

# ภาคผนวก ค-8

ระดับเสียงในบริเวณการทำงาน



## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2334532**

Date Received : Mar 31, 2023

Date Reported : Apr 05, 2023

Report Number: 2615397-1

Page 1 of 1

**Sample Number** 2334532-1  
**Parameter** Noise (Leq 8 hrs.)  
**Location** บริเวณ Cooling Tower  
**Measurement Date** Mar 30, 2023  
**Measurement by** Supot Salamteh

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:40 AM - 11:40 AM	82.3	91.6	82.4
11:40 AM - 12:40 PM	82.5	84.3	82.4
12:40 PM - 01:40 PM	82.5	84.3	82.4
01:40 PM - 02:40 PM	82.5	84.3	82.4
02:40 PM - 03:40 PM	82.5	84.3	82.4
03:40 PM - 04:40 PM	82.6	84.2	82.5
04:40 PM - 05:40 PM	82.7	87.5	82.6
05:40 PM - 06:40 PM	82.9	84.7	82.8

Leq Average 8 hrs. (dB(A))

82.6

Lmax (dB(A))

91.6

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย  
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**Technical Management**

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**Approved by**

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**Project Location :** GNC

**Lot ID: 2334532**

Date Received : Mar 31, 2023

Date Reported : Apr 05, 2023

Report Number: 2615398-1

Page 1 of 1

**Sample Number** 2334532-2  
**Parameter** Noise (Leq 8 hrs.)  
**Location** บริเวณ Gas Compressor  
**Measurement Date** Mar 30, 2023  
**Measurement by** Supot Salamteh

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:07 AM - 11:07 AM	72.3	73.5	71.8
11:07 AM - 12:07 PM	71.4	91.1	70.4
12:07 PM - 01:07 PM	71.6	74.6	70.8
01:07 PM - 02:07 PM	72.4	91.4	71.2
02:07 PM - 03:07 PM	72.5	80.9	71.9
03:07 PM - 04:07 PM	73.2	75.1	72.5
04:07 PM - 05:07 PM	73.6	74.6	73.1
05:07 PM - 06:07 PM	73.1	91.0	72.0

Leq Average 8 hrs. (dB(A))

72.6

Lmax (dB(A))

91.4

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2334532**

Date Received : Mar 31, 2023

Date Reported : Apr 05, 2023

Report Number: 2615399-1

Page 1 of 1

**Sample Number** 2334532-3  
**Parameter** Noise (Leq 8 hrs.)  
**Location** บริเวณ Boiler Feed Pump  
**Measurement Date** Mar 30, 2023  
**Measurement by** Supot Salamteh

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:24 AM - 11:24 AM	77.9	80.8	77.6
11:24 AM - 12:24 PM	78.1	78.9	77.8
12:24 PM - 01:24 PM	78.0	80.1	77.8
01:24 PM - 02:24 PM	77.9	78.7	77.8
02:24 PM - 03:24 PM	77.9	79.0	77.8
03:24 PM - 04:24 PM	77.9	78.8	77.8
04:24 PM - 05:24 PM	78.0	78.5	77.8
05:24 PM - 06:24 PM	78.1	84.1	78.0

Leq Average 8 hrs. (dB(A))

78.0

Lmax (dB(A))

84.1

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2334532**

Date Received : Mar 31, 2023

Date Reported : Apr 05, 2023

Report Number: 2615401-1

Page 1 of 1

**Sample Number** 2334532-5  
**Parameter** Noise (Leq 8 hrs.)  
**Location** บริเวณ Gas Turbine Accessories System GT2  
**Measurement Date** Mar 30, 2023  
**Measurement by** Supot Salamteh

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:37 AM - 11:37 AM	81.3	83.7	80.9
11:37 AM - 12:37 PM	80.6	81.7	80.3
12:37 PM - 01:37 PM	80.2	81.4	79.8
01:37 PM - 02:37 PM	79.6	84.9	79.3
02:37 PM - 03:37 PM	79.5	81.0	79.2
03:37 PM - 04:37 PM	79.7	81.1	79.3
04:37 PM - 05:37 PM	79.8	81.1	79.4
05:37 PM - 06:37 PM	79.9	82.2	79.6

Leq Average 8 hrs. (dB(A))

80.1

Lmax (dB(A))

84.9

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2334532**

Date Received : Mar 31, 2023

Date Reported : Apr 05, 2023

Report Number: 2615402-1

Page 1 of 1

**Sample Number** 2334532-6  
**Parameter** Noise (Leq 8 hrs.)  
**Location** บริเวณ Steam Turbine Generator  
**Measurement Date** Mar 30, 2023  
**Measurement by** Supot Salamteh

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:13 AM - 11:13 AM	80.5	82.2	80.2
11:13 AM - 12:13 PM	80.5	81.5	80.2
12:13 PM - 01:13 PM	80.8	81.8	80.3
01:13 PM - 02:13 PM	81.0	82.0	80.8
02:13 PM - 03:13 PM	81.2	82.3	80.9
03:13 PM - 04:13 PM	81.5	82.3	81.1
04:13 PM - 05:13 PM	81.6	86.3	81.3
05:13 PM - 06:13 PM	82.9	88.5	82.5

Leq Average 8 hrs. (dB(A))

81.3

Lmax (dB(A))

88.5

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2334532**

Date Received : Mar 31, 2023

Date Reported : Apr 05, 2023

Report Number: 2615403-1

Page 1 of 1

**Sample Number** 2334532-7  
**Parameter** Noise (Leq 8 hrs.)  
**Location** บริเวณ Steam Turbine Lube Oil Skid  
**Measurement Date** Mar 30, 2023  
**Measurement by** Supot Salamteh

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:19 AM - 11:19 AM	72.2	100.0	70.3
11:19 AM - 12:19 PM	71.1	79.2	70.9
12:19 PM - 01:19 PM	72.2	74.0	72.0
01:19 PM - 02:19 PM	72.4	78.2	70.9
02:19 PM - 03:19 PM	71.6	81.5	71.2
03:19 PM - 04:19 PM	71.9	75.0	71.5
04:19 PM - 05:19 PM	72.1	80.8	71.8
05:19 PM - 06:19 PM	71.8	81.7	71.4

Leq Average 8 hrs. (dB(A))

71.9

Lmax (dB(A))

100.0

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2341176**

Date Received : Apr 18, 2023

Date Reported : Apr 24, 2023

Report Number: 2621192-1

Page 1 of 1

**Sample Number** 2341176-1  
**Parameter** Noise (Leq 8 hrs.)  
**Location** บริเวณ Gas Turbine Accessories System GT1  
**Measurement Date** Apr 17, 2023  
**Measurement by** Siriwit Ruangsom

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:40 AM - 10:40 AM	78.5	80.7	78.1
10:40 AM - 11:40 AM	78.1	79.5	77.7
11:40 AM - 12:40 PM	77.8	79.0	77.5
12:40 PM - 01:40 PM	77.9	79.7	77.4
01:40 PM - 02:40 PM	77.5	79.0	77.2
02:40 PM - 03:40 PM	78.2	98.6	77.1
03:40 PM - 04:40 PM	77.7	97.8	77.1
04:40 PM - 05:40 PM	82.6	91.9	77.4

Leq Average 8 hrs. (dB(A))

78.9

Lmax (dB(A))

98.6

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย  
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**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2340042**

Date Received : May 25, 2023

Date Reported : May 30, 2023

Report Number: 2664382-1

Page 1 of 1

**Sample Number** 2340042-1  
**Parameter** Noise (Leq 8 hrs.)  
**Location** บริเวณ Cooling Tower  
**Measurement Date** May 24, 2023  
**Measurement by** Satcha Phetsawaeng

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:13 AM - 10:13 AM	81.0	87.1	76.9
10:13 AM - 11:13 AM	81.6	83.0	81.4
11:13 AM - 12:13 PM	81.4	83.3	81.2
12:13 PM - 01:13 PM	81.4	83.1	81.2
01:13 PM - 02:13 PM	81.4	83.3	81.2
02:13 PM - 03:13 PM	82.1	84.2	81.1
03:13 PM - 04:13 PM	81.6	83.6	81.2
04:13 PM - 05:13 PM	82.6	83.4	82.4

Leq Average 8 hrs. (dB(A))

81.7

Lmax (dB(A))

87.1

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2340042**

Date Received : May 25, 2023

Date Reported : May 30, 2023

Report Number: 2664383-1

Page 1 of 1

**Sample Number** 2340042-2  
**Parameter** Noise (Leq 8 hrs.)  
**Location** บริเวณ Gas Compressor  
**Measurement Date** May 24, 2023  
**Measurement by** Satcha Phetsawaeng

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:36 AM - 10:36 AM	74.8	78.1	72.9
10:36 AM - 11:36 AM	75.0	78.9	72.6
11:36 AM - 12:36 PM	75.3	80.5	72.6
12:36 PM - 01:36 PM	75.5	80.1	73.3
01:36 PM - 02:36 PM	75.7	79.0	73.7
02:36 PM - 03:36 PM	76.3	79.9	74.5
03:36 PM - 04:36 PM	75.2	82.6	73.1
04:36 PM - 05:36 PM	74.0	81.5	72.9

Leq Average 8 hrs. (dB(A))

75.3

Lmax (dB(A))

82.6

Standard (dB(A))

90

140

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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2340042**

Date Received : May 25, 2023

Date Reported : May 30, 2023

Report Number: 2664384-1

Page 1 of 1

**Sample Number** 2340042-3  
**Parameter** Noise (Leq 8 hrs.)  
**Location** บริเวณ Boiler Feed Pump  
**Measurement Date** May 24, 2023  
**Measurement by** Satcha Phetsawaeng

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:19 AM - 10:19 AM	81.9	82.8	81.7
10:19 AM - 11:19 AM	81.9	82.7	81.7
11:19 AM - 12:19 PM	82.0	82.7	81.8
12:19 PM - 01:19 PM	81.8	82.5	81.6
01:19 PM - 02:19 PM	81.6	82.2	81.4
02:19 PM - 03:19 PM	81.6	82.2	81.4
03:19 PM - 04:19 PM	81.6	82.2	81.4
04:19 PM - 05:19 PM	81.1	85.2	80.1

Leq Average 8 hrs. (dB(A))

81.7

Lmax (dB(A))

85.2

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย  
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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2340042**

Date Received : May 25, 2023

Date Reported : May 30, 2023

Report Number: 2664385-1

Page 1 of 1

**Sample Number** 2340042-4  
**Parameter** Noise (Leq 8 hrs.)  
**Location** บริเวณ Gas Turbine Accessories System GT1  
**Measurement Date** May 24, 2023  
**Measurement by** Satcha Phetsawaeng

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:16 AM - 10:16 AM	84.0	85.2	83.7
10:16 AM - 11:16 AM	83.9	84.6	83.6
11:16 AM - 12:16 PM	84.2	85.4	83.6
12:16 PM - 01:16 PM	84.3	85.4	83.5
01:16 PM - 02:16 PM	83.7	84.7	83.0
02:16 PM - 03:16 PM	83.6	84.7	83.0
03:16 PM - 04:16 PM	83.0	84.3	82.4
04:16 PM - 05:16 PM	82.5	83.4	82.2

Leq Average 8 hrs. (dB(A))

83.7

Lmax (dB(A))

85.4

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย  
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**Technical Management**

*Thanita K.*

Thanita Kulsuriwong  
Scientist (4)

**Approved by**

*Supot S.*

Supot Salamteh  
Section Head

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## Analysis / Test Report

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418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2340042**

Date Received : May 25, 2023

Date Reported : May 30, 2023

Report Number: 2664386-1

Page 1 of 1

**Sample Number** 2340042-5  
**Parameter** Noise (Leq 8 hrs.)  
**Location** บริเวณ Gas Turbine Accessories System GT2  
**Measurement Date** May 24, 2023  
**Measurement by** Satcha Phetsawaeng

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
12:00 AM - 01:00 AM	83.9	86.0	83.3
12:00 AM - 01:00 AM	84.1	85.5	83.6
12:00 AM - 01:00 AM	84.9	86.7	83.9
12:00 AM - 01:00 AM	84.9	86.6	83.8
12:00 AM - 01:00 AM	84.2	85.6	83.0
12:00 AM - 01:00 AM	84.0	86.0	83.1
12:00 AM - 01:00 AM	82.7	85.3	81.7
12:00 AM - 01:00 AM	82.2	84.3	81.7

Leq Average 8 hrs. (dB(A))

84.0

Lmax (dB(A))

86.7

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย  
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## Analysis / Test Report

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418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2340042**

Date Received : May 25, 2023

Date Reported : May 30, 2023

Report Number: 2664387-1

Page 1 of 1

**Sample Number** 2340042-6  
**Parameter** Noise (Leq 8 hrs.)  
**Location** บริเวณ Steam Turbine Generator  
**Measurement Date** May 24, 2023  
**Measurement by** Satcha Phetsawaeng

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:36 AM - 10:36 AM	79.6	80.8	78.9
10:36 AM - 11:36 AM	80.2	81.2	79.8
11:36 AM - 12:36 PM	80.2	81.1	79.8
12:36 PM - 01:36 PM	80.5	81.6	80.2
01:36 PM - 02:36 PM	80.5	81.6	80.2
02:36 PM - 03:36 PM	80.7	82.3	80.3
03:36 PM - 04:36 PM	80.8	81.7	80.5
04:36 PM - 05:36 PM	80.3	82.8	79.7

Leq Average 8 hrs. (dB(A))

80.4

Lmax (dB(A))

82.8

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย  
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Supot Salamteh  
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## Analysis / Test Report

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418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2340042**

Date Received : May 25, 2023

Date Reported : May 30, 2023

Report Number: 2664388-1

Page 1 of 1

**Sample Number** 2340042-7  
**Parameter** Noise (Leq 8 hrs.)  
**Location** บริเวณ Steam Turbine Lube Oil Skid  
**Measurement Date** May 24, 2023  
**Measurement by** Satcha Phetsawaeng

