

香港電燈有限公司  
The Hongkong Electric Co., Ltd.



**Lamma Power Station  
Units L2, L4 & L5 Flue Gas Desulphurization  
Plants Retrofit  
Operational Phase**

**Quarterly Environmental Monitoring & Audit Report**

**April – June 2011**



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## EXECUTIVE SUMMARY

This is the quarterly Environmental Monitoring and Audit (EM&A) report for the Projects “Lamma Power Station Units L4 & L5 Flue Gas Desulphurization Plant Retrofit” and “Lamma Power Station Unit L2 Flue Gas Desulphurization Plant Retrofit” prepared by the Environmental Team (ET). This report presents the results of impact monitoring on air and water quality and environmental audit for the operation of the said projects in the period from April to June 2011.

Environmental monitoring for air quality and water quality were carried out for the purpose of this EM&A program as well as for fulfilling the requirements stipulated in the relevant licences. The results were checked against the established Action/Limit (AL) levels. The implementation status of the environmental mitigation measures, Event/Action Plan and environmental complaint handling procedures were also checked.

### Plant Availability

Units L2, L4 and L5 were out of service during the following period:

Unit	Period	Remark
L5	15/01/2011 03:06 to 16/05/2011 15:36	Unit overhaul
L5	16/05/2011 19:38 to 17/05/2011 09:07	Turbine balancing
L5	17/05/2011 17:13 to 18/05/2011 08:51	Turbine over-speed test
L5	18/05/2011 18:03 to 19/05/2011 07:29	Turbine balance weight caulking

### Malfunction/Outage Records of Pollution Control Equipment

Major outages of the Pollution Control Equipment during the reporting period are listed below:

Equipment	Period	Cause	Actions Taken
L2 FGD	13/05/2011 09:34 to 24/05/2011 03:00	Booster fan vibration high	EPD was informed by letter dated 25/05/2011
L2 FGD	04/06/2011 04:05 to 20/07/2011 15:51	Booster fan repairing work	EPD was informed by letter dated 22/07/2011
L5 FGD	07/06/2011 17:11 to 19:10	FGD was bypassed due to mal-operation of Booster fan vibration high trip.	EPD was informed by letter dated 10/06/2011

For other minor outages, please refer to section 1.4 of the report.

### **Environmental Monitoring Works**

Environmental monitoring works were performed during the operation of Units L2, L4 and L5 FGD Plants in the reporting period.

#### *Air Quality*

No exceedance of Action and Limit levels for air quality were recorded in the reporting period.

#### *Water Quality*

No exceedance of Action and Limit levels for water quality were recorded in the reporting period.

### **Environmental Licensing and Permitting**

Description	Permit / Licence No.	Valid Period		Issued To	Date of Issuance
		From	To		
Environmental Permit for L4/5 FGD plants retrofit project	EP-248/2006	25/04/2006	-	HK Electric	25/04/2006
Environmental Permit for Unit L2 FGD plant retrofit project	EP-287/2007	02/10/2007	-	HK Electric	02/10/2007
Specified Processes Licence issued under APCO	L-7-002(8)	01/01/2011	31/12/2012	HK Electric	30/12/2010
WPCO discharge licence for Ash Lagoon	EP890/W2/XD018	16/04/2007	31/12/2011	HK Electric	16/04/2007

### **Implementation Status of Environmental Mitigation Measures**

Environmental mitigation measures were implemented in the reporting period.

### **Environmental Complaints**

No complaint on environmental issues against the projects was received during the reporting period.

### **Future key issues**

Key issues to be considered in the coming months include:

#### *Air Impact*

- To continuously carry out the air quality monitoring for Units L2, L4 and L5.

### *Water Impact*

- To continuously carry out the water quality monitoring for FGD WWT plant.

### **Concluding Remarks**

The environmental performance of the projects was generally satisfactory.

## 1. INTRODUCTION

The Environmental Team (hereinafter called the “ET”) was formed within The Hongkong Electric Co. Ltd (HK Electric) to undertake Environmental Monitoring and Audit for the “Operation of Lamma Power Station Units L4 & L5 Flue Gas Desulfurization Plant Retrofit Project” under the requirements of Clause 2.18 of Environmental Permit (EP) No. EP-248/2006 and “Operation of Lamma Power Station Unit L2 Flue Gas Desulfurization Plant Retrofit Project” under the requirements of Clause 2.10 of Environmental Permit (EP) No. EP-287/2007.

This report summarizes the environmental monitoring and audit work for the said Projects for the period from April to June 2011.

### 1.1 Background

The Projects involves retrofitting the three existing coal-fired generating Units L2, L4 and L5 of Lamma Power Station with Flue Gas Desulphurisation (FGD) plants for reducing sulphur dioxide emissions in support of Government policy to improve the air quality of the Pearl River Delta.

The Projects include the installation and operation of FGD plants with flue gas desulphurization efficiency of 90% for the three coal-fired Units L2, L4 & L5 to reduce the overall SO<sub>2</sub> emissions from Lamma Power Station. The process adopted for the FGD plants is “Wet Limestone-Gypsum”, a technology which has already been used in, and proved effective and reliable for the existing coal-fired units L6, L7 & L8. The flue gas from the boiler is directed to the FGD absorber inside which removal of SO<sub>2</sub> is take place by reaction with limestone slurry. After passing through the absorber, the treated flue gas is heated up by a gas-gas heater to over 80°C at boiler rated capacity and directed back to the existing chimney for discharge to the atmosphere. Figure 1.1a, Figure 1.1b, Figure 1.2a, Figure 1.2b and Figure 1.3 show the location and schematic of the FGD plants.

Wastewater filtrated from the reacted limestone slurry, i.e. gypsum slurry, is produced and it is directed to the existing FGD wastewater treatment plant (WWTP). The FGD WWTP is designed to treat the effluent from FGD plants by alkalization, precipitation and neutralization processes. The schematic diagram of the FGD WWTP is illustrated in Figure 1.4.

The additional equipment for the FGD Plants retrofit projects for Units L2, L4 and L5 includes:

- Three sets of FGD absorbers and associated ductworks
- Three sets of booster fans
- Three sets of gas-gas heaters
- Two FGD Switchgear and Equipment Buildings
- Gypsum dewatering system comprising two sets of hydrocyclones and belt filters

## 1.2 Project Organisation

The management structure to oversee the Projects includes the following:

- Environmental Protection Department (The Authority);
- General Manager (Corporate Development) (The official contact person between HK Electric and EPD);
- Environmental Team Leader (ET Leader);
- Environmental Team (ET).

The organization chart for the Operation EM&A programme is shown in Figure 1.5.

## 1.3 Plant Availability during the Reporting Period

Units L2, L4 and L5 were out of service during the following period:

Unit	Period	Remark
L5	15/01/2011 03:06 to 16/05/2011 15:36	Unit overhaul
L5	16/05/2011 19:38 to 17/05/2011 09:07	Turbine balancing
L5	17/05/2011 17:13 to 18/05/2011 08:51	Turbine over-speed test
L5	18/05/2011 18:03 to 19/05/2011 07:29	Turbine balance weight caulking

## 1.4 Malfunction/Outage Records of Pollution Control Equipment

Equipment	Period	Cause	Actions Taken
L2 FGD	14/04/2011 16:26 to 19:23	FGD plant computer fault	EPD was informed by letter dated 19/04/2011
L2 FGD	08/05/2011 07:47 to 07:51	Booster fan inlet damper control sluggish	EPD was informed by letter dated 12/05/2011
L2 FGD	13/05/2011 09:34 to 24/05/2011 03:00	Booster fan vibration high	EPD was informed by letter dated 25/05/2011
L2 FGD	30/05/2011 15:43 to 15:49	Booster fan inlet damper control sluggish	EPD was informed by letter dated 01/06/2011

Equipment	Period	Cause	Actions Taken
L2 FGD	01/06/2011 10:11 to 10:26	Booster fan inlet damper control sluggish	EPD was informed by letter dated 01/06/2011
L2 FGD	03/06/2011 19:41 to 19:55	Booster fan vibration high	EPD was informed by letter dated 07/06/2011
L2 FGD	04/06/2011 04:05 to 20/07/2011 15:51	Booster fan repairing work	EPD was informed by letter dated 22/07/2011
L4 FGD	02/04/2011 02:16 to 02:29	Routine checking of bypass dampers	EPD was informed by letter dated 07/04/2011
L4 FGD	09/04/2011 02:07 to 02:21	Routine checking of bypass dampers	EPD was informed by letter dated 13/04/2011
L4 FGD	16/4/2011 03:16 to 03:21	Routine checking of bypass dampers	EPD was informed by letter dated 19/04/2011
L4 FGD	23/4/2011 03:16 to 03:21	Routine checking of bypass dampers	EPD was informed by letter dated 29/04/2011
L4 FGD	30/4/2011 01:57 to 02:06	Routine checking of bypass dampers	EPD was informed by letter dated 05/05/2011
L4 FGD	07/05/2011 01:32 to 01:37	Routine checking of bypass dampers	EPD was informed by letter dated 12/05/2011
L4 FGD	14/05/2011 01:54 to 01:59	Routine checking of bypass dampers	EPD was informed by letter dated 18/05/2011
L4 FGD	21/05/2011 02:35 to 02:50	Routine checking of bypass dampers	EPD was informed by letter dated 25/05/2011
L4 FGD	28/05/2011 03:53 to 03:56	Routine checking of bypass dampers	EPD was informed by letter dated 01/06/2011
L4 FGD	04/06/2011 01:15 to 01:17	Routine checking of bypass dampers	EPD was informed by letter dated 07/06/2011
L4 FGD	11/06/2011 03:05 to 03:25	Routine checking of bypass dampers	EPD was informed by letter dated 15/06/2011
L4 FGD	18/06/2011 03:46 to 03:50	Routine checking of bypass dampers	EPD was informed by letter dated 21/06/2011
L4 FGD	25/06/2011 02:22 to 02:24	Routine checking of bypass dampers	EPD was informed by letter dated 29/06/2011
L5 FGD	21/05/2011 19:21 to 9:29 19:47 to 19:55	FGD was bypassed due to faulty thermocouple	EPD was informed by letter dated 25/05/2011
L5 FGD	22/05/2011 23:09 to 23:15 23:25 to 23:31 23:34 to 23:40	FGD was bypassed due to faulty thermocouple	EPD was informed by letter dated 25/05/2011
L5 FGD	04/06/2011 01:21 to 01:23	Routine checking of bypass dampers	EPD was informed by letter dated 07/06/2011

Equipment	Period	Cause	Actions Taken
L5 FGD	07/06/2011 17:11 to 19:10	FGD was bypassed due to mal-operation of Booster fan vibration high trip.	EPD was informed by letter dated 10/06/2011
L5 FGD	21/06/2011 09:59 to 10:43	FGD was bypassed due to FGD inlet temperature high.	EPD was informed by letter dated 24/06/2011

## 1.5 Summary of EM&A Requirements

Environmental Monitoring and Audit (EM&A) requirements have been discussed in the Environmental Impact Assessment (EIA) Report/ Project Profile for the Projects. The assessment results indicate that environmental monitoring works required for the EM&A programmes of these Projects are already in place or would be implemented under Lamma Power Station Extension Environmental Permit or environmental licenses for the operation of the existing Lamma Power Station. Such monitoring works are considered adequate for the Projects and no additional EM&A activities are required. Hence, environmental monitoring for air quality and water quality are carried out for the purpose of this EM&A program as well as for fulfilling the requirements stipulated in the relevant licences.

The EM&A monitoring work for air and water quality are described in Section 2 and Section 3 respectively.

The following environmental audits are summarized in Section 4 of the report:

- Environmental monitoring results;
- The status of environmental licensing and permits for the Projects;
- The implementation status of environmental protection and pollution control / mitigation measures.

The future key issues for the Projects will be reported in Section 5 of this report.

