

ภาคผนวก ค-3

ผลการติดตามตรวจสอบลักษณะสมบัติจากบ่อพักน้ำเสีย



Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.

965 Bangpoo Industrial Estate, Soi 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd,
Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O :

Project Name : Monitoring EIA

Project Location:

TESTING
No.0009
Lot ID: 225406
Date Received : Jan 17, 2022
Date Reported : Jan 25, 2022
Report Number : 2204178-1

Page 1 of 3

Sample Number	225406-1
Sample Date	Jan 17, 2022 11:50 AM
Sample Description	Wastewater
Location	Wastewater sump (manhole)
Date Analysis Commenced	Jan 18, 2022
Condition of Sample	Contained in three amber glass bottles, eight plastic bottles and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.001	≤0.25	Based on APHA (2017), 3125	Bangkok
Barium	mg/L	0.0003	0.0005	0.09	≤1.0	Based on APHA (2017), 3125	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Based on APHA (2017), 3125	Bangkok
Chromium	mg/L	0.0003	0.0005	0.0005	No Standard	Based on APHA (2017), 3125	Bangkok
Copper	mg/L	0.0003	0.0005	0.002	≤2.0	Based on APHA (2017), 3125	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Based on APHA (2017), 3500-Cr (B)	Bangkok
Lead	mg/L	0.0003	0.0005	Not Detected	≤0.2	Based on APHA (2017), 3125	Bangkok
Manganese	mg/L	0.0003	0.0005	0.002	≤5.0	Based on APHA (2017), 3125	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Based on APHA (2017), 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.002	≤1.0	Based on APHA (2017), 3125	Bangkok
Selenium	mg/L	0.0003	0.0005	Not Detected	≤0.02	Based on APHA (2017), 3125	Bangkok
Silver	mg/L	0.0003	0.0005	Not Detected	≤1.0	Based on APHA (2017), 3125	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	≤0.75	Based on APHA (2017), Calculated	Bangkok
Zinc	mg/L	0.003	0.005	<0.005	≤5.0	Based on APHA (2017), 3125	Bangkok

Pesticides - Organochlorine Group							
2,4-DDD	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
2,4-DDE	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
2,4-DDT	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
4,4-DDD	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
4,4-DDE	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
4,4-DDT	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok

Technical Management
Savitree Naisangiam
Assistant Manager
โทรศัพท์ ๖-204-๔4709

Approved by
Kankorn Anek
Senior Manager
โทรศัพท์ ๖-204-๔6111

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Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.

965 Bangpoo Industrial Estate, Soi 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd,
Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O :

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Sample Number	225406-1
Sample Date	Jan 17, 2022 11:50 AM
Sample Description	Wastewater
Location	Wastewater sump (manhole)
Date Analysis Commenced	Jan 18, 2022
Condition of Sample	Contained in three amber glass bottles, eight plastic bottles and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Pesticides - Organochlorine Group							
Aldrin	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
alpha-BHC	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
beta-BHC	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Chlordane	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
delta-BHC	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Dieldrin	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Endosulfan I	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Endosulfan II	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Endrin	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
gamma-Chlordane	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Heptachlor	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Heptachlor-Epoxide	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Lindane (gamma-BHC)	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Methoxychlor	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Water Testing							
BOD (5 days at 20 degree C)	mg/L	-	2	<2	≤500	Based on APHA (2017), 5210 B	Bangkok
COD	mg/L	1.5	5	13	≤750	Based on APHA (2017), 5220 D	Bangkok
Cobri (at Original pH) *	ADMI	-	5	5	≤600	APHA (2017), 2120 F	Bangkok
Cobri (at pH 7.0) *	ADMI	-	5	6	≤600	APHA (2017), 2120 F	Bangkok
Cyanide as CN	mg/L	0.002	0.005	Not Detected	≤0.2	Based on APHA (2017), 4500-CN (C)/E	Bangkok
Formaldehyde *	mg/L	0.03	0.1	Not Detected	≤1	Wastewater Analysis	Bangkok

Technical Management
Savitree Naisangiam
Assistant Manager
โทรศัพท์ ๖-204-๔4709

Approved by
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Senior Manager
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Lot ID: 225406
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Report Number : 2204178-1

Page 3 of 3

Sample Number		225406-1					
Sampled Date		Jan 17, 2022 11:50 AM					
Sample Description		Wastewater					
Location		Wastewater pump (manhole)					
Date Analysis Commenced		Jan 18, 2022					
Condition of Sample		Contained in three amber glass bottles, eight plastic bottles and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)					
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Bangkok
pH at 25 degree C	-	-	-	8.1	5.5-9.0	Based on APHA (2017), 4500-H (B)	Bangkok
Phenol *	mg/L	0.0005	0.001	Not Detected	≤1	Based on APHA (2017), 5530 C	Bangkok
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	APHA (2017), 4500-Cl(F)	Bangkok
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Bangkok
Temperature *	Degree C	-	-	31.0	≤45	Based on APHA (2017), 2550 B	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	380	≤3000	Based on APHA (2017), 2540 C	Bangkok
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	<1.0	≤100	Based on APHA (2017), 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	Based on APHA (2017), 2540 D	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Wisarut Sretamma

Remark :
- LOD : Limit of Detection
- "≤" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

Technical Management

Sawitree N.
Sawitree Nisangiam
Assistant Manager
โทร: 02-04-4709

Approved by

Kanokkorn Anek
Senior Manager
โทร: 02-04-6111

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965 Bangpoo Industrial Estate, Soi 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd,
Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280
P/O :
Project Name : Monitoring EIA
Project Location :
TESTING
No.0009
Lot ID: 225406
Date Received : Jan 17, 2022
Date Reported : Jan 25, 2022
Report Number : 2204178-2

Page 1 of 1

Sample Number	225406-1						
Sampled Date	Jan 17, 2022 11:50 AM						
Sample Description	Wastewater						
Location	Wastewater sump (manhole)						
Date Analysis Commenced	Jan 18, 2022						
Condition of Sample	Contained in three amber glass bottles, eight plastic bottles and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Iron	mg/L	0.003	0.005	0.03	≤10.0	Based on APHA (2017), 3125	Bangkok
Pesticides - Organochlorine Group							
alpha-Chlordane *	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Hexachlorobenzene	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Mirex *	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	-	0.06	<0.06	No Standard	Based on APHA (2017), 4500-NH3 (B), (F)	Bangkok
Anionic Surfactant as MBAS *	mg/L	0.015	0.05	<0.05	≤30	Based on APHA (2017), 5540 (B),(C)	Bangkok
Chloride *	mg/L	0.15	0.5	66.6	No Standard	ISE Application	Bangkok
Flow rate *	m3/d	-	-	51	No Standard	Flow meter	Bangkok
Fluoride as F *	mg/L	0.15	0.5	<0.5	≤5	Based on APHA (2017), 4500-F (C)	Bangkok
Odour *		-	-	Odourless	Non Objectionable	APHA (2017), 2150 B	Bangkok
Phosphate as P *	mg/L	0.005	0.01	<0.01	No Standard	Based on APHA (2017), 4500-P(E)	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Wisarut Sretamma

Remark :
- LOD : Limit of Detection
- "≤" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

Approved by

Sawitree N.
Sawitree Nisangiam
Assistant Manager

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Client : Bangpoo Environmental Complex Co., Ltd.

965 Bangpoo Industrial Estate, Soi 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd,
Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O :

Project Name : Monitoring EIA

Project Location:

TESTING
No.0009
Lot ID: 2213488

Date Received : Feb 14, 2022

Date Reported : Feb 23, 2022

Report Number : 2218632-1

Page 1 of 3

Sample Number	2213488-1
Sample Date	Feb 14, 2022 9:50 AM
Sample Description	Wastewater
Location	Wastewater sump (manhole)
Date Analysis Commenced	Feb 15, 2022
Condition of Sample	Contained in three amber glass bottles, eight plastic bottles and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.005	≤0.25	Based on APHA (2017), 3125	Bangkok
Barium	mg/L	0.0003	0.0005	0.21	≤1.0	Based on APHA (2017), 3125	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Based on APHA (2017), 3125	Bangkok
Chromium	mg/L	0.0003	0.0005	0.008	No Standard	Based on APHA (2017), 3125	Bangkok
Copper	mg/L	0.0003	0.0005	0.01	≤2.0	Based on APHA (2017), 3125	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	<0.01	≤0.25	Based on APHA (2017), 3500-Cr (B)	Bangkok
Lead	mg/L	0.0003	0.0005	0.002	≤0.2	Based on APHA (2017), 3125	Bangkok
Manganese	mg/L	0.0003	0.0005	0.05	≤5.0	Based on APHA (2017), 3125	Bangkok
Mercury *	mg/L	0.0001	0.0005	<0.0005	≤0.005	Based on APHA (2017), 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.010	≤1.0	Based on APHA (2017), 3125	Bangkok
Selenium	mg/L	0.0003	0.0005	0.0006	≤0.02	Based on APHA (2017), 3125	Bangkok
Silver	mg/L	0.0003	0.0005	Not Detected	≤1.0	Based on APHA (2017), 3125	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	≤0.75	Based on APHA (2017), Calculated	Bangkok
Zinc	mg/L	0.003	0.005	0.03	≤5.0	Based on APHA (2017), 3125	Bangkok

Pesticides - Organochlorine Group							
2,4-DDD	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
2,4-DDE	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
2,4-DDT	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
4,4-DDD	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
4,4-DDE	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
4,4-DDT	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok

Technical Management
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Assistant Manager
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P/O :

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Project Location:

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Lot ID: 2213488

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Page 2 of 3

Sample Number	2213488-1
Sample Date	Feb 14, 2022 9:50 AM
Sample Description	Wastewater
Location	Wastewater sump (manhole)
Date Analysis Commenced	Feb 15, 2022
Condition of Sample	Contained in three amber glass bottles, eight plastic bottles and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Pesticides - Organochlorine Group							
Aldrin	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
alpha-BHC	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
beta-BHC	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Chlordane	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
delta-BHC	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Dieldrin	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Endosulfan I	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Endosulfan II	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Endrin	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
gamma-Chlordane	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Heptachlor	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Heptachlor-Epoxide	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Lindane (gamma-BHC)	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Methoxychlor	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Water Testing							
BOD (5 days at 20 degree C)	mg/L	-	2	13	≤500	Based on APHA (2017), 5210 B	Bangkok
COD	mg/L	1.5	5	100	≤750	Based on APHA (2017), 5220 D	Bangkok
Cobri (at Original pH) *	ADMI	-	5	53	≤600	APHA (2017), 2120 F	Bangkok
Cobri (at pH 7.0) *	ADMI	-	5	53	≤600	APHA (2017), 2120 F	Bangkok
Cyanide as CN	mg/L	0.002	0.005	<0.005	≤0.2	Based on APHA (2017), 4500-CN (C)/E	Bangkok
Formaldehyde *	mg/L	0.03	0.1	0.2	≤1	Wastewater Analysis	Bangkok

