ภาคผนวก ข-4

สำเนาหนังสือชี้แจงกรณีมีผลการติดตามตรวจสอบคุณภาพอากาศไม่เป็นไปตามมาตรฐาน

BLCP POWER

เลขที่ : BLCP-SHE-2023-0092

7 กันยายน 2566

เรื่อง ขอแจ้งค่าการระบายปริมาณฝุ่นละอองของบริษัท บีแอลซีพี เพาเวอร์ จำกัด หน่วยผลิตที่ 2 มีค่าสูงผิดปกติ

เรียน ผู้อำนวยการสำนักงานนิคมอุตสาหกรรมมาบตาพุด

สำเนาเรียน ผู้อำนวยการสำนักงานท่าเรืออุตสาหกรรมมาบตาพุด

สิ่งที่ส่งมาด้วย 1.ผลการตรวจวัดค่าการระบายฝุ่นจากปล่องระบายอากาศของบริษัท บีแอลซีพี เพาเวอร์ จำกัด หน่วยผลิตที่ 2 วันที่ 7 กันยายน 2566

2. ค่าฝุ่นละอองในบรรยากาศทั่วไปที่สถานีวัดตากวน วันที่ 7 กันยายน 2566

ตามที่บริษัท บีแอลซีพี เพาเวอร์ จำกัด ได้มีการติดตั้งเครื่องมือตรวจวัดคุณภาพอากาศแบบต่อเนื่อง (Continuous Emissions Monitoring System; CEMS) เพื่อติดตามคุณภาพอากาศที่ระบายออกจากปล่องระบายอากาศ พบว่า ปริมาณฝุ่นละอองที่ระบายออกจากปล่องโรงไฟฟ้าบีแอลซีพี หน่วยผลิตที่ 2 (เฉลี่ย 1 ชั่วโมงสูงสุด) 7 กันยายน 2566 เวลาประมาณ 03.00 – 04.00 น. สูงกว่าข้อกำหนด EIA ที่กำหนดไว้ 43 มิลลิกรัมต่อลูกบาศก์เมตร ดังสิ่งที่ส่งมาด้วย 1 จากการตรวจสอบพบว่าอุปกรณ์ดักจับฝุ่นละอองแบบไฟฟ้าสถิตย์ (Electrostatic Precipitator; EP) เกิดการขัดข้องชั่วขณะ จึงเป็นสาเหตุที่ทำให้ค่าฝุ่นละอองสูงผิดปกติ

ในการนี้บริษัทฯ จึงได้ดำเนินการปรับกระบวนการผลิตและดำเนินการแก้ไข ตลอดจนควบคุมการเผาไหม้เพื่อให้ค่าการระบายฝุ่นละอองกลับมาสู่ค่าปกติ พร้อมกันนี้ได้ตรวจสอบและเฝ้าระวังค่าฝุ่นละอองในบรรยากาศทั่วไปที่สถานีวัดตากวน ซึ่งเป็นสถานีที่อยู่ใกล้โรงไฟฟ้าฯ มากที่สุด พบว่า ฝุ่นละอองรวมและฝุ่นละอองขนาดไม่เกิน 10 ไมครอน มีค่าปกติตามเกณฑ์มาตรฐาน ดังมีรายละเอียดตามสิ่งที่ส่งมาด้วย 2 นี้

จึงเรียนมาเพื่อโปรดทราบ

[redacted]

ฝ่ายสิ่งแวดล้อม โทรศัพท์ 038-918507 , 038-918687
Email: environment@blcp.co.th

BLCP POWER

เลขที่ : BLCP-SHE-2023-0091

7 กันยายน 2566

เรื่อง ขอแจ้งค่าการระบายปริมาณฝุ่นละอองของบริษัท บีแอลซีพี เพาเวอร์ จำกัด หน่วยผลิตที่ 2 มีค่าสูงผิดปกติ

เรียน อธิบดีกรมควบคุมมลพิษ

สิ่งที่ส่งมาด้วย 1.ผลการตรวจวัดค่าการระบายฝุ่นจากปล่องระบายอากาศของบริษัท บีแอลซีพี เพาเวอร์ จำกัด หน่วยผลิตที่ 2 วันที่ 7 กันยายน 2566

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[redacted]

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บริษัท บีแอลซีพี เพาเวอร์ จำกัด เลขที่ 9 ถนนไอ-แปด นิคมอุตสาหกรรมมาบตาพุด ต.มาบตาพุด อ.เมือง จ.ระยอง 21150 โทรศัพท์: 038 925 100 โทรสาร: 038 925 155, 038 925 199
BLCP POWER LIMITED No.9, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Muang, Rayong 21150 Tel: 66 38 925 100 Fax: 66 38 925 155, 66 38 925 199
www.blcp.co.th

สิ่งที่ส่งมาด้วย 1

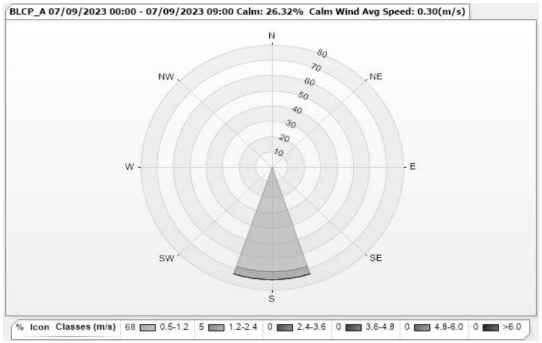
ค่าการระบายจากปล่องระบายอากาศแบบอัตโนมัติหน่วยผลิตที่ 2 ในวันที่ 7 กันยายน 2566

