

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
July – September 2012**

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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 July to September 2012.

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
L2	27/7/2012 08:48 to 27/7/2012 17:00	Defect rectification
L4	1/7/2012 00:00 to 2/7/2012 23:37	Defect rectification
L4	13/7/2012 22:36 to 16/7/2012 03:27	Defect rectification
L4	20/7/2012 19:46 to 22/7/2012 20:43	Defect rectification
L4	10/8/2012 21:33 to 13/8/2012 04:34	Defect rectification
L4	29/9/2012 13:44 to 30/9/2012 24:00	Rotary Air Heater washing
L5	28/9/2012 21:07 to 30/9/2012 24:00	Defect rectification

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	23/07/2012 11:18 to 06/08/2012 11:49	Defect rectification	EPD was informed by letter dated 07/08/2012

Equipment	Period	Cause	Actions Taken
L2 FGD	24/09/2012 22:51 to 23:48	FGD plant was bypassed due to a signal fault caused by lightning	EPD was informed by letter dated 27/09/2012
L5 FGD	09/07/2012 00:01 to 22/07/2012 23:48	Defect rectification	EPD was informed by letter dated 24/07/2012

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	Varied L-7-002(8)	20/04/2012	31/12/2012	HK Electric	20/04/2012
WPCO discharge licence for Ash Lagoon	WT00011131-2011	15/12/2011	31/12/2016	HK Electric	15/12/2011

Implementation Status of Environmental Mitigation Measures

Environmental mitigation measures were implemented in the reporting period.

Environmental Complaints

One concern on environmental issue related to the operation of Lamma Power Station was received during the reporting period, for which nothing abnormal was identified at the Power Station.

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 July to September 2012.

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 SO₂ 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 SO₂ 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
L2	27/7/2012 08:48 to 27/7/2012 17:00	Defect rectification
L4	1/7/2012 00:00 to 2/7/2012 23:37	Defect rectification
L4	13/7/2012 22:36 to 16/7/2012 03:27	Defect rectification
L4	20/7/2012 19:46 to 22/7/2012 20:43	Defect rectification
L4	10/8/2012 21:33 to 13/8/2012 04:34	Defect rectification
L4	29/9/2012 13:44 to 30/9/2012 24:00	Rotary Air Heater washing
L5	28/9/2012 21:07 to 30/9/2012 24:00	Defect rectification

1.4 Malfunction/Outage Records of Pollution Control Equipment

Equipment	Period	Cause	Actions Taken
L2 FGD	06/07/2012 03:42 to 03:46	Routine damper exercise	EPD was informed on 10/07/2012
L2 FGD	13/07/2012 01:28 to 01:30	Routine damper exercise	EPD was informed on 17/07/2012

Equipment	Period	Cause	Actions Taken
L2 FGD	20/07/2012 02:02 to 02:08	Routine damper exercise	EPD was informed on 24/07/2012
L2 FGD	23/07/2012 11:18 to 06/08/2012 11:49	Defect rectification	EPD was informed by letter dated 07/08/2012
L2 FGD	24/08/2012 03:24 to 03:34	Routine damper exercise	EPD was informed on 28/08/2012
L2 FGD	07/09/2012 01:55 to 01:57	Routine damper exercise	EPD was informed on 12/09/2012
L2 FGD	14/09/2012 01:21 to 01:25	Routine damper exercise	EPD was informed on19/09/2012
L2 FGD	24/09/2012 22:51 to 23:48	FGD plant was by- passed due to a signal fault caused by lightning	EPD was informed by letter on 27/09/2012
L4 FGD	04/08/2012 05:28 to 05:33	Routine damper exercise	EPD was informed on 07/08/2012
L4 FGD	26/08/2012 02:44 to 02:53	Routine damper exercise	EPD was informed on28/08/2012
L4 FGD	01/09/2012 04:44 to 04:45	Routine damper exercise	EPD was informed on05/09/2012
L4 FGD	08/09/2012 01:42 to 01:47	Routine damper exercise	EPD was informed on 17/09/2012
L4 FGD	14/09/2012 23:38 to 23:43	Routine damper exercise	EPD was informed on 19/09/2012
L4 FGD	22/09/2012 23:33 to 23:35	Routine damper exercise	EPD was informed on 26/09/2012
L5 FGD	09/07/2012 00:01 to 22/07/2012 23:48	Defect rectification	EPD was informed by letter on 24/07/2012
L5 FGD	04/08/2012 05:02 to 05:21	Routine damper exercise	EPD was informed on07/08/2012

Equipment	Period	Cause	Actions Taken
L5 FGD	11/08/2012 03:23 to 03:27	Routine damper exercise	EPD was informed on 14/08/2012
L5 FGD	18/08/2012 01:43 to 01:48	Routine damper exercise	EPD was informed on 22/08/2012
L5 FGD	26/08/2012 02:25 to 02:35	Routine damper exercise	EPD was informed on 28/08/2012
L5 FGD	01/09/2012 04:51 to 04:53	Routine damper exercise	EPD was informed on 05/09/2012
L5 FGD	08/09/2012 01:31 to 01:37	Routine damper exercise	EPD was informed on 12/09/2012
L5 FGD	14/09/2012 23:57 to 15/09/2012 00:07	Routine damper exercise	EPD was informed on 19/09/2012

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.