Technical Management
Savitree N. Nisangiam
Assistant Manager
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Approved by
Kankorn Anek
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Sampled Date		Feb 14, 2022 9:50 AM					
Sample Description		Wastewater					
Location		Wastewater pump (manhole)					
Date Analysis Commenced		Feb 15, 2022					
Condition of Sample		Contained in three amber glass bottles, eight plastic bottles and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)					
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Bangkok
pH at 25 degree C		-	-	8.3	5.5-9.0	Based on APHA (2017), 4500-H (B)	Bangkok
Phenol *	mg/L	0.0005	0.001	Not Detected	≤1	Based on APHA (2017), 5530 C	Bangkok
Residual Free Chlorine *	mg/L	-	0.1	0.1	≤1	APHA (2017), 4500-Cl(F)	Bangkok
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Bangkok
Temperature *	Degree C	-	-	31.0	≤45	Based on APHA (2017), 2550 B	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	1020	≤3000	Based on APHA (2017), 2540 C	Bangkok
Total Kjeldahl Nitrogen as N *	mg/L	0.15	1.0	40.7	≤100	Based on APHA (2017), 4500-Norg (C)	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	16	≤200	Based on APHA (2017), 2540 D	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Wisarut Sretamma

Remark :
- LOD : Limit of Detection
- "≤" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

Technical Management

Savitree N.
Savitree Naisangiam
Assistant Manager
โทร: 02-04-4709

Approved by

Kanokorn Anek
Kanokorn Anek
Senior Manager
โทร: 02-04-6111

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory, ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

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Analysis / Test Report

TESTING
No.0009
Lot ID: 2213488
Date Received : Feb 14, 2022
Date Reported : Feb 23, 2022
Report Number : 2218632-2

Client : Bangpoo Environmental Complex Co., Ltd.
965 Bangpoo Industrial Estate, Soi 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd,
Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280
P/O :
Project Name : Monitoring EIA
Project Location:

Page 1 of 1

Sample Number	2213488-1						
Sampled Date	Feb 14, 2022 9:50 AM						
Sample Description	Wastewater						
Location	Wastewater sump (manhole)						
Date Analysis Commenced	Feb 15, 2022						
Condition of Sample	Contained in three amber glass bottles, eight plastic bottles and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Iron	mg/L	0.003	0.005	0.13	≤10.0	Based on APHA (2017), 3125	Bangkok
Pesticides - Organochlorine Group							
alpha-Chlordane *	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Hexachlorobenzene	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Mirex *	ug/L	0.001	0.02	Not Detected	Not Detected	Based on APHA (2017), 6630 C	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	-	0.06	24.2	No Standard	Based on APHA (2017), 4500-NH3 (B), (F)	Bangkok
Anionic Surfactant as MBAS *	mg/L	0.015	0.05	0.06	≤30	Based on APHA (2017), 5540 (B),(C)	Bangkok
Chloride *	mg/L	0.15	0.5	278	No Standard	ISE Application	Bangkok
Flow rate *	m3/d	-	-	27.4	No Standard	Analyzed by Client	Bangkok
Fluoride as F *	mg/L	0.15	0.5	3.9	≤5	Based on APHA (2017), 4500-F (C)	Bangkok
Odour *		-	-	Odourless	Non Objectionable	APHA (2017), 2150 B	Bangkok
Phosphate as P *	mg/L	0.005	0.01	1.93	No Standard	Based on APHA (2017), 4500-P(E)	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Wisarut Sretamma

Remark :
- LOD : Limit of Detection
- "≤" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

Approved by

Savitree N.
Savitree Naisangiam
Assistant Manager

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PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT EFFLUENT T22AH515-0001	DETECTION LIMIT
METALS				
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0011	0.0003
BARIUM °	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.056	0.005
CADMIUM °	mg/L Cd	IN-HOUSE METHOD: UAE TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.002
CHROMIUM °	mg/L Cr	IN-HOUSE METHOD: UAE TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.007
HEXAVALENT CHROMIUM °	mg/L Cr ⁶⁺	COLOURIMETRIC METHOD (SM: 3500-Cr B)	ND	0.006
TRIVALENT CHROMIUM °	mg/L Cr ³⁺	NITRIC ACID DIGESTION, DIRECT AIR ACETYLENE FLAME, COLOURIMETRIC (SM: 3030 E, 3111 B AND 3500-Cr B) AND CALCULATION METHOD	ND	0.007
COPPER °	mg/L Cu	IN-HOUSE METHOD: UAE TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.005
IRON °	mg/L Fe	IN-HOUSE METHOD: UAE TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	0.261	0.005
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.015
MANGANESE °	mg/L Mn	IN-HOUSE METHOD: UAE TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	< LOQ	0.004
MERCURY °	mg/L Hg	COLD VAPOUR AAS METHOD (SM: 3112 B)	0.0015	0.0005
NICKEL °	mg/L Ni	IN-HOUSE METHOD: UAE TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	< LOQ	0.005
SELENIUM °	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	ND	0.0005
SILVER °	mg/L Ag	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	0.005
ZINC °	mg/L Zn	IN-HOUSE METHOD: UAE TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	< LOQ	0.003
ORGANOCHLORINE PESTICIDES				
α-BHC °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.02
β-BHC °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.02
γ-BHC °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.02
δ-BHC °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.02
ALDRIN °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.02
DIELDRIN °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.02

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PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT EFFLUENT T22AH515-0001	DETECTION LIMIT
ENDOSULFAN I °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.02
ENDOSULFAN II °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.04
ENDOSULFAN SULFATE °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.04
ENDRIN °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.04
ENDRIN ALDEHYDE °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.04
HEPTACHLOR °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.02
HEPTACHLOR EPOXIDE °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.02
p,p-DDD °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.04
p,p-DDE °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.04
p,p-DDT °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.04
METHOXYCHLOR °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.20
SAMPLE CONDITION				
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN	

a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

ND : NON-DETECTABLE.

< LOQ : < LEVEL OF QUANTITATION (TOTAL KJELDAHL NITROGEN ≥ 15 AND < 5.0 mg/L MANGANESE ≥ 0.004 AND < 0.050 mg/L, NICKEL ≥ 0.005 AND < 0.100 mg/L, ZINC ≥ 0.003 AND < 0.050 mg/L).

Dejawan V.
(MISS BENAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR

MAY 10, 2022

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• REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE ONLY.

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT EFFLUENT T22AL730-0004	DETECTION LIMIT
METALS				
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0013	0.0003
BARIUM °	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.125	0.005
CADMIUM °	mg/L Cd	IN-HOUSE METHOD: UAE/TP IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.002
CHROMIUM °	mg/L Cr	IN-HOUSE METHOD: UAE/TP IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.007
HEXAVALENT CHROMIUM °	mg/L Cr ⁶⁺	COLOURIMETRIC METHOD (SM: 3500-Cr-B)	ND	0.006
TRIVALENT CHROMIUM °	mg/L Cr ³⁺	NITRIC ACID DIGESTION, DIRECT AIR ACETYLENE FLAME COLOURIMETRIC (SM: 3030 E, 3111 B AND 3500-Cr-B) AND CALCULATION METHOD	ND	0.007
COPPER °	mg/L Cu	IN-HOUSE METHOD: UAE/TP IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	< LOQ	0.005
IRON °	mg/L Fe	IN-HOUSE METHOD: UAE/TP IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	0.203	0.005
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE/TP IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.015
MANGANESE °	mg/L Mn	IN-HOUSE METHOD: UAE/TP IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	< LOQ	0.004
MERCURY °	mg/L Hg	COLD VAPOUR AAS METHOD (SM: 3112 B)	0.0008	0.0005
NICKEL °	mg/L Ni	IN-HOUSE METHOD: UAE/TP IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.005
SELENIUM °	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	ND	0.0005
SILVER °	mg/L Ag	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	0.005
ZINC °	mg/L Zn	IN-HOUSE METHOD: UAE/TP IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	< LOQ	0.003
ORGANOCHLORINE PESTICIDES				
α-BHC °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.02
β-BHC °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.02
γ-BHC °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.02
δ-BHC °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.02
ALDRIN °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.02
DIELDRIN °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.02

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT EFFLUENT T22AL730-0004	DETECTION LIMIT
ENDOSULFAN I °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.02
ENDOSULFAN II °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.04
ENDOSULFAN SULFATE °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.04
ENDRIN °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.04
ENDRIN ALDEHYDE °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.04
HEPTACHLOR °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.02
HEPTACHLOR EPOXIDE °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.02
p,p-DDD °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.04
p,p-DDE °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.04
p,p-DDT °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.04
METHOXYCHLOR °	µg/L	LIQUID-LIQUID EXTRACTION GAS CHROMATOGRAPHIC (ECD) METHOD (SM: 6630 C)	ND	0.20
SAMPLE CONDITION				
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN	

a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

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IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

A : MEASURED BY CUSTOMER.

ND : NON-DETECTABLE.

< LOQ : < LIMIT OF QUANTITATION (TOTAL KJELDAHL NITROGEN ≥ 15 AND < 5.0 mg/L, COPPER ≥ 0.005 AND < 0.050 mg/L,

MANGANESE ≥ 0.004 AND < 0.050 mg/L, ZINC ≥ 0.003 AND < 0.050 mg/L).

