

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



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

Operational Phase

Quarterly Environmental Monitoring & Audit Report

April – June 2019

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**

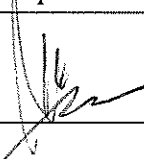
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Certified by	 (Mr. IP Tat-Yan, Environmental Team Leader)

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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 April to June 2019.

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

Plant Availability

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

Unit	Period	Remark
L2	28/06/2019 19:59 to 30/06/2019 23:59	Defect rectification
L4	04/04/2019 21:42 to 07/04/2019 18:19	Defect rectification
L4	14/06/2019 23:20 to 16/06/2019 21:22	Defect rectification
L5	30/04/2019 21:02 to 02/05/2019 21:18	Defect rectification
L5	08/05/2019 23:18 to 11/05/2019 05:59	Defect rectification

Malfunction/Outage Records of Pollution Control Equipment

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

Equipment	Period	Cause	Actions Taken
L2 FGD	17:48 on 18/04/2019 To 18:28 on 18/04/2019	Tripping of absorber recirculation pump 2A	EPD was informed on 24/04/2019
L4 FGD	18:32 on 01/04/2019 to 19:15 on 01/04/2019	Defect rectification	EPD was informed on 03/04/2019
L5 FGD	02:39 on 28/06/2019 To 20:50 on 28/06/2019	To facilitate gas dust inspection	EPD was informed on 02/07/2019

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 Process Licence issued under APCO	L-7-002(12)	01/01/2019	31/12/2020	HK Electric	17/12/2018
WPCO discharge licence for Ash Lagoon	WT00027218-2017	24/02/2017	31/12/2021	HK Electric	24/02/2017

Implementation Status of Environmental Mitigation Measures

Environmental mitigation measures were implemented in the reporting period.

Environmental Complaints

There was no environmental complaint against the operation of Lamma Power Station during the reporting period.

Future key issues

Key issues to be considered in the coming months include:

Air Impact

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

Water Impact

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

Concluding Remarks

The environmental performance of the projects was generally satisfactory.

1. INTRODUCTION

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

This report summarizes the environmental monitoring and audit work for the said Projects for the period from April to June 2019.

1.1 Background

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

The Projects include the installation and operation of FGD plants with flue gas desulphurization efficiency of 90% for the three coal-fired Units L2, L4 & L5 to reduce the overall SO₂ emissions from Lamma Power Station. The process adopted for the FGD plants is “Wet Limestone-Gypsum”, a technology which has already been used in, and proved effective and reliable for the existing coal-fired units L6, L7 & L8. The flue gas from the boiler is directed to the FGD absorber inside which removal of SO₂ is take place by reaction with limestone slurry. After passing through the absorber, the treated flue gas is heated up by a gas-gas heater to over 80°C at boiler rated capacity and directed back to the existing chimney for discharge to the atmosphere. [Figure 1.1a](#), [Figure 1.1b](#), [Figure 1.2a](#), [Figure 1.2b](#) and [Figure 1.3](#) show the location and schematic of the FGD plants.

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

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

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

1.2 Project Organisation

The management structure to oversee the Projects includes the following:

- Environmental Protection Department (The Authority);

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

The organization chart for the Operation EM&A programme is shown in [Figure 1.5](#).

1.3 Plant Availability during the Reporting Period

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

Unit	Period	Remark
L2	28/06/2019 19:59 to 30/06/2019 23:59	Defect rectification
L4	04/04/2019 21:42 to 07/04/2019 18:19	Defect rectification
L4	14/06/2019 23:20 to 16/06/2019 21:22	Defect rectification
L5	30/04/2019 21:02 to 02/05/2019 21:18	Defect rectification
L5	08/05/2019 23:18 to 11/05/2019 05:59	Defect rectification

1.4 Malfunction/Outage Records of Pollution Control Equipment

Equipment	Period	Cause	Actions Taken
L2 FGD	17:48 on 18/04/2019 To 18:28 on 18/04/2019	Tripping of absorber recirculation pump 2A	EPD was informed on 24/04/2019
L4 FGD	18:32 on 01/04/2019 to 19:15 on 01/04/2019	Defect rectification	EPD was informed on 03/04/2019
L4 FGD	02:28 on 27/04/2019 to 02:30 on 27/04/2019	Routine Dampers Exercise	EPD was informed on 19/04/2019
L4 FGD	02:09 on 18/05/2019 to 02:11 on 18/05/2019	Routine Dampers Exercise	EPD was informed on 21/05/2019
L4 FGD	02:28 on 08/06/2019 to 02:30 on 08/06/2019	Routine Dampers Exercise	EPD was informed on 17/06/2019
L5 FGD	01:53 on 13/04/2019 to 02:05 on 13/04/2019	Routine Dampers Exercise	EPD was informed on 18/04/2019
L5 FGD	02:01 on 20/04/2019 to 02:03 on 20/04/2019	Routine Dampers Exercise	EPD was informed on 24/04/2019

L5 FGD	02:17 on 27/04/2019 to 02:19 on 27/04/2019	Routine Dampers Exercise	EPD was informed on 29/04/2019
L5 FGD	02:04 on 18/05/2019 to 02:06 on 18/05/2019	Routine Dampers Exercise	EPD was informed on 21/05/2019
L5 FGD	01:53 on 25/05/2019 to 01:55 on 25/05/2019	Routine Dampers Exercise	EPD was informed on 29/05/2019
L5 FGD	03:12 on 01/06/2019 to 03:15 on 01/06/2019	Routine Dampers Exercise	EPD was informed on 17/06/2019
L5 FGD	02:21 on 22/06/2019 to 02:23 on 22/06/2019	Routine Dampers Exercise	EPD was informed on 28/06/2019
L5 FGD	02:39 on 28/06/2019 To 20:50 on 28/06/2019	To facilitate gas dust inspection	EPD was informed on 02/07/2019

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.

