Table D3.23 The Concentration of Pb, Zn, Cd in the Atmosphere

		totali absorb air	Pb	Zn	Cd
			μ g/m³		
M M S (1)	3-4.IX.1985	15.5	5.70	4.00	0.50
	12-13.V.1986	8,84	6.64	22.70	0.89
	31-1.VIII.1986	11.48	4.45	1.89	0.00
TEKE (3)	20-21.V.1986	10.17	0.92	1.55	4.67
	7-8.VIII.1986	13.79	0.44	0.99	0.00
	4-5.X.1986	14.02	5.39	8.90	0.56
BASINO SELO (4)	1-2.XI.1985	13.7	0.91	2.39	0.04
	24-25.VII.1986	8.99	0.61	1.52	0.04
	19-20.VIII.198	10.27	0.00	0.82	0.00
GRADSKO (5)	12-13.XI.1985	16.84	0.18	3.93	0.00
	10-11.VI.1986	10.4	0.00	0.99	0.00
	20-21.VIII.198	11.26	0.19	0.60	0.00

Source : RHI

Table D3.24 The Concentration of Pb, Cd, Zn in the Dust

Annual Average Concentrations in Veles (1976-1985)

		Average	conc.	mg/m2
Urban area	Year	Pb	Cd	Zn
	1976/77	5,200	0,260	9,780
	1982	0,530	0,056	0,253
	1983	1,721	0,104	0,455
Veles	1984	0,817	0,041	0,523
	1985	1,336	0,101	10,769
Control area	1984	0,056	0,004	0,054
v. Ivankovci	1985	0,042	0,007	0,217

Source : IPH-Veles

Table D3.25 The Concentration of Pb, Cd, Zn in the Atmosphere

Annual Average Concentrations in Veles

		Average	conc	mg/m3
Urban area	Year	Pb	Cd	Zn
	1976/77	2,480	0,170	1,750
	1982	1,080	0,193	0,741
	1983	1,086	0,172	0,626
Veles	1984	0,773	0,087	0,599
	1985	0,701	0,120	1,138
Control area	1984	0,077	0,010	0,103
v. Ivankovci	1985	0,083	trace	0,126

Source : IPH-Veles

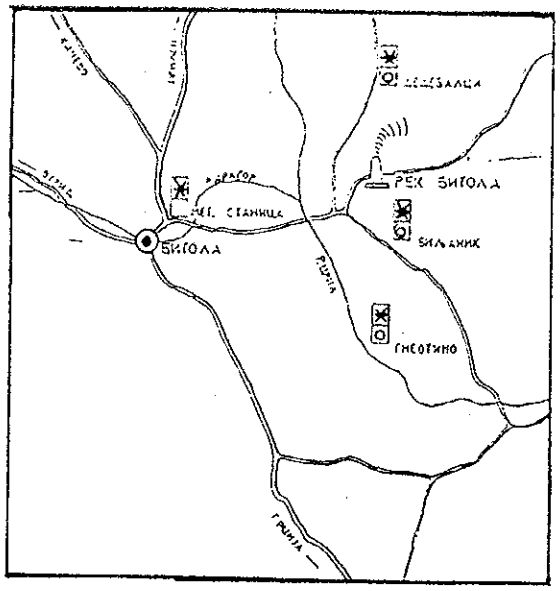
Table D3.26 Air Quality Level in Bitola for Dust (1996)

Month	Replek (mg/m^2)	st.8-ma No.2 (mg/m^2)	UVR -station (mg/m^2)	Factory"Progr es" (mg/m^2)
January	38.86	63.69	72.81	73.88
February	22.40	57.71	54.70	111.03
March	48.74	54.77	59.44	58.47
April	51.61	72.94	129.94	84.90
May	86.82	73.00	94.78	35.66
June	14.40	96.18	150.50	183.50
July	128.39	64.22	57.77	48.69
August	10.80	59.73	347.86*	75.63
September	60.42	151.35	112.26	251.08
October	42.47	29.25	66.74	68.96
November	13.17	68.64	42.90	125.56
December	29.50	41.70	87.50	45.50
Total - 1996	45.63	69.43	106.43	96.90

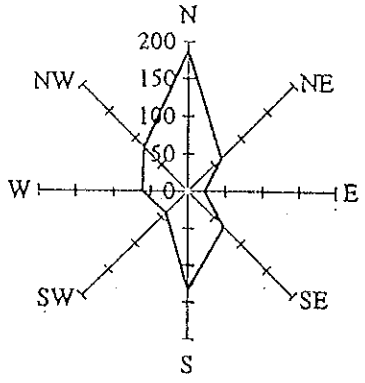
*above the MPC (maximum permited concentration - 300 mg/m^2)

Source : IPH

Bitola



AVERAGE ANNUAL WIND DISTRIBUTION



* - SO_2 and black smoke o - dust deposit

Figure D3.18 The Measuring Points Disposition

Table D3.27 The Survey Results of SO_2 and Black Smoke in Bitola

MMS BITOLA

SO_2

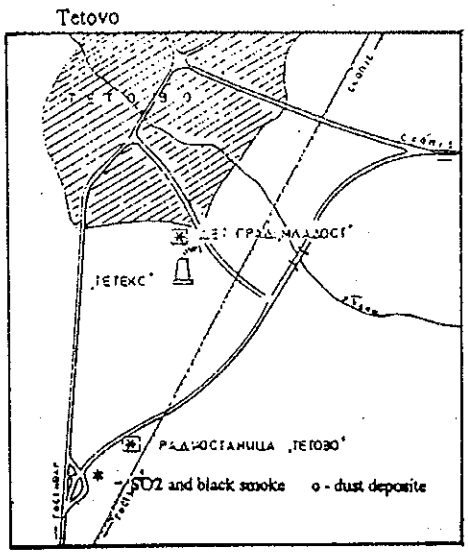
	$\bar{C}$	%	C_{98}	MPC	C_{max}
1984	9	99	34	0	45
1985	18	100	74	1	153
1986	21	98	123	1	151
1987	18	99	90	0	134
1988	15	90	37	0	55
1990	18	93	83	0	190
1991	12	80	42	0	77
1992	7	99	23	0	51
1993	4	99	15	0	33
1994	8	100	29	0	33

black smoke

	$\bar{C}$	%	C_{98}	MPC	C_{max}
1984	16	99	71	25	103
1985	19	100	77	42	101
1986	19	98	96	40	149
1987	17	99	75	22	161
1988	16	90	78	22	107
1990	16	83	85	23	164
1991	22	80	79	33	280
1992	16	97	69	22	162
1993	16	97	67	23	176
1994	14	100	69	18	124

$\bar{C}$ - average annual concentration $\mu g/m^3$
C_{98} - 98-percentile value
% - % of realisation
MPC - number of days > MPC = 150 (50)
C_{max} - max. annuel value $\mu g/m^3$

Source : RHI



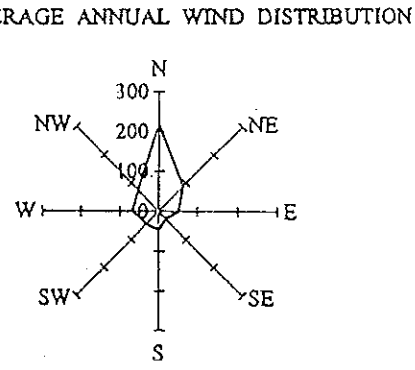


Figure D3.19 The Measuring Points Disposition

Table D3.28 The Survey Results of SO_2 and Block Smoke in Tetove

SO_2

	Kinder garten Tetovo					Radi station				
	$\bar{C}$	%	C_{98}	MP	C_{max}	$\bar{C}$	%	C_{98}	MP	C_{max}
1984	7	99	49	0	79	10	100	71	0	107
1985	27	99	123	2	183	23	94	119	2	199
1986	19	99	137	5	168	22	93	156	9	233
1987	9	99	65	0	96	22	91	149	7	237
1988	9	99	54	0	80	12	94	55	0	105
1990	5	88	19	0	27					
1991	4	93	21	0	70					
1992	2	96	10	0	21					
1993	2	97	8	0	41					
1994	3	95	11	0	18					

black smoke

	Kinder garten Tetovo					Radio station				
	$\bar{C}$	%	C_{98}	MP	C_{max}	$\bar{C}$	%	C_{98}	MP	C_{max}
1984	14	99	84	25	179	32	100	101	62	187
1985	36	99	143	82	230	38	94	136	78	333
1986	33	99	153	62	189	31	93	125	48	178
1987	26	99	117	52	135	31	97	121	56	245
1988	33	96	162	60	277	31	94	124	58	186
1990	32	88	131	36	271					
1991	35	89	206	62	230					
1992	26	96	114	42	312					
1993	24	97	166	31	238					
1994	23	96	103	29	192					

$\bar{C}$ - average annual concentration mg/m³
C_{98} - 98-percentile value
% - % of realisation
MPC - number of days > MPC = 150 (50)

Source : RHI

Table D3.29 Air-quality Level in Kumanovo for Dust Fall (1996)

Month	Average concentration (mg/m^2)	Minimum (mg/m^2)	Maximum (mg/m^2)
January	226.1	187.7	299.1
February	35.0	29.7	39.4
March	44.5	35.9	54.0
April	79.9	64.8	97.1
May	78.7	75	88.0
June	89.0	82.0	96.0
July	83.3	68.5	93.2
August	118.5	106.0	130.0
September	72.3	53.3	92.9
October	71.5	54.0	107.0
November	199.5	122.9	301.3*
December	142.9	103.9	194.5
Total - 1996	103.4	81.9	132.7

* above MPC (maximum permited concentration - 300 mg/m^2)

Source : IHP

Table D3.30 Air Quality Level in Shtip for Dust Fall (1996)

Pollutant	No. of measurement sites	No. of sampler	Average monthly concentration (mg/m^2)	Minimum - maximum (mg/m^2)	No. of days above the MPC*
Dust	4	47	410	142.3-1176.0	275

*MPC - maximum permited concentration (300 mg/m^2)

Source : IHP

Table D3.31 Air Quality Level in Prilep and Krushevo for Dust Fall (1996)

Cities	No. of samples	Average monthly concentration (mg/m^2)	Minimum - maximum (mg/m^2)	No. of days above the MPC*
Prilep	60	424.2	195.0-776.8	240
Krushevo	24	461.0	150.0-876.0	240

*MPC - maximum permited concentration (300 mg/m^2)

Source : IHP

Notes of Table D3.32(1) - Table D3.32(5)

The information and data about investigated objects and emitters are given in Table 3.32. The are given together with data about:

Object 1: Number of emitters
2: Type of emitters: industrial (I), energetic (E) and communal-heating (C)
3: Installation power (in MW)
4: Quantity of liquid fuel per hour (in kg/h)
5: Quantity of solid fuel (in kg/h)
6: Quantity of gas fuel (in m^3/h)
7: Volumetric flow of waste gases (in Nm^3/h) from emitters working in the investigated period
8: Total vol. Flow of gases of registered emitters (in Nm^3/h)
9: y coordinate (longitude), Gauss-Krieger protection
10: x coordinate latitude), Gauss-Krieger protection

Table D3.32(1) Emission Source Facilities in Skopje

No.	Object	1	2	3	4	5	6	7	8	9	10
	I. Community Cair										
1	Basic School (BS) "Vasil Glavinov"	2	C	1.22	80	-	-	675	1285	75 36 400	46 52 225
2	BS Rajko Zinzifov	2	C	1.1	100	-	-	580	1160	75 36 375	46 52 925
3	BS Petar Zdravkovski	2		1.16	100	-	-	610	1220	75 37 100	46 53 200
4	BS Panajot Ginovski	2	C	1.2	100	-	-	630	1260	75 37 725	46 53 112
5	BS Zivko Brajkovski	5	C	1.6	270	-	-	630	1683	75 37 500	46 54 175
6	BS Kliment Ohridski	2	C	1.66	140	-	-	874	1748	75 37 350	46 55 225
7	BS 26 Juli	2	C	1.18	80	-	-	610	1242	75 35 550	46 55 325
8	BS Braca Ramiz Hamid	2	C	0.8	60	-	-	420	840	75 35 550	46 55 500
9	BS Idnina	4	C	0.81	170	-	-	316	856	75 37 550	46 53 050
10	BS Nikola Vapcarov		C	0.81	80	-	-	420	840	75 36 925	46 52 500
11	BS Aco Sopov	2	C	1.1 2.0 2.2	-	60	-	-	-	75 37 425	46 59 525
12	Children-garden-C-G Snezana	2	C	0.6	60	-	-	316	632	75 36 325	46 52 225
13	C-G Snezana, K-1	1	C	0.6	60	-	-	420	632	75 36 375	46 52 825
14	C-G Snezana, K-2	1	C	0.4	40	-	-	316	420	75 35 550	46 55 175
15	C-G 11 Oktomvri	2	C	0.73	55	-	-	390	760	75 37 000	46 53 150
16	C-G Rosica	1	C	0.4	30	-	-	420	420	75 36 950	46 52 950
17	C-G Brat.-Edinst.	2	C	0.3	50	-	-	316	316	75 37 850	46 53 050
18	C-G Br.Ed. K-S.P	1	C	0.1	10	-	-	105	105	75 37 500	46 54 275
19	C-G Br.Ed K-NK	2	C	0.5	50	-	-	263	526	75 37 375	46 54 300
20	C-G 11 Oktomvri	2	C	0.6	50	-	-	316	632	75 37 425	46 59 300
21	High School-HSArsenl Jakov	2	C	1.2	120	-	-	632	1264	75 37 150	46 53 300
22	HS Cvetan Dimov	2	C	1.55	110	-	-	1054	1634	75 36 675	46 52 250
23	Pension home	2	C	0.8	60		-	-	-	75 36 500	46 52 250
24	Rehabilitation center	3	C	3.6	240	-	-	1260	3780	75 36 550	46 53 275
25	Rehabilit. Center 25 May	2	C	1.07	80	-	-	890	890	75 37 150	46 54 750
26	Ambulance Kraiska 1	1	C	0.15	10	-	-	160	160	75 37 350	46 54 150
27	Ambulance - S.Orizari	2	C	0.7	-	160	-	458	916	75 35 200	46 55 625
28	Ambulance Cair	3	C	1.37	100	-	-	900	1550	75 37 425	46 53 050
29	Post Cair	2	C	0.5	50	-	-	316	316	75 37 150	46 52 325
30	Police Station	1	C	0.08	8	-	-	82	82	75 37 375	46 54 650
31	Jail Skopje	2	C	1.78	80	-	-	250	500	75 35 625	46 54 225
32	Electrodistribut.	2	C	3.75	200	-	-	2250	3000	75 36 625	46 54 225
33	Textile factory Nase Dete	2	C	0.11	10	-	-	116	116	75 37 150	46 53 750
34	Water Supply.	2	C	3.49	300	-	-	1833	3133	75 36 625	46 54 050
35	Textile factorySkoteks	1	C	2.2	50	-	-	612	612	75 37 050	46 53 450
36	Bakery 8 March	13	C	4.5	935	-	-	5550	5550	75 36 050	46 54 125
37	Porc. factory IGM	11	I	3.20 - for 4	561	-	304	69490	69490	75 36 125	46 53 625
	TOTAL	95	84C 11 I	48.46	4499	220	304	94480	109570		