Dejawan V.
(MISS BENAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR

JULY 1, 2022

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ผลการติดตามตรวจสอบลักษณะสมบัติของน้ำฝน

ANALYSIS REPORT

CUSTOMER NAME : BANGPOO ENVIRONMENTAL COMPLEX COMPANY LIMITED
ADDRESS : 965 SOI 3, MOO 2, BANGPOO INDUSTRIAL ESTATE, BANG POO MAI MUEANG SAMUT PRAKAN SAMUT PRAKAN 10280
CONTACT INFORMATION : TEL : 66 (89) 205-0158 e-mail : arpakon.prompt@wms-thailand.com
SAMPLE SOURCE : จัตุรัสบ้านน้ำทิพย์โครงการพัฒนาระบบระบายน้ำในทองผาภูมิ
SAMPLE TYPE : RAINWATER
SAMPLING DATE : MAY 23, 2022
SAMPLING TIME : 14:50 HOUR
SAMPLING METHOD : GRAB
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS CHOMTHANAN AHPHATPAPHA

RECEIVED DATE : MAY 24, 2022
ANALYTICAL DATE : MAY 24 - JUNE 7, 2022
REPORT NO. : 2022-U042960
WORK NO. : 2021-008734
ANALYSIS NO. : T22AJ76-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT RAINWATER T22AJ76-0001	DETECTION LIMIT
pH	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	7.8 (32°C)	-
TEMPERATURE	°C	THERMOMETER AT SITE (SM: 2550 B)	32	-
ELECTRICAL CONDUCTIVITY	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD (SM: 2510 B)	323 (25°C)	0.1
DISSOLVED OXYGEN ^a	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: 4500-O ₂ C)	4.2	-
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O ₂ C AND 5210 B)	ND	2.0
AMMONIA-NITROGEN	mg/L NH ₃ -N	PHENATE METHOD (SM: 4500-NH ₃ F)	0.23	0.04
CYANIDE	mg/L CN ⁻	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN ⁻ C AND 4500-CN ⁻ E)	ND	0.005
NITRATE-NITROGEN	mg/L NO ₃ -N	CADMIUM REDUCTION METHOD (SM: 4500-NO ₃ E)	0.23	0.02
PHENOLS	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 C)	ND	0.005
METALS				
ARSENIC	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0010	0.0003
CADMIUM	mg/L Cd	NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	ND	0.002
HEXAVALENT CHROMIUM	mg/L Cr ⁶⁺	COLOURIMETRIC METHOD (SM: 3500-Cr B)	ND	0.006
COPPER	mg/L Cu	NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	ND	0.002
LEAD	mg/L Pb	NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	ND	0.003
MANGANESE	mg/L Mn	NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	0.006	0.002
MERCURY	mg/L Hg	IN-HOUSE METHOD: UAE:TP-HEM.002 (COLD VAPOUR ATOMIC ABSORPTION SPECTROMETRIC METHOD); SM: 3112 B	0.0004	0.0001
NICKEL	mg/L Ni	NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	ND	0.005
ZINC	mg/L Zn	NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	0.053	0.003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT RAINWATER T22AJ76-0001	DETECTION LIMIT
MICROBIOLOGY				
FAECAL COLIFORM BACTERIA	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	630	18
COLIFORM BACTERIA	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 B)	7900	18
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT				
			COLOURLESS/CLEAR BLACK	

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23RD EDITION, 2017.
SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23RD EDITION, 2017.
ND : NON-DETECTABLE
A : SAMPLING AT 13:30 HOUR ON JUNE 13, 2022, ANALYSIS NO. T22AL385-0001

Peyawan V.
(MISS BENJAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR

JUNE 22, 2022

ANALYSIS REPORT

CUSTOMER NAME : BANGPOO ENVIRONMENTAL COMPLEX COMPANY LIMITED
ADDRESS : 965 SOI 3, MOO 2, BANGPOO INDUSTRIAL ESTATE, BANG POO MAI MUEANG SAMUT PRAKAN SAMUT PRAKAN 10280
CONTACT INFORMATION : TEL : 66 (89) 205-0158 e-mail : arpakorn.prompt@wms-thailand.com
SAMPLING SOURCE : จตุรัสบ้านท่าช้างโครงการโรงงานรับขนาน้ำท่าช้างวัดเตย
SAMPLE TYPE : RAINWATER
SAMPLING DATE : JUNE 17, 2022
SAMPLING TIME : 09:00 HOUR
SAMPLING METHOD : GRAB
SAMPLING BY : CUSTOMER
ANALYZED BY : MISS CHOMTHANAN AHPITAPAPHA

RECEIVED DATE : JUNE 17, 2022
ANALYTICAL DATE : JUNE 17-29, 2022
REPORT NO. : 2022-U050581
WORK NO. : 2021-008734
ANALYSIS NO. : T22AL824-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT RAINWATER T22AL824-0001	DETECTION LIMIT
pH	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H ⁺ B)	8.3 (31°C)	-
TEMPERATURE	°C	THERMOMETER AT SITE (SM: 2550 B)	31	-
ELECTRICAL CONDUCTIVITY	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD (SM: 2510 B)	108 (25°C)	0.1
DISSOLVED OXYGEN	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O ₂ G)	4.2	0.5
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O ₂ G AND 5210 B)	ND	2.0
AMMONIA-NITROGEN ^a	mg/L NH ₃ -N	PHENATE METHOD (SM: 4500-NH ₃ F)	0.21	0.04
NITRATE-NITROGEN	mg/L NO ₃ -N	CADMIUM REDUCTION METHOD (SM: 4500-NO ₃ E)	0.29	0.02
CYANIDE	mg/L CN ⁻	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN ⁻ C AND 4500-CN ⁻ E)	ND	0.005
PHENOLS ^a	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 G)	ND	0.005
METALS				
ARSENIC	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0005	0.0003
CADMIUM	mg/L Cd	NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	ND	0.002
HEXAVALENT CHROMIUM	mg/L Cr ⁶⁺	COLOURIMETRIC METHOD (SM: 3500-Cr ⁶⁺ B)	ND	0.006
COPPER	mg/L Cu	NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	0.006	0.002
LEAD	mg/L Pb	NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	ND	0.003
MANGANESE	mg/L Mn	NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	ND	0.002
MERCURY	mg/L Hg	IN-HOUSE METHOD: UAE.TP.HEM.002 (COLD VAPOUR ATOMIC ABSORPTION SPECTROMETRIC METHOD); SM: 3112 B	ND	0.0001
NICKEL	mg/L Ni	NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	0.011	0.005
ZINC	mg/L Zn	NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD (SM: 3030 E AND 3111 B)	0.116	0.003

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• REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE ONLY.



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT RAINWATER T22AL824-0001	DETECTION LIMIT
MICROBIOLOGY				
COLIFORM BACTERIA	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 B)	330	18
FAECAL COLIFORM BACTERIA	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	< 18	18
SAMPLE CONDITION				
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BLACK	

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23RD EDITION, 2017.
SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23RD EDITION, 2017.
ND : NON-DETECTABLE.
A : SAMPLING AT 11:10 HOUR ON JULY 4, 2022, ANALYSIS NO. T22AN118-0001 (ANALYTICAL DATE : JULY 4 - 12, 2022)

Dejawan V.
(MISS BENAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR

JULY 15, 2022

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ภาคผนวก ค-5

ผลการติดตามตรวจสอบคุณภาพน้ำในบ่อสังเกตการณ์
การรั่วซึมของถังเก็บน้ำเสีย



Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.

965 Bangpoo Industrial Estate, Sol 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd,
Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O :

Project Name : Monitoring EIA

Project Location:

TESTING
No.0009

Lot ID: 225412

Date Received : Jan 17, 2022

Date Reported : Jan 31, 2022

Report Number : 2220182-1

Page 1 of 1

Sample Number	225412-1			
Sampled Date	Jan 17, 2022 11:20 AM			
Sample Description	Groundwater			
Location	Monitoring Well No.1			
Date Analysis Commenced	Jan 18, 2022			
Condition of Sample	Contained in three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)			

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 degree C) *	mg/L	-	2	3	500	Based on APHA (2017), 5210 B	Bangkok
COD	mg/L	1.5	5	198	≤750	Based on APHA (2017), 5220 D	Bangkok
pH at 25 degree C	-	-	-	7.8	5.5-9.0	Based on APHA (2017), 4500-H (B)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	16720	No Standard	Based on APHA (2017), 2540 C	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Wisarut Sretamma

Remark :

- LOD : Limit of Detection
- "L" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

Technical Management

Siriluk P.

Siriluk Puengpang
Supervisor

เบอร์โทรภายใน 7-204-3-4720

Approved by

Kanokkorn Anek

Kanokkorn Anek
Senior Manager

เบอร์โทรภายใน 7-204-3-6111

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Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.

965 Bangpoo Industrial Estate, Sol 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd,
Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O :

Project Name : Monitoring EIA

Project Location:

Lot ID: 225412

Date Received : Jan 17, 2022

Date Reported : Jan 31, 2022

Report Number : 2220182-2

Page 1 of 1

Sample Number	225412-1			
Sampled Date	Jan 17, 2022 11:20 AM			
Sample Description	Groundwater			
Location	Monitoring Well No.1			
Date Analysis Commenced	Jan 18, 2022			
Condition of Sample	Contained in three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)			

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 degree C	micromhos/cm	-	0.5	25310	No Standard	Based on APHA (2017), 2510 B	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Wisarut Sretamma

Remark :

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- "L" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Siriluk P.

Siriluk Puengpang
Supervisor

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Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.

965 Bangpoo Industrial Estate, Sol 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd,
Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O :

Project Name : Monitoring EIA

Project Location:

TESTING
No.0009

Lot ID: 225412

Date Received : Jan 17, 2022

Date Reported : Jan 31, 2022

Report Number : 2220183-1

Page 1 of 1

Sample Number	225412-2
Sampled Date	Jan 17, 2022 11:25 AM
Sample Description	Groundwater
Location	Monitoring Well No.2
Date Analysis Commenced	Jan 18, 2022
Condition of Sample	Contained in three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 degree C) *	mg/L	-	2	2	500	Based on APHA (2017), 5210 B	Bangkok
COD	mg/L	1.5	5	102	≤750	Based on APHA (2017), 5220 D	Bangkok
pH at 25 degree C	-	-	-	7.5	5.5-9.0	Based on APHA (2017), 4500-H (B)	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	17700	No Standard	Based on APHA (2017), 2540 C	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Wisarut Sretamma

Remark :
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- "L" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Technical Management

Siriluk P.
Siriluk Puengpang
Supervisor

Approved by

Kanokkorn Anek
Senior Manager

เบอร์โทร 7-204-4-4720

เบอร์โทร 7-204-6-6111

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Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.

965 Bangpoo Industrial Estate, Sol 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd,
Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O :

Project Name : Monitoring EIA

Project Location:

Lot ID: 225412

Date Received : Jan 17, 2022

Date Reported : Jan 31, 2022

Report Number : 2220183-2

Page 1 of 1

Sample Number	225412-2
Sampled Date	Jan 17, 2022 11:25 AM
Sample Description	Groundwater
Location	Monitoring Well No.2
Date Analysis Commenced	Jan 18, 2022
Condition of Sample	Contained in three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 degree C	micromhos/cm	-	0.5	27200	No Standard	Based on APHA (2017), 2510 B	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Wisarut Sretamma

Remark :
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Approved by

Siriluk P.
Siriluk Puengpang
Supervisor

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Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.

