

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
October – December 2010**

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



ENVIRONMENTAL IMPACT ASSESSMENT (EIA) ORDINANCE, CAP. 499

ENVIRONMENTAL PERMITS NO. EP-248/2006 & EP-287/2007

**LAMMA POWER STATION
UNITS L2, L4 & L5 FLUE GAS DESULPHURIZATION PLANTS RETROFIT**

**ENVIRONMENTAL MONITORING & AUDIT PROGRAMME
AT OPERATIONAL PHASE**

Report Title

Quarterly EM&A Report
(October to December 2010)

Date

17 March 2011

Certified by



(Mr. IP Tat-Yan, Environmental Team Leader)

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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 October to December 2010.

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	28/10/2010 01:31 to 29/11/2010 21:26	Unit overhaul
L2	06/12/2010 20:29 to 7/12/2010 08:33	SSC repair
L4	02/10/2010 02:02 to 07/10/2010 07:14	Boiler RH tube leakage repair
L4	26/11/2010 19:52 to 28/11/2010 14:55	Boiler RH tube leakage repair
L4	11/12/2010 21:18 to 11/01/2011 07:27	Unit overhaul
L5	18/11/2010 22:51 to 25/11/2010 07:36	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	13/09/2010 09:46 to 18/10/2010 15:41	Booster fan vibration high	EPD was informed by letter on 15/09/2010 & 19/10/2010.
L2 FGD	30/11/2010 14:13 to 19:05	For the conduction of booster fan shaft alignment check.	EPD was informed by letter on 30/11/2010.

Equipment	Period	Cause	Actions Taken
L2 FGD	03/12/2010 12:28 to 17:38	Booster fan rotor shaft and bearing inspection.	EPD was informed by letters on 03/12/2010 & 06/12/2010.
L2 FGD	30/12/2010 01:41 to 31/12/2010 21:19	Booster fan bearing inspection	EPD was informed by letters on 30/12/2010 & 03/01/2011
L4 FGD	28/10/2010 04:00 to 16:45	FGD was bypassed for removing the discharge blind plate after 4A absorber recirculation pump repair.	EPD was informed by letter on 29/10/2010.
L4 FGD	22/11/2010 11:58 to 12:04	FGD was bypassed due to FGD inlet gas temperature high.	EPD was informed by letter on 23/11/2010.
L5 FGD	31/10/2010 22:35 to 22:45	Tripping of 5C absorber recirculation pump	EPD was informed by letter on 01/11/2010

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	L-7-002(7)	01/01/2009	31/12/2010	HK Electric	31/12/2008

Description	Permit / Licence No.	Valid Period		Issued To	Date of Issuance
		From	To		
issued under APCO					
WPCO discharge licence for Ash Lagoon	EP890/W2/XD018	16/04/2007	31/12/2011	HK Electric	16/04/2007

Implementation Status of Environmental Mitigation Measures

Environmental mitigation measures were implemented in the reporting period.

Environmental Complaints

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

Future key issues

Key issues to be considered in the coming months include:

Air Impact

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

Water Impact

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

Concluding Remarks

The environmental performance of the projects was generally satisfactory.

1. INTRODUCTION

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

This report summarizes the environmental monitoring and audit work for the said Projects for the period from October to December 2010.

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	28/10/2010 01:31 to 29/11/2010 21:26	Unit overhaul
L2	06/12/2010 20:29 to 7/12/2010 08:33	SSC repair
L4	02/10/2010 02:02 to 07/10/2010 07:14	Boiler RH tube leakage repair
L4	26/11/2010 19:52 to 28/11/2010 14:55	Boiler RH tube leakage repair
L4	11/12/2010 21:18 to 11/01/2011 07:27	Unit overhaul
L5	18/11/2010 22:51 to 25/11/2010 07:36	Defect rectification

1.4 Malfunction/Outage Records of Pollution Control Equipment

Equipment	Period	Cause	Actions Taken
L2 FGD	13/09/2010 09:46 to 18/10/2010 15:41	Booster fan vibration high	EPD was informed by letter on 15/09/2010 & 19/10/2010.
L2 FGD	18/10/2010 20:19 to 20:52	Tripping of 2B absorber recirculation pump.	EPD was informed by letter on 19/10/2010.

Equipment	Period	Cause	Actions Taken
L2 FGD	19/10/2010 13:23 to 13:28	Booster fan inlet damper control sluggish	EPD was informed by letter on 21/10/2010
L2 FGD	20/10/2010 13:36 to 14:15	Tripping of 2B absorber recirculation pump	EPD was informed by letter on 21/10/2010
L2 FGD	27/10/2010 16:44 to 17:06	Furnace draft surge	EPD was informed by letter on 28/10/2010
L2 FGD	30/11/2010 14:13 to 19:05	For the conduction of booster fan shaft alignment check.	EPD was informed by letter on 30/11/2010.
L2 FGD	03/12/2010 12:28 to 17:38	Booster fan rotor shaft and bearing inspection.	EPD was informed by letters on 03/12/2010 & 06/12/2010.
L2 FGD	09/12/2010 08:28 to 08:35 08:53 to 08:57	Furnace draft fluctuation.	EPD was informed by letter on 10/12/2010.
L2 FGD	10/12/2010 11:05 to 12:13	Sampling of Booster fan bearing lube oil for analysis.	EPD was informed by letters on 10/12/2010.
L2 FGD	23/12/2010 21:58 to 22:03	Booster fan inlet damper control sluggish	EPD was informed by letter on 28/12/2010
L2 FGD	30/12/2010 01:41 to 31/12/2010 21:19	Booster fan bearing inspection	EPD was informed by letters on 30/12/2010 & 03/01/2011
L4 FGD	16/10/2010 01:56 to 02:02	Routine checking of bypass dampers	EPD was informed by letter on 18/10/2010
L4 FGD	23/10/2010 02:33 to 02:52	Routine checking of bypass dampers	EPD was informed by letter on 26/10/2010
L4 FGD	28/10/2010 04:00 to 16:45	FGD was bypassed for removing the discharge blind plate after 4A absorber recirculation pump repair.	EPD was informed by letter on 29/10/2010.
L4 FGD	06/11/2010 01:48 to 01:52	Routine checking of bypass dampers	EPD was informed by letter on 09/11/2010
L4 FGD	22/11/2010 11:58 to 12:04	FGD was bypassed due to FGD inlet gas temperature high.	EPD was informed by letter on 23/11/2010.
L4 FGD	12/11/2010 23:49 to 23:56	Routine checking of bypass dampers	EPD was informed by letter on 16/11/2010
L4 FGD	04/12/2010 02:14 to 02:17	Routine checking of bypass dampers	EPD was informed by letter on 06/12/2010

Equipment	Period	Cause	Actions Taken
L5 FGD	02/10/2010 03:55 to 03:59	Routine checking of bypass dampers	EPD was informed by letter on 05/10/2010
L5 FGD	09/10/2010 02:05 to 02:10	Routine checking of bypass dampers	EPD was informed by letter on 11/10/2010
L5 FGD	16/10/2010 02:42 to 02:47	Routine checking of bypass dampers	EPD was informed by letter on 18/10/2010
L5 FGD	23/10/2010 02:00 to 02:13	Routine checking of bypass dampers	EPD was informed by letter on 26/10/2010
L5 FGD	30/10/2010 00:00 to 00:04	Routine checking of bypass dampers	EPD was informed by letter on 01/11/2010
L5 FGD	31/10/2010 22:35 to 22:45	Tripping of 5C absorber recirculation pump	EPD was informed by letter on 01/11/2010
L5 FGD	06/11/2010 01:50 to 01:59	Routine checking of bypass dampers	EPD was informed by letter on 09/11/2010
L5 FGD	11/11/2010 22:11 to 22:21	FGD was bypassed due to furnace draft unstable during unloading.	EPD was informed by letter on 11/11/2010
L5 FGD	04/12/2010 02:26 to 02:30	Routine checking of bypass dampers	EPD was informed by letter on 06/12/2010
L5 FGD	11/12/2010 00:31 to 00:35	Routine checking of bypass dampers	EPD was informed by letter on 13/12/2010
L5 FGD	19/12/2010 02:49 to 02:53	Routine checking of bypass dampers	EPD was informed by letter on 20/12/2010
L5 FGD	25/12/2010 02:15 to 02:19	Routine checking of bypass dampers	EPD was informed by letter on 28/12/2010

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.

