

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

January – March 2014

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 (January to March 2014)
Date	23 June 2014
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 January to March 2014.

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	10/02/2014 00:00 to 31/03/2014 23:59	Unit Overhaul
L5	04/03/2014 00:00 to 31/03/2014 23:59	Unit Overhaul

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	20/01/2014 00:00 to 23/01/2014 08:40	FGD plant was bypassed to conduct inspection and necessary maintenance works for 2A and 2B absorber recirculation pumps, suction pipe and pressure switches tapping line	EPD was informed by letter dated 28/01/2014
L2 FGD	27/01/2014 04:02 to 19:48	FGD plant was bypassed to facilitate the de-energization of the 6.6kV station board for protection relay maintenance	EPD was informed by letter dated 28/01/2014
L4 FGD	14/01/2014 08:50 to 11:15	FGD plant was bypassed due to the operation of its booster fan stalling protection	EPD was informed by letter dated 17/01/2014

Equipment	Period	Cause	Actions Taken
L4 FGD	21/01/2014 12:38 to 15:30	FGD plant was bypassed due to the operation of its booster fan stalling protection	EPD was informed by letter dated 23/01/2014

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

Environmental Monitoring Works

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

Air Quality

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

Water Quality

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

Environmental Licensing and Permitting

Description	Permit / Licence No.	Valid Period		Issued To	Date of Issuance
		From	To		
Environmental Permit for L4/5 FGD plants retrofit project	EP-248/2006	25/04/2006	-	HK Electric	25/04/2006
Environmental Permit for Unit L2 FGD plant retrofit project	EP-287/2007	02/10/2007	-	HK Electric	02/10/2007
Specified Processes Licence issued under APCO	L-7-002(9)	01/01/2013	31/12/2014	HK Electric	28/12/2012
WPCO discharge licence for Ash Lagoon	WT00011131-2011	15/12/2011	31/12/2016	HK Electric	15/12/2011

Implementation Status of Environmental Mitigation Measures

Environmental mitigation measures were implemented in the reporting period.

Environmental Complaints

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

Future key issues

Key issues to be considered in the coming months include:

Air Impact

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

Water Impact

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

Concluding Remarks

The environmental performance of the projects was generally satisfactory.

1. INTRODUCTION

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

This report summarizes the environmental monitoring and audit work for the said Projects for the period from October to December 2013.

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	10/02/2014 00:00 to 31/03/2014 23:59	Unit Overhaul
L5	04/03/2014 00:00 to 31/03/2014 23:59	Unit Overhaul

1.4 Malfunction/Outage Records of Pollution Control Equipment

Equipment	Period	Cause	Actions Taken
L2 FGD	08/01/2014 15:34 to 15:46	FGD plant was bypassed due to the tripping of 2A absorber recirculation pump	EPD was informed by letter dated 13/01/2014
L2 FGD	09/01/2014 12:15 to 12:28	FGD plant was bypassed due to the tripping of 2B absorber recirculation pump	EPD was informed by letter dated 13/01/2014
L2 FGD	16/01/2014 15:05 to 15:19	FGD plant was bypassed due to the tripping of 2A absorber recirculation pump	EPD was informed by letter dated 20/01/2014

Equipment	Period	Cause	Actions Taken
L2 FGD	20/01/2014 00:00 To 23/01/2014 08:40	FGD plant was bypassed to conduct inspection and necessary maintenance works for 2A and 2B absorber recirculation pumps, suction pipe and pressure switches tapping line	EPD was informed by letter dated 28/01/2014
L2 FGD	27/01/2014 04:02 to 19:48	FGD plant was bypassed to facilitate the de-energization of the 6.6kV station board for protection relay maintenance	EPD was informed by letter dated 28/01/2014
L4 FGD	11/01/2014 02:19 to 02:36	Routine damper exercise	EPD was informed on 15/01/2014
L4 FGD	14/01/2014 08:50 to 11:15	FGD plant was bypassed due to the operation of its booster fan stalling protection	EPD was informed by letter dated 17/01/2014
L4 FGD	21/01/2014 12:38 to 15:30	FGD plant was bypassed due to the operation of its booster fan stalling protection	EPD was informed by letter dated 23/01/2014
L4 FGD	21/01/2014 20:10 to 20:17	FGD plant bypass dampers were opened when Unit L4 was switched from dual fan group operation to single fan group operation for conducting defect rectification works on the ash intake gates	EPD was informed by letter dated 23/01/2014
L4 FGD	31/01/2014 02:27 to 02:42	FGD plant bypass dampers were opened due to furnace draft fluctuation	EPD was informed by letter dated 06/02/2014
L5 FGD	04/01/2014 00:45 to 00:47	Routine damper exercise	EPD was informed on 08/01/2014
L5 FGD	12/01/2014 01:27 to 01:42	Routine damper exercise	EPD was informed on 15/01/2014
L5 FGD	18/01/2014 02:55 to 02:58	Routine damper exercise	EPD was informed on 22/01/2014

Equipment	Period	Cause	Actions Taken
L5 FGD	25/01/2014 02:27 to 02:30	Routine damper exercise	EPD was informed on 28/01/2014
L5 FGD	01/02/2014 00:13 to 00:39	Routine damper exercise	EPD was informed on 05/02/2014
L5 FGD	08/02/2014 01:22 to 01:24	Routine damper exercise	EPD was informed on 12/02/2014
L5 FGD	15/02/2014 01:52 to 01:55	Routine damper exercise	EPD was informed on 19/02/2014
L5 FGD	21/02/2014 23:38 to 23:47	Routine damper exercise	EPD was informed on 26/02/2014