965 Bangpoo Industrial Estate, Sol 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd,
Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O :

Project Name : Monitoring EIA

Project Location:

TESTING
No.0009

Lot ID: 225412

Date Received : Jan 17, 2022

Date Reported : Jan 31, 2022

Report Number : 2220184-1

Page 1 of 1

Sample Number	225412-3
Sampled Date	Jan 17, 2022 11:30 AM
Sample Description	Groundwater
Location	Monitoring Well No.3
Date Analysis Commenced	Jan 18, 2022
Condition of Sample	Contained in three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 degree C) *	mg/L	-	2	3	500	Based on APHA (2017), 5210 B	Bangkok
COD	mg/L	1.5	5	133	≤750	Based on APHA (2017), 5220 D	Bangkok
pH at 25 degree C	-	-	-	7.1	5.5-9.0	Based on APHA (2017), 4500-H (B)	Bangkok
Total Dissolved solids Dried at 180 degree C *	mg/L	-	5	28240	No Standard	Based on APHA (2017), 2540 C	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Wisarut Sretamma

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Technical Management

Siriluk P.

Siriluk Puengpang
Supervisor
พระปิ่นเกล้าฯ 7-204-3-4720

Approved by

Kanokkorn Anek

Kanokkorn Anek
Senior Manager
พระปิ่นเกล้าฯ 7-204-3-6111

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Analysis / Test Report

Lot ID: 225412

Date Received : Jan 17, 2022

Date Reported : Jan 31, 2022

Report Number : 2220184-2

Page 1 of 1

Sample Number	225412-3
Sampled Date	Jan 17, 2022 11:30 AM
Sample Description	Groundwater
Location	Monitoring Well No.3
Date Analysis Commenced	Jan 18, 2022
Condition of Sample	Contained in three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 degree C	micromhos/cm	-	0.5	38300	No Standard	Based on APHA (2017), 2510 B	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Wisarut Sretamma

Remark :
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Approved by

Siriluk P.

Siriluk Puengpang
Supervisor

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Analysis / Test Report

TESTING
No.0009

Lot ID: 2213493

Date Received :Feb 14, 2022
Date Reported :Feb 22, 2022
Report Number :2218635-1

Client : Bangpoo Environmental Complex Co., Ltd.

965 Bangpoo Industrial Estate , Soi 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd,
Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O :

Project Name : Monitoring EIA

Project Location :

Page 1 of 3

Sample Number	2213493-1
Sampled Date	Feb 14, 2022 10:30 AM
Sample Description	Groundwater
Location	Monitoring Well No.1
Date Analysis Commenced	Feb 15, 2022
Condition of Sample	Contained in three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
BOD (5 days at 20 degree C) *	mg/L	-	2	3	Based on APHA (2017), 5210 B	Bangkok
COD	mg/L	1.5	5	88	Based on APHA (2017), 5220 D	Bangkok
Conductivity at 25 degree C *	micronthos/cm	-	0.5	25260	Based on APHA (2017), 2510 B	Bangkok
pH at 25 degree C	-	-	-	7.5	Based on APHA (2017), 4500-H (B)	Bangkok
Total Dissolved solids Dried at 180 degree C *	mg/L	-	5	14120	Based on APHA (2017), 2540 C	Bangkok

Sampled By : Wisarut Sretamma

Remark :
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Siriluk P.

Approved by

Siriluk Puenggang
Supervisor

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Analysis / Test Report

TESTING
No.0009

Lot ID: 2213493

Date Received :Feb 14, 2022
Date Reported :Feb 22, 2022
Report Number :2218635-1

Client : Bangpoo Environmental Complex Co., Ltd.

965 Bangpoo Industrial Estate , Soi 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd,
Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O :

Project Name : Monitoring EIA

Project Location :

Page 2 of 3

Sample Number	2213493-2
Sampled Date	Feb 14, 2022 10:10 AM
Sample Description	Groundwater
Location	Monitoring Well No.2
Date Analysis Commenced	Feb 15, 2022
Condition of Sample	Contained in three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
BOD (5 days at 20 degree C) *	mg/L	-	2	<2	Based on APHA (2017), 5210 B	Bangkok
COD	mg/L	1.5	5	91	Based on APHA (2017), 5220 D	Bangkok
Conductivity at 25 degree C *	micronthos/cm	-	0.5	28100	Based on APHA (2017), 2510 B	Bangkok
pH at 25 degree C	-	-	-	7.1	Based on APHA (2017), 4500-H (B)	Bangkok
Total Dissolved solids Dried at 180 degree C *	mg/L	-	5	17120	Based on APHA (2017), 2540 C	Bangkok

Sampled By : Wisarut Sretamma

Remark :
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Siriluk P.

Approved by

Siriluk Puenggang
Supervisor

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Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.

965 Bangpoo Industrial Estate, Soi 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd,
Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O :

Project Name : Monitoring EIA

Project Location :

Sample Number 2213493-3

Sampled Date Feb 14, 2022 10:20 AM

Sample Description Groundwater

Location Monitoring Well No.3

Date Analysis Commenced Feb 15, 2022

Condition of Sample Contained in three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	Result	LOQ (LOR)	Method	Testing Location
Water Testing						
BOD (5 days at 20 degree C) *	mg/L	-	<2	2	Based on APHA (2017), 5210 B	Bangkok
COD	mg/L	1.5	62	5	Based on APHA (2017), 5220 D	Bangkok
Conductivity at 25 degree C *	micromhos/cm	-	40290	0.5	Based on APHA (2017), 2510 B	Bangkok
pH at 25 degree C	-	-	7.1	-	Based on APHA (2017), 4500-H (B)	Bangkok
Total Dissolved solids Dried at 180 degree C *	mg/L	-	26500	5	Based on APHA (2017), 2540 C	Bangkok

Sampled By : Wisarut Sritamma

Remark :
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Approved by

Siriluk P.

Siriluk Puengpang
Supervisor

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3 Soi Udomsuk 41, Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260
Tel. 0 2763 2828 Fax 0 2763 2800 www.uaeconsultant.com E-mail: uae@uaeconsultant.com

ANALYSIS REPORT

CUSTOMER NAME

: BANGPOO ENVIRONMENTAL COMPLEX COMPANY LIMITED

ADDRESS

: 965 SOI 3, MOO 2, BANGPOO INDUSTRIAL ESTATE, BANG POO MAI MUEANG SAMUT PRAKAN SAMUT PRAKAN 10280

CONTACT INFORMATION

: TEL : 66 (89) 205-0158 e-mail : arpakon.promptpet@wms-thailand.com

SAMPLING SOURCE

: -

SAMPLE TYPE

: GROUNDWATER

SAMPLING DATE

: MARCH 17, 2022

SAMPLING TIME

: 11:10 HOUR

SAMPLING METHOD

: PERISTALTIC PUMP

SAMPLING BY

: MR MANIT PANCHOT

ANALYZED BY

: MISS PORNPIMOL WAENTHONG

RECEIVED DATE

: MARCH 17, 2022

ANALYTICAL DATE

: MARCH 17-25, 2022

REPORT NO.

: 2022-U024262

WORK NO.

: 2021-008734

ANALYSIS NO.

: T22AF168-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		DETECTION LIMIT
			MW1	T22AF168-0001	
pH	-	ELECTROMETRIC METHOD AT SITE (SM-4500-H-B)	6.8 (3°C)		-
ELECTRICAL CONDUCTIVITY	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM-2510 B)	40,843 (3°C)		0.1
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM-4500-O-C AND 5210 B)	23.2		10
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLEX, TITRIMETRIC METHOD (SM-5220 C)	168		25.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM-2540 C)	29,040		25
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT					
			YELLOW/CLEAR BROWN		

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

Pojanwan V.
(MISS BENJAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR

APRIL 20, 2022

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Tel.0 2763 2828 Fax.0 2763 2800 www.uaiconsultant.com E-mail: uae@uaiconsultant.com

ANALYSIS REPORT

CUSTOMER NAME : BANGPOO ENVIRONMENTAL COMPLEX COMPANY LIMITED
ADDRESS : 965 SOI 3, MOO 2, BANGPOO INDUSTRIAL ESTATE, BANG POO MAI MUEANG SAMUT PRAKAN 10280
CONTACT INFORMATION : TEL : 66 (89) 205-0158 e-mail : arpakon.promptpet@wms-thailand.com
SAMPLE SOURCE : -
SAMPLE TYPE : GROUNDWATER
SAMPLING DATE : MARCH 17, 2022
SAMPLING TIME : 10:30 HOUR
SAMPLING METHOD : PERISTALTIC PUMP
SAMPLING BY : MR MANIT PANCHOT
ANALYZED BY : MISS PORNPIJOL WAENTHONG

RECEIVED DATE : MARCH 17, 2022
ANALYTICAL DATE : MARCH 17-25, 2022
REPORT NO. : 2022-U024263
WORK NO. : 2021-008734
ANALYSIS NO. : T22AF168-0002

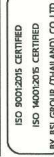
PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			MW2 T22AF168-0002	
pH	-	ELECTROMETRIC METHOD AT SITE (SM/4500-H ⁺ B)	7.0 (31°C)	-
ELECTRICAL CONDUCTIVITY	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM/2510 B)	29.337 (31°C)	0.1
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	ND	1.0
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	68.1	25.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	17.880	25
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.
ND : NON-DETECTABLE.

Pejawan V.
(MISS BENJAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR

APRIL 20, 2022

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CONTACT INFORMATION : TEL : 66 (89) 205-0158 e-mail : arpakon.promptpet@wms-thailand.com
SAMPLE SOURCE : -
SAMPLE TYPE : GROUNDWATER
SAMPLING DATE : MARCH 17, 2022
SAMPLING TIME : 10:00 HOUR
SAMPLING METHOD : PERISTALTIC PUMP
SAMPLING BY : MR MANIT PANCHOT
ANALYZED BY : MISS PORNPIJOL WAENTHONG

RECEIVED DATE : MARCH 17, 2022
ANALYTICAL DATE : MARCH 17-25, 2022
REPORT NO. : 2022-U024264
WORK NO. : 2021-008734
ANALYSIS NO. : T22AF168-0003

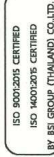
PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			MW3 T22AF168-0003	
pH	-	ELECTROMETRIC METHOD AT SITE (SM/4500-H ⁺ B)	7.0 (31°C)	-
ELECTRICAL CONDUCTIVITY	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM/2510 B)	29.292 (31°C)	0.1
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	ND	1.0
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: 5220 C)	77.6	25.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	17.720	25
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.
ND : NON-DETECTABLE.