Table D3.32(2) Emission Source Facilities in Skopje

No.	Object	1	2	3	4	5	6	7	8	9	10
	II. Community Karpos										
38	BS Mirce Acev	2	C	1.395	140	-	-	858	1470	75 29 500	46 51 600
39	BS Koco Racin	4	C	-	132	-	-	516	2064	75 30 575	46 51 275
40	BS Gj. Petrov	2	C	1.162	102	-	-	663	1326	75 28 325	46 51 625
41	C-G Vlae	2	C	-	16	-	-	108	216	75 31 625	46 51 750
42	C-G Gj. Petrov I	2	C	0.522	26	-	-	264	528	75 30 775	46 51 450
43	C-G G. Petrov II	2	C	0.186	20	-	-	106	212	75 28 550	46 51 750
44	C-G G. Rosica	2	C	0.302	16	-	-	172	344	75 31 375	46 51 350
45	Gereontological center	2	C	1.162	102	-	-	663	1326	75 28 500	46 51 625
46	Ambulance G. Petrov	1	C	0.151	15	-	-	159	159	75 28 700	46 51 825
47	Polyclinic G. Petrov	3	C	1.2	-	-	-	1440	4320	75 30 500	46 51 750
48	Post Gj. Petrov	2	C	0.6	-	-	-	-	-	75 30 550	46 51 750
49	Chem. Factory ADING	2	C	0.95	-	100	-	542	1084	75 30 650	46 52 150
50	Copper factory KUPROM	2	C	2	100	-	-	910	1820	75 50 850	46 50 850
51	Textile factory VELUFLOK	2	C	2.4	120	-	-	1370	2740	75 31 550	46 50 875
52	Constr. Comp. Mavrovo	3	C	3.48	240	-	-	1222	3666	75 31 625	46 52 125
53	TEHNOGAS	3	C	1.162	150	-	-	610	815	75 31 100	46 51 875
54	Constr. Comp. Karpos	1	C	5.8	685	-	-	6360	6360	75 31 200	46 51 925
55	Textile factory KOLEKTIV	2	C	1.2	120	-	-	574	1148	75 30 875	46 52 400
56	SKOVIN	3	C	1.673	102	-	-	611	1763	75 30 275	46 53 000
57	Chem. and Cosmetic co. ALKALOID	1	C	6.97	612	-	-	7956	7956	75 30 950	46 52 150
58	Constr. Co. Beton	3	C	2.905	70	-	-	1194	3051	75 31 125	46 52 100
59	Bakery Zito luks -Gj. Petrov	4	I	1.604	248	-	-	2890	2890	75 31 475	46 51 875
60	Central Heating Plant - WEST	6	E	176.9	14760	-	-	137364	137367	75 32 875	46 50 850
	TOTAL	**55**	**46 C 4 I 6 E**	**213.7**	**17776**	**100**	-	**166535**	**182625**		
	III. Community Center										
61	BS Tefejuz	2	C	1.16	100	-	-	613	1226	75 37 150	46 51 350
62	BS Bratstvo Edinstvo	2	C	0.6	40	-	-	306	612	75 37 025	46 51 500
63	BS Lirlja	3	C	2.76	234	-	-	1104	2820	75 37 425	46 52 300
64	BS Cvetan Dimov	2	C	1.3	100	-	-	735	1347	75 37 275	46 52 175
65	BS Dame Gruev	2	C	1.16	80	-	-	612	3211	75 36 750	46 52 000
66	BS Lirija II	3	C	1.5	66	-	-	1054	1224	75 37 050	46 51 150
67	C-G Cvet	2	C		40	-	-	240	480	75 37 500	46 52 000
68	Student house KJP	3	C	2.895	255	-	-	1020	3005	75 35 550	46 50 250
69	Hotel Grand	2	C	2.4	170	-	-	1264	2414	75 36 600	46 50 150
70	Hotel Jadran	1	C	0.41	20	-	-	650	650	75 36 050	46 50 375
71	Hotel Bristol	1	C	0.3	30	-	-	280	280	75 36 050	46 49 900

Table D3.32(3) Emission Source Facilities in Skopje

No.	Object	1	2	3	4	5	6	7	8	9	10
	III. Community Center										
72	Hotel Turist	2	C	1.2	120	-	-	680	1290	75 36 100	46 50 050
73	Hotel Panorama	2	C	1.626	142	-	-	857	1714	75 35 425	46 48 925
74	Hotel Skala	2	C	2.094	184	-	-	1100	2208	75 35 550	46 48 675
75	Rehabilitation medical depart.	2	C	2.3	302	-	-	1214	2428	75 34 750	46 49 750
76	Clinic Center	4	C	27	2750	-	-	9500	29512	75 35 250	46 49 375
77	Medical Ginecol. Center - Cair	2	C	3	240	-	-	1620	3211	75 36 850	46 51 950
78	Central Post	2	C	4.3	380	-	-	2450	4557	75 36 125	46 50 550
79	Text. Comp. Makedonija sport	2	C	1.16	-	-	-	608	-	75 35 625	46 49 500
80	Graphic Comp. Goce Delcev	3	C	-	110	-	-	1070	1670	75 36 000	46 50 300
81	Mebel factory Treska	3	C	7.4	647	-	-	3305	6857	75 34 700	46 50 400
82	Tobacco factory	7	4 C 3 I	0.522	26	-	-	2550	5800	75 36 900	46 49 300
83	Bakery Zito luks	4	I	0.8	80	-	-	421	842	75 35 300	46 49 875
84	Heating plant Park	2	E	9	400	-	-	2515	5031	75 35 050	46 51 375
85	Heating plant Vodno	2	E	4	240	-	-	1800	3600	75 34 625	46 49 750
	TOTAL	62	51 C 7 I 4 E	79.3	6756	-	-	37568	84359		
	IV. Community Gazi Babar										
86	BS Gligor Prlicev	5	C	0.63	90	-	-	400	670	75 38 500	46 52 400
87	BS Krste Misirkov	4	C	0.36	100	-	-	600	800	75 42 300	46 51 950
88	BS 25 May	2	C	1.16	80	-	-	611	1222	75 42 450	46 42 200
89	BS Dana Krapcev	2	C	1.13	60	-	-	611	1191	75 42 100	46 51 200
90	BS Naum Naumovski Borce	2	C	1.16	20	-	-	611	1222	75 41 825	46 50 650
91	BS Vera Jocic	2	C	1.16	100	-	-	611	1222	75 41 875	46 49 800
92	C-G Detska radost	2	C	0.6	60	-	-	316	632	75 38 500	46 52 475
93	C-G 25 May I	2	C	0.46	50	-	-	242	484	75 42 250	46 51 625
94	C-G 25 May II	2	C	0.46	50	-	-	242	484	75 44 125	46 48 900
95	C-G 25 May III	2	C	0.46	50	-	-	242	484	75 41 875	46 49 900
96	C-G 25 May IV	2	C	0.31	45	-	-	170	328	75 41 850	46 51 175
97	C-G 25 May V	2	C	0.3	40	-	-	158	316	75 41 550	46 50 700
98	HS Edvard Kardelj	9	C	-	-	-	-	-	-	75 39 675	46 50 950
99	HS ETUC	2	C	1.98	100	-	-	1475	2086	75 39 675	46 50 950
100	HS ASUC	2	C	2.4	120	-	-	1170	2340	75 39 750	46 51 000
101	Senic	2	C	2.12	120	-	-	1330	2194	75 39 550	46 50 925
102	Hotel Continental	2	C	1.9	130	-	-	1030	1870	75 38 000	46 50 625
103	Post Cento	2	C	0.12	20	-	-	70	140	75 42 250	46 51 350
104	Custom Direction	1	C	0.72	50	-	-	630	630	75 39 800	46 50 650
105	Policlinic Cento	2	C	0.46	45	-	-	242	484	75 42 250	46 51 330

Table D3.32(4) Emission Source Facilities in Skopje

No.	Object	1	2	3	4	5	6	7	8	9	10
	IV. Community Gazi Babar										
106	Metal Constr. Co. MZT	6	C	24.75	2550	-	-	6200	6811	75 40 575	46 50 175
107	Textile fact. Tekstil	5	C	2.9	150	-	-	1220	1830	75 40 700	46 50 500
108	25 Maj	2	C	1.68	140	-	-	885	1770	75 40 875	46 50 625
109	Ranka Milanovic	2	C	0.93	85	-	-	520	1010	75 40 000	46 50 500
110	Rubber Co. Autoguma	1	I	1	-	100	-	2480	2480	75 38 550	46 50 150
111	Beer Co. Pivara	2	I	16	1600	-	-	8430	16860	75 39 150	46 50 625
112	Pharmaceutic Co. Alkaloid	3	I	12.55	730	-	-	7650	12920	75 39 175	46 50 950
113	Color factory Alkaloid	3	I	6.5	320	-	-	4898	6856	75 40 300	46 50 500
114	Bakery Zitoluks	11	3C 8I	4.35 -	360 640	-	-	3060	4590	75 38 675	46 50 625
115	Milk Co.	2	1C 1 I	2.80 2.80	150 150	-	-	2950 -	2950 -	75 42 325	46 50 100
116	Leader factory Gazela	3	I	15.2	1100	-	-	3690	7380	75 40 425	46 49 875
117	Paper Co. Komuna	5	I	15	1500	-	-	13100	13100	75 38 500	46 50 050
118	Textile fact. Mak. Rakotvorbi	2	I	12.1	650	-	-	6100	12000	75 38 850	46 50 850
119	Chocolate factoryEvropa	2	I	4.4	450	-	-	4800	4800	75 39 000	46 50 625
120	Leader Co. Kozara	5	3 C 2 I	9.70 8.50	950 750	-	-	10244	10244	75 40 250	46 50 000
121	Petrol Refinery OKTA	2	I	130	20948	-	-	188090	188090	75 54 250	46 49 750
122	Iron&Steel Co.	15	10 I 55 E	180	15300	-	-	36880	790317 158317	75 38 825	46 52 775
123	Central Heating plant- EAST	7	E	293.9	24480	-	-	304597	304597	75 38 050	46 50 050
	TOTAL	129	73 C 44 I 12 E	763.4	74323	100	-	616555	1565407		
	V. Community Kisela Voda										
124	BS Rajko Zinzifov	2	C	0.816	60	-	-	432	864	75 42 750	46 44 225
125	BS Goce Delcev	2	C	1.162	60	-	-	612	1224	75 40 825	46 47 425
126	BS K. Josifovski I	2	C	-	-	-	-	-	-	75 36 200	46 49 050
127	BS K.Josifovski II	2	C	1.8	60	-	-	948	1896	75 36 325	46 49 300
128	BS Dr Zlatan Sremec	2	C	1.626	80	-	-	857	1714	75 36 625	46 49 075
129	BS Dimitar Makedonski	4	C	1	130	-	-	500	1000	75 39 925	46 47 650
130	BS Kuzman Sapkarev	2	C	1.4	130	-	-	737	1474	75 43 700	46 44 250
131	BS Partenij Zografski	2	C	1.16	100	-	-	612	1224	75 36 625	46 48 825
132	C-G 8 Mart	2	C	0.583	78	-	-	372	744	75 37 050	46 47 700
133	C-G Veseli Cvetovi I	2	C	0.233	26	-	-	240	240	75 36 550	46 48 900
134	C-G Veseli Cvetovi II	2	C	0.47	60	-	-	252	504	75 39 100	46 48 225
135	C-G Veseli Cvetovi III	2	C	0.1	50	-	-	580	1160	75 42 900	46 44 175

Table D3.32(5) Emission Source Facilities in Skopje

No.	Object	1	2	3	4	5	6	7	8	9	10
	V. Community Kisela Voda										
136	C-G Veseli Cvetovi IV	1	C	0.23	25	-	-	240	-	75 39 575	46 48 150
137	HS of Chem. M. Kiri Skolodvska	3	C	1.2	210	-	-	842	1263	75 39 000	46 48 325
138	HS Braca Miladinovci	4	C	0.92	68	-	-	408	816	75 43 800	46 43 625
139	Policlinic Centar	2	C	1.162	100	-	-	612	1224	75 43 050	46 44 075
140	Post Drucevo	2	C	0.232	-	-	-	122	244	75 43 250	46 44 000
141	Mac. Rel. transp.	2	C	9	800	-	-	4650	9400	75 38 250	46 48 325
142	Textile fact. Crvena Zvezda	1	C	-	-	-	-	2500	2500	75 37 450	46 47 600
143	Electric Co.Rade Koncar	4	C	10.5	310	-	-	3688	11056	75 37 800	46 48 650
144	Textile Co.Mirka Ginova	2	C	1.8	140	-	-	948	1896	75 37 675	46 47 650
145	Plant prod. Co. Alkaloid	2	C	3.4	298	-	-	1791	3582	75 37 575	46 48 950
146	Ceramic fac. IGM Partizan	3	I	-	510	-	-	57045	57045	75 44 750	46 44 250
147	Evroteks	4	3 C 2 I	0.70 1.16	86 90	-	-	612	1968	75 37 500	46 47 750
148	Bakery Zitoluks	4	I	1.164	191	-	-	2186	2186	75 36 875	46 49 075
149	Glass fac.	3	2 C 1 I	-	-	-	-	5000	5000	75 39 425	46 46 850
150	Chemical Co.Hemteks	3	I	9	375	-	-	6322	9483	75 40 375	46 46 900
151	Cement factory	48	4 C 44 I	16.2	830	-	-	1746724	1763608	75 38 575	46 47 225
152	Chemical Co.OHIS	84	77 I 7 E	-174.2	2400 each	-	-	48998	-183601	75 40 750	46 46 400
153	Central heating Plant 11 Oktomvri	3	E	28.1	2480	-	-	26748	26748	75 37 550	46 48 550
	TOTAL	201	37 C 134 I 10 E	279.3	10277	-	-	1915578	2094204		

	SKOPJE	1	2	3	4	5	6	7	8	9	10
	TOTAL	543	311C 200 I 32 E	1375	113.63	52 0	304	2830736	4036165		

The information and data about investigated objects and emitters are given in Table II. They are given together with data about :

n (1) Number of emitters(1);
n (2)Type of emitters: industrial (I), energetic (E) and communal-heating (C);
n (3) Installation power (in MW);
n (4) Quantity of liquid fuel per hour (in kg/h);
n (5) Quantity of solid fud (in kg/h);
n (6) Quantity of gas fuel(in m3/h);
n (7) Volumetric flow of waste gases (in Nm3/h) from emitters working in the investigated period;
n (8) Total vol. Flow of gases of registered emitters (in Nm3/h).
Coordinates :
n(9) y coordinate (longitude), Gaus-Kriger proection
n(10) x coordinate (latitude), Gaus-Kriger proection

Table D3.33 Number of Companies Divided by Type of Activities

Type of activities	Number of companies and institutions					
	Cair	Gazi Baba	Kisela Voda	Karpos	Centar	Skopje - total
Industry	5	15	13	12	7	52
Non-industry	32	23	17	11	18	101
Total	37	38	30	23	25	153

Table D3.34 Number of Emitters Divided by Type of Activities

Type of activities	Number of emitters					
	Cair	Gazi Baba	Kisela Voda	Karpos	Centar	Skopje - total
Energetic and metallurgy	2	18	3	8	4	35
Metal and electrical industry	0	0	4	0	0	4
Nonmetallic industry	0	0	3	0	0	3
Textile and leader industry	3	11	7	0	2	23
Chemical industry	0	6	12	10	0	28
Graphic, paper, publishing and cinematography	0	5	0	0	3	8
Agriculture, food, tobacco and water treatment	13	17	4	7	11	52
Forest and wood industry	0	0	0	0	3	3
Construction	11	0	7	7	0	25
Traffics	0	0	2	0	0	2
Post	2	2	2	2	2	10
Education	51	46	34	16	19	166
Health	6	4	2	6	8	26
Administration	3	1	0	0	0	4
Trade, tourism, restaurants	2	7	0	0	10	19
Communal activities	2	0	0	0	0	2
Banks, assurance, intellectual activities	0	0	0	0	0	0
Total	95	117	80	56	62	410

Table D3.35 Number of Emitters Divided by General Type of Activities

Type of activities	Number of emitters						
	Cair	Gazi Baba	Kisela Voda	Karpos	Centar	Skopje - total	Skopje - total, in %
Industry	11	32	13	4	7	67	16.34
Energetic	0	12	10	6	4	32	7.8
Communal	84	73	57	46	51	311	75.86
Total	95	117	80	56	62	410	100.0

Table D3.36 Number of Emitters Working Continuously for 5, 10 and more than 10 years (for those emitters having data)

Working years	Number of emitters and institutions						
	Cair	Gazi Baba	Kisela Voda	Karpos	Centar	Skopje - total	Skopje - total, in %
< 5	18	4	6	3	4	35	9.4
5 - 10	18	8	7	5	11	49	13.1
> 10	58	83	58	43	47	289	77.5
Total	94	95	71	51	62	373	100.0

Table D3.37 Number of Emitters with Different Capacities (power of less than 1 MW, 50 MW and more than 50 MW)

Capacity, MW	Number of emitters and institutions						
	Cair	Gazi Baba	Kisela Voda	Karpos	Centar	Skopje - total	Skopje - total, in %
< 1	64	46	42	29	34	215	52.44
1 - 50	13	51	25	15	22	126	30.73
> 50	0	2	0	2	0	4	0.98
No data	18	18	13	10	6	65	15.85
Total	95	117	80	56	62	410	100.0

Table D3.38 Consumption of Fuels in Skopje

Type of fuel	Consumption of fuel in kg/h					
	Cair	Gazi Baba	Kisela Voda	Karpos	Centar	Skopje - total
Liquid	4234	48775	17884	7344	10024	88 621
Solid	320	100	100	-	-	520
Gas	304	-	-	-	-	304

Table D3.39 Number of Emitters Divided by Type of Used Fuel

Type of fuel	Number of emitters					
	Cair	Gazi Baba	Kisela Voda	Karpos	Centar	Skopje - total
Liqaid	82	107	75	51	58	373
Solid	5	10	5	5	4	29
Gas	8	0	0	0	0	8
Total	95	117	80	56	62	410

Table D3.40 Number of Emitters Divided by Working Capacities

Working capacities	Number of emitters					
	Cair	Gazi Baba	Kisela Voda	Karpos	Centar	Skopje - total
<33 %	24	22	15	13	13	87
33-50 %	51	49	39	34	23	196
>50 %	8	9	14	4	21	56
No data	12	37	12	5	5	71
Total	95	117	80	56	62	410

Table D3.41 Emission Parameters from Emitters in Skopje according to the Type of Emitters

Type of emitter	Vol. Flow, $Nm^3/24h$	CO, kg/24h	SO_2, kg/24 h	NO_x, kg/24h	Dust, kg/24h
Industrial	4 040 153	10 384.73	1 819.86	1 045.9	208.56
Communal	1 911 805	717.72	1 226.92	573.46	-
Energetic	4 974 489	277.91	6 212.16	2 724.89	-
Total	10 926 447	11 380.36	9 258.94	4 344.25	208.56

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1. *Register of Polluters in Skopje*, Mining Institute, Skopje, 1996.