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:43 AM - 10:43 AM	84.4	101.2	82.6
10:43 AM - 11:43 AM	84.7	100.9	81.7
11:43 AM - 12:43 PM	85.1	103.5	82.2
12:43 PM - 01:43 PM	84.2	99.1	82.6
01:43 PM - 02:43 PM	84.5	102.4	82.6
02:43 PM - 03:43 PM	84.4	100.3	82.9
03:43 PM - 04:43 PM	84.6	92.0	83.2
04:43 PM - 05:43 PM	83.5	99.5	81.8

Leq Average 8 hrs. (dB(A))

84.4

Lmax (dB(A))

103.5

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย  
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**Technical Management**

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**Approved by**

*Supot S.*

Supot Salamteh  
Section Head

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## ภาคผนวก ค-9

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ระดับความร้อนในบริเวณการทำงาน



## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2334599**

Date Received : Mar 31, 2023

Date Reported : Apr 04, 2023

Report Number: 2606092-1

Page 1 of 4

**Sample Number** 2334599-1  
**Parameter** Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)  
**Measurement Date** Mar 30, 2023  
**Measurement by** Supot Salamteh  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : - )

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Condenser Exhaust Unit	120	29.4	26.4	36.8	36.0
Average (WBGT)		29.4			
Guideline WBGT (°C)		34.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

**Technical Management**

Supot Salamteh  
Section Head

**Approved by**

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2334599**

Date Received : Mar 31, 2023

Date Reported : Apr 04, 2023

Report Number: 2606092-1

Page 2 of 4

**Sample Number** 2334599-2  
**Parameter** Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)  
**Measurement Date** Mar 30, 2023  
**Measurement by** Supot Salamteh  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : - )

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณท่อส่งน้ำ	120	29.4	26.5	36.1	35.8
Average (WBGT)		29.4			
Guideline WBGT (°C)		34.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

**Technical Management**

Supot Salamteh  
Section Head

**Approved by**

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2334599**

Date Received : Mar 31, 2023

Date Reported : Apr 04, 2023

Report Number: 2606092-1

Page 3 of 4

**Sample Number** 2334599-5  
**Parameter** Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)  
**Measurement Date** Mar 30, 2023  
**Measurement by** Supot Salamteh  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : - )

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Generator Area 12	120	29.5	26.7	36.2	35.4
Average (WBGT)		29.5			
Guideline WBGT (°C)		34.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

**Technical Management**

Supot Salamteh  
Section Head

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2334599**

Date Received : Mar 31, 2023

Date Reported : Apr 04, 2023

Report Number: 2606092-1

Page 4 of 4

**Sample Number** 2334599-6  
**Parameter** Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)  
**Measurement Date** Mar 30, 2023  
**Measurement by** Supot Salamteh  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : - )

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Gas turbine Area 12	120	29.7	26.8	36.9	35.7
Average (WBGT)		29.7			
Guideline WBGT (°C)		34.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

**Technical Management**

Supot Salamteh  
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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2341184**

Date Received : Apr 18, 2023

Date Reported : Apr 21, 2023

Report Number: 2621199-1

Page 1 of 2

**Sample Number** 2341184-1  
**Parameter** Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)  
**Measurement Date** Apr 18, 2023  
**Measurement by** Norranon Tathongkham  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : - )

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Generator Area 11	120	29.9	27.0	36.8	36.2
Average (WBGT)		29.9			
Guideline WBGT (°C)		34.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

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Supot Salamteh  
Section Head

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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2341184**

Date Received : Apr 18, 2023

Date Reported : Apr 21, 2023

Report Number: 2621199-1

Page 2 of 2

**Sample Number** 2341184-2  
**Parameter** Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)  
**Measurement Date** Apr 18, 2023  
**Measurement by** Norranon Tathongkham  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : - )

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Gas Turbine Area 11	120	29.8	26.9	36.7	36.0
Average (WBGT)		29.8			
Guideline WBGT (°C)		34.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2340062**

Date Received : May 26, 2023

Date Reported : May 30, 2023

Report Number: 2618685-1

Page 1 of 6

**Sample Number** 2340062-1  
**Parameter** Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)  
**Measurement Date** May 24, 2023  
**Measurement by** Satcha Phetsawaeng  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Condenser Exhaust Unit	120	29.8	27.1	36.2	36.1
Average (WBGT)		29.8			
Guideline WBGT (°C)		34.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
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## Analysis / Test Report

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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2340062**

Date Received : May 26, 2023

Date Reported : May 30, 2023

Report Number: 2618685-1

Page 2 of 6

**Sample Number** 2340062-2  
**Parameter** Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)  
**Measurement Date** May 24, 2023  
**Measurement by** Satcha Phetsawaeng  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณท่อลำเลียงไอน้ำ	120	29.7	27.2	35.5	35.1
Average (WBGT)		29.7			
Guideline WBGT (°C)		34.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
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**Technical Management**

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## Analysis / Test Report

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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2340062**

Date Received : May 26, 2023

Date Reported : May 30, 2023

Report Number: 2618685-1

Page 3 of 6

**Sample Number** 2340062-3  
**Parameter** Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)  
**Measurement Date** May 24, 2023  
**Measurement by** Satcha Phetsawaeng  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Generator Area 11	120	29.9	26.9	36.9	36.4
Average (WBGT)		29.9			
Guideline WBGT (°C)		34.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

**Technical Management**

Supot Salamteh  
Section Head

**Approved by**

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2340062**

Date Received : May 26, 2023

Date Reported : May 30, 2023

Report Number: 2618685-1

Page 4 of 6

**Sample Number** 2340062-4  
**Parameter** Heat Stress (Sampling Time : 01.00 PM - 03.00 PM)  
**Measurement Date** May 24, 2023  
**Measurement by** Satcha Phetsawaeng  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Generator Area 12	120	29.8	27.2	35.9	35.4
Average (WBGT)		29.8			
Guideline WBGT (°C)		34.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

**Technical Management**

Supot Salamteh  
Section Head

**Approved by**

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2340062**

Date Received : May 26, 2023

Date Reported : May 30, 2023

Report Number: 2618685-1

Page 5 of 6

**Sample Number** 2340062-5  
**Parameter** Heat Stress (Sampling Time : 01.00 PM - 03.00 PM)  
**Measurement Date** May 24, 2023  
**Measurement by** Satcha Phetsawaeng  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Gas Turbine Area 11	120	29.6	26.9	36.1	35.4
Average (WBGT)		29.6			
Guideline WBGT (°C)		34.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

**Technical Management**

Supot Salamteh  
Section Head

**Approved by**

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Assistant Manager

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2340062**

Date Received : May 26, 2023

Date Reported : May 30, 2023

Report Number: 2618685-1

Page 6 of 6

**Sample Number** 2340062-6  
**Parameter** Heat Stress (Sampling Time : 01.00 PM - 03.00 PM)  
**Measurement Date** May 24, 2023  
**Measurement by** Satcha Phetsawaeng  
**Location** ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Gas Turbine Area 12	120	30.0	27.2	36.7	35.9
Average (WBGT)		30.0			
Guideline WBGT (°C)		34.0			

**Reference Method :** Wet Bulb Globe Temperature

**Guideline:**

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

**Technical Management**

Supot Salamteh  
Section Head

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# ภาคผนวก ค-10

ความเข้มแสงสว่างในบริเวณการทำงาน



## Analysis / Test Report

**Client** : Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2334536**

Date Received : Apr 03, 2023

Date Reported : Apr 07, 2023

Report Number : 2616247-1

Page 1 of 3

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
Area - Administration Building : Canteen and Pantry Kitchen									
1.1	2334536-1	30 Mar 2023	Day time	1	658	661.0	150	300	Pass
1.2	2334536-2	30 Mar 2023	Day time	2	664				
Area - Administration Building : Women Toilets									
2.1	2334536-3	30 Mar 2023	Day time	1	218	255.7	50	100	Pass
2.2	2334536-4	30 Mar 2023	Day time	2	267				
2.3	2334536-5	30 Mar 2023	Day time	3	242				
2.4	2334536-6	30 Mar 2023	Day time	4	251				
2.5	2334536-7	30 Mar 2023	Day time	5	264				
2.6	2334536-8	30 Mar 2023	Day time	6	292				
Area - Administration Building : Men Toilets									
3.1	2334536-9	30 Mar 2023	Day time	1	151	253.2	50	100	Pass
3.2	2334536-10	30 Mar 2023	Day time	2	278				
3.3	2334536-11	30 Mar 2023	Day time	3	284				
3.4	2334536-12	30 Mar 2023	Day time	4	291				
3.5	2334536-13	30 Mar 2023	Day time	5	263				
3.6	2334536-14	30 Mar 2023	Day time	6	252				
Area - Administration Building : Walkway in Front of Reception									
4.1	2334536-15	30 Mar 2023	Day time	1	468	657.3	50	100	Pass
4.2	2334536-16	30 Mar 2023	Day time	2	509				
4.3	2334536-17	30 Mar 2023	Day time	3	995				
Spot - Administration Building : Admin Office Table									
5	2334536-18	30 Mar 2023	Day time	1	490	-	400-500	-	Pass
Spot - Administration Building : Purchasing Officer Table									
6	2334536-19	30 Mar 2023	Day time	1	768	-	400-500	-	Pass
Spot - Administration Building : Admin Manager Table									
7	2334536-20	30 Mar 2023	Day time	1	448	-	400-500	-	Pass
Spot - Administration Building : Photocopier									
8	2334536-21	30 Mar 2023	Day time	1	317	-	300-400	-	Pass

Technical Management

Supot Salamteh  
Section Head

Approved by

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client** : Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2334536**

Date Received : Apr 03, 2023

Date Reported : Apr 07, 2023

Report Number : 2616247-1

Page 2 of 3

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot / Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
Area - Administration Building : Master document Room									
9.1	2334536-22	30 Mar 2023	Day time	1	493	454.0	150	300	Pass
9.2	2334536-23	30 Mar 2023	Day time	2	424				
9.3	2334536-24	30 Mar 2023	Day time	3	466				
9.4	2334536-25	30 Mar 2023	Day time	4	368				
9.5	2334536-26	30 Mar 2023	Day time	5	458				
9.6	2334536-27	30 Mar 2023	Day time	6	515				
Area - Administration Building : Admin Walkway									
10.1	2334536-28	30 Mar 2023	Day time	1	1,289	598.3	50	100	Pass
10.2	2334536-29	30 Mar 2023	Day time	2	1,413				
10.3	2334536-30	30 Mar 2023	Day time	3	1,241				
10.4	2334536-31	30 Mar 2023	Day time	4	198				
10.5	2334536-32	30 Mar 2023	Day time	5	160				
10.6	2334536-33	30 Mar 2023	Day time	6	214				
10.7	2334536-34	30 Mar 2023	Day time	7	350				
10.8	2334536-35	30 Mar 2023	Day time	8	322				
10.9	2334536-36	30 Mar 2023	Day time	9	198				
Area - Administration Building : Meeting Room 2									
11.1	2334536-37	30 Mar 2023	Day time	1	286	361.5	150	300	Pass
11.2	2334536-38	30 Mar 2023	Day time	2	305				
11.3	2334536-39	30 Mar 2023	Day time	3	200				
11.4	2334536-40	30 Mar 2023	Day time	4	339				
11.5	2334536-41	30 Mar 2023	Day time	5	478				
11.6	2334536-42	30 Mar 2023	Day time	6	561				
Spot - Administration Building : Plant Manager Table									
12	2334536-43	30 Mar 2023	Day time	1	423	-	400-500	-	Pass
Spot - Administration Building : EHS Room Tabel 1									
13	2334536-44	30 Mar 2023	Day time	1	413	-	400-500	-	Pass

Technical Management

Supot Salamteh  
Section Head

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Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client** : Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2334536**

Date Received : Apr 03, 2023

Date Reported : Apr 07, 2023

Report Number : 2616247-1

Page 3 of 3

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot / Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
Area - Administration Building : Meeting Room 1									
14.1	2334536-45	30 Mar 2023	Day time	1	467	340.7	150	300	Pass
14.2	2334536-46	30 Mar 2023	Day time	2	293				
14.3	2334536-47	30 Mar 2023	Day time	3	249				
14.4	2334536-48	30 Mar 2023	Day time	4	285				
14.5	2334536-49	30 Mar 2023	Day time	5	358				
14.6	2334536-50	30 Mar 2023	Day time	6	311				
14.7	2334536-51	30 Mar 2023	Day time	7	340				
14.8	2334536-52	30 Mar 2023	Day time	8	339				
14.9	2334536-53	30 Mar 2023	Day time	9	326				
14.10	2334536-54	30 Mar 2023	Day time	10	469				
14.11	2334536-55	30 Mar 2023	Day time	11	286				
14.12	2334536-56	30 Mar 2023	Day time	12	365				

**Measurement by** : Supot Salamteh Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

**Guideline** : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

Supot Salamteh  
Section Head

Approved by

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Assistant Manager

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## Analysis / Test Report

**Client** : Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2334545**

Date Received : Apr 04, 2023

Date Reported : Apr 07, 2023

Report Number : 2616249-1

Page 1 of 1

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot / Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
Area - Control Building : Ground Floor : Electrical Room									
1.1	2334545-1	30 Mar 2023	Night time	1	158	142.4	50	100	Pass
1.2	2334545-2	30 Mar 2023	Night time	2	133				
1.3	2334545-3	30 Mar 2023	Night time	3	218				
1.4	2334545-4	30 Mar 2023	Night time	4	219				
1.5	2334545-5	30 Mar 2023	Night time	5	135				
1.6	2334545-6	30 Mar 2023	Night time	6	164				
1.7	2334545-7	30 Mar 2023	Night time	7	98				
1.8	2334545-8	30 Mar 2023	Night time	8	56				
1.9	2334545-9	30 Mar 2023	Night time	9	101				
Area - Control Building : 1st Floor : Walkway									
2.1	2334545-10	30 Mar 2023	Night time	1	364	286.5	50	100	Pass
2.2	2334545-11	30 Mar 2023	Night time	2	318				
2.3	2334545-12	30 Mar 2023	Night time	3	215				
2.4	2334545-13	30 Mar 2023	Night time	4	322				
2.5	2334545-14	30 Mar 2023	Night time	5	244				
2.6	2334545-15	30 Mar 2023	Night time	6	256				
Area - Control Building : 1st Floor : Stairs									
3.1	2334545-16	30 Mar 2023	Night time	1	664	386.0	50	100	Pass
3.2	2334545-17	30 Mar 2023	Night time	2	253				
3.3	2334545-18	30 Mar 2023	Night time	3	241				