Pejawan V.
(MISS BENJAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR

APRIL 20, 2022

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ADDRESS : 965 SOI 3, MOO 2, BANGPOO INDUSTRIAL ESTATE, BANG POO MAI MUEANG SAMUT PRAKAN SAMUT PRAKAN 10280
CONTACT INFORMATION : TEL : 66 (89) 205-0158 e-mail : arpakon.promptpet@wms-thailand.com
SAMPLING SOURCE : -
SAMPLE TYPE : GROUNDWATER
SAMPLING DATE : APRIL 21, 2022
SAMPLING TIME : 14:20 HOUR
SAMPLING METHOD : PERISTALTIC PUMP
SAMPLING BY : MR PHATSAMUT THOSAKOON
ANALYZED BY : MISS PORNPIJOL WAENTHONG

RECEIVED DATE : APRIL 22, 2022
ANALYTICAL DATE : APRIL 22-29, 2022
REPORT NO. : 2022-U031830
WORK NO. : 2021-008734
ANALYSIS NO. : T22AH514-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			MW1 T22AH514-0001	
pH	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	7.3 (32°C)	-
ELECTRICAL CONDUCTIVITY	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	22,703 (32°C)	0.1
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	36.6	10
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLEX, TITRIMETRIC METHOD (SM: 5220 C)	174	250
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	15,320	25
SAMPLE CONDITION				
WATER'S COLOUR/TURBID SEDIMENT			BROWN/TURBID BROWN	

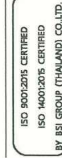
SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

Piyapat S.

(MRS PIYAPAT SUTTANANUTWONG)
LABORATORY SUPERVISOR

MAY 6, 2022

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CONTACT INFORMATION : TEL : 66 (89) 205-0158 e-mail : arpakon.promptpet@wms-thailand.com
SAMPLING SOURCE : -
SAMPLE TYPE : GROUNDWATER
SAMPLING DATE : APRIL 21, 2022
SAMPLING TIME : 14:40 HOUR
SAMPLING METHOD : PERISTALTIC PUMP
SAMPLING BY : MR PHATSAMUT THOSAKOON
ANALYZED BY : MISS PORNPIJOL WAENTHONG

RECEIVED DATE : APRIL 22, 2022
ANALYTICAL DATE : APRIL 22-29, 2022
REPORT NO. : 2022-U031831
WORK NO. : 2021-008734
ANALYSIS NO. : T22AH514-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			MW2 T22AH514-0002	
pH	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	7.0 (31°C)	-
ELECTRICAL CONDUCTIVITY	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	24,801 (31°C)	0.1
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	17.1	10
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLEX, TITRIMETRIC METHOD (SM: 5220 C)	125	250
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	18,620	25
SAMPLE CONDITION				
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	

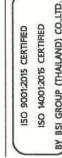
SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

Piyapat S.

(MRS PIYAPAT SUTTANANUTWONG)
LABORATORY SUPERVISOR

MAY 6, 2022

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CUSTOMER NAME : BANGPOO ENVIRONMENTAL COMPLEX COMPANY LIMITED
ADDRESS : 965 SOI 3, MOO 2, BANGPOO INDUSTRIAL ESTATE, BANG POO MAI MUEANG SAMUT PRAKAN SAMUT PRAKAN 10280
CONTACT INFORMATION : TEL : 66 (89) 205-0158 e-mail : arpakon.prompet@wms-thailand.com
SAMPLING SOURCE : MW1
SAMPLE TYPE : GROUNDWATER
SAMPLING DATE : APRIL 21, 2022
SAMPLING TIME : 14:55 HOUR
SAMPLING METHOD : PERISTALTIC PUMP
SAMPLING BY : MR PHATSAMUT THOSAKOON
ANALYZED BY : MISS PORNPIJOL WAENTHONG

RECEIVED DATE : APRIL 22, 2022
ANALYTICAL DATE : APRIL 22-29, 2022
REPORT NO. : 2022-U031832
WORK NO. : 2021-008734
ANALYSIS NO. : T22AH514-0003

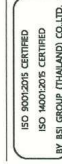
PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			MW3 T22AH514-0003	
pH	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H B)	6.9 (32°C)	-
ELECTRICAL CONDUCTIVITY	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	37.401 (32°C)	0.1
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	190	10
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLEX, TITRIMETRIC METHOD (SM: 5220 C)	436	25.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	28.640	25
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BLACK	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

Piyapat S.
(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 6, 2022

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CUSTOMER NAME : BANGPOO ENVIRONMENTAL COMPLEX COMPANY LIMITED
ADDRESS : 965 SOI 3, MOO 2, BANGPOO INDUSTRIAL ESTATE, BANG POO MAI MUEANG SAMUT PRAKAN SAMUT PRAKAN 10280
CONTACT INFORMATION : TEL : 66 (89) 205-0158 e-mail : arpakon.prompet@wms-thailand.com
SAMPLING SOURCE : MW1
SAMPLE TYPE : GROUNDWATER
SAMPLING DATE : MAY 19, 2022
SAMPLING TIME : 11:00 HOUR
SAMPLING METHOD : PERISTALTIC PUMP
SAMPLING BY : MR PHATSAMUT THOSAKOON
ANALYZED BY : MISS PORNPIJOL WAENTHONG

RECEIVED DATE : MAY 19, 2022
ANALYTICAL DATE : MAY 19-26, 2022
REPORT NO. : 2022-U040367
WORK NO. : 2021-008734
ANALYSIS NO. : T22AJ504-0001

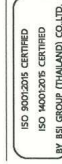
PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			MW1 T22AJ504-0001	
pH	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H B)	7.0 (31°C)	-
ELECTRICAL CONDUCTIVITY	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	15.301 (31°C)	0.1
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	76.4	10
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLEX, TITRIMETRIC METHOD (SM: 5220 C)	169	25.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	9.230	25
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			BROWN/TURBID BROWN	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

Piyapat S.
(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 31, 2022

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ANALYSIS REPORT

CUSTOMER NAME : BANGPOO ENVIRONMENTAL COMPLEX COMPANY LIMITED
ADDRESS : 965 SOI 3, MOO 2, BANGPOO INDUSTRIAL ESTATE, BANG POO MAI MUEANG SAMUT PRAKAN SAMUT PRAKAN 10280
CONTACT INFORMATION : TEL : 66 (89) 205-0158 e-mail : arpakon.prompt@wms-thailand.com
SAMPLING SOURCE : MW2
SAMPLE TYPE : GROUNDWATER
SAMPLING DATE : MAY 19, 2022
SAMPLING TIME : 10:45 HOUR
SAMPLING METHOD : PERISTALTIC PUMP
SAMPLING BY : MR PHATSAMUT THOSAKOON
ANALYZED BY : MISS PORNPIMOL WAENTHONG

RECEIVED DATE : MAY 19, 2022
ANALYTICAL DATE : MAY 19-26, 2022
REPORT NO. : 2022-U040368
WORK NO. : 2021-008734
ANALYSIS NO. : T22A504-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			MW2 T22A504-0002	
pH	-	ELECTROMETRIC METHOD AT SITE (SM/4500-H ⁺ B)	7.2 (31°C)	-
ELECTRICAL CONDUCTIVITY	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM/2510 B)	23,203 (31°C)	0.1
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	7.1	10
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLEX, TITRIMETRIC METHOD (SM: 5220 C)	74.0	25.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	13,580	25
SAMPLE CONDITION		WATER'S COLOUR/TURBID SEDIMENT		
		YELLOW/TURBID BROWN		

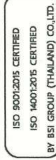
SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

Piyapol S.

(MRS PIYAPAT SUTTANANUTWONG)
LABORATORY SUPERVISOR

MAY 31, 2022

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CONTACT INFORMATION : TEL : 66 (89) 205-0158 e-mail : arpakon.prompt@wms-thailand.com
SAMPLING SOURCE : MW3
SAMPLE TYPE : GROUNDWATER
SAMPLING DATE : MAY 19, 2022
SAMPLING TIME : 10:30 HOUR
SAMPLING METHOD : PERISTALTIC PUMP
SAMPLING BY : MR PHATSAMUT THOSAKOON
ANALYZED BY : MISS PORNPIMOL WAENTHONG

RECEIVED DATE : MAY 19, 2022
ANALYTICAL DATE : MAY 19-26, 2022
REPORT NO. : 2022-U040369
WORK NO. : 2021-008734
ANALYSIS NO. : T22A504-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			MW3 T22A504-0003	
pH	-	ELECTROMETRIC METHOD AT SITE (SM/4500-H ⁺ B)	6.9 (32°C)	-
ELECTRICAL CONDUCTIVITY	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM/2510 B)	38,701 (32°C)	0.1
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	3.7	10
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLEX, TITRIMETRIC METHOD (SM: 5220 C)	111	25.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	27,980	25
SAMPLE CONDITION		YELLOW		

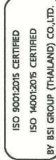
SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

Piyapol S.