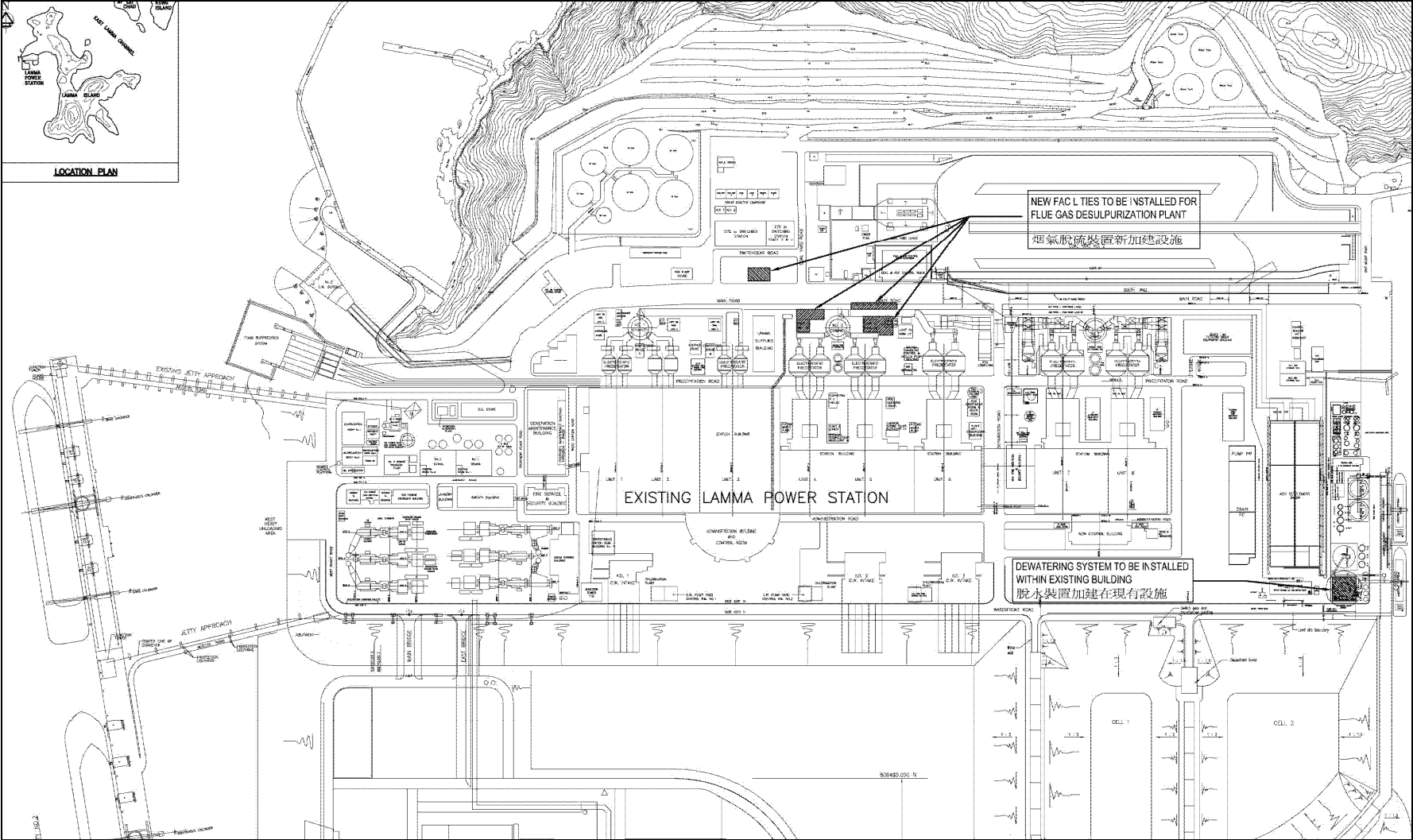


Figure 1.1a Location of New Facilities for L4 & L5 FGD Plants

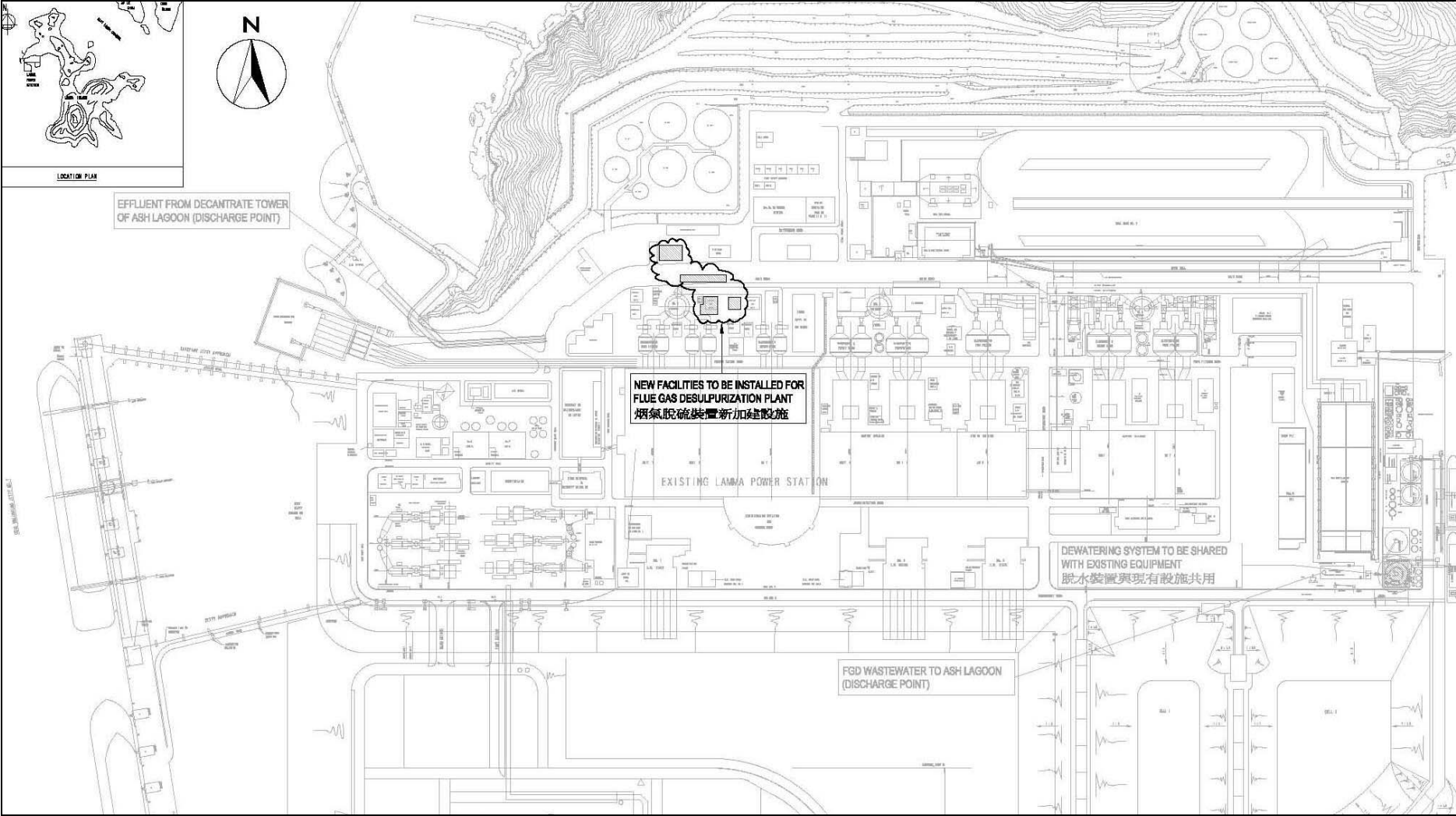


Figure 1.1b Location of New Facilities for L2 FGD Plant

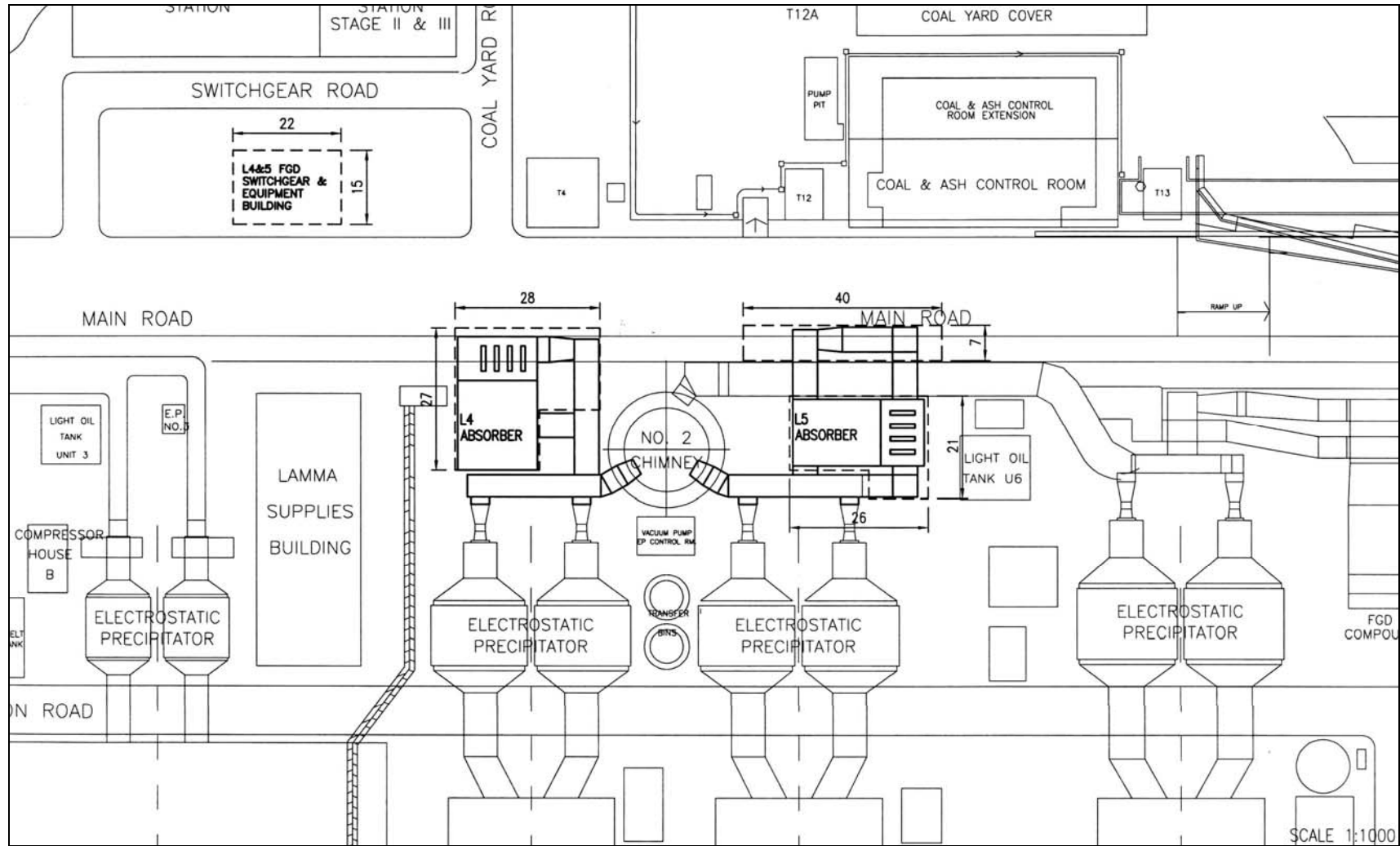


Figure 1.2a General Arrangement of L4 & L5 FGD Plants

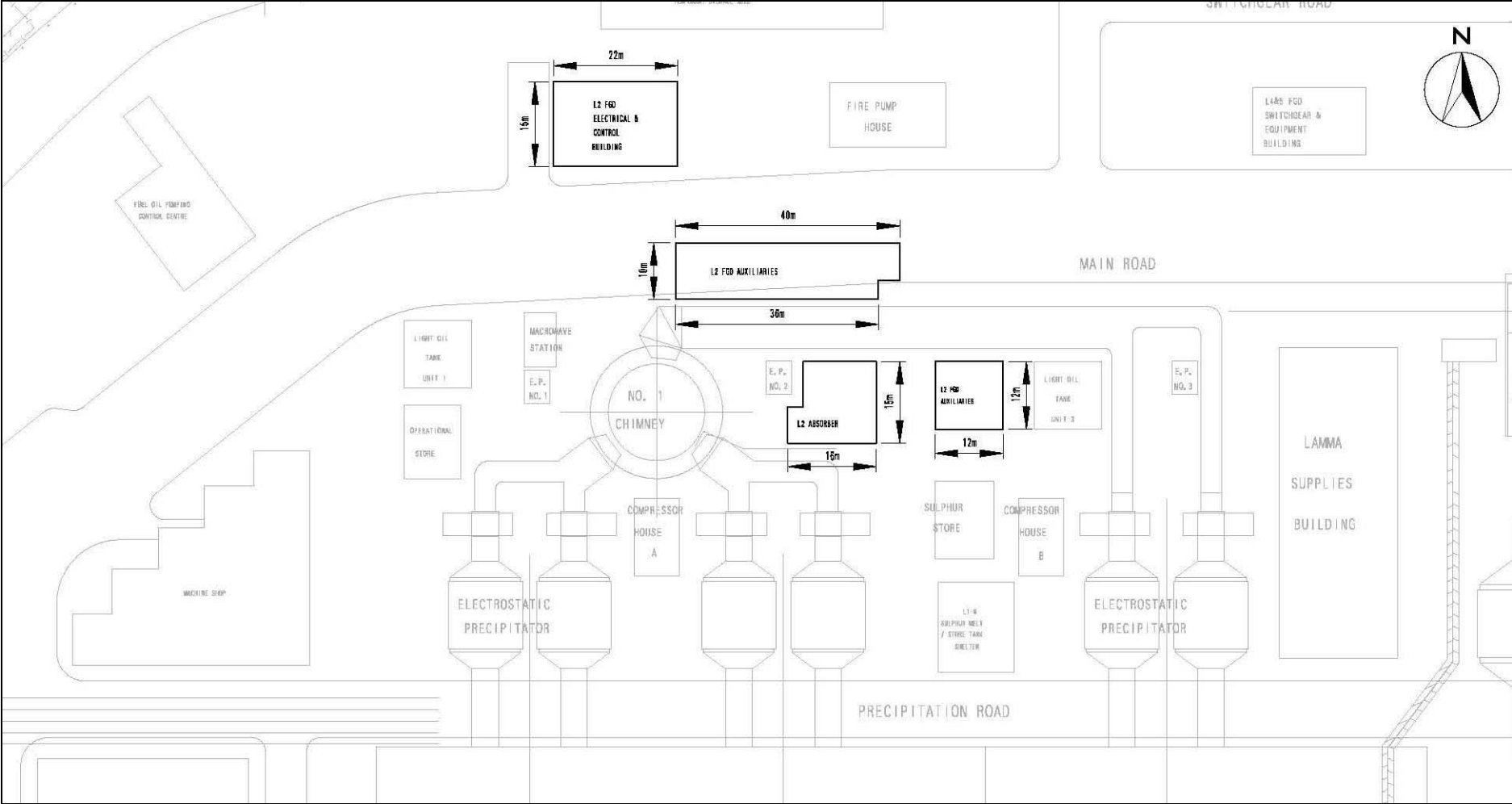


Figure 1.2b General Arrangement of L2 FGD Plant

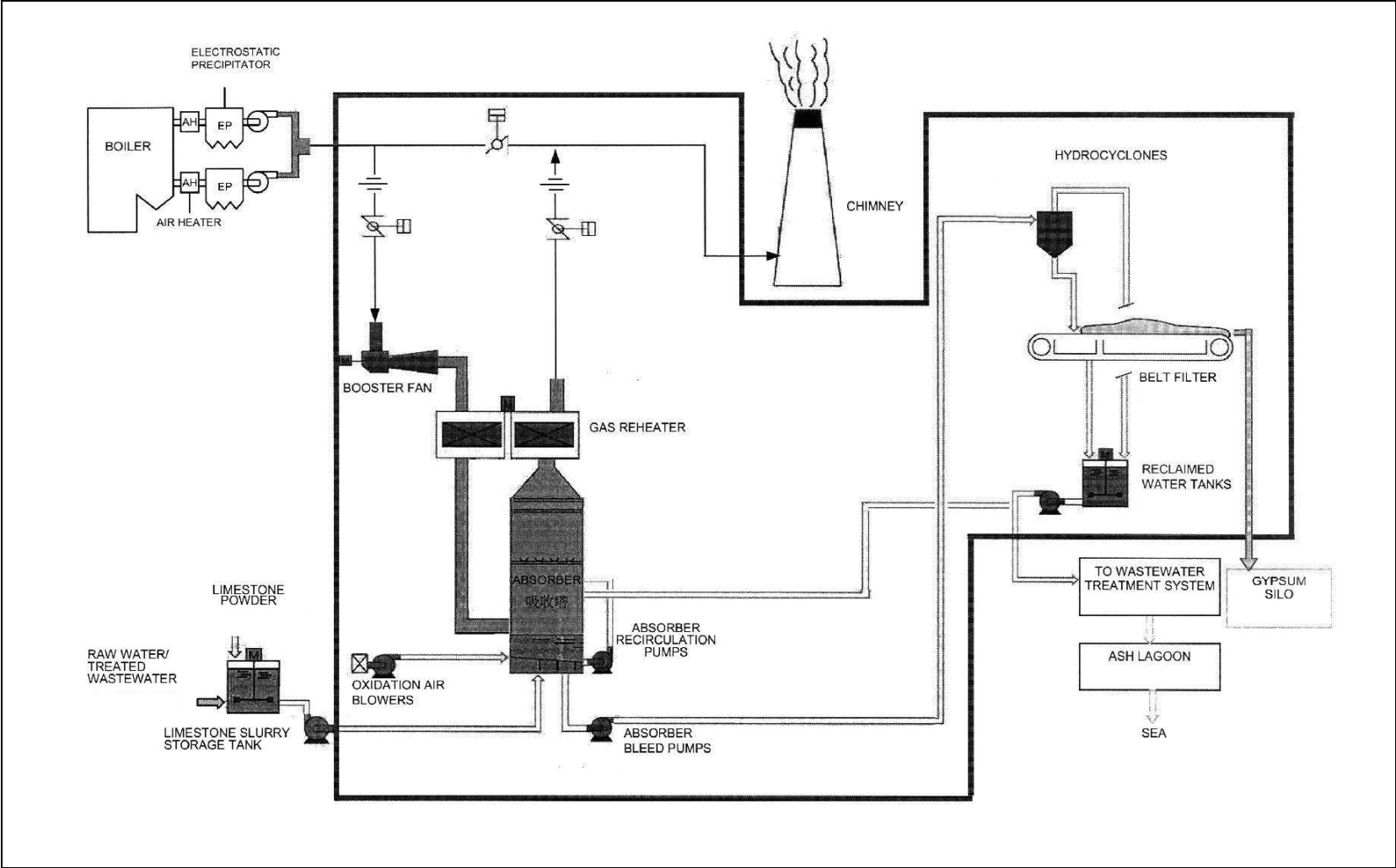


Figure 1.3 Schematic Diagram of the L4 & L5 FGD Plant

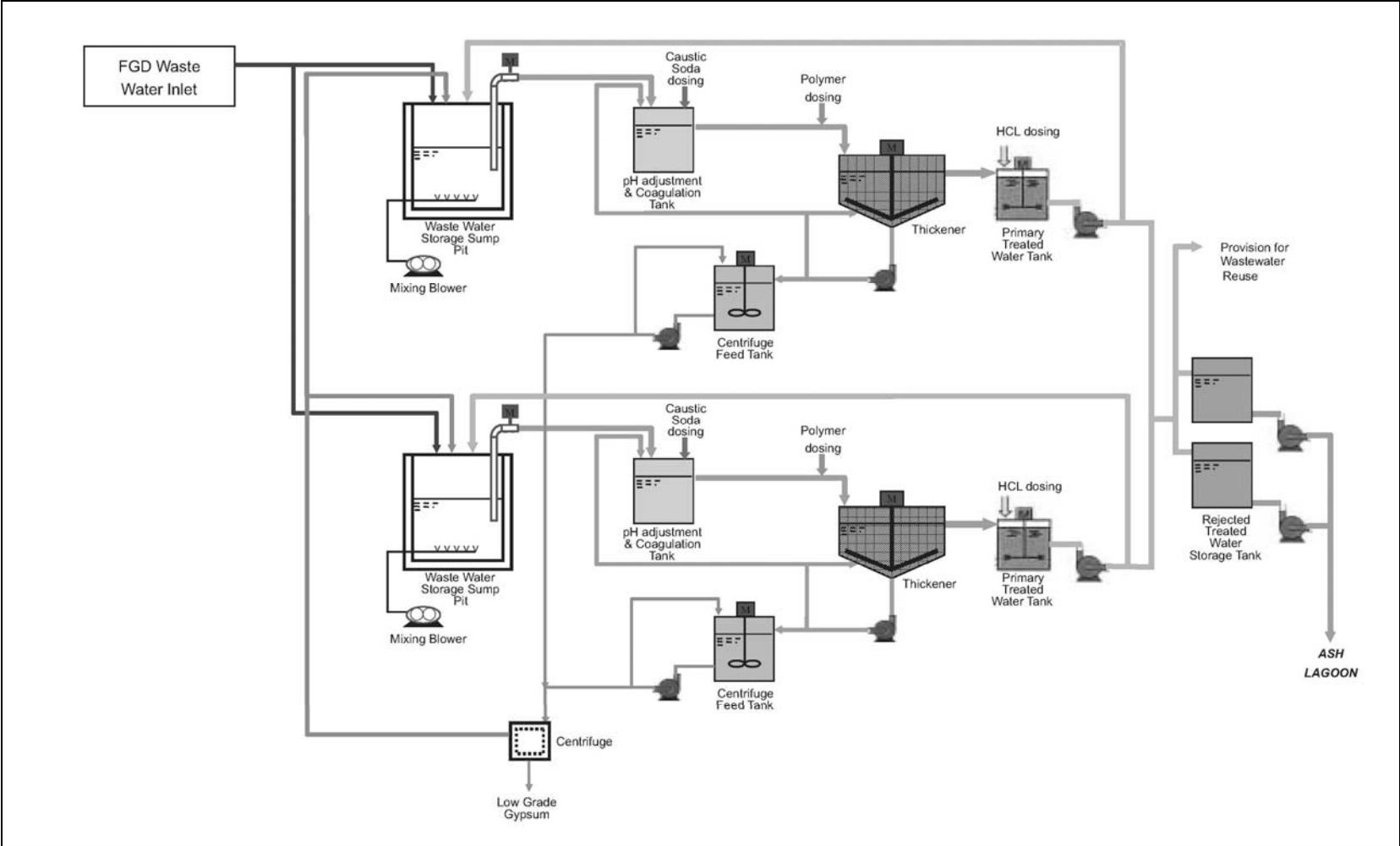


Figure 1.4 Simplified Schematic Diagram of FGD Wastewater Treatment Plant

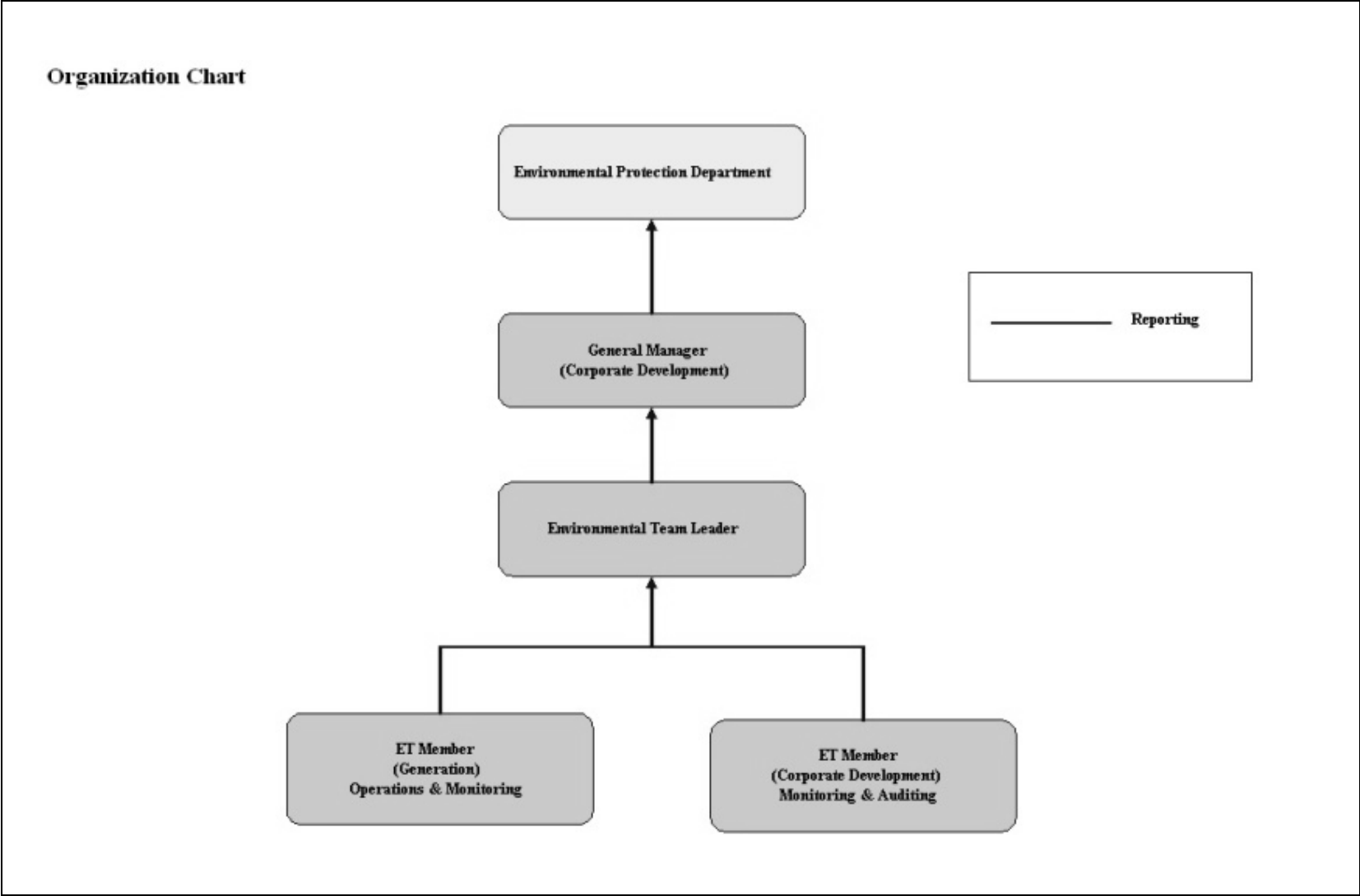


Figure 1.5 Organization Structure at Operational Phase of the Projects

## 2. AIR QUALITY

### 2.1 Monitoring Requirements

Since the Projects will bring a general air quality improvement, no additional EM&A activities are considered required, besides those already in place, such as those required by specified process licenses for the operation of the existing Lamma Power Station. In accordance with the requirements stipulated in the Specified Processes Licence issued under Air Pollution Control Ordinance, various operation parameters as stated in Table 2.1 were monitored and checked against the Action/Limit Levels shown in Appendix A.

Table 2.1 Air Quality Monitoring Parameters and Frequency

Sources of Emission	Parameter	Frequency
Steam boilers L2, L4 & L5	Particulate	Once / year
	Particulate (Opacity)	Continuous
	SO <sub>2</sub>	Continuous
	NO <sub>x</sub> expressed as NO <sub>2</sub> (For L4 and L5 only)	Continuous
Fugitive Dust (Coal, PFA, Limestone, gypsum)	Total Suspended Particulate	Once every six days
Chimney emissions	Ambient air	Continuous at existing ambient air monitoring stations
	SO <sub>2</sub>	
	NO <sub>2</sub>	

### 2.2 Summary of Results and Observations

Monitoring of various parameters as listed in Table 2.1 above was conducted during the operation of Units L2, L4 and L5 in the reporting period. A summary of monitoring data is shown in Appendix B.

The new ambient air monitoring station at Cheung Chau commenced its operation since 1 June 2011 after the completion of the installation work.

No Action/Limit Level exceedance was recorded in the reporting period.

### 3. WATER QUALITY

#### 3.1 Monitoring Requirements

According to the EIA Report/ Project Profile for the Projects, the current monitoring programme for the Lamma Power Station can cover the Projects and no additional EM&A measures are required besides those already in place. Hence, the EM&A work on water quality should strictly follow the relevant monitoring requirements stipulated in the discharge licence for Ash Lagoon issued under the Water Pollution Control Ordinance (WPCO).

Water quality monitoring was carried out for FGD Waste Water Treatment Plant (WWTP) in the reporting period. The parameters stated in Table 3.1 were monitored and checked against the Action/Limit Levels as given in Appendix A.

Table 3.1 Water Quality Monitoring Parameters and Frequencies

Item	Parameters	Frequencies
1	pH	Daily
2	Suspended Solids	Daily
3	Iron	Monthly
4	Barium	Monthly
5	Mercury	Monthly
6	Cadmium	Monthly
7	Cyanide	Monthly
8	Total Phosphorus	Monthly
9	Total Nitrogen	Monthly

#### 3.2 Summary of Results and Observations

Monitoring of various parameters as listed in Table 3.1 above was carried out during the discharge of the WWTP in the reporting period. A summary of the data is shown in Appendix C.

The data recorded for the monitoring parameters were all below their corresponding Action/Limit Levels. No Action/Limit level exceedance was recorded in the reporting period. The effluent quality was generally satisfactory.

## 4. ENVIRONMENTAL AUDIT

### 4.1 Review of Environmental Monitoring Procedures

The environmental monitoring procedures were regularly reviewed by the Environmental Team. No modification to the existing monitoring procedures was recommended.

### 4.2 Assessment of Environmental Monitoring Results

#### *Monitoring results for Air Quality and Water Quality*

The environmental monitoring results for air quality, noise and water quality are presented in Sections 2, 3 and 4 respectively are summarized in Table 4.1.

Table 4.1 Summary of Action/Limit Level Exceedances on Monitoring Parameters

Item	Parameter Monitored	Monitoring Period	No. of Exceedances In		Event/Action Plan Implementation Status and Results
			Action Level	Limit Level	
Air					
1	Annual analysis of dust particulate emission rates at chimney stacks.	01/04/11-30/06/11	N.A.	0	
2	Continuous monitoring of opacity, NO <sub>x</sub> , SO <sub>2</sub> and CO <sub>2</sub> in the flue gas at the chimney stacks	01/04/11-30/06/11	0	0	
3	TSP monitoring at Lamma Power Station Boundary (ie East Gate and Reservoir).	01/04/11-30/06/11	0	0	
4	Ambient SO <sub>2</sub> & NO <sub>x</sub> monitoring at the Peak, Queen Mary Hospital, Victoria Road, Chung Hom Kok, Ap Lei Chau and	01/04/11-30/06/11	0	0	

Item	Parameter Monitored	Monitoring Period	No. of Exceedances In		Event/Action Plan Implementation Status and Results
			Action Level	Limit Level	
	Cheung Chau.				
Water					
1	pH in WWTP Effluent	01/04/11-30/06/11	0	0	
2	Suspended Solids in WWTP Effluent	01/04/11-30/06/11	0	0	
3	Iron in WWTP Effluent	01/04/11-30/06/11	0	0	
4	Barium in WWTP Effluent	01/04/11-30/06/11	0	0	
5	Mercury in WWTP Effluent	01/04/11-30/06/11	0	0	
6	Cadmium in WWTP Effluent	01/04/11-30/06/11	0	0	
7	Cyanide in WWTP Effluent	01/04/11-30/06/11	0	0	
8	Total Phosphorus in WWTP Effluent	01/04/11-30/06/11	0	0	
9	Total Nitrogen in WWTP Effluent	01/04/11-30/06/11	0	0	

### *Waste Management Records*

The quantity of FGD gypsum and sludge collected for reuse by contractor in the reporting period are shown in Table 4.2.

Table 4.2 Amount of Gypsum and Sludge Collected for Reuse by Contractor

<b>Period</b>	<b>Amount of Gypsum Collected</b>	<b>Amount of Sludge Collected</b>
April 2011	9343.4 MT	32.5 MT
May 2011	7702.5 MT	3.3 MT
June 2011	8515.1 MT	0 MT

#### 4.3 Status of Environmental Licensing and Permitting

All permits/licenses obtained as of June 2011 are summarised in Table 4.3.

Table 4.3 Summary of Environmental Licensing and Permit Status

<b>Description</b>	<b>Permit / Licence No.</b>	<b>Valid Period</b>		<b>Status</b>
		<b>From</b>	<b>To</b>	
Environmental Permit for Units L4/5 FGD Plants Retrofit	EP-248/2006	25/04/2006	-	Valid
Environmental Permit for Unit L2 FGD Plant Retrofit	EP-287/2007	02/10/2007	-	Valid
Specified Processes Licence issued under APCO	L-7-002(8)	01/01/2011	31/12/2012	Valid
WPCO discharge licence for Ash Lagoon	EP890/W2/XD018	16/04/2007	31/12/2011	Valid

#### 4.4 Implementation Status of Environmental Mitigation Measures

Mitigation measures detailed in the EIA Report and EP are required to be implemented. An updated summary of the Environmental Mitigation Implementation Schedule (EMIS) is presented in Appendix D.

#### 4.5 Implementation Status of Event/Action Plan

A list of specific actions in the event of exceedances of the various threshold levels for specific emission and discharge sources is given in Appendix A.

As no Action/Limit level exceedance was recorded, no action has been devised.

#### 4.6 Implementation Status of Environmental Complaint Handling Procedures

No complaint on environmental issues against the projects was received during the reporting period.