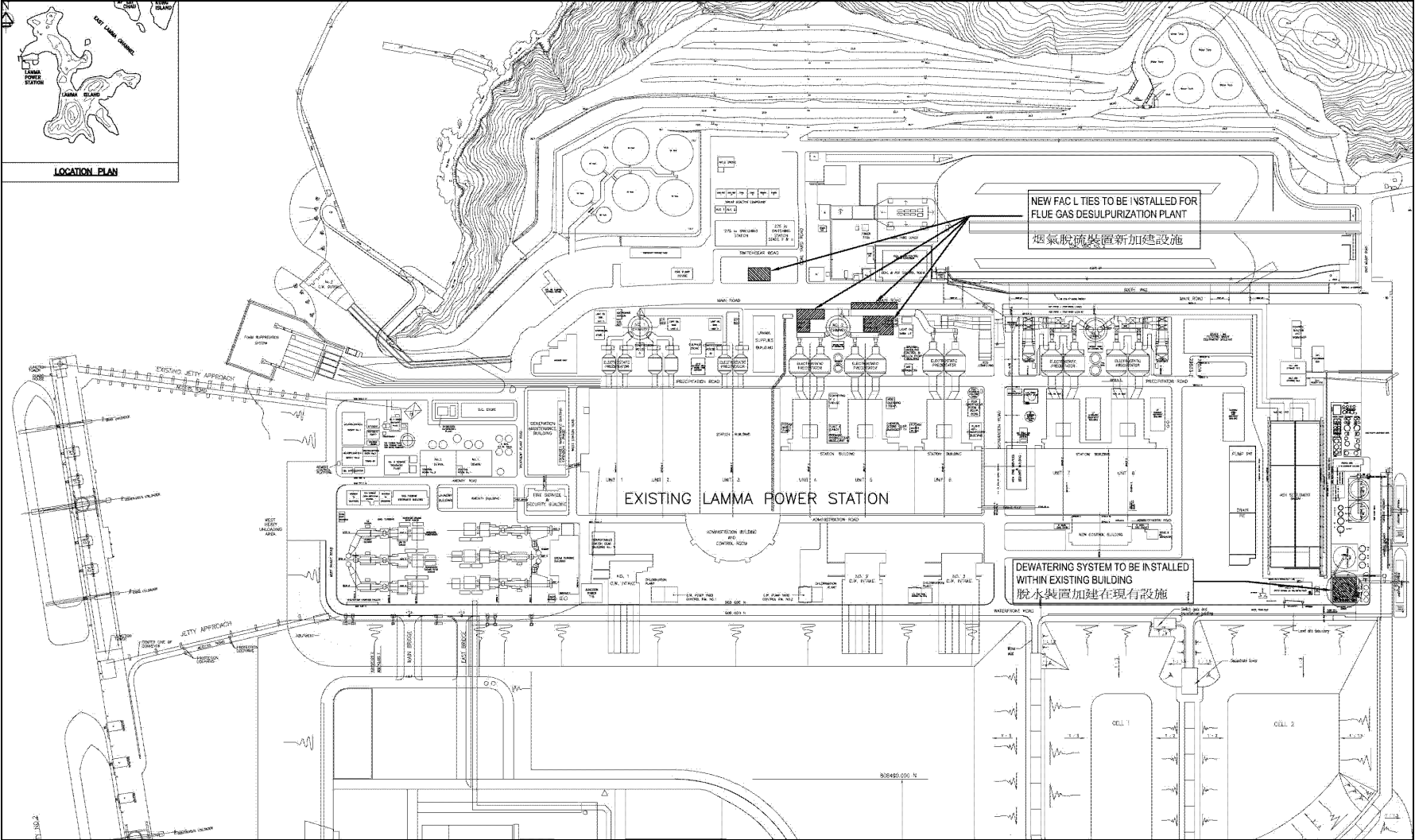


Figure 1.1a Location of New Facilities for L4 & L5 FGD Plants

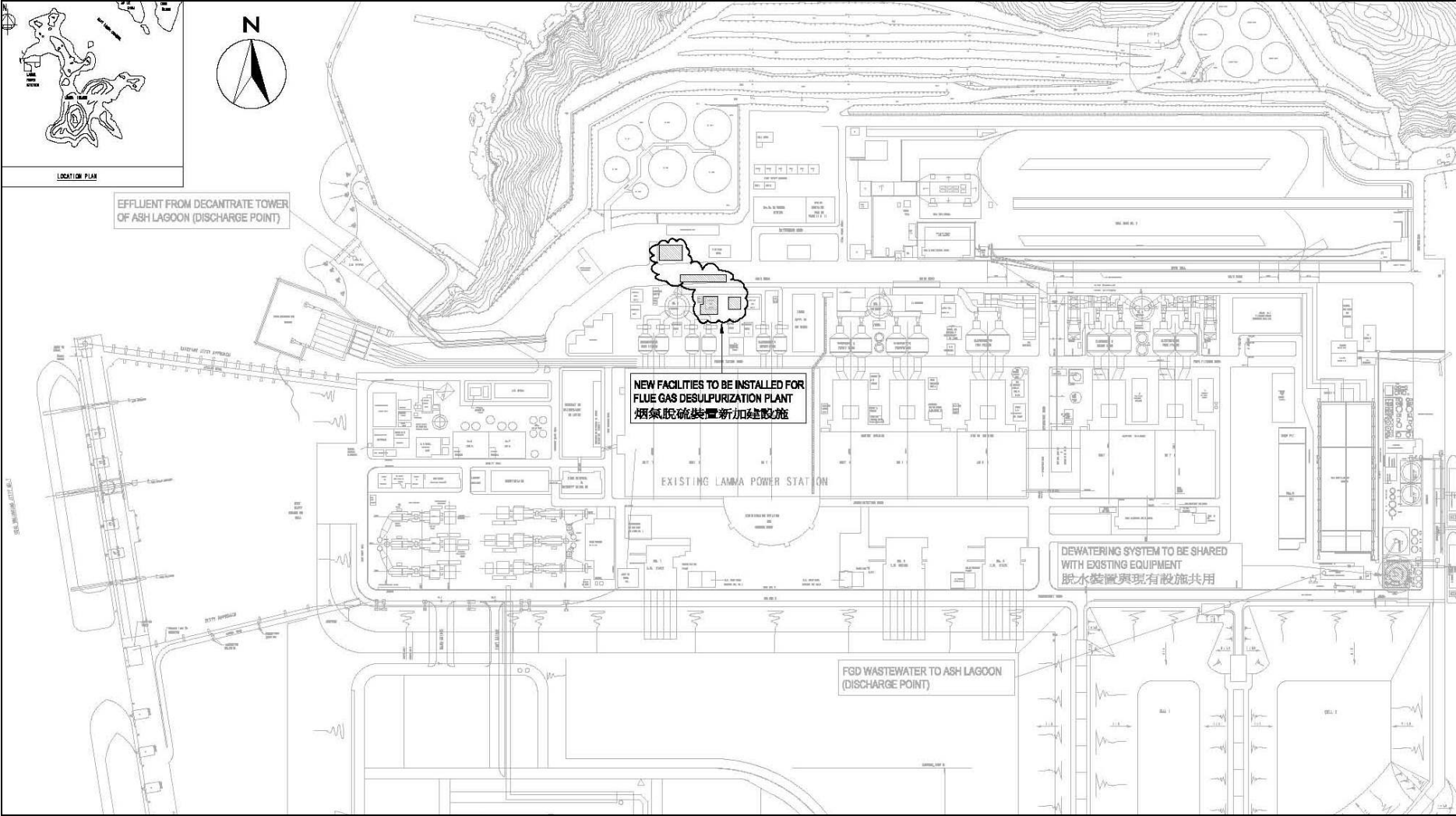


Figure 1.1b Location of New Facilities for L2 FGD Plant

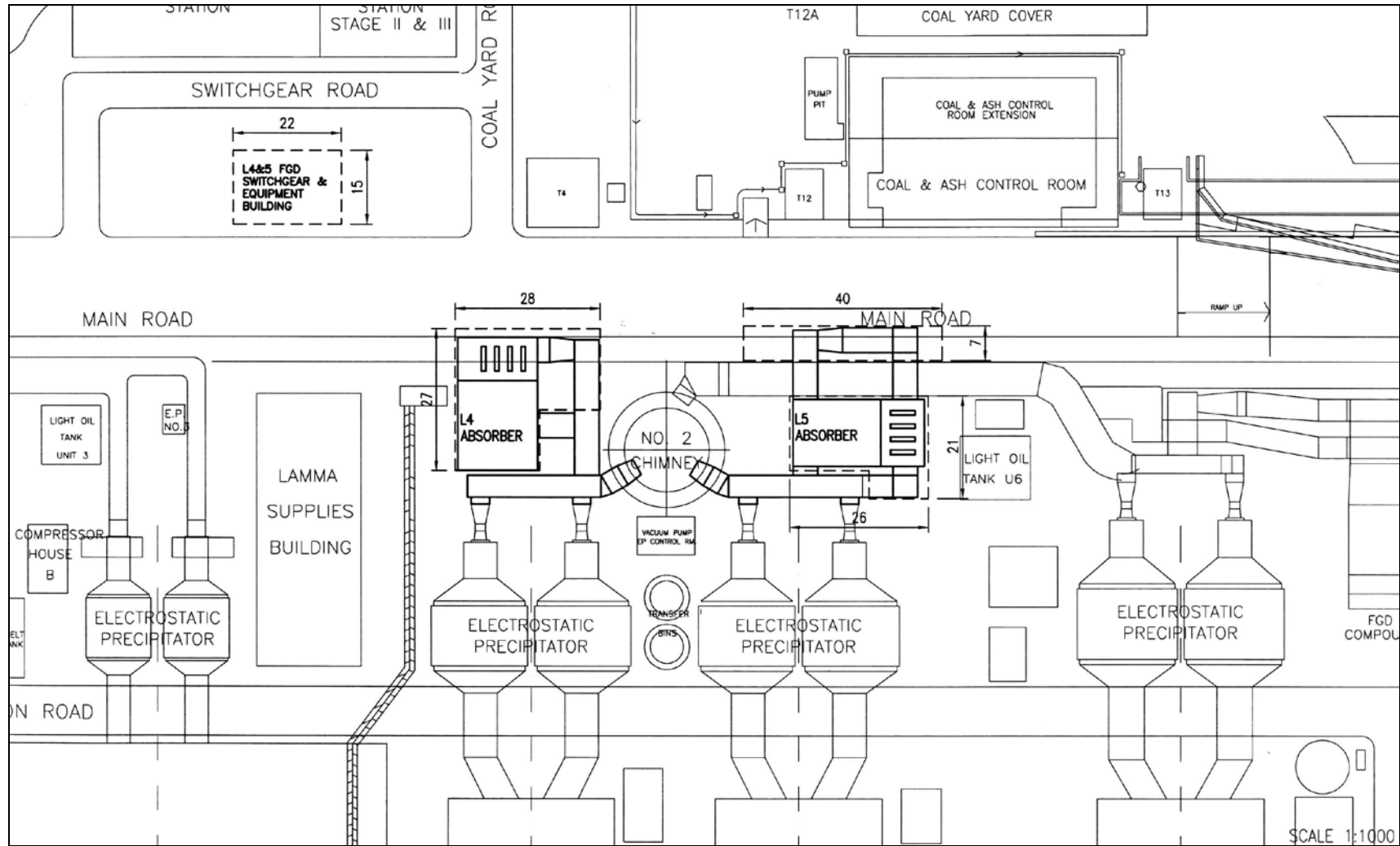


Figure 1.2a General Arrangement of L4 & L5 FGD Plants

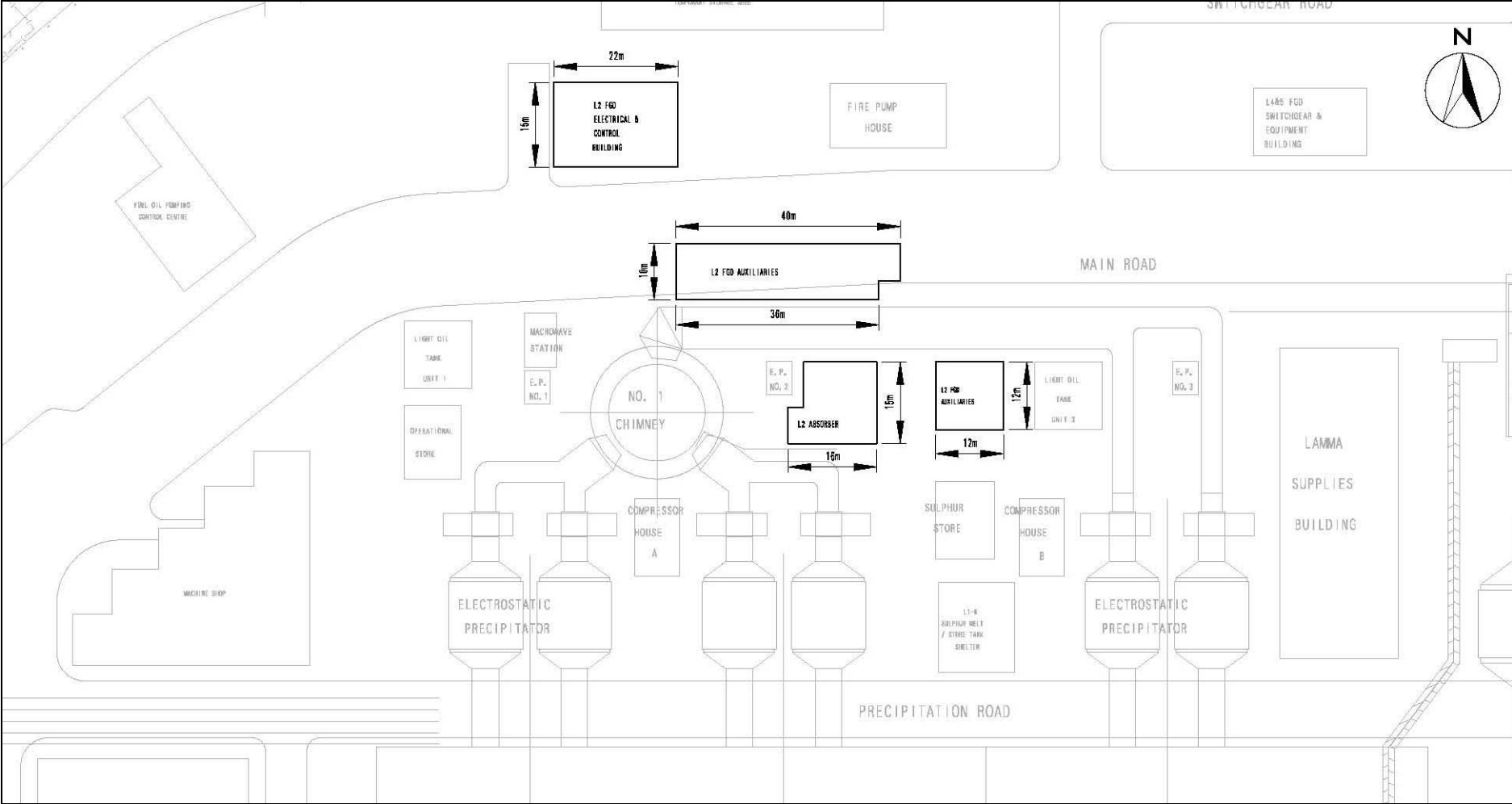


Figure 1.2b General Arrangement of L2 FGD Plant

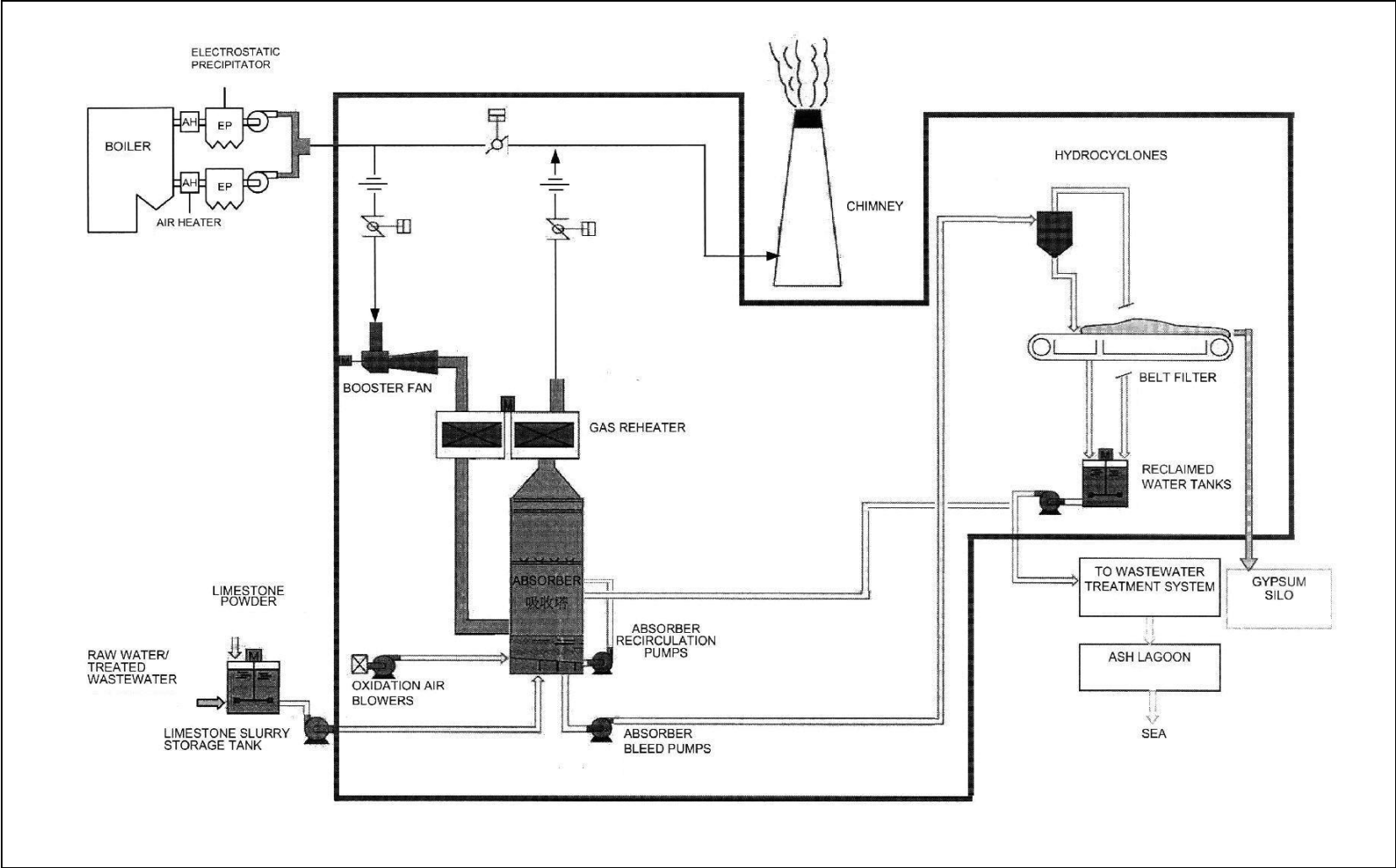


Figure 1.3 Schematic Diagram of the L2, L4 & L5 FGD Plant

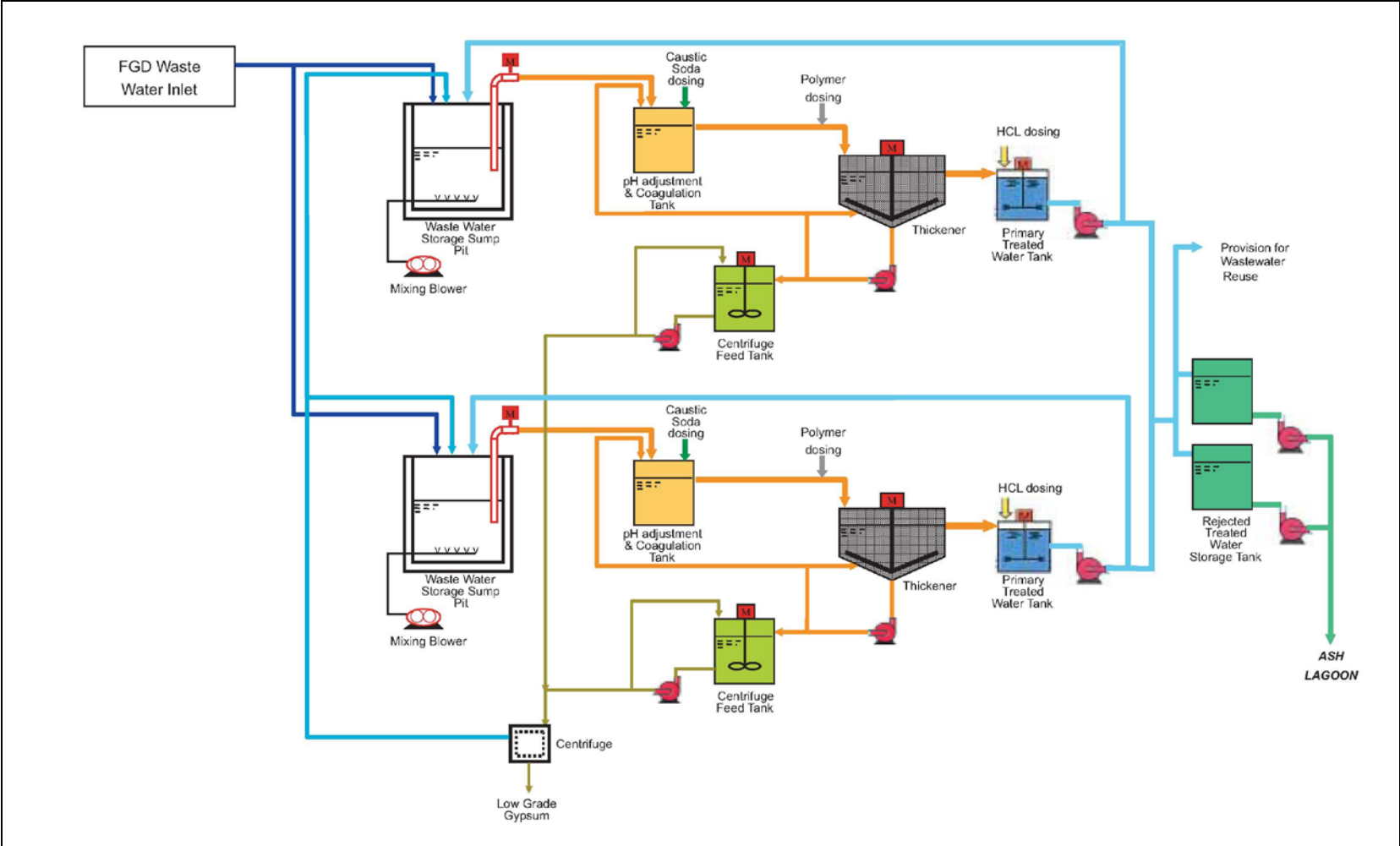


Figure 1.4 Simplified Schematic Diagram of FGD Wastewater Treatment Plant

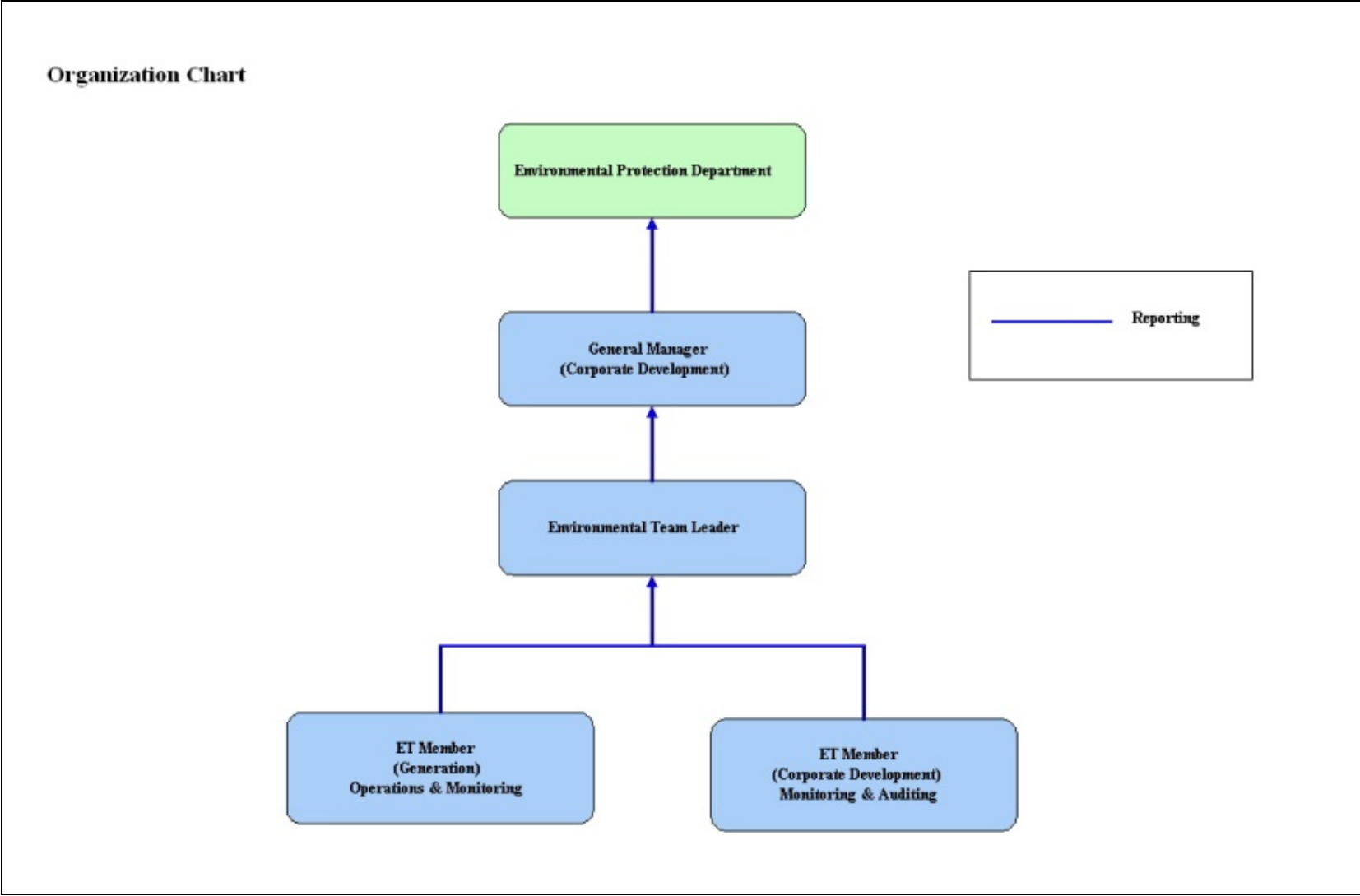


Figure 1.5 Organization Structure at Operational Phase of the Projects

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. Total Suspended Particulate (TSP) monitoring at East Gate and Reservoir area of Lamma Power Station is no longer required under the current SP Licence L-7-002(12) commencing from January 2019. It is agreed with EPD that the results of continuous Respirable Suspended Particulate (RSP) monitoring at Lamma Power Station would be reported. 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. Those parameters have to be checked against the Action/Limit Levels are 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)	Respirable Suspended Particulate	Continuous
Chimney emissions	Ambient air	Continuous at existing ambient air monitoring stations
	SO ₂	
	NO ₂	

2.2 Summary of Results and Observations

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

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

3. WATER QUALITY

3.1 Monitoring Requirements

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

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

Table 3.1 Water Quality Monitoring Parameters and Frequencies

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

3.2 Summary of Results and Observations

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

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

4. ENVIRONMENTAL AUDIT

4.1 Review of Environmental Monitoring Procedures

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

4.2 Assessment of Environmental Monitoring Results

Monitoring results for Air Quality and Water Quality

The environmental monitoring results for air quality and water quality are presented in [Sections 2 and 3](#) respectively are summarized in [Table 4.1](#).

