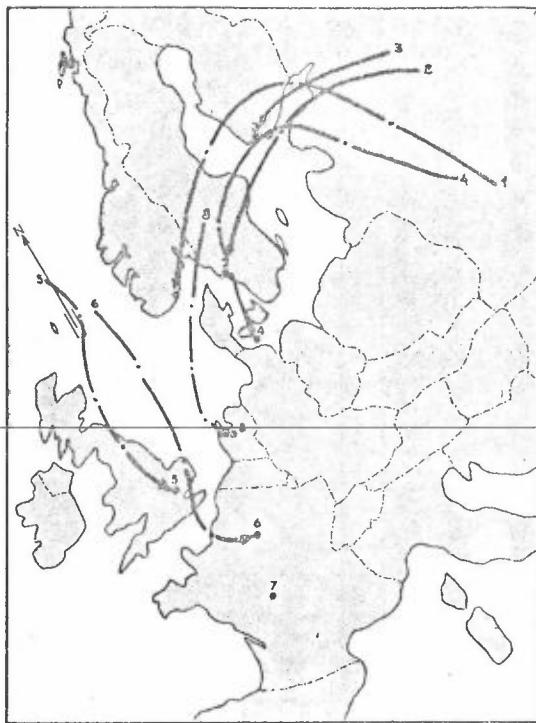
FIGURE 13

Day with high sulphate concentration and high strong acid concentration.

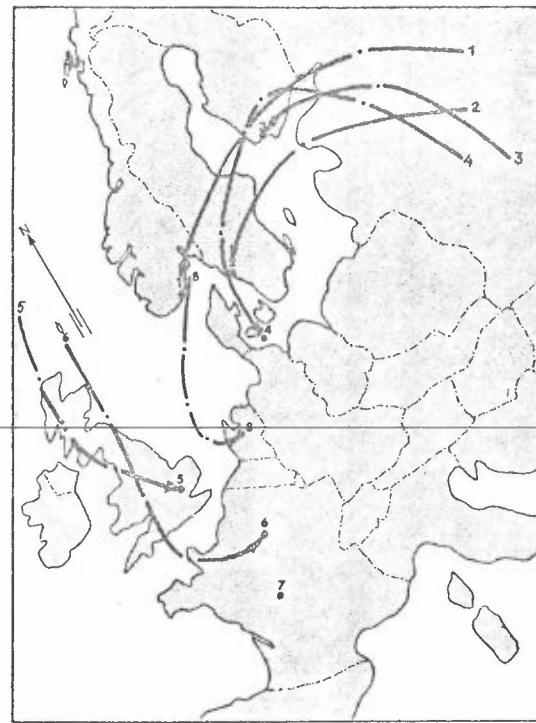
Observed concentrations, neq/m<sup>3</sup>:

sulphate: N01 - 2.3  
S02 - 6.2  
SF2 - 11.1  
UK1 - 5.1  
F03 - 10.8  
NL1 - 6.0

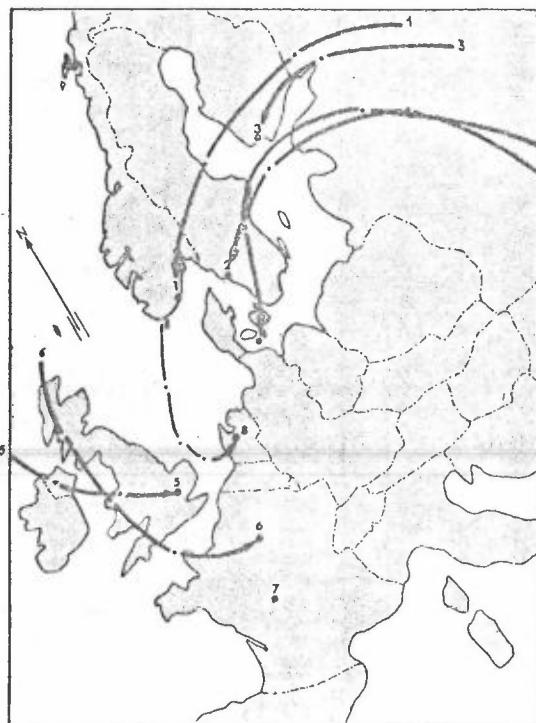
strong acid: N01 - 8  
S02 - 1  
SF2 - 23  
UK1 - 45  
F03 - 128  
NL1 - 13



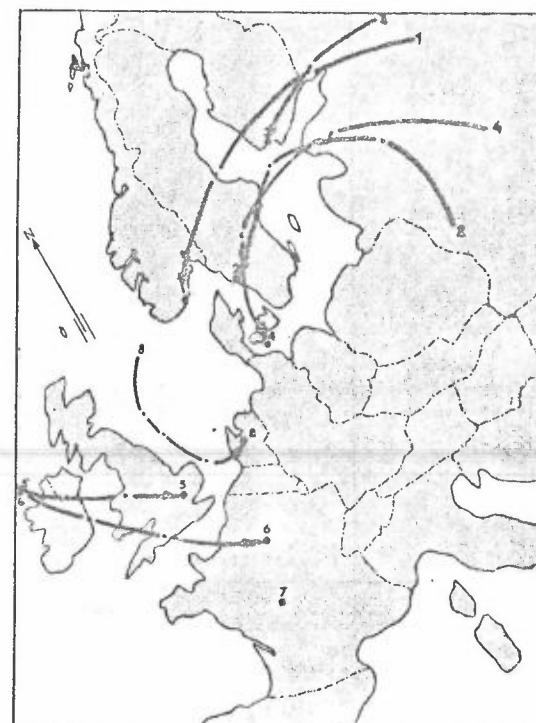
Trajectories arriving at  
741101, 00 GMT.



Trajectories arriving at  
741101, 06 GMT.



Trajectories arriving at  
741101, 12 GMT.



Trajectories arriving at  
741101, 18 GMT.

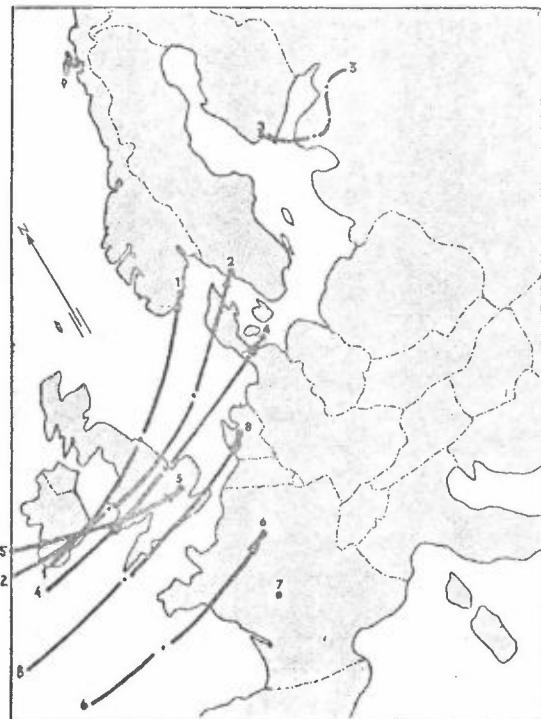
FIGURE 14

Day with high sulphate concentration and high strong acid concentration.

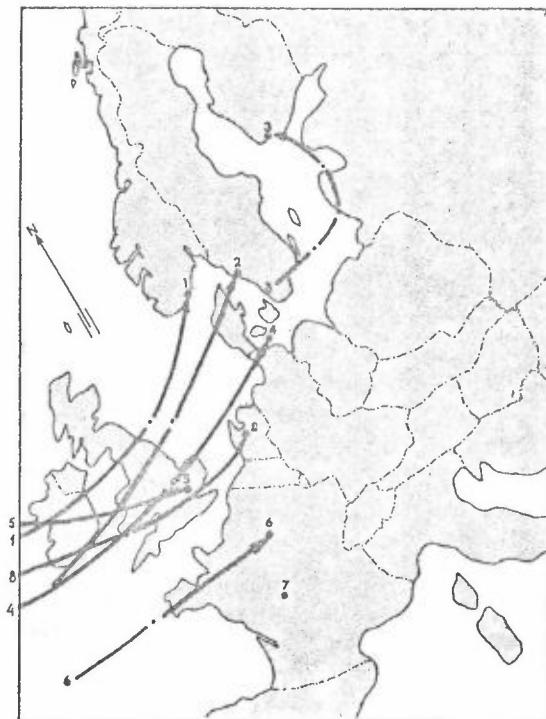
Observed concentrations, neq/m<sup>3</sup>:

sulphate:	N01 - 2.9
	S02 - 3.2
	SF2 - 0.9
	UK1 - 2.2
	F03 - 5.6
	NL1 - <u>10.9</u>

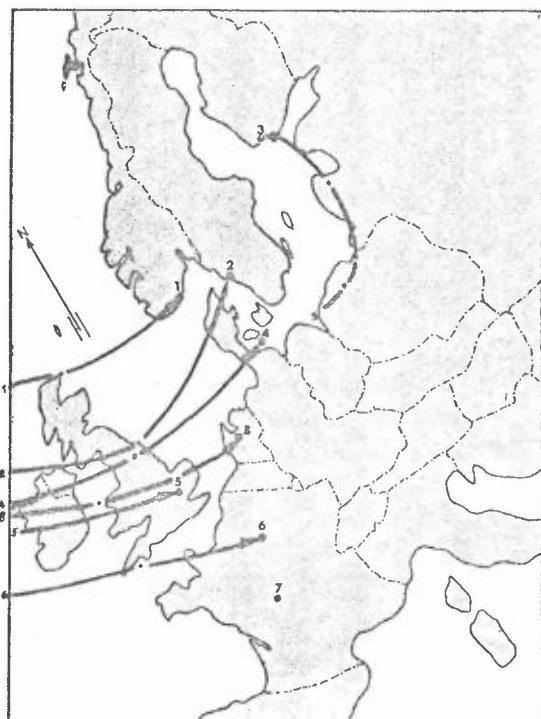
strong acid:	N01 - 40
	S02 - 14
	SF2 - 4
	UK1 - -
	F03 - 54
	NL1 - 18



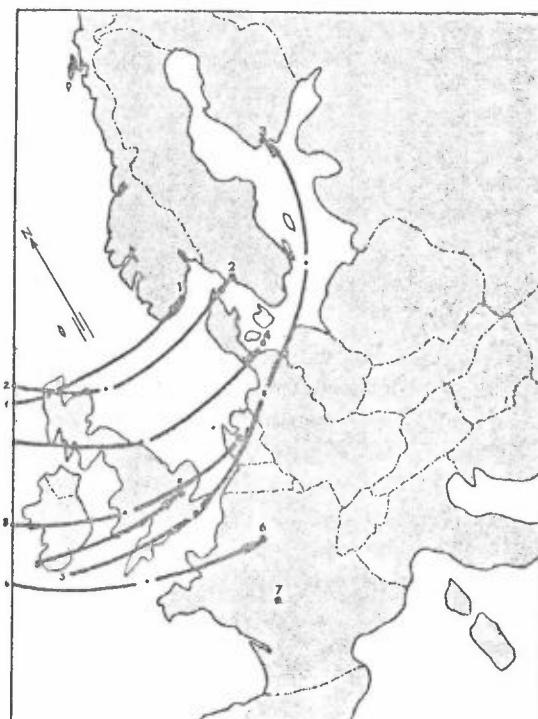
Trajectories arriving at  
741110, 00 GMT.



Trajectories arriving at  
741110, 06 GMT.



Trajectories arriving at  
741110, 12 GMT.



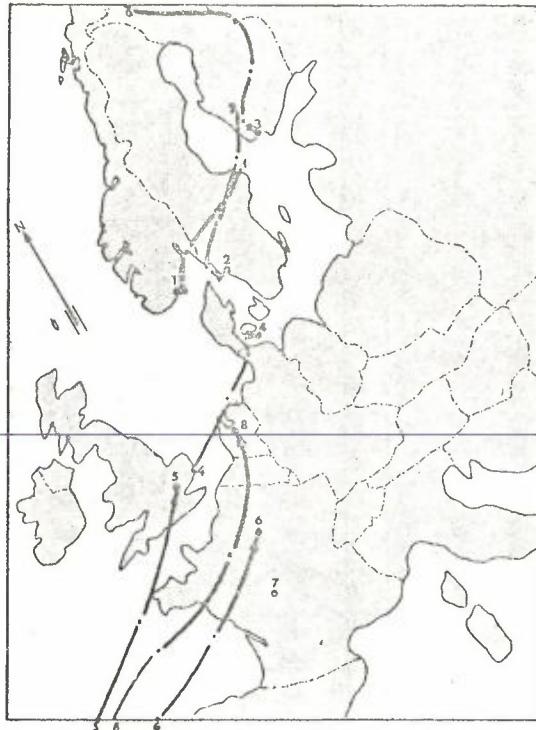
Trajectories arriving at  
741110, 18 GMT.

FIGURE 15

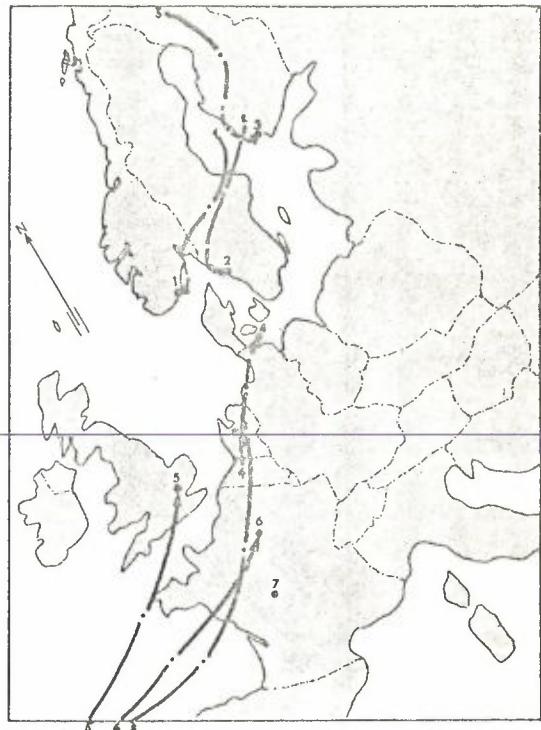
Day with high strong acid concentration.

Observed strong acid concentrations, neq/m<sup>3</sup>:

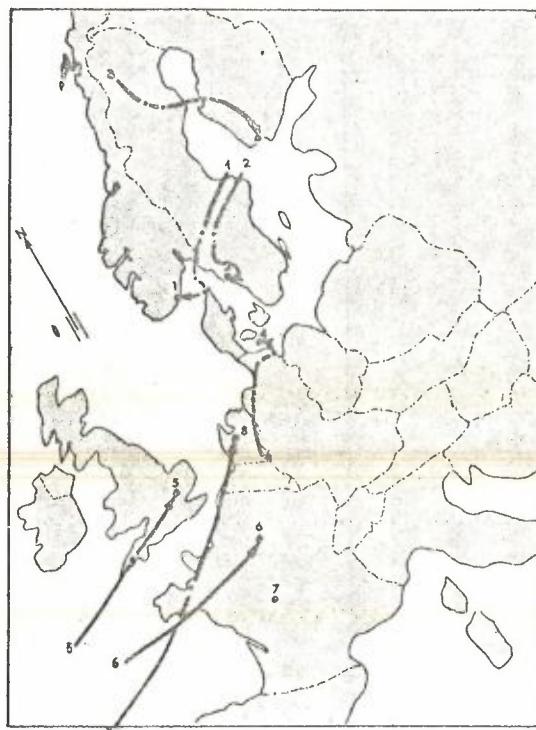
N01	-	3
S02	-	-
SF2	-	6
UK1	-	-
F03	-	86
NLL	-	12



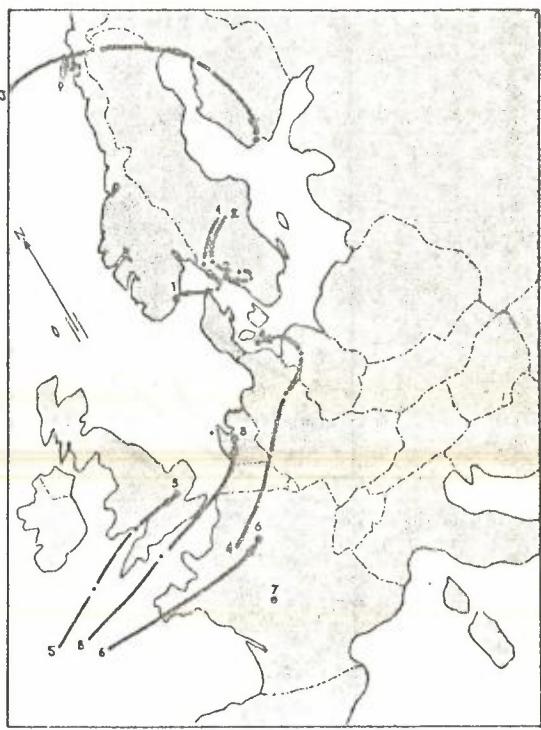
Trajectories arriving at  
741122, 00 GMT.



Trajectories arriving at  
741122, 06 GMT.



Trajectories arriving at  
741122, 12 GMT.