Date & Time		Unit 2
Start Time	End Time	Particulate in mg/m^3 ($7\%O_2$)
07/09/2023 00:00	07/09/2023 01:00	18.55
07/09/2023 01:00	07/09/2023 02:00	18.19
07/09/2023 02:00	07/09/2023 03:00	21.67
07/09/2023 03:00	07/09/2023 04:00	55.69
07/09/2023 04:00	07/09/2023 05:00	21.91
07/09/2023 05:00	07/09/2023 06:00	17.53
07/09/2023 06:00	07/09/2023 07:00	16.89
07/09/2023 07:00	07/09/2023 08:00	19.10
07/09/2023 08:00	07/09/2023 09:00	20.41
07/09/2023 09:00	07/09/2023 10:00	19.29
มาตรฐาน EIA		**≤43**

สิ่งที่ส่งมาด้วย 2

ผลการตรวจวัดคุณภาพอากาศในบรรยากาศทั่วไป ของสถานีวัดตากวน ในวันที่ 7 กันยายน 2566

Date & Time		BLCP_A	BLCP_A
Start Time	End Time	TSP ($\mu g/m^3$)	PM10 ($\mu g/m^3$)
07/09/2023 00:00	07/09/2023 01:00	13	8
07/09/2023 01:00	07/09/2023 02:00	0	3
07/09/2023 02:00	07/09/2023 03:00	0	4
07/09/2023 03:00	07/09/2023 04:00	2	6
07/09/2023 04:00	07/09/2023 05:00	4	25
07/09/2023 05:00	07/09/2023 06:00	7	11
07/09/2023 06:00	07/09/2023 07:00	25	4
07/09/2023 07:00	07/09/2023 08:00	39	17
07/09/2023 08:00	07/09/2023 09:00	29	13
07/09/2023 09:00	07/09/2023 10:00	5	8
มาตรฐาน (เฉลี่ย 24 ชั่วโมง)		**≤330**	**≤120**



ทิศทางลมวันที่ 7 กันยายน 2566
พัดจากทิศใต้ไปยังทิศเหนือ

ภาคผนวก ข-5

ข้อกำหนดด้านการระบายมลสารของโรงไฟฟ้า

BLCP PROCEDURE	BLCP	P	SHE	04	014	K

Title: **Management of Environmental Emissions**

[redacted]

Associated Documents:	BLCP-MP-SHE-01-001 Safety, Health and Environment Policy BLCP-P-SHE-03-015 Incident Reporting and Investigation (II-PSM) BLCP-P-SHE-05-002 Environmental Monitoring and Reporting BLCP-I-CSER-05-002 BLCP Complaints and Communications Management

Change History

Rev	Date	Author	Owner	Endorsed By	Authorized By	Modifications/Reason for change	Status
A	29-08-08	Ray W	OD	N/A	MD	First Issue	Withdrawn
B	22-04-09	Ray W	OD	N/A	GM	Addition of CW Outfall Emissions	Withdrawn
C	20-09-10	Adul U	OD	DGM	GM	1. Issue to BLCP template and new coding (refer to BLCP-P-CS-01-001) 2. Increase detail in Section 5.7.1 Cooling Water Temperature	Withdrawn
D	27-09-12	Adul U	OD	N/A	DMD	Addition of CW outfall COD limits and operations action.	Withdrawn
E	14-11-14	KSW	SM	ERD	OD	Added pro-active for outfall temperature	Withdrawn
F	14-11-16	KPS	SM	ERD	OD	Change author and change particulate matter to TSP	Withdrawn
G	23-06-17	KPS	SM	ERD	OD	5.7.1 Jellyfish attack during hot season	Withdrawn
H	30-10-18	KPS	SM	ERD	OD	1. Adjust responsibility 2. Adjust wording on item 5.5 in case of exceedance of limit 3. Add action in item 5.6.4	Withdrawn

I	21-10-20	KPS	SOM	ED	OD	Change owner and endorsed	Withdrawn
J	31-10-22	TBS	SOM	ED	OD	-Change Author and Bi-annual review -Change ER to CSER -Change SH and Environment manager to SHE manager	Withdrawn
K	12-01-23	TBS	SOM	ED	OD	-Review associated documents correct version -Add more detail at 5.6.4 High Total Suspended Particulate (TSP)	Issued

CONTENTS

1. Introduction/Purpose
2. Scope
3. Definition
4. Responsibilities
5. Procedure
6. Training
7. Control of Records
8. Review and Audit

Appendix I Load reduction after stack emission EIA limits exceedance.

1. INTRODUCTION/PURPOSE

The Environmental Impact of the Operation of BLCP Power Station is regulated by Thai Law, Environmental Impact Assessment (EIA) and other applicable documents.

The purpose of this procedure is to provide guidance for Operations staff in cases where limits in legislation and EIA may be exceeded for shorter period of time and where no exact requirements for action in legislation, EIA or elsewhere is otherwise provided.

BLCP places great importance on complying with the Environmental requirements and will accept that penalties may occur or greater risk for penalties may arise in order to strictly comply with environmental requirements, based on hourly values.

2. SCOPE

This procedure is applicable for all main and balance of plant equipment at BLCP Power Ltd. The principles herein are applicable for the following emissions parameters:

- Stack SO_2 emissions
- Stack NOx emissions
- Stack dust emissions
- Cooling Water Outfall emissions (Temperature, pH, Chlorine)

Legal and EIA documents pertaining to Environmental Limits and Stack Emissions will always supersede and have higher priority than this procedure.