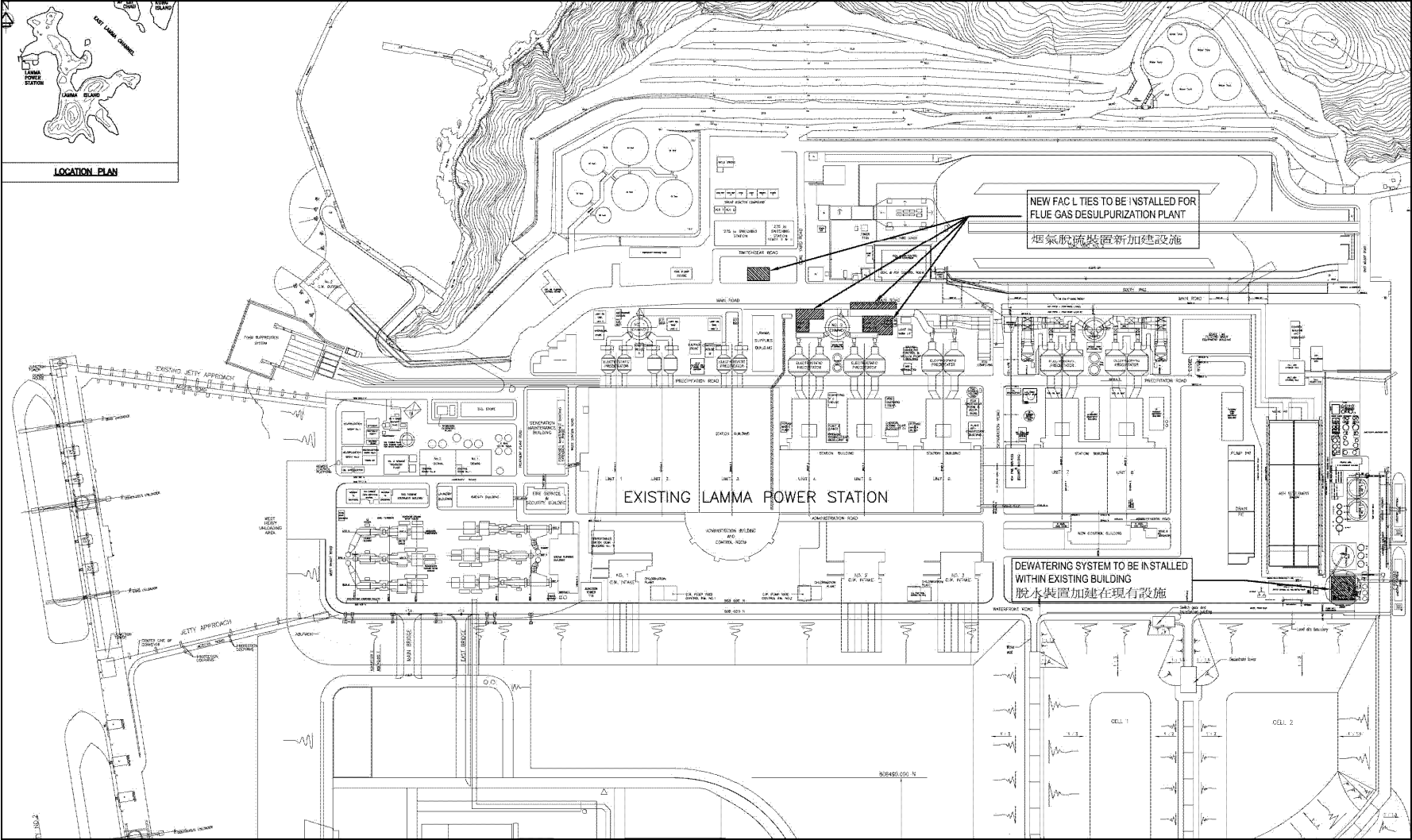


Figure 1.1a Location of New Facilities for L4 & L5 FGD Plants

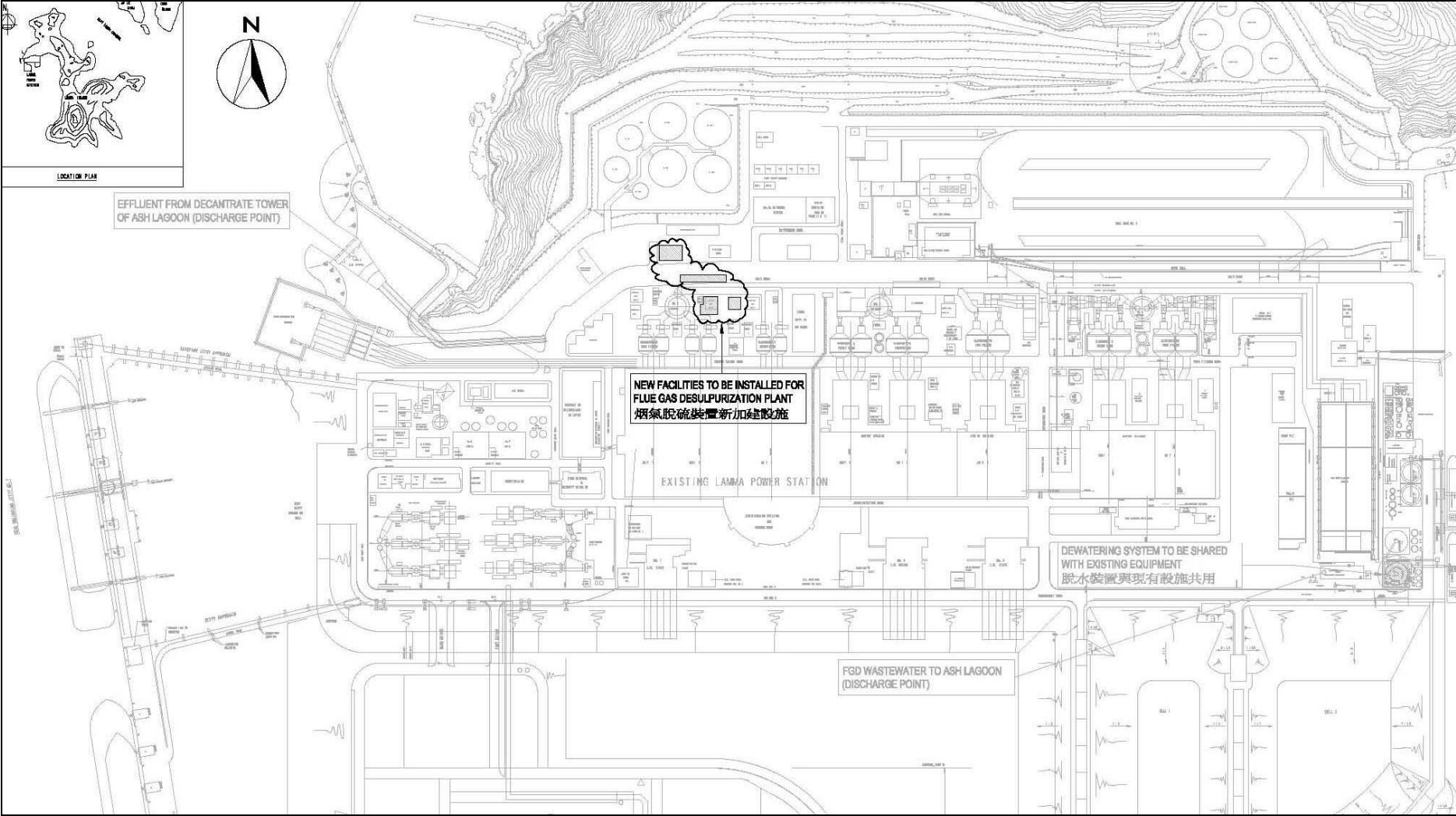


Figure 1.1b Location of New Facilities for L2 FGD Plant

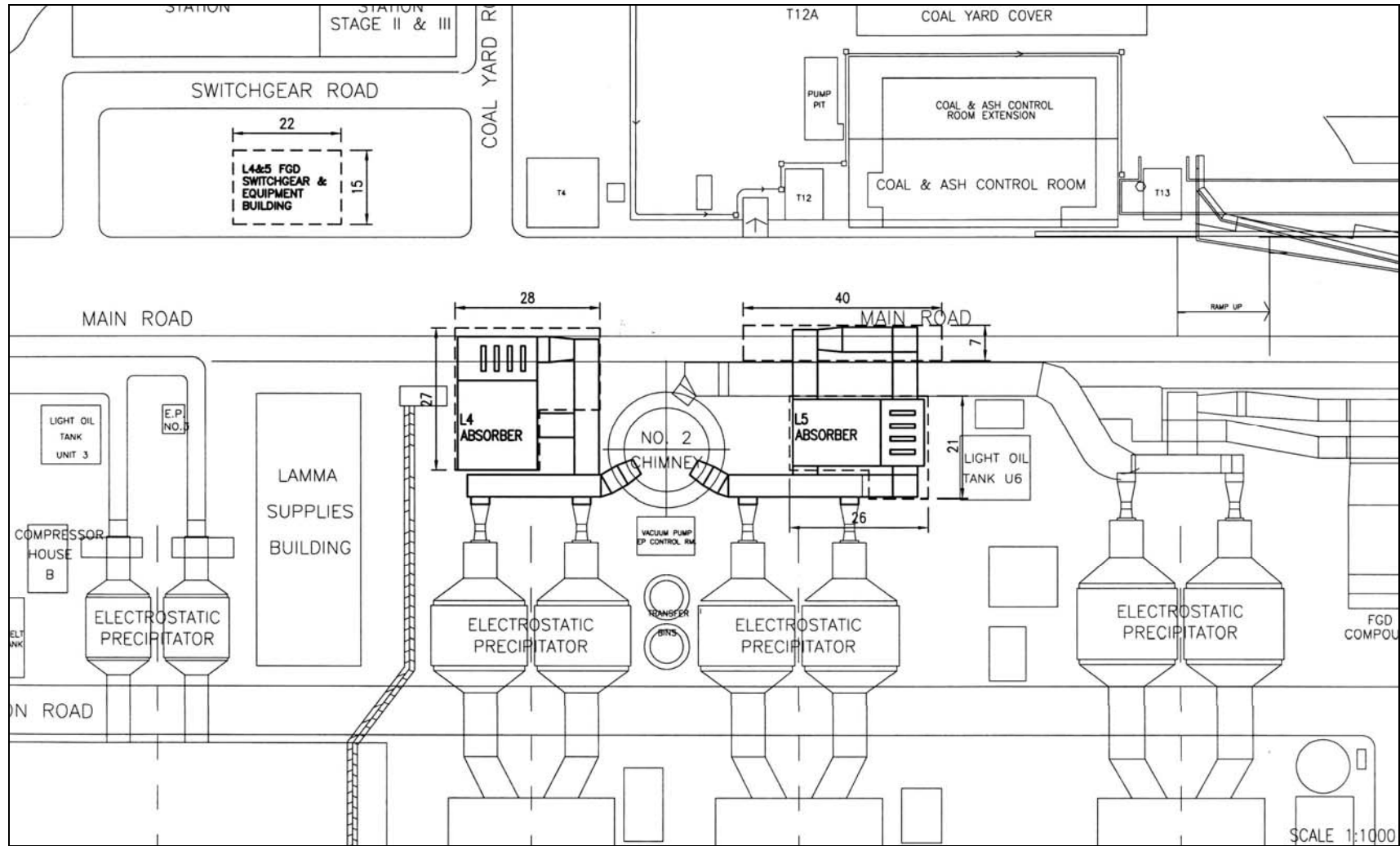


Figure 1.2a General Arrangement of L4 & L5 FGD Plants

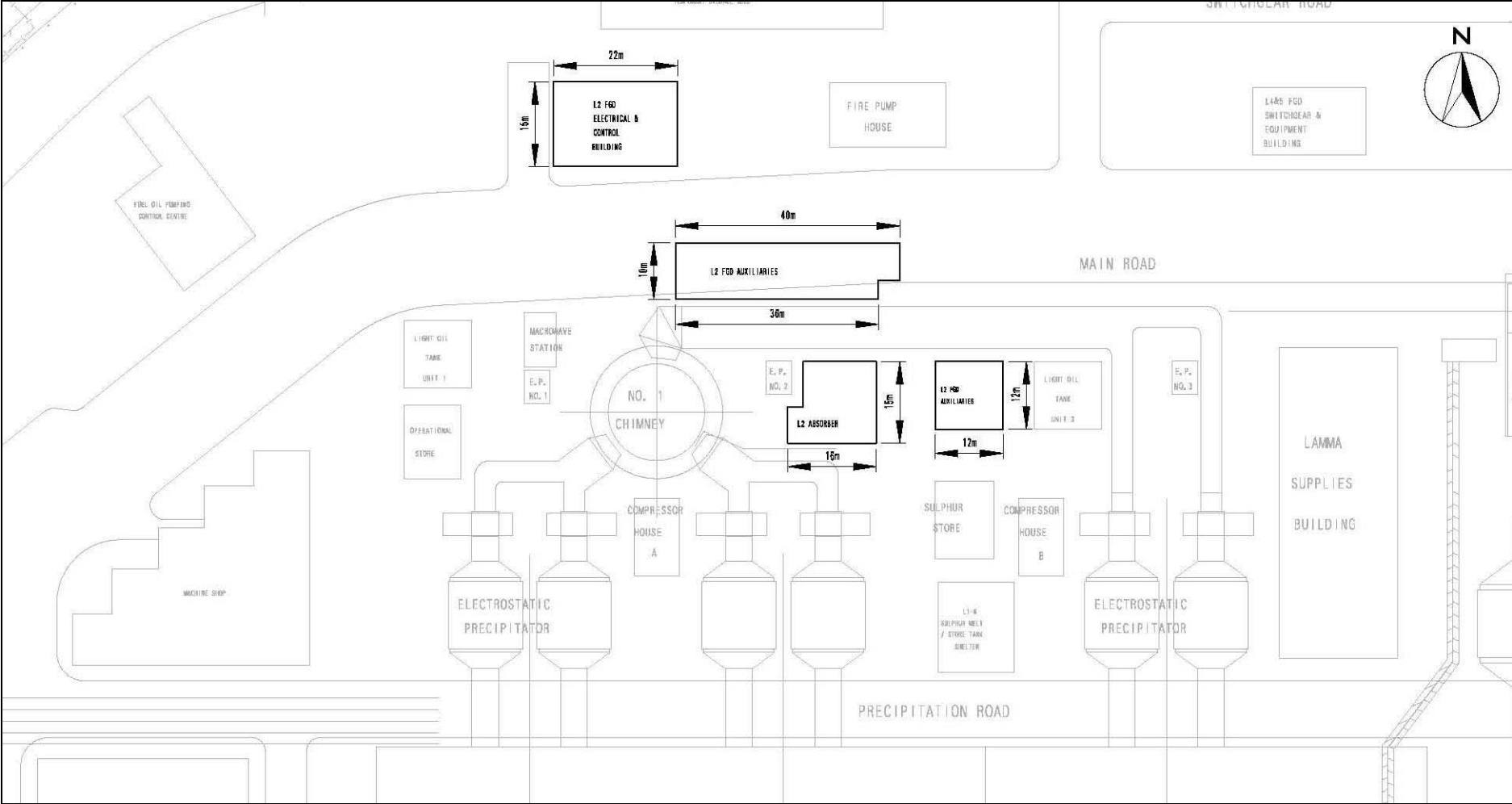


Figure 1.2b General Arrangement of L2 FGD Plant

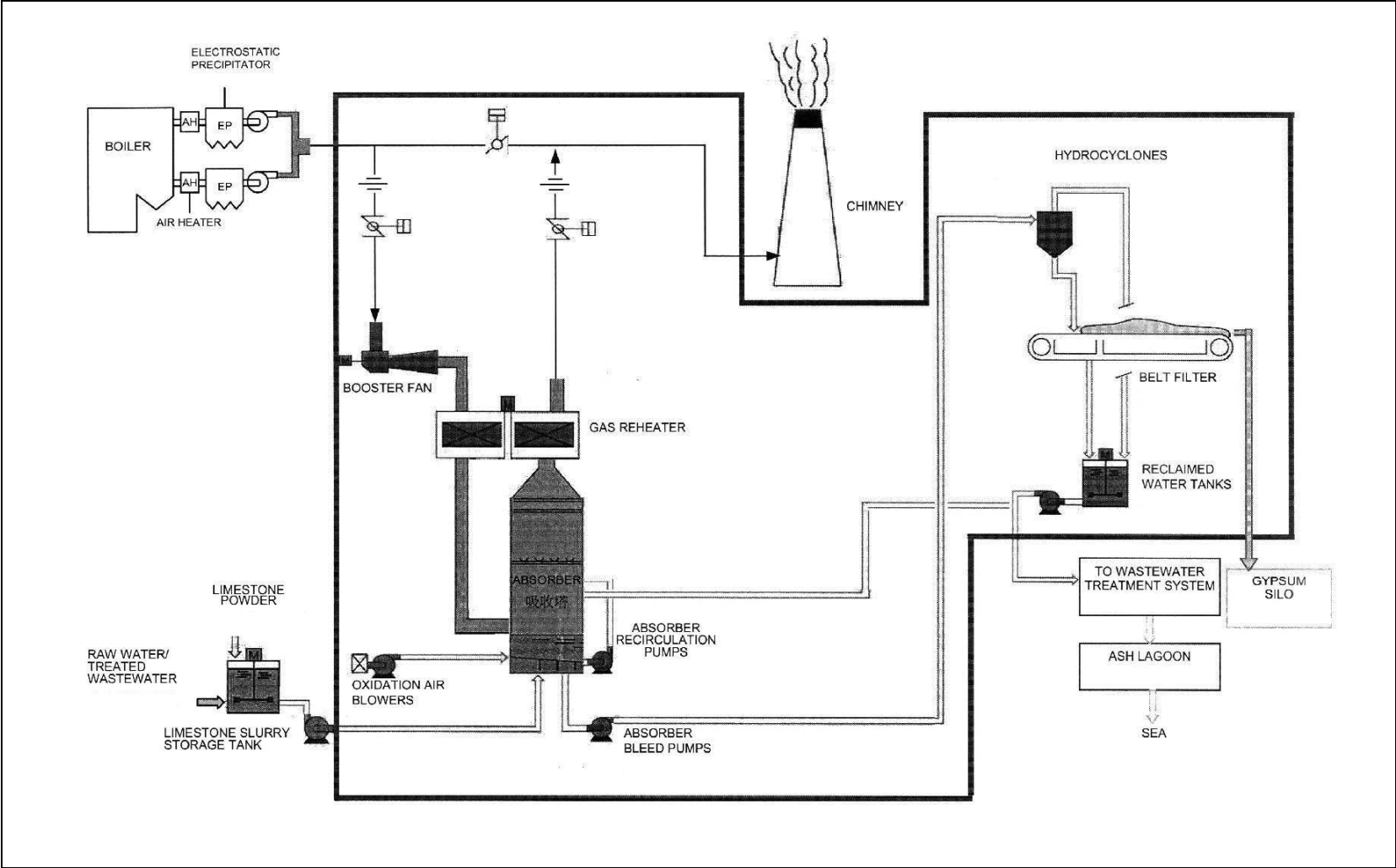


Figure 1.3 Schematic Diagram of the L4 & L5 FGD Plant

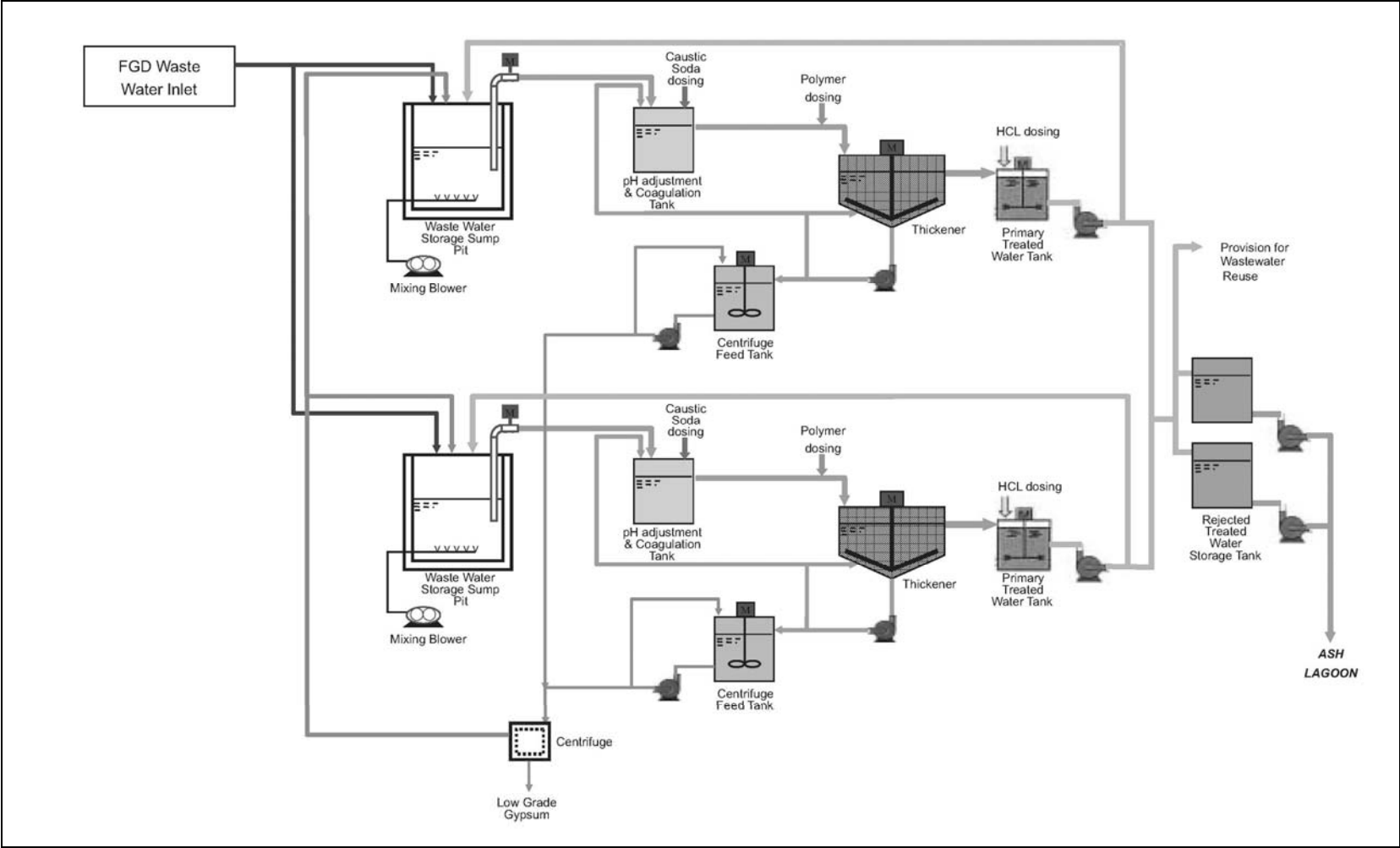


Figure 1.4 Simplified Schematic Diagram of FGD Wastewater Treatment Plant

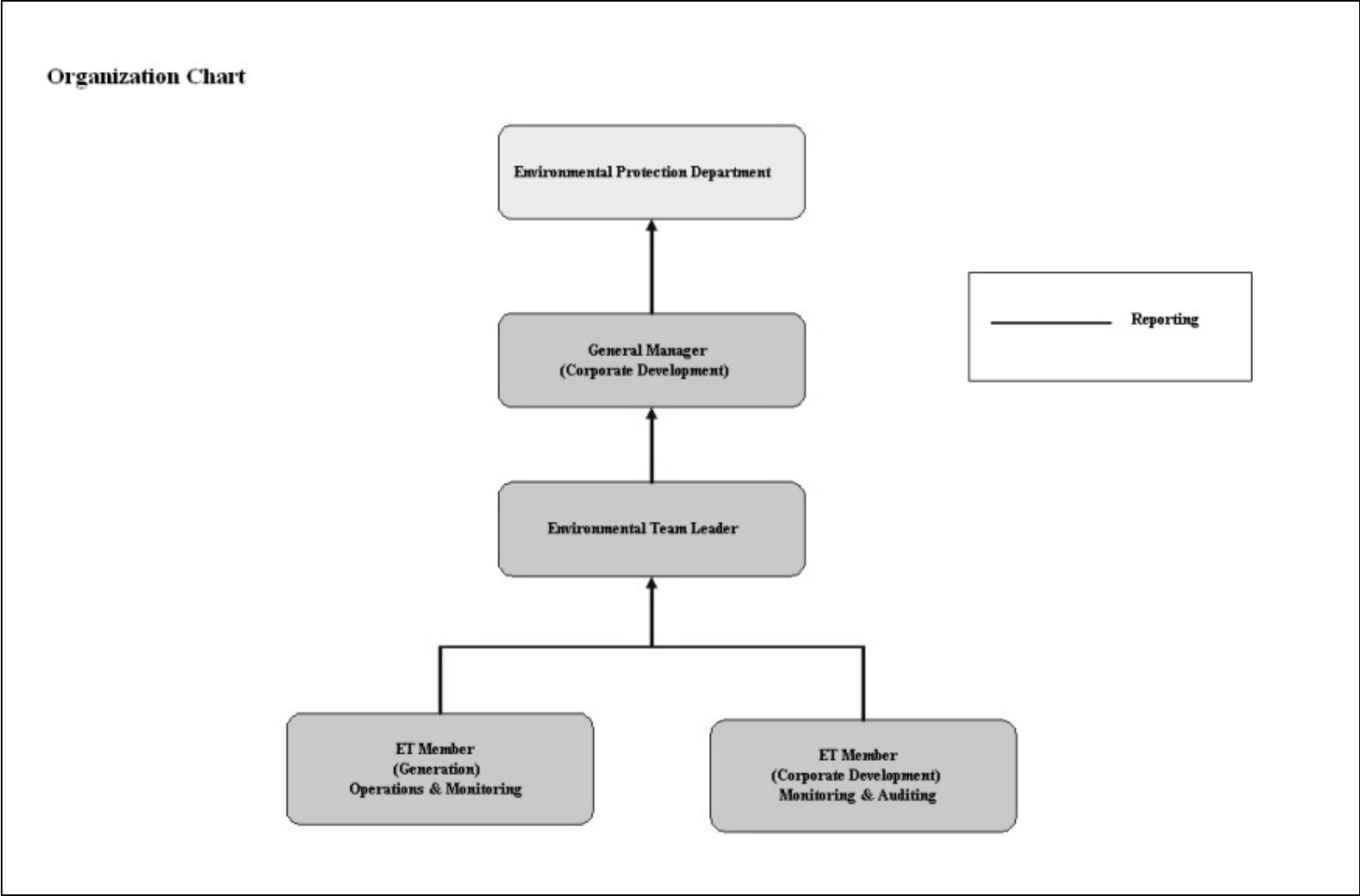


Figure 1.5 Organization Structure at Operational Phase of the Projects

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 ₂	Continuous
	NO _x expressed as NO ₂ (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 ₂	
	NO ₂	

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.

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.	01/07/12-30/09/12	N.A.	0	
2	Continuous monitoring of opacity, NO _x , SO ₂ and CO ₂ in the flue gas at the chimney stacks	01/07/12-30/09/12	0	0	
3	TSP monitoring at Lamma Power Station Boundary (ie East Gate and Reservoir).	01/07/12-30/09/12	0	0	
4	Ambient SO ₂ & NO _x monitoring at the Peak, Queen Mary Hospital, Victoria Road, Chung Hom Kok, Ap Lei Chau and	01/07/12-30/09/12	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	01/07/12-30/09/12	0	0	
2	Suspended Solids in WWTP Effluent	01/07/12-30/09/12	0	0	
3	Iron in WWTP Effluent	01/07/12-30/09/12	0	0	
4	Barium in WWTP Effluent	01/07/12-30/09/12	0	0	
5	Mercury in WWTP Effluent	01/07/12-30/09/12	0	0	
6	Cadmium in WWTP Effluent	01/07/12-30/09/12	0	0	
7	Cyanide in WWTP Effluent	01/07/12-30/09/12	0	0	
8	Total Phosphorus in WWTP Effluent	01/07/12-30/09/12	0	0	
9	Total Nitrogen in WWTP Effluent	01/07/12-30/09/12	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

Period	Amount of Gypsum Collected	Amount of Sludge Collected
July 2012	6,431.5 MT	0 MT
August 2012	8576.8 MT	0 MT
September 2012	8446.8 MT	89.2 MT

4.3 Status of Environmental Licensing and Permitting

All permits/licenses obtained as of September 2012 are summarised in Table 4.3.

Table 4.3 Summary of Environmental Licensing and Permit Status

Description	Permit / Licence No.	Valid Period		Status
		From	To	
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	Varied L-7-002(8)	20/04/2012	31/12/2012	Valid
WPCO discharge licence for Ash Lagoon	WT00011131-2011	15/12/2011	31/12/2016	Valid

4.4 Implementation Status of Environmental Mitigation Measures

Mitigation measures detailed in the EIA Report and EP are required to be implemented. A 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

During the reporting period, there was one (1) concern on “dust” as summarized in Table 4.4.

Table 4.4 Environmental Complaints / Enquiries Received

Case Reference / Date, Time Received / Date, Time Concerned	Descriptions / Actions Taken	Conclusion / Status
<p><i>Reference:</i> EC121100178</p> <p><i>Received:</i> 30/09/2012 p.m.</p> <p><i>Concerned:</i> “In the weeks before”</p>	<p>A District Councillor referred to HK Electric concerns from the residents of Tai Shan Village about dust particles found in the Village. The relevant dust monitoring records were reviewed and nothing abnormal was identified. The P/S staff visited the Village on 11/10/2012 and found the concerned area visually clean. During the visit, discussions with the residents were made and no adverse comment about dust particles was received. The District Councillor was advised of the findings accordingly and had no further comment.</p>	<p>Nothing abnormal was identified. Case closed.</p>

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

No major outage plan for the coming three months.

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 July to September 2012. 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. One concern on environmental issue related to the operation of Lamma Power Station was received during the reporting period, for which nothing abnormal was identified at the Power Station. 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 ³	-	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 ₂	continuous	200 mg/Nm ³ (1h)	190	200	
	NO _x expressed as NO ₂ (For L4 and L5 only)	continuous	615 mg/Nm ³ (1h)	585	615	
Fugitive dust (Coal, PFA, limestone, gypsum)	TSP	Once every six days.	260 (µg/m ³) (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 ₂	Continuous at existing ambient air monitoring stations	800 (µg/m ³) (1h)	-	800	ET to review data on post-hoc basis and check for possible power station contribution.
	NO ₂		300 (µg/m ³) (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_x and SO₂ for Unit L5

Date	Daily Maximum		
	SO ₂ concentration (mg/Nm ³) [#]	NO _x concentration (mg/Nm ³) [#]	Opacity (%)
1/7/2012	70	383	17
2/7/2012	76	378	18
3/7/2012	91	332	18
4/7/2012	52	332	22
5/7/2012	43	296	18
6/7/2012	28	304	18
7/7/2012	46	282	18
8/7/2012	32	296	17
9/7/2012	FGD Plant Outage	315	22
10/7/2012	FGD Plant Outage	369	23
11/7/2012	FGD Plant Outage	410	23
12/7/2012	FGD Plant Outage	461	23
13/7/2012	FGD Plant Outage	460	21
14/7/2012	FGD Plant Outage	371	27
15/7/2012	FGD Plant Outage	429	23
16/7/2012	FGD Plant Outage	460	26
17/7/2012	FGD Plant Outage	395	22
18/7/2012	FGD Plant Outage	441	22
19/7/2012	FGD Plant Outage	312	18
20/7/2012	FGD Plant Outage	330	18
21/7/2012	FGD Plant Outage	394	16
22/7/2012	FGD Plant Outage	402	15
23/7/2012	124	428	24
24/7/2012	136	362	26
25/7/2012	73	343	15
26/7/2012	52	331	16
27/7/2012	27	346	14
28/7/2012	40	369	12
29/7/2012	25	285	12
30/7/2012	24	393	14
31/7/2012	33	351	14

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) [#]	NOx concentration (mg/Nm3) [#]	Opacity (%)
1/8/2012	52	246	17
2/8/2012	27	285	16
3/8/2012	12	275	15
4/8/2012	11	351	16
5/8/2012	21	240	16
6/8/2012	17	202	21
7/8/2012	8	320	17
8/8/2012	35	279	18
9/8/2012	55	238	15
10/8/2012	73	285	15
11/8/2012	55	362	13
12/8/2012	40	352	14
13/8/2012	42	360	14
14/8/2012	75	404	14
15/8/2012	68	408	15
16/8/2012	59	424	15
17/8/2012	59	369	14
18/8/2012	84	451	13
19/8/2012	55	387	14
20/8/2012	84	472	19
21/8/2012	88	458	21
22/8/2012	85	413	14
23/8/2012	91	457	15
24/8/2012	93	410	15
25/8/2012	83	387	15
26/8/2012	45	353	15
27/8/2012	45	374	19
28/8/2012	48	393	20
29/8/2012	57	403	14
30/8/2012	61	364	15
31/8/2012	78	339	15

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) [#]	NOx concentration (mg/Nm3) [#]	Opacity (%)
1/9/2012	51	366	15
2/9/2012	84	261	15
3/9/2012	75	325	15
4/9/2012	78	429	18
5/9/2012	68	418	18
6/9/2012	61	400	18
7/9/2012	65	393	19
8/9/2012	68	410	14
9/9/2012	79	365	14
10/9/2012	57	353	15
11/9/2012	69	323	16
12/9/2012	84	326	15
13/9/2012	61	299	14
14/9/2012	50	381	15
15/9/2012	39	417	15
16/9/2012	24	418	14
17/9/2012	41	410	16
18/9/2012	57	385	15
19/9/2012	65	349	15
20/9/2012	60	343	15
21/9/2012	48	344	14
22/9/2012	69	347	15
23/9/2012	53	356	14
24/9/2012	57	366	14
25/9/2012	40	356	15
26/9/2012	14	362	14
27/9/2012	11	355	15
28/9/2012	10	357	14
29/9/2012	*	*	*
30/9/2012	*	*	*

Note: # - Hourly average value. Expressed as at 0°C, 101.325kPa, dry and corrected to 12% CO₂ condition.

* - Unit L5 was not on load.

B.2.2 Monthly Summary of Stack NO_x and SO₂ for Unit L4

Date	Daily Maximum		
	SO ₂ concentration (mg/Nm ³) [#]	NO _x concentration (mg/Nm ³) [#]	Opacity (%)
1/7/2012	*	*	*
2/7/2012	*	*	*
3/7/2012	*	*	*
4/7/2012	103	258	11
5/7/2012	37	307	11
6/7/2012	35	297	12
7/7/2012	73	246	11
8/7/2012	54	301	10
9/7/2012	117	322	12
10/7/2012	121	270	12
11/7/2012	122	276	11
12/7/2012	103	271	11
13/7/2012	70	257	12
14/7/2012	*	*	*
15/7/2012	*	*	*
16/7/2012	50	233	13
17/7/2012	56	244	18
18/7/2012	75	378	18
19/7/2012	42	316	17
20/7/2012	112	375	22
21/7/2012	*	*	*
22/7/2012	*	*	*
23/7/2012	93	408	19
24/7/2012	90	425	22
25/7/2012	99	410	15
26/7/2012	57	292	10
27/7/2012	25	240	8
28/7/2012	33	231	9
29/7/2012	11	247	8
30/7/2012	32	397	10
31/7/2012	23	389	10

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) [#]	NOx concentration (mg/Nm3) [#]	Opacity (%)
1/8/2012	38	293	13
2/8/2012	46	262	11
3/8/2012	20	297	13
4/8/2012	11	221	12
5/8/2012	47	351	15
6/8/2012	33	331	14
7/8/2012	40	387	16
8/8/2012	68	221	8
9/8/2012	47	337	9
10/8/2012	63	303	10
11/8/2012	*	*	*
12/8/2012	*	*	*
13/8/2012	77	348	13
14/8/2012	81	357	8
15/8/2012	58	318	9
16/8/2012	51	301	10
17/8/2012	65	369	10
18/8/2012	77	339	9
19/8/2012	86	377	11
20/8/2012	93	361	23
21/8/2012	93	496	20
22/8/2012	82	435	12
23/8/2012	92	433	10
24/8/2012	101	465	11
25/8/2012	99	398	9
26/8/2012	52	439	12
27/8/2012	89	446	12
28/8/2012	102	445	11
29/8/2012	76	424	10
30/8/2012	70	409	10
31/8/2012	88	419	14

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) [#]	NOx concentration (mg/Nm3) [#]	Opacity (%)
1/9/2012	80	292	11
2/9/2012	112	290	10
3/9/2012	121	274	10
4/9/2012	106	449	10
5/9/2012	45	396	10
6/9/2012	66	433	24
7/9/2012	51	463	11
8/9/2012	80	465	11
9/9/2012	72	373	9
10/9/2012	47	364	12
11/9/2012	95	436	13
12/9/2012	100	302	10
13/9/2012	109	361	17
14/9/2012	48	366	10
15/9/2012	59	376	11
16/9/2012	17	299	9
17/9/2012	65	330	11
18/9/2012	45	406	21
19/9/2012	88	378	10
20/9/2012	88	327	10
21/9/2012	51	333	10
22/9/2012	86	355	15
23/9/2012	79	323	11
24/9/2012	91	396	10
25/9/2012	84	360	7
26/9/2012	79	363	13
27/9/2012	38	294	7
28/9/2012	26	249	8
29/9/2012	55	244	8
30/9/2012	*	*	*

Note: # - Hourly average value. Expressed as at 0°C, 101.325kPa, dry and corrected to 12% CO₂ condition.

* - Unit L4 was not on load.