3. *National Environmental Action Plan, Summary of Thematic Reports*, Part I, *Industrial Management*, Skopje, 1996.

2. *National Environmental Action Plan, Summary of Thematic Reports*, Part II, *Air Quality*, Skopje, 1996.

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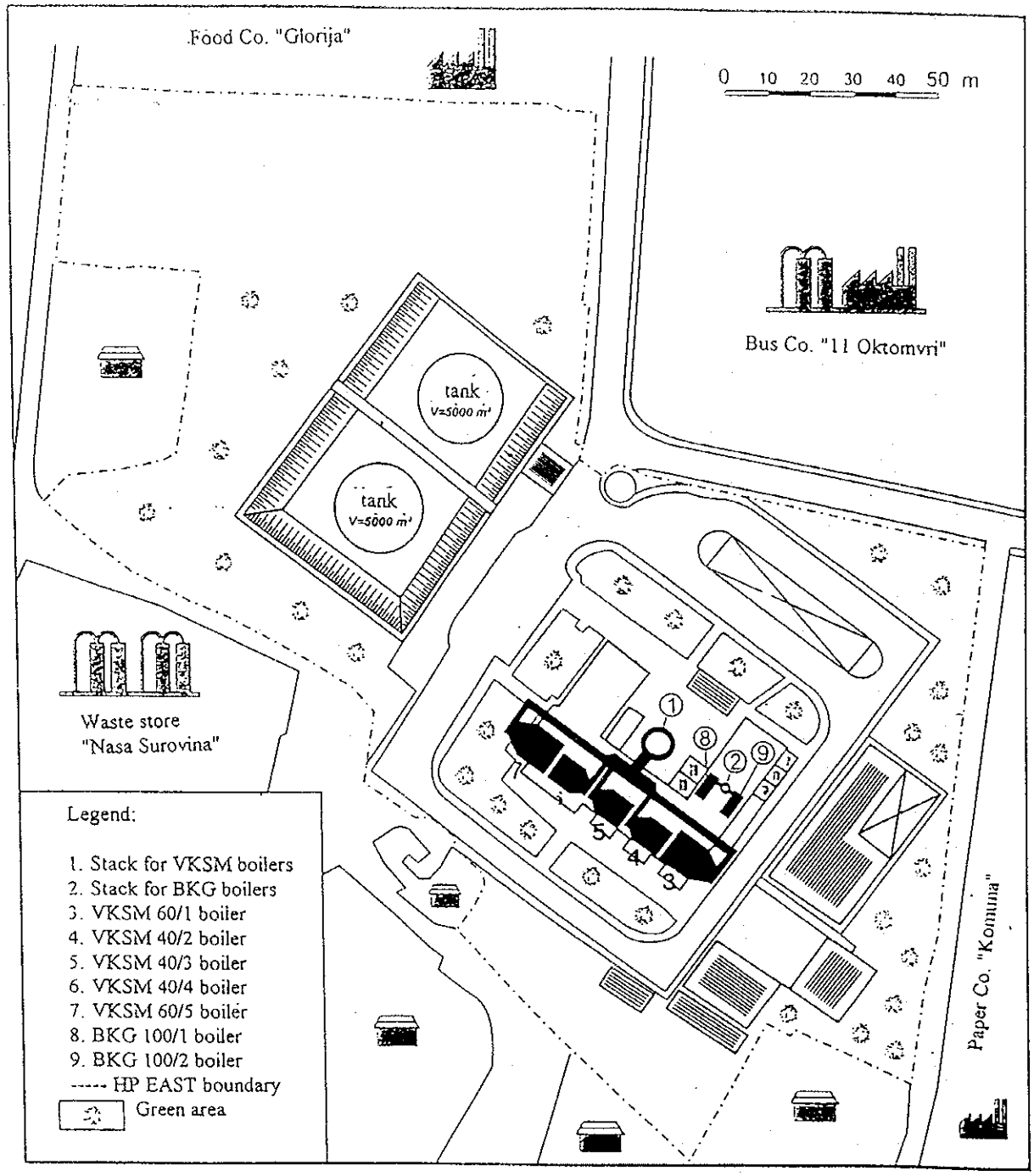

Figure D3.20 Heating Plant (HP EAST)

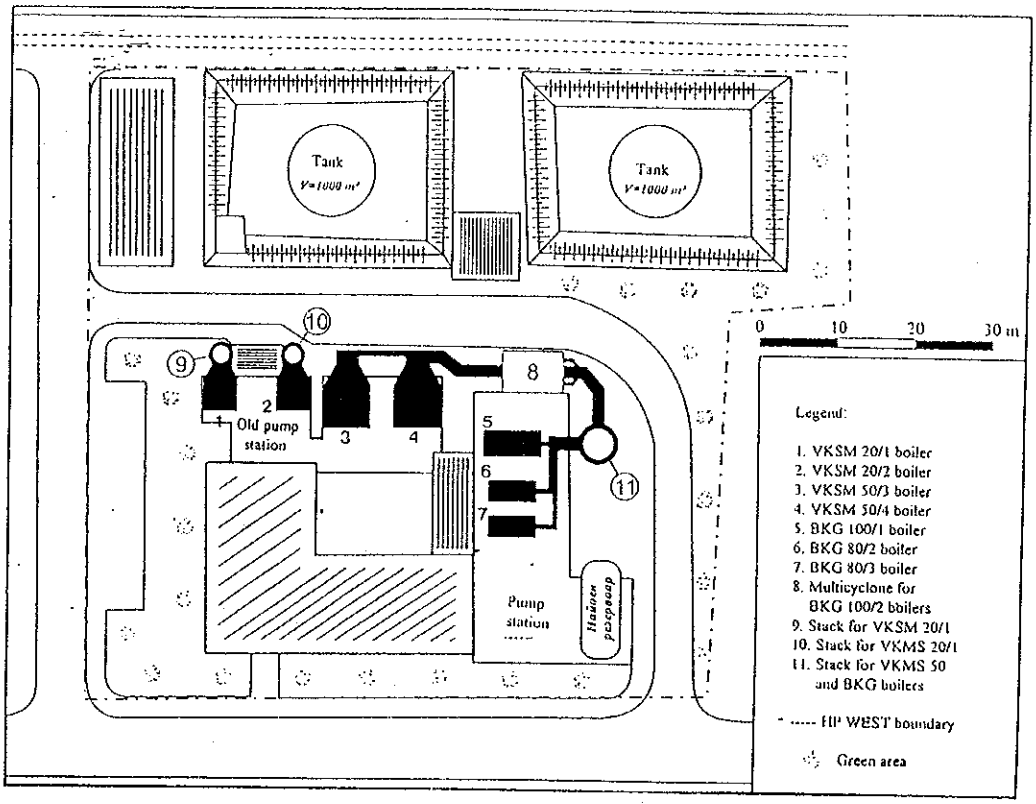

Figure D3.21 Heating Plant (HP WEST)

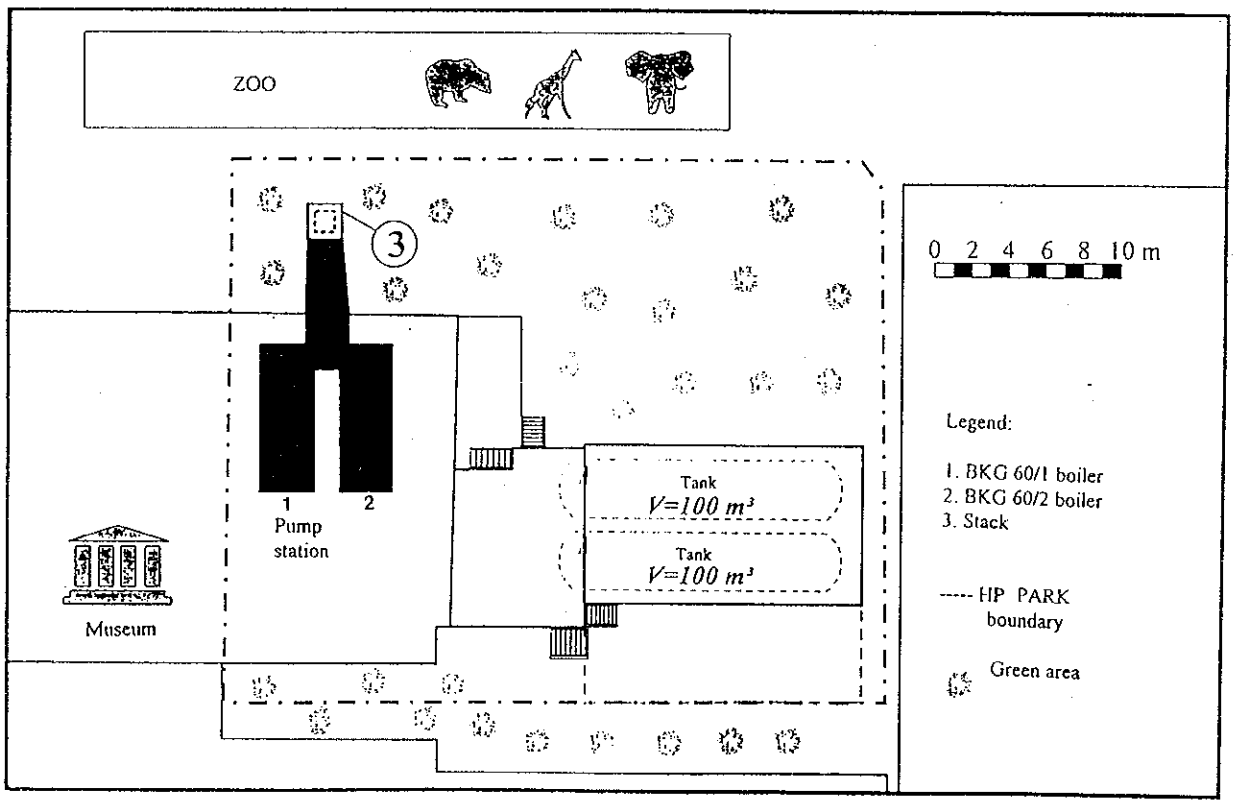

Figure D3.22 Heating Plant (HP PARK)

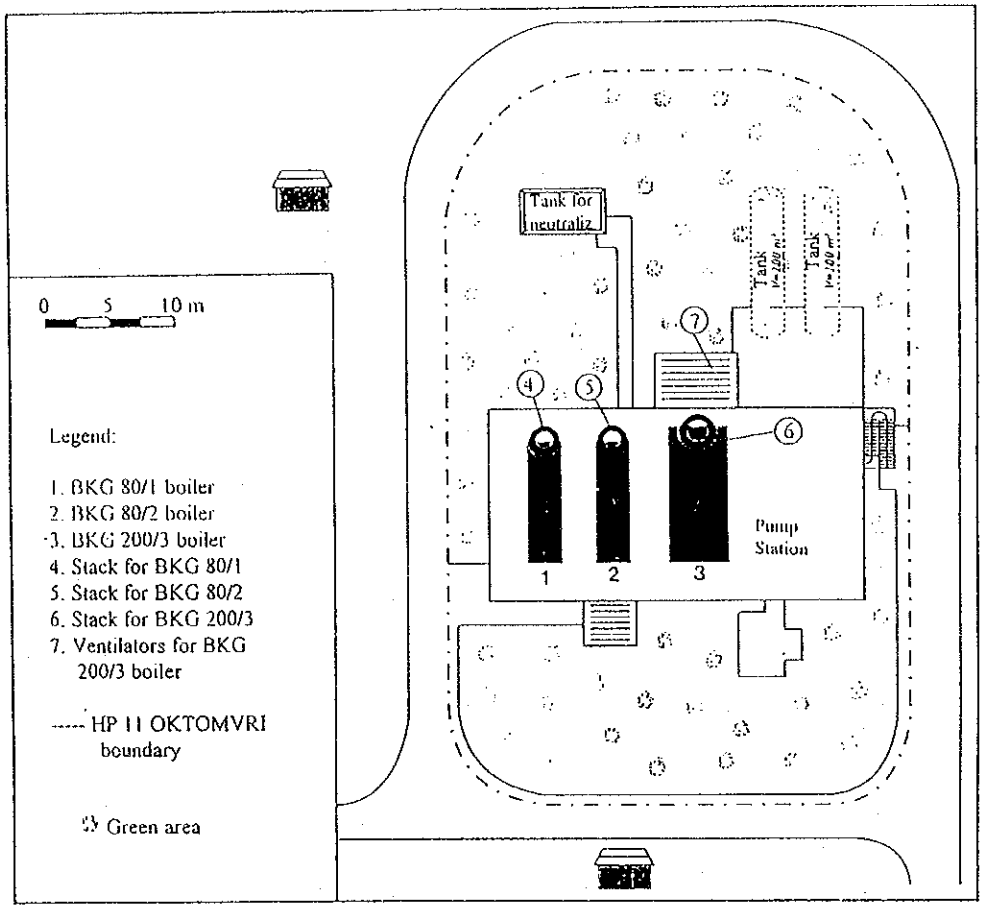

Figure D3.23 Heating Plant (HP 11 OKTOMVRI)

Table D3.42 Characteristics of the Central Heating Plants in Skopje

No.	Object	No. emit.	MW	Liquid fuel, kg/h	Liquid fuel, kg/24h	Vol. Flow of gases (Nm^3/h)	Total vol. Flow of gases of emitters, Nm^3/h
1	CHP Heating Plant- EAST	7	293.93	24480	190 400	304 597	304 597
2	Central Heating Plant - WEST	6	182.91	14760	88 200	137 364	137 367
3	Central Heating Plant 11 Oktomvri	3	28.21	2480	16 700	26 748	26 748
4	Heating Plant Park	2	8.95	400	3 500	2 515	5 031
5	Heating Plant Vodno	2	3.88	240	-	1 800	3 600
	TOTAL	20	517.88	42 360	298 800	473 024	477 343

Table D3.43 Physical and Chemical Characteristics of Liquid Fuel

No	Parameter	Value
1	Content of carbon	83-87 %
2	Content of hydrogen	10-14 %
3	Content of sulfur	0.8-2.0 %
4	Content of oxygen	0.1-0.5 %
5	Content of nitrogen	0.1-0.5 %
6	Content of ash	0.02-0.5 %
7	Content of moisture	0.02-1.5 %
8	Density at 15 °C	935-975 kg/m^3
9	Flash point	110-250 °C
10	Viscosity at 50 °C	115-350 mm/s^2
11	Heating value	39.8-41.28 MJ/kg

Table D3.44 Physical and Chemical Characteristics of Natural Gas

No	Parameter	Value
1	Content of methane	85 %
2	Content of ethane	7.0 %
3	Content of propane and heavier CH	6.0 %
4	Content of oxygen	0.02 %
5	Content of nitrogen and carbon monoxide	7.0 %
6	Content of hydrogen sulfide	max. 6 mg/m3
7	Content of sulfur in mercaptan	max. 15 mg/m3
8	Content of total sulfur	max. 100 mg/m3
9	Density	0.780 kg/m3
10	Flash point	640°C
11	Heat value	33.5 MJ/m3

Table D3.45 Emission from the Central Heating Plants

Heating Plant	Vol. Flow waste gases, Nm^3/h	Vol. Flow waste gases, $Nm^3/24h$	CO, kg/24h	SO_2, kg/24h	NO_x, kg/24h
EAST	304 597	2 456 522	108.56	2 790.39	1 390.12
WEST	137 367	1 102 640	34.54	1 277.17	594.53
11 Oktomvri	26 748	208 978	1.96	226.76	96.54
Park	5 031	44 256	0.71	52.82	26.36
Total	473 743	3 812 396	145.77	4 347.14	2 107.55

Table D3.46 Results from the Measurement of Waste Gases from Central Heating Plant - East (March 1995)

Parameter	Type and number of boiler					
	VKSM-60, No 1	VKSM-40, No 2	VKSM-40, No 3	VKSM-40, No 4	VKSM-40, No 5	BKG-100, No 1
Temp. of gases, °C	281	241	264	262	272	278
Ambient temp., °C	20	20	23	26	23	20
O_2, %	3.5	1.7	3.6	2.1	3.7	5.5
CO_2, %	12.9	14.2	12.8	14	12.8	11.5
CO, mg/m^3	64	85	87	44	58	84
NO_x, mg/m^3	553	568	583	554	572	458
SO_2, mg/m^3	1154	1148	1140	1148	1148	1182

