

เอกสารแนบ 31
หนังสือรับรองผลการตรวจวัดคุณภาพสิ่งแวดล้อม



Analysis / Test Report



TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetuk, Amphur Thaplor, Pichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492616
Date Received : Aug 29, 2024
Date Reported : Sep 04, 2024
Report Number : 3080694-1

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Sample Number 2492616-2
Sampled Date Aug 21, 2024
Sample Description Air Quality
Location Ban Dong Long (GPS 47Q 0678214, 1802239)
Date Analysis Commenced Aug 30, 2024
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure 750 mmHg
Atmospheric Temperature 31.1 °C

Analyte	Sampled Date/time	Unit	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	21/08/24 - 22/08/24	mg/m3	- 0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	21/08/24 - 22/08/24	mg/m3	- 0.005	0.028	0.33	In - house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

Guideline :
NEB No.24 : Notification of the National Environmental Board. No.24/ 2004 (B.E.2547) dated September 24, 2004
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Analysis / Test Report



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Date Received : Aug 29, 2024
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Sample Number 2492616-1
Sampled Date Aug 20, 2024
Sample Description Air Quality
Location Ban Dong Long (GPS 47Q 0678214, 1802239)
Date Analysis Commenced Aug 30, 2024
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure 750 mmHg
Atmospheric Temperature 30.1 °C

Analyte	Sampled Date/time	Unit	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	20/08/24 - 21/08/24	mg/m3	- 0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	20/08/24 - 21/08/24	mg/m3	- 0.005	0.017	0.33	In - house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

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Project Name : Air Test

Project Location :

Lot ID: 2492616

Date Received : Aug 29, 2024

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TESTING
No.0009

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Sample Number	2492616-4
Sampled Date	Aug 23, 2024
Sample Description	Air Quality
Location	Ban Dong Long (GPS 47Q 0678214, 1802239)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	31.6 °C

Analyte	Sampled Date/time	Unit	LOD (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	23/08/24 - 24/08/24	mg/m3	- 0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	23/08/24 - 24/08/24	mg/m3	- 0.005	0.031	0.33	In - house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

Guideline :

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P/O : 47581

Project Name : Air Test

Project Location :

Lot ID: 2492616

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Sample Number	2492616-3
Sampled Date	Aug 22, 2024
Sample Description	Air Quality
Location	Ban Dong Long (GPS 47Q 0678214, 1802239)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	32.6 °C

Analyte	Sampled Date/time	Unit	LOD (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	22/08/24 - 23/08/24	mg/m3	- 0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	22/08/24 - 23/08/24	mg/m3	- 0.005	0.028	0.33	In - house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

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Project Name : Air Test
Project Location :
Lot ID: 2492616
Date Received : Aug 29, 2024
Date Reported : Sep 04, 2024
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Sample Number 2492616-6
Sampled Date Aug 25, 2024
Sample Description Air Quality
Location Ban Dong Long (GPS 47Q 0678214, 1802239)
Date Analysis Commenced Aug 30, 2024
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure 750 mmHg
Atmospheric Temperature 31.7 °C

Analyte	Sampled Date/time	Unit	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	25/08/24 - 26/08/24	mg/m3	- 0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	25/08/24 - 26/08/24	mg/m3	- 0.005	0.023	0.33	In - house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

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Sample Number 2492616-5
Sampled Date Aug 24, 2024
Sample Description Air Quality
Location Ban Dong Long (GPS 47Q 0678214, 1802239)
Date Analysis Commenced Aug 30, 2024
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure 750 mmHg
Atmospheric Temperature 31.8 °C

Analyte	Sampled Date/time	Unit	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	24/08/24 - 25/08/24	mg/m3	- 0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	24/08/24 - 25/08/24	mg/m3	- 0.005	0.018	0.33	In - house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

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Sample Number	2492616-8
Sampled Date	Aug 20, 2024
Sample Description	Air Quality
Location	Ban Nong Ra Man (GPS 47Q 0674693, 1802561)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	29.5 °C

Analyte	Sampled Date/time	Unit	LOD (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	20/08/24 - 21/08/24	mg/m3	- 0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	20/08/24 - 21/08/24	mg/m3	- 0.005	0.023	0.33	In - house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

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P/O : 47581

Project Name : Air Test

Project Location :

Lot ID: 2492616

Date Received : Aug 29, 2024

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Sample Number	2492616-7
Sampled Date	Aug 26, 2024
Sample Description	Air Quality
Location	Ban Dong Long (GPS 47Q 0678214, 1802239)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	32.1 °C

Analyte	Sampled Date/time	Unit	LOD (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	26/08/24 - 27/08/24	mg/m3	- 0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	26/08/24 - 27/08/24	mg/m3	- 0.005	0.031	0.33	In - house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

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Project Name : Air Test
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Lot ID: 2492616
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Sample Number	2492616-10
Sampled Date	Aug 22, 2024
Sample Description	Air Quality
Location	Ban Nong Ra Man (GPS 47Q 0674693, 1802561)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	31.2 °C

Analyte	Unit	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing						
Hydrogen cyanide *	mg/m3	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	mg/m3	0.005	0.073	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

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Project Name : Air Test
Project Location :
Lot ID: 2492616
Date Received : Aug 29, 2024
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Sample Number	2492616-9
Sampled Date	Aug 21, 2024
Sample Description	Air Quality
Location	Ban Nong Ra Man (GPS 47Q 0674693, 1802561)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	29.1 °C

Analyte	Unit	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing						
Hydrogen cyanide *	mg/m3	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	mg/m3	0.005	0.036	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

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P/O : 47581

Project Name : Air Test

Project Location :

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Sample Number	2492616-12
Sampled Date	Aug 24, 2024
Sample Description	Air Quality
Location	Ban Nong Ra Man (GPS 47Q 0674693, 1802561)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	29.9 °C

Analyte	Unit	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing						
Hydrogen cyanide *	mg/m ³	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	mg/m ³	0.005	0.029	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

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P/O : 47581

Project Name : Air Test

Project Location :

Lot ID: 2492616

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Sample Number	2492616-11
Sampled Date	Aug 23, 2024
Sample Description	Air Quality
Location	Ban Nong Ra Man (GPS 47Q 0674693, 1802561)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	30.1 °C

Analyte	Unit	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing						
Hydrogen cyanide *	mg/m ³	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	mg/m ³	0.005	0.045	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

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Analysis / Test Report



TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetuk, Amphur Thaplor, Pichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492616
Date Received : Aug 29, 2024
Date Reported : Sep 04, 2024
Report Number : 3080694-1

Page 14 of 35

Sample Number 2492616-14
Sampled Date Aug 26, 2024
Sample Description Air Quality
Location Ban Nong Ra Man (GPS 47Q 0674693, 1802561)
Date Analysis Commenced Aug 30, 2024
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure 750 mmHg
Atmospheric Temperature 31.5 °C

Analyte	Unit	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing						
Hydrogen cyanide *	mg/m3	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	mg/m3	0.005	0.033	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

Guideline :
NEB No.24 : Notification of the National Environmental Board. No.24/ 2004 (B.E.2547) dated September 24, 2004
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Analysis / Test Report



TESTING
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Client : Akara Resources Public Co., Ltd.
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P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492616
Date Received : Aug 29, 2024
Date Reported : Sep 04, 2024
Report Number : 3080694-1

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Sample Number 2492616-13
Sampled Date Aug 25, 2024
Sample Description Air Quality
Location Ban Nong Ra Man (GPS 47Q 0674693, 1802561)
Date Analysis Commenced Aug 30, 2024
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure 750 mmHg
Atmospheric Temperature 30.1 °C

Analyte	Unit	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing						
Hydrogen cyanide *	mg/m3	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	mg/m3	0.005	0.036	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

Guideline :
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P/O : 47581

Project Name : Air Test

Project Location :

Lot ID: 2492616

Date Received : Aug 29, 2024

Date Reported : Sep 04, 2024

Report Number : 3080694-1



Page 16 of 35

Sample Number	2492616-16
Sampled Date	Aug 21, 2024
Sample Description	Air Quality
Location	Ban Khao Mor (GPS 47Q 0675723, 1804284)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	30.2 °C

Analyte	Sampled Date/time	Unit	LOD (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	21/08/24 - 22/08/24	mg/m3	- 0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	21/08/24 - 22/08/24	mg/m3	- 0.005	0.014	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

Guideline :

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P/O : 47581

Project Name : Air Test

Project Location :

Lot ID: 2492616

Date Received : Aug 29, 2024

Date Reported : Sep 04, 2024

Report Number : 3080694-1



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Sample Number	2492616-15
Sampled Date	Aug 20, 2024
Sample Description	Air Quality
Location	Ban Khao Mor (GPS 47Q 0675723, 1804284)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	30.4 °C

Analyte	Sampled Date/time	Unit	LOD (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	20/08/24 - 21/08/24	mg/m3	- 0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	20/08/24 - 21/08/24	mg/m3	- 0.005	0.023	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

Guideline :

NEB No.24 : Notification of the National Environmental Board. No.24/ 2004 (B.E.2547) dated September 22, 2004

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P/O : 47581

Project Name : Air Test

Project Location :

Client : Akara Resources Public Co., Ltd.

99 Moo 9, Tambon KhaochetDuk

P/O : 47581

Project Name : Air Test

Sample Number	2492616-17
Sampled Date	Aug 22, 2024
Sample Description	Air Quality
Location	Ban Khao Mor (GPS 47Q 0675723, 1804284)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	32.1 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOK)	Result	Guideline Limit*	Method	Guideline Testing Location
Air Testing								
Hydrogen cyanide	22/08/24 - 23/08/24	mg/m3	-	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	22/08/24 - 23/08/24	mg/m3	-	0.005	0.023	0.33	In - house method : STM 04-051 based on U.S.	Bangkok NEB No.24

Guideline :

NEB No.24 : Notification of the National Environmental Board, No.24, 2004 (B.E.2547) dated September 22, 2004

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Analysis / Test Report



TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
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P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492616
Date Received : Aug 29, 2024
Date Reported : Sep 04, 2024
Report Number : 3080694-1

Page 20 of 35

Sample Number	2492616-20
Sampled Date	Aug 25, 2024
Sample Description	Air Quality
Location	Ban Khao Mor (GPS 47Q 0675723, 1804284)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	30.3 °C

Analyte	Sampled Date/time	Unit	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	25/08/24 - 26/08/24	mg/m3	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	25/08/24 - 26/08/24	mg/m3	0.005	0.020	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

Guideline :
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Analysis / Test Report



TESTING
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P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492616
Date Received : Aug 29, 2024
Date Reported : Sep 04, 2024
Report Number : 3080694-1

Page 19 of 35

Sample Number	2492616-19
Sampled Date	Aug 24, 2024
Sample Description	Air Quality
Location	Ban Khao Mor (GPS 47Q 0675723, 1804284)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	30.3 °C

Analyte	Sampled Date/time	Unit	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	24/08/24 - 25/08/24	mg/m3	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	24/08/24 - 25/08/24	mg/m3	0.005	0.017	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

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P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492616
Date Received : Aug 29, 2024
Date Reported : Sep 04, 2024
Report Number : 3080694-1

Page 22 of 35

Sample Number 2492616-22
Sampled Date Aug 20, 2024
Sample Description Air Quality
Location Ban Klong Sai Yang Rong (GPS 47Q 0676116, 1798785)
Date Analysis Commenced Aug 30, 2024
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure 750 mmHg
Atmospheric Temperature 32.1 °C

Analyte	Sampled Date/time	Unit	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	20/08/24 - 21/08/24	mg/m3	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	20/08/24 - 21/08/24	mg/m3	0.005	0.013	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

Guideline :
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Analysis / Test Report



TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
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P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492616
Date Received : Aug 29, 2024
Date Reported : Sep 04, 2024
Report Number : 3080694-1

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Sample Number 2492616-24
Sampled Date Aug 22, 2024
Sample Description Air Quality
Location Ban Klong Sai Yang Rong (GPS 47Q 0676116, 1798785)
Date Analysis Commenced Aug 30, 2024
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure 750 mmHg
Atmospheric Temperature 32.7 °C

Analyte	Sampled Date/time	Unit	LOD (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	22/08/24 - 23/08/24	mg/m3	- 0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	22/08/24 - 23/08/24	mg/m3	- 0.005	0.021	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

Guideline :
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TESTING
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P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492616
Date Received : Aug 29, 2024
Date Reported : Sep 04, 2024
Report Number : 3080694-1

Page 23 of 35

Sample Number 2492616-23
Sampled Date Aug 21, 2024
Sample Description Air Quality
Location Ban Klong Sai Yang Rong (GPS 47Q 0676116, 1798785)
Date Analysis Commenced Aug 30, 2024
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure 750 mmHg
Atmospheric Temperature 31.6 °C

Analyte	Sampled Date/time	Unit	LOD (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	21/08/24 - 22/08/24	mg/m3	- 0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	21/08/24 - 22/08/24	mg/m3	- 0.005	0.016	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

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P/O : 47581

Project Name : Air Test

Project Location :
Report Number : 3080694-1

Lot ID: 2492616

Date Received : Aug 29, 2024

Date Reported : Sep 04, 2024

Report Number : 3080694-1

TESTING
No.0009

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Sample Number	2492616-26
Sampled Date	Aug 24, 2024
Sample Description	Air Quality
Location	Ban Klong Sai Yang Rong (GPS 47Q 0676116, 1798785)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	32.4 °C

Analyte	Sampled Date/time	Unit	LOD (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	24/08/24 - 25/08/24	mg/m3	- 0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	24/08/24 - 25/08/24	mg/m3	- 0.005	0.014	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

Guideline :

NEB No.24 : Notification of the National Environmental Board. No.24/ 2004 (B.E.2547) dated September 24, 2004

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Analysis / Test Report



Client : Akara Resources Public Co., Ltd.

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P/O : 47581

Project Name : Air Test

Project Location :
Report Number : 3080694-1

Lot ID: 2492616

Date Received : Aug 29, 2024

Date Reported : Sep 04, 2024

Report Number : 3080694-1

TESTING
No.0009

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Sample Number	2492616-25
Sampled Date	Aug 23, 2024
Sample Description	Air Quality
Location	Ban Klong Sai Yang Rong (GPS 47Q 0676116, 1798785)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	32.4 °C

Analyte	Sampled Date/time	Unit	LOD (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	23/08/24 - 24/08/24	mg/m3	- 0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	23/08/24 - 24/08/24	mg/m3	- 0.005	0.016	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

Guideline :

NEB No.24 : Notification of the National Environmental Board. No.24/ 2004 (B.E.2547) dated September 22, 2004

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.

99 Moo 9, Tambon Khaochetuk, Amphur Thaplor, Pichit Thailand 66230

P/O : 47581

Project Name : Air Test

Project Location :

Lot ID: 2492616

Date Received : Aug 29, 2024

Date Reported : Sep 04, 2024

Report Number : 3080694-1

TESTING
No.0009

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Sample Number	2492616-28
Sampled Date	Aug 26, 2024
Sample Description	Air Quality
Location	Ban Klong Sai Yang Rong (GPS 47Q 0676116, 1798785)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	33.2 °C

Analyte	Sampled Date/time	Unit	LOD (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	26/08/24 - 27/08/24	mg/m3	- 0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	26/08/24 - 27/08/24	mg/m3	- 0.005	0.020	0.33	In - house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

Guideline :

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P/O : 47581

Project Name : Air Test

Project Location :

Lot ID: 2492616

Date Received : Aug 29, 2024

Date Reported : Sep 04, 2024

Report Number : 3080694-1

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Sample Number	2492616-27
Sampled Date	Aug 25, 2024
Sample Description	Air Quality
Location	Ban Klong Sai Yang Rong (GPS 47Q 0676116, 1798785)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	32.3 °C

Analyte	Sampled Date/time	Unit	LOD (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	25/08/24 - 26/08/24	mg/m3	- 0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	25/08/24 - 26/08/24	mg/m3	- 0.005	0.018	0.33	In - house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

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P/O : 47581

Project Name : Air Test

Project Location :

Lot ID: 2492616

Date Received : Aug 29, 2024

Date Reported : Sep 04, 2024

Report Number : 3080694-1

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No.0009

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Sample Number	2492616-30
Sampled Date	Aug 21, 2024
Sample Description	Air Quality
Location	Ban Long Du (GPS 47Q 0671962, 1799044)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	31.4 °C

Analyte	Sampled Date/time	Unit	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	21/08/24 - 22/08/24	mg/m3	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	21/08/24 - 22/08/24	mg/m3	0.005	0.019	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

Guideline :

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P/O : 47581

Project Name : Air Test

Project Location :

Lot ID: 2492616

Date Received : Aug 29, 2024

Date Reported : Sep 04, 2024

Report Number : 3080694-1

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Sample Number	2492616-29
Sampled Date	Aug 20, 2024
Sample Description	Air Quality
Location	Ban Long Du (GPS 47Q 0671962, 1799044)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	31.6 °C

Analyte	Sampled Date/time	Unit	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	20/08/24 - 21/08/24	mg/m3	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	20/08/24 - 21/08/24	mg/m3	0.005	0.017	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

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P/O : 47581

Project Name : Air Test

Project Location :

Lot ID: 2492616

Date Received : Aug 29, 2024

Date Reported : Sep 04, 2024

Report Number : 3080694-1

TESTING
No.0009

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Sample Number	2492616-32
Sampled Date	Aug 23, 2024
Sample Description	Air Quality
Location	Ban Long Du (GPS 47Q 0671962, 1799044)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	32.1 °C

Analyte	Sampled Date/time	Unit	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	23/08/24 - 24/08/24	mg/m ³	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	23/08/24 - 24/08/24	mg/m ³	0.005	0.024	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

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P/O : 47581

Project Name : Air Test

Project Location :

Lot ID: 2492616

Date Received : Aug 29, 2024

Date Reported : Sep 04, 2024

Report Number : 3080694-1

TESTING
No.0009

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Sample Number	2492616-31
Sampled Date	Aug 22, 2024
Sample Description	Air Quality
Location	Ban Long Du (GPS 47Q 0671962, 1799044)
Date Analysis Commenced	Aug 30, 2024
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure	750 mmHg
Atmospheric Temperature	32.6 °C

Analyte	Sampled Date/time	Unit	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	22/08/24 - 23/08/24	mg/m ³	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	22/08/24 - 23/08/24	mg/m ³	0.005	0.025	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

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P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492616
Date Received : Aug 29, 2024
Date Reported : Sep 04, 2024
Report Number : 3080694-1

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Sample Number 2492616-34
Sampled Date Aug 25, 2024
Sample Description Air Quality
Location Ban Long Du (GPS 47Q 0671962, 1799044)
Date Analysis Commenced Aug 30, 2024
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure 750 mmHg
Atmospheric Temperature 32.1 °C

Analyte	Sampled Date/time	Unit	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	25/08/24 - 26/08/24	mg/m ³	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	25/08/24 - 26/08/24	mg/m ³	0.005	0.025	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

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P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492616
Date Received : Aug 29, 2024
Date Reported : Sep 04, 2024
Report Number : 3080694-1

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Sample Number 2492616-33
Sampled Date Aug 24, 2024
Sample Description Air Quality
Location Ban Long Du (GPS 47Q 0671962, 1799044)
Date Analysis Commenced Aug 30, 2024
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated
Barometric Pressure 750 mmHg
Atmospheric Temperature 32.1 °C

Analyte	Sampled Date/time	Unit	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing							
Hydrogen cyanide *	24/08/24 - 25/08/24	mg/m ³	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	24/08/24 - 25/08/24	mg/m ³	0.005	0.018	0.33	In-house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

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P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492614

Date Received : Aug 29, 2024
Date Reported : Sep 03, 2024
Report Number: 3080683-1

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Sample Description	Air Quality	2492614-1	2492614-2	2492614-3	2492614-4	2492614-5	2492614-6	2492614-7
Location	Ban Dong Long (GPS 47Q 0678214, 18022239)							
Parameter	Nitrogen dioxide (ppm)							
Measurement Date	Aug 20, 2024 - Aug 27, 2024							
Measurement by	Thanit Jantip							
Time		2492614-1	2492614-2	2492614-3	2492614-4	2492614-5	2492614-6	2492614-7
01:00 PM - 02:00 PM	0.002	0.001	0.001	0.004	0.002	0.002	0.001	0.001
02:00 PM - 03:00 PM	0.002	0.001	0.002	0.002	0.002	0.001	0.001	0.002
03:00 PM - 04:00 PM	0.003	0.002	0.002	0.003	0.003	<0.001	0.003	0.003
04:00 PM - 05:00 PM	0.002	0.002	0.002	0.002	0.002	0.001	0.001	0.002
05:00 PM - 06:00 PM	0.002	0.004	0.002	0.004	0.004	0.001	0.003	0.003
06:00 PM - 07:00 PM	0.002	0.004	0.004	0.005	0.003	0.002	0.002	0.004
07:00 PM - 08:00 PM	0.002	0.003	0.004	0.005	0.002	0.003	0.005	0.005
08:00 PM - 09:00 PM	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.004
09:00 PM - 10:00 PM	0.002	0.002	0.002	0.004	0.003	0.006	0.003	0.003
10:00 PM - 11:00 PM	0.003	0.002	0.003	0.003	0.002	0.007	0.002	0.002
11:00 PM - 12:00 AM	0.002	0.002	0.002	0.002	0.002	0.006	0.002	0.002
12:00 AM - 01:00 AM	0.002	0.001	0.002	0.002	0.001	0.002	0.002	0.002
01:00 AM - 02:00 AM	0.001	0.002	0.001	0.002	0.001	0.002	0.002	0.001
02:00 AM - 03:00 AM	0.001	0.001	0.001	0.002	<0.001	0.002	0.002	0.001
03:00 AM - 04:00 AM	0.001	0.001	0.001	0.002	<0.001	0.002	0.002	0.002
04:00 AM - 05:00 AM	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.002
05:00 AM - 06:00 AM	0.002	0.002	0.001	0.003	0.002	0.002	0.002	0.002
06:00 AM - 07:00 AM	0.003	0.003	0.002	0.002	0.002	0.002	0.002	0.003
07:00 AM - 08:00 AM	0.003	0.002	0.002	0.004	0.001	0.002	0.002	0.002
08:00 AM - 09:00 AM	0.001	0.001	0.002	0.002	0.001	0.001	0.001	0.002
09:00 AM - 10:00 AM	<0.001	0.001	0.002	0.002	<0.001	0.001	0.001	0.002
10:00 AM - 11:00 AM	0.001	0.001	0.002	0.001	0.001	0.001	0.001	0.002
11:00 AM - 12:00 PM	0.001	0.002	0.003	0.002	0.001	0.001	0.001	0.003
12:00 PM - 01:00 PM	0.001	0.003	0.002	0.002	0.002	0.001	0.003	0.003
Average	0.002	0.002	0.002	0.003	0.002	0.002	0.002	0.002
1hr - Maximum	0.003	0.004	0.004	0.005	0.004	0.007	0.005	0.005
Standard 1hr - Average	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
Standard								
Reference Method	: Notification of the National Environment Board No. 33, 2009 (B.E. 2552) : US EPA Method Part 50 App. F (Chemiluminescence)							

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P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492616

Date Received : Aug 29, 2024
Date Reported : Sep 04, 2024
Report Number : 3080694-1

Page 35 of 35

Sample Number	2492616-35							
Sampled Date	Aug 26, 2024							
Sample Description	Air Quality							
Location	Ban Long Du (GPS 47Q 0671962, 1799044)							
Date Analysis Commenced	Aug 30, 2024							
Condition of Sample	Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one amber plastic bottle, refrigerated							
Barometric Pressure	750 mmHg							
Atmospheric Temperature	33.1 °C							
Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing								
Hydrogen cyanide *	26/08/24 - 27/08/24	mg/m3	-	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	Bangkok
Total Suspended Particulate	26/08/24 - 27/08/24	mg/m3	-	0.005	0.025	0.33	In - house method : STM 04-051 based on U.S. Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB No.24 Bangkok

Guideline :
NEB No.24 : Notification of the National Environment Board, No.24, 2004 (B.E.2547) dated September 22, 2004

- Remark :
- LOD : Limit of Detection
 - "c" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
 - Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
 - The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS (ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full).

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Scientist (3)

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MM-N08

Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheulak, Amphur Thaplor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492614

Date Received : Aug 29, 2024
Date Reported : Sep 03, 2024
Report Number: 3100296-1

Page 1 of 1

Sample Description		Air Quality													
Location		Ban Khao Mor (GPS 47Q 0675723, 180d284)													
Parameter		Nitrogen dioxide (ppm)													
Measurement Date		Aug 20, 2024 - Aug 27, 2024													
Measurement by		Thanit Janjip													
		2492614-15		2492614-16		2492614-17		2492614-18		2492614-19		2492614-20		2492614-21	
Time		Aug 20, 2024		Aug 21, 2024		Aug 22, 2024		Aug 23, 2024		Aug 24, 2024		Aug 25, 2024		Aug 26, 2024	
12:00 PM - 01:00 PM		0.002		0.003		0.001		0.003		0.002		0.001		0.001	
01:00 PM - 02:00 PM		0.002		0.002		0.002		0.001		0.002		0.001		0.001	
02:00 PM - 03:00 PM		0.001		0.002		0.002		0.002		0.002		0.001		<0.001	
03:00 PM - 04:00 PM		0.002		<0.001		0.002		0.003		0.002		0.001		0.001	
04:00 PM - 05:00 PM		0.001		0.001		0.001		0.002		0.001		0.002		0.001	
05:00 PM - 06:00 PM		0.002		0.001		0.001		0.001		0.002		<0.001		0.002	
06:00 PM - 07:00 PM		0.001		0.001		0.001		0.002		0.001		<0.001		0.001	
07:00 PM - 08:00 PM		0.002		0.002		0.002		0.001		<0.001		0.001		<0.001	
08:00 PM - 09:00 PM		0.002		0.002		<0.001		0.001		0.001		<0.001		0.001	
09:00 PM - 10:00 PM		0.002		0.002		0.002		0.001		<0.001		0.002		0.002	
10:00 PM - 11:00 PM		0.001		0.001		0.002		0.001		0.002		<0.001		<0.001	
11:00 PM - 12:00 AM		0.002		<0.001		0.002		0.001		0.001		<0.001		0.001	
12:00 AM - 01:00 AM		0.002		0.001		<0.001		0.001		<0.001		0.001		<0.001	
01:00 AM - 02:00 AM		0.001		0.001		0.002		0.002		0.002		<0.001		<0.001	
02:00 AM - 03:00 AM		0.001		0.001		<0.001		0.002		<0.001		<0.001		<0.001	
03:00 AM - 04:00 AM		0.001		0.001		<0.001		0.001		<0.001		<0.001		0.001	
04:00 AM - 05:00 AM		0.001		<0.001		0.002		0.002		0.002		0.002		0.002	
05:00 AM - 06:00 AM		0.001		0.002		<0.001		0.002		0.002		0.001		0.002	
06:00 AM - 07:00 AM		0.001		0.001		0.001		0.002		0.002		<0.001		0.001	
07:00 AM - 08:00 AM		0.004		0.002		0.002		0.003		0.002		0.001		0.001	
08:00 AM - 09:00 AM		0.003		0.001		0.001		0.003		0.002		0.002		0.002	
09:00 AM - 10:00 AM		0.004		0.002		0.002		0.002		0.001		0.001		0.002	
10:00 AM - 11:00 AM		0.004		0.002		0.001		0.003		0.002		0.002		0.002	
11:00 AM - 12:00 PM		0.004		0.001		0.001		0.002		0.002		0.002		0.002	
Average		0.002		0.001		0.001		0.002		0.001		0.001		0.001	
1hr - Maximum		0.004		0.003		0.002		0.003		0.002		0.002		0.002	
Standard 1hr - Average		0.170		0.170		0.170		0.170		0.170		0.170		0.170	
Standard		: Notification of the National Environment Board No. 33, 2009 (B.E. 2552)													
Reference Method		: US EPA Method Part 50 App. F (Chemiluminescence)													

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheulak, Amphur Thaplor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492614

Date Received : Aug 29, 2024
Date Reported : Sep 03, 2024
Report Number: 3100294-1

Page 1 of 1

Sample Description		Air Quality													
Location		Ban Nong Ra Man (GPS 47Q 0674693, 1802561)													
Parameter		Nitrogen dioxide (ppm)													
Measurement Date		Aug 20, 2024 - Aug 27, 2024													
Measurement by		Thanit Janjip													
Time		2492614-8		2492614-9		2492614-10		2492614-11		2492614-12		2492614-13		2492614-14	
		Aug 20, 2024	Aug 21, 2024	Aug 21, 2024	Aug 21, 2024	Aug 22, 2024	Aug 22, 2024	Aug 23, 2024	Aug 24, 2024	Aug 24, 2024	Aug 25, 2024	Aug 25, 2024	Aug 26, 2024	Aug 26, 2024	Aug 26, 2024
11:00 AM - 12:00 PM		<0.001	0.002	0.004	0.003	0.001	<0.001	0.001	<0.001	0.001	<0.001	0.001	<0.001	0.001	<0.001
12:00 PM - 01:00 PM		<0.001	0.004	<0.001	<0.001	0.001	<0.001	0.001	<0.001	0.001	<0.001	0.001	<0.001	0.001	<0.001
01:00 PM - 02:00 PM		0.002	0.001	<0.001	0.001	0.001	<0.001	0.002	0.002	0.002	<0.001	0.002	<0.001	0.002	<0.001
02:00 PM - 03:00 PM		0.002	0.001	0.001	0.001	0.001	<0.001	<0.001	0.002	0.002	<0.001	0.002	<0.001	0.002	<0.001
03:00 PM - 04:00 PM		0.001	0.001	0.001	<0.001	0.001	0.001	0.001	<0.001	<0.001	0.001	0.001	0.001	0.002	0.002
04:00 PM - 05:00 PM		<0.001	0.001	0.001	0.003	0.003	0.003	0.002	0.002	0.002	0.003	0.003	0.002	0.002	0.002
05:00 PM - 06:00 PM		<0.001	0.001	0.001	0.003	0.003	0.003	0.004	0.003	0.003	0.004	0.004	0.002	0.002	0.002
06:00 PM - 07:00 PM		0.001	0.001	0.001	0.003	0.003	0.003	0.004	0.003	0.003	0.003	0.003	0.004	0.002	0.003
07:00 PM - 08:00 PM		0.002	<0.001	0.004	0.004	0.004	0.004	0.006	0.003	0.002	0.002	0.002	0.004	0.004	0.004
08:00 PM - 09:00 PM		<0.001	<0.001	0.004	0.003	0.003	0.003	0.007	0.002	0.002	0.001	0.001	0.002	0.002	0.002
09:00 PM - 10:00 PM		0.001	0.001	0.004	0.004	0.004	0.004	0.007	0.002	0.002	0.001	0.001	0.002	0.002	0.002
10:00 PM - 11:00 PM		<0.001	0.002	0.005	0.005	0.005	0.005	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	0.005	0.005
11:00 PM - 12:00 AM		<0.001	0.001	0.001	0.003	0.003	0.003	0.005	<0.001	<0.001	<0.001	<0.001	0.002	0.002	0.002
12:00 AM - 01:00 AM		<0.001	0.001	<0.001	<0.001	<0.001	<0.001	0.004	0.001	0.001	<0.001	<0.001	0.002	0.002	0.002
01:00 AM - 02:00 AM		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	0.001	0.001	<0.001	<0.001	0.001	0.001	0.001
02:00 AM - 03:00 AM		<0.001	<0.001	0.004	0.004	0.004	0.004	0.004	<0.001	<0.001	0.002	0.002	0.002	0.002	0.002
03:00 AM - 04:00 AM		<0.001	<0.001	0.003	0.003	0.004	0.004	0.004	<0.001	<0.001	0.002	0.002	0.002	0.002	0.002
04:00 AM - 05:00 AM		<0.001	0.002	0.004	0.004	0.004	0.004	0.007	<0.001	<0.001	0.001	0.001	0.001	0.003	0.003
05:00 AM - 06:00 AM		0.001	0.001	0.003	0.003	0.003	0.003	0.004	<0.001	<0.001	0.001	0.001	0.002	0.002	0.002
06:00 AM - 07:00 AM		0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.004	0.003	0.003	0.001	0.001	0.001	0.001
07:00 AM - 08:00 AM		<0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.005	0.003	<0.001	<0.001	<0.001
08:00 AM - 09:00 AM		0.002	<0.001	0.001	0.001	0.001	0.001	0.004	0.001	0.001	0.003	0.001	<0.001	<0.001	<0.001
09:00 AM - 10:00 AM		0.001	0.002	0.001	0.001	0.001	0.001	0.003	0.002	0.002	0.001	0.001	<0.001	0.001	0.001
10:00 AM - 11:00 AM		0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.002	<0.001	<0.001	0.002	0.002	0.002
Average		0.001	0.001	0.002	0.002	0.003	0.003	0.003	0.001	0.001	0.002	0.002	0.002	0.002	0.002
1hr - Maximum		0.002	0.004	0.005	0.005	0.007	0.007	0.007	0.004	0.004	0.005	0.005	0.005	0.005	0.005
Standard 1hr - Average		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
Standard	: Notification of the National Environment Board No. 33, 2009 (B.E. 2552)														
Reference Method	: US EPA Method Part 50 App. F (Chemiluminescence)														

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS Laboratory Group (Thailand) Ltd. or its authorized representative. This report is not reproduced except in full.