Table 4.4 Environmental Complaints / Enquiries Received

Case Reference / Date, Time Received / Date, Time Concerned	Descriptions / Actions Taken	Conclusion / Status
Nil	N/A	N/A

Table 4.5 Outstanding Environmental Complaints / Enquiries Carried Over

Case Reference / Date, Time Received / Date, Time Concerned	Descriptions / Actions Taken	Conclusion / Status
Nil	N/A	N/A

## 5. FUTURE KEY ISSUES

### 5.1 Outage Plan for the coming 3 months

Unit / Equipment	Period	Remark
L5	08/07/2011 to 09/07/2011	Removal of condensate venturi
L5	29/07/2011 to 30/07/2011	Defect rectification

### 5.2 Key issues for the coming 3 months

Key issues to be considered in the coming 3 months include:

#### *Air Impact*

- To continuously carry out the air quality monitoring for Units L2, L4 and L5.

#### *Water Impact*

- To continuously carry out the water quality monitoring for FGD Waste Water Treatment Plant.

## **6. CONCLUSION**

Environmental monitoring was performed as required in the reporting period from January to March 2011. All monitoring results were checked and reviewed.

No Action/Limit level exceedance on air quality parameters were recorded in the reporting period.

No Action/Limit level exceedance on water quality parameters were recorded in the reporting period.

Environmental mitigation measures recommended in the EIA Report and EP were implemented in the reporting period. Yet no abnormality that might have caused any abnormal emission was identified. No prosecution was received for the Projects in the reporting period.

The environmental performance of the Projects was generally satisfactory.

## Appendix A Event/Action Plans in Response to Exceedance of AL Levels

### A.1 Air

Source of Emissions	Parameters to be Monitored	Frequency	Concentration Not to Be Exceeded	Action	Limit	Proposed Action
Steam boilers L2, L4 and L5	Particulate	once/year	85 mg/Nm <sup>3</sup>	-	85	ET Leader informs Generation Division at action level. Maintenance initiated. Temporary load shift until pollution control equipment repaired and reinstated. Report to EPD.
	Particulate (Opacity)	continuous	40% (bihourly)	35	40	
	SO <sub>2</sub>	continuous	200 mg/Nm <sup>3</sup> (1h)	190	200	
	NO <sub>x</sub> expressed as NO <sub>2</sub> (For L4 and L5 only)	continuous	615 mg/Nm <sup>3</sup> (1h)	585	615	
Fugitive dust (Coal, PFA, limestone, gypsum)	TSP	Once every six days.	260 (µg/m <sup>3</sup> ) (24 hours)	-	260	Investigation of sources and additional dust suppression to be employed at Limit level. Frequency of monitoring to be increased as necessary.
Chimney emissions	Ambient air SO <sub>2</sub>	Continuous at existing ambient air monitoring stations	800 (µg/m <sup>3</sup> ) (1h)	-	800	ET to review data on post-hoc basis and check for possible power station contribution.
	NO <sub>2</sub>		300 (µg/m <sup>3</sup> ) (1h)	-	300	

## A.2 Water

Source of Discharges	Parameters to be Monitored	Frequency	Concentration Not to Be Exceeded	Action	Limit	Proposed Action
FGD Wastewater Treatment Plant	pH	Daily	6-9	-	6-9	If pH exceeds limit level, consideration to be given to adjust chemical dosing. ET Leader inform Generation Division and investigation be initiated to identify and remedy cause.  For all other parameters except pH, Generation Division to be informed, frequency of monitoring to be increased, and investigations to be initiated to identify cause and remedy if concentration exceeds action level. If problem persists to exceed the limit level, ET Leader verbally informs EPD and ensures remedial actions implemented.
	Suspended Solids	Daily	30 mg/L	25	30	
	Iron	Monthly	4 mg/L	3.6	4	
	Barium	Monthly	1.5 mg/L	1.3	1.5	
	Mercury	Monthly	0.005 mg/L	0.0045	0.005	
	Cadmium	Monthly	0.005 mg/L	0.0045	0.005	
	Cyanide	Monthly	0.1 mg/L	0.09	0.1	
	Total Phosphorus	Monthly	8 mg/L	7.2	8	
	Total Nitrogen	Monthly	400 mg/L	360	400	



## B.2 Unit L2, L4 and L5 Stack Monitoring at Lamma Power Station

### B.2.1 Monthly Summary of Stack NO<sub>x</sub> and SO<sub>2</sub> for Unit L5

Date	Daily Maximum		
	SO <sub>2</sub> concentration (mg/Nm <sup>3</sup> ) <sup>#</sup>	NO <sub>x</sub> concentration (mg/Nm <sup>3</sup> ) <sup>#</sup>	Opacity (%)
1/4/2011	*	*	*
2/4/2011	*	*	*
3/4/2011	*	*	*
4/4/2011	*	*	*
5/4/2011	*	*	*
6/4/2011	*	*	*
7/4/2011	*	*	*
8/4/2011	*	*	*
9/4/2011	*	*	*
10/4/2011	*	*	*
11/4/2011	*	*	*
12/4/2011	*	*	*
13/4/2011	*	*	*
14/4/2011	*	*	*
15/4/2011	*	*	*
16/4/2011	*	*	*
17/4/2011	*	*	*
18/4/2011	*	*	*
19/4/2011	*	*	*
20/4/2011	*	*	*
21/4/2011	*	*	*
22/4/2011	*	*	*
23/4/2011	*	*	*
24/4/2011	*	*	*
25/4/2011	*	*	*
26/4/2011	*	*	*
27/4/2011	*	*	*
28/4/2011	*	*	*
29/4/2011	*	*	*
30/4/2011	*	*	*

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) <sup>#</sup>	NOx concentration (mg/Nm3) <sup>#</sup>	Opacity (%)
1/5/2011	*	*	*
2/5/2011	*	*	*
3/5/2011	*	*	*
4/5/2011	*	*	*
5/5/2011	*	*	*
6/5/2011	*	*	*
7/5/2011	*	*	*
8/5/2011	*	*	*
9/5/2011	*	*	*
10/5/2011	*	*	*
11/5/2011	*	*	*
12/5/2011	*	*	*
13/5/2011	*	*	*
14/5/2011	*	*	*
15/5/2011	*	*	*
16/5/2011	*	*	*
17/5/2011	*	*	*
18/5/2011	111	534	16
19/5/2011	105	367	19
20/5/2011	119	343	15
21/5/2011	101	357	15
22/5/2011	70	357	14
23/5/2011	84	378	14
24/5/2011	130	314	14
25/5/2011	116	313	14
26/5/2011	80	295	13
27/5/2011	100	351	14
28/5/2011	41	330	13
29/5/2011	34	330	13
30/5/2011	33	367	14
31/5/2011	23	321	13

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) <sup>#</sup>	NOx concentration (mg/Nm3) <sup>#</sup>	Opacity (%)
1/6/2011	70	336	15
2/6/2011	78	329	15
3/6/2011	85	347	14
4/6/2011	92	355	14
5/6/2011	89	318	14
6/6/2011	102	338	14
7/6/2011	107	397	18
8/6/2011	113	371	14
9/6/2011	33	399	14
10/6/2011	47	378	14
11/6/2011	47	349	15
12/6/2011	29	342	15
13/6/2011	55	349	15
14/6/2011	76	393	14
15/6/2011	96	325	14
16/6/2011	81	315	14
17/6/2011	60	271	14
18/6/2011	*	*	*
19/6/2011	*	*	*
20/6/2011	106	209	14
21/6/2011	91	322	15
22/6/2011	95	330	15
23/6/2011	116	407	15
24/6/2011	45	413	15
25/6/2011	48	372	16
26/6/2011	39	431	16
27/6/2011	86	400	15
28/6/2011	73	377	18
29/6/2011	57	366	18
30/6/2011	58	442	18

Note: # - Hourly average value. Expressed as at 0°C, 101.325kPa, dry and corrected to 12% CO<sub>2</sub> condition.

\* - Unit L5 was not on load.

### B.2.2 Monthly Summary of Stack NO<sub>x</sub> and SO<sub>2</sub> for Unit L4

Date	Daily Maximum		
	SO <sub>2</sub> concentration (mg/Nm <sup>3</sup> ) <sup>#</sup>	NO <sub>x</sub> concentration (mg/Nm <sup>3</sup> ) <sup>#</sup>	Opacity (%)
1/4/2011	110	426	16
2/4/2011	71	389	13
3/4/2011	51	430	13
4/4/2011	117	458	14
5/4/2011	92	448	10
6/4/2011	80	461	12
7/4/2011	127	481	12
8/4/2011	110	514	14
9/4/2011	77	460	11
10/4/2011	68	403	12
11/4/2011	107	410	12
12/4/2011	83	331	12
13/4/2011	119	412	16
14/4/2011	111	437	14
15/4/2011	102	444	13
16/4/2011	111	382	15
17/4/2011	103	357	14
18/4/2011	123	453	13
19/4/2011	87	514	14
20/4/2011	87	372	21
21/4/2011	63	360	20
22/4/2011	85	322	16
23/4/2011	21	315	14
24/4/2011	7	352	14
25/4/2011	1	465	16
26/4/2011	0	471	24
27/4/2011	74	519	15
28/4/2011	47	519	14
29/4/2011	70	513	14
30/4/2011	49	531	14

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) <sup>#</sup>	NOx concentration (mg/Nm3) <sup>#</sup>	Opacity (%)
1/5/2011	78	508	14
2/5/2011	24	519	14
3/5/2011	53	449	19
4/5/2011	107	418	15
5/5/2011	50	461	15
6/5/2011	75	407	20
7/5/2011	101	434	15
8/5/2011	8	331	14
9/5/2011	30	277	17
10/5/2011	42	339	14
11/5/2011	99	280	16
12/5/2011	103	301	16
13/5/2011	86	242	18
14/5/2011	31	310	18
15/5/2011	30	361	15
16/5/2011	141	506	18
17/5/2011	145	405	14
18/5/2011	110	379	14
19/5/2011	76	363	14
20/5/2011	76	362	15
21/5/2011	122	340	15
22/5/2011	109	369	16
23/5/2011	117	305	16
24/5/2011	120	331	17
25/5/2011	81	347	15
26/5/2011	65	323	15
27/5/2011	87	389	17
28/5/2011	101	416	15
29/5/2011	19	395	15
30/5/2011	65	392	19
31/5/2011	24	337	19

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) <sup>#</sup>	NOx concentration (mg/Nm3) <sup>#</sup>	Opacity (%)
1/6/2011	65	308	17
2/6/2011	85	324	20
3/6/2011	85	341	21
4/6/2011	85	303	16
5/6/2011	68	292	19
6/6/2011	112	270	18
7/6/2011	109	398	19
8/6/2011	88	378	17
9/6/2011	51	443	20
10/6/2011	62	422	19
11/6/2011	72	321	19
12/6/2011	81	400	14
13/6/2011	67	376	19
14/6/2011	83	400	20
15/6/2011	59	388	14
16/6/2011	91	379	13
17/6/2011	25	374	15
18/6/2011	26	366	17
19/6/2011	104	289	16
20/6/2011	54	390	18
21/6/2011	81	298	15
22/6/2011	114	258	15
23/6/2011	120	339	15
24/6/2011	91	334	20
25/6/2011	57	324	16
26/6/2011	75	365	18
27/6/2011	66	386	18
28/6/2011	67	373	18
29/6/2011	55	331	16
30/6/2011	17	335	16

Note: # - Hourly average value. Expressed as at 0°C, 101.325kPa, dry and corrected to 12% CO<sub>2</sub> condition.

\* - Unit L4 was not on load.

### B.2.3 Monthly Summary of Stack SO<sub>2</sub> for Unit L2

Date	Daily Maximum	
	SO <sub>2</sub> concentration (mg/Nm <sup>3</sup> ) <sup>#</sup>	Opacity (%)
1/4/2011	*	*
2/4/2011	*	*
3/4/2011	*	*
4/4/2011	*	*
5/4/2011	*	*
6/4/2011	133	13
7/4/2011	103	14
8/4/2011	115	14
9/4/2011	*	*
10/4/2011	*	*
11/4/2011	82	14
12/4/2011	*	*
13/4/2011	*	*
14/4/2011	77	14
15/4/2011	74	14
16/4/2011	92	14
17/4/2011	78	14
18/4/2011	104	14
19/4/2011	87	12
20/4/2011	*	*
21/4/2011	*	*
22/4/2011	*	*
23/4/2011	*	*
24/4/2011	*	*
25/4/2011	*	*
26/4/2011	67	15
27/4/2011	116	13
28/4/2011	112	14
29/4/2011	91	14
30/4/2011	92	15

Date	Daily Maximum	
	SO2 concentration (mg/Nm3) #	Opacity (%)
1/5/2011	*	*
2/5/2011	*	*
3/5/2011	130	15
4/5/2011	144	13
5/5/2011	112	13
6/5/2011	134	14
7/5/2011	81	14
8/5/2011	41	15
9/5/2011	46	19
10/5/2011	106	14
11/5/2011	132	14
12/5/2011	128	14
13/5/2011	98	16
14/5/2011	FGD Bypassed	17
15/5/2011	FGD Bypassed	15
16/5/2011	FGD Bypassed	18
17/5/2011	FGD Bypassed	14
18/5/2011	FGD Bypassed	16
19/5/2011	FGD Bypassed	18
20/5/2011	FGD Bypassed	20
21/5/2011	FGD Bypassed	18
22/5/2011	FGD Bypassed	19
23/5/2011	FGD Bypassed	20
24/5/2011	127	15
25/5/2011	137	15
26/5/2011	*	*
27/5/2011	*	*
28/5/2011	*	*
29/5/2011	*	*
30/5/2011	79	15
31/5/2011	*	*

Date	Daily Maximum	
	SO2 concentration (mg/Nm3) <sup>#</sup>	Opacity (%)
1/6/2011	91	16
2/6/2011	48	16
3/6/2011	49	19
4/6/2011	28	27
5/6/2011	FGD Bypassed	26
6/6/2011	FGD Bypassed	25
7/6/2011	FGD Bypassed	25
8/6/2011	FGD Bypassed	26
9/6/2011	FGD Bypassed	29
10/6/2011	FGD Bypassed	28
11/6/2011	FGD Bypassed	34
12/6/2011	FGD Bypassed	27
13/6/2011	FGD Bypassed	33
14/6/2011	FGD Bypassed	25
15/6/2011	FGD Bypassed	27
16/6/2011	FGD Bypassed	21
17/6/2011	FGD Bypassed	21
18/6/2011	FGD Bypassed	20
19/6/2011	FGD Bypassed	19
20/6/2011	FGD Bypassed	19
21/6/2011	FGD Bypassed	23
22/6/2011	FGD Bypassed	22
23/6/2011	FGD Bypassed	19
24/6/2011	FGD Bypassed	20
25/6/2011	FGD Bypassed	31
26/6/2011	FGD Bypassed	30
27/6/2011	FGD Bypassed	32
28/6/2011	FGD Bypassed	23
29/6/2011	FGD Bypassed	31
30/6/2011	FGD Bypassed	28

Note: # - Hourly average value. Expressed as at 0°C, 101.325kPa, dry and corrected to 12% CO<sub>2</sub> condition.

\* - Unit L2 was not on load.

#### **B.2.4 Summary of Annual Stack Particulate Sampling**

No stack particulate sampling was conducted in the reporting period.

### **B.3 Ambient SO<sub>2</sub> and NO<sub>2</sub> monitoring Data at Southern District and Cheung Chau**

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : VICTORIA PEAK  
POLLUTANT : SULPHUR DIOXIDE  
MONTH: APRIL  
YEAR : 2011  
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	4	4	5	5	6	6	7	6	6	6	7	7	7	5	3	4	6	4	4	3	2	2	****	2	5
2	4	3	3	3	3	3	4	4	4	6	9	9	10	11	8	12	11	15	14	5	3	6	****	3	7
3	6	2	2	2	1	1	1	1	15	29	45	44	26	22	12	16	15	14	10	16	120	55	****	7	20
4	5	5	9	6	4	3	2	2	1	2	2	2	3	2	4	8	11	13	7	5	5	****	4	5	
5	3	3	3	2	3	3	3	3	4	5	7	6	5	5	6	5	5	4	4	3	3	3	****	3	4
6	4	3	3	3	3	3	4	5	6	7	7	7	10	9	9	10	8	6	4	4	3	4	****	4	5
7	3	1	1	1	1	1	1	1	2	2	3	5	16	10	4	3	2	3	6	7	9	5	****	11	4
8	6	2	2	2	2	1	2	3	3	10	19	30	7	4	7	7	1	6	11	3	1	1	****	1	6
9	1	3	1	1	1	0	0	0	0	0	1	1	3	1	1	1	2	1	1	1	1	1	****	2	1
10	2	1	1	1	1	1	1	2	3	3	4	4	11	11	5	6	18	25	23	4	2	3	****	5	6
11	9	8	5	5	4	5	5	60	31	13	14	14	21	23	21	24	23	24	18	12	10	4	****	4	16
12	3	4	5	6	6	6	5	5	4	5	6	6	5	5	5	5	4	5	4	4	2	2	****	2	5
13	3	2	2	1	2	5	6	5	5	5	7	9	8	7	7	14	16	6	6	5	4	4	****	4	6
14	4	5	4	4	4	3	3	4	2	2	4	4	4	4	2	9	10	9	3	4	2	1	****	1	4
15	1	0	0	0	0	0	0	1	1	33	19	31	17	16	17	33	4	4	7	8	20	25	****	8	11
16	3	4	1	1	1	1	3	1	1	1	1	2	1	0	0	2	2	3	2	1	1	2	****	1	2
17	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	7	1
18	0	0	0	0	0	0	0	0	4	4	4	1	7	19	6	1	1	2	3	5	5	5	****	6	3
19	5	5	5	6	6	7	8	11	11	12	12	13	10	8	7	7	7	7	11	10	7	7	****	5	8
20	5	5	4	4	3	3	4	4	5	5	6	6	5	5	5	4	5	4	4	3	2	2	****	1	4
21	1	1	1	1	0	1	0	1	1	1	2	1	0	0	0	0	0	0	1	2	2	2	****	1	1
22	2	1	1	1	1	2	2	2	2	5	7	12	6	6	7	6	14	15	20	10	12	7	****	6	6
23	6	5	4	4	3	2	2	1	1	2	2	2	1	1	1	1	1	1	2	3	3	3	****	5	2
24	4	4	4	7	6	7	8	8	8	8	9	7	6	7	2	3	3	3	2	2	2	1	****	5	5
25	5	0	0	0	4	8	9	0	1	18	8	9	23	21	27	16	12	15	12	7	7	3	****	2	9
26	1	5	5	9	8	5	2	4	10	52	44	8	9	5	2	2	3	3	9	9	8	4	****	8	9
27	2	3	2	2	2	2	2	2	4	6	16	8	6	4	3	4	6	5	5	4	3	4	****	4	4
28	3	3	4	3	4	4	6	17	16	26	20	12	12	5	6	3	4	3	1	1	1	2	****	2	7
29	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	****	2	1
30	1	2	1	1	1	1	1	1	1	M	2	5	6	4	4	2	4	8	6	3	9	2	****	2	3

MONTHLY STATISTICS:											STD GEOM		PERCENT		NO. OF TIMES	
GEOM	ARITH		<-----PERCENTILE----->					<-----RANGE----->				DEVIATION	VALID DATA	ABOVE	OBJECTIVE	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	1-HR	24-HR	4	96	1-HR	24-HR	
3	4	6	4	12	18	27	39	0	- 120	1	- 20	4	96	0	0	

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 800 OR 24-HR OBJECTIVE 350

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : VICTORIA PEAK  
 POLLUTANT : NITROGEN DIOXIDE  
 MONTH: APRIL  
 YEAR : 2011  
 UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	25	18	19	13	10	11	13	20	35	49	44	58	57	59	61	29	39	46	36	25	15	9	****	12	30
2	11	9	17	17	12	6	9	12	21	55	73	70	43	35	29	49	44	85	78	32	31	61	****	18	36
3	12	8	8	8	6	4	5	13	57	67	70	70	47	50	54	51	60	53	62	68	89	79	****	39	43
4	23	33	70	33	13	12	12	18	33	42	34	37	49	53	60	76	76	76	83	85	60	39	****	20	45
5	23	17	16	17	16	11	16	16	18	23	33	27	22	21	24	24	32	30	31	31	25	17	****	13	22
6	16	9	9	7	7	6	11	21	32	35	43	46	49	53	62	78	69	56	34	30	25	11	****	12	31
7	6	3	2	4	4	14	11	17	72	75	73	72	73	47	37	32	30	51	54	111	109	53	****	97	45
8	52	7	7	9	6	5	13	29	53	100	104	68	36	35	39	52	32	79	91	57	15	15	****	10	40
9	10	19	13	14	11	10	11	21	28	43	46	37	49	46	53	57	53	83	92	55	14	10	****	16	34
10	14	15	11	11	9	11	15	28	35	36	50	49	41	38	29	40	52	65	80	16	22	42	****	12	31
11	26	52	11	2	4	12	12	58	29	31	42	47	50	52	60	67	69	119	110	38	27	11	****	18	41
12	14	10	9	9	8	8	8	13	22	22	32	42	37	42	42	35	30	30	33	24	27	32	****	20	24
13	19	11	8	6	6	6	9	28	56	62	74	46	52	70	77	53	63	40	38	42	48	47	****	24	39
14	20	13	7	8	7	5	13	21	27	32	34	26	31	29	31	32	43	45	60	50	53	43	****	30	29
15	23	17	13	9	10	7	10	32	30	48	37	44	34	34	36	38	17	22	31	46	62	58	****	32	30
16	20	21	4	4	4	8	26	11	11	12	13	25	11	9	11	15	20	24	21	21	30	37	****	17	16
17	27	34	20	13	14	13	10	18	15	16	17	31	17	21	19	24	15	17	15	16	17	12	****	69	20
18	46	28	20	22	17	17	24	51	76	79	77	58	44	60	40	33	30	24	30	34	26	21	****	23	38
19	30	29	19	14	6	4	11	42	45	40	31	29	27	40	38	25	21	17	28	35	27	24	****	12	26
20	9	7	5	4	5	6	7	14	19	26	28	28	22	19	18	22	23	23	20	17	11	7	****	14	15
21	7	3	3	2	2	3	5	10	16	22	19	17	11	12	10	10	10	17	13	11	8	9	****	18	10
22	7	5	3	3	3	3	6	12	27	31	34	46	20	17	18	20	37	56	79	42	49	60	****	53	27
23	55	45	36	32	29	26	23	40	41	33	44	42	51	40	49	47	35	35	29	14	7	15	****	16	34
24	23	19	27	8	7	7	10	13	34	44	36	53	54	51	49	39	25	19	0	3	3	****	0	25	
25	3	0	0	0	32	67	67	6	29	76	36	34	67	49	46	41	35	48	75	69	58	46	****	30	40
26	21	69	45	74	65	38	16	24	39	77	71	28	35	25	16	27	31	35	65	68	41	31	****	31	42
27	10	9	7	6	6	7	11	14	15	23	40	31	21	15	14	22	17	19	18	18	11	14	****	15	16
28	13	6	4	4	3	2	22	60	74	57	64	50	64	36	41	28	33	36	25	29	20	18	****	14	30
29	9	8	8	6	7	7	7	11	18	23	23	21	16	18	14	16	18	21	16	16	15	13	****	14	14
30	13	15	11	9	9	9	11	19	23	M	26	44	31	26	26	21	32	51	48	40	26	43	****	14	25