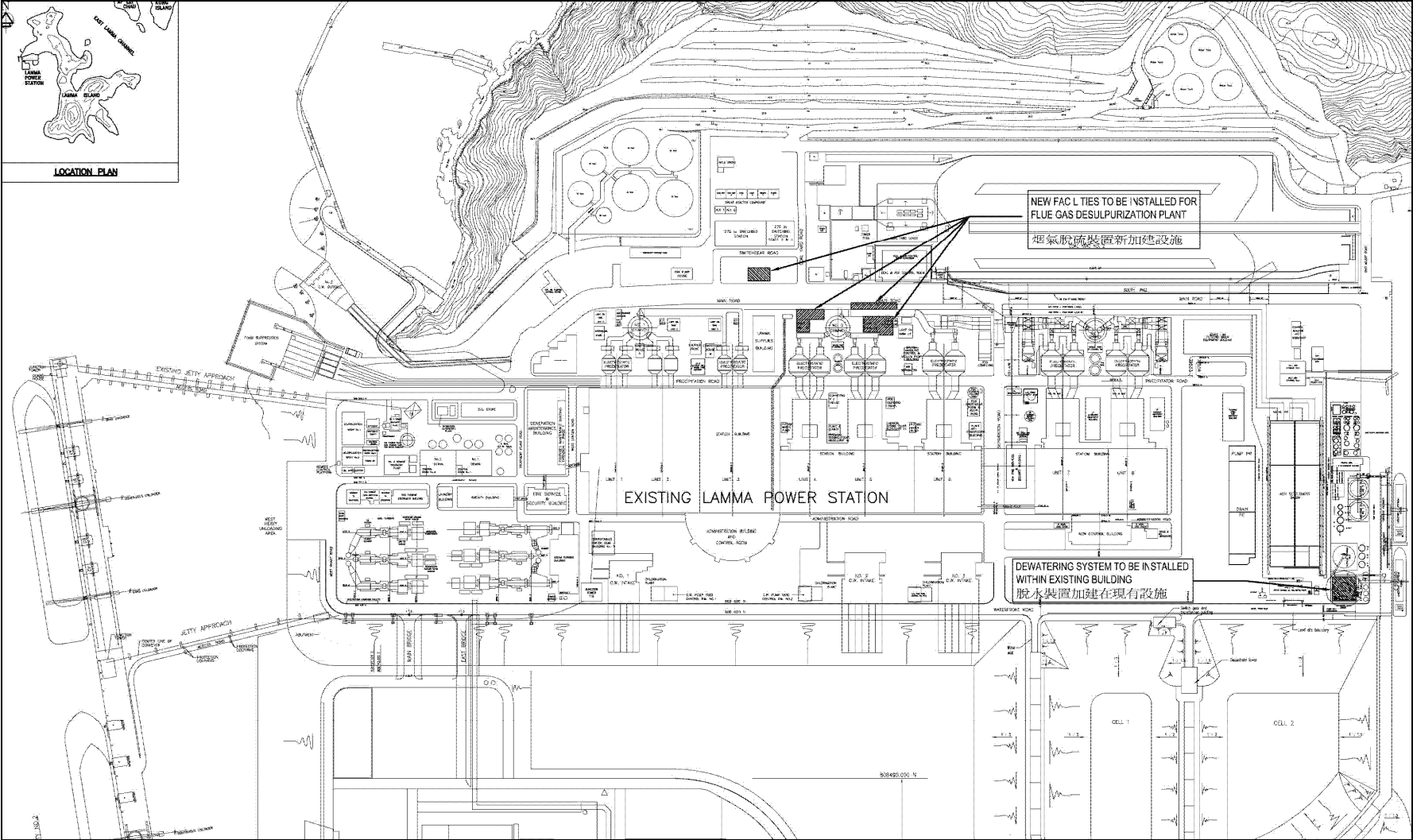


Figure 1.1a Location of New Facilities for L4 & L5 FGD Plants

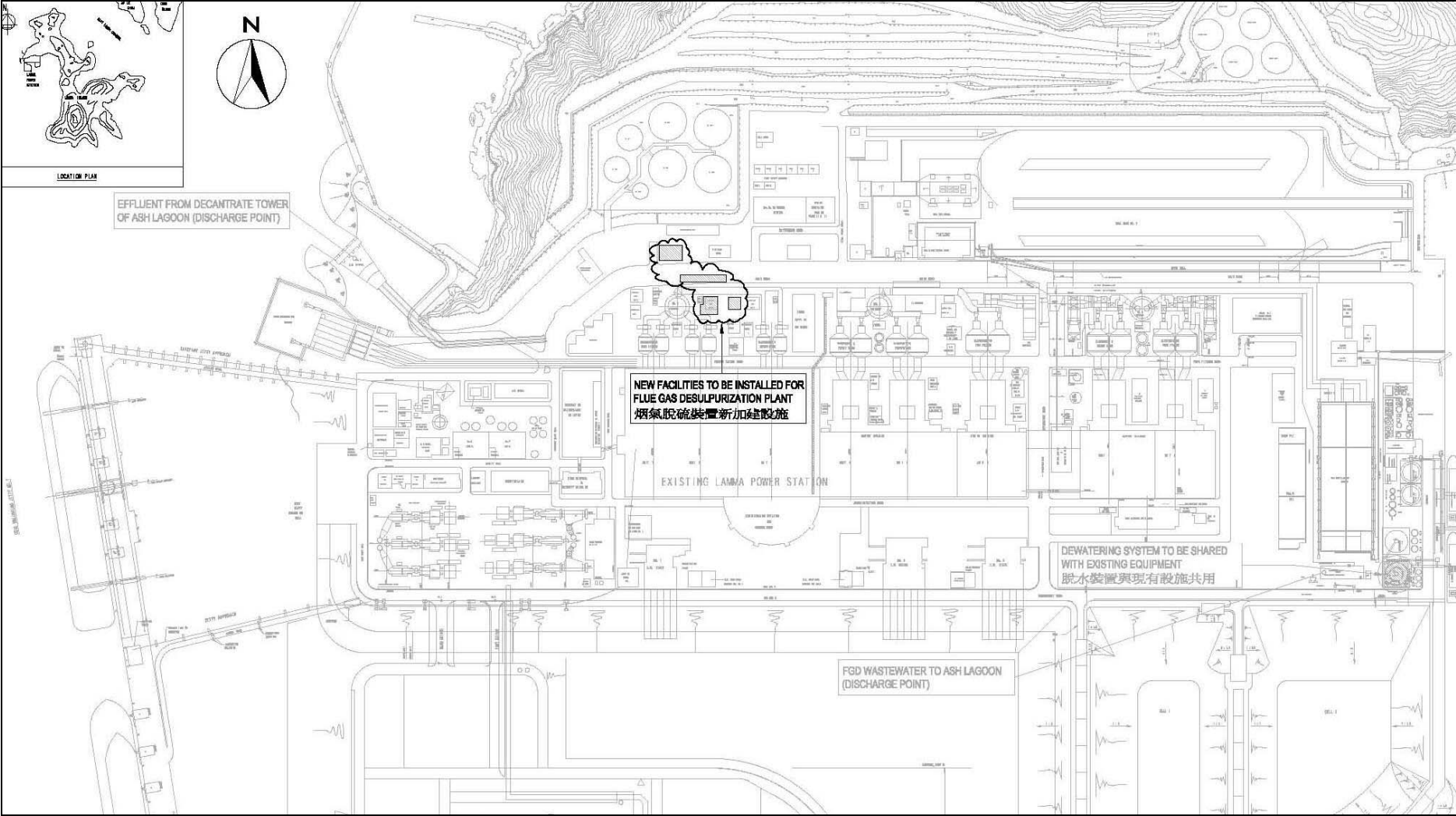


Figure 1.1b Location of New Facilities for L2 FGD Plant

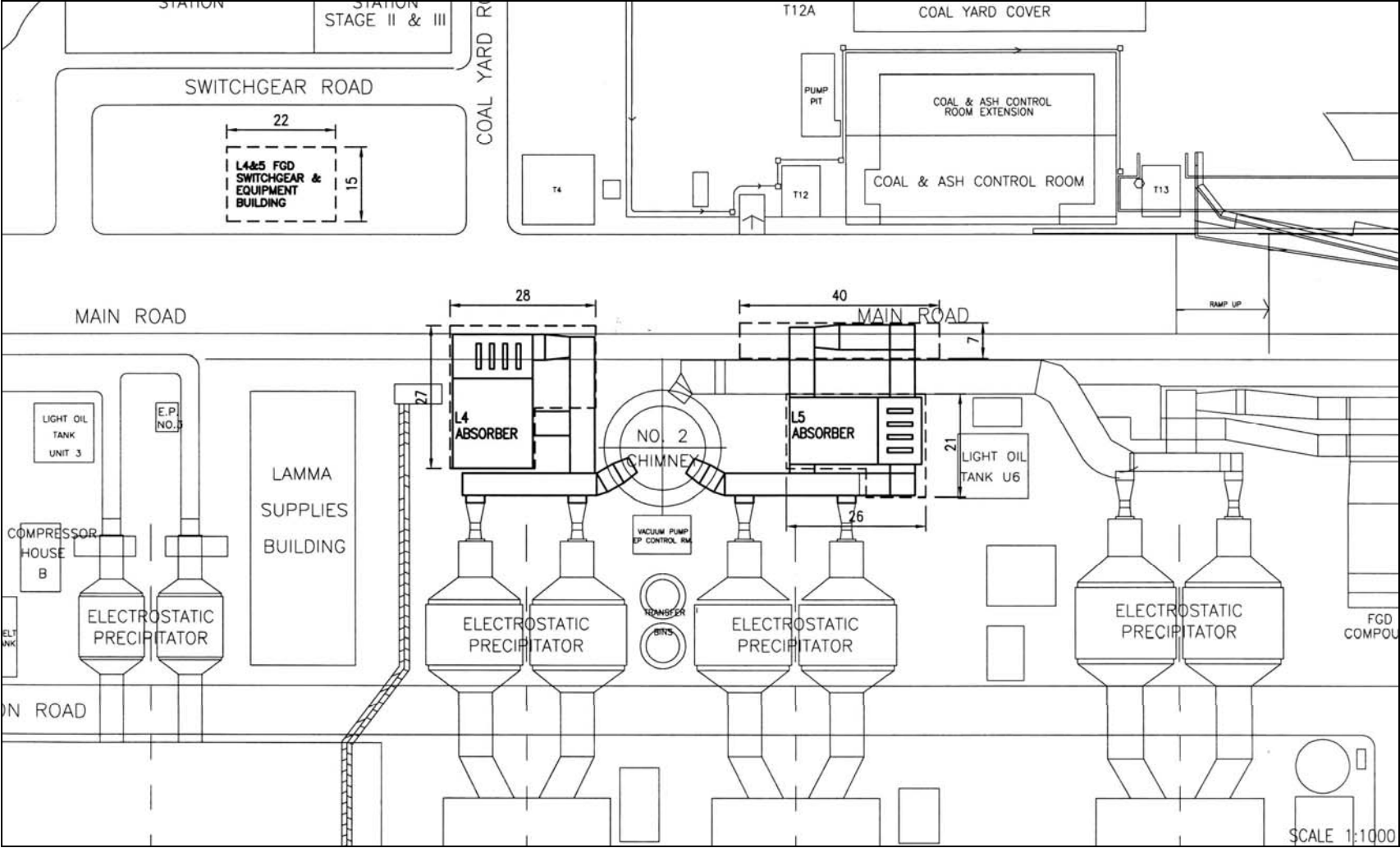


Figure 1.2a General Arrangement of L4 & L5 FGD Plants

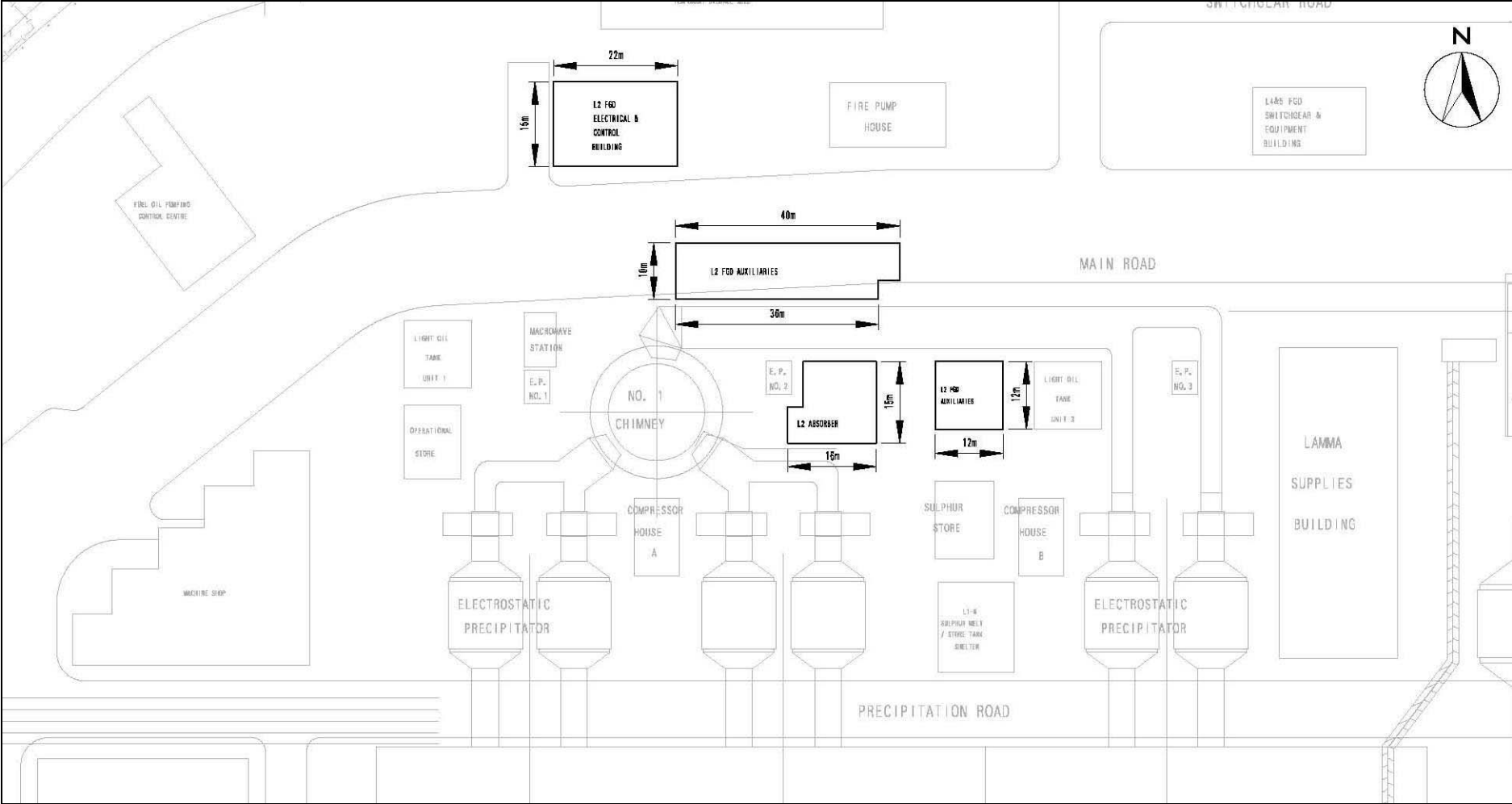


Figure 1.2b General Arrangement of L2 FGD Plant

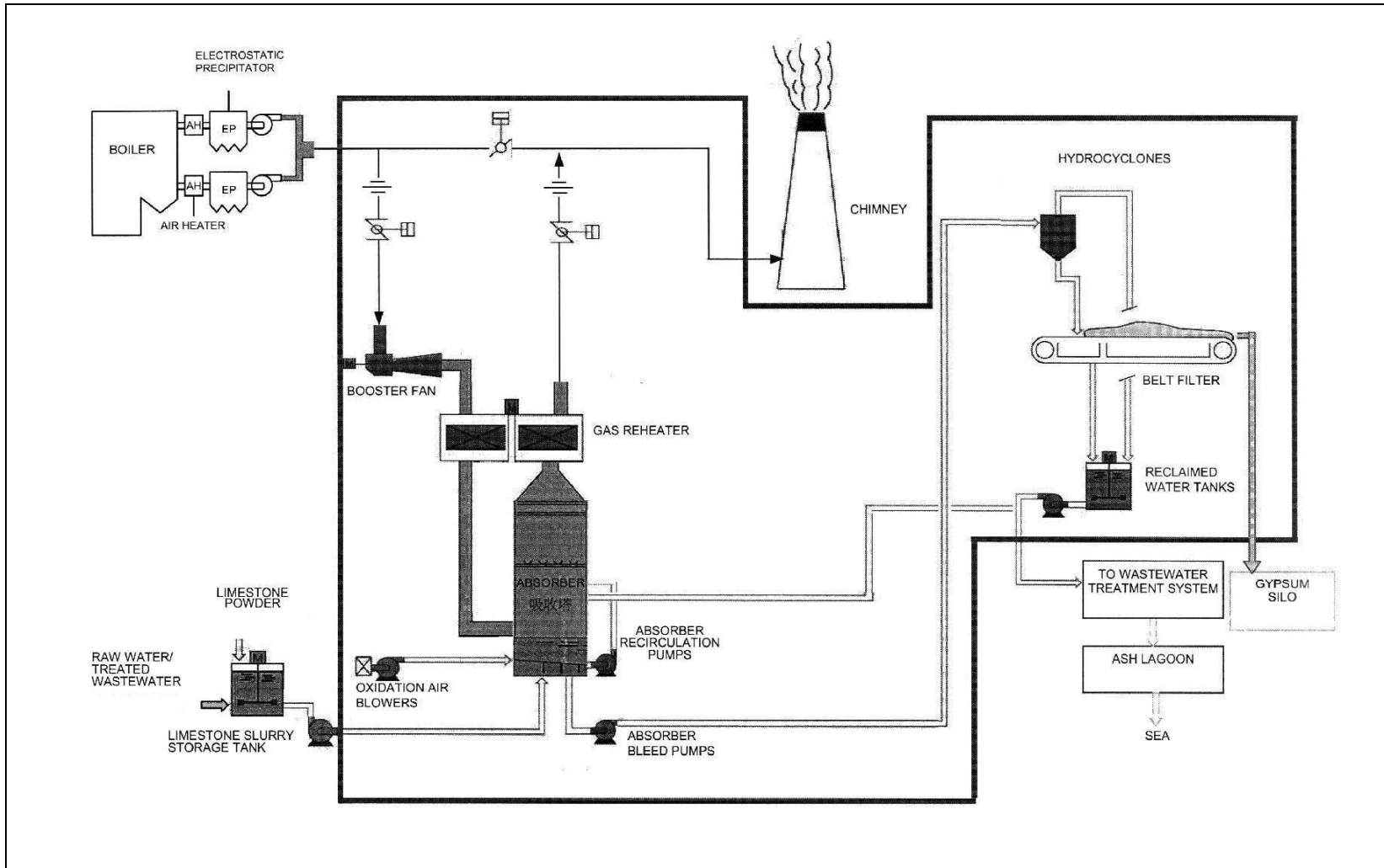


Figure 1.3 Schematic Diagram of the L4 & L5 FGD Plant

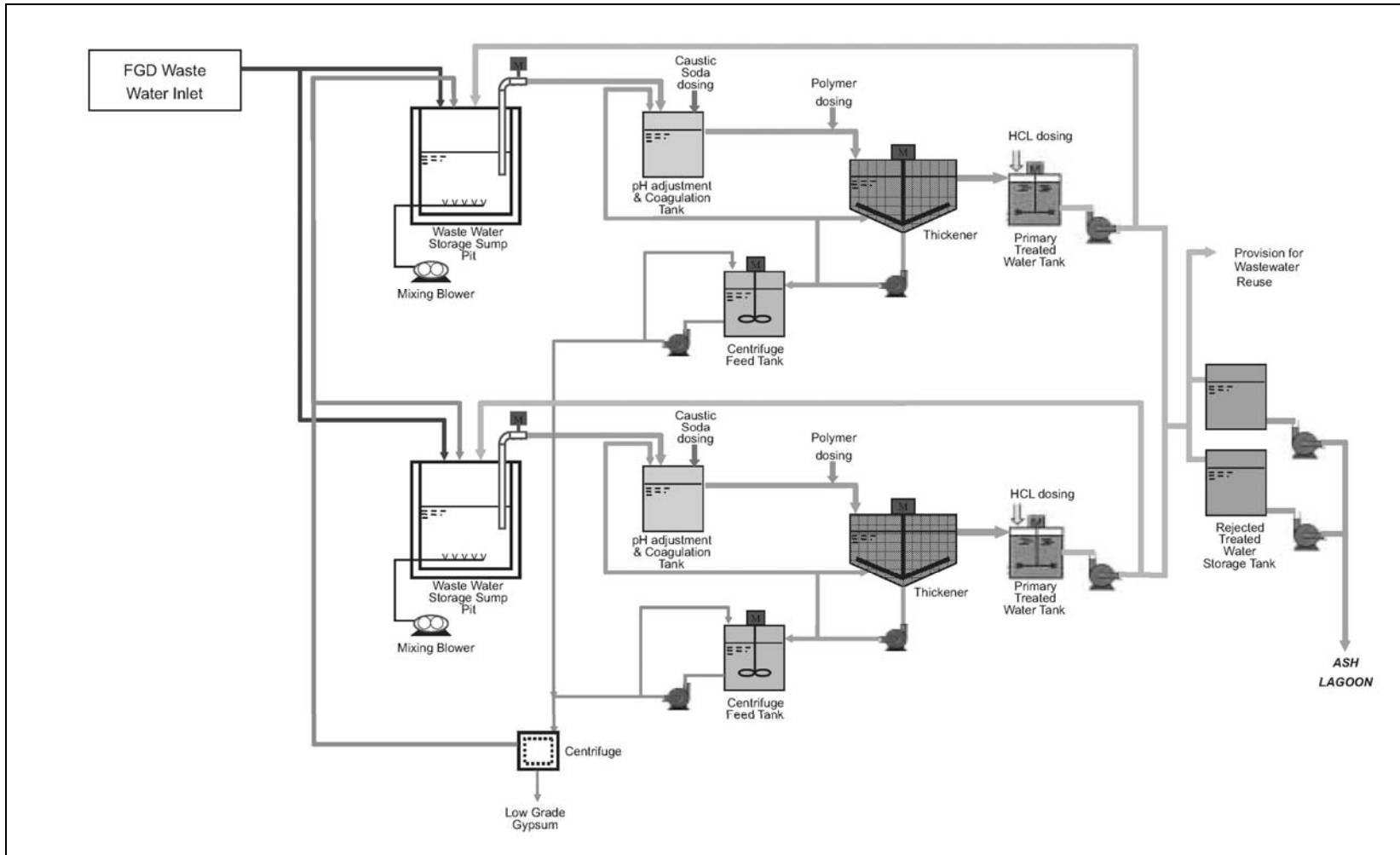


Figure 1.4 Simplified Schematic Diagram of FGD Wastewater Treatment Plant

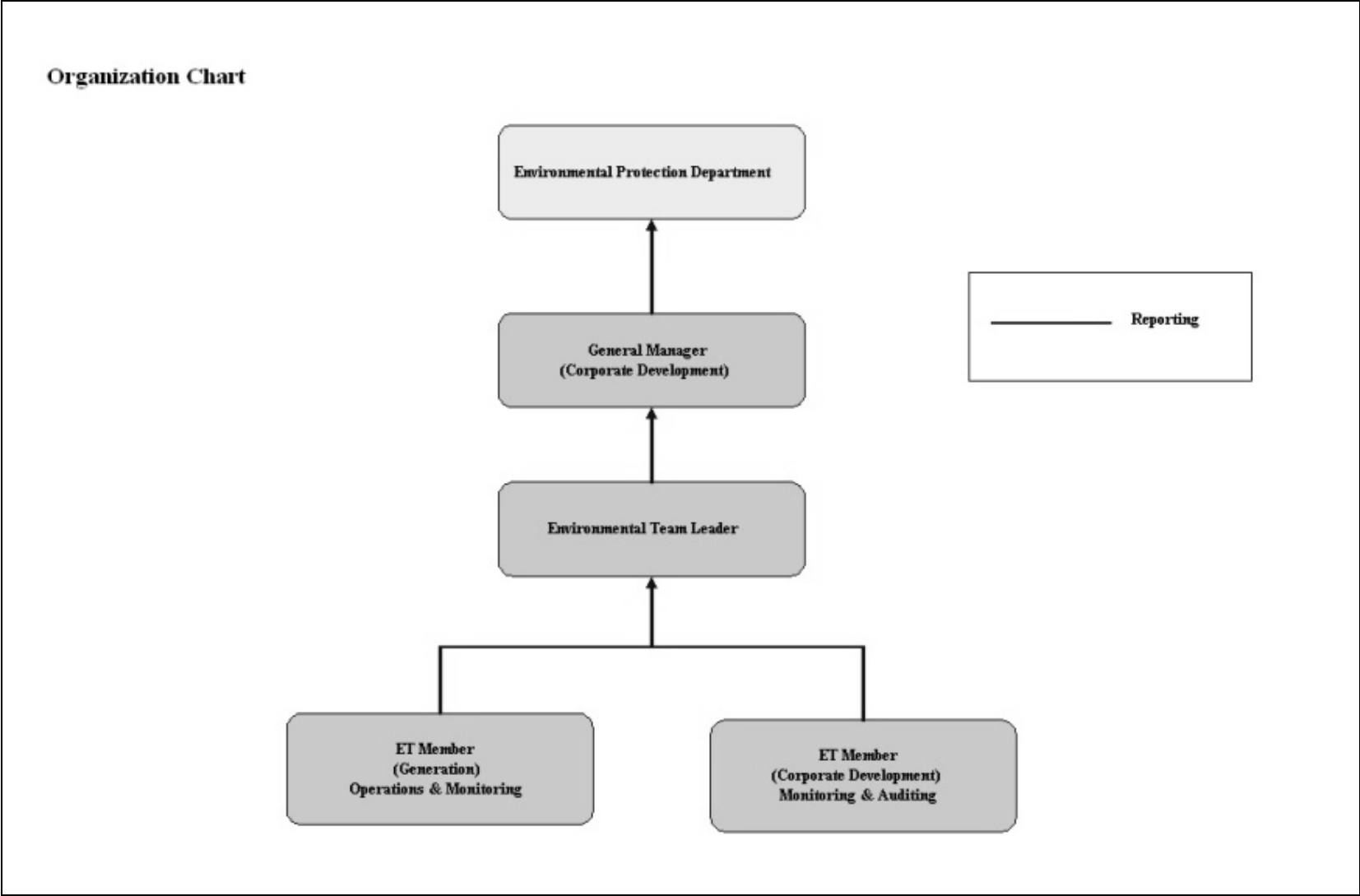


Figure 1.5 Organization Structure at Operational Phase of the Projects

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.

The ambient air monitoring station at Cheung Chau was temporarily suspended since October 2010 and the preparation work for installation of a new station at Cheung Chau was in progress.