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MM-N08

Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheulak, Amphur Thaplor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492614
Date Received : Aug 29, 2024
Date Reported : Sep 03, 2024
Report Number: 3100301-1

Page 1 of 1

Sample Description		Air Quality											
Location		Ban Long Du (GPS 47Q 0671962, 1790044)											
Parameter		Nitrogen dioxide (ppm)											
Measurement Date		Aug 20, 2024 - Aug 27, 2024											
Measurement by		Thanit Janjop											
Time		2492614-29	2492614-30	2492614-31	2492614-32	2492614-33	2492614-34	2492614-35					
		Aug 20, 2024	Aug 21, 2024	Aug 22, 2024	Aug 23, 2024	Aug 24, 2024	Aug 25, 2024	Aug 26, 2024					
02:00 PM - 03:00 PM		0.002	0.003	0.003	0.002	0.003	0.002	0.002	0.003	0.003	0.003	0.003	
03:00 PM - 04:00 PM		0.007	0.002	0.003	0.003	0.003	0.003	0.002	0.003	0.002	0.002	0.003	
04:00 PM - 05:00 PM		0.004	0.002	0.003	0.003	0.003	0.003	0.002	0.003	0.002	0.002	0.003	
05:00 PM - 06:00 PM		0.003	0.002	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	
06:00 PM - 07:00 PM		0.004	0.002	0.004	0.003	0.003	0.003	0.004	0.004	0.003	0.003	0.003	
07:00 PM - 08:00 PM		0.004	0.002	0.005	0.003	0.004	0.003	0.004	0.004	0.003	0.003	0.003	
08:00 PM - 09:00 PM		0.004	0.003	0.004	0.003	0.007	0.003	0.004	0.004	0.003	0.003	0.003	
09:00 PM - 10:00 PM		0.004	0.003	0.003	0.003	0.004	0.003	0.005	0.003	0.003	0.003	0.003	
10:00 PM - 11:00 PM		0.003	0.003	0.002	0.003	0.003	0.003	0.004	0.004	0.003	0.004	0.004	
11:00 PM - 12:00 AM		0.004	0.002	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	
12:00 AM - 01:00 AM		0.004	0.002	0.003	0.003	0.002	0.003	0.003	0.003	0.003	0.003	0.003	
01:00 AM - 02:00 AM		0.004	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.004	
02:00 AM - 03:00 AM		0.003	0.002	0.003	0.002	0.002	0.002	0.003	0.003	0.003	0.002	0.002	
03:00 AM - 04:00 AM		0.003	0.002	0.002	0.002	0.002	0.002	0.003	0.002	0.002	0.002	0.002	
04:00 AM - 05:00 AM		0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.002	0.002	
05:00 AM - 06:00 AM		0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.002	0.002	0.002	
06:00 AM - 07:00 AM		0.002	0.002	0.003	0.002	0.003	0.003	0.004	0.004	0.002	0.002	0.002	
07:00 AM - 08:00 AM		0.002	0.003	0.003	0.003	0.003	0.002	0.003	0.003	0.003	0.003	0.003	
08:00 AM - 09:00 AM		0.002	0.003	0.004	0.002	0.003	0.002	0.005	0.005	0.003	0.005	0.005	
09:00 AM - 10:00 AM		0.003	0.004	0.004	0.002	0.002	0.002	0.004	0.004	0.003	0.003	0.003	
10:00 AM - 11:00 AM		0.003	0.003	0.003	0.003	0.004	0.003	0.003	0.003	0.003	0.003	0.003	
11:00 AM - 12:00 PM		0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	
12:00 PM - 01:00 PM		0.003	0.003	0.003	0.003	0.003	0.003	0.002	0.002	0.002	0.002	0.002	
01:00 PM - 02:00 PM		0.002	0.002	0.002	0.003	0.004	0.003	0.003	0.003	0.003	0.002	0.002	
Average		0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	
1hr - Maximum		0.007	0.004	0.005	0.004	0.007	0.005	0.005	0.005	0.005	0.005	0.005	
Standard 1hr - Average		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	
Standard		: Notification of the National Environment Board No. 33, 2009 (B.E. 2552).											
Reference Method		: US EPA Method Part 50 App. F (Chemiluminescence)											

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS (US EPA Method Part 50 App. F) and the laboratory (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Scientist (3)

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheulak, Amphur Thaplor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492614
Date Received : Aug 29, 2024
Date Reported : Sep 03, 2024
Report Number: 3100299-1

Page 1 of 1

Sample Description		Air Quality											
Location		Ban Klong Sai Yang Rong (GPS 47Q 0676116, 1798785)											
Parameter		Nitrogen dioxide (ppm)											
Measurement Date		Aug 20, 2024 - Aug 27, 2024											
Measurement by		Thanit Janjip											
Time		2492614-22	2492614-23	2492614-24	2492614-25	2492614-26	2492614-27	2492614-28					
		Aug 20, 2024	Aug 21, 2024	Aug 22, 2024	Aug 23, 2024	Aug 24, 2024	Aug 25, 2024	Aug 26, 2024					
03:00 PM - 04:00 PM		0.004	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	
04:00 PM - 05:00 PM		0.003	0.002	0.001	0.002	0.001	0.002	0.001	0.001	0.002	0.002	<0.001	
05:00 PM - 06:00 PM		<0.001	0.003	0.001	0.002	0.001	0.001	0.001	0.001	0.001	0.001	<0.001	
06:00 PM - 07:00 PM		<0.001	0.001	0.001	<0.001	0.001	<0.001	0.001	0.002	0.002	<0.001	<0.001	
07:00 PM - 08:00 PM		0.001	0.001	<0.001	<0.001	0.002	<0.001	0.002	0.001	0.001	0.002	0.002	
08:00 PM - 09:00 PM		<0.001	<0.001	<0.001	<0.001	0.002	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	
09:00 PM - 10:00 PM		<0.001	<0.001	<0.001	<0.001	0.002	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	
10:00 PM - 11:00 PM		0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
11:00 PM - 12:00 AM		0.002	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
12:00 AM - 01:00 AM		0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
01:00 AM - 02:00 AM		0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.001	<0.001	<0.001	
02:00 AM - 03:00 AM		0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
03:00 AM - 04:00 AM		0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
04:00 AM - 05:00 AM		0.002	<0.001	0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
05:00 AM - 06:00 AM		0.002	0.003	0.002	0.002	0.001	0.002	0.001	0.002	0.002	0.002	0.002	
06:00 AM - 07:00 AM		0.002	0.002	0.003	0.002	0.003	0.002	0.001	0.003	0.003	0.002	0.002	
07:00 AM - 08:00 AM		0.003	0.003	0.003	0.003	0.002	0.001	0.001	0.002	0.002	0.002	0.002	
08:00 AM - 09:00 AM		0.002	0.002	0.002	0.002	0.002	0.002	0.001	0.002	0.002	0.002	0.002	
09:00 AM - 10:00 AM		0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	
10:00 AM - 11:00 AM		0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	
11:00 AM - 12:00 PM		0.003	0.003	0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	
12:00 PM - 01:00 PM		0.002	0.003	0.003	0.002	0.001	0.002	0.001	0.002	0.002	0.002	0.002	
01:00 PM - 02:00 PM		0.002	0.003	0.002	0.002	0.003	0.002	0.003	0.002	0.002	0.003	0.003	
02:00 PM - 03:00 PM		0.002	0.003	0.002	<0.001	0.002	<0.001	0.002	0.001	0.002	0.002	0.002	
Average		0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	
1hr - Maximum		0.004	0.003	0.003	0.002	0.003	0.003	0.003	0.003	0.003	0.003	0.003	
Standard 1hr - Average		0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	
Standard		: Notification of the National Environment Board No. 33, 2009 (B.E. 2552).											
Reference Method		: US EPA Method Part 50 App. F (Chemiluminescence)											

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS (US EPA Method Part 50 App. F) and the laboratory (Thailand) strongly recommends that this report is not reproduced except in full.

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Analysis / Test Report

Client: Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Pichit Thailand 66230

Lot ID: 24104169

Date Received : Sep 27, 2024

Date Reported : Oct 08, 2024

Report Number: 3105445-1

P/O : 47581

Project Name : Air Test

Project Location :

Page 1 of 1

Sample Number	24104169-1							
Sampled Date	Sep 24, 2024							
Sample Description	Emission from Stationary Source							
Location	Acid Hood/ Outlet							
Date Analysis Commenced	Sep 28, 2024							
Condition of Sample	Extracted into two amber plastic bottles; refrigerated							
	Stack Description							
Ambient Pressure	750	mmHg	Diameter	0.30	m	Oxygen	20.9	%
Ambient Temperature	30.0	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	30.0	°C	Gas Velocity	9.8	m/s
Type of Fuel	-		Moisture	2.22	%	Flow Rate (Actual O2)	2374	Nm3/hr
Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Testing Location
Air Testing								
Hydrogen Chloride	02:50 PM - 03:50 PM	mg/m3	-	0.01	<0.01	200	U.S. Environmental Protection Agency 40 CFR method 1-4, 26, 2020 (Include sampling)	Bangkok
Sulfuric acid *	02:50 PM - 03:26 PM	ppm	-	0.01	<0.01	25	United States Environmental Protection Agency, EPA Method 8	Bangkok

Guideline : Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)
Sampling By : Arjit Srisen นวรัตน์ ๖-204-๖-0048

Remark :

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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Scientist (3)
ทะเบียนเลขที่ ว-204-จ-0027

...without written consent from the laboratory.

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MM-N08



Analysis / Test Report

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99 Moo 9, Tambon Khaochelluk, Amphur Thaplor, Pichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 24104116
Date Received : Sep 27, 2024
Date Reported : Oct 08, 2024
Report Number: 3105400-1

Page 1 of 1

Sample Number	24104116-1
Sampled Date	Sep 25, 2024
Sample Description	Emission from Stationary Source
Location	Electro Winning plant 2
Date Analysis Commenced	Sep 28, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish and two amber plastic bottles, refrigerated

Stack Description								
Ambient Pressure	750	mmHg	Diameter	0.45	m	Oxygen	20.9	%
Ambient Temperature	30.0	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	41.0	°C	Gas Velocity	9.4	m/s
Type of Fuel	-		Moisture	2.47	%	Flow Rate (Actual O2)	4892	Nm3/hr

Analyte	Sampled Time	Unit	LOD	Result	LOQ (LOR)	Guideline Limit	Method	Testing Location
Air Testing								
Hydrogen Chloride	04:20 PM - 05:20 PM	mg/m3	-	0.01	0.07	200	U.S. Environmental Protection Agency 40 CFR method 1-4, 26, 2020 (include sampling)	Bangkok
Oxides of Nitrogen *	04:30 PM - 04:40 PM	ppm	-	1.06	<1.06	No Standard	United States Environmental Protection Agency, EPA Method 7	Bangkok
Total Suspended Particulate	04:20 PM - 05:00 PM	mg/m3	-	0.5	<0.5	400		Bangkok
Guideline : Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)								

Sampling By : Arnt Sisen นิสิตงานสิทธิ์ ๓-204-๓-0048

Remark :

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Technical Management

Scientist (3)
นิตินานนท์ ๓-204-๓-0027

Approved by

Assistant General Manager
นิตินานนท์ ๓-204-๓-0004

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochelluk, Amphur Thaplor, Pichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 24104133
Date Received : Sep 27, 2024
Date Reported : Oct 04, 2024
Report Number: 3105423-1

Page 1 of 1

Sample Number	24104133-1
Sampled Date	Sep 24, 2024
Sample Description	Emission from Stationary Source
Location	Lab Dust Collection/ Outlet
Date Analysis Commenced	Sep 30, 2024
Condition of Sample	Extracted into one filter paper placed in plastic petri dish

Stack Description								
Ambient Pressure	750	mmHg	Diameter	0.57	m	Oxygen	20.9	%
Ambient Temperature	30.0	°C	Shape	Circle		Carbon Dioxide	0.0	%
Type of Process	Process		Stack Temperature	36.0	°C	Gas Velocity	8.9	m/s
Type of Fuel	-		Moisture	2.66	%	Flow Rate (Actual O2)	7618	Nm3/hr

Analyte	Sampled Time	Unit	LOD	Result	LOQ (LOR)	Guideline Limit	Method	Testing Location
Air Testing								
Total Suspended Particulate	01:00 PM - 01:42 PM	mg/m3	-	0.5	9.8	400	U.S. Environmental Protection Agency 40 CFR method 5, Appendix A, 2020 (include sampling)	Bangkok
Guideline : Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)								

Sampling By : Arnt Sisen นิสิตงานสิทธิ์ ๓-204-๓-0048

Remark :

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Technical Management

Scientist (4)
นิตินานนท์ ๓-204-๓-0011

Approved by

Assistant General Manager
นิตินานนท์ ๓-204-๓-0004

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheuluk, Amphur Thapklor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 24104127
Date Received : Sep 27, 2024
Date Reported : Oct 09, 2024
Report Number: 3105410-1

Page 1 of 1

Sample Number	24104127-1
Sampled Date	Sep 25, 2024
Sample Description	Emission from Stationary Source
Location	Carbon Regeneration
Date Analysis Commenced	Sep 28, 2024
Condition of Sample	Extracted into 6 x 0.2-L collection flasks, one filter paper placed in plastic petri dish, one 10-L air sampling bag and three amber plastic bottles, refrigerated

Stack Description						
Analyte	Sampled Time	Unit	LOQ (LOR)	Result at 7 %O ₂	Guideline Limit	Method
Air Testing Carbon Monoxide U	02:30 PM - 02:40 PM	ppm	-	1.0	690	<United States Environmental Protection Agency, EPA Method 10
	02:20 PM - 03:20 PM	mg/m3	-	0.01	160	<S. Environmental Protection Agency 40 CFR method 1-4, 26, 2020 (Include sampling)
	02:30 PM - 02:40 PM	ppm	-	1.06	200	<United States Environmental Protection Agency, EPA Method 7
	02:50 PM - 03:20 PM	ppm	-	*2.00	60	<United States Environmental Protection Agency, EPA Method 6
Total Suspended Particulate	02:30 PM - 03:18 PM	mg/m3	-	0.5	66.9	

Guideline : Notification of the Ministry of Industry 2006 (I.E. 2549) Published in the Royal Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (I.E. 2549)

Sampling By : Artit Srisen รหัสประจำตัว ๓-204-๓-0048

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Approved by _____

Scientist (3)
รหัสประจำตัว ๓-204-๓-0027

Assistant General Manager
รหัสประจำตัว ๓-204-๓-0004

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
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P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 24104116
Date Received : Sep 27, 2024
Date Reported : Oct 08, 2024
Report Number: 3105400-2

Page 1 of 1

Sample Number	24104116-1
Sampled Date	Sep 25, 2024
Sample Description	Emission from Stationary Source
Location	Electro Winning plant 2
Date Analysis Commenced	Sep 28, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish and two amber plastic bottles, refrigerated

Stack Description						
Analyte	Sampled Time	Unit	LOQ (LOR)	Result	Method	Testing Location
Ambient Pressure	750	mmHg				
Ambient Temperature	30.0	°C				
Type of Process	Process					
Type of Fuel	-					
		Diameter	0.45	m	Oxygen	20.9 %
		Shape	Circle		Carbon Dioxide	0.0 %
		Stack Temperature	41.0	°C	Gas Velocity	9.4 m/s
		Moisture	2.47	%	Flow Rate (Actual O ₂)	4892 Nm3/hr

Air Testing Hydrogen cyanide	10:20 AM - 10:50 AM	mg/m3	-	0.01	NIOSH (1994), P8CAM 116	Bangkok
--	---------------------	-------	---	------	-------------------------	---------

Sampling By : Artit Srisen

Remark :

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

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Analysis / Test Report

TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochehluk, Amphur Thapklor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 24104172
Date Received : Sep 27, 2024
Date Reported : Oct 08, 2024
Report Number: 3105447-1

Page 1 of 2

Sample Number	Sampled Date	Sample Description	Location	Date Analysis Commenced	Condition of Sample	Stack Description					Analyte	Method	Testing Location
						Ambient Pressure	Ambient Temperature	Type of Process	Type of Fuel	Extraction			
24104172-1	Sep 26, 2024	Emission from Stationary Source	Hot Oil	Sep 28, 2024	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, and three amber plastic bottles, refrigerated	750 mmHg	30.0 °C	Combustion	LP%		Carbon Monoxide U	NIOSH (1994), PRCAM 116	Bangkok
						750 mmHg	30.0 °C	Combustion	LP%		Hydrogen Chloride	NIOSH (1994), PRCAM 116	Bangkok
						750 mmHg	30.0 °C	Combustion	LP%		Oxides of Nitrogen U	NIOSH (1994), PRCAM 116	Bangkok
						750 mmHg	30.0 °C	Combustion	LP%		Sulfur dioxide U	NIOSH (1994), PRCAM 116	Bangkok
						750 mmHg	30.0 °C	Combustion	LP%		Total Suspended Particulate	NIOSH (1994), PRCAM 116	Bangkok

Guideline : Notification of the Ministry of Industry 2006 (I.E. 2549) Published in the Royal Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (I.E. 2549)
Sampling By : <ssaree Namburee > 2404-a-0073

Remark :

Technical Management

Approved by

Scientist (3)
นายณัฐพงศ์ 2404-a-0027

Assistant General Manager
นายณัฐพงศ์ 2404-a-0004

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochehluk, Amphur Thapklor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 24104127
Date Received : Sep 27, 2024
Date Reported : Oct 09, 2024
Report Number: 3105410-2

Page 1 of 1

Sample Number	Sampled Date	Sample Description	Location	Date Analysis Commenced	Condition of Sample	Stack Description					Analyte	Method	Testing Location
						Ambient Pressure	Ambient Temperature	Type of Process	Type of Fuel	Extraction			
24104127-1	Sep 25, 2024	Emission from Stationary Source	Carbon Regeneration	Sep 28, 2024	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one 10-L air sampling bag and three amber plastic bottles, refrigerated	750 mmHg	30.0 °C	Combustion	LPG		Hydrogen cyanide	NIOSH (1994), PRCAM 116	Bangkok
						750 mmHg	30.0 °C	Combustion	LPG		Oxides of Nitrogen U	NIOSH (1994), PRCAM 116	Bangkok
						750 mmHg	30.0 °C	Combustion	LPG		Sulfur dioxide U	NIOSH (1994), PRCAM 116	Bangkok
						750 mmHg	30.0 °C	Combustion	LPG		Total Suspended Particulate	NIOSH (1994), PRCAM 116	Bangkok

Sampling By : Atit Srisen
Remark :
- LOD : Limit of Detection
- "u" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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Scientist (3)

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11/31/24



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thaplor, Pichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

TESTING
No. 0009

Page 2 of 2

Sample Number		24104172-1				
Sampled Date		Sep 26, 2024				
Sample Description		Emission from Stationary Source				
Location		Hot Oil				
Date Analysis Commenced		Sep 28, 2024				
Condition of Sample		Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one 10-L air sampling bag and three amber plastic bottles, refrigerated				
Stack Description						
Ambient Pressure	750	mmHg	Diameter	0.40	Oxygen	2.9
Ambient Temperature	30.0	°C	Shape	Circle	Carbon Dioxide	10.2
Type of Process	Combustion		Stack Temperature	220	%s Velocity	9.6
Type of Fuel	LP%		Moisture	10.19	Flow Rate (Actual O2)	2336
Analyte		Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 %O ₂
					Guideline Limit	Method
						Testing Location

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Sampling By : Ussaree Namburee

Remark :
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Assistant General Manager
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MM-N08



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapkor, Pichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 24104124
Date Received : Sep 27, 2024
Date Reported : Oct 08, 2024
Report Number: 3105409-1

Page 2 of 2

Sample Number	24104124-1
Sampled Date	Sep 26, 2024
Sample Description	Emission from Stationary Source
Location	Hold Melting furnace plant 2
Date Analysis Commenced	Sep 28, 2024
Condition of Sample	Extracted into 1° o 2-L collection flasks, one filter paper placed in plastic petri dish, one 10-L air sampling bag and three amber plastic bottles, refrigerated

Stack Description						
Ambient Pressure	750	mmHg	Diameter	m	Oxygen	20.1 (
Ambient Temperature	30.0	%	Shape	Circle	Carbon Dioxide	0.3 (
Type of Process	Combustion (Open System)	V	Stack Temperature	115	%	Has) elocity
Type of fuel	LPH		Moisture	4.53	(x10° Rate Actual Q2V
						5235 Nm3/hr
Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit
Method	Testing Location					

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Technical Management

Approved by

Scientist GV
หน้าแผนก 7-204-3-0027

Assistant General Manager
หน้าแผนก 7-204-3-0004

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapkor, Pichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 24104124
Date Received : Sep 27, 2024
Date Reported : Oct 08, 2024
Report Number: 3105409-1

Page 1 of 2

Sample Number	24104124-1
Sampled Date	Sep 26, 2024
Sample Description	Emission from Stationary Source
Location	Hold Melting furnace plant 2
Date Analysis Commenced	Sep 28, 2024
Condition of Sample	Extracted into 1° o 2-L collection flasks, one filter paper placed in plastic petri dish, one 10-L air sampling bag and three amber plastic bottles, refrigerated

Stack Description						
Ambient Pressure	750	mmHg	Diameter	m	Oxygen	20.1 (
Ambient Temperature	30.0	%	Shape	Circle	Carbon Dioxide	0.3 (
Type of Process	Combustion (Open System)	V	Stack Temperature	115	%	Has) elocity
Type of fuel	LPH		Moisture	4.53	(x10° Rate Actual Q2V
						5235 Nm3/hr
Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit
Method	Testing Location					

Air Testing	Carbon Monoxide U	10:25 AM - 10:35 AM	ppm	-	1.0	1.8	690	< limit States Environmental Protection Agency, EPA Method 10	Langkok
	Hydrogen Chloride	10:15 AM - 11:15 AM	mg/m3	-	0.01	0.02	160	< S. Environmental Protection Agency 40 CFR method 1-4, 26, 2020 (Include sampling)	Langkok
	Oxides of Nitrogen U	10:15 AM - 10:25 AM	ppm	-	1.06	* 1.06	200	< limit States Environmental Protection Agency, EPA Method 7	Langkok
	Sulfur dioxide U	10:45 AM - 11:15 AM	ppm	-	2.0	* 2.00	60	< limit States Environmental Protection Agency, EPA Method 6	Langkok
	Total Suspended Particulate	10:15 AM - 11:03 AM	mg/m3	-	0.5	18.6	320	< S. Environmental Protection Agency 40 CFR method 5, Appendix A, 2020 (Include sampling)	Langkok

Guideline : Notification of the Ministry of Industry 2006 G.E. 2549V (Published in the Royal Government Gazette), Vol.123 Special Part 125 D, dated December 4, 2006 G.E. 2549V
Sampling By : <ssaree Namburee หน้าแผนก 7-204-3-0073

Remark :

Technical Management

Approved by

Scientist GV
หน้าแผนก 7-204-3-0027

Assistant General Manager
หน้าแผนก 7-204-3-0004

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without the written consent of the laboratory.
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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
P/O : 47581
Project Name : Air Test
Project Location :

99 Moo 9, Tambon Khaochei-luk, Amphur Thapklor, Phichit Thailand 66230
Date Received : Sep 27, 2024
Date Reported : Oct 08, 2024
Report Number: 3105409-2

Lot ID: 24104124

24104124-1

Page 1 of 1

Sample Number	24104124-1
Sample Date	Sep 26, 2024
Sample Description	Emission from Stationary Source
Location	Hold Melting furnace plant 2
Date Analysis Commenced	Sep 28, 2024
Condition of Sample	Extracted into two 2-L collection flasks, one filter paper placed in plastic petri dish, one 10-L air sampling bag and three amber plastic bottles, refrigerated

Stack Description					
Ambient Pressure	750	mmHg	Diameter	0.60	m
Ambient Temperature	30.0	GC	Shape	Circle	
Type of Process	Combustion	%open System	Stack Temperature	115	GC
Type of fuel	LPH		Moisture	4.53	(
Analyte		Sampled Time	Unit	LOQ (LOR)	Result
					Method
					Testing Location

Air Testing					
Hydrogen cyanide		10:15 AM - 10:45 AM	mg/m3	-	0.01
					<0.01
					NIOSH %99HV PRCAM 116
					Bangkok

Sampling By : Ussaree Namburee

Remark :

- LOD : Limit of Detection
- "L" : Less than LOQ %limit of Quantitation/ LOR %limit of Reporting

Approved by

Results apply to the sample(s) submitted, unless the sampling was conducted by ALS. No part of this report may be reproduced in any form without the written consent from the laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Scientist



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098036-1

Page 1 of 1

Sample Number	2492626-2
Parameter	Air Quality
Location	Ban Dong Long (GPS 47Q 0678205, 1802158)
Measurement Date	Aug 21 - Aug 22, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710639

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	44.3	65.3	35.2
03:00 PM - 04:00 PM	42.4	64.7	34.6
04:00 PM - 05:00 PM	49.4	83.4	35.4
05:00 PM - 06:00 PM	46.9	70.2	37.4
06:00 PM - 07:00 PM	47.2	67.5	40.6
07:00 PM - 08:00 PM	53.8	85.1	46.4
08:00 PM - 09:00 PM	54.1	81.0	44.9
09:00 PM - 10:00 PM	56.4	82.8	44.5
10:00 PM - 11:00 PM	64.8	86.6	61.2
11:00 PM - 12:00 AM	62.0	76.9	55.4
12:00 AM - 01:00 AM	56.9	84.1	41.3
01:00 AM - 02:00 AM	54.1	81.0	44.9
02:00 AM - 03:00 AM	56.4	82.8	44.5
03:00 AM - 04:00 AM	44.1	66.8	36.0
04:00 AM - 05:00 AM	43.5	67.0	36.4
05:00 AM - 06:00 AM	44.4	67.0	36.8
06:00 AM - 07:00 AM	45.7	66.7	36.6
07:00 AM - 08:00 AM	42.4	64.7	35.3
08:00 AM - 09:00 AM	43.3	65.9	35.7
09:00 AM - 10:00 AM	44.6	65.6	35.5
10:00 AM - 11:00 AM	49.9	81.0	34.7
11:00 AM - 12:00 PM	48.3	72.3	36.5
12:00 PM - 01:00 PM	42.6	66.6	35.5
01:00 PM - 02:00 PM	46.2	62.2	34.9
Leq Average 24 hrs. (dB(A))	54.9		
Lmax (dB(A))	86.6		
L90 (dB(A))	36.5		
Ldn (dB(A))	64.0		
Standard (dB(A))	70	115	
Reference Method	: ISO1996-1 and 1996-2		
Standard	1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงมาตรฐาน และระดับเสียงที่โครงการประกอบกิจการ โรงงาน พ.ศ. 2548		

Technical Management
Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098035-1

Page 1 of 1

Sample Number	2492626-1
Parameter	Air Quality
Location	Ban Dong Long (GPS 47Q 0678205, 1802158)
Measurement Date	Aug 20 - Aug 21, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710639

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	42.8	72.9	36.6
03:00 PM - 04:00 PM	49.7	80.6	37.1
04:00 PM - 05:00 PM	59.9	83.9	38.5
05:00 PM - 06:00 PM	45.8	73.0	37.4
06:00 PM - 07:00 PM	47.6	68.7	39.7
07:00 PM - 08:00 PM	49.8	67.7	48.1
08:00 PM - 09:00 PM	49.2	62.8	45.9
09:00 PM - 10:00 PM	59.8	79.6	44.7
10:00 PM - 11:00 PM	53.0	69.9	44.7
11:00 PM - 12:00 AM	61.1	75.6	51.2
12:00 AM - 01:00 AM	63.4	85.8	56.7
01:00 AM - 02:00 AM	55.9	88.0	39.2
02:00 AM - 03:00 AM	63.1	105.8	38.3
03:00 AM - 04:00 AM	42.4	64.7	34.6
04:00 AM - 05:00 AM	49.4	83.4	35.4
05:00 AM - 06:00 AM	46.9	70.2	37.4
06:00 AM - 07:00 AM	45.1	75.2	38.9
07:00 AM - 08:00 AM	52.0	82.9	39.4
08:00 AM - 09:00 AM	48.1	75.3	39.7
09:00 AM - 10:00 AM	47.6	68.7	39.7
10:00 AM - 11:00 AM	49.8	67.7	48.1
11:00 AM - 12:00 PM	42.7	64.4	34.6
12:00 PM - 01:00 PM	42.1	64.4	35.0
01:00 PM - 02:00 PM	43.0	65.6	35.4
Leq Average 24 hrs. (dB(A))	55.8		
Lmax (dB(A))	105.8		
L90 (dB(A))	64.4		
Ldn (dB(A))	70	115	
Standard (dB(A))	: ISO1996-1 and 1996-2		
Reference Method	: ISO1996-1 and 1996-2		
Standard	1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงมาตรฐาน และระดับเสียงที่โครงการประกอบกิจการ โรงงาน พ.ศ. 2548		

Technical Management
Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochedluk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098038-1

Page 1 of 1

Sample Number	2492626-4
Parameter	Air Quality
Location	Ban Dong Long (GPS 47Q 0678205, 1802158)
Measurement Date	Aug 23 - Aug 24, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710639

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	43.1	64.5	34.3
03:00 PM - 04:00 PM	44.0	66.3	34.3
04:00 PM - 05:00 PM	43.8	77.2	35.0
05:00 PM - 06:00 PM	44.3	73.1	36.3
06:00 PM - 07:00 PM	43.7	68.7	35.2
07:00 PM - 08:00 PM	47.5	73.4	43.0
08:00 PM - 09:00 PM	48.4	69.8	44.5
09:00 PM - 10:00 PM	45.8	67.0	43.6
10:00 PM - 11:00 PM	45.9	65.6	43.3
11:00 PM - 12:00 AM	41.7	53.3	38.3
12:00 AM - 01:00 AM	41.3	60.3	38.5
01:00 AM - 02:00 AM	37.8	66.5	35.1
02:00 AM - 03:00 AM	42.6	72.4	37.2
03:00 AM - 04:00 AM	42.4	71.6	38.1
04:00 AM - 05:00 AM	50.5	67.9	43.6
05:00 AM - 06:00 AM	54.4	71.8	41.1
06:00 AM - 07:00 AM	66.5	90.9	57.3
07:00 AM - 08:00 AM	59.4	73.9	53.6
08:00 AM - 09:00 AM	50.5	67.9	43.6
09:00 AM - 10:00 AM	54.4	71.8	41.1
10:00 AM - 11:00 AM	49.7	76.2	39.8
11:00 AM - 12:00 PM	54.6	98.5	37.2
12:00 PM - 01:00 PM	46.7	84.3	37.2
01:00 PM - 02:00 PM	46.1	68.9	36.5
Leq Average 24 hrs. (dB(A))	54.6		
Lmax (dB(A))	98.5		
L90 (dB(A))			38.3
Ldn (dB(A))			
Standard (dB(A))	70	115	
Reference Method	: ISO1996-1 and 1996-2		
Standard	1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงที่คาดการณ์การรบกวน ทั้งนี้ พ.ศ. 2548		

Technical Management

Scientist (3)

Section Head

Approved by



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochedluk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098037-1

Page 1 of 1

Sample Number	2492626-3
Parameter	Air Quality
Location	Ban Dong Long (GPS 47Q 0678205, 1802158)
Measurement Date	Aug 22 - Aug 23, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710639

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	51.0	82.6	35.2
03:00 PM - 04:00 PM	52.0	88.7	35.0
04:00 PM - 05:00 PM	48.0	75.7	35.1
05:00 PM - 06:00 PM	46.0	78.0	35.1
06:00 PM - 07:00 PM	46.3	75.2	36.3
07:00 PM - 08:00 PM	64.6	93.7	43.4
08:00 PM - 09:00 PM	47.2	78.0	43.6
09:00 PM - 10:00 PM	47.5	77.2	43.2
10:00 PM - 11:00 PM	50.0	88.2	42.9
11:00 PM - 12:00 AM	45.2	72.0	40.7
12:00 AM - 01:00 AM	47.5	78.4	39.3
01:00 AM - 02:00 AM	46.7	80.8	39.2
02:00 AM - 03:00 AM	53.8	84.4	38.7
03:00 AM - 04:00 AM	51.6	88.6	39.0
04:00 AM - 05:00 AM	50.0	79.9	40.9
05:00 AM - 06:00 AM	47.8	79.2	43.2
06:00 AM - 07:00 AM	47.9	75.9	38.8
07:00 AM - 08:00 AM	44.8	74.6	36.1
08:00 AM - 09:00 AM	62.8	92.9	35.0
09:00 AM - 10:00 AM	53.9	97.9	34.7
10:00 AM - 11:00 AM	45.0	71.6	34.9
11:00 AM - 12:00 PM	46.7	76.8	34.0
12:00 PM - 01:00 PM	45.5	69.0	33.8
01:00 PM - 02:00 PM	40.8	58.9	33.1
Leq Average 24 hrs. (dB(A))	52.9		
Lmax (dB(A))		97.9	
L90 (dB(A))			36.3
Ldn (dB(A))			
Standard (dB(A))	70	115	
Reference Method	: ISO1996-1 and 1996-2		
Standard	1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงที่คาดการณ์การรบกวน ทั้งนี้ พ.ศ. 2548		

Technical Management

Scientist (3)

Section Head

Approved by



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochedluk, Amphur Thaplor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098040-1