MONTHLY STATISTICS:										NO. OF TIMES					
GEOM	ARITH		<-----PERCENTILE----->							<-----RANGE----->		STD GEOM	PERCENT	ABOVE	OBJECTIVE
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR		
22	25	30	25	61	73	82	95	0	- 119	2	96	0	0		

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 300 OR 24-HR OBJECTIVE 150

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : VICTORIA PEAK  
 POLLUTANT : SULPHUR DIOXIDE  
 MONTH: MAY  
 YEAR : 2011  
 UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	11	2	1	2	5	14	10	17	15	6	8	11	4	4	7	10	7	8	4	1	2	2	****	3	7
2	2	3	3	1	1	2	2	2	4	5	5	4	2	4	3	3	8	7	8	7	6	6	****	8	4
3	5	5	4	4	3	3	3	5	5	18	22	8	10	10	17	4	5	8	13	7	5	6	****	8	8
4	8	4	7	4	6	5	5	5	3	8	12	11	19	5	7	15	20	25	26	38	16	10	****	6	12
5	2	1	0	0	0	0	0	0	0	1	0	0	4	1	0	0	0	0	1	0	0	0	****	0	1
6	1	1	1	2	4	2	2	2	2	4	3	3	1	0	0	3	9	5	7	6	5	****	6	3	
7	2	2	2	3	1	2	2	3	4	5	4	2	4	1	0	3	0	0	1	1	1	1	****	1	2
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	1	0
10	1	1	1	1	1	1	0	1	3	3	3	2	10	18	5	3	1	2	4	2	2	2	****	2	3
11	0	1	4	2	4	4	1	2	5	21	14	3	14	5	3	2	3	2	4	3	4	4	****	3	5
12	2	2	2	3	3	3	3	3	2	2	2	2	2	3	5	2	0	3	19	16	8	3	****	6	4
13	5	2	4	5	4	3	3	2	5	4	10	25	6	8	11	9	4	17	19	7	2	1	****	1	7
14	1	1	1	1	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	****	0	1
15	0	0	1	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	1	1	1	****	2	1
16	1	1	1	1	1	1	1	0	1	6	42	55	24	12	11	4	3	5	2	5	6	16	****	12	9
17	6	4	3	4	3	3	3	3	4	2	2	2	2	1	1	2	2	1	2	2	2	3	****	4	3
18	2	2	3	4	5	5	5	7	5	5	5	5	5	4	3	2	4	3	3	2	1	2	****	3	4
19	3	2	3	4	4	4	8	7	9	7	2	1	5	1	1	0	0	0	0	0	0	0	****	0	3
20	0	0	0	0	0	0	0	0	0	2	3	11	0	0	0	0	0	0	0	0	0	0	****	0	1
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	3	4	****	1	1	
22	1	1	0	1	1	1	1	1	1	1	2	2	2	1	2	7	13	5	40	7	3	4	****	2	4
23	2	8	14	4	5	20	16	14	14	27	29	36	33	29	21	15	13	14	19	12	7	5	****	6	16
24	4	6	5	4	4	7	3	0	3	5	7	8	11	19	4	2	1	1	1	0	1	1	****	1	4
25	1	0	1	0	0	1	0	0	4	6	8	3	1	1	5	1	1	2	3	3	7	3	****	5	2
26	4	4	5	5	4	5	8	7	9	10	8	12	17	16	12	19	12	15	14	14	18	19	****	7	11
27	4	5	8	8	8	9	8	9	9	13	3	6	31	26	20	20	20	14	23	20	19	16	****	38	15
28	30	21	38	41	36	38	14	10	11	15	24	23	22	24	45	54	29	32	39	41	43	54	****	38	31
29	22	23	21	19	20	21	32	10	7	6	7	8	5	3	3	2	3	4	3	4	3	2	****	2	10
30	1	1	1	2	1	1	1	2	3	2	1	1	3	2	3	4	5	5	4	3	2	5	****	5	2
31	6	4	4	3	3	2	3	4	4	16	14	13	30	23	7	6	6	9	6	4	3	2	****	3	8

MONTHLY STATISTICS:

GEOM	ARITH	<-----PERCENTILE----->					<-----RANGE----->			STD GEOM	PERCENT	NO. OF TIMES	
MEAN	MEDIAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	ABOVE OBJECTIVE	1-HR	24-HR
2	3	3	16	23	37	41	0	- 55	6	96	0	0	

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 800 OR 24-HR OBJECTIVE 350

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : VICTORIA PEAK  
POLLUTANT : NITROGEN DIOXIDE  
MONTH: MAY  
YEAR : 2011  
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	24	12	8	8	18	34	25	36	30	19	29	35	25	22	27	32	25	28	29	31	33	28	****	27	26
2	18	18	12	6	5	8	11	13	16	17	24	26	21	18	16	19	26	27	25	24	24	27	****	19	18
3	16	11	8	6	6	7	10	18	19	23	27	18	18	19	26	19	25	29	36	32	31	26	****	24	20
4	25	14	18	14	15	16	18	26	27	38	40	48	48	29	43	73	98	127	128	147	95	84	****	67	54
5	58	53	33	13	11	19	18	25	50	29	34	41	55	51	29	35	48	48	58	40	25	21	****	10	35
6	9	10	6	8	21	13	17	19	22	23	22	20	15	15	14	20	20	24	17	18	21	15	****	21	17
7	20	15	10	11	7	8	9	14	18	18	18	17	20	18	17	23	23	24	27	28	22	22	****	13	17
8	12	14	9	8	1	4	5	11	9	9	9	14	12	10	8	8	9	8	12	13	10	8	****	13	9
9	14	4	7	5	5	8	12	15	13	15	16	10	11	11	12	15	13	16	20	20	15	18	****	12	13
10	14	13	7	8	6	6	7	12	16	16	16	24	26	30	15	14	15	17	27	22	18	22	****	11	16
11	6	10	28	5	33	24	13	9	16	31	30	17	35	16	25	22	20	17	22	30	19	18	****	10	20
12	7	5	4	12	9	3	8	12	10	13	17	14	16	12	19	16	12	20	39	32	30	23	****	27	16
13	29	6	6	6	6	5	8	13	17	29	32	45	36	30	42	33	24	98	94	81	32	18	****	16	31
14	18	21	13	10	8	9	10	12	13	13	15	12	12	15	21	23	25	26	24	23	22	18	****	13	16
15	12	9	10	8	6	4	7	9	12	20	12	14	13	19	41	21	16	17	18	22	14	17	****	8	14
16	6	5	3	2	2	2	7	20	22	42	35	42	33	24	22	16	16	43	22	42	49	70	****	83	26
17	73	66	55	56	42	31	35	55	58	56	47	44	41	27	26	34	26	31	28	27	21	18	****	18	40
18	11	10	8	9	8	6	13	32	43	42	36	42	28	17	20	25	23	23	12	13	23	18	****	34	21
19	24	14	14	10	8	9	13	32	40	45	39	31	31	22	23	20	15	24	22	31	22	21	****	17	23
20	16	11	9	4	2	7	13	28	47	60	60	40	29	23	25	19	12	14	24	28	33	30	****	20	24
21	17	14	9	2	5	4	8	12	20	21	22	19	15	9	13	24	26	29	23	27	19	25	****	20	17
22	21	11	9	6	5	4	7	11	13	14	21	16	13	9	15	23	39	32	56	12	9	19	****	2	16
23	2	25	28	26	25	58	56	50	40	51	56	60	67	83	81	77	76	97	111	108	92	93	****	86	63
24	54	38	32	38	27	27	24	30	43	73	80	83	89	91	76	70	76	67	67	66	51	51	****	33	56
25	34	27	13	15	22	31	31	36	58	73	81	60	54	52	77	76	73	96	100	94	120	87	****	94	61
26	82	56	39	45	30	37	46	59	57	67	64	71	71	71	67	72	53	64	57	98	123	154	****	27	66
27	10	16	37	20	7	31	57	68	64	72	51	50	83	77	54	54	64	68	59	62	146	150	****	189	65
28	165	125	132	96	88	83	42	26	51	70	72	63	47	41	51	70	50	59	73	87	104	190	****	132	83
29	75	75	54	15	37	72	83	22	23	13	21	24	16	15	10	6	5	18	19	20	3	4	****	1	27
30	1	0	0	0	0	0	0	7	19	17	10	22	17	25	31	19	22	15	10	12	16	20	****	16	12
31	20	18	10	10	6	9	11	50	75	106	115	109	102	84	43	26	19	29	24	29	34	20	****	14	42

MONTHLY STATISTICS:

GEOM	ARITH	<-----PERCENTILE----->					<-----RANGE----->				STD GEOM	PERCENT	NO. OF TIMES ABOVE OBJECTIVE	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR	
22	22	31	22	72	89	113	132	0	- 190	2	96	0	0	

- NOTES: 1. FLAGS FOR INVALID DATA :  
 \*\*\*\* : DAILY ZERO/SPAN CHECK  
 D : DYNAMIC CALIBRATION  
 T : TELEMETRY/DATALOGGR/ANALYZER FAULT  
 M : MAINTENANCE OR MACHINE SHUTDOWN  
 P : POWER FAILURE
2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 300 OR 24-HR OBJECTIVE 150

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : VICTORIA PEAK  
 POLLUTANT : SULPHUR DIOXIDE  
 MONTH: JUNE  
 YEAR : 2011  
 UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	1	1	0	1	9	11	15	11	13	13	13	23	23	11	9	16	12	14	13	9	5	3	****	4	10
2	2	1	0	0	6	3	4	4	4	3	<--- D --->	4	3	4	7	6	6	5	6	7	7	5	****	4	4
3	7	6	9	12	10	7	9	9	9	8	6	5	7	4	9	9	7	5	3	7	6	5	****	9	7
4	8	6	5	5	4	5	5	7	6	5	14	11	7	12	5	3	2	4	3	3	6	6	****	8	6
5	2	3	3	1	2	2	2	2	6	3	7	4	4	4	2	3	2	1	2	2	2	2	****	3	3
6	2	2	3	0	2	6	4	2	7	3	2	3	2	1	1	1	2	1	2	2	1	1	****	2	2
7	1	3	2	1	3	9	12	4	10	33	50	83	16	2	2	22	36	30	5	8	14	15	****	5	16
8	4	3	4	4	9	14	8	10	17	22	9	18	2	0	0	1	3	2	2	2	2	2	****	3	6
9	3	4	2	3	1	1	2	2	4	2	1	3	2	3	1	6	9	2	1	1	0	0	****	2	2
10	2	2	4	4	4	7	5	6	42	49	21	19	14	10	10	6	10	3	1	0	0	0	****	2	10
11	3	4	12	8	2	5	1	1	15	2	1	1	5	7	1	1	2	3	3	3	5	3	****	5	4
12	4	2	1	4	3	3	1	0	1	2	1	1	12	36	19	10	5	3	36	36	5	6	****	7	9
13	6	5	3	3	3	4	5	2	2	2	3	1	4	3	2	2	3	3	1	3	6	****	4	3	
14	4	3	4	2	1	3	3	5	3	3	1	4	2	3	9	8	12	4	5	6	6	****	7	4	
15	2	5	5	4	5	5	5	5	5	3	1	2	2	2	3	2	2	2	2	3	7	3	****	7	4
16	5	2	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	****	2	1
17	1	1	1	0	1	1	1	0	2	1	0	0	1	0	1	0	0	0	1	0	0	0	****	0	1
18	1	0	0	0	1	0	0	0	0	1	6	2	2	0	0	0	0	0	0	0	0	0	****	0	1
19	1	0	1	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	2	2	2	****	2	1
20	2	3	2	2	2	1	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	****	1	1
21	2	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	0	1	****	1	0
22	1	1	1	1	1	1	1	2	0	1	1	1	0	1	1	1	1	1	1	1	1	1	****	1	1
23	1	1	1	1	1	2	1	0	1	1	0	0	1	0	1	0	0	0	0	0	0	0	****	0	1
24	0	0	1	1	1	1	2	2	2	1	0	2	2	2	1	2	2	2	2	3	5	5	****	5	2
25	6	6	12	14	9	10	9	8	8	8	6	6	4	2	1	3	14	9	2	3	6	6	****	9	7
26	17	9	4	12	6	3	3	1	3	7	6	8	11	19	12	15	12	11	15	18	8	9	****	8	9
27	8	5	5	4	2	4	2	3	3	5	8	7	9	7	12	10	8	3	5	3	6	5	****	6	6
28	5	2	4	3	3	4	3	4	9	4	16	4	3	4	2	1	17	7	3	4	4	3	****	4	5
29	3	4	4	3	2	3	1	3	4	4	3	4	3	3	5	4	4	2	2	2	2	1	****	2	3
30	1	1	2	2	2	4	3	2	2	2	2	2	2	1	1	0	0	1	0	0	1	2	****	5	2

MONTHLY STATISTICS:										NO. OF TIMES				
GEOM	ARITH		<-----PERCENTILE----->					<-----RANGE----->			STD GEOM	PERCENT	ABOVE OBJECTIVE	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR	
2	2	4	2	10	14	22	36	0	- 83	4	96	0	0	

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 800 OR 24-HR OBJECTIVE 350

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : VICTORIA PEAK  
POLLUTANT : NITROGEN DIOXIDE  
MONTH: JUNE  
YEAR : 2011  
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	9	1	0	1	33	37	48	50	64	70	51	64	61	47	50	69	41	55	47	45	43	27	****	25	41
2	17	3	0	5	85	53	48	37	35	38	<--- D --->	31	26	31	39	37	35	41	37	34	33	****	29	33	
3	23	14	16	19	12	8	20	37	36	30	34	20	31	17	32	28	27	25	25	33	34	23	****	27	25
4	27	20	13	12	8	11	12	18	19	20	27	35	25	26	24	20	17	23	26	26	24	27	****	24	21
5	13	11	7	4	6	5	6	7	16	12	23	22	15	20	13	18	17	22	24	26	21	31	****	24	16
6	13	8	9	2	4	13	13	11	11	10	18	15	14	9	10	11	19	17	24	22	19	23	****	8	13
7	9	7	4	2	8	22	22	12	21	24	27	30	8	4	5	15	28	19	7	13	19	26	****	9	15
8	7	4	5	3	8	12	7	14	17	19	16	17	11	12	11	11	13	14	14	15	14	15	****	13	12
9	12	8	4	7	4	2	6	14	21	15	11	13	18	20	22	26	26	23	22	19	18	19	****	20	15
10	16	15	14	16	14	17	13	14	26	33	34	26	27	28	29	27	36	27	14	15	17	14	****	20	21
11	34	29	29	22	10	21	9	13	30	18	14	17	18	27	14	15	19	22	30	25	33	23	****	15	21
12	14	6	3	6	4	5	3	1	10	23	11	4	35	45	32	29	19	14	47	55	19	32	****	31	19
13	21	13	8	6	7	9	11	19	13	17	19	13	20	21	20	15	18	21	21	23	25	****	18	16	
14	15	12	13	5	3	5	11	15	14	15	14	14	12	9	25	19	21	13	15	19	12	12	****	9	13
15	8	4	6	7	6	7	13	17	13	14	18	20	13	13	15	15	14	16	16	21	22	18	****	30	14
16	29	15	10	5	4	4	12	16	16	19	25	28	17	17	17	22	26	15	13	22	24	21	****	13	17
17	9	6	4	1	7	4	7	11	19	19	16	21	20	17	23	17	17	18	23	22	21	10	****	9	14
18	8	8	5	4	3	3	7	12	14	17	19	22	16	11	13	14	16	15	18	19	13	8	****	6	12
19	5	3	3	0	1	1	1	4	5	8	10	18	18	16	16	13	21	9	8	14	10	10	****	7	9
20	3	3	2	1	2	3	10	22	22	15	18	11	12	9	5	10	9	18	24	13	18	9	****	16	11
21	18	10	7	7	7	6	13	20	23	28	22	31	28	16	32	31	20	23	31	27	24	12	****	15	20
22	18	12	7	3	3	1	4	5	4	5	5	3	2	4	3	4	3	3	3	1	1	1	****	0	4
23	0	0	0	1	0	0	1	3	5	5	8	14	8	10	10	5	4	4	4	4	3	4	****	2	4
24	2	1	2	4	1	2	3	4	6	8	9	14	15	10	11	11	8	12	20	23	17	17	****	22	10
25	20	11	21	26	9	13	18	12	11	14	13	16	16	12	14	20	37	20	23	32	33	41	****	26	20
26	32	15	6	28	17	3	5	4	8	21	17	30	29	38	31	41	41	42	49	52	31	37	****	22	26
27	18	7	13	7	3	3	2	5	6	12	17	21	22	20	35	35	29	21	18	20	23	25	****	11	16
28	9	5	2	2	1	6	8	9	31	12	28	20	13	20	20	9	36	30	20	26	26	17	****	22	16
29	9	9	7	4	2	5	4	10	15	15	13	13	13	14	27	19	20	32	26	22	22	15	****	12	14
30	10	6	7	9	7	16	13	14	22	25	20	20	20	14	16	15	16	15	16	16	14	10	****	12	14

MONTHLY STATISTICS:										NO. OF TIMES					
GEOM	ARITH			<-----PERCENTILE----->					<-----RANGE----->			STD GEOM	PERCENT	ABOVE OBJECTIVE	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR		
12	15	17	15	31	37	49	55	0	- 85	3	96	0	0		

- NOTES: 1. FLAGS FOR INVALID DATA :  
 \*\*\*\* : DAILY ZERO/SPAN CHECK  
 D : DYNAMIC CALIBRATION  
 T : TELEMETRY/DATALOGGR/ANALYZER FAULT  
 M : MAINTENANCE OR MACHINE SHUTDOWN  
 P : POWER FAILURE
2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 300 OR 24-HR OBJECTIVE 150

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : CHUNG HOM KOK ZONE SUBSTATION      MONTH: APRIL      YEAR : 2011  
 POLLUTANT : SULPHUR DIOXIDE      UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	11	9	10	11	12	16	12	11	10	11	12	10	9	8	9	11	10	8	9	16	16	13	****	11	11
2	10	11	8	7	6	9	9	8	11	12	14	12	13	5	6	9	16	22	14	25	36	27	****	54	15
3	29	14	9	17	12	13	19	27	31	42	49	29	27	54	36	29	36	24	2	2	7	3	****	2	22
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	2	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	1
11	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
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
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
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
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
17	0	0	0	0	4	2	1	0	0	0	0	0	0	3	0	6	0	0	0	15	15	14	****	0	3
18	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
21	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	0	0	0	0	0	0	0	0	0	0	0	2	3	20	47	13	8	4	1	8	0	****	0	5	
23	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	****	18	1
25	15	0	0	1	0	3	0	0	10	49	64	61	59	31	40	22	12	6	1	0	1	0	****	3	17
26	0	0	1	6	0	24	14	23	4	4	7	1	2	0	0	1	0	1	1	1	0	0	****	0	4
27	3	8	0	2	0	0	0	5	4	22	11	4	2	10	0	6	14	3	1	1	0	0	****	0	4
28	0	0	0	2	0	0	22	20	28	16	2	2	0	2	0	0	1	0	0	0	0	0	****	0	4
29	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	0	0	0	0	0	0	0	0	0	M	0	0	3	1	9	39	13	21	2	1	3	6	****	4	5

MONTHLY STATISTICS:													NO. OF TIMES			
GEOM	ARITH		<-----PERCENTILE----->						<-----RANGE----->				STD GEOM	PERCENT	ABOVE	OBJECTIVE
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR			
5	0	3	0	11	19	34	48	0	- 64	5	96	0	0			

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 800 OR 24-HR OBJECTIVE 350

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : CHUNG HOM KOK ZONE SUBSTATION MONTH: APRIL YEAR : 2011  
 POLLUTANT : NITROGEN DIOXIDE UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	13	13	13	10	9	9	11	15	20	11	11	14	17	17	18	20	27	27	26	18	12	19	****	13	16
2	10	9	8	8	7	7	11	15	19	19	17	20	25	18	16	15	26	33	39	59	57	39	****	63	24
3	22	7	7	8	6	7	16	33	43	45	42	23	27	46	42	28	37	39	33	32	35	36	****	19	28
4	12	11	11	15	8	7	7	9	10	9	10	12	15	19	24	32	41	31	21	20	19	15	****	10	16
5	8	8	7	7	6	6	9	12	11	14	16	14	15	13	17	14	19	23	17	16	13	9	****	5	12
6	9	3	5	3	2	2	5	10	11	12	10	12	11	8	13	19	15	11	13	19	15	16	****	10	10
7	7	6	7	5	7	5	7	12	9	14	14	17	15	19	16	19	23	34	35	30	17	15	****	35	16
8	41	24	5	4	3	5	5	16	28	36	18	16	14	17	13	12	15	24	29	15	23	25	****	4	17
9	25	12	8	7	4	5	6	10	13	13	17	18	17	17	16	21	25	23	35	33	17	9	****	13	16
10	8	8	8	8	7	8	8	9	12	18	15	19	17	17	13	16	24	50	58	66	63	85	****	53	26
11	61	25	49	40	44	27	50	60	46	31	24	20	25	28	26	26	25	36	38	48	30	11	****	8	34
12	6	5	6	7	8	7	9	15	13	14	11	13	15	17	13	15	16	17	16	16	13	11	****	11	12
13	11	8	9	9	9	10	13	16	17	18	23	18	18	20	21	30	30	46	35	21	19	18	****	11	19
14	9	6	7	9	12	11	14	22	20	11	14	12	11	11	15	30	31	21	44	42	30	24	****	29	19
15	24	24	8	9	5	5	6	14	18	15	13	10	6	20	26	31	33	27	33	35	20	19	****	31	19
16	22	22	22	11	14	17	12	14	12	18	28	20	20	21	21	22	21	34	28	22	21	22	****	25	20
17	22	16	12	18	25	23	21	18	18	20	18	17	16	22	19	22	15	18	27	35	34	34	****	13	21
18	12	14	10	7	6	8	9	25	29	41	27	23	22	24	23	24	30	26	20	20	18	14	****	12	19
19	10	13	8	7	5	4	7	15	17	14	18	19	20	21	23	22	25	29	34	19	15	12	****	10	16
20	7	8	6	6	7	8	11	13	14	14	13	12	15	15	17	20	19	20	21	22	16	****	13	14	
21	8	7	7	5	6	8	9	15	14	16	12	12	10	11	10	14	14	13	12	8	8	9	****	9	10
22	6	4	3	2	3	1	6	18	17	19	15	12	18	22	29	51	31	31	26	25	44	28	****	26	19
23	16	13	12	18	14	9	12	9	11	18	20	19	20	16	14	20	19	16	16	15	14	10	****	10	15
24	9	11	11	17	7	5	10	9	11	16	21	23	19	20	26	27	37	50	22	20	16	19	****	29	19
25	31	10	8	10	10	13	13	11	37	70	76	59	65	48	46	35	39	40	40	24	22	20	****	18	32
26	16	15	15	13	11	24	25	34	23	20	25	18	21	15	19	23	24	27	28	30	30	27	****	15	22
27	17	18	9	12	9	12	13	29	26	31	26	24	21	24	18	23	35	23	20	22	47	36	****	37	23
28	35	26	38	44	50	31	36	41	33	26	23	29	34	37	35	35	39	19	9	8	14	11	****	12	29
29	9	13	8	7	6	8	7	10	11	10	9	9	11	11	14	16	20	20	18	19	17	14	****	14	12
30	12	12	8	7	8	11	16	20	24	M	14	10	22	17	23	41	33	37	28	33	36	32	****	26	21