3. DEFINITION

EMR	Environmental Management Representative
OH&SMR	Occupational Health and Safety Management Representative
SM / ERM	Shift Manager /Emergency Response Manager
CSER	Corporate Services and External Relations Department
EIA	Environmental Impact Assessment: 2 x 717 MW Independent Power Project
Emergency Case	In case of high emission level including SO_2, NOx, Total Suspended Particulate, emit to atmospheres in higher than EIA commitment limits as in continuous period due to emission control equipment failures, malfunction or tripped or plant emergency shutdown
Internal Communication	Any activity aimed to publicize the company's Occupational Health & Safety and Environmental implementation for all of employees.
External Communication	Any activity and information dealing or incoming concern of Occupational Health and Safety and Environmental from external sources whether government, concern external parties, contractor or above
Emissions	Refers to both Stacks and CW Outfall Discharge
NOx	Oxides of Nitrogen

SO_2	Sulfur dioxide
TSP	Total Suspended Particulate
CEMS	Continuous Emission Monitoring System
AQMS	Air Quality Monitoring Station
FGD	Flue Gas Desulphurization
BUF	Boost Up Fan forming part of the FGD plant
EP	Electrostatic precipitator
CW Outfall	Condenser and FGD Cooling Water discharge

4. RESPONSIBILITIES

Operations Director is responsible for:

- Execution and implementation of this procedure.
- Ensuring that operation personnel are notified of and comply with this procedure.

Shift Manager / Assistant Shift Manager is responsible for:

- Supervising operational personnel and ensuring compliance with this procedure.
- Reporting directly to BLCP Senior Management in the event of exceeding limits.
- Reporting directly to BLCP Senior Management when there is an imminent risk of exceeding limits.
- Evaluating the causes of an exceedance and taking the appropriate action in response in accordance with this procedure.
- Preventing exceedances as guided by this procedure at the expense of incurring penalties from PPA by reducing load shall determine the time needed for load reduction and where possible give 30 minutes warning according to PPA to EGAT prior to load reduction.
- Liaising with EGAT to minimize penalties from any resultant load reductions incurred as a means of preventing or limiting an environmental exceedance.
- Report to the relevant authorities (IEAT) within 15 minutes by phone and 24 hrs. by formal excursion report.
- Reporting any exceedances according to BLCP-P-SHE-03-015 Incident Reporting and BLCP-P-SHE-05-002 Environmental Monitoring and Reporting

Process Engineer / Unit Operator is responsible for:

- Monitoring the environmental parameters, trends and alarm with quick immediate action.
- Reporting immediate in the event of an emissions excursion.
- Taking appropriate action to prevent an emissions excursion and reporting events immediately to the ASM and SM.
- Acting promptly in response to alarms or events that will lead to an exceedance in the environmental limits.

Corporate Services and External Relations is responsible for:

- Liaising with external parties such as government, IEAT and the community in event of an emergency case where environmental emissions exceed EIA limits for a continuous period.

SHE manager is responsible for:

- The evaluation of risks from pollution of the workplace to protect all persons on the BLCP site.
- Providing or supporting the protection equipment to reduce the risk in workplace if necessary.
- Report to the relevant authorities (IEAT) within 24 hrs. by formal excursion report.

5. PROCEDURE

5.1 Environmental limits

Type	Parameters	Unit	90% limit	EIA limit	Thai Standard
Stack	NOx	ppm	216.9	≤ 241	≤ 350
	SO_2	ppm	235.8	≤ 262	≤ 320
	Total Suspended Particles	mg/Nm^3	38.7	≤ 43	≤ 120
Outfall	Temperature	°C		≤ 40	≤ 40
	Chlorine (Free Chlorine)	mg/l	0.9	≤ 1.0	≤ 1.0
	pH	-	6.0-8.0	5.5-9.0	5.5-9.0
	COD	mg/l	108	-	≤ 120

5.2 Emissions

Emissions refer to the discharge from the stack and CW outfall canal. Flue gas stack discharge is monitored for levels of NOx, SO_2, total suspended particulate and opacity. CW Outfall discharge is monitored for temperature, pH, free chlorine and COD.

The following instruction relates to the control actions required to be taken to prevent an exceedance and emergency action in event of these parameters being exceeded.

5.3 Normal Operations

Under normal operating conditions Operators must closely monitor and control environmental emissions to maintain emissions below the above limits.

The following procedure provides the Operator with guidelines and appropriate control action when approaching;

- 90% of flue gas stack emission limit

- CW outfall emission limit (temperature, chlorine, pH and COD)

BLCP management have accepted the increased risk of loss of availability and incurrence of penalties, should it be considered necessary to reduce load or shutdown the unit to avoid an environmental emission excursion.

Efforts should be made to minimize penalties in accordance with the PPA agreement and whenever possible a 30 minutes short notice will be issued to EGAT declaring a load reduction.

Shift Manager shall determine the load reduction based on actual case data, as a guideline a reduction to 500 MW shall be initiated for NOx. The load reduction to limit SO_2 excursions shall depend upon actual plant conditions at the time.