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.	01/10/10-31/12/10	N.A.	0	
2	Continuous monitoring of opacity, NO _x , SO ₂ and CO ₂ in the flue gas at the chimney stacks	01/10/10-31/12/10	0	0	
3	TSP monitoring at Lamma Power Station Boundary (ie East Gate and Reservoir).	01/10/10-31/12/10	0	0	
4	Ambient SO ₂ & NO _x monitoring at the Peak, Queen Mary Hospital, Victoria Road, Chung Hom Kok, Ap Lei Chau and	01/10/10-31/12/10	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	01/10/10-31/12/10	0	0	
2	Suspended Solids in WWTP Effluent	01/10/10-31/12/10	0	0	
3	Iron in WWTP Effluent	01/10/10-31/12/10	0	0	
4	Barium in WWTP Effluent	01/10/10-31/12/10	0	0	
5	Mercury in WWTP Effluent	01/10/10-31/12/10	0	0	
6	Cadmium in WWTP Effluent	01/10/10-31/12/10	0	0	
7	Cyanide in WWTP Effluent	01/10/10-31/12/10	0	0	
8	Total Phosphorus in WWTP Effluent	01/10/10-31/12/10	0	0	
9	Total Nitrogen in WWTP Effluent	01/10/10-31/12/10	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
October 2010	8272.4 MT	33.3 MT
November 2010	6084.5 MT	24.6 MT
December 2010	4228.6 MT	54.5 MT

4.3 Status of Environmental Licensing and Permitting

All permits/licenses obtained as of December 2010 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	L-7-002(7)	01/01/2009	31/12/2010	Valid
WPCO discharge licence for Ash Lagoon	EP890/W2/XD018	16/04/2007	31/12/2011	Valid

4.4 Implementation Status of Environmental Mitigation Measures

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

4.5 Implementation Status of Event/Action Plan

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

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

4.6 Implementation Status of Environmental Complaint Handling Procedures

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

Table 4.4 Environmental Complaints / Enquiries Received

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

Table 4.4 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 planned for the next 3 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 October to December 2010. 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. No complaint on environmental issues against the projects was received during the reporting period. 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 (%)
1/10/2010	68	263	14
2/10/2010	68	257	14
3/10/2010	83	200	14
4/10/2010	99	256	13
5/10/2010	92	263	14
6/10/2010	89	313	14
7/10/2010	120	278	14
8/10/2010	130	282	14
9/10/2010	107	319	14
10/10/2010	69	283	13
11/10/2010	61	290	14
12/10/2010	110	294	15
13/10/2010	65	284	14
14/10/2010	65	438	17
15/10/2010	82	367	16
16/10/2010	87	482	14
17/10/2010	72	351	14
18/10/2010	106	307	15
19/10/2010	89	361	15
20/10/2010	81	378	18
21/10/2010	118	408	18
22/10/2010	126	374	14
23/10/2010	86	387	14
24/10/2010	84	440	15
25/10/2010	101	378	21
26/10/2010	101	371	14
27/10/2010	68	366	14
28/10/2010	117	347	14
29/10/2010	126	350	14
30/10/2010	65	486	15
31/10/2010	76	391	14

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) [#]	NOx concentration (mg/Nm3) [#]	Opacity (%)
1/11/2010	136	387	18
2/11/2010	82	415	16
3/11/2010	106	436	15
4/11/2010	82	419	14
5/11/2010	119	383	15
6/11/2010	102	349	18
7/11/2010	88	394	14
8/11/2010	111	479	14
9/11/2010	105	472	14
10/11/2010	91	402	14
11/11/2010	89	394	14
12/11/2010	94	317	14
13/11/2010	85	356	14
14/11/2010	58	370	14
15/11/2010	81	362	14
16/11/2010	58	344	16
17/11/2010	62	358	15
18/11/2010	68	331	14
19/11/2010	*	*	*
20/11/2010	*	*	*
21/11/2010	*	*	*
22/11/2010	*	*	*
23/11/2010	*	*	*
24/11/2010	*	*	*
25/11/2010	72	385	15
26/11/2010	88	369	14
27/11/2010	77	346	13
28/11/2010	110	347	15
29/11/2010	99	284	14
30/11/2010	57	295	14

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) [#]	NOx concentration (mg/Nm3) [#]	Opacity (%)
1/12/2010	129	267	15
2/12/2010	77	266	14
3/12/2010	88	263	14
4/12/2010	66	263	14
5/12/2010	74	242	14
6/12/2010	99	318	14
7/12/2010	87	326	14
8/12/2010	76	253	14
9/12/2010	95	251	14
10/12/2010	100	218	15
11/12/2010	69	251	14
12/12/2010	112	245	14
13/12/2010	79	227	14
14/12/2010	88	279	14
15/12/2010	75	304	15
16/12/2010	70	274	14
17/12/2010	121	232	14
18/12/2010	93	225	14
19/12/2010	80	251	14
20/12/2010	92	246	14
21/12/2010	88	321	16
22/12/2010	42	446	14
23/12/2010	89	475	13
24/12/2010	63	378	13
25/12/2010	85	319	13
26/12/2010	54	342	13
27/12/2010	56	331	13
28/12/2010	117	360	13
29/12/2010	103	419	14
30/12/2010	123	440	14
31/12/2010	145	390	15

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 (%)
1/10/2010	2	452	10
2/10/2010	0	372	10
3/10/2010	*	*	*
4/10/2010	*	*	*
5/10/2010	*	*	*
6/10/2010	*	*	*
7/10/2010	1	372	15
8/10/2010	29	471	20
9/10/2010	16	433	12
10/10/2010	13	451	14
11/10/2010	21	417	17
12/10/2010	48	458	12
13/10/2010	45	421	12
14/10/2010	72	504	19
15/10/2010	82	449	18
16/10/2010	114	346	16
17/10/2010	139	375	10
18/10/2010	113	290	13
19/10/2010	77	409	11
20/10/2010	65	400	19
21/10/2010	97	361	18
22/10/2010	133	433	13
23/10/2010	87	436	12
24/10/2010	129	469	12
25/10/2010	97	425	13
26/10/2010	117	369	9
27/10/2010	83	381	10
28/10/2010	105	368	15
29/10/2010	102	367	11
30/10/2010	60	518	12
31/10/2010	53	377	13

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) [#]	NOx concentration (mg/Nm3) [#]	Opacity (%)
1/11/2010	76	368	22
2/11/2010	79	422	10
3/11/2010	152	436	12
4/11/2010	108	429	12
5/11/2010	137	462	12
6/11/2010	105	398	13
7/11/2010	89	431	9
8/11/2010	108	471	12
9/11/2010	104	405	10
10/11/2010	95	412	10
11/11/2010	98	410	11
12/11/2010	90	360	11
13/11/2010	102	368	11
14/11/2010	72	328	11
15/11/2010	100	415	11
16/11/2010	79	425	9
17/11/2010	74	473	9
18/11/2010	94	427	11
19/11/2010	56	454	12
20/11/2010	88	514	11
21/11/2010	75	522	11
22/11/2010	125	473	14
23/11/2010	116	511	7
24/11/2010	62	410	8
25/11/2010	76	382	9
26/11/2010	78	406	11
27/11/2010	*	*	*
28/11/2010	77	326	11
29/11/2010	69	369	11
30/11/2010	74	400	10

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) [#]	NOx concentration (mg/Nm3) [#]	Opacity (%)
1/12/2010	75	330	11
2/12/2010	62	351	11
3/12/2010	84	365	9
4/12/2010	98	460	9
5/12/2010	134	437	9
6/12/2010	91	303	11
7/12/2010	100	290	9
8/12/2010	96	276	9
9/12/2010	82	272	10
10/12/2010	53	301	13
11/12/2010	104	274	12
12/12/2010	*	*	*
13/12/2010	*	*	*
14/12/2010	*	*	*
15/12/2010	*	*	*
16/12/2010	*	*	*
17/12/2010	*	*	*
18/12/2010	*	*	*
19/12/2010	*	*	*
20/12/2010	*	*	*
21/12/2010	*	*	*
22/12/2010	*	*	*
23/12/2010	*	*	*
24/12/2010	*	*	*
25/12/2010	*	*	*
26/12/2010	*	*	*
27/12/2010	*	*	*
28/12/2010	*	*	*
29/12/2010	*	*	*
30/12/2010	*	*	*
31/12/2010	*	*	*

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 (%)
1/10/2010	FGD bypassed	24
2/10/2010	FGD bypassed	23
3/10/2010	FGD bypassed	24
4/10/2010	FGD bypassed	20
5/10/2010	FGD bypassed	19
6/10/2010	FGD bypassed	16
7/10/2010	*	*
8/10/2010	FGD bypassed	22
9/10/2010	FGD bypassed	20
10/10/2010	*	*
11/10/2010	FGD bypassed	21
12/10/2010	FGD bypassed	26
13/10/2010	FGD bypassed	27
14/10/2010	FGD bypassed	29
15/10/2010	FGD bypassed	26
16/10/2010	*	*
17/10/2010	*	*
18/10/2010	78	20
19/10/2010	110	17
20/10/2010	80	21
21/10/2010	84	18
22/10/2010	68	17
23/10/2010	*	*
24/10/2010	*	*
25/10/2010	115	17
26/10/2010	107	15
27/10/2010	178	16
28/10/2010	*	*
29/10/2010	*	*
30/10/2010	*	*
31/10/2010	*	*

Date	Daily Maximum	
	SO2 concentration (mg/Nm3) #	Opacity (%)
1/11/2010	*	*
2/11/2010	*	*
3/11/2010	*	*
4/11/2010	*	*
5/11/2010	*	*
6/11/2010	*	*
7/11/2010	*	*
8/11/2010	*	*
9/11/2010	*	*
10/11/2010	*	*
11/11/2010	*	*
12/11/2010	*	*
13/11/2010	*	*
14/11/2010	*	*
15/11/2010	*	*
16/11/2010	*	*
17/11/2010	*	*
18/11/2010	*	*
19/11/2010	*	*
20/11/2010	*	*
21/11/2010	*	*
22/11/2010	*	*
23/11/2010	*	*
24/11/2010	*	*
25/11/2010	*	*
26/11/2010	*	*
27/11/2010	*	*
28/11/2010	*	*
29/11/2010	*	*
30/11/2010	40	17

Date	Daily Maximum	
	SO2 concentration (mg/Nm3) [#]	Opacity (%)
1/12/2010	62	18
2/12/2010	85	12
3/12/2010	92	16
4/12/2010	74	12
5/12/2010	76	13
6/12/2010	95	13
7/12/2010	112	12
8/12/2010	111	12
9/12/2010	103	13
10/12/2010	93	15
11/12/2010	76	14
12/12/2010	*	*
13/12/2010	92	15
14/12/2010	101	11
15/12/2010	107	11
16/12/2010	120	11
17/12/2010	115	12
18/12/2010	127	13
19/12/2010	114	13
20/12/2010	122	13
21/12/2010	89	11
22/12/2010	103	12
23/12/2010	86	12
24/12/2010	101	13
25/12/2010	102	12
26/12/2010	94	13
27/12/2010	92	13
28/12/2010	106	14
29/12/2010	95	14
30/12/2010	44	20
31/12/2010	FGD Bypassed	17

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

No stack particulate sampling was conducted in the reporting period.

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: OCTOBER
 YEAR : 2010
 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	1	1	1	1	2	3	4	4	3	4	4	3	3	2	4	5	5	5	5	1	****	2	3
2	1	0	2	3	2	3	4	3	4	5	6	3	3	3	3	3	4	5	3	4	6	7	****	7	4
3	5	7	7	8	5	5	5	5	6	5	6	3	0	0	1	1	4	8	9	5	2	4	****	2	5
4	2	3	2	3	5	6	5	6	5	6	5	6	5	6	6	6	6	7	15	20	11	7	****	8	7
5	7	6	9	9	9	10	10	14	12	13	12	11	11	10	9	7	7	6	6	6	6	6	****	6	9
6	7	8	8	8	8	7	8	8	9	10	9	7	9	9	9	7	8	7	6	6	6	5	****	4	8
7	1	1	1	2	6	6	6	6	7	6	5	6	5	4	5	5	4	6	4	5	6	5	****	7	5
8	8	7	8	6	6	5	7	8	10	10	10	10	10	9	9	8	9	5	5	4	2	2	****	5	7
9	4	5	3	3	2	1	1	2	3	4	6	5	5	4	7	7	5	3	4	3	2	****	4	4	
10	4	2	2	4	3	3	2	2	2	2	2	2	1	2	1	1	1	1	0	0	0	****	1	2	
11	0	0	1	1	1	0	2	2	2	3	3	3	4	3	3	2	2	3	3	4	5	4	****	6	3
12	6	5	3	2	3	3	4	1	2	4	3	4	2	3	3	2	2	2	2	3	3	9	****	3	3
13	3	3	4	2	1	1	1	2	1	1	1	1	1	0	0	0	0	0	0	1	1	2	****	2	1
14	2	3	2	1	1	1	2	1	1	2	2	2	1	1	0	0	0	0	1	1	1	3	****	2	1
15	1	1	1	4	3	2	2	3	2	2	2	3	3	4	3	3	3	5	6	6	9	8	****	7	4
16	6	6	6	7	5	4	4	5	6	6	7	6	5	6	5	5	5	5	5	3	4	4	****	3	5
17	4	6	6	7	7	7	7	8	8	7	7	6	5	6	6	5	5	5	5	4	2	****	5	6	
18	4	4	5	5	6	3	3	6	14	20	16	9	10	9	8	7	7	8	8	7	6	7	****	6	8
19	7	9	11	11	11	13	13	14	25	21	16	13	9	11	5	5	6	9	14	17	14	14	****	14	12
20	14	15	13	12	12	12	12	11	12	10	10	9	9	9	8	9	8	8	8	10	9	****	9	10	
21	8	6	5	5	5	7	8	5	4	5	4	4	4	5	6	5	4	5	3	3	4	4	****	4	5
22	7	18	22	14	12	12	7	7	4	5	7	14	11	8	9	12	10	10	8	8	8	11	****	11	10
23	11	12	14	12	15	20	21	31	39	36	38	45	62	60	51	44	49	49	35	23	13	10	****	23	31
24	27	26	26	24	34	32	14	14	19	14	10	17	18	18	22	31	12	7	7	9	7	****	4	18	
25	6	7	5	3	3	3	4	5	14	13	10	8	11	6	5	5	13	13	6	5	5	3	****	3	7
26	5	5	3	3	4	4	4	4	5	5	6	7	5	3	4	4	6	8	8	11	4	3	****	3	5
27	3	3	3	3	3	3	4	6	15	11	9	7	7	11	11	10	13	14	14	15	15	****	16	9	
28	16	10	8	8	8	7	6	7	12	10	11	11	13	11	8	10	15	15	16	18	15	13	****	13	11
29	11	11	10	12	12	11	11	13	17	20	19	16	16	15	14	15	16	17	19	22	22	22	****	24	16
30	24	23	23	25	24	23	23	29	28	27	35	35	23	16	17	22	28	31	24	22	21	21	****	23	25
31	23	21	20	20	20	19	19	19	18	17	18	15	14	12	12	14	16	26	24	16	14	14	****	15	18

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
5	6	6	18	23	32	39	0	-	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 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: OCTOBER
 YEAR : 2010
 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	12	8	9	9	8	12	18	19	21	20	19	18	17	18	20	25	31	30	34	30	19	****	15	18
2	15	8	7	11	8	8	12	18	21	30	32	34	29	28	39	33	44	50	45	53	52	53	****	31	29
3	26	20	22	16	26	16	19	18	22	34	30	30	32	40	33	52	58	62	69	58	57	56	****	51	37
4	44	27	16	13	13	12	23	27	31	39	36	39	30	45	45	55	51	58	101	85	68	49	****	32	41
5	22	11	16	10	9	12	15	30	37	54	51	53	42	45	61	60	62	69	71	55	49	52	****	42	40
6	28	24	16	13	13	12	18	34	44	55	54	50	27	40	43	50	40	39	34	29	22	10	****	15	31
7	7	6	4	5	10	8	12	23	35	47	43	38	34	43	37	39	53	65	55	58	45	24	****	36	32
8	30	18	16	13	12	12	21	35	47	49	43	39	31	26	31	33	33	34	25	24	16	8	****	11	26
9	7	9	8	8	6	5	6	14	22	29	38	33	34	28	28	26	29	38	32	26	20	12	****	11	20
10	10	5	5	6	6	6	6	7	8	12	13	11	10	7	5	5	7	7	4	1	4	2	****	4	6
11	1	0	1	1	1	1	3	7	10	13	16	14	12	10	15	11	10	15	22	16	14	13	****	12	10
12	13	8	5	3	4	3	8	10	17	22	18	17	17	15	16	23	19	39	42	41	20	15	****	12	17
13	12	13	11	6	6	4	11	20	28	23	25	20	30	17	18	19	23	24	30	13	14	17	****	26	18
14	21	17	9	5	3	3	8	14	25	25	30	29	28	33	28	38	27	39	42	34	26	34	****	16	23
15	16	8	7	8	6	8	7	18	36	41	40	39	29	33	38	40	45	41	38	44	42	35	****	40	29
16	29	26	17	15	12	14	15	17	21	25	38	40	43	50	46	45	47	61	55	48	45	33	****	11	33
17	14	9	11	10	10	11	16	18	23	20	16	21	18	19	27	39	35	31	29	14	12	7	****	12	18
18	13	11	7	8	10	8	17	35	50	66	61	47	38	43	48	44	31	33	30	34	36	49	****	78	35
19	58	49	33	26	20	17	24	43	62	62	66	64	47	42	40	35	39	59	67	60	56	52	****	42	46
20	44	32	20	18	19	17	23	39	48	58	48	42	39	42	39	52	44	40	45	51	47	38	****	31	38
21	29	18	15	11	12	14	21	31	36	37	39	36	29	31	31	33	37	43	40	37	33	25	****	18	29
22	21	29	29	17	12	17	17	26	25	27	31	47	38	32	41	55	49	38	49	38	31	26	****	57	33
23	46	40	30	15	16	18	24	34	43	46	50	54	79	83	74	63	70	82	76	87	71	36	****	55	52
24	55	52	44	42	51	55	32	30	43	50	45	56	58	67	58	74	99	88	62	59	70	52	****	35	56
25	47	37	20	11	12	13	19	37	42	41	44	47	41	45	54	57	70	74	53	59	58	59	****	51	43
26	50	30	20	15	15	15	22	28	34	51	46	51	42	45	45	49	60	61	62	57	50	45	****	30	40
27	27	25	17	19	20	16	19	34	45	42	40	40	32	40	47	42	36	36	41	55	58	43	****	38	35
28	39	33	22	24	23	14	19	31	46	49	45	44	46	43	41	50	61	69	76	73	65	56	****	37	44
29	32	21	17	17	21	19	31	66	62	73	77	65	52	49	51	54	72	96	85	79	83	72	****	55	54
30	45	33	28	23	19	19	30	57	76	79	82	83	65	50	54	67	79	96	115	105	92	78	****	58	62
31	59	50	41	37	36	28	40	56	65	37	41	48	56	51	50	68	65	81	98	114	127	130	****	56	62

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	
27	32	34	32	61	73	84	97	0	- 130	2	96	0	0	