Table D3.47 Results from the Measurement of Waste Gases from Central Heating Plant - West (March 1995)

Parameter	Type and number of boiler			
	VKSM-20, No 1	VKSM-20, No 2	VKSM-50, No 3	VKSM-50, No 4
Temp. of gases,°C	287	283	214	283
Ambient temp., °C	20	20	20	20
O_2, %	4.8	5.2	3.8	4.2
CO_2, %	13.1	11.7	12.7	12.4
CO, mg/m^3	53	48	68	83
NO_x, mg/m^3	593	589	570	554
SO_2, mg/m^3	1164	1187	1130	1182

Table D3.48 Results from the Measurement of Waste Gases from Central Heating Plant - 11 Oktomvri (March 1995)

Parameter	Type and number of boiler		
	BKG-80, No 1	BKG-80, No 2	BKG-80, No 3
Temp. of gases, °C	238	195	198
Ambient temp., °C	20	20	18
O_2, %	6.5	7.0	8.5
CO_2, %	10.7	10.3	9.2
CO, mg/m^3	20	41	12
NO_x, mg/m^3	512	493	453
SO_2, mg/m^3	1129	1107	1080

Table D3.49 Consumption of Liquid Fuels for Traffics and Household for Heating

(Unit: ton)

Year	Gasoline	Household for Heating		
		Diesel-1	Kerosene	Total
1980	46 713	42 667	36 701	79 368
1981	47 114	49 622	24 085	73 707
1982	46 117	59 833	16 812	76 645
1983	36 444	85 179	24 313	109 492
1984	47 192	80 326	26 061	106 387
1985	32 939	51 525	28 172	79 697
1986	39 079	47 235	17 534	64 769
1987	37 067	39 221	19 535	58 756
1988	41 280	131 989	17 728	149 717
1989	40 759	41 440	19 382	60 822
1990	43 864	69 766	22 729	92 459
1991	58 005	69 971	20 785	90 756
1992	45 985	52 346	11 879	64 225
1993	48 577	47 570	14 631	62 201
Total 1980/93	611 135	868 690	300 347	1 169 037
Average	43 653	62 049	21 453	83 502
Average per day	120	170	59	229

Table D3.50 Consumption of Heavy Oil in Heating Plants from Central Heating in Skopje from 1993 to 1997 (in tons)

Heating Plant/ Year	January	February	March	April	October	November	December	Total
1993								
East	10231.3	7877.1	5571.6	1296.3	825.7	6389.8	7991.5	40183.3
West	4405.6	3519.9	2443.9	589.7	357.6	2830.5	3432.6	17579.8
11 October	833.7	716.0	499.9	91.0	65.1	559.6	674.5	3439.8
Park	269.6	187.4	161.7	45.3	29.3	126.2	189.0	1009.0
Total	15740.2	12300.4	8677.1	2022.3	1277.7	9906.1	12287.6	62211.9
1994								
East	7393.5	7045.0	3642.7	1584.9	1808.0	5356.7	8785.1	35615.9
West	3399.5	3990.1	1672.4	761.4	744.5	2354.2	3770.1	15692.2
11 October	686.9	565.1	340.4	107.9	158.6	438.1	759.2	3056.2
Park	197.9	167.6	80.5	45.2	54.5	105.5	219.9	871.1
Total	11677.8	10767.8	5736.0	2499.4	2765.6	8254.5	13534.3	55235.4
1995								
East	9767.0	6162.7	6165.4	2520.3	2137.4	7643.0	7353.6	41749.4
West	4666.1	2887.2	2702.8	1369.7	1027.8	3570.0	3372.9	19596.5
11 October	766.7	568.1	489.6	250.8	185.4	687.7	620.6	3568.9
Park	242.1	163.6	102.5	105.6	51.2	210.4	189.8	1065.2
Total	15441.9	9781.6	9460.3	4246.4	3401.8	12111.1	11536.9	65980.0
1996								
East	9226.6	8307.1	7837.4	3152.4	3180.6	5453.7	8433.3	45591.1
West	4098.6	3762.3	3498.0	1407.8	1172.1	2398.5	4207.5	20544.8
11 October	769.5	649.2	620.6	267.3	234.1	453.6	756.8	3751.1
Park	227.7	219.4	202.2	77.7	74.2	143.9	223.8	1168.9
Total	14322.4	12938.0	12158.2	4905.2	4661.0	8449.7	13621.4	71055.9
1997								
East	9452.8	7574.3	6115.9	5581.6	4272.1	5850.8	8397.2	47244.7
West	4240.0	3199.2	2848.1	2547.8	1982.9	2717.9	3918.2	21454.1
11 October	719.0	636.9	486.5	458.7	380.7	504.7	723.1	3899.6
Park	207.8	190.8	160.0	141.0	128.3	137.3	226.2	1191.4
Total	14619.6	11591.2	9610.5	8729.1	6764.0	9210.7	13264.7	73789.8

Table D3.51 Lead, Cadmium and Zinc Concentrations in Vegetables (mg/kg) on Various Distances from the Lead Smelter Factory in Veles (1990)

	Spring			Autumn		
Vegetables	lead	cadmium	zinc	lead	cadmium	zinc
Green salad						
Drenevica*	15,1	2,8	51,0	75,5	4,4	71,3
Recani**	14,1	2,3	36,6	28,0	2,6	39,2
Basino selo***	11,4	1,7	33,9	15,6	1,0	45,2
Spinach						
Drenevica*	24,9	2,4	74,3	39,2	4,6	46,8
Recani**	19,3	1,6	54,3	23,6	4,5	34,8
Basino selo***	15,0	1,4	50,5	24,4	3,2	56,8
v.Ivankovci****(control)	0,9	0,11	5,9	-	-	-

Table D3.52 Lead, Cadmium and Zinc Concentrations in the Soil and Vegetables (mg/kg) - Statistical Relation -1990

		Spring			Autumn		
Vegetables - metal	Soil	vegetable	r	p	vegetable	r	p
Green salad							
Lead	30,5	13,8	0,599	<0,05	39,7	0,743	<0,01
Cadmium	2,5	2,4	0,704	<0,01	2,9	0,787	<0,01
Zinc	78,5	40,6	0,910	<0,01	57,6	0,770	<0,01
Spinach							
Lead	30,5	19,7	0,704	<0,01	29,6	0,630	<0,05
Cadmium	2,5	1,7	0,919	<0,01	3,6	0,889	<0,01
Zinc	78,5	59,7	0,927	<0,01	83,6	0,677	<0,05

** Drenevica = 700 m north-west from the smelter factory*
*** Recani = 1000 m south-east from the smelter factory*
**** Basino selo = 2000 m north from the factory*
***** s. Ivankovci (control) = 10.000 m north-east*

Table D3.53 Lead, Cadmium and Zinc Concentrations in Different Kind of Agricultural Food (mg/kg) in Veles Area (1990)

	Type of vegetable -location	Lead	Cadmium	Zinc	
vegetables	Onion				
	Drenevica*	8,2	1,75	36.0	
	Recani**	7.0	1,75	28,25	
	Basino selo***	5,3	1,14	21,9	
	v. Ivankovci****(control)	0,6	0,13	6,4	
	Pepper				
	Drenevica*	4,2	0,42	26,4	
	Recani**	4,6	0,38	25,1	
	Basino selo***	3,9	0,41	34,6	
	v. Ivankovci****	0,9	0,04	18,1	
	Tomato				
	Drenevica*	3,3	0,31	13,5	
	Recani**	1,7	0,12	7,5	
	Basino selo***	1,9	0,16	7,9	
	v. Ivankovci****(control)	0,7	-	5,6	
fruit	Type of fruit	Lead	Cadmium	Zinc	
	Apricot				
	Drenevica*	3,1	0,35	6,1	
	Recani**	3,9	0,23	6,9	
	Basino selo***	2,0	0,13	0,37	
	v. Ivankovci****(control)	0,8	0,02	2,1	
	Grape				
	100 m. near the factory	10,9	0,3	21,9	
	Drenevica*	1,2	0,15	9,2	
	Recani**	1,5	0,12	10,8	
	Basino selo***	1,0	0,15	9,4	
	v.Ivankovci****(control)	0,3	0,02	2,2	
clover and hay	Sort of plant - location	Lead	Cadmium	Zinc	Season
	Clover				Summer
	Recani	78,3	2,7	108,1	
	Basino selo	75,0	2,9	90,0	
	Hay				Autumn
	Recani 1	67,0	1,4	87,0	
	Recani 2	60,1	1,3	82,3	
	v. Ivankovci (control)	3,2	0,2	11,8	

** Drenevica = 700 m north-west from the smelter factory*
*** Recani = 1000 m south-east from the smelter factory*
**** Basino selo = 2000 m north from the factory*
***** s. Ivankovci (control) = 10.000 m north-east*

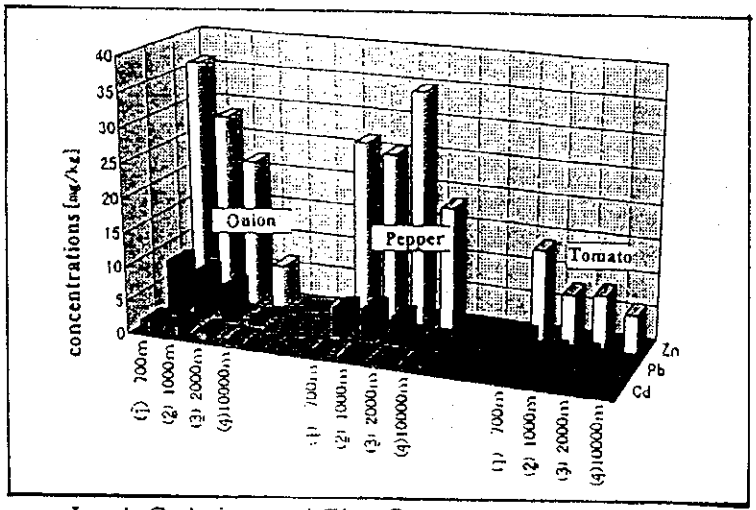

Figure D3.24 Lead, Cadmium and Zinc Concentrations in Different Kind of Vegetables (mg/kg) in Veles Area (1990)

Table D3.54 Heavy Metal Concentration Found in Wine

Type of Heavy Metal	Wine-Producing region	Average (ug/l)	MAX (ug/l)	MIN (ug/l)	Standard Deviation	No. of Samples
Pb	Non-polluted Regions	66.1	100	50	15.2	15
	T. Veles Regions	218.3	1030	94	234.8	16
Zn	Non-polluted Regions	182.6	432	90	102.6	10
	T. Veles Regions	316.3	609	161	168.3	11

Source: St. Cyril and Methodius University-Skopje

Table D3.55 Engine Factor of Automobiles

emission factors (gr/l)[6]

COMPOUND	PETROL MOTORS	DIESEL MOTORS
sulfurus dioxide SO_2	0.4	4.5
nitrate oxides NO_2	20	90
organic volatiles VOC	40	110
total suspended particles TSP	3	15
carbon monoxide CO	220	90
lead	0.45	0

Source:NEAP

Table D3.56 Emission Volume of Harmful Pollutants for Each Type of Fuel

		SO_2 t/year	VOC t/year	CO t/year	NO_2 t/year	Pb t/year	TSP t/year
Gasoline	R. Macedonia	73.6	7360	40480	3680	82.8	552
	Skopje	27.6	2760	15180	1380	31	207
	from this in Skopje	37.5 %					
Light Oil	R. Macedonia	383.4	9372	7668	7668	-	1278
	Skopje	61	1492	1220	1220	-	203
	from this in Skopje	16 %					
Total Discharge	R. Macedonia	4574	16732	48148	11348	82.8	1830
	Skopje	88.6	4252	16400	2600	31.0	410
	from this in Skopje	19.4%	25.4%	19.4%	22.9%	37.5%	22.4%

Source:NEAP

Table D3.57 Chemical Analysis of Coal

Mine	Content, %							Heat value, kJ/kg
	Moisture	Ash	C	H	O	N	S	
Berovo	46.40	14.86		38.78			1.18	8 839
Bitola								
- Suvodol	51.1	13.42	22.66	2.05		9.66	0.55	7 582
- Zivojno	47.3	10.52	28.47	2.55	11.34		0.85	8 179
Piskupstina-Struga	31.5	12.0		58.74			0.26	11 720
Oslomej Kicevo	56.64	7.81	22.52	1.26	11.77		0.52	7 050

Table D3.58(1) List of the Sampling Points for SO_2 and NO_2 (November 10-20, 1997)

No.	DESCRIPTION
1	s. Radišani (Atanas Kirilov)
2	n. Kisela Jabuka, prodavnica JUGE-EM, ul. 10, br. 12, Čedo Džumkovski
3	s. Vizbegovo, glavna ulica br. 61, (sproti školoto), Dimovski Tomislav
4	n. Šuto Orizari, Ul. Vietnamska, br. 21 (sproti Ambulanta), Šain Safet
5	n. Šuto Orizari, pogon JOSING (pozadi grobišta), Sašo ili Zvonko
6	n. Butel, Galička 52, Dragan Angelovski
7	n. Butel, Ljubotenska 55, Tomislav Daskalov
8	n. Butel, Institut za lozarstvo
9	n. Butel, Ho Ši Min 34, Miloš Makreski
10	Butel grobišta, kapela
11	n. Šuto Orizari, Žito Luks, pogon 8-mi mart
12	s. Novo Selo, ambulanta D-r Biljana
13	Skladište ENTERIER, Novoselski pat b.b.
14	s. Bardovski, prodavnica MEGALOPROM, Drage Atanasovski
15	s. Bardovski, niva na Drage Atanasovski
16	Momin Potok, firma SINTEK
17	Do IGM-TIPO, Ul. Makedonsko-kosovska brig. 85, Boris Spasov
18	IGM-TIPO, direkcija (kontakt Lazar Krepiev)
19	n. Butel (do opština), Hristijan Todorovski Karpoš 157, Zekirija Omer
20	Železara, Ruden dvor
21	Železara, Topilnica
22	Železara, Troska - Topilnica
23	n. Singelić, Zemjodelska apteka, Alija Avdović b.b.
24	Železara, Troska - Čeličarnica
25	Železara, Čeličarnica

Table D3.58(2) List of the Sampling Points for SO_2 and NO_2 (November 10-20, 1997)

26	n. ŽelezaraAmbulanta Dr RUBINA, Koce Metalec 14
27	Do DDD na ZZZ, ul. Hristijan Todorovski-Karpos 26
28	ul. Blagoja Parović 4 (do d. gradinka na Džon Kenedi), Miško Božinovski
29	Kasarna ILINDEN
30	Momin Potok, pogon SKENĆO (do Tehnokomerc)
31	RHMZ
32	s. Zlokućani, CVETAN MARKET PROM, ul. Skupi 13
33	Otpad JUGOSUROVINA, DE Djorče Petrov, (upravniik Vojkan)
34	n. Novoselski Pat, ul. Tiranska 14, Vojislav Cvetkovski
35	n. Djorče Petrov, Rasadnik, Ul. Crnogorska, br. 72, Erhan Červani
36	s. Kondovo, AmbulantaHUMANITETI, Dr. Fatmir Šakiri
37	s. Ljubin, Harun Ličina
38	Gj. Petrov (benz. pumpa-izlez), ul. Panajot Ginovski 1a, Mitra Veselinovska
39	Djorče Petrov
40	Djorče Petrov
41	Djorče Petrov
42	Vlae, merno mesto na ZZZ, do OU Dimo Hadži Dimov, Kleoec 16[b], Milka Hadži Vasileva
43	Karpoš IV
44	Karpoš III, T. Stafilov
45	Mašinski fakultet
46	Mitropolija
47	Ministerstvo za zemjodelstvo, šumarstvo i vodostopanstvo, ul. Leninova b.b.
48	Market do Ambulanta Bit Pazar
49	PMF
50	Avtokomanda, Merno mesto na RHMZ (Dom za starci)
51	Železara, Valavnica
52	Železara, Ezero
53	n. Singelić, Ambulanta
54	Madžari, MLEKARA

Table D3.58(3) List of the Sampling Points for SO_2 and NO_2 (November 10-20, 1997)