1.5 Summary of EM&A Requirements

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

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

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

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

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

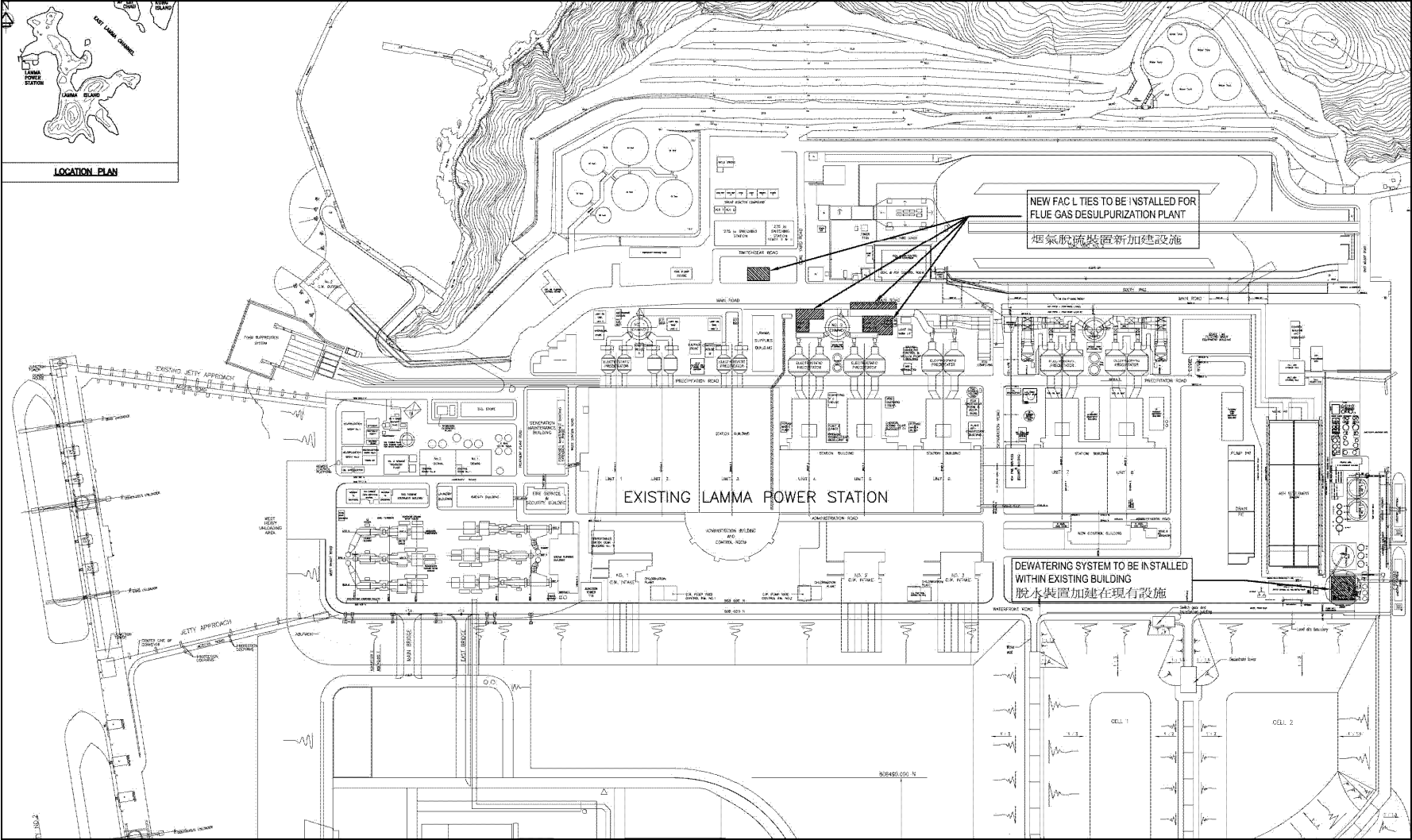


Figure 1.1a Location of New Facilities for L4 & L5 FGD Plants

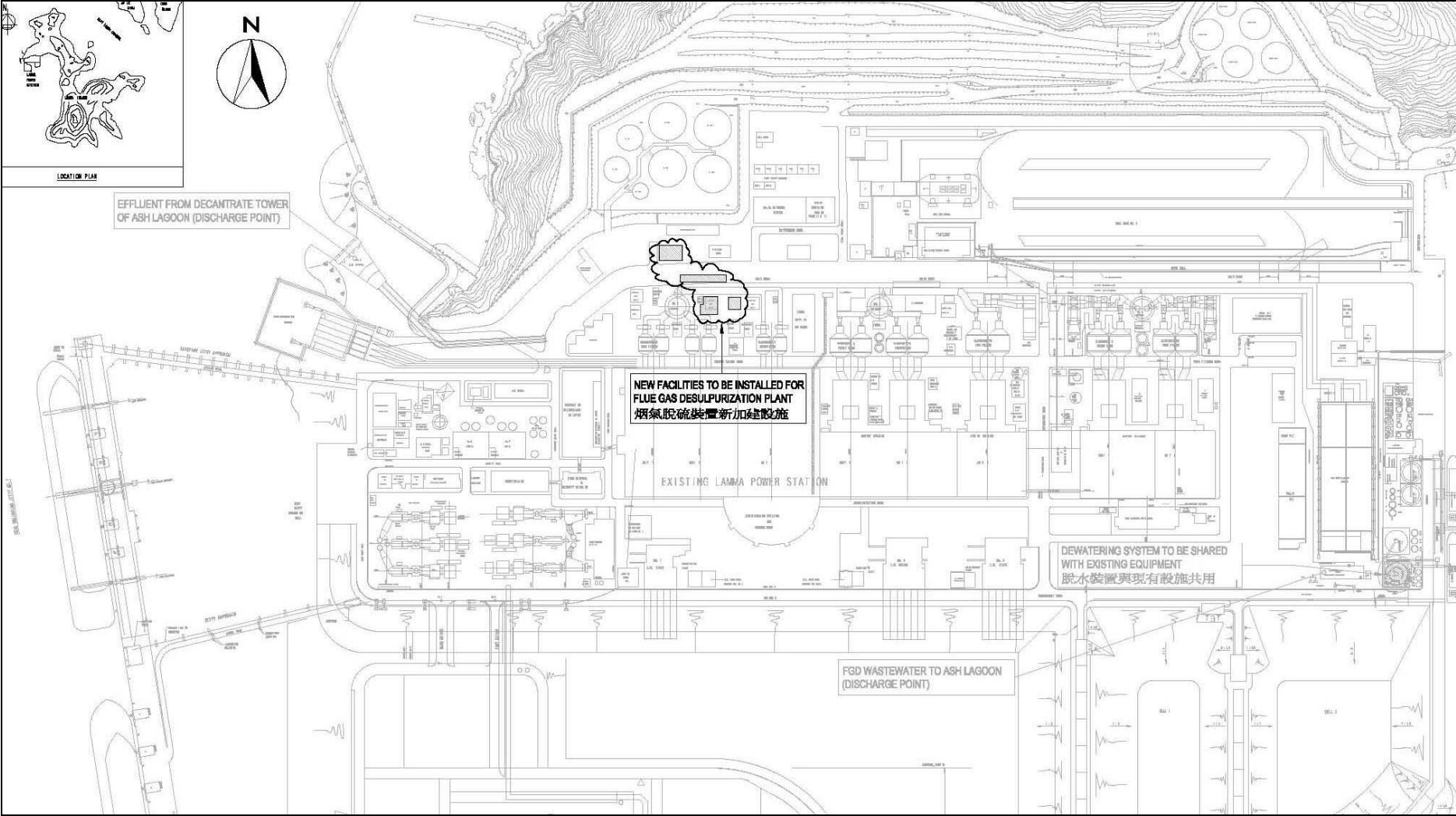


Figure 1.1b Location of New Facilities for L2 FGD Plant

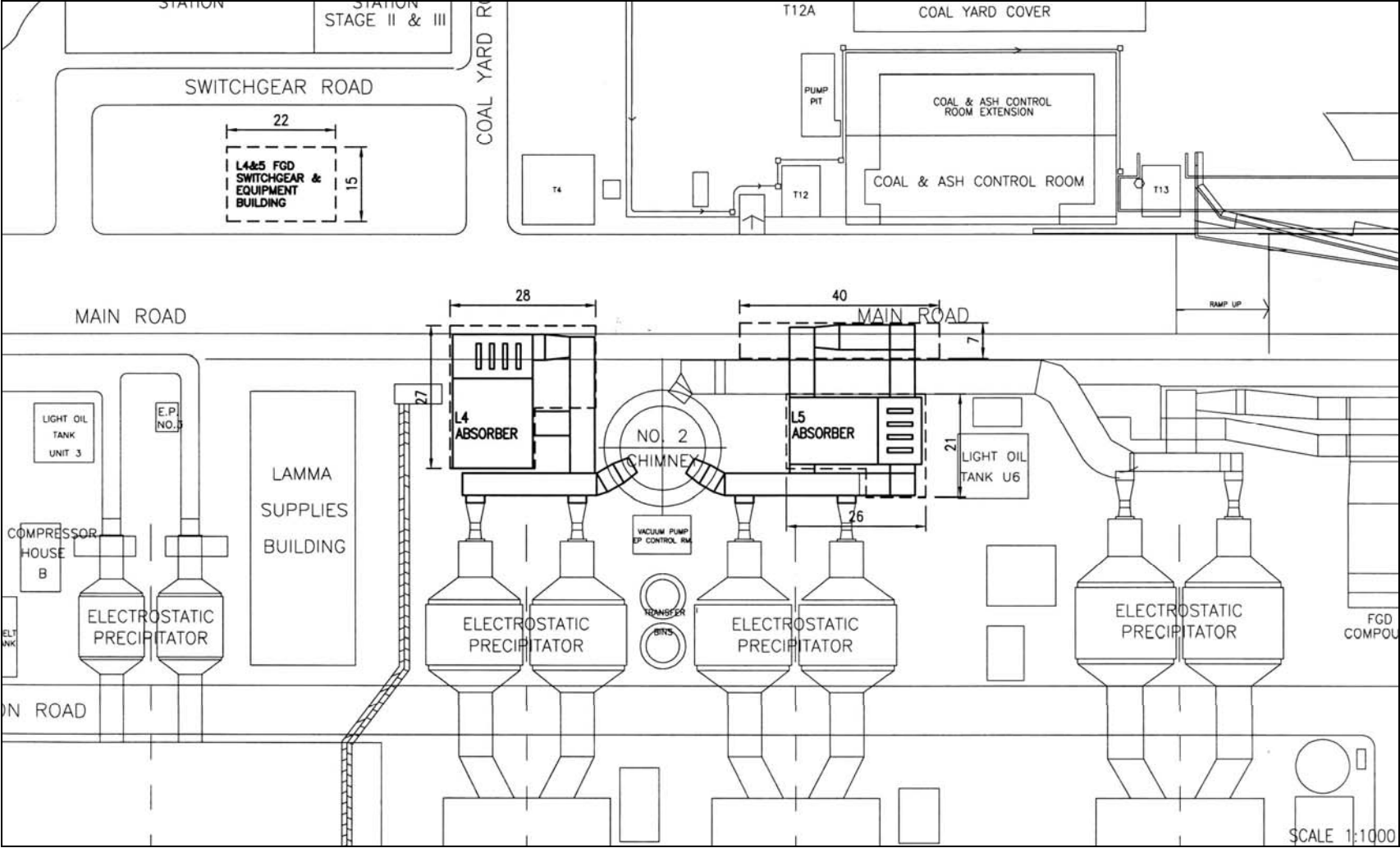


Figure 1.2a General Arrangement of L4 & L5 FGD Plants

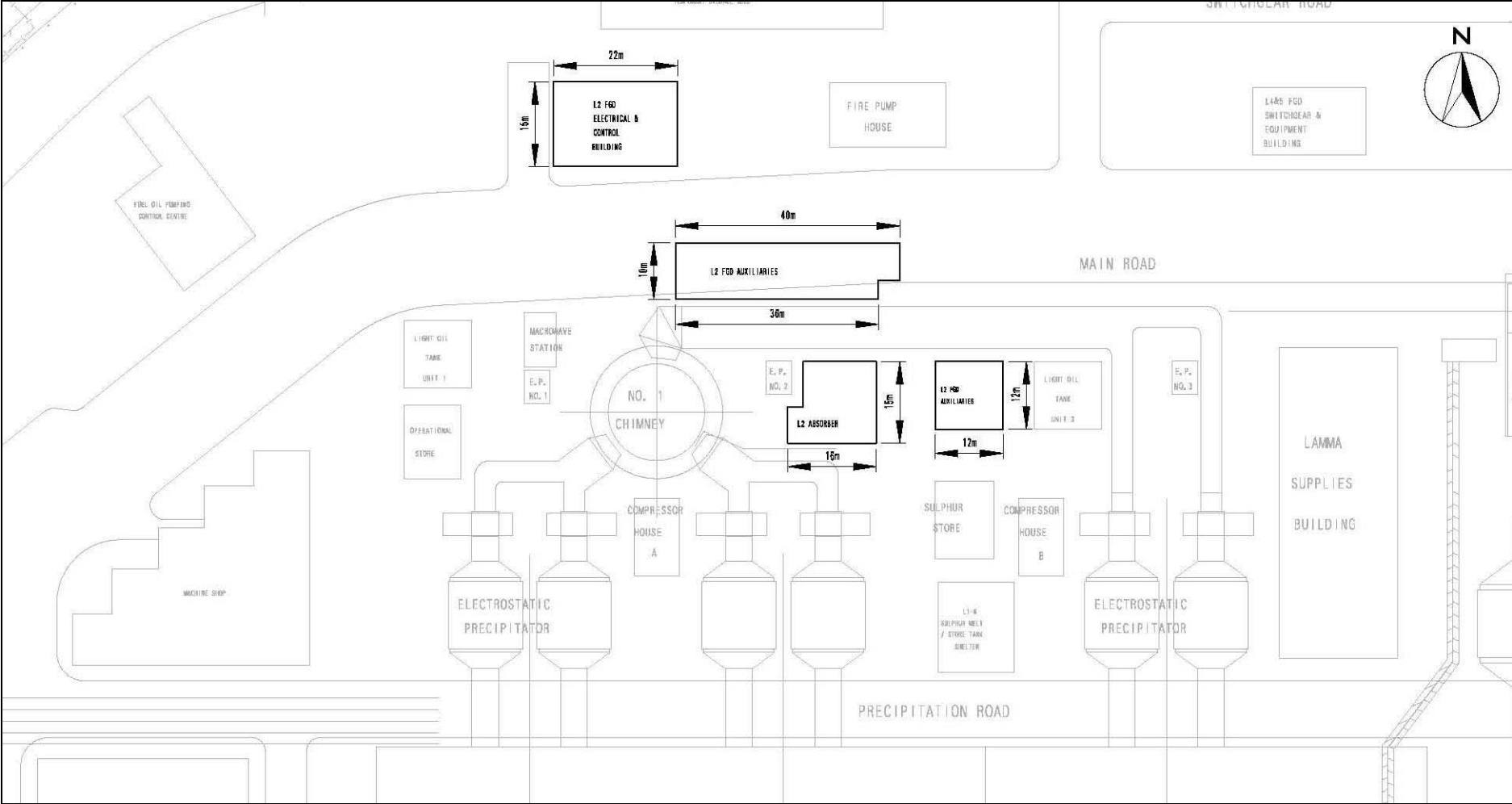


Figure 1.2b General Arrangement of L2 FGD Plant

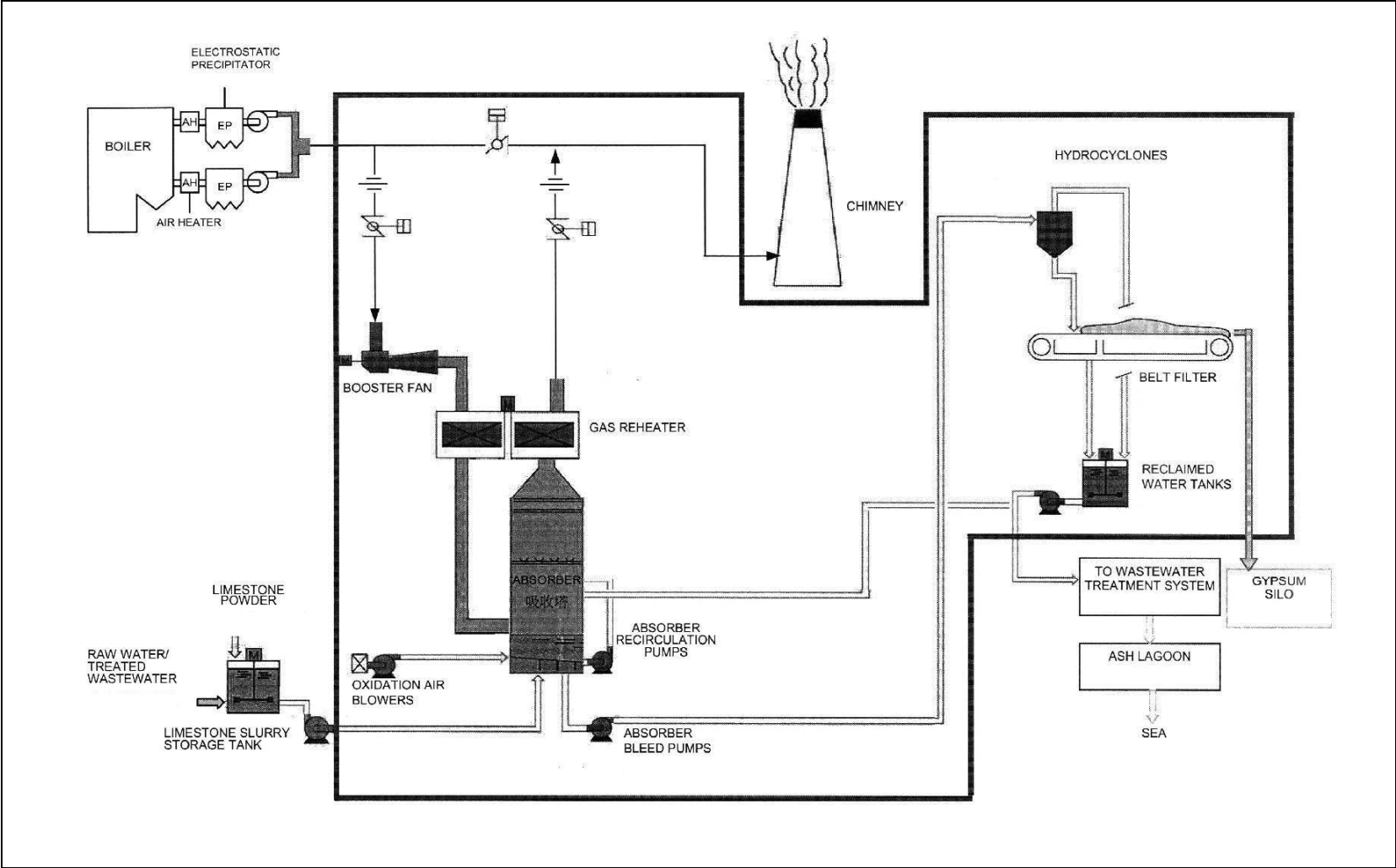


Figure 1.3 Schematic Diagram of the L4 & L5 FGD Plant

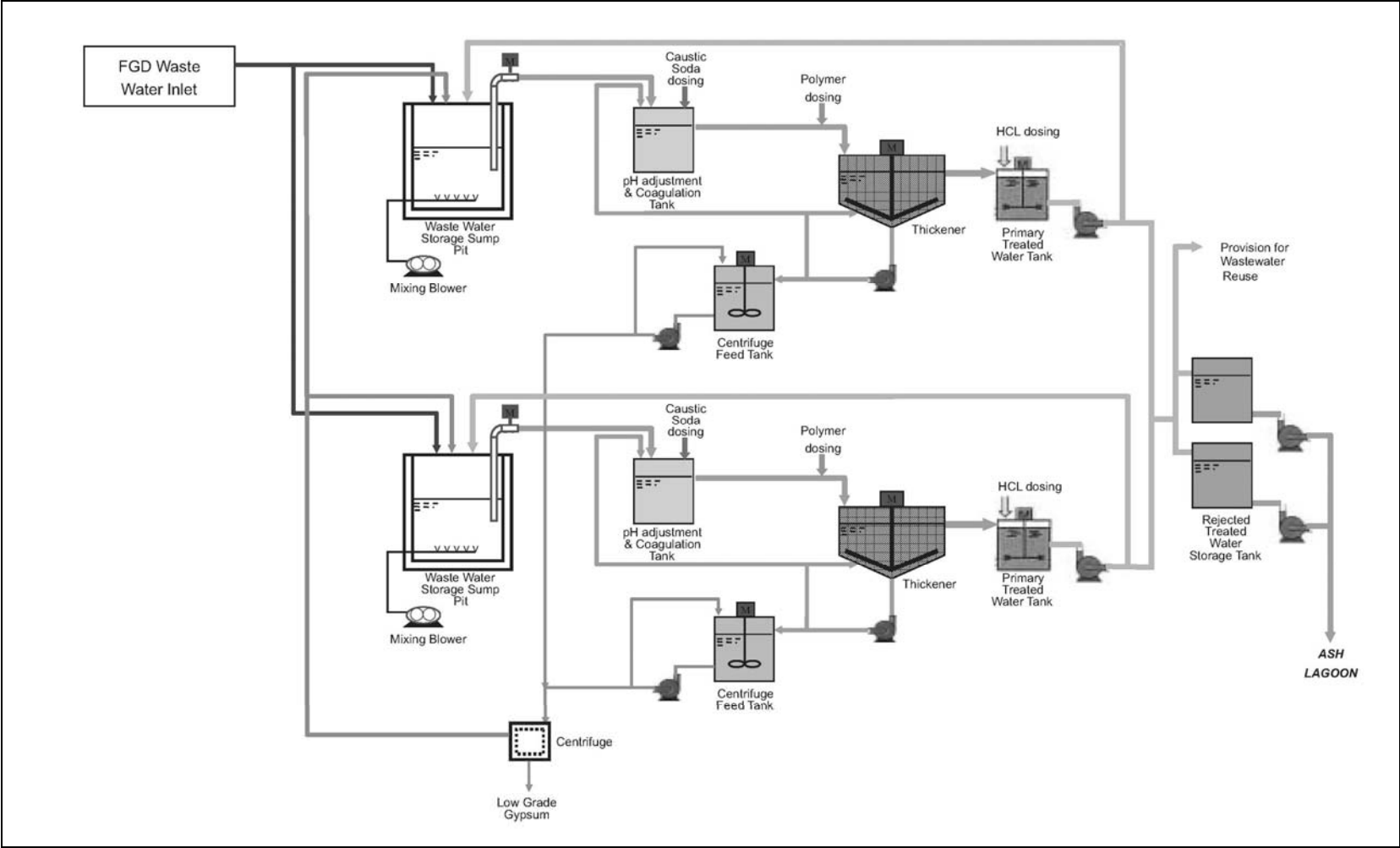


Figure 1.4 Simplified Schematic Diagram of FGD Wastewater Treatment Plant

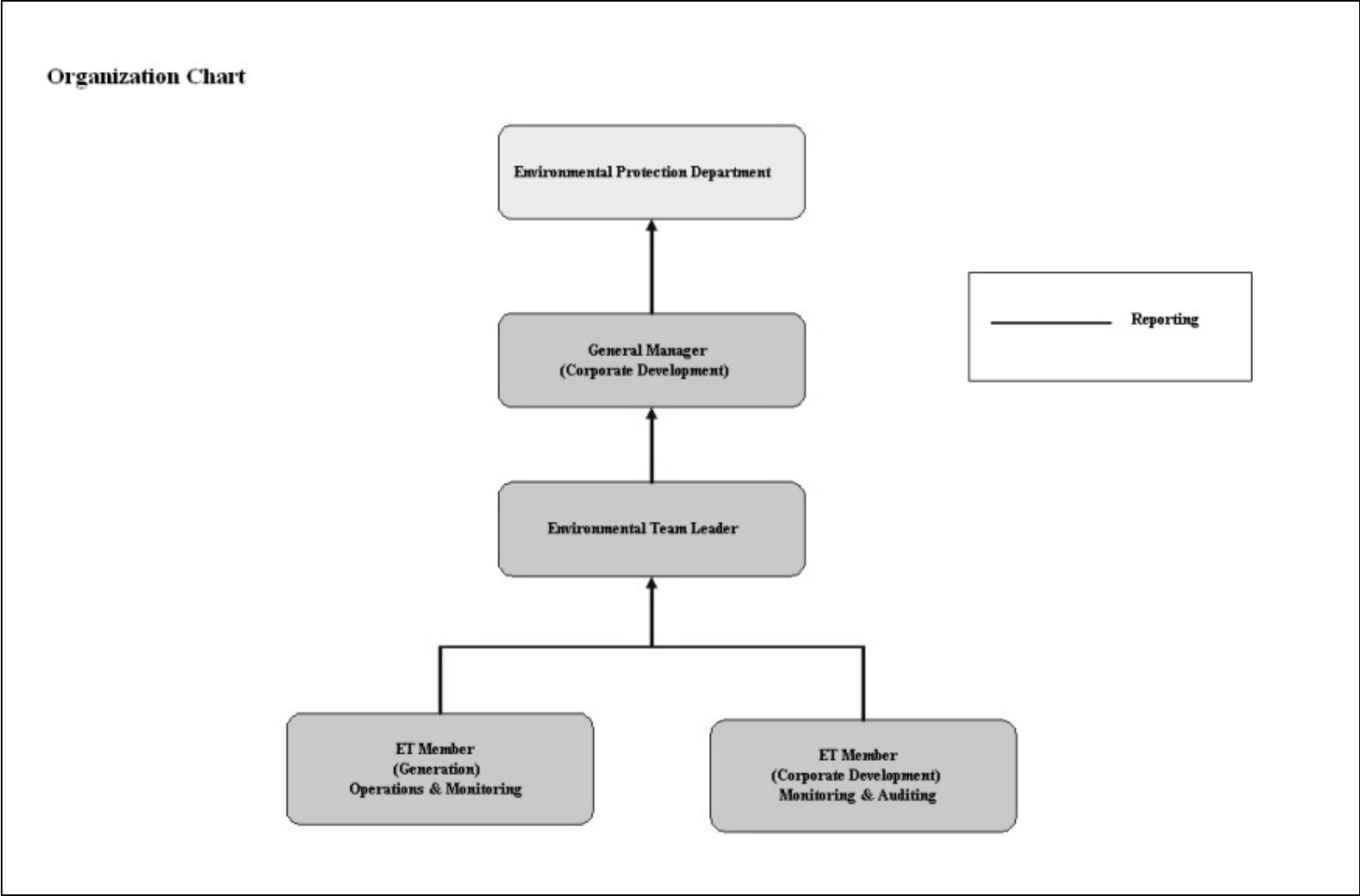


Figure 1.5 Organization Structure at Operational Phase of the Projects

2. AIR QUALITY

2.1 Monitoring Requirements

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

Table 2.1 Air Quality Monitoring Parameters and Frequency

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

2.2 Summary of Results and Observations

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

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

Ambient air monitoring at Queen Mary Hospital was temporarily suspended since November 2013 due to the re-development of the Senior Staff Quarter building of

Queen Mary Hospital. Site searching for a suitable location for the replacement station was in progress.

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.	01/01/14-31/03/14	N.A.	0	
2	Continuous monitoring of opacity, NOx, SO2 and CO2 in the flue gas at the chimney stacks	01/01/14-31/03/14	0	0	
3	TSP monitoring at Lamma Power Station Boundary (ie East Gate and Reservoir).	01/01/14-31/03/14	0	0	
4	Ambient SO2 & NOx monitoring at the Peak, Queen Mary Hospital, Victoria Road, Chung Hom Kok, Ap Lei Chau and	01/01/14-31/03/14	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	01/01/14-31/03/14	0	0	
2	Suspended Solids in WWTP Effluent	01/01/14-31/03/14	0	0	
3	Iron in WWTP Effluent	01/01/14-31/03/14	0	0	
4	Barium in WWTP Effluent	01/01/14-31/03/14	0	0	
5	Mercury in WWTP Effluent	01/01/14-31/03/14	0	0	
6	Cadmium in WWTP Effluent	01/01/14-31/03/14	0	0	
7	Cyanide in WWTP Effluent	01/01/14-31/03/14	0	0	
8	Total Phosphorus in WWTP Effluent	01/01/14-31/03/14	0	0	
9	Total Nitrogen in WWTP Effluent	01/01/14-31/03/14	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
January 2014	1740.8 MT	0 MT
February 2014	7567.0 MT	0 MT
March 2014	3255.7 MT	142.3 MT

4.3 Status of Environmental Licensing and Permitting

All permits/licenses obtained as of March 2014 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(9)	01/01/2013	31/12/2014	Valid
WPCO discharge licence for Ash Lagoon	WT00011131-2011	15/12/2011	31/12/2016	Valid

4.4 Implementation Status of Environmental Mitigation Measures

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

4.5 Implementation Status of Event/Action Plan

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

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

4.6 Implementation Status of Environmental Complaint Handling Procedures

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

Table 4.4 Environmental Complaints / Enquiries Received

Case Reference / Date, Time Received / Date, Time Concerned	Descriptions / Actions Taken	Conclusion / Status
<p><i>Reference:</i> EC140200186</p> <p><i>Received:</i> 05/02/2014 a.m.</p> <p><i>Concerned:</i> 03/02/2014 (13:00-15:00)</p>	<p>EPD received a complaint from a resident at Tai Shan East, Lamma Island, against black dust from Lamma Power Station. No abnormal activity that could have caused the alleged issue was identified and the relevant monitoring data was checked normal. EPD also inspected the Power Station on 14/02/2014. The relevant information and records were sent to EPD on 24/02/2014 for further evaluation as requested. There was no further enquiry since then.</p>	<p>Nothing abnormal was identified. Case closed.</p>

Table 4.5 Outstanding Environmental Complaints / Enquiries Carried Over

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

5. FUTURE KEY ISSUES

5.1 Outage Plan for the coming 3 months

Unit / Equipment	Period	Remark
L2	01/04/2014 to 02/04/2014	Unit Overhaul
L4	08/04/2014 to 09/04/2014	Installation of Test Venturi for Turbine Heat Rate Test
L5	01/04/2014 to 26/05/2014	Unit Overhaul

5.2 Key issues for the coming 3 months

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

Air Impact

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

Water Impact

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

6. CONCLUSION

Environmental monitoring was performed as required in the reporting period from January to March 2014. All monitoring results were checked and reviewed.

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

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

Environmental mitigation measures recommended in the EIA Report and EP were implemented in the reporting period. One environmental concern against the operation of Lamma Power Station was received during the reporting period, for which nothing abnormal was identified at the Power Station. No prosecution was received for the Projects in the reporting period.

The environmental performance of the Projects was generally satisfactory.

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

A.1 Air

Source of Emissions	Parameters to be Monitored	Frequency	Concentration Not to Be Exceeded	Action	Limit	Proposed Action
Steam boilers L2, L4 and L5	Particulate	once/year	50 mg/Nm ³	-	50	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	

Appendix B

Air Quality Monitoring Results

B.1 Ambient Total Suspended Particulate Monitoring at Lamma Power Station

Date: First Quarter of 2014 (January - March)

DATE	TSP CONCENTRATION ($\mu\text{g}/\text{m}^3$)		WEATHER INFORMATION (from Hong Kong Observatory)		
	Reservoir	East Gate	Mean Wind Speed (km/hr)	Prevailing Wind Dir. ($^{\circ}$)	Mean R.H. (%)
02/01/2014	89	73	16.1	040	73
08/01/2014	113	119	17.4	030	84
14/01/2014	103	76	26.2	030	65
20/01/2014	133	129	18.8	030	51
26/01/2014	102	91	19.9	030	76
01/02/2014	54	51	10.8	050	83
07/02/2014	23	23	10.5	050	87
13/02/2014	23	33	30.2	020	91
19/02/2014	28	28	39.7	020	75
25/02/2014	38	40	24.7	050	85
03/03/2014	47	45	42.3	070	87
09/03/2014	28	30	24.2	040	87
15/03/2014	90	90	29.2	060	67
21/03/2014	80	84	26.7	030	69
27/03/2014	33	28	11.5	160	82

TSP ($\mu\text{g}/\text{m}^3$)

Action Level -
 Limit Level 260

Equipment used: Reservoir & East Gate : High Volume Air Sampler

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 (%)
1/1/2014	28	430	11
2/1/2014	39	398	12
3/1/2014	71	425	13
4/1/2014	71	376	14
5/1/2014	36	461	13
6/1/2014	80	383	15
7/1/2014	71	386	14
8/1/2014	53	364	14
9/1/2014	89	405	16
10/1/2014	41	475	15
11/1/2014	61	444	17
12/1/2014	54	476	18
13/1/2014	80	434	20
14/1/2014	65	398	21
15/1/2014	61	368	20
16/1/2014	45	392	21
17/1/2014	49	372	20
18/1/2014	58	391	20
19/1/2014	43	456	20
20/1/2014	93	449	24
21/1/2014	98	467	25
22/1/2014	51	446	23
23/1/2014	54	317	22
24/1/2014	84	463	24
25/1/2014	53	379	24
26/1/2014	67	394	24
27/1/2014	62	362	26
28/1/2014	68	376	26
29/1/2014	57	422	25
30/1/2014	68	444	26
31/1/2014	26	401	23

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) [#]	NOx concentration (mg/Nm3) [#]	Opacity (%)
1/2/2014	38	441	23
2/2/2014	41	344	23
3/2/2014	56	446	23
4/2/2014	60	389	24
5/2/2014	66	337	25
6/2/2014	79	332	25
7/2/2014	85	335	23
8/2/2014	62	436	22
9/2/2014	49	411	22
10/2/2014	73	423	24
11/2/2014	68	351	24
12/2/2014	66	398	24
13/2/2014	70	342	25
14/2/2014	108	368	25
15/2/2014	105	428	22
16/2/2014	88	381	21
17/2/2014	108	423	22
18/2/2014	90	456	22
19/2/2014	92	465	22
20/2/2014	100	490	21
21/2/2014	95	468	21
22/2/2014	88	385	20
23/2/2014	95	446	20
24/2/2014	75	355	27
25/2/2014	*	*	*
26/2/2014	*	*	*
27/2/2014	*	*	*
28/2/2014	*	*	*

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) [#]	NOx concentration (mg/Nm3) [#]	Opacity (%)
1/3/2014	*	*	*
2/3/2014	*	*	*
3/3/2014	*	*	*
4/3/2014	*	*	*
5/3/2014	*	*	*
6/3/2014	*	*	*
7/3/2014	*	*	*
8/3/2014	*	*	*
9/3/2014	*	*	*
10/3/2014	*	*	*
11/3/2014	*	*	*
12/3/2014	*	*	*
13/3/2014	*	*	*
14/3/2014	*	*	*
15/3/2014	*	*	*
16/3/2014	*	*	*
17/3/2014	*	*	*
18/3/2014	*	*	*
19/3/2014	*	*	*
20/3/2014	*	*	*
21/3/2014	*	*	*
22/3/2014	*	*	*
23/3/2014	*	*	*
24/3/2014	*	*	*
25/3/2014	*	*	*
26/3/2014	*	*	*
27/3/2014	*	*	*
28/3/2014	*	*	*
29/3/2014	*	*	*
30/3/2014	*	*	*
31/3/2014	*	*	*

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 (%)
1/1/2014	131	465	7
2/1/2014	16	465	6
3/1/2014	63	418	8
4/1/2014	111	473	9
5/1/2014	29	439	8
6/1/2014	127	330	9
7/1/2014	108	394	10
8/1/2014	84	345	9
9/1/2014	55	360	8
10/1/2014	108	405	9
11/1/2014	101	394	9
12/1/2014	100	457	10
13/1/2014	101	465	13
14/1/2014	125	425	9
15/1/2014	95	434	11
16/1/2014	60	364	8
17/1/2014	28	359	8
18/1/2014	18	396	8
19/1/2014	20	385	9
20/1/2014	108	380	12
21/1/2014	110	434	11
22/1/2014	86	448	11
23/1/2014	79	314	12
24/1/2014	99	489	12
25/1/2014	141	431	15
26/1/2014	65	461	12
27/1/2014	89	414	14
28/1/2014	135	387	9
29/1/2014	118	346	10
30/1/2014	78	436	13
31/1/2014	29	354	9

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) [#]	NOx concentration (mg/Nm3) [#]	Opacity (%)
1/2/2014	25	430	9
2/2/2014	36	490	9
3/2/2014	32	506	10
4/2/2014	39	445	10
5/2/2014	63	436	8
6/2/2014	101	439	7
7/2/2014	110	368	8
8/2/2014	94	402	6
9/2/2014	*	*	*
10/2/2014	*	*	*
11/2/2014	*	*	*
12/2/2014	*	*	*
13/2/2014	*	*	*
14/2/2014	*	*	*
15/2/2014	*	*	*
16/2/2014	*	*	*
17/2/2014	*	*	*
18/2/2014	*	*	*
19/2/2014	*	*	*
20/2/2014	*	*	*
21/2/2014	*	*	*
22/2/2014	*	*	*
23/2/2014	*	*	*
24/2/2014	*	*	*
25/2/2014	19	362	7
26/2/2014	20	400	8
27/2/2014	42	453	7
28/2/2014	14	331	6