**Measurement by** : Supot Salamteh Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

**Guideline** : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

**Technical Management**

Supot Salamteh  
Section Head

**Approved by**

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2334546**

Date Received : Mar 31, 2023

Date Reported : Apr 07, 2023

Report Number : 2616251-1

Page 1 of 1

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
1	Spot - Control Building : 2nd Floor : MCC Room หน้าตู้ 1								
	2334546-1	30 Mar 2023	Night time	1	453	-	200-300	-	Pass
2	Spot - Control Building : 2nd Floor : MCC Room หน้าตู้ 2								
	2334546-2	30 Mar 2023	Night time	1	472	-	200-300	-	Pass
3	Spot - Control Building : 2nd Floor : MCC Room หน้าตู้ 3								
	2334546-3	30 Mar 2023	Night time	1	300	-	200-300	-	Pass
4	Spot - Control Building : 2nd Floor : MCC Room หน้าตู้ 4								
	2334546-4	30 Mar 2023	Night time	1	305	-	200-300	-	Pass
5	Spot - Control Building : 2nd Floor : MCC Room หน้าตู้ 5								
	2334546-5	30 Mar 2023	Night time	1	309	-	200-300	-	Pass
6	Spot - Control Building : 2nd Floor : Switchgear and Electrical : Room No.1								
	2334546-6	30 Mar 2023	Day time	1	232	-	200-300	-	Pass
7	Spot - Control Building : 2nd Floor : Switchgear and Electrical : Room No.2								
	2334546-7	30 Mar 2023	Day time	1	267	-	200-300	-	Pass
8	Spot - Control Building : 2nd Floor : Switchgear and Electrical : Room No.3								
	2334546-8	30 Mar 2023	Day time	1	267	-	200-300	-	Pass
9	Spot - Control Building : 2nd Floor : Switchgear and Electrical : Room No.4								
	2334546-9	30 Mar 2023	Day time	1	201	-	200-300	-	Pass
10	Spot - Control Building : 2nd Floor : Switchgear and Electrical : Room No.5								
	2334546-10	30 Mar 2023	Day time	1	231	-	200-300	-	Pass
11	Spot - Control Building : 2nd Floor : Switchgear and Electrical : Room No.6								
	2334546-11	30 Mar 2023	Day time	1	214	-	200-300	-	Pass
12.1	Area - Control Building : 2nd Floor : Stairs								
	2334546-12	30 Mar 2023	Night time	1	226	115.3	50	100	Pass
12.2	2334546-13	30 Mar 2023	Night time	2	56				
12.3	2334546-14	30 Mar 2023	Night time	3	64				

**Measurement by :** Supot Salamteh Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

**Guideline :** Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

Supot Salamteh  
Section Head

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## Analysis / Test Report

**Client** : Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2334547**

Date Received : Mar 31, 2023

Date Reported : Apr 18, 2023

Report Number : 2616253-1

Page 1 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
Area - Control Building : 3rd Floor : Walkway									
2.1	2334547-4	30 Mar 2023	Day time	1	353	461.1	50	100	Pass
2.2	2334547-5	30 Mar 2023	Day time	2	289				
2.3	2334547-6	30 Mar 2023	Day time	3	274				
2.4	2334547-7	30 Mar 2023	Day time	4	384				
2.5	2334547-8	30 Mar 2023	Day time	5	642				
2.6	2334547-9	30 Mar 2023	Day time	6	481				
2.7	2334547-10	30 Mar 2023	Day time	7	865				
2.8	2334547-11	30 Mar 2023	Day time	8	514				
2.9	2334547-12	30 Mar 2023	Day time	9	348				
2.1	2334547-13	30 Mar 2023	Night time	1	664	410.3	50	100	Pass
2.2	2334547-14	30 Mar 2023	Night time	2	698				
2.3	2334547-15	30 Mar 2023	Night time	3	590				
2.4	2334547-16	30 Mar 2023	Night time	4	330				
2.5	2334547-17	30 Mar 2023	Night time	5	215				
2.6	2334547-18	30 Mar 2023	Night time	6	249				
2.7	2334547-19	30 Mar 2023	Night time	7	316				
2.8	2334547-20	30 Mar 2023	Night time	8	311				
2.9	2334547-21	30 Mar 2023	Night time	9	320				
Area - Control Building : 3rd Floor : Men Toilets									
3.1	2334547-22	30 Mar 2023	Day time	1	185	201.5	50	100	Pass
3.2	2334547-23	30 Mar 2023	Day time	2	235				
3.3	2334547-24	30 Mar 2023	Day time	3	148				
3.4	2334547-25	30 Mar 2023	Day time	4	208				
3.5	2334547-26	30 Mar 2023	Day time	5	218				
3.6	2334547-27	30 Mar 2023	Day time	6	215				
Area - Control Building : 3rd Floor : Women Toilets									
4.1	2334547-28	30 Mar 2023	Day time	1	432	257.3	50	100	Pass
4.2	2334547-29	30 Mar 2023	Day time	2	187				
4.3	2334547-30	30 Mar 2023	Day time	3	153				

Technical Management

Supot Salamteh  
Section Head

Approved by

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client** : Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2334547**

Date Received : Mar 31, 2023

Date Reported : Apr 18, 2023

Report Number : 2616253-1

Page 2 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot / Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
Area - Control Building : 3rd Floor : Canteen and Pantry Room									
5.1	2334547-31	30 Mar 2023	Day time	1	687	653.7	150	300	Pass
5.2	2334547-32	30 Mar 2023	Day time	2	630				
5.3	2334547-33	30 Mar 2023	Day time	3	644				
Spot - Control Building : 3rd Floor : Operation Manager Table									
6	2334547-34	30 Mar 2023	Day time	1	758	-	400-500	-	Pass
6	2334547-35	30 Mar 2023	Night time	1	698	-	400-500	-	Pass

**Measurement by** : Supot Salamteh Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

**Guideline** : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

**Note** : This Analysis test report is reissued to supersede report No. 2616253-1 Date Reported : Apr 07, 2023 due to revise analytical information

Technical Management

Supot Salamteh  
Section Head

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Wichan Choonharat  
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## Analysis / Test Report

**Client** : Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2334551**

Date Received : Mar 31, 2023

Date Reported : Apr 07, 2023

Report Number : 2616255-1

Page 1 of 1

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
1	Spot - Terminal & Switchyard Control Building : Terminal Control Room No.1								
	2334551-1	30 Mar 2023	Day time	1	356	-	300-400	-	Pass
2	Spot - Terminal & Switchyard Control Building : Terminal Control Room No.2								
	2334551-2	30 Mar 2023	Day time	1	304	-	300-400	-	Pass
3	Spot - Terminal & Switchyard Control Building : Battery Room No.1								
	2334551-3	30 Mar 2023	Day time	1	352	-	200-300	-	Pass
4	Spot - Terminal & Switchyard Control Building : Switchgear Room No.1								
	2334551-4	30 Mar 2023	Day time	1	317	-	300-400	-	Pass
5	Spot - Terminal & Switchyard Control Building : Switchgear Room No.2								
	2334551-5	30 Mar 2023	Day time	1	428	-	300-400	-	Pass
6	Spot - Terminal & Switchyard Control Building : Switchyard Control Room No.1								
	2334551-6	30 Mar 2023	Day time	1	341	-	300-400	-	Pass
7	Spot - Terminal & Switchyard Control Building : Switchyard Control Room No.2								
	2334551-7	30 Mar 2023	Day time	1	326	-	300-400	-	Pass
8	Spot - Terminal & Switchyard Control Building : Battery Room No.2								
	2334551-8	30 Mar 2023	Day time	1	362	-	200-300	-	Pass

**Measurement by** : Supot Salamteh Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

**Guideline** : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

Supot Salamteh  
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418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2334552**

Date Received : Mar 31, 2023

Date Reported : Apr 18, 2023

Report Number : 2616257-1 Rev. No.1

Page 1 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
	Area - Warehouse and Workshop Building : 1st Floor : Reception Room								
1.1	2334552-1	30 Mar 2023	Day time	1	454	210.9	50	100	Pass
1.2	2334552-2	30 Mar 2023	Day time	2	319				
1.3	2334552-3	30 Mar 2023	Day time	3	263				
1.4	2334552-4	30 Mar 2023	Day time	4	145				
1.5	2334552-5	30 Mar 2023	Day time	5	214				
1.6	2334552-6	30 Mar 2023	Day time	6	109				
1.7	2334552-7	30 Mar 2023	Day time	7	101				
1.8	2334552-8	30 Mar 2023	Day time	8	215				
1.9	2334552-9	30 Mar 2023	Day time	9	78				
	Area - Warehouse and Workshop Building : 1st Floor : Warehouse Canteen and Pantry								
2.1	2334552-10	30 Mar 2023	Day time	1	780	380.3	150	300	Pass
2.2	2334552-11	30 Mar 2023	Day time	2	158				
2.3	2334552-12	30 Mar 2023	Day time	3	203				
	Spot - Warehouse and Workshop Building : 1st Floor : Warehouse Officer Table No.1								
3	2334552-13	30 Mar 2023	Day time	1	404	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : 1st Floor : Warehouse Officer Table No.2								
4	2334552-14	30 Mar 2023	Day time	1	415	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : 1st Floor : Warehouse Officer Table No.3								
5	2334552-15	30 Mar 2023	Day time	1	420	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : 1st Floor : Warehouse Officer Table No.4								
6	2334552-16	30 Mar 2023	Day time	1	421	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : 1st Floor : Warehouse Officer Table No.5								
7	2334552-17	30 Mar 2023	Day time	1	401	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : 1st Floor : Warehouse Officer Table No.6								
8	2334552-18	30 Mar 2023	Day time	1	409	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : 1st Floor : Warehouse Officer Table No.7								
9	2334552-19	30 Mar 2023	Day time	1	403	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : 1st Floor : Warehouse Officer Table No.8								
10	2334552-20	30 Mar 2023	Day time	1	425	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : 1st Floor : Warehouse Officer Table No.9								
11	2334552-21	30 Mar 2023	Day time	1	401	-	400-500	-	Pass

Technical Management

Supot Salamteh  
Section Head

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Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

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418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2334552**

Date Received : Mar 31, 2023

Date Reported : Apr 18, 2023

Report Number : 2616257-1 Rev. No.1

Page 2 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
12	2334552-22	30 Mar 2023	Day time	1	410	-	400-500	-	Pass
13	2334552-23	30 Mar 2023	Day time	1	400	-	400-500	-	Pass
14	2334552-24	30 Mar 2023	Day time	1	412	-	400-500	-	Pass
16	2334552-26	30 Mar 2023	Day time	1	963	-	400-500	-	Pass
17.1	2334552-27	30 Mar 2023	Day time	1	860	674.6	150	300	Pass
17.2	2334552-28	30 Mar 2023	Day time	2	558				
17.3	2334552-29	30 Mar 2023	Day time	3	349				
17.4	2334552-30	30 Mar 2023	Day time	4	416				
17.5	2334552-31	30 Mar 2023	Day time	5	417				
17.6	2334552-32	30 Mar 2023	Day time	6	982				
17.7	2334552-33	30 Mar 2023	Day time	7	1,000				
17.8	2334552-34	30 Mar 2023	Day time	8	815				

**Measurement by** : Supot Salamteh Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

**Guideline** : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

**Note** : This Analysis test report is reissued to supersede report No. 2616257-1 Date Reported : Apr 07, 2023 due to revise analytical information

Technical Management

Supot Salamteh  
Section Head

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Assistant Manager

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418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2334553**

Date Received : Mar 31, 2023

Date Reported : Apr 07, 2023

Report Number : 2616259-1

Page 1 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
	Area - Warehouse and Workshop Building : Ground Floor : Warehouse Room								
1.1	2334553-1	30 Mar 2023	Day time	1	1,204	327.3	100	200	Pass
1.2	2334553-2	30 Mar 2023	Day time	2	256				
1.3	2334553-3	30 Mar 2023	Day time	3	215				
1.4	2334553-4	30 Mar 2023	Day time	4	258				
1.5	2334553-5	30 Mar 2023	Day time	5	364				
1.6	2334553-6	30 Mar 2023	Day time	6	342				
1.7	2334553-7	30 Mar 2023	Day time	7	292				
1.8	2334553-8	30 Mar 2023	Day time	8	300				
1.9	2334553-9	30 Mar 2023	Day time	9	315				
1.10	2334553-10	30 Mar 2023	Day time	10	342				
1.11	2334553-11	30 Mar 2023	Day time	11	287				
1.12	2334553-12	30 Mar 2023	Day time	12	269				
1.13	2334553-13	30 Mar 2023	Day time	13	314				
1.14	2334553-14	30 Mar 2023	Day time	14	302				
1.15	2334553-15	30 Mar 2023	Day time	15	285				
1.16	2334553-16	30 Mar 2023	Day time	16	274				
1.17	2334553-17	30 Mar 2023	Day time	17	269				
1.18	2334553-18	30 Mar 2023	Day time	18	228				
	Area - Warehouse and Workshop Building : Ground Floor : Walkway								
2.1	2334553-19	30 Mar 2023	Day time	1	361	216.1	50	100	Pass
2.2	2334553-20	30 Mar 2023	Day time	2	219				
2.3	2334553-21	30 Mar 2023	Day time	3	125				
2.4	2334553-22	30 Mar 2023	Day time	4	303				
2.5	2334553-23	30 Mar 2023	Day time	5	120				
2.6	2334553-24	30 Mar 2023	Day time	6	192				
2.7	2334553-25	30 Mar 2023	Day time	7	161				
2.8	2334553-26	30 Mar 2023	Day time	8	209				
2.9	2334553-27	30 Mar 2023	Day time	9	255				