Page 1 of 1

Sample Number	2492626-6
Parameter	Air Quality
Location	Ban Dong Long (GPS 47Q 0678205, 1802158)
Measurement Date	Aug 25 - Aug 26, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710639

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	42.8	68.6	30.9
03:00 PM - 04:00 PM	46.3	77.5	31.2
04:00 PM - 05:00 PM	44.6	77.6	33.4
05:00 PM - 06:00 PM	52.1	74.7	35.8
06:00 PM - 07:00 PM	46.0	64.8	38.7
07:00 PM - 08:00 PM	49.4	68.5	47.3
08:00 PM - 09:00 PM	48.8	63.3	47.5
09:00 PM - 10:00 PM	48.3	51.3	47.1
10:00 PM - 11:00 PM	48.3	62.5	46.8
11:00 PM - 12:00 AM	49.4	77.2	45.6
12:00 AM - 01:00 AM	45.7	62.1	41.8
01:00 AM - 02:00 AM	44.8	57.0	41.1
02:00 AM - 03:00 AM	44.8	65.6	39.6
03:00 AM - 04:00 AM	43.9	61.1	39.2
04:00 AM - 05:00 AM	45.5	58.0	41.7
05:00 AM - 06:00 AM	47.1	63.4	44.6
06:00 AM - 07:00 AM	45.4	68.4	39.5
07:00 AM - 08:00 AM	54.2	97.7	38.1
08:00 AM - 09:00 AM	44.4	65.1	35.6
09:00 AM - 10:00 AM	45.1	62.1	36.4
10:00 AM - 11:00 AM	43.3	70.1	34.9
11:00 AM - 12:00 PM	44.4	75.1	38.1
12:00 PM - 01:00 PM	43.7	65.8	35.4
01:00 PM - 02:00 PM	42.1	61.1	35.8
Leq Average 24 hrs. (dB(A))	47.4		
Lmax (dB(A))	97.7		
L90 (dB(A))			38.7
Ldn (dB(A))	53.1		
Standard (dB(A))	70	115	
Reference Method	: ISO1996-1 and 1996-2		

Standard 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงที่ได้จากการประกอบกิจการ
พ.ร.บ. พ.ศ. 2548

Technical Management

Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochedluk, Amphur Thaplor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098039-1

Page 1 of 1

Sample Number	2492626-5
Parameter	Air Quality
Location	Ban Dong Long (GPS 47Q 0678205, 1802158)
Measurement Date	Aug 24 - Aug 25, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710639

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	45.4	69.8	33.6
03:00 PM - 04:00 PM	48.4	74.8	34.8
04:00 PM - 05:00 PM	49.3	84.0	33.3
05:00 PM - 06:00 PM	47.7	70.5	36.4
06:00 PM - 07:00 PM	43.6	66.9	36.3
07:00 PM - 08:00 PM	48.9	70.0	46.2
08:00 PM - 09:00 PM	48.3	64.6	47.0
09:00 PM - 10:00 PM	49.9	70.1	46.6
10:00 PM - 11:00 PM	60.9	73.6	47.6
11:00 PM - 12:00 AM	53.5	97.4	33.9
12:00 AM - 01:00 AM	44.8	71.0	32.4
01:00 AM - 02:00 AM	42.6	68.0	33.4
02:00 AM - 03:00 AM	57.8	74.6	46.8
03:00 AM - 04:00 AM	54.6	74.3	45.9
04:00 AM - 05:00 AM	55.0	75.4	47.6
05:00 AM - 06:00 AM	48.6	73.0	44.5
06:00 AM - 07:00 AM	45.9	69.6	40.3
07:00 AM - 08:00 AM	45.5	70.9	38.2
08:00 AM - 09:00 AM	48.9	74.3	37.6
09:00 AM - 10:00 AM	44.0	72.4	35.2
10:00 AM - 11:00 AM	53.5	97.4	33.9
11:00 AM - 12:00 PM	44.8	71.0	32.4
12:00 PM - 01:00 PM	42.6	68.0	33.4
01:00 PM - 02:00 PM	46.0	68.8	32.0
Leq Average 24 hrs. (dB(A))	52.0		
Lmax (dB(A))	97.4		
L90 (dB(A))			36.3
Ldn (dB(A))	60.8		
Standard (dB(A))	70	115	
Reference Method	: ISO1996-1 and 1996-2		

Standard 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงที่ได้จากการประกอบกิจการ
พ.ร.บ. พ.ศ. 2548

Technical Management

Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochutluk, Amphur Thapklor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3088042-1

Sample Number	2492626-8
Parameter	Air Quality
Location	Ban Khao Mor (GPS 47Q 06575703, 1804307)
Measurement Date	Aug 20 - Aug 21, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 1122504

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
01:00 PM - 02:00 PM	44.7	74.6	38.1
02:00 PM - 03:00 PM	48.0	84.5	38.8
03:00 PM - 04:00 PM	43.6	59.6	39.4
04:00 PM - 05:00 PM	43.4	71.0	39.6
05:00 PM - 06:00 PM	44.2	64.9	39.8
06:00 PM - 07:00 PM	46.7	66.0	42.5
07:00 PM - 08:00 PM	48.4	70.0	47.2
08:00 PM - 09:00 PM	49.4	68.6	47.3
09:00 PM - 10:00 PM	52.1	76.4	49.5
10:00 PM - 11:00 PM	50.6	66.8	49.7
11:00 PM - 12:00 AM	48.5	63.6	46.0
12:00 AM - 01:00 AM	44.1	52.2	42.1
01:00 AM - 02:00 AM	42.1	50.1	40.0
02:00 AM - 03:00 AM	41.7	50.8	39.9
03:00 AM - 04:00 AM	53.0	68.0	47.4
04:00 AM - 05:00 AM	56.1	59.4	55.1
05:00 AM - 06:00 AM	50.6	71.1	44.8
06:00 AM - 07:00 AM	47.6	63.4	44.0
07:00 AM - 08:00 AM	61.0	91.2	42.7
08:00 AM - 09:00 AM	47.4	63.4	42.7
09:00 AM - 10:00 AM	47.4	61.0	42.7
10:00 AM - 11:00 AM	44.1	59.7	39.7
11:00 AM - 12:00 PM	43.3	70.7	36.7
12:00 PM - 01:00 PM	42.8	63.6	36.0
Leq Average 24 hrs. (dB(A))	51.0		
Lmax (dB(A))	91.2		41.6
L90 (dB(A))			
Ldn (dB(A))	57.1		
Standard (dB(A))	70	115	
Reference Method	: ISO1996-1 and 1996-2		

Standard 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงมาตรฐาน และระดับเสียงที่โครงการประกอบกิจการ
โรงงาน พ.ศ. 2548

Technical Management

Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochutluk, Amphur Thapklor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3088041-1

Sample Number	2492626-7
Parameter	Air Quality
Location	Ban Dong Long (GPS 47Q 0678205, 1802158)
Measurement Date	Aug 26 - Aug 27, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710639

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	43.4	69.1	36.0
03:00 PM - 04:00 PM	51.9	75.7	36.7
04:00 PM - 05:00 PM	56.9	79.4	36.0
05:00 PM - 06:00 PM	57.2	79.4	36.3
06:00 PM - 07:00 PM	48.0	79.1	37.9
07:00 PM - 08:00 PM	49.1	65.0	47.4
08:00 PM - 09:00 PM	51.1	73.1	47.7
09:00 PM - 10:00 PM	47.3	66.1	45.8
10:00 PM - 11:00 PM	46.5	68.9	44.9
11:00 PM - 12:00 AM	45.1	63.1	43.1
12:00 AM - 01:00 AM	43.7	51.0	42.7
01:00 AM - 02:00 AM	45.7	78.1	40.9
02:00 AM - 03:00 AM	50.4	78.1	43.1
03:00 AM - 04:00 AM	46.8	74.5	39.8
04:00 AM - 05:00 AM	44.1	62.9	40.4
05:00 AM - 06:00 AM	48.5	78.5	43.9
06:00 AM - 07:00 AM	48.3	76.2	39.5
07:00 AM - 08:00 AM	47.4	71.5	38.2
08:00 AM - 09:00 AM	54.5	98.0	36.3
09:00 AM - 10:00 AM	44.6	69.7	34.7
10:00 AM - 11:00 AM	43.4	65.7	34.5
11:00 AM - 12:00 PM	42.9	64.4	35.2
12:00 PM - 01:00 PM	51.9	75.7	36.7
01:00 PM - 02:00 PM	56.9	79.4	36.0
Leq Average 24 hrs. (dB(A))	51.0		
Lmax (dB(A))	98.0		38.2
L90 (dB(A))			
Ldn (dB(A))	54.7		
Standard (dB(A))	70	115	
Reference Method	: ISO1996-1 and 1996-2		

Standard 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงมาตรฐาน และระดับเสียงที่โครงการประกอบกิจการ
โรงงาน พ.ศ. 2548

Technical Management

Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3088044-1

Page 1 of 1

Sample Number	2492626-10
Parameter	Air Quality
Location	Ban Khao Mor (GPS 47Q 0675703, 1804307)
Measurement Date	Aug 22 - Aug 23, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 1122504

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
01:00 PM - 02:00 PM	43.5	62.2	37.6
02:00 PM - 03:00 PM	43.0	69.1	37.1
03:00 PM - 04:00 PM	43.4	65.7	37.5
04:00 PM - 05:00 PM	43.9	63.3	37.6
05:00 PM - 06:00 PM	42.6	60.8	38.3
06:00 PM - 07:00 PM	47.6	64.1	41.6
07:00 PM - 08:00 PM	47.7	64.1	45.7
08:00 PM - 09:00 PM	46.5	53.6	44.3
09:00 PM - 10:00 PM	45.0	56.6	43.1
10:00 PM - 11:00 PM	45.2	67.8	41.1
11:00 PM - 12:00 AM	44.8	64.7	41.2
12:00 AM - 01:00 AM	42.4	55.3	40.7
01:00 AM - 02:00 AM	43.7	65.1	40.6
02:00 AM - 03:00 AM	42.7	64.5	40.0
03:00 AM - 04:00 AM	42.6	51.8	40.4
04:00 AM - 05:00 AM	43.1	63.0	41.8
05:00 AM - 06:00 AM	48.4	73.8	43.6
06:00 AM - 07:00 AM	46.2	69.2	42.4
07:00 AM - 08:00 AM	47.2	69.2	42.2
08:00 AM - 09:00 AM	47.0	63.3	40.1
09:00 AM - 10:00 AM	45.3	61.6	39.5
10:00 AM - 11:00 AM	41.8	60.9	37.0
11:00 AM - 12:00 PM	41.0	69.7	34.2
12:00 PM - 01:00 PM	41.7	63.1	35.8
Leq Average 24 hrs. (dB(A))	45.0		
Lmax (dB(A))	73.8		40.4
L90 (dB(A))			
Ldn (dB(A))	51.3		
Standard (dB(A))	70	115	
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงที่โครงการประกอบกิจการ โรงงาน พ.ศ. 2548			

Technical Management Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3088043-1

Page 1 of 1

Sample Number	2492626-9
Parameter	Air Quality
Location	Ban Khao Mor (GPS 47Q 0675703, 1804307)
Measurement Date	Aug 21 - Aug 22, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 1122504

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
01:00 PM - 02:00 PM	43.4	63.5	37.9
02:00 PM - 03:00 PM	44.5	69.8	37.3
03:00 PM - 04:00 PM	42.1	60.9	38.0
04:00 PM - 05:00 PM	45.6	75.6	36.7
05:00 PM - 06:00 PM	44.2	64.8	39.1
06:00 PM - 07:00 PM	47.1	65.5	41.7
07:00 PM - 08:00 PM	46.8	60.7	45.8
08:00 PM - 09:00 PM	46.4	54.6	44.8
09:00 PM - 10:00 PM	46.5	67.2	44.1
10:00 PM - 11:00 PM	46.6	68.2	44.4
11:00 PM - 12:00 AM	44.1	64.1	42.0
12:00 AM - 01:00 AM	43.2	69.1	41.4
01:00 AM - 02:00 AM	43.1	52.6	41.5
02:00 AM - 03:00 AM	42.0	50.2	40.0
03:00 AM - 04:00 AM	45.1	56.8	43.0
04:00 AM - 05:00 AM	46.4	69.5	43.4
05:00 AM - 06:00 AM	47.9	72.0	43.3
06:00 AM - 07:00 AM	47.9	71.8	43.2
07:00 AM - 08:00 AM	48.0	71.9	41.3
08:00 AM - 09:00 AM	46.9	73.5	39.3
09:00 AM - 10:00 AM	43.2	60.9	36.5
10:00 AM - 11:00 AM	42.7	60.9	37.3
11:00 AM - 12:00 PM	41.9	62.3	35.5
12:00 PM - 01:00 PM	43.2	65.8	37.0
Leq Average 24 hrs. (dB(A))	45.4		
Lmax (dB(A))	75.6		41.3
L90 (dB(A))			
Ldn (dB(A))	52.0		
Standard (dB(A))	70	115	
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงที่โครงการประกอบกิจการ โรงงาน พ.ศ. 2548			

Technical Management Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098046-1

Page 1 of 1

Sample Number	2492626-12
Parameter	Air Quality
Location	Ban Khao Mor (GPS 47Q 0675703, 1804307)
Measurement Date	Aug 24 - Aug 25, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 1122504

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
01:00 PM - 02:00 PM	54.9	69.1	37.3
02:00 PM - 03:00 PM	62.4	79.6	37.7
03:00 PM - 04:00 PM	47.8	64.5	38.4
04:00 PM - 05:00 PM	52.0	66.9	38.5
05:00 PM - 06:00 PM	59.7	78.0	40.2
06:00 PM - 07:00 PM	45.9	73.4	40.4
07:00 PM - 08:00 PM	51.5	73.4	47.1
08:00 PM - 09:00 PM	51.2	74.7	48.6
09:00 PM - 10:00 PM	51.0	64.6	49.1
10:00 PM - 11:00 PM	51.1	80.5	47.8
11:00 PM - 12:00 AM	52.9	73.0	50.4
12:00 AM - 01:00 AM	61.5	74.3	53.6
01:00 AM - 02:00 AM	60.4	65.4	57.8
02:00 AM - 03:00 AM	52.6	59.2	48.6
03:00 AM - 04:00 AM	51.1	56.4	48.5
04:00 AM - 05:00 AM	53.0	57.7	52.1
05:00 AM - 06:00 AM	52.0	69.8	50.9
06:00 AM - 07:00 AM	49.6	46.6	46.6
07:00 AM - 08:00 AM	49.3	70.3	46.1
08:00 AM - 09:00 AM	50.9	67.3	44.5
09:00 AM - 10:00 AM	56.2	69.6	43.0
10:00 AM - 11:00 AM	54.1	74.0	45.3
11:00 AM - 12:00 PM	51.1	68.5	38.4
12:00 PM - 01:00 PM	53.8	66.3	35.2
Leq Average 24 hrs. (dB(A))	55.5		
Lmax (dB(A))	80.5		46.1
L90 (dB(A))			
Ldn (dB(A))	62.3		
Standard (dB(A))	70	115	
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่ได้จากการประกอบกิจการ โรงงาน พ.ศ. 2548			

Technical Management

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098045-1

Page 1 of 1

Sample Number	2492626-11
Parameter	Air Quality
Location	Ban Khao Mor (GPS 47Q 0675703, 1804307)
Measurement Date	Aug 23 - Aug 24, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 1122504

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
01:00 PM - 02:00 PM	45.4	70.8	35.4
02:00 PM - 03:00 PM	51.6	75.5	35.8
03:00 PM - 04:00 PM	55.2	87.4	45.7
04:00 PM - 05:00 PM	55.6	76.0	41.2
05:00 PM - 06:00 PM	49.6	73.9	36.6
06:00 PM - 07:00 PM	45.3	68.1	39.2
07:00 PM - 08:00 PM	47.0	68.4	45.2
08:00 PM - 09:00 PM	46.4	61.9	44.8
09:00 PM - 10:00 PM	44.8	55.2	42.5
10:00 PM - 11:00 PM	44.1	67.9	41.5
11:00 PM - 12:00 AM	42.6	57.6	40.6
12:00 AM - 01:00 AM	42.8	63.1	39.9
01:00 AM - 02:00 AM	40.2	59.8	38.4
02:00 AM - 03:00 AM	39.1	54.1	37.8
03:00 AM - 04:00 AM	60.4	89.4	39.1
04:00 AM - 05:00 AM	61.0	91.2	41.6
05:00 AM - 06:00 AM	66.8	96.4	57.1
06:00 AM - 07:00 AM	58.0	70.3	54.3
07:00 AM - 08:00 AM	52.6	67.1	49.3
08:00 AM - 09:00 AM	50.0	68.7	47.4
09:00 AM - 10:00 AM	56.5	74.5	46.7
10:00 AM - 11:00 AM	60.0	75.5	38.9
11:00 AM - 12:00 PM	47.3	65.4	35.5
12:00 PM - 01:00 PM	45.8	63.2	35.4
Leq Average 24 hrs. (dB(A))	56.5		
Lmax (dB(A))	96.4		40.6
L90 (dB(A))			
Ldn (dB(A))	65.3		
Standard (dB(A))	70	115	
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่ได้จากการประกอบกิจการ โรงงาน พ.ศ. 2548			

Technical Management

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochedluk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098048-1

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Sample Number	2492626-14
Parameter	Air Quality
Location	Ban Khao Mor (GPS 47Q 0675703, 1804307)
Measurement Date	Aug 26 - Aug 27, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 1122504

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
01:00 PM - 02:00 PM	50.7	67.7	38.1
02:00 PM - 03:00 PM	56.4	69.6	38.4
03:00 PM - 04:00 PM	49.5	65.2	38.3
04:00 PM - 05:00 PM	47.3	66.5	39.8
05:00 PM - 06:00 PM	48.4	67.0	38.5
06:00 PM - 07:00 PM	48.9	68.1	39.9
07:00 PM - 08:00 PM	45.9	61.6	41.7
08:00 PM - 09:00 PM	62.7	47.5	45.3
09:00 PM - 10:00 PM	45.0	60.5	44.1
10:00 PM - 11:00 PM	44.6	59.1	43.5
11:00 PM - 12:00 AM	44.2	62.4	42.9
12:00 AM - 01:00 AM	43.2	54.3	40.3
01:00 AM - 02:00 AM	43.1	52.4	41.9
02:00 AM - 03:00 AM	42.5	54.1	40.9
03:00 AM - 04:00 AM	41.4	52.6	39.9
04:00 AM - 05:00 AM	44.8	58.1	41.6
05:00 AM - 06:00 AM	46.1	63.3	43.6
06:00 AM - 07:00 AM	48.2	63.6	44.7
07:00 AM - 08:00 AM	47.9	68.7	43.2
08:00 AM - 09:00 AM	43.4	59.4	43.2
09:00 AM - 10:00 AM	43.9	67.9	38.9
10:00 AM - 11:00 AM	52.0	69.8	50.9
11:00 AM - 12:00 PM	49.6	69.8	46.6
12:00 PM - 01:00 PM	49.1	70.3	46.1
Leq Average 24 hrs. (dB(A))	48.4		
Lmax (dB(A))	70.3		41.6
L90 (dB(A))			
Ldn (dB(A))	52.3		
Standard (dB(A))	70	115	
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงมาตรฐาน และระดับเสียงที่โครงการประกอบกิจการ โรงงาน พ.ศ. 2548			

Technical Management
Scientist (3)
Approved by
Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochedluk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098047-1

Page 1 of 1

Sample Number	2492626-13
Parameter	Air Quality
Location	Ban Khao Mor (GPS 47Q 0675703, 1804307)
Measurement Date	Aug 25 - Aug 26, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 1122504

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
01:00 PM - 02:00 PM	55.1	68.5	36.9
02:00 PM - 03:00 PM	53.0	68.5	37.2
03:00 PM - 04:00 PM	54.9	75.4	37.8
04:00 PM - 05:00 PM	50.2	65.7	36.7
05:00 PM - 06:00 PM	50.1	65.8	42.4
06:00 PM - 07:00 PM	46.3	71.9	39.9
07:00 PM - 08:00 PM	48.0	65.6	45.8
08:00 PM - 09:00 PM	47.2	62.1	45.6
09:00 PM - 10:00 PM	48.6	72.6	45.6
10:00 PM - 11:00 PM	46.2	56.5	45.2
11:00 PM - 12:00 AM	44.8	56.2	43.4
12:00 AM - 01:00 AM	44.2	52.7	42.5
01:00 AM - 02:00 AM	41.8	50.7	40.3
02:00 AM - 03:00 AM	42.3	64.7	40.0
03:00 AM - 04:00 AM	40.7	50.8	39.0
04:00 AM - 05:00 AM	44.2	55.0	41.5
05:00 AM - 06:00 AM	46.4	66.9	44.0
06:00 AM - 07:00 AM	47.5	67.4	44.1
07:00 AM - 08:00 AM	48.2	68.2	42.5
08:00 AM - 09:00 AM	45.1	61.5	40.4
09:00 AM - 10:00 AM	56.4	71.6	36.9
10:00 AM - 11:00 AM	55.6	72.9	38.6
11:00 AM - 12:00 PM	58.7	72.8	37.4
12:00 PM - 01:00 PM	54.8	74.5	37.3
Leq Average 24 hrs. (dB(A))	51.6		
Lmax (dB(A))	75.4		40.3
L90 (dB(A))			
Ldn (dB(A))	53.9	115	
Standard (dB(A))	70		
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงมาตรฐาน และระดับเสียงที่โครงการประกอบกิจการ โรงงาน พ.ศ. 2548			

Technical Management
Scientist (3)
Approved by
Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098050-1

Sample Number	2492626-16
Parameter	Air Quality
Location	Ban Long Du (GPS 47Q 0672008, 1799066)
Measurement Date	Aug 21 - Aug 22, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710640

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
03:00 PM - 04:00 PM	43.3	63.3	37.4
04:00 PM - 05:00 PM	48.2	67.0	42.3
05:00 PM - 06:00 PM	43.6	70.3	37.8
06:00 PM - 07:00 PM	43.4	70.8	39.1
07:00 PM - 08:00 PM	48.3	63.4	48.3
08:00 PM - 09:00 PM	48.9	61.2	48.0
09:00 PM - 10:00 PM	47.9	59.6	46.9
10:00 PM - 11:00 PM	48.1	61.8	46.9
11:00 PM - 12:00 AM	48.1	59.4	46.9
12:00 AM - 01:00 AM	47.2	54.2	46.1
01:00 AM - 02:00 AM	46.6	70.3	44.8
02:00 AM - 03:00 AM	44.8	53.1	43.1
03:00 AM - 04:00 AM	55.5	69.5	43.0
04:00 AM - 05:00 AM	59.5	69.7	52.1
05:00 AM - 06:00 AM	50.3	72.5	41.9
06:00 AM - 07:00 AM	47.0	66.3	41.7
07:00 AM - 08:00 AM	45.7	71.4	39.8
08:00 AM - 09:00 AM	44.2	63.3	37.4
09:00 AM - 10:00 AM	44.3	70.5	37.2
10:00 AM - 11:00 AM	42.9	66.0	35.9
11:00 AM - 12:00 PM	42.3	62.1	35.6
12:00 PM - 01:00 PM	41.3	63.7	34.7
01:00 PM - 02:00 PM	41.2	62.8	35.4
02:00 PM - 03:00 PM	47.3	71.7	36.4
Leq Average 24 hrs. (dB(A))	49.7		
Lmax (dB(A))	72.5		41.7
L90 (dB(A))			
Ldn (dB(A))	58.5		
Standard (dB(A))	70	115	
Reference Method	: ISO1996-1 and 1996-2		
Standard	1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงที่ได้จากการประกอบกิจการ ทั้งนี้ พ.ศ. 2548		

Technical Management
Scientist (3)
Approved by
Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098049-1

Sample Number	2492626-15
Parameter	Air Quality
Location	Ban Long Du (GPS 47Q 0672008, 1799066)
Measurement Date	Aug 20 - Aug 21, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710640

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
03:00 PM - 04:00 PM	44.1	69.8	38.3
04:00 PM - 05:00 PM	47.1	67.8	42.9
05:00 PM - 06:00 PM	44.1	66.2	40.1
06:00 PM - 07:00 PM	44.9	67.3	40.3
07:00 PM - 08:00 PM	51.4	62.9	49.4
08:00 PM - 09:00 PM	50.8	66.7	49.1
09:00 PM - 10:00 PM	50.4	65.4	48.4
10:00 PM - 11:00 PM	50.0	71.2	46.2
11:00 PM - 12:00 AM	48.6	61.2	47.5
12:00 AM - 01:00 AM	48.1	65.9	45.9
01:00 AM - 02:00 AM	47.1	64.6	44.3
02:00 AM - 03:00 AM	45.1	63.1	42.3
03:00 AM - 04:00 AM	57.9	71.3	42.8
04:00 AM - 05:00 AM	63.0	71.2	57.3
05:00 AM - 06:00 AM	54.8	74.1	45.9
06:00 AM - 07:00 AM	47.1	69.2	42.8
07:00 AM - 08:00 AM	46.5	70.9	41.7
08:00 AM - 09:00 AM	49.7	67.8	40.6
09:00 AM - 10:00 AM	44.6	61.8	39.1
10:00 AM - 11:00 AM	44.2	62.3	39.1
11:00 AM - 12:00 PM	43.1	68.3	36.4
12:00 PM - 01:00 PM	42.5	61.0	37.8
01:00 PM - 02:00 PM	44.6	73.0	38.5
02:00 PM - 03:00 PM	44.8	72.4	37.8
Leq Average 24 hrs. (dB(A))	52.3		
Lmax (dB(A))		74.1	42.3
L90 (dB(A))			
Ldn (dB(A))	61.5	115	
Standard (dB(A))	70		
Reference Method	: ISO1996-1 and 1996-2		
Standard	1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงที่ได้จากการประกอบกิจการ ทั้งนี้ พ.ศ. 2548		

Technical Management
Scientist (3)
Approved by
Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098052-1

Page 1 of 1

Sample Number	2492626-18
Parameter	Air Quality
Location	Ban Long Du (GPS 47Q 0672008, 1799066)
Measurement Date	Aug 23 - Aug 24, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710640

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
03:00 PM - 04:00 PM	45.4	67.1	36.3
04:00 PM - 05:00 PM	48.9	66.2	45.6
05:00 PM - 06:00 PM	53.9	97.9	34.7
06:00 PM - 07:00 PM	45.0	71.6	34.9
07:00 PM - 08:00 PM	46.7	76.8	34.0
08:00 PM - 09:00 PM	45.5	69.0	33.8
09:00 PM - 10:00 PM	40.8	58.9	33.1
10:00 PM - 11:00 PM	45.5	70.9	38.2
11:00 PM - 12:00 AM	48.9	74.3	37.6
12:00 AM - 01:00 AM	44.0	72.4	35.2
01:00 AM - 02:00 AM	53.5	97.4	33.9
02:00 AM - 03:00 AM	44.8	71.0	32.4
03:00 AM - 04:00 AM	42.6	68.0	33.4
04:00 AM - 05:00 AM	46.0	68.8	32.0
05:00 AM - 06:00 AM	46.8	74.5	39.8
06:00 AM - 07:00 AM	44.1	62.9	40.4
07:00 AM - 08:00 AM	48.5	78.5	43.9
08:00 AM - 09:00 AM	48.3	76.2	39.5
09:00 AM - 10:00 AM	47.4	71.5	38.2
10:00 AM - 11:00 AM	48.6	61.2	47.5
11:00 AM - 12:00 PM	65.9	97.9	45.9
12:00 PM - 01:00 PM	47.1	64.6	48.3
01:00 PM - 02:00 PM	45.1	63.1	42.3
02:00 PM - 03:00 PM	54.5	93.2	35.6
Leq Average 24 hrs. (dB(A))	48.5		
Lmax (dB(A))	97.9		36.3
L90 (dB(A))			
Ldn (dB(A))	54.3		
Standard (dB(A))	70	115	
Reference Method	: ISO1996-1 and 1996-2		
Standard	1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงมาตรฐาน และระดับเสียงที่โครงการประกอบกิจการ โรงงาน พ.ศ. 2548		

Technical Management

Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098051-1

Page 1 of 1

Sample Number	2492626-17
Parameter	Air Quality
Location	Ban Long Du (GPS 47Q 0672008, 1799066)
Measurement Date	Aug 22 - Aug 23, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710640

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
03:00 PM - 04:00 PM	45.2	67.1	37.8
04:00 PM - 05:00 PM	46.0	59.5	39.2
05:00 PM - 06:00 PM	46.0	68.1	37.9
06:00 PM - 07:00 PM	43.5	67.2	39.1
07:00 PM - 08:00 PM	50.1	68.8	47.1
08:00 PM - 09:00 PM	51.9	73.9	48.6
09:00 PM - 10:00 PM	51.8	59.2	48.5
10:00 PM - 11:00 PM	48.2	60.1	46.4
11:00 PM - 12:00 AM	47.1	64.4	45.8
12:00 AM - 01:00 AM	46.8	64.4	45.5
01:00 AM - 02:00 AM	46.3	74.0	44.0
02:00 AM - 03:00 AM	43.7	61.0	42.0
03:00 AM - 04:00 AM	57.4	71.9	42.6
04:00 AM - 05:00 AM	65.1	72.1	55.7
05:00 AM - 06:00 AM	52.4	74.0	41.6
06:00 AM - 07:00 AM	45.2	63.9	40.9
07:00 AM - 08:00 AM	43.0	60.4	38.8
08:00 AM - 09:00 AM	43.0	63.2	37.1
09:00 AM - 10:00 AM	44.8	60.9	37.5
10:00 AM - 11:00 AM	45.6	63.2	37.2
11:00 AM - 12:00 PM	44.8	62.7	35.6
12:00 PM - 01:00 PM	40.6	65.3	34.7
01:00 PM - 02:00 PM	40.5	66.1	34.6
02:00 PM - 03:00 PM	44.4	75.3	35.7
Leq Average 24 hrs. (dB(A))	52.0		
Lmax (dB(A))	75.3		39.2
L90 (dB(A))			
Ldn (dB(A))	61.1	115	
Standard (dB(A))	70		
Reference Method	: ISO1996-1 and 1996-2		
Standard	1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงมาตรฐาน และระดับเสียงที่โครงการประกอบกิจการ โรงงาน พ.ศ. 2548		

Technical Management

Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochedluk, Amphur Thapkror, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098054-1

Sample Number	2492626-20
Parameter	Air Quality
Location	Ban Long Du (GPS 47Q 0672008, 1799066)
Measurement Date	Aug 25 - Aug 26, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710640

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
03:00 PM - 04:00 PM	45.2	63.5	38.6
04:00 PM - 05:00 PM	49.2	65.0	44.2
05:00 PM - 06:00 PM	51.6	68.3	45.4
06:00 PM - 07:00 PM	54.2	68.5	47.0
07:00 PM - 08:00 PM	55.2	70.1	48.8
08:00 PM - 09:00 PM	53.3	68.1	47.8
09:00 PM - 10:00 PM	47.6	61.9	46.3
10:00 PM - 11:00 PM	47.2	61.6	45.8
11:00 PM - 12:00 AM	48.8	64.7	46.3
12:00 AM - 01:00 AM	47.0	64.4	45.2
01:00 AM - 02:00 AM	46.4	64.0	44.2
02:00 AM - 03:00 AM	45.4	61.6	43.1
03:00 AM - 04:00 AM	49.5	64.1	41.1
04:00 AM - 05:00 AM	54.7	70.0	48.5
05:00 AM - 06:00 AM	48.9	74.2	41.7
06:00 AM - 07:00 AM	48.6	72.0	44.1
07:00 AM - 08:00 AM	47.3	64.2	41.7
08:00 AM - 09:00 AM	44.2	64.5	39.4
09:00 AM - 10:00 AM	43.0	65.4	37.1
10:00 AM - 11:00 AM	42.5	58.9	36.0
11:00 AM - 12:00 PM	45.0	85.9	36.5
12:00 PM - 01:00 PM	41.0	59.7	38.5
01:00 PM - 02:00 PM	41.8	62.2	35.9
02:00 PM - 03:00 PM	41.8	64.8	35.8
Leq Average 24 hrs. (dB(A))	49.4		
Lmax (dB(A))	85.9		
L90 (dB(A))	43.1		
Ldn (dB(A))	55.8		
Standard (dB(A))	70	115	
Reference Method	: ISO1996-1 and 1996-2		
Standard	1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานเสียงสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงมาตรฐาน และระดับเสียงที่โครงการประกอบกิจการ โรงงาน พ.ศ. 2548		

Technical Management

Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochedluk, Amphur Thapkror, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098053-1

Sample Number	2492626-19
Parameter	Air Quality
Location	Ban Long Du (GPS 47Q 0672008, 1799066)
Measurement Date	Aug 24 - Aug 25, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710640