5.4 Initial actions

Flue Gas Stack Emissions – DCS alarms are set at 90% of EIA limits, based on instantaneous values. Operations shall react immediately if alarm level is reached to try to prevent any excursions by adjusting operational parameters, as detailed in sections 5.5 and 5.6

CW Outfall High Temperature – DCS alarms are set at 39.0°C, 39.5°C and 40.0 °C based on instantaneous values. Operations shall react immediately upon receipt of the first alarm to prevent excursion above the 40.0°C maximum limit as detailed in sections 5.5 and 5.7.1

CW Outfall pH – DCS alarms are set at 6.5 and 8.5 based on instantaneous values. Operations shall react immediately upon receipt of the alarm to prevent excursion beyond the EIA limit of 5.0 to 9.0 as detailed in sections 5.7.2

CW Outfall Chlorine – DCS alarms are set at 0.5 and 0.1 based on instantaneous values. Operations shall react immediately upon receipt of the alarm to prevent excursion beyond the EIA limit of 1.0 mg/l as detailed in sections 5.7.3

CW Outfall COD – DCS alarms are set at 90% of Thai Standard, based on instantaneous values. Operations shall react immediately upon receipt of the alarm to prevent excursion beyond the Thai Standard of 120 mg/l.

5.5 Exceedance of Limit

Every parameter must not be over legal, Thai Standard or EIA limits at all times. If the initial control action does not result in limiting the emissions and the EIA limit, the immediately action shall be implement follow item 5.6 and 5.7.

Load shall be reduced so the excursions are limited as shown in Table 5.1

Shift Manager shall determine the time needed for load reduction and where possible give 30 minutes warning according to PPA to EGAT prior to load reduction.

For flue gas stack emission, scenarios for load reductions are given in Appendix I as guidance for exceedance of EIA limit.

Any environmental emission excursion based on 1 hour values and any load reductions shall be immediately reported to the Operations Director.

* For CW outfall temperature limits not exceedance 40.0°C at all time. It is not necessary to reduce load in event of operation outside of limits for CW outfall pH and chlorine)

If Operation can be stabilized above 90% but below EIA limits for flue gas stack emissions, no load reduction is required, however the operation shall be closely monitored.

In the event of an "emergency case", where stack or outfall emissions exceed the EIA limit for a continuous period; in addition to reporting the excursion to the Operations Director. The CSER Team must also be notified, in order to liaise with the external parties.

Where emission values have been exceeded or monitoring equipment has failed or malfunctioned, these events shall be recorded in the Operation Daily Report.

The relevant authorities must be reported by CSER Team within 24 hrs. after the incident excursion and any exceeding the limits.

5.6 Stack Emissions

5.6.1 SO_2 Emission

If SO_2 levels are high due to FGD problems or high sulphur coal, adjustments must be made to return the level below the 90% EIA limit (236 ppm).

Where adjustments cannot return the level of EIA limit, EGAT should be notified (30 minutes short notice) and the load progressively reduced until SO_2 levels are in limit.

Adjustment may include the following:

- Adjustments to the FGD flue gas throughput settings by bias (increase) FGD flue gas flow control. Close attention to the BUF stall curve and conditions will be required to prevent the BUF from a possible stall.
- Change-over to a standby mill with low sulfur coal.
- Adjustment to Mill coal flow output bias
- Change coal burning program to blending with low sulphur coal

5.6.2 NOx Emission

When the emission levels reach 90% of the maximum permissible EIA limits (217 ppm) efforts to recover normal operating conditions should be made.

Adjustment may include the following:

- Adjustment to additional air dampers by bias (increase) wind box No. 7AA, 8AA and monitor CO emission value.
- Adjustment to the bias of mill output
- Minor air flow adjustment by bias (decrease) excess O_2.
- Application of short term soot-blowing restrictions

If NOx levels are high due to operation with 6 mills in service for whatever reason the sixth mill must be taken out of service immediately and the unit load supported by 5 mills only.

5.6.3 Equipment Failure

i. Loss of a BUF

In the event of the failure of a BUF resulting in an immediate increase in SO_2 emissions levels above the EIA limit, gas flow through the FGD should be adjusted to one BUF capacity to prevent a possible fan stall of the remaining in-service fan.

Where an immediate restart of the BUF is not possible, a load reduction should be considered to declare (30 minutes Short Notice) if the SO_2 stack emission 90% EIA limit exceedance and the load progressively reduced until emissions are in limit.

ii. Loss of two FGD Sea Water Pumps

In the event of the failure of two FGD sea water pumps resulting in an increase in SO_2 emissions levels above the EIA limit, a decrease of gas flow through the FGD will be necessary.

Where an immediate restart of one of the sea water pumps is not possible, a load reduction should be considered to declare (30 minutes Short Notice) it the SO_2 stack emission 90% EIA limit exceedance and the load progressively reduced until emissions are in limit.

5.6.4 High Total Suspended Particulate (TSP)

Operation should strive to maintain opacity readings which according to the acknowledged correlation curves will correspond to the total suspended particulate (TSP) as required by EIA limit (43 mg/Nm^3).

Load reductions shall be initiated, if the opacity readings abnormal, to bring the readings total suspended particulate below EIA limit requirements, based on hourly values.

If high opacity readings occur, operation staff shall try to lower theses by:

- Checking boiler combustion and mill operation for correct performance
- Checking all EP sections for correct performance regarding voltage, current and rapping hammer operating cycle.
- Checking all EP hoppers to ensure no blocking hoppers
- Bias FGD max (+2%).
- Start Pulverizer stand by and reduce coal flow of coal brand that high % ash and/or low ESP K-factor.
- Inform MHO to change coal burning program that low% ash and/or high ESP K-factor.
- Checking and maintain burner tilting working should not more than 15 degree position
- Checking and maintain rate of excess O2 adjustment to ensure that combustion air flow not exceed

5.6.5 Loss of Two or More Electrostatic Precipitator Sections

In the event of the failure of two or more zones of the electrostatic precipitators resulting in an increase in emissions, and where an immediate restart of the failed zones is not possible within 20 minutes, a load reduction will be declared immediately, requiring 30 minutes Short Notice to EGAT.