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

Item	Parameter Monitored	Monitoring Period	No. of Exceedances In		Event/Action Plan Implementation Status and Results
			Action Level	Limit Level	
Air					
1	Annual analysis of dust particulate emission rates at chimney stacks.	01/04/19-30/06/19	N.A.	0	No L4, L5 PM stack sampling tests were conducted in the reporting period.
2	Continuous monitoring of opacity, NOx, SO2 and CO2 in the flue gas at the chimney stacks	01/04/19-30/06/19	0	0	
3	Ambient SO2 & NOx monitoring at the Peak, Queen Mary Hospital, Victoria Road, Chung Hom Kok, Ap Lei Chau and Cheung Chau.	01/04/19-30/06/19	0	0	
Water					
1	pH in WWTP Effluent	01/04/19-30/06/19	0	0	
2	Suspended Solids in WWTP Effluent	01/04/19-30/06/19	0	0	

Item	Parameter Monitored	Monitoring Period	No. of Exceedances In		Event/Action Plan Implementation Status and Results
			Action Level	Limit Level	
3	Iron in WWTP Effluent	01/04/19-30/06/19	0	0	
4	Barium in WWTP Effluent	01/04/19-30/06/19	0	0	
5	Mercury in WWTP Effluent	01/04/19-30/06/19	0	0	
6	Cadmium in WWTP Effluent	01/04/19-30/06/19	0	0	
7	Cyanide in WWTP Effluent	01/04/19-30/06/19	0	0	
8	Total Phosphorus in WWTP Effluent	01/04/19-30/06/19	0	0	
9	Total Nitrogen in WWTP Effluent	01/04/19-30/06/19	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
April 2019	5,209.55 MT	213.08 MT
May 2019	7,559.17 MT	124.79 MT
June 2019	6,062.77 MT	101.17 MT

4.3 Status of Environmental Licensing and Permitting

All permits/licenses obtained as of June 2019 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 Process Licence issued under APCO	L-7-002(12)	01/01/2019	31/12/2020	Valid
WPCO discharge licence for Ash Lagoon	WT00027218-2017	24/02/2017	31/12/2021	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 no environmental complaint against the operation of Lamma Power Station.

Table 4.4 Environmental Complaint(s) Received

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

Table 4.5 Outstanding Environmental Complaint(s) Carried Over

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

5. FUTURE KEY ISSUES

5.1 Outage Plan for the coming 3 months

No major outage planned in the coming 3 months

5.2 Key issues for the coming 3 months

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

Air Impact

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

Water Impact

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

6. CONCLUSION

Environmental monitoring was performed as required in the reporting period from April to June 2019. 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.

There was no environmental complaint against the operation of Lamma Power Station during the reporting period.

No prosecution was received for the Projects in the reporting period.

The environmental performance of the Projects was generally satisfactory.

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

A.1 Air

Source of Emissions	Parameters to be Monitored	Frequency	Concentration Not to Be Exceeded	Action	Limit	Proposed Action
Steam boilers L2, L4 and L5	Particulate	once/year	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	
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 Respirable Suspended Particulate Monitoring at Lamma Power Station

Date: Second Quarter of 2019 (April – June)

Date	RSP concentration ($\mu\text{g}/\text{m}^3$)	
	Reservoir	East Gate
01/04/2019	32	46
02/04/2019	21	31
03/04/2019	21	29
04/04/2019	18	25
05/04/2019	35	47
06/04/2019	26	29
07/04/2019	22	23
08/04/2019	27	18
09/04/2019	18	14
10/04/2019	24	19
11/04/2019	26	29
12/04/2019	18	15
13/04/2019	14	24
14/04/2019	17	18
15/04/2019	20	41
16/04/2019	11	22
17/04/2019	14	18
18/04/2019	15	20
19/04/2019	15	18
20/04/2019	20	20
21/04/2019	21	23
22/04/2019	19	19
23/04/2019	17	29
24/04/2019	19	21
25/04/2019	26	31
26/04/2019	25	36
27/04/2019	30	35
28/04/2019	22	24
29/04/2019	17	27
30/04/2019	22	23

Date	RSP concentration ($\mu\text{g}/\text{m}^3$)	
	Reservoir	East Gate
01/05/2019	28	42
02/05/2019	24	34
03/05/2019	27	39
04/05/2019	23	38
05/05/2019	17	12
06/05/2019	13	10
07/05/2019	13	16
08/05/2019	15	18
09/05/2019	13	13
10/05/2019	16	16
11/05/2019	25	34
12/05/2019	21	28
13/05/2019	27	35
14/05/2019	20	24
15/05/2019	19	19
16/05/2019	25	38
17/05/2019	23	36
18/05/2019	21	32
19/05/2019	24	31
20/05/2019	21	30
21/05/2019	29	34
22/05/2019	29	40
23/05/2019	27	27
24/05/2019	32	34
25/05/2019	24	20
26/05/2019	18	16
27/05/2019	16	17
28/05/2019	##	14
29/05/2019	##	22
30/05/2019	21	29
31/05/2019	20	18

Remark: ## - No valid daily average of RSP due to insufficient valid data

Date	RSP concentration ($\mu\text{g}/\text{m}^3$)	
	Reservoir	East Gate
01/06/2019	17	18
02/06/2019	14	18
03/06/2019	17	17
04/06/2019	28	21
05/06/2019	16	14
06/06/2019	23	15
07/06/2019	13	19
08/06/2019	16	23
09/06/2019	16	24
10/06/2019	19	29
11/06/2019	23	31
12/06/2019	19	20
13/06/2019	21	27
14/06/2019	21	26
15/06/2019	23	24
16/06/2019	25	28
17/06/2019	19	22
18/06/2019	11	14
19/06/2019	13	20
20/06/2019	14	18
21/06/2019	13	30
22/06/2019	17	##
23/06/2019	19	##
24/06/2019	26	##
25/06/2019	15	##
26/06/2019	30	18
27/06/2019	17	27
28/06/2019	33	44
29/06/2019	30	38
30/06/2019	45	32

Remark: ## - No valid daily average of RSP due to equipment failure

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

B.2.1 Monthly Summary of Stack NOx and SO2 for Unit L5

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) [#]	NOx concentration (mg/Nm3) [#]	Opacity (%)
1/4/2019	113	415	12
2/4/2019	85	383	13
3/4/2019	62	389	13
4/4/2019	71	365	13
5/4/2019	38	384	13
6/4/2019	37	352	14
7/4/2019	22	331	14
8/4/2019	24	322	13
9/4/2019	25	349	13
10/4/2019	60	333	13
11/4/2019	72	324	13
12/4/2019	24	368	13
13/4/2019	69	353	13
14/4/2019	58	333	13
15/4/2019	52	319	13
16/4/2019	52	326	13
17/4/2019	44	347	13
18/4/2019	56	314	13
19/4/2019	51	373	13
20/4/2019	96	338	12
21/4/2019	138	338	13
22/4/2019	60	356	13
23/4/2019	63	333	13
24/4/2019	35	319	14
25/4/2019	25	296	14
26/4/2019	30	426	14
27/4/2019	29	318	13
28/4/2019	31	347	13
29/4/2019	53	308	13
30/4/2019	48	334	12

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) [#]	NOx concentration (mg/Nm3) [#]	Opacity (%)
1/5/2019	*	*	*
2/5/2019	*	*	*
3/5/2019	46	258	13
4/5/2019	40	266	13
5/5/2019	37	271	12
6/5/2019	37	320	12
7/5/2019	39	259	13
8/5/2019	27	348	13
9/5/2019	*	*	*
10/5/2019	*	*	*
11/5/2019	31	281	13
12/5/2019	32	331	13
13/5/2019	35	328	12
14/5/2019	43	381	13
15/5/2019	37	326	14
16/5/2019	33	378	14
17/5/2019	20	318	14
18/5/2019	15	387	14
19/5/2019	20	284	13
20/5/2019	30	310	13
21/5/2019	22	299	12
22/5/2019	31	489	14
23/5/2019	63	543	14
24/5/2019	60	316	13
25/5/2019	87	353	14
26/5/2019	68	292	13
27/5/2019	74	308	14
28/5/2019	61	345	13
29/5/2019	79	330	12
30/5/2019	59	296	12
31/5/2019	108	284	13

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) [#]	NOx concentration (mg/Nm3) [#]	Opacity (%)
1/6/2019	105	323	12
2/6/2019	64	316	12
3/6/2019	44	311	13
4/6/2019	32	333	12
5/6/2019	27	320	13
6/6/2019	26	291	13
7/6/2019	*	*	*
8/6/2019	*	*	*
9/6/2019	16	268	12
10/6/2019	15	340	13
11/6/2019	35	270	14
12/6/2019	33	303	13
13/6/2019	44	282	13
14/6/2019	51	369	12
15/6/2019	28	300	13
16/6/2019	36	296	12
17/6/2019	48	316	12
18/6/2019	41	301	12
19/6/2019	37	288	12
20/6/2019	46	289	12
21/6/2019	65	298	12
22/6/2019	31	284	12
23/6/2019	39	337	13
24/6/2019	45	395	13
25/6/2019	31	387	12
26/6/2019	28	429	12
27/6/2019	28	273	13
28/6/2019	28	370	13
29/6/2019	22	372	13
30/6/2019	35	373	12

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 NOx and SO2 for Unit L4

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) [#]	NOx concentration (mg/Nm3) [#]	Opacity (%)
1/4/2019	127	421	23
2/4/2019	108	430	23
3/4/2019	104	408	22
4/4/2019	32	411	20
5/4/2019	*	*	*
6/4/2019	*	*	*
7/4/2019	28	306	8
8/4/2019	31	309	24
9/4/2019	59	352	23
10/4/2019	83	327	21
11/4/2019	96	309	22
12/4/2019	63	340	17
13/4/2019	72	342	21
14/4/2019	82	332	22
15/4/2019	63	378	18
16/4/2019	72	292	19
17/4/2019	50	372	19
18/4/2019	85	400	21
19/4/2019	96	350	23
20/4/2019	104	362	23
21/4/2019	99	429	22
22/4/2019	95	372	24
23/4/2019	79	310	24
24/4/2019	94	358	25
25/4/2019	33	350	20
26/4/2019	47	392	25
27/4/2019	26	371	21
28/4/2019	27	326	22
29/4/2019	28	328	24
30/4/2019	34	318	16

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) [#]	NOx concentration (mg/Nm3) [#]	Opacity (%)
1/5/2019	81	336	18
2/5/2019	47	303	17
3/5/2019	39	292	16
4/5/2019	62	276	17
5/5/2019	37	314	13
6/5/2019	32	244	12
7/5/2019	*	*	*
8/5/2019	*	*	*
9/5/2019	32	289	15
10/5/2019	63	426	16
11/5/2019	59	446	15
12/5/2019	32	413	15
13/5/2019	38	383	21
14/5/2019	50	403	18
15/5/2019	33	396	16
16/5/2019	46	419	21
17/5/2019	29	399	19
18/5/2019	27	375	19
19/5/2019	34	406	18
20/5/2019	35	374	16
21/5/2019	22	329	16
22/5/2019	46	374	17
23/5/2019	79	381	18
24/5/2019	84	308	18
25/5/2019	90	401	21
26/5/2019	52	292	16
27/5/2019	68	330	21
28/5/2019	85	392	20
29/5/2019	66	366	20
30/5/2019	70	377	17
31/5/2019	75	260	9

Date	Daily Maximum		
	SO2 concentration (mg/Nm3) [#]	NOx concentration (mg/Nm3) [#]	Opacity (%)
1/6/2019	69	336	19
2/6/2019	68	333	17
3/6/2019	84	411	22
4/6/2019	32	393	14
5/6/2019	33	331	19
6/6/2019	20	326	17
7/6/2019	37	355	16
8/6/2019	55	333	16
9/6/2019	35	336	15
10/6/2019	36	330	16
11/6/2019	67	303	18
12/6/2019	56	341	20
13/6/2019	66	310	18
14/6/2019	64	364	18
15/6/2019	*	*	*
16/6/2019	61	322	5
17/6/2019	64	353	17
18/6/2019	73	351	18
19/6/2019	53	357	19
20/6/2019	88	369	20
21/6/2019	97	331	24
22/6/2019	77	363	20
23/6/2019	74	258	21
24/6/2019	63	367	23
25/6/2019	81	305	21
26/6/2019	75	349	23
27/6/2019	36	325	22
28/6/2019	83	340	25
29/6/2019	58	271	21
30/6/2019	68	297	19

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 (%)
1/4/2019	114	12
2/4/2019	*	*
3/4/2019	*	*
4/4/2019	163	11
5/4/2019	104	12
6/4/2019	80	17
7/4/2019	69	13
8/4/2019	37	13
9/4/2019	53	12
10/4/2019	79	12
11/4/2019	66	12
12/4/2019	53	11
13/4/2019	*	*
14/4/2019	*	*
15/4/2019	41	11
16/4/2019	*	*
17/4/2019	26	11
18/4/2019	50	12
19/4/2019	107	12
20/4/2019	98	11
21/4/2019	101	12
22/4/2019	76	12
23/4/2019	61	12
24/4/2019	97	11
25/4/2019	86	12
26/4/2019	68	13
27/4/2019	41	12
28/4/2019	*	*
29/4/2019	*	*
30/4/2019	43	13

Date	Daily Maximum	
	SO2 concentration (mg/Nm3) [#]	Opacity (%)
1/5/2019	*	*
2/5/2019	58	12
3/5/2019	92	11
4/5/2019	*	*
5/5/2019	*	*
6/5/2019	*	*
7/5/2019	*	*
8/5/2019	*	*
9/5/2019	*	*
10/5/2019	76	12
11/5/2019	*	*
12/5/2019	*	*
13/5/2019	*	*
14/5/2019	*	*
15/5/2019	68	12
16/5/2019	52	13
17/5/2019	57	13
18/5/2019	47	14
19/5/2019	*	*
20/5/2019	47	14
21/5/2019	49	12
22/5/2019	*	*
23/5/2019	37	12
24/5/2019	*	*
25/5/2019	*	*
26/5/2019	*	*
27/5/2019	*	*
28/5/2019	42	13
29/5/2019	*	*
30/5/2019	*	*
31/5/2019	*	*

Date	Daily Maximum	
	SO2 concentration (mg/Nm3) [#]	Opacity (%)
1/6/2019	56	15
2/6/2019	74	15
3/6/2019	*	*
4/6/2019	26	12
5/6/2019	49	12
6/6/2019	52	13
7/6/2019	45	13
8/6/2019	49	14
9/6/2019	48	13
10/6/2019	81	13
11/6/2019	74	13
12/6/2019	64	13
13/6/2019	90	13
14/6/2019	60	13
15/6/2019	69	13
16/6/2019	80	13
17/6/2019	89	14
18/6/2019	49	13
19/6/2019	55	13
20/6/2019	46	15
21/6/2019	82	14
22/6/2019	95	13
23/6/2019	64	12
24/6/2019	118	13
25/6/2019	76	13
26/6/2019	58	13
27/6/2019	56	13
28/6/2019	57	14
29/6/2019	*	*
30/6/2019	*	*

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

* - Unit L2 was not on load.