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

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

STATION : VICTORIA PEAK
POLLUTANT : SULPHUR DIOXIDE
MONTH: NOVEMBER
YEAR : 2010
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	12	13	13	12	10	10	10	14	14	13	14	12	11	9	7	7	6	17	8	11	13	10	****	5	11	
2	5	5	4	4	5	7	7	11	11	12	13	12	10	9	6	5	4	5	4	5	7	5	****	6	7	
3	6	6	6	6	6	6	8	9	11	15	15	13	10	11	9	10	8	9	8	8	9	11	9	****	10	9
4	10	10	10	10	14	15	16	18	18	17	16	15	14	15	11	8	8	6	3	3	2	1	****	3	10	
5	2	2	4	4	4	4	5	7	11	9	8	11	13	9	8	5	3	2	2	2	2	1	****	2	5	
6	1	1	1	1	1	2	4	5	5	3	4	3	10	8	5	4	9	6	13	11	10	5	****	6	5	
7	3	4	3	3	4	5	5	10	11	16	15	16	29	42	32	25	34	11	9	5	5	9	****	5	13	
8	5	6	6	8	6	8	9	8	14	13	21	13	13	8	5	5	8	12	21	10	9	6	****	6	10	
9	14	20	20	21	21	20	20	31	39	28	18	16	15	14	13	12	12	14	14	14	13	14	****	12	18	
10	11	12	11	13	14	10	11	10	13	15	14	14	13	11	9	8	10	12	14	14	8	9	****	6	11	
11	9	18	19	13	13	13	12	15	16	12	9	8	8	8	12	4	5	8	27	15	14	12	****	7	12	
12	6	5	6	10	11	12	12	13	14	14	9	9	8	7	7	7	5	4	2	3	3	3	****	4	8	
13	4	3	5	5	6	6	7	7	6	4	4	4	3	3	4	5	7	3	2	2	2	2	****	1	4	
14	1	2	2	4	4	4	5	6	5	6	7	5	3	3	5	6	4	5	6	7	4	2	****	1	4	
15	3	3	3	4	3	5	5	6	6	5	6	5	2	2	4	4	4	3	5	4	3	1	****	1	4	
16	0	0	0	1	1	1	3	8	9	6	6	7	13	11	13	11	14	15	12	12	11	5	****	5	7	
17	6	4	3	3	3	3	4	6	6	7	6	7	17	13	19	10	8	7	5	5	5	5	****	4	7	
18	4	4	3	4	3	4	4	5	7	9	10	12	10	18	19	11	M	9	9	10	5	7	****	5	8	
19	3	3	3	2	2	2	2	2	5	11	11	12	16	28	35	21	15	22	28	51	18	11	****	19	14	
20	19	7	8	8	7	6	6	6	6	6	4	4	5	5	4	4	3	4	4	4	4	4	****	3	6	
21	2	1	1	2	2	1	1	2	2	3	3	3	4	4	10	8	9	10	12	15	7	9	****	11	5	
22	13	10	10	11	13	13	17	24	29	48	50	29	23	18	14	29	32	15	12	16	14	13	****	11	20	
23	8	7	6	6	7	6	6	5	6	6	8	18	25	22	27	33	26	14	8	8	11	9	****	8	12	
24	8	7	7	7	6	6	6	6	7	7	7	7	11	11	10	10	9	7	8	9	8	7	****	7	8	
25	8	7	6	9	9	9	8	9	17	18	20	14	13	10	9	11	9	10	13	13	14	10	****	5	11	
26	4	5	7	5	7	7	6	11	12	13	10	10	10	9	8	8	10	9	10	12	10	10	****	7	9	
27	7	7	7	6	5	6	7	9	10	10	9	10	7	7	5	5	4	4	3	4	4	4	****	3	6	
28	2	3	3	1	2	1	2	3	5	6	6	6	3	2	2	3	4	4	5	4	3	****	4	3		
29	4	5	5	4	4	5	6	5	9	9	10	11	26	10	10	10	9	8	6	7	8	7	****	6	8	
30	6	5	6	6	7	9	10	8	10	12	38	50	31	23	35	44	52	36	18	16	16	17	****	12	20	

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	9	7	16	22	33	41	0	- 52	2	96	0	0	

- NOTES:
1. FLAGS FOR INVALID DATA :
 - **** : DAILY ZERO/SPAN CHECK
 - D : DYNAMIC CALIBRATION
 - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
 - M : MAINTENANCE OR MACHINE SHUTDOWN
 - P : POWER FAILURE
 2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 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: NOVEMBER
YEAR : 2010
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	38	21	18	15	13	15	23	32	56	59	57	49	48	39	52	61	67	86	42	24	34	31	****	16	39
2	14	12	10	9	9	9	22	43	53	54	56	44	39	45	37	36	37	50	64	44	49	36	****	24	35
3	23	20	15	11	14	20	30	59	85	92	78	75	66	56	59	50	67	62	52	54	72	49	****	38	50
4	30	24	17	18	24	27	30	62	52	64	69	57	54	52	54	57	50	73	69	63	52	48	****	29	47
5	22	18	14	14	14	14	20	49	64	84	78	81	82	89	103	107	60	68	67	70	57	42	****	28	54
6	31	24	15	21	33	26	34	48	64	74	82	73	81	82	88	85	87	93	98	105	91	56	****	66	63
7	48	67	52	53	36	22	52	58	58	70	74	56	75	87	84	77	82	61	92	102	50	39	****	22	62
8	16	7	17	19	20	23	29	49	77	76	84	77	68	53	56	66	95	111	123	85	71	54	****	72	59
9	41	27	17	13	15	18	31	72	97	89	67	58	48	56	62	70	104	104	56	48	39	42	****	26	52
10	31	24	17	16	14	14	21	45	63	73	72	71	53	40	39	41	24	52	55	51	42	30	****	23	40
11	25	18	17	16	17	17	24	44	64	78	71	63	40	50	77	55	79	106	173	175	107	66	****	40	62
12	34	20	15	21	20	18	20	44	61	91	57	48	35	26	32	29	27	33	37	30	21	16	****	23	33
13	19	16	14	16	16	13	17	24	28	35	32	36	31	32	36	46	45	46	38	38	28	25	****	24	29
14	19	17	13	11	15	15	17	25	28	26	34	29	25	29	23	29	31	39	46	42	35	28	****	18	26
15	21	14	13	13	13	14	21	35	45	52	47	43	38	44	43	35	26	38	41	37	33	23	****	12	31
16	12	8	9	11	11	10	23	48	50	48	54	56	59	51	56	67	72	94	102	93	87	61	****	36	49
17	49	38	22	18	16	15	23	36	51	60	54	50	66	66	74	48	35	69	43	37	33	28	****	32	42
18	22	20	12	15	13	13	19	34	54	54	67	77	67	60	60	48	M	93	121	126	44	36	****	57	51
19	50	29	26	16	14	15	24	46	62	79	67	70	71	84	91	75	54	82	126	191	125	86	****	74	68
20	74	48	46	43	17	24	25	39	51	48	26	35	27	43	53	46	49	41	40	33	45	39	****	29	40
21	32	22	10	11	12	13	14	25	30	35	44	55	50	50	43	49	58	65	111	79	25	67	****	106	44
22	75	31	25	28	28	23	62	97	90	88	110	80	76	64	61	106	120	109	101	108	100	81	****	80	76
23	82	39	20	18	16	16	22	30	46	57	67	75	79	70	65	79	96	113	121	58	34	28	****	22	54
24	19	13	11	11	10	12	20	34	50	44	52	69	57	42	34	31	43	40	32	50	41	41	****	34	34
25	34	21	27	22	21	14	25	49	56	62	70	58	52	36	46	63	68	85	107	104	76	53	****	38	52
26	41	31	15	10	17	18	21	57	77	54	32	35	42	48	55	64	72	116	114	141	60	50	****	24	52
27	25	21	16	14	14	16	21	32	28	31	32	38	39	39	47	53	55	61	66	61	59	49	****	20	36
28	18	13	10	10	13	13	13	18	26	29	31	31	42	29	25	25	32	34	36	53	48	35	****	15	26
29	24	15	11	12	13	13	21	41	73	84	76	68	64	59	63	79	77	48	51	50	53	46	****	40	47
30	45	30	28	39	36	42	58	74	74	100	97	99	86	70	75	89	100	119	87	92	97	106	****	67	74

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		
39	43	47	43	86	101	114	124	7	- 191	26	- 76	2	96	0	0

NOTES:

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

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

STATION : VICTORIA PEAK
 POLLUTANT : SULPHUR DIOXIDE
 MONTH: DECEMBER
 YEAR : 2010
 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	8	6	7	8	6	7	8	12	10	8	8	18	22	11	8	11	14	17	17	25	15	****	6	11
2	5	5	6	6	5	5	6	6	12	10	11	14	15	17	19	20	25	31	25	26	16	13	****	11	14
3	9	9	9	9	10	11	10	9	14	13	13	13	12	10	9	9	8	9	8	8	6	6	****	8	10
4	7	7	8	7	8	9	10	11	11	11	10	11	10	10	10	9	10	8	7	7	9	8	****	7	9
5	5	5	4	3	3	3	4	6	7	7	8	6	5	7	4	7	8	10	22	26	11	13	****	15	8
6	15	11	11	11	16	19	14	17	18	23	15	14	14	9	13	10	9	13	15	18	14	11	****	11	14
7	12	18	25	32	37	36	37	39	39	35	33	31	35	34	31	29	30	32	32	32	35	32	****	24	31
8	23	21	21	20	17	15	16	18	21	20	21	16	11	10	10	11	10	11	14	15	13	12	****	10	15
9	10	9	10	11	15	14	10	13	15	11	11	10	11	12	14	15	13	9	10	10	9	****	6	11	
10	5	3	3	4	4	4	4	5	5	7	7	6	7	7	7	7	6	6	3	4	4	****	3	5	
11	5	8	11	10	9	7	8	8	8	9	9	9	8	8	8	8	9	8	8	8	9	9	****	7	8
12	6	5	4	4	4	4	5	6	6	6	6	6	6	6	6	6	6	5	6	5	5	5	****	5	5
13	5	4	4	3	3	3	3	3	2	2	4	3	3	4	1	2	1	1	2	0	0	0	****	1	2
14	3	1	3	2	3	5	5	4	5	12	10	7	6	5	8	3	3	4	3	2	2	1	****	2	4
15	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	2	2	1	1	****	1	1
16	0	0	0	0	0	0	1	1	1	2	3	4	5	6	7	8	8	9	11	10	10	11	****	11	5
17	9	10	9	9	8	8	8	9	10	10	11	10	12	16	19	24	30	23	26	18	22	11	****	11	14
18	11	10	9	8	9	9	8	9	9	9	9	9	9	8	8	7	7	6	6	6	6	6	****	7	8
19	7	8	9	8	8	7	6	6	6	6	7	8	9	8	7	7	7	17	23	33	28	28	****	22	12
20	22	26	21	18	15	16	17	16	16	14	10	8	6	5	2	3	2	2	3	2	2	2	****	7	10
21	3	7	10	6	13	21	36	66	76	78	42	40	56	58	47	49	49	37	37	40	78	98	****	74	44
22	66	77	87	120	94	32	20	22	26	21	<-- D -->	7	7	5	9	9	9	9	8	6	4	3	****	7	30
23	4	5	5	10	16	12	15	15	18	20	19	16	14	16	14	15	11	9	8	10	12	13	****	7	12
24	6	6	7	7	7	8	9	10	12	14	17	16	14	15	15	16	15	13	13	10	10	9	****	5	11
25	4	4	4	4	4	3	3	3	3	4	4	4	5	6	8	10	11	9	7	3	2	4	****	5	5
26	5	5	5	8	9	10	10	11	11	12	12	11	12	11	13	12	12	12	11	10	8	6	****	5	10
27	6	6	5	5	5	5	5	8	8	8	8	10	12	10	15	22	14	8	7	8	10	7	****	6	9
28	7	7	7	8	8	9	9	10	10	10	8	8	8	7	25	20	20	10	6	7	9	19	****	10	11
29	10	7	4	5	6	5	4	5	6	6	10	3	2	4	6	8	8	6	6	6	7	10	****	8	6
30	10	8	5	10	12	9	9	12	16	18	19	20	16	16	16	16	18	19	19	18	19	20	****	18	15
31	18	19	19	18	16	16	16	16	28	25	24	19	13	11	11	11	9	10	10	10	13	13	****	13	16

MONTHLY STATISTICS:

GEOM	ARITH	<-----PERCENTILE----->					<-----RANGE----->				STD GEOM	PERCENT	NO. OF TIMES ABOVE OBJECTIVE			
MEAN	MEDIAN	50	90	95	98	99	1-HR	24-HR		DEVIATION	VALID DATA	1-HR	24-HR			
8	9	9	22	32	48	75	0	-	120	1	-	44	2	96	0	0

- NOTES:
1. FLAGS FOR INVALID DATA :
 - **** : DAILY ZERO/SPAN CHECK
 - D : DYNAMIC CALIBRATION
 - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
 - M : MAINTENANCE OR MACHINE SHUTDOWN
 - P : POWER FAILURE
 2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 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: DECEMBER
YEAR : 2010
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	68	41	30	36	52	30	36	43	60	63	50	63	77	69	52	43	63	80	97	125	136	132	****	65	66
2	67	47	24	25	22	20	26	58	91	84	85	91	84	72	65	66	89	104	105	144	96	124	****	43	71
3	37	21	22	21	23	22	29	45	71	65	40	35	36	34	41	49	40	39	46	52	53	47	****	23	39
4	23	15	17	17	15	12	17	24	38	42	48	45	43	55	66	73	78	67	83	101	60	39	****	32	44
5	35	20	18	15	18	18	19	29	34	43	55	67	53	74	68	79	119	136	151	113	42	36	****	55	56
6	50	31	43	37	34	33	44	82	89	117	95	78	67	50	58	62	48	80	103	116	90	70	****	44	66
7	30	31	26	20	18	18	21	41	51	63	56	50	54	57	50	50	51	57	60	85	69	57	****	46	46
8	45	27	29	25	21	16	26	62	71	62	68	72	58	56	56	69	68	71	90	97	103	104	****	69	59
9	59	30	37	53	50	70	50	59	69	69	48	27	21	25	27	36	36	42	33	32	39	38	****	21	42
10	17	15	11	13	13	13	17	28	33	51	40	28	32	36	35	37	37	46	39	37	32	33	****	18	29
11	24	22	24	25	20	19	22	28	35	37	41	40	33	40	48	50	50	52	43	39	30	25	****	21	33
12	18	11	10	11	10	11	15	21	22	22	23	25	20	21	18	19	19	19	22	18	19	11	****	12	17
13	12	10	8	7	7	9	12	17	22	29	28	29	38	38	36	42	35	63	29	15	24	10	****	15	23
14	63	15	36	27	36	53	39	38	59	74	71	68	55	68	73	35	36	39	27	19	19	18	****	17	43
15	18	12	7	8	8	9	10	13	19	24	25	22	20	24	27	27	38	49	64	47	40	36	****	29	25
16	30	27	23	20	15	14	16	26	31	30	27	28	28	31	37	33	37	53	62	47	51	54	****	40	33
17	28	24	20	11	12	11	27	43	53	74	78	82	72	79	74	88	99	99	143	126	119	89	****	92	67
18	94	85	69	18	17	21	20	28	43	42	41	32	33	36	42	64	56	66	63	43	41	43	****	19	44
19	24	28	25	21	12	11	12	14	23	32	36	40	46	51	60	54	53	113	128	118	149	162	****	66	56
20	33	32	27	25	15	20	35	55	74	79	63	49	30	39	38	37	36	53	53	65	58	51	****	120	47
21	34	61	114	79	81	45	54	105	105	117	136	124	122	126	91	92	95	94	143	109	94	83	****	73	95
22	66	62	65	120	129	62	31	38	69	75	<-- D -->	47	39	20	27	35	36	34	37	42	27	****	28	52	
23	36	27	21	16	18	15	18	20	34	52	66	61	40	33	41	61	63	60	43	39	54	39	****	20	38
24	14	21	10	8	7	5	9	30	43	62	56	56	55	46	43	46	46	39	46	46	34	28	****	19	33
25	21	15	10	7	10	8	11	17	19	20	24	29	31	45	57	71	64	56	52	41	42	52	****	32	32
26	30	28	28	18	19	18	19	26	30	35	35	40	37	42	48	52	55	71	93	70	60	57	****	44	41
27	48	48	35	34	32	24	22	20	29	30	26	45	43	39	28	43	55	70	117	120	126	73	****	40	50
28	37	48	38	37	29	24	19	20	25	46	40	57	61	54	66	78	107	112	75	32	32	40	****	14	47
29	19	10	9	8	7	8	9	20	38	49	59	45	45	48	59	74	88	80	57	71	85	74	****	34	43
30	21	29	11	13	11	9	20	44	59	67	76	77	65	60	73	78	94	93	115	115	98	67	****	56	59
31	40	28	17	15	19	18	28	56	78	91	87	86	66	55	48	50	58	84	115	119	124	104	****	80	64

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	
38	40	40	89	113	126	136	5	- 162	2	96	0	0	

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

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

STATION : VICTORIA ROAD SUBSTATION
POLLUTANT : SULPHUR DIOXIDE
MONTH: OCTOBER
YEAR : 2010
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	0	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	0	1	1	0	****	3	1	
2	1	1	1	1	1	1	1	1	1	2	2	2	1	2	1	1	2	2	2	2	2	2	2	****	4	1
3	2	2	3	3	3	3	3	2	3	3	3	2	2	2	2	2	2	3	3	3	3	3	****	5	3	
4	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	3	3	4	2	****	3	2	
5	1	0	0	0	1	1	1	2	2	2	2	2	1	1	0	0	0	0	0	0	0	0	****	2	1	
6	0	0	0	0	0	0	0	1	1	2	3	2	1	2	2	2	2	2	2	2	2	2	****	3	1	
7	2	1	1	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	****	3	2	
8	2	1	2	2	2	2	2	2	2	3	4	4	3	3	3	3	3	2	2	1	1	1	****	3	2	
9	1	1	2	1	1	1	1	1	2	2	3	3	2	2	2	3	2	2	2	2	2	2	****	4	2	
10	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	****	3	1	
11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	****	1	1	
12	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	2	0	
13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	****	4	1	
14	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	****	3	1	
15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	****	3	1	
16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	****	3	1	
17	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	****	1	0	
18	0	0	0	0	0	0	0	0	2	4	3	2	2	2	0	0	0	0	0	0	0	0	****	3	1	
19	4	2	2	2	2	2	3	3	4	5	4	3	3	2	1	1	2	2	2	4	4	4	****	7	3	
20	5	5	4	4	4	3	3	5	5	5	5	4	3	4	3	3	3	3	4	3	3	3	****	5	4	
21	3	5	5	3	5	6	5	3	2	3	4	4	4	4	6	4	4	4	5	6	7	7	****	5	5	
22	7	7	8	8	7	6	7	7	5	4	5	5	4	3	4	4	6	7	5	5	4	6	****	13	6	
23	10	9	8	7	9	11	15	27	30	27	23	32	41	33	26	21	26	23	28	18	10	7	****	21	20	
24	13	13	15	12	18	19	21	25	24	24	25	21	13	14	11	15	15	12	8	6	6	4	****	4	15	
25	4	4	3	2	2	2	3	3	6	6	5	5	4	15	11	3	3	3	5	7	3	3	****	5	5	
26	5	4	3	3	3	3	3	3	4	4	5	5	5	4	4	4	4	5	6	5	4	4	****	5	4	
27	4	4	4	4	4	3	4	5	6	5	4	5	4	4	5	6	6	7	8	8	9	8	****	8	5	
28	9	5	5	5	4	4	3	3	5	6	6	5	5	4	5	5	6	7	8	8	8	8	****	9	6	
29	7	7	6	7	7	8	7	8	10	10	9	9	8	8	8	6	7	7	9	10	12	12	****	15	8	
30	14	13	13	13	13	13	14	18	17	17	17	16	11	8	11	11	11	13	13	12	14	13	****	16	13	
31	15	13	12	12	12	11	12	12	13	10	9	7	6	5	10	5	7	8	12	12	8	8	****	7	10	