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
03:00 PM - 04:00 PM	41.3	69.5	35.3
04:00 PM - 05:00 PM	47.5	77.6	37.0
05:00 PM - 06:00 PM	52.1	69.6	47.5
06:00 PM - 07:00 PM	52.6	64.3	46.1
07:00 PM - 08:00 PM	54.4	72.5	46.9
08:00 PM - 09:00 PM	54.1	68.9	49.7
09:00 PM - 10:00 PM	50.0	70.0	48.9
10:00 PM - 11:00 PM	48.9	67.0	47.1
11:00 PM - 12:00 AM	52.8	80.9	47.6
12:00 AM - 01:00 AM	55.0	63.4	53.3
01:00 AM - 02:00 AM	54.6	71.7	50.2
02:00 AM - 03:00 AM	52.6	60.0	49.4
03:00 AM - 04:00 AM	57.5	76.6	48.3
04:00 AM - 05:00 AM	62.7	68.9	60.4
05:00 AM - 06:00 AM	57.6	75.8	49.5
06:00 AM - 07:00 AM	50.2	69.6	44.3
07:00 AM - 08:00 AM	47.2	65.5	41.6
08:00 AM - 09:00 AM	45.6	67.5	39.6
09:00 AM - 10:00 AM	43.2	68.2	38.5
10:00 AM - 11:00 AM	43.1	73.0	37.1
11:00 AM - 12:00 PM	42.3	61.0	36.8
12:00 PM - 01:00 PM	43.2	81.7	36.4
01:00 PM - 02:00 PM	41.9	61.4	36.1
02:00 PM - 03:00 PM	44.1	67.1	36.9
Leq Average 24 hrs. (dB(A))	53.6		
Lmax (dB(A))	81.7		
L90 (dB(A))	47.1		
Ldn (dB(A))	62.5		
Standard (dB(A))	70	115	
Reference Method	: ISO1996-1 and 1996-2		
Standard	1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานเสียงสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงมาตรฐาน และระดับเสียงที่โครงการประกอบกิจการ โรงงาน พ.ศ. 2548		

Technical Management

Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochedluk, Amphur Thapkror, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098056-1

Page 1 of 1

Sample Number	2492626-22
Parameter	Air Quality
Location	Ban Nong Ra Man (GPS 47Q 0674684, 1802590)
Measurement Date	Aug 20 - Aug 21, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710644

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
12:00 PM - 01:00 PM	48.3	70.4	44.9
01:00 PM - 02:00 PM	46.7	65.9	38.1
02:00 PM - 03:00 PM	44.9	62.2	38.8
03:00 PM - 04:00 PM	46.1	67.4	38.3
04:00 PM - 05:00 PM	46.9	69.6	39.8
05:00 PM - 06:00 PM	49.5	65.7	41.8
06:00 PM - 07:00 PM	46.6	66.8	40.3
07:00 PM - 08:00 PM	48.1	68.5	43.2
08:00 PM - 09:00 PM	48.5	69.6	46.3
09:00 PM - 10:00 PM	46.3	70.4	44.9
10:00 PM - 11:00 PM	48.3	62.0	44.9
11:00 PM - 12:00 AM	47.4	59.8	46.2
12:00 AM - 01:00 AM	47.2	60.2	46.0
01:00 AM - 02:00 AM	45.5	68.3	43.6
02:00 AM - 03:00 AM	45.4	75.7	41.7
03:00 AM - 04:00 AM	47.9	75.5	40.4
04:00 AM - 05:00 AM	54.8	76.4	49.7
05:00 AM - 06:00 AM	56.0	78.1	51.5
06:00 AM - 07:00 AM	49.7	67.8	44.7
07:00 AM - 08:00 AM	50.5	73.0	43.0
08:00 AM - 09:00 AM	49.4	73.9	41.3
09:00 AM - 10:00 AM	49.8	77.9	48.4
10:00 AM - 11:00 AM	49.8	75.1	42.4
11:00 AM - 12:00 PM	46.9	65.0	39.5
Leq Average 24 hrs. (dB(A))	49.4		
Lmax (dB(A))	78.1		42.4
L90 (dB(A))			
Ldn (dB(A))	56.9		
Standard (dB(A))	70	115	
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงมาตรฐาน และระดับเสียงที่ต่ำกว่ามาตรฐาน ทั้งนี้ พ.ศ. 2548			

Technical Management

Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochedluk, Amphur Thapkror, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098055-1

Page 1 of 1

Sample Number	2492626-21
Parameter	Air Quality
Location	Ban Long Du (GPS 47Q 0677008, 1799066)
Measurement Date	Aug 26 - Aug 27, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710640

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
03:00 PM - 04:00 PM	56.4	69.7	36.4
04:00 PM - 05:00 PM	64.4	72.3	57.6
05:00 PM - 06:00 PM	60.5	74.7	39.6
06:00 PM - 07:00 PM	60.6	71.9	54.8
07:00 PM - 08:00 PM	56.6	71.7	46.8
08:00 PM - 09:00 PM	67.4	67.4	46.0
09:00 PM - 10:00 PM	53.0	60.3	46.1
10:00 PM - 11:00 PM	47.5	63.7	46.7
11:00 PM - 12:00 AM	48.2	63.2	46.1
12:00 AM - 01:00 AM	46.7	66.3	42.0
01:00 AM - 02:00 AM	45.4	49.4	43.8
02:00 AM - 03:00 AM	46.2	66.5	43.0
03:00 AM - 04:00 AM	55.1	71.4	44.0
04:00 AM - 05:00 AM	60.4	68.6	51.5
05:00 AM - 06:00 AM	52.1	64.8	43.8
06:00 AM - 07:00 AM	47.7	62.6	42.4
07:00 AM - 08:00 AM	51.8	68.0	41.2
08:00 AM - 09:00 AM	49.4	66.9	38.8
09:00 AM - 10:00 AM	44.6	65.5	38.1
10:00 AM - 11:00 AM	42.3	60.1	36.6
11:00 AM - 12:00 PM	42.4	60.3	34.7
12:00 PM - 01:00 PM	43.1	65.3	34.8
01:00 PM - 02:00 PM	56.4	69.7	36.4
02:00 PM - 03:00 PM	64.4	72.3	57.6
Leq Average 24 hrs. (dB(A))	56.8		
Lmax (dB(A))		74.7	43.0
L90 (dB(A))			
Ldn (dB(A))	60.8		
Standard (dB(A))	70	115	
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงมาตรฐาน และระดับเสียงที่ต่ำกว่ามาตรฐาน ทั้งนี้ พ.ศ. 2548			

Technical Management

Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098058-1

Sample Number	2492626-24
Parameter	Air Quality
Location	Ban Nong Ra Man (GPS 47Q 0674684, 1802590)
Measurement Date	Aug 22 - Aug 23, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710644

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
12:00 PM - 01:00 PM	67.3	83.0	56.0
01:00 PM - 02:00 PM	67.0	84.4	56.8
02:00 PM - 03:00 PM	61.6	76.2	55.6
03:00 PM - 04:00 PM	63.9	73.8	57.4
04:00 PM - 05:00 PM	65.1	75.2	55.2
05:00 PM - 06:00 PM	50.4	75.3	42.6
06:00 PM - 07:00 PM	50.0	73.8	40.2
07:00 PM - 08:00 PM	48.0	64.1	41.2
08:00 PM - 09:00 PM	47.1	66.6	44.7
09:00 PM - 10:00 PM	47.8	71.0	44.6
10:00 PM - 11:00 PM	46.6	68.6	43.4
11:00 PM - 12:00 PM	44.4	67.5	41.9
12:00 AM - 01:00 AM	49.1	87.4	41.5
01:00 AM - 02:00 AM	42.9	61.6	39.0
02:00 AM - 03:00 AM	46.9	69.8	39.3
03:00 AM - 04:00 AM	43.3	69.2	40.2
04:00 AM - 05:00 AM	45.6	68.2	41.6
05:00 AM - 06:00 AM	59.3	67.1	41.3
06:00 AM - 07:00 AM	48.1	67.1	42.6
07:00 AM - 08:00 AM	50.3	71.6	42.5
08:00 AM - 09:00 AM	48.3	67.6	41.1
09:00 AM - 10:00 AM	47.9	64.0	41.1
10:00 AM - 11:00 AM	48.3	72.6	41.2
11:00 AM - 12:00 PM	45.9	63.9	39.4
Leq Average 24 hrs. (dB(A))	58.9		
Lmax (dB(A))	87.4		41.6
L90 (dB(A))			
Ldn (dB(A))	59.6		
Standard (dB(A))	70	115	
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงมาตรฐาน และระดับเสียงที่โครงการประกอบกิจการ โรงงาน พ.ศ. 2548			

Technical Management Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098057-1

Sample Number	2492626-23
Parameter	Air Quality
Location	Ban Nong Ra Man (GPS 47Q 0674684, 1802590)
Measurement Date	Aug 21 - Aug 22, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710644

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
12:00 PM - 01:00 PM	49.2	75.0	38.3
01:00 PM - 02:00 PM	45.9	65.4	40.7
02:00 PM - 03:00 PM	46.5	66.7	40.8
03:00 PM - 04:00 PM	47.0	66.0	40.9
04:00 PM - 05:00 PM	47.1	64.5	42.0
05:00 PM - 06:00 PM	49.0	66.8	43.1
06:00 PM - 07:00 PM	49.8	76.1	42.6
07:00 PM - 08:00 PM	50.7	66.0	43.8
08:00 PM - 09:00 PM	50.3	60.3	49.1
09:00 PM - 10:00 PM	50.7	78.8	47.0
10:00 PM - 11:00 PM	49.1	74.0	46.7
11:00 PM - 12:00 AM	48.3	74.4	43.9
12:00 AM - 01:00 AM	44.9	73.9	42.8
01:00 AM - 02:00 AM	44.3	74.3	41.8
02:00 AM - 03:00 AM	43.0	53.5	41.5
03:00 AM - 04:00 AM	48.5	74.5	40.4
04:00 AM - 05:00 AM	43.9	62.4	41.8
05:00 AM - 06:00 AM	46.8	80.6	41.5
06:00 AM - 07:00 AM	56.6	78.0	43.8
07:00 AM - 08:00 AM	67.1	81.7	55.1
08:00 AM - 09:00 AM	63.8	78.2	55.8
09:00 AM - 10:00 AM	57.4	70.1	54.7
10:00 AM - 11:00 AM	61.2	76.8	54.9
11:00 AM - 12:00 PM	60.8	76.7	55.7
Leq Average 24 hrs. (dB(A))	57.1		
Lmax (dB(A))	81.7		42.8
L90 (dB(A))			
Ldn (dB(A))	59.1		
Standard (dB(A))	70	115	
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงมาตรฐาน และระดับเสียงที่โครงการประกอบกิจการ โรงงาน พ.ศ. 2548			

Technical Management Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098060-1

Sample Number	2492626-26
Parameter	Air Quality
Location	Ban Nong Ra Man (GPS 47Q 0674684, 1802590)
Measurement Date	Aug 24 - Aug 25, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710644

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
12:00 PM - 01:00 PM	46.2	68.7	38.7
01:00 PM - 02:00 PM	49.1	73.3	39.6
02:00 PM - 03:00 PM	48.2	68.5	41.7
03:00 PM - 04:00 PM	46.4	63.2	40.5
04:00 PM - 05:00 PM	47.8	65.9	41.6
05:00 PM - 06:00 PM	49.3	80.0	41.2
06:00 PM - 07:00 PM	50.2	73.8	42.5
07:00 PM - 08:00 PM	49.7	73.8	47.4
08:00 PM - 09:00 PM	49.7	74.1	47.0
09:00 PM - 10:00 PM	49.5	71.2	46.7
10:00 PM - 11:00 PM	49.8	45.8	45.8
11:00 PM - 12:00 AM	58.6	82.3	48.1
12:00 AM - 01:00 AM	62.3	88.6	57.6
01:00 AM - 02:00 AM	56.2	80.8	50.8
02:00 AM - 03:00 AM	53.4	74.4	51.8
03:00 AM - 04:00 AM	54.8	77.5	52.3
04:00 AM - 05:00 AM	55.8	74.0	54.1
05:00 AM - 06:00 AM	52.0	64.5	45.3
06:00 AM - 07:00 AM	50.2	71.1	42.9
07:00 AM - 08:00 AM	49.8	67.2	42.8
08:00 AM - 09:00 AM	48.6	74.7	42.6
09:00 AM - 10:00 AM	47.5	72.2	41.5
10:00 AM - 11:00 AM	47.8	69.9	39.3
11:00 AM - 12:00 PM	47.6	70.9	38.9
Leq Average 24 hrs. (dB(A))	53.4		
Lmax (dB(A))	88.6		42.8
L90 (dB(A))			
Ldn (dB(A))	62.4		
Standard (dB(A))	70	115	
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงที่ได้จากการประกอบกิจการ โรงงาน พ.ศ. 2548			

Technical Management

Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098059-1

Sample Number	2492626-25
Parameter	Air Quality
Location	Ban Nong Ra Man (GPS 47Q 0674684, 1802590)
Measurement Date	Aug 23 - Aug 24, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710644

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
12:00 PM - 01:00 PM	45.0	65.8	37.2
01:00 PM - 02:00 PM	47.5	82.5	39.3
02:00 PM - 03:00 PM	45.7	64.3	37.9
03:00 PM - 04:00 PM	46.5	64.3	36.3
04:00 PM - 05:00 PM	47.5	67.4	36.8
05:00 PM - 06:00 PM	48.6	68.4	40.9
06:00 PM - 07:00 PM	49.9	75.4	40.3
07:00 PM - 08:00 PM	48.1	65.5	43.6
08:00 PM - 09:00 PM	51.0	71.6	47.8
09:00 PM - 10:00 PM	48.7	67.5	46.9
10:00 PM - 11:00 PM	51.3	84.3	46.2
11:00 PM - 12:00 AM	48.1	63.7	46.2
12:00 AM - 01:00 AM	47.1	66.3	44.0
01:00 AM - 02:00 AM	45.1	72.2	42.4
02:00 AM - 03:00 AM	42.8	67.0	40.3
03:00 AM - 04:00 AM	47.5	72.2	38.5
04:00 AM - 05:00 AM	65.5	86.8	59.4
05:00 AM - 06:00 AM	69.4	90.7	63.3
06:00 AM - 07:00 AM	67.1	81.7	55.8
07:00 AM - 08:00 AM	58.4	79.5	53.9
08:00 AM - 09:00 AM	54.8	79.5	49.1
09:00 AM - 10:00 AM	53.0	67.9	50.2
10:00 AM - 11:00 AM	50.9	64.4	47.2
11:00 AM - 12:00 PM	47.2	64.9	42.1
Leq Average 24 hrs. (dB(A))	59.2		
Lmax (dB(A))	90.7		43.6
L90 (dB(A))			
Ldn (dB(A))	68.7	115	
Standard (dB(A))	70		
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงที่ได้จากการประกอบกิจการ โรงงาน พ.ศ. 2548			

Technical Management

Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098062-1

Sample Number	2492626-28
Parameter	Air Quality
Location	Ban Nong Ra Man (GPS 47Q 0674684, 1802590)
Measurement Date	Aug 26 - Aug 27, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710644

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
12:00 PM - 01:00 PM	46.6	69.1	38.4
01:00 PM - 02:00 PM	46.3	68.6	37.1
02:00 PM - 03:00 PM	47.0	68.5	37.6
03:00 PM - 04:00 PM	46.4	67.4	38.4
04:00 PM - 05:00 PM	48.6	67.3	39.9
05:00 PM - 06:00 PM	48.6	76.0	40.1
06:00 PM - 07:00 PM	47.5	67.7	40.4
07:00 PM - 08:00 PM	50.6	66.7	46.5
08:00 PM - 09:00 PM	50.8	68.2	46.8
09:00 PM - 10:00 PM	49.2	66.3	43.7
10:00 PM - 11:00 PM	51.2	64.2	43.2
11:00 PM - 12:00 AM	46.2	74.9	42.6
12:00 AM - 01:00 AM	56.4	65.1	39.9
01:00 AM - 02:00 AM	60.5	66.3	48.7
02:00 AM - 03:00 AM	57.7	68.4	41.0
03:00 AM - 04:00 AM	45.3	72.1	41.4
04:00 AM - 05:00 AM	47.4	64.6	44.6
05:00 AM - 06:00 AM	47.8	62.8	43.2
06:00 AM - 07:00 AM	50.6	65.3	44.3
07:00 AM - 08:00 AM	49.5	67.1	40.6
08:00 AM - 09:00 AM	47.3	68.9	39.4
09:00 AM - 10:00 AM	50.7	69.8	43.4
10:00 AM - 11:00 AM	50.9	75.0	41.7
11:00 AM - 12:00 PM	49.2	70.9	46.5
Leq Average 24 hrs. (dB(A))	51.9		
Lmax (dB(A))	76.0		41.4
L90 (dB(A))			
Ldn (dB(A))	60.5		
Standard (dB(A))	70	115	
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงที่ได้จากการประกอบกิจการ โรงงาน พ.ศ. 2548			

Technical Management : Scientist (3)

Approved by : Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098061-1

Sample Number	2492626-27
Parameter	Air Quality
Location	Ban Nong Ra Man (GPS 47Q 0674684, 1802590)
Measurement Date	Aug 25 - Aug 26, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710644

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
12:00 PM - 01:00 PM	46.7	73.6	37.8
01:00 PM - 02:00 PM	47.2	66.5	40.8
02:00 PM - 03:00 PM	47.0	64.0	41.5
03:00 PM - 04:00 PM	48.1	75.8	41.7
04:00 PM - 05:00 PM	49.3	77.4	41.2
05:00 PM - 06:00 PM	49.0	71.6	40.6
06:00 PM - 07:00 PM	49.5	74.9	41.1
07:00 PM - 08:00 PM	49.2	70.9	46.5
08:00 PM - 09:00 PM	46.8	64.1	45.3
09:00 PM - 10:00 PM	46.1	62.4	45.0
10:00 PM - 11:00 PM	46.8	65.4	44.0
11:00 PM - 12:00 AM	44.8	57.6	43.3
12:00 AM - 01:00 AM	44.5	68.7	41.2
01:00 AM - 02:00 AM	48.5	56.2	40.9
02:00 AM - 03:00 AM	48.1	69.5	39.8
03:00 AM - 04:00 AM	47.3	58.4	43.4
04:00 AM - 05:00 AM	47.6	64.1	44.6
05:00 AM - 06:00 AM	48.2	63.4	43.1
06:00 AM - 07:00 AM	50.7	69.8	43.4
07:00 AM - 08:00 AM	50.9	75.0	41.7
08:00 AM - 09:00 AM	47.1	65.2	40.7
09:00 AM - 10:00 AM	45.9	68.5	38.6
10:00 AM - 11:00 AM	47.2	66.4	38.1
11:00 AM - 12:00 PM	47.2	67.1	39.8
Leq Average 24 hrs. (dB(A))	47.9		
Lmax (dB(A))	77.4		41.2
L90 (dB(A))			
Ldn (dB(A))	54.2		
Standard (dB(A))	70	115	
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงที่ได้จากการประกอบกิจการ โรงงาน พ.ศ. 2548			

Technical Management : Scientist (3)

Approved by : Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098064-1

Page 1 of 1

Sample Number	2492626-30
Parameter	Air Quality
Location	Ban Klong Sai Yang Rong (GPS 47Q 0676121, 1798820)
Measurement Date	Aug 21 - Aug 22, 2024
Measurement by	Thanit Janjip
Sound Level meter	Serial No. 710637

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
04:00 PM - 05:00 PM	43.6	66.2	35.8
05:00 PM - 06:00 PM	45.7	69.2	36.5
06:00 PM - 07:00 PM	44.3	58.5	38.2
07:00 PM - 08:00 PM	53.2	66.3	50.2
08:00 PM - 09:00 PM	53.1	58.3	52.3
09:00 PM - 10:00 PM	53.3	61.6	51.6
10:00 PM - 11:00 PM	53.3	63.2	50.8
11:00 PM - 12:00 AM	54.6	68.2	50.5
12:00 AM - 01:00 AM	55.1	67.5	49.7
01:00 AM - 02:00 AM	53.6	67.5	48.1
02:00 AM - 03:00 AM	50.4	63.3	48.2
03:00 AM - 04:00 AM	51.0	61.2	49.0
04:00 AM - 05:00 AM	53.9	64.3	49.9
05:00 AM - 06:00 AM	52.5	62.2	47.5
06:00 AM - 07:00 AM	47.9	74.8	41.4
07:00 AM - 08:00 AM	51.2	68.1	39.6
08:00 AM - 09:00 AM	45.7	64.8	38.6
09:00 AM - 10:00 AM	44.0	64.2	37.9
10:00 AM - 11:00 AM	43.5	63.2	35.8
11:00 AM - 12:00 PM	41.8	67.7	35.1
12:00 PM - 01:00 PM	41.4	60.0	34.7
01:00 PM - 02:00 PM	41.8	59.6	35.1
02:00 PM - 03:00 PM	42.2	70.1	32.8
03:00 PM - 04:00 PM	39.3	58.3	33.7
Leq Average 24 hrs. (dB(A))	50.6		
Lmax (dB(A))	74.8		
L90 (dB(A))			39.6
Ldn (dB(A))	58.9		
Standard (dB(A))	70	115	
Reference Method	: ISO1996-1 and 1996-2		
Standard	1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงที่ได้จากการประกอบกิจการ ทั้งนี้ พ.ศ. 2548		

Technical Management

Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098063-1

Page 1 of 1

Sample Number	2492626-29
Parameter	Air Quality
Location	Ban Klong Sai Yang Rong (GPS 47Q 0676121, 1798820)
Measurement Date	Aug 20 - Aug 21, 2024
Measurement by	Thanit Janjip
Sound Level meter	Serial No. 710637

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
04:00 PM - 05:00 PM	45.9	79.2	36.3
05:00 PM - 06:00 PM	42.1	66.7	36.8
06:00 PM - 07:00 PM	44.8	65.7	37.5
07:00 PM - 08:00 PM	53.9	60.6	49.0
08:00 PM - 09:00 PM	55.3	61.5	54.1
09:00 PM - 10:00 PM	56.1	67.8	54.7
10:00 PM - 11:00 PM	56.3	65.9	54.1
11:00 PM - 12:00 AM	56.2	65.2	53.7
12:00 AM - 01:00 AM	57.9	66.6	54.9
01:00 AM - 02:00 AM	56.2	65.5	51.1
02:00 AM - 03:00 AM	51.3	66.2	44.2
03:00 AM - 04:00 AM	52.1	65.5	48.9
04:00 AM - 05:00 AM	59.4	68.6	51.9
05:00 AM - 06:00 AM	63.5	69.0	58.9
06:00 AM - 07:00 AM	59.3	78.3	50.3
07:00 AM - 08:00 AM	52.4	68.1	41.5
08:00 AM - 09:00 AM	51.8	71.2	39.6
09:00 AM - 10:00 AM	51.1	64.7	39.3
10:00 AM - 11:00 AM	45.8	67.0	36.6
11:00 AM - 12:00 PM	42.5	66.9	35.8
12:00 PM - 01:00 PM	47.4	79.1	35.2
01:00 PM - 02:00 PM	44.6	62.3	35.7
02:00 PM - 03:00 PM	45.9	67.3	34.6
03:00 PM - 04:00 PM	41.1	67.3	35.0
Leq Average 24 hrs. (dB(A))	55.2		
Lmax (dB(A))	79.2		
L90 (dB(A))			41.5
Ldn (dB(A))	64.2		
Standard (dB(A))	70	115	
Reference Method	: ISO1996-1 and 1996-2		
Standard	1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงที่ได้จากการประกอบกิจการ ทั้งนี้ พ.ศ. 2548		

Technical Management

Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochediuk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098066-1

Page 1 of 1

Sample Number	2492626-32
Parameter	Air Quality
Location	Ban Klong Sai Yang Rong (GPS 47Q 0676121, 1798820)
Measurement Date	Aug 23 - Aug 24, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710637

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
04:00 PM - 05:00 PM	42.1	71.4	34.8
05:00 PM - 06:00 PM	46.0	76.0	34.6
06:00 PM - 07:00 PM	50.4	76.1	39.3
07:00 PM - 08:00 PM	56.5	66.0	49.9
08:00 PM - 09:00 PM	57.2	65.3	55.8
09:00 PM - 10:00 PM	56.8	65.1	55.3
10:00 PM - 11:00 PM	52.6	64.9	50.1
11:00 PM - 12:00 AM	51.9	60.9	48.6
12:00 AM - 01:00 AM	50.7	60.5	47.3
01:00 AM - 02:00 AM	48.7	58.0	45.2
02:00 AM - 03:00 AM	51.3	57.0	45.7
03:00 AM - 04:00 AM	54.8	56.5	51.7
04:00 AM - 05:00 AM	66.3	97.5	51.5
05:00 AM - 06:00 AM	69.1	72.9	67.5
06:00 AM - 07:00 AM	65.5	90.0	60.6
07:00 AM - 08:00 AM	60.1	68.7	57.4
08:00 AM - 09:00 AM	67.8	72.7	57.9
09:00 AM - 10:00 AM	69.1	72.9	67.5
10:00 AM - 11:00 AM	66.8	76.3	63.9
11:00 AM - 12:00 PM	58.1	80.8	41.7
12:00 PM - 01:00 PM	46.7	70.9	37.9
01:00 PM - 02:00 PM	47.7	71.0	36.8
02:00 PM - 03:00 PM	46.1	73.9	36.2
03:00 PM - 04:00 PM	50.5	72.3	39.7
Leq Average 24 hrs. (dB(A))	62.2		
Lmax (dB(A))	97.5		48.6
L90 (dB(A))			
Ldn (dB(A))	69.0		
Standard (dB(A))	70	115	
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงที่โครงการประกอบกิจการ โรงงาน พ.ศ. 2548			

Technical Management
Scientist (3)

Approved by

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochediuk, Amphur Thapkor, Phichit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :

Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098065-1

Page 1 of 1

Sample Number	2492626-31
Parameter	Air Quality
Location	Ban Klong Sai Yang Rong (GPS 47Q 0676121, 1798820)
Measurement Date	Aug 22 - Aug 23, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710637

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
04:00 PM - 05:00 PM	43.8	79.0	34.5
05:00 PM - 06:00 PM	42.2	67.8	35.5
06:00 PM - 07:00 PM	46.6	65.6	37.3
07:00 PM - 08:00 PM	55.6	62.4	50.1
08:00 PM - 09:00 PM	56.2	63.5	55.2
09:00 PM - 10:00 PM	55.9	66.0	54.5
10:00 PM - 11:00 PM	55.3	62.7	52.7
11:00 PM - 12:00 AM	65.0	65.0	52.8
12:00 AM - 01:00 AM	55.4	63.7	52.5
01:00 AM - 02:00 AM	53.2	62.3	48.6
02:00 AM - 03:00 AM	56.8	75.0	52.6
03:00 AM - 04:00 AM	51.4	62.6	49.3
04:00 AM - 05:00 AM	48.4	59.5	46.0
05:00 AM - 06:00 AM	47.9	59.0	45.5
06:00 AM - 07:00 AM	48.1	73.8	42.0
07:00 AM - 08:00 AM	50.7	71.4	39.5
08:00 AM - 09:00 AM	61.7	61.7	38.6
09:00 AM - 10:00 AM	45.0	63.7	35.7
10:00 AM - 11:00 AM	44.0	67.2	35.0
11:00 AM - 12:00 PM	44.1	74.0	34.9
12:00 PM - 01:00 PM	43.0	69.3	34.4
01:00 PM - 02:00 PM	48.1	71.2	36.5
02:00 PM - 03:00 PM	44.9	62.0	34.1
03:00 PM - 04:00 PM	43.2	62.5	34.2
Leq Average 24 hrs. (dB(A))	51.9		
Lmax (dB(A))		79.0	39.5
L90 (dB(A))			
Ldn (dB(A))	59.6		
Standard (dB(A))	70	115	
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป 2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงที่โครงการประกอบกิจการ โรงงาน พ.ศ. 2548			

Technical Management
Scientist (3)

Approved by

Section Head



Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phidit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098067-1

Analysis / Test Report

Sample Number	2492626-34
Parameter	Air Quality
Location	Ban Klong Sai Yang Rong (GPS 47Q 0676121, 1798820)
Measurement Date	Aug 25 - Aug 26, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710637

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
04:00 PM - 05:00 PM	50.7	87.1	38.5
05:00 PM - 06:00 PM	47.6	64.3	40.0
06:00 PM - 07:00 PM	53.4	70.4	45.6
07:00 PM - 08:00 PM	60.2	63.0	58.9
08:00 PM - 09:00 PM	60.3	63.3	58.6
09:00 PM - 10:00 PM	58.2	62.6	55.8
10:00 PM - 11:00 PM	57.5	61.4	54.9
11:00 PM - 12:00 AM	56.1	61.1	53.5
12:00 AM - 01:00 AM	54.0	59.9	48.1
01:00 AM - 02:00 AM	54.1	59.9	48.5
02:00 AM - 03:00 AM	53.4	59.3	49.9
03:00 AM - 04:00 AM	55.6	63.4	50.1
04:00 AM - 05:00 AM	55.7	61.5	50.9
05:00 AM - 06:00 AM	51.6	76.2	43.9
06:00 AM - 07:00 AM	49.8	77.0	40.9
07:00 AM - 08:00 AM	48.4	78.9	39.3
08:00 AM - 09:00 AM	46.0	72.7	37.3
09:00 AM - 10:00 AM	43.9	62.9	36.6
10:00 AM - 11:00 AM	45.7	69.7	36.6
11:00 AM - 12:00 PM	47.2	69.4	34.9
12:00 PM - 01:00 PM	48.8	80.6	37.7
01:00 PM - 02:00 PM	50.5	80.3	36.8
02:00 PM - 03:00 PM	50.9	82.9	37.0
03:00 PM - 04:00 PM	43.7	70.2	35.0
Leq Average 24 hrs. (dB(A))	54.3		
Lmax (dB(A))	87.1		40.9
L90 (dB(A))			
Ldn (dB(A))	61.0		
Standard (dB(A))	70	115	
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป			
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงที่ได้จากการประกอบกิจการ			
พ.ร.บ. พ.ศ. 2548			

Technical Management

Approved by

Scientist (3)

Section Head



Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheduk, Amphur Thapkor, Phidit Thailand 66230
P/O : 47581
Project Name : Air Test
Project Location :
Lot ID: 2492626
Date Received : Aug 29, 2024
Date Reported : Aug 30, 2024
Report Number: 3098067-1

Analysis / Test Report

Sample Number	2492626-33
Parameter	Air Quality
Location	Ban Klong Sai Yang Rong (GPS 47Q 0676121, 1798820)
Measurement Date	Aug 24 - Aug 25, 2024
Measurement by	Thanit Janjop
Sound Level meter	Serial No. 710637

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
04:00 PM - 05:00 PM	47.0	82.0	38.7
05:00 PM - 06:00 PM	51.2	71.7	38.7
06:00 PM - 07:00 PM	52.0	61.6	41.5
07:00 PM - 08:00 PM	55.9	62.2	55.1
08:00 PM - 09:00 PM	57.5	68.3	55.4
09:00 PM - 10:00 PM	59.5	67.6	57.9
10:00 PM - 11:00 PM	59.0	71.2	57.3
11:00 PM - 12:00 AM	60.9	73.0	58.0
12:00 AM - 01:00 AM	61.1	74.8	59.1
01:00 AM - 02:00 AM	57.0	64.8	54.1
02:00 AM - 03:00 AM	60.1	70.1	51.9
03:00 AM - 04:00 AM	69.5	72.8	67.5
04:00 AM - 05:00 AM	69.0	72.7	65.7
05:00 AM - 06:00 AM	59.4	79.8	44.0
06:00 AM - 07:00 AM	50.5	82.5	40.9
07:00 AM - 08:00 AM	52.2	80.4	39.5
08:00 AM - 09:00 AM	48.3	63.4	37.8
09:00 AM - 10:00 AM	48.7	66.5	38.4
10:00 AM - 11:00 AM	50.3	80.3	37.4
11:00 AM - 12:00 PM	42.2	61.4	36.0
12:00 PM - 01:00 PM	47.8	77.5	37.2
01:00 PM - 02:00 PM	43.5	70.4	34.7
02:00 PM - 03:00 PM	41.3	61.6	35.3
03:00 PM - 04:00 PM	46.9	68.0	35.6
Leq Average 24 hrs. (dB(A))	60.3		
Lmax (dB(A))	82.5		40.9
L90 (dB(A))			
Ldn (dB(A))	69.8	115	
Standard (dB(A))	70		
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานสิ่งแวดล้อมทั่วไป			
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงที่ได้จากการประกอบกิจการ			
พ.ร.บ. พ.ศ. 2548			

Technical Management

Approved by

Scientist (3)

Section Head



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.