55	KOMUNA
56	Pat za Kvantaški pazar, ELEKTROMETAL (sproti MTZ)
57	Evropa (do Pivara, merno mesto na ZZZ)
58	Ul. Belasica 19[a], Marica Božinovska (sproti Sajmište)
59	Do Narodna i univerzitetska biblioteka (prod. za autodelovi)
60	Sproti Ginazija Josip Broz Tito (merno mesto na RHMZ)
61	AMSM (merno mesto na RHMZ)
62	Ul. Naum Naumovski-Borče, 64
63	Blizu Dr. Mihail Kočubovski (Perica)
64	Do Žitoluks (Taftalidže I), Dušan Jovanović
65	n. Kozle, ul. Jurij Gagarin 111, Predrag Stanoević
66	Fabrika KUPROM
67	s. Saraj, ANTIKOR
68	s. Grčec, do Osnovno učilište, Murtezani
69	pat za Nerezi (levo od prikolka)
70	n. Ždanec, ul. Ždanec 39 (Silvana)
71	n. Trnodol, ul. Jan Hus 9, Sašo Stojanovski
72	n. Kozle, Institut za belodrobni zabolovanja
73	RZZZ
74	GZZZ
75	Voena akademija
76	n. Aerodrom, do Detska gradinka, prod. GRNE PROMET (m. mesto na ZZZ)
77	n. Lisiče, ul. ASNOM 56, prod. ŠEKSPIR (do Vardar)
78	n. Lisiče (diva naselba), ul. Todor Čangov 142, Petre Bonevski (f. Sito Kolor)
79	s. G. Lisiče, ul. Lisec 162, Boris Božinovski
80	n. Lisiče, Mini Market Žan kompani, ul. Ernest Telman 7[a], Zoran Dimiškovski
81	n. Lisiče, zgrada br. 33, st. 3, Nikola Angelkovski (do merno mesto na RHMZ)
82	n. Aerodrom, Bul. Jane Sandanski, gradilište Mavrovo
83	n. Kisela Voda, Zavod za ovoštarstvo - Rasadnik (m. mesto na RHMZ)

Table D3.58(4) List of the Sampling Points for SO_2 and NO_2 (November 10-20, 1997)

84	n. Kisela Voda, kaj hotel Pelagonija, ul. Gj. Dimitrov br. 6
85	Do Hotel Panorama (merno mesto na GZZZ)
86	Sredno Vodno, restoran "Staro Skopje"
87	s. G. Nerezi, Manastir Sv. Pantelejmon
88	n. Pržino, Pržino 7[b] (Dušan)
89	n. Kisela Voda, Avto škola "Kisela Voda" (Vasko)
90	Fabrika Cementarnica (m. mesto na ZZZ)
91	n. Lisiče, ul. Mihail Glinka 4, prof. Durnev
92	s. G. Lisiče, ul. G. Lisiče 1, Nikola Nikolovski
93	n. Pintija (OHIS), ul. 1438 br. 17 (poseldna kuća desno), Dimče Ristevski
94	OHIS, restoran MOSKVA, Prvomajska b.b, Dimitrija Cancevski
95	OHIS (sproti benzinska pumpa), Prvomajska 30, Trifun Sazdovski (pozadi avtohehaničarski dućan PIRELI)
96	n. Pripor, ul. Sava Kovačević 81[a], Petar Mitrevski
97	s. Sopište, "Komitska noć", Ljubo Petrevski
98	n. Dračevo, Ul. 14-ta Brigada" br. 3[a], Slobodan Miloševski
99	n. Dračevo, ul. "Janko Mišić br. 53, Vlado Nikolovski
100	s. Dračevo, Dračevska 198, merno mesto na RHMZ (Branko)

Table D3.59(1) The Monitoring Results of SO_2

Points	10/11.XI.1997		11/12.XI.1997		12/13.XI.1997		13/14.XI.1997		14/15.XI.1997		15/16.XI.1997		16/17.XI.1997		17/18.XI.1997		18/19.XI.1997		19/20.XI.1997	
	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³
1	1.62	4.31	2.7	7.19	3.24	8.62	7.02	18.68	3.78	10.06	0.54	1.44	2.7	7.19	0.54	1.44	5.4	14.37	5.4	14.37
2	7.02	18.68	2.16	5.75	5.41	14.39	0.54	1.44	3.24	8.62	1.62	4.31	1.62	4.31	1.08	2.88	4.86	12.92	2.7	7.19
3	4.32	11.5	2.7	7.19	2.69	7.16	4.32	11.5	9.72	25.87	1.08	2.87	0.54	1.44	0.54	1.44	4.3	11.46	4.32	11.5
4	4.86	12.93	1.08	2.87	1.62	4.31	2.7	7.19	5.94	15.81	0.54	1.44	1.08	2.87	0.54	1.44	3.78	10.06	4.84	12.89
5	8.1	21.56	2.7	7.19	4.32	11.5	5.4	14.37	2.7	7.19	1.08	2.87	3.24	8.62	0.54	1.44	4.32	11.5	3.76	10.01
6	0.54	1.44	4.32	11.5	5.91	15.74	2.7	7.19	2.16	5.75	2.72	7.24	0.54	1.43	1.08	2.87	2.15	5.73	0.54	1.44
7	0.54	1.44	4.33	11.52	7.5	19.97	2.7	7.19	1.08	2.87	1.63	4.34	0.54	1.43	0.54	1.44	0.54	1.43	0.54	1.44
8	0.54	1.44	6.5	17.29	7.56	20.12	5.94	15.81	1.62	4.31	3.25	8.66	1.08	2.87	1.08	2.87	0.54	1.43	0.54	1.44
9	6.48	17.25	4.32	11.5	6.47	17.23	2.14	5.71	1.08	2.87	2.72	7.25	1.62	4.31	0.55	1.48	0.54	1.43	1.62	4.31
10	5.94	15.81	4.86	12.93	7.56	20.12	4.86	12.93	3.24	8.62	1.62	4.31	3.24	8.62	1.62	4.31	3.85	10.24	4.84	12.89
11	1.62	4.31	2.7	7.19	3.78	10.07	3.78	10.06	13.5	35.93	2.16	5.75	3.78	10.06	0.54	1.44	4.3	11.46	3.23	8.6
12	5.94	15.81	3.24	8.62	5.94	15.81	0.54	1.44	6.47	17.23	1.62	4.31	4.25	11.32	2.16	5.76	4.31	11.48	2.71	7.21
13	5.4	14.37	1.08	2.87	16.74	44.55	0.54	1.44	3.24	8.63	0.54	1.44	4.35	11.57	0.54	1.44	3.26	8.68	2.7	7.19
14	3.78	10.06	1.08	2.87	15.68	41.73	1.08	2.87	5.39	14.36	0.54	1.44	4.8	12.77	1.08	2.88	5.42	14.42	4.32	11.51
15	3.78	10.06	3.24	8.62	5.94	15.82	3.78	10.06	3.78	10.07	1.08	2.88	5.4	14.38	2.16	5.75	4.89	13.02	\	
16	0.54	1.44	2.16	5.75	8.07	21.48	4.32	11.5	3.24	8.62	0.54	1.44	5.4	14.37	1.08	2.87	4.3	11.46	3.78	10.06
17	4.86	12.93	2.7	7.19	5.94	15.81	6.48	17.25	3.24	8.62	1.08	2.87	2.7	7.19	1.08	2.87	4.84	12.89	3.78	10.06
18	5.94	15.81	1.08	2.87	16.2	43.11	4.86	12.93	8.1	21.56	2.16	5.75	5.4	14.37	4.32	11.5	5.92	15.75	3.77	10.05
19	10.8	28.74	7.03	18.71	7.54	20.08	8.09	21.53	1.62	4.31	2.17	5.78	3.23	8.59	0.54	1.44	2.69	7.16	1.08	2.88
20	10.26	27.31	16.2	43.11	1.08	2.87	2.7	7.19	7.45	19.84	1.61	4.28	1.65	4.39	2.73	7.26	6.97	18.55	2.16	5.75
21	5.4	14.37	13.5	35.93	2.7	7.19	3.78	10.06	5.31	14.13	2.68	7.12	2.75	7.32	1.61	4.3	6.98	18.58	1.62	4.31
22	5.94	15.81	11.88	31.62	1.62	4.31	4.32	11.5	4.74	12.63	2.66	7.09	0.55	1.46	1.64	4.35	3.76	10.02	\	
23	9.72	25.87	18.9	50.3	2.7	7.19	3.78	10.06	4.79	12.76	2.19	5.82	4.92	13.1	3.81	10.15	5.43	14.44	3.24	8.62
24	6.48	17.25	11.88	31.62	4.86	12.93	2.7	7.19	15.63	41.62	4.29	11.42	2.74	7.3	3.28	8.74	3.78	10.07	2.7	7.19
25	7.02	18.68	14.58	38.8	1.62	4.31	3.78	10.06	7	18.64	2.13	5.67	17.69	47.1	2.7	7.19	9.68	25.78	1.62	4.31
26	1.62	4.31	6.51	17.33	10.28	27.36	8.1	21.56	2.16	5.75	3.25	8.66	2.16	5.74	2.16	5.75	0.54	1.44	2.17	5.77
27	4.86	12.93	4.33	11.53	5.94	15.81	4.86	12.93	1.08	2.87	1.63	4.34	2.69	7.17	1.08	2.87	2.69	7.17	1.08	2.88
28	3.24	8.62	3.8	10.11	8.66	23.06	2.7	7.19	0.54	1.44	4.88	12.99	2.69	7.17	1.08	2.87	1.08	2.87	1.62	4.32
29	0.54	1.44	3.78	10.06	10.26	27.31	7.53	20.05	1.08	2.87	2.7	7.19	6.48	17.25	6.94	18.46	9.16	24.38	7.34	19.55
30	8.1	21.56	4.86	12.93	12.37	32.94	7.02	18.68	4.32	11.5	0.54	1.44	4.32	11.5	0.54	1.44	4.84	12.89	4.32	11.5
31	4.32	11.5	3.78	10.06	6.49	17.28	1.63	4.35	1.62	4.31	1.62	4.31	0.54	1.44	5.94	15.82	9.72	25.87	9.25	24.64
32	4.32	11.5	10.26	27.31	7.57	20.16	2.7	7.19	5.39	14.36	1.08	2.87	3.78	10.07	1.62	4.31	4.32	11.5	4.86	12.93
33	4.32	11.5	6.48	17.25	7.58	20.18	3.78	10.06	3.24	8.62	1.08	2.87	5.95	15.83	5.94	15.82	4.86	12.94	4.86	12.93
34	4.32	11.5	11.83	31.49	7.55	20.11	2.7	7.19	7.02	18.68	1.08	2.87	5.4	14.37	1.62	4.31	3.78	10.06	5.39	14.36
35	0.54	1.44	6.46	17.19	2.17	5.77	7	18.64	1.63	4.33	4.43	11.79	0.59	1.56	1.07	2.85	0.54	1.42	1.08	2.87
36	0.54	1.44	8.61	22.93	4.33	11.53	4.85	12.92	1.09	2.89	1.97	5.24	2.35	6.26	0.54	1.45	0.53	1.42	1.08	2.87
37	0.54	1.44	7.55	20.11	2.17	5.77	4.31	11.47	1.63	4.34	2.46	6.56	0.59	1.56	0.54	1.45	0.54	1.43	1.07	2.86
38	0.54	1.44	10.22	27.21	2.71	7.21	7	18.63	2.17	5.78	3.94	10.48	1.18	3.15	0.54	1.45	0.53	1.42	0.54	1.44
39	0.54	1.44	6.99	18.61	3.26	8.67	3.76	10.02	2.17	5.78	2.46	6.55	1.18	3.15	1.09	2.89	0.53	1.42	2.7	7.19
40	0.54	1.44	11.84	31.51	9.24	24.6	5.4	14.37	1.09	2.9	3.92	10.43	4.7	12.5	0.54	1.45	0.53	1.42	0.54	1.43
41	0.54	1.44	8.63	22.96	6.49	17.28	8.07	21.48	1.08	2.87	2.48	6.59	1.18	3.14	0.54	1.45	0.53	1.42	7.99	21.28
42	3.78	10.06	8.1	21.56	7	18.64	2.7	7.19	3.24	8.63	0.53	1.42	4.32	11.5	2.67	7.1	2.69	7.17	9.7	25.81
43	4.32	11.5	11.88	31.62	4.85	12.92	1.62	4.31	3.24	8.62	0.54	1.44	5.94	15.81	3.24	8.63	5.39	14.35	4.31	11.48
44	1.08	2.87	5.4	14.37	7.56	20.12	7.51	19.98	1.62	4.31	2.16	5.75	5.94	15.81	7.48	19.91	10.8	28.74	10.31	27.46
45	1.08	2.87	4.32	11.5	6.48	17.25	5.36	14.27	0.54	1.44	2.16	5.75	5.4	14.37	6.95	18.49	9.7	25.83	8.15	21.69
46	0.54	1.44	6.48	17.25	7.02	18.68	4.29	11.42	0.54	1.44	4.86	12.93	6.48	17.25	6.37	16.96	10.85	28.88	\	
47	3.78	10.06	3.78	10.06	9.72	25.87	5.38	14.32	1.08	2.87	0.54	1.44	5.4	14.37	11.76	31.31	10.8	28.74	7.08	18.84
48	0.54	1.44	13.5	35.93	3.78	10.06	8.1	21.56	2.67	7.11	1.64	4.36	3.77	10.03	3.24	8.62	6.48	17.25	4.34	11.55
49	4.86	12.93	4.32	11.51	10.27	27.34	4.32	11.51	1.62	4.31	2.16	5.76	2.7	7.19	1.08	2.87	1.08	2.87	1.08	2.89
50	5.4	14.37	5.97	15.89	11.36	30.24	3.24	8.63	1.08	2.88	1.62	4.31	1.62	4.31	0.54	1.44	5.4	14.38	1.08	2.88