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			
2	2	2	11	14	22	26	0	-	41	0	-	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: OCTOBER
YEAR : 2010
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	0	0	0	0	1	6	9	11	15	15	5	5	5	3	3	5	4	8	9	6	3	****	6	5
2	2	0	0	3	0	2	7	17	18	28	31	24	24	25	37	31	33	42	34	41	35	34	****	35	22
3	17	10	13	15	25	17	20	14	19	20	15	11	10	11	14	25	26	39	49	33	24	27	****	31	21
4	23	13	7	6	8	7	24	42	38	39	37	33	28	39	42	53	42	64	89	79	81	64	****	36	39
5	17	10	10	6	5	8	14	34	44	51	39	36	29	30	44	38	51	75	69	43	23	37	****	33	33
6	10	8	2	1	0	0	7	43	47	54	32	24	19	20	22	23	20	15	10	3	1	0	****	5	16
7	0	0	0	0	0	0	1	10	13	24	23	17	18	32	25	21	45	60	53	27	22	11	****	23	18
8	11	5	4	0	1	2	10	29	42	42	27	26	19	17	21	26	37	27	23	11	7	4	****	9	17
9	0	0	0	0	0	0	4	9	20	21	25	25	21	20	13	15	15	27	12	5	1	0	****	6	11
10	1	0	0	0	0	0	1	1	3	6	7	5	4	3	3	2	4	6	5	3	2	2	****	7	3
11	2	0	0	0	0	1	6	14	19	21	22	19	18	20	30	35	28	24	32	17	15	16	****	25	16
12	12	6	4	4	3	5	20	30	27	30	31	19	18	13	17	21	29	44	53	51	40	23	****	24	23
13	8	10	5	3	7	8	23	26	30	31	23	18	22	19	31	34	38	41	35	30	33	25	****	42	23
14	37	25	14	3	3	3	17	24	29	24	25	20	21	29	29	41	51	38	36	32	20	40	****	16	25
15	9	3	2	3	2	5	11	23	39	41	29	28	26	29	32	36	47	42	36	40	38	30	****	43	26
16	20	18	10	8	5	6	11	13	18	19	21	21	22	27	39	29	29	24	52	32	23	15	****	9	20
17	2	0	1	3	2	4	10	10	10	10	6	8	5	5	12	16	18	15	11	6	5	5	****	9	8
18	2	1	1	1	3	13	30	50	58	66	56	39	35	40	42	32	29	28	26	23	22	44	****	66	31
19	59	26	22	19	11	12	32	52	58	59	54	59	53	45	40	47	57	70	49	30	36	35	****	41	42
20	27	18	17	15	13	13	27	58	65	57	50	42	39	47	49	50	56	61	61	51	34	31	****	29	40
21	18	23	18	13	19	22	32	42	43	43	45	49	45	39	50	52	52	49	51	49	50	41	****	25	38
22	30	24	19	20	18	17	28	43	51	48	48	50	48	45	58	75	72	55	53	43	30	33	****	64	42
23	60	42	28	16	21	24	39	52	59	56	50	72	112	90	77	62	79	92	117	94	68	45	****	72	62
24	53	46	46	49	57	53	50	49	50	50	55	58	51	49	40	65	79	84	62	46	50	38	****	31	53
25	33	24	13	7	7	13	27	35	43	45	37	37	41	70	64	64	64	63	60	57	48	51	****	44	41
26	40	26	17	12	12	12	21	34	39	47	44	45	44	41	41	50	59	60	56	51	47	40	****	32	38
27	26	20	15	17	17	15	27	40	43	37	37	41	38	38	38	43	57	60	61	57	49	33	****	33	37
28	35	25	25	19	14	14	26	39	56	50	49	48	43	39	43	49	63	68	84	60	46	40	****	46	43
29	32	25	19	18	19	24	31	58	61	77	70	63	54	51	55	52	69	68	63	46	45	42	****	51	47
30	46	33	29	21	17	19	32	62	65	80	80	67	52	45	51	54	51	70	63	63	69	61	****	57	52
31	54	37	28	25	23	24	37	49	50	36	29	26	23	30	47	24	29	45	83	78	108	101	****	70	46

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	
20	27	30	27	59	68	79	87	0	- 117	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 : VICTORIA ROAD SUBSTATION
POLLUTANT : SULPHUR DIOXIDE
MONTH: NOVEMBER
YEAR : 2010
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	5	5	5	5	5	5	8	10	10	10	8	6	5	6	5	18	8	5	7	8	6	****	3	7
2	3	3	3	3	3	4	5	7	10	10	9	8	6	5	5	4	4	3	3	3	3	3	****	3	5
3	3	3	3	4	4	5	8	10	11	10	9	8	6	7	7	6	6	5	5	5	5	5	****	5	6
4	5	5	5	7	10	10	10	13	12	11	10	10	9	9	7	6	6	4	2	2	9	17	****	4	8
5	5	4	6	4	4	3	5	6	8	16	9	9	7	6	9	14	5	3	3	3	2	1	****	1	6
6	0	0	1	1	1	1	2	2	2	3	2	1	7	6	6	13	5	8	13	12	13	17	****	11	5
7	12	13	8	10	5	5	5	8	18	16	18	65	49	39	32	30	13	4	4	4	4	5	****	6	16
8	7	7	19	38	23	7	8	8	11	15	14	9	8	8	26	30	25	50	31	18	8	6	****	5	17
9	11	15	15	15	15	15	15	23	19	15	12	10	10	8	10	12	10	9	8	7	8	****	7	12	
10	6	7	6	7	8	6	6	7	10	18	22	31	35	7	6	5	5	6	8	9	6	6	****	4	10
11	5	11	11	8	8	8	8	11	12	13	15	19	5	7	15	36	47	28	21	25	20	10	****	6	15
12	6	7	7	8	9	10	10	11	21	35	8	7	5	5	5	5	4	3	2	2	3	3	****	3	8
13	3	3	4	5	5	5	6	5	5	5	3	3	3	3	3	4	5	6	4	3	3	3	****	3	4
14	2	2	3	4	5	4	5	6	5	5	6	4	3	3	4	5	4	4	5	4	3	2	****	1	4
15	2	3	3	4	4	5	5	5	6	5	6	5	4	4	8	7	5	5	4	4	4	2	****	2	4
16	2	1	2	2	2	2	5	7	12	7	7	10	22	21	23	16	22	20	39	19	10	8	****	6	12
17	6	5	4	4	4	5	5	8	12	10	7	14	18	17	12	8	7	7	4	5	4	4	****	3	8
18	2	3	2	3	2	3	4	5	6	7	5	8	12	30	8	6	5	5	5	5	5	10	****	6	6
19	5	5	4	3	4	7	6	17	16	10	10	29	27	34	28	17	19	34	26	19	28	14	****	16	16
20	14	7	5	5	4	4	4	12	24	13	9	9	2	2	4	4	4	4	4	4	4	4	****	5	7
21	3	2	2	2	2	2	2	2	3	9	20	10	11	14	6	9	25	7	4	5	6	7	****	18	8
22	19	38	14	8	42	22	28	45	56	49	45	25	19	27	17	34	47	35	14	10	10	10	****	7	27
23	11	7	4	4	3	3	4	4	4	12	31	35	34	41	32	24	14	8	7	6	9	8	****	7	14
24	6	5	5	5	4	5	5	5	5	5	6	9	8	8	7	7	5	6	7	7	5	****	5	6	
25	5	5	5	7	8	7	7	9	15	16	15	11	11	8	13	21	7	8	15	11	12	9	****	4	10
26	3	3	5	4	6	6	6	9	15	13	9	8	8	7	8	15	11	18	10	10	10	9	****	7	9
27	7	7	6	6	6	7	8	9	11	11	10	9	9	7	7	6	5	5	4	4	4	5	****	4	7
28	3	3	3	2	2	2	2	4	5	6	7	5	4	2	3	1	2	3	2	2	3	3	****	3	3
29	3	3	3	3	3	3	5	6	14	38	33	28	14	9	9	9	8	7	6	7	7	6	****	9	10
30	10	6	9	15	17	9	14	24	72	71	53	<-----D----->					46	44	14	11	11	11	****	6	25

MONTHLY STATISTICS:										NO. OF TIMES			
GEOM	ARITH		<-----PERCENTILE----->					<-----RANGE----->			STD GEOM	PERCENT	ABOVE OBJECTIVE
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR
7	6	10	6	20	31	43	49	0	- 72	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 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: NOVEMBER
YEAR : 2010
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	36	20	15	13	10	15	28	36	58	58	45	36	34	36	39	23	54	57	69	38	35	25	****	13	34
2	12	9	7	8	7	9	39	77	75	63	42	35	31	41	38	41	62	50	53	28	30	31	****	22	35
3	16	19	15	11	13	24	41	64	101	85	67	60	53	50	56	56	68	50	43	41	78	41	****	34	47
4	23	21	21	24	24	27	53	82	60	70	68	56	52	44	55	51	56	81	83	70	92	105	****	45	55
5	27	32	33	19	19	16	35	54	72	82	75	82	81	109	102	112	99	99	89	88	66	44	****	30	64
6	33	24	21	31	30	27	36	53	70	80	75	66	76	80	83	90	92	98	100	102	110	99	****	80	68
7	78	74	72	72	45	38	37	61	73	61	66	97	80	74	49	44	33	40	67	73	77	92	****	58	63
8	66	33	62	79	47	19	30	55	77	85	72	58	60	56	68	69	87	128	117	135	71	61	****	79	70
9	45	21	14	13	12	14	32	77	99	96	68	44	45	27	23	26	75	100	59	36	30	37	****	30	45
10	26	20	12	13	12	15	29	72	76	77	84	97	63	32	29	27	32	64	49	41	26	20	****	18	41
11	17	16	14	13	14	17	38	64	67	76	84	80	36	55	72	69	102	139	177	171	184	134	****	43	73
12	39	12	9	15	15	17	31	61	93	112	38	29	23	18	22	23	20	22	27	17	13	11	****	15	30
13	11	9	10	11	10	10	15	19	21	22	20	18	21	25	27	27	41	35	25	16	15	13	****	13	19
14	9	9	8	8	11	12	14	21	22	22	20	18	16	15	15	17	17	23	34	33	26	20	****	11	17
15	12	9	8	10	9	12	19	37	46	48	38	37	30	39	53	48	38	34	32	27	19	16	****	10	27
16	7	6	6	8	11	10	34	64	61	53	49	54	50	49	49	44	52	73	122	101	91	71	****	37	48
17	48	33	21	16	15	27	44	62	74	70	49	52	71	78	39	52	58	77	57	34	25	23	****	25	46
18	13	13	9	9	9	11	23	38	53	66	64	73	61	67	23	21	19	30	114	113	92	46	****	84	46
19	63	46	24	22	21	27	51	79	87	83	63	82	79	85	56	37	36	93	94	106	147	100	****	83	68
20	84	70	43	46	23	23	27	59	64	46	44	40	28	26	50	48	46	45	32	30	51	32	****	62	44
21	33	17	10	7	7	9	26	32	37	41	46	20	21	22	15	19	42	41	68	102	100	109	****	99	40
22	96	89	51	28	81	70	81	101	109	112	111	82	73	95	73	126	104	126	136	92	108	95	****	75	92
23	90	59	22	19	15	12	35	45	50	64	71	72	79	66	49	56	34	76	131	70	26	22	****	22	51
24	15	9	8	7	6	9	24	50	52	49	45	37	20	18	46	59	49	43	37	41	32	31	****	54	32
25	37	25	24	23	22	19	27	61	63	65	59	43	48	36	46	45	56	91	103	95	71	53	****	25	49
26	30	31	14	10	14	18	29	86	85	50	33	26	31	39	26	55	41	79	120	156	71	33	****	19	48
27	18	13	11	10	10	18	25	35	34	39	32	34	23	29	36	44	51	73	82	45	56	27	****	17	33
28	16	11	8	8	10	11	17	27	36	27	30	23	36	28	19	17	21	24	24	39	40	28	****	17	22
29	23	19	11	11	12	15	28	51	56	81	56	51	25	30	24	32	76	55	49	37	49	51	****	65	39
30	73	46	50	51	60	29	76	87	91	80	80	<-----	D	----->	94	175	106	84	91	90	****	56	79		

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		
37	40	47	40	91	102	124	138	6	- 184	17	- 92	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: DECEMBER
YEAR : 2010
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	4	5	7	10	7	10	14	35	35	28	25	19	6	5	10	25	18	19	18	16	****	6	14
2	5	4	4	5	5	5	5	10	11	18	42	20	19	18	22	28	39	52	44	51	35	14	****	12	20
3	8	8	8	8	10	10	10	9	21	17	13	12	10	8	9	9	8	8	7	6	5	5	****	7	9
4	7	6	7	7	7	8	9	10	10	10	10	9	8	11	17	8	8	7	7	6	7	8	****	6	8
5	5	5	5	5	4	4	4	17	10	31	43	36	53	13	8	34	71	40	30	25	24	43	****	20	23
6	46	66	62	59	79	92	70	67	144	96	85	128	97	62	56	60	31	12	12	14	14	12	****	10	60
7	10	17	23	29	33	34	34	35	33	31	30	29	29	28	27	28	30	32	31	32	29	****	22	28	
8	21	19	19	19	16	14	15	17	17	14	16	13	8	8	8	11	8	8	10	11	11	11	****	10	13
9	9	8	9	9	10	13	9	11	12	10	9	9	8	8	9	10	10	9	7	7	7	6	****	4	9
10	3	3	3	3	3	4	3	4	5	6	5	5	5	5	6	6	6	5	5	4	4	4	****	4	4
11	4	6	8	9	7	6	6	6	7	7	7	7	6	5	4	5	6	6	6	5	6	5	****	4	6
12	3	1	1	1	1	1	3	3	3	3	3	2	1	1	1	0	0	0	0	0	0	0	****	0	1
13	0	0	0	0	0	0	0	0	1	15	13	14	7	9	2	6	14	27	10	11	22	****	18	7	
14	23	16	18	17	12	15	18	16	33	48	50	71	74	59	56	44	27	6	2	1	1	0	****	1	26
15	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	2	2	2	4	2	2	****	2	1
16	1	1	1	1	1	1	1	2	3	5	8	7	8	8	8	8	8	8	8	8	8	9	****	8	5
17	8	8	7	6	5	5	5	7	8	9	19	23	13	13	15	20	22	17	24	11	9	7	****	7	12
18	9	9	6	5	5	6	5	8	7	6	6	5	5	3	3	3	3	3	2	3	3	3	****	3	5
19	4	6	6	6	11	13	5	6	11	5	10	17	21	5	5	7	18	24	29	44	58	67	****	62	19
20	61	58	78	64	58	76	61	64	67	122	74	17	14	9	6	5	4	4	6	15	6	22	****	16	39
21	9	7	18	42	41	32	51	44	51	76	51	75	96	66	40	34	28	30	23	23	30	40	****	90	43
22	57	52	64	68	81	26	14	17	21	16	15	14	12	11	9	10	9	9	10	8	8	7	****	9	24
23	7	7	8	13	18	13	14	15	17	17	17	13	10	7	7	8	8	7	8	9	9	9	****	7	11
24	6	6	7	5	6	8	8	9	10	11	13	12	9	9	9	8	8	8	6	6	5	****	1	8	
25	1	1	1	1	0	0	0	1	1	2	2	2	2	4	6	13	17	7	5	3	2	3	****	5	3
26	4	4	5	7	8	10	10	10	10	11	10	8	6	7	7	8	7	7	7	6	5	****	5	7	
27	7	10	7	5	5	6	5	6	7	7	13	7	8	15	20	7	6	9	19	14	8	****	5	9	
28	7	7	10	8	9	9	9	9	13	32	51	27	21	30	20	8	5	6	5	4	5	11	****	10	14
29	10	6	8	14	13	17	8	8	22	14	9	5	9	19	6	8	8	9	5	5	6	8	****	15	10
30	12	10	8	8	10	9	9	12	13	15	14	15	14	12	12	11	12	12	13	15	17	17	****	15	12
31	15	16	15	15	14	14	14	16	17	18	17	13	10	8	7	7	7	8	8	8	15	13	****	11	12

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				
8	8	8	35	59	75	88	0	-	144	1	-	60	3	96	0	24-HR	
																0	0