99 Moo 9, Tambon Khadnetluk, Amphur Thaplor, Phichit Thailand 66230

P/O : 47581

Project Name : Air Test

Project Location :

Lot ID: 2492626

Date Received : Aug 29, 2024

Date Reported : Aug 30, 2024

Report Number: 3098069-1

Sample Number 2492626-35

Parameter Air Quality

Location Ban Klong Sai Yang Rong (GPS 47Q 0676121, 1798820)

Measurement Date Aug 26 - Aug 27, 2024

Measurement by Thanit Janjop

Sound Level meter Serial No. 710637

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
04:00 PM - 05:00 PM	48.4	82.5	35.2
05:00 PM - 06:00 PM	45.4	68.8	37.2
06:00 PM - 07:00 PM	51.1	62.3	43.4
07:00 PM - 08:00 PM	55.6	61.2	54.7
08:00 PM - 09:00 PM	55.7	57.9	52.6
09:00 PM - 10:00 PM	54.1	57.9	50.9
10:00 PM - 11:00 PM	52.2	56.4	50.9
11:00 PM - 12:00 AM	52.6	58.9	50.9
12:00 AM - 01:00 AM	51.2	57.2	48.9
01:00 AM - 02:00 AM	47.7	68.1	44.9
02:00 AM - 03:00 AM	48.8	54.8	46.7
03:00 AM - 04:00 AM	50.2	69.6	48.6
04:00 AM - 05:00 AM	49.0	58.5	47.7
05:00 AM - 06:00 AM	47.7	64.2	42.8
06:00 AM - 07:00 AM	50.8	72.8	39.8
07:00 AM - 08:00 AM	50.5	82.4	38.9
08:00 AM - 09:00 AM	50.0	64.9	38.4
09:00 AM - 10:00 AM	48.7	71.7	35.7
10:00 AM - 11:00 AM	47.1	72.6	34.2
11:00 AM - 12:00 PM	55.9	62.3	55.1
12:00 PM - 01:00 PM	57.5	68.3	55.4
01:00 PM - 02:00 PM	59.5	67.6	57.9
02:00 PM - 03:00 PM	42.2	61.4	36.0
03:00 PM - 04:00 PM	47.8	77.5	37.2

Leq Average 24 hrs. (dB(A))

Lmax (dB(A))

L90 (dB(A))

Ldn (dB(A))

Standard (dB(A))

Reference Method : ISO1996-1 and 1996-2

Standard 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานเสียงโดยทั่วไป

2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงที่โครงการประกอบกิจการ

โรงงาน พ.ศ. 2548

Technical Management

Scientist (3)

Approved by

Section Head



MM-N08



Analysis / Test Report

TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetuk, Amphur Thaplor, Pichit Thailand 66230
P/O :
Project Name : Water Project
Project Location : CHATREE

Lot ID: 2488415
Date Received :Aug 09, 2024
Date Reported :Aug 16, 2024
Report Number :3071677-1

Page 2 of 4

Sample Number	2488415-1
Sampled Date	Aug 08, 2024 10:45 AM
Sample Description	Wastewater
Location	WWAT6708
Date Analysis Commenced	Aug 10, 2024
Condition of Sample	Contained in four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
COD	mg/L	-	25	64	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 520 D	Bangkok
Cyanide as CN	mg/L	0.002	0.005	19.2	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - CN (C, E)	Bangkok
pH at 25 degree C		-	-	8.6	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (D)	Bangkok
Temperature *	Degree C	-	-	29.1	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	4484	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	22	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Bangkok
Weak Acid Dissociable Cyanide *	mg/L	0.002	0.005	19.2	Based on Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (1)	Bangkok

Remark :
- LOD : Limit of Detection
- %^u : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS Laboratory Group (Thailand) Co., Ltd. or its authorized personnel. This report is not reproduced except in full.

Approved by

Section Head

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company



Analysis / Test Report

TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetuk, Amphur Thaplor, Pichit Thailand 66230
P/O :
Project Name : Water Project
Project Location : CHATREE

Lot ID: 2488415
Date Received :Aug 09, 2024
Date Reported :Aug 16, 2024
Report Number :3071677-1

Page 1 of 4

Sample Number	2488415-1
Sampled Date	Aug 08, 2024 10:45 AM
Sample Description	Wastewater
Location	WWAT6708
Date Analysis Commenced	Aug 10, 2024
Condition of Sample	Contained in four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Metals Testing						
Arsenic	mg/L	0.0003	0.0005	0.05	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	0.19	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.20	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.01	0.04	<0.04	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.0010	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Manganese	mg/L	0.0003	0.0005	0.22	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Mercury	mg/L	0.0001	0.0005	<0.0005	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.003	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.0003	0.0005	0.04	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.003	0.005	0.03	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing						
BOD (5 days at 20 degree C)	mg/L	-	2.0	4.9	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - O G	Bangkok

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS Laboratory Group (Thailand) Co., Ltd. or its authorized personnel. This report is not reproduced except in full.

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MM-N08



Analysis / Test Report

TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetuk, Amphur Thaplor, Pichit Thailand 66230
P/O :
Project Name : Water Project
Project Location : CHATREE

Lot ID: 2488415
Date Received :Aug 09, 2024
Date Reported :Aug 16, 2024
Report Number :3071677-1

Page 4 of 4

Sample Number 2488415-2
Sampled Date Aug 08, 2024 10:30 AM
Sample Description Wastewater
Location WWBT6708
Date Analysis Commenced Aug 10, 2024
Condition of Sample Contained in four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	Result	Method	Testing Location
Water Testing					
COD	mg/L	-	25	41	Bangkok
Cyanide as CN	mg/L	0.002	0.005	23.3	Bangkok
pH at 25 degree C		-	-	8.6	Bangkok
Temperature *	Degree C	-	-	28.9	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	4068	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	Bangkok
Weak Acid Dissociable Cyanide *	mg/L	0.002	0.005	23.3	Bangkok

Remark :
- LOD : Limit of Detection
- %^u : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

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2344-41/ EMAIL S:\Report\AL NGSL\pt (7:30PM)



Analysis / Test Report

TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetuk, Amphur Thaplor, Pichit Thailand 66230
P/O :
Project Name : Water Project
Project Location : CHATREE

Lot ID: 2488415
Date Received :Aug 09, 2024
Date Reported :Aug 16, 2024
Report Number :3071677-1

Page 3 of 4

Sample Number 2488415-2
Sampled Date Aug 08, 2024 10:30 AM
Sample Description Wastewater
Location WWBT6708
Date Analysis Commenced Aug 10, 2024
Condition of Sample Contained in four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	Result	Method	Testing Location
Metals Testing					
Arsenic	mg/L	0.0003	0.0005	0.03	Bangkok
Cadmium	mg/L	0.0003	0.0005	0.002	Bangkok
Copper	mg/L	0.0003	0.0005	5.37	Bangkok
Hexavalent Chromium	mg/L	0.01	0.04	<0.04	Bangkok
Lead	mg/L	0.0003	0.0005	<0.0005	Bangkok
Manganese	mg/L	0.0003	0.0005	0.13	Bangkok
Mercury	mg/L	0.0001	0.0005	<0.0005	Bangkok
Nickel	mg/L	0.0003	0.0005	0.10	Bangkok
Selenium	mg/L	0.0003	0.0005	0.04	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	Bangkok
Zinc	mg/L	0.003	0.005	Not Detected	Bangkok
Water Testing					
BOD (5 days at 20 degree C)	mg/L	-	2.0	<2.0	Bangkok

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S:\Report\AL NGSL\pt (7:30PM)



CERTIFICATE OF ANALYSIS

Client	Akara Resources Public Co., Ltd.	ALS Lot No.	2488345
Contact	Yaowanud Chandung	Date Samples Received	Aug 07, 2024 04:01 PM
Address	99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230	Issue Date	Aug 22, 2024 06:02 PM
Email	yaowanud@akararesources.com	Quote number	Q2352889
		Project	CHATREE
Telephone	0-5661-4500	No. of samples received	25
Facsimile	0-5661-4190	No. of samples analysed	25

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or client request.

When sampling time information is not provided by client, sampling dates are shown without a time component. In this instances, the time component has been assumed by the laboratory for processing purposes.

The 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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Page : 1 of 9

ALS Lot No. : 2488345
Client : Akara Resources Public Co., Ltd.
Project : CHATREE



Analytical Results

Client sample ID			SW6708ST1	SW6708ST2	SW6708ST8	SW6708ST9	SW6708ST10	SW6708ST11	SW6708ST13
Client sampling date / time			5-Aug-24	6-Aug-24	6-Aug-24	6-Aug-24	6-Aug-24	6-Aug-24	5-Aug-24
Compound	LOR	Unit	2488345-1	2488345-2	2488345-3	2488345-4	2488345-5	2488345-6	2488345-7
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	116	284	1364	3880	1740	400	115
EA025: Suspended Solids									
Total Suspended Solids	5	mg/L	15	7	<5	<5	<5	<5	10
EA065: Total Hardness									
Total Hardness	1	mg/L	78	183	1094	3024	1497	321	84
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	76	18	20	96	23	86	71
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	76	18	20	96	23	86	71
ED041G: Sulfate									
Sulfate	1.0	mg/L	<1.0	199	1204	2875	1323	273	49.9
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	3.0	13.0	23.2	2.3	2.6	2.7	2.3
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	22.6	35.8	168	595	324	45.8	21.6
Magnesium	0.10	mg/L	5.30	22.8	164	374	167	50.2	7.18
Potassium	0.10	mg/L	1.35	1.15	6.07	11.7	10.9	6.66	1.42
Sodium	0.10	mg/L	8.03	9.53	89.3	27.8	16.1	8.86	12.1
EG020T: Total Metals by ICP-MS									
Arsenic	0.001	mg/L	0.001	0.001	<0.001	0.001	<0.001	0.001	0.001
Cobalt	0.001	mg/L	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001
Copper	0.001	mg/L	0.002	0.001	<0.001	<0.001	<0.001	<0.001	0.002
Iron	0.05	mg/L	0.96	0.54	0.12	<0.05	0.10	0.15	0.73
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	0.13	0.24	0.39	0.05	0.52	0.09	0.12
EG035T: Total Recoverable Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G-1: Cyanide WAD Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

LOR = Limit of reporting

Approved by

Senior Manager

MM-N08

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Analytical Results

Client sample ID			SW6708ST1	SW6708ST2	SW6708ST8	SW6708ST9	SW6708ST10	SW6708ST11	SW6708ST13
Client sampling date / time			5-Aug-24	6-Aug-24	6-Aug-24	6-Aug-24	6-Aug-24	6-Aug-24	5-Aug-24
Compound	LOR	Unit	2488345-1	2488345-2	2488345-3	2488345-4	2488345-5	2488345-6	2488345-7
EN055: Ionic Balance									
Ionic Balance	0	%	0.62	6.79	0.70	1.40	6.01	0.59	0.01
Total Anions	0.01	mEq/L	1.32	4.70	25.54	60.25	27.43	7.05	2.24
Total Cations	0.01	mEq/L	1.95	4.11	25.90	61.96	30.93	6.97	2.23
EP005: Total Organic Carbon									
Total Organic Carbon	0.1	mg/L	3.88	4.83	3.32	0.94	1.51	5.91	4.41
Turbidity									
Turbidity	0.1	NTU	35	8.2	1.6	1.3	1.8	3.9	15

LOR = Limit of reporting

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 Senior Manager



Analytical Results

Client sample ID			SW6708ST14	SW6708ST16	SW6708ST17	SW6708ST18	SW6708ST20	SW6708ST21	SW6708ST22
Client sampling date / time			5-Aug-24	5-Aug-24	6-Aug-24	6-Aug-24	6-Aug-24	6-Aug-24	5-Aug-24
Compound	LOR	Unit	2488345-8	2488345-9	2488345-10	2488345-11	2488345-12	2488345-13	2488345-14
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	87	119	984	764	1976	1444	130
EA025: Suspended Solids									
Total Suspended Solids	5	mg/L	8	33	<5	10	6	<5	30
EA065: Total Hardness									
Total Hardness	1	mg/L	68	87	750	565	1745	1269	64
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	66	81	55	76	20	18	91
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	66	81	55	76	20	18	91
ED041G: Sulfate									
Sulfate	1.0	mg/L	<1.0	<1.0	810	531	1640	1211	<1.0
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	2.1	2.8	10.3	4.6	2.4	3.0	1.9
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	18.7	25.3	145	94.1	373	272	16.5
Magnesium	0.10	mg/L	5.07	5.77	94.8	80.3	197	151	5.62
Potassium	0.10	mg/L	1.51	1.54	4.20	8.15	10.0	11.4	0.87
Sodium	0.10	mg/L	8.44	9.30	40.0	19.8	20.1	22.9	17.7
EG020T: Total Metals by ICP-MS									
Arsenic	0.001	mg/L	0.001	0.001	<0.001	0.001	<0.001	<0.001	0.002
Cobalt	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	0.003	<0.001	<0.001
Copper	0.001	mg/L	0.002	0.003	<0.001	<0.001	0.001	0.002	0.004
Iron	0.05	mg/L	0.62	1.57	0.23	0.12	0.06	<0.05	2.18
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	0.03	0.11	0.40	0.38	0.77	0.14	0.15
EG035T: Total Recoverable Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G-1: Cyanide WAD Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

LOR = Limit of reporting

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 Senior Manager



Analytical Results

Client sample ID			SW6708ST14	SW6708ST16	SW6708ST17	SW6708ST18	SW6708ST20	SW6708ST21	SW6708ST22
Client sampling date / time			5-Aug-24	5-Aug-24	6-Aug-24	6-Aug-24	6-Aug-24	6-Aug-24	5-Aug-24
Compound	LOR	Unit	2488345-8	2488345-9	2488345-10	2488345-11	2488345-12	2488345-13	2488345-14
EN055: Ionic Balance									
Ionic Balance	0	%	0.62	0.78	2.48	0.69	3.03	4.27	0.54
Total Anions	0.01	mEq/L	1.13	1.40	17.72	12.20	33.84	25.06	1.54
Total Cations	0.01	mEq/L	1.76	2.18	16.86	12.37	35.95	27.30	2.08
EP005: Total Organic Carbon									
Total Organic Carbon	0.1	mg/L	4.66	3.53	4.91	6.75	1.57	2.01	4.96
Turbidity									
Turbidity	0.1	NTU	15	60	2.2	13	4.1	2.2	60

LOR = Limit of reporting

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 Senior Manager



Analytical Results

Client sample ID			SW6708ST23	SW6708ST27	SW6708ST28	SW6708ST30	SW6708ST31	SW6708ST33	SW6708ST36
Client sampling date / time			5-Aug-24	6-Aug-24	6-Aug-24	6-Aug-24	5-Aug-24	5-Aug-24	6-Aug-24
Compound	LOR	Unit	2488345-15	2488345-16	2488345-17	2488345-18	2488345-19	2488345-20	2488345-21
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	102	1124	206	2452	1864	1412	1764
EA025: Suspended Solids									
Total Suspended Solids	5	mg/L	<5	<5	<5	<5	<5	<5	<5
EA065: Total Hardness									
Total Hardness	1	mg/L	71	990	185	2246	1553	1238	1369
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	71	81	76	18	20	5	5
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	71	81	76	18	20	5	5
ED041G: Sulfate									
Sulfate	1.0	mg/L	<1.0	849	107	1819	1427	1216	1437
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	2.4	2.7	3.7	2.3	2.3	2.1	10.6
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	18.7	227	43.8	401	350	288	219
Magnesium	0.10	mg/L	5.96	106	18.4	301	165	132	200
Potassium	0.10	mg/L	1.21	7.92	4.20	11.3	9.80	10.6	3.34
Sodium	0.10	mg/L	11.8	8.46	4.64	15.0	18.8	12.2	31.4
EG020T: Total Metals by ICP-MS									
Arsenic	0.001	mg/L	0.001	0.002	0.003	0.001	<0.001	<0.001	<0.001
Cobalt	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	0.006	0.006
Copper	0.001	mg/L	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.002
Iron	0.05	mg/L	0.58	0.09	0.20	0.05	<0.05	<0.05	0.06
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	0.07	0.23	0.02	0.13	0.07	1.95	2.10
EG035T: Total Recoverable Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G-1: Cyanide WAD Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

LOR = Limit of reporting

Approved by _____
 Senior Manager



Analytical Results

Client sample ID			SW6708ST23	SW6708ST27	SW6708ST28	SW6708ST30	SW6708ST31	SW6708ST33	SW6708ST36
Client sampling date / time			5-Aug-24	6-Aug-24	6-Aug-24	6-Aug-24	5-Aug-24	5-Aug-24	6-Aug-24
Compound	LOR	Unit	2488345-15	2488345-16	2488345-17	2488345-18	2488345-19	2488345-20	2488345-21
EN055: Ionic Balance									
Ionic Balance	0	%	0.74	4.86	6.43	9.97	4.26	2.20	1.52
Total Anions	0.01	mEq/L	1.23	18.70	3.53	37.44	29.49	24.93	29.69
Total Cations	0.01	mEq/L	1.97	20.61	4.01	45.73	32.11	26.05	28.80
EP005: Total Organic Carbon									
Total Organic Carbon	0.1	mg/L	4.62	2.80	5.44	1.94	2.23	1.59	2.54
Turbidity									
Turbidity	0.1	NTU	12	2.1	4.9	0.90	1.1	0.95	1.9

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Senior Manager



Analytical Results

Client sample ID			SW6708ST37	SW6708ST39	SW6708ST40	SW6708ST41	----	----	----
Client sampling date / time			6-Aug-24	6-Aug-24	5-Aug-24	6-Aug-24	----	----	----
Compound	LOR	Unit	2488345-22	2488345-23	2488345-24	2488345-25	----	----	----
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	588	760	948	764	----	----	----
EA025: Suspended Solids									
Total Suspended Solids	5	mg/L	<5	5	<5	<5	----	----	----
EA065: Total Hardness									
Total Hardness	1	mg/L	425	561	776	701	----	----	----
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	15	66	10	20	----	----	----
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	----	----	----
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	----	----	----
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	----	----	----
Total Alkalinity	1	mg/L	15	66	10	20	----	----	----
ED041G: Sulfate									
Sulfate	1.0	mg/L	454	550	739	586	----	----	----
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	1.3	4.1	1.5	2.0	----	----	----
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	108	139	183	132	----	----	----
Magnesium	0.10	mg/L	37.8	52.0	77.9	90.0	----	----	----
Potassium	0.10	mg/L	2.22	7.32	7.51	4.04	----	----	----
Sodium	0.10	mg/L	13.7	8.91	8.59	13.4	----	----	----
EG020T: Total Metals by ICP-MS									
Arsenic	0.001	mg/L	0.002	0.002	0.001	0.001	----	----	----
Cobalt	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----	----	----
Copper	0.001	mg/L	<0.001	0.001	<0.001	<0.001	----	----	----
Iron	0.05	mg/L	0.06	0.10	<0.05	0.09	----	----	----
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----	----	----
Manganese	0.001	mg/L	0.02	0.15	0.04	0.26	----	----	----
EG035T: Total Recoverable Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	----	----	----
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	----	----	----
EK025G-1: Cyanide WAD Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	----	----	----

LOR = Limit of reporting

Approved by

Senior Manager



Analytical Results

Client sample ID			SW6708ST37	SW6708ST39	SW6708ST40	SW6708ST41	----	----	----
Client sampling date / time			6-Aug-24	6-Aug-24	5-Aug-24	6-Aug-24	----	----	----
Compound	LOR	Unit	2488345-22	2488345-23	2488345-24	2488345-25	----	----	----
EN055: Ionic Balance									
Ionic Balance	0	%	2.19	2.50	2.62	8.72	----	----	----
Total Anions	0.01	mEq/L	9.55	12.40	15.27	12.34	----	----	----
Total Cations	0.01	mEq/L	9.14	11.79	16.09	14.70	----	----	----
EP005: Total Organic Carbon									
Total Organic Carbon	0.1	mg/L	2.30	4.88	2.19	4.94	----	----	----
Turbidity									
Turbidity	0.1	NTU	2.1	6.1	1.6	3.1	----	----	----

LOR = Limit of reporting

Approved by

Senior Manager

Page : 9 of 9



CERTIFICATE OF ANALYSIS

Client Akara Resources Public Co., Ltd.
Contact Yaowanud Chandung
Address 99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230
Email yaowanud@akararesources.com
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Facsimile 0-5661-4190

ALS Lot No. 24127007
Date Samples Received Nov 14, 2024 02:00 PM
Issue Date Nov 28, 2024 02:59 PM
Quote number Q2352889
Project CHATREE
No. of samples received 25
No. of samples analysed 25

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or client request.

When sampling time information is not provided by client, sampling dates are shown without a time component. In this instances, the time component has been assumed by the laboratory for processing purposes.

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Analytical Results

Client sample ID Client sampling date / time			SW6711ST1 12-Nov-24	SW6711ST2 12-Nov-24	SW6711ST8 13-Nov-24	SW6711ST9 12-Nov-24	SW6711ST10 12-Nov-24	SW6711ST11 12-Nov-24	SW6711ST13 11-Nov-24
Compound	LOR	Unit	24127007-1	24127007-2	24127007-3	24127007-4	24127007-5	24127007-6	24127007-7
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	134	286	1772	3936	1540	364	380
EA025: Suspended Solids									
Total Suspended Solids	5	mg/L	10	9	<5	<5	<5	6	<5
EA065: Total Hardness									
Total Hardness	1	mg/L	100	204	1301	2784	1421	257	261
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	111	116	51	96	51	96	132
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	111	116	51	96	51	96	132
ED041G: Sulfate									
Sulfate	1.0	mg/L	<1.0	188	1453	2552	1286	235	222
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	5.4	8.3	28.8	2.4	2.6	2.5	7.7
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	28.1	45.6	206	551	305	35.4	61.7
Magnesium	0.10	mg/L	7.29	22.0	191	342	166	41.0	25.9
Potassium	0.10	mg/L	4.68	6.52	5.17	11.9	10.7	5.69	5.97
Sodium	0.10	mg/L	13.0	18.5	143	27.2	16.2	6.79	20.5
EG020T: Total Metals by ICP-MS									
Arsenic	0.001	mg/L	0.001	0.002	<0.001	0.001	<0.001	<0.001	0.002
Cobalt	0.001	mg/L	<0.001	<0.001	0.008	<0.001	<0.001	<0.001	<0.001
Copper	0.001	mg/L	0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	0.05	mg/L	0.58	0.67	0.40	<0.05	0.07	0.06	0.10
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	1.41	0.46	2.52	0.04	0.43	0.13	0.44
EG035T: Total Recoverable Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G-1: Cyanide WAD Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

LOR = Limit of reporting

Approved by

Senior Manager



Analytical Results

Client sample ID Client sampling date / time			SW6711ST1 12-Nov-24	SW6711ST2 12-Nov-24	SW6711ST8 13-Nov-24	SW6711ST9 12-Nov-24	SW6711ST10 12-Nov-24	SW6711ST11 12-Nov-24	SW6711ST13 11-Nov-24
Compound	LOR	Unit	24127007-1	24127007-2	24127007-3	24127007-4	24127007-5	24127007-6	24127007-7
EN055: Ionic Balance									
Ionic Balance	0	%	0.71	8.41	1.68	3.13	4.69	7.20	4.91
Total Anions	0.01	mEq/L	1.98	5.98	31.28	53.68	27.13	6.44	6.90
Total Cations	0.01	mEq/L	2.69	5.05	32.35	57.14	29.80	5.58	6.26
EP005: Total Organic Carbon									
Total Organic Carbon	0.1	mg/L	5.58	7.07	1.19	1.02	2.04	5.84	6.80
Turbidity									
Turbidity	0.1	NTU	3.5	4.6	3.7	0.70	1.5	3.9	3.6

LOR = Limit of reporting

Approved by

Senior Manager



Analytical Results

Client sample ID Client sampling date / time			SW6711ST14 11-Nov-24	SW6711ST16 11-Nov-24	SW6711ST17 13-Nov-24	SW6711ST18 13-Nov-24	SW6711ST20 13-Nov-24	SW6711ST21 12-Nov-24	SW6711ST22 11-Nov-24
Compound	LOR	Unit	24127007-8	24127007-9	24127007-10	24127007-11	24127007-12	24127007-13	24127007-14
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	136	171	796	632	1744	1392	192
EA025: Suspended Solids									
Total Suspended Solids	5	mg/L	6	11	<5	<5	5	<5	<5
EA065: Total Hardness									
Total Hardness	1	mg/L	95	118	627	490	1585	1202	136
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	101	116	66	91	23	51	152
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	101	116	66	91	23	51	152
ED041G: Sulfate									
Sulfate	1.0	mg/L	<1.0	13.6	591	485	1476	1177	<1.0
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	5.4	6.4	6.2	4.6	2.4	2.5	4.9
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	26.2	32.7	119	87.5	367	261	37.9
Magnesium	0.10	mg/L	7.26	8.75	80.1	66.1	168	144	10.1
Potassium	0.10	mg/L	3.74	3.27	3.57	8.54	9.78	11.1	3.22
Sodium	0.10	mg/L	10.3	15.9	34.5	16.4	21.3	24.4	23.3
EG020T: Total Metals by ICP-MS									
Arsenic	0.001	mg/L	0.002	0.002	<0.001	0.001	<0.001	<0.001	0.002
Cobalt	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001
Copper	0.001	mg/L	0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	0.05	mg/L	0.24	0.80	0.16	<0.05	0.06	<0.05	0.35
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	0.16	1.18	0.15	0.29	0.47	0.52	1.10
EG035T: Total Recoverable Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G-1: Cyanide WAD Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

LOR = Limit of reporting

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Senior Manager



Analytical Results

Client sample ID Client sampling date / time			SW6711ST14 11-Nov-24	SW6711ST16 11-Nov-24	SW6711ST17 13-Nov-24	SW6711ST18 13-Nov-24	SW6711ST20 13-Nov-24	SW6711ST21 12-Nov-24	SW6711ST22 11-Nov-24
Compound	LOR	Unit	24127007-8	24127007-9	24127007-10	24127007-11	24127007-12	24127007-13	24127007-14
EN055: Ionic Balance									
Ionic Balance	0	%	0.64	13.91	2.96	3.56	4.38	2.53	18.43
Total Anions	0.01	mEq/L	1.81	2.36	13.31	11.52	30.53	24.90	2.63
Total Cations	0.01	mEq/L	2.45	3.13	14.13	10.73	33.33	26.20	3.82
EP005: Total Organic Carbon									
Total Organic Carbon	0.1	mg/L	4.97	5.77	2.63	6.85	2.01	1.85	3.48
Turbidity									
Turbidity	0.1	NTU	3.0	4.7	2.2	4.5	2.9	2.0	2.5

LOR = Limit of reporting

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Senior Manager



Analytical Results

Client sample ID Client sampling date / time			SW6711ST23 11-Nov-24	SW6711ST27 13-Nov-24	SW6711ST28 12-Nov-24	SW6711ST30 12-Nov-24	SW6711ST31 11-Nov-24	SW6711ST33 11-Nov-24	SW6711ST36 13-Nov-24
Compound	LOR	Unit	24127007-15	24127007-16	24127007-17	24127007-18	24127007-19	24127007-20	24127007-21
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	312	912	114	3104	1460	1172	1652
EA025: Suspended Solids									
Total Suspended Solids	5	mg/L	<5	<5	22	<5	<5	<5	<5
EA065: Total Hardness									
Total Hardness	1	mg/L	231	954	210	2196	1441	1166	1481
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	142	111	91	18	51	3	5
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	142	111	91	18	51	3	5
ED041G: Sulfate									
Sulfate	1.0	mg/L	169	895	158	2106	1428	1165	1479
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	9.7	2.2	4.3	2.4	2.5	2.3	5.5
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	54.3	206	46.5	386	326	269	240
Magnesium	0.10	mg/L	23.1	118	22.9	297	171	126	214
Potassium	0.10	mg/L	6.72	6.37	4.34	11.3	10.8	10.3	3.11
Sodium	0.10	mg/L	27.0	9.25	5.25	16.1	20.9	12.1	32.9
EG020T: Total Metals by ICP-MS									
Arsenic	0.001	mg/L	0.002	0.001	0.004	<0.001	<0.001	<0.001	<0.001
Cobalt	0.001	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.001
Copper	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	0.05	mg/L	0.61	0.09	0.08	0.07	<0.05	0.07	<0.05
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	1.78	0.11	0.17	0.12	0.08	0.48	0.66
EG035T: Total Recoverable Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G-1: Cyanide WAD Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

LOR = Limit of reporting

Approved by

Senior Manager



Analytical Results

Client sample ID Client sampling date / time			SW6711ST23 11-Nov-24	SW6711ST27 13-Nov-24	SW6711ST28 12-Nov-24	SW6711ST30 12-Nov-24	SW6711ST31 11-Nov-24	SW6711ST33 11-Nov-24	SW6711ST36 13-Nov-24
Compound	LOR	Unit	24127007-15	24127007-16	24127007-17	24127007-18	24127007-19	24127007-20	24127007-21
EN055: Ionic Balance									
Ionic Balance	0	%	0.73	1.04	2.97	1.59	2.52	1.46	1.11
Total Anions	0.01	mEq/L	6.05	20.14	4.83	43.31	30.01	23.86	30.39
Total Cations	0.01	mEq/L	5.96	20.57	4.55	44.71	31.56	24.56	31.07
EP005: Total Organic Carbon									
Total Organic Carbon	0.1	mg/L	7.10	1.99	11.4	2.05	2.99	1.74	2.01
Turbidity									
Turbidity	0.1	NTU	2.1	1.3	25	0.85	1.1	0.80	0.65

LOR = Limit of reporting

Approved by

Senior Manager



Analytical Results

Client sample ID			SW6711ST37	SW6711ST39	SW6711ST40	SW6711ST41	----	----	----
Client sampling date / time			13-Nov-24	13-Nov-24	11-Nov-24	12-Nov-24	----	----	----
Compound	LOR	Unit	24127007-22	24127007-23	24127007-24	24127007-25	----	----	----
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	520	600	692	928	----	----	----
EA025: Suspended Solids									
Total Suspended Solids	5	mg/L	<5	7	<5	<5	----	----	----
EA065: Total Hardness									
Total Hardness	1	mg/L	455	523	515	834	----	----	----
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	20	91	15	86	----	----	----
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	----	----	----
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	----	----	----
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	----	----	----
Total Alkalinity	1	mg/L	20	91	15	86	----	----	----
ED041G: Sulfate									
Sulfate	1.0	mg/L	488	474	540	711	----	----	----
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	1.7	5.2	1.8	2.3	----	----	----
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	117	137	121	158	----	----	----
Magnesium	0.10	mg/L	39.8	44.0	51.4	106	----	----	----
Potassium	0.10	mg/L	2.52	10.8	6.22	4.90	----	----	----
Sodium	0.10	mg/L	13.7	8.81	6.15	14.8	----	----	----
EG020T: Total Metals by ICP-MS									
Arsenic	0.001	mg/L	0.002	0.004	0.002	0.002	----	----	----
Cobalt	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----	----	----
Copper	0.001	mg/L	<0.001	0.005	<0.001	<0.001	----	----	----
Iron	0.05	mg/L	<0.05	0.15	<0.05	<0.05	----	----	----
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----	----	----
Manganese	0.001	mg/L	0.05	0.39	0.04	0.38	----	----	----
EG035T: Total Recoverable Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	----	----	----
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	----	----	----
EK025G-1: Cyanide WAD Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	----	----	----

LOR = Limit of reporting

Approved by

Senior Manager



Analytical Results

Client sample ID			SW6711ST37	SW6711ST39	SW6711ST40	SW6711ST41	----	----	----
Client sampling date / time			13-Nov-24	13-Nov-24	11-Nov-24	12-Nov-24	----	----	----
Compound	LOR	Unit	24127007-22	24127007-23	24127007-24	24127007-25	----	----	----
EN055: Ionic Balance									
Ionic Balance	0	%	2.92	0.89	2.75	4.39	----	----	----
Total Anions	0.01	mEq/L	10.34	11.30	11.32	15.97	----	----	----
Total Cations	0.01	mEq/L	9.75	11.10	10.71	17.44	----	----	----
EP005: Total Organic Carbon									
Total Organic Carbon	0.1	mg/L	2.01	5.15	2.38	4.87	----	----	----
Turbidity									
Turbidity	0.1	NTU	1.3	3.9	1.1	2.4	----	----	----

LOR = Limit of reporting

Approved by

Senior Manager



CERTIFICATE OF ANALYSIS

Client Akara Resources Public Co., Ltd.

ALS Lot No.

2488350

Contact Yaowanud Chandung
Address 99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230

Date Samples Received Aug 07, 2024 04:01 PM
Issue Date Aug 19, 2024 07:36 PM

Email yaowanud@akararesources.com

Quote number Q2352889
Project CHATREE

Telephone 0-5661-4500
Facsimile 0-5661-4190

No. of samples received 25
No. of samples analysed 25

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

General Comments

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Page : 1 of 5

ALS Lot No. : 2488350

Client : Akara Resources Public Co., Ltd.