Technical Management

Supot Salamteh  
Section Head

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Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2334553**

Date Received : Mar 31, 2023

Date Reported : Apr 07, 2023

Report Number : 2616259-1

Page 2 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot / Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
Area - Warehouse and Workshop Building : Ground Floor : Electrical Room/Fitness Room									
3.1	2334553-28	30 Mar 2023	Day time	1	236	341.8	150	300	Pass
3.2	2334553-29	30 Mar 2023	Day time	2	215				
3.3	2334553-30	30 Mar 2023	Day time	3	364				
3.4	2334553-31	30 Mar 2023	Day time	4	451				
3.5	2334553-32	30 Mar 2023	Day time	5	298				
3.6	2334553-33	30 Mar 2023	Day time	6	487				
Spot - Warehouse and Workshop Building : Ground Floor : C&I Cabinet									
4	2334553-34	30 Mar 2023	Day time	1	412	-	400-500	-	Pass
Spot - Warehouse and Workshop Building : Ground Floor : C&I Table									
5	2334553-35	30 Mar 2023	Day time	1	479	-	400-500	-	Pass
Spot - Warehouse and Workshop Building : Ground Floor : Instrument and Control									
6	2334553-36	30 Mar 2023	Day time	1	987	-	400-500	-	Pass
Spot - Warehouse and Workshop Building : Ground Floor : Mechanical and Electrical #1									
7	2334553-37	30 Mar 2023	Day time	1	416	-	400-500	-	Pass
Spot - Warehouse and Workshop Building : Ground Floor : Mechanical and Electrical #2									
8	2334553-38	30 Mar 2023	Day time	1	466	-	400-500	-	Pass
Spot - Warehouse and Workshop Building : Ground Floor : Mechanical and Electrical #3									
9	2334553-39	30 Mar 2023	Day time	1	478	-	400-500	-	Pass

**Measurement by :** Supot Salamteh Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

**Guideline :** Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

Supot Salamteh  
Section Head

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## Analysis / Test Report

**Client** : Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2334595**

Date Received : Mar 31, 2023

Date Reported : Apr 07, 2023

Report Number : 2616260-1

Page 1 of 1

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
Spot - Water Treatment Control Building : Laboratory (หน้า Hood)									
1	2334595-1	30 Mar 2023	Night time	1	472	-	300-400	-	Pass
Spot - Water Treatment Control Building : Laboratory (หน้า Spectrophotometer)									
2	2334595-2	30 Mar 2023	Night time	1	677	-	400-500	-	Pass
Spot - Water Treatment Control Building : Laboratory (หน้าโต๊ะวัด pH)									
3	2334595-3	30 Mar 2023	Night time	1	453	-	400-500	-	Pass
Area - Water Treatment Control Building : ทางเดินหน้าห้อง Laboratory									
4.1	2334595-4	30 Mar 2023	Night time	1	92	67.3	25	50	Pass
4.2	2334595-5	30 Mar 2023	Night time	2	50				
4.3	2334595-6	30 Mar 2023	Night time	3	69				
4.4	2334595-7	30 Mar 2023	Night time	4	104				
4.5	2334595-8	30 Mar 2023	Night time	5	83				
4.6	2334595-9	30 Mar 2023	Night time	6	43				
4.7	2334595-10	30 Mar 2023	Night time	7	44				
4.8	2334595-11	30 Mar 2023	Night time	8	52				
4.9	2334595-12	30 Mar 2023	Night time	9	69				

**Measurement by** : Supot Salamteh Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

**Guideline** : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

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**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2340070**

Date Received : May 29, 2023

Date Reported : Jun 01, 2023

Report Number : 2669954-1

Page 1 of 3

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
	Area - Administration Building : Canteen and Pantry Kitchen								
1.1	2340070-1	24 May 2023	Day time	1	541	565.5	150	300	Pass
1.2	2340070-2	24 May 2023	Day time	2	590				
	Area - Administration Building : Women Toilets								
2.1	2340070-3	24 May 2023	Day time	1	316	371.2	50	100	Pass
2.2	2340070-4	24 May 2023	Day time	2	377				
2.3	2340070-5	24 May 2023	Day time	3	325				
2.4	2340070-6	24 May 2023	Day time	4	326				
2.5	2340070-7	24 May 2023	Day time	5	506				
2.6	2340070-8	24 May 2023	Day time	6	377				
	Area - Administration Building : Men Toilets								
3.1	2340070-9	24 May 2023	Day time	1	307	337.3	50	100	Pass
3.2	2340070-10	24 May 2023	Day time	2	397				
3.3	2340070-11	24 May 2023	Day time	3	385				
3.4	2340070-12	24 May 2023	Day time	4	310				
3.5	2340070-13	24 May 2023	Day time	5	315				
3.6	2340070-14	24 May 2023	Day time	6	310				
	Area - Administration Building : Walkway in Front of Reception								
4.1	2340070-15	24 May 2023	Day time	1	347	601.0	50	100	Pass
4.2	2340070-16	24 May 2023	Day time	2	393				
4.3	2340070-17	24 May 2023	Day time	3	1,063				
	Spot - Administration Building : Admin Office Table								
5	2340070-18	24 May 2023	Day time	1	515	-	400-500	-	Pass
	Spot - Administration Building : Purchasing Officer Table								
6	2340070-19	24 May 2023	Day time	1	989	-	400-500	-	Pass
	Spot - Administration Building : Admin Manager Table								
7	2340070-20	24 May 2023	Day time	1	412	-	400-500	-	Pass
	Spot - Administration Building : Photocopier								
8	2340070-21	24 May 2023	Day time	1	363	-	300-400	-	Pass

Technical Management

Supot Salamteh  
Section Head

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Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client** : Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2340070**

Date Received : May 29, 2023

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Report Number : 2669954-1

Page 2 of 3

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
Area - Administration Building : Master document Room									
9.1	2340070-22	24 May 2023	Day time	1	506	623.0	150	300	Pass
9.2	2340070-23	24 May 2023	Day time	2	623				
9.3	2340070-24	24 May 2023	Day time	3	663				
9.4	2340070-25	24 May 2023	Day time	4	690				
9.5	2340070-26	24 May 2023	Day time	5	693				
9.6	2340070-27	24 May 2023	Day time	6	563				
Area - Administration Building : Admin Walkway									
10.1	2340070-28	24 May 2023	Day time	1	183	183.9	50	100	Pass
10.2	2340070-29	24 May 2023	Day time	2	171				
10.3	2340070-30	24 May 2023	Day time	3	160				
10.4	2340070-31	24 May 2023	Day time	4	173				
10.5	2340070-32	24 May 2023	Day time	5	169				
10.6	2340070-33	24 May 2023	Day time	6	182				
10.7	2340070-34	24 May 2023	Day time	7	200				
10.8	2340070-35	24 May 2023	Day time	8	216				
10.9	2340070-36	24 May 2023	Day time	9	201				
Area - Administration Building : Meeting Room 2									
11.1	2340070-37	24 May 2023	Day time	1	361	378.7	150	300	Pass
11.2	2340070-38	24 May 2023	Day time	2	465				
11.3	2340070-39	24 May 2023	Day time	3	407				
11.4	2340070-40	24 May 2023	Day time	4	387				
11.5	2340070-41	24 May 2023	Day time	5	337				
11.6	2340070-42	24 May 2023	Day time	6	315				
Spot - Administration Building : Plant Manager Table									
12	2340070-43	24 May 2023	Day time	1	526	-	400-500	-	Pass
Spot - Administration Building : EHS Room Tabel 1									
13	2340070-44	24 May 2023	Day time	1	450	-	400-500	-	Pass

Technical Management

Supot Salamteh  
Section Head

Approved by

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client** : Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2340070**

Date Received : May 29, 2023

Date Reported : Jun 01, 2023

Report Number : 2669954-1

Page 3 of 3

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot / Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
Area - Administration Building : Meeting Room 1									
14.1	2340070-45	24 May 2023	Day time	1	326	476.8	150	300	Pass
14.2	2340070-46	24 May 2023	Day time	2	487				
14.3	2340070-47	24 May 2023	Day time	3	362				
14.4	2340070-48	24 May 2023	Day time	4	392				
14.5	2340070-49	24 May 2023	Day time	5	706				
14.6	2340070-50	24 May 2023	Day time	6	611				
14.7	2340070-51	24 May 2023	Day time	7	602				
14.8	2340070-52	24 May 2023	Day time	8	520				
14.9	2340070-53	24 May 2023	Day time	9	338				
14.10	2340070-54	24 May 2023	Day time	10	438				
14.11	2340070-55	24 May 2023	Day time	11	446				
14.12	2340070-56	24 May 2023	Day time	12	493				

**Measurement by** : Natthapon Jiengwareewong Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

**Guideline** : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

Supot Salamteh  
Section Head

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Assistant Manager

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2340076**

Date Received : May 29, 2023

Date Reported : Jun 01, 2023

Report Number : 2669959-1

Page 1 of 1

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
1	Spot - Control Building : 1st Floor : MCC Room หน้าตู้ 1 2340076-1	24 May 2023	Night time	1	364	-	200-300	-	Pass
2	Spot - Control Building : 1st Floor : MCC Room หน้าตู้ 2 2340076-2	24 May 2023	Night time	1	485	-	200-300	-	Pass
3	Spot - Control Building : 1st Floor : MCC Room หน้าตู้ 3 2340076-3	24 May 2023	Night time	1	411	-	200-300	-	Pass
4	Spot - Control Building : 1st Floor : MCC Room หน้าตู้ 4 2340076-4	24 May 2023	Night time	1	232	-	200-300	-	Pass
5	Spot - Control Building : 1st Floor : MCC Room หน้าตู้ 5 2340076-5	24 May 2023	Night time	1	356	-	200-300	-	Pass
6	Spot - Control Building : 1st Floor : Switchgear and Electrical : Room No.1 2340076-6	24 May 2023	Day time	1	260	-	200-300	-	Pass
7	Spot - Control Building : 1st Floor : Switchgear and Electrical : Room No.2 2340076-7	24 May 2023	Day time	1	277	-	200-300	-	Pass
8	Spot - Control Building : 1st Floor : Switchgear and Electrical : Room No.3 2340076-8	24 May 2023	Day time	1	241	-	200-300	-	Pass
9	Spot - Control Building : 1st Floor : Switchgear and Electrical : Room No.4 2340076-9	24 May 2023	Day time	1	249	-	200-300	-	Pass
10	Spot - Control Building : 1st Floor : Switchgear and Electrical : Room No.5 2340076-10	24 May 2023	Day time	1	253	-	200-300	-	Pass
11	Spot - Control Building : 1st Floor : Switchgear and Electrical : Room No.6 2340076-11	24 May 2023	Day time	1	230	-	200-300	-	Pass
12.1	Area - Control Building : 1st Floor : Stairs 2340076-12	24 May 2023	Night time	1	353	245.3	50	100	Pass
12.2	2340076-13	24 May 2023	Night time	2	267				
12.3	2340076-14	24 May 2023	Night time	3	116				

**Measurement by :** Natthapon Jiengwareewong Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

**Guideline :** Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

Supot Salamteh  
Section Head

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Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client** : Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2340077**

Date Received : May 29, 2023

Date Reported : Jun 01, 2023

Report Number : 2669960-1

Page 1 of 3

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
Area - Control Building : 2nd Floor : Stairs									
1.1	2340077-1	24 May 2023	Night time	1	690	554.3	50	100	Pass
1.2	2340077-2	24 May 2023	Night time	2	763				
1.3	2340077-3	24 May 2023	Night time	3	210				
Area - Control Building : 2nd Floor : Walkway									
2.1	2340077-4	24 May 2023	Day time	1	333	441.8	50	100	Pass
2.2	2340077-5	24 May 2023	Day time	2	378				
2.3	2340077-6	24 May 2023	Day time	3	343				
2.4	2340077-7	24 May 2023	Day time	4	261				
2.5	2340077-8	24 May 2023	Day time	5	339				
2.6	2340077-9	24 May 2023	Day time	6	341				
2.7	2340077-10	24 May 2023	Day time	7	500				
2.8	2340077-11	24 May 2023	Day time	8	722				
2.9	2340077-12	24 May 2023	Day time	9	759				
2.1	2340077-13	24 May 2023	Night time	1	165	153.0	50	100	Pass
2.2	2340077-14	24 May 2023	Night time	2	158				
2.3	2340077-15	24 May 2023	Night time	3	139				
2.4	2340077-16	24 May 2023	Night time	4	120				
2.5	2340077-17	24 May 2023	Night time	5	164				
2.6	2340077-18	24 May 2023	Night time	6	147				
2.7	2340077-19	24 May 2023	Night time	7	160				
2.8	2340077-20	24 May 2023	Night time	8	171				
2.9	2340077-21	24 May 2023	Night time	9	153				
Area - Control Building : 2nd Floor : Men Toilets									
3.1	2340077-22	24 May 2023	Day time	1	287	463.0	50	100	Pass
3.2	2340077-23	24 May 2023	Day time	2	322				
3.3	2340077-24	24 May 2023	Day time	3	566				
3.4	2340077-25	24 May 2023	Day time	4	591				
3.5	2340077-26	24 May 2023	Day time	5	532				
3.6	2340077-27	24 May 2023	Day time	6	480				