B.2.3 Monthly Summary of Stack SO₂ for Unit L2

Date	Daily Maximum	
	SO ₂ concentration (mg/Nm ³) [#]	Opacity (%)
1/7/2012	67	13
2/7/2012	59	12
3/7/2012	76	11
4/7/2012	65	10
5/7/2012	41	15
6/7/2012	41	14
7/7/2012	30	12
8/7/2012	92	14
9/7/2012	76	12
10/7/2012	68	15
11/7/2012	33	17
12/7/2012	32	19
13/7/2012	25	20
14/7/2012	47	26
15/7/2012	35	16
16/7/2012	34	16
17/7/2012	26	14
18/7/2012	34	17
19/7/2012	38	16
20/7/2012	50	14
21/7/2012	40	13
22/7/2012	49	13
23/7/2012	64	15
24/7/2012	*	*
25/7/2012	FGD Plant Outage	13
26/7/2012	*	*
27/7/2012	*	*
28/7/2012	*	*
29/7/2012	*	*
30/7/2012	FGD Plant Outage	12
31/7/2012	FGD Plant Outage	13

Date	Daily Maximum	
	SO2 concentration (mg/Nm3) [#]	Opacity (%)
1/8/2012	FGD Plant Outage	16
2/8/2012	FGD Plant Outage	14
3/8/2012	FGD Plant Outage	22
4/8/2012	FGD Plant Outage	22
5/8/2012	FGD Plant Outage	20
6/8/2012	13	15
7/8/2012	25	22
8/8/2012	35	14
9/8/2012	47	13
10/8/2012	65	13
11/8/2012	81	13
12/8/2012	52	14
13/8/2012	42	14
14/8/2012	54	14
15/8/2012	40	14
16/8/2012	44	13
17/8/2012	60	14
18/8/2012	49	13
19/8/2012	49	13
20/8/2012	43	14
21/8/2012	93	12
22/8/2012	89	12
23/8/2012	92	12
24/8/2012	81	12
25/8/2012	113	11
26/8/2012	106	12
27/8/2012	75	12
28/8/2012	81	12
29/8/2012	52	13
30/8/2012	62	13
31/8/2012	74	12

Date	Daily Maximum	
	SO2 concentration (mg/Nm3) [#]	Opacity (%)
1/9/2012	72	13
2/9/2012	70	13
3/9/2012	49	13
4/9/2012	86	13
5/9/2012	93	12
6/9/2012	99	13
7/9/2012	89	12
8/9/2012	63	12
9/9/2012	69	12
10/9/2012	62	13
11/9/2012	91	12
12/9/2012	97	12
13/9/2012	80	12
14/9/2012	51	14
15/9/2012	62	13
16/9/2012	51	13
17/9/2012	*	*
18/9/2012	*	*
19/9/2012	*	*
20/9/2012	*	*
21/9/2012	*	*
22/9/2012	*	*
23/9/2012	*	*
24/9/2012	103	17
25/9/2012	61	16
26/9/2012	*	*
27/9/2012	*	*
28/9/2012	*	*
29/9/2012	37	13
30/9/2012	113	13

Note: # - Hourly average value. Expressed as at 0°C, 101.325kPa, dry and corrected to 12% CO₂ condition.

* - Unit L2 was not on load.

B.2.4 Summary of Annual Stack Particulate Sampling

Unit	Date	Results (mg/Nm ³)
L2	22/05/2012	6
L4	26/07/2012	6
L5	30/07/2012	7

Monitoring Equipment: Napp model 32 (Manual stack sampling system)

B.3 Ambient SO₂ and NO₂ 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: JULY

YEAR : 2012
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	****	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	****	0	0
5	0	0	1	1	1	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	****	2	1
6	1	2	1	1	1	1	2	1	1	1	0	0	2	1	1	0	0	0	0	0	1	0	****	0	1
7	0	0	0	1	1	2	1	1	1	1	3	1	1	1	2	2	2	2	2	1	1	0	****	0	1
8	0	1	1	1	1	1	1	0	1	1	1	2	3	1	2	2	2	2	2	2	0	0	****	1	1
9	1	1	1	0	1	2	1	1	0	0	1	6	30	23	2	3	2	2	1	1	0	0	****	0	3
10	0	0	0	0	0	0	0	0	0	0	0	1	1	6	4	2	0	0	0	0	0	0	****	0	1
11	1	0	1	1	0	1	2	2	2	2	1	2	2	2	5	22	18	1	1	1	1	0	****	1	3
12	1	1	1	1	1	0	1	0	1	1	0	1	1	1	2	8	4	1	0	0	0	0	****	6	1
13	1	1	1	1	1	2	1	2	1	0	1	3	1	3	5	5	2	1	1	1	1	1	****	1	2
14	2	2	2	2	1	2	1	1	1	1	0	0	0	2	13	0	0	0	0	0	1	1	****	0	1
15	2	1	2	1	1	1	1	2	1	1	1	0	1	2	0	1	1	1	1	1	1	1	****	0	1
16	1	1	1	1	1	1	0	1	1	1	1	1	0	0	1	0	0	0	0	0	1	1	****	1	1
17	1	1	0	1	1	1	1	1	1	1	1	2	2	1	2	1	1	1	1	1	1	2	****	1	1
18	1	2	1	1	2	2	0	2	2	1	2	1	1	1	8	11	1	1	1	0	1	****	1	2	
19	1	0	0	0	1	0	0	2	6	1	0	2	3	20	33	41	21	6	1	2	1	0	****	1	6
20	1	1	1	1	1	1	1	1	1	1	22	11	6	3	2	3	10	10	4	1	2	11	****	14	5
21	13	3	4	1	1	2	1	8	22	21	27	39	28	23	26	23	22	18	2	1	1	2	****	2	13
22	1	1	1	2	2	2	2	2	1	0	0	1	0	1	1	1	1	2	2	2	2	2	****	2	1
23	2	1	2	2	2	2	2	2	1	2	1	2	2	2	2	2	2	2	2	2	2	2	****	2	2
24	2	1	2	1	2	2	2	2	1	2	1	2	1	1	2	2	1	1	2	2	2	1	****	2	2
25	1	1	1	1	2	1	0	0	0	0	0	1	0	0	0	0	0	1	1	2	0	0	****	0	1
26	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0	****	6	1
27	1	1	1	0	1	0	0	1	1	1	0	0	1	1	1	1	1	0	1	1	0	0	****	1	1
28	2	1	2	0	0	2	1	1	1	0	0	0	0	0	0	0	1	1	0	0	0	1	****	1	1
29	2	0	0	0	1	1	1	0	0	0	0	0	1	1	1	14	4	12	3	9	9	2	****	1	3
30	2	1	1	1	3	8	7	11	18	27	50	25	14	9	2	2	6	2	1	1	1	1	****	1	8
31	1	1	1	1	1	2	1	1	4	8	8	15	16	11	10	3	2	2	1	2	1	1	****	1	4

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
1	1	1	3	11	22	27	0	- 50	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: JULY
 YEAR : 2012
 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	2	0	1	1	0	0	3	1	2	2	4	3	4	4	3	3	4	4	7	4	12	****	3	3
2	1	0	0	0	0	0	2	5	7	8	7	12	11	10	12	12	12	8	5	10	6	6	****	6	6
3	5	9	9	4	3	2	3	7	6	5	9	12	7	10	10	18	20	19	18	22	24	24	****	7	11
4	4	4	2	2	2	1	5	15	10	10	10	10	5	6	5	8	9	10	8	14	9	8	****	3	7
5	4	2	2	1	1	1	3	6	15	10	16	26	13	14	10	11	9	6	5	5	5	5	****	7	8
6	7	4	4	2	3	5	8	13	13	20	12	15	13	8	12	13	12	15	21	18	10	8	****	17	11
7	12	3	4	14	7	4	14	19	19	15	17	13	16	12	15	19	19	20	29	25	27	24	****	20	16
8	10	8	7	5	4	9	9	15	9	14	11	13	15	9	15	12	19	19	25	27	17	27	****	14	14
9	10	10	4	7	4	11	12	11	9	15	15	20	24	25	12	13	12	14	23	23	21	23	****	12	14
10	4	5	3	5	1	6	3	9	10	7	9	4	5	6	15	12	11	13	15	15	19	25	****	12	9
11	7	4	7	14	10	12	8	10	7	17	8	6	7	5	13	29	30	14	15	14	19	18	****	15	13
12	8	6	3	6	2	5	4	13	10	10	10	5	4	5	5	21	27	19	30	23	17	23	****	15	12
13	8	3	4	1	1	1	6	11	8	10	13	25	19	26	28	15	17	22	24	25	21	27	****	10	14
14	4	5	5	1	12	15	10	11	9	9	10	11	4	6	22	30	21	20	20	18	16	25	****	12	13
15	7	5	5	3	16	4	2	13	9	16	15	12	10	21	13	18	18	20	16	17	23	22	****	12	13
16	7	3	3	2	3	10	2	12	12	10	8	11	5	9	11	16	12	16	15	16	18	11	****	8	10
17	9	1	2	3	1	4	7	8	12	9	9	7	7	9	8	13	15	20	23	18	26	21	****	12	11
18	8	5	4	7	8	4	3	10	15	24	23	25	18	16	17	29	29	29	28	30	30	20	****	19	17
19	19	9	2	0	2	10	12	16	22	10	14	34	25	31	37	41	31	20	23	36	40	27	****	9	20
20	16	7	4	9	10	6	2	8	15	22	41	45	49	43	42	41	51	48	54	37	43	60	****	50	31
21	86	10	6	3	4	7	15	32	55	59	88	124	67	64	54	46	49	55	38	34	27	26	****	28	43
22	22	17	11	12	11	10	9	15	15	17	22	15	15	13	10	13	25	20	15	30	26	23	****	23	17
23	15	7	6	5	4	5	11	16	25	31	28	24	22	22	25	24	16	11	8	6	7	6	****	2	14
24	2	2	2	2	4	5	5	5	7	7	8	9	10	12	9	7	6	10	9	7	7	4	****	2	6
25	3	1	1	1	3	2	10	17	17	15	19	17	16	20	27	34	33	22	17	11	6	6	****	2	13
26	5	3	2	2	1	1	3	5	11	11	11	14	19	21	19	31	31	16	18	27	8	10	****	5	12
27	5	3	3	3	2	7	4	10	19	27	31	38	39	27	20	21	23	15	11	9	6	27	****	13	16
28	20	14	17	9	0	1	8	17	20	17	26	22	16	18	21	21	24	28	29	19	14	18	****	32	18
29	41	31	14	18	27	21	18	15	14	29	30	11	14	17	16	30	18	33	36	52	41	23	****	6	24
30	30	1	5	5	34	36	33	38	27	26	29	26	21	15	13	25	27	22	28	58	48	34	****	12	26
31	7	4	6	14	24	33	34	15	26	42	48	58	55	38	37	29	28	47	50	28	49	20	****	11	31

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	
10	12	12	30	41	52	58	0 -	124	3	3	96	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: AUGUST
 YEAR : 2012
 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	8	4	1	0	0	1	6	13	18	22	18	26	22	22	32	30	11	10	6	7	****	8	12
2	15	17	19	24	34	38	45	35	24	17	15	11	21	20	23	17	17	20	14	19	21	26	****	4	22
3	16	26	27	4	3	3	12	17	31	45	48	42	28	25	33	30	33	22	24	33	29	18	****	7	24
4	7	6	5	1	1	2	2	2	2	2	2	1	1	1	1	0	3	1	1	2	1	1	****	3	2
5	5	1	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	4	0	0	****	0	1	
6	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	1	1	2	1	1	1	3	****	1	1
7	3	1	6	10	20	24	16	5	6	10	5	3	8	29	24	31	23	12	5	1	1	1	****	1	11
8	1	1	1	3	5	20	25	42	20	18	12	17	19	20	26	18	11	5	6	2	0	0	****	0	12
9	0	0	0	6	11	9	3	0	5	0	2	4	6	3	1	3	1	0	0	0	0	****	5	3	
10	0	0	1	1	1	1	1	1	0	1	2	1	1	14	2	0	5	15	0	4	5	1	****	0	2
11	0	0	0	1	2	1	2	2	2	0	1	14	2	1	1	1	6	1	4	1	1	1	****	1	2
12	1	1	1	1	0	1	3	1	1	1	1	0	1	1	1	0	0	0	0	0	1	1	****	1	1
13	1	1	1	2	1	1	0	1	0	1	5	7	2	<-----D----->	8	8	5	4	3	****	8	3	****	8	3
14	1	1	2	2	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	****	1	1
15	0	0	0	1	0	4	4	20	46	20	22	22	19	17	9	20	16	14	16	17	17	12	****	12	13
16	2	2	3	0	0	0	0	0	1	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	2	0	2	3	1	1	1	2	2	1	1	1	1	****	2	1
19	1	0	1	1	1	1	1	0	1	1	14	13	6	2	2	4	8	7	7	14	11	9	****	17	5
20	12	16	15	2	1	0	1	1	1	1	4	2	4	23	23	10	2	2	4	0	0	4	****	5	6
21	5	0	0	0	0	0	0	0	0	0	5	1	3	26	7	4	3	1	1	2	4	****	2	3	
22	2	0	2	1	2	1	3	1	1	2	4	2	1	2	2	2	5	20	25	26	6	4	****	15	6
23	21	9	5	6	7	5	11	17	18	11	11	9	7	8	14	20	24	22	10	13	21	56	****	11	15
24	8	14	9	16	14	19	8	7	10	5	8	12	10	12	20	25	20	4	3	8	9	14	****	9	12
25	15	4	7	9	8	4	5	9	13	15	17	14	10	19	18	15	23	31	27	25	16	7	****	0	14
26	0	1	0	0	1	3	3	6	0	0	0	0	1	1	3	5	2	3	13	10	11	4	****	1	3
27	1	1	0	0	3	1	5	16	10	11	14	14	23	27	20	20	24	12	15	18	12	7	****	10	12
28	4	11	16	20	20	24	19	32	42	42	46	36	23	23	23	28	29	10	7	7	7	3	****	3	21
29	2	2	3	1	0	1	1	1	0	0	0	1	4	3	11	3	4	5	2	9	0	1	****	4	3
30	1	0	1	1	1	0	0	0	1	4	5	3	6	8	11	8	7	5	3	4	7	7	****	2	4
31	2	1	1	1	0	1	0	0	0	0	1	3	3	3	4	4	4	4	3	2	2	1	****	0	2

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		
3	2	7	2	21	26	33	42	0	-	56	0	-	24	5	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 PEAK
 POLLUTANT : NITROGEN DIOXIDE
 MONTH: AUGUST
 YEAR : 2012
 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	6	71	50	19	18	22	20	42	45	56	74	61	71	58	56	60	65	57	59	51	43	****	22	45
2	23	32	42	43	72	71	72	57	76	88	96	86	78	56	52	42	45	51	57	68	66	88	****	35	61
3	46	42	44	23	17	17	41	58	80	66	77	83	66	54	41	41	51	64	99	91	99	30	****	35	55
4	15	7	10	5	2	1	7	7	11	26	30	42	30	31	42	48	70	65	48	75	67	79	****	70	34
5	71	13	4	7	0	1	1	7	23	28	15	15	23	26	20	23	25	37	48	54	34	42	****	10	23
6	1	0	0	1	0	0	3	10	13	13	11	18	11	12	9	16	17	16	24	37	26	42	****	34	14
7	28	42	55	54	57	55	51	30	42	63	63	43	55	75	69	67	52	60	51	41	32	34	****	17	49
8	12	11	13	23	16	35	41	57	50	50	44	48	51	48	67	41	35	39	83	52	37	33	****	10	39
9	6	4	2	17	29	32	15	9	39	39	41	31	29	33	39	36	30	20	28	25	24	23	****	11	24
10	4	1	5	5	22	14	19	18	16	17	22	13	11	24	9	18	21	46	30	36	42	35	****	14	19
11	8	9	3	6	1	2	4	10	28	39	46	65	28	22	17	21	29	23	42	30	21	29	****	26	22
12	12	12	4	9	11	26	2	13	21	33	31	26	33	27	32	26	26	23	29	36	33	29	****	25	23
13	13	8	8	9	12	27	7	13	24	28	37	37	30	<----- D ----->	40	47	41	41	42	****	26	26	26	26	
14	11	6	4	6	5	3	12	25	28	43	41	42	26	26	44	21	19	13	17	16	18	0	****	23	19
15	1	0	8	22	11	39	23	40	29	46	58	55	60	67	56	73	77	79	133	143	143	103	****	55	57
16	20	9	10	2	4	21	30	28	40	38	36	35	29	41	35	30	19	13	12	10	4	2	****	1	20
17	0	0	0	0	0	0	0	1	4	8	8	8	10	13	13	13	18	9	12	17	19	14	****	5	8
18	4	6	1	2	0	3	3	5	15	18	18	22	21	19	14	26	25	25	29	31	25	31	****	28	16
19	12	19	24	11	9	7	8	12	11	21	26	23	18	10	10	19	32	35	48	41	32	38	****	44	22
20	45	40	39	19	22	10	11	10	10	11	21	20	18	35	40	50	40	35	35	27	34	32	****	25	27
21	26	6	6	7	4	5	14	17	13	11	11	14	12	16	45	40	19	25	29	27	34	36	****	30	19
22	16	12	17	10	11	6	8	16	7	11	25	16	21	22	17	31	33	44	58	74	65	59	****	68	28
23	85	72	80	77	67	50	68	65	71	71	73	77	60	68	77	92	74	84	84	111	115	109	****	26	76
24	21	36	27	30	31	61	53	54	58	52	53	40	36	47	64	56	48	55	61	65	84	****	43	49	
25	63	34	27	29	26	20	30	36	40	46	46	49	32	41	40	41	59	74	86	85	83	63	****	42	47
26	24	23	12	11	11	16	17	31	18	21	23	22	22	24	31	35	34	42	73	56	59	45	****	43	30
27	40	36	26	18	31	27	40	53	47	53	46	62	55	52	34	32	46	37	38	41	38	36	****	23	40
28	14	14	20	20	23	35	31	40	49	59	81	77	48	48	41	61	57	43	36	43	48	25	****	17	40
29	7	3	4	7	6	14	32	34	19	20	16	18	22	15	44	25	16	24	26	40	29	14	****	23	20
30	11	4	5	13	5	3	6	9	20	27	20	14	18	25	35	30	39	32	35	41	46	43	****	19	22
31	18	12	8	3	3	5	6	17	24	24	20	29	16	13	16	15	15	12	8	10	9	6	****	7	13

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	
21	27	27	65	77	86	99	0	- 143	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 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: SEPTEMBER
YEAR : 2012
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	3	3	3	3	3	3	3	3	3	3	4	5	4	5	4	4	3	3	3	3	****	3	3
2	3	2	1	2	1	1	1	0	1	1	1	1	2	2	2	2	2	2	2	1	0	0	****	0	1
3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	0	0	0	****	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	****	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	2	3	3	1	4	5	****	1	1
6	1	0	0	0	0	0	0	0	0	0	2	2	2	3	2	3	2	3	2	1	2	2	****	0	1
7	1	1	1	0	0	0	0	1	0	0	1	2	3	3	3	2	2	1	1	1	0	0	****	0	1
8	1	0	0	1	1	1	1	1	1	24	35	17	8	8	6	7	21	16	13	12	16	15	****	14	9
9	13	2	3	1	1	0	0	1	0	0	3	0	0	1	0	1	0	1	1	0	0	0	****	6	1
10	1	3	1	0	1	1	0	0	2	9	10	7	13	17	19	26	18	18	13	9	5	0	****	10	8
11	0	0	0	0	0	0	6	0	0	0	0	0	1	1	1	1	1	2	2	0	1	0	****	0	1
12	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	0	0	0	0	****	0	0
13	0	0	0	0	0	0	0	0	0	8	20	9	1	0	1	2	1	1	3	14	1	0	****	0	3
14	0	0	0	0	0	0	0	0	1	1	2	2	3	0	2	2	0	0	1	1	0	1	****	1	1
15	0	0	0	0	0	0	0	1	2	3	4	4	5	5	4	4	11	4	6	5	3	3	****	2	3
16	1	0	1	1	1	1	2	3	6	5	8	9	6	8	19	22	20	21	22	13	10	7	****	2	8
17	4	4	5	5	7	6	7	6	6	6	6	2	9	8	24	14	25	24	26	22	27	28	****	17	13
18	38	21	18	22	7	7	4	4	4	3	4	36	13	6	7	4	4	4	4	2	1	3	****	4	10
19	4	5	7	6	4	2	1	0	0	0	M	0	0	0	0	0	1	0	0	0	0	0	****	1	1
20	2	4	4	0	0	0	2	3	4	3	3	2	0	0	0	0	0	0	0	0	0	0	****	0	1
21	0	0	0	0	0	0	0	0	0	1	1	3	2	2	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	1	0	****	0	0
23	0	0	0	0	0	0	0	0	0	8	10	7	13	7	10	8	10	9	8	5	5	6	****	0	5
24	2	6	2	4	4	7	0	2	5	17	12	2	0	0	0	0	0	0	0	0	0	0	****	5	3
25	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	0	0	0	0	0	0	****	0	0
26	0	0	0	0	0	0	0	0	0	0	2	3	4	12	5	5	3	3	1	1	5	2	****	3	2
27	1	20	13	10	8	11	6	5	12	4	0	0	1	2	9	13	11	9	8	14	12	****	13	8	
28	16	10	7	6	6	6	6	5	9	10	7	2	5	7	6	4	3	5	5	5	5	4	****	7	6
29	9	8	10	11	10	8	14	14	14	18	13	4	4	3	6	9	3	3	4	2	5	4	****	7	8
30	6	4	3	5	7	8	6	8	6	5	6	6	8	7	8	8	8	8	8	6	7	4	****	6	6