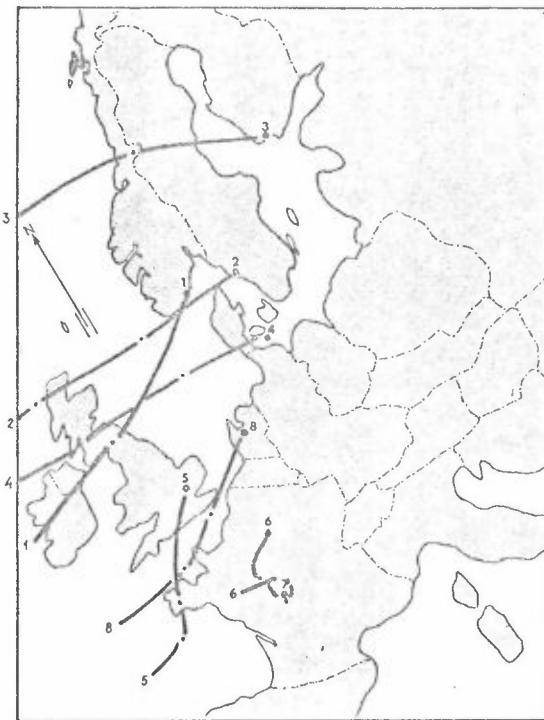
Trajectories arriving at  
741122, 18 GMT.

FIGURE 16

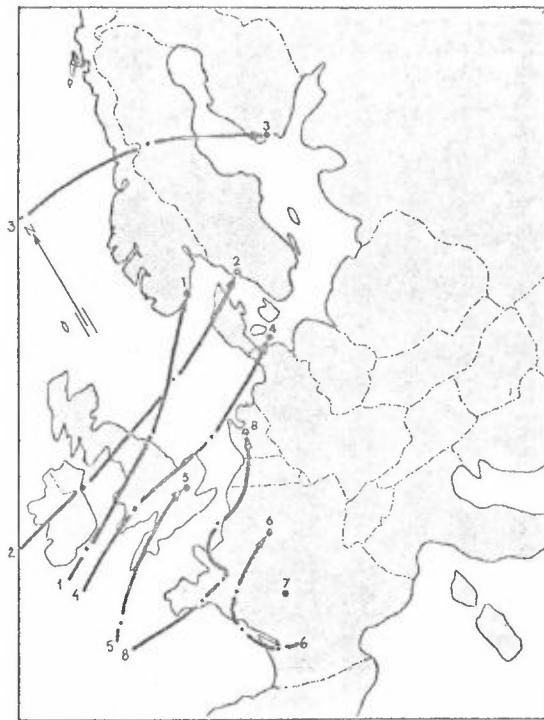
Day with high strong acid concentration.

Observed strong acid concentrations, neq/m<sup>3</sup>:

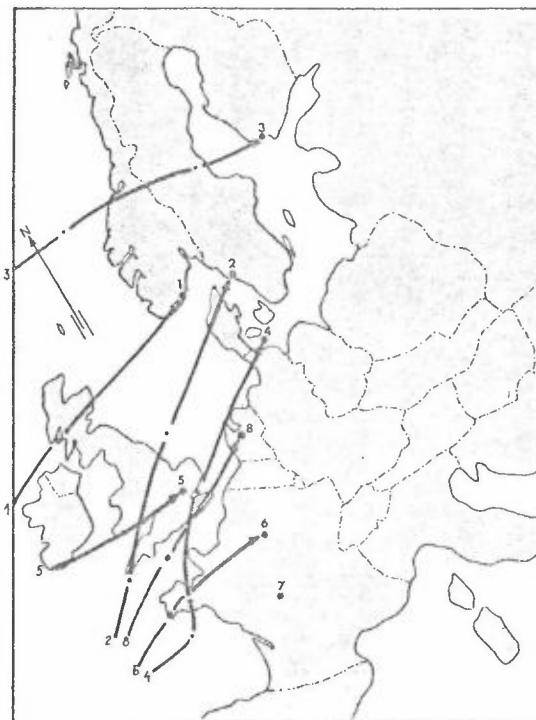
N01 - 35
S02 - 1
SF2 - 22
UK1 - 2
F03 - 55
NLL - 11



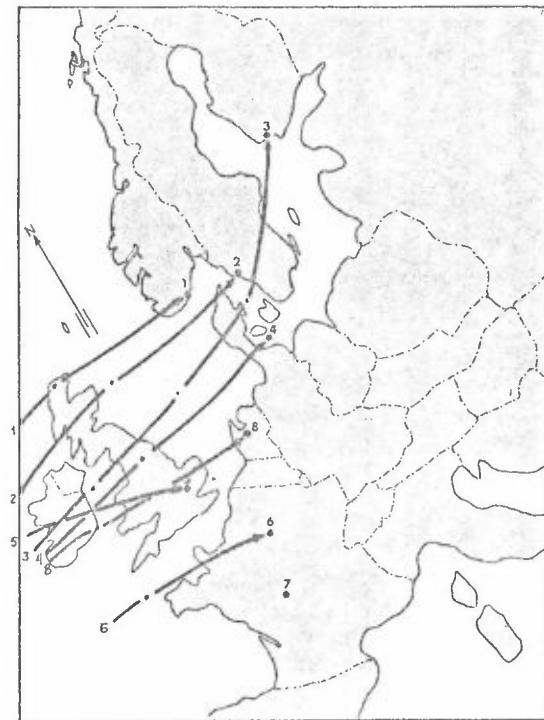
Trajectories arriving at  
741204, 00 GMT.



Trajectories arriving at  
741204, 06 GMT.



Trajectories arriving at  
741204, 12 GMT.



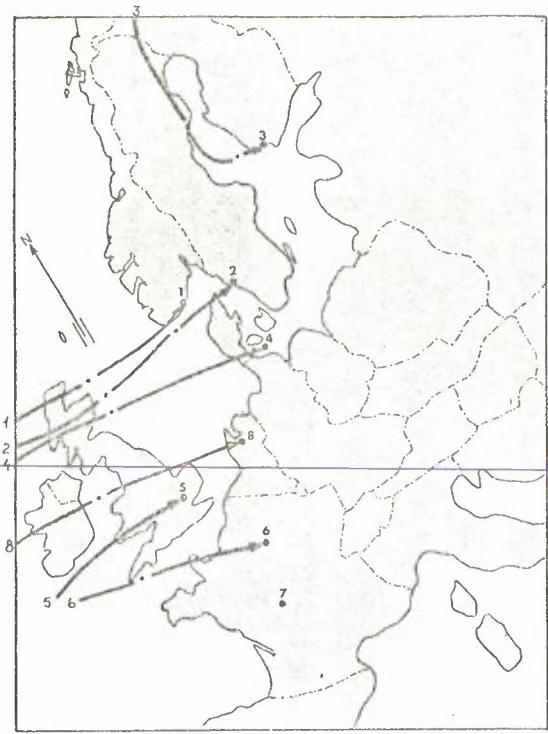
Trajectories arriving at  
741204, 18 GMT.

FIGURE 17

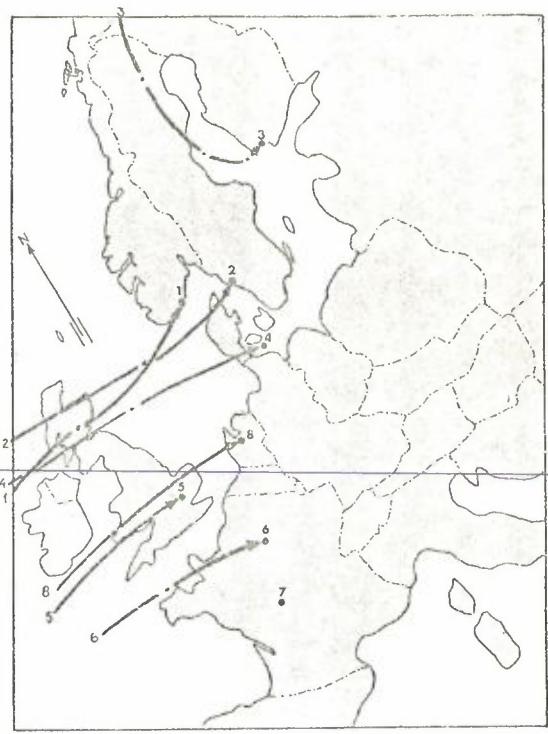
Day with high strong acid concentration.

Observed strong acid concentrations, neq/m<sup>3</sup>:

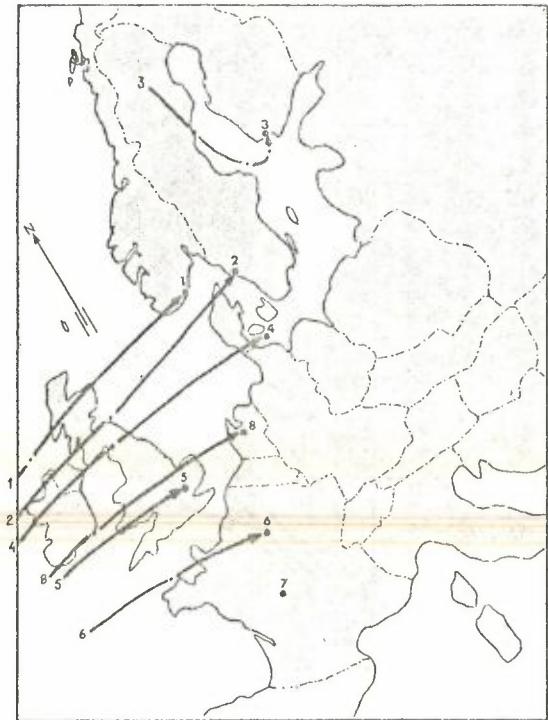
N01 -	1
S02 -	0
SF2 -	1
UK1 -	1
F03 -	$\frac{47}{7}$
NLL -	$\frac{47}{7}$



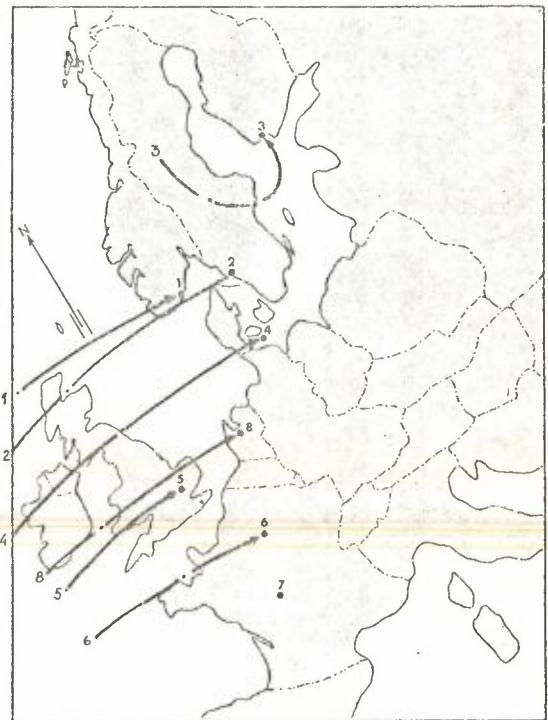
Trajectories arriving at  
741202, 00 GMT.



Trajectories arriving at  
741202, 06 GMT.



Trajectories arriving at  
741202, 12 GMT.



Trajectories arriving at  
741202, 18 GMT.

FIGURE 18

Day with high strong acid concentration.

Observed strong acid concentrations, neq/m<sup>3</sup>:

N01 -	0
S02 -	$\frac{1}{1}$
SF2 -	5
UK1 -	-
F03 -	46
NL1 -	$\frac{9}{9}$

APPENDIX



## STATION CH 1, 45-DAYS PROGRAM.

PRECIPITATION SAMPLE

NOVEMBER ,1974

## SAMPLING PERIOD

FROM DAY GMT		TO DAY GMT		DURATION MIN		AMOUNT MM		P4	H <sub>4</sub> UEN/L	S04 MG/L	NH4-N MG/L	NO <sub>3</sub> MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	CL MG/L	FE MG/L
3	0700	4	0700	1440	5.7	5.30	-0	.6	-0.00	.05	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
4	0700	5	0700	1440	11.6	5.60	-0	.3	-0.00	.05	-1.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
5	0700	6	0700	1440	.4	-0	1.0	-0.00	.02	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	
10	0700	11	0700	1440	5.5	5.50	-0	.3	-0.00	.02	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
12	0700	13	0700	1440	3.0	5.80	-0	.6	-0.00	.04	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
16	0700	17	0700	1440	15.3	5.50	-0	2.1	-0.00	.06	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
18	0700	19	0700	1440	21.7	5.20	-0	.6	-0.00	.03	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
19	0700	20	0700	1440	11.1	5.60	-0	1.5	-0.00	.02	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
20	0700	21	0700	1440	3.1	5.80	-0	2.2	-0.00	.08	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
21	0700	22	0700	1440	3.0	5.70	-0	1.0	-0.00	.04	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
22	0700	23	0700	1440	4.7	6.00	-0	0.0	-0.00	.02	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
24	0700	25	0700	1440	9.6	5.80	-0	.4	-0.00	.02	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
26	0700	27	0700	1440	21.9	5.30	-0	.4	-0.00	.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
28	0700	29	0700	1440	5.9	5.20	-0	.3	-0.00	.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
29	0700	30	0700	1440	14.5	5.00	-0	1.0	-0.00	.01	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
30	0700	1	0700	1440	19.3	5.10	-0	.4	-0.00	.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00

## STATION D 02, 45-DAYS PROGRAM.

NOVEMBER ,1974

## SAMPLING PERIOD

## COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION MIN	AMOUNT MM	PH	H <sup>+</sup> UEN/L	S04 MG/L	NH4-N MG/L	NO <sub>3</sub> -N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	CL MG/L	FE MG/L			
1	0800	2	0800	1250	13.8	4.09	6	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
9	0800	10	0800	120	1.3	4.14	68	5.7	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
12	0800	13	0800	42	.5	4.39	-0	14.1	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
17	0800	18	0800	92	1.0	4.05	31	6.3	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
18	0800	19	0800	35	.4	4.32	-0	14.4	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
22	0800	23	0800	375	4.1	3.89	60	10.5	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
24	0800	25	0800	325	3.6	4.30	14	6.6	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
25	0800	26	0800	415	4.6	3.98	27	3.0	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
27	0800	28	0800	445	4.9	4.02	33	3.9	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
28	0800	29	0800	290	3.2	4.03	31	3.9	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
29	0800	30	0800	40	.4	-6	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00

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PRECIPITATION SAMPLE  
NOVEMBER ,1974



**STATION B 82: 45-DAYS PROGRAM**

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DECEMBER 1974



STATION D 02, 45-DAYS PROGRAM.

**PRECIPITATION SAMPLE**

DECEMBER - 1974

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## STATION SF 2, 45-DAYS PROGRAM.

## PRECIPITATION SAMPLE

JUNE , 1974

## SAMPLING PERIOD

FROM DAY GMT	TO DAY GMT	DURATION MIN	AMOUNT MM	PH	H <sup>+</sup> MEQ/L	SO <sub>4</sub> MG/L	NH <sub>4</sub> -N MG/L	NO <sub>3</sub> -N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	CL MG/L	FE MG/L
2 0516	2 0550	40	.3	-0.00	-0	3.2	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
10 0600	10 0800	120	5.1	4.47	51	2.9	.49	.15	.90	.02	.2	.41	.30	.30
11 1430	11 1500	30	.3	4.23	77	6.6	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
12 1130	12 1430	180	3.1	4.40	52	3.8	.76	.16	-0.00	.02	.1	.30	.30	.30
21 1050	21 1130	40	5.2	6.12	40	4.2	4.60	.22	1.30	.17	5.5	.30	.24	.24
22 1400	22 1410	10	.8	-0.00	-0	3.4	-0.00	-0.00	-0.00	.12	.45	.30	.30	.30
23 1530	23 1620	50	1.2	5.98	8	2.5	-0.00	-0.00	-0.00	.07	.03	-0.00	-0.00	-0.00
25 0830	25 0920	50	.8	4.76	28	1.1	.07	.10	.80	.05	.2	.00	.00	.00
29 2220	29 0120	180	1.7	4.89	25	.8	2.00	.96	.80	.00	.1	.00	.00	.00
30 0730	30 0910	130	1.2	4.71	31	2.0	-0.00	-0.00	-0.00	.00	.00	.00	.00	.00

STATION SF 2, 45-DAYS PROGRAM.