The load should, then be immediately reduced until particulate emission levels are within limit Where, a restart of the failed zones is not imminent, it may be necessary to reduce the boiler gas flow to a single gas path flow to ensure the unit stays within particulate emission limits.

5.7 Cooling Water Outfall

5.7.1 Cooling Water Temperature

Operations should strive to maintain CW outfall temperatures below the EIA limit of 40.0°C**.** Three alarm levels are set to warn the Operator of an impending possible exceedance. The CW outfall temperature is dependent on the CW inlet temperature, condenser heat load, FGD flow, tidal and seasonal seawater conditions. Average CW inlet temperatures are seasonal and peak during April-May approximately (30-32 ^{O}C) and are trending to increase every year.

The lower the tide level the greater the temperature rise at the CW intake. This affect can be considerable with tides less than 0.9 m. If the average CW inlet temperature reaches 31.5°C the CW outfall temperature will approach the 40.0°C EIA limit.

These factors should be considered when anticipating CW outfall temperatures and attempting to maintain them within the EIA limit of 40.0°C.

If the sea water tide level and CW inlet temperatures forecasting indicates that CW inlet temperatures will be higher than 31.5 ^{O}C and sea water tide level is lower than 0.9 m. (Sattahip Tide Table) from normal sea water tide level, coal burning program should be considered by changing to burn low sulphur (<0.30%) coal in advance for supporting the FGD by-pass operation during the hot period.

- Coal burning program will be prepared with low sulphur coal during hot season to cover the period of CW inlet temperature high and low tide level during April-June.
- Coal burning program will be changed to burn with low sulphur coal during low tide level especially during day time.
- FGD will be bypassing operation to reduce hot flue gas to CW outlet temperature by bias BUF inlet guide vane and out of service Boost up fans respectively.
    - Bias FGD (-50) or approximately 80% bypass flue gas to stack.
    - Manual throttle FGD boost up fans inlet guide vane
    - Out of service FGD boost up fans.
- Coal bunker A should be storaged with low sulphur coal during this period for emergency in service to reduce the magnitude of CW outlet temperature.

In case of jellyfish attacking that could effect to CW outfall temperature

These factors should be considered when anticipating CW outfall temperatures and attempting to maintain them within the EIA limit of 40.0°C.

- Coal burning program will be changed to burn with low sulphur coal during low tide level especially during day time.
- FGD will be bypassing operation to reduce hot flue gas to CW outlet temperature by bias BUF inlet guide vane and out of service Boost up fans respectively when

jellyfish has been observed at the jetty that possible effect to block travelling screen.

- Bias FGD (-50) or approximately 80% bypass flue gas to stack.
- Manual throttle FGD boost up fans inlet guide vane
- Out of service FGD boost up fans.
- Travelling screens will be in service at initially low speed and change to high speed in automatically control or manually adjust by operator.
- Throttle condenser outlet water box when differential level across travelling screen >250 mm or observe massive of jellyfish at the intake or travelling screen.
- Maximum control condenser outlet water box throttling to control CW outlet not greater than 40 °C.
- Consider to keep low sulphur coal in Coal bunker A for supporting in an emergency situation that requires FGD bypassing operation to reduce the magnitude of CW outlet temperature.
- CW pumps allow to restart 2 times an hour if any protection that trip the pump.

Alarm Level and Control Action

Level 1 alarm at 39.0°C – Commence to bias down flue gas to the FGD gradually step by step, closely monitoring the SO_2 and particulate matter level, these must be controlled within 90% of the EIA limit. The first control action involves bypassing flue gas around the FGD. At normal MCP gas flow the FGD contributes approximately 1.3 to 1.5°C to CW outfall temperature.

Level 2 alarm at 39.5°C – Warning of approaching limit which requires more continue bias down flue gas to the FGD gradually step by step, until completely out service FGD, closely monitoring the SO_2 and particulate matter level that must be controlled within 90% of the EIA limit. Generation load reduction must be considered if the CW outlet temperature tendency is increasing and weather condition such as ambient temperature, tide level and CW inlet temperature is not satisfactory.

Level 3 alarm at 40.0°C – Shift manager or Assistant shift manager give short notice of impending load reduction (30 minutes) and advice Operations Director or General Manager immediately. After 30 minutes reduce load by 50-100 MW and monitor the outfall temperature. The cooling outfall temperature is expected to reduce by 0.30°C - 0.67°C.

5.7.2 Cooling Water pH

The EIA pH limit of the CW outfall is 5.0 to 9.0 with the DCS alarm values are set at 6.5 and 8.5. Upon receipt of the low alarm, operations shall confirm outfall readings / instrumentation and place Aeration Blowers in service to raise pH level.

5.7.3 Cooling Water Residual Chlorine

The EIA free residual chlorine limit of the outfall cooling water is 1.0 mg/l with the DCS alarm values are set at 0.5 and 0.1. High chlorine residual is a result of excessive chlorine dosing at the intake, while low chlorine residuals is a result of insufficient chlorine dosing. Operations shall confirm outfall readings / instrumentation and adjust chlorine dosing in order to maintain chlorine residual within the control range of 0.1 to 0.5.

5.7.4 Cooling Water COD.

Thai standard COD limit of the outfall cooling water is 120 mg/l with the DCS alarm values are set at 108 and 120 mg/l upon receipt of the high alarm, operations shall confirm the COD outfall readings / instrumentation and compare the analysis result between sea water intake COD and sea water outfall COD before immediately corrective action taken be reduced the sea water flow rate though FGD.