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) [#]	NOx concentration (mg/Nm3) [#]	Opacity (%)
1/3/2014	*	*	*
2/3/2014	*	*	*
3/3/2014	23	479	5
4/3/2014	49	415	5
5/3/2014	39	453	6
6/3/2014	13	452	6
7/3/2014	18	377	5
8/3/2014	*	*	*
9/3/2014	*	*	*
10/3/2014	19	484	5
11/3/2014	32	397	5
12/3/2014	74	393	7
13/3/2014	39	410	8
14/3/2014	14	351	6
15/3/2014	*	*	*
16/3/2014	*	*	*
17/3/2014	17	427	8
18/3/2014	14	436	8
19/3/2014	40	437	10
20/3/2014	36	371	11
21/3/2014	17	355	9
22/3/2014	*	*	*
23/3/2014	*	*	*
24/3/2014	29	397	10
25/3/2014	92	364	8
26/3/2014	112	352	7
27/3/2014	105	347	8
28/3/2014	89	429	9
29/3/2014	63	456	10
30/3/2014	64	372	9
31/3/2014	83	435	10

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 (%)
1/1/2014	*	*
2/1/2014	*	*
3/1/2014	*	*
4/1/2014	*	*
5/1/2014	*	*
6/1/2014	54	17
7/1/2014	114	16
8/1/2014	105	16
9/1/2014	101	15
10/1/2014	118	15
11/1/2014	*	*
12/1/2014	*	*
13/1/2014	96	15
14/1/2014	83	15
15/1/2014	66	15
16/1/2014	43	22
17/1/2014	28	18
18/1/2014	*	*
19/1/2014	*	*
20/1/2014	FGD plant outage	19
21/1/2014	FGD plant outage	20
22/1/2014	FGD plant outage	22
23/1/2014	80	19
24/1/2014	57	19
25/1/2014	76	19
26/1/2014	83	25
27/1/2014	87	18
28/1/2014	76	15
29/1/2014	89	15
30/1/2014	*	*
31/1/2014	*	*

Date	Daily Maximum	
	SO2 concentration (mg/Nm3) [#]	Opacity (%)
1/2/2014	*	*
2/2/2014	*	*
3/2/2014	*	*
4/2/2014	*	*
5/2/2014	*	*
6/2/2014	*	*
7/2/2014	*	*
8/2/2014	*	*
9/2/2014	*	*
10/2/2014	*	*
11/2/2014	*	*
12/2/2014	*	*
13/2/2014	*	*
14/2/2014	*	*
15/2/2014	*	*
16/2/2014	*	*
17/2/2014	*	*
18/2/2014	*	*
19/2/2014	*	*
20/2/2014	*	*
21/2/2014	*	*
22/2/2014	*	*
23/2/2014	*	*
24/2/2014	*	*
25/2/2014	*	*
26/2/2014	*	*
27/2/2014	*	*
28/2/2014	*	*

Date	Daily Maximum	
	SO2 concentration (mg/Nm3) [#]	Opacity (%)
1/3/2014	*	*
2/3/2014	*	*
3/3/2014	*	*
4/3/2014	*	*
5/3/2014	*	*
6/3/2014	*	*
7/3/2014	*	*
8/3/2014	*	*
9/3/2014	*	*
10/3/2014	*	*
11/3/2014	*	*
12/3/2014	*	*
13/3/2014	*	*
14/3/2014	*	*
15/3/2014	*	*
16/3/2014	*	*
17/3/2014	*	*
18/3/2014	*	*
19/3/2014	*	*
20/3/2014	*	*
21/3/2014	*	*
22/3/2014	*	*
23/3/2014	*	*
24/3/2014	*	*
25/3/2014	*	*
26/3/2014	*	*
27/3/2014	*	*
28/3/2014	*	*
29/3/2014	*	*
30/3/2014	*	*
31/3/2014	*	*

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.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
MONTH: JANUARY

STATION : VICTORIA PEAK
POLLUTANT : SULPHUR DIOXIDE

YEAR : 2014
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	42	35	36	42	32	31	26	35	30	25	27	26	28	25	23	21	21	18	24	25	21	21	19	22	27
2	20	19	16	13	12	11	10	10	14	17	20	17	17	17	22	21	25	18	14	12	10	9	11	14	15
3	24	23	21	13	12	12	10	10	18	25	18	22	22	28	37	69	63	64	46	61	48	59	56	55	34
4	50	34	30	28	26	23	23	26	30	33	M	36	40	39	40	41	44	46	45	51	44	41	40	35	37
5	35	33	32	32	31	31	32	35	41	41	41	40	37	38	38	37	36	34	31	28	30	25	22	25	34
6	24	22	22	23	27	28	31	37	38	35	34	33	31	28	27	28	23	22	20	17	14	14	12	11	25
7	9	8	6	6	6	7	6	6	7	10	11	13	12	11	10	10	10	8	8	5	4	3	3	8	
8	3	4	3	3	2	3	3	3	3	10	8	15	34	36	55	59	56	39	31	17	13	13	12	10	18
9	9	10	10	12	11	12	13	14	22	17	11	10	9	8	8	8	8	13	18	13	10	10	11	10	12
10	8	9	12	11	11	13	12	10	9	13	13	14	13	12	11	12	12	13	14	13	12	11	9	9	12
11	7	6	5	5	7	9	9	11	12	11	9	9	9	8	8	10	10	10	10	11	11	9	7	7	9
12	9	11	11	11	10	9	9	11	18	42	52	47	36	29	22	19	71	28	22	17	12	10	10	8	22
13	8	6	8	9	9	8	9	14	19	13	10	23	14	18	19	14	22	26	13	17	13	12	11	11	14
14	13	9	9	10	10	20	11	11	14	19	16	16	10	8	7	5	6	9	10	16	14	9	11	12	11
15	10	10	9	9	13	15	10	13	46	24	18	9	9	8	6	7	10	11	12	11	11	10	10	9	13
16	11	12	11	11	12	12	12	14	16	15	12	11	11	12	12	12	12	13	11	10	10	10	8	6	12
17	5	6	7	6	6	7	7	9	11	14	19	20	27	32	36	51	55	38	48	48	44	44	51	23	26
18	23	25	25	25	25	25	24	23	22	21	20	18	17	13	15	16	15	16	19	26	18	16	15	9	20
19	8	8	9	11	11	14	17	19	19	19	20	20	20	19	17	17	16	16	14	13	14	15	20	21	16
20	19	24	20	18	17	16	17	15	15	32	34	42	28	21	26	38	36	17	17	18	22	29	30	28	24
21	29	33	35	37	38	35	36	36	41	37	31	32	28	27	28	26	26	28	24	20	20	23	23	25	30
22	28	28	29	30	31	30	34	34	41	24	23	22	21	37	47	38	31	31	38	39	43	38	23	18	32
23	15	12	13	13	12	10	10	12	14	15	17	18	19	15	12	11	11	12	11	10	9	8	9	6	12
24	6	5	5	5	5	5	5	5	6	5	5	5	5	4	6	6	8	7	6	4	5	5	4	6	5
25	4	4	3	3	3	3	3	3	3	4	4	5	4	4	5	5	5	6	6	6	7	7	6	5	5
26	5	6	5	4	4	3	3	4	7	11	10	7	18	55	27	15	10	7	6	7	8	7	6	6	10
27	6	5	5	6	6	6	6	7	6	8	9	10	8	9	10	9	8	9	8	6	10	7	7	5	7
28	6	6	6	5	4	4	6	6	7	8	7	7	8	8	9	8	20	8	6	6	6	6	6	6	7
29	6	6	6	5	6	10	8	11	9	8	7	7	7	5	6	7	7	7	6	4	4	3	3	1	6
30	2	1	3	5	5	6	6	6	9	9	37	26	40	23	25	33	45	48	18	5	6	9	10	5	16
31	4	3	2	2	3	3	4	3	3	4	13	25	13	7	7	7	6	4	3	2	4	2	3	1	5

MONTHLY STATISTICS:

ARITH-----PERCENTILES-----RANGE-----													STN GEOM		PERCENT		NO. OF TIMES ABOVE OBJECTIVE	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR				
13	12	17	12	36	42	51	56	1	-	71	5	-	37	2	100	0	0	

- NOTES: 1. FLAGS FOR INVALID DATA :
D: DYNAMIC CALIBRATION
T: TELEMETRY/DATALOGGR FAULT
M: MAINTENANCE OR ANALYZER FAULT
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
MONTH: JANUARY

STATION : VICTORIA PEAK
POLLUTANT : NITROGEN DIOXIDE

YEAR : 2014
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	54	20	36	59	35	29	12	31	15	14	33	29	33	39	40	39	29	12	32	15	10	11	11	16	27
2	15	14	15	12	8	7	7	9	87	134	137	129	82	96	99	122	131	129	130	101	46	17	18	29	66
3	22	16	14	11	16	19	15	23	35	57	65	56	52	74	91	128	87	100	71	107	102	98	79	81	59
4	106	88	50	30	24	M	24	53	86	129	M	71	73	70	45	61	98	106	115	117	67	68	79	59	74
5	73	36	25	22	20	11	6	8	12	17	18	21	19	16	14	13	20	19	18	13	11	9	12	16	19
6	12	5	4	4	5	7	11	18	35	42	52	73	45	77	98	81	51	31	18	11	7	6	5	8	29
7	4	3	0	0	0	1	1	4	16	21	21	20	13	23	32	27	41	41	18	28	18	12	0	3	14
8	0	0	0	0	0	9	13	16	61	76	34	66	67	97	124	130	110	96	81	60	57	63	64	45	53
9	30	35	23	19	27	20	31	48	60	67	54	40	25	31	51	64	65	83	90	61	35	28	19	7	42
10	4	2	5	4	5	4	5	9	15	33	28	29	26	33	51	60	44	24	27	12	4	6	5	3	18
11	0	0	0	0	0	0	2	13	26	25	25	20	19	35	48	49	71	81	56	33	39	20	16	11	25
12	6	1	0	0	0	1	3	15	31	92	111	100	70	51	40	33	94	85	74	75	55	43	45	35	44
13	38	11	9	11	20	17	22	34	41	39	26	42	41	42	42	52	58	75	77	69	66	46	33	36	39
14	27	16	17	14	12	22	14	25	38	54	52	50	38	42	38	36	48	71	74	82	83	57	36	27	41
15	29	14	8	9	18	22	16	46	64	71	62	30	26	19	22	29	39	28	12	8	11	12	15	11	26
16	8	5	5	4	3	2	6	34	46	46	33	40	46	44	44	26	51	67	47	51	41	34	31	24	31
17	13	10	2	2	4	4	7	23	61	92	109	89	78	90	107	92	91	93	172	197	186	166	189	88	82
18	47	20	8	4	3	M	14	30	60	60	53	61	40	46	51	56	47	60	90	113	83	68	42	25	47
19	21	15	12	10	9	11	12	14	11	12	10	25	26	32	32	33	36	55	71	61	63	46	51	78	31
20	71	120	53	16	6	0	4	6	29	110	128	121	87	75	55	70	82	56	57	60	80	55	29	38	59
21	28	21	13	11	9	10	16	30	45	58	49	49	46	40	37	53	52	73	68	69	51	47	42	46	40
22	36	25	19	17	17	17	36	72	97	78	65	67	58	79	80	64	48	62	83	110	179	133	62	14	63
23	20	12	14	12	10	7	10	29	41	39	49	40	40	48	52	69	44	70	84	16	29	6	12	7	32
24	7	7	7	6	4	5	4	12	31	40	50	29	32	52	68	55	75	58	28	18	19	16	15	25	28
25	15	12	8	6	5	4	3	9	37	62	62	52	40	36	26	20	53	93	56	67	67	57	48	42	37
26	26	12	5	2	4	4	7	37	61	76	53	39	38	54	21	12	9	16	20	19	16	13	12	15	24
27	9	5	4	3	2	1	3	14	26	31	33	19	32	51	51	49	50	62	54	10	18	10	7	1	23
28	0	2	0	0	0	0	0	6	8	28	25	26	43	58	62	66	68	47	20	21	1	2	8	19	21
29	8	M	0	0	0	0	0	0	10	14	12	23	22	5	6	11	10	5	1	0	0	0	0	0	6
30	0	0	0	0	0	0	0	6	11	32	67	60	53	31	33	35	51	83	50	8	5	27	16	2	24
31	0	0	0	0	0	0	0	0	0	4	55	59	16	4	17	15	25	26	20	2	0	0	0	0	10

MONTHLY STATISTICS:

ARITH-----PERCENTILES-----RANGE-----													STN GEOM		PERCENT		NO. OF TIMES ABOVE OBJECTIVE	
GEOM	MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR				
	26	28	36	28	81	99	128	134	0	-	197	6	-	82	3	99	0	0

- NOTES: 1. FLAGS FOR INVALID DATA :
D: DYNAMIC CALIBRATION
T: TELEMETRY/DATALOGGR FAULT
M: MAINTENANCE OR ANALYZER FAULT
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
MONTH: FEBRUARY

STATION : VICTORIA PEAK
POLLUTANT : SULPHUR DIOXIDE

YEAR : 2014
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	3	3	3	2	2	2	2	2	2	3	8	33	35	7	5	7	4	3	4	4	2	3	3	4	6
2	5	3	3	2	2	2	2	2	2	7	25	12	12	11	11	12	24	18	14	9	5	9	6	4	8
3	12	14	14	8	3	10	63	11	11	10	14	18	30	32	42	42	33	28	18	15	9	11	10	38	21
4	9	14	17	23	19	7	2	2	1	1	1	2	1	1	1	3	3	2	1	1	2	2	1	1	5
5	2	2	2	2	2	2	2	2	2	2	2	3	2	3	3	2	2	2	2	2	1	2	1	2	2
6	1	1	1	1	1	2	1	2	4	4	3	3	3	5	4	3	5	6	4	4	2	1	2	2	3
7	1	1	1	2	1	1	1	0	1	5	21	6	4	3	4	4	5	4	3	2	2	2	3	14	4
8	7	6	10	11	7	5	5	10	8	13	3	3	3	3	4	3	2	2	2	2	2	2	1	2	5
9	1	1	1	1	1	1	1	2	1	1	1	2	4	6	7	5	4	3	2	2	2	3	2	1	2
10	1	1	1	1	2	2	2	6	5	9	13	17	7	7	11	8	12	8	7	10	6	6	5	5	6
11	4	3	4	4	4	4	4	4	7	9	9	8	8	7	6	7	7	10	13	20	19	9	7	6	8
12	4	4	3	3	2	1	2	2	3	4	4	3	3	3	4	4	6	7	10	7	6	4	2	1	4
13	1	1	1	0	0	0	1	5	5	3	5	6	4	5	8	8	9	5	3	4	2	2	2	4	4
14	4	4	4	4	7	6	5	5	6	9	8	7	9	7	10	12	14	14	11	6	8	6	6	6	7
15	5	5	5	6	5	5	4	7	5	5	6	6	6	6	6	6	5	5	7	6	5	3	4	4	5
16	5	4	3	3	2	3	3	3	3	3	3	3	3	3	3	2	2	2	3	2	2	2	2	3	3
17	2	3	3	2	2	2	2	2	3	3	3	2	4	4	4	4	4	3	3	2	3	2	3	2	3
18	2	2	2	2	2	2	2	2	11	16	15	9	7	5	19	38	17	17	12	9	15	11	8	4	10
19	3	2	2	2	2	2	2	4	7	10	5	9	6	11	15	16	7	13	7	9	6	6	6	6	7
20	6	6	5	5	4	4	6	5	6	6	6	5	5	4	3	3	4	5	7	5	6	6	7	7	5
21	8	6	6	7	7	8	8	9	8	9	9	10	8	7	7	7	9	11	9	7	8	7	6	6	8
22	5	5	7	7	7	6	5	6	7	8	10	9	10	10	10	10	10	10	9	8	7	6	5	4	7
23	4	3	4	4	5	5	6	7	7	6	5	5	7	7	7	8	12	8	6	4	5	5	5	4	6
24	3	2	1	3	2	3	5	4	5	5	5	6	8	6	6	M	M	0	0	0	0	0	0	2	3
25	2	3	3	3	2	3	2	3	4	4	4	4	4	3	3	3	3	3	2	2	1	1	1	1	3
26	1	1	1	0	1	1	0	0	2	3	4	5	3	10	12	14	15	26	18	8	9	5	4	8	6
27	4	2	1	1	2	1	1	1	1	2	2	3	2	1	2	1	1	1	1	1	1	1	1	1	1
28	1	1	1	1	2	2	2	2	2	2	2	2	1	2	1	2	2	2	1	1	1	1	1	1	2

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----									RANGE-----				STN GEOM DEVIATION	PERCENT VALID DATA	NO. OF TIMES ABOVE OBJECTIVE		
	MEAN	MEDIAN	MEAN	50	90	95	98	99	0	1-HR	24-HR	1-HR	24-HR					
4	4	4	5	4	11	15	24	33	0	-	63	1	-	21	2	100	0	0

- NOTES: 1. FLAGS FOR INVALID DATA :
D: DYNAMIC CALIBRATION
T: TELEMETRY/DATALOGGR FAULT
M: MAINTENANCE OR ANALYZER FAULT
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
MONTH: FEBRUARY

STATION : VICTORIA PEAK
POLLUTANT : NITROGEN DIOXIDE

YEAR : 2014
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	4	14	41	53	44	7	16	34	17	9	10	7	0	1	0	1	11
2	0	0	0	0	0	0	0	0	0	17	39	26	25	16	10	17	33	26	51	37	52	38	37	7	18
3	1	0	0	0	0	0	18	0	0	1	11	13	34	39	29	36	44	32	49	23	14	15	41	124	22
4	7	31	17	63	15	1	0	0	1	1	1	1	1	5	5	5	7	7	0	0	0	0	0	0	7
5	0	0	0	0	0	0	0	1	4	9	14	14	11	21	20	11	14	19	7	1	0	1	1	11	7
6	2	2	0	0	0	1	3	14	53	59	39	39	26	32	43	16	37	48	62	67	24	1	12	1	24
7	0	0	0	0	0	0	0	0	2	23	29	18	6	1	3	7	22	25	8	12	6	4	8	46	9
8	40	35	35	28	27	25	25	22	41	44	22	25	18	12	20	32	34	28	11	5	5	1	3	0	22
9	0	0	0	0	0	0	0	0	0	0	1	9	19	23	24	24	23	19	20	20	20	21	15	19	11
10	12	4	0	0	0	1	9	32	32	45	42	45	32	29	35	33	42	41	48	46	40	32	24	27	27
11	21	9	9	7	9	6	10	27	47	48	50	47	45	38	40	40	46	61	66	72	70	63	71	73	41
12	68	M	34	23	14	6	19	32	50	62	56	46	39	52	60	63	63	63	69	63	61	54	47	38	47
13	35	26	17	10	9	8	18	21	50	38	52	33	42	48	44	43	49	55	47	49	39	25	30	38	34
14	28	11	11	5	10	9	12	23	38	60	50	36	46	50	59	76	60	61	66	58	50	50	63	67	42
15	62	27	28	6	10	14	11	19	29	40	33	31	26	40	42	42	36	26	8	5	4	0	2	1	23
16	0	0	0	0	0	0	0	0	1	1	3	8	7	9	13	7	7	12	16	6	14	8	20	4	6
17	0	0	0	0	0	0	0	0	37	49	46	23	14	4	0	7	14	1	5	9	6	1	24	0	10
18	0	0	0	0	0	0	0	0	32	49	31	14	9	6	42	68	49	37	27	24	24	22	20	19	20
19	20	9	1	2	2	2	8	21	28	46	36	32	25	31	35	51	40	54	45	42	41	42	36	33	28
20	38	36	25	12	4	1	16	35	35	34	32	34	33	24	17	19	56	80	96	103	84	41	25	23	38
21	21	11	6	2	2	4	4	15	27	25	23	16	10	17	23	35	33	56	33	17	13	10	11	10	18
22	5	1	0	0	0	0	1	6	23	40	50	36	17	22	37	32	16	33	20	18	19	12	7	4	17
23	3	M	0	0	0	0	0	0	1	1	3	3	4	0	0	3	7	0	1	0	5	0	1	1	1
24	0	0	0	0	0	0	0	1	15	29	10	12	10	22	22	M	M	28	18	11	7	6	6	9	9
25	7	8	10	8	6	7	9	14	47	51	59	69	62	46	37	22	38	60	59	91	50	39	18	10	34
26	10	12	7	6	8	9	17	18	47	80	81	86	62	78	75	83	100	92	87	45	77	33	17	87	51
27	40	24	16	9	7	9	10	20	41	54	38	37	23	21	25	22	34	35	17	12	7	12	14	10	22
28	10	9	7	10	9	11	11	13	23	32	33	22	21	30	37	44	54	48	30	21	13	12	11	21	22

MONTHLY STATISTICS:

ARITH-----PERCENTILES-----RANGE-----										STN 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				
17	17	22	17	51	63	79	87	0	-	124	1	-	51	3	99	0	0

- NOTES: 1. FLAGS FOR INVALID DATA :
D: DYNAMIC CALIBRATION
T: TELEMETRY/DATALOGGR FAULT
M: MAINTENANCE OR ANALYZER FAULT
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
MONTH: MARCH