## PRECIPITATION SAMPLE

JULY , 1974

## SAMPLING PERIOD

FROM DAY GMT	TO DAY GMT	DURATION MIN	AMOUNT MM	PH	H <sup>+</sup> MEQ/L	SO <sub>4</sub> MG/L	NH <sub>4</sub> -N MG/L	NO <sub>3</sub> -N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	CL MG/L	FE MG/L
1 1050	1 1110	20	.4	4.51	58	2.8	-0.00	-0.00	-0.00	.05	-0.5	-0.3	-0.30	-0.30
4 1540	4 1630	50	.5	-0.00	-0	3.5	-0.00	-0.00	-0.00	.09	-0.0	-0.0	-0.00	-0.00
5 0730	5 0850	80	1.0	-0.00	-0	7.4	-0.00	-0.00	-0.00	.17	-0.0	-0.0	-0.00	-0.00
6 1310	6 1350	40	.9	-0.00	-0	5.6	-0.03	-0.00	-0.00	.15	-0.0	-0.0	-0.00	-0.00
8 1130	8 1150	20	.5	-0.00	-0	8.1	-0.00	-0.00	-0.00	.13	-0.0	-0.0	-0.00	-0.00
9 0710	9 0830	80	1.6	-0.00	-0	15.7	-0.00	-0.00	-0.00	.20	-0.0	-0.0	-0.00	-0.00
10 1200	10 1220	20	.4	4.97	36	4.3	1.30	.31	.90	.45	1.3	-0.0	-0.00	-0.00
11 0600	11 0630	30	.5	5.28	19	1.0	-0.00	-0.00	-0.00	.00	.03	-0.0	-0.00	-0.00
13 0640	13 0720	40	.9	6.92	-44	3.1	-0.00	-0.00	-0.00	-0.00	.07	-0.0	-0.00	-0.00
14 2210	14 2220	10	.3	-0.00	-0	17.5	-0.00	-0.00	-0.00	.25	-0.0	-0.0	-0.00	-0.00
16 0150	16 0420	150	1.5	4.17	117	6.9	-0.00	-0.00	-0.00	.13	-0.0	-0.0	-0.00	-0.00
17 2320	17 2340	20	1.2	4.33	67	7.4	.97	.60	1.50	.17	.8	-0.0	-0.00	-0.00
18 0600	18 0610	10	.3	5.0	35	1.2	.23	.15	.40	.00	.7	-0.0	-0.00	-0.00
19 0600	19 0650	50	5.35	15	5.4	.11	.50	1.40	.17	.8	.57	.57	.57	.57
20 0620	20 0640	20	.7	-0.00	-0	19.3	-0.00	-0.00	-0.00	.50	-0.0	-0.0	-0.00	-0.00
25 0330	25 0500	120	.7	4.76	33	5.0	-0.00	-0.00	-0.00	.13	-0.0	-0.0	-0.00	-0.00
26 1420	26 1430	10	.4	6.73	-23	1.9	-0.00	-0.00	-0.00	.07	-0.0	-0.0	-0.00	-0.00
27 1030	27 1050	50	1.6	4.90	23	2.5	.64	-0.00	-0.00	.10	3.7	-0.0	-0.00	-0.00
28 0930	28 1000	30	1.1	7.19	-0	1.6	-0.00	-0.00	-0.00	.07	-0.0	-0.0	-0.00	-0.00
29 1150	29 1200	10	.3	5.54	-0	2.6	-0.00	-0.00	-0.00	.07	-0.0	-0.0	-0.00	-0.00
30 1910	30 0210	420	6.2	5.54	-8	.6	-0.00	-0.00	-0.00	.07	-0.0	-0.0	-0.00	-0.00
31 1350	31 1440	50	4.2	4.93	.9	.21	.12	.00	.00	.00	.00	.00	.00	.00
		24				.44								

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**STATION SF 2, 45-DAYS PROGRAM.**

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PRECIPITATION SAMPLE

AUGUST 1974

三〇〇三一

#### SAMPLING PERIOD

FROM	TO	DURATION	AMOUNT	PH	H <sup>+</sup>	NH <sub>4</sub> <sup>+</sup> /L	NO <sub>3</sub> <sup>-</sup> /L	CA	Mg	Na	K	Cl	Fe
DAY	GMT	DAY	GMT	MIN	M <sub>4</sub>	M <sub>5</sub> /L	M <sub>6</sub> /L	M <sub>7</sub> /L	M <sub>8</sub> /L	M <sub>9</sub> /L	M <sub>10</sub> /L	M <sub>11</sub> /L	
1	0950	1	1050	60	1.2	5.27	20	1.9	-0.00	-0.00	-0.03	-0.03	-0.10
4	0610	4	0610	10	1.3	5.72	10	1.7	-3.00	-0.36	-0.00	-0.00	-0.00
5	1210	5	1300	50	1.2	4.41	75	6.9	-3.00	-3.00	-0.03	-0.15	-0.00
6	0820	6	0930	10	1.0	5.35	10	0.7	-2.6	-5.4	-0.46	-0.03	-0.1
7	1740	7	1800	20	1.2	5.38	10	1.4	-4.8	-0.08	-0.00	-0.03	-0.00
10	0150	10	0600	250	10.2	8.02	20	1.7	-3.6	-1.1	-0.40	-0.03	-0.1
11	0600	11	0640	40	2.3	4.50	57	2.6	-3.8	-1.3	-0.40	0	-0.00
12	2220	12	0330	5	3.3	4.36	66	5.5	1.1R	-4.1	-0.07	-0.2	-0.00
14	1140	14	1220	40	9.1	4.45	53	2.9	-5.5	-2.1	-0.90	-0.63	-0.1
16	0350	16	0400	10	2	-0.00	-0	6.1	-0.00	-3.00	-0.04	-0.21	-0.0
18	1410	18	1530	80	-0.4	-0.00	-0	2.5	-0.00	-0.00	-0.19	-0.0	-0.00
19	1030	19	1120	50	1.0	-3.00	-6	3.2	-0.99	-0.18	-0.00	-0.05	-0.3
20	1330	20	1410	40	2.6	5.86	2	1.0	-0.00	-0.00	-0.03	-0.0	-0.00
24	0720	24	0720	20	3	5.88	14	9.3	-0.00	-0.00	-0.00	-0.24	-0.0
29	1720	29	1740	20	1.0	4.77	40	5.1	-0.94	-0.37	-0.90	-0.10	-0.2

STATION SF 2; 45-DAYS PROGRAM.

卷之二

SEPTEMBER 1974

#### SAMPLING PERIOD

COMPONENTS

FROM	TO	DURATION	AMOUNT	PH
AY	GMT	DAY	GMT	MIN
2	0310	2	0350	40
4	2110	4	2130	10
5	1520	5	1710	110
6	1150	6	1210	20
7	1010	7	1720	430
8	1510	8	1640	90
10	0830	10	1010	100
11	0020	11	0130	70
12	0830	12	J840	10
19	1330	19	1350	1.0
20	1000	20	1030	1.4
22	1100	22	1120	0.9
23	1130	10	1.0	-0.00
25	0610	60	4.33	-0.60
26	1000	10	4.72	-0.60
29	0620	70	3.3	-0.60
30	0830	150	4.38	3.2
				65
				4.6
				1.80
				0.07
				0.3



## STATION SF 2, 45-DAYS PROGRAM.

## PRECIPITATION SAMPLE

OCTOBER , 1974

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SAMPLING PERIOD		COMPONENTS														
FROM DAY	TO DAY	GMT	GMT	DURATION MIN	AMOUNT MM	PH	H+	SO4 UMOL/L	NH4-N MG/L	NO3-N MG/L	CA MG/L	Mg MG/L	Na MG/L	K MG/L	Cl MG/L	Fe MG/L
1	1	1250	0350	900	10.7	5.31	14	1.0	.57	.15	.05	.05	.1	-0.3	-0.30	.13
2	2	1730	1810	40	1.1	-0.00	10.5	-0.00	-0.00	-0.00	.18	-0.0	-0.0	-0.00	-0.00	.30
4	4	0730	0930	140	5.3	4.69	32	2.7	.60	.23	.38	.02	.3	-0.0	-0.00	.45
5	5	1240	1400	80	1.6	4.62	42	2.8	4.60	.36	.38	.05	.3	-0.0	-0.00	.50
9	9	1510	1730	140	.4	4.71	37	2.3	-3.00	-3.15	-2.00	.05	-0.5	-2.0	-2.00	.05
10	10	0600	0810	130	3.4	4.92	23	1.2	-0.00	-0.00	.15	-0.6	-1.0	-0.90	-0.60	.05
11	11	0620	1110	50	.2	3.87	178	2.6	-0.00	-0.00	.22	-0.6	-0.6	-0.60	-0.60	.05
19	19	0310	0330	20	.2	-0.00	-0	10.3	-0.00	-0.00	.12	-0.6	-0.0	-0.00	-0.00	.05
20	20	1500	1700	120	.7	4.47	58	6.4	1.90	.93	-0.0	.10	-0.0	-0.0	-0.00	.05
21	21	1830	1920	50	.4	4.65	38	5.2	-0.00	-1.00	.05	-0.0	-0.0	-0.00	-0.00	.05
22	22	1440	1540	120	1.3	4.57	52	5.3	-0.00	-0.00	.05	-0.0	-0.0	-0.00	-0.00	.05
23	23	0920	1050	90	.5	4.04	129	7.7	-0.00	-0.00	.03	-0.0	-0.0	-0.00	-0.00	.05
25	25	0810	1250	280	4.1	4.83	26	1.3	.45	.9	.13	.03	.1	-0.0	-0.00	.14
26	26	0400	0450	50	.7	5.38	10	3.5	-0.00	-0.00	.05	-0.0	-0.0	-0.00	-0.00	.05
27	27	1720	1810	50	1.0	4.88	22	1.0	.33	.13	.03	.1	-0.0	-0.00	-0.00	.05
28	28	1040	1110	30	.3	4.65	36	4.4	-0.00	-0.00	.05	-0.0	-0.0	-0.00	-0.00	.05
30	30	1300	1400	60	.3	6.99	-75	5.1	-0.00	-0.00	.05	-0.0	-0.0	-0.00	-0.00	.05
31	31	0840	1320	19	1.4	5.4	-	5.7	-0.00	-0.00	.24	-0.0	-0.0	-0.00	-0.00	.05



## STATION SF 2, 45-DAYS PROGRAM.

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## HIGH VOLUME SAMPLER

NOVEMBER , 1974

## SAMPLING PERIOD

## COMPONENTS

FROM DAY	TO DAY	T.P.M. UG/M <sup>3</sup>	PH	H <sup>+</sup> UG/M <sup>3</sup>	SO <sub>4</sub> UG/M <sup>3</sup>	NH <sub>4</sub> -N UG/M <sup>3</sup>	NO <sub>3</sub> -N UG/M <sup>3</sup>	CA UG/M <sup>3</sup>	MG UG/M <sup>3</sup>	NA UG/M <sup>3</sup>	K UG/M <sup>3</sup>	CL UG/M <sup>3</sup>	FE UG/M <sup>3</sup>	NO <sub>2</sub> UG/M <sup>3</sup>	SO <sub>2</sub> UG/M <sup>3</sup>
1 0530	2 0530	-0.00	-0.00	14 .90	• 39	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
2 0530	3 0530	-0.00	-0.00	13 4.30	1.00	0.02	0.02	0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
3 0530	4 0530	-0.00	-0.00	13 2.70	.67	0.14	0.00	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
4 0530	5 0530	-0.06	-0.00	8 1.36	.24	0.01	0.00	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
5 0530	6 0530	-0.00	-0.00	23 11.20	1.78	• 13	• 64	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
6 0530	7 0530	-0.00	-0.00	13 6.00	1.39	• 09	• 38	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
7 0530	8 0530	-0.00	-0.00	13 5.10	1.75	• 17	• 09	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
8 0530	9 0530	-0.00	-0.00	14 5.40	1.45	• 06	• 09	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
9 0530	10 0530	-0.00	-0.00	40 8.60	1.65	• 05	• 29	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
10 0530	11 0530	-0.00	-0.00	6 4.20	.86	• 24	• 08	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
11 0530	12 0530	-0.00	-0.00	5 4.40	.55	• 25	• 00	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
12 0530	13 0530	-0.00	-0.00	4 4.20	.54	• 23	• 05	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
13 0530	14 0530	-0.00	-0.00	6 4.50	.67	• 17	• 09	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
14 0530	15 0530	-0.00	-0.00	5 4.10	.92	• 07	• 03	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
15 0530	16 0530	-0.00	-0.00	12 6.40	1.51	• 24	• 24	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
16 0530	17 0530	-0.00	-0.00	12 4.90	.67	• 20	• 08	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
17 0530	18 0530	-0.00	-0.00	11 5.20	1.96	• 17	• 25	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
18 0530	19 0530	-0.00	-0.00	11 5.30	.74	• 32	• 27	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
19 0530	20 0530	-0.00	-0.00	9 5.80	.67	• 18	• 24	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
20 0530	21 0530	-0.00	-0.00	30 5.40	.64	• 04	• 25	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
21 0530	22 0530	-0.00	-0.00	5 5.80	1.25	• 07	• 25	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
22 0530	23 0530	-0.00	-0.00	22 5.43	1.14	• 37	• 28	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
23 0530	24 0530	-0.00	-0.00	3 5.70	1.56	• 14	• 25	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
24 0530	25 0530	-0.00	-0.00	8 6.40	2.02	• 10	• 25	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
25 0530	26 0530	-0.00	-0.00	3 12.30	2.75	• 08	• 65	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
26 0530	27 0530	-0.00	-0.00	10 5.80	1.54	• 16	• 72	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
27 0530	28 0530	-0.00	-0.00	20 9.60	2.01	• 09	• 74	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
28 0530	29 0530	-0.00	-0.00	22 10.90	2.22	• 03	• 86	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
29 0530	30 0530	-0.00	-0.00	3 8.80	0.06	• 00	• 46	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00
30 0530	1 0530	-0.00	-0.00	6.86	0.05	• 22	-0.60	-0.00	0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00



## STATION SF 2, 45-DAYS PROGRAM.

## PRECIPITATION SAMPLE

NOVEMBER ,1974

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SAMPLING PERIOD		COMPONENTS											
FROM DAY	TO DAY	DURATION MIN	AMOUNT MM	PH	H <sup>+</sup>	SO <sub>4</sub>	NH <sub>4</sub> -N	CA	MG	NA	K	CL	FE
GMT	GMT				UMOL/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
1 0620	1 0720	60	.2	5.68	-0	.9	-0.03	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
3 0840	3 1010	90	.6	5.83	26	1.7	.63	.11	2.50	.03	-0.5	-0.5	-0.50
4 0600	4 0610	10	.1	5.09	16	1.2	.44	.10	2.10	.02	.1	-0.3	-3.30
5 0610	5 0750	100	.8	4.25	98	5.4	-9.00	-2.10	-3.00	.6	-0.1	-1.1	-3.30
6 1710	6 1720	10	.1	-0.00	-0	5.6	-0.00	.65	-0.00	.14	-0.0	-6.0	-0.00
7 *04*	8 *04*	1440	.1	-0.03	-0	8.1	-0.00	-3.00	-0.00	.39	-0.3	-0.0	-0.30
10 0140	10 0150	890	7.0	4.54	41	2.6	.45	.29	.13	.84	.3	-1.0	.62
11 1810	11 1840	30	.2	4.36	53	2.0	.44	.41	.13	.6	-3.1	-0.30	-0.30
12 *04*	13 *04*	1440	4.1	4.18	87	4.4	.98	.50	-0.00	.10	-0.6	-0.30	-0.30
13 1950	13 2120	90	.4	-0.00	-0	6.2	-0.00	-0.00	-0.00	.23	-6.3	-6.0	-6.00
14 0800	14 0820	20	.2	4.80	25	2.3	.66	.28	1.00	.86	.5	-0.0	-0.00
15 0630	15 0700	60	2.8	4.34	58	2.9	1.30	.45	.06	.52	-1.0	-1.00	.25
16 1900	16 0500	660	7.7	4.42	55	2.0	.46	.45	1.00	.04	.1	-0.0	-0.30
17 1100	17 0600	300	5.5	4.49	56	2.4	.37	.26	.13	.04	.1	-0.6	-3.00
18 *04*	19 *04*	1440	.2	-0.00	-0	10.7	-0.00	-0.00	-0.00	-0.00	-0.0	-0.0	-0.00
23 *0**	24 *0**	1440	.1	-0.00	-0	0.0	-0.00	-0.00	-0.00	.97	-0.0	-0.0	-0.00
25 *04*	26 *04*	1440	.5	-0.00	-0	8.4	-0.00	.55	-0.00	.26	-0.0	-0.0	-0.00
26 0810	26 1110	180	.7	4.23	87	6.8	-0.00	.90	-0.00	.37	-0.3	-0.3	-0.30
27 1530	27 0530	570	3.6	4.59	37	1.2	.43	.31	.60	.05	-0.0	-0.0	-0.00
28 *0**	29 *0**	1440	.3	-0.00	-0	8.3	-0.00	-0.00	.13	-3.0	-5.0	-6.0	-6.00
29 0600	29 0820	140	.7	4.48	67	4.5	-0.00	-0.00	.13	-0.0	-0.0	-0.0	-0.00