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
1	1	4	1	10	15	22	26	0	- 38	7	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: SEPTEMBER
 YEAR : 2012
 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	3	4	5	3	3	7	7	11	19	16	16	11	13	15	12	10	9	8	6	6	7	****	8	9
2	5	3	2	2	2	3	4	4	4	5	4	2	5	7	2	2	3	8	13	10	8	****	8	5	
3	5	6	4	5	4	7	13	14	14	13	14	12	10	10	12	12	12	16	17	18	14	11	****	10	11
4	10	4	4	5	9	11	20	26	29	28	23	18	16	15	11	18	15	14	15	14	15	15	****	30	16
5	19	15	11	11	8	9	12	16	19	28	21	19	16	21	27	28	20	15	17	14	19	33	****	30	19
6	11	10	9	7	4	3	7	23	42	25	19	14	12	24	26	21	17	18	9	13	9	8	****	8	15
7	3	1	0	0	0	1	1	8	9	11	8	9	10	10	13	13	13	10	9	8	7	6	****	16	7
8	12	10	10	9	19	12	18	20	19	37	M	37	33	28	26	34	53	67	72	70	102	111	****	102	41
9	86	15	11	8	9	14	12	15	10	15	34	14	10	6	6	11	14	23	35	20	27	31	****	30	20
10	22	27	14	4	12	11	6	22	24	28	28	38	40	41	45	46	49	55	39	17	11	****	26	28	
11	17	12	8	7	7	9	27	14	17	15	15	16	8	7	8	9	10	10	10	8	10	4	****	7	11
12	1	0	0	0	0	0	6	8	9	8	7	5	4	6	8	9	6	7	6	5	5	7	****	3	5
13	1	1	0	0	0	4	16	26	28	37	46	34	24	18	17	34	25	28	55	73	77	47	****	41	27
14	24	19	19	10	10	13	26	37	56	60	59	49	55	45	53	62	46	50	74	74	81	73	****	69	46
15	63	47	35	27	19	27	40	53	55	66	71	55	47	52	50	53	58	77	92	85	65	75	****	50	55
16	44	35	42	37	23	35	49	50	69	70	59	40	23	33	43	54	52	72	69	122	126	116	****	61	58
17	44	30	20	16	14	15	27	48	67	69	76	55	50	44	74	47	69	80	73	62	130	139	****	171	62
18	152	49	58	76	42	26	38	60	89	82	69	97	46	30	35	43	26	29	16	21	36	46	****	53	53
19	13	7	5	3	3	6	22	49	86	77	M	93	62	36	52	59	50	47	23	35	30	32	****	18	37
20	13	11	10	5	4	11	23	43	34	25	24	22	17	23	26	25	22	23	18	20	17	16	****	12	19
21	7	3	4	5	3	5	13	17	23	27	20	19	17	21	20	21	16	25	24	21	18	15	****	14	16
22	8	5	4	3	3	4	10	13	17	16	20	8	7	16	16	16	8	17	22	10	10	11	****	20	11
23	17	8	5	2	0	8	7	7	9	20	23	19	22	21	22	22	38	39	41	46	31	30	****	0	19
24	7	23	11	13	13	15	4	17	27	25	27	21	18	19	19	15	14	16	14	16	17	23	****	28	17
25	12	7	6	7	6	9	11	26	34	36	34	27	24	21	34	46	30	35	28	17	18	18	****	19	22
26	13	23	14	13	9	13	18	43	63	55	63	55	49	41	41	47	47	26	13	24	31	35	****	42	34
27	55	110	102	50	31	37	39	48	70	70	50	32	30	30	33	40	30	35	49	49	67	79	****	69	52
28	99	68	27	19	18	17	25	40	57	64	53	42	36	38	32	36	28	40	52	54	47	37	****	45	42
29	43	33	28	24	21	21	46	59	81	92	77	41	28	27	28	28	19	20	58	86	88	77	****	36	46
30	30	26	27	35	32	22	37	55	54	70	49	44	37	50	45	52	49	57	58	57	46	59	****	40	45

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	28	20	62	76	95	114	0	- 171	5	- 62	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: JULY YEAR : 2012
 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	0	2	1	0	0	0	2	0	0	0	0	3	0	3	4	7	5	0	0	1	1	0	****	73	4			
2	2	0	0	0	0	2	0	1	2	4	1	2	6	7	8	5	8	8	2	0	0	0	****	1	3			
3	1	1	2	1	0	0	0	4	1	2	1	1	2	2	2	7	12	11	0	0	0	0	****	0	2			
4	0	0	0	0	0	1	0	0	0	4	6	5	4	5	8	8	9	7	1	0	0	0	****	3	3			
5	1	0	0	2	0	0	0	1	2	0	0	0	2	1	2	1	1	4	1	0	0	2	****	2	1			
6	1	0	4	0	0	1	1	5	3	4	2	9	7	1	0	2	9	13	9	2	2	1	****	3	3			
7	3	0	0	1	0	1	1	3	0	3	2	5	6	8	10	11	8	8	0	0	0	0	****	0	3			
8	0	0	0	0	2	3	2	6	1	3	8	13	4	5	0	5	3	6	1	1	1	0	****	1	3			
9	3	1	2	0	1	3	7	3	1	4	7	15	14	10	----->													
10	SUSPENSION OF AIR MONITORING DUE TO AIR CONDITIONER FAULT -->														16	31	32	8	0	0	0	0	0	0	0	****	4	
11	1	5	1	1	4	2	3	4	4	6	8	5	4	3	6	0	0	1	1	2	1	1	****	4	3			
12	3	1	0	1	2	0	7	4	1	5	4	1	2	8	3	1	0	0	0	0	0	0	****	3	2			
13	3	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	4	5	5	****	2	1				
14	1	3	1	0	1	2	3	3	1	3	4	4	3	3	4	5	6	5	7	5	4	7	****	5	3			
15	8	8	6	2	4	5	5	2	2	4	6	2	6	7	6	5	6	2	4	6	2	3	****	4	5			
16	5	4	5	6	7	8	7	9	13	14	13	14	14	M	0	0	0	0	0	0	0	1	****	1	6			
17	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	1	0	0	0	0	0	****	0	0			
18	1	0	0	1	0	0	1	0	0	0	0	0	7	6	0	0	1	4	0	1	2	0	****	2	1			
19	1	3	0	0	0	1	0	0	0	9	13	13	11	3	0	3	2	1	2	0	1	10	****	1	3			
20	5	13	8	3	6	11	2	0	24	31	56	25	10	5	4	10	11	3	24	33	42	49	****	17	17			
21	11	27	15	20	11	2	0	0	5	41	77	68	46	31	32	33	27	21	0	0	0	0	****	0	20			
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0			
23	0	0	0	0	0	0	0	0	0	M	0	0	<----- M ----->		1	1	3	0	0	0	0	****	2	0				
24	0	0	0	0	2	0	0	0	2	0	0	0	0	1	1	M	M	2	3	2	0	0	****	2	1			
25	1	0	0	0	1	1	0	0	1	2	0	0	0	0	2	0	0	0	0	2	0	0	****	0	0			
26	2	0	0	0	0	2	0	0	0	2	0	0	0	0	1	2	0	0	0	0	2	0	****	0	1			
27	1	2	0	1	1	1	2	1	1	3	2	0	0	0	0	1	1	0	0	3	5	10	****	3	2			
28	5	7	7	18	14	3	2	2	0	2	2	3	2	0	1	1	0	0	0	5	11	****	7	4				
29	10	3	2	0	3	0	1	0	0	1	1	0	0	0	2	0	11	28	24	10	17	****	13	5				
30	20	24	45	7	11	8	3	1	58	96	57	13	12	13	12	9	6	9	5	10	3	2	****	4	19			
31	1	0	3	0	13	7	33	24	25	34	53	25	15	13	15	6	11	6	1	3	14	2	****	4	13			

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	
2	1	5	1	11	20	34	55	0	- 96	5	92	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: AUGUST YEAR : 2012
 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	5	1	6	50	10	10	9	27	20	16	36	33	35	31	27	33	25	17	22	18	22	****	16	21
2	24	24	21	30	40	41	46	48	41	73	62	70	55	48	33	31	22	22	21	30	32	33	****	9	37
3	6	11	28	43	32	25	54	27	69	68	58	65	47	23	19	18	21	25	24	21	20	23	****	32	33
4	31	26	35	16	6	3	2	0	3	19	10	8	6	7	18	15	12	7	0	10	15	23	****	21	13
5	12	10	3	1	1	2	5	9	11	14	6	9	10	4	4	6	4	4	8	5	2	2	****	0	6
6	0	2	0	0	0	0	2	0	0	0	1	1	0	0	0	2	0	0	0	1	1	8	****	8	1
7	17	5	10	13	12	10	33	18	21	39	23	7	9	13	32	19	26	24	25	6	4	0	****	7	16
8	2	4	13	9	18	5	19	9	15	24	23	25	40	28	33	26	23	7	10	1	2	1	****	12	15
9	3	3	0	3	12	5	6	12	14	29	11	15	7	7	0	0	0	2	0	2	0	0	****	0	6
10	2	0	0	1	0	2	2	1	1	0	1	1	2	0	1	0	0	1	2	0	0	6	****	0	1
11	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	0	****	0	0
12	2	1	0	0	0	0	0	0	0	0	0	0	0	1	2	4	0	0	0	0	0	0	****	7	1
13	10	0	0	0	3	0	0	0	1	0	2	4	9	2	0	1	4	22	3	5	1	0	****	0	3
14	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	1	0	0	0	****	1	0
15	2	0	0	0	10	0	4	6	21	25	15	3	3	5	1	10	19	32	42	56	44	34	****	26	16
16	5	3	2	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	1	0	0	0	0	0	0	0	0	****	0	0
18	0	0	0	0	0	0	0	0	0	2	0	11	8	6	6	8	3	1	0	0	1	1	****	17	3
19	14	3	6	3	11	14	17	20	29	31	38	21	8	0	4	8	3	4	0	2	3	7	****	15	11
20	13	18	25	31	17	22	7	8	9	6	19	2	2	1	2	3	0	1	1	1	0	3	****	3	9
21	2	10	26	10	4	7	26	8	2	4	3	2	0	3	2	0	0	1	0	0	1	1	****	14	6
22	23	13	3	6	5	3	3	22	13	26	7	0	3	22	5	1	3	28	8	20	17	0	****	8	10
23	6	5	6	8	19	57	21	20	27	20	10	8	12	15	22	28	40	42	36	23	23	30	****	13	21
24	9	16	18	12	12	17	4	1	4	4	29	19	10	17	25	23	30	10	0	0	1	6	****	0	12
25	1	0	0	3	6	3	2	3	11	13	15	20	15	38	20	22	18	19	27	14	10	0	****	0	11
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	****	0	0
27	0	0	0	0	22	41	16	7	24	42	30	35	28	23	17	17	8	16	12	18	23	9	****	9	17
28	6	9	8	14	17	14	25	31	44	53	66	23	25	23	13	16	19	7	5	12	6	6	****	2	19
29	3	0	0	0	0	7	0	0	0	0	2	2	8	3	3	1	6	2	14	9	11	10	****	3	4
30	3	6	3	3	1	2	2	2	0	0	0	17	20	7	2	0	1	0	0	1	0	0	****	0	3
31	0	0	0	0	0	0	0	0	3	0	1	1	0	0	0	M	3	1	2	3	3	5	****	2	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	DEVIATION	VALID DATA	1-HR	24-HR	
5	3	3	27	35	48	58	0	- 73	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 : CHUNG HOM KOK ZONE SUBSTATION MONTH: SEPTEMBER YEAR : 2012
 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	0	0	0	0	0	0	0	2	0	0	1	0	0	0	1	1	2	0	2	1	0	0	****	0	0
2	0	0	0	0	0	0	0	1	0	0	1	1	1	1	1	0	2	1	5	5	0	1	****	0	1
3	0	1	2	0	0	0	0	0	1	0	0	0	0	1	1	1	3	3	0	1	1	3	****	0	1
4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	****	0	0
5	0	1	0	0	0	2	0	0	0	0	0	0	1	0	0	1	2	1	4	8	7	0	****	1	1
6	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	2	3	2	1	0	0	0	****	0	1
7	0	0	0	0	0	0	0	3	0	0	1	0	0	1	1	2	1	2	3	0	0	0	****	4	1
8	1	8	0	0	0	0	1	1	3	0	1	1	8	18	16	13	19	24	13	9	5	26	****	32	9
9	5	20	19	22	11	1	1	2	3	8	3	2	1	0	1	2	4	8	17	4	2	1	****	1	6
10	0	4	0	0	2	11	2	5	7	4	9	8	13	11	13	16	14	14	24	4	7	9	****	4	8
11	0	0	0	0	0	0	0	5	1	1	2	0	0	0	0	4	8	5	8	5	3	0	****	0	2
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	2	0	1	****	0	0
13	1	1	1	0	0	0	1	0	1	1	0	0	0	0	0	2	8	4	1	11	16	1	****	1	2
14	1	1	1	0	0	1	1	4	15	17	21	37	33	11	5	6	19	17	22	21	14	23	****	16	12
15	8	5	0	0	2	3	1	5	13	8	4	1	1	1	2	3	2	9	26	26	12	10	****	3	6
16	3	2	2	2	2	2	3	17	14	43	51	33	21	31	25	45	73	29	21	17	16	11	****	7	20
17	5	1	1	1	1	1	1	2	5	12	22	31	36	42	31	44	22	52	28	22	15	6	****	6	17
18	43	46	60	29	3	1	0	2	2	4	13	12	10	4	5	7	22	17	16	4	0	0	****	1	13
19	1	0	0	0	2	1	0	1	21	8	3	1	2	2	3	2	4	4	3	2	1	1	****	1	3
20	2	1	1	1	1	2	1	1	1	1	2	1	1	2	2	2	4	4	2	2	1	1	****	1	2
21	2	1	1	1	1	2	1	1	1	1	1	0	1	2	0	2	0	1	1	1	0	0	****	0	1
22	1	0	0	1	0	0	1	2	0	0	2	0	1	0	2	1	1	7	7	9	6	3	****	1	2
23	3	0	0	0	0	1	0	0	0	3	0	0	0	0	3	4	3	5	8	8	14	19	****	7	3
24	8	6	1	1	1	2	2	0	0	0	0	0	0	3	3	M	21	22	28	15	8	11	****	6	6
25	4	3	2	4	4	3	5	10	8	9	10	12	8	11	8	13	15	11	11	11	15	13	****	5	8
26	4	4	4	4	6	6	8	8	12	20	22	17	18	23	25	28	22	29	25	11	15	9	****	8	14
27	9	11	19	16	11	10	10	14	16	16	13	8	11	16	20	31	56	32	40	28	36	21	****	54	22
28	60	20	9	9	9	9	13	18	22	23	18	18	20	16	16	17	16	30	29	29	30	23	****	16	20
29	13	11	10	10	11	8	10	12	17	25	22	11	15	22	24	26	32	35	18	21	10	8	****	7	16
30	8	15	11	11	10	10	11	15	12	12	12	11	13	20	20	28	26	21	9	9	9	11	****	14	14

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	
2	2	7	2	21	28	39	49	0	- 73	10	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
 POLLUTANT : SULPHUR DIOXIDE
 MONTH: JULY
 YEAR : 2012
 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	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	1	****	1	1
2	0	0	0	0	0	0	0	0	1	1	1	1	3	2	2	2	1	1	1	1	1	1	****	2	1
3	2	3	3	2	1	2	2	2	3	2	3	3	4	4	5	6	16	12	4	4	7	5	****	3	4
4	2	2	2	2	2	2	1	2	2	2	3	4	2	2	2	2	2	2	1	2	2	2	****	1	2
5	1	1	0	0	0	0	0	1	1	0	0	0	1	1	0	0	1	1	2	1	1	4	****	2	1
6	2	1	2	2	2	2	3	5	3	4	4	3	2	3	2	5	4	4	5	3	3	2	****	2	3
7	2	2	2	3	3	2	4	5	4	5	9	8	6	2	4	7	4	5	4	4	2	2	****	4	4
8	2	2	2	3	2	3	5	4	4	7	5	6	6	3	3	3	2	3	5	4	5	5	****	5	4
9	5	4	3	2	3	6	4	3	4	9	7	5	5	10	6	3	1	4	7	5	6	7	****	7	5
10	4	4	4	4	4	7	3	4	6	7	5	3	2	5	5	4	5	5	3	4	3	4	****	3	4
11	2	5	6	4	3	3	3	4	3	3	4	3	2	4	4	9	10	5	3	4	2	3	****	5	4
12	3	3	3	2	3	2	3	3	4	5	4	2	4	3	2	5	10	4	2	3	3	8	****	4	4
13	5	5	6	4	3	3	4	6	3	4	3	6	6	5	6	5	5	4	2	4	5	3	****	3	4
14	2	5	3	2	3	3	3	5	2	2	3	5	3	4	6	8	5	6	4	2	4	4	****	3	4
15	4	3	3	3	3	3	2	2	4	5	3	5	5	4	4	2	4	3	2	3	5	6	****	4	4
16	3	3	3	2	3	2	1	3	3	3	4	3	2	2	3	1	2	2	3	1	1	1	****	1	2
17	2	1	1	1	1	1	1	1	2	3	3	1	2	2	3	2	1	2	3	2	2	4	****	3	2
18	3	1	2	2	2	1	1	0	0	0	0	8	7	6	3	3	6	5	8	7	3	2	****	3	3
19	5	3	2	0	0	4	3	1	1	22	13	19	5	4	8	3	6	5	4	2	2	2	****	3	5
20	3	2	2	4	6	6	3	5	12	8	17	34	12	11	8	14	13	13	8	10	10	12	****	7	10
21	7	5	4	3	2	2	3	6	16	34	55	43	27	24	18	17	16	12	2	1	1	2	****	2	13
22	1	1	1	2	2	1	2	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	****	1	1
23	1	1	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	****	1	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	****	1	0
25	0	0	0	0	1	1	1	2	2	3	3	2	3	4	2	2	2	2	2	1	1	1	****	1	2
26	1	1	0	0	0	0	0	0	1	0	0	0	0	1	0	2	1	0	0	0	0	0	****	0	0
27	0	0	0	0	0	0	0	0	2	2	4	2	1	1	1	2	2	1	2	6	6	8	****	5	2
28	4	4	5	5	4	2	1	2	2	1	4	5	3	4	12	23	11	5	3	2	1	2	****	3	5
29	3	3	4	5	5	4	4	13	24	30	43	32	10	29	26	23	19	17	12	17	17	11	****	7	15
30	7	9	9	4	5	5	8	24	59	48	30	18	14	20	21	11	11	9	7	5	3	4	****	5	15
31	3	3	3	4	5	5	6	8	12	11	16	25	15	10	9	4	4	3	2	7	8	1	****	1	7

MONTHLY STATISTICS:

GEOM	ARITH	-----PERCENTILE-----					-----RANGE-----					STD GEOM	PERCENT	NO. OF TIMES				
MEAN	MEDIAN	50	90	95	98	99	1-HR					24-HR	VALID DATA	ABOVE OBJECTIVE				
2	3	4	3	8	15	24	31	0	-	59	0	-	15	3	96	0	24-HR	

- 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: JULY
 YEAR : 2012
 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	1	0	0	0	0	0	4	3	9	7	8	10	7	9	9	3	10	6	3	2	7	****	6	5
2	2	0	0	0	0	0	4	9	14	13	10	10	11	7	9	4	7	11	7	10	9	6	****	11	7
3	5	8	6	3	1	1	8	12	18	6	2	6	6	4	8	5	17	14	14	21	20	17	****	10	9
4	1	1	0	0	0	1	11	16	11	10	9	6	8	6	8	7	7	10	9	7	6	7	****	3	6
5	1	0	0	0	0	0	2	6	9	11	17	11	13	9	9	11	15	13	13	12	13	12	****	10	8
6	8	4	3	1	1	5	17	25	22	20	13	9	10	14	17	24	17	12	25	22	16	9	****	22	14
7	15	3	3	13	6	1	25	27	29	23	22	10	9	1	7	11	9	11	26	31	22	19	****	24	15
8	16	7	3	6	2	13	23	12	8	8	3	6	6	8	8	7	2	4	12	16	13	11	****	10	9
9	10	4	3	2	4	13	13	10	7	11	12	<-----M----->			7	6	13	22	16	18	19	****	16	11	
10	7	13	10	9	7	17	11	20	20	13	14	6	5	8	9	9	12	12	14	12	11	16	****	17	12
11	9	14	17	11	9	12	12	13	13	16	11	9	6	9	9	18	20	16	13	17	11	18	****	15	13
12	10	7	6	5	8	10	13	18	23	24	15	6	8	8	5	14	22	16	14	14	14	24	****	15	13
13	15	14	14	7	6	10	16	17	11	14	10	15	20	15	19	12	17	20	27	31	36	26	****	23	17
14	15	17	8	4	14	9	15	26	25	22	22	15	9	9	12	16	16	16	20	17	20	19	****	11	15
15	14	9	12	13	11	6	6	11	18	21	13	17	11	17	17	11	18	17	15	26	28	29	****	20	16
16	13	8	11	8	11	7	14	25	19	17	14	12	10	8	12	13	15	20	23	24	27	27	****	16	15
17	17	6	11	6	7	13	18	20	22	18	14	12	11	15	16	17	21	24	20	21	36	25	****	24	17
18	21	10	15	13	17	14	17	32	46	41	40	47	32	28	20	16	17	25	40	47	41	37	****	33	28
19	36	22	16	11	8	26	23	22	22	29	18	29	12	9	18	10	18	19	18	9	12	18	****	23	19
20	20	14	8	13	20	17	14	26	34	28	33	48	36	26	21	28	36	35	53	52	83	68	****	50	33
21	34	23	12	9	7	16	37	47	57	84	145	147	77	69	77	80	82	70	37	31	11	9	****	15	51
22	19	15	10	7	7	8	14	17	15	16	17	13	10	10	7	9	16	13	8	16	21	15	****	20	13
23	15	6	3	4	4	7	11	15	24	26	22	23	24	21	21	19	12	9	7	4	4	2	****	2	12
24	1	2	1	1	1	1	1	3	5	7	11	15	16	12	13	15	14	13	12	11	9	8	****	7	8
25	6	2	0	3	7	6	27	34	35	31	26	26	20	33	47	51	51	47	31	25	17	11	****	12	24
26	12	5	4	3	3	3	17	16	23	16	15	15	24	24	27	42	41	36	36	42	37	31	****	29	22
27	12	6	5	4	4	12	14	30	37	48	46	39	40	39	29	24	27	21	29	41	42	39	****	33	27
28	28	25	29	21	17	19	34	29	31	31	22	21	10	14	21	32	22	25	35	43	39	34	****	39	27
29	38	39	35	31	29	29	31	33	28	29	40	37	18	28	26	21	17	28	38	56	55	52	****	29	33
30	30	27	22	4	25	26	27	33	38	32	29	23	25	29	41	32	32	23	19	17	22	19	****	27	26
31	18	13	13	16	35	34	39	40	43	44	56	63	52	39	45	17	25	32	107	154	113	30	****	27	46

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	
13	15	15	36	45	60	81	0	- 154	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 300 OR 24-HR OBJECTIVE 150