Technical Management

Supot Salamteh  
Section Head

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Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2340077**

Date Received : May 29, 2023

Date Reported : Jun 01, 2023

Report Number : 2669960-1

Page 2 of 3

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
Area - Control Building : 2nd Floor : Women Toilets									
4.1	2340077-28	24 May 2023	Day time	1	341	426.0	50	100	Pass
4.2	2340077-29	24 May 2023	Day time	2	463				
4.3	2340077-30	24 May 2023	Day time	3	474				
Area - Control Building : 2nd Floor : Canteen and Pantry Room									
5.1	2340077-31	24 May 2023	Day time	1	768	768.7	150	300	Pass
5.2	2340077-32	24 May 2023	Day time	2	948				
5.3	2340077-33	24 May 2023	Day time	3	590				
Spot - Control Building : 2nd Floor : Operation Manager Table									
6	2340077-34	24 May 2023	Day time	1	979	-	400-500	-	Pass
6	2340077-35	24 May 2023	Night time	1	666	-	400-500	-	Pass
Spot - Control Building : 2nd Floor : Control Room Desk 1									
7	2340077-36	24 May 2023	Night time	1	401	-	400-500	-	Pass
Spot - Control Building : 2nd Floor : Control Room Desk 2									
8	2340077-37	24 May 2023	Night time	1	403	-	400-500	-	Pass
Spot - Control Building : 2nd Floor : Control Room Desk 3									
9	2340077-38	24 May 2023	Night time	1	401	-	400-500	-	Pass
Spot - Control Building : 2nd Floor : Control Room Desk 4									
10	2340077-39	24 May 2023	Night time	1	400	-	400-500	-	Pass
Spot - Control Building : 2nd Floor : Control Room Desk 5									
11	2340077-40	24 May 2023	Night time	1	415	-	400-500	-	Pass
Spot - Control Building : 2nd Floor : DSC Room Desk 1									
12	2340077-41	24 May 2023	Night time	1	402	-	400-500	-	Pass
Spot - Control Building : 2nd Floor : Photocopier									
13	2340077-42	24 May 2023	Day time	1	310	-	300-400	-	Pass
Spot - Control Building : 2nd Floor : Fax and Copy									
14	2340077-43	24 May 2023	Day time	1	309	-	300-400	-	Pass
Spot - Control Building : 2nd Floor : Computer No.1									
15	2340077-44	24 May 2023	Day time	1	406	-	400-500	-	Pass
Spot - Control Building : 2nd Floor : Computer No.2									
16	2340077-45	24 May 2023	Day time	1	417	-	400-500	-	Pass
Spot - Control Building : 2nd Floor : โต๊ะทำงาน Operation Office 1									
17	2340077-46	24 May 2023	Night time	1	401	-	400-500	-	Pass

Technical Management

Supot Salamteh  
Section Head

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Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

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418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2340077**

Date Received : May 29, 2023

Date Reported : Jun 01, 2023

Report Number : 2669960-1

Page 3 of 3

Page 3 of 3

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
18	Spot - Control Building : 2nd Floor : โต๊ะทำงาน Operation Office 2								
	2340077-47	24 May 2023	Night time	1	403	-	400-500	-	Pass
19	Spot - Control Building : 2nd Floor : CCTV Room Table								
	2340077-48	24 May 2023	Day time	1	415	-	400-500	-	Pass
20	Spot - Control Building : 2nd Floor : Control (Table No.1)								
	2340077-49	24 May 2023	Day time	1	420	-	400-500	-	Pass
21	Spot - Control Building : 2nd Floor : Control (Table No.2)								
	2340077-50	24 May 2023	Day time	1	425	-	400-500	-	Pass
22	Spot - Control Building : 2nd Floor : Computer Control No.1								
	2340077-51	24 May 2023	Day time	1	422	-	400-500	-	Pass
23	Spot - Control Building : 2nd Floor : Computer Control No.2								
	2340077-52	24 May 2023	Day time	1	436	-	400-500	-	Pass
24	Spot - Control Building : 2nd Floor : Computer Control No.3								
	2340077-53	24 May 2023	Day time	1	440	-	400-500	-	Pass
25	Spot - Control Building : 2nd Floor : Computer Control No.4								
	2340077-54	24 May 2023	Day time	1	451	-	400-500	-	Pass
26	Spot - Control Building : 2nd Floor : Computer Control No.5								
	2340077-55	24 May 2023	Day time	1	420	-	400-500	-	Pass
27	Spot - Control Building : 2nd Floor : Computer Control No.6								
	2340077-56	24 May 2023	Day time	1	410	-	400-500	-	Pass
28	Spot - Control Building : 2nd Floor : Computer Control No.7								
	2340077-57	24 May 2023	Day time	1	415	-	400-500	-	Pass

**Measurement by** : Natthapon Jiengwareewong Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

**Guideline** : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

**Technical Management**

Supot Salamteh  
Section Head

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Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client** : Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2340080**

Date Received : May 29, 2023

Date Reported : Jun 01, 2023

Report Number : 2669965-1

Page 1 of 1

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
	Spot - Electrical Building : 2nd Floor : ตู้ควบคุม 3 (10MKA10GH001 Generator Control Panel)								
1	2340080-1	24 May 2023	Night time	1	296	-	200-300	-	Pass
	Area - Electrical Building : 2nd Floor : ทางเดินภายในห้อง #1								
2.1	2340080-2	24 May 2023	Night time	1	290	252.0	50	100	Pass
2.2	2340080-3	24 May 2023	Night time	2	214				
	Area - Electrical Building : 2nd Floor : ทางเดินภายในห้อง #2								
3.1	2340080-4	24 May 2023	Night time	1	216	158.5	50	100	Pass
3.2	2340080-5	24 May 2023	Night time	2	101				

**Measurement by** : Natthapon Jiengwareewong Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

**Guideline** : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

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## Analysis / Test Report

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418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2340081**

Date Received : May 29, 2023

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Report Number : 2669967-1

Page 1 of 1

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
Spot - Electrical Building 1st Floor : ตัวควบคุม 1 (SA01)									
1	2340081-1	24 May 2023	Night time	1	260	-	200-300	-	Pass
Spot - Electrical Building 1st Floor : ตัวควบคุม 2 (10BFA)									
2	2340081-2	24 May 2023	Night time	1	361	-	200-300	-	Pass
Spot - Electrical Building 1st Floor : ตัวควบคุม 3 (10BUA01)									
3	2340081-3	24 May 2023	Night time	1	283	-	200-300	-	Pass
Spot - Electrical Building 1st Floor : ตัวควบคุม 4 (10BRU01)									
4	2340081-4	24 May 2023	Night time	1	329	-	200-300	-	Pass
Area - Electrical Building 1st Floor : ทางเดินบริเวณบันได #1									
5.1	2340081-5	24 May 2023	Night time	1	184	328.0	50	100	Pass
5.2	2340081-6	24 May 2023	Night time	2	472				
Area - Electrical Building 1st Floor : ทางเดินบริเวณบันได #2									
6.1	2340081-7	24 May 2023	Night time	1	412	515.5	50	100	Pass
6.2	2340081-8	24 May 2023	Night time	2	619				
Area - Electrical Building 1st Floor : ทางเดินภายในห้อง #1									
7.1	2340081-9	24 May 2023	Night time	1	326	350.0	50	100	Pass
7.2	2340081-10	24 May 2023	Night time	2	374				
Area - Electrical Building 1st Floor : ทางเดินภายในห้อง #2									
8.1	2340081-11	24 May 2023	Night time	1	253	247.5	50	100	Pass
8.2	2340081-12	24 May 2023	Night time	2	242				

**Measurement by :** Natthapon Jiengwareewong Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

**Guideline :** Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

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Section Head

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2340082**

Date Received : May 29, 2023

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Report Number : 2669970-1

Page 1 of 1

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
1	2340082-1	24 May 2023	Day time	1	484	-	300-400	-	Pass
2	2340082-2	24 May 2023	Day time	1	417	-	300-400	-	Pass
3	2340082-3	24 May 2023	Day time	1	309	-	200-300	-	Pass
4	2340082-4	24 May 2023	Day time	1	360	-	300-400	-	Pass
5	2340082-5	24 May 2023	Day time	1	347	-	300-400	-	Pass
6	2340082-6	24 May 2023	Day time	1	368	-	300-400	-	Pass
7	2340082-7	24 May 2023	Day time	1	338	-	300-400	-	Pass
8	2340082-8	24 May 2023	Day time	1	347	-	200-300	-	Pass

**Measurement by :** Natthapon Jiengwareewong Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

**Guideline :** Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

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Section Head

Approved by

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2340083**

Date Received : May 29, 2023

Date Reported : Jun 01, 2023

Report Number : 2669973-1

Page 1 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot / Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
	Area - Warehouse and Workshop Building : 1st Floor : Reception Room								
1.1	2340083-1	24 May 2023	Day time	1	836	685.2	50	100	Pass
1.2	2340083-2	24 May 2023	Day time	2	747				
1.3	2340083-3	24 May 2023	Day time	3	649				
1.4	2340083-4	24 May 2023	Day time	4	585				
1.5	2340083-5	24 May 2023	Day time	5	611				
1.6	2340083-6	24 May 2023	Day time	6	662				
1.7	2340083-7	24 May 2023	Day time	7	707				
1.8	2340083-8	24 May 2023	Day time	8	786				
1.9	2340083-9	24 May 2023	Day time	9	584				
	Area - Warehouse and Workshop Building : 1st Floor : Warehouse Canteen and Pantry								
2.1	2340083-10	24 May 2023	Day time	1	301	315.3	150	300	Pass
2.2	2340083-11	24 May 2023	Day time	2	296				
2.3	2340083-12	24 May 2023	Day time	3	349				
	Spot - Warehouse and Workshop Building : 1st Floor : Warehouse Officer Table No.1								
3	2340083-13	24 May 2023	Day time	1	452	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : 1st Floor : Warehouse Officer Table No.2								
4	2340083-14	24 May 2023	Day time	1	487	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : 1st Floor : Warehouse Officer Table No.3								
5	2340083-15	24 May 2023	Day time	1	417	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : 1st Floor : Warehouse Officer Table No.4								
6	2340083-16	24 May 2023	Day time	1	468	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : 1st Floor : Warehouse Officer Table No.5								
7	2340083-17	24 May 2023	Day time	1	442	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : 1st Floor : Warehouse Officer Table No.6								
8	2340083-18	24 May 2023	Day time	1	430	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : 1st Floor : Warehouse Officer Table No.7								
9	2340083-19	24 May 2023	Day time	1	418	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : 1st Floor : Warehouse Officer Table No.8								
10	2340083-20	24 May 2023	Day time	1	410	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : 1st Floor : Warehouse Officer Table No.9								
11	2340083-21	24 May 2023	Day time	1	446	-	400-500	-	Pass

Technical Management

Supot Salamteh  
Section Head

Approved by

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client** : Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2340083**

Date Received : May 29, 2023

Date Reported : Jun 01, 2023

Report Number : 2669973-1

Page 2 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot / Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
12	2340083-22	24 May 2023	Day time	1	416	-	400-500	-	Pass
13	2340083-23	24 May 2023	Day time	1	467	-	400-500	-	Pass
14	2340083-24	24 May 2023	Day time	1	461	-	400-500	-	Pass
15	2340083-25	24 May 2023	Day time	1	403	-	300-400	-	Pass
16	2340083-26	24 May 2023	Day time	1	467	-	400-500	-	Pass
17.1	2340083-27	24 May 2023	Day time	1	424	635.5	150	300	Pass
17.2	2340083-28	24 May 2023	Day time	2	836				
17.3	2340083-29	24 May 2023	Day time	3	958				
17.4	2340083-30	24 May 2023	Day time	4	598				
17.5	2340083-31	24 May 2023	Day time	5	520				
17.6	2340083-32	24 May 2023	Day time	6	522				
17.7	2340083-33	24 May 2023	Day time	7	619				
17.8	2340083-34	24 May 2023	Day time	8	607				

**Measurement by** : Natthapon Jiengwareewong Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

**Guideline** : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

**Technical Management**

Supot Salamteh  
Section Head

**Approved by**

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client** : Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2340084**

Date Received : May 29, 2023

Date Reported : Jun 01, 2023

Report Number : 2669980-1

Page 1 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot / Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
Area - Warehouse and Workshop Building : Ground Floor : Warehouse Room									
1.1	2340084-1	24 May 2023	Day time	1	1,519	939.8	100	200	Pass
1.2	2340084-2	24 May 2023	Day time	2	786				
1.3	2340084-3	24 May 2023	Day time	3	906				
1.4	2340084-4	24 May 2023	Day time	4	910				
1.5	2340084-5	24 May 2023	Day time	5	1,005				
1.6	2340084-6	24 May 2023	Day time	6	791				
1.7	2340084-7	24 May 2023	Day time	7	720				
1.8	2340084-8	24 May 2023	Day time	8	638				
1.9	2340084-9	24 May 2023	Day time	9	932				
1.10	2340084-10	24 May 2023	Day time	10	921				
1.11	2340084-11	24 May 2023	Day time	11	804				
1.12	2340084-12	24 May 2023	Day time	12	858				
1.13	2340084-13	24 May 2023	Day time	13	1,029				
1.14	2340084-14	24 May 2023	Day time	14	1,083				
1.15	2340084-15	24 May 2023	Day time	15	1,076				
1.16	2340084-16	24 May 2023	Day time	16	879				
1.17	2340084-17	24 May 2023	Day time	17	912				
1.18	2340084-18	24 May 2023	Day time	18	1,106				
Area - Warehouse and Workshop Building : Ground Floor : Walkway									
2.1	2340084-19	24 May 2023	Day time	1	163	197.3	50	100	Pass
2.2	2340084-20	24 May 2023	Day time	2	249				
2.3	2340084-21	24 May 2023	Day time	3	191				
2.4	2340084-22	24 May 2023	Day time	4	200				
2.5	2340084-23	24 May 2023	Day time	5	216				
2.6	2340084-24	24 May 2023	Day time	6	158				
2.7	2340084-25	24 May 2023	Day time	7	225				
2.8	2340084-26	24 May 2023	Day time	8	195				
2.9	2340084-27	24 May 2023	Day time	9	179				