## STATION SF 2, 45-DAYS PROGRAM.

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## HIGH VOLUME SAMPLER

DECEMBER ,1974

## SAMPLING PERIOD

## COMPONENTS

FROM DAY GMT	TO DAY GMT	T.P.H. UG/M <sup>3</sup>	PH	H <sup>+</sup> NEON/M <sup>3</sup>	SO <sub>4</sub> UG/L	NH <sub>4</sub> -N UG/M <sup>3</sup>	NO <sub>3</sub> -N UG/M <sup>3</sup>	CA UG/M <sup>3</sup>	MG UG/M <sup>3</sup>	NA UG/M <sup>3</sup>	K UG/M <sup>3</sup>	CL UG/M <sup>3</sup>	FE UG/M <sup>3</sup>	NO <sub>2</sub> UG/M <sup>3</sup>	SO <sub>2</sub> UG/M <sup>3</sup>	
1 0530	2 0530	-0.00	-0.00	5	5.90	1.48	.09	.22	-0.00	.10	-0.00	-0.00	-0.00	-0	-0	
2 0530	3 0530	-0.00	-0.00	5	3.90	.67	.05	.22	-0.00	.10	-0.00	-0.00	-0.00	-0	-0	
3 0530	4 0530	-0.00	-0.00	0	1.70	.06	.02	.22	-0.00	.05	-0.00	-0.00	-0.00	-0	-0	
4 0530	5 0530	-0.00	-0.00	1	2.50	.23	.07	.03	-0.00	.45	-0.00	-0.00	-0.00	-0	-0	
5 0530	6 0600	-0.00	-0.00	4	3.20	.49	.08	1.04	-0.00	.10	-0.00	-0.00	-0.00	-0	-0	
6 0600	7 0530	-0.00	-0.00	6	4.30	.96	.07	.65	-0.00	.10	-0.00	-0.00	-0.00	-0	-0	
7 0600	8 0530	-0.00	-0.00	2	4.50	1.09	.06	.21	-0.00	.10	-0.00	-0.00	-0.00	-0	-0	
8 0600	9 0530	-0.00	-0.00	5	3.30	.65	.06	.66	-0.00	.20	-0.00	-0.00	-0.00	-0	-0	
9 0530	10 0530	-0.00	-0.00	3	3.20	.18	.46	1.10	-0.00	-0.00	-0.00	-0.00	-0.00	-0	-0	
10 0530	11 0530	-0.00	-0.00	0	2.50	.14	.20	1.10	-0.00	-0.00	-0.00	-0.00	-0.00	-0	-0	
11 0530	12 0530	-0.00	-0.00	3	3.20	.62	.12	.00	-0.00	.50	-0.00	-0.00	-0.00	-0	-0	
12 0530	13 0530	-0.00	-0.00	10	4.30	.72	.09	.67	-0.00	.30	-0.00	-0.00	-0.00	-0	-0	
13 0530	14 0530	-0.00	-0.00	0	2.90	.46	.06	.46	-0.00	.30	-0.00	-0.00	-0.00	-0	-0	
14 0530	15 0530	-0.00	-0.00	0	1.80	.11	.00	.00	-0.00	.30	-0.00	-0.00	-0.00	-0	-0	
15 0530	16 0530	-0.00	-0.00	0	2.60	.13	.00	.00	-0.00	.30	-0.00	-0.00	-0.00	-0	-0	
				0.36	.04											

STATION SF 2, 45-DAYS PROGRAM.

DECEMBER ,1974  
PRECIPITATION SAMPLE

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## SAMPLING PERIOD

## COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION MIN	AMOUNT MM	PH	H <sup>+</sup> NEON/L	SO <sub>4</sub> MG/L	NH <sub>4</sub> -N MG/L	NO <sub>3</sub> -N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	CL MG/L	FE MG/L	NO <sub>2</sub> UG/M <sup>3</sup>	SO <sub>2</sub> UG/M <sup>3</sup>
2 1625	2 2000	215	2.7	4.74	35	1.1	.14	.21	-0.00	.03	.2	-0.00	-0.00	-0.00	-0.00	-0
4 1530	4 0500	873	7.3	4.45	44	2.0	.28	.13	.05	.3	-0.3	-0.00	-0.00	-0.00	-0.00	-0
5 0600	5 0800	120	.7	-0.00	-0	5.3	-0.00	-0.00	-0.00	.05	-0.0	-0.00	-0.00	-0.00	-0	
7 0600	7 1000	240	.7	6.52	-20	3.8	-0.00	-0.00	-0.00	.12	-0.1	-0.00	-0.00	-0.00	-0	
8 1100	8 1630	330	2.1	4.41	51	2.7	.45	.33	-0.00	.09	.7	-0.00	-0.00	-0.00	-0.00	-0
9 1115	9 1735	380	6.6	4.50	44	3.8	.65	.32	.75	.16	1.1	-0.00	-0.00	-0.00	-0.00	-0
11 1400	11 1640	160	1.5	4.46	47	2.9	.89	.43	-0.00	.08	.7	-0.00	-0.00	-0.00	-0.00	-0
12 1050	12 2200	670	4.9	5.03	23	1.4	.86	.38	.08	.3	-0.3	-0.00	-0.00	-0.00	-0.00	-0
13 0830	13 1525	415	1.5	5.47	14	5.4	-0.00	-0.00	-0.00	.14	-0.0	-0.00	-0.00	-0.00	-0.00	-0
14 1910	15 0600	650	6.8	4.36	61	2.0	.45	.40	.13	.03	.3	-0.00	-0.00	-0.00	-0.00	-0
15 0500	15 1420	500	3.4	4.62	34	2.3	.75	.30	.13	.05	.4	-0.00	-0.00	-0.00	-0.00	-0
17 0715	17 0810	50	4	4.60	35	1.8	.53	.42	.13	.06	.3	-0.00	-0.00	-0.00	-0.00	-0
18 1305	18 2000	415	4.5	4.53	44	1.8	.39	.26	.13	.02	.1	-0.00	-0.00	-0.00	-0.00	-0
19 0500	19 0900	180	1.3	4.73	34	1.5	-0.00	-0.00	-0.00	.04	.04	-0.00	-0.00	-0.00	-0.00	-0
20 1400	20 1800	240	.6	4.39	62	2.7	-0.00	-0.00	-0.00	.09	.09	-0.00	-0.00	-0.00	-0.00	-0
22 2230	23 0600	160	5.16	5.1	19	1.7	.59	.24	.13	.04	.1	-0.00	-0.00	-0.00	-0.00	-0
25 1030	25 1730	450	4.24	4.25	72	3.60	.70	.13	.19	.04	.05	-0.00	-0.00	-0.00	-0.00	-0
26 0010	26 0215	2.6	4.45	43	-0.00	-0.00	-0.00	-0.00	-0.00	.04	-0.00	-0.00	-0.00	-0.00	-0.00	-0



## STATION F 03, 45-DAYS PROGRAM.

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HIGH VOLUME SAMPLER

NOVEMBER ,1974

## SAMPLING PERIOD

## COMPONENTS

FROM DAY GTM	TO DAY GTM	DURATION MIN	AMOUNT MM	PH	H <sub>+</sub> UG/L	S04 MG/L	NH4-N MG/L	NO3-N MG/L	CA MG/L	MG UG/M <sub>3</sub>	NA UG/M <sub>3</sub>	K UG/M <sub>3</sub>	CL UG/M <sub>3</sub>	FE UG/M <sub>3</sub>	NO2 UG/M <sub>3</sub>	SO2 UG/M <sub>3</sub>
1 0800	2 0800	1440	11.2	6.36	4	.34	.35	1.00	.11	.8	.1	-0.00	-0.00	0.00	0.00	0
8 0800	9 0800	1440	-0.0	4.57	89	4.4	.33	.35	1.00	.10	.5	.4	-0.30	-0.30	0.00	0.00
17 0800	18 0800	1440	10.2	6.98	-0	3.2	.13	.15	.50	.09	.5	.1	-0.30	-0.30	0.00	0.00
20 0800	21 0800	1440	8.7	5.96	33	3.3	.22	.20	.50	.07	.5	.3	-0.30	-0.30	0.00	0.00
23 0800	24 0800	1440	13.2	5.67	14	2.4	.04	.04	.20	.06	.2	.1	-0.00	-0.00	0.00	0.00
26 0800	27 0800	1440	40.8	6.03	-0	1.5	.01	.01	.20	.01	.2	0.0	-0.30	-0.30	0.00	0.00
30 0800	1 0800	1440	11.6	6.00	34	.15	.20	.03	.01	.06	.00	0.00	-0.30	-0.30	0.00	0.00
54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70
1 0900	2 0900	1440	11.2	6.36	4	.34	.35	1.00	.11	.8	.1	-0.00	-0.00	0.00	0.00	0
8 0900	9 0900	1440	8.7	5.96	33	3.3	.22	.20	.50	.07	.5	.3	-0.30	-0.30	0.00	0.00
17 0900	18 0900	1440	13.2	5.67	14	2.4	.04	.04	.20	.06	.2	.1	-0.00	-0.00	0.00	0.00
26 0900	27 0900	1440	11.90	5.98	8	1.00	0.00	.01	.33	.02	.30	0.00	-0.30	-0.30	0.00	0.00
27 0900	28 0900	1440	12.90	6.03	5	1.40	0.00	.05	.50	.11	.10	.10	-0.30	-0.30	0.00	0.00
28 0900	29 0900	1440	18.90	5.81	15	2.70	.10	.10	.44	.10	.20	.20	-0.30	-0.30	0.00	0.00
29 0900	30 0900	1440	11.60	5.52	-0	1.70	.05	.15	.60	.05	.05	.10	-0.30	-0.30	0.00	0.00
30 0900	1 0900	1440	11.60	5.52	34	.20	.03	.10	.50	.05	.05	.10	-0.30	-0.30	0.00	0.00

STATION F 03, 45-DAYS PROGRAM.

PRECIPITATION SAMPLE

NOVEMBER ,1974

## SAMPLING PERIOD

## COMPONENTS

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FROM DAY GTM	TO DAY GTM	DURATION MIN	AMOUNT MM	PH	H <sub>+</sub> UG/L	S04 MG/L	NH4-N MG/L	NO3-N MG/L	CA MG/L	MG UG/L	NA UG/L	K UG/L	CL UG/L	FE UG/L	NO2 UG/L	SO2 UG/L
1 0800	2 0800	1440	11.2	6.36	4	.34	.35	1.00	.11	.8	.1	-0.00	-0.00	0.00	0.00	0
8 0800	9 0800	1440	-0.0	4.57	89	4.4	.33	.35	1.00	.10	.5	.4	-0.30	-0.30	0.00	0.00
17 0800	18 0800	1440	10.2	6.98	-0	3.2	.13	.15	.50	.09	.5	.1	-0.30	-0.30	0.00	0.00
20 0800	21 0800	1440	8.7	5.96	33	3.3	.22	.20	.50	.07	.5	.3	-0.30	-0.30	0.00	0.00
23 0800	24 0800	1440	13.2	5.67	14	2.4	.04	.04	.20	.06	.2	.1	-0.00	-0.00	0.00	0.00
26 0800	27 0800	1440	40.8	6.03	-0	1.5	.01	.01	.20	.01	.2	0.0	-0.30	-0.30	0.00	0.00
30 0800	1 0800	1440	11.6	6.00	34	.15	.20	.03	.01	.06	.00	0.00	-0.30	-0.30	0.00	0.00
54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70
1 0900	2 0900	1440	11.2	6.36	4	.34	.35	1.00	.11	.8	.1	-0.00	-0.00	0.00	0.00	0
8 0900	9 0900	1440	8.7	5.96	33	3.3	.22	.20	.50	.07	.5	.3	-0.30	-0.30	0.00	0.00
17 0900	18 0900	1440	13.2	5.67	14	2.4	.04	.04	.20	.06	.2	.1	-0.00	-0.00	0.00	0.00
26 0900	27 0900	1440	11.90	5.98	8	1.00	0.00	.01	.33	.02	.30	0.00	-0.30	-0.30	0.00	0.00
27 0900	28 0900	1440	12.90	6.03	5	1.40	0.00	.05	.50	.11	.10	.10	-0.30	-0.30	0.00	0.00
28 0900	29 0900	1440	18.90	5.81	15	2.70	.10	.10	.44	.10	.20	.20	-0.30	-0.30	0.00	0.00
29 0900	30 0900	1440	11.60	5.52	-0	1.70	.05	.15	.60	.05	.05	.10	-0.30	-0.30	0.00	0.00
30 0900	1 0900	1440	11.60	5.52	34	.20	.03	.10	.50	.05	.05	.10	-0.30	-0.30	0.00	0.00



## STATION F 03, 45-DAYS PROGRAM.

HIGH VOLUME SAMPLER

DECEMBER ,1974

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## SAMPLING PERIOD

FROM DAY GMT	TO DAY GMT	T.P.M.	PH	H <sup>+</sup>	S04	NH4-N	NO3-N	CA	4G	NA	K	CL	FE	NO2	S02
		UG/M3	UG/M3	NE0/M3	UG/M3										
1 0900	2 0900	22.90	4.72	17	1.90	0.00	0.04	.50	.04	0.00	0.00	-0.60	0.00	4	0
2 0900	3 0900	27.40	4.60	46	2.80	.20	.15	.63	.03	0.30	.10	-0.60	5.60	3	2
3 0900	4 0900	45.20	4.27	71	6.60	.70	.40	.81	.06	0.30	.10	-0.60	0.03	6	6
4 0900	5 0900	41.70	4.42	47	5.80	.70	.30	.81	.10	1.20	.14	-0.60	0.03	2	4
5 0900	6 0900	41.40	5.29	11	3.50	.40	.30	.80	.28	0.30	.10	-0.60	0.03	4	3
6 0900	7 0900	41.10	5.13	17	5.00	.40	.25	.70	.10	1.00	.10	-0.60	0.03	2	2
7 0900	8 0900	32.60	5.39	18	3.70	.35	.40	.63	.13	1.10	.20	-0.60	0.03	1	1
8 0900	9 0900	24.00	5.52	6	1.70	.20	.15	.50	.04	1.30	.10	-0.60	0.03	2	2
9 0900	10 0900	23.90	5.43	26	1.70	.05	.05	.63	.02	0.00	-0.60	0.00	0.00	0	0
10 0900	11 0900	28.90	4.97	28	3.50	.35	.70	.70	.15	2.00	.10	-0.60	0.00	6	6
11 0900	12 0900	39.90	5.67	23	3.10	.10	.20	.70	.32	0.30	.20	-0.60	0.00	3	3
12 0900	13 0900	33.90	5.69	34	3.10	.13	.20	.90	.12	1.10	.30	-0.60	0.03	4	4
13 0900	14 0900	42.60	5.13	27	5.10	.50	.85	.85	.25	3.00	.20	-0.60	0.60	1	0
14 0900	15 0900	40.70	4.97	37	5.80	1.00	.60	.80	.19	0.20	-0.60	0.00	0.00	0	0
15 0900	16 0900	24.00	4.85	26	2.10	0.00	.05	.49	.03	0.30	0.00	-0.60	0.03	0	0

## STATION F 03, 45-DAYS PROGRAM.

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## PRECIPITATION SAMPLE

DECEMBER ,1974

## SAMPLING PERIOD

FROM DAY GMT	TO DAY GMT	DURATION	AMOUNT	PH	H <sup>+</sup>	S04	NH4-N	NO3-N	CA	Mg	Na	K	CL	FE	NO2	S02
		MIN	MM	NE0/L	Mg/L	Mg/L	Mg/L	Mg/L	Mg/L	Mg/L	Mg/L	Mg/L	Mg/L	Mg/L	Mg/L	Mg/L
12 0800	13 0800	1440	9.0	5.75	50	4.2	.39	.40	.09	1.00	.09	1.0	0.0	-0.30	-0.00	0
15 0800	16 0800	1440	3.5	6.08	4.4	.34	.35	1.00	.12	1.00	.12	1.0	0.1	-0.30	-0.30	0



STATION NL01, 45-DAYS PROGRAM.

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PRECIPITATION SAMPLE

JULY  
1974

SAMPLING PERIOD

FROM DAY GMT	TO DAY GMT	DURATION MIN	AMOUNT MM	PH	H <sup>+</sup> UEN/L	SO <sub>4</sub> <sup>2-</sup> MG/L	NH <sub>4</sub> -N MG/L	NO <sub>3</sub> -N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	CL MG/L	FE MG/L
1 0700	2 0700	132	.8	3.97	-0	9.8	-0.00	-0.00	.56	.17	-0.0	-0.30	6.00	
2 0700	3 0700	324	17.2	4.41	64	2.2	-0.00	-0.00	.20	.07	-0.0	-0.00	5.00	5.00
3 0700	4 0700	72	2.5	4.53	51	3.9	-0.00	-0.00	.30	.11	-0.0	-0.00	6.00	6.00
4 0700	5 0700	94.8	14.9	4.13	100	5.5	-0.00	-0.00	.30	.13	-0.0	-0.00	5.50	5.50
5 0700	6 0700	72	.6	3.78	-0	-0.00	-0.00	-0.00	-0.00	-0.00	-0.0	-0.00	-0.30	-0.30
12 0700	13 0700	312	2.4	4.23	73	17.9	-0.03	-0.00	1.90	.40	-0.0	-0.00	2.00	
13 0700	14 0700	276	5.4	4.53	41	7.9	-0.00	-0.00	.40	.13	-0.0	-0.00	0.80	0.80
14 0700	15 0700	102	1.4	3.87	-0	11.3	-0.00	-0.00	.30	.08	-0.0	-0.00	1.00	1.00
16 0700	17 0700	36	2.5	4.34	63	57.9	-0.03	-0.00	8.10	.20	-0.0	-0.00	-0.30	-0.30
17 0700	18 0700	144	4.7	4.28	95	7.3	-0.00	-0.00	.40	.14	-0.0	-0.00	6.00	6.00
19 0700	20 0700	150	.8	3.86	-0	6.9	-0.00	-0.00	.50	.17	-0.0	-0.00	0.00	0.00
22 0700	23 0700	222	6.7	4.37	116	3.6	-0.00	-0.00	.20	.05	-0.0	-0.00	0.50	0.50
23 0700	24 0700	144	1.9	4.34	115	4.5	-0.00	-0.00	.30	.08	-0.0	-0.00	0.00	0.00
26 0700	27 0700	156	1.4	4.17	-0	9.4	-0.03	-0.00	.60	.20	-0.0	-0.00	0.30	0.30

STATION NL01, 45-DAYS PROGRAM.