Table D3.59(2) The Monitoring Results of SO_2

Points	10/11.XI.1997		11/12.XI.1997		12/13.XI.1997		13/14.XI.1997		14/15.XI.1997		15/16.XI.1997		16/17.XI.1997		17/18.XI.1997		18/19.XI.1997		19/20.XI.1997	
	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³
51	7.02	18.68	13.5	35.93	18.9	50.3	2.7	7.19	6.9	18.36	2.19	5.82	2.2	5.86	4.36	11.62	4.83	12.86	2.7	7.19
52	8.1	21.56	9.18	24.43	3.24	8.62	0.54	1.44	4.77	12.69	1.65	4.39	1.65	4.4	3.82	10.17	8.55	22.76	\	
53	8.1	21.56	12.96	34.49	2.7	7.19	2.7	7.19	6.95	18.49	2.73	7.27	0.55	1.46	3.27	8.71	5.37	14.29	\	
54	5.4	14.37	14.58	38.81	2.16	5.75	2.7	7.19	6.32	16.84	0.54	1.44	16.54	44.03	1.09	2.89	5.39	14.35	4.86	12.93
55	4.86	12.93	10.26	27.31	2.16	5.75	9.18	24.43	1.6	4.27	2.18	5.81	5.4	14.37	7.01	18.67	10.8	28.76	10.88	28.96
56	5.94	15.81	11.34	30.18	6.48	17.25	8.09	21.54	5.35	14.23	2.18	5.8	5.37	14.3	4.83	12.86	9.73	25.9	10.87	28.94
57	15.12	40.24	10.26	27.31	7.56	20.12	10.78	28.7	10.7	28.49	0.55	1.45	4.83	12.84	9.18	24.45	7.03	18.71	6.52	17.37
58	9.18	24.43	7.56	20.12	7.56	20.12	3.78	10.06	3.73	9.94	0.55	1.45	5.38	14.32	5.94	15.81	7.02	18.68	5.43	14.44
59	9.18	24.43	10.8	28.74	10.26	27.31	5.41	14.4	1.61	4.28	2.17	5.77	6.45	17.16	3.78	10.05	6.48	17.25	5.43	14.46
60	2.7	7.19	3.24	8.62	8.64	22.99	8.05	21.42	3.24	8.62	2.16	5.75	9.72	25.87	9.6	25.57	12.42	33.05	5.44	14.47
61	2.7	7.19	5.4	14.37	8.64	22.99	7.52	20.01	2.16	5.75	3.78	10.06	8.1	21.56	7.47	19.89	9.72	25.89	6.51	17.34
62	1.62	4.31	5.4	14.37	7.02	18.68	4.28	11.39	1.62	4.31	0.54	1.44	9.18	24.43	6.92	18.43	9.71	25.85	9.79	26.05
63	0.54	1.44	3.24	8.62	7.56	20.12	5.37	14.28	1.62	4.31	2.7	7.19	9.72	25.87	6.94	18.48	10.26	27.31	8.74	23.27
64	1.08	2.87	5.4	14.37	7.02	18.68	12.88	34.28	1.62	4.31	2.7	7.19	10.8	28.74	11.21	29.85	6.49	17.28	9.77	26.01
65	3.24	8.62	2.16	5.75	5.96	15.85	1.63	4.33	1.62	4.31	2.7	7.19	0.54	1.44	6.46	17.2	5.41	14.41	9.64	25.67
66	2.7	7.19	9.15	24.35	2.72	7.23	10.26	27.31	0.54	1.45	4.92	13.1	4.32	11.5	0.53	1.42	0.53	1.41	2.7	7.19
67	1.62	4.31	8.61	22.93	1.63	4.33	6.46	17.2	1.09	2.89	2.46	6.55	0.54	1.44	1.09	2.89	5.34	14.22	2.69	7.16
68	2.16	5.75	8.59	22.87	5.45	14.51	5.38	14.33	1.09	2.9	2.46	6.56	6.48	17.25	0.6	1.6	0.54	1.43	\	
69	4.32	11.5	3.24	8.62	9.22	24.53	3.26	8.66	1.62	4.31	3.24	8.62	1.62	4.31	6.46	17.2	10.83	28.82	\	
70	4.86	12.93	7.56	20.12	11.92	31.73	1.63	4.33	1.62	4.31	2.16	5.75	8.64	22.99	2.69	7.17	7.58	20.19	10.69	28.45
71	3.78	10.06	5.4	14.37	9.19	24.47	2.17	5.77	0.54	1.44	2.7	7.19	7.02	18.68	6.46	17.21	9.21	24.52	6.43	17.13
72	6.48	17.25	4.32	11.5	10.29	27.4	3.25	8.64	1.08	2.87	2.16	5.75	0.54	1.44	5.39	14.34	8.12	21.62	10.19	27.12
73	7.56	20.12	4.86	12.93	12.98	34.56	3.27	8.7	2.7	7.19	3.24	8.62	7.56	20.12	7.06	18.79	10.8	28.74	4.84	12.87
74	5.4	14.37	5.4	14.37	10.26	27.31	7.04	18.73	2.14	5.7	2.17	5.77	5.38	14.32	7.04	18.75	9.71	25.85	5.41	14.41
75	2.7	7.19	8.64	22.99	7.56	20.12	2.7	7.2	4.07	10.83	1.71	4.54	8.15	21.71	6.5	17.29	8.09	21.53	4.85	12.91
76	0.54	1.44	9.18	24.43	7.02	18.68	2.69	7.17	3.24	8.62	1.62	4.31	8.11	21.59	6.48	17.25	9.7	25.81	5.4	14.37
77	1.08	2.87	8.1	21.56	8.64	22.99	1.08	2.88	2.7	7.19	2.7	7.19	7.56	20.13	5.93	15.79	6.48	17.25	4.86	12.93
78	0.54	1.44	8.64	22.99	9.18	24.43	1.62	4.31	1.62	4.31	\		5.94	15.82	5.93	15.8	8.63	22.98	4.86	12.93
79	1.08	2.87	8.64	22.99	8.64	22.99	1.08	2.88	2.7	7.18	0.54	1.44	5.4	14.37	4.32	11.5	5.93	15.78	3.78	10.06
80	1.08	2.87	9.72	25.87	11.34	30.18	1.08	2.88	2.7	7.18	1.08	2.87	10.26	27.32	6.48	17.25	7.03	18.72	4.32	11.5
81	0.54	1.44	8.64	22.99	11.88	31.62	1.62	4.31	2.16	5.74	1.62	4.31	5.41	14.39	7.01	18.67	10.25	27.29	\	
82	1.08	2.87	10.26	27.31	14.04	37.37	1.08	2.87	4.32	11.49	0.54	1.44	9.2	24.48	5.39	14.34	9.17	24.41	4.32	11.5
83	4.32	11.5	9.72	25.87	12.42	33.05	7.04	18.73	2.67	7.12	0.54	1.44	5.39	14.34	6.5	17.29	10.25	27.29	10.28	27.36
84	4.32	11.5	14.04	37.37	12.42	33.05	4.86	12.94	2.67	7.12	1.62	4.32	5.39	14.35	7.03	18.72	9.72	25.89	5.41	14.39
85	5.4	14.37	3.78	10.06	13.52	35.98	1.09	2.9	1.08	2.87	2.16	5.75	3.78	10.06	6.47	17.22	7.55	20.09	8.15	21.69
86	6.48	17.25	4.32	11.5	12.97	34.54	2.18	5.79	2.16	5.75	2.7	7.19	0.54	1.44	5.38	14.33	10.8	28.74	\	
87	4.86	12.93	8.64	22.99	14.56	38.75	1.09	2.9	2.16	5.75	2.7	7.19	1.62	4.31	6.46	17.21	10.26	27.31	\	
88	\		\		\		4.32	11.5	2.14	5.69	2.71	7.21	4.32	11.51	5.95	15.83	6.48	17.25	5.41	14.39
89	4.32	11.5	8.64	22.99	6.5	17.31	4.32	11.5	3.78	10.07	0.54	1.43	0.54	1.44	2.16	5.74	4.86	12.93	0.54	1.44
90	\		12.96	34.49	5.94	15.81	7.02	18.68	4.86	12.94	2.16	5.74	4.32	11.5	3.24	8.62	5.38	14.32	2.72	7.24
91	0.54	1.44	9.72	25.87	11.88	31.62	3.25	8.64	1.62	4.31	1.62	4.31	2.7	7.19	6.48	17.26	15.08	40.16	43.19	114.97
92	0.54	1.44	10.8	28.74	8.64	22.99	0.54	1.44	2.16	5.74	0.54	1.44	3.24	8.62	3.24	8.62	5.93	15.79	5.4	14.37
93	3.24	8.62	12.96	34.49	4.86	12.93	3.78	10.06	3.79	10.08	0.54	1.44	2.7	7.19	5.4	14.37	2.69	7.17	0.54	1.44
94	0.54	1.44	7.56	20.12	6.48	17.26	3.78	10.06	3.79	10.08	1.08	2.87	1.62	4.31	1.08	2.87	5.38	14.33	1.09	2.89
95	4.32	11.5	4.86	12.93	7.02	18.7	3.24	8.62	4.32	11.51	0.54	1.44	3.24	8.62	4.86	12.93	4.85	12.9	1.63	4.33
96	0.54	1.44	10.8	28.74	6.48	17.25	4.32	11.5	6.49	17.28	2.15	5.72	4.87	12.95	4.32	11.5	4.85	12.9	\	
97	0.54	1.44	3.78	10.06	7.02	18.68	3.78	10.06	5.41	14.4	0.54	1.43	7.57	20.15	4.32	11.49	5.93	15.78	\	
98	0.54	1.44	3.78	10.06	5.39	14.36	7.02	18.68	2.16	5.76	0.54	1.44	5.94	15.81	4.32	11.5	6.46	17.19	1.08	2.88
99	0.54	1.44	4.32	11.5	4.86	12.93	3.78	10.06	5.95	15.84	2.16	5.75	5.4	14.37	6.48	17.26	3.77	10.03	2.71	7.22
100	0.54	1.44	7.56	20.12	4.32	11.5	3.78	10.06	3.79	10.09	1.62	4.31	7.02	18.68	1.62	4.31	4.84	12.88	1.09	2.89

Table D3.60(1) The Monitoring Results of NO_2

Points	10/11.XI.1997		11/12.XI.1997		12/13.XI.1997		13/14.XI.1997		14/15.XI.1997		15/16.XI.1997		16/17.XI.1997		17/18.XI.1997		18/19.XI.1997		19/20.XI.1997	
	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³
1	11.25	21.51	15	28.69	10.31	19.72	10.31	19.72	15	28.69	20.63	39.44	19.69	37.65	12.18	23.29	17.82	34.07	19.69	37.65
2	37.51	71.72	11.25	21.51	25.35	48.48	8.44	16.14	13.13	25.1	11.26	21.53	9.38	17.93	2.82	5.39	17.82	34.07	9.38	17.94
3	18.75	35.86	21.57	41.24	27.1	51.81	10.31	19.72	15.94	30.48	26.26	50.2	11.25	21.51	17.82	34.07	20.63	39.44	13.13	25.1
4	29.07	55.58	28.13	53.79	19.69	37.65	11.25	21.51	20.63	39.44	26.26	50.2	12.19	23.31	11.25	21.51	27.19	51.99	23.36	44.67
5	17.82	34.07	37.51	71.72	19.69	37.65	12.19	23.31	17.82	34.07	18.75	35.86	16.88	32.27	16.88	32.27	15.94	30.48	27.06	51.74
6	12.19	23.31	11.26	21.53	28.95	55.35	8.44	16.14	19.69	37.65	15.11	28.89	19.58	37.44	8.43	16.12	11.25	21.51	7.51	14.36
7	19.69	37.65	14.1	26.95	38.15	72.95	2.81	5.38	20.63	39.44	12.28	23.47	21.46	41.04	13.13	25.1	10.31	19.72	5.64	10.78
8	12.19	23.31	18.81	35.96	25.3	48.37	6.56	12.55	29.07	55.58	23.54	45.01	18.7	35.76	10.31	19.72	10.31	19.72	7.52	14.37
9	11.25	21.51	18.75	35.86	21.55	41.21	9.31	17.81	24.36	46.58	20.8	39.78	20.6	39.39	15.41	29.46	15	28.69	9.38	17.94
10	17.82	34.07	23.44	44.82	17.82	34.07	12.19	23.31	16.88	32.27	30.01	57.37	29.07	55.58	12.19	23.31	18.75	35.86	15.89	30.37
11	18.75	35.86	20.63	39.44	18.75	35.86	14.07	26.89	28.13	53.79	17.82	34.07	30.01	57.37	18.75	35.86	26.26	50.2	18.72	35.78
12	27.19	51.99	19.69	37.65	15	28.69	10.31	19.72	24.36	46.58	5.63	10.76	7.39	14.13	9.39	17.95	19.69	37.65	16.94	32.38
13	32.82	62.75	15	28.69	31.93	61.04	8.44	16.14	17.83	34.09	19.68	37.62	10.38	19.85	15.01	28.71	16.88	32.27	30.01	57.37
14	37.51	71.72	12.19	23.31	25.35	48.48	7.5	14.34	17.8	34.04	18.77	35.88	10.19	19.48	9.41	17.99	17.82	34.07	11.27	21.54
15	30.01	57.37	16.88	32.27	19.71	37.68	2.81	5.38	12.2	23.32	11.27	21.54	20.64	39.47	10.32	19.74	19.69	37.65	\	\
16	21.57	41.24	14.07	26.89	19.69	37.65	16.88	32.27	16.88	32.27	18.75	35.86	17.82	34.07	12.19	23.31	16.88	32.27	18.75	35.86
17	29.07	55.58	17.82	34.07	21.57	41.24	17.82	34.07	30.01	57.37	19.69	37.65	23.44	44.82	17.82	34.07	18.75	35.86	18.75	35.86
18	25.32	48.41	28.13	53.79	19.65	37.57	35.63	68.13	30.01	57.37	28.13	53.79	18.75	35.86	16.88	32.27	19.69	37.65	29.03	55.5
19	9.38	17.93	17.84	34.11	18.75	35.86	18.73	35.81	28.15	53.82	24.53	46.91	19.61	37.49	15.94	30.48	19.69	37.65	12.22	23.36
20	11.25	21.51	21.57	41.24	15	28.69	12.19	23.31	17.57	33.6	13.97	26.71	16.22	31.02	13.27	25.36	8.44	16.14	20.63	39.44
21	12.19	23.31	20.63	39.44	17.82	34.07	9.38	17.93	21.2	40.53	17.66	33.76	19.11	36.54	9.34	17.87	15	28.69	15	28.69
22	10.31	19.72	18.75	35.86	18.75	35.86	0	0	34.79	66.51	9.25	17.7	21.98	42.02	8.52	16.29	11.25	21.51	\	\
23	16.88	32.27	19.69	37.65	17.82	34.07	10.31	19.72	16.65	31.83	18.98	36.29	14.24	27.23	16.09	30.76	9.38	17.93	21.57	41.24
24	11.25	21.51	21.57	41.24	16.88	32.27	8.44	16.14	25.28	48.34	27.94	53.42	20.01	38.26	7.6	14.53	6.56	12.55	12.19	23.31
25	14.07	26.89	19.69	37.65	20.63	39.44	13.13	25.1	25.27	48.31	19.42	37.14	19.56	37.39	9.38	17.93	9.38	17.93	12.19	23.31
26	16.88	32.27	23.56	45.04	17.82	34.07	17.82	34.07	33.78	64.59	27.31	52.21	24.36	46.58	12.19	23.31	23.44	44.82	10.36	19.8
27	17.82	34.07	20.69	39.55	20.63	39.44	17.82	34.07	37.51	71.72	19.8	37.86	23.38	44.7	19.69	37.65	18.75	35.86	10.34	19.78
28	20.63	39.44	28.27	54.05	24.45	46.75	18.75	35.86	36.57	69.92	24.48	46.81	30.86	59	10.31	19.72	21.57	41.24	9.4	17.97
29	33.76	64.54	25.32	48.41	30.94	59.17	19.62	37.52	18.75	35.86	27.19	51.99	31.88	60.96	14.83	28.35	32.82	62.75	37.36	71.43
30	21.57	41.24	20.63	39.44	19.69	37.65	18.75	35.86	26.26	50.2	29.07	55.58	28.13	53.79	20.63	39.44	28.13	53.79	22.51	43.03
31	21.57	41.24	15	28.69	22.55	43.12	28.37	54.24	29.07	55.58	11.25	21.51	24.38	46.62	5.63	10.76	29.07	55.58	10.4	19.89
32	29.07	55.58	19.69	37.65	27.25	52.1	29.07	55.58	21.55	41.21	27.19	51.99	27.21	52.03	12.2	23.32	45.01	86.06	29.07	55.58
33	19.69	37.65	15	28.69	29.15	55.73	15	28.69	16.87	32.25	12.19	23.31	17.84	34.11	10.32	19.74	26.26	50.2	19.68	37.62
34	22.51	43.03	14.95	28.59	20.62	39.42	9.38	17.93	15.94	30.48	13.12	25.08	13.13	25.1	9.38	17.94	18.75	35.86	12.18	23.29
35	12.19	23.31	14.95	28.59	21.64	41.38	8.42	16.1	26.38	50.45	17.09	32.68	29.6	56.59	9.31	17.81	19.69	37.65	4.69	8.96
36	10.31	19.72	14.96	28.61	19.75	37.76	8.43	16.11	18.86	36.06	43.59	83.34	26.54	50.74	10.38	19.85	19.69	37.65	10.31	19.71
37	9.38	17.93	16.87	32.25	15.06	28.79	9.36	17.89	17.95	34.33	18.83	35.99	28.51	54.52	10.38	19.85	18.75	35.86	3.73	7.14
38	15.94	30.48	21.49	41.09	35.76	68.37	20.57	39.33	24.52	46.88	20.52	39.24	37.99	72.64	16.05	30.69	25.32	48.41	13.12	25.08
39	15.94	30.48	17.74	33.92	36.77	70.31	14.94	28.57	24.4	46.65	20.52	39.24	30.83	58.94	19.82	37.89	28.13	53.79	5.63	10.76
40	18.75	35.86	26.17	50.03	47.21	90.27	11.25	21.51	10.41	19.9	46.8	89.48	30.6	58.5	33.97	64.95	21.57	41.24	10.28	19.65
41	11.25	21.51	34.65	66.25	35.71	68.27	14.02	26.8	10.3	19.69	22.38	42.78	25.57	48.9	20.77	39.72	28.13	53.79	9.25	17.7
42	27.19	51.99	27.19	51.99	29.94	57.25	11.25	21.51	17.83	34.09	37.92	72.5	21.57	41.24	17.6	33.64	17.82	34.07	16.84	32.21
43	30.94	59.17	38.45	73.51	35.58	68.04	18.75	35.86	28.13	53.79	16.88	32.27	45.95	87.85	8.45	16.15	29.07	55.58	18.73	35.81
44	30.94	59.17	26.26	50.2	29.07	55.58	27.94	53.42	12.19	23.31	21.57	41.24	29.07	55.58	14.85	28.39	30.94	59.17	27.35	52.28
45	49.7	95.02	26.26	50.2	33.76	64.54	23.28	44.51	11.25	21.51	20.63	39.44	28.13	53.79	27.84	53.23	21.57	41.24	33.97	64.95
46	52.51	100.4	19.69	37.65	28.13	53.79	20.49	39.17	25.32	48.41	28.13	53.79	27.19	51.99	23.98	45.85	35.63	68.13	\	\
47	57.2	109.37	27.19	51.99	27.19	51.99	24.3	46.45	17.82	34.07	29.07	55.58	20.63	39.44	17.64	33.74	28.13	53.79	30.26	57.85
48	26.26	50.2	40.32	77.09	40.32	77.09	22.51	43.03	24.11	46.1	24.64	47.11	27.1	51.81	19.69	37.65	36.57	69.92	21.68	41.41
49	20.63	39.44	21.6	41.29	20.66	39.5	17.84	34.11	29.09	55.62	30.05	57.45	31.88	60.96	12.19	23.31	20.63	39.44	10.36	19.8
50	21.57	41.24	19.79	37.83	46.98	89.83	29.09	55.62	40.38	77.2	24.4	46.65	21.57	41.24	17.83	34.09	24.38	46.62	11.29	21.59