Technical Management

Supot Salamteh  
Section Head

Approved by

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client** : Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2340084**

Date Received : May 29, 2023

Date Reported : Jun 01, 2023

Report Number : 2669980-1

Page 2 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
	Area - Warehouse and Workshop Building : Ground Floor : Electrical Room/Fitness Room								
3.1	2340084-28	24 May 2023	Day time	1	303	316.8	150	300	Pass
3.2	2340084-29	24 May 2023	Day time	2	310				
3.3	2340084-30	24 May 2023	Day time	3	298				
3.4	2340084-31	24 May 2023	Day time	4	349				
3.5	2340084-32	24 May 2023	Day time	5	330				
3.6	2340084-33	24 May 2023	Day time	6	311				
	Spot - Warehouse and Workshop Building : Ground Floor : C&I Cabinet								
4	2340084-34	24 May 2023	Day time	1	660	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : Ground Floor : C&I Table								
5	2340084-35	24 May 2023	Day time	1	710	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : Ground Floor : Instrument and Control								
6	2340084-36	24 May 2023	Day time	1	630	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : Ground Floor : Mechanical and Electrical #1								
7	2340084-37	24 May 2023	Day time	1	410	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : Ground Floor : Mechanical and Electrical #2								
8	2340084-38	24 May 2023	Day time	1	584	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : Ground Floor : Mechanical and Electrical #3								
9	2340084-39	24 May 2023	Day time	1	606	-	400-500	-	Pass
	Spot - Warehouse and Workshop Building : Ground Floor : Mechanical and Electrical Workshop Room (Table No.3)								
10	2340084-40	24 May 2023	Day time	1	511	-	400-500	-	Pass

**Measurement by** : Natthapon Jiengwareewong Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

**Guideline** : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

**Technical Management**

Supot Salamteh  
Section Head

**Approved by**

Wichan Choonharat  
Assistant Manager

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## Analysis / Test Report

**Client** : Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2340086**

Date Received : May 29, 2023

Date Reported : Jun 01, 2023

Report Number : 2669981-1

Page 1 of 1

Page 2 of 3

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
Spot - Water Treatment Control Building : Laboratory (หน้า Hood)									
1	2340086-1	24 May 2023	Night time	1	311	-	300-400	-	Pass
Spot - Water Treatment Control Building : Laboratory (หน้า Spectrophotometer)									
2	2340086-2	24 May 2023	Night time	1	695	-	400-500	-	Pass
Spot - Water Treatment Control Building : Laboratory (หน้าโต๊ะวัด pH)									
3	2340086-3	24 May 2023	Night time	1	433	-	400-500	-	Pass
Area - Water Treatment Control Building : ทางเดินหน้าห้อง Laboratory									
4.1	2340086-4	24 May 2023	Night time	1	64	61.6	25	50	Pass
4.2	2340086-5	24 May 2023	Night time	2	64				
4.3	2340086-6	24 May 2023	Night time	3	59				
4.4	2340086-7	24 May 2023	Night time	4	52				
4.5	2340086-8	24 May 2023	Night time	5	56				
4.6	2340086-9	24 May 2023	Night time	6	73				
4.7	2340086-10	24 May 2023	Night time	7	66				
4.8	2340086-11	24 May 2023	Night time	8	52				
4.9	2340086-12	24 May 2023	Night time	9	68				

**Measurement by** : Natthapon Jiengwareewong Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

**Guideline** : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

**Technical Management**

Supot Salamteh  
Section Head

**Approved by**

Wichan Choonharat  
Assistant Manager

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## ภาคผนวก ค-11

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การตรวจสอบความถูกต้องของระบบ CEMs ประจำปี พ.ศ. 2566



## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.

418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355710**

Date Received: Jun 19, 2023

Date Reported: Jul 03, 2023

Report Number: 2652755-2

Page 1 of 2

**Sample Number** 2355710-1  
**Sampled Date** Jun 15, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 11  
**Parameter** Relative Response Audit

### Relative Response Audit Test Report

No Sample	Date	Time		CEMS Values		RM Values (mg/m <sup>3</sup> )	Allowable Range		Criterion
		Start	Stop	(%Opacity)	(mg/m <sup>3</sup> )		Minimum	Maximum	
1	15-Jun-23	11:10	11:58	4.03	1.79	0.08	-5.21	8.79	Pass
2	15-Jun-23	12:10	12:58	4.56	2.03	0.04	-4.97	9.03	Pass
3	15-Jun-23	13:10	13:58	4.46	1.99	0.13	-5.01	8.99	Pass
4	15-Jun-23	14:10	14:58	3.96	1.76	0.22	-5.24	8.76	Pass
5	15-Jun-23	15:10	15:58	3.47	1.54	0.13	-5.46	8.54	Pass

Remark: -Relative Response Audit is refer to 40 CFR Part 60 Appendix B : Performance Specification 11 : Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Source (PS-11)  
- Correlation Equation of Linear curve  $Y = 0.4554X - 0.0419$   
-Emission limit 28 mg/m3 from Environmental Impact Assessment Report of Gulf NC Co.,Ltd.

**Technical Management**

Wichan Choonharat  
Manager

ทะเบียนเลขที่ ว-204-ค-6113

**Approved by**

Sarayuth Jitranont  
Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-4702

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

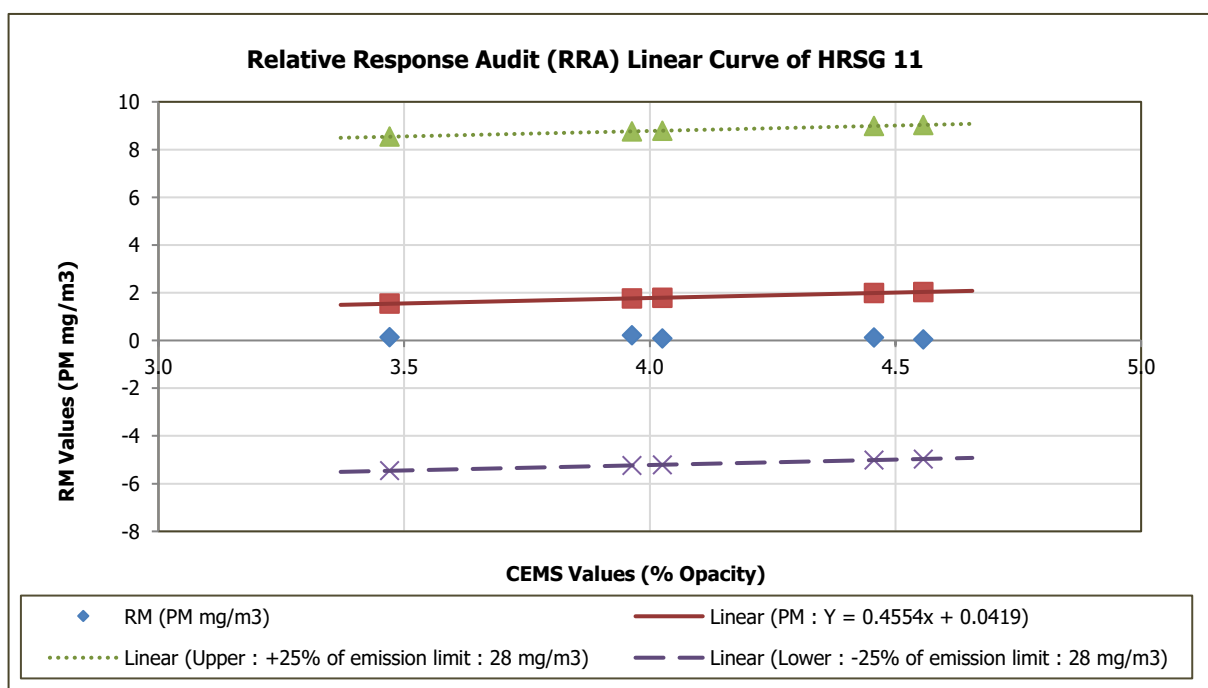
**P/O :**  
**Project Name :** Monitoring EIA  
**Project Location :** GNC

**Lot ID: 2355710**

Date Received: Jun 19, 2023  
Date Reported: Jul 03, 2023  
Report Number: 2652755-2

Page 2 of 2

**Sample Number** 2355710-1  
**Sampled Date** Jun 15, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 11  
**Parameter** Relative Response Audit



**Sampled By :** Norranon Tathongkham

**Technical Management**

*Wichan Choonharat*

Wichan Choonharat  
Manager

ทะเบียนเลขที่ ว-204-ค-6113

**Approved by**

*Sarayuth Jittranont*

Sarayuth Jittranont  
Assistant General Manager  
ทะเบียนเลขที่ ว-204-ค-4702

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355710**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652755-1

Page 1 of 10

**Sample Number** 2355710-2  
**Sampled Date** Jun 15, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 11  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Extracted into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.4	%
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	3.7	%
Type of Process	Combustion		Stack Temperature	113	°C	Gas Velocity	16.6	m/s
Type of Fuel	Natural Gas		Moisture	6.18	%	Flow Rate (Actual O2)	379529	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O <sub>2</sub>	Result at 14.4 % O <sub>2</sub>	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>										
Total Suspended Particulate	11:10 AM - 11:58 AM	mg/m3	-	0.5	<0.5	<0.5	30	60	United States Environmental Protection Agency, EPA Method 5	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)

ทะเบียนเลขที่ ว-204-จ-4717

**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
Senior Manager

ทะเบียนเลขที่ ว-204-ค-6111

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S:\Reports\\_Air Stack\_O2\_2GL.rpt ( 6:50PM)



## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355710**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652755-1

Page 2 of 10

**Sample Number** 2355710-2  
**Sampled Date** Jun 15, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 11  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Extracted into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.4	%
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	3.7	%
Type of Process	Combustion		Stack Temperature	113	°C	Gas Velocity	16.6	m/s
Type of Fuel	Natural Gas		Moisture	6.18	%	Flow Rate (Actual O2)	379529	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	11:10 AM - 11:58 AM	g/s	-	-	<0.05	1.7	-	Calculated	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Sampled By :** Norranon Tathongkham

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)  
ทะเบียนเลขที่ ว-204-จ-4717

**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
Senior Manager  
ทะเบียนเลขที่ ว-204-ค-6111

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355710**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652755-1

Page 3 of 10

**Sample Number** 2355710-3  
**Sampled Date** Jun 15, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 11  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Extracted into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	2.35	m	Oxygen	14.5	%
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	3.6	%
Type of Process	Combustion		Stack Temperature	113	°C	Gas Velocity	16.6	m/s
Type of Fuel	Natural Gas		Moisture	6.35	%	Flow Rate (Actual O2)	186503	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O <sub>2</sub>	Result at 14.5 % O <sub>2</sub>	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>										
Total Suspended Particulate	12:10 PM - 12:58 PM	mg/m3	-	0.5	<0.5	<0.5	30	60	United States Environmental Protection Agency, EPA Method 5	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)

ทะเบียนเลขที่ ว-204-จ-4717

**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
Senior Manager

ทะเบียนเลขที่ ว-204-ค-6111

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355710**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652755-1

Page 4 of 10

**Sample Number** 2355710-3  
**Sampled Date** Jun 15, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 11  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Extracted into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	2.35	m	Oxygen	14.5	%
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	3.6	%
Type of Process	Combustion		Stack Temperature	113	°C	Gas Velocity	16.6	m/s
Type of Fuel	Natural Gas		Moisture	6.35	%	Flow Rate (Actual O2)	186503	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	12:10 PM - 12:58 PM	g/s	-	-	<0.03	1.7	-	Calculated	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Sampled By :** Norranon Tathongkham

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)  
ทะเบียนเลขที่ ว-204-จ-4717

**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
Senior Manager  
ทะเบียนเลขที่ ว-204-ค-6111

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355710**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652755-1

Page 5 of 10

**Sample Number** 2355710-4  
**Sampled Date** Jun 15, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 11  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Extracted into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.5	%
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	3.7	%
Type of Process	Combustion		Stack Temperature	113	°C	Gas Velocity	16.6	m/s
Type of Fuel	Natural Gas		Moisture	6.37	%	Flow Rate (Actual O2)	378890	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result		Guideline (1)	Guideline (2)	Method	Testing Location
					at 7 %O <sub>2</sub>	at 14.5 % O <sub>2</sub>				
Air Testing										
Total Suspended Particulate	01:10 PM - 01:58 PM	mg/m3	-	0.5	<0.5	<0.5	30	60	United States Environmental Protection Agency, EPA Method 5	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

Technical Management

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)

ทะเบียนเลขที่ ว-204-จ-4717

Approved by

*Kanokkorn Anek*

Kanokkorn Anek  
Senior Manager

ทะเบียนเลขที่ ว-204-ค-6111

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355710**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652755-1

Page 6 of 10

**Sample Number** 2355710-4  
**Sampled Date** Jun 15, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 11  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Extracted into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.5	%
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	3.7	%
Type of Process	Combustion		Stack Temperature	113	°C	Gas Velocity	16.6	m/s
Type of Fuel	Natural Gas		Moisture	6.37	%	Flow Rate (Actual O2)	378890	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	01:10 PM - 01:58 PM	g/s	-	-	<0.05	1.7	-	Calculated	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Sampled By :** Norranon Tathongkham

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)  
ทะเบียนเลขที่ ว-204-จ-4717

**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
Senior Manager  
ทะเบียนเลขที่ ว-204-ค-6111

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355710**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652755-1