Project : CHATREE



Analytical Results

Client sample ID			GW6708ST4	GW6708ST5	GW6708ST7	GW6708ST8	GW6708ST9	GW6708ST10	GW6708ST11
Client sampling date / time			5-Aug-24	6-Aug-24	5-Aug-24	5-Aug-24	5-Aug-24	5-Aug-24	5-Aug-24
Compound	LOR	Unit	2488350-1	2488350-2	2488350-3	2488350-4	2488350-5	2488350-6	2488350-7
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	294	382	384	128	194	324	169
EA065: Total Hardness									
Total Hardness	1	mg/L	244	309	252	69	135	197	99
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	227	312	307	71	116	222	91
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	227	312	307	71	116	222	91
ED041G: Sulfate									
Sulfate	1.0	mg/L	62.1	<1.0	46.8	<1.0	31.8	60.6	18.8
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	12.5	1.2	23.3	4.1	10.6	13.5	1.9
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	71.5	108	64.1	23.8	34.3	55.0	27.0
Magnesium	0.10	mg/L	16.1	9.39	22.4	2.41	12.1	14.5	7.61
Potassium	0.10	mg/L	0.36	0.54	0.36	4.82	0.30	0.38	1.32
Sodium	0.10	mg/L	29.5	15.8	72.0	6.83	17.2	47.6	14.8
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	0.004	0.001	0.004	0.004	<0.001	<0.001	0.002
Cobalt	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	0.001	mg/L	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001
Iron	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	0.04	0.46	0.04	0.22	0.11	0.001	0.18
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G: Cyanide Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EN055: Ionic Balance									
Ionic Balance	----	%	7.32	14.26	10.32	0.53	9.75	6.83	0.73
Total Anions	0.01	mEq/L	5.34	5.16	6.65	1.27	2.85	5.25	1.92
Total Cations	0.01	mEq/L	6.18	6.87	8.18	1.81	3.46	6.02	2.65
Turbidity									
Turbidity	0.1	NTU	0.60	1.0	0.50	110	0.35	0.15	29

Approved by

Senior Manager

MM-N08

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Analytical Results

Client sample ID			GW6708ST12	GW6708ST13	GW6708ST15	GW6708ST17	GW6708ST18	GW6708ST20	GW6708ST21
Client sampling date / time			6-Aug-24	6-Aug-24	6-Aug-24	5-Aug-24	5-Aug-24	6-Aug-24	5-Aug-24
Compound	LOR	Unit	2488350-8	2488350-9	2488350-10	2488350-11	2488350-12	2488350-13	2488350-14
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	228	258	242	808	436	326	280
EA065: Total Hardness									
Total Hardness	1	mg/L	119	159	175	578	273	238	241
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	136	161	111	418	227	202	217
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	136	161	111	418	227	202	217
ED041G: Sulfate									
Sulfate	1.0	mg/L	6.0	7.4	74.1	233	161	<1.0	51.0
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	1.7	17.4	17.9	95.2	49.0	36.4	10.6
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	39.6	47.1	56.9	150	78.9	65.2	70.0
Magnesium	0.10	mg/L	4.90	10.1	8.03	49.1	18.5	18.2	16.0
Potassium	0.10	mg/L	0.72	0.53	7.02	2.85	1.10	1.04	0.34
Sodium	0.10	mg/L	15.0	19.6	9.77	99.3	82.9	14.2	23.2
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	0.02	<0.001	0.001	0.001	<0.001	<0.001	0.002
Cobalt	0.001	mg/L	<0.001	<0.001	0.002	<0.001	<0.001	0.001	<0.001
Copper	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	0.98	0.25	1.09	<0.001	<0.001	0.46	0.001
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G: Cyanide Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EN055: Ionic Balance									
Ionic Balance	----	%	11.93	10.42	3.46	5.39	4.11	10.96	8.72
Total Anions	0.01	mEq/L	2.40	3.28	3.83	14.29	8.38	4.33	4.89
Total Cations	0.01	mEq/L	3.05	4.05	4.11	15.92	9.10	5.40	5.83
Turbidity									
Turbidity	0.1	NTU	0.30	1.6	25	17	0.75	1.2	4.7

Approved by

Senior Manager



Analytical Results

Client sample ID			RG67086672	RG6708690	RG6708691	RG6708692	RG6708693	RG67084017	RG67084018
Client sampling date / time			6-Aug-24	5-Aug-24	5-Aug-24	6-Aug-24	6-Aug-24	5-Aug-24	6-Aug-24
Compound	LOR	Unit	2488350-15	2488350-16	2488350-17	2488350-18	2488350-19	2488350-20	2488350-21
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	196	334	284	182	312	492	340
EA065: Total Hardness									
Total Hardness	1	mg/L	133	280	221	124	273	351	271
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	121	297	277	146	202	227	247
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	121	297	277	146	202	227	247
ED041G: Sulfate									
Sulfate	1.0	mg/L	44.7	<1.0	<1.0	<1.0	68.9	161	53.7
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	1.7	1.6	3.0	<1.0	1.3	55.5	11.8
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	32.4	86.3	57.2	30.6	83.1	103	88.0
Magnesium	0.10	mg/L	12.7	15.6	19.0	11.4	16.0	22.8	12.4
Potassium	0.10	mg/L	3.93	0.56	11.8	0.23	0.35	1.18	3.64
Sodium	0.10	mg/L	15.9	22.7	27.3	20.3	10.8	54.1	26.1
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	0.001	0.003	0.001	0.002	0.002	<0.001	0.004
Cobalt	0.001	mg/L	<0.001	<0.001	0.003	<0.001	0.006	<0.001	<0.001
Copper	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	0.06	0.42	1.85	0.23	3.39	0.89	0.39
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G: Cyanide Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EN055: Ionic Balance									
Ionic Balance	----	%	8.01	14.52	12.13	16.26	11.23	4.57	9.62
Total Anions	0.01	mEq/L	2.94	4.92	4.63	2.42	4.74	8.57	5.48
Total Cations	0.01	mEq/L	3.45	6.59	5.91	3.36	5.94	9.40	6.64
Turbidity									
Turbidity	0.1	NTU	3.6	1.7	75	3.2	190	5.0	15

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Senior Manager



Analytical Results

Client sample ID			RG67084020	RG67084021	RG67084024	RG67084025	----	----	----
Client sampling date / time			5-Aug-24	5-Aug-24	5-Aug-24	5-Aug-24	----	----	----
Compound	LOR	Unit	2488350-22	2488350-23	2488350-24	2488350-25	----	----	----
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	452	206	117	134	----	----	----
EA065: Total Hardness									
Total Hardness	1	mg/L	146	156	64	93	----	----	----
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	338	136	66	91	----	----	----
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	----	----	----
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	----	----	----
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	----	----	----
Total Alkalinity	1	mg/L	338	136	66	91	----	----	----
ED041G: Sulfate									
Sulfate	1.0	mg/L	79.0	<1.0	30.1	<1.0	----	----	----
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	16.5	4.6	4.2	1.9	----	----	----
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	27.1	50.2	17.9	28.2	----	----	----
Magnesium	0.10	mg/L	18.9	7.33	4.54	5.45	----	----	----
Potassium	0.10	mg/L	0.63	9.06	1.57	2.17	----	----	----
Sodium	0.10	mg/L	157	6.58	12.3	9.58	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	<0.001	0.003	<0.001	<0.001	----	----	----
Cobalt	0.001	mg/L	<0.001	<0.001	0.001	<0.001	----	----	----
Copper	0.001	mg/L	0.002	0.006	<0.001	0.002	----	----	----
Iron	0.05	mg/L	<0.05	0.06	<0.05	<0.05	----	----	----
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----	----	----
Manganese	0.001	mg/L	<0.001	0.02	0.73	0.01	----	----	----
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	----	----	----
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	----	----	----
EK025G: Cyanide Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	----	----	----
EN055: Ionic Balance									
Ionic Balance	----	%	12.25	21.17	0.04	0.79	----	----	----
Total Anions	0.01	mEq/L	7.61	2.36	1.81	1.54	----	----	----
Total Cations	0.01	mEq/L	9.74	3.63	1.84	2.33	----	----	----
Turbidity									
Turbidity	0.1	NTU	60	39	5.0	70	----	----	----

Approved by

Senior Manager

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CERTIFICATE OF ANALYSIS

Client	Akara Resources Public Co., Ltd.	ALS Lot No.	2488413
Contact	Yaowanud Chandung	Date Samples Received	Aug 08, 2024 01:00 PM
Address	99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230	Issue Date	Aug 19, 2024 07:37 PM
Email	yaowanud@akararesources.com	Quote number	Q2352889
		Project	CHATREE
Telephone	0-5661-4500	No. of samples received	19
Facsimile	0-5661-4190	No. of samples analysed	19

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or client request.

When sampling time information is not provided by client, sampling dates are shown without a time component. In this instances, the time component has been assumed by the laboratory for processing purposes.

The 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.



Analytical Results

Client sample ID			MS6708677	MS6708678	MS6708679	MS67085993	MS67085994	MS67085997	MS67085998
Client sampling date / time			7-Aug-24	6-Aug-24	6-Aug-24	6-Aug-24	6-Aug-24	6-Aug-24	6-Aug-24
Compound	LOR	Unit	2488413-1	2488413-2	2488413-3	2488413-4	2488413-5	2488413-6	2488413-7
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	936	292	294	1844	2328	168	300
EA065: Total Hardness									
Total Hardness	1	mg/L	784	170	147	1501	1948	73	145
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	136	106	86	328	252	66	86
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	136	106	86	328	252	66	86
ED041G: Sulfate									
Sulfate	1.0	mg/L	676	85.0	91.6	1336	1788	42.9	143
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	3.0	1.6	1.2	2.8	2.9	1.7	3.6
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	243	33.0	35.5	443	527	21.5	48.2
Magnesium	0.10	mg/L	45.7	21.4	14.3	96.4	153	4.67	5.97
Potassium	0.10	mg/L	8.00	0.38	0.91	5.24	1.94	1.09	0.51
Sodium	0.10	mg/L	28.6	15.3	14.6	51.0	58.1	12.9	29.6
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	0.003	0.001	<0.001	0.002	0.003	<0.001	<0.001
Cobalt	0.001	mg/L	0.008	<0.001	0.008	<0.001	<0.001	<0.001	0.004
Copper	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002
Iron	0.05	mg/L	<0.05	<0.05	0.58	<0.05	<0.05	<0.05	<0.05
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	2.43	0.03	0.59	1.07	0.14	0.11	0.16
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G: Cyanide Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EN055: Ionic Balance									
Ionic Balance	----	%	3.66	7.47	4.37	0.50	1.01	0.05	2.56
Total Anions	0.01	mEq/L	16.09	3.51	3.30	32.70	40.67	2.00	4.42
Total Cations	0.01	mEq/L	17.32	4.08	3.61	32.37	41.49	2.05	4.20
Turbidity									
Turbidity	0.1	NTU	80	40	110	10	9.4	3.5	70

Approved by

Senior Manager



Analytical Results

Client sample ID			MS67086081	MS67086082	MS67086083	MS67086084	MS67086647	MS67086648	MS67086651
Client sampling date / time			6-Aug-24	6-Aug-24	6-Aug-24	6-Aug-24	5-Aug-24	5-Aug-24	5-Aug-24
Compound	LOR	Unit	2488413-8	2488413-9	2488413-10	2488413-11	2488413-12	2488413-13	2488413-14
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	492	1916	372	380	322	181	422
EA065: Total Hardness									
Total Hardness	1	mg/L	364	1433	267	255	228	109	343
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	23	141	267	307	161	96	202
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	23	141	267	307	161	96	202
ED041G: Sulfate									
Sulfate	1.0	mg/L	367	1513	15.6	7.5	77.3	29.2	171
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	2.5	2.8	1.2	1.7	2.5	2.6	3.4
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	75.0	312	81.5	58.4	72.7	34.4	96.6
Magnesium	0.10	mg/L	42.8	159	15.4	26.6	11.3	5.73	24.6
Potassium	0.10	mg/L	2.29	4.40	0.58	0.14	2.70	1.43	4.59
Sodium	0.10	mg/L	11.0	89.2	24.6	28.6	10.6	6.11	10.9
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	0.001	0.001	0.002	0.002	<0.001	<0.001	0.003
Cobalt	0.001	mg/L	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	0.68	2.00	0.19	0.04	0.36	0.05	0.94
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G: Cyanide Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EN055: Ionic Balance									
Ionic Balance	----	%	0.82	0.90	15.18	9.54	8.54	0.25	3.80
Total Anions	0.01	mEq/L	7.93	33.24	4.73	5.24	4.29	2.24	6.89
Total Cations	0.01	mEq/L	7.80	32.65	6.42	6.34	5.09	2.49	7.44
Turbidity									
Turbidity	0.1	NTU	2.7	2.0	0.70	1.9	12	65	50

Approved by

Senior Manager



Analytical Results

Client sample ID			MS67086652	MS67086653	MS67086654	MS67086665	MS67086666	----	----
Client sampling date / time			5-Aug-24	5-Aug-24	5-Aug-24	5-Aug-24	5-Aug-24	----	----
Compound	LOR	Unit	2488413-15	2488413-16	2488413-17	2488413-18	2488413-19	----	----
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	492	904	198	110	174	----	----
EA065: Total Hardness									
Total Hardness	1	mg/L	449	748	99	60	140	----	----
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	343	96	66	60	126	----	----
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	----	----
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	----	----
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	----	----
Total Alkalinity	1	mg/L	343	96	66	60	126	----	----
ED041G: Sulfate									
Sulfate	1.0	mg/L	106	650	64.5	23.9	35.2	----	----
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	4.2	3.8	5.5	2.4	2.2	----	----
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	125	143	8.60	18.1	44.3	----	----
Magnesium	0.10	mg/L	33.2	94.9	18.8	3.49	7.06	----	----
Potassium	0.10	mg/L	1.78	12.5	4.48	1.54	2.40	----	----
Sodium	0.10	mg/L	12.3	7.27	12.6	12.5	11.7	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	0.003	<0.001	0.004	0.001	0.002	----	----
Cobalt	0.001	mg/L	<0.001	<0.001	0.01	<0.001	<0.001	----	----
Copper	0.001	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	----	----
Iron	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	----	----
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	----	----
Manganese	0.001	mg/L	0.06	4.13	1.47	0.22	<0.001	----	----
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	----	----
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	----	----
EK025G: Cyanide Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	----	----
EN055: Ionic Balance									
Ionic Balance	----	%	9.55	2.16	0.09	0.23	8.33	----	----
Total Anions	0.01	MEq/L	7.89	14.92	2.55	1.55	2.85	----	----
Total Cations	0.01	MEq/L	9.55	15.58	2.64	1.78	3.36	----	----
Turbidity									
Turbidity	0.1	NTU	4.2	220	110	4.7	0.60	----	----

Approved by

Senior Manager

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CERTIFICATE OF ANALYSIS

Client	Akara Resources Public Co., Ltd.	ALS Lot No.	2488369
Contact Address	Yaowanud Chandung 99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230	Date Samples Received Issue Date	Aug 09, 2024 01:00 PM Aug 19, 2024 07:37 PM
Email	yaowanud@akararesources.com	Quote number Project	Q2352889 CHATREE
Telephone Facsimile	0-5661-4500 0-5661-4190	No. of samples received No. of samples analysed	30 30

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or client request.

When sampling time information is not provided by client, sampling dates are shown without a time component. In this instances, the time component has been assumed by the laboratory for processing purposes.

The 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.



Analytical Results

Client sample ID Client sampling date / time			MS67085991 7-Aug-24	MS67085992 7-Aug-24	TSF6708663 7-Aug-24	TSF6708699 7-Aug-24	TSF67081991 7-Aug-24	TSF67081992 7-Aug-24	TSF67085350 7-Aug-24
Compound	LOR	Unit	2488369-1	2488369-2	2488369-3	2488369-4	2488369-5	2488369-6	2488369-7
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	180	277	1068	1848	704	836	932
EA065: Total Hardness									
Total Hardness	1	mg/L	133	209	785	1231	582	586	616
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	131	197	323	358	459	549	252
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	131	197	323	358	459	549	252
ED041G: Sulfate									
Sulfate	1.0	mg/L	27.7	45.0	489	918	208	235	498
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	4.4	2.0	32.3	26.0	5.6	10.1	10.7
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	47.6	75.2	251	287	163	141	158
Magnesium	0.10	mg/L	3.36	5.28	34.6	129	42.9	56.9	53.7
Potassium	0.10	mg/L	0.29	0.17	2.10	0.42	0.44	0.13	2.58
Sodium	0.10	mg/L	13.1	8.16	29.5	53.5	32.5	74.0	57.5
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	<0.001	0.002	0.001	<0.001	0.003	0.004	0.001
Cobalt	0.001	mg/L	<0.001	0.003	<0.001	<0.001	<0.001	0.001	0.001
Copper	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	0.12	0.99	2.02	0.30	0.70	0.39	1.10
Silver	0.001	mg/L	<0.001	----	----	----	----	<0.001	----
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G-1: Cyanide WAD Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EN055: Ionic Balance									
Ionic Balance	----	%	6.50	3.97	1.67	3.80	4.65	2.94	1.00
Total Anions	0.01	mEq/L	2.84	4.20	16.18	25.31	11.91	14.08	14.58
Total Cations	0.01	mEq/L	3.23	4.54	16.73	27.31	13.07	14.93	14.88
Turbidity									
Turbidity	0.1	NTU	25	55	24	4.8	1.2	0.80	1.2

Senior Manager

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Analytical Results

Client sample ID Client sampling date / time			TSF67085351 7-Aug-24	TSF67085249 7-Aug-24	TSF67086534 7-Aug-24	TSF67085332 7-Aug-24	TSF67085336 7-Aug-24	TSF67086691 7-Aug-24	TSF67085338 7-Aug-24
Compound	LOR	Unit	2488369-8	2488369-9	2488369-10	2488369-11	2488369-12	2488369-13	2488369-14
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	768	442	425	280	652	432	457
EA065: Total Hardness									
Total Hardness	1	mg/L	506	323	316	177	449	329	277
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	141	267	262	91	217	232	181
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	141	267	262	91	217	232	181
ED041G: Sulfate									
Sulfate	1.0	mg/L	446	52.0	39.5	99.0	253	150	146
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	3.4	10.7	4.9	3.2	4.9	3.8	4.2
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	95.4	119	116	51.7	146	108	89.3
Magnesium	0.10	mg/L	65.2	6.33	6.39	11.7	20.3	14.2	13.1
Potassium	0.10	mg/L	2.02	0.78	0.89	0.55	0.78	1.25	1.39
Sodium	0.10	mg/L	32.9	12.6	12.7	14.4	22.7	22.7	20.6
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	<0.001	0.003	0.003	0.002	0.004	0.04	0.03
Cobalt	0.001	mg/L	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001
Copper	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	0.005	0.62	0.04	0.48	0.03	1.30	1.33
Silver	0.001	mg/L	----	----	----	----	<0.001	----	----
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G-1: Cyanide WAD Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EN055: Ionic Balance									
Ionic Balance	----	%	0.44	10.05	13.67	7.53	6.04	4.37	3.09
Total Anions	0.01	mEq/L	11.51	5.74	5.24	3.60	8.84	6.96	6.07
Total Cations	0.01	mEq/L	11.61	7.02	6.90	4.18	9.97	7.60	6.46
Turbidity									
Turbidity	0.1	NTU	11	4.2	1.9	9.8	0.65	120	80

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Analytical Results

Client sample ID Client sampling date / time			TSF67085339 7-Aug-24	TSF67086467 7-Aug-24	TSF67086468 7-Aug-24	TSF67086472 7-Aug-24	TSF67086473 7-Aug-24	TSF67086655 7-Aug-24	TSF67086656 7-Aug-24
Compound	LOR	Unit	2488369-15	2488369-16	2488369-17	2488369-18	2488369-19	2488369-20	2488369-21
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	255	976	2533	302	1108	127	17
EA065: Total Hardness									
Total Hardness	1	mg/L	136	697	1139	222	748	98	5
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	76	323	81	222	15	91	5
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	76	323	81	222	15	91	5
ED041G: Sulfate									
Sulfate	1.0	mg/L	92.1	437	1934	36.5	729	20.8	<1.0
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	2.6	11.5	53.9	1.2	5.0	1.7	1.3
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	42.1	226	309	73.4	168	30.1	1.80
Magnesium	0.10	mg/L	7.57	29.0	95.5	9.47	79.9	5.53	0.20
Potassium	0.10	mg/L	3.47	2.35	21.0	0.78	1.00	1.85	0.34
Sodium	0.10	mg/L	13.7	32.4	284	18.0	28.2	9.98	2.71
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	<0.001	0.001	<0.001	0.001	<0.001	0.005	<0.001
Cobalt	0.001	mg/L	0.002	0.003	0.05	<0.001	<0.001	0.002	<0.001
Copper	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001
Iron	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	2.11	2.17	12.7	0.34	0.72	0.56	0.02
Silver	0.001	mg/L	----	----	----	----	----	----	----
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G-1: Cyanide WAD Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EN055: Ionic Balance									
Ionic Balance	----	%	3.32	2.09	7.80	8.63	3.04	0.48	0.11
Total Anions	0.01	mEq/L	3.19	14.52	42.28	4.41	15.26	1.96	0.12
Total Cations	0.01	mEq/L	3.41	15.14	36.17	5.24	16.21	2.44	0.23
Turbidity									
Turbidity	0.1	NTU	12	4.6	1.2	3.4	2.9	37	1.6

Senior Manager

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Analytical Results

Client sample ID Client sampling date / time			TSF67086657 7-Aug-24	TSF67086658 7-Aug-24	TSF67086659 7-Aug-24	TSF67086660 7-Aug-24	TSF67086661 7-Aug-24	TSF67086662 7-Aug-24	TSF67086663 7-Aug-24
Compound	LOR	Unit	2488369-22	2488369-23	2488369-24	2488369-25	2488369-26	2488369-27	2488369-28
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	352	892	468	382	372	125	218
EA065: Total Hardness									
Total Hardness	1	mg/L	233	559	297	266	238	89	138
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	217	5	267	202	252	86	141
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	217	5	267	202	252	86	141
ED041G: Sulfate									
Sulfate	1.0	mg/L	23.7	607	88.7	59.5	<1.0	<1.0	<1.0
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	<1.0	<1.0	1.7	1.1	<1.0	<1.0	<1.0
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	81.1	150	97.2	92.0	82.9	32.2	43.3
Magnesium	0.10	mg/L	7.27	44.3	13.2	8.88	7.59	2.09	7.28
Potassium	0.10	mg/L	2.32	7.36	0.93	1.00	0.71	0.72	1.93
Sodium	0.10	mg/L	13.8	21.5	34.2	18.6	20.7	2.45	13.9
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	<0.001	<0.001	0.005	0.003	0.01	<0.001	<0.001
Cobalt	0.001	mg/L	<0.001	0.06	<0.001	<0.001	<0.001	0.002	<0.001
Copper	0.001	mg/L	<0.001	0.01	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	0.29	3.79	0.03	0.01	0.28	0.36	0.37
Silver	0.001	mg/L	----	----	----	----	----	----	<0.001
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G-1: Cyanide WAD Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EN055: Ionic Balance									
Ionic Balance	----	%	13.34	0.77	8.88	15.03	15.55	0.48	18.95
Total Anions	0.01	mEq/L	4.06	12.47	6.23	4.55	4.15	1.43	2.33
Total Cations	0.01	mEq/L	5.31	12.28	7.45	6.16	5.68	1.91	3.41
Turbidity									
Turbidity	0.1	NTU	2.0	1.2	1.5	1.2	9.0	1.9	18

Senior Manager

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Analytical Results

Client sample ID Client sampling date / time			TSF67086664 7-Aug-24	6708DC2 8-Aug-24	----	----	----	----	----
Compound	LOR	Unit	2488369-29	2488369-31	----	----	----	----	----
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	228	----	----	----	----	----	----
EA065: Total Hardness									
Total Hardness	1	mg/L	133	----	----	----	----	----	----
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	146	----	----	----	----	----	----
Carbonate Alkalinity	1	mg/L	<1	----	----	----	----	----	----
Hydroxide Alkalinity	1	mg/L	<1	----	----	----	----	----	----
Phenolphthalein Alkalinity	1	mg/L	<1	----	----	----	----	----	----
Total Alkalinity	1	mg/L	146	----	----	----	----	----	----
ED041G: Sulfate									
Sulfate	1.0	mg/L	<1.0	----	----	----	----	----	----
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	<1.0	----	----	----	----	----	----
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	39.5	----	----	----	----	----	----
Magnesium	0.10	mg/L	8.44	----	----	----	----	----	----
Potassium	0.10	mg/L	2.15	----	----	----	----	----	----
Sodium	0.10	mg/L	13.7	----	----	----	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	<0.001	----	----	----	----	----	----
Cobalt	0.001	mg/L	<0.001	----	----	----	----	----	----
Copper	0.001	mg/L	<0.001	----	----	----	----	----	----
Iron	0.05	mg/L	<0.05	----	----	----	----	----	----
Lead	0.001	mg/L	<0.001	----	----	----	----	----	----
Manganese	0.001	mg/L	0.14	----	----	----	----	----	----
Silver	0.001	mg/L	----	----	----	----	----	----	----
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	----	----	----	----	----	----
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	1.011	----	----	----	----	----
EK025G-1: Cyanide WAD Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	1.011	----	----	----	----	----
EN055: Ionic Balance									
Ionic Balance	----	%	15.77	----	----	----	----	----	----
Total Anions	0.01	mEq/L	2.41	----	----	----	----	----	----
Total Cations	0.01	mEq/L	3.31	----	----	----	----	----	----
Turbidity									
Turbidity	0.1	NTU	3.5	----	----	----	----	----	----

Senior Manager

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CERTIFICATE OF ANALYSIS

Client	Akara Resources Public Co., Ltd.	ALS Lot No.	24127010
Contact Address	Yaowanud Chandung 99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230	Date Samples Received	Nov 13, 2024 12:45 PM
Email	yaowanud@akararesources.com	Issue Date	Nov 20, 2024 07:09 PM
Telephone	0-5661-4500	Quote number	Q2352889
Facsimile	0-5661-4190	Project	CHATREE
		No. of samples received	25
		No. of samples analysed	25

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

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Analytical Results

Client sample ID			GW6711ST4	GW6711ST5	GW6711ST7	GW6711ST8	GW6711ST9	GW6711ST10	GW6711ST11
Client sampling date / time			12-Nov-24	12-Nov-24	11-Nov-24	11-Nov-24	11-Nov-24	11-Nov-24	11-Nov-24
Compound	LOR	Unit	24127010-1	24127010-2	24127010-3	24127010-4	24127010-5	24127010-6	24127010-7
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	334	416	400	204	104	344	245
EA065: Total Hardness									
Total Hardness	1	mg/L	262	329	263	158	121	187	101
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	248	299	324	132	121	243	116
Carbonate Alkalinity	1	mg/L	10.00	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	5	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	258	299	324	132	121	243	116
ED041G: Sulfate									
Sulfate	1.0	mg/L	60.8	<1.0	51.4	49.7	34.1	60.9	18.2
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	10.5	1.8	23.4	18.7	5.1	13.8	2.1
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	76.6	116	68.3	55.2	31.4	52.6	27.9
Magnesium	0.10	mg/L	17.4	9.84	22.8	5.24	10.7	13.9	7.81
Potassium	0.10	mg/L	0.54	0.57	0.44	6.40	0.26	0.28	1.26
Sodium	0.10	mg/L	35.1	16.9	74.3	13.2	16.9	49.5	14.8
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	0.004	0.001	0.005	0.008	<0.001	<0.001	0.002
Cobalt	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.09
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	0.05	0.06	0.002	0.001	0.08	0.39	0.14
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G: Cyanide Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EN055: Ionic Balance									
Ionic Balance	----	%	9.61	19.57	9.71	2.96	5.87	2.79	0.37
Total Anions	0.01	mEq/L	5.60	4.94	7.02	3.70	2.83	5.61	2.34
Total Cations	0.01	mEq/L	6.79	7.35	8.53	3.92	3.18	5.93	2.71
Turbidity									
Turbidity	0.1	NTU	0.45	0.30	1.5	15	0.35	0.75	20

Approved by

Senior Manager



Analytical Results

Client sample ID			GW6711ST12	GW6711ST13	GW6711ST15	GW6711ST17	GW6711ST18	GW6711ST20	GW6711ST21
Client sampling date / time			12-Nov-24	12-Nov-24	12-Nov-24	11-Nov-24	11-Nov-24	12-Nov-24	12-Nov-24
Compound	LOR	Unit	24127010-8	24127010-9	24127010-10	24127010-11	24127010-12	24127010-13	24127010-14
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	246	256	282	804	484	316	282
EA065: Total Hardness									
Total Hardness	1	mg/L	135	168	183	599	275	221	225
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	172	177	106	405	223	197	218
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	172	177	106	405	223	197	218
ED041G: Sulfate									
Sulfate	1.0	mg/L	<1.0	9.8	104	277	177	<1.0	50.6
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	2.0	7.3	18.1	104	47.1	31.3	5.9
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	45.4	50.1	58.9	159	81.5	58.6	65.3
Magnesium	0.10	mg/L	5.53	10.6	9.09	48.9	17.6	18.5	15.2
Potassium	0.10	mg/L	0.87	0.49	7.44	2.37	1.23	1.02	0.22
Sodium	0.10	mg/L	15.2	16.1	10.2	105	74.8	13.9	22.0
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	0.009	<0.001	<0.001	0.001	<0.001	<0.001	0.002
Cobalt	0.001	mg/L	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001
Copper	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	3.57	0.23	1.33	0.001	0.005	0.28	0.01
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G: Cyanide Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EN055: Ionic Balance									
Ionic Balance	----	%	8.17	10.54	0.56	4.36	1.23	10.39	6.91
Total Anions	0.01	mEq/L	2.89	3.31	4.37	15.20	8.58	4.12	4.76
Total Cations	0.01	mEq/L	3.40	4.09	4.32	16.58	8.80	5.07	5.47
Turbidity									
Turbidity	0.1	NTU	18	2.1	32	2.0	0.25	1.4	0.50

Approved by

Senior Manager



Analytical Results

Client sample ID			RG67116672	RG6711690	RG6711691	RG6711692	RG6711693	RG67114017	RG67114018
Client sampling date / time			12-Nov-24	12-Nov-24	12-Nov-24	12-Nov-24	12-Nov-24	11-Nov-24	11-Nov-24
Compound	LOR	Unit	24127010-15	24127010-16	24127010-17	24127010-18	24127010-19	24127010-20	24127010-21
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	232	364	320	230	282	588	374
EA065: Total Hardness									
Total Hardness	1	mg/L	119	283	244	123	239	419	259
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	116	283	263	167	207	278	253
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	116	283	263	167	207	278	253
ED041G: Sulfate									
Sulfate	1.0	mg/L	55.3	<1.0	<1.0	<1.0	58.5	206	69.2
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	1.9	1.3	3.8	<1.0	1.7	58.5	9.7
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	28.1	86.7	59.8	30.8	72.5	130	83.3
Magnesium	0.10	mg/L	12.0	16.1	22.9	11.1	14.1	23.1	12.4
Potassium	0.10	mg/L	5.28	0.50	9.03	0.22	0.16	1.43	3.50
Sodium	0.10	mg/L	15.6	22.4	26.1	20.1	9.39	60.0	28.4
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	<0.001	0.003	<0.001	0.002	0.001	0.001	0.002
Cobalt	0.001	mg/L	<0.001	<0.001	0.004	0.002	<0.001	<0.001	<0.001
Copper	0.001	mg/L	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001
Iron	0.05	mg/L	<0.05	<0.05	<0.05	0.66	<0.05	<0.05	<0.05
Lead	0.001	mg/L	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	0.04	0.07	1.36	0.25	0.67	0.83	0.36
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G: Cyanide Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EN055: Ionic Balance									
Ionic Balance	----	%	1.87	17.31	17.09	9.38	5.54	2.87	5.41
Total Anions	0.01	mEq/L	3.09	4.68	4.42	2.76	4.64	10.40	5.83
Total Cations	0.01	mEq/L	3.21	6.64	6.24	3.33	5.19	11.02	6.50
Turbidity									
Turbidity	0.1	NTU	9.9	1.5	24	4.4	24	2.2	65

Approved by

Senior Manager



Analytical Results

Client sample ID			RG67114020	RG67114021	RG67114024	RG67114025	----	----	----
Client sampling date / time			11-Nov-24	11-Nov-24	11-Nov-24	11-Nov-24	----	----	----
Compound	LOR	Unit	24127010-22	24127010-23	24127010-24	24127010-25	----	----	----
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	412	158	112	155	----	----	----
EA065: Total Hardness									
Total Hardness	1	mg/L	154	109	73	114	----	----	----
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	263	132	86	116	----	----	----
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	----	----	----
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	----	----	----
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	----	----	----
Total Alkalinity	1	mg/L	263	132	86	116	----	----	----
ED041G: Sulfate									
Sulfate	1.0	mg/L	99.5	<1.0	19.3	<1.0	----	----	----
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	24.1	4.0	4.7	4.6	----	----	----
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	29.2	34.2	21.1	35.2	----	----	----
Magnesium	0.10	mg/L	19.7	5.69	4.98	6.40	----	----	----
Potassium	0.10	mg/L	0.67	6.03	1.80	2.72	----	----	----
Sodium	0.10	mg/L	109	7.77	10.6	9.03	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	<0.001	0.002	0.001	<0.001	----	----	----
Cobalt	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----	----	----
Copper	0.001	mg/L	0.004	<0.001	<0.001	<0.001	----	----	----
Iron	0.05	mg/L	<0.05	0.16	<0.05	<0.05	----	----	----
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----	----	----
Manganese	0.001	mg/L	0.17	0.45	0.47	0.02	----	----	----
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	----	----	----
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	----	----	----
EK025G: Cyanide Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	----	----	----
EN055: Ionic Balance									
Ionic Balance	----	%	5.43	0.40	0.03	0.71	----	----	----
Total Anions	0.01	mEq/L	7.02	2.27	1.94	2.04	----	----	----
Total Cations	0.01	mEq/L	7.83	2.66	1.97	2.74	----	----	----
Turbidity									
Turbidity	0.1	NTU	17	38	9.0	12	----	----	----

Approved by

Senior Manager



CERTIFICATE OF ANALYSIS

Client	Akara Resources Public Co., Ltd.	ALS Lot No.	24127019
Contact	Yaowanud Chandung	Date Samples Received	Nov 14, 2024 02:00 PM
Address	99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230	Issue Date	Nov 21, 2024 05:45 PM
Email	yaowanud@akararesources.com	Quote number	Q2352889
		Project	CHATREE
Telephone	0-5661-4500	No. of samples received	19
Facsimile	0-5661-4190	No. of samples analysed	19