Table D3.60(2) The Monitoring Results of NO_2

Points	10/11.XI.1997		11/12.XI.1997		12/13.XI.1997		13/14.XI.1997		14/15.XI.1997		15/16.XI.1997		16/17.XI.1997		17/18.XI.1997		18/19.XI.1997		19/20.XI.1997	
	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³	ppb	μg/m³
51	12.19	23.31	24.38	46.62	36.57	69.92	11.25	21.51	23.96	45.82	19.93	38.1	16.26	31.08	8.53	16.31	12.19	23.31	16.88	32.27
52	13.13	25.1	30.01	57.37	27.19	51.99	28.13	53.79	23	43.97	25.77	49.26	13.39	25.6	9.48	18.12	13.13	25.1	\	\
53	31.88	60.96	25.26	50.2	20.63	39.44	10.31	19.72	23.2	44.36	22.77	43.54	24.69	47.21	15.16	28.99	13.13	25.1	\	\
54	24.38	46.62	29.07	55.58	29.07	55.58	17.82	34.07	23.8	45.51	30.11	57.57	20.62	39.43	12.26	23.44	16.88	32.27	22.51	43.03
55	22.51	43.03	30.01	57.37	25.32	48.41	5.63	10.76	14.85	28.39	20.85	39.86	18.75	35.86	19.68	37.62	22.51	43.03	13.23	25.29
56	28.13	53.79	41.26	78.89	35.63	68.13	21.55	41.21	21.36	40.84	29.33	56.09	21.46	41.04	24.25	46.36	34.7	66.34	22.66	43.33
57	28.13	53.79	39.38	75.3	33.76	64.54	33.71	64.45	27.88	53.31	29.37	56.16	17.69	33.83	24.4	46.65	35.63	68.13	22.66	43.33
58	24.38	46.62	32.82	62.75	29.07	55.58	13.13	25.1	28.73	54.93	26.53	50.73	19.62	37.52	21.57	41.24	22.51	43.03	16.96	32.43
59	27.19	51.99	38.45	73.51	28.13	53.79	32.89	62.88	33.55	64.14	30.11	57.57	28.93	55.31	18.74	35.83	30.01	57.37	15.1	28.87
60	43.13	82.47	26.26	50.2	28.13	53.79	27.96	53.45	15.94	30.48	27.19	51.99	23.44	44.82	36.14	69.11	37.51	71.72	38.71	74.02
61	52.51	100.4	19.69	37.65	27.19	51.99	22.38	42.79	27.19	51.99	23.44	44.82	29.07	55.58	32.44	62.02	32.82	62.75	58.46	111.78
62	30.94	59.17	34.7	66.34	26.26	50.2	26.95	51.53	39.38	75.3	34.7	66.34	21.57	41.24	18.5	35.37	23.44	44.82	36.83	70.41
63	29.07	55.58	18.75	35.86	36.57	69.92	22.37	42.76	5.63	10.76	16.88	32.27	33.76	64.54	22.26	42.56	28.13	53.79	56.93	108.86
64	35.63	68.13	22.51	43.03	28.13	53.79	22.37	42.76	14.07	26.89	19.69	37.65	30.94	59.17	17.62	33.69	20.63	39.44	31.12	59.5
65	19.69	37.65	22.51	43.03	20.69	39.55	28.27	54.05	28.13	53.79	13.13	25.1	17.82	34.07	9.35	17.88	21.57	41.24	18.61	35.59
66	11.25	21.51	17.75	33.95	26.42	50.52	15	28.69	15.13	28.93	39.31	75.17	22.51	43.03	12.93	24.72	19.69	37.65	9.38	17.93
67	10.31	19.72	20.57	39.33	20.72	39.61	10.29	19.67	17.94	34.3	19.66	37.58	26.26	50.2	11.33	21.67	26.26	50.2	9.34	17.85
68	9.38	17.93	13.06	24.96	34.09	65.18	8.42	16.09	0	0	14.55	27.81	30.01	57.37	13.54	25.9	19.69	37.65	\	\
69	17.82	34.07	13.13	25.1	13.18	25.21	19.79	37.83	26.26	50.2	10.31	19.72	17.82	34.07	8.42	16.09	23.44	44.82	\	\
70	24.38	46.62	14.07	26.89	18.82	35.98	15.07	28.81	20.63	39.44	11.25	21.51	29.07	55.58	9.36	17.89	29.07	55.58	20.42	39.04
71	19.69	37.65	15	28.69	13.15	25.14	18.83	36.01	19.69	37.65	18.75	35.86	18.75	35.86	17.78	33.99	18.75	35.86	45.63	87.25
72	21.57	41.24	28.13	53.79	18.82	35.98	10.34	19.76	26.26	50.2	11.25	21.51	28.13	53.79	10.29	19.68	27.19	51.99	24.21	46.29
73	21.57	41.24	20.63	39.44	21.61	41.32	11.35	21.7	29.07	55.58	20.63	39.44	19.69	37.65	18.86	36.06	29.07	55.58	24.26	46.39
74	28.13	53.79	45.95	87.85	33.76	64.54	22.57	43.15	22.3	42.64	22.58	43.18	24.3	46.45	19.76	37.78	19.69	37.65	14.1	26.97
75	35.63	68.13	28.13	53.79	34.7	66.34	28.17	53.86	18.56	35.48	20.74	39.66	16.05	30.69	12.22	23.37	24.38	46.62	10.29	19.68
76	52.51	100.4	24.38	46.62	31.88	60.96	27.14	51.89	22.51	43.03	21.58	41.27	21.6	41.29	17.82	34.07	15	28.69	15.94	30.48
77	47.82	91.44	29.07	55.58	24.38	46.62	20.64	39.47	21.57	41.24	\	\	15.95	30.5	15.92	30.44	15	28.69	11.24	21.5
78	27.19	51.99	24.38	46.62	28.13	53.79	3.75	7.18	13.13	25.1	19.71	37.68	14.08	26.91	11.24	21.5	13.13	25.1	12.19	23.31
79	30.94	59.17	21.57	41.24	28.13	53.79	11.28	21.56	34.67	66.29	19.69	37.65	15	28.69	13.14	25.12	17.82	34.07	9.38	17.93
80	30.94	59.17	27.19	51.99	24.38	46.62	17.87	34.16	35.61	68.08	20.63	39.44	15.01	28.71	11.25	21.51	21.57	41.24	11.25	21.51
81	45.95	87.85	32.82	62.75	15.94	30.48	17.82	34.07	19.66	37.6	20.64	39.47	13.15	25.14	19.68	37.62	18.75	35.86	\	\
82	49.7	95.02	31.88	60.96	29.07	55.58	33.71	64.45	28.11	53.75	27.21	52.03	27.25	52.1	19.65	37.57	21.57	41.24	10.31	19.72
83	28.13	53.79	30.01	57.37	38.45	73.51	23.51	44.95	16.72	31.96	24.47	46.78	29.01	55.46	11.28	21.57	27.19	51.99	12.22	23.36
84	25.32	48.41	28.13	53.79	26.26	50.2	23.46	44.85	17.64	33.74	16.93	32.36	29.97	57.29	10.34	19.76	21.57	41.24	10.33	19.75
85	20.63	39.44	16.88	32.27	12.21	23.34	7.57	14.47	30.01	57.37	17.82	34.07	15.94	30.48	9.36	17.9	19.69	37.65	28.31	54.13
86	12.19	23.31	5.63	10.76	3.76	7.18	12.28	23.49	27.19	51.99	3.75	7.17	11.25	21.51	10.29	19.67	21.57	41.24	\	\
87	15.94	30.48	2.81	5.38	3.75	7.16	9.45	18.07	17.82	34.07	7.5	14.34	25.32	48.41	8.42	16.1	10.31	19.72	\	\
88	\	\	\	\	\	\	28.13	53.79	26.91	51.46	16.94	32.38	19.72	37.7	8.45	16.16	30.94	59.17	9.39	17.95
89	17.82	34.07	27.19	51.99	29.17	55.77	18.75	35.86	25.34	48.44	22.43	42.88	17.83	34.09	10.31	19.71	14.07	26.89	15.95	30.5
90	\	\	63.76	121.92	22.51	43.03	18.75	35.86	28.15	53.82	25.28	48.34	26.26	50.2	11.24	21.5	15.94	30.48	17.94	34.3
91	30.94	59.17	31.88	60.96	20.63	39.44	10.34	19.76	19.68	37.62	19.69	37.65	29.07	55.58	5.63	10.76	19.69	37.65	16.88	32.27
92	29.07	55.58	24.38	46.62	22.51	43.03	28.21	53.94	18.74	35.83	35.63	68.13	19.69	37.65	10.31	19.72	19.69	37.65	15	28.69
93	15	28.69	27.19	51.99	31.88	60.96	27.19	51.99	22.55	43.12	12.17	23.28	13.13	25.1	15.94	30.48	6.56	12.55	13.19	25.22
94	12.19	23.31	20.63	39.44	33.78	64.59	20.63	39.44	18.79	35.93	24.36	46.58	12.19	23.31	7.5	14.34	11.25	21.51	14.13	27.02
95	14.07	26.89	16.88	32.27	18.77	35.88	40.32	77.09	19.72	37.7	23.43	44.79	12.19	23.31	13.13	25.1	12.19	23.31	17.88	34.18
96	29.07	55.58	23.44	44.82	30.94	59.17	10.31	19.72	24.43	46.71	14.94	28.57	30.99	59.25	10.31	19.72	6.56	12.55	\	\
97	15.94	30.48	18.75	35.86	29.07	55.58	10.31	19.72	17.85	34.14	10.29	19.67	18.78	35.91	6.56	12.54	0.94	1.79	\	\
98	29.07	55.58	10.31	19.72	25.3	48.37	11.25	21.51	18.79	35.93	10.31	19.72	20.63	39.44	10.32	19.74	5.63	10.76	15.01	28.71
99	18.75	35.86	1.88	3.59	21.55	41.21	8.44	16.14	22.55	43.12	25.32	48.41	15	28.69	2.82	5.38	6.56	12.55	15.07	28.81
100	28.13	53.79	11.25	21.51	31.88	60.96	11.25	21.51	16.93	32.36	19.69	37.65	20.63	39.44	3.75	7.17	4.69	8.96	8.48	16.21