PRECIPITATION SAMPLE

AUGUST  
1974

SAMPLING PERIOD

COMPONENTS

FROM DAY GMT	TO DAY GMT	DURATION MIN	AMOUNT MM	PH	H <sup>+</sup> UEN/L	SO <sub>4</sub> <sup>2-</sup> MG/L	NH <sub>4</sub> -N MG/L	NO <sub>3</sub> -N MG/L	CA MG/L	MG MG/L	NA MG/L	K MG/L	CL MG/L	FE MG/L
3 0700	4 0700	1440	3.9	4.22	74	6.3	-0.00	-0.00	1.00	-0.30	1.0	.3	-0.00	-3.00
4 0700	5 0700	1440	4.8	4.09	178	7.4	-0.00	-0.00	.40	.05	.4	-0.00	-1.00	
8 0700	9 0700	1440	7.6	4.71	32	8.0	-0.00	-0.00	.70	-0.00	1.0	.6	-0.00	-5.00
9 0700	10 0700	1440	16.2	4.19	160	4.1	-0.00	-0.00	.20	-0.00	.7	.1	-0.00	-0.30
10 0700	11 0700	1440	6.0	4.37	86	3.6	-0.00	-0.00	.20	-0.00	1.5	.1	-0.00	-0.00
11 0700	12 0700	1440	11.0	4.11	115	2.7	-0.00	-0.00	.20	-0.00	.9	.0	-0.00	-0.00
12 0700	13 0700	1440	4.34	90	2.6	-0.00	-0.00	-0.00	.20	.00	.0	-0.00	-0.00	
16 0700	17 0700	1440	1.7	4.80	-0	16.4	-0.00	-0.00	4.90	-0.00	1.3	1.5	-0.00	-3.00
18 0700	19 0700	1440	2.3	4.14	-0	13.8	-0.00	-0.00	1.60	-0.00	1.2	1.1	-0.00	-0.00
26 0700	27 0700	1440	9.6	4.55	-0	13.4	-0.00	-0.00	1.80	-0.00	.9	1.0	-0.00	-0.00
31 0700	1 0700	1440	1.6	4.08	-0	25.5	-0.00	-0.00	4.30	-0.00	.6	-0.30	-0.00	

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## STATION NL01, 45-DAYS PROGRAM.

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## PRECIPITATION SAMPLE

SEPTEMBER 4, 1974

SAMPLING PERIOD		COMPONENTS											
FROM DAY GMT	TO DAY GMT	DURATION MIN	AMOUNT MM	P4	H+	SO4	NH4-N	NO3-N	CA	Mg	Na	K	Cl
					µEQL/L	MG/L							
1 0700	2 0700	1440	4.2	4.64	82	6.5	1.96	3.34	.46	-0.00	.5	.1	-0.36
2 0700	3 0700	1440	6.3	4.52	33	5.3	1.85	4.20	.40	-0.00	.3	.1	-0.34
4 0700	5 0700	1440	19.9	4.77	19	4.2	.96	.23	.20	-0.00	.3	.1	-0.00
5 0700	6 0700	1440	15.6	4.71	24	3.3	.65	.21	.10	-0.00	.1	.1	-0.00
6 0700	7 0700	1440	2.1	4.56	32	7.3	-0.00	-0.00	.30	-0.00	1.8	.2	-0.00
7 0700	8 0700	1440	1.5	4.48	14	6.1	-0.00	-0.00	.40	-0.00	1.5	.2	-0.00
9 0700	10 0700	1440	11.5	4.65	27	3.3	.37	.16	.20	-0.00	1.1	.1	-0.00
12 0700	13 0700	1440	2.6	4.93	18	7.3	-0.00	-0.10	1.00	-0.00	.5	.1	-0.30
13 0700	14 0700	1440	1.3	4.51	-0	7.4	-0.00	-0.00	.40	-0.00	.3	.0	-0.00
15 0700	16 0700	1440	.7	7.33	-6	21.5	-0.00	-0.00	1.00	-0.00	3.8	.4	-0.00
17 0700	18 0700	1440	3.9	4.46	48	7.8	1.99	8.97	.50	-0.00	.6	.4	-0.30
21 0700	22 0700	1440	6.6	4.34	46	6.5	.90	.31	.30	-0.00	.9	.2	-0.00
22 0700	23 0700	1440	3.6	4.27	54	5.2	.82	.31	.20	-0.00	1.3	.2	-0.00
23 0700	24 0700	1440	9.4	4.52	29	4.1	.90	.21	.20	-0.00	.5	.1	-0.00
24 0700	25 0700	1440	6.8	4.60	30	4.9	.75	.23	.50	-0.00	6.9	.3	-0.00
25 0700	26 0700	1440	8.1	4.63	45	3.3	.56	.14	.10	-0.00	.4	.1	-0.00
26 0700	27 0700	1440	4.0	4.52	40	4.4	1.12	.29	.30	-0.00	1.2	.1	-0.00
27 0700	28 0700	1440	9.6	4.60	86	3.1	.58	.14	.10	-0.00	.2	.1	-0.00
28 0700	29 0700	1440	.4	4.04	-0	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
29 0700	30 0700	1440	1.7	4.19	92	9.0	-0.00	-0.00	.70	-0.00	1.6	.6	-0.00
30 0700	1 0700	3.1	4.18	7.9	2.88	-0.17	-0.00	-0.00	1.5	-0.00	.4	-0.00	0.00



## STATION NL01, 45-DAYS PROGRAM.

HIGH VOLUME SAMPLER

OCTOBER , 1974

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SAMPLING PERIOD		COMPONENTS																
FROM	TO	T.P.M.	PH	H <sub>2</sub>	SO <sub>4</sub>	NH <sub>4</sub> -N	NO <sub>3</sub> -N	CA	Mg	Na	K	Cl	FE	NO <sub>2</sub> -N	SO <sub>2</sub>			
DAY	GMT	DAY	GMT	UG/M <sub>3</sub>	UG/M <sub>3</sub>	UG/M <sub>3</sub>	UG/M <sub>3</sub>	UG/M <sub>3</sub>	UG/M <sub>3</sub>	UG/M <sub>3</sub>	UG/M <sub>3</sub>	UG/M <sub>3</sub>	UG/M <sub>3</sub>	UG/M <sub>3</sub>	UG/M <sub>3</sub>	UG/M <sub>3</sub>		
9	0700	10	0700	-0.00	6.33	1.41	1.50	.15	-0.00	.70	-0.00	.02	0	-0	0	0	0	
11	0700	12	0700	-0.00	6.13	1.99	3.05	.39	-0.00	.30	-0.00	.14	-0	-0	0	0	0	
12	0700	13	0700	-0.00	5.62	2.3	1.65	.59	1.00	.13	-0.00	.80	-0.00	.55	0	0	0	
13	0700	14	0700	-0.00	6.60	7	2.50	.76	1.15	.13	-0.00	.10	-0.00	0.60	0	0	0	
14	0700	15	0700	-0.00	5.89	8	5.30	2.19	3.15	.18	-0.00	.50	-0.00	0.02	0	0	0	
15	0700	16	0700	-0.00	5.23	12	5.60	5.03	3.40	.77	-0.00	.60	-0.00	0.05	0	0	0	
16	0700	17	0700	-0.00	5.25	24	15.80	6.52	3.35	.56	-0.00	.51	-0.00	.49	0	0	0	
17	0700	18	0700	-0.00	5.34	22	12.20	4.28	1.90	.46	-0.00	.40	-0.00	.95	0	0	0	
18	0700	19	0700	-0.00	5.56	17	11.40	3.99	2.10	.47	-0.00	.60	-0.00	1.10	0	0	0	
19	0700	20	0700	-0.00	6.23	14	2.70	.90	.65	.21	-0.00	1.40	-0.00	0.00	0	0	0	
20	0700	21	0700	-0.00	5.92	18	8.30	2.07	1.10	.17	-0.00	.60	-0.00	0.02	0	0	0	
21	0700	22	0700	-0.00	6.23	15	4.20	1.59	.90	.19	-0.00	.20	-0.00	0.03	0	0	0	
22	0700	23	0700	-0.00	6.46	12	2.90	1.00	.65	.13	-0.00	.70	-0.00	1.00	0	0	0	
23	0700	24	0700	-0.00	6.02	14	6.80	2.09	.45	.18	-0.00	1.40	-0.00	0.02	0	0	0	
24	0700	25	0700	-0.00	5.85	15	6.80	2.44	.80	.44	-0.00	2.10	-0.00	.33	0	0	0	
25	0700	26	0700	-0.00	6.36	19	2.99	.86	.40	.23	-0.00	2.40	-0.00	.00	0	0	0	
27	0700	28	0700	-0.00	6.75	9	2.10	.34	.15	.17	-0.00	3.00	-0.00	0.00	0	0	0	
28	0700	29	0700	-0.00	6.79	7	1.10	.11	.09	.09	-0.00	1.30	-0.00	0.00	0	0	0	
29	0700	30	0700	-0.00	6.04	5	1.30	.33	.10	.10	-0.00	.80	-0.00	0.05	0	0	0	
30	0700	31	0700	-0.00	6.69	14	2.20	.78	.15	.06	-0.00	.80	-0.00	.00	0	0	0	
31	0700	1	0700	-0.00	5.63	19	12.30	4.29	1.30	.05	-0.00	.70	-0.00	.02	0	0	0	



## STATION NL01, 45-DAYS PROGRAM.

PRECIPITATION SAMPLE

OCTOBER • 1974

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## SAMPLING PERIOD

FROM DAY GMT	TO DAY GMT	DURATION MIN	AMOUNT MM	PH	COMPONENTS									
					H <sup>+</sup>	SO <sub>4</sub>	NH <sub>4</sub> -N	NO <sub>3</sub> -N	CA	Mg	Na	K	CL	FE
MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
1 0700	2 0700	1440	.4	4.20	-0	-0.0	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
3 0700	4 0700	1440	5.3	4.23	89	4.4	.93	.38	.40	.00	.00	.00	.00	.00
4 0700	5 0700	1440	1.4	4.09	-0	6.0	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
5 0700	6 0700	1440	3.5	4.40	63	3.2	.92	.23	.40	-0.00	7.3	.5	-0.00	-0.00
6 0700	7 0700	1440	8.4	4.55	50	1.6	.50	.22	.20	-0.00	.9	.2	-0.00	6.40
7 0700	8 0700	1440	5.6	4.23	116	4.7	1.40	.77	.80	-0.00	.7	.2	-0.30	.40
9 0700	10 0700	1440	2.6	4.45	92	4.9	-0.00	-0.00	.30	-0.00	.8	.4	-0.00	.00
11 0700	12 0700	1440	.6	4.24	-0	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
12 0700	13 0700	1440	2.9	4.48	68	4.3	1.24	-0.00	-0.00	-0.00	1.4	.4	-0.00	0.00
13 0700	14 0700	1440	.5	4.20	-0	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
16 0700	17 0700	1440	.5	3.92	-0	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
18 0700	19 0700	1440	11.8	4.44	105	2.8	.44	.14	.40	-0.00	.1	.4	-0.00	.00
19 0700	20 0700	1440	.4	3.94	-0	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
20 0700	21 0700	1440	1.7	4.17	151	6.6	-0.00	-0.00	.50	-0.00	3.9	.2	-0.00	-0.00
21 0700	22 0700	1440	.4	4.04	-0	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
22 0700	23 0700	1440	19.7	4.70	59	1.9	.54	.24	.00	-0.00	.5	.1	-0.00	0.00
24 0700	25 0700	1440	.9	4.21	-0	10.1	-0.00	-0.00	.80	-0.00	4.1	2.3	-0.00	0.50
25 0700	26 0700	1440	4.2	5.21	15	6.5	1.77	.39	.70	-0.00	6.7	1.5	-0.00	.20
26 0700	27 0700	1440	2.7	4.33	68	6.6	1.70	.65	.60	-0.00	5.05	.6	-0.00	0.00
27 0700	28 0700	1440	18.9	4.40	60	5.6	.48	.18	.60	-0.00	14.4	.7	-0.00	0.00
28 0700	29 0700	1440	4.6	4.40	43	2.4	.40	.08	.20	-0.00	5.2	.3	-0.00	.00



## STATION NL01, 45-DAYS PROGRAM.

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## HIGH VOLUME SAMPLER

NOVEMBER , 1974

## SAMPLING PERIOD

FROM DAY 6MT	TO DAY 6MT	T.P.M.	PH	H <sub>2</sub> UG/M <sup>3</sup>	SO <sub>4</sub> UG/M <sup>3</sup>	NH <sub>4</sub> -N UG/M <sup>3</sup>	NO <sub>3</sub> -N UG/M <sup>3</sup>	CA UG/M <sup>3</sup>	MG UG/M <sup>3</sup>	NA UG/M <sup>3</sup>	K UG/M <sup>3</sup>	CL UG/M <sup>3</sup>	FE UG/M <sup>3</sup>	NO <sub>2</sub> UG/M <sup>3</sup>	SO <sub>2</sub> UG/M <sup>3</sup>	COMPONENTS
																UG/M <sup>3</sup>
1 0700	2 0700	-0.00	5.51	18 11.10	4.38	0.93	0.37	-0.00	0.90	0.40	-0.00	0.02	-3	19		
2 0700	3 0700	-0.00	5.51	18 11.10	4.38	0.93	0.37	-0.00	0.90	0.40	-0.00	0.02	-3	19		
3 0700	4 0700	-0.00	6.29	14 4.10	1.63	0.45	0.25	-0.00	0.80	0.20	-0.00	0.03	-3	19		
4 0700	5 0700	-0.00	5.67	16 10.30	3.44	1.41	0.88	-0.00	0.60	0.60	-0.00	0.02	-3	19		
5 0700	6 0700	-0.00	5.78	14 7.10	2.95	1.04	0.17	-0.00	0.50	0.30	-0.00	0.02	-3	19		
6 0700	7 0700	-0.00	5.83	13 6.20	2.22	0.64	0.24	-0.00	0.50	0.20	-0.00	0.02	-3	19		
7 0700	8 0700	-0.00	5.38	24 18.80	7.71	2.50	1.79	-0.00	0.90	0.80	-0.00	0.11	-3	19		
8 0700	9 0700	-0.00	5.15	23 22.60	8.49	2.51	1.55	-0.00	1.00	0.80	-0.00	0.11	-3	19		
9 0700	10 0700	-0.00	5.37	29 16.70	2.10	1.05	0.60	-0.00	0.90	0.70	-0.00	0.03	-3	19		
10 0700	11 0700	-0.00	6.25	10 7.73	1.18	0.18	-0.00	1.00	1.20	0.30	-0.00	0.02	-3	19		
11 0700	12 0700	-0.00	6.39	12 3.70	1.26	0.86	0.22	-0.00	2.50	0.40	-0.00	0.03	-3	19		
12 0700	13 0700	-0.00	6.44	12 3.70	1.22	0.79	0.21	-0.00	1.30	0.30	-0.00	0.01	-3	19		
13 0700	14 0700	-0.00	6.19	12 5.36	1.93	1.24	0.31	-0.00	1.50	0.30	-0.00	0.09	-3	19		
14 0700	15 0700	-0.00	5.60	15 5.20	1.44	0.94	0.54	-0.00	1.40	0.40	-0.00	0.02	-3	19		
15 0700	16 0700	-0.00	5.92	14 3.10	0.62	0.33	0.31	-0.00	0.50	0.20	-0.00	0.03	-3	19		
16 0700	17 0700	-0.00	5.79	15 2.80	0.09	0.59	0.19	-0.00	0.50	0.20	-0.00	0.03	-3	19		
17 0700	18 0700	-0.00	5.36	16 7.60	3.04	1.25	0.20	-0.00	1.30	0.40	-0.00	0.03	-3	19		
18 0700	19 0700	-0.00	5.48	16 8.30	1.92	0.20	-0.00	1.30	0.90	0.30	-0.00	0.09	-3	19		
19 0700	20 0700	-0.00	5.47	15 7.70	1.53	0.88	0.49	-0.00	1.10	0.50	-0.00	0.02	-3	19		
20 0700	21 0700	-0.00	5.42	16 8.40	1.99	0.97	0.31	-0.00	1.30	0.30	-0.00	0.01	-3	19		
21 0700	22 0700	-0.00	5.48	18 9.50	3.00	1.18	1.01	-0.00	1.20	0.20	-0.00	0.03	-3	19		
22 0700	23 0700	-0.00	5.75	15 8.30	0.97	0.70	-0.00	1.50	0.40	-0.00	0.02	0.01	-3	19		
23 0700	24 0700	-0.00	6.13	11 6.80	2.60	1.11	0.21	-0.00	0.90	0.60	-0.00	0.03	-3	19		
24 0700	25 0700	-0.00	5.85	10 7.80	2.52	1.40	0.84	-0.00	1.20	0.50	-0.00	0.02	-3	19		
25 0700	26 0700	-0.00	6.34	4 5.80	1.62	0.98	0.54	-0.00	2.50	0.30	-0.00	0.03	-3	19		
26 0700	27 0700	-0.00	6.05	6 3.30	0.84	0.57	0.20	-0.00	3.60	0.30	-0.00	0.03	-3	19		
27 0700	28 0700	-0.00	5.77	12 5.10	2.02	0.96	0.80	-0.00	2.80	0.60	-0.00	0.03	-3	19		
28 0700	29 0700	-0.00	5.95	13 6.80	0.91	0.61	0.00	-0.00	2.30	0.40	-0.00	0.03	-3	19		
29 0700	30 0700	-0.00	6.41	10 2.30	3.81	1.13	0.30	-0.00	2.40	0.20	-0.00	0.03	-3	19		
30 0700	1 0700	-0.00	6.23	10 3.30	1.07	0.47	1.67	-0.00	2.10	0.30	-0.00	0.03	-3	19		
1	0700	-0.00	5.97	8 6.40	2.17	0.40	-0.00	2.70	0.40	-0.00	0.03	0.00	-3	19		



STATION NLO1: 45-DAYS PROGRAM.