STATION : VICTORIA PEAK
POLLUTANT : SULPHUR DIOXIDE

YEAR : 2014
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	0	1	1	1	1	1	1	1	2	3	1	1	2	2	2	3	3	3	2	2	2	2	1	1	2
2	2	1	1	1	2	2	9	5	12	10	12	10	3	4	3	3	2	2	1	1	1	1	1	1	4
3	1	1	1	1	1	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
4	2	2	2	2	2	2	2	2	4	3	3	2	7	5	7	9	7	6	6	10	10	9	13	12	5
5	9	7	8	6	3	3	3	4	5	5	5	3	4	4	4	4	5	5	4	4	4	3	3	4	5
6	4	4	4	4	3	3	3	3	3	3	3	3	3	3	4	4	4	4	3	3	3	3	3	3	3
7	2	2	3	4	4	3	3	3	3	3	3	3	3	3	4	3	3	3	3	4	4	3	3	2	3
8	2	2	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4	3	3	8	5	3	3	2	3
9	2	2	2	2	2	2	2	2	3	3	4	4	3	3	2	2	3	2	2	3	3	3	3	4	3
10	4	5	4	3	3	3	3	3	3	3	3	4	4	3	3	4	3	3	3	3	4	5	5	6	4
11	6	5	5	5	6	5	6	6	6	7	6	6	5	6	6	5	6	6	4	3	3	3	3	3	5
12	2	2	3	2	3	3	3	3	2	3	3	3	3	3	4	4	4	3	4	4	3	3	3	2	3
13	1	2	2	6	3	6	7	5	5	6	4	5	6	5	5	4	4	6	9	10	9	6	5	5	5
14	4	4	4	4	4	4	4	5	5	6	7	8	8	7	8	7	8	8	6	6	8	7	7	7	6
15	6	7	8	8	8	8	9	11	12	13	13	13	13	14	14	15	14	14	13	14	14	15	17	16	12
16	18	19	19	18	17	17	12	12	13	11	11	11	12	12	12	14	11	11	10	9	6	5	6	5	12
17	4	3	3	2	3	2	2	2	4	5	5	4	13	8	9	8	7	7	5	5	4	4	4	2	5
18	3	3	2	2	3	2	2	2	3	3	4	4	5	5	7	7	8	8	8	7	7	7	7	3	5
19	3	2	2	3	2	2	2	3	3	3	3	3	6	11	11	14	15	13	13	10	9	9	3	4	6
20	3	9	7	7	8	7	8	9	11	29	60	49	33	43	45	77	79	80	69	60	24	15	13	6	31
21	5	6	6	7	7	5	7	9	8	7	9	15	11	12	15	16	11	10	10	10	10	10	8	8	9
22	8	7	8	7	8	8	9	10	13	16	17	16	14	15	15	14	13	13	12	10	9	7	8	6	11
23	6	6	6	7	8	7	7	8	9	10	10	9	8	8	9	10	13	13	11	8	8	7	7	5	8
24	6	6	7	7	6	7	7	8	10	12	11	11	11	T	T	6	6	10	10	8	7	7	5	4	8
25	4	7	6	6	5	5	5	7	9	9	9	9	15	18	19	12	9	7	7	8	6	6	6	3	8
26	3	2	3	2	4	3	2	2	2	18	12	26	23	11	12	11	12	12	8	5	7	4	3	2	8
27	2	2	2	2	2	2	2	2	2	3	5	9	5	5	12	9	21	9	6	5	4	4	4	3	5
28	3	3	3	3	3	3	4	3	4	5	5	4	4	5	5	6	6	5	5	5	6	7	2	4	4
29	2	2	2	2	2	2	3	3	4	5	5	5	6	5	8	8	7	6	13	12	12	7	9	6	6
30	5	4	3	3	4	3	3	4	3	4	4	4	3	3	4	4	5	4	4	4	4	3	3	1	4
31	0	1	1	1	1	1	1	1	1	1	1	2	2	3	8	6	3	7	5	4	2	1	2	3	2

MONTHLY STATISTICS:

ARITH-----PERCENTILES-----RANGE-----													STN GEOM	PERCENT	NO. OF TIMES		
GEOM										1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR		
MEAN	MEDIAN	MEAN	50	90	95	98	99	0	-	80	2	-	31	2	100	0	0
5	4	6	4	12	15	19	44	0	-	80	2	-	31	2	100	0	0

- NOTES: 1. FLAGS FOR INVALID DATA :
D: DYNAMIC CALIBRATION
T: TELEMETRY/DATALOGGR FAULT
M: MAINTENANCE OR ANALYZER FAULT
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: MARCH

YEAR : 2014
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	16	14	19	12	14	8	7	12	47	69	41	35	25	28	25	38	41	40	39	36	43	28	27	14	28
2	21	6	3	11	12	21	50	42	77	60	59	58	35	26	27	19	20	16	17	15	14	16	17	12	27
3	12	9	8	7	7	8	10	12	24	31	45	41	45	46	51	49	46	51	29	15	13	13	14	10	25
4	11	10	9	9	9	9	12	15	71	63	53	56	67	75	68	83	108	111	111	116	100	102	112	104	62
5	93	83	71	61	46	33	24	41	59	51	55	47	42	49	59	49	42	40	27	19	14	16	16	15	44
6	14	12	9	9	8	8	10	12	21	31	40	27	29	43	49	52	58	54	30	19	15	18	20	19	25
7	12	10	11	12	12	10	13	15	24	34	28	30	27	41	48	37	32	38	28	25	17	15	15	15	23
8	15	14	11	10	9	11	12	16	44	66	61	58	69	51	64	92	97	78	83	82	73	58	50	45	49
9	45	39	40	28	23	28	31	33	38	43	46	44	37	33	32	37	29	31	34	33	29	30	30	23	34
10	19	18	14	9	7	7	10	17	33	43	38	45	44	40	53	66	57	48	22	18	20	18	17	16	28
11	15	11	11	11	10	11	13	19	39	62	58	56	51	61	59	52	68	64	36	17	20	16	12	13	33
12	12	M	8	8	7	6	9	11	15	24	30	28	22	19	23	28	26	19	31	26	15	10	8	25	18
13	6	3	4	65	67	69	66	61	61	72	54	58	73	62	59	62	72	86	116	117	85	50	51	51	61
14	24	19	18	18	17	13	18	27	48	63	69	66	61	62	80	103	110	93	49	51	61	56	45	38	50
15	33	21	16	15	11	13	17	21	47	68	68	61	68	74	84	92	66	60	37	30	28	28	19	20	42
16	24	23	18	18	19	18	14	24	23	22	25	23	23	22	30	35	24	46	30	40	16	20	30	31	25
17	25	13	8	7	8	10	12	11	76	102	86	62	77	92	109	111	111	96	49	16	13	7	9	19	47
18	23	14	7	9	7	6	10	17	42	49	36	25	30	21	24	33	30	39	26	10	7	5	8	7	20
19	9	8	8	5	4	9	11	23	42	29	24	25	21	26	28	29	42	48	39	24	16	27	19	14	22
20	7	34	30	24	20	16	21	33	40	101	101	74	67	79	85	83	105	145	178	145	68	35	34	41	65
21	28	30	20	14	12	14	22	40	41	49	59	61	45	53	65	75	67	61	66	52	48	45	30	33	43
22	36	27	19	17	21	18	19	24	38	48	45	43	39	51	46	36	31	31	34	28	29	30	30	18	32
23	16	14	13	10	10	10	11	15	16	18	19	18	17	15	11	11	13	14	18	18	24	32	23	17	16
24	14	9	9	10	10	7	11	21	42	58	44	33	55	T	T	35	44	67	74	62	19	7	11	8	30
25	9	20	17	10	9	8	9	16	80	97	84	70	49	39	35	33	30	26	27	33	12	5	5	5	30
26	3	M	28	17	12	12	20	29	44	69	46	52	38	26	30	28	39	43	28	21	38	13	8	9	28
27	10	2	2	4	3	1	12	8	12	17	15	16	10	9	13	12	33	24	23	18	7	7	4	1	11
28	2	7	18	9	14	8	17	20	33	54	48	39	28	47	30	33	24	25	15	18	18	14	12	11	23
29	9	7	9	3	2	2	4	11	17	18	16	22	31	44	55	38	29	26	42	49	36	23	42	35	24
30	31	24	7	10	26	11	12	12	7	21	19	14	8	9	9	7	12	12	11	15	14	19	9	12	14
31	14	9	4	3	4	3	5	4	22	29	33	37	32	58	76	54	41	68	88	98	69	51	83	35	38

MONTHLY STATISTICS:

ARITH-----PERCENTILES-----RANGE-----													STN GEOM		PERCENT		NO. OF TIMES ABOVE OBJECTIVE	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR				
24	25	33	25	68	84	104	111	1	-	178	11	-	65	2	99	0	0	

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

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

STATION : CHUNG HOM KOK ZONE SUBSTATION
POLLUTANT : SULPHUR DIOXIDE

MONTH: JANUARY

YEAR : 2014

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	40	48	37	29	35	46	51	36	25	23	24	27	26	22	23	22	24	24	29	29	29	29	25	24	30
2	23	21	20	17	16	14	14	16	17	16	15	18	16	17	18	16	16	16	15	14	14	15	16	15	16
3	20	17	24	26	33	20	79	82	108	85	74	124	108	85	91	118	78	58	52	49	54	57	53	38	64
4	33	27	22	22	21	17	17	23	26	28	29	30	31	55	63	46	42	42	41	42	38	36	35	35	33
5	34	33	32	32	31	32	31	36	36	37	36	33	33	33	35	36	34	31	27	25	27	24	24	27	32
6	27	23	24	25	28	29	33	35	35	32	32	32	30	26	29	26	23	21	18	17	16	16	16	13	25
7	13	11	11	11	11	11	11	12	14	17	16	16	17	17	14	14	15	13	13	11	9	8	7	6	12
8	6	7	7	7	20	9	7	7	7	77	83	29	12	13	45	65	57	42	35	20	15	13	14	12	25
9	12	12	13	12	14	13	12	13	13	13	13	13	12	12	12	12	13	13	15	14	14	14	14	14	13
10	12	16	16	14	17	16	14	13	13	14	18	18	15	17	16	16	14	16	17	15	16	14	12	12	15
11	10	10	8	9	12	14	15	16	17	14	14	14	17	12	15	14	12	13	18	16	14	12	11	11	13
12	14	20	22	19	17	18	17	16	20	90	102	92	56	86	108	92	96	40	19	17	16	14	9	10	42
13	10	10	9	10	11	11	13	12	14	14	13	12	11	13	13	10	12	13	12	14	15	14	12	13	12
14	14	14	13	11	12	13	13	12	11	11	12	12	12	12	11	M	7	10	11	11	12	11	12	13	12
15	12	11	12	12	11	11	11	13	13	13	12	12	11	11	11	12	13	14	13	13	14	13	12	12	12
16	15	13	13	14	15	14	16	17	18	19	15	15	15	14	16	14	14	13	13	14	16	13	10	11	14
17	10	12	14	11	11	12	12	14	15	15	37	56	42	36	42	51	43	40	47	43	41	42	31	22	29
18	24	25	26	27	28	27	26	24	23	22	22	20	18	16	32	27	26	18	17	18	22	21	18	17	23
19	16	15	18	18	19	22	24	25	23	23	22	25	24	23	22	22	21	20	21	21	19	23	38	22	22
20	22	22	22	23	22	19	20	18	44	100	69	53	72	43	47	34	72	49	24	24	26	30	32	30	38
21	31	33	34	35	35	33	30	28	28	27	M	28	32	31	29	29	28	27	26	27	27	26	26	29	29
22	28	29	30	29	29	29	28	28	28	28	M	M	67	66	63	M	M	27	29	54	44	29	19	14	35
23	11	10	10	10	9	8	8	9	9	11	13	14	13	8	5	6	6	5	6	5	4	5	4	5	8
24	5	4	4	5	4	5	5	6	6	5	3	4	4	3	5	6	6	6	6	5	5	4	3	5	5
25	4	3	3	1	2	2	1	1	1	0	1	2	1	2	3	4	4	5	6	6	7	4	5	5	3
26	6	6	4	3	2	2	26	84	38	56	186	101	50	4	4	11	7	5	7	6	7	5	5	4	26
27	3	3	3	2	3	3	2	3	2	4	5	4	4	6	4	4	4	4	3	6	4	4	3	4	4
28	5	7	5	3	2	2	3	4	4	2	2	4	5	5	4	4	6	4	6	8	7	4	4	7	4
29	6	5	4	4	8	8	7	8	5	7	6	6	4	5	7	6	5	5	6	6	6	5	9	4	6
30	3	4	4	4	4	4	7	6	7	6	9	11	11	10	9	9	29	79	50	71	42	52	102	50	24
31	27	17	34	23	27	11	12	6	9	20	15	10	9	11	7	7	6	6	3	6	5	6	6	2	12

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----									RANGE-----				STN GEOM DEVIATION	PERCENT VALID DATA	NO. OF TIMES ABOVE OBJECTIVE		
	MEAN	MEDIAN	MEAN	50	90	95	98	99	0	1-HR	24-HR	1-HR	24-HR					
	14	14	21	14	41	57	87	102	0	-	186	3	-	64	2	98	0	0

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

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

STATION : CHUNG HOM KOK ZONE SUBSTATION
POLLUTANT : NITROGEN DIOXIDE

MONTH: JANUARY

YEAR : 2014

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	82	M	77	39	70	101	127	50	31	21	17	17	17	16	21	26	31	21	22	21	28	29	23	19	39
2	18	20	22	17	17	15	16	22	26	31	26	26	20	18	21	26	30	28	24	17	14	14	13	11	21
3	14	8	36	38	61	36	115	119	118	92	83	95	91	120	174	188	196	171	131	137	192	213	166	80	111
4	84	42	23	17	15	13	15	41	36	42	59	55	44	96	108	77	39	33	36	33	22	20	21	14	41
5	17	13	14	11	9	11	12	15	18	21	21	24	22	23	26	26	24	25	25	23	26	24	24	21	20
6	20	16	16	15	17	16	20	22	24	22	18	19	17	17	21	20	19	17	15	16	15	15	14	12	18
7	12	13	11	12	13	10	11	9	11	12	10	12	11	12	13	12	11	10	12	16	13	11	10	11	12
8	14	13	20	15	38	21	15	28	25	63	80	62	23	30	62	127	137	131	113	78	55	47	40	50	54
9	45	39	30	25	23	16	18	21	22	20	19	19	20	18	20	23	25	32	34	25	19	20	19	12	24
10	11	14	16	16	20	19	18	17	15	16	19	18	15	19	18	20	20	19	16	14	14	13	10	10	16
11	8	9	7	6	7	9	13	18	27	20	13	13	14	12	17	11	13	14	21	16	15	14	13	11	13
12	10	12	10	11	10	11	12	13	45	97	102	114	102	116	136	120	108	58	31	35	31	25	15	14	52
13	13	13	13	12	10	7	22	27	53	54	49	49	44	54	53	43	58	65	70	63	35	15	11	24	36
14	27	34	22	19	20	31	18	26	17	26	24	20	15	11	13	M	10	14	19	43	32	17	13	16	21
15	14	M	10	8	8	10	14	22	23	22	14	13	10	11	11	15	17	18	11	9	9	11	11	9	13
16	9	8	9	10	10	9	13	18	24	22	14	16	13	13	15	13	15	16	9	14	20	15	14	11	14
17	7	6	7	6	8	9	9	14	16	22	55	85	69	66	67	78	61	67	71	57	100	88	44	21	43
18	19	12	10	9	9	10	12	16	23	40	31	14	10	9	43	44	35	28	24	26	31	25	23	11	21
19	11	10	11	11	12	13	13	16	15	16	12	13	16	18	21	21	28	36	17	24	26	34	57	37	20
20	31	15	14	20	15	14	14	28	60	107	106	109	108	79	76	67	90	80	28	27	26	21	19	11	49
21	11	10	9	9	9	9	10	14	17	20	M	15	15	13	13	23	20	20	17	21	12	9	8	10	14
22	8	7	7	6	5	6	7	13	17	13	16	9	9	13	14	M	M	69	52	70	49	28	15	12	20
23	12	13	12	11	7	9	10	13	12	12	14	14	11	7	6	11	11	10	4	5	9	7	7	11	10
24	13	11	11	11	9	11	10	12	11	13	9	9	8	10	13	12	16	13	13	14	12	11	10	15	12
25	13	12	9	7	8	7	6	7	8	10	7	10	8	7	10	12	18	18	22	19	24	16	17	12	12
26	16	15	11	8	7	4	45	101	78	89	114	88	60	19	15	20	20	23	20	16	15	13	13	10	34
27	9	9	8	7	7	7	8	13	9	13	12	11	11	11	9	13	14	11	11	13	10	9	8	10	10
28	12	14	11	8	7	8	11	17	14	10	10	12	12	15	14	16	20	22	20	18	14	8	9	12	13
29	10	M	7	7	7	7	8	10	7	9	8	9	7	7	10	12	9	12	7	11	15	16	26	16	10
30	16	8	3	5	6	8	20	17	23	20	21	17	15	14	15	14	26	88	95	106	126	110	123	56	40
31	31	27	51	51	47	36	22	10	34	46	35	18	15	16	12	18	19	31	21	19	11	13	14	11	25

MONTHLY STATISTICS:

ARITH-----PERCENTILES-----RANGE-----													STN GEOM		PERCENT		NO. OF TIMES ABOVE OBJECTIVE	
GEOM	MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR				
	19	16	27	16	64	100	124	137	3	-	213	10	-	111	2	98	0	0

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

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

STATION : CHUNG HOM KOK ZONE SUBSTATION
POLLUTANT : SULPHUR DIOXIDE

MONTH: FEBRUARY

YEAR : 2014
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	3	2	3	1	1	0	0	1	18	59	47	6	0	0	0	0	8	4	1	2	8	7	7	7	
2	4	1	1	0	0	0	2	3	5	22	101	93	95	48	25	22	37	14	9	8	14	15	11	3	22
3	9	5	6	6	4	8	14	49	33	55	63	59	80	67	41	67	70	78	63	48	39	24	13	6	38
4	5	4	4	26	18	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3	13	3	3	2	0	0	13	2
8	22	17	8	9	7	7	8	10	6	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	2	1	1	0	0	1	2	1	1	1	1	3	4	4	3	2	3	1
11	3	2	2	2	3	3	2	2	6	5	5	3	3	3	4	4	4	3	4	4	4	4	4	4	3
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	2	2	2	1	0	0	1
13	0	0	0	0	0	0	0	0	0	2	0	4	3	1	3	6	6	1	1	0	0	0	0	2	1
14	2	1	2	2	2	1	1	2	4	4	5	7	9	6	13	30	24	16	14	5	5	4	5	5	7
15	3	4	6	4	4	4	3	3	3	4	4	5	5	6	5	5	4	6	5	2	2	3	3	3	4
16	5	4	3	2	2	4	4	4	4	5	6	5	4	3	4	3	3	5	5	3	3	4	2	2	4
17	2	2	1	2	1	1	1	1	0	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0	1
18	0	0	0	0	0	0	0	0	1	15	70	57	33	28	31	35	18	14	10	8	9	4	0	0	14
19	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	2	3	2	2	2	2	3	3	4	1
20	4	4	3	3	3	3	3	3	4	6	5	3	4	4	4	4	4	6	5	5	8	7	7	6	5
21	8	6	6	7	9	8	7	8	7	8	7	7	5	5	6	7	6	6	5	5	5	5	4	4	6
22	4	4	4	7	7	5	5	4	4	6	6	10	9	9	9	9	8	7	6	5	4	3	2	6	
23	3	3	3	2	3	3	5	6	6	4	3	4	5	6	7	7	8	4	3	3	3	5	3	3	4
24	2	1	0	1	0	1	3	1	2	3	3	4	4	5	5	4	5	2	1	1	0	0	1	2	
25	1	2	2	2	1	2	2	2	2	3	1	0	1	2	1	1	0	0	0	0	0	0	0	0	1
26	0	0	0	0	0	0	0	0	10	40	8	0	1	2	4	9	5	0	7	1	0	0	0	20	4
27	7	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	1	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

MONTHLY STATISTICS:

MONTHLY STATISTICS:													NO. OF TIMES ABOVE OBJECTIVE				
GEOM	ARITH-----PERCENTILES-----								RANGE-----				STN GEOM	PERCENT	ABOVE OBJECTIVE		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR				
4	2	5	2	9	22	56	68	0	-	101	0	-	38	3	100	0	0