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

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

STATION : VICTORIA ROAD SUBSTATION MONTH: DECEMBER YEAR : 2010
 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	45	40	32	42	53	62	62	62	71	76	71	74	75	34	15	22	30	66	93	110	125	129	****	88	64
2	64	59	27	24	25	27	64	89	78	86	89	60	62	87	69	83	132	167	208	188	159	87	****	40	86
3	17	12	14	14	14	17	51	50	88	74	36	28	34	30	41	50	41	40	36	31	27	23	****	17	34
4	13	9	11	11	10	11	18	23	30	39	34	47	41	59	57	77	75	78	106	114	108	28	****	24	45
5	29	17	15	13	20	23	34	63	56	61	71	63	89	29	20	53	113	108	139	152	143	136	****	144	69
6	151	152	151	147	148	150	143	141	160	149	144	130	118	104	113	130	113	78	69	86	78	62	****	51	120
7	35	29	19	16	16	18	29	44	60	66	56	50	47	40	49	54	69	77	73	84	62	54	****	36	47
8	44	29	31	27	20	24	43	58	64	58	59	63	53	43	49	70	87	69	85	88	76	70	****	77	56
9	49	35	44	49	36	69	63	79	88	71	36	27	25	26	30	30	27	30	30	26	30	26	****	19	41
10	16	12	9	9	9	13	21	43	44	55	34	29	36	34	33	32	39	39	30	21	21	21	****	17	27
11	23	17	21	23	17	17	35	34	32	33	38	36	30	31	40	38	41	31	30	25	21	20	****	17	28
12	13	9	8	8	9	9	13	17	19	21	19	19	17	17	15	17	17	18	18	17	18	13	****	12	15
13	8	7	5	4	4	11	19	28	30	37	45	51	46	49	37	28	57	81	82	66	58	64	****	64	38
14	70	58	53	58	49	51	60	65	64	68	65	66	73	81	90	89	92	38	22	19	16	14	****	12	55
15	10	8	6	7	8	9	14	19	23	24	23	22	24	28	33	33	47	57	67	48	39	36	****	32	27
16	28	24	22	20	18	15	20	27	32	35	34	31	29	34	40	36	42	54	59	49	50	46	****	42	34
17	31	23	17	12	8	14	32	45	61	69	64	61	57	62	71	85	94	113	139	121	94	89	****	72	62
18	88	88	70	21	13	16	18	25	33	41	36	31	29	32	37	61	65	73	78	73	58	51	****	38	47
19	38	30	31	25	32	35	31	38	45	35	37	52	50	17	20	23	49	87	161	179	176	178	****	138	66
20	119	97	122	118	94	109	110	120	118	129	92	61	56	33	42	49	62	93	108	93	102	111	****	107	93
21	111	91	108	119	115	108	116	105	102	103	121	119	121	90	57	57	70	141	140	162	136	115	****	144	111
22	100	67	69	111	126	61	32	46	59	74	60	47	40	41	33	29	26	27	29	23	22	19	****	20	50
23	19	24	18	16	21	23	40	62	69	75	74	61	41	41	44	61	68	97	88	87	84	83	****	23	53
24	27	33	12	8	9	11	24	43	53	50	51	53	50	43	39	42	38	29	26	24	20	17	****	14	31
25	12	11	10	7	9	9	12	17	16	17	21	27	31	38	47	63	53	51	49	38	39	49	****	35	29
26	29	27	25	19	19	19	23	39	33	37	34	32	22	26	32	38	42	52	60	51	53	51	****	45	35
27	66	69	46	44	34	30	46	33	22	26	25	15	17	26	36	20	40	84	114	124	106	****	40	47	
28	30	45	58	47	30	26	32	81	92	94	109	82	39	71	42	25	33	113	137	112	78	96	****	73	67
29	48	25	29	44	43	73	45	64	91	60	47	44	50	53	21	30	63	105	103	96	98	84	****	77	61
30	50	44	36	27	24	37	38	70	85	68	64	69	61	53	56	65	71	85	95	104	72	57	****	39	60
31	35	30	24	20	22	22	30	67	90	92	83	65	46	35	40	40	53	88	116	126	128	99	****	90	63

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		
42	43	43	109	129	150	161	4	-	208	15	-	120	2	96	0	0

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

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

STATION : QUEEN MARY HOSPITAL
 POLLUTANT : SULPHUR DIOXIDE
 MONTH: OCTOBER
 YEAR : 2010
 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	1	1	1	0	1	4	3	3	2	2	3	3	2	3	3	2	2	1	1	1	****	1	2
2	1	1	2	3	2	2	3	2	3	3	3	2	2	2	2	2	2	2	2	2	3	3	****	3	2
3	4	5	7	7	5	5	6	5	6	6	7	5	5	3	3	3	4	6	5	6	6	8	****	6	5
4	5	5	5	5	6	7	6	7	5	5	6	7	5	5	5	6	6	8	8	8	8	7	****	5	6
5	6	6	7	8	8	8	8	11	11	10	10	10	9	9	8	7	7	6	6	5	5	6	****	6	8
6	6	7	7	7	7	8	8	7	9	8	8	8	7	7	7	8	7	7	6	6	5	5	****	5	7
7	4	4	4	5	6	5	5	6	7	6	6	6	5	5	5	5	5	5	5	5	6	5	****	7	5
8	7	7	7	6	6	7	7	8	8	9	10	9	9	7	7	7	8	6	4	4	2	3	****	4	7
9	2	3	2	2	2	2	2	3	3	3	5	5	5	4	3	5	6	3	3	3	3	3	****	3	3
10	2	2	2	3	2	3	2	2	2	2	3	2	2	2	2	2	2	1	1	1	1	1	****	1	2
11	1	1	1	1	1	1	2	2	1	1	2	1	2	1	1	1	0	0	0	1	1	1	****	1	1
12	1	1	0	0	1	1	1	1	1	2	1	1	2	2	3	2	1	1	1	1	2	6	****	1	1
13	1	1	2	1	1	1	1	1	2	2	2	2	2	1	1	1	1	1	2	1	3	3	****	4	2
14	4	7	8	3	3	3	3	3	3	4	4	3	3	2	3	3	3	3	3	3	3	7	****	4	3
15	4	2	2	4	4	3	2	2	4	7	2	3	3	4	4	3	3	5	5	7	8	6	****	6	4
16	5	4	5	5	4	3	3	3	4	5	5	5	5	9	4	4	5	4	3	4	4	3	****	4	4
17	5	5	5	7	7	7	7	8	8	7	6	6	5	5	5	5	6	4	4	3	3	****	3	5	
18	3	4	4	5	5	5	5	7	10	10	9	8	8	8	5	6	6	7	7	6	5	5	****	7	6
19	12	8	9	9	9	11	11	10	10	9	9	8	7	5	4	5	7	5	4	8	8	9	****	10	8
20	10	9	9	9	8	7	8	9	9	7	8	7	7	9	7	6	6	7	7	7	7	6	****	6	8
21	5	8	7	6	8	13	9	5	4	4	5	7	6	8	11	8	7	7	8	8	10	10	****	6	7
22	12	12	13	15	13	11	12	13	10	9	8	9	7	5	8	8	9	10	7	7	7	10	****	15	10
23	12	13	13	10	14	16	19	35	38	35	30	41	53	50	44	38	45	38	41	25	12	10	****	28	29
24	16	14	20	16	25	26	22	27	24	23	26	26	17	19	18	26	29	16	11	7	8	5	****	4	18
25	5	5	4	2	3	3	4	3	6	8	5	5	6	12	8	5	5	7	10	6	5	****	6	6	
26	7	7	6	5	5	5	5	5	6	5	5	5	4	4	4	5	4	5	6	5	4	4	****	3	5
27	3	4	4	4	3	3	5	5	7	6	5	5	6	7	8	10	11	13	12	13	13	****	9	7	
28	10	8	8	7	7	7	6	5	6	7	8	7	6	7	6	7	7	8	9	10	11	12	****	11	8
29	10	9	9	10	9	9	10	10	13	12	11	11	11	11	12	11	12	13	14	15	17	18	****	20	12
30	20	19	19	20	20	19	21	24	21	21	20	18	15	13	18	18	18	19	19	18	19	20	****	22	19
31	21	20	19	18	19	18	18	18	18	15	13	11	10	9	10	11	15	20	21	24	16	14	****	9	16

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				
5	6	7	6	15	20	27	38	0	-	53	1	-	29	2	96	0	0

- NOTES: 1. FLAGS FOR INVALID DATA :
 **** : DAILY ZERO/SPAN CHECK
 D : DYNAMIC CALIBRATION
 T : TELEMETRY/DATALOGGR/ANALYZER FAULT
 M : MAINTENANCE OR MACHINE SHUTDOWN
 P : POWER FAILURE
2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 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: OCTOBER
 YEAR : 2010
 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	9	8	7	5	5	7	9	11	9	9	10	10	9	9	8	12	18	22	21	18	10	****	13	11
2	10	9	8	8	7	6	8	9	10	14	12	16	13	15	17	10	14	17	27	29	35	17	****	16	14
3	21	15	18	23	26	21	12	9	21	27	21	15	31	13	14	33	34	46	44	36	32	31	****	22	25
4	21	19	14	12	13	11	18	36	15	15	24	32	17	17	21	25	34	62	74	77	75	67	****	28	32
5	21	13	11	8	10	9	11	17	21	30	30	29	23	24	37	52	37	56	79	71	59	31	****	35	31
6	27	14	12	11	10	9	12	28	47	41	30	28	28	25	21	24	31	33	33	25	22	15	****	18	24
7	13	13	10	8	8	9	12	22	29	28	29	22	19	23	27	25	37	35	33	31	31	25	****	28	22
8	19	14	13	10	10	9	14	18	32	31	31	28	28	24	23	24	22	21	31	23	16	8	****	11	20
9	6	10	9	10	7	7	9	16	21	26	27	22	22	19	25	19	25	30	28	23	21	13	****	13	18
10	10	7	5	6	6	5	6	7	7	8	8	6	5	5	4	3	4	4	3	4	2	2	****	4	5
11	2	2	1	1	1	1	2	3	3	3	2	4	3	3	7	4	4	29	35	29	29	23	****	10	9
12	15	8	6	6	5	4	5	13	16	24	12	11	14	11	22	24	20	42	50	49	35	14	****	17	18
13	12	11	12	8	7	5	15	27	33	18	21	19	27	22	15	17	19	23	23	29	31	22	****	43	20
14	35	34	27	9	6	4	13	17	25	17	23	20	17	16	22	27	22	34	53	40	29	32	****	22	24
15	16	9	7	6	6	7	8	15	31	37	22	17	13	21	37	19	26	41	30	42	44	25	****	39	22
16	13	15	12	12	9	10	9	9	10	10	13	16	14	17	33	22	17	22	22	34	22	25	****	14	16
17	13	12	8	8	8	9	13	16	19	15	9	11	10	9	11	16	16	12	11	11	7	9	****	10	11
18	10	9	6	7	8	8	23	48	57	59	44	39	36	39	36	41	21	25	23	29	25	28	****	60	30
19	56	36	32	25	19	18	32	45	52	49	47	56	49	40	44	37	38	46	55	46	48	47	****	47	42
20	37	28	25	26	21	21	32	56	53	50	41	36	31	37	35	39	41	47	48	40	36	30	****	25	36
21	20	24	17	14	20	24	25	28	32	30	34	37	32	26	37	33	36	36	41	40	38	32	****	20	29
22	28	25	20	22	20	18	28	36	46	39	39	45	42	38	49	60	52	46	40	29	23	25	****	57	36
23	49	44	38	20	26	27	40	52	63	55	49	59	80	75	67	57	70	76	110	91	54	31	****	66	57
24	44	37	43	47	56	49	44	49	40	41	46	45	45	45	39	58	67	72	46	43	43	30	****	27	46
25	29	25	16	10	11	15	21	24	44	41	33	32	31	53	54	53	48	46	54	58	47	46	****	41	36
26	39	29	22	16	15	15	18	37	42	47	42	43	40	39	40	52	58	61	65	56	46	41	****	31	39
27	25	22	16	17	18	14	26	35	43	38	35	35	32	36	29	34	38	40	40	44	52	35	****	18	31
28	20	19	21	12	10	14	17	23	39	39	40	39	32	34	33	42	45	67	76	61	56	42	****	38	36
29	29	20	16	19	15	11	22	29	47	65	57	52	47	38	44	42	52	45	57	53	46	41	****	38	38
30	36	32	27	21	14	14	34	53	54	55	57	55	41	37	45	51	53	64	58	62	59	56	****	41	44
31	45	38	31	23	23	23	27	37	45	39	17	14	16	20	36	35	37	56	45	41	94	112	****	37	39

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	
22	25	25	52	58	69	76	1	- 112	2	96	0	0	

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

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

STATION : QUEEN MARY HOSPITAL
 POLLUTANT : SULPHUR DIOXIDE
 MONTH: NOVEMBER
 YEAR : 2010
 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	9	9	9	8	9	9	12	14	12	12	11	10	9	9	15	18	23	9	11	14	11	****	7	11
2	7	7	7	7	7	9	10	12	14	14	13	12	10	9	8	7	6	6	5	6	7	6	****	6	8
3	7	7	7	7	7	10	11	13	14	13	11	10	8	7	8	8	8	7	7	8	9	8	****	8	9
4	8	8	10	13	14	14	14	18	17	17	15	15	12	11	9	10	9	8	7	5	6	7	****	4	11
5	4	6	6	7	6	6	7	10	11	8	9	14	11	11	9	8	4	5	3	5	4	2	****	2	7
6	1	2	2	2	2	3	3	5	3	5	3	2	4	4	2	8	11	14	19	14	15	29	****	10	7
7	11	15	11	8	5	7	7	12	15	18	15	22	50	49	36	32	24	6	9	14	9	8	****	9	17
8	8	11	16	24	15	11	11	10	12	17	13	11	10	10	22	50	40	64	47	16	10	8	****	8	19
9	15	20	19	20	21	20	19	18	17	17	16	13	17	12	15	20	14	12	12	12	12	12	****	10	16
10	10	12	11	13	14	11	11	12	14	25	15	13	19	11	9	8	8	9	12	13	11	8	****	6	12
11	9	18	18	13	12	13	13	15	13	12	16	22	10	11	8	30	38	25	21	29	17	10	****	7	17
12	8	8	8	11	13	13	13	18	39	12	9	7	6	7	8	5	5	4	3	5	4	****	5	10	
13	5	5	6	6	7	7	8	8	7	5	5	4	4	5	5	5	8	5	4	4	5	****	4	6	
14	3	4	5	6	8	8	7	9	8	8	8	7	5	6	7	8	7	7	8	9	7	5	****	3	7
15	5	5	5	6	7	8	8	8	8	7	7	7	5	8	6	8	7	6	6	6	5	4	****	2	6
16	2	2	3	3	3	3	6	9	13	10	7	9	17	16	24	22	21	18	32	22	9	8	****	6	12
17	7	5	4	4	4	5	7	12	9	7	6	11	17	21	17	10	7	6	4	5	4	4	****	3	8
18	4	4	3	4	3	4	4	5	7	7	6	6	8	32	16	11	9	6	8	10	10	9	****	7	8
19	6	5	6	8	4	4	6	21	14	10	9	21	23	29	25	22	16	19	21	22	37	20	****	12	16
20	13	8	5	11	5	4	3	2	7	18	14	11	3	3	4	5	5	5	5	6	7	****	9	7	
21	13	6	3	3	3	3	3	3	3	4	21	18	35	16	15	6	20	20	8	14	11	10	****	11	11
22	15	26	14	10	53	17	26	27	28	44	46	26	21	20	17	24	27	13	12	12	12	12	****	5	22
23	5	6	4	4	4	4	4	4	6	5	18	30	25	33	30	38	20	14	12	6	8	7	****	6	13
24	6	5	4	4	4	5	4	5	4	5	7	14	7	7	7	7	5	6	8	8	6	****	6	6	
25	7	6	6	9	9	8	8	10	14	15	13	11	11	11	11	21	10	11	19	14	16	11	****	5	11
26	4	5	7	6	8	8	9	10	20	14	10	9	8	7	14	19	22	38	12	13	10	9	****	6	12
27	8	8	7	7	7	9	9	11	11	16	11	10	10	8	8	7	6	9	13	11	6	7	****	5	9
28	4	5	4	4	4	4	4	13	9	8	9	7	5	4	4	3	3	5	5	5	6	5	****	6	5
29	6	8	19	12	8	8	26	15	12	30	39	30	27	16	15	17	14	9	8	7	8	8	****	20	16
30	14	9	7	15	10	12	12	14	34	76	55	55	31	28	34	45	55	46	16	14	15	15	****	10	27

MONTHLY STATISTICS:										NO. OF TIMES				
GEOM	ARITH		<-----PERCENTILE----->					<-----RANGE----->			STD GEOM	PERCENT	ABOVE OBJECTIVE	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR	
9	9	11	9	21	30	42	50	1	- 76	2	96	0	0	