PRECIPITATION SAMPLE

NOVEMBER, 1974

#### SAMPLING PERIOD



## STATION NL01, 45-DAYS PROGRAM.

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HIGH VOLUME SAMPLER

DECEMBER , 1974

## SAMPLING PERIOD

FROM DAY G.M.T.	TO DAY G.M.T.	T.P.M.		PH NEQ/M3	H <sup>+</sup> UG/L	SO4 UG/M3	NH4-N UG/M3	NO3-N UG/M3	CA UG/M3	MG UG/M3	NA UG/M3	K UG/M3	CL UG/M3	FE UG/M3	NO2 UG/M3	SO2 UG/M3
		UG/M3	UG/M3													
1 0700	2 0700	-0.00	6.27	10	7.10	2.71	1.35	.25	-0.50	2.90	.40	-0.00	-0.00	-0	23	
2 0700	3 0700	-0.00	6.32	9	6.10	1.75	.84	.33	-1.00	1.80	.30	-0.03	-0.00	-1	10	
3 0700	4 0700	-0.00	5.97	10	15.70	5.48	1.73	.88	-0.00	1.30	.50	-0.35	-0.00	-1	48	
4 0700	5 0700	-0.00	6.30	7	6.40	2.25	1.01	.41	-0.00	2.30	.40	-0.05	-0.03	-1	23	
5 0700	6 0700	-0.00	6.53	7	2.50	.99	.67	.24	-0.00	3.40	.40	-0.05	-0.03	-1	4	
6 0700	7 0700	-0.00	5.75	14	5.40	2.50	1.00	.22	-0.00	1.80	.30	-0.03	-0.03	-1	17	
7 0700	8 0700	-0.00	5.96	13	5.30	2.51	.95	.26	-0.00	2.10	.40	-0.03	-0.03	-1	14	
8 0700	9 0700	-0.00	5.82	14	9.30	3.33	1.11	.22	-0.00	1.30	.40	-0.05	-0.03	-1	22	
9 0700	10 0700	-0.00	5.95	11	4.60	1.45	.79	.29	-0.00	2.40	.40	-0.05	-0.03	-1	23	
10 0700	11 0700	-0.00	6.65	14	4.60	1.43	.69	.30	-0.00	1.30	.20	-0.06	-0.03	-1	37	
11 0700	12 0700	-0.00	6.47	12	2.60	2.05	.19	.14	-0.00	1.90	.20	-0.06	-0.03	-1	3	
12 0700	13 0700	-0.00	6.03	13	5.60	2.97	.11	.11	-0.00	2.00	.40	-0.05	-0.03	-1	0	
13 0700	14 0700	-0.00	5.75	13	5.60	2.11	.37	-0.00	2.00	.50	-0.05	-0.03	-1	12		
14 0700	15 0700	-0.00	5.92	15	4.60	2.52	.28	.33	-0.00	2.10	.50	-0.05	-0.03	-1	12	
15 0700	16 0700	-0.00	5.63	15	9.40	2.19	.99	.16	-0.00	2.50	.50	-0.05	-0.03	-1	14	
16 0700	17 0700	-0.00	5.63	16	4.50	.15	.71	.28	-0.00	2.00	.40	-0.05	-0.03	-1	0	
17 0700	18 0700	-0.00	6.14	14	4.50	.35	.26	.00	-0.00	5.00	.40	-0.05	-0.03	-1	26	

STATION NL01, 45-DAYS PROGRAM.

## PRECIPITATION SAMPLE

DECEMBER , 1974

## SAMPLING PERIOD

## COMPONENTS

FROM DAY G.M.T.	TO DAY G.M.T.	DURATION		AMOUNT MM	PH	H <sup>+</sup> UG/L	SO4 UG/L	NH4-N UG/L	NO3-N UG/L	CA UG/L	MG UG/L	NA UG/L	K UG/L	CL UG/L	FE UG/L	NO2 UG/L	SO2 UG/L
		DAY	G.M.T.														
1 0700	2 0700	3	1440	4.0	3.93	93	7.8	1.88	1.26	.70	-0.00	1.7	.4	-0.30	0.00	0.00	
3 0700	4 0700	4	1440	.5	3.87	-0	-0.0	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	
4 0700	5 0700	5	1440	2.1	4.27	90	14.4	-0.00	1.40	-0.00	2.9	.4	-0.00	0.00	0.00	0.00	
5 0700	6 0700	6	1440	4.9	4.45	54	4.2	.93	.45	.60	-0.00	9.9	.4	-0.00	0.00	0.00	
6 0700	7 0700	7	1440	2.0	4.21	115	3.6	-0.00	-0.00	1.00	-0.00	5.3	.5	-0.00	0.00	0.00	
7 0700	8 0700	8	1440	1.8	4.35	94	4.8	-0.00	-0.00	.80	-0.00	2.4	.4	-0.00	0.00	0.00	
8 0700	9 0700	9	1440	.8	4.09	-0	1.8	-0.03	-0.00	.80	-0.00	2.4	.6	-0.00	0.00	0.00	
9 0700	10 0700	10	1440	.7	4.00	-0	6.6	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	
10 0700	11 0700	11	1440	11.4	4.41	59	2.4	1.35	.60	-0.00	2.2	.4	-0.00	0.00	0.00	0.00	
11 0700	12 0700	12	1440	6.4	4.91	42	5.4	.50	.21	-0.00	5.0	.4	-0.00	0.00	0.00	0.00	
12 0700	13 0700	13	1440	5.8	4.26	85	6.0	.54	.30	-0.00	-0.00	.6	.1	-0.00	0.00	0.00	
13 0700	14 0700	14	1440	2.8	4.05	130	10.2	1.62	.64	-0.00	-0.00	2.4	.3	-0.00	0.00	0.00	
14 0700	15 0700	15	1440	.7	4.00	-0	6.6	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	
15 0700	16 0700	16	1440	8.4	4.23	89	7.8	.54	.42	.30	-0.00	1.7	.1	-0.00	0.00	0.00	
16 0700	17 0700	17	1440	2.3	4.17	96	33.0	-0.00	-0.00	4.80	-0.00	102.0	4.0	-0.00	0.00	0.00	
17 0700	18 0700	18	1440	2.9	4.30	38	12.0	1.12	.57	1.50	-0.00	25.5	1.2	-0.00	0.00	0.00	
18 0700	19 0700	19	1440	1.4	4.04	-0	9.0	-0.00	-0.00	.70	-0.00	7.0	.5	-0.00	0.00	0.00	
19 0700	20 0700	20	1440	.7	4.21	-0	13.8	-0.00	-0.00	2.00	-0.00	3.5	1.4	-0.00	0.00	0.00	
20 0700	21 0700	21	1440	6.5	4.68	-0.0	1.99	.33	.80	-0.00	2.5	.5	-0.00	0.00	0.00	0.00	
21 0700	22 0700	22	1440	18.4	4.55	34	3.0	.39	.00	-0.00	.2	0.0	-0.00	0.00	0.00	0.00	
22 0700	23 0700	23	1440	7.7	4.43	45	4.2	.45	.33	.30	-0.00	6.1	.3	-0.00	0.00	0.00	
23 0700	24 0700	24	1440	4.02	4.04	-0	11.4	-0.00	-0.00	2.00	-0.00	3.5	1.4	-0.00	0.00	0.00	
24 0700	25 0700	25	1440	5.6	4.68	-0.0	1.99	.33	.80	-0.00	2.5	.5	-0.00	0.00	0.00	0.00	
25 0700	26 0700	26	1440	1.5	4.08	-0	0.00	-0.00	-0.00	0.00	0.00	0.0	-0.00	0.00	0.00	0.00	
26 0700	27 0700	27	1440	6.7	4.43	45	4.2	.45	.33	.30	-0.00	5.5	-0.00	0.00	0.00	0.00	
27 0700	28 0700	28	1440	4.02	4.04	-0	11.4	-0.00	-0.00	2.00	-0.00	3.5	1.4	-0.00	0.00	0.00	
28 0700	29 0700	29	1440	5.6	4.68	-0.0	0.00	-0.00	-0.00	0.00	0.00	0.0	-0.00	0.00	0.00	0.00	
29 0700	30 0700	30	1440	1.5	4.08	-0	0.00	-0.00	-0.00	0.00	0.00	0.0	-0.00	0.00	0.00	0.00	
30 0700	31 0700	31	1440	6.7	4.43	45	4.2	.45	.33	.30	-0.00	5.5	-0.00	0.00	0.00	0.00	
31 0700	32 0700	32	1440	4.02	4.04	-0	11.4	-0.00	-0.00	2.00	-0.00	3.5	1.4	-0.00	0.00	0.00	
32 0700	33 0700	33	1440	5.6	4.68	-0.0	0.00	-0.00	-0.00	0.00	0.00	0.0	-0.00	0.00	0.00	0.00	
33 0700	34 0700	34	1440	1.5	4.08	-0	0.00	-0.00	-0.00	0.00	0.00	0.0	-0.00	0.00	0.00	0.00	
34 0700	35 0700	35	1440	6.7	4.43	45	4.2	.45	.33	.30	-0.00	5.5	-0.00	0.00	0.00	0.00	
35 0700	36 0700	36	1440	4.02	4.04	-0	11.4	-0.00	-0.00	2.00	-0.00	3.5	1.4	-0.00	0.00	0.00	
36 0700	37 0700	37	1440	5.6	4.68	-0.0	0.00	-0.00	-0.00	0.00	0.00	0.0	-0.00	0.00	0.00	0.00	
37 0700	38 0700	38	1440	1.5	4.08	-0	0.00	-0.00	-0.00	0.00	0.00	0.0	-0.00	0.00	0.00	0.00	
38 0700	39 0700	39	1440	6.7	4.43	45	4.2	.45	.33	.30	-0.00	5.5	-0.00	0.00	0.00	0.00	
39 0700	40 0700	40	1440	4.02	4.04	-0	11.4	-0.00	-0.00	2.00	-0.00	3.5	1.4	-0.00	0.00	0.00	
40 0700	41 0700	41	1440	5.6	4.68	-0.0	0.00	-0.00	-0.00	0.00	0.00	0.0	-0.00	0.00	0.00	0.00	
41 0700	42 0700	42	1440	1.5	4.08	-0	0.00	-0.00	-0.00	0.00	0.00	0.0	-0.00	0.00	0.00	0.00	
42 0700	43 0700	43	1440	6.7	4.43	45	4.2	.45	.33	.30	-0.00	5.5	-0.00	0.00	0.00	0.00	
43 0700	44 0700	44	1440	4.02	4.04	-0	11.4	-0.00	-0.00	2.00	-0.00	3.5	1.4	-0.00	0.00	0.00	
44 0700	45 0700	45	1440														



## STATION NL01, 45-DAYS PROGRAM.

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## PRECIPITATION SAMPLE

JANUARY ,1975

SAMPLING PERIOD		COMPONENTS												
FROM DAY	TO DAY	DURATION MIN	AMOUNT MM	PH	H <sup>+</sup>	SO <sub>4</sub>	NH <sub>4</sub> -N	NO <sub>3</sub> -N	CA	MG	NA	K	CL	FE
GMT	GMT				MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
6 0700	7 0700	1440	16.4	4.33	7.9	4.2	.53	.12	.30	+0.00	1.6	.1	-0.90	3.20
7 0700	8 0700	1440	7.2	4.18	140	3.0	.69	.75	.40	-0.00	1.3	.2	-0.30	3.00
14 0700	15 0700	1460	1.7	-0.00	-0	9.0	-0.00	-0.00	-0.00	-0.00	-0.6	-0.0	-0.30	-0.00
15 0700	16 0700	1440	.9	4.36	-6	6.6	-0.03	-0.33	.90	-0.00	.6	.5	-0.30	0.30
16 0700	17 0700	1440	2.0	4.24	-18	15.6	-0.00	-3.00	1.90	-0.00	1.4	.3	-0.30	0.00
17 0700	18 0700	1440	6.0	4.63	38	8.4	.61	.18	.60	-0.00	1.8	.1	-0.30	0.00
18 0700	19 0700	1440	3.7	4.23	45	10.8	1.00	.12	.90	-0.00	1.0	0.6	-0.30	0.30
20 0700	21 0700	1440	1.9	4.32	66	16.2	-0.00	-1.90	1.20	-0.00	.7	.1	-0.30	0.30
21 0700	22 0700	1440	.4	3.93	-0	-0.0	-0.00	-0.00	-0.00	-0.00	-0.2	-0.0	-0.30	-0.00
22 0700	23 0700	1440	10.5	4.53	39	4.8	.43	.39	.30	-0.00	.6	.9	-0.30	0.00
23 0700	24 0700	1440	3.3	4.46	38	7.8	1.16	.27	.60	-0.00	3.3	.4	-0.30	0.00
25 0700	26 0700	1440	4.3	4.81	27	6.6	1.28	.09	.40	-0.00	4.3	.9	-0.30	0.30
26 0700	27 0700	1440	-6.6	4.30	-0	16.8	-0.00	-0.30	.30	-0.00	1.8	.3	-0.30	0.00
27 0700	28 0700	1440	10.9	4.42	36	6.0	.94	.60	.50	-0.00	2.6	.4	-0.30	0.00
28 0700	29 0700	1440	4.9	4.45	18	3.0	.51	.24	.20	-0.00	1.0	.4	-0.30	0.00
29 0700	30 0700	1440	4.6	4.84	-0	-0.0	-0.30	-0.00	-0.00	-0.00	-0.3	-0.3	-0.30	-0.30
30 0700	31 0700	1440	1.3	4.60	6.0	-5.00	-0.00	-0.00	-0.00	-0.00	1.7	.2	-0.30	0.00
31 0700	1 0700	1440	4.55	9.7	-30	-0.00	-0.00	-0.00	-0.00	-0.00	1.3	.1	-0.30	0.00



## STATION N 01, 45-DAYS PROGRAM.

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HIGH VOLUME SAMPLER  
NOVEMBER , 1974