B.2.4 Summary of Annual Stack Particulate Sampling

Unit	Date	Results (mg/Nm ³)
L4	12/06/2019	9
L5	11/06/2019	11

Monitoring Equipment: APEX model XC-522-V (Manual stack sampling system)

B.3 Ambient SO₂ and NO₂ monitoring Data at Southern District and Cheung Chau

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

STATION : CHUNG HOM KOK ZONE SUBSTATION
POLLUTANT : SULPHUR DIOXIDE

MONTH: APRIL

YEAR : 2019

UNIT : MICROGRAMS/CUBIC METER

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

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----			STN GEOM	PERCENT	NO. OF TIMES			
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	ABOVE LIMIT LEVEL				
1	0	1	0	2	2	4	5	0	-	29	0	-	3	2	100	0

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

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

STATION : CHUNG HOM KOK ZONE SUBSTATION
POLLUTANT : NITROGEN DIOXIDE

MONTH: APRIL

YEAR : 2019

UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4	3	3	2	2	4	2	2	0	1
2	0	0	0	0	0	0	0	0	1	1	1	2	2	2	1	1	1	2	1	0	0	0	0	0	1
3	0	M	0	0	0	0	0	0	0	2	2	1	1	1	2	1	0	3	7	5	3	2	2	2	1
4	1	1	0	0	0	0	0	1	2	2	1	1	2	3	4	7	6	1	1	1	0	0	1	2	2
5	3	4	2	0	0	0	3	4	6	24	60	55	72	46	52	45	41	46	37	40	34	38	37	36	29
6	43	46	31	27	19	11	8	18	41	53	33	36	17	10	14	9	10	14	8	15	1	8	5	5	20
7	24	3	1	1	7	11	2	1	0	1	2	6	4	1	8	5	4	10	19	34	10	12	11	22	8
8	14	22	13	18	4	7	10	15	8	6	1	11	3	5	8	6	4	8	13	8	3	7	4	1	8
9	2	4	7	2	12	4	15	13	2	1	5	1	2	0	0	5	3	4	10	14	4	14	12	13	6
10	14	7	2	2	2	5	10	16	7	6	6	6	3	1	1	7	3	16	18	11	10	7	7	21	8
11	6	10	7	8	6	4	2	7	7	4	5	5	10	10	4	5	4	8	5	9	5	11	6	5	6
12	4	5	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
13	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	2	1	1	0	0	0	0	0	0	0
14	1	1	0	0	0	0	0	0	0	1	0	0	4	3	3	1	0	0	1	0	0	2	1	0	1
15	0	0	0	0	0	0	0	2	4	2	2	2	2	3	3	4	4	7	2	1	1	0	0	0	2
16	0	0	0	0	0	0	0	2	1	2	8	21	30	37	34	28	12	9	26	34	32	19	10	4	13
17	4	M	0	2	2	0	1	M	9	7	8	3	2	1	2	2	10	15	12	4	M	4	5	1	4
18	2	2	0	0	0	5	7	13	7	8	8	6	3	2	4	3	8	4	5	2	0	5	3	2	4
19	3	1	2	0	0	1	2	2	4	4	5	5	5	7	8	1	1	2	0	0	0	0	0	0	2
20	0	0	0	0	0	0	0	1	1	2	2	1	2	4	5	7	9	5	8	4	4	5	7	6	3
21	0	0	0	0	0	0	1	5	9	9	5	2	0	0	1	7	9	15	9	12	12	3	6	13	5
22	9	8	11	4	1	6	11	8	14	9	3	0	2	4	2	1	1	4	7	12	10	21	15	21	8
23	22	9	8	15	23	18	11	16	19	14	8	15	14	11	13	17	15	17	31	19	28	21	16	24	17
24	27	28	24	21	12	20	17	14	17	13	9	7	9	8	4	6	9	14	16	19	21	13	12	10	15
25	7	14	7	13	4	4	7	17	15	6	13	9	6	6	3	6	20	17	16	15	7	9	12	9	10
26	14	14	25	22	21	27	27	27	13	6	10	6	12	4	7	7	17	14	6	14	6	4	11	7	13
27	4	3	3	2	3	4	6	6	6	6	6	8	5	5	3	3	4	10	6	3	3	3	3	1	4
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
29	0	0	0	0	0	0	0	4	1	2	0	0	0	0	0	2	3	3	4	7	7	11	11	6	3
30	8	12	6	4	2	2	3	8	5	7	1	13	0	6	15	20	25	17	9	36	25	29	62	57	16

MONTHLY STATISTICS:

GEOM	ARITH ----- PERCENTILES -----							----- RANGE -----				STN GEOM	PERCENT	NO. OF TIMES		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	ABOVE	LIMIT	LEVEL		
6	4	7	4	18	27	39	46	0	-	72	0	-	29	3	99	0

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

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

STATION : VICTORIA ROAD SUBSTATION
POLLUTANT : SULPHUR DIOXIDE

MONTH: APRIL

YEAR : 2019
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	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1
2	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1
3	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
4	0	1	1	1	0	1	0	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1
5	1	1	1	1	1	1	1	1	2	2	1	2	3	2	2	2	2	2	1	1	1	1	2	2	2
6	1	1	1	1	1	1	1	2	3	3	4	4	4	4	3	1	2	2	1	1	2	1	1	1	2
7	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1
8	1	1	1	1	1	1	1	3	2	1	1	1	1	2	2	1	1	2	1	1	2	3	1	2	1
9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	1	1	2	2	2	3	4	2	2	2	2	2	2	1	1	2	1	2
11	1	1	1	1	1	1	1	1	1	1	1	2	1	2	1	1	1	1	1	1	1	2	1	1	1
12	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
16	1	0	0	1	1	0	1	1	1	0	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1
17	1	1	1	1	1	1	1	1	2	2	3	2	1	1	1	1	2	1	1	1	1	1	1	1	1
18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
19	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	1	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1	0	0	0
21	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1
22	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
23	2	1	1	1	1	1	1	1	3	2	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1
24	1	1	1	1	1	1	1	1	1	1	2	1	1	2	1	2	1	1	1	1	1	1	1	1	1
25	1	1	1	1	0	0	0	1	1	1	1	0	0	1	0	0	0	0	0	0	0	1	1	1	1
26	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
29	1	1	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1
30	0	0	0	0	0	1	1	1	2	2	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----										RANGE-----		STN GEOM	PERCENT	NO. OF TIMES		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR		24-HR		DEVIATION	VALID DATA	ABOVE	LIMIT	LEVEL	
1	1	1	1	1	2	3	3	0	-	4	0	-	2	1	100	0	

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

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

STATION : VICTORIA ROAD SUBSTATION
POLLUTANT : NITROGEN DIOXIDE

MONTH: APRIL

YEAR : 2019
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	5	5	5	5	5	5	8	10	10	11	12	10	11	12	13	17	16	14	13	10	9	9	8	7	10
2	6	5	4	5	4	5	7	9	10	10	9	9	10	10	10	12	12	11	10	10	6	6	5	5	8
3	6	M	4	4	6	12	10	21	25	27	20	19	11	10	11	11	12	14	10	9	9	8	7	6	12
4	6	5	5	5	4	4	6	8	9	9	14	16	17	16	16	21	21	30	40	38	35	25	10	15	
5	21	11	6	10	10	9	16	18	34	38	31	36	40	29	30	28	35	41	31	22	25	22	22	25	25
6	23	17	25	22	8	7	11	23	49	55	53	28	22	21	24	16	16	20	21	16	25	23	15	17	23
7	18	10	13	15	6	14	9	12	14	11	8	8	9	9	11	9	13	19	16	21	17	21	19	18	13
8	18	12	9	10	8	9	14	17	16	11	11	11	11	17	19	16	16	28	28	20	20	22	14	17	16
9	13	16	16	14	14	13	15	17	12	12	12	11	17	14	13	12	16	13	11	21	19	15	14	14	14
10	15	11	9	8	7	9	13	15	13	14	14	11	14	17	14	11	9	21	18	16	15	17	19	14	14
11	12	13	11	8	6	10	14	18	18	19	19	20	21	22	17	11	13	12	15	18	18	19	12	24	15
12	20	19	19	11	7	6	7	9	8	9	8	8	9	12	13	11	9	9	8	7	7	7	7	6	10
13	5	6	5	5	5	5	6	6	7	8	9	9	9	9	8	8	8	7	6	5	5	5	5	6	7
14	6	7	5	5	5	5	8	10	12	15	11	17	25	26	21	15	18	15	8	11	7	6	7	5	11
15	4	6	7	4	3	4	6	8	8	9	9	10	12	12	13	12	11	11	10	8	7	6	7	7	8
16	6	5	5	4	4	5	8	11	9	13	25	21	29	32	37	35	37	27	35	40	42	38	35	32	22
17	31	M	26	17	11	8	12	19	30	38	46	38	28	15	23	20	28	22	20	18	18	10	12	13	22
18	9	7	5	4	5	6	9	11	11	12	10	10	9	10	10	9	10	8	8	6	6	17	15	16	9
19	7	5	5	3	3	5	8	11	11	13	13	14	13	15	12	12	9	11	20	11	12	16	25	33	12
20	30	6	4	3	3	4	6	6	6	8	9	9	12	15	13	19	25	23	17	20	29	30	16	20	14
21	28	24	6	3	5	8	7	10	11	11	9	8	9	10	10	14	16	17	17	18	16	12	13	10	12
22	9	6	5	6	6	10	12	10	11	9	9	7	6	7	4	6	7	13	10	8	8	10	12	21	9
23	23	11	8	8	7	10	12	13	11	15	17	25	10	13	16	8	8	10	17	15	25	19	21	20	14
24	18	12	10	14	11	12	13	15	11	13	17	7	8	13	9	20	12	17	17	17	16	18	15	15	14
25	9	9	13	9	9	6	10	15	13	14	11	14	8	8	8	12	13	9	12	18	17	18	19	13	12
26	10	8	8	13	18	17	11	18	9	12	14	16	14	16	10	13	15	15	15	14	9	6	6	4	12
27	5	5	4	3	3	3	5	5	5	6	6	6	6	7	6	5	13	11	9	4	4	4	4	3	6
28	3	2	2	2	1	2	2	2	3	4	4	4	5	4	6	6	6	4	3	4	3	4	4	4	4
29	5	4	3	5	6	3	6	8	10	9	9	11	11	11	9	13	15	13	16	14	9	12	8	8	9
30	6	5	10	9	6	7	10	18	22	17	13	10	9	16	16	22	21	27	23	26	20	19	29	31	16

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----				STN GEOM	PERCENT	NO. OF TIMES		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	ABOVE	LIMIT	LEVEL		
11	11	13	11	23	29	37	40	1	-	55	4	-	25	2	100	0

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

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

STATION : POK FU LAM
POLLUTANT : SULPHUR DIOXIDE

YEAR : 2019
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN	
1	5	5	5	6	5	6	5	6	6	5	6	6	7	6	6	6	6	6	5	5	5	6	6	6	6	
2	6	6	5	6	5	5	5	5	6	6	6	7	6	5	6	6	6	6	6	6	6	5	5	6	6	
3	5	5	5	5	5	5	6	6	7	7	7	6	6	6	6	7	6	6	6	6	6	5	5	5	6	
4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	6	5	5	5	5	6	6	6	6	5	
5	6	6	6	6	6	6	6	6	9	10	8	11	14	11	10	10	11	9	8	8	8	9	11	9	9	
6	8	8	8	8	7	8	10	10	11	12	14	14	14	14	9	9	8	11	8	10	17	9	10	8	10	
7	7	9	8	7	6	7	8	9	8	7	7	7	7	7	7	8	9	8	8	8	7	11	7	7	8	
8	6	7	6	6	6	6	6	9	9	7	7	7	7	7	8	7	6	7	7	7	8	9	7	7	7	
9	6	6	7	7	7	7	6	7	8	7	7	6	7	7	7	7	7	6	6	6	7	7	7	8	7	
10	7	8	8	8	7	7	7	8	8	8	7	7	7	9	9	8	8	7	8	8	7	8	42	7	9	
11	7	7	7	7	6	7	7	7	7	7	8	7	8	8	7	9	8	9	7	7	7	7	7	8	7	
12	6	7	7	7	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
13	5	6	5	5	6	5	6	5	5	5	6	6	6	6	6	5	6	5	6	6	6	6	6	6	6	
14	6	5	6	6	6	6	7	7	7	8	7	6	7	6	6	7	6	6	6	6	6	6	6	6	6	
15	6	6	6	6	6	6	6	6	6	7	8	8	7	7	7	7	6	6	6	6	6	5	6	6	6	
16	6	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	10	9	7	7	7	8	8	9	7	
17	8	9	9	10	9	9	10	9	11	13	14	9	8	7	8	7	7	8	8	7	7	7	7	8	9	
18	7	7	7	7	7	7	6	6	7	7	6	6	6	6	6	6	6	6	6	6	6	6	6	7	7	6
19	6	6	6	6	7	6	7	7	7	8	7	7	8	8	8	7	7	7	7	6	6	7	6	7	7	
20	7	7	7	6	6	7	6	6	6	6	6	7	7	7	6	7	7	7	7	7	7	7	7	8	7	
21	8	8	7	7	7	7	7	7	7	7	7	7	8	8	7	8	8	8	7	7	7	7	7	10	7	
22	8	8	7	6	7	8	7	7	8	7	7	8	8	8	8	6	9	7	6	7	6	7	7	7	7	
23	7	7	7	7	6	7	7	9	9	10	10	8	7	7	8	8	7	7	9	8	8	6	7	8	8	
24	8	9	8	8	7	8	7	8	8	12	9	8	7	11	7	8	7	8	7	7	7	7	7	7	8	
25	7	8	7	7	7	7	7	8	9	9	8	8	7	8	7	8	8	7	7	8	7	7	8	7	8	
26	6	7	6	7	8	7	7	8	7	7	7	8	8	7	8	8	8	8	7	7	7	6	6	6	7	
27	6	6	6	6	6	6	6	6	6	6	6	6	6	7	6	6	5	5	6	5	6	5	6	6	6	
28	6	6	6	6	6	5	6	6	6	6	5	6	6	6	6	7	7	6	6	6	6	5	6	6	6	
29	6	6	6	7	7	6	6	6	6	6	7	7	6	7	7	7	7	8	7	7	7	7	7	7	7	
30	7	6	6	6	7	7	7	7	9	9	8	8	7	7	7	7	8	8	8	7	8	8	11	9	8	

MONTHLY STATISTICS:

GEOM	ARITH ----- PERCENTILES -----							----- RANGE -----					STN GEOM	PERCENT	NO. OF TIMES	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	ABOVE	LIMIT	LEVEL		
7	7	7	7	8	9	11	14	5	-	42	5	-	10	1	100	0