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

General Comments

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Page : 1 of 4

ALS Lot No. : 24127019
Client : Akara Resources Public Co., Ltd.
Project : CHATREE



Analytical Results

Client sample ID			MS6711677	MS6711678	MS6711679	MS67115993	MS67115994	MS67115997	MS67115998
Client sampling date / time			12-Nov-24	12-Nov-24	12-Nov-24	12-Nov-24	12-Nov-24	13-Nov-24	13-Nov-24
Compound	LOR	Unit	24127019-1	24127019-2	24127019-3	24127019-4	24127019-5	24127019-6	24127019-7
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	1352	190	192	3416	1772	100	170
EA065: Total Hardness									
Total Hardness	1	mg/L	1064	154	174	2271	1422	51	93
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	101	121	106	218	329	66	126
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	101	121	106	218	329	66	126
ED041G: Sulfate									
Sulfate	1.0	mg/L	1123	77.5	107	2371	1235	23.2	24.9
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	7.9	2.3	1.6	3.6	3.0	1.2	3.4
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	312	31.5	42.4	611	442	15.3	32.4
Magnesium	0.10	mg/L	69.2	18.3	16.4	181	77.8	3.20	3.06
Potassium	0.10	mg/L	13.8	0.40	1.05	1.57	5.06	0.88	0.56
Sodium	0.10	mg/L	40.6	15.0	15.3	68.0	39.3	11.1	27.8
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	0.002	0.001	0.001	0.003	0.004	<0.001	0.001
Cobalt	0.001	mg/L	0.01	<0.001	0.008	<0.001	<0.001	<0.001	0.005
Copper	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.003
Iron	0.05	mg/L	2.28	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	3.81	0.02	0.63	0.08	1.57	0.15	0.32
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G: Cyanide Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EN055: Ionic Balance									
Ionic Balance	----	%	2.94	1.41	2.45	3.68	0.60	0.05	7.16
Total Anions	0.01	mEq/L	24.78	3.64	3.96	52.02	30.65	1.59	2.68
Total Cations	0.01	mEq/L	23.37	3.74	4.16	48.33	30.29	1.54	3.09
Turbidity									
Turbidity	0.1	NTU	160	60	80	11	19	4.2	750

Approved by

Senior Manager

MM-N08



Analytical Results

Client sample ID			MS67116081	MS67116082	MS67116083	MS67116084	MS67116647	MS67116648	MS67116651
Client sampling date / time			13-Nov-24	13-Nov-24	13-Nov-24	13-Nov-24	11-Nov-24	11-Nov-24	11-Nov-24
Compound	LOR	Unit	24127019-8	24127019-9	24127019-10	24127019-11	24127019-12	24127019-13	24127019-14
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	668	1800	376	368	412	242	408
EA065: Total Hardness									
Total Hardness	1	mg/L	520	1370	259	279	274	153	277
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	18	152	304	329	162	137	192
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	18	152	304	329	162	137	192
ED041G: Sulfate									
Sulfate	1.0	mg/L	550	1648	15.5	9.1	157	58.7	133
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	2.4	2.6	1.3	1.6	2.5	2.5	3.4
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	107	277	82.0	70.1	84.5	46.4	76.6
Magnesium	0.10	mg/L	61.3	165	13.3	25.3	15.4	9.15	20.8
Potassium	0.10	mg/L	1.80	4.42	0.44	<0.10	3.17	1.95	4.40
Sodium	0.10	mg/L	23.7	133	23.4	26.5	10.7	9.56	9.70
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	<0.001	0.002	0.003	0.002	0.001	<0.001	0.003
Cobalt	0.001	mg/L	<0.001	0.004	<0.001	<0.001	0.001	<0.001	<0.001
Copper	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	0.11	3.57	0.41	0.15	0.77	0.41	0.92
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G: Cyanide Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EN055: Ionic Balance									
Ionic Balance	----	%	0.43	4.12	7.66	9.00	0.84	0.37	0.99
Total Anions	0.01	mEq/L	11.57	36.17	5.33	5.62	5.93	3.51	5.95
Total Cations	0.01	mEq/L	11.47	33.31	6.21	6.73	6.03	3.53	6.07
Turbidity									
Turbidity	0.1	NTU	14	31	2.3	3.7	37	90	33

Approved by

Senior Manager



Analytical Results

Client sample ID			MS67116652	MS67116653	MS67116654	MS67116655	MS67116656	----	----
Client sampling date / time			11-Nov-24	11-Nov-24	11-Nov-24	11-Nov-24	11-Nov-24	----	----
Compound	LOR	Unit	24127019-15	24127019-16	24127019-17	24127019-18	24127019-19	----	----
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	440	936	214	130	240	----	----
EA065: Total Hardness									
Total Hardness	1	mg/L	360	689	90	59	130	----	----
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	293	96	66	71	142	----	----
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	----	----
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	----	----
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	----	----
Total Alkalinity	1	mg/L	293	96	66	71	142	----	----
ED041G: Sulfate									
Sulfate	1.0	mg/L	114	689	78.2	27.6	32.3	----	----
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	3.6	3.8	5.2	2.2	2.3	----	----
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	105	130	9.00	17.1	41.1	----	----
Magnesium	0.10	mg/L	23.7	88.1	16.4	3.84	6.64	----	----
Potassium	0.10	mg/L	2.79	12.2	4.38	1.43	2.00	----	----
Sodium	0.10	mg/L	10.5	6.68	11.6	11.9	10.9	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	0.002	<0.001	0.004	0.001	0.001	----	----
Cobalt	0.001	mg/L	<0.001	0.002	0.02	<0.001	<0.001	----	----
Copper	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	----	----
Iron	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	----	----
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	----	----
Manganese	0.001	mg/L	0.03	3.94	1.54	0.14	0.72	----	----
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	----	----
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	----	----
EK025G: Cyanide Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	----	----
EN055: Ionic Balance									
Ionic Balance	----	%	3.23	4.58	0.40	0.06	1.23	----	----
Total Anions	0.01	mEq/L	7.23	15.74	2.82	1.79	3.05	----	----
Total Cations	0.01	mEq/L	7.71	14.36	2.42	1.72	3.12	----	----
Turbidity									
Turbidity	0.1	NTU	45	240	100	4.0	1.8	----	----

Approved by

Senior Manager



CERTIFICATE OF ANALYSIS

Client	Akara Resources Public Co., Ltd.	ALS Lot No.	24127012
Contact	Yaowanud Chandung	Date Samples Received	Nov 15, 2024 12:45 PM
Address	99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230	Issue Date	Nov 22, 2024 08:28 PM
Email	yaowanud@akararesources.com	Quote number	Q2352889
		Project	CHATREE
Telephone	0-5661-4500	No. of samples received	30
Facsimile	0-5661-4190	No. of samples analysed	30

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or client request.

When sampling time information is not provided by client, sampling dates are shown without a time component. In this instances, the time component has been assumed by the laboratory for processing purposes.

The 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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Page : 1 of 6

ALS Lot No. : 24127012
Client : Akara Resources Public Co., Ltd.
Project : CHATREE



Analytical Results

Client sample ID			MS67115991	MS67115992	TSF6711663	TSF6711699	TSF6711991	TSF6711992	TSF67115350
Client sampling date / time			13-Nov-24	13-Nov-24	14-Nov-24	14-Nov-24	13-Nov-24	13-Nov-24	14-Nov-24
Compound	LOR	Unit	24127012-1	24127012-2	24127012-3	24127012-4	24127012-5	24127012-6	24127012-7
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	252	624	896	984	744	728	820
EA065: Total Hardness									
Total Hardness	1	mg/L	162	451	709	1008	637	614	606
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	121	253	339	359	476	582	334
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	121	253	339	359	476	582	334
ED041G: Sulfate									
Sulfate	1.0	mg/L	61.0	238	499	814	304	206	451
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	5.1	1.7	25.6	18.7	7.2	7.2	8.3
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	50.7	168	228	226	187	145	156
Magnesium	0.10	mg/L	8.60	7.77	36.3	114	50.4	61.1	52.7
Potassium	0.10	mg/L	0.34	0.58	2.07	0.47	0.59	0.16	2.26
Sodium	0.10	mg/L	9.06	20.2	32.7	51.6	39.5	83.5	61.6
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	<0.001	<0.001	0.001	<0.001	0.003	0.004	0.002
Cobalt	0.001	mg/L	<0.001	0.002	<0.001	<0.001	0.002	<0.001	<0.001
Copper	0.001	mg/L	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001
Iron	0.05	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	0.39	1.20	2.40	0.13	1.41	0.31	1.07
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G: Cyanide Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EN055: Ionic Balance									
Ionic Balance	----	%	3.77	4.53	1.81	0.22	3.51	6.57	0.17
Total Anions	0.01	mEq/L	3.38	9.04	16.45	23.02	14.20	13.95	14.91
Total Cations	0.01	mEq/L	3.64	9.90	15.86	22.92	15.23	15.91	14.86
Turbidity									
Turbidity	0.1	NTU	40	24	4.7	24	0.50	0.55	2.0

Approved by

Senior Manager

MM-N08



Analytical Results

Client sample ID			TSF67115351	TSF67115249	TSF67116534	TSF67115332	TSF67115336	TSF67116691	TSF67115338
Client sampling date / time			14-Nov-24	13-Nov-24	13-Nov-24	13-Nov-24	13-Nov-24	13-Nov-24	13-Nov-24
Compound	LOR	Unit	24127012-8	24127012-9	24127012-10	24127012-11	24127012-12	24127012-13	24127012-14
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	940	395	385	162	428	470	358
EA065: Total Hardness									
Total Hardness	1	mg/L	823	342	322	115	320	315	281
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	207	299	293	111	238	223	187
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	207	299	293	111	238	223	187
ED041G: Sulfate									
Sulfate	1.0	mg/L	751	52.0	38.0	39.7	104	127	138
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	5.3	7.2	5.7	2.2	3.3	4.1	4.3
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	159	126	119	35.9	104	103	90.8
Magnesium	0.10	mg/L	103	6.69	6.33	6.23	14.4	13.9	13.2
Potassium	0.10	mg/L	2.38	0.88	1.03	0.80	0.84	1.34	1.38
Sodium	0.10	mg/L	44.1	13.0	12.5	10.9	19.8	21.8	21.1
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	<0.001	0.003	0.003	0.002	0.006	0.06	0.02
Cobalt	0.001	mg/L	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	0.001
Copper	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.12
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	0.06	0.67	0.46	0.36	0.05	1.32	1.47
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G: Cyanide Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EN055: Ionic Balance									
Ionic Balance	----	%	1.17	9.28	9.93	0.10	8.66	6.63	4.57
Total Anions	0.01	mEq/L	18.86	6.15	5.75	2.70	6.11	6.36	6.00
Total Cations	0.01	mEq/L	18.42	7.41	7.01	2.80	7.27	7.26	6.57
Turbidity									
Turbidity	0.1	NTU	3.5	2.5	1.1	4.0	0.50	100	27

Approved by

Senior Manager



Analytical Results

Client sample ID			TSF67115339	TSF67116467	TSF67116468	TSF67116472	TSF67116473	TSF67116655	TSF67116656
Client sampling date / time			13-Nov-24	13-Nov-24	13-Nov-24	13-Nov-24	13-Nov-24	13-Nov-24	13-Nov-24
Compound	LOR	Unit	24127012-15	24127012-16	24127012-17	24127012-18	24127012-19	24127012-20	24127012-21
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	190	944	1120	342	628	202	25
EA065: Total Hardness									
Total Hardness	1	mg/L	120	774	683	247	657	80	10
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	66	233	81	228	15	96	10
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	66	233	81	228	15	96	10
ED041G: Sulfate									
Sulfate	1.0	mg/L	96.2	759	932	78.2	722	16.9	2.8
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	2.9	10.5	13.5	2.0	7.2	2.1	2.0
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	36.6	253	174	77.7	154	24.6	3.03
Magnesium	0.10	mg/L	6.86	34.6	59.7	12.8	66.1	4.58	0.48
Potassium	0.10	mg/L	3.20	2.28	13.7	0.66	0.62	1.52	0.32
Sodium	0.10	mg/L	13.7	42.0	116	16.6	26.3	8.31	2.83
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	<0.001	0.001	<0.001	0.001	<0.001	0.001	<0.001
Cobalt	0.001	mg/L	0.002	0.004	0.009	<0.001	<0.001	0.002	<0.001
Copper	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	0.25	<0.05
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	0.44	2.43	6.60	0.46	1.22	0.51	0.03
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G: Cyanide Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EN055: Ionic Balance									
Ionic Balance	----	%	0.91	6.09	4.22	2.58	3.08	0.03	0.04
Total Anions	0.01	mEq/L	3.12	19.59	20.70	5.38	15.17	1.98	0.28
Total Cations	0.01	mEq/L	3.07	17.34	19.03	5.67	14.26	2.01	0.32
Turbidity									
Turbidity	0.1	NTU	80	0.70	0.60	3.7	14	12	0.80

Approved by

Senior Manager



Analytical Results

Client sample ID			TSF67116657	TSF67116658	TSF67116659	TSF67116660	TSF67116661	TSF67116662	TSF67116663
Client sampling date / time			13-Nov-24	13-Nov-24	13-Nov-24	13-Nov-24	13-Nov-24	13-Nov-24	13-Nov-24
Compound	LOR	Unit	24127012-22	24127012-23	24127012-24	24127012-25	24127012-26	24127012-27	24127012-28
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	362	712	440	335	315	58	175
EA065: Total Hardness									
Total Hardness	1	mg/L	224	505	280	242	205	40	127
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	243	10	288	228	233	61	152
Carbonate Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Total Alkalinity	1	mg/L	243	10	288	228	233	61	152
ED041G: Sulfate									
Sulfate	1.0	mg/L	15.0	559	90.2	67.9	3.1	2.8	<1.0
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	1.2	1.4	2.2	1.7	1.3	1.5	<1.0
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	78.5	136	91.5	83.9	71.4	14.8	40.2
Magnesium	0.10	mg/L	6.88	39.9	12.5	7.79	6.55	0.82	6.49
Potassium	0.10	mg/L	2.15	6.74	0.80	0.80	0.44	0.45	1.70
Sodium	0.10	mg/L	13.4	20.9	32.3	15.9	20.8	5.00	13.1
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	0.001	<0.001	0.007	0.002	0.008	<0.001	<0.001
Cobalt	0.001	mg/L	<0.001	0.04	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	0.001	mg/L	<0.001	0.01	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07
Lead	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	0.001	mg/L	0.25	3.33	0.11	0.17	0.21	0.07	0.15
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EK025G: Cyanide Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EN055: Ionic Balance									
Ionic Balance	----	%	8.52	1.94	2.88	3.52	12.37	0.06	11.21
Total Anions	0.01	mEq/L	4.32	11.60	6.63	5.16	3.91	1.09	2.52
Total Cations	0.01	mEq/L	5.12	11.16	7.02	5.54	5.02	1.04	3.15
Turbidity									
Turbidity	0.1	NTU	3.7	0.90	1.2	1.8	3.3	0.75	21

Approved by

Senior Manager



Analytical Results

Client sample ID			TSF67116664	6711DC2					
Client sampling date / time			13-Nov-24	14-Nov-24					
Compound	LOR	Unit	24127012-29	24127012-31					
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	188	----	----	----	----	----	----
EA065: Total Hardness									
Total Hardness	1	mg/L	125	----	----	----	----	----	----
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	152	----	----	----	----	----	----
Carbonate Alkalinity	1	mg/L	<1	----	----	----	----	----	----
Hydroxide Alkalinity	1	mg/L	<1	----	----	----	----	----	----
Phenolphthalein Alkalinity	1	mg/L	<1	----	----	----	----	----	----
Total Alkalinity	1	mg/L	152	----	----	----	----	----	----
ED041G: Sulfate									
Sulfate	1.0	mg/L	<1.0	----	----	----	----	----	----
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	1.2	----	----	----	----	----	----
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	38.4	----	----	----	----	----	----
Magnesium	0.10	mg/L	7.15	----	----	----	----	----	----
Potassium	0.10	mg/L	1.86	----	----	----	----	----	----
Sodium	0.10	mg/L	13.1	----	----	----	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	0.001	mg/L	<0.001	----	----	----	----	----	----
Cobalt	0.001	mg/L	<0.001	----	----	----	----	----	----
Copper	0.001	mg/L	<0.001	----	----	----	----	----	----
Iron	0.05	mg/L	<0.05	----	----	----	----	----	----
Lead	0.001	mg/L	<0.001	----	----	----	----	----	----
Manganese	0.001	mg/L	0.15	----	----	----	----	----	----
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	----	----	----	----	----	----
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	<0.002	<0.002	----	----	----	----	----
EK025G: Cyanide Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	<0.002	<0.002	----	----	----	----	----
EN055: Ionic Balance									
Ionic Balance	----	%	10.29	----	----	----	----	----	----
Total Anions	0.01	mEq/L	2.54	----	----	----	----	----	----
Total Cations	0.01	mEq/L	3.12	----	----	----	----	----	----
Turbidity									
Turbidity	0.1	NTU	4.6	----	----	----	----	----	----

Approved by

Senior Manager



CERTIFICATE OF ANALYSIS

Client	Akara Resources Public Co., Ltd.	ALS Lot No.	2488414
Contact Address	Yaowanud Chandung 99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230	Date Samples Received	Aug 09, 2024 01:00 PM
Email	yaowanud@akararesources.com	Issue Date	Aug 23, 2024 09:29 AM
Telephone	0-5661-4500	Quote number	Q2352889
Facsimile	0-5661-4190	Project	CHATREE
		No. of samples received	3
		No. of samples analysed	3

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or client request.

When sampling time information is not provided by client, sampling dates are shown without a time component. In this instances, the time component has been assumed by the laboratory for processing purposes.

The 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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Page : 1 of 3

ALS Lot No. : 2488414
Client : Akara Resources Public Co., Ltd.
Project : CHATREE



Analytical Results

Compound	Client sample ID		6708SP	6708UD	6708UD2	---	---	---	---
	Client sampling date / time		8-Aug-24	8-Aug-24	8-Aug-24				
	LOR	Unit	2488414-1	2488414-2	2488414-3	---	---	---	---
BOD									
BOD (5 days at 20 degree C)	2.0	mg/L	---	<2.0	4.0				
COD									
COD	25	mg/L	---	<25	61				
EA015: Total Dissolved Solids									
Total Dissolved solids	5	mg/L	2455	1925	2965				
EA025: Suspended Solids									
Total Suspended Solids	5	mg/L	10	<5	<5	---	---	---	---
EA065: Total Hardness									
Total Hardness	1	mg/L	1297	1218	1353	---	---	---	---
ED037P: Alkalinity									
Bicarbonate Alkalinity	1	mg/L	181	126	20	---	---	---	---
Carbonate Alkalinity	1	mg/L	<1	<1	<1	---	---	---	---
Hydroxide Alkalinity	1	mg/L	<1	<1	<1	---	---	---	---
Phenolphthalein Alkalinity	1	mg/L	<1	<1	<1	---	---	---	---
Total Alkalinity	1	mg/L	181	126	20	---	---	---	---
ED041G: Sulfate									
Sulfate	1.0	mg/L	1850	1475	2425	---	---	---	---
ED045G: Chloride Discrete analyzer									
Chloride	1.0	mg/L	47.4	24.6	107	---	---	---	---
ED093F: Dissolved Major Cations									
Calcium	0.10	mg/L	425	383	522	---	---	---	---
Magnesium	0.10	mg/L	57.2	63.7	10.8	---	---	---	---
Potassium	0.10	mg/L	45.2	25.5	105	---	---	---	---
Sodium	0.10	mg/L	219	145	388	---	---	---	---
EO020F: Dissolved Metals by ICP-MS									
Aluminium	0.01	mg/L	<0.01	<0.01	<0.01	---	---	---	---
Antimony	0.001	mg/L	0.001	0.001	<0.001	---	---	---	---
Arsenic	0.001	mg/L	<0.001	<0.001	0.01	---	---	---	---
Barium	0.001	mg/L	0.02	0.02	0.03	---	---	---	---
Boron	0.05	mg/L	0.71	0.19	0.16	---	---	---	---
Cadmium	0.001	mg/L	<0.001	0.03	0.001	---	---	---	---
Chromium	0.001	mg/L	<0.001	<0.001	<0.001	---	---	---	---
Cobalt	0.001	mg/L	0.007	0.007	0.06	---	---	---	---

LOR = Limit of reporting

Approved by

Senior Manager



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetrak, Amphur Thaplor, Phichit Thailand 66230
P/O : 47583
Project Name : Water Project
Project Location : CHATREE

TESTING
No. 0009
Lot ID: 24131563
Date Received : Nov 26, 2024
Date Reported : Dec 11, 2024
Report Number : 3169922-1

Page 1 of 8

Sample Number 24131563-1
Sampled Date Nov 25, 2024 3:30 PM
Sample Description UD
Location 6711UD
Date Analysis Commenced Nov 27, 2024
Condition of Sample Contained in two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Metals Testing						
Aluminum	mg/L	0.003	0.005	0.02	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Antimony	mg/L	0.0003	0.0005	0.004	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Arsenic	mg/L	0.0003	0.0005	Not Detected	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.02	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Boron	mg/L	0.003	0.005	0.21	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	0.001	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Calcium	mg/L	0.03	0.05	379	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Chromium	mg/L	0.0003	0.0005	Not Detected	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Cobalt	mg/L	0.0003	0.0005	0.008	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	<0.0005	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Iron	mg/L	0.003	0.005	0.06	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Lead	mg/L	0.0003	0.0005	Not Detected	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok

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ALS Lot No. : 2488414
Client : Akara Resources Public Co., Ltd.
Project : CHATREE



Analytical Results

Client sample ID Client sampling date / time			6708SP 8-Aug-24 2488414-1	6708UD 8-Aug-24 2488414-2	6708UD2 8-Aug-24 2488414-3	----	----	----	----
Compound	LOR	Unit							
EG020F: Dissolved Metals by ICP-MS									
Copper	0.001	mg/L	<0.001	<0.001	<0.001	----	----	----	----
Iron	0.05	mg/L	<0.05	<0.05	<0.05	----	----	----	----
Lead	0.001	mg/L	<0.001	<0.001	<0.001	----	----	----	----
Manganese	0.001	mg/L	4.08	2.68	2.80	----	----	----	----
Molybdenum	0.001	mg/L	0.07	0.01	3.13	----	----	----	----
Nickel	0.001	mg/L	<0.001	<0.001	<0.001	----	----	----	----
Selenium	0.01	mg/L	<0.01	<0.01	<0.01	----	----	----	----
Silver	0.001	mg/L	<0.001	<0.001	<0.001	----	----	----	----
Zinc	0.005	mg/L	<0.005	<0.005	0.03	----	----	----	----
EG035F: Dissolved Mercury by CVAFS									
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	----	----	----	----
EK025G: Cyanide Discrete analyzer									
Cyanide	0.002	mg/L	0.005	<0.002	1.501	----	----	----	----
EK025G-1: Cyanide WAD Discrete analyzer									
Weak Acid Dissociable Cyanide	0.002	mg/L	0.005	<0.002	1.501	----	----	----	----
EK055G: Ammonia Discrete analyzer									
Ammonia Nitrogen	0.06	mg/L	8.48	3.30	25.6	----	----	----	----
EK057G: Nitrate Discrete analyzer									
Nitrate	0.01	mg/L	<0.01	0.15	<0.01	----	----	----	----
EK071G: Reactive Phosphorus									
Reactive Phosphorus	0.01	mg/L	<0.01	<0.01	<0.01	----	----	----	----
EN055: Ionic Balance									
Ionic Balance	----	%	6.86	2.43	6.35	----	----	----	----
Total Anions	0.01	mEq/L	42.04	32.84	52.81	----	----	----	----
Total Cations	0.01	mEq/L	36.64	31.28	46.51	----	----	----	----
EP005: Total Organic Carbon									
Total Organic Carbon	0.1	mg/L	0.94	0.77	9.84	----	----	----	----

LOR = Limit of reporting

Approved by

Senior Manager



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheulak, Amphur Thaplor, Phichit Thailand 66230
P/O : 47583
Project Name : Water Project
Project Location : CHATREE

Lot ID: 24131563
Date Received : Nov 26, 2024
Date Reported : Dec 11, 2024
Report Number : 3169922-1

Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheulak, Amphur Thaplor, Phichit Thailand 66230
P/O : 47583
Project Name : Water Project
Project Location : CHATREE

Lot ID: 24131563
Date Received : Nov 26, 2024
Date Reported : Dec 11, 2024
Report Number : 3169922-1

Page 3 of 8

Sample Number	24131563-1
Sampled Date	Nov 25, 2024 3:30 PM
Sample Description	UD
Location	671UD
Date Analysis Commenced	Nov 27, 2024
Condition of Sample	Contained in two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOB)	Result	Method	Testing Location
Water Testing						
Bicarbonate Alkalinity as CaCO ₃ *	mg/L	-	1	121	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2320 B	Bangkok
BOD (5 days at 20 degree C)	mg/L	-	2.0	<2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Carbonate Alkalinity as CaCO ₃ *	mg/L	-	1	<1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2320 B	Bangkok
Carbonate Hardness as CaCO ₃ *	mg/L	-	1	121	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2320 B	Bangkok
Chloride *	mg/L	0.15	0.5	13.0	ISE Application	Bangkok
COD	mg/L	-	25	<25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Bangkok
Cyanide as CN	mg/L	0.002	0.005	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - CN (C, E)	Bangkok
Hydroxide Alkalinity as CaCO ₃ *	mg/L	-	1	<1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2320 B	Bangkok
Nitrate as N *	mg/L	0.06	0.2	0.68	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NO3 E	Bangkok
Non-Carbonate Hardness as CaCO ₃ *	mg/L	-	1	1126	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2320 B	Bangkok
Phenolphthalein Alkalinity as CaCO ₃ *	mg/L	-	1	<1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2320 B	Bangkok
Phosphate as P *	mg/L	0.005	0.01	0.01	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (E)	Bangkok

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Page 2 of 8

Sample Number	24131563-1
Sampled Date	Nov 25, 2024 3:30 PM
Sample Description	UD
Location	671UD
Date Analysis Commenced	Nov 27, 2024
Condition of Sample	Contained in two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOB)	Result	Method	Testing Location
Metals Testing						
Magnesium	mg/L	0.03	0.05	67.7	In-house method : STM 05-01.4 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Manganese	mg/L	0.0003	0.0005	3.70	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Mercury	mg/L	0.0001	0.0005	Not Detected	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
Molybdenum	mg/L	0.0003	0.0005	0.02	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Nickel	mg/L	0.0003	0.0005	0.0008	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Potassium	mg/L	0.03	0.05	26.1	In-house method : STM 05-01.4 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Selenium	mg/L	0.0003	0.0005	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Silver	mg/L	0.0003	0.0005	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Sodium	mg/L	0.03	0.05	102	In-house method : STM 05-01.4 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Zinc	mg/L	0.003	0.005	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Water Testing						
Ammonia Nitrogen *	mg/L	-	0.06	3.15	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (B, F)	Bangkok

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheulak, Amphur Thaplor, Phichit Thailand 66230
P/O : 47583
Project Name : Water Project
Project Location : CHATREE

Lot ID: 24131563
Date Received : Nov 26, 2024
Date Reported : Dec 11, 2024
Report Number : 3169922-1

Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheulak, Amphur Thaplor, Phichit Thailand 66230
P/O : 47583
Project Name : Water Project
Project Location : CHATREE

Lot ID: 24131563
Date Received : Nov 26, 2024
Date Reported : Dec 11, 2024
Report Number : 3169922-1

Page 5 of 8

Sample Number	24131563-2					
Sampled Date	Nov 25, 2024 4:00 PM					
Sample Description	UD2					
Location	671UD2					
Date Analysis Commenced	Nov 27, 2024					
Condition of Sample	Contained in two glass vials and five plastic bottles, sample containers comply to pretreatment – preservation standards (APHA, USEPA)					
Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Metals Testing						
Aluminum	mg/L	0.003	0.005	0.02	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Antimony	mg/L	0.0003	0.0005	Not Detected	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Arsenic	mg/L	0.0003	0.0005	0.02	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.03	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Boron	mg/L	0.003	0.005	0.19	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	0.0007	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Calcium	mg/L	0.03	0.05	479	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Chromium	mg/L	0.0003	0.0005	Not Detected	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Cobalt	mg/L	0.0003	0.0005	0.07	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	Not Detected	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Iron	mg/L	0.003	0.005	2.40	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok
Lead	mg/L	0.0003	0.0005	Not Detected	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok

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Sample Number	24131563-1					
Sampled Date	Nov 25, 2024 3:30 PM					
Sample Description	UD					
Location	671UD					
Date Analysis Commenced	Nov 27, 2024					
Condition of Sample	Contained in two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)					
Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
Residual Alkalinity *	mg/L	-	1	<1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2320 B	Bangkok
Sulfate *	mg/L	0.5	2	1382	Based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Bangkok
Total Alkalinity as CaCO3 *	mg/L	-	1	121	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2320 B	Bangkok
Total Dissolved solids Dried at 180 degree C	mg/L	-	5	1312	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Bangkok
Total Organic Carbon *	mg/L	0.03	0.1	0.94	Based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5310 B	Bangkok
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Bangkok
Weak Acid Dissociable Cyanide *	mg/L	0.002	0.005	Not Detected	Based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-CN (1)	Bangkok

Remark :
- LOD : Limit of Detection
- LOQ : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) listed in this report are not included in the scope of accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

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Analysis / Test Report

Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheulak, Amphur Thaplor, Phichit Thailand 66230
P/O : 47583
Project Name : Water Project
Project Location : CHATREE

Lot ID: 24131563
Date Received : Nov 26, 2024
Date Reported : Dec 11, 2024
Report Number : 3169922-1

TESTING
No.0009

Lot ID: 24131563
Date Received : Nov 26, 2024
Date Reported : Dec 11, 2024
Report Number : 3169922-1

TESTING
No.0009

Page 7 of 8

Sample Number	24131563-2
Sampled Date	Nov 25, 2024 4:00 PM
Sample Description	UD2
Location	6711UD2
Date Analysis Commenced	Nov 27, 2024
Condition of Sample	Contained in two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOB)	Result	Method	Testing Location
Water Testing						
Bicarbonate Alkalinity as CaCO ₃ *	mg/L	-	1	51	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2320 B	Bangkok
BOD (5 days at 20 degree C)	mg/L	-	2.0	10.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Bangkok
Carbonate Alkalinity as CaCO ₃ *	mg/L	-	1	<1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2320 B	Bangkok
Carbonate Hardness as CaCO ₃ *	mg/L	-	1	51	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2320 B	Bangkok
Chloride *	mg/L	0.15	0.5	101	ISE Application	Bangkok
COD	mg/L	-	25	46	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Bangkok
Cyanide as CN	mg/L	0.002	0.005	6.020	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - CN (C, E)	Bangkok
Hydroxide Alkalinity as CaCO ₃ *	mg/L	-	1	<1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2320 B	Bangkok
Nitrate as N *	mg/L	0.06	0.2	Not Detected	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NO ₃ E	Bangkok
Non-Carbonate Hardness as CaCO ₃ *	mg/L	-	1	1368	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2320 B	Bangkok
Phenolphthalein Alkalinity as CaCO ₃ *	mg/L	-	1	<1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2320 B	Bangkok
Phosphate as P *	mg/L	0.005	0.01	Not Detected	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (E)	Bangkok

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Analysis / Test Report

Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheulak, Amphur Thapklor, Phichit Thailand 66230
P/O :
Project Name : Water Project
Project Location : CHATREE

Lot ID: 2488416
Date Received : Aug 09, 2024
Date Reported : Aug 16, 2024
Report Number : 3071678-1

TESTING
No.0009

Page 1 of 1

Sample Number	2488416-1					
Sampled Date	Aug 08, 2024 10:25 AM					
Sample Description	En-WWTP					
Location	Process					
Date Analysis Commenced	Aug 09, 2024					
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)					
Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Microbiological Testing						
Fecal Coliform	MPN/100mL	-	-	<1.8	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B, E	Bangkok
Total Coliform	MPN/100mL	-	-	<1.8	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B	Bangkok

Remark :
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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Scientist (3)

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Analysis / Test Report

Accreditation No. 103147

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheutuk, Amphur Thapklor, Phichit Thailand 66230
P/O :
Date Received : Aug 09, 2024
Date Reported : Aug 16, 2024
Report Number : 3085213-1
Project Name : Soil Plant, Fish, Food
Project Location :

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheutuk, Amphur Thapklor, Phichit Thailand 66230
P/O :
Date Received : Aug 09, 2024
Date Reported : Aug 16, 2024
Report Number : 3085212-1
Project Name : Soil Plant, Fish, Food
Project Location :

Lot ID: 2492118

Date Received : Aug 09, 2024
Date Reported : Aug 16, 2024
Report Number : 3085212-1

Page 1 of 1

Sample Number 2492118-2
Sampled Date Aug 07, 2024 1:30 PM
Sample Description ปลาในตู้เลี้ยงปลา
Location ปลาในตู้เลี้ยงปลา
Date Analysis Commenced Aug 10, 2024
Condition of Sample Packed in one glass bottle, refrigerated (client container)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Metals Testing						
Arsenic	mg/kg	-	0.50	2.23	United States Environmental Protection Agency, EPA Method 3050 B and 6010 D	Bangkok
Manganese	mg/kg	-	1.00	405	United States Environmental Protection Agency, EPA Method 3050 B and 6010 D	Bangkok
Physical Parameters						
Moisture	%	-	0.1	50.5	In-house method based on Standard Methods for the Examination of Water and Wastewater, 19th ed., APHA, AWWA & WEF, 23rd ed., 2017, part 2500 G	Bangkok

Note : Analysis Results expressed on dry basis.