- NOTES:
1. FLAGS FOR INVALID DATA :
 - **** : DAILY ZERO/SPAN CHECK
 - D : DYNAMIC CALIBRATION
 - T : TELEMETRY/DATALOGGR/ANALYZER FAULT
 - M : MAINTENANCE OR MACHINE SHUTDOWN
 - P : POWER FAILURE
 2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 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: NOVEMBER
YEAR : 2010
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	39	26	19	16	12	13	19	32	40	31	29	28	21	23	39	43	50	64	41	16	20	21	****	18	29
2	15	11	10	8	9	10	16	54	93	70	49	25	24	24	22	25	26	32	57	38	36	39	****	19	31
3	19	14	13	12	20	25	34	58	78	79	66	59	51	49	36	32	37	35	40	33	29	37	****	22	38
4	21	20	31	27	22	21	36	66	59	77	64	66	27	19	25	40	40	70	60	34	40	41	****	24	40
5	25	36	25	13	13	14	28	56	36	43	46	63	63	73	88	82	48	89	59	74	50	22	****	20	46
6	18	23	26	32	24	28	23	51	67	77	71	54	61	74	65	77	84	92	95	98	81	92	****	65	60
7	67	69	65	64	46	44	35	45	39	55	50	54	78	80	61	53	48	32	47	91	98	64	****	60	59
8	43	53	49	55	21	17	20	41	66	86	69	49	43	52	59	82	85	137	146	70	30	28	****	36	58
9	36	27	21	17	19	14	25	49	64	75	69	56	31	43	37	38	62	68	53	33	30	28	****	20	40
10	17	17	14	12	13	12	14	28	53	64	56	47	39	35	27	30	28	44	65	49	43	29	****	29	33
11	18	13	14	14	14	14	18	27	27	58	101	84	52	52	67	71	101	119	162	175	88	33	****	25	58
12	22	19	13	14	12	9	11	22	66	103	44	29	23	19	20	19	19	31	37	23	21	14	****	21	27
13	15	12	13	11	9	7	9	11	15	16	17	16	14	17	22	20	31	33	29	29	23	17	****	19	18
14	18	11	12	12	10	11	12	16	14	16	17	14	15	20	13	15	17	28	28	18	19	14	****	17	16
15	15	12	11	10	8	10	12	18	24	33	24	22	25	34	29	32	20	24	43	40	29	23	****	12	22
16	11	9	9	9	9	11	27	47	51	50	32	48	50	45	49	59	54	70	100	98	53	46	****	35	42
17	31	27	15	14	14	21	33	55	60	47	26	49	60	69	58	44	32	51	41	25	25	21	****	19	36
18	18	17	12	11	10	12	16	23	27	56	51	59	60	73	48	37	42	52	60	109	69	16	****	40	40
19	41	25	23	17	12	13	39	70	75	77	54	59	54	69	58	47	51	65	82	94	145	106	****	80	59
20	75	64	44	39	22	11	11	7	38	54	44	46	19	29	37	40	44	39	25	23	38	38	****	41	36
21	49	29	13	15	11	9	11	15	31	35	44	29	40	29	26	19	36	49	63	104	94	91	****	100	41
22	95	67	40	20	77	34	46	70	73	96	96	76	72	71	69	75	102	103	93	67	56	68	****	18	69
23	24	33	8	8	10	10	13	25	39	41	59	63	68	69	54	70	58	91	107	52	27	28	****	15	42
24	15	11	9	9	8	11	16	20	27	32	23	34	33	26	24	20	29	21	22	31	39	36	****	21	22
25	18	19	28	20	17	10	23	50	56	53	53	36	41	49	49	53	51	81	107	52	41	34	****	30	42
26	33	19	14	9	14	13	24	52	69	47	19	19	27	22	43	49	66	108	94	110	54	42	****	28	42
27	23	15	14	14	14	15	17	24	27	37	19	17	24	24	29	31	42	65	84	67	41	41	****	21	31
28	17	12	8	10	13	12	17	31	31	16	26	27	21	23	24	17	24	13	22	29	42	38	****	19	21
29	21	21	33	23	16	17	44	37	61	75	62	45	39	39	41	54	61	55	35	37	42	46	****	57	42
30	40	27	23	43	29	26	24	52	84	83	77	84	71	50	57	86	106	142	92	83	76	73	****	58	65

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	24-HR	DEVIATION	VALID DATA	1-HR	24-HR			
32	33	40	33	76	92	105	115	7	-	175	16	-	69	2	96	0	0

NOTES:

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

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

STATION : QUEEN MARY HOSPITAL
POLLUTANT : SULPHUR DIOXIDE
MONTH: DECEMBER
YEAR : 2010
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	7	5	6	11	9	8	9	14	20	11	19	22	18	13	14	23	18	18	24	25	22	****	7	14
2	4	5	5	5	5	4	5	6	8	6	19	17	20	20	21	25	33	51	61	45	17	10	****	8	17
3	7	6	5	6	8	8	8	8	15	15	12	11	10	10	8	8	7	7	7	6	5	5	****	7	8
4	7	7	7	7	7	9	10	11	11	11	10	10	10	15	24	15	8	8	7	12	13	10	****	8	10
5	7	7	7	7	6	8	10	17	16	19	45	29	42	24	13	23	43	28	29	26	40	34	****	15	22
6	19	15	15	23	43	34	38	36	29	32	44	54	71	59	47	40	21	10	11	11	13	11	****	11	30
7	12	19	23	29	33	34	34	34	34	30	29	29	30	29	28	27	28	30	32	32	32	30	****	23	29
8	22	21	21	21	17	15	16	18	16	13	13	12	10	8	8	7	8	8	10	11	13	12	****	10	13
9	9	10	18	12	11	13	10	12	13	11	10	10	9	10	10	13	12	12	9	10	11	10	****	7	11
10	6	6	5	5	6	7	6	7	8	9	10	8	8	7	7	7	8	8	6	6	6	****	5	7	
11	7	8	11	10	9	8	9	8	9	9	9	8	7	7	6	7	8	8	8	8	8	7	****	6	8
12	5	4	3	3	3	4	5	6	6	6	7	6	5	5	4	4	3	3	3	3	2	2	****	2	4
13	2	2	2	1	1	1	1	1	1	14	18	<-- D -->	9	9	6	4	4	9	5	19	20	****	10	7	
14	10	9	5	3	10	8	9	7	12	27	39	56	60	46	47	45	21	5	2	1	1	1	****	1	18
15	1	1	1	1	1	2	1	1	1	2	2	2	2	2	2	2	3	2	4	2	2	****	2	2	
16	2	1	2	1	1	1	2	2	3	5	8	7	7	7	8	8	9	9	8	8	8	****	8	5	
17	8	8	7	6	6	6	6	7	8	8	18	20	14	15	15	20	24	21	28	13	11	8	****	9	12
18	11	10	9	7	9	8	8	9	9	9	9	8	7	7	6	5	5	5	5	5	5	5	****	6	7
19	7	8	8	7	7	11	13	8	6	6	6	18	23	12	9	18	12	22	31	57	65	87	****	74	22
20	76	68	62	42	79	55	21	37	51	47	80	36	25	14	8	5	4	3	3	3	11	7	****	7	32
21	9	7	26	20	18	16	20	32	49	48	61	66	82	65	41	49	38	41	33	41	37	46	****	64	40
22	53	55	71	99	77	19	15	16	17	19	15	15	14	13	10	12	12	11	12	10	10	8	****	10	26
23	9	9	10	14	20	16	16	21	19	31	44	22	11	13	11	12	10	11	14	25	23	15	****	11	17
24	17	12	25	10	7	8	9	10	12	13	16	15	12	12	12	12	11	10	11	9	9	8	****	4	11
25	3	3	3	3	2	2	2	2	2	3	3	3	3	5	7	11	15	7	5	4	2	3	****	4	4
26	5	4	5	7	9	12	11	12	13	12	12	11	9	9	9	8	9	10	10	9	9	8	****	8	9
27	8	9	9	8	8	9	11	9	9	10	16	12	11	24	31	16	9	16	27	33	12	****	8	14	
28	10	10	12	11	15	17	17	16	21	27	35	33	24	30	24	20	11	9	7	10	16	17	****	13	18
29	11	10	8	7	8	8	9	7	12	14	13	6	5	12	10	11	18	20	10	20	24	20	****	33	13
30	32	28	19	13	12	10	10	13	15	14	14	16	15	12	12	11	11	12	13	15	16	17	****	14	15
31	15	15	13	13	14	14	14	16	16	17	15	12	9	8	7	7	7	8	8	10	15	15	****	12	12

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	10	10	32	46	63	73	1	-	99	2	-	40	2	96	0	0

- NOTES: 1. FLAGS FOR INVALID DATA :
 **** : DAILY ZERO/SPAN CHECK
 D : DYNAMIC CALIBRATION
 T : TELEMETRY/DATALOGGR/ANALYZER FAULT
 M : MAINTENANCE OR MACHINE SHUTDOWN
 P : POWER FAILURE
2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 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: DECEMBER
YEAR : 2010
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	39	44	18	30	60	43	45	53	70	73	50	61	68	44	30	34	60	73	72	81	119	122	****	59	59
2	19	37	24	14	14	14	18	51	80	63	72	62	57	69	67	67	113	149	180	160	90	63	****	22	65
3	13	11	15	14	14	19	23	41	78	70	31	21	23	25	28	38	30	42	49	50	40	28	****	22	32
4	21	15	15	11	10	12	15	20	20	27	28	24	33	48	66	78	98	105	108	109	86	29	****	25	44
5	32	28	18	19	19	19	23	38	42	52	67	59	78	55	36	40	84	99	131	136	147	92	****	38	59
6	46	49	37	53	84	76	92	73	88	103	119	103	101	96	92	92	69	72	65	81	46	30	****	22	73
7	21	28	21	17	14	15	21	36	47	56	46	36	28	28	37	37	40	50	53	73	58	38	****	31	36
8	36	27	28	23	16	17	26	44	50	43	56	50	47	45	39	63	62	66	69	86	77	82	****	78	49
9	37	55	84	50	21	48	34	41	45	56	41	20	10	13	15	20	19	33	33	30	30	28	****	20	34
10	16	16	10	12	9	11	11	24	47	57	56	43	29	36	40	38	46	57	44	39	27	37	****	18	31
11	28	30	30	22	19	18	24	30	38	42	47	40	37	32	41	41	44	39	39	35	25	17	****	20	32
12	19	11	11	11	12	11	14	18	19	16	16	18	12	12	11	11	12	13	13	10	9	7	****	7	13
13	5	6	4	4	8	10	11	11	10	39	47	<-- D -->	49	46	40	62	33	45	40	76	65	****	67	32	
14	64	67	48	44	60	56	56	53	55	69	68	70	71	72	80	82	69	29	25	15	15	15	****	16	52
15	14	11	7	8	9	9	12	15	24	26	24	17	24	31	40	39	30	44	61	43	33	31	****	26	25
16	24	21	20	16	15	13	15	20	24	26	26	24	21	23	30	25	30	38	50	40	41	39	****	35	27
17	29	20	16	10	7	9	18	28	48	53	61	58	54	51	59	74	90	94	139	116	93	50	****	39	53
18	82	71	37	17	17	16	18	18	34	37	34	24	29	27	31	55	72	52	51	51	45	41	****	18	38
19	23	30	29	21	13	20	23	21	22	28	28	40	43	25	27	44	40	92	140	152	162	180	****	136	58
20	112	102	90	60	101	75	33	80	105	103	107	80	50	47	42	32	44	43	40	60	76	79	****	43	70
21	76	53	118	110	73	32	76	100	103	105	108	114	112	109	68	66	70	78	139	118	84	71	****	37	88
22	39	52	73	98	109	27	14	20	17	45	30	32	28	26	9	12	15	17	29	27	35	27	****	32	35
23	32	22	13	17	18	16	22	41	65	72	78	57	41	42	39	53	69	78	102	101	96	68	****	32	51
24	44	35	46	19	15	14	20	39	54	63	50	41	32	39	43	42	38	31	31	24	24	21	****	18	34
25	17	14	12	9	10	8	8	10	13	12	12	10	14	15	27	55	48	46	43	31	27	38	****	28	22
26	22	22	22	17	17	19	23	37	39	30	27	30	28	29	33	34	38	47	55	43	40	36	****	18	31
27	29	36	46	36	34	43	42	17	19	20	21	32	20	19	30	45	29	30	69	113	129	85	****	31	42
28	19	48	89	67	51	49	52	49	73	89	98	97	54	62	53	38	41	81	74	58	60	19	****	11	58
29	17	12	10	7	7	6	21	12	46	65	49	31	32	45	33	37	62	92	90	110	94	84	****	88	46
30	76	64	40	20	31	16	21	41	60	53	47	65	55	47	51	55	63	67	82	84	78	38	****	25	51
31	21	18	13	10	15	16	24	62	76	76	73	59	42	19	20	29	38	48	40	74	115	104	****	91	47

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	
36	38	38	88	105	121	140	4	- 180	2	96	0	0	

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

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

STATION : AP LEI CHAU
 POLLUTANT : SULPHUR DIOXIDE
 MONTH: OCTOBER
 YEAR : 2010
 UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	4	4	3	4	3	2	3	3	4	3	3	3	4	5	0	1	1	2	2	1	1	1	****	3	2
2	1	1	1	2	2	2	2	2	2	3	1	0	0	1	1	0	0	3	2	1	3	3	****	4	2
3	2	4	7	6	5	5	5	5	6	4	5	3	3	4	4	2	5	5	6	5	5	6	****	8	5
4	6	6	6	6	6	7	5	5	5	6	7	7	6	8	8	8	8	9	9	10	10	9	****	12	7
5	9	10	10	11	11	11	11	13	12	12	13	13	13	14	13	11	9	8	8	7	7	7	****	10	10
6	9	7	7	8	9	8	7	7	9	8	9	9	8	10	11	11	9	8	6	6	6	6	****	7	8
7	4	4	3	4	5	6	6	7	8	7	8	8	8	7	8	8	7	8	8	9	10	6	****	12	7
8	9	8	10	10	10	9	10	11	12	13	14	13	16	14	15	14	13	10	9	9	8	9	****	11	11
9	6	6	5	3	3	3	3	2	2	2	4	4	4	5	3	4	3	1	0	0	1	0	****	2	3
10	0	1	1	2	1	1	2	2	2	2	3	2	4	6	7	6	5	5	5	6	6	7	****	10	4
11	7	5	5	5	5	5	5	5	4	3	6	3	5	7	6	5	1	2	1	1	1	1	****	2	4
12	1	1	1	1	0	1	0	1	0	0	1	4	2	0	0	0	0	0	1	1	3	15	****	4	2
13	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5	****	3	1
14	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	1	1	2	3	****	6	1
15	4	3	3	4	5	5	2	2	2	2	2	1	1	2	2	3	2	3	3	2	5	4	****	6	3
16	3	2	1	2	1	1	0	0	1	1	2	1	1	1	1	0	0	0	0	0	0	0	****	1	1
17	0	0	0	0	1	1	1	1	1	2	1	1	0	1	2	2	1	2	0	0	0	0	****	1	1
18	0	0	0	0	1	0	0	0	3	3	1	0	0	0	0	0	1	1	0	0	0	0	****	0	1
19	12	1	1	1	1	1	0	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	****	2	1
20	0	1	1	2	2	2	2	4	8	7	7	4	2	2	4	4	5	6	5	6	6	7	****	11	4
21	8	7	6	7	5	5	7	8	8	8	7	9	8	6	11	9	9	9	8	8	9	9	****	11	8
22	9	20	21	18	14	16	12	10	9	11	11	14	12	10	11	13	13	14	12	9	9	10	****	18	13
23	11	11	17	13	14	18	17	30	42	39	36	43	69	58	49	53	56	44	48	36	19	14	****	26	33
24	21	23	25	21	26	26	26	30	33	32	41	41	33	28	21	36	35	31	18	10	12	12	****	11	26
25	9	11	10	8	7	9	8	10	12	12	10	14	15	28	34	58	20	13	12	11	12	11	****	13	15
26	12	12	11	10	10	11	12	10	11	13	8	9	10	12	11	10	11	11	10	11	10	9	****	9	10
27	9	10	9	9	10	9	8	11	13	14	12	12	11	9	10	13	13	15	16	17	19	17	****	14	12
28	14	13	11	11	11	11	10	10	11	13	12	12	11	<--- M --->	6	8	10	11	12	13	10	****	11	11	
29	9	8	8	9	10	10	9	10	12	12	13	16	15	15	15	15	15	16	18	19	21	21	****	22	14
30	22	22	22	23	23	21	22	25	27	27	<--- M --->	18	18	22	21	22	23	24	23	22	22	****	23	23	
31	22	22	20	20	20	20	20	20	20	17	17	15	13	13	14	11	12	12	14	15	14	13	****	14	17

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
4	6	8	6	19	23	36	44	0 - 69	1 - 33	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 : AP LEI CHAU
 POLLUTANT : NITROGEN DIOXIDE
 MONTH: OCTOBER
 YEAR : 2010
 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	1	0	0	0	0	0	2	7	7	2	2	6	5	7	8	3	4	8	17	26	14	16	****	17	7
3	18	12	3	7	11	5	7	8	10	7	7	7	6	2	8	12	21	20	36	24	22	21	****	22	13
4	19	15	7	4	2	5	12	24	24	21	22	24	16	21	20	21	39	39	45	50	43	28	****	23	23
5	18	7	4	3	2	4	11	19	28	24	16	14	9	11	16	18	27	27	41	18	11	15	****	24	16
6	8	9	2	1	1	1	6	18	25	21	13	9	4	4	4	6	2	1	0	0	0	0	****	0	6
7	0	0	0	0	0	0	0	5	10	6	6	3	3	4	8	7	7	13	17	4	10	1	****	4	5
8	4	0	0	0	0	0	4	14	9	4	4	3	1	0	0	0	1	0	0	0	0	0	****	3	2
9	0	0	0	0	0	0	0	0	0	0	1	5	6	0	0	0	0	0	0	0	0	0	****	0	1
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	1	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	****	4	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0	****	1	1
13	0	0	0	0	0	0	1	3	4	4	0	1	2	0	0	0	1	2	4	2	12	7	****	19	3
14	11	9	1	0	0	0	0	0	0	1	4	3	3	1	1	0	0	0	0	0	0	8	****	3	2
15	0	0	0	0	0	0	0	0	17	21	9	6	11	12	17	18	21	32	32	33	38	29	****	30	14
16	25	17	8	8	7	7	11	14	14	14	15	10	11	11	21	12	10	19	14	10	18	2	****	3	12
17	4	4	2	2	1	3	5	7	3	1	0	2	1	0	0	1	2	2	1	0	0	0	****	0	2
18	0	0	0	0	1	2	3	36	44	43	41	38	30	22	26	12	2	4	5	3	4	24	****	54	17
19	66	34	22	19	11	14	20	53	54	49	38	44	37	37	31	34	44	40	42	32	37	29	****	30	36
20	27	17	21	18	14	17	23	42	45	47	41	37	28	27	29	41	44	51	45	36	25	22	****	16	31
21	17	11	9	6	7	6	13	17	20	24	26	32	30	23	17	30	29	32	28	29	25	12	****	11	20
22	7	13	9	6	2	6	4	16	21	19	17	31	26	22	28	34	44	44	58	30	21	12	****	34	22
23	25	22	22	6	7	10	17	32	39	39	31	40	80	59	52	52	48	54	81	66	42	18	****	49	39
24	27	26	25	26	33	34	30	27	30	31	33	34	31	22	16	28	31	45	36	17	40	43	****	41	31
25	28	20	8	2	0	1	8	20	22	20	15	16	17	23	33	60	35	37	36	29	33	35	****	35	23
26	33	20	8	3	1	2	8	17	17	33	24	22	23	34	37	39	47	45	52	44	40	32	****	34	27
27	23	15	11	9	10	10	18	33	37	31	30	29	21	31	23	32	36	20	30	45	46	36	****	24	26
28	24	23	16	10	7	9	12	32	38	36	38	40	38	<--- M --->	31	42	43	53	56	42	31	****	32	31	
29	30	22	14	8	12	10	15	34	56	58	56	40	37	39	49	44	48	56	55	54	49	43	****	47	38
30	43	35	25	21	19	21	28	40	54	66	<--- M --->	38	36	44	41	46	56	62	68	66	52	****	50	43	
31	58	42	34	18	15	18	27	37	38	29	17	14	11	12	16	10	17	19	64	85	82	69	****	41	34