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

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

STATION : POK FU LAM
POLLUTANT : NITROGEN DIOXIDE

YEAR : 2019
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	7	6	6	5	6	6	10	17	24	25	26	23	24	24	32	31	26	26	23	23	17	16	15	11	18
2	8	7	6	7	6	6	12	21	19	22	22	27	26	21	20	24	28	32	23	23	12	8	9	7	17
3	10	7	6	4	3	4	14	45	44	50	26	30	21	14	21	27	30	21	15	14	14	12	10	12	19
4	11	8	7	7	6	7	9	15	20	18	16	18	25	22	25	26	26	37	50	63	88	77	42	51	28
5	55	14	15	20	12	28	35	31	71	75	55	67	70	46	54	55	61	59	48	43	40	46	61	60	47
6	55	40	49	45	17	21	33	39	92	100	82	43	24	21	14	22	16	37	33	45	60	37	28	25	41
7	26	34	15	15	9	17	19	36	19	15	9	8	10	10	9	8	22	24	28	34	18	21	18	20	19
8	21	12	11	13	8	8	14	19	17	14	16	13	10	13	20	10	7	27	24	24	20	24	14	15	16
9	10	15	13	11	11	10	14	20	13	8	6	6	8	4	4	3	8	10	9	20	21	14	12	12	11
10	6	6	16	12	2	5	11	12	15	8	7	2	5	10	8	5	3	11	22	10	11	16	11	8	9
11	8	11	4	0	1	7	9	16	15	11	11	4	11	11	8	6	12	9	11	17	11	11	3	41	10
12	25	38	34	8	5	4	5	9	9	13	10	10	10	10	12	11	9	10	7	6	4	5	5	7	11
13	8	10	7	6	5	6	7	8	11	15	14	12	13	14	12	12	14	14	13	8	7	7	7	8	10
14	6	10	7	7	7	6	21	28	38	31	43	38	54	34	29	39	24	16	11	8	13	7	13	14	21
15	13	9	6	6	5	6	9	12	20	23	21	21	15	18	24	22	23	23	20	14	13	11	10	8	15
16	6	7	6	5	4	5	9	17	29	63	76	45	60	61	80	66	79	74	84	86	91	99	96	86	51
17	79	79	82	55	32	30	49	49	71	74	76	51	36	12	20	15	24	33	39	32	26	27	49	34	45
18	41	21	8	9	7	5	7	10	13	13	10	9	6	7	9	7	7	6	4	3	6	14	16	27	11
19	7	4	3	2	2	3	6	10	11	11	11	12	12	24	20	13	13	18	11	10	19	67	68	64	18
20	63	32	5	1	0	0	1	1	2	4	4	4	11	14	15	25	41	43	29	58	65	54	62	41	24
21	85	M	2	2	3	8	4	5	8	7	5	6	6	9	9	15	15	16	18	17	15	9	12	8	12
22	9	3	4	5	5	12	14	18	19	11	7	5	9	7	3	2	9	9	9	6	7	9	10	18	9
23	25	8	4	6	4	12	13	20	15	25	16	10	8	6	8	5	7	8	23	28	28	13	20	17	14
24	17	15	12	19	16	16	14	17	21	25	11	5	6	13	8	11	9	26	16	21	13	19	13	12	15
25	6	5	7	5	10	3	9	16	16	16	12	13	10	11	8	16	14	10	8	26	9	15	11	8	11
26	6	5	7	10	14	24	11	22	10	8	14	24	15	9	8	12	11	14	15	9	4	7	5	5	11
27	5	3	1	1	1	1	3	3	5	5	3	3	4	7	9	16	22	19	9	5	4	3	2	2	6
28	2	2	2	2	0	0	2	2	4	2	4	3	4	7	14	30	11	1	2	5	1	1	1	9	5
29	13	14	10	31	15	2	6	9	10	8	14	21	10	6	11	11	16	13	13	12	8	11	6	4	11
30	5	4	8	11	5	5	7	14	20	17	14	13	12	39	36	36	36	42	39	52	27	41	80	78	27

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----					STN GEOM	PERCENT	NO. OF TIMES	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	ABOVE	LIMIT	LEVEL		
13	12	19	12	43	62	79	86	0	-	100	5	-	51	2	100	0

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

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

STATION : AP LEI CHAU
POLLUTANT : SULPHUR DIOXIDE

YEAR : 2019
UNIT : MICROGRAMS/CUBIC METER

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

MONTHLY STATISTICS:

ARITH ----- PERCENTILES ----- RANGE -----											STN GEOM		PERCENT		NO. OF TIMES	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	ABOVE	LIMIT	LEVEL		
4	4	4	4	6	7	8	11	0	-	13	2	-	7	2	98	0

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

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

STATION : AP LEI CHAU
POLLUTANT : NITROGEN DIOXIDE

YEAR : 2019
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	3	5	6	6	6	3	4	5	9	11	14	13	9	3	4	3	3	1	5
2	0	0	0	0	0	0	4	3	5	5	4	5	4	2	4	2	7	10	4	1	1	0	1	2	3
3	0	M	0	0	0	0	5	6	5	4	5	3	2	0	0	3	1	3	0	0	0	0	0	3	2
4	4	2	0	0	0	0	0	1	2	3	5	4	6	6	6	9	7	10	18	11	9	13	17	0	6
5	12	13	4	3	12	20	34	46	56	43	48	52	65	34	32	45	65	63	47	51	42	84	75	56	42
6	42	35	40	28	17	45	37	53	97	77	71	48	37	40	29	23	21	31	24	47	18	15	15	14	38
7	21	4	7	9	20	29	13	9	8	5	11	18	15	13	15	10	13	17	29	55	21	8	14	23	16
8	25	17	14	20	8	3	10	16	11	12	21	22	12	12	27	9	5	24	21	27	13	20	5	10	15
9	14	14	16	20	16	11	17	15	12	10	9	4	8	5	6	6	10	4	6	16	17	21	15	25	12
10	17	8	8	2	10	9	16	14	17	13	20	17	10	9	11	15	16	16	23	15	18	7	15	17	13
11	3	16	13	2	5	6	12	17	16	11	15	11	20	23	10	6	18	11	15	19	8	12	5	38	13
12	34	14	13	5	1	M	M	M	M	M	M	M	M	M	M	5	1	1	0	0	0	1	2	2	
13	1	1	2	0	0	1	2	2	1	3	5	5	6	4	5	6	6	7	5	4	1	1	1	9	3
14	6	4	3	2	2	2	6	5	5	6	5	6	11	20	18	14	7	11	7	9	1	2	3	5	7
15	8	6	5	1	1	2	6	7	8	9	7	7	6	7	7	8	9	12	7	3	2	1	1	2	6
16	0	0	0	0	0	0	4	5	1	6	37	59	64	62	36	45	35	35	83	85	78	59	52	56	33
17	21	M	11	11	9	9	20	37	32	33	50	37	21	5	17	17	33	14	13	6	6	8	16	2	19
18	1	2	0	0	0	1	2	4	2	5	1	4	1	4	5	4	4	1	1	1	1	14	10	8	3
19	6	1	1	1	0	1	2	8	4	5	5	10	7	21	20	10	12	8	7	8	5	7	6	12	7
20	6	1	1	0	0	0	0	0	2	1	1	2	5	12	12	15	19	10	5	8	16	5	6	11	6
21	6	3	1	1	2	1	3	7	7	6	3	4	8	8	13	18	14	21	27	20	16	5	9	11	9
22	10	8	8	14	5	22	20	18	12	9	6	6	7	7	4	2	4	7	4	2	2	14	17	28	10
23	29	6	18	17	12	13	15	17	16	15	14	16	12	15	9	13	16	13	23	18	22	31	20	26	17
24	15	14	7	14	16	20	7	13	10	9	11	11	9	16	13	16	10	17	17	17	15	24	6	3	13
25	4	8	12	3	7	8	10	10	10	17	26	32	21	31	17	30	33	24	16	12	15	15	17	26	17
26	20	23	30	24	22	22	22	21	12	18	19	24	13	18	16	13	12	12	8	7	2	2	0	1	15
27	1	2	2	1	2	1	3	2	2	3	3	4	3	6	6	8	14	21	8	0	1	0	0	1	4
28	1	2	2	1	0	0	2	2	4	4	5	2	1	3	4	2	0	2	3	2	0	1	2	1	2
29	0	6	0	1	1	3	0	1	3	3	4	1	0	0	1	M	M	6	3	5	2	5	5	3	2
30	4	7	13	18	9	17	12	13	21	27	11	15	17	28	38	48	38	48	45	67	65	75	100	117	36

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----					STN GEOM	PERCENT	NO. OF TIMES	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	ABOVE	LIMIT	LEVEL		
8	8	13	8	30	46	65	77	0	-	117	2	-	42	3	98	0

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

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

STATION : CHEUNG CHAU
POLLUTANT : SULPHUR DIOXIDE

YEAR : 2019
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	2	0	0	1	2	2	2	8	9	7	7	10	8	2	1	2	2	0	4	1	2	0	5	3	
2	1	0	0	0	0	0	1	3	4	4	2	1	2	1	2	1	1	2	0	1	1	1	0	1	1	
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4	0	0	0	0	0	0	0	1	4	1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	1	1
5	0	0	0	0	0	0	0	0	1	2	2	3	3	4	2	7	2	1	0	0	0	0	0	0	1	1
6	0	0	0	0	0	0	0	0	3	5	5	9	7	3	2	1	1	1	0	0	0	0	1	2	2	
7	0	0	0	0	0	0	0	1	4	6	2	2	1	3	2	1	3	1	0	0	0	0	0	1	1	
8	1	0	0	0	0	0	0	1	2	3	1	1	0	0	3	1	0	0	0	0	0	0	0	1	1	
9	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	
10	0	0	0	0	0	0	0	0	1	1	1	3	2	3	2	2	1	0	0	0	0	0	0	2	1	
11	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	1	1	0	0	1	0	0	1	0	
12	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
15	0	0	0	0	0	0	0	0	0	1	3	2	2	4	3	3	2	1	0	0	0	0	0	1	1	
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	1	0	0	0	0	0	0	1	0	
17	0	0	0	0	0	0	0	0	1	1	2	1	0	0	0	3	2	1	0	0	1	0	0	1	1	
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	1	2	2	4	2	0	0	0	0	0	0	0	0	0	1	1	
20	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	
21	0	0	0	0	0	0	0	1	0	1	2	5	3	1	3	2	0	0	0	0	0	0	0	2	1	
22	2	3	1	1	1	2	4	2	2	3	2	1	1	1	0	0	0	0	0	0	0	0	0	2	1	
23	0	0	0	0	0	0	0	2	1	1	2	2	1	0	0	0	0	0	0	0	0	0	0	1	0	
24	0	0	0	0	0	1	1	2	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	1	0	
25	0	0	0	0	0	0	0	1	1	2	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	
26	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	
27	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
28	0	0	0	0	0	0	2	1	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
29	0	0	0	0	0	0	0	0	0	0	0	0	0	M	M	0	0	0	0	0	0	0	0	1	0	
30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----				STN GEOM	PERCENT	NO. OF TIMES		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR		24-HR		DEVIATION	VALID DATA	ABOVE LIMIT LEVEL		
2	0	1	0	2	3	5	7	0	-	10	0	-	3	2	100	0

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

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

STATION : CHEUNG CHAU
POLLUTANT : NITROGEN DIOXIDE

YEAR : 2019
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	26	13	12	26	27	22	21	33	41	36	38	50	40	21	20	34	29	24	28	20	27	16	31	28
2	19	18	21	14	18	22	23	38	29	28	23	18	26	22	25	27	22	33	25	21	27	22	15	64	25
3	44	M	24	18	12	59	52	11	14	26	46	6	6	3	2	3	2	3	4	11	11	10	9	13	17
4	16	20	17	16	16	22	20	23	21	19	26	25	52	60	43	31	26	15	15	16	10	10	9	8	22
5	24	21	40	46	50	71	70	66	62	71	63	42	42	53	36	74	43	58	51	45	97	99	50	87	57
6	66	44	38	30	18	59	54	42	28	27	22	23	14	13	11	14	13	14	15	12	19	25	32	18	27
7	23	21	20	19	8	12	18	25	31	35	18	20	13	13	13	11	24	13	28	41	42	38	35	30	23
8	33	16	25	30	22	23	34	28	27	20	17	10	10	7	13	9	9	13	15	30	29	14	11	8	19
9	6	8	4	6	8	7	10	8	7	2	5	4	3	4	3	5	11	5	6	21	32	13	15	26	9
10	13	13	15	16	24	15	15	12	11	12	10	12	9	9	9	8	6	8	15	21	25	35	17	20	15
11	9	5	8	7	13	9	14	12	8	12	5	4	7	12	10	6	9	14	20	26	33	25	20	53	14
12	67	69	29	30	13	21	30	29	29	16	16	11	13	12	13	19	4	12	11	13	9	11	14	8	21
13	5	4	8	6	8	6	16	17	17	9	13	17	14	13	20	9	10	24	25	26	18	10	14	17	14
14	16	16	14	18	21	22	20	31	26	37	11	13	51	32	83	43	47	70	56	46	14	8	44	103	35
15	75	57	70	38	8	9	18	11	22	25	39	21	21	42	45	42	34	35	26	26	26	27	19	19	31
16	15	13	20	24	20	21	12	21	8	11	54	52	55	54	67	62	31	48	99	127	121	97	55	39	47
17	31	M	19	44	49	42	71	64	66	64	64	27	11	12	12	30	27	20	25	21	37	20	21	17	35
18	13	12	17	13	7	6	13	12	17	15	15	11	6	6	12	13	12	9	12	10	22	9	31	41	14
19	41	26	21	35	22	26	28	19	30	27	29	27	23	34	36	62	62	50	53	21	31	42	11	12	32
20	7	6	7	7	5	7	11	12	14	10	17	17	25	31	24	36	39	28	45	47	76	71	81	83	29
21	73	69	86	48	40	52	60	51	62	26	21	20	24	18	24	32	22	23	28	51	58	32	53	29	42
22	49	57	45	52	46	48	58	40	20	16	11	6	7	10	6	6	8	10	26	22	45	55	40	34	30
23	27	23	15	13	16	18	30	44	24	15	17	13	11	7	7	7	5	12	24	49	32	38	26	30	21
24	25	25	30	42	39	38	40	28	17	14	12	6	5	5	6	4	6	8	9	16	21	21	13	12	18
25	17	21	11	8	21	25	21	26	22	22	18	9	10	13	12	7	11	13	17	18	54	37	48	53	21
26	55	59	57	45	39	34	31	26	18	10	12	11	4	6	4	3	7	4	9	15	11	11	3	8	20
27	7	8	8	14	26	10	11	8	6	6	6	5	5	12	20	16	29	26	14	7	17	7	3	7	12
28	8	10	11	8	8	17	23	16	22	19	12	7	5	5	7	7	4	5	15	10	6	8	16	13	11
29	8	14	17	24	5	3	4	5	7	6	8	3	6	M	M	13	21	29	41	39	56	48	43	26	19
30	53	36	39	52	34	22	20	16	18	15	13	13	9	18	17	24	26	18	49	76	65	83	92	83	37

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----					STN GEOM	PERCENT	NO. OF TIMES	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR		24-HR			DEVIATION	VALID DATA	ABOVE LIMIT LEVEL	
19	20	25	20	53	64	79	91	2	-	127	9	-	57	2	99	0

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

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

STATION : CHUNG HOM KOK ZONE SUBSTATION
 POLLUTANT : SULPHUR DIOXIDE

MONTH: MAY

YEAR : 2019

UNIT : MICROGRAMS/CUBIC METER

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

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----				STN GEOM	PERCENT	NO. OF TIMES		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	ABOVE	LIMIT	LEVEL		
1	0	0	0	1	1	2	2	0	-	26	0	-	1	2	99	0