(MRS PIYAPAT SUTTANANUTWONG)
LABORATORY SUPERVISOR

MAY 31, 2022

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CONTACT INFORMATION : TEL : 66 (89) 205-0158 e-mail : arpakon.promptpet@wms-thailand.com
SAMPLING SOURCE : MW1
SAMPLE TYPE : GROUNDWATER
SAMPLING DATE : JUNE 16, 2022
SAMPLING TIME : JUNE 16, 2022
SAMPLING METHOD : PERISTALTIC PUMP
SAMPLING BY : MR PHATSAMUT THOSAKOON
ANALYZED BY : MISS PORNPIJOL WAENTHONG

RECEIVED DATE : JUNE 16, 2022
ANALYTICAL DATE : JUNE 16-22, 2022
REPORT NO. : 2022-U050577
WORK NO. : 2021-008734
ANALYSIS NO. : T22AL730-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			MW1 T22AL730-0001	
pH	-	ELECTROMETRIC METHOD AT SITE (SM/4500-H-B)	7.5 (34°C)	-
ELECTRICAL CONDUCTIVITY	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	16,671 (33°C)	0.1
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	211	10
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLEX, TITRIMETRIC METHOD (SM: 5220 C)	111	25.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	10,100	25
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

Dejawan V.
(MISS BENAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR

JULY 1, 2022

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ANALYSIS REPORT

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CONTACT INFORMATION : TEL : 66 (89) 205-0158 e-mail : arpakon.promptpet@wms-thailand.com
SAMPLING SOURCE : MW2
SAMPLE TYPE : GROUNDWATER
SAMPLING DATE : JUNE 16, 2022
SAMPLING TIME : JUNE 16, 2022
SAMPLING METHOD : PERISTALTIC PUMP
SAMPLING BY : MR PHATSAMUT THOSAKOON
ANALYZED BY : MISS PORNPIJOL WAENTHONG

RECEIVED DATE : JUNE 16, 2022
ANALYTICAL DATE : JUNE 16-22, 2022
REPORT NO. : 2022-U050578
WORK NO. : 2021-008734
ANALYSIS NO. : T22AL730-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			MW2 T22AL730-0002	
pH	-	ELECTROMETRIC METHOD AT SITE (SM/4500-H-B)	7.0 (32°C)	-
ELECTRICAL CONDUCTIVITY	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	23,203 (32°C)	0.1
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	5.3	10
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLEX, TITRIMETRIC METHOD (SM: 5220 C)	83.2	25.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	15,440	25
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

Dejawan V.
(MISS BENAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR

JULY 1, 2022

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• REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE ONLY.



ANALYSIS REPORT

CUSTOMER NAME : BANGPOO ENVIRONMENTAL COMPLEX COMPANY LIMITED
ADDRESS : 965 SOI 3, MOO 2, BANGPOO INDUSTRIAL ESTATE, BANG POO MAI MUEANG SAMUT PRAKAN SAMUT PRAKAN 10280
CONTACT INFORMATION : TEL : 66 (89) 205-0158 e-mail : arpakon.prompt@wms-thailand.com
SAMPLING SOURCE : MW3
SAMPLE TYPE : GROUNDWATER
SAMPLING DATE : JUNE 16, 2022
SAMPLING TIME : 11:00 HOUR
SAMPLING METHOD : PERISTALTIC PUMP
SAMPLING BY : MR PHATSAWUT THOSAKOON
ANALYZED BY : MISS PORNPIMOL WAENTHONG

RECEIVED DATE : JUNE 16, 2022
ANALYTICAL DATE : JUNE 16-22, 2022
REPORT NO. : 2022-U050579
WORK NO. : 2021-008734
ANALYSIS NO. : T22AL730-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			MW3 T22AL730-0003	
pH	-	ELECTROMETRIC METHOD AT SITE (SM-4500-H-B)	7.0 (33°C)	-
ELECTRICAL CONDUCTIVITY	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM-2510 B)	26,201 (33°C)	0.1
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM-4500-O C AND 5210 B)	7.2	10
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLEX, TITRIMETRIC METHOD (SM-5220 C)	105	25.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM-2540 C)	18,020	25
SAMPLE CONDITION				
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23RD EDITION, 2017.

Benjawan V.
 (MISS BENJAWAN VIRIYOTHAI)
 LABORATORY SUPERVISOR

JULY 1, 2022

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ภาคผนวก ค-6

ผลการติดตามตรวจสอบอาชีพอนามัยและความปลอดภัย

ภาคผนวก ค-6.1

ผลการติดตามตรวจสอบผู้ลงชื่อในสถานที่ทำงาน



Analysis / Test Report

TESTING
No.0009

Lot ID: 229130

Date Received : Feb 25, 2022
Date Reported : Mar 04, 2022
Report Number : 2210405-1

Client : Bangpoo Environmental Complex Co., Ltd.

965 Bangpoo Industrial Estate, Soi 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd, Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O : BPC22-0015

Project Name : Monitoring EIA

Project Location :

Page 1 of 2

Sample Number	229130-1								
Sampled Date	Feb 25, 2022								
Sample Description	Air Quality								
Location	Receiving Building								
Date Analysis Commenced	Mar 01, 2022								
Condition of Sample	Drawn into two filter papers placed in each cassette								
Barometric Pressure	760 mmHg								
Atmospheric Temperature	30.0 °C								
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Respirable Dust	09:25 AM - 11:25 AM	mg/m3	-	0.15	<0.15	5	Based on NIOSH (1998), 0600	OSHA	Bangkok
Total dust	09:25 AM - 11:25 AM	mg/m3	-	0.15	<0.15	15	Based on NIOSH (1994), 0501	OSHA	Bangkok

Approved by

Saranya C.

Saranya Chalermbhramong
Scientist (4)

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Analysis / Test Report

TESTING
No.0009

Lot ID: 229130

Date Received : Feb 25, 2022
Date Reported : Mar 04, 2022
Report Number : 2210405-1

Client : Bangpoo Environmental Complex Co., Ltd.

965 Bangpoo Industrial Estate, Soi 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd, Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O : BPC22-0015

Project Name : Monitoring EIA

Project Location :

Page 2 of 2

Sample Number	229130-2								
Sampled Date	Feb 25, 2022								
Sample Description	Air Quality								
Location	Haz Building								
Date Analysis Commenced	Mar 01, 2022								
Condition of Sample	Drawn into two filter papers placed in each cassette								
Barometric Pressure	760 mmHg								
Atmospheric Temperature	30.0 °C								
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Respirable Dust	09:30 AM - 11:30 AM	mg/m3	-	0.15	<0.15	5	Based on NIOSH (1998), 0600	OSHA	Bangkok
Total dust	09:30 AM - 11:30 AM	mg/m3	-	0.15	0.35	15	Based on NIOSH (1994), 0501	OSHA	Bangkok

Approved by

Saranya C.

Saranya Chalermbhramong
Scientist (4)

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ภาคผนวก ค-6.2

ผลการติดตามตรวจสอบระดับเสียงในสถานที่ทำงาน



Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.

965 Bangpoo Industrial Estate , Soi 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd,
Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O : BPC22-0015

Project Name : Monitoring EIA

Project Location :

Lot ID: 229134

Date Received : Feb 26, 2022

Date Reported : Mar 03, 2022

Report Number: 2249739-1

Page 1 of 1

Sample Number	229134-1			
Parameter	Noise (Leq 8 hrs.)			
Location	Receiving Building			
Measurement Date	Feb 24, 2022			
Measurement by	Samart Roorgan			
	Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
	08:41 AM - 09:41 AM	79.1	91.5	70.3
	09:41 AM - 10:41 AM	75.4	86.6	59.7
	10:41 AM - 11:41 AM	73.7	89.9	58.9
	11:41 AM - 12:41 PM	77.1	92.2	59.4
	12:41 PM - 01:41 PM	79.6	91.2	73.1
	01:41 PM - 02:41 PM	80.5	89.3	70.8
	02:41 PM - 03:41 PM	77.6	92.2	65.8
	03:41 PM - 04:41 PM	75.9	93.1	68.5

Technical Management

Saranya Chalemithamrong
Scientist (4)

Approved by

Supot Salameh
Section Head

Supot S.

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S\Reports\Air Noise rpt (10:37AM)



Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.

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Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O : BPC22-0015

Project Name : Monitoring EIA

Project Location :

Lot ID: 229134

Date Received : Feb 26, 2022

Date Reported : Mar 03, 2022

Report Number: 2249740-1

Page 1 of 1

Sample Number	229134-2			
Parameter	Noise (Leq 8 hrs.)			
Location	Haz Building			
Measurement Date	Feb 24, 2022			
Measurement by	Samart Roorgan			
	Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
	08:27 AM - 09:27 AM	69.5	85.6	62.9
	09:27 AM - 10:27 AM	70.8	91.1	62.6
	10:27 AM - 11:27 AM	68.4	87.8	62.7
	11:27 AM - 12:27 PM	65.9	84.1	62.6
	12:27 PM - 01:27 PM	75.3	96.3	63.8
	01:27 PM - 02:27 PM	68.7	90.2	63.7
	02:27 PM - 03:27 PM	79.5	99.2	64.3
	03:27 PM - 04:27 PM	67.2	87.3	62.8

Technical Management

Saranya Chalemithamrong
Scientist (4)

Approved by

Supot Salameh
Section Head

Supot S.

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S\Reports\Air Noise rpt (10:37AM)



Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.

965 Bangpoo Industrial Estate , Soi 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd,
Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O : BPC22-0015

Project Name : Monitoring EIA

Project Location :

Lot ID: 229134

Date Received : Feb 26, 2022

Date Reported : Mar 03, 2022

Report Number: 2249741-1

Page 1 of 1

Sample Number	229134-3		
Parameter	Noise (Leq 8 hrs.)		
Location	Control room		
Measurement Date	Feb 24, 2022		
Measurement by	Smart Roorgan		
	Time	Leq (dB(A))	Lmax (dB(A))
	08:39 AM - 09:39 AM	63.2	70.2
	09:39 AM - 10:39 AM	62.9	72.7
	10:39 AM - 11:39 AM	62.3	71.1
	11:39 AM - 12:39 PM	62.9	72.7
	12:39 PM - 01:39 PM	62.3	70.9
	01:39 PM - 02:39 PM	63.5	75.9
	02:39 PM - 03:39 PM	63.7	72.9
	03:39 PM - 04:39 PM	63.8	72.5
			L90 (dB(A))
			62.6
			61.6
			61.4
			61.5
			61.5
			61.6
			61.6

Technical Management

Savanya C.

Saranya Chalemithamrong
Scientist (4)

Approved by

Supot Salameh
Section Head

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S\Reports\Air Noise rpt (10.37AM)



Analysis / Test Report

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Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O : BPC22-0015

Project Name : Monitoring EIA

Project Location :

Lot ID: 229134

Date Received : Feb 26, 2022

Date Reported : Mar 03, 2022

Report Number: 2249742-1

Page 1 of 1

Sample Number	229134-4			
Parameter	Noise (Leq 8 hrs.)			
Location	Fluidized-bed Incinerator Area			
Measurement Date	Feb 24, 2022			
Measurement by	Smart Roorgan			
	Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
	08:39 AM - 09:39 AM	80.7	102.7	77.8
	09:39 AM - 10:39 AM	78.4	81.9	77.9
	10:39 AM - 11:39 AM	78.3	79.9	77.9
	11:39 AM - 12:39 PM	77.8	80.1	77.3
	12:39 PM - 01:39 PM	77.7	82.6	77.2
	01:39 PM - 02:39 PM	77.7	88.7	76.7
	02:39 PM - 03:39 PM	77.2	86.8	76.7
	03:39 PM - 04:39 PM	77.5	88.7	76.4

Technical Management

Savanya C.