MONTHLY STATISTICS:										NO. OF TIMES					
GEOM	ARITH		<-----PERCENTILE----->					<-----RANGE----->			STD GEOM	PERCENT	ABOVE	OBJECTIVE	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR		
16	16	19	16	35	42	52	62	1	- 85	10	- 34	2	96	0	0

- NOTES: 1. FLAGS FOR INVALID DATA :  
 \*\*\*\* : DAILY ZERO/SPAN CHECK  
 D : DYNAMIC CALIBRATION  
 T : TELEMETRY/DATALOGGR/ANALYZER FAULT  
 M : MAINTENANCE OR MACHINE SHUTDOWN  
 P : POWER FAILURE
2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 300 OR 24-HR OBJECTIVE 150









THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : VICTORIA ROAD SUBSTATION MONTH: APRIL YEAR : 2011  
 POLLUTANT : SULPHUR DIOXIDE UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	4	3	5	3	4	4	1	8	23	27	12	16	7	4	4	14	13	18	10	6	6	7	****	5	9
2	4	4	3	27	20	15	14	36	42	44	70	15	17	12	22	39	28	58	27	30	33	21	****	16	26
3	15	4	3	4	3	6	10	16	66	107	81	59	32	38	25	24	22	11	24	30	7	8	****	23	27
4	11	7	4	13	24	2	1	0	1	2	3	3	2	1	2	11	32	43	42	15	6	6	****	4	10
5	3	4	3	3	3	3	4	4	3	4	7	4	3	3	3	1	2	1	2	2	2	2	****	2	3
6	4	3	3	3	2	2	3	4	4	6	7	9	11	39	28	30	8	4	2	3	2	2	****	2	8
7	2	34	45	25	39	32	27	27	40	30	10	29	28	8	6	25	12	27	23	20	16	12	****	10	23
8	11	8	6	2	2	2	3	10	50	38	65	49	24	28	38	18	20	11	22	13	6	5	****	8	19
9	5	4	0	0	0	0	0	0	0	0	0	17	13	5	7	5	3	3	5	2	3	****	7	3	
10	32	18	2	1	7	47	36	17	19	20	21	19	23	24	19	34	46	61	58	53	37	19	****	6	27
11	16	5	7	10	13	16	5	23	24	29	23	18	30	26	29	26	23	66	41	19	12	5	****	5	20
12	5	5	5	6	7	7	5	5	5	5	5	4	3	4	8	5	4	4	5	5	4	4	****	2	5
13	4	3	4	3	4	7	11	15	34	28	55	20	10	14	15	20	14	24	13	11	6	2	****	2	14
14	4	5	2	2	2	1	1	9	5	4	17	19	12	9	18	18	34	15	19	15	7	6	****	8	10
15	5	8	6	3	2	2	3	37	73	118	49	48	29	26	15	15	8	12	12	16	6	11	****	10	22
16	9	5	2	3	3	3	4	4	4	4	18	8	6	3	15	8	7	7	4	7	19	****	10	7	
17	9	11	17	9	9	8	6	10	10	4	3	1	5	8	2	5	2	1	2	9	6	3	****	18	7
18	29	3	1	1	2	3	3	16	13	10	13	31	84	27	18	5	2	3	4	6	7	6	****	6	13
19	6	6	5	6	5	6	8	10	11	12	11	12	11	10	9	9	9	7	11	9	7	7	****	5	8
20	4	4	3	4	3	3	2	3	4	4	4	3	3	3	3	3	3	3	3	3	3	1	****	0	3
21	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	0	0	6	5	2	3	13	27	25	12	17	10	14	16	41	31	20	7	10	4	21	26	****	6	14
23	5	4	4	9	4	2	1	2	8	14	11	4	3	2	1	1	0	0	0	2	3	3	****	4	4
24	4	4	3	4	8	6	13	10	8	6	8	13	9	13	4	4	4	10	7	10	5	6	****	13	7
25	10	4	4	4	5	5	5	15	53	45	15	45	29	45	30	19	12	10	6	4	10	8	****	4	17
26	2	5	3	6	6	8	6	6	13	45	28	14	28	5	7	16	13	6	7	8	8	8	****	5	11
27	5	6	3	4	2	1	4	7	13	25	21	10	11	8	7	8	13	9	8	4	3	4	****	2	8
28	2	3	4	1	0	2	11	32	37	41	22	17	16	7	7	5	4	1	0	0	0	0	****	1	9
29	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	****	0	0
30	0	0	0	0	0	1	0	1	3	5	<----- M ----->	16	17	10	13	21	18	11	5	4	4	****	5	7	

MONTHLY STATISTICS:											NO. OF TIMES				
GEOM	ARITH		<-----PERCENTILE----->					<-----RANGE----->				STD GEOM	PERCENT	ABOVE	OBJECTIVE
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR		
6	6	11	6	29	40	54	66	0	- 118	4	95	0	0		

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 800 OR 24-HR OBJECTIVE 350

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : VICTORIA ROAD SUBSTATION MONTH: APRIL YEAR : 2011  
 POLLUTANT : NITROGEN DIOXIDE UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	17	13	22	10	14	18	27	65	82	78	52	68	32	15	13	30	31	53	49	99	81	69	****	55	43
2	30	13	23	71	65	66	74	82	84	74	68	24	27	23	40	55	44	84	67	115	100	91	****	74	61
3	59	17	28	37	24	30	57	65	80	90	72	66	41	52	42	34	36	30	32	52	41	58	****	71	48
4	58	48	39	61	32	7	9	19	28	30	28	40	46	58	57	62	75	76	77	75	53	28	****	18	44
5	16	13	11	11	11	11	16	18	18	22	27	20	19	16	21	17	17	19	21	20	16	15	****	14	17
6	14	9	8	8	8	9	18	29	48	46	69	62	60	79	70	87	60	56	49	45	41	21	****	21	40
7	19	96	103	77	87	86	74	67	85	54	36	60	56	19	17	53	32	71	85	83	76	86	****	88	66
8	94	50	20	15	15	23	59	83	94	91	77	58	34	45	54	38	44	49	100	111	97	102	****	92	63
9	38	16	8	8	5	7	13	22	27	35	37	30	52	42	22	27	30	31	41	103	117	114	****	110	41
10	134	92	8	12	36	78	72	63	60	47	43	35	42	43	37	57	77	100	81	107	108	58	****	94	64
11	67	28	35	39	24	40	47	69	66	68	50	38	52	47	55	35	28	71	90	108	31	11	****	11	48
12	10	7	8	7	9	10	14	21	26	34	37	37	20	33	46	33	35	40	46	34	26	24	****	22	25
13	20	12	11	12	13	22	57	79	94	95	104	57	33	35	32	39	43	52	66	98	112	64	****	92	54
14	83	39	14	14	10	17	56	80	47	17	42	34	18	22	27	27	39	32	69	69	47	50	****	44	39
15	34	26	20	19	19	17	45	68	68	62	47	47	33	34	24	22	19	26	27	26	44	55	****	43	36
16	27	24	14	14	10	15	34	22	31	27	16	29	14	14	9	30	21	22	20	22	34	39	****	23	22
17	31	32	22	21	24	22	18	29	26	25	20	19	18	25	19	23	36	32	31	35	39	28	****	68	28
18	68	29	19	19	17	16	43	70	87	95	85	65	77	42	39	44	27	28	37	29	43	25	****	27	45
19	17	20	12	10	4	6	13	49	38	45	35	31	27	32	28	41	62	35	35	35	25	21	****	17	28
20	11	8	6	6	7	9	14	24	27	26	29	25	19	23	25	27	35	24	23	20	21	16	****	13	19
21	8	4	4	3	3	6	13	24	28	27	19	15	18	21	30	21	25	23	23	18	18	16	****	16	17
22	15	12	30	45	33	33	62	68	68	28	31	20	23	25	45	38	33	20	33	29	70	71	****	55	39
23	48	40	40	49	30	20	33	51	70	77	63	53	48	37	40	49	31	27	17	18	15	17	****	23	39
24	21	17	20	13	21	19	37	51	41	36	36	30	32	29	25	25	26	43	60	96	118	133	****	55	43
25	51	26	25	16	17	26	46	94	119	89	30	56	45	48	33	27	26	31	23	48	74	69	****	53	47
26	38	24	21	44	49	48	62	32	26	55	41	28	50	15	19	38	29	29	29	48	55	61	****	33	38
27	17	13	10	14	8	11	30	40	42	57	34	27	40	20	21	19	26	26	30	34	34	31	****	32	27
28	25	14	21	12	10	30	46	48	50	47	48	35	44	40	60	50	44	43	29	23	19	16	****	14	33
29	8	6	7	4	4	6	12	17	29	39	36	34	19	22	19	20	24	24	19	18	16	13	****	14	18
30	10	10	9	6	9	11	24	44	54	52	<----- M ----->	32	29	22	31	59	64	53	47	43	43	****	38	32	

MONTHLY STATISTICS:										NO. OF TIMES			
GEOM	ARITH		<-----PERCENTILE----->					<-----RANGE----->		STD GEOM	PERCENT	ABOVE	OBJECTIVE
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR
31	32	39	32	77	92	104	113	3	- 134	2	95	0	0

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 300 OR 24-HR OBJECTIVE 150

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : VICTORIA ROAD SUBSTATION  
POLLUTANT : SULPHUR DIOXIDE  
MONTH: MAY  
YEAR : 2011  
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN	
1	8	15	15	10	17	7	9	9	13	12	27	25	21	16	25	20	14	12	17	10	16	9	****	10	15	
2	9	11	7	3	5	9	7	14	18	26	17	16	12	12	6	18	22	18	12	18	15	16	****	13	13	
3	20	11	9	10	5	10	12	13	11	15	18	18	17	15	6	6	8	7	14	19	22	15	****	20	13	
4	22	13	21	19	17	13	35	33	27	30	27	36	33	31	39	47	52	47	57	52	51	61	****	77	36	
5	36	42	21	3	2	11	12	4	8	2	14	31	6	1	1	2	6	7	3	1	12	9	****	1	10	
6	0	0	2	31	28	16	18	6	8	8	18	10	9	8	4	5	9	13	14	11	13	15	****	13	11	
7	5	12	10	12	5	11	7	7	11	13	17	11	13	9	8	12	10	6	2	2	1	1	****	1	8	
8	1	2	0	1	1	2	2	3	3	1	1	3	4	3	2	2	3	1	2	1	1	1	****	3	2	
9	2	1	2	1	2	2	1	1	2	1	3	6	4	8	2	2	2	5	3	2	1	2	****	6	3	
10	7	6	8	8	7	12	11	17	17	19	10	12	8	13	14	19	10	15	14	11	10	12	****	7	12	
11	7	4	4	5	6	10	6	6	4	10	13	5	3	4	5	5	6	2	5	6	10	7	****	4	6	
12	5	4	2	2	2	1	5	3	2	6	12	4	7	7	4	5	5	12	32	9	3	13	****	17	7	
13	10	8	9	11	6	13	7	2	2	3	4	10	36	21	16	20	38	44	38	37	6	1	****	1	15	
14	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	****	0	0	
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	5	26	16	****	35	4
16	43	55	49	95	92	87	54	81	129	61	11	19	15	11	12	7	10	13	8	20	17	20	****	25	40	
17	11	6	8	6	4	4	3	4	5	29	11	3	2	1	1	1	1	1	1	1	1	1	****	2	5	
18	2	2	2	2	2	2	2	4	3	2	3	2	3	M	2	1	2	1	0	0	0	0	****	0	2	
19	0	0	0	0	0	0	2	3	4	12	27	12	5	0	0	0	0	0	0	0	0	0	****	0	3	
20	0	0	0	0	0	7	28	28	18	13	26	3	0	0	0	0	0	0	0	0	0	0	****	0	5	
21	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	****	0	0	
22	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	5	2	2	9	4	2	4	****	0	1	
23	0	0	1	2	5	10	13	21	36	50	<----- D ----->	31	18	12	8	6	5	3	2	1	1	****	3	11		
24	9	14	13	9	6	7	0	19	16	11	20	18	31	63	7	0	0	0	0	0	0	2	****	0	11	
25	0	0	0	0	5	8	0	6	3	1	5	4	25	24	4	0	19	14	3	0	3	15	****	23	7	
26	9	1	0	0	0	4	8	5	4	30	29	17	38	16	14	33	30	14	19	16	12	11	****	1	13	
27	0	0	1	3	7	7	5	27	42	72	15	29	31	18	21	19	11	19	19	20	13	13	****	34	19	
28	27	37	34	18	18	32	12	7	38	64	26	29	27	35	61	29	30	30	27	30	35	29	****	16	30	
29	17	14	11	10	6	7	10	10	11	3	3	3	0	0	0	0	0	0	0	0	0	0	****	0	5	
30	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	0	0	2	6	4	3	11	19	46	77	43	47	40	15	13	3	4	3	0	0	3	0	****	0	15	

MONTHLY STATISTICS:

GEOM	ARITH	<-----PERCENTILE----->					<-----RANGE----->				STD GEOM	PERCENT	NO. OF TIMES ABOVE OBJECTIVE			
MEAN	MEDIAN	50	90	95	98	99	1-HR	24-HR			DEVIATION	VALID DATA	1-HR	24-HR		
5	5	5	29	38	55	68	0	-	129	0	-	40	6	95	0	0

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 800 OR 24-HR OBJECTIVE 350

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : VICTORIA ROAD SUBSTATION  
POLLUTANT : NITROGEN DIOXIDE  
MONTH: MAY  
YEAR : 2011  
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	47	40	37	26	33	22	34	43	43	30	32	35	32	24	31	27	24	21	42	45	51	34	****	36	34
2	22	28	15	11	9	21	30	36	34	30	25	24	28	24	17	29	33	38	39	47	44	40	****	44	29
3	41	23	18	21	13	27	39	39	33	22	20	20	22	20	12	17	21	15	28	22	46	41	****	47	26
4	44	27	31	27	26	27	38	49	60	58	63	60	69	88	102	119	143	157	160	152	137	134	****	101	81
5	54	73	43	8	14	38	45	42	54	39	53	65	21	14	26	24	63	72	50	59	77	68	****	16	44
6	6	7	22	58	56	44	55	46	43	32	36	25	16	18	17	25	40	34	32	38	42	39	****	40	34
7	27	30	25	26	11	22	31	37	37	29	24	17	18	18	17	22	30	34	33	31	29	25	****	23	26
8	18	13	5	8	6	11	16	22	18	16	15	13	15	19	19	20	20	24	22	21	22	18	****	24	17
9	18	7	8	4	6	12	24	29	23	22	12	11	9	10	8	11	26	33	31	33	25	25	****	30	18
10	35	25	20	22	19	27	31	26	19	24	16	14	17	18	16	21	17	21	25	23	22	24	****	24	22
11	18	13	6	8	23	29	22	25	12	25	28	21	17	15	19	16	27	16	20	31	32	25	****	27	21
12	23	16	10	9	7	9	30	21	11	15	18	6	11	8	9	7	10	18	34	15	13	18	****	15	14
13	15	12	11	14	10	18	23	31	41	31	36	49	48	41	53	84	134	122	108	102	46	24	****	20	47
14	14	10	7	5	4	7	15	16	20	21	24	22	20	19	20	23	27	24	19	16	15	13	****	11	16
15	7	7	7	5	4	5	9	11	12	14	17	13	15	20	23	21	21	18	18	45	103	90	****	99	25
16	98	93	89	95	90	82	72	83	86	54	15	30	24	23	21	32	46	63	60	67	74	77	****	79	63
17	66	61	61	57	45	37	45	57	65	67	56	51	47	35	31	40	44	32	32	30	21	16	****	16	44
18	12	8	8	7	7	8	13	27	36	29	26	32	23	M	25	21	25	24	24	22	26	15	****	24	20
19	14	7	10	10	9	12	24	60	45	57	74	52	33	20	22	22	24	25	27	20	19	16	****	15	27
20	14	11	9	5	4	35	75	69	51	38	40	18	7	6	13	17	31	38	46	40	19	25	****	33	28
21	29	20	11	3	6	9	19	24	31	30	26	22	18	20	25	33	44	34	38	42	37	45	****	33	26
22	27	11	12	10	9	10	16	25	29	15	32	18	17	9	14	30	26	23	41	57	64	44	****	20	24
23	20	42	50	42	49	50	61	52	58	59	<----- D ----->	110	104	83	88	91	104	119	112	92	92	****	80	73	
24	66	54	54	37	36	34	51	68	61	65	70	69	77	88	82	72	77	70	78	74	67	71	****	30	63
25	32	31	14	24	37	49	36	47	59	66	73	62	73	83	85	77	78	102	120	87	123	121	****	107	69
26	88	44	37	40	33	50	60	66	67	80	79	74	85	66	47	79	67	38	52	92	127	145	****	45	68
27	25	25	45	48	55	74	79	83	86	96	76	88	87	52	44	46	23	42	49	153	170	152	****	152	76
28	171	149	114	43	43	83	77	59	88	95	83	93	79	81	120	74	80	87	88	93	133	167	****	53	94
29	85	32	33	24	18	19	84	82	58	23	23	19	15	13	12	15	12	18	20	14	13	13	****	17	29
30	8	7	5	5	6	9	23	30	30	25	22	20	20	24	26	37	34	30	31	57	61	24	****	37	25
31	41	40	29	34	28	28	69	84	97	124	112	121	110	51	48	44	52	39	32	36	66	25	****	17	58

MONTHLY STATISTICS:

GEOM	ARITH	<-----PERCENTILE----->					<-----RANGE----->			STD GEOM	PERCENT	NO. OF TIMES ABOVE OBJECTIVE	
MEAN	MEDIAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR	
30	30	30	84	103	134	152	3	- 171	2	95	0	0	

- NOTES: 1. FLAGS FOR INVALID DATA :  
 \*\*\*\* : DAILY ZERO/SPAN CHECK  
 D : DYNAMIC CALIBRATION  
 T : TELEMETRY/DATALOGGR/ANALYZER FAULT  
 M : MAINTENANCE OR MACHINE SHUTDOWN  
 P : POWER FAILURE
2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 300 OR 24-HR OBJECTIVE 150

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : VICTORIA ROAD SUBSTATION  
POLLUTANT : SULPHUR DIOXIDE  
MONTH: JUNE  
YEAR : 2011  
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	0	0	0	0	12	13	16	21	28	27	16	12	6	8	14	12	6	7	3	1	3	4	****	4	9
2	1	4	0	0	5	7	20	8	5	7	12	20	19	20	10	6	7	10	4	10	9	6	****	7	9
3	8	8	11	12	8	9	14	8	7	7	2	1	1	2	1	3	7	6	3	3	5	4	****	6	6
4	4	5	3	6	4	2	2	3	6	9	12	9	3	6	2	1	1	3	4	1	9	14	****	9	5
5	2	1	3	0	0	1	0	2	3	2	8	4	5	4	3	4	3	2	1	2	2	1	****	2	2
6	4	3	2	1	3	4	1	4	8	3	11	3	2	1	2	0	0	0	0	2	3	1	****	3	3
7	1	4	0	0	1	6	5	3	9	29	26	61	12	3	4	7	20	6	0	2	6	8	****	3	9
8	1	0	0	0	7	3	0	5	14	8	2	1	1	0	2	2	1	1	0	0	1	0	****	5	2
9	1	1	3	3	1	0	0	1	5	1	1	4	4	5	2	8	9	3	2	0	0	0	****	0	2
10	3	1	3	3	3	7	4	12	13	19	19	10	17	15	12	18	18	6	1	0	0	0	****	0	8
11	2	11	2	4	3	3	1	1	7	4	0	3	4	6	3	1	2	0	1	4	1	3	****	7	3
12	2	3	0	2	1	5	1	0	0	0	0	0	2	7	37	5	3	2	3	6	7	8	****	6	4
13	0	0	0	0	0	0	1	2	0	6	14	11	12	4	4	1	4	5	6	1	5	4	****	1	3
14	8	3	3	1	0	3	7	4	0	2	2	4	0	0	6	12	5	2	2	4	3	8	****	0	3
15	1	1	3	2	1	7	7	1	2	1	1	2	0	1	1	1	2	0	1	4	7	3	****	4	2
16	3	1	0	0	0	0	0	0	1	0	0	0	0	0	5	6	0	4	8	0	1	0	****	0	1
17	0	0	0	0	0	0	0	0	1	1	0	0	0	<--- M --->	0	0	0	0	0	0	0	0	****	0	0
18	0	0	0	0	0	0	0	0	0	1	3	3	4	4	7	0	0	0	0	0	0	0	****	0	1
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
20	0	0	0	0	0	0	0	3	13	0	0	0	1	0	0	1	1	9	4	0	0	0	****	0	1
21	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	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	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	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	3	3	3	5	4	4	3	3	2	3	6	1	1	3	2	0	12	0	0	1	3	2	****	1	3
26	1	4	1	4	2	2	2	0	3	4	4	8	12	22	24	24	21	9	8	9	5	5	****	6	8
27	3	0	3	1	2	1	1	5	3	4	4	6	14	4	0	2	2	1	4	4	1	****	2	3	
28	2	0	0	0	0	0	0	0	0	0	2	1	0	1	0	0	0	0	0	0	0	0	****	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	1	****	3	0

MONTHLY STATISTICS:										NO. OF TIMES				
GEOM	ARITH			PERCENTILE					RANGE		STD GEOM	PERCENT	ABOVE OBJECTIVE	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR	
2	1	3	1	8	12	20	24	0	- 61	4	96	0	0	