## SAMPLING PERIOD

## COMPONENTS

FROM DAY	TO DAY	T.P.M. UG/M <sup>3</sup>	PH	H <sup>+</sup>	S04 UG/M <sup>3</sup>	NH4-N UG/M <sup>3</sup>	NO3-N UG/M <sup>3</sup>	CA UG/M <sup>3</sup>	MG UG/M <sup>3</sup>	NA UG/M <sup>3</sup>	K UG/M <sup>3</sup>	CL UG/M <sup>3</sup>	FE UG/M <sup>3</sup>	NO2 UG/M <sup>3</sup>	SO2 UG/M <sup>3</sup>
1 0805	2 0800	5.00	3.55	4.0	2.88	.25	.22	.03	.01	.63	.04	.04	.00	0	2
2 0830	3 0730	5.00	3.80	2.3	2.75	.43	.20	.05	.02	.13	.09	.04	.00	3	3
3 0750	4 0800	4.00	3.00	1.6	2.07	.31	.19	.05	.02	.03	.06	.00	2	3	
4 0810	5 0800	3.00	2.80	2.2	1.76	.18	.01	.02	.02	.03	.01	.00	2	2	
5 0810	6 0800	8.00	4.30	8	2.32	.45	.04	.04	.02	.07	.08	.64	-0.03	2	2
6 0800	7 0800	7.00	4.70	3	1.72	.15	.03	.04	.04	.53	.53	.27	-0.03	1	1
7 0800	8 0800	8.00	4.80	2	1.00	.01	.03	.03	.11	.02	.02	.00	0	0	
8 0810	9 0800	9.00	4.50	5	3.53	.22	.10	.03	.02	.17	.15	.00	0	0	
9 0830	10 0800	10.00	4.65	3	2.17	.27	.06	.04	.06	.53	.08	.64	-0.03	1	1
10 0810	11 0800	4.00	4.65	3	1.08	.05	.04	.05	.07	.54	.54	.04	-0.03	1	1
11 0810	12 0800	5.00	4.75	2	0.99	.04	.05	.05	.09	.99	.14	.05	-0.03	1	1
12 0810	13 0800	4.00	4.73	2	1.58	.07	.37	.05	.09	.11	.21	.00	0	2	
13 0810	14 0800	6.00	4.60	4	1.82	.22	.14	.04	.05	.17	.15	.00	0	1	
14 0810	15 0800	12.00	4.60	4	2.04	.14	.21	.04	.12	.12	.00	0	0	1	1
15 0810	16 0800	13.00	4.50	3	2.36	.14	.24	.11	.21	.39	.12	.00	0	1	1
16 0810	17 0830	14.00	4.53	5	3.38	.31	.14	.11	.23	.33	.11	.00	0	1	1
17 0830	18 0830	4.00	4.75	2	1.24	.10	.07	.04	.06	.49	.05	.00	0	1	1
18 0830	19 0800	4.00	4.73	2	1.15	.11	.06	.03	.04	.34	.04	.00	0	1	1
19 0805	20 0800	1.00	4.70	2	0.61	.13	.04	.01	.01	.35	.02	.00	0	1	1
20 0810	21 0810	4.00	4.75	2	1.22	.32	.07	.03	.16	.05	.00	0	0	1	1
21 0810	22 0830	7.00	4.53	5	2.59	.51	.03	.14	.12	.91	.09	.00	0	0	1
22 0810	23 0800	8.00	3.65	3	2.98	.30	.01	.04	.02	.11	.05	.00	0	1	1
23 0830	24 0845	5.00	4.45	5	2.12	.34	.02	.03	.03	.18	.04	.00	0	1	1
24 0845	25 0800	13.00	4.65	2	3.17	.55	.27	.07	.10	.86	.10	.00	0	1	1
25 0810	26 0815	4.00	5.13	1	1.61	.19	.08	.03	.05	.37	.04	.00	0	1	1
26 0820	27 0810	3.00	4.50	4	1.74	.12	.01	.01	.02	.05	.02	.00	0	1	1
27 0810	28 0800	3.00	5.45	0	1.15	.12	.03	.05	.03	.18	.03	.00	0	1	1
28 0810	29 0800	2.00	3.70	17	1.52	.15	.01	.01	.01	.30	.01	.00	0	1	1
29 0810	30 0800	2.00	4.03	14	1.35	.15	.04	.01	.02	.05	.01	.02	-0.03	1	1
30 0800	31 0800	2.00	4.00	1	0.91	.09	.01	.01	.02	.02	.01	.00	0	0	0



STATION N 01, 45-DAYS PROGRAM.

PRECIPITATION SAMPLE

NOVEMBER 1974

#### SAMPLING PERIOD

FROM DAY	TO DAY	GHT MM	DURATION MIN	AMOUNT MM	PERIOD		PH	H <sup>+</sup> UEN/L	S04 MG/L	NH4-N MG/L	NO3-N MG/L	CA <sup>+</sup> MG/L	Mg <sup>2+</sup> MG/L	Na <sup>+</sup> MG/L	K <sup>+</sup> MG/L	CL <sup>-</sup> MG/L	FE %
					PERIOD	PERIOD											
6	0700	7	0700	1440	1.0	9	4.05	102	0.33	0.52	0.23	0.69	-0.0	0.2	1.10	-0.0	0.0
8	0700	9	0700	1440	15.3	4.00	123	6.9	1.53	1.30	0.21	0.17	-0.0	0.3	2.50	-0.0	0.0
9	0700	10	0700	1440	28.0	4.00	39	2.0	0.15	0.19	0.09	0.11	-0.0	0.1	1.50	-0.0	0.0
10	0700	11	0700	1440	12.0	4.05	30	2.0	0.12	0.11	0.10	0.25	-0.0	0.1	3.50	-0.0	0.0
11	0700	12	0700	1440	4.80	2.0	2.3	0.10	0.07	0.26	0.66	-0.0	0.3	8.50	-0.0	0.0	
12	0700	13	0700	1440	8.6	4.80	15	1.9	0.08	0.08	0.13	-0.0	0.2	4.30	-0.0	0.0	
13	0700	14	0700	1440	25.6	4.95	7	2.7	0.30	0.54	0.18	0.09	-0.0	0.3	3.30	-0.0	0.0
14	0700	15	0700	1440	39.6	4.35	47	2.9	0.45	0.35	0.17	0.35	-0.0	0.2	4.30	-0.0	0.0
17	0700	18	0700	1440	5.7	4.45	39	2.3	0.17	0.29	0.18	0.38	-0.0	0.2	5.00	-0.0	0.0
18	0700	19	0700	1440	16.2	4.55	28	1.1	0.13	0.17	0.04	-0.0	0.4	4.00	-0.0	0.0	
19	0700	20	0700	1440	15.0	3.70	2.39	10.8	0.23	0.38	0.06	0.02	-0.0	0.4	3.30	-0.0	0.0
23	0710	24	0700	1440	12.9	3.65	2.39	5.7	0.24	0.59	0.19	0.06	-0.0	0.3	2.90	-0.0	0.0
24	0700	25	0700	1440	34.7	4.05	105	5.2	0.92	0.89	0.21	0.21	-0.0	0.2	3.30	-0.0	0.0
25	0700	26	0700	1440	25.6	4.45	37	2.5	0.41	0.35	0.11	0.11	-0.0	0.2	1.90	-0.0	0.0
27	0700	28	0700	1440	4.0	4.30	54	2.2	0.45	0.45	0.13	-0.0	0.1	2.50	-0.0	0.0	



## STATION N 01, 45-DAYS PROGRAM.

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HIGH VOLUME SAMPLER

DECEMBER ,1974

## SAMPLING PERIOD

FROM DAY GMT	TO DAY GMT	T.P.M. UG/M <sup>3</sup>	PH	H <sup>4</sup> UG/M <sup>3</sup>	SC4 UG/M <sup>3</sup>	NH <sub>4</sub> -N UG/M <sup>3</sup>	NO <sub>3</sub> -N UG/M <sup>3</sup>	CA UG/M <sup>3</sup>	MG UG/M <sup>3</sup>	NA UG/M <sup>3</sup>	K UG/M <sup>3</sup>	CL UG/M <sup>3</sup>	FF UG/M <sup>3</sup>	NO <sub>2</sub> UG/M <sup>3</sup>	SO <sub>2</sub>
1 0800	2 0830	9.00	5.90	5.35	.49	.01	.03	.05	.15	.02	.02	.32	-0.00	4	1
2 0810	3 0900	5.00	5.35	5.35	.91	.02	.13	.12	.17	.06	.06	2.04	-0.00	2	2
3 0810	4 0800	7.00	4.35	2	1.32	.03	.06	.07	.10	.66	.05	6.9	-0.00	3	3
4 0810	5 0800	3.00	5.20	4	.51	.02	.04	.04	.26	.43	.02	0.07	-0.00	4	4
5 0810	6 0800	5.00	5.60	0	.36	.01	.06	.12	.94	.04	.04	1.05	-0.00	4	4
6 0810	7 0800	5.00	5.30	9	.43	.02	.04	.06	.38	.03	.03	0.52	-0.00	4	4
7 0810	8 0800	3.00	5.30	1	.20	.00	.02	.02	.04	.01	.01	0.03	-0.00	4	4
8 0810	9 0800	7.00	5.35	-0	.87	.03	.05	.07	.11	.54	.07	1.03	-0.00	2	2
9 0810	10 0800	7.00	5.30	0	.75	.01	.05	.19	.19	.05	.05	2.16	-0.00	2	2
10 0800	11 0800	4.00	5.20	0	.52	.01	.04	.06	.30	.03	.03	0.67	-0.00	4	4
11 0800	12 0800	4.00	5.30	0	.39	.00	.01	.04	.06	.38	.03	0.75	-0.00	4	4
12 0810	13 0800	2.00	5.25	-0	.27	.01	.03	.03	.14	.04	.04	0.03	-0.00	4	4
13 0810	14 0800	6.00	5.05	1	.79	.02	.03	.05	.08	.43	.03	0.55	-0.00	3	3
14 0810	15 0800	5.00	5.25	0	.58	.00	.03	.03	.14	.81	.05	1.62	-0.00	2	2
15 0810	16 0800	3.00	5.50	-0	.32	.00	.02	.04	.05	.27	.03	1.47	-0.00	4	4
16 0810	17 0800	8.00	5.25	0	.45	.01	.02	.04	.05	.26	.02	0.75	-0.00	4	4
17 0810	18 0800	2.00	5.35	0	.38	.01	.03	.03	.17	.61	.04	2.29	-0.00	4	4
18 0810	19 0800	3.00	4.95	1	.80	.02	.03	.04	.20	.62	.03	0.56	-0.00	3	3
19 0810	20 0800	6.00	5.10	1	.99	.06	.04	.05	.07	.44	.03	1.62	-0.00	2	2
20 0810	21 0900	6.00	5.35	1	.86	.03	.04	.09	.16	.03	.03	1.23	-0.00	4	4
21 0810	22 0800	10.00	5.10	1	.63	.02	.04	.04	.05	.26	.02	0.75	-0.00	4	4
22 0810	23 0830	12.00	5.20	0	.22	.01	.03	.03	.17	.61	.04	2.29	-0.00	4	4
23 0810	24 0800	21.00	4.80	5	.69	.05	.11	.16	.99	.14	.13	0.56	-0.00	3	3
24 0810	25 0800	16.00	4.50	3	.45	.05	.17	.09	.79	.12	.12	0.47	-0.00	4	4
25 0810	26 0800	7.00	5.20	0	.13	.05	.08	.07	.13	.68	.05	1.14	-0.00	4	4
26 0810	27 0800	4.00	5.25	0	.97	.03	.03	.03	.10	.60	.03	0.96	-0.00	4	4
27 0810	28 0800	12.00	5.25	0	1.33	.02	.11	.21	.15	.73	.14	1.17	-0.00	2	2
28 0810	29 0920	6.00	5.25	0	.98	.05	.04	.07	.10	.53	.05	0.88	-0.00	4	4
29 0820	30 0800	3.00	5.40	0	.43	.02	.05	.08	.44	.03	.03	0.89	-0.00	4	4
30 0810	31 0800	5.00	5.20	0	.51	.04	.03	.05	.17	.40	.04	1.56	-0.00	4	4
31 0810	1 0830	6.00	5.00	0	.77	.03	.03	.03	.11	.29	.04	1.26	-0.00	4	4



## STATION N 01, 45-DAYS PROGRAM.

## PRECIPITATION SAMPLE

DECEMBER \*1974

## SAMPLING PERIOD

FROM DAY GMT		TO DAY GMT		DURATION MIN		AMOUNT MM		PH		H+		SO4		NH4-N		NO3-N		CA		Mg		NA		K		CL		FE		
										UG/L	MG/L	UG/L	MG/L	UG/L	MG/L	UG/L	MG/L	UG/L	MG/L	UG/L	MG/L	UG/L	MG/L	UG/L	MG/L	UG/L	MG/L	UG/L	MG/L	
1	0700	2	0700	1440	7.0	4.35	52	1.8	.16	.32	.09	.1	1.30	-5.00	-0.0	.1	1.30	-5.00	-0.0	.1	1.30	-5.00	-0.0	.1	1.30	-5.00	-0.0	.1	1.30	-5.00
3	0700	4	0700	1440	4.3	3.85	164	4.8	.51	.32	.09	.1	2.90	-0.0	-0.0	.2	2.90	-0.0	-0.0	.2	2.90	-0.0	-0.0	.2	2.90	-0.0	-0.0	.2	2.90	-0.0
4	0700	5	0700	1440	8.1	4.80	15	1.2	.04	.21	.51	.08	-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	-0.0	
6	0700	7	0700	1440	2.3	4.60	28	.8	.07	.14	.07	.05	-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	-0.0	
10	0700	11	0700	1440	5.4	4.90	10	1.02	.05	.09	.22	.28	-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	-0.0	
11	0700	12	0700	1440	6.6	4.65	28	1.4	.03	.09	.28	.28	-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	-0.0	
13	0700	14	0700	1440	3.6	4.55	22	1.5	.11	.18	.20	.24	-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	-0.0	
16	0700	17	0700	1440	18.3	4.70	17	1.1	.11	.13	.11	.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	-0.0	-0.0	-0.0	
19	0700	20	0700	1440	8.9	4.55	27	1.7	.11	.17	.17	.13	-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	-0.0	
21	0700	22	0700	1440	3.3	4.25	64	3.8	.37	.46	.20	.22	-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	-0.0	
22	0700	23	0700	1440	9.4	4.55	36	1.8	.18	.15	.09	.15	-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	-0.0	
23	0700	24	0700	1440	3.1	3.85	163	9.8	1.15	1.22	.19	.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	-0.0	-0.0	-0.0	-0.0	-0.0	
24	0700	25	0700	1440	7.0	0.05	108	7.1	1.35	1.35	.34	.38	-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	-0.0	
25	0700	26	0700	1440	12.3	4.55	30	.1	.21	.28	.12	.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	-0.0	-0.0	
27	0700	28	0700	1440	9.6	4.85	14	.8	.08	.13	.16	.03	-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	-0.0	
30	0700	31	0700	1440	3.8	6.35	-54	2.2	.02	.03	.13	.43	-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	-0.0	
31	0700	32	0700	1440	3.4	5.63	1.8	.11	.30	.13	.43	.101	-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	-0.0	
32	0700	33	0700	1440	3.4	5.63	-19	1.8	.11	.30	.13	.43	-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	-0.0	
33	0700	34	0700	1440	3.4	5.63	1.8	.11	.30	.13	.43	.101	-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	-0.0	
34	0700	35	0700	1440	3.4	5.63	-19	1.8	.11	.30	.13	.43	-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	-0.0	
35	0700	36	0700	1440	3.4	5.63	1.8	.11	.30	.13	.43	.101	-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	-0.0	
36	0700	37	0700	1440	3.4	5.63	-19	1.8	.11	.30	.13	.43	-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	-0.0	
37	0700	38	0700	1440	3.4	5.63	1.8	.11	.30	.13	.43	.101	-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	-0.0	
38	0700	39	0700	1440	3.4	5.63	-19	1.8	.11	.30	.13	.43	-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	-0.0	
39	0700	40	0700	1440	3.4	5.63	1.8	.11	.30	.13	.43	.101	-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	-0.0	
40	0700	41	0700	1440	3.4	5.63	-19	1.8	.11	.30	.13	.43	-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	-0.0	
41	0700	42	0700	1440	3.4	5.63	1.8	.11	.30	.13	.43	.101	-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	-0.0	
42	0700	43	0700	1440	3.4	5.63	-19	1.8	.11	.30	.13	.43	-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	-0.0	
43	0700	44	0700	1440	3.4	5.63	1.8	.11	.30	.13	.43	.101	-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	-0.0	
44	0700	45	0700	1440	3.4	5.63	-19	1.8	.11	.30	.13	.43	-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	-0.0	
45	0700	46	0700	1440	3.4	5.63	1.8	.11	.30	.13	.43	.101	-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	-0.0	
46	0700	47	0700	1440	3.4	5.63	-19	1.8	.11	.30	.13	.43	-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	-0.0	
47	0700	48	0700	1440	3.4	5.63	1.8	.11	.30	.13	.43	.101	-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	-0.0	
48	0700	49	0700	1440	3.4	5.63	-19	1.8	.11	.30	.13	.43	-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	-0.0	
49	0700	50	0700	1440	3.4	5.63	1.8	.11	.30	.13	.43	.101	-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	-0.0	
50	0700	51	0700	1440	3.4	5.63	-19	1.8	.11	.30	.13	.43	-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	-0.0	
51	0700	52	0700	1440	3.4	5.63	1.8	.11	.30	.13	.43	.101	-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	-0.0	
52	0700	53	0700	1440	3.4	5.63	-19	1.8	.11	.30	.13	.43	-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	-0.0	
53	0700	54	0700	1440	3.4	5.63	1.8	.11	.30	.13	.43	.101	-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	-0.0	
54	0700	55	0700	1440	3.4	5.63	-19	1.8	.11	.30	.13	.43	-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	-0.0	
55	0700	56	0700	1440	3.4	5.63	1.8	.11	.30	.13	.43	.101	-0.0	-0.0</td																