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

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

STATION : CHUNG HOM KOK ZONE SUBSTATION
POLLUTANT : NITROGEN DIOXIDE

MONTH: FEBRUARY

YEAR : 2014
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	6	7	6	7	6	6	15	39	70	54	19	9	9	9	10	10	37	16	12	13	15	15	19	17
2	10	6	7	8	7	7	12	16	23	35	75	71	66	50	35	33	43	22	16	32	50	40	30	18	30
3	24	19	19	12	8	21	25	61	50	58	68	62	62	52	43	57	73	78	63	58	54	65	33	14	45
4	13	11	16	63	23	8	8	10	9	9	9	9	9	8	8	11	9	9	7	6	7	7	6	4	12
5	5	7	5	5	5	5	5	6	5	7	5	5	5	6	7	6	6	7	5	7	6	6	8	7	6
6	6	7	6	9	8	5	4	5	10	10	8	11	8	12	13	11	15	22	12	8	9	8	10	6	9
7	6	6	5	5	6	6	4	7	9	13	15	13	13	14	11	16	23	36	29	33	23	20	15	42	15
8	60	60	52	47	43	38	38	37	37	32	21	20	18	15	15	15	16	17	14	14	14	13	12	6	27
9	5	5	6	6	6	7	6	8	6	7	7	9	10	23	30	43	29	39	33	34	35	33	34	26	19
10	20	15	11	8	8	10	14	29	39	43	31	29	39	47	33	41	43	50	50	42	40	34	29	29	31
11	28	21	16	14	16	19	18	34	52	57	53	45	42	48	56	63	69	65	62	52	55	48	39	15	41
12	9	M	10	8	6	5	7	8	14	18	17	14	12	14	21	23	31	37	28	35	42	39	30	30	20
13	36	18	14	11	10	11	15	39	51	65	59	66	64	54	69	70	72	56	62	67	50	32	30	27	44
14	20	10	11	17	22	18	28	43	51	51	59	60	56	54	52	72	80	82	66	19	15	11	9	8	38
15	6	6	5	5	5	6	7	11	12	15	15	13	13	14	13	14	14	13	10	8	6	6	6	6	10
16	6	7	6	5	6	9	9	10	11	11	13	14	15	14	16	15	12	14	12	9	10	10	10	10	11
17	11	10	9	9	8	8	9	13	13	18	19	20	13	14	14	22	17	21	23	31	10	10	12	10	14
18	13	7	8	8	12	14	15	33	33	47	73	73	81	72	90	90	83	67	56	52	52	47	46	34	46
19	33	30	18	16	17	14	14	18	16	22	25	23	35	26	24	41	45	46	57	42	36	31	29	27	29
20	29	28	30	21	10	10	10	13	16	15	14	11	9	10	10	9	14	24	8	6	19	14	9	9	15
21	11	10	7	7	9	9	9	15	12	12	12	11	10	10	10	11	11	11	8	7	9	11	8	6	10
22	6	6	6	5	6	5	6	7	7	9	9	9	10	8	11	13	12	12	12	9	7	8	8	6	8
23	8	6	7	5	6	6	7	8	8	7	7	7	8	9	10	12	14	11	11	11	11	11	8	8	9
24	7	8	8	7	6	6	9	9	8	7	7	8	9	10	9	11	15	13	9	10	6	6	4	6	8
25	6	7	7	7	4	6	7	11	11	8	7	6	10	7	13	21	13	9	12	11	11	11	12	12	10
26	10	M	9	7	5	7	17	31	49	53	31	20	13	12	9	15	16	12	29	18	11	15	10	32	19
27	14	11	12	8	8	11	13	9	10	12	13	14	12	12	10	12	13	11	10	15	13	8	11	9	11
28	8	8	8	9	9	10	8	9	9	13	11	14	13	10	9	11	14	13	10	9	7	8	9	9	10

MONTHLY STATISTICS:

ARITH-----PERCENTILES-----RANGE-----													STN 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			
15	12	20	12	51	62	72	76	4	-	90	6	-	46	2	100	0	0	

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

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

STATION : CHUNG HOM KOK ZONE SUBSTATION
POLLUTANT : SULPHUR DIOXIDE

MONTH: MARCH

YEAR : 2014
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	2	0	0	0	0	0	0	1	3	1	1	4	3	1	1	0	1	2	2	1	0	0	0	0	1
2	0	0	0	0	5	4	1	1	26	123	22	2	2	1	2	0	0	0	0	0	0	0	0	0	8
3	0	0	0	0	0	0	0	T	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	11	20	15	28	12	4
5	17	4	5	1	0	0	0	3	0	0	0	0	1	1	0	1	5	4	1	2	0	1	0	0	2
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	2	4	3	0	0	0	0	0	0	0	0	0	0	0	T	T	11	0	2	0	0	0	1
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	7	1
10	8	9	2	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	1	2	5	8	9	10	2
11	9	8	8	10	11	9	10	10	9	10	10	10	7	10	11	10	10	6	2	1	1	0	0	0	7
12	0	0	0	0	0	0	1	2	0	1	1	1	0	1	0	0	1	1	0	1	1	1	0	0	1
13	0	0	0	65	56	51	26	10	1	0	3	30	33	34	52	70	52	38	74	50	4	1	1	4	27
14	4	3	3	5	4	3	5	6	5	8	9	4	5	5	4	6	7	6	8	9	9	10	8	8	6
15	7	8	9	8	9	10	13	13	12	12	12	12	12	12	13	13	16	15	13	14	14	17	16	21	13
16	25	24	20	20	20	21	17	16	17	18	17	18	19	21	20	20	17	14	13	11	8	9	8	7	17
17	4	4	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
18	0	1	0	0	0	5	1	2	0	0	0	0	1	0	0	0	0	0	0	0	0	5	8	2	1
19	5	1	0	0	0	0	0	1	2	0	0	1	3	9	6	1	4	0	0	4	7	5	4	1	2
20	0	0	1	8	1	0	0	16	104	58	101	123	127	70	56	D	D	42	40	17	0	0	0	1	35
21	1	1	1	2	2	1	2	3	4	3	2	3	3	2	3	4	4	4	2	3	4	4	3	3	3
22	4	3	3	3	3	3	5	7	9	11	13	15	12	10	10	9	5	5	6	4	5	2	1	2	6
23	2	2	0	2	3	1	2	4	5	5	5	4	4	5	8	7	6	2	3	2	3	2	1	2	3
24	2	2	2	3	2	2	3	4	4	7	7	6	6	4	4	13	14	7	8	11	5	5	3	3	5
25	3	13	5	4	1	3	6	5	5	5	4	4	3	3	3	2	4	6	4	4	6	17	7	6	5
26	4	6	3	1	0	0	0	2	6	1	0	40	29	19	15	27	43	61	25	16	20	80	78	71	23
27	49	39	41	20	16	10	5	2	5	8	11	31	62	103	41	36	17	5	7	3	5	3	3	1	22
28	1	1	0	0	0	2	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
29	0	0	0	0	1	1	2	1	1	1	0	0	0	1	18	22	11	20	12	5	9	54	49	20	10
30	14	16	4	1	19	11	6	4	8	13	7	6	2	0	1	0	1	0	0	0	0	0	0	0	5
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0

MONTHLY STATISTICS:

MONTHLY STATISTICS:										NO. OF TIMES ABOVE OBJECTIVE							
GEOM	ARITH-----PERCENTILES-----								RANGE-----		STN GEOM	PERCENT	ABOVE OBJECTIVE				
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR				
5	1	7	1	17	30	59	76	0	-	127	0	-	35	3	99	0	0

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

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

STATION : CHUNG HOM KOK ZONE SUBSTATION
POLLUTANT : NITROGEN DIOXIDE

MONTH: MARCH

YEAR : 2014
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	8	7	6	7	7	8	10	11	11	19	20	23	18	20	22	29	26	22	22	24	18	23	27	17
2	18	21	13	21	32	32	29	38	50	67	33	21	24	18	21	14	13	11	8	9	8	7	9	13	22
3	7	7	4	4	7	4	6	T	T	10	11	11	9	10	9	10	10	11	9	9	8	10	9	7	8
4	7	7	9	8	7	7	10	15	11	18	19	16	13	18	28	38	43	40	56	67	92	92	98	82	33
5	90	77	78	64	55	44	42	37	22	27	22	18	17	11	9	13	13	15	9	9	9	10	9	7	29
6	7	8	7	6	7	6	6	8	10	8	7	8	7	7	8	8	8	10	8	9	7	7	6	7	8
7	9	7	10	11	10	9	11	13	8	10	10	8	10	10	12	12	T	T	13	15	14	10	11	10	11
8	10	12	7	8	8	9	9	10	10	10	11	12	12	11	16	21	23	34	39	30	30	25	25	22	17
9	21	18	14	12	14	15	12	13	11	14	22	18	13	15	15	15	19	20	19	18	14	14	16	12	16
10	13	13	9	5	4	5	5	8	8	8	9	9	11	10	12	18	13	13	9	9	10	11	11	11	10
11	10	9	10	10	10	10	10	12	10	12	14	12	13	13	14	16	15	14	11	10	11	10	10	10	12
12	10	M	9	9	9	10	14	21	20	25	30	25	22	19	18	24	29	49	31	46	46	30	17	14	23
13	15	18	19	85	94	86	72	48	41	13	33	79	78	88	92	M	108	110	113	100	35	14	16	15	60
14	14	13	12	16	14	10	14	17	13	15	19	21	21	23	25	26	23	20	20	17	16	19	18	13	17
15	15	12	11	10	10	11	11	13	13	15	16	17	16	15	14	12	14	15	14	16	15	16	17	16	14
16	17	17	14	12	12	12	11	12	20	19	18	17	19	19	18	21	22	23	21	19	15	15	17	14	17
17	11	8	6	8	11	9	10	10	15	19	18	23	22	18	15	12	13	20	6	13	15	9	6	7	13
18	10	9	9	10	14	29	M	33	47	37	24	16	M	14	13	17	20	22	18	13	18	37	40	19	21
19	22	13	5	4	5	7	12	23	30	16	14	17	16	25	25	15	20	17	29	21	27	30	43	43	20
20	29	23	31	56	27	36	47	48	68	56	61	57	56	51	54	D	D	64	71	48	16	15	16	16	43
21	16	12	11	10	9	10	12	19	21	21	23	25	18	24	27	33	34	30	23	25	26	26	23	20	21
22	14	9	8	11	17	13	10	11	12	12	12	12	9	12	15	15	15	16	15	13	14	8	7	9	12
23	8	7	5	5	6	6	6	9	8	8	8	8	8	8	12	16	14	17	13	12	13	10	9	8	9
24	7	6	5	7	6	5	9	9	12	9	9	9	8	10	10	14	14	18	11	26	14	14	11	10	11
25	9	23	11	11	7	9	12	19	26	22	14	11	10	13	16	15	19	36	24	29	21	24	11	15	17
26	9	13	11	7	9	9	12	25	27	21	20	38	33	23	17	23	40	46	39	17	44	77	71	48	28
27	34	29	35	23	27	16	19	28	35	23	23	31	43	51	32	26	27	19	25	20	27	19	17	12	27
28	15	17	11	6	7	15	17	16	15	16	13	11	15	14	19	16	19	23	24	21	10	9	10	26	15
29	21	18	15	14	13	15	28	27	30	23	22	28	48	57	68	68	69	83	89	79	91	98	100	85	50
30	76	80	58	22	40	48	51	24	31	41	29	29	24	20	12	18	20	18	22	15	13	12	14	9	30
31	10	7	6	6	8	7	14	18	15	19	33	32	31	40	28	42	62	60	41	30	24	17	21	30	25

MONTHLY STATISTICS:

ARITH-----PERCENTILES-----RANGE-----													STN GEOM		PERCENT		NO. OF TIMES ABOVE OBJECTIVE	
GEOM	MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR				
	16	15	21	15	42	65	87	93	4	-	113	8	-	60	2	99	0	0

- NOTES: 1. FLAGS FOR INVALID DATA :
D: DYNAMIC CALIBRATION
T: TELEMETRY/DATALOGGR FAULT
M: MAINTENANCE OR ANALYZER FAULT
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: JANUARY

YEAR : 2014
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	29	60	44	35	42	47	36	31	30	61	63	53	40	41	26	14	14	14	12	13	16	15	21	32	33
2	34	14	31	39	42	38	26	17	38	102	61	62	62	47	41	96	48	20	28	47	41	54	126	91	50
3	65	54	32	37	48	39	41	85	77	73	100	123	92	48	38	50	49	57	40	38	39	37	41	36	56
4	41	45	24	21	18	15	15	16	18	24	24	25	44	38	39	39	40	32	30	37	31	28	28	26	29
5	24	24	25	29	35	23	22	26	30	29	29	29	26	26	25	25	23	22	21	20	22	18	16	18	24
6	18	16	16	16	18	20	21	23	25	24	24	21	21	19	28	16	13	12	12	9	9	8	6	5	17
7	4	4	3	3	3	4	3	2	3	3	4	4	5	5	5	3	3	2	2	4	7	4	16	41	6
8	44	26	19	19	38	50	30	41	54	39	50	34	98	52	56	63	55	35	31	19	11	10	17	11	38
9	10	12	8	18	12	12	14	12	14	16	22	9	6	6	5	4	5	8	10	8	7	7	7	6	10
10	5	6	7	7	7	8	7	6	5	7	8	8	8	8	7	8	7	8	9	9	8	8	6	7	7
11	6	6	4	3	4	6	5	6	10	15	23	6	6	6	5	6	5	16	5	6	6	7	5	4	7
12	5	7	7	7	7	10	11	11	15	51	52	58	38	33	27	23	52	45	14	11	9	7	6	5	21
13	4	4	9	18	17	8	14	23	25	25	19	16	14	12	13	14	15	14	10	8	8	8	7	10	13
14	12	8	7	6	12	22	8	8	10	12	M	M	10	21	28	14	3	4	6	8	8	5	7	8	10
15	7	6	5	7	12	9	6	7	9	12	7	5	5	4	3	4	5	5	6	6	5	5	5	5	6
16	6	7	6	7	7	7	7	9	10	10	8	6	7	6	6	6	5	6	6	5	5	6	6	4	7
17	4	3	3	5	4	4	4	8	15	24	24	43	27	26	27	43	38	35	33	26	28	37	46	23	22
18	21	21	19	20	20	19	18	17	16	15	14	13	11	9	9	18	25	30	34	25	13	12	12	7	17
19	6	6	7	8	8	9	13	15	15	14	16	16	15	15	23	26	24	26	22	11	11	11	16	20	15
20	17	20	17	14	13	12	12	35	73	79	35	46	47	45	43	41	51	23	12	13	14	18	20	21	30
21	20	21	23	25	26	23	22	23	23	22	18	17	16	16	15	22	14	14	13	13	12	13	15	18	19
22	18	17	18	18	17	18	19	20	20	18	16	14	23	38	44	28	22	20	21	23	25	27	21	13	22
23	10	8	9	9	8	7	7	8	10	10	14	13	14	11	9	8	8	8	6	7	6	5	5	3	8
24	3	2	2	3	3	3	2	2	3	3	3	4	3	3	2	3	3	3	3	3	4	4	3	4	3
25	4	2	8	41	22	13	5	6	4	3	19	28	5	5	3	3	2	2	3	4	4	5	4	5	8
26	25	72	66	40	14	25	31	26	33	49	23	65	88	82	22	10	7	5	4	5	5	4	4	5	30
27	4	4	4	4	4	4	3	5	4	5	7	8	6	7	10	6	6	5	5	3	5	4	4	4	5
28	3	4	4	3	3	3	3	4	5	7	24	28	41	24	21	46	17	12	5	5	4	4	4	17	12
29	27	30	34	10	11	9	7	9	10	6	M	4	22	9	3	3	3	3	3	19	24	23	13	7	13
30	5	6	22	85	54	50	35	24	36	138	93	77	42	30	30	37	71	64	35	16	16	9	15	15	42
31	14	9	8	6	26	13	7	9	18	23	59	55	10	8	7	7	5	2	7	16	6	6	5	19	14

MONTHLY STATISTICS:

ARITH-----PERCENTILES-----RANGE-----													STN GEOM		PERCENT		NO. OF TIMES ABOVE OBJECTIVE	
GEOM	MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR				
	13	13	19	13	42	55	77	93	2	-	138	3	-	56	2	99	0	0

- NOTES: 1. FLAGS FOR INVALID DATA :
D: DYNAMIC CALIBRATION
T: TELEMETRY/DATALOGGR FAULT
M: MAINTENANCE OR ANALYZER FAULT
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: JANUARY

YEAR : 2014

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	50	M	119	110	120	122	129	103	125	124	114	93	68	74	49	21	31	57	81	83	53	83	81	136	88
2	117	29	109	137	97	71	52	83	133	116	83	104	100	90	78	129	97	105	120	150	161	156	146	156	109
3	135	126	77	91	108	111	120	140	124	118	119	121	123	113	124	151	133	176	139	144	179	162	126	120	128
4	121	158	72	41	27	22	26	55	75	70	77	60	116	81	103	123	119	98	127	128	78	68	55	93	83
5	73	77	45	39	57	31	21	21	22	28	27	25	26	28	28	29	33	33	30	26	26	24	25	25	33
6	21	15	13	13	14	17	26	38	40	37	29	30	38	37	71	40	36	34	33	23	17	15	15	14	28
7	11	9	6	5	5	10	21	20	22	19	17	17	17	16	21	22	25	25	24	28	55	36	80	87	25
8	86	80	73	67	67	76	80	80	85	89	88	78	82	120	128	123	113	104	92	75	66	64	72	61	85
9	44	42	25	42	38	37	52	57	60	70	72	43	33	37	45	46	69	97	89	56	37	34	27	17	49
10	15	11	11	13	13	15	18	24	20	32	31	31	28	35	39	51	42	29	46	29	19	15	15	12	25
11	8	6	5	5	5	10	26	44	44	45	42	13	19	29	32	35	41	72	69	87	58	50	31	25	33
12	22	15	7	6	11	19	29	49	69	95	94	100	81	61	65	56	108	116	56	50	52	53	41	33	54
13	38	30	34	47	47	36	41	53	53	53	43	45	43	47	47	58	61	76	85	78	73	62	51	49	52
14	44	28	24	18	36	41	21	42	42	52	M	M	36	49	57	44	36	56	77	81	87	63	42	48	47
15	32	M	12	24	37	26	30	47	61	60	38	20	15	13	10	22	22	26	24	19	18	22	20	16	27
16	12	11	8	9	8	10	20	40	74	39	25	18	22	21	20	18	25	38	65	81	91	88	79	52	36
17	37	20	16	10	8	10	19	51	65	71	86	81	81	104	91	90	93	107	120	134	127	128	158	108	76
18	51	21	14	12	8	13	23	43	53	49	38	43	30	27	45	57	72	119	119	100	87	47	58	23	48
19	19	17	13	11	11	14	15	16	16	15	15	19	20	28	33	35	40	58	73	76	82	92	117	116	40
20	102	116	63	34	27	31	36	122	137	116	98	114	105	87	81	96	116	81	67	69	60	35	28	33	77
21	31	21	15	13	13	16	29	47	44	43	32	34	41	34	29	58	55	68	62	56	37	33	30	34	36
22	32	20	17	16	17	21	48	61	86	59	47	46	64	70	70	52	54	46	122	126	118	98	117	31	60
23	16	13	11	11	12	11	20	35	39	28	30	25	27	24	27	39	29	52	49	26	36	18	16	17	25
24	11	7	4	4	5	6	11	17	20	18	15	16	11	11	11	17	29	27	23	20	20	15	19	16	15
25	14	7	21	74	52	28	35	41	33	22	59	57	18	25	15	12	19	51	71	70	71	68	58	64	41
26	93	99	100	88	31	78	91	94	96	91	71	86	71	65	32	13	16	18	19	17	14	13	13	13	55
27	9	6	5	4	4	4	9	22	22	23	19	26	21	27	31	34	46	54	68	48	47	35	24	16	25
28	17	13	9	5	3	6	19	50	42	48	61	54	54	43	32	52	37	71	64	47	29	47	62	114	41
29	114	M	84	26	51	35	25	47	37	18	M	18	40	19	7	11	14	20	60	75	88	105	54	54	46
30	61	83	81	109	99	61	101	102	119	121	79	76	46	34	32	39	79	101	108	95	106	84	99	112	84
31	54	41	43	19	40	18	55	43	97	87	80	56	6	9	6	8	16	20	35	65	11	39	22	66	39

MONTHLY STATISTICS:

GEOM ARITH-----PERCENTILES-----RANGE-----														STN 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	42	52	42	112	123	137	154	3	-	179	15	-	128	2	98	0	0

- NOTES: 1. FLAGS FOR INVALID DATA :
D: DYNAMIC CALIBRATION
T: TELEMETRY/DATALOGGR FAULT
M: MAINTENANCE OR ANALYZER FAULT
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: FEBRUARY