Page 7 of 10

**Sample Number** 2355710-5  
**Sampled Date** Jun 15, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 11  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Extracted into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.4	%
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	3.7	%
Type of Process	Combustion		Stack Temperature	113	°C	Gas Velocity	16.6	m/s
Type of Fuel	Natural Gas		Moisture	6.36	%	Flow Rate (Actual O2)	378928	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O <sub>2</sub>	Result at 14.4 % O <sub>2</sub>	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>										
Total Suspended Particulate	02:10 PM - 02:58 PM	mg/m3	-	0.5	<0.5	<0.5	30	60	United States Environmental Protection Agency, EPA Method 5	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)

ทะเบียนเลขที่ ว-204-จ-4717

**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
Senior Manager

ทะเบียนเลขที่ ว-204-ค-6111

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14494-21/ EMAIL

S:\Reports\\_Air Stack\_O2\_2GL.rpt ( 6:50PM)



## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355710**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652755-1

Page 8 of 10

**Sample Number** 2355710-5  
**Sampled Date** Jun 15, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 11  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Extracted into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.4	%
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	3.7	%
Type of Process	Combustion		Stack Temperature	113	°C	Gas Velocity	16.6	m/s
Type of Fuel	Natural Gas		Moisture	6.36	%	Flow Rate (Actual O2)	378928	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	02:10 PM - 02:58 PM	g/s	-	-	<0.05	1.7	-	Calculated	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Sampled By :** Norranon Tathongkham

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)  
ทะเบียนเลขที่ ว-204-จ-4717

**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
Senior Manager  
ทะเบียนเลขที่ ว-204-ค-6111

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355710**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652755-1

Page 9 of 10

**Sample Number** 2355710-6  
**Sampled Date** Jun 15, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 11  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Extracted into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.4	%
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	3.7	%
Type of Process	Combustion		Stack Temperature	113	°C	Gas Velocity	16.6	m/s
Type of Fuel	Natural Gas		Moisture	6.33	%	Flow Rate (Actual O2)	379035	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O <sub>2</sub>	Result at 14.4 % O <sub>2</sub>	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>										
Total Suspended Particulate	03:10 PM - 03:58 PM	mg/m3	-	0.5	<0.5	<0.5	30	60	United States Environmental Protection Agency, EPA Method 5	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)

ทะเบียนเลขที่ ว-204-จ-4717

**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
Senior Manager

ทะเบียนเลขที่ ว-204-ค-6111

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14494-21/ EMAIL

S:\Reports\\_Air Stack\_O2\_2GL.rpt ( 6:50PM)



## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355710**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652755-1

Page 10 of 10

**Sample Number** 2355710-6  
**Sampled Date** Jun 15, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 11  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Extracted into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.4	%
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	3.7	%
Type of Process	Combustion		Stack Temperature	113	°C	Gas Velocity	16.6	m/s
Type of Fuel	Natural Gas		Moisture	6.33	%	Flow Rate (Actual O2)	379035	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	03:10 PM - 03:58 PM	g/s	-	-	<0.05	1.7	-	Calculated	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Sampled By :** Norranon Tathongkham

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)  
ทะเบียนเลขที่ ว-204-จ-4717

**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
Senior Manager  
ทะเบียนเลขที่ ว-204-ค-6111

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.

418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355710**

Date Received: Jun 19, 2023

Date Reported: Jul 03, 2023

Report Number: 2652755-2

Page 1 of 2

**Sample Number** 2355710-1  
**Sampled Date** Jun 15, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 11  
**Parameter** Relative Response Audit

### Relative Response Audit Test Report

No Sample	Date	Time		CEMS Values		RM Values (mg/m <sup>3</sup> )	Allowable Range		Criterion
		Start	Stop	(%Opacity)	(mg/m <sup>3</sup> )		Minimum	Maximum	
1	15-Jun-23	11:10	11:58	4.03	1.79	0.08	-5.21	8.79	Pass
2	15-Jun-23	12:10	12:58	4.56	2.03	0.04	-4.97	9.03	Pass
3	15-Jun-23	13:10	13:58	4.46	1.99	0.13	-5.01	8.99	Pass
4	15-Jun-23	14:10	14:58	3.96	1.76	0.22	-5.24	8.76	Pass
5	15-Jun-23	15:10	15:58	3.47	1.54	0.13	-5.46	8.54	Pass

Remark: -Relative Response Audit is refer to 40 CFR Part 60 Appendix B : Performance Specification 11 : Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Source (PS-11)  
- Correlation Equation of Linear curve  $Y = 0.4554X - 0.0419$   
-Emission limit 28 mg/m3 from Environmental Impact Assessment Report of Gulf NC Co.,Ltd.

**Technical Management**

Wichan Choonharat  
Manager

ทะเบียนเลขที่ ว-204-ค-6113

**Approved by**

Sarayuth Jitranont  
Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-4702

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

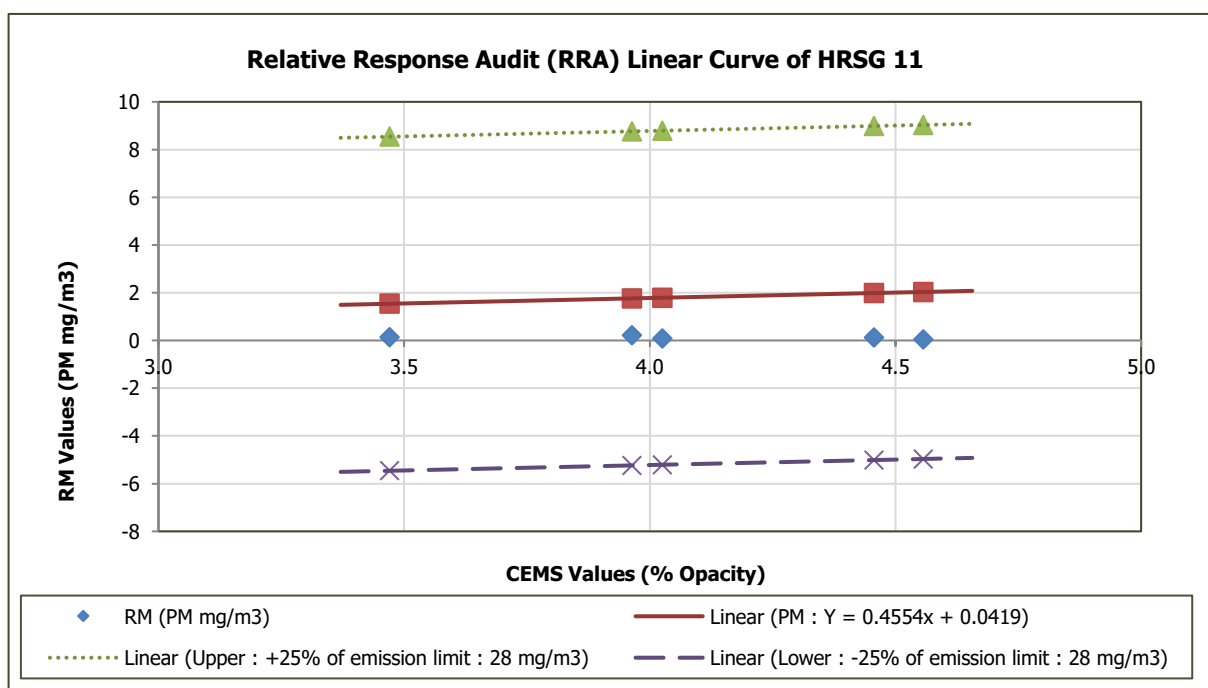
**P/O :**  
**Project Name :** Monitoring EIA  
**Project Location :** GNC

**Lot ID: 2355710**

Date Received: Jun 19, 2023  
Date Reported: Jul 03, 2023  
Report Number: 2652755-2

Page 2 of 2

**Sample Number** 2355710-1  
**Sampled Date** Jun 15, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 11  
**Parameter** Relative Response Audit



**Sampled By :** Norranon Tathongkham

**Technical Management**

*Wichan Choonharat*

Wichan Choonharat  
Manager

ทะเบียนเลขที่ ว-204-ค-6113

**Approved by**

*Sarayuth Jittranont*

Sarayuth Jittranont  
Assistant General Manager  
ทะเบียนเลขที่ ว-204-ค-4702

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 1 of 10

**Sample Number** 2355720-2  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.9	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.2	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.28	%	Flow Rate (Actual O2)	349092	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result		Guideline (1)	Guideline (2)	Method	Testing Location
					at 7 %O <sub>2</sub>	at 14.9 % O <sub>2</sub>				
Air Testing										
Total Suspended Particulate	10:30 AM - 11:18 AM	mg/m3	-	0.5	1.7	0.73	30	60	United States Environmental Protection Agency, EPA Method 5	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)

ทะเบียนเลขที่ ว-204-จ-4717

**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
Senior Manager

ทะเบียนเลขที่ ว-204-ค-6111

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 2 of 10

**Sample Number** 2355720-2  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.9	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.2	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.28	%	Flow Rate (Actual O2)	349092	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	10:30 AM - 11:18 AM	g/s	-	-	0.07	1.7	-	Calculated	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Sampled By :** Norranon Tathongkham

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
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ทะเบียนเลขที่ ว-204-จ-4717

**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
Senior Manager  
ทะเบียนเลขที่ ว-204-ค-6111

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 3 of 10

**Sample Number** 2355720-3  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.8	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.3	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.26	%	Flow Rate (Actual O2)	349117	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result		Guideline (1)	Guideline (2)	Method	Testing Location
					at 7 %O <sub>2</sub>	at 14.8 % O <sub>2</sub>				
Air Testing										
Total Suspended Particulate	11:30 AM - 12:18 PM	mg/m3	-	0.5	<0.5	<0.5	30	60	United States Environmental Protection Agency, EPA Method 5	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

Technical Management

*Saranya C.*

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ทะเบียนเลขที่ ว-204-จ-4717

Approved by

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 4 of 10

**Sample Number** 2355720-3  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.8	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.3	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.26	%	Flow Rate (Actual O2)	349117	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	11:30 AM - 12:18 PM	g/s	-	-	<0.05	1.7	-	Calculated	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Sampled By :** Norranon Tathongkham

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
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**Approved by**

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Kanokkorn Anek  
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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 5 of 10

**Sample Number** 2355720-4  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.8	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.3	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.39	%	Flow Rate (Actual O2)	348717	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O <sub>2</sub>	Result at 14.8 % O <sub>2</sub>	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>										
Total Suspended Particulate	12:30 PM - 01:18 PM	mg/m3	-	0.5	1.2	0.53	30	60	United States Environmental Protection Agency, EPA Method 5	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

Technical Management

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Saranya Chalermthamrong  
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ทะเบียนเลขที่ ว-204-จ-4717

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S:\Reports\\_Air Stack\_O2\_2GL.rpt ( 6:53PM)



## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 6 of 10

**Sample Number** 2355720-4  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.8	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.3	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.39	%	Flow Rate (Actual O2)	348717	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	12:30 PM - 01:18 PM	g/s	-	-	0.05	1.7	-	Calculated	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Sampled By :** Norranon Tathongkham

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
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**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 7 of 10

**Sample Number** 2355720-5  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.6	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.5	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.26	%	Flow Rate (Actual O2)	349050	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result		Guideline (1)	Guideline (2)	Method	Testing Location
					at 7 %O <sub>2</sub>	at 14.6 % O <sub>2</sub>				
Air Testing										
Total Suspended Particulate	01:30 PM - 02:18 PM	mg/m3	-	0.5	<0.5	<0.5	30	60	United States Environmental Protection Agency, EPA Method 5	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
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ทะเบียนเลขที่ ว-204-จ-4717

**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 8 of 10

**Sample Number** 2355720-5  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.6	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.5	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.26	%	Flow Rate (Actual O2)	349050	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	01:30 PM - 02:18 PM	g/s	-	-	<0.05	1.7	-	Calculated	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Sampled By :** Norranon Tathongkham

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)  
ทะเบียนเลขที่ ว-204-จ-4717

**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 9 of 10

**Sample Number** 2355720-6  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.5	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.5	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.27	%	Flow Rate (Actual O2)	348981	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result		Guideline (1)	Guideline (2)	Method	Testing Location
					at 7 %O <sub>2</sub>	at 14.5 % O <sub>2</sub>				
Air Testing										
Total Suspended Particulate	02:30 PM - 03:18 PM	mg/m3	-	0.5	<0.5	<0.5	30	60	United States Environmental Protection Agency, EPA Method 5	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)

ทะเบียนเลขที่ ว-204-จ-4717

**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
Senior Manager

ทะเบียนเลขที่ ว-204-ค-6111

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 10 of 10

**Sample Number** 2355720-6  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.5	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.5	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.27	%	Flow Rate (Actual O2)	348981	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	02:30 PM - 03:18 PM	g/s	-	-	<0.05	1.7	-	Calculated	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Sampled By :** Norranon Tathongkham

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
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**Approved by**

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Kanokkorn Anek  
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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received: Jun 19, 2023

Date Reported: Jul 03, 2023

Report Number: 2652772-2

Page 1 of 2

**Sample Number** 2355720-1  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Parameter** Relative Response Audit

### Relative Response Audit Test Report

No Sample	Date	Time		CEMS Values		RM Values (mg/m <sup>3</sup> )	Allowable Range		Criterion
		Start	Stop	(%Opacity)	(mg/m <sup>3</sup> )		Minimum	Maximum	
1	16-Jun-23	10:30	11:18	2.91	1.22	0.75	-5.78	8.22	Pass
2	16-Jun-23	11:30	12:18	2.30	0.99	0.19	-6.01	7.99	Pass
3	16-Jun-23	12:30	13:18	2.54	1.08	0.54	-5.92	8.08	Pass
4	16-Jun-23	13:30	14:18	3.06	1.27	0.15	-5.73	8.27	Pass
5	16-Jun-23	14:30	15:18	2.79	1.17	0.10	-5.83	8.17	Pass

Remark: -Relative Response Audit is refer to 40 CFR Part 60 Appendix B : Performance Specification 11 : Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Source (PS-11)  
- Correlation Equation of Linear curve  $Y = 0.3628X + 0.1576$   
-Emission limit 28 mg/m3 from Environmental Impact Assessment Report of Gulf NC Co.,Ltd.

