1) New installation of the circulating fluidized bed combustion (CFBC) system planned by MVM Rt. is considered to be appropriate and necessary for improvement of the plant under the policies of the Government.

2) Conversions of existing 4 boilers into the hybrid fluidized bed combustion (HFBC) type have been also planned by MVM Rt. Meanwhile, the Government has proposed a regulation that the sulfur removal efficiency of the HFBC system be 60 % or more. The HFBC system was developed by Institute for Electric Power Research (VEIKI) and successfully applied in Ajka Power Plant using the coal produced near Ajka. However, the sulfur removal efficiency of 60 % was not confirmed by the combustion test of the Study Team conducted at Ajka Power Plant in which the Borsod coal was used. Although the efficiency of 60 % is said to be guaranteed by VEIKI in the application the HFBC system to Borsod Power Plant, careful studies are recommended for its success.

(5) Prevention of Emissions of Harmful Substances

In the Sajó Valley area, there are several chemical plants that emit harmful substances such as HCl, H_2SO_4, NH_3, phosgene, and chlorobenzene. Emissions of these substances must be controlled strictly for the safety of people rather than in view of air pollution control. Since these plants have their own plans to eliminate such harmful emissions, their urgent implementation is strongly recommended.

(6) Air Quality Simulation

The degree of influence to the ground level pollutant concentration is not always proportional to the scale of the emission source. Therefore, air quality simulation, such as that employed in this study, is useful for air pollution control planning. For a simulation model to be reliable, accuracy of data on ambient air quality, meteorology, and pollutant emission sources is critically important. Therefore, works to improve these data should be continued systematically. Wide-spread utilization of available simulation models and further development of models for particular purposes, such as analysis of short-term high pollutant concentration phenomenon, are recommended.

Conversion of SO_2 Concentration Unit

ppm ⟶ mg/m^3		mg/m^3 ⟶ ppm	
ppm (ppb)	mg/m^3 ($\mu g/m^3$)	mg/m^3 ($\mu g/m^3$)	ppm (ppb)
1	3	1	0
2	5	2	1
3	8	3	1
4	11	4	2
5	13	5	2
6	16	6	2
7	19	7	3
8	21	8	3
9	24	9	3
10	27	10	4
20	53	20	8
30	80	30	11
40	106	40	15
50	133	50	19
60	160	60	23
70	186	70	26
80	213	80	30
90	240	90	34
100	266	100	38
200	532	200	75
300	799	300	113
400	1,065	400	150
500	1,331	500	188
600	1,597	600	225
700	1,863	700	263
800	2,130	800	301
900	2,396	900	338
1,000	2,662	1,000	376
2,000	5,324	2,000	751
3,000	7,986	3,000	1,127
4,000	10,648	4,000	1,503
5,000	13,311	5,000	1,878
6,000	15,973	6,000	2,254
7,000	18,635	7,000	2,629
8,000	21,297	8,000	3,005
9,000	23,959	9,000	3,381
10,000	26,621	10,000	3,756

Note: The unit conversion was made by the following equation using the condition of 20°C and 1.013×10^5 Pa.

$$SO_2\ [ppm] = 22.4/64 \cdot (273+20)/273 \cdot SO_2\ [mg/m^3]$$

Conversion of NO_2 /NO_x Concentration Unit

ppm → mg/m^3		mg/m^3 → ppm	
ppm (ppb)	mg/m^3 (μg/m^3)	mg/m^3 (μg/m^3)	ppm (ppb)
1	2	1	1
2	4	2	1
3	6	3	2
4	8	4	2
5	10	5	3
6	11	6	3
7	13	7	4
8	15	8	4
9	17	9	5
10	19	10	5
20	38	20	10
30	57	30	16
40	77	40	21
50	96	50	26
60	115	60	31
70	134	70	37
80	153	80	42
90	172	90	47
100	191	100	52
200	383	200	105
300	574	300	157
400	765	400	209
500	957	500	261
600	1,148	600	314
700	1,339	700	366
800	1,531	800	418
900	1,722	900	470
1,000	1,913	1,000	523
2,000	3,827	2,000	1,045
3,000	5,740	3,000	1,568
4,000	7,654	4,000	2,091
5,000	9,567	5,000	2,613
6,000	11,480	6,000	3,136
7,000	13,394	7,000	3,658
8,000	15,307	8,000	4,181
9,000	17,221	9,000	4,704
10,000	19,134	10,000	5,226

Note: The unit conversion was made by the following equation using the condition of 20°C and 1.013×10^5 Pa.

$$NO_2\ [ppm] = 22.4/46 \cdot (273+20)/273 \cdot NO_2\ [mg/m^3]$$