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 800 OR 24-HR OBJECTIVE 350

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : VICTORIA ROAD SUBSTATION  
POLLUTANT : NITROGEN DIOXIDE  
MONTH: JUNE  
YEAR : 2011  
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	16	16	11	13	68	66	64	61	72	78	67	56	34	28	52	42	36	37	27	26	32	22	****	32	42
2	20	10	8	7	22	45	70	55	50	31	29	40	30	34	20	19	19	31	26	25	28	24	****	36	30
3	30	29	29	28	21	27	61	38	24	23	8	11	13	13	10	14	23	21	16	20	31	26	****	33	24
4	26	26	22	23	18	16	23	27	34	31	31	23	16	27	19	15	14	20	21	21	32	33	****	29	24
5	16	12	19	8	10	15	15	15	16	15	20	13	12	15	12	15	10	12	19	21	19	21	****	22	15
6	23	21	16	10	27	21	23	27	27	25	30	23	19	18	16	17	19	40	36	33	28	****	29	24	
7	22	22	14	15	18	23	22	20	14	33	32	29	19	15	16	16	22	16	14	17	21	18	****	19	20
8	18	10	15	11	16	12	11	21	20	18	14	14	14	9	14	16	15	16	15	21	22	18	****	24	16
9	17	13	18	18	14	14	25	29	23	13	10	11	13	14	14	20	27	33	34	27	21	22	****	17	19
10	18	15	18	20	18	21	21	20	21	17	20	16	23	22	24	25	30	23	25	23	24	20	****	27	21
11	29	34	23	20	18	25	26	22	41	31	16	11	15	30	20	14	19	15	30	38	32	28	****	29	24
12	20	20	13	18	10	23	14	18	29	32	44	43	35	37	43	18	15	13	28	39	49	50	****	33	28
13	20	17	9	6	9	13	31	36	36	38	32	25	24	16	17	14	21	21	23	18	34	36	****	19	22
14	23	18	17	10	9	18	25	24	19	24	17	16	30	13	22	27	23	20	25	25	22	23	****	16	20
15	12	15	18	15	17	27	33	26	27	24	28	24	18	20	24	24	25	23	24	31	38	32	****	39	24
16	38	25	18	11	10	18	28	33	44	49	40	48	43	51	58	53	42	58	54	45	40	35	****	26	38
17	23	21	21	18	25	18	27	34	37	39	41	33	30	<--- M --->	23	25	28	29	27	26	18	****	23	27	
18	13	7	5	3	5	7	20	22	30	22	17	27	16	17	19	18	22	22	26	24	20	16	****	17	17
19	15	10	7	4	7	5	9	12	14	18	15	9	10	6	9	11	9	15	19	15	15	15	****	20	12
20	12	5	3	1	1	7	20	28	31	18	18	20	18	15	10	9	15	19	26	23	26	24	****	25	16
21	10	5	3	2	2	3	12	19	23	25	17	22	21	16	31	22	18	15	24	20	18	9	****	10	15
22	5	2	1	0	0	0	4	7	11	8	8	8	5	4	6	7	8	8	8	6	7	4	****	7	5
23	1	0	0	0	0	2	9	18	18	19	19	20	17	19	21	22	22	18	17	11	9	7	****	11	12
24	9	6	4	5	2	5	13	15	17	16	18	21	20	19	21	19	18	26	34	25	24	24	****	26	17
25	32	19	18	21	26	26	29	27	21	16	24	12	16	17	14	11	27	13	13	19	24	21	****	18	20
26	16	16	9	21	16	18	19	22	29	36	31	34	42	56	59	56	54	44	37	45	36	37	****	29	33
27	23	16	26	21	20	13	14	23	28	18	16	23	17	20	18	16	20	13	21	21	21	17	****	20	19
28	15	9	10	9	12	8	16	19	24	27	36	34	25	27	32	26	39	42	35	35	37	31	****	19	25
29	17	9	9	12	12	11	18	34	27	25	21	21	22	24	20	24	36	38	29	22	22	18	****	20	21
30	23	20	13	11	15	25	26	32	40	36	38	39	41	32	30	28	34	34	38	32	34	30	****	34	30

MONTHLY STATISTICS:										NO. OF TIMES							
GEOM	ARITH		<-----PERCENTILE----->					<-----RANGE----->			STD GEOM	PERCENT	ABOVE OBJECTIVE				
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR				
19	20	22	20	36	43	56	63	0	-	78	5	-	42	2	96	0	0

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 300 OR 24-HR OBJECTIVE 150

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : QUEEN MARY HOSPITAL  
POLLUTANT : SULPHUR DIOXIDE  
MONTH: APRIL  
YEAR : 2011  
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	7	7	9	7	7	7	5	24	38	44	24	19	15	9	8	11	13	20	12	6	6	7	****	12	14
2	4	3	3	3	12	10	7	14	25	31	34	19	17	14	17	21	24	42	25	18	28	12	****	9	17
3	10	5	5	5	6	4	11	19	32	94	69	60	39	33	28	21	16	21	6	12	8	4	****	14	23
4	7	3	10	6	4	2	1	1	2	3	4	3	2	2	3	11	21	31	36	20	6	5	****	3	8
5	3	3	3	3	3	2	4	4	3	4	7	4	3	3	3	2	3	2	2	2	3	2	****	2	3
6	4	3	3	3	3	3	3	5	6	11	16	19	25	41	28	6	12	9	6	3	3	3	****	1	9
7	1	3	24	8	9	3	2	19	36	38	21	23	26	6	3	13	5	13	11	14	11	10	****	16	14
8	14	3	10	12	9	3	7	8	26	43	46	41	16	16	31	19	9	11	7	13	8	1	****	24	16
9	38	22	6	2	0	0	0	0	0	1	2	10	15	7	12	10	5	4	3	3	5	****	5	7	
10	16	15	3	2	6	5	20	17	13	32	32	23	15	16	6	11	25	89	35	11	10	11	****	6	18
11	2	2	1	2	9	8	4	31	23	25	18	17	29	21	24	22	21	20	55	14	10	3	****	4	16
12	3	4	6	8	6	5	4	4	4	4	4	3	3	3	3	3	3	4	4	4	4	3	****	1	4
13	7	3	3	4	16	33	26	32	47	32	73	35	18	16	23	11	21	13	9	7	2	2	****	2	19
14	2	2	3	3	4	4	10	6	8	11	25	25	9	9	9	18	11	13	6	4	2	3	****	6	8
15	4	5	5	3	2	2	4	8	36	53	34	34	21	12	13	9	6	7	6	6	2	2	****	5	12
16	7	3	1	0	2	1	1	2	0	1	3	5	5	3	3	8	5	6	6	3	5	7	****	6	4
17	5	6	7	5	6	6	4	8	7	5	4	3	6	6	5	7	1	3	3	3	2	2	****	13	5
18	4	1	5	3	2	4	4	5	8	10	8	19	33	22	18	12	4	5	6	8	9	9	****	9	9
19	8	8	8	9	8	9	11	13	14	14	14	15	14	14	13	13	13	12	14	13	10	10	****	8	12
20	8	7	6	6	7	6	5	6	7	7	7	6	5	7	6	6	5	4	5	5	5	2	****	1	6
21	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	****	2	1
22	1	1	7	6	1	2	2	3	19	14	19	11	11	8	16	11	15	14	11	4	13	14	****	6	9
23	6	5	5	7	5	4	3	3	6	6	6	7	9	5	3	3	3	3	3	4	6	6	****	8	5
24	8	7	6	7	8	6	7	15	20	9	9	14	18	6	5	4	4	3	6	4	17	12	****	4	9
25	3	2	3	3	3	3	6	13	38	52	19	35	22	25	24	18	14	12	11	10	9	8	****	7	15
26	5	5	7	10	6	7	6	7	11	28	19	13	18	5	7	7	14	7	11	8	7	7	****	3	9
27	5	7	4	4	2	2	2	4	14	20	15	8	10	7	8	7	6	6	4	2	1	2	****	1	6
28	1	0	1	0	0	1	3	8	29	29	19	15	12	7	7	3	3	2	1	1	2	2	****	2	6
29	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	****	0	1
30	1	1	0	0	1	1	0	0	1	M	1	6	11	10	6	5	6	10	8	3	2	1	****	7	4

MONTHLY STATISTICS:										NO. OF TIMES				
GEOM	ARITH		<-----PERCENTILE----->					<-----RANGE----->			STD GEOM	PERCENT	ABOVE	OBJECTIVE
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR	
6	6	10	6	23	32	41	53	0	- 94	3	96	0	0	

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 800 OR 24-HR OBJECTIVE 350

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : QUEEN MARY HOSPITAL MONTH: APRIL YEAR : 2011  
 POLLUTANT : NITROGEN DIOXIDE UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	25	17	18	18	10	11	11	54	77	77	57	52	41	29	23	28	45	75	88	86	110	108	****	71	49
2	11	8	18	21	45	27	24	45	56	63	50	36	28	28	40	37	46	77	77	84	68	39	****	9	41
3	5	9	23	22	52	10	18	27	62	80	65	54	39	42	47	35	29	55	18	32	31	17	****	32	35
4	14	9	60	37	8	8	8	17	24	24	21	25	27	32	58	65	70	74	75	71	46	36	****	18	36
5	19	15	13	14	13	12	14	18	19	22	26	18	11	9	12	11	19	23	22	26	23	15	****	15	17
6	16	10	8	8	14	11	12	23	48	56	58	60	59	70	62	54	64	72	71	59	27	18	****	19	39
7	7	12	52	27	32	14	28	67	71	69	62	58	58	24	24	40	39	67	95	113	110	101	****	101	55
8	77	20	69	79	56	25	62	76	92	97	81	60	36	38	51	52	46	62	61	103	45	21	****	68	60
9	81	62	24	11	10	9	13	16	29	29	26	25	37	44	34	35	49	58	83	106	107	101	****	73	46
10	107	91	15	11	30	29	58	50	46	54	50	40	35	31	12	18	36	112	93	31	34	41	****	33	46
11	1	2	1	3	13	33	23	56	57	56	43	36	42	34	49	49	47	54	119	61	28	13	****	13	36
12	12	9	10	11	10	10	12	20	28	30	38	36	29	28	26	35	40	37	35	37	39	29	****	12	25
13	31	18	16	18	33	56	63	82	97	82	93	73	49	43	54	32	77	71	63	75	3	2	****	2	49
14	2	2	2	2	3	8	53	33	64	40	51	35	13	18	16	23	21	32	31	8	5	3	****	10	21
15	7	11	8	4	3	4	31	43	54	45	39	38	30	20	23	18	22	22	27	29	23	30	****	19	24
16	23	13	2	1	3	5	6	11	7	6	9	11	8	7	8	13	13	14	10	16	20	****	15	10	
17	15	16	15	13	17	18	10	19	16	18	15	11	16	14	18	17	5	14	12	12	10	11	****	55	16
18	23	17	21	15	13	16	20	47	74	82	75	57	53	45	52	37	16	17	24	33	25	17	****	24	35
19	30	15	9	5	5	5	9	25	35	33	26	21	21	27	32	22	18	19	34	34	23	18	****	14	21
20	10	8	6	7	7	8	13	23	33	32	28	25	21	12	13	17	17	21	22	18	11	5	****	6	16
21	8	4	5	4	4	7	8	13	14	13	9	7	6	7	6	6	10	5	6	8	18	16	****	7	8
22	5	4	16	17	4	7	12	15	51	34	38	21	20	13	20	16	24	35	37	22	53	52	****	40	24
23	45	34	24	36	32	20	23	38	38	31	31	50	43	30	24	39	31	25	31	20	18	22	****	19	31
24	31	26	14	14	12	4	6	17	36	21	30	30	41	16	22	25	27	13	52	46	107	66	****	3	29
25	3	2	7	3	3	7	32	72	108	82	34	45	32	25	23	24	23	22	25	20	21	18	****	12	28
26	8	13	35	61	19	14	10	21	29	42	28	25	32	10	15	19	31	34	38	23	23	25	****	12	25
27	11	12	8	11	7	7	12	19	43	42	31	23	21	16	17	19	15	19	16	11	5	8	****	7	17
28	4	3	4	4	3	4	17	42	48	41	44	43	37	32	34	17	17	34	23	26	16	14	****	6	22
29	3	3	3	2	2	2	2	5	4	11	14	11	6	8	5	3	4	6	5	8	8	5	****	4	5
30	3	2	2	0	1	2	2	3	6	M	10	14	28	19	11	11	20	34	33	15	11	4	****	17	11

MONTHLY STATISTICS:										NO. OF TIMES				
GEOM	ARITH		<-----PERCENTILE----->					<-----RANGE----->			STD GEOM	PERCENT	ABOVE	OBJECTIVE
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR	
20	22	29	22	64	77	101	108	0	- 119	3	96	0	0	

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 300 OR 24-HR OBJECTIVE 150

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : QUEEN MARY HOSPITAL  
POLLUTANT : SULPHUR DIOXIDE  
MONTH: MAY  
YEAR : 2011  
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	11	11	9	6	9	11	4	9	17	6	11	14	11	9	15	12	8	6	7	3	6	2	****	6	9
2	3	4	3	2	2	4	4	6	7	7	3	3	2	6	12	9	7	9	8	9	****	6	5	10	
3	8	4	6	3	2	4	4	5	7	15	21	16	22	26	18	7	6	6	10	11	12	7	****	9	10
4	12	9	11	10	10	7	19	14	15	20	24	29	29	18	26	35	41	37	47	41	39	44	****	55	26
5	60	31	14	1	1	0	3	3	10	4	15	25	15	7	0	3	10	11	6	1	0	2	****	0	10
6	0	0	0	4	6	1	2	1	4	4	7	5	3	4	2	3	4	8	6	6	8	6	****	5	4
7	1	4	4	5	2	5	2	3	5	6	8	4	6	4	4	7	5	5	2	1	1	1	****	1	4
8	1	2	1	1	1	2	2	3	3	2	2	3	4	4	2	3	3	2	2	2	3	3	****	4	2
9	3	2	2	2	2	2	2	2	2	2	2	3	4	3	2	1	1	3	2	1	0	0	****	2	2
10	4	3	3	4	4	6	5	6	9	10	7	10	8	16	18	9	6	11	7	7	5	7	****	5	7
11	7	7	6	5	5	6	8	5	5	12	14	19	17	9	4	4	4	3	6	5	7	6	****	4	7
12	6	4	3	3	3	2	5	7	9	13	18	7	8	11	6	5	7	12	5	5	6	7	****	8	7
13	7	6	8	9	6	9	7	1	1	3	11	9	17	17	19	17	17	32	42	18	3	0	****	0	11
14	1	1	0	0	0	1	1	2	0	0	1	0	1	0	0	0	0	0	0	0	1	0	****	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9	2	3	1	0	0	6	6	****	11	2
16	27	19	26	49	52	55	42	42	68	85	26	40	16	7	10	6	8	13	5	17	17	19	****	28	29
17	6	3	5	4	4	3	2	5	5	2	0	0	0	0	0	0	0	0	0	0	1	****	2	2	
18	1	2	3	3	5	5	5	8	5	5	5	5	5	4	4	3	5	3	3	2	2	2	****	3	4
19	3	3	5	13	16	14	11	13	13	13	36	15	12	5	7	2	1	1	0	0	0	0	****	0	8
20	0	1	0	0	0	1	7	21	22	30	24	16	1	0	1	0	0	1	1	1	0	0	****	1	6
21	2	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	1	1	1	1	6	****	4	1
22	3	0	0	1	2	1	1	3	1	1	4	2	4	3	8	6	6	6	23	22	10	8	****	3	5
23	3	4	7	9	12	27	24	27	41	60	70	57	44	38	22	19	14	13	10	7	6	4	****	5	23
24	8	12	11	10	11	13	1	2	6	13	16	18	25	59	6	1	4	4	1	3	1	1	****	1	10
25	0	1	0	3	9	12	2	1	3	4	8	3	12	19	9	5	14	17	3	2	1	8	****	16	7
26	4	4	3	4	3	9	10	5	6	10	17	15	25	12	12	24	32	15	22	25	21	17	****	6	13
27	5	6	8	8	21	14	10	24	34	25	12	21	28	24	23	26	19	22	17	17	16	24	****	41	19
28	31	24	47	37	35	42	14	11	15	52	25	34	34	46	69	43	35	34	36	47	66	52	****	26	37
29	23	20	20	19	17	18	27	23	27	8	8	7	3	2	1	1	0	0	0	1	0	1	****	3	10
30	3	3	3	4	4	4	3	4	5	4	3	3	4	4	3	3	3	3	3	3	4	6	****	5	4
31	6	6	22	26	23	23	7	14	43	95	46	56	37	20	15	10	8	8	6	3	10	4	****	4	21

MONTHLY STATISTICS:

GEOM	ARITH	<-----PERCENTILE----->					<-----RANGE----->			STD GEOM	PERCENT	NO. OF TIMES	
MEAN	MEDIAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	ABOVE OBJECTIVE	1-HR	24-HR
4	5	5	25	39	52	60	0	- 95	5	96	0	0	

- NOTES: 1. FLAGS FOR INVALID DATA :  
 \*\*\*\* : DAILY ZERO/SPAN CHECK  
 D : DYNAMIC CALIBRATION  
 T : TELEMETRY/DATALOGGR/ANALYZER FAULT  
 M : MAINTENANCE OR MACHINE SHUTDOWN  
 P : POWER FAILURE
2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 800 OR 24-HR OBJECTIVE 350

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : QUEEN MARY HOSPITAL  
POLLUTANT : NITROGEN DIOXIDE  
MONTH: MAY  
YEAR : 2011  
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	25	18	17	9	15	34	13	21	27	15	19	23	16	12	19	20	14	16	21	15	14	5	****	12	17
2	4	7	4	5	5	8	11	10	12	12	12	9	8	9	8	11	20	22	21	21	13	15	****	18	12
3	16	6	9	4	5	8	12	18	16	18	19	17	26	26	24	15	21	21	36	30	23	14	****	19	17
4	19	16	16	15	13	11	25	35	37	40	42	49	55	51	78	97	116	126	135	130	123	114	****	94	63
5	72	60	37	7	12	12	20	37	47	31	49	48	37	25	26	62	63	70	51	23	3	11	****	6	35
6	1	1	4	13	17	4	7	7	11	14	18	13	9	9	8	10	13	18	22	20	15	14	****	11	11
7	2	6	6	9	1	4	5	11	9	10	10	7	7	7	7	13	9	6	7	6	3	3	****	4	7
8	2	4	0	0	1	3	3	4	6	5	4	8	8	7	4	4	5	4	5	4	4	3	****	7	4
9	5	2	3	1	2	3	3	7	7	7	8	8	9	6	9	7	10	14	11	6	4	4	****	8	6
10	9	6	6	6	5	7	9	11	12	9	8	9	10	16	15	10	9	15	14	17	12	11	****	9	10
11	23	10	4	4	8	11	13	11	6	15	13	22	20	11	6	5	13	10	16	17	20	16	****	16	13
12	13	9	5	4	5	4	13	19	20	15	23	11	10	12	10	8	13	17	14	15	16	17	****	25	13
13	18	11	8	11	7	13	18	16	23	19	19	34	30	33	46	56	74	109	102	81	29	9	****	22	34
14	19	16	14	12	10	9	11	18	12	8	10	7	8	13	24	25	25	27	22	18	19	9	****	10	15
15	8	7	7	5	4	3	6	6	10	12	18	7	8	21	33	25	32	24	17	12	36	37	****	41	17
16	67	51	51	74	67	67	62	68	67	69	31	24	19	12	15	9	36	54	47	60	71	75	****	77	51
17	56	32	50	46	44	37	30	52	60	53	47	27	31	25	25	32	22	26	39	23	20	15	****	19	35
18	13	9	9	10	6	6	10	21	28	28	28	30	23	16	13	16	21	20	14	33	27	18	****	22	18
19	12	9	10	31	28	25	27	37	47	47	64	37	33	27	34	21	20	30	18	24	29	24	****	17	28
20	13	9	7	4	4	8	35	53	55	51	43	31	12	15	12	16	16	15	15	10	4	6	****	10	19
21	9	6	1	0	3	7	10	14	19	18	16	8	8	3	3	10	4	5	10	9	7	17	****	10	9
22	8	1	1	1	2	0	2	3	2	0	8	6	6	2	10	11	15	13	35	17	10	19	****	4	8
23	2	12	27	30	39	50	51	43	48	49	55	61	68	88	77	66	71	78	89	100	91	70	****	67	58
24	49	49	41	36	34	39	21	35	55	63	66	64	73	88	67	35	69	60	66	63	62	64	****	36	54
25	17	30	23	32	40	44	26	30	57	68	75	55	54	79	81	72	86	111	91	52	23	79	****	96	57
26	67	37	23	42	29	52	44	53	63	65	63	64	59	50	48	55	73	49	66	99	108	69	****	37	57
27	25	36	44	34	82	76	49	73	76	70	54	62	70	60	44	52	54	60	83	71	38	62	****	95	60
28	150	60	73	48	45	87	33	30	54	80	63	62	56	63	85	58	55	63	80	74	76	71	****	27	65
29	17	13	15	12	8	18	58	65	57	17	14	19	14	12	6	4	5	10	13	18	10	13	****	15	19
30	13	6	4	4	4	4	10	22	25	22	15	21	19	18	24	11	13	11	15	28	38	26	****	20	16
31	29	30	49	45	39	39	22	57	82	112	101	116	100	69	51	37	29	34	42	39	51	29	****	19	53

MONTHLY STATISTICS:

GEOM	ARITH	<-----PERCENTILE----->					<-----RANGE----->			STD GEOM	PERCENT	NO. OF TIMES ABOVE OBJECTIVE	
MEAN	MEDIAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR	
18	18	18	67	80	100	113	0	150	3	96	0	0	

- NOTES: 1. FLAGS FOR INVALID DATA :  
 \*\*\*\* : DAILY ZERO/SPAN CHECK  
 D : DYNAMIC CALIBRATION  
 T : TELEMETRY/DATALOGGR/ANALYZER FAULT  
 M : MAINTENANCE OR MACHINE SHUTDOWN  
 P : POWER FAILURE
2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 300 OR 24-HR OBJECTIVE 150