YEAR : 2014
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	16	20	15	17	17	14	9	21	46	38	56	36	17	4	3	10	8	12	4	2	3	4	9	16
2	8	5	4	2	2	2	2	2	8	23	55	64	24	16	17	10	14	14	8	7	5	3	2	5	13
3	5	6	6	5	4	9	22	22	15	14	30	32	37	37	22	47	28	43	31	24	15	11	10	6	20
4	5	4	5	6	13	7	2	2	1	1	1	1	1	1	0	2	1	1	1	1	1	0	0	0	2
5	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	0	1	11	20	10	17	14	27	32	33	47	32	24	4	3	2	2	6	2	3	4	17	24	31	15
7	23	25	46	31	42	25	18	41	83	55	9	6	8	7	14	8	6	6	8	10	14	49	42	13	25
8	16	18	17	16	11	10	18	15	18	24	23	13	5	4	3	4	2	2	2	2	2	1	1	1	10
9	1	1	1	1	0	0	1	1	1	1	1	1	5	4	4	5	2	1	1	1	1	1	1	1	2
10	0	0	0	0	1	1	1	2	2	3	3	4	5	9	8	5	4	4	4	4	4	4	4	4	3
11	3	2	2	4	8	4	3	4	6	10	7	7	9	10	10	6	6	6	6	5	6	7	5	5	6
12	3	2	2	2	1	1	1	1	4	4	3	2	3	14	10	12	7	5	6	5	4	3	1	1	4
13	3	5	2	2	2	5	5	5	11	5	4	4	6	8	8	7	4	5	4	4	3	3	3	3	5
14	3	3	3	5	13	9	11	6	7	6	8	17	17	14	17	15	12	11	13	6	6	5	5	4	9
15	3	5	3	5	6	5	3	3	4	3	3	4	4	3	4	3	2	2	3	3	2	1	1	1	3
16	2	2	1	1	1	2	2	2	2	2	2	2	1	4	2	2	2	6	2	9	16	21	18	26	5
17	28	30	35	27	33	34	26	49	109	73	91	82	42	29	8	9	6	7	25	25	16	32	32	20	36
18	16	15	14	8	10	58	44	34	56	72	66	67	34	32	40	23	15	16	12	8	8	7	7	5	28
19	4	4	4	3	2	2	1	1	1	3	2	3	3	5	7	5	5	4	4	3	3	3	3	3	3
20	4	5	4	5	12	21	17	12	20	25	18	16	9	2	2	2	3	4	28	19	5	4	4	3	10
21	4	4	4	4	5	6	5	6	5	6	6	7	6	5	4	4	4	4	4	4	4	3	3	3	5
22	3	3	3	4	4	3	3	3	3	3	4	6	6	6	6	6	6	6	5	5	3	3	2	2	4
23	2	2	2	2	3	3	3	4	4	3	3	4	4	5	5	6	6	5	3	3	3	3	3	2	3
24	1	1	1	1	0	1	2	1	2	3	3	3	3	3	3	2	2	1	0	0	0	0	0	0	1
25	0	0	0	0	0	0	1	7	12	5	2	1	1	1	1	3	3	1	6	15	19	34	30	40	8
26	24	39	44	52	27	15	10	34	68	111	37	33	56	51	21	32	38	28	21	15	11	11	15	10	33
27	10	17	29	6	4	3	2	1	6	20	3	2	1	1	1	1	1	0	0	0	0	0	0	0	5
28	0	0	0	1	1	1	0	1	1	0	M	0	1	0	0	0	0	0	0	0	0	0	0	0	0

MONTHLY STATISTICS:

MONTHLY STATISTICS:										NO. OF TIMES							
GEOM	ARITH-----PERCENTILES-----RANGE-----									STN GEOM	PERCENT	ABOVE OBJECTIVE					
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR				
6	4	10	4	28	40	56	69	0	-	111	0	-	36	3	100	0	0

- NOTES: 1. FLAGS FOR INVALID DATA :
D: DYNAMIC CALIBRATION
T: TELEMETRY/DATALOGGR FAULT
M: MAINTENANCE OR ANALYZER FAULT
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: FEBRUARY

YEAR : 2014
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	15	54	74	69	64	52	46	59	53	69	64	41	27	9	0	2	18	19	61	54	30	19	42	73	42
2	30	21	15	2	14	12	19	26	40	53	60	54	41	30	19	12	18	21	26	44	25	15	6	8	25
3	8	24	6	1	0	13	32	44	36	16	37	39	44	39	24	49	44	62	63	73	43	37	77	46	36
4	25	7	10	36	13	2	1	5	7	9	5	5	5	3	3	4	4	6	6	4	1	1	0	1	7
5	0	0	0	0	0	0	3	5	9	7	8	8	4	7	11	5	6	8	9	8	4	14	8	22	6
6	11	13	25	34	17	28	35	49	44	45	39	26	22	3	4	6	14	17	34	52	57	68	69	67	32
7	67	62	59	54	52	47	46	62	55	41	8	7	8	9	20	16	33	58	69	74	69	69	68	41	46
8	36	32	29	26	23	23	26	25	29	31	31	33	19	17	19	31	33	27	22	12	10	9	5	1	23
9	0	0	0	0	0	0	1	3	2	2	7	14	22	22	23	28	23	25	26	24	25	22	23	21	13
10	13	9	3	1	1	3	16	27	37	38	40	37	34	39	38	36	36	40	47	44	42	32	28	32	28
11	27	15	9	11	19	12	22	39	51	48	43	40	40	44	51	45	51	59	65	58	62	72	70	75	43
12	62	M	37	26	21	19	37	53	59	61	57	52	47	55	54	64	66	59	66	63	61	55	42	37	50
13	41	45	26	22	19	26	34	34	59	46	47	43	47	47	45	50	48	55	50	55	46	27	35	30	41
14	27	17	9	16	34	24	30	35	45	44	36	50	49	46	50	62	60	63	94	65	53	59	59	53	45
15	56	43	35	26	28	27	23	28	41	43	39	38	37	42	43	43	26	19	16	11	7	5	5	2	28
16	0	0	0	0	0	1	4	6	6	7	6	10	6	18	7	6	16	40	18	57	84	79	70	74	21
17	71	69	68	64	62	53	51	68	70	71	76	77	62	48	15	31	30	60	97	90	86	94	97	83	66
18	76	62	72	55	47	72	70	89	81	84	75	81	78	80	102	55	43	37	36	31	32	32	32	30	61
19	28	23	16	14	14	12	21	38	40	54	42	34	30	29	37	48	48	53	54	50	43	41	39	39	35
20	33	42	37	35	42	48	52	60	52	46	44	35	22	9	8	10	36	64	90	109	90	73	37	38	46
21	34	12	7	5	5	7	12	18	21	19	12	14	12	12	16	25	25	33	23	13	10	8	8	8	15
22	5	1	0	0	0	1	5	8	15	20	22	16	10	11	14	12	12	15	17	12	12	10	10	6	10
23	5	1	1	0	0	0	2	4	6	5	6	3	3	3	6	8	8	11	9	10	10	8	7	6	5
24	3	0	0	0	0	0	4	7	17	20	7	8	8	9	13	13	13	17	11	9	5	3	3	4	7
25	0	0	0	0	0	0	11	54	47	28	11	6	7	10	16	31	32	25	50	97	89	93	90	82	32
26	75	74	71	70	56	43	52	64	73	73	49	48	62	71	52	59	59	60	97	90	89	75	86	81	68
27	75	54	59	17	6	10	11	16	32	32	11	11	7	6	7	8	15	17	14	7	6	5	3	3	18
28	2	0	0	0	0	2	6	11	11	12	M	M	10	10	11	12	14	14	13	11	10	9	9	15	8

MONTHLY STATISTICS:

MONTHLY STATISTICS:													NO. OF TIMES				
GEOM	ARITH-----PERCENTILES-----									RANGE-----				STN GEOM	PERCENT	ABOVE OBJECTIVE	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR				
22	26	31	26	68	75	90	94	0	-	109	5	-	68	3	100	0	0

- NOTES:
1. FLAGS FOR INVALID DATA :
 - D: DYNAMIC CALIBRATION
 - T: TELEMETRY/DATALOGGR FAULT
 - M: MAINTENANCE OR ANALYZER FAULT
 - 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: MARCH

YEAR : 2014
UNIT : MICROGRAMS/CUBIC METER

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

MONTHLY STATISTICS:

ARITH-----PERCENTILES-----RANGE-----													STN GEOM		PERCENT		NO. OF TIMES ABOVE OBJECTIVE	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR					
2	1	2	1	5	7	9	12	0	-	20	0	-	6	2	100	0	0	

- NOTES: 1. FLAGS FOR INVALID DATA :
D: DYNAMIC CALIBRATION
T: TELEMETRY/DATALOGGR FAULT
M: MAINTENANCE OR ANALYZER FAULT
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: MARCH

YEAR : 2014
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	24	14	15	13	15	21	21	12	12	20	22	22	24	19	16	17	15	27	33	34	27	25	20	20
2	18	14	9	13	14	9	13	20	16	19	23	22	16	15	14	13	12	11	10	10	10	11	11	13	14
3	9	7	5	5	4	6	9	12	12	12	M	0	0	0	0	0	0	0	0	0	0	0	0	0	4
4	0	0	0	0	0	0	0	0	0	2	M	M	50	39	37	35	36	40	41	41	42	42	42	36	22
5	32	29	24	22	21	20	19	19	19	19	19	21	18	19	21	20	21	22	19	17	16	16	15	18	20
6	15	15	13	13	13	13	14	17	18	19	18	18	17	18	18	19	20	21	21	20	18	17	18	18	17
7	14	12	11	11	12	12	13	16	17	17	17	16	16	17	20	19	20	20	20	18	17	16	15	16	16
8	14	12	11	10	10	11	12	14	15	19	22	20	25	27	30	33	32	31	33	30	30	28	26	23	22
9	19	19	15	16	15	15	16	16	16	15	15	16	16	15	17	16	17	16	18	17	15	14	14	16	16
10	13	12	12	10	10	10	12	16	19	19	19	19	20	19	18	22	22	21	19	17	17	16	15	15	16
11	13	11	11	11	10	11	13	17	18	19	17	18	18	19	21	22	20	20	21	21	17	15	14	15	16
12	12	M	10	9	9	9	12	15	17	20	20	23	25	25	28	33	32	34	33	32	35	28	32	29	23
13	25	17	15	25	21	23	23	28	29	30	25	25	30	29	30	35	39	40	42	40	36	37	33	30	29
14	23	19	15	13	12	13	15	19	22	24	25	27	27	26	28	31	32	30	27	27	26	26	25	24	23
15	21	17	15	14	13	13	15	16	19	23	23	23	25	24	25	29	25	25	23	22	24	20	21	20	21
16	16	15	13	14	16	23	21	28	28	33	35	34	31	24	21	22	20	19	18	30	33	30	39	38	25
17	36	35	26	17	21	17	26	28	27	29	31	32	29	30	33	34	34	35	33	31	30	28	27	29	29
18	28	26	25	25	24	22	22	23	25	29	32	31	25	23	20	19	22	25	23	27	22	17	18	21	24
19	24	19	13	15	16	18	20	23	26	25	24	28	30	32	M	M	16	11	13	16	12	9	7	10	19
20	7	3	6	2	1	1	4	9	15	15	14	18	19	22	19	17	17	19	18	21	21	14	8	8	12
21	2	1	0	0	0	0	0	2	3	5	7	8	6	7	10	12	11	9	11	10	6	5	3	1	5
22	0	0	0	0	0	0	0	0	0	1	1	2	1	2	3	4	5	4	5	3	2	1	0	3	2
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	2	3	2	1	1	1
24	0	0	0	0	0	0	0	1	4	7	5	2	6	10	14	8	7	7	12	20	19	18	9	11	7
25	16	18	16	9	15	14	11	11	16	13	14	16	13	13	11	5	8	12	23	26	20	13	12	19	14
26	12	M	15	15	19	17	11	12	15	13	9	10	7	3	7	3	6	9	12	11	10	7	7	6	10
27	4	1	0	1	0	0	1	6	7	8	8	2	0	5	8	8	10	9	8	4	0	0	0	0	4
28	0	0	3	2	2	2	4	6	7	7	3	2	4	12	15	14	8	7	6	4	3	12	7	7	6
29	3	2	1	0	0	0	0	2	5	4	2	3	5	14	13	12	15	14	16	13	17	17	16	15	8
30	14	12	10	8	11	10	10	9	7	7	4	1	0	0	3	1	1	0	0	0	0	2	0	1	5
31	0	0	0	0	0	0	0	0	3	5	6	14	14	16	12	10	14	16	22	15	17	16	13	18	9

MONTHLY STATISTICS:

ARITH-----PERCENTILES-----RANGE-----										STN GEOM		PERCENT		NO. OF TIMES ABOVE OBJECTIVE			
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR				
13	15	15	15	29	33	37	40	0	-	50	1	-	29	2	99	0	0

- NOTES: 1. FLAGS FOR INVALID DATA :
D: DYNAMIC CALIBRATION
T: TELEMETRY/DATALOGGR FAULT
M: MAINTENANCE OR ANALYZER FAULT
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
MONTH: JANUARY

STATION : AP LEI CHAU
POLLUTANT : SULPHUR DIOXIDE

YEAR : 2014
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	49	37	32	44	28	36	40	35	32	55	19	18	18	18	12	16	12	15	16	19	18	16	16	16	26
2	16	14	13	11	8	11	11	13	20	120	122	M	58	68	36	92	17	11	8	13	5	3	6	15	30
3	9	19	14	28	49	27	100	78	92	85	94	105	138	103	61	44	50	61	40	42	36	39	41	54	59
4	111	53	27	22	25	18	44	42	30	26	22	24	44	40	36	36	71	33	30	32	31	28	25	25	36
5	23	24	23	22	21	22	22	27	31	30	30	30	26	27	26	27	26	24	20	18	19	17	18	22	24
6	22	18	17	19	20	22	25	26	29	26	26	25	23	19	18	20	12	8	7	7	5	5	4	6	17
7	6	5	2	2	3	3	3	2	3	5	6	6	5	6	4	4	4	1	2	2	1	1	2	29	4
8	8	33	61	29	71	42	20	2	31	86	47	24	55	57	51	68	53	38	28	15	8	7	10	10	36
9	8	10	8	11	5	4	5	5	11	7	4	3	4	2	2	2	2	2	7	6	5	5	7	10	6
10	7	11	10	10	9	12	10	8	7	9	10	11	11	10	9	9	11	11	12	10	12	11	7	7	10
11	5	6	4	4	5	7	7	10	7	7	5	6	7	6	6	7	6	4	11	9	7	6	4	5	6
12	4	8	9	8	9	9	9	8	20	66	67	58	33	37	35	73	68	55	17	14	10	8	8	7	27
13	5	3	7	11	15	6	5	12	18	21	15	16	15	11	12	14	16	16	11	8	11	8	6	7	11
14	8	7	5	5	7	21	8	6	6	7	9	9	29	30	23	8	5	2	4	8	7	5	5	5	10
15	5	2	1	2	3	4	3	5	17	5	4	3	2	0	2	2	3	4	4	2	3	4	3	5	4
16	7	7	6	6	7	7	7	8	10	11	9	8	7	7	7	6	7	7	6	5	6	4	5	3	7
17	0	0	4	1	0	2	3	3	4	17	37	50	26	25	47	45	30	29	32	36	33	29	30	23	21
18	21	22	23	21	20	21	21	21	20	24	17	16	14	14	32	36	31	33	44	26	16	14	13	8	22
19	5	7	7	8	9	12	16	19	16	14	14	15	14	14	12	13	15	23	8	8	19	28	24	36	15
20	59	40	15	13	10	14	13	29	71	92	M	M	66	60	57	53	69	49	15	16	16	21	22	19	37
21	20	22	22	25	25	24	22	20	18	17	16	17	19	17	23	25	14	13	15	17	16	15	13	21	19
22	19	18	19	19	19	21	22	19	19	16	17	16	18	26	24	31	26	30	32	38	30	30	20	13	23
23	10	9	9	9	10	9	9	10	10	10	13	14	14	12	9	8	9	8	6	6	5	5	6	3	9
24	3	1	4	2	3	3	3	3	2	3	3	4	2	2	3	4	4	5	3	3	5	5	2	5	3
25	3	2	1	0	1	1	0	1	1	1	1	3	3	3	1	3	1	2	3	1	4	3	2	15	2
26	12	6	4	5	5	2	2	3	8	20	59	81	82	86	14	10	6	4	4	4	5	5	5	5	18
27	4	4	3	2	5	4	3	4	3	5	7	6	5	6	7	5	4	4	3	4	6	5	3	7	5
28	6	6	6	5	3	5	4	7	6	6	4	6	35	46	13	19	10	4	3	7	7	5	6	3	9
29	3	2	3	2	3	5	5	6	5	3	3	2	3	5	2	6	1	2	1	1	32	21	8	27	6
30	14	152	73	18	51	49	45	59	49	95	134	46	31	48	83	44	34	45	51	45	42	35	51	24	55
31	28	18	20	56	41	14	8	5	14	37	85	16	7	5	6	2	5	2	1	2	4	2	4	5	16

MONTHLY STATISTICS:

ARITH-----PERCENTILES-----										RANGE-----				STN GEOM	PERCENT	NO. OF TIMES ABOVE OBJECTIVE	
GEOM	MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR			
11	11	18	11	44	60	86	102	0	-	152	2	-	59	3	99	0	0

- NOTES: 1. FLAGS FOR INVALID DATA :
D: DYNAMIC CALIBRATION
T: TELEMETRY/DATALOGGR FAULT
M: MAINTENANCE OR ANALYZER FAULT
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: JANUARY

YEAR : 2014
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	112	101	84	128	78	98	109	93	98	84	22	14	12	11	14	15	16	21	36	44	30	31	35	45	55
2	39	37	27	22	21	33	48	92	106	134	108	M	79	80	56	108	54	113	118	108	103	78	80	80	75
3	41	41	13	56	82	59	109	101	101	96	92	105	100	106	116	108	118	135	97	105	107	109	119	134	94
4	179	147	63	29	25	14	73	88	68	63	66	57	92	77	86	101	117	75	62	72	57	57	59	41	74
5	52	31	22	24	23	12	12	23	17	19	16	17	16	15	18	21	21	23	18	14	14	14	16	18	20
6	16	12	10	8	9	11	19	30	24	16	15	18	12	14	14	22	13	10	9	9	6	6	7	13	13
7	11	11	7	6	6	7	11	16	19	13	10	12	11	17	16	17	23	32	30	36	27	34	37	82	20
8	43	66	77	66	74	68	54	47	57	86	81	73	73	84	121	130	117	105	92	76	74	73	70	64	78
9	48	39	32	35	30	22	35	50	64	54	29	23	14	27	35	38	38	77	89	41	39	25	17	14	38
10	13	12	13	13	14	14	13	13	16	24	24	22	16	20	22	27	19	18	20	14	8	7	6	5	16
11	3	7	5	2	4	8	21	31	33	16	7	7	5	4	3	6	11	9	22	47	39	29	16	18	15
12	12	9	4	6	3	5	11	36	66	84	84	91	70	68	71	94	85	89	55	48	42	38	35	37	48
13	35	22	20	29	39	25	33	43	46	45	38	42	42	37	39	47	51	70	81	67	65	42	33	39	43
14	36	26	23	18	22	41	32	34	37	43	42	43	50	57	51	26	26	17	59	67	76	40	43	33	39
15	31	M	15	13	16	20	32	55	63	52	33	8	3	0	0	0	1	3	8	18	12	12	11	11	18
16	9	7	7	8	7	9	16	35	35	22	16	7	6	5	7	7	7	15	38	43	40	33	38	30	19
17	19	21	6	5	7	9	11	42	51	56	92	84	74	91	72	64	43	42	43	44	105	149	159	121	59
18	63	24	12	11	11	10	22	43	60	62	50	40	16	21	65	59	64	75	112	94	52	33	30	31	44
19	22	13	9	10	10	10	12	12	10	11	11	15	16	18	16	20	35	57	43	55	85	80	84	116	32
20	125	140	60	21	14	14	28	69	108	127	M	M	104	81	61	79	117	118	75	77	69	41	34	26	72
21	27	21	12	12	11	14	26	37	42	44	43	42	38	38	50	56	48	52	66	63	44	39	33	39	37
22	31	26	19	18	17	19	35	53	65	50	21	18	25	35	33	51	47	66	50	45	44	75	61	40	39
23	42	29	16	12	9	8	12	29	21	12	12	10	8	7	7	8	7	15	13	25	17	15	18	18	15
24	17	14	3	3	2	5	3	10	14	18	13	8	1	0	0	1	13	11	14	7	5	4	4	2	7
25	4	4	0	0	0	0	1	2	4	14	13	12	0	0	0	0	0	5	15	21	30	28	18	48	9
26	48	29	9	11	10	3	20	39	62	73	73	70	55	60	10	0	1	4	5	2	2	1	0	1	25
27	0	0	0	0	0	0	0	0	3	3	0	1	0	0	0	0	0	6	2	0	1	12	7	7	2
28	10	10	2	0	0	0	1	11	12	5	3	2	40	51	6	31	6	0	0	6	17	31	27	25	12
29	22	M	0	0	0	1	4	5	17	5	2	1	0	0	0	0	0	4	24	59	106	115	113	90	25
30	111	115	107	65	103	100	86	102	70	85	79	38	23	19	46	36	28	73	103	92	137	138	110	143	84
31	132	119	58	49	51	21	7	15	35	58	73	6	0	0	0	0	0	0	0	0	0	0	0	1	26

MONTHLY STATISTICS:

ARITH-----PERCENTILES-----RANGE-----													STN GEOM		PERCENT		NO. OF TIMES ABOVE OBJECTIVE	
GEOM	MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR				
	25	24	37	24	92	109	125	136	0	-	179	2	-	94	3	99	0	0

- NOTES: 1. FLAGS FOR INVALID DATA :
D: DYNAMIC CALIBRATION
T: TELEMETRY/DATALOGGR FAULT
M: MAINTENANCE OR ANALYZER FAULT
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
MONTH: FEBRUARY