## STATION S 02, 45-DAYS PROGRAM.

PRECIPITATION SAMPLE

NOVEMBER , 1974

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## SAMPLING PERIOD

FROM DAY	TO DAY	DURATION MIN	AMOUNT MM	PH	H <sub>+</sub> MEQ/L	SO <sub>4</sub> MG/L	NH <sub>4</sub> -N MG/L	NO <sub>3</sub> -N MG/L	CA MG/L	Mg MG/L	Na MG/L	K MG/L	Cl MG/L	FE MG/L
					DAY	GMT	DAY	GMT						
5	1821	6	0038	377	4.5	-0.00	46	3.8	.77	.44	.26	-0.00	.6	-0.00
6	1132	6	2316	706	5.2	-0.00	99	5.3	.46	.72	.24	-0.00	1.5	-0.00
9	0215	9	0501	166	3.1	-0.00	72	5.7	.60	.47	.30	-0.00	4.0	-0.00
9	0938	9	1546	368	1.0	-0.00	188	3.3	1.75	1.67	.46	-0.00	5.0	-0.00
9	1922	9	2204	162	6.8	-0.00	43	3.6	.14	.14	.24	-0.00	4.0	-0.00
9	2204	10	0107	163	.3	-0.00	48	6.2	.38	.16	.34	-0.00	4.5	-0.00
10	0107	10	0412	165	6.5	-0.00	27	3.6	.14	.18	.24	-0.00	5.3	-0.00
10	1152	11	1457	145	.8	-0.03	27	5.9	.42	.39	.70	-0.00	15.5	-0.00
11	0501	11	0722	141	2.8	-0.00	67	9.1	.52	.90	0.0	-0.00	21.5	-0.00
11	0827	11	1138	191	.8	-0.00	-21	17.6	.66	1.22	1.94	-0.03	47.0	-0.00
11	1457	11	1748	171	1.3	-0.00	61	4.5	.43	.74	.44	-0.06	7.2	-0.00
11	1749	11	2101	193	1.4	-0.00	32	9.1	.78	.52	.98	-0.00	24.0	-0.00
11	2102	13	2142	40	1.5	-0.00	43	7.4	.52	.42	.72	-0.00	17.5	-0.00
13	0428	13	0650	142	.1	-0.00	64	3.2	-0.00	-0.00	-0.00	-0.00	12.6	-0.00
13	1518	13	1749	151	2.6	-0.00	43	5.7	.56	.54	-0.00	-0.00	11.8	-0.00
14	0436	14	0722	196	1.0	-0.00	43	8.2	1.22	.58	.80	-0.00	19.5	-0.00
14	0722	14	1340	379	3.0	-0.00	54	3.6	.22	.50	.36	-0.00	5.3	-0.00
14	1340	14	1947	367	6.5	-0.00	40	7.1	.98	.51	.82	-0.00	7.2	-0.00
14	1947	14	2301	194	1.3	-0.00	68	7.1	.99	.86	.74	-0.00	7.4	-0.00
15	1028	15	1335	187	9.2	-0.00	38	4.1	.29	.27	.42	-0.00	7.8	-0.00
15	1335	15	1455	196	1.0	-0.03	37	2.1	.28	.19	.12	-0.00	1.3	-0.00
16	0837	16	1142	185	5.9	-0.00	48	2.1	.31	.43	.08	-0.00	.5	-0.00
16	1454	16	1810	196	6.1	-0.00	45	3.2	.63	.46	.26	-0.00	4.4	-0.00
16	1810	18	0029	379	3.3	-0.00	63	3.8	.67	.89	1.30	-0.00	2.1	-0.00
18	0432	18	0739	187	.2	-0.00	46	13.6	-0.00	-0.00	-0.00	-0.00	25.0	-0.00
18	0739	18	1422	567	2.4	-0.00	99	1.0	1.16	1.26	-0.00	-0.00	13.4	-0.00
19	0616	19	1253	95	3.1	-0.00	92	2.59	2.25	.90	-0.00	-0.00	2.9	-0.00
19	1549	20	0113	564	1.8	-0.00	68	5.4	1.16	.95	.22	-0.00	1.9	-0.00
20	0340	20	0753	193	1.3	-0.00	30	4.1	.38	.26	.30	-0.00	7.5	-0.00
24	1627	24	1945	198	2.2	-0.00	74	7.8	1.34	.75	.24	-0.00	3.5	-0.00
24	1945	24	2257	192	1.9	-0.00	65	4.0	.54	.43	.12	-0.00	2.4	-0.00
25	1338	26	0709	1051	6.4	-0.00	63	4.1	.60	.22	-0.00	-0.00	1.7	-0.00
26	1044	26	1044	133	1.3	-0.00	92	7.8	.92	.35	-0.00	-0.00	3.9	-0.00
27	0812	28	0800	1428	3.3	-0.00	69	3.2	1.82	.58	-0.00	-0.00	3.3	-0.00



## STATION S 02, 45-DAYS PROGRAM.

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## HIGH VOLUME SAMPLER

DECEMBER ,1974

## SAMPLING PERIOD

FROM DAY	TO DAY	T.P.M.	PH	H+	S04	NH4-N	N03-N	CA	MG	NA	K	CL	FE	N02	S02
DAY	GMT	DAY	GMT	UG/M3											
2	0810	3	0800	21.20	-0.00	-1	4.60	.41	.23	.33	-0.00	5.40	-0.00	-0.00	-0
3	0810	4	0800	23.20	-0.00	-1	3.85	.53	.36	.25	-0.00	5.00	-0.00	-0.00	-0
4	0810	5	0800	25.40	-0.00	0	4.20	.68	.25	.22	-0.00	5.10	-0.00	-0.00	-0
5	0810	6	0800	31.20	-0.00	5	2.70	.49	.39	.35	-0.00	7.90	-0.00	-0.00	-0
6	0810	7	0800	14.10	-0.00	2	2.70	.34	.17	.14	-0.00	2.50	-0.00	-0.00	-0
9	0810	10	0800	20.90	-0.00	-3	2.90	.24	.19	.42	-0.00	5.40	-0.00	-0.00	-0
10	0810	11	0800	22.60	-0.00	25	3.00	.22	.15	.32	-0.00	6.70	-0.00	-0.00	-0
11	0810	12	0800	19.00	-0.00	-1	2.70	.55	.32	.26	-0.00	4.30	-0.00	-0.00	-0
12	0810	13	0800	11.50	-0.00	0	2.10	.34	.13	.09	-0.00	1.60	-0.00	-0.00	-0
13	0810	14	0800	22.90	-0.00	-1	2.70	.32	.17	.25	-0.00	4.60	-0.00	-0.00	-0

## STATION S 02, 45-DAYS PROGRAM.

## PRECIPITATION SAMPLE

DECEMBER ,1974

## SAMPLING PERIOD

FROM DAY	TO DAY	DURATION	AMOUNT	PH	H+	S04	NH4-N	N03-N	CA	MG	NA	K	CL	FE	N02	S02
DAY	GMT	DAY	GMT	MIN	MM	UG/L	MG/L	UG/M3	UG/M3							
1	1435	2	0316	76.1	.9	-0.00	72	5.8	.97	1.27	.24	-0.00	2.9	-0.00	-0.00	-0
2	0744	2	1215	27.1	1.1	-0.00	58	6.0	.88	.84	.40	-0.00	6.9	-0.00	-0.00	-0
4	0918	5	0718	1320	5.2	-0.00	107	12.9	.77	.75	1.14	-0.00	27.3	-0.00	-0.00	-0
5	2255	6	0323	268	2.3	-0.00	27	8.2	.13	.16	1.06	-0.00	36.1	-0.00	-0.00	-0
6	0323	7	0751	268	1.1	-0.00	22	2.0	.03	.12	.34	-0.00	3.5	-0.00	-0.00	-0
7	0751	7	2122	811	2.1	-0.00	38	2.5	.14	.17	.16	-0.00	3.0	-0.00	-0.00	-0
8	1522	9	0450	808	1.5	-0.00	32	3.6	.31	.52	.22	-0.00	3.6	-0.00	-0.00	-0
9	0922	9	1352	270	.5	-0.00	2	11.0	.78	.99	-0.00	-0.00	22.7	-0.00	-0.00	-0
10	0335	10	0824	289	.1	-0.00	11	92.4	-0.00	-0.30	-0.00	-0.00	380.0	-0.00	-0.00	-0
10	1725	11	0226	541	2.6	-0.00	34	22.5	.60	.50	.96	-0.00	84.0	-0.00	-0.00	-0
11	0654	11	1115	261	.2	-0.00	16	51.7	-0.00	-0.30	-0.00	-0.00	200.0	-0.00	-0.00	-0
12	0658	12	1745	647	1.6	-0.00	70	18.5	.53	1.16	-0.00	-0.00	58.0	-0.00	-0.00	-0
14	0255	14	0716	261	2.4	-0.00	37	7.9	.22	.37	1.06	-0.00	22.0	-0.00	-0.00	-0
14	1606	14	0716	530	2.3	-0.00	110	9.0	.81	.34	.00	-0.00	19.0	-0.00	-0.00	-0

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## STATION UK 1, 45-DAYS PROGRAM.

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HIGH VOLUME SAMPLER  
NOVEMBER , 1974

## SAMPLING PERIOD

## COMPONENTS

FROM	TO	T.P.M.	PH	H <sub>+</sub>	SO <sub>4</sub>	NH <sub>4</sub> -N	NO <sub>3</sub> -N	CA	MG	NA	K	CL	FE	NO <sub>2</sub>	SO <sub>2</sub>
DAY	GMT	DAY	GMT	UG/m <sup>3</sup>	UG/m <sup>3</sup>	UG/m <sup>3</sup>	UG/m <sup>3</sup>	UG/m <sup>3</sup>	UG/m <sup>3</sup>	UG/m <sup>3</sup>	UG/m <sup>3</sup>	UG/m <sup>3</sup>	UG/m <sup>3</sup>	UG/m <sup>3</sup>	UG/m <sup>3</sup>
1	0700	2	0700	-0.00	5.75	2	2.20	2.52	.40	.23	.09	-3.00	-0.00	-0.00	-0
3	0700	4	0700	-0.00	5.65	2	2.00	.83	.31	.21	.08	-0.30	-0.05	-0.05	-0
5	0700	6	0700	-0.00	4.35	451	5.10	2.60	.38	.53	.16	-3.00	-0.00	-0.00	-0
7	0700	8	0700	-0.00	5.15	7	4.10	2.20	.93	.91	.15	-3.00	-0.00	-0.00	-0
8	0700	9	0700	-0.00	5.95	1	3.20	1.05	.28	.15	.10	-3.00	-0.00	-0.00	-0
9	0700	10	0700	-0.00	5.95	1	2.60	.76	.26	.33	.19	-3.00	-0.00	-0.00	-0
11	0700	12	0700	-0.00	5.75	2	1.80	.63	.18	.17	.14	-0.00	-0.00	-0.00	-0
13	0700	14	0700	-0.00	5.05	9	3.60	.74	.16	.36	.13	-3.00	-0.00	-0.00	-0
15	0700	15	0700	-0.00	5.60	3	5.10	1.40	.26	.36	.14	-3.00	-0.00	-0.00	-0
16	0700	17	0700	-0.00	5.50	3	7.20	2.40	.34	.63	.15	-3.00	-0.00	-0.00	-0
17	0700	18	0700	-0.00	5.30	5	6.20	1.90	.37	.16	.04	-3.00	-0.00	-0.00	-0
18	0700	19	0700	-0.00	4.75	18	5.90	2.12	.21	.97	.14	-3.00	-0.00	-0.00	-0
20	0700	21	0700	-0.00	4.45	35	5.40	2.10	.26	.34	.07	-3.00	-0.00	-0.00	-0
21	0700	22	0700	-0.00	5.40	4	3.30	1.10	.38	.22	.04	-3.00	-0.00	-0.00	-0
22	0700	23	0700	-0.00	5.80	2	6.90	2.02	.32	.37	.04	-3.00	-0.00	-0.00	-0
24	0700	25	0700	-0.00	5.60	3	1.20	.37	.14	.65	.17	-3.00	-0.00	-0.00	-0
30	0700	1	0700	-0.00	5.60	3	1.07	.33	.17	.17	-3.00	-0.00	-0.00	-0.00	-0

## STATION UK 1, 45-DAYS PROGRAM.

## PRECIPITATION SAMPLE

NOVEMBER , 1974

## SAMPLING PERIOD

## COMPONENTS

FROM	TO	DURATION	AMOUNT	P <sub>H</sub>	H <sub>+</sub>	SO <sub>4</sub>	NH <sub>4</sub> -N	NO <sub>3</sub> -N	CA	MG	NA	K	CL	FE	NO <sub>2</sub>	SO <sub>2</sub>
DAY	GMT	DAY	MIN	MM	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
1	0700	2	0700	1440	1.9	3.60	251	7.6	.60	.20	.03	.01	-0.0	-0.30	-0.30	-0
2	0700	3	0700	1440	4.4	4.20	63	9.4	-0.00	-0.00	2.50	.62	-0.0	-0.0	-0.0	-0
3	0700	4	0700	1440	4.0	4.40	40	3.9	.80	.17	.17	-0.0	-0.0	-0.00	-0.00	-0
9	0700	10	0700	120	2.0	4.60	25	3.7	.70	.31	.07	-0.0	-0.0	-0.00	-0.00	-0
11	0700	12	0700	410	6.9	4.60	25	1.3	.10	.16	.09	-0.0	-0.0	-0.00	-0.00	-0
13	0700	14	0700	1050	12.3	4.40	40	3.0	.30	.20	.17	.12	-0.0	-0.00	-0.00	-0
14	0700	15	0700	230	9.9	4.60	25	1.9	.10	.10	.56	.26	-0.0	-0.00	-0.00	-0
15	0700	16	0700	240	3.1	4.10	79	4.8	.60	.40	.40	.13	-0.0	-0.00	-0.00	-0
16	0700	17	0700	210	1.6	4.10	79	5.6	.30	.43	.10	-0.0	-0.0	-0.00	-0.00	-0
17	0700	18	0700	840	18.7	4.20	63	4.4	.40	.30	.15	.05	-0.0	-0.00	-0.00	-0
18	0700	19	0700	240	11.2	4.30	50	1.3	.10	.20	.15	.02	-0.0	-0.00	-0.00	-0
19	0700	20	0700	240	4.1	4.00	100	3.2	.10	.21	.04	-0.0	-0.00	-0.00	-0.00	-0
20	0700	21	0700	400	7.5	3.93	126	1.7	.50	.20	.37	.06	-0.0	-0.00	-0.00	-0
21	0700	22	0700	730	17.1	4.10	79	2.2	.30	.10	.22	.03	-0.0	-0.00	-0.00	-0
24	0700	25	0700	150	.9	4.10	79	4.7	.90	.40	.64	.25	-0.0	-0.00	-0.00	-0
28	0700	29	0700	110	5.20	4.20	63	3.3	.40	.20	.68	.49	-0.0	-0.00	-0.00	-0
29	0700	30	0700	5.3	4.20	63	3.5	.32	.18	.59	.18	-0.0	-0.00	-0.00	-0.00	-0

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## STATION UK 1, 45-DAYS PROGRAM.

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## HIGH VOLUME SAMPLER

DECEMBER \*1974

## SAMPLING PERIOD

FROM DAY 4 6 8 13 16	TO DAY 0700 0700 0700 0700 0700	T.P.M.		PH	H <sup>+</sup>	SO <sub>4</sub>	NH <sub>4</sub> -N	NO <sub>3</sub> -N	CA	MG	NA	K	CL	FE	NO <sub>2</sub>	SO <sub>2</sub>
		UG/M <sub>3</sub>	UG/M <sub>3</sub>													
		-0.00	-0.00	5.95	-1	1.90	*40	*16	*27	*18	-0.00	-0.00	-0.00	-0.00	43	10
		-0.00	-0.00	6.15	-1	3.80	1.01	*39	*65	*12	-0.00	-0.00	-0.00	-0.00	53	7
		-0.00	-0.00	5.40	4	4.30	1.30	*30	*25	*05	-0.00	-0.00	-0.00	-0.00	27	13
		-0.00	-0.00	5.75	2	3.60	1.29	*41	*67	*23	-0.00	-0.00	-0.00	-0.00	37	
		-0.00	-0.00	5.63	25	2.20	.60	.23	.45	.22	-0.00	-0.00	-0.00	-0.00	70	29

## STATION UK 1, 45-DAYS PROGRAM.

## PRECIPITATION SAMPLE

DECEMBER

\*1974

## SAMPLING PERIOD

## COMPONENTS

FROM DAY 10 12 16 22 23 25 26	TO DAY 0700 0700 0700 0700 0700 0700 0700	DURATION		AMOUNT MM	PH	H <sup>+</sup>	SO <sub>4</sub>	NH <sub>4</sub> -N	NO <sub>3</sub> -N	CA	MG	NA	K	CL	FE	NO <sub>2</sub>	SO <sub>2</sub>
		UG/L	UG/L														
		2.5	5.20	6	6.0	.60	.30	2.20	.54	-0.0	-0.0	-0.00	-0.00	-0.00	30		
		5.2	4.05	89	3.6	.20	.10	.50	.06	-0.0	-0.0	-0.00	-0.00	-0.00	00		
		1.7	4.30	5.9	5.9	.20	.20	.47	.06	-0.0	-0.0	-0.00	-0.00	-0.00	00		
		1.8	6.3	2.3	-3.00	-1.50	-0.00	-0.00	-0.00	-0.0	-0.0	-0.00	-0.00	-0.00	30		
		4.80	1.9	16	4.80	-0.00	-0.00	-0.00	-0.00	-0.0	-0.0	-0.00	-0.00	-0.00	00		
		4.55	2.4	28	2.6	-0.00	-0.00	-0.00	-0.00	-0.0	-0.0	-0.00	-0.00	-0.00	00		
		7.5	4.60	1.440	1.440	-0.00	-0.00	-0.00	-0.00	-0.0	-0.0	-0.00	-0.00	-0.00	00		

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