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

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

STATION : CHUNG HOM KOK ZONE SUBSTATION
POLLUTANT : NITROGEN DIOXIDE

MONTH: MAY

YEAR : 2019

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	79	M	76	72	65	62	44	34	34	33	34	30	23	27	29	16	16	64	8	4	4	1	1	0	33
2	0	0	0	0	0	0	0	0	0	0	0	M	2	1	2	3	4	3	4	5	5	7	7	7	2
3	6	5	6	4	5	5	3	6	6	8	8	10	7	6	6	8	8	9	6	6	6	4	5	4	6
4	3	3	3	3	3	3	4	6	6	6	8	7	6	4	5	5	7	7	6	6	7	6	5	5	5
5	6	5	4	4	5	5	5	4	5	5	5	8	5	5	6	5	6	7	5	5	5	4	4	4	5
6	4	3	4	3	3	3	3	5	5	5	5	5	5	5	5	5	6	6	5	4	5	4	3	3	4
7	3	3	3	3	3	3	3	4	4	3	4	4	4	5	5	6	6	5	5	6	7	6	5	5	4
8	4	3	4	4	4	4	5	6	5	5	4	5	6	6	6	6	7	6	6	5	6	5	5	3	5
9	5	4	5	5	5	5	7	7	11	7	10	7	10	17	10	15	14	12	12	23	17	8	9	7	10
10	6	5	5	6	7	7	7	13	17	20	14	9	8	8	9	9	8	16	12	10	11	8	11	9	10
11	8	6	7	5	5	5	6	6	7	8	8	8	10	9	8	9	11	13	7	7	10	11	10	7	8
12	8	9	4	5	4	4	4	5	7	6	6	5	5	4	5	5	5	10	8	4	6	5	7	7	6
13	7	5	5	5	5	5	5	5	6	6	5	6	7	5	6	7	7	9	9	7	12	10	8	8	7
14	9	4	4	9	6	3	6	9	7	6	4	5	4	6	4	3	5	14	16	15	21	21	12	21	9
15	11	M	9	5	4	4	7	8	8	14	16	13	15	M	7	24	15	15	25	14	14	15	22	14	13
16	16	22	17	13	14	24	23	22	14	16	11	18	22	13	9	12	15	25	18	23	12	17	10	15	17
17	7	6	12	24	16	14	18	17	14	13	13	19	15	18	30	28	23	20	25	22	24	24	9	15	18
18	14	27	33	17	17	14	18	18	25	23	17	22	14	14	12	13	17	15	13	20	17	17	18	15	18
19	8	15	11	14	15	14	23	16	15	16	19	18	20	10	20	11	13	12	18	24	27	17	12	14	16
20	24	11	8	13	13	26	20	20	13	15	M	M	4	4	0	1	3	7	0	0	1	11	3	0	9
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	M	M	5	5	4	9	6	2	1	1
22	1	1	1	3	4	3	4	4	6	5	6	6	6	5	4	6	6	6	8	2	3	5	3	2	4
23	3	4	1	2	1	1	3	8	7	7	8	10	12	9	6	6	4	5	4	5	6	5	5	5	5
24	8	8	5	4	3	5	4	6	5	5	6	4	5	5	6	5	5	7	6	5	7	5	6	6	5
25	4	4	3	2	5	3	4	4	6	6	7	5	4	3	4	5	6	8	12	12	12	14	8	7	6
26	10	9	8	8	6	6	9	9	8	8	13	10	10	9	8	8	5	14	17	9	8	9	9	11	9
27	7	7	10	6	4	4	10	5	5	6	10	17	22	20	16	27	34	35	36	51	48	40	28	9	19
28	4	4	9	11	9	10	9	10	12	10	21	11	14	26	29	31	33	40	26	28	25	20	20	14	18
29	5	M	4	3	3	3	3	6	6	4	4	4	4	4	5	5	4	6	4	4	4	4	3	4	4
30	3	2	2	2	3	3	4	5	6	5	5	5	5	5	5	5	5	4	4	6	4	3	5	5	4
31	3	4	8	3	2	2	3	8	8	6	7	8	7	8	9	26	17	19	18	17	8	6	13	8	9

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----					STN GEOM	PERCENT	NO. OF TIMES	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR			24-HR	DEVIATION	VALID DATA	ABOVE	LIMIT LEVEL	
7	6	9	6	20	25	34	47	0	-	79	1	-	33	2	99	0

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

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

STATION : VICTORIA ROAD SUBSTATION
POLLUTANT : SULPHUR DIOXIDE

YEAR : 2019
UNIT : MICROGRAMS/CUBIC METER

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

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----				STN GEOM	PERCENT	NO. OF TIMES		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR		24-HR		DEVIATION	VALID DATA	ABOVE LIMIT LEVEL		
1	0	0	0	1	1	2	2	0	-	3	0	-	2	1	100	0

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

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

STATION : VICTORIA ROAD SUBSTATION
POLLUTANT : NITROGEN DIOXIDE

YEAR : 2019
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	38	M	41	42	36	25	23	21	21	21	20	18	18	19	22	25	28	29	24	16	14	12	10	7	23
2	5	5	5	4	4	4	6	10	11	10	11	10	10	11	12	11	12	10	14	16	16	11	7	8	9
3	6	5	4	4	4	4	6	8	12	13	11	11	13	10	12	14	15	17	13	9	6	6	6	5	9
4	5	4	4	4	4	4	5	7	7	8	6	7	6	8	7	10	9	8	7	7	6	5	5	5	6
5	5	5	4	4	4	4	5	5	5	5	5	6	6	6	6	5	6	6	6	5	5	5	4	4	5
6	3	3	3	2	2	2	6	8	11	11	10	11	10	10	11	12	10	10	8	6	5	5	4	4	7
7	4	4	3	3	3	3	5	7	9	8	8	7	7	7	7	9	9	10	8	7	6	6	6	5	6
8	4	3	3	3	3	4	5	6	9	8	7	8	10	10	9	8	12	14	15	11	9	7	6	5	7
9	4	4	7	2	6	8	8	17	20	22	25	22	27	30	38	29	30	36	31	35	26	17	20	10	20
10	7	5	4	4	9	10	13	18	14	17	16	14	13	12	7	10	11	12	21	14	17	18	15	17	12
11	22	18	13	5	5	6	16	15	26	31	31	20	13	13	12	23	26	19	17	17	12	11	13	10	16
12	24	23	7	6	4	4	6	6	5	8	6	5	5	7	7	10	7	7	15	34	17	9	6	16	10
13	13	4	4	4	3	3	7	9	22	25	23	22	18	19	19	21	27	17	11	10	8	8	6	5	13
14	6	18	20	22	24	8	17	15	17	24	17	14	9	6	12	19	13	22	24	27	35	24	14	9	17
15	9	M	9	6	8	5	12	16	15	13	14	20	13	9	11	18	18	14	17	20	16	13	16	11	13
16	12	11	8	6	11	12	15	16	18	13	10	7	9	13	20	19	21	31	25	19	15	12	15	16	15
17	18	18	14	14	9	10	14	12	15	13	6	8	8	7	10	8	16	20	18	13	8	6	9	9	12
18	5	8	11	6	4	6	13	12	7	11	7	11	9	7	13	8	9	9	9	13	9	10	11	15	9
19	8	6	3	4	3	3	9	16	13	6	8	3	8	4	9	15	11	8	9	10	M	13	8	8	8
20	13	8	4	8	10	10	13	12	10	12	12	14	16	11	16	17	34	42	39	47	30	30	28	14	19
21	10	6	5	5	5	5	6	10	11	13	13	11	11	10	13	11	12	12	10	8	8	8	8	8	9
22	6	8	5	3	3	3	8	13	16	13	10	7	7	8	7	10	9	9	8	10	10	7	5	4	8
23	4	M	2	2	2	2	7	11	8	9	7	9	13	9	7	8	7	7	6	5	5	5	4	4	6
24	4	4	4	3	2	3	5	6	7	6	5	5	6	6	6	6	M	11	7	6	M	3	4	5	5
25	5	3	3	2	2	3	4	4	4	6	6	5	7	6	5	5	5	6	9	7	7	5	5	4	5
26	5	3	3	1	2	1	2	4	4	5	8	8	8	10	9	6	9	12	12	6	3	4	3	3	5
27	3	3	3	3	2	5	10	9	9	12	11	12	11	14	13	14	21	16	20	21	22	21	20	10	12
28	16	4	3	2	2	3	6	9	11	16	14	9	21	24	14	13	22	32	30	29	28	25	23	20	16
29	22	14	6	4	2	2	3	5	6	5	4	4	4	3	5	7	6	6	5	4	4	4	3	2	5
30	3	2	1	1	1	1	3	4	5	5	5	6	6	5	6	7	7	7	5	6	5	4	4	5	4
31	5	4	4	4	3	3	6	10	9	14	11	15	14	13	13	20	20	13	22	22	13	12	10	10	11

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----					STN GEOM	PERCENT	NO. OF TIMES	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR			24-HR	DEVIATION	VALID DATA	ABOVE	LIMIT LEVEL	
8	8	10	8	21	25	31	36	1	-	47	4	-	23	2	99	0

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

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

STATION : POK FU LAM
POLLUTANT : SULPHUR DIOXIDE

YEAR : 2019
UNIT : MICROGRAMS/CUBIC METER

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

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----				STN GEOM	PERCENT	NO. OF TIMES		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	ABOVE	LIMIT	LEVEL		
8	8	8	8	10	10	11	12	0	-	19	1	-	11	1	100	0

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

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

STATION : POK FU LAM
POLLUTANT : NITROGEN DIOXIDE

YEAR : 2019
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	77	58	111	115	86	65	56	51	46	43	37	31	29	31	39	48	65	73	46	29	22	15	11	10	50
2	8	6	6	6	5	5	11	17	19	22	17	18	16	16	15	25	30	29	40	60	37	26	15	13	19
3	10	8	7	6	6	5	8	15	26	25	24	20	22	19	21	32	27	33	31	14	9	9	11	7	16
4	7	6	6	5	5	5	8	11	16	17	17	21	20	22	17	27	24	19	16	15	12	9	8	6	13
5	6	M	4	5	5	5	5	6	9	8	6	8	8	9	10	7	7	8	6	7	8	9	8	8	7
6	6	5	4	4	5	4	11	14	21	31	26	18	19	14	19	16	16	17	16	11	10	8	7	3	13
7	2	1	1	1	1	2	3	7	10	13	14	14	14	15	15	17	19	17	13	12	9	7	6	6	9
8	4	3	3	2	2	3	4	10	14	17	15	14	14	15	18	16	34	59	28	24	15	9	8	9	14
9	8	6	6	7	28	17	19	30	61	70	56	55	64	61	59	51	58	85	83	107	84	42	40	43	48
10	19	13	17	17	42	61	59	49	41	36	36	29	36	28	20	18	22	26	50	52	61	50	46	54	37
11	51	48	40	43	52	48	56	60	72	74	61	37	20	18	22	38	38	37	42	45	14	27	32	33	42
12	63	17	12	8	9	15	16	9	12	16	7	8	16	15	21	19	11	18	70	109	72	38	24	49	27
13	30	40	18	4	5	2	11	41	30	55	39	40	29	29	36	45	42	66	23	20	26	26	9	4	28
14	31	47	53	27	49	10	12	23	30	36	14	7	2	2	3	9	6	19	24	23	26	10	5	3	20
15	7	2	1	0	6	7	5	16	11	8	7	8	6	5	8	15	17	17	15	20	13	8	14	13	10
16	18	12	10	8	11	17	18	18	22	16	10	8	6	5	7	7	11	12	16	13	14	20	22	25	14
17	20	18	18	15	10	15	18	24	21	13	9	12	10	13	9	11	14	16	22	18	20	15	7	7	15
18	7	17	18	12	9	16	16	13	8	11	7	14	10	6	10	14	16	14	10	12	10	8	10	12	12
19	7	M	7	5	6	5	12	20	20	11	15	5	9	2	7	12	15	13	13	16	19	18	10	10	11
20	13	10	5	6	6	8	24	15	16	15	18	18	24	12	20	56	58	81	85	49	28	64	76	15	30
21	12	6	4	4	5	5	9	15	20	41	37	35	24	26	33	26	20	28	28	14	19	14	39	26	20
22	13	16	17	7	10	20	18	38	37	37	23	12	12	12	10	14	12	17	23	24	25	19	10	3	18
23	2	1	1	1	0	9	15	27	28	23	20	30	38	16	7	8	10	15	16	10	7	5	4	3	12
24	3	3	4	3	2	2	3	8	7	9	7	7	7	4	7	10	9	9	7	3	2	0	0	1	5
25	0	0	0	0	0	0	0	0	1	2	2	0	0	0	1	1	2	2	6	3	2	1	0	3	1
26	4	2	2	0	0	0	2	2	4	5	8	18	16	15	28	13	15	11	7	5	3	3	2	2	7
27	1	1	2	2	0	2	6	2	8	16	11	33	31	21	25	43	46	43	43	57	55	42	43	7	23
28	27	0	1	0	0	1	2	7	21	28	33	8	47	49	21	31	43	63	43	49	69	58	56	55	30
29	58	31	1	1	0	1	1	6	9	8	8	6	9	11	14	12	13	15	7	6	5	3	3	8	10
30	9	5	4	4	4	3	7	11	13	11	13	12	15	16	21	15	M	15	14	16	10	10	8	4	10
31	3	3	3	4	3	2	5	13	13	20	8	28	21	12	20	26	35	13	47	39	14	8	8	8	15

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							RANGE-----					STN GEOM	PERCENT	NO. OF TIMES	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR		24-HR			DEVIATION	VALID DATA	ABOVE LIMIT LEVEL	
13	13	19	13	46	58	72	84	0	-	115	1	-	50	3	100	0

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

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

STATION : AP LEI CHAU
POLLUTANT : SULPHUR DIOXIDE

YEAR : 2019
UNIT : MICROGRAMS/CUBIC METER

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

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----				STN GEOM	PERCENT	NO. OF TIMES		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR		24-HR		DEVIATION	VALID DATA	ABOVE LIMIT LEVEL		
2	1	3	1	5	6	20	22	0	-	24	0	-	10	2	96	0

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

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

STATION : AP LEI CHAU
POLLUTANT : NITROGEN DIOXIDE

YEAR : 2019
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	117	M	101	114	93	64	55	49	43	42	41	34	27	31	42	52	68	68	38	17	14	11	4	7	49
2	4	3	2	2	2	2	6	10	13	11	10	10	9	8	10	11	13	11	18	26	20	16	14	14	10
3	7	4	4	2	2	5	5	2	10	15	14	15	11	11	11	11	13	9	2	2	0	1	0	7	
4	0	0	0	0	0	0	0	0	1	2	5	5	2	3	0	1	2	2	0	0	0	0	0	0	1
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2	5	4	0	0	0	0	0	0	1
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	M	0	0	2	0	1	7	2	0	2	0	0	0	0	1
9	0	8	1	0	0	3	10	15	34	43	31	33	60	52	46	23	12	45	66	82	67	25	1	0	27
10	0	0	0	0	0	1	0	0	1	5	2	0	0	0	0	0	0	2	5	4	5	6	0	29	3
11	15	8	0	0	0	0	3	6	5	14	0	0	0	1	0	2	2	1	0	5	0	0	0	5	3
12	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	1	0
13	0	0	0	0	0	0	0	0	1	1	1	0	5	4	2	1	2	4	8	4	0	0	0	0	1
14	1	2	0	10	10	1	1	10	5	2	2	4	0	1	5	15	4	10	16	2	25	22	0	13	7
15	6	M	6	1	0	0	3	2	0	0	2	4	0	0	3	9	4	3	16	12	13	6	11	5	5
16	5	2	4	4	2	5	9	6	9	7	6	8	8	1	2	1	5	10	7	1	2	3	6	8	5
17	0	2	7	4	2	3	7	2	2	3	1	5	1	2	7	7	4	6	14	6	5	0	1	3	4
18	0	2	5	5	2	7	13	13	6	13	7	17	4	2	2	1	1	0	2	5	5	2	6	8	5
19	1	2	0	3	0	0	8	5	4	10	10	0	7	0	7	13	5	2	1	5	5	6	2	8	4
20	14	3	0	10	11	8	15	12	11	17	16	22	24	16	17	19	33	72	65	51	19	38	5	14	21
21	6	0	0	0	0	0	0	3	1	3	3	7	1	4	4	1	1	3	0	0	1	1	0	2	2
22	3	4	0	0	0	1	6	17	13	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
23	0	0	0	0	0	0	0	0	0	5	5	M	12	3	0	0	0	0	0	0	0	0	0	0	1
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
25	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
26	0	0	0	0	0	0	0	0	0	0	1	9	1	10	1	0	0	3	0	0	0	0	0	0	1
27	0	0	1	0	0	1	3	0	0	8	17	28	18	19	22	30	46	37	43	52	53	52	51	15	21
28	1	2	0	0	0	0	0	0	0	4	22	26	25	51	21	28	40	44	41	42	49	42	39	54	22
29	27	M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	1	5	12	2	5	0	0	10	21	6	20	14	7	12	10	2	0	5