**Technical Management**

Wichan Choonharat  
Manager

ทะเบียนเลขที่ ว-204-ค-6113

**Approved by**

Sarayuth Jitranont  
Assistant General Manager  
ทะเบียนเลขที่ ว-204-ค-4702

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418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

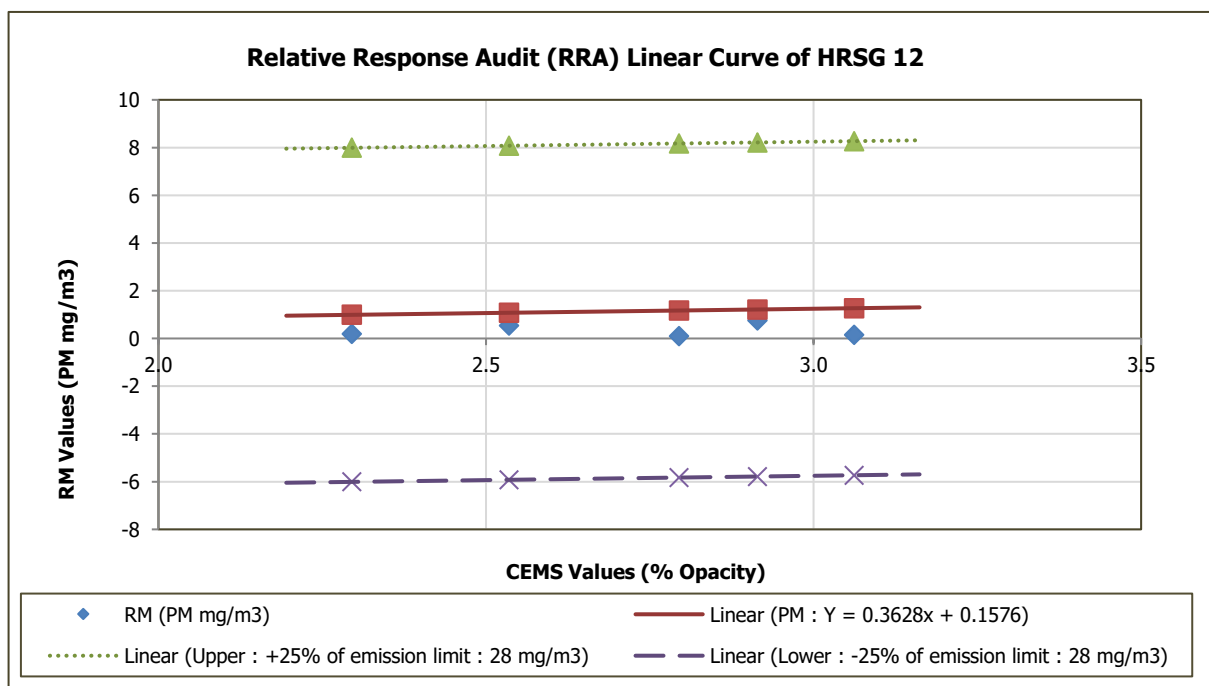
**P/O :**  
**Project Name :** Monitoring EIA  
**Project Location :** GNC

**Lot ID: 2355720**

Date Received: Jun 19, 2023  
Date Reported: Jul 03, 2023  
Report Number: 2652772-2

Page 2 of 2

**Sample Number** 2355720-1  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Parameter** Relative Response Audit



**Sampled By :** Norranon Tathongkham

**Technical Management**

*Wichan Choonharat*

Wichan Choonharat  
Manager

ทะเบียนเลขที่ ว-204-ค-6113

**Approved by**

*Sarayuth Jittranont*

Sarayuth Jittranont  
Assistant General Manager  
ทะเบียนเลขที่ ว-204-ค-4702

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 1 of 10

**Sample Number** 2355720-2  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.9	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.2	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.28	%	Flow Rate (Actual O2)	349092	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result		Guideline (1)	Guideline (2)	Method	Testing Location
					at 7 %O <sub>2</sub>	at 14.9 % O <sub>2</sub>				
Air Testing										
Total Suspended Particulate	10:30 AM - 11:18 AM	mg/m3	-	0.5	1.7	0.73	30	60	United States Environmental Protection Agency, EPA Method 5	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)

ทะเบียนเลขที่ ว-204-จ-4717

**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
Senior Manager

ทะเบียนเลขที่ ว-204-ค-6111

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 2 of 10

**Sample Number** 2355720-2  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.9	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.2	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.28	%	Flow Rate (Actual O2)	349092	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	10:30 AM - 11:18 AM	g/s	-	-	0.07	1.7	-	Calculated	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Sampled By :** Norranon Tathongkham

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
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**Approved by**

*Kanokkorn Anek*

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 3 of 10

**Sample Number** 2355720-3  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.8	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.3	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.26	%	Flow Rate (Actual O2)	349117	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result		Guideline (1)	Guideline (2)	Method	Testing Location
					at 7 %O <sub>2</sub>	at 14.8 % O <sub>2</sub>				
Air Testing										
Total Suspended Particulate	11:30 AM - 12:18 PM	mg/m3	-	0.5	<0.5	<0.5	30	60	United States Environmental Protection Agency, EPA Method 5	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

Technical Management

*Saranya C.*

Saranya Chalermthamrong  
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ทะเบียนเลขที่ ว-204-จ-4717

Approved by

*Kanokkorn Anek*

Kanokkorn Anek  
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S:\Reports\\_Air Stack\_O2\_2GL.rpt ( 6:53PM)



## Analysis / Test Report

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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 4 of 10

**Sample Number** 2355720-3  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.8	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.3	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.26	%	Flow Rate (Actual O2)	349117	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	11:30 AM - 12:18 PM	g/s	-	-	<0.05	1.7	-	Calculated	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Sampled By :** Norranon Tathongkham

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

**Technical Management**

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**Approved by**

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## Analysis / Test Report

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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 5 of 10

**Sample Number** 2355720-4  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.8	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.3	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.39	%	Flow Rate (Actual O2)	348717	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result		Guideline (1)	Guideline (2)	Method	Testing Location
					at 7 %O <sub>2</sub>	at 14.8 % O <sub>2</sub>				
Air Testing										
Total Suspended Particulate	12:30 PM - 01:18 PM	mg/m3	-	0.5	1.2	0.53	30	60	United States Environmental Protection Agency, EPA Method 5	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)

ทะเบียนเลขที่ ว-204-จ-4717

**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
Senior Manager

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
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**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 6 of 10

**Sample Number** 2355720-4  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.8	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.3	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.39	%	Flow Rate (Actual O2)	348717	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	12:30 PM - 01:18 PM	g/s	-	-	0.05	1.7	-	Calculated	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Sampled By :** Norranon Tathongkham

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)  
ทะเบียนเลขที่ ว-204-จ-4717

**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 7 of 10

**Sample Number** 2355720-5  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.6	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.5	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.26	%	Flow Rate (Actual O2)	349050	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O <sub>2</sub>	Result at 14.6 % O <sub>2</sub>	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>										
Total Suspended Particulate	01:30 PM - 02:18 PM	mg/m3	-	0.5	<0.5	<0.5	30	60	United States Environmental Protection Agency, EPA Method 5	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)

ทะเบียนเลขที่ ว-204-จ-4717

**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
Senior Manager

ทะเบียนเลขที่ ว-204-ค-6111

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S:\Reports\\_Air Stack\_O2\_2GL.rpt ( 6:53PM)



## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 8 of 10

**Sample Number** 2355720-5  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.6	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.5	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.26	%	Flow Rate (Actual O2)	349050	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	01:30 PM - 02:18 PM	g/s	-	-	<0.05	1.7	-	Calculated	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Sampled By :** Norranon Tathongkham

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

**Technical Management**

*Saranya C.*

Saranya Chalermthamrong  
Scientist (4)  
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**Approved by**

*Kanokkorn Anek*

Kanokkorn Anek  
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ทะเบียนเลขที่ ว-204-ค-6111

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## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 9 of 10

**Sample Number** 2355720-6  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.5	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.5	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.27	%	Flow Rate (Actual O2)	348981	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result		Guideline (1)	Guideline (2)	Method	Testing Location
					at 7 %O <sub>2</sub>	at 14.5 % O <sub>2</sub>				
Air Testing										
Total Suspended Particulate	02:30 PM - 03:18 PM	mg/m3	-	0.5	<0.5	<0.5	30	60	United States Environmental Protection Agency, EPA Method 5	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

Technical Management

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Scientist (4)

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Approved by

*Kanokkorn Anek*

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S:\Reports\\_Air Stack\_O2\_2GL.rpt ( 6:53PM)



## Analysis / Test Report

**Client :** Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**

**Project Name :** Monitoring EIA

**Project Location :** GNC

**Lot ID: 2355720**

Date Received : Jun 19, 2023

Date Reported : Jun 30, 2023

Report Number: 2652772-1

Page 10 of 10

**Sample Number** 2355720-6  
**Sampled Date** Jun 16, 2023  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 12  
**Date Analysis Commenced** Jun 21, 2023  
**Condition of Sample** Drawn into one filter paper placed in plastic petri dish

### Stack Description

Ambient Pressure	755	mmHg	Diameter	3.35	m	Oxygen	14.5	%
Ambient Temperature	31.0	°C	Shape	Circle		Carbon Dioxide	3.5	%
Type of Process	Combustion		Stack Temperature	111	°C	Gas Velocity	15.7	m/s
Type of Fuel	Natural Gas		Moisture	9.27	%	Flow Rate (Actual O2)	348981	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Air Testing</b>									
Total Suspended Particulate	02:30 PM - 03:18 PM	g/s	-	-	<0.05	1.7	-	Calculated	Bangkok

### Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf NC Co., Ltd.

Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Sampled By :** Norranon Tathongkham

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

**Technical Management**

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## Analysis / Test Report

**Client** : Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O** :

**Project Name** : Monitoring EIA

**Project Location** : GNC

**Lot ID: 2355721**

Date Received :Jun 19, 2023

Date Reported :Jun 21, 2023

Report Number :2652811-1

Page 1 of 1

**Sample Number** 2355721-1  
**Sample Description** Emission from Stationary Source  
**Location** ปล่อง HRSG 11  
**Measurement Date** Jun 15, 2023

### Stack Description

Ambient Temperature	32 °C	Diameter	3.35 m	Oxygen	14.48 %
Ambient Pressure	755 mmHg	Shape	Circle	Carbon dioxide	3.63 %
Type of Process	Combustion	Stack Temperature	113 °C	Gas Velocity	16.65 m/s
Type of Fuel	Natural Gas	Moisture	6.37 %	Flow Rate	379032 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Sulfur Dioxide (ppm)	
				at Actual O <sub>2</sub>	at 7% O <sub>2</sub>	at Actual O <sub>2</sub>	at 7% O <sub>2</sub>
1	12:10 PM - 12:30 PM	14.51	3.61	13.91	30.28	0.79	1.72
2	12:31 PM - 12:51 PM	14.47	3.63	16.89	36.54	0.81	1.76
3	12:52 PM - 01:12 PM	14.45	3.64	17.78	38.33	0.81	1.75
Average (ppm)		14.48	3.63	16.20	35.05	0.80	1.74
Guideline <sup>1/</sup> (ppm)				-	60	-	6
Guideline <sup>2/</sup> (ppm)				-	120	-	20
Result (mg/Nm <sup>3</sup> )				30.47	65.94	2.11	4.56
Emission Rate at Actual O <sub>2</sub> (g/s)				3.2083		0.2217	
Guideline <sup>1/</sup> (g/s)				7.40		1.00	
Method				US EPA Method 7E		US EPA Method 6C	

**Sampled By** : Sathapron Thakarw

**Guideline** : <sup>1/</sup> Environmental Impact Assessment Report of Gulf NC Co., Ltd.

<sup>2/</sup> Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

**Technical Management**

Wichan Choonharat  
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ทะเบียนเลขที่ ว-204-ค-6113

**Approved by**

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## Analysis / Test Report

**Client** : Gulf NC Co., Ltd.  
418 Moo 1, Nontree, Kabin Buri, Prachinburi Thailand 25110

**P/O :**  
**Project Name** : Monitoring EIA  
**Project Location** : GNC

**Lot ID: 2355721**

Date Received : Jun 19, 2023  
Date Reported : Jun 21, 2023  
Report Number : 2652811-1

Page 1 of 1

**Sample Number** : 2355721-1  
**Sample Description** : Emission from Stationary Source  
**Location** : ปล่อง HRSG 11  
**Measurement Date** : Jun 15, 2023

### Stack Description

Ambient Temperature	32 °C	Diameter	3.35 m	Oxygen	14.48 %
Ambient Pressure	755 mmHg	Shape	Circle	Carbon dioxide	3.63 %
Type of Process	Combustion	Stack Temperature	113 °C	Gas Velocity	16.65 m/s
Type of Fuel	Natural Gas	Moisture	6.37 %	Flow Rate	379032 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Carbon Monoxide (ppm)	
				at Actual O <sub>2</sub>	At 7% O <sub>2</sub>
1	12:10 PM - 12:30 PM	14.51	3.61	19.68	42.83
2	12:31 PM - 12:51 PM	14.47	3.63	19.52	42.21
3	12:52 PM - 01:12 PM	14.45	3.64	19.19	41.37
Average (ppm)		14.48	3.63	19.46	42.14
Guideline (ppm)				-	690
Result (mg/Nm <sup>3</sup> )				22.29	48.26
Emission Rate at Actual O <sub>2</sub> (g/s)				2.3467	
Method				US EPA Method 10	

**Sampled By :** Sathapron Thakarw  
**Guideline :** Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)

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# ภาคผนวก ง

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