STATION : AP LEI CHAU
POLLUTANT : SULPHUR DIOXIDE

YEAR : 2014
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	3	3	3	3	6	2	5	1	67	90	65	46	30	1	4	3	2	6	10	1	2	5	5	7	15
2	7	3	2	2	2	14	58	25	18	32	51	55	21	18	15	12	18	15	11	28	32	21	5	27	21
3	14	15	17	12	13	14	22	21	9	13	24	19	48	42	27	40	33	43	24	65	39	21	17	13	25
4	9	7	6	16	18	7	1	1	1	1	1	M	2	0	0	1	1	0	0	1	0	0	0	0	3
5	0	1	0	0	0	0	0	0	1	0	1	1	0	1	1	1	0	0	0	0	0	0	0	2	0
6	1	0	0	1	0	0	1	0	1	1	27	35	2	2	1	1	1	0	0	1	0	1	13	10	4
7	2	2	5	28	65	11	3	10	31	4	3	2	3	3	5	2	5	2	3	3	3	9	11	30	10
8	13	14	14	13	8	8	13	12	20	38	27	11	9	2	1	1	0	0	0	1	1	0	0	1	9
9	1	1	1	1	1	1	1	1	1	0	1	1	4	5	5	6	3	4	2	3	1	1	0	1	2
10	1	1	1	1	2	1	1	7	17	16	16	13	6	8	12	7	8	4	9	9	6	5	4	3	7
11	3	3	3	2	6	5	3	4	5	7	8	7	7	8	7	6	6	9	11	14	15	6	4	4	6
12	2	2	2	2	1	0	0	0	1	1	1	0	1	0	1	4	3	3	4	6	6	2	1	0	2
13	1	1	2	0	0	0	3	4	9	5	5	4	5	5	6	8	5	6	3	5	2	1	1	3	4
14	2	2	2	2	9	6	5	3	3	3	6	14	15	13	18	17	13	9	14	5	4	4	4	2	7
15	1	1	1	2	0	0	0	0	0	0	1	1	2	2	2	1	2	1	3	3	0	0	0	1	1
16	3	2	1	1	1	2	2	1	1	2	3	2	2	2	3	2	2	1	1	0	0	2	1	0	2
17	1	0	0	1	0	10	5	0	1	0	1	1	1	1	0	1	1	0	0	1	0	15	40	8	4
18	4	3	3	2	2	52	34	9	52	68	38	41	16	20	32	29	15	17	11	7	10	8	6	6	20
19	2	4	3	2	2	3	3	5	6	7	7	9	8	7	9	15	7	8	6	9	7	5	6	3	6
20	2	2	1	1	2	8	8	8	9	15	6	8	2	1	0	0	1	3	12	7	1	1	2	4	4
21	4	4	4	5	6	6	5	6	5	6	5	5	4	4	3	4	5	4	4	3	4	4	3	3	4
22	2	3	3	5	4	3	3	3	2	3	3	6	7	7	5	7	6	6	5	5	4	3	2	5	4
23	2	1	3	1	2	3	3	4	4	4	3	4	4	5	6	6	6	4	2	2	2	4	2	6	3
24	4	3	1	3	1	3	3	2	3	5	5	5	6	5	5	5	3	3	1	2	2	2	2	2	3
25	1	1	2	1	1	1	2	2	2	2	2	1	1	2	1	1	2	1	0	1	0	1	0	2	1
26	11	37	5	23	11	10	8	92	63	50	M	M	57	52	56	83	55	19	10	8	11	20	14	7	32
27	7	2	1	1	1	2	1	1	1	3	2	2	1	1	1	2	1	0	0	0	0	1	0	2	1
28	1	1	2	2	2	2	2	2	2	3	2	2	1	1	2	2	1	1	1	1	1	1	1	1	2

MONTHLY STATISTICS:

MONTHLY STATISTICS:													NO. OF TIMES				
ARITH-----PERCENTILES-----RANGE-----										STN GEOM	PERCENT	ABOVE OBJECTIVE					
GEOM	MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR			
4	3	7	3	17	32	54	65	0	-	92	0	-	32	3	100	0	0

- NOTES: 1. FLAGS FOR INVALID DATA :
D: DYNAMIC CALIBRATION
T: TELEMETRY/DATALOGGR FAULT
M: MAINTENANCE OR ANALYZER FAULT
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
MONTH: FEBRUARY

STATION : AP LEI CHAU
POLLUTANT : NITROGEN DIOXIDE

YEAR : 2014
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	2	2	9	3	23	11	60	48	52	27	13	0	0	0	2	7	0	15	3	11	5	12	
2	19	8	4	5	12	14	52	52	31	36	41	26	20	17	16	10	21	10	17	45	41	45	5	46	25
3	28	20	43	28	19	30	23	28	24	28	27	22	40	30	17	18	21	40	46	76	37	43	49	76	34
4	31	19	28	50	9	0	0	0	0	0	0	M	0	0	0	0	0	0	0	0	0	0	0	0	6
5	0	0	0	0	0	0	0	0	0	0	0	2	0	1	3	1	2	3	1	1	0	2	1	4	1
6	3	4	3	2	0	6	17	22	25	19	33	24	0	0	0	0	0	0	15	14	7	31	58	51	14
7	36	41	24	51	56	31	19	40	49	4	0	0	0	0	0	4	1	0	0	0	35	29	50	20	
8	38	31	27	24	21	19	23	24	26	27	30	28	24	13	10	22	30	26	16	10	7	4	2	1	20
9	0	0	0	0	0	0	0	0	1	1	1	13	19	23	23	28	28	31	32	32	31	30	30	25	15
10	19	7	1	0	0	1	12	33	40	42	42	39	34	33	38	39	39	44	51	48	41	36	27	28	29
11	23	12	11	8	9	11	14	37	44	49	50	48	46	43	48	47	48	56	63	68	66	58	63	70	41
12	57	M	31	22	16	10	22	38	47	41	35	30	31	34	41	50	55	61	61	62	61	50	43	41	41
13	37	36	24	15	10	12	26	29	48	45	50	36	43	48	42	45	45	52	49	50	49	35	36	34	37
14	27	7	2	8	20	14	20	28	40	41	37	44	45	43	42	51	48	45	60	41	61	48	48	53	36
15	26	19	21	9	3	5	9	23	31	27	20	25	20	29	25	33	25	13	6	3	1	4	3	1	16
16	1	0	0	0	0	0	0	0	1	4	8	8	4	0	0	1	7	15	16	19	23	24	18	20	7
17	15	11	4	1	1	20	27	30	27	33	25	6	0	4	0	0	0	4	25	61	10	41	81	47	20
18	31	8	3	7	5	55	56	11	45	59	48	50	37	52	76	48	36	31	28	26	25	24	25	25	34
19	26	15	10	6	5	7	11	26	22	39	38	34	35	25	29	46	56	52	53	48	45	46	38	36	31
20	33	39	25	20	16	38	49	53	50	42	20	19	6	4	0	0	0	5	62	96	46	20	58	22	30
21	29	13	8	4	2	3	4	7	9	6	5	7	5	4	8	9	18	24	19	10	8	7	5	2	9
22	0	0	0	0	0	0	0	4	3	4	3	1	0	4	2	3	4	5	5	3	1	1	1	1	2
23	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	2	0
24	4	0	0	0	0	0	1	3	3	5	0	0	0	0	0	0	3	6	1	0	0	0	0	0	1
25	0	0	0	0	0	0	0	4	2	5	0	0	0	0	0	0	2	9	21	41	19	21	27	13	7
26	40	M	25	38	26	34	51	65	52	46	M	M	43	37	46	68	56	16	12	11	75	86	63	46	45
27	15	7	2	0	0	0	0	6	14	11	6	11	0	0	0	0	0	0	1	0	0	0	1	0	3
28	0	0	0	0	0	0	1	1	1	6	4	3	1	0	0	5	17	7	1	1	2	1	0	8	2

MONTHLY STATISTICS:

MONTHLY STATISTICS:													NO. OF TIMES ABOVE OBJECTIVE				
GEOM	ARITH-----PERCENTILES-----									RANGE-----				STN GEOM	PERCENT	ABOVE OBJECTIVE	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR		24-HR		DEVIATION	VALID DATA	1-HR	24-HR		
15	12	19	12	48	56	63	72	0	-	96	0	-	45	3	99	0	0

- NOTES: 1. FLAGS FOR INVALID DATA :
D: DYNAMIC CALIBRATION
T: TELEMETRY/DATALOGGR FAULT
M: MAINTENANCE OR ANALYZER FAULT
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: MARCH

YEAR : 2014
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	1	1	0	1	1	0	0	1	2	2	1	3	1	2	1	1	1	1	0	0	1	2	6	7	2
2	13	12	4	22	105	46	26	99	93	78	91	7	3	4	4	3	2	1	0	0	0	1	0	1	26
3	1	0	0	0	1	1	2	1	4	1	2	2	4	0	1	1	1	0	0	1	0	1	2	4	1
4	3	2	2	2	2	3	4	4	3	3	4	11	24	23	30	24	19	15	21	50	38	41	30	16	16
5	17	13	12	11	4	7	21	26	68	46	9	1	3	3	1	2	4	5	3	4	2	2	1	3	11
6	2	2	2	2	2	0	0	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1
7	2	1	3	4	4	2	2	1	1	1	2	1	1	1	4	1	2	2	3	4	5	3	1	0	2
8	0	0	0	0	0	0	1	0	2	1	1	1	1	1	14	12	0	0	2	0	1	1	1	0	2
9	0	0	1	0	11	0	3	0	1	1	1	1	1	1	0	0	1	1	0	1	1	2	2	4	1
10	4	8	4	0	1	0	0	1	1	0	0	0	1	1	0	0	1	1	0	1	3	5	6	8	2
11	8	7	7	7	7	7	7	8	7	6	5	6	5	6	5	5	5	3	1	1	1	1	1	3	5
12	2	2	2	1	2	2	3	4	3	2	3	3	2	2	3	5	5	4	5	8	55	22	14	4	7
13	9	1	21	88	42	30	52	40	15	4	18	7	22	9	11	83	72	96	115	98	78	8	3	4	39
14	5	4	4	4	5	5	5	6	5	6	8	5	8	6	6	7	6	8	7	9	9	9	8	9	6
15	7	7	8	8	9	9	12	10	11	10	10	11	10	12	10	10	12	12	10	11	11	11	13	13	10
16	14	14	12	11	12	11	11	7	9	8	8	11	12	11	11	11	10	5	5	5	2	2	3	5	9
17	3	3	3	1	2	1	2	1	3	26	16	8	21	91	54	42	32	5	1	1	3	11	9	10	15
18	6	5	4	11	20	7	10	21	9	65	48	3	4	4	3	2	2	1	1	1	1	3	5	3	10
19	2	2	1	1	5	19	10	30	13	4	1	8	46	19	36	20	15	18	7	12	9	19	23	13	14
20	11	7	41	17	11	44	102	139	159	131	124	83	85	65	54	71	63	72	86	78	29	4	3	5	62
21	5	4	4	6	6	4	6	8	6	7	5	7	6	11	7	9	7	7	6	6	7	7	6	5	6
22	5	3	4	3	4	5	6	7	9	10	13	14	9	10	9	10	6	6	6	6	5	5	3	2	7
23	2	2	2	2	2	2	2	2	3	4	4	4	2	2	5	5	7	4	1	2	3	1	1	3	3
24	4	3	3	3	2	4	5	4	5	6	7	7	5	12	5	5	5	7	6	6	7	5	5	3	5
25	1	6	6	3	3	4	16	22	69	81	33	55	16	6	5	4	8	11	14	5	2	5	8	1	16
26	4	8	5	1	7	14	1	25	18	6	13	48	20	11	6	8	19	20	13	9	14	12	25	111	17
27	73	75	63	39	31	20	13	19	6	20	56	18	33	65	50	51	19	10	7	4	4	4	3	3	29
28	1	3	4	2	1	2	3	2	2	1	2	1	2	2	2	2	1	2	1	1	1	1	1	0	2
29	0	0	0	0	0	1	0	1	2	8	0	1	9	11	24	13	23	18	13	14	94	95	70	35	18
30	26	34	14	11	77	59	40	14	6	16	6	6	4	7	18	10	8	5	3	2	1	0	0	0	15
31	0	0	0	0	0	1	0	1	1	1	6	24	8	14	14	16	24	24	4	1	1	0	7	9	7

MONTHLY STATISTICS:

ARITH-----PERCENTILES-----RANGE-----													STN 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					
5	5	12	5	28	63	91	101	0	-	159	1	-	62	3	100	0	0	

- NOTES: 1. FLAGS FOR INVALID DATA :
D: DYNAMIC CALIBRATION
T: TELEMETRY/DATALOGGR FAULT
M: MAINTENANCE OR ANALYZER FAULT
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: MARCH

YEAR : 2014
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	2	0	0	0	0	1	10	1	0	0	0	0	0	0	0	0	0	0	0	0	33	76	63	8
2	63	57	23	41	55	41	40	53	45	44	43	1	0	1	1	0	0	0	0	0	0	0	0	0	21
3	0	0	2	1	0	0	0	0	0	0	1	M	5	4	5	1	2	0	1	0	0	0	0	0	1
4	0	0	0	0	0	0	2	10	33	31	21	31	57	56	47	42	42	63	70	85	94	103	102	95	41
5	78	65	50	52	35	32	29	32	39	42	29	10	5	8	5	5	6	2	0	0	0	0	0	0	22
6	0	0	0	0	0	0	0	0	0	1	3	0	0	2	1	4	8	10	4	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	1	0	1	1	5	6	4	3	4	1	2	0	0	0	1	1
8	1	1	0	0	0	0	1	1	7	11	23	23	27	18	33	61	42	60	45	63	47	32	31	24	23
9	34	30	25	14	24	17	25	22	25	27	31	29	18	8	16	14	8	14	15	10	6	3	6	8	18
10	2	2	1	0	0	0	0	1	5	5	1	5	8	4	3	6	10	8	0	1	3	2	3	4	3
11	3	1	0	0	0	2	4	9	10	11	11	12	8	11	13	16	12	12	13	6	5	4	4	4	7
12	1	M	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0	1	42	72	66	86	55	37	16
13	29	0	19	79	66	64	68	62	52	45	50	42	57	63	69	93	103	103	105	102	98	32	20	25	60
14	4	0	0	0	0	0	6	10	10	15	26	24	22	19	14	1	7	9	10	16	14	7	9	22	10
15	17	4	1	1	0	1	4	2	15	20	20	24	28	15	11	21	31	26	14	12	13	12	13	16	13
16	16	10	4	6	8	12	9	21	18	12	9	10	9	12	13	16	17	9	23	30	13	7	22	12	13
17	16	4	0	0	0	0	15	42	62	82	52	19	32	71	64	55	25	16	6	28	31	29	53	4	29
18	0	0	0	10	30	13	38	64	52	50	33	0	0	0	0	0	0	0	0	0	0	0	0	0	12
19	0	0	0	0	5	30	44	52	22	0	0	0	11	5	14	5	4	26	1	13	8	59	63	64	18
20	54	25	60	56	45	43	56	67	57	54	54	37	31	30	37	43	54	71	69	76	70	3	3	2	46
21	6	4	0	0	0	1	7	25	24	29	26	29	20	30	31	36	36	32	37	28	27	23	13	17	20
22	10	5	1	0	4	1	1	5	7	7	8	7	4	0	0	0	0	0	7	6	5	5	5	0	4
23	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2	1	4	0	0	1	0
24	0	0	0	0	0	0	0	2	11	5	0	0	0	15	9	0	0	0	19	26	28	17	0	0	6
25	2	8	7	0	0	0	30	59	63	50	26	45	24	1	0	0	1	3	13	22	0	1	18	1	16
26	2	M	7	0	11	26	8	41	13	3	17	41	19	7	2	1	21	9	4	26	55	32	32	50	19
27	36	51	47	34	13	22	36	12	2	4	15	5	9	19	17	11	6	0	0	0	0	0	0	0	14
28	0	1	0	0	0	0	0	4	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	2	3	12	18	23	44	57	59	70	70	70	86	92	81	66	31
30	64	65	45	37	54	49	40	13	0	8	0	0	0	1	1	0	0	1	0	0	1	1	0	0	16
31	0	0	0	0	0	0	0	0	0	9	30	28	16	11	29	41	77	65	45	65	21	11	20	52	22

MONTHLY STATISTICS:

ARITH-----PERCENTILES-----RANGE-----										STN GEOM		PERCENT		NO. OF TIMES ABOVE OBJECTIVE			
GEOM	MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR			
13	5	17	5	54	65	81	95	0	-	105	0	-	60	4	100	0	0

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

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

STATION : CHEUNG CHAU
POLLUTANT : SULPHUR DIOXIDE

MONTH: JANUARY

YEAR : 2014
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	35	36	34	41	36	26	23	22	24	26	40	33	21	19	19	17	16	15	16	19	20	16	22	24	25
2	31	32	32	20	21	20	21	19	25	29	25	23	20	16	18	21	29	17	14	16	15	18	20	16	22
3	39	39	50	37	17	13	12	13	11	11	15	22	34	24	23	21	23	24	39	45	52	52	43	40	29
4	36	27	21	18	16	16	18	22	25	26	26	29	27	31	34	33	29	30	32	40	40	43	38	42	29
5	32	33	33	24	26	35	40	39	31	29	30	30	26	26	26	26	25	23	20	18	19	18	14	15	27
6	18	15	15	14	16	18	19	22	29	26	27	27	21	20	17	19	17	16	17	10	9	9	10	8	17
7	7	7	6	5	4	7	8	7	8	12	10	9	M	14	12	11	7	7	9	11	15	11	7	5	9
8	10	11	9	13	14	12	15	16	30	53	41	41	32	47	30	46	42	32	29	19	15	11	8	9	24
9	10	11	8	8	9	8	8	8	9	10	13	14	13	10	14	16	10	10	10	11	14	10	9	7	10
10	7	7	7	7	7	8	8	7	6	7	9	12	11	11	11	10	8	7	9	11	7	9	9	9	9
11	9	8	7	5	4	7	8	8	14	23	22	13	8	10	7	8	7	6	7	13	14	16	24	7	11
12	8	12	10	9	7	30	26	20	18	18	32	42	27	21	21	23	24	23	17	12	10	8	6	6	18
13	4	5	4	5	6	5	6	7	9	10	13	12	11	11	9	8	8	8	8	9	9	9	10	8	8
14	8	8	6	6	8	8	10	9	11	11	11	12	11	10	9	9	9	7	7	5	5	6	12	7	9
15	8	7	6	6	6	5	6	10	12	11	17	19	4	3	4	5	6	6	6	6	6	5	7	5	7
16	5	8	7	9	8	7	14	10	14	19	16	13	8	8	7	7	7	5	6	9	10	11	11	8	9
17	5	7	5	4	10	8	7	9	14	20	17	21	15	22	22	20	17	17	11	8	8	9	8	31	13
18	34	19	17	17	18	18	21	19	20	17	15	14	14	16	13	13	13	18	30	28	26	25	20	11	19
19	8	6	7	8	9	9	11	14	15	15	16	16	19	21	16	15	23	13	11	11	11	13	19	18	14
20	20	20	20	23	42	50	49	31	38	29	25	16	14	14	34	32	32	26	17	16	16	16	20	20	26
21	19	21	23	25	24	21	19	21	21	19	18	18	19	21	20	15	14	15	14	14	15	15	13	14	18
22	17	17	19	20	18	19	18	18	19	24	24	23	19	18	15	14	15	15	16	18	21	23	17	14	18
23	14	13	9	9	8	8	9	9	13	16	15	13	14	11	8	7	7	8	8	8	11	8	7	9	10
24	7	5	4	3	4	4	5	4	5	6	6	7	8	5	4	5	7	6	5	7	7	6	7	6	6
25	11	7	5	7	11	20	12	11	14	15	13	13	14	5	5	5	8	6	7	10	6	8	13	11	10
26	10	14	22	39	54	20	14	11	12	12	13	21	19	22	30	10	8	7	6	6	7	7	6	6	16
27	8	8	7	5	10	10	9	8	7	10	10	8	6	7	6	5	5	5	5	5	11	9	8	8	8
28	7	7	8	8	5	4	6	6	7	10	7	6	6	16	14	17	17	8	5	5	10	8	11	11	9
29	13	15	17	14	19	18	17	19	26	34	21	6	7	5	5	8	5	6	4	4	7	16	14	12	13
30	12	19	14	13	33	28	28	12	20	48	35	19	14	15	16	16	20	13	17	16	12	13	16	19	20
31	15	15	20	38	40	62	98	105	79	44	34	37	37	14	12	24	19	9	6	9	13	13	16	16	32

MONTHLY STATISTICS:

ARITH-----PERCENTILES-----RANGE-----										STN GEOM		PERCENT		NO. OF TIMES ABOVE OBJECTIVE			
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR				
13	13	16	13	30	38	44	51	3	-	105	6	-	32	2	100	0	0