5.8 Resumption of load levels after load reduction.

After a load reduction Operation staff shall continue to rectify the situation in an attempt to restore full production capacity.

In case of cooling water temperature exceeded.

- Shift Manager will consider the weather conditions i.e. sea water inlet temperature, tide level, cooling water outlet temperature drop after load reduction, marginal of FGD bias and also coal burning program will be considered to ensure that plant could be run through 24 hrs after resumptions.
- Shift Manager will advise Operations Director for decision making a notice of generation load resumption back to normal.

In case of equipment failure, load may be increased when equipment is made available and the plant can be safely operated below emissions levels.

If the situation cannot be immediately rectified, the load reduction shall be maintained. Assistance shall be requested from Engineering, and BLCP Senior Management shall be contacted for decision support.

Following an Emergency Case, where emissions have been returned to normal, the Operations Director, CSER Team and SHE Team, must be notified of the plant status.

5.9 Support

The EMR or Environmental Engineer is responsible to advise ways to mitigate or eliminate emissions, and should be consulted as required. The OH&SMR or Safety Engineer is responsible to advise of safe areas for evacuation if necessary and safety information on site as required.

5.10 Mitigation of Outside Impact

Following an environmental incident the Shift Manager must prepare the initial incident report for submission to the Operations Director. In consultation and approval with management the CSER Team will then be responsible for disseminating information for release to the Government, IEAT and Community.

BLCP POWER

The CSER Team Community will survey and monitor the surrounding area which may have been affected by any emissions and obtain feedback from any affected external parties. This information shall be recorded and reported to BLCP management.

6. TRAINING

The author of this procedure is responsible for providing training and guidance in its implementation.

The Owner of this procedure is responsible for cascade training to persons that are required to monitor and/or control emissions that may impact upon the compliance with this procedure.

As a minimum this training will be provided to all persons named as having specific responsibilities under this procedure.

Any records of training will be submitted to HR and copies of training records shall be kept in the BLCP Filing System.

7. CONTROL OF RECORDS

All records connected within this instruction shall be kept in file at Central Control room (CCR) and controlled by Operations Department. They must be available for scrutiny and audit.

Records should be stored for archive where possible within the BLCP Filing System maintained by Document Control.

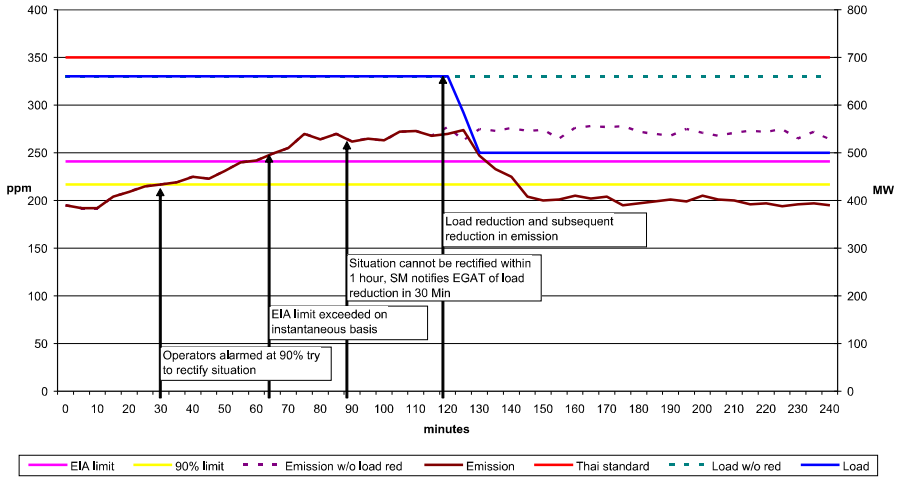
8. REVIEW AND AUDIT

BLCP Procedures and Instructions associated with the Safety, Health, and Environment will be reviewed every two years under BLCP-P-SHE-03-003– Safety, Health and Environment Audit and Review unless needed before the planned.

Any inaccuracies or omissions in this procedure should be notified to the procedure owner immediately.