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

STATION : VICTORIA ROAD SUBSTATION MONTH: AUGUST YEAR : 2012
 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	0	0	0	3	8	4	6	5	12	12	13	23	23	25	15	13	20	6	5	4	3	3	****	5	9
2	12	15	14	13	14	18	24	28	41	47	47	49	43	28	20	15	17	19	15	13	19	14	****	5	23
3	4	10	19	15	12	12	21	37	52	43	44	44	44	29	22	13	11	8	12	6	6	8	****	4	21
4	4	5	10	4	2	1	1	1	1	3	5	6	7	5	5	5	5	4	12	8	6	4	****	4	5
5	3	2	2	2	2	1	1	2	2	2	2	4	5	4	5	3	2	5	6	7	3	3	****	3	3
6	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	10	****	9	2
7	6	2	3	5	4	4	9	10	10	17	12	10	11	14	28	18	10	7	3	2	2	2	****	2	8
8	2	3	4	4	3	4	8	10	13	13	18	22	21	26	16	11	6	4	2	2	2	2	****	3	9
9	2	2	2	2	4	5	5	6	19	13	9	12	9	10	5	5	2	2	1	2	1	1	****	3	5
10	1	1	2	1	2	2	3	3	3	3	4	4	3	9	3	4	4	4	3	3	4	4	****	3	3
11	2	2	2	1	1	1	0	1	1	2	2	3	1	3	2	2	4	3	5	2	2	2	****	3	2
12	3	3	1	2	2	3	1	2	2	2	6	5	8	6	5	6	5	4	6	4	5	3	****	8	4
13	5	4	3	2	3	3	2	2	2	4	7	17	12	7	5	11	11	11	9	7	3	3	****	4	6
14	4	3	2	2	2	2	2	2	3	4	4	4	3	3	2	2	3	3	3	2	2	2	****	3	3
15	2	2	8	8	7	5	5	13	36	27	18	27	28	18	18	23	19	24	30	22	26	20	****	10	17
16	7	4	5	5	4	4	4	19	14	7	7	5	5	4	3	3	3	3	2	2	2	2	****	3	5
17	2	2	1	2	1	1	1	1	1	1	2	3	2	2	2	2	2	2	2	2	2	2	****	2	2
18	2	1	2	2	1	2	1	2	4	5	7	13	13	8	5	7	7	10	3	2	3	5	****	9	5
19	4	3	4	5	6	9	10	9	5	14	15	10	12	3	6	9	7	3	6	4	5	6	****	7	7
20	9	10	7	4	3	3	3	6	5	8	7	13	10	8	11	4	4	5	4	4	3	6	****	12	7
21	10	8	11	9	6	5	7	7	8	10	6	7	7	8	7	6	9	6	5	8	5	9	****	11	8
22	10	6	6	6	5	3	6	6	18	17	8	6	6	4	9	16	9	18	14	14	9	8	****	16	10
23	15	13	11	15	15	16	16	18	27	21	16	14	11	17	17	22	29	18	9	9	12	6	****	5	15
24	5	6	4	5	6	6	9	11	16	18	15	14	9	13	15	17	17	9	4	3	7	8	****	6	10
25	6	7	11	8	6	5	6	10	11	12	14	15	11	18	18	14	12	15	15	17	14	8	****	2	11
26	3	6	7	5	7	10	10	8	6	6	6	5	5	5	8	5	4	5	7	11	11	10	****	13	7
27	19	15	7	15	18	18	19	17	22	19	21	21	26	25	14	15	12	8	6	5	3	3	****	2	14
28	2	3	3	5	9	10	11	16	22	32	39	25	17	15	18	9	8	6	3	2	2	2	****	2	11
29	2	1	1	1	1	4	1	2	1	2	2	4	8	3	8	1	2	4	2	2	0	1	****	1	2
30	0	0	0	0	0	0	0	0	2	2	<----- D ----->	13	7	11	7	5	7	20	9	11	****	3	5		
31	2	2	1	1	0	2	0	1	2	3	17	30	3	0	0	0	0	0	0	0	0	0	****	1	3

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	18	23	30	43	0	- 52	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 : VICTORIA ROAD SUBSTATION
POLLUTANT : NITROGEN DIOXIDE
MONTH: AUGUST
YEAR : 2012
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	15	14	29	69	51	37	70	67	75	69	70	92	84	102	69	71	101	37	31	40	41	38	****	64	58
2	109	57	58	61	36	53	73	75	82	98	99	124	120	82	82	60	59	61	73	69	126	116	****	41	79
3	32	47	77	60	51	48	79	92	106	106	101	106	118	73	51	32	46	52	78	67	84	75	****	36	70
4	29	25	42	20	17	10	23	25	31	54	55	42	52	32	26	26	34	28	54	79	73	55	****	44	38
5	39	21	11	13	11	14	10	23	27	23	16	24	16	17	16	13	13	25	45	54	38	27	****	18	22
6	14	9	7	6	2	2	12	23	24	24	8	6	5	8	8	11	19	21	31	33	34	38	****	45	17
7	34	21	28	37	29	36	38	36	43	50	48	38	41	50	65	45	32	34	29	23	27	27	****	30	37
8	21	24	23	34	24	30	45	56	60	57	59	74	72	102	88	53	33	24	19	28	25	26	****	26	44
9	13	14	10	14	28	40	39	45	58	45	31	40	33	29	20	21	12	15	13	14	8	13	****	17	25
10	5	7	14	4	11	15	18	20	21	19	19	23	13	24	14	16	20	24	29	21	28	35	****	14	18
11	10	10	10	8	7	9	18	30	31	48	42	39	14	31	21	17	23	18	28	31	29	31	****	33	23
12	21	13	8	16	13	23	10	22	25	24	24	23	25	19	18	23	20	17	31	23	36	29	****	34	22
13	19	11	12	8	19	21	22	35	37	33	28	27	33	26	14	16	22	29	21	23	13	9	****	24	22
14	28	10	5	8	7	17	28	39	27	26	13	11	14	16	8	21	26	31	27	24	24	21	****	24	20
15	26	22	36	36	31	32	34	35	43	47	46	44	51	46	34	55	45	75	101	100	102	65	****	40	50
16	32	16	27	31	17	15	30	58	51	28	31	27	26	30	29	22	15	12	11	10	6	4	****	4	23
17	3	2	2	2	3	3	6	11	13	14	13	16	19	21	19	21	25	24	24	24	24	23	****	18	14
18	16	11	7	8	6	12	22	28	41	30	23	29	22	14	13	13	19	35	37	33	26	19	****	31	22
19	23	23	25	26	22	24	23	21	9	19	15	14	21	10	13	16	21	19	24	26	30	29	****	37	21
20	35	31	25	17	14	16	21	22	19	19	14	23	20	16	22	10	12	19	18	17	15	22	****	36	20
21	27	22	22	23	13	14	25	23	19	16	10	10	11	13	13	12	18	16	21	22	15	23	****	19	18
22	24	19	20	16	14	6	19	23	23	22	34	38	34	36	39	53	46	54	63	73	76	76	****	71	38
23	67	69	68	70	68	64	62	67	84	89	78	87	65	63	50	60	81	66	52	88	113	56	****	32	70
24	36	54	36	40	42	53	66	56	60	60	58	67	58	74	90	81	86	83	106	79	93	82	****	50	66
25	53	53	49	41	25	23	36	43	46	49	53	61	48	74	79	67	71	89	104	101	95	60	****	29	59
26	35	38	33	26	30	37	35	34	30	31	30	26	29	30	35	35	40	47	50	65	71	75	****	62	40
27	70	56	29	49	56	54	55	56	64	67	59	67	79	90	39	47	51	56	40	41	42	34	****	27	53
28	25	24	13	16	25	39	48	61	60	61	84	47	32	33	45	20	22	35	25	22	16	10	****	16	34
29	15	10	6	6	6	58	28	41	42	39	33	28	30	18	37	28	23	31	31	47	38	29	****	15	28
30	12	11	13	13	10	17	21	21	39	35	<----- D ----->	20	17	17	15	15	18	32	36	32	32	****	21	21	
31	12	9	3	3	1	4	15	31	36	34	33	40	18	21	19	6	20	19	17	14	12	13	****	14	17

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	
27	28	28	71	84	102	106	1	- 126	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: SEPTEMBER
 YEAR : 2012
 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	2	1	1	2	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	****	0	1
2	0	0	0	0	0	0	0	1	1	1	1	1	1	2	2	2	2	2	3	3	3	4	****	4	1
3	3	4	3	3	3	4	3	3	2	2	2	3	3	3	3	3	3	3	3	3	3	4	****	4	3
4	3	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	0	0	0	0	0	****	0	1
5	0	0	0	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	5	7	7	****	5	2	
6	4	4	3	3	3	3	3	3	3	3	2	2	3	3	2	2	2	2	2	2	2	****	2	3	
7	2	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	****	4	1	
8	4	4	5	3	2	2	11	19	38	60	53	28	24	21	18	17	20	12	14	11	14	23	****	15	18
9	16	12	11	8	7	5	5	5	4	5	5	1	1	2	2	1	4	7	6	3	2	8	****	10	6
10	8	19	19	6	8	15	4	5	17	17	12	28	34	24	30	16	17	20	23	13	12	6	****	7	16
11	2	3	2	2	2	1	2	2	2	2	2	3	2	2	3	3	3	4	7	5	5	4	****	4	3
12	3	3	3	2	2	2	2	3	2	3	4	4	2	3	3	1	2	2	1	1	1	1	****	1	2
13	1	2	0	0	0	0	4	22	7	34	23	11	4	11	4	8	12	3	5	13	5	2	****	3	7
14	2	2	2	2	2	3	3	3	3	3	6	10	10	8	3	3	3	3	3	3	3	3	****	4	4
15	4	4	4	5	3	3	4	7	6	6	9	9	6	5	19	18	20	8	4	5	4	4	****	4	7
16	4	4	3	3	3	5	5	5	9	26	17	12	11	11	31	31	26	24	20	15	9	9	****	6	13
17	8	8	8	10	10	10	10	10	11	9	9	18	11	18	28	34	24	24	26	21	22	23	****	33	17
18	44	34	26	33	16	12	15	17	15	23	50	43	21	21	28	12	7	7	6	5	5	6	****	6	20
19	7	8	9	10	8	6	5	4	7	5	3	3	4	3	3	2	5	4	3	4	4	3	****	5	5
20	5	6	6	4	3	4	5	7	7	6	5	5	3	3	3	3	3	3	3	3	3	3	****	3	4
21	3	3	3	3	2	2	3	3	4	5	4	5	4	4	2	2	2	2	1	2	2	1	****	2	3
22	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	3	3	****	3	1
23	2	2	1	2	0	1	4	5	9	39	62	43	27	24	20	15	15	22	14	20	7	12	****	8	15
24	7	16	9	9	7	13	11	8	54	27	22	8	3	2	1	1	1	2	2	2	1	2	****	2	9
25	1	1	1	1	1	1	1	2	3	2	2	3	3	4	4	3	3	2	1	0	1	1	****	0	2
26	0	1	1	0	1	2	3	3	3	18	18	20	11	12	6	6	5	5	5	5	6	5	****	4	6
27	6	31	29	14	11	10	11	11	10	7	5	3	2	3	11	15	17	19	12	13	10	10	****	11	12
28	15	15	9	9	9	8	8	8	9	10	7	6	4	4	3	3	4	6	6	6	6	5	****	7	7
29	7	8	8	8	8	7	11	10	9	8	7	5	4	3	7	3	3	2	2	3	7	7	****	9	6
30	8	5	5	5	8	8	9	11	10	11	10	9	11	11	10	9	9	9	9	8	7	7	****	8	9

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			
4	4	4	17	24	34	43	0	-	62	1	-	20	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 : VICTORIA ROAD SUBSTATION
POLLUTANT : NITROGEN DIOXIDE
MONTH: SEPTEMBER
YEAR : 2012
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	2	1	2	0	2	9	7	12	14	13	9	11	10	12	11	11	7	9	11	9	7	****	6	8
2	3	1	0	0	0	0	3	5	4	5	3	4	8	9	7	7	14	13	10	13	11	14	****	11	6
3	6	4	0	0	0	7	18	19	20	12	15	15	14	15	16	12	16	14	19	18	12	13	****	13	12
4	9	2	0	0	4	4	14	19	19	17	13	15	10	7	8	9	9	10	23	15	10	8	****	11	10
5	1	0	0	0	0	1	8	12	16	20	11	9	14	11	17	17	17	20	16	30	16	22	****	36	13
6	11	4	1	4	1	2	8	18	27	14	9	12	10	11	11	17	12	16	13	16	8	2	****	4	10
7	0	0	0	0	0	0	5	14	16	14	11	10	12	12	13	18	14	14	14	13	14	16	****	22	10
8	18	19	18	7	9	12	30	36	42	45	34	29	27	25	25	26	29	31	42	56	65	82	****	76	34
9	65	39	20	13	18	15	22	22	20	14	9	4	5	6	8	4	10	16	29	22	20	22	****	31	19
10	27	32	17	9	13	29	26	28	17	19	23	22	29	22	31	20	24	23	34	43	44	25	****	25	25
11	13	9	4	1	3	4	13	22	20	14	8	10	8	16	14	21	24	29	25	19	16	14	****	16	14
12	7	5	1	0	0	1	12	15	13	11	8	10	3	3	7	10	18	23	17	20	13	14	****	11	10
13	6	6	0	0	1	11	34	43	22	40	35	16	35	21	19	36	23	35	52	65	84	42	****	25	28
14	20	17	14	7	11	16	28	48	47	55	55	47	42	49	50	67	70	74	83	67	76	73	****	67	47
15	54	32	22	26	15	18	33	59	57	65	68	58	48	46	60	50	72	89	63	66	61	70	****	50	51
16	43	45	38	35	30	29	38	51	58	64	46	38	41	40	65	72	79	77	87	90	74	86	****	47	55
17	27	30	19	19	18	19	38	61	76	67	72	68	52	63	71	54	41	44	85	73	92	77	****	163	58
18	125	68	48	82	56	37	84	98	113	104	112	78	31	26	43	19	23	57	47	42	73	66	****	74	66
19	23	16	14	9	7	9	30	82	95	81	70	85	71	35	45	59	46	35	28	27	19	17	****	16	40
20	7	5	3	1	0	4	13	31	29	21	16	16	12	9	16	18	19	16	18	13	10	6	****	2	12
21	1	0	0	0	0	1	12	18	23	21	15	14	11	14	14	9	10	16	15	9	10	13	****	11	10
22	3	1	0	0	0	3	7	24	19	18	21	17	4	1	1	3	18	35	28	26	23	22	****	24	13
23	20	11	4	5	7	13	24	20	13	19	20	25	14	16	18	12	18	26	13	20	18	42	****	21	17
24	20	27	9	12	6	18	24	27	27	12	14	4	5	24	40	25	26	19	20	15	10	19	****	13	18
25	1	0	0	0	0	0	6	17	20	21	12	12	11	13	16	21	18	24	18	11	10	13	****	16	11
26	7	8	4	7	5	15	14	55	75	64	77	79	36	22	19	21	20	64	46	53	80	63	****	71	39
27	38	95	97	45	23	19	40	60	64	67	47	27	22	28	39	33	33	47	78	94	59	69	****	30	50
28	57	70	17	9	10	12	22	60	66	58	54	43	35	28	35	38	55	74	63	58	62	48	****	38	44
29	34	23	15	14	18	15	36	66	62	73	57	39	29	28	34	13	42	31	31	37	43	51	****	51	37
30	36	31	27	32	28	27	40	48	59	54	41	30	38	35	35	32	36	26	24	28	28	22	****	15	33

MONTHLY STATISTICS:		<-----PERCENTILE----->											<-----RANGE----->		STD GEOM	PERCENT	NO. OF TIMES	
GEOM	ARITH	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR	ABOVE OBJECTIVE					
MEAN	MEDIAN	MEAN																
16	19	27	19	65	76	87	96	0	-	163	6	-	66	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 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: JULY

YEAR : 2012
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	1	0
2	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	****	1	0
3	2	4	3	2	1	1	0	0	0	2	0	0	1	1	3	4	16	11	3	3	7	5	****	1	3
4	0	1	0	1	1	0	0	0	3	9	3	1	0	0	0	0	0	0	0	0	0	0	****	0	1
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	4	0
6	8	6	4	2	1	1	1	0	0	0	0	0	M	M	0	0	0	0	3	0	0	0	****	0	1
7	0	0	1	4	5	0	9	10	5	3	11	9	4	0	1	5	3	15	2	4	1	0	****	4	4
8	1	1	3	3	2	3	5	6	3	5	4	3	6	3	1	4	0	1	6	5	5	7	****	7	4
9	6	5	3	1	2	6	5	2	2	5	6	9	14	9	11	1	0	2	7	4	4	5	****	5	5
10	1	2	5	1	2	6	1	4	6	5	2	3	0	2	1	0	1	0	2	3	1	2	****	1	2
11	2	2	4	1	0	1	1	2	3	1	5	2	0	7	1	1	3	5	1	6	0	2	****	3	2
12	0	1	0	0	1	1	2	2	3	3	4	2	4	5	0	1	4	2	1	1	0	4	****	1	2
13	2	2	4	0	0	3	2	3	1	5	2	4	6	4	3	1	2	4	3	6	4	1	****	2	3
14	1	2	1	0	1	1	1	6	2	4	4	5	1	3	3	3	2	4	4	1	2	3	****	1	2
15	2	3	1	1	2	1	0	1	5	2	1	6	2	1	1	2	5	1	0	0	2	6	****	3	2
16	1	1	1	2	2	0	0	2	2	0	1	1	0	0	1	0	0	0	0	0	2	0	****	1	1
17	1	0	1	0	0	1	1	0	1	2	2	2	1	4	0	2	5	3	0	0	4	0	****	2	1
18	3	0	4	2	3	2	0	0	4	0	1	8	12	7	6	8	9	6	7	7	3	1	****	6	4
19	12	4	1	0	1	1	0	2	1	12	15	15	1	1	10	5	6	7	6	1	0	0	****	1	4
20	2	0	1	5	7	3	1	5	10	8	26	35	24	10	6	15	20	14	15	11	11	14	****	8	11
21	14	8	7	3	2	6	7	15	38	48	80	74	56	46	38	35	34	29	0	0	0	0	****	0	23
22	0	0	0	0	0	0	0	0	0	1	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	0	0	0	0	1	0	1	3	3	3	1	0	0	7	6	0	0	3	2	0	0	0	****	0	1
26	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	****	0	0
27	0	0	6	0	0	1	0	2	7	0	7	2	0	0	1	0	0	0	0	3	10	23	****	2	3
28	2	3	6	5	0	0	1	3	1	0	3	4	0	3	9	24	12	2	2	0	0	0	****	3	4
29	4	5	5	4	8	3	2	14	35	28	54	73	25	21	27	27	15	11	12	18	21	15	****	7	19
30	4	13	7	1	11	9	9	31	54	53	60	24	22	20	22	11	16	9	9	4	3	2	****	5	17
31	0	0	3	10	11	9	12	13	16	19	27	40	27	19	15	6	6	6	4	6	5	3	****	4	11

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
2	1	4	1	11	20	35	51	0	- 80	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 : QUEEN MARY HOSPITAL
POLLUTANT : NITROGEN DIOXIDE
MONTH: JULY
YEAR : 2012
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	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	5	3	7	****	4	1
2	0	0	0	0	0	0	0	1	2	1	2	1	2	1	2	2	3	1	2	8	21	14	****	16	3
3	11	10	9	5	2	3	2	2	10	13	11	7	10	7	9	8	19	16	14	16	19	12	****	7	10
4	3	3	2	2	3	1	3	12	16	20	14	8	4	4	5	6	4	4	2	14	7	5	****	3	6
5	4	2	0	0	0	0	3	6	12	2	2	12	12	11	13	7	3	4	4	2	4	3	****	6	5
6	6	6	7	5	6	6	7	12	7	6	5	3	3	5	5	8	11	12	14	12	7	4	****	9	7
7	5	3	6	15	10	4	19	22	14	6	17	14	9	7	8	11	10	19	9	14	9	5	****	10	11
8	7	6	8	10	9	12	16	16	10	10	7	7	10	16	8	10	9	9	17	16	20	19	****	19	12
9	17	11	8	9	8	14	14	11	18	12	11	11	15	14	17	10	9	11	20	15	14	18	****	13	13
10	5	9	11	6	7	12	8	14	13	12	11	7	5	8	6	7	9	9	14	14	14	14	****	11	10
11	11	8	10	7	3	7	7	10	12	10	12	9	4	10	5	5	9	13	13	17	11	12	****	14	10
12	9	6	4	3	6	5	10	10	14	12	11	5	7	9	5	7	10	12	16	13	8	16	****	11	9
13	11	9	8	4	2	7	9	10	8	19	14	9	12	8	11	7	10	13	20	24	22	12	****	15	11
14	10	11	8	8	7	6	11	19	15	16	12	10	5	8	8	10	9	10	18	12	14	14	****	10	11
15	13	15	6	10	6	6	5	7	15	7	5	10	6	5	6	10	16	11	15	13	14	20	****	14	10
16	7	10	5	5	7	4	10	15	11	7	4	4	5	2	5	6	7	10	13	12	13	10	****	12	8
17	10	6	5	4	3	5	9	7	8	8	11	9	10	12	10	14	17	19	16	17	26	14	****	16	11
18	14	5	11	8	11	9	4	6	17	3	9	30	27	18	13	13	14	20	30	28	23	17	****	22	15
19	24	12	7	5	4	5	5	6	13	14	17	17	6	4	15	12	16	22	27	13	10	9	****	8	12
20	7	4	2	10	12	6	5	17	26	26	35	49	40	27	24	32	46	40	46	29	34	31	****	19	25
21	17	7	7	7	6	19	24	39	59	81	125	129	62	63	54	51	50	48	16	15	17	18	****	20	41
22	12	8	6	5	6	6	8	7	10	14	9	6	4	5	6	6	9	13	14	11	8	7	****	10	8
23	6	5	2	3	3	3	6	10	17	18	15	14	22	14	15	14	8	8	7	5	3	2	****	5	9
24	20	27	22	24	21	23	23	15	17	18	4	8	7	0	6	1	2	3	4	1	2	3	****	6	11
25	2	1	0	1	3	3	18	12	7	5	5	5	7	16	19	33	51	39	47	24	3	2	****	5	13
26	4	2	2	1	2	1	2	3	6	4	3	3	2	11	15	7	30	17	7	2	2	2	****	8	6
27	7	10	19	5	3	6	2	17	23	17	42	25	26	11	12	5	4	6	7	17	24	42	****	11	15
28	10	11	18	8	3	4	2	7	7	10	21	13	9	17	18	30	24	24	31	45	35	33	****	47	19
29	48	46	32	31	32	24	21	29	34	35	43	48	32	21	26	21	19	17	40	51	42	45	****	30	33
30	30	35	14	11	32	32	29	34	42	31	31	23	27	27	33	25	33	24	18	17	18	8	****	17	26
31	11	10	12	29	33	37	40	38	40	46	52	56	43	26	28	14	16	21	51	77	27	10	****	10	32