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

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Analysis / Test Report

Accreditation No. 103147

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaocheutuk, Amphur Thapklor, Phichit Thailand 66230
P/O :
Date Received : Aug 09, 2024
Date Reported : Aug 16, 2024
Report Number : 3085212-1
Project Name : Soil Plant, Fish, Food
Project Location :

Lot ID: 2492118

Date Received : Aug 09, 2024
Date Reported : Aug 16, 2024
Report Number : 3085212-1

Page 1 of 1

Sample Number 2492118-1
Sampled Date Aug 07, 2024 1:30 PM
Sample Description ปลาในตู้เลี้ยงปลา
Location ปลาในตู้เลี้ยงปลา
Date Analysis Commenced Aug 10, 2024
Condition of Sample Packed in one plastic bag, refrigerated

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Metals Testing						
Arsenic	mg/kg	0.001	0.10	<0.10	In-house method, STM No. 05-040 based on AOAC (2019) 2011.19	Bangkok
Manganese	mg/kg	0.02	0.20	96.7	In-house method, STM No. 05-040 based on AOAC (2019) 2011.19	Bangkok

Remark :
- LOD : Limit of Detection
- *LOQ* : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetuk, Amphur Thapklor, Phichit Thailand 66230
P/O : 47683
Project Name : Air Test
Project Location :

Lot ID: 24128097
Date Received : Nov 25, 2024
Date Reported : Nov 26, 2024
Report Number: 3160096-1

Page 1 of 3

Sample Number 24128097-1	
Parameter	Heat Stress (Sampling Time : 09.00 AM - 11.00 AM)
Measurement Date	Nov 21, 2024
Measurement by	Jirayut Kasemsuk
Location	บริเวณด้าน 2 ลาน (ด้านอาคาร ฝึกอบรม แผนก : ฝึกอบรม)
Location	Duration (min) WBGT (°C) NWB (°C) GT (°C) DB (°C)
Gold Room Plant 1 : โรงเพาะเห็ด	60 32.8 29.9 39.4 38.8
Gold Room Plant 1 : โรงผลิตนมถั่วเหลือง	60 19.5 18.0 23.0 22.7
Average (WBGT)	26.1
Guideline WBGT (°C)	34.0

Reference Method : Wet Bulb Globe Temperature

Guideline:

- 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)
- 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



Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetuk, Amphur Thapklor, Phichit Thailand 66230
P/O :
Project Name : Soil Plant, Fish, Food
Project Location :

Lot ID: 2492118
Date Received : Aug 09, 2024
Date Reported : Aug 16, 2024
Report Number : 3085214-1

Page 1 of 1

Sample Number		2492118-3				
Sample Date		Aug 07, 2024 1:30 PM				
Sample Description		ดินจากแปลง				
Location		แปลงนาแปลง 4				
Date Analysis Commenced		Aug 10, 2024				
Condition of Sample		Packed in one glass bottle, refrigerated (client container)				
Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Metals Testing						
Arsenic	mg/kg	0.006	0.10	Not Detected	In-house method, STM No. 05-040 based on AOAC (2019) 2011.19	Bangkok
Manganese	mg/kg	0.02	0.20	0.64	In-house method, STM No. 05-040 based on AOAC (2019) 2011.19	Bangkok

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

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230
P/O : 47683
Project Name : Air Test
Project Location :
Lot ID: 24128097
Date Received : Nov 25, 2024
Date Reported : Nov 26, 2024
Report Number: 3160096-1

Page 3 of 3

Sample Number	24128097-3
Parameter	Heat Stress (Sampling Time : 01.00 PM - 03.00 PM)
Measurement Date	Nov 21, 2024
Measurement by	Jirayut Kasemsuk
Location	ปฏิบัติงาน 2 ชั้นใต้ (ด้านล่างของ อุปกรณ์ทำงาน : อุปกรณ์ทำงาน : Lab)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
Lab Assay Room 1	65	31.5	27.1	41.9	39.8
Lab Assay Room 1 : ชั้นใต้พื้นที่ทำงาน	55	28.0	25.0	35.0	34.7
Average (WBGT)		29.9			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

- 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)
- Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat-Light and Noise, B.E.2559

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230
P/O : 47683
Project Name : Air Test
Project Location :
Lot ID: 24128097
Date Received : Nov 25, 2024
Date Reported : Nov 26, 2024
Report Number: 3160096-1

Page 2 of 3

Sample Number	24128097-2
Parameter	Heat Stress (Sampling Time : 09.00 AM - 11.00 AM)
Measurement Date	Nov 21, 2024
Measurement by	Jirayut Kasemsuk
Location	ปฏิบัติงาน 2 ชั้นใต้ (ด้านล่างของ อุปกรณ์ทำงาน : อุปกรณ์ทำงาน : ฟาร์มเลี้ยง)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
Gold Room Plant 2 : ฟาร์มเลี้ยง	60	31.2	27.8	39.1	38.8
Gold Room Plant 2 : ฟาร์มเลี้ยงฟาร์มเลี้ยง	60	19.8	18.2	23.4	23.0
Average (WBGT)		25.5			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

- 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)
- Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat-Light and Noise, B.E.2559

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230
P/O : 47589
Project Name : Water Project 2024
Project Location : CHATREE

Lot ID: 24118025

Date Received : Nov 16, 2024

Date Reported : Nov 27, 2024

Report Number : 3168424-1

Page 1 of 4

Sample Number : 24118025-1
Sampled Date : Nov 14, 2024 8:30 AM
Sample Description : Tailing
Location : Spigot 5
Date Analysis Commenced : Nov 18, 2024
Condition of Sample : Contained in one plastic bottle, refrigerated (client container)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Total Concentration Test (TTLC) : Chemical						
Cyanide	mg/kg	-	0.2	7.1	United States Environmental Protection Agency, EPA Method 9013 and 9010 B	Bangkok

Remark :

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

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230
P/O : 47589
Project Name : Water Project 2024
Project Location : CHATREE

Lot ID: 24118025

Date Received : Nov 16, 2024

Date Reported : Nov 27, 2024

Report Number : 3168424-1

Page 2 of 4

Sample Number : 24118025-2
Sampled Date : Nov 14, 2024 9:00 AM
Sample Description : Tailing
Location : Spigot 21
Date Analysis Commenced : Nov 18, 2024
Condition of Sample : Contained in one plastic bottle, refrigerated (client container)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Total Concentration Test (TTLC) : Chemical						
Cyanide	mg/kg	-	0.2	11.4	United States Environmental Protection Agency, EPA Method 9013 and 9010 B	Bangkok

Remark :

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

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230
P/O : 47589
Project Name : Water Project 2024
Project Location : CHATREE

Lot ID: 24118025

Date Received : Nov 16, 2024

Date Reported : Nov 27, 2024

Report Number : 3168424-1

Page 3 of 4

Sample Number : 24118025-3
Sampled Date : Nov 14, 2024 9:10 AM
Sample Description : Tailing
Location : Spigot 51
Date Analysis Commenced : Nov 18, 2024
Condition of Sample : Contained in one plastic bottle, refrigerated (client container)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Total Concentration Test (TTLC) : Chemical						
Cyanide	mg/kg	-	0.2	17.8	United States Environmental Protection Agency, EPA Method 9013 and 9010 B	Bangkok

Remark :

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

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230
P/O : 47589
Project Name : Water Project 2024
Project Location : CHATREE

Lot ID: 24118025

Date Received : Nov 16, 2024

Date Reported : Nov 27, 2024

Report Number : 3168424-1

Page 4 of 4

Sample Number : 24118025-4
Sampled Date : Nov 14, 2024 9:30 AM
Sample Description : Tailing
Location : Spigot 58
Date Analysis Commenced : Nov 18, 2024
Condition of Sample : Contained in one plastic bottle, refrigerated (client container)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Total Concentration Test (TTLC) : Chemical						
Cyanide	mg/kg	-	0.2	4.6	United States Environmental Protection Agency, EPA Method 9013 and 9010 B	Bangkok

Remark :

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

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230

P/O :

Project Name : Soil, Plant, Fish, Food

Project Location :

Lot ID: 2491865

Date Received : Aug 09, 2024

Date Reported : Aug 15, 2024

Report Number : 3079324-1

Page 1 of 4

Sample Number 2491865-1
Sampled Date Aug 08, 2024 8:40 AM
Sample Description Tailing
Location Spigot 5
Date Analysis Commenced Aug 10, 2024
Condition of Sample Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Total Concentration Test (TTLC) : Chemical						
Cyanide	mg/kg	-	0.2	6.4	United States Environmental Protection Agency, EPA Method 9013 and 9010 B	Bangkok

Remark :

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

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230

P/O :

Project Name : Soil, Plant, Fish, Food

Project Location :

Lot ID: 2491865

Date Received : Aug 09, 2024

Date Reported : Aug 15, 2024

Report Number : 3079324-1

Page 2 of 4

Sample Number 2491865-2
Sampled Date Aug 08, 2024 9:15 AM
Sample Description Tailing
Location Spigot 21
Date Analysis Commenced Aug 10, 2024
Condition of Sample Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Total Concentration Test (TTLC) : Chemical						
Cyanide	mg/kg	-	0.2	6.7	United States Environmental Protection Agency, EPA Method 9013 and 9010 B	Bangkok

Remark :

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

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230

P/O :

Project Name : Soil, Plant, Fish, Food

Project Location :

Lot ID: 2491865

Date Received : Aug 09, 2024

Date Reported : Aug 15, 2024

Report Number : 3079324-1

Page 3 of 4

Sample Number 2491865-3
Sampled Date Aug 08, 2024 9:00 AM
Sample Description Tailing
Location Spigot 14
Date Analysis Commenced Aug 10, 2024
Condition of Sample Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Total Concentration Test (TTLC) : Chemical						
Cyanide	mg/kg	-	0.2	4.5	United States Environmental Protection Agency, EPA Method 9013 and 9010 B	Bangkok

Remark :

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230

P/O :

Project Name : Soil, Plant, Fish, Food

Project Location :

Lot ID: 2491865

Date Received : Aug 09, 2024

Date Reported : Aug 15, 2024

Report Number : 3079324-1

Page 4 of 4

Sample Number 2491865-4
Sampled Date Aug 08, 2024 9:45 AM
Sample Description Tailing
Location Spigot 26
Date Analysis Commenced Aug 10, 2024
Condition of Sample Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Total Concentration Test (TTLC) : Chemical						
Cyanide	mg/kg	-	0.2	6.9	United States Environmental Protection Agency, EPA Method 9013 and 9010 B	Bangkok

Remark :

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

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Analysis / Test Report

TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230
P/O : 47583
Project Name : Water Project
Project Location : CHATREE

Lot ID: 2477242
Date Received : Jul 05, 2024
Date Reported : Jul 12, 2024
Report Number : 3047409-1

Page 1 of 1

Sample Number 2477242-1
Sampled Date Jul 05, 2024 7:30 AM
Sample Description DC2 ไซเตรียไนต์
Location 6707DC2
Date Analysis Commenced Jul 08, 2024
Condition of Sample Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
Cyanide as CN	mg/L	0.002	0.005	Not Detected	In-house method : STM 04-007 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - CN (C, E)	Bangkok
Weak Acid Dissociable Cyanide *	mg/L	0.002	0.005	Not Detected	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (I)	Bangkok

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

TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230

P/O :

Project Name : Water Project

Project Location : CHATREE

Lot ID: 24136393

Date Received : Dec 13, 2024

Date Reported : Dec 20, 2024

Report Number : 3193306-1

Page 1 of 1

Sample Number 24136393-1
Sampled Date Dec 13, 2024 7:30 AM
Sample Description Wastewater
Location 6712DC2
Date Analysis Commenced Dec 16, 2024
Condition of Sample Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
Cyanide as CN	mg/L	0.002	0.005	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - CN (C, E)	Bangkok
Weak Acid Dissociable Cyanide *	mg/L	0.002	0.005	Not Detected	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-CN (I)	Bangkok

Remark :

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Analysis / Test Report

TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230

P/O : 47683

Project Name : Air Test

Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

Page 1 of 25

Sample Number 24128100-1
Sampled Date Nov 19, 2024
Sample Description Air Quality
Location Laboratory room
Date Analysis Commenced Nov 27, 2024
Condition of Sample Drawn into one filter paper placed in plastic cassette
Barometric Pressure 752 mmHg
Atmospheric Temperature 33.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Metals Testing									
Lead *	01:00 PM - 03:00 PM	mg/m3	-	0.002	<0.002	0.05	NIOSH (2003), 7301	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 : Jirayut Kasemsuk

Remark :

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TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
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P/O : 47683

Project Name : Air Test

Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

Page 2 of 25

Sample Number 24128100-2
Sampled Date Nov 21, 2024
Sample Description Air Quality
Location GOLD room Plant 1
Date Analysis Commenced Nov 27, 2024
Condition of Sample Drawn into one filter paper placed in plastic cassette
Barometric Pressure 752 mmHg
Atmospheric Temperature 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Metals Testing									
Lead *	08:00 AM - 10:00 AM	mg/m3	-	0.002	<0.002	0.05	NIOSH (2003), 7301	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 : Jirayut Kasemsuk

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TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
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P/O : 47683

Project Name : Air Test

Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

Page 3 of 25

Sample Number 24128100-3
Sampled Date Nov 21, 2024
Sample Description Air Quality
Location GOLD room Plant 2
Date Analysis Commenced Nov 27, 2024
Condition of Sample Drawn into one filter paper placed in plastic cassette
Barometric Pressure 752 mmHg
Atmospheric Temperature 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Metals Testing									
Lead *	08:20 AM - 10:20 AM	mg/m3	-	0.002	<0.002	0.05	NIOSH (2003), 7301	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 : Jirayut Kasemsuk

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Analysis / Test Report

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P/O : 47683

Project Name : Air Test

Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

Page 4 of 25

Sample Number 24128100-4
Sampled Date Nov 19, 2024
Sample Description Air Quality
Location Laboratory Room
Date Analysis Commenced Nov 26, 2024
Condition of Sample Drawn into one amber plastic bottle, refrigerated
Barometric Pressure 752 mmHg
Atmospheric Temperature 25.7 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Hydrogen cyanide *	01:05 PM - 03:05 PM	ppm	-	-	<0.10	10	Based on NIOSH, P&CAM 116	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 : Jirayut Kasemsuk

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Analysis / Test Report

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99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230

P/O : 47683

Project Name : Air Test

Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

Page 5 of 25

Sample Number 24128100-5
Sampled Date Nov 21, 2024
Sample Description Air Quality
Location Gold Room Plant 1
Date Analysis Commenced Nov 26, 2024
Condition of Sample Drawn into one amber plastic bottle, refrigerated
Barometric Pressure 752 mmHg
Atmospheric Temperature 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Hydrogen cyanide *	08:00 AM - 10:00 AM	ppm	-	-	<0.10	10	Based on NIOSH, P&CAM 116	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)

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Remark :

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No.0009

Client : Akara Resources Public Co., Ltd.
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P/O : 47683

Project Name : Air Test

Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

Page 6 of 25

Sample Number 24128100-6
Sampled Date Nov 21, 2024
Sample Description Air Quality
Location Gold Room Plant 2
Date Analysis Commenced Nov 26, 2024
Condition of Sample Drawn into one amber plastic bottle, refrigerated
Barometric Pressure 752 mmHg
Atmospheric Temperature 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Hydrogen cyanide *	08:20 AM - 10:20 AM	ppm	-	-	<0.10	10	Based on NIOSH, P&CAM 116	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)

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Analysis / Test Report

TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230

P/O : 47683

Project Name : Air Test

Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

Page 7 of 25

Sample Number 24128100-7
Sampled Date Nov 19, 2024
Sample Description Air Quality
Location Cyanide Tank Plant 1
Date Analysis Commenced Nov 26, 2024
Condition of Sample Drawn into one amber plastic bottle, refrigerated
Barometric Pressure 752 mmHg
Atmospheric Temperature 33.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Hydrogen cyanide *	01:25 PM - 03:25 PM	ppm	-	-	<0.10	10	Based on NIOSH, P&CAM 116	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 : Jirayut Kasemsuk

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Analysis / Test Report

TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230

P/O : 47683

Project Name : Air Test

Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

Page 8 of 25

Sample Number 24128100-8
Sampled Date Nov 19, 2024
Sample Description Air Quality
Location Cyanide Tank Plant 2
Date Analysis Commenced Nov 26, 2024
Condition of Sample Drawn into one amber plastic bottle, refrigerated
Barometric Pressure 752 mmHg
Atmospheric Temperature 33.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Hydrogen cyanide *	01:30 PM - 03:30 PM	ppm	-	-	<0.10	10	Based on NIOSH, P&CAM 116	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)

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Analysis / Test Report

TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230

P/O : 47683

Project Name : Air Test

Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

Page 9 of 25

Sample Number 24128100-9
Sampled Date Nov 21, 2024
Sample Description Air Quality
Location CIP/CIL Tank Plant 1
Date Analysis Commenced Nov 26, 2024
Condition of Sample Drawn into one amber plastic bottle, refrigerated
Barometric Pressure 752 mmHg
Atmospheric Temperature 32.5 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Hydrogen cyanide *	10:10 AM - 12:10 PM	ppm	-	-	0.10	10	Based on NIOSH, P&CAM 116	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 : Jirayut Kasemsuk

Remark :

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TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
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P/O : 47683

Project Name : Air Test

Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

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Sample Number 24128100-10
Sampled Date Nov 21, 2024
Sample Description Air Quality
Location CIP/CIL Tank Plant 2
Date Analysis Commenced Nov 26, 2024
Condition of Sample Drawn into one amber plastic bottle, refrigerated
Barometric Pressure 752 mmHg
Atmospheric Temperature 32.5 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Hydrogen cyanide *	10:20 AM - 12:20 PM	ppm	-	-	0.12	10	Based on NIOSH, P&CAM 116	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 : Jirayut Kasemsuk

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P/O : 47683

Project Name : Air Test

Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

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Sample Number 24128100-11
Sampled Date Nov 19, 2024
Sample Description Air Quality
Location Laboratory Room
Date Analysis Commenced Nov 26, 2024
Condition of Sample Drawn into one sorbent tube, refrigerated
Barometric Pressure 752 mmHg
Atmospheric Temperature 25.7 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Hydrogen chloride *	01:05 PM - 03:05 PM	ppm	-	0.05	<0.05	5(C)	Based on OSHA, ID-174-SG	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 : Jirayut Kasemsuk

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P/O : 47683

Project Name : Air Test

Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

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Sample Number 24128100-12
Sampled Date Nov 21, 2024
Sample Description Air Quality
Location HCL Tank Plant 1
Date Analysis Commenced Nov 26, 2024
Condition of Sample Drawn into one sorbent tube, refrigerated
Barometric Pressure 752 mmHg
Atmospheric Temperature 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Hydrogen chloride *	07:40 AM - 09:40 AM	ppm	-	0.05	<0.05	5(C)	Based on OSHA, ID-174-SG	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)

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P/O : 47683

Project Name : Air Test

Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

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Sample Number 24128100-13
Sampled Date Nov 21, 2024
Sample Description Air Quality
Location HCL Tank Plant 2
Date Analysis Commenced Nov 26, 2024
Condition of Sample Drawn into one sorbent tube, refrigerated
Barometric Pressure 752 mmHg
Atmospheric Temperature 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Hydrogen chloride *	08:10 AM - 10:10 AM	ppm	-	0.05	<0.05	5(C)	Based on OSHA, ID-174-SG	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)

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P/O : 47683

Project Name : Air Test

Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

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Sample Number 24128100-14
Sampled Date Nov 19, 2024
Sample Description Air Quality
Location Sodium Hydroxide StorageTank Plant 1
Date Analysis Commenced Nov 28, 2024
Condition of Sample Drawn into one filter paper placed in plastic cassette
Barometric Pressure 752 mmHg
Atmospheric Temperature 33.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Sodium hydroxide as NaOH *	01:25 PM - 03:25 PM	mg/m3	-	0.05	<0.05	2	NIOSH (1994), 7401	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)

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P/O : 47683
Project Name : Air Test
Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

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Sample Number 24128100-15
Sampled Date Nov 19, 2024
Sample Description Air Quality
Location Sodium Hydroxide Storage Plant 2
Date Analysis Commenced Nov 28, 2024
Condition of Sample Drawn into one filter paper placed in plastic cassette
Barometric Pressure 752 mmHg
Atmospheric Temperature 33.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Sodium hydroxide as NaOH *	01:30 PM - 03:30 PM	mg/m3	-	0.05	<0.05	2	NIOSH (1994), 7401	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)

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P/O : 47683

Project Name : Air Test

Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

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Sample Number 24128100-16
Sampled Date Nov 19, 2024
Sample Description Air Quality
Location Process Persons 1
Personal Sampling คุณอารักษ์ เสริมพันธ์
Date Analysis Commenced Nov 26, 2024
Condition of Sample Drawn into two filter papers placed in each cassette
Barometric Pressure 752 mmHg
Atmospheric Temperature 30.1 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Respirable Dust	08:00 AM - 10:00 AM	mg/m3	-	0.15	<0.15	5	In - house method : STM 04-050 based on NIOSH Manual of Analytical Methods, 4th ed., NMAM, method 0600, issue 3, 1998 (Include sampling)	OSHA	Bangkok
Total dust	08:00 AM - 10:00 AM	mg/m3	-	0.15	0.47	15	In - house method : STM 04-049 based on NIOSH Manual of Analytical Methods, 4th ed., NMAM, method 0500, issue 2, 1994 (Include sampling)	OSHA	Bangkok

Guideline :

OSHA : Occupational Safety and Health Administration

Sampled By : Jirayut Kasemsuk

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P/O : 47683

Project Name : Air Test

Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

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Sample Number 24128100-17
Sampled Date Nov 19, 2024
Sample Description Air Quality
Location Process Persons 2
Personal Sampling คุณพรหมมินทร์ พรหมสะอาด
Date Analysis Commenced Nov 26, 2024
Condition of Sample Drawn into two filter papers placed in each cassette
Barometric Pressure 752 mmHg
Atmospheric Temperature 30.1 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Respirable Dust	08:00 AM - 10:00 AM	mg/m3	-	0.15	<0.15	5	In - house method : STM 04-050 based on NIOSH Manual of Analytical Methods, 4th ed., NMAM, method 0600, issue 3, 1998 (Include sampling)	OSHA	Bangkok
Total dust	08:00 AM - 10:00 AM	mg/m3	-	0.15	0.39	15	In - house method : STM 04-049 based on NIOSH Manual of Analytical Methods, 4th ed., NMAM, method 0500, issue 2, 1994 (Include sampling)	OSHA	Bangkok

Guideline :

OSHA : Occupational Safety and Health Administration

Sampled By : Jirayut Kasemsuk

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P/O : 47683

Project Name : Air Test

Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

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Sample Number 24128100-18
Sampled Date Nov 19, 2024
Sample Description Air Quality
Location Maintenance 1
Personal Sampling คุณสมพร จันทเขต
Date Analysis Commenced Nov 26, 2024
Condition of Sample Drawn into two filter papers placed in each cassette
Barometric Pressure 752 mmHg
Atmospheric Temperature 30.1 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Respirable Dust	08:10 AM - 10:10 AM	mg/m3	-	0.15	<0.15	5	In - house method : STM 04-050 based on NIOSH Manual of Analytical Methods, 4th ed., NMAM, method 0600, issue 3, 1998 (Include sampling)	OSHA	Bangkok
Total dust	08:10 AM - 10:10 AM	mg/m3	-	0.15	0.60	15	In - house method : STM 04-049 based on NIOSH Manual of Analytical Methods, 4th ed., NMAM, method 0500, issue 2, 1994 (Include sampling)	OSHA	Bangkok

Guideline :

OSHA : Occupational Safety and Health Administration

Sampled By : Jirayut Kasemsuk

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P/O : 47683

Project Name : Air Test

Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

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Sample Number 24128100-19
Sampled Date Nov 19, 2024
Sample Description Air Quality
Location Maintenance 2
Personal Sampling คุณคำหล้า พุทธสร
Date Analysis Commenced Nov 26, 2024
Condition of Sample Drawn into two filter papers placed in each cassette
Barometric Pressure 752 mmHg
Atmospheric Temperature 30.1 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Respirable Dust	08:10 AM - 10:10 AM	mg/m3	-	0.15	<0.15	5	In - house method : STM 04-050 based on NIOSH Manual of Analytical Methods, 4th ed., NMAM, method 0600, issue 3, 1998 (Include sampling)	OSHA	Bangkok
Total dust	08:10 AM - 10:10 AM	mg/m3	-	0.15	0.73	15	In - house method : STM 04-049 based on NIOSH Manual of Analytical Methods, 4th ed., NMAM, method 0500, issue 2, 1994 (Include sampling)	OSHA	Bangkok

Guideline :

OSHA : Occupational Safety and Health Administration

Sampled By : Jirayut Kasemsuk

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P/O : 47683

Project Name : Air Test

Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

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Sample Number 24128100-20
Sampled Date Nov 19, 2024
Sample Description Air Quality
Location Geo & Mining 1
Personal Sampling คุณพงษ์เดช คณานญาติ
Date Analysis Commenced Nov 26, 2024
Condition of Sample Drawn into two filter papers placed in each cassette
Barometric Pressure 752 mmHg
Atmospheric Temperature 30.1 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Respirable Dust	08:30 AM - 10:30 AM	mg/m3	-	0.15	<0.15	5	In - house method : STM 04-050 based on NIOSH Manual of Analytical Methods, 4th ed., NMAM, method 0600, issue 3, 1998 (Include sampling)	OSHA	Bangkok
Total dust	08:30 AM - 10:30 AM	mg/m3	-	0.15	0.30	15	In - house method : STM 04-049 based on NIOSH Manual of Analytical Methods, 4th ed., NMAM, method 0500, issue 2, 1994 (Include sampling)	OSHA	Bangkok

Guideline :

OSHA : Occupational Safety and Health Administration

Sampled By : Jirayut Kasemsuk

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Analysis / Test Report

TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230
P/O : 47683
Project Name : Air Test
Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

Page 21 of 25

Sample Number : 24128100-21
Sampled Date : Nov 19, 2024
Sample Description : Air Quality
Location : Laboratory Room
Personal Sampling : คุณอรรณพ สมประกอบ
Date Analysis Commenced : Nov 26, 2024
Condition of Sample : Drawn into one amber plastic bottle, refrigerated
Barometric Pressure : 752 mmHg
Atmospheric Temperature : 25.7 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Cyanide *	01:05 PM - 03:05 PM	mg/m3	-	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	-	Bangkok

Guideline :

Sampled By : Jirayut Kasemsuk

Remark :

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

TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230
P/O : 47683
Project Name : Air Test
Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

Page 22 of 25

Sample Number 24128100-22
Sampled Date Nov 21, 2024
Sample Description Air Quality
Location Gold Room Plant 1
Personal Sampling คุณวัชร ดอแก้ว
Date Analysis Commenced Nov 26, 2024
Condition of Sample Drawn into one amber plastic bottle, refrigerated
Barometric Pressure 752 mmHg
Atmospheric Temperature 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Cyanide *	08:00 AM - 10:00 AM	mg/m3	-	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	-	Bangkok

Guideline :

Sampled By : Jirayut Kasemsuk

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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TESTING
No.0009

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P/O : 47683
Project Name : Air Test
Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

Page 23 of 25

Sample Number 24128100-23
Sampled Date Nov 21, 2024
Sample Description Air Quality
Location Gold Room Plant 2
Personal Sampling คุณอำนาจ เกษมสง
Date Analysis Commenced Nov 26, 2024
Condition of Sample Drawn into one amber plastic bottle, refrigerated
Barometric Pressure 752 mmHg
Atmospheric Temperature 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Cyanide *	08:30 AM - 10:30 AM	mg/m3	-	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	-	Bangkok

Guideline :

Sampled By : Jirayut Kasemsuk

Remark :

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Analysis / Test Report

TESTING
No.0009

Client : Akara Resources Public Co., Ltd.
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P/O : 47683
Project Name : Air Test
Project Location :

Lot ID: 24128100

Date Received : Nov 25, 2024

Date Reported : Dec 18, 2024

Report Number : 3160098-1

Page 24 of 25

Sample Number 24128100-24
Sampled Date Nov 21, 2024
Sample Description Air Quality
Location CIP/CIL Tank Plant 1
Personal Sampling คุณวีรยุทธ หังทอง
Date Analysis Commenced Nov 26, 2024
Condition of Sample Drawn into one amber plastic bottle, refrigerated
Barometric Pressure 752 mmHg
Atmospheric Temperature 31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Cyanide *	07:35 AM - 09:35 AM	mg/m3	-	0.10	<0.10	No Standard	Based on NIOSH, P&CAM 116	-	Bangkok

Guideline :

Sampled By : Jirayut Kasemsuk

Remark :

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TESTING
No.0009

Lot ID: 24128100
Date Received : Nov 25, 2024
Date Reported : Dec 18, 2024
Report Number : 3160098-1

Project Location :

Page 25 of 25

Sample Number	24128100-25
Sampled Date	Nov 21, 2024
Sample Description	Air Quality
Location	CIP/CIL Tank Plant 2
Personal Sampling	คุณชลธิลา รักษาพล
Date Analysis Commenced	Nov 26, 2024
Condition of Sample	Drawn into one amber plastic bottle, refrigerated
Barometric Pressure	752 mmHg
Atmospheric Temperature	31.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Cyanide *	07:35 AM - 09:35 AM	mg/m3	-	0.10	0.10	No Standard	Based on NIOSH, P&CAM 116	-	Bangkok

Guideline :

Sampled By : Jirayut Kasemsuk

Remark :

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
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P/O :
Project Name : Air Test
Project Location :

Lot ID: 24133569

Date Received : Nov 25, 2024
Date Reported : Nov 26, 2024
Report Number : 3175585-1

Page 1 of 1

Sample Number 24133569-1
Sampled Date Nov 22, 2024
Sample Description Noise Dose
Location Process Persons 1
Personal Sampling คุณนพชัย เปลวเพลิง
Date Analysis Commenced Nov 26, 2024

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (8 hrs.)	07:47 AM - 03:47 PM	%	-	1	20.4	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	07:47 AM - 03:47 PM	dB(A)	-	-	78.1	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 : Jirayut Kasemsuk

Remark :

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Analysis / Test Report

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P/O :
Project Name : Air Test
Project Location :

Lot ID: 24132338

Date Received : Nov 25, 2024
Date Reported : Nov 26, 2024
Report Number : 3172413-1

Page 1 of 1

Sample Number 24132338-1
Sampled Date Nov 21, 2024
Sample Description Noise Dose
Location Maintenance Persons 1
Personal Sampling คุณพงษ์กร ภูคันทา
Date Analysis Commenced Nov 26, 2024

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (8 hrs.)	07:32 AM - 03:32 PM	%	-	1	16.6	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	07:32 AM - 03:32 PM	dB(A)	-	-	77.2	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 : Jirayut Kasemsuk

Remark :

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
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P/O : 47683
Project Name : Air Test
Project Location :

Lot ID: 24128095

Date Received : Nov 25, 2024
Date Reported : Nov 26, 2024
Report Number : 3160072-1

Page 2 of 2

Sample Number 24128095-2
Sampled Date Nov 19, 2024
Sample Description Noise Dose
Location Maintenance Persons 2
Personal Sampling คุณฤทธิ์ไกร ศรีบุตรดา
Date Analysis Commenced Nov 26, 2024

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (8 hrs.)	07:49 AM - 03:49 PM	%	-	1	6.8	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	07:49 AM - 03:49 PM	dB(A)	-	-	73.3	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 : Jirayut Kasemsuk

Remark :

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P/O : 47683
Project Name : Air Test
Project Location :

Lot ID: 24128092

Date Received : Nov 25, 2024
Date Reported : Nov 26, 2024
Report Number : 3160071-1

Page 2 of 3

Sample Number : 24128092-2
Sampled Date : Nov 19, 2024
Sample Description : Noise Dose
Location : Process Persons 2
Personal Sampling : คุณไวทยา ในกุลหลาม
Date Analysis Commenced : Nov 26, 2024

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (8 hrs.)	07:47 AM - 03:47 PM	%	-	1	20.0	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	07:47 AM - 03:47 PM	dB(A)	-	-	78.0	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 : Jirayut Kasemsuk

Remark :

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Analysis / Test Report

Client : Akara Resources Public Co., Ltd.
99 Moo 9, Tambon Khaochetluk, Amphur Thapklor, Phichit Thailand 66230
P/O : 47683
Project Name : Air Test
Project Location :

Lot ID: 24128092

Date Received : Nov 25, 2024
Date Reported : Nov 26, 2024
Report Number : 3160071-1

Page 3 of 3

Sample Number : 24128092-3
Sampled Date : Nov 19, 2024
Sample Description : Noise Dose
Location : Process Persons 3
Personal Sampling : คุณธนาภูมิ แหยมพลสืบ
Date Analysis Commenced : Nov 26, 2024

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (8 hrs.)	07:48 AM - 03:48 PM	%	-	1	33.9	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	07:48 AM - 03:48 PM	dB(A)	-	-	80.3	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 : Jirayut Kasemsuk

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