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

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

STATION : CHEUNG CHAU
POLLUTANT : NITROGEN DIOXIDE

YEAR : 2014
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	135	M	86	143	156	120	113	80	82	81	83	56	25	19	22	25	31	30	19	19	29	48	79	104	69
2	183	191	177	130	112	94	80	82	101	92	90	101	55	44	34	39	56	39	57	104	87	118	128	85	95
3	138	116	124	94	47	52	61	68	50	44	78	86	120	89	87	104	163	136	165	175	189	191	159	116	111
4	94	92	67	43	28	26	30	32	33	57	64	63	66	86	113	102	85	80	95	147	157	144	102	87	79
5	50	71	63	32	37	66	83	72	33	24	28	29	21	23	29	29	31	31	27	27	27	25	24	30	38
6	29	27	23	18	18	19	19	27	32	31	35	31	16	18	15	21	22	25	32	17	15	15	18	18	23
7	17	21	17	19	16	28	41	30	25	25	17	11	M	39	41	46	21	22	59	89	104	88	62	56	39
8	78	82	80	86	70	80	82	85	86	75	77	78	76	80	83	119	113	98	92	78	69	69	51	60	81
9	62	59	43	36	33	28	28	32	35	40	49	54	59	54	64	65	72	78	75	66	62	50	32	19	50
10	19	19	16	18	23	30	30	20	16	19	23	30	21	29	35	46	19	14	21	26	15	19	24	18	23
11	21	20	18	14	10	19	26	19	39	62	40	21	11	13	10	10	12	14	15	59	86	82	72	30	30
12	27	34	20	21	31	73	64	44	51	61	65	88	80	83	83	94	77	78	68	40	38	37	31	25	55
13	18	21	19	23	22	18	26	30	30	37	35	35	36	34	30	31	38	47	54	46	46	46	45	28	33
14	32	35	22	19	22	26	36	33	26	32	38	35	39	39	40	42	52	56	57	48	33	38	55	28	37
15	31	M	20	17	15	16	20	30	30	34	49	52	7	4	5	7	9	8	11	12	12	14	18	13	19
16	12	13	10	15	13	12	37	34	47	66	37	30	13	12	9	9	10	10	13	44	78	63	66	47	29
17	29	30	24	20	52	43	41	64	60	57	40	54	45	55	67	45	51	61	38	39	83	58	58	136	52
18	100	30	18	16	16	16	24	36	40	48	39	37	44	46	44	53	35	58	86	148	106	115	80	21	52
19	24	20	17	16	17	15	16	19	27	25	21	28	42	41	36	29	36	27	34	39	81	75	102	123	38
20	120	113	87	85	115	115	112	103	98	90	87	74	67	72	87	79	90	87	53	56	58	41	26	21	81
21	17	19	18	20	18	17	19	28	35	38	31	33	40	41	43	34	32	44	70	72	66	40	32	28	35
22	29	26	27	28	19	21	25	38	44	66	64	58	45	41	22	20	22	30	38	40	40	38	58	68	38
23	67	47	23	18	15	17	20	24	23	35	26	13	13	11	9	10	11	13	12	14	42	43	53	85	27
24	77	46	16	15	20	22	19	12	18	13	12	10	13	8	7	9	12	13	13	30	38	57	72	71	26
25	58	45	28	25	41	80	61	70	67	87	69	59	58	16	6	6	11	12	20	27	29	67	106	101	48
26	86	79	92	104	94	48	50	51	59	65	41	53	54	56	44	16	15	19	24	20	20	20	17	19	48
27	29	44	24	15	28	20	17	13	11	13	10	6	5	6	6	6	8	8	12	13	35	57	54	69	21
28	83	52	33	18	10	9	11	16	13	15	8	13	13	25	19	16	25	13	13	8	35	54	50	72	26
29	69	M	77	76	77	62	76	73	82	94	56	11	17	10	10	17	10	10	10	29	58	102	107	99	54
30	93	116	112	109	121	113	104	69	73	102	74	26	16	18	16	21	28	34	113	100	70	103	98	81	75
31	95	77	98	108	106	113	118	119	119	109	71	51	41	14	17	31	38	19	34	43	42	63	66	82	70

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----									RANGE-----				STN GEOM	PERCENT	NO. OF TIMES ABOVE OBJECTIVE	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR		
37	38	48	38	98	115	139	161	4	-	191	19	-	111	2	99	0	0

- NOTES: 1. FLAGS FOR INVALID DATA :
D: DYNAMIC CALIBRATION
T: TELEMETRY/DATALOGGR FAULT
M: MAINTENANCE OR ANALYZER FAULT
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
MONTH: FEBRUARY

STATION : CHEUNG CHAU
POLLUTANT : SULPHUR DIOXIDE

YEAR : 2014
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	13	11	12	14	12	19	19	19	27	34	22	22	19	17	11	11	6	16	15	12	11	13	20	15	16
2	14	12	10	9	9	13	22	18	27	46	28	21	12	10	9	7	4	12	13	10	11	10	8	7	14
3	10	8	7	8	14	17	9	16	25	28	26	13	15	14	16	11	23	8	6	7	10	10	14	11	14
4	13	14	28	39	32	13	7	5	4	4	4	4	3	2	1	2	2	2	1	1	1	1	1	2	8
5	2	3	2	2	2	2	2	3	7	6	4	3	3	3	2	3	2	1	2	1	1	1	1	1	2
6	0	1	2	2	3	4	3	4	12	18	13	7	9	8	8	5	4	8	4	3	3	3	3	11	6
7	10	16	15	12	10	9	11	16	15	16	9	6	4	5	10	11	9	7	5	5	7	8	15	6	10
8	5	5	5	6	8	4	3	3	4	6	5	9	8	7	7	6	6	8	8	6	6	4	4	3	6
9	3	3	2	2	2	2	2	3	4	4	3	3	3	5	4	3	2	2	2	2	2	2	2	1	3
10	1	1	1	1	1	1	1	2	3	4	3	3	3	3	4	4	3	4	4	4	4	4	4	4	3
11	3	3	4	4	5	4	4	4	5	6	6	6	6	6	6	7	7	7	7	7	7	5	5	4	5
12	3	4	3	3	2	2	2	1	2	3	3	5	6	5	5	5	6	4	5	5	3	2	1	2	3
13	2	1	1	1	1	1	1	2	2	2	1	2	3	3	4	6	3	3	3	3	3	3	3	3	2
14	3	3	3	5	4	4	4	5	7	8	9	9	9	11	13	9	9	7	7	8	8	12	11	7	7
15	8	5	5	5	4	5	5	7	9	11	14	12	12	13	9	8	7	7	6	7	5	3	4	4	7
16	5	4	5	4	5	4	5	5	5	5	6	5	5	6	7	6	5	4	5	5	6	6	6	7	5
17	6	6	7	5	4	4	6	7	13	14	22	17	13	14	4	4	3	3	3	4	2	4	6	7	7
18	3	8	20	20	14	15	12	14	15	16	24	27	31	21	26	12	9	9	13	14	9	6	4	3	14
19	3	3	3	3	2	2	2	1	1	2	2	3	3	4	5	4	5	4	5	4	5	5	4	4	3
20	3	3	4	4	6	6	4	5	8	9	10	12	13	9	5	3	4	4	5	12	13	13	13	10	7
21	8	6	4	4	5	6	5	7	8	12	13	10	7	10	6	6	6	7	5	7	9	6	6	6	7
22	6	6	5	6	5	4	5	6	6	6	8	7	9	7	9	10	9	7	9	6	11	8	6	5	7
23	4	4	4	6	6	5	3	5	6	9	8	8	6	6	6	6	7	5	5	5	3	3	5	4	5
24	6	5	3	2	3	3	3	5	5	6	5	6	6	5	6	7	6	4	4	5	4	4	3	3	5
25	4	4	3	3	4	6	6	5	5	5	6	M	M	M	M	M	1	0	3	12	9	11	7	11	6
26	8	8	9	9	7	7	10	13	22	37	45	32	14	13	13	11	12	10	14	22	18	22	17	17	16
27	15	15	17	18	11	6	4	8	15	17	19	17	8	6	3	5	2	4	2	1	1	4	5	3	9
28	2	2	3	2	2	3	3	4	4	6	6	5	3	3	3	2	2	3	3	1	4	4	2	6	3

MONTHLY STATISTICS:

MONTHLY STATISTICS:														NO. OF TIMES ABOVE OBJECTIVE			
GEOM	ARITH-----PERCENTILES-----									RANGE-----				STN GEOM	PERCENT	ABOVE OBJECTIVE	
MEAN	MEDIAN	MEAN	50	90	95	98	99	0	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR			
5	5	7	5	14	19	27	31	0	-	46	2	-	16	2	99	0	0

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

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

STATION : CHEUNG CHAU
POLLUTANT : NITROGEN DIOXIDE

MONTH: FEBRUARY

YEAR : 2014
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	65	48	51	61	43	80	68	67	57	64	37	43	26	17	13	16	14	35	37	30	46	76	92	90	49
2	79	64	38	31	47	71	80	65	53	66	50	33	24	25	23	23	27	31	33	40	81	51	40	70	48
3	70	73	72	75	78	61	37	53	53	59	52	29	24	26	28	29	48	27	33	21	25	33	102	96	50
4	89	80	78	88	89	22	11	13	10	12	11	14	16	14	10	11	7	10	6	9	9	9	11	27	27
5	27	25	15	16	19	22	16	18	28	29	20	11	7	8	8	8	7	7	10	6	7	6	7	7	14
6	8	9	19	20	21	19	13	28	43	40	30	15	18	11	16	15	13	27	14	16	27	17	21	66	22
7	58	74	71	59	60	55	60	62	46	52	12	9	6	7	10	14	18	13	19	22	34	51	74	44	39
8	41	38	36	34	32	29	30	27	29	34	31	40	41	43	40	43	49	53	59	52	43	23	25	17	37
9	21	18	14	20	14	19	20	22	39	51	43	37	30	32	29	27	27	30	32	32	27	23	23	14	27
10	13	11	12	11	10	11	12	16	22	26	25	27	28	28	30	35	35	47	42	35	29	24	24	20	24
11	17	14	13	13	15	14	15	19	22	27	23	30	37	41	45	45	48	48	49	53	49	37	33	27	31
12	24	M	18	14	14	17	19	21	31	48	44	51	51	51	55	56	58	59	59	63	52	38	35	26	39
13	25	25	20	18	16	14	17	26	28	36	33	38	33	35	41	48	33	36	37	34	36	31	35	33	30
14	27	19	17	20	16	17	20	20	25	33	41	41	39	42	48	47	43	45	52	75	64	74	66	49	39
15	51	33	25	21	18	19	24	30	41	56	53	51	57	54	47	51	48	35	32	18	19	18	14	18	35
16	26	25	31	28	37	30	34	33	28	24	27	26	25	24	37	32	39	27	52	46	59	57	67	59	36
17	51	61	46	25	21	30	42	56	69	79	71	39	31	38	10	16	13	33	37	27	18	77	94	71	44
18	50	67	83	90	82	83	73	74	63	45	66	68	92	65	92	59	47	46	43	38	36	33	29	25	60
19	24	23	22	19	17	18	20	17	19	32	27	30	30	31	29	22	33	45	49	47	40	35	30	28	29
20	26	21	22	24	23	22	26	35	31	34	43	45	43	34	16	7	12	14	22	100	89	119	119	86	42
21	81	19	22	19	18	16	13	19	19	28	25	18	15	25	13	18	21	25	19	20	29	15	20	17	22
22	23	23	19	16	9	8	12	21	22	22	22	9	8	11	27	25	19	21	23	15	66	34	23	22	21
23	22	15	13	34	25	19	7	12	11	21	18	19	9	9	8	10	12	10	16	17	14	15	21	26	16
24	53	35	13	9	21	13	12	20	16	23	9	18	10	9	10	17	17	19	16	30	20	24	20	21	19
25	23	17	17	19	17	34	35	18	14	12	10	M	M	M	M	M	13	9	51	103	106	103	95	95	42
26	74	M	66	66	38	46	61	64	72	83	73	50	15	19	19	16	26	27	71	86	85	86	72	75	56
27	65	60	69	70	55	18	9	32	47	52	59	42	18	14	18	31	19	21	12	8	10	44	24	20	34
28	22	32	21	17	19	27	24	28	25	31	31	28	26	27	20	14	24	23	38	17	47	33	19	58	27

MONTHLY STATISTICS:

ARITH-----PERCENTILES-----RANGE-----													STN GEOM		PERCENT		NO. OF TIMES ABOVE OBJECTIVE	
GEOM	MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR				
	28	27	34	27	67	79	91	97	6	-	119	14	-	60	2	99	0	0

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

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

STATION : CHEUNG CHAU
POLLUTANT : SULPHUR DIOXIDE

MONTH: MARCH

YEAR : 2014
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	4	5	4	3	5	6	6	4	7	9	14	10	8	6	4	12	9	17	8	6	6	5	5	5	7
2	8	13	19	34	22	17	27	25	24	28	37	44	24	8	6	5	5	4	4	3	3	3	3	2	15
3	2	1	2	1	1	2	2	1	4	9	12	11	10	12	12	7	4	5	4	5	5	3	4	5	5
4	3	3	2	3	2	3	3	4	8	10	11	14	12	18	16	13	23	20	19	18	21	27	21	17	12
5	21	22	17	9	5	4	4	5	5	7	7	10	6	8	8	6	7	6	6	8	6	5	4	6	8
6	4	4	4	3	3	2	3	3	4	3	3	4	5	5	4	5	5	5	3	3	3	3	3	3	4
7	3	2	3	4	4	4	2	4	4	3	4	4	5	4	3	3	5	5	5	5	7	4	4	3	4
8	3	2	2	2	2	2	2	3	3	3	5	7	8	8	11	16	14	8	13	20	21	16	17	11	8
9	6	4	3	2	2	2	3	3	5	5	4	6	11	16	12	10	9	7	8	5	4	5	5	8	6
10	7	7	8	6	4	3	3	3	6	4	4	4	3	4	3	3	2	3	4	4	5	6	7	8	5
11	8	7	7	7	7	7	6	7	8	9	11	11	10	9	9	8	7	8	5	3	3	4	3	4	7
12	4	3	3	2	3	3	3	4	5	13	19	25	25	13	10	11	14	13	16	18	17	15	28	19	12
13	23	22	23	T	T	T	T	T	T	T	T	T	6	6	10	12	9	10	11	10	7	21	22	25	14
14	21	7	6	8	8	8	6	8	7	11	12	11	16	15	11	8	7	9	8	9	9	12	14	18	10
15	25	15	9	11	10	9	11	13	13	15	15	14	18	20	12	13	17	19	14	14	17	14	14	18	15
16	18	20	19	19	16	17	16	20	23	26	25	22	23	17	17	21	23	26	21	19	28	20	21	21	21
17	15	10	8	6	9	8	13	17	34	44	42	41	27	21	15	17	11	13	8	7	16	8	8	10	17
18	12	11	11	9	9	8	9	12	26	41	33	23	14	7	5	7	9	5	5	3	3	8	14	11	12
19	12	9	9	7	7	9	13	13	28	22	21	17	29	15	6	8	9	14	14	14	18	19	15	18	14
20	10	7	11	15	10	7	9	27	42	88	79	42	38	20	13	20	23	17	16	18	27	11	9	8	24
21	9	11	9	13	15	13	13	9	16	16	12	10	11	10	9	9	12	17	14	12	17	16	16	13	13
22	7	6	6	7	11	10	8	8	9	13	14	13	12	11	10	8	6	6	7	7	7	6	4	4	8
23	4	5	5	4	4	5	5	6	7	8	8	8	9	5	6	5	6	6	3	3	4	4	4	4	5
24	4	6	8	6	5	6	7	6	9	11	8	7	9	10	9	6	9	8	6	11	7	10	7	5	8
25	7	9	9	10	9	11	10	14	27	23	22	19	14	21	31	24	16	23	21	17	14	11	10	8	16
26	8	8	8	7	6	10	6	5	8	18	19	10	7	6	5	3	3	3	4	3	9	5	5	6	7
27	5	5	4	3	3	5	7	11	27	23	28	5	5	24	23	18	12	10	8	9	10	9	5	5	11
28	5	5	10	6	6	4	5	6	10	5	5	3	3	9	6	8	2	2	2	2	4	5	6	3	5
29	4	5	4	5	5	5	8	10	8	22	20	7	3	4	4	2	3	2	3	5	5	3	3	5	6
30	5	10	14	16	23	20	23	29	13	12	14	13	14	12	7	7	5	4	7	5	3	2	1	1	11
31	2	1	1	1	1	1	1	1	2	1	1	1	2	1	2	3	6	9	8	5	3	3	4	3	3

MONTHLY STATISTICS:

ARITH-----PERCENTILES-----RANGE-----											STN GEOM		PERCENT		NO. OF TIMES ABOVE OBJECTIVE			
GEOM	MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR				
	8	8	10	8	21	25	30	41	1	-	88	3	-	24	2	99	0	0

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

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

STATION : CHEUNG CHAU
POLLUTANT : NITROGEN DIOXIDE

MONTH: MARCH

YEAR : 2014
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	35	47	37	17	30	35	36	17	29	33	51	28	30	17	13	64	34	33	29	20	16	26	64	44	33
2	50	69	75	82	69	65	74	69	57	50	55	56	36	18	21	18	22	21	18	23	22	14	36	24	44
3	30	17	26	14	22	15	18	17	17	34	35	37	34	37	41	35	30	39	31	33	34	24	30	28	28
4	26	24	20	22	25	22	20	25	56	78	68	67	66	78	70	78	95	99	107	107	113	117	111	89	66
5	68	57	51	38	22	17	26	34	38	53	47	47	31	33	38	27	41	32	29	29	39	32	30	20	37
6	18	21	25	13	21	13	19	22	23	24	20	20	34	33	31	38	36	35	28	30	22	24	16	15	24
7	18	12	20	18	24	28	18	27	21	27	30	28	31	27	21	31	37	36	41	39	36	23	29	25	27
8	27	34	29	28	26	28	29	32	22	24	43	59	54	56	67	80	86	76	93	94	79	68	61	52	52
9	44	36	28	21	15	15	15	20	25	34	28	25	33	37	38	40	47	31	38	26	23	29	25	42	30
10	28	18	14	14	9	10	9	15	21	19	19	18	19	18	14	13	19	26	27	36	25	30	26	27	20
11	26	24	28	25	22	25	15	17	22	31	46	41	41	36	32	35	27	38	28	29	29	30	29	49	30
12	38	M	13	10	10	12	13	20	28	77	81	87	79	46	35	56	62	82	98	95	85	88	100	69	56
13	71	66	81	T	T	T	T	T	T	T	T	T	49	48	62	80	70	71	80	79	48	101	75	64	70
14	57	19	18	28	18	19	19	35	24	44	53	48	48	46	38	18	16	22	27	37	29	62	58	70	36
15	76	57	21	25	16	19	21	28	26	36	38	43	56	50	26	35	71	58	32	27	53	43	38	68	40
16	68	48	48	47	30	48	66	77	64	82	65	69	76	36	29	65	86	141	125	114	120	113	109	122	77
17	97	53	20	9	30	40	81	79	91	98	95	86	66	71	62	55	23	40	41	61	94	61	57	70	62
18	61	60	73	62	54	33	54	49	62	67	43	25	21	12	10	14	22	18	20	14	19	33	54	57	39
19	54	33	53	40	29	47	52	48	40	26	21	15	30	28	14	18	23	44	50	57	65	75	66	78	42
20	47	26	49	51	53	47	50	59	54	59	54	52	44	28	23	42	45	44	46	62	65	42	47	46	47
21	36	38	30	30	37	39	33	29	50	59	49	40	43	47	43	44	52	73	65	63	69	56	57	52	47
22	31	26	22	23	36	28	20	21	23	27	21	20	14	14	15	13	12	13	18	22	23	28	20	20	21
23	21	19	14	11	9	10	15	32	21	15	19	19	23	10	9	9	14	12	12	14	25	23	20	32	17
24	35	24	44	35	16	25	27	23	44	37	9	7	18	26	37	10	9	10	13	36	28	43	23	27	25
25	58	67	44	45	35	50	57	65	70	59	59	38	21	22	37	30	29	41	45	50	98	92	68	59	52
26	57	M	30	28	33	64	52	42	44	30	50	49	18	18	29	29	20	19	20	30	32	56	74	63	39
27	49	35	23	24	38	45	48	42	49	30	26	6	9	34	28	23	21	27	23	26	25	28	19	14	29
28	14	16	47	23	28	10	19	21	34	8	11	8	15	54	21	48	12	8	12	30	46	46	53	16	25
29	26	36	29	37	23	37	40	51	27	38	47	33	30	37	61	43	52	41	64	83	80	68	49	74	46
30	71	71	76	74	77	68	72	64	26	30	34	27	28	18	9	16	14	15	25	18	17	19	16	8	37
31	18	11	7	7	8	8	6	12	9	26	42	35	34	28	48	66	70	88	65	62	40	58	82	77	38

MONTHLY STATISTICS:

ARITH-----PERCENTILES-----RANGE-----													STN GEOM		PERCENT		NO. OF TIMES ABOVE OBJECTIVE	
GEOM	MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	1-HR	24-HR				
	33	33	39	33	71	82	98	112	6	-	141	17	-	77	2	98	0	0

- NOTES: 1. FLAGS FOR INVALID DATA :
D: DYNAMIC CALIBRATION
T: TELEMETRY/DATALOGGR FAULT
M: MAINTENANCE OR ANALYZER FAULT
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 : January – March 2014

Week Ending	No. of Samples	Suspended Solids, mg/L			pH		
		Maximum	Minimum	Average	Maximum	Minimum	Average
04/01/14	2*	16	14	15	8.3	8.3	8.3
11/01/14	6*	14	12	12	8.3	8.0	8.2
18/01/14	5*	16	11	13	8.2	8.1	8.1
25/01/14	6*	13	10	12	8.1	8.0	8.1
01/02/14	2*	16	12	14	8.1	7.9	8.0
08/02/14	4*	19	11	14	8.1	7.9	8.0
15/02/14	5*	14	11	12	8.0	7.9	8.0
22/02/14	6*	17	13	15	8.1	7.9	8.0
01/03/14	2*	12	12	12	8.2	8.1	8.2
08/03/14	6*	14	10	13	8.2	8.0	8.1
15/03/14	6*	22	11	14	8.3	8.0	8.2
22/03/14	5*	17	12	14	8.2	8.1	8.2
29/03/14	6*	16	11	13	8.3	8.1	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 : January – March 2014

Sampling date		14/1/2014	19/2/2014	12/3/2014
Barium,	ug/L	<150	<150	<150
Mercury,	ug/L	<0.5	<0.5	<0.5
Cadmium,	ug/L	<1	<1	<1
Iron,	ug/L	<400	<400	<400
Total Phosphorous,	mg/L	<0.8	<0.8	<0.8
Total Nitrogen,	mg/L	32	129	66
Cyanide,	mg/L	<0.01	0.03	0.02

Remark:

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

Appendix D Summary of EMIS

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