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	10	10	29	40	50	55	0 - 129	1 - 41	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 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: AUGUST
 YEAR : 2012
 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	2	11	13	17	8	7	5	23	22	27	47	50	56	45	43	53	24	14	11	8	9	****	13	22
2	21	27	29	27	25	38	51	58	72	67	59	58	57	49	45	24	32	29	23	23	35	29	****	9	39
3	14	27	40	31	24	26	51	66	82	52	52	64	66	52	47	37	26	21	23	27	21	24	****	9	38
4	8	12	17	4	5	1	4	1	2	10	9	8	10	10	11	7	16	9	3	4	6	6	****	6	7
5	3	1	0	1	0	1	1	1	0	0	0	2	7	6	4	1	1	3	6	14	3	4	****	1	3
6	1	0	1	0	0	0	0	1	0	0	0	2	0	0	0	0	0	2	1	1	1	16	****	12	2
7	9	10	12	9	6	10	19	16	20	22	16	15	19	28	46	45	25	23	11	6	4	3	****	6	17
8	2	5	14	12	9	14	23	22	27	26	27	46	41	44	47	30	20	11	5	5	3	1	****	4	19
9	1	2	2	6	16	21	11	7	35	14	14	19	15	12	8	6	1	3	2	2	1	1	****	6	9
10	1	0	4	0	2	2	5	5	4	3	3	4	2	3	1	6	1	4	5	2	2	7	****	6	3
11	1	1	3	5	0	0	0	0	0	3	6	7	3	3	2	0	1	3	8	7	2	2	****	6	3
12	4	4	1	4	2	5	0	1	0	2	6	5	10	8	4	6	5	2	9	6	5	3	****	9	4
13	7	4	2	0	5	3	1	6	1	6	9	17	14	6	2	7	22	14	15	13	4	4	****	3	7
14	3	1	0	1	0	0	0	0	8	10	7	4	3	2	0	0	0	1	2	0	0	0	****	0	2
15	0	1	8	16	10	7	9	32	52	41	26	36	41	31	35	45	26	33	50	39	40	40	****	18	28
16	8	6	9	7	3	4	16	51	11	5	5	3	2	2	0	1	0	0	0	0	0	0	****	0	6
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	10	9	7	7	10	5	2	3	6	5	4	0	2	6	****	12	4
19	3	1	3	4	3	10	9	12	5	25	24	11	10	4	4	8	12	10	13	5	4	9	****	13	9
20	14	19	9	5	4	5	8	14	4	6	20	18	13	7	19	12	5	6	4	4	2	8	****	11	9
21	16	7	6	6	4	8	15	15	8	12	3	6	6	6	8	7	9	1	2	5	2	9	****	3	7
22	12	7	12	8	7	3	13	3	9	18	8	6	1	1	8	22	14	26	25	26	11	10	****	34	12
23	27	16	12	21	18	30	34	32	39	23	14	15	8	13	17	29	37	30	19	36	35	19	****	24	24
24	15	21	13	22	24	19	21	22	15	24	20	17	33	41	43	47	12	8	6	19	16	****	12	21	
25	12	15	17	14	15	10	15	23	23	25	24	22	19	41	33	31	32	40	35	46	22	14	****	1	23
26	8	13	13	8	11	23	20	14	8	7	8	5	4	7	9	8	6	10	16	16	14	12	****	12	11
27	27	20	6	22	40	41	46	29	40	23	22	36	42	41	19	24	25	20	20	18	13	8	****	6	26
28	6	11	13	23	30	29	35	38	46	59	<----- D ----->	35	31	16	23	20	9	5	4	1	****	4	22		
29	3	1	0	1	0	11	5	3	5	3	4	5	6	2	11	3	3	8	4	7	3	3	****	4	4
30	3	1	2	3	1	5	2	2	8	13	13	10	5	7	9	12	12	4	4	9	9	16	****	3	7
31	2	3	2	2	0	2	0	0	3	1	2	9	2	0	0	0	0	0	0	0	0	0	****	0	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	DEVIATION	VALID DATA	1-HR	24-HR	
7	7	7	33	45	52	59	0 -	82	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 : QUEEN MARY HOSPITAL
 POLLUTANT : NITROGEN DIOXIDE
 MONTH: AUGUST
 YEAR : 2012
 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	9	61	60	38	28	46	41	69	67	74	85	76	84	67	71	77	57	38	34	19	23	****	23	50
2	30	42	69	68	41	56	71	70	82	94	98	87	102	72	64	41	43	41	54	53	76	53	****	19	62
3	34	65	90	71	59	58	84	87	100	79	83	92	96	77	55	46	49	57	68	89	38	26	****	16	66
4	13	15	25	9	12	7	15	13	20	46	51	35	49	39	40	36	51	37	20	15	22	26	****	29	27
5	19	15	7	10	8	15	10	14	13	14	9	14	15	18	13	9	11	18	21	35	12	11	****	9	14
6	4	3	4	3	1	0	0	5	7	13	10	12	10	10	14	16	22	19	15	11	12	34	****	33	11
7	22	12	41	27	27	28	31	33	46	51	46	32	40	55	78	70	36	40	26	18	18	17	****	21	35
8	11	13	23	31	25	24	39	40	48	55	49	56	57	64	78	37	34	22	19	16	16	8	****	15	34
9	6	9	5	13	24	34	14	18	53	32	28	35	21	22	15	15	8	15	14	13	10	11	****	20	19
10	8	5	11	3	6	9	8	16	18	16	17	12	11	9	7	11	9	16	19	15	14	19	****	22	12
11	9	5	7	8	2	4	2	6	6	39	33	42	18	21	13	9	10	15	23	22	12	17	****	22	15
12	15	10	6	13	9	19	1	8	13	31	26	14	22	17	14	14	14	9	20	19	22	17	****	28	16
13	17	8	9	7	21	11	8	13	12	27	22	24	20	16	17	17	30	34	36	33	23	20	****	22	19
14	11	4	4	7	7	5	4	25	39	38	29	20	21	20	23	16	15	12	18	17	13	14	****	10	16
15	5	16	39	38	30	40	38	37	42	53	53	56	61	57	52	62	51	74	109	107	85	74	****	36	53
16	17	9	10	10	8	20	32	54	33	16	18	18	16	20	16	13	15	16	15	14	8	5	****	10	17
17	6	4	4	4	3	3	3	4	3	3	2	3	5	5	4	4	5	4	4	5	6	4	****	7	4
18	4	3	2	3	3	4	3	4	19	19	14	14	13	11	9	10	16	23	19	12	15	21	****	29	12
19	16	17	24	17	12	21	16	15	9	20	18	11	10	9	9	12	19	23	35	21	16	23	****	34	18
20	36	33	19	14	10	13	15	17	14	17	21	24	16	15	23	21	15	22	17	23	18	21	****	26	19
21	22	14	11	13	9	16	19	26	19	17	8	9	11	16	19	15	17	12	15	21	20	24	****	16	16
22	25	20	23	19	14	7	20	14	13	21	30	41	18	25	37	54	50	53	69	85	79	81	****	84	38
23	83	80	80	80	78	79	73	71	83	85	79	59	43	46	48	59	71	72	64	72	63	37	****	27	67
24	27	49	32	42	39	57	56	51	52	55	55	47	43	57	65	59	74	78	76	61	101	85	****	63	58
25	59	62	51	43	34	31	50	48	50	57	50	52	48	61	52	51	61	74	97	105	83	55	****	34	57
26	42	41	32	24	28	45	41	31	24	28	32	30	33	42	42	47	41	55	61	73	68	70	****	70	44
27	78	65	41	60	68	69	65	55	60	53	58	65	68	74	30	48	61	34	38	31	23	17	****	19	51
28	14	17	19	23	29	42	39	42	46	59	<----- D ----->	43	38	21	32	49	27	21	16	12	12	****	18	30	
29	16	11	7	8	5	24	29	16	23	17	36	23	16	13	30	13	14	28	24	26	21	19	****	17	19
30	15	13	12	15	9	23	13	15	26	28	22	16	13	15	21	23	26	20	21	27	24	31	****	10	19
31	9	8	5	8	2	5	2	8	7	14	16	20	10	3	8	12	12	5	7	11	10	6	****	8	9

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		
21	21	21	68	79	86	97	0 -	109	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 : QUEEN MARY HOSPITAL
POLLUTANT : SULPHUR DIOXIDE

MONTH: SEPTEMBER

YEAR : 2012
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	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	****	0	1
2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	1	****	1	0
3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	****	1	0
4	2	0	0	0	1	0	0	0	1	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	1	1	0	1	2	2	1	1	5	6	8	****	4	1
6	3	3	2	2	1	0	0	1	1	0	1	1	2	2	1	1	1	1	0	1	0	0	****	0	1
7	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	3	0
8	4	3	3	3	3	3	8	25	42	63	66	29	19	20	17	26	23	39	19	15	15	19	****	21	21
9	21	12	6	5	5	5	4	5	8	27	11	3	2	1	2	0	4	4	5	3	2	6	****	13	7
10	8	18	15	7	6	15	5	7	9	20	17	19	33	28	28	19	23	21	19	18	10	4	****	9	15
11	2	3	3	2	2	1	2	1	2	1	1	2	1	0	0	0	0	1	4	3	3	2	****	0	2
12	0	0	0	0	0	0	1	2	2	1	2	3	2	1	3	1	0	0	0	0	1	1	****	1	1
13	0	2	0	0	0	0	14	36	22	62	36	17	6	5	3	8	5	5	7	17	4	2	****	3	11
14	3	2	3	3	3	3	3	3	3	3	5	9	13	4	3	3	3	3	3	3	3	4	****	3	4
15	4	5	4	4	3	3	3	7	8	8	10	8	5	5	6	18	16	9	5	6	6	5	****	5	7
16	5	4	4	5	3	4	4	5	7	19	24	14	14	15	41	38	32	27	29	18	12	11	****	7	15
17	9	10	11	13	11	13	12	10	15	11	10	14	17	17	26	26	32	25	35	29	29	37	****	57	20
18	57	45	35	38	14	12	11	10	18	24	34	61	34	20	26	13	7	8	8	7	6	7	****	8	22
19	9	11	13	12	10	7	8	7	6	4	3	3	2	2	M	M	3	2	3	4	3	****	5	6	
20	5	7	6	4	3	3	6	7	8	6	6	5	4	3	3	3	3	2	2	2	3	3	****	2	4
21	1	1	2	2	0	1	3	3	4	4	4	6	5	4	2	0	0	0	0	0	0	0	****	0	2
22	0	0	0	0	0	1	0	1	1	10	1	1	0	1	1	1	0	1	1	0	3	3	****	2	1
23	2	1	0	1	0	1	4	3	6	56	65	24	15	12	27	17	17	16	15	12	11	13	****	2	14
24	5	14	16	10	8	15	6	3	19	57	16	9	3	1	0	0	0	0	0	2	0	0	****	1	8
25	0	0	0	0	0	0	0	2	3	3	3	3	5	6	6	5	3	3	2	1	1	3	****	1	2
26	1	3	2	2	3	5	5	4	5	14	21	28	17	14	6	8	7	6	6	6	8	6	****	6	8
27	12	50	51	19	14	10	12	13	11	8	6	5	3	3	5	18	12	27	11	15	17	13	****	21	16
28	22	19	10	11	11	9	10	10	11	9	8	7	5	5	3	5	7	7	7	7	8	7	****	8	9
29	8	9	9	8	9	8	10	10	10	9	9	8	5	5	12	11	4	4	5	7	8	8	****	11	8
30	10	8	9	10	10	10	10	10	11	12	11	11	12	10	10	15	10	9	8	7	7	6	****	7	10

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	7	3	19	27	40	57	0	- 66	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 : QUEEN MARY HOSPITAL
POLLUTANT : NITROGEN DIOXIDE
MONTH: SEPTEMBER
YEAR : 2012
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	5	3	5	1	1	4	4	1	3	4	4	6	7	8	6	6	8	2	1	1	4	****	3	4
2	1	1	0	0	0	1	0	0	0	2	2	2	2	3	2	1	2	1	6	13	10	9	****	7	3
3	5	7	4	4	4	5	9	8	6	7	4	6	6	6	4	5	4	9	19	17	17	10	****	9	8
4	7	5	5	6	9	7	9	12	14	17	14	12	11	8	3	7	11	12	12	10	15	13	****	13	10
5	15	10	8	8	7	9	11	12	15	21	11	11	11	16	18	19	22	11	16	11	25	25	****	26	15
6	17	16	9	4	5	6	10	19	18	22	16	8	7	15	14	16	13	16	13	12	10	6	****	9	12
7	6	2	0	2	1	3	2	4	3	3	2	2	1	2	1	4	9	13	13	8	4	10	****	11	5
8	11	9	13	6	12	14	25	31	45	46	44	29	22	24	27	41	38	53	45	31	36	49	****	84	32
9	81	39	9	11	10	16	18	12	20	39	31	21	11	11	11	9	12	19	26	15	12	16	****	30	21
10	23	32	21	9	9	21	10	18	21	24	24	23	30	26	29	27	34	32	40	30	17	8	****	19	23
11	9	8	5	3	4	3	5	5	11	13	15	15	14	10	8	14	4	6	9	6	4	3	****	7	8
12	2	2	1	2	3	1	7	5	4	8	9	9	9	8	10	8	12	8	8	5	7	5	****	9	6
13	6	6	2	2	1	5	23	36	38	41	41	31	23	23	10	19	24	17	49	68	72	20	****	35	26
14	34	31	25	21	21	26	27	35	44	50	59	49	50	47	46	49	55	55	65	54	65	58	****	60	45
15	50	33	25	30	21	25	38	55	48	62	67	52	49	48	56	64	67	66	58	64	44	56	****	39	49
16	31	34	31	35	23	27	25	25	44	63	51	33	39	38	61	67	61	69	82	82	71	65	****	39	48
17	39	32	28	24	15	17	23	26	62	62	60	53	40	40	65	61	54	63	59	39	44	91	****	153	50
18	95	77	65	80	30	27	33	46	98	104	104	109	52	34	39	31	30	24	27	21	45	55	****	36	55
19	15	10	7	4	4	3	19	14	29	67	63	53	45	28	34	M	M	39	22	32	27	24	****	16	26
20	14	11	11	5	3	7	10	20	30	26	15	15	9	17	21	20	16	29	22	16	18	13	****	11	16
21	7	4	4	4	3	5	8	13	15	19	13	12	12	12	10	14	14	22	30	19	11	10	****	14	12
22	12	7	3	2	2	4	9	6	19	30	7	9	10	25	12	16	12	11	12	13	12	9	****	14	11
23	13	7	5	5	2	7	12	10	16	26	25	15	14	13	24	24	25	31	33	38	28	39	****	5	18
24	8	25	23	17	14	17	9	14	31	28	20	17	15	13	14	12	12	24	13	24	5	7	****	25	17
25	9	4	3	3	2	4	5	18	30	31	27	23	18	17	24	23	27	40	32	12	11	12	****	20	17
26	8	11	10	6	8	8	12	23	42	74	79	80	48	32	38	38	41	21	10	12	15	11	****	26	29
27	67	105	104	50	29	27	44	52	60	66	44	38	34	33	38	41	32	65	46	34	32	25	****	42	48
28	77	80	26	22	22	20	31	50	58	58	47	44	34	41	43	33	36	55	69	56	52	37	****	38	45
29	33	24	21	21	24	16	26	38	62	68	59	48	20	26	35	37	24	15	25	55	44	36	****	21	34
30	18	28	51	39	28	26	24	22	45	57	61	41	28	21	31	47	26	24	18	22	20	19	****	14	31

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		
15	17	24	17	55	65	80	97	0	- 153	3	- 55	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: JULY
 YEAR : 2012
 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	2	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	****	3	0
2	1	0	0	0	1	0	1	0	2	0	3	2	5	1	1	0	0	0	0	1	2	2	****	7	1
3	5	6	6	5	2	3	2	3	3	2	0	1	1	0	3	8	19	4	3	9	10	6	****	5	5
4	1	2	2	2	5	4	1	0	1	1	3	3	1	0	0	1	1	0	0	2	3	3	****	2	2
5	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3	0	2	0	1	1	****	5	1	
6	2	1	5	2	6	1	11	8	4	3	0	2	1	1	3	13	1	5	3	5	2	1	****	6	4
7	3	1	4	9	4	2	8	9	6	12	15	7	10	1	10	12	9	8	4	4	3	1	****	8	7
8	4	2	4	9	5	8	13	7	8	10	10	10	9	11	12	4	3	9	16	7	12	11	****	14	9
9	14	8	11	2	8	14	6	6	5	11	6	11	10	8	5	5	2	10	7	7	13	5	****	8	8
10	1	6	8	3	10	9	5	17	5	10	5	5	2	5	4	5	3	3	1	7	10	4	****	7	6
11	6	8	11	8	6	3	6	5	6	3	6	6	4	5	9	3	6	7	4	7	1	9	****	12	6
12	6	6	6	5	6	5	15	5	8	6	6	5	10	6	6	6	10	5	2	7	5	7	****	8	6
13	12	7	7	4	2	7	8	8	1	9	2	6	7	5	2	5	3	10	6	12	13	6	****	7	6
14	3	5	4	1	5	10	6	16	4	7	8	6	3	3	7	12	5	5	6	6	7	7	****	7	6
15	12	7	6	3	4	3	3	5	11	7	2	4	4	8	3	7	8	2	1	7	6	7	****	16	6
16	2	6	7	4	8	3	7	5	8	4	5	1	2	4	6	9	6	8	12	11	10	12	****	15	7
17	7	6	14	6	9	10	10	7	13	8	6	9	10	9	7	12	11	12	8	7	15	6	****	21	10
18	13	7	18	10	10	7	7	4	9	7	14	25	21	15	11	9	14	23	20	34	18	11	****	30	15
19	25	17	12	7	11	36	18	13	14	43	17	60	12	9	16	8	17	10	4	4	5	35	****	15	18
20	34	16	11	11	25	14	11	15	32	17	38	42	28	25	17	24	39	24	32	24	70	29	****	22	26
21	44	32	48	32	12	15	22	24	41	55	93	79	50	41	46	49	38	30	1	1	3	4	****	5	33
22	3	2	1	0	2	2	1	1	2	3	3	2	1	2	1	0	2	1	1	1	1	0	****	4	2
23	2	1	0	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2	2	1	2	****	7	1
24	3	4	4	2	4	1	2	1	3	3	1	2	2	2	1	3	1	2	2	1	2	1	****	4	2
25	2	2	1	6	6	3	7	9	11	8	6	3	3	10	6	3	4	2	4	3	3	2	****	5	5
26	4	3	3	2	2	3	3	4	5	2	2	1	2	1	7	3	2	3	2	2	1	3	****	7	3
27	4	3	2	3	5	6	4	10	24	19	15	5	5	5	7	5	6	5	7	26	33	****	18	10	
28	16	18	24	42	37	14	11	11	10	4	11	5	4	9	9	30	5	7	4	3	5	14	****	17	14
29	9	8	7	17	6	6	5	4	10	36	24	3	2	24	115	71	37	33	36	35	22	42	****	35	25
30	26	65	22	10	10	9	11	52	140	90	53	35	28	26	43	16	19	22	12	14	10	8	****	14	32
31	8	9	21	12	20	12	16	18	23	16	31	43	26	20	19	13	14	17	10	28	39	10	****	18	19