Saranya Chalemithamrong
Scientist (4)

Approved by

Supot Salameh
Section Head

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S\Reports\Air Noise rpt (10.38AM)



Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.

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Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O : BPC22-0015

Project Name : Monitoring EIA

Project Location :

Lot ID: 229134

Date Received : Feb 26, 2022

Date Reported : Mar 03, 2022

Report Number: 2249743-1

Page 1 of 1

Sample Number		229134-5		
Parameter	Noise (Leq 8 hrs.)			
Location	Boiler Area			
Measurement Date	Feb 24, 2022			
Measurement by	Samart Roongan			
Time				
	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))	
08:39 AM - 09:39 AM	83.0	101.0	75.9	
09:39 AM - 10:39 AM	77.6	87.3	75.7	
10:39 AM - 11:39 AM	77.8	87.0	75.9	
11:39 AM - 12:39 PM	77.8	89.4	75.5	
12:39 PM - 01:39 PM	77.3	87.6	75.1	
01:39 PM - 02:39 PM	78.0	89.2	75.5	
02:39 PM - 03:39 PM	77.4	85.7	75.4	
03:39 PM - 04:39 PM	77.5	85.8	75.4	

Technical Management

Saranya Chalemithamrong
Scientist (4)

Approved by

Supot Salameh
Section Head

Supot S.

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S\Reports\Air Noise rpt (10.38AM)



Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.

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Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O : BPC22-0015

Project Name : Monitoring EIA

Project Location :

Lot ID: 229134

Date Received : Feb 26, 2022

Date Reported : Mar 03, 2022

Report Number: 2249744-1

Page 1 of 1

Sample Number	229134-6		
Parameter	Noise (Leq 8 hrs.)		
Location	Generator		
Measurement Date	Feb 24, 2022		
Measurement by	Samart Roongan		
Time			
08:44 AM - 09:44 AM	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
	81.2	96.7	80.6
09:44 AM - 10:44 AM	80.7	82.2	80.3
10:44 AM - 11:44 AM	80.3	81.2	79.9
11:44 AM - 12:44 PM	80.1	82.2	79.1
12:44 PM - 01:44 PM	79.9	82.5	79.4
01:44 PM - 02:44 PM	79.6	81.7	79.2
02:44 PM - 03:44 PM	79.7	83.7	79.2
03:44 PM - 04:44 PM	79.6	81.1	79.2

Technical Management

Saranya Chalemithamrong
Scientist (4)

Approved by

Supot Salameh
Section Head

Supot S.

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S\Reports\Air Noise rpt (10.38AM)



Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.
965 Bangpoo Industrial Estate , Soi 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd,
Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280
P/O : BPC22-0015
Project Name : Monitoring EIA
Project Location :

Lot ID: 229134
Date Received : Feb 26, 2022
Date Reported : Mar 03, 2022
Report Number: 2249745-1

Page 1 of 1

Sample Number	229134-7
Parameter	Noise (Leq 8 hrs.)
Location	Hybrid Battery Furnace
Measurement Date	Feb 24, 2022
Measurement by	Samart Roongan

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:39 AM - 09:39 AM	79.3	99.7	77.5
09:39 AM - 10:39 AM	78.3	86.4	77.6
10:39 AM - 11:39 AM	77.8	81.7	77.4
11:39 AM - 12:39 PM	78.0	83.3	77.5
12:39 PM - 01:39 PM	78.2	84.8	77.6
01:39 PM - 02:39 PM	79.6	94.0	78.8
02:39 PM - 03:39 PM	79.2	85.3	78.7
03:39 PM - 04:39 PM	78.4	86.9	77.6

Leq Average 8 hrs. (dB(A))
Lmax (dB(A))
Standard (dB(A))
Reference Method : Based on ISO1996-1 and 1996-2
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรฐานเครื่องมือการวัดเสียง
ในทางประกอบกิจการโรงงานเกี่ยวกับลักษณะแวดล้อมในการทำงาน พ.ศ.๒๕๕๖

99.7
140
90

Technical Management
Savanya C.
Saranya Chalemithamrong
Scientist (4)

Approved by
Supot Salamteah
Section Head

Smpt S.

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ภาคผนวก ค-6.3

ผลการติดตามตรวจสอบระดับเสียงที่ลูกจ้างได้รับ
เฉลี่ยตลอดเวลาการทำงานในแต่ละวัน (TWA)



Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.
965 Bangpoo Industrial Estate, Sol 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd, Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280
P/O : BPC22-0015
Project Name : Monitoring EIA
Project Location :

Lot ID: 229135
Date Received : Feb 26, 2022
Date Reported : Mar 01, 2022
Report Number : 2210408-1

Page 1 of 5

Sample Number	229135-1
Sampled Date	Feb 24, 2022
Sample Description	Noise Dose
Location	Receiving Building
Personal Sampling	การวัดเสียง
Date Analysis Commenced	Mar 01, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing	Noise Dose (8 hrs.)	08:40 AM - 04:40 PM	%	-	1	75.9	No Standard	Bangkok
	TWA (8 hrs.)	08:40 AM - 04:40 PM	dB(A)	-	-	83.8	85	Bangkok

Guideline :
MOL : 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. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)
Sampled By : Samart Roongnan

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

Approved by 
Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.
965 Bangpoo Industrial Estate, Sol 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd, Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280
P/O : BPC22-0015
Project Name : Monitoring EIA
Project Location :

Lot ID: 229135
Date Received : Feb 26, 2022
Date Reported : Mar 01, 2022
Report Number : 2210408-1

Page 2 of 5

Sample Number	229135-2
Sampled Date	Feb 24, 2022
Sample Description	Noise Dose
Location	Fluidized-bed Incinerator + Boiler Area
Personal Sampling	การวัดเสียง
Date Analysis Commenced	Mar 01, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing	Noise Dose (8 hrs.)	08:42 AM - 04:42 PM	%	-	1	6.5	No Standard	Bangkok
	TWA (8 hrs.)	08:42 AM - 04:42 PM	dB(A)	-	-	73.1	85	Bangkok

Guideline :
MOL : 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. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)
Sampled By : Samart Roongnan

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

Approved by 
Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.
965 Bangpoo Industrial Estate, Sol 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd, Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280
P/O : BPC22-0015
Project Name : Monitoring EIA
Project Location :

Lot ID: 229135
Date Received : Feb 26, 2022
Date Reported : Mar 01, 2022
Report Number : 2210408-1

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Sample Number	229135-4									
Sampled Date	Feb 24, 2022									
Sample Description	Noise Dose									
Location	Steam Turbine									
Personal Sampling	การสุ่มตัวอย่างส่วนบุคคล									
Date Analysis Commenced	Mar 01, 2022									
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location	
Air Testing	Noise Dose (8 hrs.)	08:42 AM - 04:42 PM	%	-	1	66.1	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
	TWA (8 hrs.)	08:42 AM - 04:42 PM	dB(A)	-	-	83.2	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

Guideline :
MOL : 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. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)
Sampled By : Samart Roongnan

Remark :
- LOD : Limit of Detection
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Analysis / Test Report

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P/O : BPC22-0015
Project Name : Monitoring EIA
Project Location :

Lot ID: 229135
Date Received : Feb 26, 2022
Date Reported : Mar 01, 2022
Report Number : 2210408-1

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Sample Number	229135-5									
Sampled Date	Feb 24, 2022									
Sample Description	Noise Dose									
Location	Haz Building									
Personal Sampling	การวัดส่วนบุคคล									
Date Analysis Commenced	Mar 01, 2022									
Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location	
Air Testing	Noise Dose (8 hrs.)	08:41 AM - 04:41 PM	%	-	1	53.7	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
	TWA (8 hrs.)	08:41 AM - 04:41 PM	dB(A)	-	-	82.3	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

Guideline :
MOL : 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. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)
Sampled By : Samart Roongnan

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

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P/O : BPC22-0015
Project Name : Monitoring EIA
Project Location :

Lot ID: 229135
Date Received : Feb 26, 2022
Date Reported : Mar 01, 2022
Report Number : 2210408-1

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Sample Number	229135-6
Sampled Date	Feb 24, 2022
Sample Description	Noise Dose
Location	Hybrid Battery Furnace
Personal Sampling	การสุ่มตัวอย่าง
Date Analysis Commenced	Mar 01, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing	Noise Dose (8 hrs.)	08:41 AM - 04:41 PM	%	-	1	44.7	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	Bangkok
	TWA (8 hrs.)	08:41 AM - 04:41 PM	dB(A)	-	-	81.5	85	MOL, Department Labour Protection and Welfare (B.E.2561)	Bangkok

Guideline :
MOL : 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. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)
Sampled By : Samart Roongnan

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

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ภาคผนวก ค-6.4

ผลการติดตามตรวจสอบความร้อน
บริเวณพื้นที่ปฏิบัติงาน (WBGT)



Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.
965 Bangpoo Industrial Estate, Soi 3 Moo.2, Bangpoo Industrial Estate,
Sukhumvit Rd, Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand
10280
P/O : BPC22-0015
Project Name : Monitoring EIA
Project Location :

Lot ID: 229137
Date Received : Feb 26, 2022
Date Reported : Mar 01, 2022
Report Number: 2210411-1

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Sample Number	229137-1				
Parameter	Heat Stress (Sampling Time : 02.00 PM - 04.00 PM)				
Measurement Date	Feb 24, 2022				
Measurement by	Smart Roongan				
Location	ปฏิบัติงาน 1 ชั้นที่ (ห้องควบคุม อุณหภูมิห้อง : - แยก : -)				
Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
Boiler	120	30.1	24.8	44.1	39.6
Average (WBGT)	30.1				
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 Salanteh
Section Head

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Analysis / Test Report

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Sukhumvit Rd, Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand
10280
P/O : BPC22-0015
Project Name : Monitoring EIA
Project Location :

Lot ID: 229137
Date Received : Feb 26, 2022
Date Reported : Mar 01, 2022
Report Number: 2210411-1

Page 2 of 6

Sample Number	229137-2				
Parameter	Heat Stress (Sampling Time : 01.45 PM - 03.45 PM)				
Measurement Date	Feb 24, 2022				
Measurement by	Smart Roongan				
Location	ปฏิบัติงาน 1 ชั้นที่ (ห้องควบคุม อุณหภูมิห้อง : - แยก : -)				
Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
Furnace	120	28.3	23.3	40.5	39.2
Average (WBGT)	28.3				
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