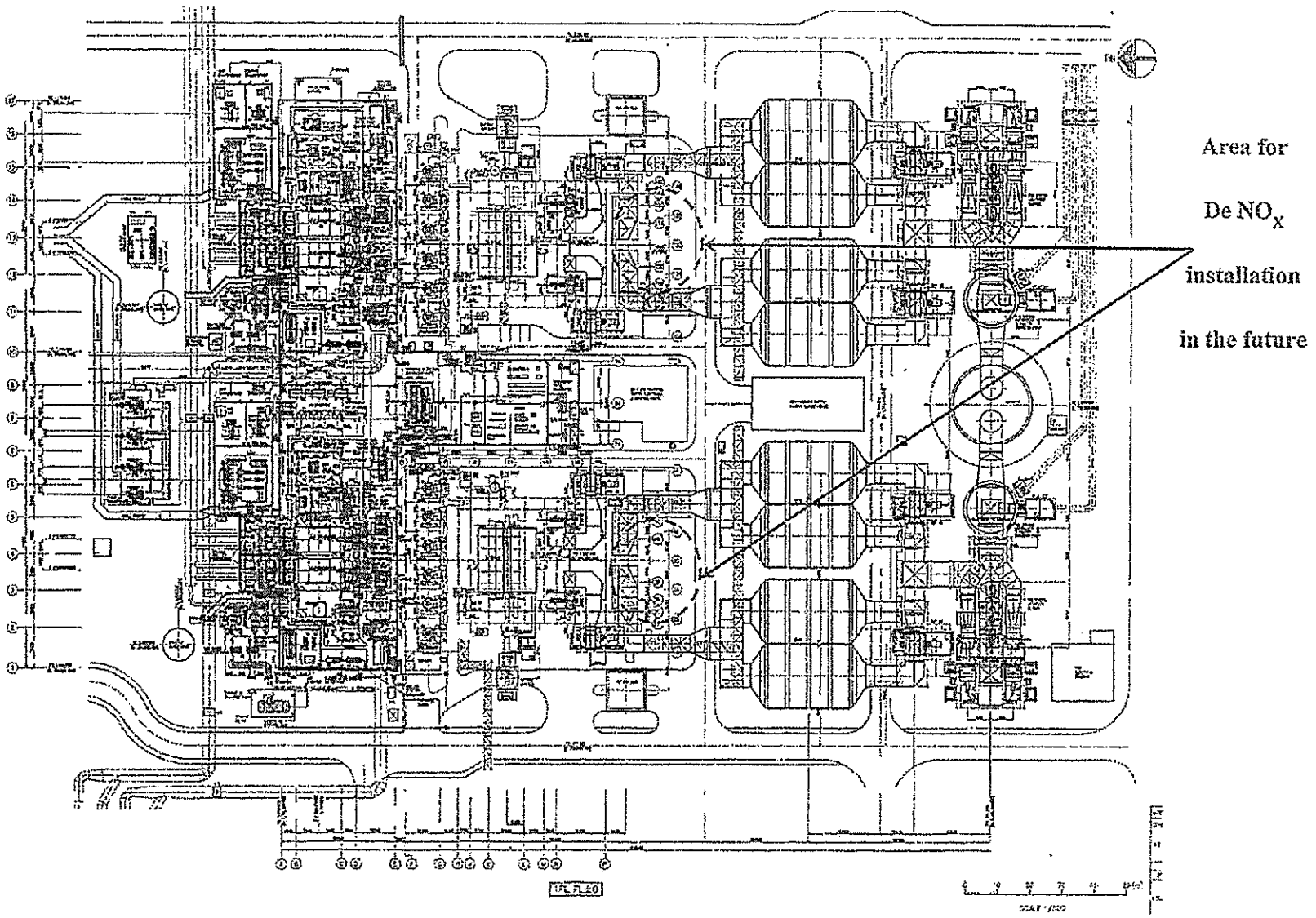
Appendix I

Load reduction after Stack Emission EIA limit exceedance

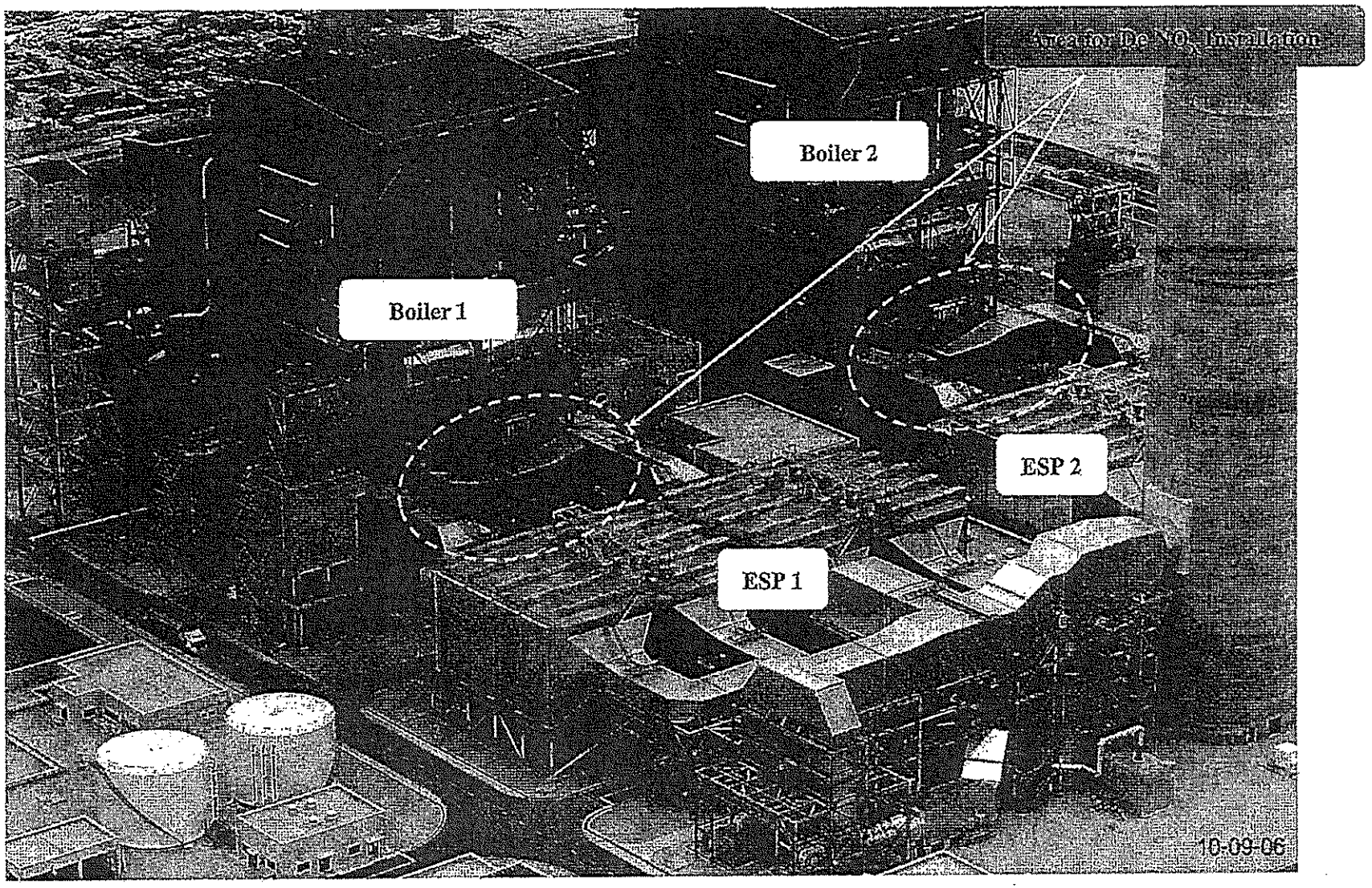


ภาคผนวก ข-6

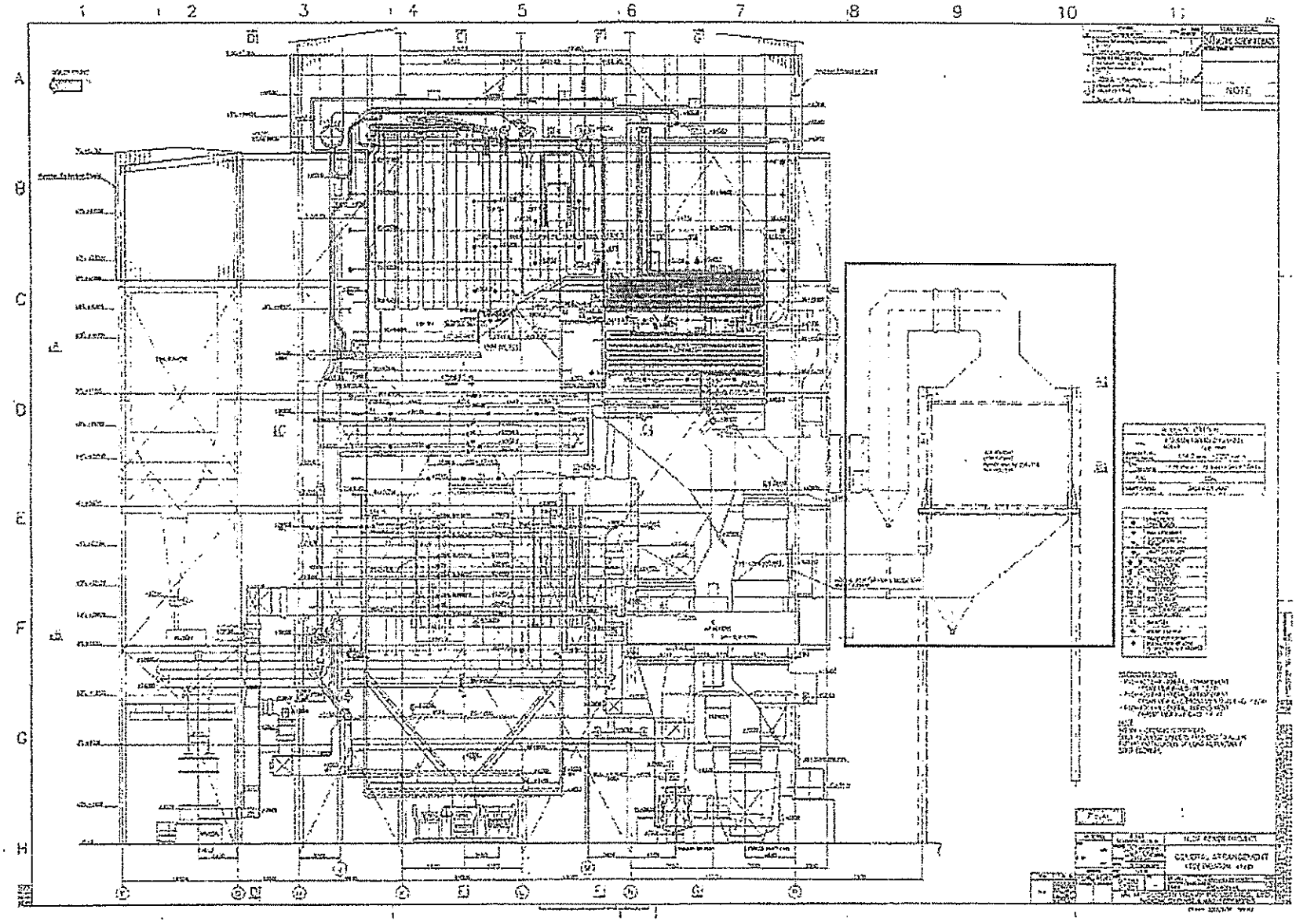
ผังพื้นที่เพื่อแสดงบริเวณพื้นที่ภายในกระบวนการผลิตที่ได้จัดเตรียมไว้สำหรับติดตั้งอุปกรณ์ลดปริมาณ NO_x ในอนาคต



รูปที่ 1-1 ผังพื้นที่เพื่อแสดงบริเวณพื้นที่ภายในกระบวนการผลิตที่ได้จัดเตรียมไว้สำหรับติดตั้งอุปกรณ์ลดปริมาณ NO_X ในอนาคต



รูปที่ 1-2 รูปภาพบริเวณพื้นที่ภายในกระบวนการผลิตที่ได้จัดเตรียมไว้สำหรับติดตั้งอุปกรณ์ลดปริมาณ NO_x ในอนาคต



รูปที่ 1-3 ตำแหน่งที่ออกแบบไว้สำหรับติดตั้งอุปกรณ์ลดปริมาณ NO_x ในอนาคต