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	
10	11	17	11	42	50	58	66	0	- 85	6	95	0	0	

- NOTES: 1. FLAGS FOR INVALID DATA :
 **** : DAILY ZERO/SPAN CHECK
 D : DYNAMIC CALIBRATION
 T : TELEMETRY/DATALOGGR/ANALYZER FAULT
 M : MAINTENANCE OR MACHINE SHUTDOWN
 P : POWER FAILURE
2. BRACKETED READINGS EXCEED 1-HR OBJECTIVE 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: NOVEMBER
 YEAR : 2010
 UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	13	13	13	14	11	11	11	16	15	13	15	12	M	13	13	12	12	12	11	16	18	16	****	10	13
2	10	10	9	10	10	13	14	15	16	15	14	13	11	11	10	7	8	9	9	9	9	9	****	11	11
3	10	9	10	10	10	12	12	14	19	19	15	13	9	10	10	11	11	10	10	12	10	10	****	11	12
4	10	9	10	12	13	15	17	17	17	16	16	16	14	15	13	11	10	8	7	7	6	9	****	8	12
5	7	6	8	9	8	8	8	9	14	12	11	9	15	13	12	9	7	5	5	5	5	5	****	6	9
6	4	4	4	4	4	3	6	1	4	2	3	6	7	15	4	3	2	1	10	19	16	4	****	3	6
7	2	2	2	7	8	5	6	6	11	30	31	57	50	49	39	55	20	6	7	7	8	11	****	10	19
8	8	9	18	23	86	12	13	11	18	25	67	13	11	10	27	33	41	64	53	24	10	8	****	8	26
9	8	18	20	20	20	19	19	21	19	17	16	17	16	13	15	15	17	18	16	15	15	15	****	15	17
10	13	14	13	14	17	13	13	13	15	16	14	21	14	11	11	9	11	13	15	15	10	9	****	7	13
11	7	17	20	16	12	13	14	14	16	14	17	17	26	9	21	32	44	39	23	34	17	14	****	11	19
12	8	9	8	11	13	14	14	14	20	17	13	9	8	7	7	10	7	5	4	4	4	4	****	5	9
13	4	4	5	5	5	6	7	6	7	6	5	5	5	5	5	6	7	8	5	3	3	4	****	3	5
14	2	3	4	6	7	8	9	9	8	8	11	9	7	8	11	12	11	11	12	13	11	9	****	7	8
15	8	9	10	10	10	10	10	11	11	11	10	11	9	13	13	14	9	9	9	9	9	5	****	5	10
16	3	3	4	4	5	4	5	8	10	8	10	9	13	10	14	16	13	21	54	21	15	10	****	8	12
17	9	8	6	6	6	6	7	8	8	9	8	8	25	26	21	11	11	10	7	8	8	8	****	8	10
18	5	6	6	5	5	5	6	7	8	9	11	<-----D----->				6	6	5	5	4	11	****	7	6	
19	4	4	5	4	4	3	5	5	15	9	15	32	31	39	28	19	31	39	25	22	16	8	****	8	16
20	6	5	7	6	5	5	4	5	4	5	4	3	4	4	5	5	4	5	5	4	4	4	****	5	5
21	3	2	2	1	2	1	2	2	2	3	4	3	3	5	5	6	8	6	5	6	8	7	****	18	5
22	38	33	24	15	35	28	47	44	69	63	49	30	25	33	33	41	67	38	19	11	11	11	****	8	34
23	7	5	5	5	4	4	5	5	5	5	33	27	33	18	11	11	9	8	10	8	11	11	****	11	11
24	9	8	7	6	5	6	6	5	5	5	6	5	8	9	9	8	8	6	6	7	8	6	****	6	7
25	6	6	5	6	7	7	8	9	12	13	12	16	11	10	10	14	9	10	11	13	13	11	****	8	10
26	5	7	8	6	7	7	8	8	10	13	10	9	9	7	8	7	9	9	9	8	10	9	****	7	8
27	9	7	7	6	6	7	8	9	11	11	11	10	10	8	7	8	7	6	5	6	8	7	****	7	8
28	5	6	6	5	4	5	5	6	7	8	8	6	6	6	5	5	6	7	6	6	6	5	****	7	6
29	5	6	7	6	6	6	7	7	9	24	18	11	10	10	10	11	9	8	7	9	8	6	****	6	9
30	6	5	4	4	13	24	32	85	58	24	53	64	21	19	26	36	42	77	44	29	49	29	****	12	33

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	24-HR	DEVIATION	VALID DATA	1-HR	24-HR			
9	9	12	9	23	34	53	64	1	-	86	5	-	34	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 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: NOVEMBER
YEAR : 2010
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	34	27	21	9	8	11	12	27	23	20	18	22	M	19	17	11	11	14	16	18	30	15	****	4	18
2	4	4	3	3	4	4	10	37	53	40	37	29	18	14	10	9	5	10	27	35	37	19	****	8	18
3	9	12	14	11	12	12	36	55	79	75	57	53	31	23	25	26	17	11	13	26	39	18	****	17	29
4	17	15	16	14	16	17	22	40	58	48	40	30	28	25	34	25	28	23	26	19	23	29	****	17	26
5	18	20	13	9	9	13	22	39	54	67	83	76	73	89	92	82	62	62	55	57	59	34	****	26	48
6	23	19	15	13	20	15	30	35	51	52	64	68	70	69	71	71	68	75	75	87	91	61	****	50	52
7	45	32	45	39	34	20	39	43	51	59	63	72	58	53	40	59	25	7	14	19	38	30	****	40	40
8	62	47	40	50	71	16	28	49	56	68	82	52	39	19	48	53	61	104	124	73	28	36	****	13	53
9	42	35	21	17	19	22	32	57	61	49	27	23	17	8	8	10	16	14	20	22	14	23	****	19	25
10	17	13	9	10	10	10	14	27	34	47	51	38	16	19	12	10	11	13	18	31	20	14	****	11	20
11	20	17	13	14	15	15	24	47	55	49	59	52	57	44	52	43	60	82	56	101	119	43	****	27	46
12	25	16	15	13	13	13	19	38	59	65	24	13	8	8	8	9	9	12	9	6	6	6	****	8	18
13	10	8	8	9	8	11	14	18	19	15	14	13	12	13	10	8	8	13	10	8	7	6	****	7	11
14	5	7	6	6	9	13	10	11	13	12	14	11	8	6	6	8	10	12	18	20	16	11	****	8	10
15	10	8	6	6	8	9	13	17	17	12	11	11	10	5	7	7	6	5	10	9	9	4	****	3	9
16	3	3	3	6	6	7	17	38	41	32	27	23	28	19	23	28	21	43	93	52	51	26	****	39	27
17	40	27	14	13	12	14	20	37	43	32	16	23	62	70	37	10	13	13	10	11	9	12	****	13	24
18	9	6	6	7	11	12	21	28	30	43	60	<-----D----->					12	16	42	24	59	39	****	46	26
19	42	28	18	14	17	15	23	54	72	64	61	69	61	62	46	31	46	51	33	32	71	71	****	69	46
20	62	57	29	26	17	18	21	38	40	21	12	11	9	12	17	19	16	22	20	17	26	17	****	16	24
21	24	10	8	8	6	8	12	17	23	19	12	7	5	7	5	4	10	11	23	44	28	26	****	89	18
22	98	96	91	80	78	79	90	90	95	99	104	65	61	89	94	76	92	80	63	83	68	71	****	66	83
23	69	28	16	13	12	13	21	32	36	37	56	56	63	36	23	27	19	36	73	25	18	11	****	10	32
24	10	8	8	8	9	11	17	27	34	27	28	21	16	9	12	11	14	12	14	26	16	19	****	26	17
25	31	26	23	21	16	17	26	46	53	48	49	55	28	25	28	27	11	42	99	74	46	35	****	30	37
26	29	20	8	7	10	14	25	44	57	33	15	13	16	13	15	22	22	28	81	60	31	21	****	11	26
27	13	15	12	11	10	13	17	32	16	20	15	16	13	9	9	18	21	22	29	25	36	14	****	8	17
28	8	7	7	6	7	9	11	16	15	24	14	10	15	15	13	8	8	10	12	17	19	16	****	12	12
29	18	17	15	7	12	16	29	46	46	45	30	21	11	10	10	12	13	14	15	17	20	27	****	26	21
30	38	32	26	31	40	44	55	81	67	43	56	76	32	20	44	43	60	124	143	123	119	100	****	76	64

MONTHLY STATISTICS:										NO. OF TIMES					
GEOM	ARITH		<-----PERCENTILE----->					<-----RANGE----->			STD GEOM	PERCENT	ABOVE OBJECTIVE		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR		
22	20	30	20	67	80	96	104	3	- 143	9	- 83	2	95	0	0

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

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

STATION : AP LEI CHAU
 POLLUTANT : SULPHUR DIOXIDE
 MONTH: DECEMBER
 YEAR : 2010
 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	7	6	7	7	6	7	7	10	94	65	37	37	6	3	4	4	4	4	8	13	13	****	5	16
2	5	5	5	6	6	6	7	7	27	88	71	40	27	28	35	40	58	64	52	52	58	28	****	16	32
3	14	16	10	10	10	10	10	10	12	M	13	12	10	8	10	9	8	8	7	6	5	5	****	8	10
4	7	7	7	7	7	8	9	10	11	12	10	10	10	10	9	8	9	9	9	9	13	13	****	13	9
5	9	9	9	7	7	7	8	8	9	21	50	43	76	11	7	10	62	44	46	44	39	36	****	36	26
6	35	175	115	78	164	183	153	131	120	160	100	138	126	63	34	66	51	15	14	14	14	****	10	86	
7	10	16	22	27	33	34	35	36	35	32	31	31	32	32	31	29	28	30	31	32	34	30	****	23	29
8	21	18	18	17	15	13	12	14	14	14	12	12	18	7	8	11	7	9	10	10	11	10	****	10	13
9	8	8	7	8	11	13	9	11	15	10	10	10	11	12	15	14	13	11	12	12	11	****	9	11	
10	7	8	7	6	7	8	8	9	9	10	11	10	10	10	11	11	12	11	11	9	10	9	****	9	9
11	10	12	13	13	12	11	11	11	10	11	11	10	9	7	7	8	9	8	8	6	5	6	****	5	9
12	3	1	1	1	2	2	4	5	5	5	5	4	5	4	3	3	3	3	2	2	2	****	1	3	
13	1	1	1	1	0	1	1	1	1	1	2	1	1	0	0	1	1	5	13	14	27	60	****	88	10
14	46	34	56	48	47	60	31	24	36	46	51	84	107	116	68	54	25	7	3	3	2	2	****	2	41
15	1	1	1	2	1	2	2	2	3	3	3	3	2	3	3	2	3	2	4	4	1	2	****	1	2
16	0	0	1	2	3	2	4	5	6	7	9	8	8	10	10	11	13	11	13	10	12	****	10	7	
17	10	10	9	9	8	8	8	8	10	12	16	21	12	14	16	18	22	18	23	15	16	11	****	12	13
18	18	8	8	7	8	10	8	9	7	7	6	5	5	4	5	4	3	4	3	4	4	4	****	5	6
19	7	8	8	7	6	4	4	4	4	4	5	6	6	4	3	4	7	22	27	28	33	50	****	69	14
20	56	56	92	79	56	45	35	50	91	70	22	10	8	7	7	6	6	5	5	5	7	55	****	18	35
21	27	42	102	142	118	59	50	40	52	46	36	37	109	44	39	38	30	25	27	24	34	55	****	215	60
22	84	60	62	74	90	35	14	14	15	14	15	14	14	12	10	12	11	11	11	10	9	8	****	10	26
23	8	7	9	14	25	16	16	17	17	18	16	14	12	13	12	12	12	12	11	12	12	13	****	10	13
24	11	10	12	10	11	12	13	13	15	17	17	15	17	15	15	13	12	12	10	11	9	****	5	13	
25	4	5	4	4	4	4	4	4	5	5	5	5	8	9	12	22	13	12	6	3	2	****	4	6	
26	4	8	8	12	12	12	13	14	11	11	12	9	11	9	9	9	10	11	10	13	9	9	****	9	10
27	9	10	10	10	10	10	10	12	11	11	10	10	9	10	11	11	10	10	9	12	11	11	****	7	10
28	8	8	9	9	10	11	10	11	12	21	67	33	18	21	12	8	8	8	7	10	10	12	****	12	15
29	10	10	10	7	8	8	7	7	8	8	11	6	7	9	10	10	8	8	8	7	9	12	****	9	9
30	12	11	9	11	15	18	41	74	24	31	17	17	18	16	15	14	15	15	17	18	19	19	****	16	20
31	17	17	17	15	15	14	13	13	18	20	16	13	11	11	10	10	10	10	10	11	9	11	****	11	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	24-HR	DEVIATION	VALID DATA	1-HR	24-HR	
11	10	10	44	67	108	135	0	- 215	2 - 86	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: DECEMBER
 YEAR : 2010
 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	57	46	33	36	38	24	28	51	52	74	73	71	69	16	10	14	19	41	24	33	110	103	****	58	47
2	51	49	29	19	17	18	31	64	69	90	84	65	52	53	71	65	107	114	123	174	172	138	****	38	74
3	43	31	19	16	18	21	28	53	79	M	22	16	14	13	14	13	14	14	20	17	17	19	****	13	23
4	14	11	9	10	10	10	14	17	17	20	20	27	21	32	30	20	21	25	38	17	21	13	****	16	19
5	22	15	12	12	12	13	18	29	34	43	62	56	60	17	8	17	78	81	99	95	131	141	****	139	52
6	139	157	142	130	162	166	158	148	124	159	132	120	109	65	59	87	107	71	76	78	56	38	****	20	109
7	18	26	21	18	17	17	26	40	47	48	49	52	41	41	45	57	59	61	68	78	62	50	****	42	43
8	40	29	25	25	24	20	23	43	58	57	44	51	57	38	33	49	55	72	71	75	90	103	****	64	50
9	71	76	50	41	59	72	69	60	71	41	24	17	6	10	10	16	16	18	15	17	18	17	****	14	35
10	13	11	10	13	12	13	17	25	20	28	24	21	16	14	17	19	23	30	22	20	15	16	****	13	18
11	18	17	18	17	13	16	20	20	20	24	28	26	22	22	26	28	32	27	21	22	14	14	****	17	21
12	13	9	8	9	10	10	13	17	19	18	17	18	15	14	15	16	16	20	20	17	14	11	****	10	14
13	10	8	6	7	8	10	15	26	32	20	20	24	14	22	7	4	3	40	72	68	70	72	****	65	27
14	68	68	65	62	62	57	51	55	52	53	51	53	63	82	85	86	61	19	9	9	9	9	****	9	49
15	9	6	6	6	7	9	10	10	12	13	13	14	11	11	14	15	28	44	61	48	40	35	****	30	20
16	28	24	20	16	13	12	14	23	30	30	24	27	27	29	41	36	41	53	46	41	39	34	****	32	30
17	27	22	15	12	14	14	26	43	56	59	61	52	46	48	57	68	79	93	132	129	120	94	****	90	59
18	92	61	58	27	24	23	25	33	30	30	26	18	21	18	28	42	32	45	31	36	40	30	****	22	34
19	25	20	21	17	14	15	21	20	30	26	15	16	13	9	8	9	20	41	119	146	128	154	****	158	45
20	147	134	138	131	102	91	86	104	108	98	37	13	8	7	6	10	14	46	83	34	86	105	****	117	74
21	130	129	134	134	128	111	86	97	91	87	95	73	101	51	42	47	35	27	44	47	93	120	****	131	88
22	131	104	98	120	128	93	48	48	69	41	37	27	25	20	8	7	11	12	29	40	43	29	****	31	52
23	32	24	18	17	21	15	19	22	23	31	39	32	19	11	9	11	16	27	20	49	52	34	****	18	24
24	20	25	13	11	10	12	17	36	37	34	32	34	28	23	17	23	17	20	22	20	13	8	****	6	21
25	7	5	6	6	6	7	9	12	14	12	12	13	14	20	36	57	55	51	50	44	43	47	****	35	24
26	25	19	20	14	12	14	15	17	28	24	23	23	27	25	24	27	33	51	59	61	47	39	****	40	29
27	46	49	46	42	29	15	18	30	29	23	14	13	8	8	12	14	11	15	43	56	49	41	****	38	28
28	59	74	69	48	39	46	42	54	56	56	85	64	24	28	16	8	11	20	44	29	50	52	****	42	44
29	54	39	20	18	17	20	30	51	42	28	31	20	26	24	9	13	18	40	54	60	48	33	****	51	32
30	50	27	17	17	18	36	83	106	62	69	51	46	51	48	43	40	51	67	79	86	74	55	****	33	53
31	36	27	21	23	27	24	30	50	61	74	66	52	21	11	13	18	17	20	27	41	97	94	****	71	40

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			
30	28	28	91	122	139	156	3	-	174	14	-	109	2	96	0	0

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

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 : October – December 2010

Week Ending	No. of Samples	Suspended Solids, mg/L			pH		
		Maximum	Minimum	Average	Maximum	Minimum	Average
02/10/10	5*	19	16	17	8.3	8.2	8.2
09/10/10	4*	18	15	17	8.3	8.2	8.3
16/10/10	7	20	15	18	8.4	8.2	8.3
23/10/10	6*	18	13	16	8.3	8.2	8.3
30/10/10	6*	20	15	18	8.4	8.2	8.3
06/11/10	2*	16	15	16	8.2	8.2	8.2
13/11/10	3*	20	15	18	8.3	8.2	8.2
20/11/10	6*	19	14	16	8.2	8.1	8.2
27/11/10	5*	18	13	15	8.3	8.2	8.2
04/12/10	5*	16	13	15	8.3	8.2	8.2
11/12/10	5*	20	14	17	8.2	8.2	8.2
18/12/10	3*	16	12	14	8.3	8.2	8.3
25/12/10	1*	19	19	19	8.2	8.2	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 : October – December 2010

Sampling date		5/10/2010	8/11/2010	7/12/2010
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	90	128	72
Cyanide,	mg/L	0.02	<0.01	<0.01

Remark:

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

Appendix D Summary of EMIS

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