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10280
P/O : BPC22-0015
Project Name : Monitoring EIA
Project Location :

Lot ID: 229137

Date Received : Feb 26, 2022
Date Reported : Mar 01, 2022
Report Number: 2210411-1

Sample Number	229137-3				
Parameter	Heat Stress (Sampling Time : 02.50 PM - 03.50 PM)				
Measurement Date	Feb 24, 2022				
Measurement by	Smart Roongan				
Location	ปฏิบัติงาน 1 ชั้นที่ (ห้องควบคุม อุณหภูมิห้องงาน : - แทนที่ : -)				
Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
Boiler Blowdown	120	28.2	23.7	39.1	37.7
Average (WBGT)	28.2				
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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10280
P/O : BPC22-0015
Project Name : Monitoring EIA
Project Location :

Lot ID: 229137

Date Received : Feb 26, 2022
Date Reported : Mar 01, 2022
Report Number: 2210411-1

Sample Number	229137-4				
Parameter	Heat Stress (Sampling Time : 01.35 PM - 03.35 PM)				
Measurement Date	Feb 24, 2022				
Measurement by	Smart Roongan				
Location	ปฏิบัติงาน 1 ชั้นที่ (ห้องควบคุม อุณหภูมิห้องงาน : - แทนที่ : -)				
Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
Vibration Screen	120	29.8	24.5	42.0	41.7
Average (WBGT)	29.8				
Guideline WBGT (°C)	34.0				

Reference Method : Wet Bulb Globe Temperature

Guideline:

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Technical Management

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10280
P/O : BPC22-0015
Project Name : Monitoring EIA
Project Location :

Lot ID: 229137

Date Received : Feb 26, 2022
Date Reported : Mar 01, 2022
Report Number: 2210411-1

Page 5 of 6

Sample Number	229137-5				
Parameter	Heat Stress (Sampling Time : 01.40 PM - 03.40 PM)				
Measurement Date	Feb 24, 2022				
Measurement by	Smart Roongan				
Location	ปฏิบัติงาน 1 ชั่วโมง (ค่า-มาตรฐาน อยู่ปฏิบัติงาน : - แทน : -)				
Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
Stream Turbine	120	28.1	24.1	37.5	37.2
Average (WBGT)		28.1			
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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Section Head

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Analysis / Test Report

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10280
P/O : BPC22-0015
Project Name : Monitoring EIA
Project Location :

Lot ID: 229137

Date Received : Feb 26, 2022
Date Reported : Mar 01, 2022
Report Number: 2210411-1

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Sample Number	229137-6				
Parameter	Heat Stress (Sampling Time : 01.55 PM - 03.55 PM)				
Measurement Date	Feb 24, 2022				
Measurement by	Smart Roongan				
Location	ปฏิบัติงาน 1 ชั่วโมง (ค่า-มาตรฐาน อยู่ปฏิบัติงาน : - แทน : -)				
Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
Hybrid Battery Furnace	120	27.1	23.7	35.2	34.6
Average (WBGT)		27.1			
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 Environmentin relation to Heat,Light and Noise, B.E.2559

Technical Management

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ภาคผนวก ค-6.5

ผลการติดตามตรวจสอบความร้อนที่พนักงาน
ได้รับจากการปฏิบัติงาน



Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.
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10280
P/O : BPC22-0015
Project Name : Monitoring EIA
Project Location :

Lot ID: 229138
Date Received : Feb 26, 2022
Date Reported : Mar 01, 2022
Report Number: 2210412-1

Page 1 of 4

Sample Number	229138-1				
Parameter	Heat Stress (Sampling Time : 01.15 PM - 03.15 PM)				
Measurement Date	Feb 25, 2022				
Measurement by	Smart Roongan				
Location	ปฏิบัติงาน 1 ชั้นที่ (ห้องควบคุม อุณหภูมิห้อง : อุณหภูมิห้อง ควบคุม : IN)				
Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
IN dept	120	24.5	21.2	32.3	32.1
Average (WBGT)	24.5				
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)
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Analysis / Test Report

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Sukhumvit Rd, Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand
10280
P/O : BPC22-0015
Project Name : Monitoring EIA
Project Location :

Lot ID: 229138
Date Received : Feb 26, 2022
Date Reported : Mar 01, 2022
Report Number: 2210412-1

Page 2 of 4

Sample Number	229138-3				
Parameter	Heat Stress (Sampling Time : 01.20 PM - 03.20 PM)				
Measurement Date	Feb 25, 2022				
Measurement by	Smart Roongan				
Location	ปฏิบัติงาน 1 ชั้นที่ (ห้องควบคุม อุณหภูมิห้อง : อุณหภูมิห้อง ควบคุม : MN)				
Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
MN dept	120	24.2	20.5	32.9	32.8
Average (WBGT)	24.2				
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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10280
P/O : BPC22-0015
Project Name : Monitoring EIA
Project Location :

Lot ID: 229138
Date Received : Feb 26, 2022
Date Reported : Mar 01, 2022
Report Number: 2210412-1

Sample Number	229138-4					
Parameter	Heat Stress (Sampling Time : 01.10 PM - 03.10 PM)					
Measurement Date	Feb 25, 2022					
Measurement by	Smart Roongan					
Location	ปฏิบัติงาน 1 ชั้นที่ (อาคารสกล อิมูบิลิตี้)งาน : ดูแลชั้นที่ 1 อาคาร RC					
Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)	
RC dept	120	26.5	23.2	34.2	33.8	
Average (WBGT)	26.5					
Guideline WBGT (°C)	34.0					

Reference Method : Wet Bulb Globe Temperature

Guideline:

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Technical Management

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10280
P/O : BPC22-0015
Project Name : Monitoring EIA
Project Location :

Lot ID: 229138
Date Received : Feb 26, 2022
Date Reported : Mar 01, 2022
Report Number: 2210412-1

Sample Number	229138-5					
Parameter	Heat Stress (Sampling Time : 01.05 PM - 03.05 PM)					
Measurement Date	Feb 25, 2022					
Measurement by	Smart Roongan					
Location	ปฏิบัติงาน 1 ชั้นที่ (อาคารสกล อิมูบิลิตี้)งาน : ดูแลชั้นที่ 1 อาคาร FB					
Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)	
FB dept	120	25.2	21.6	33.6	33.4	
Average (WBGT)	25.2					
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 Environmentin relation to Heat,Light and Noise, B.E.2559

Technical Management

Supot Salanteh
Section Head

Approved by

Wichan Choonharat
Assistant Manager

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ภาคผนวก ค-6.6

ผลการติดตามตรวจสอบสารเคมีในบรรยากาศของสถานที่ทำงาน



Analysis / Test Report

Lot ID: 229133

Date Received : Feb 25, 2022
Date Reported : Mar 05, 2022
Report Number : 2210406-1

Client : Bangpoo Environmental Complex Co., Ltd.

965 Bangpoo Industrial Estate, Soi 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd, Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O : BPC22-0015

Project Name : Monitoring EIA

Project Location :

Page 1 of 3

Sample Number	229133-1								
Sampled Date	Feb 25, 2022								
Sample Description	Air Quality								
Location	Chemical Room								
Date Analysis Commenced	Feb 25, 2022								
Condition of Sample	Drawn into one filter paper placed in plastic cassette and one sorbent tube, refrigerated								
Barometric Pressure	760 mmHg								
Atmospheric Temperature	30.0 °C								
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Hydrogen chloride	09:50 AM - 11:50 AM	ppm	-	0.05	<0.05	5(C)	Based on OSHA, ID-174-SG	MOL	Bangkok
Sodium hydroxide as NaOH	09:50 AM - 11:50 AM	mg/m3	-	0.05	<0.05	2	NIOSH (1994), 7401	MOL	Bangkok

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Approved by

Sararat Mongkonjirawat
Scientist (4)



Analysis / Test Report

Lot ID: 229133

Date Received : Feb 25, 2022
Date Reported : Mar 05, 2022
Report Number : 2210406-1

Client : Bangpoo Environmental Complex Co., Ltd.

965 Bangpoo Industrial Estate, Soi 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd, Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280

P/O : BPC22-0015

Project Name : Monitoring EIA

Project Location :

Page 2 of 3

Sample Number	229133-2								
Sampled Date	Feb 25, 2022								
Sample Description	Air Quality								
Location	Haz Building								
Date Analysis Commenced	Feb 25, 2022								
Condition of Sample	Drawn into one amber plastic bottle and two sorbent tubes, refrigerated								
Barometric Pressure	760 mmHg								
Atmospheric Temperature	30.0 °C								
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Ammonia	09:30 AM - 11:30 AM	ppm	-	0.10	0.63	50	Method of Air Sampling and Analysis, 401	MOL	Bangkok
Benzene	09:30 AM - 11:30 AM	ppm	-	0.06	<0.06	1	Based on NIOSH (2003), 1501	MOL	Bangkok
Methanol	09:30 AM - 11:30 AM	ppm	-	0.10	<0.10	200	NIOSH (1994), 2000	ACGIH	Bangkok
Toluene	09:30 AM - 11:30 AM	ppm	-	0.05	0.64	200	Based on NIOSH (2003), 1501	MOL	Bangkok
Xylene	09:30 AM - 11:30 AM	ppm	-	0.05	0.09	100	Based on NIOSH (2003), 1501	MOL	Bangkok

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Analysis / Test Report

Client : Bangpoo Environmental Complex Co., Ltd.
965 Bangpoo Industrial Estate, Soi 3 Moo.2, Bangpoo Industrial Estate, Sukhumvit Rd, Bangpoo Mai, Muang Samutprakarn, Samutprakarn Thailand 10280
P/O : BPC22-0015
Project Name : Monitoring EIA
Project Location :

Lot ID: 229133
Date Received : Feb 25, 2022
Date Reported : Mar 05, 2022
Report Number : 2210406-1

Page 3 of 3

Sample Number	229133-3								
Sampled Date	Feb 25, 2022								
Sample Description	Air Quality								
Location	Dust Moistening Room								
Date Analysis Commenced	Feb 25, 2022								
Condition of Sample	Drawn into one amber plastic bottle, refrigerated								
Barometric Pressure	760 mmHg								
Atmospheric Temperature	30.0 °C								
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Ammonia	09:45 AM - 11:45 AM	ppm	-	0.10	<0.10	50	Method of Air Sampling and Analysis, 401	MOL	Bangkok

Guideline :
MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)
Sampled By : AnechaTansamai

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

Approved by


Sararat Mongkonjirawut
Scientist (4)

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