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : QUEEN MARY HOSPITAL  
 POLLUTANT : SULPHUR DIOXIDE  
 MONTH: JUNE  
 YEAR : 2011  
 UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	3	3	2	3	22	21	23	22	32	27	26	32	13	12	16	19	10	13	12	9	7	7	****	6	15
2	4	5	3	3	3	3	11	6	6	6	14	19	9	15	12	8	7	12	7	11	11	11	****	7	8
3	9	9	12	15	12	11	12	8	9	7	6	4	5	5	7	7	14	10	7	7	6	6	****	9	9
4	6	9	7	8	6	4	6	9	8	7	11	9	5	7	4	3	3	6	6	3	9	13	****	12	7
5	4	4	4	2	4	4	2	4	4	3	10	8	5	9	5	6	4	5	5	3	4	3	****	3	5
6	3	6	3	1	4	8	5	5	7	3	8	3	12	8	10	3	5	6	3	3	2	****	4	5	
7	3	7	3	4	2	5	5	5	16	9	21	4	4	4	6	2	2	3	1	3	7	5	****	4	6
8	2	6	8	6	7	5	2	7	6	5	2	2	6	2	3	3	1	1	1	3	2	1	****	7	4
9	3	4	4	5	6	3	3	3	8	6	5	6	7	9	6	10	15	7	5	2	2	2	****	4	5
10	7	5	8	10	9	14	8	18	27	22	30	22	17	22	14	14	16	8	2	1	1	1	****	2	12
11	5	11	9	6	7	5	4	3	3	2	0	6	9	9	2	3	2	2	5	7	3	4	****	6	5
12	4	5	2	5	3	7	2	0	3	2	0	0	7	6	26	8	3	5	11	17	3	14	****	3	6
13	2	2	2	0	3	5	8	6	1	6	19	13	15	8	7	3	6	4	5	3	6	6	****	5	6
14	10	5	6	2	1	3	6	5	2	5	4	5	1	2	20	13	9	4	4	5	3	7	****	1	5
15	2	1	5	3	3	9	8	3	4	3	3	4	1	3	3	5	4	2	4	6	8	5	****	10	4
16	7	4	2	1	0	1	1	0	1	1	0	0	0	1	2	2	0	0	0	0	0	1	****	0	1
17	0	0	2	1	2	1	3	3	6	3	1	0	2	0	2	1	2	2	1	0	1	0	****	0	1
18	0	1	1	0	0	0	0	1	1	4	6	6	13	4	4	1	2	1	1	1	0	0	****	0	2
19	1	1	1	0	1	0	0	1	1	2	3	3	2	1	1	3	3	2	2	2	3	2	****	2	2
20	1	2	1	1	1	1	1	2	11	6	7	1	1	2	1	1	2	2	4	0	0	0	****	2	2
21	3	3	1	1	1	1	1	2	2	1	1	2	2	1	0	1	0	0	0	0	0	0	****	0	1
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
23	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	0	1	0	1	0	1	0	1	1	1	1	2	1	1	1	0	1	1	1	1	2	2	****	1	1
25	4	7	7	10	9	10	7	5	6	11	<--- D --->	3	5	3	2	2	3	2	5	10	10	****	3	6	
26	7	7	4	4	5	5	6	5	8	12	8	14	26	20	33	19	18	14	14	10	11	7	****	8	12
27	7	6	4	7	3	3	4	1	1	14	11	8	10	11	7	7	5	3	3	4	5	3	****	5	6
28	4	2	2	2	1	1	1	1	5	3	5	1	0	6	1	0	0	8	0	2	2	0	****	3	2
29	1	1	1	0	1	1	1	2	2	1	1	2	3	7	1	1	1	0	0	0	0	0	****	1	1
30	1	11	1	1	4	8	4	4	3	2	1	4	5	1	1	0	1	1	1	3	4	2	****	6	3

MONTHLY STATISTICS:										NO. OF TIMES				
GEOM	ARITH		<-----PERCENTILE----->					<-----RANGE----->			STD GEOM	PERCENT	ABOVE OBJECTIVE	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR	
3	3	5	3	11	14	22	26	0	- 33	4	96	0	0	

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 800 OR 24-HR OBJECTIVE 350

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : QUEEN MARY HOSPITAL  
POLLUTANT : NITROGEN DIOXIDE  
MONTH: JUNE  
YEAR : 2011  
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	11	9	6	15	67	62	57	50	60	63	48	45	22	29	34	39	34	40	36	36	20	17	****	14	35
2	7	4	2	6	17	11	29	13	13	16	22	29	12	16	12	10	13	26	27	17	21	18	****	12	16
3	13	8	10	11	8	7	17	12	13	6	7	6	8	7	12	15	20	17	17	17	19	11	****	22	12
4	11	13	9	6	5	3	9	16	8	9	12	6	4	5	4	2	3	6	8	4	11	15	****	15	8
5	1	0	0	0	1	1	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	****	3	0
6	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	2	0	0	0	0	****	2	0
7	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	****	3	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	6	0
9	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
10	0	0	0	0	0	0	0	0	0	0	4	2	2	4	3	9	11	8	0	0	0	0	****	2	2
11	4	11	7	1	4	5	1	1	2	2	0	2	1	5	0	1	0	0	16	22	7	4	****	7	4
12	1	1	0	0	0	2	0	0	5	7	0	1	14	2	8	0	0	1	13	22	0	7	****	1	4
13	0	0	0	0	0	0	0	0	0	3	5	0	0	0	0	0	0	0	0	0	0	0	****	3	1
14	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	1	0	0	0	0	0	****	1	0
15	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	1	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	10	17	8	7	0	0	0	0	0	****	1	2
17	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	****	1	0
18	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	3	0
20	0	0	0	0	0	0	1	7	10	9	6	0	0	5	1	7	7	6	14	0	0	0	****	9	4
21	4	0	0	0	0	0	0	0	2	2	3	2	2	1	5	8	5	5	4	5	3	1	****	5	2
22	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	5	1	0	2	****	1	0
23	2	2	0	0	0	1	1	7	4	4	1	0	0	0	0	0	0	0	0	0	0	0	****	2	1
24	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1	0	0	2	1	****	3	0	
25	12	11	4	8	11	12	7	2	5	6	<--- D --->	11	8	9	7	7	11	14	16	19	19	****	14	10	
26	11	12	8	7	12	13	13	12	17	21	11	23	39	37	48	30	31	28	28	15	17	13	****	12	20
27	14	11	8	9	3	1	10	8	7	18	20	18	13	10	14	10	9	13	12	10	12	5	****	11	11
28	5	1	1	2	0	0	2	5	11	5	5	3	0	7	7	0	0	8	0	1	0	0	****	7	3
29	0	0	0	0	0	0	0	3	6	2	1	0	3	9	0	1	0	0	0	0	0	0	****	5	1
30	0	13	0	0	0	2	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2	0	****	10	1

MONTHLY STATISTICS:

GEOM	ARITH	-----PERCENTILE-----					-----RANGE-----				STD GEOM	PERCENT	NO. OF TIMES ABOVE OBJECTIVE			
MEAN	MEDIAN	50	90	95	98	99	1-HR	24-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR			
2	0	0	14	20	36	48	0	-	67	0	-	35	8	96	0	0

NOTES:

1. FLAGS FOR INVALID DATA :
  - \*\*\*\* : DAILY ZERO/SPAN CHECK
  - D : DYNAMIC CALIBRATION
  - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
  - M : MAINTENANCE OR MACHINE SHUTDOWN
  - P : POWER FAILURE
2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 300 OR 24-HR OBJECTIVE 150

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : AP LEI CHAU  
 POLLUTANT : SULPHUR DIOXIDE  
 MONTH: APRIL  
 YEAR : 2011  
 UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	6	6	8	7	7	7	7	5	5	5	7	6	7	5	3	5	7	14	11	10	12	11	****	8	7
2	9	8	8	6	6	6	7	7	19	69	17	10	11	11	40	70	40	38	41	121	43	60	****	38	30
3	35	15	13	11	11	17	35	59	40	93	53	41	35	23	39	33	23	28	19	51	43	47	****	26	34
4	19	19	13	11	8	5	5	4	4	6	6	6	5	4	5	5	12	37	38	8	6	7	****	6	10
5	6	7	7	6	6	5	7	8	7	7	9	7	6	7	7	6	6	6	6	7	7	7	****	7	7
6	9	8	9	8	8	8	8	9	9	10	9	8	M	M	12	10	10	9	8	9	8	9	****	7	9
7	6	6	6	6	5	4	4	3	4	5	5	16	8	6	11	10	6	22	20	16	9	8	****	9	8
8	11	16	9	3	2	2	3	7	75	52	45	10	14	12	63	18	19	9	3	3	9	6	****	2	17
9	5	10	2	2	1	0	1	1	1	1	1	2	2	4	3	2	6	5	4	3	3	3	****	6	3
10	3	3	2	1	4	11	1	1	1	4	3	4	5	23	26	67	46	63	45	49	67	65	****	22	22
11	89	29	20	19	42	36	17	12	33	28	21	36	44	38	46	41	60	45	28	28	18	8	****	7	32
12	6	6	7	8	8	8	7	7	7	5	5	5	4	5	5	5	5	5	5	4	4	3	****	2	5
13	3	2	3	2	3	5	6	6	5	5	9	8	8	5	6	6	9	14	15	13	9	9	****	4	7
14	5	5	7	6	5	6	9	6	3	4	25	20	27	8	23	20	59	23	45	14	20	15	****	19	16
15	26	23	21	11	8	5	6	28	54	134	37	47	28	29	20	22	21	21	12	23	8	16	****	28	27
16	30	25	6	19	23	10	5	7	13	34	16	27	30	17	9	30	15	19	9	9	19	23	****	19	18
17	15	14	16	14	26	19	21	18	24	10	5	7	7	14	9	10	5	13	26	22	28	25	****	27	16
18	7	3	2	2	6	4	4	6	20	9	54	29	21	14	15	5	5	7	9	12	11	10	****	10	12
19	9	9	8	10	9	9	10	13	15	16	15	16	15	13	11	13	13	20	15	12	12	****	8	12	
20	9	9	8	8	9	7	7	8	8	9	10	9	9	10	11	11	11	10	11	11	11	8	****	7	9
21	6	5	6	5	5	7	6	6	7	7	7	6	6	5	6	5	7	6	5	5	5	5	****	4	6
22	4	3	2	2	2	8	19	44	9	8	15	12	33	29	39	55	17	21	16	8	38	28	****	4	18
23	4	4	4	6	5	3	2	2	9	3	3	2	2	2	1	1	1	2	2	4	4	****	5	3	
24	6	5	5	6	6	6	5	6	7	7	7	6	7	8	6	7	6	6	7	5	5	7	****	23	7
25	35	20	13	23	23	21	18	56	54	59	92	43	58	53	35	21	26	18	12	7	16	20	****	9	32
26	12	20	21	13	18	22	13	17	12	25	31	15	27	14	11	15	11	9	6	6	17	7	****	5	15
27	13	9	3	7	2	2	6	12	9	21	16	12	13	11	9	6	15	13	6	7	8	20	****	7	10
28	4	11	5	10	3	17	24	50	48	47	28	16	11	10	10	9	8	4	2	2	3	3	****	4	14
29	2	3	2	1	1	1	1	0	0	0	M	M	0	3	8	7	8	9	7	9	8	7	****	6	4
30	6	7	6	5	6	9	9	8	M	M	13	44	27	26	17	17	46	37	15	18	9	15	****	12	17

MONTHLY STATISTICS:											NO. OF TIMES				
GEOM	ARITH		PERCENTILE					RANGE			STD GEOM	PERCENT	ABOVE	OBJECTIVE	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR		
9	9	14	9	35	46	60	70	0	- 134	3	- 34	3	95	0	0

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 800 OR 24-HR OBJECTIVE 350

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : AP LEI CHAU  
POLLUTANT : NITROGEN DIOXIDE  
MONTH: APRIL  
YEAR : 2011  
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	20	15	16	11	11	14	24	39	34	18	15	11	12	8	6	8	10	26	14	12	13	13	****	32	17
2	15	13	22	14	16	11	22	27	40	71	27	15	11	10	36	61	38	38	32	111	79	107	****	39	37
3	88	50	50	59	45	51	56	56	42	75	45	28	32	25	32	29	20	40	20	66	62	67	****	59	48
4	70	35	25	5	8	3	6	5	11	18	14	17	19	24	26	39	46	71	66	23	17	11	****	8	25
5	5	5	4	3	4	3	6	5	8	9	11	13	10	8	8	6	6	5	6	6	5	3	****	4	6
6	6	2	1	1	1	2	8	13	19	20	19	16	M	M	36	28	19	14	4	14	12	4	****	13	12
7	19	18	9	12	20	16	28	36	29	7	7	25	16	8	9	16	9	40	37	23	17	14	****	53	20
8	56	36	23	9	10	4	31	63	87	77	44	12	17	17	51	25	21	12	16	60	110	78	****	27	39
9	9	18	7	8	5	7	9	15	17	19	16	16	25	13	10	9	12	10	20	15	18	12	****	14	13
10	19	10	8	13	23	36	23	23	26	22	12	11	13	25	26	58	54	78	69	75	133	87	****	78	40
11	89	36	40	27	52	47	48	43	47	37	28	39	47	42	62	47	70	54	55	42	18	6	****	5	43
12	5	4	5	6	7	6	7	9	11	10	18	17	13	9	15	10	12	20	21	21	17	20	****	19	12
13	20	14	14	12	13	16	29	46	58	41	31	15	15	9	12	11	15	21	25	32	40	18	****	31	23
14	33	15	21	12	15	19	10	14	7	8	24	18	13	2	19	18	42	18	41	12	21	14	****	21	18
15	25	20	22	15	7	5	36	56	55	52	33	33	16	24	23	25	23	21	19	33	17	19	****	34	27
16	32	36	13	26	36	18	8	15	17	28	22	25	31	22	21	29	20	23	10	12	25	29	****	21	22
17	18	15	19	19	29	25	22	19	23	21	13	14	11	17	13	14	11	30	28	30	42	36	****	60	23
18	37	14	13	17	22	17	30	53	67	69	84	46	27	22	31	5	7	6	13	14	16	11	****	23	28
19	25	29	19	19	15	18	27	35	30	22	15	16	13	14	11	10	10	12	26	18	13	12	****	13	18
20	10	8	6	6	7	9	10	16	17	16	18	15	11	11	10	15	10	7	10	9	7	5	****	5	10
21	7	4	5	4	4	6	7	11	13	10	8	3	3	3	1	1	0	3	7	7	8	7	****	6	5
22	8	17	16	7	9	29	44	54	16	11	18	14	27	25	30	45	22	27	30	14	57	52	****	43	27
23	44	40	33	37	39	27	29	39	50	43	45	39	34	31	39	29	22	18	13	11	16	14	****	26	31
24	37	37	22	14	13	12	19	28	26	25	22	18	15	13	12	12	12	19	24	22	15	15	****	29	20
25	47	32	18	21	24	21	45	94	82	65	71	40	46	38	20	15	28	20	17	17	25	32	****	13	36
26	16	26	34	16	27	32	18	20	16	26	32	18	33	37	35	35	23	28	22	16	28	16	****	12	25
27	27	17	10	17	8	16	21	23	18	26	23	27	27	23	28	20	30	29	21	25	24	31	****	15	22
28	18	40	35	14	19	33	39	46	42	35	25	15	27	25	31	24	24	20	22	19	12	8	****	9	25
29	7	8	7	5	6	8	5	9	9	14	M	M	6	6	7	10	8	8	5	8	7	4	****	3	7
30	3	4	3	2	2	4	6	6	M	M	12	33	20	23	17	16	38	27	10	7	6	12	****	25	13

MONTHLY STATISTICS:										NO. OF TIMES				
GEOM	ARITH		<-----PERCENTILE----->					<-----RANGE----->			STD GEOM	PERCENT	ABOVE	OBJECTIVE
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR	
17	18	23	18	46	60	78	88	0	- 133	2	95	0	0	

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 300 OR 24-HR OBJECTIVE 150

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : AP LEI CHAU  
POLLUTANT : SULPHUR DIOXIDE  
MONTH: MAY  
YEAR : 2011  
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN	
1	16	42	26	19	25	17	15	13	17	13	31	26	20	22	34	31	15	16	18	29	23	37	****	9	22	
2	28	22	14	15	9	21	29	22	32	28	12	10	20	25	17	22	25	26	31	20	16	16	****	49	22	
3	37	21	23	23	22	33	29	22	19	23	34	18	21	26	12	13	16	19	24	20	19	33	****	34	24	
4	26	17	32	22	24	14	24	33	21	28	24	28	27	21	25	35	38	37	46	45	51	70	****	27	31	
5	5	6	2	2	2	2	2	3	3	3	5	4	3	5	4	5	3	6	6	6	5	5	****	6	4	
6	6	5	5	15	13	7	5	5	7	10	11	18	15	14	13	7	23	12	20	15	18	30	****	14	12	
7	7	14	27	16	19	20	18	13	19	12	17	19	15	11	16	5	7	12	4	5	6	5	****	6	13	
8	5	7	4	6	5	6	8	8	8	4	5	5	5	7	4	4	4	3	4	5	5	5	****	7	5	
9	5	4	4	3	4	4	3	4	4	5	2	1	1	1	0	0	1	5	6	3	2	3	****	9	3	
10	13	7	16	14	13	29	19	29	20	13	7	16	9	12	8	7	1	8	9	12	14	14	****	12	13	
11	13	6	6	6	9	11	16	15	12	7	11	9	10	8	11	5	7	6	16	10	7	15	****	9	10	
12	24	17	4	9	5	7	9	7	13	10	17	9	9	13	6	5	8	10	9	4	5	9	****	17	10	
13	18	21	19	21	16	18	10	4	2	8	26	26	34	22	28	35	63	89	48	36	2	1	****	1	24	
14	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	1	1	****	0	1	
15	1	1	2	1	1	1	2	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3	3	****	4	2
16	3	3	2	17	47	60	40	32	48	7	7	15	10	11	22	24	25	30	8	14	12	21	****	24	21	
17	15	4	8	26	28	17	4	9	6	3	<--- D --->	1	1	0	0	0	0	1	2	1	1	1	****	2	6	
18	2	2	3	4	5	6	6	8	6	6	5	6	5	5	5	4	9	6	6	4	4	5	****	4	5	
19	5	4	4	5	5	6	9	8	9	4	7	4	8	5	8	4	3	3	3	3	4	4	****	3	5	
20	3	4	3	4	3	3	3	3	4	4	7	4	3	3	4	6	7	6	6	7	6	6	****	5	4	
21	11	5	5	4	4	3	3	2	4	2	2	1	1	1	2	6	1	1	2	5	2	6	****	3	3	
22	3	2	3	4	4	2	3	9	4	2	11	12	7	3	3	12	6	9	15	26	23	15	****	3	8	
23	3	15	22	9	11	15	21	28	42	50	63	55	50	36	27	16	14	12	14	10	8	7	****	6	23	
24	14	18	15	13	11	12	3	2	19	17	21	24	28	40	11	2	2	2	2	1	1	2	****	1	11	
25	1	1	1	2	5	5	2	3	13	8	11	11	31	31	8	5	28	23	18	10	18	7	****	21	11	
26	20	5	6	5	5	5	9	10	8	31	32	29	48	23	16	52	28	23	18	23	21	22	****	5	19	
27	4	6	7	7	8	11	26	46	54	92	41	35	47	24	25	21	16	19	18	23	18	28	****	70	28	
28	33	48	25	21	23	28	37	18	55	76	32	35	43	40	57	47	42	38	35	58	57	50	****	29	40	
29	40	68	42	32	29	43	22	14	10	10	11	11	7	7	6	7	6	6	6	6	6	7	****	11	18	
30	7	7	8	8	8	7	7	8	9	7	5	7	5	8	5	6	6	6	7	7	8	10	****	7	7	
31	8	7	6	5	5	5	8	5	6	63	57	60	66	10	13	9	12	9	3	3	3	3	****	2	16	

MONTHLY STATISTICS:

GEOM	ARITH	<-----PERCENTILE----->					<-----RANGE----->				STD GEOM	PERCENT	NO. OF TIMES ABOVE OBJECTIVE	
MEAN	MEDIAN	50	90	95	98	99	1-HR	24-HR		DEVIATION	VALID DATA	1-HR	24-HR	
8	8	8	32	43	57	63	0	-	92	3	96	0	0	

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 800 OR 24-HR OBJECTIVE 350

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : AP LEI CHAU  
 POLLUTANT : NITROGEN DIOXIDE  
 MONTH: MAY  
 YEAR : 2011  
 UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	39	39	26	18	27	29	25	17	14	11	19	16	14	18	26	24	16	14	23	31	27	35	****	13	23
2	25	24	14	13	7	18	18	16	15	16	8	6	14	16	9	18	19	24	26	20	20	17	****	34	17
3	31	17	15	21	17	21	20	15	12	15	15	12	19	18	7	9	14	18	17	17	18	29	****	33	18
4	31	18	25	21	23	14	18	37	35	42	45	49	55	64	73	84	109	108	122	124	105	114	****	78	61
5	41	31	9	8	7	14	16	25	26	15	14	11	2	3	3	5	10	10	14	22	32	24	****	8	15
6	7	9	12	22	19	10	7	8	9	7	11	12	9	7	5	6	12	9	17	14	19	27	****	19	12
7	13	25	26	19	17	17	20	15	13	7	7	10	12	8	11	5	10	10	16	4	4	1	****	6	12
8	4	7	2	6	5	8	9	8	9	4	4	5	6	6	3	4	3	4	5	6	3	4	****	9	5
9	8	4	7	4	7	6	5	5	5	3	3	4	3	1	2	4	11	9	5	3	5	****	15	5	
10	22	15	21	21	15	29	20	16	12	11	7	15	9	8	10	10	8	12	14	15	13	16	****	13	15
11	16	8	8	5	6	11	15	13	12	9	10	11	12	11	12	7	7	2	18	13	7	14	****	16	11
12	33	17	1	11	4	6	6	2	15	10	14	12	11	13	11	9	9	10	12	6	13	15	****	28	12
13	22	25	17	17	10	19	18	28	25	25	43	46	37	33	47	83	129	121	98	79	16	6	****	11	42
14	11	11	9	7	5	7	10	11	11	10	11	8	8	8	13	14	16	10	10	12	11	9	****	11	10
15	11	11	10	8	7	7	11	12	14	12	12	15	13	16	14	21	22	27	31	30	26	24	****	29	17
16	47	36	18	45	68	65	69	67	66	18	15	15	10	18	28	42	48	62	50	55	64	69	****	83	46
17	78	71	64	63	59	47	44	65	65	44	<--- D --->	18	12	15	15	15	20	11	9	8	9	****	11	35	
18	11	12	10	10	10	13	21	36	33	24	13	16	18	20	14	9	18	11	9	13	10	9	****	18	15
19	16	13	10	10	10	13	24	24	16	10	11	11	8	7	8	8	11	10	7	7	9	9	****	6	11
20	11	8	8	8	11	16	38	33	19	18	16	6	4	4	5	7	9	10	12	11	8	10	****	6	12
21	14	13	10	11	10	9	6	7	12	10	8	6	3	3	5	14	13	8	9	16	15	16	****	15	10
22	8	8	6	10	10	5	8	14	8	8	21	15	5	3	4	20	11	13	27	42	58	43	****	19	16
23	43	55	58	36	40	50	60	52	52	58	62	71	91	85	74	83	88	100	110	107	101	****	77	70	
24	70	54	50	39	39	39	36	49	53	61	70	71	68	74	51	44	57	51	55	47	61	56	****	31	53
25	30	29	23	20	31	35	31	41	51	65	70	53	62	77	54	28	55	73	103	112	121	107	****	89	59
26	89	45	44	42	37	41	58	57	61	70	71	70	61	45	27	69	41	45	39	46	70	121	****	36	56
27	49	31	34	34	40	58	75	78	75	82	76	67	71	38	41	40	21	26	41	53	115	96	****	107	59
28	94	78	19	14	21	41	76	48	76	85	72	77	73	54	68	60	59	55	68	123	177	75	****	32	67
29	41	72	35	27	21	46	49	25	17	13	13	16	12	9	6	7	6	6	8	7	6	7	****	10	20
30	9	9	8	7	7	7	11	15	14	14	14	12	8	10	11	10	10	8	11	15	18	18	****	22	12
31	37	36	18	16	14	21	39	43	64	90	105	84	81	17	27	15	17	14	15	16	21	16	****	12	36