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							RANGE-----				STN GEOM	PERCENT	NO. OF TIMES		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR		24-HR	DEVIATION	VALID DATA	ABOVE	LIMIT LEVEL		
6	1	7	1	18	41	53	68	0	-	117	0	-	49	3	99	0

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

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

STATION : CHEUNG CHAU
POLLUTANT : SULPHUR DIOXIDE

YEAR : 2019
UNIT : MICROGRAMS/CUBIC METER

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

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----				STN GEOM	PERCENT	NO. OF TIMES		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR		24-HR		DEVIATION	VALID DATA	ABOVE LIMIT LEVEL		
2	0	0	0	1	2	4	5	0	-	8	0	-	2	2	100	0

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

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

STATION : CHEUNG CHAU
POLLUTANT : NITROGEN DIOXIDE

YEAR : 2019
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	73	90	82	98	69	69	63	63	54	55	55	57	54	47	64	61	80	75	64	70	58	53	20	13	62
2	24	26	30	35	25	32	28	35	30	18	14	17	18	15	14	15	21	19	40	35	39	51	53	53	29
3	19	12	13	13	14	27	13	16	14	24	31	29	38	34	16	25	33	26	34	20	21	21	15	11	22
4	11	11	14	13	13	12	15	14	24	30	28	38	25	12	23	27	26	15	32	26	18	21	14	25	20
5	18	11	9	15	22	27	16	21	35	26	29	21	30	16	30	35	30	30	25	22	22	18	19	17	23
6	18	22	12	9	6	15	25	9	15	23	28	17	23	15	21	17	14	19	31	23	17	25	9	19	18
7	6	5	11	5	7	12	6	7	9	12	17	23	22	17	28	17	27	26	19	31	38	21	17	16	17
8	15	19	10	13	9	9	11	11	14	29	39	23	23	36	20	15	21	28	58	53	39	19	14	15	23
9	24	24	15	22	29	21	23	34	36	43	46	52	52	48	48	31	26	40	64	60	55	28	16	9	35
10	6	6	5	6	8	28	37	35	24	13	15	18	13	6	9	15	15	18	28	22	12	19	21	50	18
11	35	39	50	45	45	49	36	23	38	12	8	7	14	25	10	23	22	32	14	8	7	11	11	15	24
12	50	42	16	28	7	6	M	8	9	11	5	5	3	2	3	3	3	4	19	41	15	7	37	21	15
13	50	25	17	15	9	24	15	10	24	35	10	36	22	15	7	7	9	9	13	18	16	7	14	30	18
14	20	45	48	40	37	27	47	39	23	28	9	9	10	11	16	17	10	64	70	66	51	66	74	73	38
15	51	40	41	37	41	42	34	29	40	24	31	35	38	30	33	37	32	25	27	32	17	20	23	25	33
16	29	35	32	17	22	24	23	21	20	15	12	8	10	10	9	7	10	10	12	7	10	6	13	58	18
17	34	19	21	20	18	21	21	16	12	12	9	11	12	15	12	10	14	122	29	20	26	21	17	17	22
18	17	20	24	137	109	48	32	25	19	16	30	56	18	13	12	13	14	13	13	12	16	13	12	7	29
19	10	5	26	10	16	16	26	19	14	20	12	5	6	5	7	8	7	10	12	6	11	8	11	14	12
20	14	17	15	14	23	28	17	15	14	15	15	13	5	4	9	35	48	55	70	81	71	79	85	46	33
21	46	23	14	23	14	24	12	12	17	20	14	M	M	24	17	8	22	20	9	9	12	19	14	8	17
22	9	7	7	11	10	9	6	28	18	12	1	2	4	2	6	0	2	11	3	5	1	0	3	5	7
23	4	2	1	0	2	2	1	5	3	15	11	12	48	33	5	6	1	2	14	8	8	2	2	3	8
24	2	3	5	9	8	9	7	4	3	3	1	1	5	1	6	15	3	2	4	3	2	2	1	6	4
25	3	1	2	0	1	1	2	0	1	1	1	0	0	0	0	0	1	9	12	28	25	10	15	5	
26	33	10	9	14	19	16	M	12	11	16	38	4	8	4	15	16	19	30	26	21	13	12	9	13	16
27	15	11	30	12	13	7	11	8	6	32	34	23	28	21	27	49	58	65	76	76	71	67	51	64	36
28	69	64	40	22	19	14	25	28	37	30	16	41	35	47	48	42	50	45	38	50	57	61	73	68	42
29	53	22	14	12	9	9	14	15	14	12	16	19	19	21	17	10	18	31	28	21	17	9	4	5	17
30	8	15	20	18	19	22	22	27	19	12	19	8	11	9	8	6	7	19	21	17	17	10	9	9	15
31	8	4	8	8	5	4	5	8	8	8	6	4	11	8	4	14	8	28	15	18	26	30	43	0	12

MONTHLY STATISTICS:

GEOM		ARITH-----PERCENTILES-----							-----RANGE-----				STN GEOM	PERCENT	NO. OF TIMES	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	ABOVE	LIMIT	LEVEL		
16	17	22	17	48	63	73	81	0	-	137	4	-	62	2	99	0

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

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

STATION : CHUNG HOM KOK ZONE SUBSTATION
POLLUTANT : SULPHUR DIOXIDE

MONTH: JUNE

YEAR : 2019
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	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	1	1	1	1	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	
3	1	1	1	1	1	1	0	0	0	0	0	1	1	0	1	1	0	0	0	1	1	1	1	1	1	
4	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
5	0	0	1	1	0	1	1	1	1	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	0	0	0	0	0	0	0	0	0	0	0	0	
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0	0	
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	
14	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1	1	1	2	1	1	1	1	1	1	1	
15	0	1	1	1	1	1	0	0	0	1	1	1	0	0	0	0	0	1	1	0	0	0	0	1	0	
16	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0	
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	M	M	0	0	0	0	0	1	1	0	
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0	1	
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	1	
25	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	0
26	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	16	0	1	
27	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	0
28	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	0
29	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

MONTHLY STATISTICS:

-----PERCENTILES-----											-----RANGE-----		STN	GEOM	PERCENT	NO. OF TIMES
GEOM	ARITH	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	ABOVE	LIMIT	LEVEL		
1	0	0	0	1	1	1	1	0	-	27	0	-	1	2	100	0

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

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

STATION : CHUNG HOM KOK ZONE SUBSTATION
POLLUTANT : NITROGEN DIOXIDE

MONTH: JUNE

YEAR : 2019

UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	6	9	10	12	15	9	21	24	17	20	10	21	11	10	8	8	15	11	9	15	18	21	9	22	14
2	20	14	17	12	11	13	15	14	18	15	22	14	5	9	6	11	21	11	17	19	15	12	18	18	14
3	25	16	11	12	6	16	10	11	12	11	8	9	7	6	6	9	8	8	12	17	27	20	32	21	13
4	11	13	14	14	12	13	17	14	8	8	5	7	9	4	6	6	5	8	23	32	36	29	19	9	13
5	6	9	18	14	10	18	14	12	11	9	5	4	3	3	5	5	13	11	9	9	10	10	13	13	10
6	13	17	11	16	19	8	10	21	10	14	9	10	6	4	7	9	9	7	6	9	9	8	9	5	10
7	8	16	17	12	14	13	18	10	7	5	4	5	4	8	4	6	8	17	18	11	17	14	5	4	10
8	14	9	13	12	10	17	11	12	10	8	8	8	6	11	6	7	8	12	16	11	16	10	10	6	10
9	7	7	7	7	7	12	9	13	9	10	7	8	7	5	6	11	11	16	11	9	19	21	17	6	10
10	9	12	10	6	14	6	12	8	12	5	4	3	1	1	2	8	15	10	5	9	9	24	14	19	9
11	20	14	11	9	6	9	11	18	17	7	15	9	10	38	28	10	12	10	3	5	12	16	13	9	13
12	48	M	32	26	9	10	11	15	12	9	12	7	8	8	4	3	3	8	3	4	1	0	2	1	10
13	0	3	1	0	0	0	1	4	5	13	8	11	19	10	13	18	10	11	20	23	22	25	17	9	10
14	8	11	15	8	16	13	2	4	10	33	37	36	24	30	16	17	30	39	24	30	13	10	9	6	18
15	6	23	28	15	2	2	0	2	7	7	4	3	1	1	1	2	2	5	3	3	5	2	3	0	5
16	0	0	0	1	0	0	1	1	2	0	1	1	0	0	0	1	1	2	0	1	0	0	1	1	1
17	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	M	M	5	6	11	8	4	10	7	3
18	3	6	0	1	1	1	1	6	6	2	1	0	0	0	6	4	0	5	6	10	5	1	2	7	3
19	6	1	7	7	31	3	0	7	1	0	0	2	8	1	1	5	8	6	8	15	13	16	9	10	7
20	19	14	15	15	16	17	11	9	3	3	4	6	5	5	7	3	5	8	10	13	13	10	13	5	10
21	9	13	12	12	15	16	15	4	3	3	1	4	2	3	1	3	6	6	4	12	9	11	11	7	8
22	9	8	3	6	7	4	5	1	3	0	1	4	1	2	0	1	1	2	4	7	6	5	7	5	4
23	4	2	3	3	4	1	1	0	1	1	0	2	2	5	3	6	6	4	11	17	8	6	5	8	4
24	13	14	7	5	8	15	11	17	13	6	8	9	14	14	12	23	32	16	27	25	36	48	29	16	17
25	8	6	8	9	27	30	26	22	20	13	16	12	7	9	7	7	13	15	17	14	20	19	5	0	14
26	0	M	0	0	0	0	1	3	4	3	1	15	16	20	8	8	7	4	8	21	8	9	13	3	7
27	1	10	13	8	4	4	8	6	0	0	4	4	1	0	7	6	11	14	11	13	8	14	11	12	7
28	6	8	13	7	15	4	11	9	2	8	7	3	1	2	5	1	3	5	5	1	6	5	10	4	6
29	9	5	5	0	6	2	9	21	5	5	1	0	0	0	0	0	3	3	3	7	3	3	7	1	4
30	2	0	4	1	0	0	0	9	15	16	4	24	6	10	3	2	1	8	4	1	1	1	0	3	5

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----				STN GEOM	PERCENT	NO. OF TIMES		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR		24-HR		DEVIATION	VALID DATA	ABOVE LIMIT LEVEL		
7	8	9	8	18	23	30	36	0	-	48	1	-	18	2	99	0

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

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

STATION : VICTORIA ROAD SUBSTATION
POLLUTANT : SULPHUR DIOXIDE

MONTH: JUNE

YEAR : 2019

UNIT : MICROGRAMS/CUBIC METER

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

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----				STN GEOM	PERCENT	NO. OF TIMES		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR		24-HR		DEVIATION	VALID DATA	ABOVE LIMIT LEVEL		
1	0	0	0	1	1	2	2	0	-	3	0	-	1	1	100	0

NOTES:

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

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

STATION : VICTORIA ROAD SUBSTATION
POLLUTANT : NITROGEN DIOXIDE

MONTH: JUNE

YEAR : 2019

UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	9	9	12	5	8	7	9	14	20	16	12	11	14	10	9	13	11	9	16	18	15	17	12	6	12
2	6	6	6	17	24	15	9	11	9	7	6	9	7	12	20	20	14	11	16	19	10	10	10	9	12
3	9	10	9	7	7	4	8	15	16	17	9	8	7	10	8	10	14	8	12	14	16	21	26	13	12
4	10	8	9	7	9	8	13	11	12	13	15	14	12	22	18	12	9	12	18	18	14	13	18	7	13
5	5	5	9	10	10	10	12	14	13	12	11	12	9	11	6	12	14	13	10	14	12	11	11	15	11
6	20	24	17	11	17	15	16	16	20	17	11	11	13	6	21	14	9	14	13	16	21	14	25	18	16
7	13	10	9	8	7	15	17	13	7	12	15	10	7	11	13	10	20	14	19	16	15	12	12	11	12
8	10	8	6	8	12	7	12	17	16	15	16	18	19	17	18	8	7	9	17	18	18	15	9	7	13
9	7	7	7	11	9	10	15	19	20	26	14	12	21	25	15	11	24	16	11	12	13	15	8	9	14
10	8	8	8	7	12	13	16	20	15	12	11	13	13	12	8	10	17	14	16	15	26	23	21	11	14
11	25	28	24	7	7	5	12	18	11	13	13	15	30	32	34	34	29	27	15	8	11	26	32	29	20
12	30	M	24	15	20	9	18	20	23	18	20	12	15	14	12	15	14	13	15	10	9	6	6	4	15
13	5	4	5	7	6	5	11	20	20	18	21	16	11	22	20	19	13	12	12	16	10	9	9	12	13
14	7	14	12	13	14	13	14	17	18	28	25	25	26	22	21	22	25	34	39	27	42	44	30	26	23
15	64	53	19	13	14	13	27	25	28	45	32	24	15	11	10	9	9	10	10	9	7	7	6	6	19
16	5	5	4	5	4	4	5	6	7	6	7	7	6	6	7	6	7	7	8	8	7	6	7	4	6
17	5	3	3	3	3	3	4	6	7	6	7	6	8	7	6	7	10	14	14	17	14	18	15	15	8
18	10	6	6	5	7	5	6	7	11	15	12	10	10	12	15	12	10	20	20	22	14	9	8	8	11
19	7	6	7	7	10	10	13	13	13	11	7	10	15	13	12	17	13	13	12	14	21	26	21	15	13
20	17	14	7	7	11	11	10	13	15	13	18	17	17	13	8	8	15	13	22	16	13	12	17	9	13
21	10	8	8	6	8	14	14	10	10	9	9	9	14	12	14	16	14	13	12	13	12	11	11	11	11
22	13	17	14	16	10	7	11	18	15	13	14	16	12	9	8	10	10	14	20	20	15	17	21	18	14
23	16	14	13	14	12	10	13	13	12	12	11	13	11	12	10	16	14	13	14	14	13	15	13	7	13
24	11	7	5	6	6	13	20	20	23	13	16	11	15	13	15	15	15	13	16	23	18	13	15	6	14
25	6	6	8	20	41	34	23	30	37	32	39	42	26	28	28	27	16	28	21	36	44	36	34	30	28
26	20	M	13	12	11	21	10	20	21	20	23	14	13	14	19	17	20	20	22	25	22	18	22	14	18
27	12	15	15	12	13	15	18	15	16	15	19	18	17	20	15	20	22	21	21	20	21	17	19	17	17
28	13	14	12	11	10	9	20	18	12	16	21	14	13	14	25	16	17	16	17	19	27	23	17	15	16
29	16	12	11	12	13	10	13	17	17	23	15	14	14	12	12	15	25	19	19	19	18	14	16	15	15
30	12	9	11	8	7	7	7	10	26	35	21	34	30	34	21	26	16	20	34	20	18	14	13	23	19

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----										RANGE-----		STN GEOM	PERCENT	NO. OF TIMES	
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	ABOVE	LIMIT	LEVEL		
13	13	14	13	23	28	34	41	3	-	64	6	-	28	2	100	0

NOTES:

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

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

STATION : POK FU LAM
POLLUTANT : SULPHUR DIOXIDE

YEAR : 2019
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	2	1	1	1	1	0	0	0
2	0	0	1	2	3	3	2	2	1	1	0	1	0	0	0	0	0	0	0	1	7	8	3	2	2
3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
4	2	3	2	1	0	0	0	1	1	1	1	7	2	1	0	1	1	1	1	1	1	0	1	0	1
5	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
6	1	2	2	1	2	1	1	0	1	0	0	1	2	0	0	2	1	0	1	0	0	1	1	1	1
7	1	1	1	1	1	1	1	1	1	2	1	1	1	0	1	0	1	1	0	1	1	0	1	1	1
8	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
10	1	1	1	1	1	0	0	0	1	1	2	1	0	0	0	1	0	0	0	0	1	1	1	2	1
11	1	0	0	0	0	0	0	0	0	0	1	1	2	2	3	2	2	2	1	1	0	0	1	3	1
12	1	1	2	1	1	0	1	1	0	1	2	1	1	1	1	1	1	0	1	0	0	1	0	1	0
13	0	0	0	1	1	0	0	0	0	0	3	5	1	3	2	0	0	0	0	1	0	0	0	0	1
14	0	0	0	1	1	1	0	0	0	M	1	0	1	1	2	1	3	2	2	2	2	1	0	2	1
15	4	5	4	3	3	3	3	4	4	4	4	4	3	2	3	2	2	3	2	2	2	1	1	0	3
16	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	33	0	1
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	2	0	0	2	5	0	0	0	0	0	0	0	1	1	2	1
20	1	0	0	0	0	0	0	0	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0	1	0
21	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
22	0	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
24	0	0	0	0	1	1	0	0	0	0	0	0	1	0	1	0	0	0	1	1	1	1	0	0	0
25	0	0	0	0	0	1	0	1	1	2	6	8	3	3	2	1	1	1	1	1	2	2	2	0	2
26	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	1	17	0	1
27	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
28	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
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	1	1	2	1	1	0	0	0	0	0	0	0	0	0	50	1	2

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----			STN GEOM	PERCENT	NO. OF TIMES			
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	ABOVE LIMIT LEVEL				
1	0	1	0	2	2	4	6	0	-	50	0	-	3	2	100	0

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

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

STATION : POK FU LAM
POLLUTANT : NITROGEN DIOXIDE

YEAR : 2019
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	7	16	18	4	16	11	10	17	26	19	16	10	13	9	4	6	20	22	19	27	23	22	24	10	15
2	10	M	10	30	27	29	15	17	15	8	10	19	7	7	9	23	18	23	34	48	32	18	15	19	
3	14	20	9	6	8	7	12	25	31	25	14	12	5	13	6	9	16	9	25	18	26	25	38	11	16
4	20	37	20	15	16	10	16	18	32	36	24	26	15	19	24	17	12	14	38	30	18	10	13	4	20
5	2	4	9	11	12	12	12	15	13	14	6	6	6	8	5	9	15	11	12	12	8	8	8	16	10
6	28	28	16	9	16	15	17	17	18	13	6	9	7	5	12	11	8	14	15	16	21	14	26	21	15
7	14	9	11	7	6	20	17	12	9	13	12	12	9	5	9	5	11	14	13	15	15	10	10	10	11
8	7	5	7	5	13	6	11	16	12	14	8	4	6	5	5	9	11	23	24	18	11	9	9	6	10
9	8	10	9	3	11	16	11	10	6	10	7	8	12	3	5	12	12	10	11	12	12	11	12	10	10
10	8	8	10	14	10	7	12	8	18	18	12	4	6	10	8	17	17	26	26	33	34	20	13	8	14
11	45	35	36	4	12	11	22	20	10	14	14	45	52	39	44	36	34	31	41	51	34	25	57	72	33
12	42	54	42	31	45	5	21	24	25	15	14	12	10	8	9	12	11	9	16	11	9	7	6	3	18
13	2	2	3	23	13	7	11	18	21	22	34	29	14	24	25	29	31	20	27	31	15	15	16	28	19
14	22	39	28	37	37	33	21	30	45	M	46	44	53	31	26	32	49	43	53	58	78	26	24	52	39
15	69	90	57	43	32	15	16	23	46	64	42	32	17	10	9	7	7	8	12	9	5	6	4	3	26
16	3	M	3	2	2	1	3	6	6	5	5	4	3	4	4	3	5	6	4	6	4	3	4	3	4
17	2	1	1	1	0	2	4	10	17	19	19	14	9	5	4	4	6	7	10	11	13	14	11	19	8
18	9	4	4	5	7	2	2	6	9	12	7	9	11	10	25	14	13	34	18	11	5	5	5	4	10
19	3	3	7	7	14	6	10	8	12	16	6	11	25	21	11	8	9	11	11	13	18	18	18	14	12
20	13	9	5	5	7	11	12	13	17	15	17	8	12	9	9	4	8	11	17	14	15	12	15	8	11
21	9	7	9	10	12	16	14	13	10	11	12	7	14	9	5	9	13	9	10	13	14	17	14	11	11
22	12	10	11	14	10	7	10	18	17	9	10	11	9	6	6	6	8	9	9	10	9	15	12	13	10
23	11	14	11	9	7	8	17	12	14	9	10	13	8	10	8	8	12	21	21	18	19	15	15	9	12
24	14	10	13	8	13	16	11	13	13	15	10	12	19	19	19	20	22	17	48	57	44	52	39	10	21
25	7	28	26	31	35	56	43	43	47	52	54	63	37	38	25	41	32	33	30	75	76	67	64	51	44
26	12	6	28	3	3	17	5	26	20	27	18	9	8	15	21	16	23	16	32	38	25	21	22	7	17
27	5	12	15	16	15	21	21	9	12	14	23	18	13	9	14	20	18	26	28	24	24	14	13	16	17
28	9	12	9	13	9	7	21	17	8	15	12	11	16	15	17	7	11	14	19	15	18	14	13	15	13
29	13	6	7	6	6	10	17	20	20	24	10	9	8	7	5	8	12	7	17	17	17	9	12	14	12
30	10	M	9	6	4	3	11	14	33	34	29	20	19	19	7	16	16	19	23	25	16	14	9	8	16

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----				STN GEOM	PERCENT	NO. OF TIMES		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	ABOVE	LIMIT	LEVEL		
13	13	16	13	33	44	55	64	0	-	90	4	-	44	2	99	0

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

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

STATION : AP LEI CHAU
POLLUTANT : SULPHUR DIOXIDE

YEAR : 2019
UNIT : MICROGRAMS/CUBIC METER

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

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----				STN GEOM	PERCENT	NO. OF TIMES		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR		24-HR	DEVIATION	VALID DATA	ABOVE	LIMIT LEVEL		
2	2	2	2	3	4	5	6	0	-	8	0	-	3	2	100	0

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

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

STATION : AP LEI CHAU
POLLUTANT : NITROGEN DIOXIDE

YEAR : 2019
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	0	2	4	0	0	3	1	18	24	15	9	3	8	2	1	0	3	1	0	4	2	3	13	0	5
2	0	3	5	4	4	1	4	18	13	8	13	13	4	4	0	2	15	9	14	19	5	0	0	31	8
3	16	33	13	0	9	3	7	1	6	8	4	9	2	6	3	8	8	4	16	11	30	19	32	6	11
4	2	9	2	1	0	0	4	2	14	6	5	8	2	0	1	4	5	18	34	29	9	5	1	0	7
5	0	0	13	7	9	6	9	3	0	0	0	2	0	0	0	1	2	2	4	0	0	0	0	1	2
6	8	9	8	4	8	7	1	2	4	5	2	0	0	3	6	3	1	0	0	1	6	2	13	7	4
7	2	6	2	1	2	7	7	3	1	1	2	4	5	2	0	2	2	4	3	1	2	0	0	5	3
8	2	0	0	0	8	1	6	4	1	4	8	3	1	5	4	1	1	3	6	6	7	0	0	0	3
9	0	0	0	0	1	4	1	1	0	6	2	3	3	0	0	3	5	4	2	4	2	2	0	0	2
10	2	4	0	1	1	1	4	5	0	0	0	1	1	3	3	7	8	12	4	3	28	30	8	5	5
11	17	23	17	0	2	1	9	6	13	19	25	28	40	52	24	12	24	15	11	34	59	53	42	56	24
12	57	M	53	19	3	0	0	3	2	0	1	0	0	0	0	0	5	17	8	3	1	0	0	0	7
13	0	0	0	0	0	0	3	1	11	18	17	34	12	14	18	11	5	7	22	26	24	12	3	22	11
14	6	20	18	19	26	30	22	24	40	60	57	47	45	38	36	40	40	59	45	34	37	24	12	31	34
15	33	58	36	46	3	1	2	11	27	40	5	0	0	0	0	0	0	0	0	0	0	0	0	0	11
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	7	9	1	7	1
18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	12	11	2	19	9	0	0	0	0	0	2
19	0	0	1	8	11	9	0	0	1	0	4	2	11	8	6	4	3	1	9	4	12	16	8	14	6
20	9	9	1	11	4	10	5	1	7	4	11	10	6	2	1	1	5	5	8	1	1	2	1	0	5
21	0	0	0	0	0	5	2	0	0	1	0	1	1	1	1	2	3	0	1	1	2	0	0	0	1
22	1	3	0	0	0	0	2	3	8	0	2	1	1	1	0	0	3	1	1	2	1	4	5	1	2
23	0	3	0	1	1	0	4	4	2	0	1	3	1	1	2	2	3	2	9	5	1	5	0	1	2
24	6	1	0	0	0	5	2	2	2	2	2	4	6	11	13	12	9	7	22	42	46	40	31	1	11
25	2	3	1	27	34	33	36	23	20	19	30	14	6	30	9	0	19	7	10	23	27	17	23	2	17
26	0	M	0	0	0	1	2	2	5	5	21	9	15	11	24	12	14	14	26	26	19	5	21	1	10
27	2	8	2	1	1	10	10	15	1	3	18	10	M	7	8	12	5	16	18	17	4	1	3	10	8
28	1	2	3	4	0	2	10	8	5	22	21	4	5	4	10	2	3	7	6	1	2	0	7	1	5
29	4	2	2	4	7	2	5	7	7	9	6	6	6	2	4	6	12	6	7	9	12	1	19	12	7
30	1	0	3	1	1	1	9	12	22	14	22	20	17	7	2	5	2	13	21	9	4	0	0	4	8

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							RANGE-----				STN GEOM	PERCENT	NO. OF TIMES		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR		24-HR		DEVIATION	VALID DATA	ABOVE LIMIT LEVEL		
5	3	7	3	22	32	44	53	0	-	60	0	-	34	3	100	0

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

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

STATION : CHEUNG CHAU
POLLUTANT : SULPHUR DIOXIDE

YEAR : 2019
UNIT : MICROGRAMS/CUBIC METER

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

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----				STN GEOM	PERCENT	NO. OF TIMES		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	ABOVE	LIMIT	LEVEL		
2	0	1	0	3	4	10	12	0	-	17	0	-	4	2	99	0

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

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

STATION : CHEUNG CHAU
POLLUTANT : NITROGEN DIOXIDE

MONTH: JUNE

YEAR : 2019
UNIT : MICROGRAMS/CUBIC METER

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	M	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	M	M	15	8	5	0	9	12	21	10	7	4
5	0	0	0	0	0	0	0	0	0	9	3	0	0	0	0	1	0	6	7	2	12	13	10	14	3
6	3	4	10	5	7	4	5	0	1	0	0	0	0	0	0	0	0	0	2	2	3	0	4	13	3
7	9	6	8	6	25	45	32	29	10	7	29	8	19	11	25	20	19	12	21	23	23	24	20	15	19
8	11	8	12	14	9	11	16	7	6	5	17	4	2	3	2	2	3	6	13	13	7	6	8	11	8
9	8	5	3	3	5	4	7	3	5	2	3	3	3	1	6	2	1	5	2	3	2	9	7	11	4
10	7	6	7	2	2	2	2	5	4	3	2	1	4	4	5	3	4	8	16	36	44	26	29	41	11
11	63	59	18	8	14	10	3	14	32	54	47	57	46	51	22	17	25	21	36	53	55	79	58	83	39
12	67	M	85	72	53	50	60	60	34	22	17	12	15	11	10	6	7	12	44	13	8	5	7	13	30
13	10	5	11	18	16	13	31	23	14	10	18	27	26	12	11	23	7	6	40	20	32	35	44	16	20
14	28	40	20	59	59	41	37	45	30	40	40	45	20	20	18	20	46	51	64	76	72	33	22	47	41
15	37	52	25	39	25	61	69	62	62	49	30	6	2	2	2	2	2	5	7	7	2	3	3	8	23
16	2	2	3	2	3	2	5	12	18	10	10	9	2	3	2	4	17	12	5	2	2	2	2	7	6
17	2	2	3	7	7	14	11	10	15	27	25	18	19	13	4	2	4	11	15	7	8	5	8	17	11
18	11	12	16	9	13	27	36	17	17	6	9	M	M	M	M	M	14	23	24	36	36	62	45	29	23
19	19	35	36	18	5	0	0	5	0	15	9	2	2	0	0	4	1	2	14	28	26	21	20	23	12
20	6	12	11	23	10	17	17	10	6	4	1	0	0	0	0	0	1	1	1	3	8	9	9	7	7
21	3	3	3	3	2	12	9	4	3	1	0	0	1	1	0	1	0	0	1	1	2	4	1	2	2
22	1	0	0	2	1	4	8	7	6	1	2	1	0	1	0	0	0	0	0	3	3	4	2	1	2
23	2	1	1	2	1	1	1	8	1	1	0	1	1	1	0	3	1	7	9	3	2	5	10	3	3
24	2	3	7	3	2	1	4	6	2	0	1	3	1	8	9	15	7	8	29	48	49	43	12	19	12
25	32	41	38	30	22	28	28	43	41	59	47	30	14	12	9	15	23	28	23	53	39	25	11	19	30
26	26	M	39	27	30	14	8	13	13	17	28	13	6	19	11	8	5	18	9	13	4	15	29	19	17
27	18	14	19	14	15	17	15	17	6	3	4	2	M	5	7	3	4	4	5	5	7	4	5	3	9
28	10	3	2	5	5	7	8	4	16	7	4	0	0	1	2	3	2	2	2	2	3	3	4	2	4
29	1	1	2	4	4	3	2	6	2	0	1	0	1	2	3	5	3	0	0	4	3	2	3	6	2
30	14	7	7	13	12	1	0	3	14	22	2	1	0	3	0	1	19	21	34	46	63	60	44	17	17

MONTHLY STATISTICS:

GEOM	ARITH-----PERCENTILES-----							-----RANGE-----				STN GEOM	PERCENT	NO. OF TIMES		
MEAN	MEDIAN	MEAN	50	90	95	98	99	1-HR	24-HR	DEVIATION	VALID DATA	ABOVE	LIMIT	LEVEL		
8	5	12	5	36	48	61	67	0	-	85	0	-	41	3	98	0

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

Appendix C Summary Results on Water Quality Monitoring

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

Period : April - June 2019

Week Ending	No. of Samples	Suspended Solids, mg/L			pH		
		Maximum	Minimum	Average	Maximum	Minimum	Average
06/04/19	7	20	14	17	8.3	7.7	8.1
13/04/19	7	21	12	17	8.3	7.6	8.1
20/04/19	7	22	14	17	8.3	7.7	8.1
27/04/19	6*	21	12	17	8.2	7.8	8.0
04/05/19	6*	18	12	16	8.3	7.8	8.1
11/05/19	7	20	13	16	8.1	7.6	7.9
18/05/19	7	20	13	16	8.3	7.8	8.1
25/05/19	7	19	12	16	8.2	7.9	8.1
01/06/19	7	23	15	18	8.3	7.8	8.0
08/06/19	7	22	14	17	8.2	7.7	8.0
15/06/19	7	23	13	19	8.4	7.8	8.1
22/06/19	5*	20	15	18	8.2	7.8	8.0
29/06/19	5*	18	15	17	8.5	7.6	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 : April - June 2019

Sampling date		2/4/2019	7/5/2019	4/6/2019
Barium,	ug/L	<150	<150	<150
Mercury,	ug/L	<0.5	<0.5	<0.5
Cadmium,	ug/L	1.9	2.4	2.9
Iron,	ug/L	<400	<400	<400
Total Phosphorous,	mg/L	<0.8	<0.8	<0.8
Total Nitrogen,	mg/L	50	65	70
Cyanide,	mg/L	0.01	0.02	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	Equipment 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