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
5	6	6	23	35	47	63	0	-	140	4	96	0	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: JULY
YEAR : 2012
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	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	****	2	0
2	0	0	0	0	0	0	1	0	1	0	1	2	4	0	0	0	1	0	0	0	0	0	****	7	1
3	5	3	4	1	0	0	4	4	4	1	0	1	0	1	3	7	11	3	7	14	10	6	****	7	4
4	1	0	4	5	6	10	12	6	2	1	2	2	0	0	0	0	0	0	0	1	1	3	****	1	3
5	0	0	0	0	0	0	0	0	1	4	17	19	0	0	3	0	0	0	0	0	0	0	****	1	2
6	0	0	0	0	1	0	2	1	2	1	0	1	0	0	0	9	0	4	0	6	4	0	****	2	1
7	0	0	1	8	0	0	7	8	7	8	10	5	7	4	9	14	7	3	3	2	1	0	****	3	5
8	0	0	0	8	2	3	15	5	3	4	3	2	2	4	5	3	2	2	14	2	7	5	****	4	4
9	11	3	7	1	6	9	4	5	5	11	12	9	4	5	2	6	0	7	4	4	6	3	****	3	6
10	0	3	2	0	4	4	10	13	5	13	8	6	3	9	11	9	9	10	2	5	4	1	****	4	6
11	2	3	8	5	4	1	10	5	8	10	11	8	8	8	8	7	12	6	3	7	1	10	****	9	7
12	3	3	3	5	6	4	16	6	12	12	10	8	10	6	4	11	12	11	4	4	1	8	****	2	7
13	8	3	1	1	0	3	9	5	1	12	9	16	6	13	7	14	6	21	10	10	13	3	****	5	8
14	3	5	2	0	2	10	14	21	12	15	15	11	10	9	9	18	8	7	10	4	8	5	****	4	9
15	7	4	5	2	7	1	9	4	10	9	4	5	3	7	2	2	4	3	1	5	3	7	****	12	5
16	1	3	4	2	6	1	12	4	5	2	5	2	1	1	4	8	4	8	10	10	11	10	****	11	6
17	5	3	7	2	3	5	11	5	8	10	11	9	6	7	2	11	7	12	5	5	15	5	****	15	7
18	12	2	9	5	6	4	11	10	16	24	26	M	27	22	17	16	17	18	21	36	27	8	****	25	16
19	22	19	10	4	10	32	26	25	25	28	21	37	17	12	17	21	22	18	9	8	12	37	****	17	19
20	31	20	9	15	25	17	17	26	28	32	M	M	28	28	39	58	54	39	29	75	46	****	24	31	
21	47	44	49	43	15	23	54	54	60	80	139	149	67	58	63	65	63	59	31	35	14	8	****	14	54
22	19	14	8	6	8	9	16	14	15	15	12	10	8	7	4	7	14	12	10	12	11	8	****	18	11
23	16	11	5	6	7	9	12	11	20	17	13	15	13	12	15	14	7	5	3	8	7	11	****	19	11
24	7	22	11	8	7	2	3	6	3	4	2	4	1	1	3	1	2	2	1	1	2	****	1	4	
25	3	1	1	6	8	4	18	19	13	8	8	5	6	18	17	36	37	27	12	9	6	6	****	5	12
26	4	6	4	5	4	6	6	7	12	7	8	6	7	16	31	26	15	23	20	18	31	23	****	26	14
27	11	8	7	7	10	11	6	18	25	37	41	33	37	19	8	8	8	11	10	15	36	38	****	19	18
28	24	29	35	36	31	24	10	17	13	13	13	6	3	8	10	19	5	12	8	9	12	22	****	36	17
29	27	22	21	30	24	22	20	20	24	38	33	15	7	13	40	31	31	28	43	47	29	46	****	40	28
30	32	43	32	19	28	34	38	42	48	39	34	29	30	27	49	46	32	46	31	22	23	19	****	17	33
31	16	14	28	15	41	38	45	45	44	46	61	58	51	45	60	38	35	52	95	141	91	39	****	27	49

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	
6	7	7	33	45	59	66	0 - 149	0 - 54	5	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: AUGUST
 YEAR : 2012
 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	15	12	9	17	25	14	20	19	17	22	28	43	42	45	43	51	52	28	33	41	16	19	****	29	28
2	44	47	26	28	33	41	56	54	65	69	56	77	99	50	37	26	26	31	26	24	42	34	****	19	44
3	21	23	34	29	20	20	28	51	88	58	66	82	66	44	38	25	28	29	30	21	33	43	****	26	39
4	18	28	38	33	18	4	5	7	8	21	16	21	13	12	18	26	17	11	26	30	17	21	****	28	19
5	13	15	11	8	7	6	11	10	14	5	5	6	15	11	7	8	4	15	24	11	8	10	****	11	10
6	7	6	8	5	6	2	1	7	3	1	3	3	4	3	3	2	6	7	7	12	44	****	29	8	
7	28	22	45	64	66	50	75	31	19	46	30	23	20	35	65	45	31	32	16	15	15	16	****	14	35
8	11	22	19	18	13	16	29	41	40	28	29	40	46	51	40	39	25	20	14	9	11	8	****	21	26
9	12	17	10	16	25	17	16	24	32	22	25	27	26	20	9	15	6	3	6	3	2	****	10	15	
10	6	5	10	1	5	15	16	19	14	4	6	13	11	8	10	9	12	5	11	6	7	24	****	11	10
11	4	13	10	7	7	4	3	8	14	13	13	10	11	8	9	4	2	18	16	8	12	7	****	18	9
12	16	11	11	12	11	17	4	13	7	3	7	2	18	13	13	17	11	12	18	17	11	11	****	15	12
13	14	11	4	7	12	12	8	10	6	17	24	37	22	8	4	18	22	20	17	15	7	7	****	19	14
14	11	6	4	7	3	2	1	1	3	3	4	6	4	4	4	6	8	8	4	4	3	****	12	5	
15	8	5	30	20	31	25	26	33	56	46	37	37	42	25	26	37	45	62	61	65	57	46	****	45	38
16	19	10	14	24	11	5	6	46	16	7	7	6	6	4	3	5	3	2	2	1	1	1	****	3	9
17	2	1	1	2	1	0	0	1	1	1	0	0	3	2	2	5	5	1	4	4	4	4	****	5	2
18	3	3	3	4	2	4	4	6	18	8	22	31	33	15	15	20	17	17	5	5	8	21	****	38	13
19	15	8	10	23	30	34	45	36	13	66	64	64	25	8	16	17	13	9	14	12	25	20	****	33	26
20	42	44	49	55	20	23	9	17	13	10	20	25	11	17	24	12	7	6	11	7	14	****	24	20	
21	19	32	42	23	17	17	20	21	20	18	12	17	9	15	20	11	13	15	11	12	17	16	****	53	20
22	41	19	26	19	18	9	14	33	33	20	12	12	11	10	9	17	16	33	26	34	16	13	****	24	20
23	20	22	28	50	63	59	42	32	32	27	18	15	17	43	48	58	46	46	33	37	85	33	****	24	38
24	25	34	23	24	27	21	21	17	23	26	23	21	22	31	31	33	38	13	5	7	7	8	****	11	21
25	13	14	17	19	12	9	10	19	20	21	25	27	26	36	35	35	32	37	35	37	26	14	****	10	23
26	8	6	6	7	8	10	11	13	7	4	5	3	4	6	9	9	5	5	14	14	11	8	****	7	8
27	8	8	5	20	34	21	21	20	25	40	41	42	48	40	22	25	21	23	19	26	17	14	****	14	24
28	21	21	18	20	28	44	35	53	42	49	58	44	34	37	40	24	35	28	13	13	15	7	****	14	30
29	15	8	6	4	4	26	14	10	5	8	6	14	27	16	17	19	12	22	27	10	12	15	****	9	13
30	10	7	7	5	5	15	14	12	16	5	13	38	32	23	15	16	14	9	13	17	18	13	****	9	14
31	7	8	6	6	7	7	6	7	5	8	26	28	7	3	6	4	5	5	6	5	4	6	****	10	8

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
13	15	19	15	42	51	64	66	0	- 99	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: AUGUST
 YEAR : 2012
 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	21	21	31	61	62	38	66	65	65	67	75	90	74	79	71	70	71	53	58	73	28	27	****	40	57
2	53	68	47	38	34	59	75	70	78	96	104	120	148	83	73	57	45	63	81	73	88	67	****	29	72
3	38	51	68	73	69	65	80	90	98	83	90	118	95	64	58	41	63	59	52	31	42	52	****	31	66
4	18	31	42	37	23	8	32	24	22	50	49	47	45	31	45	34	21	19	52	46	24	25	****	31	33
5	10	13	9	11	10	11	28	14	22	8	9	13	18	16	7	11	9	22	40	25	15	12	****	15	15
6	9	7	8	5	5	6	6	9	6	4	2	3	3	2	2	3	5	5	9	11	16	46	****	35	9
7	34	38	43	47	47	44	45	35	42	50	49	37	40	49	65	65	50	55	25	22	24	27	****	25	42
8	13	26	23	31	25	25	45	54	50	49	45	59	76	71	67	67	48	37	18	13	20	16	****	29	39
9	13	26	16	19	35	28	27	48	41	31	36	38	38	37	29	30	18	21	14	14	7	8	****	13	26
10	9	9	12	2	5	9	22	19	21	12	16	25	23	11	16	18	26	21	25	13	11	28	****	11	16
11	4	13	9	6	13	11	23	31	42	32	23	19	15	11	13	12	9	17	18	14	10	10	****	19	16
12	12	7	9	11	10	18	10	29	27	11	10	7	16	19	15	15	16	12	17	18	19	14	****	19	15
13	15	12	6	10	23	20	21	24	15	20	23	26	22	11	5	15	29	26	21	26	16	12	****	31	19
14	15	6	8	15	9	8	14	20	14	8	8	10	6	5	5	6	7	12	15	8	7	11	****	19	10
15	22	28	41	34	41	43	39	42	42	49	46	35	37	32	30	55	60	68	67	51	51	61	****	51	45
16	29	28	14	37	31	14	27	53	29	16	19	22	17	18	19	13	9	8	5	3	2	2	****	5	18
17	5	4	4	4	3	3	2	3	3	2	1	2	5	3	4	5	6	4	4	5	5	4	****	5	4
18	4	4	4	5	4	9	9	14	19	9	19	22	20	12	12	12	20	22	18	21	15	28	****	30	14
19	22	19	21	29	30	29	31	24	15	22	21	28	20	14	14	17	17	14	21	14	28	26	****	29	22
20	37	33	35	34	22	25	18	19	12	12	17	28	17	19	29	22	14	17	13	14	17	18	****	25	22
21	20	34	30	26	24	25	27	23	22	22	19	18	18	24	25	16	16	18	14	15	18	22	****	30	22
22	35	24	31	29	24	14	22	30	26	28	30	41	43	38	37	46	51	56	62	76	81	71	****	77	42
23	76	76	75	76	76	75	71	81	93	81	76	48	73	63	83	97	97	60	48	116	88	****	36	76	
24	39	54	54	37	36	44	68	53	56	56	58	52	62	68	65	75	59	46	43	58	56	****	47	54	
25	58	49	44	46	27	24	36	37	40	47	46	56	49	61	60	57	62	75	84	86	70	49	****	43	52
26	41	35	25	23	21	23	25	34	27	23	25	23	22	30	35	35	30	34	51	54	44	43	****	57	33
27	61	59	43	41	61	59	62	61	61	67	71	81	82	73	45	52	57	54	40	34	23	32	****	25	54
28	41	34	20	21	32	52	42	60	55	53	72	54	33	51	57	27	50	50	17	16	19	4	****	20	38
29	14	8	8	4	7	39	21	18	17	30	30	27	30	24	27	26	29	38	41	13	15	19	****	7	21
30	5	8	7	3	4	12	21	22	26	53	14	28	23	18	17	19	18	16	12	12	19	8	****	11	16
31	5	3	1	3	7	9	5	7	9	11	20	22	5	1	1	0	2	4	3	3	2	5	****	14	6

MONTHLY STATISTICS:

GEOM	ARITH	<-----PERCENTILE----->					<-----RANGE----->				STD GEOM	PERCENT	NO. OF TIMES	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	ABOVE	OBJECTIVE	
												1-HR	24-HR	
22	25	31	25	67	76	88	97	0	- 148	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: SEPTEMBER

YEAR : 2012
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	7	8	7	7	7	6	6	5	7	4	7	6	6	4	6	3	6	5	5	5	****	7	6
2	5	5	4	5	5	4	4	4	4	4	2	3	5	6	5	5	5	6	7	7	6	****	7	5	
3	6	8	5	5	5	6	4	3	3	2	4	2	3	3	3	3	3	3	4	5	7	****	4	4	
4	3	2	2	3	3	2	2	2	1	2	1	2	1	1	0	2	1	0	1	1	1	0	****	2	2
5	0	0	0	0	1	0	0	1	1	1	1	0	0	2	0	0	1	1	3	6	7	5	****	5	2
6	3	2	2	1	1	1	1	2	2	1	2	2	2	2	2	2	2	4	3	4	4	4	****	4	2
7	4	3	3	4	4	5	3	6	4	4	4	3	3	3	6	5	5	5	4	6	4	6	****	12	5
8	11	10	13	9	9	8	10	29	73	77	51	31	39	29	33	24	29	24	23	19	46	63	****	27	30
9	25	24	27	22	17	11	10	12	10	9	8	4	5	5	5	5	9	10	8	7	5	12	****	10	11
10	8	19	22	23	32	27	6	27	45	87	24	33	30	25	27	21	17	20	21	19	18	11	****	10	25
11	5	6	5	6	6	4	5	6	4	4	6	5	5	4	5	6	6	7	11	7	7	7	****	7	6
12	5	5	6	5	5	5	5	5	5	5	7	7	4	6	6	4	6	4	3	4	4	5	****	7	5
13	5	6	4	3	3	3	5	3	2	47	45	4	5	10	12	6	10	4	3	11	14	1	****	3	9
14	1	2	2	2	2	2	3	2	5	4	6	8	11	13	6	D	D	0	0	1	1	0	****	0	3
15	0	0	0	0	0	0	0	0	0	0	0	1	5	6	13	10	18	23	9	3	1	0	****	1	4
16	0	0	0	0	1	0	1	6	18	16	7	7	7	30	35	38	20	20	17	18	10	****	1	11	
17	3	3	4	6	5	7	6	5	4	4	10	10	7	15	30	23	20	20	25	20	21	15	****	42	13
18	50	39	21	27	14	8	5	2	1	1	1	0	11	1	0	4	1	1	0	1	2	****	3	8	
19	2	3	6	5	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	0	1	
20	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	****	0	0	
21	1	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	****	2	0	
23	0	0	0	0	0	6	13	7	7	81	55	57	30	31	19	14	13	8	4	18	37	33	****	11	19
24	12	11	4	2	5	10	14	8	10	1	1	0	0	0	0	0	0	0	0	0	0	****	0	3	
25	0	0	0	0	0	0	0	0	0	0	0	2	0	2	1	0	0	0	0	0	0	****	0	0	
26	0	0	0	0	0	0	0	0	0	0	6	17	3	1	1	1	1	0	1	1	4	2	****	1	2
27	1	4	25	20	5	4	3	2	1	0	0	0	0	7	15	8	14	11	15	17	22	****	14	8	
28	15	8	6	4	5	5	7	6	3	4	0	2	0	0	0	0	1	2	1	1	1	****	5	3	
29	3	2	4	9	9	9	6	10	9	2	4	0	0	0	0	0	0	0	3	8	7	****	8	4	
30	5	2	1	1	3	4	4	4	5	4	4	5	6	3	3	5	1	4	3	2	1	2	****	3	3

MONTHLY STATISTICS:		<-----PERCENTILE----->										<-----RANGE----->				STD GEOM	PERCENT	NO. OF TIMES ABOVE OBJECTIVE	
GEOM	ARITH	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR							
MEAN	MEAN	4	18	27	41	53	0	-	87	0	-	30	4	96	0	0			
4	7																		

- 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: SEPTEMBER
 YEAR : 2012
 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	10	10	7	7	5	7	8	6	5	4	6	4	6	4	8	4	6	3	5	5	6	5	****	9	6
2	7	6	5	6	5	5	5	4	5	3	3	4	5	3	5	5	6	8	9	10	10	****	10	6	
3	8	12	8	7	7	10	10	12	10	9	7	5	3	4	5	5	6	7	7	9	11	14	****	12	8
4	17	15	11	8	13	16	20	23	18	18	13	9	9	7	4	10	8	13	12	15	8	14	****	19	13
5	15	13	10	11	8	10	9	11	11	11	8	8	7	8	11	11	11	7	7	11	12	12	****	13	10
6	11	10	9	10	7	8	10	14	26	16	9	6	9	6	7	7	7	9	4	6	5	4	****	6	9
7	5	4	3	4	4	4	3	6	3	3	1	1	1	1	3	3	4	4	3	4	3	19	****	23	5
8	26	14	22	17	18	24	31	37	40	41	29	23	27	21	27	25	39	32	29	30	34	55	****	23	29
9	28	29	40	29	31	23	18	19	16	8	7	5	5	6	5	11	15	19	14	9	12	****	16	16	
10	15	35	26	26	32	30	16	28	30	37	28	26	22	19	23	24	26	26	28	24	21	20	****	17	25
11	10	13	10	9	10	9	20	13	10	5	5	5	3	3	4	5	6	8	12	6	5	5	****	8	8
12	7	6	7	6	7	7	13	6	5	4	4	4	2	3	4	2	4	5	4	4	5	5	****	6	5
13	7	11	11	8	9	14	27	25	11	30	34	8	10	14	16	13	13	8	19	51	72	35	****	43	21
14	37	34	23	17	18	22	33	44	54	55	59	51	51	55	44	D	D	79	86	87	74	68	****	72	51
15	62	42	28	26	22	26	33	50	53	54	60	50	51	40	53	48	70	73	53	73	70	61	****	51	50
16	51	31	29	25	24	25	45	50	56	60	48	29	25	29	50	58	81	58	52	26	21	45	****	71	43
17	46	29	17	15	16	21	27	47	57	69	72	64	33	50	56	45	34	35	32	22	21	19	****	66	39
18	77	82	57	77	70	48	48	87	58	36	12	15	7	25	12	2	3	7	6	8	14	39	****	31	36
19	27	39	17	9	13	14	29	54	81	39	36	24	28	16	22	25	26	5	1	6	3	13	****	9	23
20	5	3	3	0	0	3	14	21	13	12	6	7	2	7	14	8	5	7	4	2	1	0	****	4	6
21	2	0	0	0	0	0	2	8	5	13	8	8	3	12	5	4	8	12	4	0	0	1	****	9	5
22	3	0	0	3	2	1	2	6	6	2	0	0	0	0	0	0	3	7	3	8	8	3	****	18	3
23	7	5	3	8	10	11	17	10	7	18	15	15	12	15	14	11	14	17	18	20	31	32	****	18	14
24	19	16	13	11	14	17	19	15	12	3	7	1	0	0	2	1	1	2	3	1	8	8	****	11	8
25	1	0	0	0	0	0	4	7	10	3	5	2	3	6	3	2	6	0	0	0	0	1	****	17	3
26	9	18	12	5	9	8	13	20	41	38	49	68	18	6	2	0	0	1	4	30	37	35	****	45	20
27	37	54	78	82	41	28	32	49	48	38	22	20	10	18	29	37	24	48	33	26	43	45	****	42	38
28	69	48	18	11	15	16	29	41	46	43	43	41	31	30	33	40	44	36	59	59	56	51	****	43	39
29	42	27	22	24	22	25	30	49	64	67	58	25	13	7	8	5	3	5	9	27	34	36	****	48	28
30	40	30	38	32	26	23	35	35	40	36	28	21	24	17	14	10	8	8	9	46	8	15	****	7	24

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	12	20	12	49	59	73	80	0	- 87	3	- 51	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: JULY
 YEAR : 2012
 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	2	3	2	6	12	13	4	4	4	2	8	8	10	10	9	2	4	2	2	1	2	****	3	5	
2	2	1	1	8	9	8	6	4	3	3	9	11	11	13	15	12	7	8	4	3	4	3	****	5	7	
3	7	10	7	3	3	4	10	16	12	15	13	10	9	4	10	8	10	8	9	4	3	3	****	3	8	
4	7	6	5	4	7	9	14	14	6	8	7	6	11	10	10	7	6	5	2	2	5	6	****	4	7	
5	2	3	3	3	3	2	4	12	16	6	4	12	17	6	6	3	6	7	4	6	3	0	****	3	6	
6	2	1	1	1	0	1	2	1	2	2	0	2	6	6	6	3	10	16	10	6	10	11	****	4	5	
7	2	2	1	1	1	1	1	2	1	1	2	1	1	1	2	2	2	2	1	1	1	1	****	1	1	
8	0	0	0	0	0	0	0	1	1	1	0	2	1	0	1	1	1	2	1	1	0	0	****	0	1	
9	0	0	0	0	0	0	0	1	2	2	1	3	3	2	2	2	1	1	0	0	0	0	****	1	1	
10	0	0	0	0	0	0	0	1	2	1	1	3	2	2	1	1	1	1	0	0	0	0	****	0	1	
11	0	0	0	0	0	0	0	1	2	1	1	2	1	2	1	3	1	0	0	0	0	0	****	1	1	
12	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	3	1	0	1	1	1	****	1	1	
13	0	0	0	0	1	0	1	1	1	2	2	3	2	1	1	3	4	1	1	1	1	1	****	1	1	
14	1	1	1	0	1	3	2	1	2	1	1	2	3	3	4	2	2	1	1	0	0	****	1	1		
15	0	0	0	1	3	3	1	1	1	1	3	1	3	4	3	2	2	1	0	0	1	0	****	1	1	
16	0	1	0	2	2	2	2	3	1	2	1	1	1	1	2	3	1	1	1	1	1	1	****	1	1	
17	1	1	1	1	1	1	1	2	1	2	2	2	3	2	2	2	2	2	1	1	1	1	****	1	1	
18	1	1	1	1	1	1	1	2	1	1	3	6	6	3	4	3	2	2	1	1	1	1	****	1	2	
19	1	1	1	2	2	2	2	1	4	7	5	2	3	7	9	4	4	3	1	1	2	2	****	8	3	
20	9	6	5	3	3	5	8	9	10	9	19	7	5	7	10	5	11	13	13	6	5	7	****	16	8	
21	14	10	7	5	10	11	14	15	33	54	30	37	28	45	38	30	24	18	9	10	11	6	****	11	20	
22	9	11	8	8	10	9	8	14	12	14	12	7	5	2	6	3	3	3	2	3	4	1	****	8	7	
23	9	9	9	10	10	8	8	11	10	6	6	5	6	3	2	2	1	2	2	1	0	****	1	6		
24	0	1	1	1	1	0	0	1	0	0	0	1	2	1	1	2	2	2	2	2	2	3	****	2	1	
25	2	2	2	1	0	0	0	2	2	3	3	2	1	0	0	1	1	1	0	1	2	0	****	1	1	
26	2	3	2	3	3	4	6	6	4	4	3	9	4	3	2	3	3	5	4	9	8	7	****	6	4	
27	5	5	5	4	5	5	5	3	2	3	3	5	5	3	11	12	8	5	1	2	3	6	7	7	5	
28	20	20	16	18	14	14	14	19	30	34	19	M	25	20	20	24	24	33	27	28	16	15	25	****	29	22
29	30	20	17	14	13	19	25	67	42	31	27	20	18	10	20	7	15	23	15	7	4	4	****	4	20	
30	8	8	4	7	7	10	19	25	32	12	9	4	4	4	6	11	7	3	4	1	2	2	****	1	8	
31	1	1	1	3	8	12	21	30	27	12	11	8	17	17	8	5	2	4	4	4	4	6	****	15	10	