MONTHLY STATISTICS:

GEOM	ARITH	<-----PERCENTILE----->					<-----RANGE----->			STD GEOM	PERCENT	NO. OF TIMES ABOVE OBJECTIVE	
MEAN	MEDIAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR	
18	16	16	69	83	107	118	1	- 177	3	96	0	0	

- NOTES: 1. FLAGS FOR INVALID DATA :  
 \*\*\*\* : DAILY ZERO/SPAN CHECK  
 D : DYNAMIC CALIBRATION  
 T : TELEMETRY/DATALOGGR/ANALYZER FAULT  
 M : MAINTENANCE OR MACHINE SHUTDOWN  
 P : POWER FAILURE
2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 300 OR 24-HR OBJECTIVE 150

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : AP LEI CHAU  
 POLLUTANT : SULPHUR DIOXIDE  
 MONTH: JUNE  
 YEAR : 2011  
 UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	2	2	2	3	11	19	25	27	38	39	37	17	15	14	20	27	16	13	14	11	16	15	****	13	17
2	25	32	13	15	13	15	19	12	14	13	17	28	25	36	21	17	18	13	15	19	20	21	****	21	19
3	32	39	30	56	27	41	49	27	25	18	10	8	13	10	10	17	14	12	14	14	14	17	****	24	23
4	15	17	13	20	19	10	11	16	9	46	39	19	12	12	12	11	7	7	10	12	15	34	****	27	17
5	12	9	7	6	8	8	10	11	19	8	18	19	15	13	5	8	8	9	10	11	9	11	****	10	11
6	13	13	10	11	14	15	10	9	18	7	10	7	15	8	12	16	5	4	6	8	12	9	****	5	10
7	6	15	5	3	4	10	11	6	11	15	9	7	6	7	13	9	2	5	3	19	21	11	****	10	9
8	8	6	7	6	15	12	10	12	11	8	4	4	15	7	7	10	7	8	8	8	6	7	****	11	8
9	12	10	12	12	13	13	18	15	13	7	8	7	10	11	11	17	16	10	7	3	4	5	****	5	10
10	9	8	12	11	14	13	15	44	11	9	12	20	30	24	20	34	25	12	8	6	5	6	****	7	16
11	10	16	10	20	10	13	11	8	2	16	39	22	12	14	12	5	9	4	10	13	4	7	****	13	12
12	8	8	6	7	6	10	3	2	3	3	4	5	19	17	47	7	4	7	8	9	27	17	****	12	10
13	6	8	6	4	4	5	3	14	5	7	12	15	15	19	9	6	11	8	8	6	11	10	****	10	9
14	18	12	8	5	3	14	6	13	4	5	6	9	3	3	9	16	10	4	7	11	7	9	****	4	8
15	6	3	10	7	6	8	9	7	7	6	5	18	5	6	10	8	8	6	10	10	12	10	****	12	8
16	9	6	5	4	5	4	5	6	5	4	4	4	2	7	5	4	3	3	7	6	5	****	6	5	
17	5	5	6	6	11	5	11	11	14	9	11	5	6	5	4	6	7	7	5	5	5	4	****	5	7
18	3	5	6	4	5	4	3	5	7	11	10	25	16	34	14	7	5	3	6	4	4	4	****	5	8
19	6	5	7	5	6	4	4	6	5	5	6	5	5	3	3	6	5	4	4	2	5	4	****	3	5
20	2	3	4	3	2	2	3	3	2	2	3	2	3	3	3	3	3	4	3	2	5	5	****	6	3
21	6	5	3	3	4	3	3	3	2	2	4	5	4	3	1	3	2	2	2	2	1	0	****	0	3
22	1	1	1	1	0	1	1	0	1	1	0	1	1	0	0	0	1	0	1	1	0	1	****	0	1
23	1	0	1	1	0	1	2	0	1	0	0	1	0	0	1	1	0	2	0	1	0	1	****	0	1
24	1	2	1	3	1	2	2	1	1	1	2	2	2	3	3	2	2	2	0	3	3	4	****	2	2
25	5	15	22	25	16	15	10	12	16	10	15	11	10	12	14	5	13	4	3	8	14	8	****	7	12
26	13	9	5	3	9	16	7	5	9	5	9	10	12	27	35	51	17	20	20	24	28	23	****	23	16
27	14	20	7	7	9	5	13	27	16	17	19	11	22	19	7	8	7	8	4	9	7	5	****	5	12
28	10	4	7	4	6	3	2	5	4	7	5	2	5	8	2	1	2	3	2	5	3	2	****	8	4
29	5	5	6	4	3	5	5	9	8	5	2	8	3	5	5	9	9	4	4	4	3	4	****	3	5
30	6	4	5	5	10	12	8	8	8	10	7	8	11	3	5	4	5	5	4	5	9	6	****	15	7

MONTHLY STATISTICS:

GEOM	ARITH		-----PERCENTILE-----					-----RANGE-----					STD GEOM	PERCENT	NO. OF TIMES ABOVE OBJECTIVE		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR		DEVIATION	VALID DATA	1-HR	24-HR			
6	7	9	7	19	25	36	40	0	-	56	1	-	23	3	96	0	0

NOTES:

1. FLAGS FOR INVALID DATA :
  - \*\*\*\* : DAILY ZERO/SPAN CHECK
  - D : DYNAMIC CALIBRATION
  - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
  - M : MAINTENANCE OR MACHINE SHUTDOWN
  - P : POWER FAILURE
2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 800 OR 24-HR OBJECTIVE 350

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : AP LEI CHAU  
 POLLUTANT : SULPHUR DIOXIDE  
 MONTH: JUNE  
 YEAR : 2011  
 UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	2	2	2	3	11	19	25	27	38	39	37	17	15	14	20	27	16	13	14	11	16	15	****	13	17
2	25	32	13	15	13	15	19	12	14	13	17	28	25	36	21	17	18	13	15	19	20	21	****	21	19
3	32	39	30	56	27	41	49	27	25	18	10	8	13	10	10	17	14	12	14	14	14	17	****	24	23
4	15	17	13	20	19	10	11	16	9	46	39	19	12	12	12	11	7	7	10	12	15	34	****	27	17
5	12	9	7	6	8	8	10	11	19	8	18	19	15	13	5	8	8	9	10	11	9	11	****	10	11
6	13	13	10	11	14	15	10	9	18	7	10	7	15	8	12	16	5	4	6	8	12	9	****	5	10
7	6	15	5	3	4	10	11	6	11	15	9	7	6	7	13	9	2	5	3	19	21	11	****	10	9
8	8	6	7	6	15	12	10	12	11	8	4	4	15	7	7	10	7	8	8	8	6	7	****	11	8
9	12	10	12	12	13	13	18	15	13	7	8	7	10	11	11	17	16	10	7	3	4	5	****	5	10
10	9	8	12	11	14	13	15	44	11	9	12	20	30	24	20	34	25	12	8	6	5	6	****	7	16
11	10	16	10	20	10	13	11	8	2	16	39	22	12	14	12	5	9	4	10	13	4	7	****	13	12
12	8	8	6	7	6	10	3	2	3	3	4	5	19	17	47	7	4	7	8	9	27	17	****	12	10
13	6	8	6	4	4	5	3	14	5	7	12	15	15	19	9	6	11	8	8	6	11	10	****	10	9
14	18	12	8	5	3	14	6	13	4	5	6	9	3	3	9	16	10	4	7	11	7	9	****	4	8
15	6	3	10	7	6	8	9	7	7	6	5	18	5	6	10	8	8	6	10	10	12	10	****	12	8
16	9	6	5	4	5	4	5	6	5	4	4	4	2	7	5	4	3	3	7	6	5	****	6	5	
17	5	5	6	6	11	5	11	11	14	9	11	5	6	5	4	6	7	7	5	5	5	4	****	5	7
18	3	5	6	4	5	4	3	5	7	11	10	25	16	34	14	7	5	3	6	4	4	4	****	5	8
19	6	5	7	5	6	4	4	6	5	5	6	5	5	3	3	6	5	4	4	2	5	4	****	3	5
20	2	3	4	3	2	2	3	3	2	2	3	2	3	3	3	3	3	4	3	2	5	5	****	6	3
21	6	5	3	3	4	3	3	3	2	2	4	5	4	3	1	3	2	2	2	2	1	0	****	0	3
22	1	1	1	1	0	1	1	0	1	1	0	1	1	0	0	0	1	0	1	1	0	1	****	0	1
23	1	0	1	1	0	1	2	0	1	0	0	1	0	0	1	1	0	2	0	1	0	1	****	0	1
24	1	2	1	3	1	2	2	1	1	1	2	2	3	3	2	2	2	0	3	3	4	****	2	2	
25	5	15	22	25	16	15	10	12	16	10	15	11	10	12	14	5	13	4	3	8	14	8	****	7	12
26	13	9	5	3	9	16	7	5	9	5	9	10	12	27	35	51	17	20	20	24	28	23	****	23	16
27	14	20	7	7	9	5	13	27	16	17	19	11	22	19	7	8	7	8	4	9	7	5	****	5	12
28	10	4	7	4	6	3	2	5	4	7	5	2	5	8	2	1	2	3	2	5	3	2	****	8	4
29	5	5	6	4	3	5	5	9	8	5	2	8	3	5	5	9	9	4	4	4	3	4	****	3	5
30	6	4	5	5	10	12	8	8	8	10	7	8	11	3	5	4	5	5	4	5	9	6	****	15	7

MONTHLY STATISTICS:										NO. OF TIMES				
GEOM	ARITH		<-----PERCENTILE----->					<-----RANGE----->			STD GEOM	PERCENT	ABOVE OBJECTIVE	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR	
6	7	9	7	19	25	36	40	0	- 56	3	96	0	0	

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 800 OR 24-HR OBJECTIVE 350

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : AP LEI CHAU  
 POLLUTANT : NITROGEN DIOXIDE  
 MONTH: JUNE  
 YEAR : 2011  
 UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN	
1	13	11	11	14	39	56	54	51	59	57	52	43	33	29	39	41	28	23	21	16	17	14	****	11	32	
2	22	30	12	9	8	27	19	12	13	14	13	22	17	25	16	17	16	14	15	19	26	19	****	24	18	
3	30	35	20	49	18	35	53	26	19	22	9	5	9	9	18	12	15	14	16	14	20	****	32	21		
4	15	14	8	16	17	5	10	10	4	26	27	9	10	6	8	9	7	10	11	9	9	25	****	22	12	
5	11	5	5	3	4	6	6	6	6	5	11	7	9	7	1	3	2	4	4	7	4	5	****	10	6	
6	13	8	6	4	5	8	5	5	9	5	5	3	7	4	5	12	5	5	8	6	5	7	****	6	6	
7	7	8	3	3	2	11	8	3	5	10	8	6	5	4	9	8	2	5	4	7	13	11	****	11	7	
8	6	3	2	2	7	7	8	7	9	6	6	3	8	3	3	6	4	6	6	5	3	4	****	16	6	
9	9	4	6	7	11	8	15	10	9	9	4	4	8	5	7	12	8	5	5	0	0	1	****	9	7	
10	7	5	11	11	11	11	11	15	8	5	6	10	14	13	13	22	16	7	6	6	2	2	****	8	9	
11	12	18	6	16	6	10	15	11	2	17	25	16	10	12	6	4	5	6	20	18	5	5	****	18	12	
12	7	11	6	6	1	13	3	4	13	13	15	17	18	20	28	4	3	10	18	15	41	19	****	27	14	
13	14	12	6	3	5	5	4	20	14	5	7	14	13	14	6	5	7	8	7	4	11	10	****	18	9	
14	18	13	6	4	1	10	5	9	2	6	3	5	4	1	9	14	9	3	8	9	4	7	****	6	7	
15	4	1	6	3	3	6	11	2	4	4	5	13	2	2	7	7	5	3	8	6	10	8	****	16	6	
16	11	4	3	0	3	3	4	7	7	10	13	26	16	10	22	26	10	20	11	18	14	5	****	6	11	
17	4	3	3	6	7	2	11	9	13	13	20	M	15	12	8	3	5	7	4	3	5	2	****	4	7	
18	2	1	2	1	3	4	2	4	6	9	7	17	9	17	8	4	6	6	8	6	4	3	****	4	6	
19	7	4	6	4	6	4	4	6	4	4	5	5	4	3	2	4	5	11	10	7	7	7	****	6	5	
20	4	4	3	2	3	9	20	19	8	7	3	7	6	2	2	4	3	3	6	2	6	9	****	8	6	
21	7	4	3	1	2	4	10	13	12	10	9	11	10	12	19	8	10	13	14	11	9	5	****	5	9	
22	5	4	3	2	1	2	2	3	4	2	1	1	1	1	2	1	1	1	1	1	0	0	0	****	2	2
23	0	2	4	0	1	1	1	2	1	1	2	1	1	2	1	1	1	1	1	1	1	1	****	2	1	
24	2	3	2	5	1	4	2	2	3	3	3	4	2	3	2	3	5	5	2	4	8	8	****	4	3	
25	13	18	26	28	24	20	22	17	20	16	23	22	19	19	17	10	17	14	10	13	18	15	****	10	18	
26	12	10	8	4	13	22	15	13	16	14	21	23	32	50	57	60	33	37	25	36	41	27	****	30	26	
27	25	25	14	14	18	10	28	31	20	25	27	31	25	24	15	22	15	21	8	12	17	11	****	10	19	
28	16	7	12	4	10	6	10	15	10	18	15	24	7	13	16	13	37	41	17	14	11	7	****	11	14	
29	9	8	7	5	3	6	10	13	12	8	7	9	5	8	14	16	25	15	13	9	5	4	****	6	9	
30	9	5	6	6	12	13	7	8	9	10	7	9	13	2	5	3	7	4	7	7	12	4	****	20	8	

MONTHLY STATISTICS:										NO. OF TIMES				
GEOM	ARITH		<-----PERCENTILE----->					<-----RANGE----->			STD GEOM	PERCENT	ABOVE OBJECTIVE	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR	
7	8	11	8	22	28	41	53	0	- 60	3	96	0	0	

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 300 OR 24-HR OBJECTIVE 150

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : CHEUNG CHAU  
POLLUTANT : SULPHUR DIOXIDE

MONTH: JUNE

YEAR : 2011  
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN	
1	2	1	0	2	1	1	1	2	3	2	3	2	2	4	3	1	0	0	0	0	0	0	****	0	1	
2	1	0	0	0	2	2	4	11	12	8	7	1	0	0	1	0	0	0	0	0	0	0	****	0	2	
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0	
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0	
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0	
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0	
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0	
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0	
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0	
10	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	1	1	1	1	****	0	0	
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0	
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0	
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0	
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0	
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	
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	
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0	
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0	
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0	
20	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	****	1	0	
21	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0	
22	0	0	0	0	0	0	0	0	0	0	0	0	0	<--- M --->	1	1	1	1	1	0	1	1	****	1	0	
23	0	1	1	0	1	0	1	0	0	1	0	0	1	1	1	M	1	0	0	0	0	0	****	1	0	
24	0	0	0	0	0	0	0	1	1	1	1	1	1	2	2	2	2	2	2	1	2	2	****	2	1	
25	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	2	1	1	1	1	0	1	****	1	1	
26	1	1	1	1	1	1	1	1	1	1	2	2	3	5	4	3	3	3	3	3	2	2	****	3	2	
27	2	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	0	****	1	1	
28	1	1	1	0	0	<-----P----->													1	1	2	1	0	****	1	
29	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	****	1	0	
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	1	0	

MONTHLY STATISTICS:

GEOM	ARITH	PERCENTILE					RANGE		STD	GEOM	PERCENT	NO. OF TIMES ABOVE OBJECTIVE	
MEAN	MEDIAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR	
1	0	0	1	2	3	4	0	12	3	94	0	0	

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 800 OR 24-HR OBJECTIVE 350

THE HONGKONG ELECTRIC COMPANY, LTD.  
AIR QUALITY DATA MONTHLY TIME SERIES REPORT

STATION : CHEUNG CHAU  
 POLLUTANT : NITROGEN DIOXIDE  
 MONTH: JUNE  
 YEAR : 2011  
 UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	30	24	11	27	25	22	22	23	21	20	24	15	10	16	7	2	0	0	0	0	0	0	****	0	13
2	1	0	0	0	1	0	5	29	22	8	10	0	0	0	0	0	0	0	0	0	0	0	****	0	3
3	0	0	0	0	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	****	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
10	0	0	0	0	0	0	0	2	0	0	0	2	3	2	0	0	3	9	12	18	11	****	0	3	
11	0	0	0	0	0	5	0	0	0	5	9	2	0	0	0	0	0	0	0	0	0	0	****	0	1
12	0	0	0	0	0	0	0	4	2	3	9	0	0	0	0	0	0	0	0	0	0	0	****	5	1
13	25	12	1	9	3	0	0	1	17	12	6	6	0	0	0	0	0	0	0	0	0	0	****	0	4
14	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
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
16	0	0	0	0	0	0	0	0	0	0	1	24	27	32	31	29	23	24	29	31	6	5	****	2	11
17	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	2	2	6	3	****	2	1	
18	0	0	0	0	0	0	2	0	0	0	1	1	0	0	0	0	0	0	3	1	5	****	16	1	
19	1	0	0	0	1	2	1	3	0	0	0	0	0	0	0	0	2	0	0	0	0	0	****	1	1
20	4	1	3	3	11	15	16	13	13	12	1	0	2	0	0	0	0	10	15	14	22	****	24	8	
21	13	5	17	3	4	1	2	14	18	9	0	17	18	11	8	7	2	0	2	1	0	1	****	0	7
22	1	0	0	2	0	0	5	0	1	0	2	0	0	<--- M --->	0	0	0	0	0	0	0	0	****	0	1
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	M	1	1	1	1	0	0	****	4	0
24	3	0	0	2	5	3	3	0	0	0	0	0	0	0	1	0	0	3	4	1	2	8	****	0	2
25	0	4	0	0	0	0	0	0	4	8	2	0	0	0	1	0	0	0	0	0	0	0	****	0	1
26	0	0	0	0	0	0	0	0	4	3	1	20	43	26	9	6	17	32	55	22	15	****	36	13	
27	22	0	1	0	1	7	13	16	6	3	4	0	0	0	0	0	4	0	0	0	0	0	****	0	3
28	0	0	0	0	0	<-----P----->							1	0	2	11	25	38	30	42	11	0	****	0	
29	1	0	0	0	0	0	0	0	0	2	1	0	0	0	1	1	1	0	6	7	6	9	****	0	2
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	****	0	0

MONTHLY STATISTICS:													NO. OF TIMES				
GEOM	ARITH		<-----PERCENTILE----->					<-----RANGE----->					STD GEOM	PERCENT	ABOVE OBJECTIVE		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR			DEVIATION	VALID DATA	1-HR	24-HR		
1	0	3	0	10	20	28	32	0	-	55	0	-	13	10	94	0	0

- NOTES:
1. FLAGS FOR INVALID DATA :
    - \*\*\*\* : DAILY ZERO/SPAN CHECK
    - D : DYNAMIC CALIBRATION
    - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
    - M : MAINTENANCE OR MACHINE SHUTDOWN
    - P : POWER FAILURE
  2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 300 OR 24-HR OBJECTIVE 150

## Appendix C Summary Results on Water Quality Monitoring

### LAMMA POWER STATION FGD WASTEWATER TREATMENT PLANT EFFLUENT DISCHARGE TO ASH LAGOON SUSPENDED SOLIDS AND PH

Period : April – June 2011

Week Ending	No. of Samples	Suspended Solids, mg/L			pH		
		Maximum	Minimum	Average	Maximum	Minimum	Average
02/04/11	4*	16	13	15	7.9	7.8	7.9
09/04/11	5*	18	13	16	7.9	7.8	7.8
16/04/11	4*	14	12	13	7.9	7.8	7.9
23/04/11	5*	20	14	16	7.9	7.8	7.8
30/04/11	4*	20	15	18	7.9	7.8	7.8
07/05/11	3*	18	15	17	7.9	7.8	7.8
14/05/11	2*	16	14	15	7.9	7.8	7.9
21/05/11	4*	15	12	13	7.9	7.8	7.9
28/05/11	4*	16	12	14	7.9	7.8	7.9
04/06/11	3*	18	15	16	7.9	7.8	7.8
11/06/11	4*	18	12	15	7.8	7.7	7.8
18/06/11	6*	20	13	16	7.9	7.7	7.8
25/06/11	5*	18	14	16	7.9	7.8	7.8

Remark :

\* - No sampling for the remaining day(s) of the week / no sampling due to no discharge

**LAMMA POWER STATION  
FGD WASTEWATER TREATMENT PLANT  
EFFLUENT DISCHARGE TO ASH LAGOON  
TRACE METAL, TOTAL PHOSPHORUS  
AND TOTAL NITROGEN ANALYSIS**

Period : April – June 2011

Sampling date		6/4/2011	3/5/2011	2/6/2011
Barium,	ug/L	<150	<10	<150
Mercury,	ug/L	<0.5	<0.5	<0.5
Cadmium,	ug/L	1	3	1
Iron,	ug/L	440	450	400
Total Phosphorous,	mg/L	<0.8	<0.8	<0.8
Total Nitrogen,	mg/L	48	110	79
Cyanide,	mg/L	<0.01	<0.01	<0.01

Remark:

According to the WPCO Ash Lagoon Discharge Licence, contents at exact levels of trace metals below 1/10 th of the WPCO Licence permitted limits will not be reported. When the concentration of a metal exceeds 1/10 th of the limit, the exact value of the metal concentration will be reported.

## Appendix D Summary of EMIS

<b>EM&amp;A Log Ref.</b>	<b>Mitigation Measures</b>	<b>Implementation Status</b>
	<b>GENERAL</b>	
A1	No other process, except the Wet Limestone-Gypsum process used in the FGD plants of the coal-fired Units L6, L7 and L8 within the Lamma Power Station, shall be used in the FGD plants for the projects unless otherwise agreed by EPD.	Complied
	<b>WATER QUALITY</b>	
B1	All wastewater arising from the operation of the projects shall be collected and directed to the existing wastewater treatment plant within the Lamma Power Station for treatment.	Complied
B2	The operational plant effluent from the FGD plants should be reused as much as possible in order to minimise discharge to the WWTP.	Complied
B3	Maintenance of the WWTP should be performed regularly to ensure the effluent from the WWTP would not exceed the current requirements stipulated in the WPCO licence for Ash Lagoon.	Complied
	<b>WASTE</b>	
C1	No gypsum or sludge arising from the operation of the projects shall be disposed of anywhere. All gypsum and sludge shall be collected and reused.	Complied
	<b>NOISE</b>	
D1	Equipments including the Absorber Recirculation Pump, Oxidation Air Blower, Booster Fan and Booster Fan Motor of the FGD plants shall be acoustically insulated and the Gas-Gas Heater (untreated side) of the FGD plants shall be provided with reinforced lagging to reduce the noise impact.	Complied