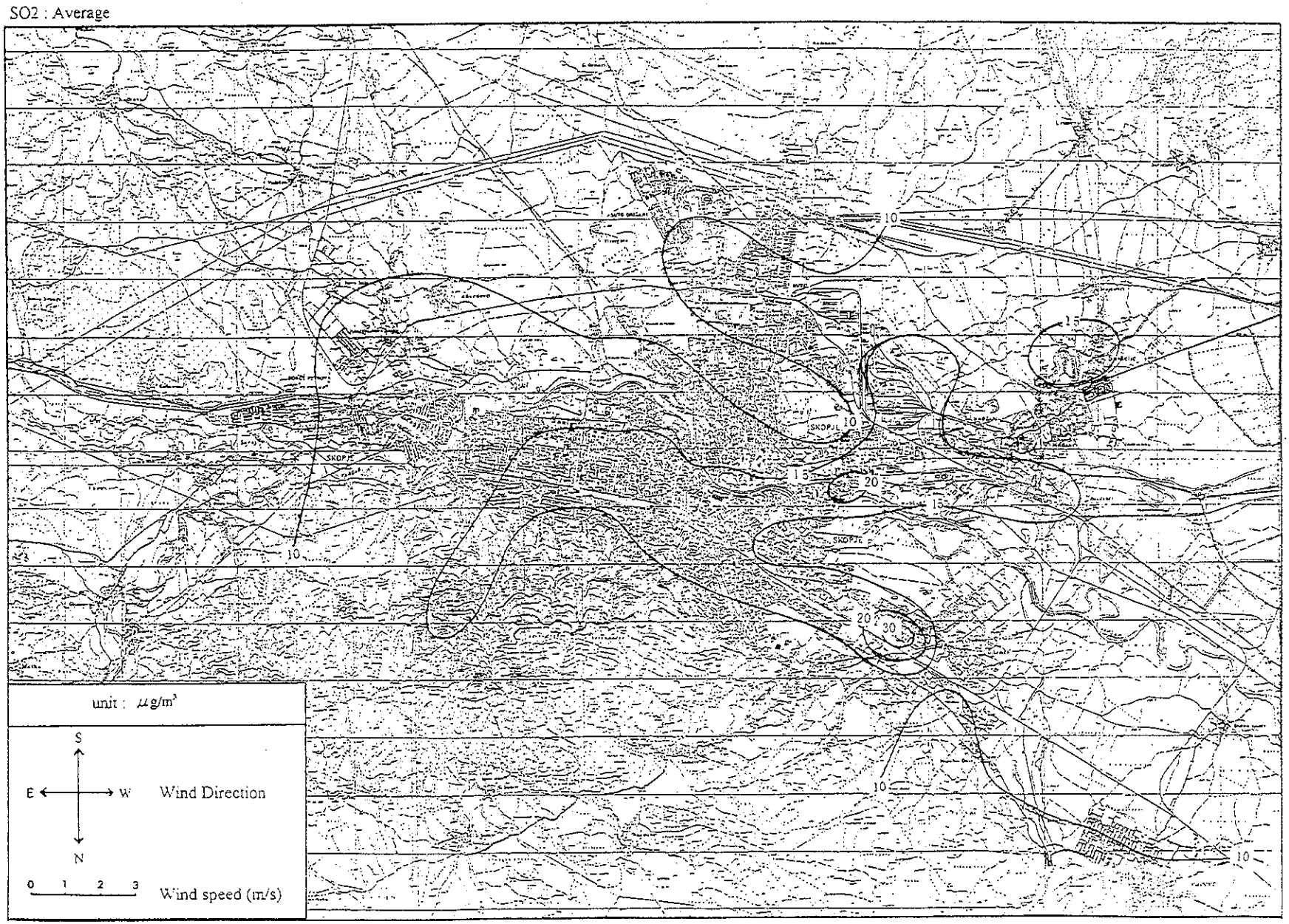

Figure D3.25(1) The Concentration Distributions of SO_2

SO2 : Run-2

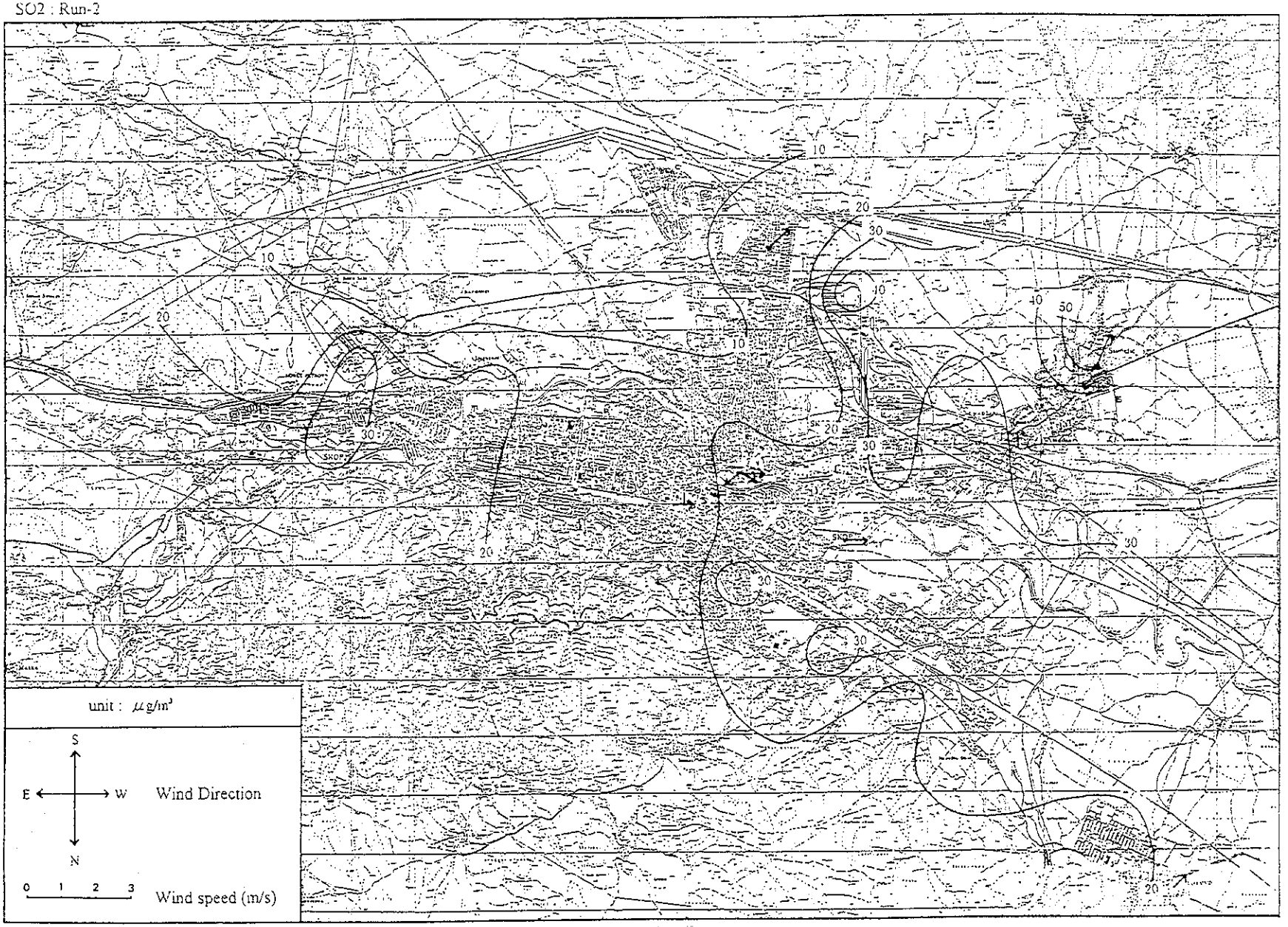

Figure D3.25(2) The Concentration Distributions of SO_2

SO2 : Run-3

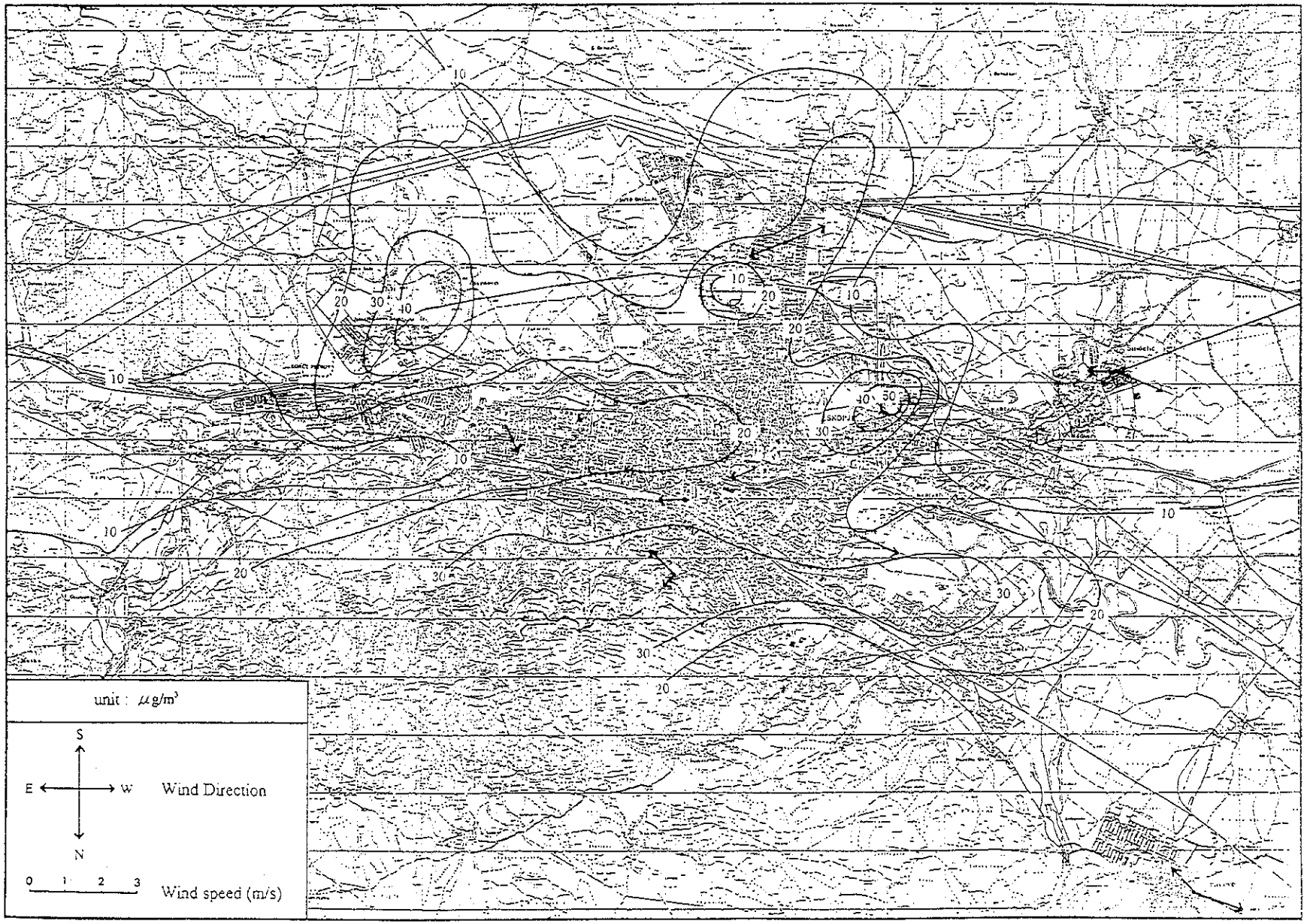

Figure D3.25(3) The Concentration Distributions of SO_2

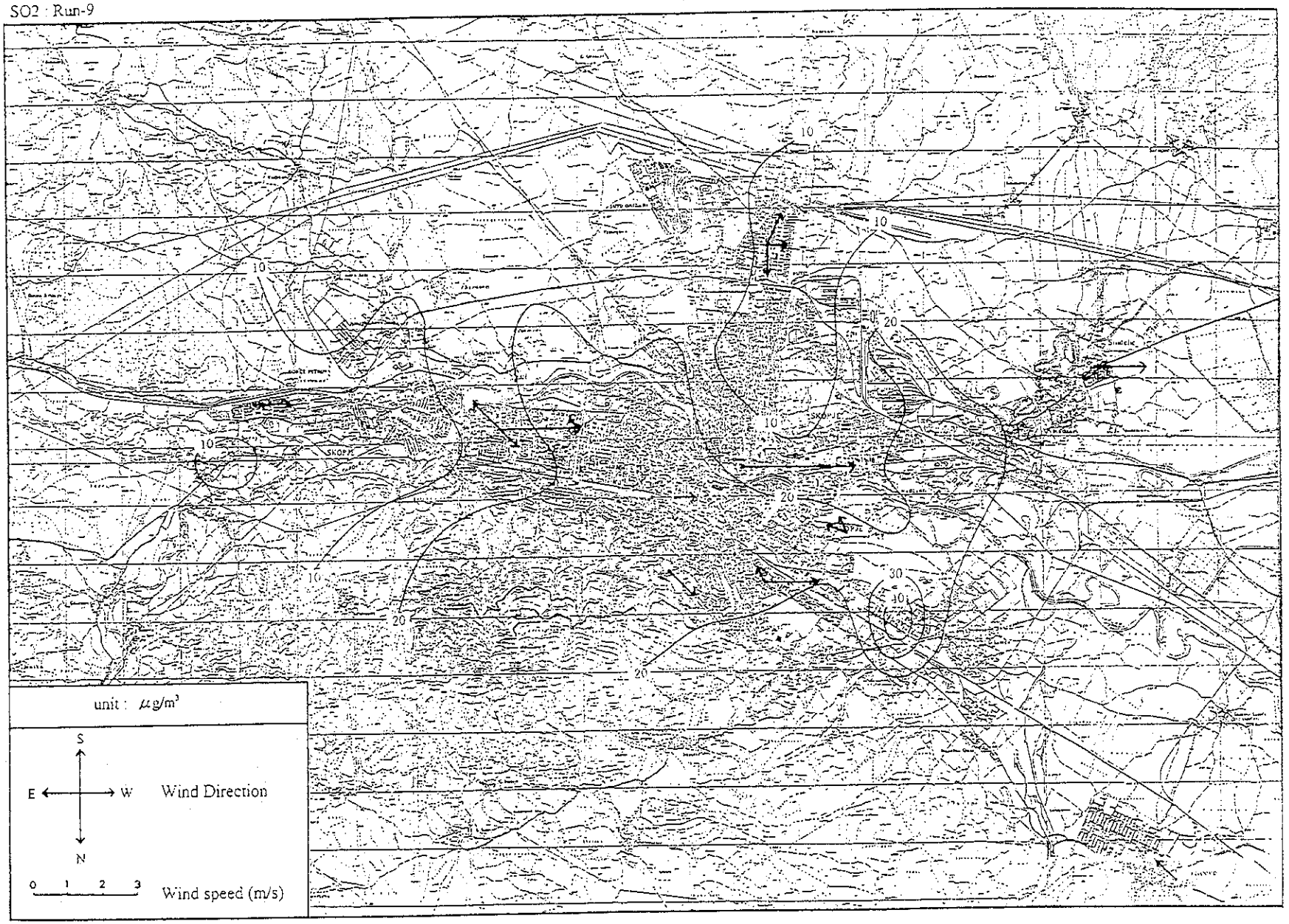

Figure D3.25(4) The Concentration Distributions of SO_2

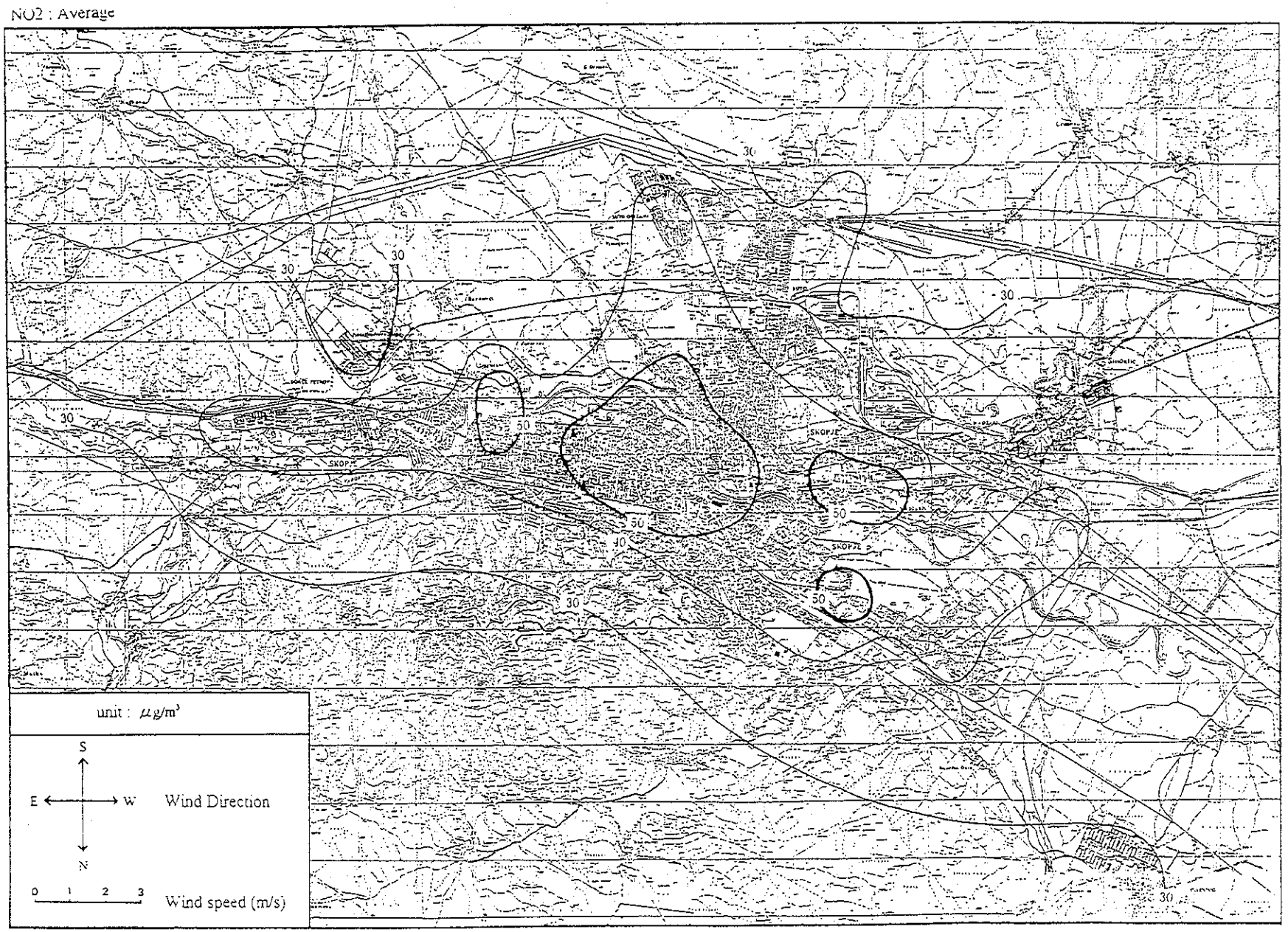

Figure D3.26(1) The Concentration Distributions of NO_2

NO2 : Run-1

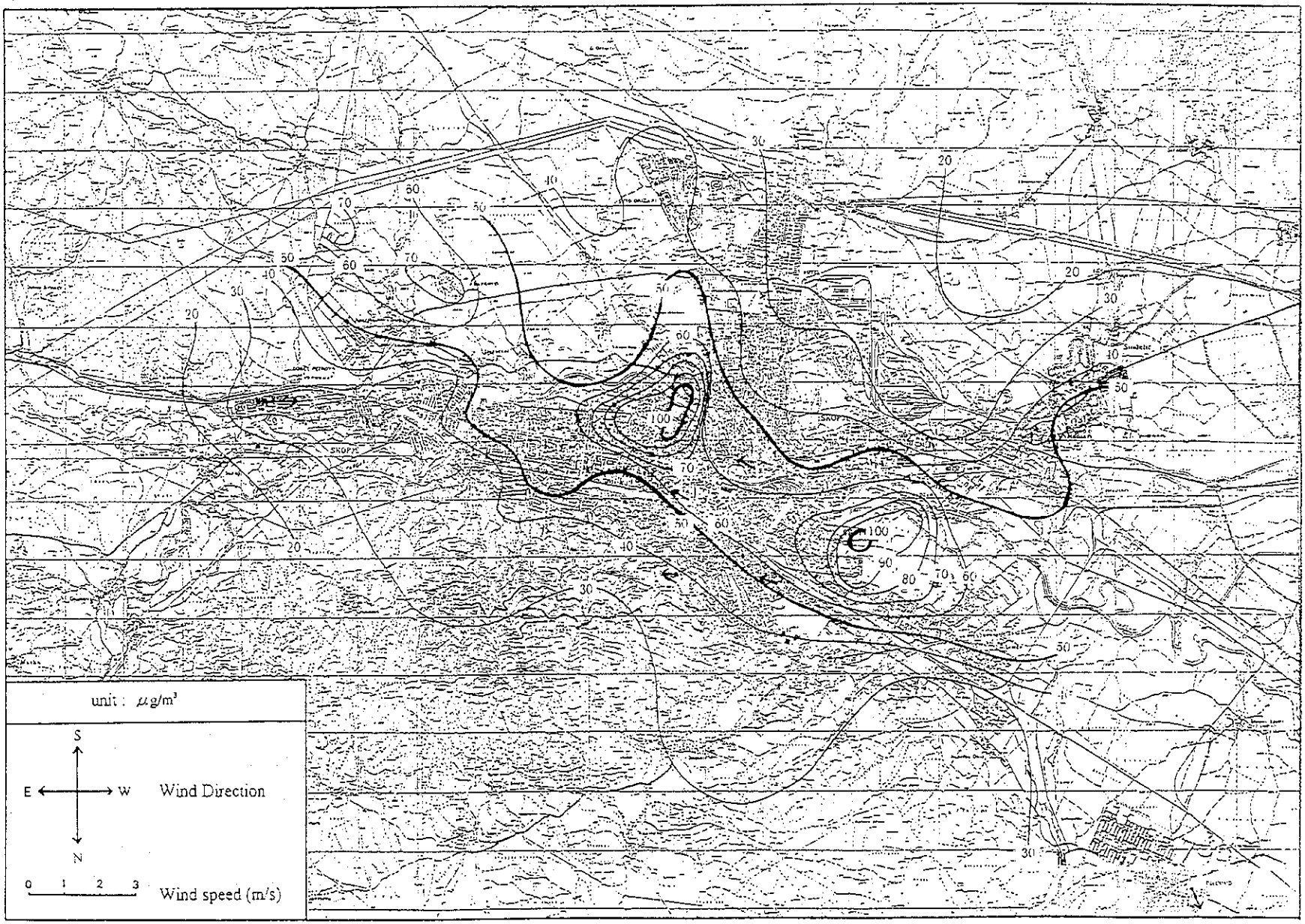

Figure D3.26(2) The Concentration Distributions of NO_2