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	2	2	14	20	30	33	0	-	67	4	96	0	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: JULY
 YEAR : 2012
 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	6	8	6	15	27	22	3	2	2	2	8	6	7	7	7	1	4	7	7	2	5	****	9	7
2	6	9	8	20	13	10	7	3	3	3	7	7	9	8	8	8	6	9	10	12	13	12	****	17	9
3	31	31	9	7	7	8	13	14	9	8	6	5	5	4	7	5	5	5	10	9	7	7	****	6	9
4	12	8	8	11	19	21	18	14	4	6	6	5	8	7	7	5	6	4	4	6	10	12	****	7	9
5	4	8	6	5	8	7	11	18	23	11	19	36	34	8	7	5	10	12	9	13	9	4	****	8	12
6	6	2	3	4	3	6	5	2	2	2	2	3	6	6	7	6	10	16	13	12	19	21	****	8	7
7	6	5	4	6	3	6	7	5	4	2	2	2	2	3	3	3	3	3	9	6	6	5	****	7	4
8	4	3	2	3	3	4	4	3	2	2	2	1	2	2	2	2	2	3	4	3	4	3	****	4	3
9	3	2	2	3	3	5	3	3	2	2	3	2	2	1	1	0	2	2	2	4	5	5	****	7	3
10	4	3	3	3	4	3	5	4	3	4	4	2	2	1	2	1	1	2	2	3	3	5	****	3	3
11	3	3	3	2	2	2	2	2	2	2	2	2	1	2	1	3	1	1	1	0	0	0	****	5	2
12	0	1	1	2	3	1	1	2	1	1	0	0	2	1	1	1	2	1	1	3	3	2	****	2	1
13	1	0	1	1	1	0	1	1	0	1	0	0	M	1	1	0	2	0	3	2	2	2	****	3	1
14	4	3	1	1	2	4	3	3	4	2	2	1	2	4	2	2	2	4	5	2	3	3	****	2	3
15	3	2	0	1	4	3	2	2	1	1	1	2	2	1	3	1	1	3	2	2	4	3	****	3	2
16	2	3	0	4	3	1	4	2	2	1	1	2	1	1	2	1	2	2	4	3	4	3	****	4	2
17	5	2	2	2	4	4	4	3	2	1	1	2	1	2	1	2	4	6	7	6	3	****	3	3	
18	5	6	3	4	7	5	5	17	1	17	31	33	20	4	3	2	1	4	5	5	7	7	****	4	9
19	3	3	6	8	13	11	14	10	21	17	10	2	5	6	9	5	6	4	5	9	8	14	****	43	10
20	40	31	24	15	22	31	29	25	26	22	28	12	13	10	12	9	14	19	23	17	11	60	****	82	25
21	76	51	30	14	57	61	58	41	55	81	34	44	40	67	67	58	67	65	49	54	40	19	****	58	51
22	40	41	31	27	30	27	19	25	21	24	32	21	9	3	6	7	10	15	10	16	26	8	****	43	21
23	32	29	23	23	22	17	22	26	29	39	28	19	15	18	26	25	11	4	5	5	2	1	****	5	18
24	1	4	7	5	3	2	4	5	3	0	0	2	1	0	2	4	4	6	9	12	10	****	5	4	
25	9	9	8	3	0	0	2	15	7	4	5	6	5	1	3	18	15	6	7	18	19	5	****	11	8
26	14	13	13	12	18	14	20	14	8	12	6	11	5	4	8	14	14	25	30	51	46	44	****	18	18
27	17	12	9	9	10	16	19	6	6	32	33	38	29	32	41	32	25	9	6	32	22	45	65	35	24
28	75	67	61	78	68	66	66	70	43	30	M	19	11	14	19	17	33	38	41	36	37	44	****	46	44
29	47	38	33	32	25	37	35	42	39	41	35	29	23	5	10	5	13	20	20	14	9	9	****	22	25
30	39	32	13	21	31	30	28	30	32	15	14	7	8	13	18	18	13	4	11	7	9	9	****	20	18
31	15	26	20	21	43	43	43	40	35	21	25	18	22	20	11	7	3	14	42	36	37	24	****	78	28

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	1-HR	24-HR		
6	6	6	33	43	65	68	0	-	82		1	-	51	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 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: AUGUST
 YEAR : 2012
 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	5	4	24	20	14	11	12	12	10	10	26	28	23	30	31	27	22	12	7	5	8	9	****	10	16	
2	8	9	13	29	29	23	30	46	53	49	44	31	32	34	25	20	15	17	13	20	12	12	****	7	25	
3	10	25	25	24	23	25	30	30	23	20	16	13	21	20	16	10	8	10	11	13	15	19	****	15	18	
4	12	10	8	4	2	1	1	1	1	2	2	4	3	4	5	4	4	4	9	5	6	5	****	7	4	
5	6	3	0	1	0	0	1	1	1	1	1	2	2	2	2	2	1	1	1	3	6	8	****	10	2	
6	11	9	10	10	4	3	5	11	13	12	6	4	6	4	3	3	14	11	6	2	2	2	****	6	7	
7	5	3	4	3	3	4	4	9	10	10	9	13	11	52	43	25	22	10	6	4	3	2	****	2	11	
8	2	3	3	3	5	4	4	6	4	9	18	27	22	23	28	22	12	6	2	1	1	1	****	0	9	
9	0	0	2	12	13	8	9	9	9	14	15	11	7	8	8	4	2	1	1	1	1	1	****	1	6	
10	0	0	1	1	1	2	2	2	2	3	5	6	1	5	2	3	2	2	1	3	2	1	****	0	2	
11	0	1	1	1	0	0	0	0	0	0	1	0	0	2	1	1	0	0	0	1	3	1	****	1	1	
12	1	1	1	2	3	1	1	7	18	26	16	15	6	3	1	2	1	1	1	1	1	1	****	1	5	
13	1	1	1	0	2	1	1	1	2	3	5	5	13	12	11	5	3	1	1	0	0	0	****	1	3	
14	3	11	13	8	7	9	8	9	9	10	14	8	11	12	12	11	22	27	16	11	7	10	****	10	11	
15	9	13	13	17	15	9	8	12	14	27	18	33	36	26	39	35	27	21	16	15	12	8	****	10	19	
16	7	4	7	7	5	6	9	20	17	15	12	19	10	9	8	6	4	3	2	1	5	2	****	2	8	
17	1	1	1	1	1	0	0	0	0	1	1	2	4	2	3	7	<----->									
18	FAILURE OF DATALOGGER										3	2	1	2	3	3	5	4	5	5	4	3	****	4		
19	6	10	11	14	18	10	5	6	4	3	5	4	13	8	9	7	4	4	5	4	2	3	****	3	7	
20	2	2	2	3	3	4	2	3	3	3	5	8	10	6	3	2	2	2	0	1	1	1	****	1	3	
21	2	2	2	1	1	2	2	3	6	4	3	3	2	3	2	2	1	1	0	1	1	2	****	3	2	
22	3	4	2	2	1	2	2	6	6	2	2	3	5	4	3	2	4	7	10	12	14	22	****	24	6	
23	18	19	19	17	16	15	18	28	30	28	19	15	12	18	14	15	11	11	14	14	11	10	****	10	17	
24	9	9	12	38	19	14	11	14	13	11	12	12	11	13	18	22	28	27	27	29	29	33	****	10	18	
25	7	5	5	7	5	10	24	32	31	30	32	33	32	31	27	24	23	19	23	30	20	14	****	7	20	
26	5	6	6	6	9	8	9	9	10	9	10	13	10	9	5	7	8	7	7	7	15	23	****	17	9	
27	16	16	16	17	19	21	15	18	22	17	16	12	23	15	14	16	9	14	12	11	11	7	****	3	15	
28	4	5	9	11	10	10	6	11	13	18	27	31	35	37	24	14	8	5	4	6	5	5	****	6	13	
29	3	4	3	1	1	1	0	1	2	4	4	3	5	3	4	3	5	2	4	5	3	2	****	3	3	
30	2	2	2	1	1	1	2	2	3	2	4	9	6	3	3	4	7	1	0	0	2	2	****	8	3	
31	6	6	7	7	9	8	4	2	2	4	7	7	8	5	2	1	3	6	1	1	2	7	****	6	5	

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	6	6	23	29	33	39	0	-	53	1	-	25	4	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: AUGUST
 YEAR : 2012
 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	28	40	106	72	68	71	70	45	32	36	68	61	36	39	46	33	48	44	23	13	35	14	****	52	47	
2	27	26	37	68	61	43	58	63	73	75	72	60	62	35	53	68	66	45	53	129	23	56	****	36	56	
3	37	93	74	85	60	73	67	58	57	73	40	17	23	28	18	11	10	20	25	29	40	72	****	12	45	
4	25	24	15	3	0	0	0	0	5	8	13	29	22	8	8	6	9	33	83	22	4	7	****	11	14	
5	8	6	1	2	0	0	4	4	1	1	1	1	1	0	1	0	1	1	3	3	7	8	****	18	3	
6	17	12	16	13	3	5	15	35	33	32	1	1	4	2	0	2	11	10	8	2	5	2	****	52	12	
7	38	14	21	18	24	32	25	26	29	28	20	30	23	39	37	24	18	14	11	4	3	1	****	1	21	
8	1	4	12	7	11	7	11	24	19	20	24	31	27	26	32	19	13	8	2	3	2	0	****	1	13	
9	0	0	8	29	33	15	22	16	16	25	20	12	4	6	7	0	0	0	0	0	1	0	****	0	9	
10	0	0	0	0	1	1	0	1	1	4	6	6	1	4	1	3	4	6	2	2	1	0	****	0	2	
11	0	0	0	0	0	0	0	8	1	0	3	0	0	4	0	0	0	0	0	0	1	4	0	****	1	1
12	1	0	0	0	0	0	5	21	35	29	13	10	2	1	0	1	0	0	2	1	1	0	****	0	5	
13	1	1	0	0	2	0	6	4	8	4	3	1	6	7	8	4	2	0	0	0	1	1	****	1	3	
14	6	20	26	16	14	16	13	13	10	8	11	6	8	9	6	8	21	29	26	12	4	9	****	11	13	
15	9	21	21	28	33	29	31	29	25	38	41	37	35	31	39	45	47	46	20	21	21	10	****	19	29	
16	9	25	27	21	15	28	36	40	37	26	23	45	26	35	28	18	7	5	4	2	12	13	****	3	21	
17	0	0	0	0	0	0	0	0	0	0	0	0	3	2	1	2	<----->									
18	FAILURE OF DATALOGGER										1	1	0	0	0	1	4	2	6	11	10	8	3	18		
19	20	20	24	29	30	26	13	12	3	2	3	2	5	3	4	3	2	6	12	10	2	6	3	5	10	
20	3	2	6	12	6	9	7	9	9	4	6	9	10	5	1	0	0	1	0	0	0	1	****	1	4	
21	2	2	1	1	0	4	5	2	4	1	0	0	0	1	0	0	0	0	0	0	0	5	****	12	2	
22	16	8	0	2	1	4	11	22	14	6	7	18	26	17	19	6	24	42	67	72	70	72	****	75	26	
23	78	83	79	74	63	62	62	68	74	80	71	56	44	38	26	28	22	23	19	20	31	29	****	21	50	
24	12	6	17	77	36	41	23	27	25	26	34	38	31	32	41	39	46	66	79	71	76	72	****	44	42	
25	29	22	24	26	26	42	39	51	40	47	52	57	49	48	41	35	40	35	48	74	62	62	****	36	43	
26	34	40	30	27	30	29	30	27	26	28	28	35	33	32	24	28	41	41	52	54	82	103	****	65	40	
27	54	50	52	53	63	61	44	48	49	38	31	21	34	18	17	29	16	22	21	82	31	41	****	15	39	
28	13	14	14	17	13	15	16	36	24	25	33	25	26	32	23	15	16	9	7	8	8	8	****	8	18	
29	1	5	4	5	6	1	0	5	10	13	12	11	10	6	3	23	18	1	3	6	5	5	****	5	7	
30	0	2	5	1	0	4	13	7	8	0	10	15	2	3	4	3	0	0	0	0	0	0	****	7	4	
31	1	2	2	7	15	13	3	0	0	2	1	0	0	0	1	2	5	3	0	3	0	11	****	7	4	

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
8	11	19	11	52	69	77	83	0	- 129	6	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

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

STATION : CHEUNG CHAU
 POLLUTANT : SULPHUR DIOXIDE
 MONTH: SEPTEMBER
 YEAR : 2012
 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	2	3	2	2	2	2	3	3	6	3	2	3	5	2	1	4	4	1	1	2	2	****	3	3	
2	3	3	3	4	2	2	2	4	3	2	3	3	6	5	5	6	5	7	4	5	3	****	3	4		
3	3	3	4	3	5	4	3	4	4	4	4	5	6	4	3	9	9	4	2	3	3	****	3	4		
4	4	7	4	5	3	4	13	17	9	8	6	6	3	4	3	7	2	1	4	2	3	3	****	5	5	
5	4	5	4	6	5	6	4	6	8	8	8	7	5	4	9	4	6	5	6	9	10	9	****	11	7	
6	6	6	5	11	9	5	8	4	7	3	8	5	11	10	11	2	11	3	2	2	3	1	****	1	6	
7	1	2	1	1	4	4	4	3	4	3	2	4	8	6	3	3	4	2	2	4	4	4	****	12	4	
8	9	12	14	15	18	16	19	34	28	15	10	11	11	16	9	10	5	9	5	6	5	5	****	7	13	
9	6	21	41	31	24	22	17	16	17	15	15	14	10	12	13	11	9	7	6	8	6	4	****	3	14	
10	6	5	2	2	2	2	2	2	2	3	3	3	6	6	8	7	3	3	3	3	5	13	****	6	4	
11	5	4	6	7	8	8	6	7	5	5	8	9	10	13	12	17	12	12	7	5	5	5	****	3	8	
12	2	3	5	2	3	5	4	8	8	11	13	15	10	7	9	9	7	8	9	7	4	5	****	5	7	
13	6	7	8	4	4	6	9	11	13	9	M	M	9	14	13	8	5	12	10	8	5	7	****	4	8	
14	3	3	3	3	2	3	2	4	5	4	----->															
15	FAILURE OF DATALOGGER										10	9	9	9	8	8	8	13	15	13	13	11	10	****	8	
16	7	7	5	7	6	8	8	8	8	8	8	11	11	9	12	16	19	18	26	29	26	17	****	13	13	
17	11	10	11	13	14	14	14	13	13	12	15	12	11	13	13	13	14	15	16	17	17	18	****	20	14	
18	21	20	21	22	19	21	25	25	30	34	29	23	24	15	12	13	15	18	15	18	22	19	****	14	21	
19	14	14	15	17	15	16	16	21	28	16	6	6	4	5	3	5	4	5	3	4	4	4	****	8	10	
20	9	8	8	7	4	4	14	11	11	10	8	8	6	5	4	4	4	3	3	3	3	4	****	4	6	
21	4	3	4	4	3	2	3	8	5	6	6	7	7	7	3	3	3	7	11	3	2	3	****	9	5	
22	3	4	1	2	5	4	4	6	10	14	5	7	4	3	6	9	8	9	18	15	16	13	****	7	8	
23	6	7	6	8	8	9	11	17	14	13	5	6	16	11	6	2	1	2	4	3	4	6	****	19	8	
24	17	13	8	10	11	11	14	16	14	11	18	16	14	7	4	3	10	6	5	6	3	2	****	0	9	
25	0	2	2	2	3	8	7	9	15	15	17	17	17	13	15	7	5	11	4	2	2	3	****	7	8	
26	4	9	8	9	4	6	9	7	8	9	14	15	12	11	11	10	11	14	16	12	10	11	****	11	10	
27	12	13	16	13	12	12	10	10	11	18	15	9	7	5	7	9	7	5	8	12	6	7	****	8	10	
28	10	11	10	10	8	8	8	10	12	10	7	7	7	6	7	6	5	5	7	9	7	8	****	9	8	
29	11	9	10	9	7	8	8	10	9	8	9	10	10	14	8	6	9	9	13	11	10	13	****	10	10	
30	12	14	13	14	15	15	15	13	19	23	15	16	15	17	16	14	12	10	9	12	10	8	****	11	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
7	7	8	7	16	18	24	29	0	- 41	3 - 21	2	93	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: SEPTEMBER
YEAR : 2012
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	15	15	5	3	5	4	3	1	2	2	1	0	1	3	2	13	7	0	0	1	1	****	2	4	
2	3	1	3	4	1	1	2	1	0	0	0	0	0	0	1	1	2	8	3	4	0	****	2	1		
3	1	1	4	1	5	5	5	9	3	5	1	1	1	0	0	2	2	0	0	2	3	6	****	5	3	
4	4	15	6	6	3	11	23	20	11	16	11	7	1	3	2	3	1	3	14	9	13	8	****	28	9	
5	20	21	11	17	14	19	12	13	14	13	20	6	4	7	13	5	7	5	8	12	10	14	****	34	13	
6	11	7	6	30	34	31	38	8	20	9	11	4	12	10	11	4	13	7	5	13	5	1	****	5	13	
7	1	1	0	0	9	4	4	1	1	0	0	1	2	0	0	2	0	1	5	4	5	****	18	3		
8	14	21	25	27	26	29	28	28	25	18	5	7	6	14	6	9	3	9	3	5	3	4	****	9	14	
9	5	22	53	48	37	39	27	18	16	11	13	7	4	6	5	6	8	5	7	9	2	1	****	2	15	
10	5	4	1	2	2	6	6	3	1	5	2	1	3	4	3	1	3	2	3	4	3	10	****	4	3	
11	0	1	3	9	11	9	7	6	3	2	2	3	4	5	6	10	9	12	6	3	3	1	****	2	5	
12	1	3	5	0	4	7	6	6	3	6	6	6	4	3	5	6	6	6	11	7	4	4	****	5	5	
13	5	12	15	4	5	11	20	20	19	16	M	M	5	9	6	2	0	9	8	32	44	54	****	30	15	
14	14	10	15	10	5	9	10	17	19	22	<----->															
15	FAILURE OF DATALOGGER										39	31	33	35	33	36	37	58	49	56	78	72	68	****	34	
16	32	29	24	17	13	15	19	21	18	24	28	36	30	15	18	26	40	40	61	62	77	79	****	77	35	
17	53	39	19	11	14	16	23	22	19	28	33	24	25	26	29	17	11	13	15	12	11	11	****	44	22	
18	64	60	55	73	80	68	65	55	63	90	66	55	59	12	3	5	7	12	7	8	11	9	****	8	41	
19	9	23	32	10	21	31	41	51	75	44	7	15	3	4	4	8	6	7	0	5	4	3	****	11	18	
20	8	4	8	3	0	4	40	27	18	12	5	3	1	1	4	6	0	2	6	3	3	0	****	3	7	
21	1	0	0	1	0	0	3	8	2	3	4	0	3	2	0	1	3	8	9	1	1	3	****	13	3	
22	6	2	0	10	14	6	3	5	8	20	1	1	0	0	0	1	1	4	25	18	17	11	****	7	7	
23	1	1	1	4	7	17	15	12	10	14	0	0	3	1	0	0	1	0	1	0	2	5	****	23	5	
24	24	6	5	5	3	6	14	17	10	2	4	4	3	4	26	18	9	2	2	3	3	8	****	3	8	
25	1	22	18	2	4	9	8	13	15	13	13	13	17	13	15	5	2	13	3	1	0	1	****	39	10	
26	5	28	19	27	5	30	23	10	13	23	45	43	29	11	8	5	7	18	18	12	10	10	****	27	19	
27	50	52	59	45	36	34	23	28	25	51	40	30	22	17	10	19	13	7	13	17	12	9	****	25	28	
28	54	47	32	22	9	7	9	19	32	27	18	22	21	20	24	17	23	26	39	58	47	52	****	41	29	
29	41	20	17	13	9	11	16	23	25	33	27	28	26	24	8	5	9	7	15	9	7	23	****	11	18	
30	25	44	41	32	32	30	31	28	41	41	31	39	36	43	32	17	6	5	2	9	8	9	****	7	26	

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	14	8	36	51	64	74	0	- 90	4	93	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 : July – September 2012

Week Ending	No. of Samples	Suspended Solids, mg/L			pH		
		Maximum	Minimum	Average	Maximum	Minimum	Average
07/07/12	2*	20	15	18	8.2	8.1	8.2
14/07/12	3*	16	11	13	8.2	8.0	8.1
21/07/12	3*	18	12	14	8.2	8.1	8.1
28/07/12	5*	13	11	12	8.2	8.0	8.1
04/08/12	4*	13	10	12	8.1	8.0	8.0
11/08/12	7	13	11	12	8.2	7.9	8.1
18/08/12	6*	12	10	11	8.2	8.0	8.1
25/08/12	6*	19	11	14	8.4	8.1	8.2
01/09/12	7	19	12	15	8.4	8.1	8.2
08/09/12	6*	12	11	12	8.2	8.1	8.2
15/09/12	7	12	10	11	8.2	8.0	8.1
22/09/12	6*	15	11	12	8.3	8.0	8.1
29/09/12	7	19	9	14	8.4	8.0	8.2

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 : July – September 2012

Sampling date		4/7/2012	14/8/2012	5/9/2012
Barium,	ug/L	<150	<150	<150
Mercury,	ug/L	<0.5	<0.5	<0.5
Cadmium,	ug/L	1	1	2
Iron,	ug/L	<400	<400	<400
Total Phosphorous,	mg/L	<0.8	<0.8	<0.8
Total Nitrogen,	mg/L	131	293	54
Cyanide,	mg/L	<0.01	0.01	0.02

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

EM&A Log Ref.	Mitigation Measures	Implementation Status
	GENERAL	
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
	WATER QUALITY	
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
	WASTE	
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
	NOISE	
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